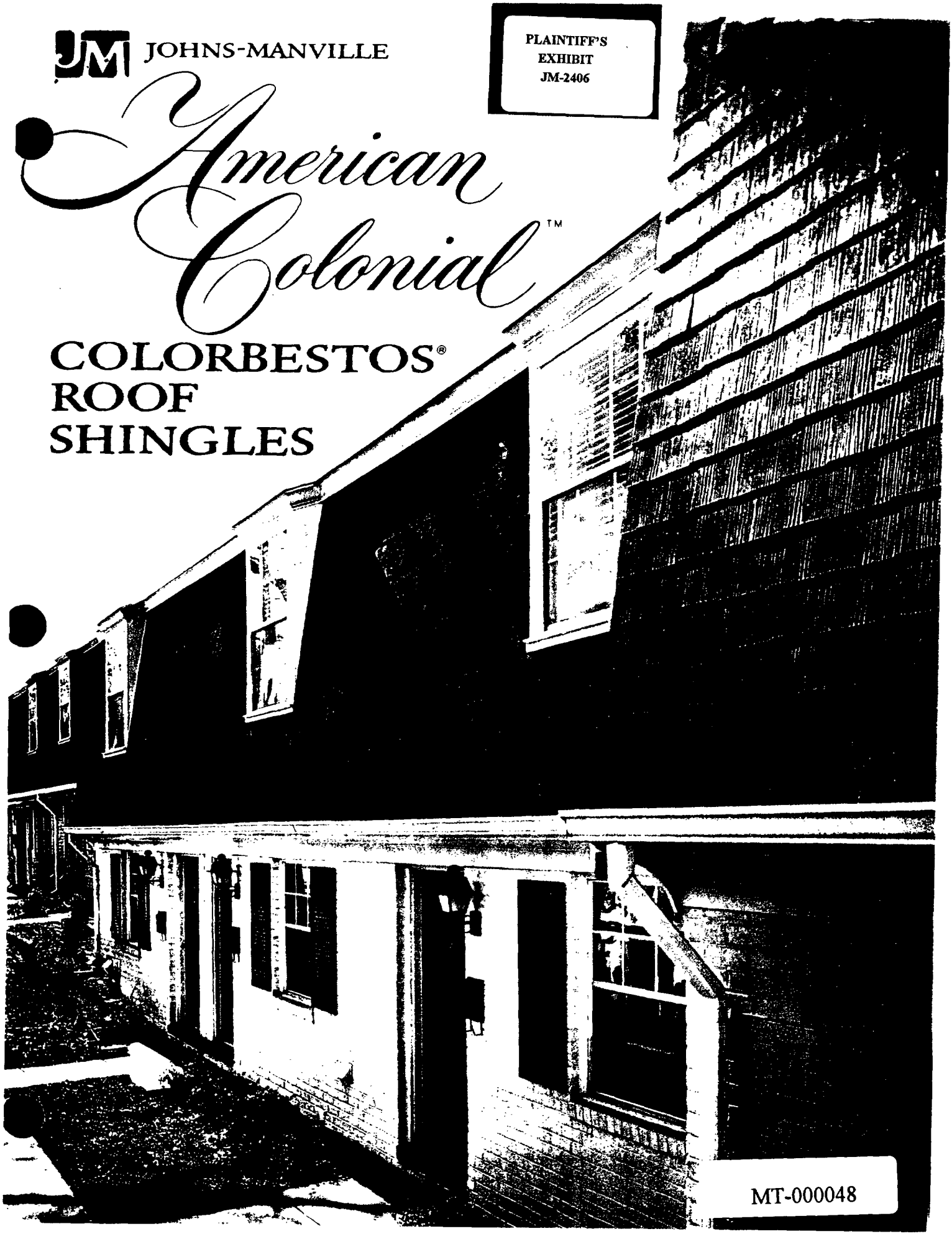
JOHNS-MANVILLE

PLAINTIFF'S
EXHIBIT
JM-2406

American Colonial™

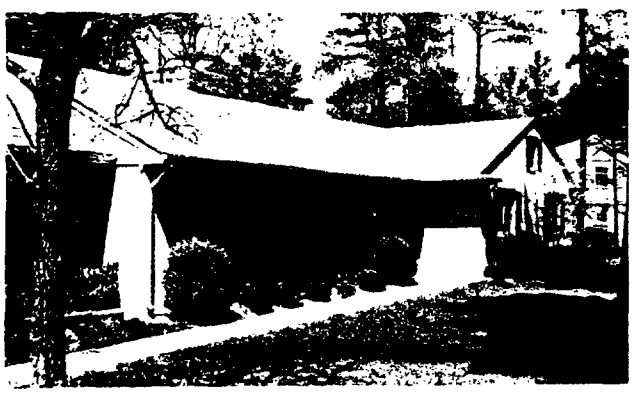
COLORBESTOS® ROOF SHINGLES

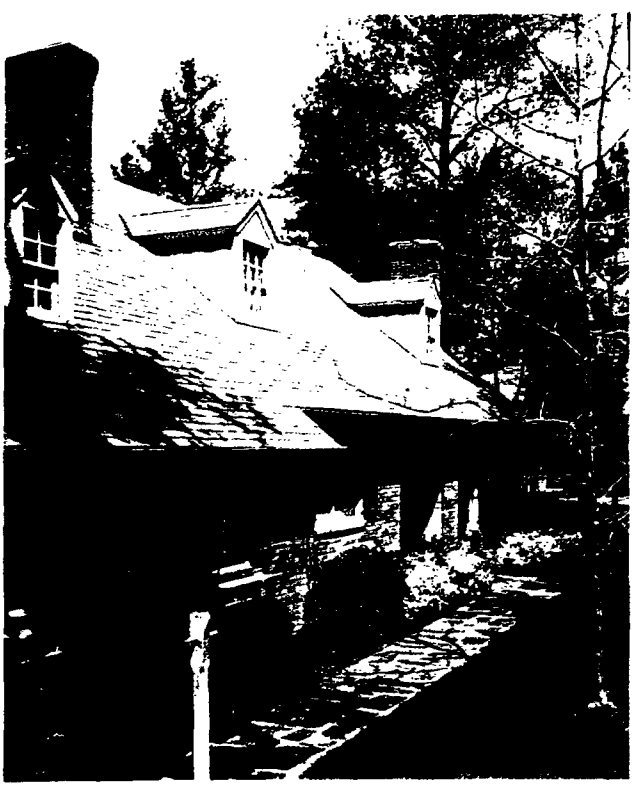


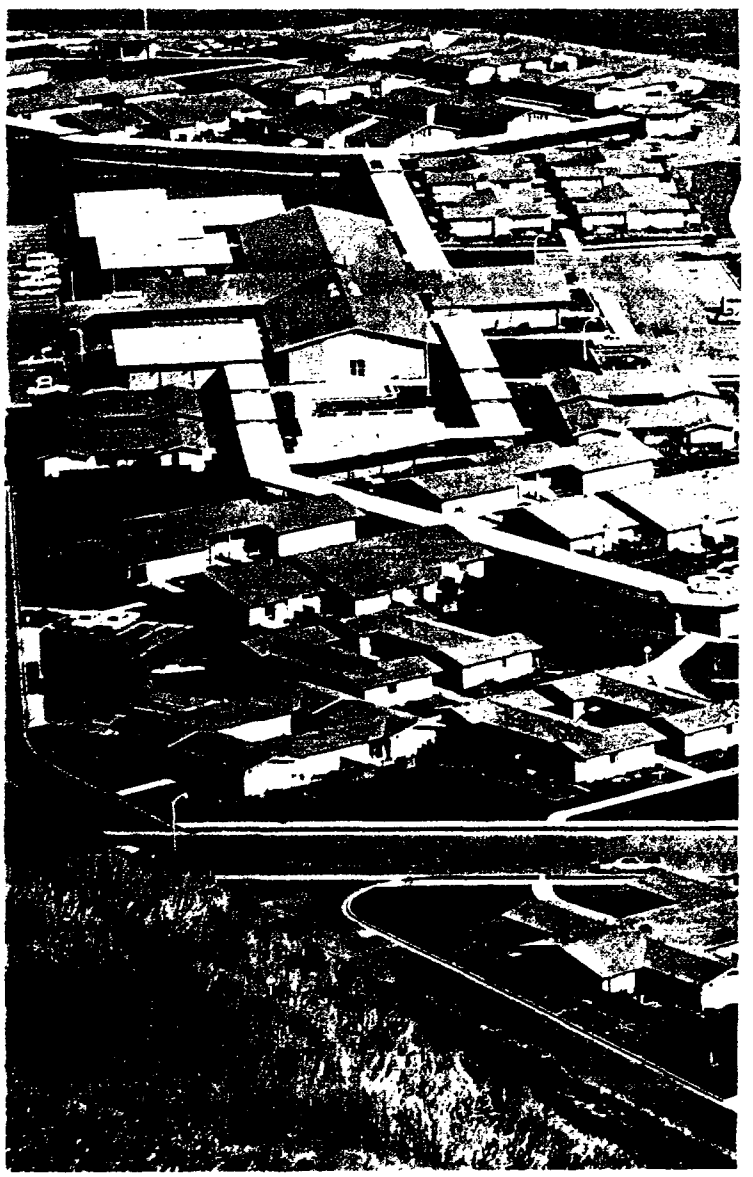
