SECTION 04 21 13

HAND MOULDED BRICK MASONRY

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\*\* NOTE TO SPECIFIER \*\* Old Carolina Brick Co.; handmade clay masonry units.
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This section is based on the products of Old Carolina Brick Co., which is located at:475 Majolica Rd.Salisbury, NC 28147Toll Free Tel: 800-536-8850Tel: 704-636-8850Fax: 704-636-0000Email: [request info (dframe@handmadebrick.com)](https://arcat.com/rfi?action=email&company=Old%252BCarolina%252BBrick%252BCo.&message=RE%253A%2520Spec%2520Question%2520(04210car)%253A%2520&coid=42085&spec=04210car&rep=&fax=704-636-0000)
Web: <http://www.handmadebrick.com>
 [ [Click Here](https://arcat.com/company/old-carolina-brick-co-42085) ] for additional information.
The classic beauty of Old Carolina Brick is created by hand. Each brick is hand molded in the ageless tradition of craftsmanship and lasting beauty. Used on fine homes, distinctive commercial buildings, and notable historical restorations throughout the country and world locations, Old Carolina brick add a unique warmth and creative flavor to any architectural design. Our handmade brick are primarily used by discerning designers and architects to create visually stimulating textures, patterns, and color palettes.
Based on our commitment to quality and authenticity, Old Carolina brick are each hand molded and then hard fired to provide the beautiful bisques, hues, and unique colors identical to those of brick made centuries ago. Our hand crafting process imparts distinctive folds, finger marks, and particular surface irregularities for individual characterization of each brick. Old Carolina handmade brick provide a unique appearance unequalled by conventional mass produced brick. Special shapes and custom brick sizes are available, and can be readily created from customer designs. Old Carolina bricks are used as pavers as well as face brick, and are often used on beautiful landscaping applications.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Hand moulded clay masonry units and accessories for the following applications:
			1. Facing brick.
			2. Thin brick.
			3. Pavers.
			4. Special shapes.
			5. Custom applications and color blends.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 04 20 00 - Unit Masonry.
		2. Section 05 12 13 - Architecturally-Exposed Structural Steel Framing.
		3. Section 05 40 00 - Cold-Formed Metal Framing.
		4. Section 05 50 00 - Metal Fabrications.
		5. Section 06 10 00 - Rough Carpentry.
		6. Section 07 10 00 - Dampproofing and Waterproofing.
		7. Section 07 27 00 - Air Barriers.
		8. Section 07 60 00 - Flashing and Sheet Metal.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM C 216 - Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale).
		2. ASTM C 902 - Standard Specification for Pedestrian and Light Traffic Paving Brick.
		3. ASTM C 1088 - Standard Specification for Thin Veneer Brick Units Made from Clay or Shale.
		4. Brick Industry Association (BIA) Technical Notes on Brick Construction 20 - Cleaning Brickwork.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.
		3. Samples: Furnish not less than five individual brick as samples, showing extreme variations in color and texture.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Sample Panel: Mock-up or sample panels shall be used to review brick and mortar color and serve as the standard of workmanship for the Project.
			1. Approximately 4 feet (1.2 m) long by 3 feet (1 m) high, showing the proposed color range, texture, bond, mortar and workmanship. All brick shipped for the sample shall be included in the panel.
			2. When required, provide a separate panel for each type of brick or mortar.
			3. Do not start work until Architect/Engineer has accepted sample panel.
			4. Use panel as standard of comparison for all masonry work built of same material.
			5. Do not destroy or move panel until work is completed and accepted by Architect.
	1. QUALITY ASSURANCE

\*\* NOTE TO SPECIFIER \*\* Insert qualifications required. Delete if not required.

* + 1. Manufacturer Qualifications: Minimum 5 years manufacturing similar products.

\*\* NOTE TO SPECIFIER \*\* Insert qualifications required. Delete if not required.

