



**AGGREGATE SUBMITTAL**  
**Report of Physical Properties**

**GRP Material Description:** Roadbase, 1 1/2" UDOT **Report Date:** August 1, 2023  
**GRP Material Code:** GRAD **Reviewed by:** Dan McDaniel  
**Source Location/Code:** Perry / 590 **Report No.** 590GRAD00223

TEST RESULTS				
Standard	PHYSICAL PROPERTIES		Result	Test Source
ASTM C 29 AASHTO T19	<b>Unit Weight</b>	Unit Weight, lbs./cu.ft. =	<b>124.0</b>	
		Voids, % =	<b>22</b>	
		<input type="checkbox"/> Jigged <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Rodded		
ASTM D1557 AASHTO T180	<b>Modified Proctor</b>	Max. density, lbs./cu.ft. =	<b>136.8</b>	
		Optimum Moisture, % =	<b>5.8</b>	
ASTM D698 AASHTO T99	<b>Standard Proctor</b>	Max. density, lbs./cu.ft. =	<b>132.5</b>	
		Optimum Moisture, % =	<b>7</b>	
ASTM D4318 AASHTO T89/90	<b>Liquid Limit Plastic Limit Plasticity Index</b>	Liquid Limit=	<b>0</b>	
		Plastic Limit=	<b>0</b>	
		Plasticity Index=	<b>NP</b>	
ASTM C131 AASHTO T96	<b>L.A. Abrasion</b>	Small Coarse Loss, % =	<b>26</b>	
		Grading/Revolutions, =	<b>B/500</b>	
ASTM C535	<b>L.A. Abrasion</b>	Large Coarse Loss, % =		
		Grading/Revolutions, =		
ASTM C 128 AASHTO T84	<b>Fine Specific Gravity &amp; Absorption</b>	Bulk Specific Gravity (dry) =		
		Bulk Specific Gravity, SSD =		
		Apparent Specific Gravity =		
		Absorption, % =		
ASTM C 127/128 AASHTO T85/84	<b>Coarse/Fine Specific Gravity &amp; Absorption</b>	Bulk Specific Gravity (dry) =	<b>2.618</b>	
		Bulk Specific Gravity, SSD =	<b>2.650</b>	
		Apparent Specific Gravity =	<b>2.707</b>	
		Absorption, % =	<b>1.2</b>	
ASTM D2419 AASHTO T176	<b>Sand Equivalent</b>	Sand Equivalent, % =	<b>31</b>	
ASTM C 88 AASHTO T104	<b>Soundness</b>	Coarse Soundness Loss, % =		
		Magnesium No. of Cycles =		
	<b>Soundness</b>	Fine Soundness Loss, % =		
		Magnesium No. of Cycles =		
ASTM C 1252 AASHTO T304	<b>Fine Aggregate Angularity</b>	Uncompacted Voids, % =		
		Method C (as received material)		
ASTM C40 AASHTO T21	<b>Organic Impurities</b>	Coarse Aggregate, % =		
		Fine Aggregate, % =		
ASTM C142 AASHTO T112	<b>Clay / Friable Particles</b>	Coarse Aggregate, % =		
		Fine Aggregate, % =		
ASTM C123 AASHTO T113	<b>Lightweight Pieces</b>	Coarse Aggregate, % =		
		Fine Aggregate, % =		
ASTM D1883 AASHTO T193	<b>CBR</b>	Surcharge = 10 lbs CBR @ 0.1"=	<b>69</b>	
		Swell% = 0.0% CBR @ 0.2"=	<b>109</b>	
ASTM D5821	<b>Fractured Face</b>	1 or 2 Faces =	<b>1</b>	<b>95</b>
		Fractured Face, % =	<b>2</b>	<b>84</b>
AASHTO T-289	<b>pH of Soils</b>	10.2	<b>AASHTO T-236</b>	<b>Direct Shear</b>
AASHTO T 291	<b>Chlorides</b>	42.1ppm	<b>AASHTO T-267</b>	<b>Organic Content</b>
AASHTO T-288	<b>Resistivity</b>	10170 Ohm*cm	<b>AASHTO T-88</b>	<b>Hydrometer</b>
AASHTO T-290	<b>Sulfates</b>			<b>6</b>

SIEVE ANALYSIS		
ASTM C136	AASHTO T27	
Sieve Size	% Passing	Spec.
450 mm (18")		
375 mm (15")		
300 mm (12")		
250 mm (10")		
225 mm (9")		
200 mm (8")		
150 mm (6")		
125 mm (5")		
100 mm (4")		
75.0 mm (3")		
63.0 mm (2-1/2")		
50.0 mm (2")		
37.5 mm (1-1/2")	<b>100</b>	
25.0 mm (1")	<b>91</b>	
19.0 mm (3/4")	<b>85</b>	
12.5 mm (1/2")	<b>80</b>	
9.5 mm (3/8")	<b>75</b>	
6.3 mm (1/4")		
4.75 mm (No.4)	<b>61</b>	
2.36 mm (No.8)	<b>48</b>	
2.00 mm (No.10)		
1.18 mm (No.16)	<b>38</b>	
0.600 mm (No.30)	<b>30</b>	
0.425 mm (No.40)		
0.300 mm (No.50)	<b>23</b>	
0.180 mm (No.80)		
0.150 mm (No.100)	<b>15</b>	
0.075 mm (No.200)	<b>10.2</b>	
ASTM D422		
<b>Hydrometer =</b>		
ASTM C566 AASHTO T255		
<b>Moisture Content, % =</b>		
ASTM C136 AASHTO T27		
<b>Fineness Modulus (FM) =</b>		
AASHTO M145		
<b>Classification of Soils =</b>	<b>A1A</b>	
ASTM D4791 Ratio =	<b>1:5</b>	
<b>Flat &amp; Elongated =</b>	<b>0</b>	