SECTION 04 73 00

SIMULATED MORTARLESS STONE VENEER

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

*Copyright 2018 - 2019 ARCAT, Inc. - All rights reserved*

\*\* NOTE TO SPECIFIER \*\* NCP Industries; Adorn Mortarless Stone Veneer products.
.
This section is based on the products of NCP Industries, which is located at:P. O. Box 636Norfolk, NE 68702Toll Free Tel: 888-379-2210Email: [request info (info@ncpindustries.com)](https://arcat.com/rfi?action=email&company=NCP%252BIndustries&message=RE%253A%2520Spec%2520Question%2520(04730ncp)%253A%2520&coid=51283&spec=04730ncp&rep=&fax=)
Web: <https://www.ncpindustries.com> | <https://www.adornstone.com>
 [ [Click Here](https://arcat.com/company/ncp-industries-51283) ] for additional information.
Natural Concrete Products (NCP) is a concrete Manufacturing company that specializes in Mortarless Veneer Stone Siding, retaining wall blocks, outdoor living kits, pavers, and Equipment. We believe that your home should be a beautiful, relaxing oasis both inside and out. That's why we've created our unique, simple-to-use product lines. Whether you're a do-it-yourselfer or contractor, our products will give you the results of your dreams.
Adorn Mortarless Stone Veneer is an ideal choice for any exterior or interior project. Perfect for home improvement and new construction alike, the natural look of stone has never been easier to use. Adorn adds style without the extra cost of traditional stacked stone. Adorn system is offered in a panel format, with corners and sills (all sold separately) that are easily installed by way of fasteners on any stable structure.

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Mortarless Stone Veneer and related accessories
	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 06 10 00 - Rough Carpentry.
		3. Section 05 40 00 - Cold-Formed Metal Framing.
		4. Section 07 27 00 - Air Barriers.
		5. Section 07 28 00 - Underlayments\*.
		6. Section 07 62 00 - Sheet Metal Flashing and Trim.
		7. Section 07 90 00 - Joint Protection.
		8. Section 09 24 13 - Adobe Finish.
		9. Section 10 30 00 - Fireplaces and Stoves.
	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 39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
		2. ASTM C 67 - Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
		3. ASTM C 192 - Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory.
		4. ASTM C 567 - Standard Test Method for Determining Density of Structural Lightweight Concrete
		5. ASTM D 226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
		6. ICC ES AC 51 Acceptance Criteria for Manufactured Stone Veneer
		7. LEED: US Green Building Council's Leadership in Energy and Environmental Design Green Building Rating System.
	1. DESIGN / PERFORMANCE REQUIREMENTS
		1. Building Code Compliance:
			1. International Code Council (ICC): Mortarless stone veneer shall meet or exceed ICC Evaluation Service Acceptance Criteria 51 for precast stone veneer as follows:
				1. Density Equilibrium: 93 in accordance with ASTM C 567.
				2. Freeze Thaw: 50 Cycles 3% or Less Weight Loss in accordance with ASTM C 67.
				3. Compressive Strength: Greater Than 1800 PSI in accordance with ASTM C 39 and C 192
				4. Moisture Absorption: Less Than 18% in accordance with ICC ES AC 51, Section 4.6
				5. Saturated Weight lb/in2: 12
	2. 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 standards and methods.
		3. Shop Drawings: Submit drawings depicting proper installation and flashing techniques. Coordinate locations with those found on the Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraphs if LEED is not applicable.

* + 1. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
			1. LEED v 4, Product Data for Credit EQ 2: For products and materials to comply with low emittance standards, provide documentation substantiating that products comply with requisite low emittance standards.
			2. LEED v 4, Product Data for Credit for location and distance from Project of material manufacturer and point of extraction, harvest or recovery for main raw material.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color sample representing manufacturer's full range of available colors and textures.
		2. Verification Samples: For each finish product specified, two samples, minimum size 8 inches (203 mm) square, representing actual product, color, and texture.
		3. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
		4. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for cleaning and repair of components.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Manufacturer with a minimum of 5 years documented experience manufacturing and marketing all Manufactured Stone products of the type specified in this section.
		2. Installer Qualifications: Company with documented experience in installation of manufactured masonry of the type specified.

