



Report of the school year 1935-36 being the eighty-first annual report of the public schools of Madison, Wisconsin.

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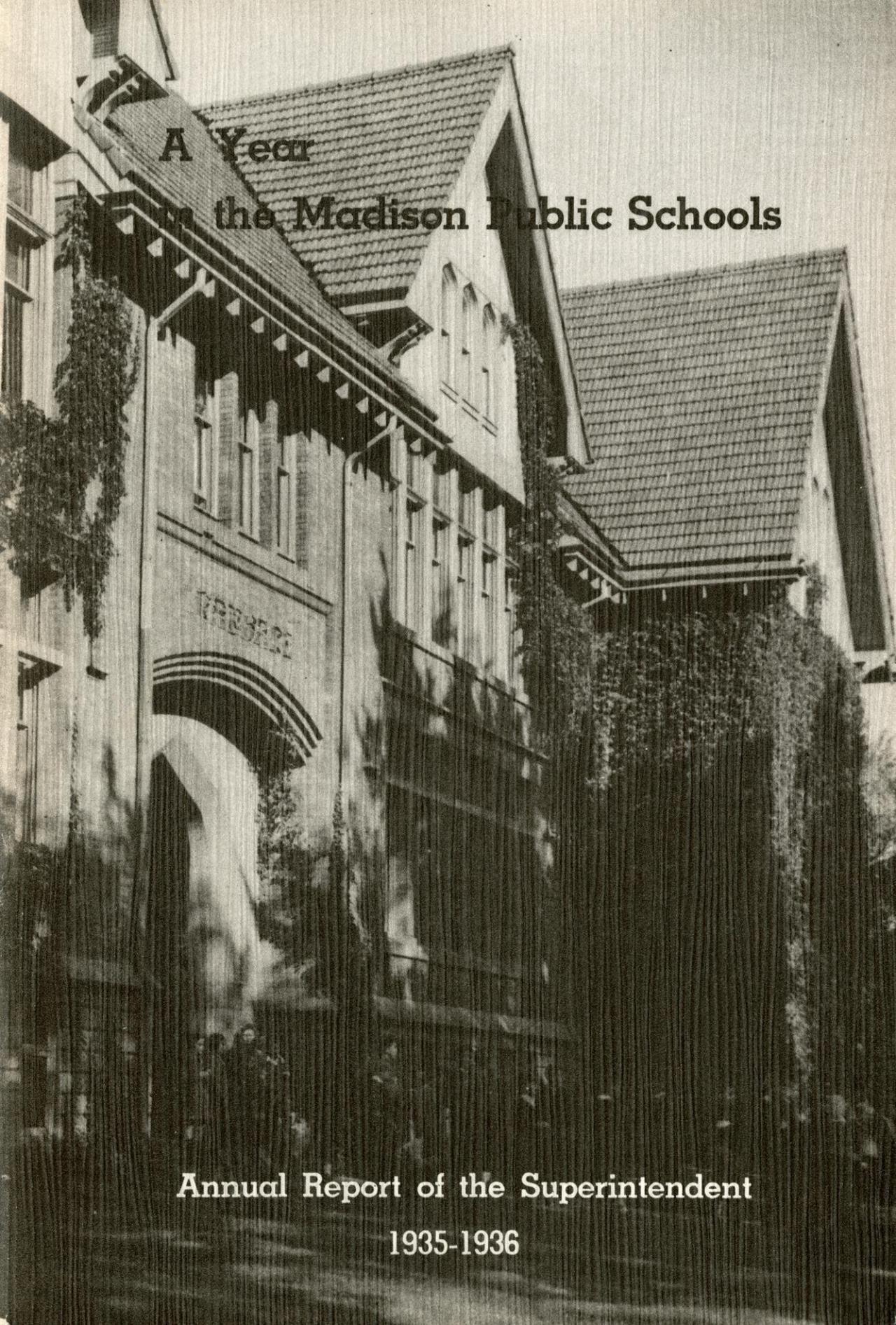
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A Year

in the Madison Public Schools

Annual Report of the Superintendent

1935-1936

**Report of the School Year
1935-36**

Being the

Eighty-First Annual Report

of

The Public Schools

of

Madison, Wisconsin



Compiled by

R. W. Bardwell, Superintendent

**Approved by the Board of Education
and ordered published**

November 1936

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Madison, Wisconsin

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• Acknowledgment is made to Miss Beda Hood, teacher of Journalism in Central High School and director of school publicity, for her assistance in this report, and in particular for Parts II and III; to Miss Ruth Alcott, teacher of Art in Central High and Lincoln schools, for pencil sketches illustrating the excerpts of principals' and supervisors' reports in Part I; and to Richard Goldsmith, Jr., of the WPA Federal Art Project for the photograph on the front cover and on page 13.

FOREWORD

• *The city of Madison is ideally constituted, by its location and by the essential character and interests of its people, to achieve schools for its children and youth second to none. The position which the city holds as a center of government and of higher education, together with the natural beauty of its setting, brings to it many who have a primary interest in contributing to such an ideal.*

The Board of Education and the staff of teachers and others who are engaged in providing schooling for Madison children, are aware of this interest and this desire on the part of the citizens for the best in their schools. Throughout Madison's public schools there prevails a belief in that ideal and a desire to contribute to its achievement. It is my opinion that each year marks a step forward towards that goal.

This report, the purpose of which is to inform Madison citizens regarding their schools, presents only a fragmentary and partial picture of the work of one year. Many important items which have been omitted have been covered in preceding reports. This is the eighth annual report in a series starting in 1929, in each of which emphasis is given to different problems and phases of the schools. To obtain a more complete picture of Madison's school progress towards its ideal this report should be considered in relation to the others that have preceded it.

R. W. BARDWELL

Superintendent

Part I

THE WORK OF THE YEAR

A. CHILD WELFARE

1. The School Carries Out Three State Laws

- Like the proverbial woman who lived in a shoe, Miss Cassie E. Lewis, Supervisor of Attendance, has *so many children*—16,087 boys and girls—but unlike this out-moded parent, Miss Lewis does know what to do.

Dealing with the administration of three state laws concerning school census, child labor, and compulsory education, this department supervises child accounting, children in industry, and social service growing out of attendance difficulties.

2. Child Accounting and Census

- The school census, which records all persons in the city of Madison between the ages of four and twenty, inclusive, is taken each June by twenty enumerators under the direction of Miss Lewis. The report for June 1936 shows a total of 16,087. Each child enrolled in the schools has a permanent and cumulative record card; each fall the enrolment is checked against the census of the preceding June.

The census is also useful in showing the increase or decrease of school population in the different districts of the city, as shown in Table I.

3. School Attendance of Pupils

- The work of the Attendance Department, which includes a supervisor of attendance, a field assistant, and two office assistants, is not bringing to school pupils who play hooky, as the truant officer did years ago. Once in a while it is necessary to bring a child into school, but the enforcement of school attendance now involves many other things.

"Home calls, with the social work incidental to them, form the major work of our department," says Miss Lewis. "This involves close cooperation with schools, social agencies, and employers. A school court

TABLE I
SHOWING COMPARISON OF CENSUS TOTALS OF SCHOOL DISTRICTS
FOR THE YEARS 1935 AND 1936

School Districts	Census Totals 1935	Census Totals 1936	Increase	Decrease
Doty	828	838	10	5
Draper	864	859	-	-
Dudgeon	632	647	15	-
Emerson	1,727	1,705	-	22
Franklin	734	784	50	-
Harvey	490	505	15	-
Hawthorne	941	928	-	13
Lapham	685	689	4	-
Lincoln	1,013	991	-	22
Longfellow	1,957	1,887	-	70
Lowell	1,740	1,729	-	11
Marquette	704	733	29	-
Nakoma	254	276	22	-
Randall	2,269	2,335	66	-
Washington	866	860	-	6
Joint District No. 8	328	321	-	7
Totals	16,032	16,087	211	156
16087			1936 Census Total	
16032			1935 Census Total	
55			Increase	

is often held at which times parents and members of social agencies are called in to talk over a certain child's problems before he is referred to juvenile court. Many times juvenile court can be avoided and early delinquencies curbed."

In her annual report Miss Lewis describes the nature of the work of the Attendance Department.

Since September, 1935, the amendment to the school attendance law has been in effect. Through its provisions, children of school age, 7 to 18 inclusive, living in Vocational school cities, must attend school full time unless they have child labor permits to work while school is in session. Although there seem to be some complaints from school officials in Wisconsin cities who find it has been difficult of enforcement, we have had little difficulty here. In fact, the attendance workers of the Vocational school have found that children between the ages of 16 and 18 who previously have attended but one day a week, regardless of whether they were employed the other four days, have shown greater interest in their school work. The change in the law has influenced some others to remain in high school when they found they could have no part-time consideration. The number who have secured employment to avoid school attendance is negligible.

The usual policies and routine in working with children, parents, schools, and social agencies have been followed. They include:

1. Checking enrolment with census at the beginning of the year to find if all children of school age were registered in some school, and the follow-up necessary on those unable to attend for whatever cause. We have secured doctors' statements following home calls on children whose physical condition did not warrant regular attendance, and referred to school departments and agencies any cases in their special fields.
2. Investigating tuition cases and transfers of pupils from one school district to another requested by schools and the superintendent.
3. Distributing clothing given to us by clubs and interested persons as occasion offered to help a boy or girl who was not otherwise provided for. With the problem of compulsory attendance comes the problem of inability to attend. Many families are struggling along on low incomes, and calls are made on us for shoes, clothing, and other essentials. We gave away 219 pieces of clothing during the year.

Our department aided two boys who had been school "problems" to go to Scout and Y camps last summer through funds given us by interested individuals.

In addition we had in our shoe fund \$14.50 (donated by individuals) at the beginning of the school year which was spent for clothing. We were given \$25 at Christmas time with special request that we purchase galoshes, mittens, and hose for children needing them. Our fund was depleted before the close of school.

The Woman's Club aided in furnishing both new and old clothing and maintained an active interest in helping throughout the year, assisting girls with graduation necessities in June. Church groups have donated clothing which was repaired and ready for use.

Due to the unusually long cold spell we found children daily who were inadequately clothed for the exposure of a long walk to and from school. It was frequently necessary to excuse some of these from attendance until clothing could be secured in the 20-below temperature days, or to take them to school. During the weather of extreme cold and deep snow, attendance might have been improved if bus transportation could have been provided in the Gallagher Plat area. According to our 1936 census, there are 200 children in Gallagher Plat attending Lowell and East. Although it is a little over a mile from Lowell—the nearest school—there are no sidewalks in the Plat and most of the families are on relief. Each winter attendance becomes irregular in some of these families due to the weather conditions and lack of warm clothing. Transportation arrangements would minimize loss of school time, retardation, and illness from exposure.

The Business and Professional Women's Club has given scholarships of \$5 per month to one girl in each of the high schools and the Vocational school. These girls were chosen with the aid of the principal or guidance

worker, who made recommendations based on need and scholastic achievement. The Club gave \$50 to an Italian girl who graduated from high school in February to aid her in going to college, and has given minor assistance to other girls.

When the NYA began to function, providing school jobs to some of the children on relief, interest in school was stimulated by their ability to supply their own school and clothing needs. It again demonstrated that poverty is a factor in school and attendance problems.

4. Home calls, with the social work incidental to them, on children absent from school form the major service of our department. This involves close cooperation with schools, social agencies, and employers. A comparatively small percentage of cases of absences without the parents' knowledge are found. Some of the outstanding causes of irregular attendance are illness on the part of the child or parent, poverty, failure of parents to cooperate with the school, lack of understanding of school policies, unwholesome neighborhood influences and gangs, lack of wholesome play activities, broken homes through separation or death, parental delinquency, and frequently a combination of such reasons.

The second semester, as in other years, our work increased until forty or fifty cases were reported on some days by the schools. During the year, 4007 home calls were made by the supervisor and assistant. Of this number 84 were on pupils listed from an unclaimed program list reported by the junior and senior high schools at the beginning of each semester.

5. The court cases handled consisted of five, jointly with other agencies. One of these was a mother who had previously been brought into court for neglect of her children in spite of complete relief and efforts of several agencies to help the family.

A boy of 17 on probation defied anyone to make him go to school. He had ability to do good school work. His parents, of foreign birth, unable to control him, made a pretense of working with the school, but really encouraged him in his wilfulness. It took the judge but a few minutes to change the boy's attitude, permitting him to make his own decision to return to school or to accept a suggested alternative.

Another case was handled jointly with the Family Welfare. A 15-year-old girl, both a home and school problem, was referred to that agency by the child guidance department and this department for case work. After months of futile efforts to secure the cooperation of a subnormal mother and to bring about a more pleasant home situation, the case was referred to the Juvenile Court. The parents promised cooperation, but revealed their helplessness. A recent conference of the above named agencies and Dr. Mabel Masten, neurologist, resulted in a suggested boarding-home plan to try the influence of a normal home in averting delinquency.

A 15-year-old boy was twice suspended from school within the months of the school year for continued disobedience, disrespect, and truancy brought

about by the influence of adult delinquency in a squalid home. We are making an effort to have him placed in a different environment.

The fifth case was that of the parents of a boy of 16, who were transients moving about constantly—"here today and gone tomorrow"—exploiting the boy who was sometimes the only one who could find work in the nomadic life they led. The father has now settled down to a job which is aiding not only this boy, but several younger children as well to go to school.

We do not believe in court action if it can be avoided. Truants are not always delinquents, but "the per cent of truancy is greatest among delinquents" surveys of juvenile delinquency show.

Some of the problems in connection with school attendance and children in industry are baffling; all are challenging and thoroughly interesting. They are a joint responsibility of home, school, and the community.

B. PUPILS AND TEACHERS

1. Enrolment of Pupils

- Development of suburban areas accounts for a great share of the increased enrolment in the high schools of the city. Tuition pupils make up the major increase in the enrolment in the secondary schools for the past five years, as shown in the accompanying report. That the enrolment in the elementary grades has arrived at a point that is almost stationary, may be concluded from Table III.

2. The Teaching Staff

- The schools of Madison are organized into 19 units. The number of teachers and the number of pupils in each school, as well as the ratio of pupils to teachers, is shown in Table IV.

The number of teachers at the different levels, together with the teaching load at each of these levels, is shown in Table II.

TABLE II
TEACHING LOAD AT DIFFERENT LEVELS

	Number of Teachers	Number of Pupils Enrolled	Number of Pupils per Teacher
Kindergarten -----	17.5	1064	60.8*
Grades 1-6 -----	188.0	5498	29.1
Grades 7-12 -----	207.0	5431	26.7

* Since the kindergarten has half-day sessions, this means that the number of pupils enrolled per class was 30.4.

An analysis of the teaching load shows that there are certain factors which affect the numbers given in Table II. For example, included in the group of teachers for grades 1-6 are the teachers in the special education classes. These classes are necessarily small, as shown in Table V.

TABLE III
COMPARATIVE TOTAL ENROLMENT FIGURES AT THE CLOSE OF THE SCHOOL YEARS
ENDING 1932, 1933, 1934, 1935 AND 1936

Schools	June 10, 1932	June 9, 1933	June 15, 1934	June 14, 1935	June 12, 1936
Brayton	90	79	79	90	92
Doty	172	202	190	186	165
Draper	209	214	222	215	204
Dudgeon	264	275	259	257	261
Emerson	1,084	808	827	795	784
Franklin	404	432	437	427	444
Harvey	253	204	205	223	234
Hawthorne	343	341	326	332	320
Lapham	254	250	258	263	255
Lincoln	430	427	439	434	460
Longfellow	604	601	573	607	586
Lowell	981	778	764	744	752
Marquette	381	313	331	345	353
Nakoma	264	263	243	240	262
Randall	783	849	848	839	842
Washington	235	225	224	216	214
Specials	106	106	100	120	112
Crippled	43	43	49	45	51
Deaf	22	26	25	25	24
Central Junior	556	494	517	500	502
Central Senior	886	836	837	812	766
East Junior		956	1,003	1,046	1,019
East Senior	1,386	1,132	1,152	1,151	1,223
West Junior	626	656	660	677	744
West Senior	739	786	835	917	954
Totals	11,115	11,296	11,403	11,506	11,623

The teaching loads in these special groups, together with the fact that the three specialists in speech correction were included in the count of elementary teachers, affects the figure given on the "number of pupils per teacher" considerably. Omitting the special education in the survey, the load per elementary teacher is 31.4 pupils instead of 29.1.

In grades 7-12 the pupil load of 26.7 at first glance seems rather light. However, when the small sections in fourth year Latin, French, German, and Advanced Mathematics are considered, and especially in the third and fourth year classes that have entered in the second semester, one realizes that there must be many high school classes of between 35 and 40 pupils in order to have this average.

TABLE IV
NUMBER OF PUPILS PER TEACHER

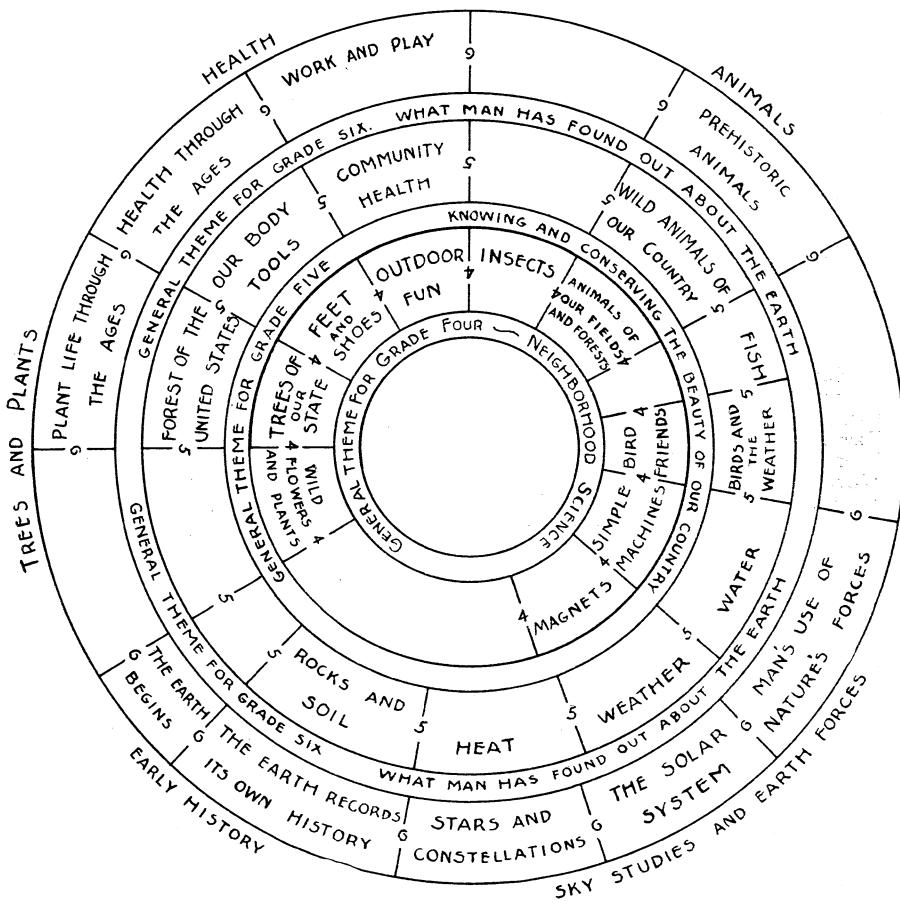
Schools	No. of Teachers	Total Enrollment	Average Daily Attendance	Pupils per Teacher on basis of Total Enrollment	Pupils per Teacher on basis of Ave. Daily Attendance
Elementary—					
Brayton	2.7	92	77.7	34.07	28.8
Doty	6.5	165	149.5	25.38	23.0
Draper	7.08	204	184.1	28.81	26.0
Dudgeon	8.18	261	233.0	31.9	28.48
Emerson	25.2	784	701.0	31.1	27.8
Franklin	15.4	444	391.0	28.8	25.4
Harvey	7.77	234	202.8	30.1	26.1
Hawthorne	9.18	320	293.0	34.85	31.9
Lapham	7.4	255	215.3	34.3	29.1
Lincoln	13.8	460	395.7	33.3	28.67
Longfellow	19.2	586	533.5	30.5	27.8
Lowell	23.3	752	666.4	32.27	28.6
Marquette	9.77	353	297.4	36.13	30.4
Nakoma	10.2	262	202.0	25.68	19.8
Randall	25.3	842	753.7	33.28	29.8
Washington	7.46	214	195.0	28.7	26.1
Total	198.44	6,228	5,491.1	31.4	27.7
Secondary—					
Central Junior	19.3	502	457.2	26.0	23.68
Central Senior	32.0	766	647.9	23.9	20.24
East Junior	36.4	1,019	941.5	28.0	25.9
East Senior	42.4	1,223	1,023.5	28.84	24.1
West Junior	26.3	744	689.2	28.3	26.2
West Senior	32.5	954	853.2	29.3	26.25
Total	188.9	5,208	4,612.5	27.57	24.4
Special Education—					
Emerson Oppor.	2.5	40	31.8	16.0	12.7
Longfellow Oppor.	3.27	72	57.5	22.0	17.6
Longfellow Crippled	5.24	51	39.7	9.73	7.6
Doty Deaf	4.07	24	16.9	5.9	4.1
Total	15.08	187	145.9	12.4	9.67

TABLE V
TEACHING LOAD IN SPECIAL EDUCATION CLASSES

	Number of Teachers	Number of Pupils Enrolled	Number of Pupils per Teacher
Crippled	8*	52	6.5
Deaf	4	23	5.7
Exceptional	5	112	22.4

* Includes physio-therapist and other workers.

A PROGRAM OF NATURAL SCIENCE
FOR
GRADES FOUR-FIVE-SIX





A nature study class in Tenney Park.

C. CURRICULUM MAKING

- The motorist with a destination does not start his journey without road maps and guidance, or he will be lost on the by-roads of a little world. A sailor must consider the chart of the seas. So must the pupil follow a guide or curriculum. This plan includes the studies, the materials, and the way in which he works.

The curriculum of the Madison schools is being constantly studied and revised to meet the needs of the children. Teachers working in committees learn of the best material and methods, use them experimentally, and test the results carefully before they recommend for permanent adoption. Some fine work has been done by Madison's teachers in this field, work that has received favorable comment by recognized leaders in America. As a result, requests for the outlines of the Madison curriculum are coming in by mail each week from all parts of the country. The following is an excerpt from the annual report of Mrs. Ethel Mabie Falk, Supervisor of Curriculum.

"Curriculum Study a Community Contribution

"As in the four previous years of curriculum study, committees of teachers have made valuable contributions to the education which Madison provides for the children in its schools. Such study is accepted by teachers as a challenge. With their training and experience they are better equipped than any other group of

persons to determine the nature of the educational opportunities which the schools shall provide. The community expects and appreciates their leadership.

"Curriculum Problems 1935-36

"In their organized study of the curriculum this year, Madison teachers attacked the problems of:

- (1) Enriching the elementary child's program by the development of a science course.
- (2) Adjusting the arithmetic program to maturity levels for economy of learning.
- (3) Improving reading instruction by preventing and correcting deficiencies with special attention to individual pupils.
- (4) Discovering the nature of readiness for learning to read and providing a flexible program for grade one.
- (5) Planning a six-year program of studies for the junior-senior high schools."

• • •

ATTENDANCE					
Period	1	2	3	4	Total
Days present	38	45	43	50	176
Days absent	0	3	1	0	4
Times tardy	2	1	0	0	3
Height	55 3/4"	56 1/4"	56 3/4"		
Weight	68 1/2	70	75		

PARENT'S SIGNATURE

Period

1. *Mrs. J. Carlton*
2. *Mrs. J. Carlton*
3. *Mrs. J. Carlton*
4. *Mrs. J. Carlton*

Promoted to: *Grade 7*

Madison Public Schools
Madison, Wisconsin
GRADES 3, 4, 5, 6,
Washington Elementary School
Report of *James Carlton* Grade *6*
Year 1935-36 Teacher *Doris Roberts*

In order that a pupil may achieve a reasonable amount of school success, it is desirable for him to:

Grow in self-reliance.
Work and play well with other children.
Help with the plans and discussions of the class.
Work with considerable independence.
Discover the possibilities within himself.
Be in good physical condition.

The principal and teachers will be glad to discuss the above points with you in conference.

It is the purpose of this card to give the home as much information as possible regarding the progress of the child.

In rating each child's achievement we have taken into account his natural ability as well as the standards for the average pupil of the grade.

The child's happy adjustment to other children and his emotional and physical welfare have been given study, as well as his needs and abilities in the usual school subjects. It has been our aim to provide every child with the best conditions possible for his school success.

R. W. BARDWELL, Superintendent
Paul Groux Principal.

D. REPORTING PUPIL ACHIEVEMENT TO PARENTS

- For several years the principals of the elementary schools have been working upon the improvement of the "report cards" sent to parents. The practical question has been: "What does the parent want to know and what does he need to know about the progress of his child in school?" Studies of grading by percentages and by letters have shown that there is a great deal of fallacy in their apparent definiteness, and the tendency on the part of both teachers and parents to use them, no matter how fallacious they may be, as superficial incentives for superior work has gradually led to the development of a report that tells of the achievement and the general development of the child without lending itself to undesirable purposes.

The original card of this type devised in 1933 was revised during the past year by a committee of the principals, there being a card for the kindergarten, another for the first and second grades, and a third for the third, fourth, fifth and sixth grades. The last named report card is shown below.

E. EXCERPTS FROM PRINCIPALS' AND SUPERVISORS' REPORTS

- Each year the principals and supervisors report to the Board of Education essential information in regard to the work of their building or department. These reports are duplicated in full, and a bound copy is given to each principal and supervisor, as well as to each Board member. Thus all members of the administrative and supervisory staff are kept informed in regard to the plans and progress in school buildings and departments of the Madison school system other than their own.

It is believed that the reading of these reports proves helpful to the members of the Board of Education in making their decisions in regard to Madison's school plans and policies. It is also believed that the knowledge which the reports bring to staff members in regard to what is being done throughout the schools, and an understanding and appreciation of the plans and objectives of other members of the staff, will bring about the unity which is essential for a good school organization.

The Secondary Schools

- The following are typical paragraphs from the reports of the principals in the secondary schools.

CENTRAL JUNIOR-SENIOR HIGH SCHOOL, L. A. Waehler, principal:



"A problem that challenged the Central High community for years until it culminated in the securing of Breese Stevens Field, is again becoming annually more serious as Breese Stevens Field has become at our expense an all-city field. We urgently recommend that the Board of Education give impetus to proposals whereby the City of Madison might secure by purchase or trade the so-called Reynolds property lying just northwest of Breese Stevens Field or the so-called Conklin Ice House property lying just northwest of the City Water Works. Space for intramural, physical education and athletic activities is, if anything, much more needed for the young people of the crowded central part of the city than for those in the less congested outlying areas."

CENTRAL JUNIOR HIGH SCHOOL, Miss Vida V. Smith, assistant principal:

"A serious attempt has been made to develop a better pupil-teacher relationship through the home room activities. Our underlying principle to establish this better relationship has been to have the home room teacher become better acquainted with his pupils and they in turn become better acquainted with him and with each other. In order to make this possible, the home room and club activities have been of a very informal nature, teachers keeping in the background and pupils doing most of the planning, organizing, executing, and evaluating the results of their achievements."

CENTRAL JUNIOR-SENIOR HIGH SCHOOL, Grant C. Haas, guidance director:

"The regular activities of testing, record keeping, statistical work, educational, vocational, and social counseling, conferences with teachers, parents, and with public and private agencies were conducted as in previous years.

"Group talks were given in home rooms, and talks on guidance were given to PTA groups and to parents of pre-school children."

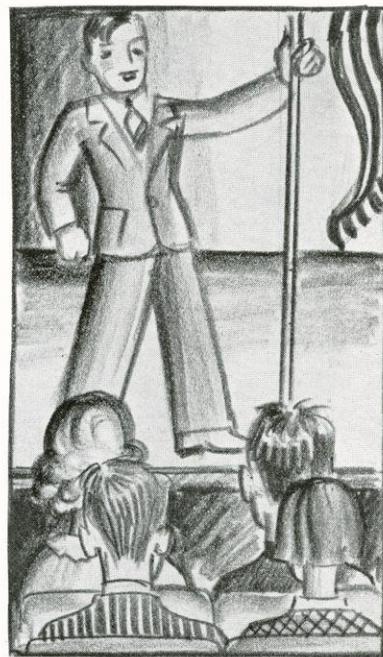
EAST JUNIOR-SENIOR HIGH SCHOOL, Foster S. Randle, principal:

"The general objective was the same one that we have had for a number of years. The desire was to improve the organization, administration and supervision of the school, and to encourage, in every possible way, the strengthening of the school work.

"While it seems necessary for us to keep our teaching load in line with that found in schools organized in other cities of our size, it must be realized that better work could be done if such was not the case. The trouble seems to me to be that we have been increasing the teacher load while using the same teaching technique and teaching organization that we had used with a smaller pupil-teacher ratio. Teaching load could, perhaps, be successfully increased further if teachers were given some clerical assistance during at least part of their school day."

EAST JUNIOR HIGH SCHOOL, Miss Louise H. Elser, assistant principal:

"This year a definite attempt was made to have an auditorium schedule at the beginning of the school year and to carry out the idea of more pupil participation. In spite of the several forced vacations, the program was carried out so that on each Tuesday there was a program. Many weeks there was an additional program on Thursday. On the whole there was a greater interest and a finer appreciation by the student body."



EAST JR.-SR. HIGH SCHOOL, Miss Margaret Fosse, guidance director:

"Each year the home room guidance principle is becoming more accepted as a part of the school life, and more of the teachers are attempting to carry out good programs. The vocational material in the guidance office is in constant use, both for home room programs and for regular class assignments. The English department has included vocational information, personal interviews, applications, etc. in some of its classes, and the career pamphlets and books are in constant demand.

"This year the Junior High School home room reorganization was begun by Mrs. Peterson and carried on by the present guidance director with her committees. A seventh grade *Know Your School* orientation program was worked out and will be introduced next year."

WEST JUNIOR-SENIOR HIGH SCHOOL, Volney G. Barnes, principal:

"The school year for West was greatly interrupted by an epidemic of scarlet fever, a fuel-shortage, and a music tournament. These interruptions make the report on the accomplishment of the school rather pessimistic. The first two interruptions were unavoidable. The last, however, was such as to cause one to wonder whether it is worth while. The tournament comes at a time of the year when school work is being brought to a close. The number of pupils directly affected is one-third of the school. They must necessarily be dismissed from class work. The tournament has been over for a week, but the school has not settled down. One sometimes wonders if our attention to extra-curricular activities does not lead us in a path that results in a nervous tension too high for the pupils."

WEST JR. HIGH SCHOOL, LeRoy E. Luberg, assistant principal:

"Another general problem which is most significant for junior high teachers is recognizing sufficiently the whole child rather than his activities in just one subject or organization. Our seventh grade teachers have set the pace in solving this problem because they have subordinated class projects to the larger program of the child's entire school life. This has been due, in part, to the system which allows them to teach all of their home room people in the three academic subjects. Another advantage they have is a comparative freedom from the credit system and the rigidity which seems necessary to fulfill the requirements for high school graduation and college entrance. It would be well for us to extend this same freedom in the eighth and ninth grades."



WEST JR.-SR. HIGH SCHOOL, Miss Lillian A. Reinking, guidance director:

"Perhaps the greatest development this year has been the careful supervision of the placement and programming of ninth grade pupils. For the first time all incoming ninth graders were tested before they chose their electives. Special English and Mathematic classes were provided also for the non-academic pupils. It is felt that this attention to suitable electives and proper placement has reduced the per cent of withdrawals from failures in ninth grade subjects, but no data can be offered until the close of the grade period."

The Elementary Schools

- The following are brief excerpts from the reports of the principals of the sixteen elementary schools, six of which, being of relatively small size, have one principal for two schools.

BRAYTON SCHOOL, Marie Hagen, teacher and principal:

"The enrolment of Brayton School has varied considerably again this year, having had as many as 112 pupils on our registers while only 69 remained with us during the entire year. In the first grade alone there were 31 pupils enrolled with a constant group of 11 pupils. The average daily enrolment in this grade was 18.3 and the average daily enrolment for the school was 83 pupils."

DRAPER AND DUDGEON SCHOOLS, Lucile Clock, principal:

"An individual folder was started for each child. A Binet test was given to all children who had not been given one (about half the school). Two study groups were organized; one for preschool-kindergarten mothers and one which made a study of "Character Education". For the first time, Draper PTA sponsored a Mother-Daughter and a Father-Son Banquet. These were so successful that they will doubtless be an annual affair from now on.

"We have continued our plan of the past several years of gathering as much information as possible on the individual child and adding it to the case study folders of the children. We have continued the use of the shack for a gymnasium. There is a crying need for an auditorium as soon as it can be provided."



DOTY AND WASHINGTON SCHOOLS, Pearl Leroux, principal:

"The organization of the regular class work for the Doty and Washington Schools has been similar to that of the previous year. Because the schools are so near together, some of the work of the two schools was planned as one unit. Through this plan more efficient work was done at a somewhat lower cost.

"This year special attention was given to the organization in the two buildings. Remedial reading was emphasized throughout the year. The program was planned so that the classroom teacher could do the remedial work with her own pupils. A special effort was made to continue with the splendid aims and high ideals which Miss Edgar encouraged and emphasized."

EMERSON SCHOOL, Leo P. Schleck, principal:

"Throughout the school year teachers have been conscious of the character needs of the children. Four desirable traits have been emphasized; viz., honesty, cooperation, courtesy, and sincerity. These were developed more or less indirectly through subject matter, active participation in school clubs, auditorium activities, girl scout work, athletic games, playground activities, boys' patrol, girls' patrol, movies, radio programs, and the like. As a result of this varied program of activities, a high grade of citizenship training has resulted."

FRANKLIN SCHOOL, S. A. Oellerich, principal:

"Test results and classroom procedures have indicated very definitely the success of the remedial work as carried out this year in reading, arithmetic, and spelling. For example, in one of our intermediate grades there were 19 pupils who were more than a year below their standard reading grade in September 1935. By analyzing individual difficulties and maintaining open records of progress which were discussed frequently during the year with individual pupils, weaknesses were discovered and progress noted."

HARVEY AND MARQUETTE SCHOOLS, Emily R. Parsons, principal:

"Because of the full-time teacher in art and dramatics, more has been accomplished in those subjects than in any previous year. The work has been closely related to the social studies, English, reading, safety education and other school subjects. An attempt has been made to relate art to every subject where it will help the pupil to express himself better. The several puppet plays which were given, offered opportunity for initiative, creative expression, and training in citizenship. Going to books for original source material has given children avenues of approach which led to an appreciation of subject matter, and to research to get true ideas about costumes, and for encouragement in the correct use of spoken English."

HAWTHORNE SCHOOL, Velmer D. Pratt, principal:

"Remedial Reading. The purpose of this work was to improve reading deficiencies, to change reading attitudes and to remove objectionable reading habits. This year, because of the severe winter and so much illness, the absent child became a reading problem and much time had to be given to making up lost work.

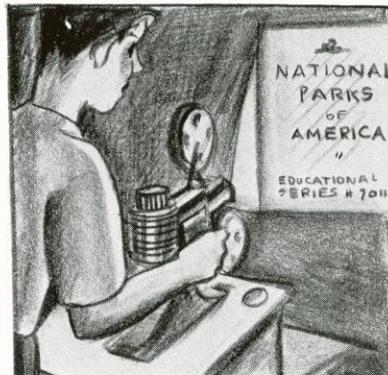
"In the first three grades the most effective results were obtained by reading many books containing easy material, although individual help in phonics, vocabulary and phrase work played an important part. In a few cases a feeling of confidence had to be built up. Some of the improvements noted were: 1. Slow readers read more fluently because of much repetition of vocabulary in easy readers. 2. Marked improvement in oral reading. 3. Improvement in rate by slow jerky readers. 4. Some improvement in one case where pupil seemed to lack phonetic sense."

LAPHAM SCHOOL, Shirley D. Almy, principal:

"The special work of all grades this year was with reading difficulties and the remedial work. The work of the first grade and kindergarten included a survey of the physical factors as they influenced the reading readiness, and an inventory of social attitudes for each child. The most extensive remedial reading program was carried on in the second grade with special material purchased for the purpose. The number of serious reading difficulties was reduced from twenty-three to three."

LINCOLN SCHOOL, Renette Jones, principal:

"Under the leadership of a very conscientious University student we again have a good orchestra. Pupils have entered all art contests — many of them winning prizes. We have been able to have our librarian three days a week this year. Heretofore our library work was crowded into two days. The fathers in our PTA presented the school with a good machine. Several of the older boys soon learned to run it. We have stressed 'English in all subjects'. To get anywhere in good English, pupils must get everywhere in good English. This year tests were given in both the sixth and eighth grades. Both the tests and the record sheets will be of value to the teachers of seventh and ninth grades."



LONGFELLOW SCHOOL, C. Lorena Reichert, principal:

"Much effort was put forth this past year to develop a cooperative type of organization in the intermediate grades. The home room teachers taught arithmetic, English, and the social studies, while music, natural science, and physical education were taught by teachers who were especially interested in these subjects. It was rather difficult at first to find time enough in our already crowded curriculum for all the subjects. We have accomplished this partly by reducing the number of subject divisions. Instead of having separate divisions for reading, language, spelling, and penmanship, or for history, geography, and civics, we have grouped these under the two headings of English and social studies. This allowed greater flexibility in arranging the daily program. This type of organization has allowed more time for natural science,

a subject in which we find the intermediate grade children extremely interested. The work in science has done much for the enrichment of the curriculum for the child. It has allowed him to explore different aspects of his environment."

LOWELL SCHOOL, Annie D. Axtell, principal:

"Our greatest problem this year has been the results of contagious diseases. Several children had scarlet fever, mumps, and chicken-pox which necessitated an absence from school of ten or eleven weeks. Many others contracted one or two of the diseases. Frequently a child was required to remain at home as a contact case. To this absence caused by contagion was added a large number of days due to extremely cold weather. While our monthly attendance has been around 700, one month it dropped to 668. This absence has made it impossible for the children to accomplish the work of the grade. Because it is necessary for the weaker pupils to repeat most of the subjects, our retardation problem is a serious one. Special programs will be made out for many of these pupils next year. By this plan and with a great deal of individual attention, we hope that some of them will be able to overcome their loss."

NAKOMA SCHOOL, Walter W. Engelke, principal:

"Nakoma School took part as one of the experimental centers in developing the new curriculum for science in grades 4, 5, and 6. Although handicapped by lack of materials, the teachers in these grades (with the assistance of the science teacher in grades 7 and 8) planned a half-hour each day of science information and understandings which would prove suitable and interesting to the children. The results of this research and experimentation will be incorporated in a series of science units for next year."

RANDALL SCHOOL, Alice E. Rood, principal:



"An experiment in ability grouping based upon maturity and work habits was tried out in the third grades. Twenty-seven children who were too immature for third grade work but were bright, were grouped together and the third grade course of study modified to meet their needs. At the end of the year these children showed they had grown enough to be promoted to a special fourth grade next year. In another year I believe the majority of these children will be able to do regular work.

"Remedial reading programs have been carried on in all grades beyond the first. In grades two and three, one-half hour each day has been set aside for special work with those children who need it. In the upper grades remedial groups were worked with while the rest of the class worked in the library. In addition to this, special instruction in reading of science materials was given by the science teachers."

Quotations have already been given in this report from the reports of the Supervisor of Attendance, Miss Lewis, and the Supervisor of Curriculum, Mrs. Falk. The following are excerpts from the reports of other supervisors.

CHILD GUIDANCE AND SPECIAL EDUCATION, Pauline B. Camp, supervisor:

"Guidance. The Madison Public Schools endeavor to give careful study to every child in order that he may be placed where he will achieve the best personal and educational development. The central office, through the guidance staff, assists principals and teachers in the study and placement of children through the following services:

1. Group testing; 2. Individual or Binet testing; 3. Behavior clinic.

"School for the Deaf. The degree of deafness varies. Twenty-two are sufficiently deaf to need special speech and language development. All need the assistance of lip-reading in order to receive oral instruction and information. Five are classified as hard-of-hearing. All were tested at the beginning and at the end of the school year on the audiometer. Five showed deterioration in hearing ability.

"The Orthopedic School.

Enrolment

Orthopedic School -----	52
Out-patient -----	23
Total -----	75
Withdrawn during the year --	8

Improvement

Out of body casts and walking	2	
Learned to walk alone -----	1	
Learned to walk with crutches	1	
Learned to climb stairs -----	3	
Miscellaneous motor skills (outstanding) -----	6	
Discarded braces, crutches, etc. -----		5
New braces applied for first time -----		8
Total -----		26



"Classes for Intellectually Subnormal. There are two classes at Emerson; an intermediate group and an advanced group. Longfellow has three classes; a kindergarten, an intermediate, and an advanced group. In all classes except one the teaching approach has been through projects.

"Speech Correction.

Enrolment

Number of stutterers -----	58	Number of voice defects--	5
Number of sound substitutions	225	Number of dialect-----	2
Number of articulatory defects	149	Total -----	439

A definite time was allotted to each building for speech correction work. This period was uninterrupted by other work assignments. A number of speech cases were referred for a neurological examination at the Out-Patient Clinic, University of Wisconsin Hospital. Several were taken to the Speech Clinic at the University for audiometer tests."

WISCONSIN ORTHOPEDIC HOSPITAL SCHOOL, Charlotte Kohn, principal:

"The closing of this school year marks the end of the fifth year for the school department of the Wisconsin Orthopedic Hospital. It is interesting to note that in that time the school enrolment has increased 50%—the enrolment this year having been 161 boys and 145 girls, making a total of 306 original enrolments, including returned children; total enrolment 366 children. Out of this number, 48% had not been enrolled in any public school this year before entering here. About 25% of this number came from parochial schools, leaving 23% who had not attended any school before coming here. 60 children previously enrolled here returned during the year, some once, some twice, and several three times. Those returning two and three times meant that this was the only school they were attending. Often, when possible, they carried on their work at home, and continued upon their return to this school."



ART DEPARTMENT,

Lucy Irene Buck, supervisor:

"With the creative approach becoming more acceptable in all phases of education in our schools, the impulse to create something of merit and to adventure with one's hands in chalk, paint, clay and metal is receiving more sympathetic understanding from parents and teachers."

HEALTH EDUCATION DEPARTMENT,

Fannie M. Steve, supervisor:

"The staff worked on and completed the first part of the tentative syllabus for junior and senior high school boys and girls. This required considerable research and proved a valuable project.

"In the grade buildings where one teacher has been responsible for the physical education work we found a better and more interested response.

"Boy patrols, organized in each grade school early in the year, did their usual fine work. They took part in a forum broadcast and several safety programs



as well. Their annual theater party was given them by the AAA on Thursday, June 11.

"Nutrition centers had a larger enrolment the past year than they had the previous year. These children were cardiac cases, tuberculosis contacts, and nervous and undernourished cases."

HOME ECONOMICS, Loretto M. Reilly, supervisor:

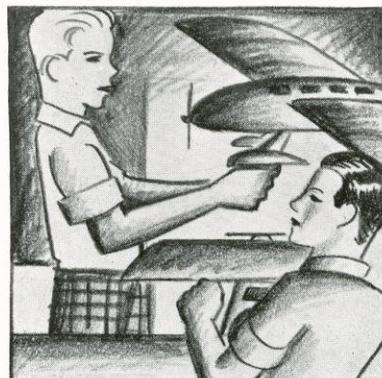
"Parents and some teachers are showing a more sympathetic attitude toward the aims and offerings of the home economics departments. We find this reflected in student elections. More and better students are enrolled. And at the close of this year several teachers report that students are giving evidence of better understanding of their part as consumers—and that open-mindedness is recognized as a very necessary attribute.

"It is increasingly apparent that homes are teaching less and less in proportion to learning needed for immediate personal living. Where home has failed, the school finds it difficult to overcome untidy and careless habits of work."



INDUSTRIAL ARTS, T. A. Hippaka, supervisor:

"Assistance has been given the boy in order that he might better find himself and that he might discover his interests and abilities. In order to be of service to the boy in this respect, a considerable variety of classes has been planned. Occupations are studied, and related information is acquired. In grade seven the boy takes shop drawing, woodworking, bench metal work, and electricity. In grade eight he has exploratory experiences in mechanical drawing, woodworking, aeronautics, and sheet metal work. The ninth grade offering consists of auto mechanics, applied drafting, pattern making, home mechanics, printing, and architectural drawing. When the boy reaches the senior high school level he wishes more experience in certain fields. He now has the opportunity to pursue his chosen field further."



MUSIC DEPARTMENT, Anne E. Menaul, supervisor:



"The children have sung many songs for the sheer enjoyment of singing and have correlated much of the vocal music with the social studies. They have developed the ability to read music with some degree of skill. Children in lower grades memorized from 60 to 80 songs during the year. In the intermediate grades many songs were given in unison, two and three parts. In the junior high school careful attention was given to classification of voices and selection of material suited to the limitations of the changing voice. Two, three and

four part selections were used. Senior high schools were given four, five, six and eight part song material."

Part II

THE SCHOOL AND THE COMMUNITY

- As a city grows there is a tendency for its public school system to become an isolated section of its current life. The best school is the one that not only opens its doors to its people, but that also goes out into the community and uses its bountiful resources in providing the most vital learning for its boys and girls. This the Madison Public Schools strive to do.

A. AMERICAN EDUCATION WEEK

- American Education Week saw the schools go into the community, as well as parents coming to school. Not only did open house offer a special invitation to parents and other citizens, but services of school children went out to many city clubs. Skits, talks, and music made up the programs of pupil groups who entertained business and professional men.

Besides the regular school life of city children, many special events were planned, such as the large rallies in the three high schools. Drawing from the elementary schools in each area, the high schools presented programs in the form of a pageant, moving pictures of school activities, and vaudeville sketches.

Editorials in the two local newspapers carried the following expression on this local and national observation of American Education Week.

There is something very profoundly significant underlying the purpose of this national school celebration, especially significant for the adults of the nation. . . .

As a result of it all, many more parents will ponder the value of universal education. In doing so, education and the maintenance of a democracy will become clarified to all of them. . . .

Universal education, carried on into adulthood, constantly available to all who wish to have its benefits, is a foundation stone of democracy. . . . The more familiar parents become with our schools and their children's work in them, the more vigilantly they will watch over the security and integrity of one of democracy's props. —Capital Times

Education Week is simply a convenient device by which the public is enabled to observe what the schools are doing and to appraise their contribution to America's way of life. It is a good time for all of us to pause long enough to note the manner in which our schools are functioning and the improvements in educational methods which have been made in the last few years.

—Wisconsin State Journal



B. THE CENTENNIAL COMMENCEMENT

- Symbolizing the thousands of graduates that have come from Madison public schools, 800 seniors from the three secondary schools of the city participated in a spectacular baccalaureate ceremony in June as part of a state-wide observation of Wisconsin's one hundredth birthday.

Arrayed in traditional gray caps and gowns, graduating classes from East, Central, and West moved slowly down the greensward of Camp Randall stadium through their respective arches toward their places at the end of the field.

The long processional, including graduates, the three school bands and choirs, symbolized what Madison has been doing through the span of years in educating its youth. In a tone of dignity and solemnity, Governor Philip La Follette addressed the graduates, charging them with the duty of becoming good citizens of a fine state.



C. A GIFT TO UNDER-PRIVILEGED CHILDREN

- There's a fashion show in Madison with almost 800 dolls modeling in the annual pre-Christmas party this year. . . .

The dolls, silent members of the Empty Stocking Club, are patiently waiting until Christmas morning. Then many small hearts will beat faster, and many pairs of eyes will shine when almost 800 small girls find these fashionably dressed dollys in their stockings.

So wrote a feature writer in The Wisconsin State Journal concerning the great project of Madison's high school children for weeks preceding the holidays. Miss Cassie Lewis, Attendance Supervisor, is in charge of dressing the hundreds of bisque children.

D. A MADISON CHRISTMAS TRADITION

● Silent night closed in late Sunday as lights dimmed and chit-chat of at least 5,000 men, women, and children ceased in the capacious Capitol rotunda.

Men took off their hats, some of them sheepishly late, stomped on cigarettes and cigars, mothers clutched at mittenened, unmuffled children, hushed them as soft voices sounded the start of the story of the Nativity.

Crammed into every nook and cranny, crowding the Capitol's halls, the thousands watched and waited. Knowing well the story of a birth in a manger, they might have thought, as they stood in the mighty marbled building, this is the kind of a place in which He *might* have been born.

But He was not born in such a place, as they soon learned again.

Smoothly, then with sharper tones, "Gloria Patri et Filio" rang out over the halls. From then on the story of the birth of Christ was simply told in effective pantomime by Madison's students. Shepherds knelt beside far-come kings, whitened angels showed up sharply in well-lighted niches.

This story from The Wisconsin State Journal on December 14 is typical of the tribute paid to the beautiful pageant of the Nativity given each year by the high school pupils of the public schools. For fourteen years the story of the Holy Birth has been told in song and pantomime until it has become part of Madison's Christmas tradition. The ever-moving carols and hymns tell the simple story in one of the loveliest settings in the nation—the majestic state capitol.

Miss Anne Menaul, Supervisor of Music, has been in charge of the general production from the beginning, when it was first presented in the Capitol Park.



Over two hundred voices make up the main choir which wafts the song upward until it is caught by the antiphonal choir in an echo reminiscent of that silent night in the Bethlehem hills.

The pageant has given many departments in the schools an opportunity to do practical work along special lines. The production calls for aid from music, home economics, art, dramatics, manual arts, and journalism departments.

E. COMMUNITY USE OF SCHOOL BUILDINGS

- The school buildings of the city represent an investment by its people of over three million dollars. The question is sometimes raised, "Are these school buildings used for the maximum benefit of Madison citizens?" The answer is in the following report of how they were used during the past year.

1. School Use of Buildings

- From eight o'clock in the morning until six o'clock in the evening of every school day the buildings are completely occupied with the activities of school children under the direction of the building principals. In that period of the day between the close of school and six o'clock the buildings, and especially the gymnasiums and auditoriums, are teeming with vigorous life of child and youth—athletic games, dramatics, choruses, matinee dances, club meetings—thousands of children getting from these activities healthful exercise and occupation after school each day. Saturday mornings are also set aside for the pupils' use of school buildings.

2. Adult Use of Buildings

- At six o'clock school days and at twelve noon on Saturdays the control of the buildings shifts from the building principals to the superintendent's office. After these hours the buildings are no longer available to school children—except for occasional programs or projects directly sponsored by the schools. From six o'clock on buildings are made available to adult groups, to whom are issued permits from the superintendent's office for the use of specific rooms for definite hours. The following is the tabulation of the uses of school buildings during the past year by groups outside of the school.

Parochial School Athletic Groups	65
Pre-School Kindergarten Mothers Clubs	41
Civic or Political Organizations—	
Attic Angels	52
Workers Alliance	44
South Side Band	31
Community Union	14
South Side Men's Club	12
National Union for Social Justice	9
Church Groups	5
W. P. A.	5
Civic Music Association	4
State Department of Public Instruction	4
Dane County Rural Schools	3
Madison Civic Theater	3
Madison New Theater	3
Grieg Chorus	2
Southern Wisconsin Teachers Association	2
Wisconsin Conservation Department	2
Townsend Old Age Revolving Pensions Group	2
A Citizens' Committee	1
Summer Round-Up Group	1
Franklin School 8th Grade Mothers	1
Madison Assn. of Public School Teachers	1
Group of Madison School Men	1
State Bureau of Personnel	1
Wisconsin Vocational Association	1
Wisconsin Interscholastic Athletic Assn.	1
Cancer Clinic	1
Wisconsin High School Forensic Assn.	1
Wis. Institute of Cooperative Economics	1
Committee for the Centennial	1
State Journal Empty Stocking Club	1
Capital Times Kiddie Camp	1
Joint School District No. 7	1
Joint School District No. 8	1
Olbrich Memorial Group	1
League Against War and Fascism	1
Madison Federation of Labor	1
Cosmopolitan Club	1
Civic Thanksgiving Committee	1
Governor's Safety Committee	1
Firemen's Local Union No. 311	1
American Labor League, Inc.	1
	221
Miscellaneous Groups—	
Mr. Church & Mr. Klose (Summer music instruction)	69
Veterans of Foreign Wars Drum & Bugle Corps	25
Icor Organization	2
Sholom Aleichem Branch No. 155	1
Wisconsin School of Music	1
Audrey Medaris School of the Dance	1
Nakoma Homes Company	1
Beecroft Bondholders	1
National Drossner Defense Committee	1
Ygdrasil Literary Society & Sons of Norway	1
Zor Temple	1
	104
Total	1651

Part III

THE MEMBERS OF THE BOARD OF EDUCATION

- Seven members of the Board of Education work harmoniously for the good of the children of Madison. A variety of interests among the group blends to bring to the child the best in modern education. Doctor, lawyer, merchant—all chiefs in their profession—work for the welfare of the youth of Madison.

Meetings of the Board of Education are scheduled the first and third Mondays of the month at 7:30 o'clock in the evening at 22 West Dayton Street. Around a long table in the main room of the administration building sit these members with R. W. Bardwell, Superintendent of Schools; Earl D. Brown, Secretary of the Board; Marcus E. Johnson, Supervisor of Buildings and Grounds; Miss Irma V. Kahle, Secretary to the Superintendent.

Visitors have always been welcome at these meetings. The Board is especially hospitable to those who would make suggestions and requests for school improvement. An informal air in meeting brings forth the individuality of each member which, when synchronized, works in a steady, sincere effort to promote education for better citizenry.

HERBERT C. SCHENK holds the distinction of serving the longest on the Board of Education—thirteen years. A man who believes thoroughly in public education, Mr. Schenk upholds a curriculum which has for its purpose training for life. Along with his common sense philosophy there break forth the quips and humor which make Mr. Schenk a source of occasional gaiety and merriment at the Board meetings.

He brings to the Board the title of state assemblyman, annotated with the word *liberal*. His experience on many of the city's other boards has given him good background in city government.

JOHN P. BUTLER, President of the Board of Education, is a veteran member, having served continuously for twelve years. He graduated from the old Madison High School in 1900, having previously attended Draper School.

Distinction on several counts comes to the Board with Mr. Butler. In 1934 he was mayoralty candidate. He has been a resident of Madison since 1891, and has been affiliated with organized labor since 1904.

GLENN W. STEPHENS has served ten years on the Board of Education. Mr. Stephens has proved himself invaluable in many respects, the most outstanding being his ability to aid in the legal aspects of the Board's business. His faculty of summing up a situation and sensing its many-sidedness has been most helpful. He was the first to insist that fire alarm systems be installed in accordance with the recommendation of the city fire chief. This shows his evaluation of such a situation.

MRS. JAMES W. MADDEN, appointed to fill the place left vacant by the resignation of Miss Regina Groves, had served on the Board of Education for nine years previously. Mrs. Madden comes to the group as a former teacher and as a parent. Having taught in the old Doty School when it was a four-room building, Mrs. Madden has seen the gradual growth of the city schools. With two grades in a room at that time, the only feminine member of the present Board has also observed the schools through the eyes of her daughter and son, who have gone through grades and high school in Madison.

HOLDEN M. OLSEN is serving his second term on the Board of Education. Working for the State of Wisconsin, Mr. Olsen's official title is Supervisor of Probation and Parole. He has served on the Auditing Committee of the Board and several other temporary committees. Mr. Olsen has been a resident of Madison since 1906. Mr. Olsen, too, has children in the Madison schools.

DR. R. W. HUEGEL and DR. J. S. SUPERNAW, dentist and physician, are the custodians of the child's health. Both of them have been instrumental in clarifying and organizing the health program in the public schools. Working with the Board of Health, they have been most helpful to the Board of Education. Dr. Huegel's health interest goes even a step farther, for he has been a promoter of recreation for both children and adults. He has also been the chief official of most of the basketball and football games in the secondary schools. His accomplishments in dental research have brought him an honorary degree of Fellowship in the American College of Dentists.

DR. J. S. SUPERNAW, the newest member on the Board of Education, has brought to the group the fresh viewpoint of one who has been looking at the schools from the angle of parent and citizen, rather than as a Board member. His perceptions as a person who has been standing farther away from a picture have been helpful in many ways. Visiting schools, observing conditions under which Madison children study and play, and showing limitless enthusiasm have made him invaluable on the Board.

Part IV

A SURVEY OF THE PUBLIC SCHOOL BUILDINGS

Madison, Wisconsin

● For several years the Board of Education of Madison have had before them the problem of providing more adequate and healthful housing for the increasing number of children attending the public schools of the city. They have recognized that good school building facilities were not equally available to all the people. However, the economic depression which started in 1929, made any major correction of this situation very difficult, if not impossible. When, in June 1936, they received from the East Side Business Men's Association a petition for a new elementary school building, they concluded that the economic situation was no longer a deterrent. In order to provide themselves with as much exact information as possible in regard to their school buildings, they voted to ask the State Department of Public Instruction to examine all school buildings, and investigate other factors related to a school building program. This survey is the result of that request.

School Building Survey

... of ...

Madison, Wisconsin

1936



SURVEY COMMITTEE

J. F. Waddell

J. T. Giles

H. W. Schmidt

Department of Public Instruction

Madison, Wisconsin

JOHN CALLAHAN
State Superintendent

THE BOARD OF EDUCATION
Madison, Wis.

Gentlemen: I take pleasure in submitting to your board the School Building Survey report, request for which was made to me some time ago. I am sorry that this report was somewhat delayed, but several other surveys had precedence over yours; this, in addition to a large amount of office work has prevented the committee from completing the work sooner but I am sure the delay will not prove serious.

As stated elsewhere, Madison's location between the two lakes, its "bottle neck", presents some interesting features, particularly as regards the city's school population and distribution of the older school buildings. In connection with Madison's steady population growth, this situation has led to some problems which have been under consideration by the survey committee for some time. I hope this study and its recommendations will serve you in good stead.

It is understood of course that the findings as contained herein may be accepted or rejected or modified as your board sees fit; this was a part of our agreement. It was agreed however that this report would be published in full and made available to the citizens of Madison. As the recommendations are based upon very objective data, I am in the hope that the former will be valuable to you and may be accepted as stated.

I have appointed J. F. Waddell, J. T. Giles and H. W. Schmidt to serve as the survey committee and will let their report speak for itself.

Very truly yours,

JOHN CALLAHAN
State Superintendent

INTRODUCTION

- The committee, for some time, has been engaged in collating and studying a large amount of data, much of which has been prepared by Supt. R. W. Bardwell and his staff. Other material has been furnished by the Association of Commerce, the Wisconsin Telephone Company, the Madison Gas & Electric Company, the State Board of Health and others. This material is all objective and has served as a basis of the committee's work. Much of it is presented later in either tabular or graphic form so that the reader may become familiar with the "raw" material fundamental to this study.

The committee will treat the survey under a number of sections such as The Present School Buildings, an inventory section; Enrollment Statistics; Past and Future Trends; etc. The section on Recommendations will likely be the most interesting and in this connection it may be well to state the committee's attitude in this respect.

It is to be understood that the recommendations are in no sense mandatory and the Board is not obligated to accept them. They may be accepted in part or they may be rejected as a whole. At the same time they are based upon objective considerations in the main and the subjective elements eliminated so far as it was possible to do so. For these reasons the tabular and graphic materials are of importance here and they are presented rather fully as basic material.

The whole report is submitted in a helpful spirit and as unbiased judgments and it is hoped that it may solve in part if not as a whole Madison's rather involved and perplexing school building problems.

THE COMMITTEE

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December 30, 1936.

Section I

PRESENT SCHOOL BUILDINGS IN GENERAL

● It would evidently be out of the question to formulate any future school building program without first determining the existing building facilities, in other words to take an inventory both as to quantity and quality.

Commercially this is an easy matter; one records the number of articles and their value in terms of dollars and cents. Unfortunately this same procedure cannot be followed in a school building inventory, though the number of school buildings is known. The various elements which go to make up a school plant have little quantitative value and we have no monetary or other objective unit which may be used in summation. But very important are the "values" which attach themselves to the various school building elements and which ordinarily are described as good, fair or poor. One cannot very well add up these values to get a final total judgment.

This difficulty has been overcome by educators by the development of a so-called "score card". This card, which by the way is not a card at all, is universally used by survey and research people to determine what these subjective and rather elusive values are. The "card" consists of a tabulation of those elements which make up a complete school plant from the grounds upon which the building stands to the attic space of the building itself. These items are then recorded in terms of their existence, their fitness to meet needs or standards and their condition. On the basis of previous analyses and judgments, tested out under working and field conditions, each separate item

recorded has been given a numerical value—the sum total of all the items recorded is the "score" of the school plant.

The usual standard score is 1,000 points divided among five main sections which in turn contain 50 subdivisions. The latter again are split into several hundred minor items. Due to the great number of subdivisions and the objective standards listed, the personal equations or subjective judgments are largely eliminated and the final mathematical sum or score represents as objective an evaluation or "inventory" as is possible without a most minute and detailed study of each element. These values are therefore universally accepted and form a basis for a part of the survey studies themselves. In this instance the Wisconsin Score Card for city buildings has been used.

Three observers score a building independently and the median or middle score is made of record for the committee's use. In accord with the previous explanation it is no uncommon thing to find that the scores of the three observers vary only 1-2%, frequently less. For example one school was given the following scores: 713, 725, 725; another 549, 543, 523 and still another 624, 610, 620. The objective character of the record will be apparent.

As the possible total score for any building is 1,000 points and represents thus 100% efficiency for the school plant as a whole, the score for any building may be translated into percent effectiveness by dividing the point score by ten. Thus a total score of 892 points may be thought of as 89.2% of stand-

ard or effective. The individual item scores may of course not be so translated but must be calculated in percents by determining the ratio between any point score and its correlative standard. For instance if the item of Placement were given a 12 point score its percentage score of standard would be 12/42 or 28.5%.

It has been found that any school plant as a whole which scores over 850% is considered a very good one; if it scores between 700 and 850 points it is good, while one which merits a score between 550 and 700 is a fair or passable one. Any plant which rates less than 550 points is usually one which has outlived its usefulness and extensive repairs and remodeling will not be paying investments—the structure should be abandoned at an early date and be replaced or other disposition made of it. This matter will be referred to later.

In order that the reader may get some idea of the standards involved in the scoring judgments, a few of the more important ones will be briefly discussed here and the relation between such standards and some of the existing conditions commented upon. Table I gives the score records for each building for 31 main items.

I. Site

This item includes such matters as accessibility, safety, sanitation, environment, size, condition, etc. Without going into a mass of detail only a few of these items will be discussed here.

Accessibility is not rated high among Madison's elementary schools and this in part is due to the peculiar geographical location of the city and the erection of school buildings on the old "ward representation" basis. Judicious district boundary lines have helped out in some instances but little can be done about schools such as the Doty, Lapham

and Marquette schools whose scores here are 8, 5 and 5 points respectively (standard is 19). In the same class is the Dudgeon school, which is at the extreme western end of the district and eight-tenths of a mile from the eastern end; the width of the district is about one-third of a mile. The score of this item is 5, the same as the Lapham and Marquette schools. It was probably expected that city annexation of areas such as Westmoreland, Briar Hill, Arlington Heights, etc. would take place; as it is, the school is badly off center. It may later develop into a better situation. Maps of these districts will show these conditions; nor can present boundary lines be changed materially to help out the conditions.

2. School Grounds

This item which includes size, form, playgrounds, condition, etc. does not score high except for the Nakoma, East and West high schools which are given a standard rating. Nearly all sites are too small and do not offer sufficient space for either a proper setting of the building or for recreational activities. The accepted standard is 150 sq. ft. of playground area per child. This in connection with indifferent soil and playground covering has reduced most scores to a very low level with the Washington bringing up the rear with a 41% score; the Dudgeon school received the highest score next below that of the Nakoma school. The Franklin, Lowell and Lincoln schools are on a par with 44-45 points out of 54.

3. Building Construction

Building construction refers to the general construction of the school, its type, material, corridors, stairways, basement, decoration in general, etc. The range from standard, 250 points, is considerable—from 238 for the West

high school to 101 for the Draper. All kinds of types are found with the "square box" type predominating. Little attention has been paid to appearance as regards the older buildings but some of the newer buildings show up much better in this respect.

Stairways and corridors are heavily penalized, particularly in the older buildings such as the Hawthorne, Lapham, Washington, Brayton, etc. Attics, in some instances are used for storage and basements in these older structures are all scored as poor. Corridor and general decorations, in many instances, are also penalized due either to improper colors or to soiled condition. The color should be such as to reflect a maximum of light as corridors, as a rule, are dark and not supplied with much natural lighting. However it is understood that much of this will be corrected at an early date and as funds are available.

4. Class Rooms

This item includes size, construction and condition of floors, walls and ceilings, window lighting, blackboards, decoration, etc.

The Brayton, Draper and Washington schools have the unenviable distinction of being credited with less than 50% of standard while the West high school leads the list with a 95% score, a very good showing. The Lapham gets a 55% score and the Dudgeon 92%, the latter the best of the grade buildings with the Emerson and Lowell schools close seconds.

Floors as a rule do not rate very high due either to the old type with their cracks and poor condition or due to the floor treatment which leaves the floors very dark and soiled in appearance. Particularly poor are the floors in the Brayton school; they are of oak and

badly splintered. Those of the Central high school also leave much to be desired. Another floor treatment which leaves the floors light colored and clean looking is indicated.

Natural lighting is good in all of the modern buildings but the same cannot be said of the older structures which are from 20% to 50% short of the minimum legal window area—one-sixth of the class room floor area. The Brayton school has a shortage of only about 10% but due to the location of the school and its environment the window lighting is obstructed and actually much more below standard than that indicated. The trees about the Longfellow school also cut down the effective natural lighting very materially. This subject will be expanded when the different schools are discussed.

There is a general shortage of bulletin boards and storage cases; blackboards are also penalized when they are not of slate or are placed between windows as is the case in some of the buildings. Decorations score fair as a rule; both color and condition are scored. According to the School Lighting Code the ceilings should be either white or light ivory with a reflection coefficient of at least 70%; the walls may be of a color which reflects not to exceed 50% of the incident light.

The location of class rooms as regards exit facilities is uniformly good except in a few minor instances, but the item of cloak rooms or wardrobes does not fare so well. The Brayton school where wraps are hung on hooks in the main corridors is at the bottom of the list with a 4 point score out of 32. On the other end of the scale are the West high and the Dudgeon with a full credit for this item. Wraps should either be stored in separate cloakrooms or wardrobes, or in steel lockers, easily

accessible; all need to be properly ventilated and heated.

5. Service Systems

This main division has seven subdivisions which will be taken up separately.

A. Heating and Ventilation

The above caption covers the general plant and installation, air supply, apparatus, temperature control, etc. The Harvey, Brayton and Hawthorne schools score low, about 38% of standard, the Lapham and Doty schools trail them closely; on the other hand there are nearly half of the schools which rate high—these are the more modern structures. On account of the older buildings' rather poor airways and distribution systems some difficulty in heating and ventilation may be anticipated. And in fact overheating was in evidence in many rooms. Air movement was also at a minimum in some cases especially as measured by modern systems. Automatic temperature control is found in all schools though the older thermostats and air motors are not always very effective. In quite a number of schools corridor floor registers are found; these of course are prohibited by the heating code.

B. Fire Protection

This includes fire protection apparatus, fireproofness, exits, wiring, etc. The scores are fair to good except that of the Brayton, Harvey and Washington schools, the former scaling but 52% of a good score as may be expected.

Fire extinguishers are found in sufficient quantities and all buildings are provided with fire alarm systems. However the extinguishers may well be placed in full sight and appropriately designated by easily seen backgrounds,

such as red painted boards, etc. The same is true of the fire alarm buttons.

The older types of buildings with their wooden interior construction are of course penalized and so is some of the older knob and tube wiring. The latter however is rapidly being replaced by approved types of wiring. Exits are uniformly good and as a rule properly placed.

C. Water Supply

Water supply scores fair and embraces washing facilities with hot and cold water supply, drinking fountains, provisions for bathing, etc. In the newer school buildings the scores are good with the West high school heading the list with a standard score while the Draper school has slipped to last place. The scale for drinking fountains contemplates sanitary stream heads, placed at proper heights, easily accessible and not less than one outlet for 100 students. These conditions are not universally met and washing facilities are also not up to standard in the older schools both as to type of fixture and number.

D. Toilet Systems

Placement, sanitation, adequacy, type and number of fixtures constitute the main items here. The Central high school's toilets are classed among the poor installations with the Hawthorne school at the bottom of the list with a 28 point score out of 50.

Standards call for a separate ventilating system, a generous amount of outside windows, open front, automatic seats, adequate number of fixtures, enclosed by sanitary partitions with doors.

Penalties are quite evenly distributed over the whole range of standards except adequacy of numbers which is nearly 100% in all schools.

E. Artificial Lighting

Standards call for six outlets per room, well shaded lamps, from 150 to 200 watts per lamp, proper illumination for all auxiliary spaces, etc.

Unshaded drop cords are still found, old style three to five arm "chandeliers" still exist and improperly shaded lamps are in evidence in spots. The Brayton school is particularly bad in this respect meriting only a 5 point score out of a possible 23.

In this connection there is quoted a very apt statement which is applicable to Madison's schools:

"The almost constitutional inability of the average teacher to operate window shades often gives the paradoxical condition of full electric lighting in a room with window shades fully drawn on the brightest of days."

This condition has been found by the committee so frequently that it intruded itself very definitely. Several schools seem to feel that placing the upper shades down to the meeting rails of the windows is necessary for appearances' sake. Only the other day one of the committee passed a large school building where this condition existed and lighting fixtures were nearly all turned on. The sun shone brightly.

It is agreed that teachers have a definite "teaching responsibility" but this also includes providing physical conditions conducive to the health and well-being of their pupils. As the major part of the effective desk lighting is furnished by the upper half of the window, some care should be exercised to operate the shades (which should all be of the double hung variety) to produce effective lighting on the work surfaces and blackboards.

F. Accessory Rooms

Relatively, this item rates lowest of the six divisions of the score card. In

great part this is due to the existence of so many old buildings in Madison where the need or necessity of many auxiliary spaces was not felt at the time the schools were erected but even in the newer structures this item does not appear to particular advantage.

This division includes libraries sufficient to accommodate approximately 15% of the capacity of the school in case of a high school and sufficiently large and accessibly located to serve an elementary school.

A gymnasium of proper capacity and served by spectator spaces, lockers and showers, director's rooms, etc. is necessary. For elementary schools at least a playroom would be required for the smaller schools. Auditoriums are considered a part of a high school plant but not of an elementary school except for very large units.

In addition to the above the list includes proper office spaces, teachers' rooms in buildings of more than six rooms, emergency or nurse's rooms, sometimes in connection with a medical inspection or clinical suite, vocational rooms and shops, studios for music and art and adequate storage spaces for instructional and janitor supplies.

It is obvious that there are a number of items on the score card which are not needed in certain schools; these are therefore "credited" to the score but not as "earned". This is necessary in order to "balance" the total score. Such items are library, auditorium, vocational rooms and studios. Where these items are found they are scored on the basis of their condition and need to fit their particular purpose.

G. Equipment

There are five subdivisions of this item: desks, furniture and furnishings, instructional equipment, equip-

TABLE I

STANDARD	CENTRAL	EAST	WEST	H.S.	BRAYTON	DOTY	DRAPER	DUDGEON	EMERSON	FRANKLIN	HARVEY	HAWTHORNE	LAPHAM	LINCOLN	LONGFELLOW	LOWELL	MARQUETTE	NAKOMA	RANDALL	WASHINGTON	STANDARD	
X	Site	110	79	105	104	61	79	58	90	78	92	80	61	59	83	66	87	62	98	76	58	110
A	Accessibility	19	19	19	14	19	8	13	5	19	14	14	10	5	13	17	10	5	13	13	15	19
B	Surroundings	37	30	32	36	14	38	19	37	27	33	30	23	23	26	23	33	26	31	24	21	37
C	School grounds	54	30	54	54	28	35	26	48	32	45	36	28	31	44	26	44	31	54	39	22	54
X	Building Const.	280	169	228	238	106	169	101	224	208	225	168	134	146	199	165	214	141	208	204	122	250
A	Placement	42	12	39	42	24	24	24	37	21	34	23	23	27	27	20	31	23	39	30	30	42
B	Main const.	110	91	101	104	48	61	46	95	101	101	76	62	68	96	85	99	70	83	96	52	110
C	Internal const.	98	68	88	92	34	64	31	92	86	90	70	49	51	76	60	84	48	86	78	42	98
X	Class Rooms	190	139	163	181	75	134	89	176	174	164	150	119	105	155	141	169	119	164	150	85	190
A	Construction	131	92	111	122	49	91	57	117	121	112	102	77	69	105	92	116	79	111	96	53	131
B	Location	27	27	27	27	22	27	17	27	25	25	26	25	28	25	24	23	22	25	24	20	27
C	Closets, etc.	32	20	25	32	4	16	15	32	28	27	22	17	14	25	25	30	18	28	30	12	32
X	Service Systems	235	195	209	229	142	177	159	228	209	217	180	143	164	203	182	210	160	198	191	148	235
A	Heating & Vent'g	58	51	52	58	34	39	42	58	54	58	35	34	39	50	46	54	37	48	45	38	58
B	Fire protection	43	39	38	41	20	31	28	41	39	39	25	27	29	37	35	39	30	37	39	24	43
C	Water supply	40	30	38	40	28	28	23	39	37	36	26	26	26	36	30	36	27	34	31	25	40
D	Toilet system	50	38	41	48	36	40	36	41	42	46	35	28	38	46	42	44	30	43	37	32	50
E	Artif. lighting	23	18	19	20	5	20	15	21	18	19	10	12	13	17	12	18	16	15	18	11	11
F	Cleaning facil.	11	11	11	11	9	9	7	11	11	10	9	7	9	10	8	11	10	11	11	10	11
G	Miscellaneous	10	10	10	10	10	10	10	10	8	10	10	10	10	9	8	8	10	10	8	10	10
X	Accessory Rooms	90	58	67	72	45	64	47	64	61	85	50	44	56	75	72	80	48	74	68	62	90
A	Library	15	7	12	10	16	16	10	10	15	15	15	5	15	15	15	15	7	10	10	12	15
B	Gym, play rm. etc.	19	10	17	16	0	12	0	0	19	19	0	5	0	16	15	19	0	19	14	9	19
C	Aud. & Study	9	5	7	9	2	9	9	9	9	8	9	2	9	7	9	7	9	9	8	8	
D	Orifice	8	7	7	8	0	5	4	8	6	7	4	4	5	6	4	6	4	6	8	6	
E	Teachers' room	5	4	5	5	5	3	1	5	5	5	0	4	4	3	4	3	4	0	3	8	
F	Emergency room	6	3	5	5	0	0	4	6	4	6	2	3	3	5	5	4	3	5	3	3	
G	Vocational rooms	11	11	3	11	11	11	11	11	11	11	11	11	11	11	10	11	11	11	10	11	11
H	Studios	2	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2	2	2	2	2	
I	Janitor's room	7	5	5	5	2	3	2	5	5	6	3	3	3	6	4	5	4	5	5	4	
J	Store rooms	8	4	4	5	1	4	4	8	5	6	4	3	4	8	4	6	4	6	6	4	
X	Equipment	125	80	101	104	80	78	70	117	96	93	86	75	71	94	81	97	76	95	91	71	125
A	Desks	40	20	32	35	37	25	20	40	30	27	30	28	20	32	25	32	25	25	30	20	40
B	Furniture etc.	19	12	19	19	9	10	9	18	14	15	13	9	12	14	13	15	11	15	12	10	19
C	Instr. equipment	36	25	20	20	25	25	25	35	32	30	30	25	25	30	25	30	25	30	25	20	36
D	Phy. Ed. equipment	18	13	18	18	3	10	8	12	12	12	9	6	5	8	6	8	5	10	6	7	18
E	Miscellaneous	12	10	12	12	6	8	6	12	8	9	6	5	5	8	6	8	5	10	6	7	12
	Total Score	1000	720	975	928	509	701	524	899	846	876	584	576	601	811	707	857	806	825	780	556	1000
Total less equipment & credits		765	561	567	720	326	507	370	670	681	691	496	418	434	634	560	662	449	635	602	414	

Note: Underlined figures are credit items i.e., not required items in certain schools. Where the item of "Library" is scored but not credited, the score is given to existing quarters.

ment for physical education and a general miscellaneous section.

The Central high school, accompanied by Draper, Lapham and Washington schools, is in the 50% group so far as desk equipment is concerned and the three mentioned grade schools also are in the lowest total equipment score group. In many instances desks are of the old cast iron frame type, non-adjustable; seat slopes were also found defective and a lack of different size or non-adjustable desks per room was noted. Pupil comfort is quite a vital factor when one is slated to occupy an uncomfortable seat for a number of hours.

General instructional equipment rates good as a whole but as it includes such items as public address systems, moving picture projectors, stereopticons, library books and catalog, maps, etc., it may readily be surmised that some of these things may be missing in some schools.

Playground apparatus is not plentiful; first aid kits were found in all schools but quite a number of the smaller schools were short on couches and arrangements to take care of pupils in case of accidents, emergency or illness.

In conclusion it may be stated that as a whole Madison's school buildings are good so far as the newer ones are concerned but many of the older ones leave much to be desired when contrasted with modern structures. The scores of some of the school buildings could be raised materially by paying attention to some of the minor matters mentioned previously. Whether this is advisable or recommended will be discussed later. Custodial care was satisfactory.

The following section of this report will deal with the individual buildings.

Section II

THE VARIOUS SCHOOL BUILDINGS

A. The Central High School

● This building is the oldest of the high schools and its score of 72.0% efficient is a reflection of the building and its service as compared with a modern plant. Table I will show that the penalties are quite evenly distributed over the whole range of items. The only item of importance which scales standard is accessibility, due to districting which makes the school site central to its school population.

There are no outstanding good features and none which are very poor but there are a few items which may be recorded as much below standard

and which can be improved. One is the lack of either pleasing or proper light reflecting decorations in both class rooms and corridors. The effect is rather depressing, especially when compared with some of Madison's more recent school buildings. The corridors are also in need of acoustical treatment as the reverberation period is very long—it is comparatively easy to reduce the noise level.

Due to its location the school is subject to rather indifferent air supply for ventilation and this, with a low air intake and the smoke nuisance calls for a filtered air supply which is not fur-

nished now. Here again it will be easy to correct this condition.

Toilets are poor as measured by modern standards of sanitation. There are no handrails on the main stairway and due to its width should have center rails as well. There are store rooms under the stairs which have been prohibited by the State Building Code for over twenty years.

The floors in the class rooms are very dark, nearly black in color and need refinishing down to the wood; they are unsightly and difficult to keep perfectly clean. The old desk equipment has received but a 50% rating.

B. The West High School

This is the most modern school building in Madison and has been given a 928 point score which, among many hundreds of school buildings scored by the committee, has received the highest rating so far recorded. Penalties are slight and well distributed. Some of the recitation rooms are rather small; one room is seated with lighting from the right. There is no public address system installed which now seems to be a necessity.

As mentioned previously shades were found drawn to the meeting rail and even lower, on a bright day, and the lighting units lit! Current consumption could be materially reduced and lighting conditions improved. The shops are minus a ventilating system which is considered a rather serious fault; a shaving and dust exhauster is also indicated as necessary. The ventilation in the auditorium is not good and gives rise to drafts. The library is rated as too small and not very accessible. In other respects the building is first class.

C. The East High School

This school is rated as 87.3% of standard and the score is of course influenced by the first unit, some features of which are not standard. A comparison of the new with the old, on the ground, will show this influence. The study halls in the old unit are not rated high due to their peculiar location, arrangement and lighting and the old gymnasiums have also been scored somewhat sub-standard though the new unit fares better.

It was interesting to the committee to note the difference in air conditions in the old and the new sections of the building; the latter was definitely better to the senses than the former. Some of the boys' toilets had an odor due to improper or insufficient ventilation.

But the poorest features were those connected with the shop sections and the barracks used for shop purposes. In the first place the main shops have concrete floors laid directly on grade, a very poor scheme; this leads to very cold and poor floors. The heating of these spaces is also sub-standard and ventilation ineffective. The wood barracks building is of course an anomaly—located in the courtyard of a modern building, a real fire hazard, poor construction, badly heated and ventilated—there seems to be little excuse for permitting this condition to exist or continue. The committee is unanimous that this structure be abandoned, immediately, if possible.

The "labyrinthian" character of the various sections of this building with their various levels was also commented upon by the committee but of course such matters are fixed and beyond change.

D. The Brayton School

Five hundred and nine! That is the score of Madison's poorest school

building or 326 on the construction scale where 420 is the "poor" line. The school was scored only on the basis of its regular school use; the front or shop section was not scored. There is really little to say in this case as the school is a poor one and was at one time abandoned for school purposes; it should merit a like fate at the end of the present school year. About the only redeeming feature about the structure is that it will not collapse, it is built too well for that and for this reason it has likely been resurrected. It may be continued for the special shop activity as at present.

E. The Doty School

This building, in spite of its age, scores much better than expected and even its construction score is well above that of a poor one.

Similar to the other older schools the penalties are distributed and no outstanding poor features are recorded but there are some which, if corrected, would lead to a better score and a more effective building.

Floor treatment does not appear very good; the decorations are soiled and shades are of the old green type, some single and some double hung. Lighting is scored down somewhat due to the interference of the tree tops. On a rather dull day the front right seats, under daylight conditions, gave 0.6 foot candle of illumination and the same seats in the fifth grade gave 0.4 foot candles while in the fourth grade room the reading became 0.5 foot candles. This is *extremely poor lighting*; the shades were partly drawn. With shades up and the lamps lit the illumination increased to 3.7, 3.6 and 5.0 f. c. respectively, still below what is considered good illumination. The remedy is obvious. The time was 8:50-9:10 A. M., the day dull.

The attic was used for some storage and could be kept cleaner. The janitor has an "office" under the stairs which should be vacated. Toilets were scored as good but the old type of lavatory sinks were found; there were some odors in both toilets.

A floor register was found in the first floor corridor. As the building had recently been rewired these electric and fire hazards were no longer in evidence. A small and inadequate room in the basement was used for play purposes. The upkeep of the building and its custodial service were good and a vacuum cleaning system helped in this respect.

F. The Draper School

The scores of 524 and 370 points for this school tell the story of a poor school building. Scores are poor all along the line and the only indication of modernness was its wiring for electric service, recently done.

The list of undesirable and poor features includes an old and obsolete heating and ventilating system, natural lighting below the legal limit, blackboards and bulletin boards between windows, soiled decorations, dirty attic, combustible stores under the exit stairs, toilets poor with a badly broken cement floor in the girls' and the old insanitary slate urinals in the boys'.

With the lights on and shades up three rooms gave the following illumination on the right front and center seats: 1.5, 4.2 foot candles; 4.0, 3.8 f. c. and 2.8, 3.0 f. c. The window transoms, which give some of the best lighting, were mostly shaded.

This school and its disposition will be discussed in Section VI.

G. The Dudgeon School

Among the elementary schools the Dudgeon building scores highest with

899 out of a possible 1,000 points; it is modern in virtually all respects containing secondary clocks, radio and address system, vacuum cleaning system, proper bulletin boards and cork pinning strips, etc. A stoker for the boiler would be proper and economical. One room is seated so the light comes from the right.

The building is planned for a second story addition. Some attention will need to be paid to the northwest corner of the building where the foundation is settling and giving rise to wall cracks which may soon become serious if prolonged settling occurs.

H. The Emerson School

This is one of several modern elementary schools whose score of 846 puts it just a few points below the very good line. Building Construction, Class Rooms and Service Systems all score good and only one school scores higher on Accessory Rooms, quite a record. Penalties are small ones except on site, whose score is rather low due to inadequate size and lack of landscaping so as to make a better setting for the building.

The rooms in the basement are poor as regards ventilation; they were found overheated as the ventilating system was shut down at 11:15 A. M. on the day of the committee's visit. Most of the rooms are short on lighting units and as usual the shades were improperly adjusted. There are stores under the stairs and hand rails were not found on all stairs.

The moving picture booth in the auditorium is considered a hazard—it is not properly vented, has no automatic shutters and contains a wooden bench for the projector. This should be corrected immediately if any use is made of the booth.

The provisions for rest and nutrition rooms, etc. are very good and to be commended. With comparatively little expense the score of this building may be raised to put it into the "very good" class. See section VI-2 for further discussions.

I. The Franklin School

With the exception of the Dudgeon school, this building has the highest score of all elementary schools. It has a fine playground, is pleasing in appearance and its general construction and arrangement are good and quite modern. Again its score for service systems is second only to that of the Dudgeon.

Auxiliary spaces have been given the best score of any school building. The gymnasium is fine and the showers and locker rooms good.

Again, we find lighting conditions unsatisfactory in some instances. Two rooms are seated with the light from the rear, a practice not to be condoned. Transoms over windows, which let in some of the most effective light, were found shaded. In room 103 the daylight illumination on the inside row of desks front and center was 1.7 and 2.0 foot candles, while the desk in the center of the room showed 2.7 foot candles; a poor showing. With the four lighting units on the readings became 2.8, 3.0, 4.5 respectively. Even here the illumination was below an accepted minimum. Similar conditions were observed in other rooms; in room 108 the shades were drawn down two-thirds from the top though the day was cloudy. Blackboards were too low in a number of rooms; children write at eye height and the lower part of low boards is therefore mostly waste.

Stokers for the boilers would be an improvement and economy. The heating and ventilating system is good and operates effectively.

J. The Harvey School

A score of 584 points puts this school just over the line from a poor one but the construction score puts it a few points higher.

Penalties are generously spread over the whole range of items as may be expected though the class room item scores nearly 80% of standard. Store rooms under stairs, floor register in the corridor, bulletin boards between windows, only two lighting units in each room (give very poor lighting effects), floors very dark and unsightly, cupboards in corridors, poor bubblers over old sinks, etc., are some of the items which do not appear creditable on the score. For future disposition of this school see Section VI-3.

K. The Hawthorne School

Like the Harvey School this building is just in the passable category but a 418 point score on the construction scale puts it into the poor class.

The play space is restricted and rated as poor with bad soil conditions on one side of the building. The old Ruttan system of heating and ventilation has been remodeled in part but is not particularly effective; the air intake is about three feet above grade, directly adjacent to the play space and the opening was just two inches produced by placing a rock between cover and ledge. The air supply is at low ebb with this condition.

Blackboards are found below and in the same wall with windows. The ceilings are poor and some plaster is loose. The decorations are soiled; there are combustible stores under the stairs.

The girls' toilets are fair but the boys' room is very poor. The old style of insanitary slate urinals were again found and to kill the very objectionable odor doses of chloride of lime were being used—ventilation is virtually nil.

The boiler is of the old style return flue type set in an unprotected pit with a ladder for access.

Natural lighting is below the minimum requirements. The artificial lighting units are sufficient in number but the fixtures are inefficient and in need of repair. With sunshine out doors the foot-candle reading on the front row center desk in two rooms, 5th and 6th grades, was only 4.5. Improvements to make this building a first class one would be very extensive and not warranted financially.

L. The Lapham School

This school is close to having a poor rating and would be so considered if the barracks were included in the original score. There are many features about the former building which are definitely poor. Site is only credited with 59 out of 110 points, as might be expected. The corridors are used as cloakrooms and contain storage cupboards; they are also dark and the decorations soiled. Similar to the Hawthorne School the school has the old modified Ruttan system of ventilation with its attendant fire hazards.

Here again we find the boiler set in a pit without handrails to the steps; rubbish was found stored under the vestibule. Blackboards in the same wall with windows, rear exit door without panic hardware, entrance to kindergarten through a class room alcove, outside air supply *below* grade, poor and badly vented boys' toilet with obsolete slate urinals, etc. are all features not conducive to raising the score of the building.

The natural lighting is poor and aggravated by trees shading the windows. Artificial lighting is poor with only four units per room and lamps too small. The fourth grade room,

with window transoms shaded and lamps turned on gave the following foot-candle measurements. Center front row 1.75; middle of third row 2.5; center desk 4.75. The fifth grade room gave 2.5, 4.25 and 6.5 foot candles on desks located similarly while the third grade room gave 1.5, 2.0 and 5.0 foot candles under the same circumstances and like desk distribution. The day was dull. The reader may judge for himself the effect of such lighting.

The barracks building with nine feet eaves, a room furnace, cold floors, deficient window area and illumination varying from 1.5 to 2.25 foot candles on the two inside rows, has no place here. The committee has disposed of this situation in the next section.

M. The Lincoln School

The score of 811 puts this school building well up in the "good" class and close to the very good buildings. Like some of the other good schools the penalties are minor and well spread over the various items.

The grounds at the rear of the building are being much improved as a W.P.A. project; a fine play space will result and excellent landscaping is a possibility.

The committee however was definitely concerned about the use or rather misuse of the window shades; this in connection with only four effective units for desk illumination, again gave rise to bad lighting effects. With sunshine at intervals and shades drawn to the meeting rails, the inside desk rows gave foot-candle readings way below a reasonable minimum. Readings like the following were encountered: 1.2, 3.0, 2.5, 1.5, 2.5, 3.0, 1.0, 1.75, 3.0, 4.0, 2.0, 3.5, 5.0, 2.0, 4.0, 6.5. These figures speak for themselves. In other respects the building is good and well kept up.

N. The Longfellow School

Only 39 points separate this building from the "Very Good" score line; the reader is referred to Table I which shows the demerits of the building and site as a whole.

Neither the Greenbush building nor the old Longfellow School were scored or included in the set-up. Both structures are slated for the discard and the reader will find this matter discussed in the recommendations, Section VI.

The natural lighting is obstructed by close growing trees at the front of the school and this, taken in conjunction with some badly handled shades, has led the committee to specific criticism as in other cases. In four rooms the shades were drawn down one-half, no artificial lighting used and the children were obliged to sit at desks receiving illumination of 2.3, 1.25, 2.0; 0.5, 0.4, 1.25; 1.75, 2.0, 1.25; 1.5, 0.5, 0.6, 4.0 foot-candles. The day was cloudy and the time 2:30-3:00 o'clock in the afternoon. No more need be said on this subject!

When this building is used as part of a new school unit, as recommended, then changes in this structure may be made to make it conform to modern standards such as an analysis of the present structure will indicate, including stoker firing, etc.

O. The Lowell School

Like the Franklin and Dudgeon schools the Lowell school is a very good building. Though the arrangement is not perfect due to the addition and other factors, yet its appointments and auxiliary rooms are very good. A very good gymnasium, a "roof garden", a large "nutrition" room, cafeteria, fine kindergarten, good ventilation, etc. all contribute to give this school an 857 point score.

As this school may still be enlarged it should of course be a permanent part of Madison's school system as explained later.

P. The Marquette School

In spite of its many shortcomings this school plant is 56 points over the poor line, 60.6% effective. It is one of those structures which are built too solid—yet too poor to perpetuate. Of course the type is poor and no longer found among modern school buildings; the corridors are dark, floors fair to poor, decorations soiled, blackboards under windows and no hand rails on some stairs. Temperature control is automatic but the old thermostats do not seem to function well as the building was overheated and not well ventilated; the fan was closed down at 11.12 A. M. on the day of the committee's visit.

The lighting situation was bad in spots but shades were being operated somewhat better than in some of the other schools. The artificial lighting was satisfactory in general but left much to be desired in the corridors and accessory spaces. The interior does not make a pleasing appearance.

R. The Nakoma School

This building is an "adopted" one being originally a semi-rural school in a district adjacent to Madison but since annexed. The score of this school plant is 825, a very good showing for a school of this type. The building consists of an original unit which has expanded into a large 12 room school; the second floor of the newer unit is still unfinished but is soon to be converted into four additional class rooms.

The older unit has some features which are not completely modern while the newer part is planned with more recent trends and standards in evidence

except in one rather important matter—the wide overhanging eaves. The original structure had this undesirable feature which cuts off the best natural lighting and reduces the "sky angle" to a low efficiency so far as lighting is concerned; it sacrifices the latter at the expense of architectural treatment. In the new unit this feature has been perpetuated.

The effect of this is shown when on a rather dull day, shades partly drawn and lighting units operating, the two inside rows of desks received the following illumination in four rooms: 2.5, 3.4, 4.2; 2.25, 2.75, 3.25; 3.0, 2.5, 3.5; 2.0, 2.25, 2.5 foot-candles on three differently located seats in each room.

The site and playground are fine and give splendid opportunity for outdoor activities.

Air conditions in the new section are much better than in the old. The former is served by unit ventilation and the latter by a central fan system which apparently is operated only when heat is required. This should be changed so that an air supply to every room is furnished at all times. The fan and pulley are in need of better guarding and protection. The boiler is stoker fired.

The city branch library which is also used as a school library is not very accessible to the school as a whole. The lighting units in the sewing room are not shaded and give very bad light for sewing. Decorations may be much improved in spots such as the kindergarten, etc. The building will be considered an integral part of Madison's school system.

S. The Randall School

Contrary to expectation this building and plant do not reach the very good score line 800; the score is 20 points

below this and the plant is thus considered 78.0% efficient. In part this is due to constructions, arrangements, facilities, etc. of the old section; the newer addition fares better in this respect. Penalties are also due to insufficient playground space, indifferent accessory spaces and various other items particularly the present basement class rooms which are six feet below grade and sub-standard in nearly all respects.

All boys' toilets had bad odors and ventilation should be improved. A number of rooms were seated so that the window lighting came from the rear or right—too many rooms wider than the building code permits or the window lighting warrants. Boilers are not stoker fired and the stairway to them has no protecting hand rail. The building's fire protection rating is good, 39 out of 43 points. This of course does not imply that it is a fireproof structure but rather that it is well protected from common hazards.

T. The Washington School

Only six theoretical points above a "poor" building score, the constructional score places it below the line—it is a poor building.

It has received the lowest score on Site like the Draper School. Little can be said in favor of it. It is old, poorly arranged, less than half of standard for class rooms and likewise for general building construction. On service systems it is in the same class with the Brayton, Harvey and Hawthorne Schools, poor.

Window lighting is below standard in every room and similar to other schools what effective transom lighting exists is covered with shades. Here we find illumination on desk surfaces as low as 0.6 foot-candles at 9:30 A. M. on a cloudy day, which could only be

raised to 2.0 foot-candles with the light units turned on.

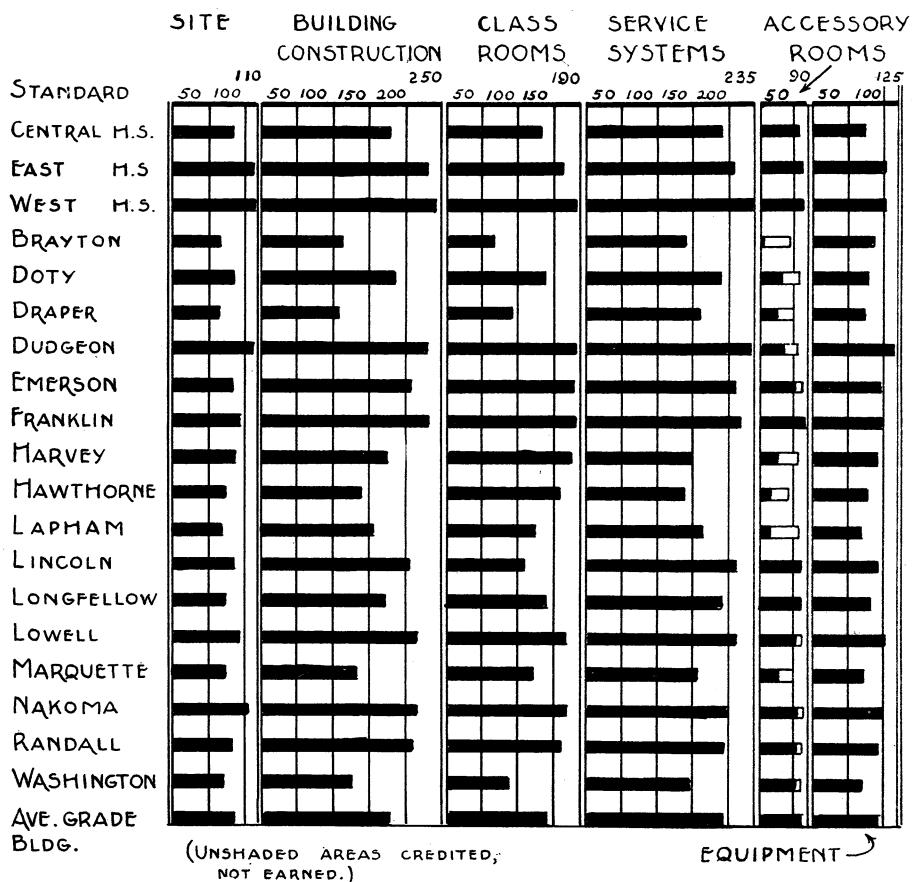
Decorations are dark and soiled, floors mostly old and oil soaked. Bulletin boards between windows, the attic used for a playroom, corridors serving as cloakrooms, a poor "auditorium", slate urinals in the boys' toilet accompanied by their attendant odors, etc. are all matters of common observation. The building has a depressing effect both from the outside and the inside—it has outlived its usefulness.

In Conclusion

Sections I and II of this report conclude the inventory of school plants and a discussion of the standards generally accepted. How far do Madison's schools meet the latter? In what respects has the Capitol City of Madison lived up to a tradition that its schools should reflect the best in education and in keeping with the importance and the development of a growing city in the shadows of our great University? This report cannot answer this question so far as pure education is concerned, but utilizing its school buildings as an index and believing that good physical facilities, fine and pleasing structures and good surroundings as well as educational tools of a high order are necessary factors in an up-to-date and modern school system, it will have to be admitted that there are plenty of evidences that much improvement must be made before any condition bordering on the first class may be looked for and accepted, particularly in the elementary school section.

Many of the criticisms made are due to the inherent character of the buildings themselves. The depreciation and repair accounts must inevitably assume unwarranted proportions and it must be conceded that to perpetuate and con-

FIGURE B
GROUP SCORES



tinue along past lines is not defensible. As it is the buildings in general have been kept up and made as safe as could be under the circumstances and with a limited budget. Yet much can be done to raise the standard of those schools which, perforce, still will remain a part of a future school system; a careful analysis of each building will show the

way. The high school situation is much more favorable in the above directions.

The future program will be discussed later; it is based fundamentally upon what Madison now possesses in the way of school buildings, the need for expansion and those factors which will contribute to a permanent future modern school system.

Section III

BUILDING CAPACITIES

● The fact that Madison has nineteen school buildings has of course little bearing upon the situation so far as accommodating the school population is concerned. The buildings range in size from very small ones to one housing over 2,000 pupils. It is therefore quite necessary to determine the seating capacity of these buildings and compare that with the present and possible future attendance.

A. Elementary Schools

In case of an elementary school building it is quite easy to calculate its capacity on the basis of the legal seating capacity and what constitutes an efficient pupil load per teacher. Wisconsin prescribes the capacity of a school building in terms of its floor area, using gross class room floor area as a basis. Legally every child in the kindergarten to the fifth grade is entitled to 14 square feet gross of class room floor and all others not less than 16 square feet. However, due to changing educational procedure and the newer methods of teaching it is almost universally accepted that 16 sq. ft. of floor area is a minimum and that 18 sq. ft. is not unreasonable. It is on this basis that most capacities are figured.

The other element mentioned is class sizes. At one time it was believed that small classes were conducive to better teaching results; without going into details it is now generally conceded that this does not follow; in fact, better teaching results may be obtained with relatively large classes and good teachers, with an acceptable environment. The enrollment is thus usually based on 40 to 45 pupils per room, for the elementary school. The latter figure is customarily used in large cities as the basis for total enrollment per room. In Madison, where the average daily attendance hovers around 87% during the past five years, this would mean an average attendance of 40 pupils per room. Very few school rooms in Madison legally seat less than 45 on a 16 sq. ft. basis, in fact many can seat in excess of this. Consequently 45 students enrolled per room has been used to determine the various building capacities. Table II has been compiled on this basis.

It must be remembered, however, that this is a *capacity* table only, it does not take into consideration undesirable class room features or other factors making for inefficiency; it is simply a tabulation based upon the premises previously discussed. As a whole therefore Madison

still has some room in its elementary schools. Several schools (on the Nov. 1936 enrollment basis) were virtually filled and none showed a large overcapacity except the Doty which is a little over half-filled so far as room capacity is concerned. This does not include two rooms for the deaf. But more of this in another section.

B. High Schools

The capacity of the high schools is not quite so easy to determine; there are a number of variables which must be considered. For instance, it will be evident that a school operating on a five period day has a lesser capacity than one operating on an eight period day and if class capacity may be increased so will the building capacity increase and if the class rooms are increased in number so will the capacity. One will have to assume some bases which are as factual as possible.

Madison's high schools (the two sections, junior and senior are thrown together for calculation purposes) operate on a seven period day. The median class size of the East High School, on the Nov. 1936 basis, was 28.6 which will be exceeded somewhat by the end of the year. The range is from 12 to 42 exclusive of band or orchestra classes or those in the gymnasium. The Central High School range is 6 to 36 with a median of 26.3. The West High School has a median class size of 29.5 and a range of 12 to 45.

As a practical matter it has been found that a *median* class size of 30 is a reasonable assumption for a maximum working class size. Of course there are variations, as stated in the previous paragraph but in a large number of surveys made by the Department this median has not been exceeded and universally accepted.

In regular school work a student carries four subjects and in addition work in physical education, frequently some work in music and art as an "extra", etc. In Madison all students are also required to attend their home room for an "activity" period each day. We may therefore safely assume that every student will be in rooms devoted to instruction for 27-29 periods per week, aside from his presence in the library and study halls. The above refers to the senior high school group in particular but the situation in the junior high school section is similar and not markedly different.

Using a formula which takes all these matters into consideration and which has been used successfully for over ten years we got a maximum working capacity for each of the high schools as follows:

CENTRAL	EAST	WEST
7p 1535	8p 1753	7p 2698
		8p 2853

These figures mean that every room is occupied for either seven or eight periods per day with an adjustment of ten percent deducted from the original capacity to allow for practical variations. For small schools this adjustment allowance is increased to 15% due to small classes but in large schools such as Madison's the percentage may be reduced to ten as large classes predominate. The computation also calls for "itinerant" teachers as it cannot well be justified that each teacher must "own" a particular room though some administrators do not agree with this principle.

C. Enrollment vs. Capacity

On the basis of Table II and the previous assumptions we get some facts which will be discussed briefly.

Using the Nov. 1936 enrollment figures we find that the present elementary

school buildings have an excess capacity, based on *room space only* of 1385. But a detail study of the table shows that practically this figure cannot be used as a sole criterion as children just don't live in certain places so as to accommodate the various schools. It is also evident that a number of excess seatings such as those of the Lapham, Lowell and Marquette schools cannot be used as a practical matter. Of course school boundaries have been changed from time to time as variations in attendance in the various districts required and it may still be done. Practically 1,000 additional seatings are available. Unfortunately even these are not distributed "right" due to shifting population and so certain districts are loaded while

others are depleted as regards pupil distribution and seating. This situation will be treated subsequently and relief indicated.

Due to concentration of the high school enrollment in three buildings there are fewer variations. Table II shows that the excess capacity of the Central High School on a seven period day is 286 and 504 on an eight period day. As the rooms now used in the vocational school have not all been included in the calculations the total capacity would be increased slightly over that given in the table.

The East High School has a fair leeway with an excess of 447 or 602 respectively while the West High is close to capacity now with 154 and 411 as

TABLE 2
SCHOOL BUILDING ENROLLMENTS AND CAPACITIES
NOVEMBER 1936

	Enr.	Capacity		Excess	
		7 period	8 period	7 period	8 period
Central H. S.	1,249	1,535	1,753	286	504
East H. S.	2,261	2,698	2,853	447	602
West H. S.	1,669	1,823	2,080	154	411
Brayton	81	135			54
Doty	154	270			116
Draper	186	315			129
Dudgeon	260	360			100
Emerson	761	765			4
Franklin	468	585			117
Harvey	244	345			101
Hawthorne	294	405			111
Lapham	254	270			16
Lincoln	428	495			67
Longfellow	566	675			109
Lowell	741	765			24
Marquette	324	360			36
Nakoma	287	475			188
Randall	799	950			151
Washington	253	315			62
Total	6,100	7,485			1,385

ENROLLMENT FIGURES FROM SUPERINTENDENTS' REPORTS

FIGURE C

ELEMENTARY SCHOOL CAPACITIES AND ENROLMENTS

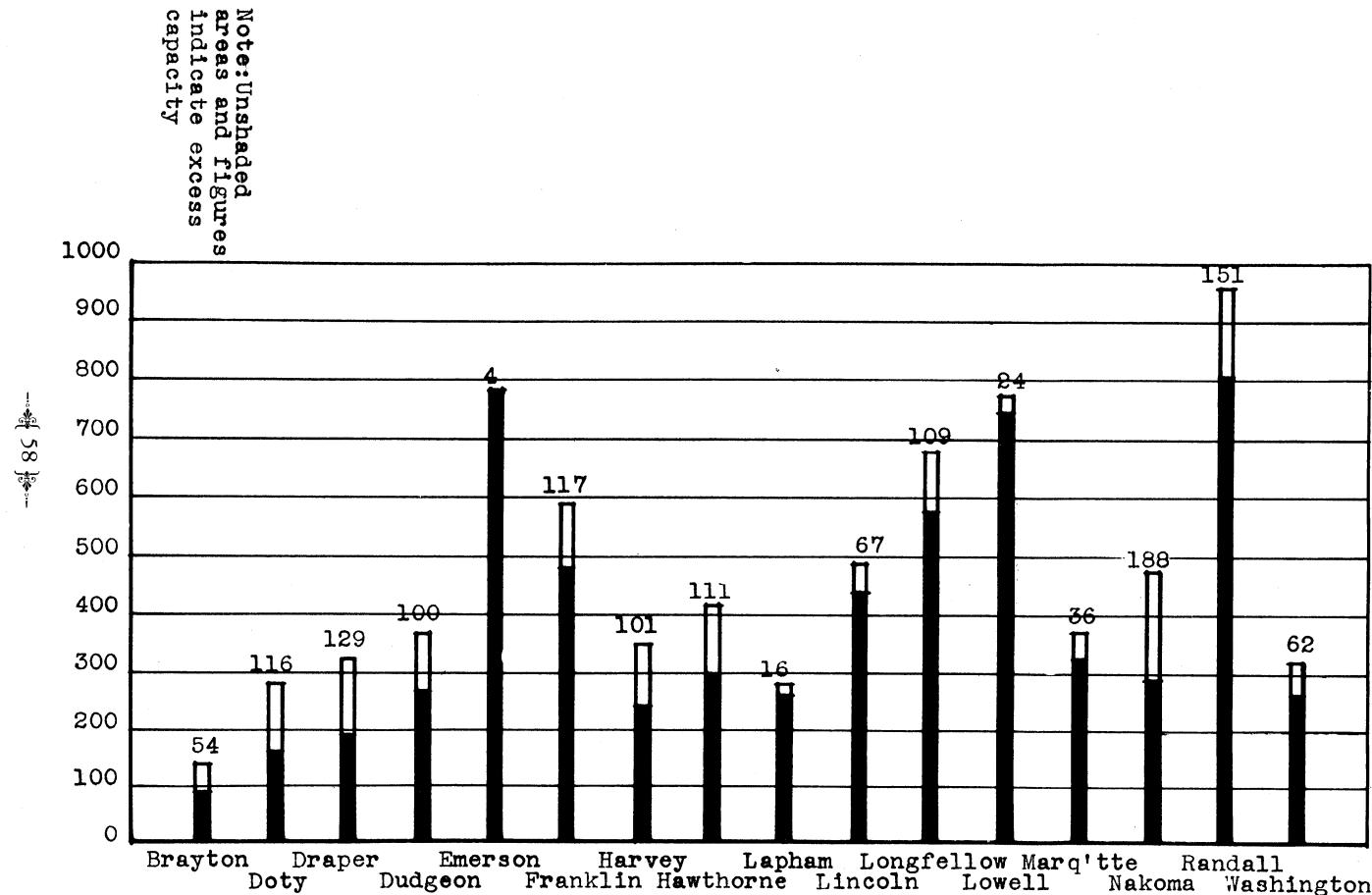
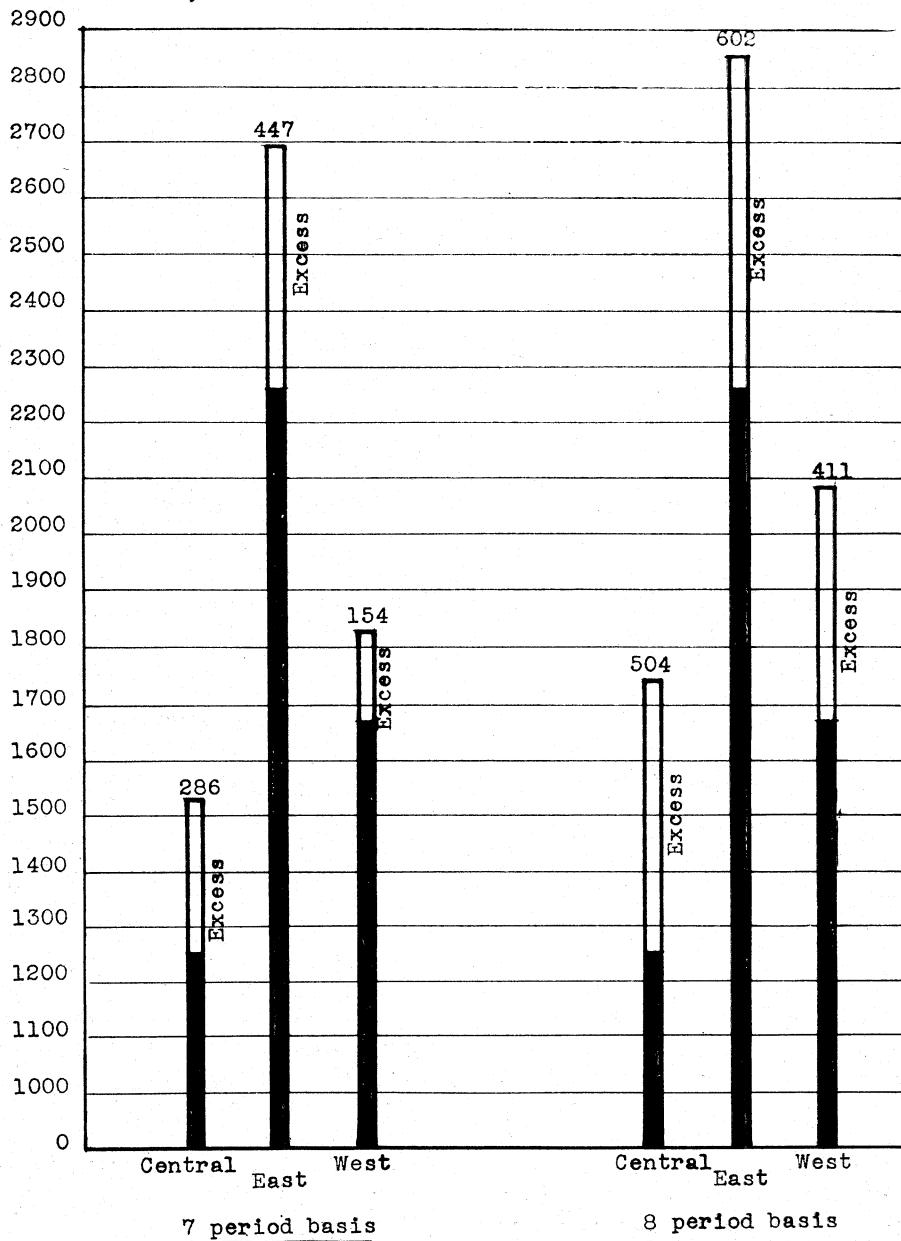


FIGURE D
JUNIOR-SENIOR H. S. CAPACITIES, ENROLMENTS



excesses. All of these figures will be reduced slightly by the end of the year due to some increased attendance.

It is to be reiterated that all of the figures cited are based upon assumptions which may or may not be accepted by the Board. For instance some administrators do not believe that a class room should be used by more than one teacher or that a stenography room could be used by a history class or that a science lecture room could be used for a literature class, etc. It is agreed that a situa-

tion which requires these adjustments is not ideal but on the other hand it is not particularly defensible to advocate an expensive building program unless it is a *necessary* one. Compromises are therefore in order all along the line until such time as the ideal situation may be realized. Capacities *per se* mean little unless they are discussed in relation to future enrollment trends which will be discussed in the next section.

Fig. C shows a part of the material in this section in graphic form.

Section IV

ENROLLMENT FEATURES

● The past and present enrollment of Madison's schools is given in Table III for a ten year period; the present enrollment, November 1936, is given for comparison purposes and to show possible trends. This material is presented in graphic form in Figs. D, E and F.

The curves are particularly interesting as they visually show enrollment features and in easily interpreted form. It is to be borne in mind that these figures and curves do not take into consideration enrollment in special classes which would add only about 200 to the grand total nor do they include Madison's "parochial and private" schools' population of nearly 2600 in 1936, a very significant number. The statistical material involves only those in the public schools.

On the face of the tabular data the school population has increased very materially during the past ten years. The total enrollment has risen 27.9%, the elementary enrollment only 8.6% while those of the senior and junior high schools have increased 23.8% and 174.9% respectively. The tuition pupils

have also increased rapidly, 155.0% during the period from 1927 to 1936. The school census has gone up 16.8%. If we consider *local* enrollment only we find that the total enrollment has risen 22.5% to 1936 as compared with 27.9% for the total enrollment for the same period. The difference is accounted for of course by the tuition students.

The curves of school census and total local enrollment are virtually parallel and the gap between the two curves would be definitely decreased to a comparatively small one if those attending other than the public schools were added. The differential would probably be less than 2,000 which means that school enrollment in Madison is excellent. It is also apparent that the holding power of the schools is very good when we consider that in 1936 nearly one-third of the local school enrollment was found in grades 9 to 12, constituting the upper one-third of the school system. The average daily attendance is also very good.

It is somewhat difficult to make a valid attendance or enrollment study by

TABLE 3
ENROLLMENT STATISTICS

Year	School Census	Elementary School				Jr. High School				Sr. High School				Total Net Enr.	Total Local Enr.
		Net Enr.	Tuit.	Net local enr.	A.D.A	Net Enr.	Tuit.	Net local enr.	A.D.A	Net Enr.	Tuit.	Net local enr.	A.D.A		
1927	13,894	5,614	83	5,531	4,857	806	11	795	759	2,393	188	2,205	2,138	8,813	8,531
1928	13,884	5,790	34	5,756	4,944	811	7	804	757	2,549	219	2,330	2,270	9,150	8,890
1929	14,390	5,781	62	5,719	4,863	878	7	871	802	2,692	225	2,467	2,377	9,351	9,057
1930	14,735	5,819	29	5,790	4,383	924	7	917	864	2,896	319	2,577	2,486	9,639	9,284
1931	14,959	5,763	38	5,725	4,937	1,553	80	1,473	1,448	2,781	329	2,452	2,520	10,097	9,650
1932	15,366	6,032	138	5,894	5,219	1,625	81	1,544	1,518	2,963	357	2,606	2,666	10,620	10,044
1933	15,413	5,993	182	5,811	5,198	1,950	146	1,804	1,940	2,709	335	2,374	2,500	10,652	9,989
1934	15,746	5,968	182	5,786	5,371	2,125	142	1,983	1,997	2,776	352	2,424	2,478	10,869	10,193
		(1)				(4)								(7)	
1935	16,032	6,014	184	5,830	5,074	2,176	164	2,012	2,012	2,845	364	2,481	2,502	11,035	10,323
		(2)				(5)								(7)	
1936	16,085	6,034	189	5,845	5,289	2,223	171	2,052	2,057	2,913	359	2,554	2,540	11,170	10,451
		(3)				(6)								(7)	
Nov. 1936		6,100				2,216				2,963				11,279	

(1) 257 (4) 230 } Parochial pupils attending for
 (2) 329 (5) 298 } I. A. & H. Ec. instruction, not included } (7) does not include these.
 (3) 333 (6) 222

FIGURES FROM SUPERINTENDENTS' REPORTS

grade subdivisions due to the fact that there was a transition period from 1930 to 1933 when Madison went on a bona fide junior-senior high school or six-year high school basis. In 1927 four schools had a partial junior high school organization, the Longfellow, Randall, Emerson and Lowell schools. In 1931 the West High School became available and for two years, until 1935, the Emerson and Lowell still had this system while the three high schools began to absorb the seventh and eighth grades. Since 1933 therefore Madison's school system operated as a 6-3-3 organization. But even today the Nakoma and Lincoln schools still retain some seventh and eighth graders. This situation is shown in Table IV and Figs. F and G. The "hump" in the East High School's curve, Fig. F is due to reporting the senior high school as a four year school; in 1933-34 the ninth graders were shifted to the junior section and in addition the seventh and eighth graders of the Lowell and Emerson Schools were transferred to the East High School.

Consequently comparable data for the three school groups may only be obtained from 1932 on; to make it a five year period the committee has used 1932 as a starting point.

If we use this latter data then the trend situation changes somewhat. The elementary school enrollment is almost

stationary; in the country at large it is dropping. The total enrollment has dropped to a 6.2% increase while the senior high school enrollment is stationary. There is, however, a 36.3% increase for the junior high school though the curve at present is perfectly flat. The tuition increase has dropped from 155.0% for the ten year period to 24.8% for the past five years; that curve is also flattening out.

In the high schools, senior sections, we find very little increase since 1933 in the East School, a dropping off in the Central and definite upward trends in the West School—all this is in keeping with a situation that has been expected for years. See Fig. F.

On the face of Tables II to IV and Figs. E to G one might not expect any particular shortage of rooms except in a few elementary schools and possibly in the West High School; but all of the high schools may increase their capacity by changing over to an eight period day. But this is not the whole picture; already quite a number of unsatisfactory conditions have been discussed which will change the situation in many respects. But what is the outlook; what has the future in store and what are the trends in enrollment? Section V will bring this matter to your attention as the committee sees it.

Section V

ENROLLMENT TRENDS

*"Ob, wad some power the giftie gie us
"To see the future still ahead.
"It wad frae monie a blunder free us,
"And foolish notion."*

- The above quotation, adapted to the situation confronting the committee in this section, seemed quite apt and with

point. What does the future have in store for Madison's schools? Not being omniscient the committee will try and analyze available data with a view to drawing some lessons and conclusions from them.

TABLE 4
JUNIOR AND SENIOR H. S. ENROLLMENT

Year	Senior H. S.								Junior H. S.								Long. -Rand. Em'son-Low.	
	Central		East		West		Central		East		West							
	Net En.	Tuit.	Net En.	Tuit.	Net En.	Tuit.	Net En.	Tuit.	Net En.	Tuit.	Net En.	Tuit.	Net En.	Tuit.	Net En.	Tuit.	Net En.	Tuit.
1927	1,515**	86	878**	102													806*	11
1928	1,593**	99	956**	120													811*	7
1929	1,674**	104	1,018**	131													878	7
1930	1,123	145	1,173	174													924	7
																Em'son-Low.		
1931	869	47	1,109**	204	705	78	495	22			599	52	459	6				
1932	866	51	1,369**	237	728	80	543	16			617	63	465	2				
1933	829	22	1,120	202	760	111	484	6	818	69	648	71						
1934	829	22	1,130	196	817	136	559	12	1,088	78	708	61						
1935	802	12	1,136	204	907	148	491	11	1,024	83	661	70						
1936	764	16	1,207	191	942	152	497	6	984	78	742	87						

*Emerson reports 7 & 8 gr. only

**Grades 9-12

FIGURES FROM SUPERINTENDENTS' REPORTS

FIGURE E

TOTAL ENROLMENT, ETC. (less parochial school pupils)

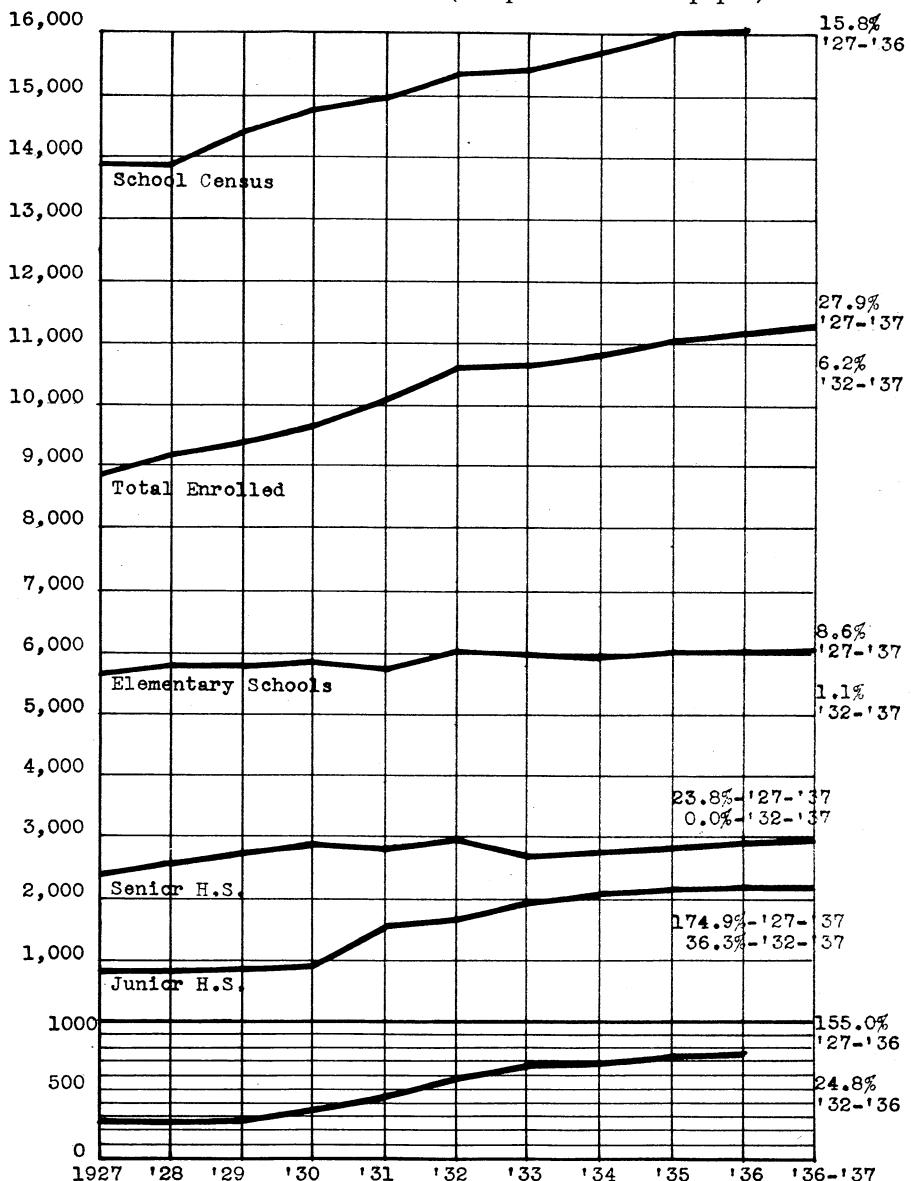
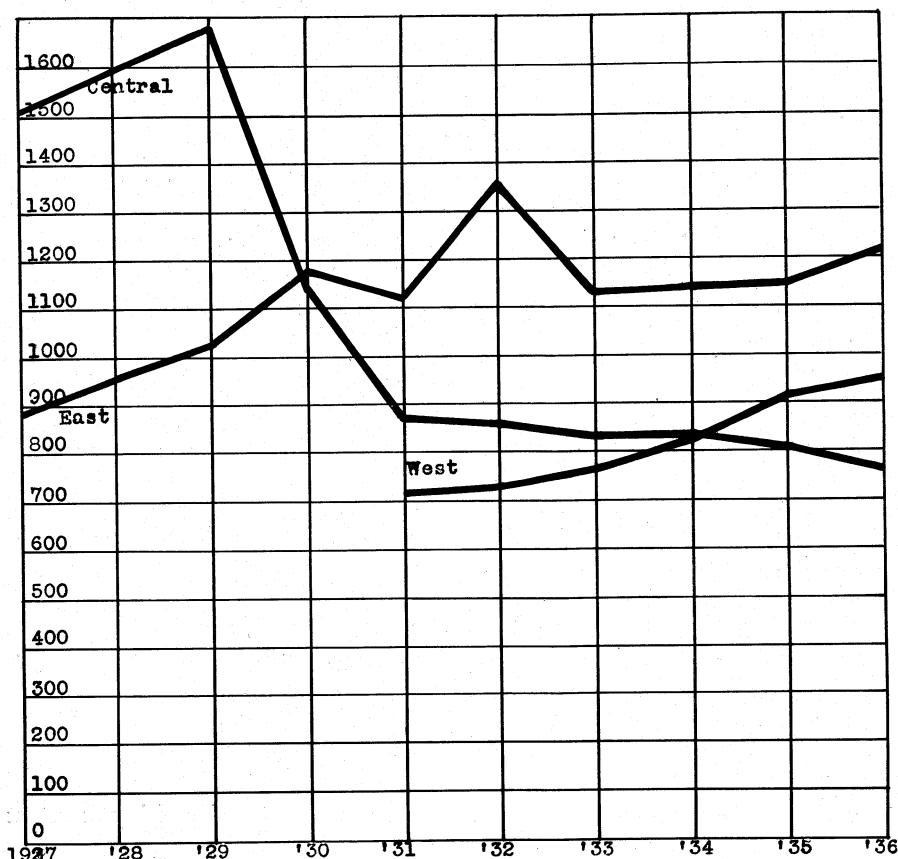


FIGURE F
SENIOR H. S. ENROLMENTS



The committee has been provided with a lot of material pertinent to the questions of growth and trends in Madison. The Association of Commerce, the Wisconsin Telephone Company, the Madison Gas and Electric Company, the State Board of Health and others have all contributed, generously, material useful to the committee in this study.

A. Population Growth

It will be assumed that the primary factor is city growth and this will be discussed first. The U. S. Census gives

Madison's population for fifty years as follows:

1890	-----	13,426
1900	-----	19,164
1910	-----	25,531
1920	-----	38,378
1930	-----	57,899

This tabulation shows a constant and rapid growth. If it continues at approximately the same rate from 1930 to 1940 then we may look for a population of about 71,500 by the next census. Using directory index figures, ratios of

population to certain public service extensions, vital statistics and other means, the population growth of Madison has been estimated at 66,800 in 1935¹ and nearly a thousand more by the end of 1936. Whether this rate of growth will continue is of course problematic but it is conjectured that growth will not slow up much for sociological and other reasons. The congregative tendency of the people is not diminishing, governmental functions will attract people to Madison and annexations of surrounding areas may also be in the picture. Naturally taxation in this area will have some influence on "immigration" but so far little tendency to "move out" has manifested itself. Figure K shows the situation at present and as stated, graphically.

That the upward trend is definite may also be observed from the graphs of Fig. H which show increases of certain utilities so far as new installation are concerned. Though figures for 1936 are not yet available, except for telephone extensions, the upward trend is continuing according to all reports. Fig. J shows the dwelling growth which is also increasing.

Since 1927 the population has increased about 35% as estimated up to 1935 while the school census has increased just about 16% in the same period and including 1936. It is not to be expected that the same ratio will hold for both groups.

It may be agreed that many people *will* move out into suburban territory and that cooperative housing such as that recently being developed just outside of Madison will have its influence. In a measure this is true on the other hand children in these areas will likely attend school in Madison, and suburban areas will attach themselves to Madison

for school purposes which is already the case. From the school angle therefore these population growths, even if outside of the city, will influence enrollment upward. How much? The answer to that question lies in the future but may be answered on an assumption basis.

Let us use the curve of Fig. K and assume that the growth curve will flatten out somewhat, which it probably will, as Madison is not an industrial city and growth in this direction over the nation will only be evident in terms of "sympathetic reflexes"; then the curve will probably take the shape shown and lead to an approximate population of 80,000 in 1950. It would seem that this conclusion is reasonable.

For several years Madison's birthrate has been nearly double that of the death rate though the ratio of births to population has dropped very materially since the peak of 1918. From that date to 1935 the birthrate has dropped 27% with the most rapid drop, 14%, during 1930-33.² Since that period there is an upward trend.

If we assume the conditions cited as having a fair validity and if we assume that the ratio of school enrollment to school census remains fairly constant then, for calculation purposes, we may look for an elementary enrollment of about 7,300 and a junior-senior high school enrollment of about 6,100 by 1946, covering a ten year period.

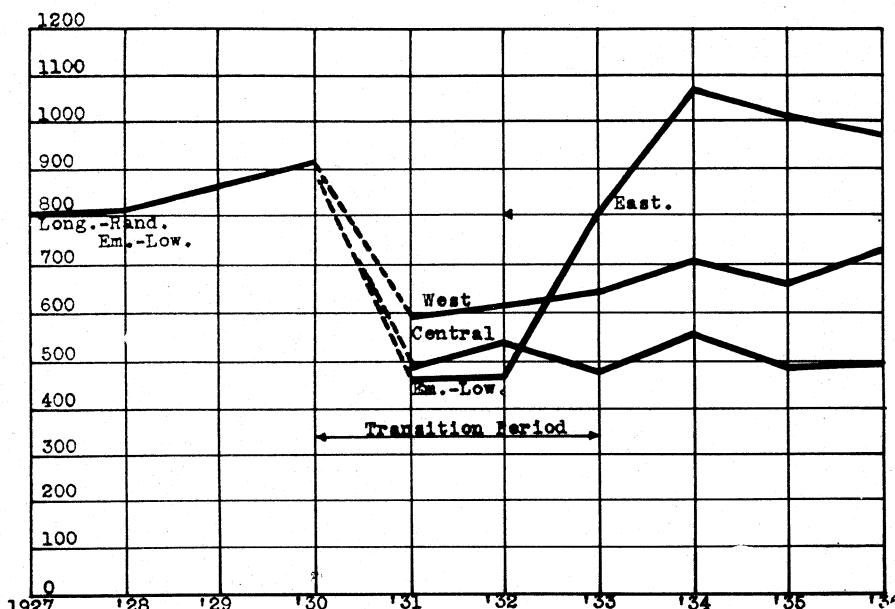
Comparing this with the ratio of enrollment to population, which has been quite constant around 16-17% we find that the estimated ratio is slightly under 18%—thus allowing some leeway in enrollment expansion. The figures set should thus be sufficient.

With economic conditions still unsettled, with indications of impending sociological changes in the country and

¹ Association of Commerce.

² 1935 Report on Vital Statistics. Wis. State Board of Health.

FIGURE G
JUNIOR H. S. ENROLMENTS



the world at large, the committee feels that this look into the future is as far as they can go and even then fraught with considerable uncertainty. At any rate the figures given will be assumed as guides.

Just how far any annexation territory will influence the situation is difficult to estimate. At the time Nakoma became a part of the City, Briar Hill, Glenwood, Westmoreland and Arlington Heights were also involved but these territories did not come into the city and at present there seems little likelihood that it will come to pass soon. Much of this area sends its children into city schools now and if later changes in the city limits are made remedies are at hand; these will be discussed in another section.

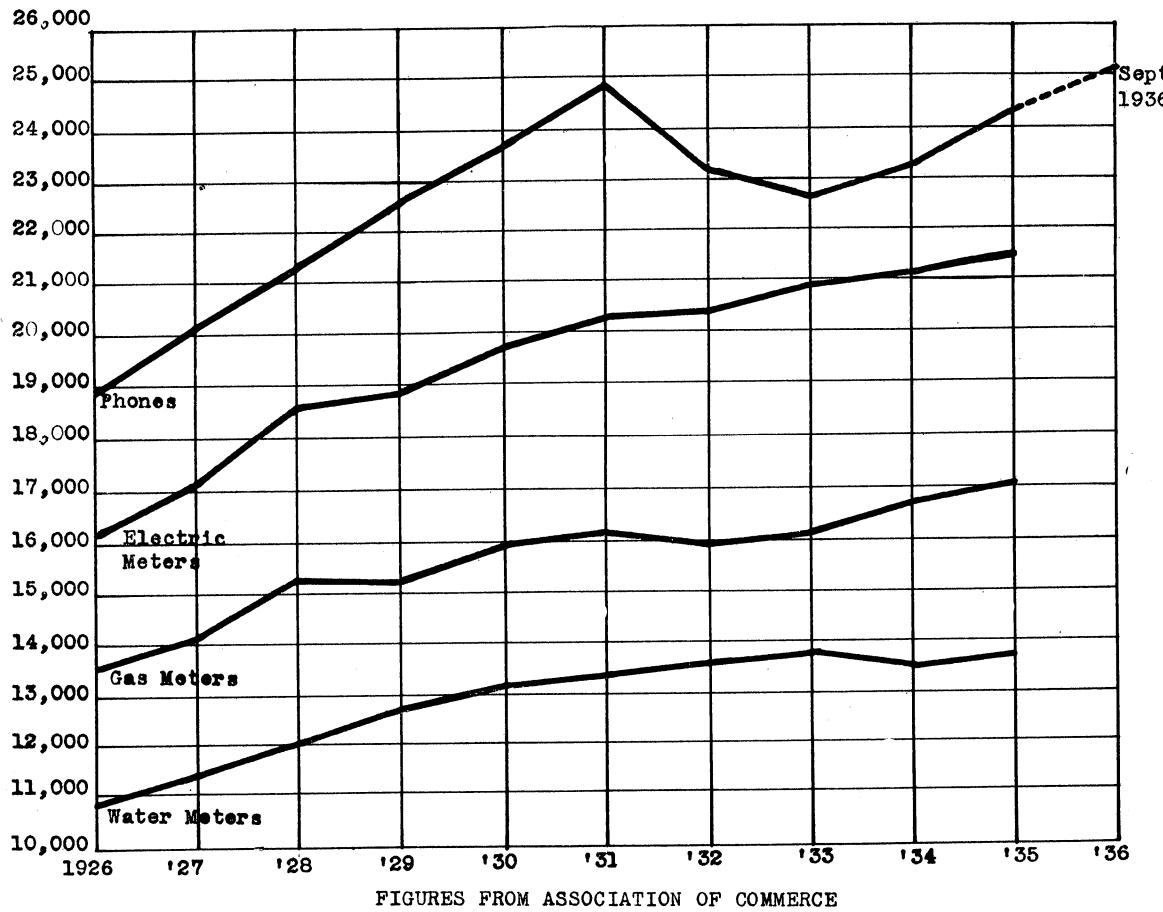
B. Population Distribution

The second factor is that concerned with the population distribution in the

city itself. Here again the committee is indebted to many agencies for specific information.

Sofar as dwellings are concerned the growth is mostly to the West. New residences erected during 1936 number about 60 east of the capitol while west of it there are twice as many with half of these concentrated in the Nakoma section. The South Madison area has only 15 new units during 1936. The distribution of the balance is quite even except for the central part of the city where there are no new dwellings in the area between the two lakes, Patterson on the east the railroad on the southwest and Randall on the west.

Similarly public utility extensions are mostly in the western part of the city with a considerable electric load density towards southern suburban and rural areas. This corresponds with the density of tuition pupils in these areas. The exact location of new telephone connec-



FIGURES FROM ASSOCIATION OF COMMERCE

FIGURE H
WATER-GAS-ELECTRIC AND PHONE INSTALLATIONS
1926-1936

FIGURE J
HOUSING AND BIRTHS

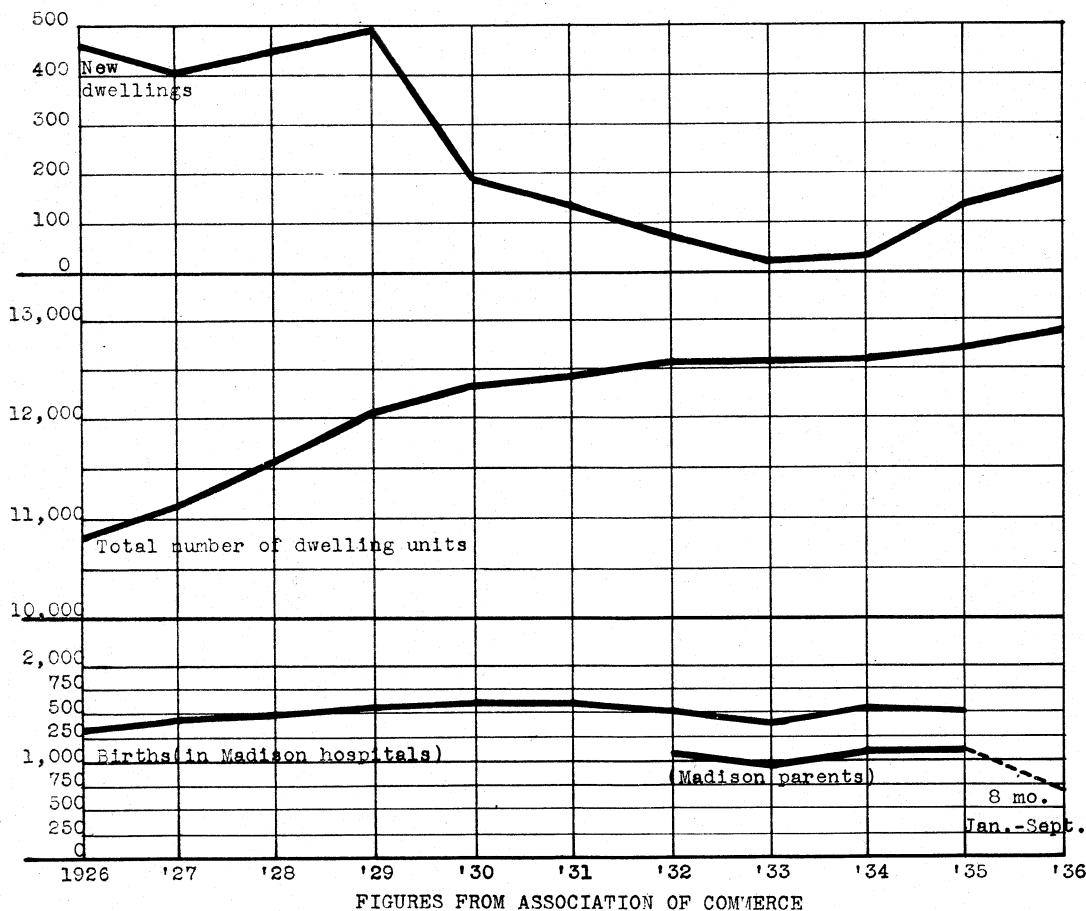
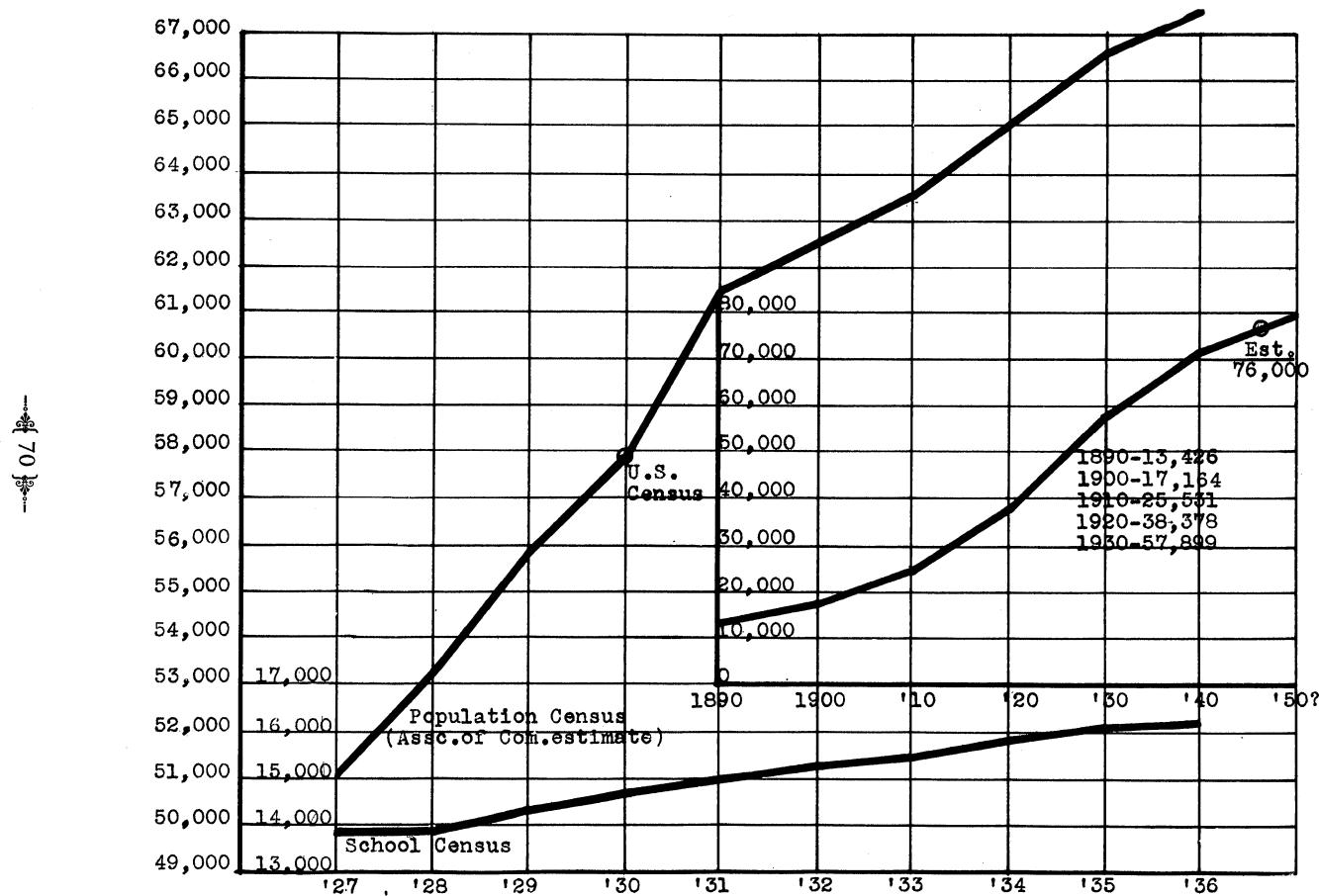


FIGURE K

POPULATION (partly estimated) AND SCHOOL



tions was not available but these appear to be distributed along similar lines with the west section of the city getting the major share.

If birth locations are any criterion of either population trends or future school enrollments then the spot map of the residents of parents of children born during 1936 or rather from Jan. 1 to Sept. 1 is of decided interest. The Nakoma section may be neglected so far as "new arrivals" are concerned. Again, contrary to many people's opinion, the old part of the city from the Yahara River on the east and Frances Street on the west, accounted for 37% of the total Madison births. The section east of the Yahara river contributed 27% while the section west of Frances Street including South Madison had 36% of the total births to its credit.

This situation then, in connection with the other data given previously, will give rise to some judgments which will have a bearing on the local school situation and school building distribution. It is evident that the central part of the city will always contribute a fair share of the school population; not only this but that portion to the east of Hancock Street, south of Wilson and up to the Yahara River now contributes about one-fifth of Madison's elementary school enrollment and a correspondingly large number of both junior and senior high school students. Though there is the chance that families will move out of this area for better housing purposes, it is also probable that their places will be taken by flat and apartment house dwellers—this area will ultimately be populated by such groups.

At present there are two other areas with a dense enrollment, the Hawthorne and Lowell districts. There are no particular concentrations in the west end of the city, the distribution is quite even.

The private and parochial school attendance will of course always be a factor in the situation but other information lacking, this matter will be left in status quo as there are no indications that the situation will change. Those schools will probably always get their proportionate share of Madison's school population. As it is now, over 600 of these pupils are receiving some instruction in the cocurricular subjects of industrial arts and home economics in a number of public schools.

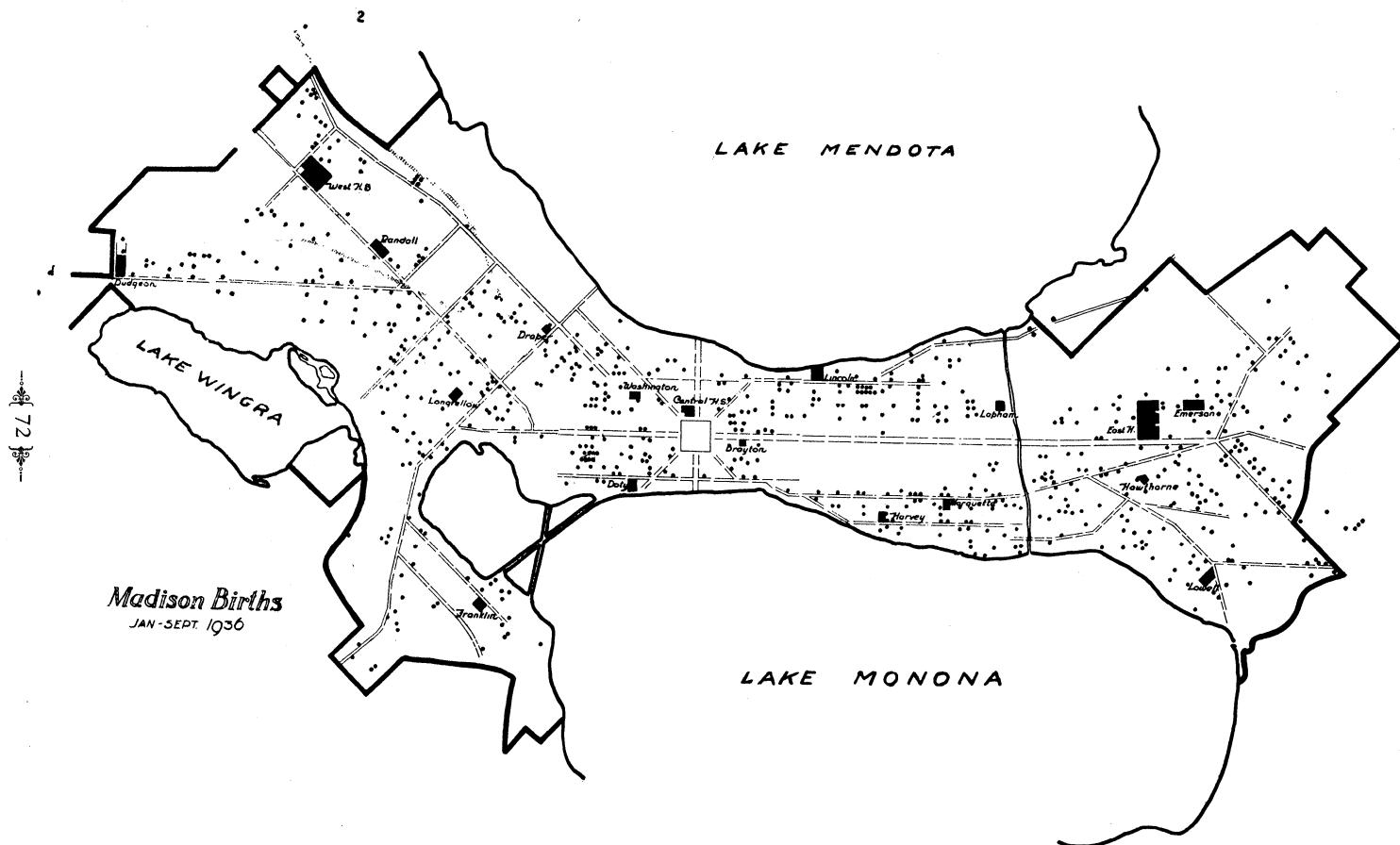
One may look for some increase in tuition pupils due to closing some of the surrounding district schools but the load will not be heavy for years to come.

Resume

As stated elsewhere there is at present no actual shortage of seating in Madison's schools and though the high schools are beginning to load up it is possible to accommodate a considerable number of new students by changing to the eight period day. (The rooms in the vocational school used by the Central school may be released later.)

It is obvious that Madison's school buildings are not well located and that perforce there must be overlapping of districts to equalize attendance. The map showing present conditions is instructive. The situation is very clearly depicted and shows what happens when a city is encumbered with a large number of small school buildings. Naturally parents would like to have their schools so located that it will be "only a step" to the school doors but the price, both financial and educational, is too heavy to pay for such a scheme or to continue an existing one.

If the conclusions reached as to future trends and enrollment, 7,300 in the elementary section and 6,100 in the junior-senior section by 1946, then on the face



of present maximum seatings available, existing schools could just take care of the increase. But of course the committee does not propose to recommend

retention of the present arrangement as it is obsolete, does not conform to modern thought and withall does not fit the new and future pattern.

Section VI

RECOMMENDATIONS

● As has been discussed in the previous section it is not an easy matter to forecast Madison's population or its related school enrollment growth—whether the assumptions used as a basis are valid or the conclusions reached reliable must be left to your Board. There may exist conditions which have either not been presented or which have been overlooked by the committee.

As there is a definite tendency for the elementary school population to drop off, not only in this state but in the U. S. at large, it is believed that the future enrollment figures cited are sufficient to take care of these pupils during the next ten years.

The high school enrollment in Madison is already at a high peak and the holding power of the schools very good indeed. Consequently increases will mostly be due to increased population and an inflow of tuition students. Here again it is believed that the numbers given in the last section will be reasonable ones and probably not exceeded by 1947 if reached. The past growth per se cannot continue in the same ratio.

Again we have the peculiar geographical situation in the isthmus or bottle-neck between the two lakes and in addition the proverbial railroad tracks to say nothing of the hazards produced by several very busy arterial highways and the "'round the square" feature.

In this connection it is known that the city and state planning boards have had the matter of highways under consideration but so far no definite plans have been formulated. There is however the possibility that in the future a 'round the city' state highway for routing through traffic will be developed. There is also the possibility that some of the main east-west arteries will be widened and the Regent-West Washington bottle-neck eliminated. These changes will not materially affect the school situation though they may reduce some of the traffic hazards, which will be a step in the right direction.

The railroad situation is of course an aggravated one and has been under advisement and discussion for a long period of years. Apparently the solution is not very much nearer than in the past. Even if the switchyards are removed there still will be several tracks, three or four, left with nearly 24 trains every day. The hazards and conditions will be reduced and improved but not eliminated unless combinations between the several railroads are effected and this lies so far in the future, if ever achieved, that this feature has not been considered. If it should come to pass then it will facilitate school traffic and population distribution but will not nullify the recommendations made.

Madison's schools are a scattered lot, now numbering 16 elementary schools, nine of which are less than ten rooms,

and three high schools. Most of the buildings may have served their locality in their time but with city expansion and population shifts mostly to the west, the situation has changed. Then too many buildings are below or near the border line of poor structures, in no sense modern or effective and no longer either in the center of their populations or districts; some are, of course, in locations where they serve their school population to advantage and still fill a need for years to come, even for the life of the structure. To formulate a long range program for Madison is thus no easy task; the factors involved are neither simple nor readily controlled.

The committee could probably set out a program on a defensible theoretical basis for a long period of years if it started from scratch. But this is impossible due both to existing good structures and certain local considerations which latter will not be denied. The committee has given all these matters much study and consideration and presents herewith a program which it believes will relieve the city of the burden of small inefficient administrative units and at the same time makes a judicious compromise with the more subjective elements already mentioned. The program is by no means ideal but based on good premises and reasonable expenditures. It reduces the total number of elementary schools from 16 to 10, increases the size of three large existing units and provides for high school expansion in the south of the city in the near future. The details of the recommendations are as follows:

1. Abolish the Hawthorne school—it is a mediocre building whose constructional score is in the poor class. Change the boundary of the Emerson school district to include the east triangle of the present Hawthorne district which includes the area bounded by

East Main Street, Linden and St. Paul Avenues to Ohio Street to the railroad tracks.

This will entail about 150 pupils additional who will then attend the Emerson School. Nine-tenths of the Emerson's enrollment will live within a half-mile radius of the school.

2. As the capacity of the Emerson School has been reached, Fig. C, it will be necessary to erect a six or eight room addition to the school, preferably the latter. This will permit the new pupils to be housed and will also relieve the Lowell School, which is up to capacity now, by changing the north boundary line of this district and moving it south to Waubesa to Milwaukee to Oak Streets to the present East line, thus reducing the school's own load and opening up the way for future expansion from the east in both schools. Additional play space should be acquired at or near the Emerson School which, it is understood, is already contemplated. Landscaping should also be done at this time.

3. The situation in the Harvey, Marquette and western Hawthorne districts calls for relief and a definite change. These buildings are rapidly approaching the danger line and are administratively not efficient and expensive to keep going. As the city has already acquired the "new Marquette site" between Jenifer and Spaight Streets it is recommended that a new school be erected on this site to replace the three schools mentioned.

The pupils involved will be approximately 300 from the remaining Hawthorne district, 350 from the old Marquette and 225 from the old Harvey districts, a total of 875. These numbers are taken from the spot maps furnished the committee and include all children spotted in the three areas, i.e. of course, kindergarten to sixth grade.

It will require a 22 room building with adequate auxiliary spaces. Only 12% of the proposed enrollment live outside of a half-mile radius from the new school. This school is of a size which makes for an effective educational and administrative unit.

4. The conditions in the Lapham district are decidedly unfavorable to the continued use of this building. It is badly off center and its score is close to that of a poor building; in fact if the barracks or "shack" building had been included in the score it would definitely be so. Though apparently far removed, the Brayton School plays a part in this connection as the recommendations call for a change in the Lincoln School boundaries which are to include the Lapham district on the east and a part of the Brayton district on the west and south. The Brayton School should of course be abandoned for regular instruction purposes—it is a very poor building and has long outlived its usefulness.

It is true that the city already owns the Burrows property, the block bounded by Dayton, Mifflin, Bearly and Ingersoll Streets but erecting a new school on this property, which school could be only a six or eight room building would only perpetuate the small school and that one only five blocks removed from the quite modern Lincoln building. The property may well be developed into a first class public playground.

As the Lincoln School is virtually filled now it is recommended that an addition be built which will house the present Lincoln enrollment of 325, 250 from the Lapham district and in addition about 80 from the old Brayton district. (The 102 seventh and eighth graders of the Lincoln are to be transferred to the Central junior high school section). This program will call for the erection of an eight room addition

to the Lincoln school. This may readily be done on the east end of the present building; the grounds are amply large and have recently been very much improved. Though the school is not central to the district north and south, it is well located east and west. If about 25 pupils from the extreme east end of the new district were to attend the new "Marquette" School, no child would live outside of a three-quarter mile radius and two-thirds within a half-mile radius from the Lincoln School.

The new Lincoln School boundary would then be Lake Mendota, the Yahara River, the railroad on the south, to Blair, to Wilson to Hancock to East Washington, to Pinckney to Mifflin to Wisconsin Ave. to the lake. Of course this boundary has simply been assumed to give objective pupil data and may be changed at will.

5. The Doty school is of course off the center of its district but it is a fair building and it is recommended that it be retained, for a number of years at least. Its north boundary to remain West Washington, then to Carroll to Main to Pinckney to East Washington to Hancock to Lake Mendota. This means that the school will need to accommodate an enrollment of around 175. The capacity of the school is ample and still leaves room for expansion and other activities. (See R. 6)

6. The Washington School situation has been a real problem for the committee and a puzzle as well. In the first place the building is a poor one, 414 points on a construction scale where 420 is the "dead line". Its site is not only too small but located in a congested area only a block removed from State Street and directly across from a fire station and on a busy thoroughfare.

It might be argued that the Barry property now owned by the city and probably purchased with a view to using

it as a site for a new building, may be so used. But its location and environment preclude this. It is almost directly adjacent to the railroad switch-yard, at the rear it butts on Meuer's fuel yard and across Frances Street are lumber yards and light industrial districts. Even if the railroad yards are ever removed, the site would still be a poor one; it should be retained for its present purpose—a playground, much needed.

The district itself will always contribute a fair share of children, at present about 130, in the kindergarten to grade four and about 50 in grades four to six. The problem is therefore where these children should be placed. It is of course possible to retain, in part at least, a portion of the Washington building and hold school there for a period of years; but this is not a remedy. There are however two other alternatives either one of which may be accepted by the administration.

One is to erect a new school on this site to house the lower grades; a four room building would be sufficient to take care of the little folks. The others, about 50, could then attend the Doty School.

The other is to send all the children to the Doty School in which case the deaf children could be sent to the Longfellow School with certain changes discussed later. It is true that certain traffic hazards, particularly West Washington Avenue will be encountered, but Bassett Street is an arterial and protected by stop lights. With an additional school traffic officer, possibly on Henry Street, the situation would not be at all serious. This arrangement would fill the Doty School though a change in boundaries could take care of this.

If the building is abandoned for school purposes it may be used in part as a store house for educational and

other supplies for the city as a whole; it is centrally located. This matter will be treated in another paragraph near the end of this section.

7. Similar to the Washington School the Draper School situation is a bad one. The building is definitely in the poor class, is in a poor location and has a poor and restricted play-space. It is recommended that this structure be eliminated from Madison's school building list and its enrollment, about 195 pupils, be accommodated in the Longfellow school. Though there are some traffic hazards involved in the change they do not seem any worse than those existing now. A half-mile radius with the Longfellow School as a center will enclose two-thirds of the Draper's school enrollment while a three-quarter mile radius will cover all.

8. The situation at the Longfellow School is satisfactory in most instances so far as the main structure is concerned but the old Greenbush Building, used in part for storage purposes, should of course be torn down; it is very poor in every respect. The old Longfellow Building now used for the crippled children was not scored nor considered a part of the regular school plant. It is not at all adapted to its present occupancy and represents fire and other hazards due not only to its general construction but also due to the fact that rapid means of exit for these children are lacking.

As the school will now need to take care of the Draper children, under the proposed program, it is recommended that an addition, possibly in L form be erected to take care of these children. This section of the addition should be specially planned to serve the handicapped youngsters. The whole addition will involve the equivalent of about 13-14 rooms.

By removing the old Longfellow and Greenbush buildings additional play space will be available even with the addition. It is also possible to purchase additional property in the block itself; it is so suggested.

9. The use of the basement rooms in the Randall School is to be discouraged. These areas are improper for recitation purposes and lack in many respects the characteristics of good school rooms. It seems an anomaly to teach about health in such spaces, as is done now.

Purely on the basis of capacity there is the possibility of discarding these rooms though this would probably lead to administrative difficulties.

It is unfortunate, in a way, that the use of the playground, the balance of the block, is restricted by the donor to a public playground as that now limits the building program of this school. The only chance for an addition is to complete the hollow square and erect a four room addition at the west. The present building has been planned with this in view and it is recommended that this addition be erected at a comparatively early date. This will release the basement rooms and allow some space for future expansion. The Randall district will not grow very much, if any, in the future and the proposed additional class room space will no doubt suffice for a long period of years.

10. As there appears to be some increase in the tuition students from the territory lying to the southwest of the city, it is possible to provide for these in the Franklin and Longfellow Schools or even in the Nakoma building as the Franklin School will have some excess room under the program proposed and the Nakoma building will also be in a better position to handle these students when the second floor is completed. Of course a part of the new quarters will be used to house the future pupils in

the Nakoma district or those from territory to the north. But with the removal of the seventh and eighth grade pupils to the West High School sufficient room for years to come will be available for elementary schools in this part of the city.

So far as the city at large is concerned the elementary school enrollment may be taken care of in the remaining existing and new buildings and the former may all be increased in capacity by additions with comparative ease. In case the city should grow very materially and beyond that expected in either the east or west ends, additional schools may be erected on sites which the city has already purchased. (See maps)

11. As has been mentioned before the playground spaces in connection with the schools are, as a whole, inadequate except in a few instances. With the suggested program this problem will in part at least be solved by the new "Marquette" School and the improvements at the Lincoln School. The Randall playground will be improved as present work progresses but will not be enlarged.

As the city and the Board have a previous report or survey on a recreation program available it is suggested that the recommendations contained therein be followed except as the program might be modified on the basis of this school building program, if accepted.

12. The problems connected with the junior and senior high school situation, really a six-year high school organization, are not serious at present nor would these problems, if later they should assume serious proportions, be difficult of solution.

The maximum capacity of the Central School is 1485 with an enrollment of 1249, thus leaving an excess seating of 236 at present. The East School's

capacity is 2698 with an enrollment of 2261 leaving 447 additional students to be accommodated. The West School situation is not so favorable as the capacity is only 154 in excess of the present enrollment. All this on the basis of a *seven period day*; the total excess is thus around 800. It is of course to be admitted that all rooms will be used on this basis, that is, seven periods per day which will require, as stated elsewhere, that teachers become "itinerant" which, in part, is the case now.

If the high schools were to switch over to an *eight period day* the maximum excess capacity would be around 1400 which, as the enrollment increase is tapering off, would take care of the city's needs in this respect for quite a long period of years.

It will be remembered, in this connection, that the seventh and eighth graders, now in the Lincoln School are to be transferred to the Central High School, as per the suggested program. It will be possible to take care of these students as only about 100 are involved.

It will be admitted that the Central High School is not a school which is as modern as either of the other schools nor does it have as many facilities; at the same time it is, at present at least, strategically situated so far as the central part of the city is concerned which latter will always have a good share of Madison's high school population to contribute. It will therefore be treated as in *status quo* for a long period of years.

However there is another situation in the high school field which should be considered at this time and that is the one concerned with the south side, the Franklin School district. Though growth so far as population is concerned will be slow the problem of housing increasing numbers of tuition pupils from this part of the territory

will need to be held in mind, as stated in paragraph nine.

It will be remembered that the Franklin School now has an enrollment of about 110 in the seventh and eighth grades and in addition this district sends over 100 high school students to the Central and about 30 to the West High Schools. Territory adjacent or tributary to the Franklin School district also sends over 50 tuition students to the West and about the same number to the Central High Schools. In other words out of this section of the city and adjacent areas there have originated nearly 350 six year high school students at present. At least 50 more are in the city section between Drake and Erin Streets who could also easily be included in the Franklin district. If these students could all be accommodated in the Franklin district it would relieve both the West and Central Schools somewhat.

The above statements lead to the recommendation that a new junior-senior high school building be erected in the south section of the city or possibly an addition to the Franklin in which case additional property will need to be acquired. It is believed however that a new building with a capacity of 500 would be preferable; there are a number of suitable sites available and the committee makes no recommendations in this respect.

13. At present about 60 pupils in grades seven and eight are still in the Nakoma School. These may be sent to the West High School later as room for them will be available under the proposed program or if the West School should change to an eight period program.

14. Present playground soil conditions are not very good at most schools and poor in quite a number of instances. Though the recommended program will

eliminate some of these, those which are retained or any new ones should be treated and surfaced to produce an even, fairly resilient surface without loose gravel or crushed stone. A modern semi-asphaltic surface treatment is recommended.

15. It is also suggested that much attention be paid to fire alarms, their stations and extinguishers. Each building may easily be connected to the public fire alarm system so as to be able to give a direct alarm. This may be done in each school by means of a throw-over switch which will permit a local fire alarm for drill purposes or a small horn or siren could be operated separate from the main alarm system for this purpose.

16. As has been discussed previously more attention should be paid to providing good lighting conditions on the children's desks or working surfaces. This means good and efficient lighting fixtures, proper size luminaires and the effective operation of the window shades criticized before. It is also possible to get increased lighting by using decorations whose color will promote light reflection which is not now always the case.

It is also possible to improve some of the physical conditions in those buildings retained under this program. This may well include the selection or adjustment of seating suitable to the occupants; improvements here are indicated in many cases. Too many rooms are seated with non-adjustable desks and only one size to a room.

17. The committee has also felt that the present administration building, a remodeled dwelling, is unsatisfactory, too small and not in keeping with a school system the size of Madison nor commensurate with the problems confronting the school administration. At

present the very old and decrepit school building on the Lincoln grounds has offices for the Guidance and Special Education Supervisors and in addition small quarters for the Supervisors of Health Education and Recreation. The Brayton School has offices for the Attendance division. These various departments should be under one roof and given modern housing and office space.

It is therefore recommended that the program outlined so far be augmented by the erection of a suitable administration unit sufficient in size and scope to provide for all administrative offices under one roof.

The committee has no specific recommendations to make as to a site. If the Washington School is vacated or even if a new unit is erected there, it is quite feasible to also provide for an administrative unit. It is possible of course to convert a part of the old Washington School into offices but the expense involved in modernizing and rebuilding the old structure is hardly warranted and not recommended.

It is also possible to build on the present site as eventually, if not in the very near future, the Baptist Church property should be acquired for school purposes. The present situation here is not to be retained indefinitely.

18. In case the program outlined is accepted by the city and carried out in general then it will leave the city with five or six parcels of vacant property some of which are quite valuable and may either be sold, if the title is unconditional, or retained for recreation purposes. In either case there will be no loss but considerable gain.

19. As called to attention in Section II-C the wooden shop buildings of the East High School should be replaced with a modern shop structure and the mistakes of the permanent shop section rectified.

In Conclusion

The program outlined seems a reasonable and feasible one to the committee. It will probably care for Madison's school program and enrollment for eight to ten years, if not longer. The total maximum capacity of the elementary schools under the proposed set-up is about 7800 allowing about 1600 seatings for adjustment and expansion. Even if the ten year period should bring unprecedented increases it will still be possible, by means of additions to existing buildings, to increase the enrollment capacity.

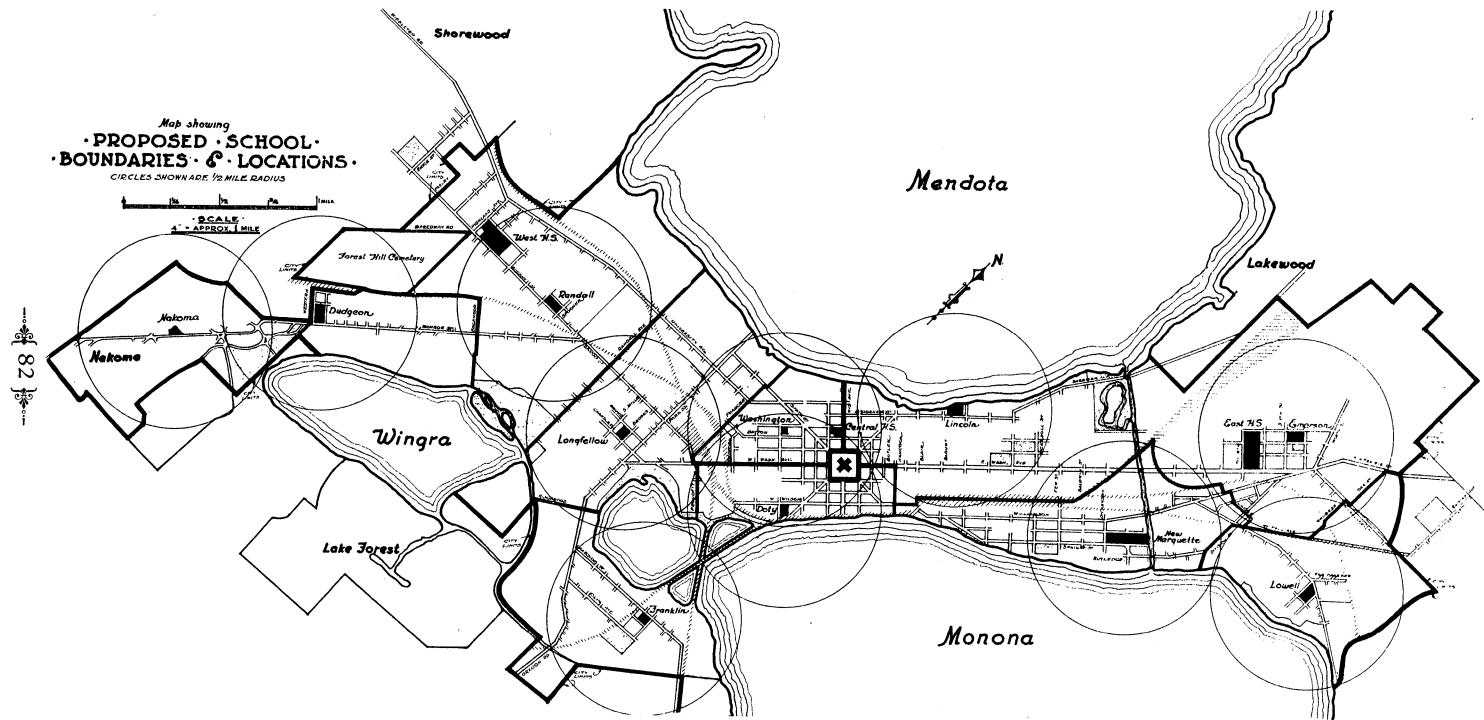
The high school program will relieve the West and Central Schools somewhat and due to the new "South" High School will permit further expansion in the western part of the city where the major growth is taking place. It will provide for a capacity of about 6500 on a seven period day; this should permit sufficient leeway for a ten year period.

It is also to be remembered that the program does not call for an immediate change nor that any new buildings must be erected "to-morrow"; it will require several years to get such a program operating and make the suggested changes. However, even if the Board should reject this program or any part of it it is still necessary to set up a definite program of some kind, nor should it be a haphazard one—relief is needed.

Resume

In brief and as a concise review of this section, the proposed changes are:

1. Abandon the Greenbush, old Longfellow, Draper, Washington, Harvey, Marquette, Lapham and Hawthorne Schools.
 2. Erect a new Marquette School on the new site.
 3. Erect additions to the Emerson, Lincoln and Longfellow Schools.
 4. Change the boundaries of the Emerson, Lowell, Lincoln, Doty, Washington and Longfellow Schools to make the required adjustments in pupil loads.
 5. Erect a new unit at the Washington site and combine it with an administration unit.
 6. House the crippled and deaf children in the new Longfellow addition making the necessary arrangements for these children.
 7. Erect a new six-year high school building in the south-western part of the city (Franklin district).
 8. Erect new shop building at the East High School.
 9. Make a number of changes and adjustments as well as some physical improvements in various schools as set forth,
- (In this connection a study of the maps appended to this report will be very instructive and show the simplification of the school system under the proposed program).



Section VII

FINANCES

● Naturally the cost of the outlined program is of considerable interest to the reader and of course has a definite bearing upon the whole matter. One might recommend a building program which could not be financed or which would be out of keeping with the results obtained later. The committee believes that its program *can be financed* without undue financial burdens and that *it is in keeping* with later obtainable results.

The estimates of the various improvements are based upon present Madison prices for "fireproof" modern structures, but on a rising market and with a future not yet stabilized, no pretense is made to project these prices into the next few years. They may have to be modified and revised either upward or downward. Furthermore the estimates are not "just made" but based upon either existing plans or sketch plans made for this purpose.

No estimates have been made of sites or land to be acquired; these matters may best be handled at the time such property is needed or purchased for future use. Nor have any estimates been made regarding general improvements. These may be furnished the Board by its Superintendent of Buildings, Mr. Marcus Johnson.

ESTIMATED COST OF RECOMMENDED BUILDING PROGRAM

1. New Marquette building. \$210,000
2. Addition to Emerson school (8 rooms) ----- 68,000

3. Addition to Lincoln school (8 rooms) -----	73,000
4. New Washington School? (4 rooms) -----	35,000
5. Addition to Longfellow school -----	113,000
6. Addition to Randall school (4 rooms) -----	32,000
7. New high school (500 capacity) -----	250,000
8. New Administration Building -----	50,000
9. New shops at East high school -----	20,000
	<hr/>
	\$851,000

To the average person a program involving over three-quarter million dollars may seem a very pretentious or ambitious one. But let us compare it with the cost of the West high school erected in 1929-30. This structure, without grading and completing the play field areas cost \$724,000; with all improvements it cost just about \$750,000. In other words for the price of one modern high school building Madison is clearing up its involved, antiquated elementary school building situation and putting itself on the "educational map" with a clean cut school system, and withal, is giving due attention to the lower half of its school population. Is the price too high? The committee is of the belief that the costs involved are justifiable from all angles. As has been declared, the whole program is not in-

tended to be realized at once but in proper stages.

In 1929, i.e. of December 31, Madison's total funded indebtedness was \$5,764,542. This rose to \$6,230,120 in 1932 since which time this debt was reduced to \$4,676,311, a reduction of \$1,553,809 "during the past five difficult years."¹ Even with the reduction of its assessed valuation from \$146,257,700 to \$120,836,735 during the past five years, Madison's finances are in very good shape, with its debt reduction going on apace. If the city, in 1929, could afford to spend nearly three-quarter million dollars on one high school, when its indebtedness was \$5,764,542, could it spend a similar amount during the next three years, let us say, when its indebtedness will be reduced to a little over \$4,000,000 by 1939 even by the issuance of the necessary school bonds?

Of course the city will be obliged to issue other bonds for various purposes

¹ From "A letter to Taxpayers" by the city.

in the next few years yet its total indebtedness does not need to rise anywhere near the danger point of legal limitations. When the city each year proposes to reduce its indebtedness by over \$400,000 during the next four years, the situation cannot be considered unfavorable to the program outlined.

In the last analysis this matter must be taken under careful advisement by the Board and the city administration.

Conclusion

The survey committee has studied Madison's school problems carefully and has given the whole subject much thought and time. As stated at the beginning the recommendations are suggestive and no mandates are involved. If the solutions offered are helpful and lead to final acceptable plans, then the work of the committee has not been in vain. The report is offered in a cooperative and helpful spirit.

THE COMMITTEE

Part V

THE BUSINESS AND FINANCIAL ADMINISTRATION OF THE SCHOOLS

By EARL D. BROWN
Supervisor of Accounts, Purchases and Supplies

- The financial report for last year emphasized the personnel that is involved in the makeup of the budget and its operation. The following report will show the importance of centralization in business procedure and will also describe the methods used in making purchases.

To the boy from the country who has never been to the city, maze of avenues, streets, skyscrapers, houses, bus lines, etc., seems an unsolvable mess in which he would be lost were he assigned to locate a man by the name of Tom Jones. To the city child who has learned the system of streets, names and numbers, this task would be a lark.

A. Central Cost Control on All Budget Accounts

- When the casual observer sees the budget of the Board of Education set at a million two hundred thousand dollars, he may be curious to know how that body is able to keep a close check on such a multiplicity of schools, departments, and detailed items.

The same type of system which makes it possible for the city child to locate Tom Jones living at No. 16 Elm Street is used in setting up the million dollar budget. The Board of Education has developed through its Business Office scientific, complete and at the same time easily managed systems of accounts, purchases and supplies. The Business Office is able to sum up at a glance just how much a certain school has spent of its total budget. More than that it can determine exactly how much any one of a number of detailed expenses within a given school, such as cost of paper towels, electric lights, consumption of coal, repair of buildings, or teachers salaries, amount to on a given day. The system goes still further so that the total of all coal consumption or all towel consumption in all of the schools can be determined in a few moments.

The setup is based upon the school as a unit. Under the *Building Heading* are listed all of the general expenses which continue from year to year such as teachers' salaries, water supply, coal, books, repair of buildings, etc. By checking closely the amounts consumed each year for a period of years under each detailed account, it is comparatively simple and yet entirely scientific to determine what will be spent during the current year. These exact amounts are set up at the beginning of each year as the amounts to be spent. Above each account in the ledger the amount is set up in *red figures* as a warning that in that particular pigeon hole a definite amount of money has been set aside for a particular purpose determined by the Superintendent and his staff. As the weeks and months of the year go by, the columns get larger and more detail is added, but a comparison between the red figures at the top and the balance at the bottom clearly indicates how much money is left to be spent.

Perhaps the strongest point of the system is the centralizing of responsibility. All purchases, storage of goods, accounting for expenditures, and budget making are started and finally terminate in the Business Office. The accounting department warns the purchasing agent when amounts are nearly expended. The stock department informs the purchasing agent when inventories are running low. The experience in buying, storing and accounting is utilized by the Supervisor in setting up the budget for the next year.

Lists of expenditures such as consumption of electricity, water and coal are kept over a period of years by months, for each and all schools. This makes it possible to compare costs between schools and also within the same school over periods of time. The practical result is that schools will try to make the best showing possible as to economy. These lists also help to determine within a few dollars just how much money is to be allotted in the budget for the next year.

This centralizing of responsibility adds another advantage. Each school will be given its equal share of all commodities and services. Unit costs for books, supplies, teacher service, etc., can be determined and measured out to each school on an equal basis. This insures each child an equal opportunity to share in all of the services available.

B. Values and Pupils' Needs Insured by Purchasing Methods

- A word might well be added as to the system of purchasing used. More than two thousand different items are purchased each year in oper-

ating and maintaining the school. Most of these items are used in furnishing instruction.

On a large number of supplies it is possible to get information as to tests for quality from research institutions such as the University of Wisconsin testing laboratories, Forest Products Laboratory, and the Chicago Commercial Laboratory. All of the coal consumed by the schools is purchased according to definite specifications. As soon as the coal arrives in cars, samples are taken out and sent to the various laboratories for testing.

Other items upon which tests have been made are electric lamps, soap, paper towels, etc.

The accompanying exhibit shows some of the tests that are used in determining the best quality in theme paper.

The following paragraphs taken from the specifications used in purchasing pupils' desks are typical of the conditions set up in the purchase of many other items.

1. Desks to be equipped with book box large enough for storage of books, pencils and paper. Top to lift on silent hinges furnished with cushions so as to afford silent closing. Desk to be equipped with modern type adjustment for raising and lowering. Sizes A and B to be equipped with ink wells. Seat to be of modern posture type, saddle shaped, with adjustment for raising and lowering, and swivel adjustment for turning to left or right. Desk and seat to be connected by tubular steel bent close to floor, finished in harmony with other metal parts. Frame to be wide enough to prevent tipping. Feet to be provided with large flat bottom slides to prevent cutting of floor covering. Desks to be furnished with adjusting wrenches, one wrench for every 20 desks.
2. Finish to be of standard method of finishing used by manufacturer. Bidder must submit description of finish. Wood finish to be tobacco brown, metal parts also in brown.
3. Bidder must state dimensions of desk box for sizes A, B and C and state whether box is of steel or wood or both.
4. Bidder must furnish sample of desk quoted on in either size A or B.
5. Desks are to be crated or shipped in such a way as to prevent marring.
6. Desks to be shipped F.O.B. 22 West Dayton Street, Madison, Wisconsin.

In order to assemble all of these materials in quantities large enough to afford quantity discounts, a year's supply is purchased at one time. Take, for example, scientific supplies; more than four hundred different items have to be purchased varying from giant grasshoppers to Spencer microscopes. A list of these four hundred items is made up and sent to a dozen or more scientific supply houses located all over the United States.

TESTS ON THEME PAPER

Rating Unit	Points
Excellent -----	(10)
Good -----	(8)
Fair -----	(6)
Poor -----	(4)

Company	Writing Test with Fine Pen	Tear Test	Crumple Test	Quality	Color	Total Points	Unit Price
A	Good (8)	Ex. long (10) fibre, tough thread	Ex. (9)	Good + smooth (9)	Clear white (9)	45	.2548 Net
B	Poor (4) scratches	Good (8) long fibre	Good (8)	Good medium (8)	White (9)	37	.28 1%, 30
C	Fair (6) Pen scratches a bit	Fair (6) fibre shorter not as tough	Good medium (8)	Good (9) fairly smooth hard	White (9)	38	.269 Net
D	Poor (4)	Fair (6) short fibre	Good (8)	Fair (6)	White (9)	33	.2550 2%, 10
E	Poor (4)	Fair (6) medium fibre	Good (8)	Good medium (8)	Dull white (8)	34	.2875 1%, 10

These companies bid on groups of these items and the bids are tabulated. Several of the teachers who will use the materials, and who have had years of experience in selecting supplies, are called in to help determine the best quality for the least money. One company or several companies are selected and the orders are sent out. The supplies are assembled according to the various schools and departments, and delivery is made during the summer. It is estimated by taking advantage of this quantity buying that from 50% to 100% on price is saved.

The same procedure as above described takes place in the purchase of several hundred manual arts supplies, art supplies, paper towels, floor brushes, soap, school seats and a dozen other general classifications. After a year or two of experience in this type of buying, the purchasing agent becomes an expert in the selection of commodities as to quality and price. He becomes familiar with the market and is able to take advantage of "seasonal lows", when prices are down. He becomes familiar with the needs of every school and every classroom. He knows the uses that each item is put to, and by constant contact with teachers he becomes tuned to the teaching situation where these hundreds of commodities are used. In other words, the business end of school purchasing does not become a hard and fast "low buying" system, but a personal service where the needs of pupils are met by personal supervision and quality selection.

BALANCE SHEET AS OF JUNE 30, 1936

ASSETS

Particulars	
FIXED ASSETS	
Land and Land Improvements -----	\$ 858,496.04
Buildings and Attached Structures -----	4,263,313.78
Machinery and Equipment -----	688,684.69
SUNDY ACCOUNTS RECEIVABLE	
Accounts Receivable -----	10,189.20
Tuitions Receivable -----	75,106.74
CURRENT ASSETS	
Cash in Bank -----	1,485.58
Board of Education—Petty Cash Fund -----	15.00
Board of Education—Advances to be Refunded -----	1,500.00
INVENTORIES	
Stock Room -----	10,699.87
Fuel -----	2,714.45
TRUST FUNDS	
Samuel Shaw Prize Fund -----	927.08
C. R. Stein Scholarship Fund -----	2,401.82
William McPyncheon Trust Fund -----	10,314.37
Total -----	<u>\$5,925,848.62</u>

LIABILITIES

Particulars	
FIXED LIABILITIES	
Bonded Indebtedness -----	\$2,241,000.00
State Trust Fund Loans -----	28,822.00
OTHER LIABILITIES	
Longfellow Crippled Fund -----	1,000.00
Award of Industrial Commission of Wisconsin to Lloyd Benson	3,425.55
TRUST FUND RESERVES	
Samuel Shaw Prize Fund -----	927.08
C. R. Stein Scholarship Fund -----	2,401.82
William McPyncheon Fund -----	10,314.37

PROPRIETARY INTEREST

Particulars	
FIXED SURPLUS	
\$3,537,246.96	
CURRENT SURPLUS	
100,710.84	
Total -----	<u>\$5,925,848.62</u>

REVENUES—JULY, 1935 THROUGH JUNE 30, 1936

REVENUE RECEIPTS AND ACCRUALS

Particulars	
STATE FUND APPORTIONMENT	
In City of Madison	\$ 72,730.00
In that part of Joint School District No. 8 Township of Blooming Grove	98.50
TAXES LEVIED BY COUNTY SUPERVISORS	
In City of Madison	66,000.00
CITY SCHOOL TAXES	
In City of Madison	937,694.58
In that part of Joint School District No. 8	3,457.09
STATE AIDS	
For Deaf School	5,991.38
For Speech Correction	3,370.01
For Crippled Children—Longfellow School	9,779.16
For Crippled Children—Orthopedic School	6,692.93
For Crippled Children—Other Schools	248.25
For High Schools	882.36
TUITIONS	
Central Senior High School	1,325.49
Central Junior High School	416.30
East Senior High School	18,167.10
East Junior High School	6,045.63
West Senior High School	12,846.11
West Junior High School	6,833.58
Elementary Schools	8,340.54
Deaf Schools	833.20
Crippled Children	1,552.60
RENTALS	
C. H. S. Auditorium and Gymnasium	17.26
E. H. S. Auditorium and Gymnasium	127.60
W. H. S. Auditorium and Gymnasium	50.61
Elementary School Gymnasiums	67.51
OTHER MISCELLANEOUS RECEIPTS	
Board of Education	—250.44
Vocational School	562.49
Total Revenue Receipts	\$1,163,879.84

NON-REVENUE RECEIPTS AND ACCRUALS

SALE OF MATERIAL	
Attendance Department	\$ 15.00
Home Economics Dept. C. H. S.	3.89
Home Economics Dept. E. H. S.	11.53
Manual Arts Dept. C. H. S.	247.42
Manual Arts Dept. E. H. S.	604.64
Manual Arts Dept. W. H. S.	359.92
Manual Arts Dept. Elementary	182.62
Special Schools	72.16
Open Air and Nutrition Room—Emerson	80.58
Open Air and Nutrition Room—Longfellow	73.81
Open Air and Nutrition Room—Lowell	70.56
Total Non-Revenue Receipts	1,722.13
Grand Total	\$1,165,601.97

TOTAL OPERATION, MAINTENANCE AND CAPITAL
JULY 1, 1935 THROUGH JUNE 30, 1936

SUMMARY OF EXPENDITURES

	Operation	Maintenance	Capital	Total
Sept. of Schools -----	\$ 8,841.82	\$.0	\$.0	\$ 8,841.82
Admin. Bldg. -----	25,628.59	215.23	227.92	26,071.74
Admin. Annex -----	609.20	56.04	79.10	744.34
C. S. H. S. -----	100,065.07	3,691.99	2,226.11	105,983.17
C. J. H. S. -----	44,793.04	116.49	150.00	45,059.53
E. S. H. S. -----	135,219.45	4,107.99	2,738.76	142,066.20
E. J. H. S. -----	73,985.24	71.09	73.03	74,129.36
W. S. H. S. -----	107,962.76	2,818.34	4,234.44	115,015.54
W. J. H. S. -----	55,435.04	11.53	191.84	55,638.41
Brayton -----	5,886.70	354.02	35.80	6,276.52
Doty -----	14,598.62	936.91	372.68	15,908.21
Draper -----	15,702.55	261.95	55.83	16,020.33
Dudgeon -----	18,242.71	436.48	507.39	19,186.58
Emerson -----	53,474.07	1,980.34	88.49	55,542.90
Franklin -----	35,673.06	421.66	5,622.47	41,717.19
Harvey -----	17,461.28	616.80	341.46	18,419.54
Hawthorne -----	20,269.32	330.52	25.23	20,625.07
Hawthorne Annex -----	50.05	12.83	.0	62.88
Lapham -----	15,965.49	641.28	35.74	16,642.51
Lincoln -----	29,889.12	369.40	268.12	30,526.64
Longfellow -----	49,181.86	983.66	114.26	50,279.78
Lowell -----	46,855.45	1,794.35	370.15	49,019.95
Marquette -----	21,040.56	791.22	117.17	21,948.95
Nakoma -----	21,071.83	238.81	1,504.72	22,815.36
Randall -----	54,558.24	1,545.69	397.00	56,500.93
Washington -----	17,112.82	222.01	131.46	17,466.29
Music Studio -----	965.94	2.75	.0	968.69
New Marquette -----	41.45	26.10	.0	67.55
Recreation Dept. -----	24,625.92	.0	.0	24,625.92
Undistributed -----	110,659.81	1,137.29	50.15	111,847.25
Totals -----	\$1,125,867.06	\$24,192.77	\$19,959.32	\$1,170,019.15

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