The two main advantages for using carpeting are noise control and low maintenance costs. Carpets reduce floor instigated or impact noises and are psychologically dignifying. Maintenance costs for carpets are less than for other types of floor coverings because carpet requires less surface preparation. The initial cost of carpet is little, if any, more than that of other floor coverings. Carpeting can be used quickly and economically as a replacement floor covering in older libraries. (GM)
ADDRESS BY JOE B. GARRETT
DIRECTOR OF MERCHANDISING
AMERICAN CARPET INSTITUTE
350 FIFTH AVENUE
NEW YORK, NEW YORK

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THE CARPETED LIBRARY

The growing list of carpeted libraries indicates that you, the professionals, are well aware of library flooring requirements -- and especially the ability of soft floor coverings -- carpet -- to contribute economically to solving some library environmental problems of long standing.

"Library," to the layman, is a retreat where he can find information quickly and study it in relative quiet. Next to adequate selection and quick location of information, the physical make-up of the library is probably the next most important requirement from the user's point of view. By this we mean adequate acoustical and visual privacy which is in the conscious mind of the library user only when acoustics are obviously inferior or when he is constantly distracted visually.

Even the casual library user knows that library planning has been intensified in recent years, much as all academic planning and facilities have received concentrated attention. In the view of many, the library has come to serve as the barometer of interest in knowledge particularly so with great emphasis being placed on individual inquiry and study as important phases of school programs.

The library gets more and, in many cases, different kinds of use today than before. And, with new use and new attention, has come the urgent up-grading of interior elements which combine to produce a workably effective, conducive environment. In short, library planners have risen to the occasion.

From the outsider's point of view, this up-grading seems to have been accelerated by the apparent "breaking out of the mold" which has meant a broader view of library scope and function, its fulfillment of a "teaching instrument" role and a shedding of its more or less traditional "study hall" image. This has meant the incorporation, in varying degrees, of audio visual and a range of other mechanical devices which tend to be noise producing thereby creating the need for very careful acoustical planning. The rapidly growing trend toward carpet use in libraries hinges on this acoustical fact of life.
CARPET FITS LIBRARY REQUIREMENTS

Carpet fits well into modern library requirements. Its basic character offers the benefits of beauty, dignity and ease of care, but the compelling reason for its use in libraries is its researched ability to serve as a superior acoustical material at the floor level. This fact is quickly accepted.

Everybody understands that the library should be quiet -- not tomb-like -- but free of extraneous and unnecessary noise. Carpet delivers this needed quiet by eliminating floor instigated or impact noise such as foot shuffling, dropping books and pencils, and the moving of desks and chairs, while psychologically dignifying and creating user respect and positive behavior patterns. All this has put carpet in the "common sense" category as a library floor covering.

Whether private or public, the carpeted library is rarely controversial any more. The trend to carpet was not stimulated artificially, but originated with administrators, architects and planners, who looked for and found a floor covering with performance qualities that would meet the needs of modern library design.

AMERICAN LIBRARY ASSOCIATION TECHNOLOGY REPORT:

Your own library technology project report on the use of carpeting in libraries indicates that its use is becoming routine. The report cites its superior acoustical properties, lower maintenance costs, vast improvement in decor, and immediate and positive psychological effects experienced by the Arcadia, California, Public Library, the University of South Carolina Library, (the reading rooms of which were first carpeted in 1840) and a number of other school and public libraries.

EDUCATIONAL FACILITIES LABORATORIES LIBRARY REPORT:

In its school library report, Educational Facilities Laboratories points to Foothill College, Los Altos, California; Kansas City Public Library; and the Andrews, Texas, High School Library as three which have solved severe acoustical problems by using carpet. This report also points to drastically reduced maintenance costs -- the savings from which are substantial over the carpet's wear life.

Educational Facilities Laboratories also recently published a study on acoustical environment of school buildings which was done by architect John Lyon Reid and acoustical expert Dariel Fitzroy. Two carpeted schools with carpeted libraries were reported as being acoustically superior with an overwhelmingly excellent rating from teachers and tests. Co-author of the study, Dariel Fitzroy, says in the light of his experience:

"Carpets in the corridors and classrooms of schools may become an essential fundamental in the planning of schools in the immediate future. In the light of modern school requirements, carpeting gives evidence of being a necessity."

