

**MATERIAL  
INSPECTION  
REQUEST**



|                      |                                  |       |                  |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |
|----------------------|----------------------------------|-------|------------------|--|----|----|----|----|----|----|----|----|-------|----|----|--|--|--|--|--|
| Contractor Company   | KNOOZ SINA COMPANY<br>شركة كنفوز |       | Designer Company |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |
| Issued by Contractor | Name                             | Sign: | Date             | Time   |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |
|                      | Eng. Ahmed Abdallah              |       | 13-09-2022       |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |
| Contractor reference | KS1 - (06) - 13-09-2022          |       |                  |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |
| Received by ER       | M.A                              |       | MIR              | <table border="1"> <tr> <td>C1</td> <td>C2</td> <td>C3</td> <td>DD</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td>KP504</td> <td>EW</td> <td>C5</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | C1 | C2 | C3 | DD | MM | YY | HH | MM | KP504 | EW | C5 |  |  |  |  |  |
| C1                   | C2                               | C3    | DD               | MM   | YY | HH | MM |    |    |    |    |    |       |    |    |  |  |  |  |  |
| KP504                | EW                               | C5    |                  |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |

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

| Description of Materials   |                   | FILL MATERIAL RESULTS |  |              |      |
|--|-------------------|-----------------------|--|--------------|------|
| Location to be Used  |                   | From                  | To   |              |      |
|  |                   | 504+300               | 504+380  | (-3.00)      |      |
|  |                   | 504+740               | 504+880  | (-1.50)      |      |
|  |                   | 504+880               | 505+000  | (-1.50)      |      |
|  |                   | 504+520               | 504+640  | (-1.75)      |      |
|  |                   | 504+640               | 504+740  | (-1.75)      |      |
| MAR Approval No  |                   |                       | Date   |              |      |
| Supplier Name  |                   |                       |  |              |      |
| Test Requirement   |                   | Specification         | Clause   |              |      |
| Reference Photos   | Yes attached / No | Other                 |  |              |      |
| Item   | Description       | Unit                  | Quantity   | Arrival Date | Note |
| 1  | Sieve analysis    | m <sup>3</sup>        | 4200   | 10-09-2022   |      |
| 2  | Classification    | m <sup>3</sup>        | 4200   | 10-09-2022   |      |
| 3  | Proctor & O.m.c   | m <sup>3</sup>        | 4200   | 11-09-2022   |      |
| 4  | LL & P.L & PI     | m <sup>3</sup>        | 4200   | 11-09-2022   |      |
| 5  | C.B.R             | m <sup>3</sup>        | 4200   | 13-09-2022   |      |
| Comments by:   |                   |                       | Comments by:   |              |      |
| A sample has been taken from fill material by K.K office to ( Al Nuby laboratory ) and the results founded meet the specifications and accepted. |                   |                       | Test results Foreestimated. Quantities of about [ 5000m <sup>3</sup> ] |              |      |
| APPROVAL STATUS  |                   |                       |  |              |      |
| Organisation   | Name              | Sign                  | Date   | A-AWC-R      |      |
| Contractor   | Ahmed Abdallah    |                       | 13-9-2022  |              |      |
| QA/QC*   | Ahmed Abozaid     |                       | 13-9-2022  |              |      |
| GARB**   | Hussien Fouad     |                       | 13-9-2022  |              |      |
| Comments by  |                   |                       |  |              |      |
| Employers Representative   | M.A               |                       |  | A            |      |

\* Designer  
\*\* Alignment / Bridges: Culvert Only

# MATERIAL APPROVAL REQUEST



|                        |                         |       |                  |                |
|------------------------|-------------------------|-------|------------------|----------------|
| Location Name          | Contractor Company      |       | Designer Company |                |
| Electric express train | KNOOZ SINA COMPANY      |       | k.k              |                |
| Issued by Contractor   | Name                    | Sign  | Date             | Time           |
|                        | Ahmed Abdallah          | Ahmed | 13-09-2022       |                |
| Contractor Reference   | KS1 - (06) - 13-09-2022 |       |                  |                |
| Received by ER         |                         |       | MAR              |                |
|                        | C1                      | C2    | C3               | DD MM YY HH MM |
|                        | KP504                   | EW    | CS               |                |

| NB:Package 1 only (Package 2 via Content )        |                |                       |                             |         |
|---|----------------|-----------------------|-----------------------------|---------|
| The following test result are attached for review |                |                       |                             |         |
| Description of Materials                          | Soil ( A-1-b ) |                       |                             |         |
| Location of stock                                 | K.p (504+500 ) |                       |                             |         |
| Item  | Specification  | Test requirement      | Test result attachment      | Remarks |
| 1   | ASTM D 75      | Aggregate Sampling    | According to specifications |         |
| 2   | ASTM C 136     | Sieve Analysis        | According to specifications |         |
| 3   | ASTM D 1440    | Passing Sieve, No 200 | 13.1 %                      |         |
| 4   | ASTM D 4318    | Atterberg limit       | 4.12 %                      |         |
| 5   | ASTM D 2974    | Moisture content      | 6.5 %                       |         |
| 6   | ASTM D 1557    | Modified proctor      | 2.16                        |         |
| 7   | ASTM D 1883    | CBR                   | 40.30 %                     |         |
| Comments by:                                      |                |                       | Comments by:                |         |
|   |                |                       |                             |         |

| APPROVAL STATUS          |                |         |           |         |
|--------------------------|----------------|---------|-----------|---------|
| Organisation             | Name           | Sign    | Date      | A-AWC-R |
| Contractor               | Ahmed Abdallah | Ahmed   | 13-9-2022 |         |
| Contractor QA/QC *       | Ahmed Abozaid  | Ahmed   | 13-9-2022 |         |
| GARB**                   | Hussein Fouad  | Hussein | 13-9-2022 |         |
| Employers Representative | M.A            | M.A     | 30/9/2022 | A       |

\* Designer  
 \*\* Alignment/Bridges: Culvert only



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



Operating Lab      AL Nuby Central Lab

**PARTICLE SIZE DISTRIBUTION OF SOIL**

|                 |              |            |      |         |         |
|-----------------|--------------|------------|------|---------|---------|
| TESTING DATE:   | 10-09-2022   | Code       |      |         |         |
| LOCATION        | k.p(504+500) | KS 1 (006) | ZONE | 504+180 | 505+000 |
| TESTING COMPANY | knouz sina1  |            |      |         |         |

visual inspection test

Gradient test

| gradation of bulk materials |       |       | SAMPLE WEIGHT (g) |        | 9598.00 |        | gm     | table classify |
|-----------------------------|-------|-------|-------------------|--------|---------|--------|--------|----------------|
| sieve size                  | 2     | 1.5   | 1                 | 4/3    | 2/1     | 8/3    | # 4    | PASS           |
| Mass retained (g)           | 0.0   | 961.0 | 757.0             | 910.0  | 612.0   | 816.0  | 881.0  | A-1-b          |
| Cumulative Retained (g)     | 0.0   | 961.0 | 1718.0            | 2628.0 | 3240.0  | 4056.0 | 4937.0 | PRO 2.16       |
| Cumulative Retained %       | 0.0   | 10.0  | 17.9              | 27.4   | 33.8    | 42.3   | 51.4   | WC 6.50        |
| Cumulative Passing %        | 100.0 | 90.0  | 82.1              | 72.6   | 66.2    | 57.7   | 48.6   | CBR 40.30      |

| soft material gradation |       |        | WT.OF sample |  | 500.00 |  | gm |
|-------------------------|-------|--------|--------------|--|--------|--|----|
| sieve size              | 10    | 40     | 200          |  |        |  |    |
| Cumulative Retained (g) | 43.90 | 198.00 | 365.00       |  |        |  |    |
| Cumulative Retained %   | 8.78  | 39.60  | 73.00        |  |        |  |    |
| Cumulative Passing %    | 91.22 | 60.40  | 27.00        |  |        |  |    |

General gradient

| sieve size(in)       | 2     | 1.5  | 1    | 3/4  | 1/2  | 3/8  | # 4  | # 10 | # 40  | # 200 |
|----------------------|-------|------|------|------|------|------|------|------|-------|-------|
| sieve size(mm)       | 50.0  | 37.5 | 25.0 | 19.0 | 12.5 | 9.5  | 4.75 | 2.00 | 0.425 | 0.075 |
| Cumulative Passing % | 100.0 | 90.0 | 82.1 | 72.6 | 66.2 | 57.7 | 48.6 | 44.3 | 29.3  | 13.1  |

| ATTERBERG LIMITS | LIQUID LIMIT ( L.L.) | PLASTIC LIMIT (P.L.) | PLASTIC INDEX (P.I.) |
|------------------|----------------------|----------------------|----------------------|
|                  |                      | 23.59%               | 19.47%               |

Contractor Engineer

Lab Engineer

Consultant Engineer



13/9/2022

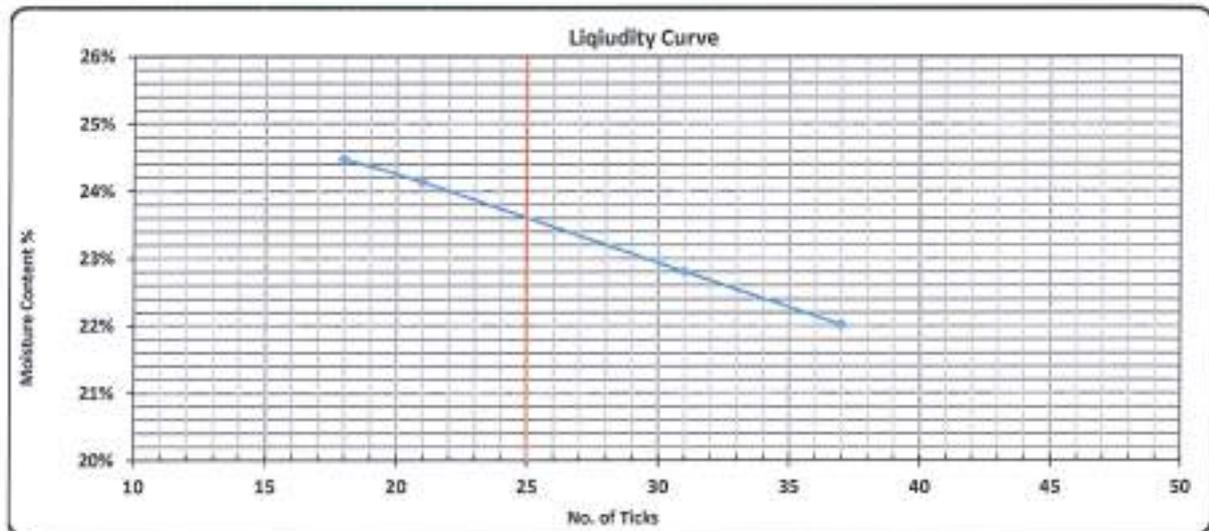


**Plasticity and Liquidity Test -Atterberg Limits**

|               |              |           |      |         |         |
|---------------|--------------|-----------|------|---------|---------|
| Testing Date: | 11-09-2022   | Code      | ZONE | 504+180 | 505+000 |
| Location:     | k.p(504+500) | KS1 (006) |      |         |         |
| Company Name  | knooz sinaa  |           |      |         |         |

**Testing Results :-**

| Test                    | Liquid Limit |       |       |       | Plastic Limit |       |
|-------------------------|--------------|-------|-------|-------|---------------|-------|
|                         | No. of Ticks | 37    | 31    | 21    | 18            | -     |
| Tare No.                | 7            | 10    | 45    | 8     | 19            | 73    |
| Tare WT. (gm)           | 42.70        | 43.80 | 41.20 | 46.90 | 44.40         | 42.50 |
| Tare WT. + Wet WT. (gm) | 59.60        | 57.80 | 52.00 | 61.90 | 49.10         | 47.00 |
| Tare WT. + Dry WT. (gm) | 56.6         | 55.20 | 49.90 | 59.0  | 48.30         | 46.30 |
| Water WT. (gm)          | 3.05         | 2.60  | 2.10  | 2.95  | 0.80          | 0.70  |
| Dry WT. (gm)            | 13.85        | 11.40 | 8.70  | 12.05 | 3.90          | 3.80  |
| Moisture Content %      | 22.0%        | 22.8% | 24.1% | 24.5% | 20.5%         | 18.4% |
| Average %               |              |       |       |       | 19.5%         |       |



| L.L.  | P.L.  | P.I. |
|-------|-------|------|
| 23.6% | 19.5% | 4.1% |

|                       |               |                     |
|-----------------------|---------------|---------------------|
| Contractor Specialist | Lab. Engineer | Consultant Engineer |
| Name :                | Name :        | Name :              |
| Sign :                | Sign :        | Sign :              |



شركة كنوز  
سيناء  
للمقاولات العامة  
والتوريدات



Electric Express Train  
Contract Number 1  
Sec-T Puka - Matruh



المكتب  
الاستشاري الهندسي  
أ.ع. خالد السيد



**Electric Express Train - HSR**  
 From El Ain El Sokhna City To El Alamein - MATROUH  
 Section - 7 From FOKA TO MARSA MATROUH  
 From Station 504+000 To Station 588+177



