محضر استلام موقع

انه في يوم الثلاثاء الموافق ٥ /٩/ ٢٠٢٣ بحضور كلا من

١- م حسام الدين حلمي — الهيئة العامة للطرق والكباري

٢- م السيد محمود عليوة — شركة النيل العامة للطرق والكباري

اجتمعت اللجنة المشكلة عاليه بموقع العمل وتم استلام الموقع خاليا من العوائق من الهيئة العامة للطرق والكباري الي شركة النيل العامة للطرق والكباري بمشروع كوبري ريجوا علي مسار الخط الأول للقطار الكهربائي السريع (السخنة – القاهرة – الإسكندرية - العلمين – مطروح) في المسافة من كم ٤٩٨+١٨٩ الي كم ٦٣٥+١٨٩ طبقا للعقد المبرم رقم ٢٩٣ لسنة ٢٠٢٣ /٢٠٢٤

التوقيع

١- الهيئة العامة للطرق والكباري

٢- شركة النيل العامة للطرق والكباري

م/ السيد محمود عليوة

كوبرى ريجوا على مسار الخط الأول للقطار الكهربائى السريع (السخنة - القاهرة - الإسكندرية -العلمين - مطروح) من المحطة 189+498 إلى المحطة 189+635

بيان بالمعدات المتواجدة في عملية

المعدة	العدد
لودر(Caterpillar/972)	1
ونش (XCMG 25 TON)	1
حفار (Doosan DX 300)	1
مولد كهرباء	1
كوميريسور	1
هزاز دمك خرسانة	3

مدير المشروع

م / السيد محمود عليوة

أصل

كوبرى ريجوا على مسار الخط الأول للقطار الكهربائى السريع (السخنة - القاهرة - الإسكندرية -العلمين - مطروح) من المحطة 189+498 إلى المحطة 189+635

بيان بالمهندسين والمراقبين المتواجدين في عملية

الأسم	الوظيفة
السيد محمود عليوه	مدير المشروع
محمد عبدالمولى عبدالحميد	مهندس مدني
مختار محمد	مهندس ضبط جودة
احمد رشاد السيد	مهندس مساحة
أحمد محمود بدر ابراهيم	مراقب

مدير المشروع

م / السيد محمود عليوة

SUBMISSION OF DOCUMENTS

Contractor Company				Designer Company					
Issued by Contractor	Name	Sign		Date				Time	
				26/3/2023					
Received by ER		محرم باخوم	SUB	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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	RESULT OF CROSS HOLE TEST	

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT OF CROSS HOLE TEST FOOTING P1 PILE P8**	
2				
3				
4				
5				
6				

Comments by:	**Comments by**

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	محمد عبد الحوك			A
Designer				A
GARB *				
ER	Mohammad Gardoub			A
NAT				

Nile Engineering Consulting Bureau **N.E.C.B**
PROF.DR.ING/ FAROUK I.K. EL-KADI
DR.ING/ANWAR FAROUK EL-KADI
EXPERT HOUSE FOR ENGINEERING CONSULTANTS

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أ.د.مهندس/ فاروق إبراهيم كمال القاضي
دكتور مهندس / أنور فاروق القاضي
بيت خبرة إستشاري هندسي

Since1969

إسم العميل	: شركة النيل العامة للطرق والكباري
إسم المشروع	: كباري مسار القطار السريع - القطاع الثالث - كوبري ريجوا
الموضوع	: اختبارات CHUM
رقم الصادر	: E – 188
التاريخ	: 2023/03/26

تحيه طيبه وبعد ,,,

بالإشـارة إلى الموضوع عاليه، مرفق لسيادتكم عدد (2) نسخة من تقرير اختبارات (CHUM) الزيارة التى تمت بتاريخ 2023/03/13 - لعدد (1) خازوق

وتفضلوا سيادتكم بقبول فائق الإحترام ،،،

Nile Engineering Consulting Bureau
أ.د.م. أنور فاروق القاضي
بطاقة ضريبية ٢٢٢-٢٨٥-١٣٢

مكتب النيل الهندسي الاستشاري (مصـــــــــر)
د.مهندس/ انور فاروق القاضي
" العضو المنتدب "
مكتب النيل الهندسي الإستشاري

المرفقات :

- عدد (2) نسخة من التقرير.

N.E.C.B بيت خبرة هندسي استشاري
مكتب النيل الهندسي الإستشاري (مصر)
صادر م.ن رقم : E-١٨٨
رقم المشروع / التاريخ ٢٠٢٣/٣/٢٦
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تليفون: 22877600 -22700553 فاكس: 22750033
e-mail : necb.misr@necb-misr.net

CROSS-HOLE ULTRASONIC MONITOR (CHUM)

HIGH-SPEED RAIL BRIDGES (3RD SECTOR FROM NILE WEST TO ALAMEIN), REGWA BRIDGE

الهيئة العامة
للطرق و الكباري و النقل البري
(GARBLT)

ARAB CONSULTING ENGINEERS
MOHARRAM - BAKHOUM

الشركة الماجدة

Report on (1) Concrete Element(S)

Rev	Status	Date	Editor	Checked by
0	Final	13-MAR-2023	SHERIF SALAH, BSc	DR. ENG. A.F. EL – KADI

This report provides the factual results of the CHUM performed by NECB.

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مكتب النيل الهندسي الاستشاري
٢٣ ش هلسو النيل ثقة ٥١ مصر
هذا التقرير خاص لمشروع
رقم ——— تاريخ
ملف
ولا يجوز استخدامها لأي مشروع آخر ومن يخالف
ذلك يعرض للمساءلة القانونية

Document History

Title	NECB Ref.	Rev.	Status	Date	Remark
CSL Report	CSL080/0218/023	0	Formal/ Final	13-03-2023	-

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2) Measuring Technique 5
3) Tested Element(s) 5
4) 3-D Tomography output (Optional) 5
5) Conclusion 5
General Tips 6
ANNEXES 7
CHUM TEST RESULTS 8
3-D TOMOGRAPHY 9
CHUM Method Statement 10

1)Introduction

1.1 Upon the request of **"General Nile for Road& Bridges"** Cross Hole Ultra Sonic Monitoring (CHUM) following the Project Specifications executed to check the concrete homogeneous for (1) concrete element(s).

1.2 The testing activities can be summarized as follows:

Project /Location	**High-Speed Rail Bridges (3rd sector from Nile West to Alamein), Regwa Bridge**
Date /Time	13-Mar-2023
Witnessed	Project Engineer; and Client Engineer
NECB Staff	Mohamed Salah, Geotec. Mohamed Ali, Geotec.
No. of tests/Type	1/ Concrete Elements / Bored/ Cast-in situ
CHUM Patern	4 tubes, 6 logs (except if mentioned in item 3 below)
Tested Element (s) Information	As stated in item 3 below and annex 1

Fig. 1 CHUM in Progress

2) The Measuring Technique

2.1 The measuring and the interpretation of the test following ASTM specifications (D6760-17), and AFNOR NF P 94-160-1 (2000) are as shown in the attachments.

2.2 The test equipment (CHUM) manufactured by Piletest UK. The related data are in the attachments.

3) Tested Element(s)

3.1 The tested element (s) data, CHUM input and test output attached in annex 1.

3.2 (6) CHUM logs are available for the tested and reported element(s) arranged as shown in fig.2.

3.3 The tested element(s) have the following dimension:

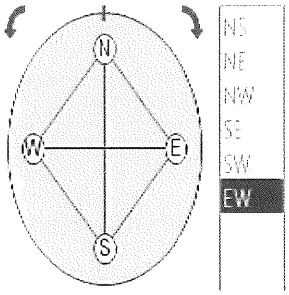


Fig 2 Element with 4 tubes (6 logs)

S	Pile ID	Type	Dimensions	Available CHUM tubes	Remark
1	P1-P8	Concrete pile	D1.2m / L40.0m	4 /4	-

4) 3-D Tomography output (Optional)

4.1 N/A.

5) Conclusion

Interpretation based on comparing both times interval vs. energy curves, and review wave velocities through test for the tested and reported element. The test results can summarized as follows:

5.1 Tested and reported pile # (**P1-8**) is free from any significant defects, has a homogeneous and good quality concrete, and **Integrity Accepted (up to the end of available CHUM pipes**).

5.2 CHUM results for the tested pile attached in Annex 1.

General Tips

1) Low wave velocities near the CHUM tubes zones mean non-uniform tube spacing (green color in 3D Tomography). That will not affect the test results.
2) The effective area in 3D Tomography is related to the concrete quality, not the element cross-section.
3) Preparing CHUM pipes for test is out of NECB`s scope of work.

Cairo, 13 Mar 2023

NILE ENGINEERING CONSULTING BUREAU
(MISR)
Dr. ENG. A. F. EL – KADI
CEO

مكتب النيل الهندسي الإستشاري
٢٣ ش قصر النيل القاهرة ٥١٠ مصر
ت: ٢٣٩٢١٨٨٠ فاكس: ٢٣٩٣٤٦٥٩
هذا التقرير خاص بمشروع
رقم ..... بتاريخ
ملحوظة: ..... لا يجوز استخدامها لأي مشروع آخر ومن يخالف ذلك يعرض للمساءلة القانونية ن م

ANNEXES

CHUM TEST RESULTS

Geotechnical QC&QA Department.
Subject : CHUM Final Report_ **High Speed Rail Bridges, 3rd Sector".**
To : **General Nile for Road& Bridges".**
NECB Ref. : CHUM080/0218/022.
Checked by : A. F. El-Kadi, PhD.

CHUM Summary

Pile ID	Profile	Measured length of pipes (m)	Apparent Wave Speed [m/s]	Remarks
P1-P8	12	39.74m	4980	Sound concrete without any significant defect. FAT is very good during the test.
	23	39.74m	4620	
	34	39.74m	4610	
	14	39.74m	4940	
	13	39.74m	4570	
	24	39.74m	4680	

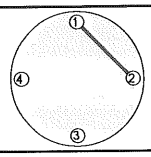
Geotechnical QC&QA Department.

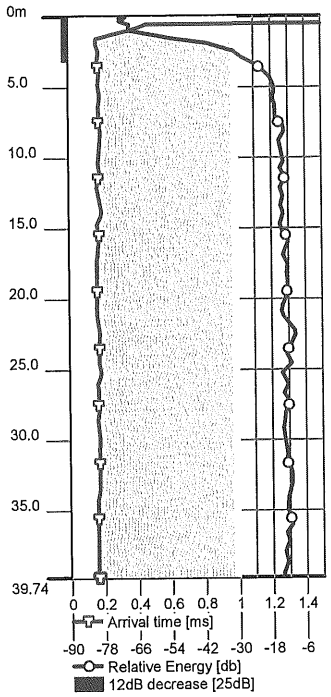
Subject : CHUM Final Report_ High Speed Rail Bridges, 3rd Sector".
To : General Nile for Road& Bridges".
NECB Ref. : CHUM080/0218/022.
Checked by : A. F. El-Kadi, PhD.

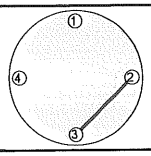
P1-P8

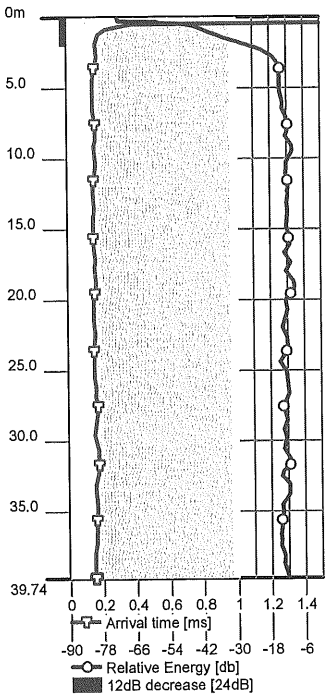
3/13/2023
Diameter: 1.20m

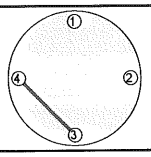
12	23	34
39.74m	39.74m	39.74m
Distance: 0.60m	Distance: 0.60m	Distance: 0.60m
Filter: 1	Filter: 1	Filter: 1

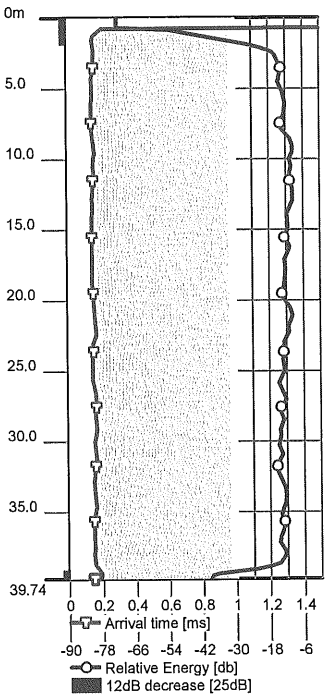












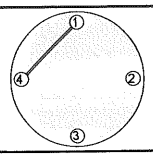
Geotechnical QC&QA Department.

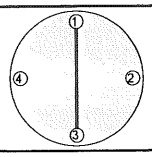
Subject : CHUM Final Report_ High Speed Rail Bridges, 3rd Sector".
To : General Nile for Road& Bridges".
NECB Ref. : CHUM080/0218/022.
Checked by : A. F. El-Kadi, PhD.

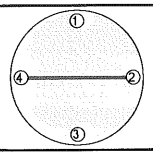
P1-P8

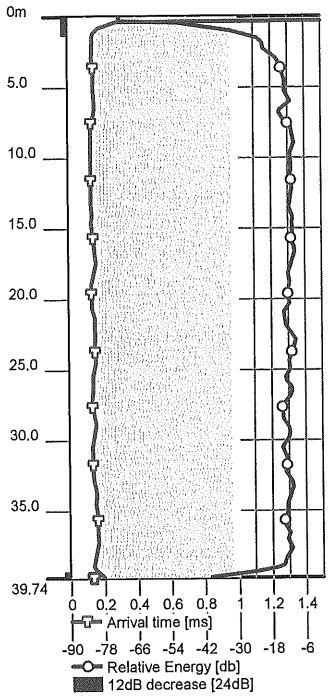
3/13/2023
Diameter: 1.20m

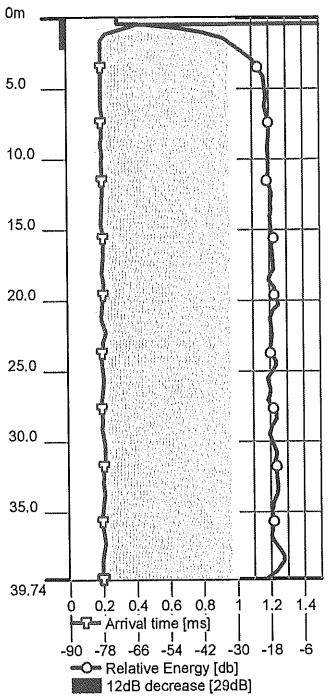
14	13	24
39.74m	39.74m	39.74m
Distance: 0.60m	Distance: 0.85m	Distance: 0.85m
Filter: 1	Filter: 1	Filter: 1

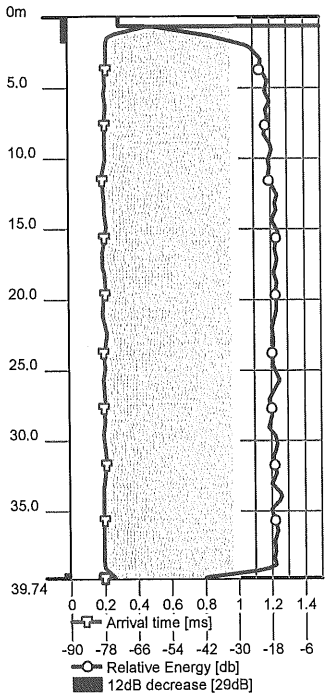












3-D TOMOGRAPHY

N/A

CHUM Method Statement

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5.	Data Processing Techniques	05
6.	Interpretation of results	05
7.	Equipment calibration	05

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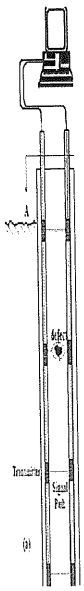
1) General

- Cross Hole Ultra Sonic Monitor (CHUM) test is for checking the integrity of newly placed drilled shafts, seal footings, and slurry or diaphragm walls. CHUM test relies on the propagation of ultrasonic waves between two or more access tubes to measure the velocity and signal strength of the propagated waves. The testing can be performed on any concrete foundation provided two or more access tubes or core holes capable of holding water are present in the foundation. CHUM can also be used to check the integrity of underwater concrete piers and foundations by strapping access tubes to the sides. Cross hole Tomography can be performed to image critical anomalies found in CHUM tests.
- CHUM tests are typically performed on concrete, particularly concrete drilled shafts. Other materials, which support the transmission of ultrasonic waves, can be tested, such as slurry, rock, grout, water-saturated media, and cemented radioactive wastes.



Standards for CHUM method include ASTM D6760 for integrity testing of concrete deep foundations and ACI 228.2R for NDE applications, and FLH 521.830 for determining pulse velocity through concrete in drilled shafts.

2) Access

- Access tubes must be installed before the construction of the drilled shaft for quality assurance purposes unless core holes are to be drilled in a forensic case.
- PVC or black steel tubes (U.S. schedule 40) are typically used. The tubes are 1.5 (steel tubes only) to 2 inches (38 to 50 mm) in diameter and are typically tied to the rebar cage to ensure close to vertical positions of the tubes.
- The typical tube thickness shall be between 2.0 to 3.0 mm.
- The tubes must extend at least 30cm

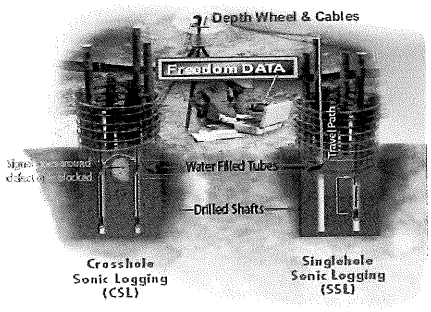


fig.2 System Installation

above the top of the shaft to compensate for the water displaced by the source, receiver, and cables and to allow for easy access. Tubes must be bonded to the concrete for good test results. To minimize de-bonding of tubes, water should be added immediately before or after concrete placement and the tubes should not be mechanically disturbed.

- At least two tubes are needed to perform CHUM test. For good coverage of the test shaft, the following number of tubes be installed is recommended:

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Shaft Diameter	Recommended Number Of Tubes	Tube Spacing
D < 2.5 ft (0.75m)	2 minimum	180 Degree
2.5 < D < 3.5 ft (1.0 m)	3 minimum	120 Degrees
3.5 < D < 5.0 ft (1.5 m)	4 minimum	90 Degrees
5.0 < D < 8.0 ft (2.5 m)	6 minimum	60 Degrees
8.0 < D <	8 minimum	45 Degrees

- The concrete in the shaft should normally be allowed at least (5) days to cure hardened concrete before testing. If "PVC" tubes are used, testing should be done within 10 days after the placement of concrete due to possible tube-concrete de-bonding.

  It is very important to fill tubes with clean water immediately before or within one hour after concrete placement. This action inhibits the de-bonding of concrete from the tube. Cap or Seal tube tops to keep out debris.

  Also, all CHUM tubes should be prepared using pure water and refilled using pure water at least 24 hr before starting the CHUM test.

  CHUM pipes should be leveld before start the test activities.

Tube Grouting

- After CHUM testing is completed and the engineer has accepted the shaft, withdraw the water from access tubes and any other drilled holes. Then fill tubes and holes completely with approved grout mix.

3) Data Collection

- In the CHUM test, the source is lowered to the bottom of one of the tubes, and the receiver is lowered to the bottom of another tube. The source and receiver are pulled simultaneously to allow the horizontal ultrasonic pulse velocity to be measured. A depth wheel controls the resolution of the collected data.
- Typically, the source is excited every 0.2 ft (6 cm) vertically and a measurement is taken. The source and receiver are pulled to the top of each shaft, thus giving a complete assessment of the concrete quality between the two tubes. CHUM tests are typically performed between all the perimeter tubes to check the perimeter of the shaft. Additional opposing diagonal CHUM tests are also performed to check the integrity of the inner core of the shaft. If there are more than 4 tubes and an anomaly is identified, CHUM tests may be performed of sub diagonal tube pairs to further define an anomaly. A pair of tubes can be logged and the results displayed in less than approximately 5 minutes. The Freedom data PC with the Cross hole Ultrasonic monitor system (CHUM) is used for the collection and analysis of CHUM data.

4) Testing Equipment and Tools

- Testing equipment fig. 3 consists of:
  - Heavy Duity Computer;
  - Two Hydro-phones;
  - Depth Controller wheel;and
  - Two Cables wheels;

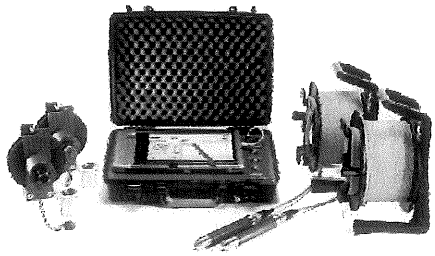


Fig.3 CHUM Equipment

PRO.DR.ING./ FAROUK.I.K.EL KADI
DR.ING. / ANWAR FAROUK EL KADI
Expert House Of Engineering Consultants

05 Dr. Abdel Hameed Lotfy Street
Po. Box 11371
Nasr City-Cairo-Egypt
Tel : +2-02-22877600
Fax : +2-02-22700553
E-mail : anwarfelkadi@gmail.com
Internet: www.necb-misr.net

5) Data Processing Techniques

- The collected data from CHUM measurements between two tubes at all depths are saved in one file. The file is scanned to determine first-wave arrival times and energy levels at all depths. A CHUM log shows either the arrival time (or velocity) and signals energy plots vs. depth.
- CHUM system can easily scan any concrete element with enough tubes pairs as mentioned in table 1 above. The quality of the results is affected by the quality bonding between both concrete and steel tubes.

6) Interpretation of results

- In uniform, good quality concrete, the travel time between vertical equidistant tubes will be relatively constant and correspond to reasonable concrete pulse velocity from the bottom to the top of the foundation (see fig. 4).

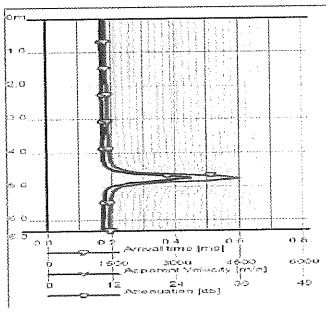
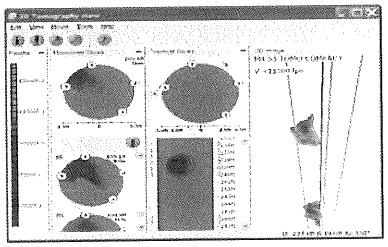


Fig. 4 CHUM interface (Arrival Time along pile lnegth , and Energy,

- CHUM test will also produce records with good signal amplitude and energy in good quality concrete. Longer travel times and lower amplitude/energy signals indicate the presence of irregularities such as poor quality concrete, void, honeycomb, and soil intrusions. In some severe defects, the signal may be completely lost.
- The variance in the arrival time between CHUM logs is due to the variance in tube spacing.

7) 3D Tomography (optional - fig. 5)



- 3D Tomography used for evaluate the concrete quality using wave velocity variation along pile length as follows:

I. Sound wave velocity over 4200m/s excellent concrete;.
II. Sound wave velocity over 3657m/s very good concrete;
III. Sound wave velocity 3048 to 3657m/s accept concrete and;
IV. Sound wave velocity less than 3048 m/s questionable concrete.

- The real concrete low quality or shaft defects be clear when receiving the same defective zone on both traveling time - energy curve and 3D tomography. otherwise maybe tube debonding or local ineffective low material quality.

8) Equipment calibration

- The latest calibration certificate for CHUM will attached in the final report.

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date				Time			
				7/9/2022							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (25))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved		Plant & equipment available		
Mix Approved		Back up equipment available		
Setting out Survey Approved		Cast in items secure		
Temp Works Approved		Access route clear		
Formwork Checked		Work area safe to progress		
Start Time for Pour: 1:30 pm		Concrete Volume: 51 m3		

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			7/9/2022	A

BAUER EGYPT | SYSTRA | ACE CONSULTING ENGINEERS MOHARRAM BAKHOUM | وزارة النقل

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	9
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	7/9/2022
Pile No.	P25	Structure	bridge	Pile Cutoff Level	-
Pier	P3	Ground Level	68.00	Pile Toe Level	28.907
Theoretical Pile Length from caisson level	40.53m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	39.09 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	69.435
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	67.107
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.33 m

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585399.934	830504.063
Actual	585399.941	830504.057
BAUER Survivor		

Geotechnical Log

0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

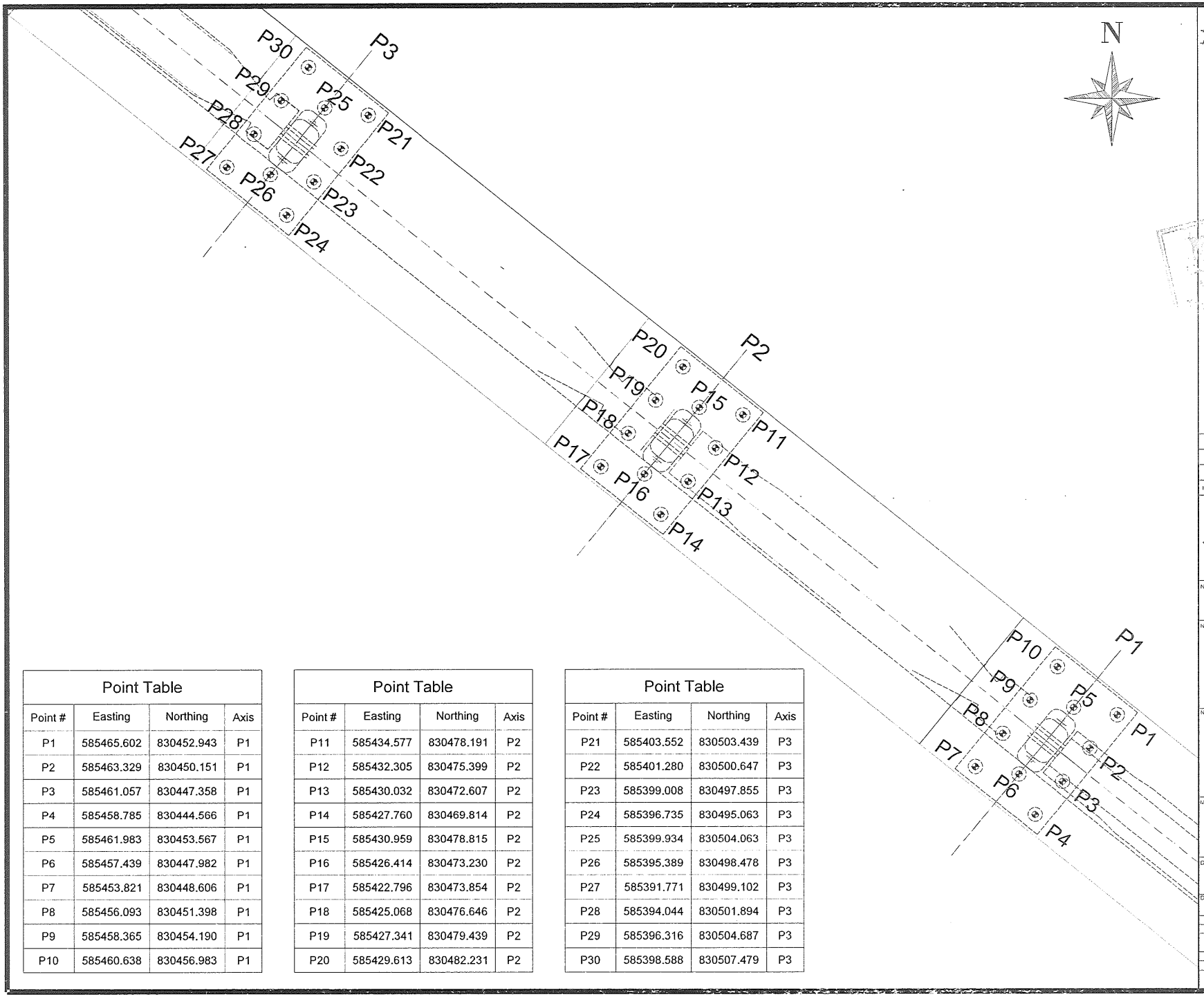
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.03
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	38
Sand Content %	Less than 4%	N/A	Less than 2%	0.75

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	6/9	12:30	15:30	Cleaning	-	-	-	
Install Cages	7/9	10:50	12:00	Pouring	7/9	13:30	14:42	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
PC0-00	08/2022	1 : 150
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alva	Eng.Mamdouh Salah	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashiell	Eng. Javier Torrico

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى وادى النطرون)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : Pile 25

Dimension : 15*15*15 cm

Date of casting : 05/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	05/09/2022	03/10/2022	28	8.661	118800	528	560
2	05/09/2022	03/10/2022	28	8.418	128900	573	
3	05/09/2022	03/10/2022	28	8.731	130400	580	

التوقيع: الأستشارى جودة المشروع

مهندس / أحمد عرابى
مدير المصنع

Head Office. : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٢٦٣٠١٤٥ / ٠٤٨ - ف: ٢٦٣٠١٤٠ / ٠٤٨
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B25

Dimension : 15*15*15 cm

Date of casting : 07/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	07/09/2022	14/09/2022	7	8.389	93580	416	454
2	07/09/2022	14/09/2022	7	8.451	104700	465	
3	07/09/2022	14/09/2022	7	8.524	108200	481	

التوقيع:

مركز هليوبوليس

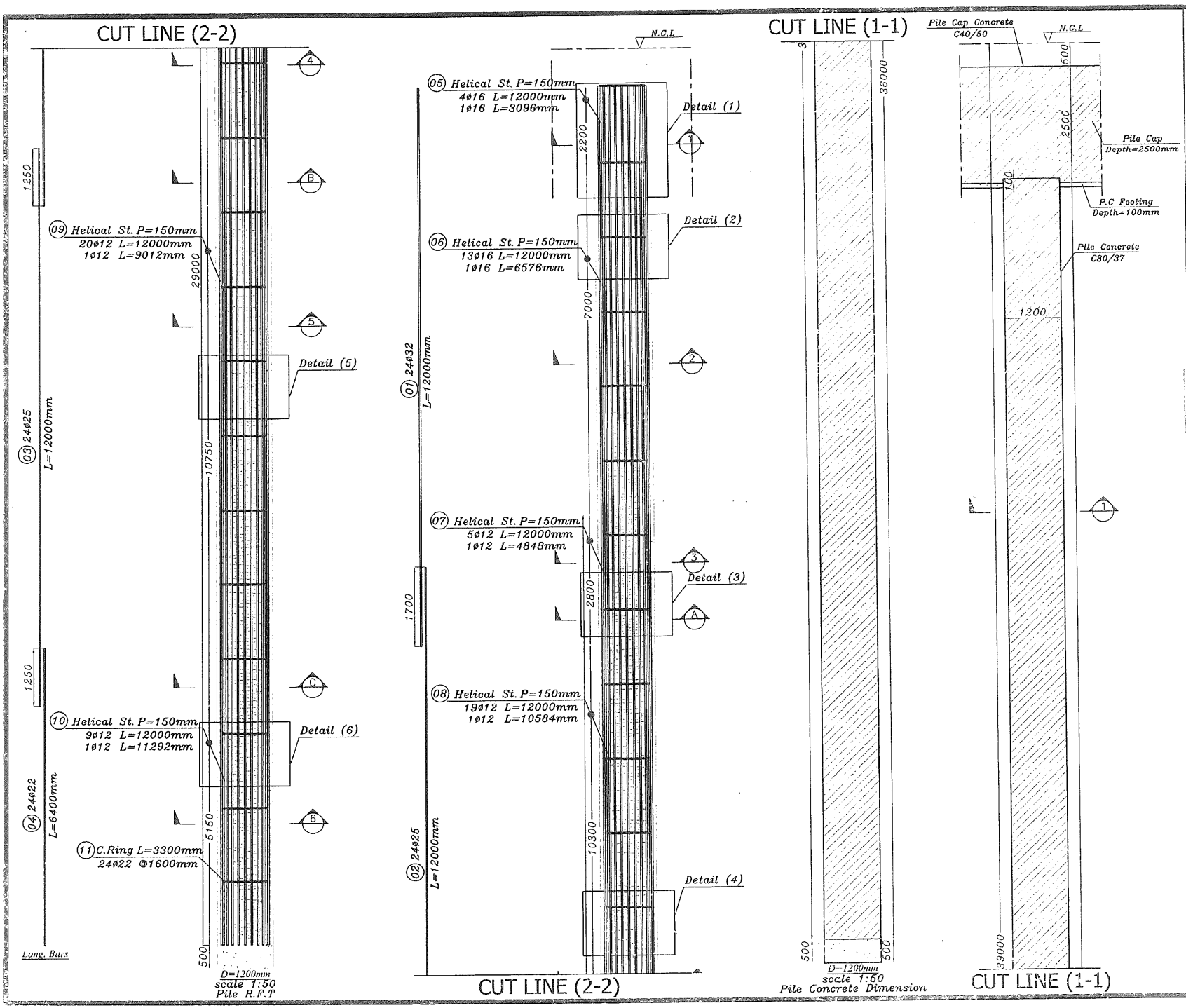
الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

مهندس/ أحمد عرابى
مدير المصنع

Head Office : 41 Losaka st. - Second Floor - Flat 3 Mohamed El-Maqrief st.
Nasr City - / Telfax: 26772572
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : ٤١ش لوساكا - الدور الثاني شقة ٣ - متفرع من ش محمد المقريف
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٢٦٣٠١٤٥ / ٠٤٨ - ف : ٢٦٣٠١٤٠ / ٠٤٨
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website : www.alamalreadymix.com



GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings, all information should be taken as completed
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup (B) and (C) = 640mm
- Lap Splice Between Helical Stirrup (B) and (D) = 640mm
- Lap Splice Between Helical Stirrup (B) and (D) = 480mm

All Levels should be revised before construction in site

ABBREVIATION :

-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab Houses of Engineering

NO.	DATE	ENG.	REVISION
0	31-05-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

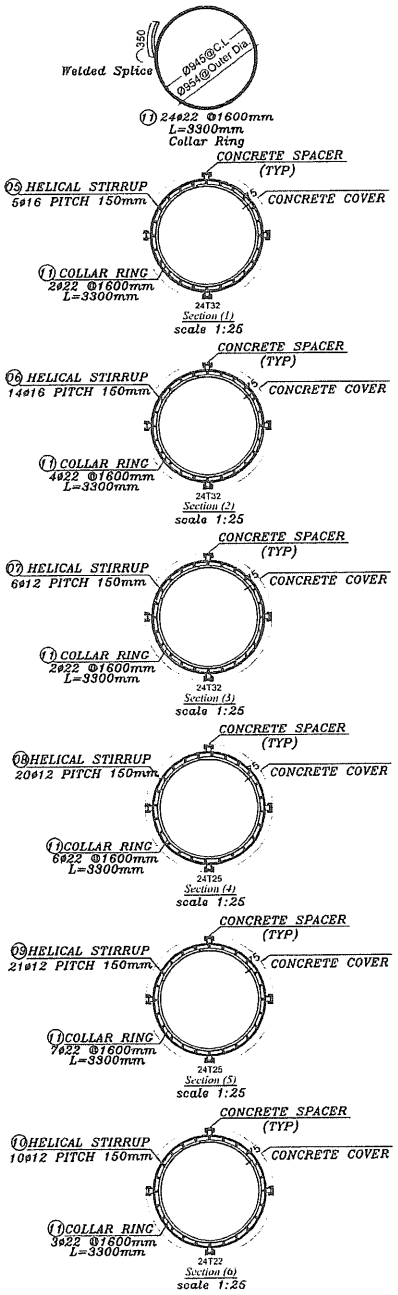
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

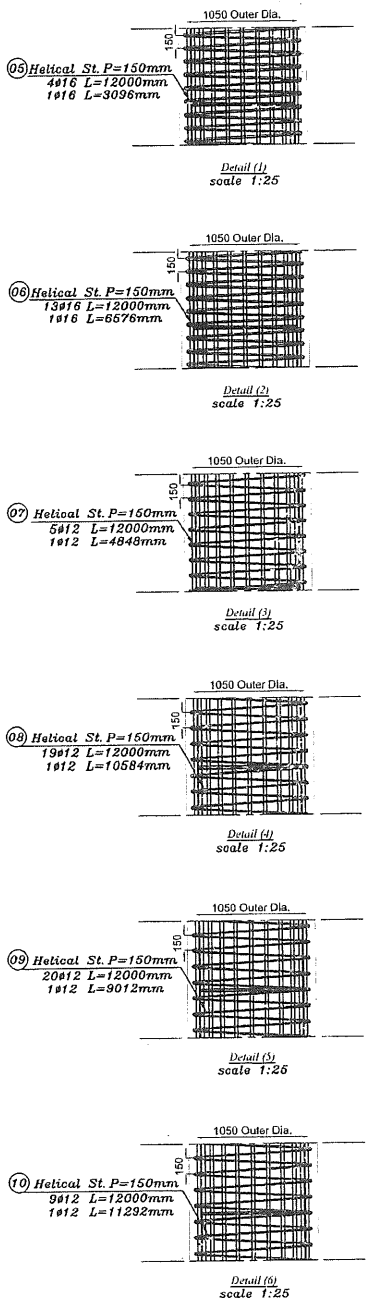
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

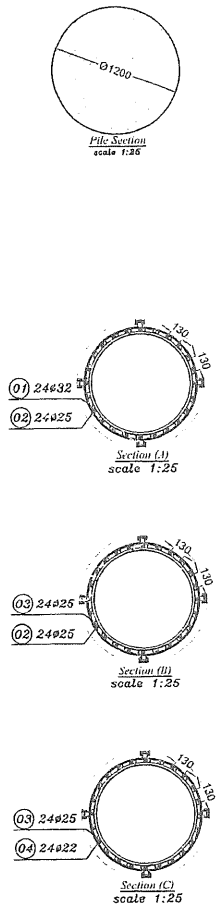
MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SD-110-001-PIE-E00	05-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fouzy	ENG. Abdullah Mahsen	ENG. Mamdouh Sulah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashein		Eng. Jaafar Turkoo







GENERAL NOTES

- All dimensions are in millimeters
- Do not measure from drawings. All dimensions should be verified on site
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup (05) and (06) : 1 Bar/mm
- Lap Splice Between Helical Stirrup (06) and (07) : 1 Bar/mm
- Lap Splice Between Helical Stirrup (08) and (09) : 48 Bar/mm

All Levels should be revised before construction in site

ABBREVIATION :

-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel: +20 2 26 [illegible]

NO.	DATE	ENG.	REVISION
0	04-01-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR:
الشركة القابضة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SD-110-002-PIE-E02	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Rabah Farazy	ENG. Abdullah Mohsen	ENG. Mostafa Saleh

SUPERVISOR:	APPROVED BY:
DR. Mahmoud Lashen	Eng. Javier Tuesca

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering
Tel: +2027910155
C-C 1343
١٥

GENERAL NOTES:

- All dimensions are in mm unless
- Do not measure from drawing. All dimensions should be read or requested
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover: 75 mm
- Lap Splice Between Helical Stirrup (Ø) and (Ø) is 40 mm
- Lap Splice Between Helical Stirrup (Ø) and (Ø) is 60mm
- Lap Splice Between Helical Stirrup (Ø) and (Ø) is 80mm

All Levels should be revised before construction in site

ABBREVIATION :
- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINATION

HSRE-V001-CC-210-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	31-07-2022	MAB	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1059

OWNER: المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :
الشركة القابضة

DWG. TITLE.
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-110-003-PIE-E00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mahsen	ENG. Mamdouh Saleh
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashaan	Eng. Javier Tovico	

REQUEST to POUR CONCRETE

Contractor Company				Designer Company					
Issued by Contractor	Name	Sign		Date				Time	
				5/9/2022					
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة								

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (26))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved			Plant & equipment available	
Mix Approved			Back up equipment available	
Setting out Survey Approved			Cast in items secure	
Temp Works Approved			Access route clear	
Formwork Checked			Work area safe to progress	
Start Time for Pour: 12:59 pm			Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			5/9/2022	A

BAUER EGYPT | SYSTRA | AC CONSULTING ENGINEERS MOHARRAM BAKHOUM | وزارة النقل

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	7
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	5/9/2022
Pile No.	P26	Structure	bridge	Pile Cutoff Level	-
Pier	P3	Ground Level	68.00	Pile Toe Level	28.907
Theoretical Pile Length from caisson level	40.37 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	39.09 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	69.280
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	67.107
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.17m

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585395.389	830498.478
Actual	585395.398	830498.485
BAUER Survivor		

Geotechnical Log

0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

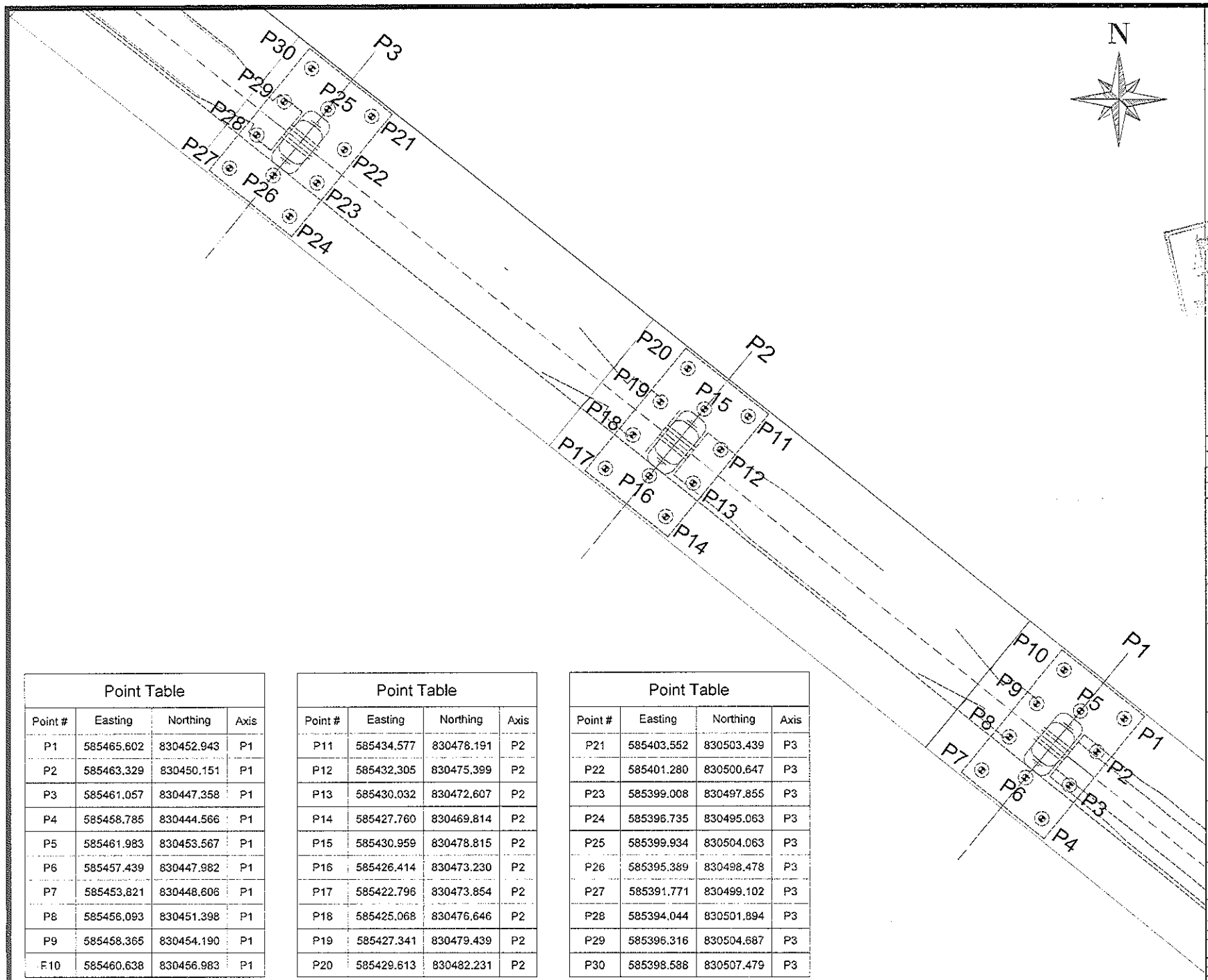
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.03
Viscosity(Sec.)	30:70 Sec.	36	≤90 Sec.	38
Sand Content %	Less than 4%	N/A	Less than 2%	1.2

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	4/9	13:30	19:35	Cleaning	-	-	-	
Install Cages	5/9	10:43	12:05	Pouring	5/9	12:59	14:17	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER — المالك

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT
FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG. NO.	DATE	SCALE
PCC-00	08/2022	1 : 150

DRAWING BY	DESIGNED BY	CHECKED BY
Eng. Khaled Alaa	Eng. Mamdouh Saleh	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashein	Eng. Jamal Tonkou

Point Table

Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table

Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table

Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى وادى النطرون)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B26

Dimension : 15*15*15 cm

Date of casting : 05/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	05/09/2022	12/09/2022	7	8.630	104400	464	453
2	05/09/2022	12/09/2022	7	8.560	99360	442	
3	05/09/2022	12/09/2022	7	8.687	101900	453	

التوقيع:

مهندس / أحمد عرابى
مدير المصنع

مركز هليوبوليس

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

تامر سالم

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile 26
Dimension	:	15*15*15 cm
Date of casting	:	07/09/2022
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	05/09/2022	03/10/2022	28	8.557	130900	582	564
2	05/09/2022	03/10/2022	28	8.491	119400	531	
3	05/09/2022	03/10/2022	28	8.661	130400	580	

التوقيع:

الأستشارى

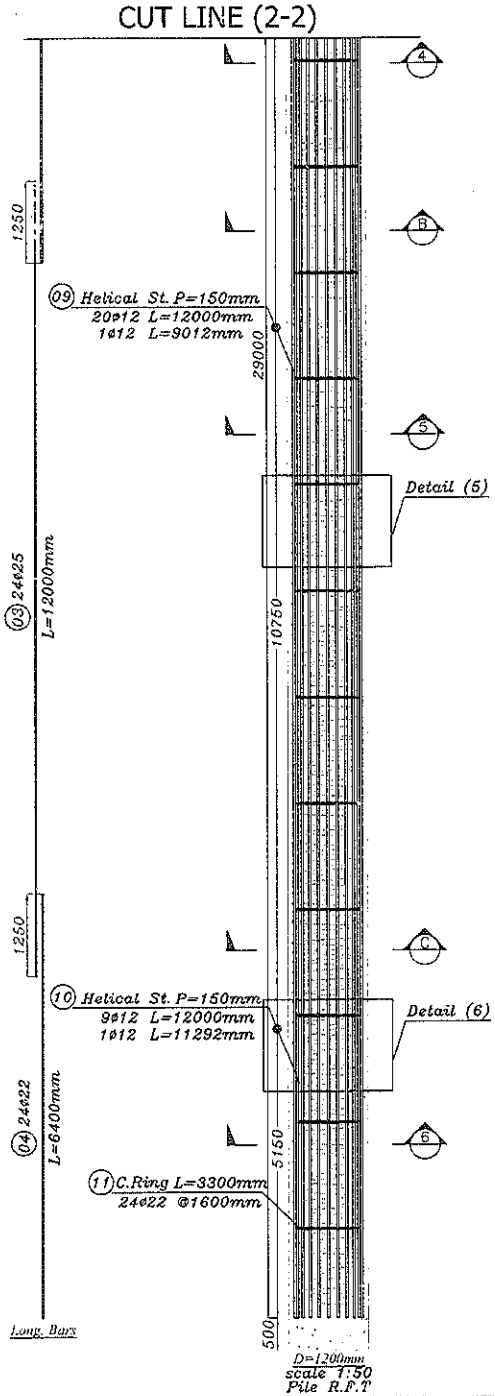
جودة المشروع

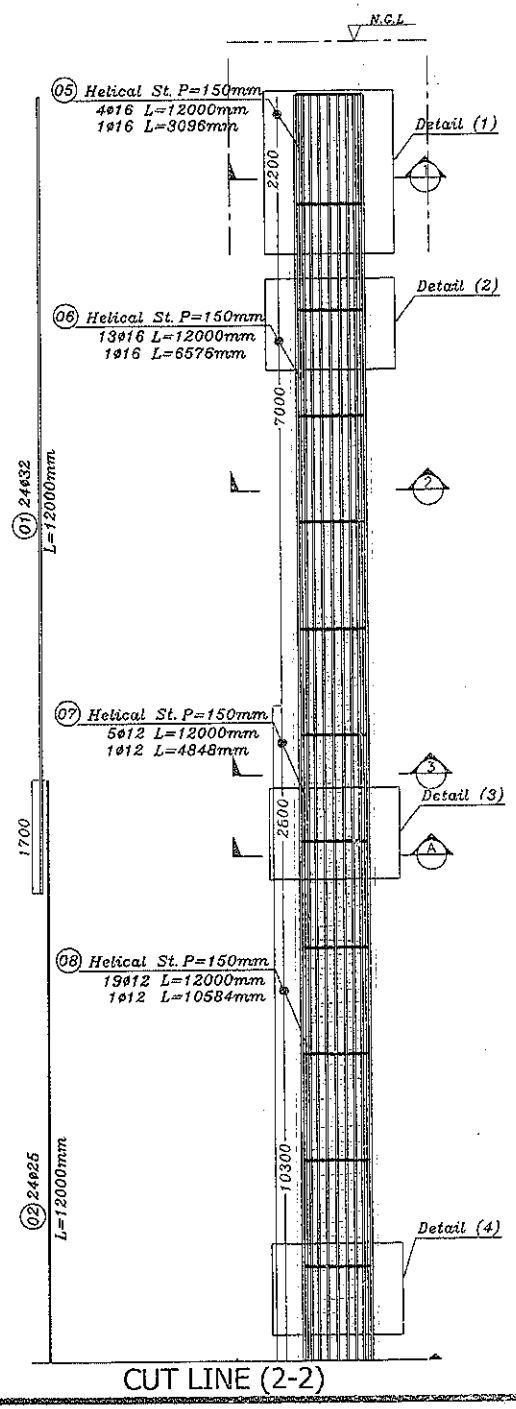
مهندس / أحمد عرابى
مدير المصنع

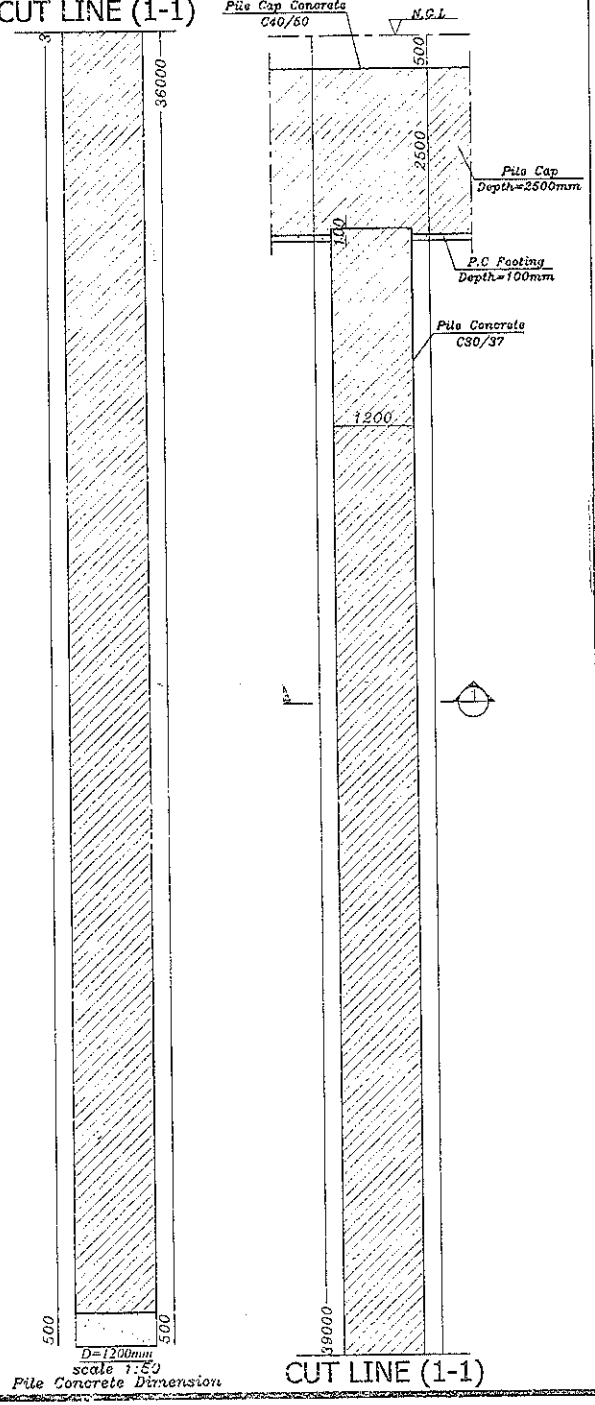
الأمل للخرسانة الجاهزة

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497
E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

الإدارة : إيجيبت ميديكال سنتر- مدينة نصر- المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨/٢٦٣٠١٤٥ - ف: ٠٤٨/٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧







GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings, all measurements should be taken on site
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 70mm
- Lap Splice Between Helical Stirrup (1) and (2) = 640mm
- Lap Splice Between Helical Stirrup (3) and (4) = 640mm
- Lap Splice Between Helical Stirrup (5) and (6) = 640mm

All Levels should be revised before construction in site

ABBREVIATION :

-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1 DEFINITION
HSRE-V001-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3 REINFORCEMENT (1)

Arab House of Engineering
Tel: +2027010451

NO.	DATE	ENG.	REVISION
0	11-01-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED - RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

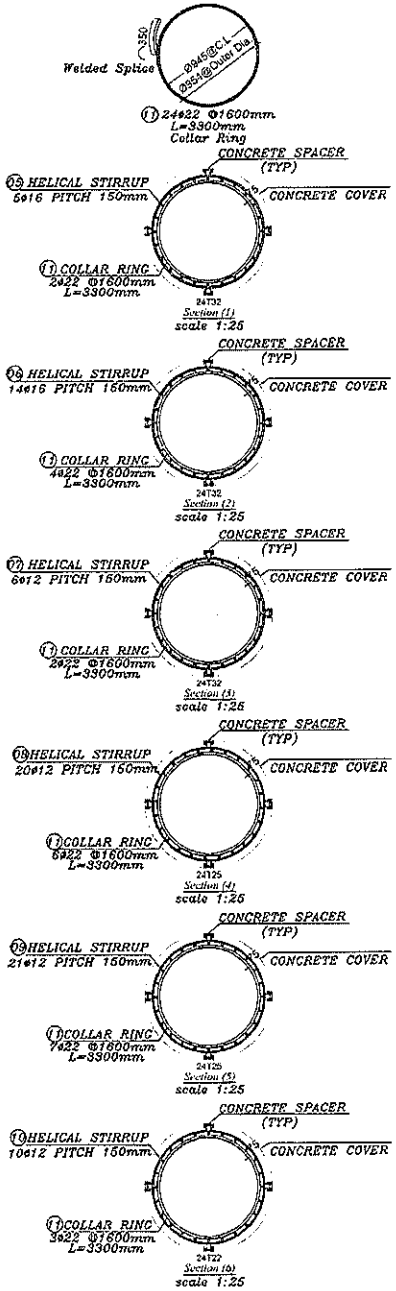
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

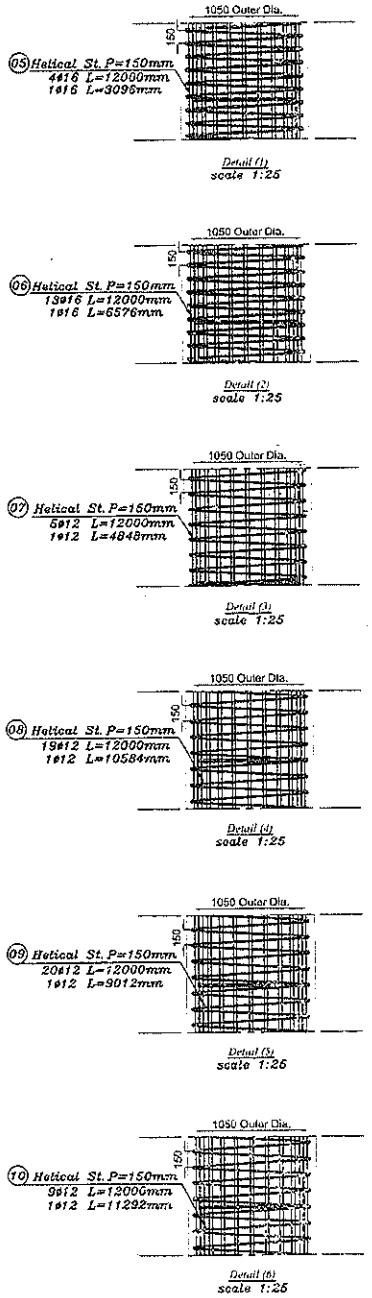
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

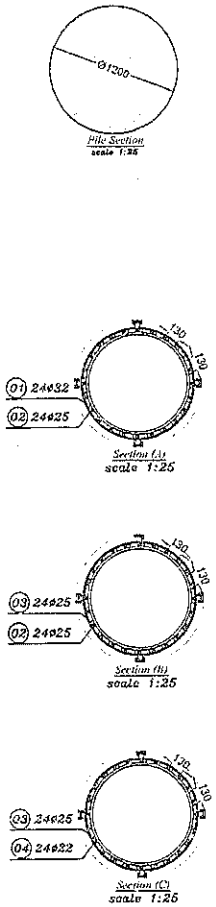
MAIN CONTRACTOR :
الشركة القابضة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG NO :	DATE:	SCALE:
HSRE-V001-SD-110-001-P01-E00	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Ralem Fawzy	ENG. Abdullah Mohsen	ENG. Alaaeldeen Sabah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Gashawa		Eng. Jaber Tushko







GENERAL NOTES

- All dimensions are in millimeters
- Do not scale drawings strictly. All dimensions should be read or computed.
- Pile Concrete Cover - Pile Cap Concrete Cover
- Cover to Steel 75mm
- Lap Splice Between Helical Stirrup (05) and (06) = 40 diam
- Lap Splice Between Helical Stirrup (06) and (07) = 40 diam
- Lap Splice Between Helical Stirrup (07) and (08) = 40 diam

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-002	REGWA ROAD BRIDGE GENERAL NOTES AND LEGEND 1, DEFINITION
HSRE-V001-CC-210-002-PIS-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	[illegible]	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1009

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARDET

وزارة النقل

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKESH

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-210-002-PIS-H00	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVIEWED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mahrous	ENG. Mostafa Saleh
		mas
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashen	Eng. Ashraf Tawfiq	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering

GENERAL NOTES:

- All dimensions are in millimeters.
- Do not measure from drawings. All measurements should be taken on site.
- Pile Cap Concrete C40/50 - Pile Cap Steel Rebar B500
- Concrete cover 75mm
- Lap Splice Between Vertical Stirrup 50 and 60 is 1040mm
- Lap Splice Between Helical Stirrup 50 and 60 is 1040mm
- Lap Splice Between Helical Stirrup 50 and 60 is 1410mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VDO1-CC-010-001-NOT-002 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION

HSRE-VD01-CC-210-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	14-09-2022	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1009

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CARDLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALMARIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAIKEN

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :
الشركة القابضة

DWG. TITLE
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BAND SHOP DRAWING

DWG NO.	DATE:	SCALE:
HSRE-VD01-SD-110-003-PIE-R00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Evlyn Fawzy	ENG. Abdullah Mohsen	ENG. Mamdouh Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashien		Eng. Anwar Tawfik

REQUEST to POUR CONCRETE

Contractor Company				Designer Company						
Issued by Contractor	Name	Sign		Date				Time		
				7/9/2022						
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة									

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (25))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved			Plant & equipment available	
Mix Approved			Back up equipment available	
Setting out Survey Approved			Cast in items secure	
Temp Works Approved			Access route clear	
Formwork Checked			Work area safe to progress	
Start Time for Pour: 1:30 pm			Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			7/9/2022	A

BAUER EGYPT SYSTRA

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	9
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	7/9/2022
Pile No.	P25	Structure	bridge	Pile Cutoff Level	-
Pier	P3	Ground Level	68.00	Pile Toe Level	28.907
Theoretical Pile Length from caisson level	40.53m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	39.09 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	69.435
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	67.107
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.33 m

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585399.934	830504.063
Actual	585399.941	830504.057
BAUER Survivor		

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

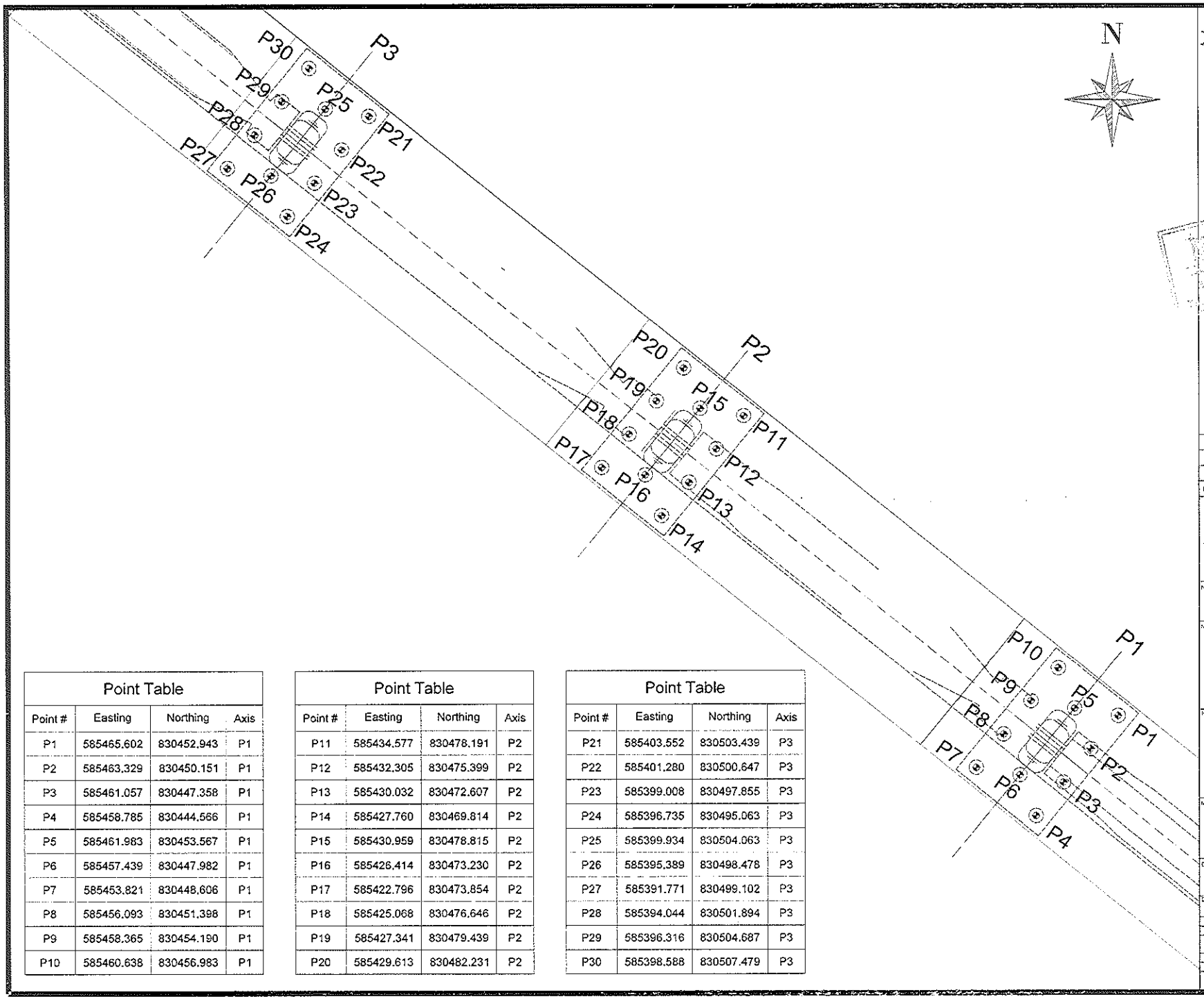
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.03
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	38
Sand Content %	Less than 4%	N/A	Less than 2%	0.75

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	6/9	12:30	15:30	Cleaning	-	-	-	
Install Cages	7/9	10:50	12:00	Pouring	7/9	13:30	14:42	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	06/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CARELT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG NO.	DATE	SCALE
PC0405	06/2022	1 : 150
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mamdouh Salah	
SUPERVISOR		APPROVED BY
DR. Mahmoud Lashin		Eng. Javier Torres

Point Table

Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table

Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table

Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى وادى النطرون)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : Pile 25

Dimension : 15*15*15 cm

Date of casting : 05/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	05/09/2022	03/10/2022	28	8.661	118800	528	560
2	05/09/2022	03/10/2022	28	8.418	128900	573	
3	05/09/2022	03/10/2022	28	8.731	130400	580	

التوقيع: الأستشارى جودة المشروع

مهندس / أحمد عرابى
مدير المصنع

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ٦٠ مليون جنيه
والمصدر ٢٥ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	خازوق B25
Dimension	:	15*15*15 cm
Date of casting	:	07/09/2022
MIX DESIGN STRENGTH :		370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	07/09/2022	14/09/2022	7	8.389	93580	416	454
2	07/09/2022	14/09/2022	7	8.451	104700	465	
3	07/09/2022	14/09/2022	7	8.524	108200	481	

التوقيع:

مركز هليوبوليس

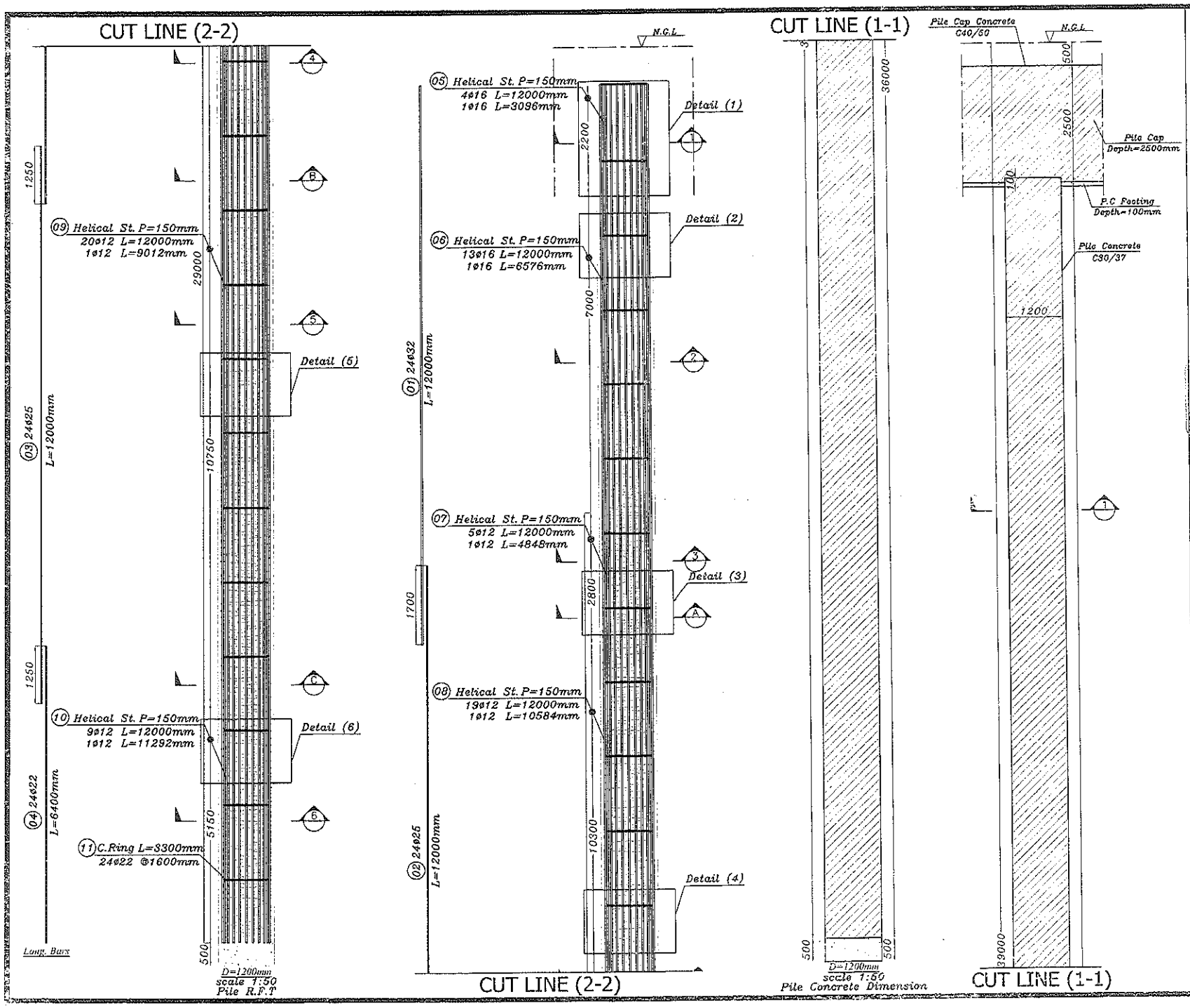
الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

مهندس/ أحمد عرابى
مدير المصنع

Head Office : 41 Losaka st. - Second Floor - Flat 3 Mohamed El-Maqrief st.
Nasr City - / Telfax: 26772572
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : ٤١ش لوساكا - الدور الثاني شقة ٣ - متفرع من ش محمد المقريف
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website : www.alamalreadymix.com



GENERAL NOTES:

- All dimensions are millimeters
- Do not measure from drawings. All dimensions should be taken at construction
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice between Helical Stirrup Ⓐ and Ⓒ is 1,000mm
- Lap Splice between Helical Stirrup Ⓑ and Ⓓ is 1,000mm
- Lap Splice between Helical Stirrup Ⓒ and Ⓔ is 1,000mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E01 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1 DEMNITION

HSRE-V001-CC-210-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3 REINFORCEMENT [1]

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	11-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1669

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

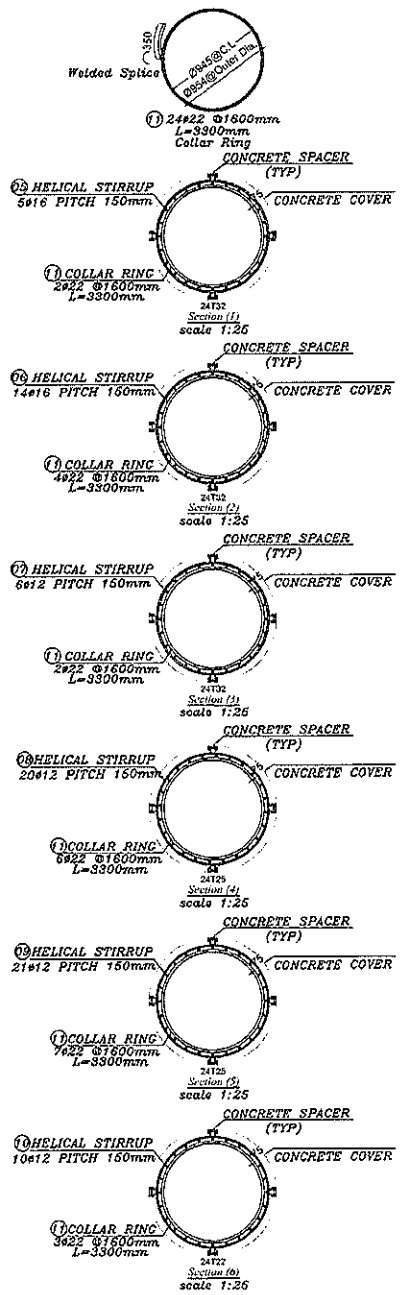
FHECOR Ingenieros Consultores

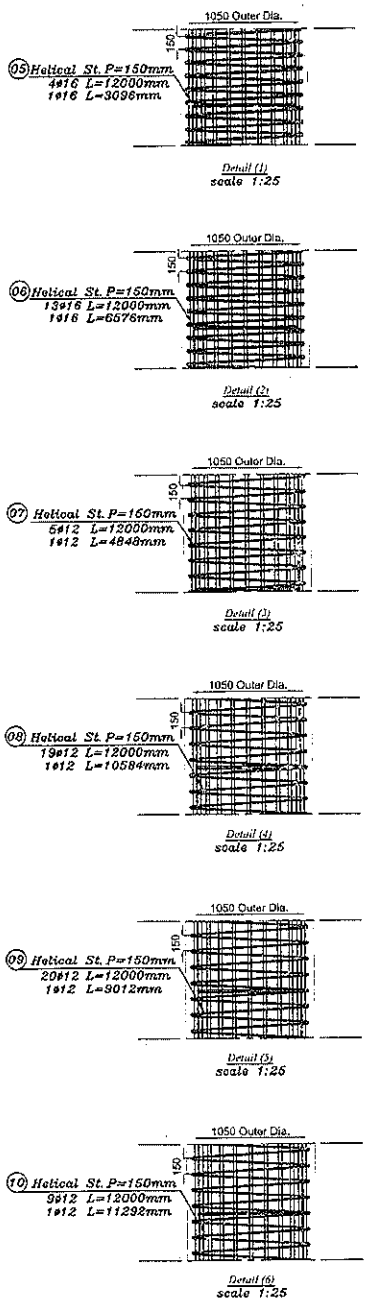
MAIN CONTRACTOR:

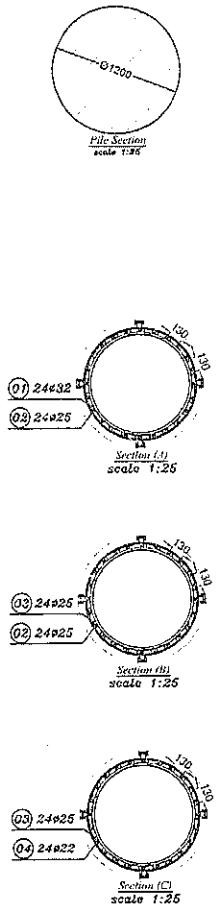
DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-110-001-PIE-E06	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Mostafa Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lotfiema	Eng. Jadal Tunkar	







GENERAL NOTES:

- All dimensions in millimeters
- Do not scale drawing. All dimensions should be followed or computed.
- Pile Concrete C35/P37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup (Φ16) and (Φ12) 1.4 Meter
- Lap Splice Between Helical Stirrup (Φ16) and (Φ22) 1.4 Meter
- Lap Splice Between Helical Stirrup (Φ12) and (Φ22) 1.4 Meter

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRC-V001-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRC-V001-CC-010-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel: +202761 0435

NO.	DATE	ENG.	REVISION
0	26-07-2022	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. NK9

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
وزارة النقل

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRC-V001-SD-110-002-PIE-E02	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdullah Mohsen	ENG. Mawdoud Saleh
		mag
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashram	Eng. Junaid Tariko	

REQUEST to POUR CONCRETE

Contractor Company				Designer Company					
Issued by Contractor	Name	Sign		Date				Time	
				30/8/2022					
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة								

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (27))		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: 7:38 pm		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			30/8/2022	A

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	3
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	30/8/2022
Pile No.	P27	Structure	bridge	Pile Cutoff Level	-
Pier	P3	Ground Level	68.00	Pile Toe Level	28.907
Theoretical Pile Length from caisson level	40.75 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	39.09 m	Theoretical Concrete Q	46.05 m³	Temporary Casing Level	69.660
Act. Drilling Length	41 m	Act. Concrete Q	50.5 m³	Steel Top Level	67.107
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.55 m

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585391.771	830499.102
Actual	585391.764	830499.105
BAUER Survivor		

Geotechnical Log

0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

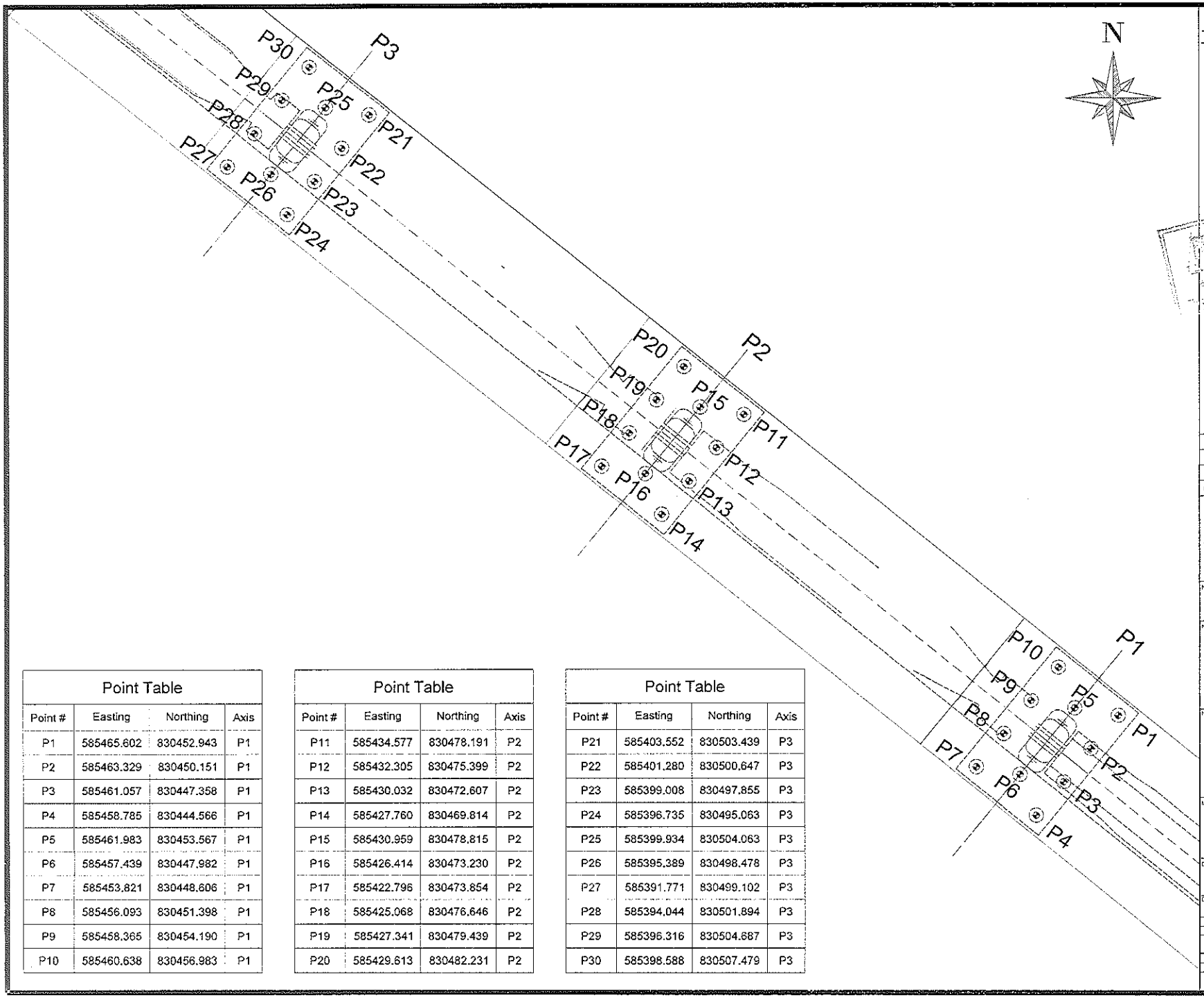
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.03
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	36
Sand Content %	Less than 4%	N/A	Less than 2%	1.50

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	30/8	11:18	16:43	Cleaning	-	-	-	
Install Cages	30/8	17:20	18:34	Pouring	30/8	19:38	21:15	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
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P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
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P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
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P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
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P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT
FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
PCO-00	08/2022	1 : 100
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Aisa	Eng.Mamdouh Saleh	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashour	Eng. Jasser Tamim

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B27

Dimension : 15*15*15 cm

Date of casting : 30/08/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	30/08/2022	27/09/2022	28	8.451	130300	579	566
2	30/08/2022	27/09/2022	28	8.378	128600	572	
3	30/08/2022	27/09/2022	28	8.521	122900	546	

التوقيع:

الأستشارى

جودة المشروع

مهندس / أحمد عرابى
مدير المصنع

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	خازوق B27
Dimension	:	15*15*15 cm
Date of casting	:	30/08/2022
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	30/08/2022	03/09/2022	4	8.667	88640	394	393
2	30/08/2022	03/09/2022	4	8.671	89770	399	
3	30/08/2022	03/09/2022	4	8.499	86980	387	

التوقيع:
مهندس / أحمد عرابى
مدير المصنع

مركز هليوبوليس

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
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01028459673 - 01006880635 - 01004976497
E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	خازوق B27
Dimension	:	15*15*15 cm
Date of casting	:	30/08/2022
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	30/08/2022	06/09/2022	7	8.388	89800	399	420
2	30/08/2022	06/09/2022	7	8.643	97820	435	
3	30/08/2022	06/09/2022	7	8.592	95940	426	

التوقيع:

مهندس / أحمد عرابى

مدير المصنع

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
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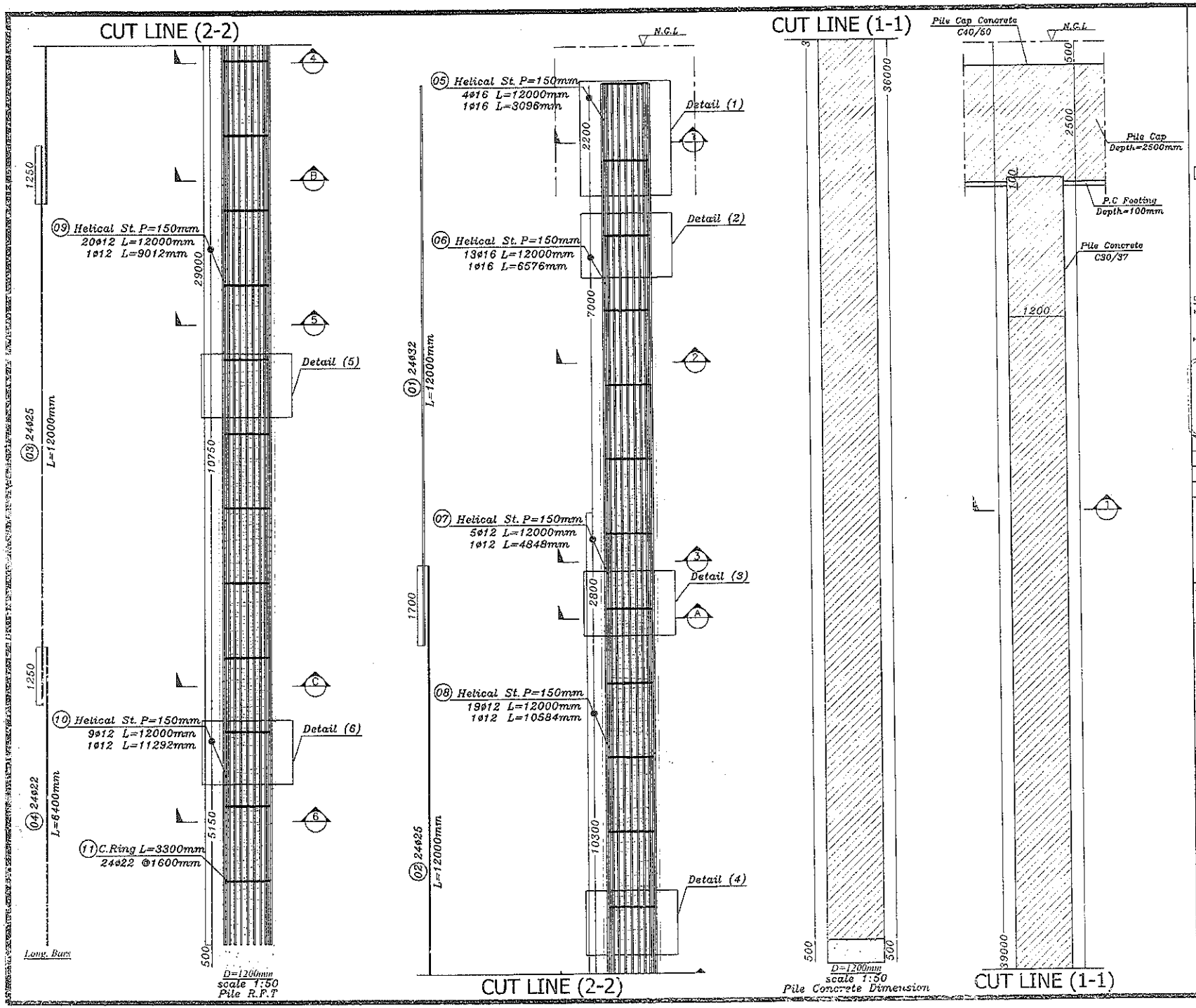
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com



GENERAL NOTES:

- All dimensions are in millimeters.
- Do not measure from drawings. All dimensions should be read or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete Cover 75mm
- Lap Splice Between Vertical Stirrup (10) and (10) is 1400mm
- Lap Splice Between Helical Stirrup (10) and (10) is 1400mm
- Lap Splice Between Helical Stirrup (10) and (12) is 1400mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSNE-V001-CC-010-001-NOT-E01	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSNE-V001-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	11-07-2022	MAN	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1869

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -TAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

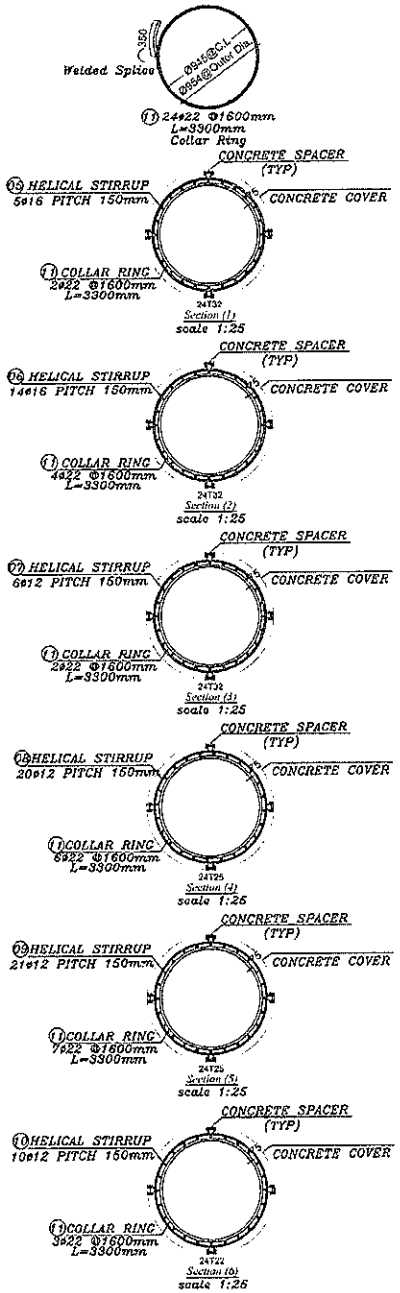
FHECOR Ingenieros Consultores

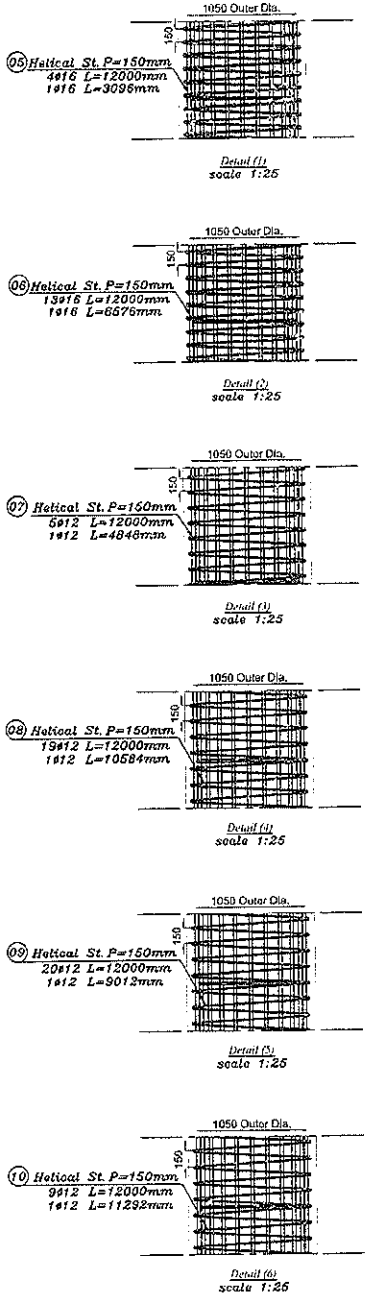
MAIN CONTRACTOR:

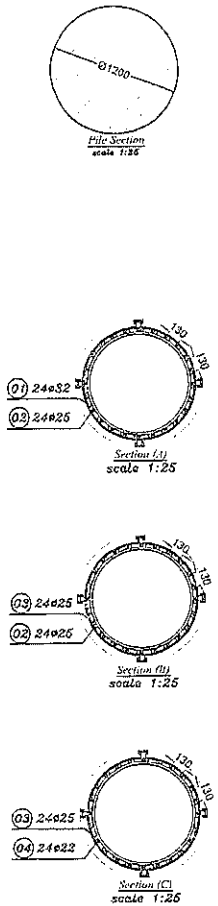
DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO:	DATE:	SCALE:
HSNE-V001-SO-210-003-PIE-F50	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Rabah Fawzy	ENG. Abdallah Mahmoud	ENG. Mamdouh Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashin		Eng. Jaber Ibrahim







GENERAL NOTES:

- All dimensions are in millimeters.
- Do not measure from drawing. All dimensions shall be verified on site.
- Pile Concrete C35/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup (05) and (06) is 640mm
- Lap Splice Between Helical Stirrup (06) and (07) is 640mm
- Lap Splice Between Helical Stirrup (08) and (09) is 640mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-GC-010-001-F001-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-210-002-P15-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel: +20270154135

NO.	DATE	ENG.	REVISION
0	[illegible]	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. [illegible]

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

الوجه القبلية

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-110-001-P1R-R00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Bakari Fawzy	ENG. Abdullah Mohsen	ENG. Mamdouh Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashram	Dr.Eng. Jamal Tawfiq	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Φ12	Φ16	Φ22	Φ25	Φ32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GECTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering

GENERAL NOTES:

All Levels should be revised before construction in site

ABBREVIATION :
- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

H0RE-V001-CC-010-001-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION

H0RE-V001-CC-210-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	01-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.	DATE:	SCALE:
H0RE-V001-SD-110-003-PIE-S02	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eldin Fawzy	ENG. Abdallah Mokhtar	ENG. Mamdouh Galeb
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashaan		Engr. Jovian Tawfik

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date						Time	
				12/9/2022							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (28))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved		Plant & equipment available		
Mix Approved		Back up equipment available		
Setting out Survey Approved		Cast in items secure		
Temp Works Approved		Access route clear		
Formwork Checked		Work area safe to progress		
Start Time for Pour: 6:40 pm		Concrete Volume: 51 m3		

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			12/9/2022	A

BAUER EGYPT | SYSTRA | ACE CONSULTING ENGINEERS MOHAB RAM BARHOUM | وزارة النقل

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	13
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	12/9/2022
Pile No.	P28	Structure	bridge	Pile Cutoff Level	-
Pier	P3	Ground Level	68.00	Pile Toe Level	28.907
Theoretical Pile Length from caisson level	40.742 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	39.09 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	69.649
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	67.107
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.54

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585394.044	830501.894
Actual	585394.052	830501.886
BAUER Survivor		

Bentonite Slurry Test

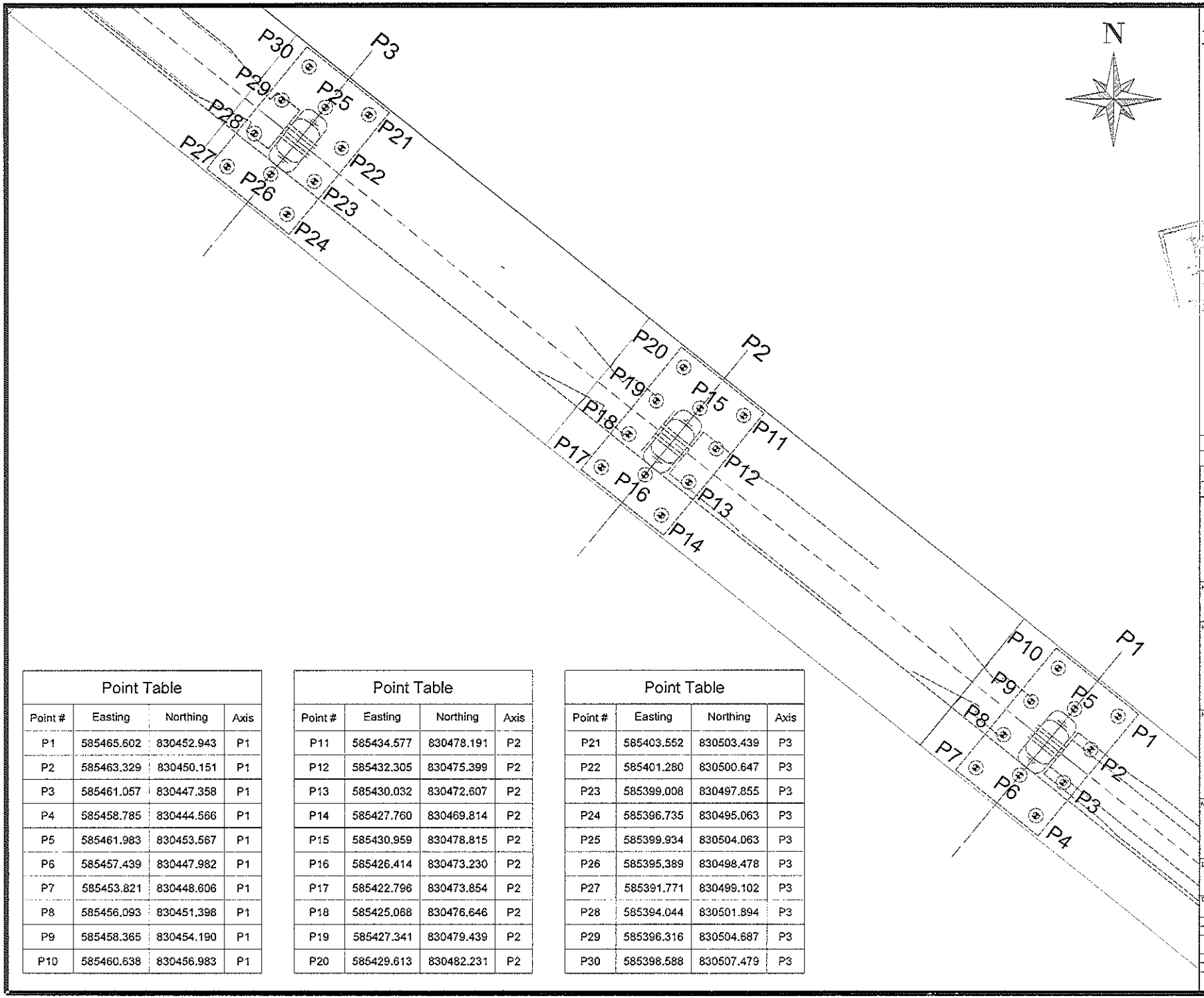
Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.03	Less Than 1.5	1.06
Viscosity(Sec.)	30:70 Sec.	35	≤90 Sec.	38
Sand Content %	Less than 4%	N/A	Less than 2%	1

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	12/9	9:10	16:00	Cleaning	-	-	-	
Install Cages	12/9	16:30	17:20	Pouring	12/9	18:40	20:10	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NOTES:
-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	09/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT
FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
PC0-00	09/2022	1 : 100
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Hamdouh Salah	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lotfeen	Dr. [illegible]

At Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ٦٠ مليون جنيه
والمصدر ٢٥ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	خازوق B28
Dimension	:	15*15*15 cm
Date of casting	:	12/09/2022
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	12/09/2022	19/09/2022	7	8.418	107600	478	482
2	12/09/2022	19/09/2022	7	8.537	101800	452	
3	12/09/2022	19/09/2022	7	8.501	116100	516	

التوقيع:

جودة المشروع

الأستشارى

مهندس / أحمد عرابى
مدير المصنع

Head Office : 41 Losaka st. - Second Floor - Flat 3 Mohamed El-Maqrief st.
Nasr City - / Telfax: 26772572
Planet : New Cairo - Katamia - Pfart 82 - 83
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01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : ٤١ش لوساكا - الدور الثاني شقة ٣ - متفرع من ش محمد المقريف
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨/٢٦٣٠١٤٥ - ف: ٠٤٨/٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website : www.alamalreadymix.com

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B28

Dimension : 15*15*15 cm

Date of casting : 12/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	12/09/2022	10/10/2022	28	8.521	125700	559	555
2	12/09/2022	10/10/2022	28	8.377	131200	583	
3	12/09/2022	10/10/2022	28	8.498	117400	522	

جودة المشروع　　الأستشارى　　التوقيع:

مهندس / أحمد عرابى

مدير المصنع

الأمل للخرسانة الجاهزة

الإدارة : ايجيبت بيزنيس سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (١٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧

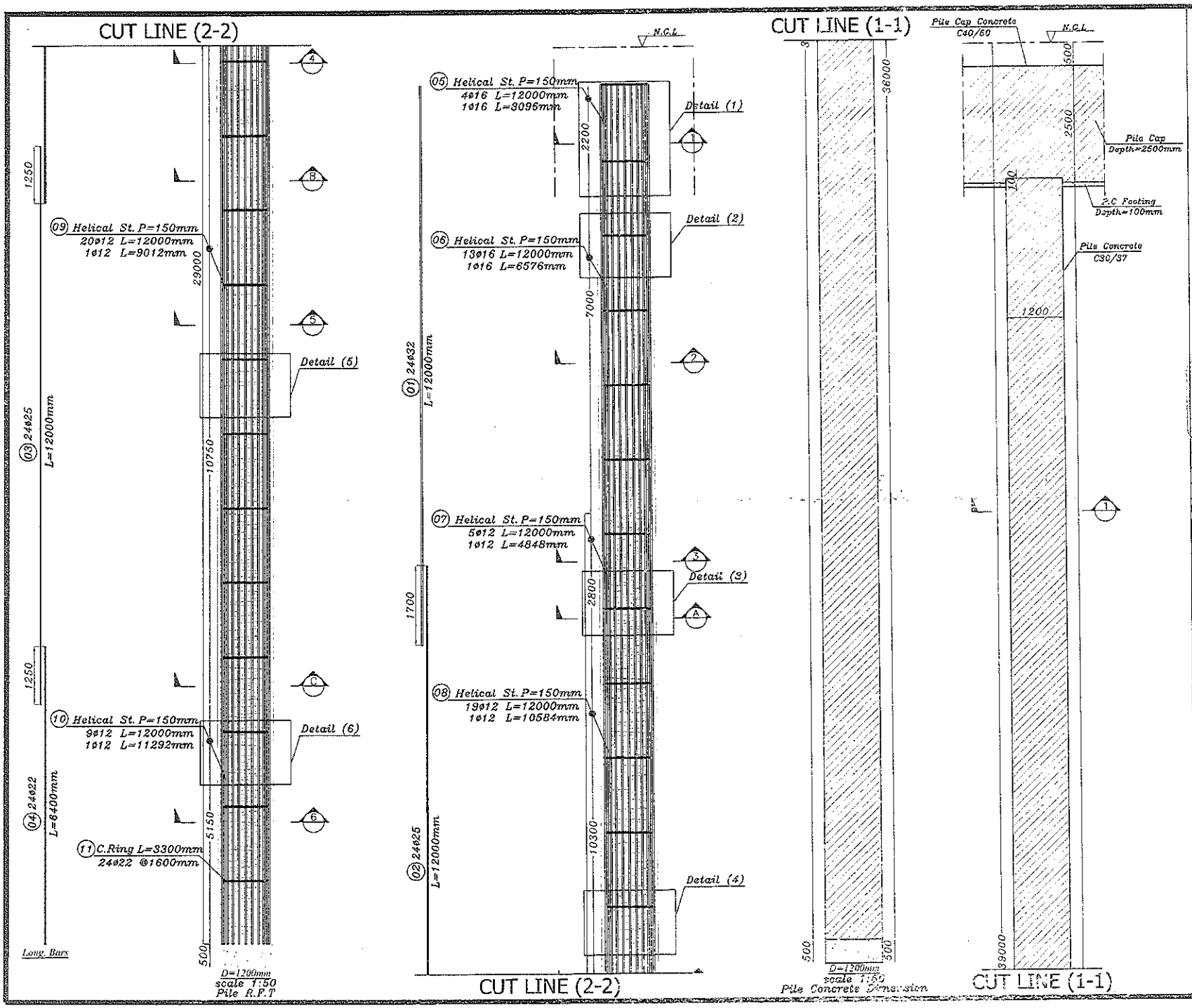
موقع العمل : القاهرة الجديدة - المنطقة لطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة لطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨/٢٦٣٠١١٥ - ف: ٠٤٨/٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

Head Office : Egyptian Business Center - Nasr City - Tenth District - Fifth Floor Unit (407)
Nasr City - Telefax: 26772572 - 23573307

Planet : New Cairo - Katamia - Plant 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

الممسوحة ضوئيا بـ CamScanner



GENERAL NOTES:

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-E00	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-210-002-PIE-F00	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3 REINFORCEMENT (1)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	[illegible]	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE, No. 1900

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

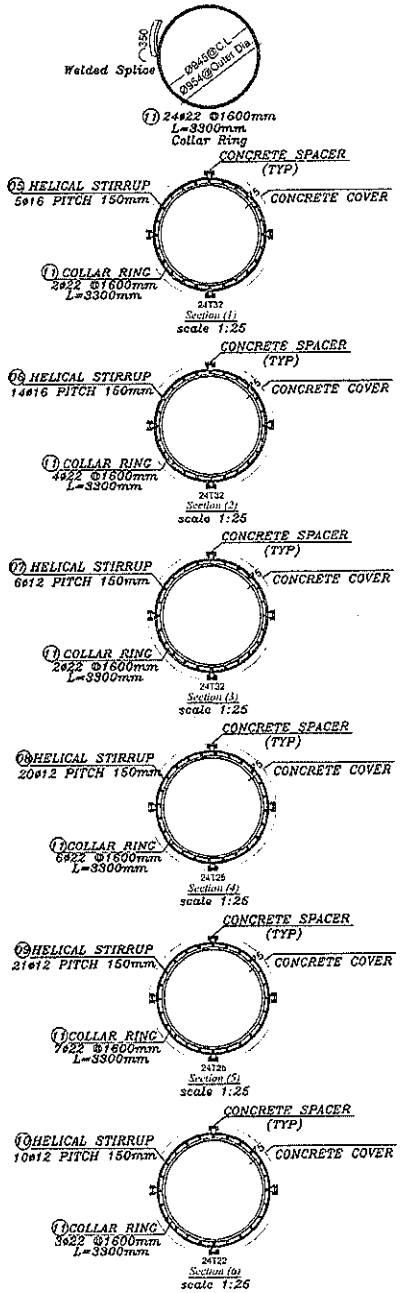
FHECOR Ingenieros Consultores

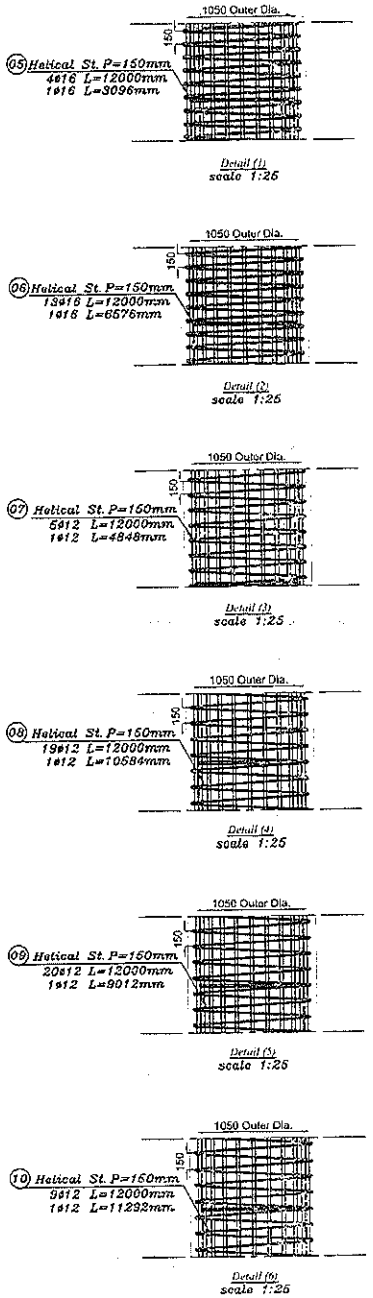
MAIN CONTRACTOR :

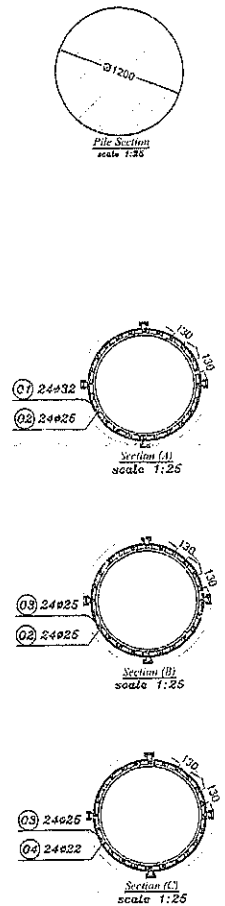
DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SD-110-001-PIL-F00	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVIEWED BY:
ENG. Eslam Hamzy	ENG. Abdullah Alshaer	ENG. Mostafa Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashein	Eng. Jaber Tarikou	







GENERAL NOTES

- All dimensions are in millimeters.
- Do not measure from drawing. All dimensions should be taken as specified.
- Pile Concrete Grade : Pile Cap Concrete Grade 30
- Clear cover 75mm
- Lap Splice Between Helical Stirrup (05) and (06) 1000mm
- Lap Splice Between Helical Stirrup (06) and (07) 1400mm
- Lap Splice Between Helical Stirrup (07) and (08) 1600mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HCRE-V001-CC-010 001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HCRE-V001-CC-210 002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3- REINFORCEMENT (1)

Arab House of Engineering
Tel: +20 2 27510135

NO.	DATE	ENG.	REVISION
C	24/08/2022	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHALKOH

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG. NO. :	DATE:	SCALE:
HCRE-V001-SD-210-002-PIE-E09	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Islam Fawzy	ENG. Abdallah Mahran	ENG. Mustafa Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashen	Eng. Javier Turrico	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.63 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering
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Tel: +2027510425
C-C1342
١٥

GENERAL NOTES:
- All dimensions are in [illegible]
- Do not use scale drawing. All dimensions should be strictly followed
- Pile Concrete C30/37 - Pile Cap Concrete C30/37
- Concrete cover 75mm
- Lap Splice Between Vertical Stirrups [illegible] x [illegible] L=[illegible]mm
- Lap Splice Between Vertical Stirrups [illegible] and [illegible] L=[illegible]mm
- Lap Splice Between Vertical Stirrups [illegible] and [illegible] L=[illegible]mm

All Levels should be revised before construction in site

ABBREVIATION :
- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :
- HSRE-V001-CC-010-001-NOT-C02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
- HSRE-V001-CC-210-002-PIB-E09 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	01-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER: المالك:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
وزارة النقل

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:
الشركة القابضة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2,P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG NO.:	DATE:	SCALE:
HSRE-V001-SD-110-001-PIE-190	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdullah Mokson	ENG. Mamdouh Gelab
		MGS
SUPERVISOR		APPROVED BY:
DR. Ibrahim Lashen		Eng. Jalal Tawfiq

REQUEST to POUR CONCRETE

Contractor Company				Designer Company						
Issued by Contractor	Name	Sign		Date				Time		
				15/9/2022						
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة									

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (29))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved		Plant & equipment available		
Mix Approved		Back up equipment available		
Setting out Survey Approved		Cast in items secure		
Temp Works Approved		Access route clear		
Formwork Checked		Work area safe to progress		
Start Time for Pour: 2:50 pm		Concrete Volume: 51 m3		

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			15/9/2022	A

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	17
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	15/9/2022
Pile No.	P29	Structure	bridge	Pile Cutoff Level	-
Pier	P3	Ground Level	68.00	Pile Toe Level	28.907
Theoretical Pile Length from caisson level	40.6 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	39.03 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	69.570
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	67.107
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.46

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585396.316	830504.687
Actual	585396.322	830504.678
BAUER Survivor		

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

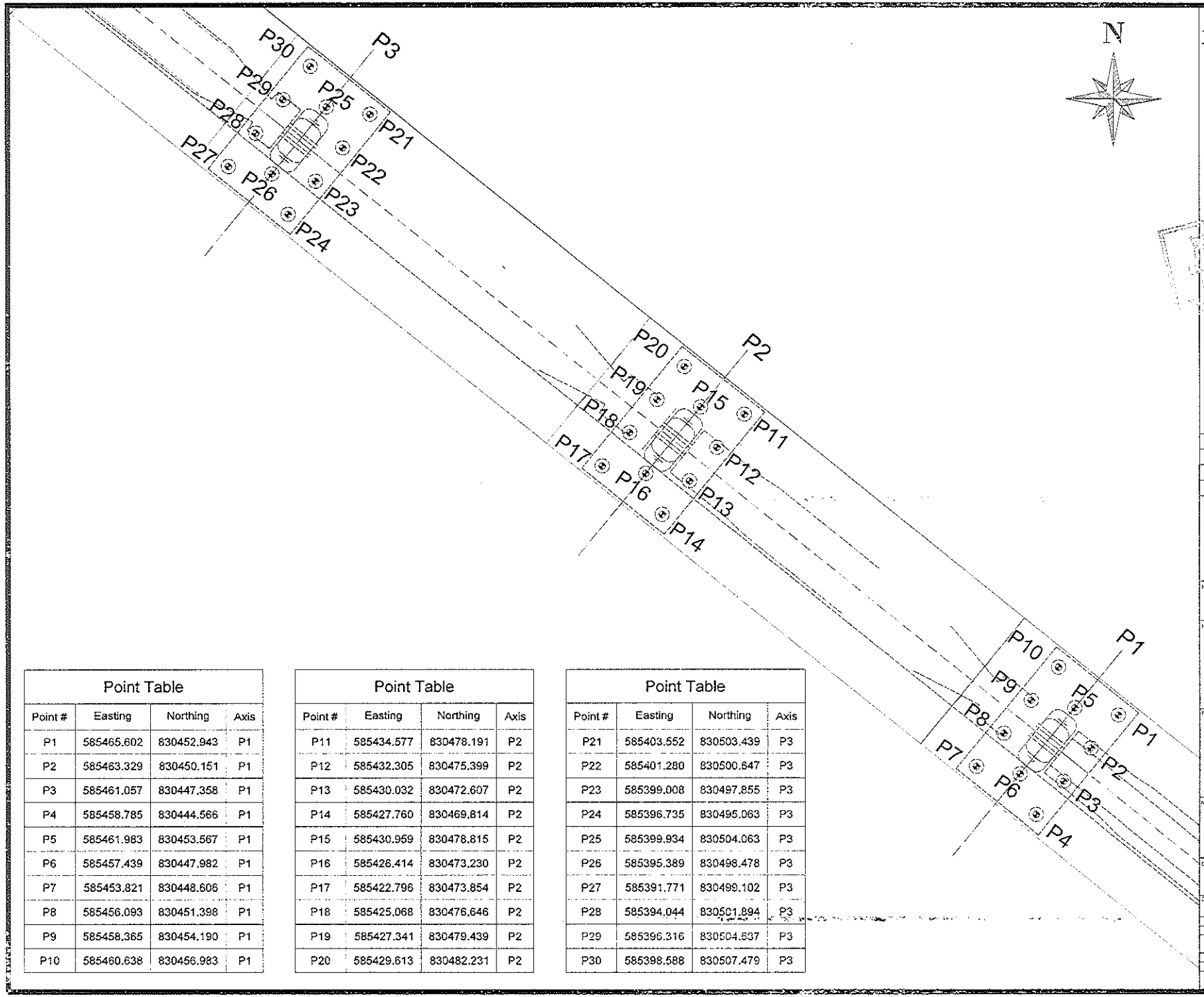
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.06
Viscosity(Sec.)	30:70 Sec.	33	≤90 Sec.	37
Sand Content %	Less than 4%	N/A	Less than 2%	1.50

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	15/9	7:00	10:00	Cleaning	-	-	-	
Install Cages	15/9	11:20	14:00	Pouring	15/9	14:50	16:00	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NO	DATE	BY.G.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALASHRIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
PC0400	08/2022	1 : 150

DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mahmoud Salah	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashen	Eng. Javier Tuero

Al Amal Ready mix

الأمل
للخرسانة الجاهزة ش.م.م.
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B29

Dimension : 15*15*15 cm

Date of casting : 15/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	15/09/2022	22/09/2022	7	8.593	106900	475	488
2	15/09/2022	22/09/2022	7	8.346	108800	484	
3	15/09/2022	22/09/2022	7	8.395	114000	507	

التوقيع:
مهندس / أحمد عرابى
مدير المصنع

الأستشارى

جودة المشروع
مركز هليوبوليس

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497
E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

الإدارة : مول إيجيبت ميديكال سنتر- الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر/ تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٠٠٦٠٣٣٨٦٠ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٢٢٧٨٥٥٥٩٦
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨/٢٦٣٠١٤٥ - ف : ٠٤٨/٢٦٣٠١٤٠
٠١٠٠٤٩٧٦٤٩٧ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٢٨٤٥٩٦٧٣

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	خازوق B29
Dimension	:	15*15*15 cm
Date of casting	:	15/09/2022
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	15/09/2022	13/10/2022	28	8.621	146800	652	660
2	15/09/2022	13/10/2022	28	8.432	149100	663	
3	15/09/2022	13/10/2022	28	8.578	149900	666	

التوقيع: الأستشارى جودة المشروع

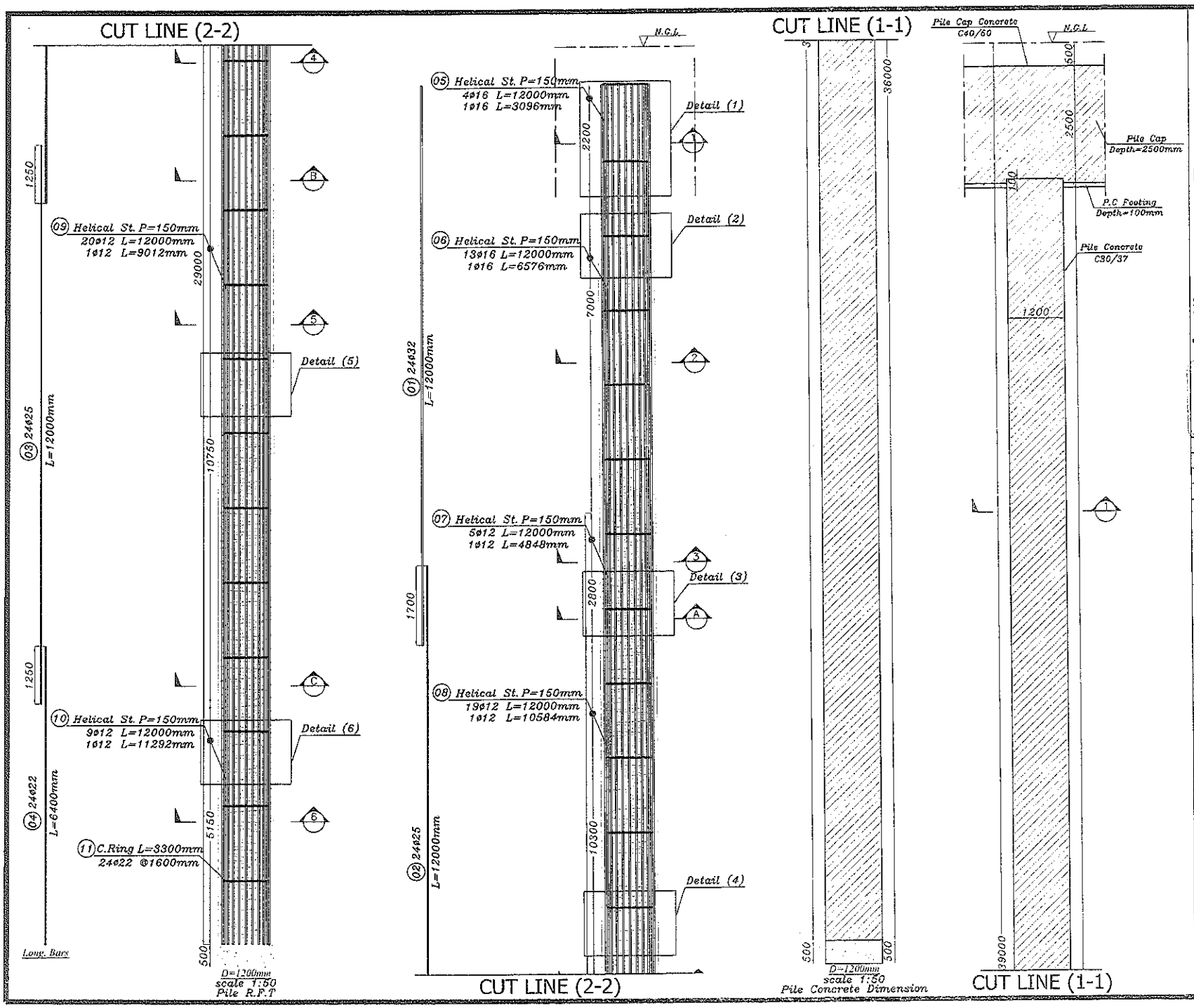
مهندس / أحمد عرابى
مدير المصنع

الأمل للخرسانة الجاهزة
مصنع النسيم
مراقبة الجودة

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٠٠٦٠٣٣٨٦٠ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٢٢٧٨٥٥٥٩٦
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٠٤٩٧٦٤٩٧ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٢٨٤٥٩٦٧٣

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com



GENERAL NOTES:

- All dimensions are in millimeters
- The reinforcement in the drawings, all the location should be field at site (FOC)
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup (1) and (2) is 600mm
- Lap Splice Between Helical Stirrup (2) and (3) is 600mm
- Lap Splice Between Helical Stirrup (3) and (4) is 400mm

All Levels should be revised before construction in site

ABBREVIATION :

-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

DRAWING REFERENCES :

NGHE-V001-CC-010400-NOT-E01	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
NGHE-V001-CC-210402-PIF-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel: +2027618456

NO.	DATE	ENG.	REVISION
0	11-09-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1049

OWNER: المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

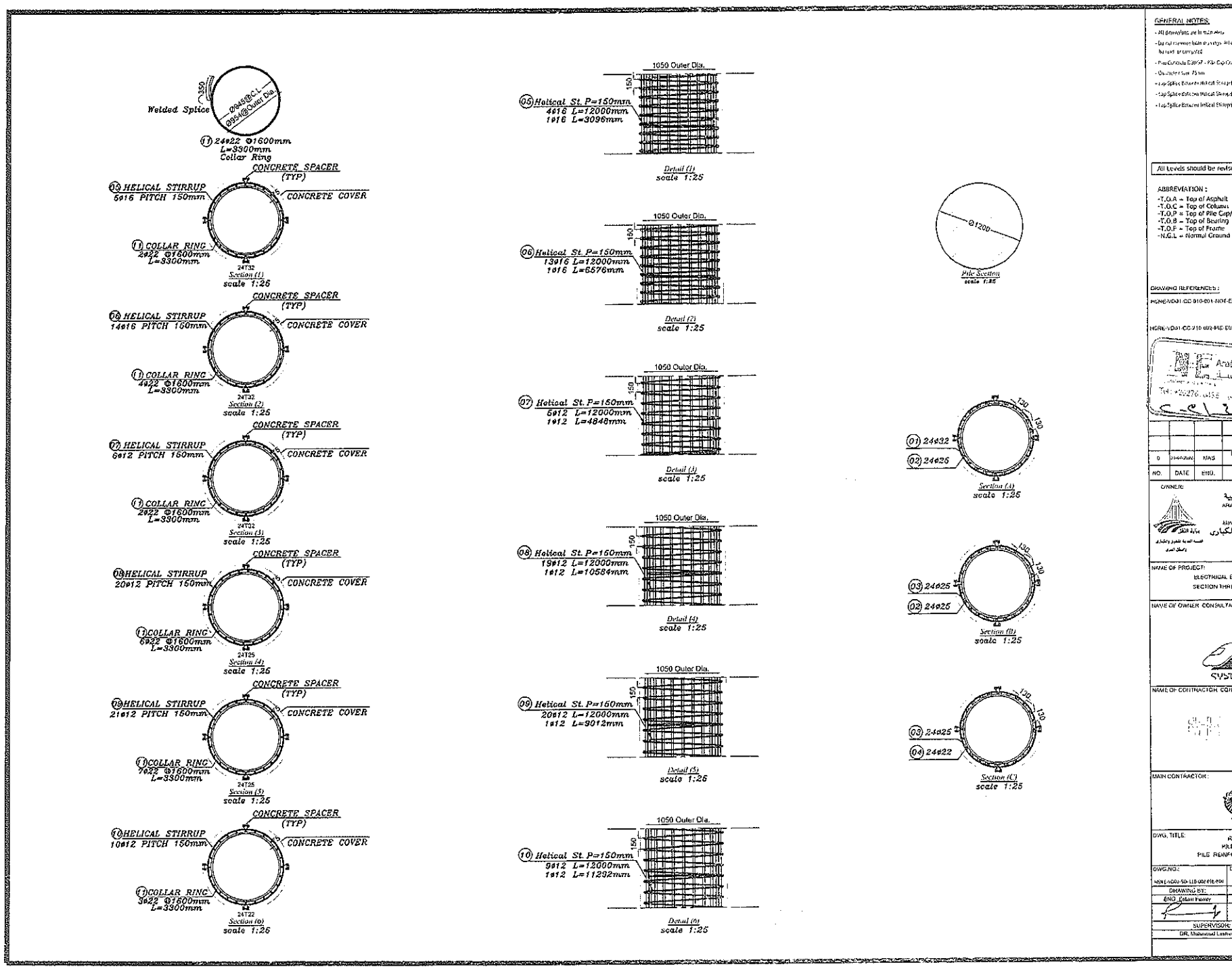
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
NGHE-V001-SD-110-003-PIL-E30	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Fatma Fawzy	ENG. Abdallah Munsser	ENG. Mansour Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashwah	Eng. Jaafar Nafou	



GENERAL NOTES:

- All dimensions are in mm unless
- Do not measure from drawings. All dimensions shall be taken from or computed
- Pile Concrete Cover = 75 mm - Pile Cap Concrete Cover = 75 mm
- Cover = 75 mm
- Lap Splice Between Helical Strap (5) and (6) = 1400 mm
- Lap Splice Between Helical Strap (6) and (7) = 1400 mm
- Lap Splice Between Helical Strap (8) and (9) = 1400 mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HGNE-ADJ-CC-010-001-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION

HGNE-ADJ-CC-210-002-RIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	[illegible]	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. [illegible]

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALMAJAN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HGNE-ADJ-SD-110-002-RIE-F04	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdullah Mohsen	ENG. Mamdouh Salah
SUPERVISOR:	APPROVED BY:	
DR. Mohamed Lashiwa	Eng. Jaafar Turkia	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	ϕ12	ϕ16	ϕ22	ϕ25	ϕ32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering

GENERAL NOTES:

- All dimensions are in millimetres
- Do not scale from drawings. All dimensions should be taken from drawings
- Pile Concrete C30/37 - Pile Cap Concrete C30/37
- Concrete Cover 70 mm
- Lap Splice Between Helical Stirrup Ⓐ and Ⓑ: 1.4 Meter
- Lap Splice Between Helical Stirrup Ⓑ and Ⓒ: 1.6 Meter
- Lap Splice Between Helical Stirrup Ⓒ and Ⓓ: 1.8 Meter

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1 DEFINITION

HSRE-V001-CC-010-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	31-07-2022	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE: NR. 1569

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE.
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-110-003-PIE-100	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Mahmoud Saleh
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Elashaary	Eng. Jesus Tuerlo	

REQUEST to POUR CONCRETE

Contractor Company				Designer Company					
Issued by Contractor	Name	Sign		Date				Time	
				29/8/2022					
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة								

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (30))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved			Plant & equipment available	
Mix Approved			Back up equipment available	
Setting out Survey Approved			Cast in items secure	
Temp Works Approved			Access route clear	
Formwork Checked			Work area safe to progress	
Start Time for Pour: pm			Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			29/8/2022	A

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	2
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	29/8/2022
Pile No.	P30	Structure	bridge	Pile Cutoff Level	-
Pier	P3	Ground Level	68.00	Pile Toe Level	28.907
Theoretical Pile Length from caisson level	40.56 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	39.09 m	Theoretical Concrete Q	46.104 m³	Temporary Casing Level	69.465
Act. Drilling Length	40.8 m	Act. Concrete Q	51 m³	Steel Top Level	67.107
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.36 m

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585398.588	830507.479
Actual	585398.605	830507.474
BAUER Survivor		

Geotechnical Log

0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

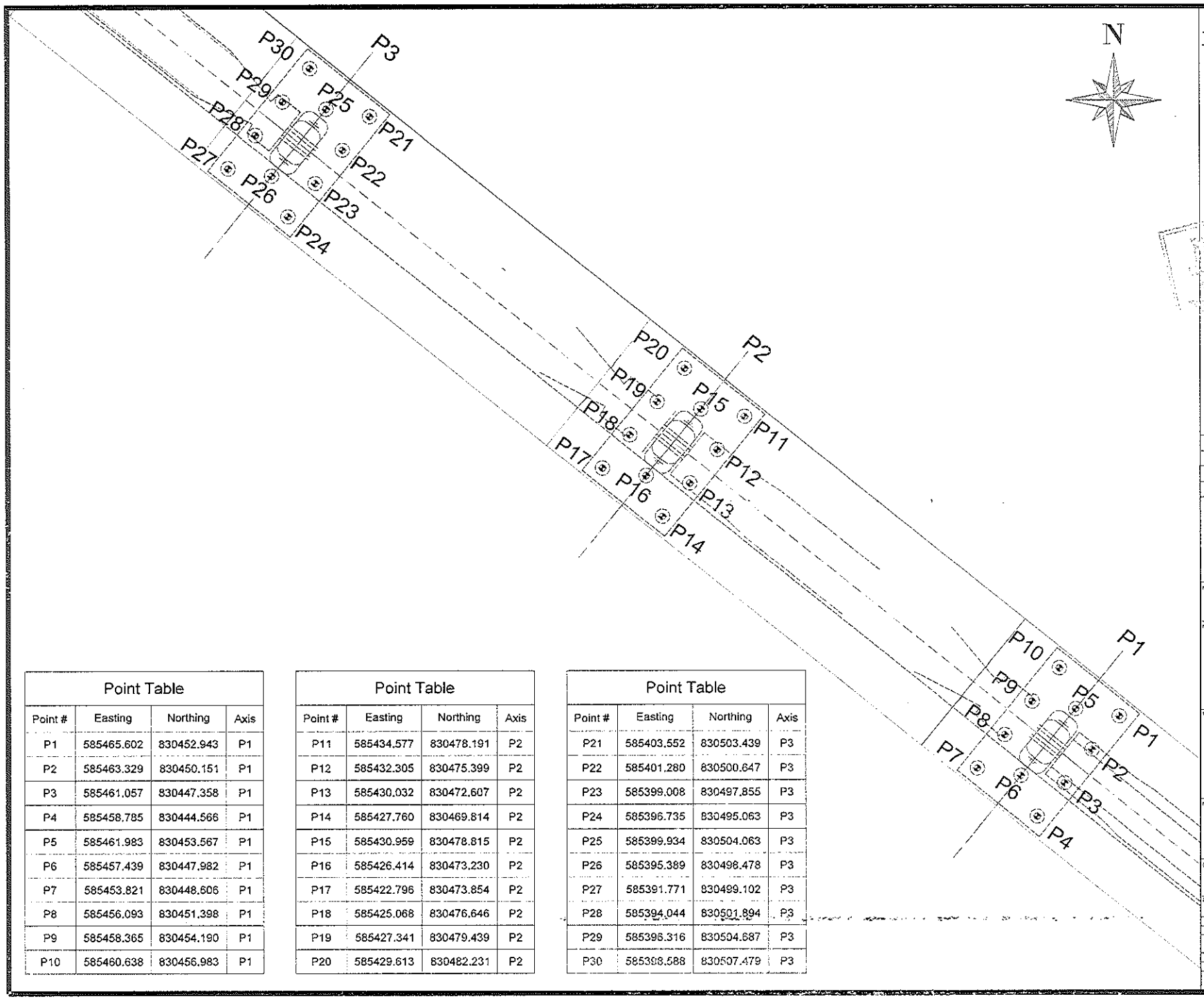
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.03
Viscosity(Sec.)	30:70 Sec.	33	≤90 Sec.	36
Sand Content %	Less than 4%	N/A	Less than 2%	1.00

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	29/8	7:30	11:40	Cleaning	-	-	-	
Install Cages	29/8	12:15	13.35	Pouring	29/8	19:20	21:00	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	BY	REVISION
00	06/2022	KA	ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CAREET

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED-RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE:

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
PC0400	06/2022	1 : 120
DRAWNED BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mahmoud Saleh	

SUPERVISOR	APPROVED BY
Dr. Mahmoud Lashwah	Eng. Jasser Tarek

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B30

Dimension : 15*15*15 cm

Date of casting : 29/08/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	29/08/2022	03/09/2022	5	8.418	95510	424	401
2	29/08/2022	03/09/2022	5	8.479	89660	398	
3	29/08/2022	03/09/2022	5	8.436	85250	379	

التوقيع:

مهندس / أحمد عرابى
مدير المصنع

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : 41 Losaka st. - Second Floor - Flat 3 Mohamed El-Maqrief st.
Nasr City - / Telfax: 26772572
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : ٤١ش لوساكا - الدور الثاني شقة ٣ - متفرع من ش محمد المقريف
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website : www.alamalreadymix.com

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	خازوق B30
Dimension	:	15*15*15 cm
Date of casting	:	29/08/2022
MIX DESIGN STRENGTH :		370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	29/08/2022	05/09/2022	7	8.676	87570	389	358
2	29/08/2022	05/09/2022	7	8.618	76090	338	
3	29/08/2022	05/09/2022	7	8.363	77930	346	

التوقيع:

مهندس / أحمد عرابى
مدير المصنع

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : 41 Losaka st. - Second Floor - Flat 3 Mohamed El-Maqrief st.
Nasr City - / Telfax: 26772572
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : ٤١ ش لوساكا - الدور الثاني شقة ٣ - متفرع من ش محمد المقريف
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website : www.alamalreadymix.com

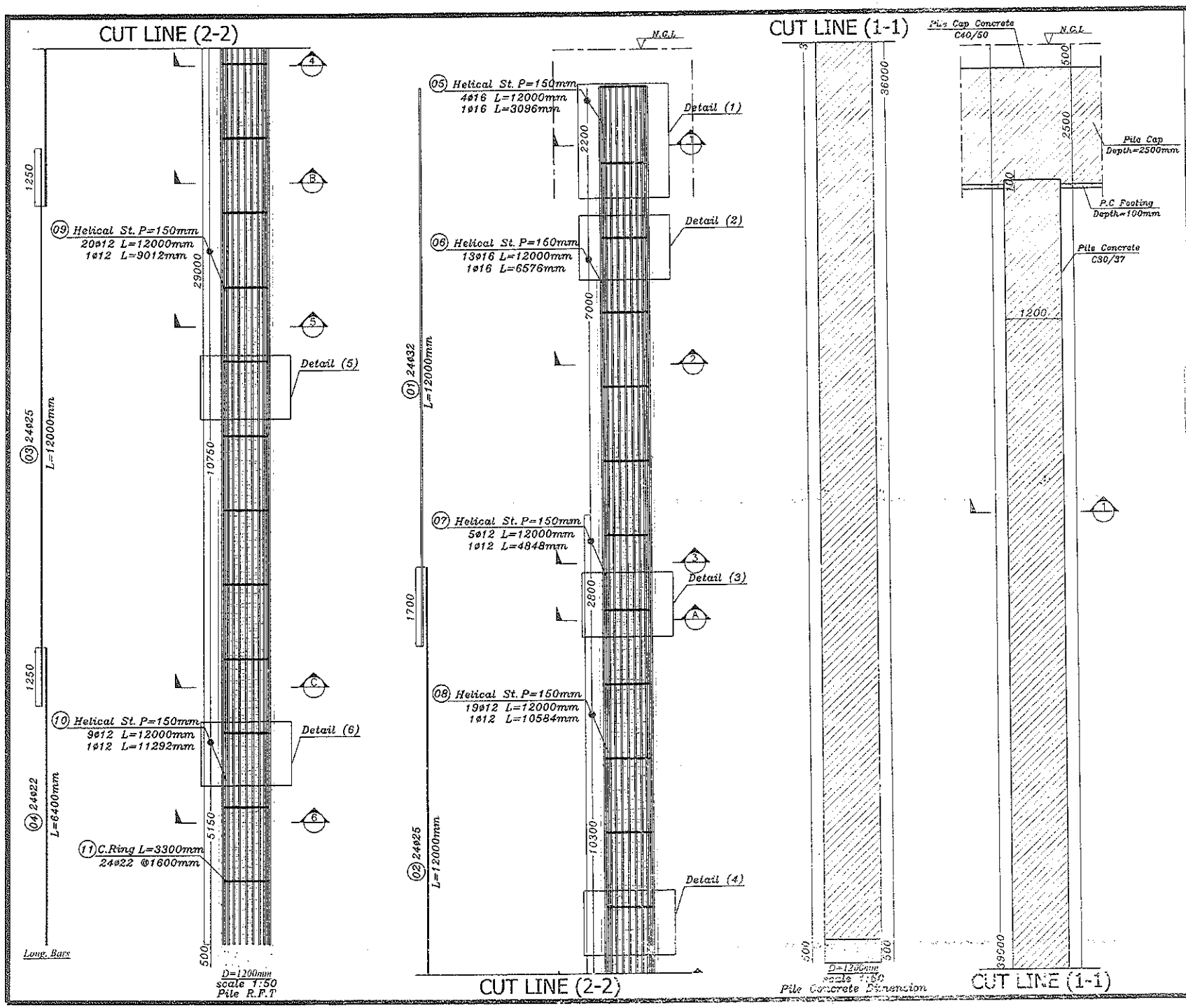
COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	خازوق B30
Dimension	:	15*15*15 cm
Date of casting	:	29/08/2022
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	29/08/2022	26/09/2022	28	8.689	131800	586	569
2	29/08/2022	26/09/2022	28	8.581	128400	571	
3	29/08/2022	26/09/2022	28	8.661	123700	550	

التوقيع:
مهندس / أحمد عرابى
مدير المصنع

مركز هليوبوليس



GENERAL NOTES:

- [illegible]
- [illegible]
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup (1) and (2) = 1.6 Meters
- Lap Splice Between Helical Stirrup (2) and (3) = 1.6 Meters
- Lap Splice Between Helical Stirrup (3) and (4) = 1.6 Meters

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES:

HSREA-001-CC-010-001-NOT-L00	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1 DISMANTLIGH
HSHR-V001-CC-210-002-PIE-L02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3 REINFORCEMENT (1)

Arab Houses of Engineering

NO.	DATE	ENG.	REVISION
0	[illegible]	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1009

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

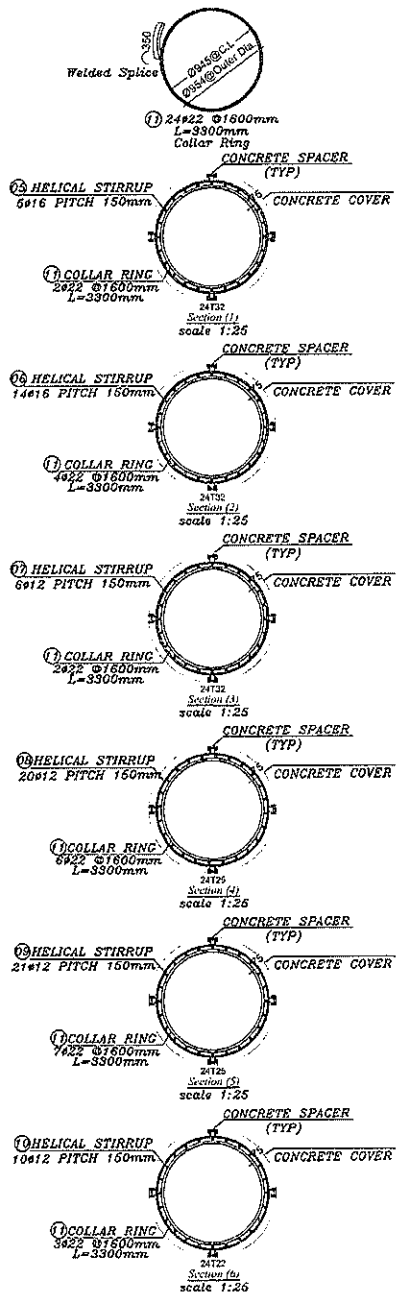
NAME OF OWNER CONSULTANT:
SYSTRA SHARGE

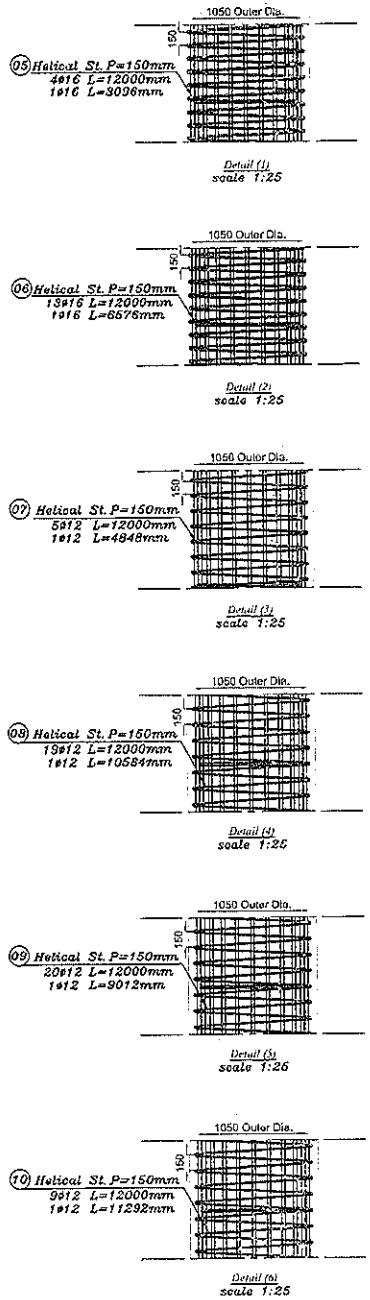
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

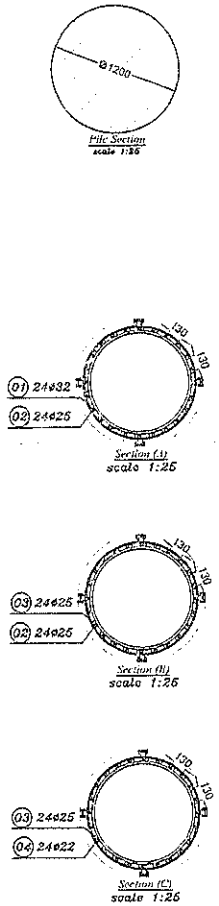
MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO:	DATE:	SCALE:
HSHR-V001-SR-110-001-PIE-R00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Foualy	ENG. Abdallah Mohsen	ENG. Mamdouh Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashiwa		Eng. Jaber Yankou







GENERAL NOTES:

- All dimensions are in millimeters.
- General tolerances shall be as per ... All dimensions shall be checked on site.
- Pile Concrete C30/37 - Pile Cover is 65 mm
- Concrete cover 75mm
- Lap Splice between Helical Stirrup (Φ14) and (Φ16) is 640mm
- Lap Splice between Helical Stirrup (Φ16) and (Φ12) is 480mm
- Lap Splice between Helical Stirrup (Φ16) and (Φ12) is 480mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-N-D01-GC-010-001-RDT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINATION
HSRE-N-D01-GC-210-002-MIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab Houses of Engineering

NO.	DATE	ENG.	REVISION
0	01-4-2022	MAB	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1009

OWNER: المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-N-D01-SD-110-002-PIB-E00	04-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Hassy	ENG. Abdallah Mohsen	ENG. Mostafa Saleh
SUPERVISOR:	APPROVED BY:	
DR. Mohamed Lashiem	Eng. Amir Tawfiq	

SUBMISSION OF DOCUMENTS

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
		أسامة عادل		٢٠٢٢/٨/٢٩							
Received by ER		محرم باخوم	SUB	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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	steel bar test	

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			Report On Tension and Cold Bend Tests	7
2			Report on chemical analysis test for steel bar specimens	3
3				
4				

Comments by:	Comments by
	النتائج مقبولة ولا مانع من العمل. على أن يتم أخذ عينات بصورة دورية طبقاً لمواصفات المشروع

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
Designer				A
GARB *				
ER	محمد محمود		٢٠٢٢/٨/٢٩	
NAT				

* Alignment/ Bridges/ Culverts only

Research Center of
Properties and Testing of
Materials and Quality Control
Faculty of Eng. - Ain Shams Univ.

وحدة أبحاث
خواص واختبار المواد
وضبط الجودة
كلية الهندسة – جامعة عين شمس

رقم التقرير: B0798B/2022

التاريخ: 29/08/2022

تقرير عن نتائج اختبار التحليل الكيميائي على عينات من صلب التسليح

العميل: شركة النيل العامة للطرق والكباري

المشروع: كوبري تقاطع طريق ريجوا من الكم 540+189 الى الكم 680+189

المالك: الهيئة العامة للطرق والكباري

الاستشاري: مكتب محرم باخوم – سيسترا

تم إعداد هذا التقرير بناءً على طلب شركة النيل العامة للطرق والكباري بخصوص إجراء اختبار التحليل الكيميائي على عينات من صلب التسليح.

العينات الموردة:

- عدد "1" عينة صلب تسليح ذو نتوءات بقطر اسمي 10 مم كود HADIDNA 500DWR .
- عدد "1" عينة صلب تسليح ذو نتوءات بقطر اسمي 12 مم كود HADIDNA 500DWR .
- عدد "1" عينة صلب تسليح ذو نتوءات بقطر اسمي 16 مم كود HADIDNA 500DWR .
- عدد "1" عينة صلب تسليح ذو نتوءات بقطر اسمي 18 مم كود HADIDNA 500DWR .
- عدد "1" عينة صلب تسليح ذو نتوءات بقطر اسمي 22 مم كود HADIDNA 500DWR .
- عدد "1" عينة صلب تسليح ذو نتوءات بقطر اسمي 25 مم كود HADIDNA 500DWR .
- عدد "1" عينة صلب تسليح ذو نتوءات بقطر اسمي 32 مم كود EGS ورتبة صلب "B500DWR" طبقاً لما هو وارد بخطاب العميل.

تم توريد العينات إلى الوحدة بتاريخ 11/08/2022 وذلك بمعرفة العميل وعلى مسئوليته، وقد تم أخذ بيانات العينات من خطاب العميل أو من على العينات.

النتائج

1- عينة صلب تسليح قطر 10 مم:

C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Al %	Co %
0.32928	0.17006	1.51988	0.01973	0.01946	0.02938	0.00539	0.04283	0.00192	0.00515
Cu %	**Nb %**	**Ti %**	**V %**	**W %**	**Pb %**	**Sn %**	**As %**	**Sb %**	**Zn %**
0.15872	<0.001	0.00060	0.00207	<0.005	0.00404	0.02205	0.02897	0.03350	0.00469
المكافئ الكربوني		0.60340							

وحدة أبحاث خواص واختبار المواد كلية الهندسة

١ ش السرايات – ميدان عبده باشا – العباسية – القاهرة ت: ٢٦٨٣١٤٤٠
1 El-Sarayat St., Abbasia, Cairo Tel.: 26831440

رقم التقرير: B0798B/2022

التاريخ: 29/08/2022

2- عينة صلب تسليح قطر 12 مم:

C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Al %	Co %
0.34001	0.21038	1.38039	0.01690	0.02044	0.02901	0.01235	0.06894	0.00230	0.00612
Cu %	**Nb %**	**Ti %**	**V %**	**W %**	**Pb %**	**Sn %**	**As %**	**Sb %**	**Zn %**
0.26864	0.00111	0.00056	0.00226	<0.005	0.00382	0.02138	0.03253	0.02832	0.00413
المكافئ الكربوني		0.60130							

3- عينة صلب تسليح قطر 16 مم:

C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Al %	Co %
0.32255	0.20032	1.43650	0.01472	0.01781	0.03340	0.00609	0.04549	0.00229	0.00548
Cu %	**Nb %**	**Ti %**	**V %**	**W %**	**Pb %**	**Sn %**	**As %**	**Sb %**	**Zn %**
0.14048	<0.001	0.00080	0.00213	<0.005	0.00434	0.02136	0.03249	0.02748	0.00513
المكافئ الكربوني		0.58269							

4- عينة صلب تسليح قطر 18 مم:

C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Al %	Co %
0.31215	0.20121	1.44135	0.01980	0.02269	0.03340	0.00569	0.04638	0.00236	0.00564
Cu %	**Nb %**	**Ti %**	**V %**	**W %**	**Pb %**	**Sn %**	**As %**	**Sb %**	**Zn%**
0.14051	0.00176	0.00082	0.00232	<0.005	0.00402	0.02146	0.03725	0.03209	0.00537
المكافئ الكربوني		0.57312							

وحدة أبحاث خواص
واختبار المواد
كلية الهندسة
جامعة عين شمس

١ ش السرايات – ميدان عبده باشا – العباسية – القاهرة ت: ٢٦٨٣١٤٤٠
1 El-Sarayat St., Abbasia, Cairo Tel.: 26831440

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وحدة أبحاث
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وضبط الجودة
كلية الهندسة – جامعة عين شمس

رقم التقرير: B0798B/2022

التاريخ: 29/08/2022

5- عينة صلب تسليح قطر 22 مم:

C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Al %	Co %
0.34562	0.20962	1.36366	0.01552	0.01643	0.03956	0.01049	0.05826	0.00246	0.00785
Cu%	Nb%	Ti%	V%	W%	Pb%	Sn%	As%	Sb%	Zn%
0.25376	0.00209	0.00098	0.00189	<0.005	0.00385	0.01975	0.02643	0.02817	0.00496
المكافئ الكربوني		0.60409							

6- عينة صلب تسليح قطر 25 مم:

C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Al %	Co %
0.35418	0.17370	1.47633	0.02005	0.01824	0.02260	0.00849	0.04505	0.00221	0.00658
Cu%	Nb%	Ti%	V%	W%	Pb%	Sn%	As%	Sb%	Zn%
0.18224	0.00155	0.00075	0.00246	<0.005	0.00467	0.02008	0.03013	0.02718	0.00630
المكافئ الكربوني		0.62210							

7- عينة صلب تسليح قطر 32 مم:

C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Al %	Co %
0.35041	0.22069	0.96942	0.02310	0.02192	0.10064	0.01625	0.11050	0.00261	0.01190
Cu%	Nb%	Ti%	V%	W%	Pb%	Sn%	As%	Sb%	Zn%
0.43248	0.00192	0.00132	0.00220	<0.005	0.00451	0.02577	0.03385	0.02639	0.00947
المكافئ الكربوني		0.57200							

أعد التقرير
كيميائى/ أشرف رزق

راجع التقرير

قائم بأعمال مدير الوحدة
د. إبراهيم عبد اللطيف يوسف

وحدة أبحاث خواص واختبار المواد
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جامعة عين شمس

١ ش السرايات – ميدان عبده باشا – العباسية – القاهرة ت: ٢٦٨٣١٤٤٠
1 El-Sarayat St., Abbasia, Cairo Tel.: 26831440

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وحدة أبحاث
خواص واختبار المواد
وضبط الجودة
كلية الهندسة – جامعة عين شمس

Ref. No.: B0798/2022
Date: 28/08/2022

Report on Tension and Cold Bend Tests

Client: شركة النيل العامة للطرق والكباري
Project: كوبري تقاطع طريق ريجوا من الكم 189+540 إلي الكم 189+680
Owner: الهيئة العامة للطرق والكباري
Consultant: مكتب محرم باخوم – سيسترا
Number of Specimens: 21 **Type:** Deformed bars
Delivered by: Client on 11/08/2022

(a) Tension Test

Specimen Number		4	5	6
Code		HADIDNA B500DWR		
Nominal Diameter (d_n - mm)		12	12	12
Weight of Specimen (W - g)		281	275	279
Length of Specimen (L - mm)		317	309	310
Weight per Unit Length	Actual (kg/m')	0.886	0.890	0.900
	Deviation from nominal (%)	-0.105	0.293	1.424
Gauge Length (L_o - mm)		60	60	60
Nominal Area (A_n - mm^2)		113.10	113.10	113.10
Yield Load (P_y - ton)		6.50	6.60	6.50
Maximum Load (P_{max} - ton)		8.50	8.50	8.50
Final Length (L_i - mm)		73	74	73
Yield Stress (R_{eH} - N/mm^2)		574.7	583.5	574.7
Tensile Strength (R_m - N/mm^2)		751.5	751.5	751.5
R_m / R_{eH}		1.31	1.29	1.31
Elongation after Breaking (A_5 - %)		21.6	23.3	21.6

(b) Cold Bend Test

Number of specimens passed the test (ALL)
Number of specimens failed the test (NON)

*Tests were carried out according to ES 262-2/2015 "Steel for the Reinforcement of Concrete".
*All information was taken from the client letter (on his sole responsibility) or from the delivered specimens.

Prepared by
Eng. Karim Mohsen
2/7

Revised by
د. محمود بلال

Acting Head of Center
Dr. Ibrahim A.L. Yousif

ت: ٢٦٨٣١٤٤٠ ١ ش السرايات – ميدان عبده باشا – العباسية – القاهرة
1 El-Sarayat St., Abbasia, Cairo Tel.: 26831440

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وحدة أبحاث
خواص واختبار المواد
وضبط الجودة
كلية الهندسة – جامعة عين شمس

Ref. No.: B0798/2022
Date: 28/08/2022

Report on Tension and Cold Bend Tests

Client: شركة النيل العامة للطرق والكباري
Project: كوبري تقاطع طريق ريجوا من الكم 189+540 إلي الكم 189+680
Owner: الهيئة العامة للطرق والكباري
Consultant: مكتب محرم باخوم – سيسترا
Number of Specimens: 21 **Type:** Deformed bars
Delivered by: Client on 11/08/2022

(a) Tension Test

Specimen Number		1	2	3
Code		HADIDNA B500DWR		
Nominal Diameter (d_n - mm)		10	10	10
Weight of Specimen (W - g)		195	195	193
Length of Specimen (L - mm)		314	314	313
Weight per Unit Length	Actual (kg/m')	0.621	0.621	0.617
	Deviation from nominal (%)	0.778	0.778	0.063
Gauge Length (L_o - mm)		50	50	50
Nominal Area (A_n - mm^2)		78.54	78.54	78.54
Yield Load (P_y - ton)		4.50	4.80	4.80
Maximum Load (P_{max} - ton)		5.70	6.00	6.00
Final Length (L_i - mm)		63	64	64
Yield Stress (R_{eH} - N/mm^2)		572.9	611.1	611.1
Tensile Strength (R_m - N/mm^2)		725.7	763.9	763.9
R_m / R_{eH}		1.27	1.25	1.25
Elongation after Breaking (A_5 - %)		26.0	28.0	28.0

(b) Cold Bend Test

Number of specimens passed the test (ALL)
Number of specimens failed the test (NON)

*Tests were carried out according to ES 262-2/2015 "Steel for the Reinforcement of Concrete".
*All information was taken from the client letter (on his sole responsibility) or from the delivered specimens.

Prepared by
Eng. Karim Mohsen
1/7

Revised by
د/ محمود جلال

Acting Head of Center
Dr. Ibrahim A.L. Yousif

وحدة أبحاث خواص واختبار المواد وضبط الجودة
كلية الهندسة – جامعة عين شمس

١ ش السرايات – ميدان عبده باشا – العباسية – القاهرة ت: ٢٦٨٣١٤٤٠
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وحدة أبحاث
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وضبط الجودة
كلية الهندسة – جامعة عين شمس

Ref. No.: B0798/2022
Date: 28/08/2022

Report on Tension and Cold Bend Tests

Client: شركة النيل العامة للطرق والكباري
Project: كوبري تقاطع طريق ريجوا من الكم 189+540 إلي الكم 189+680
Owner: الهيئة العامة للطرق والكباري
Consultant: مكتب محرم باخوم – سيسترا
Number of Specimens: 21 **Type:** Deformed bars
Delivered by: Client on 11/08/2022

(a) Tension Test

Specimen Number		7	8	9
Code		**HADIDNA B500DWR**		
Nominal Diameter (d_n - mm)		16	16	16
Weight of Specimen (W - g)		595	589	590
Length of Specimen (L - mm)		377	374	374
Weight per Unit Length	Actual (kg/m')	1.578	1.575	1.578
	Deviation from nominal (%)	0.045	-0.169	0.000
Gauge Length (L_o - mm)		80	80	80
Nominal Area (A_n - mm^2)		201.06	201.06	201.06
Yield Load (P_y - ton)		11.20	11.00	11.20
Maximum Load (P_{max} - ton)		14.70	14.60	14.70
Final Length (L_i - mm)		98	102	101
Yield Stress (R_{eH} - N/mm^2)		557.0	547.1	557.0
Tensile Strength (R_m - N/mm^2)		731.1	726.1	731.1
R_m / R_{eH}		1.31	1.33	1.31
Elongation after Breaking (A_5 - %)		22.5	27.5	26.2

(b) Cold Bend Test

Number of specimens passed the test (ALL)
Number of specimens failed the test (NON)

*Tests were carried out according to ES 262-2/2015 "Steel for the Reinforcement of Concrete".
*All information was taken from the client letter (on his sole responsibility) or from the delivered specimens.

Prepared by
Eng. Karim Mohsen
3/7

Revised by
د/ محمود هلال

Acting Head of Center
Dr. Ibrahim A.L. Yousri

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1 El-Sarayat St., Abbasia, Cairo Tel.: 26831440

Research Center of
Properties and Testing of
Materials and Quality Control
Faculty of Eng. - Ain Shams Univ.

وحدة أبحاث
خواص واختبار المواد
وضبط الجودة
كلية الهندسة - جامعة عين شمس

Ref. No.: B0798/2022
Date: 28/08/2022

Report on Tension and Cold Bend Tests

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Owner: الهيئة العامة للطرق والكباري
Consultant: مكتب محرم باخوم - سيسترا
Number of Specimens: 21 **Type:** Deformed bars
Delivered by: Client on 11/08/2022

(a) Tension Test

Specimen Number		10	11	12
Code		HADIDNA B500DWR		
Nominal Diameter (d_n - mm)		18	18	18
Weight of Specimen (W - g)		816	825	832
Length of Specimen (L - mm)		423	428	432
Weight per Unit Length	Actual (kg/m')	1.929	1.928	1.926
	Deviation from nominal (%)	-3.380	-3.456	-3.538
Gauge Length (L_o - mm)		90	90	90
Nominal Area (A_n - mm^2)		254.47	254.47	254.47
Yield Load (P_y - ton)		14.20	14.20	14.10
Maximum Load (P_{max} - ton)		18.60	18.50	18.60
Final Length (L_i - mm)		113	113	111
Yield Stress (R_{eH} - N/mm^2)		558.0	558.0	554.0
Tensile Strength (R_m - N/mm^2)		730.9	727.0	730.9
R_m / R_{eH}		1.31	1.30	1.32
Elongation after Breaking (A_5 - %)		25.5	25.5	23.3

(b) Cold Bend Test

Number of specimens passed the test (ALL)
Number of specimens failed the test (NON)

*Tests were carried out according to ES 262-2/2015 "Steel for the Reinforcement of Concrete".
*All information was taken from the client letter (on his sole responsibility) or from the delivered specimens.

Prepared by
Eng. Karim Mohsen
4/7

Revised by
د. محمود هلال

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Consultant: مكتب محرم باخوم – سيسترا
Number of Specimens: 21 **Type:** Deformed bars
Delivered by: Client on 11/08/2022

(a) Tension Test

Specimen Number		13	14	15
Code		HADIDNA B500DWR		
Nominal Diameter (d_n - mm)		22	22	22
Weight of Specimen (W - g)		1301	1273	1300
Length of Specimen (L - mm)		455	442	455
Weight per Unit Length	Actual (kg/m')	2.859	2.880	2.857
	Deviation from nominal (%)	-4.130	-3.435	-4.204
Gauge Length (L_o - mm)		110	110	110
Nominal Area (A_n - mm^2)		380.13	380.13	380.13
Yield Load (P_y - ton)		22.00	22.10	22.20
Maximum Load (P_{max} - ton)		28.50	28.50	28.60
Final Length (L_i - mm)		134	133	132
Yield Stress (R_{eH} - N/mm^2)		578.7	581.3	584.0
Tensile Strength (R_m - N/mm^2)		749.7	749.7	752.3
R_m / R_{eH}		1.30	1.29	1.29
Elongation after Breaking (A_5 - %)		21.8	20.9	20.0

(b) Cold Bend Test

Number of specimens passed the test (ALL)
Number of specimens failed the test (NON)

*Tests were carried out according to ES 262-2/2015 "Steel for the Reinforcement of Concrete".
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Prepared by
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5/7

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Number of Specimens: 21 **Type:** Deformed bars
Delivered by: Client on 11/08/2022

(a) Tension Test

Specimen Number		16	17	18
Code		HADIDNA B500DWR		
Nominal Diameter (d_n - mm)		25	25	25
Weight of Specimen (W - g)		1902	1936	1863
Length of Specimen (L - mm)		505	494	485
Weight per Unit Length	Actual (kg/m')	3.766	3.919	3.841
	Deviation from nominal (%)	-2.209	1.756	-0.264
Gauge Length (L_o - mm)		125	125	125
Nominal Area (A_n - mm^2)		490.87	490.87	490.87
Yield Load (P_y - ton)		29.00	28.60	28.60
Maximum Load (P_{max} - ton)		37.50	37.20	37.00
Final Length (L_i - mm)		153	155	154
Yield Stress (R_{eH} - N/mm^2)		590.7	582.6	582.6
Tensile Strength (R_m - N/mm^2)		763.9	757.8	753.7
R_m / R_{eH}		1.29	1.30	1.29
Elongation after Breaking (A_5 - %)		22.4	24.0	23.2

(b) Cold Bend Test

Number of specimens passed the test (ALL)
Number of specimens failed the test (NON)

*Tests were carried out according to ES 262-2/2015 "Steel for the Reinforcement of Concrete".
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Consultant: مكتب محرم باخوم – سيسترا
Number of Specimens: 21 **Type:** Deformed bars
Delivered by: Client on 11/08/2022

(a) Tension Test

Specimen Number		19	20	21
Code		EGS		
Nominal Diameter (d_n - mm)		32	32	32
Weight of Specimen (W - g)		3379	3409	3520
Length of Specimen (L - mm)		538	551	564
Weight per Unit Length	Actual (kg/m')	6.281	6.187	6.241
	Deviation from nominal (%)	-0.467	-1.953	-1.094
Gauge Length (L_o - mm)		160	160	160
Nominal Area (A_n - mm^2)		804.25	804.25	804.25
Yield Load (P_y - ton)		43.00	45.00	45.20
Maximum Load (P_{max} - ton)		59.00	59.60	59.00
Final Length (L_i - mm)		192	194	190
Yield Stress (R_{eH} - N/mm^2)		534.6	559.5	562.0
Tensile Strength (R_m - N/mm^2)		733.6	741.0	733.6
R_m / R_{eH}		1.37	1.32	1.31
Elongation after Breaking (A_5 - %)		20.0	21.2	18.7

(b) Cold Bend Test

Number of specimens passed the test (ALL)
Number of specimens failed the test (NON)

*Tests were carried out according to ES 262-2/2015 "Steel for the Reinforcement of Concrete".
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1 El-Sarayat St., Abbassia, Cairo Tel.: 26831440

CROSS-HOLE ULTRASONIC MONITOR (CHUM)

HIGH-SPEED RAIL BRIDGES (3RD SECTOR FROM NILE WEST TO ALAMEIN), REGWA BRIDGE

الهيئة العامة
للطرق و الكباري و النقل البري
(GARBLT)

ARAB CONSULTING ENGINEERS
MOHARRAM - BAKHOUM

Report on (2) Concrete Element(S)

Rev	Status	Date	Editor	Checked by
0	Final	05-OCT-2022	SHERIF SALAH, BSc	DR. ENG. A. F. EL – KADI

This report provides the factual results of the CHUM performed by NECB.

NILE ENGINEERING CONSULTING BUREAU (MISR)
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1)Introduction

1.1 Upon the request of **"General Nile for Road& Bridges"** Cross Hole Ultra Sonic Monitoring (CHUM) following the Project Specifications executed to check the concrete homogeneous for (2) concrete element(s).

1.2 The testing activities can be summarized as follows:

Project /Location	**High-Speed Rail Bridges (3rd sector from Nile West to Alamein), Regwa Bridge**
Date /Time	05-Oct-2022
Witnessed	Project Engineer; and Client Engineer
NECB Staff	Amr Salah, BSc. Mohamed Ali, Geotec.
No. of tests/Type	2/ Concrete Elements / Bored/ Cast-in situ
CHUM Patern	4 tubes, 6 logs (except if mentioned in item 3 below)
Tested Element (s) Information	As stated in item 3 below and annex 1

Fig. 1 CHUM in Progress

Contents

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2) Measuring Technique 4
3) Tested Element(s) 4
4) 3-D Tomography output (Optional) 4
5) Conclusion 4
General Tips 5
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CHUM TEST RESULTS 7
3-D TOMOGRAPHY 8
CHUM Method Statement 9

2) The Measuring Technique

2.1 The measuring and the interpretation of the test following ASTM specifications (D6760-17), and AFNOR NF P 94-160-1 (2000) are as shown in the attachments.

2.2 The test equipment (CHUM) manufactured by Piletest UK. The related data are in the attachments.

3) Tested Element(s)

3.1 The tested element (s) data, CHUM input and test output attached in annex 1.

3.2 (6) CHUM logs are available for the tested and reported element(s) arranged as shown in fig.2.

3.3 The tested element(s) have the following dimension:

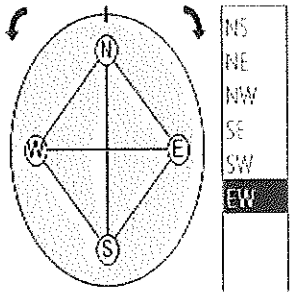

Fig 2 Element with 4 tubes (6 logs)

S	Pile ID	Type	Dimensions	Available CHUM tubes	Remark
1	P2-P13	Concrete pile	D1.2m / L40.0m	4 /4	-
2	P3-P29	Concrete pile	D1.2m / L40.0m	4 /4	-

4) 3-D Tomography output (Optional)

4.1 N/A.

5) Conclusion

Interpretation based on comparing both times interval vs. energy curves, and review wave velocities through test for the tested and reported element, in addition to Tomography results. The test results can summarized as follows:

5.1 Tested and reported pile # (**P3-29**) is free from any significant defects, has a homogeneous and good quality concrete, and **Integrity Accepted (up to the end of available CHUM pipes)**.

5.2 For pile P2-13: CHUM detects high anomalies (Flaw) starting from depth 20.8m to 21.6m. The effective areas are varying from 84 to 88%.

5.3 CHUM results for all tested piles, in addition to the tomography results attached in Annex 1&2.

General Tips

1) Low wave velocities near the CHUM tubes zones mean non-uniform tube spacing (green color in 3D Tomography). That will not affect the test results.
2) The effective area in 3D Tomography is related to the concrete quality, not the element cross-section.
3) Preparing CHUM pipes for test is out of NECB`s scope of work.

Cairo, 5 Oct 2022

NILE ENGINEERING CONSULTING BUREAU
(MISR)

Dr. ENG. A. F. EL – KADI
CEO

مكتب النيل الهندسي الاستشاري
٣ ش قصر النيل ثالث ٥١٠ مصر
تليفون ٢٣٣٧٦٠٠٠ فاكس ٢٣٣٧٦٠٠٩
هذا التقرير خاص بمشروع
رقم ..... تاريخ
طلب .....
ويحظر استخدامه لأي مشروع آخر ومن يخالف
ذلك يعرض للمساءلة القانونية .

JAS-ANZ

ANNEXES

CHUM TEST RESULTS

Subject : CHUM Final Report_ High Speed Rail _3rd Sector.
To : General Nile for Road& Bridges.
NECB Ref.: CHUM182/1101/022.
CHUM Annex

CHUM Summary

S	Pile ID	Profile	Measured length of pipes (m)	Apparent Wave Speed [m/s]	Remarks
1	**P2P13**	12	39.44m	4520	CHUM detects a relative energy reduction from depth 20.8m to 21.6m. The effective area varies between 84 %to 88%.
		23	38.15m	4520	
		34	38.94m	4590	
		14	38.89m	4550	
		13	38.79m	4630	
		24	39.19m	4430	
2	**P3P29**	12	31.98m	4470	Sound concrete without any significate anomaly. FAT is perfect during test.
		23	37.74m	4440	
		34	37.73m	4510	
		14	31.98m	4360	
		13	32.43m	4560	
		24	38.58m	4530	

Subject : CHUM Final Report_ High Speed Rail _3rd Sector.
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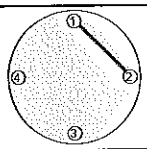
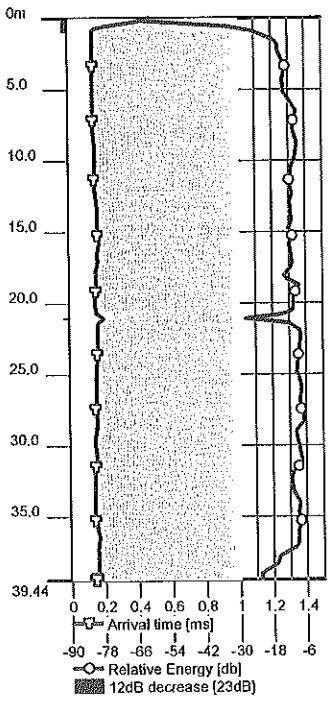
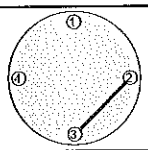
NECB Ref.: CHUM182/1101/022.
CHUM Annex

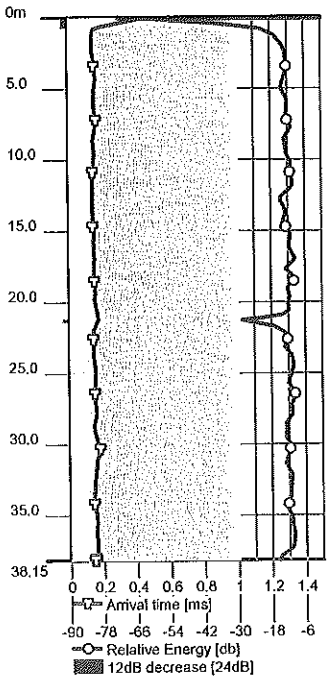
P2P13
10/5/2022
Diameter: 1.20m

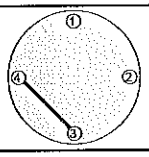
12	23	34
39.44m	**38.15m**	**38.94m**
Distance: 0.55m	**Distance: 0.55m**	**Distance: 0.55m**
Filter: 1	**Filter: 1**	**Filter: 1**

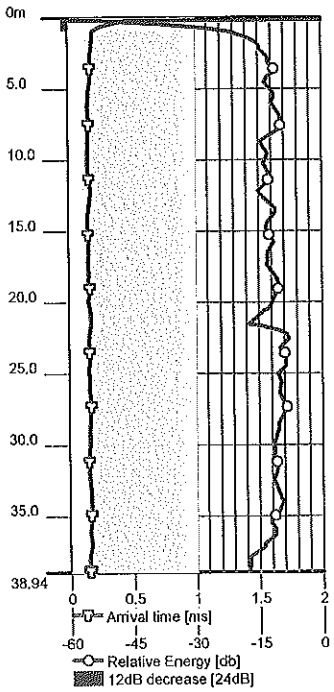












Subject : CHUM Final Report_ High Speed Rail _3rd Sector.
To : **General Nile for Road& Bridges.**
NECB Ref.: CHUM182/1101/022.
CHUM Annex

P2P13
10/5/2022
Diameter: 1.20m

14	13	24
38.89m	38.79m	39.19m
Distance: 0.55m	Distance: 0.85m	Distance: 0.85m
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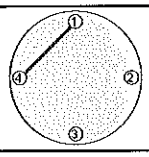
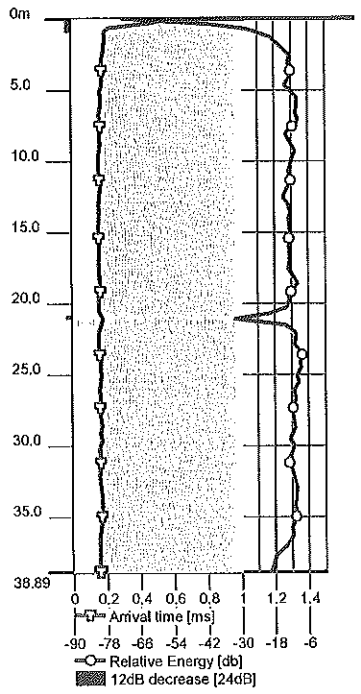
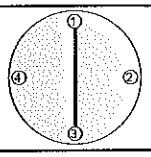
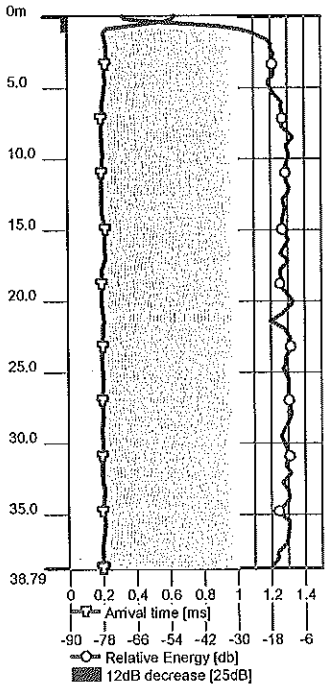
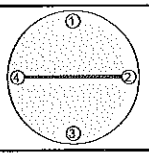
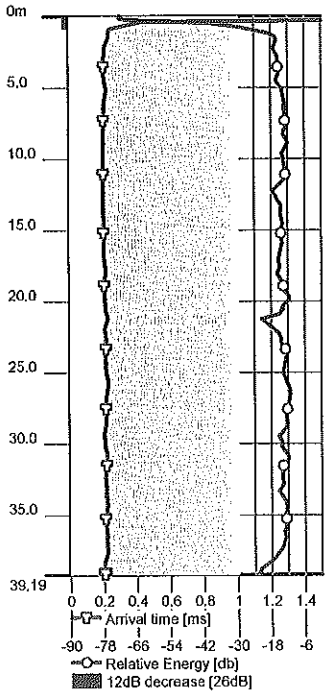








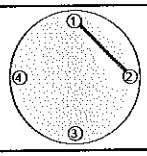


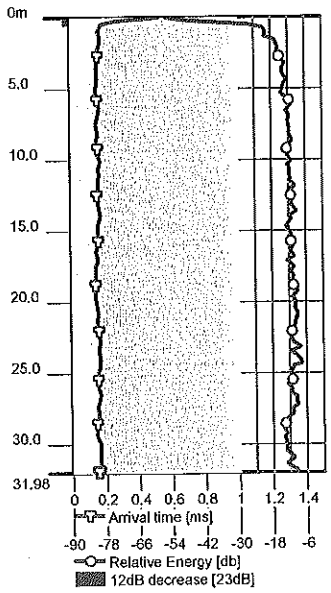


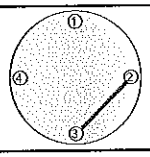
Subject : CHUM Final Report_ High Speed Rail _3rd Sector.
To : General Nile for Road& Bridges.
NECB Ref.: CHUM182/1101/022.
CHUM Annex

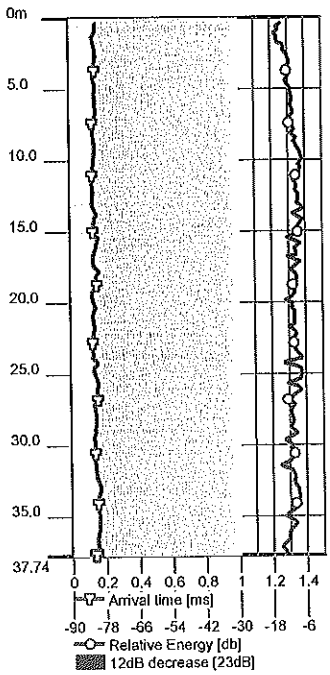
P3P29
10/5/2022
Diameter: 1.20m

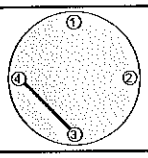
12	23	34
31.98m	**37.74m**	**37.73m**
Distance: 0.55m	**Distance: 0.55m**	**Distance: 0.55m**
Filter: 1	**Filter: 1**	**Filter: 1**

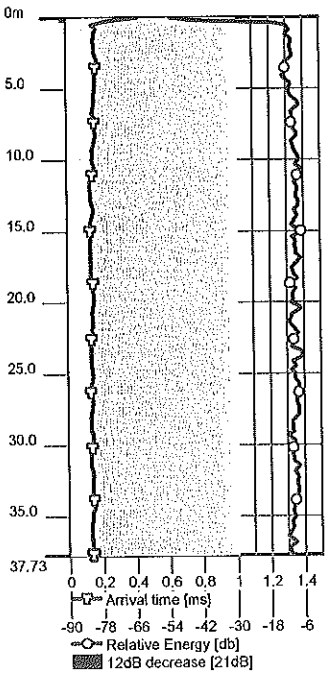












Subject : CHUM Final Report_ High Speed Rail _3rd Sector.
To : General Nile for Road& Bridges.
NECB Ref.: CHUM182/1101/022.
CHUM Annex

P3P29
10/5/2022
Diameter: 1.20m

14	13	24
31.98m	**32.43m**	**38.58m**
Distance: 0.55m	**Distance: 0.85m**	**Distance: 0.85m**
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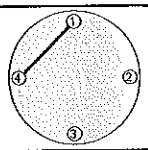
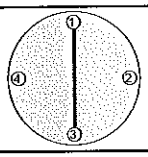
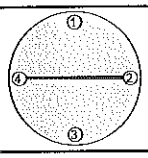
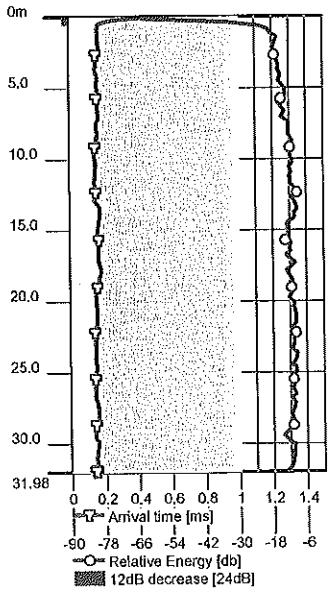
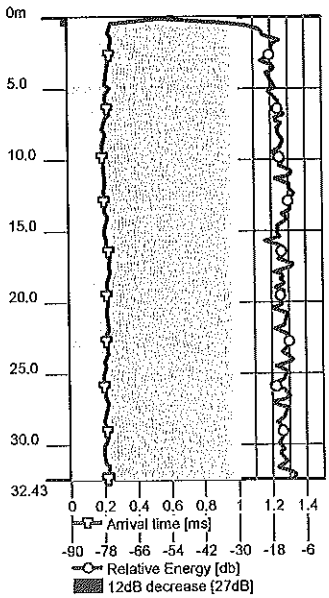
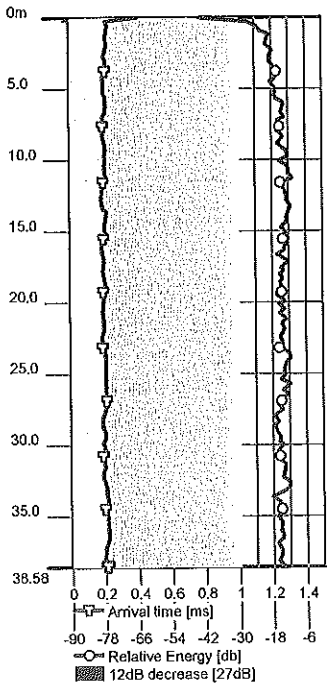












3-D TOMOGRAPHY

N/A

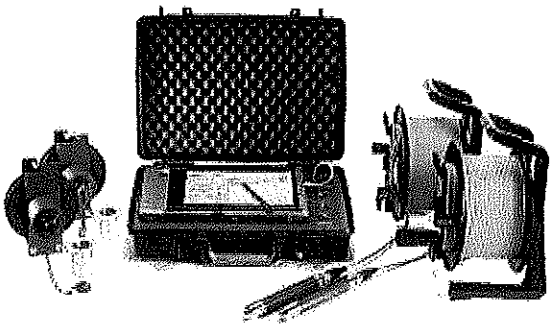
CHUM Method Statement

NILE ENGINEERING CONSULTING BUREAU

Expertise House of Engineering Consultants

NECB

Since 1969



CROSS-HOLE ULTRA SONIC MONITOR

GENERIC METHOD STATEMENT

NILE ENGINEERING CONSULTING BUREAU (MISR)

PRO.DR.ING./ FAROUK.I.K.EL KADI

DR.ING. / ANWAR FAROUK EL KADI

EXPERT HOUSE OF ENGINEERING CONSULTANTS

05 Dr. Abdel Hameed Lotfy Street

Po. Box 11371

Nasr City-Cairo-Egypt

Tel : +2-02-22877600

Fax : +2-02-22700553

E-mail : anwarfelkadi@gmail.com

Internet: www.necb-misr.net

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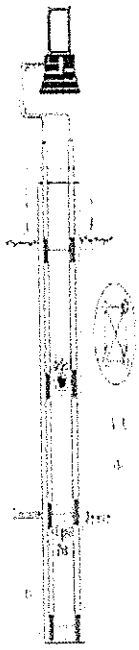
1) General

- Cross Hole Ultra Sonic Monitor (CHUM) test is for checking the integrity of newly placed drilled shafts, seal footings, and slurry or diaphragm walls. CHUM test relies on the propagation of ultrasonic waves between two or more access tubes to measure the velocity and signal strength of the propagated waves. The testing can be performed on any concrete foundation provided two or more access tubes or core holes capable of holding water are present in the foundation. CHUM can also be used to check the integrity of underwater concrete piers and foundations by strapping access tubes to the sides. Cross hole Tomography can be performed to image critical anomalies found in CHUM tests.



- CHUM tests are typically performed on concrete, particularly concrete drilled shafts. Other materials, which support the transmission of ultrasonic waves, can be tested, such as slurry, rock, grout, water-saturated media, and cemented radioactive wastes.

Standards for CHUM method include ASTM D6760-16 for integrity testing of concrete deep foundations and ACI 228.2R for NDE applications, and FLH 521.830 for determining pulse velocity through concrete in drilled shafts.

2) Access

- Access tubes must be installed before the construction of the drilled shaft for quality assurance purposes unless core holes are to be drilled in a forensic case.
- PVC or black steel tubes (U.S. schedule 40) are typically used. The tubes are 1.5 (steel tubes only) to 2 inches (38 to 50 mm) in diameter and are typically tied to the rebar cage to ensure close to vertical positions of the tubes.
- The tubes must extend at least 30cm above the top of the shaft to

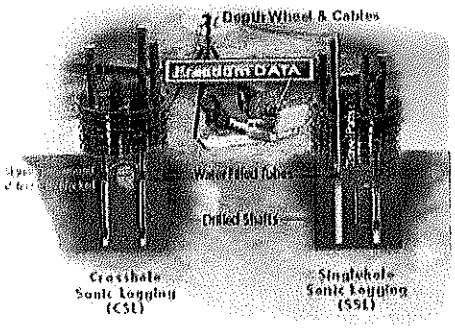


fig.2 System Installation

compensate for the water displaced by the source, receiver, and cables and to allow for easy access. Tubes must be bonded to the concrete for good test results. To minimize de-bonding of tubes, water should be added immediately before or after concrete placement and the tubes should not be mechanically disturbed.

- At least two tubes are needed to perform CHUM test. For good coverage of the test shaft, the following number of tubes be installed is recommended:

Shaft Diameter	Recommended Number Of Tubes	Tube Spacing
D < 2.5 ft (0.75m)	2 minimum	180 Degree
2.5 < D < 3.5 ft (1.0 m)	3 minimum	120 Degrees
3.5 < D < 5.0 ft (1.5 m)	4 minimum	90 Degrees
5.0 < D < 8.0 ft (2.5 m)	6 minimum	60 Degrees
8.0 < D <	8 minimum	45 Degrees

- The concrete in the shaft should normally be allowed at least 1-2 days to cure to hardened concrete before testing. If "PVC" tubes are used, testing should be done within 10 days after the placement of concrete due to possible tube-concrete de-bonding.

It is very important to fill tubes with clean Water immediately before or within one hour after concrete placement. This action inhibits de-bonding of concrete from the tube. Cap or Seal tube tops to keep out debris.

Also, all CHUM tubes should be washed using pure water and refilled using pure water at least 24 hr before starting CHUM test.

CHUM pipes should be leveld before start the test activities.

Tube Grouting

- After CHUM testing is completed and the engineer has accepted the shaft, remove all water from access tubes and any other drilled holes. Then fill tubes and holes completely with approved grout mix.

3) Data Collection

- In a CHUM test, the source is lowered to the bottom of one of the tubes, and the receiver is lowered to the bottom of another tube. The source and receiver are pulled simultaneously to allow the horizontal ultrasonic pulse velocity to be measured. A depth wheel controls the resolution of the collected data.
- Typically, the source is excited every 0.2 ft (6 cm) vertically and a measurement is taken. The source and receiver are pulled to the top of each shaft, thus giving a complete assessment of the concrete quality between the two tubes. CHUM tests are typically performed between all the perimeter tubes to check the perimeter of the shaft. Additional opposing diagonal CHUM tests are also performed to check the integrity of the inner core of the shaft. If there are more than 4 tubes and an anomaly is identified, CHUM tests may be performed of sub diagonal tube pairs to further define an anomaly. A pair of tubes can be logged and the results displayed in less than approximately 5 minutes. The Freedom data PC with the Cross hole Ultrasonic monitor system (CHUM) is used for the collection and analysis of CHUM data.

4) Testing Equipment and Tools

- Testing equipment fig. 3 consists of:
  - Heavy Duity Computer;
  - Two Hydro-phones;
  - Depth Controller wheel;and
  - Two Cables wheels;

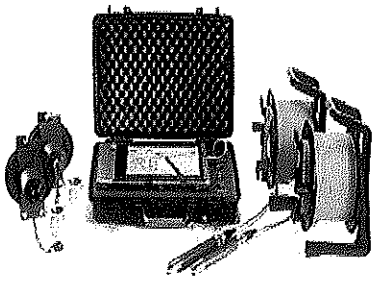


Fig.3 CHUM Equipment

5) Data Processing Techniques

-The collected data from CHUM measurements between two tubes at all depths are saved in one file. The file is scanned to determine first wave arrival times and energy levels at all depths. A CHUM log shows either the arrival time (or velocity) and signals energy plots vs. depth.

-CHUM system can easily scan any concrete element with enough tubes pairs as mentioned in table 1 above. The quality of the results is affected by the quality bonding between both concrete and steel tubes.

6) Interpretation of results

- In uniform, good quality concrete, the travel time between vertical equidistant tubes will be relatively constant and correspond to reasonable concrete pulse velocity from the bottom to the top of the foundation (see fig. 4).

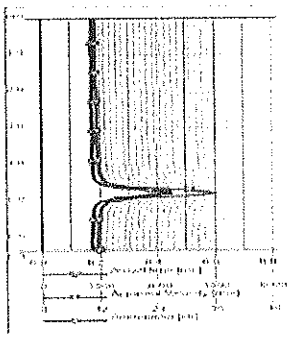
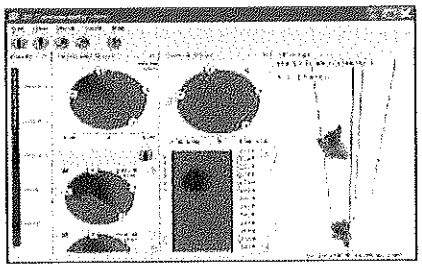


Fig. 4 CHUM interface (Arrival Time along pile lnegth , and Energy,

- CHUM test will also produce records with good signal amplitude and energy in good quality concrete. Longer travel times and lower amplitude/energy signals indicate the presence of irregularities such as poor quality concrete, void, honeycomb, and soil intrusions. In some severe defects, the signal may be completely lost.
- The variance in the arrival time between CHUM logs is due to the variance of tube spacing.



7) 3D Tomography (optional - fig. 5)

- 3D Tomography used for evaluate the concrete quality using wave velocity variation along pile length as follows:

I. Sound wave velocity over 4200m/s excellent concrete;.
II. Sound wave velocity over 3657m/s very good concrete;
III. Sound wave velocity 3048 to 3657m/s accept concrete and;
IV. Sound wave velocity less than 3048 m/s questionable concrete.

- The real concrete low quality or shaft defects be clear when receiving same defected zone on both of traveling time - energy curve and 3D tomography. otherwise maybe tube debonding or local uneffective low material quality.

8) Equipment calibration

- Calibration certificate for CHUM will attached in the final report.

PILETEST
Take a Deeper Look

Developing, manufacturing and marketing of deep Foundation quality assurance NDT equipment since 1996

ORIGINAL

CERTIFICATE OF IN-HOUSE CALIBRATION

15222-2

Calibration date	2021-05-11
Valid till	2024-05-10

#	item	S/N	Results
1	CHUM System	1433	Pass
2	CHUM transducers	T 1451, T1700	Pass

I hereby certify that the above CHUM system was successfully calibrated according to all the requirements of ASTM standard D6760-16 using in-house method CALCH03A

Erez I. Amir
President
Piletest.com

Pile Testing Instruments
PILETEST
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Developing, manufacturing and marketing of deep Foundation quality assurance NDT equipment since 1996

IN-HOUSE Calibration Report

2021-05-11

UUC	S/N	
CHUM System	1433	
Temperature	20	°C

Results

Measured wave speed	340.0	m/s
Expected wave speed	343.3	m/s
Intercept	-3.6	us
R2	0.9999	
Results	Pass	

Measurements

FAT (sec)	Distance (m)
0.0001460	0.051
0.0003020	0.102
0.0005740	0.197
0.0008700	0.301
0.00820	0.401
0.0014720	0.501
0.0017600	0.6

Summary

I hereby certify that the above CHUM system was successfully calibrated according to all the requirements of ASTM standard D6760-16 using in-house method CALCH03A

Erez I. Amir
President
Piletest.com

Pile Testing Instruments PILETEST www.piletest.com

PILETEST.COM

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إستلام موقع
Site Handover Sheet (CHUM)

إستلام أمر العمل:	2022/ /	تاريخ الزيارة: 2022/ 10 /	ملاحظات أثناء الاختبار Notes
المالك (Owner):	الهيئة العامة للطرق والكباري		
العميل (NECB Client):	شركة النيل العامة للطرق والكباري		
المشروع (Project Name):	الكوبري الدائري - كوبري الجسور		
إستشاري المالك (OE):	كريم سيا هوم		

S.	Elemnet Type	Element ID	No. of Tubes	Available No. of Tubes	D (cm)	L (m)	Other measurements
1	P2PL3	Pile	4	4	120	40	
2	P3P29	Pile	4	4	120	40	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							

الجهاز المستخدم Testing Equipment	إجمالي عدد الاختبارات Total #of tests		
ممثلي المكتب NECB Representative	مهندس إختبارات /		التوقيع
	فني إختبارات /		التوقيع
ممثل العميل Client Representative	الاسم / فادي ابو طيع		
	المسمى الوظيفي /	ممثل الاستشاري OE Representative	الاسم / التوقيع /

صحة أرقام وأعداد وبيانات العناصر المسجلة مسئولية العميل لأول مرة، ويلزم التأكد منها من خلال لوحة معتمدة بالموقع.

The truth of the tested elements data is in the client responsability and should be checked via a stamped layout at site.

نموذج رقم (F/24-02)
تاريخ أول إصدار 10/04

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date				Time			
				2/5 / 2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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 : **Insulating For Footing Layer (1)**		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW	
Work Activity	**Insulating For Footing P3 Layer (2)**
Location	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km FOOTING P3

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1				
2				
3				

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative	Mohammed gardouh			A

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date				Time			
				2/5 / 2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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 : **Insulating For Footing Layer (1)**		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW	
Work Activity	**Insulating For Footing P2 Layer (2)**
Location	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km FOOTING P2

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1				
2				
3				

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative	Mohammed Gadoh			A

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date						Time	
				31/4 / 2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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 : **Insulating For Footing Layer (1)**		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW	
Work Activity	**Insulating For Footing P3 Layer (1)**
Location	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km FOOTING P3

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1				
2				
3				

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative	Mohammed Gardouh			A

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date						Time	
				31/4 / 2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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 : **Insulating For Footing Layer (1)**		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW	
Work Activity	**Insulating For Footing P2 Layer (1)**
Location	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km FOOTING P2

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1				
2				
3				

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative	Mohammed Gardah			A

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
				17/6/2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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 : INSULATING FOR FOOTING P1 LAYER 1		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW	
WORK Activity	**INSULATING FOR FOOTING P1 LAYER 1**
Location	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km FOOTING P1

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1				
2				
3				

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative	Mohammed Gardoum			A

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
				24/6/2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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 : INSULATING FOR FOOTING P1 LAYER 2		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW	
WORK Activity	INSULATING FOR FOOTING P1 LAYER 2
Location	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km FOOTING P1

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1				
2				
3				

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative	Mohammed Gardah			A

MATERIAL APPROVAL REQUEST

Contractor Company				Designer Company					
Issued by Contractor	Name	Sign		Date	Time				
				25/3/2023					
Contractor Reference									
Received by ER		محرم باخوم	MAR	C1	C2	C3	DD	MM	YY	HH	MM

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

Description of Materials	**NILOCOAT R** is a rubberized bitumen damp-proofing coating /adhesive,specially formulated to provide high resistance to the passage of water vapor, and is highly resistant to re-emulsification when in long term contact with water .		
Location to be Used	REGWA		
Sample only	Yes / No	Materials Type	**Insulation Materials**
Supplier Name		Data Sheet provided	Yes attached / No
Reference in BoQ		Specification	Clause
Prequalification reference		Test Samples Results	
Reference Photos	Yes attached / No	Other	

Comments by:	**Comments by:**

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC R
Contractor	Ahmed Adel			A
QA/QC *				A
GARB**				
Employers Representative	Mohammed Gardoun		25/3/2023	A

* Designer

BituNil

BITUMINOUS COATS

NILOCOAT R

DESCRIPTION

NILOCOAT R is a rubberized bitumen damp-proofing coating /adhesive, specially formulated to provide high resistance to the passage of water vapor, and is highly resistant to re-emulsification when in long term contact with water.

NILOCOAT R bonds strongly to most substrates.

USES

- Damp-proofing of structural footings and below grade walls.
- General damp-proofing applications & as a vapor barrier.
- NILOCOAT R bonds extremely well to a wide variety of substrates including concrete, brick, bitumen & mastic asphalt membranes, slates, tiles, etc.

Thus it is used as an adhesive to bond construction materials such as wood block, compatible insulation, tiles,..etc..

MAJOR FEATURES

- Excellent damp-proofing characteristics.
- Superb adhesion
- Excellent movement capability.
- Solvent free - environment friendly.
- No re-emulsification in water.

INSTALLATION

PREPARATION:

A. Thoroughly clean all surfaces to be coated with NILOCOAT R.
B. Repair damaged or cracked substrate.
C. Prepare porous surfaces by priming with NILOCOAT R diluted 1:1 with water.
D. Allow primed surface to dry before application of coating.
E. Stir well prior to application of coats.

Rubberized Damp-Proofing Coating & Adhesive

APPLICATION:

1. General damp-proofing & vapor barrier.

As a general Damp-proofing for vertical and horizontal application.

a.) Prepare surface as indicated earlier.

b.) Apply in two coats. The first at the rate of 0.6- 0.8 Kg/ m2. (depending on substrate condition) Allow to dry before applying the second coat which should be at right angle to the first, at the same rate.

c.) Use only as damp-proof membrane in sandwich construction. (i.e. Apply as above, blinding the wet second coat with clean, sharp sand before applying a minimum of 50mm sand cement screed surface (horizontal Application), or clean sand backfill (vertical application) .

d.) If NILOCOAT R is to be left exposed to sunlight for any length of time, the wet second coat must be blinded with clean sharp sand.

When used as a vapor barrier, it is essential that there are no imperfections in the coating. Any small hole will destroy the vapor seal.

2. As an adhesive for insulation & tiles

a) Ensure surfaces are clean, smooth, & lightly dampened.
b) Allow both surfaced to be bonded with the rubberized coating at 0.6-0.8 Kg/m2 rate
c) Allow to become tacky before pressing firmly together. Hold material in place until sufficient adhesive strength is developed.1

Store BITUNIL NILOCOAT R under cover, at temperatures between 5°C and 40°C. Storage must be frost free.

PACKING

15Kg and 200Kg containers.

HEALTH & SAFETY INSTRUCTIONS

As with all chemical products, care should be taken during use and storage.

Avoid contact with mouth, eyes, and skin.

Wear suitable protective clothing, gloves, and eye/ face protection.

NILOCOAT R

Rubberized Damp-Proofing Coating & Adhesive

Properties	Test Method	NILOCOAT R
Composition		Rubberized bitumen, water, emulsifying agents
Bitumen modifier	ASTM D 2939	SBR
Specific gravity	ASTM D 2939	1.05 ±0.02
Flammability		No tendency to flash of ignite
Drying time (firm set)		Less than 24 hrs at 80% RH [+5%] @ 27°C [±2°C]
Heat resistance, at 100°C		No flow, sag or blistering
Flexibility at 0°C		No cracking or flaking
Residue by evaporation, %		60 [nominal]
Water vapor transmission (g/m2/24Hrs)		0.8
Water resistance	ASTM D 2939	No blistering or re-emulsification in water
Shelf Life	-	12 Month (in factory sealed container, stored in a shaded ventilated area)

The information given in this Technical Data Sheet is given to the best of our knowledge based on laboratory test and practical experience. However, as the product is often used under conditions beyond our control, we cannot guarantee anything but the product itself.

Distributor:

بيتو نيل BituNil
Nile Waterproofing Material Co. S.A.E
شركة النيل للمواد العازلة ش.م.م

H.Q: 50, Al Khalifa Al Maamoun St. Roxy - Heliopolis, Cairo - Egypt, Tel : (202) 24511194 - 24511195 Fax: (202) 24511198.

MATERIAL APPROVAL REQUEST

Contractor Company			Designer Company	
Issued by Contractor	Name	Sign	Date	Time
			25/3/2023	
Contractor Reference				
Received by ER		محرم باخوم	MAR	

C1	C2	C3	DD	MM	YY	HH	MM

CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2	Work Activity IT Will be used to inject the tubes that were used in the (ultra Sonic) experiment		
CODE - 3	Sub Element of Activity		

Description of Materials	Sika Intraplast Z (Expanding Grout Admixture) **(injection material)**		
Location to be Used	REGWA (FOOTING P1)		
Sample only	Yes / No	Materials Type	Expanding Grout Admixture **(injection material)**
Supplier Name		Data Sheet provided	Yes attached / No
Reference in BoQ		Specification	Clause
Prequalification reference		Test Samples Results	
Reference Photos	Yes attached / No	Other	

Comments by:	**Comments by:**

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC *				A
GARB**				
Employers Representative	Mohammed Gardouh		25/3/2023	A

* Designer
** Alignment/Bridges: Culvert only

Product Data Sheet
Edition 1, 2014
Version no. 01.14

Construction

Intraplast® -Z

Expanding Grout Admixture

Product Description	An expanding grout admixtures which introduce micro bubbles into the cement mix. Wet volume expansion and increased fluidity, without segregation, are the enhanced performance characteristics when using Intraplast® -Z.
Uses	Intraplast®-Z is used to increase cohesion in cement grouts (addition of sand is possible). Intraplast® -Z develop hydrogen gas. In general Intraplast®-Z can be used for grouting of: ■ Pre-stressed cable ducts. ■ Rock and soil anchoring. ■ Bearing plates. ■ Pre-placed aggregates grouting. ■ Tunnel linings.
Advantages	Intraplast® -Z provide the following beneficial properties: ■ Increased frost resistance. ■ Improved fluidity. ■ Increased cohesion. ■ Volume expansion in the wet state. ■ Slight retardation of set (Intracrete only).
Approvals / Standards	▪ Intraplast® -Z has been tested as per SCAQMD Rule 1168' Result VOC Content 0 g/L

Technical Data

Colour	Grey
Density	1.0 ± 0.1 kg/l
Storage Conditions	Dry
Shelf Life	12 months
Packaging	160 x 1 kg or 20 x 1 kg

Application

Dosage	2% by weight of cement. (1 kg sachet per 50 kg cement).
Dispensing	Add directly to the cement mix water, in the mixer. Sand may be added as required.
Important Recommendations	For pre-stressed concrete work, where mechanical batching is carried out, a mixing time of 4 minutes with a W/C ratio of 0.36 - 0.40 has been found to give the best results. The most effective mixing sequence has proven to be; water, cement and finally the admixture. Cements containing fly ash are unsuitable.

Typical Results

	Control	Sample 1	Sample 2
Mix Design *Cement*	1	1	1
Water	*0.50*	*0.45*	*0.45*
Intraplast® Z per 50 kg OPC	-	*500 gm*	*1000 gm*
Flow Test – JA Cone 3 mins after mixing (3 mins ± 0.3 sec)	3.09 Sec.	3.18 Sec.	3.31 Sec.
Density *(kg/m³)*	1.840	1,850	1.885
Air Content *(%)*	8.2	5.8	6.4
Expansion (%) *3 days*	-	-	0.470
7 days	-	-	*0.738*
Compressive Strength (N/mm2) 1 day	13.4	11.8	13.7
7 days	26.0	29.2	30.6
28 days	*41.7*	*43.2*	*47.5*

Safety Instructions

Ecology	Do not dispose of into water or soil but according to local regulations.
Transport	Non-hazardous.
***Safety* Precautions**	Contact with eyes, skin may cause irritation. Wear gloves and goggles.
Toxicity	Non-Toxic under relevant health and safety codes.

Legal notes

- *The information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.*

Construction

Sika Egypt for Construction Chemicals
El Abour City
1st industrial zone (A)
Section # 10 Block 13035,
Egypt

Tel :+202-46100714/15/16/17/18
Fax :+202- 46100759
Mob :+2012- 3908822/55
www.sika.com.eg

MATERIAL APPROVAL REQUEST

Contractor Company				Designer Company					
Issued by Contractor	Name	Sign		Date	Time				
				25/3/2023					
Contractor Reference									
Received by ER		محرم باخوم	MAR	C1	C2	C3	DD	MM	YY	HH	MM

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

Description of Materials	**NILOCOAT R** is a rubberized bitumen damp-proofing coating /adhesive,specially formulated to provide high resistance to the passage of water vapor, and is highly resistant to re-emulsification when in long term contact with water .		
Location to be Used	REGWA		
Sample only	Yes / No	Materials Type	**Insulation Materials**
Supplier Name		Data Sheet provided	Yes attached / No
Reference in BoQ		Specification	Clause
Prequalification reference		Test Samples Results	
Reference Photos	Yes attached / No	Other	

Comments by:	**Comments by:**

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC R
Contractor	Ahmed Adel			A
QA/QC *				A
GARB**				
Employers Representative	Mohammed Gardoun		25/3/2023	A

* Designer

BituNil

BITUMINOUS COATS

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- Superb adhesion
- Excellent movement capability.
- Solvent free - environment friendly.
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INSTALLATION

PREPARATION:

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B. Repair damaged or cracked substrate.
C. Prepare porous surfaces by priming with NILOCOAT R diluted 1:1 with water.
D. Allow primed surface to dry before application of coating.
E. Stir well prior to application of coats.

Rubberized Damp-Proofing Coating & Adhesive

APPLICATION:

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As a general Damp-proofing for vertical and horizontal application.

a.) Prepare surface as indicated earlier.

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Store BITUNIL NILOCOAT R under cover, at temperatures between 5°C and 40°C. Storage must be frost free.

PACKING

15Kg and 200Kg containers.

HEALTH & SAFETY INSTRUCTIONS

As with all chemical products, care should be taken during use and storage.

Avoid contact with mouth, eyes, and skin.

Wear suitable protective clothing, gloves, and eye/ face protection.

NILOCOAT R

Rubberized Damp-Proofing Coating & Adhesive

Properties	Test Method	NILOCOAT R
Composition		Rubberized bitumen, water, emulsifying agents
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Specific gravity	ASTM D 2939	1.05 ±0.02
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Drying time (firm set)		Less than 24 hrs at 80% RH [+5%] @ 27°C [±2°C]
Heat resistance, at 100°C		No flow, sag or blistering
Flexibility at 0°C		No cracking or flaking
Residue by evaporation, %		60 [nominal]
Water vapor transmission (g/m2/24Hrs)		0.8
Water resistance	ASTM D 2939	No blistering or re-emulsification in water
Shelf Life	-	12 Month (in factory sealed container, stored in a shaded ventilated area)

The information given in this Technical Data Sheet is given to the best of our knowledge based on laboratory test and practical experience. However, as the product is often used under conditions beyond our control, we cannot guarantee anything but the product itself.

Distributor:

بيتو نيل BituNil
Nile Waterproofing Material Co. S.A.E
شركة النيل للمواد العازلة ش.م.م

H.Q: 50, Al Khalifa Al Maamoun St. Roxy - Heliopolis, Cairo - Egypt, Tel : (202) 24511194 - 24511195 Fax: (202) 24511198.

