



**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Resident Engineer  
 Dar Engineering  
 Punjab Agriculture Food and Durg Authority's Science Enclave (PAFDA)

Reference # CED/TFL **36546** (Dr. Qasim Khan)  
 Reference of the request letter # DB-78/DAR/RE/ME/2021/14

Dated: 10-06-2021  
 Dated: 08-06-2021

**Tension Test Report** (Page – 1/1)

Date of Test 21-06-2021  
 Gauge length 2 inches  
 Description MS Steel Strip Tensile Test as per ASTM A36

| Sr. No.                                  | Designation   |           | Size of Strip | X Section Area | Yield load | Breaking Load | Yield Stress | Ultimate Stress | Elongation | % Elongation | Remarks |
|--|---------------|-----------|---------------|----------------|------------|---------------|--------------|-----------------|------------|--------------|---------|
|  |               |           |               |                |            |               |              |                 |            |              |         |
| 1  | MS Steel Pipe | 1"x2"x3mm | 24.00x2.80    | 67.20          | -----      | 2900          | -----        | 423.35          | 0.50       | 25.00        |         |
| 2  |               |           | 24.00x2.80    | 67.20          | -----      | 3000          | -----        | 437.95          | 0.50       | 25.00        |         |
| -  | -             | -         | -             | -              | -          | -             | -            | -               | -          | -            |         |
| -  | -             | -         | -             | -              | -          | -             | -            | -               | -          | -            |         |
| -  | -             | -         | -             | -              | -          | -             | -            | -               | -          | -            |         |
| -  | -             | -         | -             | -              | -          | -             | -            | -               | -          | -            |         |
| <b>Only Two Samples for Tensile Test</b> |               |           |               |                |            |               |              |                 |            |              |         |
| <b>Bend Test</b>                         |               |           |               |                |            |               |              |                 |            |              |         |
|  |               |           |               |                |            |               |              |                 |            |              |         |
|  |               |           |               |                |            |               |              |                 |            |              |         |
|  |               |           |               |                |            |               |              |                 |            |              |         |

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

Note:

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**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
M/S Javid Industrial Company  
Gujranwala

Reference # CED/TFL **36572 (Dr. Qasim Khan)**  
Reference of the request letter # Nil

Dated: 15-06-2021  
Dated: 15-06-2021

**Tension Test Report** (Page – 1/1)

Date of Test 21-06-2021  
Gauge length 2 inches  
Description Iron Sheet Steel Strip Tensile Test

| Sr. No.                                 | Designation | Size of Strip | X Section Area     | Yield load | Breaking Load | Yield Stress | Ultimate Stress | Elongation | % Elongation | Remarks |
|---|-------------|---------------|--------------------|------------|---------------|--------------|-----------------|------------|--------------|---------|
|   | -----       | (mm)          | (mm <sup>2</sup> ) | (kg)       | (kg)          | (MPa)        | (MPa)           | (in)       |              |         |
| 1                                       | Iron Sheet  | 34.00x3.90    | 132.60             | 6000       | 7440          | 443.89       | 550.43          | 0.70       | 35.00        |         |
| -                                       | -           | -             | -                  | -          | -             | -            | -               | -          | -            |         |
| -                                       | -           | -             | -                  | -          | -             | -            | -               | -          | -            |         |
| -                                       | -           | -             | -                  | -          | -             | -            | -               | -          | -            |         |
| -                                       | -           | -             | -                  | -          | -             | -            | -               | -          | -            |         |
| -                                       | -           | -             | -                  | -          | -             | -            | -               | -          | -            |         |
| <b>Only One Sample for Tensile Test</b> |             |               |                    |            |               |              |                 |            |              |         |
|   |             |               |                    |            |               |              |                 |            |              |         |
| <b>Bend Test</b>                        |             |               |                    |            |               |              |                 |            |              |         |
|   |             |               |                    |            |               |              |                 |            |              |         |
|   |             |               |                    |            |               |              |                 |            |              |         |
|   |             |               |                    |            |               |              |                 |            |              |         |

