

# Transportation Engineering Laboratory (TEL)

Department of Civil Engineering (CED)

UNIVERSITY OF ENGINEERING & TECHNOLOGY (UET)

LAHORE – 54890 (PAKISTAN)



Phone: 092-42-9929202 Cable: UNIVENGTECH Fax: 092-42-9922566

Ref.:-----

Date:-----

Mr. M. Hassan Khan  
Resident Engineer,  
NESPAK.

Subject: **Testing of Sub-base Material**  
Scheme # 1, Rehabilitation/Improvement of Street (PCC) UC-31, 46,  
Shalamar Zone MCL

Dear Sir,

It is with reference to your letter No. 4084/103/LDP/SMZ(S-1)/04/23 dated 05-03-2025.  
Please find below the results for the tests conducted on the sub-base sample provided to this  
laboratory on 19-03-2025 through your representative.

### 1. Sieve Analysis (ASTM C-136)

Sieve Size	1 1/2"	1"	3/4"	1/2"	3/8"	#4
%age Passing	100	84.41	67.48	54.11	44.19	38.37

### 2. Specific Gravity & Water Absorption (ASTM C-127)

Specific Gravity (oven dried condition)	2.68
Specific Gravity (saturated surface dry condition)	2.71
Apparent Specific Gravity	2.75
Water Absorption (%)	0.94

### 3. Sodium Sulphate Soundness (ASTM C-88)

Sieve Size	Weight of Fraction Before Test (gm)	Weight of Fraction After Test (gm)	Percentage Passing Designated Sieve After Test	Weighted Percentage Loss
1" + 3/4"	1503.4	1479.3	1.60	0.52
	<b>Total = 0.52%</b>			

### 4. Los Angeles Abrasion Value Test (ASTM C-131/535)

Grading Used	Los Angeles Abrasion Value (%)
A	26.35

If you have further query, please do not hesitate to contact the undersigned.

Best Regards,

Director  
Transportation Engineering Laboratory

**Note:**

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2. Sampling has not been performed by Transportation Engineering Laboratory (TEL), UET and TEL-UET does not accept the responsibility that the sample(s) supplied is/are truly representative sample(s) of any batch or stock or entire project.
3. While TEL-UET agrees to take every reasonable precaution to ensure validity of its test results, it assumes no liability thereof beyond the amount of the fee charged for the analysis or test.
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TEL-UET

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Ref.:-----

Date:-----

Mr. Aamir Shahzad  
Material Engineer,  
Fazaia Housing Scheme,  
Gujranwala.

Subject: **Testing of Coarse Aggregate**  
Infrastructure Development Works Phase-I (Mirage, Eagle & Shaheen Block)  
Fazaia Housing Scheme, Gujranwala

Dear Sir,

It is with reference to your letter No. FHSG/PMO/6015/5/Dev dated 12-05-2025.

Please find below the results for the tests conducted on the aggregate sample provided to this laboratory through your representative.

## 1. Sodium Sulphate Soundness (ASTM C-88)

Sieve Size	Weight of Fraction Before Test (gm)	Weight of Fraction After Test (gm)	Percentage Passing Designated Sieve After Test	Weighted Percentage Loss
1/2" + 3/8"	1002.3	993.2	0.91	0.78
<b>Total = 0.78%</b>				

## 2. Los Angeles Abrasion Value Test (ASTM C-131/535)

Grading Used	Los Angeles Abrasion Value (%)
B	14.36

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Transportation Engineering Laboratory

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Ref.:-----

Date:-----

Mr. Faheem Ahmad  
ARE,  
Package-I (PCP),  
Daska.

Subject: **Testing of Fine Aggregate (Source: Hairo Sand)**  
Construction of Storm Water Drainage in Daska City

Dear Sir,

It is with reference to your letter No. DSK/CON/1094/SWD/264/2025 dated 01-05-2025.

Please find below the results for the tests conducted on the aggregate sample provided to this laboratory on 20-05-2025 through your representative.

## 1. Sieve Analysis (ASTM C-136)

Sieve Size	3/8"	#4	#8	#16	#30	#50	#100	#200
%age Passing	100	99.24	96.87	84.14	66.49	26.91	5.64	1.22

## 2. Fineness Modulus (ASTM C-142)

Fineness Modulus (%)	2.21
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## 3. Specific Gravity & Water Absorption (ASTM C-128)

Specific Gravity (OD)	2.68
Specific Gravity (SSD)	2.70
Apparent Specific Gravity	2.73
Water Absorption (%)	0.75

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Transportation Engineering Laboratory

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Ref.:-----

Date:-----

Mr. Faheem Ahmad  
ARE,  
Package-I (PCP),  
Daska.

Subject: **Testing of Coarse Aggregate (Source: Sargodha)**  
Construction of Storm Water Drainage in Daska City

Dear Sir,

It is with reference to your letter No. DSK/CON/1094/SWD/265/2025 dated 01-05-2025.

Please find below the results for the tests conducted on the aggregate sample provided to this laboratory on 20-05-2025 through your representative.

## 1. Sieve Analysis (ASTM C-136)

Sieve Size	3/4"	1/2"	3/8"	#4
%age Passing	100	5.67	0.45	0.09

## 2. Specific Gravity & Water Absorption (ASTM C-127)

Specific Gravity (oven dried condition)	2.61
Specific Gravity (saturated surface dry condition)	2.62
Apparent Specific Gravity	2.64
Water Absorption (%)	0.46

## 3. Sodium Sulphate Soundness (ASTM C-88)

Sieve Size	Weight of Fraction Before Test. (gm)	Weight of Fraction After Test. (gm)	Percentage Passing Designated Sieve After Test.	Weighted Percentage Loss.
1/2" + 3/8"	1003.9	991.8	1.21	1.20
	<b>Total = 1.20%</b>			

#### 4. Flakiness & Elongation Index (BS 812: Part 105)

Sieve Size		Individual Flakiness Index (%)	Weighted Flakiness Index (%)	Individual Elongation Index (%)	Weighted Elongation Index (%)
Passing (in.)	Retained (in.)				
3/4	1/2	9.36	8.83	12.31	11.61
1/2	3/8	13.82	0.72	19.54	1.02
3/8	1/4	0	0	48.78	0.18
<b>Flakiness Index = 9.55%</b>			<b>Elongation Index = 12.81%</b>		

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