Dr. Harold B. Gores, President of Educational Facilities Laboratories, writing in the April issue of "Nation's Schools" magazine, had this to say:

"Studies of comparative costs tend to show that over the long haul of the years carpeting will save money, especially if all factors are included -- lower maintenance costs; possibility of reducing the number of partitions that would otherwise have to be constructed; likelihood of reduction in
fuel consumption (estimated by L.P. Herrington at 5%); increase in reflected light from ceilings no longer designed around sound absorption; reduction of micro-organisms floating in the air; and the greatest factor of all -- though probably immeasurable except by testimony -- the effect on the student's morale and how he feels about the place in which he works.

"But whether carpeting is cheaper is not the central question. What is central is whether an acoustic floor covering will help children to see better, hear better, act better and learn more. An increasing number of educators believe this to be the case."

Before showing you slides of some carpeted libraries, I will quickly review the basic research which has been done, documenting the acoustical and maintenance properties of carpet as a suitable library floor covering.

**ACOUSTICS**

Carpet's acoustical ability was first measured back in 1955 by Dr. Cyril Harris of Columbia University and now President of the Acoustical Society of America. Its ability to act as a noise absorbent was rated at .55 and interpreted as being as effective as most materials designed specifically for the purpose of noise reduction.

Dr. Harris also found that carpet absorbed 10 times the amount of airborne noise as other types of floor coverings (examples being voice or machine noise) and that it virtually eliminated impact noises (clattering of heels, moving chairs and desks and dropped materials). These findings were confirmed in field tests by Professors Rodman and Kunz of Rensselaer Polytechnic Institute who conducted tests in the carpeted Shaker High School, the first school to use carpet for acoustical and maintenance cost-reduction purposes. These gentlemen also commented on the good sense of eliminating floor instigated noise in this manner rather than allowing the noises to be created and then trying to trap them with acoustical materials on other room surfaces.

In carpeted areas large dollar savings can often be realized by eliminating many other acoustical treatments. This is often an advantage for libraries since the ceilings no longer have to be designed around noise control materials and can be used for the most desirable lighting. Subsequent acoustical studies and observations, particularly in the educational field, have repeatedly drawn attention to the desirability of the acoustical floor covering.

**MAINTENANCE**

Concerning maintenance, about nine years ago a maintenance cost-comparative study conducted by Industrial Sanitation Counselors, an independent housekeeping consultant firm for some of the nation's leading corporations and hotels, established that carpet was easier and substantially cheaper to maintain than hard floors under heavy, medium and light traffic soil conditions. Over the years this evidence has mounted.

As late as last year a new and broadened maintenance study was done by the same firm and pointed out that carpet's "total use" cost, which included its initial and maintained cost averages over its wear life, was about one-half the cost of other floor coverings.
The "Cutting Costs with Carpet" booklet which contains full details of these studies is available free of charge from ACI. The actual "total use" cost of 1,000 square feet of carpet compared to the same area of traditional tile floors was $182.41 for carpet -- $348.29 for tile.

LIBRARY MAINTENANCE

There have been a number of reports from librarians based on field experience stating that our maintenance savings estimates are actually somewhat conservative. Among these is Foothill College, mentioned earlier. Obviously, there is no mopping, stripping, waxing, buffing, re-waxing, etc. Large maintenance savings are realized through less expenditure for labor, capital equipment and expendable supplies. Carpeting is simply far easier and less costly to maintain at a much higher appearance level. This is scientific maintenance which too few people practice.

It has been our observation in talking with professionals that these maintenance figures are looked upon with some skepticism only among those who have not had direct experience with carpeted schools or libraries. Quite impressive validation of these figures is supplied by a recently established company on the West Coast which some of you may know.

This organization contracts with schools to take over total floor maintenance at the figure currently being paid by the school for this service. The contract stipulates that carpeting will be supplied by the company and installed throughout the school at no charge to the school itself. The company's profits are then realized through a substantial reduction in current floor maintenance costs. The school pays no more, and has carpet installed and properly maintained, free of charge.

Now, briefly a few slides of carpeted libraries:

SLIDE #1: This is Shaker High School, Newtonville, New York, which has 25,000 square feet of carpet in all academic areas, now in its seventh year of use. Reaction of students, teachers, parents, administrators, custodians and visitors has been entirely favorable and enthusiastic.

SLIDE #2: The library lounge provides an area for relaxation and study. The floor is used as a work area. There is obviously an advantage in this increased utilization of space: students do not object to taking a seat, editing a yearbook, or holding entire classes on carpeted floors. Shaker High School physics classes use carpeted stair risers as classroom seats. In carpeted libraries, the floor is very often used as a seating and work area. Quoting Millard Smith, Principal of the school:

"The noise of a school is impact noise, footsteps, foot shufflings, scraping of chairs and desks on the floor, dropping of books and pencils. Carpeting is the only flooring material that absorbs impact noises sufficiently so that they are barely heard.

"Carpeting contributed significantly to the de-institutionalizing of the school and school life. Students take greater pride in the school and are more relaxed in the activities they carry on there.

"The presence of carpet has been observed by all of our faculty as a major cause of positive habit development by students using these..."
areas. There is a unanimous feeling on the part of the staff that they would prefer to teach in carpeted rooms. Because the atmosphere is informal, the teachers at Shaker find it easier to develop a close relationship between student and teacher.

SLIDE #3: This is the library of the carpeted Andrews, Texas, High School which contains 45,000 square feet of carpet in all academic areas. Comments on this library environment have been extremely favorable. Architect John Lyon Reid was able to use the ceiling for completely luminous lighting rather than for acoustical purposes since he felt that adequate acoustical treatment had been applied at the floor level.

SLIDE #4: This is the Morton High School library in Chicago which again illustrates the improved lighting features which can be used and also some of the color and design advantages of carpeted floors. It is clear that carpet decoratively unifies and uplifts library atmosphere, much to the liking of the staffs and patrons.

SLIDE #5: This is the carpeted library at Longwood High School, Middle Island, New York. This installation has been down for some time, and the company representatives responsible report the results have been particularly gratifying. Carpeted libraries are informal, comfortable, and the climate is completely inviting.

SLIDE #6: The Moses Brown School, Providence, Rhode Island, is another example of effective use of color in library planning along with good quality carpet. In this and other libraries, the anticipated problem of rolling heavy book trucks over carpet has, in most cases, simply not presented itself. In other cases, special 6" by 1 1/2" plastic casters have been used as was recommended by the special library research project on this subject. In the great majority of cases, standard equipment and casters are used.

SLIDE #7: Another scene of the Moses Brown school which still manages to communicate the quiet of this library environment. Access to the lower book shelves is considerably simplified by simply kneeling on the carpet.

SLIDE #8: This is the Jesuit School in Dallas which used both carpet and acoustical tile for noise control purposes, as some libraries choose to do, depending on the various functions carried on and the age level of users.

SLIDE #9: The Brozosport High School, Freeport, Texas, is, as you can see, a very modern library both in design and furnishings. The carpeting is beige in color with a tweed texture. Almost any color seems suitable. People seem to expect more unusual library colors. Specifications will naturally vary somewhat according to end use, and type and amount of traffic. Suitable specifications can easily be developed around wool, nylon or acrylic surface fibers. Consult commercial carpet specialists for help in this area.

SLIDE #10: Finally, Yale University's Rare Book Library, which utilizes a vast expanse of plush carpeting and glass-walled partitions separating various areas of the library.

SLIDE #11: Footsteps and traffic movement on one side of the glass wall would be highly distracting were there no carpet to muffle the sound.
SLIDE #12: Although this library is of quite a different character, the carpet does serve its noise control and aesthetic purposes. These libraries are merely representative of several hundred which are carpeted today, and we hear about a great many more as each week passes.

COMMENTS: We might mention the relationship between the carpeted library and the carpeted hospital, although it may be obvious to you.

Hospitals are now using carpet at a very rapid rate for acoustical and maintenance purposes and with excellent results. Tests are now being conducted at the carpeted Barnes Hospital here in St. Louis to determine correct maintenance procedures and methods. Preliminary studies at the Genesee Hospital in Rochester, New York, indicated less germ count in carpeted areas than in uncarpeted. This is still being studied.

The St. Louis University Library, which you are scheduled to visit this evening, also has considerable carpeting in a large lounge area to which we invite your attention.

CONCLUSION: We believe these to be the practical advantages of carpet in libraries:

1. All room surfaces considered, it costs no more, or very little more, initially.

2. The tremendously favorable maintenance record, compared with other floor coverings, will reduce costs and allow for replacement at the same time that a much higher appearance level is maintained.

3. Acoustical treatment on the floor will likely allow ceilings to be designed for improved lighting.

4. Carpet creates a respectable, workable, up-graded library environment which, in turn, creates respect on the part of the user.

5. Carpet can be used more quickly and economically as a replacement floor covering in older libraries to bring them completely up-to-date. It is the only deployable floor covering -- removable - reshapable - reusable.

6. Carpet controls noise at the floor level, where troublesome library noise originates.

Thank you for your interest.