FILE NAME: US Gypsum (USG)

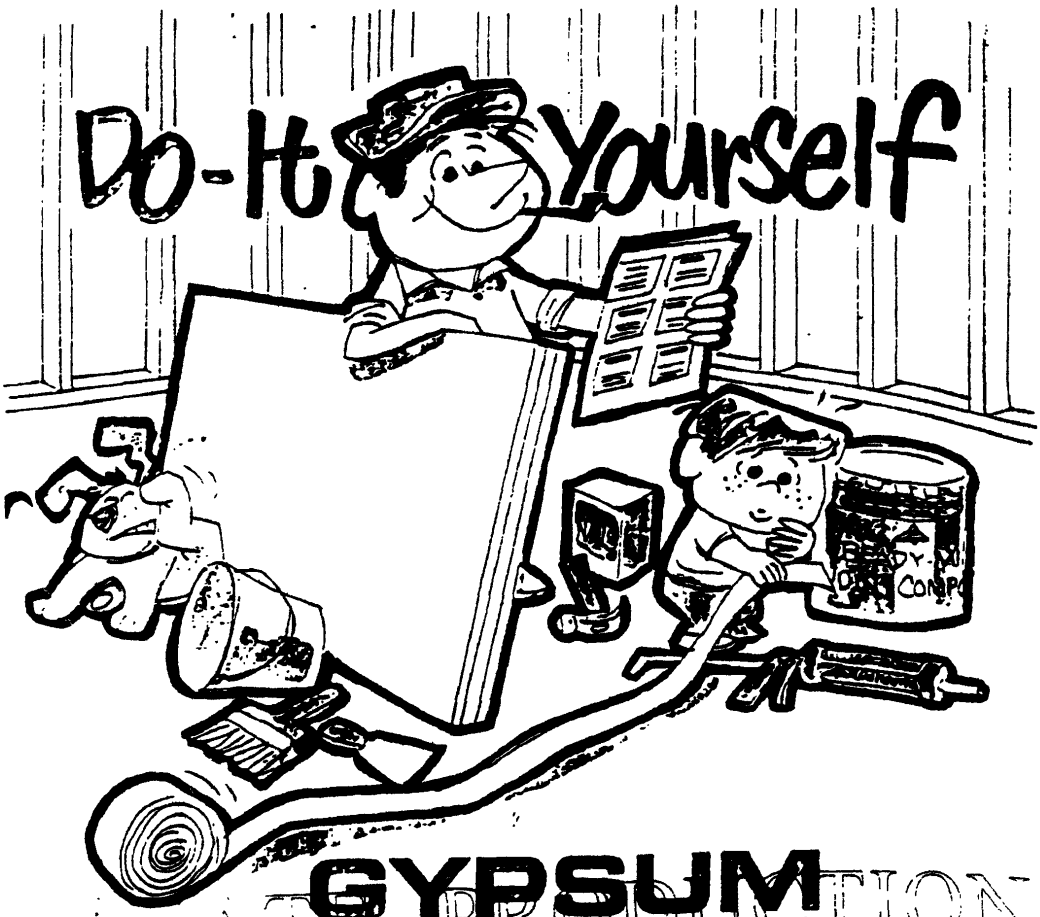
DATE: Undated

DOC#: USG002

DOCUMENT DESCRIPTION: Undated industry DIY booklet on gypsum wallboard application by Georgia Pacific Gypsum Division

PLAINTIFF'S EXHIBIT
GP-188

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

PRODUCTION MATERIAL

Georgia-Pacific

GYPSUM DIVISION

PS FOR PROFI SSIONAL-LOOI NG RESULTS

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
[illegible] sq. ft.	1 Gal.	[illegible]
[illegible] sq. ft.	2 Gals.	[illegible]
[illegible] sq. ft.	3 Gals.	[illegible]
700-800 sq. ft.	4 Gals.	[illegible]
900-1000 sq. ft.	1 5 Gal. Pail	[illegible]

*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.

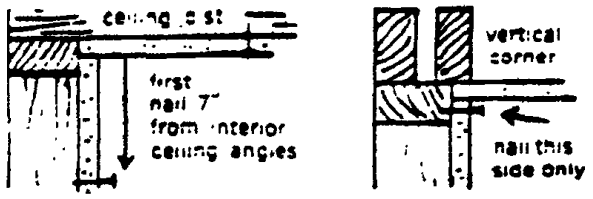
3 TOOLS REQUIRED



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 Keynole 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

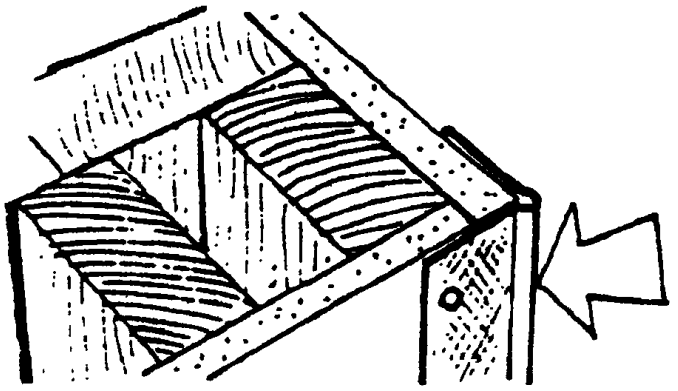
6 WALL APPLICATION



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.

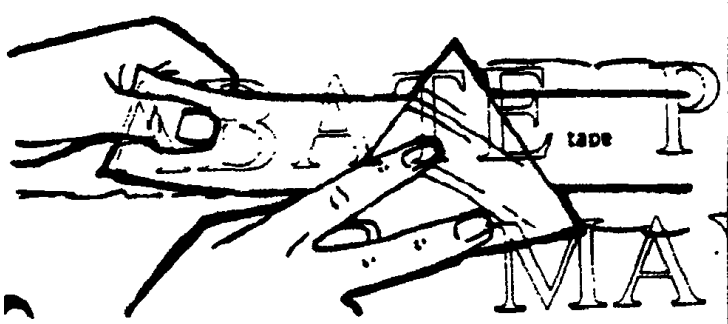
A vertical application places the long edges of the wallboard parallel to the framing members. This is more desirable if the ceiling height of your wall is greater than 8'-2" or the wall is 4' wide or less. Nailing recommendations are the same as for horizontal application.

7 METAL CORNERBEAD



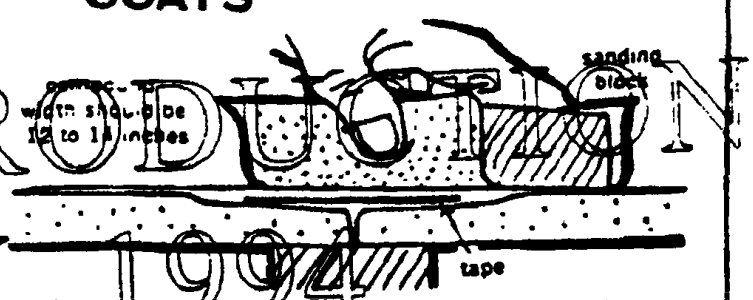
To protect corners from edge damage, install metal cornerbead after you have installed the wallboard. Nail the metal cornerbead every 5" through gypsumboard into wood framing.

10 APPLYING WALLBOARD TAPE



Next take your wallboard tape, center it over the joint and press 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.

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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

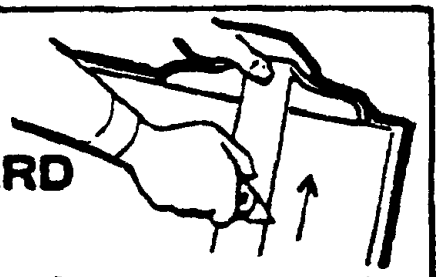
Using the sketch, determine the lengths and number of boards required. Nails can be estimated from chart below. About 50% fewer nails are required if the adhesive nail-on method is used.

ESTIMATING NAILS

Wallboard Thickness	Nail Type	Approx. lbs. per 1000 sq. ft. of gypsum wallboard
⅜" - ½"	1⅝" coated type drywall nail	5 lbs.
⅝"	1¾" coated type drywall nail	5 lbs.

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

4 CUTTING GYPSUM WALLBOARD

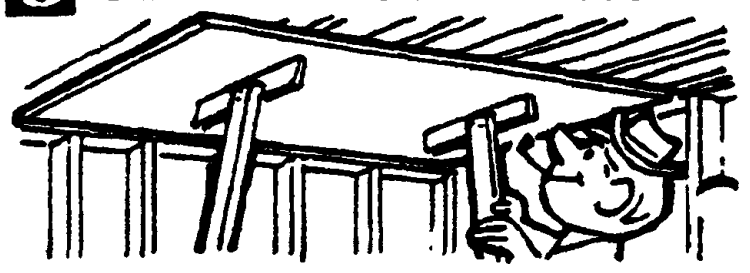


Use T-square and wallboard knife for scoring. With the knife at right angles to the board, score completely through the face paper. Then apply firm even pressure to snap the board. Fold back the partially separated portion of the board and use the knife again to cut the back paper. Rough edges should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

CUTTING OPENINGS

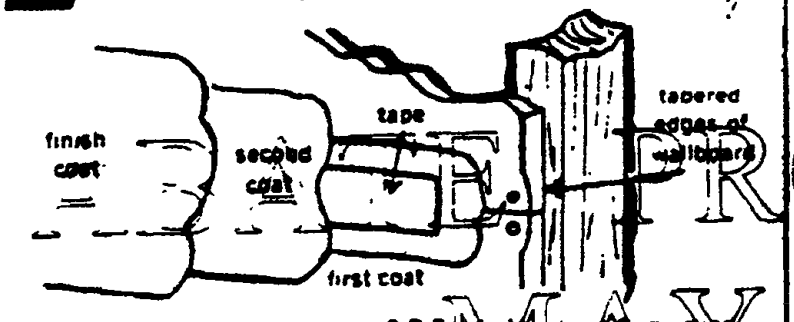
It will be necessary to cut holes in the wallboard for electrical outlets, light receptacles, etc. The distance of the opening from the end and edge of the board should be carefully measured and marked on the face of the wallboard. The opening should then be outlined in pencil and cut out with a keyhole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

5 CEILING INSTALLATION



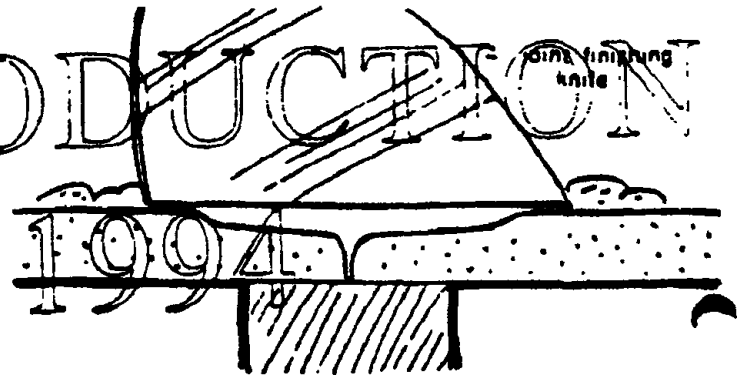
It is more difficult to install the ceiling boards because of the overhead positioning. It is desirable to have T-braces to hold the board in place while it is being nailed. A satisfactory T-brace consists of a 2 foot piece of 1 x 4 nailed onto the end of a 2 x 4. The length should be about an inch longer than the floor to ceiling height. The nails should be 7" apart. When the adhesive nail-on method is used, the edges should be nailed, but only 1 nail per joist in the field of the board. All edges should be supported on framing. The nails should be driven to bring the board tight to the framing, then another blow struck to dimple the nail, being careful 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-Mix Joint Compound fully and evenly into the slight recess created by the adjoining tapered edges of the board.

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