CONCRETE PRODUCTS GROUP

OBERFIELDS LLC is one of 13 original founding members of the Concrete Products Group. The Concrete Products Group (CPG) consists of regional market leaders in the concrete products industry. The CPG is organized to provide consistent, top-quality products to regional and national customers, from a local regional plant to anywhere in the United States. Our products such as Spec-BRIK® WCT (Water Control Technology™), Spec-Finish and Spec-Thermal™ are produced with consistent specifications and production expertise.

OBERFIELDS LLC IS A PROUD MEMBER OF:

- The Builders Exchange of Central Ohio
- Construction Specification Institute
- National Concrete Masonry Association
- Ohio Masonry Association
- Concrete Products Group
SAFETY

All Oberfields concrete masonry units are manufactured in accordance with ASTM C-90, the industry standard for load bearing concrete masonry units.

Material Safety Data Sheets (MSDS) are available upon request from Oberfields for the products listed in this Guide.

Please note, sawing or grinding of concrete masonry units may result in the release of dust particles, which could cause minor eye or nose irritation if proper protective equipment is not in place. The use of a NIOSH approved respirator and tight goggles is recommended when sawing or grinding operations are in progress. Please contact our Customer Service Center if further information is desired.

TECHNICAL SUPPORT

Oberfields Technical Support Staff will gladly provide written quotations for all your special project needs. To expedite the process, have any dimensional constraints, drawings, and product requirements available for our review.

FIRE RATING

The fire ratings for the concrete masonry units in this Guide were calculated using the equivalent thickness method and based on the use of normal weight aggregates. References include ASTM C90, ASTM C140, TEK 7-1E, International Building Code 2009, and ASTM E119.
The aesthetic beauty and structural characteristics that concrete masonry possess are being recognized and appreciated. It is important that units are ordered correctly the first time to insure the lowest overall cost, while achieving the finest quality and appearance.

1. Check for changes in quantity and color. With multiple colors, due to the use of accent bands and other color combinations, ordering by Oberfields name and number will help to clarify your order.

2. By using Oberfields Concrete Masonry Product Guide, you can order by Oberfields product number to avoid confusion. If the need arises for a shape or size that is not currently cataloged, check with your salesperson or our Technical Support Staff for the manufacturing lead time. Oberfields invites your requests for custom shapes, sizes, aggregates, textures, weights, and colors.

3. For special orders, contact Oberfields Customer Service Department for lead time.

4. Special units such as corners and halves, correctly ordered at the beginning of the project, will aid in color uniformity.

5. When calculating for estimating and dimensioning use width x height x length.
8" UNITS

55  8" x 8" x 16" SOLID
   203 x 203 x 406
   UNIT WEIGHT: 63
   ON PALLET
   54 PER CUBE
   RATED 4 HOURS

56  8" x 8" x 16" SOLID HEADER
   203 x 203 x 406
   UNIT WEIGHT: 48
   ON 8s
   72 PER CUBE

59  8" x 4" x 16" DOUBLE END
   203 x 102 x 406
   UNIT WEIGHT: 17

61  8" x 4" x 16" SASH & END
   203 x 102 x 406
   UNIT WEIGHT: 17

63a 8" x 4" x 16" RESTRICTED BOND BEAM
   203 x 102 x 406
   UNIT WEIGHT: 17
   ON PALLET
   144 PER CUBE
   NON-STOCK

64  8" x 6" x 16" DOUBLE END
   203 x 152 x 406
   UNIT WEIGHT: 25
   NON-STOCK

65  8" x 6" x 16" DOUBLE END BREAKER
   203 x 152 x 406
   UNIT WEIGHT: 25

66  8" x 6" x 16" SASH & END
   203 x 102 x 406
   UNIT WEIGHT: 25

67  8" x 6" x 16" SASH BREAKER
   203 x 102 x 406
   UNIT WEIGHT: 25

68  8" x 6" x 16" DOUBLE END
   203 x 152 x 406
   UNIT WEIGHT: 25
   ON PALLET
   90 PER CUBE

69  8" x 8" x 8" SASH & END
   203 x 203 x 203
   UNIT WEIGHT: 21
   ON PALLET
   144 PER CUBE

70  8" x 8" x 12" DOUBLE END
   203 x 203 x 305
   UNIT WEIGHT: 29
   ON PALLET
   120 PER CUBE

71  8" x 8" x 8" 45 DEGREE
   203 x 203 x 203
   UNIT WEIGHT: 29
   ON PALLET
   120 PER CUBE

56  8" x 8" x 12" DOUBLE END
   203 x 203 x 305
   UNIT WEIGHT: 29
   ON PALLET
   120 PER CUBE
10" BULLNOSE

10" x 8" x 16" SINGLE BULLNOSE & END
- 10" x 8" x 16"
- 254 x 203 x 406
- Unit Weight: 50
- On Pallet
- 75 Per Cube
- Non-Stock

