Client Reference No.: UG/II/Q.A/Q.C/2511 **Dated:** 15-07-2025

SOM Lab Ref: CED/SOM/1505 **Dated:** 15-07-2025

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

Col ® M. Ameen

Resident Engineer

General Manager (INFRA)

Union Developers (Pvt) Ltd. Lahore.

This is with reference to your above-mentioned letter and SOM receipt No.1505 dated: 15-07-2025. The samples of RPC Manhole Cover submitted in the Laboratory has been tested and the result is provided below.

Load Test Result

Sr. No	Diameter of Manhole Cover	Average Thickness of Manhole Cover	Maximum Load	Observations/Remarks
1	640 mm	70.0 mm	16000 kg	The sample was cracked at this load
2	635 mm	75.3 mm	13600 Kg	The sample was cracked at this load

Witnessed By: Hafeez

AJ Contractors **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani

Lahore.[Project Engro Enfra Share Site ID: 44319 (EC1-FAS-09347)]

Client Reference: AJ Contractor/Steel/Engro/26 **Dated:** 10-07-2025

SOM Lab Ref: CED/SOM/1502 (Page-1/1) **Dated:** 15-07-2025

Test: Tension Test & Bend Test **Test Specification:** ASTM-A 615

Sample Type: Deformed Bar **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	2.212	16	18.95	201	282	140.70	189.00	700	499	940	671	30.0	200	15.0	
2	0.977	12	12.59	113	124	60.70	90.70	537	488	802	729	30.0	200	15.0	
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BEND TEST:

--	No Bend test performed

Note:-

Only Two Samples Received and Tested

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

HABIBULLAH BHUTTO **Test Performed By:** **Dr. /Engr.** Nauman Khurram

BWRDSP Consultants.Zhob(Balochistan Water Resources Development Sector Project)(ICB-01)

Client Reference: 4078/061/HAB/01/CB-01/2549 **Dated:** 09-07-2025

SOM Lab Ref: CED/SOM/1503(Page-1/3) **Dated:** 15-07-2025

Test: Tension Test & Bend Test **Test Specification:** ASTM-A 615

Sample Type: Deformed Bar (Hunza Steel) **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	0.869	13	11.89	133	111	55.70	75.70	420	502	570	682	37.5	200	18.8	
2	0.863	13	11.83	133	110	54.70	74.50	412	498	561	678	37.5	200	18.8	
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BEND TEST:

13mm	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Three Samples Received and Tested

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

HABIBULLAH BHUTTO **Test Performed By:** **Dr. /Engr.** Nauman Khurram

BWRDSP Consultants.Zhob(Balochistan Water Resources Development Sector Project)(ICB-01)

Client Reference: 4078/061/HAB/01/CB-01/2519 **Dated:** 27-06-2025

SOM Lab Ref: CED/SOM/1503(Page-2/3) **Dated:** 15-07-2025

Test: Tension Test & Bend Test **Test Specification:** ASTM-A 615

Sample Type: Deformed Bar (Al-Moiz Steel) **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	2.180	19	18.81	284	278	124.50	184.00	439	448	649	662	42.5	200	21.3	
2	2.196	19	18.87	284	280	124.00	184.00	437	444	649	658	45.0	200	22.5	
3	0.866	13	11.85	133	110	55.20	74.50	416	501	561	676	35.0	200	17.5	
4	0.863	13	11.83	133	110	54.70	74.70	412	498	563	680	37.5	200	18.8	
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BEND TEST:

19mm	Sample bend through 180 degrees Satisfactorily without any crack
13mm	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Six Samples Received and Tested

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

HABIBULLAH BHUTTO **Test Performed By:** **Dr. /Engr.** Nauman Khurram

BWRDSP Consultants.Zhob(Balochistan Water Resources Development Sector Project)(ICB-01)

Client Reference: 4078/061/HAB/01/CB-01/2542 **Dated:** 04-07-2025

SOM Lab Ref: CED/SOM/1503(Page-3/3) **Dated:** 15-07-2025

Test: Tension Test & Bend Test **Test Specification:** ASTM-A 615

Sample Type: Deformed Bar (Hunza Steel) **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	3.891	25	25.13	491	496	233.00	312.70	475	470	637	631	45.0	200	22.5	
2	3.909	25	25.18	491	498	230.20	313.50	469	463	639	630	42.5	200	21.3	
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BEND TEST:

25mm	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Three Samples Received and Tested

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

Hafiz Saqib Hussain

Lahore.(Old Building to Use New Building)

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

Client Reference: Nil

Dated: 15-07-2025

SOM Lab Ref: 1504 (Page-1/1)

Dated: 15-07-2025

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	0.687	4	0.507	0.20	0.202	4.30	6.32	47440	46970	69700	69010	2.10	8.0	26.3	*
2	0.642	4	0.491	0.20	0.189	4.08	5.88	44970	47580	64860	68640	2.00	8.0	25.0	
3	0.660	4	0.497	0.20	0.194	4.23	6.14	46650	48100	67670	69770	2.20	8.0	27.5	
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BEND TEST:

# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Four Samples Received and Tested

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

Engr. Abdullah **Test Performed By:** **Dr. /Engr.** Nauman Khurram

P & C Engineer Ittefaq Building Solution Pvt Ltd.(AM International, Raiwind Road Lahore)

Client Reference: Nil **SOM Lab Ref:** 1506 (Page-1/1)

Dated: 15-07-2025 **Dated:** 15-07-2025

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615

Gauge Length: 8 inch **Sample Type:** Deformed Bar (Kamran Steel)

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	2.641	8	0.994	0.79	0.776	24.72	34.40	69010	70260	96050	97780	1.20	8.0	15.0	
2	1.480	6	0.744	0.44	0.435	12.39	18.17	62080	62800	91050	92100	1.60	8.0	20.0	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack
# 6	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Four Samples Received and Tested

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

Kamran Khan **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani

Procurement Manager Q Links Construction Lahore.(Const Of Q-High Street Lhr)

Client Reference: July-LTR-0022-5 **SOM Lab Ref:** 1507 (Page-1/1)

Dated: 15-07-2025 **Dated:** 15-07-2025

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	2.564	8	0.980	0.79	0.754	22.48	36.87	62750	65750	102930	107850	1.30	8.0	16.3	
2	1.489	6	0.747	0.44	0.438	13.56	21.02	67960	68270	105360	105840	1.40	8.0	17.5	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack
# 6	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Four Samples Received and Tested

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

Resident Engineer **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani

Dynamic Engineering Consultants.(Lahore Garrison Sports Complex-Multi Purpose Hall and Squash Complex)

SOM Lab

Client Reference: CANTT/UET/MPH/T-04 **Ref:** 1508 (Page-1/1)

Dated: 15-07-2025 **Dated:** 15-07-2025

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615

Gauge Length: 8 inch **Sample Type:** Deformed Bar (Sheikhoo Steel)

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	1.618	6	0.778	0.44	0.475	16.43	22.09	82370	76300	110720	102570	1.00	8.0	12.5	*
2	1.618	6	0.778	0.44	0.475	16.26	22.19	81500	75490	111230	103040	1.20	8.0	15.0	
3	0.587	4	0.469	0.20	0.173	6.70	8.26	73850	85380	91050	105260	1.10	8.0	13.8	
4	0.588	4	0.469	0.20	0.173	6.75	8.31	74420	86030	91610	105910	1.20	8.0	15.0	
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack
# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Six Samples Received and Tested

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

Engr Shahzad Khurram Khan **Test Performed By:** **Dr. /Engr.** Nauman Khurram

CRE Osmani & Compny AIIC,Fsd.(Const Of 2 x Lift Station and Roads Lane-24 at AIIC Near Sahianwala Interchange)

Client Reference: CRE/AIIC/AIIC-014/Lab/1129 **SOM Lab Ref:** 1509 (Page-1/1)

Dated: 11-07-2025 **Dated:** 15-07-2025

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615

Gauge Length: 8 inch **Sample Type:** Deformed Bar (kamran Steel)

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	1.049	5	0.626	0.31	0.308	9.81	12.69	69770	70220	90290	90880	1.30	8.0	16.3	*
2	1.043	5	0.625	0.31	0.307	10.24	13.76	72890	73600	97910	98860	1.30	8.0	16.3	
3	0.656	4	0.496	0.20	0.193	6.32	8.77	69700	72220	96670	100180	1.20	8.0	15.0	
4	0.661	4	0.497	0.20	0.194	6.57	9.19	72510	74750	101390	104530	1.20	8.0	15.0	
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BEND TEST:

# 5	Sample bend through 180 degrees Satisfactorily without any crack
# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Six Samples Received and Tested

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