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Max & Gerald Buetow, Architects, had its origin about 35 years ago. For many years the late Max Buetow was the lone member of the firm. He specialized in dairy plant and commercial projects. As dairy and food department requirements became more stringent through the years, Max Buetow's keen analysis helped solve many of the problems of technical planning and proper material usage. The firm was expanded in 1946. Gerald Buetow, Max's son, entered work as a partner. As the office staff grew with the employment of registered architects, and competent draftsmen, the scope of the firm expanded. In 1957 Orrin D. Field was made an associate. The practice of the firm now covers educational, industrial, medical and commercial work. Personal attention by the principals is given to all phases of work on the projects. Most of the work has been in Minnesota, Wisconsin, and North Dakota. Registration is also held in the states of Iowa and South Dakota.

These nine pages comprise our monograph for this issue.
PINEWOOD ELEMENTARY SCHOOL, New Brighton, Minnesota

Perspective

Interior Classroom

Interior Corridor
BRECK SCHOOL FOR BOYS, Minneapolis, Minnesota

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SEPTEMBER-OCTOBER, 1958
STATE SCHOOL FOR THE DEAF
Faribault, Minnesota

Power Plant Buildings
perspective

CONCORIA COLLEGE
St. Paul, Minnesota

Dormitories
perspective

Lutheran Memorial Center
perspective
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SEPTEMBER-OCTOBER, 1958
October 2 and 3 Meetings Will Present Top Speakers and Outstanding Buildings to Architects from Many States

Some of the most architecturally interesting buildings of the year will be presented during the eight seminars planned for members of the Minnesota Society of Architects and those attending the Regional AIA Conference during the state convention and regional gathering in St. Paul on October 2 and 3, according to those in charge of the program.

The roster of speakers is studded with internationally known designers—Breuer, Rapson, Will, Mikutowski, Jyring, etc.—and the other features of the program, now in its "final tentative" stages, indicate the entire meeting will be of prime interest to those attending. For the ladies of the architects there is a special program.

The fact that the regional conference is being held in connection with the state convention will draw more than the usual attendance to the two-day event. The expanded program took this into consideration. The sessions will be under the gavel of Pres. Brooks Cavin of St. Paul, who heads the state society. Other officers of the MSA are Vice-pres. Clair G. Armstrong of Minneapolis, Secretary Fred V. Traynor of St. Cloud and Treasurer E. W. Krafft of Minneapolis.

Registration for the convention will open at 9:00 a.m. on Thursday, October 2. The first business session of the two days is set for 10 a.m., followed by the showing of the Minnesota Centennial film, "Art in Minnesota." During open periods of the program those attending will have the opportunity to visit the exhibits of materials, equipment and methods put on by firms associated in the industry.

Luncheon on the first day will hear an unusual speaker, Ned Axt, whose "European Tour" talk is not exactly of the architectural wonders other travelers to the continent usually see.

The first seminar will have the presentation of the Toronto City Hall competition, with Frank Mikutowski of South St. Paul and Phil Will, Jr., of Perkins & Will, Chicago, carrying the discussion. Mr. Mikutowski represents a team of younger architects in this area whose original designs won out in the first stage of the competition. Mr. Will's firm also placed in the first stage. The second stage is now being judged and by the time of the convention results may be ready for presentation. The Toronto competition has won wide recognition as an inspiration and choice plum for those competing.

The Lutheran Brotherhood Building in Minneapolis will also be presented by Mr. Will in the second seminar. Mr. Will, FAIA, has won a number of honors for design through the years and at the last convention of the AIA was elected first vice-president, this toppling off long service to local and higher chapters of the association. He is registered to practice in 19 states and holds a senior certificate from the National Council of Architectural Registration Boards.

A church which has aroused much comment will be the subject of the last seminar on Thursday when

President Cavin

Mr. Will
MINNESOTA SOCIETY OF ARCHITECTS, AIA
1958 Convention
North Central States Regional Conference, AIA
October 2 and 3, 1958
Hotel St. Paul—St. Paul, Minnesota

Thursday, October 2
9:00 a.m.—Registration; view exhibits.
10:00 a.m.—Minnesota Society of Architects, business meeting.
10:30 a.m.—Centennial film—“Art in Minnesota.”
11:30 a.m.—View exhibits.
12:00 noon—Luncheon.
   Welcome messages.
   Ned Axt address, “European Tour.”
1:45-3:15 p.m.—Seminar 1, The Toronto City Hall Competition presented by Frank Mikutowski and Phil Will, Jr., representing the firms which placed in the first stage competitions.
3:15-3:40 p.m.—View exhibits.
3:40-4:20 p.m.—Seminar 2, The Lutheran Brotherhood Building, Minneapolis, Phil Will, Jr., of Perkins & Will, architects.
4:20-5:00 p.m.—Seminar 3, The Edina Church, Ralph Rapson, architect.
6:00 p.m.—Social hour, St. Paul Gallery of Art, Private Owners’ Show. Portland Cement Association, sponsor.
7:30 p.m.—Smorgasbord, University Club Work of representatives of Twin City Artists Associations.

Friday, October 3
7:00 p.m.—Registration continued.
   Regional directors’ breakfast and business meeting.
   View exhibits.
9:00-9:45 a.m.—Seminar 4, Milwaukee Veterans Memorial Building, Eero Saarinen, architect, presented by M. W. Meyer of M. W. Meyer & Associates, associate architects.
9:45-10:30 a.m.—Seminar 5, General Mills Building, Minneapolis, John Weese of Skidmore, Owings & Merrill, architects.
10:30-11:30 a.m.—Seminar 6, St. John’s University Buildings, Collegeville, Minn., Marcel Breuer, architect.
11:30 a.m.—View exhibits.
   Social hour, Portland Cement Association, sponsor.
12:00 noon—Luncheon.
   Alfred Bendiner, speaker.
2:00-2:45 p.m.—Seminar 7, Lutheran Church, Virginia, Minn. E. A. Jyring of Jyring & White, architects.
2:45-3:30 p.m.—Seminar 8, New University of Minnesota School of Architecture, John Rauma of Thorshov & Cerny, architects.
3:30 p.m.—View exhibits.
3:45 p.m.—Business meeting.
   View exhibits after meeting.
6:00 p.m.—Social hour in Ramsey Room.
7:00 p.m.—Annual dinner.
   Presentation of Honor Awards.
   Dinner dance.
Ralph Rapson, architect and head of the School of Architecture at the University of Minnesota, presents his St. Peter's Lutheran Church in Edina, Minn. Mr. Rapson, well known for his civic activities as well as for his architecture, has buildings scattered over the world, including Willow Run schools in Michigan (in association with Eero Saarinen), embassy and consul buildings for the U.S. government in Stockholm, Copenhagen, Boulogne, Neuilly, Le Havre, The Hague, Athens and Oslo, etc. His Stockholm building won a first honor award at the AIA convention in 1954, one of many honors his designs have earned.

The first day's wind-up will be a social hour sponsored by the Portland Cement Association, showing of privately owned pictures in the St. Paul Gallery of Art and a smorgasbord and art showing in the University Club.

A meeting of the regional directors at breakfast opens the second day of the convention. The first seminar of this day will be on the Milwaukee Veterans Memorial Building, designed by Eero Saarinen. It will be presented by M. W. Meyer of the associated firm of M. W. Meyer & Associates. The second seminar presentation will be the General Mills Office Building in Minneapolis, to be given by John Weese of Skidmore, Owings & Merrill, the architects. Mr. Weese is an associate partner in the firm and his early training was with men of the caliber of Mies van der Rohe and Henry Dreyfus. He has been a designer and project manager for his present firm.

Marcel Breuer will personally present his work at St. John's University in Collegeville, Minn., on the next seminar. A United States citizen since 1944, Mr. Breuer's Hungarian background has brought a new slant to work here, especially with his Bauhaus experience, where he was a master. His work is so well known to all those in the industry that only one interesting footnote on the Breuer group needs mentioning. Although the company has branch offices in four cities other than New York the organization has Mr. Breuer, four associates and a staff of fewer than 30 persons.

Alfred Bendiner, well known design commentator, will speak at the Friday luncheon, after which the seventh seminar will present the work of Jyring & Whiteman in the Lutheran Church of Virginia, Minn.

Mr. Jyring, who recently returned from extensive work in the sociological aspects of architecture in India, will present the church.

Mr. Bendiner, FAIA, practices in Philadelphia and his ability as a speaker is augmented by a wit which has found fame in caricature as well as "more serious art." He holds both bachelor's and master's degrees in architecture and his buildings include residences, factories and similar buildings, among the latest of which is the observatory and residence for the chief of astronomy at the University of Pennsylvania. He is caricaturist for three newspapers and has exhibited extensively in lithography and water color, as well as creating murals for several buildings.

Mr. Jyring, a native Minnesotan, graduated from the University of Minnesota in 1932 and then worked for architectural firms in Chicago and J. C. Taylor in Hibbing. He went into his own practice in 1939 and formed a partnership with D. S. Kerr a year later. He was resident engineer in the Sudan area for Johnson, Drake & Piper from 1941 to 1943 and then served with the navy until 1946. After the war he was a partner of S. P. Jurenes until Mr. Jurenes' death in 1953.
JURY WORKS ON HONORS

We will show the results of the work of this group of men in the next issue of Northwest Architect when the MSA Honor Awards for 1958 are announced and will be presented in a special section. Left to right in a lighter moment during the judging are Richard M. Bennett, FAIA, Chicago, Prof. Ralph W. Hammett, AIA, Ann Arbor, Mich., Harold T. Spitznagel, AIA regional director, Sioux Falls, S. D., and Brooks Cavin, president of the MSA, St. Paul.

present partnership of Jyring & Whiteman was formed in 1955. His Indian work has been with the venture capital firm of Private Enterprises, Inc.

The new University of Minnesota School of Architecture will be presented at the last seminar by John Rauma of Thorshov & Cerny, this presentation being of particular interest to Minnesota and some other architects because it concerns the school in which they received their undergraduate training. The final business session of the convention will be held following this seminar.

The last evening will have as its climax the annual dinner of the group and presentation of the convention's honor awards, followed by a dinner dance. A social hour will precede the dinner.

CONCRETE PRODUCTS ASSOCIATION ANNOUNCES COMPETITION FOR SEAL DESIGN

John Bush, president of the Minnesota Concrete Products Association, has announced a competition for the design of a seal with prizes of $100 for first place, $35 for second place and $15 for third place. The competition is open to architects, designers, draftsmen, and architectural students. The president of the Minnesota Society of Architects, Brooks Cavin, will serve as professional advisor.

Submissions are due Tuesday, November 25, 1958, in the office of the Minnesota Society of Architects, 3416 University Avenue, Minneapolis, Minnesota.

“The purpose of the competition is to select a seal, or emblem, which will be used by members of the association as an identifying plaque to hang on the wall and also for stationery and advertisements,” the announcement said. “Further information and rules of the competition will be distributed through the Minnesota Society of Architects and the School of Architecture.”

MEEKER COUNTY JOB TO PINNAULT

Expansion of facilities in two community structures of Meeker County in Litchfield, Minn., has been given for design to Louis Pinnault of St. Cloud, past president of the MSA. A second story is to be added to the county jail and the basement of the Meeker County Hospital is to be finished for an autopsy room and student nurses' classrooms.

ARCHITECTS' LADIES WILL HAVE SPECIAL CONVENTION EVENTS

Fall fashions will be emphasized at the opening event scheduled for the women in attendance at the Minnesota Society of Architects' annual convention and the associated regional conference of the AIA's north central states chapters, according to Mrs. Richard Cone of St. Paul, program chairman. Following a bus trip from the St. Paul Hotel after registration on Thursday, October 2, there will be a luncheon in the Biltmore Inn in Edina, with an unusual fashion show by L'Unique, also of Edina.

The ladies will then be transported to Southdale, the Twin Cities' outstanding shopping center, for two hours of browsing which will offer an opportunity for shopping as well as an inspection of the interesting architectural structure. Buses will return to the St. Paul Hotel in ample time for participation in the social evening at the St. Paul Gallery of Arts and dinner at the University Club.

Friday morning will bring the Minnesota State Women's Auxiliary's business meeting, following a breakfast in the St. Paul Athletic Club. At this time officers for the 1958-59 year will be elected. The final event “for women only,” also in the Athletic Club, will be a wine and cheese demonstration directed particularly toward the uses of wine in cooking.

Mrs. Cone is vice-president of the state auxiliary as well as program chairman for the women's activities at the convention. She is being assisted by Mrs. Gerald Buetow and Mrs. Robert Ames, also of the St. Paul chapter.

A hospitality room for the ladies will be conducted in the St. Paul Hotel.
The Hustad Residence

AIA's Honor Winner Puts Minnetonka Hill Site to Best Architectural Use

By Donald E. Hustad

The concept of this house was developed largely because of the site. The site is located in Tonka Woodcroft, Minnetonka, in a heavily wooded section. Depth is 160 feet and pitches from the north to the south about 14 feet. The view is to the south and the neighbors are to the north.

We wanted a house with the bedrooms on the second level and a living area located on the first, opening out to a terrace. To accomplish this and still retain the clarity of the house with not a piece of the house exposed, I employed the use of a retaining wall on the north and fill on the south. This allowing the area around the house to be level.

The area which would be basement in the so-called rambler was brought up to grade level and used for the family room, dining room, kitchen and utility room and half-bath. All of these spaces open out on grade. The family room and dining room open to the terrace on the south. The only area which could be called a basement is under the living room and is only one-half level below grade.

The living room area is a formal room by choice. This area is divided from the rest of the house by levels, so the children have no need to enter this area. To heighten the formal atmosphere the ceiling was kept at the same level as the bedrooms, thus giving a ceiling height of approximately 14 feet. Major glass areas, as in the living room and all areas, are to the south for better view and privacy. On the south side of the living room is a sitting porch, ac-

Donald E. Hustad, Minneapolis and Wayzata architect, was awarded the only recognition of an architect from this area at the recent AIA convention when his residence received an honor award in the Third Annual Homes for Better Living Program. The pictures on these pages show some of the features of the home, designed for his own family.

Fine natural light is a feature.
cesible from the living room through sliding glass doors.

