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ST. JOSEPH'S CHURCH, ESCANABA, MICHIGAN
FOELLER, SCHOBER, BERNERS, SAFFORD & JAHN
ARCHITECTS
GREEN BAY, WISCONSIN
STATE ASSOCIATION DISTRICTS URGED TO CALL MEETINGS

There has been a general lack of activity on the part of the Districts of the State Association, a condition which has been broken by the Seventh District in the past few months. In view of the many important matters which should be discussed by the Architects throughout the State, the Board feels that ALL of the Districts should hold meetings in their respective localities within the next thirty days. Following these meetings, reports as to their officers and membership should be made to the Secretary of the State Association so that material may be furnished to the heads of the Districts for general discussion and action.

A few of the more important items, which should be discussed, includes the "Small House" and how the Architect may participate in this important postwar activity. The general cost of construction has advanced. This creates an entirely new problem in connection with the small house, and new prices should be investigated.

Another item of great importance to Wisconsin Architects is the participation in the postwar programs of which there are many to be watched—Federal, State, County and City. In addition to these are the private institutions, corporations, and your former clients.

A third item which is being discussed all over the country and should be of vital interest to the Architects, is that of the Architects' assistants—their draftsmen and apprentices. Due to the war, there is a shortage of capable help and it would be well for all of the Architects to become aware of this situation in their own Districts, thereby protecting themselves against taking work which they might not be able to complete on time because of this lack of organization.

Too much cannot be said on the subject of collaborative effort. It may be necessary for the Architects to consider the pooling of their interests in order to produce results.

Most of our pre-Pearl Harbor catalogues are outmoded owing to the many new materials, and methods, and standards which will be forthcoming in the postwar era. It might be wise for District members to discuss methods of bringing their files up to date and investigating the numerous changes which are bound to be the results of research and mass production during the war. The various Districts might invite officers and members of the State Association to attend their meetings for an exchange of ideas and to promote the united effort which is so necessary at this time.

There will be a convention in the Spring. In the meantime, the Bylaw Committee is working on the codifying and revision of the Bylaws. There is a chance that the Board may call a Special Bylaw Convention prior to the Annual Meeting, in order to create better tools with which to work.

Everything possible should be done to include in our membership all practising Architects in the state. There is no better way of accomplishing this than for the head of each District to invite all of the Architects in his territory to attend these local meetings, thereby increasing our membership and activities.

Again the Board urges each District to hold a meeting within the next thirty days and to advise the Secretary of what transpires.

The first call for dues has been very gratifying. You are urged to send in your check at once, if you have not already done so. We will be in need of all the funds we can accumulate to do the constructive work which the State Association has before it.

Leigh Hunt, Secretary-Treasurer

LEGAL COLUMN

We have been running a series of fine and constructive legal articles by Gerald J. Rice, Attorney for the State Association. Suggestions to the Editor as to subjects of general interest to Wisconsin Architects for use by Mr. Rice in preparing his future legal columns, will be welcomed.

Word has been received by John J. Flad, Madison Architect, and early member of the State Association, that his son, Private James H. Flad, army infantry, was killed in action near Aachen, Germany, on October 20.

SAVE YOUR WASTE PAPER
WHAT IS THIS ADEQUATE WIRING?

By Arthur J. O'Connor, Registered Electrical Engineer Wisconsin Electric Power Company

Every successful modern architect must know the answers to many questions never mentioned, much less answered, by his architectural Alma Mater. Such as: A. How to build a $75,000 building when his client has only $50,000 in cash, promises or what have you; B. How to outguess a client who has only a very remote idea of what his building will be used for, and who changes what ideas he has at frequent and irregular intervals; C. How to persuade WPB that a beauty parlor needs authorization to remodel when WPB has just rejected an application from a munition factory; D. This list can be extended to the bottom of the page and over, but one question that bedevils the architect constantly and results in many a headache is—How much money, material and labor is required to provide adequate wiring?

When Solomon built the temple in Jerusalem, he put in a foundation, floor, walls and a roof. Today our foundations are more elaborate, especially in the colder climates; we use steel or concrete skeleton construction with fireproof materials. But, essentially our building structure follows the general idea of Solomon’s temple. We provide the floors to walk on, the roof and walls to protect us from the weather, windows for natural daylight, doors for entry and exit—all pretty much as in the days of Solomon. But we have improved and progressed since his time in a number of our other building items. Heating, ventilating, plumbing and electric wiring are necessary component parts of our modern building, which the architect of even fifty years ago could almost completely ignore by assigning them entirely to the contractors. Today, these items are so necessary to a modern building that lack of them or even insufficient provision for them makes the difference between a successful financial venture and a failure.

The use of electricity is almost in its infancy today. Not many years ago the electrical work in a building was a subdivision and a small percent of the carpenter contract. Forty years ago many buildings and a large percent of the homes were built without any provisions for electricity. Very few Milwaukee structures built since the turn of the century have been torn down but contrast the meager original needs for electricity in these buildings with what is actually in use today. Possibly a comparison of electric current sold to three of Milwaukee’s prominent organizations through the past twenty-two years will help us to crystallize the picture, and the relative kilowatt demands are shown on chart I.

This chart shows us how the maximum demand for electricity has varied from year to year in three important Milwaukee buildings, a large department store, one of our largest office buildings, and one of our prominent retail stores. The chart is very interesting when compared with one of those business cycle curves. Back in 1922, at the beginning of the chart, the department store demand was only 117 KW maximum per year. Five years later, the need for electricity had jumped to a maximum per year of 453 KW or an increase to 385%. For the next 5 years the increase was not so rapid, totaling only 483 KW or 117% of the...
previous five year value. Then from 1932 to 1937, we again see a substantial increase even though business in general was taking a licking in the pre-war depression, reaching 660 KW or an increase in five years of 137% of the previous value. And finally, although we had an increase to 721 KW or 109% in three years, the wartime restrictions on signs and show window lighting has cut us down over the five year period to slightly less than what we had in 1937. If we can ignore the wartime dip at the end of the curve, we find a total increase over the eighteen year period in this store building from 117 KW to 721 KW or 615% of the 1922 demand, or if we want to consider it on a yearly average it means that each year on an average the demand for electricity increased 10.5% over the previous year.

The curve for the large office building does not start as early as that for the department store, but the similarity between the portions of the curves shown is very evident. The office building does not have signs and window lighting which are at present tabooed under war-time restrictions, and here we do not find the dip since 1941 that occurred on the department store curve. In the case of the large retail store, we may discount a small portion of the increase as this was caused by enlarging the premises, but just the same the increase due to this enlarging was imposed on the original service equipment and feeders, and must be considered as a contingency which cannot be completely ignored.

We must remember that this increasing use of electricity is not a fad or passing fancy. The business man may regard his electric bills as nuisances and aggravations, but in the back of his mind he knows that the dollar spent for electricity either prevents the loss of several dollars in his profits or enables him to earn several dollars more. The increasing demand is not brought about by any desire to benefit the Electric Company but by the good business plan of spending a dollar to make a profit of several dollars.

But, what can we do to provide a reasonable amount of electric wiring, and what is a reasonable amount? Obviously, it is impossible to forecast the uses of electricity for the life of a building, but we can provide for a period of possibly ten years in advance. If we re-examine the curve of current requirements of the department store, and a department store never plunges blindly into new and untried financial outlays, we see that the general trend but not the actual values of the electric current used increased from about 300 KW in 1922 to about 500 KW in 1932. Here we have something to get our teeth in. In other words, if we expect our building to have wiring adequate for the next ten years, we must wire it for at least 66 percent more than we consider necessary today, and we will be considerably safer if we wire for 100% more. Our electric service, feeders, cabinets and circuits must be at least 66 percent higher than for today's equipment. This additional wiring capacity can be installed at a relatively small increase in the cost over the wiring actually needed at present and represents an investment we may refer to the curve again, it is obvious that it was impossible in 1922 to forecast then what the various uses of electricity in the department store would be and the quantity of current we would consider necessary for let us say the year 1940.

The causes contributing to vastly increased use are sometimes forgotten. Many new electrical devices were invented and perfected during this period, the rates for electrical energy dropped, by reason of increased use, to only a fraction of their 1922 cost, new, different and spectacular merchandise sales methods and policies were adopted, and the entire commercial tempo was speeded up. All these things are very evident in retrospect, but it would take a seventh son of a seventh son to even guess at such changes before we reach them. And, do you think we are all through with changes? Consider the man who resigned from the U. S. Patent Office in 1854 who said everything had been patented that could be patented! No, we are going to change and improve as long as the human race exists.

But the sixty-four dollar question is easy compared with the question of how to wire a building with facilities for the life of the structure. Frankly, the man who would attempt this is crazy. Every day finds new uses for electricity in the commercial buildings, the factories and the homes. One very important reason for our tremendous industrial war effort is the overwhelming use of electric power which allows a 90 pound girl to turn out 1000 pound shells, bombs, tank parts, etc. No one seriously expects a workman or women to use their muscles in turning out a day's work today—not while electrical devices under finger-tip control can enable one worker to turn out the equal of many workers using main strength and awkwardness. This use of power is the fundamental basis of our American way of living, producing the necessities and even the luxuries of life at so low a relative cost that our workman's pay allows him to live as never before in history. It enables the American family to enjoy luxuries unknown in other countries, and explains why our stores, office buildings and factories are literally hemmed in by parked automobiles every day. Besides a chicken in every pot, we have two cars in every garage—this in direct sequence to our tremendous electrified industry.

With such a continuously increasing demand for electric current, which is a reflection of the actual volume of business, the building owners are confronted with the two-headed problem of providing electric facilities for the present only and rebuilding their electric services, feeders, circuits, etc. at regular and pain­fullly frequent intervals; or the alternate of providing wiring adequate for a reasonable period of time.
which pays handsome dividends. One argument against such provision is that new electrical devices will be perfected which will use electricity more economically. If you could check the numbers of high-bill complaints from customers who replaced incandescent lamps with the new and more economical fluorescent lamps and are now using 10%, 25% or even 50% more current than before, you get a different viewpoint on the results of introducing new electrical equipment. Yes, the same argument was brought up back in 1910, when the tungsten lamps started to replace the good old carbon filament lamps. Do you remember those days? And, do you realize how far we have come since then?

Another question to which we need an accurate answer is what percent of a building cost should be allotted to the electrical contract? We have had some pleasant experiences and some painful ones as the result of wiring buildings during the past 15 to 20 years. One prominent public building is limited to 5 foot-candles of light in its most important areas because the main feeders are now overloaded. An outstanding office building less than 15 years old doesn’t want any new doctor or dentist tenants because the building feeders are more than overloaded now. A doctor in another prominent office building can’t use his sterilizing and other electric equipment because a beauty parlor moved into space on the same floor and now uses the feeder capacity which was previously available for the doctor. A prominent office and bank building recently changed over to alternating current and installed tremendously large new feeders all through the building at a cost something over 1½% of the assessed building value in order to avoid a similar situation.

On the brighter side of the story, we have a number of new commercial buildings which are adequately wired. One prominent downtown building built less than 10 years ago was wired with a capacity of 19 watts per square foot of floor area. Since this time, many new electrical devices have been adopted, tenancy has changed, yet the electrified wiring except for circuit changes was quite adequate. The building was not skimped in other details, elevators were provided although it is not a high building, and it is completely air-conditioned. The original electrical work was approximately 9.1% of the total cost.

In another modern building which included the elevators, electrically operated mechanical equipment and air-conditioning installation, the electrical wiring and fixtures came to only 5.26% of the total. If the air-conditioning equipment had been omitted, the electrical work would have been a larger percent, probably around 8%.

In a smaller single occupancy building, a 40 foot by 75 foot three story office building, modern in every way except that no air-conditioning was installed and no elevator was provided, the electrical work amounted to approximately 11% of the total cost.

These three modern buildings constructed under pre-war conditions can give us a fair idea of the actual cost of present day electrical wiring. We can reasonably assume that in a fairly elaborate building, incorporating modern conveniences such as air-conditioning and where the cost per cubic foot is better than average, adequate electric wiring and lighting should be

(Continued on page 10)
RICHARD PHILIPP, WILLIAM DORTCH APPOINTED JOINT TECHNICAL COMMITTEE CHAIRMEN

Richard Philipp has been appointed Chairman, representing the Wisconsin Chapter, A.I.A., and William T. Dortch, Chairman, representing the Producers' Council of Wisconsin, to serve on the local Joint Technical Information Committee of the two groups.

On Mr. Philipp's committee are Frank F. Drolshagen and John Brust. On Mr. Dortch's committee are Norbert J. Klein and R. D. Diedrich.

The joint committee was formed in response to like resolutions adopted by The American Institute of Architects and The Producers' Council, Inc. in Washington, D. C.

The Resolution adopted by the Executive Committee of The Institute, follows:

"RESOLVED, That in accordance with the recommendation of Special Technical Committees of The Institute and The Producers' Council, and the Joint Technical Committee of The Institute and The Council, The Executive Committee recommends that there be established by each chapter of The Institute, located in a city where a chapter of The Producers' Council is organized, a Technical Information Committee consisting of three members, one of whom shall be chairman of the committee;"

"That it shall be the function of such chapter Technical Information Committee to cooperate jointly with a similar committee representing the local chapter of The Council in matters of mutual interest, with particular reference to building materials, equipment, and the methods of their use; and"

"That the chairman of each cooperating Institute and Council chapter committee shall be co-chairman of a Joint Cooperating Committee."

In explanation of the Resolution, Alexander C. Robinson, III, Secretary of The Institute, writes:

"The above action provides for a closer degree of cooperation between the members of local Council and Institute Chapters in harmony with the objectives of the affiliation between The Institute and The Council which it is believed will prove of material technical and practical value to the architect as we approach the problems of postwar construction and are called upon to appraise, for peacetime use, new materials and methods of construction developed to meet war construction needs.

"As the majority of the twenty-two Council Chapters have already proceeded to appoint committees to cooperate with Institute Chapter Committees in their respective cities, it is the hope of The Executive Committee of The Institute that prompt steps will be taken to complete the appointment of Chapter Technical Information Committees to cooperate jointly with the similar committees representing local chapters of The Council."

Theodore Irving Coe, Technical Secretary of the Department of Technical Services of The Institute, writes:

"I believe there is an opportunity for these Joint Committees to perform a service of mutual advantage to architects and the producers of building materials and at the same time increase the cooperation between groups within the construction industry which is so essential to the development of unity within the industry which cannot fail to be of benefit to every individual concerned.

"The Council, through its constructive activities, has gained materially in strength and prestige during the war emergency and its program of postwar activities represents a thoughtful and helpful approach to the problems which the industry will face as we reconvert from war to peace and undertake to resume construction for peacetime needs on a basis which will permit the industry to make its fullest contribution to the economic well-being of our national economy."

DETROIT CHAPTER, A.I.A.

At its Fifty-Seventh Annual Meeting on October 24, the Detroit Chapter of The American Institute of Architects elected Clair W. Ditchy, F.A.I.A., as its president for the coming year, succeeding William Edward Kapp. The other newly elected officers are Wells I. Bennett, Dean of the College of Architecture and Design, University of Michigan, Vice President; Owen A. Luckenbach, Secretary; Julian R. Cowin, Treasurer; Talmage C. Hughes, Executive Secretary, and Malcolm R. Stilton, Director. Mr. Kapp, as immediate Past-President, remains on the Board and was elected Director to represent the Chapter on the Board of the Michigan Society of Architects.

ARCHITECTS INVITED TO HEAR N. Y. LIGHTING ENGINEER

Harry Logan, Engineering Consultant of the Holophane Company, New York City, will give a talk on "Light and Safety" Wednesday, December 5 at 8:30 p.m. in the Auditorium of the Electric Company, 231 W. Michigan Street. He will be introduced by I. L. Illing, Illuminating Engineer of the Electric Company.

Mr. Logan, who is a Fellow of the American Institute of Electrical Engineers, is co-inventor of all Holophane lens control systems. He has done the lighting engineering for major broadcasting companies throughout the country, chief among them being the National Broadcasting Company at Rockefeller Center, New York.

The talk is being given under the auspices of the Electrical Maintenance Engineers of Milwaukee. Members of the Wisconsin Chapter, A.I.A., the State Association of Wisconsin Architects and the Illuminating Engineering Society are invited.

Following the lecture, a buffet supper will be served.

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WOMAN WITH CLIPPING PLAYS IMPORTANT ROLE, ARCHITECT SAYS

When the Iowa Chapter of The American Institute of Architects held its Forty-Second Annual Meeting in Des Moines, October 24 and 25, it re-elected all of its officers.

They are, President: Leonard Wolf, Ames, Iowa; Vice-President: W. L. Perkins, Chariton; Secretary-Treasurer: O. G. Woody, Ames; Directors: J. Woolson Brooks and Burdette Higgins, Des Moines.

Arthur W. Archer, Regional Director, St. Louis, one of the guest speakers, stressed the point that architects have not tried to sell their services in the right manner and that they should impress upon the public the fact that nobody can afford to build without the services of an architect.

Another speaker, Roger Allen, A.I.A., Grand Rapids, Mich., told his audience that the woman who brings to the architect's office a clipping describing the home she wants, will not disappear with the postwar "onslaught of prefabrication", and that exasperating though she might be, she has served a good purpose. He said that her insistence on what she wants and does not want, is largely responsible for the American family's being better housed than the citizens of any other country.

The fall meeting of the Governing and Advisory Boards of the Associated General Contractors of America, the trade association of general contractors, will be held in the Drake Hotel, Chicago, Ill., on Tuesday and Wednesday, November 28 and 29, it was announced by H. E. Foreman, managing director of the association, according to S. H. Eigel, Manager of the General Contractors Association of Milwaukee.

Preliminary plans for the program call for a general coverage of probable developments affecting the construction industry in the reconversion and postwar periods. Particular emphasis will be placed on the necessity for getting construction programs underway during the transition from war to normal peacetime conditions.

"The construction industry with its far-reaching influence on the nation's economy and general welfare, can make a contribution to peacetime reconversion comparable to its contribution to the war program", Mr. Foreman said. "The general contracting industry is equipped and ready to resume large scale peacetime construction, but such construction requires advance planning.

"As a rule, more time is consumed in the planning of projects and acquisition of sites than in the construction work. Hence, there is a definite need for development to the contract letting stage of both private and public construction projects than can be started just as soon as materials and labor become available."

Paul Coddington, head of the Lakeside Bridge & Steel Company, Milwaukee, was recently elected president of the American Institute of Steel Construction at the annual meeting in Atlantic City.

Time Approaches for planning and building to "get under way"

Certified Adequate Wiring is planned, engineered wiring. As a part of post-war construction, it assures adequate wiring for years to come.

This planning means that after many years, when unforeseen electrical expansion and numerous new electrical devices require additional wiring capacity, it can be easily added without disturbing permanent walls or ceilings.

We invite architects to keep in touch with our wiring engineers.

The Electric Co.
HISTORIC CHAIRMAN ACTS AS ENVOY OF ARCHITECTS

Making People Architecture Conscious!

"That," you say, as an architect, is what we're all trying to do."

Of course, you are. It's a part of your business. It's your job. But is it your hobby?

It definitely is the hobby of Anthony Wuchterl, Chairman of the Wisconsin Chapter's Historic Committee.

Actually, though, it shouldn't be called a hobby. That's not what it is. It's much too far reaching to be so designated. When a man gives almost every minute of his spare time towards the building-up of an appreciation of architecture in the minds of the public, you can't toss off such a stupendous undertaking as a "hobby."

Just about everybody knows of Mr. Wuchterl and his lectures on historic landmarks of Wisconsin, together with his kodachrome slides. As a matter of fact, let someone mention early Wisconsin architecture and concurrently you say, "Tony Wuchterl."

His has been no superficial study, taking up the subject or dropping it, as the spirit moved him. For over ten years he has done intensive research. In 1939 he was appointed State Representative of the Historic American Building Survey, succeeding the late Alexander C. Guth, whom he had been assisting, and simultaneously was made Chairman of the Historic Committee of the Wisconsin Chapter, A.I.A.

Although the national survey was carried on only at intervals of three months a year, there was no stopping Mr. Wuchterl. With his camera, he continued touring the state, snapping all of the early landmarks. He found them everywhere. On the busiest thoroughfares, on forgotten, wooded paths.

Came 1941, and he had accumulated a very excellent and sizable collection of kodachromes. The national survey was temporarily discontinued, but he had no intention of shelving the project, even temporarily.

Shortly there came a call from the Study Group of the Oconomowoc Congregational Church requesting the Wisconsin Chapter to furnish a speaker for the evening of April 5th. The Chapter Board went into a huddle from which it immediately emerged. They had their man! Tony Wuchterl, of course!

And that was the beginning of "A Romantic Adventure into Early Wisconsin, Via Architecture." Since that time his collection of slides has grown immeasurably. To date he has made fifty-five appearances, giving his illustrated "Romantic Adventure" lecture in Milwaukee and throughout the state, before women's clubs, fraternal organizations, church groups, schools, etc.

He has shown his slides at the Chicago Art Institute, and to the boys at Truax Field and Camp McCoy. Always his lectures are announced as being given under the auspices of the Wisconsin Chapter, The American Institute of Architects.

He has made fifteen appearances with "The Story of Architecture" which includes drawing, narration, and music.

There's much more to this business of lecturing than meets the eye. There's the groundwork, which, by no means, is merely touring the state, glimpsing an old landmark, and snapping it. Not only that, landmarks don't grow on trees. Perhaps, he's been told of an historic building He goes in search of it. Again, in his travels, he might, by chance, run across one.

For his records, he has maps of every county in Wisconsin and showing every road and trail. On maps he has located the historic building or bridges, each having its identification card for the accompanying slide. As a result, no question or doubt as to the accuracy of locations, ever arises.

He shows a slide of an old ivy-covered church, melted by time. Again, a weather-beaten covered bridge that has stood against the years of driving rain and snow. A quaint "half-way" house where travelers stopped along the way in their journey by coach to some distant destination. You know that all of these were familiar sights to your forbears but that the primitive log and stone structures should have remained standing throughout a century, there for you to see, you might never have known. And so, because of Mr. Wuchterl, you do know that there are such historic landmarks in Wisconsin and where, within the radius of quarter of a mile, you may find them.

You're wondering what has all this to do with making the public architecture conscious. It is this, Mr. Wuchterl starts, literally, from the ground. For example, his slides show the old trading post, built by the Hull Brothers at Chippewa in 1835. He shows and tells how the logs were felled, explaining how the early cabins were built. He tells why this is a fine old door, or why that is still excellent architecture. He shows the horrible examples of the jig saw period.

Right now he is concentrating on the Octagonal House of which he already has a sizable collection. One of the most interesting is found at West Salem.
near LaCrosse. This octagonal mode, Mr. Wuchterl says, will at some future date, be recognized as a distinct phase of our early American architecture, just as definitely as the jigsaw.

It’s this octagonal house collection which is responsible for Wisconsin’s historic landmarks to be heralded in the East. Dr. Kenneth Conant, professor of medieval history at Harvard University, is most interested in this particular type of early American architecture, and has a splendid collection. Having seen Mr. Wuchterl’s slides, he has asked that they be sent on to be exhibited at Harvard the first of the year.

Add up all this and you’ve come to the conclusion that what with earning his daily bread, he hasn’t one single spare moment left over. But not Tony Wuchterl! During the month of November, he turned teacher. He has now just completed a series of four Wednesday evening classes at the Milwaukee Vocational School on the "Design and Planning of Small Homes," as a part of the Home Planning Course.

Step by step he analyzed the planning of a small house from all angles. At the blackboard he drew plans of the first and second floors of the minimum type of house. He explained everything from the designing of bookcases to the linen closet. But it was when he reached the kitchen cabinets that the newly-weds in the class turned the discussion to the proper space allotment for the juice squeezer.

He’s now looking forward to March of next year when, as a part of the regular Educational series, he will conduct an illustrated study course on “Early Wisconsin Architecture,” in five consecutive parts, at the Public Museum.

So there you have Tony Wuchterl, running the gamut of this business of making people architecture conscious.

And for outside recognition which Mr. Wuchterl has received for his untiring work and enthusiasm, Thomas Vint, head of the Historic American Building Survey said, “You are the only one’s on record who have been going about to spread the story of Historic Architecture.” - E. S. H.

Milwaukee’s new Building Code Committee, headed by William F. Eichfeld, representing the Association of Commerce, is now revising the out-moded city code, using the State Code as a basis.

On Mr. Eichfeld’s committee, which was appointed by Mayor John L. Bohn, are: Frederick A. Luber, Jr., Wisconsin Chapter, The American Institute of Architects; Edgar Rex Fransway, Building & Construction Trades Council; Howard F. Ilgner, superintendent of the city’s electrical service bureau; Sidney P. Dwyer, Milwaukee Real Estate board; City Engineer Joseph F. Schwada, Ald. Martin E. Schreiber and Ald. Stanley J. Cybulecki, representing the common council; Asst. Fire Chief Harry F. Johnston, S. M. Siesel, General Contractors’ association; Lawrence E. Peterson, Engineering Society of Wisconsin; Building Inspector Leon M. Gurda, and Gustave Janzer, a member of Gurda’s staff.

Mr. Janser has been appointed recording-secretary, and Frank Trenkamp, executive secretary. William Gaethke, former deputy inspector of buildings, who retired last month, is also working with the committee.
something like 6% of the total. In buildings less elabor­
te in structure and where the cost per cubic foot is
more nearly the average value, this figure should be
approximately 9%. In buildings where the structure is
more economical in cost and the electrical requirements
are a larger portion of the total, the figure should be
approximately 12%.

We believe these figures, based on our sample cases,
are conservative and reasonably accurate. They are
higher than figures used in the past, but they represent
the present ratio between relatively static items such as
the structural shell, stairways, exits, toilet facilities,
most of which are standardized by legal authority, as
compared with a more dynamic item represented by
our need for electric facilities which is constantly on
the increase. But keeping this dynamic feature in
mind, while these percentages are applicable to pres­
tent day conditions, they are not permanent figures but
are subject to revision as new uses of electricity are
developed. The development of radiant electric heat­
ing, the use of electronic equipment and similar new
uses of electricity may require that our percentages be
revised some time in the near future.

We have another type of problem with the building
which begins to look a bit frowzy and must be toned
up. In order to hold old tenants or attract new ones,
partitions must be changed, new show windows in­
stalled, maybe an elevator or an escalator added. And,
of course, while the old lighting has that delightful mid­
Victorian appearance, nevertheless it must be brought
up to date so as not to contrast too much with the newer
stores in the neighborhood. In a situation like this one
our basic building structure is already installed and
need not be touched. When we start to count the cost
of remodeling such a building, we find that the electrical
revisions are a respectable portion of the entire re­
modeling. In some cases, where major structural
changes are made, the electrical percentage may be
not much higher than our 6 or 9 percent as used in a
new building. But when the old wiring has been over­
loaded for years and the owner or tenant has been
adding a little here and more there, the old wiring is
cooked and scorched, and the rewiring installation
amounts to a complete new job. In a case like this,
we must even allow something for removing the old
and inadequate installation. Then, in the case where
the building changes are not over-elaborate, the electric
percent may run as high as 50% of the total.

Some examples of fairly recent remodeling includes
a prominent ladies' ready-to-wear store which brought
the interior up to date at a cost for electrical wiring
and lighting of 10.7% of the total job. Two similar stores
went through the same growing pains stage where the
electrical percentages were 14.8% and 11.6% of the total
remodeling. A large shoe store was able to accom­
plish the same results where the electrical percent was
only 9.5% of the total. One of the prominent business
machine firms modernized, and the electrical work was
9.2% of the total. A large public utility auditorium was
completely remodeled, and while the job included con­
siderable structural and air-conditioning changes, here
the electrical work was quite elaborate and amounted
to 23% of the total.

A prominent men's furnishing store was modernized
by adding new show windows and a new front, the
lighting was brought up to date and air-conditioning
was revised. Here the electrical percent was an even
40% of the total cost.

Possibly we have arrived at some conclusions in the
cases of new buildings and those which must be
modernized. But, what about the more remote future?
Certainly, we do not expect our newly built commer­
cial or industrial buildings to be torn down in 15 or 20
years. Very few of our downtown buildings are less
than 20 years old, many of them are nearer 40 years
old. If we cannot successfully wire our new buildings
for a future of more than ten years, we must make
arrangements so that our rewiring at the end of that
time can be done with a minimum of cost to the owner
and with the least disturbance to the tenants. Still harp­
backing to our 1922-1940 curve, if we extend the gen­
eral trend line to cover a 40 year period we see a rela­
tive increase in electrical use of approximately 365%.
Translated into future construction, this means that the
space for our service equipment and feeders must be
at least large enough to accommodate equipment 3.65
times as large as initially installed. In the case of the
large office building recently rewired, there was ade­
quate space in the basement for the new service circuit
breaker, the new switchboard and the many large con­
duits which snaked along the basement ceiling. There
also was plenty of room in the elevator shafts for the
vertical runs to the penthouses for the new elevators
and the new air-conditioning equipment. And provi­sions
had been made for new and larger feeders to
connect up to the lighting cabinets throughout the
building. Likewise in the relatively new public build­
ing, adequate spaces are available for carrying the
electric current to the many lighting cabinets, although
here the bottleneck seems to be the conduits in the
concrete structure from the cabinets to the ceiling and
wall outlets.

Sometimes the architect's client doubts the wisdom of
providing space for future electrical expansion. His
experience is limited to other details of his business or
he will not look squarely at the facts. Besides, he is
building the $75,000 building with only $50,000 and the
way business is going he will be in his grave in less
than ten years. This means that the architect must get
his results indirectly by planning the service room so
that it can be expanded in the future, such as by re­
moving a wall or two to include relatively unimpor­tant
space such as dead storage closets which will then
be incorporated in the enlarged service room. If he
cannot plan adequate vertical feeder spaces, he can
build small closets on each floor, one directly above
the other, through which future feeders can run with
a minimum disturbance to the building structure. He
can use conduits from the lighting cabinets on the

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various floors to the outlet boxes at least one size larger than needed at present. In some cases he can utilize cellular floor construction which will allow plenty of wiring space for new wiring to either the floor above or the ceiling below. And the architect who specializes in commercial and office buildings can quickly think of many more methods of providing the space needed for the future larger feeders and other facilities.

We believe the problem of providing adequate electrical wiring resolves itself into four relatively simple points.

1. **THE IMPORTANCE OF THE ELECTRICAL INSTALLATION.**
   The electrical facilities are of prime importance in a building. Equally important are the expanding uses for electricity. This point is usually ignored or misunderstood by the owner and not properly stressed by the architect or engineer in dealing with his client.

2. **PROPORTION OF TOTAL COST.**
   The proper proportion of the total cost to be allotted to the electrical installation is very important, ranging between 6% to 12% on new buildings, and on remodeling jobs from 10% up to even as high as 50%.

3. **SPACE FOR GROWING NEEDS.**
   The building should be arranged so that the rejuvenation of the electric facilities can be accomplished at a minimum of cost and annoyance to the owner and tenant. The spaces for electrical equipment should be capable of being easily expanded. Service and meter rooms should not be wedged between an elevator shaft on one side and a stairway or boiler room on the other side.

4. **IMPORTANCE OF TECHNICAL DETAILS.**
   The electrical work is as important as any other branch and requires equally qualified engineering. An electrical plan adopted only because of its economy and possibly because of an insufficient allotment of the total cost of the building is as economical as the suit of clothes which is a little too light or the second-hand car which pumps oil into the cylinders and goes only 8 miles to the gallon. Both can be tolerated for only a short time, then to be replaced by an adequate article. And the electrical layout should be undertaken by the architect with broad knowledge of his field and much and detailed experience in the electrical line, or better yet by the electrical engineer, a thoroughly practical man, who has specialized in electrical layouts, working with the architect and planning the electrical installation which will serve the building adequately for a reasonable period of time and which can be easily remodeled or revised as the need arises.

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**NEW SPACE PLANNING FOR TOMORROW'S BATHROOM**

Kohler designers and engineers have worked out many details of tomorrow's plumbing fixtures and fittings. Naturally these will not be announced until conditions permit their manufacture and delivery.

Meanwhile, Kohler appreciates that changes will take place in bathroom and kitchen planning, whether for new homes or modernization.

The bathroom shown is one solution to the problem of providing greater utility. The lavatory is flanked by deep counters with drawer and storage space. Overhead are cabinets for towels and wash cloths. The mirror is large and reflects the light on the opposite wall. From the floor plan notice that the closet has a compartment separated from the tub by a glass-block partition. There is a built-in corner dressing table with natural light from the window.

The fixtures are the Cosmopolitan bench bath with mixer-type shower; Gramercy vitreous china lavatory with shelf, compact mixer fitting, metal legs; Integra one-piece closet.

Kohler is always anxious to cooperate with architects in considering ideas for post-war homes. Write: Kohler Co., Kohler, Wis.
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