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**Pakistan. Ph: 92-42-99029202**

To,  
M/S ASM Steel Buildings  
Lahore

Reference # CED/TFL **36582** (Dr. Qasim Khan)  
Reference of the request letter # Nil

Dated: 16-06-2021  
Dated: 16-06-2021

**Tension Test Report** (Page – 1/1)

Date of Test 21-06-2021  
Gauge length 2 inches  
Description GI Plate Strip Tensile Test

| Sr. No.                                   | Designation         |      | Size of Strip | X Section Area | Yield load | Breaking Load | Yield Stress | Ultimate Stress | Elongation | % Elongation | Remarks |
|---|---------------------|------|---------------|----------------|------------|---------------|--------------|-----------------|------------|--------------|---------|
|   |                     |      |               |                |            |               |              |                 |            |              |         |
| 1   | GI Plate Sample - 1 | 1.50 | 29.30x1.50    | 43.95          | 1200       | 1520          | 267.85       | 339.28          | 0.50       | 25.00        |         |
| 2   |                     |      | 30.00x1.50    | 45.00          | 1240       | 1560          | 270.32       | 340.08          | 0.60       | 30.00        |         |
| -   | GI Plate Sample - 2 | 1.50 | 29.80x1.50    | 44.70          | 1360       | 1640          | 298.47       | 359.92          | 0.50       | 25.00        |         |
| -   |                     |      | 28.60x1.50    | 42.90          | 1280       | 1560          | 292.70       | 356.73          | 0.40       | 20.00        |         |
| -   | -                   | -    | -             | -              | -          | -             | -            | -               | -          | -            |         |
| -   | -                   | -    | -             | -              | -          | -             | -            | -               | -          | -            |         |
| <b>Only Four Samples for Tensile Test</b> |                     |      |               |                |            |               |              |                 |            |              |         |
| <b>Bend Test</b>                          |                     |      |               |                |            |               |              |                 |            |              |         |
|   |                     |      |               |                |            |               |              |                 |            |              |         |
|   |                     |      |               |                |            |               |              |                 |            |              |         |
|   |                     |      |               |                |            |               |              |                 |            |              |         |

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**Test Floor Laboratory**  
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**University of Engineering and Technology Lahore, 54890**  
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To,  
 Sub Divisional Officer  
 Buildings Sub Division  
 Assembly, Lahore  
 (Re-Construction of PIPAL House A-Block, Lahore)

Reference # CED/TFL **36589** (Dr. Qasim Khan)  
 Reference of the request letter # 442

Dated: 18-06-2021  
 Dated: 10-06-2021

**Tension Test Report** (Page -1/1)

Date of Test 21-06-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No.   | Weight<br>(lbs/ft) | Diameter/<br>Size<br>(inch) |        | Area<br>(in <sup>2</sup> ) |        | Yield load<br>(kg) | Breaking<br>Load<br>(kg) | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation<br>(inch) | % Elongation | Remarks |
|---|--------------------|-----------------------------|--------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
|   |                    | Nominal                     | Actual | Nominal                    | Actual |                    |                          | Nominal               | Actual | Nominal                  | Actual |                      |              |         |
| 1   | 0.375              | 3/8                         | 0.375  | 0.11                       | 0.110  | 3200               | 4600                     | 64200                 | 63940  | 92200                    | 92000  | 1.30                 | 16.3         |         |
| -   | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -   | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -   | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -   | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -   | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| <b>Note: only one sample for tensile and one sample for bend test</b> |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
| Bend Test   |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
| 3/8" Dia Bar Bend Test Through 180° is Satisfactory                   |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
|   |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
 Sub Divisional Officer  
 Buildings Sub Division  
 Assembly, Lahore  
 (Construction of MPA Hostel, Lahore (Phase-II) Group No. 01)

Reference # CED/TFL **36590** (Dr. Qasim Khan)  
 Reference of the request letter # 416

