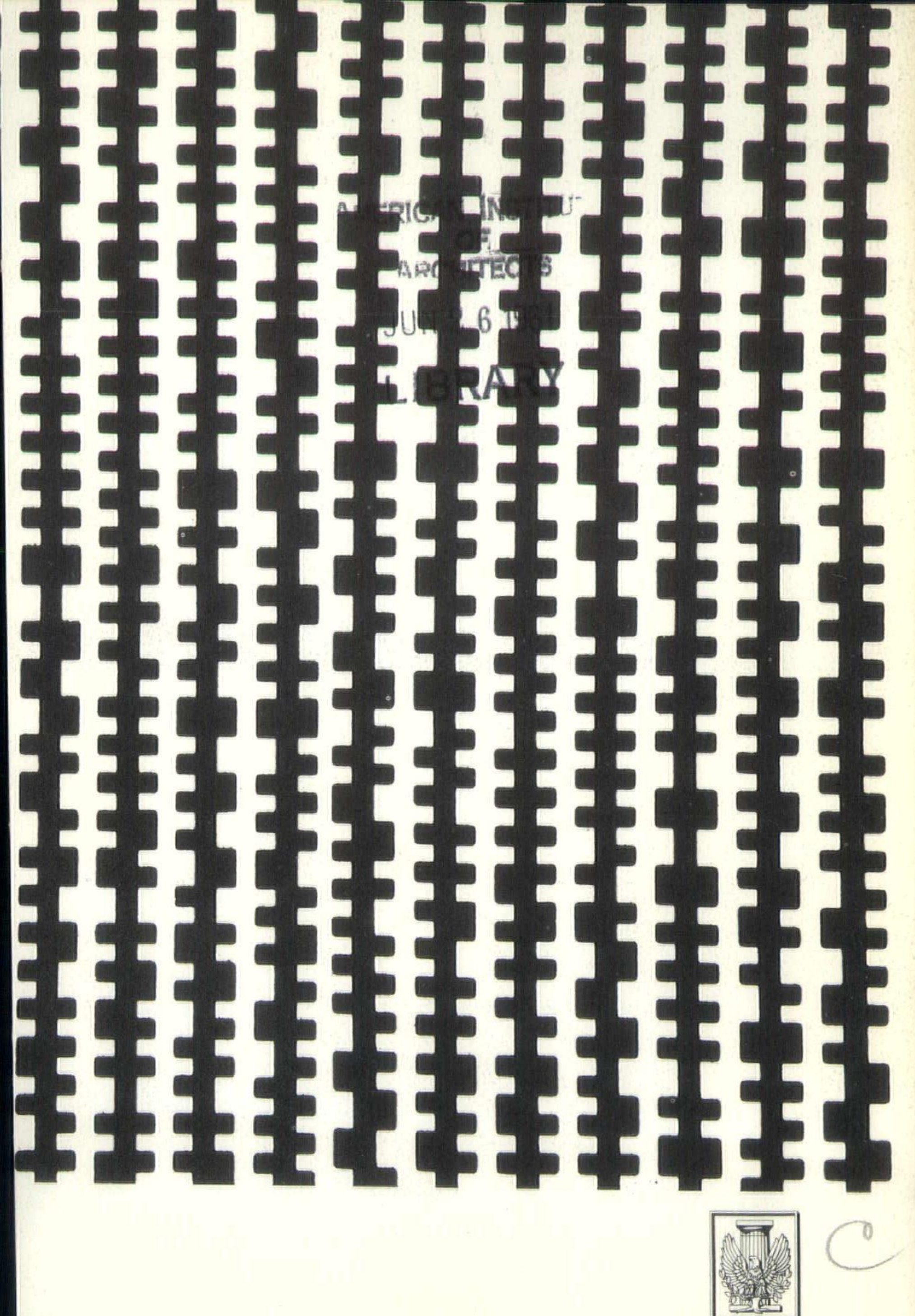

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NOISE CONTROL

The following material is from the booklet, "Airport Terminal Buildings" and is reprinted through the courtesy of the Federal Aviation Agency, Washington, D.C.

While we realize that clients wanting an airport terminal are relatively scarce, we believe the material below, from the section on jet noise control, has general application to many building types.

Noise Defined

Noise may be defined as a physical disturbance that causes an unpleasant sensation in the ear. Sound becomes undesirable within the terminal building when the listener experiences discomfort, or when the noise level reaches proportions that interfere with necessary communications and activities. The decibel (db) is used to measure relative sound (noise) pressure level. It has become a fairly standardized practice to set zero decibels equal to 0.0002 dyne/cm ^{2}. Most sound level measuring equipment uses this as the zero point and much of the recent acoustical literature refers to decibels relative to this zero point. Unless some other zero point is specified, most references to "decibels" in the general literature mean "decibels re 0.0002 dyne/cm ^{2}." This zero point was chosen in part because it represents the "zero loudness level" or absolute threshold of hearing under optimum conditions. Optimum conditions usually mean a trained young listener, an auditory stimulus of 1,000 cycles per second (cps) or thereabouts, and meticulous procedures. It is more accurate to regard the average person's absolute threshold as about +10 db for a 1,000-cps tone; this threshold is higher for both lower and higher frequencies. Most people have a maximum sensitivity to tones of about 1,000 cps.

Table 1 represents, for comparative purposes, a scale of sound intensities relating familiar sounds to the decibel scale.

Table I. *Decibel Scale of Sound Intensities*

(Based on standard reference level for measurement of sound pressure level, 0.0001 dyne/cm^2)

db		
130	THRESHOLD OF PAINFUL SOUNDS; LIMIT OF EAR'S ENDURANCE	
120	THRESHOLD OF FEELING (VARIES WITH FREQUENCY)	
110		
100	EXPRESS TRAIN PASSING AT HIGH SPEED LOUD AUTOMOBILE HORN 23' AWAY	
90		
80	NEW YORK SUBWAY MOTOR TRUCKS 15' TO 50' AWAY	
70	STENOGRAPHIC ROOM	RANGE OF SPEECH AS USUALLY HEARD IN CONVERSATION (65–35)
60	AVERAGE BUSY STREET NOISY OFFICE OR DEPARTMENT STORE	
50	MODERATE RESTAURANT CLATTER AVERAGE OFFICE	
40	SOFT RADIO MUSIC IN APARTMENT AVERAGE RESIDENCE	
30		
20	AVERAGE WHISPER 4' AWAY	
10	RUSTLE OF LEAVES IN GENTLE BREEZE	
0	THRESHOLD OF AUDIBILITY	

Source: National Bureau of Standards BMS Report 144

Terms and Definitions

The following facts and figures will help the terminal building designer determine his noise control requirements.

(continued on page 7)

"OR EQUAL"

WHAT DOES THIS MEAN –

TO THE OWNER – ?

TO THE ARCHITECT – ?

TO THE CONTRACTOR – ?

TO THE SUPPLIER – ?

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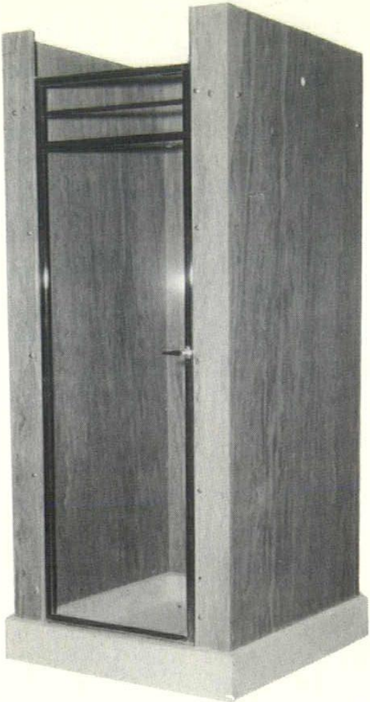


SHOWERPACK . . . a new, prefabricated marble shower compartment

Showerpack is another standardized, packaged marble product from Carthage Marble Corporation. Included in the package are a precast terrazzo receptor, shower door, and Napoleon Grey marble. These marble enclosures come ready to assemble and can be used individually or in batteries. Somewhat higher in cost, Showerpack is far more beautiful and durable than any standard shower you have seen! Find out more about Showerpack. Telephone Richard Logsdon at our Kansas City, Mo., office, located south of Southwest Boulevard at 3030 Wyoming. The number is VAlentine 1-4928.

CARTHAGE MARBLE

Homogeneous Barriers are those construction assemblies that are nonporous, having the same physical properties throughout, such as brick, concrete, gypsum, and block. It is known that weight of a homogeneous wall per unit area is the most important factor in determining its sound insulation quality. The nature of the material and the maner of fastening its edges are of secondary importance. The sound attenuation of such a barrier is proportional to the logarithm of the weight per unit area. For example, a partition or wall weighing 6 pounds per square foot has a sound transmission loss (TL) of 35 db; one weighing 60 pounds has a TL of 50 db, both at the same frequency.

Nonhomogeneous Barriers are those construction assemblies consisting of two or more layers of the same material or of different materials. In this context an air space is considered a layer. It has been found that the insulation value of a wall of a given weight can be increased by building the wall in two or more layers. Examples of this type of barrier are walls constructed of staggered wood studs plastered on both sides or unit masonry cavity walls. Sound against the surface of a nonhomogeneous barrier reacts generally as shown in figure 25; however, with an integral air space, sound must also radiate across the air space, pass through the next layer of barrier, and finally radiate from the inside wall surface into the building.

Sound Transmission Loss means "the number of decibels by which sound energy incident to a partition (wall or roof) is reduced in transmission through it." It represents a measure of the airborne sound insulation of a structure. The transmission loss of various building materials and material assemblies have been measured by the U.S. National Bureau of Standards, and these results are recorded in the Bureau's Building Materials and Structures Report 144, and Supplements 1 and 2.

The nature of barriers in terms of sound transmission loss is the first and major line of defense in controlling noise in a room separated from the noise source by walls or roof.

Frequency of sound is the number of complete to-and-fro vibrations that a source or an air particle makes in one second, and is usually expressed in cycles per second (cps). Through walls of conventional building construction, the transmission loss is usually greater for higher frequencies than for the lower.

Sound Absorption within the building envelope should not be confused with the transmission loss of sound energy passing through a wall, roof, or floor (barrier). For noise control, sound absorption techniques entail the use of acoustical materials within the building enclosure which can absorb a portion of the sound energy striking interior surfaces of the enclosure.

Reflection and Absorption of Sound are vital factors in noise control. Sound travels radially from its source and upon contacting an obstacle, such as a wall, a portion of its energy is reflected, its direction of travel is changed, and usually the intensity is reduced. As previously mentioned, part of this energy reduction is due to absorption. That fraction of energy absorbed when a sound wave is reflected from a surface is termed the *sound absorption coefficient.* This coeffiicient varies with frequency of the sound, the angle at which sound strikes the reflecting surface, and the nature of the reflecting surface material. Such coefficients of various materials are obtained from laboratory tests and usually are measured at discreet frequencies spaced at octave intervals from 125 to 4,000 cps. Table 2 gives values of a few representative materials and table 3 of persons and furniture. The "sabin" referred to in these tables is equivalent to a "square-foot unit" of perfectly absorptive

TABLE 2. *Sound Absorption Coefficients of Some Building Materials and Furnishings Expressed in Cycles per Second*

	125 cps	*500 cps*	*2,000 cps*
Brick wall:			
Painted	0.01	0.02	0.02
Unpainted	.02	.03	.05
Carpet:			
Heavy, on concrete	.05	.25	.60
Same, 40 oz. hairfelt underlay	.10	.60	.80
Fabrics:			
Light, 10 oz. per sq. yd., hung straight	.04	.11	.30
Medium, 14 oz. per sq. yd., draped to half area	.07	.49	.66
Heavy, 18 oz. per sq. yd., draped to half area	.14	.55	.70
Floors:			
Concrete or terrazzo	.01	.02	.02
Wood	.05	.03	.03
Linoleum, asphalt, rubber or cork tile on concrete	.03	.05	.05
Glass	.03	.03	.02
Marble or glazed tile	.01	.01	.01
Plaster:			
Gypsum of lime, smooth finish on tile or brick	.01	.02	.04
Same, on lath	.02	.03	.04
Gypsum or lime, rough finish on lath	.04	.06	.05
Wood paneling	.08	.06	.06

TABLE 3. *Sound Absorption of Persons and Furniture*

[1 sabin is equivalent to 1-square-foot unit of a perfectly absorptive surface]

	Sabin	*Sabin*	*Sabin*
Occupants seated, depending on character of seats, spacing, etc.	1.00 to 2.00	3.00 to 4.30	3.50 to 6.00
Chairs, metal or wood	.15	.17	.20
Wood pews	.50	.40	.40
Wood pews with cushions	1.20	1.70	2.00

surface. For example, a 100-square-foot surface having a coefficient of .40 represents an absorption of 40 sabins. The absorption of sound energy occurs when sound is converted into other forms of energy and ultimately into heat.

Most sound-absorbing materials depend largely on their surface and internal porosity for absorptivity. Such materials are interlaced with small, deeply penetrating interstices in which part of the sound energy is converted into heat by frictional and viscous resistance within the pores and by vibration of small fibers of the material.

Noise Reduction

As previously pointed out, the transmission loss resulting when sound passes through a barrier such as a wall depends upon the physical characteristics of the wall and not the properties of the spaces separated by the wall. However, once sound energy has passed through the wall, the sound absorption qualities within the receiving space (room) can further reduce the sound intensity. Therefore, the *transmission loss* (TL) and the surface absorption combine to produce the *noise reduction* (NR) which represents the difference between the sound pressure level on the source side of the wall and level on the receiving side (room). TL and NR may be approximately represented in decibels as follows:

Equation 1—$TL = 10 \log_{10} 1/r$

Equation 2—$NR = 10 \log_{10} A/T$

When A is the absorption in sabins

$T =$ the sum of the individual transmittances

$= r_1 s_1 + r_2 s_2 + r_3 s_3$, etc.

Where $r =$ coefficient of sound transmission of the various wall materials

and $s =$ corresponding area of each wall material.

Use of the above equations will be illustrated by subsequent examples.

Determination of Noise Criteria

Terminal buildings provide a satisfactory environment for the performance of various functions related to air transportation. A satisfactory environment demands the control of noise. First, noise must be controlled to *assure* intelligibility of essential speech and communication facilities. Second, noise control should be employed to the maximum practical degree for the comfort of the building occupants.

Acceptable airport terminal building noise levels will be somewhat higher than levels acceptable in similar areas elsewhere. This is because people associate noise with aircraft and expect higher noise levels at the airport.

The acceptable noise level for the various specialized terminal building areas varies in terms of each area's function. Frequency characteristics of the noise must be taken into account in any precise determination of acceptable noise levels for terminal building areas; they are also important in predicting the attenuation characteristics of various kinds of structures. Frequency must be considered because of two different sounds of equal intensity, the medium to high frequency noise will produce a much more disruptive effect on speech than will a low frequency tone. This is because the most important speech sounds tend to be concentrated in the region of 800–3,000 cps. Consequently, it is much more important to attenuate noise energy in the 1,200–

TABLE 4. *Suggested Noise Criterion For Terminal Buildings*

Decibel Level in 1,200–2,400 cps Frequency Band*	*Communication Environment*	*Recommended Room Use*
35 db to 40 db........	Telephone use satisfactory; normal voice heard 6 to 12 ft.	Conference room. Nursery.
40 db to 50 db........	Telephone use occasionally slightly difficult; normal voice 3 to 6 ft.; raised voice 6 to 12 ft.	Airport offices. Airline offices. Ticketing area.
50 db to 55 db........	Telephone use slightly difficult; normal voice 1 to 2 ft.; raised voice 3 to 6 ft.	Lobby. Concession area. Dining room.
60 db to 70 db........	Person-to-person communication with raised voice satisfactory 1 to 2 ft.; slightly difficult 3 to 6 ft. Telephone use difficult.	Toilets. Kitchen. Baggage claim area.
70 db to 80 db........	Person-to-person communication slightly difficult with raised voice 1 to 2 ft.; slightly difficult with shouting 3 to 6 ft. Telephone use very difficult.	Baggage handling areas.

*0.0002 dyne/cm², standard reference level used in most sound-measuring and acoustical literature.

2,400 cps octave band, than it is to attenuate low frequency or very high frequency sounds.

The transmission loss of almost all structures is much greater for high frequency sounds than for those of low frequency. For instance, a given wall structure may attenuate a 100-cps sound by only 10 db, while attenuating a 2,000-cps tone by 50 db.

Working out the attenuation needed for each frequency band separately, and designing to meet these requirements is complicated and can best be handled with the assistance of an acoustical expert. However, jet noise tends to be concentrated in the octave band 1,200–2,400 cps, and this happens to be the octave band most disruptive to speech. Consequently, a simple rule of thumb can be used to relate satisfactory speech conditions to the decibel level in the 1,200–2,400-cps band alone. This relationship is shown in table 4. It should be kept in mind that this will not work in the case of sounds whose noise spectrum shape differs radically from that of a typical present-day jet noise. However, since piston engine and turboprop aircraft usually make less noise than large jet aircraft and since the attenuation properties of structures usually increase with the frequency of sound to be attenuated, a building that gives adequate shielding from the 1,200–2,400-cps band produced by large jet aircraft will undoubtedly be satisfactory for control of other aircraft noise. A structure which attenuates the 1,200–2,400-cps band satisfactorily should also satisfactorily attenuate sound frequencies higher than 2,400 cps.

Table 4 identifies the communication environment associated with the various spaces usually found in terminal buildings. It should be kept in mind that these noise criteria are related to peak noise levels in the terminal. Because peaks will occur during the jet start-to-taxi operation, which is of short duration (10 to 20 seconds), the maximum noise pressure level will be infrequent at most airports. In the future, only at the large hubs will the maximum noise level approach anything near a continuous peak.

Designing the Protective Building Enclosure

After determining the appropriate noise criteria for the specialized terminal building areas, building materials and assemblies and room arrangements are chosen to meet such criteria. Examples are given below to demonstrate the technique, and to relate other important considerations of this process. Figure 26 illustrates with Examples A, B, and C the hypothetical condition pertaining to a dining room of 1000 square feet of floor area and a noise criterion of 50 db:

Example A shows the effect of large glass areas immediately exposed to the field-side jet noise.

Example B shows the effect of reducing the glass area and arranging the room's long axis perpendicular to the field-side wall.

Example C shows the effect of no glass in the exterior wall.

In these examples, it is assumed that the maximum sound pressure at the building wall results from the start-to-taxi operation and that the jet's position is roughly 400 feet from the exterior wall of the dining room. From figure 24, the maximum sound level is determined as approximately 112 decibels. It is further assumed that jet noise from source to building wall will be reduced 12 decibels, as a result of "inverse-square" loss and ground and air attenuation. Therefore, 100 decibels is considered the sound level at the field side of the dining-room wall, as well as the maximum pressure level at the roof surface, when airborne jet operations take place 400 feet from the exterior wall.

A calculation for the total room absorption "A" gives 870.40 sabins (see table 5). The variations in wall areas between Examples A, B, and C show little material effect; therefore, the total of 870.40 sabins for A is applicable to all three examples.