10" x 8" x 16" DOUBLE BULLNOSE & END
- 10" x 8" x 16"
- 254 x 203 x 406
- Unit Weight: 50
- On Pallet
- 75 Per Cube
- Non-Stock

12" SOLID

12" x 4" x 16" SOLID
- 12" x 4" x 16"
- 305 x 102 x 406
- Unit Weight: 48
- On Pallet
- 72 Per Cube

12" x 8" x 16" SOLID
- 12" x 8" x 16"
- 305 x 203 x 406
- Unit Weight: 99
- On Pallet
- 36 Per Cube

12" x 4" x 16" RESTRICTED BOND BEAM
- 12" x 4" x 16"
- 305 x 102 x 406
- Unit Weight: 24
- On Pallet
- 120 Per Cube

12" x 8" x 16" STRETCHER
- 12" x 8" x 16"
- 305 x 203 x 406
- Unit Weight: 55
- On Pallet
- 60 Per Cube
12" BULLNOSE

12" x 8" x 8" SINGLE BULLNOSE & END
- 12" x 8" x 8"
- 305 x 203 x 203
- UNIT WEIGHT: 29
- ON PALLET
- 120 PER CUBE

12" x 8" x 8" DOUBLE BULLNOSE & END
- 12" x 8" x 8"
- 305 x 203 x 203
- UNIT WEIGHT: 29
- ON PALLET
- 120 PER CUBE

12" x 8" x 16" SINGLE BULLNOSE & END
- 12" x 8" x 16"
- 305 x 203 x 406
- UNIT WEIGHT: 57
- ON PALLET
- 60 PER CUBE

12" x 8" x 16" DOUBLE BULLNOSE & END
- 12" x 8" x 16"
- 305 x 203 x 406
- UNIT WEIGHT: 57
- ON PALLET
- 60 PER CUBE

14" BULLNOSE

14" x 8" x 8" SASH & END
- 14" x 8" x 8"
- 356 x 203 x 203
- UNIT WEIGHT: 33
- ON PALLET
- 30 PER CUBE

14" x 8" x 16" SASH & END
- 14" x 8" x 16"
- 356 x 203 x 406
- UNIT WEIGHT: 58
- RATED 4 HOURS

14" STRETCHER

14" x 8" x 8" STRETCHER
- 14" x 8" x 8"
- 356 x 203 x 203
- UNIT WEIGHT: 55
- ON PALLET
- 54 PER CUBE

14" x 8" x 16" STRETCHER
- 14" x 8" x 16"
- 356 x 203 x 406
- UNIT WEIGHT: 55
- RATED 4 HOURS
16" x 8" x 16" STRETCHER

16" x 8" x 16"
406 x 203 x 406
UNIT WEIGHT: 57

RATED 4 HOURS
ON PALLET 45 PER CUBE

16" x 8" x 16" SASH & END

16" x 8" x 16"
406 x 203 x 406
UNIT WEIGHT: 63

RATED 4 HOURS
ON PALLET 45 PER CUBE

16" x 8" x 8" SASH & END

16" x 8" x 8"
406 x 203 x 406
UNIT WEIGHT: 65
90 PER CUBE
NON-STOCK

RATED 4 HOURS

ARCHITECTURAL MASONRY

SMOOTH FACE ARCHITECTURAL

4" x 4" x 16" SOLID FROGGED ON TOP

4" x 4" x 16"
102 x 102 x 406
UNIT WEIGHT: 15
ON PALLET
216 PER CUBE
NON-STOCK

RATED 1 HOUR
ON PALLET 144 PER CUBE

4" x 8" x 16" DOUBLE END

4" x 8" x 16"
102 x 203 x 406
UNIT WEIGHT: 23
NON-STOCK

RATED 1 HOUR
ON PALLET 144 PER CUBE

4" x 8" x 16" DOUBLE END BREAKER

4" x 8" x 16"
102 x 203 x 406
UNIT WEIGHT: 24
NON-STOCK

RATED 1 HOUR
ON PALLET 144 PER CUBE

6" x 4" x 16" DOUBLE END

6" x 4" x 16" DOUBLE END BREAKER

6" x 4" x 16" DOUBLE SASH BREAKER

6" x 4" x 16" SASH & END

STANDARD CUBE 192 PER CUBE

ARCHITECTURAL MASONRY

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SPLIT FACE 4"

**125a** 4" x 3" x 8" DOUBLE END
12" x 8" x 16"  
305 x 203 x 406  
UNIT WEIGHT: 4  
ON PALLET 525 PER CUBE  
NON-STOCK

**125b** 4" x 3" x 8" SASH & END BREAKER
12" x 8" x 16"  
305 x 203 x 406  
UNIT WEIGHT: 4  
ON PALLET 525 PER CUBE  
NON-STOCK

**125c** 4" x 3" x 16" DOUBLE END
12" x 8" x 16"  
305 x 203 x 406  
UNIT WEIGHT: 4  
ON PALLET 525 PER CUBE  
NON-STOCK

**126** 4" x 3" x 8" SOLID SPLIT FACE CONCRETE BRICK
102 x 57 x 203  
UNIT WEIGHT: 4  
ON PALLET 525 PER CUBE  
NON-STOCK

**127** 4" x 3" x 8" SOLID CORNER & END SPLIT FACE CONCRETE BRICK
102 x 57 x 203  
UNIT WEIGHT: 4  
ON PALLET 525 PER CUBE  
NON-STOCK

**125a** 4" x 3" x 8" DOUBLE END
12" x 8" x 16"  
305 x 203 x 406  
UNIT WEIGHT: 4  
ON PALLET 525 PER CUBE  
NON-STOCK

**125b** 4" x 3" x 8" SASH & END BREAKER
12" x 8" x 16"  
305 x 203 x 406  
UNIT WEIGHT: 4  
ON PALLET 525 PER CUBE  
NON-STOCK

**125c** 4" x 3" x 16" DOUBLE END
12" x 8" x 16"  
305 x 203 x 406  
UNIT WEIGHT: 4  
ON PALLET 525 PER CUBE  
NON-STOCK

**148** 4" x 2" x 16" SOLID SPLIT FACE
4" x 2" x 16"  
102 x 51 x 406  
UNIT WEIGHT: 7  
ON PALLET 504 PER CUBE  
NON-STOCK

**149** 4" x 3" x 16" SOLID SPLIT FACE
4" x 3" x 16"  
102 x 76 x 406  
UNIT WEIGHT: 12  
ON PALLET 288 PER CUBE  
NON-STOCK

**150** 4" x 4" x 12" SOLID CORNER & END SPLIT FACE
4" x 4" x 12"  
102 x 102 x 305  
UNIT WEIGHT: 17  
ON PALLET 216 PER CUBE  
NON-STOCK

**151** 4" x 4" x 16" SOLID SPLIT FACE FROGGED
4" x 4" x 16"  
102 x 102 x 406  
UNIT WEIGHT: 17  
ON PALLET 216 PER CUBE  
NON-STOCK

**152** 4" x 8" x 12" SOLID CORNER & END SPLIT FACE
4" x 8" x 12"  
102 x 203 x 305  
UNIT WEIGHT: 34  
ON PALLET 108 PER CUBE  
NON-STOCK

**152a** 4" x 8" x 16" SOLID L CORNER & END SPLIT FACE
4" x 8" x 16"  
102 x 203 x 406  
UNIT WEIGHT: 34  
ON PALLET 108 PER CUBE  
NON-STOCK

**153** 4" x 8" x 16" SOLID SPLIT FACE FROGGED
4" x 8" x 16"  
102 x 203 x 406  
UNIT WEIGHT: 34  
ON PALLET 108 PER CUBE  
NON-STOCK

