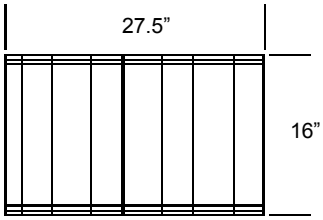
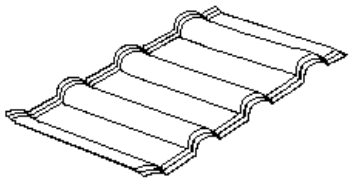
RARE MANUFACTURING INC.
Lightweight Metal Roofing

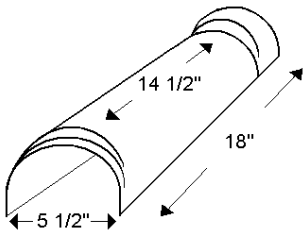
EUROPEAN TILE & FLASHING DETAILS





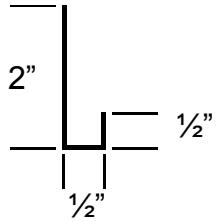
EUROPEAN TILE

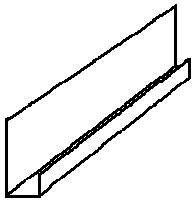
Overall Length	27.5”
Length of Coverage	24”
Width of Coverage	16”
Total Tile Coverage	2.67 sq. ft.
Weight per Tile	3.34 lbs
Tiles per square	37.5
Tiles per pallet	562 (15 sq.)
Approx. weight of full pallet	1877 lbs



EUROPEAN TILE BARREL CAP

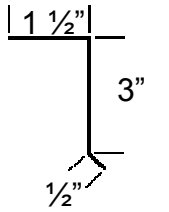
Overall Length	18”
Length of Coverage	14.5”
Weight per Cap	1.01 lbs
Barrel Caps per box	35

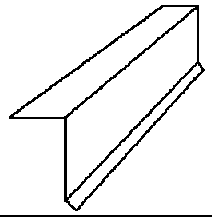




EUROPEAN TILE HOOKSTRIP

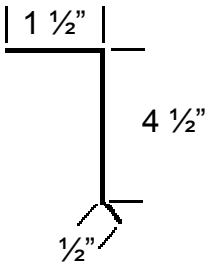
Overall Length	96”
Length of Coverage	93”
Weight (3”)	1.81 lbs

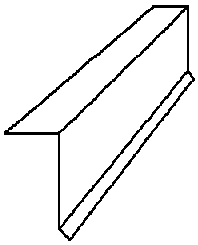




EUROPEAN TILE STARTER STRIP 3.5”

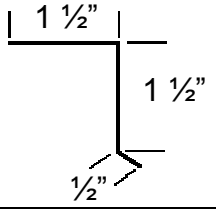
Overall Length	96”
Length of Coverage	93”
Weight (5”)	3.02 lbs

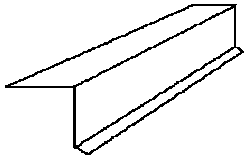




EUROPEAN TILE STARTER STRIP 5”

Overall Length	96”
Length of Coverage	93”
Weight (6.5”)	3.93 lbs





EUROPEAN TILE STARTER STRIP 2”

Overall Length	96”
Length of Coverage	93”
Weight (3.5”)	2.11 lbs

19154 – 95A Avenue, Surrey, B.C. V4N 4P2 ● Tel: 604-882-2888 ● Fax: 604-882-2887
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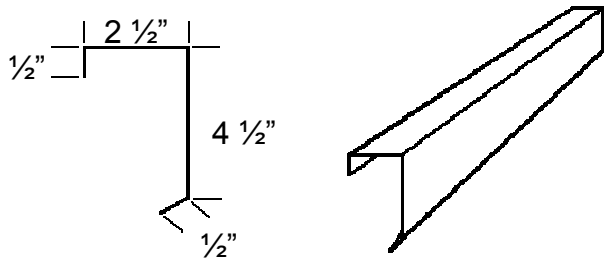
RARE MANUFACTURING INC.
Lightweight Metal Roofing

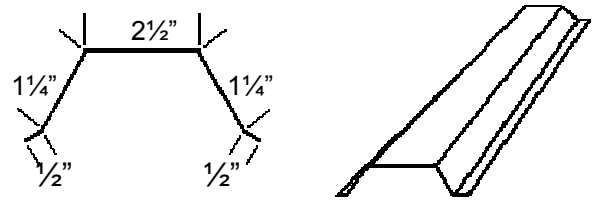
FLASHING SPECIFICATIONS

EUROPEAN TILE AND HEAVY SHAKE PROFILES



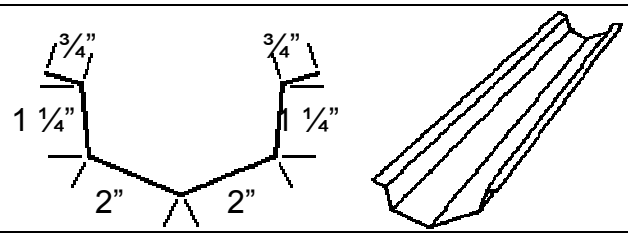
BARGE COVER

Overall Length	96"
Length of Coverage	93"
Weight	4.83 lbs



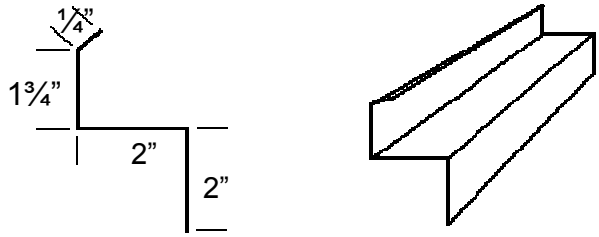
HIP/RIDGE CAP

Overall Length	96"
Length of Coverage	93"
Weight	3.62 lbs



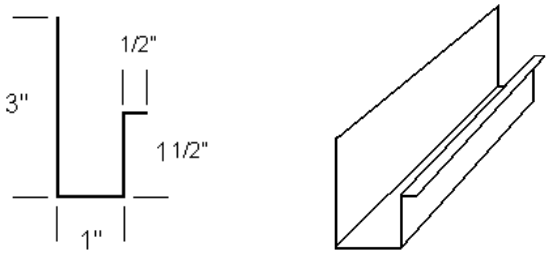
VALLEY FLASHING

Overall Length	96"
Length of Coverage	93"
Weight	4.83 lbs



WALL FLASHING

Overall Length	96"
Length of Coverage	93"
Weight	3.62 lbs



WALL VALLEY FLASHING

Overall Length	96"
Length of Coverage	93"
Weight	3.62 lbs

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ROOF FRAMING

RESPONSIBILITY
Ensure that roof framing meets local and national building codes. It is the responsibility of the specifying authority, architects, engineers and builders to ensure that these requirements are followed.

RAFTERS
Savings can be realized if rafter lengths are specified to allow for an exact number of tile courses, otherwise cutting the final top course will be required.

RIDGE VENTING
For wood decks ensure that the wood sheathing, if used, does not block or reduce the required vent openings.

ROOF INSTRUSIONS
Ensure that fastening locations for, electrical cables, vents, plumbing stacks, skylights etc., correspond with the Rare roofing system layout.

PITCH
Rare's tile design will adapt to any slope from 3 in 12 minimum to a vertical face.

BATTENS
Use construction grade wood 1½" x 1½" (38 mm x 38 mm) , or metal 1½" x 1½" batten 22 gauge galvanized steel (minimum). Ensure that size, grade and gauge comply with specifications, codes and standards.

ATTIC SPACE VENTILATIONS
The attic or ceiling space should be adequately ventilated according to appropriate building code standards. This is a design and building code requirement and is not the responsibility of the roofing contractor.

SHEATHING MEMBRANE
A sheathing membrane is required for all metal tile systems, usually composed of a nailed #15 asphalt felt or heavier. Open truss designs require a stronger barrier such as spun bonded olefin breather type sheathing membrane.

> ***NOTE**: Roof interruptions such as vents, skylights, plumbing stacks, chimneys, walls, etc. are to be fully waterproofed with self-adhering membrane underlayment to a minimum of 1 ft. onto the roof surface (or per the local building code when specified).*

APPLICATION

SHEATHING MEMBRANE
Over wood sheathing:

A Install specified membrane perpendicular to slopes with minimum 4" (75 mm) horizontal lap and 6" (150 mm) side lap.

B Membrane should cover the whole roof surface under tiles and accessories. Ensure that it runs up vertical surfaces (curb, vertical wall, vents, stack, etc.) and is properly fastened and/or taped to penetration.

C Ensure that such roof penetration is properly identified and located as per Rare roofing system layout, minimizing cutting and waste.

D Ensure that proper blocking is provided all around such items for stability and for support, fixing and fastening of flexible membrane.

Over open trusses *(only in accordance with local building codes)*:

Drape over structural members. All of the four above recommendations applied (A, B, C & D). Additionally ensure that proper locking is provided, especially for all lap joints not occurring over structural members.

BATTEN APPLICATION
Install battens at 15⅞" measured from front of batten to front of succeeding one, perpendicular to joists or rafters, offset butt joints of battens a minimum of one rafter of joist space and nail securely in place. Use 3" galvanized flat head nails. ***Illustration 1 & 2.***

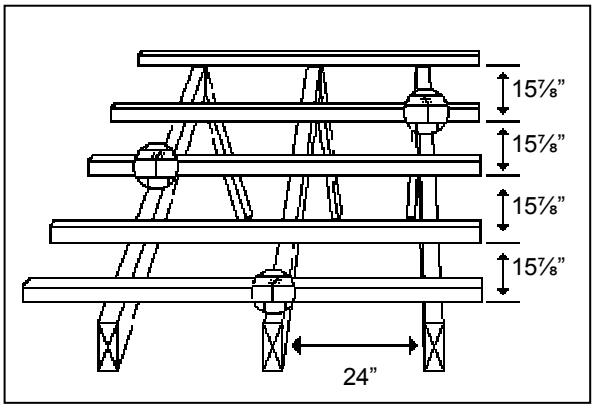

Illustration #1

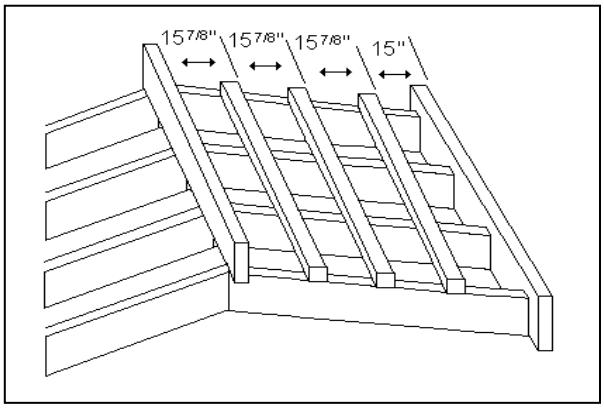

Illustration #2

IMPORTANT: Inaccurate measurements will result in failure to fit tiles properly. For this reason we recommend that batten, barge and hip boards, etc. be supplied and installed by approved roofing tile applicators. The structural support for such items as joist, trusses and backing is the responsibility of the design authority.