On the level above the family room, dining room, etc., are three bedrooms. Each bedroom opens through sliding glass doors to a balcony. The master bedroom is on the north with the other two bedrooms on the south. The two children’s bedrooms are plumbed in for future lavatories.

The most pleasant aspect of the house is the roof. Six barrel vaults spaced 8'-0" o.c., create the most relaxed and exciting space I have experienced. One of the most pleasant sights to see is the moonlight coming into the bedrooms and playing on the vaults.

Exterior finish is essentially stucco, left natural.

WRIGHT HOUSE GOES UP IN DES MOINES

Latest addition to Northwest houses designed by Frank Lloyd Wright is the home in Des Moines, Iowa, of Dr. and Mrs. Paul J. Trier. The Triers became interested in having a Wright home when they read his book, “The Natural House,” and wrote him about their plans for a home. After several meetings at Taliesin the structure was completed in design and was built this summer. An interesting footnote to the construction was Dr. Trier’s very apt reasoning about the standard architect’s fee:

“When you sell a house you pay five per cent to get it sold so why not 10 per cent when you build?”

US STEEL OFFERS BRIDGE DESIGN PRIZES

A steel highway bridge design competition offering 15 awards totaling $44,000 to engineers and college engineering students is being sponsored by the American Bridge Division of United States Steel Corporation, it has been announced by Austin J. Paddock, division president, and L. Abbett Post, executive vice-president of the American Institute of Steel Construction, who will administer the program.

The competition is dedicated to the stimulation of the best use of steel in the design of bridges for the 41,000-mile system of inter-state and defense highways to be built during the next 15 years. Open to professional and design engineers and to college engineering students, the competition poses the problem of designing an overpass structure in steel to carry a two-lane highway at right angles over a four-lane interstate highway on level ground. The overpass must be designed in accordance with standards developed by the American Association of State Highway Officials and approved by the U. S. Bureau of Public Roads. These standards are entitled “Geometric Design Standards For National System of Interstate and Defense Highways.”

Eight awards will be made for winning entries submitted by professional and design engineers, including a top award of $15,000. College engineering students will compete for $9,000 in awards, with the first award being $4,000. All entries will be judged on the basis of originality of design, utilization of the properties of steel, economy, and appearance of the structure. The type of overpass structure, length of spans, and other factors will be left to the discretion of the entrant.

Deadline is May, 1959.

Complete information on the competition can be secured from American Bridge Division, United States Steel Corporation, 525 William Penn Place, Pittsburgh 30, and from the American Institute of Steel Construction, 101 Park Avenue, New York 17.
At the invitation of the West German Government, Professor Rapson, along with nine other architects-planners, was the guest of the German government for a month-long study and observation tour this past summer. For the express purpose of studying post-war reconstruction and planning, the tour was a highly intense coverage of most of the major cities and areas in Western Germany, West Berlin and East Berlin. Here is Professor Rapson's brief digest of the trip.

The economic, social, cultural and physical recovery that has taken place in Germany since the last world war is little short of miraculous. There is little need to qualify the statement for out of the staggering ruins and distraction of the war has grown a new Germany. A new Germany living again, a new Germany regaining its lost balance, a new Germany realizing its obligations in the Free World and a new Germany realizing its great potential in the family of a United Europe.
Inasmuch as the tour was beamed at planning and redevelopment, the main emphasis was placed here. In every city the group met with town officials and the architects and planners in charge of the work. Everywhere the group was cordially welcomed and entertained and everywhere a spirit of friendly cooperation prevailed. The architects and planners were anxious to show their work, anxious for comments and criticism and anxious to learn of American developments.

After a highly concentrated tour such as the one which our small group of architects-planners experienced, one returns with many varied and mixed impressions. Paramount, perhaps, in my impressions was the fantastic overall recovery and vigor of the German nation. Faced with the almost hopeless task of rebuilding their shattered lives and cities, the German people displayed constructive qualities of greatness seldom realized in a people. This is seen not only in the amazing amount of reconstruction one encounters at every turn in every city, large or small, but is evident in all aspects of life. Rising standards of living are evident everywhere.

**LAND USE A VITAL CONSIDERATION**

Because of the loss of vast agrarian areas in East Germany and due to the great increase of West Germany's population by some 12,000,000 persons, it was absolutely essential that land production be increased greatly. This has been accomplished and food is no longer a problem. Agrarian laws protect and regulate all open land and, more than any other factors, prevent the chaos and undisciplined suburban growth so prevalent in the United States. By contrast, one finds Germany a land where respect and love for the land has meant maximum utilization and conservation of its valuable resources.

Growing industrial production and a revived merchant marine have meant a favorable export-import situation which again is absolutely essential if Germany is to survive economically.

Politically, socially and culturally, a new spirit prevails. A free and vigorous press, an active democratic participation in internal and international affairs, belief and active cooperation, bordering on leadership, in a United Europe, revived vitality in theater, music, the arts and a healthy, vigorous interest in education—all these factors combine to give the visitor a strong impression of a vigorous people firmly entrenched as one of the strong bulwarks of the free world.

Upon arrival at the Dusseldorf Airport, the group motored to Bonn, the provisional capital of the Federal Republic. Here, for three days, governmental officials set the framework for the tour, presenting and discussing the many legal, technical and financial problems of reconstruction and housing, the refugee and displaced persons' problems, as well as the over-all, long-range governmental program for reunification of Germany and the country's present and future relations with the NATO countries and the United States.

Underlying all German life, German political and economic policy has as its goal the ultimate reunification of East Germany with the free West Germany. Families and friends have been separated by the Iron Curtain and differences have arisen but, without exception, the West German believes and aspires to this eventual reunification. No one, of course, can predict when or under what conditions this will take place but one senses that all will not be completely right until this eventuality does take place. That the present division is considered of a temporary nature is apparent in the last paragraph of the provisional constitution of the German Federal Republic, which states that the constitution becomes invalid at the time a permanent constitution is ratified by the entire German people in a free, unbiased general election.

Adding to the staggering problem of rebuilding their cities and providing housing for the homeless was the heavy social burden of the millions of refugees and expellees, in addition to those bombed out and widowed, veterans, aged and unemployed. Some twelve and one-half million refugees alone have come through the Iron Curtain since 1945, a figure which represents one-fourth of the entire German population. It is to the constant credit of these refugees and expellees that, due to their skill and industry, they have by no means all become a social burden, although this great influx does continue to tax the upper limits of Western Germany's economy.

It is difficult to picture adequately the transformation of the bomb-leveled cities that has taken place during the past thirteen years. Before reconstruction could begin, some 700,000,000 cubic yards of rubble had to be removed. Many cities have virtually completed the job, others have completed more than 50 per cent of this task and all have made astounding progress. Out of these ruins modern cities are arising, cities of high

Curves and straight lines bring a peaceful atmosphere to much of the post-war reconstruction.
esthetic and physical amenities, based on the cultural heritage of these old cities.

By 1949 a housing shortage of some 5,800,000 units existed. By virtue primarily of Marshall Plan aid and German federal funds, some 3,600,000 units had been built by 1956 and it is now estimated that the housing shortage will be overcome by 1960.

Incidentally, everywhere the German officials and individual citizens alike expressed their deep gratitude for the financial aid given by the United States and acknowledged it as the mainspring of their recovery program.

Following the many conferences with the governmental officials and observation of the German legislature in action, the group inspected numerous housing developments. Here, as in other cities, total development was the key word, incorporating schools, churches, etc., within the projects. (Noteworthy from a personal point of view, the writer visited with the doctors and nurses at the hospital in Venusburg where his Number-One Boy was born a few years back.)

From Bonn the group proceeded to a five-day stop in Hamburg, the second largest city of Germany, with a stop-over in the city of Cologne. The historic and majestic twin-towered cathedral was virtually the only building left standing in this central city. However, today Cologne is a thriving example of outstanding contemporary planning and architecture. Several contemporary churches were visited here, notable among them being Gottfried Bohm’s additions to and renovation of the Church of St. Columba. Here, in a modest, little church, sensitive balance of new and traditional elements produces a work of lasting beauty.

Coupled with the impact of the over-all reconstruction picture one is greatly impressed with the machinery which has been set up to facilitate planning and reconstruction. Planning is felt to be of the greatest importance not only by public officials but by the general public. The high degree of public acceptance—or rather, one might say, the public demand—is nothing new for Germany has a long history of public acceptance of large-scale public and private housing and overall planning.

Typical planning principles and the public and official planning framework were in no place more dramatically demonstrated than in the great port city of Hamburg. A city with a population of 1,800,000 and second only to Berlin, the largest city of Germany, Hamburg forms one of the “Lands” of the Federal Republic and is a key city in the economic system of West Germany.

One of the twelve elected municipal senators (four-year office term) has charge of all building. Technical direction is under the city architect-planner. All building activities, from the over-all planning aspects to the actual construction of buildings, roads, utilities, parks, etc., are directly under the control and supervision of this planning agency.

The main work of the planning office is to establish and work the master plan. Once established and voted approval by the city senate, the master plan becomes law with absolute control over future development. One most interesting aspect of the plan is the dictate that 50 per cent of the city must remain as open “green space,” much of which is actually farm land where the city dwellers, in the tradition of people close to the land, each has a small plot of land on which to raise vegetables or flowers.

Here, as in other cities, sound progressive planning principles are being incorporated in an effort to create a total pleasant environment in keeping with the technology of our times. The planners and architects are fully aware of the great challenge facing their bombed-out cities and are making every effort to retain and recreate the great charm and aesthetic qualities so often in evidence in their older cities.

Here, as in other places, planning is very much “physical” planning and here, incidentally, as in virtually all cities and towns, the planner is an architect. The physical form of the city is ever present—ever paramount—in the thinking and objectives of the planners. Comprehensive, large-scale models and superb maps are employed to study and plot every single building, every road, every square, every park. Nothing is left to chance and nothing is allowed that does not conform to the physical plan of development.

The human element is always respected as the controlling design factor. Great emphasis is placed on the

(Continued on Page 45)
Modern stores, like modern cities prefer the distinctive design of—

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purely aesthetic values and it was interesting that planners spoke first of the amenities rather than utilitarian aspects. Faced with the same onrush of vehicular traffic that is rapidly turning most of our cities and countrysides into endless asphalt jungles, the German planners seem determined not to allow the machine to devour their cities and countrysides.

Side trips to the "Heath of Germany" to see the handsome, old, thatch-roofed, half-timbered houses, reminiscent of bygone days and to historic Lubeck with its fine Romanesque Church and its harmonious Rathhaus Square were relaxing interludes before departing for Munich.

Traveling through the lovely and variegated German country, one could not but marvel at the highly proficient and comfortable German railway system, which is purported to be the finest in Europe. Also, as one passed through the picturesque, small German towns and the tidy countryside, uncluttered by jarring roadside advertising, one could appreciate the national laws regulating this peculiar man-made form of torture. True, law does regulate outdoor advertising; however, this does not account for the fact that on not more than one or two occasions did we encounter roadside advertising. Discussion of this with many people revealed it was due to inherent respect for nature and man and his environment.

Enroute to Munich, we stopped at historic Wurzburg with its fine baroque Emperor's residence, at Balthasar Neumann's church of pilgrimage, St. Mary, and at the magnificent Marienberg fortress situated high above the town.

Arrival in the Bavarian capital, Munich, was timed to coincide with the arrival of the new Bock beer and the group was treated to the traditional welcome associated with this annual event. This Bavarian capital and cultural center, currently celebrating its 800th anniversary, provided the group with a truly rich experience for it is a city of remarkable and unique atmosphere, marked with fine, old buildings and striking modern buildings and many beautiful parks and streets. A new office-shopping complex seen here is one of the outstanding examples of the great potential inherent in contemporary architecture.

A swing south into the Bavarian Alps followed next with visits to Zugspitze, the highest point of the German Alps, where one can see four European countries and the highly picturesque mountain towns. The high Baroque and Rococo churches and palaces of southern Germany have long been recognized as the near ultimate in spacial conquest and surface decoration. First-hand observation of these remarkable structures in Ettal, Linderhof, Oberammergau and Wieskirche proved to be a high point in the tour. One cannot fail to mention the innumerable small country chapels and village churches which, by their absolute simplicity and purity of form, are to this day examples of truly fine architecture.

Old Augsburg, with its still-existent early defense walls and moats, and the valley city of Stuttgart were the next stops. Stuttgart, almost destroyed during the war, is today one of the beautiful cities and enjoys an exceptionally high economic standard. With its many, many fine examples of contemporary apartments and top rate office buildings, it is perhaps leading all the German cities in good, modern architecture.

Enroute to Hannover, the next major stop, the group visited the famous university town of Heidelberg, picturesquely located on the Neckar River. The great universities of Germany are justifiably famous and none
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Tests Conducted by Toledo University Research Foundation
has a more distinguished name for scholarship than Heidelberg University.

Hannover, capital of Lower Saxony, is known as the "Green City" due to its extensive woodlands and green ornamental grounds and recreation areas. Trees are sacred and considerable time is spent on planning and care of the green areas. When quizzed on the admittedly high costs involved in all this, the city architect-planner's simple reply, "Ah, but it is for the people," well demonstrates their sound, relative scale of values.

Close by the famous old Markethurch, the symbol of Hannover, lies the "Golden Corner," a model residential oasis within the heart of the city. This complex of beautifully scaled row houses with their delightful, private gardens was one of the finest housing groups seen. Disposal of much of the city's rubble was ingeniously used to form a superb sports stadium, seating some 86,000 spectators. The most famous of all the German industrial trials was perhaps the architectural high point of the town. Disposal of much of the city's rubble was ingeniously used to form a superb sports stadium, seating some 86,000 spectators.

The "Interban" planned community in Western Berlin is by air, for this fabulous city is the symbol of the free world. The human element is always respected as the controlling design factor. Great emphasis is placed on the purely esthetic values and it was interesting that planners spoke first of the amenities rather than utilitarian aspects." (In this old persons' development a happy combination of both is seen.)

The "Interban" planned community in Western Berlin was perhaps the architectural high point of the town. By inviting outstanding architects from all over the world (such men as Niemeyer, Beaudouin, Gropius, Yorke, LeCorbusier, Stubbs, to mention only a few) to design buildings in the Hansa District, Germany is making a strong bid for world architectural leadership. This new community for 10,000 in the heart of Berlin promises to be a highly significant architectural and planning landmark.

