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PLANNING  
COMMISSION

REPORT UPON  
LAND USE  
TRANSPORTATION  
SCHOOLS AND  
PLANNING OBJECTIVES

HARLAND BARTHOLOMEW AND ASSOCIATES

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Report Upon

LAND USE, TRANSPORTATION,  
SCHOOLS, AND PLANNING OBJECTIVES

Northwest Iowa Region

Prepared for the

Northwest Iowa Regional Planning Commission

The preparation of this report was financially aided through a federal grant from the Department of Housing and Urban Development, under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended.

Urban Planning Grant

Project No. P-116

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Prepared by

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St. Louis, Missouri

April, 1969

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Northwest Iowa Regional  
Planning Commission

Gentlemen:

We are pleased to submit herewith our second report on the Northwest Iowa Regional Planning Program. This report deals with an analysis of land use, transportation and school facilities, plus a projection of long-range planning objectives.

Following review and discussion of this report, we will proceed with the preparation of the individual county planning reports, which will reflect in more detail some of the conclusions and objectives stated in this and the previous regional planning report. It is our intent that the subsequent county reports will follow in close sequence in order that a concentrated public information program can be carried out throughout the entire regional area.

We wish to acknowledge the cooperation and assistance received from the various city and county agencies in the preparation of this report. A great majority of the material contained in this report was assembled and prepared in written form by Mr. Nathaniel Griffin, who is our Resident Planner on this planning project.

Sincerely,

HARLAND BARTHOLOMEW AND ASSOCIATES

E. D. Schippmann  
Associate Partner

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physical land development pattern of the region, and provides an insight into both past and probable future land development patterns.

The regional land use pattern of the future will evolve slowly out of the present configuration. No radical or dramatic change is likely to take place. What exists at present is an arrangement of land that has been adjusted through supply and demand to meet the general needs of the people. Generally, these uses are in proportion to the needs of the people, although much can be done to improve the present pattern.

The principal purpose of the land use plan will be to suggest a land use pattern which is more efficient and better meets the needs of the region. The land use study provides the basic data from which a land use pattern can be designed. To this end, the land use study provides:

a) the amount of acreage in each land use category, from which a determination of land use needs for 1990 can be made.

b) estimates of current population by township and community, obtained by multiplying the number of dwelling units by an average number of persons per unit.

c) data useful in evaluating the adequacy of existing school, transportation, and other public facilities and determining what will be needed in the future.

d) insights into why the region developed as it did, and what land use problems currently exist in the urban and rural areas.

In summary, this information is ultimately intended to establish a framework for planning, enabling further studies and plans to be prepared as part of the regional planning program.

#### Evolution of the Land Use Pattern

The land use pattern of every part of the United States has evolved according to the dictates of geography, climate, soils, and various human intangibles. Northwest Iowa has been no exception; although geographic factors have been minimized due to the prairie



topography. Man could build as he wished, and as a result, the land use pattern is dominated by human forms, with roads at right angles along section lines, and towns spaced at regular intervals. Only along the Big and Little Sioux rivers has nature dictated road alignment and the settlement pattern.

In fact, few areas in the United States offer more support for the central place theory of Walter Christaller. This German geographer hypothesized that communities would develop on the land so as to maximize their trade areas. The result is a hexagonal pattern of influence around each community. Small towns would have influence over limited areas, and provide only basic services. Larger central places, providing a wider range of services, would be spaced at wider intervals. This is true in the Northwest Iowa Region, where a single larger and centrally located community, Sheldon, dominates retail trade in the region. Beyond the limits of the planning area are even larger communities, whose area of influence is even greater.

The towns and roads were laid out in the early days of settlement, when travel was by horse and wagon. The automobile has brought about great changes in the spatial relationships of the region, and many changes of the past several decades have represented adjustment to the new realities. As some physical components of the region have become outdated and obsolete, they have been abandoned or replaced. Present day needs are constantly being provided for. This process of change is going on continuously, and never will be finished. Land use reflects the social and economic development activities of the region, and the demands placed upon it by local and national forces. The land use pattern in the four counties can be said to have been produced by the demand for beef, pork and grain, in the urban centers of America.

The railroads have contributed to the proliferation of small towns throughout the region. Each line was built without consideration of the already existing railroads, with the result that there is more railroad trackage than is needed to serve the region efficiently. Each railroad platted towns along its right of way to an excessive number, which contributed to a pattern of scattered population in small and undynamic communities.

It is important to understand the "spatial dynamics" of the region, for the land use changes necessary to accommodate to new needs and conditions will be greater during the planning period than in the recent past.

#### Existing Land Use

Space is the dominant feature with regard to the land use pattern of the Northwest Iowa Region. The region covers 2,327 square miles, with a population of about 67,000, or 30 persons per square mile. The four counties are among the more sparsely populated in the state of Iowa. Forty percent of the population is rural farm, and the rest live in the cities and towns of the region.

The towns are located at approximately 10 mile intervals, while urban communities are 15 to 20 miles apart. The largest urban community is Sheldon, with a population of 4,500. (See Plate 1).

Sheldon's larger size seems to be due to its central location within the region. Urban places, well located in each county, form a semi circle around Sheldon. Sioux County with a higher population density has three urban places. In the absence of geographical boundaries, communities have organized themselves according to size, with a large number of small towns serving small areas, and a few large towns with increasingly wider areas of influence. Conversely, cities with even larger populations and areas of influence are located outside the region. In between the towns, a great majority of the land area is devoted to agriculture.

Most towns in the Northwest Iowa Region have a relatively similar land use pattern, including homes, businesses, industries, and public uses like schools, churches, and parks. The arrangement of the different structures, and the relationship to each other determines the character efficiency, and quality of the community.

The typical pattern has a "main street" business district surrounded by a single family residential area. Industry tends to concentrate along the railroad line, and public and semi public uses are adjacent to the business district or in the residential area.









NORTHWEST  
IOWA  
REGIONAL  
AREA

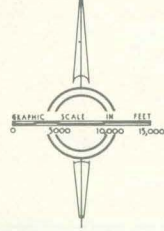
BIG SIOUX RIVER  
WATERSHED

LITTLE SIOUX  
RIVER  
WATERSHED

FLOYD RIVER  
WATERSHED

1968  
GENERALIZED  
LAND USE

-  RESIDENCE
-  COMMERCE
-  INDUSTRY
-  PUBLIC/SEMI-PUBLIC
-  PARKS/WOODED AREAS
-  WATERSHED BOUNDARIES



URBAN PLANNING GRANT PROJECT NO P-116 PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF CHAPTER 20A CODE OF IOWA, AS AMENDED.

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SIEMENS CITY

PREPARED FOR:  
NORTHWEST IOWA REGIONAL  
PLANNING COMMISSION



A certain amount of activity has grown up along principal highways near the communities.

For the most part, intermixture of incompatible land uses has not been a problem. At the scale of a small town, commerce does not seriously affect adjacent residential homes. The primary exception to the rule is found along State Highway 10 at the southern edge of Orange City. Here, businesses, homes, schools, and industry have expanded in an unplanned and undesirable fashion. Not only has the traffic carrying capacity of the highway been reduced, the result is aesthetically unattractive and dangerous for high school and college pedestrians.

#### Agricultural Uses

Agriculture is the predominant land use in the four counties. Sioux County has the largest percent of its total land area in farms, (97.4), followed by O'Brien and Osceola Counties with 96.6 percent each, and Lyon County with 96.2 percent. These figures give some idea of the intensive agriculture carried on in the Northwest Iowa Region. For the State of Iowa as a whole 94.8 percent of the land is in farms.

A breakdown of acreage by crops is shown in Plate 2. Out of a total of 1.4 million acres of farmland, 43 percent is planted in corn, 20 percent in soybeans, 7 percent in oats, 17 percent in hay and pasture, and the remainder consists of farm buildings, roads, and wooded areas. Most of the corn is fed to cattle and hogs locally, while soybean products are supplied to national markets. Most of the hay and pasture land is concentrated in rough sections along the streams, where row crop farming is impractical.

Significant variations in agricultural land use may be noted between counties. Corn is more important in the two western counties, while soybean acreage is largest in O'Brien and Osceola. The largest percentage of hay and pasture land is found in Lyon County, which has extensive hilly sections along the Big Sioux River. The somewhat larger amount of Osceola County farmland in the "other" category may be due to the numerous sand and gravel pits, both active and abandoned. In comparison to earlier years, soybean acreage is growing at the expense of oats, and to a lesser extent, corn.



There is no reason to believe that the pattern of population change will vary during the planning period. Towns which have grown most rapidly in the past will continue to do so in the future. Those which have been unable to offset losses in rural parts of their townships will be faced with a contracting retail trade area. Strictly rural townships, about half of the total, will continue to decline at present rates. Those which have undergone the greatest readjustment, however, may reach a point of stability sometime during the next two decades. The densest rural farm population is in Sioux County, suggesting that this county will have greater losses in rural population than the other three.

From available statistics, the generalization can be made that the larger the town, the more likely it will grow. Conversely, the smaller the town the greater the probability that it will experienced a population loss during the planning period.

#### Community Amenities

Quality of life is not something that is easily measured. It is an intangible, a reflection not only of physical amenities, but also immeasurable factors such as educational and cultural levels and a commonly held appreciation of a way of life. It is important, however, to make an attempt to measure this nebulous concept, for the primary objective of planning is to bring about a better way of life for the residents of a community or region.

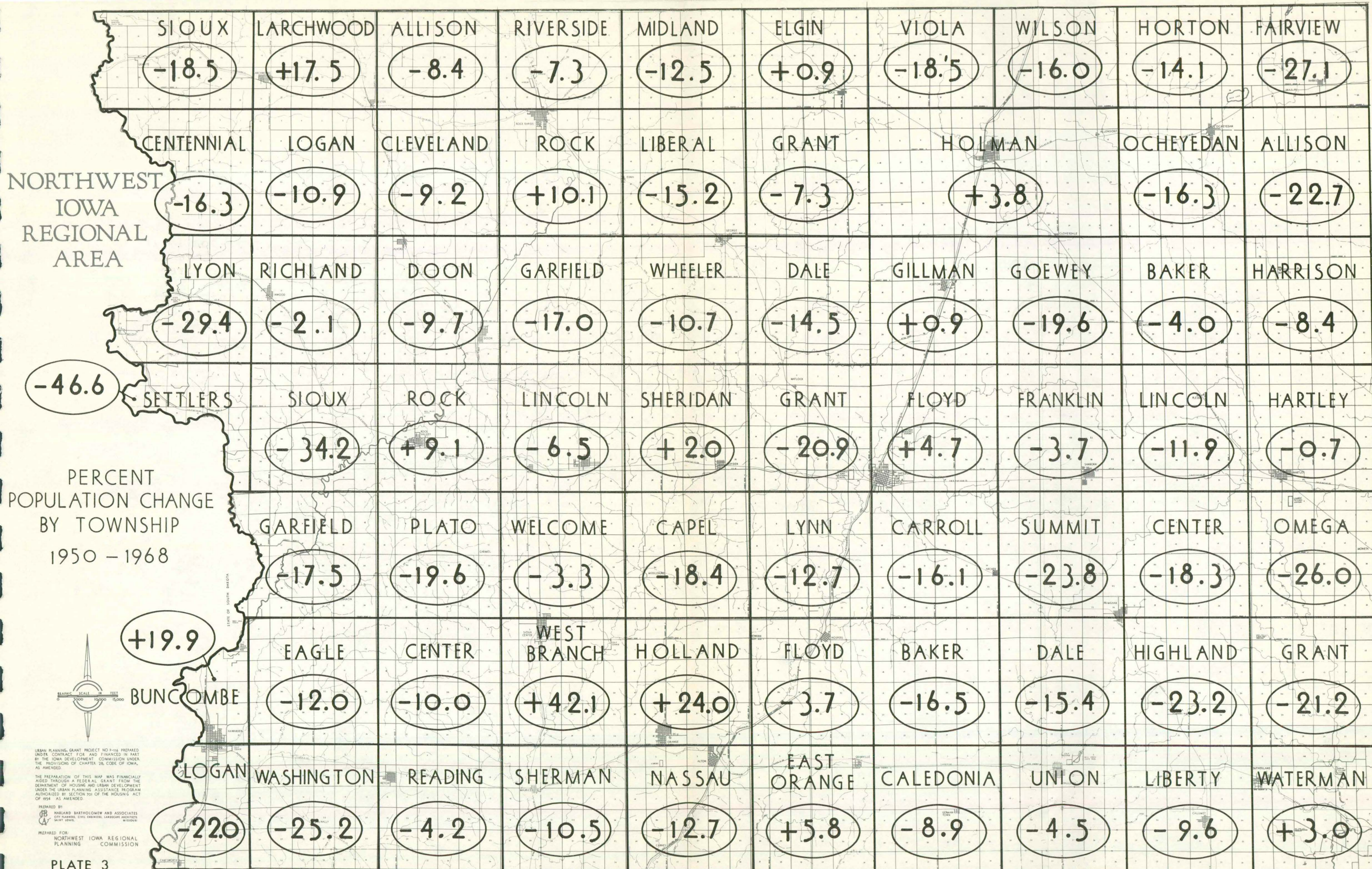
A table has been prepared which lists the facilities presently available in the 37 incorporated communities of the region. The twenty categories included range from highway and railroad access to parks, schools, hospitals and similar facilities. By comparing the totals for each of the towns, some idea of the facilities which exist in the region and the way they are distributed amount the different communities can be obtained. (See Table 2.)

Sibley achieved the highest score, which is 17. Rock Rapids, Sheldon, Orange City and Sioux Center each had 16. Hawarden got the lowest figure (15) for an urban place of over 2,500 population. Rock Valley got the highest score for any community under 2,500 in population. Paullina, Hartley, and Primghar



NORTHWEST  
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AREA

PERCENT  
POPULATION CHANGE  
BY TOWNSHIP  
1950 - 1968



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Table 2

COMMUNITY AMENITIES  
Northwest Iowa Region

	Primary School	Secondary School	Riding or Shooting Club	Primary Highway	Rail Facilities	County Courthouse	State or County Institution	College	Hospital	Golf Course	Community Park	Swimming Pool	Library	Theater	Nursing Home	Physician	County Fairgrounds	Major Employer (50+)	Motel-Hotel	Airport	Total
<u>Lyon County</u>																					
Alvord					X						X										2
Doon	X				X						X										3
George	X	X			X						X				X	X		X	X	X	9
Inwood				X	X						X										3
Larchwood				X	X						X									X	4
Lester				X	X						X										3
Little Rock	X	X		X	X						X										5
Rock Rapids	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	16
<u>O'Brien County</u>																					
Archer	X				X						X										3
Calumet	X			X	X						X										4
Hartley	X	X		X	X				X		X		X		X	X			X	X	11
Moneta					X																1
Paullina	X	X		X	X					X	X			X		X			X	X	10
Primghar	X	X	X	X	X	X	X		X		X				X	X				X	12
Sanborn	X	X		X	X						X				X	X			X		8
Sheldon	X	X		X	X		X		X	X	X	X	X	X	X	X		X		X	16
Sutherland	X	X		X	X						X		X	X	X	X				X	9
Gaza					X																1
<u>Osceola County</u>																					
Ashton	X			X	X						X								X		5
Harris	X			X	X						X										4
Melvin	X	X		X	X						X		X								5
Ocheyedan	X	X		X	X						X										5
Sibley	X	X		X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	17
May City																					0
<u>Sioux County</u>																					
Alton	X	X		X	X					X	X		X	X						X	9
Boyden	X			X	X						X		X								5
Chatsworth				X	X																2
Granville	X	X		X	X						X										5
Hawarden	X	X		X	X			X	X	X	X		X	X	X	X		X	X	X	15
Hospers	X			X	X						X										4
Hull	X	X		X	X						X		X		X						7
Ireton	X				X						X										3
Matlock					X																1
Maurice	X			X	X						X										4
Orange City	X	X		X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	16
Rock Valley	X	X		X	X					X	X	X		X	X	X		X	X	X	13
Sioux Center	X	X	X	X	X			X	X	X	X	X	X		X	X	X	X	X	X	16

Source: Harland Bartholomew and Associates Survey.

had half or more of the facilities included on the list. A majority of all communities had no more than one quarter of all the facilities, and several had only one.

The most commonly found facilities included primary highways, rail access, and community parks. Most towns had primary school facilities. Court houses, fairgrounds, airports, and similar facilities were necessarily located in only a few communities.

This table indicates several things which are important in understanding how the region might develop in the future. In deciding the land use pattern most suitable for the four counties, these facts need to be considered:

- 1) Community amenities tend to be concentrated in towns of over 2,500 population.
- 2) A majority of towns in the four counties have only a limited number of community facilities.
- 3) Many assets, desirable for an improved living standard, are present in insufficient supply, or absent from the region.
- 4) Existing facilities are well located within the region to serve immediate populations.
- 5) For those towns lacking the basic requirements; such as, a primary school, library, or medical facilities, the living environment must be seen as deficient.
- 6) As additions to the supply of physical facilities are made, they will tend to concentrate in those communities which already have the largest number of facilities.
- 7) As the pattern of facilities available depends upon community size, larger towns will attract desirable facilities in greater number and variety.
- 8) The prospect is that those communities with scores of under 10 are likely to lose facilities rather than gain more during the planning period.



### Major Land Use Problems

The land use study indicates several major problems, which should be examined:

#### Excessive Land In Roads

With almost three percent of the entire land area of the region devoted to road rights-of-way, it is evident that this figure is excessive. Over 90 percent of the road acreage is in rural areas, and this is where an effort should be made to bring the total to a more reasonable level.

A goal for the region should be to reduce rural road mileage by one-half during the planning period. If this step is taken, 20,000 acres of land, or an amount equal to the present urban area of the region could be returned to agricultural use or some other purpose. Plate 4 shows a hypothetical six section area, and how the road mileage might be changed to other uses. The roads eliminated would be the lightly traveled section roads, which, as more farmsteads are abandoned, will be even less traveled in the future.

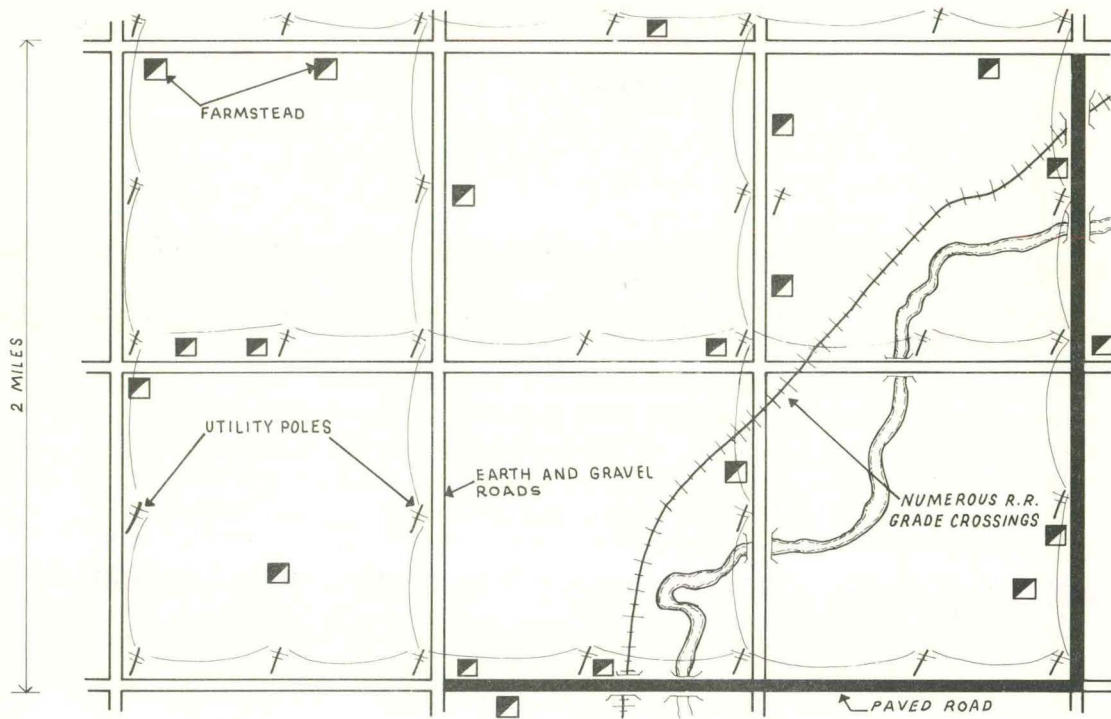
One argument against vacating rural roads has been that access to fields will become more difficult. It is felt, however, that the savings to the counties, and the inducement of giving this land to abutting property owners, warrant undertaking such an effort, despite the difficulties involved.

#### Urban Areas

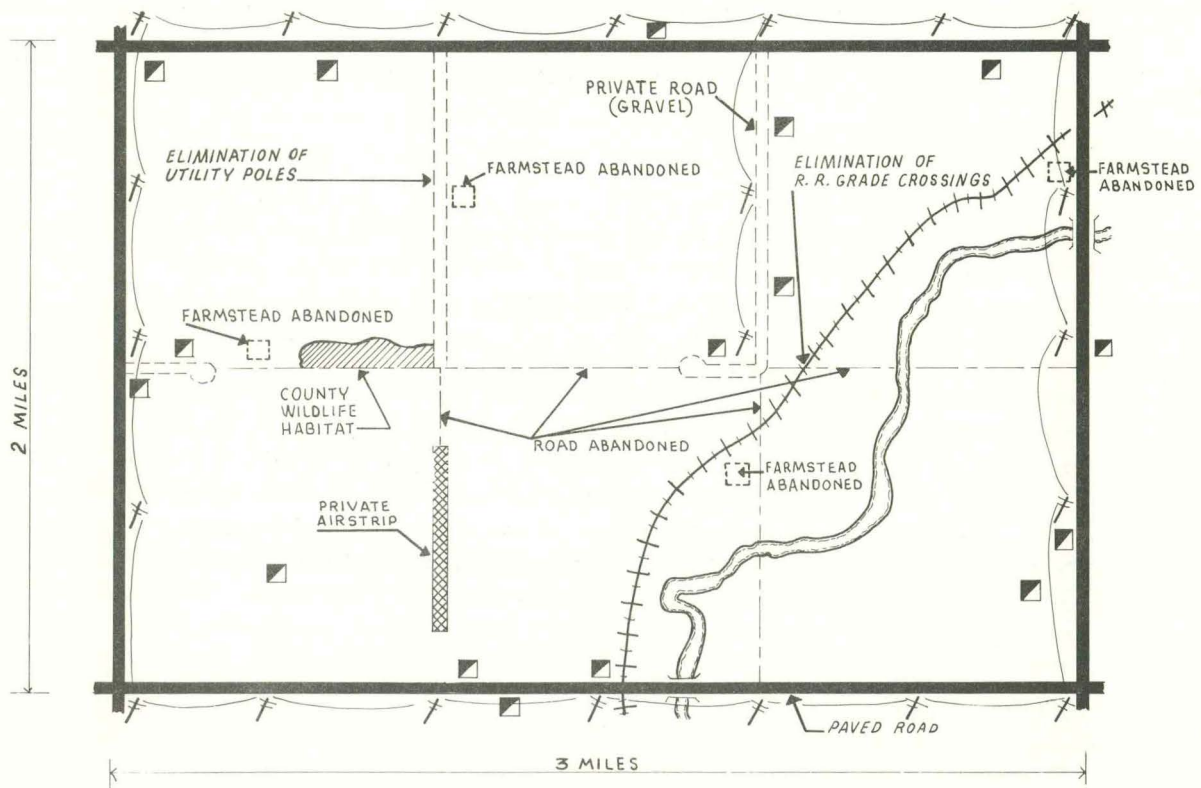
An evaluation of the 20 year population trend shows a gradual decrease in rural population and a gradual increase in urban areas. This trend is expected to continue, with nearly all of the future population growth taking place in the urban centers. Moreover, most of this growth should take place in the urban places of the region or those cities with over 2,500 population. Most residents will continue to find employment within the four counties, and this necessitates industrial expansion as the major growth segment of the local economy. New industrial land areas will likely be associated with existing urban centers.

# SUGGESTED RESTRUCTURING OF RURAL COUNTY ROADS

1969



1990



THE PREPARATION OF THIS MAP WAS FINANCED IN PART THROUGH AN URBAN PLANNING GRANT FROM THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, UNDER THE PROVISIONS OF SECTION 101 OF THE HOUSING ACT OF 1954, AS AMENDED.



### Agricultural Areas

Agricultural activity will continue to dominate the regional economy. There will be shifts among the different categories of developed land, but the amount of land used for farming should continue to be about 95 percent of the total, or 1.4 million acres.

### Recreational Areas

The establishment of state and county parks and wildlife areas has served to preserve a substantial amount of the region as open space. Further efforts should be made to conserve areas unsuitable for agriculture by incorporating them into a regional park system. Evaluation of county recreational facilities indicates that most vacant rural land is still in a natural state, and that recreational facilities are a prime need of the region.

### Solid Waste Disposal

The disposal of solid wastes is a serious and growing problem in the Northwest Iowa Region. Once it was possible to get rid of refuse and trash in the four counties by open dumping. When there were few persons who produced a relatively small amount of solid waste, this approach was less offensive. As society has become more complex, open dumping is increasingly unacceptable as a method of getting rid of wastes. Not only is the open dump unsightly, it is a breeding ground for rats and insects, and also creates problems of air and water pollution.

At the present time, the American urban population produces 5.3 pounds of trash per capita daily. This figure is expected to rise to 8.0 pounds per person by 1980. With increasing affluence, more goods are being consumed and these goods are packaged with materials which present a disposal problem. For instance, groceries which once were not wrapped now come in a variety of containers, which must be disposed of.

For a largely rural area without large cities such as the Northwest Iowa Region, a sanitary landfill is the best method of dealing with the waste problem. A sanitary landfill planned and designed by engineers has none of the objectionable characteristics of the open dump. It consists of four basic operations: (1) the solid wastes are deposited in a controlled manner in a prepared portion

of the site; (2) the solid wastes are spread and compacted in thin layers; (3) the solid wastes are covered daily or more frequently if necessary, with a layer of earth; and (4) the cover material is compacted daily.

There are two primary types of landfill operations. In flat, slightly rolling, or low-lying terrain, the area landfill is most often used. The waste is spread on the site, compacted, and covered with a layer of earth. The trench method, which may require more than one piece of equipment, involves digging a trench in which the waste is put, and covering it with the excavated earth. This approach is inadvisable when the water table lies close to the ground surface.

It can be anticipated that one acre of land per year per 10,000 population will be required for sanitary landfill. This represents 8 to 10 thousand compacted cubic yards of waste material in layers not exceeding six feet in depth.

The principal criteria for determining the location of a sanitary landfill are:

1. Each land fill can serve an area with a radius of not more than 15 to 20 miles. The cost of transporting waste becomes prohibitive for greater distances.
2. The most suitable soil type is sandy loam. Areas with underlying rock formations close to the surface should be avoided. Before selecting a site, a soil analysis should be made.
3. Siting should be such as to minimize the distance from principal areas served so as to reduce hauling.
4. The operation should be on a paved road.
5. Filled areas should not obstruct natural drainage courses.
6. Locations near springs or subject to periodic flooding should be avoided.
7. No landfill should be located where it could pollute the ground water supply.



The problem of solid waste disposal presents an opportunity for increased regional cooperation among the four counties.

Unfortunately, the population to be served is so dispersed that disposal cannot be carried on as efficiently as it might be if there were larger urban areas in the region.

The best approach for the region would be to establish one well-located sanitary landfill in each county. This would be more economical than having a large number of small landfills and open dumps and would facilitate adequate control of the operation. A total of 200 acres divided among the four counties should be set aside for the purpose of meeting anticipated needs during the planning period. This figure provides leeway for the growing amount of trash per capita and allows for flexibility on the site. One piece of equipment will be required for each site as the cost of transporting a single crawler tractor around the four counties would be prohibitive. It is feasible, however, for auxiliary equipment to be operated on an inter-county basis, thereby affording a savings to the region. Likewise, it would be possible to have one employee handle the landfill operations of two counties, as there wouldn't be enough work at any one site to keep a man fully occupied. This project could be supervised regionally by one of the county engineers.

Consideration should be given to using vacant sand and gravel pits for waste disposal purposes. Many of these areas are already in county ownership. Prior to taking this step, however, a soil analysis should be made to insure that pollution of the ground water supply will not occur.

A substantial number of junked cars, used refrigerators, obsolete farm equipment and similar bulky objects litter the region. When material of this nature is no longer usable, and there is little or no market for it as scrap, it is easy to simply abandon it along a fence line, stream, or in a wooded lot. This practice is much more prevalent elsewhere in the country, but is a growing problem within the region. From the aesthetic standpoint, rusting cars and other junk detract substantially from the appearance of the region.

In some parts of the country, portable balers move by truck have been used to clean up the countryside of



junk. This kind of an operation should be carried out at the state level. Owing to the low value of scrap, and relatively limited amount found in any given area, private enterprise could not make such an operation pay. The state, undertaking a clean-up project as a service, rather than as a paying business, could move baling equipment from county to county on a scheduled basis, and find a ready market for a steady volume of scrap.

In the absence of such a statewide program, vacant sand and gravel pits could be designated as places to dispose of this kind of junk with the area eventually covered with earth. Agriculture or park facilities would be a suitable reuse of this reclaimed land. Once again, it would have to be determined that this would not affect the water supply.

#### Future Land Use Requirements

Future land use changes in the Northwest Iowa Region reflect the fact that population is not expected to increase. In order to determine the amount of land required for the various land use categories, a population estimate of 65,000 for 1990 was used.

In line with the national trend toward larger building lots, more commercial parking areas, and spacious industrial sites, all of which consume more land than was necessitated by the older development pattern, it is anticipated that the amount of developed acreage in most land use categories will increase. (See Table 3.)

Five hundred and forty acres of single and multi-family residential housing will be needed to meet this demand. Substantial amounts of land for industrial, commercial, and public and semi-public uses will be required. All told, approximately 1,500 acres of land will be developed during the planning period.

This trend, however, will be more than offset by farmsteads and rural road rights-of-way reverting to the agricultural and vacant use category. With one-quarter of the rural road mileage vacated and 30 percent of the farmsteads abandoned during the planning period, 12,000 acres would revert to the agricultural or vacant category. This would reduce the developed acreage per 100 persons from 104.56 to 90.45. In the event that a policy to eliminate rural roads does not



Table 3

1990 REGIONAL LAND USE REQUIREMENTS

Northwest Iowa Region

<u>Category</u>	<u>Acres Per 100 Persons</u>	<u>Total Acreage</u>	<u>Additional Acreage</u>
Single Family	6.30	4,095.0	+ 498.8
Two Family	.03	19.5	+ 8.5
Multi-Family	.10	65.0	+ 27.4
Farms	15.03	9,769.5	- 4,834.1
Trailers	.03	19.5	+ 3.4
Total Residential	21.49	13,968.5	- 4,296.0
Commercial	.60	390.0	+ 31.5
Light Industry	3.50	2,275.0	+ 320.6
Heavy Industry	.40	260.0	+ 51.8
Parks	2.50	1,625.0	+ 275.1
Public and Semi-Public	4.50	2,925.0	+ 304.8
Railroads	7.27	4,722.0	-
Streets	50.20	32,630.0	- 8,999.9
Total	90.46	58,795.5	-12,312.1

Source: Harland Bartholomew and Associates



come about, and rural farmhouses continue to be used for dwellings, the reduction in developed land will be less.

The basic trend, however, is clear. The total amount of developed land in the four counties will not increase, although there will be important shifts in land use categories. The amount of acreage in the farm category is sure to go down even if it is not possible to say precisely how much. New residential areas will develop around many towns, and individual properties within them will be rebuilt. Industries will acquire large tracts for new factories.





## TRANSPORTATION

The Northwest Iowa Region encompasses an extensive area measuring some 60 miles east to west and 40 miles north to south, making the distance between communities an important planning consideration. Transportation within the region and access to neighboring metropolitan areas is a vital part of continuing economic development and growth. The large size of the area emphasizes the need to provide up-to-date transportation facilities to serve existing and distant markets, and to facilitate the movement of people.

An important goal of the planning program is to coordinate the land use plan with present and future changes in the transportation network. There is a correlation between community growth within the four counties and location on primary highways and rail lines which will become more pronounced during the next two decades. Economic and social ties will strengthen within the region, and contacts with the rest of the country will be expanded, in part due to improved transportation.

### Transportation Patterns

Highways are the most important component of the transportation system in northwest Iowa. People use automobiles for traveling within and beyond the borders of the region. Agriculture utilizes trucks to move grain and livestock from farm to market. Light industry places a high degree of dependence upon highways, with only a limited use of rail service.

Railroads are more important for bringing products into the region than for moving them out, but play a modest role in the overall transportation picture. They serve the agricultural economy, moving inputs; such as, chemicals, feed, and fertilizer into the region, and shipping out grain and meat products.

There is no scheduled air service within the Northwest Iowa Region. Existing airports serve private planes with some lighter commodities (particularly mail) being shipped by air.

In recent years, trucks and oil pipelines have expanded their share of freight movement at the ex-



pense of railroads. At present, there is stability among the different types. Railroads have an efficiency advantage in moving bulk items large distances.

An indication of the changing pattern of freight and passenger movements on a national scale is shown by the following percentage distribution among various modes of travel as determined by the U. S. Department of Commerce.

UNITED STATES INTER-CITY FREIGHT MOVEMENT

<u>Type</u>	Percent			
	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1964</u>
Railroads	57.4	50.4	44.7	44.0
Motor vehicles	15.8	17.2	21.5	22.5
Inland waterways	14.9	16.7	16.6	16.2
Oil pipelines	11.8	15.7	17.2	17.2
Air	N.A.	N.A.	0.1	0.1

UNITED STATES INTER-CITY PASSENGER MOVEMENT

<u>Type</u>	Percent			
	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1964</u>
Automobile	86.2	89.0	90.0	89.6
Airplanes	2.0	3.2	4.3	5.5
Commercial Motor carriers	5.2	3.6	2.5	2.5
Railroads	6.4	4.0	2.8	2.1
Waterways	0.2	0.2	0.3	0.3

Passenger movement is dominated by the automobile nationally, as well as in the Northwest Iowa Region. With a dispersed population and public transportation limited to inter-city buses, the automobile is relatively more indispensable locally than nationally. The airlines share of the total market is expanding rapidly, but is still small. Air travel is most efficient for trips over 250 miles.

Highways

Experience has shown that the proper way to provide for good vehicular traffic circulation is through the establishment and development of relatively few, strategically located major thoroughfares, to attract and



accommodate the principal traffic movements. The remaining road system within the counties can then be used primarily to serve as collector and service roads, and to provide access to individual properties. The principle is much like the circulatory system of the human body, with arteries serving the major organs, and progressively smaller vessels in the extremities. The highway system should also be a continuous system, with roads of differing standards serving different purposes.

### Standards

A recommended classification system for roads in the State of Iowa is contained in the "Manual of Engineering Procedures for Determining County Road Needs". The purpose of the manual is to set forth standards for measuring the adequacy of existing roads and developing a program of reasonable improvement. Four classifications of non-urban roads have been established.

State Trunk Lines - provide for long distance movement within and beyond the boundaries of the state. These highways serve state and national needs, and include interstate routes, federal highways, and most state highways. Designed to carry heavier traffic volumes, state trunk lines connect larger communities, the prime traffic generators. In agricultural areas, trunk lines should be spaced at 10 to 20 mile intervals.

County Trunk Lines - connect towns and major destination points within counties and neighboring counties. As the more heavily traveled rural roads, they serve as collectors for the state trunk lines. Recommended spacing is at five to six mile intervals, or more, depending on population density. Some county farm-to-market roads roughly correspond to county trunk lines.

County feeders - should have traffic volumes of 50 or more vehicles per day. They act as collectors for the local roads, and serve as arteries for the provision of rural services; such as, mail delivery, school bus routes, etc. Spacing is usually on a two to three mile basis, utilizing the grid pattern, and this category includes the balance of the farm-to-market roads.



Local roads - provide access to individual properties. With little traffic, the standard of construction is correspondingly lower.

In order to determine the adequacy of existing roads, and their capability of meeting future demands, the Iowa State Highway Commission has established the following width and capacity standards:

<u>Width</u>	<u>Daily Auto Capacity</u>
4 lane divided	7,000+
4 lane	4,000 - 7,000
2 lane (24 feet)	400 - 4,000
2 lane (22 feet)	Under 400

#### Existing Conditions

The Northwest Iowa Region is well served by an extensive network of highways. This system was established in the early days of settlement and has been improved steadily in order to meet changing conditions.

The major state and federal trunk lines are the most important highways in the region. Three federal highways cross the planning area, U.S. 59 and 75 north-south and U.S. 18 east-west. Two high standard state highways, 9 and 10 run east-west through the upper and lower segments of the region, respectively. In addition, State Highway 60 follows the Floyd River from LeMars to Sheldon and then continues in a northeasterly direction to the Minnesota state line. Two interstate highways are just beyond the limits of the region. Interstate 29 to the west connects Sioux City and Sioux Falls and points beyond in a north-south direction, while Interstate 90 crosses the southern edge of Minnesota in an east-west direction.

The Iowa State Highway Commission has assigned a sufficiency rating for the major state and federal trunk lines based on such factors as surface width, daily traffic, structural adequacy, safety and service. Within the Northwest Iowa Region, 57 percent of the primary highway mileage has been rated as being in good to excellent condition; 6 percent as tolerable; and 37 percent in poor or critical condition. A more complete breakdown of the primary highway mileage rating for each county is given in the following table.



<u>County</u>	<u>Critical</u>	<u>Poor</u>	<u>Tolerable</u>	<u>Good</u>	<u>Excellent</u>	<u>Total</u>
Lyon	28.99	24.48	1.31	8.15	17.72	80.65
O'Brien	28.40	-	-	10.96	39.05	78.41
Osceola	5.76	-	-	5.34	50.05	61.15
Sioux	<u>29.73</u>	<u>8.47</u>	<u>17.70</u>	<u>21.46</u>	<u>37.11</u>	<u>114.47</u>
Total	92.88	32.95	19.01	45.91	143.93	334.68

Source: "Rural Primary Road Sufficiency Guide - Iowa"

Since 1929, rural secondary roads have been under the control of county boards of supervisors and county engineers. They administer the construction and maintenance of county trunks, feeders, and local roads, which fall into the category of rural secondary roads. Most of these roads were laid out at one mile intervals on a grid pattern by the early surveyors. They follow section lines, except in the few places where rough topography precluded this. Total mileage in rural secondary roads is 4,155.16, distributed in proportion to the size of each county as indicated below.

	<u>Lyon</u>	<u>O'Brien</u>	<u>Osceola</u>	<u>Sioux</u>	<u>Region</u>
Legal not open	2.72	1.46	1.92	8.95	15.05
Unimproved earth	4.10	1.16	2.44	5.53	13.23
Graded drainage	<u>3.74</u>	<u>81.31</u>	<u>57.49</u>	<u>58.85</u>	<u>201.39</u>
Total earth	<u>10.56</u>	<u>83.93</u>	<u>61.85</u>	<u>73.33</u>	<u>229.67</u>
Gravel or stone	872.11	790.62	518.85	1,130.02	3,311.60
Bituminous	5.53	-	0.80	-	6.33
Paved	<u>119.56</u>	<u>161.71</u>	<u>148.25</u>	<u>178.04</u>	<u>607.56</u>
Total Surfaced Roads	997.20	952.33	667.90	1,308.06	3,925.49
Total	1,007.76	1,036.26	729.75	1,381.39	4,155.16

Source: "Iowa Rural Secondary Road Mileage".

The total mileage averages almost two miles of rural secondary road per square mile of land. Most are gravel surfaced, followed by paved and earth roads.

The farm-to-market roads are the most intensively used rural secondary roads. Designated many years ago,



35 percent of total rural secondary mileage falls within this category; 338.60 miles in Lyon, 361.95 miles in O'Brien, 245.96 miles in Osceola, and 491.27 miles in Sioux. The farm-to-market system combines the function of both county trunks and feeders, providing rapid inter-county movement and primary links for the provision of rural services and movement of agricultural products. These roads are generally laid out at two to three mile intervals which divide the counties into four, six or nine square mile sections.

The primary rural roads are funded by state, federal and local governments on approximately a 40-20-40 basis. Much of the Iowa road use tax goes to the farm-to-market system. The property tax is the source for most of the county share, and rural road expenditures, aside from schools, can be as much as 60 percent of total county expenditures. Local roads are financed and maintained by county governments, although there is a small amount of indirect federal aid.

#### Traffic Volumes

Traffic volumes on the primary highways are shown on Plate 5. State Highway 60 has the heaviest traffic, reaching a maximum of 3,000 vehicles per day. Volumes rise to a peak on Highways 18 and 60 at Sheldon, which is the largest community within the region, and is located near its geographic center. Higher volumes relate to the larger communities in the four counties. The average is between 1,000 and 2,000 vehicles per day which is well within the design capacity for two-lane primary highways. Highway 182 between Inwood and Larchwood, with 590 vehicles per day, is the least traveled state route.

The variation is much greater on rural secondary roads, which accommodate from less than 10 vehicles per day up to 1,400 vehicles per day. County Road P, north of Orange City, has the highest volume of any secondary road. Traffic averages under 100 vehicles per day for most rural mileage, particularly local roads.

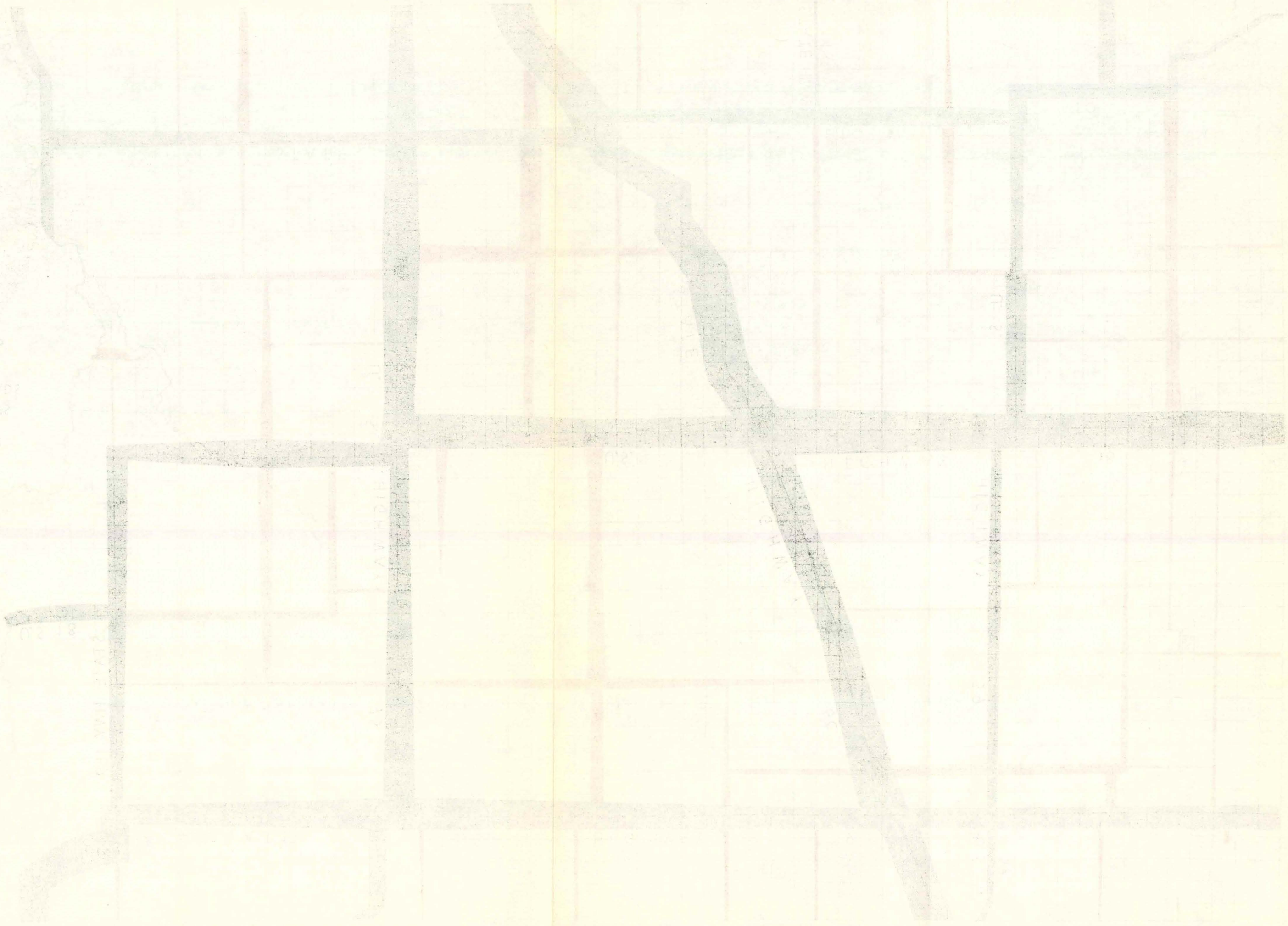
The historical pattern of vehicle registrations within the four counties shows a larger vehicle per capita figure than for the United States. For instance, in 1960, there were 0.59 vehicles per person







500  
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 8500  
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 9500  
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in northwest Iowa compared to 0.41 for the nation. In a large and sparsely populated rural area, motor vehicles become more important than in more urban regions. Mechanized farming, which requires numerous tractors, trucks, and other vehicles also helped boost the total.

There has been a rapid increase in vehicle registrations within the region, particularly in the last eight years, when the total increased from 41,641 to 49,875. (See Table 4.) The average yearly increase was 2.19 percent, compared to 1.6 for the nation.

Table 4

VEHICLE REGISTRATIONS NORTHWEST IOWA REGION

	<u>1950</u>	<u>1960</u>	<u>1968</u>	<u>1990</u>
Lyon County	7,917	8,599	10,129	-
O'Brien County	10,511	11,323	13,318	-
Osceola County	5,926	6,641	7,488	-
Sioux County	12,975	15,078	18,940	-
Total Region	37,329	41,641	49,875	58,000 (Est.)
Region Population	70,229	69,747	67,319	65,170 (Est.)
Vehicles Per Capita	.53	.59	.74	.90 (Est.)
Percent Change Per Year	-	+1.04	+2.19	+.66 (Est.)
Vehicular In- crease Per Year	-	+431	+1,029	+370 (Est.)

Source: Iowa Department of Public Safety; Harland Bartholomew and Associates Estimates, 1969.

The projected vehicles per capita figure for 1990 is 0.90. In other words, there would be nine vehicles for every 10 residents of the region. This figure is based upon the anticipation that the rate of vehicular increase will decrease as the saturation point is approached. Between 1966 and 1967, the number of tractors in use went down. As farms increase in size, the under-utilized capacities of motor vehicles can be brought into play, thereby reducing the number of farm vehicles within the region. Other factors slowing the rate of increase will be the pattern of



population decline and the fact that recent rising affluence has already enabled almost everyone who is so inclined to purchase their own automobile to do so. The total number of vehicles within the region is expected to increase to 58,000 by 1990 or some 8,000 above the present total. This increase, together with increasing mobility throughout the county, tourist travel, etc., will substantially increase traffic volumes on the region's highways.

Traffic projections have been made based upon predicted changes in population, land use and vehicle ownership and usage, and guidelines of the Iowa State Highway Commission. The number of vehicle registrations is expected to increase by 15 percent during the planning period and the state estimates average increases in traffic volumes at three percent annually. For the purposes of this report, an increase of 50 percent in traffic volumes does not seem unreasonable.

When compared with existing highway capacities, it becomes evident that most of this increase can be accommodated on the existing system. This is not to say that some changes will not be needed. Most highway improvements are equated with measured, not estimated traffic volumes, consequently future needs cannot be determined precisely. There will always be a need to continually upgrade highways to meet increasingly higher standards. In addition to changes to increase capacity, improvements in alignment, pavement width and bridges will be required, along with bypass routes around larger communities.

State Highway 60 should be upgraded to four lanes in order to accommodate future traffic growth. This highway is the principal link between Kansas, Nebraska, and the State of Minnesota, and is experiencing a rapid uptrend in use. The already low traffic volumes on a majority of the rural secondary roads can be expected to show a further decline in years ahead, as farmsteads are abandoned, and a smaller number of farm machines are used more efficiently.

The Iowa State Highway Commission has prepared a primary road construction program for fiscal years 1970 through 1974. Improvements to be carried out in Lyon County include a short stretch of repaving State Highway 10; bridge improvements on U. S. 75; and 0.80 miles of pavement in Gitche Manitou State Park. State



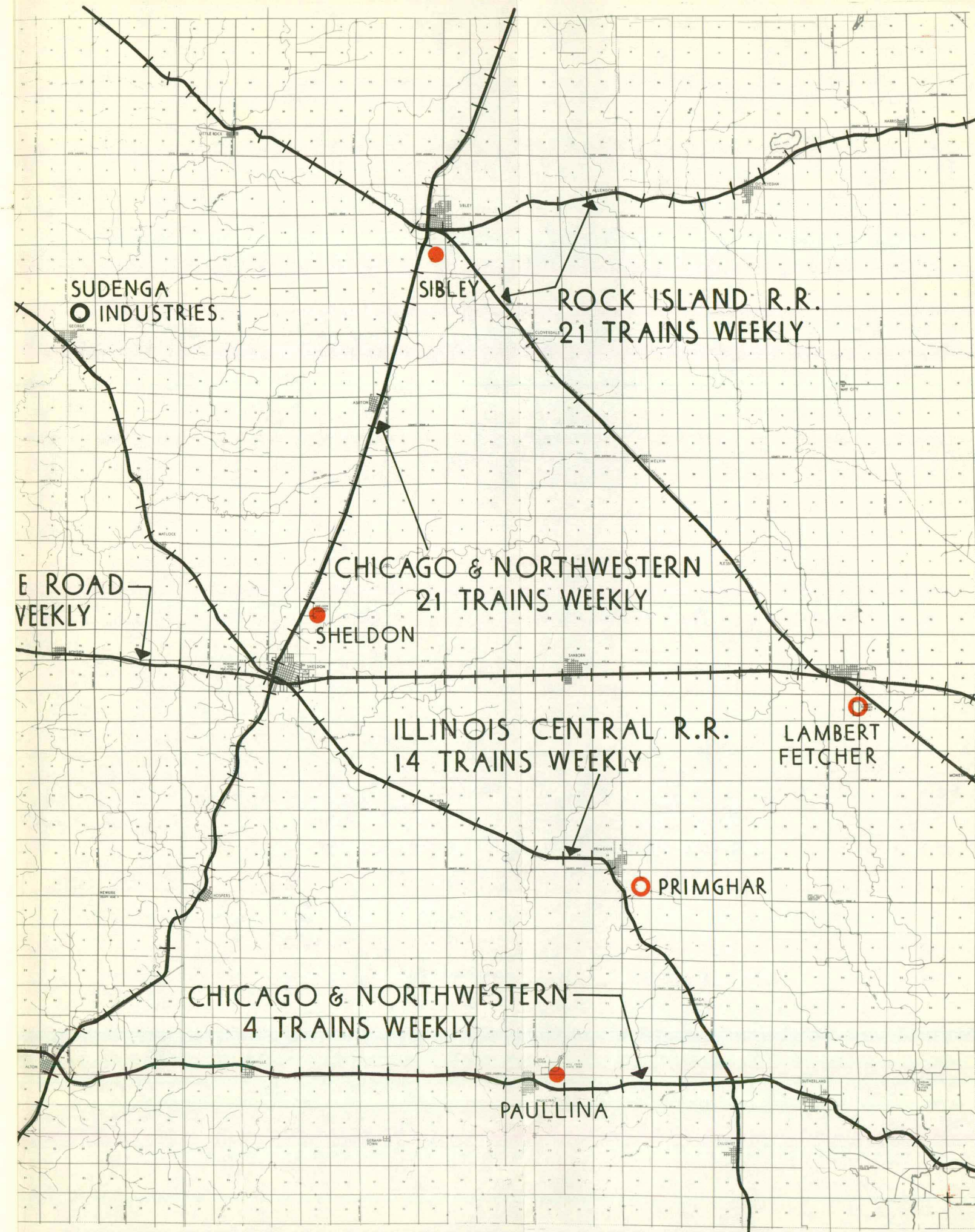
Highway 60, between Ashton and Sibley in Osceola County and Sheldon and Ritter in O'Brien County, is to be upgraded and Highway 59 between U. S. 18 and State Highway 10 is to be widened and repaved. Bridge improvements are also planned on U. S. 75 in Sioux County. Proposed improvements were "determined by a consideration of the physical conditions, safety, and service characteristics of the various primary roads". One goal of the program is to eliminate all 18 and 20-foot pavements in the primary system.

#### Highway Problems

In most instances, the need is to upgrade existing facilities by widening, repaving, reconstructing bridges, and adding railroad warning signals. Structural improvements, rather than entirely new highways will accommodate most of the anticipated increase in traffic. In the past, county secondary roads have been improved without regard to similar programs in neighboring counties. One result has been that paved roads often stop or turn 90 degrees at county lines. This lack of continuity is often found within a county. Cooperation among counties and a more regional approach to future secondary road improvements is a goal of the planning program.

Rapid changes in rural townships has reduced the need for county roads along every section line. Section line roads at one mile intervals were needed when each farmer had a quarter section, and transportation was by horse and wagon. As the rural population thins out, the cost of maintaining the same, but less intensively used rural road mileage, goes up. Provision of school bus service, rural mail delivery, utilities and other social services become more expensive. It is recommended that a super-block approach to most roads be adopted with paved county feeder roads spaced two or three miles apart, serving all rural service needs as farms are abandoned. Local roads could be deeded to abutting property owners. The local roads could then be used for intra-farm movement, plowed up for crops, or whatever use the new owners wished to put them to.

The four counties are intensively cultivated, and there is little waste land. The only public land in many townships is in road rights-of-way which serve not only as corridors of movement, but as the principal means by which the passing motorist obtains visual





Central), and Sioux Falls (North Central, Ozark and Western). The facilities at Sioux City and Sioux Falls are former military airfields, now given over to civilian use. A variety of improvement projects are presently being carried out at these airports, indicative of an increasing number of flights and passengers. A new passenger terminal is being built at Sioux Falls, and runways are being extended.

Commercial air carrier service is usually provided for communities of over 10,000 population, or in isolated rural areas; such as, the western states. Since Cherokee, Spencer, and Storm Lake, all northwest Iowa cities approaching 10,000 population, do not have air service, it seems unlikely that it will be established in the region during the planning period. The pattern of population dispersion would preclude it. In the event a major airport for the region is developed, Sheldon would be the logical site for it, both because of its size and central location.

Existing Facilities

Non-commercial airports are well distributed throughout the region, no more than 30 minutes away from any point in the four counties. Of the 12 airports, 10 are municipally owned, and two are private. (See Plate 6). The municipal airport at Sioux Center will begin operations in 1969. Every community in the region larger than 2,500 population has an airport, as do several towns under that figure which have industrial activities; such as, George, Hartley, and Rock Valley.

A total of 76 aircraft are based at the 12 airports. This averages out to 11.3 aircraft per 10,000 population, a figure higher than for many states. In Illinois, for instance, there are 4.0 aircraft per 10,000 population. Larchwood and Sheldon have the largest number of based planes, with 16 each. These communities also have the most annual flight operations, over 9,000. The Sheldon Airport is the most important in the region, with a considerable charter and mail business in addition to private planes. The privately owned Zangger Airport at Larchwood is extensively used as a base for private planes by residents of Sioux Falls. The airport at George serves industrial clients almost exclusively. Known flight operations for the region total over 40,000 annually.

