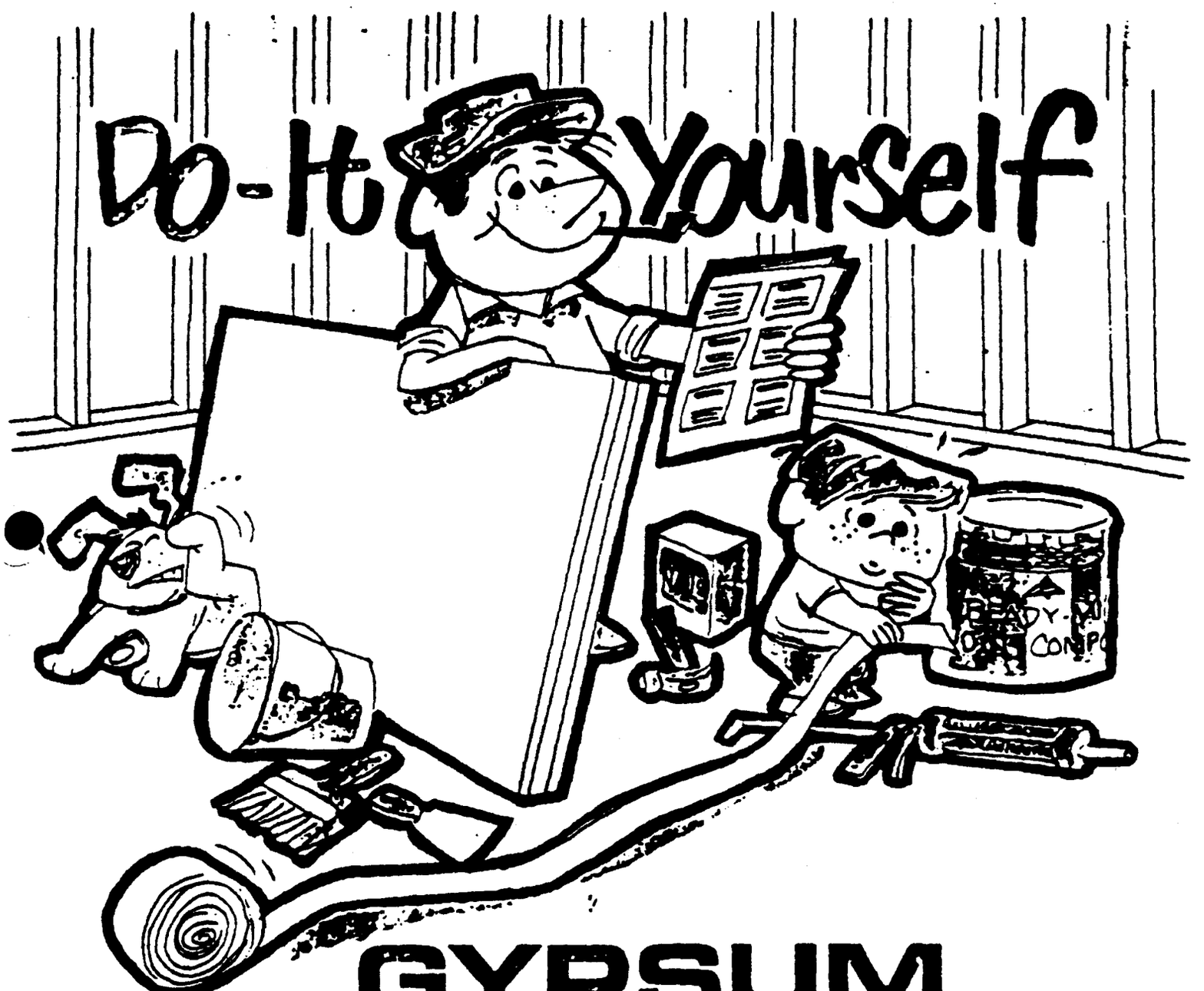
NOTE: This instruction booklet is designed for the average homeowner who is involved in a home improvement project and needs simple, easy to follow instructions on how to apply and finish gypsum wallboard.



GYPSUM WALLBOARD APPLICATION

Georgia-Pacific

GYPSUM DIVISION

PLAINTIFF'S EXHIBIT
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GP-42

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1 PLANNING THE JOB



A little thought and planning before you start your project can result in a better appearing job and a savings in materials and time. Make a sketch of the areas to be surfaced with gypsum wallboard and lay out the board panels. Install the boards across (perpendicular to) the joists or studs. Use as long a board as can be handled to eliminate or reduce end joints. For example, in a 12' x 13' room where the ceiling joists run parallel to the 13' dimension, it is desirable to have the boards be 12' long. If they are 8' long, an end joint would be necessary in each course. Where end joints cannot be avoided, they should be staggered.

It is usually better to apply the board on the ceiling first, then the sidewalls.

It is often easier to use the adhesive/nail-on method of application. This method results in fewer nails to drive and conceal and makes a higher quality installation.

2 ESTIMATING MATERIALS

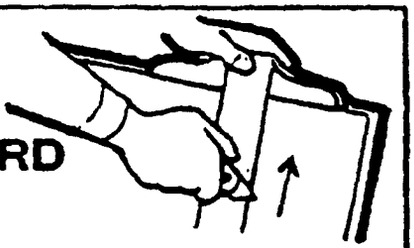
Using the sketch, determine the lengths and number of boa required. Nails can be estimated from chart below. About 5(fewer nails are required if the adhesive/nail-on method is us

ESTIMATING NAILS

Wallboard Thickness	Nail Type	Approx. lbs. per 1000 sq of gypsum wallboard
⅜", ½"	1¾" coated type drywall nail	5¼ lbs.
⅝"	1⅞" coated type drywall nail	5¼ lbs.

After the wallboard is installed, the flat joints and in corners are to be reinforced with a paper tape and joint c pound. The outside corners are to be reinforced with a dry metal corner bead and joint compound. G. P. Ready Mix pre-mixed, ready-to-use product that can be used for the c plete job of taping, filling, spotting, nail-heads and finishin

4 CUTTING GYPSUM WALLBOARD

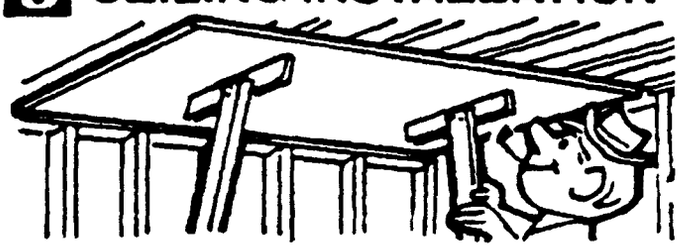


Use T-square and wallboard knife for scoring. With the knife at right angles to the board, score completely through the face paper. Then apply firm even pressure to snap the board. Fold back the partially separated portion of the board and use the knife again to cut the back paper. Rough edges should be smoothed. Panels can be cut with a saw if desired.

CUTTING OPENINGS

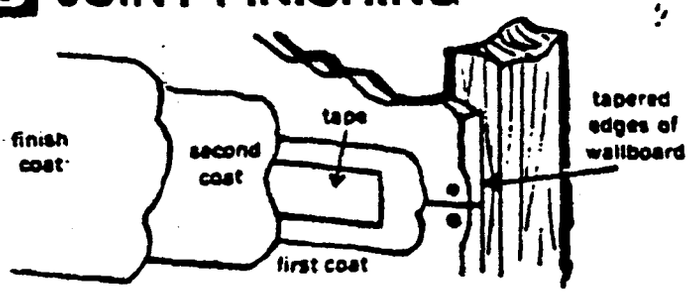
It will be necessary to cut holes in the wallboard for electrical outlets, light receptacles, etc. The distance of the opening from the end and edge of the board should be carefully measured and marked on the face of the wallboard. The opening should then be outlined in pencil and cut out with a keyhole saw. The cut-out must be accurate or the cover plate will not conceal the hole.

5 CEILING INSTALLATION



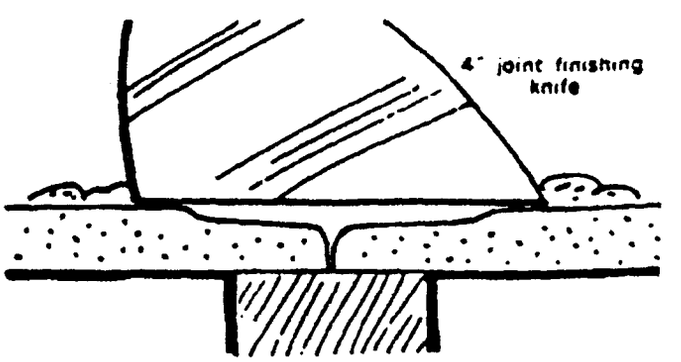
It is more difficult to install the ceiling boards because of th overhead positioning. It is desirable to have T-braces to hold th board in place while it is being nailed. A satisfactory T-brace co sists of a 2 foot piece of 1 x 4 nailed onto the end of a 2 x 4. Th length should be about an inch longer than the floor to ceilir height. The nails should be 7" apart. When the adhesive nail-c method is used, the edges should be nailed, but only 1 nail p joist in the field of the board. All edges should be supported c framing. The nails should be driven to bring the board tight to th framing, then another blow struck to dimple the nail. Being car ful not to break the face paper.

8 JOINT FINISHING



A pre-mixed material such as G-P Ready Mix Joint Compound is the easiest to use to finish joints, corners and nailheads. A minimum of three coats of Ready-Mix is recommended for all taped joints. This includes an embedding coat to bond the tape and two finishing coats over the tape. Each coat should dry thoroughly, usually 24 hours, so that the surface can be easily sanded. When sanding, wrap your sandpaper around a wood sanding block so you sand the surface evenly. Do not over-sand or sand the paper surface. This may outline the joint or nail head through the paint.

9 APPLYING BEDDING COMPOUND



Take your 4" joint finishing knife and apply the Ready Joint Compound fully and evenly into the slight recess cre by the adjoining tapered edges of the board.

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The following chart will tell you approximately how much joint compound to buy.

*ESTIMATING READY MIX JOINT COMPOUND & TAPE

G-P Gypsum Wallboard Square Feet	Estimated Amount of G-P Ready-Mix Joint Compound	Estimated Amount of G-P Wallboard Tape
100-200 sq. ft.	1 Gal.	2—60' rolls
300-400 sq. ft.	2 Gals.	3—60' rolls
500-600 sq. ft.	3 Gals.	1—250' roll
700-800 sq. ft.	4 Gals.	1—250' roll 1—60' roll
900-1000 sq. ft.	1-5 Gal. Pail	1—250' roll 2—60' rolls or 1—500' roll

*A powder joint compound, G-P All Purpose, is also available. Estimate 60 lbs. per 1000 sq. ft. of wallboard.

In the adhesive nail-on method, G-P Drywall adhesive is applied to the joists and studs before each piece of wallboard is positioned and nailed. The adhesive is applied to the framing member from a caulking gun in about a ⅜ diameter bead. For each 1,000 square feet of wallboard use eight quart size tubes of adhesive.

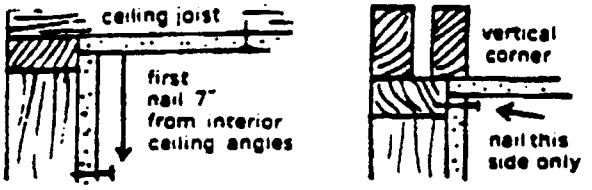
3 TOOLS REQUIRED



The basic tools you need are:

1. Wallboard Cutting Knife and Heavy Duty Knife Blade
2. Wallboard Hammer or Regular Crown Head Carpenters Claw Hammer.
3. 4' T-Square or Steel Straight Edge
4. Steel Tape Measure
5. Utility Saw or Keyhole Saw
6. Joint Finishing Knives—4" and 10" Blades
7. Plastic Pan for Joint Compound
8. Sand Paper (medium texture) for Joint Finishing
9. Caulking Gun

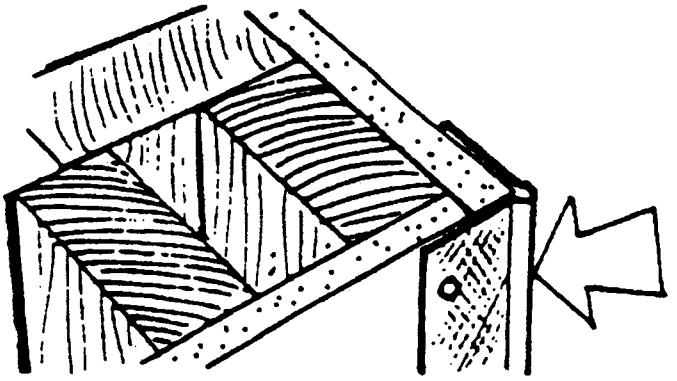
6 WALL APPLICATION



In horizontal application on sidewalls, install the top board first. Push the board up firmly against the ceiling and nail, placing nails 7" apart. One exception, however, is to keep all nails back 7" from interior ceiling angles. Nails in the interior angles are quite apt to pop. If the adhesive nail-on method is used, all of the field nailing can be eliminated. The nailing is around the edges of the board. If the board is bowed out in the center, it may be advisable to secure with a temporary nail until the adhesive sets.

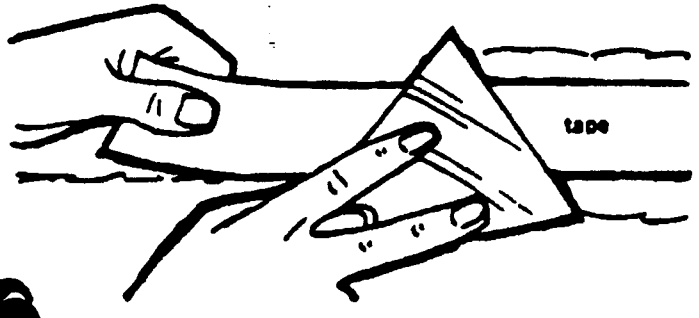
A vertical application places the long edges of the wallboard parallel to the framing members. This is more desirable if the ceiling height of your wall is greater than 8'-2" or the wall is 4' wide or less. Nailing recommendations are the same as for horizontal application.

7 METAL CORNERBEAD



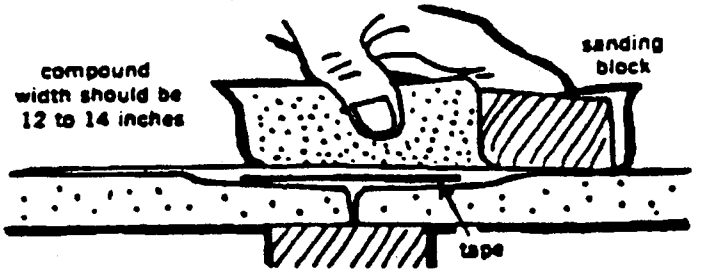
To protect corners from edge damage, install metal cornerbead after you have installed the wallboard. Nail the metal cornerbead every 5" through gypsumboard into wood framing.

10 APPLYING WALLBOARD TAPE



Next, take your wallboard tape, center it over the joint and set the tape firmly, into the bedding compound with your wallboard knife held at a 45° angle. The pressure should squeeze some compound from under the tape, but enough must be left for a good bond.

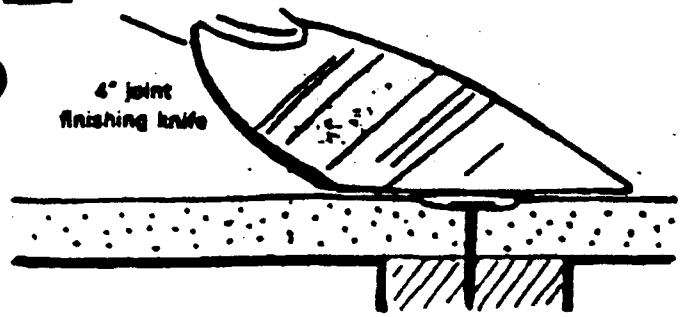
11 APPLYING FINISHING COATS



When thoroughly dry, at least 24 hours, apply a fill coat extending a few inches beyond the edge of the tape and feather the edges of the compound. When the first finishing coat is thoroughly dry, use your 10" joint finishing knife and apply a second coat and feather the edges about 1½" beyond the first coat. When this coat is dry, sand lightly to a smooth even surface. Wipe off the dust in preparation for the final decoration. Total width should be 12 to 14 inches.

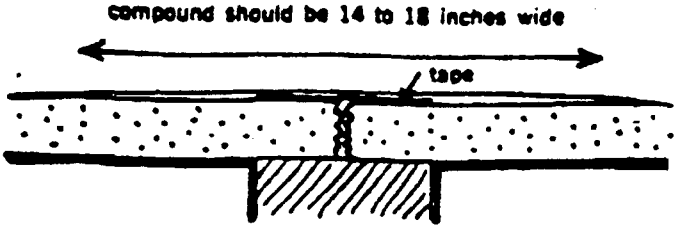
OVER—

12 FINISHING NA[illegible]EADS



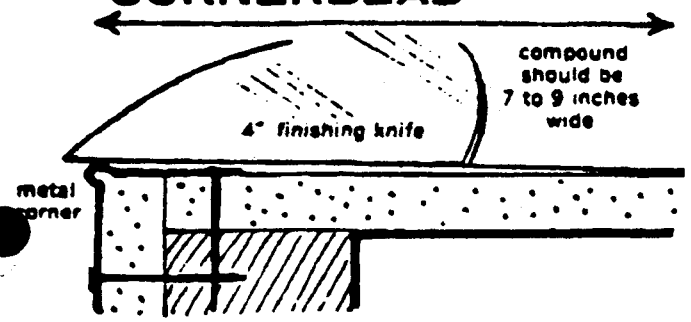
Draw your 4" joint finishing knife across nails to be sure they are below the surface of the board. Apply first coat of Ready-Mix with even pressure to smooth compound level with the surface of the board. Do not bow knife blade with excess pressure as this tends to scoop compound from dimpled area. When dry, apply second coat, let dry, sand lightly and apply third coat. Sand lightly before applying your decoration. An additional coat may be needed depending on temperature and humidity.

13 FIN[illegible]ING END JOINTS



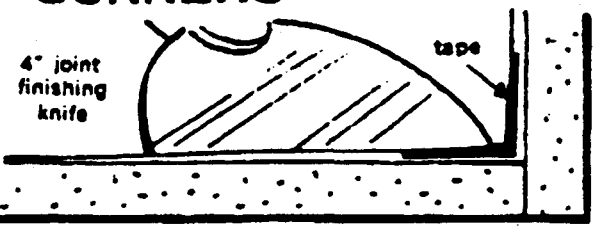
You use basically the same steps with end or butt joints as you do with tapered edges. The end joints are not tapered so care must be taken not to build up the compound in the center of the joint. This encourages ridging and shadowed areas. Feather the compound well out on each side of the joint. Final application of joint compound should be 14 to 18 inches wide.

14 FINISHING METAL CORNERBEAD



Be sure the metal corner is attached firmly. Take your 4" finishing knife and spread the G-P Ready-Mix 3" to 4" wide from the nose of the bead, covering the metal edges. When completely dry, sand lightly and apply second coat, feathering edges 2" to 3" beyond the first coat. A third coat may be needed depending on your coverage. Feather the edges of each coat 2" or 3" beyond the preceding coat.

15 FINISHING INSIDE CORNERS



Cut your tape the length of the corner angle you are going to finish. Apply the G-P Ready-Mix with your 4" knife evenly about 1½" on each side of the angle. Use sufficient compound to embed the tape. Fold the tape along the center crease and firmly press it into the corner. Use enough pressure to squeeze some compound under the edges. Feather the compound 2 inches from the edge of the tape. When first coat is dry, apply a second coat. Feather the edge of the compound 1½" beyond the first coat. Apply a third coat if necessary, let dry and sand to a smooth surface. Use as little compound as possible at the apex of the angle to prevent hairline cracking.

FINAL DECORATION

After the joint treatment is thoroughly dry, all surfaces should be sealed or primed with a vinyl or oil base primer sealer. This equalizes the absorption difference between the exposed surface and the joint compound surface. You will then have a uniform texture and suction over the entire wall or ceiling. When the primer-sealer has dried, apply your final decoration per the manufacturers recommendations.

SPECIAL GYPSUM WALLBOARD PRODUCTS

There are several wallboards that are made for specific uses. Ask your building materials dealer about:

Eternawall™—A predecorated vinyl faced wallboard in various designs for vertical installation on walls. Joints are left unfinished

Tile Backer Board—A water resistant wallboard which serves as a backer for ceramic tile in bath or shower areas.

Firestop®—A fire resistant board which provides ratings which are required in many building codes and regulations.

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