*EVERY 3RD HAS 1 FROG TO SPLIT CORNERS IN THE FIELD*
**SPLIT FACE 10”**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Dimensions</th>
<th>Unit Weight</th>
<th>Stock Status</th>
<th>Pallet Information</th>
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</thead>
<tbody>
<tr>
<td>178</td>
<td>10” x 8” x 16” stretcher split face</td>
<td>254 x 203 x 406</td>
<td>54</td>
<td>Non-Stock</td>
<td>60 per cube</td>
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<tr>
<td>178a</td>
<td>10” x 8” x 16” sash &amp; end breaker split face</td>
<td>254 x 203 x 406</td>
<td>56</td>
<td>Non-Stock</td>
<td>60 per cube</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Dimensions</th>
<th>Unit Weight</th>
<th>Stock Status</th>
<th>Pallet Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>180</td>
<td>10” x 8” x 16” termite or bond beam split face</td>
<td>254 x 203 x 406</td>
<td>60</td>
<td>Non-Stock</td>
<td>60 per cube</td>
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<tr>
<td>181</td>
<td>10” x 8” x 16” open bottom bond beam split face</td>
<td>254 x 203 x 406</td>
<td>53</td>
<td>Non-Stock</td>
<td>72 per cube</td>
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**SPLIT FACE 12”**

<table>
<thead>
<tr>
<th>Code</th>
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<th>Dimensions</th>
<th>Unit Weight</th>
<th>Stock Status</th>
<th>Pallet Information</th>
</tr>
</thead>
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<tr>
<td>182</td>
<td>12” x 4” x 16” solid split face</td>
<td>305 x 102 x 406</td>
<td>51</td>
<td>Non-Stock</td>
<td>60 per cube</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Dimensions</th>
<th>Unit Weight</th>
<th>Stock Status</th>
<th>Pallet Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>183</td>
<td>12” x 4” x 16” double end split face</td>
<td>305 x 102 x 406</td>
<td>29</td>
<td>Non-Stock</td>
<td>120 per cube</td>
</tr>
<tr>
<td>184</td>
<td>12” x 4” x 16” sash &amp; end breaker split face</td>
<td>305 x 102 x 406</td>
<td>30</td>
<td>Non-Stock</td>
<td>120 per cube</td>
</tr>
<tr>
<td>185</td>
<td>12” x 8” x 8” sash &amp; end split face</td>
<td>305 x 203 x 203</td>
<td>31</td>
<td>Non-Stock</td>
<td>120 per cube</td>
</tr>
</tbody>
</table>
196. 8" x 8" x 16" Corner & End Single Score Split Face
8" x 8" x 16"
203 x 203 x 406
UNIT WEIGHT: 45
ON PALLET
90 PER CUBE
NON-STOCK

197. 12" x 4" x 16" Double End Single Score
12" x 4" x 16"
305 x 102 x 406
UNIT WEIGHT: 29
NON-STOCK

198. 12" x 4" x 16" Sash & End Breaker Single Score Split Face
12" x 4" x 16"
305 x 102 x 406
UNIT WEIGHT: 30
NON-STOCK

199. 12" x 8" x 16" Stretcher Single Score Split Face
12" x 8" x 16"
305 x 203 x 406
UNIT WEIGHT: 58
NON-STOCK

200. 12" x 8" x 16" Sash & End Breaker Single Score Split Face
12" x 8" x 16"
305 x 203 x 406
UNIT WEIGHT: 60
NON-STOCK

219. 4" x 8" x 12" Solid Corner & End Deep 4 Flute Split Face
4" x 8" x 12"
102 x 203 x 305
UNIT WEIGHT: 24
ON PALLET
96 PER CUBE
NON-STOCK

220. 4" x 8" x 16" Solid Double End Deep 4 Flute Split Face
4" x 8" x 16"
102 x 203 x 406
UNIT WEIGHT: 30
ON PALLET
108 PER CUBE
NON-STOCK

240. 4" x 8" x 16" Solid Double End 8 Flute Split Face
4" x 8" x 16"
102 x 203 x 406
UNIT WEIGHT: 30
ON PALLET
144 PER CUBE
NON-STOCK

241. 4" x 8" x 16" Solid 45 Degree Corner & End 8 Flute Split Face
4" x 8" x 16"
102 x 203 x 406
UNIT WEIGHT: 26
ON PALLET
144 PER CUBE
NON-STOCK

