

Deahl, J. N. & others

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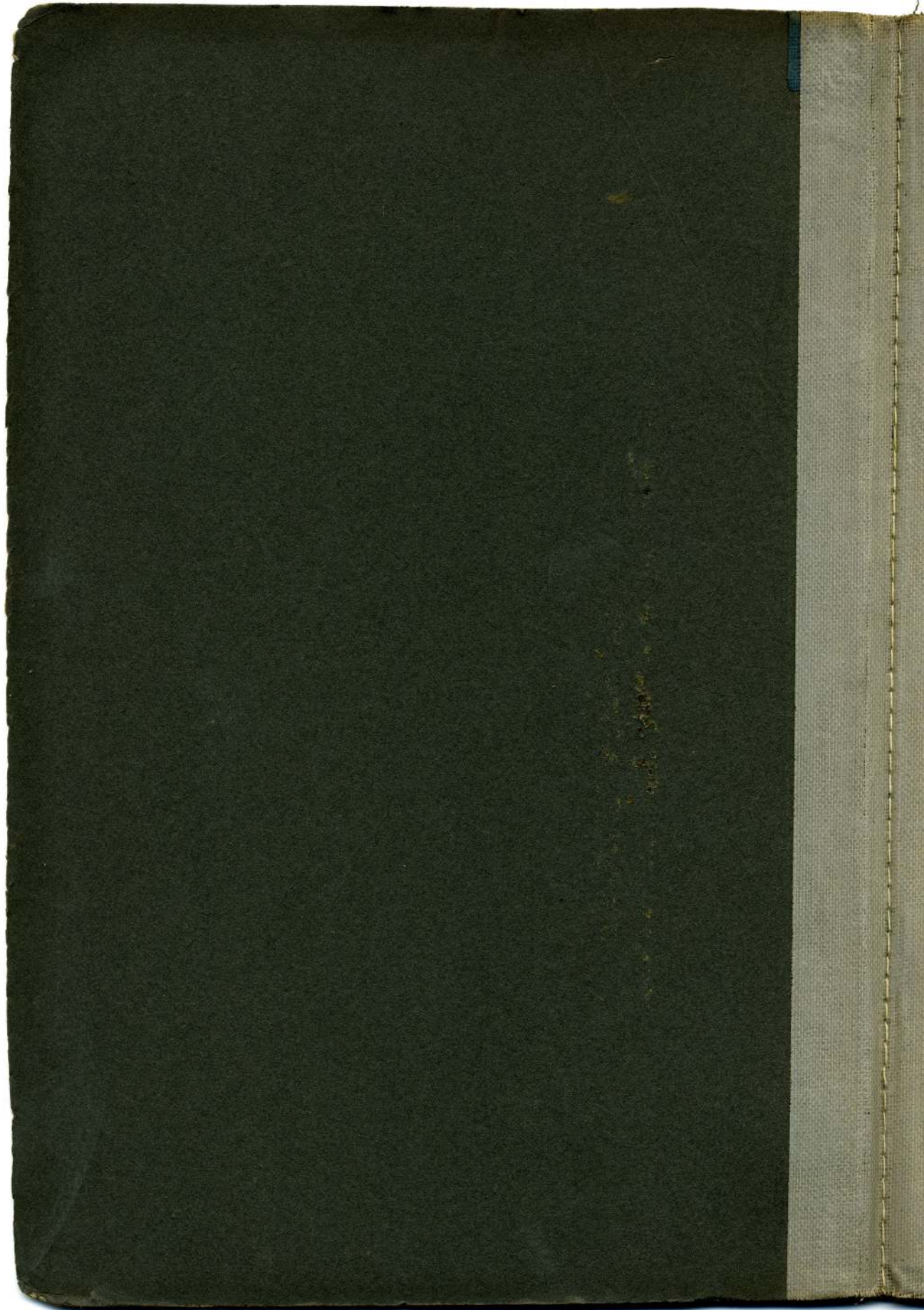
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REPORT OF THE SURVEY  
OF THE  
GRAFTON CITY SCHOOLS



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PUBLISHED BY  
DEPARTMENT OF SCHOOLS  
M. P. SHAWKEY, STATE SUPERINTENDENT  
CHARLESTON, WEST VIRGINIA

ROBERT JOHNSON  
1000 UNIVERSITY AVENUE  
ANN ARBOR, MICHIGAN

# REPORT OF THE SURVEY

OF THE

## GRAFTON CITY SCHOOLS



AS MADE BY

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HEAD OF DEPARTMENT OF EDUCATION,  
WEST VIRGINIA UNIVERSITY.

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PUBLISHED BY  
DEPARTMENT OF SCHOOLS  
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REPORT OF THE SURVEY

1917

CHATTANOOGA CITY SCHOOLS

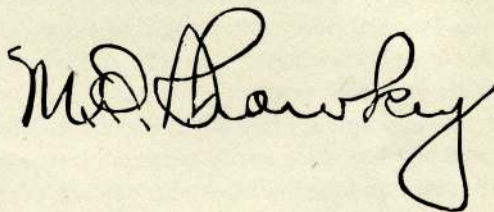


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### INTRODUCTION.

The State Department of Schools does not have so frequent opportunity for co-operating with the city schools as it does with the schools of the country. For this reason it is all the more eager to take advantage of such opportunities when they arise. In passing along the report of the committee which made the survey of school conditions in the city of Grafton a few months since, the Department feels that it is rendering a service of real value to the people of this state. Boards of education in the towns and cities especially should find the report an interesting study. The report gives us an excellent discussion of a school system, in the concrete, and I feel that the educational world at large owes a debt of gratitude to the Board of Education and the people of Grafton for this valuable work.

Very respectfully,

A handwritten signature in cursive script, reading "M. D. Hawkey". The signature is written in dark ink and is positioned centrally on the page.

*State Superintendent.*

32776

DECLARATION

I, the undersigned, do hereby certify that the above is a true and correct copy of the original as the same appears in the records of the office of the Secretary of the State of New York.

Witness my hand and seal this 1st day of January, 1900.

John B. ...

37758



June 14, 1913.

*To the Honorable Board of Education,*

*Grafton, W. Va.,*

Gentlemen :

In accordance with the agreement entered into with your body in April, 1913, to make a survey of the schools under your supervision, we have the honor to submit herewith the results of our investigation covering the educational needs of your community from an industrial standpoint, the scientific basis of a system of public education such as is demanded in your community, the professional training and equipment of the teachers employed, the course of study in use in the schools, the methods of teaching and the plan of the school organization, methods of administration as related to the assignment of teachers, possible consolidations of departments and grades, current expenditures, the purchase of supplies, and the need of a more adequate high school equipment, as well as other suggestions dealing in detail with the general management of the schools.

### **Industries and Occupations**

The chief industries of Grafton for men are railroading, glass manufacturing, metal working, wood working, clay working and office working; for women, home making, office and clerk work and sewing. Conferences and interviews have been had with those who have charge of the Baltimore and Ohio Railroad at Grafton and who manage and direct its operation, with the superintendents of the glass and tile industries, with some of the owners and managers of the metal and wood industries, with many of those who employ office and clerk help, with a number of women who sew for the public. In every instance your committee was most cordially received and willingly assisted in its work. In addition to this community study of industries, many of the business men and professional men of your city were interviewed with reference to the educational needs of your city.

The purpose of these conferences and interviews was to find the attitude towards education, what the city schools are now doing for the industries and occupations of the people of your city, what addi-

tional help the schools may be reasonably expected to give, what cooperation of the industries and occupations with the public schools in bringing about any change that may seem wise and expedient to the Board of Education may reasonably be expected from the industries and occupations of your city.

Everywhere a very commendable attitude towards general education was manifest. Superintendents and those who direct the work of young men and women expressed preference for employing boys and girls who have a high school education. If your committee may judge from the conferences and interviews with many of your citizens as well as with employers, the desire and demand for industrial education in your schools is strong and urgent. There is also a willingness on the part of employers, where it is practicable, to cooperate with the schools in providing for shop work on the part plan system of school attendance and shop work for which the boys will secure school credit.

It is true that any school system should contribute to the moral and intellectual welfare of the community that supports the system. It is also equally true that any school system should in a very direct way reflect and contribute to the major industries of the community which supports the system of schools. In fact the moral and intellectual welfare of any people is contributed to in the largest and most real sense by aiding such people in their occupations. The major part of life is work, either with the head or hands or with both head and hands. The way to enrich life, to say nothing of increased efficiency, is to rationalize the occupation of the individual. Dull and deadening routine and drudgery are raised to the plane of hopeful and life producing work by rationalizing the occupation. In this way education is life and life in turn reflects education.

The major industry in your city for men is railroading and the major occupation for women is home making. Your schools should make a reasonable return to the railroad for the money it contributes to the support of your schools. In doing this your schools will at the same time serve in a direct way many of the boys in your city. The railroad will, in the judgment of your committee, co-operate in this extension of your schools. The officials at Grafton have expressed to your committee a disposition to do so and a desire for the boys entering the railroad service to have educational opportunities to aid them in learning to become more efficient in its service. Your schools have a rare opportunity to render good service and in turn be helped by the railroad.

Home making is the chief occupation of women, yet it is more than passing strange that our schools everywhere offer little or nothing for

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the home maker. This strange situation obtains quite as often in colleges as in the grades and high schools. The education of girls in most schools is a waste of time and energy and money if it does not actually impair their capacity for successful home making. Our schools can contribute not only to making happier and better homes by teaching the things which home makers need to know but the schools can, in a very real and effective way, help to solve the problem of the high cost of living—a very real and pressing problem.

### **Night Classes**

The Columbia Tile Co. employs 15 to 20 boys and the Tygarts Valley Glass Co. employs 35 to 40 boys and girls. These boys and girls will not be able to do part time in regular school owing to the nature of their work. However, many of these girls and boys are now taking correspondence courses. This should not be necessary. The city should in some way provide for the education of these young people. A night school for these should be provided if, after proper investigation, the demand seems adequate. If this is not practicable, then your schools should provide for some kind of extension work. This may be done in an economical and successful way.

### **Sewing**

There is an opportunity and need in your city for girls to learn to sew, for the public. The persons interviewed in regard to the opportunity for sewing pointed out that girls who were able to do satisfactory work could not be secured. For this reason the women who employed help discontinued their shops and are now taking what work they can themselves do.

Sewing and dressmaking is a more desirable occupation for girls who have capacity for such work and who have to make their way in life than stenography and clerking, besides it fits for home-making which girls look forward to.

### **A Co-operative Plan**

It has been suggested elsewhere in this report that your city has an opportunity to bring about a cooperative plan beneficial both to your industries and to your schools. The railroad with its shops is especially well suited for such a plan. Other industries will also furnish opportunity on a smaller scale. It may be the railroad would not

only cooperate with its shops etc., but give financial support in equipping your manual training department.

It could well afford to do so as a business proposition. An instance of such aid to schools is found in Altoona, Pa. The Pennsylvania Railroad in 1905 equipped the Altoona high school manual training department at a total cost of about \$30,000. To secure such assistance from the railroad you would need first to erect an adequate high school building which you now badly need.

The cooperative plan is at present organized in many towns and cities. Some of these are Beverly, Mass.; Fitchburg, Mass.; Rochester, N. Y.; Peoria, Ill., and many larger cities. The plan is to have the boys attend school part time and work in the shops part time, for which school credit is given. Certain hours per week, or half day time or one week is given alternately to shop and school. Some such cooperative plan is entirely feasible in Grafton.

In your present school system a manual training plant could be installed. The cost need not be considerable. Much of the equipment could be made in Grafton. The plant once started, the boys could make much of the equipment while being taught to work in wood and metal. Some estimates of cost of equipment in manual training and home economics have been secured.

The minimum cost for furnishing a domestic science department for 16 to 24 girls would be about \$332 to \$540. This would not include plumbing and some storage shelves, the cost of which would depend upon the building, present plumbing, etc.

An estimated cost for an economical outfit for wood-working for 24 pupils would be \$535 to \$1080.

A forge shop independent of the railroad shops could be equipped for \$1378 for general tools and \$1390 for individual tools, for 20 pupils. A blacksmith shop for 20 pupils would cost probably not less than \$138.

### **The High School**

The high school was inspected and studied with reference to the plant and equipment, the program of studies, the organization, the teaching and the needs of its pupils. The plant and equipment and the organization are considered in another part of this report. It should be said here, however, that your high school is not adequately housed. The rooms now in use are quite insufficient. Next year with probably an increase of sixty or more pupils it will be very difficult to

care for them in a proper manner. The high school is very much in need of an assembly room sufficient in size to accommodate the increasing numbers of pupils and public meetings of a school or educational character.

The lighting in most of the high school rooms is very poor and the ventilation unsatisfactory. The blackboards and equipment are such as to render teaching and learning very much less effective than it otherwise would be. The school is in need of additional maps, models, charts, apparatus, books, etc.

The spirit and attitude of the high school pupils is good. The pupils manifest a very earnest desire to learn and they show by their class work reasonable industry in their studies. A considerable number of boys and girls in your school are pursuing studies for which neither nature has fitted them nor the demands of our present civilization require of them. Many of the failures in studies are due neither to failure of application on the part of pupils nor to earnest endeavor on the part of instructors to teach but rather to lack of capacity for some studies and the remoteness of other studies from the life interests of the pupils.

Your high school teachers will compare quite favorably with those of other towns and cities of the state. Their desire to help their pupils is evident. Their academic preparation is satisfactory; the professional knowledge of some of them is adequate; in some cases it is not sufficient. High school teachers should have professional training commensurate with their academic training. A reasonable knowledge of youth, their instincts and capacities, of the nature and aim of education, of the education values of studies, of the learning process, etc., is necessary to do good school work.

The program of studies in your school has been improved very much in recent years. It needs further revision in the direction of present needs of the boys and girls and of the community. It could with a few changes be made a very effective program. The present organization into four curricula should be made less restrictive. If the boys and girls are to receive the benefits of a high school education, there should be more frequent and closer supervision in the selection of studies. It should be easier for a pupil to readjust his studies when they are found not to be educative to him, that is, when he is not getting the proper amount of knowledge and the kind he will use in his life. A pupil cannot get the education values of studies unless he can do the subject well and with satisfaction to himself. High school teachers should be able to judge with accuracy whether pu-

pils are doing as well in their studies as reasonable application would enable them to do their studies. To form such a correct judgment, the pupils must do a part of their lesson preparation under the immediate supervision of the teacher; class work alone will not reveal whether the pupil is making proper application. When it is found that a pupil with reasonable time and energy given a subject is not getting the educative value of the study, the program should be flexible enough to permit the pupil to change his study.

The following recommendations are made with reference to studies in your High School:

1. Of the 16 units necessary for graduation, English should be required. The only other requirement should be a reasonable grouping of studies as follows: two majors of not fewer than three units each and three minors of not fewer than two units each. It may be not less than a unit of home economics should be required of all girls. This requirement would depend upon the facilities of the school to give the subject. If the equipment is adequate, the requirement should be made.

2. In English the amount of technical grammar and language study should be reduced. The history of literature should be omitted, except what is necessary to a reasonable understanding of the literary selections studied in school by the pupils.

3. In mathematics, a more modern text should be used in algebra and a briefer text in geometry. Plane trigonometry should doubtless be offered in your high school for those who desire it. In the eighth grade the elements of algebra should be taught in connection with the arithmetic. This may be done in such a way as to improve the arithmetic and serve as a guide and basis for further study of mathematics in the High School. The pupils should not be required to have a text in algebra in the grades.

4. The commercial studies should be bookkeeping, shorthand and typewriting. A minimum speed test should be fixed in stenography for those who take it. Sophomore standing should be required for admission to the commercial studies.

The writing, spelling and English necessary for commercial studies should be taught in connection with other subjects and in other classes. A pupil deficient in these subjects should not be permitted to enter commercial studies. You are now paying for the teaching of writing in the grades. Spelling is more economically taught in connection with other studies in the High School. This is also true of language forms. There is abundant opportunity for writing, spelling and grammar forms in high school studies. Correct form should be insisted on in all written work done by pupils.

5. The High School should offer mechanical drawing, for which preparation should be made in the grades with free-hand drawing.

6. Home economics for girls and manual training for boys should be provided for in the High School. The former subject should consist of

domestic science and sewing. It may be that you could with your present plant offer the sewing in the eighth grade to better advantage than in the High School.

The manual training should consist of wood and metal work. The metal work should include at least forging, filing and chipping.

7. Your city has an opportunity to do co-operative work of shop and school.

The co-operative plan will enable many of your boys who now receive little or no advantage of your High School to secure a secondary education.

The plan will be economical for the city and contribute directly to your major industries. The plan will also contribute to your High School in bringing it closer to the people and thereby secure for it larger confidence and support from your people.

8. There are both educational advantages and economy in furnishing free text books. It seems the Board could well afford to begin the introduction of free text books by securing a few of the books most generally used. At any rate, the library books should be very considerably increased in number.

### **Moral Education**

We are living in an age of transition—industrial, political, social, moral change. The school is the institution to which the public may rightfully look for guidance in such a time when either development or decay may result. We should recognize that the old social and moral standards will not return. The old social order is quite as impossible and undesirable today as the old industrial and political standards. The school must not only readjust itself but it must contribute to the development of moral and social efficiency of a rationally conscientious kind. Boys and girls must be taught to see the need and worth of correct moral conduct and character. Success and happiness depend upon right moral standards in both the occupation and the avocation of a people.

The school in its organization and in its studies has an opportunity to teach correct moral standards and right moral practice. In doing this the emphasis must be in teaching moral ideas, not ideas about morality. Effective teaching will be indirect. The concrete situations will be clearly presented and pupils left to draw their own conclusions. Error on the part of pupils will be corrected not by teaching the right conclusion but by more suitable situations more clearly presented. In moral education the pupil must do his own thinking and accept responsibility if character is to be developed. The government of the school, lesson preparation, pupil activities, opening exercises, history, literature, the daily and weekly press, biography, stories,



etc., furnish abundant occasion and opportunity for moral teaching of a very effective kind.

To assist the schools in the moral development of its pupils your committee recommends that the Board of Education require that in each school the opening exercises be directed to moral teaching, that this teaching be as well planned and supervised as the remaining teaching of the day, and that a reading suitable to the grade of pupils and well rendered be provided by the teacher. It is further recommended that a portion of these readings be short selections, about ten to twenty lines, from the Bible, without comment.

### **The Commercial Department**

Your committee made as careful study of the demands for commercial education in the city and of the character of the work your commercial department is now doing as the time for the survey would permit. The number of persons now employed in the city according to the best estimates available are—bookkeeping 54, stenography, 27, general 20, total 101. This estimate is liberal but it should be noted that with a sufficient number of well prepared persons available, this number would doubtless increase.

It does not seem wise, at this time, to discontinue this department. It is very desirable to afford boys and girls a better opportunity for a commercial education than the so-called business colleges with their short and misleading courses afford. The examination of the work seems to indicate that your department can economically prepare boys and girls for successful bookkeeping and stenography.

### **Organization of Elementary School**

It is necessary in public school administration that children be taught in groups. This is an economic necessity, and the size of the group under each teacher will depend upon local conditions and upon the resources available for school purposes in the community. In communities where school revenues are available groups may be smaller than in poorer communities.

Within the group of pupils under any one teacher it has been the aim of modern educational practice to secure homogeneity either in the entire class or within two or more divisions of it. These groups constitute the grades and the method of adjustment of pupils to these grades is called the graded system. The purpose here is to have within

the grade the minimum of individual differences among pupils for the reason that the largest number may be economically taught.

The graded system pre-supposes a carefully planned course of study increasing in difficulty from grade to grade, and the pupils of equal ability are grouped in their proper places in such a course of study.

The graded system of schools provides for the readjustment of the individual pupils at stated periods. At the end of the half year or year there is a formal re-classification of pupils called promotion. Pupils who have given satisfactory evidence of having completed the work of the grade to which they have been assigned, and give evidence that they can do the work of the succeeding grade, are moved into the next grade, while those who have failed to keep pace are dropped back to repeat the work of the grade.

That form of readjustment which requires pupils who do not keep pace to remain in a given grade for another year is wasteful. The best test of the efficiency of a school system is found in the provision made for the proper classification of children and for their progress through the schools. Such a provision removes grade distinctions, keeps at a minimum the number of "repeaters," and secures the most economic expenditure of school revenues.

The records of school attendance in Grafton for the present year show that many pupils dropped out of school during the sixth, seventh, and eighth months. On entering school next year these pupils must enter the grade they entered a year ago and repeat the first six, seven or eight months' work which they did this year. More flexible grading would provide against so much loss of time on the part of the pupil, and less expenditure of money for the instruction of these "repeaters." If each grade were divided in B and A sections each requiring a half year's instead of a year's work, the grading would be more liberal and grade distinctions would be lessened. It is entirely expedient in a system of schools the size of Grafton to have the half yearly instead of the yearly promotions.

An attempt has been made to ascertain to what extent, if at all, the pupils in Grafton have suffered because of the present method of classification and promotion. The eighth grades in the different buildings were visited and certain data secured which may be stated as follows:

The ninety-nine pupils in the eighth grade who were present on the day the data were gathered, will average 14 years and 7 months old at the end of this present school year. This means that on the average

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these pupils on entering high school in September next will be nearly 15 years old.

Twenty-one of the ninety-nine pupils, all of whom were born in Grafton, will average 15 years and 8 months old at the end of this present school year. This means that 21 of these pupils on entering the high school in September will be nearly 16 years old.

The average of the ninety-nine pupils shows that these pupils will be entering high school almost a year late.

The average of the twenty-one pupils shows that they will be entering the high school almost two years late.

This retardation, which is not alarming, is not proof against the present system of classification and promotion, but it is evidence. Furthermore, in order that the evidence be complete, it would be necessary to have similar data not only from pupils who belong in the eighth grade not attending school, but also from at least the fifth, sixth and seventh grades.

The test of the efficiency of a school system, so far as the study of progress through the system is concerned, is incomplete unless the ratio of the children in school to the school population is considered. A school system might have no element of retardation, no "repeaters" at all, and yet not have half the school population enrolled. Hence a grossly inefficient system might appear to be highly efficient. The total number of pupils enrolled in the public elementary and high schools of Grafton at the time this survey was made, not counting the 42 colored pupils, was 1263. The ratio of this enrollment to the school census, which is 1966, according to the figures furnished the commission, is unusually low.

### Present Time Allotment

Geography as a formal study is begun in the fourth grade and carried through the eighth. This is more time than should be devoted to the text-book study of geography, and is out of harmony with modern educational practice. History as a formal study is begun in the fifth grade and carried through the eighth. This amount is somewhat in excess of present day practice. Hygiene, Sanitation, and Physiology is taught in grades fourth to eighth inclusive. Three texts, the Primer of Hygiene, the Primer of Sanitation, and Human Physiology are used. In addition to these texts the Gulick books are used as supplementary.

Important as the study of Hygiene, Sanitation and Physiology is,

it is suggested that this study with a text be confined to hygiene and sanitation in one grade instead of four, that one book instead of three be used.

Arithmetic is begun as a formal study in the fourth grade and continued through the eighth grade. A careful investigation as to the amount of time spent on arithmetic shows that the time allotted to it is considerably in excess of modern practice.

We find, for example, in the sixth and seventh grades in the West Side and Central Schools that a greater time-allotment is given arithmetic than is given by the leading cities of the United States, as is shown below. The figures indicate the number of minutes per week devoted to arithmetic:

Cities.	Grade.	
	6th.	7th.
New York .....	200	200
Chicago .....	150	150
Philadelphia .....	225	225
St. Louis .....	150	150
Boston .....	230	210
Cleveland .....	250	300
Baltimore .....	250	275
Pittsburgh .....	240	300
Detroit .....	250	275
San Francisco .....	250	250
Milwaukee .....	200	200
Cincinnati .....	300	300
Grafton .....	300	375

In the sixth and seventh grades the following is suggested as reasonable time-allotment for the different groups of subjects:

I. Language (including reading, writing, spelling, composition, English grammar and literature), one-fourth.

II. Mathematics (including arithmetic, oral and mental), one-eighth.

III. Elementary science (including nature study, physiology, hygiene and geography), three-sixteenths.

IV. History (including civil government, biography and history proper), one-eighth.

V. Miscellaneous exercises (including music, drawing, industrial training, physical exercises and recesses for games), five-sixteenths.

By simplifying and reorganizing the course of study and reducing the time allotted to Arithmetic, Physiology and Hygiene, and Geog-

raphy and History in accordance with modern educational practice, the seventh and eighth grade pupils could devote one half day each week to industrial work,—the girls to cooking and sewing, and the boys to manual training,—and this would enable the public schools to offer richest opportunities to the pupils and the best service to the community. The improvement of the course of study invariably enlarges school attendance.

### The Cost of Elementary Text-Books

The Board of Education is to be commended for making it possible for pupils to purchase text-books at cost. But even with this provision it is the opinion of the committee that the cost of the books in the aggregate in the different grades is greater than it should be. This is due, not to the cost of the separate texts, for that is at a minimum, but to the number of texts required to be bought. This is perhaps not true in each of the grades, but taking the elementary grades as a whole it is true. The actual cost of the texts in each of the grades is as follows and is given in comparison with Elkins where the Board does not furnish books at cost:

Grade	1st	2nd	3rd	4th	5th	6th	7th	8th	Total
Grafton .....	.91	.94	1.23	2.58	2.83	3.98	4.06	4.81	21.34
Elkins .....	.55	.76	1.53	1.48	2.49	3.42	3.49	3.49	17.21
Difference.....	.36	.18	— .30	1.10	.34	.56	.57	1.32	4.13

By reducing the number of texts as suggested above the cost of books to pupils would be materially lessened. It should be stated that comparison in the cost of texts is made with Elkins not necessarily because the cost of the texts in the latter city is representative of the cost elsewhere, but because Elkins provides for semi-annual promotion and classification of pupils which, it is often argued, increases the cost of texts.

### Size of Classes

The number of pupils that teachers have under their care is not excessive. In fact the number of pupils allotted to teachers in the Grafton school is in most cases unusually low, but where revenues make it possible to have a minimum of pupils under teachers such an arrange-

ment provides for best teaching conditions. The average number of pupils belonging to teachers is as follows:

School	Enrollment	Teachers	Average
East End .....	153	6	25.5
South Side .....	145	6	24
First Ward .....	186	6	31
Central School .....	273	8	34
West Side .....	286	10	29
TOTAL .....	1,043	36	29

It is evident from the above figures that the average number of pupils belonging to each teacher is low, hence it is reasonable to expect so far as numbers are concerned that conditions for good teaching are provided.

### Elementary Teachers

Of the 36 teachers employed to teach white pupils,

6 teachers have taught 12 years or more.

13 " " " 7 and not more than 11 years.

2 " " " 5 " " " " 6 "

7 " " " 3 " " " " 4 "

6 " " " 2 years.

2 " " " 1 year.

Nineteen of the thirty-six teachers are graduates of normal schools, seminaries or colleges; thirteen teachers state that they are merely graduates of the Grafton High School; four teachers do not state their academic or professional preparation. Of the thirty-six teachers eight teachers, two men and six women, are married. One teacher holds a second grade certificate.

In order that the city might receive the best service for the money expended for its schools, and that the school system keep pace with the school system of other similar sized cities, it is suggested that there be a higher standard for eligibility to teach in the Grafton schools.

The following may be taken as a minimum standard so far as academic and professional qualifications are concerned:

1. License: The holding of a first-grade teachers' certificate, good throughout the state for the time for which the teacher is employed. City certificates should be granted when teachers have no opportunity to get a state license.

2. (a) The academic preparation: Graduation from a first-class high school or its equivalent.

(b) Professional preparation: Two years professional and academic training in the normal schools of the state, in the State University, or in denominational schools whose normal departments are recognized by the State Board of Education, or in reputable professional schools elsewhere.

Superior experience which has been gained under expert supervision in public schools may be taken as satisfying for the professional work.

As a means for providing for the growth of teachers in service and furnishing a stimulus for the reading and study of professional literature, systematic reading circle work under the leadership of the superintendent of schools should be provided. Such a provision would enable teaching efficiency more nearly to keep pace with length of service.

The matter of the selection of teachers should be in the hands of an educational expert or experts. Most boards of education have realized that they cannot perform this duty effectively and in consequence the matter has been delegated to the superintendent of schools directly or indirectly.

The schools are poorly supplied with equipment as is shown in another part of this report. It has come to be regarded as a necessity that schools be supplied with supplementary readers particularly in the first four grades. It is very much better for the child to read three or four readers of the same grade than to read one reader three or four times. New material keeps up interest in reading and where interest is the learning is at the maximum. By all means the grades mentioned should have three or four sets of supplementary readers, there being about fifteen or twenty books to the set. Above the fourth grade the schools should be supplied with supplementary books on geography, history and the like. Such a provision would materially increase conditions for good teaching and economic learning.

### Summary of Suggestions

1. That provision be made for half-yearly instead of yearly classification of pupils.
2. That the course of study be reorganized so as to provide for an equitable time-allotment for each subject, and for enrichment. (a) Less time for geography, history, arithmetic and physiology and hygiene. (b) The introduction of industrial work in the seventh and eighth grades.
3. That a reduction be made in the number of text books used by pupils in certain of the grades.
4. That there be a careful consideration of the size of classes to

ascertain whether the school revenues warrant so few pupils on the average per teacher.

5. That the standard of eligibility for teachers in the public schools be raised.

6. That the schools be provided with better equipment, particularly with supplementary readers, maps and globes.

### Possibilities of Consolidation

In our judgment the efficiency of these schools requires the employment of regular school principals at the Central Building, the West Side, and the First Ward. The number of teachers assigned to and employed in the South Side and East End schools are more than are generally employed in other cities for schools of similar enrollment. In Bluefield we find four teachers employed in a school with an enrollment of 173, and the same number in another with an enrollment of 161; in Charleston five teachers are assigned to one school with an enrollment of 197; in Fairmont four teachers to a school with an enrollment of 151; in Morgantown 6 teachers are employed in a school with an enrollment of 315; in Parkersburg six teachers in a school of 305 enrollment, and four in one of 158 enrollment; in Wellsburg six teachers are employed in a school with 237 enrollment, and five in one with 157 enrollment.

In the South Side school we found six teachers employed for a school with an enrollment of 145, and in the East End six teachers in a school with an enrollment of 153. It is our opinion that with a closer grading and organization of the pupils in these two schools, four teachers in the East End, and five in the South Side would be sufficient to take care of the pupils now enrolled in these schools or those likely to be enrolled next year, as indicated by this year's enumeration. We believe this can be done without detriment to the children in these schools, and without placing any unusual burdens upon the teachers. The money saved at this point would secure a fairly good instructor in each of the subjects of manual training, and domestic science, for the High School and the upper grades. This would give the average 29 pupils to each teacher employed in the grades below the High School. Estimated upon the basis of the reports made to the State Superintendent in the annual directory of the schools of different cities in the State for the present year the following average enrollment per teacher in the grades below the High School is shown:

Charleston .....	37
Clarksburg .....	35



Fairmont .....	38
Martinsburg .....	36
Mannington .....	38
Morgantown .....	44
Moundsville .....	43
Parkersburg .....	38
Wellsburg .....	36
Weston .....	36

The efficiency of this school system can be improved by gradually reorganizing the grades below the High School so that the average enrollment for each teacher will be between 35 and 40 pupils, and applying the money thus saved to the employment of a drawing supervisor, and instructor in manual training and domestic science. Your committee recognizes the fact that there may be local geographical and neighborhood conditions that would interfere with such readjustments. Such reorganization should be brought about with the approval of the majority of patrons after clear explanations have been given of the plans for the general betterment of the schools.

The comparative cost of the various elementary schools based upon the number of pupils enrolled in each school and the total amount paid the past year for teachers may be observed from the following figures:

**Cost per capita of teaching for pupils enrolled:**

Central Building .....	\$15.66
First Ward .....	16.68
West Side .....	18.25
East End .....	20.30
South Side .....	20.48

To show the comparative annual cost of elementary instruction in various localities the following figures based upon the cost of teaching in different representative schools are cited:

Carlisle School, Clarksburg .....	\$15.11
Fifth Ward School, Fairmont .....	15.95
Third Ward School, Elkins .....	13.26
Burke Street School, Martinsburg .....	13.24
Second Ward School, Morgantown .....	12.53
Third Ward School, Moundsville .....	11.51
Nash School, Parkersburg .....	16.14
Main Street School, Sistersville .....	15.27

It should be said that the per capita cost of elementary teaching can

easily be reduced to the point where it will result in overcrowding and inefficiency. A system of elementary schools in which the average enrollment per teacher is thirty-five pupils would be considered ideal for efficiency, and in many places an average of forty pupils to the teacher would be regarded as an efficient organization. We find at the time of this survey that in the Grafton schools there is an enrollment of 1085 in the elementary schools with 37 teachers and principals last year, while that of the South Side has increased over the preceding year. This must have an influence on the enrollment in these schools next year, and must therefore be taken into consideration in any adjustment that may be made in the assignment of teachers.

We have gone over the enrollment by rooms and grades as furnished to us by your Superintendent, and we suggest tentative plans for still further consolidations: The tendency in the upper grades in many progressive schools now is to provide for what is known as departmental work. Two or three of the upper grades are organized on a basis of subjects, and teachers are assigned to the different subjects as you have it partially arranged in your Central and West Side schools. It would seem feasible and advisable to bring the upper grade pupils in the South Side schools to the West Side building, and place them in the departmental classes there, and the upper grade pupils in the East End school could be placed in the departmental classes at the Central Building. It might be possible in this arrangement to reduce the teaching force, but if that could not be done, it ought to result in better work for the grammar grade pupils now enrolled in the small upper classes in the South Side and the East End. If this plan should be adopted there would be no need to employ regular principals at these two buildings. The woman teaching the upper grade could be allowed ten or fifteen dollars extra per month to exercise some general oversight of the building, while the supervision of the teaching and the schools in general could be attended to by the Superintendent. The present plan of employing principals at the First Ward, the Central and West Side schools should be continued, and if possible the principals at these schools should be given part time for supervision.

### **Salary Schedule**

In establishing a salary schedule in a system of schools two things must be taken into consideration—first, the number of years experience in teaching or the length of service, second, professional training and growth, including academic and pedagogical training and success in

class room work. We find here an elementary school system of forty-one teachers in which grade teachers with a few exceptions are paid fifty dollars per month, and the principals with one exception are paid ninety dollars per month. In most cities the salaries of principals are graduated in relation to the number of teachers employed under them, or the number of children over which they have supervision. Unless there are local reasons for varying from this principle, we suggest that the schedule of salaries for principals be arranged with reference to the number of children enrolled in the school. In small school systems such as this the marking or rating of teachers for the purpose of fixing salaries may result in friction and dissatisfaction, so that it may probably be more practicable to adopt the plan of dividing the teachers into classes determined by the number of years they have taught in these schools and schools of similar grade. An arrangement of salaries based upon present expenditures that would encourage the older teachers in the system, and should not discourage the younger ones desiring positions might be fixed as follows:

First year for those without experience in graded school teaching, \$40.00 per month.

Second year for those with one year's experience in graded school work, \$45.00 per month.

Third year for those with three years' experience in graded school work, \$50.00 per month.

Fourth year for those with four years' experience in graded school work, \$55.00 per month.

Fifty-five dollars per month would be the maximum for teachers from the second to the seventh grade inclusive. Teachers of the first and eighth grades in these schools should be put in a special class with a maximum salary of \$60 per month provided they have had the required training, and at least five years' successful experience in teaching. We make this suggestion because we believe that in a school system such as this the best teachers should be assigned to the first and the eighth grades. The amount of money saved in employing younger teachers at the minimum salary will provide for the increased expenditures required for the first and eighth grades.

A salary schedule for principals based upon the present maximum amount paid would be about as follows:

For schools having over 250 children enrolled, \$90 per month.

For schools having from 200 to 250 enrolled, \$80 per month.

For schools having fewer than 200 enrolled, \$70 per month.

It must be understood that the welfare of the schools, and fairness and justice to the principals and teachers now employed would require that the salary adjustment here suggested be made gradually, and that no principal or teacher now employed in the schools should suffer a reduction in salary. No Board of Education can hope for success in its administration of a school system, if it does not treat its teachers with absolute fairness and justice.

If found practicable the classification based upon years of service may be modified by taking into consideration professional merit and preparation, and success and efficiency in teaching. The estimates of professional preparation should be based upon the records of scholarship in the high school courses of study, and in advanced courses of study in the normal school or the University or college together with specific reports of practice teaching done in the training school under expert supervision. Estimates of efficiency in teaching should be based upon the observations and reports of the superintendent made at many different times and directed to the fair and impartial consideration of such qualities as power of discipline, mastery of the method of teaching, organization and presentation of subject matter, capacity for improvement and growth, and personality as it manifests its influence in the lives of the children.

Those teachers lacking many years of experience who show marked ability and efficiency in their teaching could on recommendation of the superintendent be placed on a higher salary by action of the Board of Education. Those teachers failing to show increased efficiency with their years of experience could on such report being made by the superintendent be placed on a lower salary or dismissed from service. Such readjustments as are here suggested would be made only after every means had been exhausted for the improvement of the teacher by the superintendent through suggestion, instruction, direction and supervision, so that no teacher could have any grounds for justly charging unfairness or injustice.

The salaries of instructors in a High School the size of the Grafton High School should be such as will secure and hold well prepared teachers of successful experience in competition with cities of similar size. With a range of salaries under those prevailing in other high schools, your high school will constantly suffer from the loss of teachers who will go out to those schools paying larger salaries. As a basis of comparison we note the following brief table of principals' and high school teachers' salaries in a number of representative cities:

City	Principal's Salary.	Average High School Teacher's Salary.
Clarksburg .....	\$1,500	\$90 and \$95
Elkins .....	1,350	90
Fairmont .....	1,650	90
Morgantown .....	1,500	90
Moundsville .....	1,100	75
Wellsburg .....	1,400	85

With the consolidations suggested in another part of this report, and with the abolition or modification of the commercial department of the High School, it would be possible to make such adjustments with the funds now applied to the High School as to provide a salary scale that would compare favorably with cities of similar size.

### Sanitary Conditions

The sanitary condition of your school buildings is probably not worse than that of many other buildings in the towns and cities of the State, but new demands are arising in this respect, and judged by modern standards, the sanitary conditions of the basements and toilets in the different buildings are bad.

The sanitary fixtures in the new South Side building are modern, and in good condition, but they must be cleaned occasionally if they are to be kept in proper condition. The basement of the West Side is in very good condition, but the toilet bowls ought to be thoroughly scrubbed, and the stools painted.

The basement of the Central Building is in a very unsanitary condition. The trash and rubbish of years' accumulation ought to be removed and burned, the walls cleaned and painted or white-washed. It has been years since the closet stools in this building have been cleaned. They should be gone over thoroughly, cleaned and disinfected and the surrounding parts of the fixtures painted.

The toilets in the First Ward building are in a very unsanitary condition, and need the same process of cleaning and disinfection. The same may be said of the toilets in the East End building, which have probably not been scrubbed and cleansed since they were put in. This is a sort of work that janitors have not been in the habit of doing, and some may object to doing it, but the fact remains that modern school sanitation demands that this sort of cleaning must be done regularly and systematically, either by the regular janitor or by some special person employed for the purpose.

If there be anything in the germ theory of disease, and the highest scientific authorities are agreed that there is, then closets and urinals in school buildings should have the most thorough care in order that there may be no accumulation of germs about them. This care must include frequent scrubbing, cleansing and disinfecting of closet bowls, troughs and urinals, and the use of a good quality of disinfectant.

The floors of school buildings should be thoroughly scrubbed twice a year with hot water and strong soap, and a light application of germicide floor dressing or oil applied with a mop. If there is contagious disease prevalent in the community, the desks and furniture in the school rooms should be washed with an antiseptic solution, and the rooms sealed and fumigated with an adequate quantity of formaldehyde gas. Formaldehyde candles are now on the market of sufficient power to fumigate the average size school room.

The walls and ceilings in all of your school buildings excepting the South Side are in an unsanitary condition. They should be gone over with one or two coats of some brand of dull coat paint. This is important not only to the appearance of the rooms but to their healthfulness. From every standpoint it pays to keep school rooms in a clean and attractive condition. It may not be possible to make all of these improvements at once, but we would suggest that plans be made to carry out this suggestion in a period of years. In fact the painting and renovating of school rooms ought to be a continuous process.

### **Improvements in Buildings and Grounds**

The grounds of the South Side, and the First Ward buildings are in need of improvement by grading, sodding and the building of walks. There should be either cement or gravel walks in the approaches to each of these buildings. In case it should be decided to install domestic science in the schools your committee is of the opinion that the dwelling house located on the grounds of the Central Building now occupied by the family of the janitor, could without much expense be fitted up for the use of classes in cooking and sewing. A room could also be arranged in the basement of the Central Building with some excavation that would make fair provision for a class in woodworking. There are also rooms in the basement of the West Side Building that can be equipped for manual training work. The committee also notes the fact that the building now being rented near the Central Building for school purposes is in an unsanitary condition, and undesirable for school use. There is vacant ground on the rear of the lot at this build-

ing on which a temporary building of one or two rooms could be built that would be far more satisfactory, and in the long run would effect a financial saving to the Board. There are a number of firms in the country now manufacturing portable school houses of one and two rooms all ready to set up on the ground that can be purchased at a reasonable price.

### **Current Expenditures**

We have carefully studied the list of annual expenditures as furnished by your Secretary and we make the following comment based upon the list and our observations in the schools:

The amount paid for janitor service is not sufficient to secure or to require such service as modern sanitation of school buildings demands.

The schools are inadequately supplied with materials for the teachers to carry on their work. The annual estimate should carry a liberal amount for the providing of the lower grade teachers with materials for the various forms of seat work, and for many sets of supplementary readers, and for maps and books of reference in the different grades. It is false economy to employ expensive teachers and neglect to furnish them tools to work with.

The expenditure for medical inspection is not large, but we did not find the specific results for this expenditure that ought to be in evidence. If medical inspection stops with the hurried filling out of the inspection cards, the money spent for it is wasted. Cases needing attention ought to be followed up and correction secured. The medical inspector with the principals and the Superintendent should make an annual report showing the specific number of pupils whose physical ailments and defects have been treated or corrected as a result of the examination by the medical inspector.

We believe that the expenditures in general are too low to insure efficiency in the operation of your plant. This is noticeably true in the item of repairs, janitor service, apparatus, and general supplies.

### **The Purchase of Supplies**

In a small school system such as this the best plan for the purchase of supplies is probably to put such buying in the hands of the Superintendent. He is the official who ought to be most interested in the matter, and who will be best informed as to what ought to be purchased. He should be notified of the amount appropriated for supplies

and held responsible for doing the best possible with the funds put at his command. Itemized bills for all supplies purchased should be submitted to the Board of Education after they have been checked up and approved by the Superintendent.

Janitor supplies should be ordered by the head janitor in consultation with the Superintendent, and bills for such purposes should be approved by one or both officials.

Apparatus and supplies for the laboratories in the High School should be ordered by the Superintendent after consultation with the teachers of the subjects requiring laboratory supplies. The Board of Education should of course be specific as to the amount of funds it has available for these various purposes, and the purchasing agents suggested should be held to strict account for keeping within the amount of the appropriation.

The supplies of all kinds should be kept in one central storeroom, and distributed by requisition of janitors and principals on approval of the Superintendent.

Money will be saved by submitting lists of supplies to two or three dealers for estimates and bids, although it is not always wise to buy the cheapest material.

### New High School Equipment

The crown of the city school system is the high school. It provides the higher training for the boys and girls who are capable and ambitious, gives culture and higher ideals of life and training and skill for vocational usefulness, and grace and force in social leadership. It also provides the inspiration to the boys and girls below the high school grades, leading them on to greater accomplishments. We find in this community the nucleus for a good high school, but there is an urgent need for a more adequate building, and better equipment. We find that the enrollment in the High School for a period of nine years ending with the present year has been as follows:

Year.	Boys.	Girls.	Total.
1904-1905 .....	15	45	60
1905-1906 .....	28	56	84
1906-1907 .....	34	64	98
1907-1908 .....	35	69	104
1908-1909 .....	43	84	127
1909-1910 .....	65	102	167



1910-1911 .....	78	109	187
1911-1912 .....	87	128	215
1912-1913 .....	92	129	221

Judging by the number of pupils enrolled in the upper grades this enrollment in the High School will continue to increase from year to year. With the proper building and equipment it may be expected to increase still more rapidly. The community which has a regard for its future welfare can not neglect to provide the higher training for its young people offered in the modern well-equipped high school. This High School is in immediate need of a new modern building which shall contain at least ten class rooms, physical and chemical laboratories and lecture rooms, rooms for manual training and domestic science, a gymnasium, and an auditorium. Such a building as is needed can be erected at a cost ranging from seventy-five to one hundred thousand dollars. The funds would have to be provided by a bond issue. We have gone into this matter with much care with a view of showing the basis and the means of making this improvement.

We find that your district has a total property valuation of \$7,792,000, and a net bonded indebtedness of \$69,000, and that the tax levies are as follows: Teachers' Fund 25 cents, High School Fund, 10 cents, Building Fund, 9 cents, and interest and sinking fund, 10 cents, making a total tax rate of 64 cents on the hundred dollars. The state law provides that a school district may issue bonds to the amount of two and one half percent of its valuation so that your district can under the law bond itself to the amount of \$194,000 approximately. As compared with many other cities and towns of the state, your district is not carrying a heavy bonded debt as may be seen from the following table of comparison:

	Valuation.	Bonded Debt.	Total Tax Rate.
Wheeling .....	\$63,592,586	\$1,040,000	30¼
Huntington .....	\$30,543,400	124,000	40
Elkins .....	5,702,000	90,000	60½
Martinsburg .....	6,720,094	50,000	56
Wellsburg .....	4,764,556	97,000	74¼
Buckhannon .....	3,313,468	50,000	57½
Clarksburg .....	19,058,000	335,000	54½
Morgantown .....	14,105,410	135,000	48
Weston .....	4,780,738	75,000	56
Charleston .....	28,245,285	376,200	53
Fairmont .....	14,784,022	280,000	49

Your district can issue bonds for a new High School building, laying the necessary levy for interest and sinking fund and still not be much in excess of a number of districts that have made such improvements in the last few years. We believe that the proper equipment of your High School is the most important need of your school system at the present time. Even though the making of this improvement should involve an increase of taxation, we are confident that the community will realize large dividends from such investment in the better educational advantages afforded its young people, and the increased community intelligence that will come from having a thoroughly modern high school building.

The ideal of every progressive community should be to provide such educational opportunities as will make it possible for every capable boy and girl to receive a thorough elementary and secondary education. The future welfare and progress of your community will depend upon the integrity and the efficiency of your citizenship. A fine high school will develop the future men and women who will lead in community advancement and betterment. The best investment you as a city and community can make at this time, would be the expenditure suggested here for a new high school.

### **Conclusion**

It should be understood that the survey here given by your committee is suggestive, and that any recommendations as to modifications of the school system or comments on prevailing conditions should not be regarded as final. In many instances the plans here outlined may require years for successful completion, and in the course of the years the plans themselves may undergo many modifications. The working out of the many ideas set forth in this report should be placed by the Board of Education in the hands of its school superintendent who should be an expert in matters of education, and school management and organization. The superintendent, after consultation with the Board of Education, and when he has secured a clear understanding of the general policies and desires of the Board, should be given full authority and support in carrying out his plans for the solution of the problems herein outlined.

Respectfully submitted,

J. N. DEAHL,  
JOSEPH ROSIER,  
OTIS G. WILSON.

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Conclusion

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Respectfully submitted,  
J. W. Darrin  
James H. Hoxby  
Mrs. G. W. Hoxby