## PROCTOR TEST

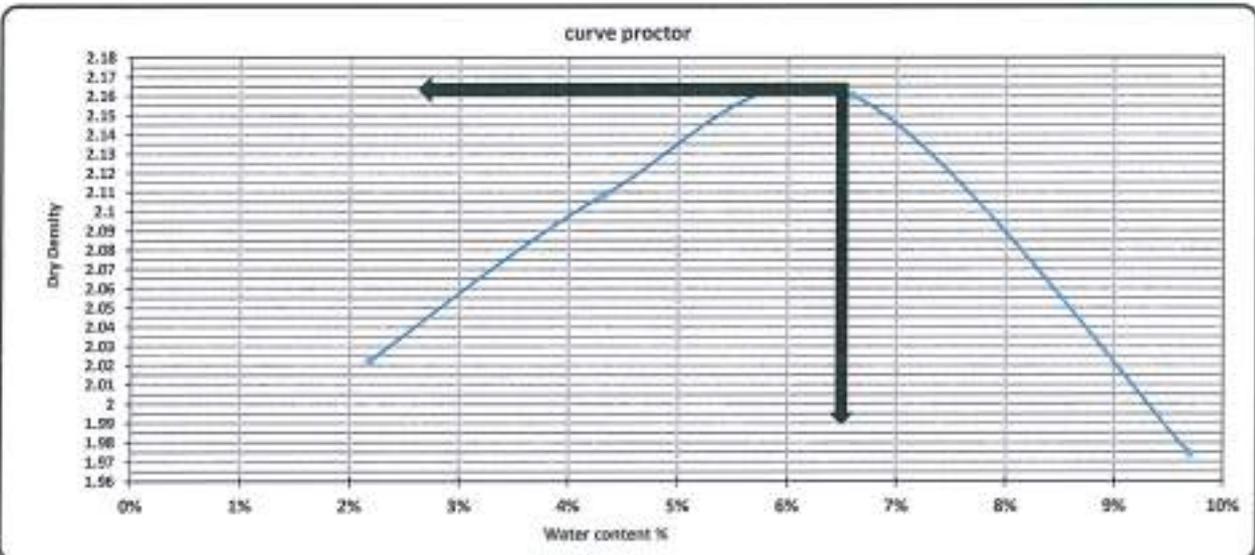
|               |              |            |      |         |         |
|---------------|--------------|------------|------|---------|---------|
| TESTING DATE: | 2022/11/09   | code       | zone | 504+180 | 505+000 |
| LOCATION      | k.p(504+500) | KS 1 (008) |      |         |         |
| NAME COMPANY  | knouz sina 1 |            |      |         |         |

|                        |        |
|------------------------|--------|
| Weight of empty mold : | 6062.0 |
| Mold Volume:           | 2183.0 |

|                 |      |
|-----------------|------|
| MAX Dry Density | 2.16 |
| Water content % | 6.5  |

| trial no :            | 1       | 2       | 3       | 4      |  |
|-----------------------|---------|---------|---------|--------|--|
| Wt. Of Mold+ wet soil | 10409.0 | 18689.0 | 19923.0 | 18617  |  |
| WT. WET SOIL          | 4347.0  | 4627.0  | 4861.0  | 4555.0 |  |
| Wt. Density           | 2.057   | 2.200   | 2.211   | 2.166  |  |

| Tare No.               | 20    | 22    | 8     | 16    | 48    | 32    | 17    | 11    |  |  |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Tare wt.               | 61    | 54.2  | 46.8  | 34    | 46.4  | 74.4  | 59.5  | 46.2  |  |  |
| Wt. Of wet soil & tare | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 |  |  |
| Wt. Of dry soil & tare | 144.5 | 144.0 | 145.0 | 146.0 | 144.0 | 144.5 | 141.0 | 142.0 |  |  |
| Wt. Of water           | 5.5   | 6.0   | 5.0   | 4.0   | 6.0   | 5.5   | 5.0   | 8.0   |  |  |
| Wt. Of dry soil        | 192.5 | 393.0 | 98.2  | 112.0 | 97.6  | 70.1  | 81.5  | 95.8  |  |  |
| Water content %        | 2.9%  | 1.8%  | 5.1%  | 3.6%  | 6.1%  | 7.8%  | 11.0% | 8.4%  |  |  |
| AV. Water content %    | 2.2%  |       | 4.3%  |       | 6.6%  |       | 9.7%  |       |  |  |
| Dry Density            | 2.023 |       | 2.109 |       | 2.160 |       | 1.974 |       |  |  |



Contractor Engineer



Consultant Engineer

*Handwritten signature and date: 13/11/2022*



California Bearing Ratio TEST

|                |              |            |      |         |         |
|----------------|--------------|------------|------|---------|---------|
| Testing Date : | 13/9/2022    | Code       | zone | 504+180 | 505+000 |
| Location :     | k,p(504+500) | KS 1 (006) |      |         |         |
| Company Name   | knouz sinil  |            |      |         |         |

Test Results

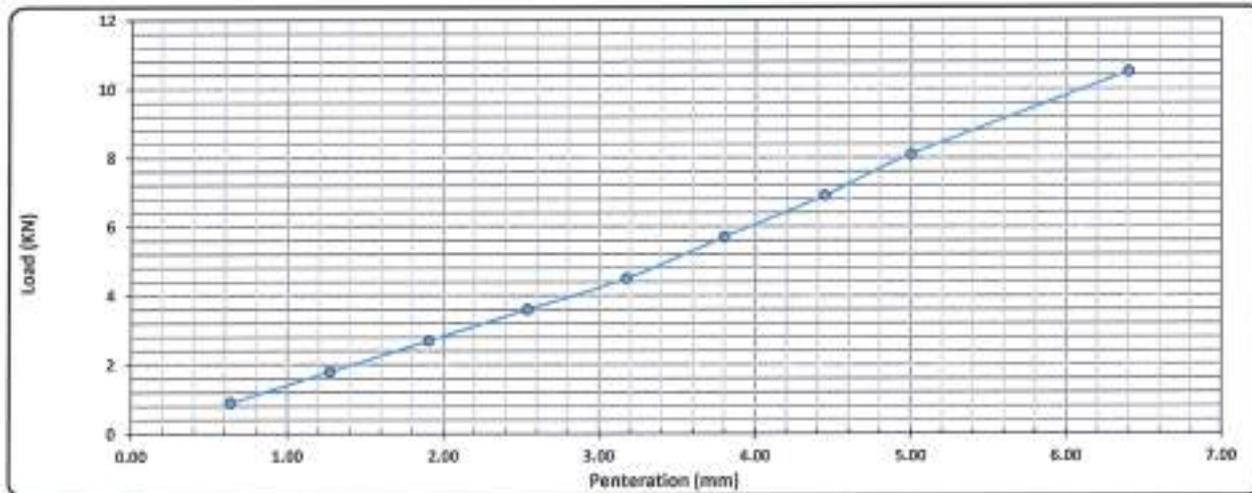
| Compaction % for Mold                |       |
|--------------------------------------|-------|
| Mold No.                             | 3     |
| Mold Vol (cm <sup>3</sup> )          | 2101  |
| Mold WT. (gm)                        | 5093  |
| Mold WT. + Wet WT. (gm)              | 9850  |
| Wet WT. (gm)                         | 4757  |
| Wet Density (g/cm <sup>3</sup> )     | 2.264 |
| Dry Density (g/cm <sup>3</sup> )     | 2.124 |
| Proctor Density (g/cm <sup>3</sup> ) | 2.160 |
| Compaction %                         | 98    |

| Moisture Ratio After Compacted Mold |       |
|-------------------------------------|-------|
| Tare No.                            | 20    |
| Tare WT. (gm)                       | 60.9  |
| Tare WT. + Wet WT. (gm)             | 158   |
| Tare WT. + Dry WT. (gm)             | 144.5 |
| Water WT. (gm)                      | 5.2   |
| Dry WT. (gm)                        | 83.6  |
| Moisture Content %                  | 6.6   |

| Swelling            |           |
|---------------------|-----------|
| Mold No.            | 3         |
| Date                | 13/9/2022 |
| Initial Height (mm) | 2.00      |
| Final Height (mm)   | 2.00      |
| Difference          | 0         |
| Sample Height (mm)  | 119.00    |
| Swelling Ratio %    | 0%        |

Loading Reading :

|                   |      |      |      |      |      |      |      |      |      |
|-------------------|------|------|------|------|------|------|------|------|------|
| Penetration (mm)  | 0.64 | 1.27 | 1.91 | 2.54 | 3.18 | 3.80 | 4.45 | 5.09 | 6.40 |
| Load Reading (kg) | 0.85 | 0.86 | 0.89 | 0.12 | 0.15 | 0.19 | 0.23 | 0.27 | 0.35 |
| Load (KN)         | 0.9  | 1.8  | 2.7  | 3.6  | 4.5  | 5.7  | 6.9  | 8.1  | 10.5 |



Calculations :-

| Penetration (mm) | Load (KN) | Standard Load (lb) | CBR (%) | Mold - Compaction (%) | Compaction (%) | CBR % |
|------------------|-----------|--------------------|---------|-----------------------|----------------|-------|
| 2.50             | 3.60      | 13.4               | 27.0%   | 98                    | 98             | 26.9% |
| 5.00             | 8.10      | 20.0               |         |                       |                | 40.3% |

Contractor Engineer

Name :

Sign :



Lab. Engineer

Name :

Sign :



Consultant Engineer

Name :

Sign :



# MATERIAL INSPECTION REQUEST



|                      |                         |                |                  |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |
|----------------------|-------------------------|----------------|------------------|--|----|----|----|----|----|----|----|----|-------|----|----|--|--|--|--|
| Contractor Company   | KNOOZ SINA COMPANY      |                | Designer Company |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |
| Issued by Contractor | Name                    | شركة كنوز سينا | Date             | 22-09-2022   |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |
|                      | Eng. Ahmed Abdallah     | أحمد عبد الله  |                  |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |
| Contractor reference | KS1 - (07) - 22-09-2022 |                |                  |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |
| Received by ER       | M.A                     | 22/9/2022      | MIR              |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |
|                      |                         |                |                  | <table border="1"> <tr> <td>C1</td> <td>C2</td> <td>C3</td> <td>DD</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td>KP504</td> <td>EW</td> <td>CS</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | C1 | C2 | C3 | DD | MM | YY | HH | MM | KP504 | EW | CS |  |  |  |  |
| C1                   | C2                      | C3             | DD               | MM   | YY | HH | MM |    |    |    |    |    |       |    |    |  |  |  |  |
| KP504                | EW                      | CS             |                  |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |

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

| Description of Materials   |                 | FILL MATERIAL RESULTS |   |              |      |
|--|-----------------|-----------------------|---|--------------|------|
| Location to be Used  |                 | From                  | To  |              |      |
|  |                 | 504+220               | 504+380   | (-2.50)      |      |
|  |                 | 504+380               | 504+520   | (-2.00)      |      |
|  |                 | 504+520               | 504+640   | (-1.50)      |      |
|  |                 | 504+220               | 504+380   | (-2.00)      |      |
| MAR Approval No  |                 |                       | Date  |              |      |
| Supplier Name  |                 |                       |   |              |      |
| Test Requirement   |                 | Specification         |   | Clause       |      |
| Reference Photos   |                 | Yes attached / No     |   | Other        |      |
| Item   | Description     | Unit                  | Quantity  | Arrival Date | Note |
| 1  | Sieve analysis  | m <sup>3</sup>        | 5000  | 19-09-2022   |      |
| 2  | Classification  | m <sup>3</sup>        | 5000  | 19-09-2022   |      |
| 3  | Proctor & O.m.c | m <sup>3</sup>        | 5000  | 20-09-2022   |      |
| 4  | L.L & P.L & PI  | m <sup>3</sup>        | 5000  | 20-09-2022   |      |
| 5  | C.B.R           | m <sup>3</sup>        | 5000  | 22-09-2022   |      |
| Comments by:   |                 |                       | Comments by:  |              |      |
| A sample has been taken from fill material by K.K office to ( AL Nuby laboratory ) and the results founded meet the specifications and accepted. |                 |                       | Test results For estimated quantities of about [ 5000m <sup>3</sup> ] |              |      |
| APPROVAL STATUS  |                 |                       |   |              |      |
| Organisation   | Name            | Sign                  | Date  | A-AWC-R      |      |
| Contractor   | Ahmed Abdallah  |                       | 22-9-2022   |              |      |
| QA/QC *  | Ahmed Abo Zaid  |                       | 22-9-2022   |              |      |
| GARB**   | Hussien Fouzed  |                       | 22-9-2022   |              |      |
| Employers Representative   | M.A             |                       | 30/9/2022   | A            |      |

\* Designer

\*\* Alignment / Bridges: Culvert Only

|                        |                         |                       |            |                  |       |    |    |    |    |    |    |    |
|------------------------|-------------------------|-----------------------|------------|------------------|-------|----|----|----|----|----|----|----|
| Location Name          | Contractor Company      |                       |            | Designer Company |       |    |    |    |    |    |    |    |
| Electric express train | KNOOZ SINA COMPANY      |                       |            | k.k              |       |    |    |    |    |    |    |    |
| Issued by Contractor   | Name                    | Sign                  | Date       | Time             |       |    |    |    |    |    |    |    |
|                        | Ahmed Abdallah          | <i>Ahmed Abdallah</i> | 22-09-2022 |                  |       |    |    |    |    |    |    |    |
| Contractor Reference   | KS1 - (07) - 22-09-2022 |                       |            |                  |       |    |    |    |    |    |    |    |
| Received by ER         |                         |                       |            | MAR              | C1    | C2 | C3 | DD | MM | YY | HH | MM |
|                        |                         |                       |            |                  | KPS04 | EW | CS |    |    |    |    |    |

