GUIDE SPECIFICATION

Manufacturer:
DECRA Roofing Systems
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SECTION 07313

STONE COATED METAL ROOF SHINGLES

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This guide specification has been prepared by DECRA Roofing Systems, in printed and electronic media, as an aid to specifiers in preparing written construction documents for stone coated metal roof shingles.

Edit entire master to suit project requirements. **Modify or add items as necessary. Delete items, which are not applicable**. Words and sentences within brackets **[_____] reflect a choice to be made** regarding inclusion or exclusion of a particular item or statement. This section may include performance, proprietary and descriptive type specifications. Edit to avoid conflicting requirements. Editor notes to guide the specifier are included between lines of asterisks to assist in choices to be made. **Remove these notes before final printing of specification**.

This guide specification is written around the Construction Specifications Institute (CSI), Section Format standards references to section names and numbers are based on **MasterFormat 95**.

For specification assistance on specific product applications, please contact our local product representatives throughout North America at 800-795-0776.

DECRA Roofing Systems reserves the right to modify these guide specifications at any time. Updates to this guide specification will be posted to the manufacturer's web site and/or in printed matter as they occur. DECRA Roofing Systems makes no expressed or implied warranties regarding content, errors, or omissions in the information presented.

PART 1 - GENERAL

1.1 SUMMARY

A. Related Documents: Provisions established within General and Supplementary Conditions of the Contract, Division 1 – General Requirements, and the Drawings are collectively applicable to this Section.

B. Section includes: Formed metal roofing panels with colored stone chip finish.

C. Associated metal flashings.

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Edit the Related Sections paragraph below to suit project requirements; delete sections that will not be used or add sections as required.

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D. Related Sections:

1. Division 6 Section “Rough Carpentry” for framing and sheathing.
2. Division 7 Section "Sheet Metal Flashing and Trim" for metal flashing, gutters, and downspouts.
3. Division 7 Section "Roof Accessories" for roof ventilators.
4. Division 7 Section "Joint Sealants" for field-applied sealants.
5. Division 9 Section “Painting” for painting of roof accessories

E. Alternates

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If work of this section will affect alternate bids, retain the following subparagraph.

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1. Refer to Section 01230 for alternatives involving work of this Section.

1.2 SUBMITTALS

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Include submittal requirements below, which are consistent with the scope of the project and extent of work of this section - only request submittals, which are necessary for review of design intent.

Do not request submittals if drawings sufficiently describe the products of this section or if proprietary specifying techniques are used. The review of submittals increases the possibility of unintended variations to drawings.

Insert the appropriate reference to the Division 1 section.

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A. Submit under provisions of Section 01300 [___].

B. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, finishes, fasteners, accessories, and manufacturers written installation instructions.

C. Shop Drawings: Include roof plans and elevations; sections at hips, gables, ridges, valleys, and eaves; and details of components, accessories, and attachments to other work.

D. Samples for Initial Selection: Manufacturer's color charts and samples boards consisting of units or sections of units showing the full range of colors, textures, and patterns available for each type of DECRA Shingle indicated.

1.3 QUALITY ASSURANCE

A. Regulatory Requirements:

1. Conform to applicable building code for roof assembly fire hazard requirements.
2. Conform to building code for minimum wind uplift resistance.

1.4 REFERENCES

A. Fire-Test-Response Characteristics: Provide DECRA Shingle with fire-test-response characteristics indicated, as determined per test method ASTM E 108 – Test For Fire Resistance of Roof Covering Materials, for application and slopes indicated.

1. Fire-Test Exposure: Class A.

B. ASTM A792/A792M: Sheet Steel, Aluminum-Zinc Alloy Coated Steel by the Hot Dip Process, Structural (physical) Quality.

C. UL 1897 and UL 580: Wind Uplift Resistance of Roof Assemblies.

D. ASTM C920: Specification for Elastomeric Joint Sealants.

E. Impact Resistance: UL 2218, Class 4.

F. Appraisal Certificates:

1. International Code Council (ICC), Whittier California, Report No. ESR 1483.
2. Underwriters Laboratories, Inc., Northbrook, Illinois, USA File No. R14710.
3. Canadian Construction Materials Center, Ottawa, Ontario, CCMC#13085-R, October 2002.

