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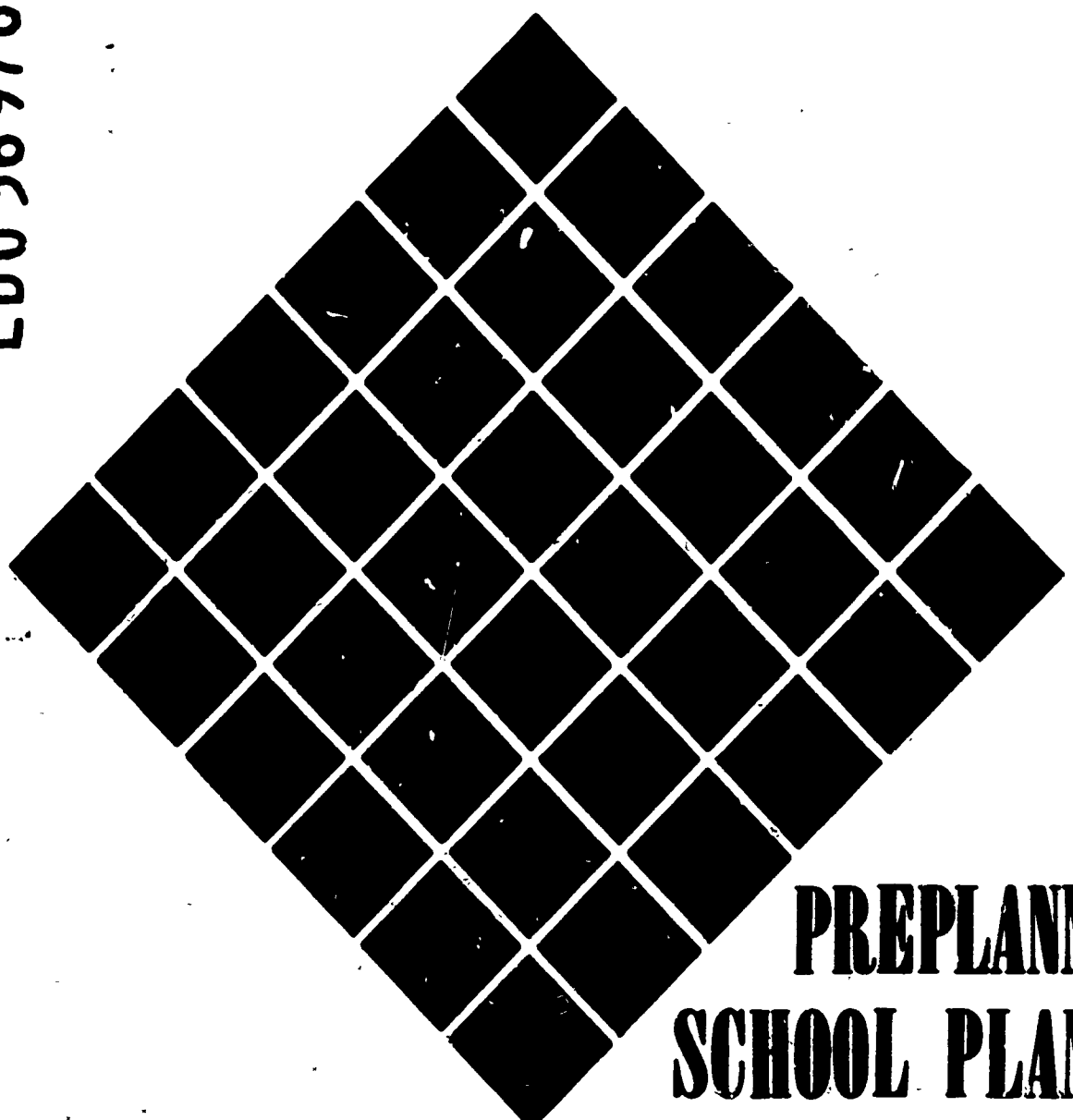
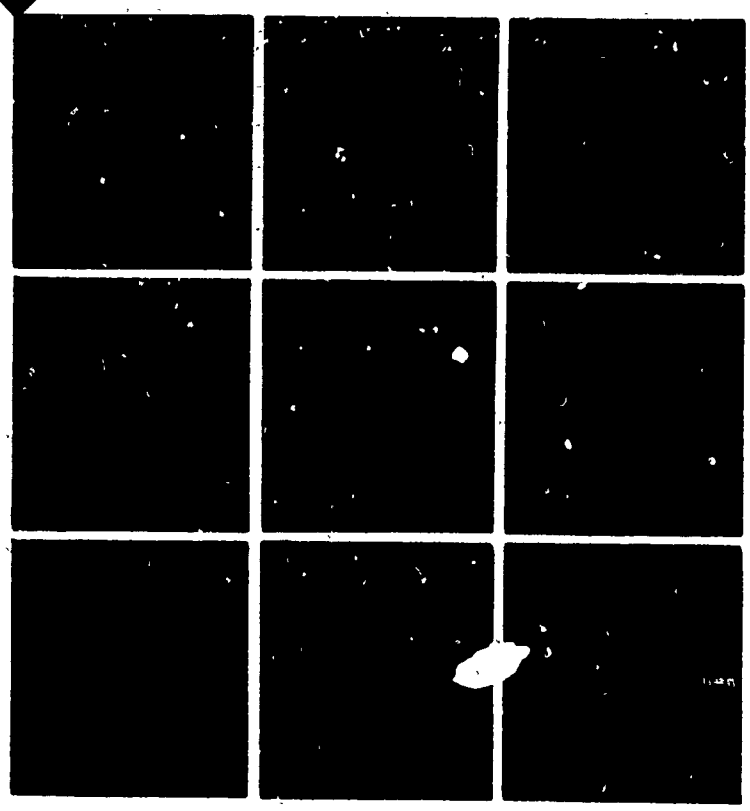
ABSTRACT

Methods of making school plant and community surveys are explained. An outline for developing educational programs into educational specifications is presented, and responsibilities are listed for all the persons involved in developing educational specifications. A checklist is included of suggested steps to be followed while conducting a building program. (FS)



PREPLANNING OF SCHOOL PLANT FACILITIES



School Plant Section
Division of Administrative Services
TEXAS EDUCATION AGENCY
Austin, Texas — September 1965

PREPLANNING

FOR

SCHOOL PLANT FACILITIES

Texas Education Agency
Austin, Texas
September, 1965

PREFACE

Texas is one of the few states with practically no legal restrictions on school construction. We can point with pride to the progress we have made and how our schools, designed by Texas architects, have equaled or surpassed others in national competitions.

With state-wide cooperation and initiative, Texas can continue to lead in school building design and construction. To accomplish this, boards of education and administrators will have to use imagination, explore new ideas, and plan buildings to provide for the rapidly advancing methods in teaching and learning.

TABLE OF CONTENTS

Page

Foreword

Preplanning for School Plant Facilities..... 1
Should We Build a New Building or Remodel and Modernize Our Old One?..... 3
Long-Range Plan Development for School Plant Requirements
- Phase I
  - Determining Educational Needs..... 5
- Phase II
  - Translating Educational Needs into an Educational Program..... 10
- Phase III
  - Development of the Educational Program into Educational Specifications..... 11

An Outline for Developing Educational Specifications..... 11
Appendix A
- Organization and Function of an Advisory Committee of Lay Citizens..... 16
- Final Action by the Board of Trustees..... 22

Appendix B
- A Check List of Suggested Steps to be Followed While Conducting a Building Program..... 23

PREPLANNING FOR SCHOOL PLANT FACILITIES

INTRODUCTION

Providing adequate and appropriate school buildings for any school district requires careful and thorough planning of two types. The first embodies "Planning For a School Building" and is that planning done by the schools' administrators and board of trustees. The second type is the "Planning Of a School Building". This is done by the selected architect and results in the working drawings and specifications for the building. In this publication we shall be primarily concerned with the first type or "Planning For a School Building".

If wise planning for a school building is to be done it must necessarily fit into the school district's "long-range" plans. Many districts, because they did not develop some "long-range" plans in the past, now have buildings which have become greater problems than the problem they were intended to solve. Of equal importance is the need to recognize that long-range plans must be periodically reviewed and revised to meet changing conditions and changing educational needs. These long-range plans must be developed around the educational program being conducted or that is desired and should answer the following three fundamental questions:

1. What and how will teaching be done during the next five to ten years?
2. What sort of school plant do we need to meet these teaching needs?
3. How can we finance the facilities required?

When the decisions, arrived at as a result of long-range planning, must be applied to a particular building program, they need to be translated into educational specifications. These educational specifications, in turn, are then translated by the architect into building plans and specifications.

In many instances, preplanning for a school building program can best be initiated by organizing representative members of the community into various advisory committees to determine the local educational needs and desires. The strength and accomplishments of these committees will be determined by their proper functioning in the following areas:

1. The educational needs of the community.
2. Population and enrollment trends.
3. Evaluation of existing and proposed plans.
4. Financial planning.

Finally, even though the ultimate success of such a program demands the support and understanding of the lay citizens of the community, the full value of money spent can usually be better realized by utilizing specialists in the preparation of the educational specifications.

It is the purpose of this bulletin to establish clearly the duties and the responsibilities of the local board, the lay citizens, and the specialist in planning <u>for</u> adequate and appropriate school buildings.

SHOULD WE BUILD A NEW BUILDING OR REMODEL AND MODERNIZE OUR OLD ONE?

The question of whether a school district should build a new building or remodel and modernize the old school building is a perennial problem. Building technology studies have indicated that rehabilitation and modernization needs occur most often in certain parts of the school buildings. Some parts wear out, deteriorate, or become obsolete more rapidly than others. Some surfaces need more attention than structural items. Educational changes, upgrading of standards, passage of time, maintenance neglect, improvement of design, new materials and construction patterns make many school buildings inefficient or obsolete even though they are structurally sound. Because many of these buildings cannot be abandoned, local school officials should plan and carry on a continuous modernization program. In some instances school districts have decided to modernize a school building without an adequate analysis of the buildings condition, no long-range planning of school plant needs and insufficient information on the probable useful life expectancy of the building if it is remodeled or modernized.

An unrecognized commitment to modernization may come with the decision to improve the heating plant, remodel the toilets, replace some plumbing, install a new roof, paint the exterior brick walls, or carry out some other extensive single operation to improve a building. Once a sizable investment has been made in repairing or replacing some of the expensive items it is too late to make a complete analysis of what to do with the building. A commitment to remodel has been made. This is a piecemeal approach to modernization and may be not only expensive but may result in prolonging the life expectancy of a building that is educationally inadequate.

Some of the many factors to be considered before deciding to remodel or modernize are:

1. The structural safety of the existing building.
2. The educational adequacy of the existing building.
3. The adequacy of the teacher's work room, conference rooms, office accommodations, library, lunchroom, and other areas.
4. The exterior appearance of the building.
5. The suitability of the present location for at least the life of the modernized building.
6. The condition of the plumbing, heating, and electrical systems within the building.
7. Evaluation of the results of improvement, alterations, remodeling, and expansion where such is required.

Experience indicates that if the cost of remodeling an existing building runs as high as 30% of the replacement cost of a new building, it would be a wiser investment to build the new building.

If, after analyzing the existing school building, the decision is against remodeling, it is hoped that this bulletin will prove helpful in avoiding some of the pit-falls often encountered when making plans for a new plant.

LONG-RANGE PLAN DEVELOPMENT
FOR
SCHOOL PLANT REQUIREMENTS

Phase I

Determining Educational Needs

The educational requirements which face the present generation are much greater and more demanding than at any time in our history. Unprecedented changes have occurred in the economic, scientific, and social conditions that demand corresponding changes in educational experiences, concepts, and methods. A rapidly increasing school age population in the first half of the twentieth century was one of the social changes that took place and often caused school plant facilities to become inadequate because of the limited financial ability of the school districts. This resulted in platoon systems, multiple sessions, and many other kinds of emergency educational make-shifts designed to cope with inadequate facilities.

It seems apparent, therefore, that the best method for determining the educational needs of a school is to survey, study, and lay out what the educational needs seem to be and what facilities are needed without regard to cost. The time to be concerned with costs is after the needs have been determined. It is then possible to establish a system of priorities in establishing new elements in the program and for new facilities as the financial ability of the district permits.

To summarize, it has become apparent that the local educational program must be geared to the needs of the children and their needs are not determined solely by the local community but by surrounding communities and even by the state and the nation. The first step, then, should be to determine the desires of the local community and determine to what extent they want to go in meeting the needs of all the children in the community. This can be accomplished through the participation of lay citizens on various committees, (Appendix A). The final selection and approval of the work of the committees is the duty of the local board of trustees.

It is suggested that the local board, with the school administrative staff, consider taking the initiative in providing for lay participation in the early planning stages by appointing one or more advisory committees. Such committees may vary from a few to several members depending upon the size and complexity of the community, but experience has indicated that the various segments of the social and economic life in the community should be represented.

Members of such committees may be selected by the board of trustees or the board may ask representative groups and organizations of the community to furnish names of members from which it may select committeemen to serve in the study. It is further suggested that as far as possible representatives be selected who are: leaders in the community life, able to look at the problems impartially, objective in their thinking, and willing and capable of weighing the broad aspects of a sound program of public education for the community.

If the local board of trustees is to be completely satisfied and receptive to the work of one or more advisory committees, they will no doubt want the following questions answered clearly and concisely:

1. Has the board of trustees been adequately informed about the purpose and functions of the various advisory committees?

2. Are the members of the board of trustees favorable to the idea of a cross-section of the community helping in planning for better schools?

3. Are the advisory committees representative of all segments of the community life?

4. Have the advisory committees been organized early enough to permit a full-fledged study of the educational needs or must it be somewhat abbreviated because of immediate problems?

5. Have all members of the advisory committees been thoroughly informed as to their responsibilities and objectives?

6. Do all members of the advisory committees understand that final decisions are morally and legally the responsibility of the board of trustees and that the board of trustees is not morally or legally bound to accept or adopt the recommendations submitted by the advisory committees?

7. Has a procedure been agreed upon by the board of trustees and the advisory committees for informing the community as to procedures and decisions?

8. Are faculty members, students, and maintenance personnel represented on the appropriate committees?

9. Have provisions been made for reference and resource materials and for working places for the group as a whole, for sub-committees, and for storage of materials?

10. Is there a workable plan for the pooling and exchanging of ideas of all groups concerned in survey and in planning, such as the board of trustees, the administrative and educational staffs, the architect and various consultants?

The advisory committees should utilize the advice and service of professional educators, such as members of the local school staff, State Department of Education consultants, and others. Their efforts should result in a series of recommendations to the board of trustees, expressing their interpretation of the educational desires of the citizens of the community.

There are two commonly used methods of making a community and school plant survey: the independent or professional, and the cooperative. The independent survey is usually made by some educational institution or by consultant agencies, sometimes members of architectural and engineering firms. The advantages of this professional or independent method are well organized procedures and techniques and usually a minimum amount of disruption and loss of time from the school program. Assuming a competent staff, the independent survey can be done quickly and very effectively.

The cooperative method, while probably less efficient and more time consuming, does have a very definite public relations value. The heart of the method is "group thinking, group activity, and group decisions". Although the professional educational leadership of the community may largely direct the course of this type of survey, the thinking and eventual understanding and support of the program by lay groups tend to assure its acceptance on the part of the community.

To prepare the members of the advisory committee and to insure that all have been given the same information from which to work, the following list of questions should be answered clearly and concisely:

1. Does the committee know what the public schools are expected to do in the community?

2. Have the various curricular offerings of the school been evaluated?

3. Has the committee been advised about the place and scope of adult education recommended for the public school program?

4. Has the committee been advised about recommendations for "special education"?

5. Is there an administrative recommendation as to the best organizational scheme for this school (5-3-4; 6-3-3; 6-2-4; or another)?

6. Has the committee been advised of any recommendations relative to any reorganization of the administrative unit or of the district?

7. Are schools reasonably accessible to all areas of the district and is an adequate system of transportation provided?

8. Has the committee been given information outlining (a) the socio-economic background of the students, (b) what happens to graduates or withdrawals, (c) what pupils want to do after graduation, and (d) provisions for the handicapped during and after school?

9. Has a chart been prepared to show what population and enrollment trends have been, and projections to estimate what they will be for the next several years?

10. Has an evaluation of each plant facility in terms of (a) safety, (b) adequacy and appropriateness for an educational environment, and (c) cost of maintenance versus repair and/or replacement been given to members of the committees?

11. Has the committee been advised of recommendations pertaining to adequacy and suitability of school sites, presently owned and anticipated?

12. Has the committee been fully informed on where all monies for the school come from and how and on what each can be spent?

13. Have the regulations concerning the capital outlay funds been thoroughly explained?

14. Have members of the committees been oriented on the latest trends in educational facilities and have they personally visited some recent examples?

Some of the factors which should be evaluated by the survey personnel, independent or cooperative, in determining the educational needs are:

1. The history of the community, including such significant items as growth over a period of ten or fifteen years, industrial and occupational life and development, and the consequent growth of the school program.

2. The child population by age groups as well as percentage in parochial and percentage in public schools.

3. Probable expansion or decrease in the various population groups.

4. Nature of general population as to social and economic composition, population density, and stability. The percentage of parents in industrial and other types of occupations. Spot maps give excellent pictures of such data as in items 2, 3 and 4.

5. The physical characteristics of the school district including square miles, roads, topography, and valuations. Maps and charts make these ideas stand out in a more meaningful way than verbal descriptions.

6. An objective appraisal of existing plant facilities in terms of safety, adequacy, health and instructional efficiency, location and other pertinent information.

7. A <u>long-range</u> estimate of plant needs which will include:

   (a) Which facilities must be abandoned?

   (b) Which facilities can be justifiably rehabilitated and continued in use? (Experience indicates that if the cost of rehabilitation or remodeling runs as much as 30% of the cost of new facilities it is not a wise investment to remodel.)

   (c) What additional sites are needed, where should they be located, and how large should they be?

   (d) What new construction is an immediate need and what type of construction is desired?

8. The community's ability to pay for what is needed in plant facilities.

Phase II

Translating Educational Needs into an Educational Program

When the various advisory committees have completed their studies and have submitted their findings and recommendations to the board, the report must be evaluated. This evaluation should result in decisions by the board on what is to be used, what discarded, and what parts are to be modified. When these decisions have been made, the professional staff, including the superintendent and the teachers, has the responsibility of developing program plans that comply with these decisions.

It is obvious that in a large school system it would be impractical to call together all staff members to counsel on each new school plant being planned. Even in the largest systems, however, it is possible to involve all staff members, at least on a representative basis, in working out certain criteria pertaining to the facilities common to all buildings of a type, i.e., the desired number of square feet in a primary classroom, the amount and location of display or tackboard areas, the location of work areas, sinks, chalkboards, storage facilities, etc. It is evident that the administrators will have to make the final decisions in preparing the detailed educational instructions to the architect to govern his design. Certainly these should not be so specific as to limit the architect's freedom in design, but they should serve as guide lines which express the desires of the faculty.

These instructions outlining the educational program should also contain the answers to such questions as:

1. What organizational pattern is to be used? (8-4; 6-3-3; 6-2-4; or another?)

2. What grades or divisions are to be housed in the different buildings? (Primary, elementary, junior high, senior high, or some combination of these.)

3. What combination of buildings may be used? (Elementary-junior high; junior-senior high.)

4. What are to be the policies regarding walking distances for the various age groups?

5. What are the policies on transportation time and distance?

6. What are the general characteristics of the curriculum in each school?

7. What are the desirable maximum and minimum enrollments for each type of school?

When these policies have been determined, the professional group is in a position to outline the over-all building needs of the community.

Phase III

Development of the Educational Program into Educational Specifications

A normal outgrowth of work done by the professional staff in translating the educational needs into an educational program is to establish physical facility needs to accommodate this program. The document in which these physical facility needs are to be spelled out and which is to serve as a book of instructions to the architect is referred to as the Educational Specifications.

AN OUTLINE FOR DEVELOPING EDUCATIONAL SPECIFICATIONS

The following outline indicates the possible areas of responsibility and the order of presentation of material that might be used in the preparation of educational specifications. "Definitions" and "Purpose" are provided for explanation and clarity.

1. Definition:

   Educational specifications include a detailed description of: (1) all the activities that will take place in the building; (2) the curriculum to be provided;

(3) specific architectural characteristics desired; (4) the facilities needed, their equipment requirements and their space relationship to other facility elements; and (5) pertinent budget and other governing factors.

An introductory section also should be devoted to a brief description of the community background and history and to the educational philosophy of the school district.

2. Purpose:

The preparation of educational specifications serves a two-fold purpose.

a. Serves to clarify and consolidate the thinking of the administration, members of the board and the community, on the needs, desires, and objectives of the educational program to be conducted within the proposed new building, and

b. Organize all important information in a manner that can be easily and clearly interpreted by the architect.

3. Areas of Responsibility:

Persons Involved	Their Role
A. Board of Trustees	a. Adopt essential policies b. Approve final educational specifications c. Employ architect d. Provide budget
B. Superintendent and Administrative Personnel	a. Designate principal or other professional person as chairman to develop educational specifications b. Provides proper administrative leadership c. Evaluates progress from time to time d. Evaluates final educational specifications and interprets them to: 1. The board of trustees 2. The architect 3. The community
C. Principal or Other Professional Person Designated	a. Form a steering committee b. Select teachers and others for each area c. Organize each group d. Coordinate work of all groups

	e. Arrange for services of all available consultants f. Organize and see that final draft of educational specifications is properly edited g. Report, through appropriate channels, to the superintendent
D. Teachers and Others Selected to Participate	a. Describe special characteristics required for each teaching space b. Describe activities to take place in each space c. Describe characteristics and needs of pupils involved d. Describe type of furniture, equipment, instructional materials and aids to be used in each space e. State desirable relationship to other spaces f. Describe various pupil groupings to be used in each space
E. Instructional Supervisors and Consultants from 1. State Department of Education 2. Colleges and universities 3. Independent professionals 4. Equipment or material specialists 5. Any others desired	a. Counsel with teachers on the instructional program b. Provide guidance, resource materials and planning information c. Interpret recent trends in education and their implications
F. Members of the Student Body	a. Advise on special student desires, i.e., 1. Special activities 2. Academic activities 3. Aspirations and goals b. Added courses of study desired
G. Citizens' Groups	a. Furnish information on background and aspirations of the community b. Serve on committees as selected c. Interpret work being done to the community

H.	Architect Selected for the Project	a. b. c.	Serves as advisor on technical, aesthetic and cost considerations Advises on those items which have peculiar implications for design Observes to become acquainted with the total problem.

4. Elements of Educational Specifications:

A. Part I

Part I should be prepared in advance and should contain statements pertaining to:

1. A description of the community

   a. Historical background
   b. Cultural background
   c. Socio-economic status
   d. Population and trends

2. Educational philosophy and policies of the school district

   a. Educational goals for students
   b. Educational organization of schools and reasons for this organization

B. Part II

Part II should delineate the educational program of the school plant being planned and should include information on:

1. The organization of the school

   a. Pupil capacity by grades for initial enrollment
   b. Initial and ultimate number of classrooms
   c. Maximum group or class size
   d. Learning activities to be provided for
   e. Summer use of facilities
   f. Community use of facilities
   g. Auxiliary areas to be provided; i.e., central library, cafeteria, administrative elements, auditorium, gymnasium, etc.
   h. Extra-curricular activities to be included

C. Part III

Part III spells out in detail the specific school plant requirements for each itemized area giving:

a. Activities for each area and number of students involved
b. Space requirements with necessary furniture, equipment (both built-in and movable), and storage facilities
c. Utilities and services with special requirements designated in addition to normal needs
d. Relationship of space required or preferred
e. Environmental factors--heating, lighting, ventilation, acoustical requirements, color, decoration
f. Special requirements and characteristics not otherwise stated
g. Internal traffic--movement of students giving numbers involved, when, where from and where to
h. Statement of any general architectural characteristics that are desired

D. Part IV

Part IV should comment as necessary on the following miscellaneous considerations:

Bus loading facilities
Outdoor paving and furniture
Planting
Fencing
Storage lockers
Coat racks
Floor materials
Floor markings
Floor mats
Folding gates
Display facilities
Wall materials
Tacking surfaces
Ceiling materials
Acoustical
Colors
Skylights
Plumbing fixtures
Hardware
Shower room arrangement
Custodial and mechanical equipment rooms
Cleaning systems
Fire fighting equipment
Hose bibbs
Public telephones
Intercom systems
Program bell system
Clock system
Fire alarm system
Outdoor lighting
Others not included above

E. Part V

Part V should give information on the proposed budget, such as,

1. The total amount of money to be available for this project.
2. Approximately how much is to be allocated for:

a. Site acquisition
b. Building construction
c. Site development
d. Architectural and engineering fees
e. Furnishings and equipment
f. Contingencies

Appendix A

ORGANIZATION AND FUNCTION OF AN ADVISORY COMMITTEE OF LAY CITIZENS

No claim is made here that it is essential or even desirable to have advisory committees in all cases. From practical experience it has been determined that there are times when educational needs and desires of a community are so clearly spelled out in the minds of the people that a committee would not be needed. Indeed, there must be times when the community has kept so well abreast of its needs by professional leadership, such as the superintendent of schools, the architect, and the curriculum or research director, that a restudy or survey would be a waste of time and money.

However, when advisory committees are formed, it is most important that the committee members realize that their functions are advisory only and terminate upon completion of their assignment. If the committee is to be productive and not waste its efforts on non-essential details and tangents, the school administration must prepare a series of related goals toward which the committee may work.

Advisory committees have two reasons for existence aside from the direct service rendered to the school and community:

1. The schools of a community belong to the people of that community, and wherever possible the stockholders of any corporation should be consulted about the investment of their money, whether it is on a cash basis or on long term loans.

2. Service on such a committee is an excellent course in adult education, especially as it pertains to public education in the community; and there is probably no better avenue through which local leadership can be discovered and developed.

How the Committee is Constituted

Granting the need for a committee in a school building program, one of the first problems is to decide on a means of creating the committee which would make the selection thoroughly democratic. One effective procedure is for the school administrator to present the idea to the board of trustees, explaining the importance of soliciting help from all interests of the community and inviting suggestions from any citizen of the community. Another approach would be for the board of trustees to select a small representative committee to work with the board in selecting the membership of the advisory committee. The advisory committee could be, and probably should be, flexible as to size and functions, but it should never lose sight of its major function of supplying the board of trustees with organized factual information as to the needs, assets, and desires of the community.

In the smaller communities, these aims may be accomplished fairly well in most instances by a joint study by the board of trustees and representatives of the various community organizations. It is important that there be representatives from every segment of the community.

After an advisory committee has been appointed, organized, and general goals established, the specific job might be stated as follows:

> "Our building is in a very poor state of repair and there is some doubt about trying to add to it, but with the property values as they are and the tax rate as it is, even if we could vote bonds for improvement, we still would not have an acceptable plant nor one comparable to some of the other communities about our size."

This specific problem, when presented, may result in the committee as a whole dividing itself into several subcommittees. Four common areas for study are:

1. Enrollment and population trends
2. The curriculum or school program

3. Plant facility needs
4. Financial ability

The procedures to be followed in making such studies will very according to the size and characteristics of different communities. It is vital, however, that in every instance, regardless of size or type of community, the committee remain a fact finding and recommending body. To be most effective, it must recognize that the board of trustees has the moral and legal obligation to make final decisions.

Function of Committees and Areas of Investigation

As the committee work gets under way, regardless of whether it is one committee or several subcommittees, frequent progress reports tend to insure better organized study and recommendations. It is desirable, in other words, to frequently call the group or groups together and "take stock". Needless duplication of effort can be avoided and a more thorough and comprehensive report expected if periodic reporting sessions are provided. It is also extremely important that each committee assignment carry with it a completion and reporting "deadline". This deadline must allow adequate time to do the job but must not allow the committee to waste time and perhaps fail to function entirely.

There are several different elements of information that committees may be assigned to investigate and compile. However, those areas of investigation generally assigned to lay committees are:

a. Enrollment and Population Trends
b. The Curriculum or School Program
c. School Plant Needs
d. Financial Ability.

A. Enrollment and Population Trends:

An analysis of population and enrollment trends which result in an estimate or prediction is subject to varying degrees of error. Nevertheless, such studies must be made if long-range planning is to be realistic. This committee will undoubtedly want to make use of such sources of information as the United States Census Bureau, local census figures, the number of preschool children and those in school, holding power of the school from year to year and public utility estimates of service connections now and for years to come.

Three other factors which affect enrollment in school are:

1. Normal in-and-out migration of population.
2. Enrollments of non-public schools in the area.
3. Abnormal migrations occasioned by disasters, defense centers, or migratory workers.

B. The Curriculum or School Program:

After having studied the past, present, and estimated future school population figures, the next step may be to determine the type and scope of the educational program to be housed. Recommendations on needed school plant construction should be based upon complete understanding of the educational program needed and desired by the particular community. School life today includes many features not included a few years ago. Significant changes have been going on in school programs during the last several years and certainly this committee will want to face realistically the question as to whether changes should be made in its community program.

It is believed that this committee will want to do at least three things: first, determine educational needs; second, consider ways for implementing

those needs; and third, assist in the preparation of educational specifications for the guidance of the architect to use in designing the school plant facilities.

The first big problem for this committee is to find out from representative citizens what they think the needs are, and then to assort, study, choose, and organize such a list of needs.

Whereas educational specifications are largely a problem for the professional staff, this committee can be of great assistance to the staff by reflecting answers to such questions as the following:

1. What groups are to be served in the building?
    a. What is expected to be the total enrollment of the regular student body?
    b. What other groups will use the building?
2. How will the groups using the buildings be organized?
    a. What is exptected to be the regular class size?
    b. Will there be special classes with different sizes?
    c. Will the groups be based on a home room organization?
    d. Will there be a departmentalized, or self-contained class organization?
    e. Will there be special subjects or core classes?
    f. What will be the size of groups other than the regular classes using the building?
3. What curricula or programs will be provided for in the building?
    a. Will there be academic classes only?
    b. Will there be shops, laboratories, demonstration units?
    c. What programs can share spaces with other activities?
4. What activities will require specially designed facilities?
    a. What will the special education classes require?

5. What equipment, including built-in equipment and furniture will be in the proposed new building?

   a. What equipment will be in each classroom?

   b. What furniture will be in each room?

   c. What equipment for audio-visual instruction, art, and for music instruction will be provided?

6. What special services will be provided for in the building?

   a. Are library services, audio-visual aids, facilities and equipment for drama productions, art and music teaching equipment to be provided?

   b. What provision is to be made for telephone, bell systems, clocks, fire systems, and other such equipment?

   c. Is storage space to be provided for supplies, books, records, extra equipment, and furniture?

C. School Plant Needs:

Any analysis of a school plant facility status should involve expert architectural and engineering assistance as well as counsel of the educators. It is suggested that the subcommittee on plant facilities might have available to its membership at least an administration staff member of the school, an architect or engineer, a representative tax-payer, and a lawyer.

Inasmuch as the average committee member will not be familiar with the recent trends in school plant planning, it is vitally important that they be informed. This should be done, under the leadership of professional planners and educators, by visiting new school plants in the vicinity, and by pictorial presentations. This group should also gather information from various staff members on desirable elements of the various types of facilities needed.

D. Financial Ability:

In all of our planning, we must not lose sight of the fact that whatever is done will cost money so there must be a financial plan. It would seem desirable to have on this committee or subcommittee a staff member who is familiar with assessments, bonded debt, debt capacity, and the general financial structure of the school district.

This committee will attempt to determine not only the existing financial status, but the probable future base and rate structure needed for the community to finance the program arrived at by other subcommittees. As in all subcommittees and general committee work, this particular group needs to make its study as objectively as possible. Its recommendations and conclusions will go to the board in terms of specific facts and figures, and these figures must be correctly and honestly organized and presented.

FINAL ACTION BY THE BOARD OF TRUSTEES

When all committees have completed their assignments and make their reports to the board, they should be extended a word of appreciation and then discharged.

Following this the board should evaluate the reports, select what they consider to be applicable and discard or delay the rest and finally formulate their plans to be reported to the public.

Appendix B

A CHECK LIST OF SUGGESTED STEPS TO BE FOLLOWED WHILE CONDUCTING A BUILDING PROGRAM

Step 1. Organizing a Planning Committee:

1. If a community planning group is to be used, do all members understand their responsibilities and tasks?

2. Do all members of the group understand that the responsibility for final decisions rests with the board of education?

3. Has a procedure been established for informing the rest of the community as to decisions and progress made?

4. Is the planning committee representative of all the different groups in the community?

5. Are teachers, students, and custodians represented on the planning committee?

6. Has a room been provided in which the group can meet, work, and keep materials?

7. Has the committee been organized early enough to allow a sufficient working period before the building is needed?

8. Has a workable, efficient plan been adopted for the interchange of ideas between the board, the educational staff, the planning committee, the architect, the educational consultants, and other people involved in the planning?

Step 2. Obtaining the Services of an Educational Consultant:

Has an educational consultant been employed very early in the planning process?

Step 3. Making a School Building Survey:

Has adequate information been collected concerning:

a. The educational program
b. Future enrollments
c. The adequacy of existing facilities
d. The financial resources of the school district?

Step 4. Appointing an Architect:

1. Have procedures and standards been adopted for selecting an architect?

2. Has a definite understanding been reached with the architect as to how specialists (site planner, bond attorney, educational consultant, acoustical engineers) are to be obtained, used, and paid for?

3. Has a definite understanding been reached with the architect as to how supervision of construction is to be provided and paid for?

Step 5. Selecting a School Site:

1. If a new site is necessary, has a procedure been adopted for its selection?

2. Have the necessary legal steps been taken in order to obtain funds for the purchase of a site?

Step 6. Preparing the Educational Specifications:

1. Are the educational specifications complete enough to describe exactly the kind of building desired?

2. Has the educational staff been consulted concerning the educational specifications?

Step 7. Preparing Preliminary Plans and Cost Estimates:

Has an understanding been reached with the architect as to when such plans should be completed and how the architect is to be paid for them?

Step 8. Retaining Legal Advice:

1. Have arrangements been made for obtaining legal advice when needed?

2. Has an understanding been reached between the attorney, the bond attorney, and the architect as to how the details of the bond election are to be handled?

Steps 9 and 10. Approving the Preliminary Plans:

1. Have all members of the board of trustees and the administration had an opportunity to study and comment on the preliminary plans?

2. Has the approval of the State Insurance Commission and the State Health Department been obtained?

3. If the plans contain facilities for vocational agriculture, homemaking, or school lunch, have the appropriate officials of the State Department of Education been consulted?

Steps 11 and 12. Determining the Financial Program and Preparing for the Bond Election:

1. Has a long-range financial plan been developed?

2. Is the proposed bond issue large enough to provide funds for such things as:

   a. Architects fees.
   b. Site development.
   c. Equipment.
   d. Unforeseen contingencies.
   e. Future growth.

Steps 13 and 14. Approving and Checking the Final Drawings:

1. Has a definite time been established for the completion of such plans?

2. Has the procedure outlined under "Approving the Preliminary Drawings" been repeated here?

Step 15. Calling for Bids:

Has the board of education adopted a policy on the issue of doing construction work under a general contract versus the use of separate contracts?

Step 16. Reviewing Bids:

Is there available to the board of education the means for determining whether or not the bidders for a construction contract are qualified to do the work? (Financial adequacy, suitable construction equipment, competent personnel, size and quality of recently completed projects.)

Step 17. Preparing and Executing Necessary Documents:

(The architect will handle the details on the above step and his advice should be followed.)

Step 18. Starting Construction:

(Dates upon which construction is to be completed are included in the contract documents.)

Step 19. Inspecting and Accepting the Building:

Has the board of education, with the help of the architect, satisfied themselves that the building has been constructed as shown in the plans and specifications?

Step 20. Equipping the Building:

Have the administration and educational staff had opportunities to discuss and make suggestions concerning furniture and equipment to be installed?

Step 21. Instructing the School Staff in the Use of the Building:

Has a definite plan been adopted for such instruction concerning all the features of the building?

Steps 22 and 23. Occupation and Dedication of the Building:

Has a program been planned to acquaint the community with the new building?