BATTEN FOR RIDGE (*STRAIGHT CAPPING*)
Toe nail to the ridge a 1" x 4" rough board, then nail a 1" x 4" on each side of the ridge. Make sure the distance from bottom of the 1½" x 1½" batten is no greater that 16". ***Illustration #3.***

BATTEN FOR RIDGE (*BARREL CAPPING*)
Toe nail to the ridge a 1" x 4" rough board, then nail a 1" x 4" on each side of the ridge and nail a 1½" x 1½" batten to the surface. Make sure the distance from the bottom of the batten is no greater than 16".

Illustration #4.

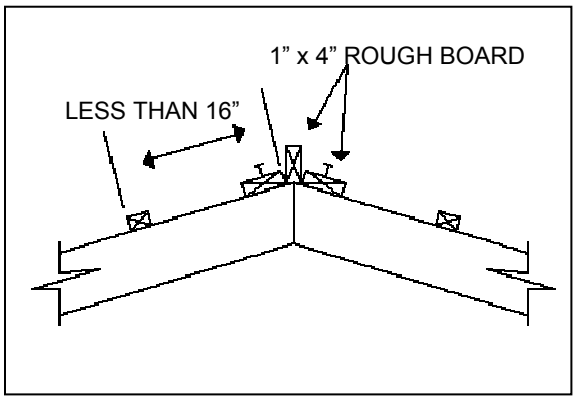

Illustration #3

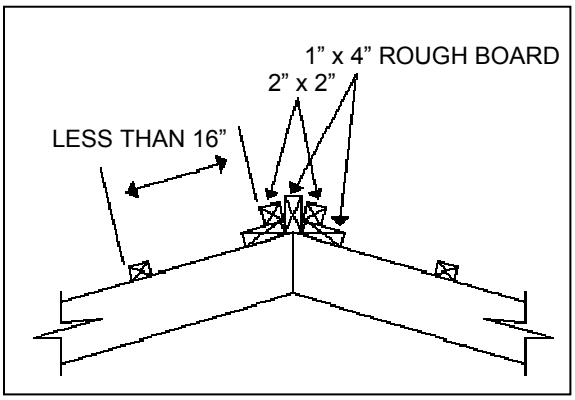

Illustration #4

BATTEN FOR HIP (*STRAIGHT CAPPING*)
A chalk line is run down the hip and a 1" x 4" (25 mm x 100 mm) rough board is toe nailed. The battens are then mitred and toe nailed to the 1" x 4" rough board. ***Illustration #5.***

BATTEN FOR HIP (*BARREL CAPPING*)
A chalk line is run down the hip and a 1" x 4" (25 mm x 100 mm) rough board is toe nailed. The battens are then toe nailed to the 1" x 4" rough board and a 1½" x 1½" is fastened on each side of the 1" x 4". ***Illustration #6.***

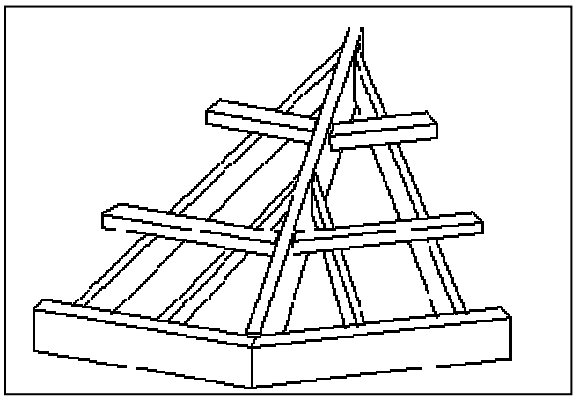

Illustration #5

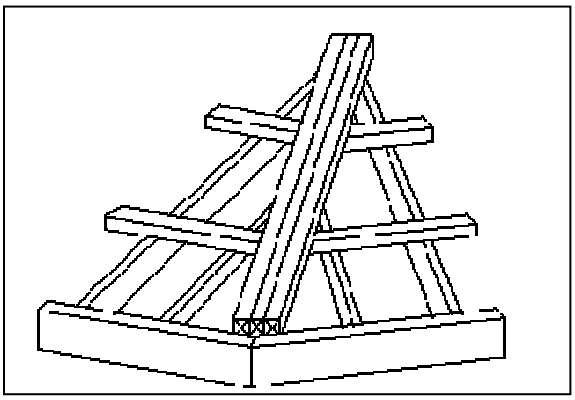

Illustration #6

BATTEN FOR VALLEYS
Run two chalk lines 2" measured from the center of the valley. Battens are installed running up the slope on both sides of the valley. Distance between valley supports should measure 4" (102 mm). Battens should be mitred and nailed to valley supports. ***Illustration #7***

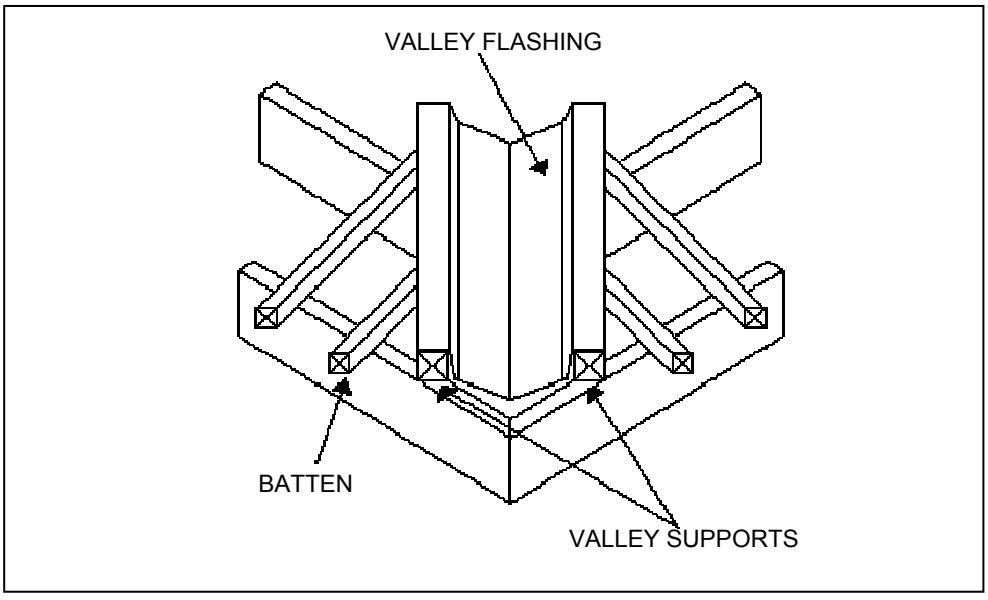

Illustration #7

BATTEN FOR GABLE (*STRAIGHT CAPPING*)
Install 1½" x 1½" batten for barge cover. Run a chalk line parallel and flush to the fascia and install over existing battens. ***Illustration #8.***

BATTEN FOR GABLE (*BARREL CAPPING*)
Run a chalk line 2" in from fascia and install 1½" x 1½" batten. ***Illustration #9.***

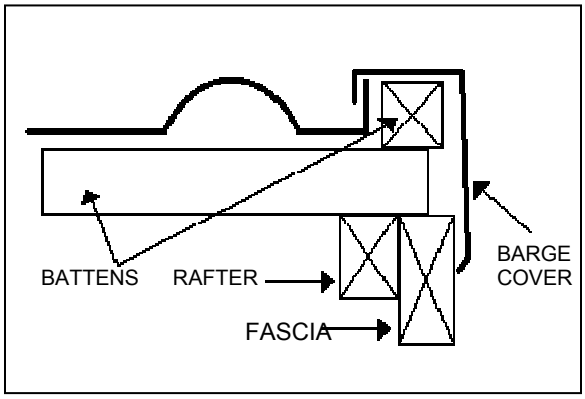

Illustration #8

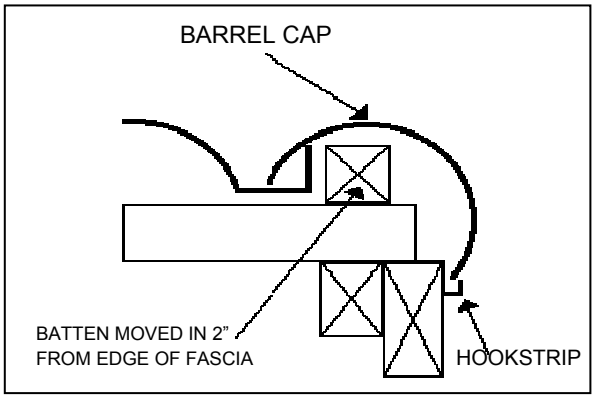

Illustration #9

TILE APPLICATION
Tiles are laid starting with the first two full courses down from the peak of the roof. Tiles interlock left over right. Lapping should be staggered for visual effect. ***Illustration #10.***

Lay tiles by lifting both tiles of the course above and slipping the next course under the nose of the tiles already in place. ***Illustration #11.***

Fasten tiles to the batten at bottom and top at every seam using #8 – 1½" galvanized painted head screws. ***Illustration #11.***

Stack tiles across the rafters or wood deck such that there is sufficient amount of support at hand. Stand on the flat portion of the tile during installation. ***Illustration #12.***

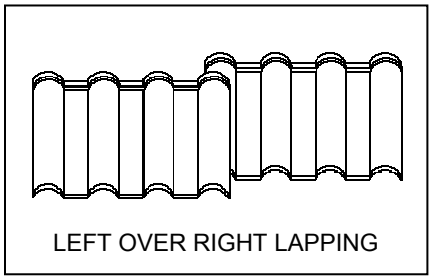

Illustration #10

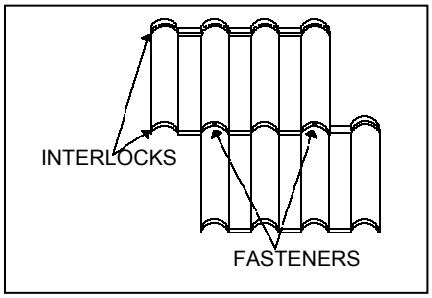

Illustration #11

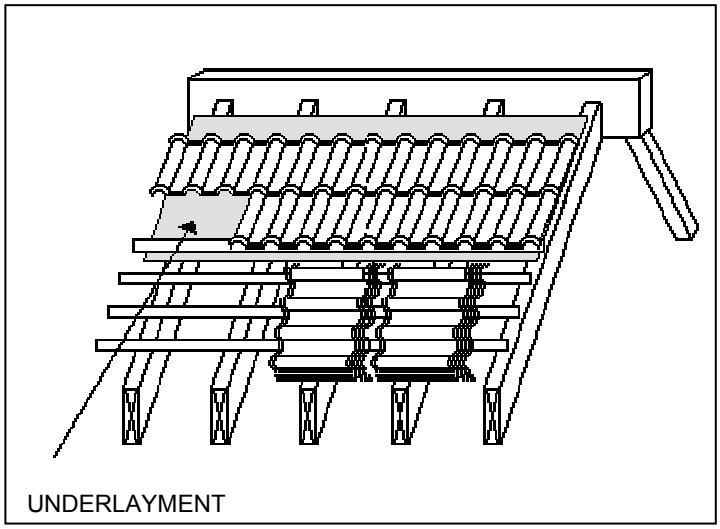

Illustration #12

INSTALLATION OF TILES AT HIPS
Lay tiles toward the other hip. Continue in this manner until the field of the roof is covered. ***Illustration #13.***

Eaves fascia fastening is done at the front flat section of the tile. ***Illustration #14.***

