

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. Abid Azim
Resident Engineer, NESPAK,
Ravi Zone.

Subject: **Testing of Granular Sub-base Material**

Rehabilitation/Improvement of Street Pavement, Sewerage/Drainage Qadafi Colony, Nabi Pura, Bangali Bagh, Sultan Pura, Hussain Park, Masoom Shah Road, Karam Nagar, Nishat Park, Badar Colony, Ch. Colony & Khokhar Road, Badami Bagh, UC 20 & 21, Ravi Zone MCL

Dear Sir,

It is with reference to your letter No. 4084/103/LDP/Ravi/04/146 dated 06-02-2025.

Please find below the results for the tests conducted on the aggregate sample provided to this laboratory on 10-02-2025 through your representative.

1. Sieve Analysis (ASTM C-136)

Sieve Size	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4
%age Passing	100	98.1	78.96	61.12	39.16	27.20	18.12

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

Grading Used	Los Angeles Abrasion Value (%)
A	26.43

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

Best Regards,

Director
Transportation Engineering Laboratory

Note:

1. This test report is based solely on the particular sample(s) supplied by the client and should not be reproduced in parts.
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.
4. The party shall assume full responsibility for the ethical use of the results in the test reports and the TEL-UET shall be held free from any and all claims which may result from the use of such data by client or others.
5. This test report shall not be reproduced wholly or in parts unless negotiated.

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:-----

Engr. Muhammad Farooq Memon
Resident Engineer,
Metroplan-Asian JV, NSIC Sargodha.

Subject: **Testing of Aggregate Base Course Material**
Project: Establishment of Nawaz Sharif Institute of Cardiology, Sargodha

Dear Sir,

It is with reference to your letter No. Metroplan-Asian-JV/IDAP-NSIC-LAB/MB-SGD-RE/187 dated 09-02-2025.

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

1. Sieve Analysis (ASTM C-136)

Sieve Size	3"	2 1/2"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4
%age Passing	100	77.33	13.49	0.38	0	0	0	0	0

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

Grading Used	Los Angeles Abrasion Value (%)
1	20.21

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

Specific Gravity (oven dried condition)	2.72
Specific Gravity (saturated surface dry condition)	2.74
Apparent Specific Gravity	2.77
Water Absorption (%)	0.63

4. 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
2" + 1 1/2"	5010.4	4992.3	0.36	0.28
	Total = 0.28%			

5. Clay Lumps and Friable Particles (ASTM C-142)

Clay Lumps and Friable Particles (%)	1.91
--------------------------------------	------

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

Best Regards,

Director
Transportation Engineering Laboratory

Note:

1. This test report is based solely on the particular sample(s) supplied by the client and should not be reproduced in parts.
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.
4. The party shall assume full responsibility for the ethical use of the results in the test reports and the TEL-UET shall be held free from any and all claims which may result from the use of such data by client or others.
5. This test report shall not be reproduced wholly or in parts unless negotiated.

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:-----

The Sub Divisional Officer,
Highway Sub Division No. 2,
Faisalabad.

Subject: **Testing of Sample of Asphalt Concrete (Asphalt Wearing Course)**
Special Repair of Faisalabad Jhang Road from Sadhar up to District Boundary
Faisalabad (Remaining Portion) Length = 13.45 km District Faisalabad

Dear Sir,

It is with reference to your letter No. 15F-II dated 19-02-2025.
Please find below the results of test conducted on the chunk of asphalt concrete provided to
this laboratory on 19-03-2025 through your representative.

Bitumen Extraction Test (Chunk)

Sample # 2

Bitumen Extraction Value (ASTM D-2172)							4.43%
Gradation Analysis							
Sieve No.	3/4"	1/2"	3/8"	#4	#8	#50	#200
% Passing	100	96.32	85.80	59.23	31.87	9.62	3.27

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

Best Regards,

Director
Transportation Engineering Laboratory

Note:

1. This test report is based solely on the particular sample(s) supplied by the client and should not be reproduced in parts.
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.
4. The party shall assume full responsibility for the ethical use of the results in the test reports and the TEL-UET shall be held free from any and all claims which may result from the use of such data by client or others.
5. This test report shall not be reproduced wholly or in parts unless negotiated.

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:-----

The Sub Divisional Officer,
Highway Sub Division No. 2,
Faisalabad.

Subject: **Testing of Sample of Asphalt Concrete (Asphalt Wearing Course)**
Special Repair of Faisalabad Jhang Road from Sadhar up to District Boundary
Faisalabad (Remaining Portion) Length = 13.45 km District Faisalabad

Dear Sir,

It is with reference to your letter No. 15F-II dated 19-02-2025.
Please find below the results of test conducted on the chunk of asphalt concrete provided to
this laboratory on 19-03-2025 through your representative.

Bitumen Extraction Test (Chunk)

Sample # 1

Bitumen Extraction Value (ASTM D-2172)							4.39%
Gradation Analysis							
Sieve No.	3/4"	1/2"	3/8"	#4	#8	#50	#200
% Passing	100	95.01	84.03	58.99	33.25	12.00	4.66

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

Best Regards,

Director
Transportation Engineering Laboratory

Note:

1. This test report is based solely on the particular sample(s) supplied by the client and should not be reproduced in parts.
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.
4. The party shall assume full responsibility for the ethical use of the results in the test reports and the TEL-UET shall be held free from any and all claims which may result from the use of such data by client or others.
5. This test report shall not be reproduced wholly or in parts unless negotiated.

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:-----

The Sub Divisional Officer,
Highway Sub Division,
Bhera.

Subject: **Testing of Sample of Asphalt Concrete (Asphalt Wearing Course)**
Special Repair of Road from Bhera Malikwal Road at Awanwala to Huzarpur via Chak
Sab Khan, Length = 9.00 km in District Sargodha

Dear Sir,

It is with reference to your letter No. 71 Bhr dated 07-03-2025.
Please find below the results of tests conducted on the chunk of asphalt concrete provided to
this laboratory on 19-03-2025 through your representative.

Bitumen Extraction Test (Chunk)

Sample # 2

Bitumen Extraction Value (ASTM D-2172)							4.39%
Gradation Analysis							
Sieve No.	3/4"	1/2"	3/8"	#4	#8	#50	#200
% Passing	100	95.33	84.36	58.93	32.77	11.25	4.01

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

Best Regards,

Director
Transportation Engineering Laboratory

Note:

1. This test report is based solely on the particular sample(s) supplied by the client and should not be reproduced in parts.
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.
4. The party shall assume full responsibility for the ethical use of the results in the test reports and the TEL-UET shall be held free from any and all claims which may result from the use of such data by client or others.
5. This test report shall not be reproduced wholly or in parts unless negotiated.

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:-----

The Sub Divisional Officer,
Highway Sub Division,
Bhera.

Subject: **Testing of Sample of Asphalt Concrete (Asphalt Wearing Course)**
Special Repair of Road from Bhera Malikwal Road at Awanwala to Huzarpur via Chak
Sab Khan, Length = 9.00 km in District Sargodha

Dear Sir,

It is with reference to your letter No. 71 Bhr dated 07-03-2025.
Please find below the results of test conducted on the chunk of asphalt concrete provided to
this laboratory on 19-03-2025 through your representative.

Bitumen Extraction Test (Chunk)

Sample # 1

Bitumen Extraction Value (ASTM D-2172)							4.41%
Gradation Analysis							
Sieve No.	3/4"	1/2"	3/8"	#4	#8	#50	#200
% Passing	100	94.49	83.24	58.78	33.66	12.78	4.92

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

Best Regards,

Director
Transportation Engineering Laboratory

Note:

1. This test report is based solely on the particular sample(s) supplied by the client and should not be reproduced in parts.
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.
4. The party shall assume full responsibility for the ethical use of the results in the test reports and the TEL-UET shall be held free from any and all claims which may result from the use of such data by client or others.
5. This test report shall not be reproduced wholly or in parts unless negotiated.

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:-----

The Sub Divisional Officer,
Highway Sub Division,
Kotmomin.

Subject: **Testing of Bitumen – AASHTO Standard (M-20)**
Rehabilitation of Road from Ranjha Chowk to Kotmomin City, Length = 18.20 km
Phase-II Chak Miana to Kotmomin, Length = 10.45 km in District Sargodha

Dear Sir,

It is with reference to your letter No. 196/K dated 29-03-2025.
Please find below the results of tests conducted on the bitumen sample provided to this laboratory on 09-04-2025 through your representative.

Sr.#	Laboratory Tests	Results
1	Penetration (ASTM D-5)	67 Units
2	Penetration of Residue (ASTM D-5)	59 Units
3	Ductility (ASTM D-113)	Above 100 cm
4	Ductility of Residue (ASTM D-113)	Above 100 cm
5	Softening Point (ASTM D-36)	48.9°C
6	Flash Point (ASTM D-92)	298°C
7	Solubility (ASTM D-2042)	99.85%
8	Specific Gravity Value (ASTM D-70)	1.021
9	Loss on Heating Value (ASTM D-6)	0.241%

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

Best Regards,

Director
Transportation Engineering Laboratory

Note:

1. This test report is based solely on the particular sample(s) supplied by the client and should not be reproduced in parts.
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.
4. The party shall assume full responsibility for the ethical use of the results in the test reports and the TEL-UET shall be held free from any and all claims which may result from the use of such data by client or others.
5. This test report shall not be reproduced wholly or in parts unless negotiated.