\*\* 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. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
			1. Finish panel of size and location designated by Architect.
			2. Minimum size 3 foot by 3 foot and showing one corner and transition to adjacent materials anticipated.
			3. Do not proceed with remaining work until workmanship, color, and texture are approved by Architect.
			4. Refinish mock-up area as required to produce acceptable work.
		2. Pre-Installation Conference:
			1. Contractor shall arrange a meeting not less than thirty days prior to starting stone veneer work.
			2. Attendance: Contractor, Architect/Owner Representative, veneer stone installer and manufacturer's representative.
	1. DELIVERY, STORAGE, AND HANDLING
		1. Store and handle products in conformance with the manufacturer's requirements and recommendations.
		2. Store products off the ground on pallets in manufacturer's unopened packaging until ready for installation.
	2. WARRANTY
		1. Provide with the manufacturers 30 year limited warranty.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: NCP Industries, which is located at:P. O. Box 636Norfolk, NE 68702Toll Free Tel: 888-379-2210Email: [request info (info@ncpindustries.com)](https://arcat.com/rfi?action=email&company=NCP%252BIndustries&message=RE%253A%2520Spec%2520Question%2520(04730ncp)%253A%2520&coid=51283&spec=04730ncp&rep=&fax=);Web: <https://www.ncpindustries.com> | <https://www.adornstone.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 Requirements.
	1. PRODUCTS
		1. Mortarless Stone Veneer: Adorn system is offered in a panel format, with corners and sills. Panel are manufactured with cast-in-place aluminum flanges used to mount to the backing with nails or screw fasteners. Panel colors, shapes and sizes shall be as follows:

\*\* NOTE TO SPECIFIER \*\* Select the Panel Colors and Sizes required from the following paragraphs and delete those that are not required.

* + - 1. Color: Terra
				1. Shapes and Sizes:

Flat: 6 inches H by 23.5 inches L by 1.75 inches D (152 mm H by 597 mm L by 44.5 mm D).

Corner: 6 inches H by 5.5 inches L by 9.5 inches L by 1.75 deep (152 mm H by 140 mm L by 241 mm L by 44.5 mm D).

Pillar Stone: 6 inches H by 18 inches L by 1.75 inches deep (152 mm H by 457 mm L by 44.5 mm D).

Sill: 2.5 inches H by 23.5 inches L by 3.5 inches deep (63.5 mm H by 597 mm L by 90 mm D).

Light Box: 12 inches H by 9 inches W by 1.75 inches deep (305 mm H by 228,6 mm W by 44.5 mm D).

Outlet Box: 7 inches H by 6 inches W by 1.75 inches deep (178 mm H by 152.4 mm W by 44.5 mm D).

* + - 1. Color: Colorado Gray
				1. Shapes and Sizes:

Flat: 6 inches H by 23.5 inches L by 1.75 inches D (152 mm H by 597 mm L by 44.5 mm D).

Corner: 6 inches H by 5.5 inches L by 9.5 inches L by 1.75 deep (152 mm H by 140 mm L by 241 mm L by 44.5 mm D).

Pillar Stone: 6 inches H by 18 inches L by 1.75 inches deep (152 mm H by 457 mm L by 44.5 mm D).

Sill: 2.5 inches H by 23.5 inches L by 3.5 inches deep (63.5 mm H by 597 mm L by 90 mm D).

Light Box: 12 inches H by 9 inches W by 1.75 inches deep (305 mm H by 228,6 mm W by 44.5 mm D).

Outlet Box: 7 inches H by 6 inches W by 1.75 inches deep (178 mm H by 152.4 mm W by 44.5 mm D).

* + - 1. Color: Northern Gray
				1. Shapes and Sizes:

Flat: 6 inches H by 23.5 inches L by 1.75 inches D (152 mm H by 597 mm L by 44.5 mm D).

Corner: 6 inches H by 5.5 inches L by 9.5 inches L by 1.75 deep (152 mm H by 140 mm L by 241 mm L by 44.5 mm D).

Pillar Stone: 6 inches H by 18 inches L by 1.75 inches deep (152 mm H by 457 mm L by 44.5 mm D).

Sill: 2.5 inches H by 23.5 inches L by 3.5 inches deep (63.5 mm H by 597 mm L by 90 mm D).

Light Box: 12 inches H by 9 inches W by 1.75 inches deep (305 mm H by 228,6 mm W by 44.5 mm D).

Outlet Box: 7 inches H by 6 inches W by 1.75 inches deep (178 mm H by 152.4 mm W by 44.5 mm D).

* + - 1. Color: Desert Tan
				1. Shapes and Sizes:

Flat: 6 inches H by 23.5 inches L by 1.75 inches D (152 mm H by 597 mm L by 44.5 mm D).

Corner: 6 inches H by 5.5 inches L by 9.5 inches L by 1.75 deep (152 mm H by 140 mm L by 241 mm L by 44.5 mm D).

Pillar Stone: 6 inches H by 18 inches L by 1.75 inches deep (152 mm H by 457 mm L by 44.5 mm D).

Sill: 2.5 inches H by 23.5 inches L by 3.5 inches deep (63.5 mm H by 597 mm L by 90 mm D).

Light Box: 12 inches H by 9 inches W by 1.75 inches deep (305 mm H by 228,6 mm W by 44.5 mm D).

