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January, 1908.

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Bulletin of the  
**College of  
William and Mary**  
Williamsburg, Virginia.



Published by the College on the First of January,  
April, June and October.

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Editor: Lyon G. Tyler, President.

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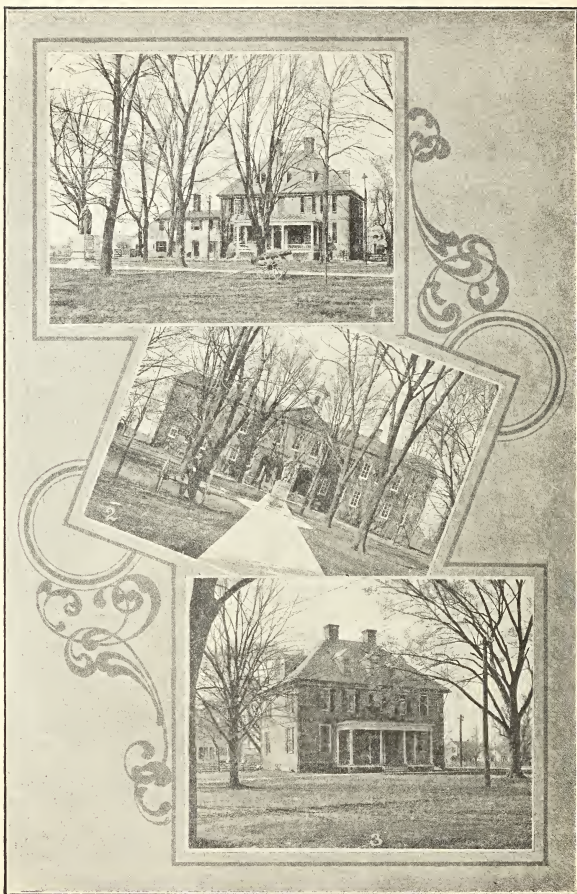
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THE ORIGINAL COLLEGE BUILDINGS AS THEY APPEAR AT PRESENT.

1. President's House, Built in 1732.
2. Main College Building, Built in 1693.
3. Brafferton Building, Built in 1723.

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Published four times each year: October 1, January 1, April 1, and June 1.

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**COURSES AT WILLIAM AND MARY. 1**

By Lyon G. Tyler, President of the College.

The work at this institution is an attempt (which, judged by its fruits in the past, has been abundantly successful), to combine the operations of a normal school with that of a college, conferring the usual degrees of Bachelor of Science, Bachelor of Arts, and Master of Arts upon courses that offer fair comparison with those of other colleges in the South. By the terms of the act approved March 7, 1906, and accepted by the College, making a transfer of the College to the State, the institution is to maintain a Normal course in connection with its collegiate department. The total number of recipients of education at the hands of the College at this stage of the session is three hundred and sixty-two, which will probably increase to four hundred before the final day. Of this number, two hundred and forty-two belong to the Normal side of the College. Of this two hundred and forty, one hundred and forty are children in the kindergarten and training school, in which there are six teachers, including the principal. One hundred young men are taking a Normal course at the College. This course covers a period of four years, two of which are commensurate, for the most part, with the life of a high

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<sup>1</sup> Published in the *Virginia School Journal* for January, 1908.

school, and the other two take the student into the classes that count, for the most part, towards regular College degrees. There is no election, however, and the same course is required to be taken by all who come pledged to teach in the public schools of Virginia.

The number of students receiving instruction who have not obligated themselves to teach, is one hundred and twenty-two, and they are, for the most part, permitted the right of election among the courses offered by the College. So far as the subjects and classes agree, both kinds of students sit together under the same instructors.

Such, in brief, constitute the organization and operation of the College. Two or three questions suggested by the current movements of education in the State may be proposed and frankly answered.

