



ENTECH ENGINEERING, INC.

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June 16, 2019

Classic Communities
6385 Corporate Drive, Suite 200
Colorado Springs, CO 80919

SF197

Attn: Bill Ritchie

Re: Cement Stabilized Subgrade Results - Laboratory Testing
Midtown at Hannah Ridge, Filing No. 1
El Paso County, Colorado

ACCEPTED for FILE
Engineering Review

09/02/2020 5:17:59 PM

dsdnjkamp

EPC Planning & Community
Development Department

Ref: Pavement Recommendations Report by Entech Engineering, Inc., dated June 17, 2020,
Entech Job No. 200511.

Dear Mr. Ritchie:

As requested, personnel of Entech Engineering, Inc. have performed strength testing on two sets of three soil/cement composite samples of Soil Type 1 for the above reference project. Testing was performed on soil samples prepared with 2% and 4% Portland Cement Type 1/2, from Martin Marietta, near Pueblo, Colorado.

A compression strength of 160 psi is recommended for cement stabilized subgrade. The 5-day average strength value of the 2% mix was 195 psi. The 5-day average strength value of the 4% mix was 210 psi. A 2% mix is recommended based on the laboratory test results. A summary of the testing results is attached.

Pending the results of the field density testing, microfracturing of the stabilized subgrade may be required. Soil strengths in excess of 200 psi require microfracturing.

We trust this has provided you with the information you required. If you have any questions or need additional information, please do not hesitate to contact us.

Respectfully Submitted,

ENTECH ENGINEERING, INC.

Daniel P. Stegman

DPS/bs

Encl.

Entech Job No. 200511

AAprojects/2019/191650/191650 cssr - lab ST2



Reviewed by:

Mark H. Hauschild, P.E.
Senior Engineer

SUMMARY OF CTS TEST RESULTS

LAB TESTING

CLIENT CLASSIC COMMUNITIES
 PROJECT MIDTOWN, HANNAH RIDGE, F1
 FIELD SAMPLE ID TB-1 @ 0-3'
 SOIL ADDITIVE TYPE I/II CEMENT

JOB NO 200511
 DATE 6/3/20
 BY BL

ADDITIVE %	WATER %	DENSITY (dry)	AGE (days)	STRENGTH (psi)
2	9.3	118.9	5	205
2	9.3	118.7	5	197
2	9.3	118.9	5	184
AVERAGE:				195
4	9.3	119.0	5	216
4	9.3	118.8	5	214
4	9.3	118.9	5	201
AVERAGE:				210

CURING METHOD

100° HUMIDIFIED OVEN