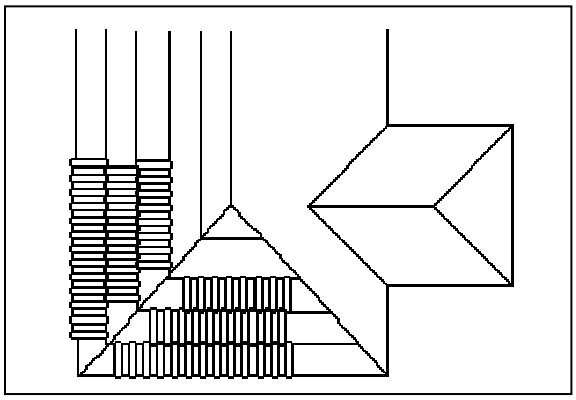

Illustration #13

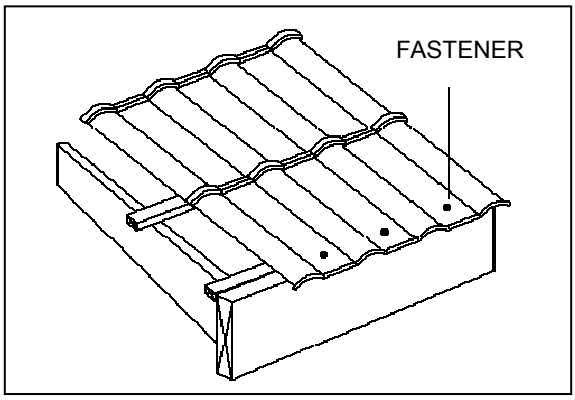

Illustration #14

CUTTING TILES
If top row width is less than 16" tile must be cut and bent to fit then screw to ridgeboard. Use portable shear and top row bender for barrel capping. ***Illustration #15 and #16.***

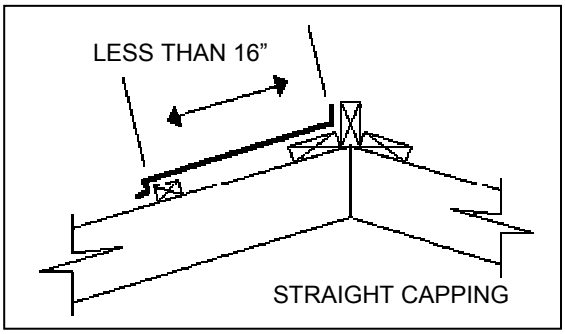

Illustration #15

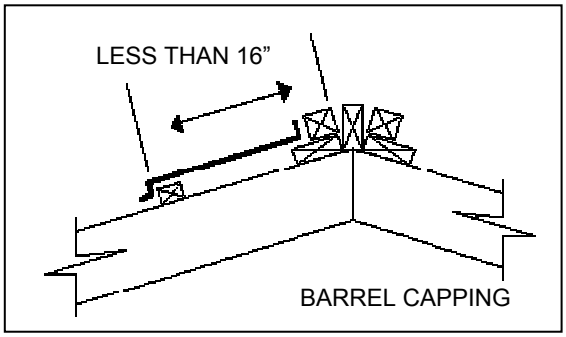

Illustration #16

CUTTING TILES FOR HIPS
Measure bottom and top of each tile to cut and record on a piece of paper. Continue down the slope until all measurements are recorded. ***Illustration #16A and #16B.***

Mark cut and bend tiles using portable bender and cutter. Stack tiles in order of application. Install tiles and screw to batten or ridgeboard using minimum two screws per tile.

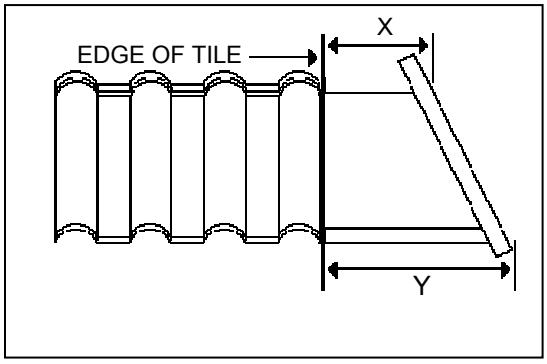

Illustration #16a

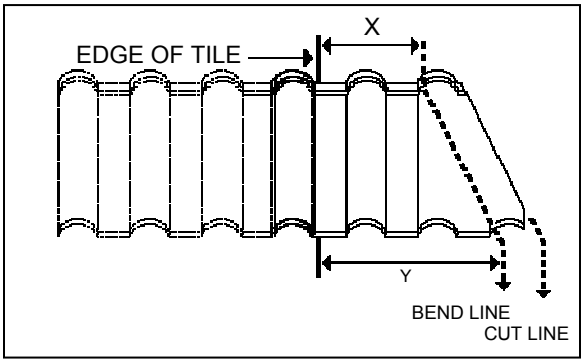

Illustration #16b

VALLEY MEASURING AND CUTTING
Measure and cut tile as per hip ***Illustration #16A & #16B,*** except tiles must be bent down at the valley gutter 1 ½" (38 mm) and screwed. ***Illustration #17.***

GABLE MEASURING AND CUTTING
Bend and cut then screw to batten. ***Illustration #18.***

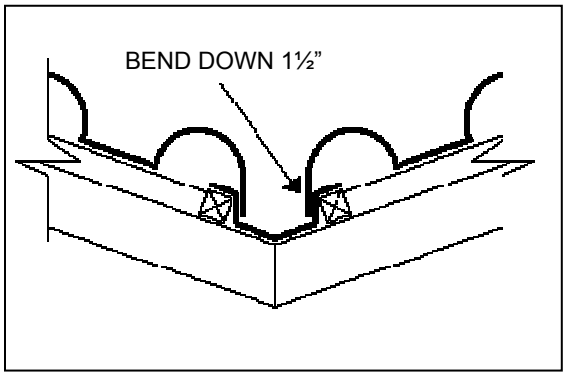

Illustration #17

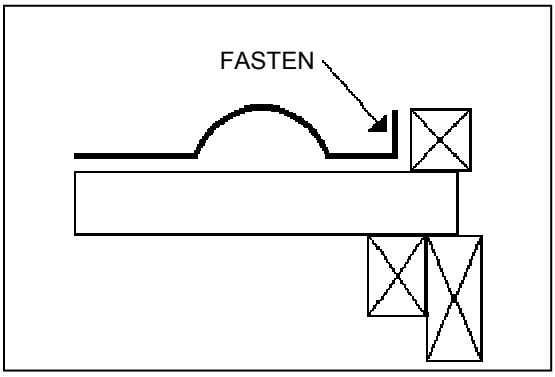

Illustration #18

INSTALLATION OF CAPPING (*STRAIGHT*)
Install using painted head screws. Overlap trims 3". For hip application ensure that laps are facing down the slope. ***Illustration #19.***

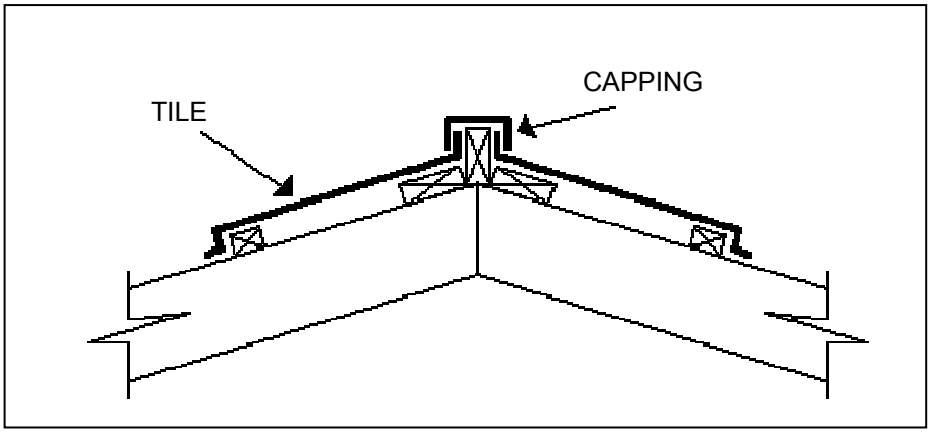

Illustration #19

INSTALLATION OF CAPPING (*BARREL*)
See ***Illustration #20 and #21.***

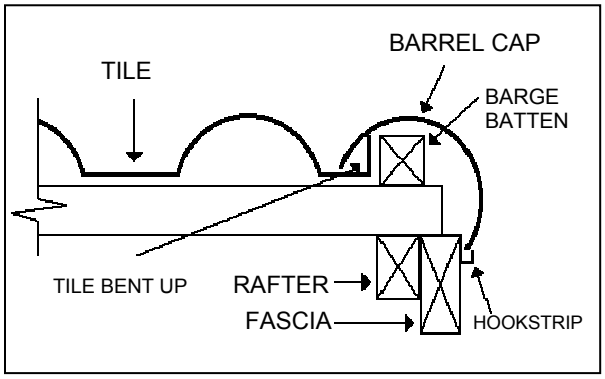

Illustration #20

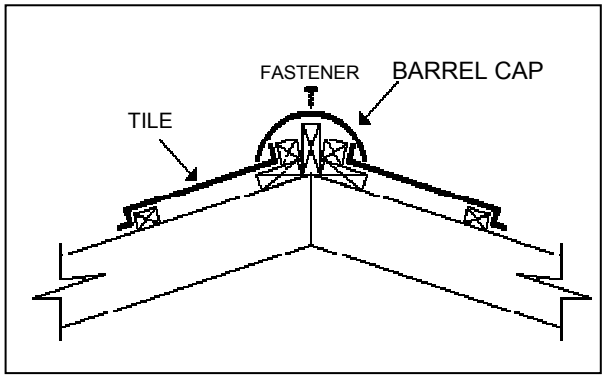

Illustration #21

BARGE COVER INSTALLATION
Barge cover should be installed over the batten and bent up portion of the tile. Ensure that seams are facing down the slope. ***Illustration #22.***

END COVERS FOR HIP & RIDGE
See Illustration #23.

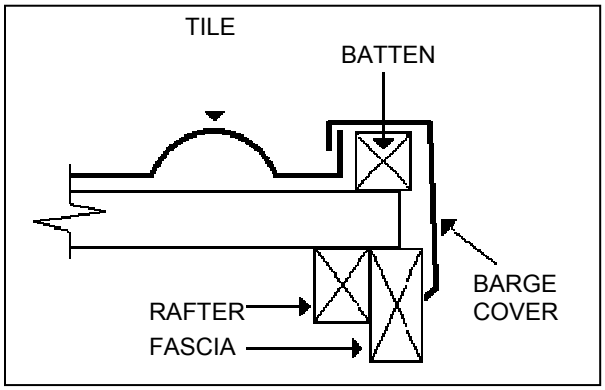

Illustration #22

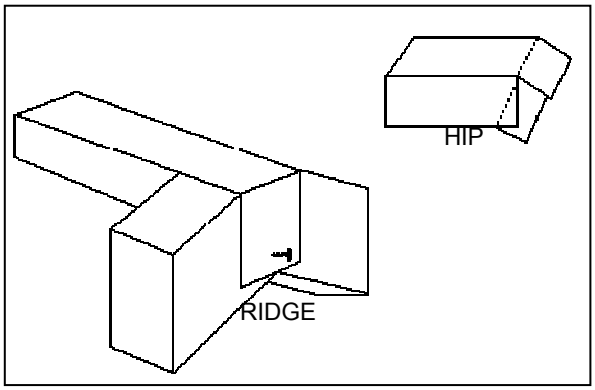

Illustration #23

MANSARD AND GAMBREL ROOFS
In this situation a backer batten is placed at the top of the bottom roof slope or mansard as shown. If full coursing cannot be accommodated, tiles at the top of the vertical wall may be cut off and flashed over. ***Illustration #24.***