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date				Time			
	[illegible]	[illegible]		27/8/2022							
Received by ER			CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference											

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour:		Concrete Volume:	

Comments by:	Comments by:

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	[illegible]	[illegible]		A
QA/QC				A
Employer Representative	[illegible]	[illegible]		A

Bored Piles Construction
Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report NO.	
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	27/08/2022
Pile No.	non-working Test Pile	Structure	bridge	Pile Cutoff Level	–
pier	–	Ground Level	67.85	Pile Toe Level	29.96
Theoretical Pile Length from caisson level	39.25 m	Water Table Level	N/A	Permanent Casting Level	N/A
Req. Drilling Length From Ground Level	37.89 m	Theoretical concrete Q	46.33 m3	Temporary Casting Level	69.21
Act. Drilling Length	41 m	Act. concrete Q	50.5m3	Steel Top Level	68.61
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	0.6

Pile Survey

Coordinates	EAST	North
Theoretical	585430.032	830472.607
Actual	585430.043	830472.625

Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm3)	Less Than 1.1	1.02	Less Than 1.5	1.06
Viscosity(Sec.)	30:70 Sec.	0:00	≤90 Sec.	37
Sand Content %	Less than 2%	N/A	Less than 2%	1.5

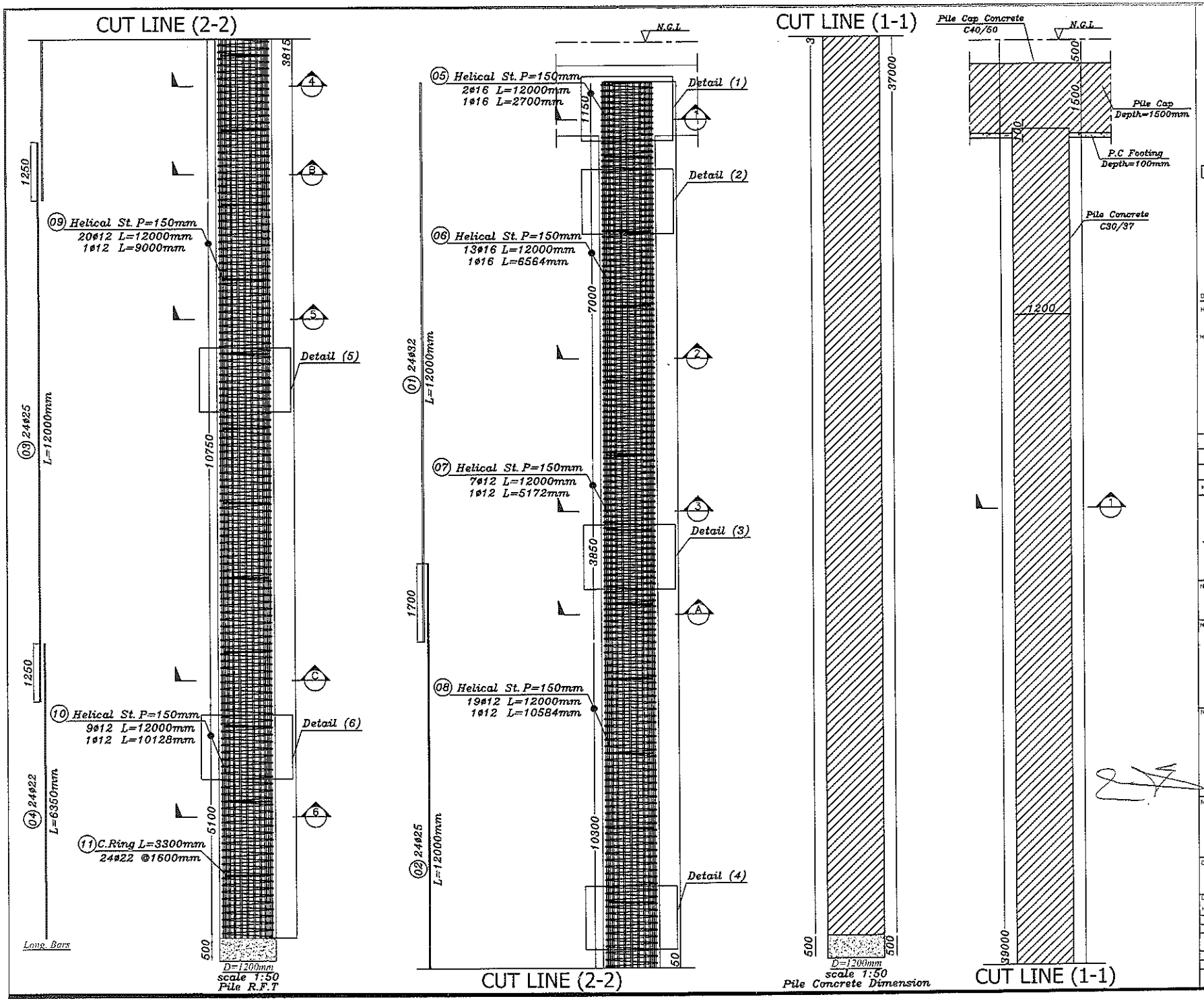
Geotechnical Log	
0	CAISSON L.
0_3	SAND
3_4	SILTY SAND
4_5	CLAY
5_8	Sand
8_9	SILTY SAND
9_10	Sand
10_13	CLAY
13_29	Sand
29_31.5	CLAY
31.5_40	Sand

Time Survey

Activity	Date	From	To	Activity	Date	From	To
Drilling	27/08/2022	07:30	12:00	Cleaning	–	–	–
Install Cages	28/08/2022	13:00	14:44	pouring	27/08/2022	18:27	19:57

	Mixer 1	Mixer 2	Mixer 3	Mixer 4	Mixer 5
Slump	21.1	21.3	20.9	21.6	21.4
Temperature	30 c	29.5 c	29 c	29 c	28 c

	BAUER EGYPT	NILE COMPANY	OWNER / if Required
Signature			



GENERAL NOTES:

- All dimensions are in millimeters.
- Do not measure from drawings, All dimension should be read or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C40/60
- Concrete cover: 75mm
- Lap Splice Between Helical Stirrups Ø10 and Ø10: 540mm
- Lap Splice Between Helical Stirrups Ø10 and Ø12: 640mm
- Lap Splice Between Helical Stirrups Ø12 and Ø12: 480mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-210-002-PIB-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	14-07-2022	MAS	ISSUED FOR CONSTRUCTION

OWNER:

المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

وزارة النقل

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

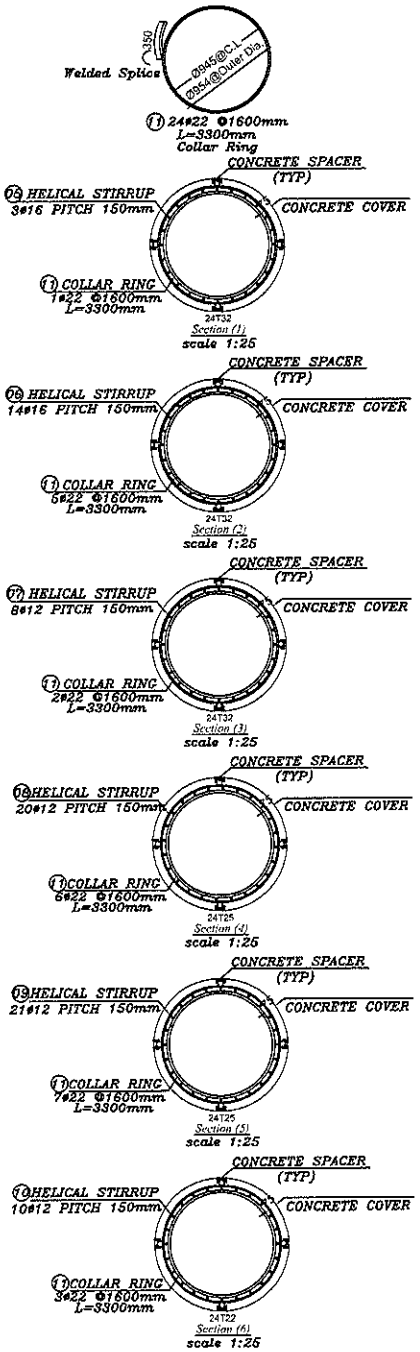
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

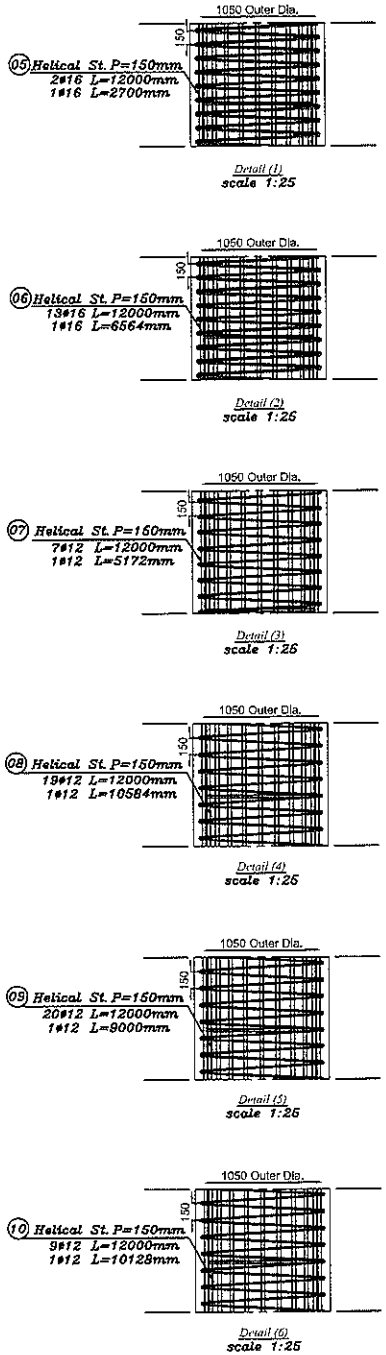
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

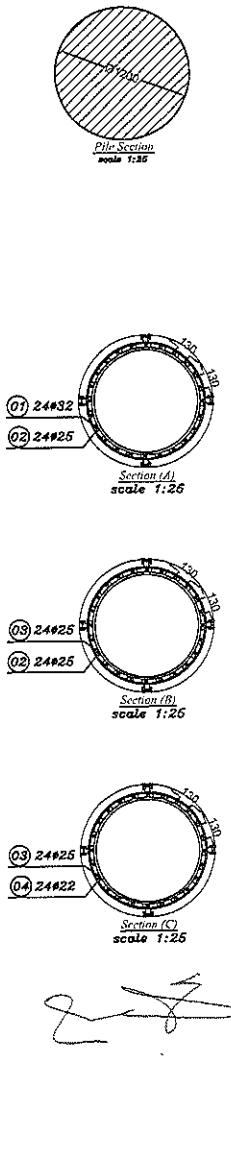
MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILE LOAD TEST
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SD-100-001-PIB-E00	07-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Mohamed Mostafa	ENG. Abdallah Mahmoud	ENG. Mostafa Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashaan	Eng. Javier Torrico	







GENERAL NOTES:

- All dimensions are in millimeters.
- Do not measure from drawings. All dimension should be read or computed.
- Top Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover: 75mm
- Lap Splice Between Helical Stirrup (Ø12mm) is 640mm
- Lap Splice Between Helical Stirrup (Ø16mm) is 640mm
- Lap Splice Between Helical Stirrup (Ø20mm) is 480mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CD-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CD-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
C	31-01-2022	MAS	ISSUED FOR CONSTRUCTION

OWNER:

المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

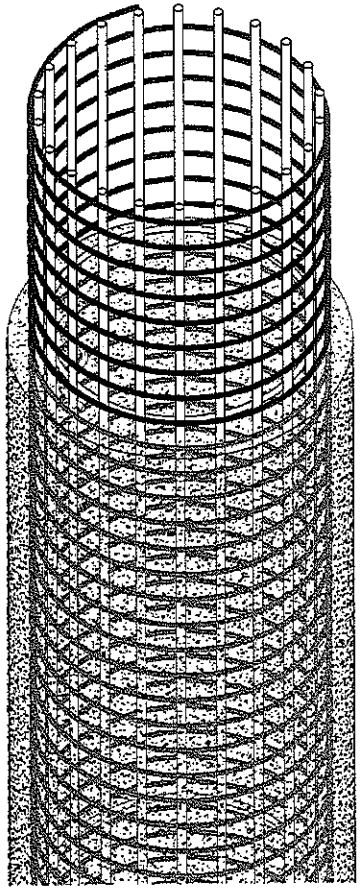
DWG. TITLE:

REGWA ROAD BRIDGE
PILE LOAD TEST
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SD-120-002-PIE-E03	07-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Mohamed Mostafa	ENG. Abdallah Mohsen	ENG. Mamdouh Saleh

SUPERVISOR:	APPROVED BY:
DR. Mahmoud Lashein	Eng. Javier Tonino

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6350	24	6350	455.31
05	16	1050 / 12000 / 150 / 1050	2+1	12000 + 2700	37.92 + 4.26
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6564	246.51 + 10.37
07	12	1050 / 12000 / 150 / 1050	7+1	12000 + 5172	74.66 + 4.59
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9000	213.33 + 8.00
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 10128	96.00 + 9.00
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5651.29



3D View For Pile 1200mm

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	694.91	189.27	227.37	577.2	288.04
TOTAL WEIGHT(Kg)	617.64	299.06	691.93	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 1600 TON ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

GENERAL NOTES:

- All dimensions are in millimeter.
- Do not measure from drawings. All dimension should be read or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup Ø12 and Ø16 is 640mm
- Lap Splice Between Helical Stirrup Ø16 and Ø16 is 640mm
- Lap Splice Between Helical Stirrup Ø16 and Ø12 is 480mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	11-07-2022	MAS	ISSUED FOR CONSTRUCTION

OWNER: المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

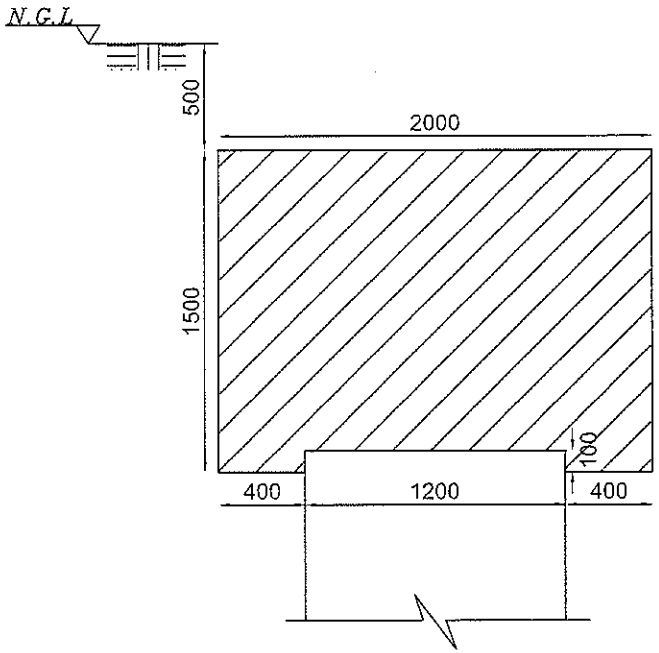
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

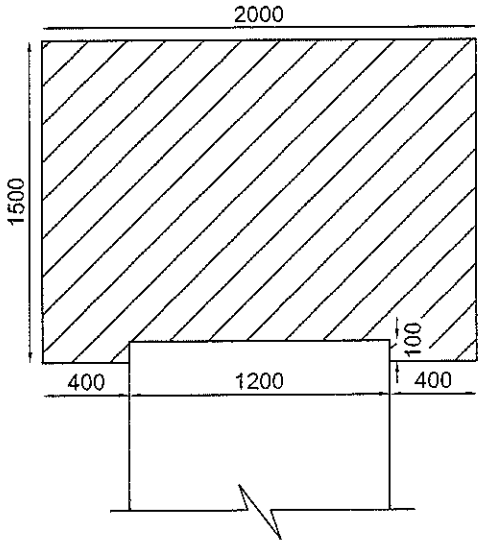
DWG. TITLE:
REGWA ROAD BRIDGE
PILE LOAD TEST
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO:	DATE:	SCALE:
HSRE-VD01-SD-108-00-MPIE-E08	07-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Mohamed Montafa	ENG. Abdallah Mohsen	ENG. Mamdouh Salah

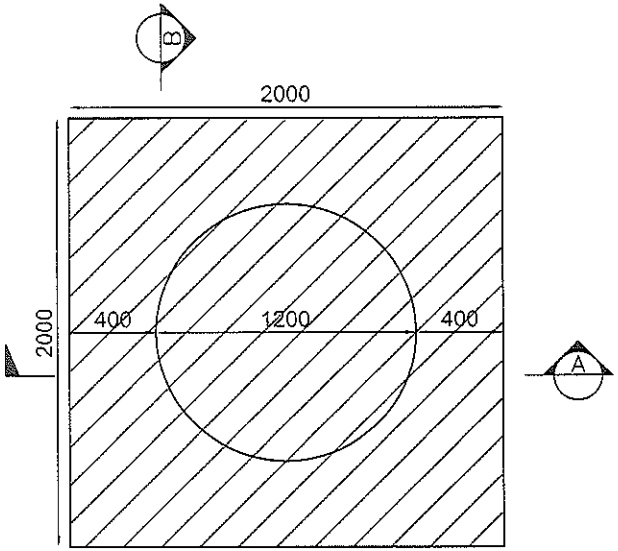
SUPERVISOR:	APPROVED BY:
DR. Mahmoud Lashaan	Eng. Javier Tordera



Section(A)
scale 1:25



Section(B)
scale 1:25



Plan of Pile Head
scale 1:25

GENERAL NOTES:

- All dimensions are in millimeter.
- Do not measure from drawings, All dimension should be read as computed.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover: 75mm
- Lap Splice Between Helical Stirrups (D) and (D) is 640mm
- Lap Splice Between Helical Stirrups (D) and (D) is 640mm
- Lap Splice Between Helical Stirrups (D) and (D) is 480mm

All Levels should be revised before construction in site

ABBREVIATION :

-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

NO.	DATE	ENG.	REVISION
0	04-07-2022	MAS	ISSUED FOR CONSTRUCTION

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

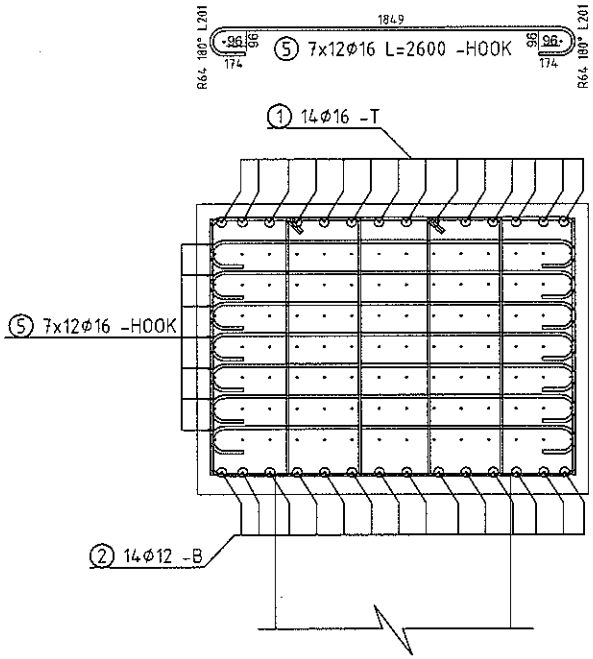
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

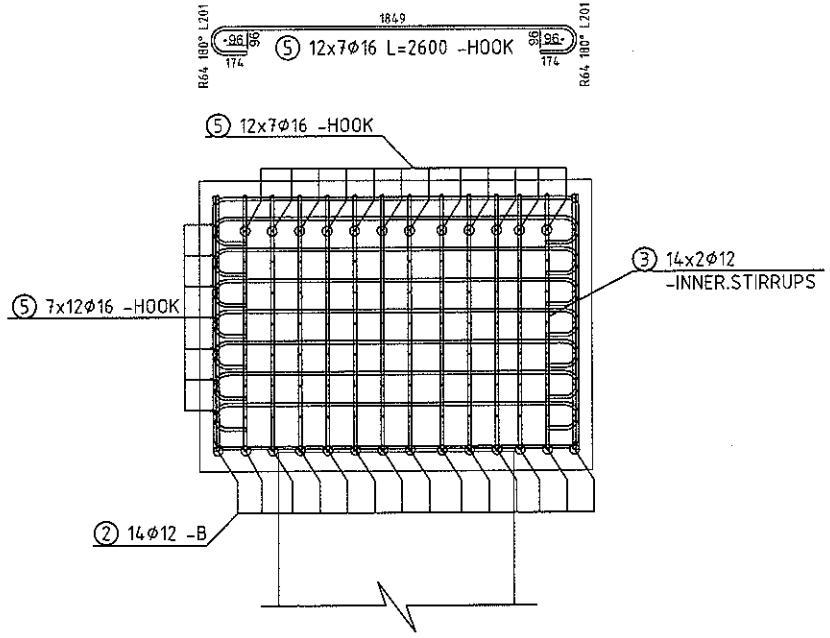
DWG. TITLE:
REGWA ROAD BRIDGE
PILE LOAD TEST
PILE CAP REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-WD01-SD-100-004-PIE-E00	07-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Mohamed Mostafa	ENG. Abdallah Mohsen	ENG. Mohamed Salim

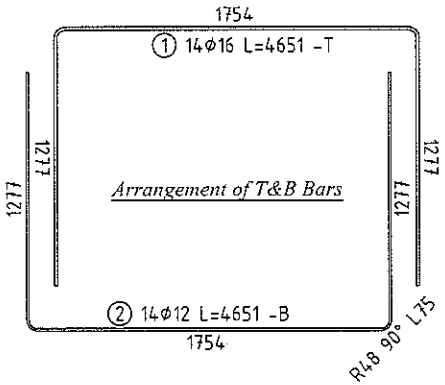
SUPERVISOR:	APPROVED BY:
DR. Mahmoud Lashheen	Eng. Javier Torrico

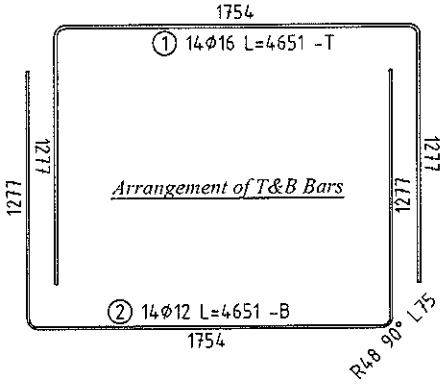


Section(A)
scale 1:25



Section(B)
scale 1:25





GENERAL NOTES:

- All dimensions are in millimeters.
- Do not measure from drawings, All dimension should be read at site/plane.
- Pile Concrete C20/37 - Pile Cap Concrete C40/50
- Concrete cover: 75mm
- Lap Splice Between Helical Stirrups (B) and (D) is 640mm
- Lap Splice Between Helical Stirrups (B) and (D) is 640mm
- Lap Splice between Helical Stirrups (D) and (D) is 480mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

NO.	DATE	ENG.	REVISION
0	31-07-2022	MAS	ISSUED FOR CONSTRUCTION

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

المالك:

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

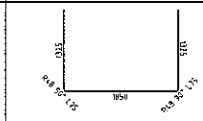
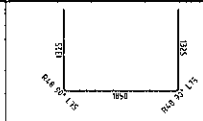
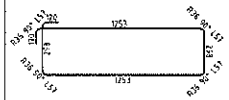
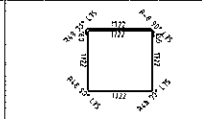
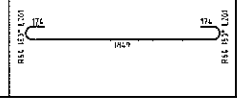
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

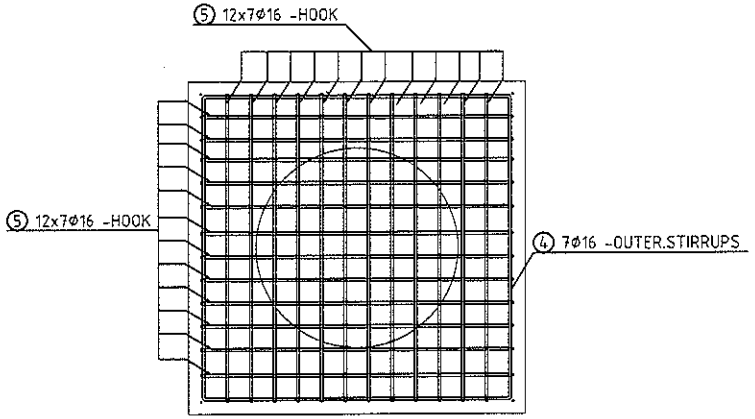
DWG. TITLE:
REGWA ROAD BRIDGE
PILE LOAD TEST
PILE CAP REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSR(E)-V001-SD-100-005-PC(E-E09	07-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Mohamed Mostafa	ENG. Abdallah Mohsen	ENG. Mirmdouh Salah

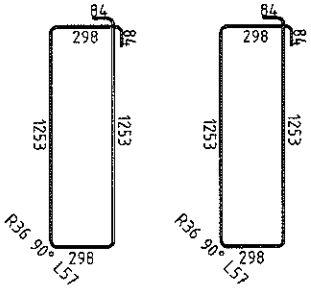
SUPERVISOR:	APPROVED BY:
DR. Mahmoud Lashen	Eng. Javier Torres

Mark	ϕ [mm]	Shape [mm]	Length [mm]	QTY	Mass [kg]	% of total	Notes
①	ϕ16		4459	28	197.05	17.6%	-T
②	ϕ12		4459	28	110.84	9.9%	-B
③	ϕ12		3498	28	86.95	7.8%	-INNER.STIRRUPS
④	ϕ16		9230	7	101.98	9.1%	-OUTER.STIRRUPS
⑤	ϕ16		2344	168	621.55	55.6%	-HOOK
Total mass = 1118.37 kg							

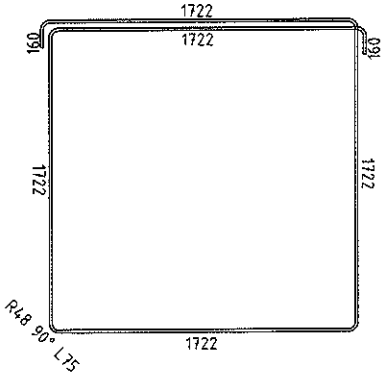
Pile Diameter	ϕ12	ϕ16
TOTAL LENGHT(M)	222.796	583.254
TOTAL WEIGHT(Kg)	197.79	920.58



Plan of Pile Head
scale 1:25



③ 14x2ϕ12 L=3858 -INNER.STIRRUPS



④ 7ϕ16 L=9806 -OUTER.STIRRUPS

GENERAL NOTES:

- All dimensions are in millimeter.
- Do not measure from drawings. All dimension should be read or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover: 75mm
- Lap Splice Between Helical Stirrups ⑩ and ⑪ is 640mm
- Lap Splice Between Helical Stirrups ⑪ and ⑫ is 640mm
- Lap Splice Between Helical Stirrups ⑫ and ⑬ is 480mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

NO.	DATE	ENG.	REVISION
0	31-07-2022	MAS	ISSUED FOR CONSTRUCTION

OWNER:

المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALMANN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
REGWA ROAD BRIDGE
PILE LOAD TEST
PILE CAP REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-100-000-PIC-030	07-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Mohamed Mostafa	ENG. Abdallah Mohsen	ENG. Mamdouh Salah

SUPERVISOR:	APPROVED BY:
DR. Mahmoud Lashden	Eng. Jawad Tawfik

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
				18/3/2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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 : pouring PC FOR Footing p1		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km FOOTING P1		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: pm		Concrete Volume: 12 m3	

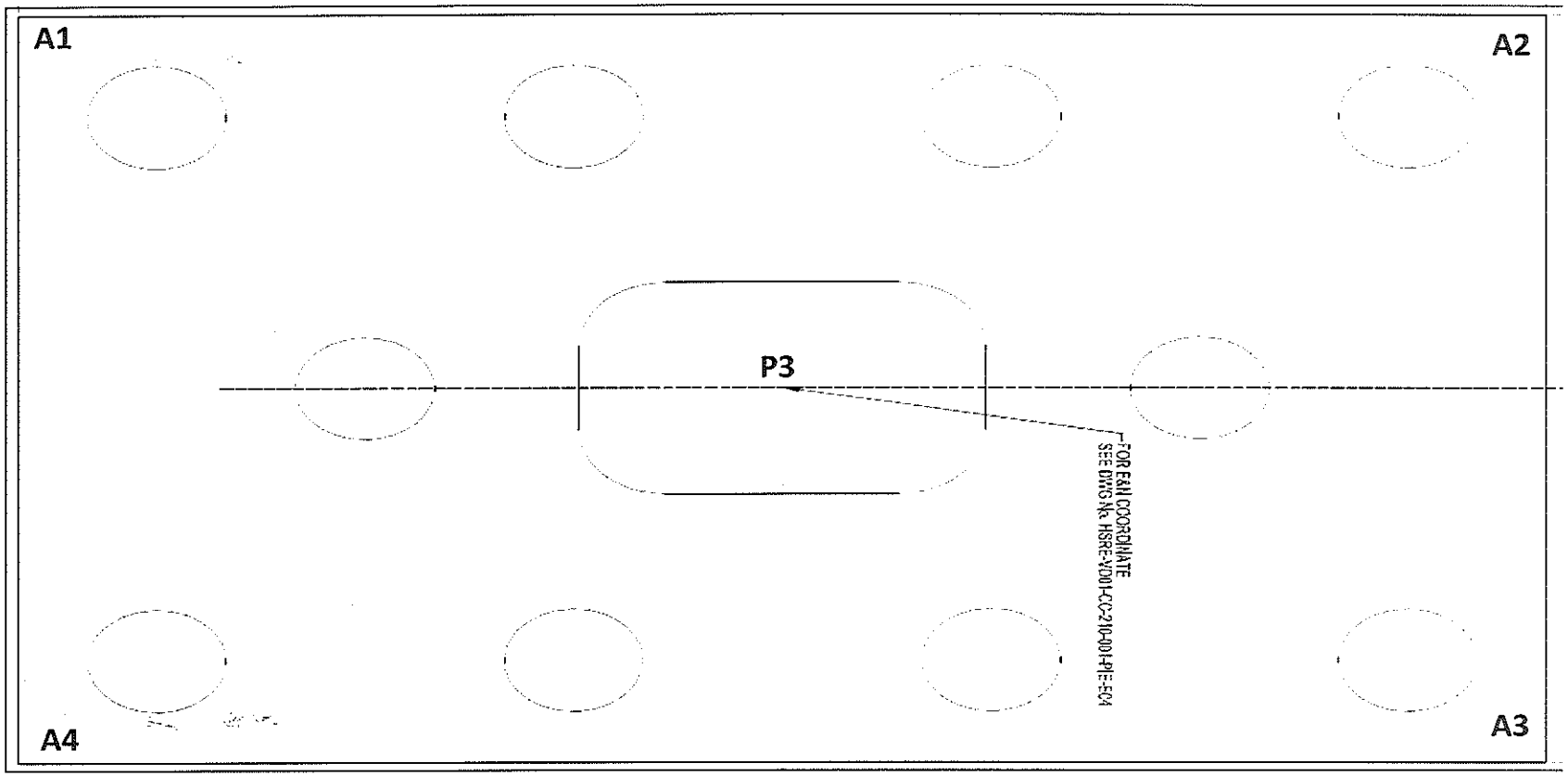
THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer Representative	Mohammed Gadoun			A



	P.C FOOTING (P3) Coordinates				
	X	Z			
A1	585467.43	830453.131	**P.C FOOTING (P2) Level**	64.04	
A2	585460.45	830458.811			
A3	585451.992	830448.418			
A4	585458.972	830442.737			

P.C FOOTING (P3) Dimensions 13.4m 9m

REQUEST to POUR CONCRETE

Contractor Company				Designer Company						
Issued by Contractor	Name	Sign		Date				Time		
				٢٠٢٢/١٠/٤						
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة									

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (P2 P.C FOOTING)			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 150 kg/cm^2
PRESTART CHECKLIST				
IR Approved		Plant & equipment available		
Mix Approved		Back up equipment available		
Setting out Survey Approved		Cast in items secure		
Temp Works Approved		Access route clear		
Formwork Checked		Work area safe to progress		
Start Time for Pour:	1:00 pm	Concrete Volume:	12m^3	

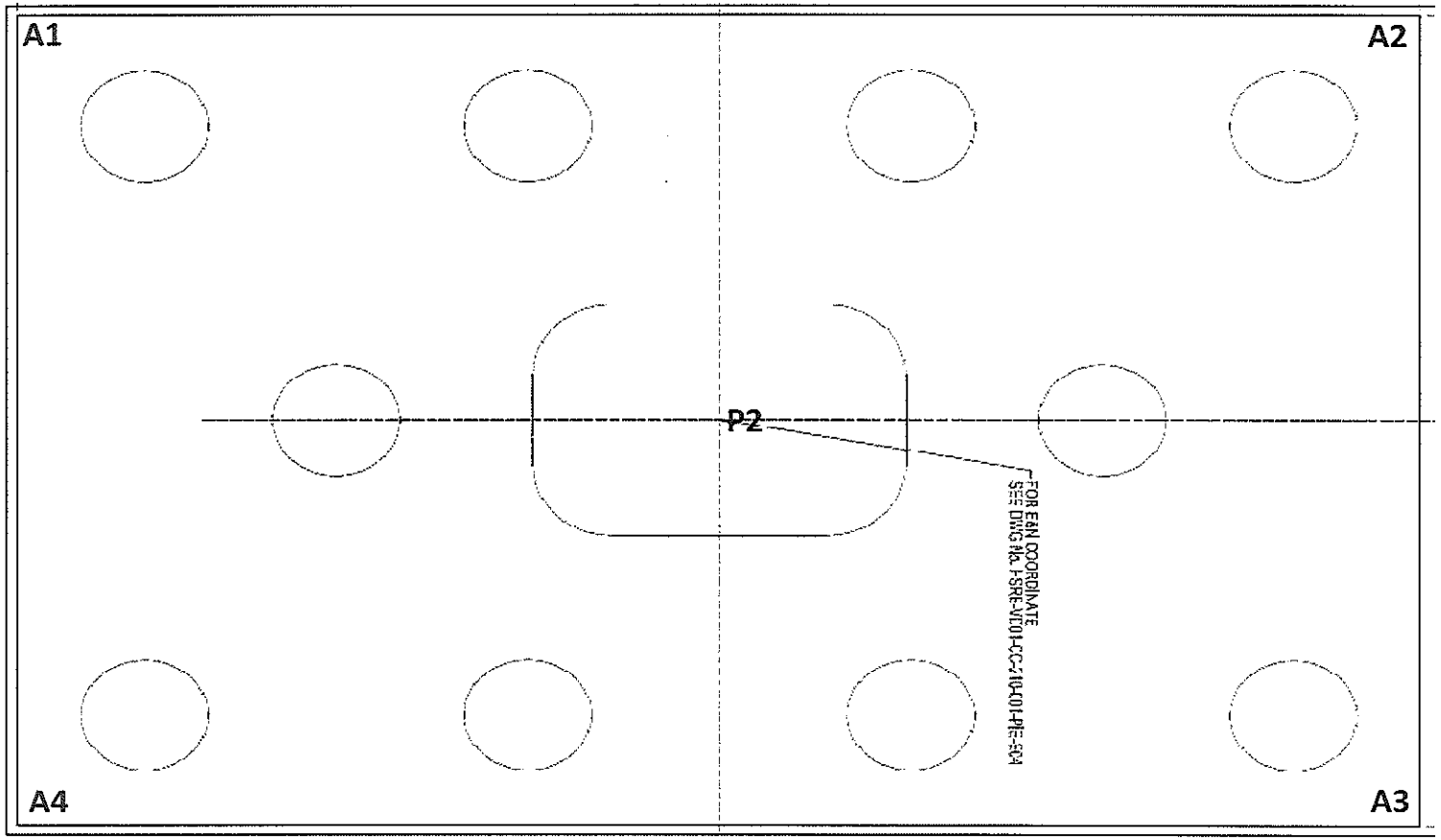
THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**P.C FOOTING COORDINATES,level and dimensions**	**1**

Comments by:	Comments by:
	الأعمال مقبولة ولا مانع من بدء الصب واخذ الكميات

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				**A**
QA/QC				**A**
Employer Representative	محمد محمود الردمي		٢٠٢٢/١٠/٤	



	P.C FOOTING (P2) Coordinates	
	X	Z
A1	585429.425	830484.06
A2	585436.406	830478.379
A3	585427.948	830467.986
A4	585420.967	830473.666

P.C FOOTING (P2) Dimensions 13.4m 9m

P.C FOOTING (P2) Level 64.907

REQUEST to POUR CONCRETE

Contractor Company				Designer Company						
Issued by Contractor	Name	Sign		Date				Time		
	نادر رمزي			29/9/2022						
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة									

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (P3 P.C FOOTING)		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 150 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: 1:00 pm		Concrete Volume: 12m^3	

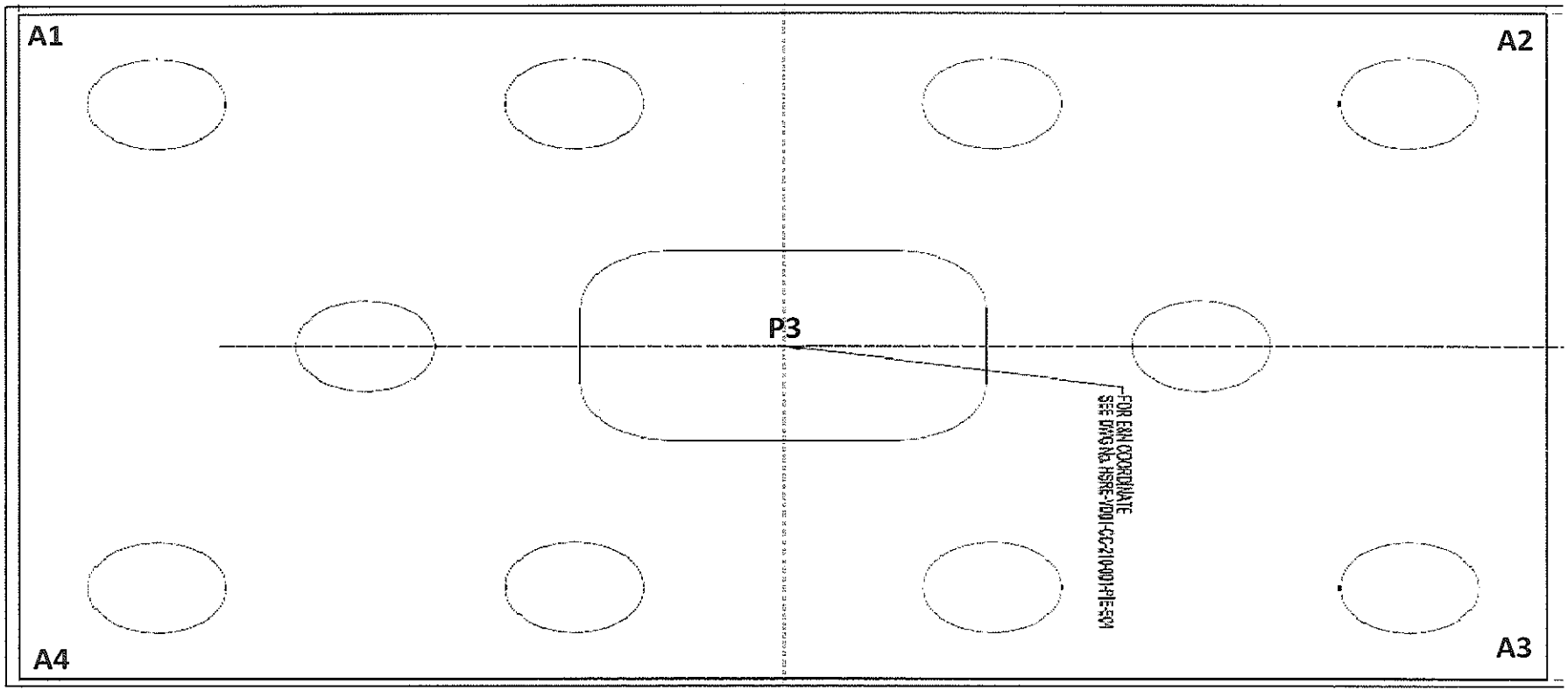
THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**P.C FOOTING COORDINATES,level and dimensions**	**1**

Comments by:	Comments by:
	الأعمال مقبولة ولا مانع من بدء الصب مع أخذ الكميات

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				**A**
QA/QC				**A**
Employer Representative	محمد محمود الجدوع		٢٠٢٢/٩/٢٩	



	P.C FOOTING (P2) Coordinates	
	X	Z
A1	585398.401	830509.308
A2	585405.381	830503.627
A3	585396.923	830493.234
A4	585389.942	830498.914

P.C FOOTING (P2) Dimensions 13.4m 9m

P.C FOOTING (P2) Level 64.237

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
	Ahmed Adel			21/6/2023							
Received by ER		Work Activity	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

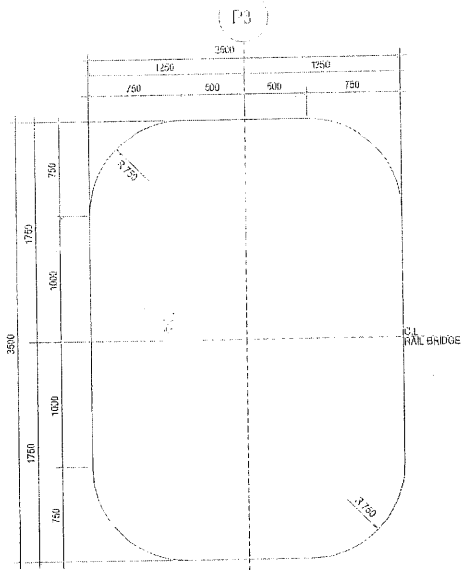
CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2	Work Activity : POURING Pier P1 Stem 4M HIGHT		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Location of Pour		Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km Pier P1		
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:
			Concrete Volume: 33M3	

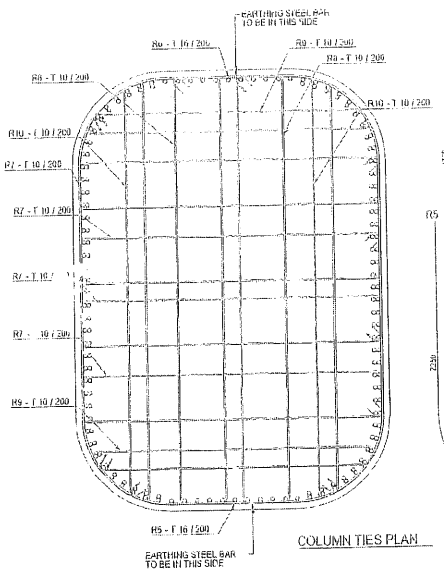
Item	Document No	Revision	Title	Number of Sheets
1			SHOPDRAWING FOR COLUMN P1	
2			RESULT OF COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS	
3			COULMN COORDINATES	

Comments by:	Comments by:

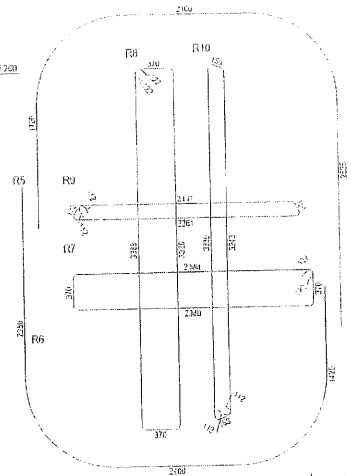
APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer Representative	Mohammed Gardouh			A



COLUMN CONCRETE DIMENSIONS

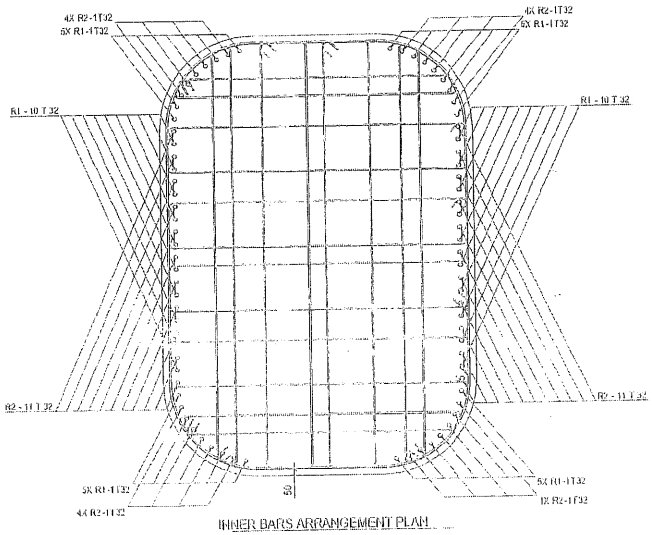


COLUMN TIES PLAN

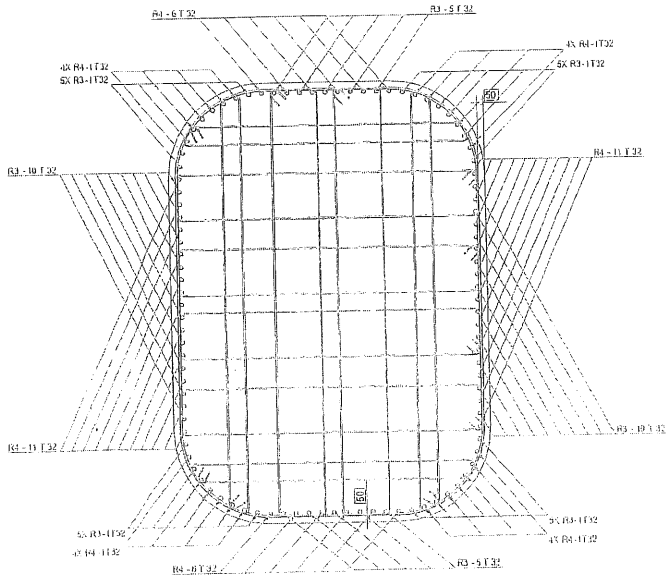


Approved with Comment

7/2/2023



INNER BARS ARRANGEMENT PLAN



OUTER BARS ARRANGEMENT PLAN

NOTES

1- ALL DIMENSIONS SHOWN ON THIS DRAWING ARE DISPLACEMENTS TO ELEVATIONS & COORDINATES ARE SHOWN IN MTERS

2- FOR PROJECT GENERAL NOTES SEE DRAWING No. HSRE-V001-CC-010-001-NOT-E00

3- FOR PIERS CONCRETE DIMENSION & SETTING OUT COORDINATES SEE DRAWING No. HSRE-V001-CC-210-03-PIE-E01

4-REINFORCED CONCRETE GRADE C30/37 & GRADE C20/25 FOR BLINDING CONCRETE

5- FOR EARTHING & BONDING DETAILS SEE DWG No. HSRE-V001-CC-408-001-DET-E07

6-FOR REINFORCING STEEL SEE DWG No. HSRE-V001-SD-206-002-HIS-E00

NO	DATE	ENG.	REVISION
0	01-03-2023	AMS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No.1145

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري
والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL) ,
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

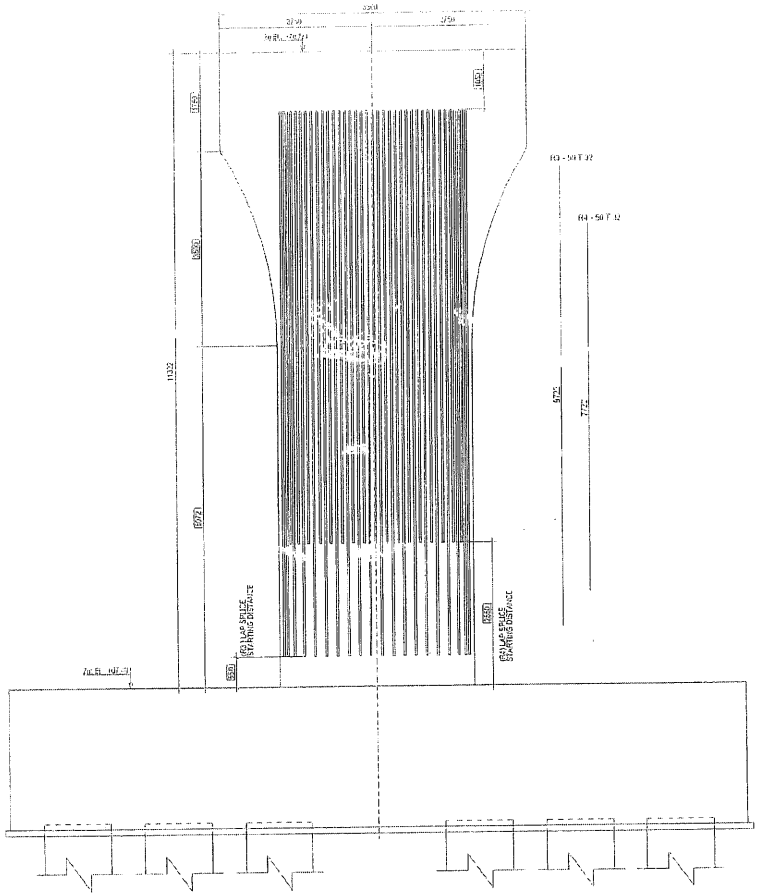
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

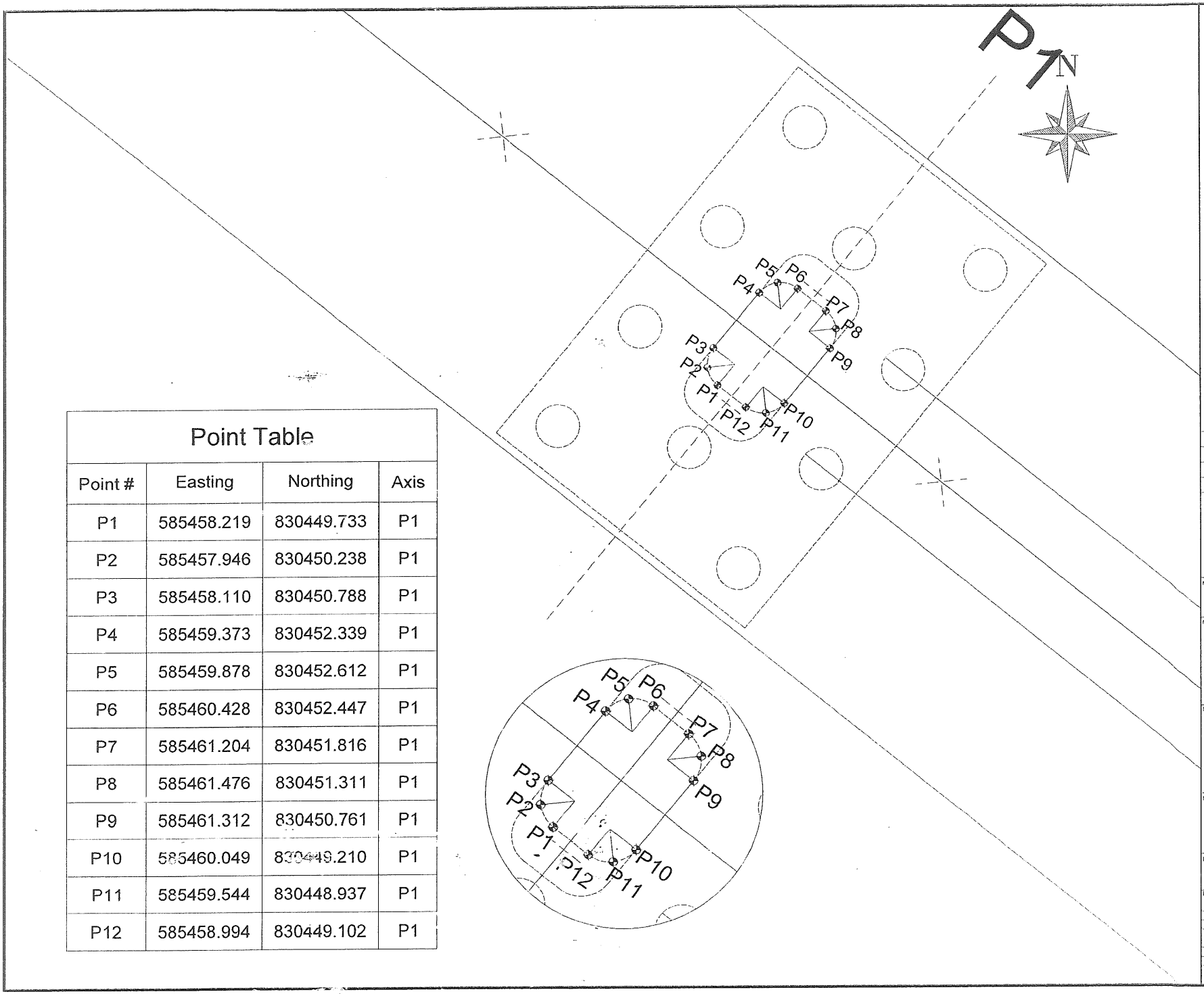
NAME OF CONTRACTOR CONSULTANT:
JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
CONCRETE DIMENSIONS
PIER @ AXES P3 PLAN & SECTIONS

DWG.NO.:	DATE:	SCALE:
1-RE-E01-01-210-03-PIE-E00	01-23	AS SHOWN
DRAWING BY: Eng. Eslam Farag	DESIGNED BY: Eng. Eslam Farag	CHECKED BY: Eng. Shenouda Saleh
SUPERVISOR: Dr. Mohamed Gadkaw		APPROVED BY: Eng. Amir Tawfiq


R3 - 50 T 32
R4 - 50 T 32
R5 - 50 T 16
R6 - 50 T 16
R7 - 50 T 16
R8 - 50 T 16
R9 - 50 T 16
R10 - 50 T 16
R11 - 50 T 16
R12 - 50 T 16



Point Table			
Point #	Easting	Northing	Axis
P1	585458.219	830449.733	P1
P2	585457.946	830450.238	P1
P3	585458.110	830450.788	P1
P4	585459.373	830452.339	P1
P5	585459.878	830452.612	P1
P6	585460.428	830452.447	P1
P7	585461.204	830451.816	P1
P8	585461.476	830451.311	P1
P9	585461.312	830450.761	P1
P10	585460.049	830449.210	P1
P11	585459.544	830448.937	P1
P12	585458.994	830449.102	P1

NOTES:

FHECOR Ingenieros Consultores

Arab House of Engineering
شركة بيت الهندسة
Tel : +2027610435 e-mail : info@ahe-consult.com
صادر رقم:

NO.	DATE	ENG	REVISION
00	12/2022	K.A	FOR SUBMITTAL

OWNER: المالك

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT
FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE
COLUMNS COORDINATES
AT REGWA BRIDGE

DWG NO	DATE	SCALE
COL -CO-01	12/2022	1 : 50
DRAWING BY	DESIGNED BY	CHECKED BY
ENG. O.U	ENG. K.A	ENG. A.A

SUPERVISOR	APPROVED BY
Dr. Mahmoud Lashen	Eng. Javier Torrico

الأمل

COMPRESSIVE STRENGTH OF
TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : column (P1)stem

Dimension : 15*15*15 cm

Date of casting : 21/06/2023

MIX DESIGN STRENGTH : 500 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	21/06/2023	19/07/2023	28	8.542	149000	662	651
2	21/06/2023	19/07/2023	28	8.508	147200	654	
3	21/06/2023	19/07/2023	28	8.476	143400	637	

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Sami S. - Tenth District
New City Telephone : [illegible]
Mobile : [illegible]
New Cairo - Fifth Settlement - Part 62 - 63

COMPRESSIVE STRENGTH OF
TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : column (P1)

Dimension : 15*15*15 cm

Date of casting : 21/06/2023

MIX DESIGN STRENGTH : 500 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	21/06/2023	28/06/2023	7	8.532	133600	594	595
2	21/06/2023	28/06/2023	7	8.574	136100	605	
3	21/06/2023	28/06/2023	7	8.484	131600	585	

التوقيع:

HELIOPOLIS Concrete Technology Group

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717

Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01002545673 - 01003650685 - 01004176497

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر/ تليفاكس : ٢٣٥٧٣٣٠٧ - ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧

موقع العمل : القاهرة الجديدة - التجمع قطعة ٨١ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨/٢٦٣٠١٤٥ - ف: ٠٤٨/٢٦٣٠١٤٠
٠١٠٠٢٥٤٥٦٧٣ - ٠١٠٠٣٦٥٠٦٨٥ - ٠١٠٠٤١٧٦٤٩٧

E-mail : info@almalreadymix.com

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
	Ahmed Adel			11/6/2023							
Received by ER		Work Activity	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

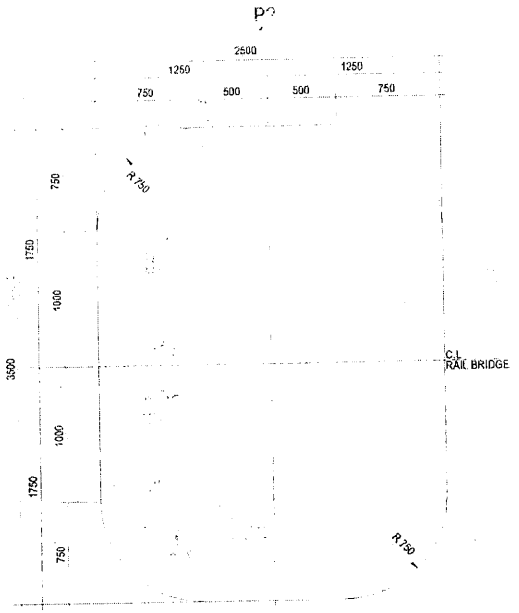
CODE-1	S1 to S21 Station Reference	D1 to S3 Depot Reference	Kp XXX Note For Kilometer point only Start Km is used
CODE - 2	Work Activity : POURING Pier P2 Stem 4M HIGHT		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Location of Pour		Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km Pier P2		
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:
			Concrete Volume: 33M3	

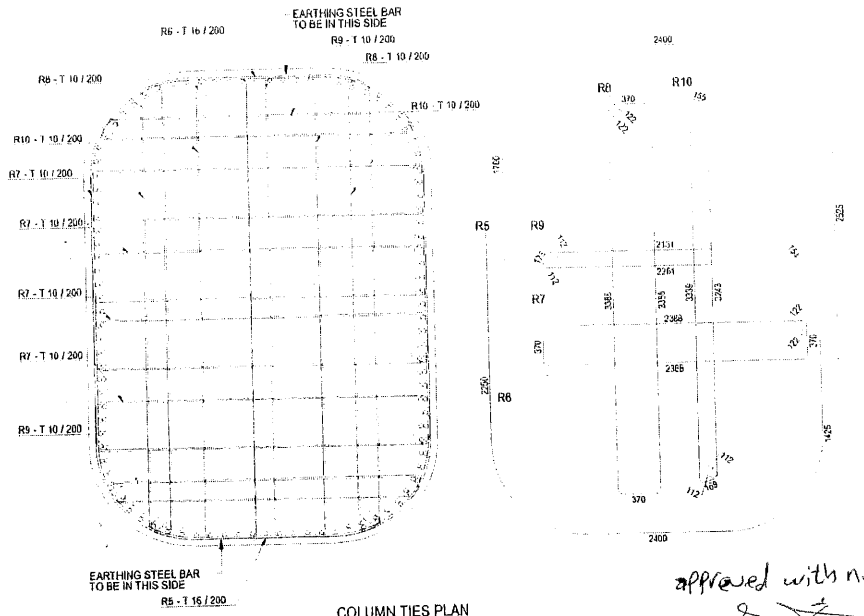
Item	Document No	Revision	Title	Number of Sheets
1			**SHOPDRAWING FOR COLUMN P2**	
2			**RESULT OF COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS**	
3			**COULMN COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer Representative	Mohammed Gardouh			A

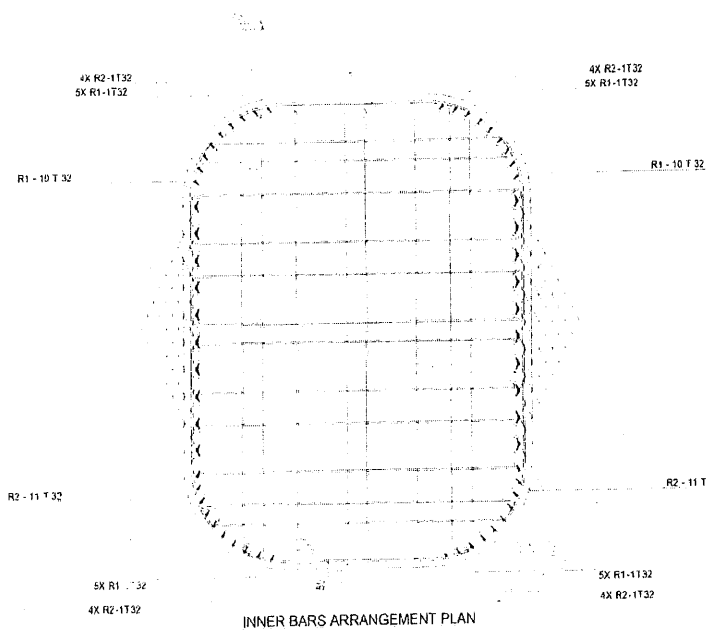


COLUMN CONCRETE DIMENSIONS

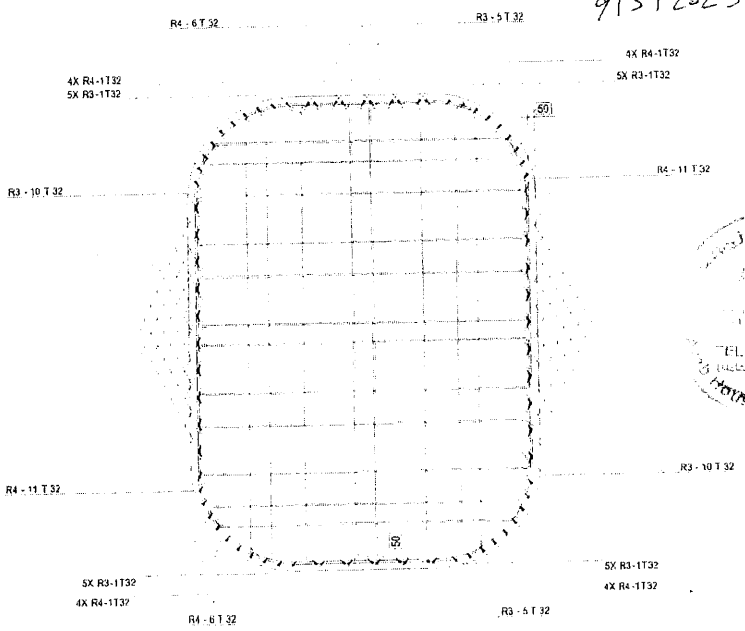


COLUMN TIES PLAN

approved with notes
9/5/2023



INNER BARS ARRANGEMENT PLAN



OUTER BARS ARRANGEMENT PLAN

NOTES:

1- ALL DIMENSIONS SHOWN IN THIS DRAWING ARE IN MILLIMETERS. ALL ELEVATIONS & COORDINATES ARE SHOWN IN METERS

2- FOR PROJECT GENERAL NOTES SEE DRAWING No. HSRE-VD01-CC-010-001-NOT-E00

3- FOR PIERS CONCREET DIMENSION & SETTING OUT COORDINATES SEE DRAWING No. HSRE-VD01-CC-210-006-PIE-E04

4- REINFORORD CONCREET GRADE C40/50 & GRADE C20/25 FOR BLINDING CONCREET

5- FOR EARTHING & BONDING DETAILS SEE DWG No. HSRE-VD01-CC-400-001-DET-E02

6- FOR REINFORCING STEEL SEE DWG No. HSRE-VD01-SD-200-002-PIE-E00

A-E JV FHECOR Ingenieros Consultores

NO	DATE	ENG	REVISION
0	05-07-2023	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No.1165

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEET OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

A-E JV FHECOR Ingenieros Consultores

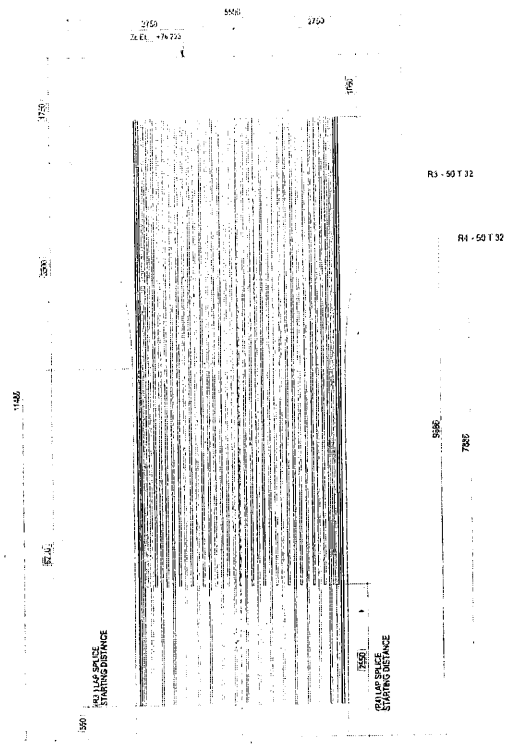
MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
CONCRETE DIMENSIONS
PIER @ AXES P2 PLAN & SECTIONS

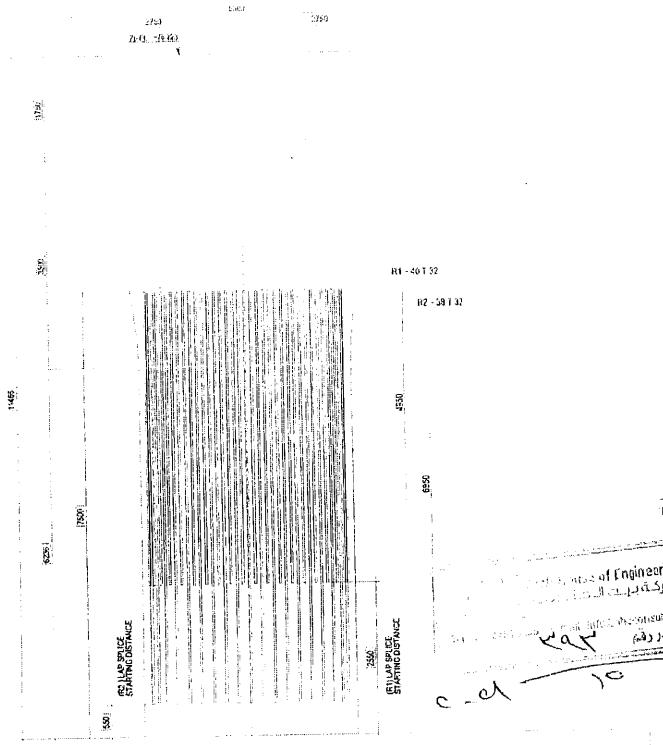
DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SD-720-005-PIE-E00	05-23	AS SHOWN

DRAWING BY:	DESIGNED BY:	CHECKED BY:
Eng. Eslam Fawzy	Eng. Eslam Fawzy	Eng. Mamdouh Eldab

SUPERVISOR:	APPROVED BY
DR. Mahmoud Lashkar	Eng. Javier Tornero



OUTER BARS ARRANGEMENT VIEW



INNER BARS ARRANGEMENT VIEW

approved With notes

9/5/2023

check and revise BBS

REBAR BENDING SCHEDULE

Bar Mark	Size	QTY.	Length	Weight	Total Weight	Bar Shape
R1	32	40	4950	31.25	1250.2	4950
R2	32	38	6950	43.66	1667.5	6950
R3	32	50	9886	62.42	3121.0	9886
R4	32	50	7886	49.79	2489.6	7886
R5	16	31	5450	8.60	266.6	105 / 5450 / 105
R6	16	31	6000	9.47	293.5	105 / 6000 / 105
R9	10	62	4911	3.03	187.9	201 / 4911 / 201
R10	10	62	7080	4.37	270.8	249 / 7080 / 249
R7	10	124	5686	3.51	435.0	122 / 5686 / 122
R8	10	62	7686	4.74	294.0	122 / 7686 / 122

Total: 10276.1 Kg

NOTES:

1- ALL DIMENSIONS SHOWN IN THIS DRAWING ARE IN MILLIMETERS. ALL ELEVATIONS & COORDINATES ARE SHOWN IN METERS.

2- FOR PROJECT GENERAL NOTES SEE DRAWING No. HSRE-V001-CC-010-001-NOT-E00

3- FOR PIERS CONCREET DIMENSION & SETTING OUT COORDINATES SEE DRAWING No. HSRE-V001-CC-210-006-PIE-E01

4- REINFORCING STEEL SHALL CONFORM TO EN1992-1-1. USED MATERIAL TYPE B500DWR (Fy=500MPa)

5- REINFORCED CONCREET GRADE C40/50 & GRADE C30/25 FOR BLINDING CONCREET.

6- CONCREET COVER SHALL BE 50mm ALL AROUND UNO.

7- FOR EARTHING & BONDING DETAILS SEE DWG No. HSRE-V001-CC-400-001-DET-E02

8- ARRANGEMENT OF STEEL BASR SHALL BE STAGGERED

LEGEND

BOTTOM BARS

TOP BARS

(a) X R (b) - (c) T (d) / (e)

a: QUANTITY OF GROUPS

b: BAR MARK

c: QUANTITY OF BARS

d: BAR SIZE

e: BAR SPACING

JV FHECOR Ingenieros Consultores

NO.	DATE	ENG	REVISION
0	05-07-2023	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No.1160

OWNER:

ARAB REPUBLIC OF EGYPT
MINISTRY OF TRANSPORT
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

JV FHECOR Ingenieros Consultores

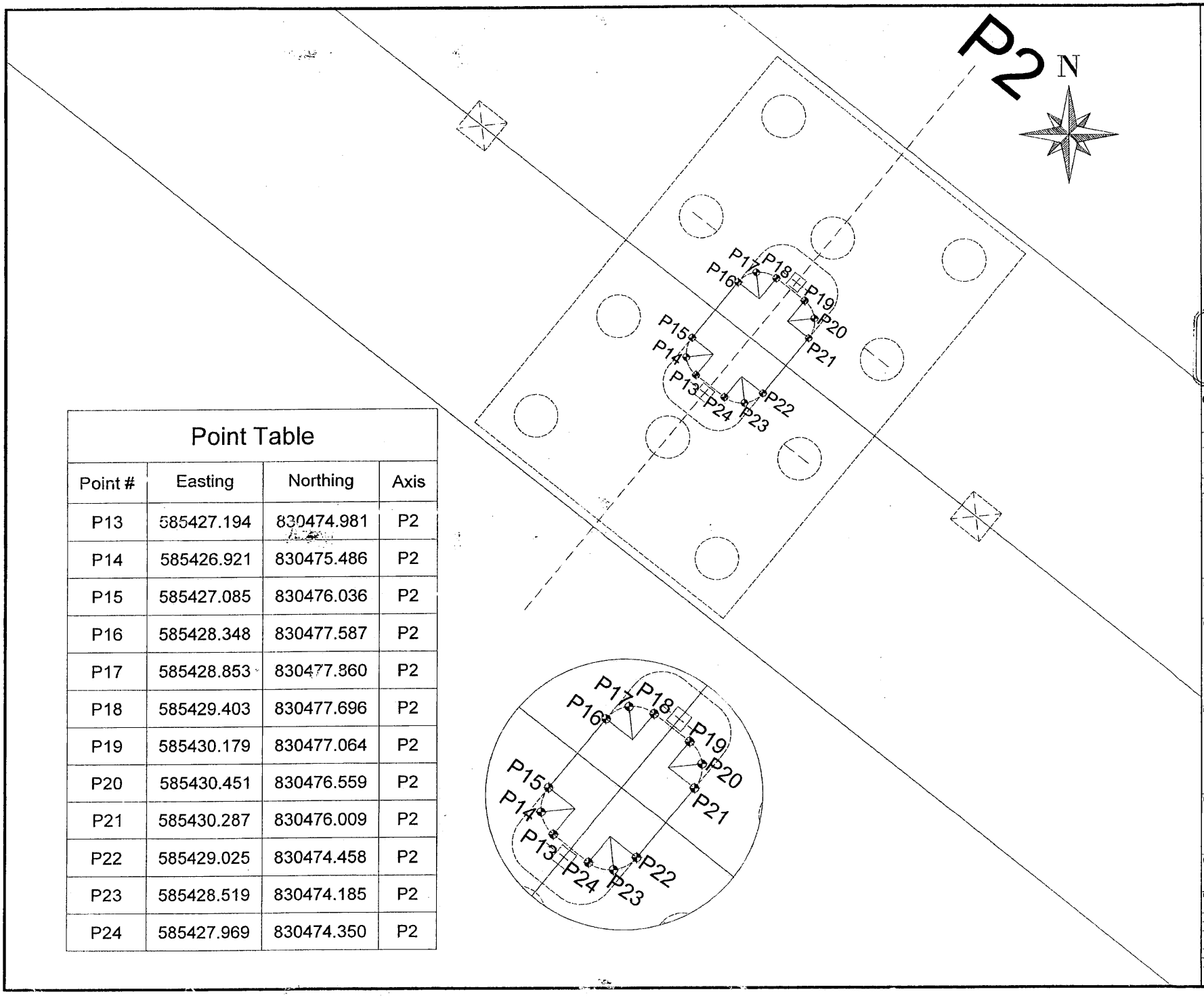
MAIN CONTRACTOR:

DWG. TITLE: REGWA ROAD BRIDGE
REINFORCING STEEL
PIER @ AXES P2 VIEWS & REBAR TABLE

DWG NO	DATE	SCALE
HSRE-V001-SD-270006-PIE-E02	05-23	AS SHOWN

DRAWING BY:	DESIGNED BY:	CHECKED BY:
Eng. Eslam Fawzy	Eng. Eslam Fawzy	Eng. Mamdouh Saleh

SUPERVISOR:	APPROVED BY
DR. Mohamed Lashien	Eng. Javier Trueba



Point Table

Point #	Easting	Northing	Axis
P13	585427.194	830474.981	P2
P14	585426.921	830475.486	P2
P15	585427.085	830476.036	P2
P16	585428.348	830477.587	P2
P17	585428.853	830477.860	P2
P18	585429.403	830477.696	P2
P19	585430.179	830477.064	P2
P20	585430.451	830476.559	P2
P21	585430.287	830476.009	P2
P22	585429.025	830474.458	P2
P23	585428.519	830474.185	P2
P24	585427.969	830474.350	P2

NOTES:

NE JV FHECOR Ingenieros Consultores

Arab House of Engineering
شركة بيت الهندسة
Tel: +2027610435 e-mail: info@ahe-consult.com
صادر رقم: ٩٣٣
١٥

NO.	DATE	ENG.	REVISION
00	12/2022	K.A	FOR SUBMITTAL

OWNER: المالك

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT
FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE
COLUMNS COORDINATES
AT REGWA BRIDGE

DWG.NO	DATE	SCALE
COL -CO-02	12/2022	1 : 50
DRAWING BY	DESIGNED BY	CHECKED BY
ENG. O.M	ENG. K.A	ENG. A.A

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashheen	Eng. Jazer Tomoo

COMPRESSIVE STRENGTH OF
TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : column (P2) stem

Dimension : 15*15*15 cm

Date of casting : 11/06/2023

MIX DESIGN STRENGTH : 500 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	11/06/2023	18/06/2023	7	8.632	123000	547	538
2	11/06/2023	18/06/2023	7	8.681	113200	503	
3	11/06/2023	18/06/2023	7	8.567	126700	563	

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi St. - Tenth District
Nasr City/Telefax: 02 25573307 - 02 27713558
Mobile: 01001115717
Work Shop : New Cairo - Katameia - Part 82 - 83

COMPRESSIVE STRENGTH OF
TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : column (P2) stem

Dimension : 15*15*15 cm

Date of casting : 18/06/2023

MIX DESIGN STRENGTH : 500 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	18/06/2023	16/07/2023	28	8.496	149800	666	653
2	18/06/2023	16/07/2023	28	8.510	148300	659	
3	18/06/2023	16/07/2023	28	8.587	142600	634	

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shehata - Tenth District
Nasr City / Telefax : 02 2261 3067 - 02 261 3558
Mobile : 01 [illegible]
Work Shop : New Cairo - Katameia - Plan 52 - [illegible]
Tel : [illegible] / Fax : [illegible]

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date						Time	
				11/6/2023							
Received by ER		Work Activity	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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 : POURING COLUMN P3 FIRST STAGE 4M HIGHT		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

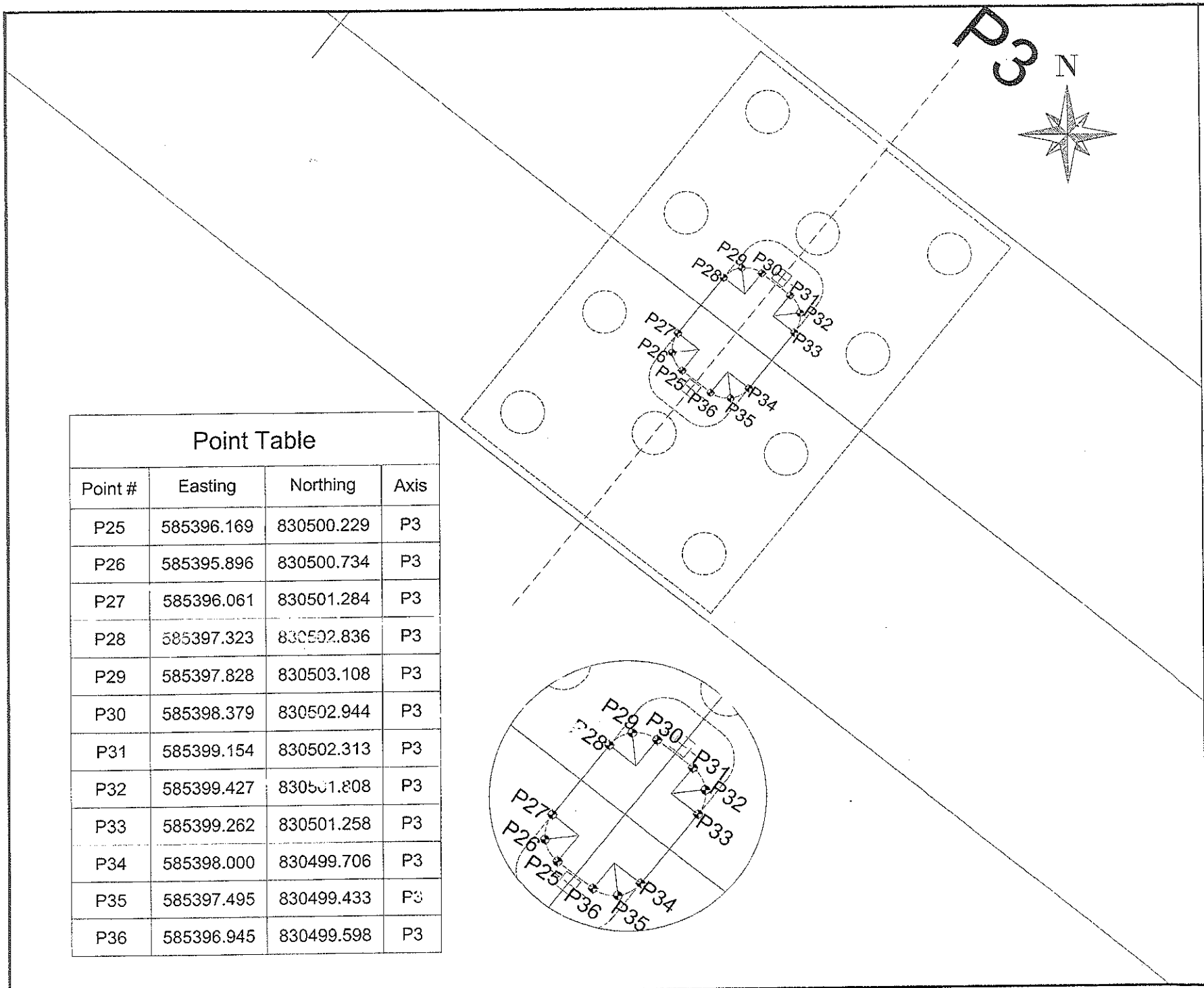
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km COLUMN (P3)			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:
			Concrete Volume: 33M3	

Item	Document No	Revision	Title	Number of Sheets
1			SHOPDRAWING FOR COLUMN P3	
2			RESULT OF COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS	
3			COULMN COORDINATES	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Mohamed ABDO			A
QA/QC				A
Employer Representative	Mohammed Gadouh			A



Point Table

Point #	Easting	Northing	Axis
P25	585396.169	830500.229	P3
P26	585395.896	830500.734	P3
P27	585396.061	830501.284	P3
P28	585397.323	830502.836	P3
P29	585397.828	830503.108	P3
P30	585398.379	830502.944	P3
P31	585399.154	830502.313	P3
P32	585399.427	830501.808	P3
P33	585399.262	830501.258	P3
P34	585398.000	830499.706	P3
P35	585397.495	830499.433	P3
P36	585396.945	830499.598	P3

NOTES:

FHECOR Ingenieros Consultores

Arab House of Engineering
شركة بيت الهندسة
Tel.: +2027610435 e-mail: info@ahe-consult.com
صادر رقم: ٩٣٣
٢٠٢٢/١٠/٥

NO.	DATE	ENG.	REVISION
03	12/2022	K.A	FOR SUBMITTAL

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

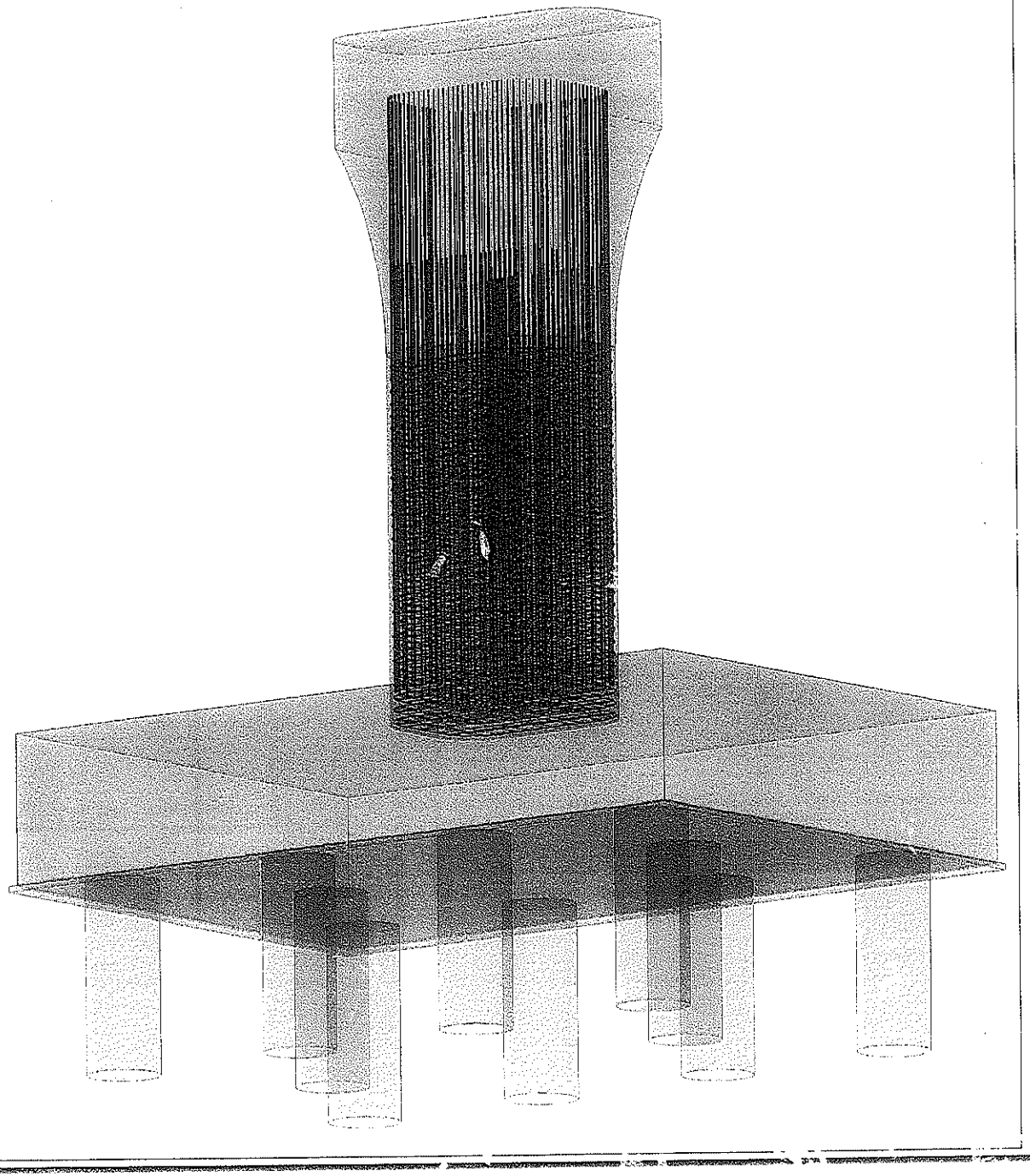
MAIN CONTRACTOR

DWG. TITLE

COLUMNS COORDINATES
AT REGWA BRIDGE

DWG.NO	DATE	SCALE
COL -CO-03	12/2022	1 : 50
DRAWING BY	DESIGNED BY	CHECKED BY
ENG. O.M	ENG. K.A	ENG. A.Z

SUPERVISOR	APPROVED BY
Dr. Mahmoud Lakhein	Eng. Jalal Tohme



NOTES:

1- ALL DIMENSIONS SHOWN IN THIS DRAWING ARE IN MILLIMETERS. ALL ELEVATIONS & COORDINATES ARE SHOWN IN METERS.

2- FOR PROJECT GENERAL NOTES
SEE DRAWING No. HSRE-VD01-CC-N10-001-NOT-E00

3- FOR PIERS CONCRETE DIMENSION & SETTING OUT COORDINATES
SEE DRAWING No. HSRE-VD01-CC-210-005-PIE-E01

4-REINFORCED CONCRETE GRADE C40/50
& GRADE C25/30 FOR BUNDING CONCRETE .

5- FOR EARTHING & BONDING DETAILS
SEE DWG No. HSRE-VD01-CC-400-001-DET-E02

6-FOR REINFORCING STEEL SEE DWG No HSRE-VD01-SD-200-R02-RIE-E00

FHECOR
Ingenieros Consultores

Arab House of Engineering
شركة بيت العمارة

NO	DATE	ENG	REVISION
0	01-03-2023	MAB	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No.1145

OWNER

المالك

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والنقل البري
وزارة النقل
GARBIT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN HIGH SPEED RAIL
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR
Ingenieros Consultores

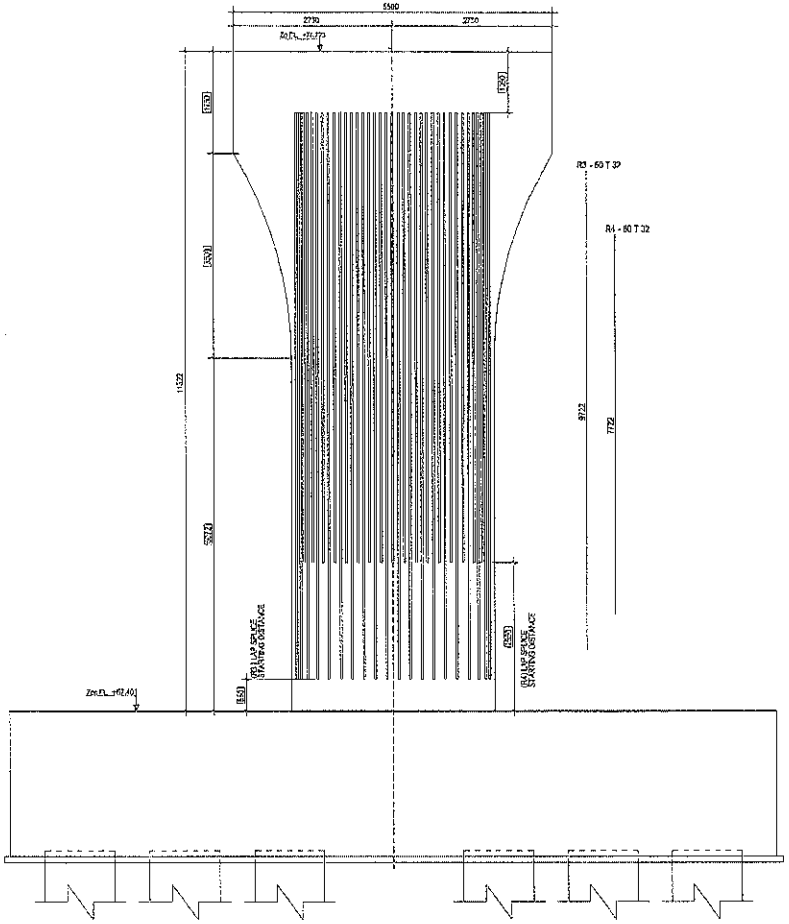
MAIN CONTRACTOR

الشركة الهندسية

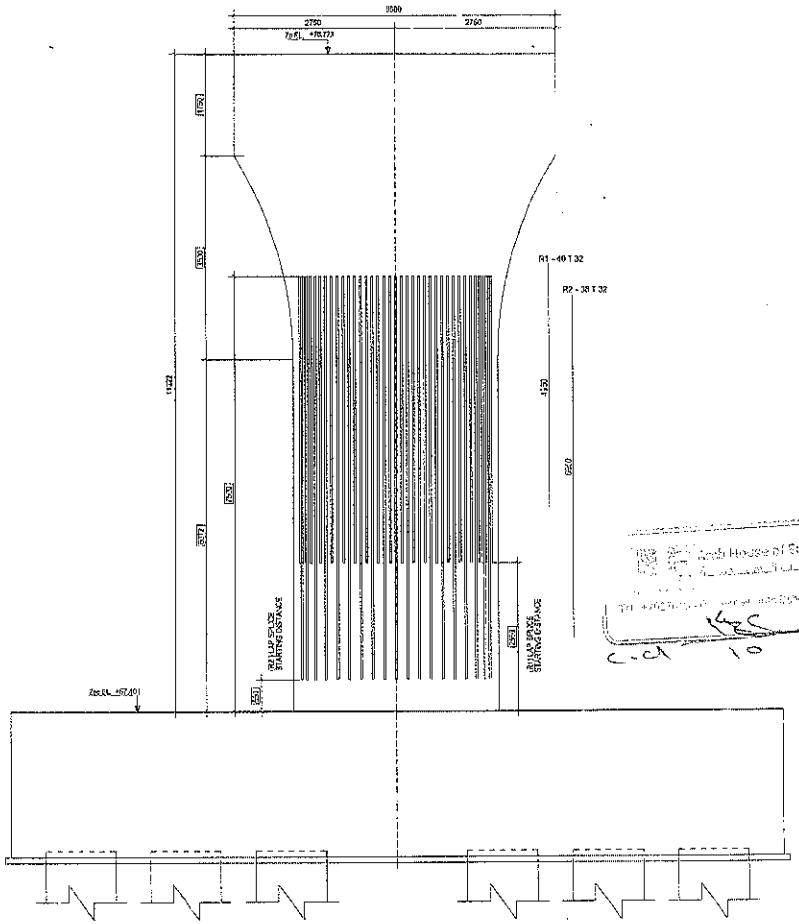
DWG TITLE

REGWA ROAD BRIDGE
CONCRETE DIMENSIONS
PIER 6 & AXES P3 3D VIEW

DWG NO	DATE	SCALE
HSRE-VD01-SD-210-005-PIE-E00	01-2-	AS SHOWN
DRAWNING BY	DESIGNED BY	CHECKED BY
Eng. Eslam Fawzy	Eng. Ceylan Fawzy	Eng. Mustafa [illegible]
SUPERVISOR		APPROVED BY
Eng. [illegible]		Eng. [illegible]



OUTER BARS ARRANGEMENT VIEW



INNER BARS ARRANGEMENT VIEW

NOTES:

1- ALL DIMENSIONS SHOWN IN THIS DRAWING ARE IN MILLIMETERS, ALL ELEVATIONS & COORDINATES ARE SHOWN IN METERS.

2- FOR PROJECT GENERAL NOTES SEE DRAWING No. HSRE-VD01-CC-010-001-NOT-E00

3- FOR PIERS CONCREET DIMENSION & SETTING OUT COORDINATES SEE DRAWING No. HSRE-VD01-CC-210-006-PIE-E04

4- REINFORCING STEEL SHALL CONFORM TO EN1992-1-1. USED MATERIAL TYPE B500CWR (Fy=500MPa).

5-REINFORCORD CONCREET GRADE C40/50 & GRADE C20/25 FOR BLINDING CONCREET.

6-CONCREET COVER SHALL BE 50mm ALL AROUND UND.

7- FOR EARTHING & BONDING DETAILS SEE DWG No. HSRE-VD01-CC-400-001-DET-E02

8- ARRANGEMENT OF STEEL BASR SHALL BE STAGGERED.

LEGEND

BOTTOM BARS

TOP BARS

(a) X R (b) - (c) T (d) / (e)

a: QUANTITY OF GROUPS

b: BAR MARK

c: QUANTITY OF BARS

d: BAR SIZE

e: BAR SPACING

REBAR BENDING SCHEDULE

Bar Mark	Size	QTY.	Length	Weight	Total Weight	Bar Shape
R1	32	40	4950	31.25	1250.2	4950
R2	32	38	6950	43.89	1667.5	6950
R3	32	50	9722	61.38	3069.3	9722
R4	32	50	7722	48.76	2437.9	7722
R5	16	30	5450	8.69	258.0	250 / 150 / 150
R6	16	30	6000	9.47	284.0	150 / 150 / 250
R9	10	60	4911	3.03	181.8	150 / 250 / 250 / 150 / 150 / 250 / 250 / 150
R10	10	80	7060	4.37	262.1	150 / 150 / 250 / 250 / 150 / 150 / 250 / 250 / 150 / 150
R7	10	120	5806	3.51	421.0	122 / 250 / 300
R8	10	60	7686	4.74	284.5	122 / 250 / 300
				Total:	10116.2	Kg

NO.	DATE	ENG.	REVISION
0	01-03-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No.1105

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONS. TANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

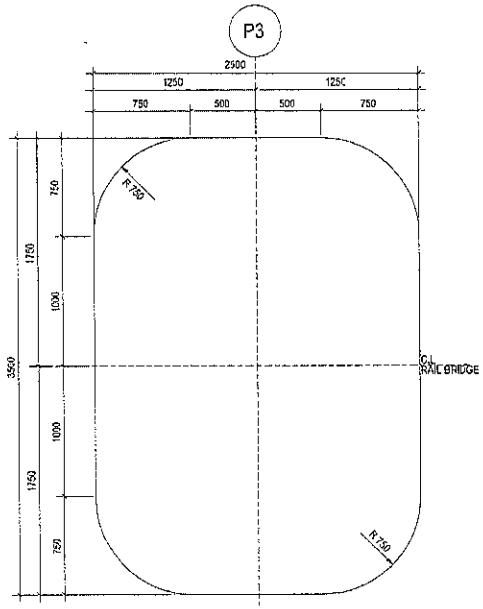
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

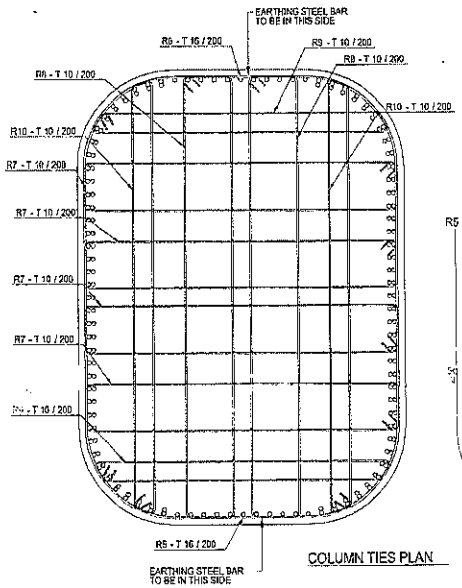
الدروة القابضة

DWG. TITLE:
REGWA ROAD BRIDGE
REINFORCING STEEL
PIER @ AXES P3 VIEWS & REBARS TABLE

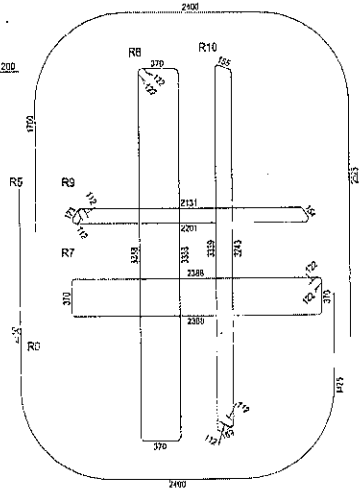
DWG. NO.:	DATE:	SCALE:
HSRE-VD01-CC-720-003-PIE-E06	01-23	AS SHOWN
DRAWING BY:	DESIGNED BY:	CHECKED BY:
Eng. Eslam Fawzy	Eng. Eslam Fawzy	Eng. Mamdouh Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashein		Eng. Jaehr Tawfik

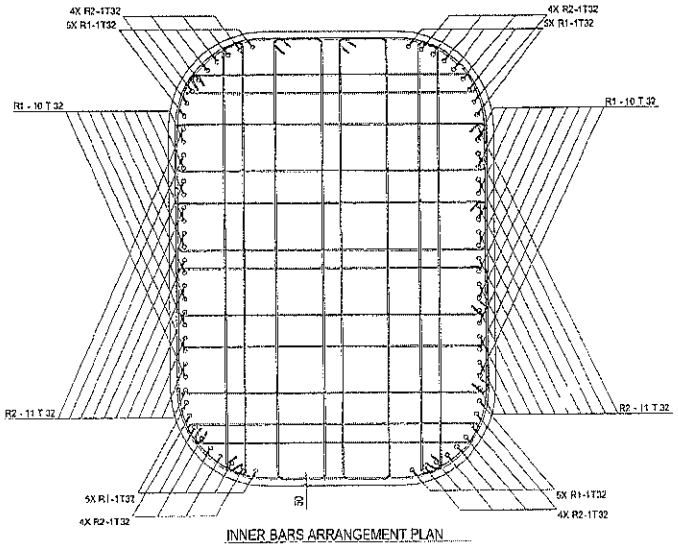


COLUMN CONCRETE DIMENSIONS

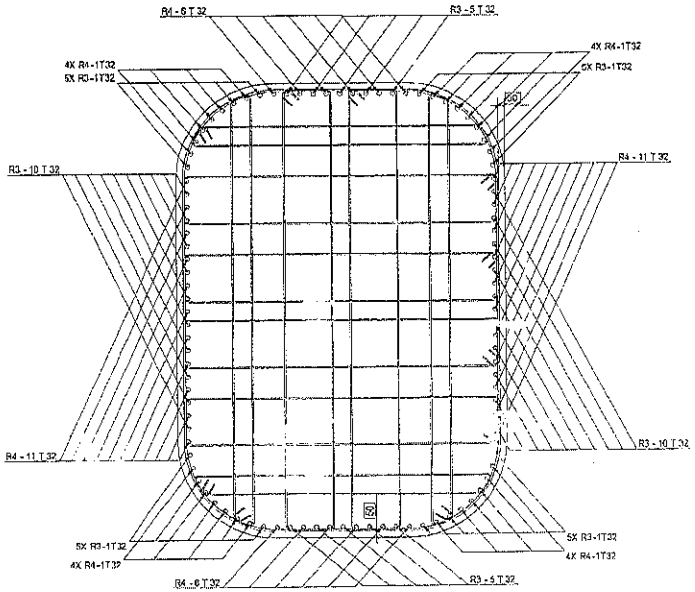


COLUMN TIES PLAN





INNER BARS ARRANGEMENT PLAN



OUTER BARS ARRANGEMENT PLAN

NOTES:

1- ALL DIMENSIONS SHOWN IN THIS DRAWING ARE IN MILLIMETERS. ALL ELEVATIONS & COORDINATES ARE SHOWN IN METERS.

2- FOR PROJECT GENERAL NOTES SEE DRAWING No. HSRE-VD01-CC-010-001-NOT-E00

3- FOR PIERS CONCREET DIMENSION & SETTING OUT COORDINATES SEE DRAWING No. HSRE-VD01-CC-210-000-PIE-E01

4-REINFORCRD CONCREET GRADE C40/50 & GRADE C20/25 FOR BLINDING CONCREET .