TABLE 5. *Calculation of Total Room Absorption*

	(a)	(b)	(c)
Surface Finish and Contents	*Area (sq. ft.)*	*Coefficient of Absorption*	*(a) × (b) (sabins)*
Floor, rubber tile	1,000	0.05	50.00
Ceiling, acoustical tile	1,000	.65	650.00
Wall (doors included) plaster finish	1,040	.06	62.40
Walls, plateglass ¼''	260	.03	7.80
25 people @ 3.00 sabins each			75.00
15 tables @ 1.68 sabins each			25.20
Total room absorption, Example A (Applicable to Examples B and C)			870.40

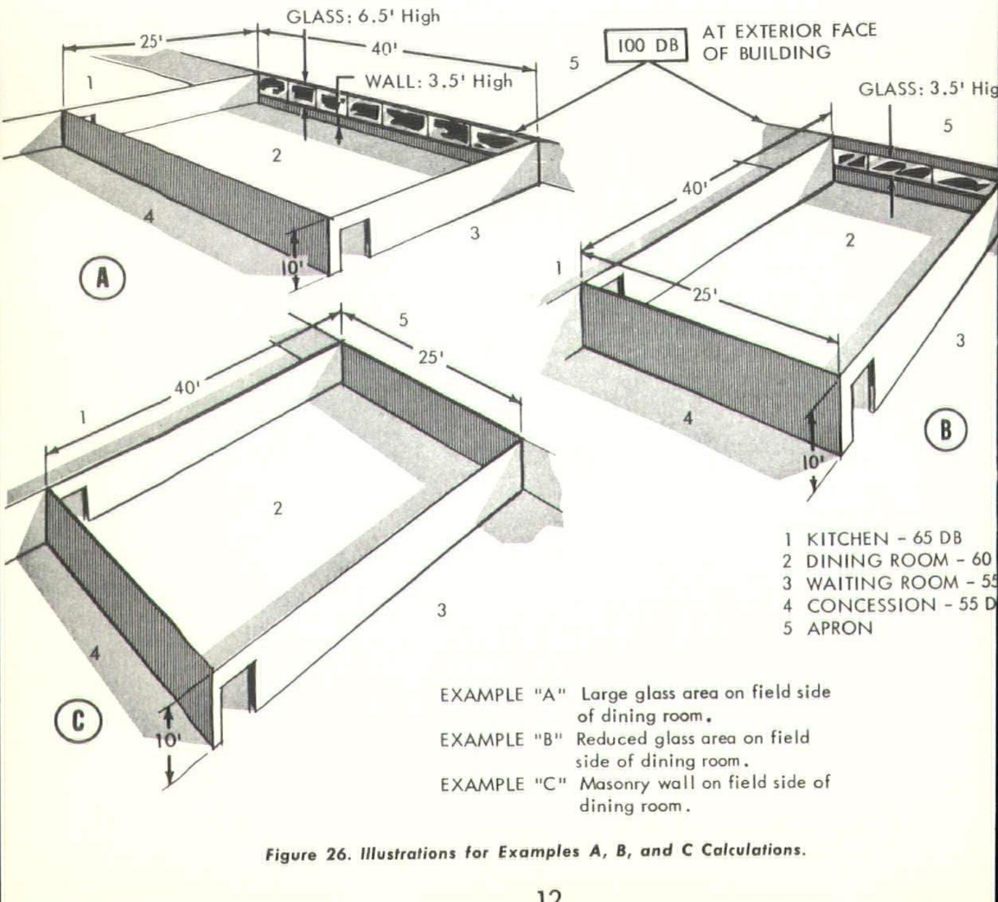


Figure 26. Illustrations for Examples A, B, and C Calculations.

Having determined "A" for the three examples, "T" (total transmission) may be determined for substitution in noise reduction equations: NR=10 log A/T. To find "T" obtain rs (the product of each different wall and roof area and that of the wall or roof area's coefficient of transmission (r)). Using Equation 1, page 54, $TL=10 \log_{10}\frac{1}{r}$, substitute TL (obtained from BMS Report 144) for each different wall or roof assembly and solve for r. A separate NR is obtained for each wall separating the dining room from a different noise level (tables 6, 7, and 8). Sound transmission losses in decibels for the various building components were obtained from BMS Report 144 issued

TABLE 6. *Calculation of Noise Reduction for Exterior Walls and Roof*

Material	Example	*s* Area (sq. ft.)	Transmission Loss (db)	*r* Coef. of Transmission	*rs*
8-in. brick wall plastered, both sides.	A	140	58	0.0000016	0.000224
	B	162.5			.00026
	C	250			.00040
Window wall	A	260	32	.00063	.16380
	B	87.5			.055125
	C	0			0
Wood roof decks, joists, and absorptive ceiling	A	1,000	50	.00001	.010
	B	1,000			.010
	C	1,000			.010

Total Transmittance "T" (sum of the rs values of each example)

Example A=0.174024
Example B= .065385
Example C= .01040

Noise Reduction Factor (NR)=10 $\log_{10}$ (A/T)

$$\text{Example A}=10 \log_{10}\frac{870.4}{0.174024}=36.9 \text{ db}$$

$$\text{Example B}=10 \log_{10}\frac{870.4}{0.065385}=41.2 \text{ db}$$

$$\text{Example C}=10 \log_{10}\frac{870.4}{0.01040}=49.2 \text{ db}$$

by the U.S. National Bureau of Standards. Previously it was mentioned that the frequency ranges most suitable for use in creating a desirable speech environment should range from 1,200 to 2,400 cps. BMS Report 144 does not record transmission losses for that particular octave band; therefore, for purposes of these examples, the transmission losses through a particular building component have been taken as the average transmission loss of 1,024 cps to 2,048 cps. This is considered satisfactory for the purpose of these examples. Actually, for critical problems involving transmission losses, more accurate results may be obtained by using "Energy Average" as discussed in BMS Report 144, Supplement 2, December 1958.

TABLE 7. *Calculations of Noise Reduction for Walls Between Dining Room and Waiting and Concession Rooms*

Material	Example	s Area (sq. ft.)	Transmission Loss (db)	r Coef. of Transmission	rs
4-inch hollow tile, plastered both sides.	A	608	40	0.0001	0.0608
	B	608			.0608
	C	608			.0608
Glass doors	A	42	32	.00063	0.02646
	B	42			.02646
	C	42			.02646

Total Transmittance "T" for each example, A, B, and C = .08726

$$NR = 10 \log_{10} \frac{870.4}{0.08726} = 39.9 \text{ db}$$

TABLE 8. *Calculation of Noise Reduction for Wall Between Dining Room and Kitchen*

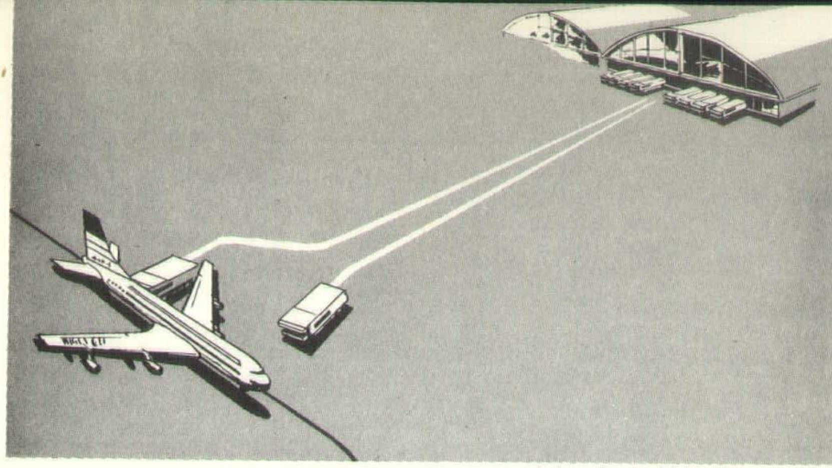
Material	Example	s Area (sq. ft.)	Transmission Loss (db)	r Coef. of Transmission	rs
4-inch hollow tile, plastered both sides.	A	208	40	0.0001	0.0208
	B	358			.0358
	C	358			.0358
Wood doors	A	42	38	.00016	0.00672
	B	42			.00672
	C	42			.00672

Total Transmittance "T" Example A= 0.02752

Example B and C= .04252

$$\text{Example A} = 10 \log_{10} \frac{870.4}{0.02752} = 45.0 \text{ db}$$

$$\text{Examples B and C} = 10 \log_{10} \frac{870.4}{0.04252} = 43.1 \text{ db}$$



Using Example A, noise reduction, the noise level in the dining room caused by jet aircraft only would be 100 db–36.9= 63.1 db. Noise from the waiting and concession area would be 55 db–39.9 db=15.1 db, and from the kitchen would be 65 db–45 db=20 db. The approximate peak noise level is obtained as follows:

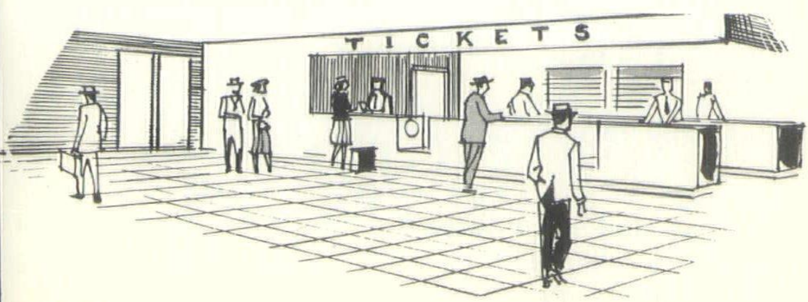
$$\begin{aligned} \text{Antilog}_{10}\,(63.1/10) &= 2{,}042{,}000 \\ \text{Antilog}_{10}\,(15.1/10) &= 32 \\ \text{Antilog}_{10}\,(20/10) &= 100 \\ \hline & \ 2{,}042{,}132 \end{aligned}$$

Dining Room Noise Level$=10 \log_{10} \times 2{,}042{,}132 = 63.1$ db

(NOTE: Noise from waiting room and kitchen appears insignificant.)

Obviously, this noise exceeds the 50 db allowance for a dining room. Following the same procedure as for Example A, an approximate noise level of 58.8 db is calculated for Example B which employes a reduced glass area as well as a shorter field-side room. This represents an improvement over the level for Example A, although the room noise level still remains too high.

Example C, demonstrating the no-glass and short exterior wall, provides a dining room noise level of 50.8 db that is acceptable for this area.



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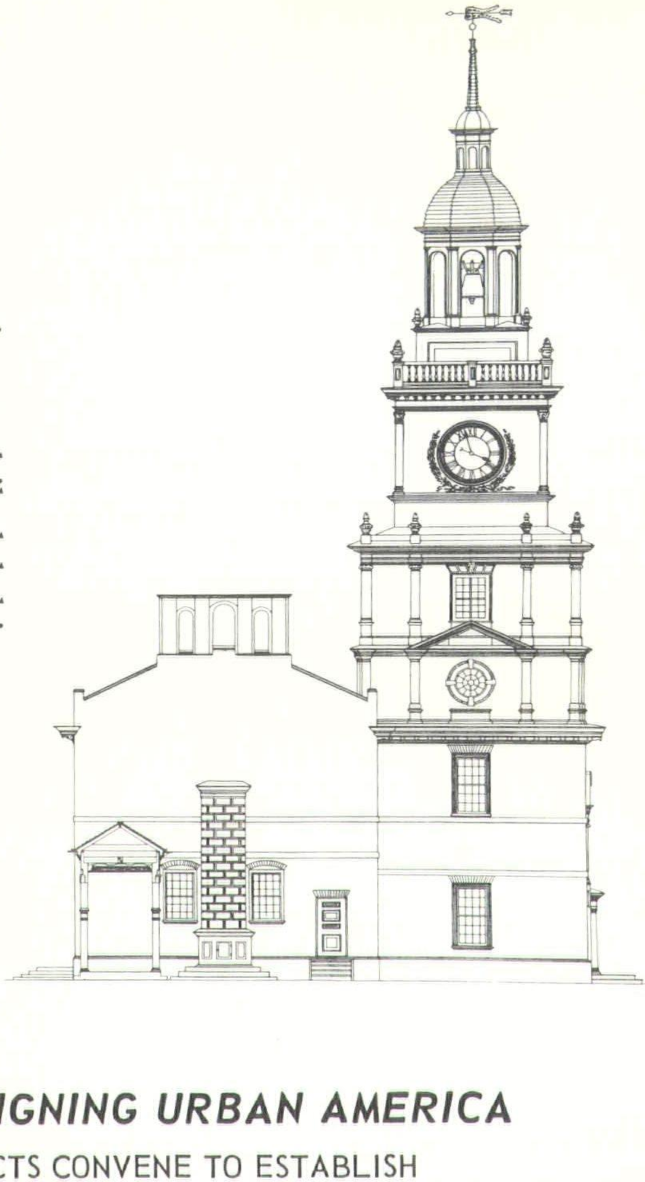

REDESIGNING URBAN AMERICA

ARCHITECTS CONVENE TO ESTABLISH PROFESSIONAL MISSION

By John Huffman, Associate—Jr. Associate Representative

The 1961 convention of the American Institute of Architects has been convened to establish a sense of professional responsibility; a "sense of mission" for the design and redesign of our man-made environment, stated President Phillip Will, Jr., FAIA in his welcoming remarks.

'If land is debauched, or steams polluted, our air a nauseous mix of soot, fumes, nd the lethal gas of industry; if our cities are exploited jungles of disorder and orrupting ugliness; and if there is little safety and no amenity, to whom can the ublic look for help, for guidance, for vision?''

'The answer must be: the architect . . . . . .''

'So here is the challenge'', concluded President Will. ''Never before has the pportunity for leadership by the architectural profession been so overwhelming nd so self-evident.''

PHILADELPHIA: URBAN DESIGN WORKSHOP

o more appropriate city than Philadelphia could have been selected as a work-hop to illustrate leadership opportunities incumbent upon the design professions.

owntown Philadelphia, located between the Delaware and Schuylkill rivers, s long been one of our largest and most affluent cities, having developed early to a major seaport and seat of Colonial and later Federal government. The city day presents a colorful urban fabric as diverse in age as in activity. The umber of nationally significant commercial and governmental buildings gives to hiladelphia an architectural heritage second to none. This heritage has fortu-tely been recognized by planning authorities, not as a hindrance, but as a nerator of several cohesive urban redevelopments consistent with contemporary quirements.

The Independence Mall and Locust Street Redevelopments are two such enlightened projects combining the preservation of historic buildings with a comprehensive renewal effort.

Philadelphia's commercial life is enriched by activities converging on the thir largest seaport in the United States. Imports and seafood lend to the variety o goods available, and the proximity of water greatly enlarges recreational potential within the city limits. Pollution is nearly under control, and landscaping o the waterways has been continuous over the years. In addition, extensiv recreational facilities are incorporated in future riverfront land-use plans.

The University of Pennsylvania, located near the central city, contributes extensively to social and cultural life. A number of the city's leading architect are represented on the University's Planning and Architectural faculties, an arrangement of benefit to student, instructor, university and city alike, and recen buildings by Kahn and Saarinen sustain the University's tradition of architectur excellence.

THE CONVENTION: A METROPOLITAN FRONTIER

Dr. Robert C. Weaver, Administrator, Housing and Home Finance Agency, key noted the convention by considering the problems of public housing and urba renewal from his frontier vantage. Those in attendance were gratified by D Weaver's assurance that the problems faced by urban America, although manifo and complex, would henceforth be resolved by the thorough, competent, and stea fast application of impeccable brinkmanship.

Sir William Holford, FRIBA, President RIBA, spoke on certain aspects of urba design from his varied experience throughout the British Empire. Sir Holfo expressed the opinion that the need for transporting persons and goods from or point to another is not now the primary concern of modern transportation system He pointed out that all advanced societies possess the experience and leg instruments requisite to establish high speed public and private transportati systems. The immediate problem is conceptual: to what extent should the d signer curtail high speed vehicular traffic to accommodate the pedestrian? Tod we face the problem of where and how to "decelerate" from vehicular pedestrian modes within the urban complex.

Sir Holford has recently consulted on a proposed zoning ordinance and redevelo ment scheme for London's Picadilly Circus. Energetic public reaction to sever commercially motivated effacements of the square was commended by Sir Holfo as providing a vital impetus to the Picadilly Project.

(continued on page

CONVENTION DOODLES

Some delegates were brought to the verge of a nervous breakdown by the U.S. Steel exhibit. It featured a taped product message heard over telephone sets and acted out in pantomime by a young lady, who timed her actions and moved her lips in perfect coordination to the words. Since there were no visible connections and her timing was so perfect, we decided to solve the puzzle by direct action – we asked her, and met with a polite smile and no answer. However, close observation of her next performance enables us to reveal the secret. A practically transparent wire ran out of her collar, up the back of her neck into her hair. A tiny receiver was seen in her left ear. Her hair masked this apparatus to all but the most discerning eye....Two convention events were held in the venerable Philadelphia Union League, a half-block from the convention hotel, the Bellevue-Stratford. One of these gatherings was the annual scrapple breakfast, hosted by Edward B. Morris of the Tile Manufacturers' Association. We understand this was Mr. Morris' final appearance as host for what has become as much a part of the AIA convention as the key-note speech....Certain figures in show business are known as "tough to follow" – meaning that their performance is so outstanding as to overshadow the next act. It struck us in Philadelphia that, convention-wise, San Francisco fits into the "Tough to follow" tradition. We found ourselves waiting for someone to suggest a run up to the Top of the Mark for a view and liquid stimulants, or looking in vain for a cable car to hop on for a quick trip to Chinatown or Russian Hill. As a matter of fact, since the taxi drivers in Philadelphia were on strike during the convention, one usually looked in vain for any kind of transportation....The Time-Life reception at the Commercial Museum gave Kansas Citians an opportunity to see what the East does with city plan models. The Philadelphia model exhibit is supposed to have cost $250,000, and we'd say – at least!....The Investiture of Fellows seems to be equally impressive, no matter what or where the physical setting. The different colored ribbons denoting what the Fellowship was for (newly adopted this year) lent an interesting touch of color to this year's ceremony. Some rumbles of dissent were heard from older Fellows about the new ribbons.... An interesting bit of by-play as Mr. Reynolds handed the statue part of the Reynolds award to Eugene Mackie – Reynolds commented, "It's too bad they didn't make two of them," to Joe Murphy. When Reynolds handed the $25,000 check to Joe Murphy, someone at our table added, "It's too bad they didn't make two of them!" We were as proud of Gene and Joe as if one of our Kansas City members had won it – well, almost as proud....Some 20 delegates and AIA staff people were hit by a short-term flu bug, and most took to their beds for a day or two.... One of the highlights of the annual banquet was a performance by a Mummer band. Dressed in their version of a Royal Scots band, they provided an enjoyable 30 minutes of music during dinner....President Will hit a very Continental note during the award presentations at the banquet, switching from English to Spanish (Castilian, yet) to French (for Le Corbusier)....Signs all over town proclaimed Philadelphia as "THE Convention City" – and we suppose this is possible after a five-week taxi strike, but it's not easy. The Host Chapter certainly went out of its way to provide buses and make the sessions interesting and informative.

MISSOURI HOUSE BILL 528

As a result of letters from several Chapter members, we have been assured by Rep. J. Luther Robinson, Chairman of the House Education Committee, that the bill is now dead. On the subject of school stock plans, we believe the BULLETIN of the New Jersey Chapter, A.I.A., wrapped up most of the arguments against them with the article on the next page.

STOCK SCHOOL PLANS

If the education program never changed –

If the culture were static and scientists had ceased probing into the unknown –

If the inventors had gone on a long holiday and discoveries and innovations were at a standstill –

If population mobility had ceased and the birth rate had become a constant factor –

If community life always remained the same –

If towns and cities were all alike –

If there were no differences in school sites –

If no new jobs were being created –

If no new educational needs were emerging and the specific purposes of the school were rigidly defined –

If the researchers had concluded that all the answers to the problems of teaching and learning had been found –

If there were no more content to be added to the curriculum –

If the producers of instructional materials and equipment had ceased to experiment and had settled down to producing a standard product –

If people were entirely content with present accomplishments –

If the dynamic forces of society had all been securely grounded and had ceased to function –

Then school-building planning would be a simple matter. Stock plans and standard classrooms would be the answer to the school districts' needs for building space. But such is not the case, nor is it likely to be.

To all of which one architect adds: "When we have stock kids – then we can have stock schools."

addenda

• We hope you noticed the cover of this issue of SKYLINES. Before you read further, take another look at it and try to figure out what it is. Chances are you'll say it's (1) a new Ed Stone Screen, or (2) an aerial view of a Johnson County subdivision, or even (3) the ramblings of an architect suddenly taken with insanity. Actually, it's a segment of Russian to English translation, courtesy of IBM's Mark II translator, developed jointly by IBM and the Air Force. The particular section shown is a discussion of Tolstoy's "War and Peace", as anyone can see. The machine's translations are still somewhat rough, but the English version is understandable. And let's not get off on the subject of an IBM automatic plan drawing and spec writing machine...

• Borrowing a phrase from another Chapter publication, which in turn borrowed it from President Kennedy's inaugural speech: "Ask not what your Chapter can do for you, but rather what can you do for your Chapter!"

• We've noticed recently that of the offices equipped with a postage meter machine, several make use of the promotional space to the left of the stamp to plug architects and the AIA. One office uses a small version of the AIA emblem shown at the left below, while others, including the Chapter office, employ the slogan, "It pays to consult an architect." A sample of the Chapter's mark is on the right. (We admit we stole it from Don Hollis.)

A · I · A

IT PAYS TO
CONSULT AN
ARCHITECT

CULTURE OF THE CITY

The second morning was devoted to talks by Lewis Mumford and Brono Zevi. Professor Zevi traced the history of modern city planning from post-Renaissance Italy through Chandigahr and Brasilia. Contemporary planning, stated Zevi, is based upon, and is manifest as, the application of three principles first recognized in the sixteenth century:

1) the plan must not impose a form or geometric pattern on the existing town. The plan must first exploit and improve current usage; and second, provide for orderly future expansion.

2) the city must not be conceived as a unit of prescribed size. Dimensiona expansion must be anticipated and facilitated by transportation arteries rather than impeded by city walls, battlements, moats, or like obstructions.

3) the plan must be recognized as a two-dimensional instrument of value onl to the extent that it generates an amenable architectural solution for th future city.

Architectural form, current economic requirements, social and transportatio necessities may vary, but planning principles are constant.

Chandigahr and Brasilia were evaluated by Zevi as contemporary architectur manifestations of these basic principles.

Lewis Mumford spoke at some length on those aspects of the city which co tribute to its ultimate function of providing a stimulating environment for soci as well as economic intercourse. Mumford's remarks were directed toward th design and reclamation of the city as a pedestrian forum in which econom activity claimed only a portion of man's total endeavor. He decried the use of t telephone as a substitute for personal contact and the intrusion of automobil into the heart of the city. Mechanical devices must be relegated to serve t general welfare.

The planner must make one simple choice to devise a coherent scheme. He mu designate one mode of transportation as preeminent: the passenger or the p destrian. Once the choice is made, the mechanics of planning may be appli rationally and with effective regularity.

Mr. Mumford stated that in his opinion neither Lincoln Center for the Performi Arts nor Brasilia possessed the human scale requisite to the informal soc exchange of ideas necessary to foster a genuine urban culture.

Mr. Mumford's remarks concluded with the statement, "Design your cities lovers and friends and the culture will take care of itself."

(continued on page


Here's
why

REDESIGNING DOWNTOWN PHILADELPHIA

final session of the convention was devoted to the presentation of Phila-phia's redevelopment plan. City Planner Edmund Bacon emphasized the con-ution of many lay organizations in helping to formulate and sustain Phila-phia's planning effort. Two plan aspects of general interest are the pedestrian k and walkway system incorporated in the Locust Street Redevelopment Pro-, and the waterfront redevelopment, which incorporates many recreational nities for the city and for the nearby Society Hill project. "Redesigning ntown Philadelphia" will be a feature of the Architectural Record in May for e who wish a detailed analysis of an outstanding planning activity.

ddition to the convention program, the host chapter provided an entertaining ram for delegates' wives. The corollary program included tours of Rittenhouse are, Fairmount Park, and the Dupont Winterthur Museum and grounds, to tion a few. In all, it was apparent that the host chapter auxiliary had spared ffort to make the convention a memorable occasion for all wives in attendance.

PHILADELPHIA MANIFESTS PROFESSIONAL ACHIEVEMENT

could not help leave the convention with a conviction that Philadelphia was ing ahead in a massive renewal program with unique sophistication and rity. The projects proposed or under construction were impressive as much heir diversity as for their number. Obviously no such programs are possible out a broad basis of understanding among the general population, and a sive, sustained effort for the preservation of a proud city. It was the city of adelphia, rather than the convention, which impressed upon this observer the ssional's responsibility to provide guidance and continuity to the task of designing Urban America".

Next month SKYLINES will carry a convention report by I. Lloyd Roark, one of the four official delegates from the Kansas City Chapter, AIA. The other delegates were John Hewitt, Louis Geis and Everett Johns.

WELCOME BACK

With this issue an old friend rejoins the list of distinguished advertisers in SKYLINES. The Carthage Marble Corporation (ad on Page 6) scheduled advertising in these pages from 1954 to 1957, and will now appear again each month. Several of our supplier friends, who began advertising in SKYLINES with the first issues in mid-1951, will be featured in the August 10-year SKYLINES review.

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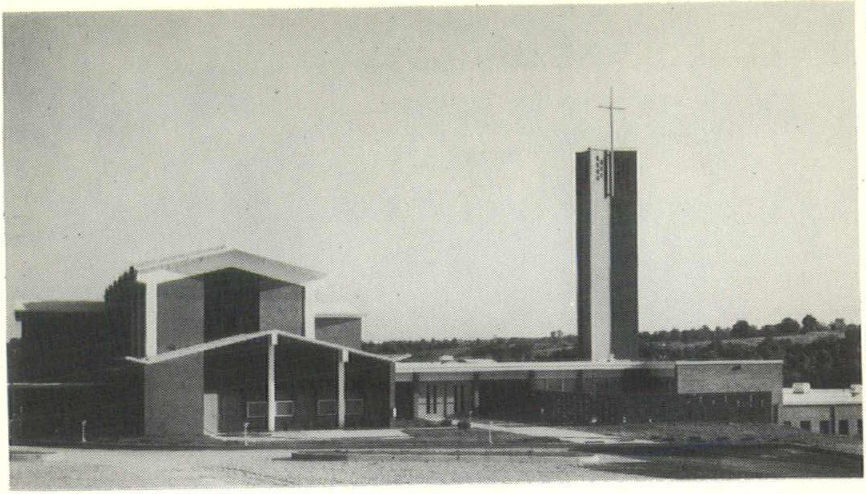

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The raised floors on all three levels are of prestressed Haydite double tee slab construction. The nave roof is composed of precast Haydite slabs set in a folded plate, gabled design, supported by gabled, precast Haydite beams. Members in the nave section were left exposed and plastered.

