MATERIALS TESTING & CONSULTING, INC.

Client:	Menzel Lake Gravel	**Date:**	July 1, 2025
Address:	P.O. Box 1494	**Project:**	Q.C. - Menzel Lake Gravel - 2025
	Marysville, WA 98270	**Project #:**	25B026
Attn:	Rob Hild	**Sample #:**	B25-0404
Revised On:		**Date sampled:**	June 27, 2025
		Control No:	7012025

As requested and authorized by the Client, MTC has performed the following test(s) on the sample number referenced above. The testing was performed in accordance with current, applicable AASHTO, ASTM, and/or WSDOT standards, which are referenced on the correlating test report pages. The results obtained in our laboratory are as detailed below and/or on the following pages:

	Test(s) Performed:	Test Results		Test(s) Performed:	Test Results
X	Sieve Analysis	Out on the #4 sieve		Sulfate Soundness	
	Proctor			Bulk Density & Voids	
	Sand Equivalent			WSDOT Degradation	
	Fracture Count			LA Abrasion	
	Moisture Content			Cation Exchange Capacity	
	Specific Gravity, Coarse				
	Specific Gravity, Fine				
	Hydrometer Analysis				
	Atterberg Limits				

If you have any questions concerning the test results, the procedures used, or if we can be of any further assistance please call the number below and ask to speak with your Project Manager or the Laboratory Manager.

Alex Eifrig

Respectfully Submitted,
Alex Eifrig
WABO Supervising Laboratory Technician

Sieve Report

Project:	Q.C. - Menzel Lake Gravel - 2025	**Date Received:**	27-Jun-25
Project #:	25B026	**Sampled By:**	Client
Client:	Menzel Lake Gravel	**Date Tested:**	30-Jun-25
Source:	Menzel Lake Gravel Pit / Washed pea gravel material	**Tested By:**	Z. Romney
Sample#:	B25-0404	**Control No.:**	7012025

Unified Soil Classification System, ASTM D-2487
GP, Poorly graded Gravel with Sand
Sample Color:
Gray

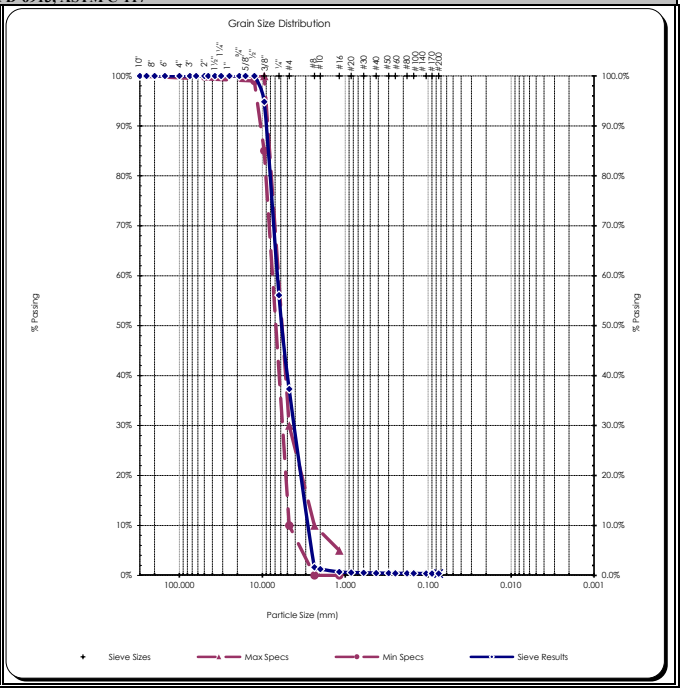
Method(s) ASTM D-2216, ASTM D-2419, ASTM D-4318, ASTM D-5281

Specifications
2024 WSDOT 9-03.1(4)C Grading #8
Sample Meets Specs ? No

$D_{(5)}$ =	2.585	mm	% Gravel =	62.7%	Coeff. of Curvature, C_C = 0.94
$D_{(10)}$ =	2.920	mm	% Sand =	37.0%	Coeff. of Uniformity, C_U = 2.27
$D_{(15)}$ =	3.255	mm	% Silt & Clay =	0.4%	Fineness Modulus = 5.64
$D_{(30)}$ =	4.259	mm	Liquid Limit =	n/a	Plastic Limit = n/a
$D_{(50)}$ =	5.797	mm	Plasticity Index =	n/a	Moisture %, as sampled = n/a
$D_{(60)}$ =	6.623	mm	Sand Equivalent =	n/a	Req'd Sand Equivalent = n/a
$D_{(90)}$ =	9.102	mm	Fracture %, 1 Face =	n/a	Req'd Fracture %, 1 Face = n/a
Dust Ratio =	36/47		Fracture %, 2+ Faces =	n/a	Req'd Fracture %, 2+ Faces = n/a

Method(s) ASTM C-136, ASTM D-6913, ASTM C-117

Sieve Size US	Sieve Size Metric	Actual Cumulative Percent Passing	Interpolated Cumulative Percent Passing	Specs Max	Specs Min
12.00"	300.00		100%		
10.00"	250.00		100%		
8.00"	200.00		100%		
6.00"	150.00		100%		
4.00"	100.00		100%		
3.00"	75.00		100%		
2.50"	63.00		100%		
2.00"	50.00	100%	100%		
1.75"	45.00		100%		
1.50"	37.50		100%		
1.25"	31.50		100%		
1.00"	25.00	100%	100%		
3/4"	19.00	100%	100%		
5/8"	16.00		100%		
1/2"	12.50	100%	100%	100.0%	99.0%
3/8"	9.50	95%	95%	100.0%	85.0%
1/4"	6.30		56%		
#4	4.75	37.3%	37%	30.0%	10.0%
#8	2.36	1.6%	2%	10.0%	0.0%
#10	2.00	1.3%	1%		
#16	1.18	0.7%	1%	5.0%	0.0%
#20	0.850		1%		
#30	0.600	0.5%	1%		
#40	0.425	0.5%	0%		
#50	0.300	0.4%	0%		
#60	0.250		0%		
#80	0.180		0%		
#100	0.150	0.4%	0%		
#140	0.106		0%		
#170	0.090		0%		
#200	0.075	0.4%	0.4%		



Comments: Sample fails to meet gradation specification requirements, has too much material passing on the #4 sieve.

Reviewed by: Alex Eifrig

Alex Eifrig
WABO Supervising Laboratory Technician