Dated: 18-06-2021  
 Dated: 03-06-2021

**Tension Test Report** (Page -1/1)

Date of Test 21-06-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No.  | Weight<br>(lbs/ft) | Diameter/<br>Size<br>(inch) |        | Area<br>(in <sup>2</sup> ) |        | Yield load<br>(kg) | Breaking<br>Load<br>(kg) | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation<br>(inch) | % Elongation | Remarks |
|--|--------------------|-----------------------------|--------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
|  |                    | Nominal                     | Actual | Nominal                    | Actual |                    |                          | Nominal               | Actual | Nominal                  | Actual |                      |              |         |
| 1  | 0.365              | 3/8                         | 0.370  | 0.11                       | 0.107  | 3300               | 4600                     | 66200                 | 67760  | 92200                    | 94500  | 1.30                 | 16.3         |         |
| 2  | 0.375              | 3/8                         | 0.374  | 0.11                       | 0.110  | 3200               | 4600                     | 64200                 | 64060  | 92200                    | 92100  | 1.50                 | 18.8         |         |
| -  | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -  | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -  | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -  | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| <b>Note: only two samples for tensile and one sample for bend test</b> |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
| Bend Test  |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
| 3/8" Dia Bar Bend Test Through 180° is Satisfactory                    |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
|  |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |

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To,  
M/S Building Standards  
Lahore  
(Residential Building at DHA Lahore)

Reference # CED/TFL **36592** (Dr. Qasim Khan)  
Reference of the request letter # GT/LTR/210618-060

Dated: 18-06-2021  
Dated: 10-06-2021

**Tension Test Report** (Page -1/1)

Date of Test 21-06-2021  
Gauge length 8 inches  
Description Deformed Steel Bar Tensile Test as per ASTM-A615

| Sr. No.                                       | Weight<br>(lbs/ft) | Diameter/<br>Size<br>(inch) |        | Area<br>(in <sup>2</sup> ) |        | Yield load<br>(kg) | Breaking<br>Load<br>(kg) | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation<br>(inch) | % Elongation | Remarks |
|---|--------------------|-----------------------------|--------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
|   |                    | Nominal                     | Actual | Nominal                    | Actual |                    |                          | Nominal               | Actual | Nominal                  | Actual |                      |              |         |
| 1   | 0.382              | 10                          | 9.61   | 0.12                       | 0.112  | 3500               | 4600                     | 64301                 | 68660  | 84510                    | 90300  | 0.80                 | 10.0         |         |
| -   | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -   | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -   | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -   | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -   | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| <b>Note: only one sample for tensile test</b> |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
| Bend Test                                     |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
|   |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
|   |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
|   |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |

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To,  
 Project Incharge  
 Marwat Construction Company  
 Construction of Coling Tower at Ravi Chemical Complex

Reference # CED/TFL **36593** (Dr. Qasim Khan)  
 Reference of the request letter # Nil

Dated: 18-06-2021  
 Dated: 07-06-2021

**Tension Test Report** (Page -1/1)

Date of Test 21-06-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No.  | Weight<br>(lbs/ft) | Diameter/<br>Size<br>(inch) |        | Area<br>(in <sup>2</sup> ) |        | Yield load<br>(kg) | Breaking<br>Load<br>(kg) | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation<br>(inch) | % Elongation | Remarks |
|--|--------------------|-----------------------------|--------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
|  |                    | Nominal                     | Actual | Nominal                    | Actual |                    |                          | Nominal               | Actual | Nominal                  | Actual |                      |              |         |
| 1  | 0.381              | 3/8                         | 0.378  | 0.11                       | 0.112  | 3200               | 4600                     | 64200                 | 62970  | 92200                    | 90600  | 1.30                 | 16.3         |         |
| 2  | 0.380              | 3/8                         | 0.377  | 0.11                       | 0.112  | 3600               | 4800                     | 72200                 | 71110  | 96200                    | 94900  | 1.20                 | 15.0         |         |
| -  | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -  | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -  | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -  | -                  | -                           | -      | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| <b>Note: only two samples for tensile and one sample for bend test</b> |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
| Bend Test  |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
| 3/8" Dia Bar Bend Test Through 180° is Satisfactory                    |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
|  |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
|  |                    |                             |        |                            |        |                    |                          |                       |        |                          |        |                      |              |         |