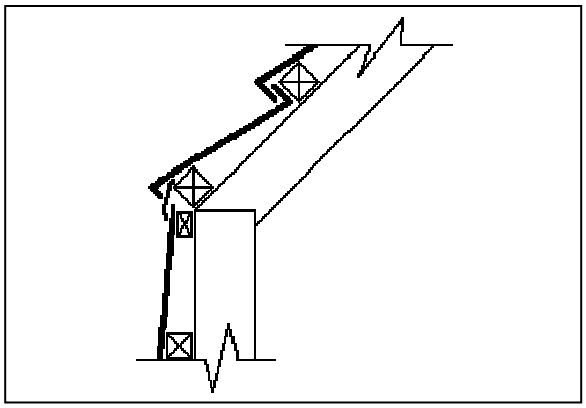

Illustration #24

VERTICAL WALL JUNCTIONS
Illustration #25 or #26.

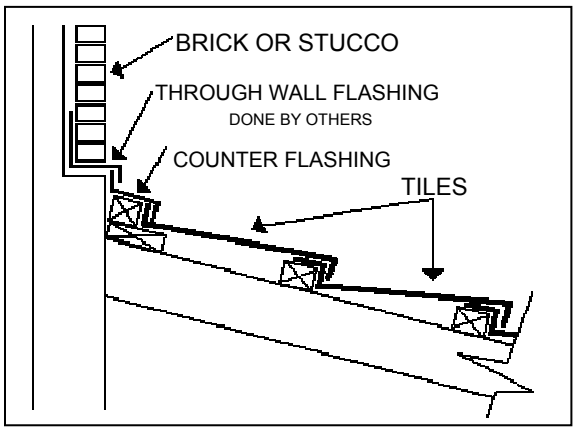

Illustration #25

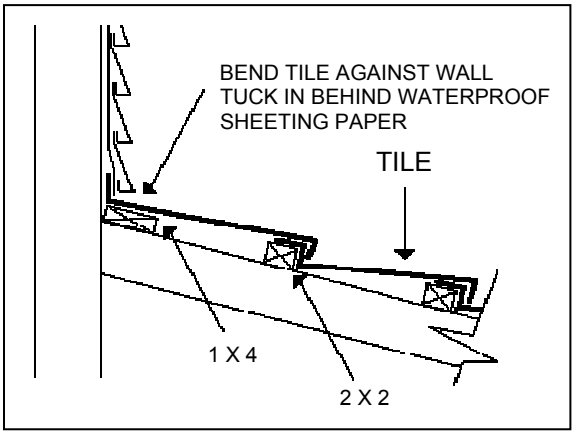

Illustration #26

On new work; coordinate the installation of the roof flashing with wall cladding supplier. To make sure the roof flashing is well tucked-in and sealed under the through wall flashing.

SPLIT LEVELS OR DORMERS
Install as per ***Illustration #27 or #28.***

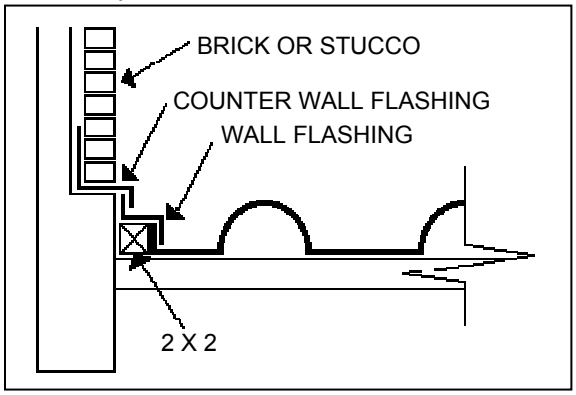

Illustration #27

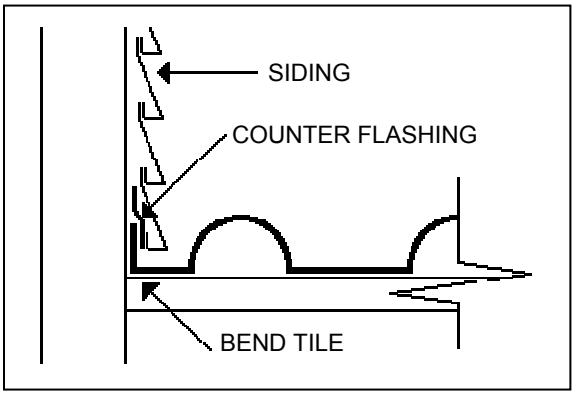

Illustration #28

SKYLIGHT AND CHIMNEY FLASHING
Bend the tile up the side 3" and install counter flashing. Tuck in and seal under through wall flashing. Coordinate installation with other trades. ***Illustration #29 or #30.***