NB:Package 1 only (Package 2 via Content )  
The following test result are attached for review

| Description of Materials | Soil ( A-1-a ) |                       |                             |         |
|--------------------------|----------------|-----------------------|-----------------------------|---------|
| Location of stock        | K.p (504+500 ) |                       |                             |         |
| Item                     | Specification  | Test requirement      | Test result attachment      | Remarks |
| 1                        | ASTM D 75      | Aggregate Sampling    | According to specifications |         |
| 2                        | ASTM C 136     | Sieve Analysis        | According to specifications |         |
| 3                        | ASTM D 1440    | Passing Sieve, No 200 | 10.7 %                      |         |
| 4                        | ASTM D 4318    | Atterberg limit       | N.P                         |         |
| 5                        | ASTM D 2974    | Moisture content      | 6.2 %                       |         |
| 6                        | ASTM D 1557    | Modified proctor      | 2.18                        |         |
| 7                        | ASTM D 1883    | CBR                   | 38.50 %                     |         |
| Comments by:             |                | Comments by:          |                             |         |
|                          |                |                       |                             |         |

**APPROVAL STATUS**

| Organisation             | Name                  | Date      | A-AWC-R |
|--------------------------|-----------------------|-----------|---------|
| Contractor               | <i>Ahmed Abdallah</i> | 22-9-2022 |         |
| Contractor QA/QC *       | <i>Ahmed Abu Zaid</i> | 22-9-2022 |         |
| GARB**                   | <i>Hussien Fouad</i>  | 22-9-2022 |         |
| Employers Representative | <i>M.A</i>            | 30/9/2022 | A       |

\* Designer  
\*\* Alignment/Bridges: Culvert only



### Electric Express Train - HSR

From El Ain El Sokhna City To El Alamein - MATROUH

Section - 7 From FOKA To MARSА MATROUH

From Station 504+000 To Station 568+177



Operating Lab

AL Nuby Central Lab

## PARTICLE SIZE DISTRIBUTION OF SOIL

|               |              |            |      |         |         |
|---------------|--------------|------------|------|---------|---------|
| TESTING DATE: | 19-09-2022   | Code       | ZONE | 504+180 | 505+000 |
| LOCATION      | k.p(504+500) | KS 1 (007) |      |         |         |
| NAME COMPANY  | knooz sina1  |            |      |         |         |

1-visual inspection test

2-Gradient test

### 1-gradation of bulk materials

|                         |       |        | SAMPLE WEIGHT [g] |        | 12587.00 |        | gm     | table classify |               |
|-------------------------|-------|--------|-------------------|--------|----------|--------|--------|----------------|---------------|
| sieve size              | 2     | 1.5    | 1                 | 4/3    | 2/1      | 8/3    | # 4    | PASS           | soil classify |
| Mass retained (g)       | 0.0   | 1202.0 | 1100.0            | 1116.0 | 1005.0   | 1228.0 | 864.0  |                | A-1-a         |
| Cumulative Retained (g) | 0.0   | 1202.0 | 2302.0            | 3418.0 | 4423.0   | 5651.0 | 6515.0 | PRO            | 2.18          |
| Cumulative Retained %   | 0.0   | 9.5    | 18.3              | 27.2   | 35.1     | 44.9   | 51.8   | WC             | 6.20          |
| Cumulative Passing %    | 100.0 | 90.5   | 81.7              | 72.8   | 64.9     | 55.1   | 48.2   | CBR            | 38.50         |

### 2-soft material gradation

|                         |       |        | WT.OF sample |  | 500.00 |  | gm |
|-------------------------|-------|--------|--------------|--|--------|--|----|
| sieve size              | 10    | 40     | 200          |  |        |  |    |
| Cumulative Retained (g) | 52.50 | 218.80 | 388.70       |  |        |  |    |
| Cumulative Retained %   | 10.50 | 43.76  | 77.74        |  |        |  |    |
| Cumulative Passing %    | 89.50 | 56.24  | 22.26        |  |        |  |    |

### 3-General gradient

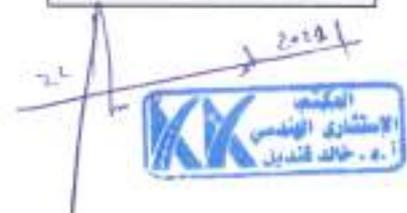
| sieve size(in)       | 2     | 1.5  | 1    | 3/4  | 1/2  | 3/8  | # 4  | # 10 | # 40  | # 200 |
|----------------------|-------|------|------|------|------|------|------|------|-------|-------|
| sieve size(mm)       | 50.0  | 37.5 | 25.0 | 19.0 | 12.5 | 9.5  | 4.75 | 2.00 | 0.425 | 0.075 |
| Cumulative Passing % | 100.0 | 90.5 | 81.7 | 72.8 | 64.9 | 55.1 | 48.2 | 43.2 | 27.1  | 10.7  |
|                      |       |      |      |      |      |      |      |      |       |       |
|                      |       |      |      |      |      |      |      |      |       |       |

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

Contractor Engineer

Lab Engineer

Consultant Engineer





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



## PROCTOR TEST

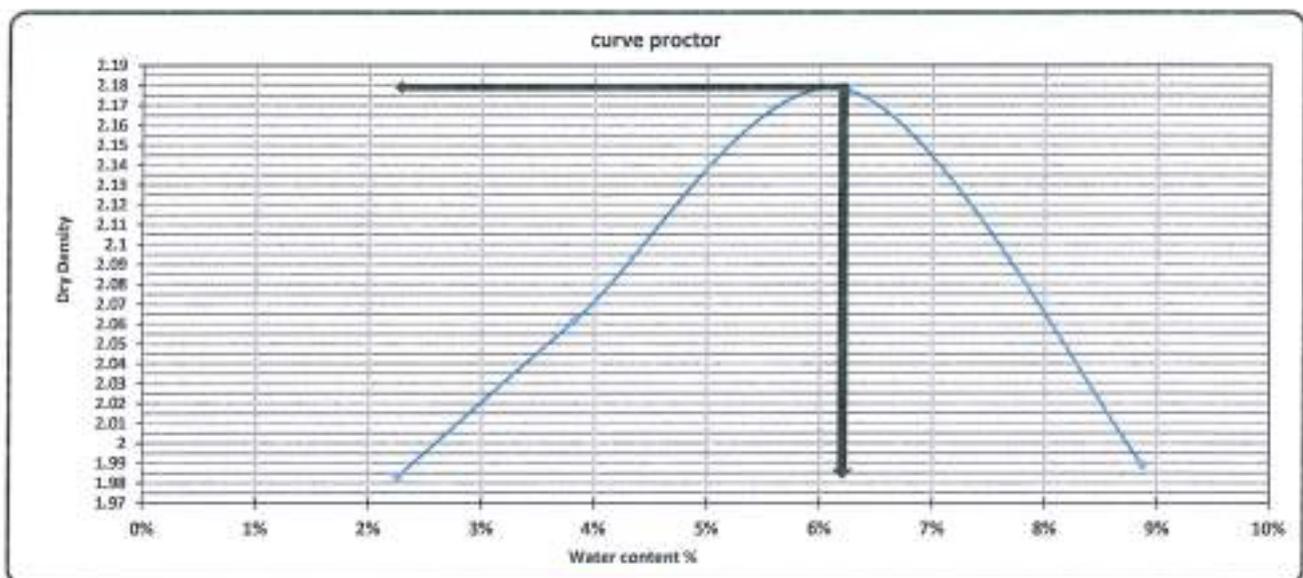
|               |              |            |      |         |         |
|---------------|--------------|------------|------|---------|---------|
| TESTING DATE: | 20-09-2022   | code       | zone | 504+180 | 505+000 |
| LOCATION      | k.p(504+500) | KS 1 (007) |      |         |         |
| NAME COMPANY  | knooz sinal  |            |      |         |         |

|                        |        |
|------------------------|--------|
| Weight of empty mold : | 6255.0 |
| Mold Volume:           | 2169.0 |

|                 |      |
|-----------------|------|
| MAX Dry Density | 2.18 |
| Water content % | 6.2  |

| trial no :            | 1       | 2       | 3       | 4      |  |
|-----------------------|---------|---------|---------|--------|--|
| Wt. Of Mold+ wet soil | 10654.0 | 10897.0 | 11273.0 | 10952  |  |
| WT. WET SOIL          | 4399.0  | 4642.0  | 5018.0  | 4697.0 |  |
| Wt. Density           | 2.028   | 2.140   | 2.314   | 2.166  |  |

| Tare No.               | 21    | 26    | 11    | 32    | 7     | 19    | 10    | 25    |  |  |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Tare wt.               | 55.2  | 55    | 46.1  | 74.4  | 42.8  | 44.4  | 43.7  | 75.8  |  |  |
| Wt. Of wet soil & tare | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 |  |  |
| Wt. Of dry soil & tare | 148.0 | 147.8 | 146.5 | 146.5 | 144.0 | 143.5 | 142.0 | 143.5 |  |  |
| Wt. Of water           | 2.0   | 2.2   | 3.5   | 3.0   | 6.0   | 6.5   | 8.0   | 6.5   |  |  |
| Wt. Of dry soil        | 92.8  | 92.8  | 100.4 | 72.1  | 101.2 | 99.1  | 98.3  | 67.7  |  |  |
| Water content %        | 2.2%  | 2.4%  | 3.5%  | 4.2%  | 5.9%  | 6.6%  | 8.1%  | 9.6%  |  |  |
| AV. Water content %    | 2.3%  |       | 3.8%  |       | 6.2%  |       | 8.9%  |       |  |  |
| Dry Density            | 1.983 |       | 2.061 |       | 2.178 |       | 1.089 |       |  |  |



Contractor Engineer  
 شركة كروز  
 للمقاولات العامة  
 والتوريدات

Lab Engineer  
 Electric Express Train  
 Central Lab Matrouh  
 Sidi Barrani - Matrouh

Consultant Engineer  
 K&K  
 الاستشاري الهندسي  
 ا.م. خالد عبدالمنعم

**California Bearing Ratio TEST**

|                |              |            |      |         |         |
|----------------|--------------|------------|------|---------|---------|
| Testing Date : | 22-09-2022   | Code       | zone | 504+180 | 505+000 |
| Location :     | k.p(504+500) | KS 1 (007) |      |         |         |
| Company Name   | knooz sina1  |            |      |         |         |

**Test Results**

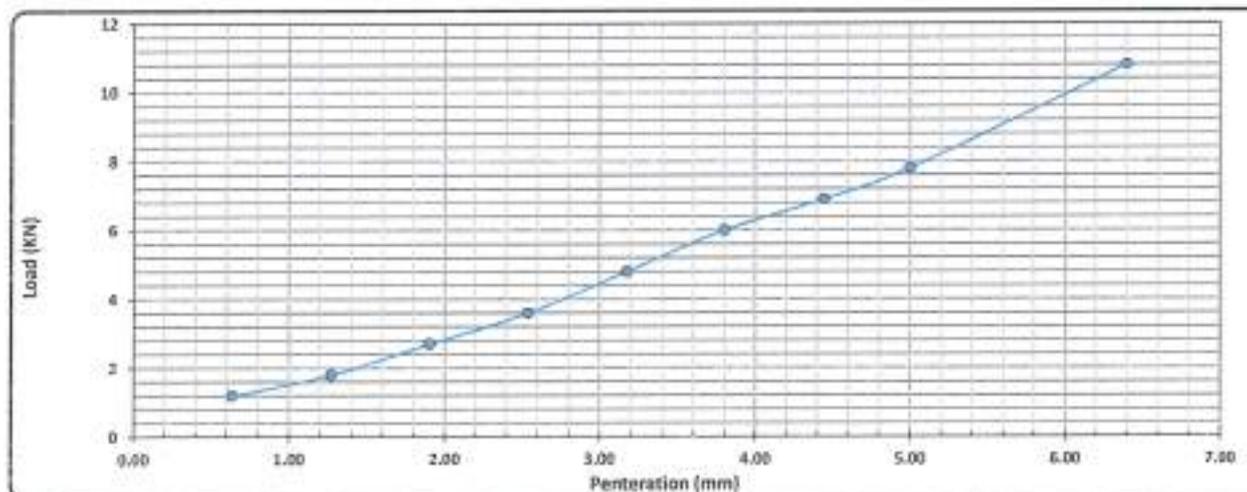
| Compaction % for Mold                |       |
|--------------------------------------|-------|
| Mold No.                             | 4     |
| Mold Vol. (cm <sup>3</sup> )         | 2122  |
| Mold WT. (gms)                       | 4875  |
| Mold WT. + Wet WT. (gms)             | 9882  |
| Wet WT. (gms)                        | 4807  |
| Wet Density (g/cm <sup>3</sup> )     | 2.285 |
| Dry Density (g/cm <sup>3</sup> )     | 2.134 |
| Proctor Density (g/cm <sup>3</sup> ) | 2.180 |
| Compaction %                         | 98    |

| Moisture Ratio After Compacted Mold |      |
|-------------------------------------|------|
| Tare No.                            | 4    |
| Tare WT. (gms)                      | 46.8 |
| Tare WT. + Wet WT. (gms)            | 139  |
| Tare WT. + Dry WT. (gms)            | 104  |
| Water WT. (gms)                     | 3.0  |
| Dry WT. (gms)                       | 97.2 |
| Moisture Content %                  | 3.1  |

| Swelling            |            |
|---------------------|------------|
| Mold No.            | 6          |
| Date                | 22-09-2022 |
| Initial Height (mm) | 1.00       |
| Final Height (mm)   | 1.00       |
| Difference          | 0          |
| Sample Height (mm)  | 120.00     |
| Swelling Ratio %    | 0%         |

**Loading Reading :**

|                   |      |      |      |      |      |      |      |      |      |
|-------------------|------|------|------|------|------|------|------|------|------|
| Penetration (mm)  | 0.64 | 1.27 | 1.91 | 2.54 | 3.18 | 3.80 | 4.45 | 5.00 | 6.40 |
| Load Reading (kg) | 0.04 | 0.86 | 0.99 | 0.12 | 0.16 | 0.20 | 0.23 | 0.26 | 0.36 |
| Load (KN)         | 1.2  | 1.8  | 2.7  | 3.6  | 4.8  | 6.0  | 6.9  | 7.8  | 10.8 |



**Calculations :-**

| Penetration (mm) | Load (Kt) | Standard Load (lb) | CBR (%) | Mold - Compaction (%) | Compaction (%) | CBR % |
|------------------|-----------|--------------------|---------|-----------------------|----------------|-------|
| 2.50             | 3.60      | 15.4               | 27.0%   | 99                    | 98             | 26.6% |
| 5.00             | 7.80      | 20.0               | 39.0%   |                       |                | 38.5% |

Contractor Engineer

Name :

Sign :



Lab. Engineer

Name :

Sign :



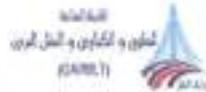
Capitulant Engineer

Name :

Sign :



# MATERIAL INSPECTION REQUEST



|                      |                         |       |                  |             |          |          |    |    |    |    |    |
|----------------------|-------------------------|-------|------------------|-------------|----------|----------|----|----|----|----|----|
| Contractor Company   | KNOOZ SINA COMPANY      |       | Designer Company | k.k         |          |          |    |    |    |    |    |
| Issued by Contractor | Name                    | Sign: | Date             | Time        |          |          |    |    |    |    |    |
|                      | Eng. Ahmed Abdallah     |       | 27-09-2022       |             |          |          |    |    |    |    |    |
| Contractor reference | KS1 - (08) - 27-09-2022 |       |                  |             |          |          |    |    |    |    |    |
| Received by ER       | M.A                     |       | MIR              | C1<br>KPS04 | C2<br>EW | C3<br>CS | DD | MM | YY | HH | MM |

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

| Description of Materials   |                   | FILL MATERIAL RESULTS |  |              |      |
|--|-------------------|-----------------------|--|--------------|------|
| Location to be Used  |                   | From                  | To   |              |      |
|  |                   | 504+640               | 504+740  | (-1.50)      |      |
|  |                   | 504+740               | 504+880  | (-1.25)      |      |
|  |                   | 504+880               | 505+000  | (-1.25)      |      |
|  |                   | 504+220               | 504+380  | (-2.00)      |      |
|  | 504+640           | 504+740               | (-1.25)  |              |      |
| MAR Approval No  |                   |                       | Date   |              |      |
| Supplier Name  |                   |                       |  |              |      |
| Test Requirement   |                   | Specification         | Clause   |              |      |
| Reference Photos   | Yes attached / No | Other                 |  |              |      |
| Item   | Description       | Unit                  | Quantity   | Arrival Date | Note |
| 1  | Sieve analysis    | m <sup>3</sup>        | 5000   | 24-09-2022   |      |
| 2  | Classification    | m <sup>3</sup>        | 5000   | 24-09-2022   |      |
| 3  | Proctor & O.m.c   | m <sup>3</sup>        | 5000   | 25-09-2022   |      |
| 4  | L.L & P.L & PI    | m <sup>3</sup>        | 5000   | 25-09-2022   |      |
| 5  | C.B.R             | m <sup>3</sup>        | 5000   | 27-09-2022   |      |
| Comments by:   |                   |                       | Comments by:   |              |      |
| A sample has been taken from fill material by K.K office to ( AL Nuby laboratory ) and the results founded meet the specifications and accepted. |                   |                       | Test results for estimated quantities of about [ 5000 m <sup>3</sup> ] |              |      |
| APPROVAL STATUS  |                   |                       |  |              |      |
| Organisation   | Name              | Sign                  | Date   | A-AWC-R      |      |
| Contractor   | Ahmed Abdallah    |                       | 27-9-2022  |              |      |
| QA/QC *  | Ahmed Abu Zaid    |                       | 27-9-2022  |              |      |
| GARB**   | HUSSYEN Fouad     |                       | 27-9-2022  |              |      |
| Comments by  |                   |                       |  |              |      |
| Employers Representative   | M.A               |                       |  | A            |      |

\* Designer

\*\* Alignment / Bridges: Culvert Only

**MATERIAL  
APPROVAL  
REQUEST**



|                        |                         |      |                  |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |
|------------------------|-------------------------|------|------------------|--|----|----|----|----|----|----|----|----|-------|----|----|--|--|--|--|--|
| Location Name          | Contractor Company      |      | Designer Company |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |
| Electric express train | KNOOZ SINA COMPANY      |      | k.k              |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |
| Issued by Contractor   | Name                    | Sign | Date             | Time   |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |
|                        | Ahmed Abdallah          |      | 27-09-2022       |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |
| Contractor Reference   | KS1 - (08) - 27-09-2022 |      |                  |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |
| Received by ER         |                         |      | MAR              | <table border="1"> <tr> <td>C1</td> <td>C2</td> <td>C3</td> <td>DO</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td>KP504</td> <td>EW</td> <td>CS</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | C1 | C2 | C3 | DO | MM | YY | HH | MM | KP504 | EW | CS |  |  |  |  |  |
| C1                     | C2                      | C3   | DO               | MM   | YY | HH | MM |    |    |    |    |    |       |    |    |  |  |  |  |  |
| KP504                  | EW                      | CS   |                  |  |    |    |    |    |    |    |    |    |       |    |    |  |  |  |  |  |

| NB:Package 1 only (Package 2 via Content )        |                |                       |                             |         |
|---|----------------|-----------------------|-----------------------------|---------|
| The following test result are attached for review |                |                       |                             |         |
| Description of Materials                          | Soil ( A-1-b ) |                       |                             |         |
| Location of stock                                 | K.p (504+320 ) |                       |                             |         |
| Item  | Specification  | Test requirement      | Test result attachment      | Remarks |
| 1   | ASTM D 75      | Aggregate Sampling    | According to specifications |         |
| 2   | ASTM C 136     | Sieve Analysis        | According to specifications |         |
| 3   | ASTM D 1440    | Passing Sieve, No 200 | 11.6 %                      |         |
| 4   | ASTM D 4318    | Atterberg limit       | N.P                         |         |
| 5   | ASTM D 2974    | Moisture content      | 6.20 %                      |         |
| 6   | ASTM D 1557    | Modified proctor      | 2.15                        |         |
| 7   | ASTM D 1883    | CBR                   | 61.80 %                     |         |
| Comments by:                                      |                |                       | Comments by:                |         |
|   |                |                       |                             |         |

| APPROVAL STATUS          |                |      |           |         |
|--------------------------|----------------|------|-----------|---------|
| Organisation             | Name           | Sign | Date      | A-AWC-R |
| Contractor               | Ahmed Abdallah |      | 27-9-2022 |         |
| Contractor QA/QC *       | Ahmed Abu Zaid |      | 27-9-2022 |         |
| GARB**                   | Hussien Fouad  |      | 27-9-2022 |         |
| Employers Representative | M.A            |      | 30/9/2022 | A       |

\* Designer

\*\* Alignment/Bridges: Culvert only



|  |   |  |  |  |   |
|--|---|--|--|--|---|
| <br>ENGINEERING CONSULTING OFFICE<br>المكتب الاستشاري الهندسي<br>ا.د. خالد قنديل | <br>SASRA<br>SHARJAH | <b>Electric Express Train - HSR</b>                |  |  | <br>الهيئة العامة للإسكان والنقل<br>وزارة النقل والبنية التحتية<br>(SASRA) |
|  |   | From El Ain El Sokhna City To El Alamein - MATROUH |  |  |   |
|  |   | Section - 7 From FOKA To MARSA MATROUH             |  |  |   |
|  |   | From Station 504+000 To Station 568+177            |  |  |   |
| Operating Lab  |   | AL Nuby Central Lab                                |  |  |   |

### PARTICLE SIZE DISTRIBUTION OF SOIL

|               |               |           |      |         |         |
|---------------|---------------|-----------|------|---------|---------|
| TESTING DATE: | 24-09-2022    | Code      |      |         |         |
| LOCATION      | K.P.(504+320) | KS1 (008) | ZONE | 504+180 | 505+000 |
| NAME COMPANY  | KONUZ SENA    |           |      |         |         |

1-visual inspection test

2-Gradient test

| A-gradation of bulk materials |       |        |        | SAMPLE WEIGHT (g) |        |        |        | 20124.00 | gm            | table classify |
|-------------------------------|-------|--------|--------|-------------------|--------|--------|--------|----------|---------------|----------------|
| sieve size                    | 2     | 1.5    | 1      | 4/3               | 2/1    | 8/3    | # 4    | PASS     | soil classify |                |
| Mass retained (g)             | 0.0   | 1650.0 | 2530.0 | 1320.0            | 975.0  | 1320.0 | 1210.0 |          | A-1-b         |                |
| Cumulative Retained (g)       | 0.0   | 1650.0 | 4180.0 | 5500.0            | 6475.0 | 7795.0 | 9005.0 | PRO      | 2.15          |                |
| Cumulative Retained %         | 0.0   | 8.2    | 20.8   | 27.3              | 32.2   | 38.7   | 44.7   | WC       | 6.20          |                |
| Cumulative Passing %          | 100.0 | 91.8   | 79.2   | 72.7              | 67.8   | 61.3   | 55.3   | CBR      | 61.80         |                |

| B-soft material gradation |       |        |        | WT.OF sample |  |  |  | 500.00 | gm |
|---------------------------|-------|--------|--------|--------------|--|--|--|--------|----|
| sieve size                | 10    | 40     | 200    |              |  |  |  |        |    |
| Cumulative Retained (g)   | 43.30 | 204.00 | 395.00 |              |  |  |  |        |    |
| Cumulative Retained %     | 8.66  | 40.80  | 79.00  |              |  |  |  |        |    |
| Cumulative Passing %      | 91.34 | 59.20  | 21.00  |              |  |  |  |        |    |

| C-General gradient   |       |      |      |      |      |      |      |      |       |       |
|----------------------|-------|------|------|------|------|------|------|------|-------|-------|
| sieve size(in)       | 2     | 1.5  | 1    | 3/4  | 1/2  | 3/8  | # 4  | # 10 | # 40  | # 200 |
| sieve size(mm)       | 50.0  | 37.5 | 25.0 | 19.0 | 12.5 | 9.5  | 4.75 | 2.00 | 0.425 | 0.075 |
| Cumulative Passing % | 100.0 | 91.8 | 79.2 | 72.7 | 67.8 | 61.3 | 55.3 | 50.5 | 32.7  | 11.6  |
|                      |       |      |      |      |      |      |      |      |       |       |
|                      |       |      |      |      |      |      |      |      |       |       |

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

Contractor Engineer

Lab Engineer

Consultant Engineer



Handwritten signature and date: 24/9/2022



## PROCTOR TEST

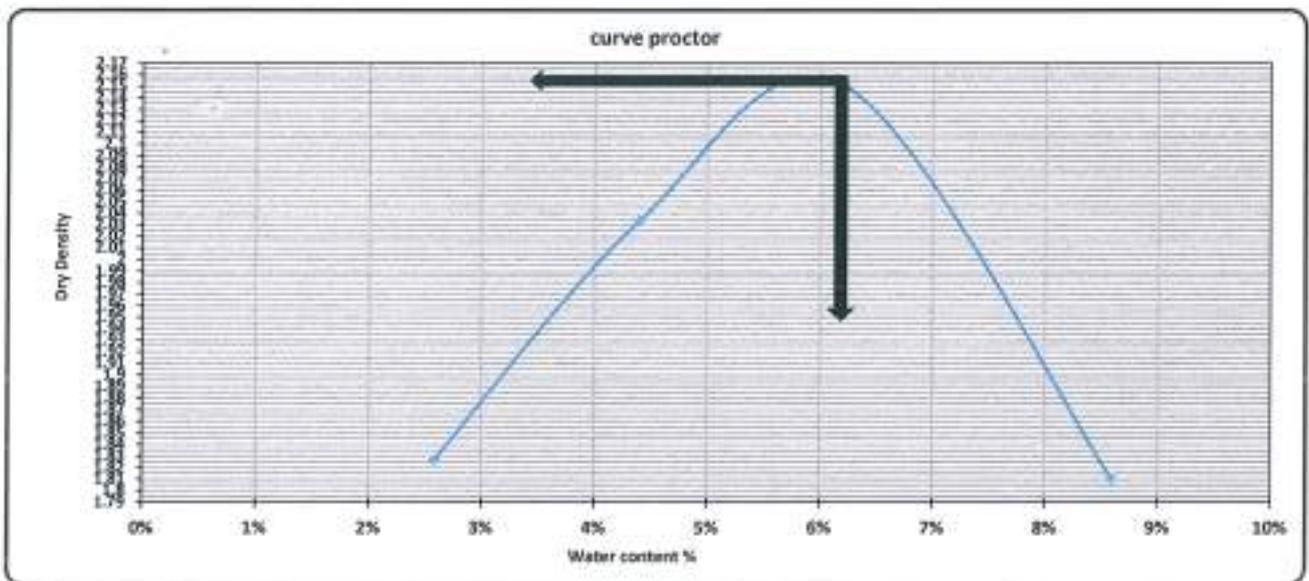
|               |              |            |      |         |         |
|---------------|--------------|------------|------|---------|---------|
| TESTING DATE: | 25-09-2022   | Code       |      |         |         |
| LOCATION      | k.p(504+320) | KS 1 (008) | zone | 504+180 | 505+000 |
| NAME COMPANY  | KONOZ SENA   |            |      |         |         |