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Retain the following paragraph if the specific project requires this rating. Otherwise, delete the following paragraph.

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G. [Dade County, Florida Acceptance No. 05-0824.01.]

H. [Florida Approval No. 5781.1.]

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store and handle roofing materials to ensure dryness. Store in a dry, well ventilated, weather tight place. Store rolls of felt and other sheet materials on end on pallets or another raised surface.

1.6 WARRANTY

A. Manufacturers Warranty: Written, transferable, limited warranty signed by DECRA Roofing Systems, covering manufacturing defects.

1. Warranty Period: 50 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURER

1. DECRA Shingle; DECRA Roofing Systems, 1230 Railroad Street, Corona, CA, 92882 (951-272-8180), (951-272-4476 FAX).

2.2 MATERIALS

A. Metal Shingles: DECRA Shingle formed interlocking panels resembling dimensional roofing shingles.

1. Material: Rolled and pressure formed, Aluminum-Zinc Alloy Coated Steel with three vertical ribs forming three flat steps, each of which shall have raised and lowered pan sections.
2. Finish: Ceramic coated, colored stone chip finish.
3. Thickness: 26 Gauge, .0179 inches (.455 mm).
4. Size: 21” wide by 52” inches long (533 by 1321 mm).
5. Exposure: 19-3/4” wide by 49” inches long (502 by 1245 mm).
6. Weight: 125 pounds per square.

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Make color selection from the choices below and delete the colors not required for the project.

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7. Color: [Canyon Brown] [Fawn Grey] [Midnight Eclipse] [Vintage Slate] [Woodland Green].
8. [Meets requirements of Dade County, Florida Acceptance No. 05-0824.01.]
9. [Florida Approval No. 5781.1.]

B. Valley: DECRA Roofing Systems, Aluminum-Zinc Alloy Coated Steel, 26 Gauge, .0179 inches (.455 mm), pressure formed into a valley with a stone coated valley cap. Finish: Match upper exposed stone coated surface of the valley cap to the shingle material.

C. Roof to Wall Flashing: Aluminum-Zinc Alloy Coated Steel sheet, 26 Gauge, .0179 inches (.455 mm), pressure formed to flash vertical roof surface transitions.

D. Underpan: Aluminum-Zinc Alloy Coated Steel sheet, 26 Gauge, .0179 inches (.455 mm), pressure formed to counter flash roof penetrations.

E. Rake / Gable Channel: Matching shingle material, color, and finish to be applied along rakes and gables.

F. Hip & Ridge: Matching shingle material, color, and finish to be applied along hips and ridges.
G. Edge Clip w/ Drip Edge: Aluminum-Zinc Alloy Coated Steel sheet, 26 Gauge, .0179 inches (.455 mm), pressure formed to fit along the leading edge of roof panels at eave/fascia.
H. Short Course Clip: Aluminum-Zinc Alloy Coated Steel sheet, 26 Gauge, .0179 inches (.455 mm), pressure formed for use with starting a short course or when Edge Clip w/drip Edge will not conform to existing eave/fascia.

2.3 ACCESSORIES

A. Sheet Metal Materials: Aluminum-Zinc Alloy Coated Steel Sheet: ASTM A 792/A 792M, Class AZ50 (AZ150) coating designation; minimum Grade 37 (Grade 255).

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Do NOT use LEAD or COPPER with this aluminum-zinc alloy coated steel roofing system.

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B. Felt Underlayment: ASTM D 226, Type I, No. 15 or ASTM D 226, Type II, No. 30, unperforated, asphalt-saturated organic felt.
C. Sealant: One-part elastomeric polyurethane sealant as recommended in writing by shingle manufacturer. Where sealant will be exposed, provide in color matching shingle. Standard: ASTM C920-86.
D. Screws: Corrosion resistant, minimum No. 8 hex head, 1-1/2 inch (38 mm) long, or of sufficient length to penetrate the deck by a minimum of 1/2 inch (12.7 mm) see manufacturers instructions for fastening positions.