5- FOR EARTHING & BONDING DETAILS SEE DWG No. HSRE-VD01-CC-400-001-DET-E02

6-FOR REINFORCING STEEL SEE DWG No. HSRE-VD01-SD-200-402-PIE-E00

NO.	DATE	ENG.	REVISION
0	01-23-2020	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE NA.1185

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARDLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
CONCRETE DIMENSIONS
PIER @ AXES P3 PLAN & SECTIONS

DRAWING:	DATE:	SCALE:
HSRE-VD01-SD-220-007-PIE-E00	01-23	AS SHOWN
DRAWING BY:	DESIGNED BY:	CHECKED BY:
Eng. Eslam Fawzy	Eng. Eslam Fawzy	Eng. Mamdouh Salah
SUPERVISOR:		APPROVED BY:
Dr. Mahmoud Lashen		Eng. Jovial Tonlon

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : column (P3)

Dimension : 15*15*15 cm

Date of casting : 11/06/2023

MIX DESIGN STRENGTH : 500 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	11/06/2023	09/07/2023	28	8.622	148000	658	668
2	11/06/2023	09/07/2023	28	8.596	149600	665	
3	11/06/2023	09/07/2023	28	8.514	153000	680	

HELIOPOLIS
Concrete Technology Center
Date :
Name :

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧

موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٢ - ٧٠٠٥
ت: ٠٤٨/٢٦٣٠١٤٥ - ف: ٠٤٨/٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717

Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

E-mail: info@alamalreadymix.com
web-site: www.alamalreadymix.com

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : column (P3)

Dimension : 15*15*15 cm

Date of casting : 11/06/2023

MIX DESIGN STRENGTH : 500 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	11/06/2023	18/06/2023	7	8.632	123000	547	538
2	11/06/2023	18/06/2023	7	8.681	113200	503	
3	11/06/2023	18/06/2023	7	8.567	126700	563	

HELIOPOLIS
Concrete Technology Center
Date :
Name :

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
				24/5/2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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 : pouring footing p1		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km FOOTING P1		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:500 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour:		Concrete Volume: 290 m3	

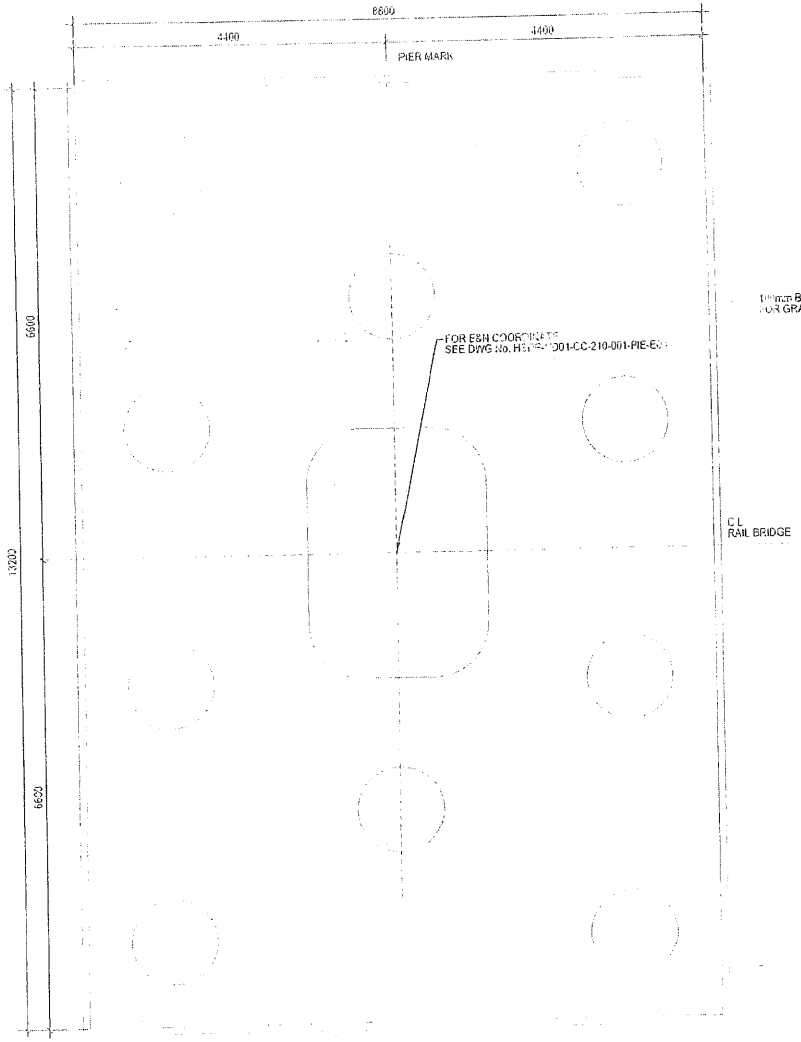
THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT 7-28 COMPRESSIVE STRENGHT OF CONCRETE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

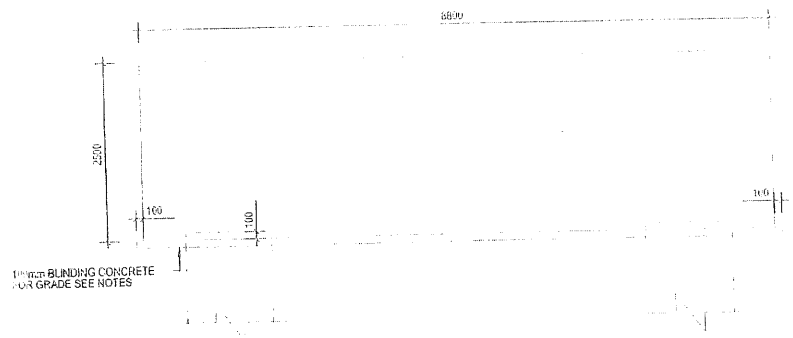
Comments by:	Comments by:

APPROVAL STATUS

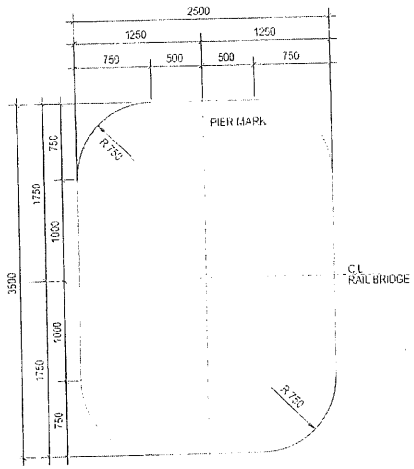
Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative	Mohammed Gardouh			A



PILE CAP TYPE 1 PLAN



SECTION A
NTS



COLUMN DIMENSIONS AT PILE CAP TOP ELEVATION

NOTES:

1- ALL LEVELS, DIMENSIONS, DRAWINGS ARE REFERENCED TO CLEVATIONS & COORDINATES ARE SHOWN IN METERS
2- FOR PROJECT GENERAL NOTES SEE DRAWING No. HSR-EY-001-CC-010-001-E01
3- FOR PIERS CONCRETE DIMENSION & SETTING OUT COORDINATES SEE DRAWING No. HSR-EY-001-CC-210-001-PIE-E04
4- REINFORCED CONCRETE GRADE C40/50 & GRADE C25/30 FOR BLINDING CONCRETE
5- FOR EARTHING & BONDING DETAILS SEE DWG No. HSR-EY-000-CC-100-001-DET-E02
6- FOR REINFORCING STEEL SEE DWG No. HSR-EY-000-CC-300-001-DET-E02

FHECOR Ingenieros Consultores

Arab Houses of Engineering

NO	DATE	ENG	REVISION
0		DAS	ISSUED FOR CONSTRUCTION AS PER REPRESENTATIVE COMMENTS

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

وزارة النقل

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION: THREE (FROM WEST OF NILE TO SUMEL-1)

NAME OF CLIENT CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

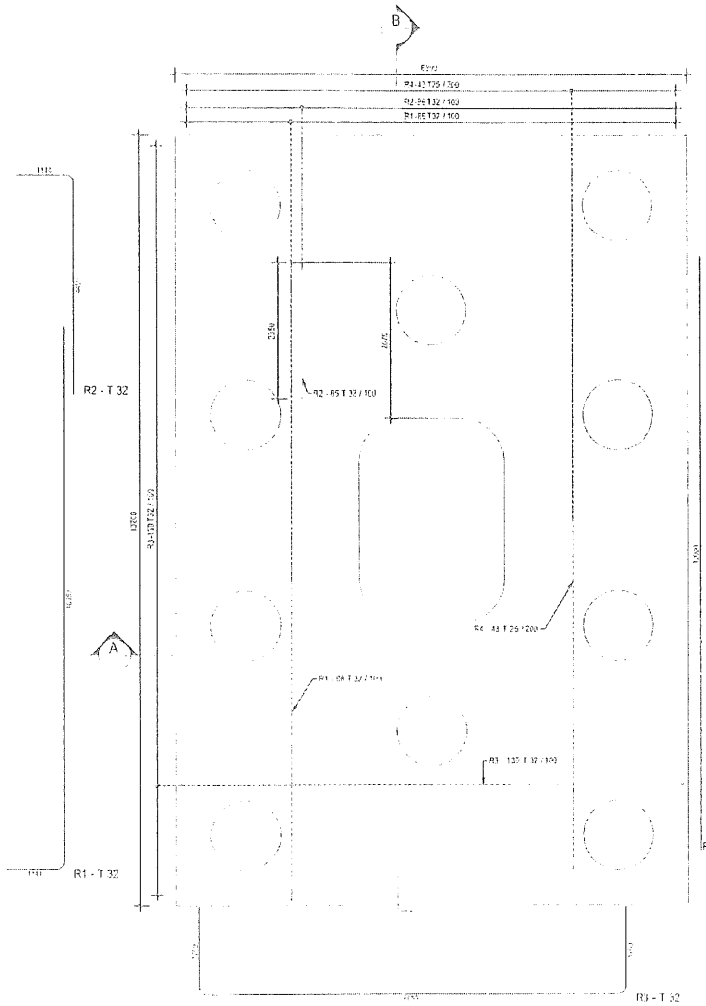
PROJECT CONTRACTOR

الشركة الناشئة

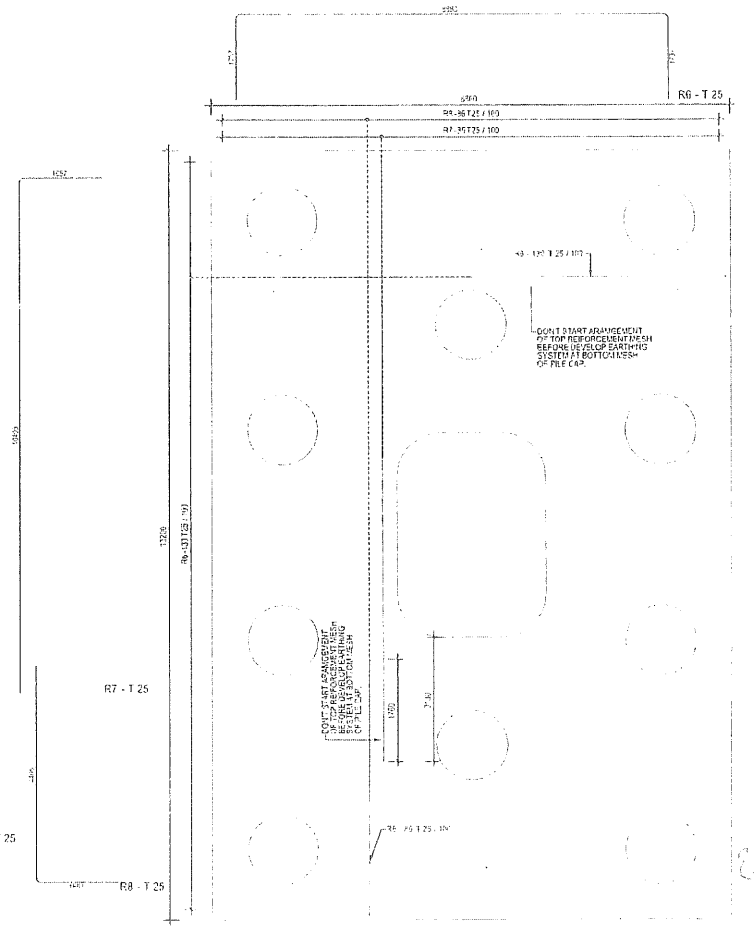
SUBJECT

REGWA ROAD BRIDGE
CONCRETE DIMENSIONS
PIER @ AXES P1,P2&P3 PLAN & SECTIONS

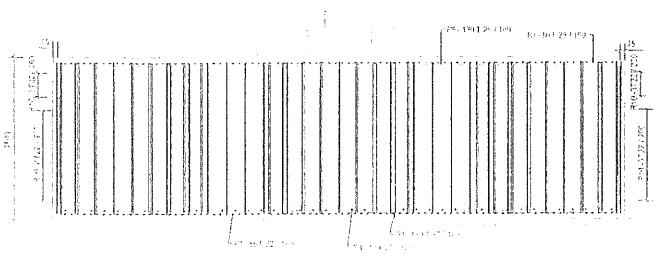
NAME	DATE	SIGNATURE
PREPARED BY	CHECKED BY	APPROVED BY
	DATE OF ISSUE	



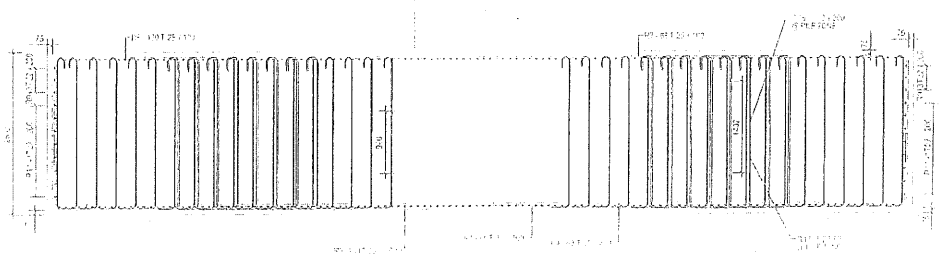
PILE CAP BOTTOM REINFOCEMENT PLAN



PILE CAP TOP REINFOCEMENT PLAN



SECTION A



SECTION B

NOTES:

1- ALL DIMENSIONS SHOWN IN THIS DRAWING ARE IN MILLIMETERS AND ELEVATIONS & COORDINATES ARE SHOWN IN METERS

2- FOR PROJECT GENERAL NOTES SEE DRAWING No HSRB-V001-CC-000-G01-NOT-E00

3- FOR PIERS CONCRETE DIMENSION & SETTING OUT COORDINATES SEE DRAWING No HSRB-V001-CC-210-000-PIE-E01

4- [illegible] TORSING STEEL SHALL COMFORM TO EN 10080-1-1 USED MATERIAL TYPE B500NR (Fy=500MPa)

5-REINFORCED CONCRETE GRADE C40/50 [illegible] GRADE C20/25 FOR BLINDING CONCRETE

6-CONCRETE COVER SHALL BE 75mm ALL AROUND UNO

7- FOR EARTHING & BONDING DETAILS SEE DRAWING HSRB-V001-CC-430-G01-DET-E02

8- ARRANGEMENT OF STEEL BARS SHALL BE STAGGERED

LEGEND

BOTTOM BARS

TOP BARS

[a] X R [b] - [c] T [d] @ [e]

a QUANTITY OF GROUPS

b BAR MARK

c QUANTITY OF BARS

d BAR SIZE

e BAR SPACING

FHECOR Ingenieros Consultores

Arab House of Engineering

REV	DATE	DWG	REVISION
0	[illegible]	[illegible]	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTE No [illegible]

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CAPWT

وزارة النقل

NAME OF PROJECT

ELECTRICAL EXPRESS HIGHWAY (HIGH SPEED RAIL)
SECTION THREE (EGYPT-EST (4 RAIL TO ALAMEIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

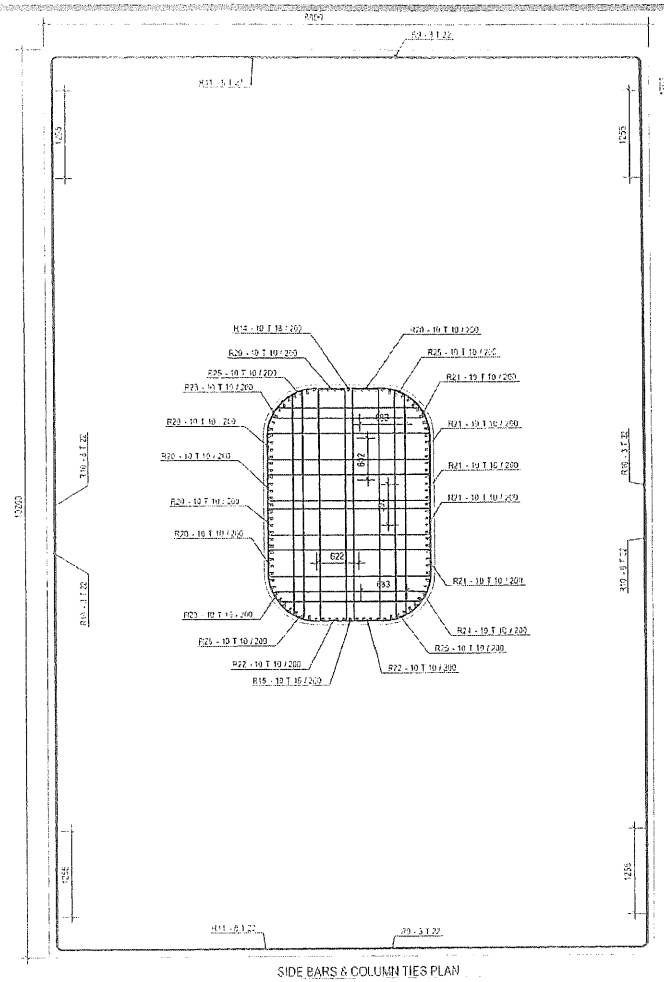
FHECOR Ingenieros Consultores

NAME OF CONTRACTOR

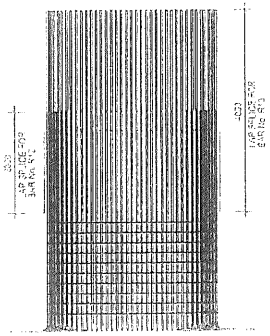
الشركة الماركة

PEDESTRIAN ROAD BRIDGE
REINFORCING STEEL
REINFORCES DETAILS PLAN & SECTIONS

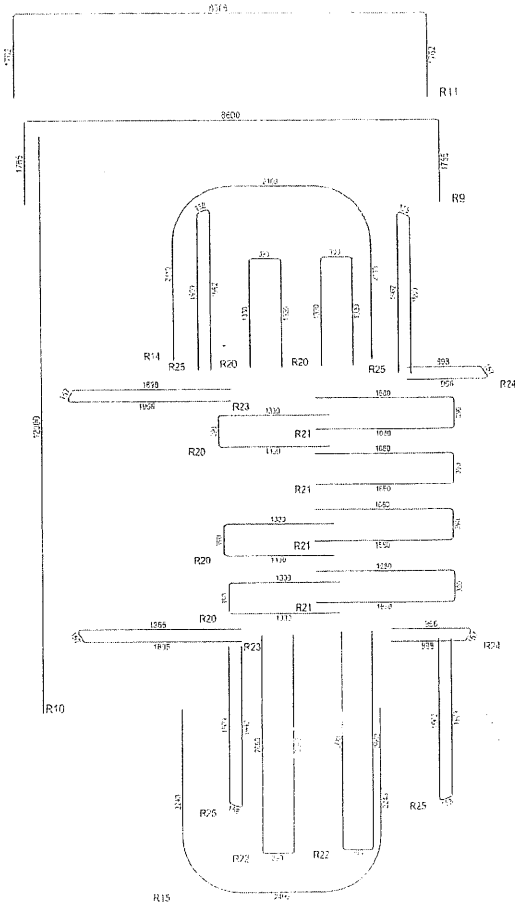
SCALE



SIDE BARS & COLUMN TIES PLAN



COLUMN STARTER BARS SECTIONAL ELEVATION



REBAR BENDING SCHEDULE

Bar Mark	Size	QTY.	Length	Weight	Total Weight	Bar Shape
R4	25	43	12000	35.25	1960.7	
R10	22	22	12000	35.81	787.8	
R1	32	86	12000	75.77	6516.0	
R2	32	86	5500	34.73	2986.5	
R3	32	130	12000	75.77	9849.8	
R6	25	130	12000	46.25	6012.2	
R7	25	86	12000	46.25	3977.3	
R8	25	86	6000	23.12	1988.7	
R9	22	6	12000	35.81	214.8	
R11	22	16	12000	35.81	572.9	
R12	32	88	5000	31.57	2778.2	
R13	32	90	7000	44.20	3977.8	
R14	16	10	6000	9.47	94.7	
R15	16	10	6250	9.88	[illegible]	
R16	22	560	2000	5.97	3342.1	
R17	22	560	2200	6.57	3676.4	
R18	16	1049	2000	3.16	3310.6	
R19	16	1049	1720	2.71	2847.0	
R20	10	60	3000	1.85	111.1	
R21	10	40	3700	2.28	91.3	
R22	10	20	5660	3.49	69.8	
R23	10	20	4000	2.47	49.4	
R24	16	20	2000	1.26	24.7	
R25	10	40	3000	1.85	148.7	

NOTES.

1- ALL DIMENSIONS SHOWN IN THE DRAWINGS ARE IN MILLIMETERS AND ELEVATIONS & COORDINATES ARE SHOWN IN METERS

2- FOR PROJECT GENERAL NOTES SEE DRAWING NO. HSRE-V001-CC-010000-001 REV

3- FOR PIERS CONCRETE DIMENSIONS & SETTING OUT COORDINATES SEE DRAWING NO. HSRE-V001-CC-010000-[illegible]

4- REINFORCING STEEL SHALL CONFORM TO ES1920 [illegible] USED MATERIAL TYPE B500GWR (Fy=500MPa)

5- READY MIXED CONCRETE GRADE C40/50 & GRADE C25/30 FOR BLINDING CONCRETE

6- CONCRETE COVER SHALL BE 75mm ALL AROUND U.O

7- FOR EARTHING & BONDING DETAILS SEE DWG No. HSRE-V001-CC-400-001-DET-R02

8- ARRANGEMENT OF STEEL BARS SHALL BE STAGGERED

LEGEND

BOTTOM BARS

TOP BARS

[N] X [B] - [L] [M] : [P]

a- QUANTITY OF GROUPS

b- BAR MARK

c- QUANTITY OF BARS

d- BAR SIZE

e- BAR SPACING

NE JV FHECOR II Ingenieros Consultores

ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE NO. [illegible]

REVISION

ISSUED

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
الهيئة العامة للطرق والكباري
والنقل البري
CAPWT

NAME OF PROJECT

ELECTRICAL & MECHANICAL WORKS FOR HIGH SPEED RAILWAY SECTION THREE (EPC/F) EST OF CUT TO MEASURE

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR II Ingenieros Consultores

NAME OF CONTRACTOR

الشركة النابحة

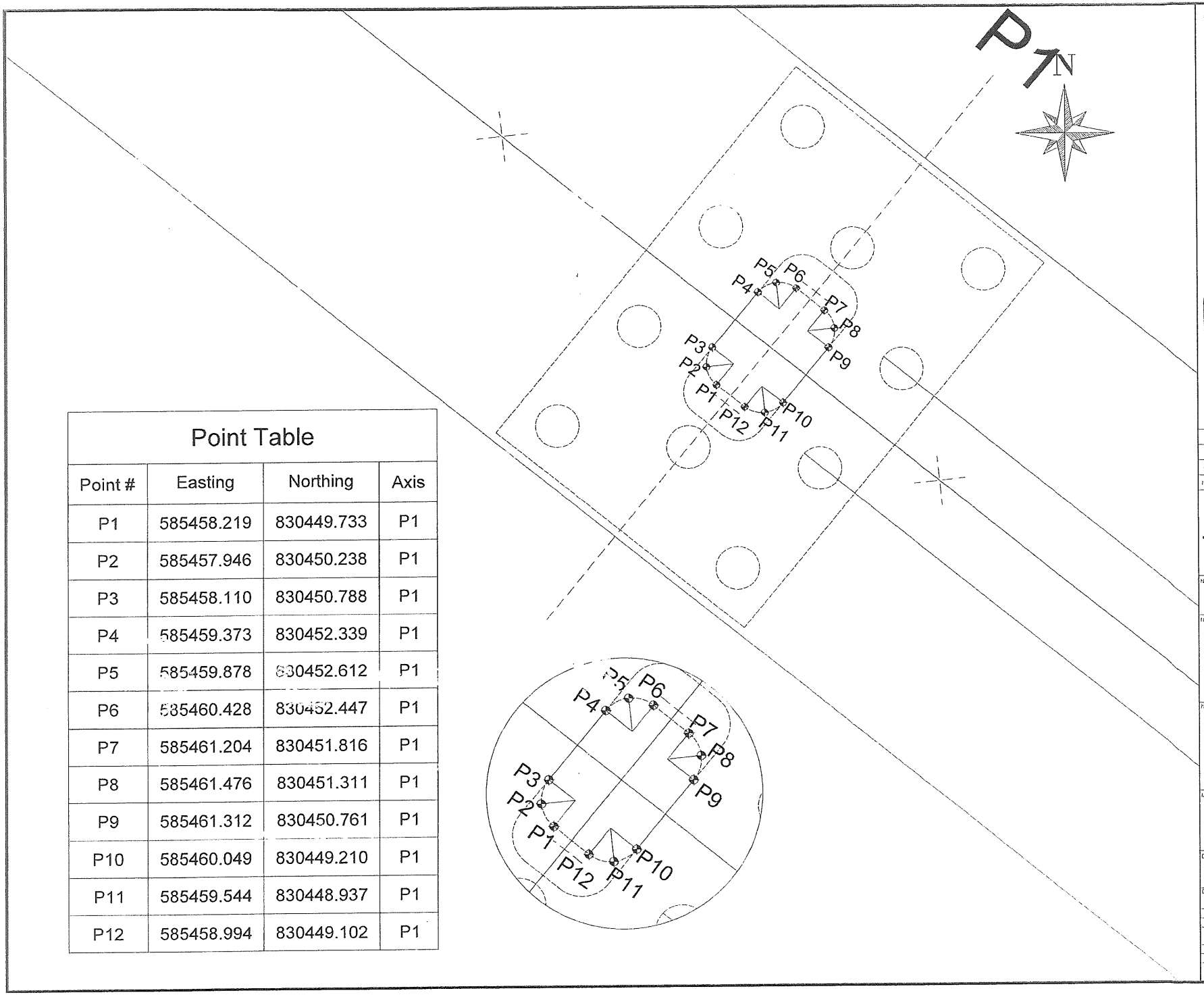
NAME OF DRAWING

FHECOR ROAD BRIDGE
REINFORCING STEEL
SHEET & AXES IN PORTFOLIO SECTIONS

REVISION

ISSUE

RBS to be revised and checked



Point Table

Point #	Easting	Northing	Axis
P1	585458.219	830449.733	P1
P2	585457.946	830450.238	P1
P3	585458.110	830450.788	P1
P4	585459.373	830452.339	P1
P5	585459.878	830452.612	P1
P6	585460.428	830452.447	P1
P7	585461.204	830451.816	P1
P8	585461.476	830451.311	P1
P9	585461.312	830450.761	P1
P10	585460.049	830449.210	P1
P11	585459.544	830448.937	P1
P12	585458.994	830449.102	P1

NOTES:

FHECOR Ingenieros Consultores

Arab House of Engineering
شركة بيت الهندسة
Tel : +2027610435 e-mail : info@ahe-consult.com
صادر رقم

NO.	DATE	ENG.	REVISION
00	12/2022	K.A	FOR SUBMITTAL

OWNER — المالك

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكبارى والنقل البرى
GARBLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF TIBE TO ALAMAIN)

NAME OF OWNER CONSULTANT
SYSTRA SHAKER

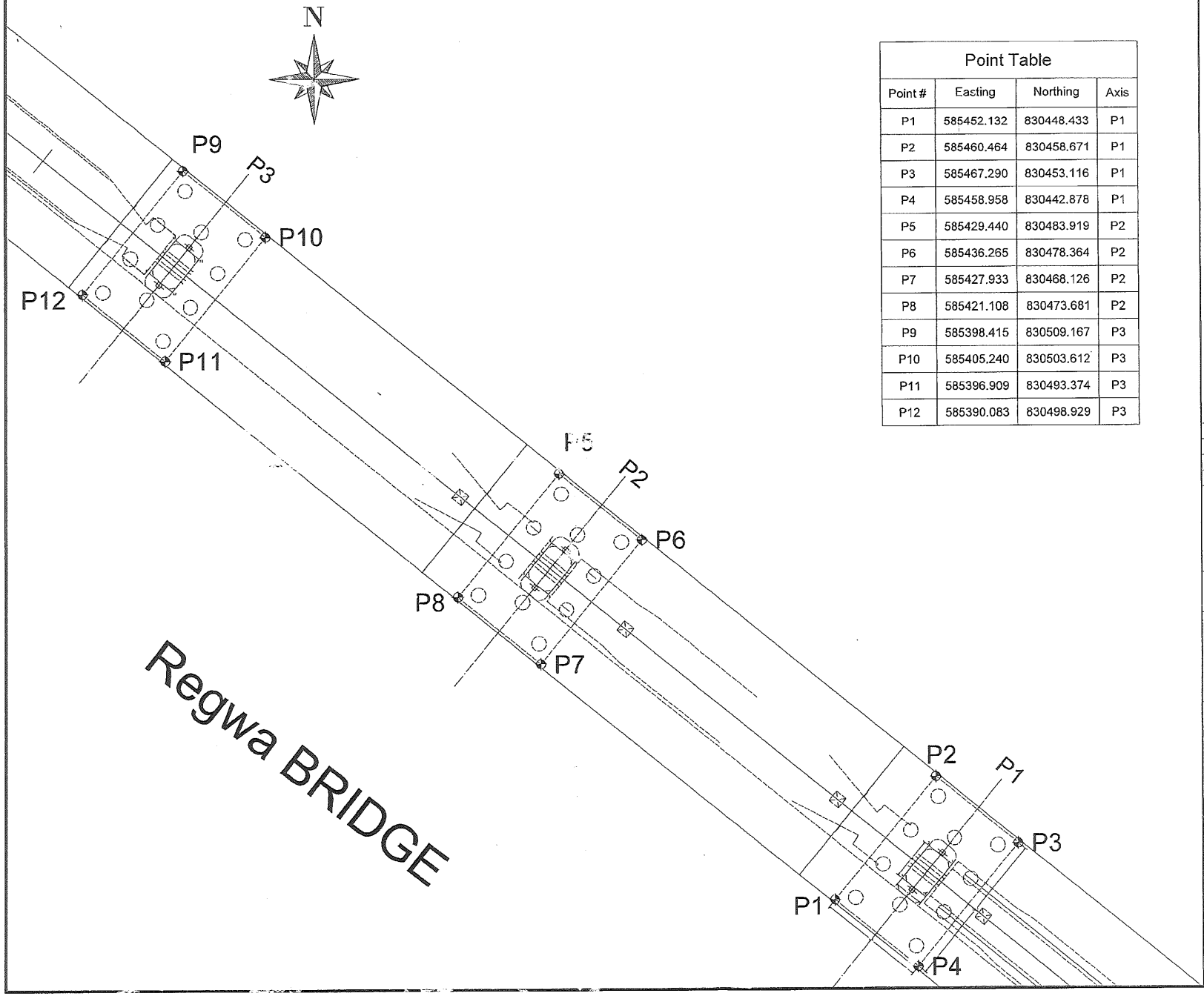
NAME OF CONTRACTOR CONSULTANT
FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE
COLUMNS COORDINATES
AT REGWA BRIDGE

DWG NO	DATE	SCALE
COL -CO-01	12/2022	1 : 50
DRAWING BY	DESIGNED BY	CHECKED BY
ENG. O.M	ENG. K.A	ENG. A.A

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashkom	Eng. Javier Tornin



Point Table			
Point #	Easting	Northing	Axis
P1	585452.132	830448.433	P1
P2	585460.464	830458.671	P1
P3	585467.290	830453.116	P1
P4	585458.958	830442.878	P1
P5	585429.440	830483.919	P2
P6	585436.265	830478.364	P2
P7	585427.933	830468.126	P2
P8	585421.108	830473.681	P2
P9	585398.415	830509.167	P3
P10	585405.240	830503.612	P3
P11	585396.909	830493.374	P3
P12	585390.083	830498.929	P3

NOTES:

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Arab House of Engineering

NO.	DATE	ENG.	REVISION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT.

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT.

FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
FOUNDATION COORDINATES
AT REGWA BRIDGE

DWG.NO.:	DATE:	SCALE:
HSR-V001-F.CO-01	10/2022	1:100
DRAWING BY:	CHECKED BY:	
Eng.Khaled Alaa	Eng.Mamdouh Saleh	
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashwa		Eng. Javier Tornco

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : Pile Cap (P1)

Dimension : 15*15*15 cm

Date of casting : 24/05/2023

MIX DESIGN STRENGTH : 500 kg/cm^2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	24/05/2023	31/05/2023	7	8.461	109200	485	497
2	24/05/2023	31/05/2023	7	8.567	113800	506	
3	24/05/2023	31/05/2023	7	8.481	112700	501	
4	24/05/2023	31/05/2023	7	8.586	117450	522	
5	24/05/2023	31/05/2023	7	8.601	110020	489	
6	24/05/2023	31/05/2023	7	8.524	109800	488	
7	24/05/2023	31/05/2023	7	8.496	115060	511	
8	24/05/2023	31/05/2023	7	8.502	110900	493	
9	24/05/2023	31/05/2023	7	8.537	106900	475	

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

HELIOPOLIS
Concrete Technology Center
Date :
Name :

Al Amal Ready mix

الأمل

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : Pile Cap (P1)

Dimension : 15*15*15 cm

Date of casting : 24/05/2023

MIX DESIGN STRENGTH : 500 kg/cm^2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	24/05/2023	21/06/2023	28	8.502	134200	596	
2	24/05/2023	21/06/2023	28	8.551	144000	640	
3	24/05/2023	21/06/2023	28	8.592	135500	602	
4	24/05/2023	21/06/2023	28	8.474	148600	660	
5	24/05/2023	21/06/2023	28	8.644	144900	644	638
6	24/05/2023	21/06/2023	28	8.615	139600	620	
7	24/05/2023	21/06/2023	28	8.720	150800	670	
8	24/05/2023	21/06/2023	28	8.586	145600	647	
9	24/05/2023	21/06/2023	28	8.588	148700	661	

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

HELIOPOLIS
Concrete Technology Center
Date :
Name :

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717

Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧

موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
				5/3/2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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 : pouring footing p2		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km FOOTING P2		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:500 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: pm		Concrete Volume: 290 m3	

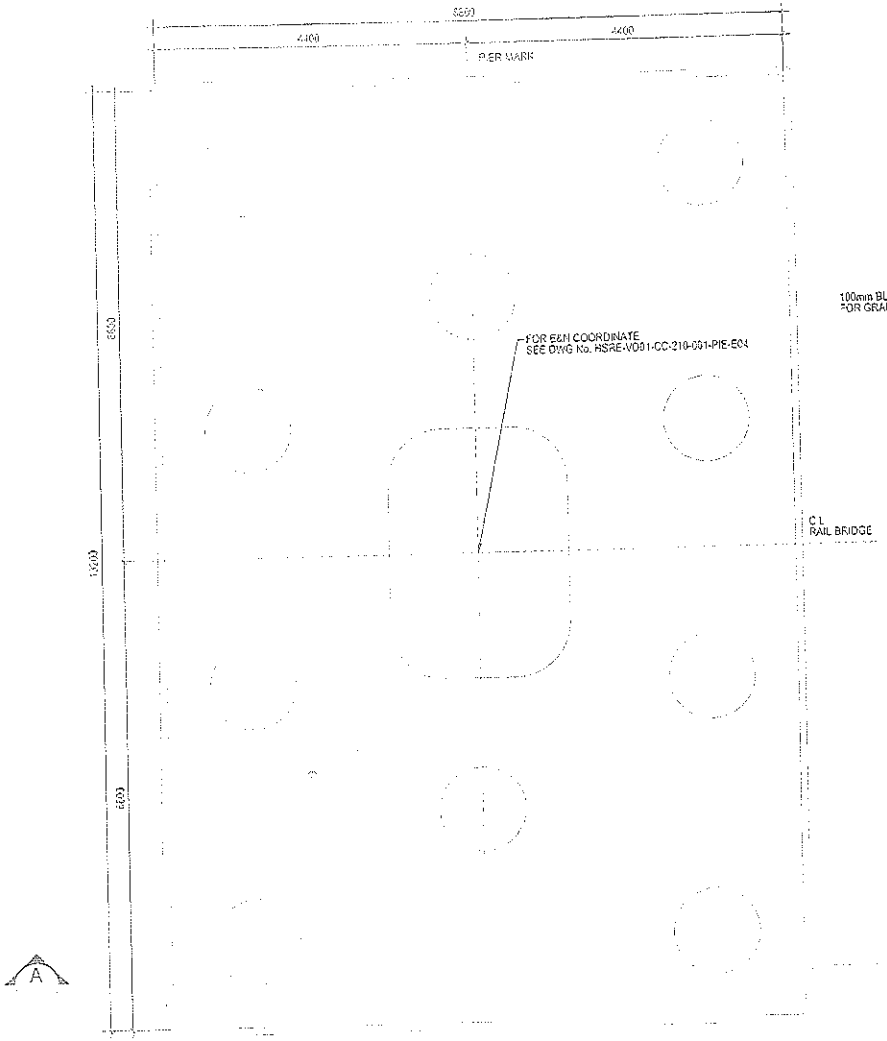
THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT 7-28COMPRESSIVE STRENGHT OF CONCRETE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR footing**	
3			**footing COORDINATES**	

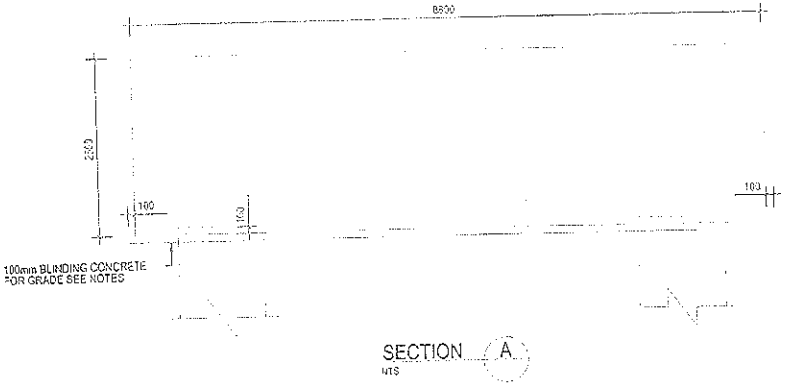
Comments by:	Comments by:

APPROVAL STATUS

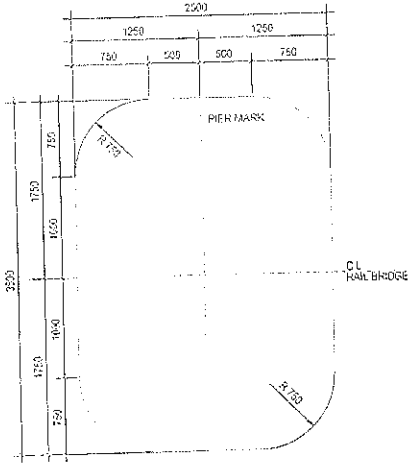
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer	Mohammed Gardown			A



PILE CAP TYPE 1 PLAN



SECTION A
NTS



COLUMN DIMENSIONS AT PILE CAP TOP ELEVATION.

NOTES:

1- ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN MILLIMETRES UNLESS OTHERWISE STATED. ELEVATIONS & COORDINATES ARE IN METRES.

2- FOR PROJECT GENERAL NOTES SEE DRAWING No. HSRE-V001-CC-210-001-GN-E01

3- FOR PIERS CONCRETE DIMENSION & SETTING OUT COORDINATES SEE DRAWING No. HSRE-V001-CC-210-001-PIE-E02

4- REINFORCED CONCRETE GRADE C25/30 & GRADE C21/35 FOR BLINDING CONCRETE

5- FOR EARTHING & BONDING DETAILS SEE DWG No. HSRE-V001-CC-210-001-DET-E02

6- FOR REINFORCING STEEL SEE DWG No. HSRE-V001-CC-210-001-DET-E03

FHECOR Ingenieros Consultores

Arab House of Engineering

NO	DATE	DWG	REVISION

ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري
والنقل البري
GAUGRT

وزارة النقل

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION 1: FROM WEST OF NILE TO ALFAYOUM

NAME OF OWNER'S CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR'S CONSULTANT

FHECOR Ingenieros Consultores

NAME OF CONTRACTOR

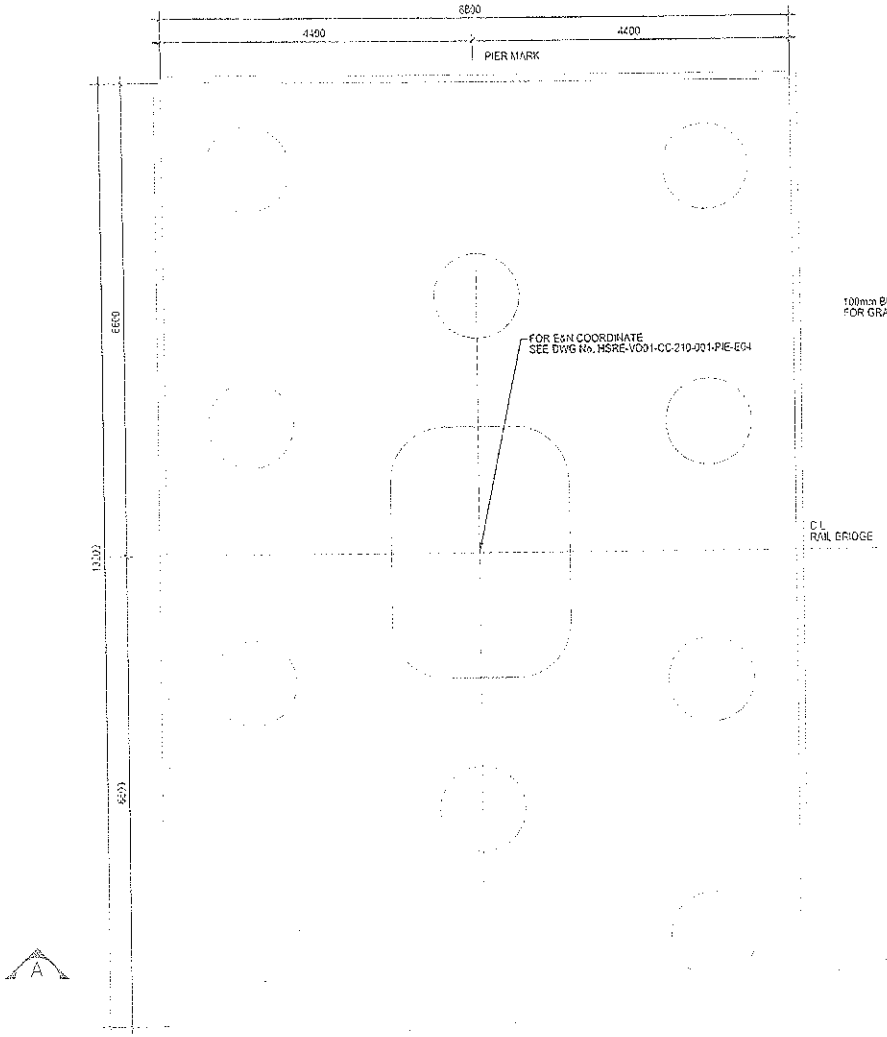
الشركة القابضة

REGWA ROAD BRIDGE
CONCRETE DIMENSIONS
PIER @ AXES P1,P2&P3 PLAN & SECTIONS

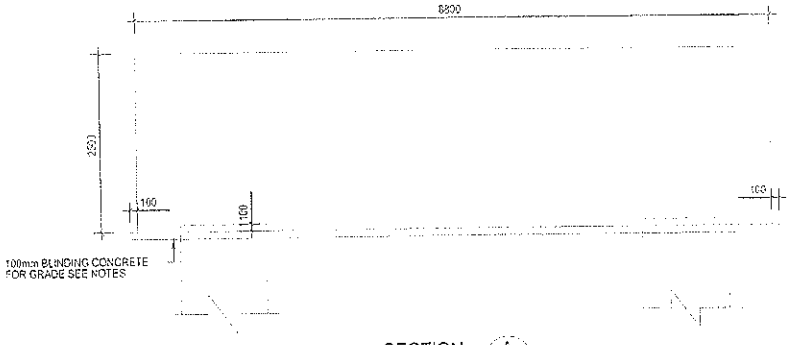
DATE

DATE

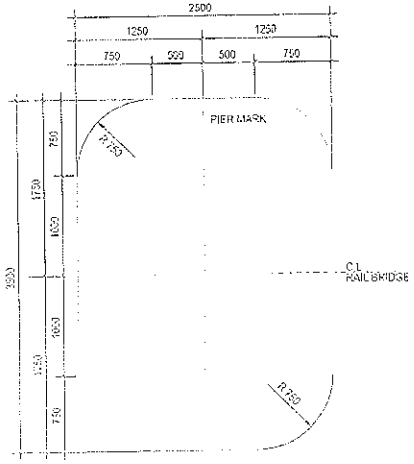
DATE



PILE CAP TYPE 1 PLAN



SECTION A
NTS



COLUMN DIMENSIONS AT PILE CAP TOP ELEVATION

NOTES:

1- ALL DIMENSIONS SHOWN ON THE DRAWING ARE IN MILLIMETERS AND ELEVATIONS & COORDINATES ARE SHOWN IN METERS
2- FOR PROJECT GENERAL NOTES SEE DRAWING No. HSRE-V001-CC-210-001-NOT-E03
3- FOR PILES CONCRETE DIMENSIONS & SETTING OUT COORDINATES SEE DRAWING No. HSRE-V001-CC-210-001-PIE-E02
4- REINFORCED CONCRETE GRADE C40 & GRADE C12/25 FOR BLINDING CONCRETE
5- FOR FARCHING & BOXING DETAILS SEE DWG No. HSRE-V001-CC-402-001-DET-E02
6- FOR REINFORCING STEEL SEE DWG No. HSRE-V001-CC-200-002-PIE-E02

FHECOR Ingenieros Consultores

Arab House of Engineering

REVISION

وزارة النقل

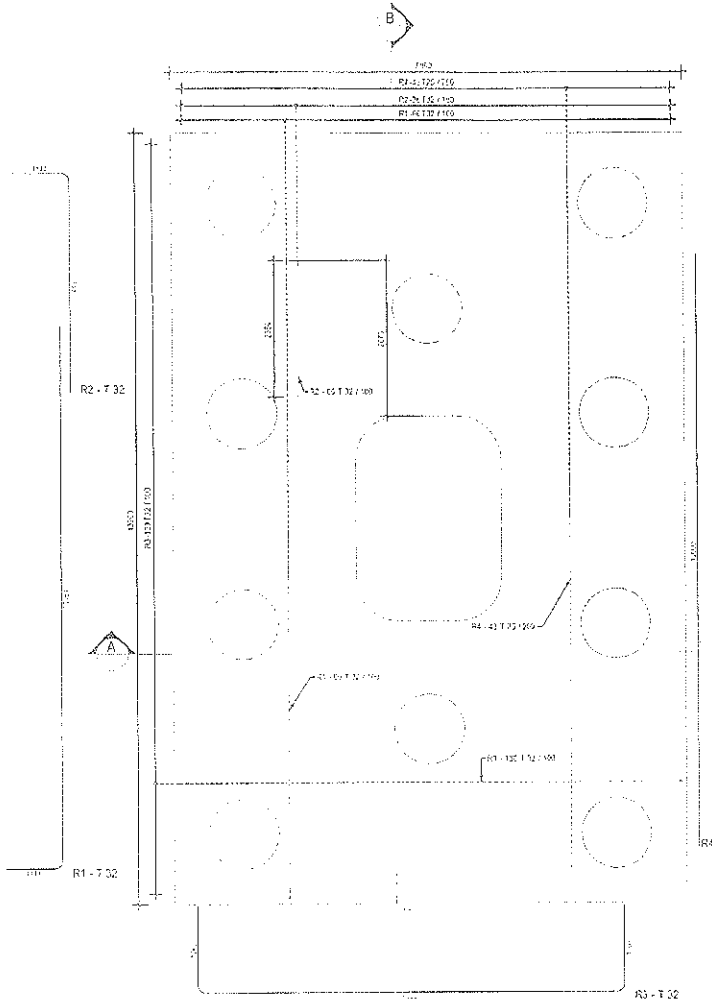
ELECTRICAL DARNESS TRANSFORMER FEED RAIL
SECTION CC FROM WEST OF MIT TO ALMARIN

SYSTRA SHAKER

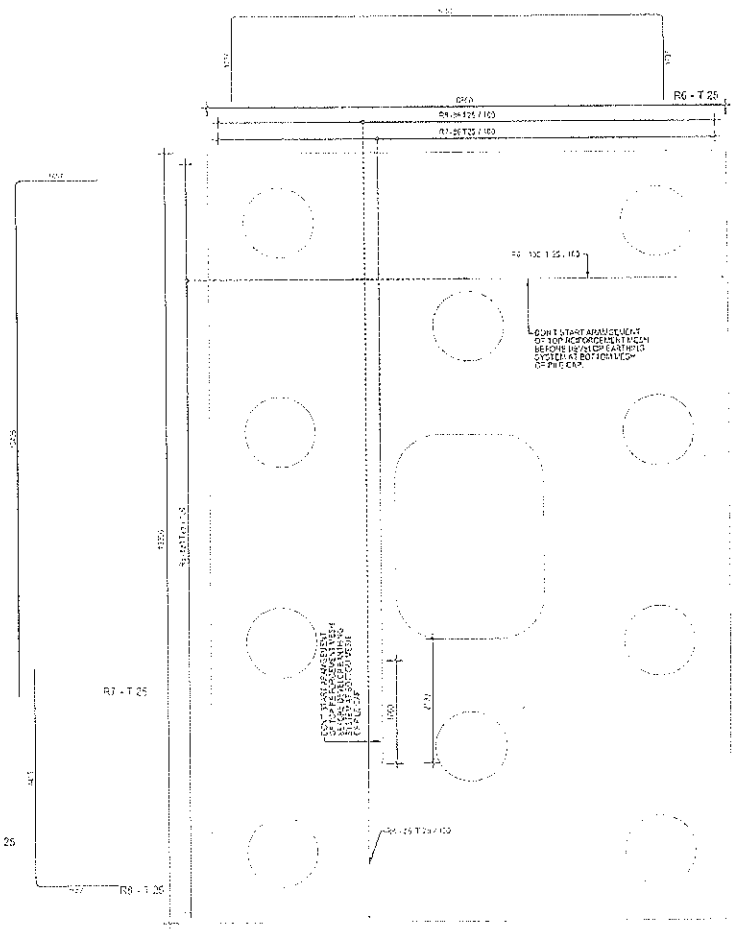
FHECOR Ingenieros Consultores

الشركة المتحدة

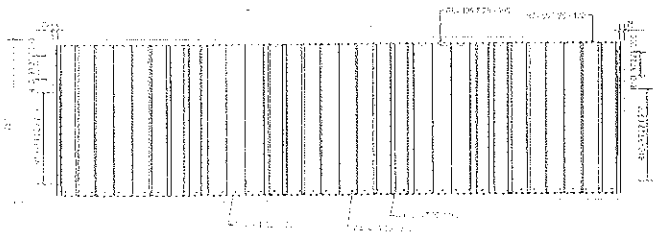
RECUA ROAD BRIDGE
CONCRETE DIMENSIONS
PILE CAPS PLAN, PLANS & SECTIONS



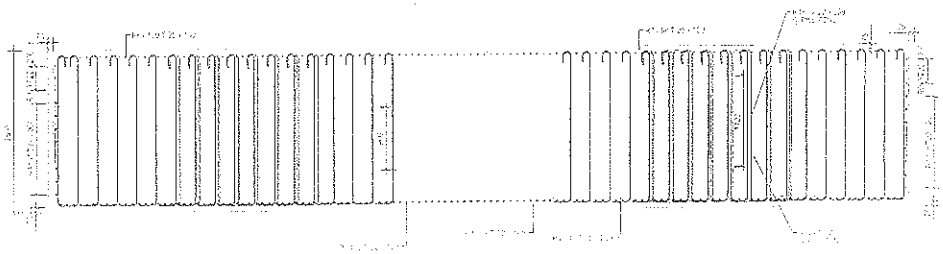
PILE CAP BOTTOM REINFORCEMENT PLAN



PILE CAP TOP REINFORCEMENT PLAN



SECTION A



SECTION B

NOTES:

1- ALL DIMENSIONS SHOWN IN THE DRAWINGS ARE IN MILLIMETERS UNLESS ELEVATIONS & COORDINATES ARE SHOWN IN METERS

2- FOR PROJECT GENERAL NOTES SEE DRAWING NO. HSRE-VD01-CC-STD-001 NOTES

3- FOR PIERS CONCRETE DIMENSIONS & SETTING OUT COORDINATES SEE DRAWING NO. HSRE-VD01-CC-PS-001-PIE-001

4- REINFORCING STEEL SHALL CONFORM TO EN 10080 & USED MATERIAL TYPE AS CLEAR IN DRAWING

5- REINFORCED CONCRETE GRADE C40/50 GRADE C25/30 FOR ELIMINATE CONCRETE

6- CONCRETE COVER SHALL BE 75mm ALL AROUND UNO

7- FOR EARTHING & BONDING DETAILS SEE DWG NO. HSRE-VD01-CC-TD-CM-DET-E02

8- ARRANGEMENT OF STEEL BAR SHALL BE STAGGERED

LEGEND

BOTTOM BARS

TOP BARS

BAR SHEET DETAILS

A QUANTITY OF GROUPS

B BAR MARK

C QUANTITY OF BARS

D BAR SIZE

E BAR SPACING

NE JV FHECOR Ingenieros Consultores

Arab House of Engineering

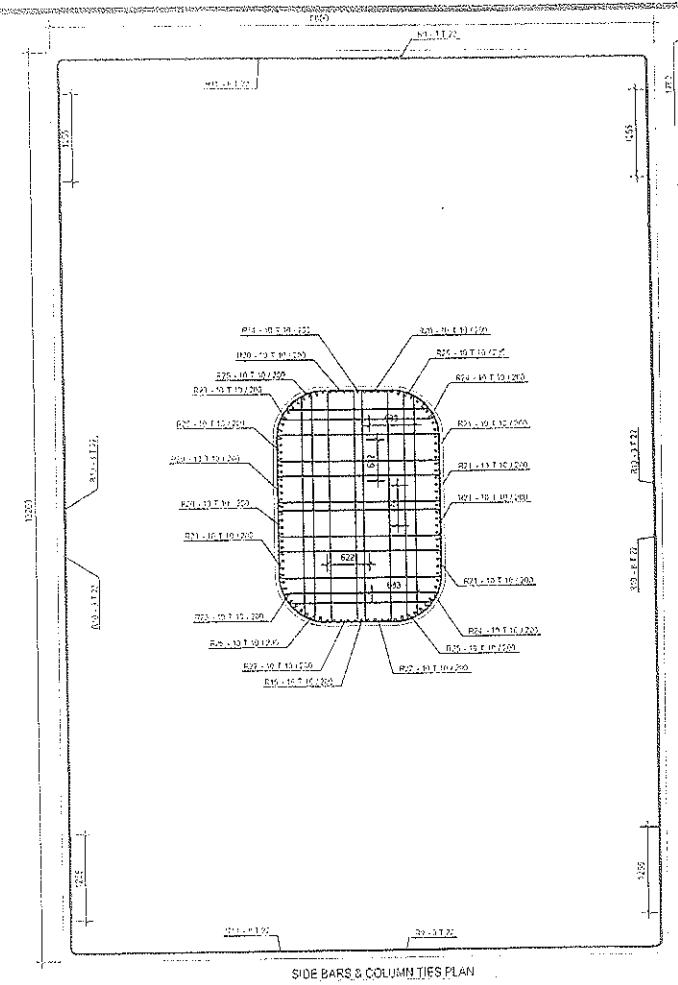
STATUS FOR CONSTRUCTION

SYSTRA SHAKER

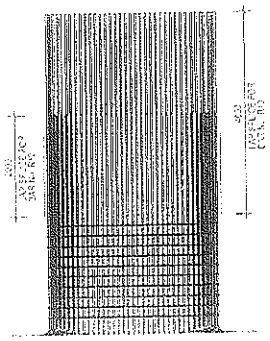
FHECOR Ingenieros Consultores

REDONDO BRIDGE

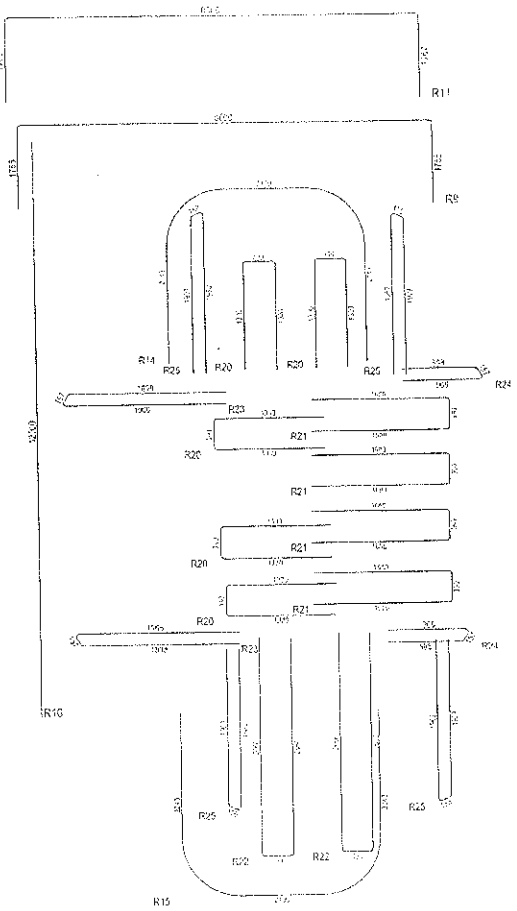
REINFORCING STEEL



SIDE BARS & COLUMN TIES PLAN



COLUMN STARTER BARS SECTIONAL ELEVATION



REBAR BENDING SCHEDULE

Bar Mark	Size	QTY.	Length	Weight	Total Weight	Bar Shape
R1	25	43	12000	46.25	1988.7	
R10	22	22	12000	35.81	787.8	
R1	32	86	12000	75.77	6516.0	
R2	32	86	5500	34.73	2986.5	
R3	32	130	12000	75.77	9849.8	
R5	25	130	12000	46.25	6012.2	
R7	25	66	12000	46.25	3077.3	
R8	25	86	6000	23.12	1988.7	
R9	22	6	12000	35.81	214.8	
R11	22	16	12000	35.81	572.9	
R12	32	88	5000	31.57	2778.2	
R13	32	90	7000	44.20	3977.8	
R14	16	10	6000	9.47	94.7	
R15	16	10	6200	9.88	98.8	
R16	22	560	2000	5.97	3342.1	
R17	22	550	2200	6.57	3378.4	
R18	16	1040	2000	3.16	3310.6	
R19	10	1040	1720	2.71	2817.0	
R20	10	80	2000	1.23	111.1	
R21	10	40	3700	2.28	91.3	
R22	10	30	5600	3.45	103.5	
R23	10	20	4000	2.47	49.4	
R24	10	20	2000	1.23	24.7	
R25	10	40	1000	2.47	98.8	

NOTES:

1. ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN MILLIMETERS UNLESS OTHERWISE STATED. ELEVATIONS & COORDINATES ARE IN GROUND METERS
2. FOR PROJECT GENERAL NOTES SEE DRAWING NO. HORE-VD01-GC-000-DN-D1-000
3. FOR PIERS CONCRETE DIMENSIONS & SETTING OUT COORDINATES SEE DRAWING NO. HORE-VD01-GC-210-DN-D1-001
4. REINFORCING STEEL SHALL CONFORM TO BS4449:1997 USED MATERIAL TYPE B500C/R (f_y=500N/mm²)
5. REINFORCED CONCRETE GRADE C40/50 GRADE C30/35 FOR ELEVATED CONCRETE
6. CONCRETE COVER SHALL BE 75mm ALL AROUND UNLESS OTHERWISE STATED
7. FOR EARTHING & BONDING DETAILS SEE DWG NO. HORE-VD01-GC-400-DT-D1-E002
8. ARRANGEMENT OF STEEL BARS SHALL BE STAGGERED

LEGEND

BOTTOM BARS

TOP BARS

DESCRIPTION OF TIES:

a. QUANTITY OF GROUPS

b. BAR MARK

c. QUANTITY OF BARS

d. BAR SIZE

e. BAR SPACING

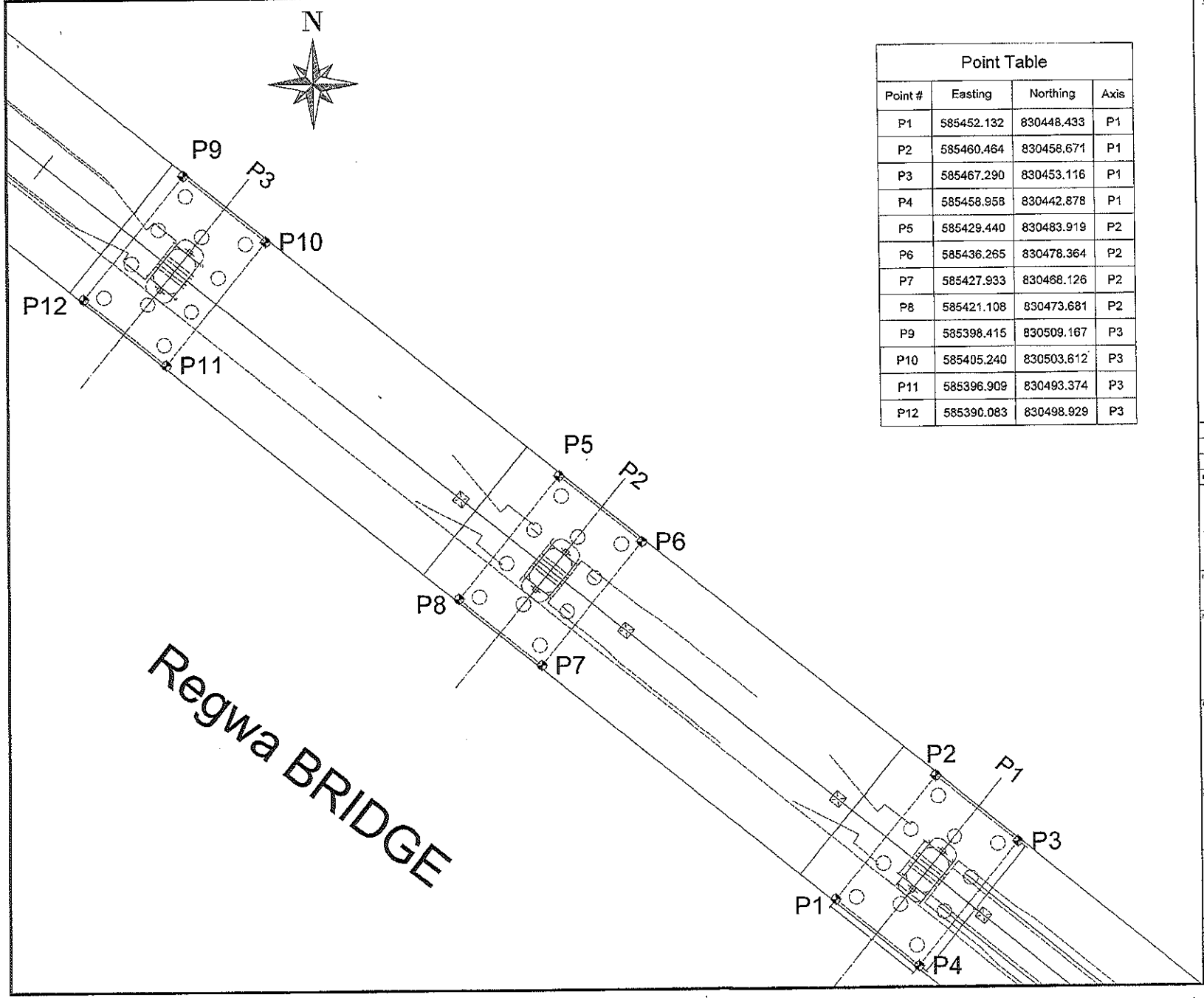
NE JV FHECOR Ingenieros Consultores

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق وأمكان
وزارة النقل
CAIRO

SYSTRA Dorsch SHAKER

FHECOR Ingenieros Consultores

الطريق الدائري
REGIONAL ROAD PROJECT
REINFORCING STEEL
PROFILES OF PIERS PLAN & SECTIONS



Point Table			
Point #	Easting	Northing	Axis
P1	585452.132	830448.433	P1
P2	585460.464	830458.671	P1
P3	585467.290	830453.116	P1
P4	585458.958	830442.878	P1
P5	585429.440	830483.919	P2
P6	585436.265	830478.364	P2
P7	585427.933	830468.126	P2
P8	585421.108	830473.681	P2
P9	585398.415	830509.167	P3
P10	585405.240	830503.612	P3
P11	585396.909	830493.374	P3
P12	585390.083	830498.929	P3

NOTES:

NE JV FHECOR Ingenieros Consultores

Arab House of Engineering

NO.	DATE	ENG.	REVISION

OWNER

المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARMT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

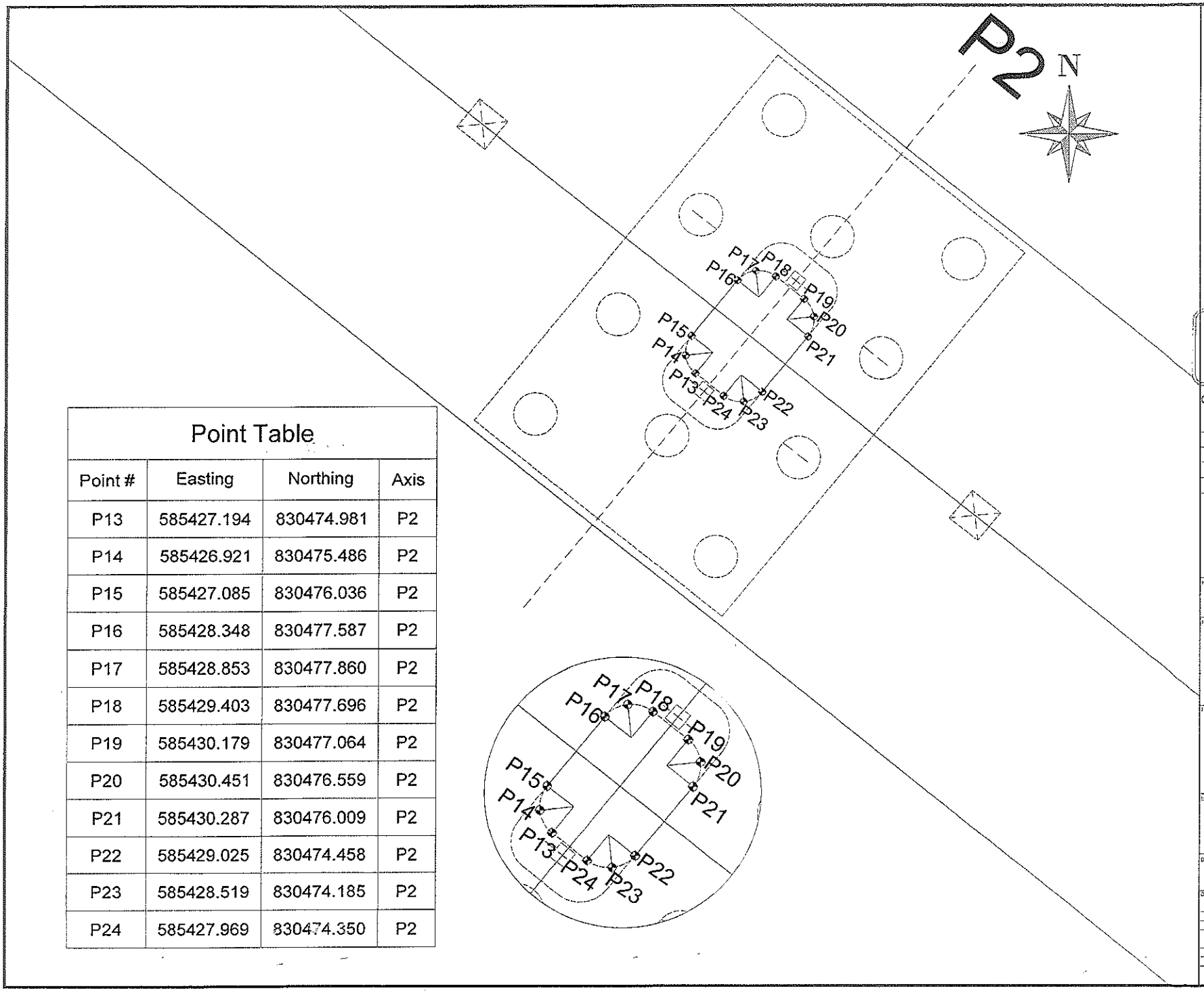
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
NE JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
FOUNDATION COORDINATES
AT REGWA BRIDGE

DWG.NO.:	DATE:	SCALE:
HSR-VD01-F-CO-61	10/2022	1:100
DRAWING BY:	CHECKED BY:	
Eng.Khalid Alaa	Eng.Mamdouh Gaber	
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lasheen		Eng. Javier Tortice



Point Table

Point #	Easting	Northing	Axis
P13	585427.194	830474.981	P2
P14	585426.921	830475.486	P2
P15	585427.085	830476.036	P2
P16	585428.348	830477.587	P2
P17	585428.853	830477.860	P2
P18	585429.403	830477.696	P2
P19	585430.179	830477.064	P2
P20	585430.451	830476.559	P2
P21	585430.287	830476.009	P2
P22	585429.025	830474.458	P2
P23	585428.519	830474.185	P2
P24	585427.969	830474.350	P2

NOTES:

NE JV FHECOR Ingenieros Consultores

Arab House of Engineering
شركة بيت الهندسة
Tel: +20276106455 e-mail: info@ahe-consult.com
صادر رقم: ٩٢٣
١٥

NO.	DATE	ENG	REVISION
00	12/2022	K.A	FOR SUBMITTAL

OWNER — المالك

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED-RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT
NE JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG TITLE
COLUMNS COORDINATES
AT REGWA BRIDGE

DWG NO	DATE	SCALE
COL-GD-02	12/2022	1:50

DRAWING BY	DESIGNED BY	CHECKED BY
ENG. O.M	ENG. K.A	ENG. A.A

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashen	Eng. Ismail Tolba

COMPRESSIVE STRENGTH OF
TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART 4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : Pier 2

Dimension : 15*15*15 cm

Date of casting : 04/03/2023

MIX DESIGN STRENGTH : 500 kg/cm^2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	04/03/2023	09/04/2023	28	8.516	142100	632	621
2	04/03/2023	09/04/2023	28	8.338	124500	553	
3	04/03/2023	09/04/2023	28	8.491	137400	611	
4	04/03/2023	09/04/2023	28	8.578	142300	632	
5	04/03/2023	09/04/2023	28	8.738	125600	558	
6	04/03/2023	09/04/2023	28	8.768	135200	601	
7	04/03/2023	09/04/2023	28	8.602	147600	656	
8	04/03/2023	09/04/2023	28	8.487	148600	660	
9	04/03/2023	09/04/2023	28	8.422	154100	685	

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shaml St. - Tenth District
Nasr City Telefax: 02 23573307 - 02 24713563
Mobile: 01001167117
Plant Site : Nasr Salem - Kalyubia - Part 02 - of
Tel.: 2904105 / Fax: 2904104

COMPRESSIVE STRENGTH OF
TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1993

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : P2

Dimension : 15*15*15 cm

Date of casting : 04/03/2023

MIX DESIGN STRENGTH : 500 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	04/03/2023	11/03/2023	7	8.443	133900	595	516
2	04/03/2023	11/03/2023	7	8.783	99600	443	
3	04/03/2023	11/03/2023	7	8.504	127500	567	
4	04/03/2023	11/03/2023	7	8.664	120400	535	
5	04/03/2023	11/03/2023	7	8.561	124200	552	
6	04/03/2023	11/03/2023	7	8.467	114500	509	
7	04/03/2023	11/03/2023	7	7.436	118500	527	
8	04/03/2023	11/03/2023	7	8.506	115200	512	
9	04/03/2023	11/03/2023	7	8.581	91800	408	

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi St. - Tenth District
Nasr City/Telefax: 02 23373307 - 02 24713558
Mobile: 01101116717
Workshop : New Cairo - Katamia - Part 82 - 83
Tel.: 29841135 / Fax: 26840108
01227555398 - 01065931170 - 01006033056

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
				10/1/2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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 : Receiving Steel Rienforcement,carpentry and Surveying works For Footing P3		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (footing P (3))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: kg/cm^2
PRESTART CHECKLIST				
IR Approved			Plant & equipment available	
Mix Approved			Back up equipment available	
Setting out Survey Approved			Cast in items secure	
Temp Works Approved			Access route clear	
Formwork Checked			Work area safe to progress	
Start Time for Pour: pm			Concrete Volume: 290 m3	

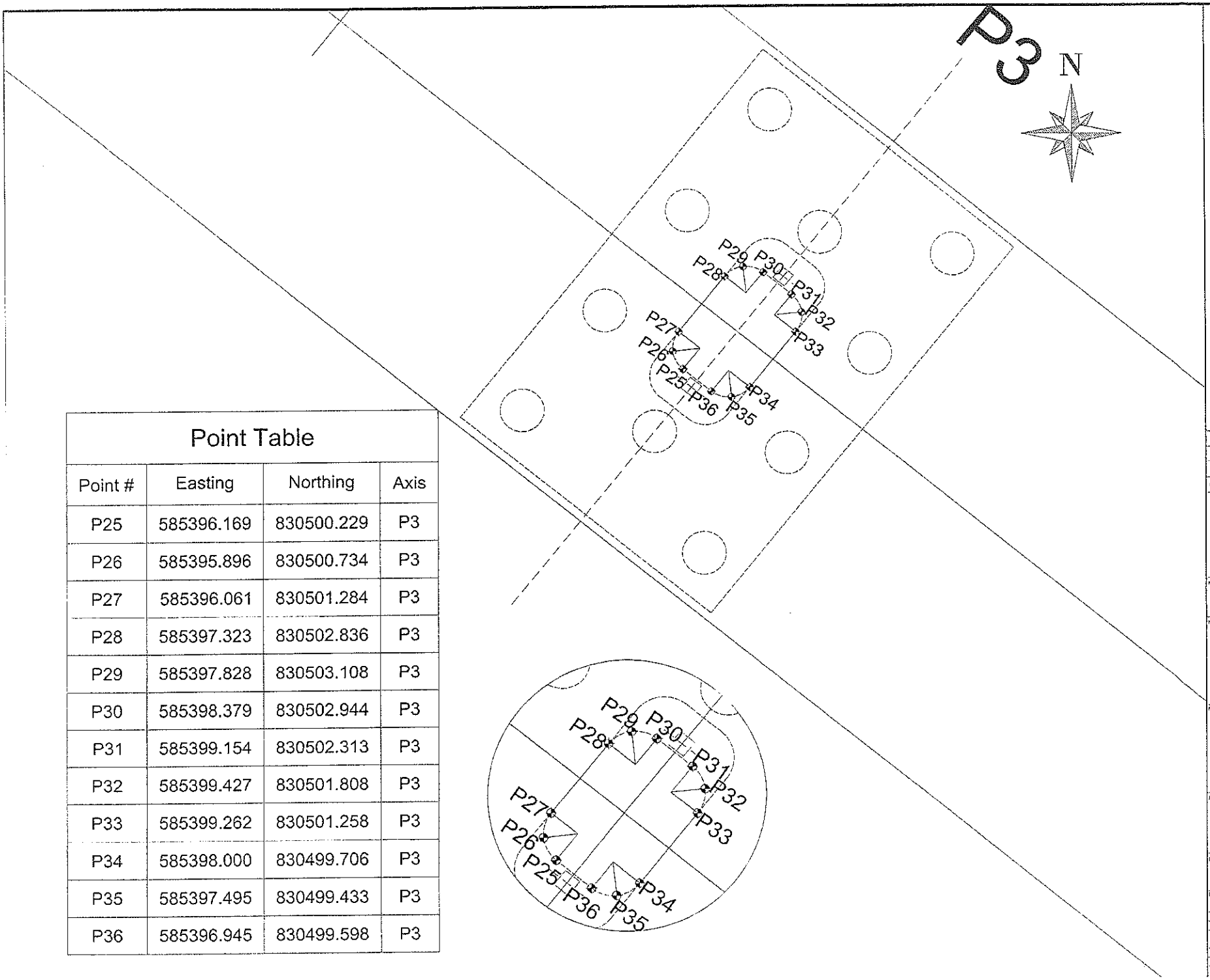
THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			Steel Rienforcement Shop drawing for footing P3	
2			Footing COORDINATES	
3			Column COORDINATES	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer Representative	Mohammed Gardouh		10/1/2023	A



Point Table

Point #	Easting	Northing	Axis
P25	585396.169	830500.229	P3
P26	585395.896	830500.734	P3
P27	585396.061	830501.284	P3
P28	585397.323	830502.836	P3
P29	585397.828	830503.108	P3
P30	585398.379	830502.944	P3
P31	585399.154	830502.313	P3
P32	585399.427	830501.808	P3
P33	585399.262	830501.258	P3
P34	585398.000	830499.706	P3
P35	585397.495	830499.433	P3
P36	585396.945	830499.598	P3

NOTES:

FHECOR Ingenieros Consultores

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شركة بيت الهندسة
Tel: +20276110435 e-mail: info@aho-consult.com
صادر رقم: ٩٣٣
٢٠٢٢/١٠

NO.	DATE	ENG	REVISION
00	12/2022	K.A	FOR SUBMITTAL

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALASHMUNI)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

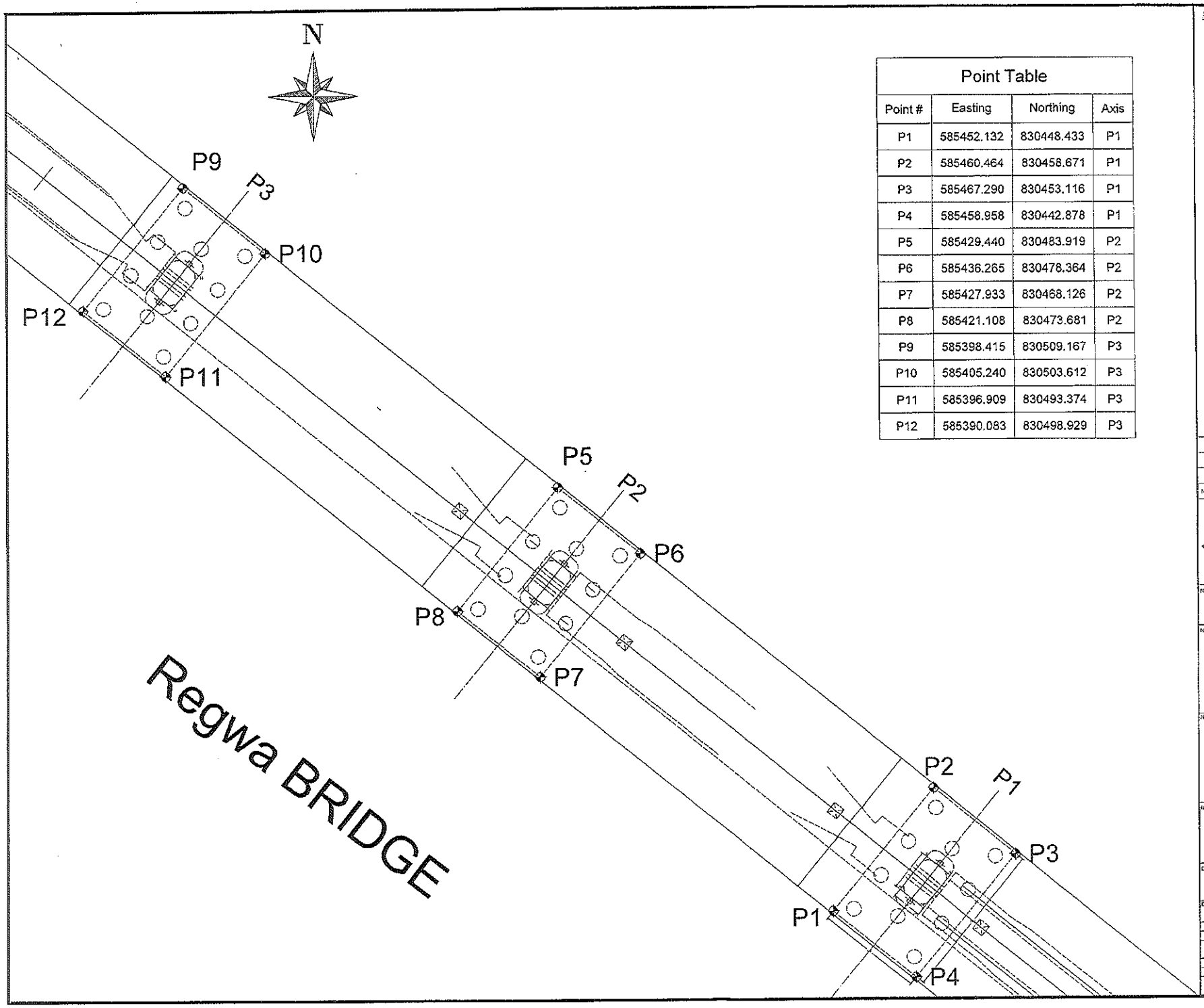
FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG TITLE

COLUMNS COORDINATES
AT REGWA BRIDGE

DWG NO	DATE	SCALE
COL -CO-03	12/2022	1 : 50
DRAWING BY	DESIGNED BY	CHECKED BY
ENG. O.M.	ENG. K.A	ENG. K.A
SUPERVISOR		APPROVED BY
DR. Mahmoud Lashkhem		Eng. Junior Torres



Point Table			
Point #	Easting	Northing	Axis
P1	585452.132	830448.433	P1
P2	585460.464	830458.671	P1
P3	585467.290	830453.116	P1
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P7	585427.933	830468.126	P2
P8	585421.108	830473.681	P2
P9	585398.415	830509.167	P3
P10	585405.240	830503.612	P3
P11	585396.909	830493.374	P3
P12	585390.083	830498.929	P3

NOTES:

FHECOR Ingenieros Consultores

Arab House of Engineering

NO.	DATE	ENG.	REVISION

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

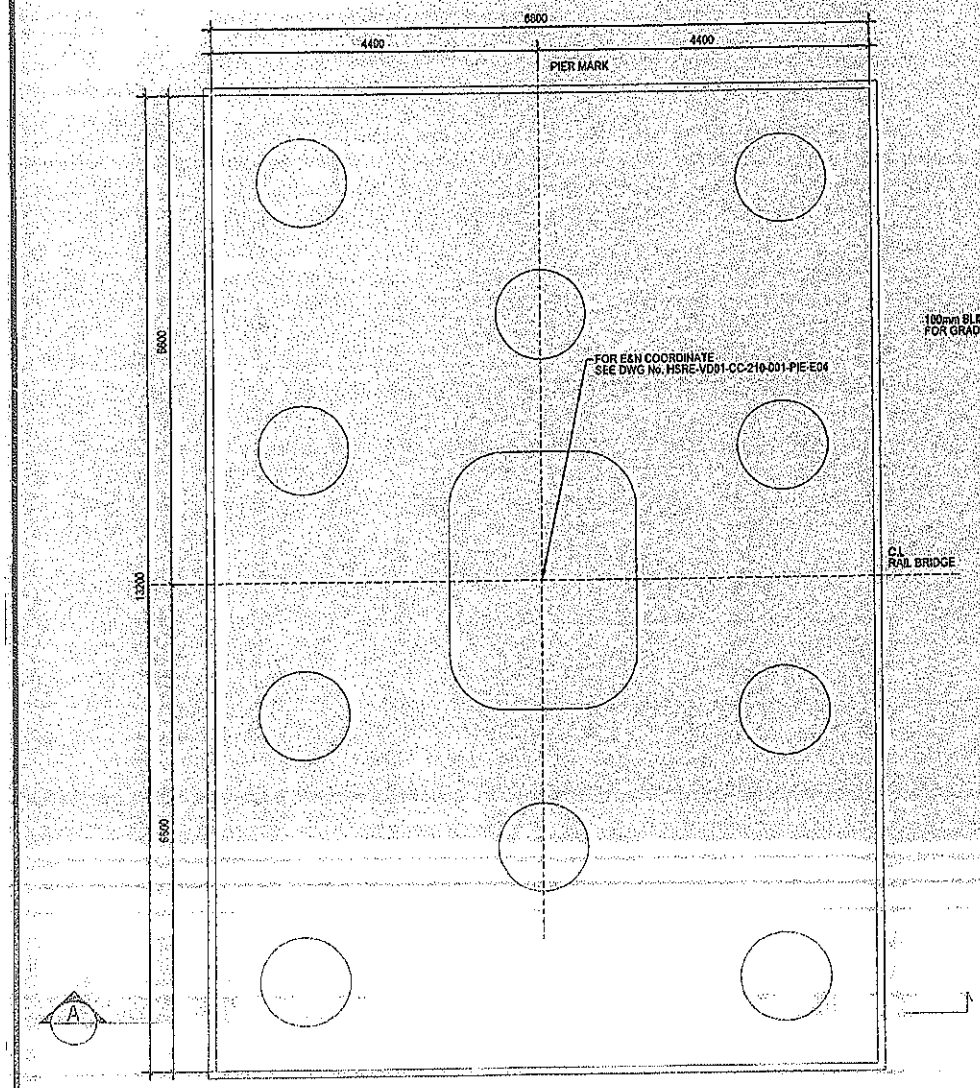
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

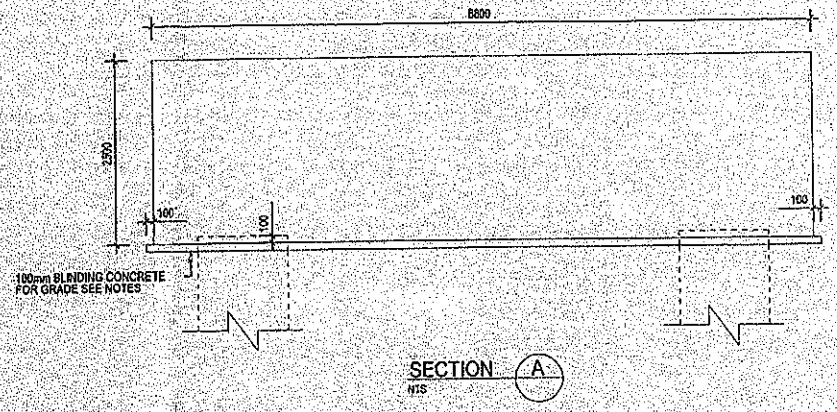
MAIN CONTRACTOR:

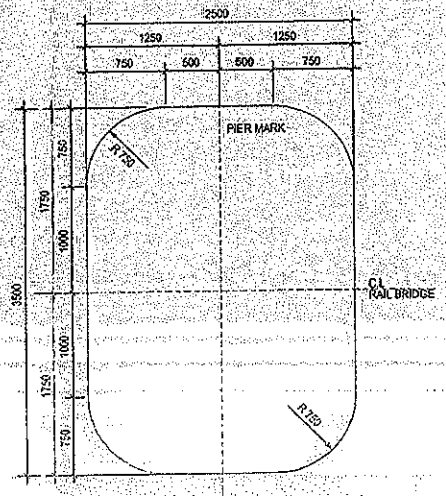
DWG. TITLE:
FOUNDATION COORDINATES
AT REGWA BRIDGE

DWG.NO.	DATE	SCALE
HSR-VD01-F.CO-01	10/2022	1:100
DRAWING BY: Eng.Khaled Abas	CHECKED BY: Eng.Mamdouh Salah	
SUPERVISOR: DR. Mahmoud Lashwah	APPROVED BY: Eng. Jawad Tounsi	



PILE CAP TYPE 1 PLAN





COLUMN DIMENSIONS AT PILE CAP TOP ELEVATION

23/6/2022

NOTES:

1- ALL DIMENSIONS SHOWN IN THIS DRAWING ARE IN MILLIMETERS. ALL ELEVATIONS & COORDINATES ARE SHOWN IN METERS.

2- FOR PROJECT GENERAL NOTES SEE DRAWING No. HSRE-VD01-CC-010-001-NOT-E03

3- FOR PIERS CONCREET DIMENSION & SETTING OUT COORDINATES SEE DRAWING No. HSRE-VD01-CC-210-006-PIE-E04

4- REINFORCED CONCREET GRADE C40/50 & GRADE C20/25 - FOR BLINDING CONCREET

5- FOR EARTHING & BONDING DETAILS SEE DWG No. HSRE-VD01-CC-400-001-DET-E02

6- FOR REINFORCING STEEL SEE DWG No. HSRE-VD01-SD-200-002-PIE-E00

FHECOR Ingenieros Consultores

Arab House of Engineering
شركة بيت الهندسة
Tel: +2027610135 e-mail: info@ahe-consult.com
صادر رقم:

NO.	DATE	ENG.	REVISION #
0	10-13-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1145

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

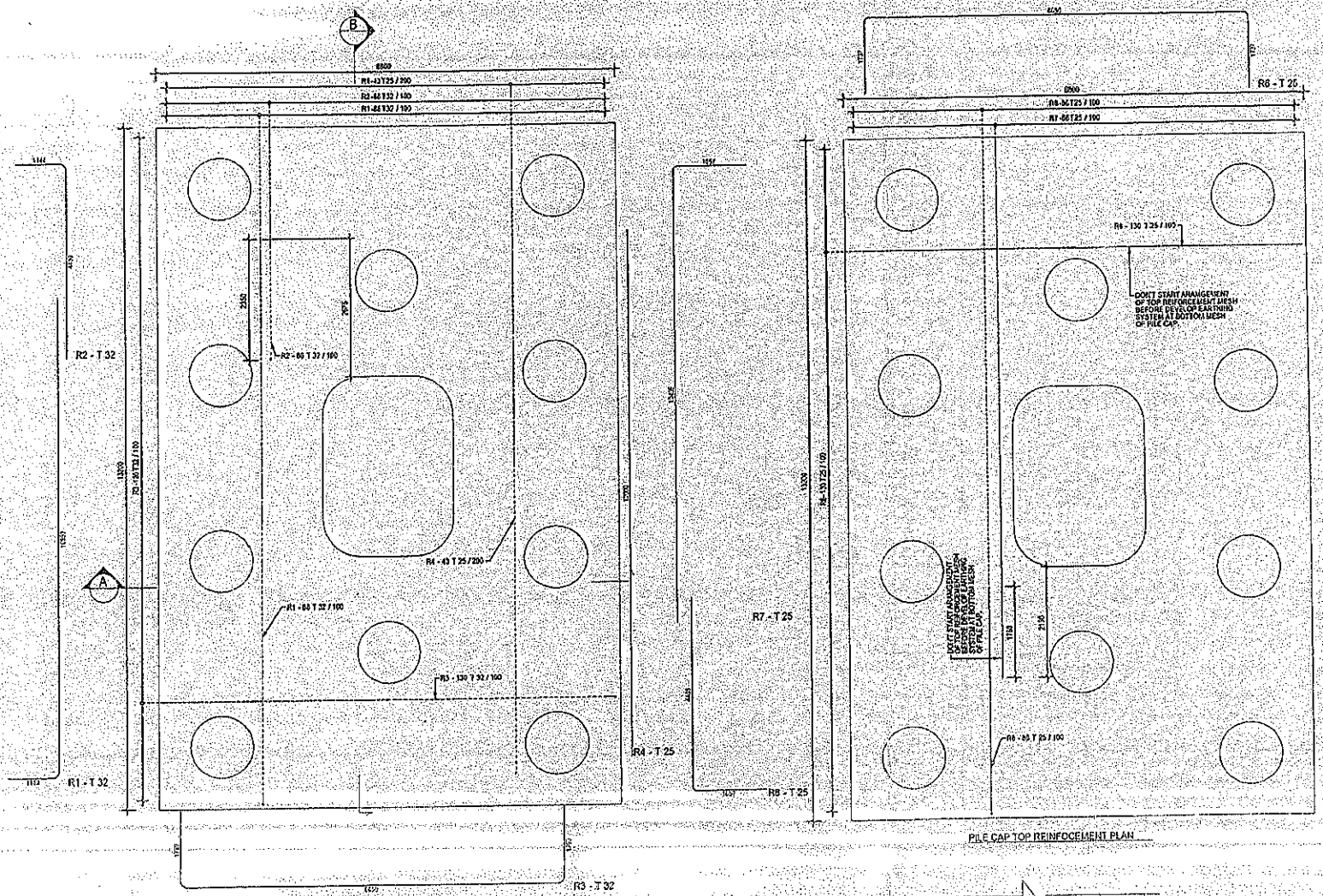
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

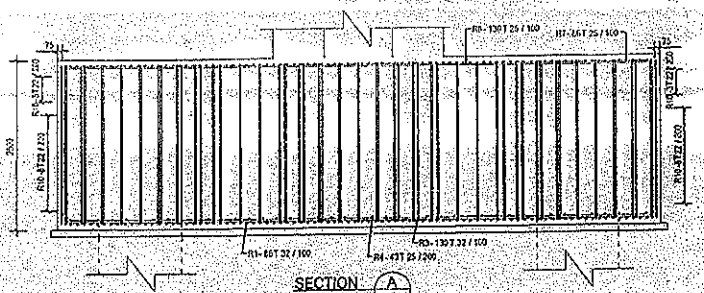
DWG. TITLE:
REGWA ROAD BRIDGE
CONCRETE DIMENSIONS
PIER @ AXES P1,P2&P3 PLAN & SECTIONS

DWG NO:	DATE:	SCALE:
HSRE-VD01-SD-210-001-PIE-E00	10-22	AS SHOWN
DRAWN BY: Eng. Eslam Fawzy	DESIGNED BY: Eng. Sabrah Hassan	CHECKED BY: Eng. Mamdouh Saleh
		APPROVED BY: Eng. Javier Torres
SUPERVISOR: DR. Mahmoud Lashden		

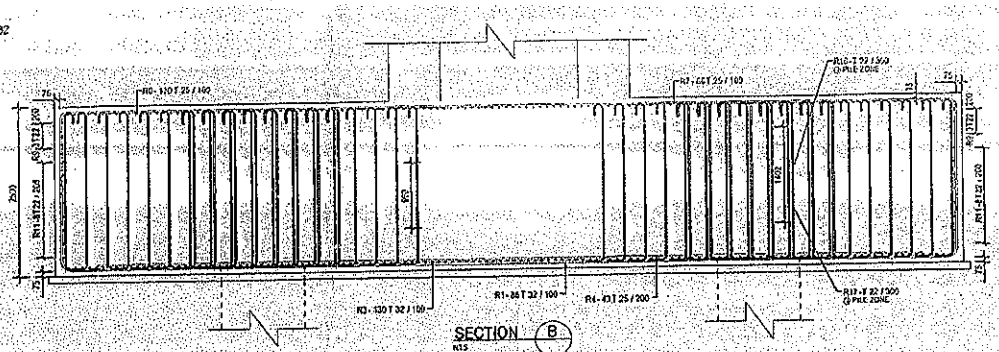


PILE CAP BOTTOM REINFOCEMENT PLAN

PILE CAP TOP REINFOCEMENT PLAN



SECTION A
NTS



SECTION B
NTS

NOTES:

1- ALL DIMENSIONS SHOWN IN THIS DRAWING ARE IN MILLIMETERS, ALL ELEVATIONS & COORDINATES ARE SHOWN IN METERS.

2- FOR PROJECT GENERAL NOTES SEE DRAWING No. HSRE-V001-CC-010-001-N01-E03

3- FOR PIERS CONCRETE DIMENSION & SETTING OUT COORDINATES SEE DRAWING No. HSRE-V001-CC-210-000-PIE-E01

4- REINFORCING STEEL SHALL CONFORM TO EN1992-1-1, USED MATERIAL TYPE B500DWR (Fy=500N/m²)

5- REINFORCED CONCRETE GRADE C40/50 & GRADE C20/25 FOR BLINDING CONCRETE.

6- CONCRETE COVER SHALL BE 75mm ALL AROUND UNO.

7- FOR EARTHING & BONDING DETAILS SEE DWG No. HSRE-V001-CC-100-001-DET-E02

8- ARRANGEMENT OF STEEL BASR SHALL BE STAGGERED.

LEGEND

BOTTOM BARS

TOP BARS

(a) X R (b) - (c) T (d) / (e)

a: QUANTITY OF GROUPS

b: BAR MARK

c: QUANTITY OF BARS

d: BAR SIZE

e: BAR SPACING

NE JV FHECOR Ingenieros Consultores

Arab House of Engineering
شركة بيت الهندسية
Tel: +20276010435 e-mail: info@ahe-consult.com
صادر رقم

NO.	DATE	ENG.	REVISION
0	30-12-2022	MAD	ISSUED FOR CONSTRUCTION AS PER REVIEW NO FIC4 No.1165

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CARULT

وزارة النقل

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALWAHAT)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

23/10/2022

NAME OF CONTRACTOR CONSULTANT:

NE JV FHECOR Ingenieros Consultores

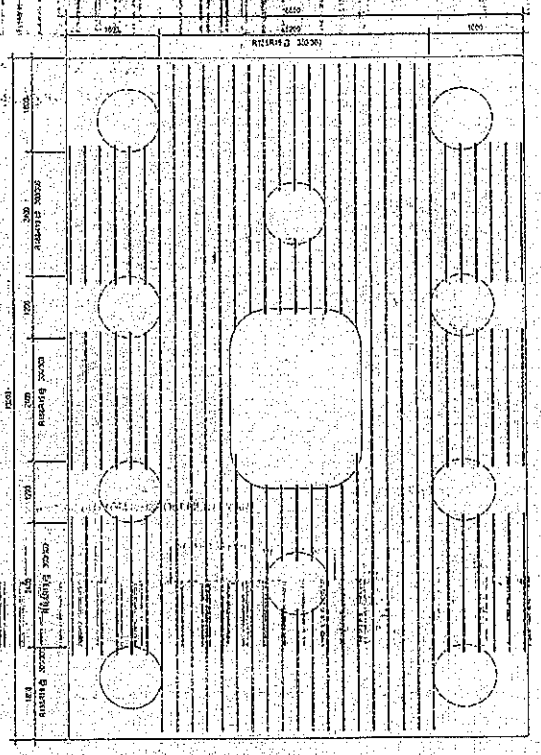
MAIN CONTRACTOR:

الشركة القابضة

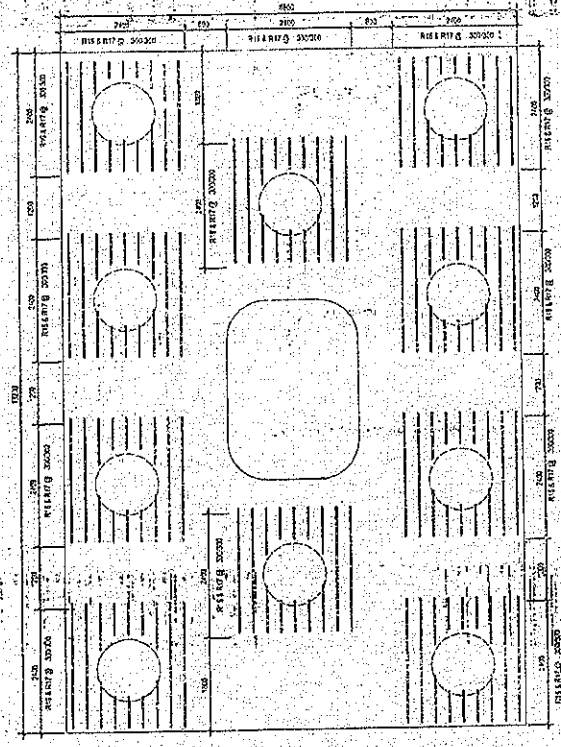
DWG. TITLE:

REGWA ROAD BRIDGE
REINFORCING STEEL
PIER @ AXES P1,P2&P3 PLAN & SECTIONS

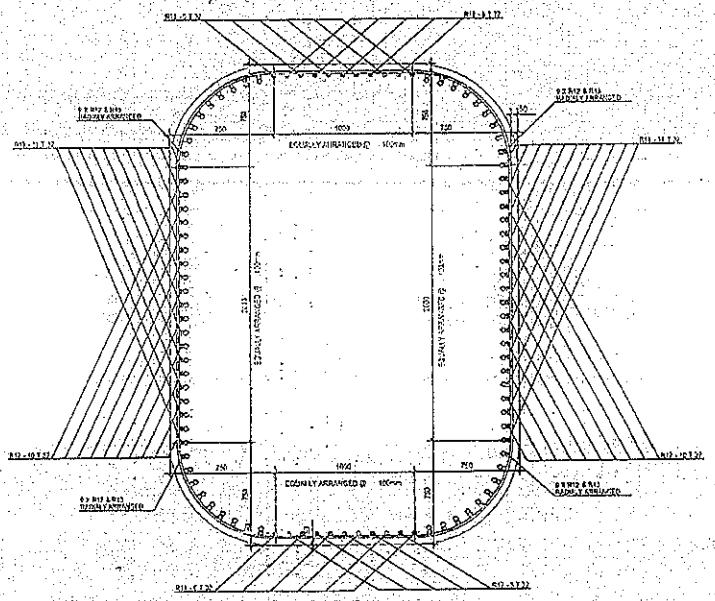
DWG. NO:	DATE:	SCALE:
HSRE-V001-SD-210-002-N10-E03	10-22	AS SHOWN
DRAWING BY: Eng. Eslam Fawzy	DESIGNED BY: Eng. Soliman Hassan	CHECKED BY: Eng. Mamdouh Galal
SUPERVISOR: Dr. Mahmoud Eashour		APPROVED BY: Eng. Javier Tarrio



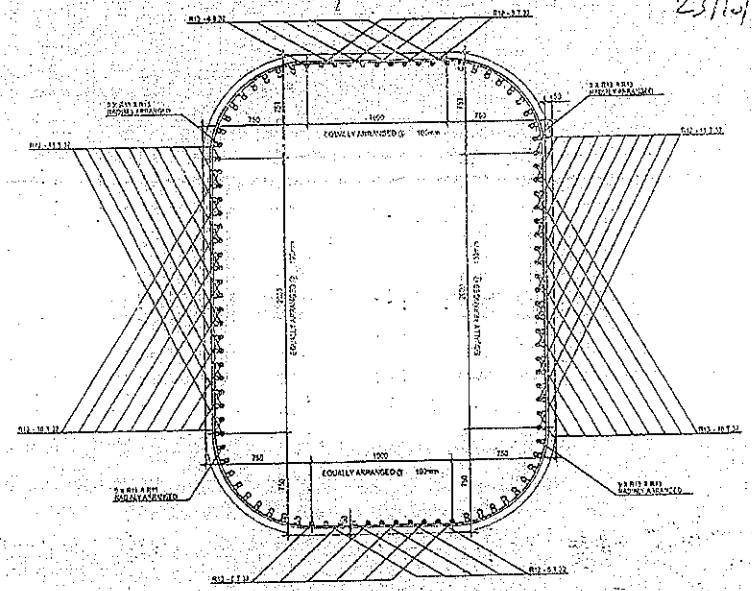
R10&R19 SHEAR LINK BARS ARRANGEMENT PLAN



R16&R17 SHEAR LINK BARS ARRANGEMENT PLAN



OUTER STARTER BARS ARRANGEMENT PLAN



INNER STARTER BARS ARRANGEMENT PLAN

NOTES:

1- ALL DIMENSIONS SHOWN ON THE DRAWING ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2- FOR PROJECT GENERAL NOTES SEE DRAWING No. HSRE-V001-CC-000-C01-DET-001
3- FOR PIERS CONCRETE DETAILS SEE DRAWING No. HSRE-V001-CC-000-C01-DET-002
4- REINFORCING STEEL SHALL CONFORM TO ASTM A615 USED MATERIAL TYPE B500BWR
5- REINFORCED CONCRETE GRADE C40/50 GRADE C30/25 FOR BLINDERO CONCRETE
6- CONCRETE COVER SHALL BE 75mm ALL AROUND
7- FOR EARTHING & BONDING DETAILS SEE DWG No. HSRE-V001-CC-000-C01-DET-002
8- ARRANGEMENT OF STEEL BARS SHALL BE STAGGERED.