* + 1. Installer Qualifications: Minimum 2 years installing similar products.
		2. Certificates: Prior to delivery, submit to Architect/Engineer certificates attesting compliance with the applicable specifications for grades, types or classes included in these specifications.
	1. DELIVERY, STORAGE, AND HANDLING
		1. Store products in manufacturer's unopened packaging until ready for installation.
		2. Store brick off the ground to prevent contamination by mud, dust or other materials likely to cause staining or other defects.
		3. Cover all materials with a nonstaining waterproof membrane material when necessary to protect from elements.
		4. Store different types of materials separately.
	2. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Old Carolina Brick Co., which is located at:475 Majolica Rd.Salisbury, NC 28147Toll Free Tel: 800-536-8850Tel: 704-636-8850Fax: 704-636-0000Email: [request info (dframe@handmadebrick.com)](https://arcat.com/rfi?action=email&company=Old%252BCarolina%252BBrick%252BCo.&message=RE%253A%2520Spec%2520Question%2520(04210car)%253A%2520&coid=42085&spec=04210car&rep=&fax=704-636-0000);Web: <http://www.handmadebrick.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements0 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. FACE BRICK
		1. Facing Brick: ASTM C 216, Grade SW, Type FBA.

\*\* NOTE TO SPECIFIER \*\* Delete brick sizes not required.

* + - 1. Size: Modular 020: 2-1/4 x 3-5/8 x 7-5/8 inches.
			2. Size: Oversize 000: 2-3/4 x 4 x 8-1/2 inches.
			3. Size: Norman 2293: 2-1/4 x 3-5/8 x 11-5/8 inches.
			4. Size: Roman 1642: 1-5/8 x 3-5/8 x 11-5/8 inches.
			5. Size: Queen Size 040: 2-3/4 x 3-5/8 x 7-5/8 inches

\*\* NOTE TO SPECIFIER \*\* Delete colors not required.

* + - 1. Color: Savannah Grey.
			2. Color: Georgetowne.
			3. Color: Tryon.
			4. Color: Charlestowne.
			5. Color: Whiltshire.
			6. Color: Bessemer Grey.
			7. Color: Low Country.
			8. Color: Londontowne.
			9. Color: Park Ridge.
			10. Color: Old Post Office.
			11. Color: Cambridge.
			12. Color: St. Michaels.
			13. Color: Jefferson College.
			14. Color: Williamstowne.
			15. Color: Cape Charles.
			16. Color: Dumaine.
			17. Color: Carters Grove.
			18. Color: Brunswick.
		1. Special Shapes:

\*\* NOTE TO SPECIFIER \*\* Delete special shapes not required.