242. 8" x 8" x 16" 45 Degree Corner & End 8 Flute Split Face
8" x 8" x 16"
203 x 203 x 406
UNIT WEIGHT: 40
ON PALLET
75 PER CUBE
NON-STOCK

243. 8" x 8" x 16" Stretcher 8 Flute Split Face
8" x 8" x 16"
203 x 203 x 406
UNIT WEIGHT: 43
NON-STOCK

244. 8" x 8" x 16" Sash & End Breaker 8 Flute Split Face
8" x 8" x 16"
203 x 203 x 406
UNIT WEIGHT: 44
NON-STOCK
CORNER DETAILS

A  4" WALL USING 4" x 8" x 12" SOLID CORNER & END SPLIT FACE

B  4" WALL USING 4" x 8" x 16" FULL RETURN L CORNER

Ba  4" WALL USING 4" x 8" x 16" FULL RETURN L CORNER SPLIT FACE

C  4" WALL USING 4" x 8" x 12" CORNER & END DEEP 4 FLUTE SPLIT FACE

D  4" WALL USING 4" x 8" x 16" 45° CORNER & END 8 FLUTE SPLIT FACE

E  6" WALL USING 6" x 8" x 14" DOUBLE END

F  8" WALL USING 4" x 8" x 12" SOLID CORNER & END SPLIT FACE

G  8" WALL USING 8" x 8" x 16" CORNER & END SPLIT FACE

I  8" WALL USING 4" x 8" x 12" CORNER & END DEEP 4 FLUTE SPLIT FACE

J  8" WALL USING 8" x 8" x 16" 45° CORNER & END 8 FLUTE SPLIT FACE

K  10" WALL USING 10" x 8" x 16" RETURN CORNER

L 12" WALL USING 4" x 8" x 12" SOLID CORNER SPLIT FACE
CORNER DETAILS (CONTINUED)

<table>
<thead>
<tr>
<th></th>
<th>12” WALL USING 8” x 8” x 16” CORNER &amp; END SPLIT FACE</th>
<th>12” WALL USING 4” x 8” x 12” CORNER &amp; END DEEP 4 FLUTE SPLIT FACE</th>
<th>12” WALL USING 12” x 8” x 16” RETURN CORNER</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
<td><img src="image3.png" alt="Diagram" /></td>
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<tr>
<td></td>
<td>1st COURSE</td>
<td>1st COURSE</td>
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<tr>
<td></td>
<td>2nd COURSE</td>
<td>2nd COURSE</td>
<td>2nd COURSE</td>
</tr>
</tbody>
</table>

P 14” WALL USING 6” x 8” x 14” DOUBLE END

Q 16” WALL USING 8” x 8” x 16” DOUBLE END

R 4” WALL USING 4” x 12” x 16” SOLID CORNER & END SPLIT FACE OR SAND BLASTED

PIER DETAILS

8” UNITS

8” & 12” UNITS

614.252.0955    740.369.7644    800.845.7644    info@oberfields.com    OBERFIELDS.COM
### Length of Concrete Masonry Walls by Stretcher

<table>
<thead>
<tr>
<th>No. of Stretchers</th>
<th>Wall Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1'4&quot;</td>
</tr>
<tr>
<td>1.5</td>
<td>2'0&quot;</td>
</tr>
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<td>3'4&quot;</td>
</tr>
<tr>
<td>3</td>
<td>4'0&quot;</td>
</tr>
<tr>
<td>3.5</td>
<td>4'8&quot;</td>
</tr>
<tr>
<td>4</td>
<td>5'4&quot;</td>
</tr>
<tr>
<td>4.5</td>
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<td>7</td>
<td>9'4&quot;</td>
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<tr>
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<td>10'0&quot;</td>
</tr>
<tr>
<td>8</td>
<td>10'8&quot;</td>
</tr>
<tr>
<td>8.5</td>
<td>11'4&quot;</td>
</tr>
<tr>
<td>9</td>
<td>12'0&quot;</td>
</tr>
<tr>
<td>9.5</td>
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<tr>
<td>15</td>
<td>20'0&quot;</td>
</tr>
<tr>
<td>16</td>
<td>26'8&quot;</td>
</tr>
</tbody>
</table>

*Based on concrete blocks 15 5/8 in. long and half units 7 5/8 in. long, with 3/8 in. thick head joints. Actual lengths of finished walls are 3/8 in. less than the modular dimensions shown in this table.*