LEGEND:

BOTTOM BARS
TOP BARS
(a) X (b)-(c) T (d) @ (e)
a: QUANTITY OF GROUPS
b: BAR MARK
c: QUANTITY OF BARS
d: BAR SIZE
e: BAR SPACING

FHECOR Ingenieros Consultores

Arab Houses of Engineering
Tel: +2027 6101455 e-mail: info@aho-consult.com

23/10/2022

NO.	DATE	ENG.	REVISION
0	10-10-2022		ISSUED FOR CONSTRUCTION

OWNER: NATIONAL ORGANIZATION FOR HIGH SPEED RAILWAYS
ARAB REPUBLIC OF EGYPT
MINISTRY OF TRANSPORT
GARDEN CITY

NAME OF PROJECT: ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL) SECTION THREE (FROM WEST OF SIDI "C" TO ALAMEIN)

NAME OF OTHER CONSULTANT: SYSTRA SHAKER

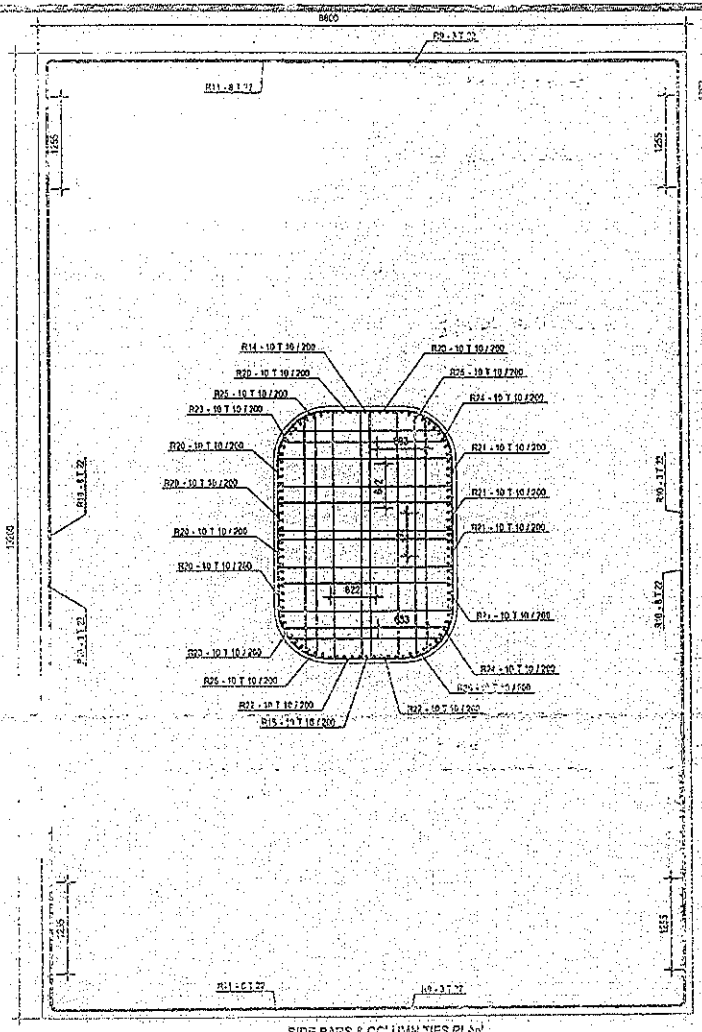
NAME OF CONSTRACTION CONSULTANT: FHECOR Ingenieros Consultores

NAME OF CONTRACTOR:

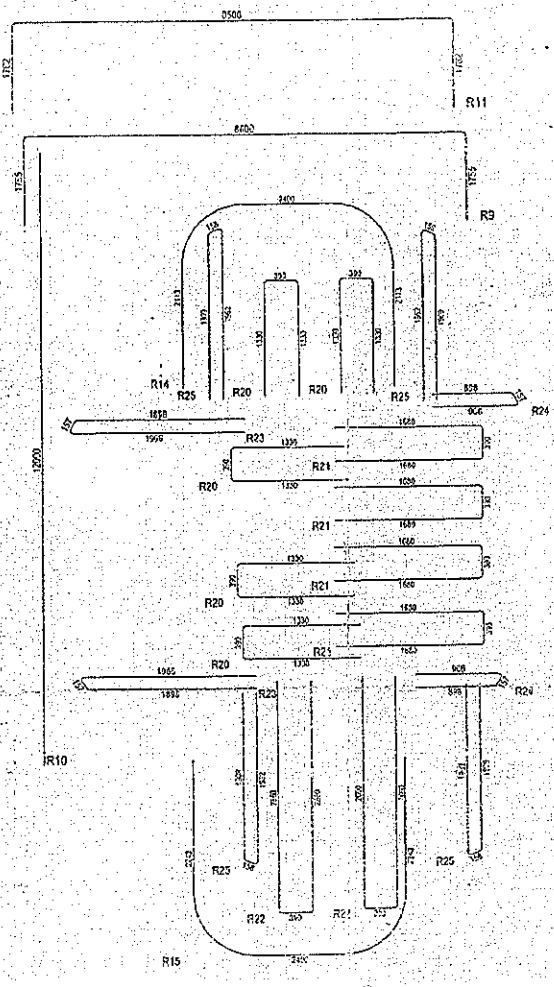
DWG. TITLE: REGWA ROAD BRIDGE
REINFORCING STEEL
PIER @ AXES P1,P2,P3 PLAN & SECTIONS

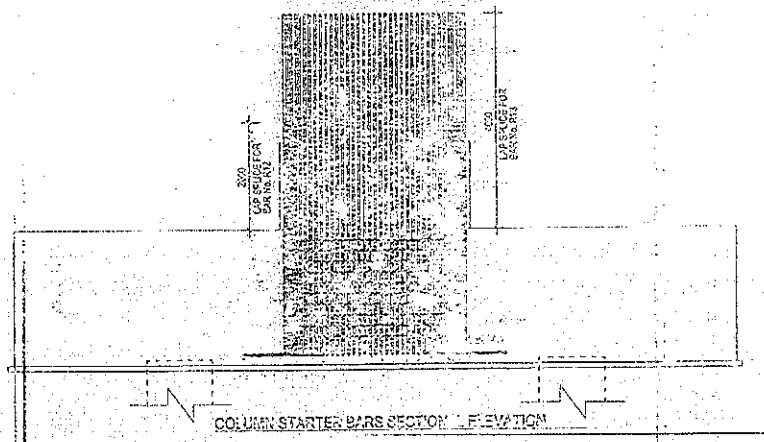
DWG. NO:	DATE:	SCALE:
HSRE-V001-CC-210-003-DET-001	10-22	NOT SHOWN
DRAWING BY:	CHECKED BY:	
Eng. Salma Tawfiq	Eng. Sabah Ibrahim	

No.	REVISION
	Eng. Mahmoud Lashkar



SIDE BARS & COLUMN TIES PLAN





COLUMN STARTER BARS SECTION & ELEVATION

REBAR BENDING SCHEDULE

Bar Mark	Size	QTY.	Length	Weight	Total Weight	Bar Shape
R9	25	40	12000	46.25	18,5[illegible]	12000
R10	22	22	12000	35.61	783.6	12000
R1	32	86	12000	75.77	6510.0	12000
R2	32	88	5500	34.73	3008.5	400
R3	32	130	12000	75.77	9849.8	700 700
R6	25	130	12000	46.25	6012.2	600
R7	25	86	12000	46.25	3977.3	1000
R8	25	56	6000	23.12	1386.7	600
R9	22	6	12000	35.61	214.9	600
R11	22	16	12000	35.61	572.9	800
R12	32	88	6000	31.57	2778.2	400
R13	32	90	7000	44.20	3977.8	600
R14	10	10	5000	9.47	[illegible]	200
R15	10	10	3200	6.03	[illegible]	200
R16	22	560	2000	5.97	3342.1	1000
R17	22	560	2250	6.67	[illegible]	[illegible]
R18	16	1049	2000	3.16	3316.5	1000
R19	16	1049	1720	2.71	2847.0	1000
R20	10	60	3000	1.85	111.1	600
R21	10	40	3760	2.28	91.3	600
R22	10	20	5660	3.49	69.8	600
R23	10	20	4000	2.47	49.4	400
R24	10	20	2000	1.23	24.7	400
R25	10	40	4000	2.47	98.8	400

Total 55[illegible] KG

Arab House of Engineering
Tel: 20274 [illegible]

23/10/2022

Bar Bending Schedule
to be checked

NOTES:

1- ALL DIMENSIONS SHOWN IN THIS DRAWING ARE IN MILLIMETERS, ALL ELEVATIONS & COORDINATES ARE SHOWN IN METERS.
3- FOR PROJECT WIDE NOTES SEE [illegible]
2- FOR [illegible] SEE [illegible]
4- REINFORCING STEEL SHALL CONFORM TO EN1992-1-1, [illegible] USED MATERIAL TYPE B500CWR (f_y=500N/m²).
5- REINFORCED CONCRETE GRADE C40/50 [illegible] GRADE C20/25 FOR BLINDING CONCRETE
6- CONCRETE COVER SHALL BE 75mm ALL AROUND UNO.
7- FOR BARTING & BONDING DETAILS SEE DWG No. HSRE-VD01-CC-400-001-DET-E02
8- ARRANGEMENT OF STEEL BASR SHALL BE STAGGERED.

LEGEND

BOTTOM BARS
TOP BARS

(a) X R (b) - (c) T (d) / (e)

a: QUANTITY OF GROUPS
b: BAR MARK
c: QUANTITY OF BARS
d: BAR SIZE
e: BAR SPACING

JV FHECOR Ingenieros Consultores

Consultant Person

No.	Date	By	Revision
0	[illegible]	[illegible]	[illegible]
NO.	DATE	ENG.	REVISION

NAME OF PROJECT:
NATIONAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF [illegible] TO ALAMEIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
JV FHECOR Ingenieros Consultores

NAME CONTRACTOR:
[illegible]

DWG. TITLE:
REGWA ROAD BRIDGE
REINFORCING STEEL
PIER @ AXES P1,P2&P3 PLAN & SECTIONS

DWG. NO.	DATE	SCALE
HSRE-VD01-CC-210-400-RE-C01	10-22	AS SHOWN
DRAWING BY: Eng. Islam Fawzy	DESIGNED BY: Eng. Soliman Hassan	CHECKED BY: Eng. Mahmoud Saleh
[illegible]	[illegible]	[illegible]
SUPERVISOR: Dr. Mahmoud Lashen		APPROVED BY: Eng. Javier Tenorio

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : قاعدة P3

Dimension : 15*15*15 cm

Date of casting : 10/01/2023

MIX DESIGN STRENGTH : 500 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	10/01/2023	07/02/2023	28	8.568	124600	554	
2	10/01/2023	07/02/2023	28	8.464	133000	591	
3	10/01/2023	07/02/2023	28	8.615	137000	609	
4	10/01/2023	07/02/2023	28	8.607	122300	544	
5	10/01/2023	07/02/2023	28	8.615	134700	599	596
6	10/01/2023	07/02/2023	28	8.623	134200	596	
7	10/01/2023	07/02/2023	28	8.445	141000	627	
8	10/01/2023	07/02/2023	28	8.565	138300	615	
9	10/01/2023	07/02/2023	28	8.604	142300	632	

التوقيع
الأمل للخرسانة الجاهزة
منطقة السادات
إدارة الجودة

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : قاعدة P3

Dimension : 15*15*15 cm

Date of casting : 10/01/2023

MIX DESIGN STRENGTH : 500 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	10/01/2023	17/01/2023	7	8.273	96030	427	430
2	10/01/2023	17/01/2023	7	8.512	98360	437	
3	10/01/2023	17/01/2023	7	8.498	95110	423	
4	10/01/2023	17/01/2023	7	8.504	88110	392	
5	10/01/2023	17/01/2023	7	8.597	94680	421	
6	10/01/2023	17/01/2023	7	8.527	108600	483	
7	10/01/2023	17/01/2023	7	8.443	94170	419	
8	10/01/2023	17/01/2023	7	8.388	94970	422	
9	10/01/2023	17/01/2023	7	8.519	100900	448	

التوقيع
الأمل للخرسانة الجاهزة
مدينة السادات
المنطقة الصناعية

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01003458873 - 01006880635 - 01004976497
E-mail: info@alamalready

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - التجمع قطعة ٨٢ - ٨٣
ت : ٢٩٨٤١١٣٦ / ف : ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٠٣٤٥٨٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

UNITED GROUP

Data Records

Date:	11/1/2023
Project Name:	مشروع القطار الكهربائي السريع (كوبري مطار رشوا)
Customer:	شركة النقل العامة للطرق والكباري
Location:	كوبري رشوا (قاعدة B)
L No.:	

	Temp °C	TC#1	TC#2	TC#3	TC#4	TC#5	TC#6	TC#7	TC#8	TC#9
2:00 AM	15.5	42	46.9	20.5	41.7	41.3	24.6	29.9	48.8	23.8

	Temp °C	TC#1	TC#2	TC#3	TC#4	TC#5	TC#6	TC#7	TC#8	TC#9
8:00 AM	22.8	31	57.5	32	49.1	53.8	30.5	33	58.2	37.3

12/1/2023

	Temp °C	TC#1	TC#2	TC#3	TC#4	TC#5	TC#6	TC#7	TC#8	TC#9
2:00 PM	17.9	53.6	73.2	54.5	59.2	73	50	58.8	73.6	53.8

	Temp °C	TC#1	TC#2	TC#3	TC#4	TC#5	TC#6	TC#7	TC#8	TC#9
8:00 PM	19.4	53	71.2	52.7	57.9	73.8	44	61.2	73.4	55.4

Customer Representative

روماعيل رمي

Headquarter: 9 Ext. 3 of Ramsis St., Nasr City, Cairo, Egypt.
Tel: +20223892314, +20223691258 Fax: +20223892436
Mob: +201116000761

Saudi Office: Makkah- Al Aziziah,
W.T.C M 9th Floor, Office No. 901/1
Mobil: +966540882735

ISO:9001:2015
ISO:14001:2015
ISO:45001:2018
E-Mail : info@unitedgroupco.com
Website: www.unitedgroupco.com

Remarks

TCH6	TCH6	TCH7	TCH8	TCH9	TCH4	TCH5	TCH6
1.8	35.7	42.9	41.1	73.2	41.5	61.8	73.3	43.9

TCH8	TCH9	TCH2	TCH3	TCH4	TCH5	TCH6
12.9	12.1	34.1	33.5	67.5	39.1	58.9	68.4	36.7

14/11/2-23

TCH4	TCH5	TCH6	TCH7	TCH8	TCH9	TCH4	TCH5	TCH6
60.1	70.1	41.7	34.6	67.5	39.5	60.1	70.1	41.7

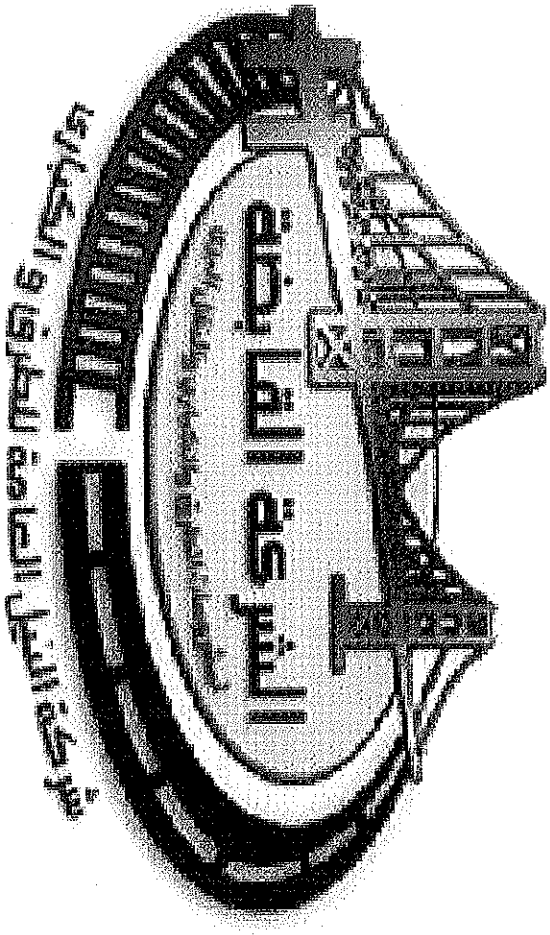
TCH6	TCH6	TCH7	TCH8	TCH9	TCH4	TCH5 Temp	TCH6
60.5	62.2	38.3	28.1	65.3	37.5	60.7	68.2	39.3

Customer Representative

UC Representative

REQ

P3 FOOTING REGWA



REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date						Time	
	Ahmed Adel			22 / 2 / 2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km pile P1 OF FOOTING P1		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:370 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: pm		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT 7-COMPRESSIVE STRENGHT OF CONCRETE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer Representative	Mohammed Gardoh			A

Bored Piles Construction
Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report NO.	
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	22 / 2 / 2023
Pile No.	p1	Structure	bridge	Pile Cutoff Level	–
pier	p1	Ground Level	67.03	Pile Toe Level	27.53
Theoretical Pile Length from caisson level	40.141	Water Table Level	N/A	Permanent Casting Level	N/A
Req. Drilling Length From Ground Level	39.5	Theoretical concrete Q	46.33 m3	Temporary Casting Level	67.671
Act. Drilling Length	41	Act. concrete Q	51 m3	Steel Top Level	66.33
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.341

Pile Survey

Coordinates	EAST	North
Theoretical	585465.602	830452.943
Actual	585465.621	830452.926
Δ	-0.019	0.017

Bentonite Slurry Test

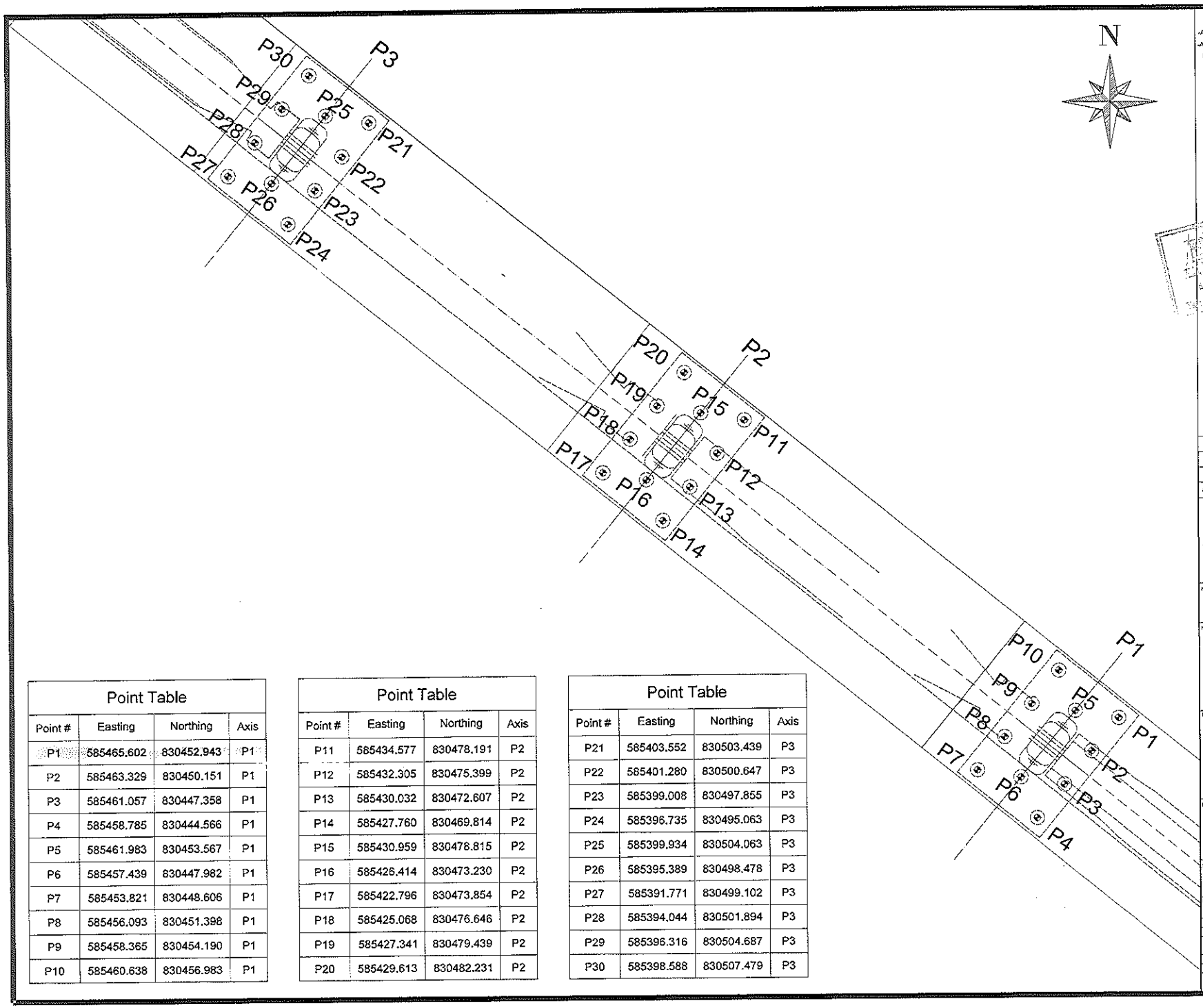
Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm3)	Less Than 1.1	1.03	Less Than 1.15	1.07
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	39
Sand Content %	Less than 2%	N/A	Less than 2%	1.6 %

Geotechnical Log	
0	CAISSON L.
0_3	SAND
3_4	SILTY SAND
4_5	CLAY
5_8	Sand
8_9	SILTY SAND
9_10	Sand
10_13	CLAY
13_29	Sand
29_31.5	CLAY
31.5_40	Sand

Time Survey

Activity	Date	From	To	Activity	Date	From	To
Drilling	22/ 2 /2023			Cleaning	_	_	_
Install Cages	22/ 2 /2023			pouring	22/ 2 /2023		

	Mixer 1	Mixer 2	Mixer 3	Mixer 4	Mixer 5
Slump	21	20.5	21.5	22	22.5
Temperature	29	28	31	29.5	31.8



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.:	DATE:	SCALE:
PCO-00	08/2022	1 : 150
DRAWING BY:	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mamdouh Salah	

SUPERVISOR:	APPROVED BY
DR. Mahmoud Lashwari	Eng. Javier Torres

Point Table

Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table

Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
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P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table

Point #	Easting	Northing	Axis
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P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
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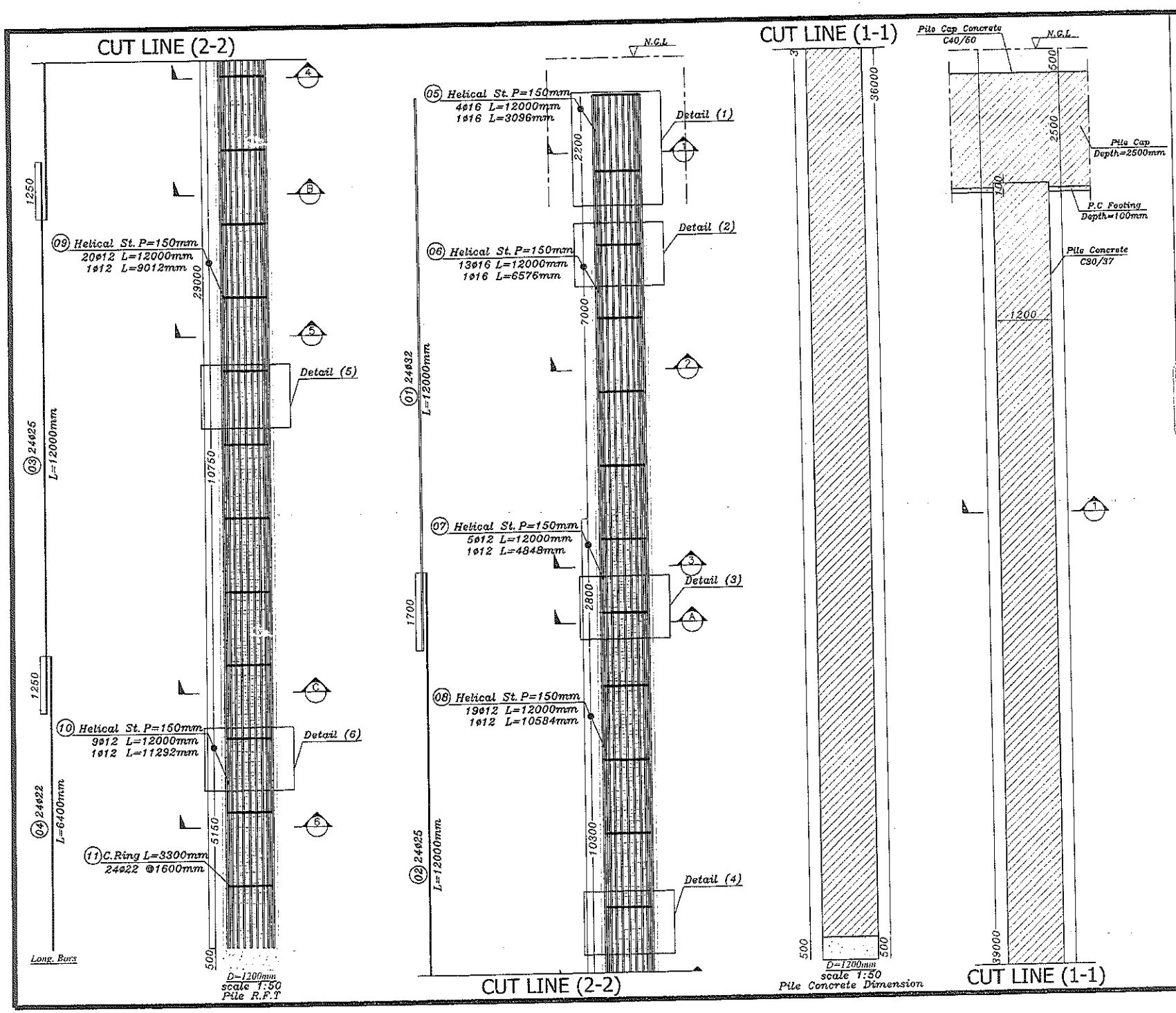
P30	585398.588	830507.479	P3



GENERAL NOTES:

- All dimensions are in millimeters.
- Do not measure from drawings. All dimensions should be taken as computed
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup (B) and (C) is 640mm
- Lap Splice Between Helical Stirrup (B) and (D) is 640 mm
- Lap Splice Between Hoop Stirrup (B) and (C) is 48mm

All Levels should be revised before construction in site

ABBREVIATION :

-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION

HSRE-VD01-CC-210-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

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Tel: +20(27)610-436 e-mail: info@abe-consult.com
تصاريح رقمية

NO.	DATE	ENG.	REVISION
0	31-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1049

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

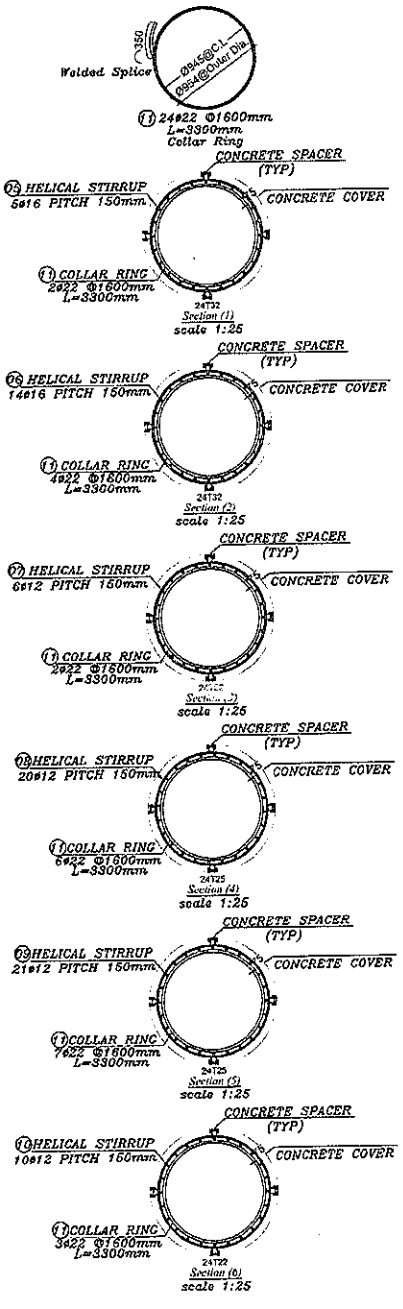
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

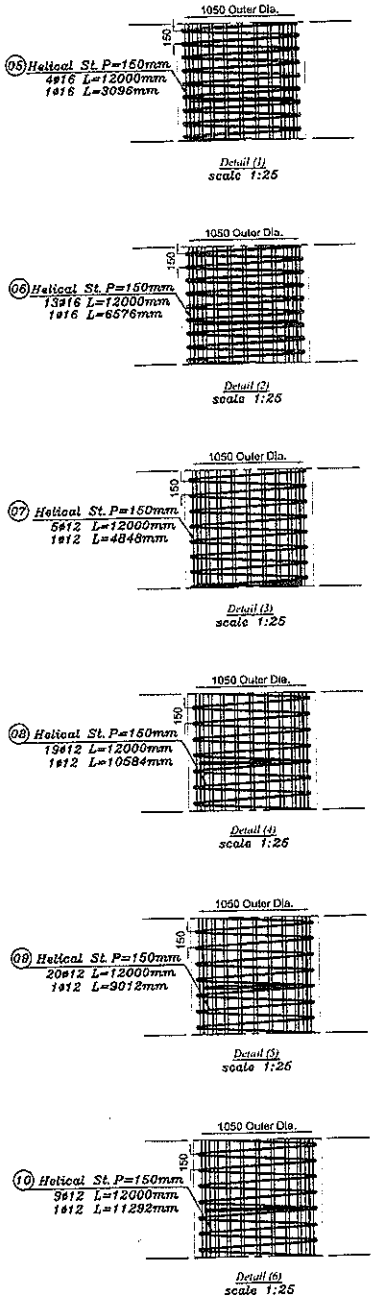
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

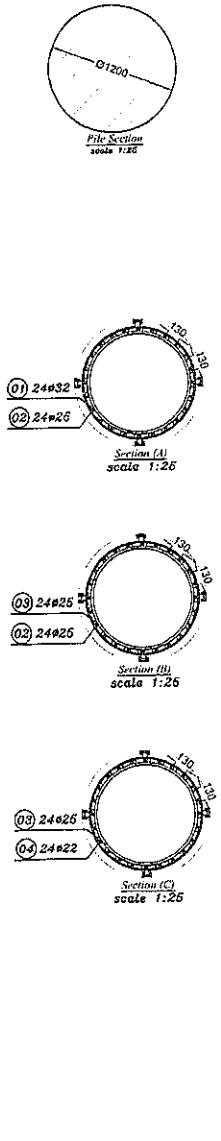
MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-CC-110-001-PIE-E00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Mostafa Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lotfaiem		Eng. Jaber Tonico







GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All dimension should be read or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C30/37
- Clear cover: 75mm
- Lap Splice between Helical Stirrup (05) and (06) is 640mm
- Lap Splice between Helical Stirrup (06) and (07) is 640mm
- Lap Splice between Helical Stirrup (09) and (10) is 960mm

All Levels should be revised before construction in site!

ABBREVIATION :

-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS #1, P2, P3, REINFORCEMENT (1)

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Tel. +20276 10455 email: info@arabconsult.com
صادر رقم

NO.	DATE	ENG.	REVISION
0	24-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1060

OWNER:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
وزارة النقل
قطاع الطرق والكباري والنقل البري
وزارة النقل

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :
الشركة الفاتحة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SD-110-002-PIE-E02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Ramzy	ENG. Abdullah Mohsen	ENG. Mamdouh Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashwa	Eng. Jaafar Tawfik	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	ϕ12	ϕ16	ϕ22	ϕ25	ϕ32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

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C-C1 3 3
١٥

GENERAL NOTES:
- All dimensions are in millimetres.
- Do not measure from drawings. All dimension should be read or computed.
- Pile Concrete C28/37 - Pile Cap Concrete C40/50
- Concrete Cover 75mm
- Lap Splice Between Helical Stirrup (01) and (03) = 610 mm
- Lap Splice Between Helical Stirrup (03) and (02) = 640mm
- Lap Splice Between Helical Stirrup (01) and (02) = 480mm

All Levels should be revised before construction in site

ABBREVIATION :
- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :
HSRE-V001-CC-010-001-N01-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-010-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	31-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVISION NOTICE No. 1069

OWNER: المالك:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR :
التوحة التابعة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-110-003-PIE-E00	09-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENC. Abdellah Mahsen	ENC. Mamdouh Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashour		Eng. Javier Tarlua

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile1- Pier1
Dimension	:	15*15*15 cm
Date of casting	:	22/02/2023
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	22/02/2023	01/03/2023	7	8.413	90810	404	419
2	22/02/2023	01/03/2023	7	8.508	98780	439	
3	22/02/2023	01/03/2023	7	8.814	93500	416	

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧

موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٢٦٣٠١٤٥ / ٠٤٨ - ف: ٢٦٣٠١٤٠ / ٠٤٨
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717

Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : Pile1- Pier1

Dimension : 15*15*15 cm

Date of casting : 22/02/2023

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	22/02/2023	22/03/2023	28	8.456	120600	536	531
2	22/02/2023	22/03/2023	28	8.478	119300	530	
3	22/02/2023	22/03/2023	28	8.623	118300	526	

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
	Ahmed Adel			1/ 3 / 2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km pile P2 OF FOOTING P1		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:370 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: pm		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT 7-COMPRESSIVE STRENGHT OF CONCRETE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer Representative	Mohammed Gad ouh			A

Bored Piles Construction
Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report NO.	
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	1/ 3 / 2023
Pile No.	P2	Structure	bridge	Pile Cutoff Level	–
pier	P1	Ground Level	67.03	Pile Toe Level	27.53
Theoretical Pile Length from caisson level	40.061	Water Table Level	N/A	Permanent Casting Level	N/A
Req. Drilling Length From Ground Level	39.5	Theoretical concrete Q	46.33 m3	Temporary Casting Level	67.591
Act. Drilling Length	41	Act. concrete Q	51 m3	Steel Top Level	66.33
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.261

Pile Survey

Coordinates	EAST	North
Theoretical	585463.329	830450.151
Actual	585463.351	830450.179
Δ	-0.022	-0.028

Bentonite Slurry Test

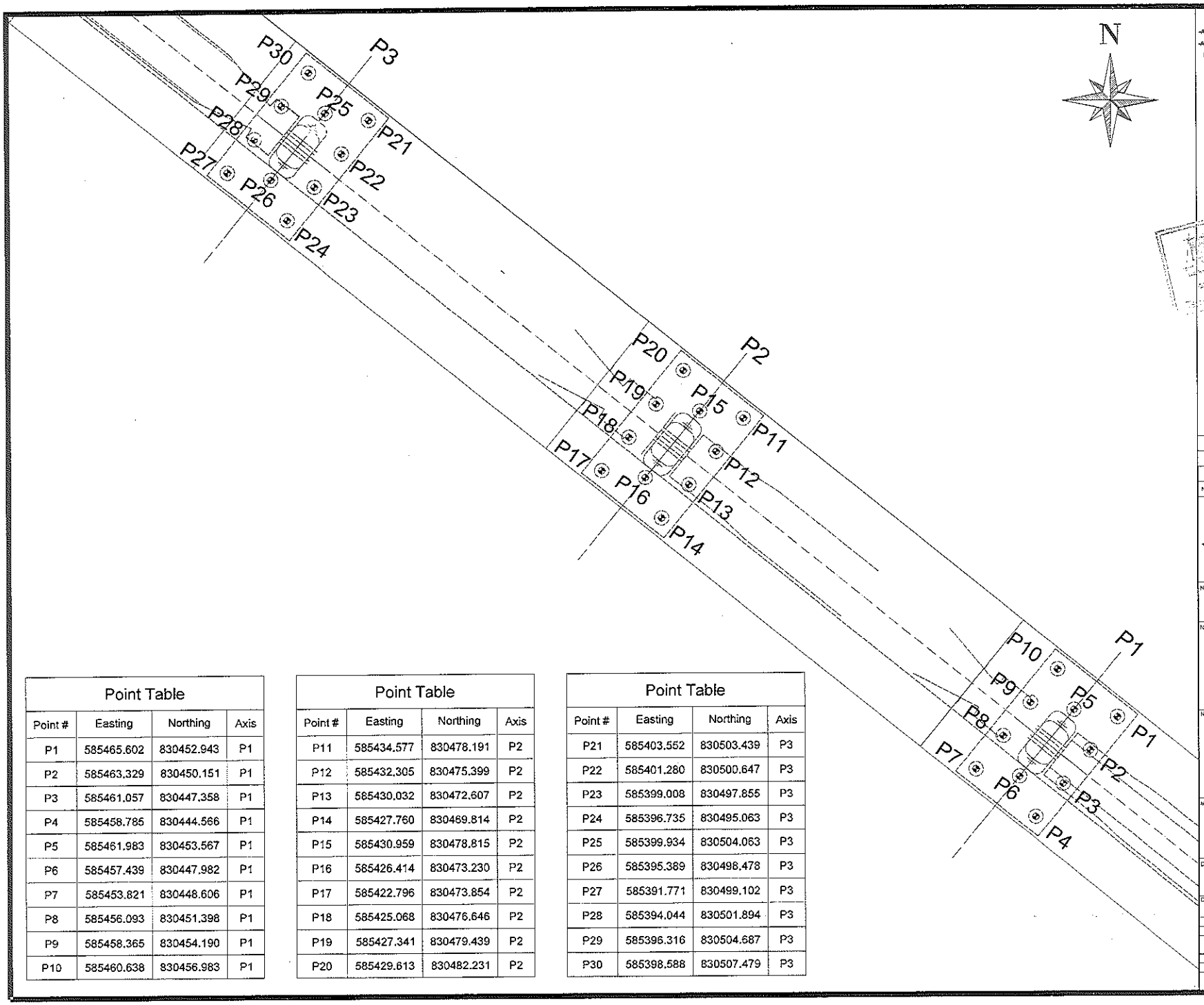
Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm3)	Less Than 1.1	1.03	Less Than 1.15	1.06
Viscosity(Sec.)	30:70 Sec.	32	≤90 Sec.	37
Sand Content %	Less than 2%	N/A	Less than 2%	1.4 %

Geotechnical Log	
0	CAISSON L.
0_3	SAND
3_4	SILTY SAND
4_5	CLAY
5_8	Sand
8_9	SILTY SAND
9_10	Sand
10_13	CLAY
13_29	Sand
29_31.5	CLAY
31.5_40	Sand

Time Survey

Activity	Date	From	To	Activity	Date	From	To
Drilling	1/3/2023			Cleaning	_	_	_
Install Cages	1/3/2023			pouring	1/3/2023		

	Mixer 1	Mixer 2	Mixer 3	Mixer 4	Mixer 5
Slump	22	21.5	23	22.8	21.9
Temperature	29	30.1	32	31	29



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

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P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NO.	DATE	ENG.	REVISION
00	08/2022	KLA	ISSUED FOR CONSTRUCTION

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

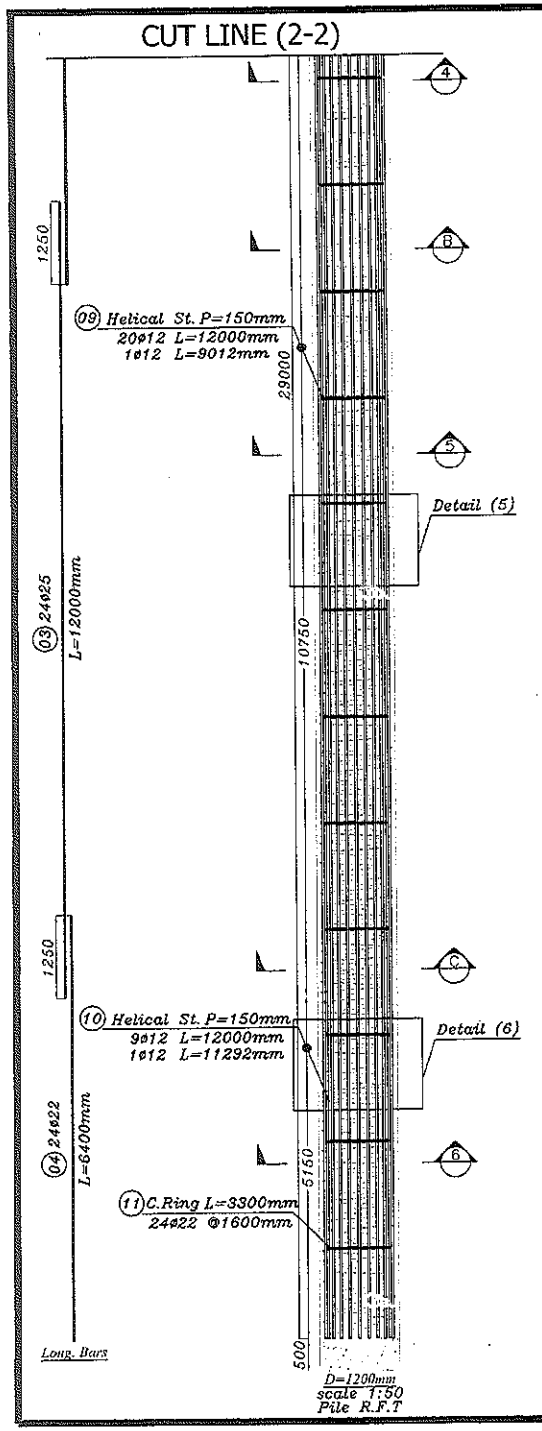
FHECOR Ingenieros Consultores

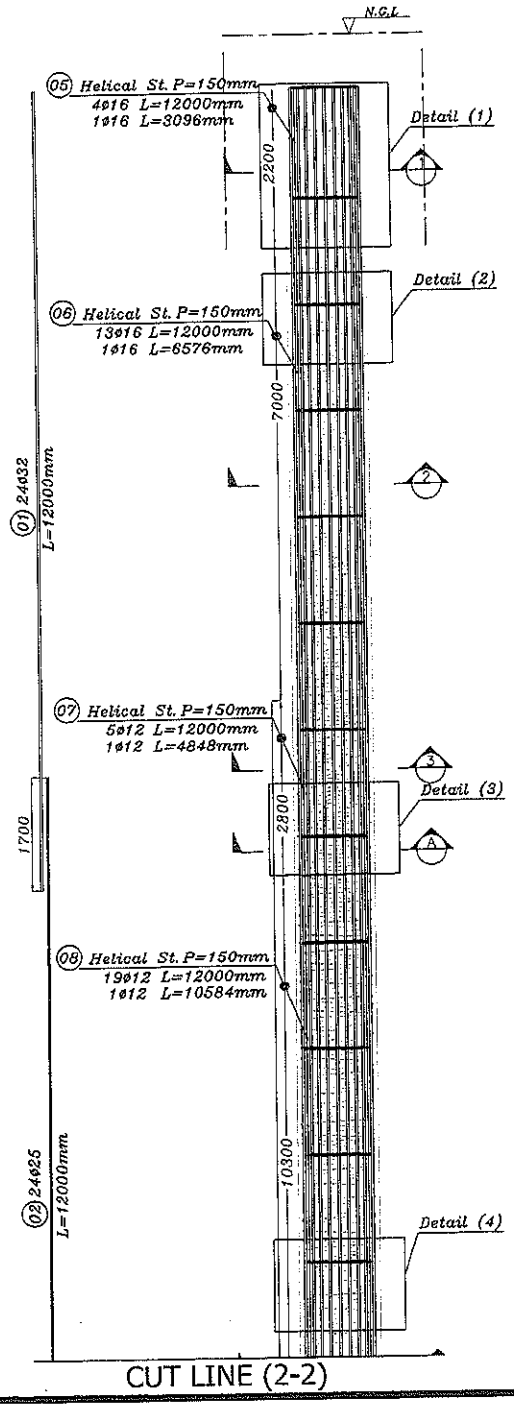
MAIN CONTRACTOR

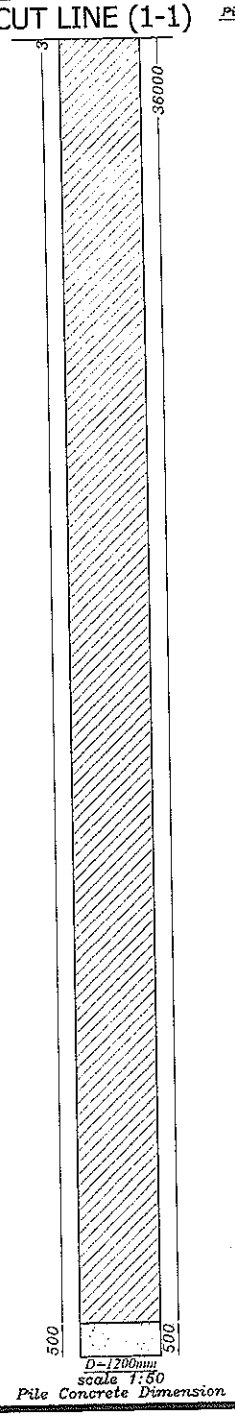
DWG. TITLE
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

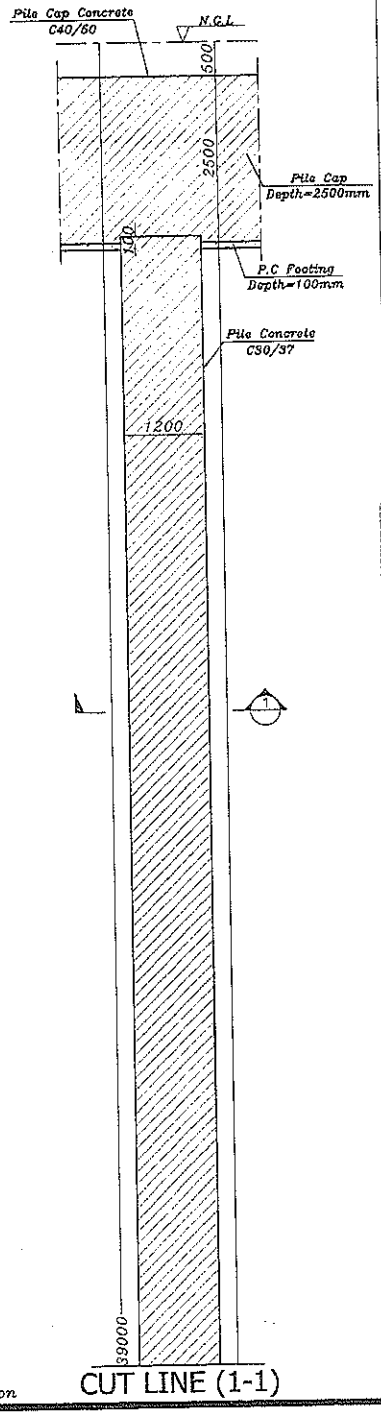
DWG.NO.:	DATE	SCALE:
PCO-00	08/2022	1 : 150
DRAWING BY	DESIGNED BY	CHECKED BY.
Eng.Khaled Alaa	Eng.Mamdouh Saleh	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashwa	Eng. Jamer Torrico









GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All information should be read in conjunction
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover: 70mm
- Lap Splice Between Helical Stirrup (14) and (16) is 640 mm
- Lap Splice Between Helical Stirrup (14) and (16) is 640 mm
- Lap Splice Between Helical Stirrup (15) and (16) is 480 mm

All Levels should be revised before construction in site

ABBREVIATION :

-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
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Tel: +20275174435
صادر رقم

NO.	DATE	ENG.	REVISION
G	[illegible]	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1600

OWNER:

المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED-RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

JV FHECOR Ingenieros Consultores

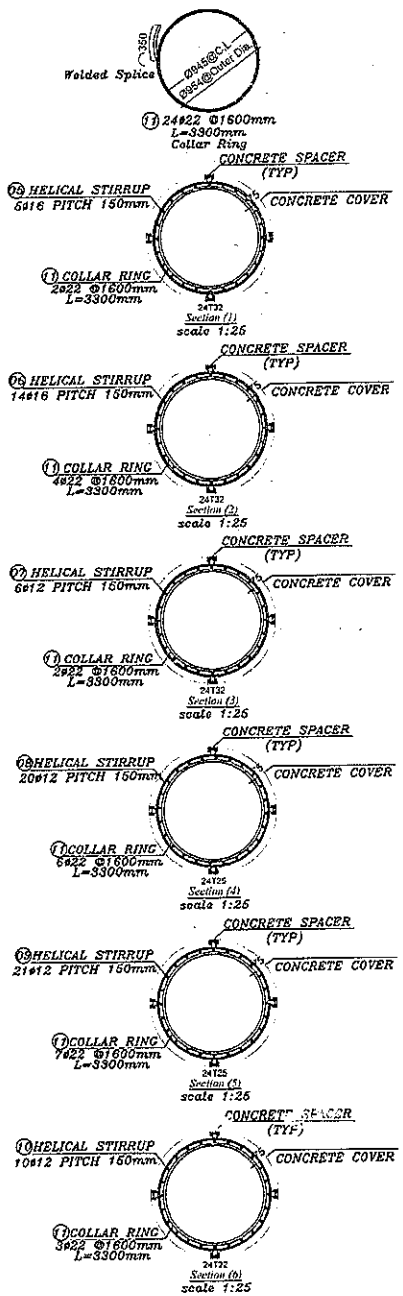
MAIN CONTRACTOR:

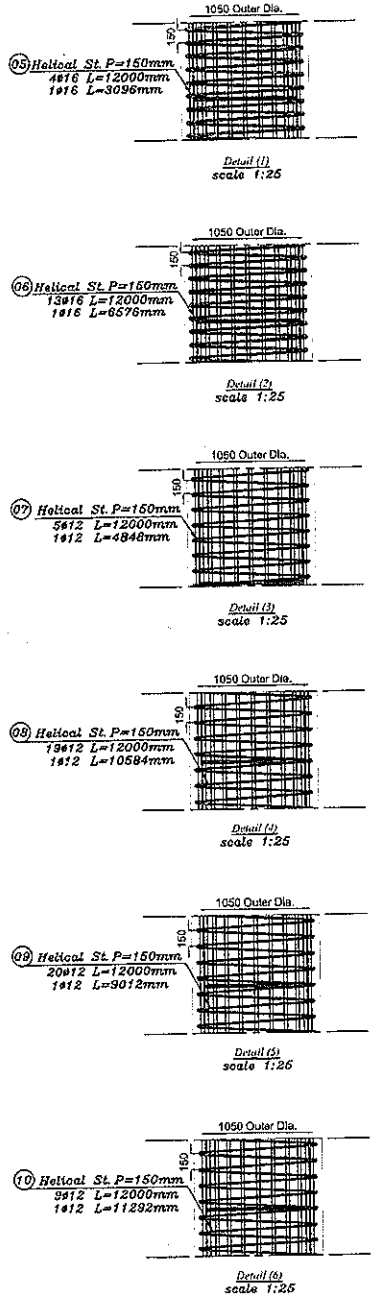
الشركة القابضة

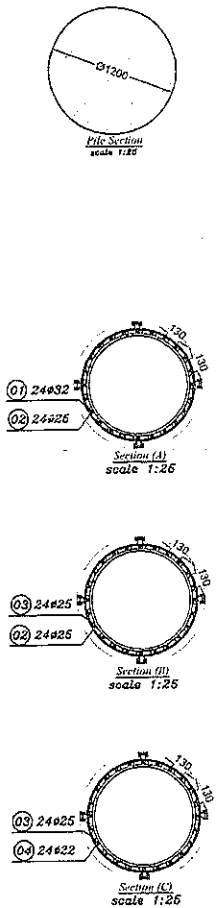
DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SC-110-001-PIE-E00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eulina Fawzy	ENG. Abdallah Mahmoud	ENG. Mamdouh Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashiwa		Eng. Junior Tadros







GENERAL NOTES:

- All dimensions are millimeters
- Elevations are from [illegible]. All dimensions should be revised at site [illegible]
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup (05) and (06) is 640mm
- Lap Splice Between Helical Stirrup (06) and (07) is 640mm
- Lap Splice Between Helical Stirrup (09) and (10) is 640mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HGRE-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HGRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

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Tel: +20/27610435 email: info@ahecorsourcing.com
صادر رقم

NO.	DATE	ENG.	REVISION
0	[illegible]	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1009

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CARBILT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG NO.:	DATE:	SCALE:
HGRE-VD01-SD-110-GM-PIE-E06	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Salma Fawzy	ENG. Abdullah Mahsen	ENG. Mamdouh Salah
SUPERVISION:		APPROVED BY:
Dr. Mahmoud Lashiwa		Eng. Javier Tuelco

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

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Tel.: +2027610725
صادر رقم
٢٠٢١٤٣٢
١٥

GENERAL NOTES:
- All dimensions are in millimeters.
- Do not measure from drawings. All dimensions should be read or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75 mm
- Lap Splice Between Helical Stirrups Ø32 = 1.640 mm
- Lap Splice Between Helical Stirrups Ø25 = 1.640 mm
- Lap Splice Between Helical Stirrups Ø22 = 1.450 mm

All Levels should be revised before construction in site

ABBREVIATION :
- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	31-01-2022	MAB	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1009

OWNER:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALMAMIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR:
الشركة القابضة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG. NO.:	DATE:	SCALE:
HSRE-VD01-SD-110-003-PIE-C00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mahran	ENG. Mamdouh Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashin		Eng. Javier Tunkia

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile 2- Pier 1
Dimension	:	15*15*15 cm
Date of casting	:	01/03/2023
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	01/03/2023	08/03/2023	7	8.468	103500	460	479
2	01/03/2023	08/03/2023	7	8.581	112100	498	
3	01/03/2023	08/03/2023	7	8.601	107600	478	

التوقيع
Al-Awal
الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

ناصر كامل

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Kalamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880636 - 01004976497

الإدارة : مول إجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمى - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٢٦٣٠١٤٥ / ٠٤٨ - ف: ٢٦٣٠١٤٠ / ٠٤٨
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٦ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alawalready mix.com
website: www.alawalready mix.com

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile 2- Pier 1
Dimension	:	15*15*15 cm
Date of casting	:	01/03/2023
MIX DESIGN STRENGTH	:	370 kg/cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	01/03/2023	29/03/2023	28	8.417	130200	579	565
2	01/03/2023	29/03/2023	28	8.523	129500	576	
3	01/03/2023	29/03/2023	28	8.546	121800	541	

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713568
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01023459873 - 01006830635 - 01004970497
E-mail: info@alamalready.com
website: www.alamalready.com

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢٢٤٧١٣٥٦٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨/٢٦٣٠١٤٥ - ف: ٠٤٨/٢٦٣٠١٤٠
٠١٠٢٣٤٥٩٨٧٣ - ٠١٠٠٦٨٣٠٦٣٥ - ٠١٠٠٤٩٧٠٤٩٧

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date						Time	
	Ahmed Adel			25 / 2 / 2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km pile P3 OF FOOTING P1		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:370 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: pm		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT 7-COMPRESSIVE STRENGHT OF CONCRETE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer Representative	Mohammed Gardouh			A

Bored Piles Construction
Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report NO.	
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	25 / 2 / 2023
Pile No.	p3	Structure	bridge	Pile Cutoff Level	–
pier	p1	Ground Level	67.03	Pile Toe Level	27.53
Theoretical Pile Length from caisson level	40.081	Water Table Level	N/A	Permanent Casting Level	N/A
Req. Drilling Length From Ground Level	39.5	Theoretical concrete Q	46.33 m3	Temporary Casting Level	67.611
Act. Drilling Length	41	Act. concrete Q	51 m3	Steel Top Level	66.33
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.281

Pile Survey

Coordinates	EAST	North
Theoretical	585461.057	830447.358
Actual	585461.09	830447.388
Δ	-0.033	-0.03

Bentonite Slurry Test

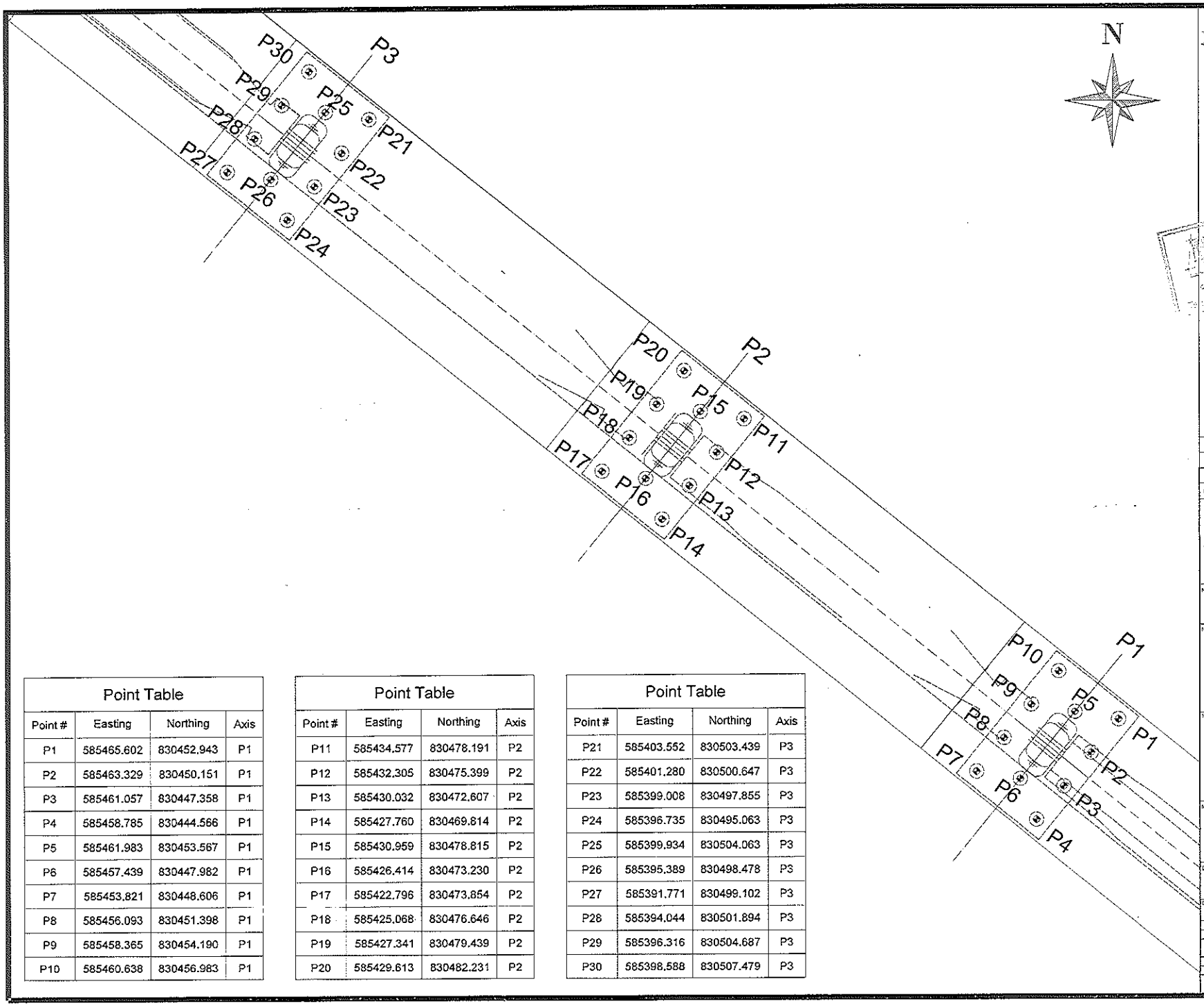
Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm3)	Less Than 1.1	1.03	Less Than 1.15	1.07
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	39
Sand Content %	Less than 2%	N/A	Less than 2%	1.6 %

Geotechnical Log	
0	CAISSON L.
0_3	SAND
3_4	SILTY SAND
4_5	CLAY
5_8	Sand
8_9	SILTY SAND
9_10	Sand
10_13	CLAY
13_29	Sand
29_31.5	CLAY
31.5_40	Sand

Time Survey

Activity	Date	From	To	Activity	Date	From	To
Drilling	25/ 2 /2023			Cleaning	–	–	–
Install Cages	25/ 2 /2023			pouring	25/ 2 /2023		

	Mixer 1	Mixer 2	Mixer 3	Mixer 4	Mixer 5
Slump	22	21.3	23	22.6	21.5
Temperature	30	31.5	30.5	29.9	32



Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARDLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT.
SYSTRA SHAKER

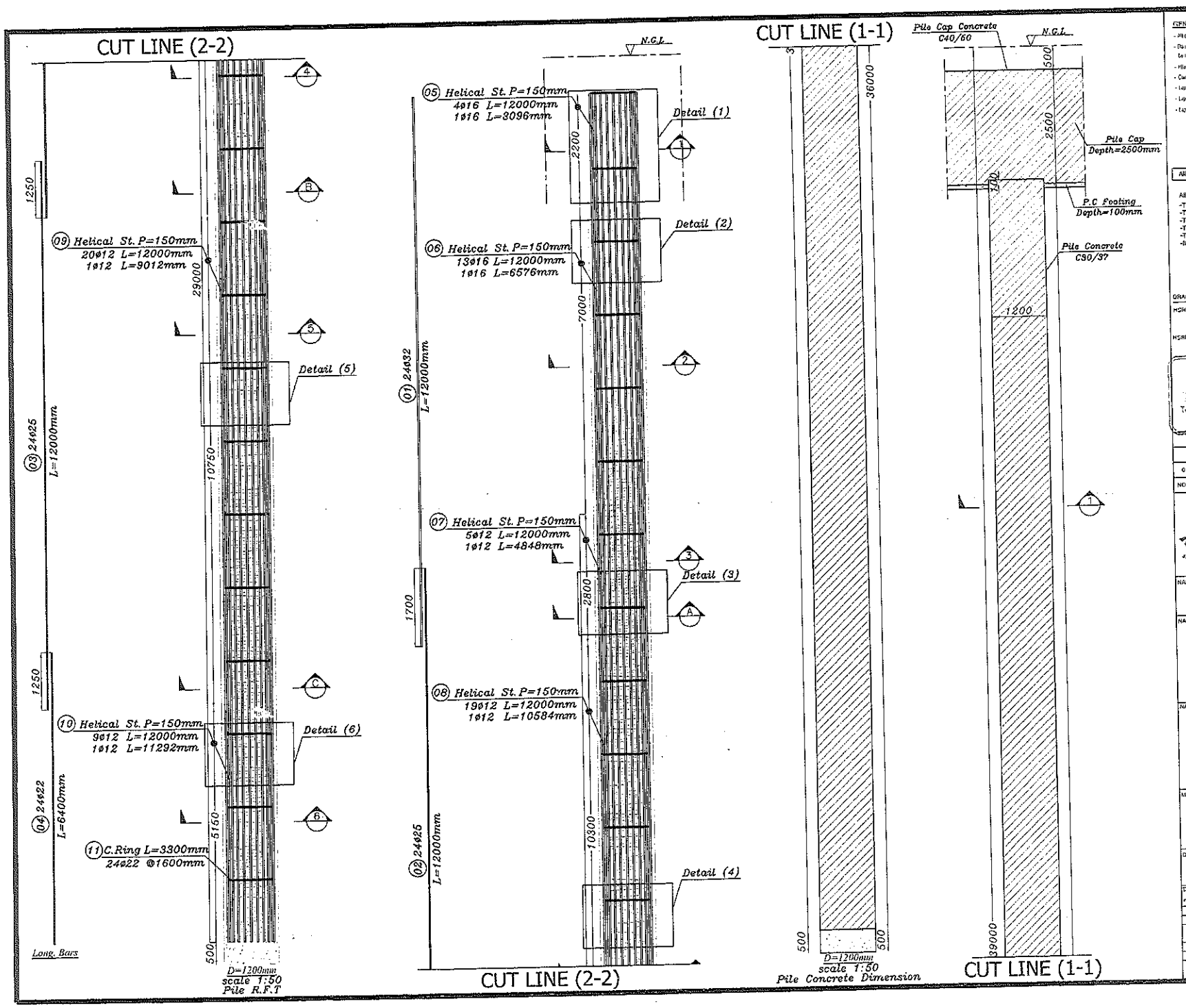
NAME OF CONTRACTOR CONSULTANT
JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
PCO-00	08/2022	1 : 150
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mamdooh Saleh	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashwah	Eng. Javier Tuesco



GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All structural should be used at construction
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup (15) and (16) is 64ø16
- Lap Splice Between Helical Stirrup (17) and (18) is 64ø12
- Lap Splice Between Helical Stirrup (19) and (20) is 48ø12

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-610-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT I, DEFINITION
HSRE-V001-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

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email: info@ahe-consult.com

NO.	DATE	ENG.	REVISION
0	11-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1000

OWNER:

المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

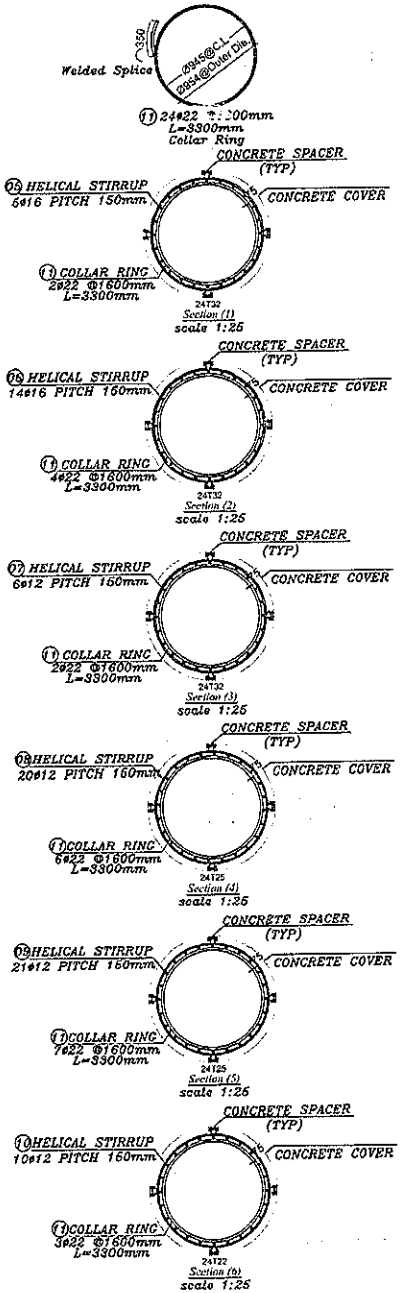
SYSTRA SHAKER

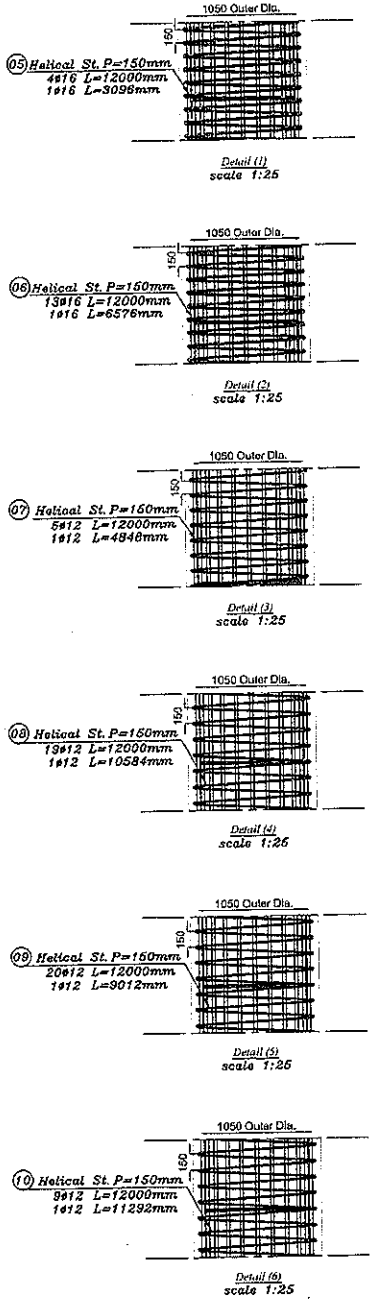
NAME OF CONTRACTOR CONSULTANT:

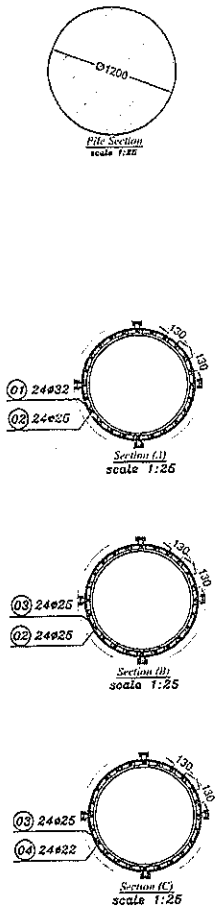
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:		
REGWA ROAD BRIDGE PILES AT AXES (P1,P2&P3) PILE REINFORCEMENT BARS SHOP DRAWING		
DWG.NO.: HSRE-V001-SD-110-001-PIE-E00	DATE: 08-2022	SCALE: AS SHOWN
DRAWING BY: ENG. Eslam Fawzy	CHECKED BY: ENG. Abdallah Kamran	REVISED BY: ENG. Mamdouh Salah
SUPERVISOR: DR. Mahmoud Lamouna		APPROVED BY: Eng. Jaafar Tadros







GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All dimensions should be taken as computed
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover: 75mm
- Lap Splice Between Helical Stirrup (05) and (06) is 60mm
- Lap Splice Between Helical Stirrup (06) and (07) is 60mm
- Lap Splice Between Helical Stirrup (09) and (10) is 48mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRB-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRB-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

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Tel.: +20276104155 email: info@ahconsult.com
صادر رقم

NO.	DATE	ENG.	REVISION
0	24-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1009

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRB-VD01-SD-110-002-PIE-S03	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Salem Farazy	ENG. Abdallah Hassan	ENG. Mandwah Sulein
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashen		Eng. Justin Tonkin

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

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C-C1 3 12
١٥

GENERAL NOTES:
- All dimensions are in mm.
- Do not derive dimensions by scaling. All dimensions should be read or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete Cover 75mm
- Lap Splice Between Vertical Stirrup (A) and (B) = 640 mm
- Lap Splice Between Vertical Stirrup (A) and (B) = 640mm
- Lap Splice Between Vertical Stirrup (B) and (C) = 480mm

All Levels should be revised before construction in site

ABBREVIATION :
- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Footing
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HORE-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1 DEFINITION
HSHE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG	REVISION
0	31/07/2022	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
وزارة النقل

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :
الشركة الفاتحة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG NO.:	DATE:	SCALE:
HSHE-V001-SD-110-003-PIE-E00	08.2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eldyn Fawzy	ENG. Abdallah Mahsoun	ENG. Mamdouh Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashin		Eng. Jivar Turko

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile3- Pier 1
Dimension	:	15*15*15 cm
Date of casting	:	25/02/2023
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	25/02/2023	04/03/2023	7	8.784	112000	498	478
2	25/02/2023	04/03/2023	7	8.639	99790	444	
3	25/02/2023	04/03/2023	7	8.332	110900	493	

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717

Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : مول ايجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٢٤٧١٣٥٥٨ ٠٢
موبايل : ٠١١٠١١١٦٧١٧

موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت : ٢٩٨٤١١٣٦ / ف : ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalready.com
Website: www.alamalready.com

Al Amal Ready mix

الأمل
الخرسانة الجاهزة ش.م.م
رأس المال المرخص به ١٠٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile 3 - Pier 1
Dimension	:	15*15*15 cm
Date of casting	:	25/02/2023
MIX DESIGN STRENGTH	:	370 kg/cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	25/02/2023	26/03/2023	28	8.65	119600	532	548
2	25/02/2023	26/03/2023	28	8.705	120200	534	
3	25/02/2023	26/03/2023	28	8.743	130100	578	

التوقيع
الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028453673 - 01006800635 - 01004976497
E-mail: info@alamalready.com

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٣٦٧٣ - ٠١٠٠٦٨٠٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧
E-mail: info@alamalready.com

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date						Time	
	Ahmed Adel			4/ 3 / 2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km pile P4 OF FOOTING P1		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:370 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: pm		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT 7-COMPRESSIVE STRENGHT OF CONCRETE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer Representative	Mohammed Gardouh			A

Bored Piles Construction
Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report NO.	
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	4/ 3 / 2023
Pile No.	P4	Structure	bridge	Pile Cutoff Level	–
pier	P1	Ground Level	67.03	Pile Toe Level	27.53
Theoretical Pile Length from caisson level	40.341	Water Table Level	N/A	Permanent Casting Level	N/A
Req. Drilling Length From Ground Level	39.5	Theoretical concrete Q	46.33 m3	Temporary Casting Level	67.871
Act. Drilling Length	41	Act. concrete Q	51 m3	Steel Top Level	66.33
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.541

Pile Survey

Coordinates	EAST	North
Theoretical	585458.785	830444.566
Actual	585458.759	830444.555
Δ	0.026	0.011

Bentonite Slurry Test

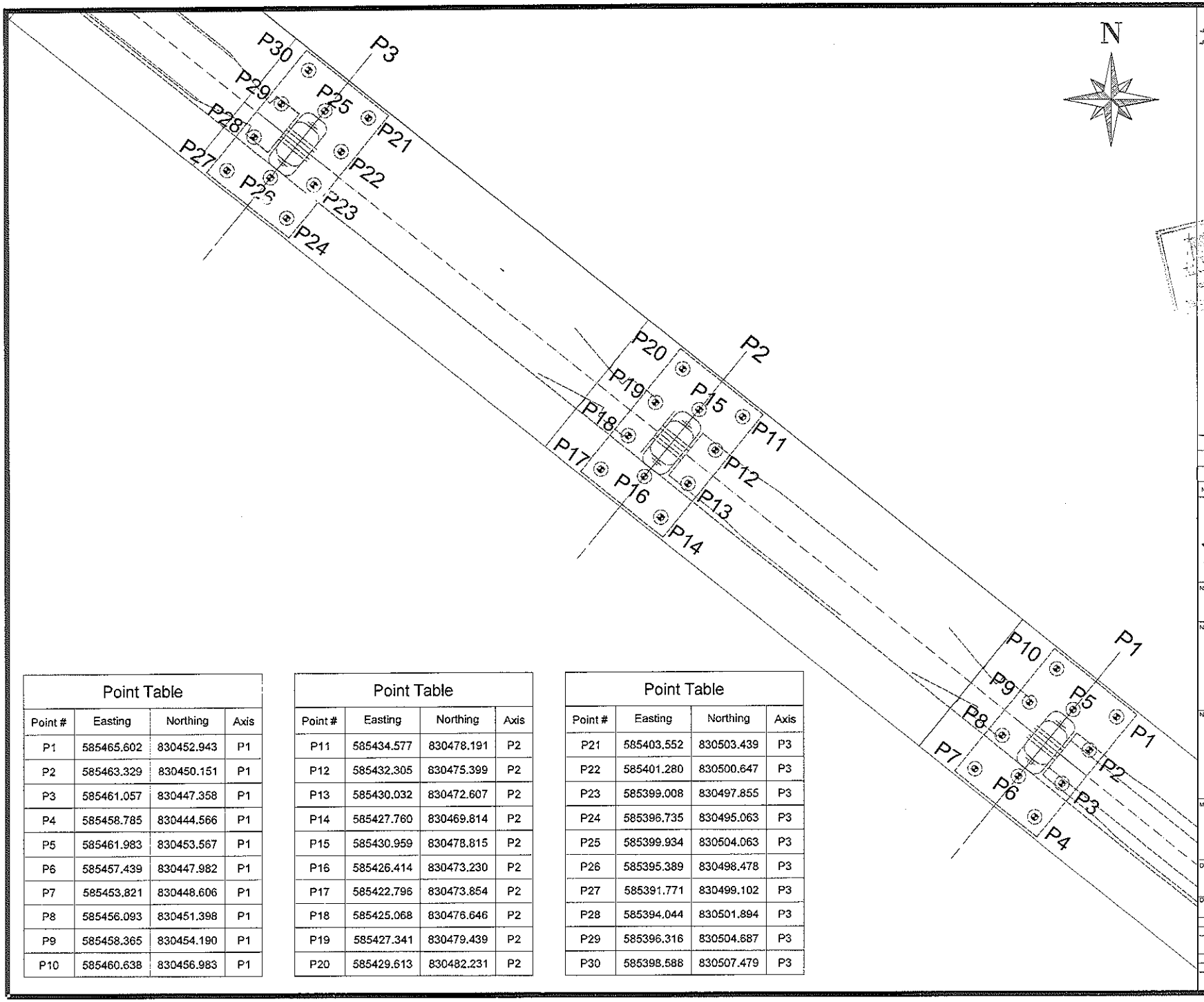
Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm3)	Less Than 1.1	1.04	Less Than 1.15	1.07
Viscosity(Sec.)	30:70 Sec.	33	≤90 Sec.	38
Sand Content %	Less than 2%	N/A	Less than 2%	1.5 %

Geotechnical Log	
0	CAISSON L.
0_3	SAND
3_4	SILTY SAND
4_5	CLAY
5_8	Sand
8_9	SILTY SAND
9_10	Sand
10_13	CLAY
13_29	Sand
29_31.5	CLAY
31.5_40	Sand

Time Survey

Activity	Date	From	To	Activity	Date	From	To
Drilling	4/3/2023			Cleaning	_	_	_
Install Cages	4/3/2023			pouring	4/3/2023		

	Mixer 1	Mixer 2	Mixer 3	Mixer 4	Mixer 5
Slump	22	21.5	23	22.8	21.9
Temperature	29	30.1	32	31	29



Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	08/2022	KLA	ISSUED FOR CONSTRUCTION

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED-RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

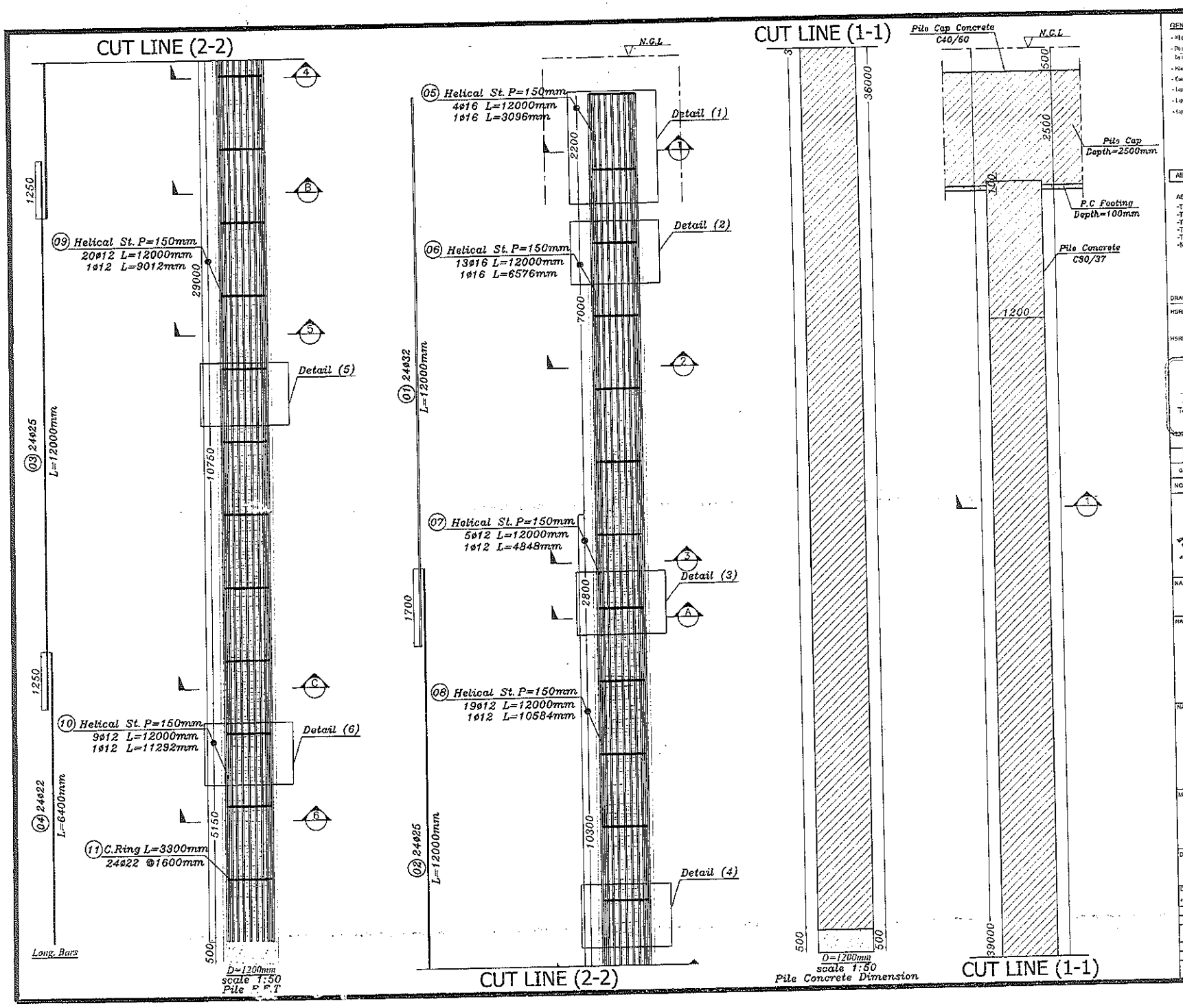
FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE:
PCO-00	08/2022	1 : 150
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mamdouh Salah	
SUPERVISOR	APPROVED BY	
DR. Mahmoud Lasheen	Eng. Javier Terrico	



GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All dimensions should be read or computed
- Pile Concrete C37/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup (5) and (6) 16ø16mm
- Lap Splice Between Helical Stirrup (6) and (7) 16ø16mm
- Lap Splice Between Helical Stirrup (6) and (8) 16ø16mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-910-001-NOT-C02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel : +20275170455 email : info@ahe-consult.com

NO.	DATE	ENG	REVISION
G	31-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1060

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED - RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

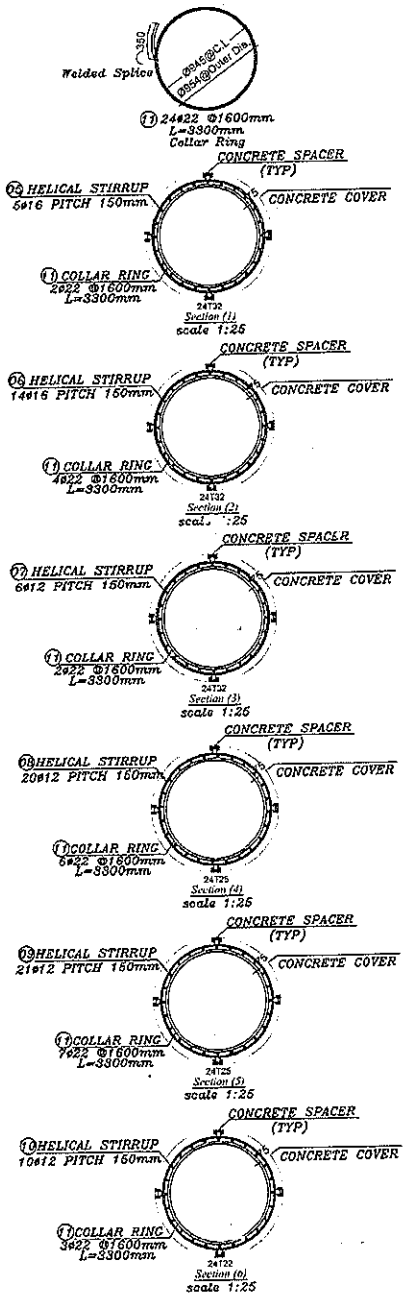
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

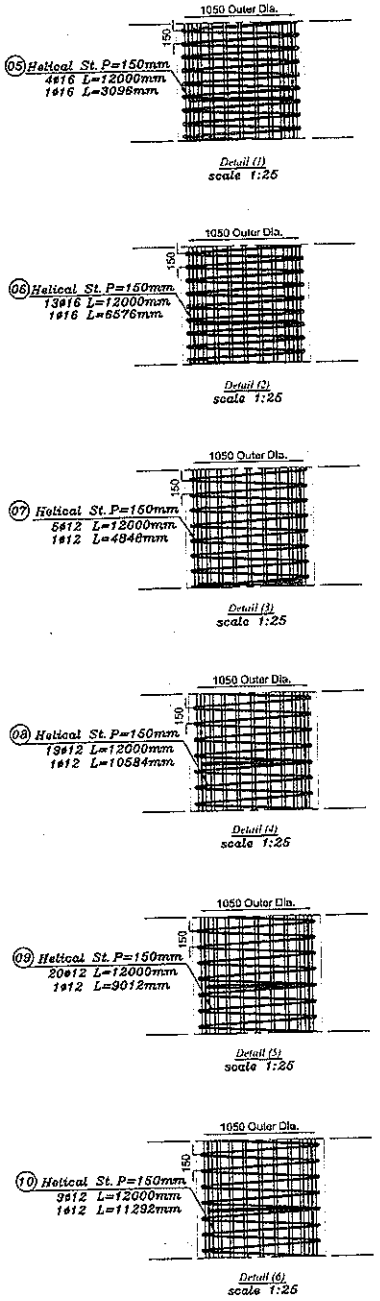
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

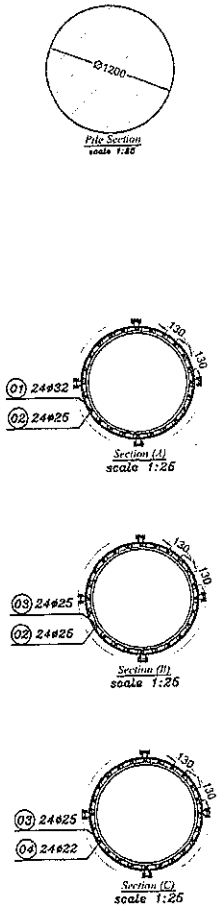
MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SD-110-001-PIE-E00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Abdelaziz Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashaba		Eng. Junior Tecnico







GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All dimension should be taken as original.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup 05 and 06 is 810mm
- Lap Splice Between Helical Stirrup 06 and 07 is 648mm
- Lap Splice Between Helical Stirrup 07 and 08 is 486mm

All Levels should be revised before construction in site

ABBREVIATION :

-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

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صادر رقم

NO.	DATE	ENG.	REVISION
0	31-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:

المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
وزارة النقل

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

الشركة القابضة

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG NO.:	DATE:	SCALE:
HSRE-VD01-SO-110-002-PIE-E02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Mamdouh Salah
		mas
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashiwa	Eng. Javier Tuelco	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

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Tel: +2027617255
صادر رقم
١٠

GENERAL NOTES:
- All dimensions are in millimeters.
- Do not measure from drawings. All dimensions should be read or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup (10) and (11) is 1.6 m
- Lap Splice Between Helical Stirrup (10) and (12) is 1.4 m
- Lap Splice Between Helical Stirrup (10) and (13) is 1.4 m

All Levels should be revised before construction in site

ABBREVIATION :
-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

DRAWING REFERENCES :
HSRE-V001-CC-910-001-N01-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-210-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	31-01-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1600

OWNER: المالك :
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
وزارة النقل

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR:
الشركة القابضة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-110-001-PIE-E00	05-2022	AS SHOWN
DRAWING BY: ENG. Eslam Fawzy	CHECKED BY: ENG. Abdallah Mansour	REVISED BY: ENG. Mamdouh Saleh
SUPERVISOR: DR. Mahmoud Lashien		APPROVED BY: Eng. Javier Tortko

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile 4- Pier 1
Dimension	:	15*15*15 cm
Date of casting	:	04/03/2023
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	04/03/2023	11/03/2023	7	8.433	100600	447	455
2	04/03/2023	11/03/2023	7	8.576	105200	468	
3	04/03/2023	11/03/2023	7	8.486	101600	452	

الخاصة بالعربية الرابعة والخامسة

التوقيع
الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
	Ahmed Adel			21/2/2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km pile P5 OF FOOTING P1		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:370 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: pm		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT 7-COMPRESSIVE STRENGHT OF CONCRETE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer Representative	Mohammed Gardouh			A

Bored Piles Construction
Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report NO.	
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	20/ 2 / 2023
Pile No.	P5	Structure	bridge	Pile Cutoff Level	–
pier	P1	Ground Level	67.03	Pile Toe Level	27.53
Theoretical Pile Length from caisson level	39.785	Water Table Level	N/A	Permanent Casting Level	N/A
Req. Drilling Length From Ground Level	39.5	Theoretical concrete Q	46.33 m3	Temporary Casting Level	67.315
Act. Drilling Length	41	Act. concrete Q	51 m3	Steel Top Level	66.33
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	0.985

Pile Survey

Coordinates	EAST	North
Theoretical	585462.003	830453.572
Actual	585461.983	830453.567
Δ	0.02	0.005

Bentonite Slurry Test

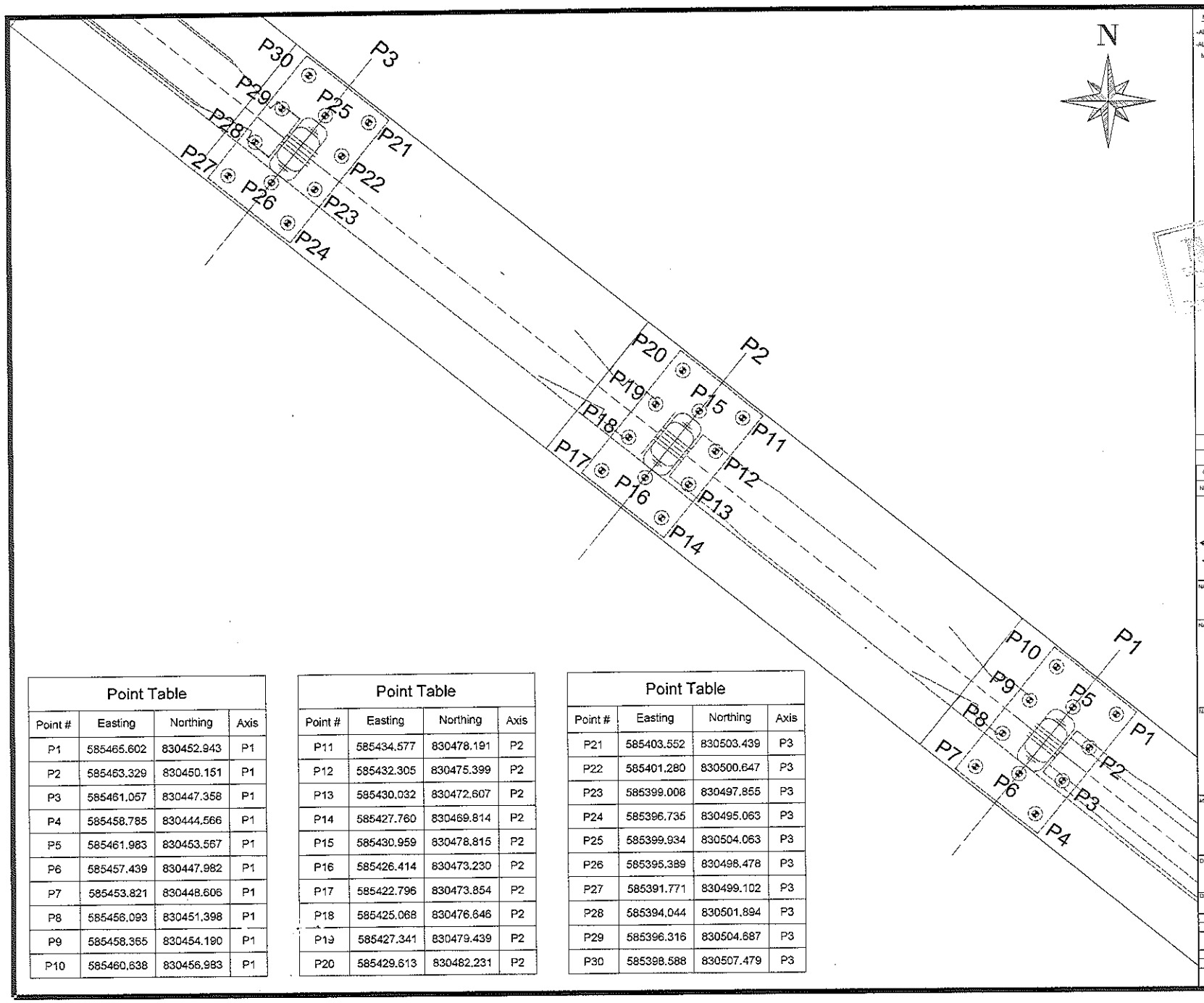
Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm3)	Less Than 1.1	1.04	Less Than 1.15	1.07
Viscosity(Sec.)	30:70 Sec.	33	≤90 Sec.	38
Sand Content %	Less than 2%	N/A	Less than 2%	1.5 %

Geotechnical Log	
0	CAISSON L.
0_3	SAND
3_4	SILTY SAND
4_5	CLAY
5_8	Sand
8_9	SILTY SAND
9_10	Sand
10_13	CLAY
13_29	Sand
29_31.5	CLAY
31.5_40	Sand

Time Survey

Activity	Date	From	To	Activity	Date	From	To
Drilling	20/2/2023			Cleaning	_	_	_
Install Cages	20/2/2023			pouring	20/2/2023		

	Mixer 1	Mixer 2	Mixer 3	Mixer 4	Mixer 5
Slump	22	21.5	23	22.8	21.9
Temperature	29	30.1	32	31	29



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	06/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT
FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE:
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE:	SCALE:
PCO-00	06/2022	1 : 150
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mamdouh Saleh	
SUPERVISOR	APPROVED BY	
DR. Mahmoud Lashuen	Eng. Javier Torrico	

Point Table

Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table

Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table

Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

Al Amal Ready mix

الأمل
الخرسانة الجاهزة ش.م.م
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : Pile 5 - Pier 1

Dimension : 15*15*15 cm

Date of casting : 20/02/2023

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	20/02/2023	27/02/2023	7	8.403	98510	438	475
2	20/02/2023	27/02/2023	7	8.364	112000	498	
3	20/02/2023	27/02/2023	7	8.760	110200	490	

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497
E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر/ تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile 5 - Pier 1
Dimension	:	15*15*15 cm
Date of casting	:	20/02/2023
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	20/02/2023	20/03/2023	28	8.483	134300	597	576
2	20/02/2023	20/03/2023	28	8.567	124200	552	
3	20/02/2023	20/03/2023	28	8.463	130500	580	

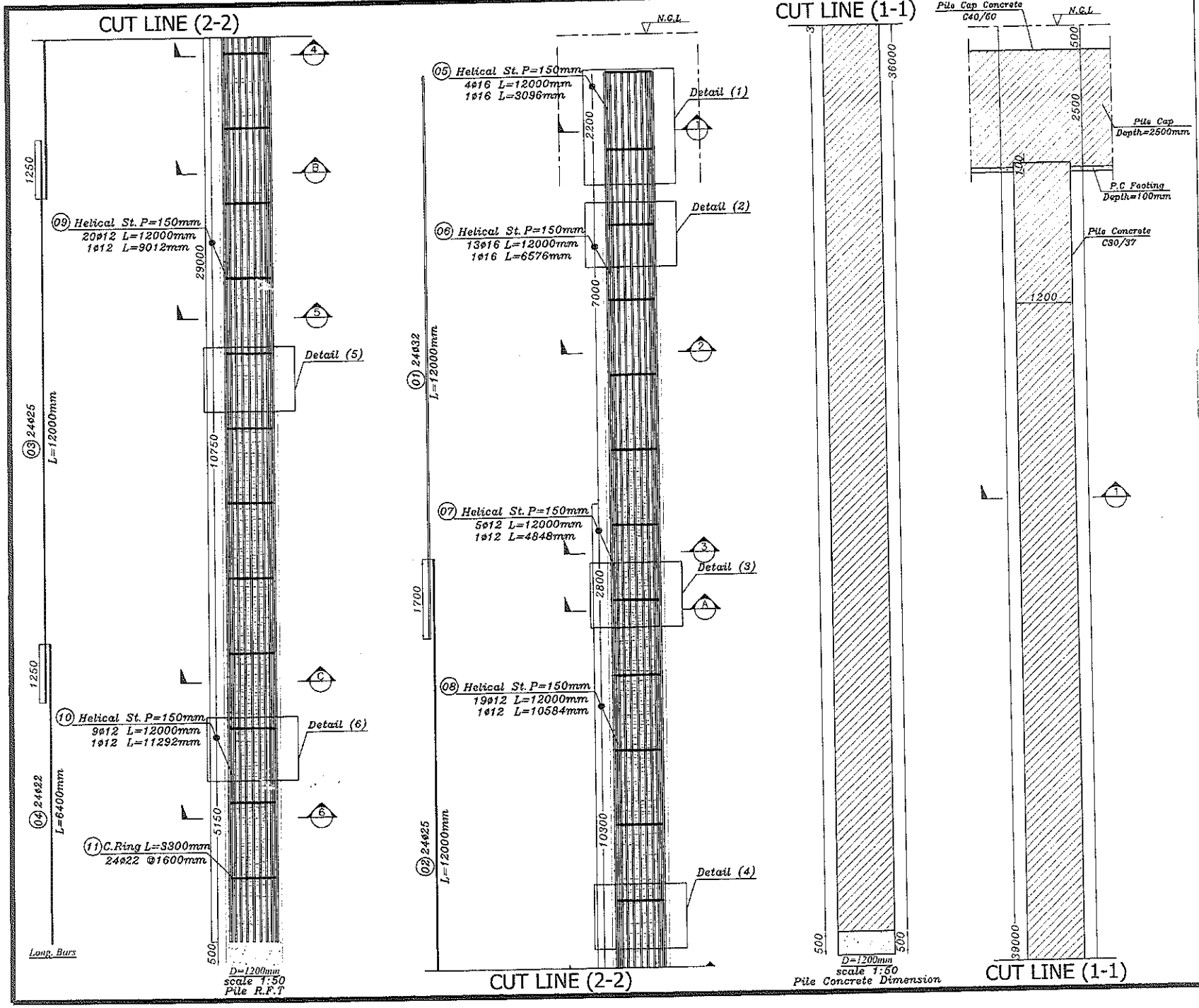
التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com



GENERAL NOTES:

- All dimensions are in millimeters.
- Do not measure by scale. All dimensions shall be as or computed
- Pile Concrete C30/37 - Pile Cap Concrete C40/60
- Concrete Cover 75mm
- Lap Splice Between Helical Stirrup (B) and (C) is 600mm
- Lap Splice Between Helical Stirrup (C) and (D) is 600mm
- Lap Splice Between Helical Stirrup (D) and (E) is 400mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMNT 1, DEPARTION
HSRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel: +2027610425

NO.	DATE	ENG.	REVISION
0	31-08-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1048

OWNER: المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

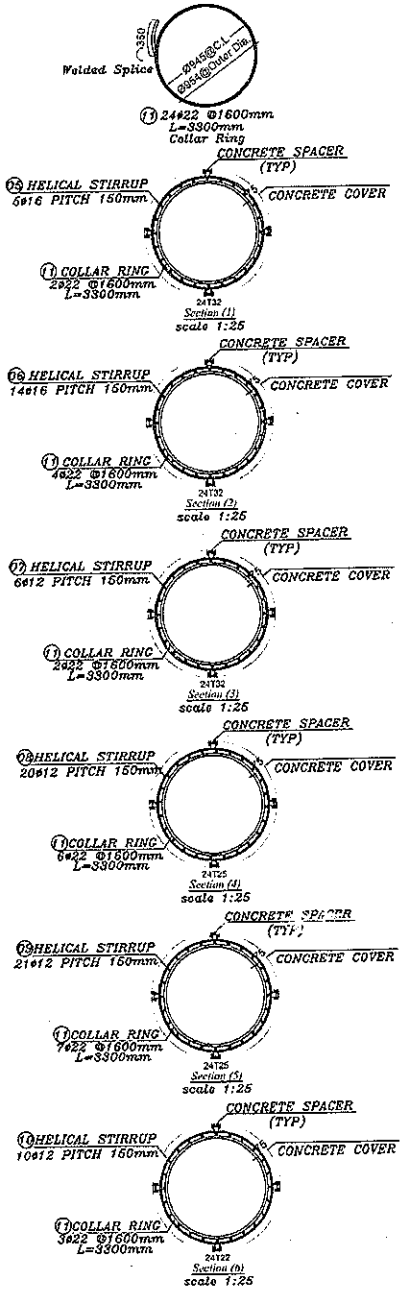
NAME OF OWNER CONSULTANT:
SYSTRA SHATCER

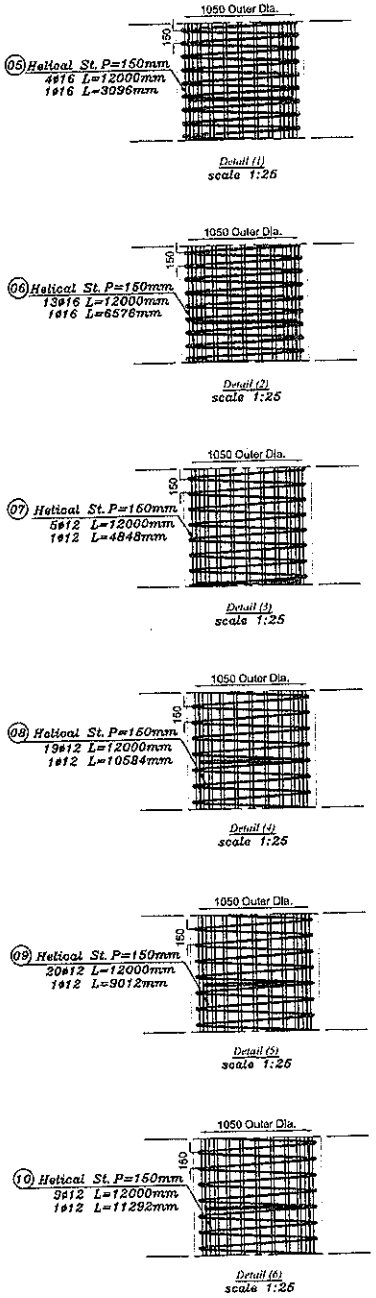
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

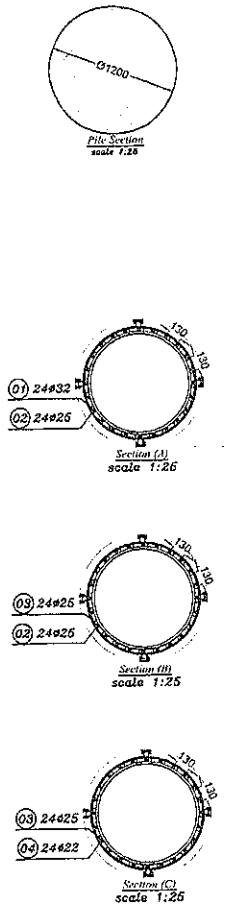
MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SD-110-001-PIE-E00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mahmoud	ENG. Mamdouh Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashheb		Eng. Jordar Fouka







GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All dimensions should be taken or computed.
- Pile Concrete C40/37 - Pile Cap Concrete C40/50
- Concrete cover: 75mm
- Lap Splice Between Helical Stirrup (02) and (03) is 600mm
- Lap Splice Between Helical Stirrup (03) and (04) is 400mm
- Lap Splice Between Helical Stirrup (04) and (05) is 400mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-10DF-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
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NO.	DATE	ENG.	REVISION
0	31-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:

المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-10-110-SM-PIE-E02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdullah Mahsen	ENG. Mamdouh Wahab
		MAS
SUPERVISOR:	APPROVED BY:	
Dr. Mahmoud Lashen	Eng. Jaafar Tawfiq	

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date						Time	
	Ahmed Adel			21/2/2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km pile P6 OF FOOTING P1		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:370 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: pm		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT COMPRESSIVE STRENGHT OF CONCRETE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer Representative	Mohammed Gardouh			A

Bored Piles Construction
Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report NO.	
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	21 / 2 / 2023
Pile No.	p6	Structure	bridge	Pile Cutoff Level	–
pier	p1	Ground Level	67.03	Pile Toe Level	27.53
Theoretical Pile Length from caisson level	40.044	Water Table Level	N/A	Permanent Casting Level	N/A
Req. Drilling Length From Ground Level	39.5	Theoretical concrete Q	46.33 m3	Temporary Casting Level	67.574
Act. Drilling Length	41	Act. concrete Q	51 m3	Steel Top Level	66.33
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.244

Pile Survey

Coordinates	EAST	North
Theoretical	585457.439	830447.982
Actual	585457.417	830447.972
Δ	0.022	0.01