Outlet Box: 7 inches H by 6 inches W by 1.75 inches deep (178 mm H by 152.4 mm W by 44.5 mm D).

* + - 1. Colors: Buckskin
				1. Shapes and Sizes:

Flat: 6 inches H by 23.5 inches L by 1.75 inches D (152 mm H by 597 mm L by 44.5 mm D).

Corner: 6 inches H by 5.5 inches L by 9.5 inches L by 1.75 deep (152 mm H by 140 mm L by 241 mm L by 44.5 mm D).

Pillar Stone: 6 inches H by 18 inches L by 1.75 inches deep (152 mm H by 457 mm L by 44.5 mm D).

Sill: 2.5 inches H by 23.5 inches L by 3.5 inches deep (63.5 mm H by 597 mm L by 90 mm D).

Light Box: 12 inches H by 9 inches W by 1.75 inches deep (305 mm H by 228,6 mm W by 44.5 mm D).

Outlet Box: 7 inches H by 6 inches W by 1.75 inches deep (178 mm H by 152.4 mm W by 44.5 mm D).

* + - 1. Colors: Slate
				1. Shapes and Sizes:

Flat: 6 inches H by 23.5 inches L by 1.75 inches D (152 mm H by 597 mm L by 44.5 mm D).

Corner: 6 inches H by 5.5 inches L by 9.5 inches L by 1.75 deep (152 mm H by 140 mm L by 241 mm L by 44.5 mm D).

Pillar Stone: 6 inches H by 18 inches L by 1.75 inches deep (152 mm H by 457 mm L by 44.5 mm D).

Sill: 2.5 inches H by 23.5 inches L by 3.5 inches deep (63.5 mm H by 597 mm L by 90 mm D).

Light Box: 12 inches H by 9 inches W by 1.75 inches deep (305 mm H by 228,6 mm W by 44.5 mm D).

Outlet Box: 7 inches H by 6 inches W by 1.75 inches deep (178 mm H by 152.4 mm W by 44.5 mm D).

* + - 1. Colors: Limestone
				1. Shapes and Sizes:

Flat: 6 inches H by 23.5 inches L by 1.75 inches D (152 mm H by 597 mm L by 44.5 mm D).

Corner: 6 inches H by 5.5 inches L by 9.5 inches L by 1.75 deep (152 mm H by 140 mm L by 241 mm L by 44.5 mm D).

Pillar Stone: 6 inches H by 18 inches L by 1.75 inches deep (152 mm H by 457 mm L by 44.5 mm D).

Sill: 2.5 inches H by 23.5 inches L by 3.5 inches deep (63.5 mm H by 597 mm L by 90 mm D).

Light Box: 12 inches H by 9 inches W by 1.75 inches deep (305 mm H by 228,6 mm W by 44.5 mm D).

Outlet Box: 7 inches H by 6 inches W by 1.75 inches deep (178 mm H by 152.4 mm W by 44.5 mm D).

* + 1. Weather Resistant Barrier: Provide in compliance with ASTM D 226.

\*\* NOTE TO SPECIFIER \*\* Select the barrier type required and delete the one not required.

* + - 1. Description: 2 layers of No. 15 non-perforated asphalt-saturated organic felt paper.
			2. Description: 1 layer of No. 15 non-perforated asphalt-saturated organic felt paper and a house-wrap product supported by a current evaluation report showing equivalency to Grade D building paper.
		1. Flashing: Self-adhering reflective rubberized asphalt membrane, 25 mils (0.63 mm) thickness minimum.
			1. Window, Door and Openings Flashing: 4 inch (102 mm) wide minimum.
		2. Fasteners: Corrosion resistant steel fasteners.

\*\* NOTE TO SPECIFIER \*\* Select the application and fastener type required from the following two paragraphs and delete the one not required.

* + - 1. For Wood Stud Applications:
				1. Nails: 11 gauge nails having a 3/8 inch (.80 mm) head, minimum of 1-1/2 inches (38 mm) long.
				2. Screws: Corrosion resistant screws with 3/8 inch (.80 mm) head and of sufficient length to penetrate wood studs a minimum of 1 inch (25 mm).
			2. For Metal Stud Applications:
				1. Screws: Corrosion resistant screws with 7/16 inch (11 mm) head and of sufficient length to penetrate metal stud a minimum of 3/8 inch (9.5 mm).
		1. Heavy Duty Construction Adhesive: PL Premium or DAP DynaGrip Max
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared in for the backup wall system indicated on the Drawings.
		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.