Flying from Berlin to Frankfurt-am-Main brought the
This striking tile “mural” was created almost entirely with large-size $8\frac{1}{2} \times 4\frac{1}{4}$ tiles. Installations such as this add dramatic interest to wall areas, at the same time capitalizing on the permanent beauty of American-Olean Tile.

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Three Builders' Exchanges Ask
Architects' Co-operation

Co-operation of architects and engineers in the matter of timing the filing of plans and specifications, and particularly addenda, has been asked in a joint letter issued by the builders' exchanges of Minneapolis, St. Paul and Duluth. Signed by William J. Meyer, Minneapolis's general manager, Ray A. Thibodeau, St. Paul's executive secretary, and Roy E. Howard, Duluth's manager, the exchange letter bore the date of August 29.

"1958 has brought the greatest rush of building activity that this region has seen in many years," the three-exchange letter said. "Because of the vast amount of detail and service required by your staffs and ours to properly handle all projects put out for bids this year, the boards of directors of the three builders exchanges feel this is a good time to review a few of the subjects which have a bearing on our joint efforts.

"In the following paragraphs we have outlined several of the major points of our services to you. We have enumerated four recommendations for your consideration when your plans are filed with us. A resolution concerning 'Addenda,' which was unanimously passed at the 1958 convention of the International Builders' Exchange Executives, is also quoted. All of the items attached have the approval and sanction of the board of directors of each exchange.

"We earnestly request that all architects read this carefully. We sincerely hope that the recommendations are well taken and we invite comment on any or all of these points or on any other matter affecting our usual, cordial relations with those in the building industry."

The enclosures with the letter are as follows:

1. To all Architects and Engineers, OUR PROBLEM IS YOUR PROBLEM
"The Minneapolis, St. Paul and Duluth Builders' Exchanges have a total membership of 1,567, including general contractors, sub-contractors, manufacturers representatives, material suppliers and others in fields related to building. During the first six months of 1958 the number of project plans filed on the three exchanges totaled 2,468. During that period 33,159 estimators made take-offs from these plans.

"The executive officers of these three exchanges are members of the International Builders' Exchange Executives and manage three of the outstanding exchanges in the United States and Canada. These exchanges have averaged more than 60 years of existence and service to the building industry. They are well organized and serve the building industry in many ways. It is our continued aim to render the most efficient service possible to all. This can be done only with the full cooperation of architects, engineers and the various governmental agencies operating in the construction field in this area.

"Our plan rooms are the finest in existence. The number of estimating tables in the three exchanges totals 96. All of our facilities are geared to give the architect, the engineer, our members and the general public better service. Each is a non-profit organization geared for service.

2. BUT . . . WE HAVE PROBLEMS:
"In order to properly serve the architect and engineer, as well as the many estimators using our facilities, each working day—we submit the following for our mutual benefit:

1—That, on large projects, more than one set of plans and specifications be filed at our exchange.

2—That, when possible, general, mechanical and electrical portions of plans and specifications be sent to us separated, thus affording more efficient distribution and use of plans on each project. This would result in less waiting, better circulation and improved service to all.

3—That, bidders' lists be forwarded to us as quickly as they become available. When bidders' lists of general, mechanical, electrical, etc., contractors are filed with us promptly and completely, we can provide better service on your projects.

4—That copies of addenda be sent to us promptly. We also urge your co-operation with the enclosed resolution—to extend bid dates when addenda are issued less than 96 hours before the bid date.

IN FACT . . . OUR PROBLEM IS ALSO YOUR PROBLEM:
"Working together, all interests in the building industry will greatly benefit. We solicit your co-operation.

3. LATE ADDENDA
"The following resolution was passed unanimously at the annual convention of the International Builders' Exchange Executives recently held in Harrisburg, Pa.

"Whereas, the issuance of late addenda and bid form causes unnecessary duress to bidders on construction projects; and

"Whereas, the co-operation of the issuing authorities would alleviate to a great extent this very serious problem in our industry; and

"Whereas, through our experience in the operation of plan rooms we submit that a minimum of 96 hours is necessary for the adequate distribution of all addenda and bid form, therefore, be it

"Resolved, we, the International Builders' Exchange Executives in convention assembled in Harrisburg, Pa., on May 15, 1958, do hereby recommend that when it becomes necessary to issue an addenda less than 96 hours before the bid date that the bid date be extended proportionately."

BUILDING WOMEN ORGANIZE
The gals are getting together, it would appear, for there is a new organization being born down in Texas to be known as the National Association of Women in Construction. From the germ in Texas they hope to germinate to a fully national association. In case any of our readers are interested we understand the group's present office is reachable through P. O. Box 1912, Fort Worth, Texas, and a note to there will bring you a brochure and any other details you request.

SEPTEMBER-OCTOBER, 1958
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MINNESOTA CSI HEARS ABOUT ORNAMENTAL METALS

The Minnesota Chapter of the Construction Specifications Institute began its 1958-59 series of meetings and projects at a dinner meeting in Minneapolis on September 26. Ornamental Metals, with emphasis on Aluminum, was the subject discussed by members and guests Kermit Johnson of Crown Iron Works, Jack Harris of Alcoa, Jerry Johnson of Kaiser and Paul Mitchell of Reynolds. The actual fabrication was covered, as well as properties of metals, their alloys and finishes and specification methods as related specifically to the Ornamental Metals section.

Presented as a part of the business meeting was the committee structure of the chapter, which has three divisions for chapter affairs, national technical and chapter technical, the latter two being controlled by a technical co-ordinating committee. The chapter affairs committees will include liaison with other organizations as well as those committees concerned with the operation of the chapter. The national technical committees will investigate a division of the specifications as assigned to the chapter and assist in investigating those divisions assigned to all other CSI Chapters. The chapter technical committees will pursue problems of specifications and specification writing as pertains to this area.

Chapter dinner meetings are held on the fourth Friday of each month except when such meetings conflict with holidays and then another date is selected. Meetings will alternate every other month between the Normandy Hotel in Minneapolis and the Commodore Hotel in St. Paul.

GREAT FALLS ARCHITECTS FORM BUILDERS' EXCHANGE

Members of the Great Falls, Mont., Society of Architects have set up a builders' exchange office in that city with Mrs. Mary M. Jacobs in charge as secretary-manager. All the usual services of such an exchange are planned by the group, including publication of a weekly news letter.

The board of directors is made up of architects William J. Hess, George C. Page, Fred O. Anderson, Philip H. Hauck, David S. Davidson, A. Calvin Hoiland and Kenneth K. Knight.

METROPOLITAN PLANNING COMMISSION ASKS 1959 FEDERAL SUPPORT

Federal funds amounting to $68,500 to match funds from its own sources have been asked by the Metropolitan Planning Commission, which covers five counties in the Minneapolis-St. Paul area, according to C. D. Loecks, director. The funds are to cover 1959 operations in Phase II of the commission's work.

Phase II "will cover a two-year period of concentrated research and planning, the products of which will be presented in the form of a preliminary plan for the future development of the Twin Cities metropolitan area." During 1959 four basic research studies will be made—a population and housing analysis, a land suitability analysis, a land use and zoning analysis and an economic base study.

SEPTEMBER-OCTOBER, 1958

Also to be handled during the year will be three "problem oriented" studies, dealing with water supply and water distribution, sanitary sewer and storm drainage problems and present and future transportation problems. The commission's studies are supplementary to those of other agencies and an exchange of information is planned.

Chapter, Club and other news . . .

MINNESOTA SOCIETY INSURORS EXPAND STAFF

The Lloyd Dosh Agency of the Washington National Insurance Company, which handles the disability income insurance for the Minnesota Society of Architects, has expanded its staff during the past year by addition of four men. The agency heads said insurance written by the agency has increased 300 per cent this year over the preceding year.

"Aim of the Washington National Insurance Company and its local representatives is to provide the best of service and coverage for its clients," Ed Lundeen, who represents the insuror, said. "We are always ready to provide expert advice on problems about keyman, partnership, accident and sickness, hospitalization, major medical and group insurance."

KILSTOFTE OPENS WAYZATA OFFICE

A new office for the practice of architecture has been opened in Wayzata, Minn., by Irwin H. Kilstoft, who formerly was with the Minneapolis firm of Griswold & Associates. Mr. Kilstoft is a graduate of the University of Minnesota and before going with the Griswold firm had been with Hubert Swanson, Minneapolis, Boyum, Schubert & Sorenson and Weiler & Strand, Madison, Wis. He is the son of the late H. B. Kilstoft, well known Winona, Minn., contractor.

STANDARDS CONFERENCE SLATED FOR NEW YORK IN NOVEMBER

"Standardization—What's In It For Me?" will be the theme of the Ninth National Conference on Standards to be held in the Hotel Roosevelt in New York, November 18 through 20. Among the industries that will discuss the benefits to be derived from standards will be those concerned with forgings and castings, nonferrous metals, plastics, exports, nuclear energy,
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The DOX PLANK system was used for the first floor of the social hall and rectory and second floor and roof of the school. DOX PLANK employed in these various buildings were designed continuously to achieve a monolithic structural slab with its desirable advantages.

A unique exposed classroom ceiling treatment was used where the lateral and longitudinal joints of the DOX PLANK were aligned to achieve an interesting grid effect.

DOX PLANK features make it the favorite of architects, engineers and contractors for use in schools, commercial buildings, factories, apartment houses and private homes.
textiles, containers for hazardous substances (chemical, petroleum, paint), electrical machinery, electronics and machine tools.

"Rising cost is the foremost problem of industry today," said Admiral G. F. Hussey, Jr., managing director of the American Standards Association. "That's why in this year's conference we will try to show how some typical industries have saved costs and expanded markets through the development and use of standards."

SPECIFICATIONS INSTITUTE PLOTS EXPANSION AT ANNUAL MEETING

Expansion of the scope of the Construction Specifications Institute to encompass 50 chapters across the country with 5,000 members was planned during the group's recent convention in Cleveland under the gavel of Pres. J. Stewart Stein of Chicago. The group currently has some 3,000 members in 29 chapters. Chicago was named as the probable site of the May, 1959, general convention of the CSI.

The Minnesota Chapter was represented at the national CSI convention by its president, John C. Anderson, and its secretary-treasurer, Rollin B. Child. In addition, the Specifications Writer's Association was represented by a five-man delegation headed by their president, Robert E. Briggs.

President Anderson was very enthusiastic about the future of CSI after attending the business sessions and seminars. He was especially encouraged by the progress of the AIA-CSI Joint Co-operative Committee headed by Morris Ketcham, Jr., FAIA, and Frank W. Crimp, AIA, CSI, co-chairman. Mr. Anderson said the AIA has under study and in various stages of development a threefold information service to be used by practitioners. These are:

1. Index of Architectural Information
2. Building Products Registry
3. Specification Service

The AIA under Specification Service, proposes to collaborate with the CSI in the development of orderly systems of specification writing, section headings and other terminology, also in the development of specification language for products which are in general use.

Division of the chapters into 12 regional groups with elections of regional directors this fall was also voted. Other business was aimed at bringing the group through its early stages onto a basis of full operation. It was decided to hire a full-time executive secretary and staff with headquarters to be in Washington, D. C.

Also voted was an exchange of information, etc., with the Specification Writers Association of Canada, which was represented by some of its officers at the meeting. The convention was the "first working convention of the CSI" and had the first materials exhibits presented by associate members.

Other officers of the new organization, which has a Northwest representation reported in earlier issues of the NORTHWEST ARCHITECT, include Willard Burrows of New York, vice-president, and Harry Plummer of Washington, secretary-treasurer.
Farmers Union Central Exchange building illustrates Crown’s complete metalworking service.

The grills and louvres on the building exterior were formed from .081 aluminum by Crown. The interesting pattern of vari-colored porcelain-enamelled steel squares on both ends of the building, immediately capture the attention of passersby.
Both inside and out, you'll find examples of Crown's metalworking skill here at the home office building of the Farmers Union Central Exchange, Inc., South St. Paul, Minn. From the two-story aluminum louvres on the building's exterior to the polished bronze frame on the lobby mosaic, Crown's versatility and excellence in fabricating architectural metals is evident.

When you need this kind of service on metal fabricating call on the craftsmen at Crown. For more than 80 years, specialists in complete service to architects and contractors.

This cantilevered canopy over the Central Exchange Main entrance was fabricated by Crown of porcelain-enamed steel. The window washing tracks and aluminum soffits are other examples of Crown's high-quality workmanship.

The vestibule, fabricated by Crown from .125 satin-finished anodized aluminum, provides an inviting entrance into the main lobby. The aluminum window frames adjoining the entrance way are also Crown fabricated.

This striking terrazzo mosaic mural in the Central Exchange lobby is set off in a handsome bronze frame and supporting legs, fabricated by Crown. (Statuary not by Crown.)

Dividing strips of satin-finished bronze, furnished by Crown, combine with the textured fabric to lend a dramatic effect to the back wall in the building's main lobby.

In the Central Exchange building lunchroom, Crown fabricated the extruded aluminum air diffusers around the light fixtures, the aluminum partition framing and all the stainless steel aisle railings.

ARCHITECT: Ellerbe & Co., St Paul, Minn. CONTRACTOR: Graus Construction Co., Hastings, Minn.

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FINI

In the last issue of Northwest Architect we ran a box on the pending wrecking of the Metropolitan Life Building, famous structure designed by E. T. Mix. We asked for comments on the little eddies of sentiment about whether it should be saved or allowed to go down. Interesting development was that we received just one solitary note about the structure and that not from one of our local readers. Wrote Edward A. Clark, safety director in the Ordnance Weapons Command, Rock Island, Ill., "This central open shaft is a very serious fire hazard and not in accord with National Fire Codes."

Which seems to be "Fini."

REZAB JOINS MINNESOTA STATE ARCHITECT'S STAFF

Newest member of the staff of the Minnesota State Architect's office is Donald Rezab, who took up his new duties in July. Mr. Rezab, a native of St. Paul, took his B.A. at Macalester College and his degree in architecture at the University of Minnesota. He spent a year on an exchange scholarship at the Free University of Berlin and one year in Copenhagen as a research fellow of the American-Scandinavian Foundation.

NORTH DAKOTA MANSION PLANNING GOES TO RITTERBUSHES

Ritterbush Bros., Bismarck, N. D., architects, have been hired by the state to start plans for the proposed new governor's mansion in Bismarck. It is to be located in the southwest part of the capitol grounds. An earlier plan to have a ranch house type of structure was tabled last spring. The legislature appropriated $200,000 for the building and the state board of administration indicated the structure should cost about $165,000, the balance being for furnishings, etc.

SKARET MOVES IN FARGO

Herman Skaret, Fargo, N. D., architect, has moved into new and larger offices in that city's deLendrecie Building. Mr. Skaret was formerly in partnership with S. M. Houkom in the firm of Houkom & Skaret.

VICTORIAN ASPECTS PONDERED

The Victorian Society has been created in England "to make sure that the best Victorian buildings and their contents do not disappear before their merits are more generally appreciated," according to a report on the new group in the Journal of the Royal Institute of British Architects. The group will first set up a secretarial office and then carry on its investigations and preservation work.

It grows late, your chances grow slimmer—so get up and go to the convention and conference!
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I. PROBLEM.

The increase in the new and used car trade and related services is beginning to create a general pattern of display and storage space shortage for a majority of the downtown Minneapolis car dealers. Like other business enterprises car sales are very competitive and there is a tendency to seek a higher and higher volume of sales and a larger variety of both new and used cars in the showrooms and open air lots. More and more of the valuable and vital downtown land is acquired by individual car dealers to store and display the large number of new and used cars for sale. This seems to be a very serious problem that needs a solution. To use the very valuable space of Minneapolis business section for used car lots is unwise from a financial and definitely detrimental from an esthetic point of view. Sound functioning of the city life itself restricts spatially the liberty of the use of ground and requires an architectural solution that would benefit all.

There is a definite trend for most downtown functions to concentrate related activities within close proximity to each other. The same physical relationship exists in the case of automobile sales. Commercially it has been extended into a kind of organization called "auto loop." This idea, as a suggestive factor, contains conclusive qualities to be discussed in the next paragraphs.

II. PREMISE

The visual and functional reorganization of central Minneapolis suggests a secondary retail area to the southwest of the primary retail, financial and business area that, as proposed in the total redevelopment scheme, would include such functions as the auto sales and service area. This roughly corresponds to the existing land use and the land use as allocated by the city planning commission. It is my feeling that concentrating and visually improving automobile sales will stimulate good competition, bring about more sales, be more convenient to the prospective car buyer, either as pedestrian or motorist, and relocating used car sales (which already are distinct and separate departments in the automobile business) to a less central location would rebuild the dignity and esthetic enjoyment of central Minneapolis and its business place.
III. PROPOSAL

Within the framework of the existing downtown Minneapolis revitalizing programs I am proposing to develop the area southwest of the primary retail, financial and business center area that would serve as an organic and efficient architectural basis for the Minneapolis loop automobile dealers section, except for used car sales. This proposal would incorporate a complete spatial and functional organization for the various downtown Minneapolis representatives or dealers of the different automobile manufacturers, retaining the individual identity and prestige of each. The total concept represents an automobile display, sales and service center, including automobile parts and accessories' sales, accessible to pedestrians and motorists. It would possibly include multi-story parking and underground service facilities. The general character of this highly specialized "automobile shopping center" would be a gay, structurally unified, three-dimensional spatial organization. The termination of the proposed pedestrian plaza at this point suggests the very festive feeling this center could add to the rest of the city, especially on occasions of display of new automobile models, open air exhibitions of sports or foreign cars, etc.

IV. SITE

As site for the automobile display, sales and service center I have chosen four city blocks in the area circumscribed by La Salle and Marquette avenues and by Tenth and Twelfth streets. This corresponds to an approximate site that was considered in the loop redevelopment proposal in the spring of 1957 by a team of architectural students at the University of Minnesota. The basic location consideration was the existing tendency to concentrate auto sales in this general area and the proximity to other downtown commercial areas. One of the potentials of this area is that it offers convenient access for both pedestrian and vehicular traffic. Since it is located between two proposed feeder streets and adjoins a distributor ring, it is on the border line of automobile vs. pedestrian and parking vs. driving or walking.

V. SPACE REQUIREMENTS

Four main elements would comprise the total concept of automobile supermarket:
1. Central display.
2. Individual dealers' offices and showrooms.
3. Individual dealers' service areas.
4. New cars storage areas.

CENTRAL DISPLAY AREA

In the new concept of auto "supermarket" a central display area would serve primarily as the symbol of lower loop automobile dealers and the display area for the various makes manufactured by auto industry. Sales functions would be excluded from this area. A customer could walk through and acquaint himself

(Description Continued on Page 63)
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See pages 61 and 63 for running story on this project.
Modern Stairway Highlights Lobby Of New Public Health Center

Adding to the beauty of the lobby in the new Public Health Center in St. Paul, Minn., is this broad, smartly styled stairway. Railings of satin finish aluminum and glass center panels enable the stairway to perform its functional purpose, yet maintain the feeling of spaciousness within the structure. Specially designed aluminum grids add beauty and function as a safety device in the stairwell railings.

Designed under the supervision of Mr. Harry Schroeder, City Architect, the building also uses architectural metal on the exterior in the caduceus and canopy lettering. All of this material including aluminum sills for the window wall were fabricated in Minnesota Fence & Iron's shops in strict accordance with specifications and delivered to the jobsite on time.

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with the various makes (each represented with three or four models) on the market. Since there are eleven downtown Minneapolis automobile dealers, it would require an indoor display space for a total of 30 to 40 cars or approximately 30,000 square feet.

In addition to indoor display great emphasis will be placed on outdoor display areas integrated with pedestrian walkways and plazas. The central display area and the display arrangement would be controlled by the auto dealers of this center, the periodic changes of display being done under the supervision of an architect or qualified interior designer.

Other important functions of the central display area would be annual auto shows, exhibits of historic or educational nature, display of foreign made or experimental cars and other related displays.

INDIVIDUAL DEALERS' OFFICES AND SHOWROOMS

The present method of selling automobiles is becoming archaic. This has been admitted by several leading men representing Detroit's auto industry. A dealer has to have ample space to carry and display a complete selection. A customer should be able to walk through and pick out the car he wants without prolonged ordering procedure and weeks of waiting.

The existing average square footage for downtown Minneapolis car dealers' showrooms is 3000 square feet, an area that is too small to display even 50% of the various models on the market. The following proposed minimum and maximum areas, and the relation of display to offices, are based on studies and interviews made with downtown Minneapolis car dealers. In addition, these facts had to be analyzed, evaluated and projected into the future to meet the requirements set above:

A—Offices and related spaces:
1. Three to five closing offices.
2. One general office.
3. Three to five managers' private offices.
4. Parts sales.
5. Restrooms.
7. Meeting rooms for sales force.
8. Dining areas.

B—Display area of 4000-8000 square feet.
In view of the fact that the proposed areas do vary, ±100% flexibility in terms of architectural and structural planning would be a factor that would have to be considered in my proposal.

INDIVIDUAL DEALERS' SERVICE AREAS

Flexibility of spaces, as in the case of showrooms, again is very important since the requirements do vary from dealer to dealer.

A—Service area usually would be divided into two major divisions:
1. Mechanical department, subdivided into
   a. Tune-up area.
   b. Lubricating area.
   c. Major overhaul.
   d. Automatic transmission.

II—Body shop.
A Golden Curtain Wall...

MASTERPIECE OF PERMANENT BEAUTY

For West Bend Aluminum Company’s new office building, the owners and Grassold-Johnson and Associates, Architects, selected gold anodized extruded aluminum for the spandrels. These spandrels were assembled with RA-60 reversible windows in natural anodized aluminum to form story-height wall units.

The units, fabricated and erected by Flour City, create a curtain wall of both utility and beauty. Reversible windows provide an efficient method of washing glass from the interior, being open for only an instant when reversing the sash. Contributing to the efficiency of the wall are the insulated spandrels whose golden-hued metallic surfaces lend an air of elegance to this important addition to the industrial landscape.
This area would also include locker and wash-up rooms for mechanics. Total square footage of service area would be 10,000-20,000 square feet.

B. Active storage or parking area for cars to be serviced, directly related to service area, with stalls for 20-30 cars would be 6,000-10,000 square feet.

**NEW CARS' STORAGE AREA**

The car sales per month per dealer average from 50 to 80 cars in the high-priced field and from 80 to 120 cars in the medium or lower brackets. It is necessary to have this number of cars in stock at all times, so a system would have to be devised where each dealer could have his whole month's supply of cars on hand without using blocks and blocks of valuable land areas for storing them.

To solve this problem I propose to include a new concept of vertical automobile storage shelves in the form of high rise buildings as part of the total planning project. The total number of new cars to be stored would range from 800 to 1,000.

**VI. STRUCTURE**

To meet the structural requirements of exceptionally large spans and spaces a continuous reinforced concrete slab system to cover the entire area above the lower level could be developed, combined with flexible divisions of spaces above and below for the functions mentioned before.

**VII. BIBLIOGRAPHY**

There is no bibliography available on organized car sales and display centers nor any other research data besides the facts mentioned above, based on interviews with several downtown automobile dealers by the author of this program.

**VIII. CONCLUSION**

Just as shopping centers as a building type were non-existent only a decade ago, a shopping center for automobiles can be viewed as a new concept in the total complex of downtown redevelopment programs and/or proposals. The impact of the automobile is already a major problem for city planners and so will increasing auto sales be to the automobile manufacturers and dealers; therefore there is a definite need to set up an entirely new pattern of automobile business in central sections of our cities. The car display, sales and service center will be an integral addition to the business, cultural, social and educational centers.

**YOU THINK YOU HAVE PROBLEMS!**

Consider the problems hinted at in the title of a British architectural committee, which is named “The Joint Subcommittee of the Practice and Salaried and Official Architects’ Committees appointed to inquire into the employment of Architects on the Salaried Staffs of Building Contractors.”

Another angle is to take your problems to the MSA Convention and Regional Conference and get your answers right there!
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SOUND CONTROL FOR SCHOOLS

By John W. Cain
Forest Fiber Products Company
Forest Grove, Oregon

School administrators have long searched for a practical method of sound control and they, along with school designers and builders, have been faced with the similar problems of high cost, appearance and wearing properties of many available acoustical material. Fortunately for tight budget school construction the picture has recently changed. Today many schools are employing a new method of arresting sound that is highly effective, durable, attractive, long wearing and reasonably priced.

This method combines the best properties of two completely different materials, acoustical insulating batt and punched Sandalwood hardboard. It is the combination of these materials, working together, that provides a phenomenally high degree of sound absorption. The actual application is simplicity itself, consisting of acoustical batting between wood framing members, overlaid with hardboard.

Possibilities of such a form of acoustical treatment seem to be unlimited to those of us who have worked with it. Not only does it minimize maintenance problems but it can be installed with equal ease and economy in large schools or small, old or new. Being highly versatile and eye appealing it can be applied in school gymnasiums, auditoriums, in the hallways, even the classrooms. Incidentally, gymnasiums given this treatment may, in many cases where cost is a factor, eliminate the need of building a separate auditorium for school activities which normally require a keen form of sound absorption.

Workmen affixing the ceiling.

This story is presented as indicative of some of the work being done today in acoustical control. Into the buildings where this treatment was used went not only the design ability of the architects but also the suggestions of Dr. A. R. Tunturi of the University of Oregon Medical School, who was the acoustical consultant.

SEPTEMBER-OCTOBER, 1958
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balance. Additionally, this type of acoustical construction offers the further benefit of thermal insulation.

Technically speaking, the acoustical-batt used in this method is a loosely interwoven, felted insulating material such as rock wool, wood fiber or fiber glass, having a density of 1 to 4 pounds per cubic foot and a thickness of 1" or more. The hardboard is punched Sandalwood, generally 1/8", 3/16" or 1/4" thick, with perforations on 1/2" or 1" centers. Sandalwood hardboard is durable, washable and has a tough, sealed surface. A light blond color is baked into the board in production. Once applied it requires no additional finishing. This, plus the fact that it is impervious to stains, mars, dents and heavy abuse, makes it an ideal facing material for wall and ceiling surfaces in school buildings.

Sketches here suggest some of the various methods of application that can be used for school gyms or other large structures.

**SOUND ABSORPTION CHARACTERISTICS**

The punched hardboard-batt type of acoustical control is particularly effective on low frequency ranges where it is usually more difficult to obtain good absorption. A comparison of hole punching on 1/2" and 1" centers reveals that the latter has better sound absorption at lower frequencies below 200 cycles per second while 1/2" center punching is better at frequencies of 700 to 800 cps and higher.

Both facing materials, however, show good absorption at a frequency of 125 cps. This is shown in the table below, which compares the punched hardboard-

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NORTHWEST ARCHITECT
batt type of acoustical control with several different types of acoustical fiber board.

(Sound Absorption Co-efficients)

<table>
<thead>
<tr>
<th>Material</th>
<th>Absorption Co-efficient*</th>
<th>Absorption Co-efficient at 125 cps.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot; Hardboard, punched on 1/2&quot; centers over Fiberglas 4.2 lbs. per cu. ft., 3&quot; thick</td>
<td>.82</td>
<td>.33</td>
</tr>
<tr>
<td>1/4&quot; Hardboard with 1/2&quot; centers over Aero-Cor PF 315, 1 lb. per cu. ft., 3/4&quot; thick</td>
<td>.84</td>
<td>.35</td>
</tr>
<tr>
<td>1/4&quot; Hardboard, punched on 1&quot; centers over Fiberglas 4.2 lbs. per cu. ft., 3&quot; thick</td>
<td>.60</td>
<td>.40</td>
</tr>
<tr>
<td>1/4&quot; Hardboard with 1&quot; centers over Aero-Cor PF 315, 1 lb. per cu. ft., 3/4&quot; thick</td>
<td>.66</td>
<td>.47</td>
</tr>
<tr>
<td>1/2&quot; Insulation Board Acoustical Tile over solid backing</td>
<td>.55 to .65</td>
<td></td>
</tr>
<tr>
<td>1/2&quot; Insulation Board Acoustical Tile on 1&quot; furring strips</td>
<td>.60 to .70</td>
<td></td>
</tr>
<tr>
<td>3/4&quot; Insulation Board Acoustical Tile on 1&quot; furring strips</td>
<td>.70 to .80</td>
<td></td>
</tr>
<tr>
<td>1&quot; Insulation Board Acoustical Tile on 1&quot; furring strips</td>
<td>.70 to .80</td>
<td></td>
</tr>
</tbody>
</table>

*Absorption co-efficients shown here are averages of the absorptions at 250, 500, 1,000 and 2,000 Cycles per second.