Bentonite Slurry Test

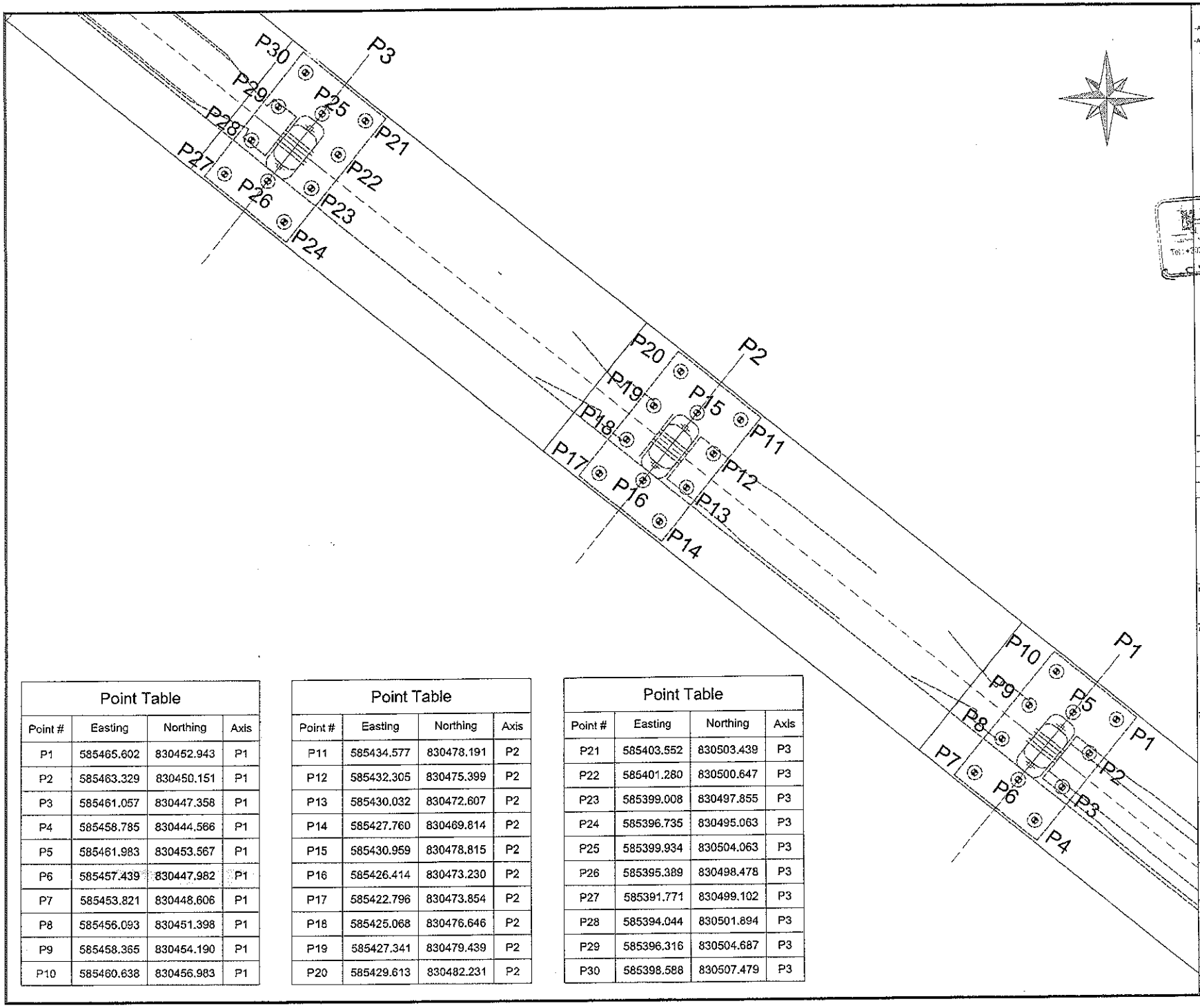
Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm3)	Less Than 1.1	1.02	Less Than 1.15	1.04
Viscosity(Sec.)	30:70 Sec.	32	≤90 Sec.	37
Sand Content %	Less than 2%	N/A	Less than 2%	1.5 %

Geotechnical Log	
0	CAISSON L.
0_3	SAND
3_4	SILTY SAND
4_5	CLAY
5_8	Sand
8_9	SILTY SAND
9_10	Sand
10_13	CLAY
13_29	Sand
29_31.5	CLAY
31.5_40	Sand

Time Survey

Activity	Date	From	To	Activity	Date	From	To
Drilling	21/ 2 /2023			Cleaning	–	–	–
Install Cages	21/ 2 /2023			pouring	21/ 2 /2023		

	Mixer 1	Mixer 2	Mixer 3	Mixer 4	Mixer 5
Slump	20.1	22	21.3	21.6	22.8
Temperature	28	27.5	30	31	30.9



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

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صادر رقم ٤٣
١٥

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 ; P3

DWG.NO.:	DATE:	SCALE:
PCO-90	08/2022	1 : 150
DRAWING BY:	DESIGNED BY:	CHECKED BY:
Eng.Khaled Alaa	Eng.Mamdouh Saleh	
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashkar	Eng. Javier Tarifa	

Point Table

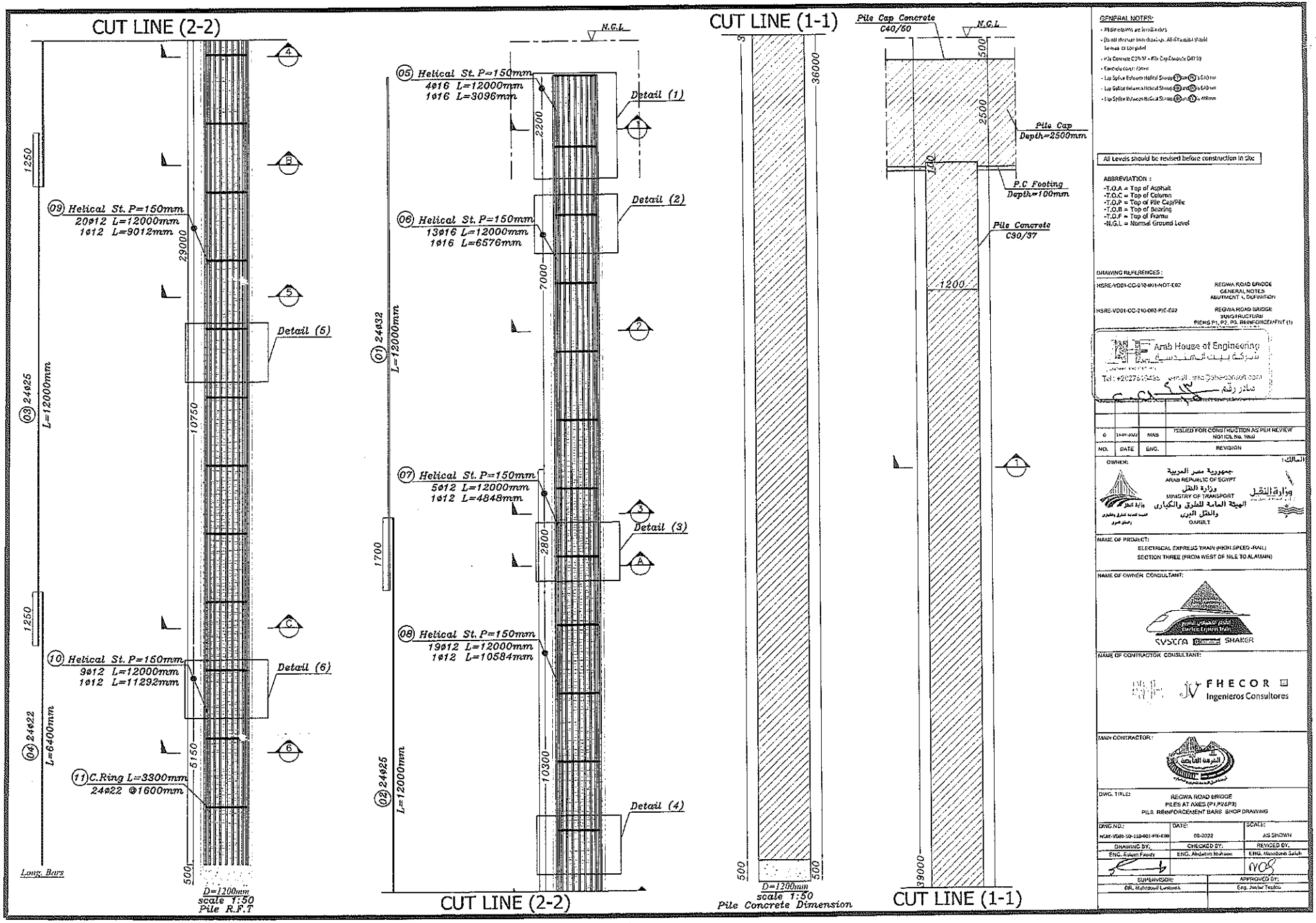
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table

Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table

Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3


CUT LINE (2-2)
09 Helical St. P=150mm
20ø12 L=12000mm
1ø12 L=9012mm
Detail (5)
10 Helical St. P=150mm
9ø12 L=12000mm
1ø12 L=11292mm
Detail (6)
11 C.Ring L=3300mm
24ø22 @1600mm
03 24ø25 L=12000mm
04 24ø22 L=6400mm
1250
1250
29000
10750
5150
500
Long. Bars
D=1200mm
scale 1:50
Pile R.F.T
N.G.L
05 Helical St. P=150mm
4ø16 L=12000mm
1ø16 L=3096mm
Detail (1)
06 Helical St. P=150mm
13ø16 L=12000mm
1ø16 L=6576mm
Detail (2)
07 Helical St. P=150mm
5ø12 L=12000mm
1ø12 L=4848mm
Detail (3)
08 Helical St. P=150mm
19ø12 L=12000mm
1ø12 L=10584mm
Detail (4)
01 24ø32 L=12000mm
02 24ø25 L=12000mm
2200
7000
2800
10300
1700
CUT LINE (2-2)
CUT LINE (1-1)
36000
500
500
D=1200mm
scale 1:50
Pile Concrete Dimension
Pile Cap Concrete
C40/50
N.G.L
500
2500
Pile Cap
Depth=2500mm
100
P.C Footing
Depth=100mm
Pile Concrete
C90/37
1200
39000
CUT LINE (1-1)
GENERAL NOTES:
All Levels should be revised before construction in site
ABBREVIATION :
-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level
DRAWING REFERENCES :
HSRE-VD01-CC-010-001-NOT-E02 REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT & DEFINITION
HSRE-VD01-CC-210-002-PIC-E02 REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)
Arab House of Engineering
Tel : +2027510485
NO. DATE ENG. REVISION
0 ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1000
OWNER:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)
NAME OF OWNER CONSULTANT:
SYSTRA
SHAKER
NAME OF CONTRACTOR CONSULTANT:
FHECOR
Ingenieros Consultores
MAIN CONTRACTOR:
DWG. TITLES:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING
DWG.NO.: HSRE-VD01-SO-110-001-PIE-E00
DATE: 08-2022
SCALE: AS SHOWN
DRAWING BY: ENG. Salem Fawzy
CHECKED BY: ENG. Abdallah Mohsen
REVIEWED BY: ENG. Mahmoud Salah
SUPERVISOR: DR. Mahmoud Lashaab
APPROVED BY: Eng. Javier Tejedor

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

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صادر رقم
١٥

GENERAL NOTES:
- All Dimension are in millimeter etc.
- Do not measure from drawings. All dimension should be verified or confirmed
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75 mm
- Lap Splice between Helical Strap Ø12 and Ø16 = 610 mm
- Lap Splice between Helical Strap Ø16 and Ø16 = 640 mm
- Lap Splice between Helical Strap Ø16 and Ø16 = 1450 mm

All Levels should be revised before construction in site

ABBREVIATION :
- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :
HGRE-VD01-CC-010-001-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HGRE-VD01-CC-210-002-PILE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PILES P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	31-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER: المالك :
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG NO.:	DATE:	SCALE:
HGRE-VD01-SD-110-003-PLC-C06	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Essam Fawzy	ENG. Abdallah Mohsen	ENG. Mamdouh Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashiaa		Eng. Javier Tuskio

Al Amal Ready mix

الأمل
للخرسانة الجاهزة ش.م.م
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile 6- Pier 1
Dimension	:	15*15*15 cm
Date of casting	:	21/02/2023
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	21/02/2023	28/02/2023	7	8.272	91440	406	379
2	21/02/2023	28/02/2023	7	8.635	79680	354	
3	21/02/2023	28/02/2023	7	8.643	84800	377	

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧

موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٠٠٦٠٣٣٨٦٠ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٢٢٧٨٥٥٥٩٦
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٢٦٣٠١٤٠ / ٠٤٨ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717

Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : Pile 6- Pier 1

Dimension : 15*15*15 cm

Date of casting : 21/02/2023

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	21/02/2023	21/03/2023	28	8.444	97340	433	469
2	21/02/2023	21/03/2023	28	8.536	116200	516	
3	21/02/2023	21/03/2023	28	8.562	103100	458	

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717

Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمى - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧

موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

REQUEST

Contractor Company				Designer Company						
Issued by Contractor	Name	Sign		Date				Time		
	Ahmed Adel			28/ 2 / 2023						
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة									

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km pile P7 OF FOOTING P1		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:370 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: pm		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT 7-COMPRESSIVE STRENGHT OF CONCRETE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer Representative	Mohammed Gardouh			A

Bored Piles Construction
Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report NO.	
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	28/ 2 / 2023
Pile No.	P7	Structure	bridge	Pile Cutoff Level	–
pier	P1	Ground Level	67.03	Pile Toe Level	27.53
Theoretical Pile Length from caisson level	40.407	Water Table Level	N/A	Permanent Casting Level	N/A
Req. Drilling Length From Ground Level	39.5	Theoretical concrete Q	46.33 m3	Temporary Casting Level	67.937
Act. Drilling Length	41	Act. concrete Q	51 m3	Steel Top Level	66.33
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.607

Pile Survey

Coordinates	EAST	North
Theoretical	585453.821	830448.606
Actual	585453.824	830448.594
Δ	-0.003	0.012

Bentonite Slurry Test

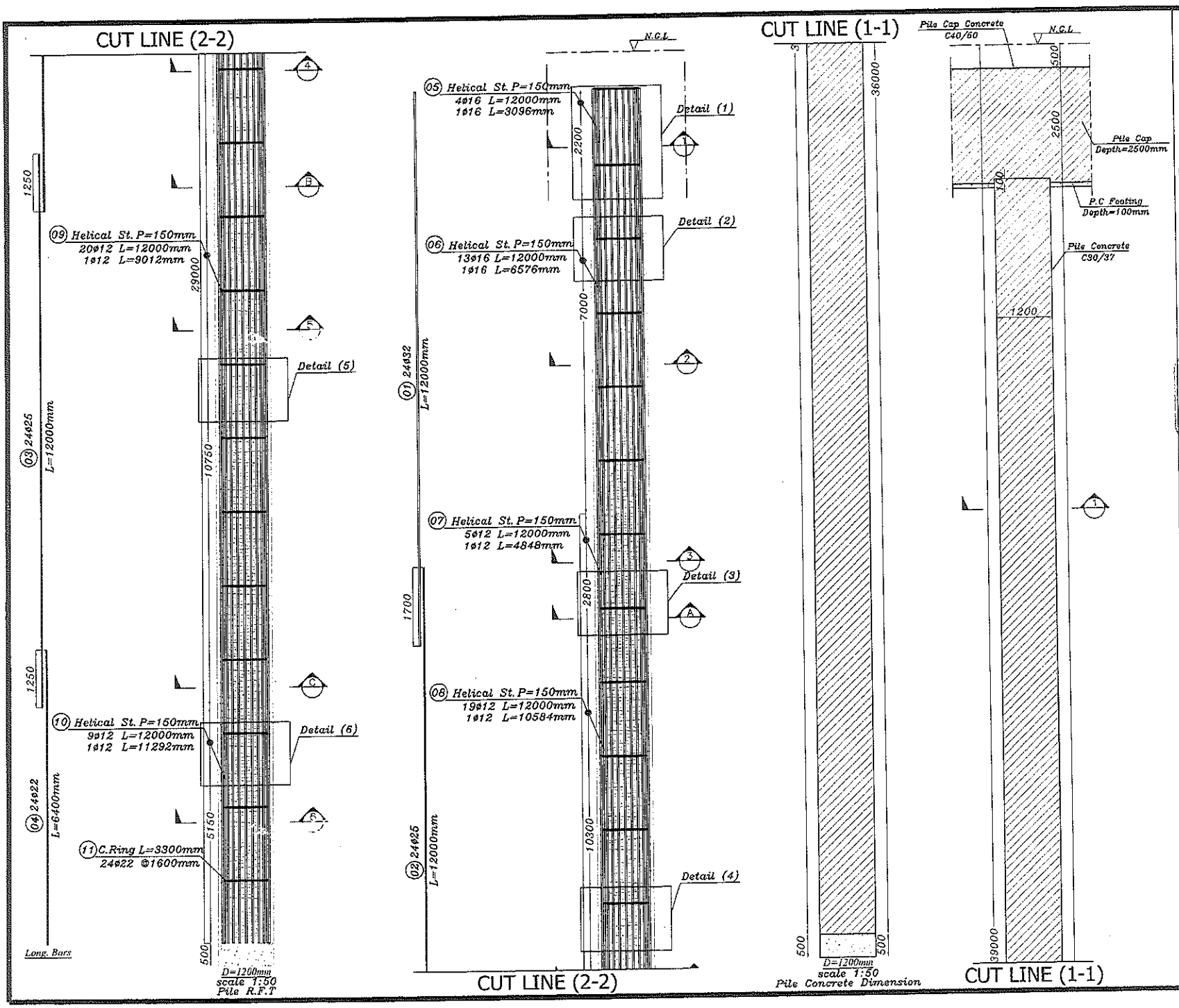
Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm3)	Less Than 1.1	1.03	Less Than 1.15	1.07
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	39
Sand Content %	Less than 2%	N/A	Less than 2%	1.5 %

Geotechnical Log	
0	CAISSON L.
0_3	SAND
3_4	SILTY SAND
4_5	CLAY
5_8	Sand
8_9	SILTY SAND
9_10	Sand
10_13	CLAY
13_29	Sand
29_31.5	CLAY
31.5_40	Sand

Time Survey

Activity	Date	From	To	Activity	Date	From	To
Drilling	28/ 2 /2023			Cleaning	_	_	_
Install Cages	28/ 2 /2023			pouring	28/ 2 /2023		

	Mixer 1	Mixer 2	Mixer 3	Mixer 4	Mixer 5
Slump	21	20.9	22	22.6	23
Temperature	31	29.9	30.7	31	29



GENERAL NOTES:

- All dimensions are in millimeters.
- Do not measure on the drawings. All dimensions should be read or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover: 75mm
- Lap Splice Between Helical Stirrup (B) and (N): 640mm
- Lap Splice Between Helical Stirrup (B) and (S): 640mm
- Lap Splice Between Helical Stirrup (B) and (E): 450mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-610-001-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ADUTMENT 1, DEFINITION

HSRE-V001-CC-210-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
شركة بيت الهندسي
Tel: +2027610455 e-mail: info@ahe-consult.com
تصاريح رقم

NO.	DATE	ENG.	REVISION
0	11-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE NO. 1068

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

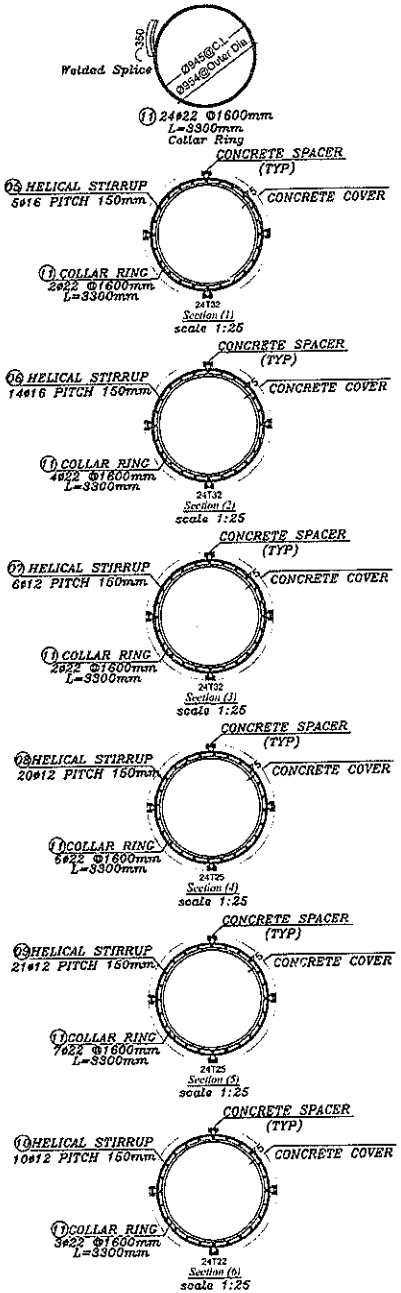
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

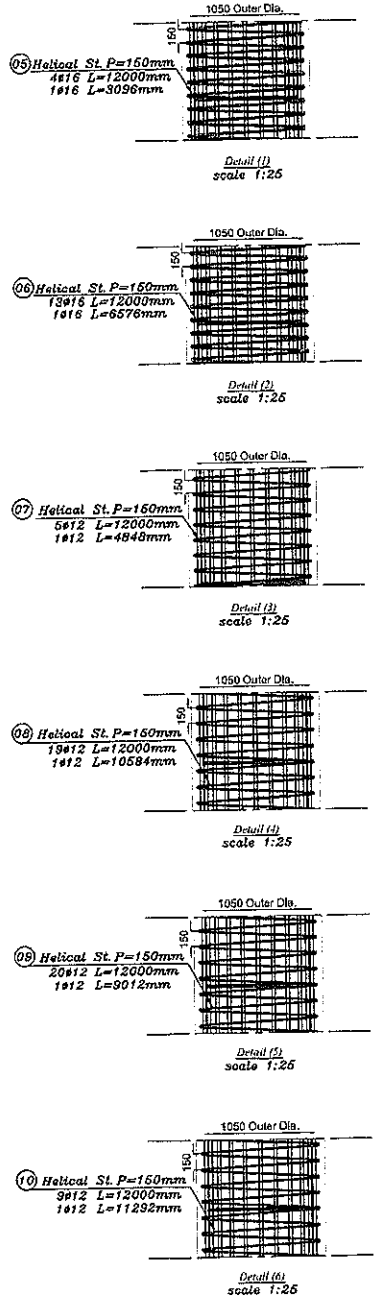
NAME OF CONTRACTOR CONSULTANT:
JV FHECOR Ingenieros Consultores

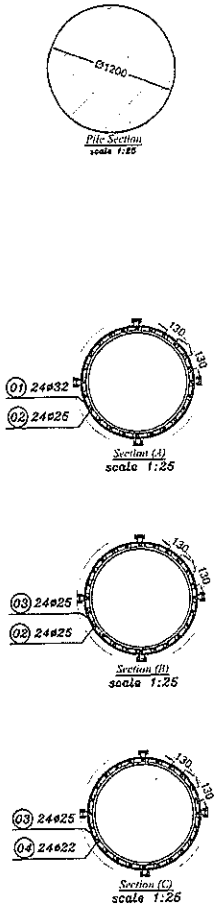
MAIN CONTRACTOR:
الشركة الجامعة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2,P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.	DATE:	SCALE:
HSRE-V001-SD-110-003-PIE-E00	01-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohamed	ENG. Hamdoah Sofah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Eashash		Eng. Jaafar Farfor







GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All dimensions should be taken or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C30/37
- Clear Cover 75mm
- Lap Splice Between Helical Stirrup 06 and 02 is 600mm
- Lap Splice Between Helical Stirrup 06 and 02 is 600mm
- Lap Splice Between Helical Stirrup 06 and 02 is 400mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION

HSRE-V001-CC-210-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT [1]

Arab House of Engineering
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Tel. +20276104135 e-mail: info@arbeconsult.com

NO.	DATE	ENG.	REVISION
0	24-8-2022	EMAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1049

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CARTILT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAZMIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-110-002-PIE-E02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Salam Fawzy	ENG. Abdallah Mahsoun	ENG. Mamdouh Gabal
		mag
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashwan		Eng. Junior Tunico

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Φ12	Φ16	Φ22	Φ25	Φ32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering
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Tel: +2027610425
Email: info@ahe-egypt.com
صادر رقم
٢٠٢١٣٣٣
١٥

GENERAL NOTES:
- All dimensions are in millimeters.
- Do not measure from drawings. All dimensions shall be field or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75 mm
- Lap Splice Between Helical Stirrup (H) and (H) is 640 mm
- Lap Splice Between Helical Stirrup (H) and (H) is 640 mm
- Lap Splice Between Helical Stirrup (H) and (H) is 450 mm

All Levels should be revised before construction in site

ABBREVIATION :
- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :
- HDRE-V001-CC-010-001-HDT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
- HSRL-V001-CC-210-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT 11

NO.	DATE	ENG.	REVISION
0	01-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1059

OWNER:
المالك:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
وزارة النقل

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

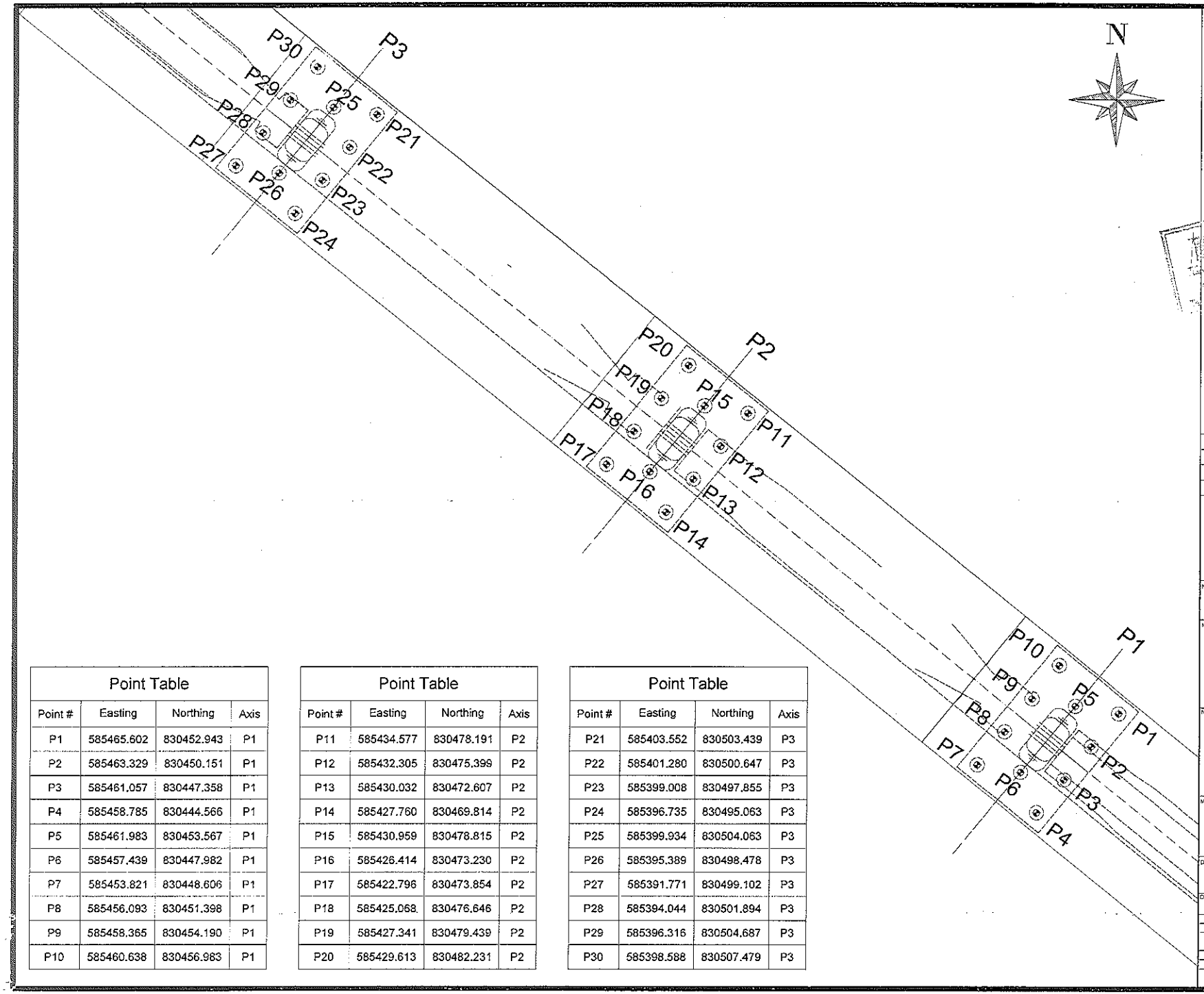
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:
الشركة العامة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-110-003-PIE-E09	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mahsen	ENG. Mamdouh Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashein		Eng. Javier Turiaso



Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NOTES:
-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER: المالك:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
AHE Andersen and Hansen
JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
PCO-00	08/2022	1 : 150
DRAWING BY:	DESIGNED BY:	CHECKED BY:
Eng.Khaled Alaa	Eng. Mamdouh Soliah	

SUPERVISOR:	APPROVED BY:
DR. Mahmoud Lashuan	Eng. Javier Torres

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile7- Pier1
Dimension	:	15*15*15 cm
Date of casting	:	28/02/2023
MIX DESIGN STRENGTH	:	370 kg/cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	28/02/2023	28/03/2023	28	8.428	128000	569	559
2	28/02/2023	28/03/2023	28	8.466	132600	589	
3	28/02/2023	28/03/2023	28	8.552	116800	519	

التوقيع
الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01008033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01008080636 - 01004976649/
E-mail: info@alamalready mix.com

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٨٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨/٢٦٣٠١٤٥ - ف: ٠٤٨/٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٨٠٨٠٦٣٦ - ٠١٠٠٤٩٧٦٤٩

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile7- Pier1
Dimension	:	15*15*15 cm
Date of casting	:	28/02/2023
MIX DESIGN STRENGTH :		370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	28/02/2023	07/03/2023	7	8.502	99980	444	464
2	28/02/2023	07/03/2023	7	8.356	109200	485	
3	28/02/2023	07/03/2023	7	8.536	103700	461	

Al Amal
الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katania - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر/ تليفاكس : ٢٣٥٧٣٣٠٧ - ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E mail: info@alamalready.com
website: www.alamalready.com

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date				Time			
	Ahmed Adel			7/3/2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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 : pouring footing p1		
CODE - 3	Sub Element of Activity		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km P8 FOOTING P1		
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐ Grade:370 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: pm		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT 7-28COMPRESSIVE STRENGHT OF CONCRETE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer	Mohammed Bardouh			A

Bored Piles Construction
Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report NO.	
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	
Pile No.	P8	Structure	bridge	Pile Cutoff Level	–
pier	P1	Ground Level	67.03	Pile Toe Level	27.53
Theoretical Pile Length from caisson level	40.165	Water Table Level	N/A	Permanent Casting Level	N/A
Req. Drilling Length From Ground Level	39.5	Theoretical concrete Q	46.33 m3	Temporary Casting Level	67.695
Act. Drilling Length	41	Act. concrete Q	51 m3	Steel Top Level	66.33
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.365

Pile Survey

Coordinates	EAST	North
Theoretical	585456.093	830451.398
Actual	585456.083	830451.381
Δ	0.01	0.017

Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm3)	Less Than 1.1	1.03	Less Than 1.15	1.07
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	39
Sand Content %	Less than 2%	N/A	Less than 2%	1.6 %

Geotechnical Log	
0	CAISSON L.
0_3	SAND
3_4	SILTY SAND
4_5	CLAY
5_8	Sand
8_9	SILTY SAND
9_10	Sand
10_13	CLAY
13_29	Sand
29_31.5	CLAY
31.5_40	Sand

Time Survey

Activity	Date	From	To	Activity	Date	From	To
Drilling	26/ 2 /2023			Cleaning	_	_	_
Install Cages	26/ 2 /2023			pouring	26/ 2 /2023		

	Mixer 1	Mixer 2	Mixer 3	Mixer 4	Mixer 5
Slump	22.5	21.6	20.6	20.8	22.3
Temperature	32	29.9	30.5	30.2	28

Al Amal Ready mix

الأمل
الخرسانة الجاهزة ش.م.م
رأس المال المرخص به ... جنيه
والمصدر والمقيد ...

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile 8 - Pier 1
Dimension	:	15*15*15 cm
Date of casting	:	07/03/2023
MIX DESIGN STRENGTH	:	370 kg/cm^2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	07/03/2023	09/04/2023	28	8.598	108600	483	516
2	07/03/2023	09/04/2023	28	8.509	121600	540	
3	07/03/2023	09/04/2023	28	8.58	118100	525	

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855896 - 01068844170 - 01006033860
El Sadat City - Industrial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028450673 - 01003930835 - 01004076897

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمى - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
تليفون : ٢٩٨٤١١٣٦ / فاكس : ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٨٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
تليفون : ٠٤٨ / ٢٦٣٠١٤٥ - فاكس : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٠٦٧٣ - ٠١٠٠٣٩٣٠٨٣٥ - ٠١٠٠٤٠٧٦٨٩٧

COMPRESSIVE STRENGTH OF
TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : Pile 8- Pier 1

Dimension : 15*15*15 cm

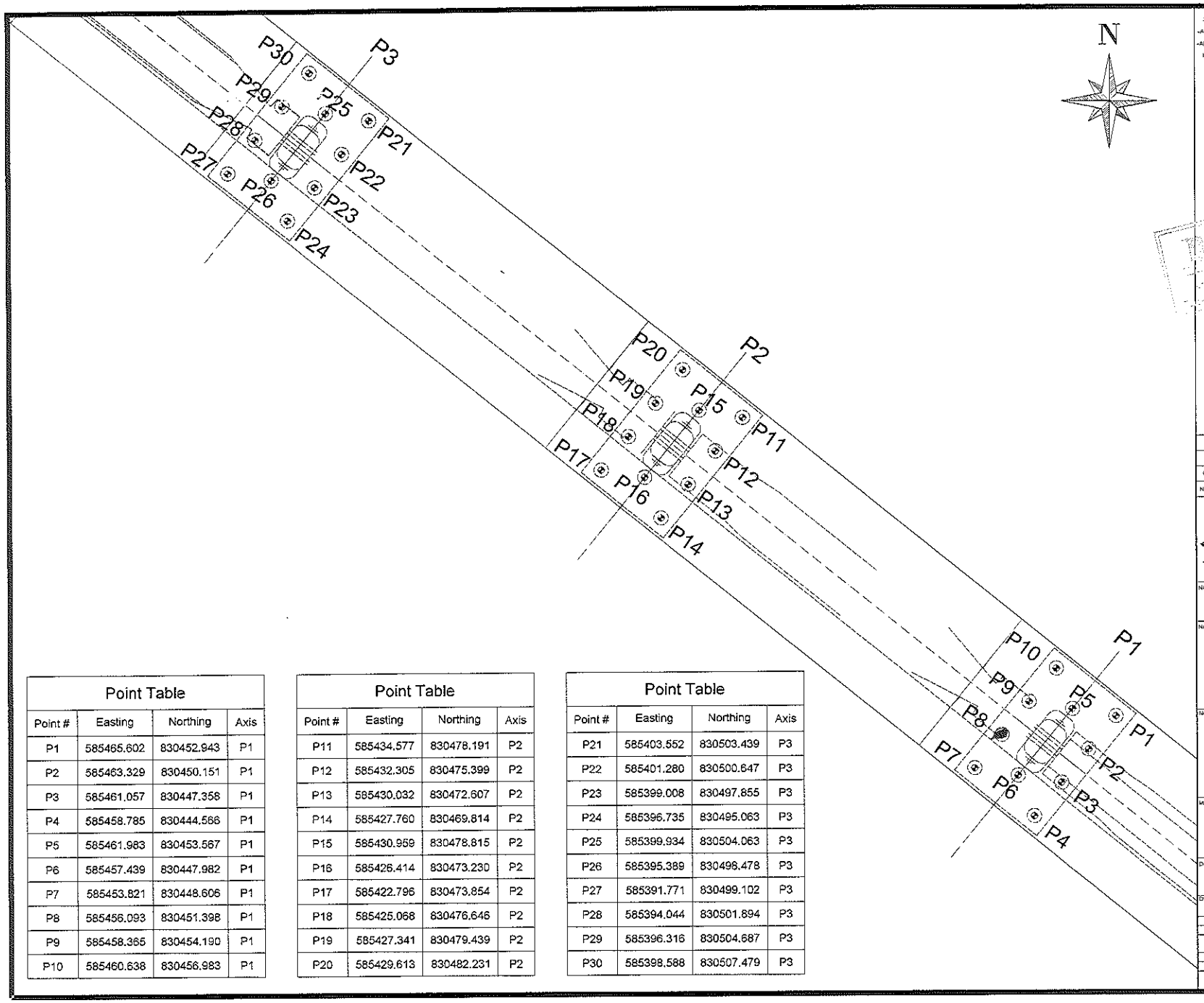
Date of casting : 07/03/2023

MIX DESIGN STRENGTH : 370 kg/cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	07/03/2023	14/03/2023	7	8.476	102900	457	445
2	07/03/2023	14/03/2023	7	8.533	105700	470	
3	07/03/2023	14/03/2023	7	8.47	91500	407	

التوقيع :
الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Egypt Medical Center Mall - Fourth Floor - Dr. Sabri St. - Tanta District
Nasr City Telefax: 02 25573307 - 02 24713555
Mobile: 01001116717
New Cairo - Yasmin - Part 02 - 03
Tel.: 2984 1135 / Fax: 2980 0106



Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	06/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED-RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT.

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
PCO-00	06/2022	1 : 100
DRAWING BY.	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mahmoud Salah	

SUPERVISOR.	APPROVED BY
DR. Mahmoud Lashoan	Eng. Javier Tornero

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date						Time	
	Ahmed Adel			26 / 2 / 2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km pile P9 OF FOOTING P1		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:370 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: pm		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT 7-COMPRESSIVE STRENGHT OF CONCRETE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			A
QA/QC				A
Employer Representative	Mohamed Gadoh			A

Bored Piles Construction
Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report NO.	
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	26 / 2 / 2023
Pile No.	P9	Structure	bridge	Pile Cutoff Level	–
pier	P1	Ground Level	67.03	Pile Toe Level	27.53
Theoretical Pile Length from caisson level	40.165	Water Table Level	N/A	Permanent Casting Level	N/A
Req. Drilling Length From Ground Level	39.5	Theoretical concrete Q	46.33 m3	Temporary Casting Level	67.695
Act. Drilling Length	41	Act. concrete Q	51 m3	Steel Top Level	66.33
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.365

Pile Survey

Coordinates	EAST	North
Theoretical	585458.365	830454.19
Actual	585458.342	830454.213
Δ	0.023	-0.023

Bentonite Slurry Test

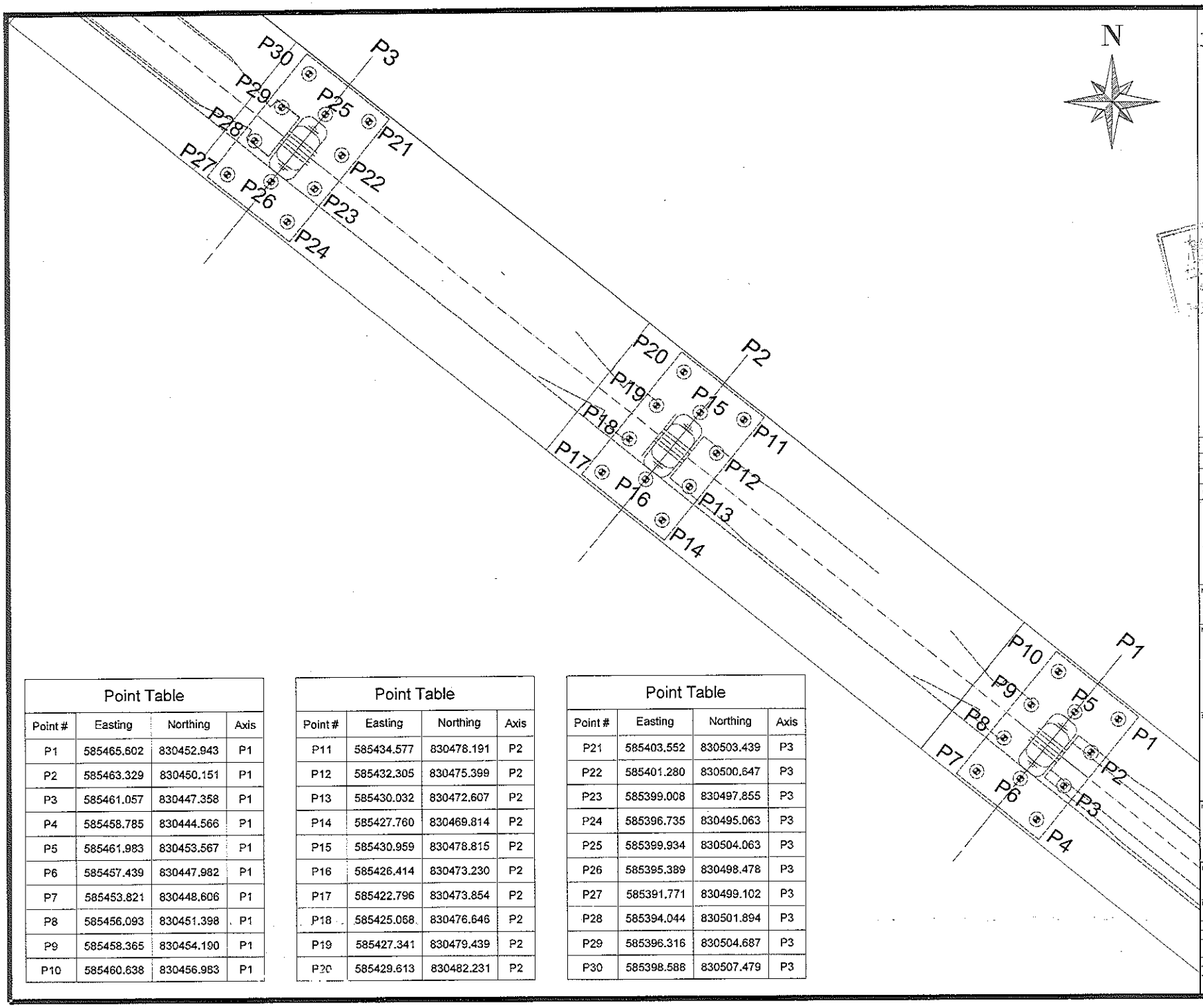
Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm3)	Less Than 1.1	1.03	Less Than 1.15	1.07
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	39
Sand Content %	Less than 2%	N/A	Less than 2%	1.6 %

Geotechnical Log	
0	CAISSON L.
0_3	SAND
3_4	SILTY SAND
4_5	CLAY
5_8	Sand
8_9	SILTY SAND
9_10	Sand
10_13	CLAY
13_29	Sand
29_31.5	CLAY
31.5_40	Sand

Time Survey

Activity	Date	From	To	Activity	Date	From	To
Drilling	26/ 2 /2023			Cleaning	_	_	_
Install Cages	26/ 2 /2023			pouring	26/ 2 /2023		

	Mixer 1	Mixer 2	Mixer 3	Mixer 4	Mixer 5
Slump	22.5	21.6	20.6	20.8	22.3
Temperature	32	29.9	30.5	30.2	28



Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
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P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
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P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
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P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER.

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT
SYSTRA SHAKER

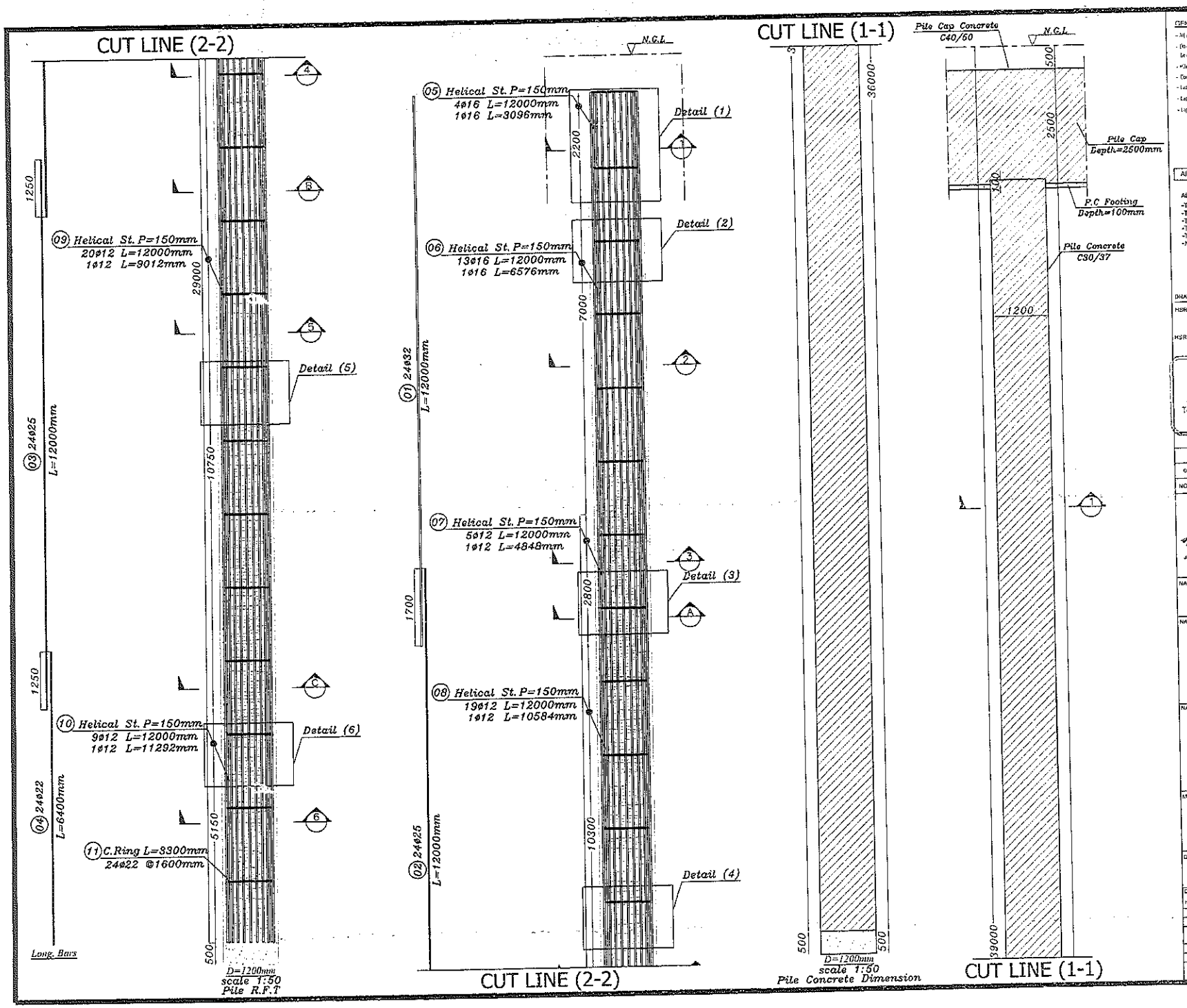
NAME OF CONTRACTOR CONSULTANT
FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE.
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE.	SCALE
PCO-00	08/2022	1 : 150
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Abaa	Eng.Mahdoah Saluh	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashwah	Eng. Jamal Tamby



GENERAL NOTES:

- All dimensions are in millimeters
- Do not scale drawings. Additional dimensions should be read or computed
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover: 75mm
- Lap Splice between Vertical Stirrup (9) and (10) is 640mm
- Lap Splice between Vertical Stirrup (10) and (11) is 640mm
- Lap Splice Between Helical St.rup (10) and (11) is 480mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-C02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT L DEFINITION
HSRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
شركة بيت الهندسية
Tel : +2027613436 email : info@alhc-consult.com
صادر رقم

NO.	DATE	ENG.	REVISION
0	11-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1040

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBUT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED-RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

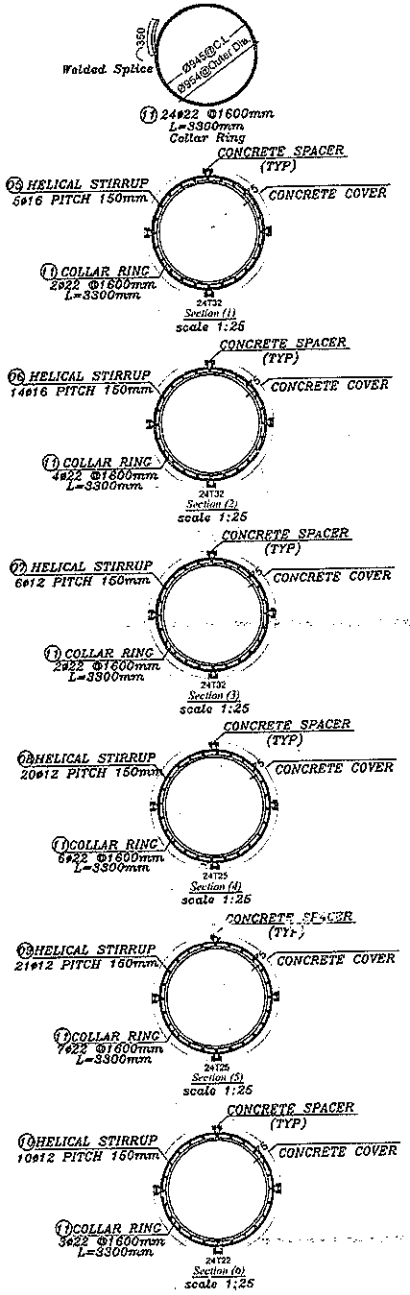
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

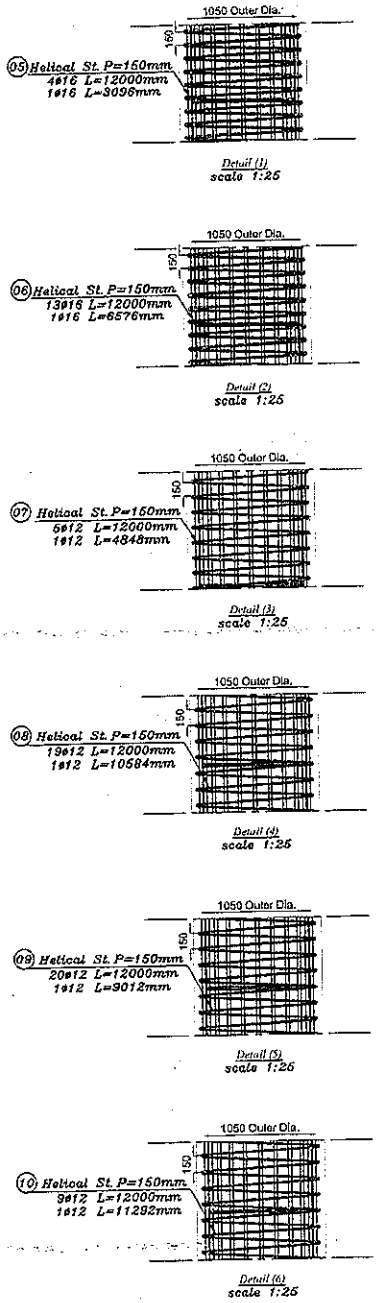
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

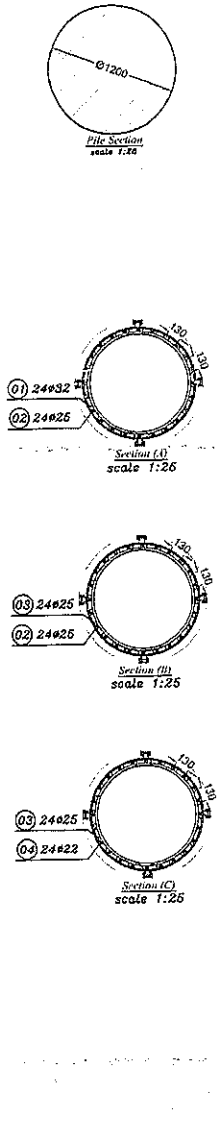
MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SB-110-001-PIE-E00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mahsen	ENG. Mamdouh Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashen		Eng. Junior Fonko







GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All dimension should be read or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C35/50
- Concrete cover: 75mm
- Lap Splice Between Helical Stirrups (05) and (06) is 600mm
- Lap Splice Between Helical Stirrups (06) and (07) is 600mm
- Lap Splice Between Helical Stirrups (09) and (10) is 600mm

All Levels should be revised before construction in site

ABBREVIATION :

-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT I, DEFINITION
HSRE-V001-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel.: +2027613435
e-mail: info@ahe-consult.com
صادر رقم

NO.	DATE	ENG.	REVISION
0	14-07-2022	MAB	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1009

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.	DATE:	SCALE:
HSRE-V001-SD-210-002-PIE-D01	08-2022	As SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Mahmoud Salah
		MAS
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashean		Eng. Jaafar Tawfico

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Φ12	Φ16	Φ22	Φ25	Φ32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering
شركة بيت الهندسة العربية
Tel: +20227610425
Email: info@arabhouseeng.com
تعاقد رقم
C-C1
١٥

GENERAL NOTES:
- All dimensions are in millimeters.
- Do not measure from drawings. All dimension should be held or computed
- Pile Concrete Cover 75mm
- Concrete Cover 75mm
- Lap Splice Between Hell. & Stirrup Ⓜ and Ⓑ = 640mm
- Lap Splice Between Helical Stirrup Ⓜ and Ⓑ = 640mm
- Lap Splice Between Helical Stirrup Ⓜ and Ⓑ = 480mm

All Levels should be revised before construction in site

ABBREVIATION :
- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-010-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT 11)

NO.	DATE	ENG.	REVISION
0	31-01-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER: المالك :
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG NO.:	DATE:	SCALE:
HSRE-V001-SO-110-003-PIE-E00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mahmoud	ENG. Mostafa Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashour		Eng. Javier Turiso

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS

BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile 9- Pier1
Dimension	:	15*15*15 cm
Date of casting	:	26/02/2023
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	26/02/2023	05/03/2023	7	8.691	120300	535	487
2	26/02/2023	05/03/2023	7	8.673	109800	488	
3	26/02/2023	05/03/2023	7	8.445	98580	438	

التوقيع:
الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile 9- Pier1
Dimension	:	15*15*15 cm
Date of casting	:	26/02/2023
MIX DESIGN STRENGTH	:	370 kg/cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	26/02/2023	26/03/2023	28	8.513	96770	430	471
2	26/02/2023	26/03/2023	28	8.63	106500	473	
3	26/02/2023	26/03/2023	28	8.445	114700	510	

التوقيع:

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katania - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industrial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01092459673 - 01006830835 - 01061976497
E-mail: info@alamalready.com
Website: www.alamalready.com

الإدارة : مول إجيبت ميدكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٢٤٧١٣٥٥٨ ٠٢
موبايل : ٠١١٠١١١٦٧١٧
مواقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٩٢٤٥٩٦٧٣ - ٠١٠٠٦٨٣٠٨٣٥ - ٠١٠٦١٩٧٦٤٩٧
٠١٠٠٦٨٣٠٨٣٥ - ٠١٠٦١٩٧٦٤٩٧

REQUEST

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
	Ahmed Adel			5/3/2023							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km pile P10 OF FOOTING P1			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade:370 kg/cm^2
PRESTART CHECKLIST				
IR Approved		Plant & equipment available		
Mix Approved		Back up equipment available		
Setting out Survey Approved		Cast in items secure		
Temp Works Approved		Access route clear		
Formwork Checked		Work area safe to progress		
Start Time for Pour: pm		Concrete Volume: 51 m3		

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**RESULT 7-COMPRESSIVE STRENGHT OF CONCRETE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Ahmed Adel			**A**
QA/QC				**A**
Employer Representative	Mohammed Gardoh			A

Bored Piles Construction
Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report NO.	
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	5/ 3 / 2023
Pile No.	P10	Structure	bridge	Pile Cutoff Level	–
pier	P1	Ground Level	67.03	Pile Toe Level	27.53
Theoretical Pile Length from caisson level	40.066	Water Table Level	N/A	Permanent Casting Level	N/A
Req. Drilling Length From Ground Level	39.5	Theoretical concrete Q	46.33 m3	Temporary Casting Level	67.596
Act. Drilling Length	41	Act. concrete Q	51 m3	Steel Top Level	66.33
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.266

Pile Survey

Coordinates	EAST	North
Theoretical	585460.603	5830456.914
Actual	585460.638	5830456.983
Δ	-0.035	-0.069

Bentonite Slurry Test

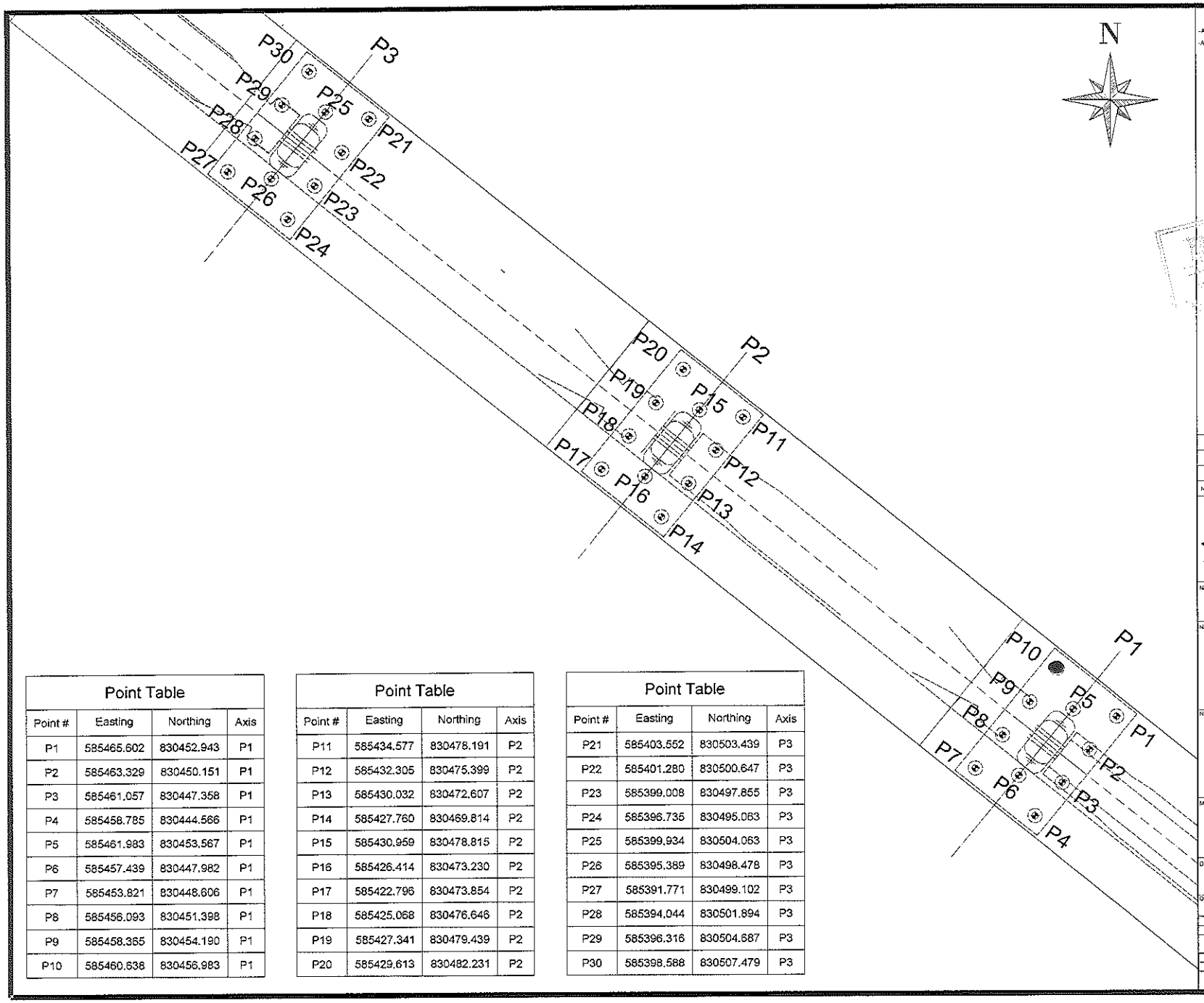
Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm3)	Less Than 1.1	1.03	Less Than 1.15	1.07
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	39
Sand Content %	Less than 2%	N/A	Less than 2%	1.5 %

Geotechnical Log	
0	CAISSON L.
0_3	SAND
3_4	SILTY SAND
4_5	CLAY
5_8	Sand
8_9	SILTY SAND
9_10	Sand
10_13	CLAY
13_29	Sand
29_31.5	CLAY
31.5_40	Sand

Time Survey

Activity	Date	From	To	Activity	Date	From	To
Drilling	5/ 3 / 2023			Cleaning	_	_	_
Install Cages	5/ 3 / 2023			pouring	5/ 3 / 2023		

	Mixer 1	Mixer 2	Mixer 3	Mixer 4	Mixer 5
Slump	21	20.9	22	22.6	23
Temperature	31	29.9	30.7	31	29



NOTES:

- ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
- ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	06/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
DARBLT

NAME OF PROJECT.
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT
FHECOR Ingenieros Consultores

MAIN CONTRACTOR .

DWG. TITLE
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG. NO.	DATE	SCALE
PCO-00	06/2022	1 : 150

DRAWING BY	DESIGNED BY:	CHECKED BY
Eng.Khaled Alaa	Eng.Mamdouh Saleh	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashkari	Eng. Javier Tornos

Point Table

Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table

Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table

Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى رجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile10 - Pier1
Dimension	:	15*15*15 cm
Date of casting	:	05/03/2023
MIX DESIGN STRENGTH	:	370 kg/cm^2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	05/03/2023	09/04/2023	28	8.468	121100	538	524
2	05/03/2023	09/04/2023	28	8.509	115200	512	
3	05/03/2023	09/04/2023	28	8.535	117300	521	

التوقيع:

الأمل للخرسانة الجاهزة
معملة المسارات
إدارة الجودة

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01009483673 - 01003930035 - 01004978497
E-mail: [illegible]

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٢٤٧١٣٥٥٨ - ٠٢
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
تليفون : ٢٩٨٤١١٣٦ / فاكس : ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - فاكس : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٠٩٤٨٣٦٧٣ - ٠١٠٠٣٩٣٠٠٣٥ - ٠١٠٠٤٩٧٨٤٩٧
E-mail: [illegible]

COMPRESSIVE STRENGTH OF
TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى رجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : Pile10- Pier1

Dimension : 15*15*15 cm

Date of casting : 05/03/2023

MIX DESIGN STRENGTH : 370 kg/cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	05/03/2023	12/03/2023	7	8.383	106200	472	421
2	05/03/2023	12/03/2023	7	8.448	84340	375	
3	05/03/2023	12/03/2023	7	8.531	93850	417	

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Egypt Medical Center Mall - Fourth Floor - Dr. Shirin St. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24016552
Mobile: 01010167777
New Cairo - Katamia - Part 82 - R
Tel.: 23841138 / Fax: 23840109

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date					Time		
				4/9/2022							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (11))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved			Plant & equipment available	
Mix Approved			Back up equipment available	
Setting out Survey Approved			Cast in items secure	
Temp Works Approved			Access route clear	
Formwork Checked			Work area safe to progress	
Start Time for Pour: 1:41 pm			Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			4/9/2022	A

BAUER EGYPT SYSTRA

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	6
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	4/9/2022
Pile No.	P11	Structure	bridge	Pile Cutoff Level	-
Pier	P2	Ground Level	67.15	Pile Toe Level	28.237
Theoretical Pile Length from caisson level	40.3 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	39.91 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	68.543
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	66.437
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.1

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585434.577	830478.191
Actual	585434.579	830478.177
BAUER Survivor		

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

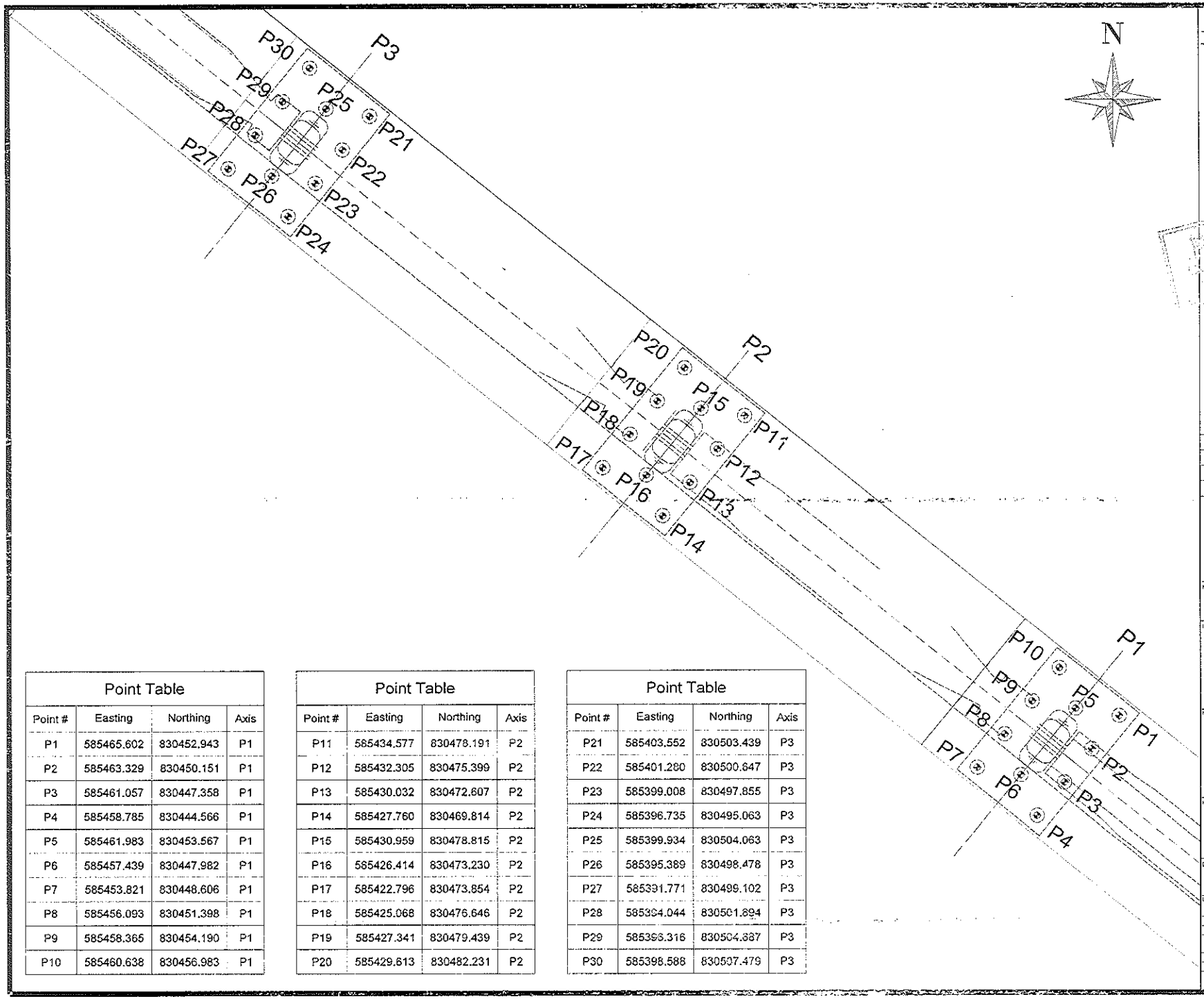
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.04
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	39
Sand Content %	Less than 4%	N/A	Less than 2%	1.50

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	4/9	7:35	10:30	Cleaning	-	-	-	
Install Cages	4/9	11:10	13:05	Pouring	4/9	13:41	14:45	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NO.	DATE	ENG.	REVISION
00	09/2022	K.A.	ISSUED FOR CONSTRUCTION

OWNER

المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED-RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER' CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR' CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
RC-048	09/2022	1 : 100
DRAWING BY	DESIGNED BY	CHECKED BY
Eng. Khaled Alaa	Eng. Mahmoud Saleh	
SUPERVISOR	APPROVED BY	
Dr. Mahmoud Lashteen	Eng. Javier Torres	

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى وادى النطرون)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile 11
Dimension	:	15*15*15 cm
Date of casting	:	05/09/2022
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	05/09/2022	03/10/2022	28	8.638	120100	534	514
2	05/09/2022	03/10/2022	28	8.515	110800	492	
3	05/09/2022	03/10/2022	28	8.587	115800	515	

التوقيع:

الأستشارى

جودة المشروع

مهندس/أحمد عرابى

مدير المصنع

Head Office: Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Plan 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B11

Dimension : 15*15*15 cm

Date of casting : 04/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	04/09/2022	11/09/2022	7	8.735	103700	461	437
2	04/09/2022	11/09/2022	7	8.576	102200	454	
3	04/09/2022	11/09/2022	7	8.390	89370	397	

التوقيع:
مهندس / أحمد عرابى
مدير المصنع

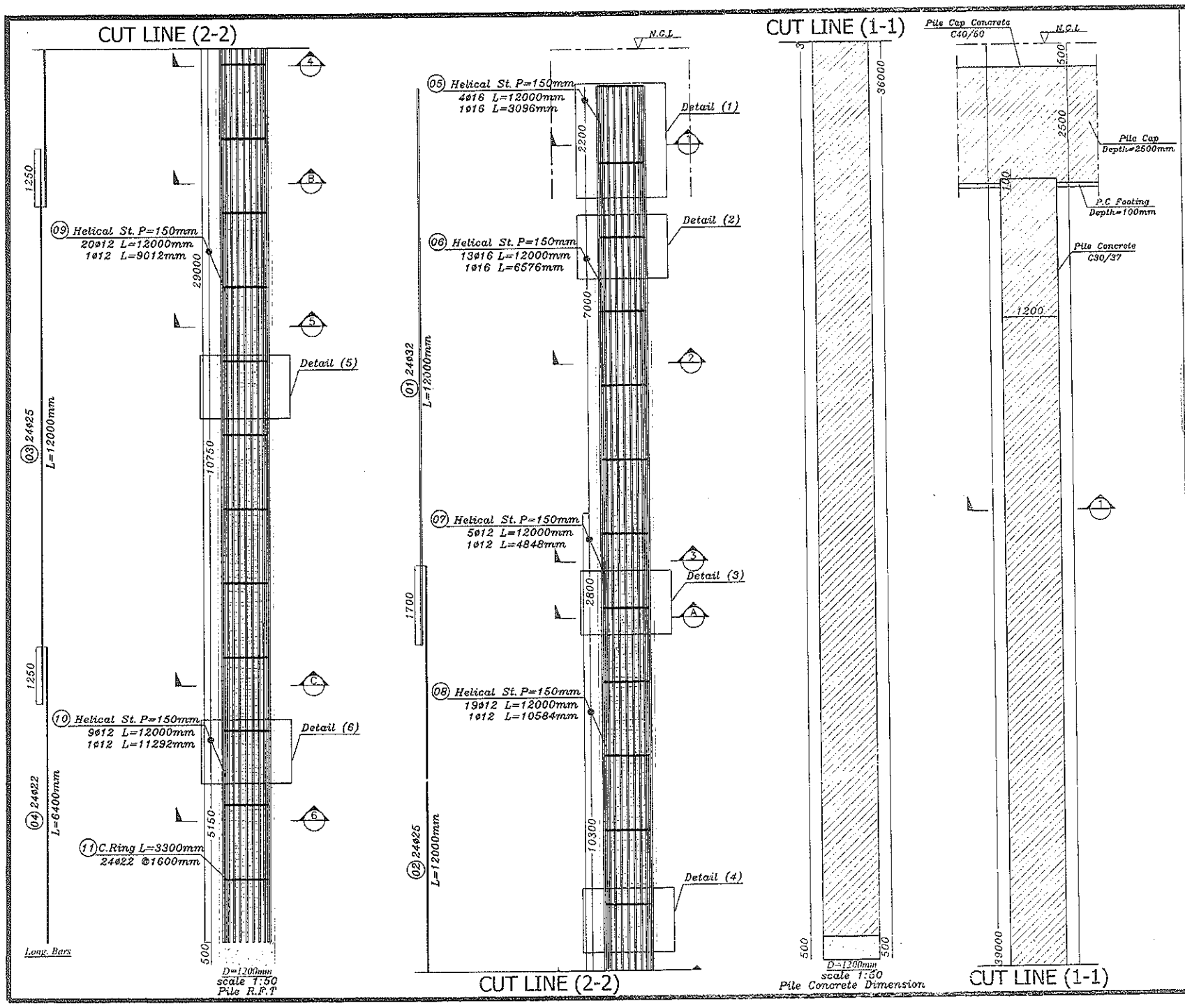
مركز هليوبوليس

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

تامر سالم

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497
E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٠٠٦٠٣٣٨٦٠ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٢٢٧٨٥٥٥٩٦
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٠٤٩٧٦٤٩٧ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٢٨٤٥٩٦٧٣



GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All dimensions should be taken as specified
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Clear Cover 75mm
- Lap Splice Between Helical Stirrup (5) and (6) is 640mm
- Lap Splice Between Helical Stirrup (9) and (10) is 640mm
- Lap Splice Between Helical Stirrup (11) and (10) is 480mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NDT-E01	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-210-002-PIR-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT

Anti House of Engineering

NO.	DATE	ENG.	REVISION
0	[illegible]	M&S	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

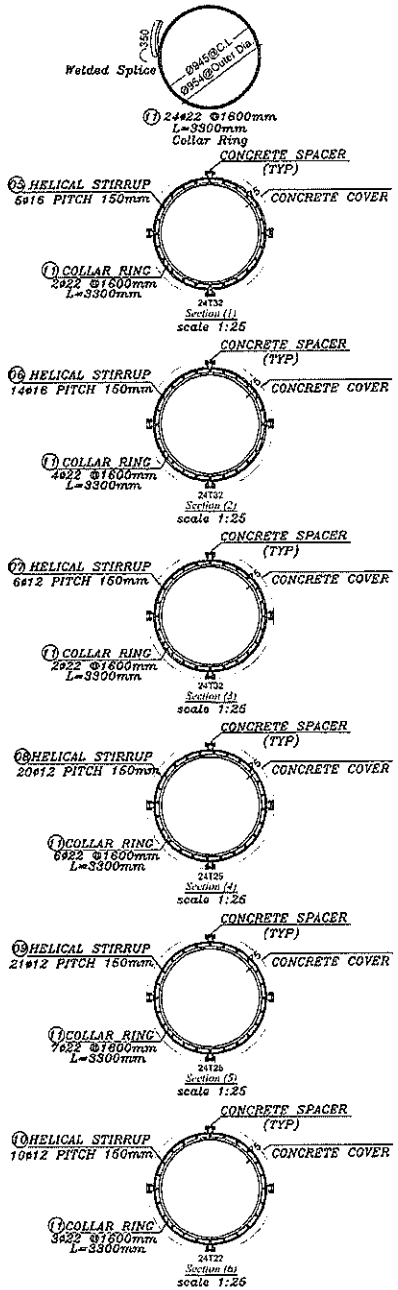
FHECOR Ingenieros Consultores

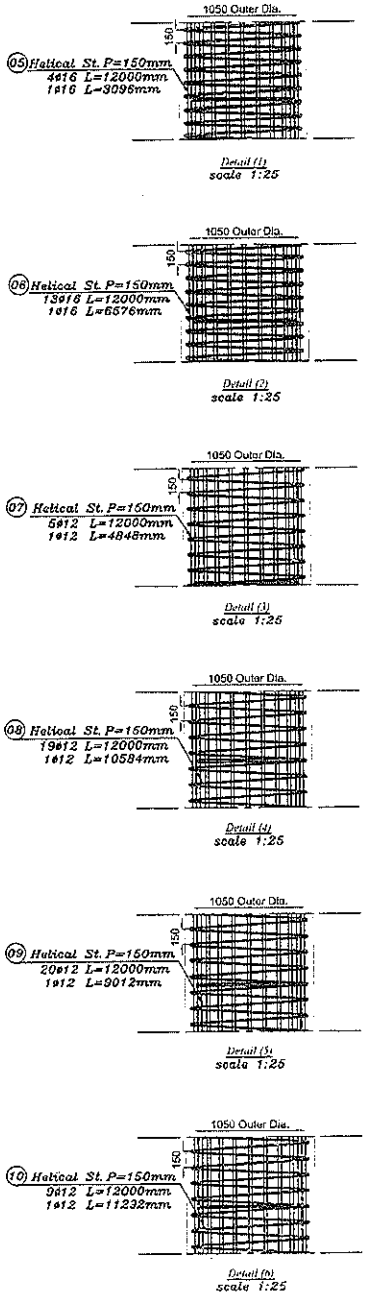
MAIN CONTRACTOR :

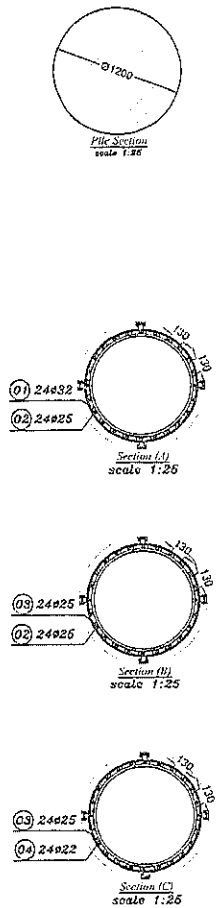
DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-CC-110-001-PIR-E02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Alshaer	ENG. Mustafa Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashen		Eng. Jaber Turkia







GENERAL NOTES

- All dimensions in millimeters
- [illegible]
- Pile Concrete Cover : Pile Cap Concrete Cover
- Concrete Cover : 75mm
- Lap Splice Between Helical Stirrup (05) and (06) 1.5 Pitch
- Lap Splice Between Helical Stirrup (06) and (07) 1.5 Pitch
- Lap Splice Between Helical Stirrup (08) and (09) 1.5 Pitch

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-810-001-NGE-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-910-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	[illegible]	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE
HSRE-V001-SD-910-002-PIE-E00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Mustafaah Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Leghem	Eng. Jawad Tawfiq	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering
Tel. +2027570435
CC1343
10

GENERAL NOTES:

- All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSHE-V001-CC-010-001-N01-E00 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION

HSHE-V001-CC-010-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	31-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1569

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :
الشركة القابضة

DWG. TITLE.
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSHE-V001-SD-010-003-PIE-E00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Mamdouh Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Eweisa		Eng. Andre Tawfik

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date				Time			
				14/9/2022							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (12))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved		Plant & equipment available		
Mix Approved		Back up equipment available		
Setting out Survey Approved		Cast in items secure		
Temp Works Approved		Access route clear		
Formwork Checked		Work area safe to progress		
Start Time for Pour: 6:15 pm		Concrete Volume: 51 m3		

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			14/9/2022	A

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	16
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	14/9/2022
Pile No.	P12	Structure	bridge	Pile Cutoff Level	-
Pier	P2	Ground Level	67.15	Pile Toe Level	28.237
Theoretical Pile Length from caisson level	40.18 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	38.91 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	68.42
Act. Drilling Length	41 m	Act. Concrete Q	51m³	Steel Top Level	66.437
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.98

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585432.305	830475.399
Actual	585432.308	830475.409
BAUER Survivor		

Geotechnical Log

0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

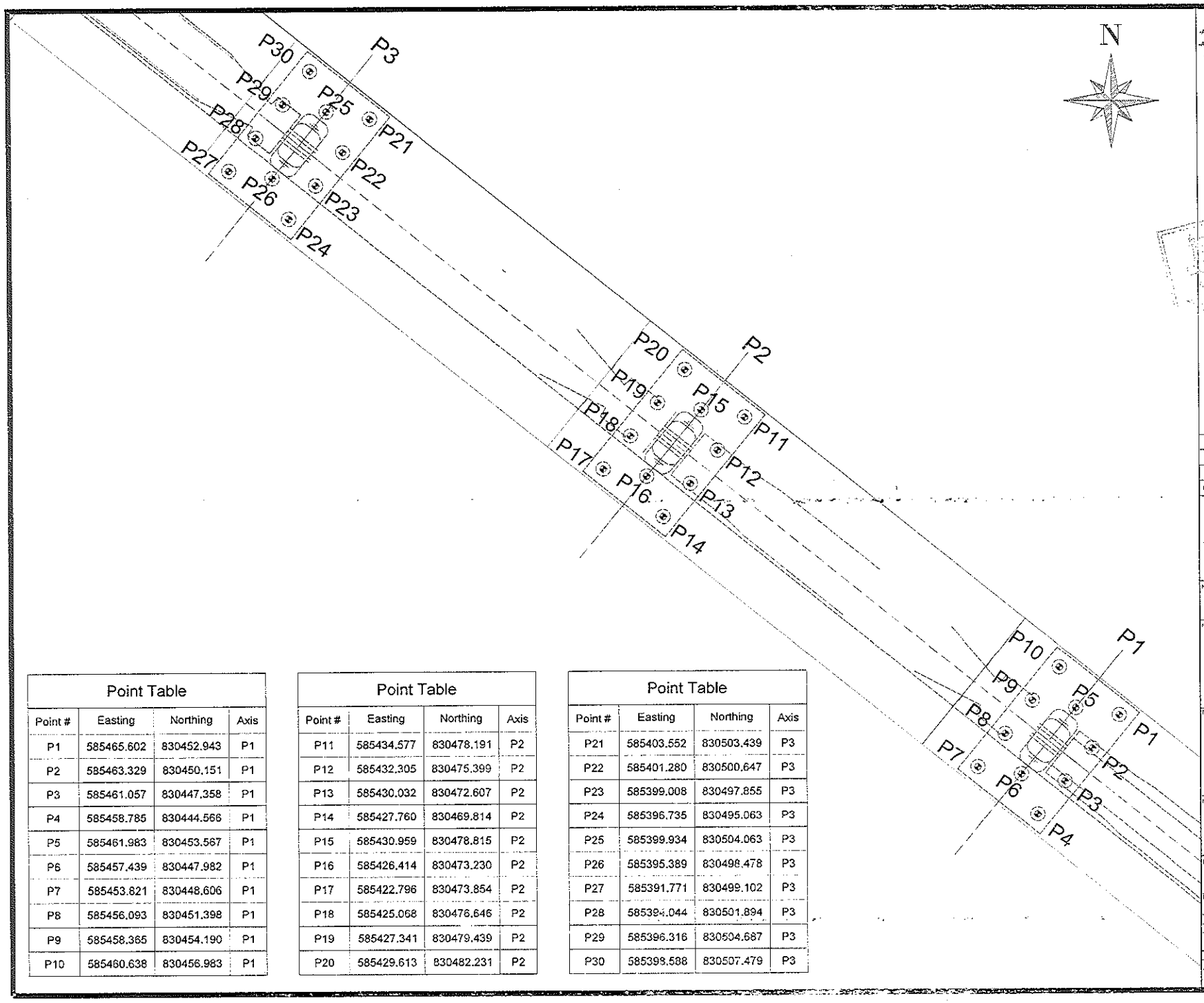
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.03
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	38
Sand Content %	Less than 4%	N/A	Less than 2%	1.50

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	14/9	11:30	14:21	Cleaning	-	-	-	
Install Cages	14/9	13:37	17:26	Pouring	14/9	18:15	19:20	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

وزارة النقل

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG. NO.	DATE	SCALE
PCO-06	08/2022	1 : 150
DRAWN BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mamdouh Saleh	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashani	Eng. Javier Terron

At Amal Ready mix

الأمل
ش.م.م
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B12

Dimension : 15*15*15 cm

Date of casting : 14/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	14/09/2022	12/10/2022	28	8.481	121100	538	566
2	14/09/2022	12/10/2022	28	8.532	126800	564	
3	14/09/2022	12/10/2022	28	8.564	134200	596	

التوقيع:

مهندس / أحمد عرابى
مدير المصنع

الأستشارى

جودة المشروع

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر- مدينة نصر- المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B12

Dimension : 15*15*15 cm

Date of casting : 14/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	14/09/2022	21/09/2022	7	8.706	93270	415	496
2	14/09/2022	21/09/2022	7	8.652	115900	515	
3	14/09/2022	21/09/2022	7	8.609	125300	557	

التوقيع:
مهندس / أحمد عرابى
مدير المصنع

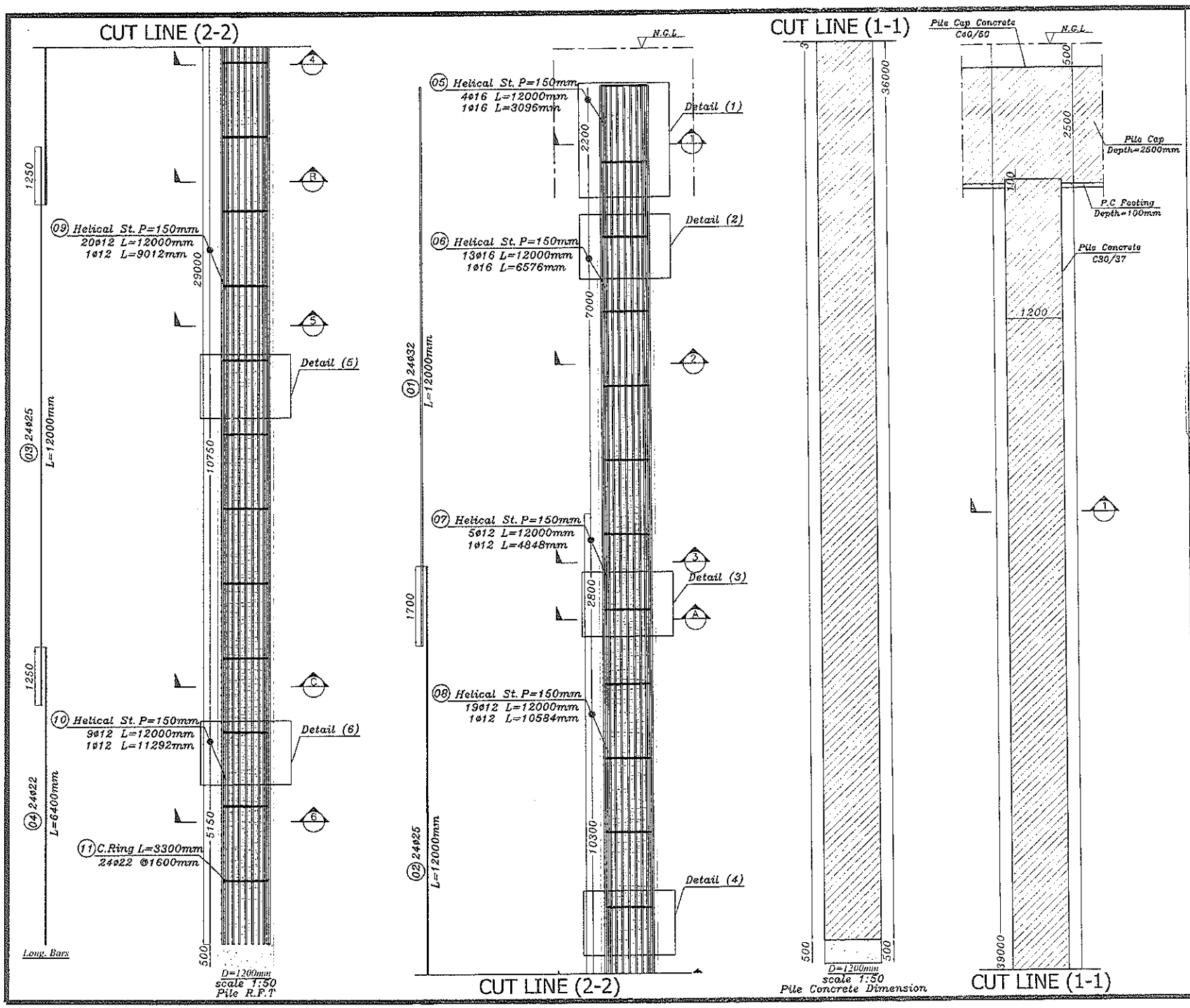
الأستشارى

جودة المشروع

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر / تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٢٦٣٠١٤٥ / ٠٤٨ - ف : ٢٦٣٠١٤٠ / ٠٤٨
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com



GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All dimensions shall be taken on site
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete Cover 75mm
- Lap Splice Between Helical Stirrup (B) and (D) = 1000mm
- Lap Splice Between Helical Stirrup (B) and (C) = 640mm
- Lap Splice Between Helical Stirrup (B) and (A) = 480mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E01	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-210-002-PIF-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel: +20 2 75 17 655

NO.	DATE	ENG.	REVISION
0	31-07-2022	AMS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1909

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

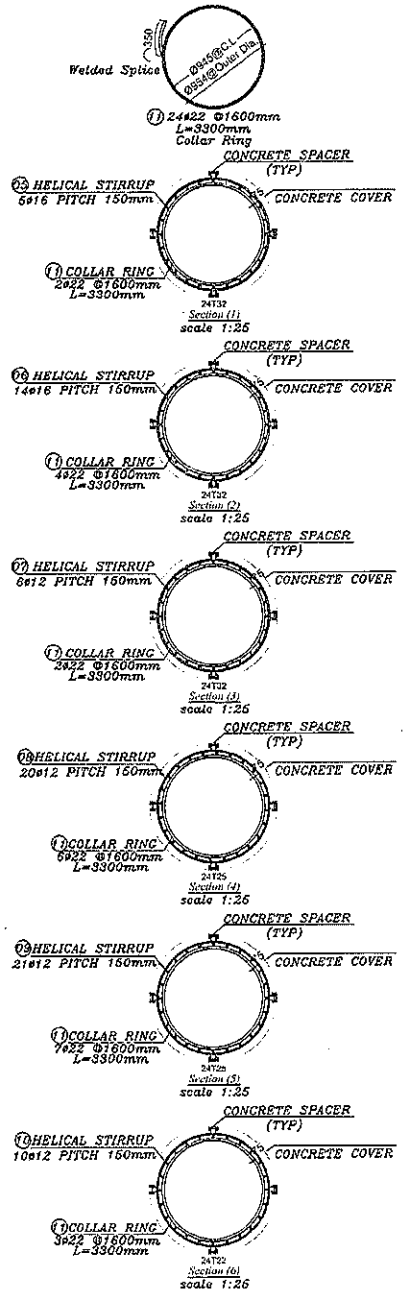
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

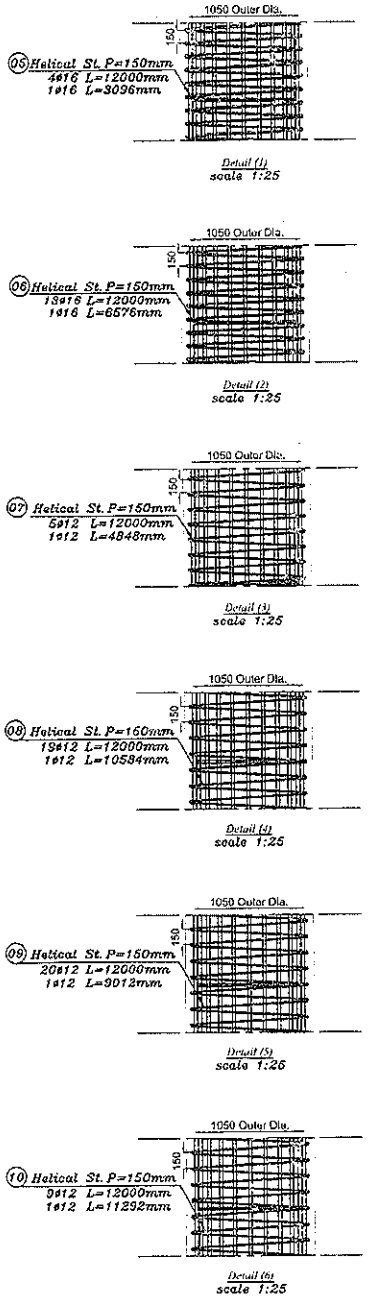
MAIN CONTRACTOR :

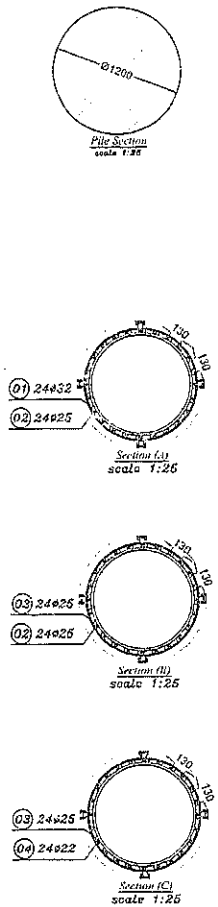
DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-210-003-PIF-R00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdullah Mohsen	ENG. Hamdouh Saleh

SUPERVISOR:	APPROVED BY:
DR. Mahmoud Gamdoun	Eng. Javier Tuskov







GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure scale drawing. All dimensions should be read or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C30/37
- Concrete cover 75mm
- Lap Splice between Helical 20mm (Ø) and (Ø) 640mm
- Lap Splice between Helical 25mm (Ø) and (Ø) 640mm
- Lap Splice between Helical 32mm (Ø) and (Ø) 1280mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	[illegible]	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1019

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CAROLT

المالك :

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-50-110-002-PIE-E01	09-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Gabal Fahmy	ENG. Abdullah Mahsen	ENG. Mamdouh Salah
		mag

SUPERVISION:	APPROVED BY:
DR. Mohamed Lashiwa	Eng. Javier Tusiion

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date				Time			
				19/9/2022							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (13))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 330 kg/cm^2
PRESTART CHECKLIST				
IR Approved			Plant & equipment available	
Mix Approved			Back up equipment available	
Setting out Survey Approved			Cast in items secure	
Temp Works Approved			Access route clear	
Formwork Checked			Work area safe to progress	
Start Time for Pour: 4 pm			Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			19/9/2022	A

BAUER EGYPT | SYSTRA | ACE CONSULTING ENGINEERS MOHARRAM BAKHOUM | وزارة النقل

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	20
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	19/9/2022
Pile No.	P13	Structure	bridge	Pile Cutoff Level	-
Pier	P2	Ground Level	67.15	Pile Toe Level	28.237
Theoretical Pile Length from caisson level	40.08 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	38.91 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	68.322
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	66.437
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.88

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585430.032	830472.607
Actual	585430.043	830472.625
BAUER Survivor		

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

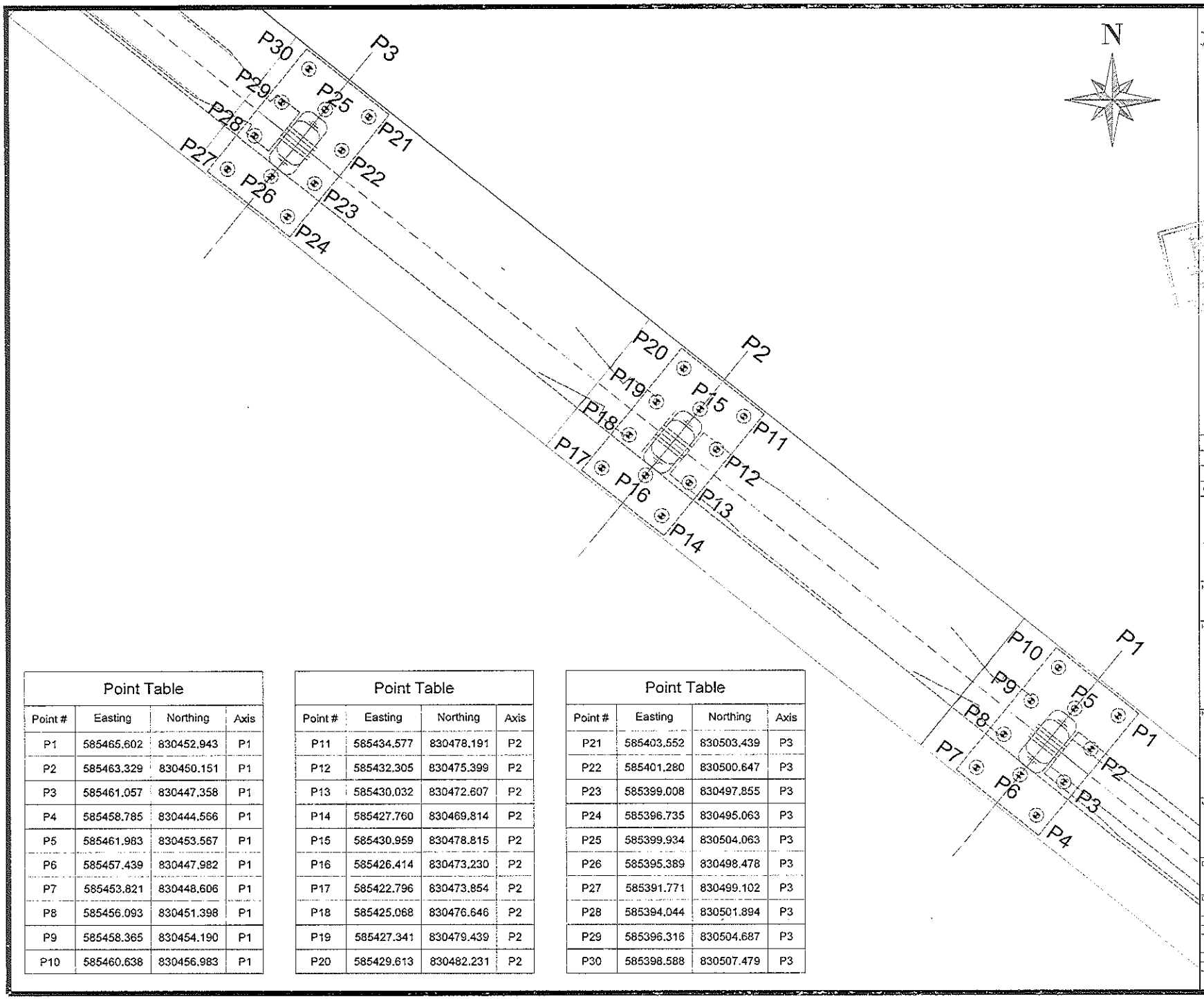
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.06
Viscosity(Sec.)	30:70 Sec.	33	≤90 Sec.	37
Sand Content %	Less than 4%	N/A	Less than 2%	1.50

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	19/9	6:00	9:00	Cleaning	-	-	-	
Install Cages	19/9	12:00	15:10	Pouring	19/9	16:00	17:00	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NOTES:

- ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
- ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG. NO.	DATE	SCALE
PCC-00	08/2022	1 : 150
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mandouh Sulieh	

SUPERVISOR	APPROVED BY
DR. Mahmoud Leishewi	Eng. Samer Tarraf

Al Amal Ready mix

الأمل
للخرسانة الجاهزة ش.م.م.
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B13

Dimension : 15*15*15 cm

Date of casting : 19/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	19/09/2022	26/09/2022	7	8.505	91240	406	466
2	19/09/2022	26/09/2022	7	8.546	113800	506	
3	19/09/2022	26/09/2022	7	8.658	109400	486	

التوقيع:
مهندس / أحمد عرابى
مدير المصنع

الأستشارى

جودة المشروع
مركز هليوبوليس

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر/ تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B13

Dimension : 15*15*15 cm

Date of casting : 19/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	19/09/2022	17/10/2022	28	8.498	136400	606	633
2	19/09/2022	17/10/2022	28	8.537	142500	633	
3	19/09/2022	17/10/2022	28	8.599	148600	660	

التوقيع:

الأستشارى

جودة المشروع

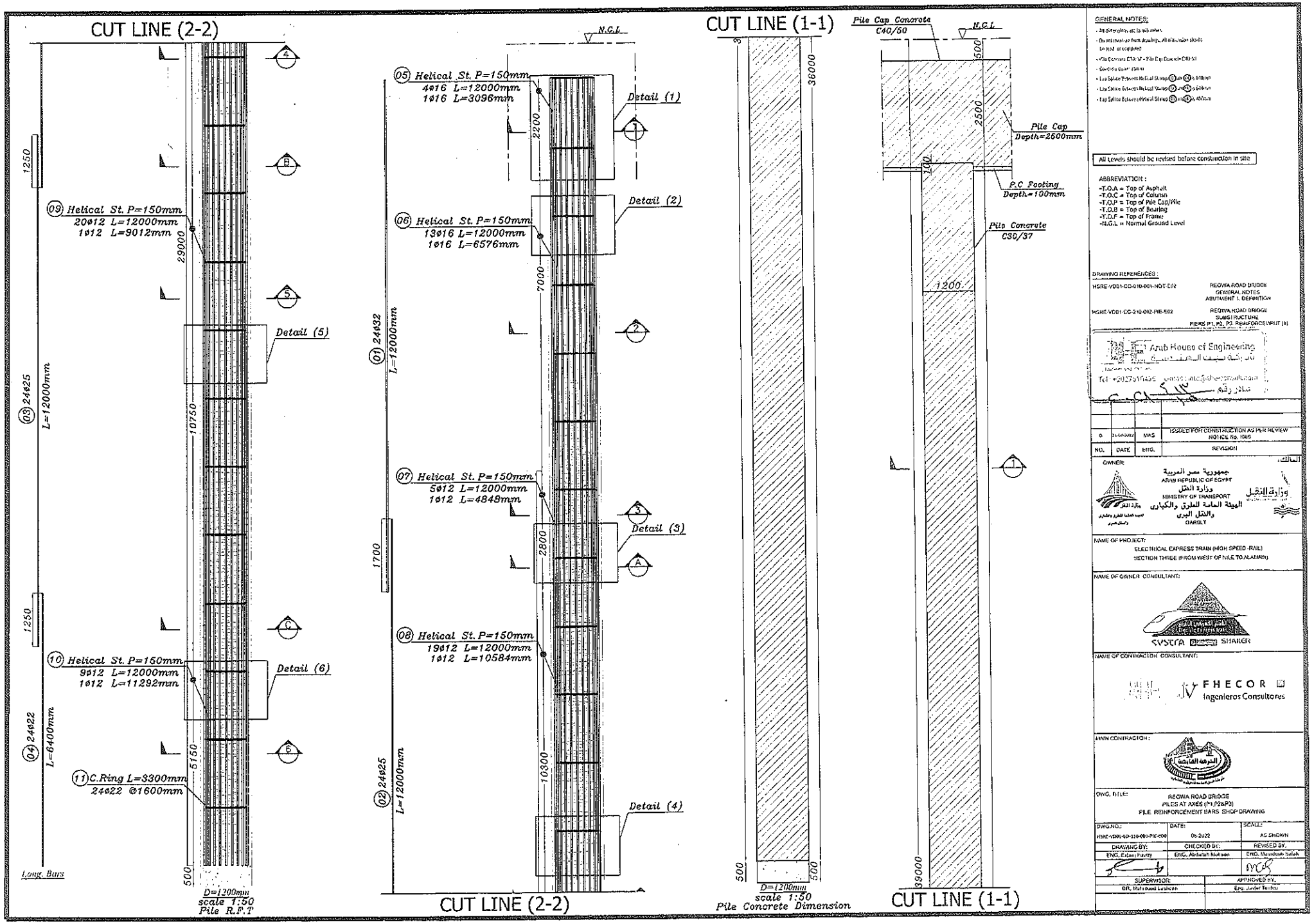
مهندس / احمد عرابى
مدير المصنع

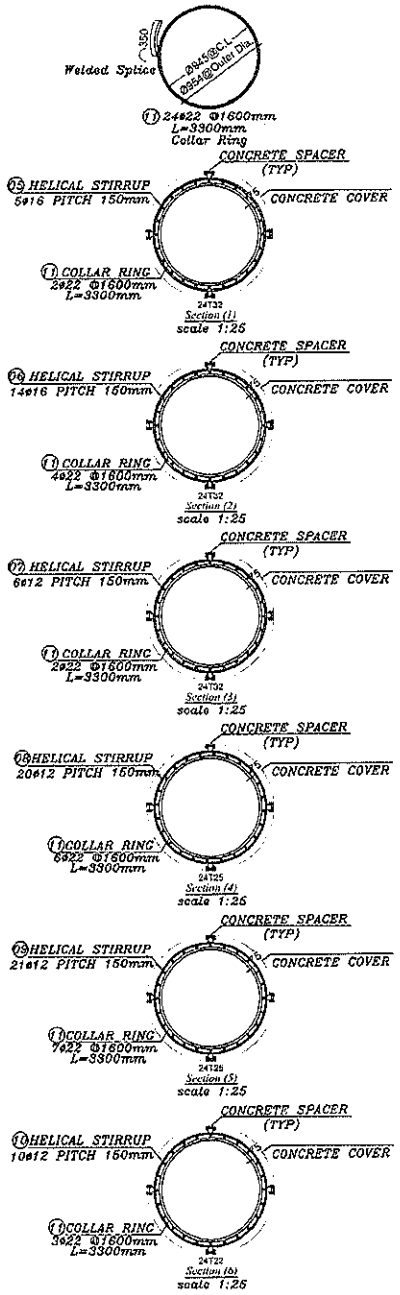
الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

