



PLAINTIFF'S EXHIBIT

USG-704



HISTORICAL FILE

Trade-Mark Protection

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DO NOT DESTROY

USG® Concealed Accessible Z-Spline Suspension System

The USG Concealed Accessible Z-Spline Suspension System achieves a new level of compatibility of function and beauty in acoustical ceiling construction. It provides a beautiful ceiling surface of ACOUSTONE® Mineral Tile unmarred by exposed metal runners. Yet each tile can be removed from complete access to above-ceiling areas.

APPEARANCE: The new system is designed to use beautiful, naturally fissured ACOUSTONE Mineral Acoustical Tile. Specially kerfed bevel edge ACOUSTONE tile are used.

PERFORMANCE: The metal suspension is a modification of the Z-Spline system originally developed by U.S.G., the most widely used method for suspension of acoustical ceilings. Angle splines are used in place of flat splines to permit independent removal of adjoining tile. All four tile edges are metal reinforced for stability. The unique kerfing of the ACOUSTONE was engineered for this metal suspension to maintain ceiling alignment.

ECONOMY: In-place cost of this new system is comparable to conventional Z-spline suspension systems. Z-splines are

spaced 24" on center rather than 12" and T-splines can be used in place of angle splines in areas where accessibility is not required. For maximum economy a 12" x 24" tile is recommended.

AIR DISTRIBUTION: This new suspension system can be adapted to the AIRSON® Air Distribution System. Either AIRSON-ACOUSTONE tile pattern (A-2 or A-5) can be specially kerfed for use on this accessible system.

SOUND ABSORPTION AND ATTENUATION: ACOUSTONE Mineral Acoustical Tile on the USG Concealed Accessible Z-Spline System has a high NRC rating (.70 - .80) range. USG foil backed ACOUSTONE "db" achieved an excellent sound attenuation average of 39.3 db when tested on this system.

CONCEALED ACCESSIBLE Z-SPLINE SUSPENSION SYSTEM

Eleven Frequency Average	ATTENUATION (decibels) AT cps										
	125	177	250	354	500	707	1000	1414	2000	2828	4000
39.3 db	25	30	29	30	33	36	39	45	51	58	56

USG[®] Concealed Accessible Z-Spline Suspension System

I. SCOPE

List all areas to receive acoustical treatment.

II. GENERAL PROVISIONS

Acoustical units shall not be installed unless satisfactory closures for windows and other openings are in place and roofs are tight. Temperatures in the working areas shall be well above freezing.

The area or room in which acoustical units are to be installed shall not be damp; i.e. plastic, terrazzo floor, etc. shall be previously installed and dry.

III. MATERIALS

Acoustical tile by the United States Gypsum Co. Shall be:

ACOUSTONE "F", "db", Finesse or MOTIF'D* ACOUSTONE $\frac{3}{4}$ " x 12" x 24" (bevel edge centerscored) for Concealed Accessible Z-Spline System)

Systems for Application Shall Be:

Concealed Accessible Z-Spline System for ACOUSTONE $1\frac{1}{4}$ " Z-spline.

Angle Splines— $23\frac{1}{2}$ " and $10-15/16$ " of galvanized steel. Finish channel and finish channel cover plate.

82-A clips to attach Z-Splines to $1\frac{1}{2}$ " carrying channels. T-Spline of galvanized steel (non accessible areas only).

IV. INSTALLATION

BASE: $1\frac{1}{2}$ " cold rolled channel grillage. No. 8 gage hanger wires shall be securely attached at 4'-0" on center. $1\frac{1}{2}$ " carrying channels shall be tied to the hanger wires and shall be hung level at a maximum spacing of 4'-0" on center. The $1\frac{1}{2}$ " channel adjacent to an intersecting wall shall not be placed more than 12" from the wall.

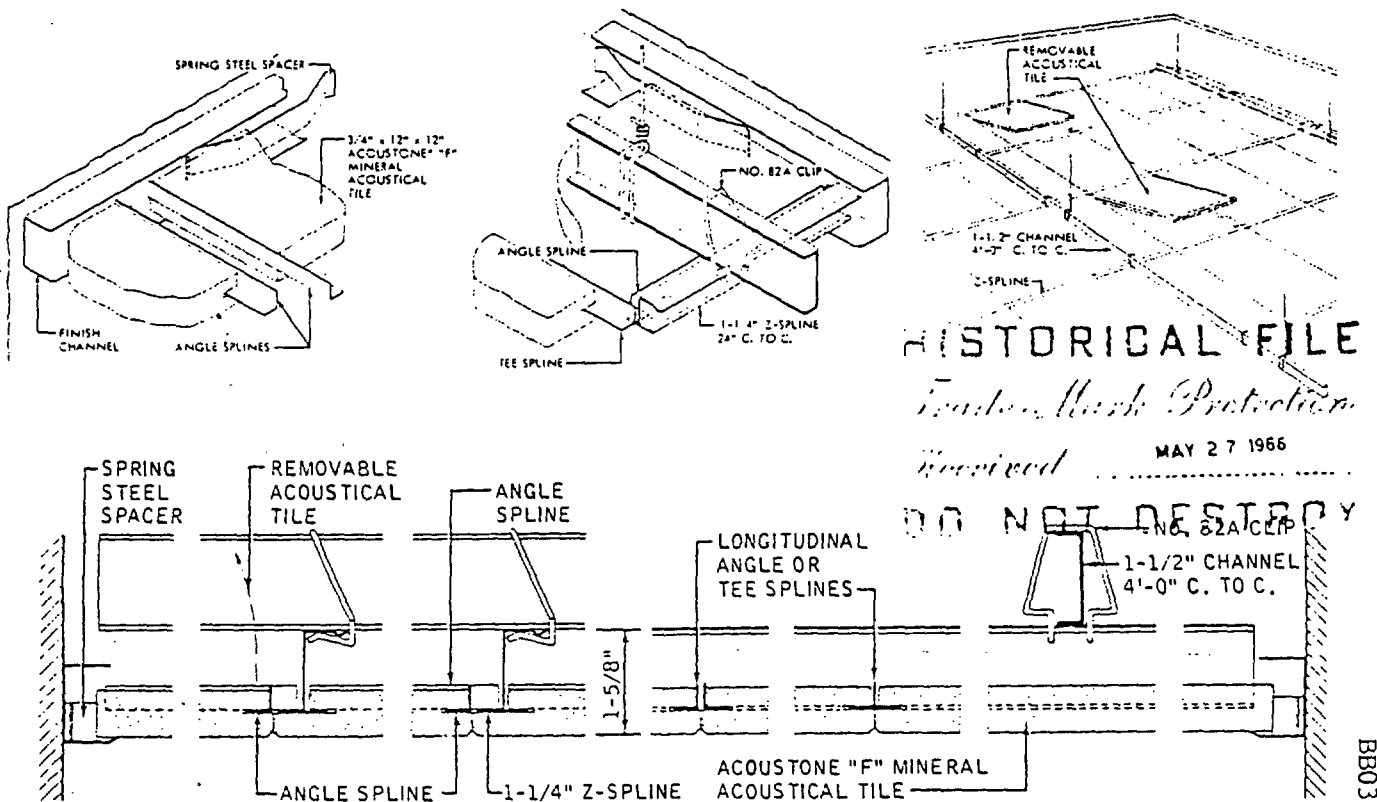
ACOUSTONE tile for Concealed Accessible System

- $1\frac{1}{4}$ " Z-Splines shall be attached on 24" centers and at right angles to the metal grillage by 82-A clips.
- Accessible Tile: USG 7/16" x 7/16" x $23\frac{1}{2}$ " Angle Splines shall be inserted in the kerf on each 24 inch edge with both angles on one end extending $\frac{1}{2}$ " beyond the edge to support the tile on the Z-Splines.

A 7/16" x 7/16" x $10-15/16$ " angle spline shall be inserted in the 12" kerf which has the protruding angles. The tile is then installed by seating the opposite end of the tile in the Z-spline and seating the protruding angles on the adjoining Z-spline.

RECOMMENDATIONS AND LIMITATIONS: Due to the special characteristics of the system only bevel edge tile is recommended.

Since methods and conditions of application and use are beyond the control of the United States Gypsum Company, its warranties of FITNESS and MERCHANTABILITY as well as any other warranties, express or implied, made in connection with the sale of this product, SHALL NOT BE EFFECTIVE OR ACTIONABLE UNLESS the product is applied according to United States Gypsum Company's directions and specifications.



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THE GREATEST NAME IN BUILDING