### Height of Concrete Masonry Walls by Courses

<table>
<thead>
<tr>
<th>No. of Courses</th>
<th>3/8&quot; Bed Joint</th>
<th>7/16&quot; Bed Joint</th>
<th>1/2&quot; Bed Joint</th>
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</thead>
<tbody>
<tr>
<td>3/8&quot; Block</td>
<td>4&quot; Block</td>
<td>8&quot; block</td>
<td>8 1/8&quot; block</td>
</tr>
<tr>
<td>1</td>
<td>8&quot;</td>
<td>4&quot;</td>
<td>8 1/8&quot;</td>
</tr>
<tr>
<td>2</td>
<td>1'4&quot;</td>
<td>8&quot;</td>
<td>8 1/8&quot;</td>
</tr>
<tr>
<td>3</td>
<td>2'0&quot;</td>
<td>1'8&quot;</td>
<td>2 3/8&quot;</td>
</tr>
<tr>
<td>4</td>
<td>2'8&quot;</td>
<td>1'4&quot;</td>
<td>2 3/8&quot;</td>
</tr>
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<td>7'6&quot;</td>
<td>2'8&quot;</td>
<td>2 3/8&quot;</td>
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<td>12</td>
<td>8'4&quot;</td>
<td>3'0&quot;</td>
<td>2 3/8&quot;</td>
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<td>50</td>
<td>38'8&quot;</td>
<td>23 5/8&quot;</td>
<td>23 5/8&quot;</td>
</tr>
</tbody>
</table>

*Based on concrete blocks 15 5/8 in. long and half units 7 5/8 in. long, with 3/8 in. thick head joints. Actual lengths of finished walls are 3/8 in. less than the modular dimensions shown in this table.*
ESTIMATING GUIDES

UNIT QUANTITIES
Standard Block (8x8x16)
1.13 block per square foot of wall area

Concrete Brick
7.0 concrete brick per square foot of wall area

Half-High Block (4x4x16 or 8x4x16)
2.26 block per square foot of wall area

APPROXIMATE VOLUME REQUIRED TO FILL CORE VOIDS IN BLOCK

<table>
<thead>
<tr>
<th>Size</th>
<th>Cores</th>
<th>Volume per Block</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 x 8 x 16</td>
<td>2 core</td>
<td>0.17 cu.ft./block</td>
</tr>
<tr>
<td>6 x 8 x 16</td>
<td>3 core</td>
<td>0.15 cu.ft./block</td>
</tr>
<tr>
<td>8 x 8 x 16</td>
<td>2 core</td>
<td>0.25 cu.ft./block</td>
</tr>
<tr>
<td>8 x 8 x 16</td>
<td>3 core</td>
<td>0.22 cu.ft./block</td>
</tr>
<tr>
<td>10 x 8 x 16</td>
<td>2 core</td>
<td>0.33 cu.ft./block</td>
</tr>
<tr>
<td>10 x 8 x 16</td>
<td>3 core</td>
<td>0.29 cu.ft./block</td>
</tr>
<tr>
<td>12 x 8 x 16</td>
<td>2 core</td>
<td>0.39 cu.ft./block</td>
</tr>
<tr>
<td>12 x 8 x 16</td>
<td>3 core</td>
<td>0.34 cu.ft./block</td>
</tr>
</tbody>
</table>

Example: 5000 - 8” - 2 core H.C. to be filled
5000 x 0.25 = 1250 cu. ft. + 27 cu. ft. per yard = 46.30 yards

MORTAR QUANTITIES

<table>
<thead>
<tr>
<th>Per 1000 Units</th>
<th>Masonry Cement Bags</th>
<th>Sand Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>4” and 6” Regular Block</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>8”, 10”, and 12” Regular Block</td>
<td>25</td>
<td>2 1/2</td>
</tr>
<tr>
<td>Concrete Brick</td>
<td>8</td>
<td>1 1/4</td>
</tr>
</tbody>
</table>

APPROXIMATE QUANTITIES OF CONCRETE REQUIRED TO FILL LINTELS AND BOND BEAMS

- .74 cu.ft. concrete per lin. ft.
- .46 cu.ft. concrete per lin. ft.
- .37 cu.ft. concrete per lin. ft.
- .22 cu.ft. concrete per lin. ft.
- .173 cu.ft. concrete per lin. ft.
- .08 cu.ft. concrete per lin. ft.
CLEANING CONCRETE MASONRY

**NEW CONSTRUCTION**

In order to reduce the amount of cleaning required at the completion of a building, walls should be cleaned each day. Mortar droppings should be allowed to harden slightly, then scraped off with a trowel or wood scraper. A small piece of broken block is also effective, followed by brushing with a stiff bristle or stainless steel wire brush (never use a steel wire brush).

