

LAND

The original college and farm grounds consisted of a tract of 648 acres purchased from five different owners. That property included the area bounded on the south by Lincoln Way, on the north by a line from Thirteenth Street to Ontario Street, on the east by Riverside Drive (extended north to Thirteenth) and on the west by Sheldon Avenue north to the north boundary, plus a ten acre tract between the Sheldon extension and Hyland Avenue from a line about at the north side of the cemetery to Ontario Street. (All names here used are current street names.)

That area, plus an additional eight acres (between Sheldon and Hyland south from the cemetery to the diagonal street joining those two streets) acquired in 1936, form what is today thought of as "central campus."

Nearby property, exclusive of outlying farms, has been acquired over the years to bring the total to 1727 acres.

The University Annual Financial Reports list all the acquisitions, with dates and areas, so those figures will not be repeated here. Farm holdings amount to 6574 acres at a number of locations around the state.

ARBORETUM

During the 19th and early 20th century various references to an arboretum have been found. However, those items all referred to areas other than that known today as the Arboretum. The earlier citations are incorporated under the headings Landscaping, Campus Planning or Pammel Woods.

The land which became the Arboretum was acquired by the college in 1924, including the property between Hayward and Sheldon Avenues which is now used as parking space, but was originally included with the College Creek valley westward to State Avenue as part of the proposed Arboretum. The earliest extant plat of the area is dated March 1, 1924. It shows a curving driveway running west from Hayward Avenue, across Sheldon and continuing to State (then Wells) Avenue with a branch turning north to Arbor (then Leek) Street. It is interesting to note that golf links and a golf house are shown on that plan on the south side of College Creek between Sheldon and State.

An article in the Iowa State Student on May 20, 1925, outlines the plans for the area at that time:

The horticulture department has recently acquired several new farms which include the college creek south west of the campus for about a mile and one-quarter. Since the land on the sides of the creek was rough and could not be used for farm lands the area has been given to the landscape department for an arboretum.

Part of the old arboretum north of Chemistry and Physics buildings has already been moved. Several hundred dollars worth of plants including over 500 trees have already been purchased and planted near the creek this spring. Over 1000 more trees have been ordered. The object is to get a background of trees as soon as possible. The dump south of Wesley hall has been filled up with dirt furnished by the city and trees have been planted there.

At the present time the grounds include over 100 acres and the plans for development have a specimen garden near the entrance of Hayward, south of Lincoln way. It is planned that every type of plant that will grow in this region will be planted and used for class study in this garden.

A road will follow the creek to the back of the arboretum. The land will be developed with park-like treatment including borders of trees, shrubs, lakes and flowers. The far end will include only native plants. These will be planted in a natural development. All of it will be very informal except the specimen garden at the entrance.

Elaborate plans for the Arboretum were prepared at various dates over the next decade, particularly by Rothacker, who used the term "Curator" as his title on the plans. Most of those studies included an area along the creek valley extending a half mile west of State Avenue, as well as that acreage previously referred to between Hayward and State. A December 14, 1929, story in the college paper records some of Rothacker's ideas:

" 'The Ames Arboretum' is suggested as the name of the botanical garden and arboretum now under development at Iowa State College," states Prof. R. R. Rothacker, of the Landscape Architecture Department.

"Four years ago," says Professor Rothacker, "the plan for the garden was outlined which, when completed, will cover an area of 50 acres. The site chosen is in the College Creek valley, one mile west of the corner of Lincoln Way and Hayward Avenue."

The arboretum will serve as an outdoor laboratory for several college departments, containing testing grounds and model arrangements of plant materials in planting composition and design. A series of soil tests for acidity have been made thruout the area, and the planting is being arranged as it is best suited to the condition of the soil, as well as to the topography of the land.

Altho the prime function of the arboretum will be for research and survey, the park should be one of the most beautiful areas around the campus, Rothacker says. The grading and design for a formal garden have been completed, and the garden will be one of the important features of the arboretum.

Hundreds of woody plants have been collected from all over the world and will be placed in the garden. Many of the plants have been secured from the Arnold Arboretum, in Boston, one of the largest arboretums in the world.

There are very few arboretums in the United States, because of the great length of time, the large amount of money, and the technical knowledge necessary to create such a project. Other arboretums are being developed at Pennsylvania State College, Cornell University and the University of Michigan. The government is planning to finance the development of such a garden near Washington, D.C., on a site adjacent to the Anacostia river.

The development of those early plans was slow. Some help came in 1934 with federal participation in a Civil Works Administration project, described in the Iowa State Student on February 10 of that year:

Destined in coming years to become one of the most important plots in the Midwest for the introduction of new plants, shrubs,

and trees, the Arboretum will be constructed on land owned by the college along the creek south of the Collegiate Methodist Church, extending about one-half mile upstream. It will cover about 35 acres and will vary in width from 250 to 300 yards.

A show garden will mark the east entrance to the wooded park, and paths will wind throughout the whole area. Different species of trees and shrubs will be grouped together for the convenience of classes in botany and forestry. An effort will be made to put into the Arboretum every plant and tree native to Iowa, with special pools constructed for water plants.

An herbaceous garden, used in growing various kinds of grasses, grains, herbs and other small plants, will be located east of the cemetery at the spot now used as a forestry nursery. About 45 acres of heavily wooded land just north of the campus will be used as a game preserve.

The arboretum is not a new project. Plans for an introductory garden were developed in the Landscape Architecture Department in 1924. So many departments were interested in such a project and would be served by it that it has become an all-college project supervised by a general committee of several departments.

Work has been started under the direction of George Godfrey, agricultural assistant to Pres. R. M. Hughes, and will be taken up more extensively in the spring. CWA financial help is expected and CCC workers probably will be employed on the job. Cooperating with the college is the Federal Bureau of Plant Industry.

Working in conjunction with Mr. Godfrey and the general committee are R. R. Rothacker of the Landscape Architecture Department, chairman and curator; J. M. Aikman of the Botany Department; T. J. Maney of the Horticulture Department and J. A. Larsen of the Forestry Department. On the committee for the herbaceous garden are J. N. Martin, Botany Department, chairman and curator; E. C. Volz, Horticulture Department; and J. C. Eldredge of the Farm Crops Department. J. E. Guthrie, professor of zoology, has charge of the Wild Life Preserve.

By 1938 the paper could report on some accomplishment and on continuing dreams for the future:(1)

Visualize 70 acres of land, a stream running through it, 2,450 species and varieties of shrubs and trees that may be found in

(1) Iowa State Daily Student, December 13, 1938.

Iowa and surrounding states and you have an idea of the Iowa State College arboretum that will be well established by 1942.

Iowa State's arboretum -- which is a short name for botanical tree garden -- begins at the junction of Chamberlain and Hayward streets and extends for nearly a mile, past State street and ends near the Agronomy Farm.

Aided by the local CCC camp and NYA help from the college the work is carried on as funds are appropriated, according to R. R. Rothacker, professor of landscape architecture and chairman of the committee in direct charge of the project.

Ten foot-bridges, a concrete culvert and a cinder path stretching the entire length have been constructed to date. The creek has been widened in three places by dams built for erosion control. Work is also being carried on to have the ground ready for planting as funds are appropriated. Thus far, only a few of the final forestry plots have been actually established.

A modification in the use of a portion of the area is reported in the Iowa State Daily Student on September 27, 1940:

Iowa State herbaceous gardens, covering 5 acres near State and Leek streets, is one of the show places at the college rapidly becoming better known, according to its curator, Dr. J. N. Martin.

This plot of ground, formerly used by the college Horticulture and Forestry Departments as a nursery, has for the last 3 years been under the supervision of a joint committee on institutional gardens and parks, of which George Godfrey, director of Agricultural Relations, is chairman.

Varieties of herbs and grasses and oats, wheat, rye and corn from all corners of the world, are planted and tested for climatic and soil reactions. Decorative grasses as well as those used for pasture and hay are sown in the plots. Bent grass for golfing greens, blue grass for fairways and soil binders grow under usual Iowa weather conditions.

It has taken much of the 3 years of development to regrade and reseed this acreage, which replaces the arboretum now located on 70 acres across State street.

Yet in this time grasses have been produced which vary in height from 1 inch to 20 feet. Classes studying farm crops, botany and horticulture use the gardens in laboratory fashion to search out the results of such precise cultivation of wild species as Dr. Martin works with daily.

Weeds are given a special growing area, so that farmers can see what they are and how they multiply. Among the blocks are strawberry plants, hops, blackberries, and raspberries, with a plot devoted to wild asters, boneset, medicinal plants, such as Gimson weed and helinum. The north section is colorful with flowers in full bloom.