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Verify requirements for ice dam protection with local building code and include if required.

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E. Perimeter Underlayment: ASTM D 1970; self-adhering, polymer-modified, bituminous sheet underlayment; 40 mils (1 mm) thick. Provide primer when recommended by underlayment manufacturer.

2.4 EXAMINATION

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Include the information in parenthesis [ ] for re-roofing applications or delete if not required.

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A. Examine substrate and conditions for compliance with requirements for maximum moisture content, soundness of roof deck, and other conditions affecting performance of metal shingle roofing. [Damaged, rotted or loose roofing materials shall be removed and the substrate corrected for re-roofing applications]. Proceed with installation only after unsatisfactory conditions have been corrected.

2.5 PREPARATION

A. Clean substrate of any projections and substances detrimental to metal shingle roofing. Cover knotholes or other minor voids in substrate with sheet metal flashing secured with roofing nails.
B. Coordinate installation of metal shingles with roof deck, flashing, underlayment and other adjoining work to ensure proper sequencing. Do not install roofing until vent stacks and other penetrations through roofing have been installed and are securely fastened.

2.6 INSTALLATION

A. General: Comply with metal shingle manufacturers written instructions for products and applications indicated, unless more stringent requirements apply.
B. Underlayment: Apply number of plies required by governing code, but at least one ply, with each ply overlapping ply below at least 6 inches (152 mm) and ends lapped at least 18 inches (457 mm).
    1. Omit felt underlayment at areas of perimeter underlayment. Lap felt underlayment over perimeter underlayment as recommended by manufacturer, but not less than 2 inches (51 mm).
C. Perimeter Underlayment: Apply minimum 24 inches (609 mm) wide layer of perimeter underlayment along entire perimeter of surface to receive metal shingles, including at eaves,

ridges, edges, hips, valleys, skylights, dormers, and around projections through roof. Extend perimeter underlayment a minimum of 24 inches (609 mm) inside exterior wall line at edges.

D. Valleys: Install in accordance with manufacturers instructions with a minimum 6 inch overlap in direction of flow. [New valley material shall be installed in re-roofing applications].

E. Shingles: Install DECRA shingle, accessories, flashing, and hip & ridge level and plumb.

1. Using the recommended offset, the first course of panels lock into the Edge Clip w/ Drip Edge.
2. The second course of panels start at the rake edge, valley or hip with a panel that is 28” in length (panel exposure is 25”) measured from the left side of the panel.
3. Position the panel into the top clip of the panels on the course below. The center of each field panel will be placed directly above the overlap of the panels on the previous course.
4. Make sure the top clips of each panel are flush. The maximum allowable gap should be 3/16”.
5. Once the panel is in position, firmly push (by hand or foot) on the panel in the area that overlaps the joint of the two panels below. This will help position the panel for fastener placement.
6. After positioning the panel, firmly push (by hand or foot) on the left side of the panel until it is locked firmly into the clip-lock of the panel on the course below. Install a fastener in the upper left corner.
7. Firmly push (by hand or foot) on the right side of the panel and make sure it is locked into the previously installed panel. Install a fastener in the upper right portion of the panel. Placing this fastener at a slight upward angle (45°) will help draw the shingle panel into the proper locking position. Complete the installation with 2 additional fasteners.

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Specify the appropriate number of fasteners per code requirements. Include information in [] for Dade County.

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8. Fasten each panel with minimum 4 fasteners along top edge of panel. [Install 24 gauge DECRA Shingle High Wind Clip (stiffening channel) to the back clip for fastener installation.]
9. Cut and slot DECRA panels that will terminate at the Rake/Gable Channel or at the Valley in accordance with the manufacturer’s instructions.

2.7 CLEANING AND PROTECTION

A. Damaged Units: Replace panels and other components of the work that have been dented, damaged or have deteriorated beyond successful repair by finish touchup with acrylic coating and stone chip granules.

B. Cleaning: After completing installation, remove any debris from the roof.

END OF SECTION 07313