\*\* NOTE TO SPECIFIER \*\* Ensure that Mortarless Stone Veneer is being installed to a structure that meets all building code requirements. Code approved flashing must be used at all terminations, penetrations, and material transitions. Backup Wall System shall be a minimum of 7/16 inch or greater OSB or plywood sheathing attached to wood or metal studs. Note that Adorn is limited to a height of 30 feet with normal building design. Heights may be increased when specified by a structural engineer and approved by building officials. Also, when a section of wall wraps over the top of the roof, extra support is needed in this area prior to the installation of Adorn.

* 1. INSTALLATION
		1. Install in accordance with manufacturer's instructions.
		2. Weather Resistant Barrier:
			1. Install weather resistive barrier in accordance with ASTM D 226 over all exterior surfaces designated to receive stone veneer.
			2. Install two layers, starting with two horizontal layers at the bottom of exterior wall or structure.
			3. Apply weather resistive barrier horizontally with the upper layer lapped over the lower layer at not less than 2 inches (51 mm).
			4. Lap weather-resistive barrier not less than 6 inches (152 mm) at the vertical joints.
		3. Flashings: Install self adhered flashing at windows, doors, openings and corners as recommended by the flashing manufacturer.
		4. Begin installing Mortarless Stone Veneer Flat with fasteners. Use a secure and level 2 x 4 at base to line up flats for a level install. Stagger flats on top of each starting from bottom working your way up
		5. Each seam on the lower course must be overlapped by a minimum of 3 inches on each side of the seam by the upper course. Cutting may be required. Corners must also be staggered. Install each siding piece using 3 fasteners with at least one fastener attached to a stud to a depth of 1 inch. Fasteners should be placed 1 inch above the veneer.
		6. Install corners first and work inward. Corners should be installed with each course. Each corner piece shall have two screws or nails to securely attach. Inside corners use the same corner pieces reversed.
		7. During the installation, some panels will need to be cut to fit and the attaching flange will need to be removed. Remove the flange, carefully by cutting off with snips. Pieces without the attaching flange shall be installed with adhesive. In order to achieve a good bond, a non-painted, clean flashing material must be attached to the structure first. After the bonding surface has been installed, use a heavy duty construction adhesive to install the pieces. Provide additional temporary support until adhesive cures.
		8. At sill under a window, carefully remove the attaching flange and glue with a heavy duty construction adhesive. Place adhesive to the back and the bottom of the sill piece being installed. Only place adhesive in the recommended areas to allow for drainage.
		9. Where the panels will terminate without a corner return, extend veneer past the structure the width of the siding, corner trim, J channel, etc., on the return. For a finished look, place the panels with the factory edge exposed. Sills are installed the same as the panels with a minimum of 3 fasteners with 1 of these into a stud to a depth of 1 inch.
		10. To finish projects where panels are to be installed up to the soffit, measure the distance from the last full panel installed to the soffit. Cut Adorn panels to fit and glue into place using construction adhesive. Trim the attaching flange from the last full panel or securely attach a nonpainted, clean flashing material to the structure to as required to achieve a good bond surface.
		11. Ensure that Adorn is being installed to a structure that meets all building code requirements. Code approved flashing must be used at all terminations, penetrations, and material transitions. Control moisture penetration caused by run off, gutters, and downspouts. If installing Adorn over a foundation block wall, it is recommended to install a layer of an ice and water shield type of product first, and then install Adorn.
		12. When cutting, grinding, or trimming any pieces, always follow the tool manufacturer's safety instructions and use the appropriate safety protection. Cutting dust and general construction dust shall be removed with clean water and if needed, nylon bristle brush. Do not clean with a power washer, harsh chemicals, or acid products.
		13. Adorn Pillar Stone Installation
			1. Construct the pillar base using 2 by 2s and OSB or plywood to the desired height. Each Pillar Stone is 6 inches high so designing the height in 6 inch increments will eliminate cutting of the Pillar Stones. Outside dimensions need to be 14 inches by 14 inches. Cover the frame with Self-adhering reflective rubberized asphalt membrane. Use treated lumber on the base. Anchor the pillar as needed.
			2. Place 4 Pillar Stones around the base. Level the base course and attach with 2 screws per Pillar Stone through the attaching flange approximately 1 inch above the stone veneer. Continue installing the Pillar Stones one course at a time. Square up the corners, check for level and attach with screws.
			3. At the top course, bend the flashing over the frame and screw in place.
			4. Place a bead of construction adhesive around the top of the Pillar Stones. Set the Pillar Cap in place.
			5. Finished pillar shall be approximately 18 inches square.
	2. FIELD QUALITY CONTROL
		1. Manufacturer's Field Services: Provide periodic site visits as requested by Architect. Report any discrepancies to the Contractor with copies to the Architect within 24 hours of each visit.
	3. CLEANING
		1. Clean manufactured masonry in accordance with manufacturer's installation instructions
	4. PROTECTION
		1. Protect installed products until completion of project.
		2. Clean prior to project closeout.
		3. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION