



300 Sierra Manor Drive, Suite 1
Reno, NV 89511

February 22, 2021
File: 1009

Mr. Chris Benna
RILITE AGGREGATES
3025 Mill Street
Reno, NV 89502

RE: Rilite Pit – Type 2, Class B Aggregate Base

Dear Mr. Benna:

Per your request, we have performed testing on the Type 2, Class B aggregate base sample you delivered to our laboratory. Test results are provided on the attached page(s) in comparison with the 2012 and 2016 Standard Specifications for Public Works Construction (SSPWC) - "Orange Book", current ASTM specification requirements, and 2014 Nevada Department of Transportation (NDOT) Standard Specifications for Road and Bridge Construction requirements.

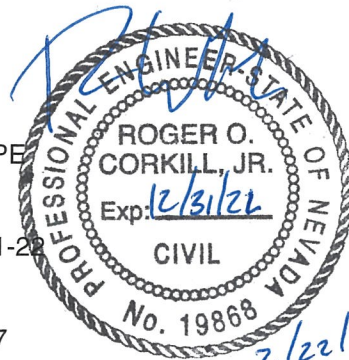
We appreciate this opportunity to provide our laboratory testing services. If you have any questions or require further information, please do not hesitate to contact us.

Sincerely,

CONSTRUCTION MATERIALS ENGINEERS, INC.

Steven L. Vineis
Laboratory Manager
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Roger O. Corkill Jr., PE
Project Manager
RE Number 19868
Expiration Date 12-31-20
rcorkill@cmenv.com
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SLV:ROC:lnh
Attachments

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TYPE 2, CLASS B AGGREGATE BASE TEST RESULTS SUMMARY - RILITE PIT

Sieve Analysis

U.S. Standard Sieve Size	Percent Passing by Weight		
	Type 2, Class B Aggregate Base	2012 SSPWC Specification ¹	2016 SSPWC & NDOT Specification ¹
1 Inch	100	100	100
3/4 Inch	91	90 - 100	90 - 100
1/2 Inch	78	-	-
3/8 Inch	72	-	-
No. 4	57	35 - 65	35 - 65
No. 8	39	-	-
No. 10	35	25 - 53	-
No. 16	26	15 - 40	15 - 40
No. 30	17	-	-
No. 40	15	12 - 28	-
No. 50	12	-	-
No. 100	9	-	-
No. 200	6.5	2 - 10	2 - 10

Test Type	Test Method	Sample Result	SSPWC/NDOT Specifications ¹
Fractured Faces	ASTM D5821/Nev. T230	99.9%	35% Minimum
Resistance (R) Value	ASTM D2844/Nev. T115	75	70 Minimum
Resistance to Wear (Grading B)	ASTM C131/AASHTO T96	28.3%	45% Maximum

Atterberg Limits

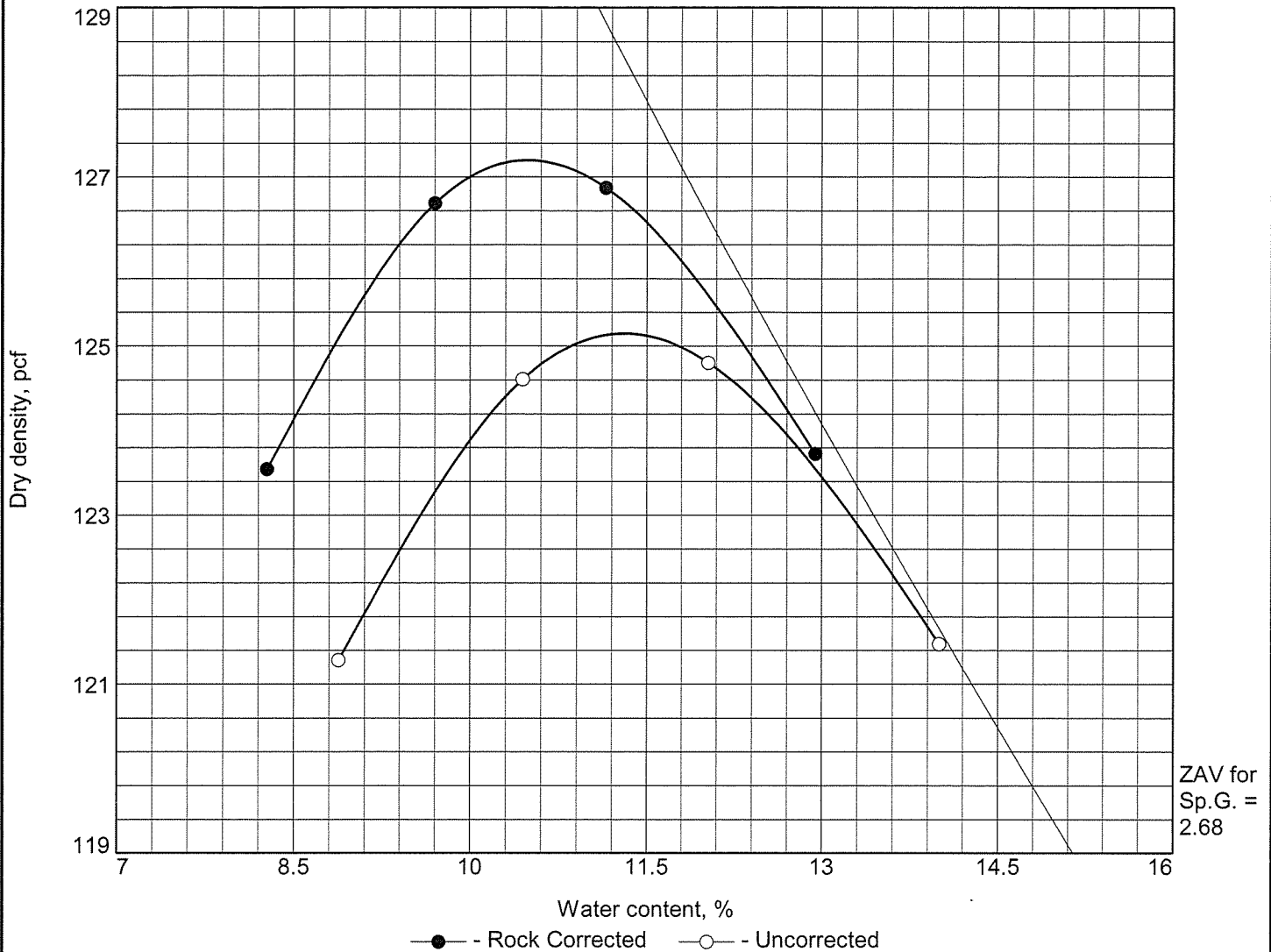
Test Type	Specification Type	Test Method	Sample Result	Specifications ¹
Liquid Limit	2012 SSPWC/NDOT	ASTM D4318/Nev. T210	No Value	35 Maximum
Plasticity Index	2012 SSPWC/NDOT	ASTM D4318/Nev. T212	Non Plastic	6 Maximum
Plasticity Index	2016 SSPWC	ASTM D4318	Non Plastic	8 Maximum

Moisture Density

Test Type	Test Method	Sample Result	SSPWC/NDOT Specifications ¹
Maximum Dry Density	ASTM D1557A	127.0 pcf	-
Optimum Moisture	ASTM D1557A	10.5%	-

¹ All specification requirements per the 2012 & 2016 Standard Specifications for Public Works Construction and 2014 NDOT Standard Specifications for Road and Bridge Construction unless otherwise noted.

MOISTURE DENSITY CURVE

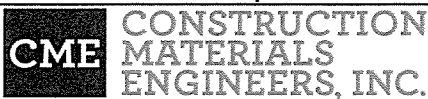


Test specification: ASTM D 1557-12 Method C Modified
 ASTM D4718-15 Oversize Corr. Applied to Each Test Point

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
							8.7	6.5

ROCK CORRECTED TEST RESULTS	UNCORRECTED	MATERIAL DESCRIPTION
Maximum dry density = 127.0 pcf	125.0 pcf	AGGREGATE BASE TYPE 2 CLASS B RILITE PIT
Optimum moisture = 10.5 %	11.5 %	

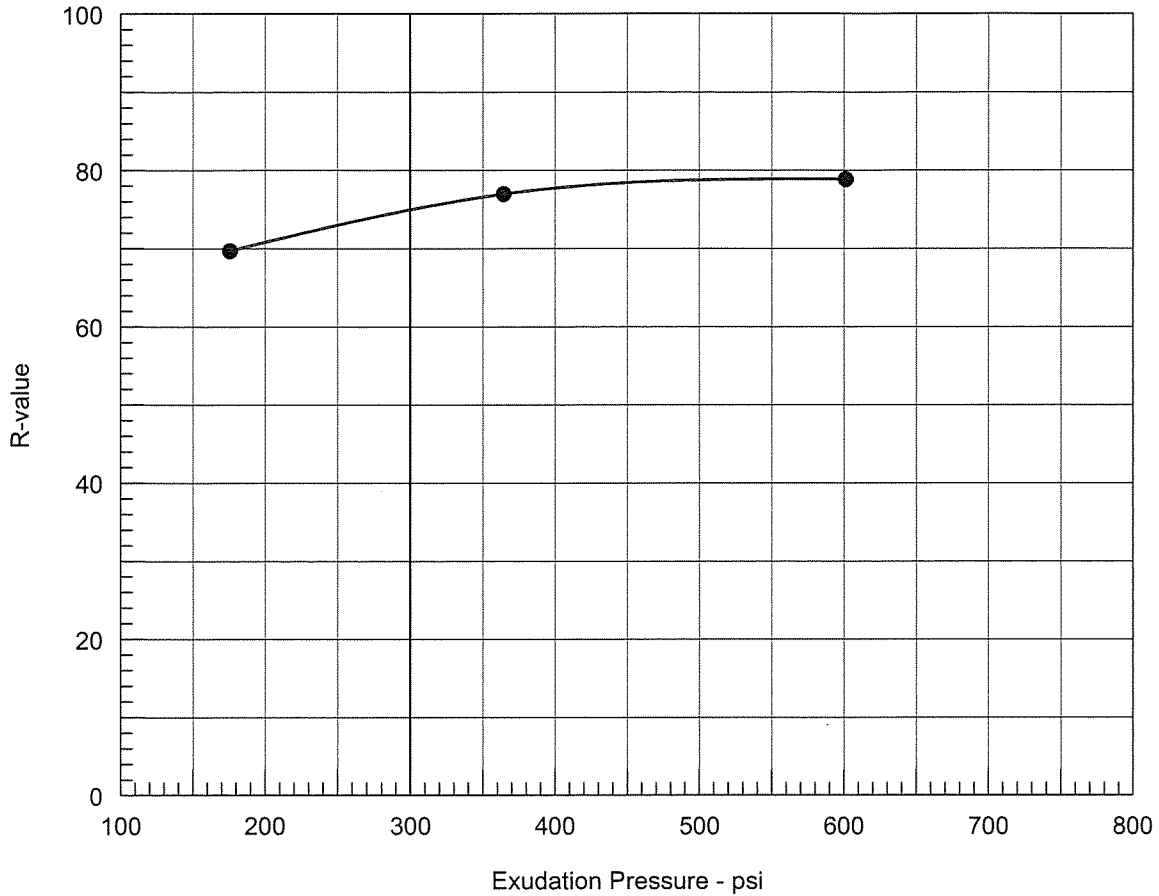
Project No. 1009 Client: RILITE AGGREGATES Project: RILITE AGGREGATES-QUALITY TESTING	Remarks: RECEIVED 2/16/2021
○ Location: PLANT STOCKPILE Sample Number: 35089	



Figure

Tested By: S. SCHWEITZER **Checked By:** S. VINEIS

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - ASTM D2844

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	118.5	11.7	0.00	16	2.40	601	80	79
2	350	121.7	12.5	0.00	17	2.40	364	78	77
3	350	121.2	12.7	0.00	25	2.45	176	70	70

Test Results	Material Description
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R-value at 300 psi exudation pressure = 75

AGGREGATE BASE
TYPE 2 CLASS B
RILITE PIT

Project No.: 1009
Project: RILITE AGGREGATES-QUALITY TESTING
Location: PLANT STOCKPILE
Sample Number: 35089
Date: 2/19/2021

Tested by: M. PONTONI
Checked by: S. VINEIS
Remarks:
 RECEIVED 2/16/2021



Figure 1A