MT-000048

The rugged beauty of American Colo

complements traditional or contempora









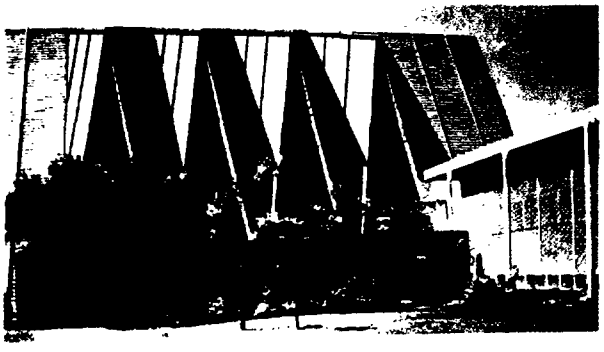
COMPLETE DOUBLE COVERAGE

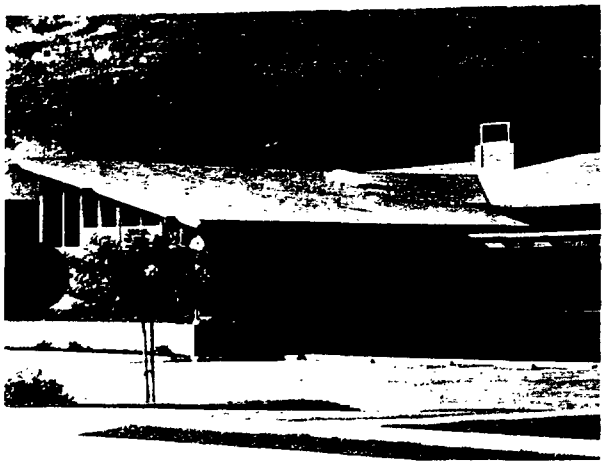
J-M American Colonial Shingles are self-aligning, self-spacing. As succeeding courses are applied, special alignment notches are matched, automatically setting the correct 6″ exposure. They provide **complete double-coverage over the entire roof area,** triple-coverage over many sections.

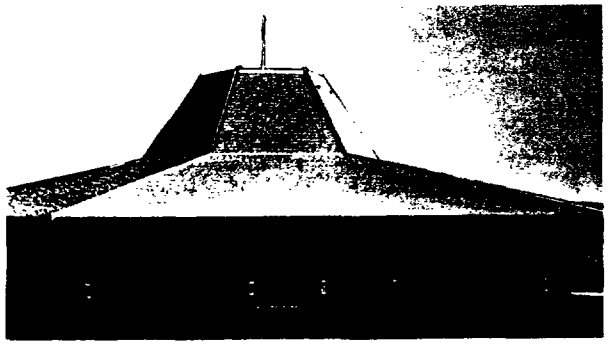


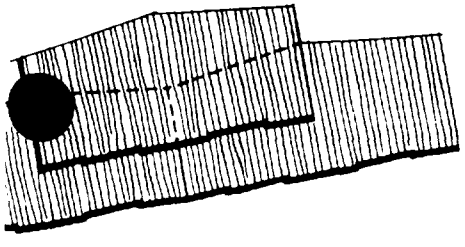
MT-000049

...ial Roof Shingles
...v architecture



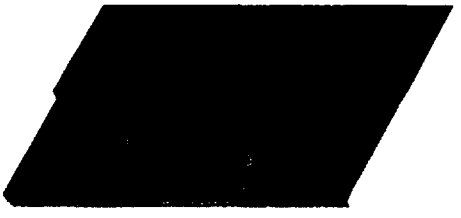








FLINT GRAY *



SLATE BLACK

SHELL WHITE



WEATHERED GREEN



CHESTNUT BROWN



Silver Gray on West Coast. Other colors available some sections of the country.

MT-000050

Deep-grooved texture, staggered edge and rich colors locked-in-to-last by an exclusive J-M process create the handsome appearance of J-M American Colonial Shingles. They are ideally suited to new construction or re-roofing. You will note in the variety of applications illustrated their compatibility with any architectural style as well as their adaptability to the most exacting design requirements.









PRODUCT DATA

Size: 14″ x 30″ x approx. 5/32″ uniform thickness.

Colors*: Weathered Green, Chestnut Brown, Shell White, Flint Gray (Silver Gray on West Coast), Slate Black.

Roof Pitch: 5″ Min. for Standard Application; 3″ Min. for Class "A" or Low Slope Application.

Application: 6″ Exposure; 2″ Headlap; 80 shingles per square. Nail holes prepunched. Only 4 nails required per shingle.

Packaging: 5 bundles per square.

Weight: Approx. 325 lbs. per square.

Accessories: *Starters*—8″ x 30″, 40 pieces (2 bundles) per 100 lin. ft. *Hip & Ridge Shingles*—14″ long, 5⅜″ tapered to 4¾″ wide, 340 pieces (5 bundles) per 100 lin. ft.

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JOHNS-MANVILLE

American Colonial



COLORBESTOS SHINGLES

. . . one of the most famous names in roofing!

Distinctive beauty and **timeless service** have earned for the American Colonial Colorbestos Shingle its unique position in the roofing field. More than a generation of proved performance has made it one of the most widely-recognized names in fine roofing.

Made of enduring mineral fibers, American Colonial Shingles have the permanence of stone. Rigid and strong, they will not rust, rot, shrink . . . need no preservative treatment . . . assure lasting protection. Their **Class "A" Fire Rating** from Underwriters' Laboratories, highest awarded by this independent testing organization, attests to the maximum resistance of American Colonial Shingles to fire and the spread of flame. Independent tests also proved their **wind-resistance.** Subjected to winds of hurricane velocity, they sustained no damage.

Specify J-M American Colonial Colorbestos Shingles for residential, commercial and institutional buildings and "roof for the last time." **Not one has ever burned or worn out!** They're made by Johns-Manville, leader in the development and manufacture of quality roofings for more than 100 years.

☆ ☆ ☆

MT-000052

ARCHITECTURAL SPECIFICATION for J-M

American Colonial

COLORBESTOS ROOF SHINGLES

Scope: Work includes furnishing all labor, materials and equipment necessary to complete installation of American Colonial Colorbestos Roof Shingles as shown on the drawings and specified herein.

Preparation of Roof Deck: The Roofing Contractor shall examine all roof decks on which his work is to be applied and shall notify the Architect in writing prior to starting work of any defects which he considers detrimental to the proper installation of his materials.

Materials: Underlayment: *For roof slopes 5" per ft. or greater,* use one ply J-M No. 15 Asbestos Felt or one ply J-M No. 33 Asbestos Underlayment Felt (West Coast only). *For roof slopes under 5" per ft. with minimum of 3" per ft.,* use two plies of above felts.

Nails: Shall be Galvanized Needle Point Roofing Nails—$1\frac{3}{4}$" long for new work, 2" for re-roofing.

Shingles: Shall be American Colonial Colorbestos Shingles as manufactured by Johns-Manville. Color shall be .....

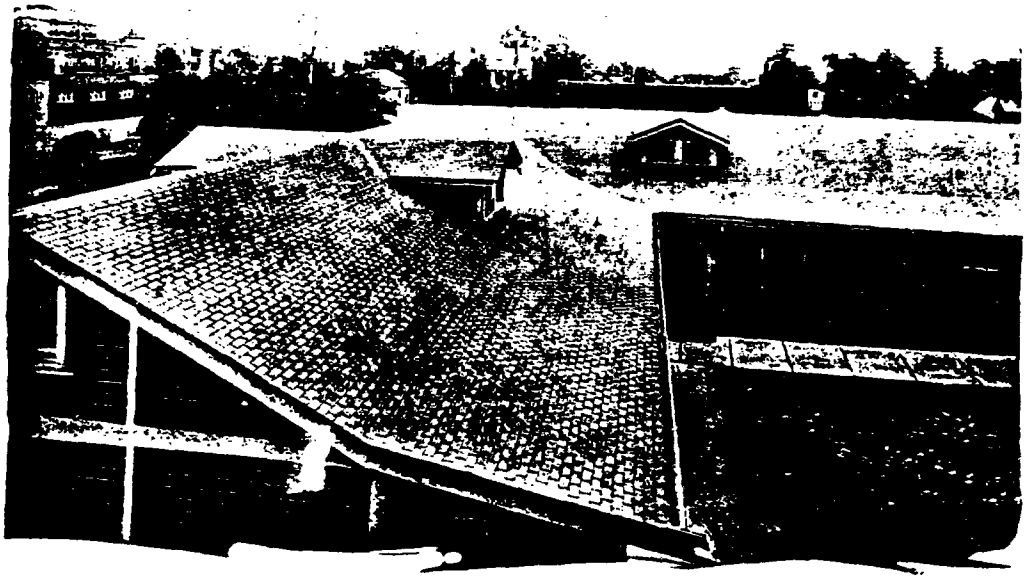
Installation: Underlayment, shingles, flashing and other accessories shall be installed in accordance with instructions pub' ed by Johns-Manville. (Special appl' on instructions apply to areas where the mean January temperature is 25°F or less.)

Note: Underwriters' Class "A" Label applies only to roofs having slope of 3" per ft. or greater using recommended underlayment.

Johns-Manville

22 East 40th Street • New York, N.Y. 10016

Sales Offices in Principal Cities



Flexstone Asbestos Shingles afford better service and greater fire protection because of their all-mineral, asbestos rock fibre felt base.

Johns-Manville Flexstone Asbestos Shingles
(Slate Surfaced)

WHERE for any reason the architect prefers a flexible, slate surfaced shingle Johns-Manville Flexstone Asbestos Shingles are recommended for any size of building with a roof pitch sufficient to accommodate this type of roof covering.

Flexstone Asbestos Shingles are an improved, all-mineral form of the flexible slate surfaced shingle. There are two types of flexible slate surfaced shingles on the market today. One is the so-called asphalt shingle and the other is the Johns-Manville Flexstone Asbestos Shingle. Although quite the same in surface appearance, the Johns-Manville Flexstone Asbestos Shingle is radically different and more desirable because of the basic raw material of which it is made.

Flexstone Asbestos Shingles are Rock—Not Rags

In a modern sky-scraper the strength and everlasting qualities of the foundation determine the durability, safety and usefulness of the structure; so it is with a flexible, slate surfaced shingle.

A shingle cannot be better than its foundation. The felt base is its backbone. It depends for its useful life upon the resistance of its felt to fire, time and weather. Therefore, the most important thing

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about a roofing of this kind is the nature of the raw materials used in the manufacture of the felt.

The base of the ordinary asphalt shingle is a rag felt which is partly rags and in some cases partly jute, waste paper and other refuse material. It will burn to a cinder.

The base of Johns-Manville Flexstone Shingles is the same asbestos rock fibre that is used in all Johns-Manville Asbestos Roofings. It is proof against rot, weather and fire.

That is why Flexstone Asbestos Shingles are superior. The natural durability —the practically indestructible nature of their asbestos felt base assures longer and more economical service and a greater degree of fire protection.

Flexstone Asbestos Shingles are better, more durable and more fire-safe because of what is IN them rather than because of what is ON them. And yet they cost little more than rag-felt shingles.

As for the surfacing: On Flexstone Shingles the only function of the slate is to provide an attractive, colorful surface rather than a further protection for the felt. Asbestos felt needs no such protection. It is not dependent upon any kind of surfacing for its resistance to time, fire and weather.

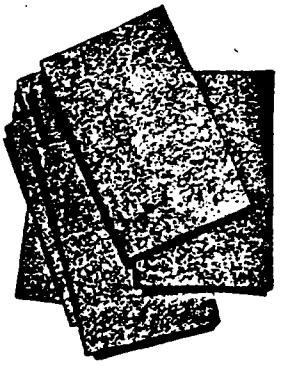
Flexstone Asbestos Shingles are attractive in appearance; moderate in first cost, easy to apply, fire-safe and they will not curl when properly applied.

Flexstone Asbestos Shingles are furnished with a surfacing of crushed slate in soft Red, a cool Green and a rich Blue-black.

Johns-Manville Flexstone Shingles are approved by Underwriters' Laboratories, Inc. ASBESTOS SHINGLES ARE THE ONLY FLEXIBLE COMPOSITION SHINGLES that take base rates of insurance. Flexstone Asbestos Shingles have been labelled Class "B," the highest rating for this type of shingle. Many localities prohibit roofs of lower rating than Class "B."

Made in Two Styles and Three Sizes

(1) Flexstone Rectangular Individual Shingles; size 8" x 12¾"; 424 shingles will cover 100 square feet of surface. Shipped in bundles of ¼ square of 106 shingles, including directions for application. Approximate shipping weight: 230 lbs. per square.



Flexstone Asbestos Individual Shingles. Size 8" x 12¾".

6 lbs. of 1" large head galvanized nails per square required for application.

(2) Flexstone Strip Shingles. A strip of asbestos slate surfaced felt 32" long by 10" or 12¾" wide, notched to represent four shingles. 112 strips will cover 100 square feet. Shipped in bundles of ½ square of 56 strips, including directions for application. Strip shingles are quicker and easier to lay and require fewer nails. Approximate shipping weight 10" width 185 lbs., 12¾" width 240 lbs. per square.

4 lbs. of 1" large head galvanized nails per square required for application.



Flexstone Asbestos Strip Shingles Size 32" x 10" or 12¾".

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Standard Specifications for Application of Johns-Manville Flexstone Rectangular Individual Asbestos Shingles

(Size 8" x 12¾")

ROOF BOARDS

Lay the roof boards in the usual manner, breaking joints and nailing securely in place with at least two nails at each rafter, leaving no loose ends. The roof boards shall be well-seasoned, of narrow width and uniform thickness; tongued and grooved preferred.

MATERIALS

Shingles shall be a heavy weight single thickness of asbestos felt impregnated with asphalt, the weather surface to be covered with crushed slate, same to be Johns-Manville Flexstone Rectangular Asbestos Shingles (red, green or blue-black), size 8" x 12¾", laid up in the following manner:

ROOFING

At the eaves apply sheet metal drip edge (painted both sides), or a wooden strip, overhanging the eave approximately ½".

Line the valleys with sheet metal, or Johns-Manville Flexstone Slate Surfaced Asbestos Roofing. If the slate surfaced roofing is used it shall be applied in two layers, the first layer being 12" wide and the second or top layer, being 20" wide.

Lay the first, or starting course, of shingles vertically and butted together, flush with drip edge, thus making a solid strip along the eave, 12¾" wide.

Lay another starting course directly on top of the first and flush with same, starting at the left with a one-third width shingle (2⅔" x 12¾"), so that all joints will be broken with first starting course. Space these shingles ½" apart.

Start the first main body course at the end 4" up from the eave, with a whole shingle. Start the next course with a two-third width shingle (5⅓ x 12¾"). Start the third main body course with a whole shingle, and the fourth course with a one-third width shingle, and so on in rotation, breaking all joints one-third and two-thirds and spacing all main body shingles ½" apart.

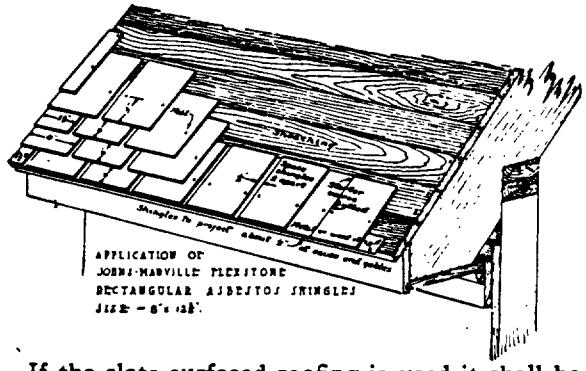
All shingles shall have a weather exposure of 4".

NAILING

Each shingle shall be nailed to the sheathing with two large head galvanized nails at least 1" long. These nails shall be placed 5" above the butt and ¾" in from the sides.

HIPS AND RIDGES

After the main body shingles have been applied, hips and ridges shall be covered with Johns-Manville Flexstone Slate Surfaced Asbestos Roofing or individual shingles.



If the slate surfaced roofing is used it shall be cut into strips approximately 8" wide and applied extending 4" each side of hip or ridge. Both edges shall be securely nailed with large head galvanized nails at least 1" long. These nails shall be spaced approximately 2" center to center and placed ¾" from edge.

If the individual shingles are used application shall be started at either end of ridge and lower end of hip. Apply one shingle flush with main body shingles, extending 4" each side of hip or ridge. Apply another shingle in the same manner and directly over the first. Apply the next shingle in a similar manner, 4" from the butt of the first shingle, fastening each shingle with two large head galvanized nails at least 1" long. These nails shall be placed 5" from the butt and ¾" in from the sides, one either side of ridge or hip. Apply succeeding shingles in a similar manner, exposing 4" of each shingle to the weather.

FLASHING

Flash and counter flash, where necessary, with sheet metal applied in an approved manner.

SIDING

Except as hereinafter noted, the specification for applying roofing shall apply to Siding:

Allow ¼" space around all doors, windows, etc., to permit shingles to be carried behind face boards, (these face boards shall be put on after the shingles have been applied and shall lap the shingles at least 2".)

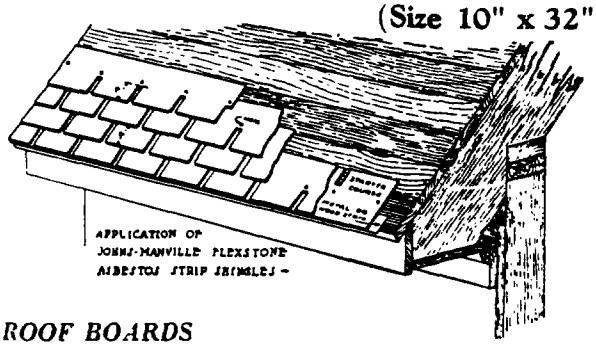
The shingles shall be exposed 3" to the weather, nailing each shingle with two large head galvanized nails at least 1" long. These nails shall be placed 4" above the butt and 1" in from the sides. Secure the two lower corners of the exposed butt of each shingle with small copper brads or small headed nails.

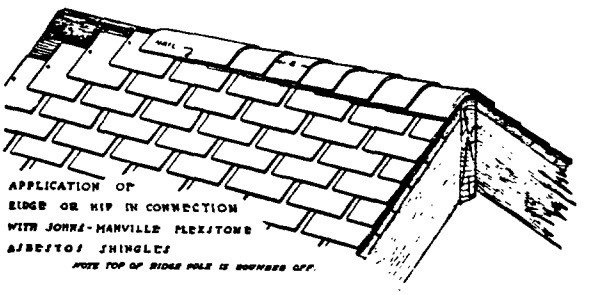
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Standard Specifications for the Application of Johns-Manville Flexstone Asbestos Strip Shingles

(Size 10" x 32" or 12¾" x 32")





ROOF BOARDS

Lay the roof boards in the usual manner, breaking joints and nailing securely in place with at least two nails at each rafter, leaving no loose ends. The roof boards shall be well-seasoned, of narrow width and uniform thickness; tongued and grooved preferred.

MATERIALS

Shingles shall be a heavy weight single thickness of asbestos felt impregnated with asphalt, the weather surface to be covered with crushed slate, same to be Johns-Manville Flexstone Asbestos Strip Shingles (red, green or blue-black), size 10" x 32" or 12¾" x 32", laid up in the following manner:

ROOFING

At the eaves apply sheet metal drip edge (painted both sides), or a wooden strip, overhanging the eave approximately ½".

Line the valleys with sheet metal, or Johns-Manville Flexstone Slate Surfaced Asbestos Roofing. If slate surfaced roofing is used, it shall be applied in two layers, the first layer being 12" wide and the second, or top layer, being 20" wide.

Lay the first, or starting course, of shingles flush with the drip edge with the cutouts up the roof, butting the strips end to end.

Lay another starting course directly on top of the first and flush with same, with the cutouts down the roof, breaking joints. Butt the strips end to end.

Start the first main body course at the end 4" up from the eave, with a strip from which half of the end shingle has been cut longitudinally. Start the next course above with a full width strip, and so on in rotation to break joints.

All shingles shall have a weather exposure of 4".

NAILING

Strips shall be nailed to the sheathing with one large head galvanized nail at least 1" long above each cut-out, and one at the end of each strip. These nails shall be placed 5" up from the butt and ¾" in from the sides. Center nails shall be driven first.

HIPS AND RIDGES

After the main body shingles have been applied, hips and ridges shall be covered with Johns-Manville Flexstone Slate Surfaced Asbestos Roofing or individual shingles.

If the slate surfaced roofing is used, it shall be cut into strips approximately 8" wide and applied extending 4" each side of hip or ridge. Both edges shall be securely nailed with large head galvanized nails at least 1" long. These nails shall be spaced approximately 2" center to center and placed ¾" from edge.

If the individual shingles are used same shall be cut from the strip shingles and application shall be started at either end of ridge and lower end of hip. Apply one shingle flush with main body shingles, extending 4" each side of hip or ridge. Apply another shingle in the same manner and directly over the first. Apply the next shingle in a similar manner 4" from the butt of the first shingle and fasten with two large head galvanized nails at least 1" long. These nails shall be placed 5" above the butt and ¾" in from the sides, one either side of ridge or hip. Apply succeeding shingles in a similar manner, exposing 4" of each shingle to the weather.

FLASHING

Flash and counter flash, where necessary, with sheet metal applied in an approved manner.

Siding—Note: Refer to same paragraph in specification for Flexstone Individual Shingle on page 163 and follow same instructions. In writing this specification, copy as part of it the "Siding" paragraph, making the following change: "These nails shall be placed 4" above the butt and 1" from the cutout."

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