



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

Construction of Bypass from Royal Hostel (N-5) to Sarwar Chowk via Ada Mai Wali Masjid, Length = 13.70 km. (Phase-II) Dection from Kachi Pakki Road to N-5 (Royal Hotel) Length 3.93 km Including Construction of Flyover Bridge over Railway Track, LBDC and N-5 in District Sahiwal.

Reference # CED/TFL **3448** (Dr. M Rizwan Riaz)

Dated: 13-06-2023

Reference of the request letter # 4267/Sahiwal/ADP/Flyover/JQ/6 2

Dated: 07-06-2023

Tension Test Report (Page -1/3)

Date of Test 16-06-2023

Gauge length 640 mm

Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield strength clause (6.3)		Breaking strength clause (6.2)		Young's Modulus of Elasticity "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	12.70 (1/2")	775.0	783.0	17900	175.60	19300	189.33	199	>3.50	B1
2	12.70 (1/2")	775.0	783.0	17800	174.62	19500	191.30	198	>3.50	B5
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only two samples for Test										

Note:

1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM – A416a
2. Load versus percentage strain graphs are attached

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
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Test Floor Laboratory
Department of Civil Engineering
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To,

Resident Engineer
NESPAK

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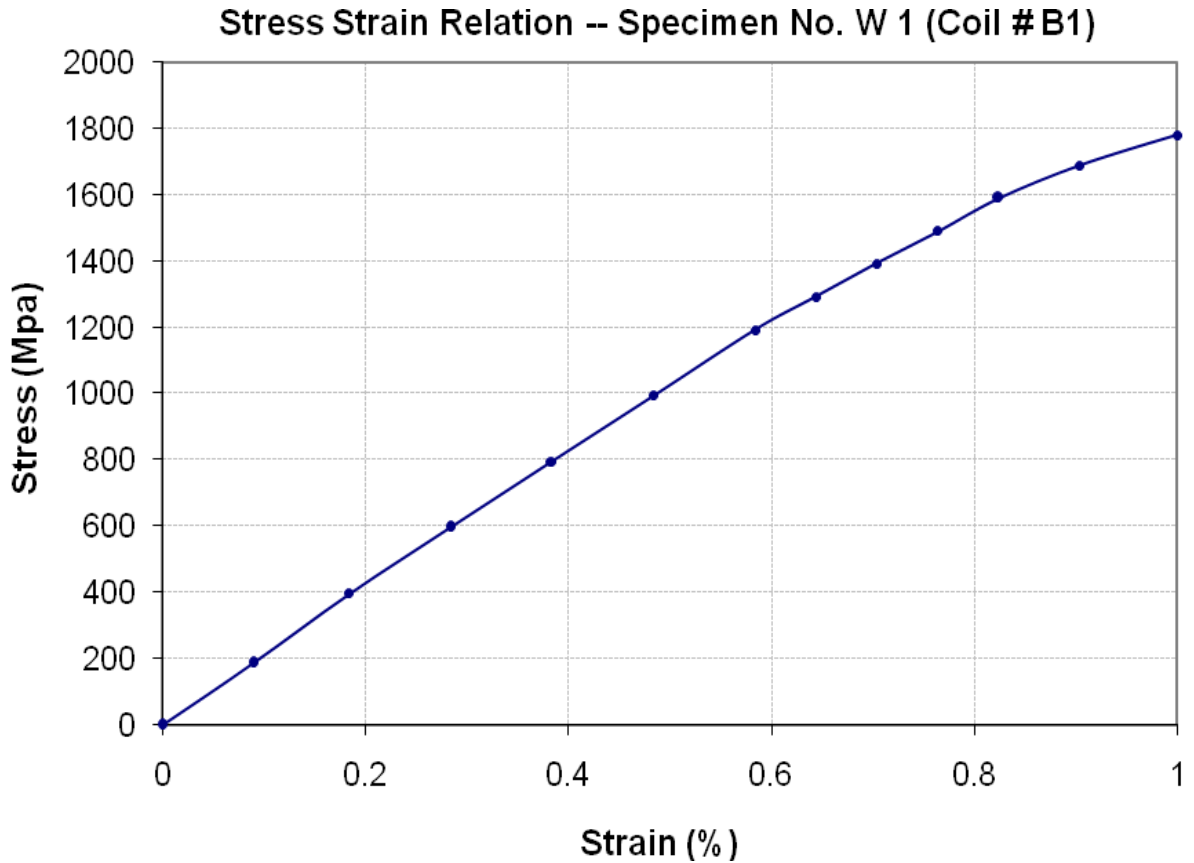
Reference # CED/TFL **3448** (Dr. M Rizwan Riaz)

Dated: 13-06-2023

Reference of the request letter # 4267/Sahiwal/ADP/Flyover/JQ/62

Dated: 07-06-2023

Graph (Page – 2/3)



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To,

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Construction of Bypass from Royal Hostel (N-5) to Sarwar Chowk via Ada Mai Wali Masjid, Length = 13.70 km. (Phase-II) Dection from Kachi Pakki Road to N-5 (Royal Hotel) Length 3.93 km Including Construction of Flyover Bridge over Railway Track, LBDC and N-5 in District Sahiwal.

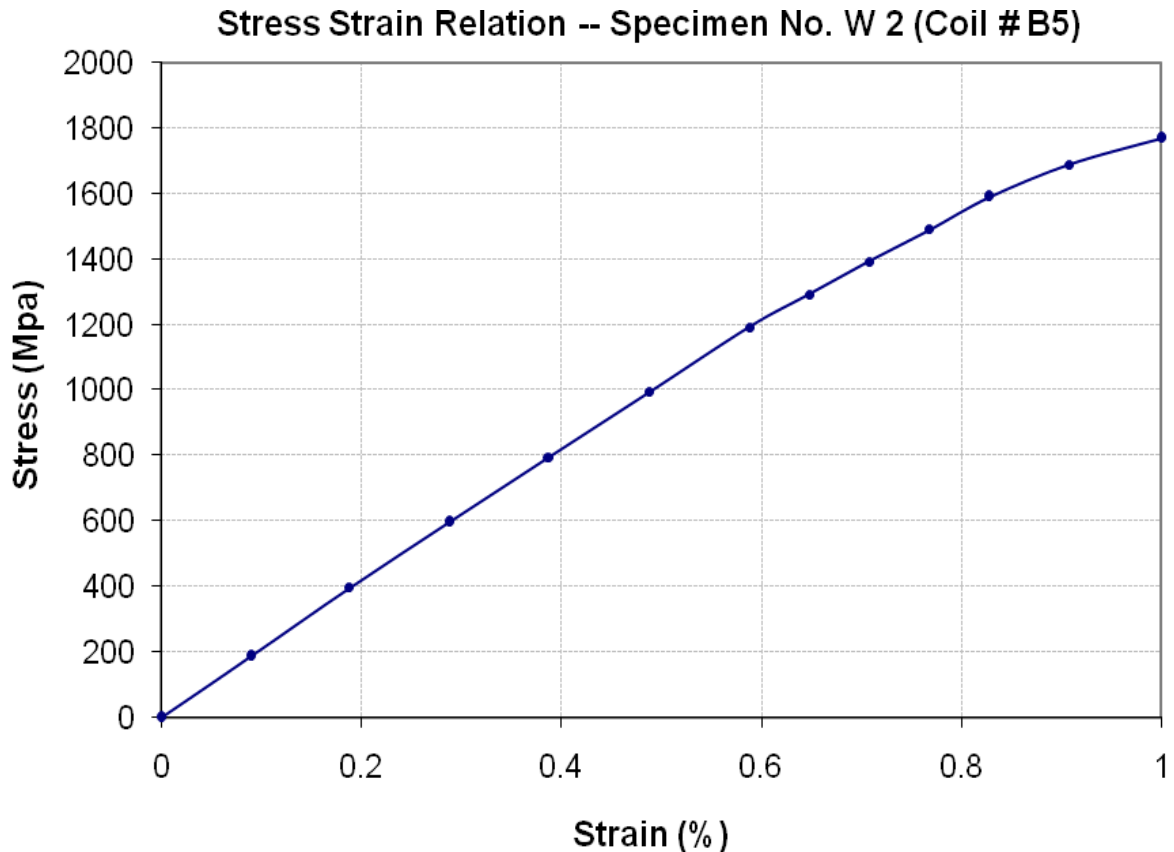
Reference # CED/TFL **3448** (Dr. M Rizwan Riaz)

Dated: 13-06-2023

Reference of the request letter # 4267/Sahiwal/ADP/Flyover/JQ/62

Dated: 07-06-2023

Graph (Page – 3/3)



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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
 Construction of Flyover / Underpass at Akbar Chowk Lahore.
 (Revised: Signal Free Corridor)

Reference # CED/TFL **3456** (Dr. M Rizwan Riaz)
 Reference of the request letter # 3772/103/ACF/SA/04/64

Dated: 14-06-2023
 Dated: 08-06-2023

Tension Test Report (Page #1/3)

Date of Test 16-06-2023
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.370	3	0.372	0.11	0.109	3300	4700	66200	66920	94200	95400	1.20	15.0	Batala Premium
2	0.367	3	0.371	0.11	0.108	3300	4700	66200	67390	94200	96000	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
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,
 Resident Engineer
 NESPAK
 Construction of Flyover / Underpass at Akbar Chowk Lahore.
 (Revised: Signal Free Corridor)

Reference # CED/TFL **3456** (Dr. M Rizwan Riaz)
 Reference of the request letter # 3772/103/ACF/SA/04/69

Dated: 14-06-2023
 Dated: 08-06-2023

Tension Test Report (Page #2/3)

Date of Test 16-06-2023
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	4.238	10	1.259	1.27	1.246	37600	59200	65300	66540	102800	104800	1.30	16.3	Batala Premium
2	4.238	10	1.259	1.27	1.246	38400	59400	66700	67950	103100	105200	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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

To,
 Resident Engineer
 NESPAK
 Construction of Flyover / Underpass at Akbar Chowk Lahore.
 (Revised: Signal Free Corridor)

Reference # CED/TFL **3456** (Dr. M Rizwan Riaz)
 Reference of the request letter # 3772/103/ACF/SA/04/70

Dated: 14-06-2023
 Dated: 08-06-2023

Tension Test Report (Page #3/3)

Date of Test 16-06-2023
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks	
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual				
1	5.345	11	1.414	1.56	1.571	41400	64400	58500	58080	91000	90400	1.70	21.3	Batala Premium	
2	5.323	11	1.411	1.56	1.565	40800	63800	57700	57480	90200	89900	1.90	23.8		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Note: only two samples for tensile and one sample for bend test															
Bend Test															
#11 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

Construction of Bridge over B.S Link Canal RD 62+00 at Raiwind Pattoki Road.

Reference # CED/TFL **3459** (Dr. M Rizwan Riaz)

Dated: 14-06-2023

Reference of the request letter # 4084/BSAM/104/6728

Dated: 31-03-2023

Tension Test Report (Page -1/2)

Date of Test 16-06-2023

Gauge length 640 mm

Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield strength clause (6.3)		Breaking strength clause (6.2)		Young's Modulus of Elasticity "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	12.70 (1/2")	775.0	783.0	18000	176.58	19600	192.28	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only one sample for Test										

Note:

1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM – A416a
2. Load versus percentage strain graphs are attached

I/C Testing Laboratories
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

Construction of Bridge over B.S Link Canal RD 62+00 at Raiwind Pattoki Road.

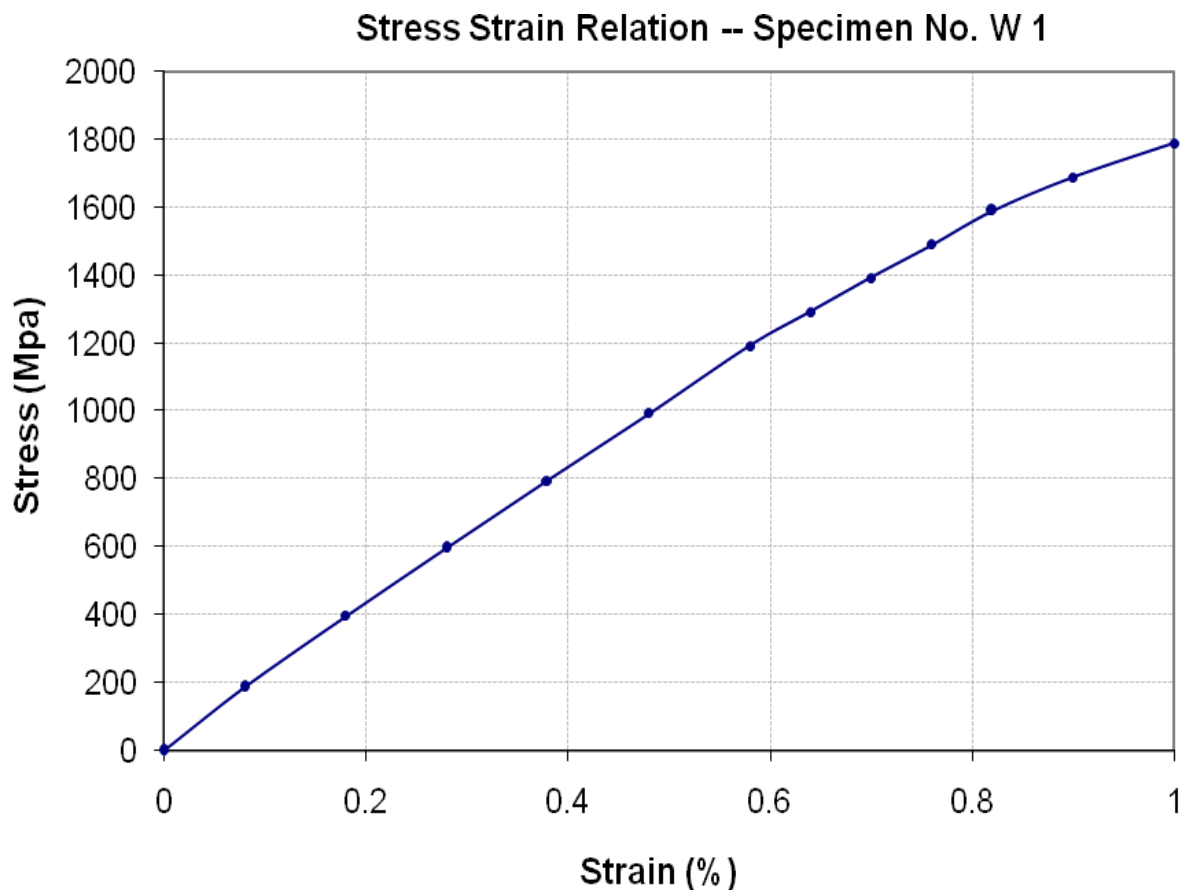
Reference # CED/TFL **3459** (Dr. M Rizwan Riaz)

Dated: 14-06-2023

Reference of the request letter # 4084/BSAM/104/6728

Dated: 31-03-2023

Graph (Page – 2/2)



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,

Resident Engineer
 NESPAK
 Construction of Multi-Level Grade Separation Flyover at Shahdra Moor, Lahore

Reference # CED/TFL **3468** (Dr. M Rizwan Riaz)
 Reference of the request letter # 4537/03/MSA/09/63

Dated: 15-06-2023
 Dated: 14-06-2023

Tension Test Report (Page -1/2)

Date of Test 16-06-2023
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	4.212	10	1.256	1.27	1.238	39600	52000	68800	70500	90300	92600	1.60	20.0	B-3859
2	4.238	10	1.259	1.27	1.246	39000	51400	67700	69010	89300	91000	2.00	25.0	B-3860
3	4.231	10	1.258	1.27	1.244	39200	51800	68100	69470	89900	91800	1.60	20.0	D-8382
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: only three samples for tensile and three samples for bend test														
Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														
#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,

Resident Engineer
 NESPAK
 Construction of Multi-Level Grade Separation Flyover at Shahdra Moor, Lahore

Reference # CED/TFL **3468** (Dr. M Rizwan Riaz)
 Reference of the request letter # 4537/03/MSA/09/59

Dated: 15-06-2023
 Dated: 13-06-2023

Tension Test Report (Page -2/2)

Date of Test 16-06-2023
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	4.205	10	1.254	1.27	1.236	38000	51000	66000	67770	88600	91000	1.70	21.3	A-930
2	4.186	10	1.252	1.27	1.230	39400	53000	68400	70580	92000	95000	1.60	20.0	A-931
3	4.189	10	1.252	1.27	1.231	39200	52800	68100	70170	91700	94600	1.80	22.5	B-3965
4	4.256	10	1.262	1.27	1.251	39200	51800	68100	69070	89900	91300	1.70	21.3	B-3987
5	4.244	10	1.260	1.27	1.248	41600	54800	72200	73500	95200	96900	1.60	20.0	D-8493
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: only five samples for tensile and five samples for bend test

Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														
#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,
 Resident Engineer
 Ritz Developers Pvt. Ltd
 Gulberg-III, Lahore

Reference # CED/TFL **3470** (Dr. Safer Abbass)
 Reference of the request letter # Nil

Dated: 15-06-2023
 Dated: 15-06-2023

Tension Test Report

Date of Test 16-06-2023
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.373	3	0.374	0.11	0.110	3640	5200	73000	73090	104200	104500	1.00	12.5	SJ Steel
2	0.371	3	0.372	0.11	0.109	3010	4540	60400	60920	91000	91900	1.10	13.8	
3	0.378	3	0.376	0.11	0.111	4200	6030	84200	83260	120900	119600	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and one sample for bend test														
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,

Sub Divisional Officer
Buildings Sub Division No. 15
Lahore
(Construction of Boundary Wall alongwith Entrance Gate of Harbanspura District
Lahore)
(Front, Back, Right & Left Side).

Reference # CED/TFL **3471** (Dr. Asif Hameed)
Reference of the request letter # 3301

Dated: 15-06-2023

Dated: 12-06-2023

Tension Test Report

Date of Test 16-06-2023

Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.367	3	0.371	0.11	0.108	3370	4940	67600	68820	99000	100900	1.20	15.0	
2	0.365	3	0.370	0.11	0.107	3180	4860	63800	65360	97400	99900	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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