|                        |        |
|------------------------|--------|
| Weight of empty mold : | 6255.0 |
| Mold Volume:           | 2169.0 |

|                 |      |
|-----------------|------|
| MAX Dry Density | 2.15 |
| Water content % | 6.2  |

| trial no :            | 1       | 2       | 3       | 4      |  |
|-----------------------|---------|---------|---------|--------|--|
| Wt. Of Mold+ wet soil | 10320.0 | 10860.0 | 11210.0 | 10820  |  |
| WT. WET SOIL          | 4065.0  | 4605.0  | 4955.0  | 4265.0 |  |
| Wt. Density           | 1.874   | 2.123   | 2.284   | 1.966  |  |

| Tare No.               | 7     | 21    | 7     | 10    | 35    | 33    | 17    | 25    |  |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Tare wt.               | 42.8  | 55.2  | 42.8  | 43.7  | 66    | 72    | 59.5  | 75.8  |  |
| Wt. Of wet soil & tare | 150.0 | 150.0 | 150.0 | 150.0 | 151.0 | 150.0 | 150.0 | 150.0 |  |
| Wt. Of dry soil & tare | 148.0 | 147.0 | 145.0 | 145.5 | 145.0 | 147.0 | 143.0 | 144.0 |  |
| Wt. Of water           | 2.0   | 3.0   | 5.0   | 4.2   | 6.0   | 3.7   | 7.0   | 6.0   |  |
| Wt. Of dry soil        | 105.2 | 91.8  | 102.2 | 101.8 | 79.0  | 75.0  | 83.5  | 68.2  |  |
| Water content %        | 1.9%  | 3.3%  | 4.9%  | 4.1%  | 7.5%  | 4.9%  | 8.4%  | 8.8%  |  |
| AV. Water content %    | 2.6%  |       | 4.4%  |       | 6.2%  |       | 8.6%  |       |  |
| Dry Density            | 1.827 |       | 2.034 |       | 2.151 |       | 1.811 |       |  |



Contractor Engineer

شركة كونازا  
سيناء  
للمقاولات العامة  
والتوريدات

Lab Engineer

Electric Express Train  
Central Lab. Number  
Sec-7 Foka - Matrouh

Consultant Engineer

17 / 2022  
م.ع. خالد قنديل

California Bearing Ratio TEST

|                |                |            |      |         |         |
|----------------|----------------|------------|------|---------|---------|
| Testing Date : | 27-09-2022     | Code       | zone | 504+180 | 505+000 |
| Location :     | k.p (504+320 ) | KS 1 (008) |      |         |         |
| Company Name   | KONOZ SENA     |            |      |         |         |

Test Results

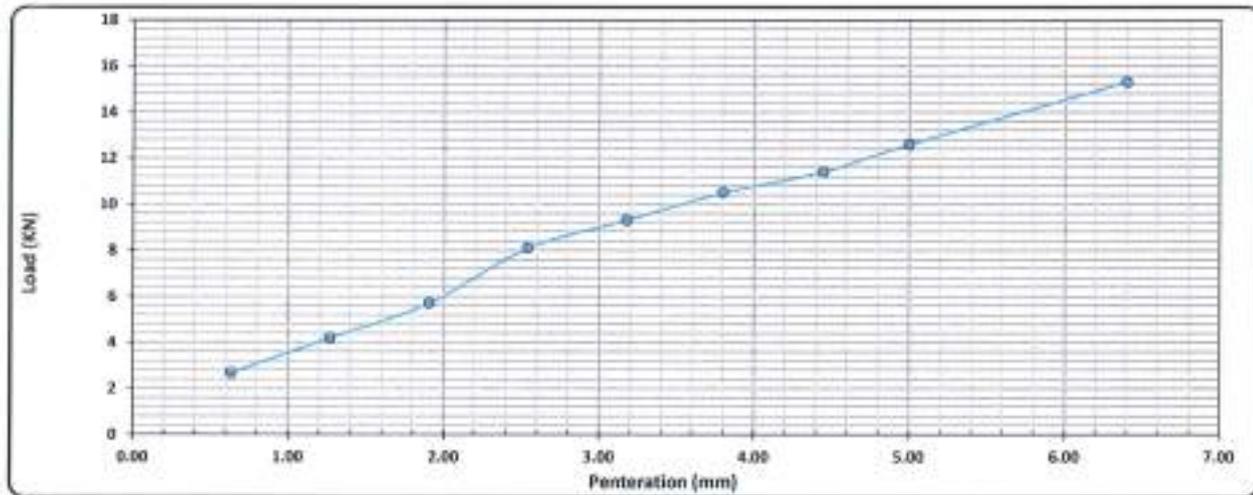
| Compaction % for Mold                |       |
|--------------------------------------|-------|
| Mold No.                             | 1     |
| Mold Vol (cm <sup>3</sup> )          | 2295  |
| Mold WT. (gms)                       | 5834  |
| Mold WT. + Weir WT. (gms)            | 10020 |
| Weir WT. (gms)                       | 5816  |
| Weir Density (g/cm <sup>3</sup> )    | 1.275 |
| Dry Density (g/cm <sup>3</sup> )     | 1.145 |
| Proctor Density (g/cm <sup>3</sup> ) | 1.150 |
| Compaction %                         | 100   |

| Moisture Ratio After Compacted Mold |       |
|-------------------------------------|-------|
| Tare No.                            | 40    |
| Tare WT. (gms)                      | 46.4  |
| Tare WT. + Weir WT. (gms)           | 150   |
| Tare WT. + Dry WT. (gms)            | 144.1 |
| Water WT. (gms)                     | 5.5   |
| Dry WT. (gms)                       | 97.7  |
| Moisture Content %                  | 6.0   |

| Swelling            |            |
|---------------------|------------|
| Mold No.            | 1          |
| Date                | 27-09-2022 |
| Initial Height (mm) | 4.00       |
| Final Height (mm)   | 4.00       |
| Difference          | 0          |
| Sample Height (mm)  | 120.00     |
| Swelling Ratio %    | 0%         |

Loading Reading :

|                   |      |      |      |      |      |      |      |      |      |
|-------------------|------|------|------|------|------|------|------|------|------|
| Penetration (mm)  | 0.64 | 1.27 | 1.91 | 2.54 | 3.18 | 3.82 | 4.45 | 5.00 | 6.40 |
| Load Reading (kg) | 0.09 | 0.14 | 0.19 | 0.27 | 0.31 | 0.35 | 0.38 | 0.42 | 0.51 |
| Load (kN)         | 2.7  | 4.2  | 5.7  | 8.1  | 9.3  | 10.5 | 11.4 | 12.6 | 15.3 |



Calculations :-

| Penetration (mm) | Load (kN) | Standard Load (lb) | CBR (%) | Mold - Compaction (%) | Compaction (%) | CBR % نسبة 98 |
|------------------|-----------|--------------------|---------|-----------------------|----------------|---------------|
| 2.50             | 8.10      | 13.4               | 60.7%   | 100                   | 98             | 59.6%         |
| 5.00             | 12.60     | 20.0               | 62.9%   |                       |                | 61.8%         |

Lab. Specialist

Name :

Sign :



Lab. Engineer

Name :

Sign :



Consultant Engineer

Name :

Sign :



# MATERIAL INSPECTION REQUEST



|                      |                         |      |                  |          |          |          |          |
|----------------------|-------------------------|------|------------------|----------|----------|----------|----------|
| Contractor Company   | KNOOZ SINA COMPANY      |      | Designer Company |          |          |          |          |
| Issued by Contractor | Name                    | Sign | Date             | Time     |          |          |          |
|                      | Eng. Ahmed Abdallah     |      | 04-10-2022       |          |          |          |          |
| Contractor reference | KS1 - (09) - 04-10-2022 |      |                  |          |          |          |          |
| Received by ER       | A-1                     |      | MIR              |          |          |          |          |
|                      |                         |      | C1<br>KPS04      | C2<br>EW | C3<br>CS | DD<br>04 | MM<br>10 |

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

| Description of Materials   |                   | FILL MATERIAL RESULTS |   |              |      |
|--|-------------------|-----------------------|---|--------------|------|
| Location to be Used  |                   | From                  | To  |              |      |
|  |                   | 504+520               | 504+640   | (-1.25)      |      |
|  |                   | 504+380               | 504+520   | (-1.75)      |      |
|  |                   | 504+740               | 504+860   | (-1.00)      |      |
|  |                   | 504+860               | 505+000   | (-1.00)      |      |
|  |                   | 504+300               | 504+380   | (-1.75)      |      |
|  |                   | 504+220               | 504+300   | (-1.75)      |      |
|  |                   | 504+640               | 504+740   | (-1.00)      |      |
| MAR Approval No  |                   |                       | Date  |              |      |
| Supplier Name  |                   |                       |   |              |      |
| Test Requirement   |                   | Specification         | Clause  |              |      |
| Reference Photos   | Yes attached / No | Other                 |   |              |      |
| Item   | Description       | Unit                  | Quantity  | Arrival Date | Note |
| 1  | Sieve analysis    | m <sup>3</sup>        | 5000  | 01-10-2022   |      |
| 2  | Classification    | m <sup>3</sup>        | 5000  | 01-10-2022   |      |
| 3  | Proctor & O.m.c   | m <sup>3</sup>        | 5000  | 02-10-2022   |      |
| 4  | L.L & P.L & PI    | m <sup>3</sup>        | 5000  | 02-10-2022   |      |
| 5  | C.B.R             | m <sup>3</sup>        | 5000  | 04-10-2022   |      |
| Comments by:   |                   |                       | Comments by:  |              |      |
| A sample has been taken from fill material by K.K office to ( AL Nuby laboratory ) and the results founded meet the specifications and accepted. |                   |                       | <br>Test results are estimated about [3000 m <sup>3</sup> ] |              |      |
| APPROVAL STATUS  |                   |                       |   |              |      |
| Organisation   | Name              | Sign                  | Date  | A-AWC-R      |      |
| Contractor   |                   |                       | 4-10-2022   |              |      |
| QA/QC *  | Ahmed Abozaid     |                       | 4-10-2022   |              |      |
| GARB**   | Hussien Fouad     |                       | 4-10-2022   |              |      |
| Comments by  |                   |                       |   |              |      |
| Employers Representative   | A-1               |                       | 4/10/22   | A            |      |

\* Designer

\*\* Alignment / Bridges: Culvert Only

**MATERIAL APPROVAL REQUEST**



|                        |                         |                    |            |                  |    |    |    |    |    |    |    |
|------------------------|-------------------------|--------------------|------------|------------------|----|----|----|----|----|----|----|
| Location Name          | Contractor Company      |                    |            | Designer Company |    |    |    |    |    |    |    |
| Electric express train | KNOOZ SINA COMPANY      |                    |            | k.k              |    |    |    |    |    |    |    |
| Issued by Contractor   | Name                    | Sign               | Date       | Time             |    |    |    |    |    |    |    |
|                        | Ahmed Abdallah          | <i>Ahmed</i>       | 04-10-2022 |                  |    |    |    |    |    |    |    |
| Contractor Reference   | KS1 - (09) - 04-10-2022 |                    |            |                  |    |    |    |    |    |    |    |
| Received by ER         | A.Z                     | <i>[Signature]</i> | MAR        | C1               | C2 | C3 | DD | MM | YY | HH | MM |
|                        |                         |                    |            | KP504            | EW | C5 |    |    |    |    |    |

| NB:Package 1 only (Package 2 via Content )        |                |                       |                             |         |
|---|----------------|-----------------------|-----------------------------|---------|
| The following test result are attached for review |                |                       |                             |         |
| Description of Materials                          | Soil ( A-1-b ) |                       |                             |         |
| Location of stock                                 | K.p (504+500 ) |                       |                             |         |
| Item  | Specification  | Test requirement      | Test result attachment      | Remarks |
| 1   | ASTM D 75      | Aggregate Sampling    | According to specifications |         |
| 2   | ASTM C 136     | Sieve Analysis        | According to specifications |         |
| 3   | ASTM D 1440    | Passing Sieve, No 200 | 13.0 %                      |         |
| 4   | ASTM D 4318    | Atterberg limit       | N.P                         |         |
| 5   | ASTM D 2974    | Moisture content      | 7.5 %                       |         |
| 6   | ASTM D 1557    | Modified proctor      | 2.14                        |         |
| 7   | ASTM D 1883    | CBR                   | 44.60 %                     |         |
| Comments by:                                      |                |                       | Comments by:                |         |
|   |                |                       |                             |         |



| APPROVAL                 |                |                    |           |         |
|--------------------------|----------------|--------------------|-----------|---------|
| Organisation             | Name           | Signature          | Date      | A-AWC-R |
| Contractor               | Ahmed Abdallah | <i>Ahmed</i>       | 4-10-2022 |         |
| Contractor QA/QC *       | Ahmed Abu Zaid | <i>Ahmed</i>       | 4-10-2022 |         |
| GARB**                   | Hussien Fouad  | <i>Hussien</i>     | 4-10-2022 |         |
| Employers Representative | A.Z            | <i>[Signature]</i> | 4/10/22   | A       |