(Data for Insulation Board from Acoustical Materials Assn., Bulletin 28, "Sound Absorption Co-efficients," A.I.A. 39-b.) In each case measurements were made in a reverberation chamber.

The subdued reverberation room in use.

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TREATMENT PROVED IN WESTERN SCHOOLS

Students and administrators of many new ultra-modern western schools can testify to the effectiveness of the punched hardboard-batt type sound treatment. One of these, the Bandon, Oregon (combined junior and senior) high school employed this type of sound control not only for walls but also in a unique series of sound baffles throughout the gym ceiling. Special acoustical problems, solved by placement of the baffles, were presented by the arched ceiling which towered to a height of 33 feet.

Baffles were suspended a specific distance from the roof and at varying angles. These were constructed by making four 4'x8' lumber frames to which a single 4'x8' sheet of punched hardboard was nailed over a fiber glass insulating batt 1" thick. Supplementing this baffle system the entire north wall of the 11,000 square foot gym was paneled with the same hardboard material over identical batting. All 4'x8' hardboard panels were left unfinished in light platinum blond sandalwood color which blended well with the birch decor throughout the school.

Punched sandalwood with 1/2" hole spacing was specified for this particular application to extend the rate of absorption to lower frequencies as well as increase total absorption at all frequencies.

Another application of this form of acoustical control was in the recently completed McMinnville, Oregon, high school. This application involved punched sandalwood over a 1" glass fiber batting material which was stapled to the underside of the roof deck separated by 1" by 4" framing members spaced 12" on centers. Sandalwood panels were then nailed to the furring strips between beam supports. Due to use of large sheets of hardboard overlay material, application time was lessened considerably. In this case the entire gym ceiling was given the full acoustical treatment.

Low cost is one of the outstanding features of the punched sandalwood-batt type of acoustical treatment, figuring on the basis of “finished” or “applied cost.” Now, with school construction and need for related facilities in a critical period, school planners must keep a tight control on expenditures and this acoustical treatment may be part of the answer to a practical method of acoustical treatment for schools.
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NORTHWEST ARCHITECT
BRITISH FACTORY CONSTRUCTION OFF

The pinch in Britain recently cropped up in a brief report in that country's architectural journal, indicating a drop in factory construction.

"The number of new factory plans approved by the Board of Trade in the first six months of 1958 showed a fall of 12 per cent compared with a year earlier, while in terms of square feet the fall was nearly 30 per cent. . . . It is to be hoped that the recent Government measures to encourage private investment (the lowering of Bank Rate to 5 per cent, the further increase in initial allowances on new industrial building beyond that announced in the Budget, and the relaxation of credit restrictions by banks and the Capital Issues Committee) will lead to a modification of this downward trend, although it seems unlikely that there will be any immediate upsurge of new factory plans on a large scale."

CREEP OF ALLOYS REPORTED

A National Bureau of Standards study indicates that the creep resistance of nickel-copper alloys is superior to that of the parent metals. This conclusion is suggested by results obtained with high-purity nickel and copper and two nickel-copper alloys. Tests made in tension at high temperatures also reveal that the rate of strain-hardening and degree of strain-aging are increased by alloying the nickel and copper with each other.

At sufficiently high temperatures and stresses all metals creep; that is, they continuously deform under constant stress. Generally, creep takes place in three stages. In the first, there is a decreasing rate of extension. In the second, creep proceeds at a nearly constant rate. In the third, the creep rate increases, culminating in complete fracture. Structural changes accompany creep at elevated temperatures and the mechanical properties of metals are sensitive to the rate of straining. The creep-testing of metals in tension under varying stresses and temperatures can be used to assess the degree of this rate-sensitivity.

With a successful opening of National Home Week to back them up, golfers of the St. Paul Home Builders' Association retained the trophy which is at stake each year when they meet the linksmen of the Builders' Exchange of St. Paul. The battle took place September 8, starting early in the morning and continuing throughout the day to be capped by dinner and awards session. Awards included those for fine golfing and other skills, like being lucky for a door prize. Dick Bjorklund and Dick Weatherston tied for the true honors, low gross, at 75. Mr. Bjorklund won the trophy on the flip of a coin.

In the top picture of this page are the officials and the winners—Mickey McLellan, chairman of the home builders' golf committee, Dick Weatherston, second low gross winner with a 75 and a lost flip of a coin, Dick Bjorklund, low gross winner with a 75, and Roy Drew, chairman of the builders' exchange golf committee.

The four-picture montage shows (top left) President Dick Steenberg and Secretary Ray Thibodeau of the St. Paul Builders' Exchange, Secretary John Bohman and President Bob Tilsen of the St. Paul Home Builders' Association . . . (right) Ray Thibodeau, Roy Drew and Jack Bohman . . . (lower left) Ed Sroder of Paper-
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Germany

(Continued from Page 47)

maturity. To understand this it is only necessary to recall the long period of suppressed innovation and the "official architectural directives" of the Nazi period, followed by the relatively unproductive war years. Many of the leading German architects had left the country. The schools were hampered and there was little exchange with the outside world.

That German construction is now entering a new phase is apparent in the more recent developments where the prime emphasis is no longer purely utilitarian and economic. The unique, pace-setting effort of the Interbau in Berlin is an example of the trend. One finds experimentation and innovation, and, above all, one finds greater refinement and maturity entering into the architectural work.

It would perhaps be fair to say that the German work shows a far greater breadth of expression and less over-all conformity than one experiences in America. Possibly this is due to the fact that there is less standardization, less industrialization of the construction industry, less mechanization and greater pliability of its labor force than in America. On the other hand, it may be inherent in the probing, searching nature of the people or it may be due to the early phase of development.

At any rate, the German architects try most anything and do not appear to fear non-conformity. It is extremely interesting, for instance, to observe the use of surface decoration as an integral part of the design process in an attempt to humanize and enrich the technological product.

A national law, requiring that 2 per cent of the construction budget on all public and semi-public work be set aside for works of art, is a strong indication of the desire and need of the German people for works of art. While not always completely integrated with the architectural work one does see painting, fresco work, sculpture, fountains and the like at every turn. One need only pause and think a bit about this to realize the tremendous significance—the lasting value—of art in our daily environment.

It would be impossible in this report, however brief, not to take special note of the new German church architecture. Traditionally, the church has occupied a strong place in the lives of the people. Traveling through the small villages and the larger cities as well, and in visiting the ever dominant church towers, one is deeply impressed with the revered and substantial position of the church.
Both physically and spiritually, the church is a focal point. Today, as throughout the centuries and through the many architectural periods, whether Romanesque, Gothic, Renaissance or Baroque, these structures are loved and cared for. In their planning and reconstruction, these older architectural monuments are sympathetically restored and related to the whole while the newer structures are given careful consideration in the total form of the community.

In the design of the new churches the architects, although breaking with past forms, are building on a strong architectural heritage. While the forms may be new and startling, the solutions invariably are strong, vigorous and bold, with a strong monumentality in its true sense. Sculpture, stained glass, fresco and tile work are usually utilized with the architectural forms to produce what is generally conceded the most significant present-day German architectural contribution.

All in all, the tour was a highly stimulating and educational venture—a once-in-a-lifetime experience. One returned with a new respect and understanding of a hard working, energetic people and a realization that Germany, once again, may well be on the way to attaining the high degree of architectural leadership she knew in the early formulative days of contemporary architecture.

BRITISH REPORT U.S. IS EXPORTING ARCHITECTURE

American architects are beginning to export architecture through the American embassies abroad, according to comments published in The Journal of the Royal Institute of British Architects in connection with an exhibit of "One Hundred Years of Architecture in America" being shown in England.

In reporting the opening of the exhibition, which includes the American embassy building in Stockholm, designed by Ralph Rapson, head of the school of architecture at the University of Minnesota, the journal reported that "in his opening remarks, Sir Roger Makins, former ambassador to the United States, said that whereas in the 18th century architects and their patrons made the Grand Tour of Europe, culminating in Rome, today one made a grand tour of the U.S.A. There was no greater index to the national expression, vigour and variety of American life than their architecture. It was a constant wonder, indicative of energy and vitality but also of financial and material resources."

"Sir William Holford, in proposing a vote of thanks to Sir Roger Makins, said that American architecture was a facet of the immense productivity of the country. It represented an enormous theatre for architecture both native (Henry Hobson Richardson, Frank Lloyd Wright and 'guest artists' from Europe (the Saarinens, Gropius, Mies van der Rohe). America was now beginning to export its native and imported products—in its U.S. embassies abroad;"

"Sir William said he had noticed on his visits to the U.S.A. that Americans were not so worried about tidiness. Their subtopias were far worse than ours. The exhibition was sponsored by the Fine Arts Committee of President Eisenhower's People-to-People Programme.

SEPTEMBER-OCTOBER, 1958
An open house event with a big barbecue as a feature drew many architects and others in the industry to the fifth annual such affair sponsored by the Cold Spring Granite Company of St. Cloud, Minn., and Casewin, Inc., Minneapolis. The event was held at Excelsior, Lake Minnetonka, and hosts were Ralph Alexander of Cold Spring and John Paul of Casewin, assisted by Dick McGowan and Cleo Dwenger of Casewin and Zeke Zener of Cold Spring.

Among those who attended are a few of whom we captured pictures. In the montage above are shown, left to right—(top, left) Chef McGirr, Vangi Hultquist, John Paul, John Anderson, Art Lucas and Zeke Zener ... (right) Architect Jim Horan, John Paul and Dick McGowan, Casewin, Rudy Stempfl, Construction Products, Bonnie Liebeler and Cleo Dwenger, Casewin ... (center, left) Architect Lee Dahlen, John Paul, Casewin, and Architect Jim Horan ... (right) Architects Jerry Carlson, Jack Olson and Jim Griffin, Zeke Zener, Cold Spring ... (bottom) Architects Dick Olinger and Dick Hauck, Dick McGowan, Casewin, Architects Jim Benson and Fred Loewen.

In the montage on the opposite page are (1-r in numbered pictures) — 1 — Architects Bill Wick, Pete Curley and Herb Larson ... 2—Minnesota state architects Jim Alexander, Don Zahn and Carl Vorlander ... 3—University engineers L. J. Maday, Jerry Nelson and Paul Ebb ... 4—Architects-in-training Bill Anderson, Dean Schmidt and Ronn Tadsen ... 5—Architects Gordon Matson and Virgil Siddens ... 6—Architects Jim Horan and John Duers ... 7—Larry Stahl and Wally Bastian, Casewin, and Roger Johnson and Joel Glotter, architects ...

8—Bill Meyer of Minneapolis Builders Exchange and Howard Johnson, architect ... 9—Architects Tom McGui, Phil Ulmer and Jerry Carlson ... 10—Charlie Alexander, Cold Spring, Architects Bob Magney and Urban Abendroth, Engineer Dick Vasatka ... 11—Bob Cerny, Harvey Schroeder and Dick Zed ... 12—Architects Harvey Thomson, Don Mark and Rudy Zelzer ... 13—Wally Conrad, Cold Spring, Architects Pete Woytuk and Tom Van Hausen ... 14—Architects Lorie Roeder and Gene Peterson ...

More of those who were at the Cold Spring-Casewin event are shown opposite. They are (1-r) — 1—Hostess Vangi Hultquist (center) with Architects Harvey Schroeder, Wayne Harmala, Dwight Wilson and Rod Erickson ... 2—Dave McFarlane, Rich-McFarlane Cut Stone Co., Bill Meyer, Lyell Halverson, contractor, Howard Johnson and (standing) Clair Lorentz of NORTHWEST ARCHITECT ... 3—John Madsen, Minnesota State Architect Al Nelson, Ollie Rausch, Cold Spring, and Architect George Nason ... 4—Doc Rethmeier, Cold Spring, Virgil Siddens and Jim Galbraith ...

5—Architects Dave McEnary and Tom Green, Bob
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ARCHITECT MAY WELL KEEP EYE ON WEATHER

Up popped recently three notations about weather and the future of man which may well mean the architect should keep himself up-to-date on what is going on in this allied and very important activity.

First little item was statement from Dr. Gortner in connection with the International Geophysical Year that future earth satellites, kept going around our world in regular patterns, will give us complete weather pictures of all parts of the earth every hour or so, transmitting the pictures to earth stations. Weather experts can study the pictures, chart changes and thus get a complete and almost up-to-the-minute report of all weather everywhere and where it is going.

Then up came a footnote which was originated by Drs. Teller and Latter in “Our Nuclear Future” which said these researchers felt the future climate of the world was going to be warmer. Reason was that many of our fuels release large quantities of carbon dioxide into the air and this prevents escape of heat from earth’s surface. As more carbon dioxide is made a part of our air blanket the more heat will be held in—result, warmer future. However, with atomic fuels, this would not be the case, they added.

Third footnote was found in a speech before the first United States Conference on Indoor Climate Design at the University of California at L. A. Dr. L. P. Herrington of Yale said the ideal environment for man probably was that which existed for Adam and Eve in the Garden of Eden, where he figured the temperature stayed about 85 degrees, considered the optimum for mankind as based on skin and deep temperatures of the unclothed human body. Clothing’s insulation, he said, has an insulating value of about 15 degrees.

The conference was aimed at solving the problem of how man can safeguard his well being through control of his indoor climate. Dr. Herrington called on designers of future buildings to provide leadership in climate design as “physiological engineers” for mankind.
PRODUCTS and SERVICES

BROS BOILER TAKES PLACE IN BANK SKYSCRAPER SPRINKLER SYSTEM

Shortly after the topping out of the steel work for the 1st National Bank building in Minneapolis, the pressure vessel shown here was placed in the structure. This unit for the sprinkler system was fabricated by Bros, Incorporated, boiler and vessel maker of Minneapolis.

The vessel was placed on the 27th floor of the bank building. It was 8 feet in diameter and 24 feet long.

GOODWIN COMPANIES HIGH IN BRICK AND TILE PRODUCTION

A history of continued expansion in facilities and personnel to serve architects and contractors is the story of the Mason City Brick and Tile Company and its associated plants in the Goodwin Companies. Their manufacture of quality brick and tile had its beginning in Mason City, Iowa, in 1883 when a small brickyard was established. The firm has grown so that now it produces more than 400 tons of clay products each day from three modern plants and employs 15 Sales Engineers in as many sales territories in Iowa, Minnesota, Wisconsin and the two Dakotas.

“New, advanced methods used in production and handling of facing brick and backup, floor, and partition tile insures full satisfaction in meeting architect’s exacting specifications,” the Goodwins reported. “The latest burning and drying methods are used in the making of these products, which eliminate much of the handling. Packaging of the clay products also assures top quality and convenience in handling.”

In the early 1940’s this firm came under the ownership of W. J. Goodwin, Sr., and two sons, W. J. Goodwin, Jr., and R. W. Goodwin, a pioneer family in clay products history. This organization now includes the Des Moines Clay Co., the Redfield Brick and Tile Co., the Ottumwa Brick and Tile Co., the Oska loosa Clay Products Co. and the Mason City Brick and Tile Co. all located in the choice shale and fire clay areas of Iowa.

“The Goodwin Companies long have been leaders in the clay products field, locally and nationally. We were in at the beginning of organization of the Structural Clay Products Institute and the Research Founda-

... tion. To keep abreast of the technical advances in production, ceramic laboratories in Des Moines and Mason City are in operation and registered architectural, ceramic and agricultural engineers give of their technical ability to give a better product and better service to the architect and contractor.”

The recently produced “Design and Construction Manual,” which details application of its products particularly with reference to backup, partition, and floor tile, and face brick, is available upon request. The services of the company sales engineers are also available to architects.

INSULATION SALES NAMED AREA WELDWOOD PARTITION AGENT

New area representative for Weldwood Movable Partitions is Insulation Sales Company, Minneapolis, according to word from Hartmann-Sanders Company, Chicago, manufacturing distributors. The partitions are a product of the United States Plywood Corporation.

“There are a number of exclusive advantages to use of Weldwood partitions,” the company said. “Sizes include standard modular panel widths up to and including 6 by 12 feet, with one-piece face construction, in any intermediate increment size. This provides practical unit sizes for use in today’s modern, large, modular buildings.

“The partitions also have great flexibility with metal key locking systems. All parts are interchangeable and salvageable.

“Weldwood Movable Partitions combine low-cost flexibility with the designer’s choice of partition faces — natural hardwoods, fabric-like plastics, high pressure plastic laminates or painted wood. Each has its special features and all have economy and long, useful life.

NORTHWEST ARCHITECT
"Complete movability of the partitions gives total freedom in redesigning floor space allotments at any time. The key locks combine the panels into solid walls and they allow for quick and easy rearrangement. Weldwood partitions are the perfect solution to the problem of space subdividing in offices, schools, hospitals, stores, banks and dozens of other structures."

PELLA OFFERS MIRROR SLIDING DOOR

Pella Products has announced a new line of sliding doors for closets and storage called Signet Mobile Mirrors, a product of Carolina Mirror Corporation of North Wilkesboro, N. C. The doors are available in standard 6'-8" or 8'-0" heights for 2 panel by-pass or 1-panel wall-pocket installations. Standard widths are from 2'-6" to 8'-0" depending on whether it is a pocket or by-pass type. Special sizes are also available.

Exposed frame is anodized aluminum in choice of matt black, gold or satin finishes. Eight nylon rollers with ball bearing axles provide smooth, noiseless operation. Silvering on mirror is protected by Carolina's exclusive electroplated copper backing and is guaranteed, the company said. Libbey-Owens-Ford Parallel-O-Plate is used exclusively.

Pella Products suggest the use of Signet Mobile Doors to give a feeling of spaciousness to small, crowded areas and to create a practical, dramatic focal point to uninteresting walls.

WELDWOOD MOVABLE PARTITIONS

Weldwood Movable Partitions combine low-cost (complete movability) with a choice of partition faces. Exclusive metal key construction locks partition panels into a solid wall. Yet, they can be quickly dismantled and rearranged in a few hours.

- Accessible concealed wiring—Provisions have been made to accommodate concealed electrical wiring in the base, post and cornice. Shallow switch and outlet boxes are available on request.
- Sizes—Standard modular panel widths, up to and including 6'-0" x 12'-0", with one-piece face construction, in any intermediate increment size.
- Low maintenance—Nothing to replace in normal usage. Panels and post caps need only minimum care. Face damage easily repaired.
- Warp-free doors (Weldwood Stay-Strate)—with incombustible Weldrok core.
- Flush design—post connector cap fastened invisibly from within—cap matches panel faces.
- Incombustible Weldrok Core—dimensionally stable, warp-free, incombustible, rot free. In all but Novo-wall partition panels.
- Light in weight—Weighing only 4 lbs./sq. ft., this system is extremely flexible. No external bracing or extensive preparatory construction or alteration is necessary.
HALDEMAN-HOMME ANNOUNCES WEST COAST PLANT

Haldeman-Homme Manufacturing Company, St. Paul, manufacturers and distributors of Erickson folding educational and school furniture, have announced opening of a new manufacturing plant in San Francisco.

"This new manufacturing facility represents an extensive addition to the company's present manufacturing capabilities here in St. Paul. The establishment of this new operation in California is the second phase of the company's long range expansion program which was authorized by the board of directors last fall," W. W. Haldeman, president, said.

The firm will manufacture its complete line of Erickson Fold-A-Way tables, choral risers, stages and other folding school equipment in this new plant. Other products presently manufactured in the St. Paul plant, which are unique in their West Coast application, will be manufactured in the new facility also.

HALDEMAN-HOMME have been active in the distribution of school and educational equipment in the Northwest for more than 35 years and are recognized nationally as the leading manufacturers of folding equipment for the multi-purpose use of space in educational institutions, the announcement said.

INLAND STEEL ANNOUNCES STEEL DECK-CEILING

New Milcor Acoustideck is a combination steel roof deck and acoustical ceiling with a .70 noise reduction coefficient, made by Inland Steel Products Company. The NRC rating was determined by the Riverbank Acoustical Laboratories, Armour Research Institute and the new deck is especially suitable for reduction of noise in factories, offices and schools, including gymnasiums, its maker said.

"Because of its strength Acoustideck can be used to span up to 10 feet, carrying normal roof loads," it was reported. "The deck is perforated along its vertical webs, where load carrying abilities are least affected. Important job savings are made possible because Acoustideck weighs less than poured or precast construction and can be used with wide joist spacing and light supporting framework.

"Four rows of perforations, 5/32" in diameter, give the deck its acoustical advantage. Pre-cut sound absorbing inert fiber batts are furnished with Acoustideck for on-the-job installation along ribs. These further reduce sound reflection."

Acoustideck is available in 18, 20 and 22 gauge steel either Bonderized and prime coated, or galvanized—and in 14 and 16 gauge, galvanized only. It is manufactured by Inland Steel Products Company, 4101 West Burnham Street, Milwaukee, Wisconsin, and further information can
be obtained by writing the advertising division.

ROY BERTELSEN NAMED MINNEAPOLIS BUILDERS' SUPPLY PRESIDENT

New president of the Minneapolis Builders' Supply Company is Roy A. Bertelsen, who succeeded his brother, the late Russell Bertelsen, as head of the building materials company. Mr. Bertelsen is a past president of the Minneapolis Builders' Exchange. The supply company has served this area for the past 42 years, with headquarters in Minneapolis.

WELDWOOD'S KORINA PANELING PROVIDES UNIQUE WALL

Korina is one of the best liked hardwoods for paneled walls in homes and offices, for smart, modern fixtures and for cabinet work of all kinds, according to the United States Plywood Corporation.

"Korina offers a naturally 'blond' wood that requires no bleaching to achieve modern light tone finishes. Its fine and irregular rays and pores are just apparent enough to give Korina a distinction typically its own. It readily takes a wide range of beautiful finishes, from pale honey to rich browns. Carefully matched panels are available from our outlets in standard grain and in figured and highly figured grains which show exceptionally brilliant markings.

"Korina is a Belgian Congo hardwood paneling marketed exclusively by United States Plywood Corporation. It is produced quarter-sliced, with a striking uniformity of color and quality in wide widths and long lengths. Our Korina plant is actually in the forest—allowing very close control of quality and supply of logs and veneer cutting."

SEPTEMBER-OCTOBER, 1958

HAWTHERONE MOVES TO NEW, MODERN PLANT

The Hawthorne Company, Houston manufacturer of grain driers and storage facilities, recently moved into a 73,000-square-foot plant which was erected to company specifications, according to Pres. H. E. Hawthorne. Operational buildings include 70,000 square feet of shop area and 3,000 square feet of office facilities.

The shop area is under cover and contains a 57-foot-wide main bay which is serviced by overhead cranes extending an additional 220 feet beyond the building over the material storage area and railroad spur.

The office building houses all administrative purchasing, sales, accounting and engineering departments, with all offices stemming from a central reception center.

The Hawthorne Company has expanded to include two related phases of operation: (1) grain equipment construction, which encompasses the design, engineering, fabrication and erection of grain elevators, driers, bulk storage bins

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and other equipment for the grain industry and (2) fabricated steel products, which includes the custom fabrication of code pressure vessels, tanks, welded structures, process piping, stacks, breeching, and ducts. The facilities of the Hawthorne Company are now geared to more than triple the present output.

FIBERGLAS BATHTUB SAVES WEIGHT

A new Fiberglas reinforced plastic bathtub which reduces weight of a standard bathtub to about one-tenth of an ordinary fixture has been introduced by Sani-Glas, Inc., of Amsterdam, N.Y.

"The new Sani-Glas tub is available in all standard colors and, because it is made from the same, rugged Fiberglas material used in boat hulls, will withstand the roughest treatment without damage to its finish or basic structure. The tub is guaranteed not to warp, bend or break," the company said. "Still another advantage is its constant warm and "velvety" feel even when placed directly on slabs or other normally colder areas in the home."

FARNHAM'S INVITES ARCHITECTS TO VISIT DURING CONVENTION

Architects attending the Minnesota Society of Architects convention have been invited to visit Farnham's remodeled and expanded office furniture display rooms (shown here) and Farnham's specialized office planning and design department.

"In planning large offices or small, executive suites or employe work spaces with scientific work-flow arrangement, many architects are now using Farnham's office design department with its staff of skilled designers trained in office planning," officials of the company said, "Farnham's service starts with the original idea and carries through to the ideal office, completely furnished and decorated."

This department is under the direction of Clark Briggs, who pointed out that "by rendering complete service Farnham's office planning and design department becomes an integral part of the architect's organization, working closely to achieve ideal results in planning, color selection, decoration, carpeting, draperies, lighting and furnishings."

"Scientific design, plus selection from famous names in distinctive office furniture such as Standard, Gunlocke, Art Metal, Johnson, Risom and Knoll, assures ultimate satisfaction to the architect and his client."

Farnham's office planning department and office furniture display floors are located in the Farnham Building, corner of Third Avenue South and Fifth Street, with entrance at 305 South Fifth Street.

October 2 & 3 are dates to use—be at the MSA and Regional meetings!

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MASONRY
DEMONSTRATED
AT STATE FAIR

Gerard Jenniges of St. Paul, 1958 national bricklayer apprentice champion, demonstrated his skill in bricklaying at the Minnesota State Fair. In a joint masonry promotional effort, the State Conference of Bricklayers, Structural Clay Products Institute, AGC of Minnesota, Minnesota Masonry Products Association and the laborers' locals of Minneapolis and St. Paul co-operated to sponsor the exhibit in front of the House of Labor.

On seven days of the ten-day fair, which began August 23, Mr. Jenniges built up different types of masonry walls and various patterns of brickwork. These wall sections were left standing as a display to show several of the uses of brick, tile and concrete products during the time he was not there. Mr. Jenniges, working in front of the building, and the exhibit were used as an attraction to draw persons to the House of Labor.

BRI PUBLISHES BOOK ON ADHESIVES AND SEALANTS

The rapid rise of adhesives and sealants as a factor in building construction and the increasing variety of uses to which these materials are being put are spotlighted in the newest publication of the Building Research Institute, a 160-page illustrated book titled "Adhesives and Sealants in Building." Presenting the most complete picture possible of the present status of these materials in the building industry, and the

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trends for the future, the volume contains reports of 22 of the nation's experts on the subject, delivered at a recent BRI conference in Washington, D.C. Among the reports is one on new work with adhesive tapes for building panels by Paul H. Wilson of Minnesota Mining & Manufacturing Co.

"Adhesives and Sealants in Building," April, 1958, NAS Publication No. 577, can be ordered from the Publications Office, National Academy of Sciences, 2101 Constitution Ave., Washington 25, D.C., at $5.00 a copy.

Logan Showergon, Arvin type, series 7600, is a surface-mounted stainless steel shower component, factory tested, ready for installation with chain-like simplicity, according to Logan Manufacturing Co., Glendale, Cal. Available in multiples of one, two, three or four shower stations, overlay connections, access panels and right angle corner units provide adequate stock fixture combinations to meet most shower room requirements.

"This design represents all of the many architectural advantages of concealed piping while retaining the accessibility normally found only in exposed piping installations," the company said.

All interior portions are produced from stainless steel, brass or copper. All exposed brass fixtures, such as shower heads, valves and soap dispensers are triple plated chrome finish and assembled with vandal-proof stainless steel screws. Fourteen gauge stainless steel housing with a number four commercial finish provides surfaces easy to clean and resistant to corrosion.

Complete details can be obtained by writing for Bulletin No. 55. The company address is P.O. Box 111, Glendale, Cal.

WOOD CONVERSION INTRODUCES NU-WOOD CEILING TILE

A new acoustical ceiling tile with a fissured pattern has been introduced by Wood Conversion Company, St. Paul. The new product, called Nu-Wood Micro-Perf decorator acoustical tile, features a travertine marble pattern, dotted with hundreds of needle-point perforations. These micrometer-sized holes are invisible when the tile is applied to the ceiling, yet provide highly effective noise control, the company reported.

"Micro-Perf tile is available in either gray or beige colors, styled by
the famous Rahr Color Clinic of New York. It has a non-glare white base finish that gives more than 80% light reflection. When the fixed pattern is applied to this white surface, a distinctive two-dimensional effect is created," the report said.

LIGHTING PLAYS IMPORTANT ROLE, BMD & R SAYS

Architects and engineers are increasingly aware of the importance of lighting in the integrated appearance and function of their buildings, according to BMD & R, Inc., which has been engaged in the design and manufacture of lighting equipment for public buildings since the gaslight days.

"Hardly a day passes when we are not called into a conference by the architect and his consulting engineer to assist in the lighting design of some building, or some specialized lighting problem," the company's officials said.

"Probably the most frequent types of buildings for which BMD & R furnish equipment nowadays are schools, churches and hospitals. However, we have designed and made lighting units for many banks, courthouses, country club-houses, university and college buildings, night clubs, executive offices and others.

"Among the special-application fixtures we have designed and manufactured are airplane warning lights, many units for Navy warships, accelerated plant-growing lighting devices and electric signs of unusual design. We were the first producers of baffle-lighting (a combination acoustical and lighting system) and BMD & R baffle-rooms have been installed in many school classrooms, libraries, banks and industrial plants.

RESTAURANT CEILINGS COVERED BY NEW BOOKLET

Striking effects achieved in new and remodeled restaurants through use of sound conditioning tile are illustrated in "New Ceilings of Acousti-Celotex for Restaurants," an 8-page booklet published by The Celotex Corporation.

Illustrated are actual examples of how installations of sound conditioning tile have been used to improve such areas as employe cafeterias, private dining rooms, banquet halls, foyers, kitchens and equipment areas as well as restaurants.

Catalogued in pictorial form are the six designs of Acousti-Celotex sound conditioning tile which are available to meet individual decorative tastes. This booklet is available without charge from The Celotex Corporation, 120 S. La Salle St., Chicago 3, Ill.

FOUR DISTINCTIVE HAWS FOUNTAINS SMARTLY STYLED IN VITREOUS CHINA

"The Series 60"... refreshing new styling with the durable beauty of gleaming vitreous china, permanently in good taste. All are wall-hung models, based on the same appealing design. Choose the model that best fits your plans...or choose several to complement each other in varied locations. Sanitation? Only HAWS has the exclusive M fountain head...raised, shielded, antisyquirt angle stream. Automatic flow control, too. Get detailed specs from HAWS. Write today.

Model 62-GF: HAWS glass filler faucet installed on back of Model 62, for double-duty convenience.

Ask for your free copy of the new HAWS Catalog.

STRAN-STEEL ISSUES BULLETIN ON STEEL BUILDINGS IN COLOR

Complete details on the recent development of the first pre-engineered steel buildings in color, using a new vinyl-aluminum protective coating, are contained in a new brochure entitled "Stran-Steel Buildings in Factory-Applied Stran-Satin Color." Buildings will now...
be offered in color coatings of blue, green, bronze, rose, gray and white, as well as the standard metal finish, the announcement said.

"Stran-Satin Color is not a paint but a two-layer protective coating of vinyl-aluminum that is said to be more durable and lower in cost than paint," the company reported. "It is applied to the galvanized steel panels at the factory."

The company said that test samples had withstood rigorous continuous exposure tests with no deterioration of the finish coat, no loss of adhesion and no corrosion of base metal. It also said the new color coatings will not blister, peel or crack. The brochure is available free from Stran-Steel Corporation, Detroit 29, Michigan.

\[\text{ZIEGLER CENTER USES PRESTRESSED PANELS}\]

Huge wall panels were lifted into position in one operation at the new heavy equipment service center for Wm. H. Ziegler Co., Inc., Minneapolis Caterpillar dealer. The Ziegler plant in Bloomington, Minn., was reportedly the first contemporary building in this area to use this technique. The twenty-five foot high panels are eight feet wide, yet the prestressed, precast concrete wall is only five inches thick.

The concrete is prestressed by high tensile cable drawn to an initial stress of 175,000 psi. The seven-wire strand cable is much stronger than the usual steel rod used for prestressing concrete, according to the manufacturer, Prestressed Concrete, Inc., Roseville, Minn. The concrete itself has twice the compressive strength of that ordinarily found in poured reinforced slabs. Design specifications are met, yet less material is used for each panel.

Aggregate on the exterior wall surface is exposed. A retarding agent on the panels permits the wiping and washing operation which exposes the aggregate. Its natural color and texture lends to the "contemporary" appearance of the building.

\[\text{ADEL REPORTS ADDITIVE GIVE BETTER BRICK}\]

Adel Clay Products Company of Des Moines, Iowa, has announced an "Additive A" which the company claims has cut drying loss and produces a better brick.

"When 'Additive A' was introduced by our company," F. L. McCrea, manager, said, "drying loss was immediately reduced because clay lubricity was increased, reducing fault-causing stresses and strains and allowing for extruding of a..."
board—Model BB—is surface-mounted with sturdy concealed fastenings. Besides a conventional cork tack-board back, the unit is now available with slotted felt for plastic letters and a new vinyl fabric back that accepts unique three-dimensional changeable letters.

“The recessed display unit—Model DC—has sliding hardware outside of the opening so that the full depth of the recess can be used for articles on exhibit. The latter is ideal for museum or scientific exhibits, as well as trophies and product displays.

“All units have sturdy permanent locks in the sliding frame itself. For further information, write W. E. Neal Slate Company, 1121 Dartmouth Avenue S.E., Minneapolis 14.

FLEXICORE FEATURES AID MODERN CONSTRUCTION

Flexicore precast floor and roof slabs are manufactured and erected in the North Central States Region by Mid-States Concrete Products Company of Beloit, Wis., and the Molin Concrete Products Company of St. Paul.

“Flexicore has been available in this area since 1946 and has been extensively used on all types of buildings where the strength and permanence of concrete is desired,” its makers reported. “Because of its basic design as a reinforced concrete beam, Flexicore utilizes standard design methods and offers to designers a flexibility not found in other types of precast systems.

“About two years ago, the National Electric Code was revised to approve the use of the cells in Flexicore for electrical raceways. This has opened an entirely new field to architects and engineers who can now utilize the long span advantages of Flexicore and in addition provide complete availability for electrical distribution in floors or ceilings.

“Recently the Flexicore Manufacturers Association completed tests at Underwriters’ Laboratories proving the extended fireproof qualities of Flexicore. This means that fireproof construction can be achieved without expensive additional field work.

“A complete revision of the Flexicore Technical Data Handbook is now being distributed and for experienced help in any design problem, architects can consult their local Flexicore representatives.”

SEPTEMBER-OCTOBER, 1958
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**ZONOLITE IMPROVES FOIL-BACKED BLANKET**

Zonolite has announced important improvements in its foil-backed glass fiber blanket. "A unique three-way Z-tab of aluminum foil assures a superior vapor barrier," the announcement said. "Strong but thin, the Z-tab makes stapling easy and provides a smooth, unwrinkled surface for applying lath or wallboard. With the Z-tab the blanket can be installed several ways. Thickness width, installation diagrams and the Zonolite name are clearly printed on the Z-tab for quick identification.

"The colorful package is completely new. The blanket weighs only two ounces per square foot and comes in standard, medium and full thickness. It is packaged four rolls to a baler. A baler contains 200 to 400 sq. ft., depending on thickness. The fine, resilient fibers allow tight compression. Two balers contain sufficient material to insulate an area 23 by 32 feet, or the side-walls of an average house. Rolls are continuous so the material can be cut as needed to assure uninterrupted insulation from floor to ceiling for any ceiling height.

"The blanket meets FHA requirements for all design areas.

"The aluminum foil vapor barrier gives a neat and pleasing appearance to the insulated wall. The foil is on one side only, since the tensile strength and lightness of the fibers make further support unnecessary. One-side facing also allows the fibers to 'breathe' to the outside.

"The low thermal diffusivity makes this blanket unequalled for air-conditioned buildings. Tests show it cools off in one-fifth to one-tenth the time of other insulations. Further information is available from Western Mineral Products Co., 1720 Madison St. N.E., Minneapolis 13, Minn.

**DIETZGEN ANNOUNCES BETTER FILM**

Development of Ageproof Film, a tear-proof drafting medium of unequalled permanence with unique drafting qualities, has been announced by Eugene Dietzgen Co.

"According to exhaustive laboratory tests, this new material withstands usage that would destroy any other drafting media," Dietzgen said. "Repeated erasures, folding and handling have virtually no effect on the drafting surface of Dietzgen Ageproof Film. Prices are comparable to conventional tracing cloth.

"Made from a virtually inert DuPont Mylar base, Dietzgen Ageproof Film has tremendous strength and permanence. It is completely fungus-resistant, impervious to perspiration, water and soft drink spots. Its transparent, fiber-free structure insures extra sharp and legible reproduction with just the right amount of transparency for visual comfort on the drafting board and maximum contrast for reproduction."

Ageproof Film is also available with diazo and photo-type sensitized surfaces. For further information

NORTHWEST ARCHITECT
SPECTRA-GLAZE USE EXPANDS IN THIS AREA

Another comparatively new use for Spectra-Glaze has been introduced to the Northwest area with construction of a gas station for the Como Oil Company in Duluth, according to the Zenith Concrete Products Company of Duluth.

"One of the deciding factors in choosing Spectra-Glaze was the fact that their adopted company colors could be duplicated. The exterior of the station is maroon and tan while the interior is finished in a decorative green," Zenith said.

Spectra-Glaze is produced by the Zenith Company under an exclusive franchise from the Burns & Russell Company of Baltimore. It is composed of a face or faces glazed to a high pressure steam-cured lightweight masonry block to provide, in an erected wall, a permanently finished surface requiring neither paint nor other treatment during the life of the building.

The glazing material, which is a combination of thermo-setting resinous binder, glass silica sand and pigments, is cast (not sprayed) onto each block, then set by heat treatment, the face becoming an integral part of the unit which cannot be removed, the company pointed out.

"Tests made by recognized testing laboratories have been very favorable, showing very high compressive strength (failing stress—1998 pounds per square inch), unusual resistance to chemicals, low moisture absorption (0.0014% by weight) and unusually good resistance to abrasion."

CHEMICALS OF ARCHITECTURAL INTEREST HANDLED BY CONSTRUCTION CHEMICALS

Construction Chemicals, Inc., St. Paul, has the exclusive distributorship for the products of the Dewey and Almy Chemical Co., among which are several of direct interest to architects and engineers, the company has pointed out.

Darex AEA, a concrete air-entraining agent, is designed for addition at the mixer to produce modern air-entrained concrete with control. Practically all ready mix plants in this area are equipped to furnish Darex AEA concrete, the company said.

"Air-entrained concrete is essen-

tensile steels and to many government specifications. Listings include girth, wall thickness, weight per foot, cross section area, moment of inertia, section modulus and radius of gyration.

The brochure also shows tolerances on squareness, straightness, parallelism, wall thickness, OD, flatness, corner radius and length. Typical applications listed include beams, columns, duct supports and mullions.

Copies of the brochure are available free from Espro Tubing Division, Union Asbestos & Rubber Company, 2900 W. Vermont St., Blue Island, Ill.
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Enhance The Beauty
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FORWARD OR BACKWARD CURVE
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Motor mounting on side of structure support out of line of air stream reduces height of Lo-Boy models by 50% of older designs.

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Daraweld is a latex emulsion for bonding new concrete to old. It is designed for combination with cement, sand and water in the production of a bonding grout useful in patching eroded and spalled concrete, in leveling concrete floors and in rendering walls water resistant. Daraweld has the very desirable attribute that it will not re-emulsify. Under repeated rain or water attack it will not soften and lose its bonding power.

Daracone is a high quality water repellent for application to leaking brick, concrete block or stucco walls. Daracone is higher in silicone content than most competing products and gives correspondingly better results.

These are but a few of the products available at Construction Chemicals, Inc. In addition this company has thoroughly experienced personnel ready to offer suggestions and recommendations on concrete problems of any type.

AETNA DOOR DESIGNED FOR
HIGH FIRE RATING

Aetna Steel Products Corporation has announced its receipt of a Class A three-hour fire test label from Underwriters Laboratories, Inc., for a line of hollow metal doors featuring a one-point lock, replacing the usual and more costly three-point lock.

J. B. Meltzer, manager of hollow metal sales, estimated this newly approved unit will make possible a reduction of at least 35% in U-L fire rated Class A budget allowances. He also stressed its availability for faster delivery since these doors are prepared with conventional mortising, instead of the preparation necessary to accommodate the three-point lock. He also reported easier operation in fire emergencies since only one bolt is operated by turning the knob instead of three.

Sold under the trade name Fyr-Chek, the line includes pairs up to and including 7'-0" x 7'-6", also, single doors up to 3'-6" x 7'-6". Doors are of completely flush design, constructed of 18-gauge sheet, asbestos-filled, 13/4" thick. The lock is equipped with a three-quarter-inch throw.

LARGEST ELECTRONIC AIR CLEANER GOES TO CHASE

The world's largest electronic air cleaning system, capable of cleaning more than 2,000,000 cubic feet of air per minute, will be installed in the new 60-story Chase Manhattan Bank building now under construction. Trion, Inc., McKees Rocks, Pa., has been awarded a contract for 49 electronic air-cleaning units which will comprise the entire air-cleaning system.

By removing virtually 100% of the products available at Construction Chemicals, Inc. In addition this company has thoroughly experienced personnel ready to offer suggestions and recommendations on concrete problems of any type.

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and pictorial form—gyms, swimming pools, shops, laboratories, cafeterias, libraries, study halls, chapels, music rooms, auditoriums, washrooms and offices. Tips on other factors involved in the sound conditioning of buildings—design, layout and site planning—are detailed.

VANCO ANNOUNCES WEATHERTIGHT LOUVERS

E. Van Noorden Company of Boston has announced a new line of extruded aluminum, weathertight louvers and louver penthouses to meet modern ventilation and architectural design requirements in industrial, institutional and commercial applications.

Both the louvers and the louver penthouses are normally delivered with commercial mill finish but are also available with caustic etched, lacquered or anodized finishes. Each type can be supplied with bird or insect screens. Complete technical catalogs are available from E. Van Noorden Company, 65 Magazine St., Boston.

MOLDED STORAGE IN MODULAR SIZES

A "revolutionary concept in low-cost storage" has been introduced to the architectural, building construction and interior design fields by the Molded Structures Division of Robert A. Schless & Company, Inc., furniture designers and manufacturers.

The new system, Stratapanel, is a combination of modular drawers and slide-panels, molded of high-impact styrene plastic, which eliminates the traditional and costly inner frame and center-slide case construction of ordinary storage units.

"Key to Stratapanel's simplicity and versatility is in the development of the slide-panel, a thin strong sheet of plastic with all the slides for a 24-inch high case deformed into its surface," the company said. "In the stormproof type, baffles at the middle and top of the blades give added protection against extreme weather conditions. In the adjustable type, the blades can be operated by hand quadrant or by chains with spring release.

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turer, the storage unit is complete with the insertion of the drawers."

Drawers are available in a standard depth of 17 3/8 inches, in heights of 3 inches and 6 inches, and in five widths from 16 1/16 inches to 46 1/16 inches. The standard color is beige, with special colors available to order in volume. Drawers are supplied with or without fronts, of walnut or birch. Standard slide-panels are 17 3/8 inches deep and 24 inches high, and are interchangeable, left to right.

National sales representatives are Bloempot & Sheen, 1 Park Avenue, New York 16, N. Y.

NEW ANGLE IN CLASSROOM ACOUSTICAL DESIGN


The use of sound reflective ceilings, together with a limited application of acoustical treatment, a practice supported by leading acoustical experts, is covered. The recently published booklet also illustrates the importance of voice reinforcement and the control of reverberation time in good student-teaching hearing.

The booklet contains valuable information for architects, school officials and board members. Copies can be obtained by writing The Flexicore Co., Inc., 1932 E. Monument Ave., Dayton 2, Ohio.

FIBERGLAS REINFORCED SILICONE ROD INTRODUCED

The Pittsburgh Electrical Insulation Company has introduced the first Fiberglas reinforced silicone extruded rod. Developed primarily for use by manufacturers of electrical equipment as an insulating material, its unique combination of mechanical characteristics makes it ideally suitable for a wide variety of structural applications.

The rods are produced by an exclusive extrusion-type process which makes possible a selling price of approximately one-half that of competitive materials which are on the market, the maker reported.

Available in round, square and rectangular shapes; irregular shapes and sizes can easily be engineered to meet Class H (180°), high temperature, end use requirements. Other characteristics are outstanding arc, heat and flame resistance, and lower dissipation factor than polyester, phenolic and melamine grades, insulation resistance superior to polyester, phenolic and melamine grades, superior mechanical strength, close tolerances, outstanding chemical resistance and excellent dimensional stability.

Further information can be obtained from Pittsburgh Electrical Insulation Co., Inc., 3000 Bigelow Boulevard, Pittsburgh, Pa.

FOAM RUBBER TACKBOARD MATERIAL ANNOUNCED

Development of a completely new kind of tackboard material with an exclusive foam rubber cushioning for easy tack removal has been announced by the Armstrong Cork Company. Only one fourth as heavy as conventional tackboard, the new material, called Cushion-Eze, can be easily depressed with the finger to permit a firm grasp on the head of an inserted tack, the company reported. The cushioning also eliminates the need for excessive pressure when placing tacks in the board.

"Cushion-Eze Tackboard is available in three modern pastel colors, Coppertone Tan, Driftwood Grey and Mint Green," Armstrong said.

"The new colors, each achieving a highly uniformed appearance were selected specifically to harmonize with today's brighter institutional and commercial interiors."

"One of the unique features of the new material is its sound absorption quality. Tests run over a range of 250 to 2000 cycles per second re-
vealed that Cushion-Eze Tackboard possesses three times the sound absorbing efficiency of conventional tackboards. Thus when installed on large areas, the material is of considerable acoustical significance.

“...the new material’s unusual flexibility makes it easy to install and eliminating the possibility of its cracking or breaking even if folded double. Available in continuous rolls of 48- and 72-inch widths, Cushion-Eze Tackboard may be cemented to any solid wall or to a rigid backing, as preferred.

“...It is, of course, expensive to heat outdoor air in winter and cool it in summer,” he said. “In the Chicago area, for example, it costs an average of $30 a year to heat 1,000 cubic feet per minute of outdoor air and about $29 annually to cool the same amount. Therefore, if the minimum quantity of outdoor air can be reduced and still accomplish removal of odors and gases, a substantial saving will result in the first cost and operating expense of heating and cooling.”

Mr. Haines said that if an air conditioning system in Chicago requires a total of 100,000 cubic feet of air per minute and 20 per cent of the air conditioning capacity is required to air condition an office with 74 per cent of its wall space in glass than one of equal area having only 24.5 per cent glass.

Operating costs for the air conditioning also would be 26 per cent higher, he said.

Minneapolis-Honeywell has introduced a master clock and program system for use in commercial, industrial and public buildings. The clock system includes a master clock, which usually is mounted in the office of a school principal or building engineer, and any number of secondary clocks located throughout the building. Also included is a programmer that breaks an electrical circuit as specified intervals to sound a bell, stop or start heating and air conditioning equipment or turn lights on and off at certain times.

A unique feature of the programmer is that its sequence can be changed by hand without specialized tools or a call to a professional serviceman.

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FENTON HIGH SCHOOL TYPIFICATIONS LOW-COST QUALITY CONSTRUCTION

The new Sentral Community High School in Fenton, Iowa, represents one answer to rising school construction costs, according to its builders. Built at a cost of $9.48 per square foot, it went into use by its 200 students at the beginning of the current school year. It contains complete facilities for the four-year secondary school program, including gym-auditorium, office suite, library, kitchen and lunchroom.

The completed contract total of $326,559.82 includes construction of an extensive sewage disposal system, kitchen serving equipment, cabinet work in the home economics suite, terrazzo corridor and toilet floors, steel windows and acoustical tile ceilings in the eight classrooms. The cost of well installation was not included.

Because the total amount of money available for construction of the new building was seriously limited, the architects, Haarstick Lundgren and Associates, Inc., St. Paul, were faced with a particularly difficult problem in their efforts to provide all the required facilities within the budget allowed. As a consequence, they turned to the lower cost building materials available today, with an eye toward achieving economy of construction without sacrificing the advantages of low maintenance costs to be gained from the highly durable, more expensive, materials often used in institutional construction.

The building takes advantage of the economies to be found in such construction materials as laminated wood beams and purlins, wood decking and, in the case of the gym-auditorium exterior, cement-asbestos panels on insulated plywood sheathing.

The structural roof framing system in the academic wings consists...
of 106 Rilco laminated wood beams. Interior wall partitions are of lightweight concrete block, while the roof is of 2x6 tongue and grooved V-joint deckings, with 1-inch rigid insulation and 15-year bond built-up roofing. Exterior walls of the classroom wings are face brick.

The gym-auditorium is constructed of laminated tangent arches and purlins manufactured by Rilco Laminated Products, Inc., St. Paul. The arches span 76 feet, with a height of 26 feet at the crown. The reactions to the arches, which are 24 by 7 inches at the base, are taken by structural steel base shoes anchored to concrete piers. Lateral bracing is provided by a 2x6 stud wall between the bents, with roof construction similar to that over the classrooms.

WHEELER LOAD TEST REPORTED IN CONCRETE JOURNAL

Publication of results of a load test on Building D of the Smith, Kline & French Laboratories, Philadelphia, in the Journal of the American Concrete Institute recently presented an important structural design development by a Minneapolis consulting engineer to the scientific world.

The building was designed incorporating the device which had been developed by Walter H. Wheeler in accordance with the Philadelphia Building Code and submitted to Mr. Wheeler for checking by the owner. Mr. Wheeler advised the owner that the building was designed according to his formula to be saved if the building was redesigned according to his formula and he was instructed to redesign them with the approval of the architect.

The Philadelphia Building Department stipulated that the second floor must be tested in accordance with their directions to substantiate the Wheeler claims. A testing laboratory in Philadelphia was employed to conduct the test and record the results. The floor was designed to safely carry a uniform load of 300 pounds per sq. ft. It was loaded with 1,500,000 pounds of salt in 100 pound bags over an area of 2,500 sq. ft., equal to 600 pounds per sq. ft. The load was shifted three times to produce greatest possible stresses and deflections in the reinforced concrete floor.

The test was the most complete that is known to have been made on a building, Mr. Wheeler said, and it indicated that the Wheeler formula produce conservative designs. No stresses were recorded that exceeded the safe working stresses used in making the design, the greatest deflection was about 60% of the allowable deflection, the recovery of the slab after removal of the load was 20% greater than required and the Wheeler method of design was approved for use in the City of Philadelphia.

Mr. Wheeler is well known to readers of NORTHWEST ARCHITECT for his Smooth Ceilings System. He has some 50 years of engineering experience behind him and is still active in the field. His Mendota bridge was included in our presentation of the most outstanding structures in the state in connection with the Minnesota Centennial.

Designs by Mr. Wheeler are found in many parts of the United States and of the world. He has been a member of the American Concrete Institute since 1933 and was awarded the outstanding achievement gold medal of the University of Minnesota in 1952.

REDWOOD DESIGN SUGGESTIONS MADE

Because of its beautiful coloring, many home owners and commercial building owners have paneled some of their rooms in redwood and the results have been good when informed practices have been followed, John Reno, utilization director for The Pacific Lumber Company, said recently.

Aside from its attractiveness, possibly the main advantage of redwood for paneling is the fact that it shrinks and swells less than other woods, he reported. This feature enables it to stay in place without the annoyance of warping or open joints occurring.

"Probably the first rule that should be followed in buying paneling of any species is to insist that the moisture content of the wood be within a range of 5 to 10 per cent in most parts of the U.S.A," he said. "In redwood, only the grades of Clear Heart and 'A' are dried to the proper moisture content for paneling.

"If one wants California Redwood paneling with the pleasing blending of the reddish brownish heartwood with the contrast of cream-colored sapwood in many of the pieces, he will order 'A' grade. On the other hand, if one prefers the more conservative richness of the reddish brownish heartwood alone, he will order 'Clear Heart' grade.

"The next decision to make is whether to use flat grain, with its beautiful woody graining and its lavish figures on the face, or vertical
Craftsmanship in Railings

Shown above is a portion of the architectural metal work in the Edina Jr. High School—fabricated by the C. W. Olson Mfg. Co.

For that something extra in the way of quality, dependability, and service, specify C. W. Olson for architectural metal work and metal building products.

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FOUNDATION CAISSONS DRILLED AND UNDER-REAMED
grain, with its more quiet mellowness of the straight lines of growth rings running from end to end. If flat grain is chosen write on your order 'The pattern shall be run on the bark face.' This will help to make sure you get the smoothest possible face. Just tell your supplier you will have an expert check to make sure you get what you ordered.

In making your choice another consideration, other than appearance, to have in mind is that vertical grain shrinks and swells only about two-thirds as much as flat grain, resulting in just about as perfect a paneling job as anyone could hope for.

For best appearance narrow paneling should be used on walls in small rooms to make them look larger and more imposing. Wide paneling looks best on walls of large rooms, imparting an appearance of compactness and neatness.

"Many standard patterns to suit any taste are available in redwood, including striated, molded faces, narrow and wide V-joints, beaded, channels, board and batt, rounded, grooved and many others with combinations of these also being popular. A striking innovation which has received acclaim is the use of bevel siding as inside horizontal or vertical paneling and even as a ceiling. A 5/8" x 4" rabbed round nose bevel siding pattern has been especially applauded. By all means any bevel siding used should be vertical grain.

"Eight inch and narrower redwood paneling can be blind-nailed through the tongue or patented nailing clips can be used. When wider widths or special patterns require face-nailing, a finish nail can be used and countersunk slightly if desired. Holes can be plugged with special non-oily putty. When face-nailing, place the nails so they freely allow the small amount of movement that might occur in even this most stable of woods.

"Whether the panels run from floor to ceiling or are placed horizontally is just a matter of taste, what one personally prefers. Combinations of horizontal wainscoting with top half, or two-thirds run vertically, or vice versa, separated by a chair rail, are attractive. If put in a playroom the wainscoting should be a tough hardwood like oak or maple finished blond, with a top of natural or darker finished redwood.

"There are many beautiful stains suitable for finishing interior redwood paneling. A color chart is available from the California Redwood Association. For those who wish to retain the natural redwood color as much as possible, the use of a good liquid carnauba wax or of wallpaper lacquer is recommended. Clear sealers give almost the same effect but darken the wood just a little bit. Redwood, along with yellow poplar, takes and holds any taste are available in redwood, including striated, molded faces, narrow and wide V-joints, beaded, channels, board and batt, rounded, grooved and many others with combinations of these also being popular.

The last word must build that fire! Go to your MSA and Regional Meetings in St. Paul.

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"finest under the sun!"
all-weather protection • attractive appearance • minimum maintenance.

Designed by sun-control engineers for architects and builders—skillfully made of lifetime aluminum. For details, contact your McKinley Representative—see Sweet's Architectural File 19-Mc.

FREIDHEIM KEEPS CONCRETE METHODS UP-TO-THE-MINUTE

The Chas. M. Freidheim Co., has become a leader in the concrete products field in Minnesota with its introduction of remote control flexible block unloading as well as keeping pace with the demand for two-way radio, automatic aggregate loading, covered block storage for winter operation and storage capacity for 3,200 barrels of cement.

"Young in years, yet old in experience is the Freidheim Co.," officials said. "Formed in July, 1953, the company can trace its roots to the post-World War I era as a part of the Hedberg-Freidheim Co.

"With a payroll of approximately $350,000 and 70 employees, the company produces 3,000,000 concrete block units, 50,000 cubic yards of ready-mixed concrete and 225,000 tons of sand and gravel per year.

"The basic process in the Freidheim Co. productive effort is the initial crushing, washing and grading of the aggregate brought in from the pit northwest of Hopkins, the aggregate at the plant location having been depleted in 1954. After the initial processing, the aggregate is used in the production of blocks and ready-mixed concrete with an ample supply being stockpiled for winter production.

"Latest of the additions to the Freidheim Co. facilities are automatic batching and a second block machine for enlarged block production. These improvements are just going into operation."

SEPTEMBER-OCTOBER, 1958
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