* + - 1. Water Table Type A:
				1. 103 External Corner.
				2. 101 Rowlock.
				3. 102 Internal Corner.
			2. Water Table Type B:
				1. 106 External Corner.
				2. 104 Rowlock.
				3. 105 Internal Corner.
			3. Water Table Type C:
				1. 109 External Corner.
				2. 107 Rowlock.
				3. 108 Internal Corner.
			4. Bullnose Rowlock:
				1. 137 External Corner.
				2. 135 Rowlock.
				3. 136 Internal Corner.
			5. Double Bullnose Rowlock:
				1. 139 External Corner.
				2. 138 Rowlock.
				3. 140 Internal Corner.
			6. Cove and Bullnose Rowlock:
				1. 119 External Corner.
				2. 117 Rowlock.
				3. 118 Internal Corner.
			7. Moulded Base Type A:
				1. 124 External Corner Left.
				2. 224 External Corner Right.
				3. 121 Header.
				4. 122 Stretcher.
				5. 123 Internal Corner Left.
				6. 223 Internal Corner Right.
			8. Moulded Base Type B:
				1. 128 External Corner Left.
				2. 228 External Corner Right.
				3. 125 Header.
				4. 126 Stretcher.
				5. 127 Internal Corner Left.
				6. 227 Internal Corner Right.
			9. Splay Water Table:
				1. 148 External Corner Left.
				2. 248 External Corner Right.
				3. 145 Header.
				4. 146 Stretcher.
				5. 147 Internal Corner Left.
				6. 247 Internal Corner Right.
			10. Bullnose Water Table:
				1. 134 External Corner Left.
				2. 234 External Corner Right.
				3. 131 Header.
				4. 132 Stretcher.
				5. 133 Internal Corner Left.
				6. 233 Internal Corner Right.
			11. Water Table Type D:
				1. 144 External Corner Left.
				2. 244 External Corner Right.
				3. 141 Header.
				4. 142 Stretcher.
				5. 143 Internal Corner Left.
				6. 243 Internal Corner Right.
			12. Cove Water Table:
				1. 114 External Corner Left.
				2. 214 External Corner Right.
				3. 111 Header.
				4. 112 Stretcher.
				5. 113 Internal Corner Left.
				6. 213 Internal Corner Right.
			13. 231 External Corner 135 degrees.
			14. 232 Internal Corner 135 degrees.
			15. 236 External Corner 45 degrees.
			16. 601 Inside Radial: \_\_\_\_\_ inch radius.
			17. 303 Outside Radial: \_\_\_\_\_ inch radius.
			18. Wall Coping Type 1:
				1. 163 Wall End.
				2. 161 Stretcher.
				3. 162 Corner.
			19. Wall Coping Type 2:
				1. 173 Wall End.
				2. 171 Cap.
				3. 172 Corner.
			20. Wall Coping Type 3:
				1. 176 Wall End.
				2. 174 Cap.
				3. 175 Corner.
			21. Wall Coping Type A:
				1. 179 Wall End.
				2. 177 Cap.
				3. 178 Corner.
			22. Wall Coping Type B:
				1. 215 Wall End.
				2. 216 Coping.
				3. 217 Corner.
			23. Wall Coping Type C:
				1. 219 Wall End.
				2. 220 Coping.
				3. 221 Corner.
			24. 611 Post Cap 9 Piece: 29-1/2 inches.
			25. 1316 Post Cap 4 Piece: 19-1/2 inches.
			26. 186 Post Cap 4 Piece: 13 inches.
			27. Step Tread:
				1. 191 Step Tread Header.
				2. 195 Step Tread Rowlock.
				3. 193 Step Tread Corner.
				4. 196 Step Tread Rowlock Corner.
			28. Window Sill:
				1. 152 Window Sill Rowlock, 4 inches.
				2. 151 Window Sill Rowlock, 2-3/4 inches.
				3. 155 Window Sill Return Right, 4 inches.
				4. 153 Window Sill Return Right, 2-3/4 inches.
				5. 156 Window Sill Return Left, 4 inches.
				6. 154 Window Sill Return Left, 2-3/4 inches.
			29. Round Nose Water Table.
			30. Dog Bone Edger.
			31. Jack Arch:
				1. 600 One Piece 3 Course.
				2. 601 One Piece 2 Course.
				3. 602 Two Piece 3 Course.
				4. 603 Three Piece 4 Course.
				5. 604 Three Piece 5 Course.
				6. Masonry Opening Size: \_\_\_\_\_.
				7. Skew Angle: \_\_\_\_\_.
			32. Radial Arch:
				1. 810 One Piece.
				2. 811 Two Piece.
				3. 812 Three Piece.
				4. 813 Three Piece.
				5. Arch Height: \_\_\_\_\_.
				6. Masonry Opening Size: \_\_\_\_\_.
				7. Radius: \_\_\_\_\_.
			33. Semi-Circular Arch:
				1. 820 One Piece.
				2. 821 Two Piece.
				3. 822 Three Piece.
				4. 823 Three Piece.
				5. Arch Height: \_\_\_\_\_.
				6. Masonry Opening Size: \_\_\_\_\_.
			34. Circular Arch:
				1. 830 One Piece.
				2. 831 Two Piece.
				3. 832 Three Piece.
				4. 833 Three Piece.
				5. Arch Height: \_\_\_\_\_.
				6. Masonry Opening Size: \_\_\_\_\_.
			35. Elliptical Arch:
				1. 840 One Piece.
				2. 841 Two Piece.
				3. 842 Three Piece.
				4. Arch Height: \_\_\_\_\_.
				5. Masonry Opening Size: \_\_\_\_\_.
			36. Bonded Paladian Arch:
				1. Arch Height: \_\_\_\_\_.
				2. Masonry Opening Size: \_\_\_\_\_.
				3. Overall Opening Size: \_\_\_\_\_.
				4. Skew Angle: \_\_\_\_\_.
			37. 205 Garden Edger.
		1. All brick supplied shall be pre-blended by the manufacturer.