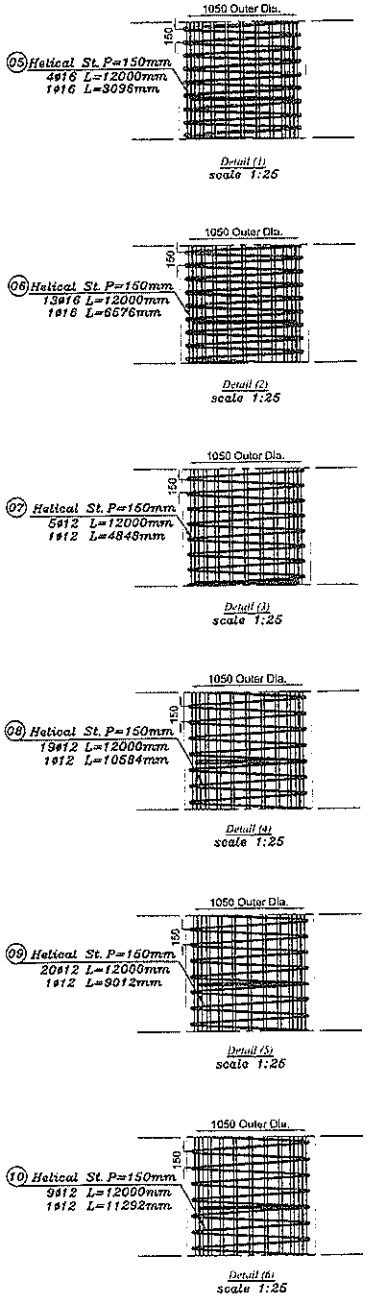
Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

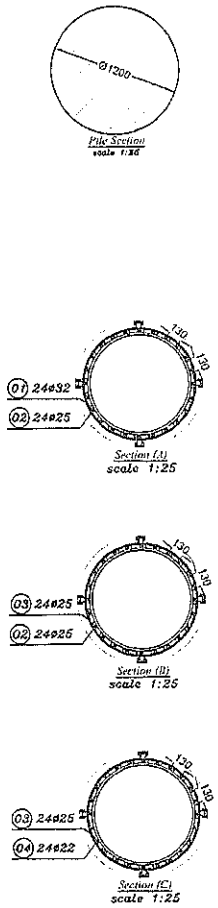
الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com


CUT LINE (2-2)
09 Helical St. P=150mm
20ø12 L=12000mm
1ø12 L=9012mm
10 Helical St. P=150mm
9ø12 L=12000mm
1ø12 L=11292mm
11 C.Ring L=3300mm
24ø22 @1600mm
Detail (5)
Detail (6)
03 24ø25 L=12000mm
04 24ø22 L=6400mm
Long. Bars
D=1200mm
scale 1:50
Pile R.F.T
05 Helical St. P=150mm
4ø16 L=12000mm
1ø16 L=3096mm
06 Helical St. P=150mm
13ø16 L=12000mm
1ø16 L=6576mm
07 Helical St. P=150mm
5ø12 L=12000mm
1ø12 L=4848mm
08 Helical St. P=150mm
19ø12 L=12000mm
1ø12 L=10584mm
Detail (1)
Detail (2)
Detail (3)
Detail (4)
01 24ø32 L=12000mm
02 24ø25 L=12000mm
N.G.L
CUT LINE (2-2)
CUT LINE (1-1)
Pile Cap Concrete C40/60
Pile Cap Depth=2500mm
P.C Footing Depth=100mm
Pile Concrete C30/37
D=1200mm
scale 1:50
Pile Concrete Dimension
CUT LINE (1-1)
GENERAL NOTES:
All Levels should be revised before construction in site
ABBREVIATION :
-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level
DRAWING REFERENCES :
REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMPUT (1)
Arab House of Engineering
NO. DATE ENG. REVISION
0 MAS ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1565
OWNER:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores
MAIN CONTRACTOR :
DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING
DWG.NO.: HSRE-V001-SO-110-001-PIE-E00
DATE: 06-2022
SCALE: AS SHOWN
DRAWING BY: ENG. Eslam Fawzy
CHECKED BY: ENG. Abdallah Mohsen
REVISED BY: ENG. Mundhoor Salah
SUPERVISOR: DR. Mahmoud Lashen
APPROVED BY: Eng. Jaber Tantoy







GENERAL NOTES:

- All dimensions are in millimeters.
- Do not measure drawings by scaling. All dimensions should be taken from drawings.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice between Helical Stirrup (05) and (06) is 600mm
- Lap Splice between Helical Stirrup (06) and (07) is 450mm
- Lap Splice between Helical Stirrup (08) and (09) is 450mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-910-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-910-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	01-07-2022	EMG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE, No. 1000

OWNER: المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO AL AMIRIYA)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-50-110-002-PIE-R06	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Kabab Fathy	ENG. Abdullah Mohsen	ENG. Mamdouh Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashaw	Eng. Javier Turach	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62

Total 5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering
شركة بيت العمارة الهندسية
Tel: +2002501430

GENERAL NOTES:
- All dimensions are in millimeters
- Do not re-use bent bars. Bars should be kept straight.
- Pile Concrete Cover : Pile Cap Concrete Cover
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup @ and @ : 640 mm
- Lap Splice Between Helical Stirrup @ and @ : 640mm
- Lap Splice Between Helical Stirrup @ and @ : 640mm

All Levels should be revised before construction in site

ABBREVIATION :
-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

DRAWING REFERENCES :
HSRE-V001-CC-010-001-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTUCN C 1. DEFINITION
HSRE-V001-CC-210-002-PIE-E30 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3. REINFORCEMENT (1)

NO.	DATE	ENG	REVISION
0	31-08-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE NO. 1069

OWNER: المالك:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
وزارة النقل

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :
الشركة الفاتحة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG. NO.:	DATE:	SCALE:
HSRE-V001-SD-110-003-PIE-E30	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVIEWED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Mamdouh Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashein		Eng. Jindar Tawfiq

REQUEST to POUR CONCRETE

Contractor Company				Designer Company						
Issued by Contractor	Name	Sign		Date				Time		
				5/9/2022						
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة									

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (14))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved			Plant & equipment available	
Mix Approved			Back up equipment available	
Setting out Survey Approved			Cast in items secure	
Temp Works Approved			Access route clear	
Formwork Checked			Work area safe to progress	
Start Time for Pour: 7:02 pm			Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				**A**
QA/QC				**A**
Employer Representative			5/9/2022	A

BAUER EGYPT | SYSTRA | A&S CONSULTING ENGINEERS MOHARRAM BAKHOUM | وزارة النقل

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	8
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	5/9/2022
Pile No.	P14	Structure	bridge	Pile Cutoff Level	-
Pier	P2	Ground Level	67.15	Pile Toe Level	28.237
Theoretical Pile Length from caisson level	40.21 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	38.91 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	68.453
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	66.437
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2 m

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585427.760	830469.814
Actual	585427.772	830469.817
BAUER Survivor		

Geotechnical Log

0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

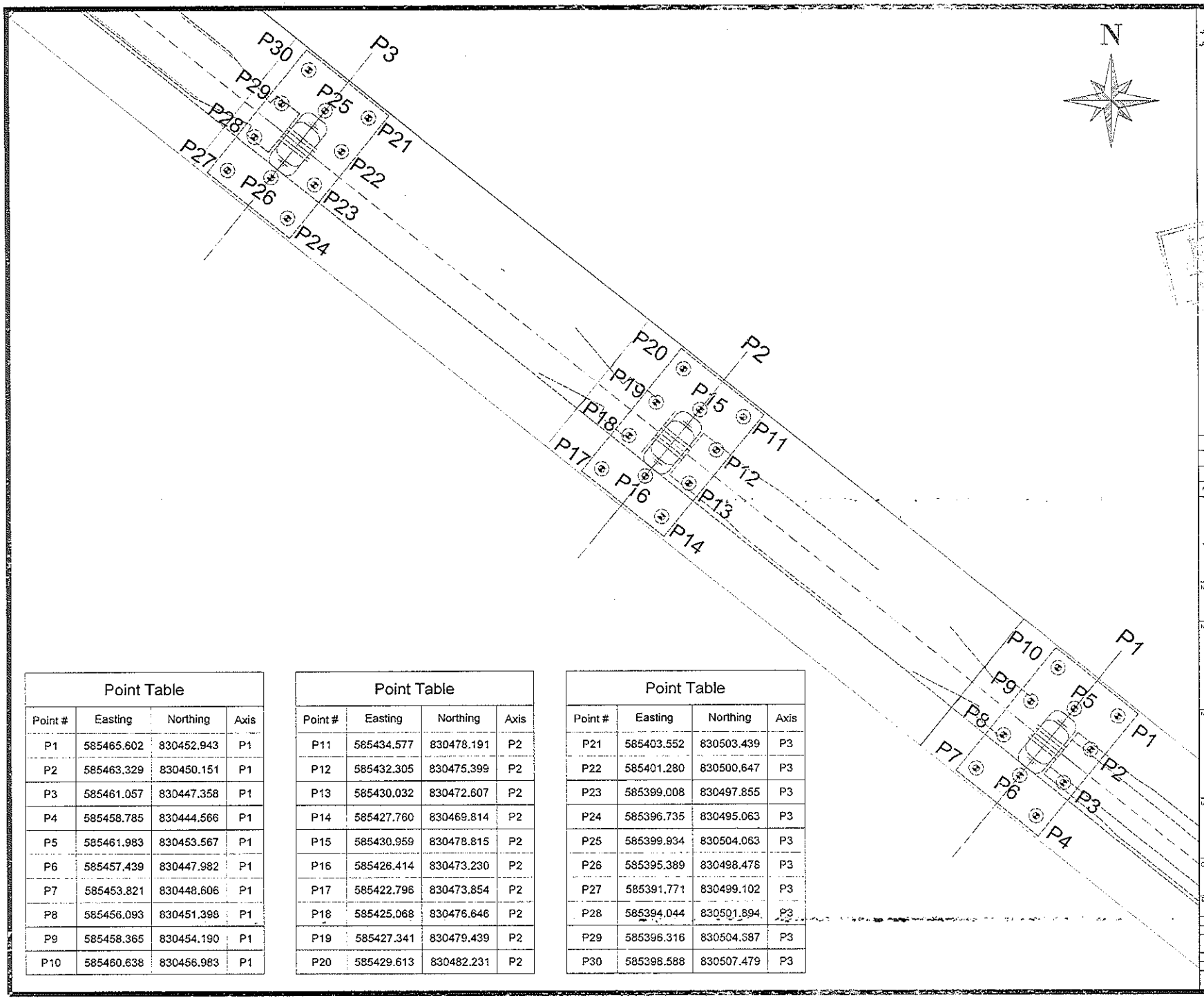
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.03	Less Than 1.5	1.06
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	40
Sand Content %	Less than 4%	N/A	Less than 2%	1

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	5/9	10:22	15:28	Cleaning	-	-	-	
Install Cages	5/9	16:50	18:07	Pouring	5/9	19:02	20:05	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARELT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG NO.	DATE	SCALE
PC0-60	08/2022	1 : 110
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mamdouh Saleh	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashwin	Eng. Jawad Tohico

Point Table

Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table

Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table

Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى وادى النطرون)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	خازوق B14
Dimension	:	15*15*15 cm
Date of casting	:	05/09/2022
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	05/09/2022	12/09/2022	7	8.440	103700	461	454
2	05/09/2022	12/09/2022	7	8.580	107300	477	
3	05/09/2022	12/09/2022	7	8.382	95780	426	

التوقيع:

مهندس / أحمد عرابى
مدير المصنع

مركز هليوبوليس

Al Amal
الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : B14 خازوق

Dimension : 15*15*15 cm

Date of casting : 04/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	04/09/2022	02/10/2022	28	8.647	121900	542	524
2	04/09/2022	02/10/2022	28	8.659	117600	523	
3	04/09/2022	02/10/2022	28	8.477	114000	507	

جودة المشروع

الأستشارى

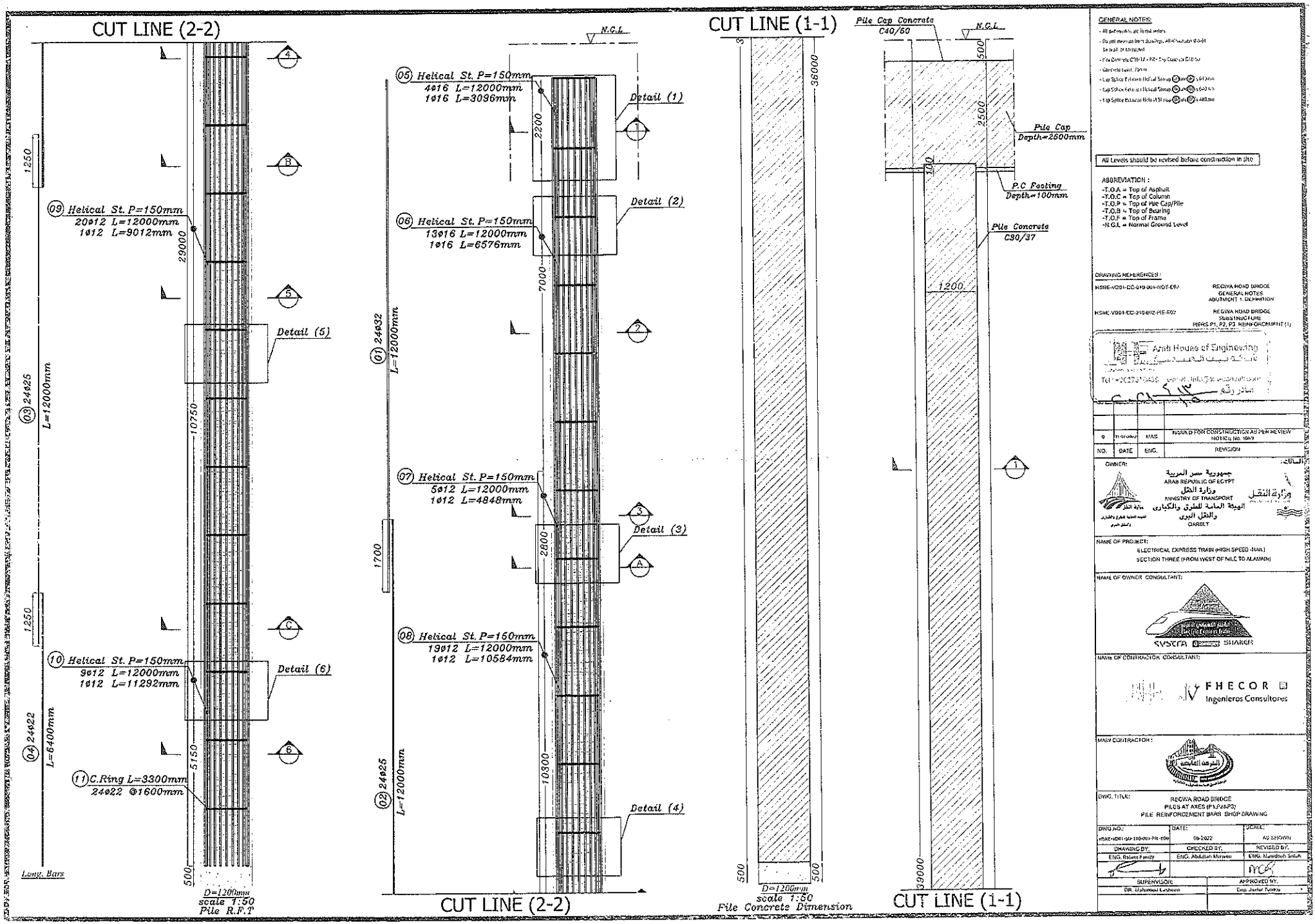
التوقيع:

مهندس / أحمد عرابى
مدير المصنع

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com



GENERAL NOTES:

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E01	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-210-002-HE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3 REINFORCEMENT (1)

Arab Houses of Engineering

Tel: +20 2 7 9 4 5 5

NO.	DATE	ENG.	REVISION
0	11-01-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1049

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHARGS

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

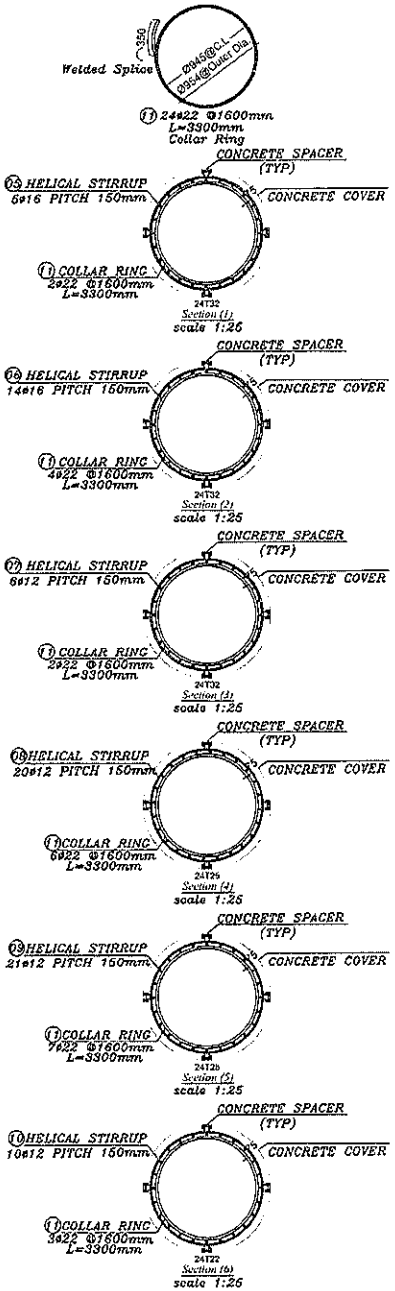
MAIN CONTRACTOR:

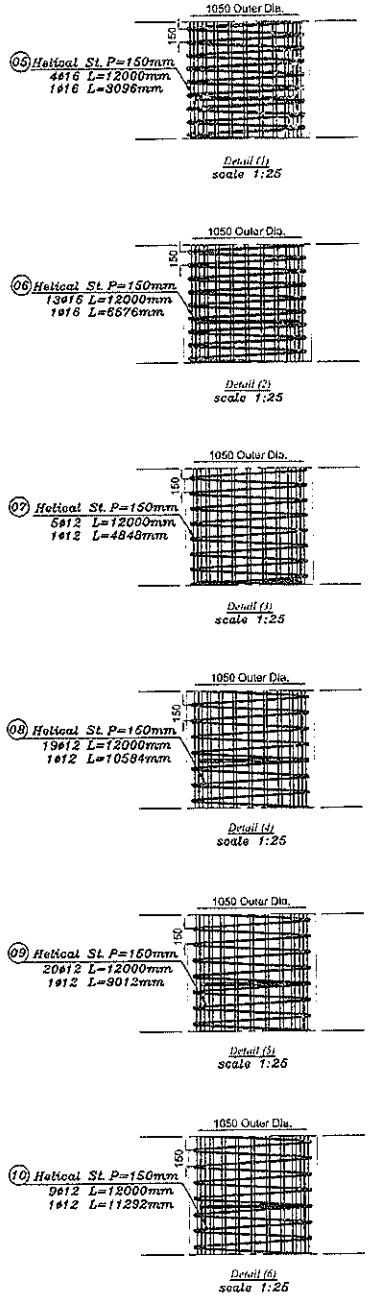
DWG. TITLE:

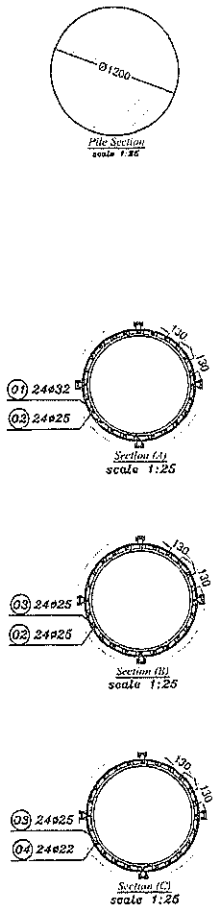
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SH-110-001-PR-E06	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Islam Fawzy	ENG. Abdullah Morsiea	ENG. Mandouh Sidah

SUPERVISOR	APPROVED BY:
DR. Mahmoud Lashiaa	Eng. Jaafar Tawfiq







GENERAL NOTES:

- All dimensions are in millimeters
- Do not remove bars without approval. All dimensions should be revised before construction.
- Pile Concrete Cover = Pile Cap Concrete Cover = 50
- Concrete Class 35 Mpa
- Lap Splice Between Helical Stirrup (A) and (B) is 600mm
- Lap Splice Between Helical Stirrup (B) and (C) is 600mm
- Lap Splice Between Helical Stirrup (A) and (C) is 600mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-910-001-HOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-910-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel: +20278104185

NO.	DATE	ENG.	REVISION
0	[illegible]	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1909

OWNER:

المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SD-310-002-PIE-E02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Farag	ENG. Abdullah Mohsen	ENG. Mustafa Salah
		mas
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashen		Dr. Ahmed Tarkan

REQUEST to POUR CONCRETE

Contractor Company				Designer Company						
Issued by Contractor	Name	Sign		Date				Time		
				11/9/2022						
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة									

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (15))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved		Plant & equipment available		
Mix Approved		Back up equipment available		
Setting out Survey Approved		Cast in items secure		
Temp Works Approved		Access route clear		
Formwork Checked		Work area safe to progress		
Start Time for Pour: 9:20 pm		Concrete Volume: 51 m3		

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			11/9/2022	A

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	12
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	11/9/2022
Pile No.	P15	Structure	bridge	Pile Cutoff Level	-
Pier	P2	Ground Level	67.15	Pile Toe Level	28.237
Theoretical Pile Length from caisson level	40.16 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	38.91 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	68.396
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	66.437
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.96

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585430.959	830478.815
Actual	585430.951	830478.827
BAUER Survivor		

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

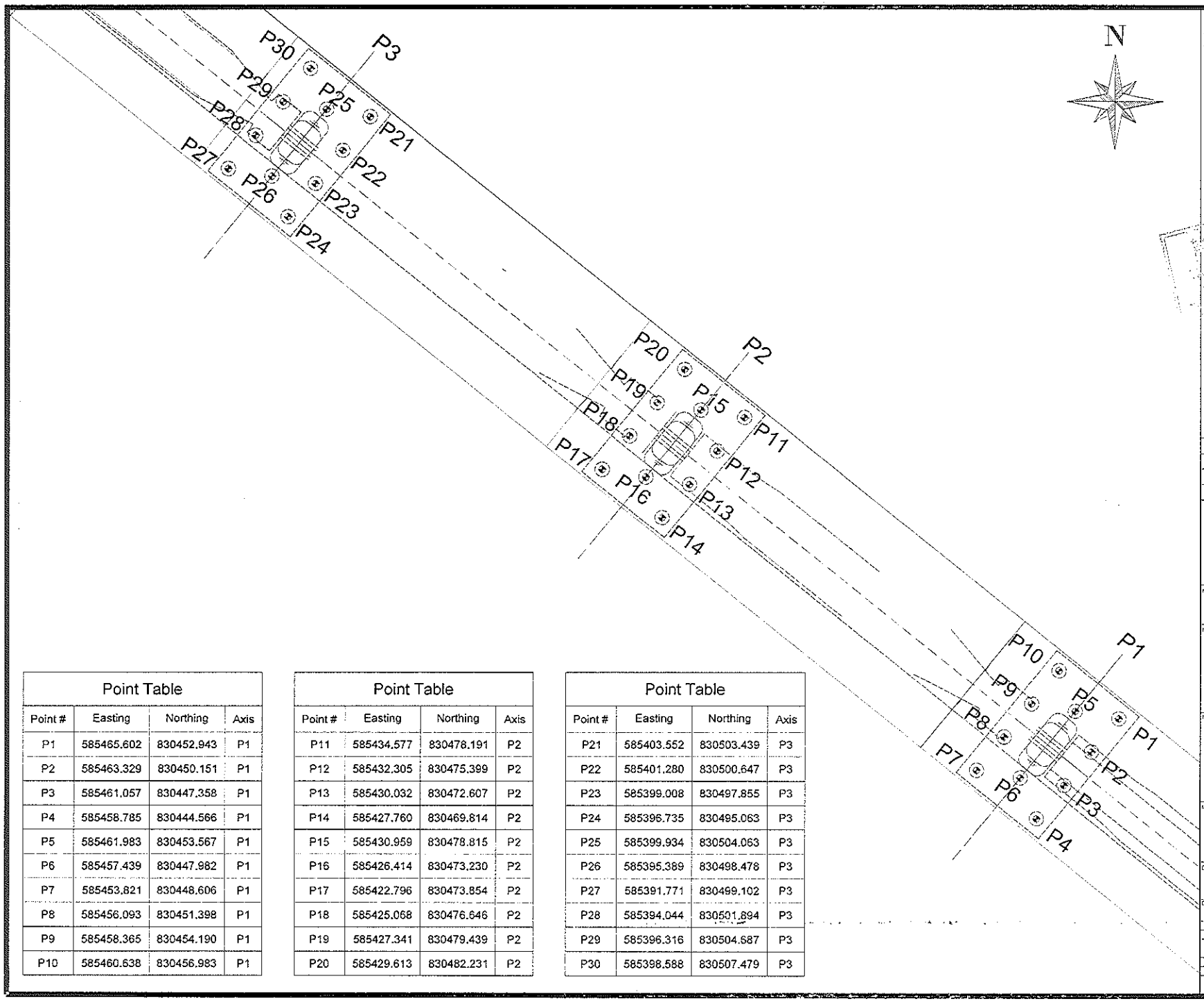
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.03
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	38
Sand Content %	Less than 4%	N/A	Less than 2%	1.50

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	11/9	14:15	19:00	Cleaning	-	-	-	
Install Cages	11/9	20:00	20:50	Pouring	11/9	21:20	22:30	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NO.	DATE	ENG.	REVISION
00	08/2022	KA	ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARELT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED-RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG. NO.	DATE	SCALE
PCO-00	08/2022	1 : 1:0
DRAWING BY	DESIGNED BY	CHECKED BY
Eng. Khaled Alaa	Eng. Mahfouzah Salah	

SUPERVISOR	APPROVED BY
Dr. Mahmoud Lashwah	Eng. Jaber Tawfiq

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B15

Dimension : 15*15*15 cm

Date of casting : 11/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	11/09/2022	09/10/2022	28	8.456	127100	565	580
2	11/09/2022	09/10/2022	28	8.574	127900	568	
3	11/09/2022	09/10/2022	28	8.521	136800	608	

التوقيع:

الأستشارى

جودة المشروع

مهندس / أحمد عرابى
مدير المصنع

الأمل للخرسانة الجاهزة
محطة ال

Head Office : Egyptian Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B15

Dimension : 15*15*15 cm

Date of casting : 11/09/2022

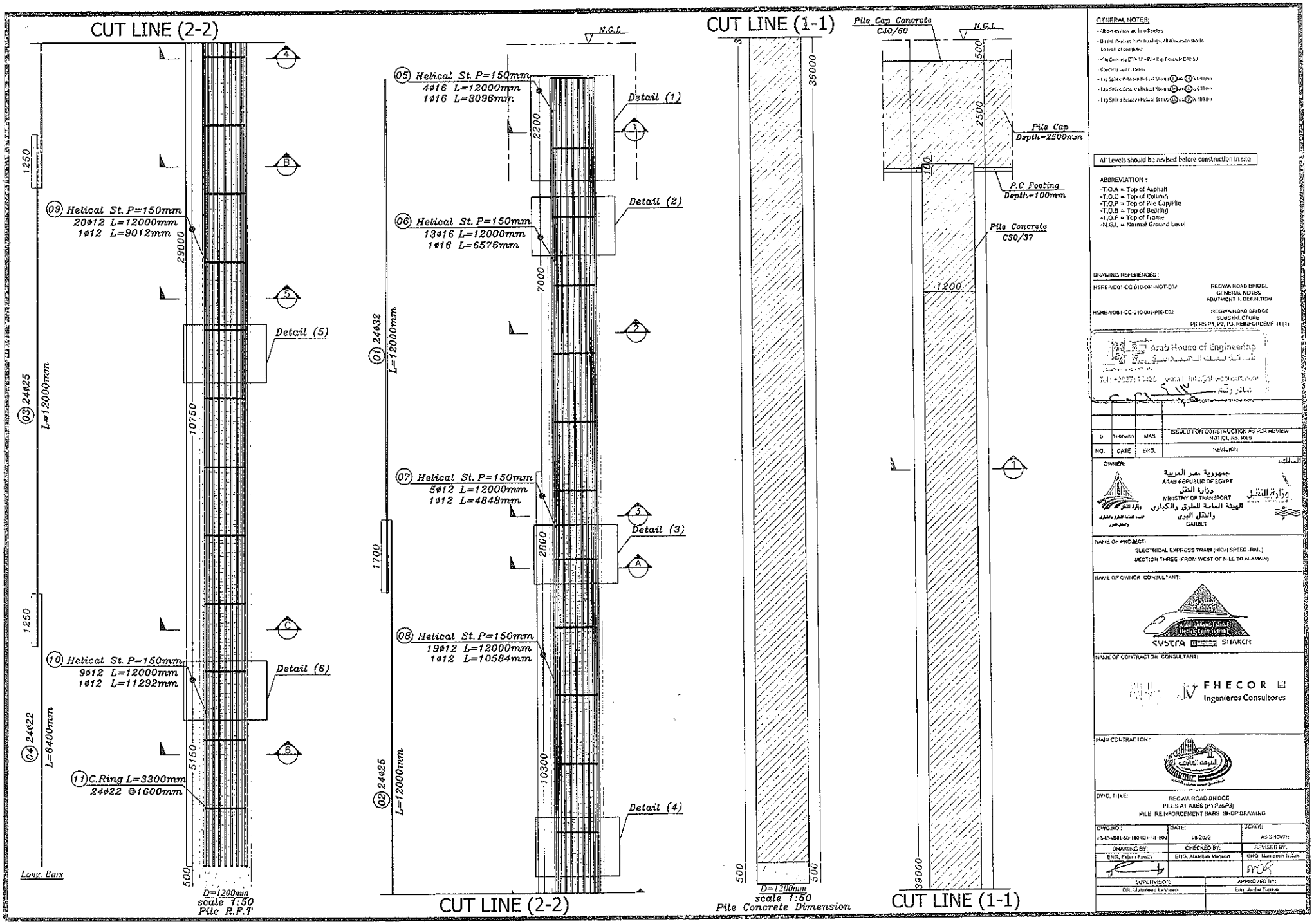
MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	11/09/2022	18/09/2022	7	8.501	108100	480	452
2	11/09/2022	18/09/2022	7	8.299	93530	416	
3	11/09/2022	18/09/2022	7	8.461	103800	461	

التوقيع:

مهندس / أحمد عرابى
مدير المصنع

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة



GENERAL NOTES:

- All dimensions are in millimeters
- Do not scale from drawings. All dimension should be kept at confirmed
- Pile Concrete C70/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Bars in Helical Stirrup (B) and (D) 1.4 Mm
- Lap Splice Bars in Helical Stirrup (D) and (E) 1.4 Mm
- Lap Splice Bars in Helical Stirrup (B) and (A) 1.4 Mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-D02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-210-002-PIR-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3: REINFORCEMENT (1)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	31-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARDLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

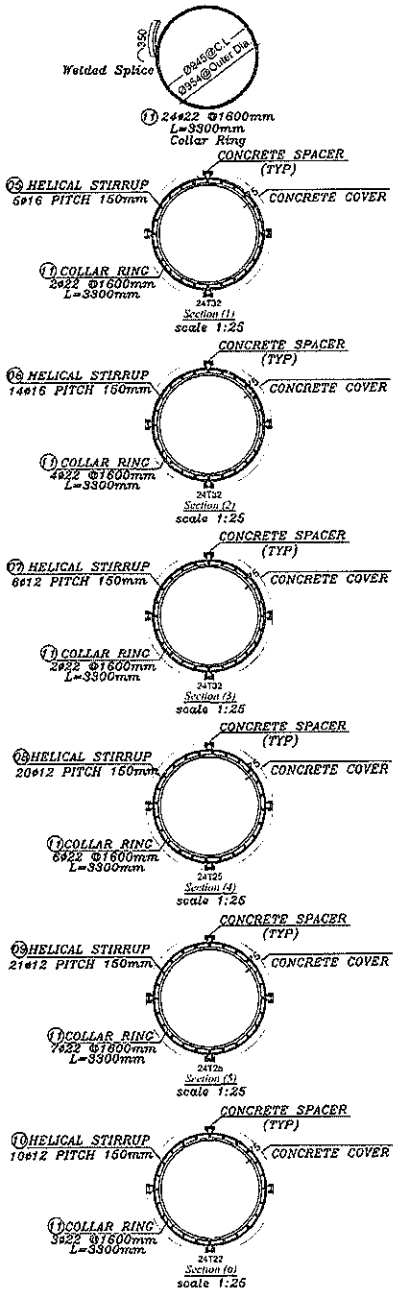
FHECOR Ingenieros Consultores

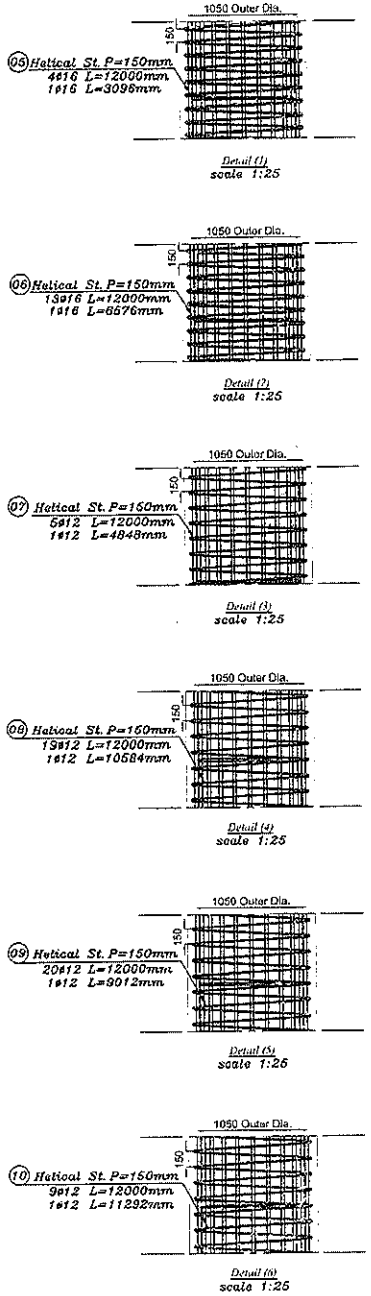
MAIN CONTRACTOR :

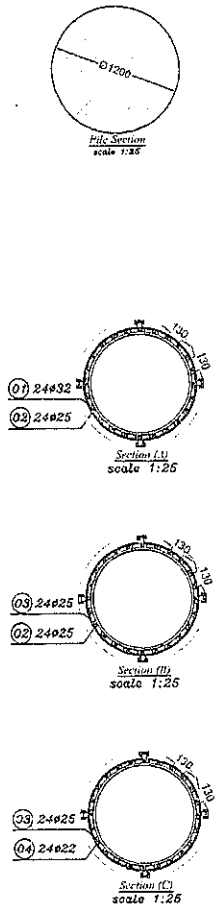
DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SP-110-001-PIR-E06	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Ramadan Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Eashwan		Eng. Jaber Tuama







GENERAL NOTES:

- All dimensions are in millimeters
- Spring elevation from geology: All dimensions should be taken or computed.
- Pile Concrete Class: F - Pile Concrete C30/50
- Density of soil: 18 kN/m
- Lap Splice Between Helical Stirrup (D) and (D): 1 Lap
- Lap Splice Between Helical Stirrup (D) and (D): 1 Lap
- Lap Splice Between Helical Stirrup (D) and (D): 1 40dbar

All Levels should be revised before construction in site

ABBREVIATION :

-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-GC-010-001-NOT-C02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-GC-010-002-PIS-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel: +202 27615185

NO.	DATE	ENG.	REVISION
0	[illegible]	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1608

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION TWICE (FROM VICST OF ABLE TO AL ALAMEIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-GC-010-001-PIS-R00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fouad	ENG. Abdullah Mahsoub	ENG. Mustafah Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashwah	Eng. Javier Tudela	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering
شركة بيت الهندسي
Tel: +202751435
C-C 1342
١٥

GENERAL NOTES:
- All dimensions are in millimeters.
- Do not use scale from drawing. All dimensions should be read or calculated.
- Pile Concrete C30/37 - Pile Cap Concrete C30/37
- Concrete cover 75 mm
- Lap Splice Between Vertical Stirrup (Ø12@150) is 600 mm
- Lap Splice Between Vertical Stirrup (Ø16@150) is 640 mm
- Lap Splice Between Vertical Stirrup (Ø16@150) and (Ø12@150) is 640 mm

All Levels should be revised before construction in site

ABBREVIATION :
- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :
HSRE-V001-CC-010-001-NOT-E02 — REQWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1: DEFINITION
HSRE-V001-CC-210-002-PIE-E02 — REQWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3: REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	01-07-2022	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1669

OWNER:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
وزارة النقل

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :
الشركة القابضة

DWG. TITLE:
REQWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-110-003-PIE-E02	03-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Ramzy	ENG. Abdallah Mohsen	ENG. Mamdouh Salah
		MAG
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Eashan	Eng. Amir Tawfiq	

REQUEST to POUR CONCRETE

Contractor Company				Designer Company						
Issued by Contractor	Name	Sign		Date				Time		
				13/9/2022						
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة									

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (16))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 320 kg/cm^2
PRESTART CHECKLIST				
IR Approved			Plant & equipment available	
Mix Approved			Back up equipment available	
Setting out Survey Approved			Cast in items secure	
Temp Works Approved			Access route clear	
Formwork Checked			Work area safe to progress	
Start Time for Pour: 3:50 pm			Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			13/9/2022	A

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	14
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	13/9/2022
Pile No.	P16	Structure	bridge	Pile Cutoff Level	-
Pier	P2	Ground Level	67.15	Pile Toe Level	28.237
Theoretical Pile Length from caisson level	40.179 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	38.91 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	68.416
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	66.437
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.98

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585426.414	830473.230
Actual	585426.424	830473.240
BAUER Survivor		

Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.03
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	38
Sand Content %	Less than 4%	N/A	Less than 2%	0.75

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	13/9	8:30	12:40	Cleaning	-	-	-	
Install Cages	13/9	13:25	15:10	Pouring	13/9	15:50	16:53	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B16

Dimension : 15*15*15 cm

Date of casting : 13/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	13/09/2022	11/10/2022	28	8.358	134500	598	600
2	13/09/2022	11/10/2022	28	8.451	135300	601	
3	13/09/2022	11/10/2022	28	8.499	135100	600	

التوقيع:

الأستشارى

جودة المشروع

مهندس / أحمد عرابى
مدير المصنع

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ٦٠ مليون جنيه
والمصدر ٢٥ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B16

Dimension : 15*15*15 cm

Date of casting : 12/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	13/09/2022	20/09/2022	7	8.456	106500	473	480
2	13/09/2022	20/09/2022	7	8.599	113400	504	
3	13/09/2022	20/09/2022	7	8.514	104000	462	

جودة المشروع

مركز هليوبوليس

الأستشارى

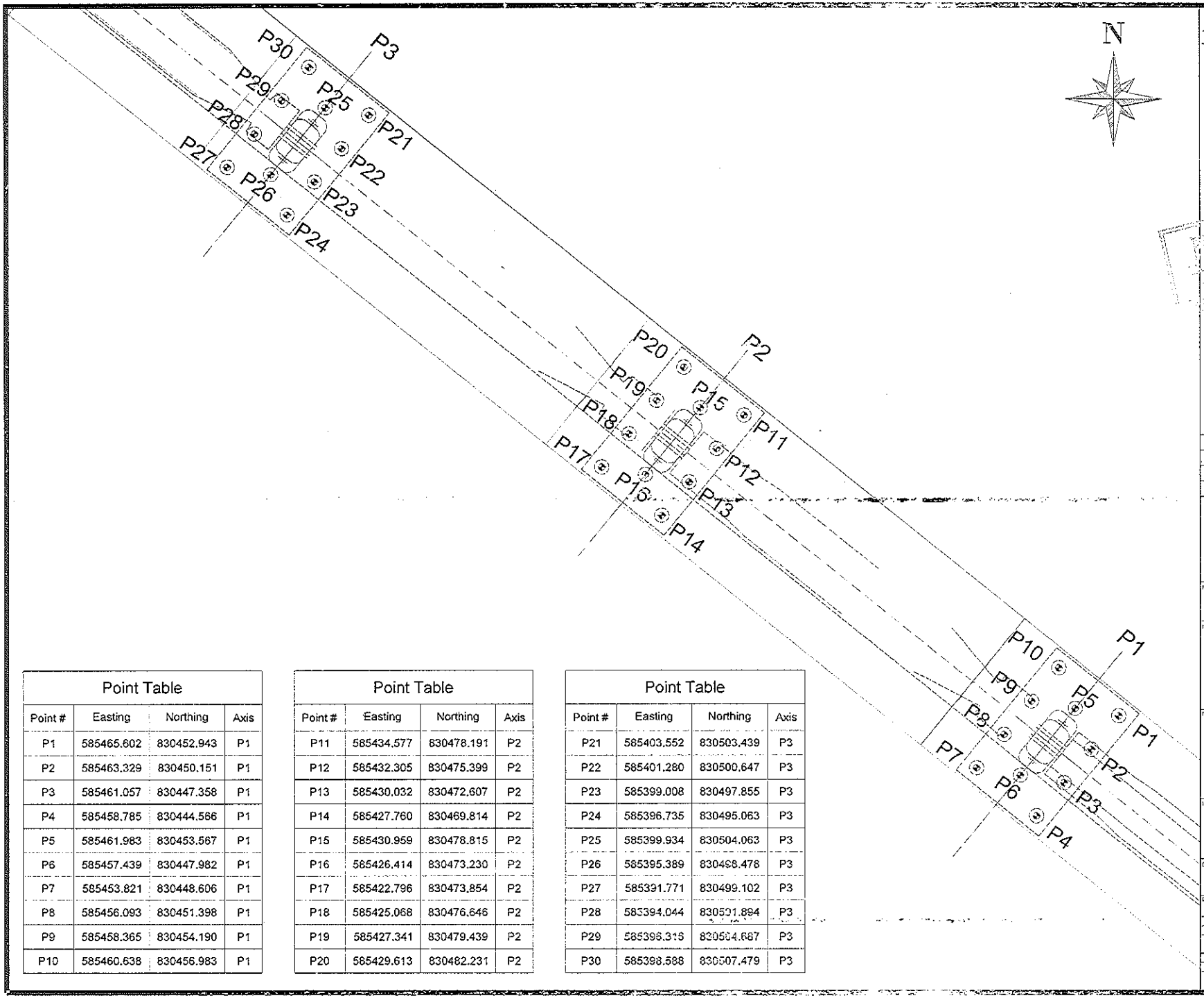
التوقيع:

مهندس / أحمد عرابى
مدير المصنع

Head Office : 41 Losaka st. - Second Floor - Flat 3 Mohamed El-Maqrief st.
Nasr City - / Telfax: 26772572
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : ٤١ش لوساكا - الدور الثاني شقة ٣ - متفرع من ش محمد المقريف
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٢٦٣٠١٤٥ / ٠٤٨ - ف: ٢٦٣٠١٤٠ / ٠٤٨
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website : www.alamalreadymix.com



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NO.	DATE	ENG.	REVISION
00	06/2022	KA	ISSUED FOR CONSTRUCTION

OWNER / المالك

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CARBLT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED-RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHALCOR

NAME OF CONTRACTOR CONSULTANT

JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR

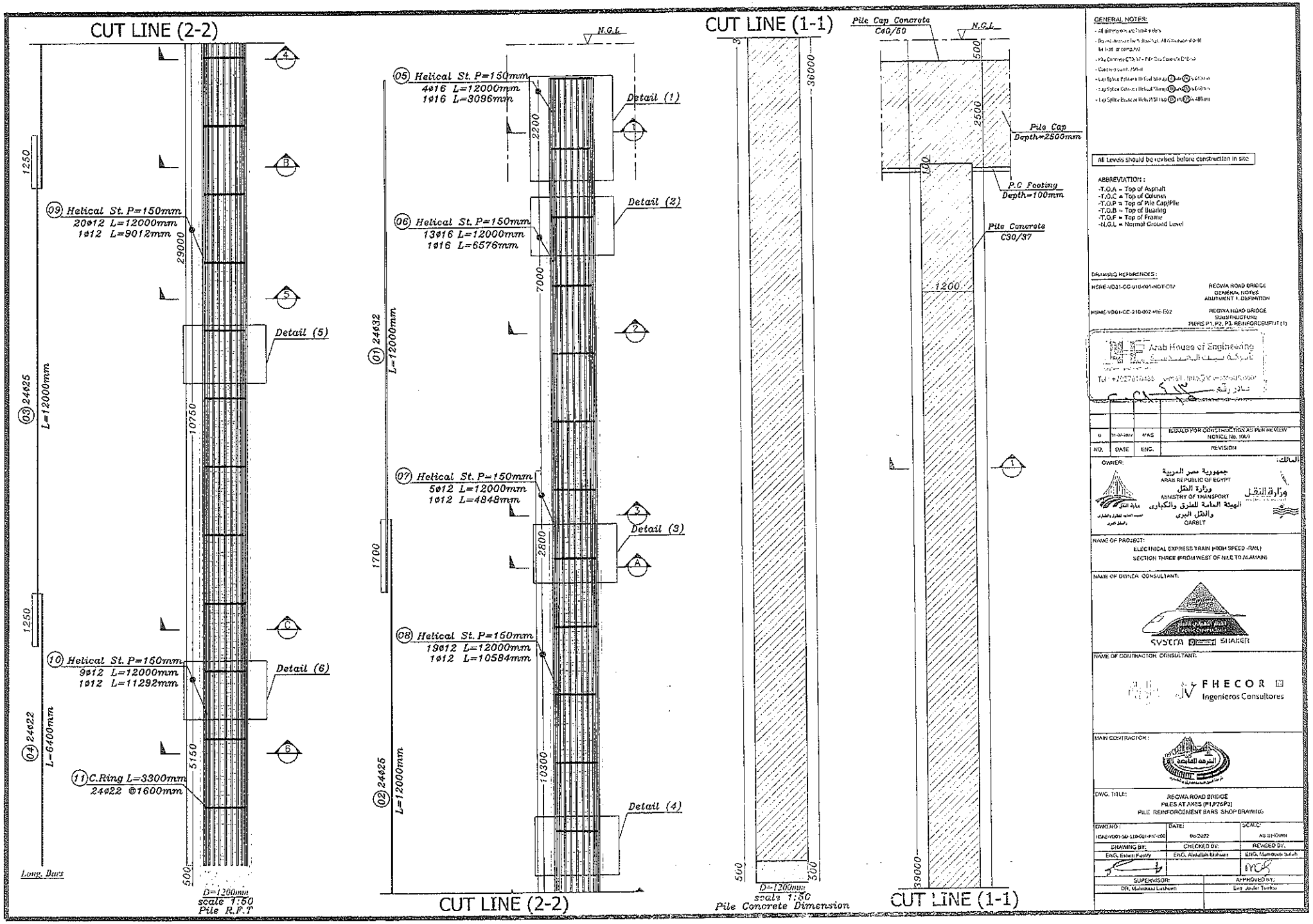
DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO	DATE	SCALE
PCO-00	06/2022	1 : 100

DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Reza	Eng.Mohamed Salah	

SUPERVISOR	APPROVED BY
DR. Mahmoud Sakhawy	Eng. Javier Tejedor



GENERAL NOTES:

- All dimensions are in mm unless
- Do not depend on scaling. All dimensions should be taken as written
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Bars in Helical Stirrup 6ø16 or 6ø12 mm
- Lap Splice Bars in Helical Stirrup 6ø12 or 6ø10 mm
- Lap Splice Bars in Helical Stirrup 6ø10 or 6ø8 mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ADJUSTMENT & DEFINITION

HSRE-V001-CC-210-002-RB-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3 REINFORCEMENT (1)

Arab House of Engineering
Tel: +202761[illegible]

NO.	DATE	ENG.	REVISION
0	31-07-2022	AKS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

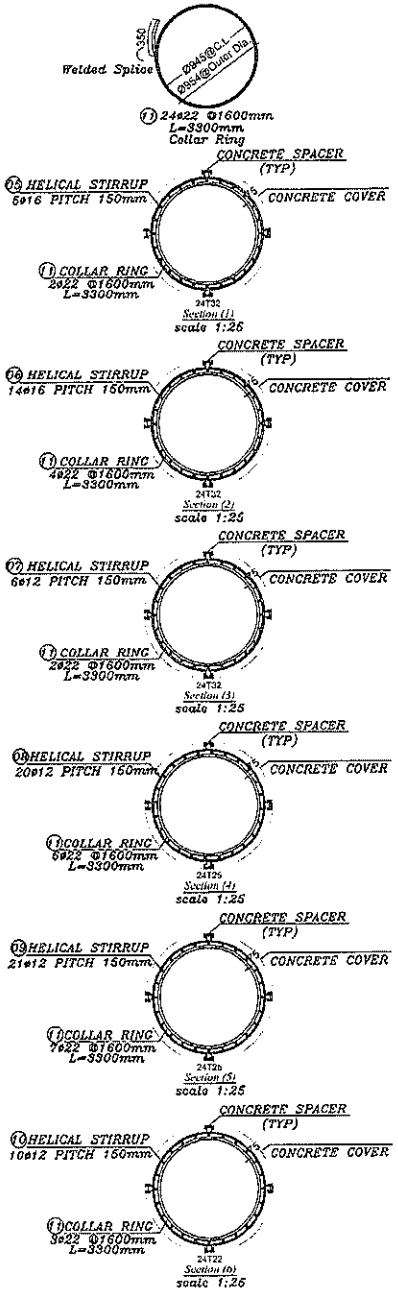
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

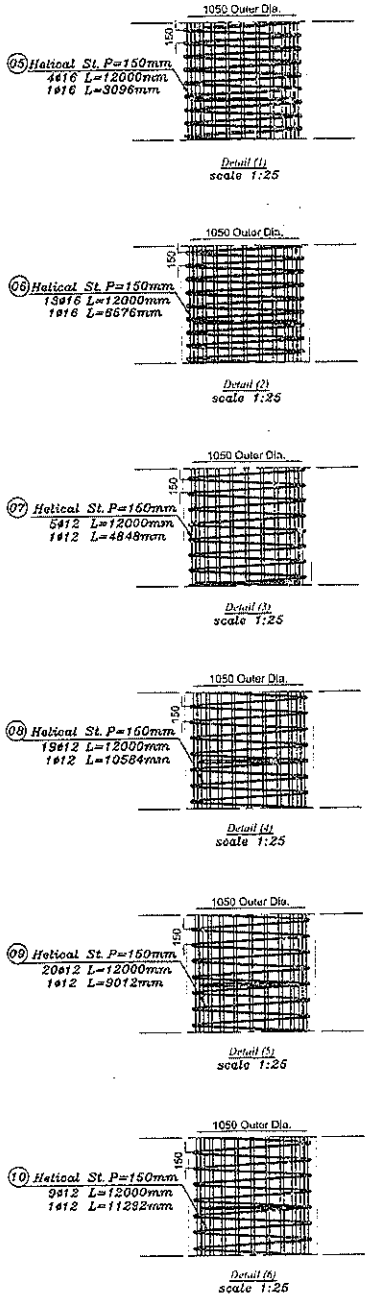
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

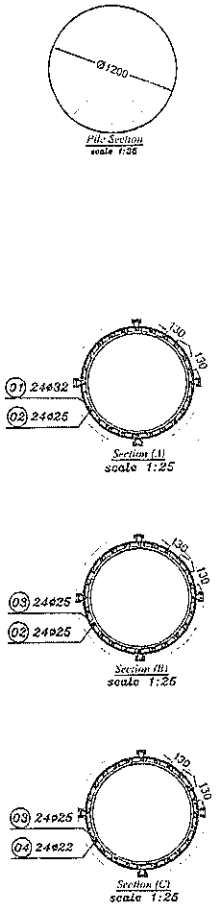
MAIN CONTRACTOR :
الشركة القابضة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO :	DATE:	SCALE:
HSRE-V001-SD-110-001-PIC-E00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVIEWED BY:
ENG. Eslam Fawzy	ENG. Abdullah Mahsen	ENG. Mamdouh Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashen		Lect. Abdel Tawfiq







GENERAL NOTES

- All dimensions are in millimeters
- Detailed measurements shown on drawings. All dimensions should be taken at contract.
- Pile Concrete C40/50 - Pile Cap Concrete C30/37
- Concrete Cover 75 mm
- Lap Splice Between Helical Stirrup (05) and (06) 1,600mm
- Lap Splice Between Helical Stirrup (07) and (08) 2,400mm
- Lap Splice Between Helical Stirrup (09) and (10) 1,600mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-810-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
9	31-03-2022	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1009

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CAHBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THINGE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SD-110-002-PIE-E02	09-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdullah Mansour	ENG. Mahmoud Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashiaw	Eng. Juliet Tadros	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 9000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering

GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure by scale. All dimensions should be verified on site
- Pile Concrete C30/37 - Pile Cap Concrete C30/37
- Concrete cover 75 mm
- Lap Splice Between Main Bars (Ø32mm) 1.2m (Ø25mm) 1.0m (Ø16mm) 0.48m
- Lap Splice Between Main Bars (Ø25mm) 1.0m (Ø16mm) 0.40m
- Lap Splice Between Main Bars (Ø16mm) 0.40m (Ø12mm) 0.30m

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-901-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ALIGNMENT 1, DEFINITION

HSRE-V001-CC-210-902-PIC-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	01-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF MILE TO ALAMEIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG NO.	DATE:	SCALE:
HSRE-V001-SD-110-903-PIC-S00	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mahreen	ENG. Mamdouh Gmah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Gaaboon	Eng. Jodar Tarica	

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date				Time			
				7/9/2022							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (17))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved			Plant & equipment available	
Mix Approved			Back up equipment available	
Setting out Survey Approved			Cast in items secure	
Temp Works Approved			Access route clear	
Formwork Checked			Work area safe to progress	
Start Time for Pour: 7:40 pm			Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			7/9/2022	A

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	10
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	7/9/2022
Pile No.	P17	Structure	bridge	Pile Cutoff Level	-
Pier	P2	Ground Level	67.15	Pile Toe Level	28.237
Theoretical Pile Length from caisson level	40.22 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	38.91 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	68.461
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	66.437
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.02

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585422.796	830473.854
Actual	585422.804	830473.861
BAUER Survivor		

Geotechnical Log

0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

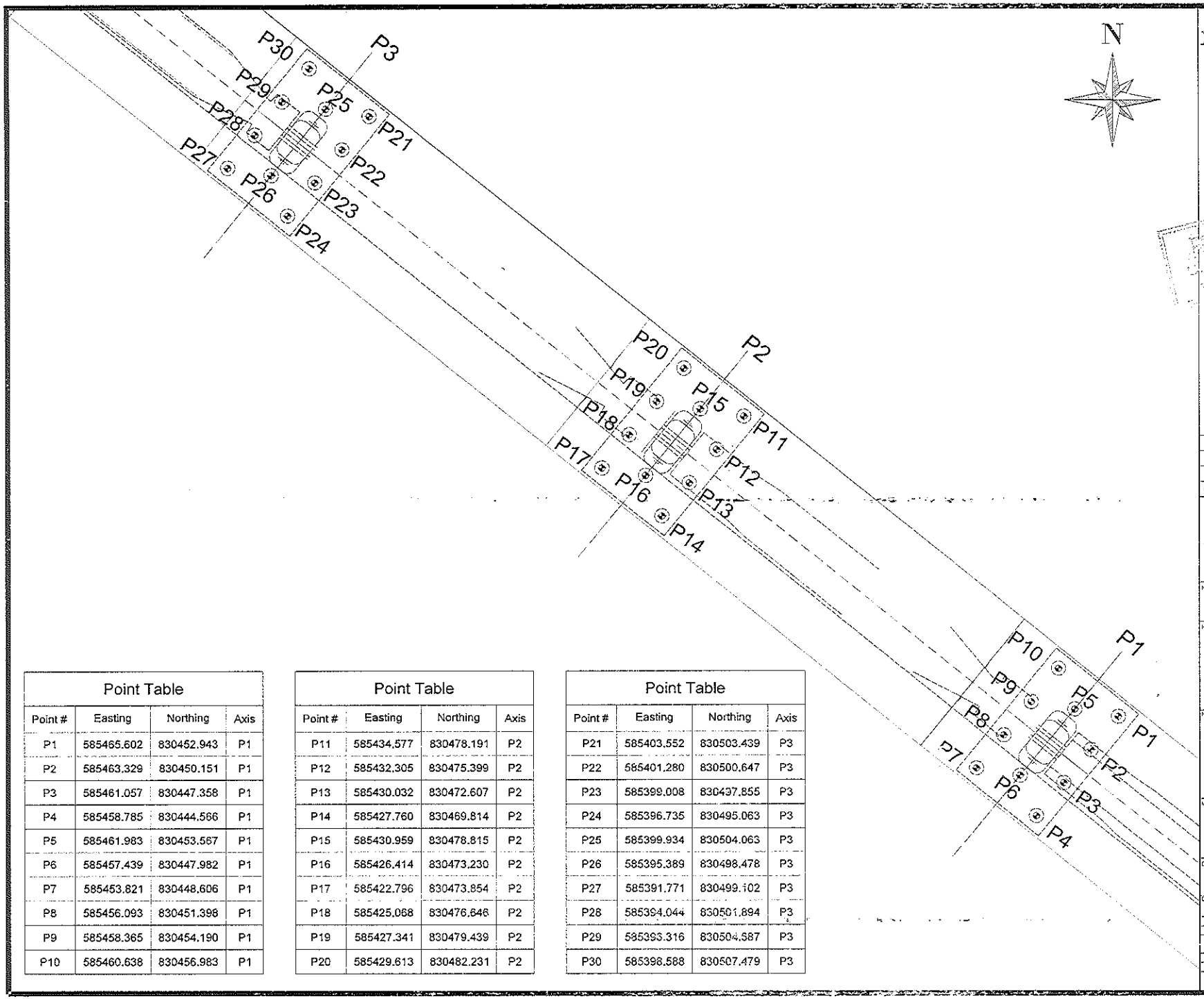
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.04
Viscosity(Sec.)	30:70 Sec.	33	≤90 Sec.	38
Sand Content %	Less than 4%	N/A	Less than 2%	1.50

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	7/9	12:30	16:15	Cleaning	-	-	-	
Install Cages	7/9	17:30	18:55	Pouring	7/9	19:40	20:50	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585393.316	830504.687	P3
P30	585398.588	830507.479	P3

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل الجوي
GARBLT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER' CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG. NO.	DATE	SCALE
PCO-00	08/2022	1 : 150
DRAWING BY	DESIGNED BY	CHECKED BY
Eng. Khaled Alaa	Eng. Mahmoud Salah	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lotfawy	Eng. Jacer Tawfeq

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B17

Dimension : 15*15*15 cm

Date of casting : 07/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	07/09/2022	14/09/2022	7	8.326	89240	397	448
2	07/09/2022	14/09/2022	7	8.459	107300	477	
3	07/09/2022	14/09/2022	7	8.501	105700	470	

التوقيع:

مركز هليوبوليس مهندس / أحمد عرابى
مدير المصنع

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : 41 Losaka st. - Second Floor - Flat 3 Mohamed El-Maqrief st.
Nasr City - / Telfax: 26772572
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : ٤١ش لوساكا - الدور الثاني شقة ٣ - متفرع من ش محمد المقريف
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٢٦٣٠١٤٥ / ٠٤٨ - ف : ٢٦٣٠١٤٠ / ٠٤٨
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website : www.alamalreadymix.com

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	Pile 17
Dimension	:	15*15*15 cm
Date of casting	:	07/09/2022
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	05/09/2022	03/10/2022	28	8.669	132800	590	588
2	05/09/2022	03/10/2022	28	8.749	128500	571	
3	05/09/2022	03/10/2022	28	8.731	135600	603	

التوقيع:

الأستشارى

جودة المشروع

مهندس/أحمد عرابى

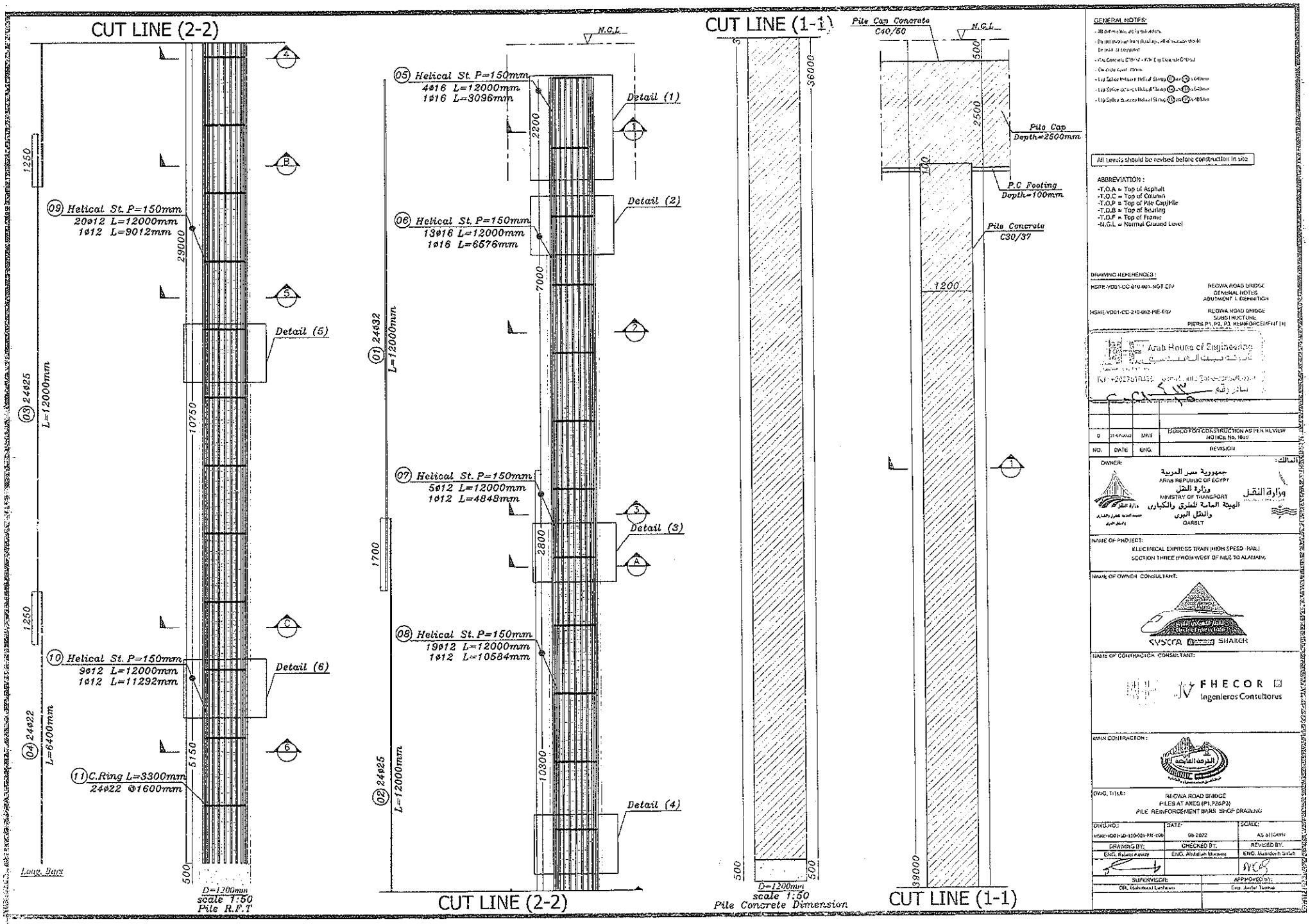
مدير المصنع

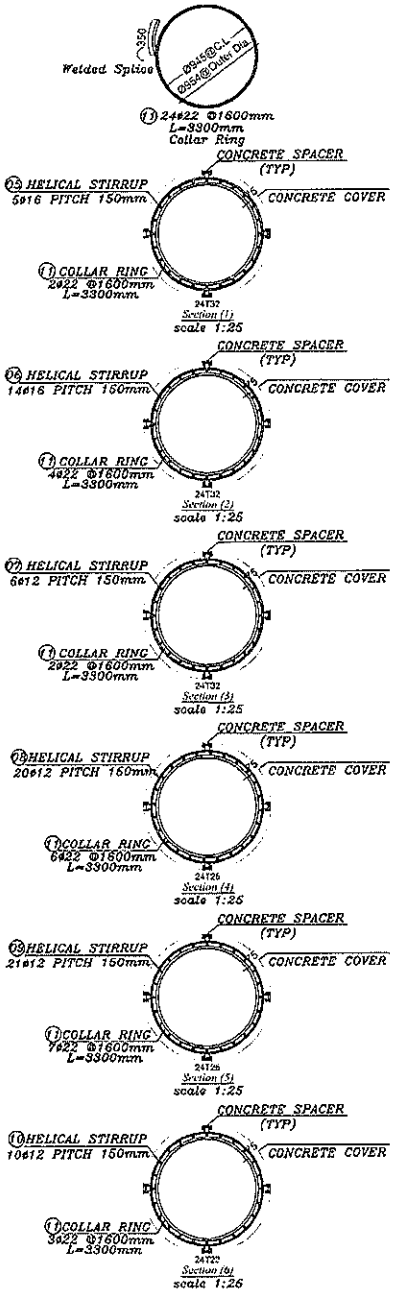
الأمل للخرسانة الجاهزة
محطة المسطرد
إدارة الجودة

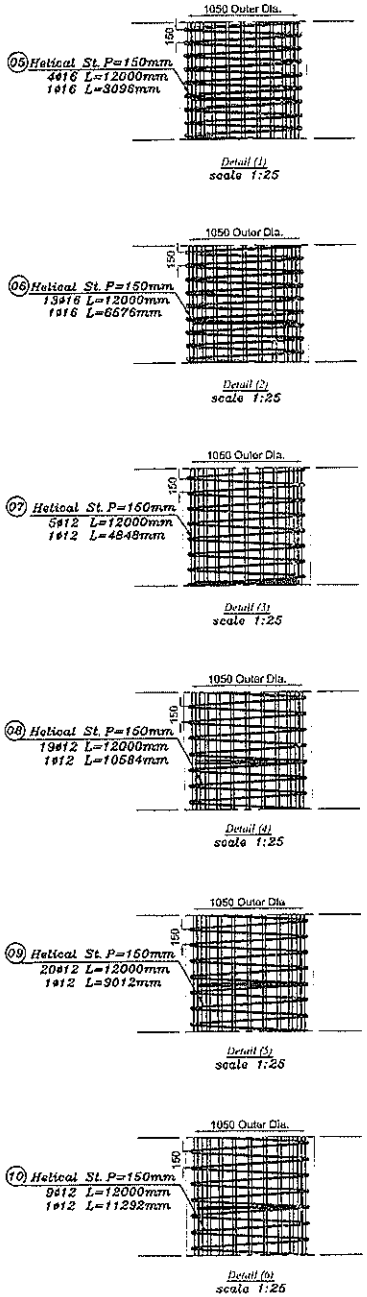
Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

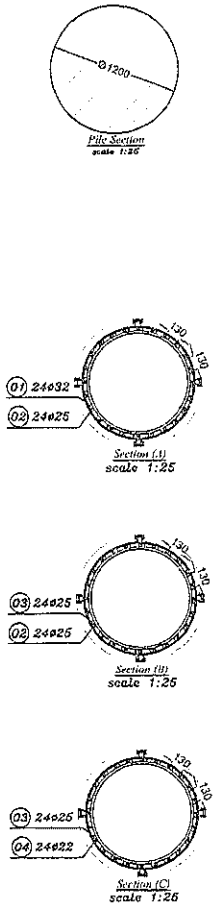
الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com


CUT LINE (2-2)
09 Helical St. P=150mm
20ø12 L=12000mm
1ø12 L=9012mm
Detail (5)
03 24ø25
L=12000mm
10 Helical St. P=150mm
9ø12 L=12000mm
1ø12 L=11292mm
Detail (6)
04 24ø22
L=6400mm
11 C.Ring L=3300mm
24ø22 @1600mm
Long. Bars
D=1200mm
scale 1:50
Pile R.F.T
N.G.L
05 Helical St. P=150mm
4ø16 L=12000mm
1ø16 L=3096mm
Detail (1)
Detail (2)
06 Helical St. P=150mm
13ø16 L=12000mm
1ø16 L=6576mm
01 24ø32
L=12000mm
07 Helical St. P=150mm
5ø12 L=12000mm
1ø12 L=4848mm
Detail (3)
08 Helical St. P=150mm
19ø12 L=12000mm
1ø12 L=10584mm
02 24ø25
L=12000mm
Detail (4)
CUT LINE (2-2)
CUT LINE (1-1)
Pile Cap Concrete
C40/50
N.G.L
Pile Cap
Depth=2500mm
P.C Footing
Depth=100mm
Pile Concrete
C30/37
D=1200mm
scale 1:50
Pile Concrete Dimension
CUT LINE (1-1)
GENERAL NOTES:
All Levels should be revised before construction in site
ABBREVIATION :
-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level
DRAWING REFERENCES :
REGWA ROAD BRIDGE
GENERAL NOTES
ABUTMENT 1 EXPANSION
REGWA ROAD BRIDGE
SUBSTRUCTURE
PIERS P1, P2, P3 REINFORCEMENT (1)
Arab Houses of Engineering
ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1809
REVISION
OWNER:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
وزارة النقل
NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -TGSL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)
NAME OF OWNER CONSULTANT:
SYSTRA
SHAKER
NAME OF CONTRACTOR CONSULTANT:
FHECOR
Ingenieros Consultores
MAIN CONTRACTOR :
DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING
DWG.NO :
DATE:
SCALE:
AS SHOWN
DRAWING BY:
CHECKED BY:
REVISED BY:
ENG. Abdullah Mansour
SUPERVISOR:
APPROVED BY:







GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from scale drawings. All dimensions should be checked or computed.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete Cover 75mm
- Lap Splice Between Helical Stirrups (05) and (06) is 1000mm
- Lap Splice Between Helical Stirrups (06) and (07) is 1000mm
- Lap Splice Between Helical Stirrups (09) and (10) is 1400mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSR-EV001-CC-010-001-RDT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSR-EV001-CC-010-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab Houses of Engineering
Tel: +20276[illegible]

NO.	DATE	ENG.	REVISION
6	[illegible]	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1669

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR:
الشركة القابضة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG. NO.:	DATE:	SCALE:
HSR-EV001-SD-110-002-PIE-E02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdullah Mohsen	ENG. Mamdouh Saleh
		MAS
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashiwan	Eng. Jaime Tuesta	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	ϕ12	ϕ16	ϕ22	ϕ25	ϕ32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering

GENERAL NOTES:

- All dimensions are in millimeters
- Do not overuse Sine drawings. All drawings shall be read in conjunction with the relevant drawings
- Pile Concrete Grade 30 (N/mm²) - Pile Cap Concrete Grade 30
- Concrete cover 75mm
- Lap Splice Between Helical Stirrups 60xØ = 1.440mm
- Lap Splice between Helical Stirrups 60xØ = 1.440mm
- Lap Splice between Helical Stirrups 60xØ = 1.440mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION

HSRE-V001-CC-210-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	01-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2,P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG NO.	DATE:	SCALE:
HSRE-V001-SD-110-003-PIE-E02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Mamdouh Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Eashaw		Eng. Judar Tawfiq

REQUEST to POUR CONCRETE

Contractor Company				Designer Company						
Issued by Contractor	Name	Sign		Date				Time		
				17/9/2022						
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة									

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (18))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved			Plant & equipment available	
Mix Approved			Back up equipment available	
Setting out Survey Approved			Cast in items secure	
Temp Works Approved			Access route clear	
Formwork Checked			Work area safe to progress	
Start Time for Pour: 6:20 pm			Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			17/9/2022	A

BAUER EGYPT | SYSTRA | ACE CONSULTING ENGINEERS MOHARRAM BAKHOUM | وزارة النقل

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	18
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	17/9/2022
Pile No.	P18	Structure	bridge	Pile Cutoff Level	-
Pier	P2	Ground Level	67.15	Pile Toe Level	28.237
Theoretical Pile Length from caisson level	40.53 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	38.91 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	68.772
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	66.437
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.33

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585425.068	830476.646
Actual	585425.069	830476.663
BAUER Survivor		

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

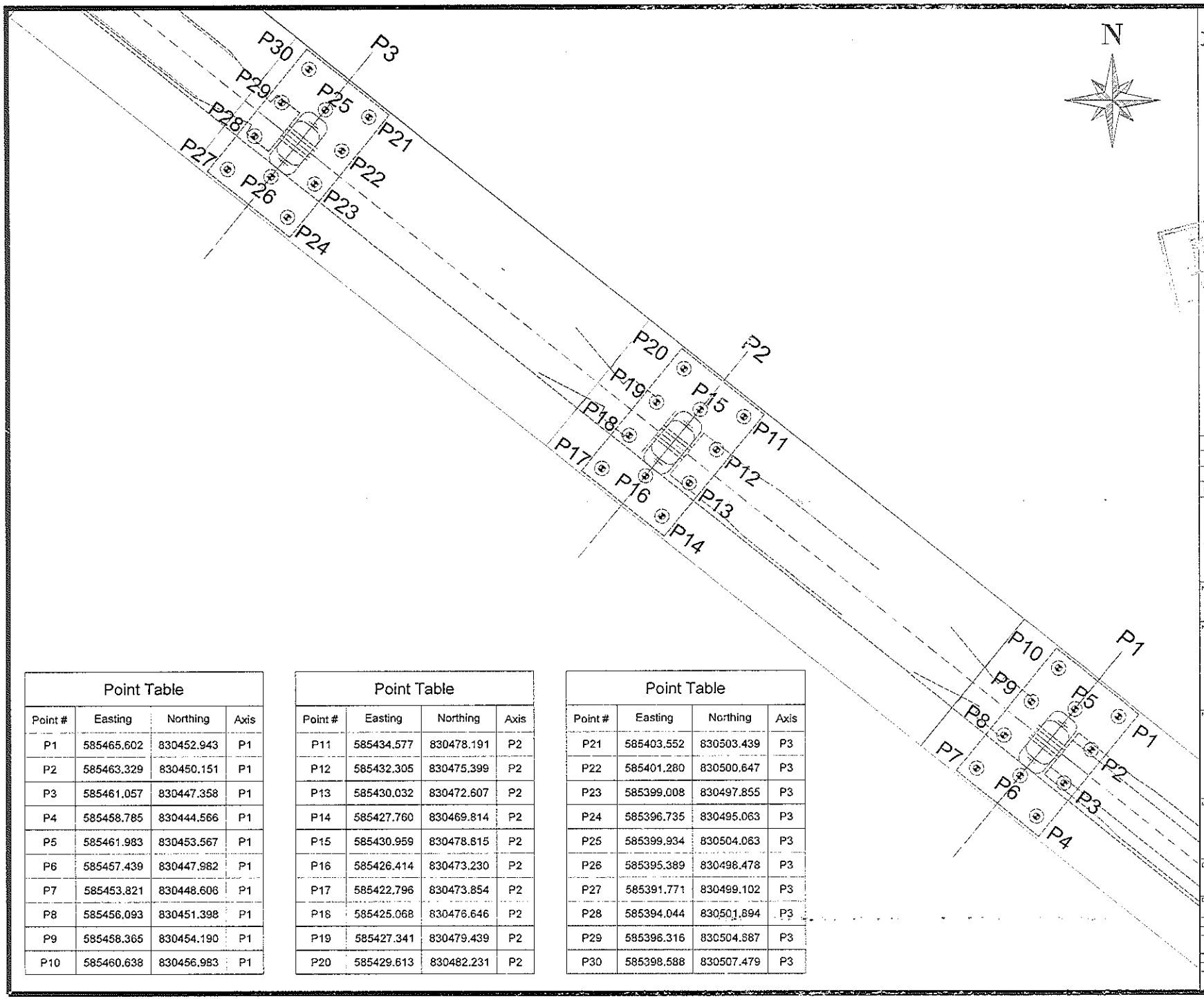
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.05
Viscosity(Sec.)	30:70 Sec.	33	≤90 Sec.	36
Sand Content %	Less than 4%	N/A	Less than 2%	1

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	17/9	10:00	16:20	Cleaning	-	-	-	
Install Cages	17/9	16:40	18:00	Pouring	17/9	18:20	19:55	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NO.	DATE	ENG.	REVISION
00	08/2022	KA	ISSUED FOR CONSTRUCTION

OWNER

المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
وزارة النقل

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO	DATE	SCALE
PC0-60	08/2022	1 : 100
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mahmoud Sulieh	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashen	Eng. Jawad Turkey

Al Amal Ready mix

الأمل
للخرسانة الجاهزة ش.م.م.
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B18

Dimension : 15*15*15 cm

Date of casting : 17/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	17/09/2022	24/09/2022	7	8.665	97780	435	441
2	17/09/2022	24/09/2022	7	8.561	108400	482	
3	17/09/2022	24/09/2022	7	8.337	91790	408	

جودة المشروع

مركز هليوبوليس

الأستشارى

التوقيع:

مهندس / أحمد عرابى
مدير المصنع

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717

Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : مول إيجيبت ميديكال سنتر- الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر/ تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧

موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / فا: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - فا : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

At Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B18

Dimension : 15*15*15 cm

Date of casting : 17/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	17/09/2022	15/10/2022	28	8.635	128000	569	595
2	17/09/2022	15/10/2022	28	8.425	140900	626	
3	17/09/2022	15/10/2022	28	8.396	132600	589	

التوقيع: الأستشارى جودة المشروع

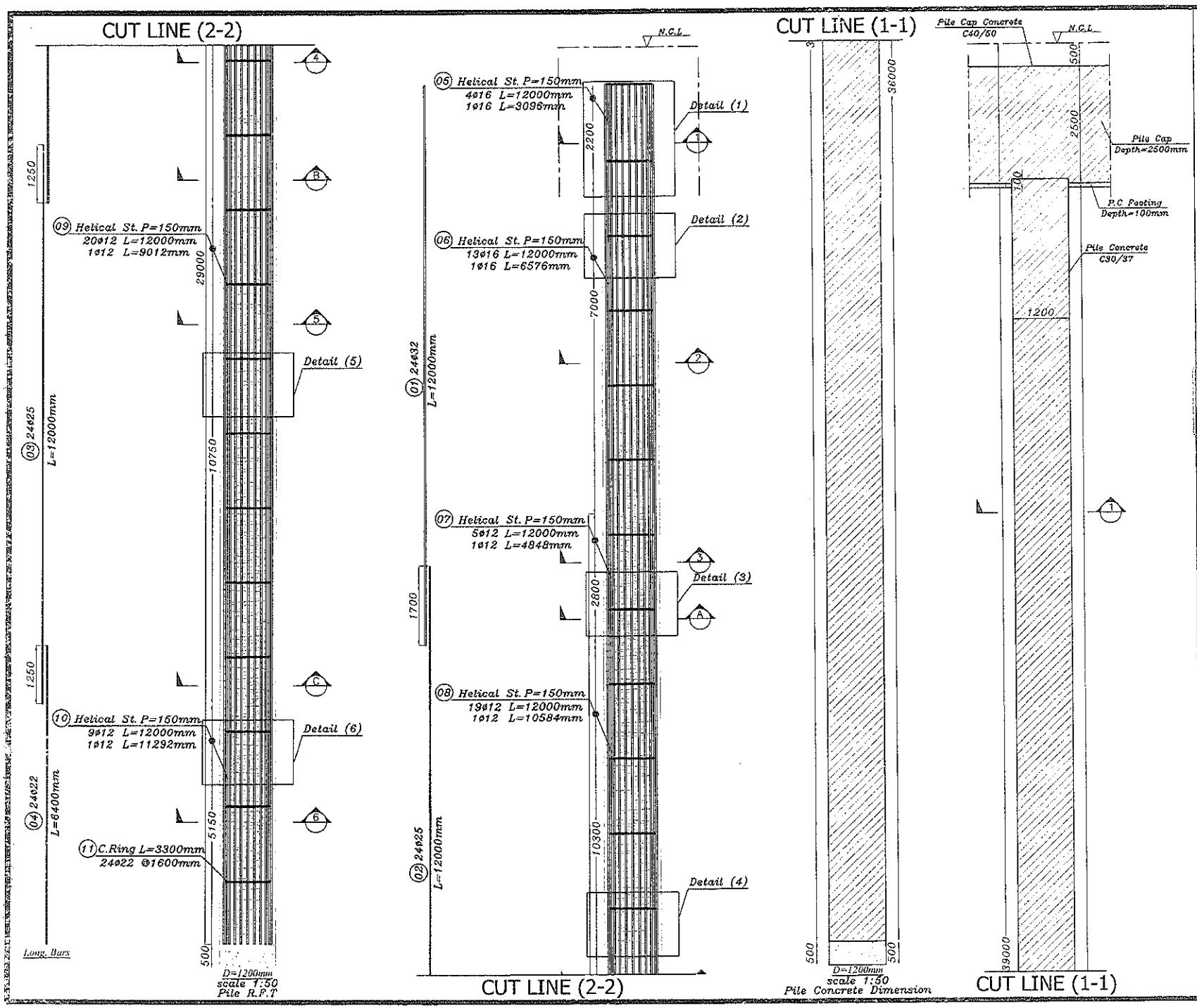
مهندس / احمد عرابى
مدير المصنع

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office: Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر- مدينة نصر- المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٢٦٣٠١٤٥ / ٠٤٨ - ف: ٢٦٣٠١٤٠ / ٠٤٨
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com



GENERAL NOTES:

- All dimensions are in millimeters.
- Do not measure from drawings. All dimensions should be taken as specified.
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete Cover 75mm
- Lap Splice Between Helical Stirrup (5) and (6) is 640 mm
- Lap Splice Between Helical Stirrup (8) and (9) is 640 mm
- Lap Splice Between Bars of Stirrup (10) and (11) is 400mm

All levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSHE-V001-CC-010-001-NOT-E01	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT & DEFINITION
HSHE-V001-CC-210-002-PIE-F02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3 REINFORCEMENT (1)

Arab House of Engineering
Tel: +20 2 37 37 8 35

NO.	DATE	ENG.	REVISION
0	31-07-2014	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1660

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

OWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSHE-V001-SD-110-001-PIE-F00	06/2012	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Islam Fawzy	ENG. Abdallah Mahran	ENG. Mamdouh Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashen		Eng. Jalal Tuffaha

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Φ12	Φ16	Φ22	Φ25	Φ32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering
Tel. +2027510459
C.C 1343
10

GENERAL NOTES:

- All dimensions are in millimeters
- Do not scale from drawings. All dimensions should be read or re-verified
- Pile Concrete Grade : Pile Cap Concrete Grade
- Concrete cover : 75 mm
- Lap Splice Between Vertical Bars: 40 Ø (40 x 16 = 640 mm)
- Lap Splice Between Vertical Stirrups: 40 Ø (40 x 10 = 400 mm)
- Lap Splice Between Hollow Stirrups: 40 Ø (40 x 10 = 400 mm)

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION

HSRE-V001-CC-210-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG	REVISION
0	21-07-2022	MKG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE.
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.	DATE:	SCALE:
HSRE-V001-CC-110-001-PIE-E02	03-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mansen	ENG. Mamdouh Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashien		Eng. Andar Tarkia

REQUEST to POUR CONCRETE

Contractor Company				Designer Company						
Issued by Contractor	Name	Sign		Date				Time		
	نادر رمزي			20/9/2022						
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة									

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (19))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved			Plant & equipment available	
Mix Approved			Back up equipment available	
Setting out Survey Approved			Cast in items secure	
Temp Works Approved			Access route clear	
Formwork Checked			Work area safe to progress	
Start Time for Pour: 2:55 pm			Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			20/9/2022	A

BAUER EGYPT SYSTRA ACE CONSULTING ENGINEERS MOHARRAM BAKHOUM

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	21
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	20/9/2022
Pile No.	P19	Structure	bridge	Pile Cutoff Level	-
Pier	P2	Ground Level	67.15	Pile Toe Level	28.237
Theoretical Pile Length from caisson level	40.50 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	38.91 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	68.734
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	66.437
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.3

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585427.341	830479.439
Actual	585427.339	830479.446
BAUER Survivor		

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

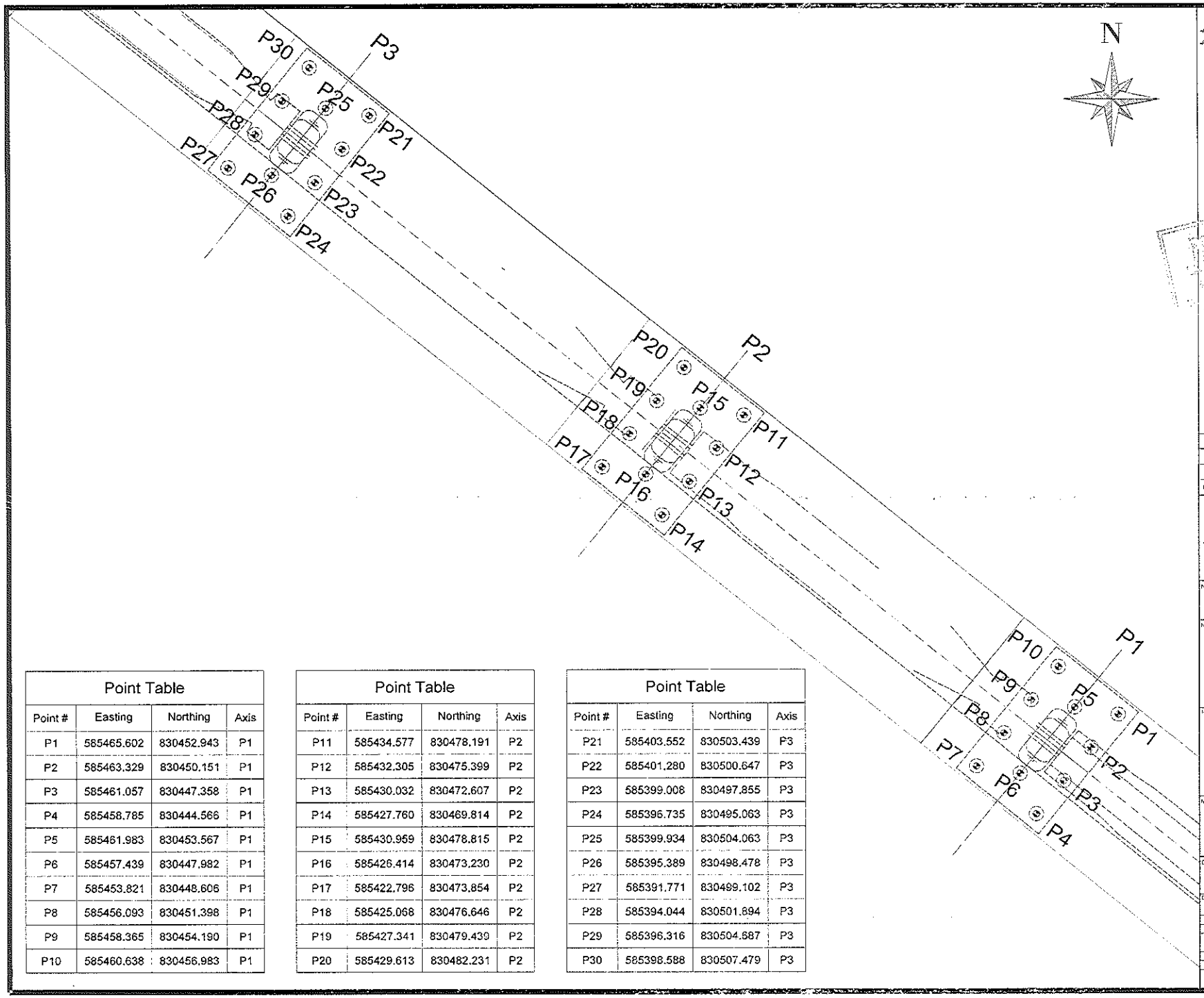
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.04
Viscosity(Sec.)	30:70 Sec.	33	≤90 Sec.	38
Sand Content %	Less than 4%	N/A	Less than 2%	1.50

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	20/9	8:30	12:00	Cleaning	-	-	-	
Install Cages	20/9	12:30	14:10	Pouring	20/9	14:55	16:10	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.
-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	DWG.	REVISION
00	09/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT
FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
PCO-00	09/2022	1 : 150
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Abaa	Eng.Mamdouh Saleh	
SUPERVISOR		APPROVED BY
DR. Mahmoud Gaafar		Eng. Javier Tornero

Point Table

Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
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P23	585399.008	830497.855	P3
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P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B19

Dimension : 15*15*15 cm

Date of casting : 20/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	20/09/2022	27/09/2022	7	8.532	121200	539	567
2	20/09/2022	27/09/2022	7	8.377	131100	583	
3	20/09/2022	27/09/2022	7	8.495	130700	581	

التوقيع:

الأستشارى

جودة المشروع

مهندس / أحمد عرابى
مدير المصنع

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

At Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B19

Dimension : 15*15*15 cm

Date of casting : 20/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	20/09/2022	18/10/2022	28	8.514	128600	572	610
2	20/09/2022	18/10/2022	28	8.624	144600	643	
3	20/09/2022	18/10/2022	28	8.437	138400	615	

التوقيع: الأستشارى جودة المشروع

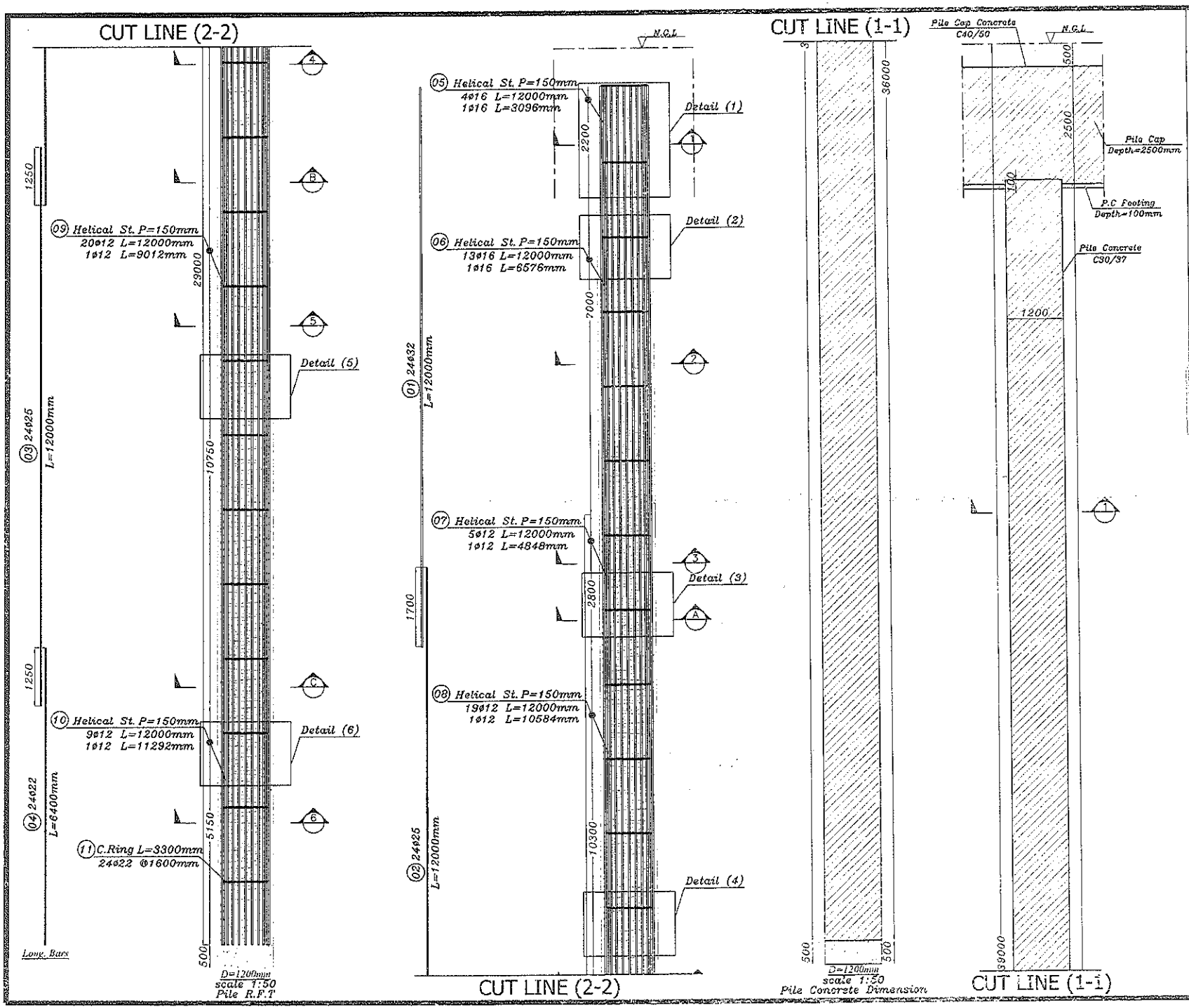
مهندس / احمد عرابى
مدير المصنع

الأمل للخرسانة الجاهزة

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨/٢٦٣٠١٤٥ - ف: ٠٤٨/٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com



GENERAL NOTES:

- All dimensions are in millimeters
- Do not deviate from the drawings. All construction should be in accordance
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice Between Helical Stirrup 10 and 14 = 480mm
- Lap Splice Between Helical Stirrup 10 and 16 = 640mm
- Lap Splice Between Helical Stirrup 10 and 20 = 800mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E07 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1 DEFINITION

HSRE-V001-CC-010-002-PIR-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3 REINFORCEMENT (1)

Arab House of Engineering
Tel: +2027613456

NO.	DATE	ENG.	REVISION
0	[illegible]	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1901

OWNER: المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

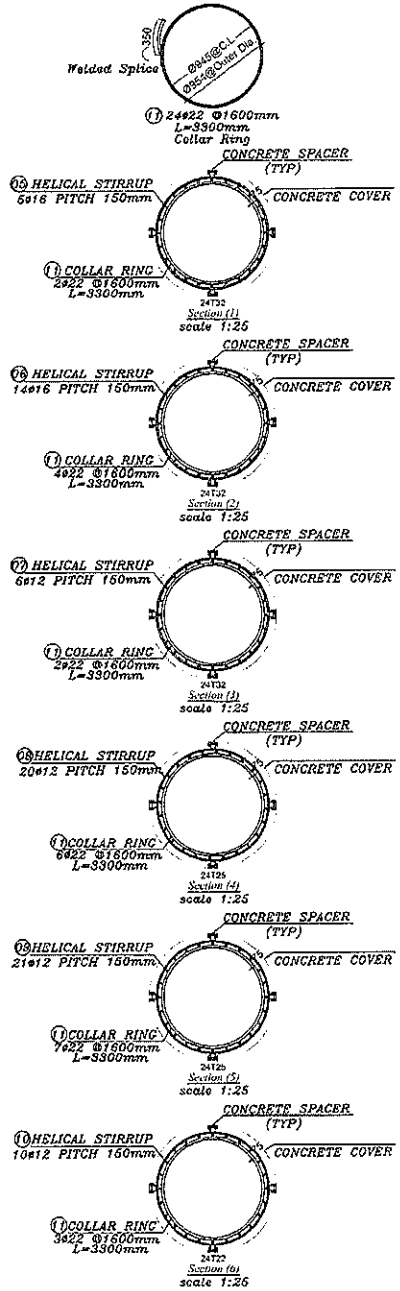
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

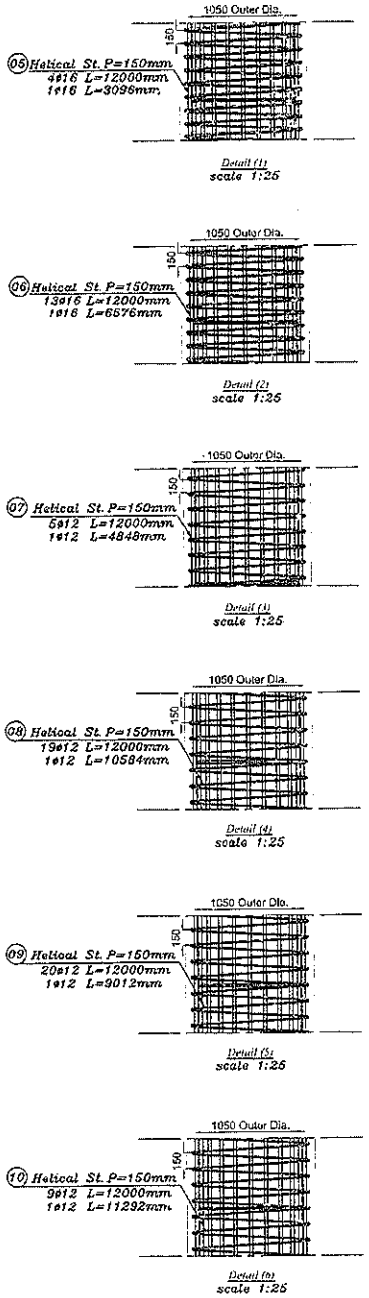
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

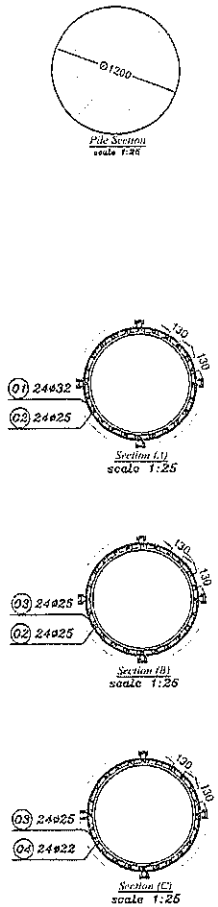
MAIN CONTRACTOR :

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-CC-010-002-PIR-E06	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mansour	ENG. Mahmoud Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashouh	Eng. Jaber Tarbu	







GENERAL NOTES

- All dimensions are in millimeters
- Do not scale drawings. All dimensions should be built as indicated.
- Pile Concrete Grade : [illegible]
- Concrete cover [illegible]
- Lap Splice Between Helical Stirrup [illegible] and [illegible] [illegible]
- Lap Splice Between Helical Stirrup [illegible] and [illegible] [illegible]
- Lap Splice Between Helical Stirrup [illegible] and [illegible] 40diam

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

H3RE-V001-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
H3RE-V001-CC-010-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	[illegible]	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1009

OWNER:

المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
DARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO:	DATE:	SCALE:
H3RE-V001-SD-110-002-PIE-E03	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Farag	ENG. Abdallah Mohsen	ENG. Mamdouh Saleh
		MAS
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashram	Eng. Zaki Tadros	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Φ12	Φ16	Φ22	Φ25	Φ32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	286.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Nesh House of Engineering
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C-C1343
10

GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All measurements should be taken at site.
- Pile Concrete C30/37 - For Cap Concrete C35/37
- Concrete Cover 75mm
- Cap Spiral Reinforcement Helical Stirrup Ø10@150 & Ø20@150
- Cap Spiral Reinforcement Helical Stirrup Ø10@150 & Ø20@150
- Cap Spiral Reinforcement Helical Stirrup Ø10@150 & Ø20@150

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-C02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1. DEFINITION

HSRE-V001-CC-210-002-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3. REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	24-07-2022	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1004

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
وزارة النقل

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-110-002-PIE-R00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mahmed	ENG. Mamdouh Salah

SUPERVISION:	APPROVED BY:
Dr. Mahmoud Lashkari	Eng. Jaafar Tawfiq

REQUEST to POUR CONCRETE

Contractor Company				Designer Company					
Issued by Contractor	Name	Sign		Date				Time	
				1/9/2022					
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة								

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (20))		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 370 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: 11:40 am		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			1/9/2022	A

BAUER EGYPT | SYSTRA | ACE CONSULTING ENGINEERS MOHARRAM BAKHOUM | وزارة النقل

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	4
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	1/9/2022
Pile No.	P20	Structure	bridge	Pile Cutoff Level	-
Pier	P2	Ground Level	67.15	Pile Toe Level	28.237
Theoretical Pile Length from caisson level	40.12 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	38.91 m	Theoretical Concrete Q	46 m³	Temporary Casing Level	68.360
Act. Drilling Length	40.7 m	Act. Concrete Q	51 m³	Steel Top Level	66.437
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	1.93

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585429.613	830482.231
Actual	585429.627	830482.227
BAUER Survivor		

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

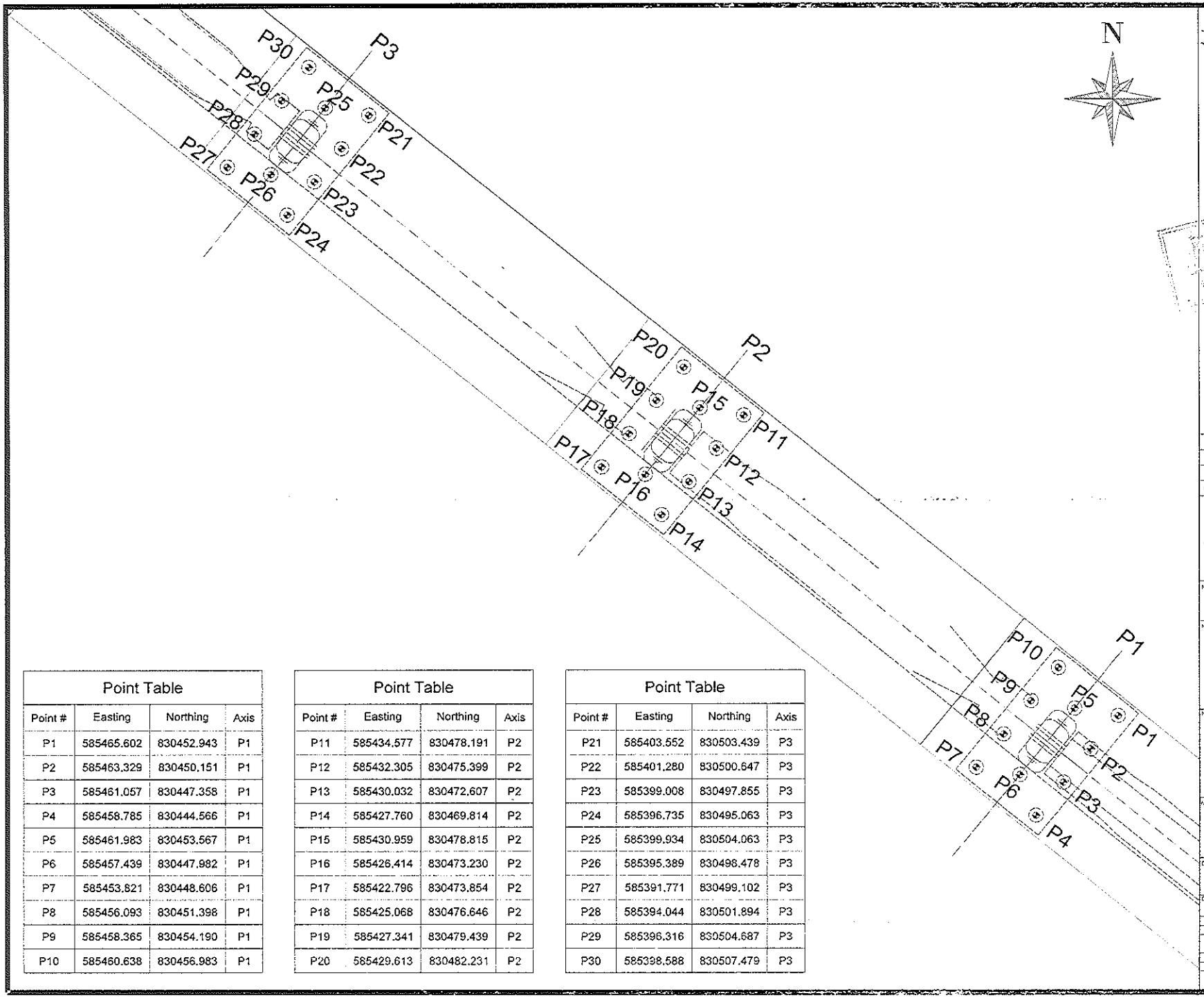
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.03
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	37
Sand Content %	Less than 4%	N/A	Less than 2%	0.5

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	31/8	11:40	16:50	Cleaning	-	-	-	
Install Cages	1/9	9:37	11:04	Pouring	1/9	11:44	13:00	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO	DATE	ENG.	REVISION
00	09/2023	K.A	ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG. NO.	DATE	SCALE
PC0-00	09/2023	1 : 100
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Nabil Alaa	Eng.Mamdouh Saleh	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashour	Gen. Jawad Tuffaha

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B20

Dimension : 15*15*15 cm

Date of casting : 01/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	01/09/2022	08/09/2022	7	3.501	35240	423	442
2	01/09/2022	08/09/2022	7	8.487	103600	460	
3	01/09/2022	08/09/2022	7	8.486	99780	443	

التوقيع:
مهندس / أحمد عرابى
مدير المصنع

مركز هليوبوليس

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨/٢٦٣٠١٤٥ - ف: ٠٤٨/٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B20

Dimension : 15*15*15 cm

Date of casting : 01/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	01/09/2022	29/09/2022	28	8.578	126400	562	561
2	01/09/2022	29/09/2022	28	8.456	127200	565	
3	01/09/2022	29/09/2022	28	8.395	125000	556	

التوقيع:

الأستشارى

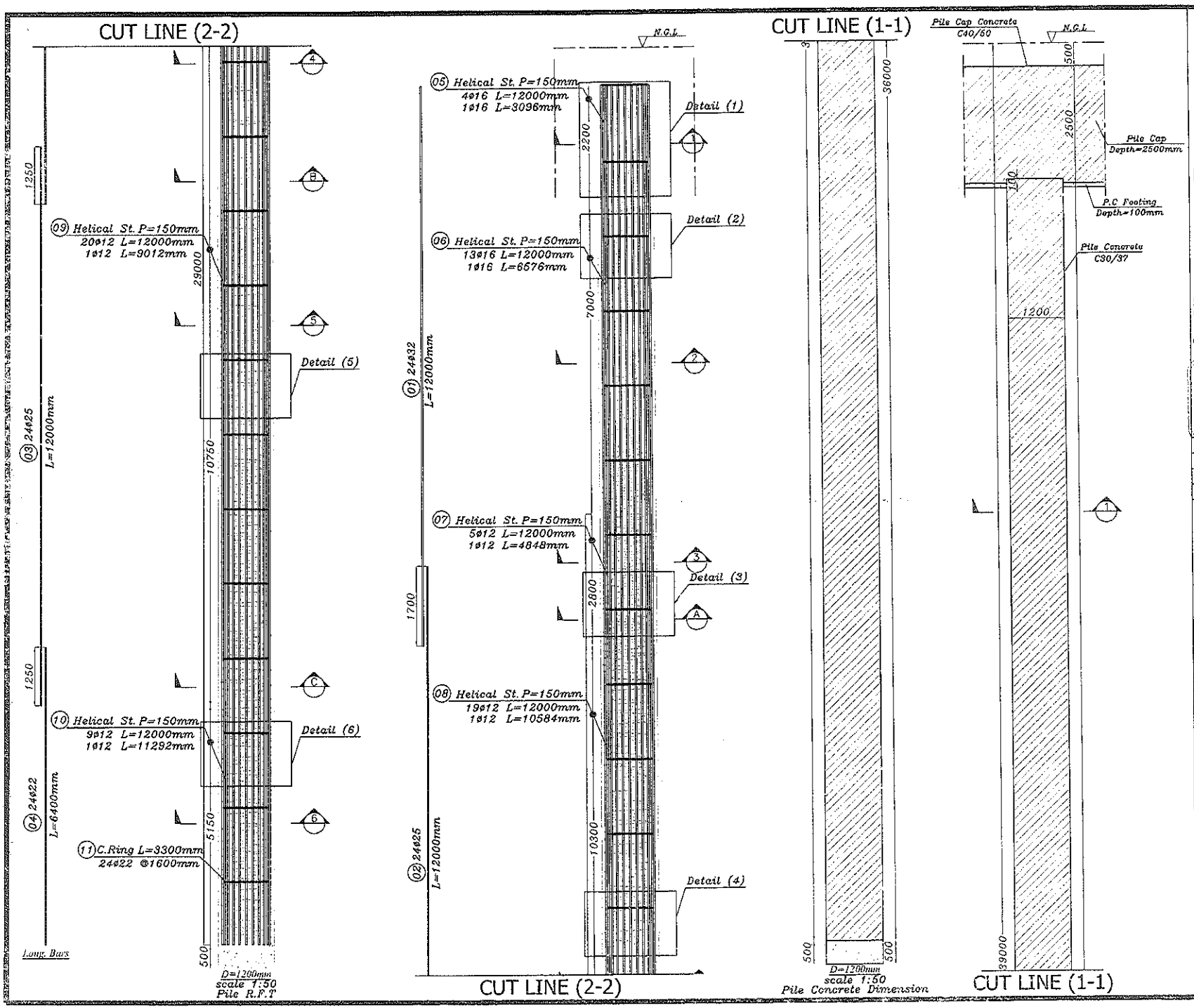
جودة المشروع

مهندس / أحمد عرابى
مدير المصنع

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com



GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All dimensions should be taken as indicated
- Pile Concrete C30/37 - Pile Cap Concrete C40/50
- Concrete cover 75mm
- Lap Splice between Helical Stirrup (11) and (09) is 640mm
- Lap Splice between Helical Stirrup (10) and (09) is 640mm
- Lap Splice between Helical Stirrup (10) and (09) is 480mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-007	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1 DEFINITION
HSRE-V001-CC-010-002-PIE-007	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3 REINFORCEMENT (1)

Arab Houses of Engineering
شركة بيوت الهندسية
Tel: +202 761 1430
مكاتب شركة

NO.	DATE	ENG.	REVISION
0	11-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1009

OWNER:

المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO AL-ALAMEIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHARES

NAME OF CONTRACTOR CONSULTANT:

JV FHECOR Ingenieros Consultores

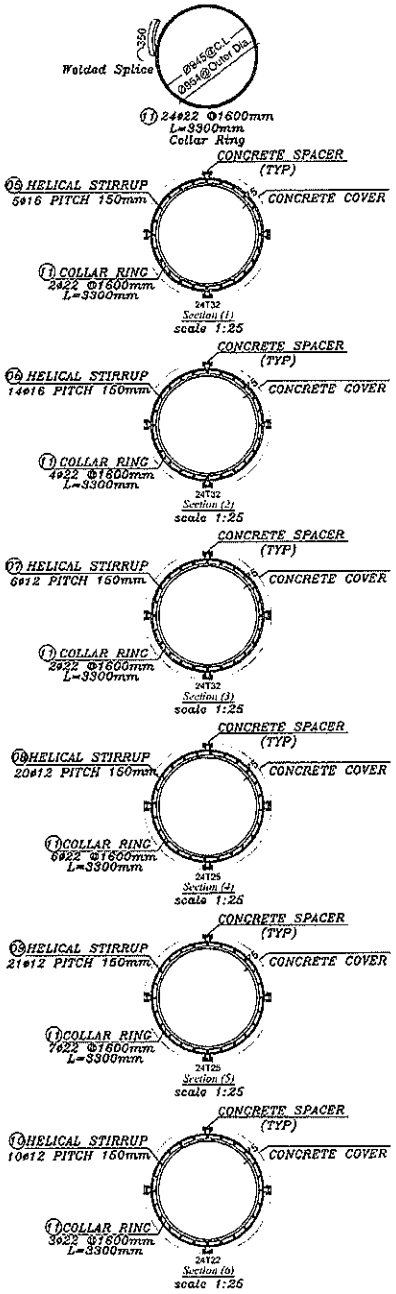
MAIN CONTRACTOR:

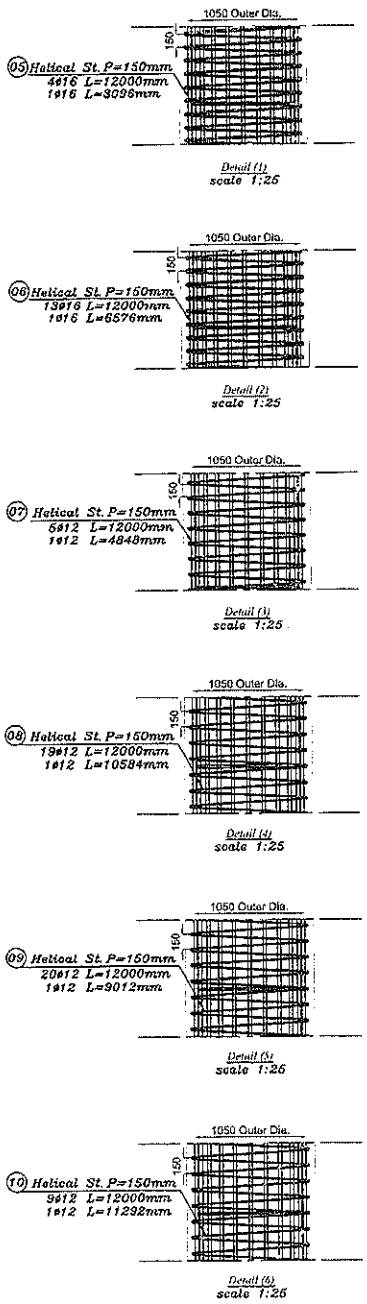
الشركة القابضة

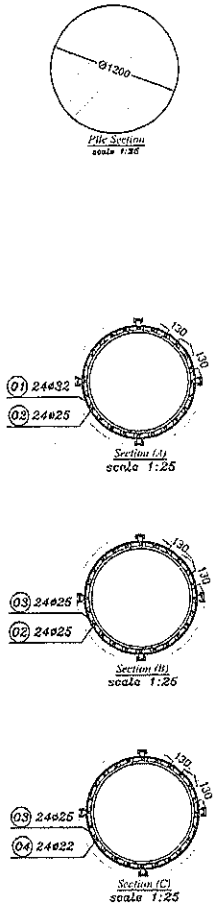
DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-110-001-PIE-008	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Hamdouh Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashen		Eng. Jaafar Tuaiba







GENERAL NOTES.