The first question is: Why maintain at William and Mary College any classes below graduation in the high school? Why the necessity of dividing the teaching power of the College and "interfering" with the work of the high schools now being established throughout the State? The answer is found in the requirement of the law to provide a Normal course at the College. The subject of entrance requirements for State Normal schools is carefully discussed this month in an article, in the magazine "Education," by Professor Joseph M. Gwinn, of the Department of Education in Tulane University, who based his conclusions upon fifty pairs of catalogues from State Normal schools for the years 1895 and 1905. He included in his study thirty of the thirty-six States of the United States having Normal schools in 1895, supplementing his information by responses of many Normal school presidents to a set of questions on the subject. Out of the fifty schools, only fourteen required graduation from a four years' high school, and thirty-six admitted students graduating in the common schools, or, at best, in the first year of the high school. But even in the case of the fourteen, which were all located in the Northern States, nine maintained preparatory or sub-Normal classes. Professor Gwinn then goes on to state the reasons which have

prevailed in bringing about this result: (1) High school graduates, even in the most advanced States, do not begin to supply the demand for material out of which to develop teachers; (2) The State authorizes the certification of teachers on the basis of an examination covering but little more than the completion of the common school branches in our rural schools. The State, therefore, cannot deny to that individual, thus given authority to teach, the privilege of attendance upon a school which proposes to teach him how to teach; (3) Lack of high schools in many counties and inefficiency in the work and equipment of those already established; (4) Low salaries and great need of teachers of fair ability in a rapidly growing State, as in all schools, most Normal students do not stay to graduation, but their services are not thereby lost, being available in the common schools; (5) At the present time, over the greater part of the United States, if these elementary classes were cut off, the Normal schools would cease to supply any teachers for the rural schools, the Normal *graduates* being almost exclusively employed in town or city high schools; (6) the ordinary high school course is largely shaped under the influence of the College and University, which do not have the preparation of teachers in mind. Every proper Normal course combines method with scholarship; and for a person to receive proper training as a teacher, he should receive Normal training while acquiring elementary scholarship. "I believe a fallacy has been made," says Professor Gwinn, "in holding that the Normal school, as a professional school, bears the same relation to the work of the high school as do other professional schools, for instance, law and medicine. What is academic for the law or medical student may become professional for the teacher, if the subject is presented with a view to the teaching of it or indirect use to the teaching of other kindred subjects."

Such are the views held by a very high authority on this question, and I am firmly convinced that to lop off the elementary classes at William and Mary, would practically destroy the objects had in view by the Legislature in establishing



the Normal course. It is the aim of the College not to admit any one to these preparatory classes unless he has had the qualification of two years' study in a high school of proper standing.

The next question which may be asked is: What advantage exists to the Normal student by the maintenance of the higher classes at the College above the Normal course? The answer is as follows: (1) The College to him is not only a Normal School, but a Normal University. His field of view is expanded and elevated. The departments exclusively Normal, like Education and Manual Training, have advanced classes in the College which, with the other departments, will fit him to be a professor of education in a college or university; (2) He has the great advantage over the ordinary Normal school student of not being obliged to change his environment. He has "learned the ropes," and has, moreover, the advantage of the cheap rates afforded by the law to every Normal student at William and Mary; (3) The Normal student, even in the elementary classes, enjoys the dignity of the College life. High ideals are ever present to him, and he goes out as an alumnus of a College which has the proudest record in the United States. If there was any need of a proof of this fact, I might point to the many Normal alumni of the College since its reorganization, in 1888, holding successful positions in the schools, colleges and the other walks of life.

There are, indeed, some young men at the College now who have no intention of being teachers, and yet are unprepared to enter upon the course of A. B. These are assigned to elementary classes with the Normal students; and surely there can be no objection to this policy as long as such classes necessarily exist in the College and the number of such students does not interfere with efficient instruction. This objection, if objection it is, is surely counterbalanced by the fact that many of the collegiate students, by the necessary fact of their associations, often drift into teaching and remain permanently in the work.

A third question may be put this way: How far is Wil-



William and Mary fulfilling the purposes of furnishing teachers to the State? The average attendance during the last nineteen years of students pledged to teach in the public schools, is one hundred and ten. At the only other State school furnishing white teachers, the State Female Normal School, at Farmville, the average during the like time has probably been about three hundred and fifty, or not much more than three times as great. This is a remarkable showing on the part of the College. In the New England States, as shown by the catalogues of the Normal schools, which are generally co-educational, the proportion in favor of females is, in most cases, upwards of twelve to one. The complaint in these States has been that the schools suffer from a lack of virile force in the teaching influences. Virginia appears, in great measure, to have escaped from this misfortune—chiefly through the influences of the College of William and Mary, which has its alumni in almost every county in Virginia acting as teachers, principals and superintendents of schools, discharging, for the most part, the most important functions of the educational system. At the recent educational conference at Roanoke, the attendance of William and Mary teachers was particularly noticeable. Co-education in the higher institutions of learning is objectionable to the feelings of the majority of the people of Virginia, and it is certainly true that the separation of the sexes in the two white Normal schools of the State has been productive of a much larger output of trained male teachers than would have been the case by opening Farmville to the influx of the male sex.

It will, of course, be the aim of the College to keep pace with the progress of the country, and the faculty are continually enlarging the courses to meet the conditions of modern thought. And yet, while determined that the collegiate courses shall be kept abreast of those in the best colleges, the faculty will never consent to embarrass and handicap its duty to the teachers by establishing impossible requirements for them.

## THE WILLIAM AND MARY EXHIBIT AT JAMESTOWN.

The William and Mary exhibit at the Jamestown Exposition attracted particular attention, on account of its unique character. To show the attention that was given this exhibit, we quote from "Education" for December, 1907:

"The building devoted to higher education at the Jamestown Exposition is an interesting place, for here have been brought together the displays of the various colleges and universities exhibiting at the Virginia Fair. Those represented are chiefly from the East and South. Many of the leading higher institutions are here; and each has endeavored to exploit its own particular vantage point of historical prestige; of location, of professional learning and invention; and of academic opportunity. Princeton, Yale, Harvard and Rutgers, William and Mary, the University of Pennsylvania and Johns Hopkins are all in the arena as representatives of the oldest established higher educational institutions of the country. William and Mary yields the palm to Harvard in point of operation; but clings to its claim of leadership as 'first in antecedents,' which are said to go back to the college proposed in Henrico in 1619, and to the project for a college in Virginia, agitated as early as 1617, three years before the landing of the Pilgrims at Plymouth Rock. An Indian massacre put a stop to the enterprise, but, after many years, the original intention was consummated in the college established in 1693 at Middle Plantation (now Williamsburg) and named in honor of the ruling monarchs, William and Mary.

"A great chart upon the wall, lettered in black, tabulates the 'Priorities' of William and Mary, which makes most interesting reading. Few people, even in higher educational activities, know that William and Mary is the first college that received its charter direct from the crown of England, and the only one that received its coat-of-arms from the College of Heralds in London; the first to have a full faculty of professors (1729); to adopt the lecture system; to establish the

elective and honor systems (1779); to widen its scope into that of a university (1779); to establish courses in municipal and constitutional law (1779); modern languages (1779); political economy (1779); and history (1803); to organize a Greek letter inter-collegiate fraternity, the Phi Beta Kappa Society; and to award gold medals as collegiate prizes, donated by Lord Botetourt (1771).

"Another chart indexes the names of the great alumni and students of the College, and what they have accomplished in the making and development of the Union. These include Peyton Randolph, the first President of the Continental Congress (1774), Thomas Jefferson, John Tyler, Sr., Edmund Randolph, James Monroe, John Marshall, General Wingfield Scott, and many Congressmen, foreign ministers, and twelve governors of States.

"The center portion of the section is filled by a large model of the College buildings and grounds, with the statue of Lord Botetourt on the campus, and the old houses still used on Palace Green. The model, it appears, is the work of the children of the Practice School connected with the College. On the wall are excellent maps and free-hand drawings, the work of undergraduates. A fine portrait painting of Thomas Jefferson graces the whole.

"Taken altogether, the higher educational exhibit at the Virginia Fair, while not by any means complete, is fairly illustrative of distinguished types of the American college and university. Visiting it, the uninitiated may get a fair idea of what is being achieved by the higher educational institutions of the land—their origin, plans, scope, personnel and purpose."

#### INTERESTING FACTS IN THE HISTORY OF THE COLLEGE.

In 1788 George Washington was made Chancellor of William and Mary, and his letter of acceptance hung in the library till it was destroyed in the fire of 1859. The following is a copy:

MOUNT, VERNON, *April 30, 1788.*

DEAR SIR:

I am now to acknowledge the receipt of your letter of the 15th inst., in which you did me the favor to enclose an extract from the

original statute designating the duties of the office to which I had been appointed. Influenced by a heartfelt desire to promote the cause of science in general and the College of William and Mary in particular, I accept the office of Chancellor of the same, and request you will be pleased to give official notice thereof to the learned body who have thought proper to honor me with the appointment.

I confide fully in their strenuous endeavors for placing the system of education on such a basis as will render it most beneficial to the State and the republic of letters, as well as to the more extensive interest of humanity and religion. In return they will do me the justice to believe that I shall not be tardy in giving my cheerful concurrence to such measures as may be best calculated for the attainment of these desirable and important objects.

For the expressions of politeness and friendship blended with your communication, I pray you to receive my best acknowledgments. With sentiments of the highest esteem and regard,

I am, Dear Sir,

Your obedient and very humble servant,

GEORGE WASHINGTON.

SAMUEL GRIFFIN, ESQ.,

*Rector of the College of William and Mary.*

#### FROM THE FACULTY BOOK.

"October 14th, 1773. Agreed unanimously that Mr. Thomas Jefferson be appointed surveyor of Albemarle, in the room of Mr. Nicholas Lewis, who has sent his letter of resignation, and that he be allowed to have a deputy."

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### ONLY POLITICAL CHAIR IN THE UNION.

1817.

We quote the following from the preface to a syllabus of lectures to the Senior Class, by Professor John Augustine Smith:<sup>1</sup>

"From the only political chair in the Union, the purest principles of republicanism should undoubtedly be promul-

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<sup>1</sup>A pamphlet published by Thomas Dodson & Son, Philadelphia, Pa. Presented very lately to the College Library by Rev. T. J. Packard, of Rockville, Md.

gated. In this respect, the author trusts he will not be found wanting. On two points alone is he aware that his political orthodoxy can be called in question. On the first, the obligation of instructions; he apprehends he is in the minority; but the frequency of elections in America renders this a mere speculation of little practical importance. On the second, the restriction of the right of suffrage to the proprietors of the soil, he is satisfied he has the concurrence of the larger and saner part of the community. And the author has urged his opinions to the best of his ability, convinced that upon this point depends all reasonable hope of permanence in the political establishments of his country—since free-holders alone have every inducement to guard, without temptation to invade the rights of their fellow-citizens.”

William and Mary College, Williamsburg, Va., April, 1817.

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## OBSERVATION AND PRACTICE SCHOOL.

1907-1908.

PROFESSOR HENRY E. BENNETT,

SUPERVISOR.

MISS NANNIE C. DAVIS,

PRINCIPAL.

ASSISTANTS:

MISS ELIZABETH A. MORECOCK,

MISS LAURA STILLWELL,

MR. CLARENCE E. KOONTZ,

MR. PAUL S. GILLIAM.

TEACHER IN KINDERGARTEN:

MISS MARGARET MURPHY.

## PUPILS IN OBSERVATION AND PRACTICE SCHOOL.

SESSION 1906-1907:

### KINDERGARTEN.

BADKINS, SLAUGHTER.	HINTON, NELLIE.
BINNS, RAY.	HUDGINS, ALICE.
BINNS, HENRY.	JOHNSON, CARLISLE.
BIRD, RANDOLPH.	KENT, HARRY.
BOZARTH, WALTER.	LARSON, MARSTON.
BOZARTH, FLOYD.	LARSON, BERNHARDT.
BROOKS, ARCHIE.	LEITH, MARTHA.
BROOKS, BERTHA.	LUCK, RENA.
BROOKS, MONTAGUE.	MORRIS, JULIAN.
BROOKS, BUCK HARRELL.	MAHONE, LLOYD.
BURRETT, EVERETT.	PERSON, ALICE.
CASEY, ODELL.	PROCTOR, RICHARD.
DAVIS, GRAHAM.	ROBB, JO ANN.
DEHART, CHARLES.	ROBB, LIZZIE.
DOUGLASS, ALBERT.	ROGERS, NEWTON.
EVANS, ALBERT.	ROGERS, JOHN.
GARRETT, VANSIE.	STEWART, BENJAMIN.
GILLIAM, MARY.	TYLER, JAMES.
GOODWIN, RUTHERFORD.	WALLS, WILLIE.
GRAHAM, MARY.	WALLS, IVA.
HENLEY, TURNER.	WILKINSON, VIRGINIA.

### FIRST GRADE.

ALEXANDER, GLENN.	McFARLANE, LESTER.
BARLOW, IDA.	O'KEEFE, CLAUDIE.
BIRD, MARGARET.	ROBB, JAMES.
BOZARTH, LESTER.	SCOTT, CARL.
CASEY, GRACE.	SHEI, INGVALD.
EVANS, ALBERT.	SOUTHALL, MARY.
GRAHAM, JOHN.	TYLER, DAVID.
GRIFFIN, MABEL.	VAUGHAN, ERNEST.
HOUGE, CLARA.	WALLS, WILLIE.
HUDGENS, WILLIE.	WICKRE, HANNAH.
KANUTSEN, CHRISTIAN.	WILLIAMS, STANLEY.
LANE, CARRIE.	WOLFE, ROBERT.

### SECOND GRADE.

ALLARD, ROBERT.	WILKINSON, VERNON.
BROOKS, JULIAN.	WILKINSON, ASKEW.
BURRETT, GEORGE.	BIRD, REBECCA.
CHRISTIAN, WILLIAM.	BOZARTH, MURIEL.
FILER, FREDERICK.	CLOWES, PEARLE.
HENLEY, RICH.	GILLIAM, CHARLOTTE.
McFARLAND, DON.	GLENN, LUCY.
MAHONE, GUY.	GARRETT, CARRA.

GOODWIN, KATHERINE.  
 LARSON, MARTHA.  
 MORRIS, LILLIAN.  
 MONCURE, MARY.

McCORMICK, GRACE.  
 MURPHY, LILLIAN.  
 SPENCER, MARTHA.

## THIRD GRADE.

ALLARD, JOHN.  
 BARLOW, LUCY.  
 BISHOP, FRED.  
 CASEY, CLYDE.  
 CANIFFE, CLARA.  
 CHARLES, MINTA.  
 COOLEY, FERN.  
 DAVIS, MAY.  
 DEHART, ALICE.  
 GEDDY, VERNON.  
 GILLIAM, MARGARET.  
 HOOPER, EDWARD.  
 HOUGE, BENNETTE.  
 HOLMES, CHARLIE.  
 JOHNSON, TOM.  
 JONES, RICHARD.  
 McMANN, CLARENCE.

O'KEEFE, KATHERINE.  
 PARSLEY, LUCILE.  
 PURCELLE, THORPE.  
 ROGERS, MAMIE.  
 RUFFIN, RANDOLPH.  
 SCOTT, ROY.  
 SLATER, CALLIE.  
 STEWART, IDA.  
 TAYLOR, GRANVILLE.  
 TYLER, MARGARET.  
 VANFOSSEN, JULIAN.  
 VANFOSSEN, EDNA.  
 VAUGHAN, SUSIE.  
 WALLS, STELLA.  
 WICKRE, MABEL.  
 WOODEN, WESLEY.

## FOURTH GRADE.

BROOKS, MABLE.  
 DE HART, GRACE.  
 EVANS, RICHARD.  
 FOSTER, LEWIS.  
 GARY, IRMA.  
 GLENN, EDNA.  
 GILLIAM, BERNICE.  
 GRAY, FRANK.  
 GRIFFIN, RUTH.  
 GRIFFIN, ESTHER.  
 HARRELL, MINNIE.  
 HARRELL, VELMA.  
 KUNSTON, MAY.

LANE, JAMES.  
 PHILLIPS, HARRY.  
 ROBB, MABLE.  
 SMITH, LOLA.  
 SPENCER, EDWARD.  
 TAYLOR, JAMES.  
 WALTRIP, TOM.  
 WARBURTON, JOHN.  
 WARBURTON, EVALAN.  
 WOLFE, MAX.  
 WOLF, MARGARET.  
 WICKRE, ERICK.



## WILLIAMSBURG, THE OLD COLONIAL CAPITAL.

By Herbert L. Bridges.

Dr. Tyler's new book, "Williamsburg, The Old Colonial Capital," is receiving much favorable comment, and is serving the means of bringing the College prominently before the public. The following is from the "Review of Reviews" for January, 1908:

"In the field of local history, no American in recent times has worked more diligently or to better purpose than President Lyon G. Tyler, of the ancient College of William and Mary, in Virginia. President Tyler's 'Cradle of the Republic' (Jamestown and James River), was the first serious attempt to tell of the topographical history of Jamestown and James River. The discovery of new material led the author to bring out a second edition last year, and his valuable work now has a companion volume in 'Williamsburg, The Old Colonial Capital.' Williamsburg succeeded Jamestown as the capital of Virginia, and it was here that the spirit of the Old Dominion found expression in the resolutions against the Stamp Act, the resolution for the Committee of Correspondence and other legislative decrees which preceded the Declaration of American independence.

"As the seat of William and Mary College, it is associated with the lives of Jefferson, Marshall, Monroe, the Randolphs, and many other great Virginians. Old Williamsburg's fame extended far beyond State boundaries and became a national heritage."

The following is from the Hartford "Daily Courant," January 4, 1908:

"The history of Williamsburg is very like that of New Haven—its chief importance is the history of the College. And if William and Mary dated, as Harvard does sometimes, not from its endowment, but from the Latin school out of which it grew, the Virginia institution would be the elder."

**NEEDS OF WILLIAM AND MARY COLLEGE.**

The following paper was read by President Tyler before the two Committees on Finance of the Senate and House of Delegates, in joint session, on Wednesday, January 22, 1908:

WILLIAM AND MARY COLLEGE, *January 7, 1908.*

*To Robert M. Hughes, Esq., Rector of the Board of Visitors  
of William and Mary College: ..*

DEAR SIR,—In reply to your request for a brief statement of the *needs* of this College to be laid before the General Assembly of Virginia at its present session, I beg to report as follows:

I. THE ANNUITY OF THE COLLEGE.

The annuity of the College should be increased from \$35,000 to \$50,000 for the following reasons, having in view the teaching efficiency of the Institution:

1. We have at present two full professors teaching Latin and Greek and the Modern Languages. This group of studies should be arranged so as to have one full professor of Latin, one full professor of Greek, who shall be also associate professor of Latin; and one professor of Modern Languages, who shall teach French, German and Spanish. At present only French and German are taught. To make this change would require \$1,800, the pay of one professor.

2. The Chair of General History and English Language and Literature, which is now taught by a full professor and an assistant professor, should be divided into a Chair of General History, to which Political Science should be added, and a chair of English Language and Literature, having each a full professor with an instructor in the latter department. This arrangement would require an additional \$1,700.

3. The Department of Natural Science—embracing Physics, Chemistry, Physiology, Botany, Bacteriology, Zoology,

Agriculture, Mineralogy and Geology—is now conducted by only three full professors, assisted by two student instructors. To make this department as efficient as it should be, there is needed a new professor, whose salary will require \$1,800 annually, and a new adjunct professor, whose salary would require \$1,200.

4. The Normal courses should be strengthened by the establishment of a department of Bookkeeping, Stenography and Typewriting usual at all Normal Schools. This change would take two instructors, to be paid each at least \$1,000 annually.

5. The classes in Mathematics are so large and so important that that department should either be divided or be strengthened by an adjunct professor. Taking the latter of the two as the least expensive, this change would require \$600 annually in addition to what is already paid for an instructor.

6. The institution of a system of lectures by eminent educators, to be delivered at intervals throughout the session, would be highly beneficial. I am told by President Boatwright, of Richmond College, that no single influence has been of greater advantage to that institution than the lectures founded by the late Mr. Thomas, of Richmond. By this means the student will be brought into contact with the first thought of the country. His horizon will be enlarged, and the college itself reap indirectly the advantage that flows from friendships thus established with eminent and influential visitors. I place the cost annually at \$700.

7. The Observation and Practice School is imperfectly developed, and instead of four grades and the kindergarten as at the present, should consist of at least eight grades and the kindergarten. This change would take four teachers—one for each additional grade, which, at \$700 apiece, would require \$2,800.

8. There is much need of sub-division in the large classes. It is difficult to handle to advantage a larger body of students than forty in one room, and impossible to do so if laboratory work is included, which is necessary in many cases. There

is also a constant call to supply new equipment and material for the various lecture rooms. After making allowance for the different expenses mentioned above, there is only left \$2,400 to meet the incidental demands—a sum which may well fall below, but cannot exceed the requirements.

## II. SPECIAL IMPROVEMENTS.

The improvements necessary at the College call for \$70,000 at least. These embrace a central power plant to supply heat and light to the College (\$30,325), the completion of the sewer system begun under authority of the last General Assembly (\$5,225), the erection of a commodious and suitable building for the Observation and Practice School and Kindergarten (\$15,200), the purchase of the proper equipment of fire protection (\$7,250), and the improvement and enlargement of the College grounds (\$12,000).

Upon the first three of these matters I sought and received the advice of Messrs, Ferguson & Calrow, a well known firm of architects, doing business in Norfolk, whose reports I beg to incorporate in this statement, as they give quite fully the estimates and reasons for appealing to the Legislature:

### I. CENTRAL POWER PLANT.

JANUARY 3, 1908.

DR. LYON G. TYLER, *President William and Mary College, Williamsburg, Virginia:*

DEAR SIR,—In reference to the heating and lighting system of the College Buildings, we beg to report as follows:

We find that the present system consists of independent hot-water and steam-heating plants, furnaces, grates and stoves, and that, not considering the President's and Proctor's residences, there are fifteen or more fires requiring more or less attention and care.

We find that about fifty per cent. of the coal burned is a high grade anthracite.

We find that nearly all of the buildings are inadequately heated, and certain portions of the buildings not at all.

We find that nearly all of the fuel has to be handled from two to three times after delivery on the grounds.

We find that the present lighting plant is taxed to about its maximum capacity.

We find that you are about to add to your College a new Library Building, requiring a heating plant and an extension of the lighting plant.

We find that certain portions of the present heating system have depreciated to such an extent that they will have to be replaced at an early date, and that the rate of depreciation of this system is about nine and one-half per cent. per annum.

In view of the above, we do not hesitate to express as our opinion that the present system of heating is inadequate, uneconomical and not suited even for its present purpose, and that the lighting system is incapable of that further extension that the growth of the College demands.

We would, therefore, advise the construction and installation of a central power plant, with steam-driven generators and sufficient boiler capacity to heat your entire group of buildings, the generators and boiler plants to be designed to take care of twenty-five per cent. increase of lights and radiation, this plant to be designed so that exhaust steam may be used for heating purposes during the dark hours.

We have carefully estimated the cost of such a plant, and we find that it can be constructed and installed for the sum of \$30,325.34, itemized as follows:

Generators, engines and boiler, .....	\$6,207.00
Pumps, switchboard, heater, purifier, valves, etc., in power house, .....	2,500.00
Power house, pump house and stack, .....	5,800.00
Outside piping, .....	6,633.34
Piping and connecting buildings, .....	8,925.00
Wiring and conductors, .....	260.00

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\$30,325.34

Such a plant would be more economical, would require less labor and attention, would supply more and cheaper heat and light, and would require less repairs and suffer less from depreciation than the present system, and would add much to the comfort of the inmates of the buildings.

To install proper independent heating plants in each of the buildings not so supplied would cost \$6,080.00.....

Your treasurer reports that the cost of heating the present buildings during the last school term was \$4,454.70.

The cost of heating the President's and Proctor's houses for the same period was about \$135.00.

The cost of heating and lighting the new Library Building will be about \$495.00.

The cost of heating the present buildings, if these buildings were supplied with proper independent heating systems, would be about \$5,595.00.

The cost of operation of the proposed plant for the school term should not exceed \$3,320.50.

From the above it will be seen that the saving in expense of operation, as between the present system and the proposed plant, would be \$1,764.20, in favor of the latter, or about six per cent. of the cost of the proposed plant, or if the present buildings, not properly heated, were equipped with independent heating plants, the having in cost, as between the independent plants and the central plant, would be about \$2,275.00, in favor of the latter, or over nine per cent. on the difference in the cost of the two installations.

In estimating the cost of operating the new plant, we have placed the maximum price for fuel delivered at the buildings at the price now paid for splint coal delivered on the grounds. In actual practice, we find, however, that a lower grade of coal can be used during the greater portion of the year, with an additional saving of, approximately, \$300.00.

If for no other reason than that of good business practice, we would recommend the installation of the new central plant.

Respectfully submitted,

FERGUSON & CALROW.

## 2. EXTENSION OF THE SEWER SYSTEM.

JANUARY 3, 1908.

DR. LYON G. TYLER, *President William and Mary College, Williamsburg, Virginia:*

DEAR SIR,—With reference to the extension of your sewerage system, we beg to report as follows:

We estimate the cost of the extension of the present sewer line to the creek or inlet, a distance of, approximately, seventeen hundred yards, at \$5,225.00, itemized as follows:

Terra-cotta drain, .....	\$1,875.00
Iron drain, .....	1,090.00
Excavation, .....	575.00
Planking and cribbing, .....	400.00
Piling and discharge pier, .....	600.00
Man holes and vents, .....	600.00
Relaying part of present sewer, .....	85.00

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\$5,225.00

The present sewer ends at a point about six hundred feet from the Infirmary, in a small fresh-water run or wet ravine, and, while there seems to have been no evil consequences therefrom, we would recommend, as a preventative and sanitary measure, that the sewer be extended to salt water or some adequate method of sewerage disposal be installed.

Respectfully submitted,

FERGUSON & CALROW.

### 3. OBSERVATION AND PRACTICE SCHOOL BUILDING.

JANUARY 4, 1908.

DR. LYON G. TYLER, *President William and Mary College, Williamsburg, Virginia:*

DEAR SIR,—We beg to report that we have examined the "Model School" building, and that, in our opinion, this building is too small and not properly arranged for "Model School" purposes.

The building has but four small class-rooms, furnace heated and poorly ventilated, and the toilet accommodations, of the most primitive type, are located at some distance from the building.

A building, suitable for your purposes, should have eight class-rooms of standard size, a kindergarten department, proper sanitary toilet equipment, and a system of ventilation capable of maintaining a constant supply of fresh air under all conditions.

We would, therefore, recommend the construction of a new building, or the alteration of the present building and an addition thereto, at a cost of about \$15,200.00.

Respectfully submitted,

FERGUSON & CALROW.

### 4. FIRE PROTECTION.

We have no fire protection to guard the property and lives entrusted to our care; we need an improved system, involving an extra water tank, to hold twenty thousand gallons of water, a reserve pump for lifting water from our artesian well, a fire engine, hose and couplings, extra fire plugs, and some fire extinguishers to be placed in the several buildings. A moderate estimate for this would be \$7,250.



## 5. PURCHASE OF LAND.

In the next place, the health and convenience of the College demand, in addition to the sewerage system, the purchase of five small cottages, whose back yards almost butt upon the present dining-room of the College boarding department. By removing the fences and small out-houses and connecting the residences up with our heating, lighting and sewer system, these cottages would serve as useful dormitories, and enable us to take care of forty students additional. These cottages and lots could be had for a sum not exceeding \$10,000.

## 6. IMPROVEMENT OF THE GROUNDS.

Finally, the campus needs attention. Owing to their historical interests, Williamsburg and William and Mary College attract more visitors than any other town or college in Virginia. The ground in front of the College is very uneven, and forms small ponds in the rainy season; and on the sides and in the rear of the College are many holes and small gullies, which detract greatly from the otherwise beautiful appearance, and should be filled up and turfed. Two thousand dollars expended in this work would effect wonders in improving the general looks of the institution.

Very respectfully yours,

LYON G. TYLER,

*President William and Mary College.*