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To,  
 Resident Engineer  
 Pillar & Sons  
 Rumanza Golf & Country Club, DHA Multan

Reference # CED/TFL **36594** (Dr. Qasim Khan)  
 Reference of the request letter # P&S/OTH/GEN/00027

Dated: 18-06-2021  
 Dated: 16-06-2021

**Tension Test Report** (Page -1/1)

Date of Test 21-06-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No.  | Weight<br>(lbs/ft) | Diameter/<br>Size |                  | Area<br>(in <sup>2</sup> ) |        | Yield load<br>(kg) | Breaking<br>Load<br>(kg) | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation<br>(inch) | % Elongation | Remarks |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
|  |                    | Nominal<br>(#)    | Actual<br>(inch) | Nominal                    | Actual |                    |                          | Nominal               | Actual | Nominal                  | Actual |                      |              |         |
| 1  | 4.257              | 10                | 1.262            | 1.27                       | 1.251  | 48200              | 62000                    | 83700                 | 84900  | 107600                   | 109200 | 1.40                 | 17.5         |         |
| 2  | 4.253              | 10                | 1.262            | 1.27                       | 1.250  | 48000              | 61600                    | 83400                 | 84620  | 107000                   | 108600 | 1.40                 | 17.5         |         |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |         |
| <b>Note: only two samples for tensile and one sample for bend test</b> |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
| Bend Test  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
| #10 Bar Bend Test Through 180° is Satisfactory                         |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
|  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |         |
|  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |         |

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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Resident Engineer  
 Bahria Town Private Limited  
 Storm Water Drain at Block 'K' 'L' & 'M' LCO Phase II Bahria Orchard, Lahore

Reference # CED/TFL **36595** (Dr. Qasim Khan)  
 Reference of the request letter # QA/QC-Steel-2356

Dated: 18-06-2021  
 Dated: 15-06-2021

**Tension Test Report** (Page -1/2)

Date of Test 21-06-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No.  | Weight<br>(lbs/ft) | Diameter/<br>Size |                  | Area<br>(in <sup>2</sup> ) |        | Yield load<br>(kg) | Breaking<br>Load<br>(kg) | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation<br>(inch) | % Elongation | Remarks     |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|-------------|
|  |                    | Nominal<br>(#)    | Actual<br>(inch) | Nominal                    | Actual |                    |                          | Nominal               | Actual | Nominal                  | Actual |                      |              |             |
| 1  | 0.367              | 3                 | 0.370            | 0.11                       | 0.108  | 3200               | 4700                     | 64200                 | 65440  | 94200                    | 96200  | 1.00                 | 12.5         | FF<br>Steel |
| 2  | 0.367              | 3                 | 0.370            | 0.11                       | 0.108  | 3300               | 4600                     | 66200                 | 67500  | 92200                    | 94100  | 1.10                 | 13.8         |             |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |             |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |             |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |             |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |             |
| <b>Note: only two samples for tensile and one sample for bend test</b> |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |             |
| Bend Test  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |             |
| #3 Bar Bend Test Through 180° is Satisfactory                          |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |             |
|  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |             |
|  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |             |

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

Note:

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**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Resident Engineer  
 NESPAK  
 Rural Accessibility Programme Phase-II 2020-21 Highway Circle No. 01, Faisalabad (Road  
 Construction Division, Faisalabad)

Reference # CED/TFL **36596** (Dr. Qasim Khan)  
 Reference of the request letter # 3872/RAP/103/AR/01/99