\* Designer  
\*\* Alignment/Bridges: Culvert only



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



Operating Lab

AL Nuby Central Lab

**PARTICLE SIZE DISTRIBUTION OF SOIL**

|               |              |            |      |         |         |
|---------------|--------------|------------|------|---------|---------|
| TESTING DATE: | 01-10-2022   | Code       |      |         |         |
| LOCATION      | k.p(504+500) | KS 1 (000) | ZONE | 504+180 | 505+000 |
| LAME COMPANY  | knouz sina1  |            |      |         |         |

-visual inspection test

-Gradient test

| I-gradation of bulk materials |       |       | SAMPLE WEIGHT (g) |        | 17383.00 |        | gm     | table classify |
|-------------------------------|-------|-------|-------------------|--------|----------|--------|--------|----------------|
| sieve size                    | 2     | 1.5   | 1                 | 3/4    | 1/2      | 3/8    | # 4    | PASS           |
| Mass retained (g)             |       | 985.0 | 1320.0            | 1595.0 | 1530.0   | 1225.0 | 1560.0 | soil classify  |
| Cumulative Retained (g)       | 0.0   | 985.0 | 2305.0            | 3900.0 | 5430.0   | 6655.0 | 8215.0 | A-1-b          |
| Cumulative Retained %         | 0.0   | 5.7   | 13.3              | 22.4   | 31.2     | 38.3   | 47.3   | PRO            |
| Cumulative Passing %          | 100.0 | 94.3  | 86.7              | 77.6   | 68.8     | 61.7   | 52.7   | WC             |
|                               |       |       |                   |        |          |        |        | CBR            |
|                               |       |       |                   |        |          |        |        | 44.60          |

| I-soft material gradation |       |       | WT.OF sample |  | 500.00 |  | gm |
|---------------------------|-------|-------|--------------|--|--------|--|----|
| sieve size                | 10    | 40    | 200          |  |        |  |    |
| Cumulative Retained (g)   | 58.6  | 209.9 | 376.5        |  |        |  |    |
| Cumulative Retained %     | 11.72 | 41.98 | 75.30        |  |        |  |    |
| Cumulative Passing %      | 88.28 | 58.02 | 24.70        |  |        |  |    |

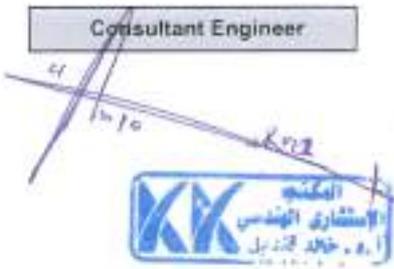
| -General gradient    |       |      |      |      |      |      |      |      |       |       |
|----------------------|-------|------|------|------|------|------|------|------|-------|-------|
| sieve size(in)       | 2     | 1.5  | 1    | 3/4  | 1/2  | 3/8  | # 4  | # 10 | # 40  | # 200 |
| sieve size(mm)       | 50.0  | 37.5 | 25.0 | 19.0 | 12.5 | 9.5  | 4.75 | 2.00 | 0.425 | 0.075 |
| Cumulative Passing % | 100.0 | 94.3 | 86.7 | 77.6 | 68.8 | 61.7 | 52.7 | 46.6 | 30.6  | 13.0  |
|                      |       |      |      |      |      |      |      |      |       |       |
|                      |       |      |      |      |      |      |      |      |       |       |

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

Contractor Engineer

Lab Engineer

Consultant Engineer



## PROCTOR TEST

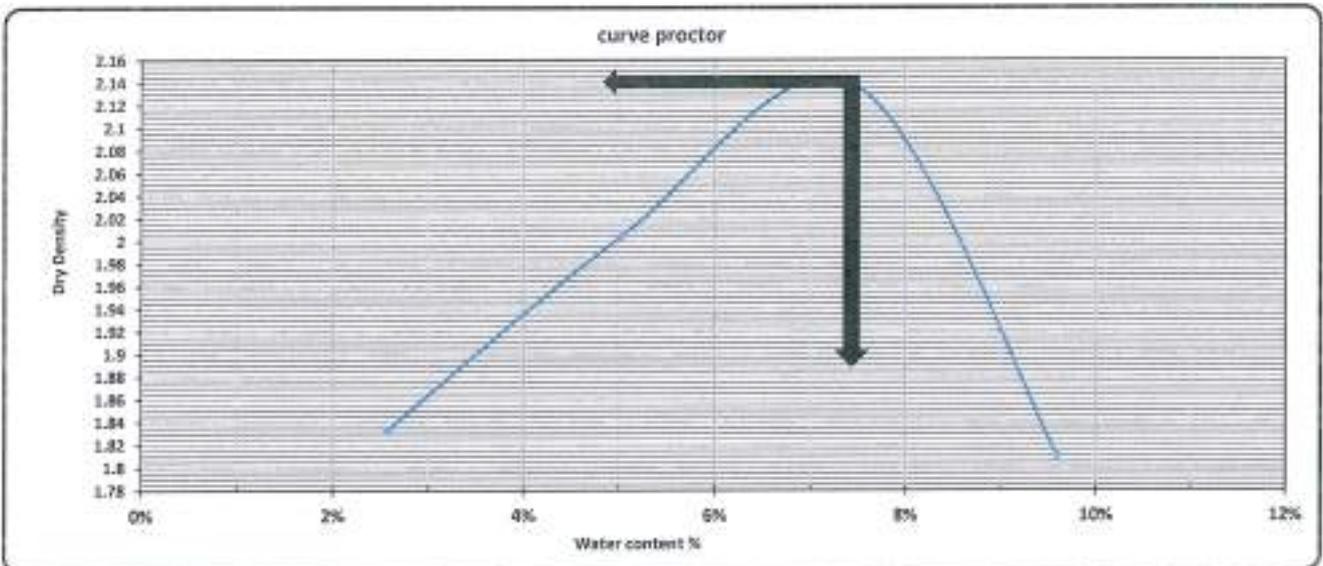
|               |               |            |      |         |         |
|---------------|---------------|------------|------|---------|---------|
| TESTING DATE: | 02-10-2022    | Code       | zone | 504+180 | 505+000 |
| LOCATION      | K.P (504+500) | KS 1 (009) |      |         |         |
| NAME COMPANY  | knooz sina1   |            |      |         |         |

|                        |        |
|------------------------|--------|
| Weight of empty mold : | 6255.0 |
| Mold Volume:           | 2169.0 |

|                 |      |
|-----------------|------|
| MAX Dry Density | 2.14 |
| Water content % | 7.5  |

|                       |         |         |         |         |  |
|-----------------------|---------|---------|---------|---------|--|
| trial no :            | 1       | 2       | 3       | 4       |  |
| Wt. Of Mold+ wet soil | 10335.0 | 10020.0 | 11240.0 | 10560.0 |  |
| WT. WET SOIL          | 4080.0  | 4565.0  | 4985.0  | 4305.0  |  |
| Wt. Density           | 1.881   | 2.105   | 2.298   | 1.985   |  |

|                        |       |       |       |       |       |       |       |       |  |  |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Tare No.               | 16    | 15    | 11    | 21    | 8     | 18    | 20    | 33    |  |  |
| Tare wt.               | 33.8  | 31    | 46.1  | 55.2  | 46.8  | 77.7  | 60.9  | 73.6  |  |  |
| Wt. Of wet soil & tare | 190.0 | 190.0 | 190.0 | 190.0 | 190.0 | 190.0 | 190.0 | 190.0 |  |  |
| Wt. Of dry soil & tare | 144.0 | 141.3 | 145.0 | 145.5 | 145.1 | 144.8 | 142.1 | 143.4 |  |  |
| Wt. Of water           | 6.0   | 8.7   | 5.0   | 4.5   | 6.9   | 5.2   | 7.9   | 6.6   |  |  |
| Wt. Of dry soil        | 209.9 | 376.5 | 98.9  | 90.3  | 96.3  | 67.1  | 81.2  | 69.8  |  |  |
| Water content %        | 2.9%  | 2.3%  | 5.1%  | 5.0%  | 7.2%  | 7.7%  | 9.7%  | 9.5%  |  |  |
| AV. Water content %    | 2.6%  |       | 5.0%  |       | 7.5%  |       | 9.6%  |       |  |  |
| Dry Density            | 1.834 |       | 2.004 |       | 2.139 |       | 1.811 |       |  |  |



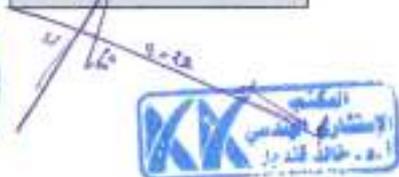
Contractor Engineer



Lab. Engineer



Consultant Engineer



## California Bearing Ratio TEST

|                |              |            |      |         |         |
|----------------|--------------|------------|------|---------|---------|
| Testing Date : | 04-10-2022   | Code       | zone | 504+180 | 505+500 |
| Location :     | k.p(504+500) | KS 1 (009) |      |         |         |
| Company Name   | knooz sina1  |            |      |         |         |

### -: Test Results

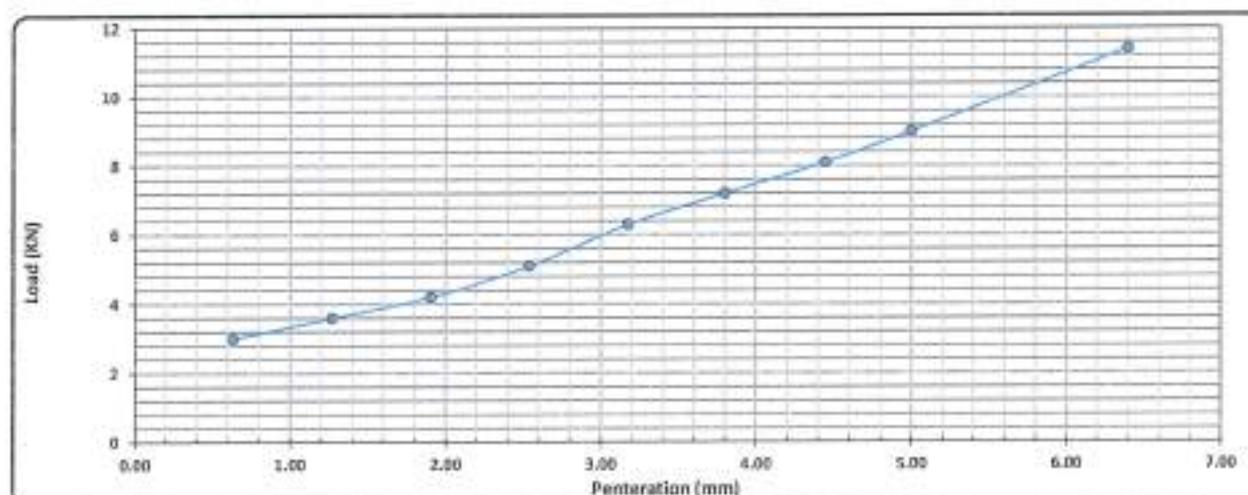
| Compaction % for Mold              |       |
|------------------------------------|-------|
| Mold No.                           | 3     |
| Mold Vol. (cm <sup>3</sup> )       | 2101  |
| Mold WT. (gms)                     | 4093  |
| Mold WT. + Wat WT. (gms)           | 4850  |
| Wat WT. (gms)                      | 4757  |
| Wat Density (g/cm <sup>3</sup> )   | 2.264 |
| Dry Density (g/cm <sup>3</sup> )   | 2.112 |
| Prove Density (g/cm <sup>3</sup> ) | 2.140 |
| Compaction %                       | 99    |

| Moisture Ratio After Compacted Mold |       |
|-------------------------------------|-------|
| Tare No.                            | 7     |
| Tare WT. (gms)                      | 42.8  |
| Tare WT. +Wat WT. (gms)             | 150   |
| Tare WT. +Dry WT. (gms)             | 142.8 |
| Water WT. (gms)                     | 7.2   |
| Dry WT. (gms)                       | 100.0 |
| Moisture Content %                  | 7.2   |

| Swelling            |            |
|---------------------|------------|
| Mold No.            | 3          |
| Date                | 04-10-2022 |
| Initial Height (mm) | 4.00       |
| Final Height (mm)   | 4.00       |
| Difference          | 0          |
| Sample Height (mm)  | 119.00     |
| Swelling Ratio %    | 0%         |

### Loading Reading :

|                   |      |      |      |      |      |      |      |      |      |
|-------------------|------|------|------|------|------|------|------|------|------|
| Penetration (mm)  | 0.64 | 1.27 | 1.91 | 2.54 | 3.18 | 3.80 | 4.45 | 5.00 | 6.40 |
| Load Reading (mm) | 0.10 | 0.12 | 0.14 | 0.17 | 0.21 | 0.24 | 0.27 | 0.30 | 0.38 |
| Load (KN)         | 3.0  | 3.6  | 4.2  | 5.1  | 6.3  | 7.2  | 8.1  | 9.0  | 11.4 |



### Calculations :-

| Penetration (mm) | Load (Ks) | Standard Load (lb) | CBR (%) | Mold - Compaction (%) | Compaction (%) | CBR % عند نسبة 99 |
|------------------|-----------|--------------------|---------|-----------------------|----------------|-------------------|
| 2.50             | 5.10      | 13.4               | 38.2%   | 99                    | 98             | 37.9%             |
| 5.00             | 9.00      | 20.0               | 44.5%   |                       |                | 44.0%             |

Contractor Engineer

Name :

Sign :



Lab Engineer

Name :

Sign :



Consultant Engineer

Name :