Over the succeeding years little mention is made of any activity in the arboretum.

On July 8, 1965 the Iowa State Daily tells of the then current conditions:

Hopes for the building of an arboretum, originally scheduled for completion in 1942, are still alive in the various natural science departments on campus.

The arboretum, which was first begun in 1938, is located south of Lincoln Way on the west side of Sheldon Avenue. It extends nearly a mile and ends near the agronomy farm.

The piece of land is one of the few natural undisturbed areas owned by the University which still exists within walking distance of central campus.

Development of this area would help solve the problem of lack of outdoor teaching laboratories for the botany, horticulture, landscape architecture, forestry, and zoology departments.

The original arboretum was to cover 70 acres and was to be planted with 2,450 species and varieties of trees and shrubs native to the Midwest and others adapted to this region.

The first work was done by the local Civilian Conservation Corps and National Youth Association with help from the college. Ten footbridges, a concrete culvert, and a cinder path were constructed. A creek, which flows through the land, was widened in three places by dams built for erosion control. Only a few of the planned 54 forestry plots were established.

Included in the completed plantings were groups of pines, junipers and other evergreens now a part of the Maney Memorial Park. This memorial was established to honor the late Thomas Maney, professor of horticulture at Iowa State. Maney took active participation in the development of the original arboretum plans.

Work was discontinued some years ago apparently due to lack of funds, but plans are again stirring in hopes of finally completing the project.

Two years later the paper reported on the deplorable conditions of the Arboretum:(1)

"It's the shame of Iowa State." That's how Prof. John M. Aikman, botany, describes the University arboretum.

Aikman, who was one of the arboretum's major enthusiasts, pointed out the arboretum's five bridges and memorials are "going to Pot." He condemned the University as lacking the "missionary spirit" necessary to gain better coordination within the departments concerned. "If you look at Wisconsin's arboretum and then come back here it makes you sick." Aikman wondered why more hasn't been done considering the number of people interested in its development.

The arboretum is located southwest of the main campus along the valley of College Creek. The bulk of it is sandwiched between Sheldon Avenue on the east and State Avenue on the west.

It contains some 74 acres of bottomland, side hills, and crests of varied soil types and plant materials. It extends along the creek on both sides for about one mile.

Horticulture director E. L. Denisen said the department has taken over the maintenance and upkeep of the Maney Memorial, an area in the arboretum composed of benches and juniper trees dedicated to the late horticulture director, Dr. Maney. Denisen expressed concern about its future.

In two years the horticulture department will transfer all mowers and maintenance equipment to its new farm north of Ames.

Denisen regards the name arboretum as unfortunate because "the plants have gone wild or deteriorated and the arboretum is of no real use as such. Only Girl Scouts and Brownies use it for picnics." Denisen said, "the arboretum is like someone's back yard needing a good deal of upkeep, what can you do about it but complain?"

Prof. Robert W. Dyas, landscape architecture, pointed out that cars drive on the mowed sections, that the largest tract of land is unkept, that the creek smells badly, and that most of the signs used for labeling have disappeared.

Dyas still has some hope for the future, pointing out that the plans to complete the arboretum are still on the University agenda.

(1) Iowa State Daily, June 29, 1967.

As originally planned in 1953 there was to have been some 2,450 individual species and varieties of plants, all labeled. The arboretum was to have been used as teaching laboratories by individuals of at least seven university departments: botany, agronomy, horticulture, forestry, landscape architecture, zoology, and entomology.

A committee representing the seven departments in the spring of 1961 and again in April of 1962 stated that there are only a few natural areas still existing within walking distance of central campus on University owned property. The problem is to preserve these few areas without interfering with the future development of the University and city.

Prof. R. E. Buchanan, who was the director of the experiment station when the arboretum was begun, said 12 acres located between Wilmoth and State Streets have been sold to the city for a proposed west side junior high school, and the remaining portion is not being maintained as an arboretum. Buchanan blamed the administration for its lack of interest.

Aikman suggests planting the arboretum as an actual prairie, using prairie grasses and natural plant materials. According to Aikman this would require a minimum of maintenance. Both Aikman and Denisen cited the need for stronger central control over the arboretum. "We should either decide to have an arboretum or not to have one," Aikman concluded.

By 1979 maintenance had improved but the early dreams of the thirties never materialized as originally planned.

CEMETERY

Concern for the final resting place for college faculty was expressed by the Board of Trustees at its meeting of August 16-19, 1876. It was then "Ordered, That five acres of land be surveyed under direction of President Welch; that the same be set aside for the purposes of a College Cemetery and be transferred from the department of Horticulture and Forestry to the department of Ornamental Grounds."

It seems reasonable to assume that the selection of the site was then made by President Welch. In 1883 an appropriation of \$75.00 was made for fencing the cemetery. No road served the cemetery until 1888 or 1889. The Biennial Report for those years states that provision was made for the construction of a road sixteen and one-half feet wide running from the cemetery gate east until intersecting the road running north from the College. The new road was the first section of what has now become Pammel Drive. At that time the road north from the College was on the west side of Old Main and ran just west of what is today the center line of Gilman and Spedding Halls.

In November 1895 the Trustees authorized enlargement of the cemetery "as much as necessary for cemetery purposes," and authorized an expenditure of \$100.00 in order that "the cemetery be beautified and ornamented and thoroughly cared for."

Funds for completion of the cemetery plat were made available in 1904. In the 21st & 22nd Biennial Reports, 1903-1906, references were made to inadequate care of the cemetery.

In 1906 the President was authorized to assign lots "as occasion arises" and report such assignments to the Board "in order that they may be entered of record." The first regulations governing the use of the cemetery were adopted by the Board of Trustees at their meeting of April 12, 1907. They were stated:

The privilege of interment in the College Cemetery shall be restricted to the College Faculty and their immediate connections.

The general care and supervision of the Cemetery shall be vested in the Public Grounds Committee.

The Public Grounds Committee may assign lots in the College Cemetery subject to the following conditions:

No coping or enclosures will be permitted around lots.
Burial lots shall not be filled above the established grade.
The surface of the grave shall conform to the lot grade.
Corner stones must not project above the surface.
Plans of proposed monuments shall be submitted to the Public Grounds Committee for approval.

The foundation for monuments shall be of the length and width of the monument and the floor for the same shall be level with the bottom of the grave.

The construction may be either of Portland cement concrete in the proportion of one, three and five or rubble stone laid in one to three Portland cement mortar.

The planting, pruning and removal of all trees in the Cemetery shall be under the direction of the Public Grounds Committee.

To insure the perpetual care of the lots the lessee shall be required to deposit with the College Treasurer previous to the first interment a sum equal to ten cents per square foot multiplied by the number of square feet in the lot assigned. This fund is to be invested by the College. Its proceeds are to be kept under a separate account and expended for the care of the said lot, under the direction of the Public Grounds Committee and bills for the same are to be paid under the rules of the College Board of Audit.

It is recommended that persons now holding lots in said Cemetery be requested to conform to the above named regulations.

Some modifications of those rules were made in 1915.

Current regulations preclude assignment of lots to anyone with less than fifteen years of service to the university, and to those of less than assistant professor or equal non-academic rank. Lots are not deeded to the families, but remain university property. Permanent privileges are granted. Today less than one-sixth of the 240 plotted lots remain unassigned.

LAKE LA VERNE

The first reference to a lake on campus appeared in the November 19, 1914, edition of the Iowa State Student:

O. C. Simonds, the well known landscape gardener of Chicago, whose services have been donated to the college by LaVerne W. Noyes, graduate of the class of '72, spent the first 3 days of this week studying the needs of the campus.

He gave most of his time to the south part of the campus, which he thinks could be maintained and developed as a park, as has been the policy up to this time. Mr. Simonds thinks it might be possible to make a dam in College Creek a short distance above the new culvert under the interurban line. If his suggestion is carried out there would be a lake about 500 feet long and 100 to 150 feet wide. This would extend nearly to the new concrete bridge at the Welch street entrance and cover most of the low ground which is now in grass.

The "culvert under the interurban" was just a few feet east of Lynn street at Lincoln Way (using current street names).

Action was taken quickly, for just a month later the paper carried this report:

"When students come back from vacation a skating pond will be ready for them," said Supt. Thomas Sloss today. College Creek is to be dammed just above the interurban bridge. The water will be raised two feet. This will make a pond which will extend nearly to Champlin's bridge.

Superintendent Sloss has men working on the dam at present. The Cardinal Guild will keep the ice cleared of snow. It is thus assured that the skaters of the college will have a chance to use their skates this winter.

On January 9, 1915, the paper noted that over 200 people had enjoyed skating on the new pond the previous night. That "pond" was welcomed by the skaters, but it was considerably less elaborate than Mr. Simonds' idea of what the lake should be.

President Pearson presented the Board of Education, at its meeting on June 15, 1915, letters from Simonds to Noyes and from Noyes to the Board setting forth the concept of a lake. Simonds explained how the work might be accomplished and what needed to be done. Dr. Noyes' letter is of particular interest and significance:

If agreeable to you, I shall be glad to bear the expense of constructing a lake at the Iowa State College Grounds in the valley

south of Dean Stanton's house, substantially in accordance with the accompanying design. If you accept my offer, I should like to have the work prosecuted under the direction of Mr. O. C. Simonds. The making of a lake is, in many respects, like painting a picture, and the same freedom should be given to the one who designs the outlines and shapes the banks that would be given to the painter of a landscape. The work ought to be finished in time for planting the coming fall, and so should be commenced without delay and followed up as outlined in the accompanying discussion and letter signed by said O. C. Simonds.

Upon receiving from you a letter stating that your Honorable Board approved of my offer, I will deposit from time to time, with the college Treasurer, such sums as may be needed up to ten thousand dollars, and payments can be made by him upon orders signed by O. C. Simonds, or his representative.

The Board unanimously approved acceptance of "the generous offer" and allocated \$500 to help fund the cost of a new entrance drive from Boone Street to "the main drive near the Music Building" (Sanitary Building). That is approximately the present drive west of the Union between Lincoln Way and Union Drive.

Construction of the new lake began in September and was substantially completed, except for plantings, by December.

The name "Lake LaVerne" was suggested at a Story County Alumni meeting on May 10, 1916, and was formally approved by the Board the following month.

The improvements of the lake did not last long. Spring rains, and sometimes floods, brought in large amounts of silt. Various methods were attempted -- digging, dredging and hosing -- to reduce the amount of sediment, but none was successful. Some years there was enough water to permit skating when the lake froze in the winter. But much of the time there was only a disreputable creek bed often referred to by the students as "Lake LaMud."

Engineering plans for modifications to improve the appearance were started in 1928 by Dean Marston, but funds to implement them were not forthcoming until 1933 when a Civilian Conservation Corps project provided manpower to begin construction of a channel to by-pass the lake when silt-laden runoff from the creek occurred. This was a concrete conduit installed on the south side of the lake. That work was completed and the lake filled the following spring. Stone rip-rap was placed on the banks in 1937 and 1938 along with up-stream silting beds.

The by-pass conduit did not eliminate all silting and by 1959 it became necessary to dredge the lake to remove the accumulation of sedi-

ment. This was done in the spring of that year by two alumni, R. R. Manatt '21 and J. D. Armstrong '37, without charge to the college. Modifications were made in the by-pass system in 1963.

Since then the lake has been well maintained and is a campus attraction, especially when the swans, Lancelot and Elaine, sometimes with four or five small cygnets accompanying them, grace the surface of the lake.

LANDSCAPING

Including ORCHARDS and GARDENS

(Also see Campus Planning, Pammel Woods and Arboretum)

On July 4, 1859, the early settlers of Story and Boone counties held a picnic to celebrate the purchase of the land that was to become the Iowa Agricultural College and Model Farm. The gathering was in the area just east of what is now the cemetery at the edge of the woods along Clear Creek. Between there and Squaw Creek where some trees were seen there was only rolling prairie without shade of any kind. The beauty of today's campus could not have been envisioned at that time.

The First Annual Report of the Secretary, for the years 1858 and 1859, stated "We must also improve the farm with additional breaking, fencing, planting of trees, orchards and gardens." By 1862 it could be reported that "About one hundred and twenty acres are under good fence, and about 80 acres under cultivation, part of which is occupied with an orchard of about six hundred apple trees."(1)

Peter Melendy, Superintendent in 1865, wrote:

There have been several hundred ornamental and shade trees, and shrubbery, set out. I deemed it essential to make an ample lawn, with here and there a tree, with shrubs for fragrance, and evergreens to relieve the golden of the summer day; with bordered walks and quiet nooks, the embowering shade of trees, with beautiful trailing vines, and shrubs, and flowers....By the judicious employment of trees we may effect almost any amount of alteration and improvement within the scope of landscape scenery.

There has been a large lot of small evergreens experimented with the past year, which have not done well. We have now about 160 Cedars that are growing nicely, 600 Balsam Fir, Norway Spruce, White Cedar and Hemlock that are doing well, and will, if care is taken with them, make good symmetrical trees.

There has been about one mile of willow cuttings set out on the north side of the rail road, and along the west side of the farm. The season was favorable for starting the cuttings, and if they have a fair chance this coming season, will make a fine belt for a wind breaker. We would recommend the planting, on the north line of the farm the entire length, this fine willow for a screen background and protection from north and west winds. The cuttings planted this year were obtained by Mr. Foster, from Overman &

(1) Third Annual Report, Feb. 6, 1862.

Edwards, of Illinois, as a gift to the farm. The cost was but for the transportation.

The following is a list of grapes that have been set out the past year: 6 Delawares, 2 Isabellas, 4 Hartford Prolifics, 4 Logan, 4 Diana, 6 Rebecca, 2 Iowa. We have mislaid the list of fruit trees.

The amount of tame grass sown on the farm is not large, and I would recommend the seeding of all the meadows and pastures in tame grass as soon as it can be done. Whole amount of land sown, 43½ acres. On old ground -- Timothy, 12 acres; Timothy and Clover, 4 acres; Clover and Blue Grass, 2½ acres; sown on prairie soil and harrowed in, and is doing well, 25 acres.

I would recommend the platting and dividing the farm into fields and lanes according to the Superintendent's plat. I think the land on the south side of the orchard fence should be used as lawns for our fine stock, to be kept at the proper seasons, and that we group native and foreign trees promiscuously through the ground, taking for the center of the group, the oak and the chestnut, which are among the largest and the noblest of our trees; the spruce, hemlock, ash and beach, locust and hickory, the cottonwood, sycamore, walnut, soft maple -- the arrangement of these should be the subject of careful study. Groups should be always composed of one principal tree, larger and taller than the rest, with others grouped around as subordinates. Plant trees most certainly, and wherever they would be a beauty or a refreshment, let their roots begin to pierce the mould above which their branches may year after year wave with a fascinating grace and a variety -- like which there is nothing else in nature.(1)

In 1868, H. M. Thompson, Superintendent, reported to the Board that "The Orchard produced some few apples but of inferior quality owing to the drought. The young vines also produced a few grapes, which with currants, gooseberries etc. were all used in the House."(2)

At the May 1868 meeting of the Board it was resolved "That the Building Committee be instructed to procure immediately the services of a first class landscape gardener to lay out the grounds of the College Farm with a view to the exact location of the Professors residences and the beautifying of the grounds." The following November the Board asked the Secretary to "notify the Landscape Gardener that the Board

(1) Sixth Annual Report ... for 1865.

(2) Minutes Jan. 13-17, 1868.

do not require his services he having failed to furnish plans in proper time so agreed upon with the Committee." At the same meeting approval was requested to relocate the orchard to the west side of the grounds.

In his report at the January 1870 meeting of the Board Thompson said

A young orchard of 300 apple trees were planted on a piece of land selected by Dr. Townsend near the west end of the farm. It is sheltered by the natural timber on the west and north & is I think the most suitable site or location for a successful orchard on the farm....

Of the evergreens that had been under cultivation on the farm, a considerable number were very successfully transplanted under the direction of the President by students into ornamental groups on different parts of the College grounds and already make a very marked improvement in the appearance of the landscape.

It was also reported at the same meeting that the terrace in front of the College building had "its three sides neatly turfed, its surface covered with gravel and finished with a border suitable for the planting of shrubbery next spring."

The following order was adopted by the Board in July 1874:

That the Professor of Horticulture with the advice of the President, prepare ground N.W. of the College buildings for an arboretum and make such arrangements for contributors, as they may deem advisable.

In June 1875 the Board ordered

That the timber in the northwest corner of the Farm lying south of the rail road be held as ornamental grounds and the same is hereby placed in charge of the Horticultural Department; And it is further ordered, That the Professor of Horticulture shall at the proper season prepare a strip of ground fifty feet wide along the entire length of the north side of the farm lying south of the railroad and plant the same in timber in the spring of 1876.

The Aurora in the August 1875 issue observed "The college has received a one-horse lawn mower. We have examined the machine to our satisfaction and find that where the grass is of proper length it does splendid work."

J. L. Budd summarized the then existing condition of the orchards and gardens in the Biennial Report for 1876-77:

The original fruit trees, small fruits, etc., planted in this garden for use of farm household, being either entirely dead or in a dilapidated, sod-bound condition, the work was attempted last spring of replanting, and replacing it in respectable shape.

Nearly one hundred cherry, plum, and apple trees were planted, and all have made fair growth. The grape vines, raspberries, currants, etc., planted, have also under good care, made a splendid growth, and bid fair, if continued attention be given, to furnish an abundant supply of fruit in a very short time to this department. The vegetable garden belonging to the farm house, has been managed in connection with the care of the fruit plantation, and has entirely supplied the wants of the large family. A supply of potatoes for nearly the whole year is also now in cellar from this garden.

The first orchard set out on the College farm occupied a plat near the farm house. This plat has necessarily since become a part of the ornamental grounds. The few trees that could be left, are now fine symmetrical specimens, even bearing a fair crop during the past unfavorable season.

The orchard as it now stands contains about twelve hundred trees, planted and re-planted at various times since 1869.

The last paragraph refers to the orchard on the west side of the grounds.

In March 1878 The Aurora gave this account of a new development:

Prof. Budd has commenced in earnest with his horticultural department this spring. The new Russian orchard which he has started will contain over twelve hundred trees, grafted with six hundred varieties from northern Europe. He also has seventy thousand grafts which will be immediately put into a nursery on the farm. The next year he will follow this up by taking hold of the plums, grapes, raspberries, currants, etc.

A re-platting of the grounds was made in 1887 and specific areas were allocated for "the farm on the one hand and the horticultural and ornamentals on 'Public Grounds' and steward's garden on the other." The map showing the divisions referred to is still in existence. An accompanying tabulation is of interest:

Land occupied by horticulture, ornamental grounds, etc.	130 acres
Land occupied by sloughs, creeks, forests, creek bed, bayous, roads, etc.	<u>300 acres</u>
Total land not subject to use for farming purposes (about)	430 acres

Total good land arable and pasture used in actual farming (about)	<u>465 acres</u>
Total College domain	895 acres

The original Russian Orchard was completely removed in 1888 by which time all but a few trees had died out. In June of that year The Aurora noted that

The committee on public grounds....have made some changes in old groups, taking out trees where they are too plentiful or out of order, and making new plantings where needed. The cottages have long been neglected, but we are well supplied with groups of trees now. The coming generation will find the college of the I.A.C. a beautiful place.... We notice a small group of oaks between the main building and farm house, the first of the kind on the grounds.

Professor Budd wrote, with obvious pride, in a report in the 14th Biennial Report for 1890-91:

In laying out and planting the public grounds the thought has been kept in mind of combining landscape effect and practical instruction to students and visitors. In the form of groups and isolated specimens we now have about every tree and shrub that will succeed fairly well in our climate.

On the campus, and over the horticultural grounds, varieties and species are labelled and constitute a constant object lesson on a large scale for the study of students and visitors. Taken as a whole the trees and shrubs of the grounds form the best arboretum found west of the Arnold arboretum at Boston. With embellishments, we could soon say that, as a park and landscape garden, our public grounds are not equalled in the west.

A similar expression of pride in the campus, though on a lesser scale, appeared in the July 1892 Aurora:

The finest grove of evergreens on the college grounds is found on the grounds surrounding the houses occupied by Profs. Osborn and Pammel. It is hereafter to be known as the Pinetum. The trees are not only beautiful examples of their kind, but there are a good many species represented. This spring a dozen additional species have been planted. As most of these are hardy the college Pinetum will contain nearly all conifers that will grow in Iowa.

The houses referred to in the above paragraph are those now called Osborn Cottage and Sloss House.

The Student, on June 15, 1897, editorialized on the Russian olive tree:

The wild olive is distinctively our college tree. With its silver leaves, its yellow blossoms and its black stems, it shows a perfect combination of our college colors. We are thoroughly gratified that Prof. Budd introduced these beautiful trees among the native ones upon the campus.

In the spring of 1902, on President Beardshear's recommendation, shade trees -- 90 hard maples and 70 white elms -- were planted along what is today known as Stange Road. O. C. Simonds was retained in late 1902 to advise on building locations and other matters of campus planning. His contributions are covered in the section "Campus Planning." He also supervised installation of new plantings.

Responsibility for the maintenance of the Public Grounds was assigned to the head of the Horticulture department by the Board in July 1904 but in August of the same year a Public Grounds committee was established to supervise the care and development of the grounds.

The personal gardens of faculty members living on campus received the attention of the Board in 1905 when these rules were adopted:

No poultry will be allowed about the houses of those living on the campus. Vegetable gardens will be allowed on the campus only by special permission of the Board of Trustees, exception the case of lettuce and other salad crops.

Those residents were also "requested to secure the advice and cooperation of the Head of the Horticultural Department in any planting or lawn matters which they may contemplate making."(1)

In the Biennial Report for 1903-05 is a general summary of the then existing condition of the campus and recommendations for improvement. Parts of that concerning walks, athletic fields, roads and bridges are included under those headings elsewhere in this volume. Specific reference to the landscaping needs follows:

A large part of the trees on the campus consist of soft maple and Scotch pines. Both of these are quick growers but very short lived trees, and are now rapidly dying out. A definite appropriation should be made for replanting. The border plantation on the old west lines of the campus just back of the Library Building and west of the Faculty Club House is also rapidly dying out. In the erection of new Engineering Hall the boundary of the campus has been extended considerably beyond this, and a new

(1) Minutes March 11, 1905.

border plantation should be established on the line west of Engineering Hall. The erection of these new buildings has also enlarged the area of the campus considerably and the maintenance funds should be increased proportionately.

For clarification of the above, the Library Building is Morrill Hall, the Faculty Club became Farm Boarding Club after it was moved, and Engineering Hall is Marston Hall.

In the Biennial Report for 1905-06 the following reference to an arboretum is included:

The arboretum was at one time much more extensive and contained a better collection than it does at present. Inroads upon it have been made from time to time in locating new buildings and roads and in extending the campus. It was designed to contain a pretty complete collection of economic and ornamental plants of interest in horticulture and forestry. It is now planned to make that part which pertains to forestry a part of the Forest Garden. This now contains coniferous trees only, but it should be developed by adding as complete a collection as possible of deciduous trees.

The exact location of that arboretum is uncertain but it is thought to have been in the general area of the Campanile. The Forest Garden is probably the area earlier referred to as the Pinetum.

The Olmsted Brothers were employed as consultants in 1906. Their report, discussed under campus planning, was primarily concerned with building locations and general campus development and gave little direct attention to the plantings on the campus except to propose replacement of the soft woods by longer lived trees.

In 1908 the line of sycamores was set out along the cinder path between the campus and Ames, and other young trees were put in elsewhere on the campus.(1) The next spring the paper reported that "The Hort. department has just finished planting five thousand white pine trees in the forestry plots on Squaw Creek."

A new policy in landscape development came in 1909, as recorded in the ISC Student on June 7:

For the coming year Professor A. T. Erwin will give his entire time to the ornamental and landscape work of the college and severs his connection with the experiment station work. As a part of this plan he has been made superintendent of public grounds and he is to use the campus as a practical laboratory in connection with the class room work in this subject.

(1) ISC Student, May 4, 1908.

Christmas 1914 saw electric lights on the pine tree in front of Beard-shear Hall (then Central) for the first time, and a special program was held on December 20. Through the generosity of Dr. LaVerne W. Noyes the services of O. C. Simonds were made available to the college during the years 1915 through 1917. His work in developing Lake La-Verne is covered under that heading. He also worked in an advisory capacity with college personnel in the planting of many trees and shrubs at other locations on the campus. (See "Campus Planning" and "Lake LaVerne.") Early in 1917 Dr. Noyes proposed construction of a second lake on the campus, to be approximately in the area now used as the parking lot east of Knoll Road and south of Union Drive. That plan never materialized.

Plans for a perennial garden were announced in the Iowa State Student on March 30, 1917:

This spring Prof. A. S. Thurston of the Horticultural department will start a flower garden consisting of herbaceous perennial plants on the plot northeast of the Plant Industry building. This plot has been used as a sheep pasture up until last fall.

All of the plants will be hardy to this climate and will be perennial flowers. Prof. Thurston expects to have as many as 250 varieties of blooms which will be laid out in 12 beds, twelve by fifty feet.

On February 25, 1919, the same paper reported:

Supt. Thos. Sloss, Prof. F. H. Culley, associate professor of landscape architecture, and Mr. Simonds will have charge of the plans for the planting of various varieties of shrubs, trees and bushes. Many of those planted during the past few years were only temporary and will be replaced this year by a more permanent variety.

A year later, at the April 1920 meeting the Board took action of a similar nature:

The President of the College was authorized to appoint a committee, including the superintendent of Buildings and Grounds and the professor of Landscape Architecture, to have charge of the plantings on the campus, but to act under the direction of the President of the College.

Removal of dead and dying trees and shrubs and their replacement with new specimens has been an ongoing activity on the campus almost from the beginning of the college. No attempt is made here to record the frequent allocation of funds for landscape improvements entered in the minutes or articles about new plantings included as news items in the student paper. A typical account appeared in the Iowa State

Student on February 11, 1933:

One hundred fifty-five distinct species of trees are growing on the Iowa State campus, according to Asst. Prof. R. R. Rothacker of the Landscape Architecture Department.

These include 32 species of coniferous or cone-bearing trees and 123 species of deciduous or leaf-dropping trees. Some of the less familiar species are the shadblow, Chinese tree-of-heaven, Russian olive, magnolia and tulip tree.

Of the well-known species, there are 10 varieties of willow, 11 of oak, 10 of maple and 6 of birch.

....Each year the department recommends setting out certain trees and supervises their planting by the Department of Buildings and Grounds. Last year 150 trees were set out.

In April of that year American lindens were planted north of the Landscape Architecture building to replace the European lindens which had died the year before. The new trees were furnished, without charge, by the Henry Kohnakie Nurseries of Painesville, Ohio.

During the winter of 1933-34 a project under the Civil Works Administration included the transplanting of many trees.

The Iowa State Student on October 30, 1934, carried an excellent account of some of the earlier plantings and is worth including here:

Many of the old trees which are now campus landmarks were planted while the present site of Dean C. F. Curtiss' home was the location of the old stagecoach tavern. In front of Memorial Union is a tree grafted from the original Washington Elm and brought here by Prof. T. J. Maney. A row of soft maple stumps, 2 and 3 feet in diameter were left about the flag pole on central campus and were cut down later when the inner circle of hard maples had become large enough.

The former boundary of the college farm land is marked by a line of honey locusts which runs past the women's dormitories. Another row of trees just south of the walk from the Landscape Architecture Building to the cinder path, marks part of the original fence rows of the farm.

Several groups of trees remain to mark the location of the old forestry test plots. The trees in these plots were planted in rows, but many have died. The Scotch pines southeast of Memorial Union were planted when the old Veterinary Hospital was located on the site of the Union. A grove of small trees has recently been planted to fill in where others have passed from existence.

Larch Knoll, near the Cranford Apartments, was a test plot for evergreens. Plans are for trees to be replanted on this hill to give Lake LaVerne a proper background.

An old apple tree and a pear tree east of Margaret Hall are all that remain of the old college orchard and vineyard. Physics Building now marks the spot of the old nursery orchard. The Armory polo field was formerly another orchard plot, and the land east of the Campanile was used as a nursery area.

Dr. Pammel was instrumental in having groups of trees dedicated to prominent individuals in the history of the college. These groups are marked by large boulders with bronze plates fastened to them. Dr. Pammel was also responsible for introducing more native trees on the campus, and the Landscape Architecture Department placed them in various locations.

Among the foreign trees are the Russian Mayday tree, which blooms in early spring; the Siberian pea tree and shrub, and the Chinese elm.

The redbud trees in front of Home Economics Hall were brought here and placed by Professor Culley, the first head of the Landscape Architecture Department.

About 5 or 6 years ago it was found that drouth, disease and difficult growing conditions were killing out many of the old trees. The Department of Landscape Architecture under the direction of Prof. P. H. Elwood, has adopted a long time plan of planting oaks and hard maples, trees that will be long lived, and putting in some short lived trees till the others become larger. Evergreens are being planted each year to gradually extend out and make all the campus as finished as the central campus. In connection with this plan, more planting of trees and shrubs will be done about Lake LaVerne.

At present there are on the campus 93 kinds of trees belonging to 23 different families. Among the more common and more largely represented families are the willow, poplar, walnut, birch, oak, elm, mulberry, rose, pea, maple, dogwood and ash.

The stone wall with its flowers, at the hill on the north side of Union Drive and Knoll Road was well described in the Iowa State Daily Student on May 22, 1946:

That walls may be decorative as well as useful is proved by Iowa State's well-known flowering wall at the corner of Knoll road and Union drive.

This garden spot was planted with perennials in 1940 after the retaining wall was built with the help of WPA labor.

Niches between the rocks contain soil which was worked in around the stones to connect with the earth in back. Now and then plants have died and new perennials and annuals have taken their places.

The various flowers tell their own seasonal story each year. Spring finds the garden turning from brown and grey to grey and a thin film of green and finally to shades of blue and fuchsia lighted by the grey background.

Summer clothes the wall with Missouri evening primroses, coral bells and violet queens, giving a different range of color. California poppies, flaunting their orange and gold, greet students as they return to school each fall.

Through the three seasons the background flower remains the same --blue catmint. Waves of this flower lead the eye along the wall and form "pockets" at intervals.

Along with the campanile the flowering wall has become a feature of Iowa State, changing yet always the same.

New formal gardens were set out east of the greenhouses in 1952 to replace the perennial garden on the site for the Agronomy Building. "The garden will be on two levels. Cannas and tropical bedding plants will be planted next to the greenhouses, with annuals finishing the higher level. The lower level, two steps down, will be devoted to perennials."(1)

Dutch elm disease first appeared on the campus in 1961 and although every effort was made to eradicate the beetles causing it, the next few years saw the removal of practically all of the elms on the campus.

Relocation of the horticulture gardens from near the greenhouses was foreseen in 1965 when plans for Bessey Hall were initiated. The new site north of Sixth Street and east of Haber Road was selected at that time, but the actual move was not completed until 1969.

As new buildings have been erected on the campus each has been landscaped appropriately under the direction of the campus landscape architect, in full recognition of its relationship not only to the new structure but with concern for its appropriateness in conjunction with other campus planting.

(1) Iowa State Daily, February 21, 1952.

A recurring maintenance problem arises annually as students, in an effort to save a few minutes of time, take short cuts across the grass and make paths in the lawn. The problem has existed and editorials condemning the practice have appeared in the student paper since the nineteenth century. Snow fences erected in the fall and left standing during the early spring have helped to keep some paths from completely killing all grass, but that method has not been completely successful. The problem remains.

The firm of Johnson, Johnson & Roy, retained in 1967, developed a long-range campus plan which is discussed under "Campus Planning." Their contribution to landscape planning was minimal.

The Physical Plant carries the primary responsibility for design, planning and planting of landscape materials at the present time.

PAMMEL WOODS

The northwest corner of the college grounds received little attention during the first forty years of the college history. The brickyard of 1860 had minimal effect. The cemetery was established in 1876. (See separate section on those two subjects.) In June 1875 the Board had ordered "That the timber in the northwest corner of the farm lying south of the railroad be held as ornamental grounds and the same is hereby placed in charge of the Horticultural Department."

In July 1889 The Aurora noted that "part of the timber land near the college cemetery (has) been cleared away, and the land is now growing crops."

The earliest suggestion for maintaining the area as a practical outdoor natural habitat appeared in The Aurora for June 1893:

Some Reasons Why We Need an Arboretum

That students may be able to study botany in a practical sense, they should have the advantage of studying all plants in their native conditions. The study of an herbarium specimen is as dry a subject for a beginner as the specimen itself is. Besides a beginner should have access to the native plants first.

The cultivation of all tillable land and the pasturage of all that cannot be tilled destroys or drives out a large number of our native plants....

During his last college years Dr. Welch took considerable interest in the case of a few fine specimens of White Oak in the cemetery. A year or two ago some person with a larger stock of greed than sense, cut one of them partly down to get a handful of becomb. The other specimens are dying from exposure, since the timber to the south and east of the cemetery has been grubbed out.

True we have many trees represented on our campus and in the nursery, but if the ground where they stand is wanted for other purposes, the mattock and grubhoe is applied without reference to the value of the plant, or an attempt to save it. There is one single specimen of Hemlock left on the grounds, where I am told there was once a group of them, and that group happened to be in the way of a graceful curve in a road, so the group was grubbed out.

To the Sophomore in botany the arboreal are not as useful as the herbaceous plants. The Sophomore must go beyond the old "two-mile" limit to find prairie, or woodland plants that are good representatives of what the plant is, as described in the manual.

A few distorted dwarfed specimens can be found in the woodland meadows on the farm.

....it is just as essential to the work of the student, to have an arboretum as it is to have a campus, athletic grounds, or experimental farm lands....

The state ought to have a place where the native plants could be grown and preserved. Aside from an economical standpoint a well arranged arboretum would be an ornament well worth the having. Hence it would not only benefit the department of botany, but the state and college as a whole. It should be the duty of the college to work for and help maintain an arboretum.

There is a piece of college land on Clear Creek, to the north and west of the cemetery, that is too rough to be of much value for farming purposes, in fact too rough, if the timber was removed to make good meadow land; which contains nearly as many of our native plants as any woodland to be found on the farm. Here, with a little care and expense, they could be preserved. There is a natural bend in the creek to the north of the cemetery that could be taken advantage of, to make an artificial lake (that would not leak!).

....the right to use that land for such a purpose, with a small amount of means would accomplish something. Our native plants will shift for themselves and do well if given half a chance.

Whether that editorial in the paper initiated response or merely reflected generally accepted student and faculty thinking of the period cannot now be determined. Whichever was the case, at the Board meeting of November 12-15, 1895, two policies affecting the area were adopted:

First: That there be set aside for forestry and park purposes the remainder of the land belonging to the College lying west and north of the College cemetery bounded on the south by the extension of the south line of the College cemetery westward to the public road, on the west by the public road, on the north by the railroad and on the east by the irregular line bounding the cultivated land of the farm extending from the railroad to the southeast corner of the College cemetery.

Second: That it be ordered by the Board that no trees on said tract be cut and that notice to this effect be posted upon the tract.

The following year the May 26, 1896, issue of the IAC Student carried this account about the same area:

Some of us have heard rumors that the woodlands to the northwest of the grounds were to be made over into a park. The gist of the matter seems to be this: the trustees have decided to begin in a small way the task of making this part of the ground beautiful. Work will first be done in that portion of the tract lying northwest of the cemetery and this side the stream, extending to the stone arch. Paths will be made through the present tangled growths and Prof. Pammel will begin a system of scientific forestry, culling inferior trees and planting more valuable ones in their stead. The stream too will have trees planted along its banks. We rejoice at the commencement of this new enterprise which is but a continuation of that policy which has already resulted in making the I.A.C. campus almost a synonym for beauty.

A year later the Public Grounds committee reported to the Board that "we have examined College Park and find that it would require a large expenditure of money to make such improvements as would be any practical benefit, and as we have not any funds at our disposal at this time, would not recommend any improvement at present."⁽¹⁾ During 1913 and again in 1914 a temporary camp was set up "in the woods near the college cemetery" for prisoners from the Anamosa reformatory. They lived in tents and were employed on various campus improvement projects.

At the April 13, 1920, meeting of the Board President Pearson submitted the following report concerning the area then called College Park:

This area is not included in the Campus proper nor is it wholly under the jurisdiction of the Farm Department. In a general way it has been looked after by the Superintendent of Buildings and Grounds. The area in question comprises about sixty acres located at the northwest corner of the campus and extended to the North Western Railroad tracks. It is mostly covered by woods. At present this tract is in bad condition and it is discreditable to the institution and carries a fire danger on account of dry grass and weeds along the railroad. To a certain extent these have been kept down by grazing. The grazing, unfortunately has had a bad effect on other features of the woods and has largely destroyed their educational value.

It is proposed now to let this ground and the trees on it serve as an outdoor laboratory for the departments already named. It would provide valuable material for the Botany Department. We could establish in this area also a grass garden in cooperation with the United States Department of Agriculture and for the special use of the Botany and Plant Pathology Section of the

(1) Minutes, May 18-21, 1897.

Agricultural Experiment Station. This work greatly interests Dr. Pammel and promises to be of high value to the state.

The Board responded to the report:

Upon the recommendation of President Pearson, the grounds designated above and known as College Park are to be transferred to the management of a committee to be appointed by the President of the College, the said committee to include representatives of the Botany, Forestry and Landscape Architecture Departments, with the understanding that the expenses will not exceed \$800 a year, which will be paid out of the fund entitled Maintenance and improvement of Public Grounds.

The Board action was promptly respected as seen in the April 23 issue of the Iowa State Student:

Work will be commenced immediately on the college park, which is located north of the experimental plots, in an effort to get it into the best of condition. Trees will be trimmed up, shrubs will be planted and a general cleanup will be made.

The work is under the direction of Dr. L. H. Pammel, Prof. G. B. McDonald, Prof. F. H. Culley, Prof. A. T. Erwin and Supt. of Grounds Thomas Sloss.

The park will be used as a laboratory for the departments that are represented on the committee. Walks will be laid out to the park and will be built when funds are available.

During the next three or four years the Military Stables and Shed and the Powder Magazines were built on the east edge of the timber area.

College Park became Pammel Park by Board action on December 12, 1939. It honors Dr. L. H. Pammel who died in 1931 after many years of service to the college. Today the area is more frequently referred to as Pammel Woods.

Since that time efforts have continued to preserve the area in as natural a condition as possible. Richards and Landers, in their 1970 report on Pammel Woods, have adequately documented the developments to that date. In the last decade little change has been made.

ROADS and BRIDGES

In thinking about the roads to and on the campus it must be remembered that during all of the nineteenth century and well into the twentieth travel on those roads was entirely by horse-drawn vehicles and a good gravel surfaced road was the best that anyone then expected. But that goal was not always achieved during that period. The Minutes of the Board and the student papers record the frequent need to improve roads and repair or replace bridges damaged by floods or high water. This account will not attempt to incorporate all of those changes but will record only the more significant developments leading up to the current road system serving the campus and the city of Ames. This can best be done under separate headings dealing with the roads within the boundaries of the campus and those serving primarily as access routes to and from Ames. (Walks for pedestrians and the part played by railroads are discussed elsewhere in this volume.)

A "Map of Agricultural College Farm," probably made in 1867,(1) shows the college land with three buildings (Main, the Farm House and the Cattle Barn) and no roads except "County Road" on the south side. That road is on the line of today's Lincoln Way.

The original access to the farm from the county road was described by Professor Charles E. Bessey in an address in 1908:(2)

It was a raw February day on which I reached the quite forlorn looking village of Ames. It impressed me with its treelessness and small houses with no shrubs and no dooryards, as a village which was all out of doors, and lonesome and unprotected. The drive over the rough, mud road, over a rickety bridge and the "bottoms" of Squaw Creek, was not reassuring. The mean approach to the college just at the base of the hill, and up through the barnyard, by the old Farm House, and then across the fields to the president's house might well have dampened the ardor of the newcomer.... Look back with me, and see this campus as the young botanist saw it. There were no drives, no walks, no paths, no smooth lawn, and only a few small trees.

Professor Bessey arrived in 1870. The route he remembered would have taken him north from the county road about where the Maple-Willow-Larch towers stand today and then west up the hill near the south side of the Power Plant and on to the Farm House.

President Welch's stepdaughter recalled her arrival by the same route in September 1869: "the patient mule team plodded wearily through the

(1) Second Report of the Trustees, January 27, 1868.

(2) Annals of Iowa, April 1909.

mud."(1)

I. P. Roberts, recalling the same year, noted that the kitchen door of the Farm House "faced on what was then the main drive."(2)

ON-CAMPUS ROADS

During 1870 a new approach road to the college from the county road was opened approximately in the location of what is now called Knoll Road. In addition, a road was built from that approach drive past South Hall then curving northwest past Main and around the north to the front of the Farm House, thus establishing the basic delineation of the open central campus. These roads were built with a solid fill of six inches at the edges to a foot at the crown, using as fill material the rejected brick from the original foundations for old Main and the rubble from the fallen concrete blocks used in the walls of the original construction of South Hall.(3)

A bridge with stone abutments was constructed where the new approach road crossed College Creek, and "in two places when the road crossed deep depressions."(3)

By 1873 roads had been built to serve the buildings known most recently as Marston Cottage and Music Hall.

In 1881 a new bridge was constructed over College Creek "on the road leading from the front entrance to the Main College building."(4) That bridge was at about the point where the present walkway crosses the creek at the north end of the Memorial Union Parking Ramp. At the same meeting the Board approved an expenditure of \$50.00 "for the purpose of building a bridge over the road leading to Professor Thomson's residence." (Marston Cottage)

When the two new faculty houses (Osborn Cottage and Sloss House) were built in 1883 a new road was run on the west side of them from about the southwest corner of the Farm House south to the road near South Hall which was the primary drive to Main from the entrance road.

During the 1890's several road changes were made, resulting principally from the construction of Botany Hall and Margaret Hall. Other roads were built to provide access to the several farm field areas.

(1) Bomb, 1897.

(2) Roberts, 1916.

(3) Minutes, December 14-15, 1870.

(4) Minutes, July 26, 28, 1881.

A new campus entrance road with a bridge across College Creek was developed north from Welch Avenue in 1911.

Paving of some of the campus roads was started in 1910 on an experimental basis sponsored by the Iowa Highway Commission, the U.S. Dept. of Agriculture and "one of the large companies manufacturing artificial asphalt road material." That company donated a carload of the artificial asphalt binder and the work was to be done under the direction of an "expert furnished by the United State Agricultural Department."(1)

On October 4, 1913, the ISC Student reported:

Asphalt is being added to the new concrete pavements as the last step in the completion of the campus roads.... The covering of asphalt will make the concrete wear longer, be easier on the horses' feet, and will not be so slippery as it will be covered with sand as soon as it is laid.

The entrance road to the campus at the east end of the lake (Lynn Avenue) was built in 1916.

During the next couple of decades additional roads were built and paved and general repairs undertaken as needed to serve the campus buildings.

A road east of the women's residence halls was put in in 1928. This was about on the line of what is now Wallace Road.

Funds provided by the Civil Works Administration in 1934 allowed additional paving of several campus roads, thus eliminating a serious dust problem caused by cinder drive surfaces. The Works Progress Administration similarly made possible further paving in 1936-38.

Campus road and street names were formally assigned in November 1941. Pammel Drive was extended west and down the hill to Hyland Avenue in 1959, providing another campus access route from west Ames.

Pammel Court streets received asphalt surfacing in 1957. They were later resurfaced on various occasions.

Bissell Road was widened to four lanes and paved between Pammel Drive and Union Drive in 1965.

(1) Biennial Report, 1908-10.

LINCOLN WAY

The condition of the road connecting the College with Ames was described in the Biennial Report for 1876-77:

There is an urgent necessity that the graded road which runs some seventy rods through the bottom land of the College farm should be improved by widening, paving with stone and covering it with twelve or fifteen inches of gravel. This portion of the highway to Ames consists of a low, narrow causeway which, being frequently overflowed by freshets, is in such condition as to render access to the College from Ames unpleasant and often difficult. In fact the causeway with its perpetual mud and ruts which deepen with every rain is a serious evil, and the success of the institution demands that it should be thoroughly repaired. The citizens of the district in which it lies are unable to do the work, the College funds cannot properly be used for such a purpose, and we are therefore compelled to ask for a small appropriation from the Legislature. The cost of thorough grading and graveling will be \$2,000.

That requested appropriation was apparently not made because in the July 1878 issue of the Aurora it was reported:

This season will see the road between the College and Ames thoroughly repaired. The grade of the entire length will be raised about two feet. The expense will be defrayed by subscriptions by the professors of the College and the business men of Ames.

At the November 1881 meeting of the Board it was ordered

That the President of the College and the Professors of Agriculture and Horticulture be directed to give to the Supervisor of District No. 2 notice to put the highway on the South side of the College farm in passable order before the 20th of November, and said officers are ordered to close the gates on that date and to prevent further travel through the College grounds. They are hereby directed to prosecute any parties who force their way through after that date.

The Biennial Report for 1882-83 refers to an appropriation of \$300 which was used for the road which "was put in excellent condition." There is no record of prosecution of trespassers. One can only speculate that the campus roads may have been better maintained than the county road and therefore provided a more inviting travel route.

The Aurora for June 1892 reported that a "flood broke through the levee near the wagon road between Ames and the college in such a way as to be deflected upon the road in the form of a whirl-pool which washed out

a hole eighty feet in diameter and thirty feet deep."

"An automobile was seen upon our highways last Saturday," reported the ISC Student on June 12, 1900. And thus a new era opened.

Maps of the 1890's identify the present Lincoln Way as "Highway from Ames to Boone." A map printed in the ISC Student in October 1904 is the earliest item found referring to the road as Boone Street. Its extension eastward in Ames was probably so designated in the original city plat.

By city ordinance of April 23, 1914, Boone Street east of Sheldon Avenue (then Pike Street) was renamed Lincoln Way in recognition of it as a segment of the new transcontinental Lincoln Highway. The name Lincoln Way was also applied to Pike Street north to what is now Oakland Street (which was then known as Ontario Street). That portion of the highway was more generally referred to as Lincoln Way - North.

Before 1915 Boone Street had been only a dirt and gravel road, often damaged by high water from Squaw Creek. In July of that year the college agreed to participate in the cost of paving the portion adjacent to the college land. Delays developed and, although the City of Ames had by then paved Boone Street east from the corner of the college property (Riverside Drive), it was September of 1921 before concrete paving from there west to Welch Avenue was open to traffic.

Plans for widening of Lincoln Way were initiated in 1955, but disagreements between the college and the city about the proposed width of the right-of-way led to long delays. No controversy existed about the portion of the road east of Beach Avenue and in 1958 widening of that section and construction of a new bridge was undertaken, as was the widening of the highway west from Sheldon Avenue. In 1962 the Board approved plans for the widening of the section adjacent to the campus and dedicated the necessary strip of land to the project. Construction started in late spring of 1963 and was completed about the first of October.

STANGE ROAD

In July 1893 the Board appropriated \$150 "to repair the north farm bridge." It is surmised that the bridge was across Squaw Creek on about the line of today's Stange Road, but this can only be conjecture unless other information or a contemporary map can be located.

Construction of North Road (as Stange Road was then called) was first discussed following receipt of a petition from people living north of the college property to the Board at its June 1904 meeting. However, it was 1915 before that road was ready for use, with a new concrete bridge over Squaw Creek and a one lane underpass at the North Western track crossing.

The road was paved in 1952.

Contracts for construction of the four-lane underpass were awarded in November 1962. Works was completed and the new pavement ready for traffic in September 1963.

The new bridge over Squaw Creek was built in 1965 and the following year the four lanes of Stange Road were paved from 13th Street north to the north side of University Village.

EAST and WEST ROADS

The earliest mention found of a proposed road extending across the campus from east to west parrallel and adjacent to the south side of the Chicago and North Western right-of-way appears in the Biennial Report for 1912-14. The section of that road from the east property line to what is now Stange Road was referred to as East Road and was to be constructed first; the section from Stange Road to the west boundary at what is now the corner of Hyland Avenue and Ontario Street was called West Road.

The Board, at its July 14, 1914, meeting, dedicated the two strips of land, sixty feet wide, along the tracks for the development of the highway. Other than constructing a fence to identify the boundary for East Road no action was taken on the development of the highway during the next seven years.

In June 1921 the Board rescinded the 1914 dedication and all further consideration of that road across the campus was dropped.

THIRTEENTH STREET

When the city of Ames agreed to drop its request for an extension of Sixth Street to the campus, in 1921, a plan was developed to extend Ninth Street across the campus north of the railroad to North Road (Stange Road) and thence west to an underpass and connection with Lincoln Way (now Ontario Street) at the west boundary of the campus.

The chief engineer of the Iowa Highway Commission made a study and reported on the Ninth Street and two alternative Thirteenth Street roads to cross the campus. His report, dated July 6, 1923, was presented to the Board that month. The Board and the city subsequently agreed on a route extending Thirteenth and intersecting North Road (Stange) south of Squaw Creek, although the Board had earlier preferred an intersection north of the creek, Final Board approval of the route came on June 17, 1925, and the road was ready for use in the spring of 1926.

An ice jam in February 1946 resulted in loss of piling on the Squaw Creek bridge and its resultant closing to traffic. Thirteenth Street thus became unusable as a campus access from Ames until a new bridge and resurfacing of the road was completed in December 1947. The roadway was resurfaced in 1949 and again in 1961.

Although the extension of 13th street west from Stange Road to the Ontario Street-Hyland Avenue corner had been contemplated since 1921, it was 1966 before serious study of a proposed route was undertaken. Much concern was expressed by faculty interested in the preservation of Pammel Woods about the potential damage to that area. Plans were finally developed for a route, almost entirely on the north side of the tracks, resulting in a minimum of encroachment on the sensitive grounds.

In 1972 title to the land for the 13th Street extension was transferred from the University to the City of Ames. The agreement with the city included a condition that the University would widen the portion of 13th Street from Stange Road east across University land and construct a new four lane bridge over Squaw Creek. That was accomplished in 1974-75.

The planned route for the extension west to Ontario Street was graded by the city, and at that time a grade crossing of the Northwestern tracks was contemplated. However, the railroad demanded a separation and plans had to be revised to include an underpass for the highway. As of this writing the city expects the road to be open for travel sometime in 1981.

