



May 7, 2008

William Love  
Arto Manufacturing Company  
15209 S. Broadway St.  
Gardena, CA 90248

Subject: Concrete Paver Load Testing  
Heider Engineering Services, Inc. Project No. 080087-1

Dear Mr. Love,

Heider Engineering Services, Inc. performed load testing on concrete pavers delivered to our laboratory on April 28, 2008. The pavers were supported on the 4 corners with plastic pedestals identified as DPH4/DPH5. A vertical load was applied at the center of the pavers with a hydraulic jack in conjunction with a calibrated load cell. The load from the hydraulic jack was applied to a 2" diameter steel disk which was placed on the center of the concrete paver. The maximum load at failure was recorded. Please find the results of this testing tabulated below.

**Concrete Pavers - 11.5" by 11.5" by 2"**

<u>Lab No.</u>	<u>Identification</u>	<u>Load at Failure, lbs.</u>
4667	4-24	1645
4668	4-22	1735
4669	4-22	1764
4670	4-24	1580

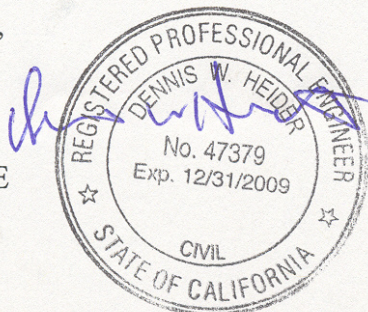
**Concrete Pavers - 17.75" by 17.75" by 2"**

<u>Lab No.</u>	<u>Identification</u>	<u>Load at Failure, lbs.</u>
4661	4-28	1873
4662	4-28	2010
4663	4.24	1250
4664	4-22	1540
4665	4-22	1590
4666	4-24	1405

If you have any questions or need additional information, please contact us at your convenience.

Respectfully submitted,

Dennis W. Heider, RCE  
Principal Engineer



Ph: (909) 673-0292

FAX: (909) 673-0272

800-A South Rochester Ave., Ontario CA 91761-8171



**Tested For:** Arto Manufacturing Company  
 15209 S Broadway St  
 Gardena, CA 90248

**Project:** Arto Brick

**Date:** April 29, 2008

**Heider Project No.:** 080087

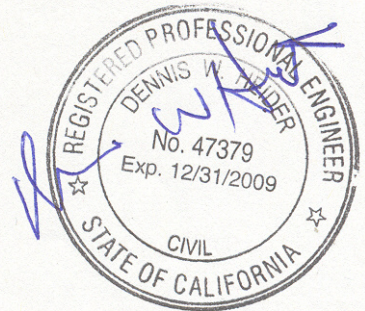
**COMPRESSIVE STRENGTH TEST REPORT**  
**ASTM C 39 & AASHTO T22 (2" X 4" NOMINAL CYLINDERS)**

**Project Address:** N/A  
**Engineer:** N/A  
**Contractor:** N/A

**Architect:** N/A

**Date Fabricated:**  
**Fabricated By:** Arto  
**Concrete Mix No.:**  
**Admixture(s):**  
**Batch Time:**

**Time Fabricated:**  
**Material Supplier:**  
**Specified Strength:**  
**Truck No.:**  
**Ticket No.:**



**Location of Placement:**

**Slump, in., ASTM C 143:**  
**Air Temp.:**  
**Unit Weight, pcf, ASTM C 138:**  
**Height, inches:**

**Concrete Temp., ASTM C 1064:**  
**Air Content, %, ASTM C 231:**  
**No. of Cyls. Made:** 5  
**Ages to be tested:**

**Comments:**

<b>Date of test:</b>	04/29/08	04/29/08	04/29/08	04/29/08	04/29/08		
<b>Specimen label/color:</b>	B-1 - Grey	B-2 - Grey	1b - Peach	2b - Peach	3b - Peach		
<b>Lab No.:</b>	4656	4657	4658	4659	4660		
<b>Diameter, in.:</b>	2.00	2.00	2.00	2.00	2.00		
<b>Load at failure, lbs:</b>	15,550	15,980	17,280	14,970	18,410		
<b>Compressive strength, psi:</b>	4,950	5,090	5,500	4,770	5,860		
<b>Tested by:</b>	AG	AG	AG	AG	AG		
<b>Type of failure*:</b>	2	2	2	2	2		

\*1) Cone 2) Cone and Split 3) Columnar 4) Diagonal Shear 5) Side Fracture 6) Pointed End Fracture

Test specimens \_\_\_\_\_ meet \_\_\_\_\_ do not meet the specifications

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**Tested For:** Arto Manufacturing Company  
 15209 S Broadway St  
 Gardena, CA 90248

**Project:** Arto Brick

**Date:** April 29, 2008

**Heider Project No.:** 080087

**COMPRESSIVE STRENGTH TEST REPORT**  
**ASTM C 39 & AASHTO T22 (3" X 6" NOMINAL CYLINDERS)**

**Project Address:** N/A  
**Engineer:** N/A  
**Contractor:** N/A

**Architect:** N/A

**Date Fabricated:**  
**Fabricated By:** Arto  
**Concrete Mix No.:**  
**Admixture(s):**  
**Batch Time:**

**Time Fabricated:**  
**Material Supplier:**  
**Specified Strength:**  
**Truck No.:**  
**Ticket No.:**



**Location of Placement:**

**Slump, in., ASTM C 143:**  
**Air Temp.:**  
**Unit Weight, pcf, ASTM C 138:**  
**Height, inches:**

**Concrete Temp., ASTM C 1064:**  
**Air Content, %, ASTM C 231:**  
**No. of Cyls. Made:** 5  
**Ages to be tested:**

**Comments:**

<b>Date of test:</b>	04/29/08	04/29/08	04/29/08	04/29/08	04/29/08		
<b>Specimen label/color:</b>	B-3 - Grey	B-4 - Grey	1a - Peach	2a - Peach	3a - Peach		
<b>Lab No.:</b>	4651	4652	4653	4654	4655		
<b>Diameter, in.:</b>	3.00	3.00	3.00	3.00	3.00		
<b>Load at failure, lbs:</b>	35,390	33,070	37,040	40,460	48,000		
<b>Compressive strength, psi:</b>	5,010	4,680	5,240	5,720	6,790		
<b>Tested by:</b>	AG	AG	AG	AG	AG		
<b>Type of failure*:</b>	2	2	2	2	2		

\*1) Cone 2) Cone and Split 3) Columnar 4) Diagonal Shear 5) Side Fracture 6) Pointed End Fracture

Test specimens \_\_\_\_\_ meet \_\_\_\_\_ do not meet the specifications

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