Sign :



|                      |                           |      |  |      |    |    |    |    |    |    |    |       |    |    |  |  |
|----------------------|---------------------------|------|--|------|----|----|----|----|----|----|----|-------|----|----|--|--|
| Contractor Company   | <b>KNOOZ SINA COMPANY</b> |      | Designer Company   |      |    |    |    |    |    |    |    |       |    |    |  |  |
| Issued by Contractor | Name                      | Sign | Date   | Time |    |    |    |    |    |    |    |       |    |    |  |  |
|                      | Eng. Ahmed Abdallah       |      | 14-10-2022   |      |    |    |    |    |    |    |    |       |    |    |  |  |
| Contractor reference | KS1 - (10) - 14-10-2022   |      |  |      |    |    |    |    |    |    |    |       |    |    |  |  |
| Received by ER       | A-1                       |      | MIR  |      |    |    |    |    |    |    |    |       |    |    |  |  |
|                      |                           |      | <table border="1"> <tr> <td>C1</td> <td>C2</td> <td>C3</td> <td>DD</td> <td>MM</td> <td>YY</td> <td>HH</td> <td>MM</td> </tr> <tr> <td>KPS04</td> <td>EW</td> <td>CS</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | C1   | C2 | C3 | DD | MM | YY | HH | MM | KPS04 | EW | CS |  |  |
| C1                   | C2                        | C3   | DD   | MM   | YY | HH | MM |    |    |    |    |       |    |    |  |  |
| KPS04                | EW                        | CS   |  |      |    |    |    |    |    |    |    |       |    |    |  |  |

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

| Description of Materials   |                   | FILL MATERIAL RESULTS |  |                 |      |
|--|-------------------|-----------------------|--|-----------------|------|
| Location to be Used  | From              | To                    | From   | To              |      |
|  | 504+520           | 504+640 (-1.00)       | 504+740  | 504+880 (-0.75) |      |
|  | 504+420           | 504+520 (-1.50)       |  |                 |      |
|  | 504+320           | 504+420 (-1.50)       |  |                 |      |
|  | 504+220           | 504+320 (-1.50)       |  |                 |      |
|  | 504+880           | 505+000 (-0.75)       |  |                 |      |
| 504+420  | 504+520 (-1.25)   |                       |  |                 |      |
| MAR Approval No  |                   |                       | Date   |                 |      |
| Supplier Name  |                   |                       |  |                 |      |
| Test Requirement   |                   | Specification         | Clause   |                 |      |
| Reference Photos   | Yes attached / No | Other                 |  |                 |      |
| Item   | Description       | Unit                  | Quantity   | Arrival Date    | Note |
| 1  | Sieve analysis    | m <sup>3</sup>        | 5000   | 11-10-2022      |      |
| 2  | Classification    | m <sup>3</sup>        | 5000   | 11-10-2022      |      |
| 3  | Proctor & O.m.c   | m <sup>3</sup>        | 5000   | 12-10-2022      |      |
| 4  | LL & P.L & PI     | m <sup>3</sup>        | 5000   | 12-10-2022      |      |
| 5  | C.B.R             | m <sup>3</sup>        | 5000   | 14-10-2022      |      |
| Comments by:   |                   |                       | Comments by:   |                 |      |
| A sample has been taken from fill material by K.K office to ( AL Nuby laboratory ) and the results founded meet the specifications and accepted. |                   |                       | Test results for estimated quantities of about [5000m <sup>3</sup> ] |                 |      |
| APPROVAL STATUS  |                   |                       |  |                 |      |
| Organisation   | Name              | Sign                  | Date   | A-AWC-R         |      |
| Contractor   | Ahmed Abdallah    |                       | 14-10-2022   |                 |      |
| QA/QC *  | Ahmed Abu Zaid    |                       | 14-10-2022   |                 |      |
| GARB**   | Hussien Fouad     |                       | 14-10-2022   |                 |      |
| Comments by  |                   |                       |  |                 |      |
| Employers Representative   | A-1               |                       | 14/10/22   | A               |      |

\* Designer  
\*\* Alignment / Bridges: Culvert Only

|                        |                         |      |            |                  |    |    |    |    |    |    |    |
|------------------------|-------------------------|------|------------|------------------|----|----|----|----|----|----|----|
| Location Name          | Contractor Company      |      |            | Designer Company |    |    |    |    |    |    |    |
| Electric express train | KNOOZ SINA COMPANY      |      |            | k.k              |    |    |    |    |    |    |    |
| Issued by Contractor   | Name                    | Sign | Date       | Time             |    |    |    |    |    |    |    |
|                        | Ahmed Abdallah          |      | 14-10-2022 |                  |    |    |    |    |    |    |    |
| Contractor Reference   | KS1 - (10) - 14-10-2022 |      |            |                  |    |    |    |    |    |    |    |
| Received by ER         |                         |      | MAR        | C1               | C2 | C3 | DD | MM | YY | HH | MM |
|                        |                         |      |            | KPS04            | EW | CS |    |    | 12 |    |    |

NB:Package 1 only (Package 2 via Content )  
The following test result are attached for review

| Description of Materials | Soil ( A-1-b ) |                       |                             |         |
|--------------------------|----------------|-----------------------|-----------------------------|---------|
| Location of stock        | K.p (504+500 ) |                       |                             |         |
| Item                     | Specification  | Test requirement      | Test result attachment      | Remarks |
| 1                        | ASTM D 75      | Aggregate Sampling    | According to specifications |         |
| 2                        | ASTM C 136     | Sieve Analysis        | According to specifications |         |
| 3                        | ASTM D 1440    | Passing Sieve, No 200 | 14.39 %                     |         |
| 4                        | ASTM D 4318    | Atterberg limit       | N.P                         |         |
| 5                        | ASTM D 2974    | Moisture content      | 7.2 %                       |         |
| 6                        | ASTM D 1557    | Modified proctor      | 2.14                        |         |
| 7                        | ASTM D 1883    | CBR                   | 49.90 %                     |         |
| Comments by:             |                | Comments by:          |                             |         |
|                          |                |                       |                             |         |

APPROVAL STATUS

| Organisation             | Name           | Signature | Date       | A-AWC-R |
|--------------------------|----------------|-----------|------------|---------|
| Contractor               | Ahmed Abdallah |           | 14-10-2022 |         |
| Contractor QA/QC*        | Ahmed Abu Zeid |           | 14-10-2022 |         |
| GARB**                   | Hussien Fouad  |           | 14-10-2022 |         |
| Employers Representative | A Z            |           | 14/10/22   | A       |

\* Designer  
\*\* Alignment/Bridges: Culvert only



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



Operating Lab: **AL Naby Central Lab**

**PARTICLE SIZE DISTRIBUTION OF SOIL**

|               |              |           |      |         |         |
|---------------|--------------|-----------|------|---------|---------|
| TESTING DATE: | 11/10/2022   | code      |      |         |         |
| LOCATION      | K.P(504+500) | KS 1(010) | ZONE | 504+180 | 505+000 |
| NAME COMPANY  | knouz sina1  |           |      |         |         |

-Gradient test

| <u>-gradation of bulk materials</u> |        |        |        | SAMPLE WEIGHT [g] |        | 25724.00 |         | gm   | table classify |
|-------------------------------------|--------|--------|--------|-------------------|--------|----------|---------|------|----------------|
| sieve size                          | 2      | 1.5    | 1      | 4/3               | 2/1    | 8/3      | # 4     | PASS | soil classify  |
| Mass retained (g)                   | 1236.0 | 1250.0 | 2231.0 | 2050.0            | 1221.0 | 1452.0   | 1357.0  |      | A-1-b          |
| Cumulative Retained (g)             | 1236.0 | 2486.0 | 4717.0 | 6767.0            | 7988.0 | 9440.0   | 10797.0 | PRO  | 2.14           |
| Cumulative Retained %               | 4.8    | 9.7    | 18.3   | 26.3              | 31.1   | 36.7     | 42.0    | WC   | 7.2            |
| Cumulative Passing %                | 95.2   | 90.3   | 81.7   | 73.7              | 68.9   | 63.3     | 58.0    | CBR  | 49.90          |

| <u>-soft material gradation</u> |       |        | WT.OF sample |  | 500.00 |  | gm |
|---------------------------------|-------|--------|--------------|--|--------|--|----|
| sieve size                      | 10    | 40     | 200          |  |        |  |    |
| Dumulative Retained (g)         | 46.70 | 175.50 | 376.00       |  |        |  |    |
| Cumulative Retained %           | 9.34  | 35.10  | 75.20        |  |        |  |    |
| Cumulative Passing %            | 90.66 | 64.90  | 24.80        |  |        |  |    |

| <u>-General gradient</u> |       |       |       |       |       |       |       |       |       |       |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| sieve size(in)           | 2     | 1.5   | 1     | 3/4   | 1/2   | 3/8   | # 4   | # 10  | # 40  | # 200 |
| sieve size(mm)           | 50.0  | 37.5  | 25.0  | 19.0  | 12.5  | 9.5   | 4.75  | 2.00  | 0.425 | 0.075 |
| Cumulative Passing %     | 95.20 | 90.34 | 81.66 | 73.69 | 68.95 | 63.30 | 58.03 | 52.61 | 37.66 | 14.39 |
|                          |       |       |       |       |       |       |       |       |       |       |
|                          |       |       |       |       |       |       |       |       |       |       |

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

Contractor Engineer

Lab Engineer

Consultant Engineer



|   |  |  |   |
|---|--|--|---|
|   | <b>Electric Express Train - HSR</b>                |  |  |
|   | From El Ain El Sokhna City To El Alamein - MATROUH |  |   |
|   | Section - 7 From FOKA TO MARSA MATROUH             |  |   |
|   | From Station 504+000 To Station 568+177            |  |   |

## PROCTOR TEST

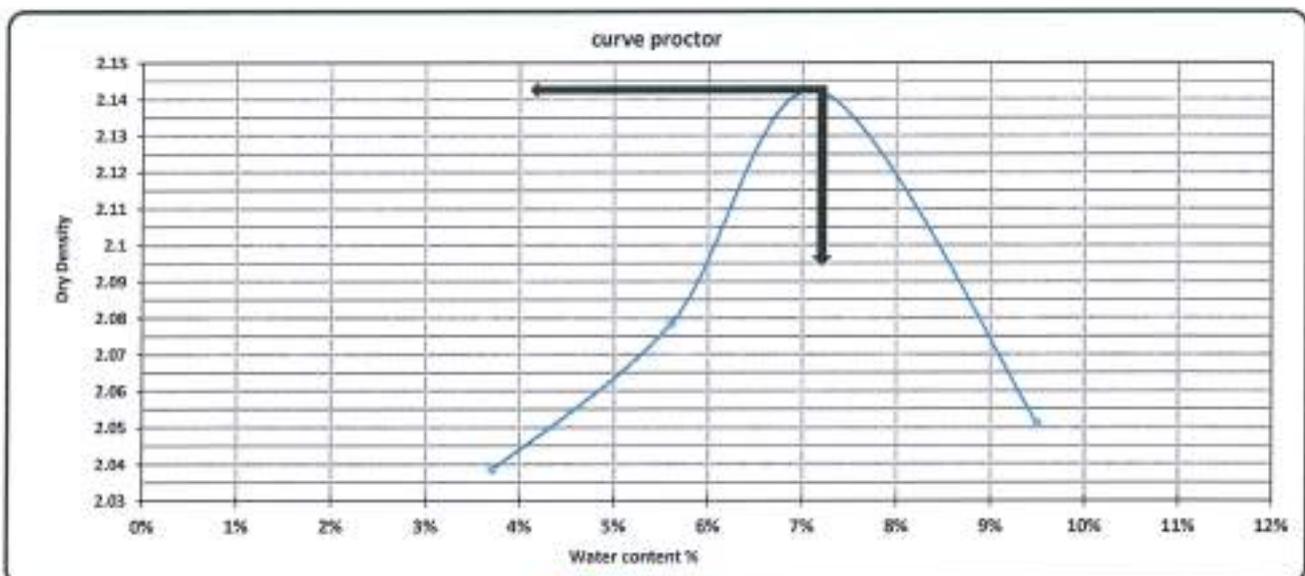
|               |              |           |      |         |         |
|---------------|--------------|-----------|------|---------|---------|
| TESTING DATE: | 12/10/2022   | code      | zone | 504+180 | 505+000 |
| LOCATION      | K.P(504+500) | KS 1(010) |      |         |         |
| NAME COMPANY  | knouz sina1  |           |      |         |         |

|                        |        |
|------------------------|--------|
| Weight of empty mold : | 6070.0 |
| Mold Volume:           | 2013.0 |

|                 |      |
|-----------------|------|
| MAX Dry Density | 2.14 |
| Water content % | 7.2  |

| trial no :            | 1       | 2       | 3       | 4      |  |
|-----------------------|---------|---------|---------|--------|--|
| Wt. Of Mold+ wet soil | 10326.0 | 10485.0 | 10692.0 | 10591  |  |
| WT. WET SOIL          | 4256.0  | 4415.0  | 4623.0  | 4521.0 |  |
| Wt. Density           | 2.114   | 2.195   | 2.296   | 2.246  |  |

| Tare No.               | 11    | 32    | 19    | 33    | 8     | 34    | 18    | 40    |  |  |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| Tare wt.               | 46.1  | 74.4  | 44.4  | 73.6  | 46.8  | 70.2  | 77.7  | 46.4  |  |  |
| Wt. Of wet soil & tare | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 | 150.0 |  |  |
| Wt. Of dry soil & tare | 146.4 | 147.2 | 144.3 | 146.0 | 143.1 | 144.4 | 143.6 | 141.2 |  |  |
| Wt. Of water           | 3.6   | 2.8   | 5.7   | 4.0   | 6.9   | 5.6   | 6.4   | 8.8   |  |  |
| Wt. Of dry soil        | 100.3 | 72.8  | 99.9  | 72.4  | 96.3  | 74.2  | 65.9  | 94.8  |  |  |
| Water content %        | 3.6%  | 3.8%  | 5.7%  | 5.5%  | 7.2%  | 7.2%  | 9.7%  | 9.3%  |  |  |
| AV. Water content %    | 3.7%  |       | 5.6%  |       | 7.2%  |       | 9.5%  |       |  |  |
| Dry Density            | 2.038 |       | 2.079 |       | 2.142 |       | 2.051 |       |  |  |



Contractor Engineer



شركة كنوز  
سيناء  
للخدمات العامة  
والشروعات

Lab Engineer



Electric Express Train  
Central Lab Number 4  
Sec-7-Egypt - Matrouh

Consultant Engineer



المكتب  
الاستشاري الهندسي  
للخدمات الهندسية

California Bearing Ratio TEST

|                |               |           |      |         |         |
|----------------|---------------|-----------|------|---------|---------|
| Testing Date : | 14-10-2022    | Code      | Zone | 504+180 | 505+000 |
| Location :     | K.P (504+500) | KS1 (Ø10) |      |         |         |
| Company Name   | knooz sinnl   |           |      |         |         |

Test Results :-

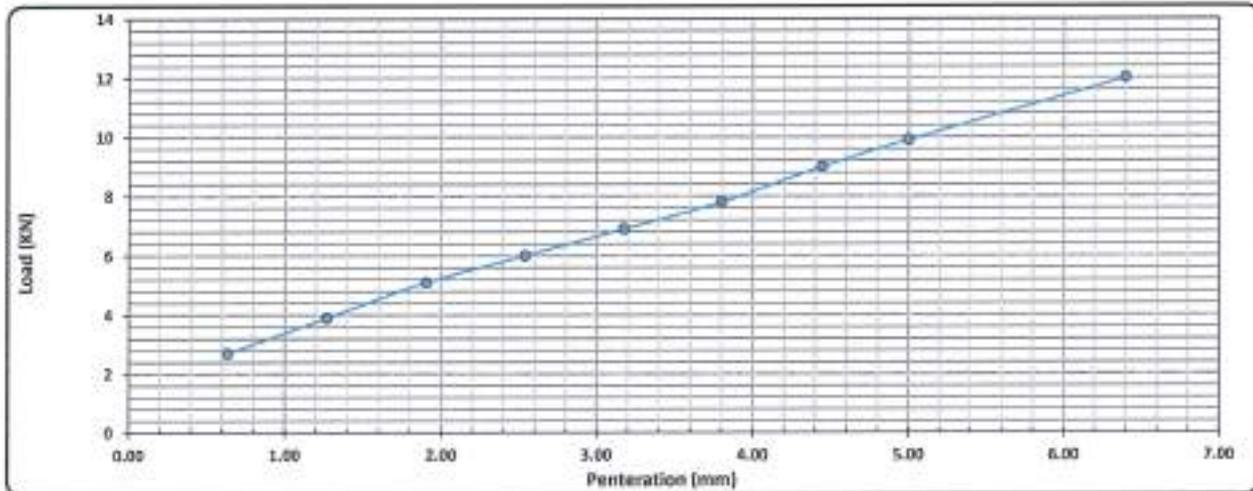
| Compaction % for Mold                |       |
|--------------------------------------|-------|
| Mold No.                             | 3     |
| Mold Vol. (cm <sup>3</sup> )         | 2101  |
| Mold WT. (gm)                        | 5653  |
| Mold WT. + Wet WT. (gm)              | 5827  |
| Wet WT. (gm)                         | 4734  |
| Wet Density (g/cm <sup>3</sup> )     | 2.253 |
| Dry Density (g/cm <sup>3</sup> )     | 2.079 |
| Proctor Density (g/cm <sup>3</sup> ) | 2.140 |
| Compaction %                         | 97    |

| Moisture Ratio After Compacted Mold |      |
|-------------------------------------|------|
| Tare No.                            | 8    |
| Tare WT. (gm)                       | 46.8 |
| Tare WT. + Wet WT. (gm)             | 158  |
| Tare WT. + Dry WT. (gm)             | 142  |
| Water WT. (gm)                      | 8.0  |
| Dry WT. (gm)                        | 95.2 |
| Moisture Content %                  | 8.4  |

| Swelling            |            |
|---------------------|------------|
| Mold No.            | 3          |
| Date                | 14-10-2022 |
| Initial Height (mm) | 1.50       |
| Final Height (mm)   | 1.50       |
| Difference          | 0          |
| Sample Height (mm)  | 119.00     |
| Swelling Ratio %    | 0%         |

Loading Reading :

|                   |      |      |      |      |      |      |      |      |      |
|-------------------|------|------|------|------|------|------|------|------|------|
| Penetration (mm)  | 0.64 | 1.27 | 1.91 | 2.54 | 3.18 | 3.80 | 4.45 | 5.09 | 6.48 |
| Load Reading (kg) | 0.09 | 0.13 | 0.17 | 0.20 | 0.23 | 0.26 | 0.30 | 0.33 | 0.40 |
| Load (KN)         | 2.7  | 3.9  | 5.1  | 6.0  | 6.9  | 7.8  | 9.0  | 9.9  | 12.0 |



Calculations :-

| Penetration (mm) | Load (Kil) | Standard Load (lb) | CBR (%) | Mold - Compaction (%) | Compaction (%) | CBR   |
|------------------|------------|--------------------|---------|-----------------------|----------------|-------|
| 2.50             | 6.00       | 13.4               | 44.9%   | 97                    | 98             | 45.3% |
| 5.00             | 9.90       | 20.0               | 40.4%   |                       |                | 40.9% |

Contractor Engineer

Name :

Sign :



Lab Engineer

Name :

Sign :



Consultant Engineer

Name :

Sign :





قائمة كميات بالمستخلص جارى ( 2 )

مشروع : القطار الكهربائي السريع (العين السخنة -العاصمة الادارية -العلمين -مطروح) قطاع فوكة - مطروح في المسافة من الكم+504 الى الكم 505+000 بطول 0.82 كيلو متر اتجاه مطروح

رقم البند و بيانه : ( 1-1 ) علاوة مسافة النقل 282.5 كم

علاوة مسافة النقل

تنفيذ : شركة كنوز سيناء للمقاولات العامة و التوريدات

3م 0

مقدار العمل السابق :

| الكمية    | بيان بالكميات                                 |
|-----------|---|
| 24,821.00 | الكمية طبقا لقوائم الكميات                    |
| 24,821.00 | اجمال الكميات خلال فترة المستخلص الحالية (3م) |
| 24,821.00 | الاجمالي الكلي (م <sup>3</sup> )              |

مهندس الهيئة العامة للطرق  
الكبرى  
م / إبراهيم كماله العناني

مهندس الإستشاري  
مكتب د/مهاك قنديل  
م / خالد فوزي السيد  
د.المرزوق

مهندس الإستشاري (xyz)  
م / محمد شهاب خليل  
محمد خليل

مهندس الشركة  
م / أحمد عبدالعاطي حامد  
أحمد عبدالعاطي



قائمة الكميات الواردة بالاستخلص جاري (2)

مشروع : القطار الكهربائي السريع (العين السخنة - العاصمة الادارية - العلمين - مطروح) قطاع فوكة - مطروح في المسافة من الكم 504+180 الى الكم 505+000 بطول 0.82 كيلو متر اتجاه مطروح

رقم البند و بيانه : ( 1-1 ) أعمال توريد وتشغيل تربة صالحة للردم ومطابقة للمواصفات طبقا للمفاوضه عن شهر نوفمبر 2022

لتنفيذ : شركة كنوز سيناء للمقاولات العامه والتوريدات

| الكمية            | الابعاد ( متر )   |     | الموقع الكيلومترى |         | بيان الاعمال بالمقاييس |
|-------------------|---|-----|-------------------|---------|------------------------|
|                   | مساحة المقطع  | طول | الى               | من      |                        |
| 3650.147059       | 36.50   | 100 | 504+420           | 504+320 | القطاع الاول           |
| 2920.117647       | 36.50   | 80  | 504+500           | 504+420 | القطاع الثاني          |
| 3650.147059       | 36.50   | 100 | 504+600           | 504+500 | القطاع الثالث          |
| 3650.147059       | 36.50   | 100 | 504+700           | 504+600 | القطاع الرابع          |
| 3650.147059       | 36.50   | 100 | 504+800           | 504+700 | القطاع الخامس          |
| 3650.147059       | 36.50   | 100 | 504+900           | 504+800 | القطاع السادس          |
| 3650.147059       | 36.50   | 100 | 505+000           | 504+900 | القطاع السابع          |
| <b>24,821.000</b> | اجمالي الكميات خلال فترة الاستخلص الحالية (م <sup>3</sup> ) |     |                   |         |                        |
| <b>24,821.000</b> | الاجمالي الكلي (م <sup>3</sup> )                            |     |                   |         |                        |

مهندس الهيئة العامة للطرق  
والمواصلات  
م / ابراهيم كمال كنعاني

مهندس الاستشاري  
مكتب د/خالد قنديل  
م / خالد فوزي السيد

كرا الكرنج

مهندس الاستشاري (xyz)

م / محمد تيمون خليل

محمد خليل

مهندس الشركة

م / أحمد عبدالمعطي حامد

أحمد العاطي



المنطقة الخامسة - ( غرب الدلتا )

السيد المهندس / نائب رئيس الهيئة للتنفيذ والمناطق

تحية طيبة.. وبعد،،

بالإحالة إلى مشروع القطار السريع ( العين السخنة - العاصمة الإدارية - برج العرب - مرسى مطروح )

نتشرف بأن نرفق لسيادتكم طيه المقاييس المعدلة للقطاعات الآتية:

أولا : القطاع السابع (فوكة/مطروح) :

| م | اسم الشركة                                | بداية القطاع<br>( كم ) | نهاية القطاع<br>( كم ) | التكلفة (مليون) |
|---|---|------------------------|------------------------|-----------------|
| 1 | كنوز سيناء للمقاولات<br>العامه والتوريدات | 504+180                | 505+000                | 13,000,000      |

برجاء من سيادتكم التفضل بالاحاطه والتوجيه بالازم

وتفضلوا بقبول فائق الاحترام والتقدير،،

**رئيس الإدارة المركزية**

**المنطقة الخامسة - غرب الدلتا**

**عميد مهندس /**

**" هاني محمد محمود طه "**



**مشروع القطار الكهربائي السريع**  
**المقايمة المعدلة لبيود الاعمال بعد التفاوض بتاريخ 2023/12/18 للقطاع السابع (فوكه - مطروح) - شركة كنوز سيناء - اتجاه مطروح**  
**القطاع من المحطة +180 إلى المحطة 505+000**

| رقم البيد | بيان الأعمال  | الوحدة | الكمية    | المدة  | الاجمالي       |
|-----------|---|--------|-----------|--------|----------------|
| 1         | اصال الرسم<br>اصل المجلد و التويد و نقل التربة مطابقة للمواصفات و تحميلها باستخدام الآلات الترابية بسك لا يزيد عن 50 سم حتى عمق 2 متر و بسك لا يزيد عن 25 سم لاستكمال المنسوب التصميمي لتشكيل الجسر والكتف (سوية تحمل كاليفورنيا لا تقل عن 15%) و رشها بالسيخ الاصطناعي للوصول الى نسبة الرطوبة المطلوبة و السك الجيد بالمراسد الترسول الى نفس كتلة حافة (96% من كتلة الحافة القصوى) و رش الكتلة طبقا للتدابير التصميمية و القطاعات العرضية للتوجيه و الرسومات التنفيذية المتعمدة و التذ بصيغ اشتراك طبقا لاصول الصداقة و مواصفات هيئة العامة للطرق و الكبارى و تعليمات المهندس المشرف. في حالة طلب جهات الاشراف زيادة نسبة التربة عن 96% بحسب زيادة 1 جنية على زيادة نسبة التربة لكل 1%<br>. مسافة التقل حتى 2 كم ويتم احتساب عتلة 1.6 جنية لكل 1 كم و زيادة السعر يشمل قيمة المادة المحمورة |        |           |        |                |
|           | عتلة مسافة التقل 282.6 كم   | 3م     | 24,821.00 | 420.75 | 10,443,435.750 |
|           | عتلة لحصول رسوم الكارثة و الموازين طبقا للائحة الشركة الوطنية   | 3م     | 24,821.00 | 13.00  | 322,673.00     |
|           | سعر في نوفمبر 2022 طبقا لتفاضله   | 3م     | 24,821.00 | 90.00  | 2,233,890.000  |
|           | الاجمالي  |        |           |        | 12,998,988.750 |

(التا عشر ملتان و تسعمائة و تسعة و تسعون الف و تسعمائة و ثمانية و تسعون جنيه و خمسة و سبعون قرشا لا غير )

مدير عام المشروعات

*محمد حسني ابراهيم*

مدير المشروع المالي

م / ابراهيم عبدالله الصولي

مدير مشروع الاستشارات  
 م / خالد محمد السيد  
 م / محمد يحيى السريحي

مدير المظروف المقاول

م / احمد عبدالعالي حامد

يعتمد  
 رئيس الإدارة المركزية  
 منطقة غرب الدقا  
 الاسكندرية - مرمى مطروح  
 عميد مهندس /  
 " هاني محمد محمود طه "