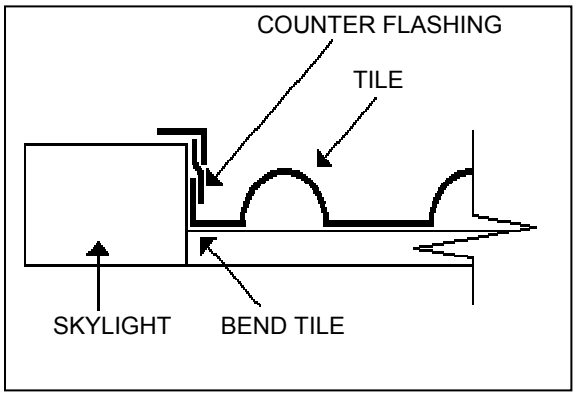

Illustration #29

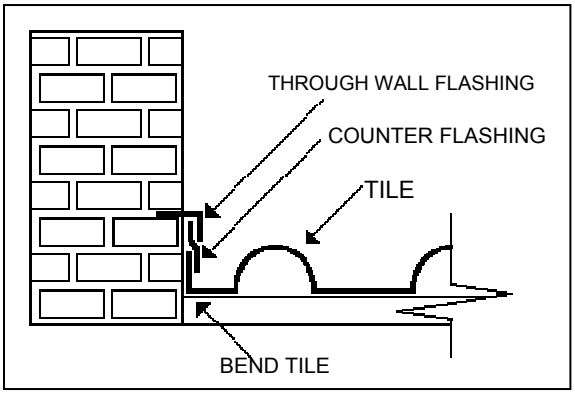

Illustration #30

PLUMBING STACKS
First cut a hole in tile and install over plumbing stack, then install a lead flashing over the pipe and onto the tile. A second tile is put over the lead flashing and fastened to the batten. ***Illustration #31.***

NOTE: Lead flashing must run high enough up slope to counter act capillaries and wind pressure and allowed gravity flow.

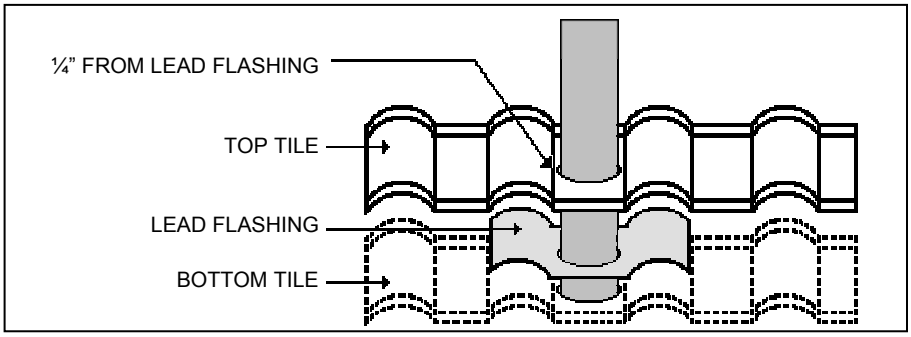

Illustration #31

GENERAL INFORMATION

1. The most efficient way to install our system is in teams of two people.
2. Rubber soled shoes must be worn during application of tiles.
3. Installers should stand in valley of the tile during installation.
4. Although Rare tile system is designed to be installed over open-truss roofs, an application of self supporting underlayment (1/2" aspenite) will speed up the tile installation.

EQUIPMENT REQUIRED TO INSTALL RARE TILES

1. Portable cutter
2. Portable bender
3. Portable top row bender
4. Metal snips
5. Nailing gun
6. Screw gun

INSULATED ROOF DECKS

Metal Z-bar system

1. Metal or wood deck
2. Vapour-barrier/Air-barrier
3. Insulation
4. Underlayment
5. Battens
6. Rare tiles

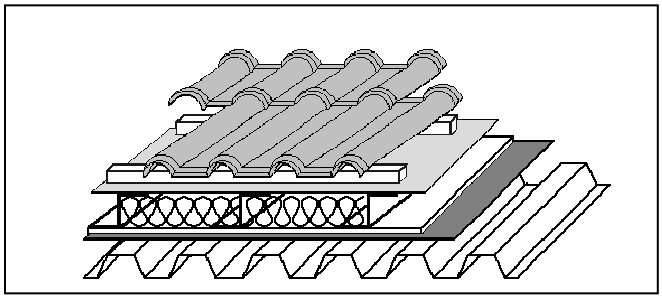

Illustration #33

Insulated using 2” x 4” or 2” x 6”

1. Metal or wood deck
2. Vapour-barrier/Air-barrier
3. Insulation
4. Underlayment
5. Battens
6. Rare tiles

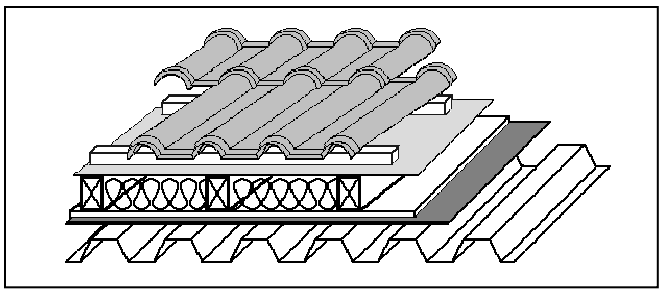

Illustration #34

Battens installed directly over insulation

1. Metal or wood deck
2. Vapour-barrier/Air-barrier
3. Insulation (maximum 2 ½”)
4. Underlayment
5. Battens
6. Rare tiles

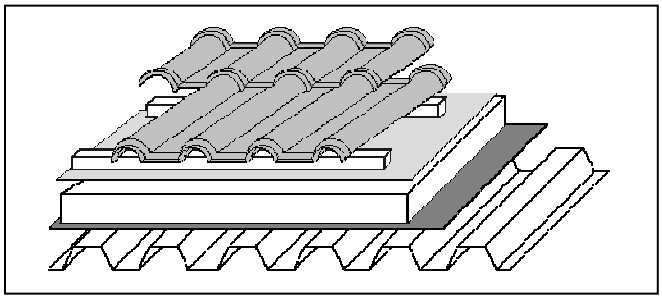

Illustration #35