June 5, 2013

Terry Popham
Texas Building Products
3621 HWY 108
Strawn, TX 76475

Please find enclosed a copy of a test report that we performed at your request on the following product that you supplied to the NCMA Research and Development Laboratory:

8 x 8 x 16 inch Concrete Masonry Unit
Mark “MW"

NCMA Job Number: 13-330A

We are pleased to report that the tested properties from this report comply with the applicable requirements of ASTM C 90-12, Standard Specification for Loadbearing Concrete Masonry Units.

The attached report includes the tested compressive strength of the concrete masonry unit. The compressive strength of masonry constructed using these units can be calculated using the Unit Strength Method as outlined in Section 1.4 B.2.b of Specification for Masonry Structures (TMS 602-11 / ACI 530.1-11 / ASCE 6-11). In accordance with this method, the compressive strength of masonry is a function of unit strength and mortar type. As shown in the attached test report.

Net Area Compressive Strength of
8 x 8 x 16 inch Concrete Masonry Unit
Mark “MW”

2420 psi

Therefore, the net area compressive strength of masonry when these units are used, can be considered to be the following:

Net Area
Compressive Strength
When used with:
          of Masonry
Type M or S mortar  1790 psi
Type N mortar 1650 psi

The values provided above can be compared directly to the specified compressive strength of masonry, $f'_{m}$. If these values exceed $f'_{m}$, compliance has been documented.

The Unit Strength Method is acknowledged to be a conservative method for determining compliance with the specified compressive strength of masonry. A second method, the Prism Test Method can also be used. The results from the Prism Test Method will likely not be the same as the results of the Unit Strength Method above, and a higher compressive strength of masonry value will usually be obtained from the Prism Test Method.

Sincerely,

Nicholas R. Lang
Manager, Research & Development Laboratory
### ASTM C140-12a Test Report

**Sampling and Testing Concrete Masonry Units and Related Units**

**Client:** Texas Building Products  
**Address:** 3621 HWY 106, Strawn, TX 76475

**Standard Specification:** ASTM C90-12

**Unit Description:** 8 x 8 x 16 inch Concrete Masonry Unit  
Mark "MW"

**Testing Agency:** National Concrete Masonry Association  
**Address:** 13750 Sunrise Valley Drive, Herndon, VA 20171-4662

**Sampling Party:** Texas Building Products  
**Date Samples Received:** 4/29/2013

**Job No.:** 13-330A  
**Report Date:** 6/5/2013

### Summary of Test Results

<table>
<thead>
<tr>
<th>Physical Property</th>
<th>ASTM Specified Values</th>
<th>Average Test Results</th>
<th>Physical Property</th>
<th>ASTM Specified Values</th>
<th>Average Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Compressive Strength</td>
<td>1900 min</td>
<td>2420 psi</td>
<td>Min. Faceshell Thickness (t0)</td>
<td>1.25 min</td>
<td>1.28 in.</td>
</tr>
<tr>
<td>Gross Compressive Strength</td>
<td>****</td>
<td>1280 psi</td>
<td>Min. Web Thickness (tL)</td>
<td>0.75 min</td>
<td>1.25 in.</td>
</tr>
<tr>
<td>Density</td>
<td>113.1 pcf</td>
<td>11.0 pcf</td>
<td>Equivalent Web Thickness</td>
<td>****</td>
<td>2.88 in.</td>
</tr>
<tr>
<td>Absorption</td>
<td>15 max</td>
<td>11.0 pcf</td>
<td>Normalized Web Area (Aww)</td>
<td>6.5 min</td>
<td>32.0 in²</td>
</tr>
<tr>
<td>Percent Solid</td>
<td>53.0 %</td>
<td>62.83 in²</td>
<td>Equivalent Thickness</td>
<td>****</td>
<td>4.03 in.</td>
</tr>
<tr>
<td>Net Cross-Sectional Area</td>
<td>62.83 in²</td>
<td></td>
<td>Max. Var. from Spec. Dimensions</td>
<td>125 max</td>
<td>0.080 in.</td>
</tr>
<tr>
<td>Gross Cross-Sectional Area</td>
<td>118.50 in²</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Individual Unit Test Results

#### Compression Units

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Received Weight in lb</th>
<th>Gross Area in²</th>
<th>Net Area in²</th>
<th>Max. Load in lb</th>
<th>Gross Strength in psi</th>
<th>Net Strength in psi</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>32.96</td>
<td>118.50</td>
<td>62.83</td>
<td>175530</td>
<td>1480</td>
<td>2790</td>
</tr>
<tr>
<td>#2</td>
<td>32.10</td>
<td>118.50</td>
<td>62.83</td>
<td>133920</td>
<td>1130</td>
<td>2130</td>
</tr>
<tr>
<td>#3</td>
<td>31.20</td>
<td>118.50</td>
<td>62.83</td>
<td>146720</td>
<td>1240</td>
<td>2340</td>
</tr>
<tr>
<td>Average</td>
<td>32.09</td>
<td>118.50</td>
<td>62.83</td>
<td>152060</td>
<td>1280</td>
<td>2420</td>
</tr>
</tbody>
</table>

#### Absorption Units

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Avg. Width in in</th>
<th>Avg. Height in in</th>
<th>Avg. Length in in</th>
<th>Avg./Min. Faceshell Thickness in in</th>
<th>Min. Web Thickness in in</th>
<th>Minimum Web Area in in²</th>
<th>Normalized Web Area in in²</th>
</tr>
</thead>
<tbody>
<tr>
<td>#4</td>
<td>7.61</td>
<td>7.70</td>
<td>15.59</td>
<td>1.28</td>
<td>1.24</td>
<td>28.73</td>
<td>32.3</td>
</tr>
<tr>
<td>#5</td>
<td>7.60</td>
<td>7.59</td>
<td>15.59</td>
<td>1.27</td>
<td>1.25</td>
<td>28.43</td>
<td>32.0</td>
</tr>
<tr>
<td>#6</td>
<td>7.61</td>
<td>7.55</td>
<td>15.58</td>
<td>1.27</td>
<td>1.24</td>
<td>28.13</td>
<td>31.6</td>
</tr>
<tr>
<td>Average</td>
<td>7.61</td>
<td>7.61</td>
<td>15.58</td>
<td>1.28</td>
<td>1.25</td>
<td>28.43</td>
<td>32.0</td>
</tr>
</tbody>
</table>

**Absorption Units:** Where the thinnest points of opposite faces shells differ in thickness by less than 0.125 inches, their measurements are averaged.

#### Date Tested:

- **5/5/2013**

**Comments:** These units meet or exceed the compressive strength, absorption and dimensional requirements of ASTM C90-12.

**Nicholas R. Lang**  
Manager, Research & Development Laboratory

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**Form TR-C140-01**  
**Revised 2/15/2013**