Good masonry practices will minimize the amount of final cleaning significantly. Turning scaffolding boards at the end of the day and using sand or straw at the base of the wall will eliminate stains that are very difficult to remove later. Another important step is to cover the top of unfinished walls at the end of each day. This will prevent water from entering the cavities and will help prevent efflorescence. The plastic or tarp should drape at least two feet down each side of the wall.

Final cleaning will be easier if it occurs approximately one week after completion of walls (newly constructed walls must set 4 or 5 days to allow the mortar to harden prior to cleaning).

Never use high pressure cleaning! The use of high pressure power washers will most certainly alter the appearance of a concrete masonry wall and could cause unrepairable damage to the building. A pressure washer with a maximum of 200 psi and a wide flare nozzle held 12 to 18 inches from the surface will give excellent results on most projects. Pre-wetting walls is a necessary first step. Work in sections from top down for best results.

**CHEMICAL CLEANING**

If good masonry practices are followed, chemical cleaning will seldom be necessary. If required, consult project specifications or call OBERFIELDS LLC for product recommendations.

Follow mix solutions and directions of manufacturer. Always pre-wet surfaces prior to application of any cleaning solution.

Oil stains, grease, graffiti or efflorescence removal, refer to N.C.M.A. Tek Notes 8.1, 8.2, 8.3, and 8.4. Copies of these teks are available from OBERFIELDS LLC, oberfields.com, or The National Concrete Masonry Association.

WATER CONTROL TECHNOLOGY (WCT)

Why try to improve on one of the most trusted construction materials available? Water Control Technology (WCT) is based on preserving the superior performance characteristics of concrete masonry units while adding features that improve the ability of masonry wall assemblies to resist moisture penetration. Subtle changes were made to the top surface of each WCT units web to discourage water from crossing to the interior face shell. Corners and ends can use the WCT drainage zones without compromising aesthetics or performance. This innovation is fully compliant with ASTM C 90 and is a standard feature on all architectural masonry units produced by OBERFIELDS.

- WCT units feature integral drainage zones that direct moisture to the wall’s drainage system.
- No special installation techniques required—cost effectiveness is assured.
- WCT units are suitable for corners and ends for a complete system.
- All units have integral water repellent in their mix design.
- WCT units meet or exceed ASTM C 90.
- Perfect for both single or multi-wythe walls.
- Offered in a wide variety of shapes and sizes.

WCT units were spray bar tested with no mortar (just gaps) alongside a traditional block design with a water flow rate equivalent to 180” of rain per hour for a half hour and then at a rate of 30” of rain for an additional 24 hours.

**RESULT:** the traditional block began to show moisture penetration to the interior surface after 11 seconds. The WCT block completed the 24 hour test without any evident moisture penetration to the interior surface of the wall.
Understanding The Masonry Process

Smooth Face Architectural Concrete Masonry

“Smooth Face Architectural Concrete Masonry” is the designation used when a manufacturer produces a regular concrete block in a colored mix design. The only visual difference between Smooth Face Architectural Concrete Masonry and regular block...is the color.

For architects to achieve their design objective, it is important to understand the limitations of Smooth Face Architectural Concrete Masonry. The purpose of this page is to provide insight on the production process and field handling which collectively influence the finish and appearance of these block walls.

At the Block Plant

TEXTURE
Smooth Face Architectural Concrete Block is produced using the same molds and production process as a regular block. The texture and aris of Smooth Face Architectural Block are very similar to a regular concrete block. Smooth Face Architectural Block produced from white aggregate tend to have even rougher edges and irregular texture due to the physical characteristics of most white aggregates.

COLOR CONSISTENCY
Concrete products use synthetic iron oxides to achieve color. The colored iron oxides are batched into the concrete mix where they are bound into the cement paste. The pigmented cement paste then acts as a binding agent for the aggregates in the concrete product.