\*\* NOTE TO SPECIFIER \*\* Old Caroline thin brick are 3/4 inch faces cut from genuine handmade brick and give an exceptional appearance for non-structural use for walls, back splashes, wine cellars, fireplaces, ceilings, and numerous projects. Thin brick can be used for both interior and exterior applications. Delete if not required.

* 1. THIN BRICK
		1. Thin Brick: ASTM C 1088, Type FBA.

\*\* NOTE TO SPECIFIER \*\* Delete brick sizes not required.

* + - 1. Size: Modular Thin TB-020: 2-1/4 x 7-5/8 x 3/4 inches.
			2. Size: Oversize Thin TB-000: 2-3/4 x 8-1/2 x 3/4 inches.

\*\* NOTE TO SPECIFIER \*\* Delete colors not required.

* + - 1. Color: Savannah Grey.
			2. Color: Georgetowne.
			3. Color: Tryon.
			4. Color: Charlestowne.
			5. Color: Whiltshire.
			6. Color: Bessemer Grey.
			7. Color: Low Country.
			8. Color: Londontowne.
			9. Color: Park Ridge.
			10. Color: Old Post Office.
			11. Color: Cambridge.
			12. Color: St. Michaels.
			13. Color: Jefferson College.
			14. Color: Williamstowne.
			15. Color: Cape Charles.
			16. Color: Dumaine.
			17. Color: Carters Grove.
			18. Color: Brunswick.
		1. Thin Brick Corners:

\*\* NOTE TO SPECIFIER \*\* Delete special shapes not required.

* + - 1. TC-020 Modular Thin Corner: 2-1/4 x 7-5/8 x 3/4 inches
			2. TC-000 Oversize Thin Corner: 2-3/4 x 8-1/2 inches x 3/4 inches.
		1. All brick supplied shall be pre-blended by the manufacturer.

\*\* NOTE TO SPECIFIER \*\* Classic. Antique. Elegant. Old Carolina fired clay brick pavers are created by hand. All of our brick are hand moulded in the colonial tradition of craftsmanship and lasting beauty. All of our genuine handmade brick are solid so that every one may be used flat for paving or landscaping. Delete if not required.

* 1. PAVERS
		1. Pavers: ASTM C 902, Grade SX, Type FBA.

\*\* NOTE TO SPECIFIER \*\* Delete paver sizes not required. Fill in size if using a brick size as a paver.

* + - 1. Size: Oversize as standard with manufacturer.
			2. Size: Modular size as standard with manufacturer.
			3. Size: 4 x 8 x 2-1/2 inches.
			4. Size: Patio Paver 050: 1-3/8 x 3-3/4x 8 inches.
			5. Size: Patio 4x8 010: 2-1/4 x 4 x 8 inches.
			6. Size: Large Paver 2309: 2-3/4 x 5-5/8 x 7-5/8 inches.
			7. Size: Dutch Paver 060: 1-3/8 x 6 x 6 inches.
			8. Size: Dutch Paver 070: 2-1/4 x 8 x 8 inches.
			9. Size: Hexagon Paver 065: 6 x 1-3/8 inches.
			10. Size: Hexagon Paver 090: 6 x 2-1/4 inches.
			11. Diamond Dutch Paver:
				1. 260 Diamond Dutch Bevel: 2-1/4 x 8-1/2 x 8-1/2 inches.
				2. 261 Diamond Dutch Square: 2-1/4 x 3 x 3 inches.
			12. Roman Pavers:
				1. 1450: 2-3/4 x 10 inches.
				2. 1451: 2-3/4 x 6 inches.
				3. 1452: 2-3/4 x 4-1/8 x 6 inches.
				4. 1453: 2-3/4 x 3 x 6 inches.
				5. 1454: 2-3/4 x 9 x 6 inches.
				6. 1455: 2-3/4 x 2-13/16 x 6 inches.
			13. Size: \_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete colors not required.

* + - 1. Color: Savannah Grey.
			2. Color: Georgetowne.
			3. Color: Tryon.
			4. Color: Charlestowne.
			5. Color: Whiltshire.
			6. Color: Bessemer Grey.
			7. Color: Low Country.
			8. Color: Londontowne.
			9. Color: Park Ridge.
			10. Color: Old Post Office.
			11. Color: Cambridge.
			12. Color: St. Michaels.
			13. Color: Jefferson College.
			14. Color: Williamstowne.
			15. Color: Cape Charles.
			16. Color: Dumaine.
			17. Color: Carters Grove.
			18. Color: Brunswick.
		1. All pavers supplied shall be pre-blended by the manufacturer.
	1. PERFORMANCE REQUIREMENTS
		1. Minimum Compressive Strength (ASTM C 216 and ASTM C 902): 5000 psi.
		2. Maximum Initial Rate of Absorption (IRA) (ASTM C 216 and ASTM C 902): 50 g/min/30 sq.in.
		3. Maximum Absorption, 24 Hour Submersion in Cold Water (ASTM C 216 and ASTM C 902): 10 percent.
		4. Efflorescence (ASTM C 216 and ASTM C 902): Not Effloresced.
		5. Abrasion Resistance (ASTM C 216 and ASTM C 902): 0.15.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions for handmade brick using Bricklayer's Method.
			1. Do not use the tile setter's method where grout is floated into joints.
			2. Do not use polymeric sand or sand mixed with cement.
			3. Do not pressure wash handmade brick pavers. If cleaning is required, use a medium bristle brush and water.
			4. Do not use vibratory compactors.
			5. Do not use muriatic acid based cleaners on handmade brick pavers, especially those with a lime coating, for example, Savannah Grey, Georgetown, and Brunswick.
			6. Do not seal brick pavers with a sealer coating
		2. Lay masonry with full head and bed joints.
		3. Lay all brick plumb and true to lines.
		4. When adjustment is necessary to be made after mortar begins to harden, remove hardened mortar and replace with fresh mortar.
	4. BONDING
		1. Lay masonry in bond pattern as indicated on drawings or general notes.
			1. Reference BIA Technical Note #30 for additional requirements.
	5. TOOLING AND POINTING

\*\* NOTE TO SPECIFIER \*\* Delete joint profiles not required.

* + 1. Joint Profile: Tool mortar joints to a concave appearance.
		2. Joint Profile: Tool mortar joints to a concave V-shaped appearance.
		3. Joint Profile: Tool mortar joints to a concave grapevine appearance.
		4. Tool exposed joints when "thumb-print" hard.
		5. Flush cut all joints not tooled.
		6. When pointing, rake mortar joints to a depth of not less than 1/2 inch (12 mm). Fill solidly with pointing mortar. Tool joints.
	1. CLEANING
		1. Clean in accordance with Manufacturer's instructions and as outlined in BIA Technical Notes 20.
		2. Do not use wire brush or pressure wash. Bucket and brush cleaning is recommended.
		3. Use products approved by brick manufacturer.
		4. Cut out all defective mortar joints and holes in exposed masonry and provide new mortar.
		5. Clean pre-selected sample wall area. Do not proceed with cleaning until approved by Architect.
		6. All cleaning practices and product used shall be in accordance with cleaning products manufacturer's printed instructions.
	2. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION