

Client Reference No.: 4084/103/LDP/GUL(S-1)04/77

Dated: 07-07-2025

SOM Lab Ref: CED/SOM/1591

Dated: 31-07-2025

Test Type: Load Test of RPC Manhole Cover

Test Standard: Non-standard test was performed as per requirement of the client [Application of load at the center of the Manhole Cover through circular thick steel plate of 15 Inch diameter]

Test Performed by: Dr. Asad Ali Gillani

Tanvir Naqvi

Resident Engineer

NESPAK (Pvt.) Ltd

(Scheme # 1 Rehb/Improvement of Street P.C.C UC -118,119,120,122,123,124,172,173, Gulberg Zone Lahore)

This is with reference to your above-mentioned letter and SOM receipt No.15591 dated: 07-07-2025. The sample of RPC Manhole Cover submitted in the Laboratory has been tested and the result is provided below.

Load Test Result

| Diameter of Manhole Cover | Average Thickness of Manhole Cover | Maximum Load | Observations/Remarks |
|---------------------------|------------------------------------|--------------|-------------------------------------|
| 640 mm | 61.5 mm | 10300 kg | The sample was cracked at this load |

Minhas Construction
Contractor Faisal Hill Taxila.(ETP Tank)

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: MCC/CFL/025
SOM Lab Ref: CED/SOM/1588 (Page-1/1)
Test: Tension Test & Bend Test
Sample Type: Deformed Bar

Dated: 31-07-2025
Dated: 31-07-2025
Test Specification: ASTM-A 615
Gauge Length: 200 mm

| S.No. | Weight | Dia. | | Area | | Yield Load | Ultimate Load | Yield Stress | | Ult. Stress | | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
| | | Nominal | Calculated | Nominal | Calculated | | | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) | | | | |
| | kg/m | mm | mm | mm ² | mm ² | kN | kN | MPa | MPa | MPa | MPa | mm | mm | % | |
| 1 | 2.206 | 19 | 18.92 | 284 | 281 | 136.20 | 188.20 | 480 | 485 | 664 | 670 | 35.0 | 200 | 17.5 | |
| 2 | 2.205 | 19 | 18.91 | 284 | 281 | 136.00 | 188.50 | 480 | 485 | 665 | 672 | 32.5 | 200 | 16.3 | |
| 3 | 0.994 | 13 | 12.70 | 133 | 127 | 62.00 | 88.70 | 467 | 490 | 668 | 701 | 35.0 | 200 | 17.5 | |
| 4 | 0.992 | 13 | 12.69 | 133 | 126 | 61.50 | 88.00 | 463 | 487 | 663 | 697 | 32.5 | 200 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|------|--|---|
| 19mm | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Six Samples Received and Tested |
| 13mm | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Muhammad Sulaman Basharat
 Site Civil Engineer AAA Partnership Pvt. Ltd.(JDW Tower Lahore)

Test Performed By: Dr. /Engr. Asad Ali Gillani

Client Reference: AAA/SO/MSB/117/2025

SOM Lab

Ref: 1589 (Page-1/1)

Dated: 31-07-2025

Dated: 31-07-2025

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type: Deformed Bar

| S.No. | Weight | Dia. | | Area | | Yield Load | Ultimate Load | Yield Stress | | Ult. Stress | | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
| | | Nominal | Calculated | Nominal | Calculated | | | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) | | | | |
| | lb/ft | # | in | in ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 1.457 | 6 | 0.738 | 0.44 | 0.428 | 14.90 | 18.83 | 74700 | 76800 | 94370 | 97020 | 1.50 | 8.0 | 18.8 | |
| 2 | 1.495 | 6 | 0.748 | 0.44 | 0.439 | 15.57 | 19.37 | 78020 | 78200 | 97080 | 97300 | 1.30 | 8.0 | 16.3 | |
| 3 | 0.648 | 4 | 0.492 | 0.20 | 0.190 | 7.16 | 8.77 | 78910 | 83070 | 96670 | 101760 | 1.30 | 8.0 | 16.3 | |
| 4 | 0.650 | 4 | 0.493 | 0.20 | 0.191 | 7.08 | 8.74 | 78130 | 81810 | 96340 | 100870 | 1.20 | 8.0 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|--|---|
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Three Samples Received and Tested |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Engineer Muhammad Irfan

Test Performed By:

Dr. /Engr.

Asad Ali Gillani

Dy Dir Infra. DHA Gujranwala.(Swapping Over Of MDF Land with DHA Gwa)

Client Reference: 111/DD/Infra/Lab/MDF/29

SOM Lab

Ref:

1590 (Page-1/2)

Dated: 28-07-2025

Dated:

31-07-2025

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar

| S.No. | Weight | Dia. | | Area | | Yield Load | Ultimate Load | Yield Stress | | Ult. Stress | | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
| | | Nominal | Calculated | Nominal | Calculated | | | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) | | | | |
| | lb/ft | # | in | in ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 1.495 | 6 | 0.748 | 0.44 | 0.439 | 15.57 | 19.11 | 78020 | 78200 | 95800 | 96020 | 1.30 | 8.0 | 16.3 | |
| 2 | 1.494 | 6 | 0.748 | 0.44 | 0.439 | 15.21 | 18.83 | 76240 | 76410 | 94370 | 94590 | 1.20 | 8.0 | 15.0 | |
| 3 | 0.660 | 4 | 0.497 | 0.20 | 0.194 | 6.47 | 8.21 | 71380 | 73590 | 90490 | 93290 | 1.10 | 8.0 | 13.8 | |
| 4 | 0.661 | 4 | 0.497 | 0.20 | 0.194 | 6.57 | 8.23 | 72510 | 74750 | 90720 | 93520 | 1.00 | 8.0 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|--|---|
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Six Samples Received and Tested |
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Engineer Muhammad Irfan
Dy Dir Infra. DHA Gujranwala.(Const Of Main Boulevard)

Test Performed By: Dr. /Engr. Asad Ali Gillani

Client Reference: 111/DD/Infra/Lab/04

SOM Lab

Ref: 1590 (Page-2/2)

Dated: 30-07-2025

Dated: 31-07-2025

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type: Deformed Bar

| S.No. | Weight | Dia. | | Area | | Yield Load | Ultimate Load | Yield Stress | | Ult. Stress | | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
| | | Nominal | Calculated | Nominal | Calculated | | | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) | | | | |
| | lb/ft | # | in | in ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 0.665 | 4 | 0.498 | 0.20 | 0.195 | 6.95 | 8.84 | 76660 | 78630 | 97460 | 99960 | 1.20 | 8.0 | 15.0 | |
| 2 | 0.665 | 4 | 0.498 | 0.20 | 0.195 | 6.93 | 8.97 | 76440 | 78400 | 98920 | 101460 | 1.10 | 8.0 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|--|---|
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Three Samples Received and Tested |
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| | | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk