A park and recreation plan for the city of Ames, Iowa

Jerome C. Miller
Iowa State College

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North Woods Bridle Path.
A PARK AND RECREATION PLAN FOR
THE CITY OF AMES, IOWA

BY

JEROME C. MILLER

A Thesis Submitted to the Graduate Faculty
for the Degree
MASTER OF SCIENCE
Major Subject: Landscape Architecture

Signatures have been redacted for privacy

Iowa State College
1932
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. INTRODUCTION</td>
<td>7</td>
</tr>
<tr>
<td>II. HISTORY</td>
<td>10</td>
</tr>
<tr>
<td>III. CLASSIFICATION OF POPULATION</td>
<td>16</td>
</tr>
<tr>
<td>IV. TYPES OF RECREATION FACILITIES</td>
<td>22</td>
</tr>
<tr>
<td>V. NATURAL FEATURES</td>
<td>29</td>
</tr>
<tr>
<td>VI. NEEDS</td>
<td>34</td>
</tr>
<tr>
<td>VII. RECOMMENDATIONS</td>
<td>36</td>
</tr>
<tr>
<td>A. Playgrounds and Playfields</td>
<td>37</td>
</tr>
<tr>
<td>1. Preschool children's playgrounds</td>
<td>37</td>
</tr>
<tr>
<td>2. Elementary school playgrounds</td>
<td>37</td>
</tr>
<tr>
<td>3. Playfields and high school sites</td>
<td>42</td>
</tr>
<tr>
<td>B. Parks and Parkways</td>
<td>46</td>
</tr>
<tr>
<td>1. Small parks</td>
<td>47</td>
</tr>
<tr>
<td>2. Neighborhood parks</td>
<td>51</td>
</tr>
<tr>
<td>3. Large parks</td>
<td>56</td>
</tr>
<tr>
<td>4. Pleasure drives</td>
<td>58</td>
</tr>
<tr>
<td>C. Major Streets</td>
<td>64</td>
</tr>
<tr>
<td>D. A Civic and Transportation Center</td>
<td>78</td>
</tr>
<tr>
<td>E. Street Trees</td>
<td>84</td>
</tr>
<tr>
<td>VIII. SUMMARY AND CONCLUSIONS</td>
<td>89</td>
</tr>
<tr>
<td>IX. LITERATURE CITED</td>
<td>93</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>X. ACKNOWLEDGMENTS</td>
<td>99</td>
</tr>
<tr>
<td>XI. APPENDIX</td>
<td>101</td>
</tr>
<tr>
<td>A. Regional Planning for Ames</td>
<td>102</td>
</tr>
<tr>
<td>B. Zoning Ordinance</td>
<td>107</td>
</tr>
<tr>
<td>C. City Plan Commission Ordinance</td>
<td>111</td>
</tr>
</tbody>
</table>
PLATES.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ames in 1875</td>
<td>11</td>
</tr>
<tr>
<td>2.</td>
<td>Population Chart</td>
<td>15</td>
</tr>
<tr>
<td>3.</td>
<td>College Owned Property and Its Effect Upon Future Growth</td>
<td>17</td>
</tr>
<tr>
<td>4.</td>
<td>Topographic Map of Ames</td>
<td>21</td>
</tr>
<tr>
<td>5.</td>
<td>Plan of Cedar Rapids Park System</td>
<td>28</td>
</tr>
<tr>
<td>6.</td>
<td>Ultimate Elementary School Plant</td>
<td>41</td>
</tr>
<tr>
<td>7.</td>
<td>Proposed Ultimate Junior and Senior High School Plant</td>
<td>43</td>
</tr>
<tr>
<td>8.</td>
<td>Proposed Development of the City Park</td>
<td>50</td>
</tr>
<tr>
<td>9.</td>
<td>Proposed Development of Brookside Park</td>
<td>52</td>
</tr>
<tr>
<td>10.</td>
<td>Existing and Proposed Large Parks and Pleasure Drives and Major Streets</td>
<td>59</td>
</tr>
<tr>
<td>11.</td>
<td>Highways Entering the City</td>
<td>65</td>
</tr>
<tr>
<td>12.</td>
<td>Proposed Overhead Grade Separation</td>
<td>70</td>
</tr>
<tr>
<td>13.</td>
<td>Proposed Underpass Grade Separation</td>
<td>71</td>
</tr>
<tr>
<td>14.</td>
<td>Proposed Underpass Grade Separation</td>
<td>72</td>
</tr>
<tr>
<td>15.</td>
<td>Proposed Development of a Civic Center</td>
<td>81</td>
</tr>
<tr>
<td>16.</td>
<td>Proposed Street Trees</td>
<td>87</td>
</tr>
<tr>
<td>17.</td>
<td>Satellite Communities Surrounding the City of Ames</td>
<td>103</td>
</tr>
<tr>
<td>18.</td>
<td>Roadside Improvement of Iowa Highways--Story County</td>
<td>105</td>
</tr>
<tr>
<td>No.</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>19.</td>
<td>Roadside Improvement of Iowa Highways--</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td>Boone County</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Zoning Map of Ames</td>
<td>110</td>
</tr>
</tbody>
</table>
ILLUSTRATIONS

<table>
<thead>
<tr>
<th>No.</th>
<th>Illustration</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Bird's Eye View of Ames</td>
<td>9</td>
</tr>
<tr>
<td>2.</td>
<td>Clear Creek</td>
<td>23</td>
</tr>
<tr>
<td>3.</td>
<td>Squaw Creek in Brookside Park</td>
<td>25</td>
</tr>
<tr>
<td>4.</td>
<td>Clear Creek in Winter</td>
<td>30</td>
</tr>
<tr>
<td>5.</td>
<td>The Stone Arch</td>
<td>33</td>
</tr>
<tr>
<td>6.</td>
<td>City Park</td>
<td>48</td>
</tr>
<tr>
<td>7.</td>
<td>Brookside Park Shelter</td>
<td>55</td>
</tr>
<tr>
<td>8.</td>
<td>Wooded Area Near South Duff Avenue</td>
<td>57</td>
</tr>
<tr>
<td>9.</td>
<td>Thirteenth Street near Squaw Creek</td>
<td>61</td>
</tr>
<tr>
<td>10.</td>
<td>Intersection of Thirteenth Street and College Road</td>
<td>63</td>
</tr>
<tr>
<td>11.</td>
<td>Proposed Overhead Grade Separation Location</td>
<td>74</td>
</tr>
<tr>
<td>12.</td>
<td>Proposed Underpass Location at Elm Avenue</td>
<td>75</td>
</tr>
<tr>
<td>13.</td>
<td>Proposed Underpass Location at Grand Avenue</td>
<td>76</td>
</tr>
<tr>
<td>14.</td>
<td>Proposed Location of Civic Center</td>
<td>79</td>
</tr>
<tr>
<td>15.</td>
<td>Duff Avenue</td>
<td>85</td>
</tr>
</tbody>
</table>
I. INTRODUCTION.

The following plans and report are intended to present a comprehensive system of recreational facilities which the city of Ames will find not only an inspiration in the future, but also an absolute necessity. Preparation now for future development of the city, in a systematic manner, will obviate the necessity of condemning valuable property at a later date, when costs may be prohibitive.

Ames has, within or very near its present boundaries, many beautiful spots which, if left in the path of future growth, will be exploited and utterly ruined for public use.

Ames has the unique position, in the large classification of small cities, of being a college town. This means that it not only has the regular duties of making the city livable and enjoyable for its citizens, but also the responsibility of providing for their health and happiness, which will determine to a great extent its drawing power for prospective students and their families. Ames owes this to Iowa State College because the existence of the city is due to a considerable extent to that institution.

The park and recreation plan seeks to include every phase of recreation which should be considered in a city the size of Ames. It is to be looked upon as a definite
yet a flexible plan; rather to be worked toward than accomplished immediately. It is ideal in the sense that it is built upon future aspirations. It is practical to the extent of some day becoming a necessity. It is to be followed not implicitly, but in a general way, as a guide rather than a rule, so long as the goal (which is coordination of all elements) is attained.

Harland Bartholomew, in an address before the National Conference on City Planning (Bartholomew, 7) stated:

"In the smaller cities lies the hope of America. Life can be made more pleasant and enjoyable and more economical. But before we achieve such satisfactory and complete cities as we may desire, we must realize that effective city planning is an integration of the five essentials, good plans, proper legislation, capable administration, and thorough public understanding based upon sound financial programs."

It is hoped that this plan will fulfill the first essential.
II. HISTORY.

Ames came into existence as a direct result of two forces: the location of Iowa Agricultural College on Squaw Creek, and the extension of the Cedar Rapids and Missouri Railroad (which later became the present main line of the Chicago and Northwestern.) John I. Blair, president of the railroad, must have realized the possibilities of this location, for he purchased the land north of the present right-of-way for the railroad company, and laid out the town in the fall of 1864.

The plat was filed in January of the following year. Noah Webster erected the first house in Ames, on the present site of the Adams funeral home. The railway station was located on the north side of the tracks, near Duff Avenue.

Ames was first called College Farms and later (1866) changed to Ames in honor of Congressman Oakes Ames of Massachusetts, who was then interested in the promotion of western railroads. Mr. Ames presented a bell to the First Congregational church, located then on its present site.

Iowa State College was probably the greatest influencing factor in the location of the town of Ames. Land for the Agricultural College was purchased in July, 1859.
Plate 1. Ames in 1875.
The first buildings were the Farmhouse and barn erected in 1860-61. Old Main Building was not started until June, 1864, and was completed in 1868. A town of Collegeton was laid out in 1863 at about the present location of the Fourth Ward business district, in the hope that the railroad right-of-way would follow the southern boundary of the College land. However, when it was determined the route would strike the north boundary, the plat was not recorded and Collegeton never came into existence.

Ames was incorporated in 1870 and organized as an independent school district. By this time the population had grown to almost 800, partially due to the progress of work on the Iowa and Minnesota Railroad from Des Moines north to Ames. It was completed in 1874 under the name of Des Moines and Minnesota Railroad as a narrow gauge road and, although not entirely satisfactory, did business until it was purchased by the Chicago and Northwestern and widened to standard gauge. Shortly afterward the road was extended north to Story City and into Hamilton County.

In 1890 a franchise was granted to the Ames and College Railway Company. This was a local enterprise, built and owned almost entirely by residents of the town. The rolling stock consisted of two coaches and a baggage car, with power furnished by a "dinky" steam engine. Transportation to and from the College was furnished by this miniature railway until
1907, when it was replaced by an electric line operated in conjunction with the Fort Dodge, Des Moines and Southern Railroad. The local transportation system has recently been replaced by buses running between the college and residence district of the Fourth Ward, and the business district and First and Second Wards of Ames. The buses take care of local transportation adequately at the present time. There is, however, the possibility in the future of a complete loop within the city limits, following the north or Thirteenth Street road to the Fourth Ward, and Lincoln Way or farther south on the return trip.

On August 21st, 1884, the City Park was donated to Ames by the Blair Town and Lot Company, original owners of the town, with the provision that trees were to be planted and maintained on the property. This was promptly done as the park exists today. The park contains approximately two and one-half acres.

Brookside Park, the largest of the two parks owned by the city, was purchased April 29, 1925. The original property contained eighteen acres which, with the addition of a small piece on the north originally owned jointly by the residents of Brookridge Addition and now part of the park, totals approximately twenty acres in all.

The above are the only parks now belonging to the city of Ames. With their total acreage twenty-two and
one half acres, it is apparent that they are entirely inadequate.

Mr. Harland Bartholomew, widely known city planner, states in his report on "A City Plan for Cedar Rapids, Iowa" (Bartholomew, 11): "It is now generally recognized by recreation authorities, park executives and city planners, that every city should have approximately ten per cent of its area devoted to recreational areas, and that the minimum should not be less than one acre for every one-hundred-persons."

Since Ames is not densely populated in reference to total area, the comparison to population is much more accurate for this city. Approximating the total area of all school grounds within the city as ten acres, added to the twenty-two and one half acres of park land, the total for recreation space in Ames is thirty-two and one half acres. Ames' 10,000 inhabitants need at the present time just three times as much area for recreation.
POPULATION GROWTH
AMES IOWA
JEROME C MILLER LANDSCAPE ARCHITECT

Plate 2.
III. CLASSIFICATION OF POPULATION

From the chart on page 15 and the table on page 19, it will be noted that with the exception of one five-year period between 1885 and 1890 Ames has had a substantial gain in population. The greatest total increase occurred between 1920 and 1925 and the highest percentage of increase between 1890 and 1895. The average per cent increase for the past thirty years is 27.7. Based on this average, the population for 1950 should reach approximately 25,000.

However, there will undoubtedly be a gradual rounding-off of the growth curve as shown on Plate 2, page 15, and a gradual reduction of percentage increase due to the increased size of the city. Another viewpoint from which to judge future growth is the principal occupation of the majority of the inhabitants. Ames is primarily an educational center. Past growth has been due chiefly to the presence of Iowa State College and the Iowa State Highway Commission. If these two institutions continue to be the determining factors, Ames should have a fairly uniform increase of about 3000 population each decade, probably attaining 25,000 by the year 2000. If, however, industry should become established, the growth curve would reverse itself and mount very rapidly.
The college enrollment has kept pace with population up until the last decade (Plate 2, page 15). However, from indications gleaned from larger colleges, increase will be more gradual in the future. The existence of the College in Ames causes census figures to be misleading. During nine months of the year Ames is fifty per cent larger than census figures show. The needs of Ames should be determined upon a combined resident and student growth, from a social standpoint as well as a commercial standpoint. In fact, every phase of city planning undertaken in Ames should give due consideration to the student population.

As shown on the map on page 17, future growth will undoubtedly follow certain definite directions due to college-owned property and to topographic characteristics such as low, poorly drained land, abrupt and extreme changes in elevation, and river bottoms. On page 21 is a topographic map of Ames and vicinity. From these two maps the direction of growth can easily be determined to follow a line north and slightly west of the downtown section and due west in the Fourth Ward. College property completely shuts out expansion in any other direction in the Fourth Ward. Very low, poorly drained land to the east and south of the downtown section of the city will retard growth in those directions to a very great extent.
## Table I.

Population Figures. *

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<th>Year</th>
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<th>Per cent increase over previous count</th>
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<tr>
<td>1870</td>
<td>656</td>
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<tr>
<td>1875</td>
<td>820</td>
<td>164</td>
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<td>1153</td>
<td>333</td>
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<td>1885</td>
<td>1317</td>
<td>164</td>
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<tr>
<td>1890</td>
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<td>643</td>
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<td>5091</td>
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<td>1920</td>
<td>6270</td>
<td>1179</td>
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<td>9332</td>
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<td>1930</td>
<td>10,261</td>
<td>929</td>
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*From the files of the City Manager.*
Table 2.

Enrollment of Iowa State College.

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<td>1870</td>
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<td>1875</td>
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<td>1915</td>
<td>2878</td>
<td>791</td>
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<td>1920</td>
<td>4479</td>
<td>723</td>
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<td>1925</td>
<td>4497</td>
<td>1293</td>
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<td>1930</td>
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</tbody>
</table>

<sup>*</sup>From Office of the Registrar, Iowa State College, Ames, Iowa

<sup>*</sup>Total of all students registered during 9 months of school year.
IV. TYPES OF RECREATION FACILITIES.

Public recreation should provide for all types of active and passive leisure, for all persons from preschool age to adult life. When people are permitted to build and live in close proximity, it becomes the duty of the city to provide means and space for recreation. Provisions should be made for a number of the following facilities, depending on the size and density of the population:

Community centers for social and educational meetings of all kinds, often practically incorporated with school buildings because such functions do not usually conflict with regular school hours. Since school buildings should be located according to population, such community centers would accommodate the residents properly.

Preschool children's playgrounds, usually of very moderate size, for protection and education of the child while he is still under the guidance of his parents.

Playgrounds in connection with every elementary school, providing educational and recreational facilities for children of school age.

Playfields for the more organized sports such as football, baseball, tennis, and possibly swimming. Wherever
Illustration 2. Clear Creek.
possible, their logical locations should be with the high schools.

Neighborhood parks for people of all ages, located within easy access of the more densely populated sections of the city, and often including playgrounds or playfields.

Large parks of a naturalistic character. These are usually the most prized of all the city's possessions, and fortunate are the cities that have natural woodlands accessible. These areas should be available mainly for passive recreation, but they may contain pleasure drives, bridle paths, some sports areas; and if sufficient in size and suitable in character, golf courses may be included. Tracts which possess natural beauty are frequently unsuited for residential or industrial development, and therefore should be purchased as early as possible to insure their preservation for the general public, to increase the value of the surrounding property, and to enhance its character.

Parkways and boulevards connecting various recreation areas by a circuitous route if possible, with easily accessible drives connecting it with the central business section. This will help give unity to the whole recreation scheme.

Public recreation might also be classified by age groups. Small children should as far as possible be cared for under
Illustration 3. Squaw Creek in Brookside Park.
parental guidance; but with ever-increasing congestion, lots become smaller, open spaces fewer, and streets increasingly dangerous. The city may remedy this condition by placing a minimum on lot dimensions, regulating building lines, requiring interior block playgrounds for the use of all lot owners jointly, or by providing frequent open, well-protected areas with sand boxes, play apparatus, wading pools, etc., installed for the small child's pleasure.

School children rely chiefly on the city for recreational advantages. Adequate playgrounds should be incorporated with every elementary school, where education and active recreation would be directly under supervision of the school authorities. Boys and girls of junior high and high school age should have separate playgrounds. Their games become increasingly organized and require much more space. Football and baseball fields, tennis courts, volley ball courts, and swimming pools should be provided.

Many young people out of school cannot be provided for on school grounds. Well-organized playfields should be provided for them, usually in connection with neighborhood parks. Sometimes they may be taken care of by opening the high school playfields to the public during the summer months.

Adults are most interested in passive recreation. For them the neighborhood parks, large naturalistic parks and pleasure drives are chiefly intended.
The following quotation is taken from "A City Plan for Cedar Rapids" (Bartholomew and associates, 11) in connection with the plan on page 28:

"During the past twenty-five years, recreation has come to be regarded as a necessity of urban life. Wholesome play, especially in the open air, is now recognized as one of the most potent of educational factors, mentally and morally as well as physically. In addition to promoting health and aiding in the development of a well-rounded personality, it has definitely proved to be a preventive for juvenile delinquency.

It is no longer necessary to bring forward evidence or facts showing the social and beneficial results accruing to the city from a well-rounded recreation system.....

Too much emphasis cannot be placed on the need for reserving space for parks and playgrounds in advance of the actual requirements. Timely action taken now will ultimately save the taxpayer vast sums. Action postponed until development actually takes place will meet with exorbitant land costs and introduce a possibility of not being able to secure adequate space to serve the needs of the district.

The plan for a comprehensive system of recreational facilities for Cedar Rapids, which at first might seem extravagant, is not out of scale."
CEDAR RAPIDS
IOWA
ZONING COMMISSION

EXISTING & PROPOSED
LARGE PARKS &
PLEASURE DRIVES

Plate 5.
V. NATURAL FEATURES.

The main portion of the city of Ames is located between two rather shallow stream valleys—Skunk River on the east, and Squaw Creek on the west, between the Fourth Ward and the rest of the city. The two stream channels include many beautiful, wooded ravines, which have been used by the public for picnicking and hiking for many years. Their popularity is as great with adults as with school children. The hilly, wooded sections have been preserved more or less by accident; and because of their location at the outer edge of the residential district or because they lie just outside the corporation line, they have not yet been spoiled to any great extent.

What is going to become of these natural parks? With the exception of the northern part of Squaw Creek which is owned and probably will be protected by the College, and the small area of Brookside Park, all of them are privately owned. Ames will grow and these prized areas will eventually be encroached upon. For the most part the irregular character of the land makes it unsuitable for small lot development, but for larger residences it will some day become very valuable. Another not too improbable result may be the commercialization of some of these areas into amusement parks, which are not as
Illustration 4. Clear Creek in Winter.
desirable as the areas in their present state. Gradual
cutting of the timber is also reducing the valleys to bare,
unsightly stream beds. If the public were suddenly prohi-
bited from entering and enjoying any of the privately owned
woods within the vicinity of Ames, something would be done.
The possibility of such action should be anticipated. If the
city purchases this valuable land, now while it is still unimproved, it will be preserved for generations to come.

Squaw Creek divides the city east and west, and its
banks are still wooded along most of its course within the
corporation limits. Its full length might well be included
in the park system. Skunk River, the largest water course in
the county, touches only the northeast corner of the present
city limits. To the east of town it is of little importance
from a scenic point of view. However, north of the corpora-
tion line will be found natural wooded bluffs from which
views may be obtained of miles of the surrounding country-
side. Not more than four miles farther up Skunk River are
outcroppings of limestone, forming several short ravines
which cannot be equalled for natural beauty in the central
part of the state.

Clear Creek is probably the best known and most visited
of the small streams within the city. It affords an ideal
location for a pleasure drive. The only unsightly spot is
the College dumping ground near the point where Clear Creek
empties into Squaw Creek.

College Creek and Worle Creek in the south part of Ames may well be transformed into beauty spots with parkways skirting their banks.

The water courses in Ames and vicinity are ideally distributed from the standpoint of pleasure drive locations and park sites.
Illustration 5. The Stone Arch.
VI. NEEDS.

The city of Ames has made a small but commendable start toward a comprehensive park system. The parks which are now in its possession should be redesigned to care for the needs to which such areas are put. Many more park sites are available and highly desirable. All streams and rivers should be owned and protected by the city. Park land should be purchased not only for the present but also for the future.

A system of parkways connecting the recreation units with each other and the central business section is of great importance.

Enlarged school playgrounds have already become necessary. Two playfields, both poorly located in respect to future population, have been recently built by the city. A new high school center will be needed within a short time.

Location of a civic center detached from the main business district is urged, as well as the building of grade separations to relieve traffic congestion due to the railroad.

Table 3, page 35, shows in a general way what a few average cities have done toward acquiring land for recreation purposes. It is evident that Ames is comparable to some other cities, but that the city urgently needs more recreation areas.
Table 3.
Comparative Total Park Areas for Various Cities*

<table>
<thead>
<tr>
<th>City</th>
<th>Population</th>
<th>Parks &amp; Playgrounds</th>
<th>Acres</th>
<th>persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cape Girardeau, Mo.</td>
<td>16,500</td>
<td>444.0</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>Cedar Rapids, Iowa</td>
<td>59,395</td>
<td>444.1</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>Clayton, Mo.</td>
<td>10,394</td>
<td>12.9</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Maplewood, Mo.</td>
<td>12,960</td>
<td>7.0</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>Sacramento, Calif.</td>
<td>105,000</td>
<td>369.0</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>San Angelo, Texas</td>
<td>25,000</td>
<td>63.5</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>San Jose, Calif.</td>
<td>66,607</td>
<td>38.0</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>Vancouver, B. C.</td>
<td>143,560</td>
<td>1380.0</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>Fort Worth, Texas</td>
<td>164,983</td>
<td>1242.0</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>Springfield, Mo.</td>
<td>57,248</td>
<td>291.0</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>University City, Mo.</td>
<td>27,072</td>
<td>33.5</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Ames, Iowa**</td>
<td>10,261</td>
<td>32.5</td>
<td>0.3</td>
<td></td>
</tr>
</tbody>
</table>

*Bartholomew, IL

**From statistics from files of City Manager.
VII. RECOMMENDATIONS.

"The future of the United States, as of any country, is dependent upon the younger generation and those generations which are to come. A responsibility therefore is placed upon those of mature judgment so to develop our facilities for education, health and well-being that those who follow will be able to carry on where we have left off.

The proper use of leisure, through the development of adequate recreation, is one of the most efficient means of securing our country's future. Well-directed play strikes at the root of all child evils. It makes for health, it raises the moral standard, it develops leadership and fair play, it creates a proper sense of responsibility and respect for authority, it makes for happiness, general welfare, and good citizenship."

William Butterworth, President
Chamber of Commerce of the United States.

(Butterworth, 16)
A. Playgrounds and Playfields.

1. Preschool children's playgrounds.

Previous mention has been made of caring for the small child by interior block playgrounds, or by setting aside small areas at convenient intervals to be maintained by the city for the use of the small child while under the supervision of its parents. This is not an urgent need in Ames at the present time. The average size of city lot throughout the city is sixty feet wide with only one family to the lot except in a few cases. Under such conditions, back yards are sufficiently large to be adequate for the use of small children, where they can be watched and guided by their parents. Future subdividers, however, may well be informed of the importance and convenience of small interior block playgrounds, which can easily be laid out when the land is platted, but which it is practically impossible to provide for after the block is built up. The small areas enhance the value of the land to an appreciable extent, if well designed and well cared for.

2. Elementary school playgrounds.

Definitions of the words playground and playfield might well be given here to clarify their meaning. Playgrounds are
built for the use of children up to junior high school age. A playground may contain any or all of the following: sandboxes, benches, paths, swings, slides and other play apparatus, wading pools, and open play lawns. Playfields are for the benefit of students of junior high school age or older. A playfield may include baseball diamond, football field, tennis and volleyball courts, swimming pool, lawn game areas for hockey, bowling, or quoits. Girls' games are always separated from the boys' in playfields. Playfields for adults need be no different in design; in fact, the high school playfields may be utilized for the younger people out of school and for adults who still care to enter into active play, outside of regular school periods and during summer vacation periods. Playfields should be kept in use as much as possible throughout the year. Other playfields which will accommodate adults should be incorporated in the neighborhood park.

Playgrounds for elementary school children are most economically located in conjunction with the schools. Schools distributed according to authorized practices will accommodate all children within a radius of one-half mile. This distance is quite satisfactory for playgrounds, and makes each one serve a residential area approximately one mile in diameter. More efficient use of the play areas will be obtained if boys and girls are separated. Supervision is of course carried on by the school authorities.
Table 4.

Enrollment of Students in the Ames Public Schools*

**Elementary Schools**

<table>
<thead>
<tr>
<th>School</th>
<th>Kindergarten</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beardshear</td>
<td>20</td>
<td>36</td>
<td>34</td>
<td>31</td>
<td>29</td>
<td>27</td>
<td>25</td>
<td>216</td>
</tr>
<tr>
<td>Lincoln</td>
<td>23</td>
<td>33</td>
<td>33</td>
<td>26</td>
<td>30</td>
<td>26</td>
<td>22</td>
<td>193</td>
</tr>
<tr>
<td>Crawford</td>
<td>25</td>
<td>24</td>
<td>22</td>
<td>17</td>
<td>18</td>
<td>28</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>Roosevelt</td>
<td>62</td>
<td>62</td>
<td>64</td>
<td>61</td>
<td>62</td>
<td>73</td>
<td>72</td>
<td>456</td>
</tr>
<tr>
<td>Whittier</td>
<td>14</td>
<td>16</td>
<td>18</td>
<td>14</td>
<td>19</td>
<td></td>
<td></td>
<td>81</td>
</tr>
<tr>
<td>Welch</td>
<td>18</td>
<td>30</td>
<td>29</td>
<td>24</td>
<td>38</td>
<td>43</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>Franklin</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>13</td>
<td>162</td>
<td>201</td>
<td>196</td>
<td>178</td>
<td>192</td>
<td>174</td>
<td>1282</td>
</tr>
</tbody>
</table>

**High Schools**

<table>
<thead>
<tr>
<th>School</th>
<th>Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7th</td>
</tr>
<tr>
<td>Central Jr.</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>137</td>
</tr>
<tr>
<td>Welch Jr.</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>43</td>
</tr>
<tr>
<td>Senior High</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>180</td>
</tr>
</tbody>
</table>

**GRAND TOTAL** : 2278

*From Statistical report for the second six weeks ending December 4, 1931, office of Superintendent of Schools.
The school department of Ames should be commended upon their choice of sites for the present schools. All grade children now living within the limits of Ames need walk not more than eight blocks. The limited size of the playgrounds is not so fortunate. All the present elementary school sites should be enlarged. Roosevelt playground should be enlarged to include all property north to Tenth Street and east to Roosevelt Avenue. Beardsheer playground should be extended to the west line of Crawford Avenue. Lincoln playground should be extended east to Sherman Avenue. Whittier should be enlarged to cover the entire block. Property west of Louise Crawford school to Welch Avenue in the Fourth Ward should be acquired in the event that the Fort Dodge, Des Moines and Southern Railroad tracks are removed.

It is proposed that Welch school be made junior high entirely to accommodate the Fourth Ward in the future. In this event a new grade school will be needed to the west and north. Growth in the Fourth Ward is forced to go in this direction, as has been noted; therefore approximate location should be as shown on Plate 6, page 41. New school sites should be carefully chosen, should be kept away from main highways and railroads, and should embrace an area of at least five acres for the lower grades and ten acres for high schools.

For future development one other new school will probably be needed in the down town section. This school
CITY OF AMES
IOWA

CITY PLANNING COMMISSION

PLATE 6.
should be located north of the present city limits between Skunk River and the north branch of the Chicago and Northwestern Railroad.

3. **Playfields and high school sites.**

Ames now has two playfields independent of schools, one of them under construction in the western part of the Fourth Ward. A small area is also being reconstructed in Brookside Park. Sites for the two large fields have been poorly chosen. They are both directly adjacent to Lincoln Highway, the most important traffic artery in the city. The field in the downtown section is also directly adjacent to the switch yards and south branch of the Northwestern Railroad. In addition to this, the high school is located, and a great majority of its students live, north of the railroad. This playfield should have been in the north part of the Second Ward, probably in connection with a new high school.

Playfields are most economically supervised and efficiently used in connection with junior and senior high schools. The present Second Ward junior high at Clark and Fifth Street is a central location for the present distribution of enrollment, but the area is inadequate. It is proposed on Plate 7, page 43, that the site of the high school plus the remainder of the block on the east be acquired for a new
CITY OF AMES
IOWA
CITY PLANNING COMMISSION

PROPOSED ULTIMATE JUNIOR AND SENIOR HIGH SCHOOL PLANT

LEGEND

Plate 7.
junior high school playfield; the high school building be turned over to junior high school students; and a new senior high be built elsewhere. Clark Avenue should be closed between Fifth and Sixth Streets to make the two blocks one unit. This would not interfere greatly with traffic if the proposed Civic Center design (Plate 15, page 81) is considered, since it opens Wilson Avenue to Fifth Street. Eventually the junior high might be included in the Civic Center, as suggested on Plate 15.

Welch Junior High in the Fourth Ward now shares space with the elementary school. This arrangement will soon prove inadequate and the school should eventually be developed as a junior high with a larger playfield. The block west of the school should be acquired as far as the Campus Avenue line, and Campus Avenue extended to Leek Street. Hyland Avenue should be closed between Leek and Wood streets to provide direct access to the playfield, and Leek should be extended to Sheldon Avenue. This would give a centralized and efficient junior high school plant for the Fourth Ward.

Dr. George D. Strayer, professor of Educational Administration, Teachers College, Columbia University, states: (Strayer, 56): "Play space of at least one hundred square feet per pupil should be provided in connection with every elementary school building....Junior high schools with a necessary provision for the games requiring larger space should have
correspondingly larger sites. Wherever open land is available and where it is possible to place these schools on the "outer rim" of the city, as in the case of the senior high schools, the sites should be from ten to fifteen acres in size. For the senior high school with the great diversity of play and athletics, which should be provided for both boys and girls, and separately for each sex, a site of from twenty to twenty-five acres should be secured.

"Junior high school pupils may be expected to travel from one to two miles. Senior high schools should be located with reference to sites available, preferably, except in the very largest cities, in the outlying districts rather than in congested areas. The placing of junior and senior high schools will be determined largely by the actual residence of those who are found in this part of the school system. This general area having been determined, the factor of transportation facilities and of site free from expensive improvements will have to be considered."

The present Ames senior high school is now overcrowded. The site is no longer suitable, and the junior high adjacent is in need of new quarters. If these urgent needs are to be met, a new high school location is necessary. Since the Fourth Ward is not yet sufficiently large to support a separate high school; since future growth of the three down
town wards will undoubtedly be northward; and since Fourth Ward traffic north of Lincoln Way can well be taken care of over the proposed Sheldon Avenue to Thirteenth Street connection, it is suggested the new high school be located north of Thirteenth Street and west of Grand Avenue. Since it is proposed that Highway No. 15 be relocated on Duff Avenue, traffic from this source will not hamper access to the school from the east. The location chosen should be reasonably level and should contain at least ten acres. A traveling distance of a mile has not been found unreasonable for high school students. This radius will include practically all of the downtown section and be centralized for double the population, at which time the Fourth Ward should be sufficiently large to require a separate high school unit.

A well-designed playfield and athletic field built in connection with the new high school, combined with the foregoing recommendations, will produce a well-rounded recreation system for all ages of school children.

B. Parks and Parkways.

Parks are usually the most interesting feature of a recreation system, and civic pride is greatly stimulated by them. The beauty of any park is chiefly due to the natural features, although very unsightly spots are often converted
into beautiful areas by skillful designing on the part of the trained landscape architect.

1. Small parks.

Ames has one small park, called "City Park", shown in the illustration on page 48, which has been in the possession of the city since 1889. At that time trees were planted, and many of them have grown into fine specimens. There are a few boxelders and poplars which should be removed and replaced by a more permanent type of tree. Furthermore, the whole area should be redesigned. The present band stand is very unsightly and, located in the center, spoils the surrounding area for any other use. The diagonal walk running from the south-west to the north-east corner tends to split the park into two halves and defeats any attempt for unity and spaciousness which might otherwise be achieved. The park should not be maintained merely for those who are rushing to and from the small section of residential district to the north-east; hence the diagonal walk is a detriment to the proper use of the park.

"City Park" should provide a place for leisure and rest for the inhabitants of the eastern part of the city. A formal entrance should be constructed at the south-west corner, which is the natural entrance from the business section. Two drinking fountains, formally placed, have
Illustration 6. City Park.
been suggested in connection with the entrance. The open lawn, as shown on the plan (Plate 8, page 50) could be provided by removing a few of the trees in that area, giving a feeling of spaciousness. The concert area should be moved to the south-east, with a band shell tucked snugly against heavy planting in the corner. The flag pole should be placed well away from the main entrance, on the knoll to the north-east, to lend interest as well as to effect greater distance. The north-west corner should be reserved for small children, should be partially screened by planting from the remainder of the park, and should contain sand-boxes and play lawn surrounded by benches from which parents may supervise their children's play. The easy curves of the walks should be planted at intervals with shrubs and possibly flowers in the bays of shrubbery. Walks are existing on the west and south property lines and are proposed on the east and north. Shrubs are shown within the boundary walks around the entire area to give seclusion and screen out dust and noise of passing cars. Since this park is located away from the central business section with private residences on three sides, it was not felt that it should be developed as the usual city square, but rather to be enjoyed from within than from without.

Another small park has been proposed in connection with the Civic Center and will be dealt with in that discussion.
2. **Neighborhood parks.**

Parks of this type embody what the name implies: neighborhood use. Although the two parks before mentioned will be used for many of the same purposes, they are inadequate in size to accommodate the inhabitants of a large residential district. Ames' largest park, Brookside, is the only area at present owned by the city which falls in the class of neighborhood parks.

Brookside Park, purchased in 1925, lies along one of the most interesting parts of Squaw Creek within the city (Plate 9, page 52). It adjoins the railroad on the south. A natural playfield site exists in this park on the high land to the east of the river. It has been used as such for a number of years. The remainder of the park is well wooded, predominantly with oak, but with many native hawthornes and sycamores intermingled, adding charm and picturesqueness to the valley. The greater part of the area lies to the west of the creek and is comparatively low. It is flooded during times of extremely high water. Recent improvements in the park have included a suspension bridge across Squaw Creek, grading of the football field, and construction of tennis courts. The location for the courts is satisfactory; however, their use in winter for a skating rink is not advisable, particularly when the creek just below the hill affords a much better place for skating.
The entrance to the park at the south-east corner is not an attractive one and should be redesigned. Since no adequate parking space is now provided, the development plan (page 52) suggests a combined entrance and parking space. The entrance location is now greatly enhanced by several large oak trees which should not be molested. The Boy Scout cabin located at the entrance to the park could well be incorporated in the plan, lending interest to the entrance circle which should be kept very simple and informal due to the naturalistic character of the park. A promenade is proposed between the entrance and the playfield, screened by hedges and trees from the parking on either side. The football field with playground ball courts transposed upon it is in much the location of the existing field. To obtain the regulation width of field some filling is necessary, along the brow of the hill on the west side. A steep bank about twelve feet high follows the east side of the field, making an ideal location for bleachers. There are two entrances from Brookridge Avenue, one at Lee Street and one farther north, between the tennis courts and the ball field.

The only road within the park is the proposed parkway connecting Riverside Drive and Thirteenth Street along the creek. The route of the parkway is under the Northwestern tracks at the Squaw Creek bridge. The bridge will have to be lengthened to allow room for the roadway, or the course
of the stream diverted to the west wing of the bridge, allowing plenty of room on the east for the passage of the road. From this underpass the parkway follows the hillside upstream to Thirteenth Street. At a point some 500 feet north of the tennis courts the hillside becomes very steep, necessitating flattening the curve in the stream and moving the stream bed fifty feet to the west. The excavation could then be used for the roadbed on the east side. Pedestrian walks under the parkway are suggested in two places to avoid danger from cross traffic. The existing foot bridge north of the railroad is in fair shape and will prove adequate in conjunction with the suspension bridge. The construction of a low dam, raising the water from two to three feet, will provide enough depth for boating for some distance upstream. It will also facilitate skating in the winter, and help maintain the water level in the bayou adjacent. The bayou is a part of the old stream bed and could well be dammed up and fed from the creek, making an attractive lagoon for water fowl and moisture-loving plants.

A system of paths has been laid out, giving access to all parts of the park. The path along the shore line is given an exit on the north to Brookridge Avenue under a small arch bridge carrying the parkway, and up a narrow ravine now filled with several unsightly chicken coops. The two existing shelters have been relocated to provide a
Illustration 7. Brookside Park Shelter
better view, and to fit the more comprehensive path system. Comfort stations have been combined with these shelters for the sake of appearance and for more efficient maintenance. Some thinning of trees should be carried out through the central section of the west area, to admit light and give a more attractive view. Clumps of willows should be planted along the creek banks where erosion now takes place. A few shrubs are necessary only where shown on the plan. These should be native varieties. A few evergreens are suggested, to be planted to the south-west around the lagoon, to screen out the railroad grade and lend interest to the small body of water.

One other neighborhood park location has been suggested, in the southern park of the Third Ward and along that part of Squaw Creek adjacent to and east of Duff Avenue. This area is little used at present and has wonderful possibilities. There is considerable level ground too low for residences but ideal for playfield purposes. It is partially wooded, with oak, elm, maple, and hawthorne. Its development as a park would increase the value of the property throughout the eastern section of the Third Ward.

3. Large parks.

Ames has three potential large parks: one located along Squaw Creek north of the College and owned by that institu-
Illustration 8. Wooded area near south Duff Avenue.
tion; the other two privately owned but used for park purposes for many years—the area along Clear Creek west of the Fourth Ward and that along Skunk River north and east of town. These two latter sites are the two most attractive valleys in the vicinity of Ames. They are deteriorating slowly because of the cutting of trees and unchecked erosion. This land should be reasonable in price; most of it lies outside the corporation limits and is not desirable for farming purposes. Purchases should be made by the city in both areas to make them more accessible to the citizens of Ames.

4. Pleasure drives.

The proposed circumferential parkway system, shown on Plate 10, page 59, is the correlating element of the whole recreation system. It forms a circulatory drive around the entire system; it connects all the various parks with pleasure drives bordered by continuous wooded strips; and it connects the recreation scheme to the central hub, the business section of the city. The parkways follow as much as possible the water courses and wooded valleys, where land is not practicable for residences.

Some mention has already been made of the parkway suggested through Brookside Park and extending north along Squaw Creek to Thirteenth Street. The Thirteenth Street
roadway, built only a few years ago, is one of the most attractive stretches now existing in the city, as shown by the illustration on page 61. It should by all means be a part of the parkway system. At its junction with the road running north from the College campus an overpass could easily be constructed (see illustration, page 63) to carry the parkway across the north and south road and on west as far as the hill overlooking the mouth of Clear Creek. On this hillside the College dumping ground still exists. Such an unsightly spot is not in keeping with the surrounding woodland, and the projection of an improved roadway along this hillside would discourage its further use. A gradual decline of the parkway toward the railroad will bring the roadway well below the railway level and allow an easy underpass through to the south side somewhere near the stone arch. Clear Creek may be bridged at any one of several convenient locations. From here a "Y" connection can be carried to the turn of the Ontario road and the parkway may be continued along the stream, crossing Hyland Avenue just north of the creek bridge, following up the valley and gradually rising again to the brow of the hill, and from this point extending to the county road running south from Ontario.

From this connection the county road should be followed south until it crosses College Creek. Turning east just south of the bridge, the parkway meanders with easy curves down the
Illustration 9. Thirteenth Street near Squaw Creek.
valley of the Creek to its intersection with State Avenue and Storm Street, extending along Storm Street to Ash Avenue south to Country Club Boulevard, and west on Cessna Street to Beach Avenue. Here a cross connection is proposed north, through the College campus to Thirteenth Street.

The circumferential parkway travels on east across the broad valley of Squaw Creek to the extension of Riverside Drive, with another cross connection following Riverside Drive north to Brookside Park. The main parkway turns east, following down the Squaw Creek valley through the proposed neighborhood park to south Duff Avenue, with connections between leading to south Oak Avenue, Walnut Avenue, and south Kellogg.

Duff Avenue from the parkway intersection north should be boulevarded to Thirteenth Street where a smaller circuit leads through the proposed park on Skunk River, returning by way of Grand Avenue. The main circuit turns west to follow Thirteenth Street to the intersection of the Brookside Park pleasure drive.

Connections with the down town business section are: east to Duff Avenue, west along Sixth Street, and north along Northwestern. The Civic Center is directly connected by the proposed boulevarding of Wilson Avenue to Thirteenth Street.
It is now easily ascertained that this circumferential route gives two direct connections (besides Lincoln Highway and the proposed direct route from Sixth Street to the campus) from the Fourth Ward to the downtown section: one from the north residential section of west Ames and one from the south residential section. It also gives approximately fifteen miles of pleasure drives almost entirely within the present city limits of Ames. Such a parkway system should be the backbone of Ames' future recreation program.

The roadway proper need not be exceptionally wide for pleasure driving. Twenty or thirty feet as a maximum is entirely sufficient for the present. The right-of-way width, however, should be ample in order to obtain an effective and attractive setting. Future widening of the roadway will then cause no difficulties.

C. Major Streets.

All previous discussion has dealt with parks and the recreation system, but it is felt that in order to arrive at a comprehensive conclusion the major street plan must be taken as a basis. Its connection with the parkway system, by providing proper traffic flow from the business and residential sections to the parkway is shown on Plate 10, page 59. The movement of through traffic in the city and its
Plate 11.
disposal must be considered. Local traffic must be routed for the greatest convenience. The major street plan, with the parkway system forming a part of it, is the skeleton upon which the city must grow.

A portion of Story County showing the highways entering the city (Plate 11, page 65) gives a diagrammatic outline of the direction and flow of through traffic in the vicinity of Ames, its passage through the city and connections with the business district, and the entrance of several county roads from various directions. Further possibilities for a regional plan beyond the city limits of Ames are given in the Appendix (page 102).

The heaviest traffic artery is the Lincoln Highway, No. 30, running directly east and west. Des Moines traffic on the Jefferson Highway, No. 65, running north to No. 30 and then turning east, is the next heaviest. The Wilson Highway, No. 15, on Grand Avenue, takes third place. There is known to be some congestion of traffic at the junction of Duff Avenue and Lincoln Way, and also at Grand and Lincoln Way. To remedy this situation it is proposed to collect all through traffic and cross traffic at one intersection, that of Duff and Lincoln Way; in other words, bring the three highways together at this point by rerouting No. 15 starting at Lincoln Way and Duff and following the latter street straight north to Sixteenth Street, from there gradually
curving to the west along the top of the Skunk River hills until it intersects with the existing highway. This would better facilitate moving of traffic from one highway to another and also keep north and south through traffic from travelling on Lincoln Highway.

The major street plan shows suggested widening of several present major streets; four connections with the Fourth Ward, three of them proposed; connections with the parkway system; and major streets connecting the three downtown wards with the business section.

The most noticeable deterrent to smooth traffic flow in the city of Ames has been found to be the grade crossings of the Northwestern Railroad, namely at Grand Avenue, Kellogg Avenue, and Duff Avenue. These crossings serve three definite purposes, each relatively important. Grade separations at any one of them are found to be very difficult engineering problems. Grand Avenue is the main crossing for Fourth Ward traffic to the business section and the Second Ward. It also accommodates all through traffic on highway No. 15 at the present time. Kellogg Avenue carries a large amount of business traffic to and from both sides of the grade crossing. It also allows passage of the Third Ward residential traffic to the main business section. The Duff Avenue crossing takes care of all traffic from the south and east to the business section and the First and Second Wards.
Each of these crossings has a special function. Not one of them will eliminate the necessity for either of the others. Therefore, at least two grade separations are necessary, one at or near Grand Avenue and one at Duff Avenue being deemed most important. For the Duff Avenue crossing an overpass is recommended, the approaches extending from Fifth Street on the north to Second Street on the south. Since twenty-two feet railroad clearance is required by law in the state of Iowa, approaches of at least 300 feet in length are necessary. Main Street would pass under the approach, making it necessary for all traffic to enter the overpass from the downtown section on Fifth Street or Duff Avenue. An underpass at this location is a practical impossibility. A less efficient alternative for this problem is an underpass connecting Crawford Avenue with Center Avenue two blocks east of Duff. This solution would be more practical as regards initial cost, because of the narrower width of trackage to pass under, and the relative cheapness of the surrounding property. However, the added distance required for north and south bound traffic, and the resultant loss of time, will more than outweigh the added expense of an overpass at Duff Avenue. An underpass at Crawford would also necessitate the relocation of highways No. 15 and 65 to make it practical.

There is no practical solution for the Kellogg Avenue crossing under the present conditions of adjacent property;
however, its abandonment is not advisable and it may be maintained as a grade crossing.

The crossing at Grand Avenue must be changed, probably at one of the three locations shown on pages 74, 75, and 76. This crossing is now burdened with more traffic than any other in the city. The solutions on Plate 12, page 70, and Plates 13 and 14, pages 71 and 72, give three suggested routes: one underpass connecting Main Street and Elm Avenue; one overhead crossing connecting Fifth Street and Oak Avenue; and the third, an underpass on Grand Avenue at the present location of the grade crossing.

The overpass between Fifth Street and Oak Avenue is a practical one in that the approach on Fifth Street is already some fourteen feet above the track level, requiring an added rise on this approach of only about eleven feet. The approach from the south would be more gradual, starting at Lincoln Way and crossing Second Street with a clearance of fourteen feet. This solution gives a direct intersection with Lincoln Way and the proposed extension of south Oak Avenue to the proposed south parkway. College traffic could approach the overpass directly from the south, or by a left turn from Lincoln Way. Another advantage of this solution is the easy approach from the business section, on Fifth Street and Main Street by way of Northwestern Avenue.
Plate 13.
The underpass connecting Main Street and Elm Avenue is proposed as following the present electric street car right-of-way across the Chicago and Northwestern tracks. The former has recently been abandoned. If the Fort Dodge, Des Moines and Southern line is removed, the approaches will be sufficient on either side for a seven per cent grade. The greatest width which must be traversed from below will be less than at any other possible crossing in the vicinity, if the Northwestern railroad can be persuaded to remove the short spur to the north of the main line. This spur is not more than 1000 feet long and has been used but little for some time. A practical solution to this problem would require a lowering of the grade of Main Street and Northwestern Avenue of about four feet at the intersection of the two roads, and extending about 100 feet to grade in each direction. This would facilitate construction of a very gradual descent into the underpass. Grand Avenue from Fifth Street south should then be relocated to intersect on a line with the underpass. This is clearly shown on Plate 13, page 71. A connection may also be made with the south parkway along the west property line of the Iowa Highway Commission, and following directly south to intersect with the parkway.

The proposed Grand Avenue underpass has the distinct advantage of following the present route of traffic. The two changes required to make this grade separation possible
are the removal of the spur to the north of the main line tracks as far as the west property line of Grand Avenue, as was required in the preceding proposed location, and the relocation of the "Y" track connecting the southbound line with the main line on the west. A shorter radius of curve would be necessary, crossing Grand Avenue as near to the present main line tracks as possible, as shown on Plate 13, page 71. This would reduce the track width necessary to pass under to not more than 100 feet. Adjacent property damage would be negligible in this location. The lowering of the intersection of Main Street, Grand and Northwestern Avenues would be necessary to the extent of four feet.

This solution gives direct access to the north entrance from three directions.

One of the three proposals should be carried out in a short time. The danger to life, the time lost by delay of traffic, and the fire hazard to the Third Ward (due to possible detaining of fire apparatus) are all very important reasons for a grade separation in the vicinity of Grand Avenue.
D. A Civic and Transportation Center.

A city properly planned should contain at least four major areas: a business center, a transportation center, residential districts, and a civic center. So far as possible each should have its separate location, yet they should all be close enough together to make each accessible to the other.

The business section of Ames centers around the intersection of Main Street and Kellogg Avenue. Ames' two largest public buildings are within one-half block of this center. Transportation is scattered over several parts of the city.

There has long been felt the need for a new location for the public buildings of Ames, at some distance from the central business district. Since the post office and city hall were built, business has been crowding in from all directions. The value of the surrounding property has become too great as business property to build a group of public buildings around the present location of the two main structures. Land is valuable for business where the post office and city hall now stand; hence a new site, sufficient in size to accommodate all necessary buildings which should compose a civic center, has been suggested some two blocks removed from the present location (as shown in Illustration 14,
Proposed Location of Civic Center.
page 79, and in connection with the present location of the railway station. This location is close enough to the business center to be convenient, yet far enough removed to make land available for further enlargement of the business district. The transportation center has been included with the civic center because neither is large enough in a city the size of Ames to necessitate wide separation. Their proximity will be desirable from an economic standpoint.

The plan of the Civic Center, (Plate 15, page 81) shows an arrangement of post office, municipal building, railway station, fire station, bus depot, library, and community house. These buildings are grouped around a central square which will provide a setting for every structure in the group.

The post office is located to the west, giving direct access to the railway station to facilitate the movement of mail to and from trains. The present post office has become entirely inadequate, and rebuilding will be necessary in the near future. This site would prove much more economical, as the present one is not large enough for any addition and land in its vicinity is extremely valuable.

The proposed location of the municipal building is toward the business section facing Clark Avenue on one side and the central square on the other. The fire station is situated opening onto Main Street because of the greater
width of the roadway. The bus depot is located in connection with the railway station to facilitate interchange of passengers and baggage. The bus garage is suggested adjacent to Clark Avenue on land now owned by the Chicago and Northwestern Railroad. Since the main bus system in the city is owned by the railroad, a bus terminal in connection with the railway station should be acceptable.

A new railway station on the site of the existing one is proposed, with connecting arcades to the two wing buildings and to Main Street. Ample driving space with taxi parking is provided. The express office occupies the east end of the building, with drive access to Clark Avenue.

The library and community house close the group on the north. The library might at some time be a wing to the future junior high school, making it convenient to the students as well as to the public.

The suggested extension and boulevarding of Wilson Avenue forms a long central axis to the Civic Center group. Two new roadways are proposed on each side of the central square to give better traffic circulation.

Purchase of the remainder of the block west to Grand Avenue and the triangular block between Grand and Northwestern Avenue would complete the scheme and give an informal setting for the post office, and provide a small park which is very much needed in this section of the city.
It is not suggested that this group of buildings be erected at once, but only as they are deemed necessary. With a correlated scheme to follow the eventual result would be a pleasing and convenient center for the city. The post office, because of the immediate necessity, will probably be constructed first; hence the site for it was chosen because it is more readily available at the present time. The site of the municipal building partly encroaches upon the present Northwestern Bell Telephone building. When rebuilding of the telephone office becomes necessary, it could be advantageously located in connection with the group to the north of the proposed community house on Wilson Avenue. This would make land available for the municipal building.

The style of architecture for such an important group of buildings should be chosen before any construction is started, and from then on strictly adhered to. It has been the mistaken conception in many cases throughout the Middle West that all public buildings should be of classic style. Such a theory makes buildings much more expensive than they need be, because the style requires a costly building material. A much more pleasing and truly American feeling could be obtained by following a Georgian or Colonial style in permanent materials.
It has been said: "A city without some kind of civic center gives to the visitor the kind of impression which would be made by a man without a face. There is nothing to express the soul of the city: it appears to be a jumble of streets and buildings. When our ancestors built the church and town hall about the village green, or set the courthouse on a dignified square, they carried out a tradition of seemliness inherited from Europe." (Hubbard and Hubbard, 35).

E. Street Trees.

In connection with the parkway system it is thought advisable to incorporate an organized plan for street tree planting in Ames. The city does have a few streets now lined with magnificent old trees. In the older parts of town several streets are beautifully arched with fine elms and maples, as shown by the illustration on page 85. The city fathers who planted these trees must have realized what everlasting beauty their work would bring. In the newer sections such forethought is not apparent. Many streets have no trees at all; others are planted to temporary, quick-growing types such as poplar, soft maple, and boxelder. These trees are not practical for use in streets because of their troublesome habits and their relatively
Illustration 15. Duff Avenue.
short life. Their only advantage is the quick growth for immediate effect.

The lack of any uniform system of tree planting (which is the one important factor in making an attractive vista of a city street) is noticeable throughout the city. On page 87, Plate 16, is the proposed street tree plan for the city of Ames, designed by Mr. Floyd Sapp under the direction of the Department of Landscape Architecture of Iowa State College, following a survey of the city which he made with Mr. Irving Christensen, for the City Plan Commission. Every tree on every city street within the boundary of Ames was located and checked as to size and condition. From this survey the map was worked out, providing an arrangement of tree planting for every street within the city. Existing hardwood trees were considered in every instance and incorporated into the resultant scheme. The irregular roadways in certain parts of the city have suggested plantings of mixed trees such as oak, maple, and linden. This is desirable because a more naturalistic planting is in keeping with the character of the streets. The only trees recommended are elm, hackberry, hard maple, oak, and linden.

It is not proposed that a wholesale cutting of poor and unhealthy trees be undertaken. A gradual selection over a period of years will be necessary, consisting of treatment
to existing damaged trees; thinning out where the trees are spaced too close; replacing with the proper type where cutting becomes necessary or removal is made because of the death of, or injury to, the tree; and last but most important, initial planting of spaces still vacant, to the variety of tree specified on the plan. The length of time necessary to carry this work to completion has been estimated as approximately fifty years. By 1980 Ames should have just cause to be proud of its beautiful residential streets. An ordinance is now being prepared so that the city will perpetuate this street tree program.
VIII. SUMMARY AND CONCLUSIONS.

A park and recreation system is not a new thought for the city of Ames. Many of the proposals in the foregoing pages have been the hopes of certain public-spirited citizens for years. Education of the public mind in favor of such a plan is the factor of vital importance in bringing these hopes to realization.

The city now possesses a total of approximately thirty-three acres devoted to recreational purposes, about half of it to highly organized play areas. This small acreage should be increased in the near future to at least one hundred acres in order to adequately care for the present population. Any preparation for the future would necessitate a total of one hundred and fifty or more acres.

All present school sites should be enlarged or new locations sought. One new elementary school will soon be necessary in the Fourth Ward. A new high school to care for the rapidly increasing enrollment and overcrowding of the present building is of prime importance. A playfield of fifteen or more acres, in connection with the new high school, is necessary. A large playfield is also much needed in the southern part of the downtown section.

Ames has only one park worthy of the name. To supply the needs of the city three more parks are necessary, one
in the northeast, one in the extreme west, and one in the
south part of the city. A circulatory system of parkways
should connect these recreation areas and provide for
pleasure driving.

There is urgent need for an extensive major street plan
to care for the future growth of the city in a systematic
manner. Widening and relocation of streets will eventually
become necessary; in fact, it is already desirable in several
instances. Definitely located set back lines and building
regulations will save untold expense when replatting and
widening of streets become necessary.

A civic and transportation center becomes a more urgent
need with the possibility of a new post office. Such a
building, located on a site adequate in size for a proper
setting and surroundings, and in connection with a group of
proposed public and semi-public buildings, would be the
center for future development.

Street trees contribute to the beautification of city
streets. Their location should be along formal lines on
straight avenues, and they should conform to the regulations
of the major street plan.

It would not be desirable from an economic standpoint
to carry out all the proposals immediately. They should be
fulfilled only as the need and opportunity arise. However,
some forward steps must be taken. Parks should be acquired
to insure their protection. Fortunately most of the proposed land is relatively low in value, is wooded and undesirable for future subdividing. Nevertheless, growth will infringe upon these now beautiful woodlands unless the city takes possession of them for the benefit of the public rather than the individual.

Acquisition of land for parks and playgrounds may be brought about in a number of ways: chiefly by direct purchase, by long-time option, by special assessments (which is the procedure in Minneapolis, Minnesota) or by private donation. Whatever the method, the result will determine the future possibilities for recreation in the city.

Possession of desirable land is only the first step toward realization of the program. One area should be chosen as the first to be worked out in detail. Brookside Park, already under construction, should be designed and carried out completely, providing a model by which the people may judge the advantages of development.

As this report nears completion, a new high school is being proposed. The site chosen, the size of the area, and the design and equipment should be so complete as to make it a valuable addition to the city and the recreation system.

The report is not to be interpreted as a set of recommendations to be carried out in every minute detail just as
they are given. Changes will be necessary from time to
time as the work progresses. It is hoped that the
proposals will form an outline of procedure.

Ames has written into the city ordinances a zoning
ordinance covering every detail of the location and use of
buildings, structures, and land. The city has organized a
Park Commission, Board of Education, and City Plan
Commission who, by correlating their efforts with the City
Council, can accomplish great things. The organization
is complete; all that is necessary is education of the
people to the need for a complete park and recreation system.
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X. ACKNOWLEDGMENTS.

Through the efforts of Professor P. H. Elwood, head of the Department of Landscape Architecture at Iowa State College, this study of a park and recreation plan for Ames was brought about. His knowledge of the needs of the city and his connections with municipal bodies made possible the correlation of the various interests and desires of these civic organizations into a single report.

It was through Professor Elwood's influence that the City Plan Commission assumed the responsibility for producing the plans and survey included in the report. Acknowledgment is extended to the members of the City Plan Commission: J. Galen Tilden, chairman in 1931, Mrs. Hiram Munn, Mrs. Dave Edwards, Mr. J. L. Powers, present chairman, Dr. T. L. Rice, Judge C. G. Lee, and Professor Elwood, for their real and active interest and encouragement.

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Appreciation is tendered for the many suggestions and the helpful criticism given by Professor Elwood, Professor R. R. Rothacker, and Mr. John R. Fitzsimmons, throughout the entire project.
APPENDIX
A. Regional Planning for Ames.

City planning has long been confined to the city proper and its immediate surroundings. Not until recently has much thought been given to regional planning of large areas, including counties and even states. This topic is becoming increasingly important with the advent of many miles of surfaced highways making possible very rapid travel between distant points.

Through traffic should be provided with radial highways between all important cities, with entrances to and exits from these cities on short spurs. This would facilitate a rapid and even flow of long distance traffic over all main highways. Direct communication between small or satellite towns and larger cities makes for efficiency and economy, and preserves the individuality of each for its own function. Plate 17, page 103, shows the location and size of the small towns around Ames.

Regional planning would solve many of the problems met in the locating of our highways. It would also include the large and important program of roadside planting. Most of our main traveled highways are now practically denuded of all natural growth. Cutting of all growth upon highways is often necessary in the construction of the road, but the highway should not be considered a finished project until
NOTE

Figures under name of each community represent population as of 1930. Diameters of circles are in proportion to population.

SATELLITE COMMUNITIES SURROUNDING CITY OF AMES IOWA

CITY PLANNING COMMISSION

Jerome C. Miller
landscape architect

Plate 17.
the depredations of road building are covered over by shrubs, vines, and trees, and the whole given a finished, park-like effect.

Some work has already been done toward more beautiful roadsides in Iowa. On pages 105 and 106 are shown two projects, one in Story and one in Boone County, showing general landscape treatment of the main highway leading into Ames.

Ames is situated at the intersection of three main cross-country highways; viz., the Lincoln, the Jefferson, and the Wilson Highways. The city might well be the first in Iowa to instigate and carry out foresighted regional planning of the approaches and connecting highways.

The beautification of the entrances to the city will give a favorable first impression to visitors, and constant pleasure to its own citizens who in increasing numbers will recognize the value of safe, convenient, and beautiful approaches.
Plate 19.
B. ZONING ORDINANCE.

Ordinance No. 422, Revised Ordinances of 1930
of the city of Ames, Iowa.

Section 18. Board of Adjustment.

(a) A Board of Adjustment is hereby established. Where the word "Board" is used in this section it shall be construed to mean the "Board of Adjustment." The Board shall consist of five (5) members who shall be appointed by the Mayor, subject to confirmation by the City Council. Each member shall be appointed for a five-year term. Any vacancy shall be filled in the same manner for the unexpired portion of the term. In the event of the absence from the city or the incapacity of a member, the Mayor may appoint a substitute who shall serve as a member of the Board, with the same powers and authority as the regular member, until such regular member has returned or has become capacitated for further service. All members shall serve without compensation.

(b) The City Clerk shall serve as the Secretary of the Board. The Board shall have the power to call on any city department for assistance in the performance of its duties, and it shall be the duty of any such department to render such assistance as may reasonably be required.

(c) The board shall adopt, from time to time, subject to the approval of the City Council, such rules and regulations as it may deem necessary to carry into effect the provisions of this ordinance.

(d) The Board shall elect its own chairman. Such chairman, or in his absence, the acting chairman, may administer oaths and compel the attendance of witnesses. There shall be a fixed place of meeting and all meetings shall be open to the public. The presence of four (4) members shall be necessary to constitute a quorum. The Secretary of the Board shall keep minutes of its proceedings, showing the vote of each member upon each question. If a member is absent or fails to vote, the minutes shall indicate such fact. The Board shall keep records of its examinations and other official actions, which shall be on file in the office of the City Clerk as a public record.

(e) Appeals to the Board may be taken by any person aggrieved, or by any officer, department, board or bureau of the municipality affected by any decision of the enforcing
officer. Such appeal shall be taken within a reasonable time, as provided by the rules of the Board, by filing with the enforcing officer and with the City Clerk a written notice of appeal specifying the grounds thereof. The secretary of the Board shall give notice of such appeal to the enforcing officer, who shall forthwith transmit to the Board all papers constituting the record upon which the action appealed from was taken. An appeal stays all proceedings in furtherance of the action appealed from, unless the enforcing officer certifies to the Board after the notice of appeal shall have been filed with him, that by reason of facts stated in the certificate a stay would in his opinion cause imminent peril to life or property. In such case proceedings shall not be stayed otherwise than by a restraining order which may be granted by a court of record on application on notice to the enforcing officer and on due cause shown. The final disposition of any appeal shall be in the form of a resolution either reversing, modifying or affirming the decision or determination appealed from.

(f) To authorize upon appeal in specific cases, such variations from the terms of this ordinance as will not be contrary to the public interest where, owing to special conditions, a literal enforcement of this ordinance will result in unnecessary hardship and so that the spirit of the ordinance shall be observed and substantial justice done. However, nothing herein shall be construed as giving the Board of Adjustment the right, power, or authority to change the limits or extent of any district or to grant permission to use any building or land when such is specifically prohibited herein.

(g) In specific cases the Board may, after public hearing at which any interested persons may appear, determine and authorize any of the following variations in the application of the regulations established by this ordinance, in harmony with their general purpose and intent, and authorize the issuance of a permit for:

1. The erection and use of a building or the use of land in any district by a public-service corporation or for public utility purposes, which the Board considers reasonably necessary for the public convenience or welfare.

2. The erection of buildings or the use of buildings or land not in accordance with the requirements of this ordinance, in the case of an undeveloped section of the city, for period not to exceed one (1) year in any case, where such building or uses are clearly incidental to and necessary for residential development, or are temporary only and will not be detrimental to or tend to
alter the character of such section or any adjoining or nearby section already developed.

(3) In any district, any use that is not specifically prohibited and that is in keeping with and appropriate to the uses authorized in such district by the provisions of this ordinance.

(4) The erection of an accessory building on any lot in any "A" District or in any "B" District, before the erection of the principal building as provided in Section 6 of this ordinance.

(5) After public notice and hearing, as provided in this ordinance, the extension of an existing building or use into a more restricted district immediately adjacent, under such conditions as will safeguard the character of the more restricted district, provided that such extension shall not be permitted more than fifty (50) feet beyond the boundary line of the district in which such building or use is authorized, and provided that no conforming building or use shall be thus displaced.

(6) After public notice and hearing, as provided in this ordinance, the extension or enlargement of an existing use located in a district restricted against such use, either by the extension or enlargement of an existing building or premises or by the erection of an additional building, where such extension or enlargement is a necessary incident to the trade, business or industry existing on the 1st day of June, 1925, provided that such extension or enlargement shall be entirely on property in the same ownership as the existing building or premises on the said 1st day of June, 1925, and provided that such extension or enlargement will not prove detrimental to or tend to alter the character of the neighborhood.

(7) After public notice and hearing, as provided for in this ordinance, the owner of any lot elects a lot line not in keeping with the established character and welfare of the neighborhood.

Where the boundaries of any district are in doubt due to any discrepancies between the layout as shown on the zoning map and the layout actually on the ground, the Board shall, on appeal, after public notice and public hearing, determine the location of such boundaries as provided in Section 4 of this ordinance, in such a way as to carry out the intent and purpose of this Ordinance.
Plate 20.

ZONING MAP
AMES, IOWA
PREPARED BY THE
ZONING COMMISSION
1930

Public Grounds
'A' Districts
(Residential)
'B' Districts
(Residential)
'C' Districts
(Local Business)
'D' Districts
(Bus. & Ind. Industry)
'E' Districts
(Hardy Industry)
C. CITY PLAN COMMISSION ORDINANCE.

Ordinance No. 407, Revised Ordinances of 1930
of the city of Ames, Iowa.

AN ORDINANCE CREATING A CITY PLAN COMMISSION AND FIXING
AND REWRITING THE DUTIES AND POWERS THEREOF.

Be it Ordained by the City Council of the City of Ames, Iowa:

Section 1. That under and by virtue of the authority
conferred by Chapter 294-AI of the Code of Iowa, 1927, a
City Plan Commission is hereby created and established.

Section 2. That a City Plan Commission, consisting of
seven (7) members, who shall be citizens of Ames and quali-
ified by knowledge or experience to act in matters pertaining
to the development of a city plan and who shall not hold any
elective office in the municipal government, shall be appointed
by the Mayor subject to the approval of the City Council.

Section 3. Term of Office. The term of office of the
members of said Commission shall be five (5) years, except
that of the seven members constituting said Commission those
first named shall hold office in the following manner, that
is: One for two years, two for three years, two for four
years, and two for five years.

Section 4. Vacancies. If any vacancy shall exist on
said Commission caused by resignation, or otherwise, the Mayor
shall appoint a successor for the residue of said term,
subject to the approval of the City Council.

Section 5. Compensation. All members of the Commission
shall serve without compensation, except their actual ex-
penses, which shall be subject to the approval of the City
Council.

Section 6. Duties and Powers:

(A) The City Plan Commission shall choose annually at
its first regular meeting one of its members to act as
Chairman of this Commission and another as Vice-Chairman,
who shall perform all the duties of the Chairman during his
absence or disability.

(B) The Commission shall adopt such rules and regu-
lations governing its organization and procedure as it may
(C) The Commission shall each year make a report to the Mayor and City Council of its proceedings, with a full statement of its receipts, disbursements and the progress of its work during the preceding fiscal year.

(D) Subject to the limitations contained in this ordinance as to the expenditure of funds, it may appoint such assistants as it may deem necessary and prescribe and define their respective duties and fix and regulate the compensation to be paid to the several persons employed by it.

(E) It shall have full power and authority to make or cause to be made such surveys, studies, maps, plans, or charts of the whole or any portion of such municipality or of any land outside thereof, which in the opinion of the Commission bears relation to a comprehensive plan and shall bring to the attention of the Council and may publish its studies and recommendations.

(F) No statuey, memorial or work of art in a public place, and no public building, bridge, viaduct, street fixtures, public structure or appurtenances, shall be located or erected, or site therefor obtained, nor shall any permit be issued by any department of the municipal government for the erection or location thereof until and unless the design and proposed location of any such improvement shall have been submitted to the City Plan Commission and its recommendations shall not act as a stay upon action for any such improvement when such Commission after thirty days' written notice requesting such recommendations shall have failed to file same.

(G) All plans, plats, or re-plats of sub-divisions or resub-divisions of land embraced in said municipality or adjacent thereto, laid out in lots or plats with the streets, alleys or other portions of the same intended to be dedicated to the public in such municipality, shall first be submitted to the City Plan Commission and its recommendations obtained before approval by the City Council.

(H) No plan for any street, park, parkway, boulevard, traffic-way, river-front, or other public improvement affecting the city plan shall be finally approved by the municipality or the character or location thereof determined, unless such proposal shall first have been submitted to the City Plan Commission and the latter shall have had thirty days within which to file its recommendations thereon.
(I) The Commission shall have full, complete and exclusive authority to expend for and on behalf of the City of Ames all sums of money appropriated as hereinafter provided, and to use and expend all gifts, donations or payments whatsoever which are received by the said City for city plan purposes.

(J) The Commission shall have no power to contract debts beyond the amount of its income for the present year.

(K) For the purpose of making a comprehensive plan for the physical development of the municipality, the City Plan Commission shall make careful and comprehensive studies of present conditions and future growth of the municipality and with due regard to its relation to neighboring territory. The plan shall be made with the general purpose of guiding and accomplishing a coordinated, adjusted and harmonious development of the municipality and its environs which will, in accordance with the present and future needs, best promote health, safety, morals, order, convenience, prosperity, and general welfare, as well as efficiency and economy in the process of development.

(L) Before adopting a comprehensive plan as referred to in the preceding paragraph, or any part of it, or any substantial amendment thereof, the Commission shall hold at least one public hearing thereon, notice of the time of which shall be given by one publication in a newspaper of general circulation in the City of Ames not less than ten nor more than twenty days before the date of hearing. The adoption of the plan or part or amendment thereof shall be by resolution of the Commission carried by the affirmative vote of not less than two thirds of the members of the Commission. After adoption of said plan by the Commission, an attested copy thereof shall be certified to the Council of the City of Ames and the Council may approve the same, and when said plan or any modification or amendment thereof shall receive the approval of the Council, the said plan until subsequently modified or amended as hereinbefore authorized shall constitute the official city plan.

(M) When such comprehensive plan as hereinbefore provided has been adopted no substantial amendment or modification thereof shall be made without such proposed change first being referred to the City Plan Commission, for its recommendation. If this Commission disapproves the proposed change it may be adopted by the City Council only by the affirmative vote of at least three-fourths of the members of the said City Council.
Section 7. The City Council may annually appropriate a sum of money from the general fund for the payment of the expenses of the City Plan Commission.

Section 8. All ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 9. This ordinance shall be in full force and effect on its passage and publication as provided by law.