When concrete block are produced, this pigmented concrete mix is compacted in the mold under high pressure. This pressure forces the cement paste to the surface of the block. When you look at a Smooth Face Architectural Block, the color you see is predominately the cement paste. The concentration of cement paste that is forced to the surface varies block per block causing the overall color of the Smooth Face Block to change.

This is not true with Split Face, Ground Face or Sandblasted units. Split Face Block are molded together and split apart after they are removed from the kiln. The concentration of cement paste forms on the opposite side of the finished surface. The cement paste on the surface of Sandblasted and Ground Face Block is either blasted or ground off during the manufacturing process. Both Sandblasted and Ground Face rely on the exposed aggregate matrix of the concrete to achieve their appearance.

To illustrate this point, view the Split, Sandblasted or Ground Face of an Architectural Concrete Masonry wall during construction. Next, look at the opposite side of that very same wall. The surface that removes the cement paste and exposes the aggregate matrix (split, sandblasted or ground) will show only a slight range of color. The surface with the cement paste remaining (smooth face) will show a wide noticeable color range.

Concrete block are cured in large kilns. The goal of curing is hydration of the cement and is typically accomplished by elevating the temperature and moisture in the kiln. Temperature and moisture significantly affect the color of cement paste. Because the temperature and moisture vary within the kiln, the color of the cement paste will vary throughout the block in the kiln. Split Face, Ground Face or Sandblasted, whose finished surface do not rely on the surface cement paste are not affected. Smooth Face Block is significantly affected.

Handling At The Jobsite

CHIPPING
ASTM C-90 Standard Specification for “Load Bearing Concrete Masonry Units” recognizes that all concrete block projects experience chipping of the units from delivery and handling at the jobsite. “Minor cracks incidental to the usual method of manufacturing or minor chipping resulting from customary methods of handling in shipment and delivery are not grounds for rejection.” The rough texture of Split Face and Sandblasted Block mask minor chips and allow the mason contractor to fill in a minor chip while the mortar joints are tooled. Small chips and rough edges are very difficult and often not possible to blend into the Smooth Face Block due to its lack of texture.

SCRATCHING
The concentrated colored cement paste on the surface of a Smooth Face Block will scratch during customary methods of handling and delivery. One block rubbing against another removes the cement paste at the point of impact. This scratch appears as a white chalky line which cannot be removed by washing. Split Face are not as vulnerable to scratching as the aggregates of the exposed concrete matrix mask impact marks. Sandblasted Block are not affected as the entire surface has been etched by sand during the Sandblast process.

Suggested Design Considerations For Using Architectural Smooth Face Block

The wide color range and handling blemishes inherent in Smooth Face Architectural Concrete Block Walls can be minimized by limiting this style of block to small areas of the wall at higher elevations. An example is single course bands of Architectural Smooth Face Block within a field of Split Face.

Often Architectural Smooth Face Block are used for budget reasons after Split Face, Sandblasted or Ground Face Block have been eliminated due to their higher cost. One option is to use regular concrete block and stain the wall afterward. Deep penetrating masonry stains maintain the natural texture of the block and have excellent durability. These colored stains mask jobsite blemishes and blend in the wide range of color visible in regular concrete block walls.

If you have questions on the masonry process, or are interested in learning more on deep penetrating masonry stains, please contact our office at 614.252.0955.
We think you’ll agree—in concrete masonry, you won’t find a more solid performer than Oberfields.

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Oberfields is Ohio’s leading manufacturer, marketer, and technical resource for superior quality machine made and precast concrete products. OBERFIELDS also distributes a wide selection of top quality resale building materials merchandise to complement its innovative core product offering.

Oberfields has over 50 years of experience serving the concrete products industry. Its three manufacturing plants, four direct sales and distribution yards, and network of dealers and distributors throughout six states provide residential and commercial markets with a full range of concrete products and related materials including: standard concrete masonry; DesignBLOK® split-face architectural masonry; SpecBrik®; interlocking concrete pavers; retaining wall systems; sitescape products; and a full line of concrete masonry building materials. You won’t find a more complete line or more industry expertise in the entire region when it comes to standard or architectural concrete masonry. We have Certified Construction Document Technologists on staff to provide full support for our products, including solutions to complex design and construction challenges.

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