
M.C.A. Superior Clay Roof Tile

This Guide Specification is intended to be used in preparation of specifications for a particular project, or as the basis for an office master specification. In either case, the Guide Specification must be edited to fit the condition of use. Pay particular attention to deletion of inapplicable portions.

Section 07320

Notes to Specifier

ORIENTAL STYLE ROOFING TILE

PART 1 - GENERAL

1.1 SUMMARY

A. Provide roofing tile where indicated on the Drawings, as specified herein, and as needed for a complete and proper installation.

B. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division One of these Specifications.

1.2 SUBMITTALS

A. Comply with pertinent provisions of Section 01340.

B. In accordance with the approved submittal schedule, submit a material list of items proposed to be provided under this Section, proving compliance with the specified requirements.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work in this Section.

B. For conditions not covered in this Section, comply with the pertinent "Installation Manual" published by the Tile Roofing Institute.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of Section 01620.

This Guide is written to cover routine installation of the indicated roofing tiles. However, local codes and special local requirements in the area of your construction may vary from the practices described. It is essential that you verify local precedents and local materials if you wish to keep construction cost in line.

Throughout Part 1 of this Section, use the standard phrasing and references used elsewhere in your specs.

45 calendar days may be too long a delay in fast track work, but receipt of this data helps assure you get the specified materials on the job.

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PART 2 - PRODUCTS

2.1 ROOFING TILE

A. Where indicated on the Drawings, provide Oriental Style roofing tile manufactured by M.C.A. Superior Clay Roof Tile located at 1985 Sampson Ave., Corona, CA 92879, phone (800) 736-6221, fax (951) 736-6052, in color number "C-_____" and with the appropriate number of the following matching accessory tiles to complete the installation:

1. Field Tiles - MO01;
2. Eave Tiles - MO02;
3. Gable Tiles - MO03 (right and left as required);
4. Gable Corners - MO04 (right and left as required);
5. Ridge Field - MO05 (optional);
6. Ridge End - MO06;
7. Ridge Starter - MO07;
8. Ridge Down End - MO08;
9. 3-Forked Ridge - MO09;
10. Two Forked Ridge - MO10;
11. Forked Eave - MO11;
12. Ridge - MO12;
13. Gable Ornaments (optional) - MO13;

B. The manufacturer may also be reached at its website: www.mca-tile.com, and by e-mail at sales@mca-tile.com.

C. Comply with pertinent provisions of ASTM C1167, Grade I, and with Legacy Report No. ER4202.

Notes to Specifier

Select color from the current catalog and state here by name and number

Verify membrane design used as standard practice in the area of your construction; edit as required.

2.2 OTHER MATERIALS

A. Membrane:

1. Under all Oriental Style tile roofing except where heavier membrane is required by governmental agencies having jurisdiction, provide not less than two layers of 30 membrane complying with ASTM D226, Type II, or one layer of Type 40 membrane complying with ASTM D2626, Type I, or upgraded membrane.

2. Provide in strict accordance with pertinent requirements of governmental and/or other agencies having jurisdiction.

B. Fasteners:

1. For tiles and cleats, use copper or other corrosion-resistant nails not less than No. 11 gage, no less than 5/16" (7.9 mm) head complying with ASTM F1667.

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PART 2 - PRODUCTS continued

2. At plywood decks, use ring shank nails in length sufficient for slight penetration through underside of the deck.
3. At board plank decks, use smooth shank nails at least 1-1/2" (38mm) long but not penetrating the underside of the deck.
4. At Gypsum plank and nailable concrete decks:
 - a. Use stainless steel or silicon bronze screw shank nails of length sufficient to penetrate 1/2 to 3/4 their length into the deck.
 - b. Do not penetrate underside of the deck.
 - c. If deck material is excessively hard, use smooth shank nails.
5. Provide two fasteners per tile at snow areas.
6. In areas designated by the building official as being subject to winds that exceed 80 mph, or where roof height exceeds 40 feet (12 m) above grade, attach all tiles in strict accordance with Chapter 15 of UBC (or IBC Table 15=D=1, footnote 2), or as required by governmental agencies having jurisdiction.
 - a. Nail the heads of all ties;
 - b. Fasten the noses of all eave course tiles with approved clips;
 - c. Nail rake tiles with two nails;
 - d. Set noses of all ridge, hip, and rake tiles in a bead of mastic approved by the Architect.
7. On slopes over 24:12, securely fasten the noses of all tiles.

Notes to Specifier

Verify fastening requirements in the area of your construction, and edit as required. Delete non-applicable requirements.

C. Wood Strips and nailers:

1. Eave Strip: Where Oriental Style roofing tile will be installed, provide 2" x 2" (50mm x 50mm) Foundation Grade Redwood strip full length at all eaves to raise the first course of roofing tiles.
2. Battens:
 - a.) For roofs with any slope, provide 1" x 2" x 4' (25mm x 50mm x 1.2m) battens, spaced as required, nailed with corrosion resistant 8d nails at 24" (610mm) on centers.
 - b.) Space the battens 1" (25mm) apart at ends for drainage, or use battens of any length when elevated above the membrane by 1/4" (6mm) thick spacers.
3. Where indicated on Drawings or otherwise required for proper nailing, provide 2" x 2" (50mm x 50mm), 2" x 3" (50mm x 76mm) and/or 2" x 6" (50mm x 152mm) Foundation Grade Redwood nailers at ridge, gables and hip.

Metric conversion of lumber is to actual dimensions of the lumber; use lumber of the closest dimensions available.

