



300 Sierra Manor Drive, Suite 1
Reno, NV 89511

February 27, 2023
File: 1009

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

RE: Rilite Pit – 4.0” Minus Structural Fill

Dear Mr. Benna:

Per your request, we have performed aggregate quality testing on the 4.0” minus structural fill received by our laboratory from the Rilite Pit on February 9, 2022. Test results are provided on the attached page(s) in comparison with standards outlined in the *2016 Standard Specifications for Public Works Construction* specifications.

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 12-31-24
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2/27/23

SLV:ROC:ar
Attachments

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1.5" MINUS STRUCTURAL FILL TEST RESULTS SUMMARY - RILITE PIT

Sieve Analysis

U.S. Standard Sieve Size	Percent Passing by Weight	
	1.5" Minus Structural Fill	2016 SSPWC Specification ¹
4 Inch	100	100
3 Inch	100	-
2 Inch	100	-
1 1/2 Inch	97	-
1 Inch	86	-
3/4 Inch	78	70-100
1/2 Inch	66	-
3/8 Inch	60	-
No. 4	47	-
No. 8	41	-
No. 10	39	-
No. 16	32	-
No. 30	25	-
No. 40	22	15-65
No. 50	19	-
No. 100	14	-
No. 200	10.4	5-20

Test Type	Test Method	Sample Result	2016 SSPWC Specifications ¹
Resistance (R) Value	ASTM D2844	81	30 Minimum
Liquid Limit	ASTM D4318	26	35 Maximum
Plasticity Index	ASTM D4318	3	12 Maximum

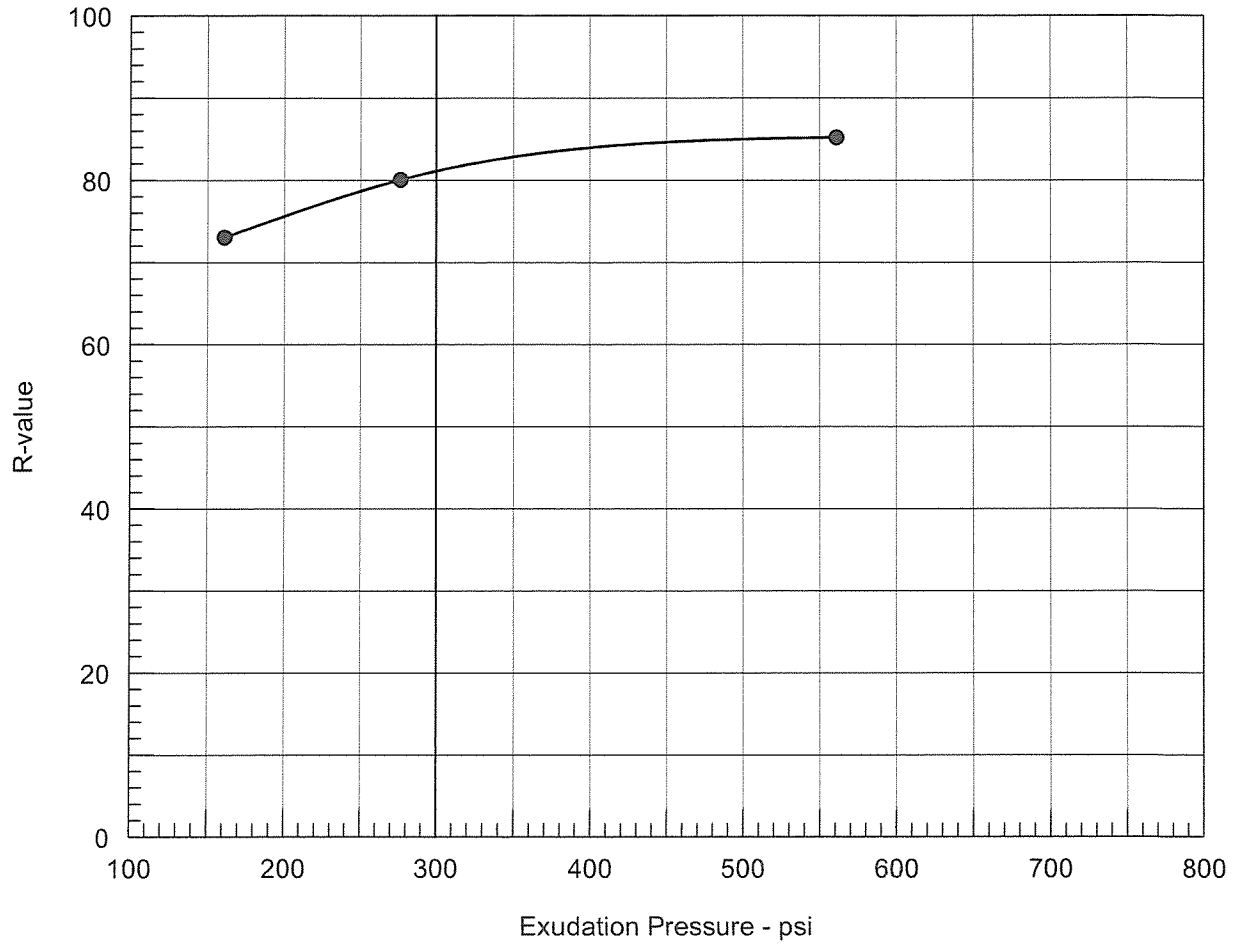
Moisture Density

Test Type	Test Method	Sample Result	2016 SSPWC Specifications ¹
Maximum Dry Density	ASTM D1557A	126.0 pcf	-
Optimum Moisture	ASTM D1557A	10.5%	-

¹ All specification requirements per the 2016 Standard Specifications for Public Works Construction.

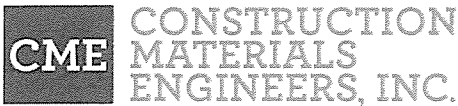


R-VALUE TEST REPORT

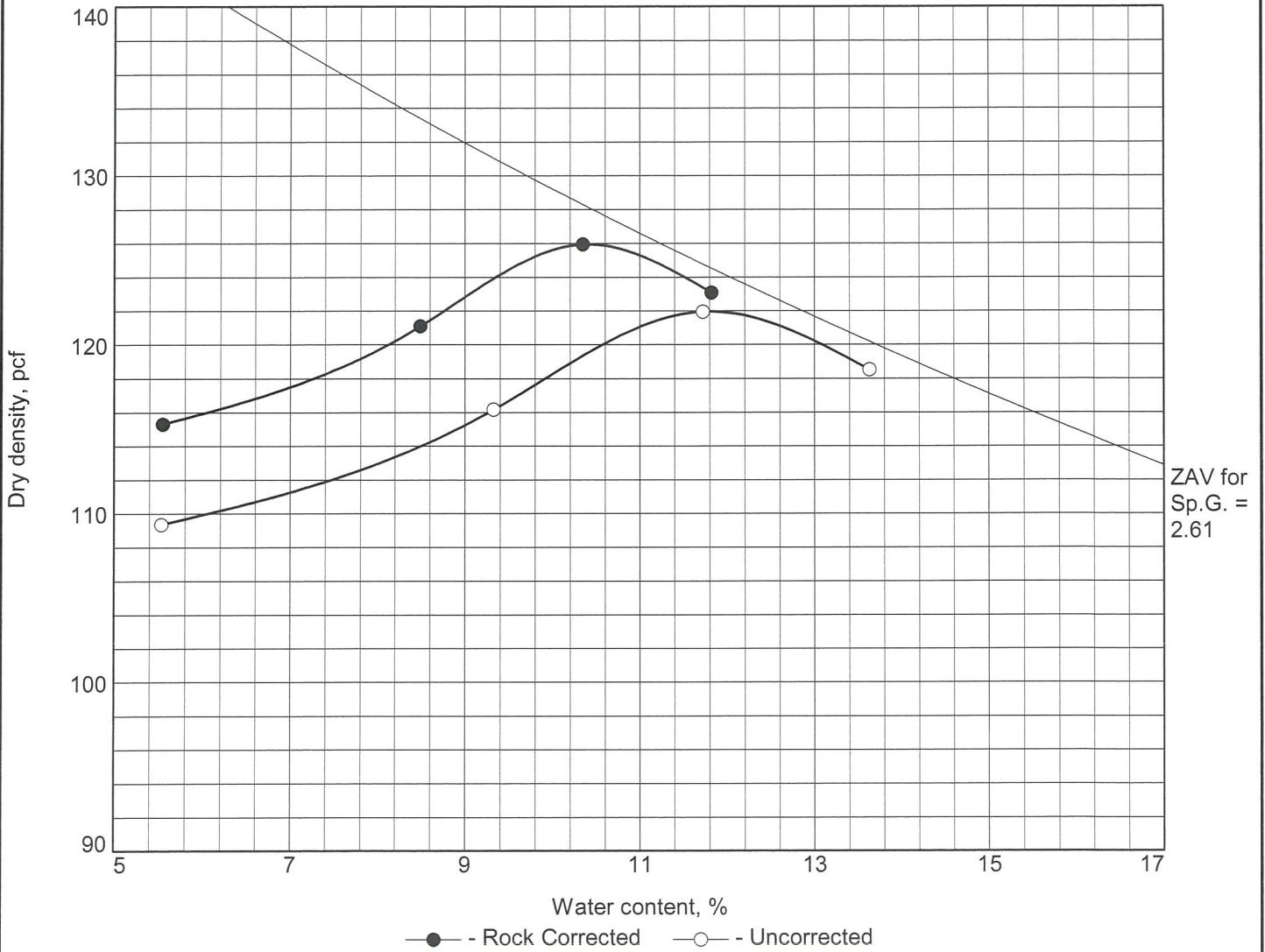


Resistance R-Value and Expansion Pressure - ASTM D2844

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	250	118.1	15.7	0.00	26	2.50	161	73	73
2	275	119.6	14.9	0.00	19	2.50	277	80	80
3	300	88.3	55.8	0.00	14	2.50	561	85	85

Test Results	Material Description
R-value at 300 psi exudation pressure = 81	4" MINUS STRUCTURAL FILL RILITE PIT LIGHT BROWN SANDY SILT W/ GRAVEL
Project No.: 1009 Project: RILITE AGGREGATES-QUALITY TESTING Location: PLANT STOCKPILE Sample Number: 37290 Date: 2/27/2023	Tested by: M. PONTONI Checked by: S. VINEIS Remarks: RECEIVED 2/9/2023
	Figure 37290

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						
							22.5	

ROCK CORRECTED TEST RESULTS	UNCORRECTED	MATERIAL DESCRIPTION
Maximum dry density = 126.0 pcf	122.0 pcf	4" MINUS STRUCTURAL FILL RILITE PIT LIGHT BROWN SANDY SILT W/
Optimum moisture = 10.5 %	12.0 %	

Project No. 1009 Client: RILITE AGGREGATES Project: RILITE AGGREGATES-QUALITY TESTING Location: PLANT STOCKPILE Sample Number: 37290	Remarks: RECEIVED ON 2/9/23
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Figure

Tested By: J. HOFF

Checked By: J. MILLER