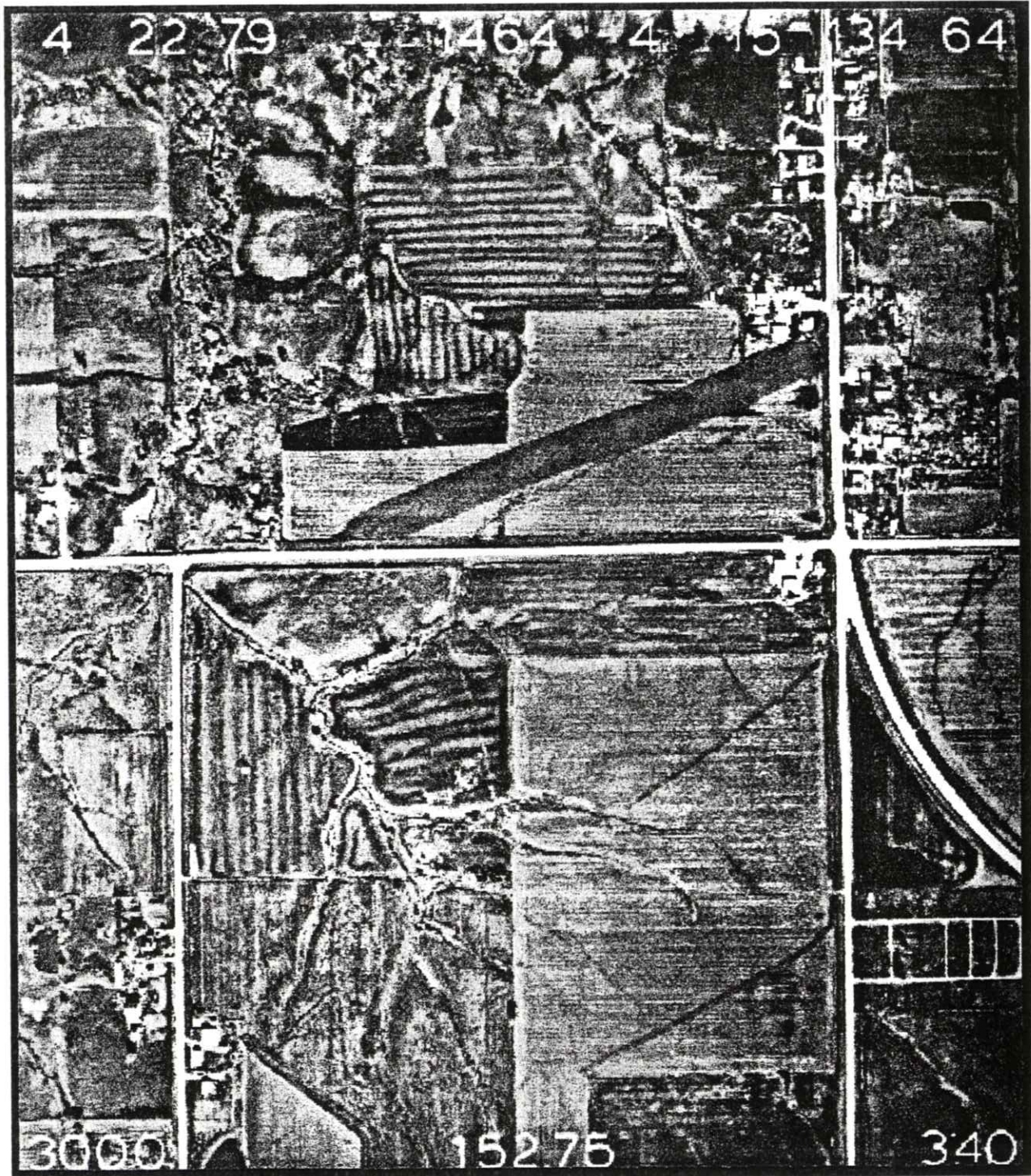


Appanoose County Comprehensive Plan



Coordinated with the Area 15 Regional Planning Commission;
Recommended by Appanoose Co. Landuse Planning Research/Fact Finding Committee;
Adopted by Resolution by Board of Supervisors on January 20, 1997

RESOLUTION # _____

RESOLUTION ADOPTING THE COUNTY COMPREHENSIVE PLAN
FOR APPANOOSE COUNTY, IOWA

WHEREAS, Appanoose County, Iowa has prepared a Comprehensive Plan which evaluates past and existing conditions and identifies goals and objectives that address development policy for the future of unincorporated Appanoose County, and

WHEREAS, it is in the interest of Appanoose County, Iowa to have a plan which is officially adopted to serve as a guide for planning, development, and implementation;

NOW, THEREFORE, BE IT RESOLVED that Appanoose County, Iowa adopts the 1997 Appanoose County Comprehensive Plan as an official plan for development and implementation as a realistic plan for improving conditions in unincorporated portions of Appanoose County, Iowa.

Passed this 30 day of January 1997.
David Duley
Chairperson
David Duley, Board of Supervisors
Appanoose County, Iowa

ATTEST:

Linda Demry
Linda Demry, County Auditor
Appanoose County, Iowa

Editor's Note

Consultation services for a draft Appanoose County, Iowa Comprehensive Plan were provided by the Area 15 Regional Planning Commission, PO Box 1110, Ottumwa, Iowa 52501.

The Appanoose County Landuse Planning/Research Fact Finding Committee was created for the purpose of reviewing preliminary drafts of the comprehensive plan and making recommendations to the Appanoose County Board of Supervisors. The Committee adopted administrative rules of order and proceeded with an open public meeting format. On December 19, 1996 at 7 p.m., the Committee held a public hearing for input on the Committee's draft comprehensive plan. Following the public hearing, the Committee formally recommended the draft comprehensive plan to the Appanoose County Board of Supervisors for consideration.

The Appanoose County, Iowa Comprehensive Plan was adopted by resolution on January 20, 1997, following public hearing, by the Appanoose County Board of Supervisors. The plan is to serve as an official plan for development and implementation as well as a realistic plan for improving conditions in unincorporated portions of Appanoose County, Iowa.

Members of the Appanoose County Landuse Planning Research/Fact Finding Committee:

Mark McDanolds; Chairperson
Jim Porter; Vice-Chair
Dennis Laurson; Secretary
Don Davis
Paul Felkner
John A. Sulser
Curtis Sebolt

Appanoose County Board of Supervisors:

David Duley; Chairperson
Royce Joiner
Wayne Sheston

Planning Assistance:

Tracy Daugherty Jordan; Area 15 Regional Planning Commission

APPANOOSE COUNTY COMPREHENSIVE PLAN

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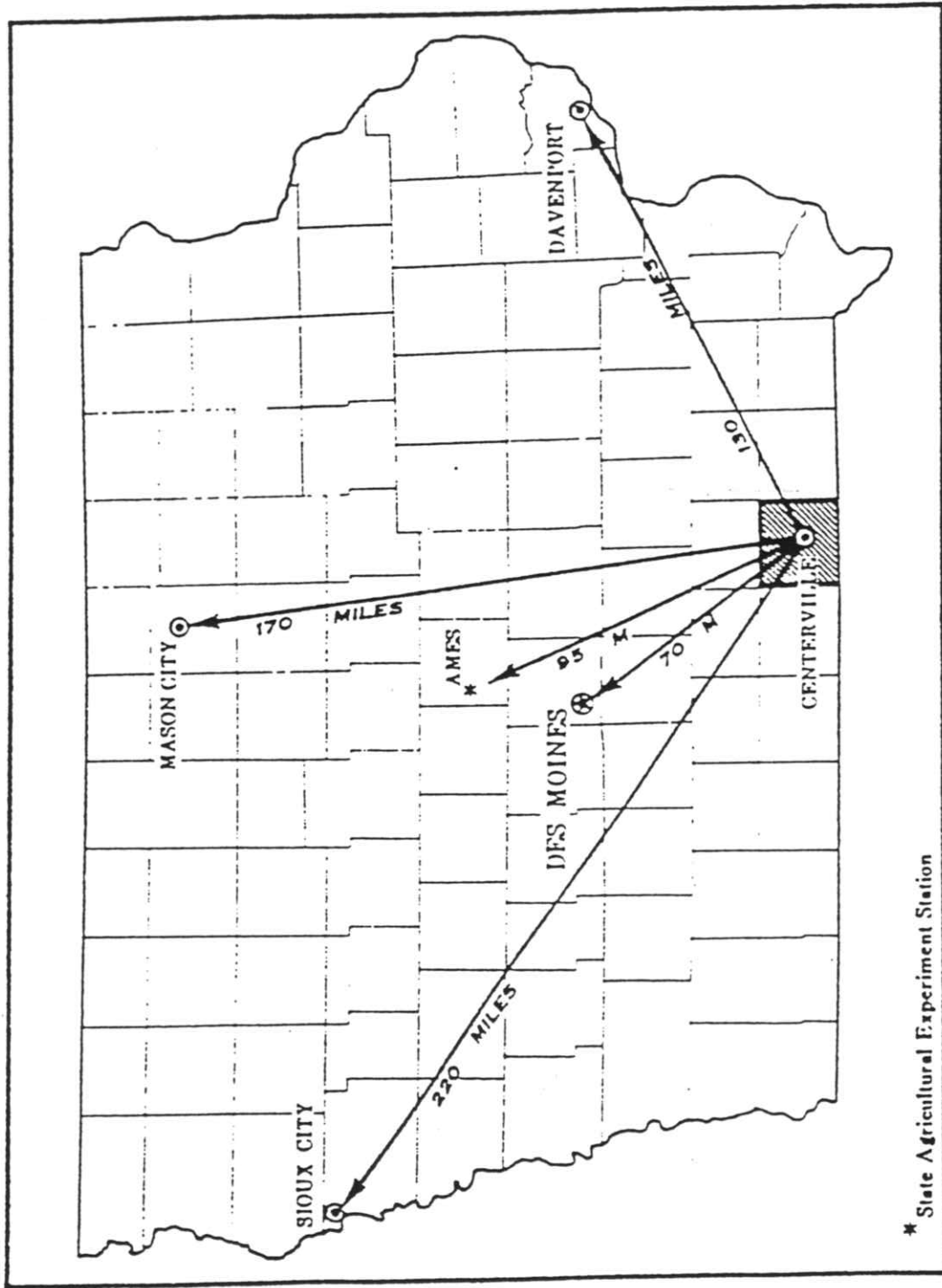


Figure 1.—Location of Appanoose County in Iowa.

SECTION ONE - INTRODUCTION

The need for a comprehensive plan was identified due to an accumulation of factors. Some of these factors include: financial constraints limiting the county's ability to provide additional public services; an increasing recognition of the need to protect and utilize the county's natural environment; the recognized need to promote orderly growth and development; and the awareness that general health, safety, and welfare policies require a solid foundation.

Primary Purpose and Scope

The primary purpose for the development of any comprehensive plan is to provide basic guidelines for use by public officials, departments, boards, and commissions whose decisions may affect existing and/or future use of land and resources in the county. The study is part of a continual planning process and is intended to promote orderly growth and development of the county as well as provide guidelines for directing physical change.

The intended scope of the plan is to provide a general analysis of the needs of Appanoose County and its residents, particularly as they relate to existing and future uses of the land. In doing so, the plan evaluates past trends in several subject areas and attempts to project the manner in which changes will occur several years into the future. Primary emphasis is placed upon how these changing trends might impact physical growth and development within the County and the identification of policies needed to direct that change.

Although this study is a comprehensive plan for the unincorporated areas of Appanoose County, it recognizes that both existing and future activities of the county's incorporated cities, as well as those of neighboring counties, may directly or indirectly cause changes to occur in rural Appanoose County. The conclusions drawn in this study attempt to incorporate these potential impacts and reflect the need for intergovernmental cooperation.

Planning Process

As directed by the Appanoose County Board of Supervisors, preparation of the comprehensive plan was undertaken by the Planning and Zoning Commission. Technical assistance was provided by staff of the Area 15 Regional Planning Commission. The study followed a general planning process consisting of research; analysis; identification of needs; and the subsequent development of goals, objectives, and policies. Background data was gathered from the U.S. Census; local, regional, and state plans; soil surveys; local land use inventories; aerial photographs of the county; field surveys; and public input and commentary offered at public meetings.

The background data was reviewed and discussed by the Planning and Zoning Commission and was used to develop goals, objectives, and land use policies. The Planning and Zoning Commission held public hearings to explain the plan and land use policies and to receive additional public input prior to recommending the plan to the Appanoose County Board of Supervisors. The Board of Supervisors then held a public hearing and, after review and discussion, approved the Comprehensive Plan for Unincorporated Appanoose County.

SECTION TWO - BACKGROUND

History

Appanoose County was named after Chief Appanoose of the Sac and Fox Tribe, head of the peace party in opposition to Black Hawk during Indian Wars in the state. The county seat was originally named Chaldea but, out of admiration for Gov. Senter of Tennessee, was renamed Centerville.

Natural resources attracted many of the earlier settlers to the County - the discovery of coal spurred additional growth. During the early 1860s, and for several decades to follow, the coal mining industry provided a tremendous impetus to the economic growth of the region. Both strip mining and underground methods became important, making the region the chief coal producing area of the state. However, the gradual depletion of the available supply, coupled with adverse market conditions, has long since marked the curtailment of coal mining operations.

Coal is known to have been mined in Appanoose County since 1857 and was, quite possibly, mined prior to that. Mining was a major industry for many years with as many as 80 to 90 mines operating at the same time. Production reached its peak in Appanoose County in 1917 when more than 1.6 million tons were mined. By the mid-1960s, coal production was reduced to less than 37,000 tons. Appanoose County has, over the years, been the second largest coal producing county in the Area 15 Region and the third largest in the state of Iowa. Although the County, today, is fundamentally dependent upon agriculture, agricultural products, and manufacturing, remnants of the once flourishing coal mining industry, are still visible throughout

Physiography

Appanoose County is located in south central Iowa adjacent to the Iowa-Missouri State Line. It is dissected by the Chariton River and is approximately 520 square miles in area. The County lies on the eastern slope of a deeply eroded drift plain which forms a divide between the Mississippi and Missouri Rivers. The County is characterized by a few broad stream valleys and an innumerable network of smaller tributaries.

The principal watershed influencing the county is that of the Chariton River and its tributaries. The Chariton River enters the northwest corner of the county and meanders toward the southeast corner where it exits across the Iowa-Missouri border. As the river flows southeasterly across the county, it forms a flat bottomed valley approximately 150 feet deep and several miles wide at its maximum width. From the west it receives a number of relatively long tributaries, but from the east it is fed by very short streams. Eventual drainage is south into the Missouri River.

Alluvial deposits are common along the major river valleys. Extending upward from the valleys and over the entire upland lies a mantle of loess several feet in thickness. Beneath the loess and covering the entire county is a drift deposit consisting of boulder clay containing pebbles of all sizes and shapes, many of which are granite or dark-red quartzite. The bedrock immediately underlying the drift belongs mainly to the Pennsylvanian series of the Des Moines group.

The County is comprised of a more equal distribution of timbered land and prairie land in contrast to other counties in Iowa. Upland hardwood types are predominantly oak and hickory. The bottom-land hardwoods contain some of the most valuable timber in the area and are primarily along the major drainages. Commercially valuable species are black walnut and soft maple while associated species include elm, ash, cottonwood, oaks, and hickories.

SECTION THREE - POPULATION CHARACTERISTICS

Analysis of various population characteristics can be important in identifying past trends and in providing valuable insight into the future needs and demands of the County's residents. With regards to population, the following section identifies historical changes, projections, components of change, make-up by spatial and age distribution, urban/rural distribution, and educational attainment.

Historical Population Change

Appanoose County's total population grew rapidly through the middle and late 1800s and into the early 1900s until reaching its peak population of 30,535 persons in 1920. The rapid increase in population during this time period can be attributed to two primary factors - the influx of population expanding westward into the newly settled area of the state and the construction of railroads. The subsequent development of the coal mining industry caused the most rapid period of growth.

Since reaching its peak in 1920 as an agricultural and mining area, Appanoose County has experienced a continuous decline in population. The most severe declines occurred between 1920 & 1930 due to the decline of the coal industry. Substantial declines have followed since 1930 due to a variety of factors including: losses in the coal mining, agricultural, and manufacturing industries.

The trend of declining population in Appanoose County is not unlike that of many neighboring counties, although the percentage change in population from decade to decade in Appanoose has been more severe. The County's tendency to rely on only a few base economic sectors has resulted in a continual loss of population, relative to the State of Iowa's which has seen a steadily increasing population through the 1970s. Early declines can be attributed to the county's coal mining industry. Later declines can be traced to manufacturing and agricultural losses.

Population Projections

Projecting local population growth, or decline, is a crucial element in any community or county planning process. Projecting trends in population change is necessary in order to determine future needs (or lack thereof) in areas such as: employment, housing, education, recreation, and public services. Through projections, an area can better understand how it is expected to change and how it can prepare for that change.

Table 3.1, on the following page, documents population trends in the County, in the Region, and in the State for the years 1850 to the present. The table also includes decennial projections for the years 2000 to 2020. Figure 3.1, following the table, illustrates the County's declining population. Woods and Poole Economics, a respected Washington D.C. firm, predicts that Appanoose County will see a gradual decline in population (4.5%) from 1995 to 2020 as will the Area XV Region (3.8%). However, the State of Iowa is projected to see moderate growth through this time period (7%). By population, Appanoose County ranks 59th among all 99 Iowa counties.

Table 3.1: Population Trends, 1850-2020

Year	Appanoose County		Area XV Region		State Of Iowa	
	Population	% Of Change	Population	% Of Change	Population	% Of Change
1850	3131	n/a	55546	n/a	192214	n/a
1860	11931	281.1	113426	104.2	674913	251.1
1870	16456	37.9	157449	38.8	1194020	76.9
1880	16636	1.1	179073	13.7	1624615	36.1
1890	18961	14	182497	1.9	1912297	17.7
1900	25927	36.7	222613	22	2231853	16.2
1910	28701	10.7	208029	-6.6	2224771	-0.3
1920	30535	6.4	206988	-0.5	2404021	8.1
1930	24835	-18.7	197375	-4.6	2470939	2.8
1940	24245	-2.3	198484	-0.6	2538268	2.7
1950	19683	-18.8	180831	-8.9	2621073	3.3
1960	16015	-18.6	167216	-7.5	2757537	5.2
1970	15007	-6.3	153825	-8	2825368	2.4
1980	15511	3.4	153307	-0.3	2913808	3.1
1990	13743	3.4	139144	-9.2	2776831	-4.7
1995*	13674	-0.2	140128	0.7	2841764	2.3
2000**	13580	-1.2	138280	-0.6	2884120	3.9
2010**	13280	-2.2	136250	-1.5	2965470	2.8
2020**	13060	-1.7	134740	-1.1	3059350	3.2

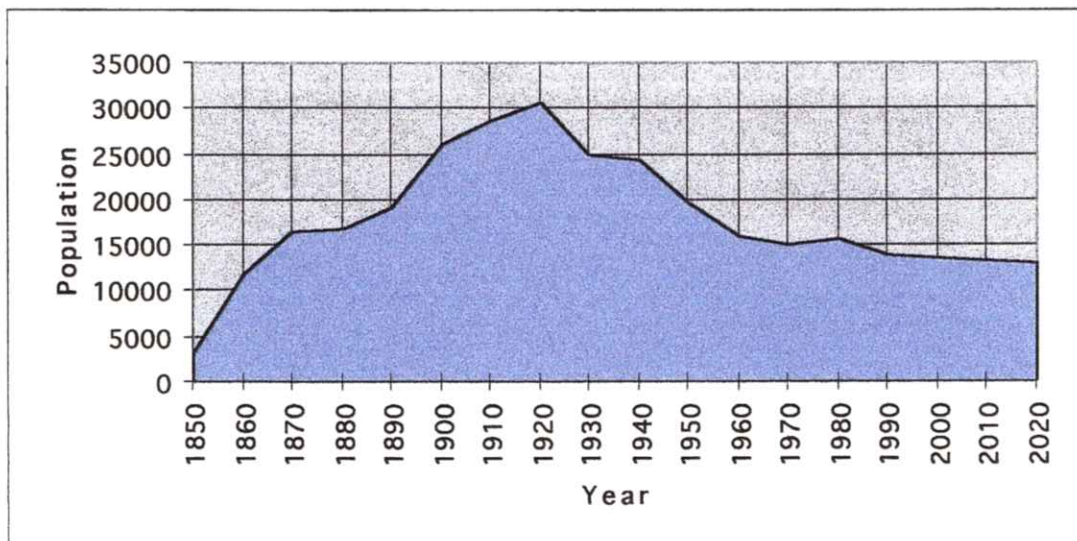
Source: U.S. Census Bureau

* U.S. Census Bureau Estimate, July 1995

** Woods and Poole Projections

n/a = information not available

**Figure 3.1:
Appanoose County Population,
1850-2020**



Components of Change

To better understand the impact population changes possess, one must first understand why the changes occurred. A revealing component of the population change is the cause of the change. Components of change give an in-depth view of the causes of population changes. This is done by examining the natural change (births vs. deaths) and the net migration figures. Past figures reveal that migration patterns have had the greatest impact. From 1950-1990, Appanoose County experienced a natural increase of 788 persons. During the same period, 6748 persons migrated out of the County which resulted in a net loss of 5960 persons. Migration out of the County has occurred in substantial numbers. This is, likely, due to those leaving in search of employment opportunities and/or to retire.

Table 3.2: Appanoose County Components of Change, 1950-1990

	Natural Change	Net Migration	Net Change
1950-1960	1032	-4720	-3688
1960-1970	-157	-851	-1008
1970-1980	-119	623	504
1980-1990	32	-1800	-1768

Source: U.S. Census Bureau

Population Composition

Another important planning consideration is the distribution of the population among various age groups. Trends and projections based upon composition of the population can assist in identifying future needs in areas such as: employment opportunities, housing, educational facilities, and recreation. Table 3.3 breaks down population by age groups for the County.

Distribution of the County's population in three primary categories: school-age (0-19), working-age (20-64) and the typical retired-age group (65+); has undergone a fairly steady and gradual change. The general indication is that the population of Appanoose County is aging just as is the population of surrounding counties and the State. However, the composition of the County differs from that of the State.

Figures reveal that there is a moderately higher percentage of elderly in the County compared to the State of Iowa as a whole. In 1990, Appanoose County's 65+ age group represented 21.2% of the population compared to 15.4% for the State. Projections indicate that this age group will continue to increase proportionately across all levels - County, Regional, State, and National. By 2020, the 65+ age group is projected to represent 28.1% of the total Appanoose County population compared to 21.3% for the State.

Since 1950, the number and percentage of persons in the school-age category has gradually decreased. In 1950 this segment represented approximately 33% of the population. By 1990 it had declined to 29%. Projections indicate that this age group will continue to decline in proportion to approximately 22.6% of the County's total population by the year 2020.

Between 1950 and 1970, the working-age segment of the population also experienced a gradual decline. However, as the baby boom generations have begun to move into and through the working age segment, a gradual increase was noticed in 1980. Following 1980, a slight decline resumed with projections indicating a leveling off over the next two decades.

As was previously mentioned, the retired-age segment has been steadily representing a greater percentage of the County's total population. This segment of the population has changed most dramatically of the three primary categories. This fact is evidenced by the advanced median age of the Appanoose County population. In 1980, the County's median age was 34. By 1990, this figure had risen to 38 and it is projected to reach 50 by the year 2020.

Table 3.3: Population by Age Distribution for Appanoose County, 1950-2020

Year	1950	1960	1970	1980	1990	2000*	2010*	2020*
Age								
under 5	1726	1336	986	1197	1130	810	750	720
5-14	3364	2665	2638	2253	2007	1850	1640	1550
15-19	1424	1147	1370	1362	840	1030	880	800
%	33.0	32.1	33.3	31.0	29.0	26.9	23.4	22.6
Age								
20-34	3371	2029	2193	3130	2276	1940	1930	1730
35-54	4708	3848	3169	2874	3250	3690	3350	2810
55-64	2207	1896	1819	1804	1270	1410	2000	2150
%	52.3	48.5	47.9	50.3	49.2	51.3	53.4	49.3
Age								
65+	2883	3094	2832	2891	2930	2980	3090	3820
%	14.6	19.3	18.9	18.6	21.2	21.7	22.7	28.1
Total	19683	16015	15007	15511	13820	13730	13640	13580
Median Age	34.8	39.8	37.4	34.0	38.1	41.7	46.4	49.8

Source: U.S. Census Bureau

*1996 Woods And Poole Projections

Geographic Distribution

The geographic distribution of population can provide valuable information in determining if and where future housing, public facilities, and commercial services should be provided and/or encouraged to locate. Table 3.4 shows the population distribution among urban and rural areas for the County (a community is defined as urban if its population exceeds 2,500). Since 1930, the percentage of urban population has increased by approximately 10%. However, dramatic declines in the total population make this figure misleading.

Although a 10% increase was experienced, the urban population actually declined by 5346 persons from 1920-1990. Some of this can be attributed to the changing urban/rural status of some communities (some fell below the 2,500 population level) while other changes are the result of population decline in general.

Table 3.4: Appanoose County Urban/Rural Distribution, 1950-1990

	1950	1960	1970	1980	1990
Urban					
No.	7625	6629	6531	6558	5936
%	38.7	41.4	43.5	42.3	43.2
Rural					
No.	12058	9386	8476	8953	7807
%	61.3	58.6	56.5	57.7	56.8

Source: 1990 U.S. Census

Table 3.5, below, documents the distribution of population by townships in Appanoose County between the years 1950 and 1990. The City of Centerville makes up approximately 43.2% of the County's population.

Table 3.5: Spatial Distribution of Population for Appanoose County (By Township), 1950-1990

TOWNSHIP	1950	1960	1970	1980	1990	% (1990)
Bellair	981	766	710	697	581	4.2
Caldwell	840	574	484	537	438	3.2
Centerville, City of	7625	6629	6531	6558	5936	43.2
Chariton	295	199	92	154	133	1.0
Douglas	275	239	206	220	169	1.2
Franklin	327	286	195	210	184	1.3
Independence	386	312	165	239	190	1.4
Johns	558	439	430	449	414	3.0
Lincoln	443	343	245	337	233	1.7
Pleasant	1264	1040	938	1052	769	5.6
Sharon	285	217	208	244	188	1.4
Taylor	1005	892	943	993	901	6.6
Udell	601	513	453	411	452	3.3
Union	252	225	180	178	162	1.2
Vermillion	619	537	669	795	979	7.1
Walnut	2036	1197	1211	1154	956	7.0
Washington	1326	1017	998	923	767	5.6
Wells	565	390	349	360	291	2.1
COUNTY	19683	16015	15007	15511	13743	100.0

Source: 1990 U.S. Census

Educational Attainment

Analysis of educational attainment figures can serve several purposes. First, the information is useful in providing a general indication of the education and training that the population possesses. This is valuable information because the education level of the population is a variable to economic productivity and, consequently, can have a significant impact on the economic well-being of an area. Secondly, an assessment of the education system can be made. It can be determined if adequate educational facilities and opportunities are being made available to the population. From this information it is possible to determine the effectiveness of the educational opportunities and the quality of the education offered in the area.

As economies continue to shift, placing more emphasis on service industries and high technology, the educational attainment of the county's residents will play an increasingly important role in the County's ability to stabilize its economy and population base. The human element is essential for the development of rural areas. The economic vitality of rural communities depends on the availability of a high-quality labor force.

Education levels for the County have improved over the years; however, when compared to state levels they remain lower. Table 3.6 indicates that, in 1990, Overall, Appanoose County's education attainment rates were slightly behind the Region, the State, and the Nation. Between 1970 and 1990, High school completion rates have risen quite dramatically. There has been a sharp decline in the number of persons not completing high school and a corresponding increase (20%) in the number of persons who have completed high school. On the other hand, college completion rates for the County, Region, and State still lag behind the Nation's rate.

The Iowa Business Council has documented that Iowa's employers are now requiring higher levels of basic skills of their workers as compared to any other time in history. Likewise, it is known that many young people who leave the area for college or continued educational programs do not return to establish careers. Therefore, it is in the best interest of the county's economy for public schools to expand basic skills learning for students not planning on attending college or continued educational programs as these young people are most likely to comprise the county's future labor force.

Table 3.6: Educational Attainment, 1990
(By Percent - Persons 25 Years and Over)

	Did Not Complete High School			Completed High School Only			Completed 4 Yrs. of College or More		
	1970	1980	1990	1970	1980	1990	1970	1980	1990
County	53.1	38.0	27.9	41.6	52.9	60.6	5.3	9.1	11.5
Area XV*	47.7	34.1	24.7	46.2	56.5	63.4	6.1	9.4	11.8
Iowa	41.1	28.5	19.9	49.8	57.6	63.2	9.1	13.9	16.9
U.S.	47.7	33.5	24.8	41.7	50.2	54.9	10.7	16.2	20.3

Source: U.S. Census Bureau

*Note: Regional figures represent an average for the ten counties

Summary of Findings - Section Three

- ⇒ The County has experienced a substantial decline in population since the mid-1920s. Projections are for a gradual decline over the next 25 years.
- ⇒ The continued decrease in population will place a heavier tax burden on remaining residents making it more difficult to maintain and improve public infrastructure and services.
- ⇒ The County's population will continue to grow older and demands for elderly services will increase.
- ⇒ Persons will continue to migrate out of the County in search of employment opportunities, unless additional opportunities can be provided within the County.
- ⇒ County residents obtaining college degrees will continue to seek employment opportunities outside the County.
- ⇒ Basic skills instruction in the public schools must be expanded in order to enhance the marketability of the County's labor force.
- ⇒ The County's population will continue to become more urbanized as farm consolidation takes place.
- ⇒ The County's low population density provides a high quality living environment for its residents.

SECTION FOUR - ECONOMIC ANALYSIS

The development of an area is invariably related to the economic well being of its primary or basic industries. Appanoose County's historical reliance upon a limited number of primary industries (agriculture and coal mining) has taken it from a fast growing, thriving economy through periods of severe and moderate decline. The continued decline which the county has experienced has resulted in several hardships, such as: out-migration of the population, loss of property tax revenue, difficulty in maintaining and improving public infrastructure and services, and low incomes.

The extent to which such conditions will continue to exert an influence upon the County's activities and functions must be recognized. The analysis of trends in labor force size, employment, income and the condition the County's primary industries are an important factor in determining the county's ability to maintain services and accommodate potential change and new growth.

Labor Force

The size and composition of the County's labor force is an important factor to consider relative to its ability to foster new economic growth within or attract new growth from outside. A County's labor force is defined as the number of males and females 16 years old and older who are either currently employed, unemployed, or available for employment. Table 4.1 offers labor force characteristics for the County, Region, and State from 1970 to 1990. In 1970, Appanoose County's labor force was composed of 5508 persons, of which 65% were male and 35% were female. Even though Appanoose County's population decreased between 1970 and 1980, the size of the labor force grew to 6289 persons by 1980. Again from 1980 to 1990, the population declined while the labor force grew.

Much of that increase is due to the number of females entering the labor market. In 1980, nearly 700 more females were employed than in 1970. This trend is likely to continue as women gain more acceptance in the work place and as a second income becomes more desirable, if not necessary, for Appanoose County residents. Additional growth in the labor force can be attributed to more people forgoing retirement to stay in the work force longer. Also, a substantial portion of the population decline occurred in age groups that don't make up a large portion of the labor force, such as the 0-17 age group.

Table 4.1: Labor Force Characteristics, 1970-1990

	County		Area XV		Iowa	
	No.	%	No.	%	No.	%
1970						
• Total Labor Force	5508	100.0	59265	100.0	1149156	100.0
• Employed	5176	94.0	56134	94.7	1106855	96.3
• Unemployed	332	6.0	3096	5.3	40953	2.7
1980						
• Total Labor Force	6289	100.0	66243	100.0	1373914	100.0
• Employed	5600	89.0	61970	93.5	1304638	95.0
• Unemployed	689	11.0	4147	6.5	69276	5.0
1990						
• Total Labor Force	6360	100.0	66090	100.0	1403883	100.0
• Employed	5930	93.2	62460	94.5	1340708	95.5
• Unemployed	430	6.8	3630	5.5	63175	4.5

Source: U.S. Census Bureau

Labor Force Participation

Appanoose County labor force participation rates have consistently been lower than those of the State of Iowa. Male and female participation rates both were approximately 10% below those of the state. In addition, State rates remain substantially behind National participation rates. A recent study (Iowa Work force 2010) suggests that labor force participation rates in Iowa will grow minimally in the future. It is anticipated that an 80% participation rate for men, and a 70% participation rate for women are near the practical upper limits (IDED). Appanoose County will not likely attain this level of labor force participation for some time.

Table 4.2: Labor Force Participation Rates, 1970-1990

AREA	1970		1980		1990	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
County	69.0	32.3	67.3	41.4	67.6	47.5
Area XV	67.9	67.9	71.6	42.3	71.1	50.7
Iowa	71.5	71.5	76.5	50.0	75.0	57.8
U.S.	79.7	79.7	77.4	41.5	88.8	68.3

Source: U.S. Census Bureau

Unemployment

Unemployment statistics do not actually report total unemployment. Some persons are not considered in the labor force, even though they would be interested in employment if job opportunities were present. Moreover, anyone, particularly those in rural areas, is considered to be employed even though they are likely to be employed on less than a full-time basis. These people might more appropriately be classified as underemployed. Many consider the unemployment rate as a poor indicator of well-being and labor force since it ignores underemployment, discouraged workers, and persons outside the labor force who would enter if conditions changed. This must be kept in mind when analyzing the following figures.

Changes in unemployment for the County are very significant in economic analysis. If the number of people unemployed and the unemployment rate are both increasing, this indicates a drastic need for new sources of employment and may forecast a considerable exodus of people from the County. On the other hand, if the number of unemployed actually declines, this indicates that new jobs have been created in more than sufficient numbers to accommodate new entrants into the labor force or that some of the surplus labor force has migrated elsewhere.

Table 4.3: Unemployment Rates, 1970-1994

AREA	1970	1980	1982	1984	1986	1988	1990	1992	1994
County	6.7	10.5	14.1	11.5	9.6	6.6	7.1	6.1	5.6
Area XV	4.4	6.9	10.5	8.6	8.9	6.0	5.1	6.1	4.6
Iowa	3.3	5.7	8.5	8.2	7.0	4.5	4.2	4.6	3.7
U.S.	4.9	7.1	9.7	7.5	7.0	5.5	5.4	n/a	n/a

Source: 1970, 1980 U.S. Census Bureau
 1982-1994 Department of Employment Services
 n/a = information not available

Income

Income data is useful in making comparisons between counties and comparing a county to the State and to the U.S. However, in order to obtain a clearer picture of income profiles in a county, review of the distribution of families by income groups is necessary. It is possible for two areas to have identical median family incomes but significantly different family-income profiles.

Income comparisons can be useful in determining a county's well being. The Iowa Department of Economic Development has stated: "The single best measure of our standard of living is Iowa's relative performance in terms of per capita income ... " If Appanoose County's per capita income is compared to the State and the U.S., a significant deficiency is evident.

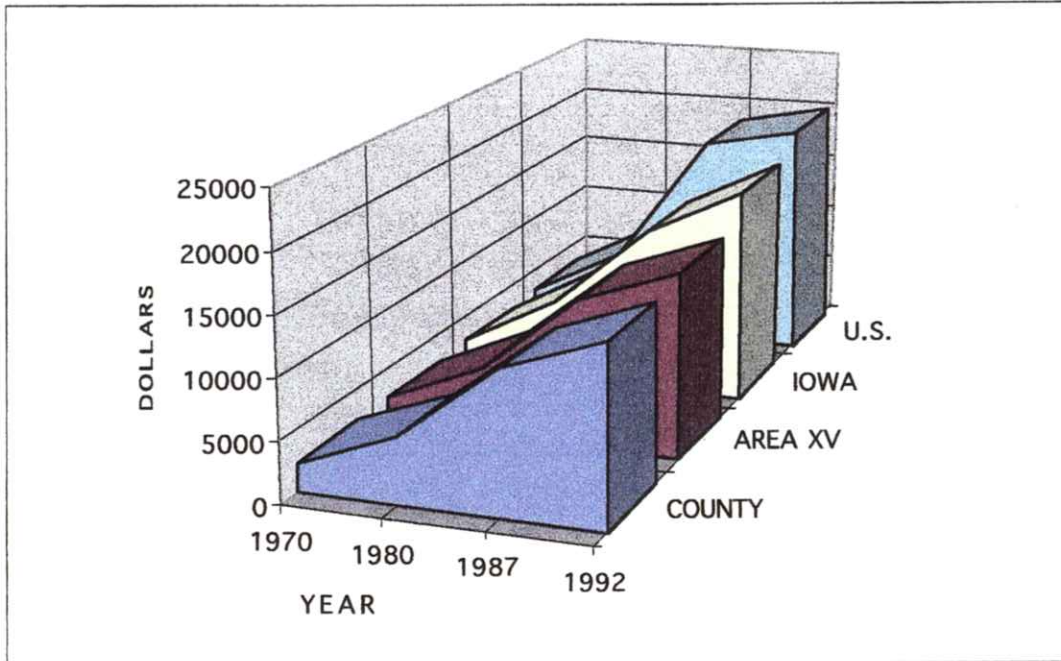
Per capita incomes have improved in the past twenty years. However, when those improvements are compared to the State and the U.S., the indication is that the Appanoose County per capita income is actually lower in 1992 than in 1970. Table 4.4 compares per capita incomes between 1970 and 1992. Figure 4.1 offers a visual representation of per capita incomes. In 1970 the Appanoose County income was approximately 84% of the state per capita income. In 1992 that figure had slipped to approximately 81%. When county income levels are compared to the U.S., the 1970 county income was approximately 77% of the U.S. income. By 1992 the county per capita income declined to 73% of the U.S. income.

Table 4.4: Per Capita Income, 1970-1992

	1970	1980	1987	1992
County	\$2,414	\$5,483	\$11,863	\$14,788
Area XV*	\$2,492	\$5,951	\$12,701	\$15,701
Iowa	\$2,884	\$7,136	\$14,230	\$18,275
U.S.	\$3,119	\$7,298	\$18,543	\$20,139

Source: Iowa Counties, figures from Statistical Abstract of U.S., Table 691
 * Average of county incomes

**Figure 4.1:
Per Capita Income, 1970-1992**



When making an assessment of income levels by per capita comparison, it is possible or likely with a smaller population sample that the average can be easily skewed by a few very high or very low income individuals. By comparing the distribution of families among the various income levels the influence of specific incomes is eliminated. Table 4.5 shows that family income distribution among the different income categories differs greatly between the County and the State of Iowa.

Table 4.5: Median Income by Household, 1990 (1989 dollars)

AREA	HOUSEHOLD INCOME	FAMILY INCOME
County	\$17,833	\$22,863
Area XV*	\$20,583	\$25,587
Iowa	\$26,229	\$31,659
U.S.**	\$29,943	\$35,353

Source: U.S. Census

*Average for all counties within Region

**Statistical Abstract of the U.S., Census Bureau

If the income categories are combined to three groups and compared there is a significant difference between the County and the State. In 1979, approximately 52% of the families in Appanoose County earned less than \$15,000 as compared to only 33.2% for the State as a whole. Comparison of families in the \$15,000 - \$25,000 income category reveals that the County and the State possess a similar percentage of families. Appanoose County contains approximately 30% in this range while the State contains 33%. The other income category included those who earned in excess of \$25,000. In this category the County was comprised of only 17.8% of the total families while the State contained nearly twice as many at 34.0%.

It must be noted that the family income figures are 1979 numbers and that the income levels have changed significantly since then. However, the distribution of family incomes among the various levels is likely to be very similar to those in the past. It should also be noted that the largest category of each area is significantly different. For Appanoose County the largest category containing 18.9% of the families is the \$10,000 - \$14,999 category. For the State of Iowa the largest category is the \$25,000 - \$34,999 category which contains 19.8% of the families.

Poverty Levels

Poverty rates could also be considered a measure of standard of living. As the income levels have increased, the poverty levels have declined slightly. This indicates that, overall, the population was "better off" in 1987 than in 1970. Although rates increased slightly between 1987 and 1991, they are still lower than in 1970 and 1980.

The origination of the poverty level was defined by the Agriculture Department's 1955 survey of food consumption. The survey noted that "families of three or more persons spend approximately one-third of their income on food". Hence, the poverty level for families was set at three times the cost of the family food plan. (These figures are adjusted annually.) For smaller families and persons living alone, the cost of the economy food plan was multiplied by factors that were slightly higher in order to compensate for the relatively larger fixed expenses for these smaller households.

Table 4.6 indicates the percentage of persons who were below the poverty level previously defined. In 1991, the poverty level for the State was 11.4%, a minimal increase from 1987. Rates for the Area XV Region and Appanoose County also exhibited increases during this time period indicating a possible trend.

Table 4.6: Poverty Rates, 1970-1991

	1970	1980	1987*	1991
County	20.8	17.3	14.6	16.2
Area XV	18.1	15.5	14.7	15.5
Iowa	11.6	9.7	10.7	11.4
U.S.**	12.6	13.0	13.5	n/a

Source: U.S. Census Bureau

*Department of Education

**Statistical Abstract of the U.S.

n/a = information not available

Employment by Industry

Review of this information can reveal the relative importance of various types of economic activities in the County. By comparing the profiles, it is easier to visualize the areas in which the County may be non-typical.

In oversimplified terms, if the County has more than the national share of the total employment engaged in a specific sector, it is usually an exporter of that product or service; while if the area has a lower proportion of its total employment engaged in a particular category than the National average, it is an importer of that type of product or service. Therefore, this data could be used to determine which industrial categories might be strengthened in the County through import substitution so that the area can produce a higher proportion of its own needs. This data can also be used to determine the economic categories which are the strongest ; It is in these areas that it may be the easiest to target industry expansion in order to increase employment.

Table 4.7 identifies the 1988 Appanoose County employment make-up. This table indicates that the economy is heavily reliant upon the manufacturing and retail sectors while the finance, insurance, and real estate sector along with the service sector should be expanded upon if they are to more closely reflect the U.S. economy.

Table 4.7: Employment By Industry, 1980 & 1990

INDUSTRY BY TYPE	COUNTY	AREA XV	IOWA
1980			
Construction	3.2	4.1	5.1
Manufacturing	22.6	29.2	28.5
Transport./Util.	11.5	5.1	5.3
Wholesale Trade	7.7	8.8	8.5
Retail Trade	25.6	25.1	22.6
F.I.R.E.	3.7	5.3	6.9
Service	21.5	25.8	21.7
Other*	4.2	2.5	1.4
1990			
Construction	3.2	4.0	4.1
Manufacturing	29.2	25.8	22.7
Transport./Util.	9.6	4.6	5.6
Wholesale Trade	4.6	6.8	7.3
Retail Trade	25.3	26.5	23.5
F.I.R.E.	3.8	5.3	7.5
Service	22.6	25.8	28.3
Other*	1.7	1.3	1.0

Source: *County Business Patterns, U.S. Census Bureau*

*Other category includes: *Ag. Services, Forestry, Fishing, & Mining*

F.I.R.E. denotes the following: *Finance, Insurance, and Real Estate*

Number of Employees/Establishment

The primary purpose of this information is to indicate the number and size of establishments by economic sectors. Review of this information should assist in understanding the differences as compared with the State and U.S. The figures indicate whether the local area is predominantly comprised of small businesses, industrial firms, and farms, or if the area contains large establishments which individually may control a significant share of specific economic sectors.

Generally, most establishments employ fewer persons than the national average for each category. This can be expected because of the smaller population base as compared to the average population served by most establishments. However, the Appanoose County manufacturing sector employs approximately the same number of employees per establishment as does the U.S. Table 4.8 reveals what may be the most significant figures. The table indicates that two manufacturing establishments employ 100-249 employees while another employs 250-499. With these three manufacturing firms comprising such a large portion of the manufacturing sector the impact of a shut-down by one or more of the plants could have a devastating affect on the county.

Table 4.8: Firm Size, 1986

INDUSTRY BY TYPE	COUNTY	AREA XV	IOWA
1980			
Construction	3.7	4.8	6.8
Manufacturing	53.0	64.1	77.1
Transport./Util.	16.7	9.6	15.6
Wholesale Trade	6.9	8.1	10.4
Retail Trade	7.7	9.0	10.6
F.I.R.E.	6.3	7.6	10.6
Service	8.4	9.0	11.6
Other*	4.5	3.4	3.4
1990			
Construction	4.0	8.0	6.7
Manufacturing	3.2	55.1	62.4
Transport./Util.	11.1	7.9	15.4
Wholesale Trade	5.2	7.4	10.8
Retail Trade	7.2	9.9	11.9
F.I.R.E.	6.7	7.3	12.3
Service	7.1	8.8	12.5
Other*	7.9	3.3	2.5

Source: *County Business Patterns, U.S. Census Bureau*

*Other category includes: Ag. Services, Forestry, Fishing, & Mining

F.I.R.E. denotes the following: Finance, Insurance, and Real Estate

Economic Shifts

During the past two decades the economy of Iowa and Iowa counties have made significant changes. Appanoose County is no exception. Several of the economic sectors have made dramatic shifts in terms of total earnings and employment. The most significant changes are the declining earnings and employment in farming, construction, and retail sectors. Conversely, several sectors have made shifts which have helped diversify the Appanoose County economy. The service, finance, insurance, real estate, and wholesale sectors have each experienced increased earnings and employment. A change in the manufacturing sector also occurred. From 1970-1990 the earnings in the manufacturing sector also decreased. The changes are likely the result of new technologies and the automation of the manufacturing industry. Projections through the year 2020 indicate that the manufacturing and services sectors will become stronger while most other sectors remain the same.

Table 4.9: Earnings/Employment (millions, 1987 \$)

SECTOR	1970	1980	1990	2000*	2010*	2020*
Farm	12.67	1.11	7.57	3.55	3.55	3.44
Ag. Services, other	0.41	0.64	0.43	0.89	1.04	1.23
Mining	1.42	2.61	1.14	1.42	1.61	1.85
Construction	3.89	5.13	4.38	5.00	5.41	5.74
Manufacturing	15.70	18.36	21.89	31.51	41.53	49.88
Transport/Comm/Util	15.40	13.93	12.10	13.99	15.86	17.84
Wholesale Trade	2.07	5.15	2.50	2.46	2.93	3.37
Retail Trade	11.82	11.47	8.59	10.72	12.44	14.04
Fin/Ins/Real Estate	1.92	2.97	2.18	2.93	3.69	4.58
Services	13.78	20.52	12.59	16.82	20.89	25.45
Fed. Civil. Govt.	1.83	2.33	2.41	2.61	2.94	3.15
Fed. Military Govt.	0.24	0.25	0.44	0.42	0.46	0.50
State & Local Govt.	9.02	9.84	10.92	13.57	15.12	16.34
TOTAL EARNINGS	90.18	94.30	87.12	105.89	127.47	147.41

Source: 1996 Woods and Poole Projections

*Projections

Table 4.10: Major Employers

Viskase Corporation	Modern Muzzle Loading Inc.
Rubbermaid Comm. Products	Care initiatives Care Center
Wells Mfg. Co.	Rathbun Regional Water Assn.
St. Joseph's Mercy Hospital	Fareway Store Inc.
Young Radiator Co.	Easter Food Store
Wal-Mart Stores Inc.	Iowa Trust & Savings Bank
Hy-Vee Food Store	Jim Buban Motors
IES Industries Inc.	Farner-Bocken, Centerville
Golden Age Care Center	Appanoose Recreation Inc.
Iowa Steel & Wire Co.	Pizza Hut of Centerville

Source: Iowa Workforce Development Department, 1994 Annual Handbook of Employment and Wages Covered by Unemployment Insurance.

Agriculture

The production of agricultural products has been, and continues to serve as, one of Appanoose County's primary industries. However, the farming industry's ability to remain the County's primary employment sector has gradually decreased over the past several decades. Improvements in farm machinery and farming methods, as well as changing market trends for agricultural products, have resulted in a gradual decrease in the number of farms and the need for many farm operators to find secondary (or primary) employment off the farm. Several statistical trends point to continued decreases in agricultural employment.

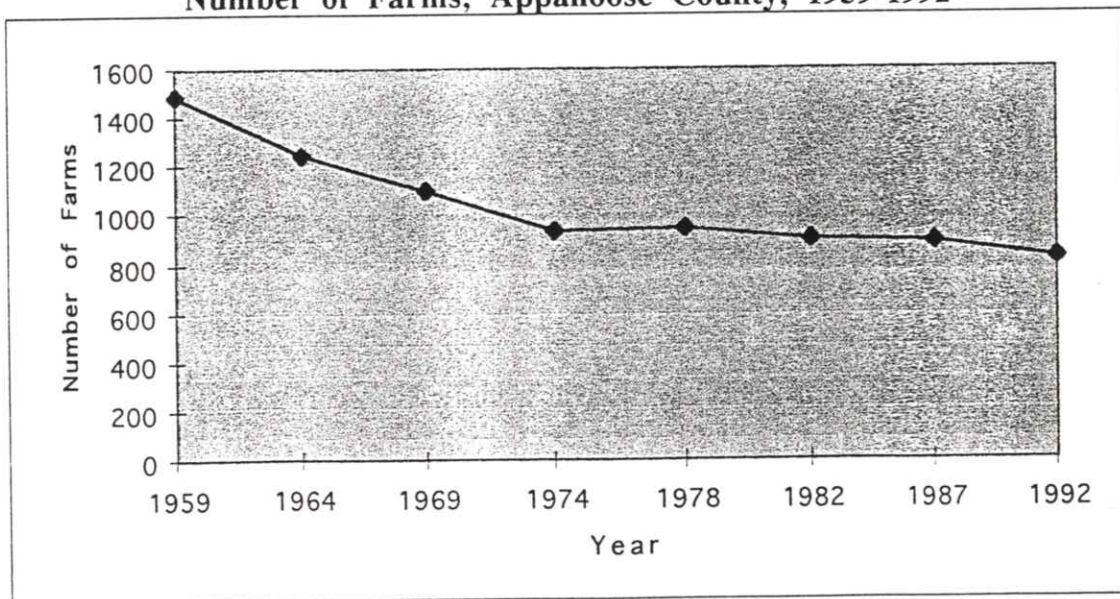
Table 4.11 shows the number of farms for the County, Region, and State while Figure 4.2 illustrates the decline. Between 1959 and 1992 the number of farms in Appanoose County decreased by 45% to a total of 827 farms.

Table 4.11: Number Of Farms

YEAR	COUNTY	AREA XV	IOWA
1959	1490	14931	174707
1964	1244	13098	154162
1969	1108	11669	140354
1974	937	10247	126104
1978	950	9856	121339
1982	900	9402	115403
1987	891	8667	105180
1992	827	8041	96543

Source: U.S. Census of Agriculture

**Figure 4.2:
Number of Farms, Appanoose County, 1959-1992**



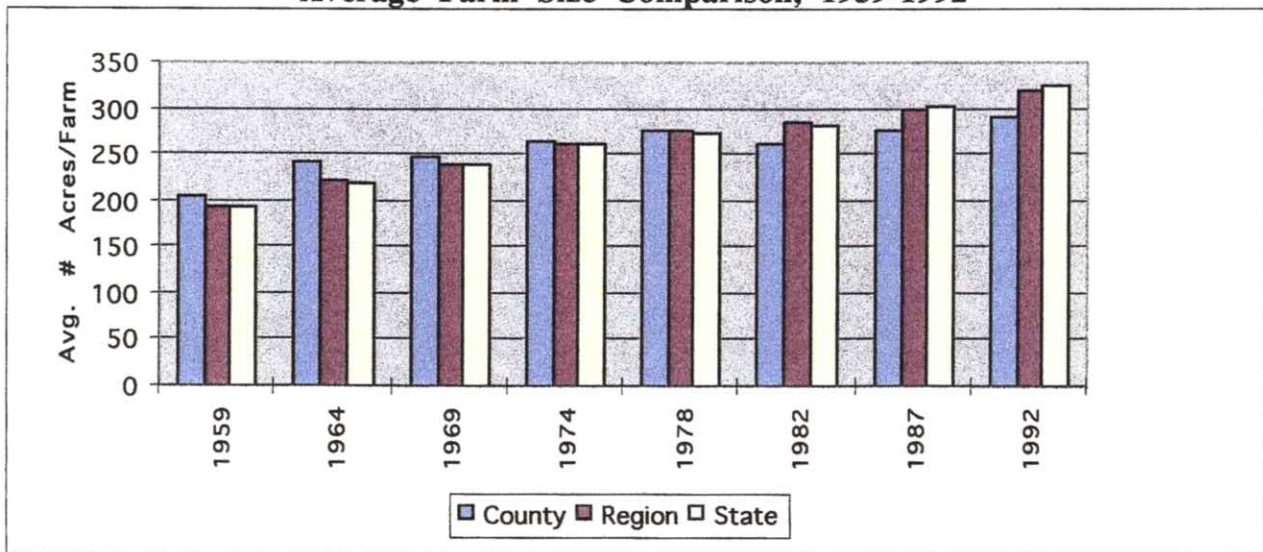
During the same time period, the average size of farms in the County increased from 204 acres in 1959 to 289 acres by 1992. Table 4.12 documents this trend of growing farm size while Figure 4.3 offers a visual comparison of the changing farm size for the County, Region, and State.

Table 4.12: Average Size Of Farms (acres)

YEAR	COUNTY	AREA XV	IOWA
1959	204	194	194
1964	241	221	219
1969	248	240	239
1974	264	263	262
1978	276	276	274
1982	263	285	283
1987	275	298	301
1992	289	318	325

Source: U.S. Census of Agriculture

**Figure 4.3:
Average Farm Size Comparison, 1959-1992**



Agricultural recessions, such as the recession experienced during the 1980s, and changing market trends have produced negative impacts upon the County's farm population (Table 4.13 highlights various farm operator characteristics for the County, Region, and State). For example, in 1992 the U.S. Census of Agriculture indicated that there were 827 farm operators in Appanoose County. Only 59% of those farm operators reported farming as their principle occupation. 41% of the County's farm operators consider some occupation other than farming to be their principle occupation; In addition, 30% of all Appanoose County farmers worked more than 200 days per year off the farm.

Appanoose County's farm operators are also aging. In 1992, the average farm operator was 55.4 years old in comparison to the state average of 50.3 years. This represents a difference of 5.1 years - a figure that was nearly half of that in 1982 (2.7 years).

Table 4.13: Farm Operator Characteristics

AREA	Total # of Operators	Principle Occupation		Oper. by Days Worked on Farm		Average Age
		Farming	Other	Any	200+	
County						
1982	900	528	372	461	300	50.3
1987	891	530	361	419	264	54.7
1992	827	489	338	392	251	55.4
Area XV						
1982	9816	6647	3169	4540	2699	49.9
1987	9082	5938	3144	4255	2588	51.9
1992	8041	4889	3152	4004	2581	53.0
Iowa						
1982	115413	86041	29372	25240	48480	47.6
1987	105180	75279	29901	46229	25928	49.3
1992	96543	66885	29658	42672	25568	50.3

Source: U.S. Census of Agriculture

These factors, combined with other recent trends such as the number of farms experiencing economic difficulties and the financial inability of many young people to undertake farming as an occupation indicate the potential for a continued loss of the rural farm population. Other negative possibilities include decreasing agricultural employment and changes in land ownership patterns. Nevertheless, it is unlikely that agricultural production will lose its stature as a primary exporter and base industry in the County.

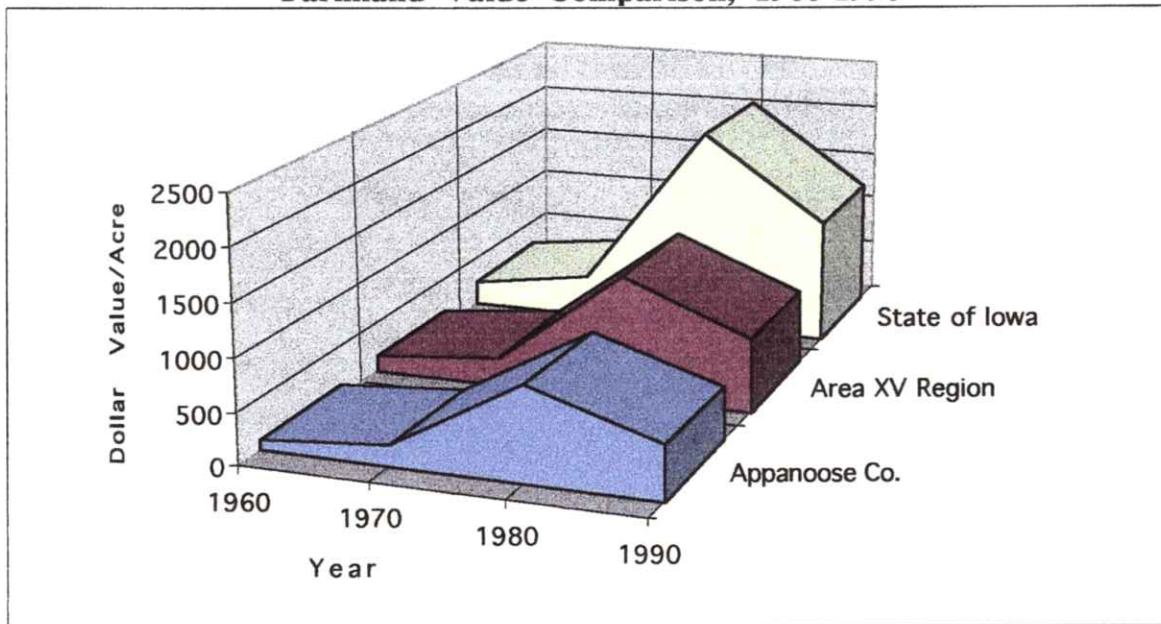
Table 4.14, below, documents the fluctuations in farmland value over time. Values in Appanoose County remain slightly lower than Regional averages and extremely lower than State Averages. In 1980, values reached their peak around the State. At that time the County's average value was 56% of the State's. In 1995, this disparity had risen to nearly 58%.

Table 4.14: Farmland Value (dollars/acre)

	1960	1970	1980	1990	1995
County	108	206	906	502	615
Area XV	162	272	1205	723	889
Iowa	261	419	2066	1214	1455

Source: Iowa State University County Extension Office

**Figure 4.4:
Farmland Value Comparison, 1960-1990**



Agricultural Income

The decline of the farming industry is exemplified in Table 4.15. In terms of net cash return per farm, Appanoose County produced only 48% of the State average. The Area XV Region did not fair well in comparison to the State, either - also producing only 48% of the State's average.

The productivity of the land, combined with farmers' reliance upon government payments make profits very marginal in many cases. Government payments accounted for 30.4% of the farm income in the County. In comparison to the Region, Appanoose County does not appear so bad off with regards to government payments. The average payment for all ten counties, combined, is 39.1% of the total farm income. Given the prediction that government reductions will limit future farm payments, it is very possible that many of the already marginal farms will be subject to failure.

Table 4.15: Farm Income, 1992

	County	Area XV	Iowa
# of Farms	827	8041	96541
Net Cash Return	\$10,891	\$10,969	\$22,718
Govt. Payment	\$4,761	\$7,044	\$7,749
% of Income	30.4	39.1	25.4
# Farms Receiving Payment	385	4583	61681
% Farms Receiving Payment	46.6	57.0	63.9

Source: 1992 U.S. Census of Agriculture

Sales figures from farming also reflect a diminishing agricultural influence on the local economy. Table 4.16 reveals that sales per farm have fluctuated and vary substantially from the State average. From 1978-1987, Appanoose County's agricultural sales per farm decreased by 6.5%. In 1987, sales per farm for the county were only 45% of the State's average. During the five-year period from 1987 to 1992, sales per farm in the County actually increased - by 14% compared to 1987 figures and by 7% compared to 1978 figures. For the State of Iowa, sales per farm increased by 42% between 1978 and 1992. The agricultural sector will continue to be an important part of the local economy. However, average local farms will earn far less in sales per farm than the State average.

Table 4.16: Agricultural Sales 1978-1992

	Sales per Farm			
	1978*	1982*	1987**	1992**
County	\$30,602	\$25,884	\$28,628	\$33,198
Area XV	\$47,022	\$53,053	\$52,336	\$53,977
Iowa	\$57,470	\$58,858	\$63,462	\$98,601

Source: *City/County Data Book, U.S. Census Bureau

**Census Of Agriculture, U.S. Census Bureau

Summary of Findings - Section Four

- ⇒ Agriculture is, and will continue to be, a major industry in the county in terms of employment and output.
- ⇒ Local farms, on average, earn far less than those of the State with regard to sales per farm.
- ⇒ By improving the farm operators' abilities to manage greater quantities of land, mechanization of agriculture has certainly contributed to the trend of a decreasing number of farms and farms of larger size.
- ⇒ The general trend of farm consolidation and secondary and/or primary off the farm employment indicates the need for new opportunities for employment in other sectors
- ⇒ There is a definite need for diversification to create a more balanced economy which is less susceptible to down turns in individual economic sectors.

SECTION FIVE - HOUSING CHARACTERISTICS

The availability of affordable, quality housing is an important factor in determining the future housing needs of the county, as well as the physical space that may be needed to accommodate the construction of new housing. Just as the cross section of the typical community (or county) will portray a variety of economic classes, so also must a community's housing stock provide a variety of living environments. From subsidized low-income units to townhouses, or rental apartments to modern single-family subdivisions, communities must provide living space for a wide range of needs. Housing, a basic need for all people, must be made available to assimilate upwards within the community and for persons wishing to enter or retire within the community. The availability of housing is an important factor in the community's ability to retain existing residents and generate new growth.

Three important factors that must be considered when analyzing the County's housing are the quantity, quality, and affordability of available housing units (for the purposes of this discussion, a housing unit is defined as any living space which provides separate kitchen and bathroom facilities; i.e.: an apartment, townhouse, single-family home, etc.). A statistical analysis of Appanoose County's housing stock indicates that a substantial percentage (38.7%) was constructed prior to 1939. Relatively few housing units were constructed between 1940 and 1970 (24.4%) with a substantial increase in construction occurring during the 1970s. Over 1700 homes or 26.7% of the County's total housing stock was built between 1970 and 1979. Between 1980 and March of 1990, 649 units have been built in Appanoose County, representing approximately 10% of the total stock. Table 5.1, below, breaks down the housing stock by the decade in which it was built (as well as those units built prior to 1939).

Table 5.1: Age Of Housing Units

Age	County		Area XV		Iowa	
	#	%	#	%	#	%
Pre-1939	2475	38.7	25885	42.5	399934	35.0
1940-1949	348	5.4	4880	8.0	90460	7.9
1950-1959	498	7.8	6113	10.0	147913	12.9
1960-1969	718	11.2	6745	11.1	159930	14.0
1970-1979	1714	26.8	11698	19.2	230514	20.2
1980-1990	649	10.1	5608	9.2	114918	10.0
Total	6402	100.0	60929	100.0	1143669	100.0

Source: 1990 U.S. Census

Data in Table 5.2 reveals an important consideration when analyzing the housing stock. The figures indicate that in 1970 the average number of persons per housing units was 2.46; In 1990, the figure had declined to 2.15. This indicates that the much of the present housing stock was constructed for larger households than what currently exist today.

Table 5.2: Persons/Housing Unit

	1970	1980	1990
County			
Total Persons	15007	15511	13743
Total Housing Units	6097	6602	6402
Persons/Housing Unit	2.46	2.35	2.15
Area XV			
Persons/Housing Unit	2.64	2.66	2.28
Iowa			
Persons/Housing Unit	2.93	2.60	2.43

Source: U.S. Census

Summary of Findings - Section Five

- ⇒ The high percentage of aged housing units in the County indicates the need for new housing construction and housing rehabilitation.
- ⇒ The County's low income level and increasing elderly population indicates a potential need for additional rental units.
- ⇒ New housing development should be encouraged to locate on existing, subdivided lots in areas containing the public infrastructure necessary to support this type of development.

SECTION SIX - TRANSPORTATION

The type and availability of transportation services is one of the most critical elements within the County. The location of transportation facilities such as paved highways, airport facilities, and rail spurs play a major role in shaping future land development patterns. The provision of railroads played an integral role in the early development of Appanoose County. Although rail access is still important to the County's economy, the provision of adequate highways and air transportation is of utmost essential, today. As the Nation's economy shifts to a more service-oriented economy and as manufacturing industries shift to "just-in-time" production, the need for adequate highway and air transportation systems will become much more important. This section of the plan provides a brief description of the County's existing transportation services.

Air Transportation

Appanoose County is served by a General Aviation Airport. The facility provides a 4,100 foot hard-surface runway equipped with lighting, Unicom radio, instrument landing system, VOR, and non-directional beacon. The facility provides access to Iowa's market and population centers requiring service by limited numbers of business jets and single or light, twin-engine craft.

Rail Transportation

Two rail lines serve Appanoose County. The Appanoose County Community Railroad, Inc. owns rail line that extends from Centerville to Albia and crosses the northeastern portion of the County. The Soo Line crosses the northwest portion of the county.

Passenger service for Appanoose County residents is provided by the Amtrak California Zephyr which traverses southern Iowa approximately ten miles to the north of the County. The nearest passenger stations are located in Ottumwa to the east and in Osceola to the west.

Highway Transportation

Appanoose County is served by a variety of State and County roads. The primary highway system provides access to interstate highways, metropolitan areas, and regional centers located outside the County. State Highway #2 bisects the County in an east-west direction providing access to Interstate #35, located west of Appanoose County. Iowa Highway #5, north of Centerville, provides access to the Des Moines Metropolitan area. Also, Highway #5 to Albia to Highway #137 will provide a route to Eddyville where the future, four-lane Des Moines/Burlington Corridor can be accessed. Highway #142 provides access to the Lake Rathbun area from the south and east. Highway #142 is accessible north from Highway #5 at Plano and west from Highway #2 at Moravia.

The primary highways passing through Appanoose County are generally in good to fair condition as rated by the Iowa Department of Transportation.

Transit Service

Public transit service is provided to Appanoose County residents by the 10-15 Transit system. 10-15 offers both fixed routes and demand-response service for a ten county area including Appanoose County. Service is primarily provided to elderly and disabled residents who cannot drive. However, all citizens may use the transit system regardless of age or income.

Out of a lack of demand, there are no urban transit systems within the County. At the present time there is no intercity private bus service available in the county, either.

Bicycle and Pedestrian Infrastructure

The bicycle as a form of transportation is gradually becoming more accepted across Iowa and more rapidly across the nation. It has long been recognized as a form of recreation with Iowa's primary focus on trails development. Within Appanoose County, bicycle trails are available at Lake Rathbun as multi-use, off-road facilities. Hiking Trails are available at Lake Rathbun, Honey Creek State Park, Lelah Bradley Park, and Sharon Bluffs Park.

Summary of Findings - Section Six

- ⇒ The type and availability of transportation services is one of the most critical elements within the County.
- ⇒ Although rail access is still important to the County's economy, the provision of adequate highways and air transportation is of utmost essential, today.
- ⇒ Appanoose County is served by a General Aviation Airport.
- ⇒ The primary highways passing through Appanoose County are generally in good to fair condition.
- ⇒ Public transit service is provided to Appanoose County residents by the 10-15 Transit system. At the present time there is no intercity private bus service available in the county.
- ⇒ As its population ages and as transportation becomes more costly, Appanoose County can expect to see an increased demand for transportation alternatives including public transit.

SECTION SEVEN - PUBLIC FACILITIES AND UTILITIES

Water

Water supplies throughout the County come from a variety of sources. The City of Centerville provides water from a municipal system while other smaller communities receive water from Rathbun Rural Water which uses water from Lake Rathbun. Those communities not receiving rural water use small, private wells.

Table 7.1: Community Water Supply Facilities

City	Source	Storage Capacity*	Average Consump.*	Peak Consump.*	Treatment Capacity*
Centerville	Res./Wells	1,250,000	700,000	980,000	2,000,000
Cincinnati	L.Rathbun**	n/a	n/a	25,000	n/a
Exline	L.Rathbun**	n/a	n/a	n/a	n/a
Moravia	L.Rathbun**	n/a	53,000	n/a	n/a
Moulton	L.Rathbun**	100,000	53,500	n/a	115,000
Mystic	L.Rathbun**	n/a	40,000	50,000	n/a
Numa	L.Rathbun**	n/a	n/a	n/a	n/a
Plano	L.Rathbun**	n/a	n/a	n/a	n/a
Rathbun	L.Rathbun**	n/a	n/a	n/a	n/a
Udell	L.Rathbun**	n/a	n/a	n/a	n/a
Unionville	L.Rathbun**	n/a	n/a	n/a	n/a

Source: Community Infrastructure Improvements Plan, 1995

*Note: Figures are in gallons

**Rathbun Regional Water Association

n/a = information not available

Sanitary Sewer

Sanitary sewer treatment is also provided by a variety of sources. The City of Centerville provides sanitary sewer treatment to its residents. Other smaller communities such as Moravia, Moulton, and Mystic utilize municipal lagoons for the treatment of sanitary sewer within the community. Other communities utilize independent septic sewer treatment systems within the community. Table 7.2 documents available information regarding community sanitary sewer systems.

Table 7.2: Community Sanitary Sewer Systems

City	Type of System	Design Capacity	Average Daily Flow	Peak Flow
Centerville	Treatment Plant	2,600,000	625,000	950,000
Cincinnati	n/a	n/a	n/a	n/a
Exline	n/a	n/a	n/a	n/a
Moravia	Lagoon	n/a	50,000	n/a
Moulton	Lagoon	117,000	78,000	117,000
Mystic	Lagoon	n/a	35,000	n/a
Numa	n/a	n/a	n/a	n/a
Plano	Septic	n/a	n/a	n/a
Rathbun	n/a	n/a	n/a	n/a
Udell	Septic	n/a	n/a	n/a
Unionville	n/a	n/a	n/a	n/a

Source: Community Infrastructure Improvements Plan, 1995
 n/a = information not available

Natural Gas

Natural gas service is provided to Appanoose County residents by IES Utilities, Inc. from the ANR pipeline. IES Utilities, Inc. provides natural gas to the City of Centerville.

Electricity

Electrical service is provided to Appanoose County residents by IES Utilities, Inc.

Schools

Four main school districts serve Appanoose County with several small fragments being served by districts outside the County. The primary school districts include: Moravia, Centerville, Seymour, and Moulton-Udell. The other school districts serving a very small portion of the northeast and northwest corners of the County include: Wayne, Albia, and Blakesburg. (See School District Map.) In total, the County education system is comprised of eight elementary schools and four secondary schools. Table 7.3 lists enrollments for the various districts within the County.

Appanoose county is also served by several post-secondary schools in the area. Colleges serving the county include: William Penn in Oskaloosa and Buena Vista (satellite location) in Ottumwa. The only Community College serving the County is Indian Hills with a satellite location in Centerville; Indian Hills primary campus is in Ottumwa. The only schools with Vo-Tech programs in the area are the Indian Hills campuses in Ottumwa and Centerville.

The Area 15 Education Agency has prepared a merger plan for schools with enrollment below 300. The only school district included in the plan is the Moulton-Udell district which would merge with Centerville if it is determined that the school can no longer operate effectively. Many different elements are considered in the criteria for evaluating the school systems. Items reviewed include: adequacy of the educational program, property valuation, condition of the existing buildings and equipment, transportation, economic factors as well as other factors.

Table 7.3: School Enrollments

School District	1975-1976	1989-1990	1995-1996
Centerville	2173	1689	1798*
Moravia	467	495	406
Moulton-Udell	411	301	288
Seymour	543	405	425

Source: Area XV Education Agency

*Centerville figure does not include non-public enrollment (St. Mary's Catholic - 65)

Health Care

Health care services are available in Appanoose County. A 60 bed hospital is centrally located in the county and is within two miles of Centerville. Seven physicians and 4 dentists provide professional services; Ambulance service, staffed with 9 paramedics, is available as well.

Emergency Services

The Appanoose County Law Enforcement Center provides police protection throughout the county. An E-911 system is being implemented and is scheduled to be fully operational by 1999. Fire protection is provided as per fire district boundaries by municipal and volunteer departments situated in Centerville, Cincinnati, Moravia, Moulton, Mystic, and Numa. (See Fire District Map.) Primary ambulance service is provided by St. Joseph's Mercy Hospital in Centerville.

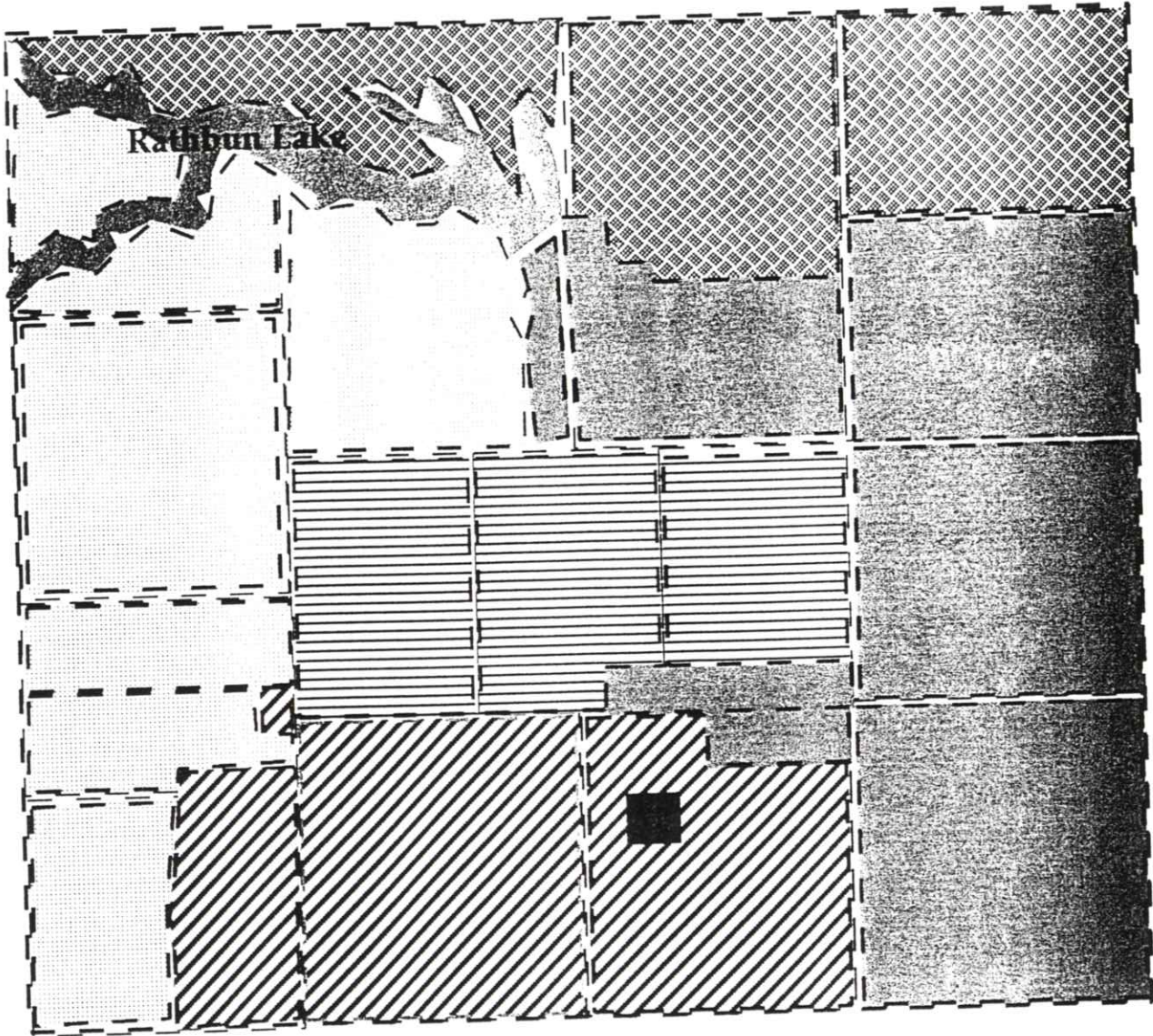
Recreation Resources

The presence of Lake Rathbun and the varied natural resources of Appanoose County provides residents with some of the best recreational amenities that the State of Iowa has to offer. For example, amenities include:

- 9 tennis courts
- golf course
- 10 city parks
- 3 state parks
- 2 lakes
- swimming, boating, camping, fishing, hunting
- state game preserve
- country club
- roller skating rink
- 6 ball parks (14 ball diamonds)
- equestrian trails
- wildlife management areas
- health clubs
- movie theaters
- rodeo arena
- public auditorium

Appanoose County Fire District Boundaries

Map is intended for general planning activities.



Cultural Resources

Appanoose County also offers a wide array of cultural opportunities which include:

- Centerville Municipal Band
- Appanoose County Historical and Coal Mining Museums
- Moravia Depot
- Moulton Depot
- Festivals
- Pancake Day
- Croatian Fest
- Moravia Fall Festival
- Moulton Jamboree
- Mystic Fourth of July
- Elm Grove Old Threshers Reunion
- Indian Hills Art Show
- Exline Family Gander Opry

Summary of Findings - Section Seven

- ⇒ Water is primarily provided by Rathbun Rural Water Association.
- ⇒ Sewage treatment, especially in smaller communities, must adapt to conform to DNR regulations.
- ⇒ The County offers or is of close proximity to varying levels of quality education.
- ⇒ Health care services and facilities, although somewhat limited, are available.
- ⇒ Appanoose County offers its residents a wide variety of quality cultural and recreational opportunities.

SECTION EIGHT - NATURAL RESOURCES

Familiarity with the County's natural resources is essential if physical growth and change is to be properly managed and directed into those areas of the County most suited to each individual type of development. Whether it be agricultural, residential, commercial, industrial, or resource-based uses of land, development must not harm our precious natural resources. This section provides a description of the County's natural resource base in the major topic areas of geology and soil resources, mineral resources, water resources, and agricultural resources.

Geology

The oldest parent material in the County is a series of beds deposited during the Des Moines sedimentary cycle in the Pennsylvanian period. The Pennsylvanian period includes four basic groups: the Kansas City group which contains deposits of limestone and shale; the Pleasanton Group which contains some sandstone, thin limestone beds, and minor amounts of coal; the Marmaton Group which contains alternating shale and limestone with some sandstone and coal; and the Cherokee Groups which includes deposits with carbonaceous shale, clay, siltstone, sandstone, thick coal beds, and minor limestone beds. There is a very wide range of thickness of these layers or beds.

Minerals

Within the various sedimentary layers deposited during the Pennsylvanian period are beds of limestone, shale of different colors and textures, and a few organic layers such as coal. There is a very wide range of thickness of these layers or beds.

In Appanoose County, coal deposits are of most note because of the significance coal had in the development of the County. As mentioned earlier, coal is known to have been mined in Appanoose County since 1857 and possibly was mined prior to that. Mining was a major industry for many years with as many as 80-90 mines operating at the same time. About 680 million tons of coal is estimated to have been originally present in Appanoose County which is an area of about 166,630 acres. Coal beds 14 inches thick or more may be present in an additional area of about 28,240 acres. Production reached its peak in Appanoose County in 1917 when more than 1.6 million tons were mined. By the mid-1960s, coal production was reduced to less than 37,000 tons. During that period of time, Appanoose County was the third largest producer of coal in the state of Iowa.

Coal production in the County is nearly non-existent today. The decline of the coal industry can be primarily attributed to the advent of petroleum resources as heating fuel, competition from western coal mining states, and stricter environmental regulations. The coal reserves in the County are high in sulfur content which, when burned, requires expensive emission treatment measures.

As stated previously, mineral deposits of gypsum, sand, gravel, and limestone are present in Appanoose County. However, mining of these minerals has been minimal to this point in time. Potential development of these resources is possible in the future.

Soils

Appanoose County is located in the Southern Iowa Drift Plain which is characterized by steeply rolling hills, table-like upland divides, and level alluvial lowlands. The County's bedrock is covered by a layer of unconsolidated materials which includes: sand, gravel, loess, till, and soil. The thickness of unconsolidated materials in the county ranges from 50 to 400 feet with the majority being composed of till and outcropping paleosols and lesser amounts of loess and alluvial deposits. Generally; the areas dominated by loess are located along the high and flat stream divides and provide good agricultural land; areas of till may be capped by loess but paleosols and glacial till are exposed on the hillsides making farm management difficult. Alluvial deposits are located in flood plains and may be composed of various textures of clays, sands, and gravels.

The most important unconsolidated material to the County is the soil. Most of the soils in Appanoose County were formed in glacial till or ice-laid material; loess or windblown material; alluvium; or water-laid material. A few small areas of eolian sands can be found along the Chariton River and in some places limestone and shale parent materials. General soils associations and characteristics of those soils located in Appanoose County are listed on the following page.

Soil Associations

A soil association is a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and it is named for the major soils. The soils in one association may occur in another, but in a different pattern.

Edina-Seymour-Clarinda (30% of county's land)

This association consists of nearly level soils on wide upland divides and of gently sloping to moderately sloping soils on the tops and sides of ridges. In places, it is dissected by moderately wide, slightly concave drainage ways. These drainage ways originate in this association and are not so deeply entrenched as they are in other associations. A few scattered trees grow in the drainage ways and along fences. The association is an important for grain producing area which is well suited for cultivated crops. As the native vegetation was nearly exclusively prairie grass, the Edina-Seymour-Clarinda Association offers the greatest land use diversity and crop yield potential with the lowest input.

Clarinda-Grundy-Haig (5% of county's land)

This association consists of nearly level soils on wide upland divides and of gently to moderately sloping soils on the tops and sides of ridges and in concave drainage ways. The drainage ways originate in this association and are not so deeply entrenched as they are in other drainage ways and along fences. This association is present at higher elevations than adjacent associations. Well suited for row crops, native vegetation within the association was mostly prairie grass.

Gara-Armstrong-Shelby (36% of county's land)

This association consists of moderately sloping soils on narrow, rounded ridge tops and moderately steep and steep soils on side slopes that are dissected by waterways. Narrow valleys are typical of this association. The main branches of upland drainage ways originate in this

association. Gullies and impassable drains are common and affect field size and shape. Native vegetation consisted of prairie grass, mixed forest, shrubs, and mixed grasses. Agricultural uses are mainly for hay, pasture, and some row crops.

Weller-Keswick (3% of county's land)

This association consists of narrow, moderately sloping ridge tops and moderately sloping to strongly sloping side slopes that are dissected by V-shaped waterways. Many fields have been dissected by V-shaped waterways, gullies, and impassable drains and are thus limited and irregular in shape. Scattered trees and shrubs grow along most of the waterways and along the fences that enclose permanent pastures. Patches of forest and scattered trees remain from the original forest cover. Agricultural uses consist primarily of hay, pasture, and occasional row crop.

Rathbun-Keswick (4% of county's land)

This association consists of narrow, sloping ridge tops and adjoins moderately to strongly sloping side slopes that are dissected by V-shaped valley waterways. Many fields and farms have been dissected by gullies and impassable drains and are thus limited in size and irregular in shape. Scattered trees and brush grow along most of the waterways and fence rows. Patches of forest and scattered trees remain from the original forest cover. Agricultural use consists of pasture, hay, and a few acres of row crop.

Lindley-Gara (14% of county's land)

This association is largely in the south-central, southeast, and northeastern parts of the County. It consists of strongly sloping to steep soils on valley sides that are dissected by V-shaped waterways. It borders the valleys of major streams. Many fields and farms have been dissected by gullies and impassable drains and are thus limited in size and irregular shape. Scattered trees and shrubs grow along most of the waterways and along the fences that enclose permanent pastures. Native vegetation consisted of forest, mixed forest, and prairie grass. Today's agricultural uses are primarily hay, pasture, and timber.

Kennebec-Chequest-Vesser (8% of county's land)

This association is largely in the central and eastern parts of the County. It consists of nearly level soils on flood plains that are dissected by abandoned stream channels. Many fields are also dissected by gullies and impassable drainage ways that extend into the uplands. Trees and bushes grow in most stream channels and along fence rows. Native vegetation included mixed grasses and prairie grasses. Livestock is supported by the association through grain crops and pasture. Timber is abundant.

Soil Map

A map showing soil associations is useful to people who want a general idea of the soils in a county, who want to compare different parts of a county, or who want to know the location of large tracts that are suitable for a certain kind of land use. A soil association map is useful as a general guide in managing a watershed, a wooded tract, or a wildlife area, or in planning engineering works, recreational facilities, and community developments.

Prime and Marginal Farm Land

The Appanoose County Soil Survey identifies soil units which are considered to be prime farmland based upon their suitability for growing field crops. Of Appanoose County's 224,720 acres of land, only 98,315 acres, or 29.4% of the land is considered to be prime farmland. Appanoose County's prime farmland, with the exception of 7,735 acres found in Class I soils, are considered to require some form of special management due to the wetness and potential for erosion.

Soil Classifications

- Class I: Soils have few limitations that restrict their use.
- Class II: Soils have moderate limitations that reduce the choice of plants that require special conservation practices.
- Class III: Soils have severe limitations that reduce the choice of plants or require special conservation practices.
- Class IV: Soils have very severe limitations that reduce the choice of plants or require very careful management practices.
- Class V: Soils are not very likely to erode by have other limitations, impractical to remove, that limit their use.
- Class VI: Soils have severe limitations that make them generally unsuitable for cultivation.
- Class VII: Soils have very severe limitations that make them unsuitable for cultivation.
- Class VIII: Soils and miscellaneous areas having limitations that nearly preclude their use for commercial crop production.

Soil Sub-Classifications

Soils are also given a sub-classification which further identifies their limitations for crop production. These include:

- e: erosion risk unless close-growing plant cover is maintained.
- w: wetness of the soil interferes with plant growth.
- s: shallow, drought or stony soil.

The distribution of Appanoose County's soils by class and subclass are shown below in Table 8.1. A detailed breakdown of soil types and their suitability for various types of development is included in the Appanoose County Soil Survey.

Table 8.1: Distribution of Soils by Class and Subclass (Acres)

Class	Total Acres	Subclass Management Concerns (Acres)		
		e	w	s
I	7,735	0	0	0
II	49,345	6,460	42,885	0
III	135,565	102,515	33,050	0
IV	65,100	35,400	29,700	0
V	1,025	0	1,025	0
VI	34,235	34,235	0	0
VII	29,460	29,090	370	0
VIII	0	0	0	0

Source: Appanoose County Soil Survey

Technology and Engineering Influences on the Soils

For general planning purposes, soil types and classifications are used to identify prime agricultural lands. Soil type information is considered to be the most impartial data available. However, recognition should be given to agricultural technologies' abilities to enhance land productivity.

Farmers have done much to increase productivity of the soils and to reclaim areas not suitable for crops. Large areas of bottom land have been made suitable for cultivation by digging drainage ditches and constructing diversions at the foot of the slopes. Drainage systems and soil conservation structures improve existing tracts of tillable land. By adding commercial fertilizers, farmers have counteracted deficiencies in plant nutrients and have made some soils more productive than they were in their natural state.

Forest

The principal species of trees in the county include white oak, red oak, black oak, elm, shagbark hickory, green ash, soft maple, walnut, and cottonwood. Economic opportunities are present if proper management takes place (i.e.: timber production---tourism/recreation).

Waterways and Water Bodies

Appanoose County contains approximately 11,335 acres of publicly owned surface water. Major waterways and water bodies include the Chariton River, Lake Rathbun, Centerville Reservoir, Sharon Bluffs State Park, and the following creeks: Shoal, Copper, Soap, South Soap, Walnut, and Little Walnut.

Summary of Findings - Section Eight

- ⇒ Coal production in the County, once a thriving industry, is nearly non-existent today. The coal reserves in the County are high in sulfur content which, when burned, requires expensive emission treatment measures.
- ⇒ Mineral deposits of gypsum, sand, gravel, and limestone are present in Appanoose County. However, mining of these minerals has been minimal to this point in time. Potential development of these resources is possible in the future.
- ⇒ Appanoose County's geography is characterized by steeply rolling hills, table-like upland divides, and level alluvial lowlands.
- ⇒ Appanoose County's prime farmland, with the exception of 7,735 acres found in Class I soils, is considered to require some form of special management due to the wetness and potential for erosion.

The County enjoys access to a variety of water resources. Most importantly, Lake Rathbun provides drinking water for the majority of rural parts of the County as well as recreational opportunities for the region.

SECTION NINE - SOLID WASTE

Although the disposal of solid waste has been an issue of concern in the heavily populated regions of the United States for many years, it has just recently become a priority issue in the State of Iowa. The Iowa Legislature, in 1987, approved a piece of legislation entitled the "Groundwater Protection Act" which requires all entities, either public or private, who operate a landfill to develop a Comprehensive Solid Waste Management Plan. The purpose of the plan is to evaluate the extent to which a waste management hierarchy is currently being implemented and to provide a plan and schedule for further implementation of the hierarchy. The waste management hierarchy, as established by the Legislature and in descending order of preference, is as follows:

- Volume reduction at the source
- Recycling and reuse
- Combustion with energy recovery and refuse-derived fuel
- Combustion for volume reduction
- Landfilling

In 1989, the Iowa Legislature adopted amendments to the Groundwater Act which mandate waste reduction goals and bans some items from the landfill. Highlights of those amendments include:

- Land disposal of yard wastes is prohibited after July 1, 1991.
- Land disposal of waste oils is prohibited after July 1, 1990.
- Landfilled wastes must be reduced by 25% by July 1, 1994.
- Landfilled wastes must be reduced by 50% by July 1, 2000.

In accordance with the requirements of these legislative acts, Appanoose County directed the completion of a study and comprehensive solid waste management plan. As a result of this study, Hall Engineering Co. of Centerville prepared a report/summary to "evaluate alternatives for providing both technically and economically feasible solid waste management methods for the planning area". The purpose of the study was to "develop an efficient solid waste disposal program that would protect the environment, preserve our natural resource, and provide the most practical and beneficial use of the materials and energy value of the solid waste".

SECTION TEN - LAND USE

Since the primary purpose of a comprehensive plan is to guide and direct physical growth and change within the County, assessment of existing uses of the land and projection of future land use needs becomes a critical element of the plan. This section of the study presents an inventory of existing land uses, describes land use changes over time, and projects the amount of land that is likely to be required to accommodate physical growth and change over the next twenty years. The projections for additional land needed to accommodate change, as well as the implications contained at the end of this section, take into consideration all of the information previously discussed in this study.

Existing Land Use

Five general categories of land use exist within Appanoose County. These include: agricultural, residential, commercial, industrial, and public uses of land. Although the majority of the County's land located outside the boundaries of incorporated cities is classified as agricultural land, pockets of more intensified development exist adjacent to incorporated cities and in isolated areas of the County.

The existing land use patterns in Appanoose County reflect those found in most rural Iowa counties. The unincorporated portion of the County is generally occupied by agriculturally-related land uses. However, Appanoose County does possess some unique characteristics because of the varied natural resources found within its boundaries. In most cases, development in the County has conformed to the physical make-up of the land. For instance, many of the roads conform to the rugged, sloping terrain with much of the development occurring near these roadways.

Another physical feature that has greatly impacted development in the County is Lake Rathbun. The construction of Rathbun Reservoir and the accompanying land uses surrounding the lake have significantly impacted that portion of the county. Not only have Lake Rathbun and the park areas altered the land use but a variety of other developments have emerged in order to support the recreational and other uses of the lake area.

Development that may be detrimental to the land and persons occupying the land in the Rathbun Region has been addressed by the Rathbun Reservoir Zoning District Ordinance, Appanoose County, Iowa. The ordinance was adopted for the following purposes: to promote public health, safety, morals, comfort, and general welfare; to conserve and protect property values; to secure and provide the social and economic advantages resulting from an orderly, planned use of land resources; and to facilitate adequate but economical provisions for public improvements. The ordinance (and all underlying purposes) was intended to act in accordance with a comprehensive plan as well as provisions of Chapter 358A of the Code of Iowa, as amended.

With the exception of isolated developments and single businesses throughout the County, the area surrounding Centerville is the only area that has experienced development pressures. Most of the development that has occurred outside the corporate boundaries of Centerville is primarily located adjacent to the city and along major roadways. The development consists of residential, commercial, and industrial land uses and is confined to an area within two miles of Centerville (an area that is included in a proposed annexation by the City of Centerville). Appanoose County is fortunate that the only concentrations of development have occurred near existing public services. At the present time, the County has no control over the development that occurs within the its

boundaries. Without any land use controls, the County is subject to providing expensive public services to developments as they occur, regardless of their proximity to existing facilities.

As stated previously, most of the new development is concentrated to a few areas within close proximity to the City of Centerville. Much of the residential development is located to the northwest of the city near the Appanoose Country Club. Other residential land uses exist along State Highway #5 adjacent to the northern and southern boundaries of Centerville. Commercial development exists in the general location of much of the residential development with industrial land uses existing adjacent to the southeast corner of the city. Another area of development exists west of the city along State Highway #2.

Summary of Findings - Section Ten

- ⇒ Five general categories of land use exist within Appanoose County. These include: agricultural, residential, commercial, industrial, and public uses of land.
- ⇒ The existing land use patterns in Appanoose County reflect those found in most rural Iowa counties.
- ⇒ Appanoose County does possess some unique characteristics because of the varied natural resources found within its boundaries.
- ⇒ The construction of Lake Rathbun Reservoir and the accompanying land uses surrounding the lake have significantly impacted that portion of the county.
- ⇒ With the exception of isolated developments and single businesses throughout the County, the area surrounding Centerville is the only area that has experienced development pressures.
- ⇒ Without any land use controls, the County is subject to providing expensive public services to developments as they occur, regardless of their proximity to existing facilities

SECTION ELEVEN - RECOMMENDED LAND USE GOALS, OBJECTIVES, AND DEVELOPMENT POLICIES

Contained within this section of the plan are a series of recommended goals, objectives, and policies that are based upon the information gathered and evaluated for this report and which are intended to provide guidance to Appanoose County in the development and implementation of land use controls. The section begins with the presentation of overall land use goals which are, of necessity, broad and general in nature. The goals reflect the desires and aspirations of the County by describing basic concepts which should guide all future development. Objectives are then presented which describe a course of action that must be followed to attain the County's goals. Next, policy statements are provided which offer more specific guidance and direction for the formulation of land use controls.

Goals

1. To insure orderly and efficient growth of residential, commercial, industrial, and public land uses in order to maintain, improve, and protect the general welfare of the citizens of Appanoose County.
2. To protect and conserve the natural, human, and economic resources that are the basis of the agricultural economy and rural lifestyle of Appanoose County.
3. To encourage cooperation and communication between the County, other units of local government, and the general public to improve the manner in which the County's natural, human, and economic resources are managed and developed.

General Development Objectives

1. To encourage the majority of future growth to occur within existing incorporated cities where adequate public services are located and/or can be provided in the most cost effective manner.
2. To encourage growth in unincorporated Appanoose County to occur in previously platted subdivisions, on marginal land, and in stable environmental areas.
3. To discourage development from locating on productive agricultural soils and other agricultural areas where conflicts may arise with farming and efficient farming practices.
4. To encourage the County and local governments to cooperate and arrive at mutual agreements pertaining to preferred patterns of development.

General Development Policies

1. Appanoose County recognizes and accepts that normal agricultural and environmental nuisances come with rural living.
2. While Appanoose County encourages development to locate within incorporated cities it recognizes that some development in rural areas is both necessary and desirable. The following guidelines have been drafted to assist in reviewing proposed new development in the rural areas. In as much as is possible, development should occur:
 - on marginal agricultural lands in order that quality agricultural land can be preserved and remain available.
 - adjacent to adequately paved roads and in clusters to promote efficient urban development patterns and to lessen congestion on streets and highways.
 - where public and/or private facilities are present or planned including: streets, water, sanitary sewer, schools, and recreation facilities/parks.
 - in areas near existing employment centers and commercial areas so as not to encourage urban sprawl or unplanned scattered development.
 - where it is least disruptive to existing agricultural activities.
 - in stable environmental areas.
 - in areas buffered from other less intensive land uses to eliminate nuisances.
 - where it can be shown that there is a recognized need for such development.
 - in an efficient, compact manner to make the best use of public facilities and infrastructure.
 - in a manner that promotes the conservation of energy resources, access to solar energy and provides for adequate light and air.
 - in a manner that secures safety from fire, floods, panic and other dangers, and protects the health and general welfare of the public.
 - in a manner that avoids undue concentration of the population and prevents the overcrowding of land.
3. The use of non-traditional energy resources will be encouraged in new and existing developments.
4. Appanoose County encourages the diversification of its economy.
5. Natural areas containing environmentally sensitive land, such as; natural forests, steep slopes, flood plains, stream banks and potential wildlife habitat should be identified and protected from urban development.

Residential Development Policies

1. Opportunities should be provided to serve the residential needs of the present and future residents of Appanoose County.
2. Residential development should be encouraged to locate on existing lots within incorporated cities or in existing, platted subdivisions. However, residential development may be allowed to locate on existing platted lots and small parcels of land in the rural areas of the county.
3. Concentrated residential development experiencing septic problems will be encouraged to create a rural sanitary sewer district.
4. Multiple family residential development will be directed towards existing incorporated cities having utility capacity to accommodate such development.
5. Appanoose County promotes the use of federal and state housing programs to assist low- and moderate-income residents.

Commercial Development Policies

1. Commercial development in rural areas should be restricted to those businesses that provide only neighborhood and agricultural business needs.
2. Commercial development serving regional needs should be directed toward existing incorporated cities having areas zoned for such development.
3. New rural commercial development should be located adjacent to major road intersections and in such a manner as not to impede traffic flow.
4. Appanoose County encourages clusters of small commercial developments served by controlled access frontage roads rather than strip development that is inefficient in use of land and is a traffic hazard.

Agricultural Land Preservation Objectives

1. To recognize agricultural land as the principal natural resource of the County and to preserve those agricultural soils considered most suitable for the various types of agricultural production.
2. To discourage development on productive agricultural soils that might hinder the ability of the agricultural community to maintain and expand present levels of agricultural production.
3. To base land use decisions concerning agricultural land on the modern soils survey, as well as the compatibility of surrounding land uses and public infrastructure currently in place.
4. To encourage soil conservation practices.

Agricultural Land Preservation Policies

1. Agricultural crop land having a prime farmland designation should be designated for preservation and the establishment of agricultural preservation districts should be encouraged.
2. Quality and/or improved pasture and grazing land should be preserved for such uses.
3. Large feedlots, farrowing pens, other confinement operations, and poultry farms not associated with the family farm are largely exempt from local land use control in Iowa due to agricultural exemption. However, these large scale operations should be considered industrial-like in nature for the purposes of monitoring the operations' environmental impacts on surrounding land uses.

Critical Resource Area Objectives

1. To prevent the degradation of environmentally sensitive natural resources including floodplains, heavily forested areas, steep slopes, and wildlife habitat areas.
2. To reduce flood damage by promoting floodproofing, flood forecasting, and watershed treatment in conjunction with appropriate and environmentally acceptable structural measures, where necessary, to protect the lives and property of Appanoose County residents.
3. To encourage those soil conservation practices which will improve the quality of water and land.

Critical Resource Area Policies

1. The environmental character of Appanoose County is a significant asset and primary reason why many people choose to live in the rural areas. The preservation of this character will be emphasized when considering any future proposals for development.
2. Subdivisions that include environmentally sensitive areas may be required to set aside the land for protection purposes.
3. Future development in known flood hazard areas should be discouraged.
4. Local floodplain management programs should meet the regulatory requirements of the National Emergency Management Administration as well as applicable state regulations at a minimum..
5. The preservation of scenic and historic areas is encouraged.

Implementation

The existence of a sound development plan is not enough to guide future development within Appanoose County. In order for this plan to serve as a practical guide for directing physical growth and change in the County, all decisions relating to land use must be in conformance with the policies established in this plan as adopted by the Board of Supervisors. In addition, implementation of the plan will require the consistent use of such land management tools as zoning and subdivision regulations, periodic review and updating of the plan, and coordination with all incorporated cities in the County.

Land Management Tools

The authority to regulate land use through the adoption and enforcement of zoning regulations is given to the County by Chapter 335 of the Code of Iowa. Once adopted, the zoning ordinance becomes a primary tool utilized to implement the goals, objectives, and policies contained within the comprehensive plan. The comprehensive plan is, therefore, considered a guide for land management. All zoning decisions should reflect the intent of the goals, objectives, and policies contained in the comprehensive plan.

On November 1, 1978, the Iowa Constitution was amended to permit counties the right of home rule authority. County Home Rule allows counties to regulate subdivision platting. Subdivision regulations are adopted in order to ensure that proper procedures for platting land are followed and in many cases to ensure the provision of adequate public services in the area to be developed. The county would be well advised to pursue the development of subdivision regulations in addition to other land management tools.

Periodic reviews and updates of the comprehensive plan and implementation tools should be conducted every five years. Annual reviews would be much more desirable and are encouraged. The reviews provide a mechanism to address changing needs and conditions in the county; assess progress toward meeting land use goals, objectives, and policies; and to maintain up-to-date data in the plan. The reviews should also include recommendations to the Board of Supervisors for changes, additions, or deletions that may become necessary and/or desirable.

The development of land use regulations to implement the comprehensive plan should be coordinated with the County's incorporated cities as many of the plan's policies direct development toward those cities. A copy of the Appanoose County Comprehensive Plan, as well as any adopted land use controls, should be made available to all communities in the County to facilitate such coordination. In addition, the County's incorporated cities should be contacted and allowed an opportunity to review and provide input into land use decisions and development prior to the approval of new development adjacent to those cities.

Appendix

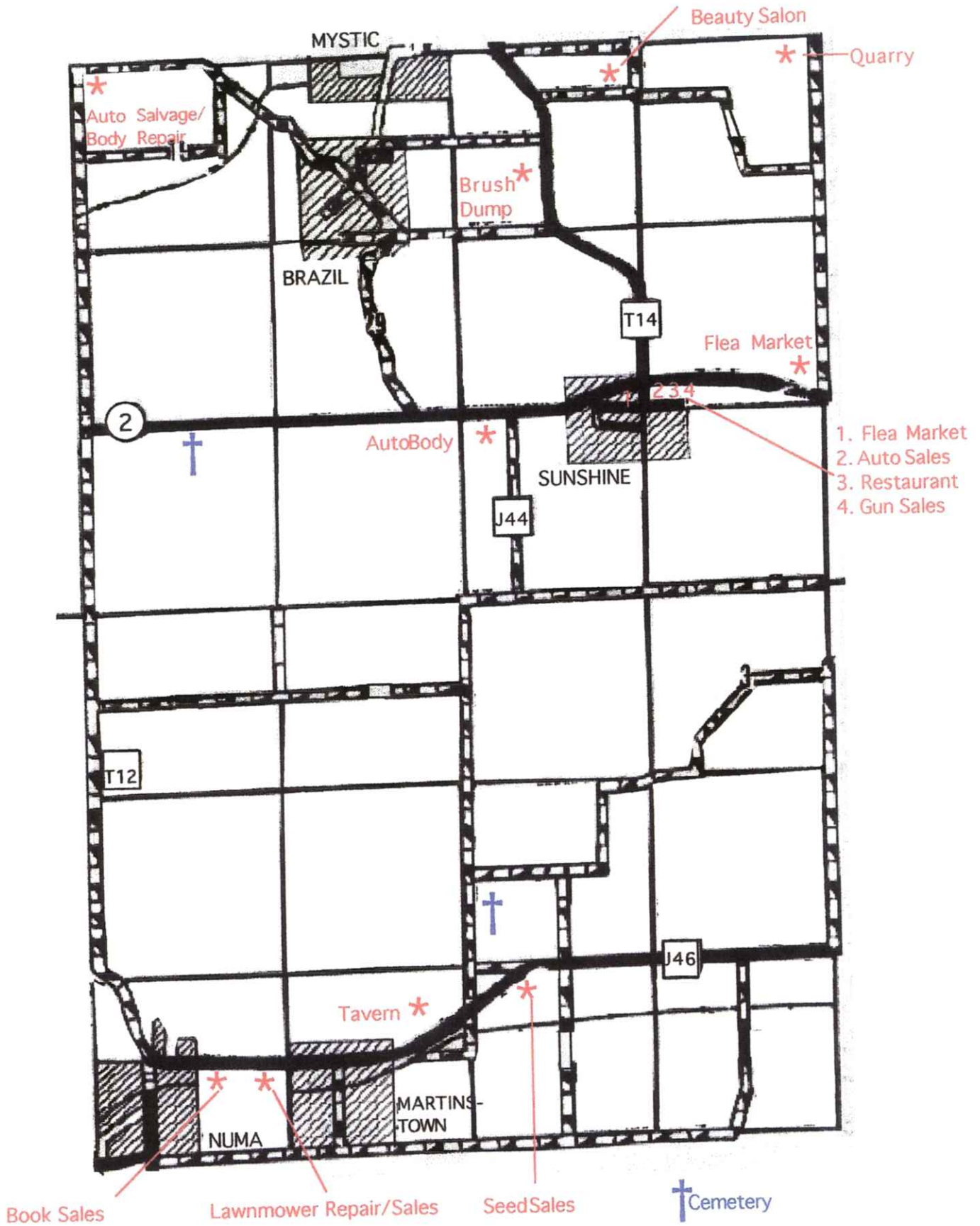
Land Use Maps by Township

The Area 15 Regional Planning Commission surveyed the unincorporated areas of Appanoose County, Iowa in July and August of 1996 at the request of the Appanoose County Board of Supervisors. Land uses were noted by touring roadways and plotting all activities that could be perceived as uses aside from agricultural activity. The purpose of the mapping was to recognize land use diversity and the location of uses within Appanoose County.

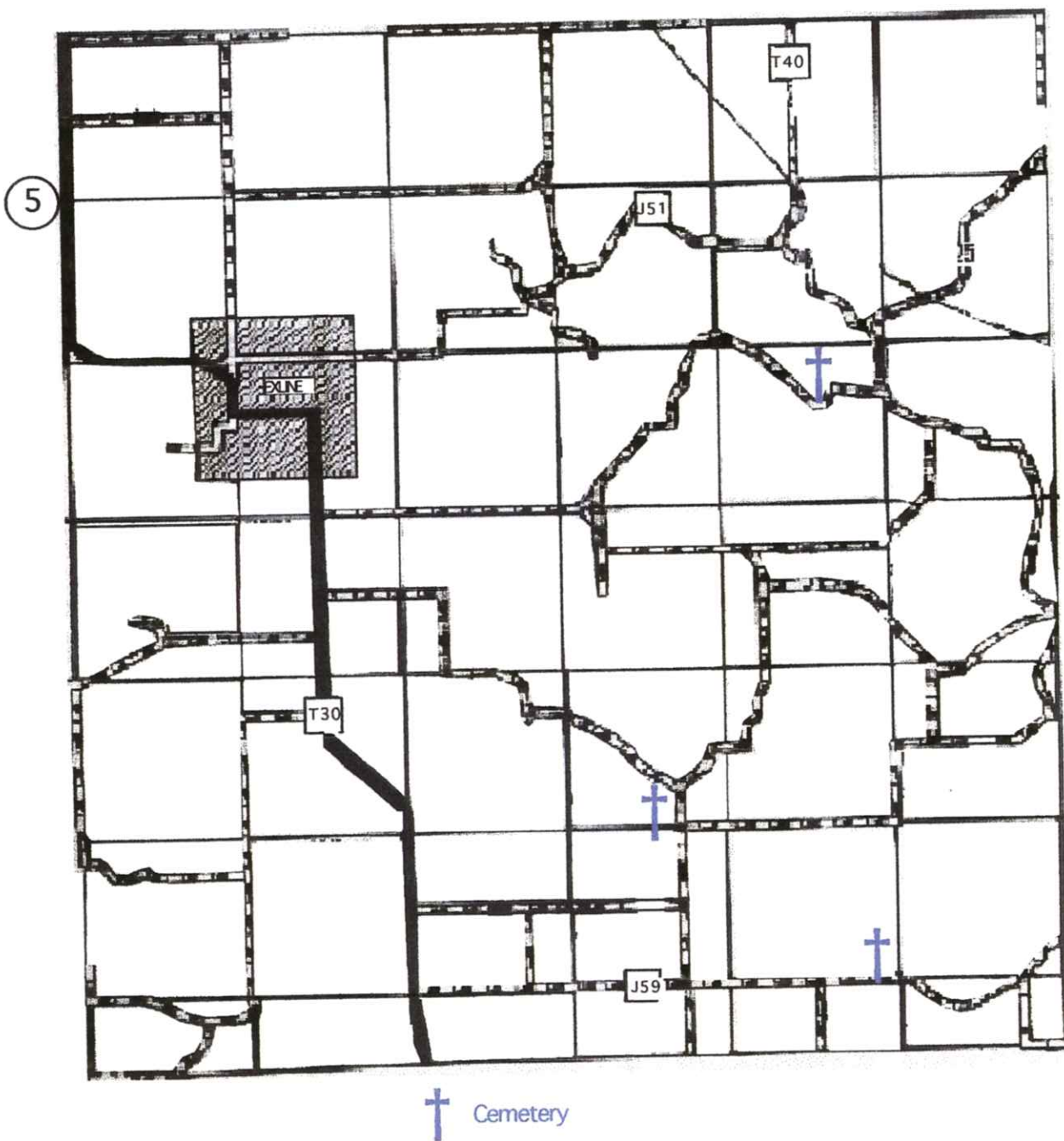
The maps of existing Appanoose County Land Uses were reviewed by the Appanoose County Landuse Planning Research/Fact Finding Committee and were proofed for general accuracy. Following a public hearing on December 19, 1996, the Committee recommended to the Appanoose County Board of Supervisors that the maps be included as part of the Appanoose County, Iowa Comprehensive Plan.

Following public hearing on January 20, 1997, the Appanoose County Board of Supervisors adopted the Appanoose County, Iowa Comprehensive Plan by resolution which included the land use maps as an appendix.

Bellair Township

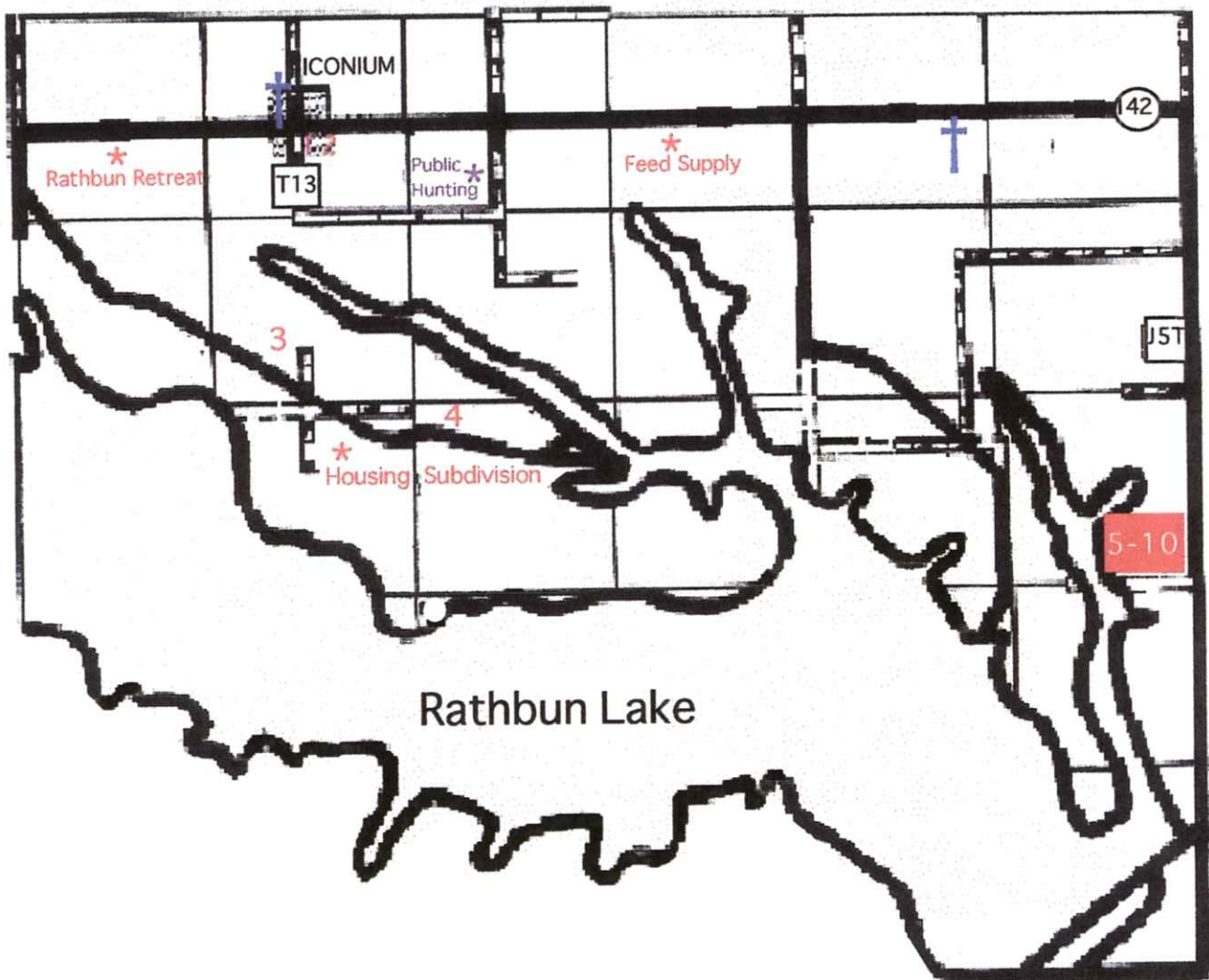


Caldwell Township



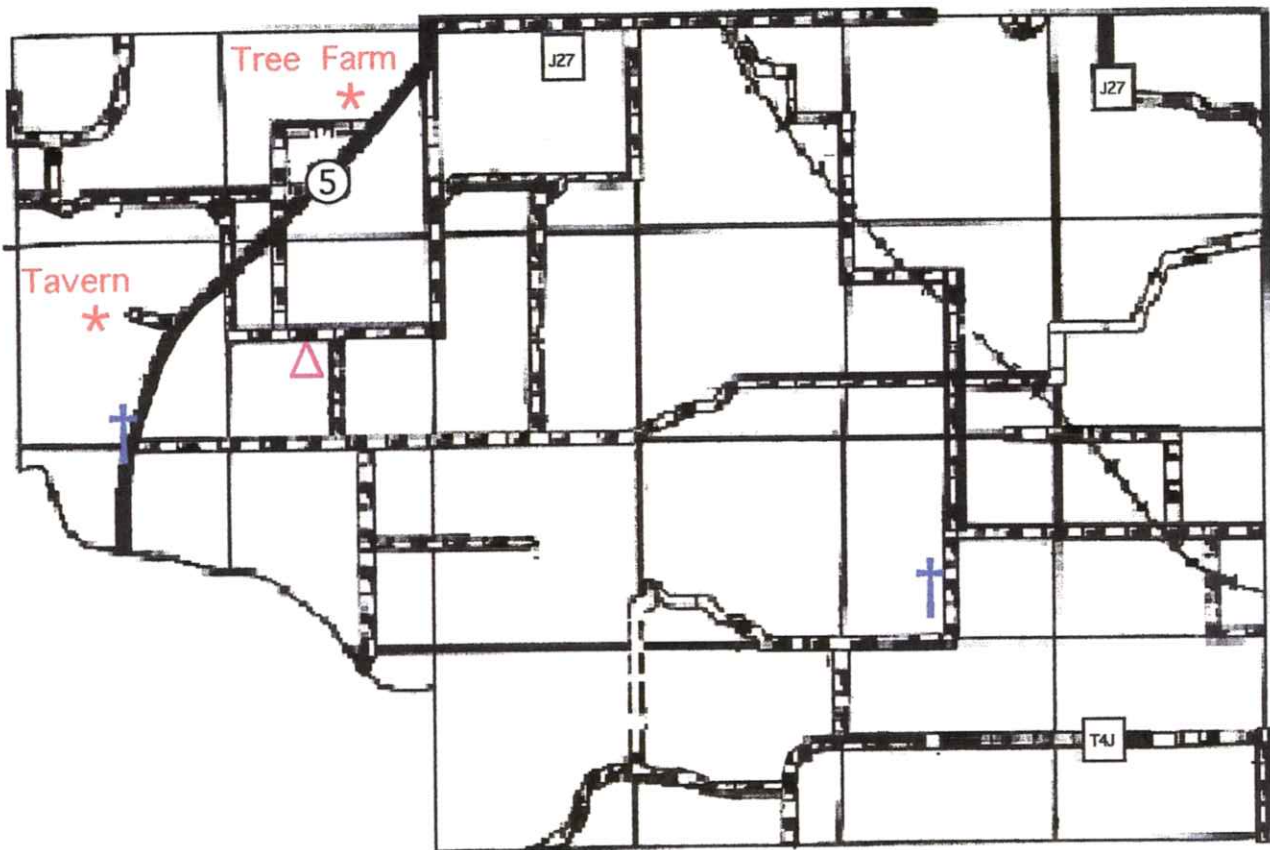
Chariton Township

- | | |
|-----------------------------|-------------------------|
| 1. Church | 6. Motel |
| 2. Vacant Commercial | 7. Boat Rental |
| 3. Bait/Tackle/Boat Storage | 8. Convenience Store |
| 4. Boat and Mini Storage | 9. Camping Registration |
| 5. Marina | 10. Restaurant |



† Cemetery

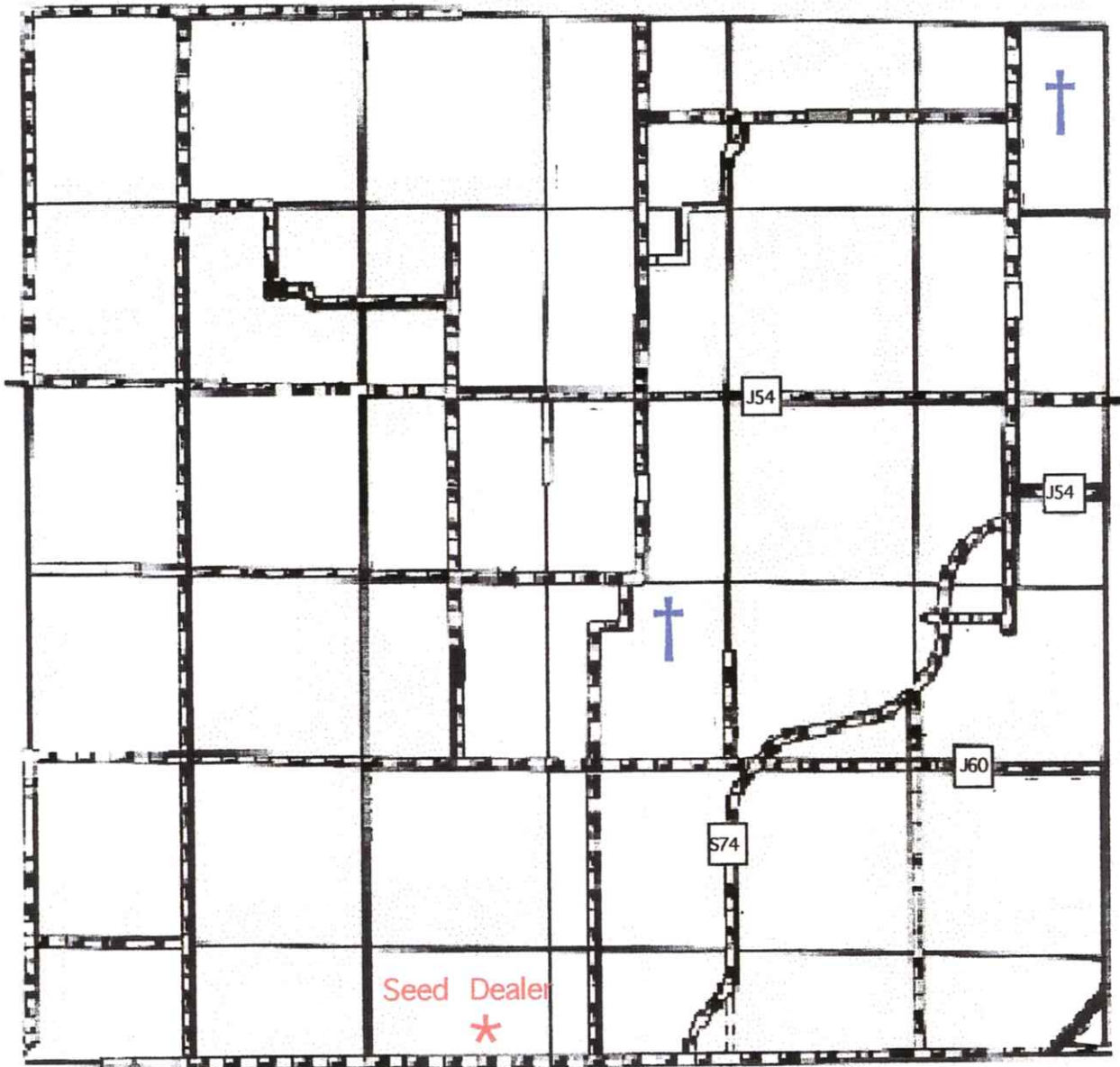
Douglas Township



Δ Church

† Cemetery

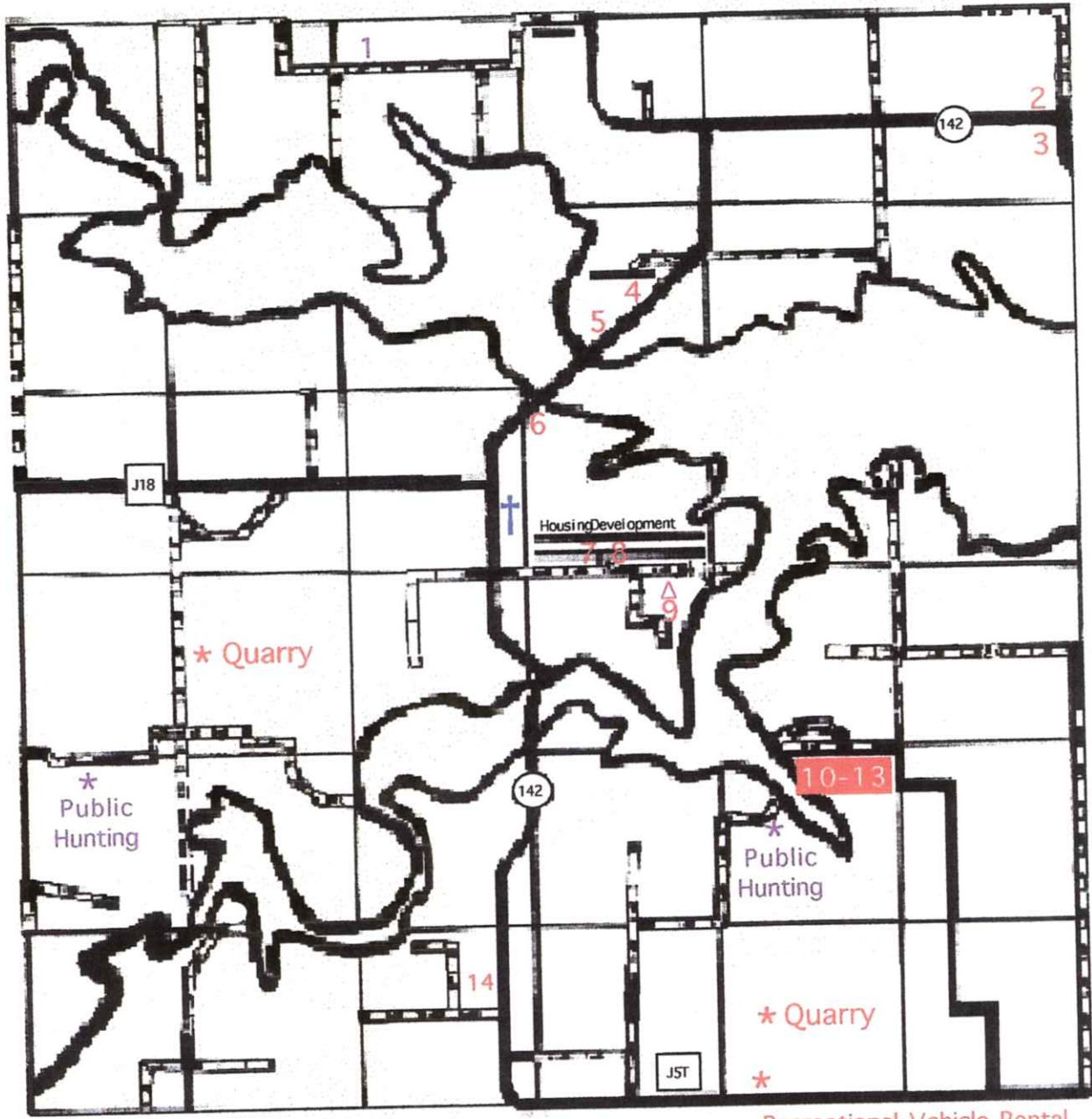
Franklin Township



† Cemetery

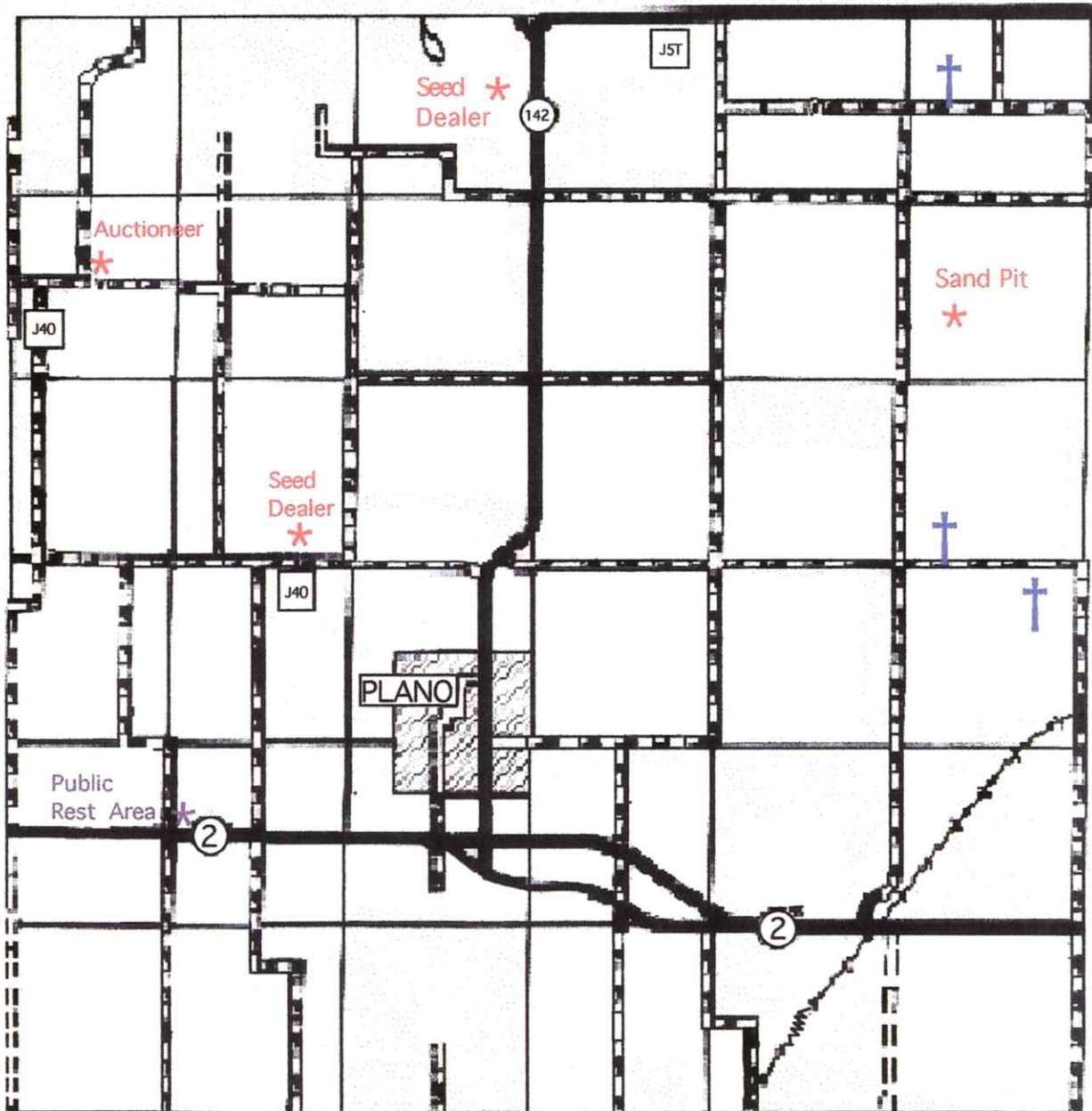
Independence Township

- | | | |
|-------------------------|----------------------------|--------------------------|
| 1. Public Hunting | 7. Camp Appanoose | 13. Convenience Store |
| 2. Communications Tower | 8. Liquid Fertilizer Sales | 14. Communications Tower |
| 3. Vacant Commercial | 9. Tree Farm | |
| 4. Bait/Tackle Shop | 10. Marina | |
| 5. Campground | 11. Bait and Storage | |
| 6. Tavern/Restaurant | 12. Restaurant | |



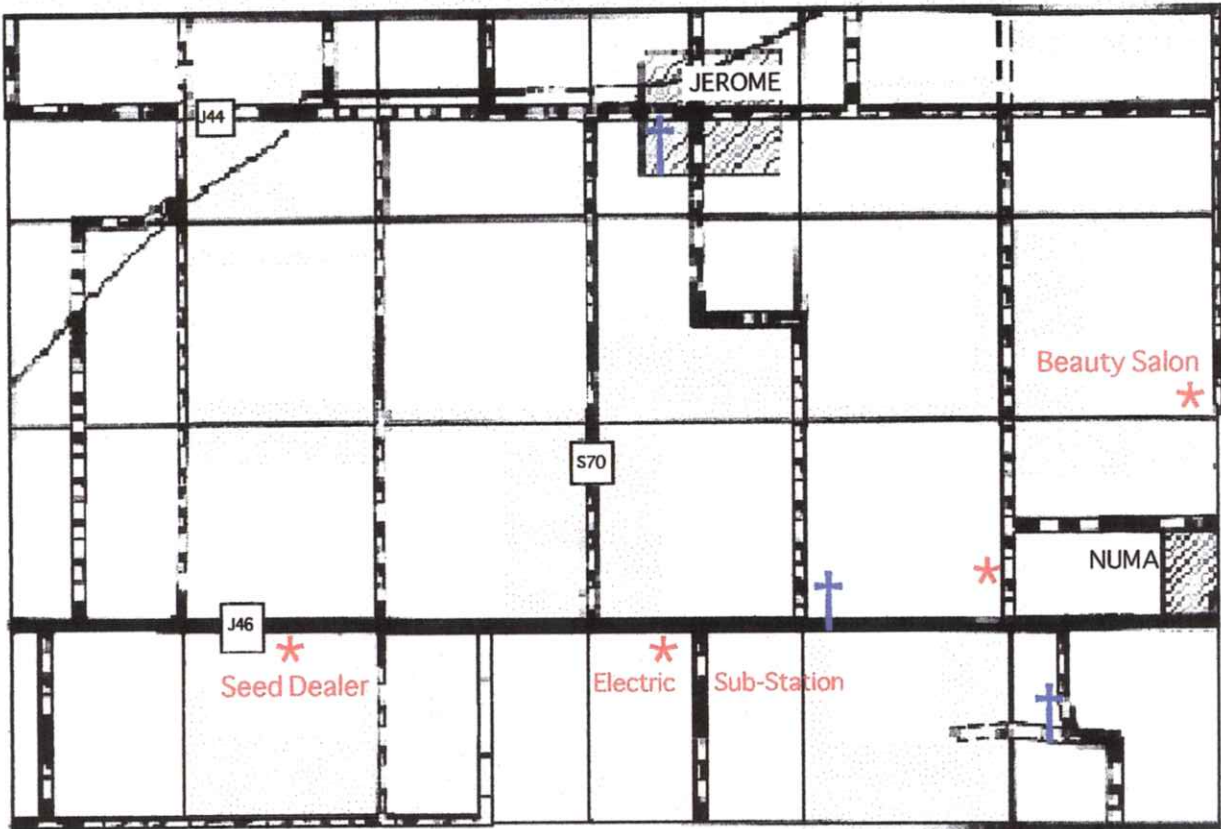
† Cemetery

Johns Township



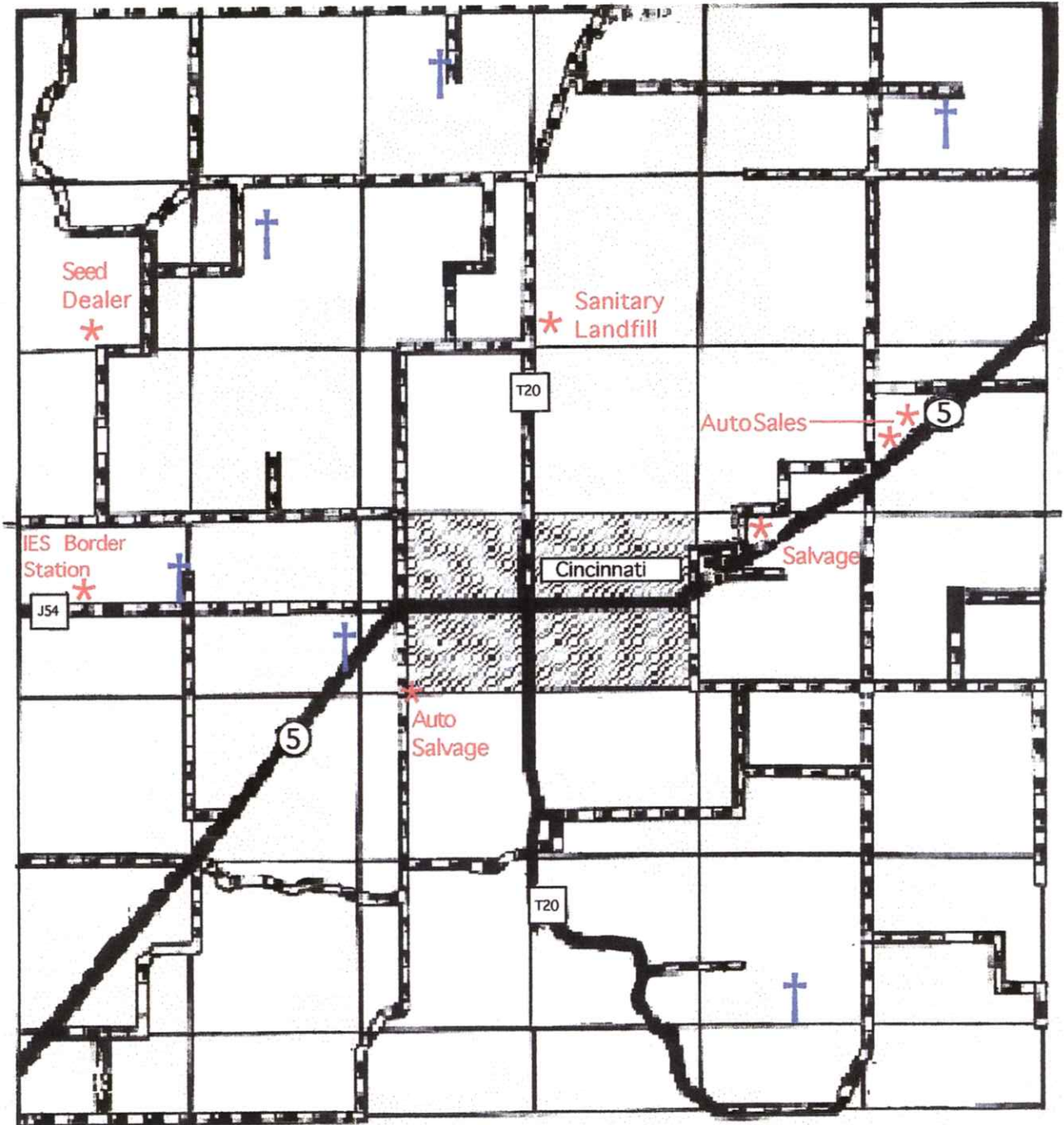
† Cemetery

Lincoln Township



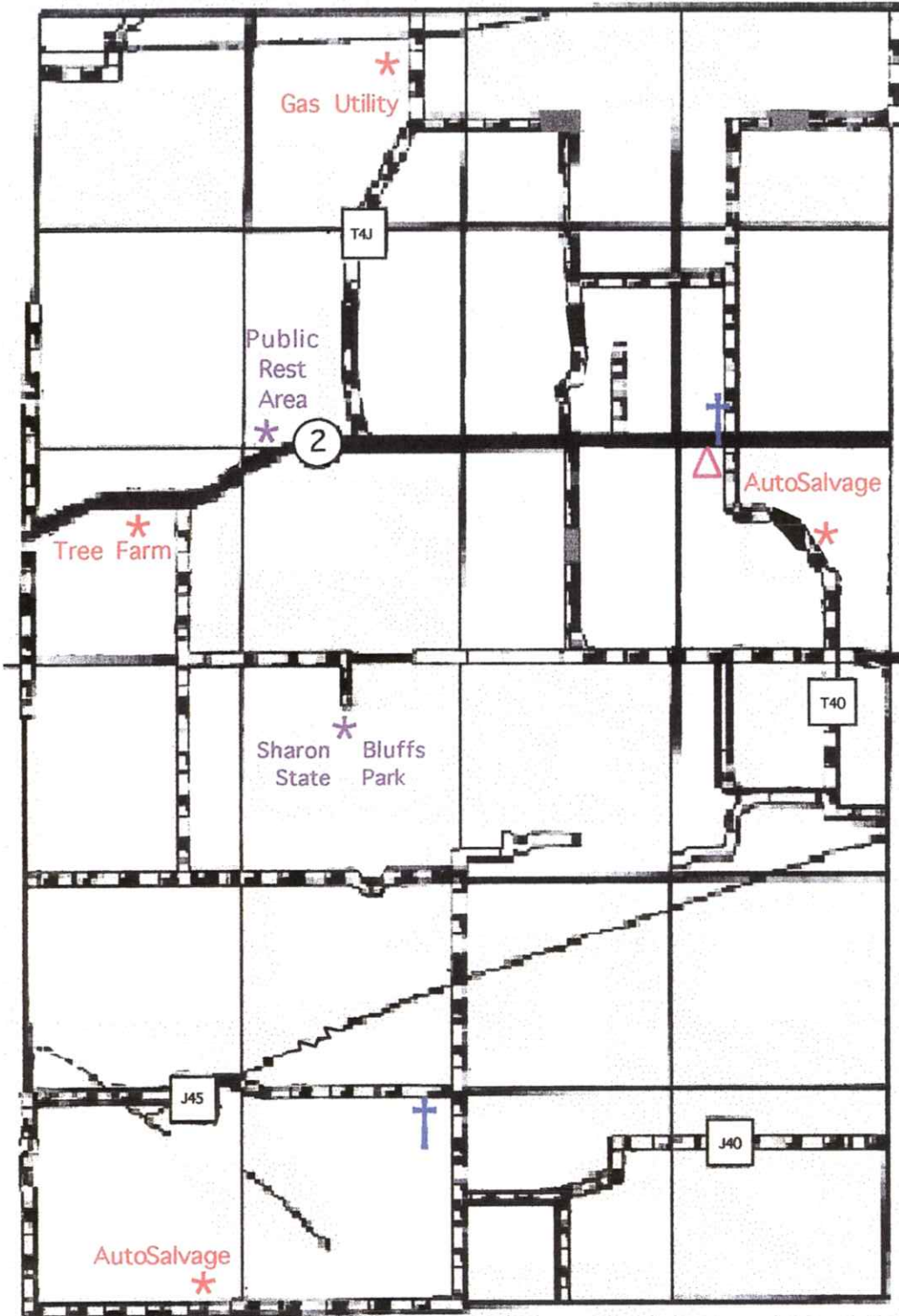
† Cemetery

Pleasant Township



† Cemetery

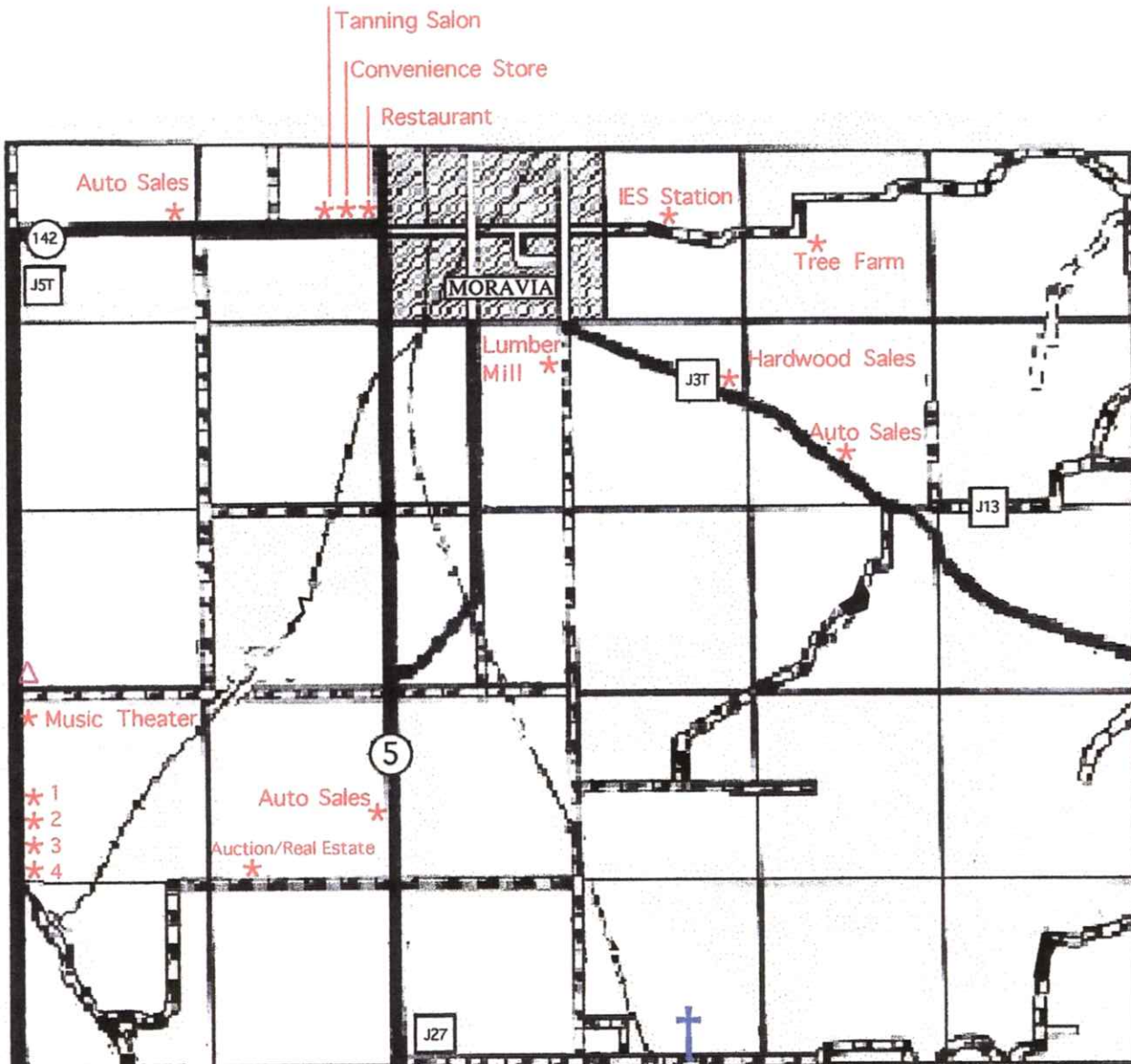
Sharon Township



† Cemetery

△ Church

Taylor Township

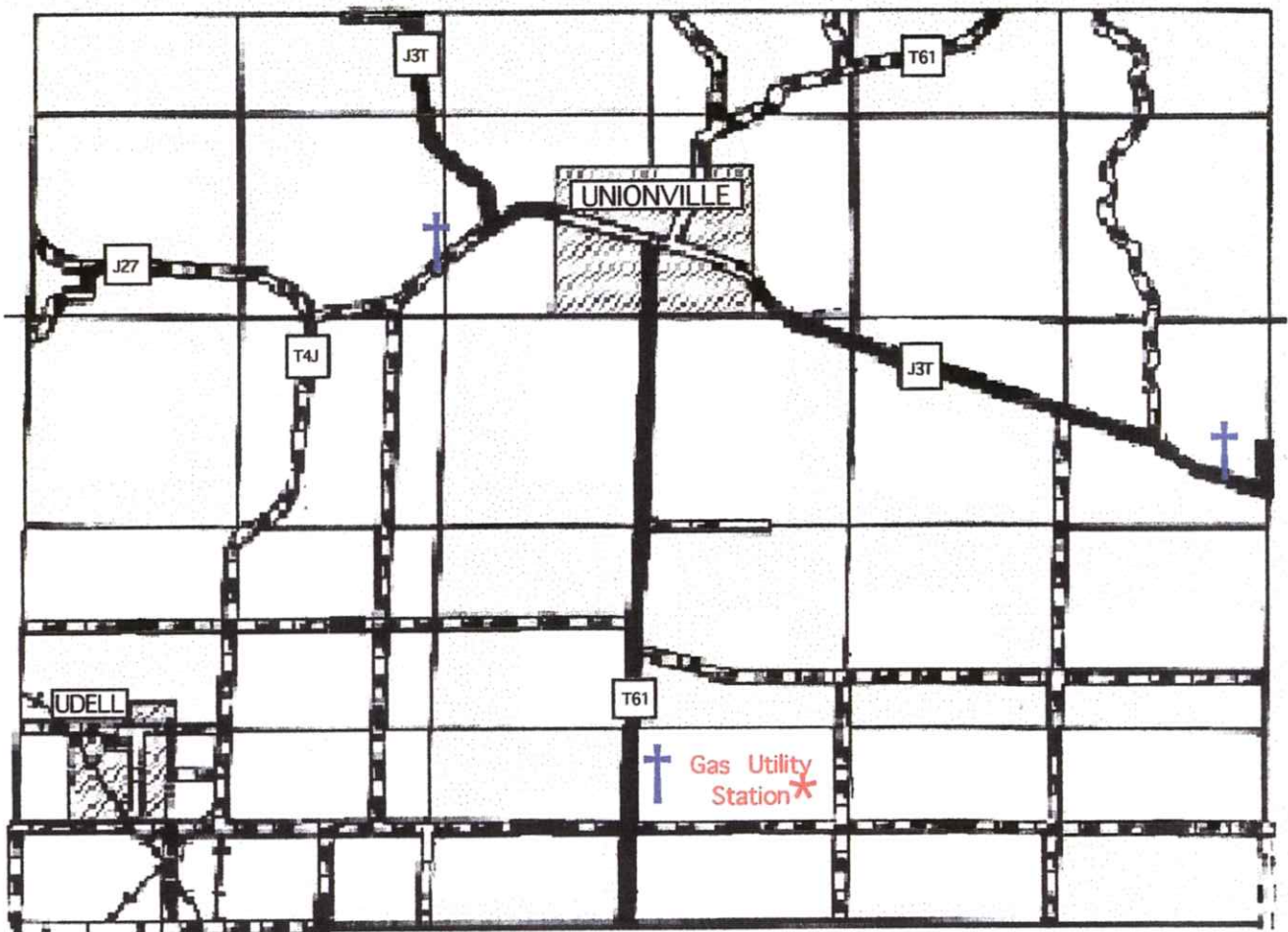


† Cemetery

△ Church

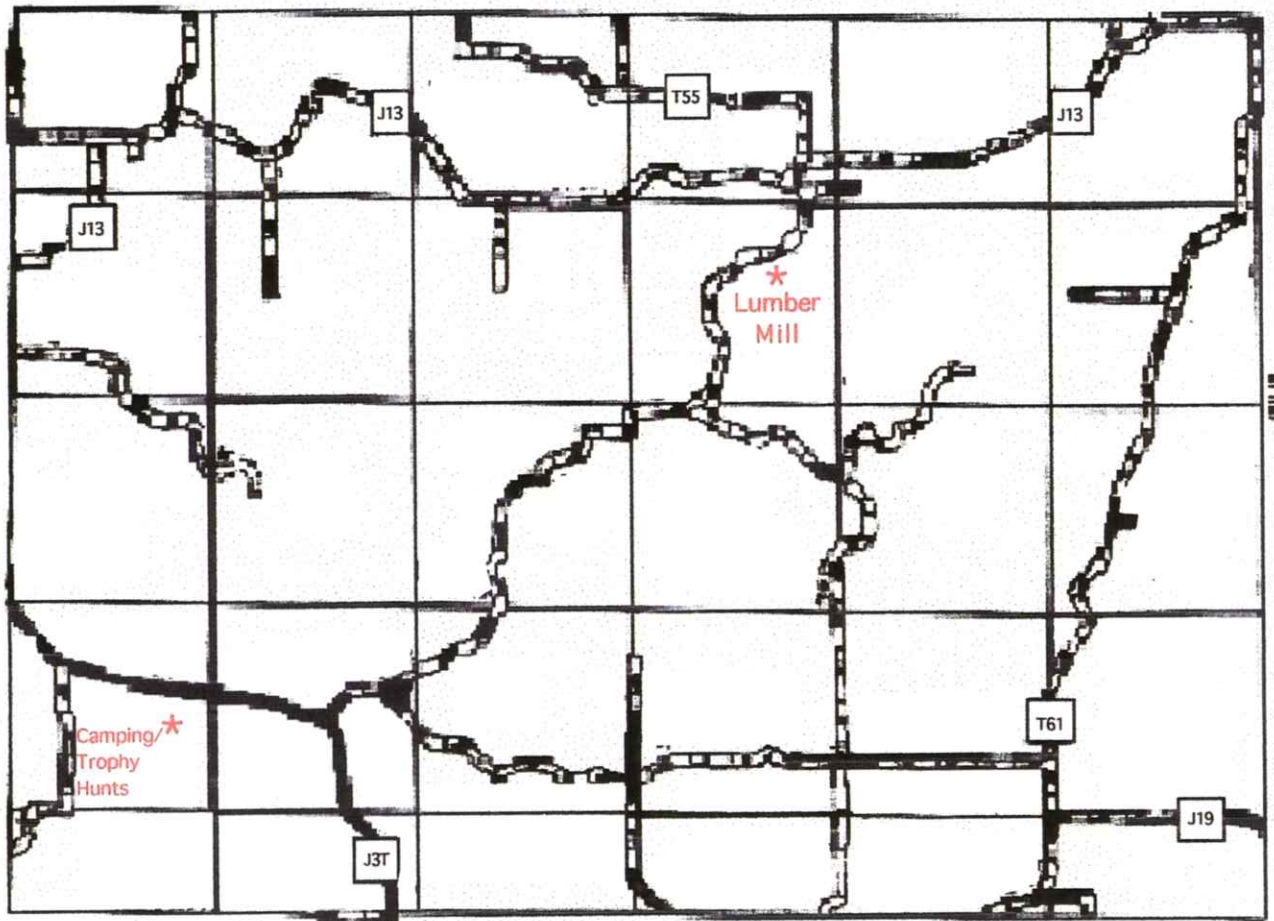
1. Convenience Store
2. RV Sales
3. Davis Hybrid Seed Office
4. Rental Cabins

Udell Township

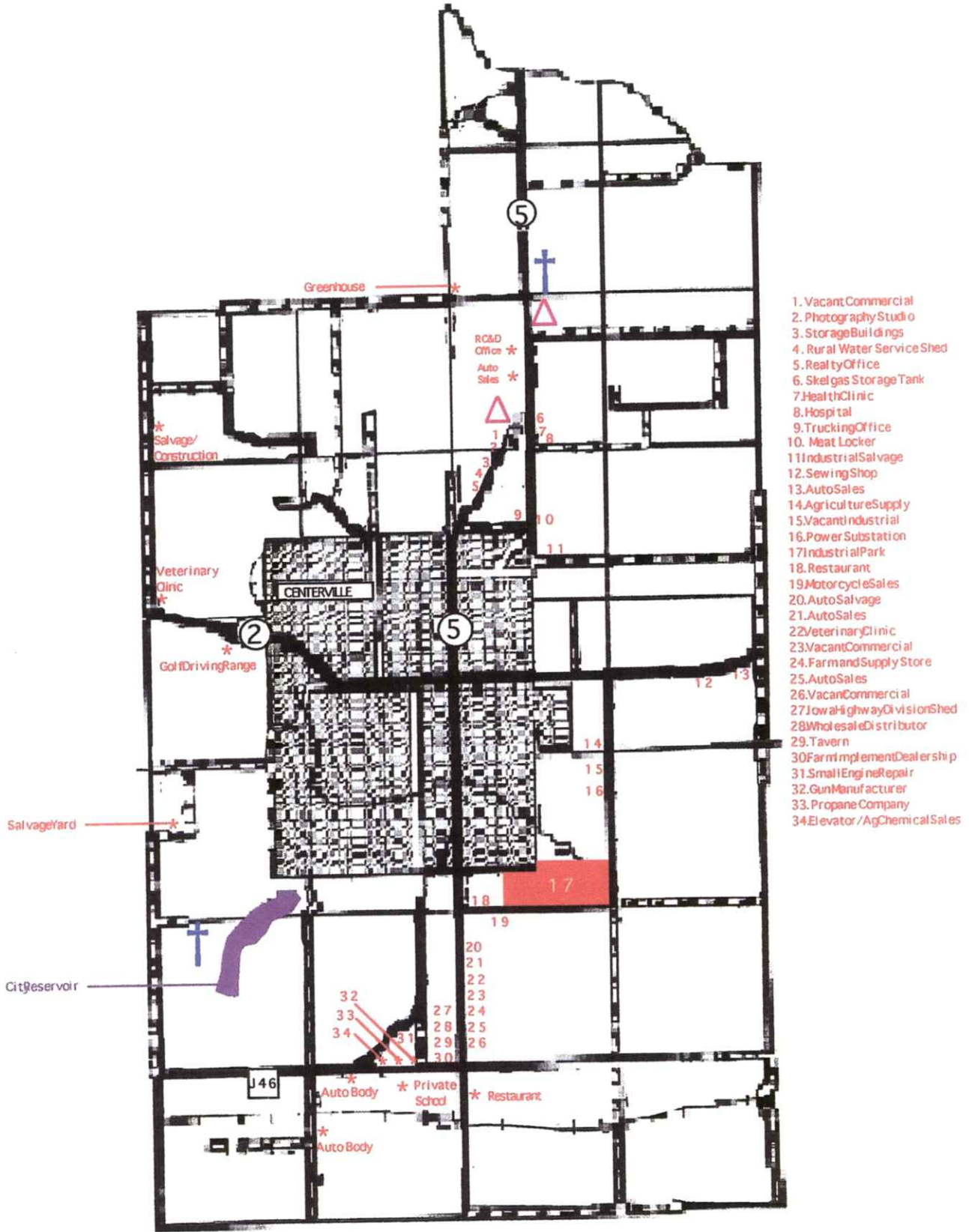


† Cemetery

Union Township



Vermillion Township

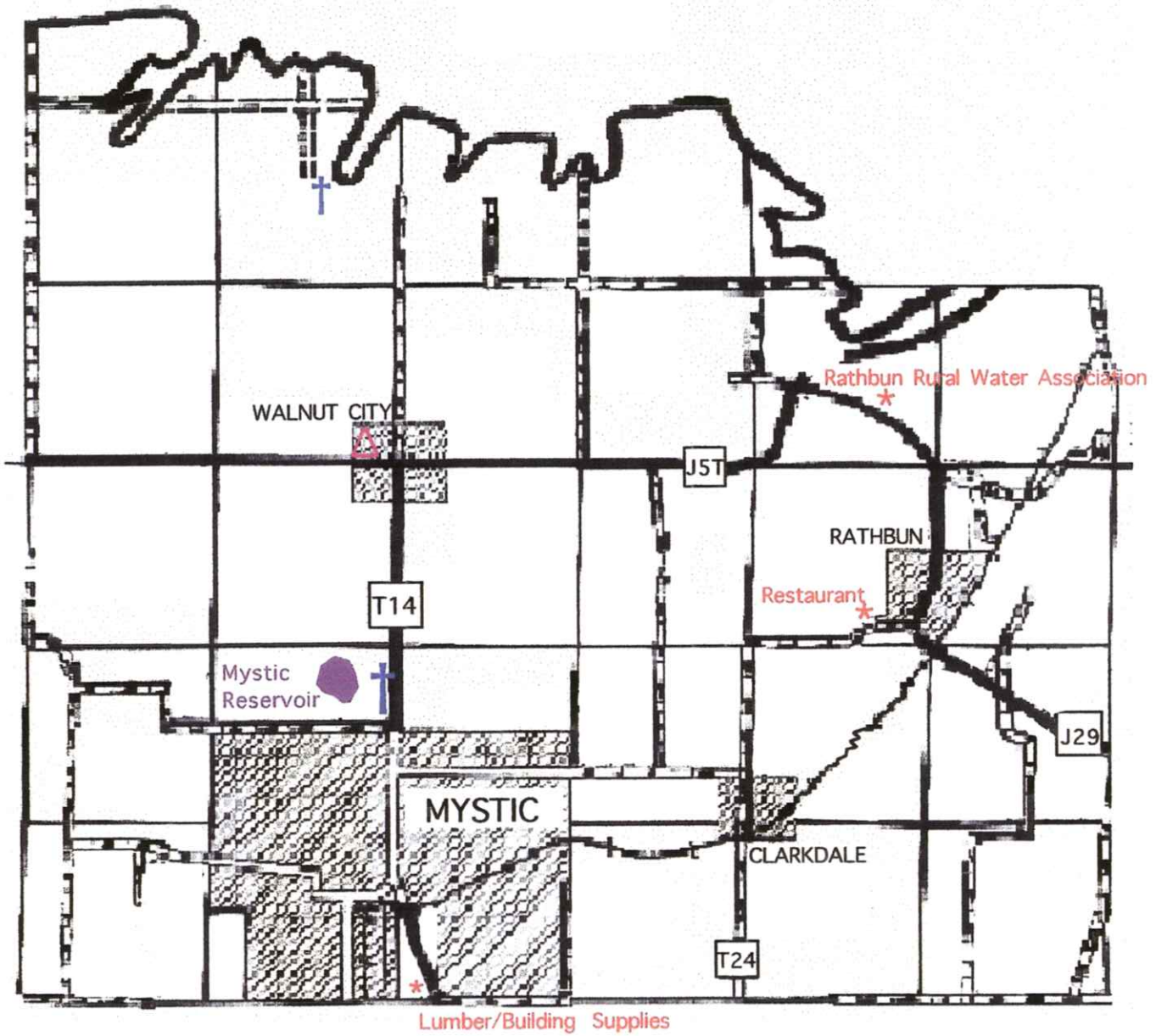


1. Vacant Commercial
2. Photography Studio
3. Storage Buildings
4. Rural Water Service Shed
5. Realty Office
6. Skel gas Storage Tank
7. Health Clinic
8. Hospital
9. Trucking Office
10. Meat Locker
11. Industrial Salvage
12. Sewing Shop
13. Auto Sales
14. Agriculture Supply
15. Vacant Industrial
16. Power Substation
17. Industrial Park
18. Restaurant
19. Motorcycle Sales
20. Auto Salvage
21. Auto Sales
22. Veterinary Clinic
23. Vacant Commercial
24. Farm and Supply Store
25. Auto Sales
26. Vacant Commercial
27. Jewelry Division Shed
28. Wholesale Distributor
29. Tavern
30. Farm Implement Dealership
31. Small Engine Repair
32. Gun Manufacturer
33. Propane Company
34. Elevator / Ag Chemical Sales

△ Church

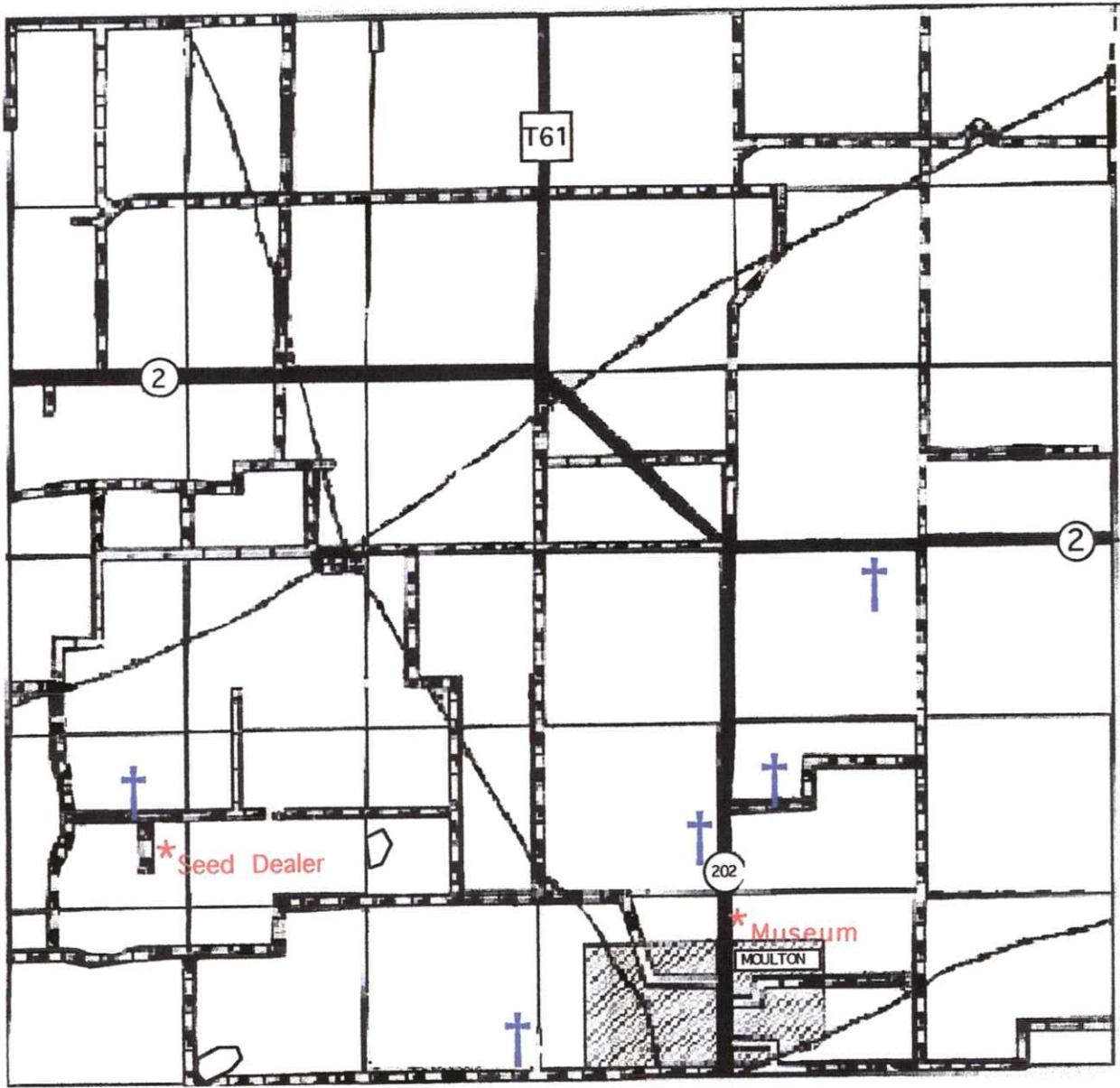
† Cemetery

Walnut Township



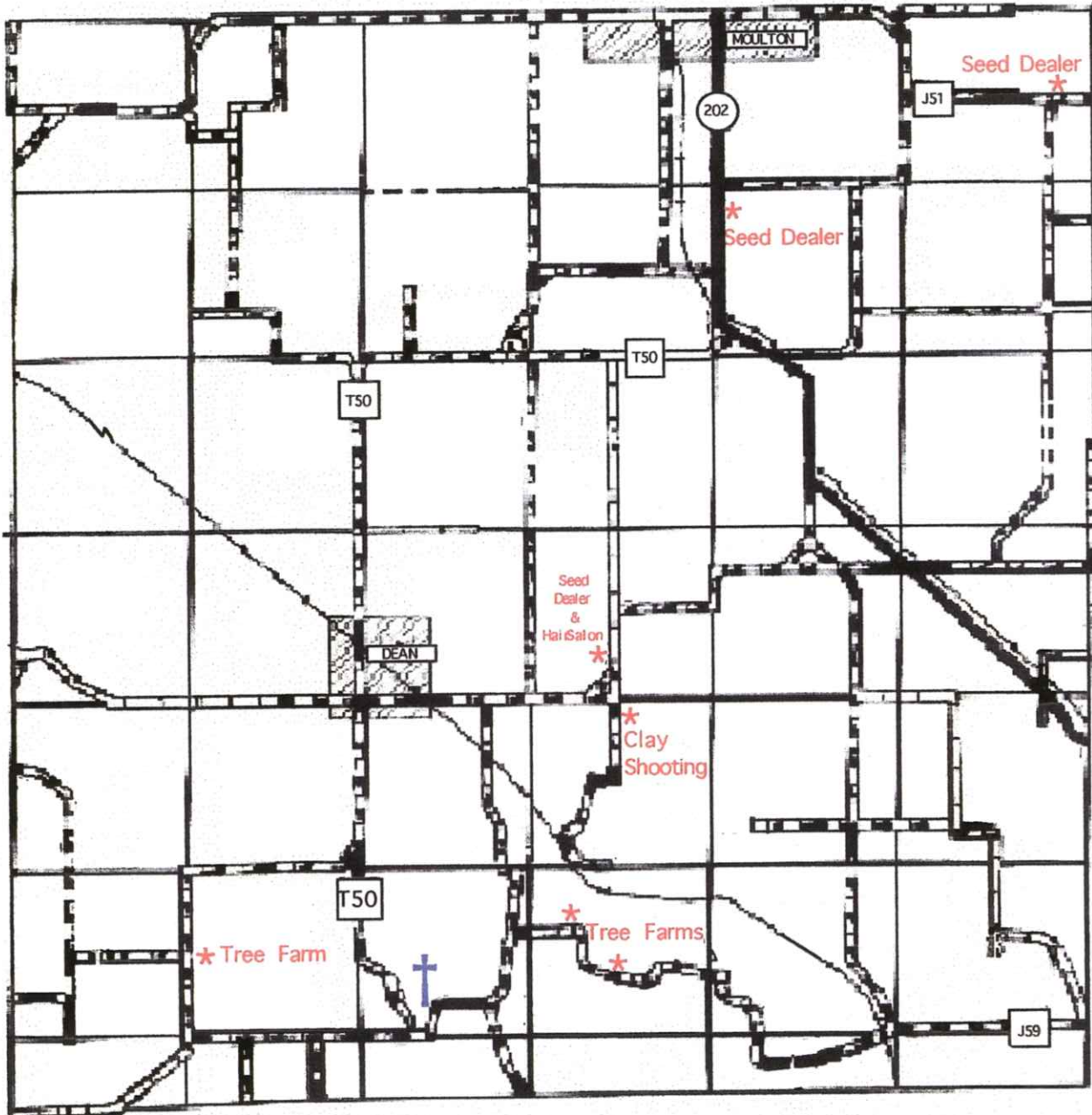
† Cemetery

Washington Township



† Cemetery

Wells Township



† Cemetery