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PART 2 - PRODUCTS continued

D. Flashing:

1. Flash at roof valleys in strict accordance with Chapter 15 of UBC, or IBC, or required by local governmental agencies having jurisdiction.
 - a. For valley flashing use not lighter than 26 gage (0.55 mm thick) G90 corrosion-resistant metal, extending at least 11" (279 mm) away from the centerline of the valley each way;
 - b. Provide splash diverter rib not less than 1" (25mm) high at the flow line, formed as part of the flashing;
 - c. Provide flashing overlap of not less than 4" (102 mm).
2. At sides of dormers, chimneys, and other walls, extend flashing at least 6" (152 mm) up the vertical surface.
 - a. Thoroughly counterflash;
 - b. Extend flashing under tile at least 4" (102 mm), and turn the side edge up 1 1/2" (38 mm).
3. At lower side of dormers, chimneys, and other walls, extend flashing at least 3" (76 mm) up the wall and 4" (102 mm) over the tile, and then thoroughly counterflash.
4. At wood saddles and returns, line with 16 oz (45 g) copper extending up sloping roofs not less than 12" (305 mm), and more where necessary, and up vertical walls not less than 6" (152 mm), thoroughly counterflashed.
5. Make all counterflashing plugged, pointed and secure.
6. Extend gutter metal up the roof to a point higher than the outer edge of the gutter.

E. Mortar, plastic cement, and sealant:

1. Cut valley tiles and remove loose pieces.
2. To prevent lift up of tiles at hip, ridge, and gable, provide plastic cement at headlap portion of those tiles.
3. For gable rakes, hip rolls, ridges, stringers, and other conditions, provide a non-running, heavy body, plastic cement composed of asphalt and other mineral ingredients complying with ASTM D4586 and Fed Spec SSC-153 Type I.
4. When using sealant in lieu of the plastic cement, provide a silicone sealant complying with ASTM D1002 or ASTM E42.

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PART 2 - PRODUCTS continued

2.3 FOR POURED CONCRETE ROOF DECKS

Notes to Specifier

A. If roof is poured concrete:

1. As part of the work of another Section of these Specifications, provide embedded in the concrete roof deck 1" x 2" (25mm x 50mm) beveled wood nailer strips extending from eave to ridge, spaced at 20" (500mm) centers.
2. Finish the concrete roof deck smooth and flush with the tops of the wood nailer strips.
3. As part of the work of this Section, and in lieu of the membrane described in Paragraph 2.2-A above, provide a membrane over the concrete deck consisting of asphalt-saturated felt weighing not less than 50 lbs per 100 sq' ft (23kg per 9.3 m²), fastening with wood lath nailed into the embedded wood nailer strips.
4. Across the wood lath, apply the appropriate wood strips and battens as described in Paragraph 2.2-B

Delete Article 2.3 if not needed.

2.4 OTHER MATERIALS

1. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

This Paragraph covers other items such as nails, etc.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Membrane:

1. Verify that deck surfaces are clean and dry prior to installation of membrane.
2. Remove all foreign particles from substrate to assure proper seating and prevent water damage.
3. Install the specified membrane in strict accordance with pertinent requirements of governmental agencies having jurisdiction.

B. On vertical applications, and on extremely steep pitches where wind currents may cause lift, set the butt of each tile in a bead of the specified plastic cement or sealant, or provide stainless steel "Wind Locks" at intervals. Use plastic cement and sealant carefully, and avoid smearing the exposed tile surface.

Delete Paragraph B if not needed, and revise the Paragraph numbers that come after it.

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3.2 INSTALLATION continued

C. Chalk Lines:

1. Chalk horizontal and vertical guide lines on the membrane to assure watertightness and proper appearance.
2. Space the chalk lines by measuring the delivered tiles for average length and width exposures.
3. Do not exceed an exposure length 1/8" (3 mm) beyond the average.

D. Installing Oriental Style roofing tiles:

1. Wood strips:

- a. Install the specified eave strip full length of all eaves.
- b. Install the specified batten strips horizontally at 9" (228mm) centers on the first two rows and 9-1/2" (242mm) centers for all rows thereafter.

2. Install the tile in rows from left to right, beginning at lower left corner of the roof.

- a. Start at the lower left corner with field tile with a gable tile.

b. Install each tile successively, firmly engaging the tile lugs with the battens, and fastening each tile with one, two, or three of the specified fasteners.

c. Install Ridge and hip, in accordance with pertinent requirements of the governmental agencies having jurisdiction.

(1) Provide cement mortar Type M complying with ASTM C270 at all ridges and hips to completely seal the area under ridge and hip tiles;

(2) Install a thin coat of rich cement mortar (one part Type I portland cement complying with ASTM C150 to three parts sand complying with ASTM C144) along exposed edges of all ridge and hip tiles;

(3) Completely and neatly fill and point up all voids.

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3.2 INSTALLATION continued

3. To avoid color patterning, checkerboarding, spotting, and stairstepping:
 - a. After the installation of each 80 roofing tiles, make a visual inspection from the ground level and at a distance from the building of about 40 feet (12 m);
 - b. Verify that tile courses follow straight and true lines;
 - c. Verify that color range is smooth with no abrupt changes.
4. Make necessary corrections before proceeding with further installation.

3.3 CLEANING UP

A. Upon completion of the work of this Section, and as a condition of its acceptance, completely remove from the job site all tools, equipment, debris, and surplus materials pertaining to this portion of the work.

END OF SECTION