SIXTH STREET

The subject of a new road between Ames and the College was first introduced at a Board meeting in November 1899 when a committee of Ames citizens urged that a new connecting link be established. Action was postponed until the following year when the public grounds committee was asked to prepare a report. At its meeting on November 21, 1902, the Board voted to open a road from Iowa Street (now Sixth Street) in Ames to the College, but that action was rescinded at the October 4, 1907, meeting of the Board.

In the summer and fall of 1921, after the Board had dropped the concept of East and West Roads along the railroad, Ames city officials again began to press for access across the campus by way of an extension of Sixth Street from Ames. The Board refused to accept the idea and much ill-will developed between Ames and the College. Not until the following year, when a compromise was agreed to, did the hard feelings recede. Agreement came with the proposal to develop an extension of Ninth Street to run north of the railroad. The development of that plan is discussed under the heading of Thirteenth Street.

Early in 1948 agreements were reached between the City of Ames, the Board of Education, Story County and the Highway Commission to develop plans for a Sixth Street bridge over Squaw Creek and extension of that street to a junction with existing campus drives. Agreement was also executed with the Chicago & North Western Railway to use their "overflow bridge" as an underpass for the new road.

Construction work began early in 1949 and a ceremony to open the new route was held on September 24, 1949.

Changes to the west end of Sixth Street in 1961 improved the intersection at Wallace Road and Osborn Drive.

ELWOOD DRIVE

The planning and development of Elwood Drive extended over a long period of time. Its status in 1963 was described in the Iowa State Daily on September 26 of that year:

A preliminary survey has been taken by the Lechner Engineering Company for Elwood Drive, a new roadway to be built from 13th Street South to Squaw Creek and Riverside Drive. The road will also connect the new Iowa State Center to the highway 30 bypass under construction south of Ames. The high grade of this road will also act as a dyke in case of high water and channel traffic from 6th Street to the campus. The project has been in the planning stage since 1955.

In December of 1963 the student paper reported:

Boyne Platt, vice-president of business and finance pointed out that construction of Elwood Drive is in line with the University's long range plan of rerouting traffic around the central campus area. Elwood Drive will extend from 13th Street south to the airport road.

The route of Elwood Drive was entirely on University property and it was therefore necessary for the land to be sold and dedicated to the city in order for it to become a city street. That transaction was executed in 1969 for the portion of Elwood Drive from Lincoln Way south to the Highway 30 bypass interchange. That new highway was opened to traffic in 1970. Whether Elwood Drive will sometime be extended north to 13th Street can only be known in the future.

WALKS

Dirt paths probably developed in the vicinity of Old Main as soon as the college was opened. The early roads on the campus were undoubtedly used as pedestrian ways as well as for wagons between Main and the Farm House and the barn, and between Main and the president's house (South Hall).

The first reference to a separate walk appeared in the April 1874 issue of the Aurora:

A new walk extending from the east end of the laboratory to Profs. Hutchin's and Thomson's house, greatly adds to the comfort, convenience, and beauty of the residence of these gentlemen.

That walk was from the Chemical Laboratory to Marston Cottage. Whether it was gravel, cinders or some other surface cannot be determined now.

In January 1876 the Board ordered

That a plank walk eight feet wide made of two in. plank on 4 x 4 stringers be built from the Main College Building to the Physical Laboratory, the same to be constructed under the direction of the President of the College, and there is hereby appropriated from Interest Fund the sum of \$250.00 or so much thereof as may be necessary.

The Aurora in May 1876 recognized the improvement:

The new plank walk between the College and Laboratory is much appreciated by the students, first, because it is a step higher than the mud, and second, on account of its dimensions, it will admit a group walking together.

By 1882 that walk was referred to in the Aurora as in a dilapidated condition, and in November of the same year the Board ordered the Public Grounds Committee to "take charge of the walk...and if they think best replace the present wooden walk with a gravel one."

As other buildings were erected on the campus walks were put in to serve them.

Now we have a two plank walk to North Hall....Walks to the greenhouse and to the cottages will be next in order.(1)

(1) Aurora June 1886

Early in the 1890's concrete walks were being used as seen in the Biennial Report for 1890-91:

The buildings and grounds have been greatly improved by the cement walks and some newly graveled driveways all of which add greatly to the beauty of the grounds and the comfort of the people. There should be much additional work by way of cement walks connecting the main building with the other buildings adjoining. A good cement walk is economical in cost and outlasts any other ordinary walk that could be used.

Conditions where walks were not provided are reflected in an editorial comment in the September 17, 1895, IAC Student:

The cement walk is now finished and wading to Agricultural Hall in the mud is a thing of the past.

The loss of Main by fire in 1902 resulted in many students finding residence rooms in private homes south of the campus. As a result new walks across the south part of the campus became important. At the Board meeting of September 11, 1903,

The President submitted a petition from students and others asking for the construction of a cinder path and bridge and the placing of additional lights on the south campus.

The Board referred the matter to the Committee on Grounds with power to act. A 1904 map shows walks across the south campus, leading to Stanton and Lynn Avenues (then called Ridge Street and Swamp Street).

During 1906 and 1907 a number of new concrete walks were built, particularly on the west side of the campus serving the engineering buildings and to the west gate.

On March 13, 1900, the ISC Student editor wrote:

There are several things we need. One is a footbridge across the motor bridge that will be safe alike for industrious hustlers and loitering lovers. From each end of this we need a sidewalk leading toward Ames and leading toward the college.

By December 1904 the paper could report that

The authorities of the college are seriously considering the matter of constructing foot bridges on the sides of the two trestles near Ames. On account of the safety and the increased travel it is thought that they are desirable.

Another three years passed before that plan matured; its completion was not seen until December 1907. It then served a much needed,

safe route to Ames. It became known as "the cinder path" and continued in use over many years as the principal pedestrian walkway between the campus and Ames.

A cinder walkway to connect the college and the city was put in on the south side of Lincoln Way in 1916. Other new walks were built as funds were made available, and the most used cinder walks were gradually replaced with concrete. By 1936 it could be reported that

More than a mile of sidewalk will be added to the 7 miles of concrete paths already on the campus. (1)

The pedestrian underpass from west Pammel Court was constructed under the railroad in 1947. The first concrete walks in Pammel Court were placed in 1955.

The walk from Hawthorn Court through the underpass was installed in 1962. By 1979 practically all major walks had been built with concrete, although a few less heavily used routes have only gravel surfaces.

Through the years a major problem has been the formation of dirt paths across the lawn areas, developed by students (and frequently faculty and staff) wanting to short-cut the surfaced walks. The student papers ever since about 1892 have editorially criticized the practice. Snow fences to minimize the paths have been placed in the fall and remain until spring when the grass has become well established, but even these do not eliminate the formation of new paths which kill the grass. There seems to be no fool-proof way to resolve the annual recurrence of the practice of taking short-cuts.

(1) Iowa State Student Sept. 22, 1936

WEST COURT and TRAILERS

The earliest record of student use of trailers for housing appeared in the September 19, 1936, issue of the Iowa State Student:

"Iowa State College does not encourage students living in trailers during the winter and is not providing any space for them this year," according to B.H. Platt, superintendent of buildings and grounds.

The parking space northwest of the Armory is no more. It is being made into a recreational area, and students with trailers for their homes must find other parking spaces. And the city ordinances require that all houses must have proper sewer and water connections.

Last year the new recreational area accommodated several house trailers for students. Several requests have already been made by students this fall for a place to park their trailers, so that they may cut down their living costs at college.

Two years later the paper carried an account of "Trailer Town" at West Gate with seven trailers. These were undoubtedly on the west side of Sheldon Avenue but the exact location has not been determined.

At the time Pammel Court was started on the north side of Pammel Drive in 1946-7, an area in the northwest corner, adjacent to what was then the recreational area, was allocated for privately owned trailers. This was inadequate space for all of the requests and West Court was established in the area now known as Franklin Park on Franklin Avenue south of Lincoln Way. That area had formerly been a C.C.C. camp and the college, in 1944, had purchased four acres and the buildings. The trailer area included some land to the north rented for the purpose. At its peak West Court had a total of about 130 units including both trailers and small prefabricated houses.

The facilities at West Court were described in the Iowa State Daily Student on February 12, 1947:

The court has progressed to a well organized community of trailers with a governing council and mayor, traffic checkers and police protection....

Street lights were installed last quarter and most of the wards have walks. A community wash house is available with four washing machines. On meeting nights the washroom also doubles as a clubroom for the group although it will accommodate barely 75 of the 260 members.

By August of that year the paper could report that a 24 by 54 feet recreation building was being constructed at West Court.

On July 1, 1953, the entire West Court area was eliminated from the housing program, and all privately owned units were removed.

In 1960 the four-acre tract owned by the University that had formed part of West Court was leased to the city and it became what is now Franklin Park.