Dated: 18-06-2021  
 Dated: 08-06-2021

**Tension Test Report** (Page -1/1)

Date of Test 21-06-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No.  | Weight<br>(lbs/ft) | Diameter/<br>Size |                  | Area<br>(in <sup>2</sup> ) |        | Yield load<br>(kg) | Breaking<br>Load<br>(kg) | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation<br>(inch) | % Elongation | Remarks          |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|------------------|
|  |                    | Nominal<br>(#)    | Actual<br>(inch) | Nominal                    | Actual |                    |                          | Nominal               | Actual | Nominal                  | Actual |                      |              |                  |
| 1  | 0.399              | 3                 | 0.387            | 0.11                       | 0.117  | 2800               | 3500                     | 56200                 | 52600  | 70200                    | 65800  | 1.70                 | 21.3         | Ittefaq<br>Steel |
| 2  | 0.396              | 3                 | 0.385            | 0.11                       | 0.116  | 2700               | 3500                     | 54100                 | 51130  | 70200                    | 66300  | 1.70                 | 21.3         |                  |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                  |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                  |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                  |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                  |
| <b>Note: only two samples for tensile and one sample for bend test</b> |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                  |
| Bend Test  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                  |
| #3 Bar Bend Test Through 180° is Satisfactory                          |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                  |
|  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                  |

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Project Director-IV  
 Lahore Development Authority  
 Construction of Underpass at Gulab Devi Hospital and Additional Lane on Lahore Bridge

Reference # CED/TFL **36598** (Dr. Qasim Khan)  
 Reference of the request letter # PD-IV/LDA/14

Dated: 18-06-2021  
 Dated: 17-06-2021

**Tension Test Report** (Page -1/1)

Date of Test 21-06-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No.  | Weight<br>(lbs/ft) | Diameter/<br>Size |                  | Area<br>(in <sup>2</sup> ) |        | Yield load<br>(kg) | Breaking<br>Load<br>(kg) | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation<br>(inch) | % Elongation | Remarks         |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|-----------------|
|  |                    | Nominal<br>(#)    | Actual<br>(inch) | Nominal                    | Actual |                    |                          | Nominal               | Actual | Nominal                  | Actual |                      |              |                 |
| 1  | 4.289              | 10                | 1.267            | 1.27                       | 1.261  | 42200              | 56800                    | 73300                 | 73780  | 98600                    | 99300  | 1.40                 | 17.5         | Kamran<br>Steel |
| 2  | 4.294              | 10                | 1.268            | 1.27                       | 1.262  | 42000              | 56600                    | 72900                 | 73340  | 98300                    | 98900  | 1.50                 | 18.8         |                 |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                 |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                 |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                 |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                 |
| <b>Note: only two samples for tensile and one sample for bend test</b> |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                 |
| Bend Test  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                 |
| #10 Bar Bend Test Through 180° is Satisfactory                         |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                 |
|  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                 |
|  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                 |

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Manager (Projects)  
 Ittefaq Construction Services  
 Construction of Commercial Plaza (42B, 43B, 44B, Sector C and 19A Main Boulevard Bahria  
 Town Lahore

Reference # CED/TFL **36599** (Dr. Qasim Khan)  
 Reference of the request letter # ICS/H.O/B.T.P/53

Dated: 18-06-2021  
 Dated: 15-06-2021

**Tension Test Report** (Page -1/1)

Date of Test 21-06-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No.  | Weight<br>(lbs/ft) | Diameter/<br>Size |                  | Area<br>(in <sup>2</sup> ) |        | Yield load<br>(kg) | Breaking<br>Load<br>(kg) | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation<br>(inch) | % Elongation | Remarks       |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------------|
|  |                    | Nominal<br>(#)    | Actual<br>(inch) | Nominal                    | Actual |                    |                          | Nominal               | Actual | Nominal                  | Actual |                      |              |               |
| 1  | 0.378              | 3                 | 0.376            | 0.11                       | 0.111  | 3400               | 4500                     | 68200                 | 67500  | 90200                    | 89400  | 1.10                 | 13.8         | Afco<br>Steel |
| 2  | 0.379              | 3                 | 0.377            | 0.11                       | 0.112  | 3400               | 4500                     | 68200                 | 67190  | 90200                    | 89000  | 1.10                 | 13.8         |               |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |               |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |               |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |               |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |               |
| <b>Note: only two samples for tensile and one sample for bend test</b> |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |               |
| Bend Test  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |               |
| #3 Bar Bend Test Through 180° is Satisfactory                          |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |               |
|  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |               |