- All dimensions be in millimeter.
- Do not measure from drawings. All dimensions should be taken on site.
- Pile Cut-off Level (P.C.O.F) = Pile Cap Concrete D.H.S.
- Concrete Cover = 75mm
- Lap Splice between Helical Stirrup (05) and (06) = 60Ø16
- Lap Splice between Helical Stirrup (06) and (07) = 48Ø16
- Lap Splice between Helical Stirrup (08) and (09) = 48Ø12

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Footing
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-VD01-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-VD01-CC-010-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel: +20275104135

NO.	DATE	ENG.	REVISION
0	[illegible]	EMS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. [illegible]

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GAHBLT
وزارة النقل

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

الشركة الفاتحة

DWG. TITLE

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-VD01-SD-010-002-PIE-E02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Farag	ENG. Abdallah Mahsen	ENG. Mustafa Salah
SUPERVISOR:	APPROVED BY:	
DR. Mustafa Sallam	Engr. Ashraf Tawfiq	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Φ12	Φ16	Φ22	Φ25	Φ32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering
شركة بيت العمارة الهندسية
Tel: +2022510135
صادر رقم
C-C1343
١٥

GENERAL NOTES:

- All Dimensions are in millimeters.
- Do not scale from drawings. All dimensions should be taken on site.
- Pile Concrete C35/B5 - Pile Cap Concrete C35/B5
- Concrete Cover 75 mm
- Lap Splice Between Helical Stirrup Φ12 and Φ16 is 1.40 mm
- Lap Splice Between Helical Stirrup Φ12 and Φ12 is 1.0 meter
- Lap Splice Between Helical Stirrup Φ12 and Φ12 is 1.40 mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1 DEFINITION
HSRE-V001-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	31-01-2022	MAB	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1669

OWNER: المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WES) OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.	DATE:	SCALE:
HSRE-V001-CC-110-003-PIE-E02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mahmoud	ENG. Mamdouh Salah
		mas
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashein	Eng. Ashraf Tawfiq	

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date				Time			
				3/9/2022							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (21))		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: 6:19 pm		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			3/9/2022	A

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	5
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	3/9/2022
Pile No.	P21	Structure	bridge	Pile Cutoff Level	-
Pier	P3	Ground Level	68.00	Pile Toe Level	28.907
Theoretical Pile Length from caisson level	40.45 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	39.09 m	Theoretical Concrete Q	45.99 m³	Temporary Casing Level	69.355
Act. Drilling Length	40.7 m	Act. Concrete Q	51 m³	Steel Top Level	67.107
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.25 m
28.907					

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585403.552	830503.439
Actual	585403.539	830503.441
BAUER Survivor		

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

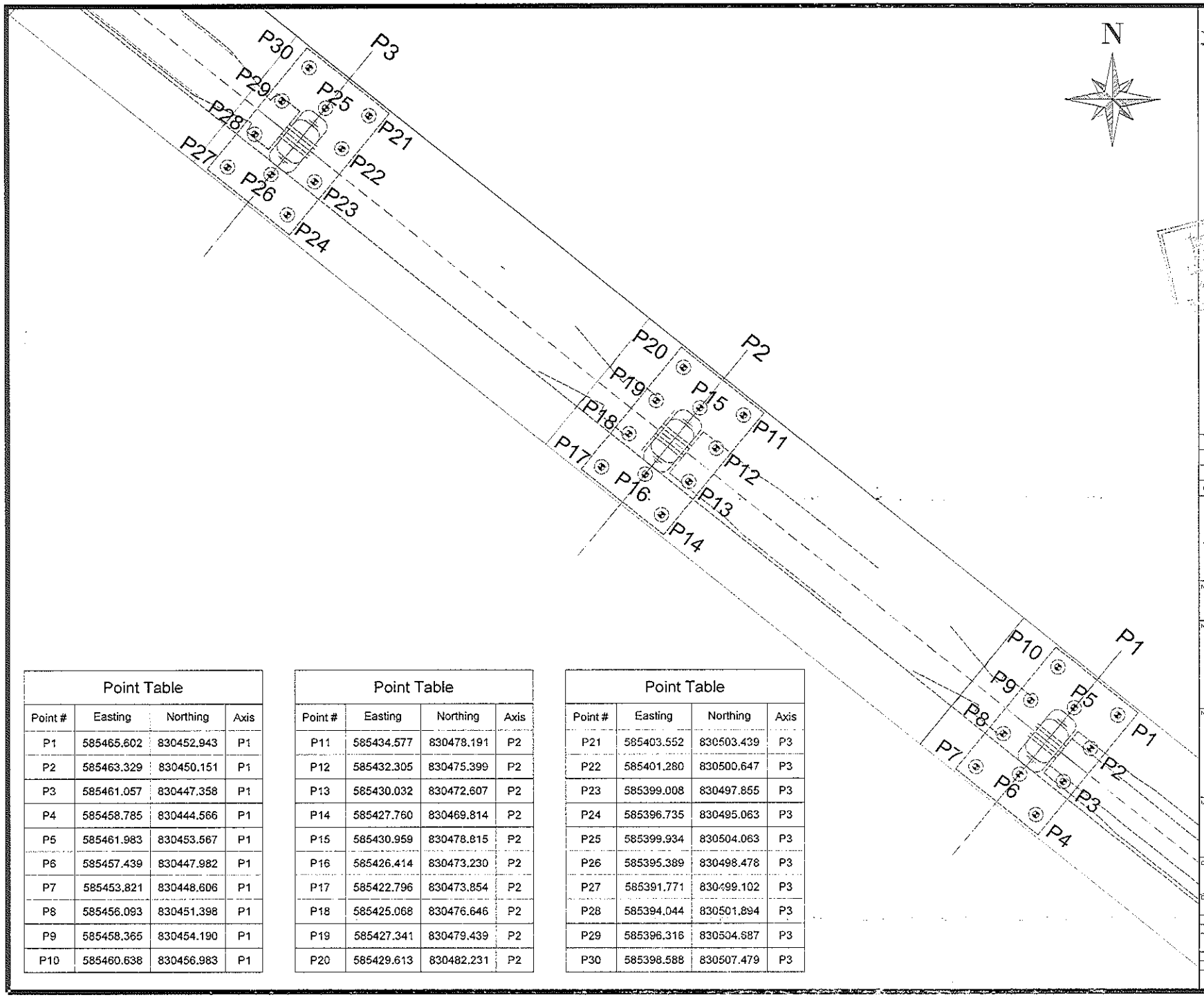
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.03
Viscosity(Sec.)	30:70 Sec.	35	≤90 Sec.	39
Sand Content %	Less than 4%	N/A	Less than 2%	1

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	3/9	10:14	14:40	Cleaning	-	-	-	
Install Cages	3/9	16:07	17:45	Pouring	3/9	18:19	19:35	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
HCO-00	08/2022	1 : 150
DRAWN BY	DESIGNED BY	CHECKED BY
Eng. Khaled Alaa	Eng. Mamdouh Saleh	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashkari	Engr. Jamal Tunisi

Point Table

Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table

Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table

Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

At Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B21

Dimension : 15*15*15 cm

Date of casting : 03/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	03/09/2022	01/10/2022	28	8.702	117900	524	546
2	03/09/2022	01/10/2022	28	8.534	119300	530	
3	03/09/2022	01/10/2022	28	8.462	131200	583	

التوقيع:

الأستشارى

جودة المشروع

مهندس / أحمد عرابى
مدير المصنع

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

At Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	خازوق B21
Dimension	:	15*15*15 cm
Date of casting	:	03/09/2022
MIX DESIGN STRENGTH :		370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	03/09/2022	10/09/2022	7	8.543	101300	450	461
2	03/09/2022	10/09/2022	7	8.506	99720	443	
3	03/09/2022	10/09/2022	7	8.568	110300	490	

التوقيع:
مهندس / أحمد عرابى
مدير المصنع

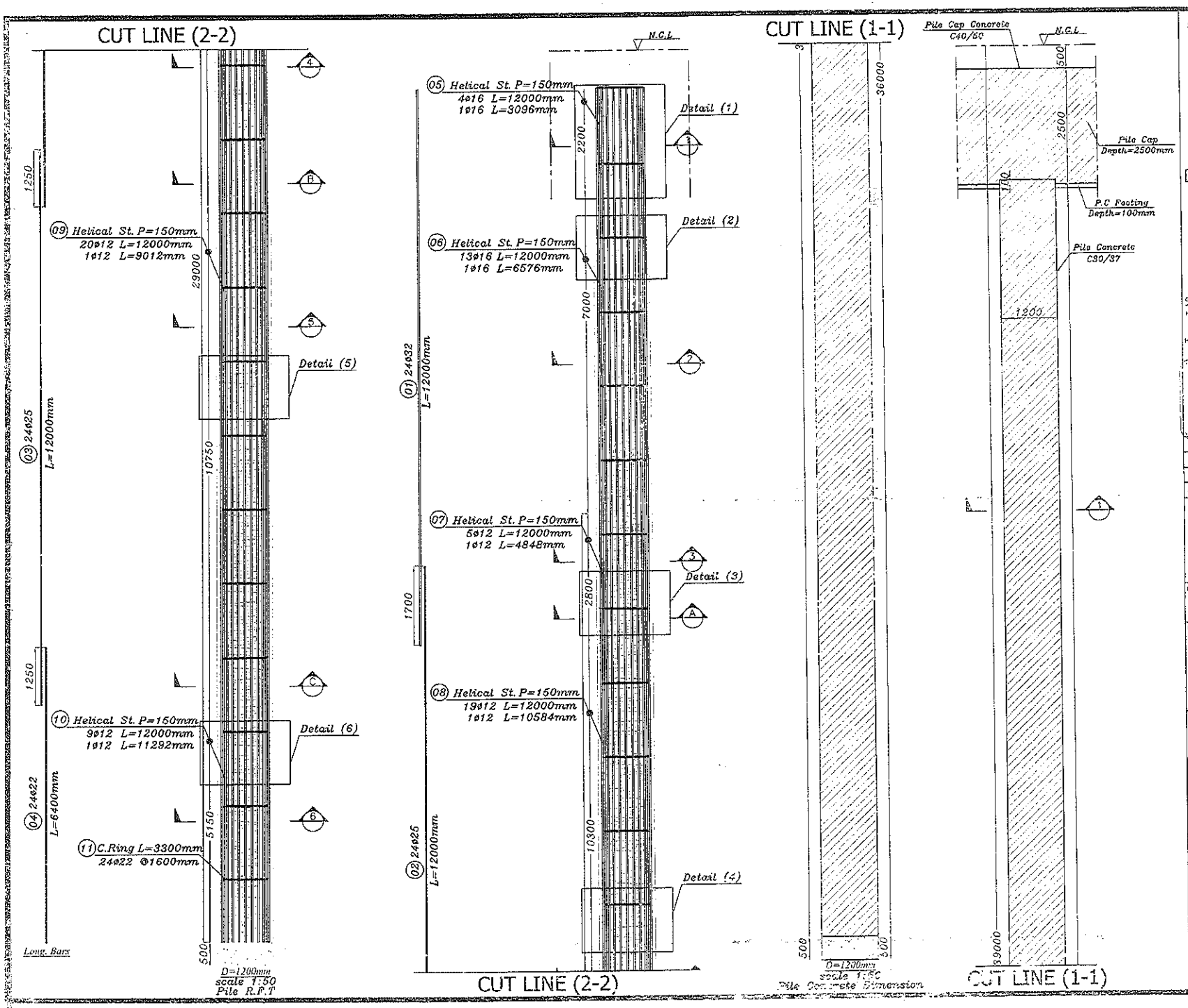
مركز هليوبوليس

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com



GENERAL NOTES:

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCED :

HSRE-V001-CC-410-001-NOT-E07	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-210-002-PIF-E07	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3 REINFORCEMENT (1)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	31-01-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

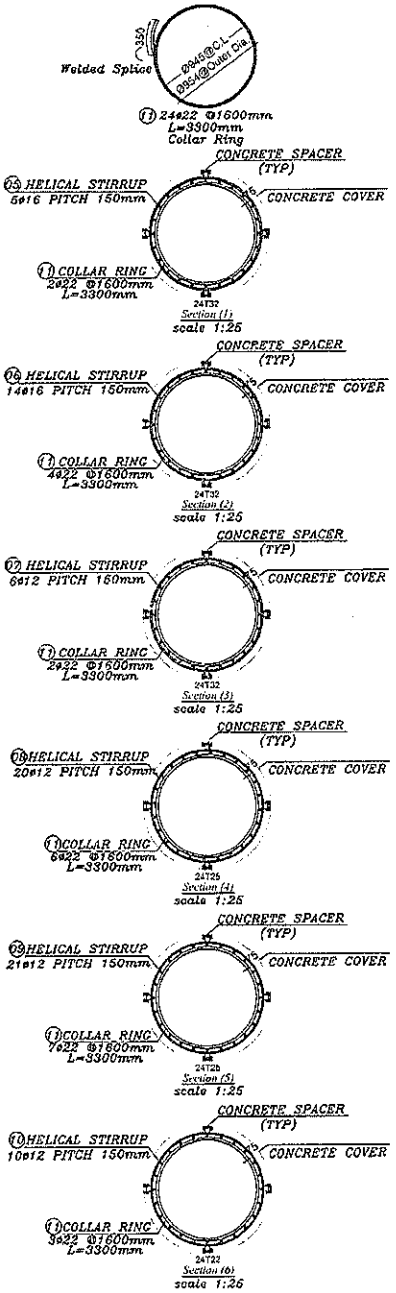
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

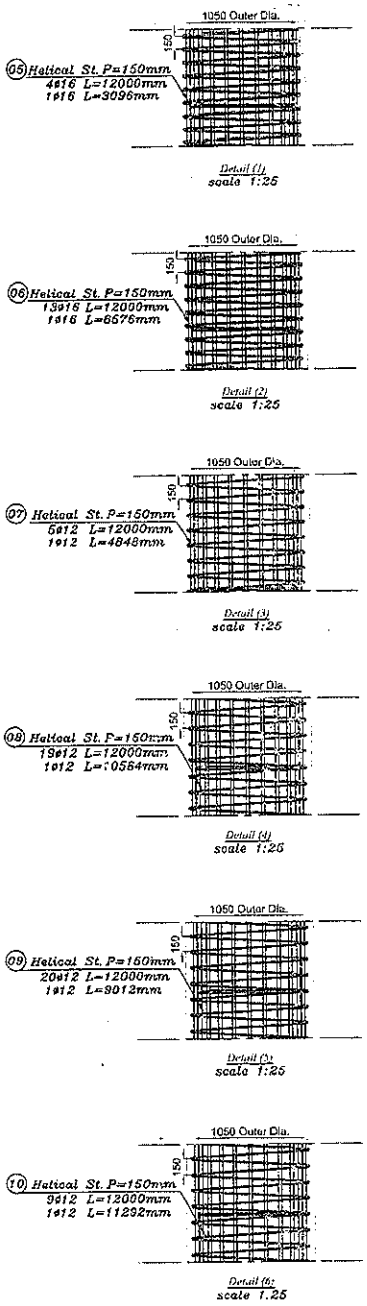
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

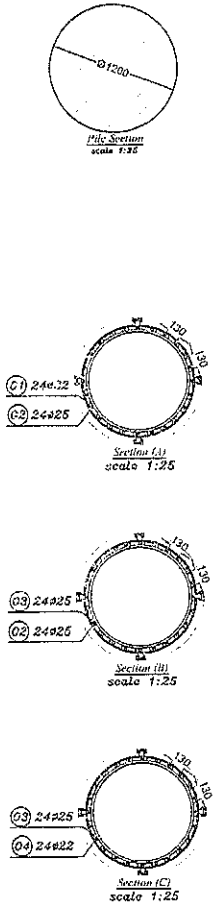
MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-CC-210-002-PIF-E06	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mansour	ENG. Mandouha Salah
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashkar		Eng. Jaber Turkey







GENERAL NOTES:

- All dimensions are in (mm)
- [illegible] All dimensions should be checked on site
- File Contents [illegible]
- Cover [illegible]
- Lap Splice Between Helical Stirrup [illegible] and [illegible] is [illegible]
- Lap Splice Between Helical Stirrup [illegible] and [illegible] is [illegible]
- Lap Splice Between Helical Stirrup [illegible] and [illegible] is [illegible]

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-ROT-002	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-010-002-PIE-002	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel: +20270 [illegible]

NO.	DATE	ENG.	REVISION
0	09-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1009

OWNER: المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GAMBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG. NO.:	DATE:	SCALE:
HSRE-V001-SD-010-002-PIE-E01	09-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdullah Mansour	ENG. Mamdouh Salah
		MAS
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lotfouni	Eng. Juan Tuaico	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

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GENERAL NOTES:

- All dimensions are in millimetre
- Do not use rule from drawings. All dimensions should be read or computed
- Pile Concrete C30/37 - Pile Cap Concrete C35/50
- Concrete cover 75mm
- Lap Splice Between Vertical Stirrup Ø25 and Ø16 is 1400mm
- Lap Splice Between Vertical Stirrup Ø25 and Ø16 is 1500mm
- Lap Splice Between Vertical Stirrup Ø16 and Ø12 is 1200mm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HORB-V001-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HORB-V001-CC-010-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	31-07-2022	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARDLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HORB-V001-CC-010-003-PIE-E02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Farouq	ENG. Abdullah Mohsen	ENG. Mahmoud Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashien		Eng. Jaber Tawfiq

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date				Time			
				18/9/2022							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (22))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST				
IR Approved		Plant & equipment available		
Mix Approved		Back up equipment available		
Setting out Survey Approved		Cast in items secure		
Temp Works Approved		Access route clear		
Formwork Checked		Work area safe to progress		
Start Time for Pour: 5 pm		Concrete Volume: 51 m3		

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			18/9/2022	A

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	19
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	18/9/2022
Pile No.	P22	Structure	bridge	Pile Cutoff Level	-
Pier	P3	Ground Level	68.00	Pile Toe Level	28.907
Theoretical Pile Length from caisson level	40.685 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	39.09 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	69.592
Act. Drilling Length	41.3 m	Act. Concrete Q	51 m³	Steel Top Level	67.107
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.48

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585401.280	830500.647
Actual	585401.290	830500.648
BAUER Survivor		

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

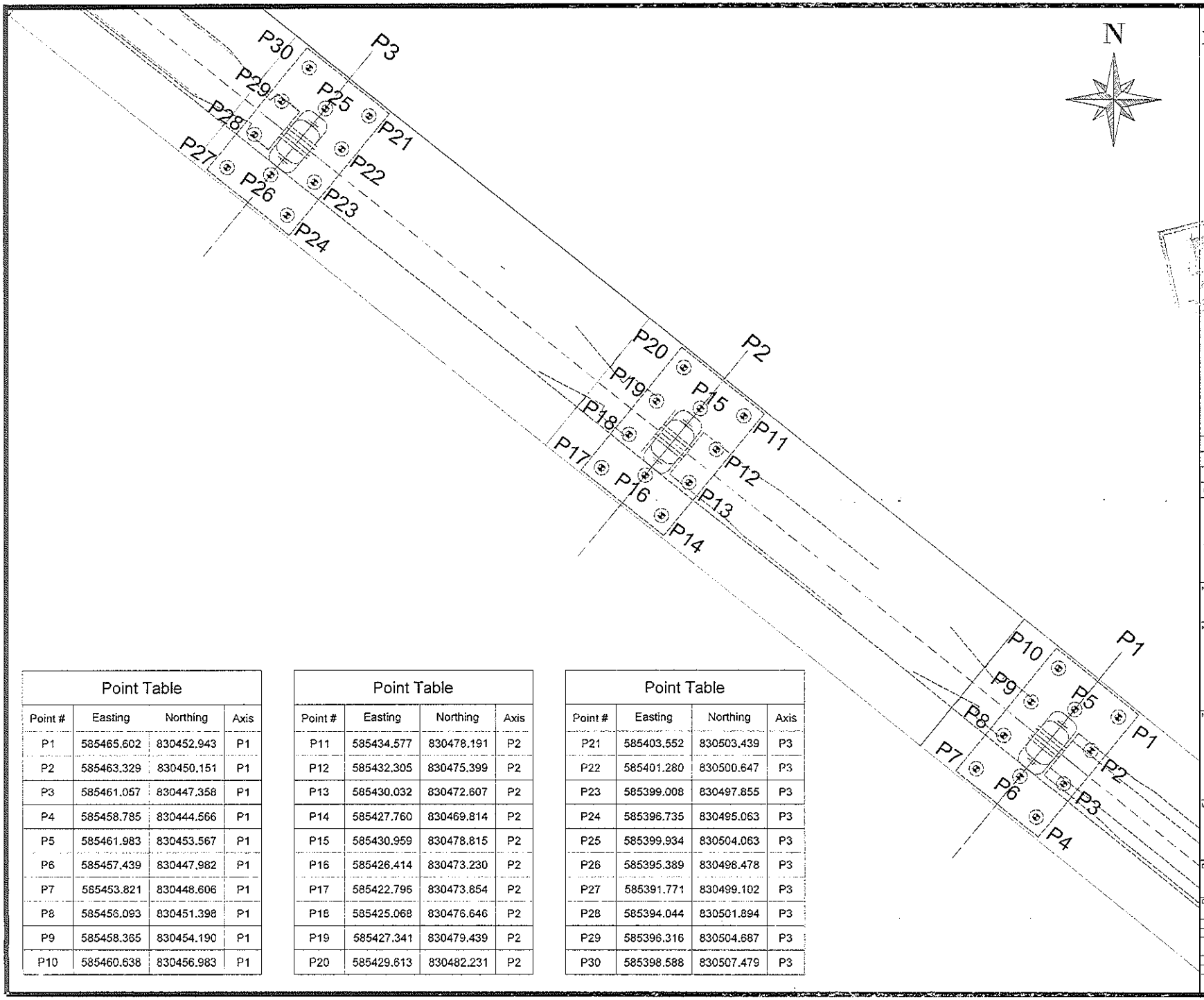
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.05
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	37
Sand Content %	Less than 4%	N/A	Less than 2%	1.50

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	18/9	12:00	14:45	Cleaning	-	-	-	
Install Cages	18/9	14:59	16:34	Pouring	18/9	17:00	18:13	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NO.	DATE	ENG.	REVISION
00	06/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER — المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT
FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE
REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG. NO	DATE	SCALE
PCG-00	06/2022	1 : 150
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled	Eng.Alamdouh Salah	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashin	Eng. Jaber Torres

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B22

Dimension : 15*15*15 cm

Date of casting : 18/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	18/09/2022	16/10/2022	28	8.534	149400	664	648
2	18/09/2022	16/10/2022	28	8.564	146300	650	
3	18/09/2022	16/10/2022	28	8.689	141500	629	

التوقيع: الأستشارى جودة المشروع

مهندس / أحمد عرابى
مدير المصنع

الأمل للخرسانة الجاهزة
محطة السادات
إدارة المصنع

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

At Amal Ready mix

الأمل
للخرسانة الجاهزة ش.م.م.
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	خازوق B22
Dimension	:	15*15*15 cm
Date of casting	:	18/09/2022
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	18/09/2022	25/09/2022	7	8.698	116300	517	476
2	18/09/2022	25/09/2022	7	8.673	101900	453	
3	18/09/2022	25/09/2022	7	8.569	103200	459	

التوقيع:
مهندس / احمد عرابى
مدير المصنع

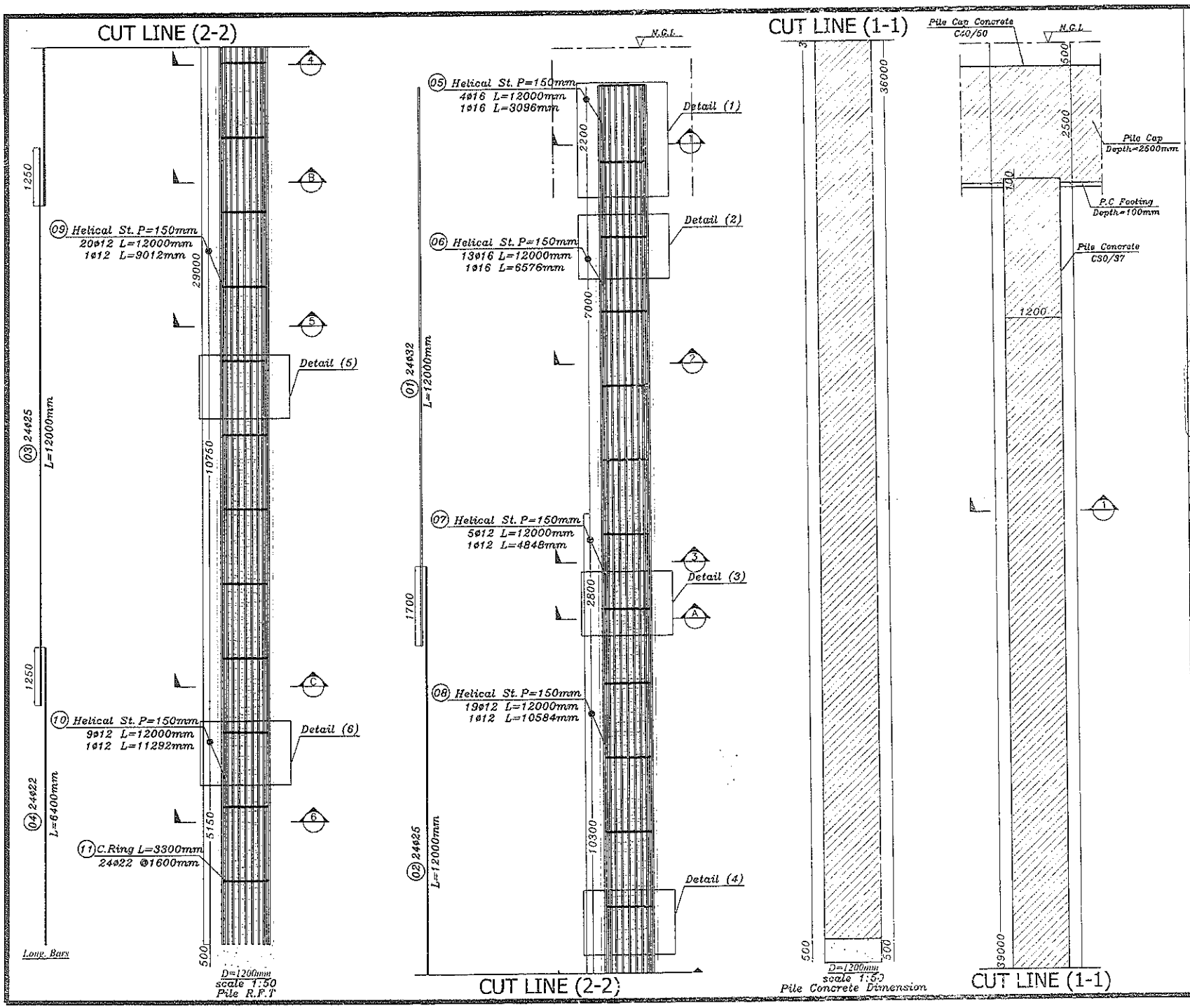
الأستشارى

جودة المشروع
مركز هليوبوليس

Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : مول إيجيبت ميديكال سنتر - الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر/ تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٠٠٦٠٣٣٨٦٠ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٢٢٧٨٥٥٥٩٦
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨/٢٦٣٠١٤٥ - ف : ٠٤٨/٢٦٣٠١٤٠
٠١٠٠٤٩٧٦٤٩٧ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٢٨٤٥٩٦٧٣

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com



GENERAL NOTES:

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HGRE-V001-GC-010-001-NOT-002 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT & DEFINITION

HGRE-V001-GC-210-002-PIE-002 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (3)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	11-07-2022	AIAS	ISSUED FOR CONSTRUCTION AS PER NE VIEW NOTICE No. 1009

OWNER: المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

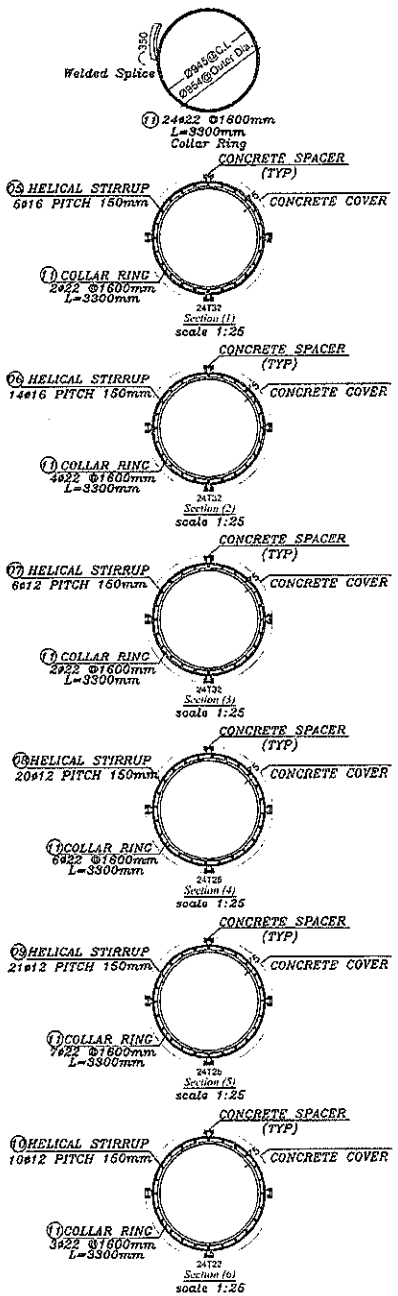
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

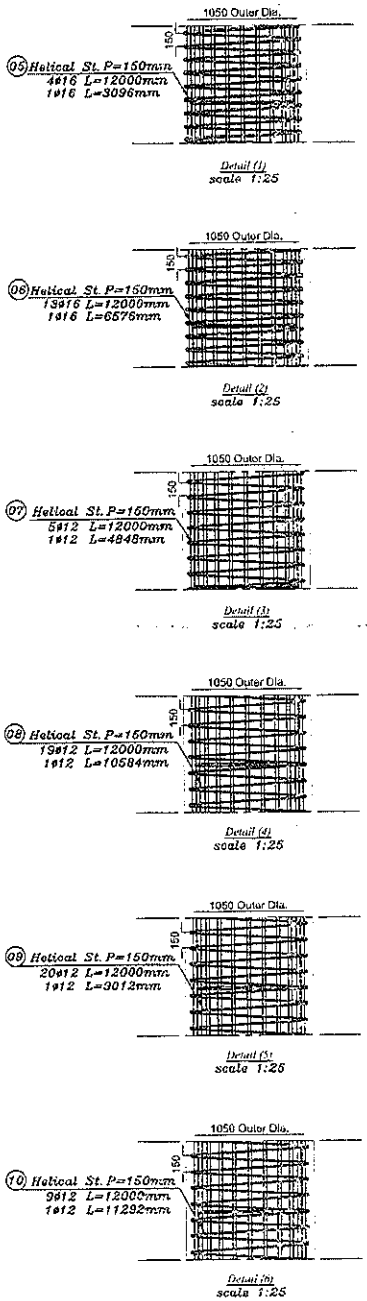
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

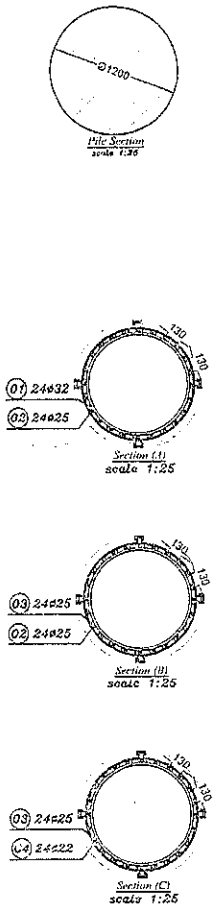
MAIN CONTRACTOR:

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HGRE-V001-SD-210-003-PIE-006	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Mostafa Salah
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashkam	Eng. Jaafar Tawfiq	







GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All dimensions should be read or calculated
- Pile Cut-off Level (PCOL) - Pile Cap Level (PCL) 1.00 m
- Concrete Cover 75mm
- Lap Splice Between Helical Stirrup (05) and (06) 1.000mm
- Lap Splice Between Helical Stirrup (06) and (07) 1.000mm
- Lap Splice Between Helical Stirrup (08) and (09) 1.000mm

All Levels should be revised before construction in site

ABBREVIATION :

- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-W001-DC-010-001-N01-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-W001-DC-710-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3 REINFORCEMENT (1)

Arab House of Engineering
Tel: +2027610535

NO.	DATE	ENG.	REVISION
0	[illegible]	MAG	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1409

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

الشركة العالمية

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-W001-SD-710-001-PIE-E02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mahran	ENG. Mustafa Saleh
SUPERVISOR:	APPROVED BY:	
DR. Mahmoud Lashiaw	Eng. Jaafar Turkia	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	12000 / 1050 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	12000 / 1050 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	12000 / 1050 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	12000 / 1050 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	12000 / 1050 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	12000 / 1050 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Φ12	Φ16	Φ22	Φ25	Φ32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering
شركة بيت الهندسة العربية
Tel: +2012701155
١٠

GENERAL NOTES:
- All dimensions are in millimeters
- Do not scale drawings. All dimensions should be taken from drawings
- Pile Concrete C30/37 - Pile Cap Concrete C35/50
- Concrete cover 75mm
- Lap Splice Between Vertical Stirrups 40 bar 40 = 1.10 m
- Lap Splice Between Vertical Stirrups 40 bar 40 = 1.50mm
- Lap Splice Between Vertical Stirrups 40 bar 40 = 2.20mm

All Levels should be revised before construction in site

ABBREVIATION :
- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
0	31-01-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVISED NOTICE No. 1009

OWNER: المالك:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALMAIAN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :
الشركة الناجحة

DWG. TITLE.
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-110-003-PIE-F00	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdallah Mohsen	ENG. Mohammed Galal
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashkar		Eng. Junior Tawfiq

REQUEST to POUR CONCRETE

Contractor Company				Designer Company						
Issued by Contractor	Name	Sign		Date				Time		
				10/9/2022						
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة									

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW				
Mix Approval Reference				
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (23))			
Concrete Type:	Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 370 kg/cm^2
PRESTART CHECKLIST				
IR Approved			Plant & equipment available	
Mix Approved			Back up equipment available	
Setting out Survey Approved			Cast in items secure	
Temp Works Approved			Access route clear	
Formwork Checked			Work area safe to progress	
Start Time for Pour: 5:56 pm			Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			10/9/2022	A

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	11
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	10/9/2022
Pile No.	P23	Structure	bridge	Pile Cutoff Level	-
Pier	P3	Ground Level	68.00	Pile Toe Level	28.907
Theoretical Pile Length from caisson level	40.38 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	39.09 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	69.290
Act. Drilling Length	41 m	Act. Concrete Q	51 m³	Steel Top Level	67.107
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.1

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585399.008	830497.855
Actual	585399.001	830497.841
BAUER Survivor		

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

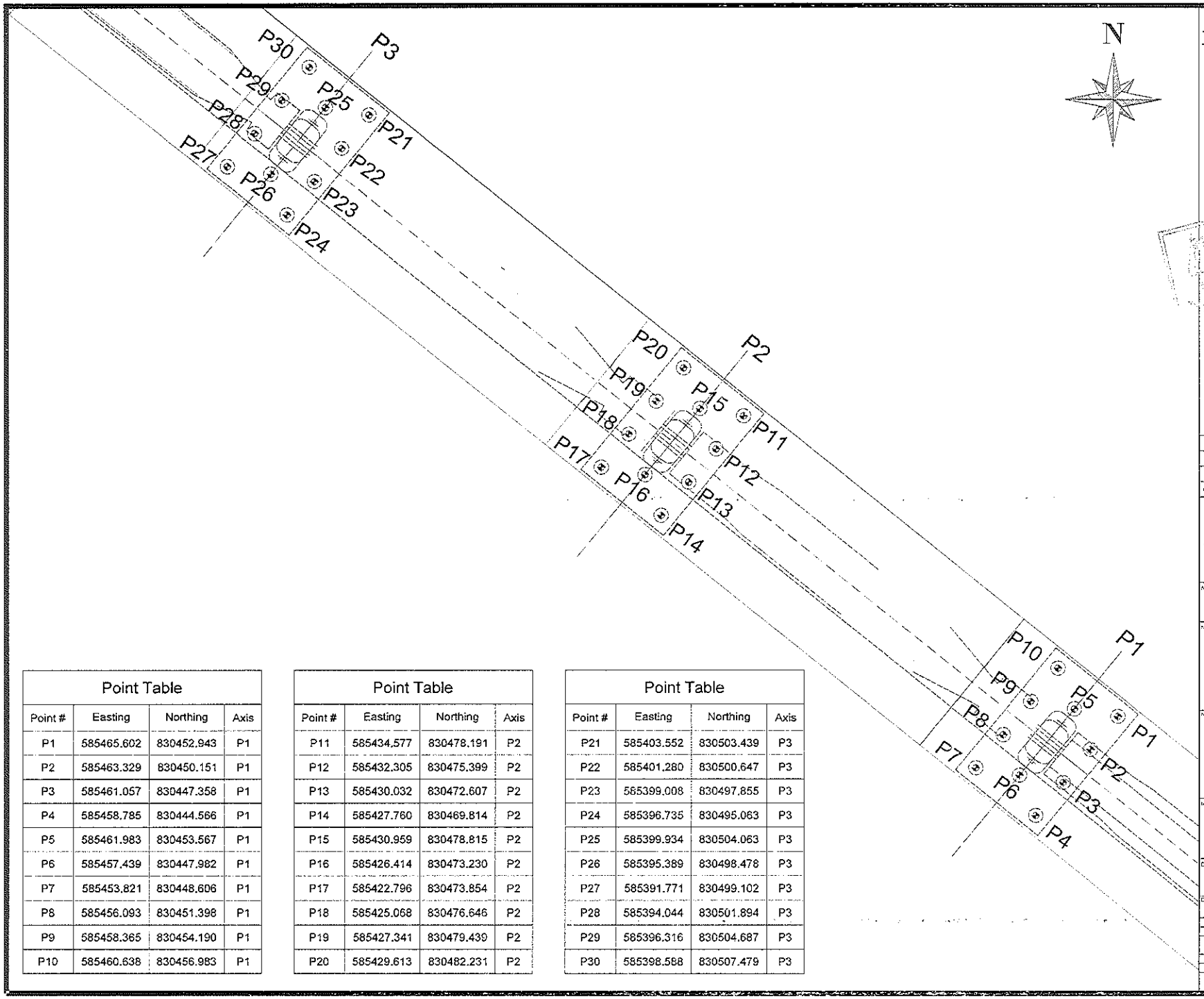
Bentonite Slurry Test

Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.03
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	38
Sand Content %	Less than 4%	N/A	Less than 2%	1.50

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	10/9	11:30	14:20	Cleaning	-	-	-	
Install Cages	10/9	16:00	17:18	Pouring	10/9	17:56	18:57	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

NO.	DATE	ENG.	REVISION
00	04/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

NE JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
RCD-00	08/2022	1:100
DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Alaa	Eng.Mamdouh Galal	

SUPERVISOR	APPROVED BY
DR. Mahmoud Lashin	Eng. Jawad Tohiou

Point Table

Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table

Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table

Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT	:	مشروع القطار الكهربائى السريع (كوبرى ريجوا)
CLIENT	:	شركة النيل العامة للطرق والكبارى
ELEMNET	:	خازوق B23
Dimension	:	15*15*15 cm
Date of casting	:	10/09/2022
MIX DESIGN STRENGTH	:	370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	10/09/2022	08/10/2022	28	8.625	135500	602	582
2	10/09/2022	08/10/2022	28	8.547	116900	520	
3	10/09/2022	08/10/2022	28	8.601	140700	625	

التوقيع:

الأستشارى

جودة المشروع

مهندس / أحمد عرابى
مدير المصنع

تامر سالم

الإدارة : إيجيبت ميديكال سنتر- مدينة نصر- المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨/٢٦٣٠١٤٥ - ف: ٠٤٨/٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City / Tel/Fax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497
E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

Al Amal Ready mix

الأمل
للخرسانة الجاهزة والمنتجات الأسمنتية
رأس المال المرخص به ٦٠ مليون جنيه
والمصدر ٢٥ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B23

Dimension : 15*15*15 cm

Date of casting : 10/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	10/09/2022	17/09/2022	7	8.654	107200	476	456
2	10/09/2022	17/09/2022	7	8.701	97310	432	
3	10/09/2022	17/09/2022	7	8.711	103500	460	

التوقيع:

مركز هليوبوليس

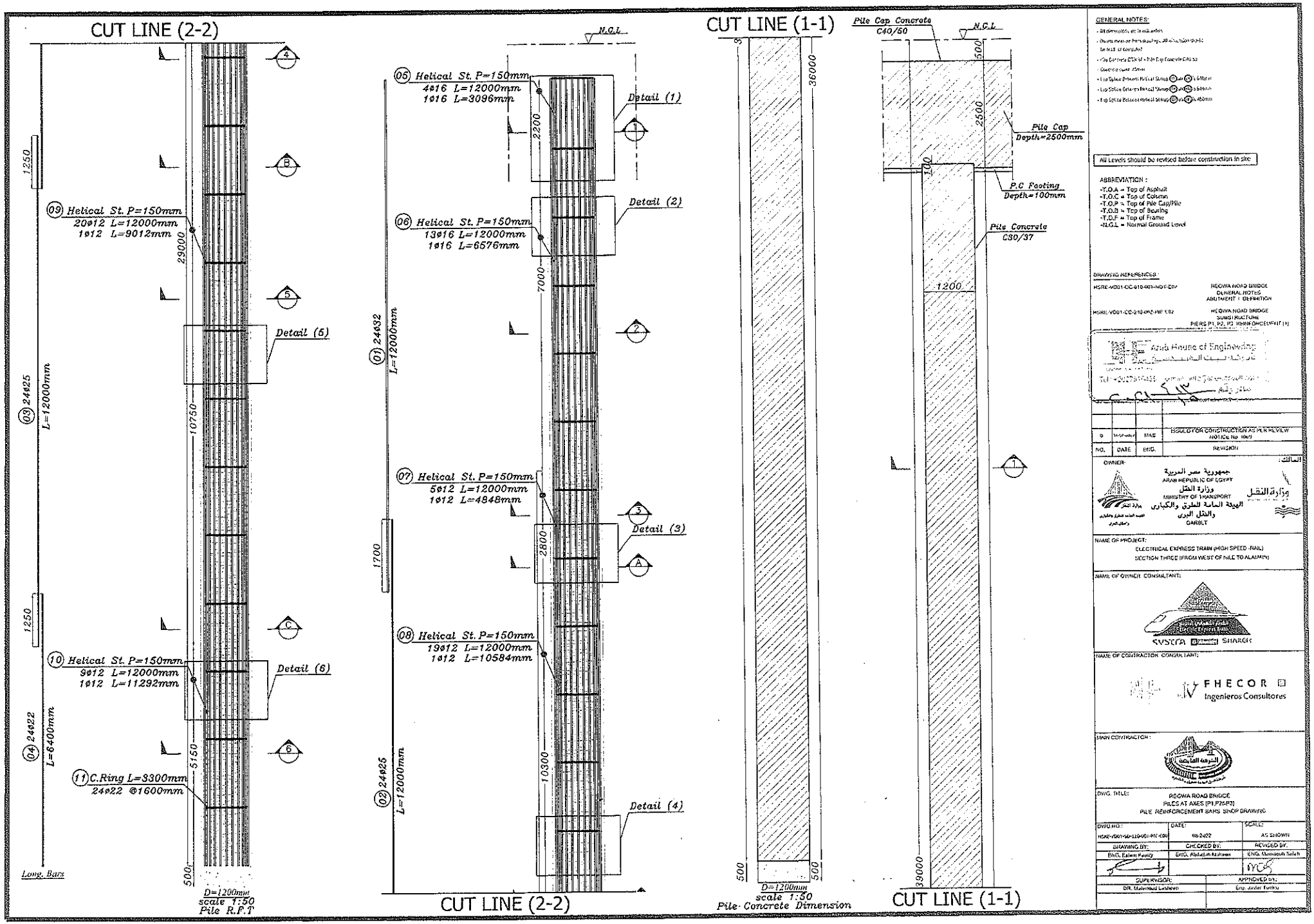
مهندس/أحمد عرابى
مدير المصنع

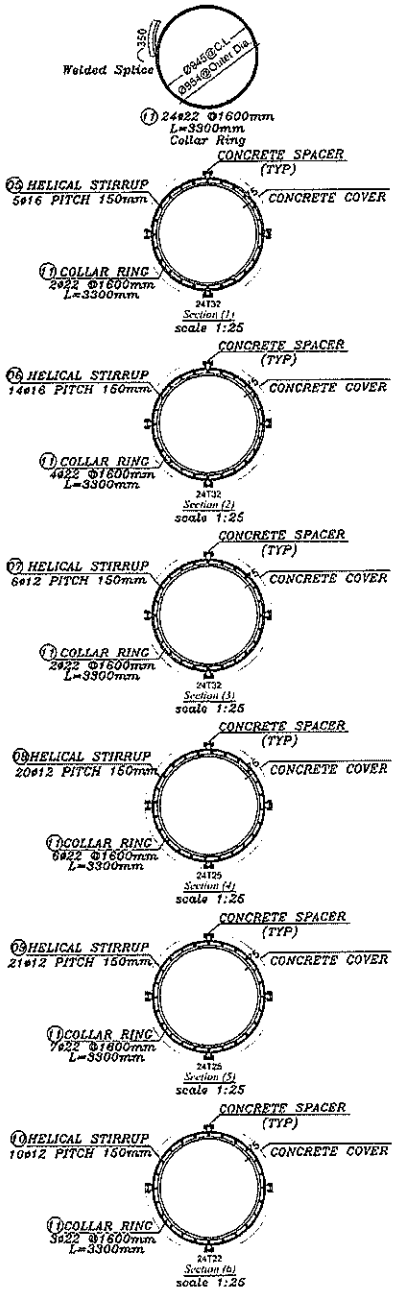
الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

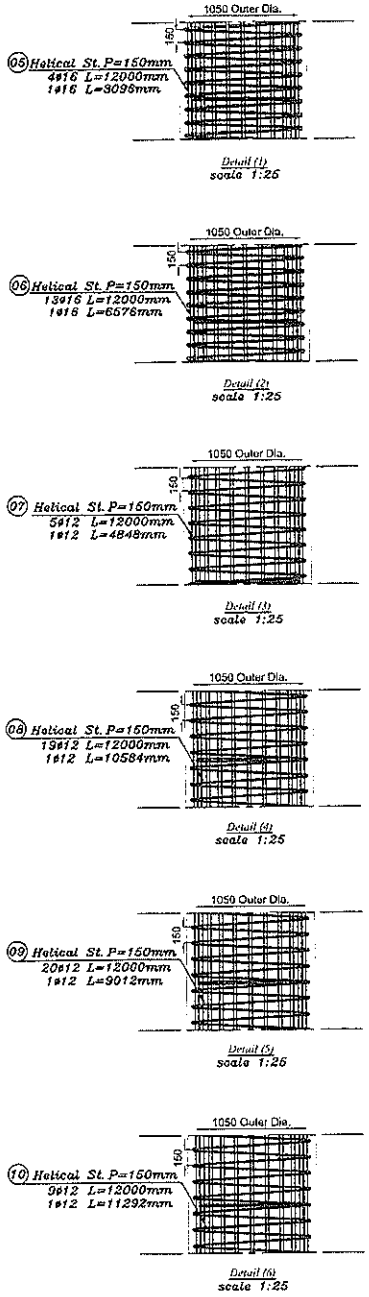
Head Office : 41 Losaka st. - Second Floor - Flat 3 Mohamed El-Maqrief st.
Nasr City - / Telfax: 26772572
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

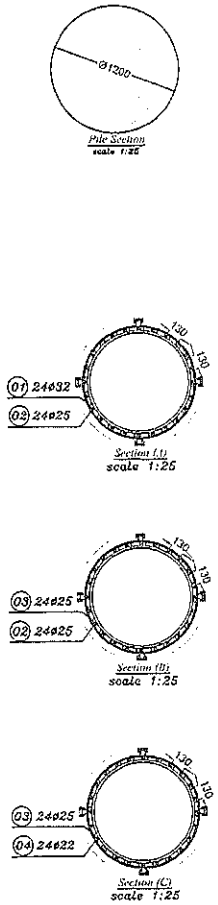
الإدارة : ٤١ش لوساكا - الدور الثاني شقة ٣ - متفرع من ش محمد المقريف
مدينة نصر/ تليفاكس : ٢٦٧٧٢٥٧٢
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٠٠٦٠٣٣٨٦٠ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٢٢٧٨٥٥٥٩٦
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٢٦٣٠١٤٥ / ٠٤٨ - ف : ٢٦٣٠١٤٠ / ٠٤٨
٠١٠٠٤٩٧٦٤٩٧ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٢٨٤٥٩٦٧٣

E-mail: info@alamalreadymix.com
website : www.alamalreadymix.com


CUT LINE (2-2)
N.G.L
05 Helical St. P=150mm
4ø16 L=12000mm
1ø16 L=3096mm
Detail (1)
Detail (2)
06 Helical St. P=150mm
13ø16 L=12000mm
1ø16 L=6576mm
09 Helical St. P=150mm
20ø12 L=12000mm
1ø12 L=9012mm
Detail (5)
07 Helical St. P=150mm
5ø12 L=12000mm
1ø12 L=4848mm
Detail (3)
08 Helical St. P=150mm
19ø12 L=12000mm
1ø12 L=10584mm
10 Helical St. P=150mm
9ø12 L=12000mm
1ø12 L=11292mm
Detail (6)
11 C.Ring L=3300mm
24ø22 @1600mm
Detail (4)
01 24ø32 L=12000mm
02 24ø25 L=12000mm
03 24ø25 L=12000mm
04 24ø22 L=6400mm
Long. Bars
D=1200mm
scale 1:50
Pile R.F.T
CUT LINE (2-2)
CUT LINE (1-1)
Pile Cap Concrete C40/50
Pile Cap Depth=2500mm
P.C Footing Depth=100mm
Pile Concrete C30/37
D=1200mm
scale 1:50
Pile Concrete Dimension
CUT LINE (1-1)
GENERAL NOTES:
All Levels should be revised before construction in site
ABBREVIATION :
-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level
DRAWING REFERENCED :
REGWA ROAD BRIDGE
GENERAL NOTES
ABUTMENT 1 DEFINITION
REGWA ROAD BRIDGE
SUBSTRUCTURE
PIERS P1, P2, P3 REINFORCEMENT (1)
Arab House of Engineering
9 MAE ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1869
NO. DATE ENG. REVISION
OWNER:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)
NAME OF OWNER CONSULTANT:
SYSTRA SHARGH
NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores
MAIN CONTRACTOR :
DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES [P1,P2,P3]
PILE REINFORCEMENT BARS SHOP DRAWING
DWG NO.: DATE: 08-2022 SCALE: AS SHOWN
DRAWING BY: ENG. Salem Fawzy
CHECKED BY: ENG. Abdullah Kashwan
REVISED BY: ENG. Mustafa Salah
SUPERVISOR: DR. Mahmoud Lashen
APPROVED BY: Eng. Jader Fathy







GENERAL NOTES:

- All dimensions are in millimeters
- Do not measure from drawings. All dimensions should be read or calculated.
- Pile Concrete Cover: Pile Cap Concrete Cover 50
- Concrete Cover 75mm
- Lap Splice between Helical Stirrup (1) and (2) 1.4 Meter
- Lap Splice between Helical Stirrup (2) and (3) 1.4 Meter
- Lap Splice between Helical Stirrup (3) and (4) 1.4 Meter

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-GC-910-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-GC-910-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering

NO.	DATE	ENG.	REVISION
0	24-07-2022	MAS	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 0069

OWNER: المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
CAHULT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMEIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR:
الشركة القابضة

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO:	DATE:	SCALE:
HSRE-V001-SD-110-002-PIE-E05	03-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdullah Mohsen	ENG. Mamdouh Sleiah
SUPERVISION:	APPROVED BY:	
Dr. Mahmoud Lashin	Dr. Jawad Turkan	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering

GENERAL NOTES:

All Levels should be revised before construction in site

ABBREVIATION :
- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HORE-V001-CC-010-001-NOT-L02 — REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINATION

HORE-V001-CC-210-002-PIE-F02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG	REVISION
0	[illegible]	MAB	ISSUED FOR CONSTRUCTION AFTER REVIEW NOTICE No. 1044

OWNER:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (NEW SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAIECH

NAME OF CONTRACTOR CONSULTANT:
FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO :	DATE:	SCALE:
HORE-V001-CC-210-003-PIE-F02	08-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
Eng. Eslam Ramey	ENG. Abdallah Nabawy	Ehab. Mamdouh Saleh
SUPERVISOR:		APPROVED BY:
DR. Mahmoud Lashein		Eng. Jadal Tawfik

إستلام موقع
Site Handover Sheet (CHUM)

إستلام أمر العمل:	2022/ /	تاريخ الزيارة: 3 /13 /2023	ملاحظات أثناء الاختبار Notes
المالك (Owner):	وزارة النقل - الهيئة العربية للإنشاءات		
العميل (NECB Client):	النيل العام للطرق والكباري		
المشروع (Project Name):	القطار الكهربائي السريع - كوبري الجوف		
إستشاري المالك (OE):	سيستكو / محمد باجوم		

S	Elemnet Type	Element ID	No. of Tubes	Available No. of Tubes	D (cm)	L (m)	Other measurements
1	Pile	P1-P8	4	4	120	40	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							

الجهاز المستخدم Testing Equipment		إجمالي عدد الاختبارات Total #of tests	1 pile
ممثلي المكتب NECB Representative	مهندس إختبارات /	التوقيع	
	فني إختبارات /	التوقيع	
ممثل العميل Client Representative	الاسم /	ممثل الاستشاري OE Representative	الاسم / التوقيع /
	المسمى الوظيفي /		

صحة أرقام وأعداد وبيانات الخوازيق المسجلة مسئولية العميل دون غيره ويلزم التأكد منها من خلال لوحة معتمدة بالموقع

The truth of the tested elements data is in the client responsability and should be checked via a stamped layout at site.

نموذج رقم (F/24-02)
إصدار/مراجعة 10/0

REQUEST to POUR CONCRETE

Contractor Company				Designer Company							
Issued by Contractor	Name	Sign		Date				Time			
				14/9/2022							
Received by ER		محرم باخوم	CON	C1	C2	C3	DD	MM	YY	HH	MM
Contractor Reference	النيل العامة										

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		

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW			
Mix Approval Reference			
Location of Pour	Electrical High Speed (From West Of Nile To ALAMAIN) From 189+540 Km to 189+680 Km (PILES P (24))		
Concrete Type: Grout Mix ☐	Lean Mix ☐	Structural Mix ☐	Grade: 350 kg/cm^2
PRESTART CHECKLIST			
IR Approved		Plant & equipment available	
Mix Approved		Back up equipment available	
Setting out Survey Approved		Cast in items secure	
Temp Works Approved		Access route clear	
Formwork Checked		Work area safe to progress	
Start Time for Pour: 12:58 pm		Concrete Volume: 51 m3	

THE FOLLOWING DOCUMENTS ARE ATTACHED FOR REVIEW

Item	Document No	Revision	Title	Number of Sheets
1			**COMPRESSIVE STRENGHT OF TEST CONCRERTE CUBE SPECIMENS**	
2			**STEEL RFT SHOPDRAWING FOR PILES**	
3			**PILES COORDINATES**	

Comments by:	Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor				A
QA/QC				A
Employer Representative			14/9/2022	A

Bored Piles Construction

Pile Record Sheet

Pile Data

Project	ELECTRIC EXPRESS TRAIN PROJECT-REGWA BRIDGE				
Owner	MINISTRY OF TRANSPORT			Report No.	15
Subcontractor	GENERAL NILE COMPANY FOR ROADS&BRIDGES			Date	14/9/2022
Pile No.	P24	Structure	bridge	Pile Cutoff Level	-
Pier	P3	Ground Level	68.00	Pile Toe Level	28.907
Theoretical Pile Length from caisson level	40.58 m	Water Table Level	N/A	Permanent Casing Level	N/A
Req. Drilling Length From Ground Level	38.09 m	Theoretical Concrete Q	46.33 m³	Temporary Casing Level	69.487
Act. Drilling Length	40.8 m	Act. Concrete Q	51 m³	Steel Top Level	67.107
Permanent Casing Dim. L(m)×D(m)×Thick. (mm)	N/A	Steel Cage	Circular piles	Hook Length	2.38

Pile Survey

Coordinates	EAST	NORTH
Theoretical	585396.735	830495.063
Actual	585396.731	830495.073
BAUER Survivor		

Bentonite Slurry Test

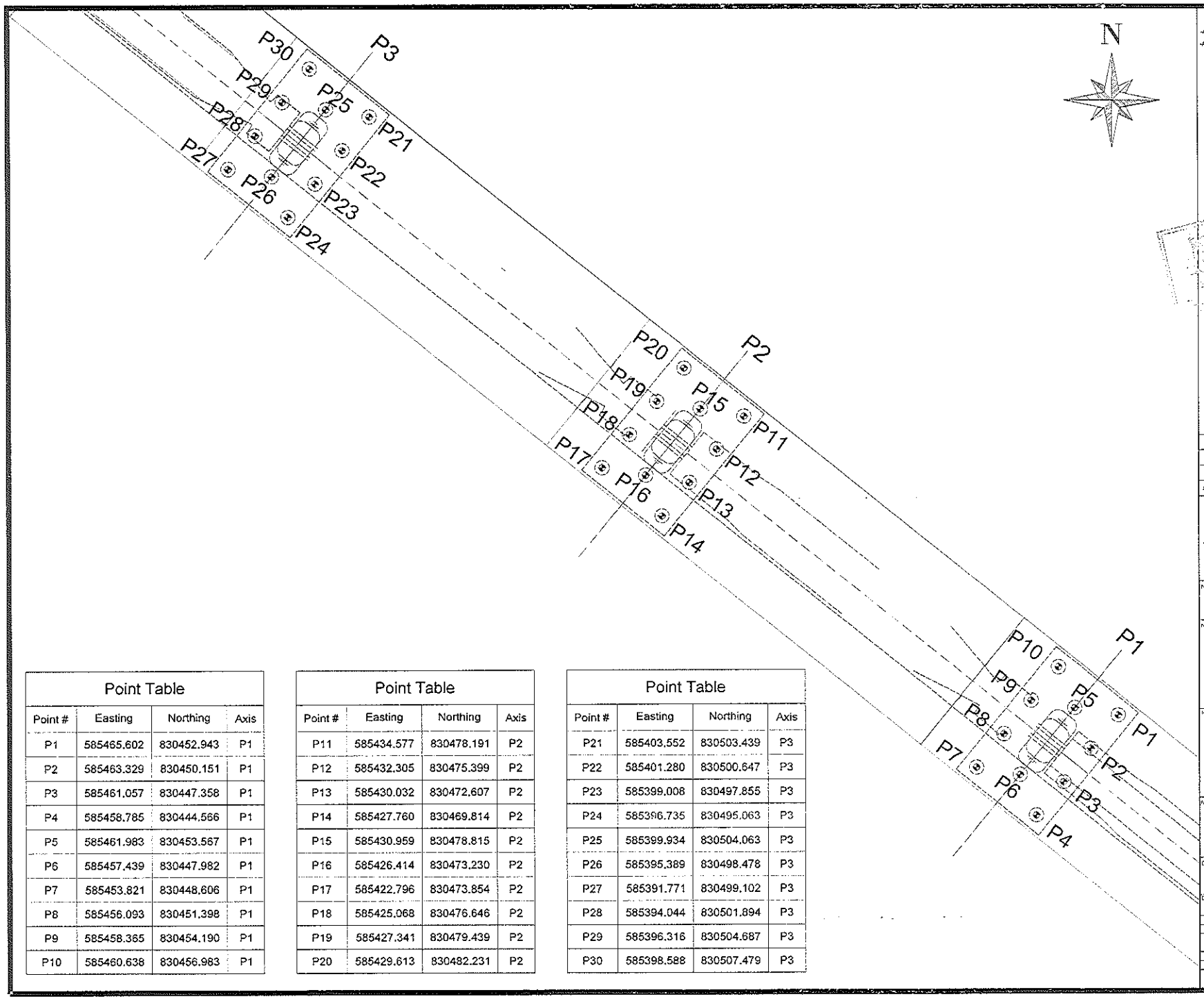
Properties	Fresh Bentonite		Before Cages Installation	
	Req. Limits	Actual	Req. Limits	Actual
Density (gm/cm³)	Less Than 1.1	1.02	Less Than 1.5	1.03
Viscosity(Sec.)	30:70 Sec.	34	≤90 Sec.	38
Sand Content %	Less than 4%	N/A	Less than 2%	1.50

Geotechnical Log	
0.0	CAISSON L.
5.0	
10.0	
15.0	
20.0	
25.0	
30.0	

Time Survey

Activity	Date	From	To	Activity	Date	From	To	Remarks
Drilling	13/9	13:45	18:00	Cleaning	-	-	-	
Install Cages	14/9	11:04	12:20	Pouring	14/9	12:58	2:00	

	BAUER EGYPT	NILE COMPANY	OWNER/*if Required*
Signature			



NOTES:

-ALL COORDINATES ARE IN METERS UNLESS OTHERWISE MENTIONED.

-ALL COORDINATES ARE BASED ON ETM (EGYPTIAN TRANSVERSE MERCATOR) AS PER THE RECEIVED SITE SURVEY.

Point Table			
Point #	Easting	Northing	Axis
P1	585465.602	830452.943	P1
P2	585463.329	830450.151	P1
P3	585461.057	830447.358	P1
P4	585458.785	830444.566	P1
P5	585461.983	830453.567	P1
P6	585457.439	830447.982	P1
P7	585453.821	830448.606	P1
P8	585456.093	830451.398	P1
P9	585458.365	830454.190	P1
P10	585460.638	830456.983	P1

Point Table			
Point #	Easting	Northing	Axis
P11	585434.577	830478.191	P2
P12	585432.305	830475.399	P2
P13	585430.032	830472.607	P2
P14	585427.760	830469.814	P2
P15	585430.959	830478.815	P2
P16	585426.414	830473.230	P2
P17	585422.796	830473.854	P2
P18	585425.068	830476.646	P2
P19	585427.341	830479.439	P2
P20	585429.613	830482.231	P2

Point Table			
Point #	Easting	Northing	Axis
P21	585403.552	830503.439	P3
P22	585401.280	830500.647	P3
P23	585399.008	830497.855	P3
P24	585396.735	830495.063	P3
P25	585399.934	830504.063	P3
P26	585395.389	830498.478	P3
P27	585391.771	830499.102	P3
P28	585394.044	830501.894	P3
P29	585396.316	830504.687	P3
P30	585398.588	830507.479	P3

NO.	DATE	ENG.	REVISION
00	08/2022	K.A	ISSUED FOR CONSTRUCTION

OWNER

المالك:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

وزارة النقل

NAME OF PROJECT

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT

FHECOR Ingenieros Consultores

MAIN CONTRACTOR

DWG. TITLE

REGWA BRIDGE
PILES COORDINATES FOR APPROVED AXIS
FROM P1 : P3

DWG.NO.	DATE	SCALE
PCO-00	08/2022	1 : 150

DRAWING BY	DESIGNED BY	CHECKED BY
Eng.Khaled Abu	Eng.Mamdouh Saleh	

SUPERVISOR	APPROVED BY
DR. Mahitosa Lashean	Eng. Juner Tohao

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B24

Dimension : 15*15*15 cm

Date of casting : 14/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	14/09/2022	12/10/2022	28	8.647	132800	590	606
2	14/09/2022	12/10/2022	28	8.599	140700	625	
3	14/09/2022	12/10/2022	28	8.532	135500	602	

التوقيع:

مهندس / أحمد عرابى
مدير المصنع

الأستشارى

جودة المشروع

الأمل للخرسانة الجاهزة
محطة السادات
إدارة الجودة

Head Office : Egypt Medical Center - Nasr City - Tenth District - Fifth Floor Unit (407).
Nasr City - / Telfax: 26772572 - 23573307
Planet : New Cairo - Katamia - Pfart 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497

الإدارة : إيجيبت ميديكال سنتر - مدينة نصر - المنطقة العاشرة - الدور الخامس وحدة (٤٠٧)
مدينة نصر / تليفاكس : ٢٦٧٧٢٥٧٢ - ٢٣٥٧٣٣٠٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٢٢٧٨٥٥٥٩٦ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٠٠٦٠٣٣٨٦٠
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت: ٠٤٨ / ٢٦٣٠١٤٥ - ف: ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٢٨٤٥٩٦٧٣ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٠٤٩٧٦٤٩٧

E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

Al Amal Ready mix

الأمل
للخرسانة الجاهزة ش.م.م.
رأس المال المرخص به ١٥٠ مليون جنيه
والمصدر ٥٠ مليون جنيه

COMPRESSIVE STRENGTH OF TEST CONCRETE CUBE SPECIMENS
BS 1881 : PART4 : 1983

PROJECT : مشروع القطار الكهربائى السريع (كوبرى ريجوا)

CLIENT : شركة النيل العامة للطرق والكبارى

ELEMNET : خازوق B24

Dimension : 15*15*15 cm

Date of casting : 14/09/2022

MIX DESIGN STRENGTH : 370 kg / cm2

NO	CASTING DATE	TESTING DATE	AGE (day)	weight (kg)	crushing load (kg)	compressive strength (kg / cm2)	Average
1	14/09/2022	21/09/2022	7	8.608	109900	488	480
2	14/09/2022	21/09/2022	7	8.562	105900	471	
3	14/09/2022	21/09/2022	7	8.439	108000	480	

التوقيع

جودة المشروع

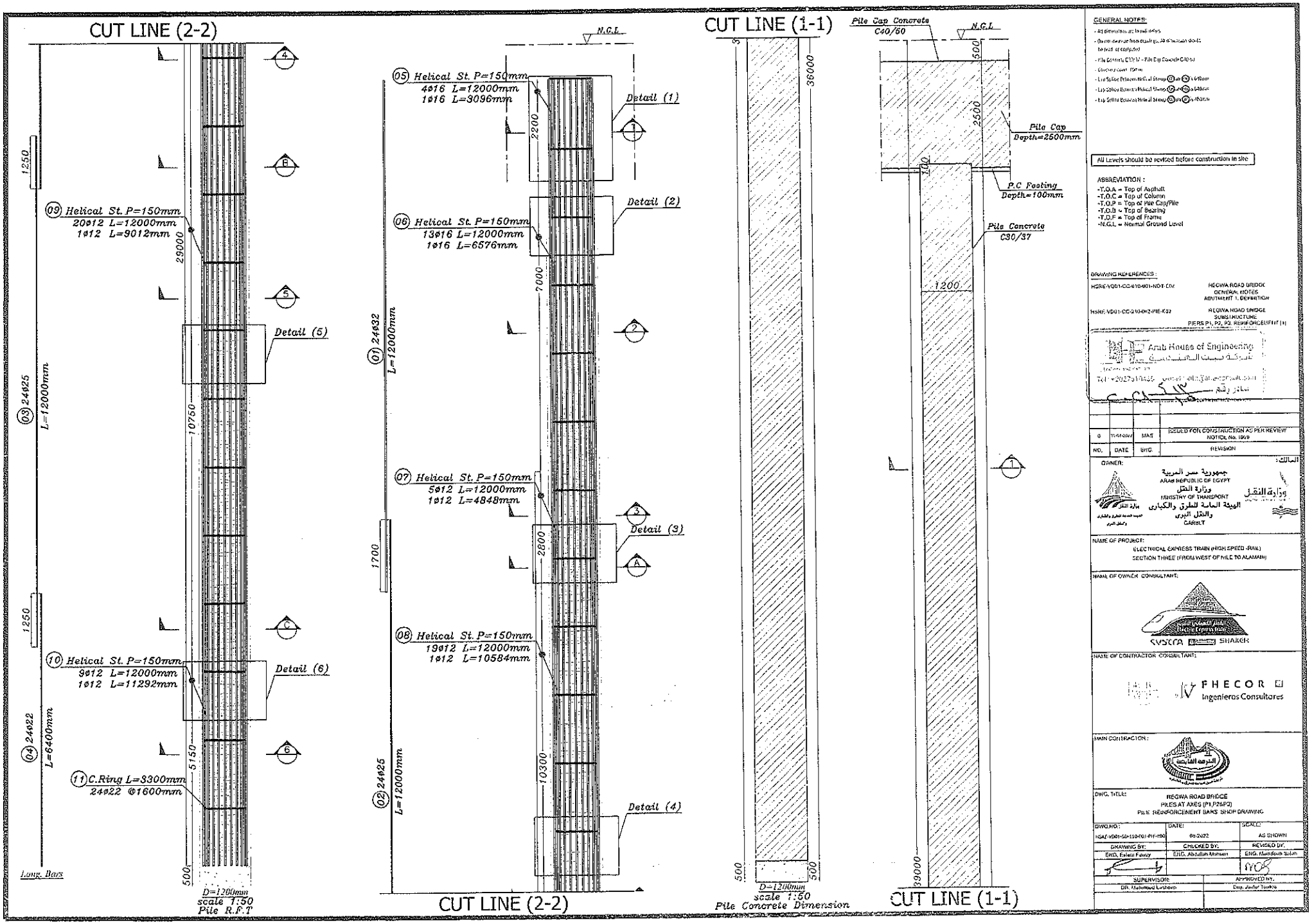
مركز هليوبوليس

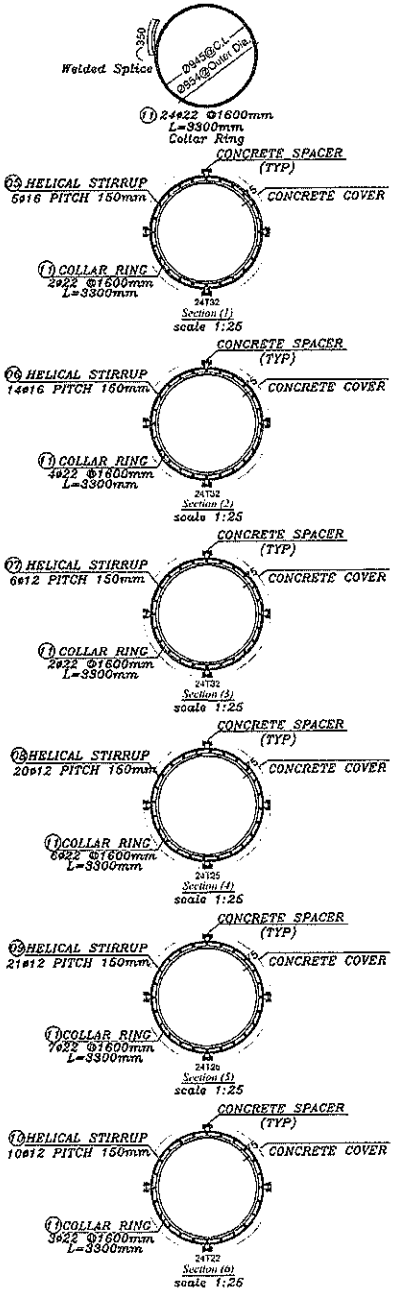
الأستشارى

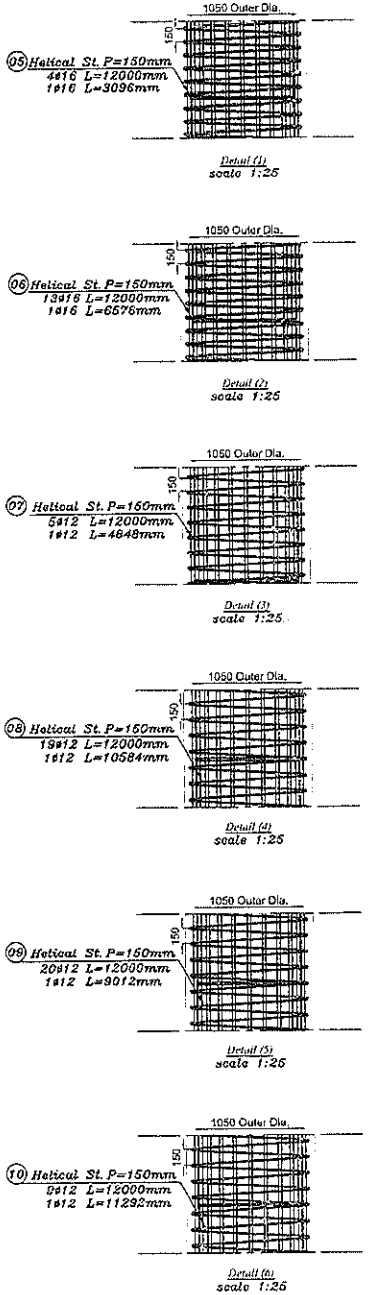
مهندس / أحمد غرابى
مدير المصنع

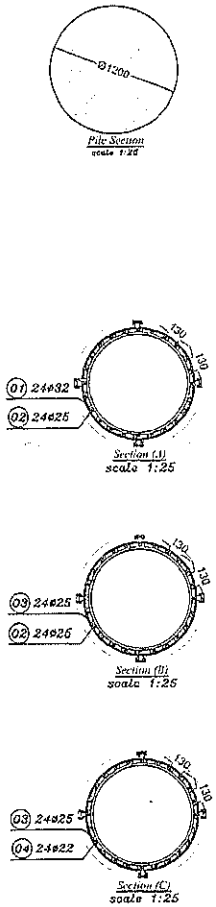
Head Office : Egypt Medical Center Mall - Fourth Floor - Dr. Shimi st. - Tenth District
Nasr City/ Telefax: 02 23573307 - 02 24713558
Mobile: 01101116717
Workstation : New Cairo - Katamia - Part 82 - 83
Tel.: 29841136 / Fax.: 29840109
01227855596 - 01068844170 - 01006033860
El Sadat City - Industreial Zone (7) - Part 7003 - 7005
Tel.: 048 2630145 / Fax.: 048 2630140
01028459673 - 01006880635 - 01004976497
E-mail: info@alamalreadymix.com
website: www.alamalreadymix.com

الإدارة : مول إيجيبت ميديكال سنتر- الدور الرابع - ش د. الشيمي - المنطقة العاشرة
مدينة نصر/ تليفاكس : ٢٣٥٧٣٣٠٧ - ٠٢ ٢٤٧١٣٥٥٨
موبايل : ٠١١٠١١١٦٧١٧
موقع العمل : القاهرة الجديدة - القطامية قطعة ٨٢ - ٨٣
ت: ٢٩٨٤١١٣٦ / ف: ٢٩٨٤٠١٠٩
٠١٠٠٦٠٣٣٨٦٠ - ٠١٠٦٨٨٤٤١٧٠ - ٠١٢٢٧٨٥٥٥٩٦
مدينة السادات - المنطقة الصناعية السابعة قطعة ٧٠٠٣ - ٧٠٠٥
ت : ٠٤٨ / ٢٦٣٠١٤٥ - ف : ٠٤٨ / ٢٦٣٠١٤٠
٠١٠٠٤٩٧٦٤٩٧ - ٠١٠٠٦٨٨٠٦٣٥ - ٠١٠٢٨٤٥٩٦٧٣


CUT LINE (2-2)
1250
09 Helical St. P=150mm
20ø12 L=12000mm
1ø12 L=9012mm
29000
Detail (5)
03 24ø25
L=12000mm
10750
1250
10 Helical St. P=150mm
9ø12 L=12000mm
1ø12 L=11292mm
Detail (6)
04 24ø22
L=6400mm
5150
11 C.Ring L=3300mm
24ø22 @1600mm
500
Long. Bars
D=1200mm
scale 1:50
Pile R.F.T
N.G.L
05 Helical St. P=150mm
4ø16 L=12000mm
1ø16 L=3096mm
Detail (1)
2200
Detail (2)
06 Helical St. P=150mm
13ø16 L=12000mm
1ø16 L=6576mm
7000
01 24ø32
L=12000mm
07 Helical St. P=150mm
5ø12 L=12000mm
1ø12 L=4848mm
Detail (3)
2800
1700
08 Helical St. P=150mm
19ø12 L=12000mm
1ø12 L=10584mm
10300
02 24ø25
L=12000mm
Detail (4)
CUT LINE (2-2)
CUT LINE (1-1)
36000
500
D=1200mm
scale 1:50
Pile Concrete Dimension
Pile Cap Concrete
C40/60
N.G.L
500
2500
Pile Cap
Depth=2500mm
100
P.C Footing
Depth=100mm
Pile Concrete
C30/37
1200
39000
CUT LINE (1-1)
GENERAL NOTES:
All Levels should be revised before construction in site
ABBREVIATION :
-T.O.A = Top of Asphalt
-T.O.C = Top of Column
-T.O.P = Top of Pile Cap/Pile
-T.O.B = Top of Bearing
-T.O.F = Top of Frame
-N.G.L = Normal Ground Level
DRAWING REFERENCES :
REGWA ROAD BRIDGE
GENERAL NOTES
ABUTMENT 1, DEFINITION
REGWA ROAD BRIDGE
SUBSTRUCTURE
PIERS P1, P2, P3, REINFORCEMENT (1)
Arab House of Engineering
REVISED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1969
NO. DATE BY REVISION
OWNER:
جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT
NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)
NAME OF OWNER CONSULTANT:
SYSTRA SHAKER
NAME OF CONTRACTOR CONSULTANT:
FHECOR
Ingenieros Consultores
MAIN CONTRACTOR:
DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING
DWG.NO.: DATE: SCALE:
AS SHOWN
DRAWING BY: CHECKED BY: REVISED BY:
ENG. Eslam Fawzy ENG. Abdullah Mohsen ENG. Mustafa Salah
SUPERVISOR APPROVED by:
DR. Mahmoud Lashein Eng. Jaafar Tawfiq







GENERAL NOTES:

- All dimensions are in millimeters
- Concrete Cover 75mm
- Lap Splice Between Helical Stirrup (5) and (6) = 1.0Lm
- Lap Splice Between Helical Stirrup (6) and (7) = 1.0Lm
- Lap Splice Between Helical Stirrup (7) and (8) = 1.0Lm

All Levels should be revised before construction in site

ABBREVIATION :

- -T.O.A = Top of Asphalt
- -T.O.C = Top of Column
- -T.O.P = Top of Pile Cap/Pile
- -T.O.B = Top of Bearing
- -T.O.F = Top of Frame
- -N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSRE-V001-CC-010-001-NOT-E02	REGWA ROAD BRIDGE GENERAL NOTES ABUTMENT 1, DEFINITION
HSRE-V001-CC-210-002-PIE-E02	REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

Arab House of Engineering
Tel: +20 2 2276 3435 e-mail: info@arabhouseofengineering.com

NO.	DATE	ERG.	REVISION
0	01-07-2022	MAB	ISSUED FOR CONSTRUCTION AS PER NEW TECHNICAL No. 1002

OWNER:

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARBLT

NAME OF PROJECT:

ELECTRICAL EXPRESS TRAIN (HIGH SPEED RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:

SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:

FHECOR Ingenieros Consultores

MAIN CONTRACTOR:

DWG. TITLE:

REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSRE-V001-SD-210-002-PIE-R09	03-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdullah Mohsen	ENG. Menatullah Galal
SUPERVISION:	APPROVED BY:	
DR. Mahmoud Lashen	Dr. Juner Tolba	

BAR MARK	BAR DIA.	SYMBOL(mm)	NUMBER QTY	LENGTH (mm)	TOTAL WEIGHT (Kg)
01	32	12000	24	12000	1820.44
02	25	12000	24	12000	1111.11
03	25	12000	24	12000	1111.11
04	22	6400	24	6400	458.90
05	16	1050 / 12000 / 150 / 1050	4+1	12000 + 3096	75.85 + 4.89
06	16	1050 / 12000 / 150 / 1050	13+1	12000 + 6576	246.51 + 10.39
07	12	1050 / 12000 / 150 / 1050	5+1	12000 + 4848	53.33 + 4.30
08	12	1050 / 12000 / 150 / 1050	19+1	12000 + 10584	202.66 + 9.40
09	12	1050 / 12000 / 150 / 1050	20+1	12000 + 9012	213.33 + 8.01
10	12	1050 / 12000 / 150 / 1050	9+1	12000 + 11292	96.00 + 10.03
11	22	3300 / 350 / Ø954	24	3300	236.62
				Total	5672.88

Pile Diameter	Ø12	Ø16	Ø22	Ø25	Ø32
TOTAL LENGHT(M)	678.47	213.69	233.39	577.2	288.04
TOTAL WEIGHT(Kg)	597.06	337.64	695.52	2222.22	1820.44

- ALLOWABLE PILE CAPACITY 1200 MM DIAMETER = 8000 KN ACCORDING TO GEOTECHNICAL REPORT.
- LENGTH OF PILE = 39 M BELOW GROUND LEVEL ACCORDING TO GEO-TECHNICAL REPORT.

Arab House of Engineering

GENERAL NOTES:

All Levels should be revised before construction in site

ABBREVIATION :
- T.O.A = Top of Asphalt
- T.O.C = Top of Column
- T.O.P = Top of Pile Cap/Pile
- T.O.B = Top of Bearing
- T.O.F = Top of Frame
- N.G.L = Normal Ground Level

DRAWING REFERENCES :

HSKE-V001-CC-010-K01-NOT-E02 — REGWA ROAD BRIDGE GENERAL NOTES ADMITTANCE DEFINITION

HSKE-V001-CC-210-B02-PIE-E02 — REGWA ROAD BRIDGE SUBSTRUCTURE PIERS P1, P2, P3, REINFORCEMENT (1)

NO.	DATE	ENG.	REVISION
B	01-07-2022	MAQ	ISSUED FOR CONSTRUCTION AS PER REVIEW NOTICE No. 1069

OWNER: المالك :

جمهورية مصر العربية
ARAB REPUBLIC OF EGYPT
وزارة النقل
MINISTRY OF TRANSPORT
الهيئة العامة للطرق والكباري والنقل البري
GARDLT

NAME OF PROJECT:
ELECTRICAL EXPRESS TRAIN (HIGH SPEED -RAIL)
SECTION THREE (FROM WEST OF NILE TO ALAMAIN)

NAME OF OWNER CONSULTANT:
SYSTRA SHAKER

NAME OF CONTRACTOR CONSULTANT:
JV FHECOR Ingenieros Consultores

MAIN CONTRACTOR :

DWG. TITLE:
REGWA ROAD BRIDGE
PILES AT AXES (P1,P2&P3)
PILE REINFORCEMENT BARS SHOP DRAWING

DWG.NO.:	DATE:	SCALE:
HSKE-V001-SD-110-B02-PIE-E02	06-2022	AS SHOWN
DRAWING BY:	CHECKED BY:	REVISED BY:
ENG. Eslam Fawzy	ENG. Abdullah Mohsen	ENG. Mamdouh Salah
SUPERVISOR:		APPROVED BY:
Dr. Mohamed Eashem		Eng. Jehad Tawfiq

مصر للتأمين التكافلي
ممتلكات ومسئوليات
MISR TAKAFUL INSURANCE

جدول وثيقة تأمين من المسؤولية المدنية العامة
رقم الوثيقة P/ACC/PL/001/2023/547

اسم الشركة	مصر للتأمين التكافلي ممتلكات و مسئوليات	جهة الاصدار	المركز الرئيسي
نوع التأمين	وثيقة تأمين من المسؤولية المدنية العامة	الكود	001
اسم المشترك	شركة النيل العامة للطرق والكباري		
عنوان المشترك	ارض الفوالة - عابدين - القاهرة		
مدة التأمين	من يوم 2023/11/01	الى يوم 2024/11/01	حسب التوقيت المحلي في ج.م.ع
الحد الاقصى لمسئولية الشركة خلال مدة التأمين	1,000,000.00		
موضوع التأمين	تعطي الوثيقة في حدود الشروط والاستثناءات ومبالغ التأمين الواردة بها مسئولية المشترك المدنية الثابتة قانونا وبصفة نهائية بموجب حكم قضائي نهائي صادر من المحاكم المصرية ووفقا لأحكام المواد 163 الى 174 من القانون المدني المصري الحالي عن الحوادث التي ينتج عنها الوفاه و/أو الاصابات الجسمانية و الأضرار المادية التي قد تلحق بالغير (الطرف الثالث) اثناء اعمال انشاء كوبرى ربجوا على مسار الخط الاول للقطار الكهربائي السريع (السخنة – القاهرة – الاسكندرية – العلمين – مطروح) في المسافة من كم 189,498 حتى كم 189,635 بالامر المباشر		
التغطيات	- التغطيات وفقا لشروط واشتراطات واستثناءات وثيقة المسئولية المدنية العامة المرفقة والتي تصدرها شركتنا والمعتمدة من الهيئة العامة للرقابة المالية.		

التغطيات	الحد الأقصى لمسئولية الشركة (جنيه مصري)
الحد الاقصى لمسئولية الشركة للاصابات الجسمانيه للشخص الواحد	100000
الحد الاقصى لمسئولية الشركة عن الاصابه الجسمانيه للحادث الواحد - مهما بلغ عدد الاشخاص	500000
الاضرار المادية للممتلكات للحادث الواحد	500000
الحد الاقصى لمسئولية الشركة بالنسبة للاضرار المادية والاضرار الجسمانية للحادث الواحد	1000000
الحد الأقصى لمسئولية الشركة خلال مدة التأمين	1000000

المحاكم المختصة	المحاكم المصرية التي تقع في دائرتها الشركة المُصدرة	القانون المطبق	القانون المصري
التحمل	10 % من قيمة كل تعويض مغطى بموجب الوثيقة بحد أدنى 2500 جم و ذلك عن الأضرار المادية		

الشروط الخاصة

- يتعين على المشترك الاطلاع على كافة شروط الوثيقة واستثناءاتها بعناية للتأكد من أنها تفي بإحتياجاته التأمينية قبل سدادها والذي يعتبر قبولا منه بكافة الشروط والاستثناءات
- ان يتخذ المشترك وتابعيه وموظفيه كافة الاحتياطات والاشتراطات اللازمة للمحافظة على سلامة أرواح الغير وان ينفذ بكل دقة تعليمات السلطات العامة الصادرة في هذا الخصوص والا سقط حقه في المطالبه بأي تعويض قد يستحق بموجب هذه الوثيقة

تخضع شركة مصر للتأمين التكافلي – ممتلكات و مسئوليات – لإشراف الهيئة العامة للرقابة المالية تحت رقم ٣٨ لسنة ٢٠١٨

الممسوحة ضوئيا بـ CamScanner

مصر للتأمين التكافلي
ممتلكات ومسئوليات
MISR TAKAFUL INSURANCE
Property & Liabilities

حساب الاشتراك

العملة	جنيه مصري
الاشتراك الصافي	800.00
نصف الدمغة النسبية	44.00
ضريبة الدمغة النوعية	8.70
رسوم الإشراف والرقابة	4.80
رسوم اعتماد ومراجعة	0.80
رسوم ضمان حملة الوثائق	1.60
مصاريف الإصدار	60.10
إجمالي الاشتراك	920.00
يستحق على المشترك اشتراك و قدره فقط تسعمائة و عشرون جنيه مصري لا غير	

اسم وسيط التأمين : محمد نجيب احمد زكي موسى هيكل
رقم القيد بالهيئة : 10963
تحريرا في : 01/11/2023

شركة مصر للتأمين التكافلي
ممتلكات ومسئوليات

تخضع شركة مصر للتأمين التكافلي - ممتلكات و مسئوليات - لإشراف الهيئة العامة للرقابة المالية تحت رقم ٣٨ لسنة ٢٠١٨

الممسوحة ضوئيا بـ CamScanner

مصر للتأمين التكافلي
ممتلكات ومسئوليات
MISR TAKAFUL INSURANCE
Property & Liabilities

مطالبه السداد

اسم الشركة	مصر للتأمين التكافلي - ممتلكات و مسئوليات	جهة الإصدار	المركز الرئيسي
نوع التأمين	وثيقة تأمين من المسؤولية المدنية العامة	الكود	001
رقم الوثيقة	P/ACC/PL/001/2023/547		
اسم المشترك	شركة النيل العامة للطرق والكباري		
العنوان	ارض الفوالة - عابدين - القاهرة		

مدة التأمين	2023/11/01	الساعة الثانية عشر ظهرا	إلى	2024/11/01	الساعة الثانية عشر ظهرا	حسب التوقيت المحلي في ج.م.ع

حساب الإشتراك

العملة	جنيه مصري
الاشتراك الصافي	800.00
نصف الدمغة النسبية	44.00
ضريبة الدمغة النوعية	8.70
رسوم الاشراف والرقابة	4.80
رسوم اعتماد ومراجعة	0.80
رسوم ضمان جملة الوثائق	1.60
مصاريف الإصدار	60.10
إجمالي الإشتراك	920.00
يستحق على المشرك اشتراك وقدره تسعمائة و عشرون جنيه مصري لا غير	

شركة مصر للتأمين التكافلي
ممتلكات ومسؤليات

اسم وسيط التأمين : محمد نجيب احمد زكي موسى هيكل
رقم القيد بالهيئة : 10963

صافي الاشتراك يتضمن قيمة العمولات الأساسية المنصوص عليها بهيكل العمولات المعتمد للشركة قبل الاستقطاعات بنسبة 10 % و بقيمة 80 ج.م

تحريرا في : 01/11/2023

توقيع العميل

توقيع المنتج

عميلنا العزيز:
لحماية سرية بياناتكم وسلامة التعامل من مخاطر الإحتيال نؤكد على ضرورة عدم قيامكم بالإفصاح عن البيانات الشخصية أو المالية أو اسم المستخدم أو الكلمات السرية سواء بالطريقة التقليدية أو من خلال الروابط الإلكترونية لأى شخص طبيعى أو إعتبارى.

الممسوحة ضوئيا بـ CamScanner