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REPORT OF STONE TESTING

PROJECT:
MATERIAL CHECK

REPORTED TO:
REALSTONE SYSTEMS
560 KIRTS BOULEVARD
SUITE 120
TROY, MI 48084

AET PROJECT NO: 20-11101

DATE: November 1, 2012

Product Type: Latte
Date Tested: 10/22/10 to 10/26/12

Conformance: The stone samples meet ASTM:C568-10 medium-density requirements for Limestone dimension stone.

Sample	A	B	C	D	E	Average	Requirements ASTM C568
<u>Strength Properties: ASTM C170 – WET CONDITION - PERPENDICULAR</u>							
Compression Strength, psi:	3,110	6,870	8,490	6,720	9,540	6,950	4,000 Min
<u>Strength Properties: ASTM C170 – DRY CONDITION – PERPENDICULAR</u>							
Compression Strength, psi:	6,460	8,200	12,380	12,860	9310	9,840	4,000 Min
<u>Strength Properties: ASTM C170 – WET CONDITION - PARALLEL</u>							
Compression Strength, psi:	4,820	7,350	6,800	5,300	3,850	5,620	4,000 Min
<u>Strength Properties: ASTM C170 – DRY CONDITION - PARALLEL</u>							
Compression Strength, psi:	13,910	11,550	9,930	11,030	7,780	10,840	4,000 Min
<u>Strength Properties: ASTM C99 & C880 – WET CONDITION -</u>							
Modulus of Rupture, psi:	1,670	1,220	1,720	1,060	1,940	1,510	500 Min
Flexural Strength, psi:	1,640	1,490	1,490	1,480	1,340	1,320	
	1,560	1,840	1,380	200	1,160		
	1,460	1,270	1,390	1,230	1,730		
<u>Strength Properties: ASTM C99 & C880 – DRY CONDITION</u>							
Modulus of Rupture, psi:	1,430	1,030	1,350	1,550	1,270	1,280	500 Min
Flexural Strength, psi:	1,230	1,380	870	1,020	1,650		
	980	900	1,110	1,160	970		
	1,050	1,120	1,160	1,110	980	1,050	

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	<u>Physical Properties: ASTM:C97</u>				
Specific Gravity:	2.374	2.294	2.372	2.347	
Bulk Density, pcf:	148.1	143.2	148.0	146.4	135 Min
Absorption, %	2.26	4.23	2.60	3.03	7.5 Max

Remarks: The samples were destroyed during testing and discarded.

Report Prepared By:

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 Staff Engineer II

Report Reviewed By:

John Amundson
 Principal Engineer



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REPORT OF FREEZE-THAW TESTING OF STONE

PROJECT:

MATERIAL EVALUATION
LATTE-STONE UNITS

REPORTED TO:

REALSTONE SYSTEMS
560 KIRTS BLVD
SUITE 120
TROY, MI 48084

ATTN: STEVE HODGES

AET JOB NO: 20-11101

DATE: JANUARY 29, 2013

INTRODUCTION

This report presents the test results on five stone units. Samples were submitted and identified by you. The scope of our work consisted of conducting freeze-thaw testing in accordance with ASTM C67-12, "Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile" and evaluated according to ASTM C 216-12a "Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale)." Our work was authorized by you on February 20, 2012.

SAMPLE INFORMATION

American Engineering Testing, Inc. received 5 stone samples identified as Latte #1 through #5 from Realstone Systems.

TESTING METHODS

The specimens were subjected to freeze-thaw cycling in accordance with ASTM C67, Section 9.

1. The samples were placed in a pan with water at a depth of ½" and frozen for 20 hours. Next the samples were immersed in a thawing tank for 4 hours. This process continued for 50 cycles or until the specimens develop a crack or appears to have lost more than 3% of its original weight by disintegration as judged by visual inspection.
2. Final weight loss percentages are calculated by dividing the oven dry weight of dislodged material by the final oven dried sample weight, plus the total dislodged material.

TEST RESULTS

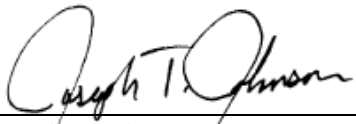
Sample	Weight Loss %	Full Width Cracking	Rating
L1	0.005%	No	See Remarks
L2	0.010%	No	See Remarks
L3	0.004%	No	See Remarks
L4	0.007%	No	See Remarks
L5	0.005%	No	See Remarks
Average	0.006%		

REMARKS

The samples were tested for 50 freeze thaw cycles. The test results meet the specifications of ASTM C216-12a "Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale)" for SW facing material. This report represents specifically the samples tested. The ASTM C216 requirements for freeze-thaw durability in section 6.1.3.1 state that no individual unit separates or disintegrates resulting in a weight loss greater than 0.5% of its original dry weight. Additionally, ASTM C216, Section 6.1.3.2 states that no individual unit develops a crack that exceeds, in length, the units least dimension. If you have any questions, please feel free to call us.

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