If you would like more information about Precast, Prestressed Haydite Concrete, call

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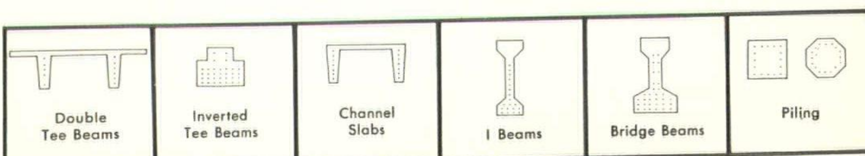


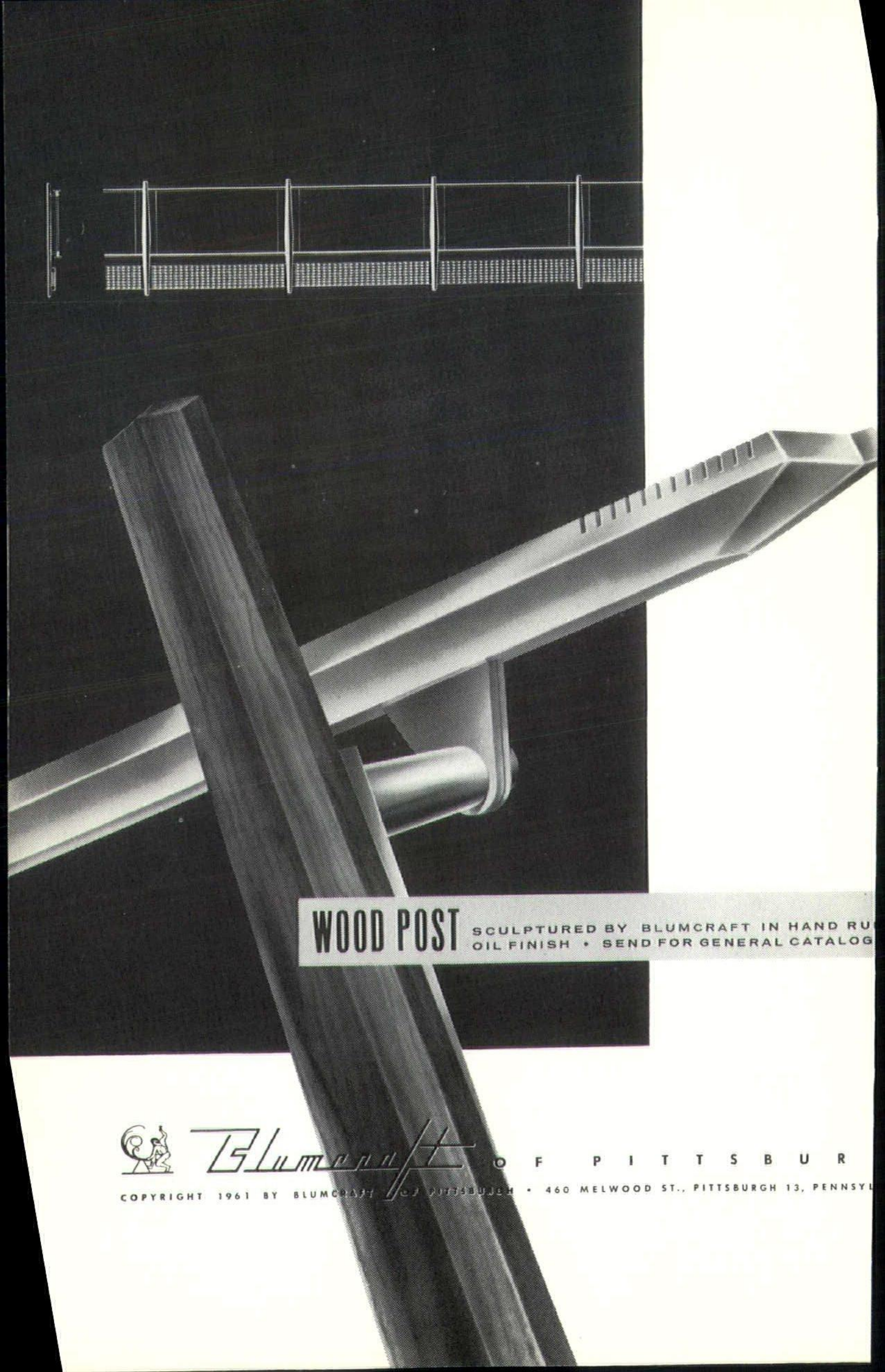
NEW CORPORATE MEMBERS

Five new Corporate members are welcomed this month in SKYLINES. Top row, left, is ELDEN KEITH EDWARDS, senior architect for Burns & McDonnell Engineering Co. Holding a B.S. in Arch. Engineering from K.U., Keith is registered in Missouri. He was a Navy pilot in World War II and is also registered as a professional engineer in Missouri. BRUCE E. LAW, top right, is a partner in the firm of Marra & Law. Partner Marra will appear a few lines later. Bruce is a native of Springfield, Mo., and is registered in both Missouri and Kansas. Outside of architecture he is active on the Board of the Countryside Methodist Church. MAYOL H. LINSCOTT, at left on the bottom row, is a partner in Tanner-Linscott & Associates. He was an Associate member of the Kansas City Chapter from 1928-33, but has let his son Bill, of the firm of Linscott, Kiene & Haylett, represent the family in the Chapter in the interim. Mayol is registered in Missouri. JAMES V. MARRA, bottom row center, joins his partner Bruce Law as a new Corporate member. Jim is a native Kan Citian, registered in Kansas and Missouri, and began his architectu work as a draftsman with Wight & Wight in 1928. JAMES D. MARSHAL partner in Marshall & Brown, is also both a registered architect a engineer. A graduate of the University of Nebraska, Jim has been acti in civic circles as chairman of the board of the K. C. Area Hospital A sociation. He is a member of M.A.R.A. and probably qualifies as one our best-traveled members in that he's covered 12 European, Asian a African countries.

NEW ASSOCIATE MEMBERS

JOE C. HOLCOMB, left, has practiced under his own name since 1958 in Springfield, Mo. Joe is a native of Springdale, Arkansas and holds a Bach. of Arch. from the University of Arkansas. He is licensed in Missouri.

SAM PRICE, above right, practices under his own name at 4638 J. C. Nichols Pkwy. A native of Kansas City, Sam earned his Bach. of Arch. Engineering degree at K.U. He is licensed in Kansas.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