LEAD INDUSTRIES ASSOCIATION
60 EAST 42ND STREET
NEW YORK 17, N. Y.

November 8, 1957

SUBJECT: RECOMMENDED PROGRAM FOR 1958

To the Industry Development Committee:

In this brochure the industry development needs of the lead industry, our current activities, and recommendations for 1958 are reviewed briefly. The latter include continuance of present programs, in some cases on an expanded basis, together with a new general program designed to tie in with and help get the most out of the planned expanded research program for the industry.

Only that research which is connected with continuing specific programs of the Association has been considered. No cognizance has been taken at this time of the study being conducted for L.I.A. at Battelle Memorial Institute on the evaluation of research needs and development of a research program for the lead industries. Battelle's final report is not expected until about December 1, 1957, and will then be considered by the Technical Steering Committee. The recommendations of that Committee, based on the Battelle report, will therefore probably not reach the Industry Development Committee before January, 1958.

In the meantime it is felt desirable to have action on the recommendations contained herein as soon as possible.

Very truly yours,

Secretary.

LEAD INDUSTRIES ASSOCIATION

INDUSTRY DEVELOPMENT FUND

RECOMMENDED BUDGET FOR 1958

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LEAD INDUSTRY DEVELOPMENT - GENERAL CONSIDERATIONS

The need to expand markets for lead is axiomatic. An increase of some 100,000 tons of lead consumption per year, or about 10 percent of domestic consumption, appears necessary to establish a reasonable balance between supply and demand, assuming that existing markets are, at the same time, protected.

No single tool can be expected to accomplish this objective. It is a major operation requiring a coordinated application of all market development tools available to the industry. These include:

1. Technical research
2. Market Research
3. Intensified promotion which may take many forms.

The lead producers have taken a most progressive step in this direction by providing the framework for a greatly expanded technical research program and by financing the study of research needs nearing completion at Battelle Memorial Institute. It would appear, however, that the most effective advantage of technical research can be taken if an intensified and parallel promotion program is closely coordinated with it.

Naturally it is expected that at least some of the results of technical research will eventually reach the stage of requiring specific promotional programs, just as we have for many years conducted promotional programs, tied in closely with a certain amount of research, in specific areas. (Our ceramic and red lead programs are examples.)

However, the industry has a great opportunity to strengthen and expedite its research with a broad horizontal promotional approach. In other words, industrial leaders must be sold on the thought that new ideas are being developed from lead every day, that it is not an old metal in the sense that all its possibilities have been exhausted, that they should try the use of lead in the solution of their problems before and not after they have tried everything else.

A properly designed promotional program can accomplish this and encourage research ideas in two ways:

1. It can encourage industry to do research on lead on its own by widely disseminating technical information on lead.

2. It can encourage industry to bring lead research problems to us to aid in their solution.

Such a program is needed in addition to the specific promotional programs we are conducting or may initiate in the future. No research director, however brilliant and well qualified, can be expected to pull a new tetraethyl lead out of his hat very often, but a program such as that suggested would feed us with ideas for research in areas with the greatest possibility of success. This is the approach, the producing industry working closely with potential users, that has proved so successful in the case of aluminum and many other raw materials.

RECOMMENDATIONS

We therefore recommend that for 1958 the Association:

1. Continue its current promotional programs as outlined in detail later herein.

2. Initiate a broad promotional program designed to excite the curiosity of industry in lead as a metal with great modern potentialities and encourage research by others or ideas which may be incorporated into our own research, which is also detailed herein.

GENERAL PROMOTION

Let us consider recommendation two first. We believe that a general promotional program as outlined herein can help to expand the application of lead into new markets as well as existing ones by:

1. Increasing its recognition among research, design and other technical people as well as business management as a material with a combination of useful properties.

2. Creating a preference for lead among these people by dramatizing its new exciting possibilities (rechargeable dry-cell battery, pearlescent movie screens, atomic applications, for example).

3. Educating the new generation of technical people as well as re-educating the "old guard" technologist to think of lead first as a vital metal for new as well as old applications.

4. Changing the "brand image" of lead as an "old-fashioned metal" to one that is in fact, a "new idea metal."

5. Suggesting new areas of research that lead's properties can open up.

To accomplish this we believe that a complete, well-rounded use of the tools at our disposal is essential. Although preferable, the use of all of these need not necessarily be started simultaneously in order to reduce the cost burden, but we believe that all should be included eventually. For that reason we recommend here not only the steps to be taken but a time-table for taking them, with full recognition of the fact that all should be undertaken simultaneously if possible.

The steps recommended, in the approximate order of undertaking them, follows:

MOTION PICTURE

A thirty-minute motion picture built around a theme such as "Look Ahead with Lead." It would emphasize new developments in lead and the properties which have made them possible, tying in these properties with established and perhaps more important uses, too. It would emphasize the "new" side of lead and its possibilities. It would be designed for showing before technical, professional, business, educational and civic groups.

BOOKLET

A booklet built around the same theme as the motion picture, but setting forth in considerably more detail the properties of lead, lead alloys and lead compounds. This could be offered at showings of the picture.

EXHIBITS

Exhibits, again designed around the same theme as the picture and the booklet, at the Design Engineering Show and the National Metal Congress.

"LEAD"

The distribution of our magazine "Lead" should be increased to include many more names among design engineers and others influencing the selection of materials.

ADVERTISING

An advertising campaign to reach business and technical executives. It should follow the same theme as the picture, booklet and exhibits, and should dramatize the "newness" of lead and its new and properties. The advertising could also be used to help in distribution of the movie and booklet, and encourage people to come to us for help in their research or technical problems. It should appear in such publications as "Materials in Design Engineering," "Product Engineering," "Scientific American," "Chemical Week," and "Business Week." A suggested sample ad is attached.

PUBLICITY

A broad publicity program along the same lines should be developed.

TECHNICAL SERVICE

The foregoing activities should tend to open up a variety of contacts of a technical nature which should be serviced by men competent to sit down with potential users and help them work out their problems relating to lead, lay out research programs in the laboratories or plants of potential users, or bring research ideas to our own research directors. At least two technical service men - one a metallurgist and the other a chemist - should be added to the staff for this purpose.

TIMETABLE

Unless this entire program can be undertaken at one time, it is suggested that the advertising, publicity and technical service might be deferred for from six months to one year in order, particularly, to complete the moving picture and booklet first, as these would be non-recurring expenses.

BUDGET

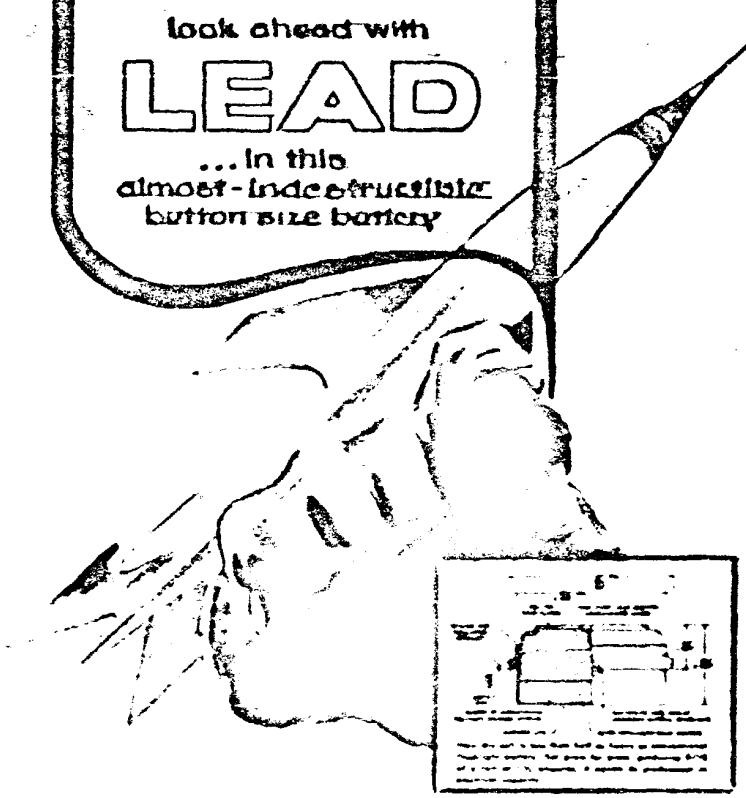
The following budget is estimated to cover the complete program of general and technical promotion outlined on the foregoing pages:

Immediate Expense	
Motion Picture Production	$45,000
Booklet	10,000
"Lead"	12,000
	$67,000
The following activities might be deferred, if necessary, for 6 months to 1 year.	
Exhibits	$10,000
Advertising Space & Production	90,000
Publicity	8,000
Technical Service Salaries & Expenses	30,000
	$138,000
Other recurring expenses	
"Lead"	12,000
Film Distribution	7,500
	$19,500
Total immediate expenses	$67,000
Total continuing expenses	157,500

look ahead with

LEAD

... in this almost-indestructible button size battery



Ever see a "dry cell" battery this small?

Not much bigger than your thumb—yet it packs enough kick to power many of the miniature electronic marvels of our jet and missile age—such as hearing aids, walkie-talkies, air navigation systems and portable radios.

And all because of lead!

It has a completely reversible electrochemical system—does not gas on charging—and has high shock and vibration resistance. *Fact is, it's button-size and almost indestructible!*

It is only one of the many new products that owe their existence today to new applications of the properties of lead. This particular application depends primarily on lead's corrosion-resistance and electrochemical properties—the same properties that make today's storage batteries possible for automobiles, submarines, and stand-by power for ships, lights and telephones. Lead also has many other unique characteristics that fill a wide variety of needs. It alloys readily with other metals, and "mates" with materials such as plastics and glass.

Whether your interests lie in developing new products and processes or in improving old ones, you will find lead's unique qualities invaluable.

Write for further information. We stand ready to assist you with your technical problems.

Send for 32 page illustrated booklet on uses and properties of lead.
Also pamphlet on over 30 alloying metals "Look ahead with LEAD."

Lead Industries Association
60 East 42nd Street New York 17, N. Y.

SPECIFIC PROGRAMS

In addition to the foregoing broad general promotion program to encourage new thinking toward lead and new research in lead, specific programs, which are already in operation by the Association, are recommended in the fields of ceramics, paints, metallic lead products and radiation shielding. These are detailed on the following pages.

RECOMMENDED PIGMENTS AND CHEMICALS PROGRAM FOR 1958

This program has been continuing since the early 1940's. At the beginning of 1957 it was decided to try to take advantage of the new Federally-supported highway construction program, which it is expected will nearly triple the use of structural steel for the purpose over the next 10 to 15 years. A rough estimate of the amount of red lead required for highway structures, based on Bureau of Public Roads structural steel requirement estimates and the amount of red lead used on typical steel bridges is in the neighborhood of 75,000 to 100,000 tons of red lead or 5,000 to 10,000 tons per year over the period if present usage only is maintained. Consequently a modest advertising program directed primarily at highway engineers was begun in 1957, but also embracing other kinds of steel structures.

In considering a program for 1958 the Red Lead Technical Committee felt that merely to hold our proportionate share of the market would mean a substantial increase in business, as already indicated, and that manufacturers of other pigments would cultivate this market aggressively because of its size. It recognized that there is only a minor possibility of increasing our share of this business because red lead is specified so preponderantly now. A growing trend back to the use of white lead base finish coats has been recognized and an attempt to encourage this trend, largely at the expense of aluminum, is included in our activities.

In the marine painting field such good progress has been made towards swinging the Navy and private shipbuilders back to red lead, the Committee felt that this field may require more intensive work. Several very large contracts have recently been let for construction of merchant ships in American yards in the next few years, notably one for more than 50 ships by Lykes Bros. Steamship Co. In this field it appears worthwhile to hold our present market and strive for a larger proportion. Our research has developed a new red lead ship bottom formulation with cost advantages that may be pushed.

Tests have also developed red lead paints for galvanized surfaces which might open up a new market for red lead and warrant some promotional attention. Because lead producers are interested in any paint pigments containing lead, the Committee is broadening its scope to include other lead pigments in its test programs.

The Committee feels that our red lead promotional activities have met with sufficient success in the past to warrant continued and intensified activity and that the size of the market, now some 12,000 to 15,000 tons of lead annually with definite possibilities for increased tonnage, also warrant it.

Therefore, the Committee recommends the following program for 1958:

ADVERTISING

Continuing present advertising in "Engineering News-Record" but increasing the schedule from 6 to 13 insertions and utilizing red lead's distinctive color in the ads.

MARKET SURVEYS

Two market surveys to be made by our advertising agency to determine:

1. whether the marine market should be more intensively developed and the best advertising and promotional approach.

2. the effectiveness of the present campaign in the highway and general construction field and whether other approaches might better be employed.

TECHNICAL LETTERS

Publication of three new Red Lead Technical Letters. Two would be based on recent research projects and would cover our newly developed formulation for paints for ship bottoms and for galvanized surfaces. The third would summarize and bring up-to-date all the best materials in past technical letters, many of which are now out of print.

PERSONNEL

Continued retention of our consultant, Dr. L. L. Carrick.

Retention of a field man well versed technically in paints to contact highway engineers, shipyards, construction companies, Government agencies, and others having to do with specifying and buying metal protective paints; also to deliver papers at Paint Production Clubs and at meetings of paint users.

PUBLICITY

Expand current publicity both through our own publication "Lead" and in other publications reaching paint markets.

RESEARCH

Several new research projects are contemplated, including tests on new red lead formulations compared with proprietary ship bottom paints, and a number of tests now on exposure should be continued. This research is conducted, however, at little cost to the Association, aside from nominal amounts for supplies such as test panels. They are planned and evaluated by the Red Lead Technical Committee, itself, and conducted at the test facilities of member companies. Most of the cost is, therefore, absorbed by the manufacturers of red lead and involves time of their employees and space on test fences.

BUDGET

Following is an estimated budget required for the recommended 1958 program together with estimated total expenditures for 1957:

	Estimated 1957	Recommended 1958
Consulting Fees, Salaries & Taxes	$6,625	$15,000
Travel Expense	1,500	7,000
"Lead"	2,400	3,200
Advertising Space	4,800	15,000
Advertising Production	700	1,800
Direct Mail (Technical Letters, etc.)	3,000	5,400
Market Surveys (Marine & Construction)	-	1,600
Publicity	1,000	2,000
Research & Research Materials	1,300	1,500
Miscellaneous	850	1,000
	$22,175	$53,500

Estimated balance, December 31, 1957 $4,500

RECOMMENDED CERAMICS PROGRAM FOR 1958

This program is entering its third full year. In the first year, on recommendation of the Technical Steering Committee, our Ceramics Technical Committee was organized and recommended retaining a top-ranking consultant and preparation of a comprehensive manual on lead in ceramics. It felt that no further steps should be recommended until available data had been gathered. With the retention of Dr. John H. Koenig, director of the School of Ceramics at Rutgers, as consultant and publication of the technical data book, "Lead in the Ceramic Industries," the first year's program was completed.

At that time the Committee recommended expansion of the program to include advertising, research and educational activities which experience of the first year suggested were needed. Thus during the present year we have been running a monthly advertising schedule in "Ceramic Industry" and the "American Ceramic Society Bulletin." Nine permanent educational exhibits are under construction to be placed in leading ceramic schools. Three graduate research fellowships have been established, one each at Rutgers, Illinois and Ohio State Universities, on lead in ceramic bodies, low temperature leaded porcelain enamels, and lead glazes for clay sewer pipe and sanitary ware respectively. One supplement to the manual has been prepared.

The Committee is highly gratified with results to date and feels as strongly as ever that there is a possibility of doubling, tripling or even quadrupling the 25,000 tons of lead now used annually in ceramics. It recognizes that the time has been too short to show results in increased tonnage yet, but it has noticed a complete change of attitude towards lead by the ceramic industries. Lead and what it can do in ceramics has become a major topic of conversation among ceramists and of papers at ceramic meetings. Observation has convinced us that lead has desirable properties needed by ceramists today but that there are also obstacles, like toxicity, that must be overcome. The Committee feels that even more intensive selling and research now, while the iron is hot, are in order.

Therefore, for 1958, the Ceramics Technical Committee recommends the following:

ADVERTISING

Continuing 12 pages each in "Ceramic Industry" and the "ACS Bulletin," and addition of 12 pages in "Ceramic Age" and 6 pages in "Ceramic News."

DIRECT MAIL

Publication of six additional supplements to "Lead in the Ceramic Industries," material for two of which is already in our hands and about ready for use.

DISPLAYS

Completion of 11 additional displays so that all 20 accredited ceramic schools will have them.

PUBLICITY

Expand current publicity both in our own publication, "Lead" and in other publications reaching ceramic markets.

RESEARCH

Continue the three graduate research fellowships already established at Rutgers, Illinois and Ohio State but increase each from $2,500 per year to $3,000 because of the difficulty of getting good fellows today at the lower figure.

Awarding a second $3,000 fellowship to Rutgers on the same subject, lead in ceramic bodies, to expedite this work which has already created great interest and on which several papers have already been presented.

Awarding a new fellowship of $3,000 to Pennsylvania State University for further investigation of phase diagrams involving lead compounds, which constitutes basic research badly needed and for which Pennsylvania State believes it has a graduate student who is well qualified.

Awarding a new $3,000 fellowship to the School of Ceramics at Clemson College for work on lead glazes for brick. This School is known for its work on brick and glazed brick is becoming more popular. Some of the glazes now contain lead, some do not. More technical information on the advantages of lead glazes and the best lead glazes to use is needed.

Awarding a new $3,000 fellowship to Alfred University, noted for its work on glass. The subject of this fellowship is being developed through conferences with the School and with Corning Glass Works to determine the most fruitful field of research on lead in glass.

Awarding a new $3,000 fellowship to the School of Ceramics at the University of California, the subject still to be determined.

(The Committee favors awarding fellowships to a number of qualified schools rather than concentrating them in a few in order to interest as many instructors and students as possible in lead.)

In addition to the fellowships, awarding a research contract to Battelle Memorial Institute to investigate further work already done there on the chemistry of adherence of porcelain enamels to the base metal on the theory that the action of the metallic oxides involved affects adherence and that lead oxide can probably be shown to be particularly effective. Because of difficulties encountered with opacifiers in high lead enamels this phase should also be investigated. The cost of such an investigation is subject to negotiation with Battelle.

PERSONNEL

Continuing to retain our present consultant, Dr. John H. Koenig.

Appropriating a fund sufficient to enable Lead Industries Association to engage for full-time work a qualified ceramist at such time as the Committee believes appropriate and a good man can be found. This might not be until some of the graduate fellows working under our grants are through with their studies, but the Committee feels that the funds should be available for quick action when the right time arrives. His duties would constitute calling on ceramists and ceramic schools, addressing local and national meetings of ceramists, working on technical problems with users and potential users of lead-containing ceramics, and in general doing technical service and promotion for lead in ceramics.

TECHNICAL STEERING COMMITTEE

The foregoing research and personnel recommendations were submitted to the L.I.A. Technical Steering Committee for approval. Approval was given with the following changes:

Instead of making each grant for $3,000 it was felt best to make them average $3,000 as it might be found that more money would be required in some instances than in others.

The proposal for work at Battelle was rejected, but instead a second fellowship at the University of Illinois was substituted. Thus nine fellowships averaging $3,000 were approved.

The proposal to add a ceramist to the staff was rejected at this time by the Technical Steering Committee but that Committee felt that the Industry Development Committee should be apprised of the fact that such a step is contemplated at the proper time and that the latter Committee may be asked to provide funds for this purpose at an unpredictable time in the future.

The Technical Steering Committee particularly commended the Ceramics Technical Committee for its constructive approach to its problems and the generally sound nature of its recommendations.

BUDGET

Following is an estimated budget to cover the recommended program of the Ceramics Technical Committee in 1958 as approved in its technical aspects by the Technical Steering Committee together with an estimate of total actual expenditures for 1957:

	Estimated Expenditures 1957	Recommended Expenditures 1958
Salaries, Consulting Fees and Taxes	$5,820	$7,000
Travel	1,500	2,000
"Lead in the Ceramic Industries"	1,610	-
Supplements to above	2,000	6,000
Research	7,500	27,000
Advertising Space	5,470	10,200
Advertising Production	2,200	1,800
College Exhibits	3,000	3,300
Publicity	1,000	2,000
"Lead"	1,000	1,200
Miscellaneous & Contingencies	760	2,500
	$31,860	$63,000

Estimated deficit, December 31, 1957 $2,300

RECOMMENDED METALLIC LEAD PRODUCTS PROGRAM FOR 1958

During 1957 the activities of this Division have been directed primarily towards the use of lead in building construction, chemical construction and solder. In building construction we have gradually been placing greater emphasis on the architect and engineer, while at the same time maintaining contact with the plumbing industry. We have also started to promote hard lead for building sheet metal work more directly. In addition to field work with both the building construction and chemical processing industries our 1957 activities are tabulated below:

Solder Handbook - Our Solder Committee completed its work on the Solder Handbook and turned it over to the main Brazing and Soldering Committee of the American Welding Society. It is expected that that Society will publish this valuable Handbook at no cost to us, except the purchase of any copies we may desire, in 1958.

Exhibits - We have exhibited at the Home Builders Show in connection with the annual meeting of the National Association of Home Builders and at the annual meeting of the National Association of Plumbing Contractors. We will exhibit at the National Chemical Exposition in December.

Building Construction Bulletin - The third in this series of specification bulletins for architects and builders is in the printer's hands and will be distributed before the year end. It deals with lead laboratory drainage systems.

Sweet's Catalogs - Two 4-page inserts, one on hard sheet lead roofing and flashing and one on lead plumbing, have been prepared to appear in the 1958 Sweet's Architectural and Sweet's Light Construction Catalogs. Preprints have been sent to members.

Flashing - A leaflet on lead flashing for the small home was prepared for distribution at the Home Builders Show.

Apprentice Training - Training of plumbers' apprentices in lead work is making exceptionally good progress. Our text book sold nearly $1,000 worth of copies this year to date so that we have now recovered almost our entire original cost of printing. We supplied lead for the international apprenticeship contest sponsored by the plumbers' union, as well as a judge for the contest and an instructor for the instructors.

Monograph on Corrosion - We are rewriting and expanding the chapter on the corrosion resistance of lead for the revised edition of of the American Chemical Society Monograph on the Corrosion of Metals.

Chemical Construction Bulletins - Two Chemical Construction Bulletins will have been circulated this year to our list of 1,500 chemical engineering schools, chemical companies, construction companies. Each consisted of a reprint of an article we prepared, one appearing in "Industrial and Engineering Chemistry" and one in "Petroleum Refiner."

Publicity - Several publicity articles on both building and chemical construction have been prepared and it is hoped will be placed in suitable trade publications before the end of the year.

Papers - Our Offer to present a paper before the annual meeting of the National Association of Corrosion Engineers on the use of lead in chemical construction has been accepted for presentation next March.

Lecture - We delivered the annual lecture on lead as an engineering material before some 200 graduate students at the Newark College of Engineering.

RECOMMENDATIONS FOR 1958

It is recommended by the Advisory Committee of this Division that 1958 activities follow along the same line as in 1957 and that a separate appropriation of $10,000 plus or minus 10 percent be approved for a market study of lead in building construction to be made by the firm of Skidmore, Owings and Merrill, architects-engineers, as explained on the following page. Estimated expenditures for 1957 and a budget to support the 1958 activities follows:

	Estimated 1957	Recommended 1958
Consulting fees, salaries and taxes	$12,050	$13,000
Travel expense	8,500	8,500
Conventions & exhibits	10,000	7,000
"Lead"	2,500	3,500
Construction bulletins	2,100	2,400
Sweet's Catalogs	6,000	6,000
Publicity	1,000	2,000
Reprints	1,000	1,000
Apprentice contest	590	600
Miscellaneous and contingencies	2,950	3,000
Total	$46,690	$47,000

Note: The unexpended balance in this fund as of December 31, 1957 is estimated at about $12,000.

RECOMMENDATION FOR A SPECIAL STUDY

OF THE BUILDING CONSTRUCTION FIELD

For many years L.I.A. has promoted lead plumbing by working with plumbers and city officials largely on plumbing codes. As time has gone on we have come to realize more and more that the trend is towards codes that permit a variety of materials, leaving the selection of the material actually used to the architect and engineer as well as the plumber. Therefore, in the last few years we have attempted to include the architect and engineer in our efforts.

At the same time over the years we have made limited efforts, largely through our publication "Lead," to have hard lead specified for sheet metal work in buildings in this country. This has met with modest success in its specification on such buildings as the New Jersey Penitentiary at Rahway, the Federal Court House in New York City, Saratoga Spa and a recently completed dormitory at Duke University. This modest success leads us to believe that more can be done.

We feel that now is the time to take an unbiased, critical and expert look at our activities in the building construction field, since building construction is one of America's biggest industries. We have been budgeting annually between $30,000 and $50,000 to promote and protect our market in this field. Has this been spent wisely? Should it be spent differently? Should more or less money be spent? What is our potential market in construction?

We therefore sought advice from a general partner of one of the country's largest architectural-engineering firms, Skidmore, Owings and Merrill, with whom we fortunately had a personal contact through a member of the L.I.A. Executive Committee. It developed that this firm has made many surveys both for government and private industry and its services were offered to us to determine market potentialities for lead in the building construction field and advice on the best approaches to realize these potentialities.

At our request Skidmore, Owings and Merrill have now submitted a formal proposal for a study of lead in building construction, a copy of which is attached. Briefly, the study would be conducted in two phases, with a report to be submitted at the end of the first phase, at which time a decision could be made as to the second phase. The first phase would cover a survey within their own organization and among contractors with whom they are working. The second phase would be broader and cover other architectural and engineering firms and contractors. The cost of the first phase is estimated at $20,000 and of the second phase at $25,000.

It is recommended by the Advisory Committee of the Metallic Lead Products Division that we engage the services of Skidmore, Owings and Merrill for the first phase of a study of the possibilities of lead in building construction to be used as a guide in planning our promotional and research efforts in this field in the future, and that the whole matter be reviewed after receiving the report of this phase. This would, of course, be a non-recurring expense which may be expected to save us money, or at least help us to spend it more effectively, in the future.

The cost of this study (first phase) would be $20,000 plus or minus ten percent.

SKIDMORE, OWINGS & MERRILL

Architects

1 MONTGOMERY STREET, SAN FRANCISCO 4, CALIFORNIA

September 16, 1957

Mr. Robert Lindley Ziegfeld
Secretary-Treasurer
Lead Industries Association
60 East 42nd Street
New York 17, New York

Dear Bob:

In accordance with our conversation in San Francisco we are enclosing herewith a proposal for our firm to make a survey on the development of the usage of lead in construction.

The scope of the work outlined in our proposal is based on the outline which you prepared when you were here. We have subdivided the work into phases as we discussed at that time. The first phase will consist of research within the four offices within our own organization; in New York, Chicago, San Francisco and Portland. This will immediately give us contact with 900 technical men working in all phases on all types of buildings in all parts of the country currently on the boards or under construction, of contemporary design and modern techniques. I think the present volume represents about $4,500,000,000 in construction costs. We will of course also have the experience of our organization with respect to use of lead and competitive metals in construction since the firm was founded in 1935.

At the end of this phase we will prepare a preliminary report containing our tentative findings and at the same time be able to direct our efforts in the second phase towards the most promising fields for investigation revealed during our research in the first phase. In other words, we will be able to direct rather than to scatter our shots and our contacts in the second phase in which we make direct and mail contacts with the rest of the profession and construction industry. This method of procedure should also minimize unnecessary travel.

At the end of this phase of the survey we will complete a final report containing our recommendations for developing and promoting the use of lead in the construction industry based on our investigations undertaken in the previous phase.

The terms of the proposed contract are on our usual 2-1/2 times the time card rate based on the salaries of technical personnel employed directly on the project plus travel and direct expenses.

This is the only practical fee arrangement for a survey of this type, where the exact scope of the work and therefore the amount of technical labor required cannot be properly determined ahead of time. We have completed several surveys on this basis with Bunker Hill and Sullivan Mining Company, The Bradley Mining

Mr. R. L. Ziegfeld September 16, 1957

Company, Homestake Mining Company and the Bunker Hill Company, as well as many other industrial clients.

You will notice that it is our custom to render monthly statements. In this way the client always has a current picture of the costs incurred by us and by him as the work develops.

We have prepared a budget estimate based on our work of similar nature. This estimate is $45,000 which can be used for budgeting purposes.

I have given considerable thought as to the best way to set up the direction and procedures for carrying out the work within our own organization. You will require a general partner in charge of the project in order to enlist the efforts of the other offices in the investigations. It seems to me that the primary consideration should be that the partner in charge of the project be one that not only has the personal contacts involved but also the greatest experience with the industry to be served. With his personal responsibility involved I am sure you will get the best results. The project manager will have to work directly under the general partner in charge and therefore should be an associate in the same office as the general partner. The project manager will do the day-to-day direction and maintain contact with the investigations being undertaken by the various offices. Since most of our contacts with the lead industry have been in the east and because of my personal contacts with you and Jack Bradley, I think I should be partner in charge of the work, with one of our San Francisco associates as project manager.

Since the survey is to cover the country and our organization is nationwide we think the travel and communications costs will be the same regardless of from which office the work is directed. We feel that the necessary inter-office travel will bring us to New York as frequently as required for necessary conferences with the client, supplemented by his normal travel as an officer of the national association.

We will gladly discuss this as well as any questions which you might have on the proposed agreement.

Very truly yours,

SKINNER, OWINGS & MERRILL

/s/ By John B. Rodgers

John B. Rodgers

JBR:ap
CC: J. D. Bradley

SKIDMORE, OWINGS & MERRILL

Architects

111 MONTGOMERY STREET, SAN FRANCISCO 4, CALIFORNIA

October 15, 1957

Lead Industries Association
60 East 42nd Street
New York 17, New York

Gentlemen:

Following our discussion with your Mr. Robert L. Ziegfold we are pleased to submit the following proposal for our professional services to conduct a survey on the development of the usage of Lead in construction:

OBJECTIVE

We understand that the objective of this study is to explore the feasibility of promoting the further use of lead in the field of construction, other than its uses for painting and art glass work, with special emphasis upon its use in sheet metal work. Other uses include, but are not limited to:

flat roof gravel flashing	expansion joints
pitched roof gravel flashing	bay window and porch roofs
vent pipe flashing	durative spandrels
chimney flashing	gutters
through-wall flashing	downspouts
complete roofing	roof boxes
gravel stops and edge strips	janitorial slop sinks
plumbing	

This study will include a survey on a national basis of representative architectural firms and other construction channels to determine the present use of lead in the construction industry as well as an investigation of the future possible methods for its use during the next ten to twenty years.

SCOPE OF SERVICE

1. Preliminary Research

During this phase we will conduct a preliminary study within the design, engineering, specification, construction and supervision departments of our firm on a nation-wide basis through our offices in New York, Chicago, San Francisco and Portland, as well with the contractors and subcontractors who have constructed the buildings we have designed, to determine the possible uses of lead in contemporary architecture, including plumbing, flashing and waterproofing, its advantages and disadvantages as compared to other materials, and suggestions as to new forms of lead for use in modern design. Building

types studied will be industrial, commercial, residential, institutional, and governmental, including military.

Upon completion of this phase of the survey a report will be submitted to your firm setting forth our preliminary findings together with our recommendations for further pursuing this study.

II. Questionnaire, Survey and Final Report

Utilizing a questionnaire to be developed by us and approved by you, our firm will conduct a survey from our New York, Chicago, San Francisco and Portland offices by personal interview among representative architects in these cities to investigate the past, present and possible future uses of lead products in architecture of both contemporary and traditional design. Representative architects in other strategically located cities will be contacted by mail and upon tabulation of information from these questionnaires, further personal interviews can be arranged if warranted.

We will investigate the reasons lead is not specified by architects and what advantages lead is considered to have over other materials for sheet metal purposes and other building uses.

Industrial, commercial, institutional, governmental (including military), and both custom and speculative residential building types will be studied.

We will prepare a final report containing our conclusions and recommendations on the feasibility of further promoting the use of lead in the building industry, as well as the type of literature, advertising, or services which would be most effective among architects in carrying out this program.

TIME

It is estimated that, except for the time necessary for your approval of the questionnaire, this project can be completed within six months.

COMPENSATION

Our compensation for the services described above shall be as follows:

a. Fee in an amount equal to the cost of technical labor of those engaged in the work, plus an overhead allowance equal to one and one-half times this technical labor cost.

Technical labor cost shall be the aggregate of wages and salaries paid by us at our usual rates of compensation, before additions or deductions on account of payroll taxes, to all technical personnel and partners engaged in the performance of the work.

Overhead allowance covers all general overhead and profit, all secretarial, clerical and accounting salaries except labor of typing technical reports and specifications. Such typing shall be considered technical labor costs.

b. Actual costs to us without further overhead allowance of consultants' services contracted for in connection with the work.

Lead Industries Association October 15, 1957

e. Actual cost to us without overhead allowance of the following direct expenses:

1. Travel and subsistence costs resulting from travel undertaken in connection with the work.

2. Costs of telegrams and long distance telephone calls.

3. Costs of blueprints, photographs and other graphic or printed reproductions.

METHOD OF PAYMENT

Payments for our services shall be made on monthly statements submitted to you by us detailing our charges on the above basis.

If this proposal meets with your concurrence, please indicate your acceptance by executing the attached copy in the space provided below and return this copy to us, and it will become a letter contract between us.

Very truly yours,

SKILLMAN, OWENS & MERRILL

/s/ John B. Rodgers
By
John B. Rodgers

JBR:ep

ACCEPTED

LEAD INDUSTRIES ASSOCIATION

By_____

Date _____

RADIATION SHIELDING

In 1957 we obtained secret "Q" clearance for a member of the staff. As a part-time activity since then he has visited atomic installations and gathered as much information as possible on the uses of lead in the atomic field and how it is installed. This information has been used for publicity purposes and to help in handling inquiries received by us for assistance in the use of lead in the nuclear field.

Since several member companies are currently very active in promoting lead in this field, we do not recommend any change in our program at this time, but feel that it should be continued. The appropriation for 1957 was $5,000 and we recommend that it be the same for 1958.

RECAPITULATION

INDUSTRY DEVELOPMENT FUND

	Estimated Expenditures 1957	Recommended Expenditures 1958
General Promotion	$ -	$67,000
Pigments and Chemicals	22,000	54,000
Ceramics:		
Promotion	24,500	36,000
Research	7,500	27,000
Metallic Lead Products	47,000	47,000
Building Construction Survey	-	20,000
Radiation Shielding	5,000	5,000
Battelle Research Study	20,000	-
	$126,000	$256,000

Note: Balance at December 31, 1957 estimated at $17,500