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**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Resident Engineer  
 NESPAK  
 Rural Accessibility Programme Phase-II 2020-21 Highway Circle No. 01, Faisalabad (Highway  
 Division, Chiniot)

Reference # CED/TFL **36601** (Dr. Qasim Khan)  
 Reference of the request letter # 3872/RAP/103/AR/01/108

Dated: 18-06-2021  
 Dated: 16-06-2021

**Tension Test Report** (Page -1/2)

Date of Test 21-06-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No.  | Weight<br>(lbs/ft) | Diameter/<br>Size |                  | Area<br>(in <sup>2</sup> ) |        | Yield load<br>(kg) | Breaking<br>Load<br>(kg) | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation<br>(inch) | % Elongation | Remarks          |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|------------------|
|  |                    | Nominal<br>(#)    | Actual<br>(inch) | Nominal                    | Actual |                    |                          | Nominal               | Actual | Nominal                  | Actual |                      |              |                  |
| 1  | 0.362              | 3                 | 0.368            | 0.11                       | 0.107  | 2600               | 3700                     | 52100                 | 53800  | 74200                    | 76600  | 1.60                 | 20.0         | Ittefaq<br>Steel |
| 2  | 0.361              | 3                 | 0.368            | 0.11                       | 0.106  | 2700               | 3900                     | 54100                 | 56070  | 78200                    | 81000  | 1.50                 | 18.8         |                  |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                  |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                  |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                  |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                  |
| <b>Note: only two samples for tensile and one sample for bend test</b> |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                  |
| Bend Test  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                  |
| #3 Bar Bend Test Through 180° is Satisfactory                          |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                  |
|  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                  |

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**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Resident Engineer  
 NESPAK  
 Rural Accessibility Programme Phase-II 2020-21 Highway Circle No. 01 & 02, Faisalabad  
 (Highway Division, Toba Tek Singh)

Reference # CED/TFL **36601** (Dr. Qasim Khan)  
 Reference of the request letter # 3872/RAP/103/AR/01/89

Dated: 18-06-2021  
 Dated: 01-06-2021

**Tension Test Report** (Page -2/2)

Date of Test 21-06-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No.  | Weight<br>(lbs/ft) | Diameter/<br>Size |                  | Area<br>(in <sup>2</sup> ) |        | Yield load<br>(kg) | Breaking<br>Load<br>(kg) | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation<br>(inch) | % Elongation | Remarks          |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|------------------|
|  |                    | Nominal<br>(#)    | Actual<br>(inch) | Nominal                    | Actual |                    |                          | Nominal               | Actual | Nominal                  | Actual |                      |              |                  |
| 1  | 0.403              | 3                 | 0.388            | 0.11                       | 0.119  | 2900               | 4300                     | 58200                 | 53930  | 86200                    | 80000  | 1.40                 | 17.5         | Ittefaq<br>Steel |
| 2  | 0.359              | 3                 | 0.367            | 0.11                       | 0.106  | 2700               | 3900                     | 54100                 | 56370  | 78200                    | 81500  | 1.50                 | 18.8         |                  |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                  |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                  |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                  |
| -  | -                  | -                 | -                | -                          | -      | -                  | -                        | -                     | -      | -                        | -      | -                    | -            |                  |
| <b>Note: only two samples for tensile and one sample for bend test</b> |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                  |
| Bend Test  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                  |
| #3 Bar Bend Test Through 180° is Satisfactory                          |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                  |
|  |                    |                   |                  |                            |        |                    |                          |                       |        |                          |        |                      |              |                  |

**I/C Testing Laboratoires**  
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**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

**I/C Testing Laboratories**  
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