Runways		National Airport Plan Recommendations	Recommended Runway Length
Surface	Lighted		
Turf	No	-	-
1) Bituminous 2) Turf	No	-	-
Bituminous	Yes	Widen and Extend Runway	3,000
Turf	Yes	-	-
Bituminous	Yes	Construct New Airport	2,900
Turf	Yes	-	-
Concrete	Yes	Widen and Extend Runway, Land for Development and Clear Zone, Construct Taxiway, Install MIRL.	3,500
Concrete	Yes	Land for Development and Clear Zone, Widen and Extend Runway, Install MIRL.	3,500
Turf	Yes	-	-
Concrete	Yes	Construct New Airport	2,800
Turf	No	-	-
Turf	-	-	-



length of 2,700 feet. Sibley and Sheldon airports fall within the second category.

Airports included in the National Airport Plan, as well as other municipal airports, are financed by a combination of local, state and federal funds. The breakdown depends upon the kind of facilities needed. An expenditure of 6.99 million dollars for general aviation airport improvements in Iowa is recommended by the National Airport Plan for fiscal 1968-1969. Private airports receive no federal aid.

#### Airport Guidelines

The FAA has drawn up guidelines for general aviation airports such as those located in the four counties. A comparison of the guidelines to the facilities provided in the region will give some indication as to how the present needs are being met.

1. It usually takes 10,000 population to produce 10 aircraft.
2. A "justifiable demand neighborhood" for an airport should have 10 or more aircraft owners, within 10 miles or 30 minutes driving time.
3. Ten aircraft usually produce 3,000 flight operations per year.
4. Ten aircraft is the recommended number for a general aviation airport; however, a smaller number of based planes is acceptable when aircraft are indispensable for agriculture, the region is remote, etc.
5. Where possible, one airport should serve two or more "demand neighborhoods".
6. Twenty-four thousand operations yearly requires air traffic control.
7. A general aviation airport, served by commercial air carriers, can handle 30,000 to 50,000 flight operations annually.
8. An airport must be compatible with neighboring land uses, located away from residential areas, etc.



9. Airport sites should be free of steep slopes, watercourses, timber and potential obstructions, with ample airspace, a suitable soil, available utilities, and accessible to users.

All but three of the airports in the region have less than 10 based aircraft, and this is because of the low population densities, with aircraft owners scattered over a wide area. Airports are well situated graphically and no undue pressure is being placed upon them. Even with a very large increase in usage, more complex facilities, such as air traffic control, will be unnecessary.

From the standpoint of siting and compatibility, the airports are a good neighbor to residents of the Northwest Iowa Region. They are, on the average, one mile distant from the communities they serve. This eliminates the problems of environmental incompatibility, such as excessive aircraft noise, and danger to persons and aircraft because of nearby dwellings and other structures. Access is quick and convenient.

#### Railroads

Five railroads serve the Northwest Iowa Region, with lines running through almost every community in the four counties. Railroads were the initial stimulus for settlement in northwest Iowa, and they laid out most of the original town sites. With 345 miles of track, these railroads provide local service and connect the region to Sioux City, Sioux Falls, Omaha, Minneapolis, and other major centers. (See Plate 6).

Rail service can be divided into two categories. "Time freights" move goods between metropolitan centers on a scheduled basis. "Locals" serve the needs of customers and communities along the line.

#### Existing Facilities

The Chicago and Northwestern has 111 miles of track in Osceola, O'Brien and Sioux Counties. It has two time freights daily between Omaha and Minneapolis, and one local between Sioux City and Worthington. Goods shipped out include grain, soybean products, and other agricultural products. Arriving shipments include a variety of bulk items, feed, lumber, livestock, and farm implements. A second line connects South Dakota with Chicago, via



Hawarden. Round trip local is provided twice weekly. This line moves crushed rock and gravel from the Hawarden area.

The Great Northern has a north-south line between Sioux City and Willmar, Minnesota, where it ties in with the east-west main line. Traffic includes goods shipped from the Pacific Northwest like lumber, potatoes, apples and livestock being shipped to the Sioux City gateway. This railroad has 46 miles of track in Lyon and Sioux Counties. There are four trains daily, two local, and two trans-continental time freights.

The Chicago, Milwaukee, St. Paul and Pacific connects Chicago with Sioux Falls, South Dakota. It has 72 miles of track in O'Brien, Sioux, and Lyon Counties. There are two trains daily, a westbound combination local and time freight, and an eastbound time freight.

With three trains a day, the Rock Island connects Sioux Falls with points south and east. The line branches at Sibley, with one track to Estherville and one to Gowrie and Des Moines. Shipments include grain, dry milk, and lumber.

The Illinois Central branch line from Cherokee to Sioux Falls provides service to Chicago. It has one local train westbound and time freight eastbound every day.

The Northwest Iowa Region is not a major rail destination or shipping point. Most industries in the region rely on truck transportation, and most of the agricultural products grown in the four counties are consumed locally. Incoming goods include a variety of products; such as, lumber, fertilizer, limestone, feed and feeder cattle. Shipments from the region are agricultural, with grain, soybean products, and meat predominating. Much of the rail traffic represents goods traveling through the region to distant metropolitan centers. The fact remains, however, that the region is exceptionally well served by railroads, and with the adoption of more efficient methods, this means of transportation could regain some of the business it has lost.

#### Railroad Freight Rates

It is not within the scope of this study to become deeply involved with the shipping rate structure for



the region. This is a specialized field with numerous factors involved. Rate differentials exist at this time, and these differentials are largely based upon distance and volumes shipped. Sample rates for agricultural products shipped from nearby cities to Chicago are shown below. This data suggests that while variations exist, this section of the Corn Belt is not at a disadvantage as far as the shipment of agricultural products is concerned.

<u>From</u>	<u>To</u>	<u>Grain Rate Per 100W</u>
Sioux Falls	-Chicago	.41 CWT
Sioux City	-Chicago	.36 CWT
Omaha	-Chicago	.36 CWT
Minneapolis	-Chicago	.39 $\frac{1}{2}$ CWT
		<u>Meat Fresh or PHP</u>
Sioux Falls	-Chicago	257.50 Per Car
Sioux City	-Chicago	265.74 Per Car
Omaha	-Chicago	257.50 Per Car
Minneapolis	-Chicago	225.57 Per Car

Source: Chicago, Milwaukee, St. Paul and Pacific Railroad.

#### Future Railroad Activity

An important new development in railroading has been the growth of containerization and piggyback. This concept affords the economy of rail transportation, together with the flexibility of trucks, as truck trailers or containers are carried on flatcars. This service could afford savings to shippers in the four counties. With three lines crossing in Sheldon, this would seem to be the best location in the region for a containerized distribution center. Such a facility might possibly be a cooperative venture among the different railroads.

In addition to technological improvements on the railroads, their relationship to the future economic activity of the region will depend upon the future of agriculture. In Illinois, railroads have begun to ship grain to Gulf Coast parts, using unit trains shuttling back and forth. If the demand for American grain continues to grow abroad, this approach might be tried in Iowa, acting as a considerable stimulus for farmers to increase corn yields. The direction of U. S. farm policy



with regard to increasing production, supplying underdeveloped nations, etc. is difficult to predict for a 22-year period.

Railroad mergers are being consummated with increasing frequency, although as yet, no merger has had an impact upon the Northwest Iowa Region. Presently, the Chicago and Northwestern and the Milwaukee Railroads are talking merger. Their tracks in the region serve different areas, and would probably continue as at present should a merger take place. The Rock Island is a candidate for division among several midwestern lines. Exactly how this would be carried out is not known. The Great Northern and Illinois Central are involved in negotiations with railroads not having any track in the Northwest Iowa Region. The probable impact of a realignment of rail systems throughout the nation will be to stimulate new technologies, and funnel long-distance freight to a smaller number of mainline corridors. The former development will be more important to the Northwest Iowa Region.

#### Summary

1. The Northwest Iowa Region is well served by an extensive network of primary and secondary roads.
2. While a majority of these roads are adequate to meet the demands placed upon them, many need to be upgraded.
3. There is an excessive amount of rural secondary road mileage.
4. Motor vehicle registrations have shown a consistently upward pattern. This increase will continue though at a reduced pace at least up through 1990.
5. Traffic volumes on primary roads within the region will increase by at least 50 percent. Traffic will decline on many secondary roads.
6. The planning program will call for a selective program of primary highway improvement, upgrading of county trunks and feeders, and reduction in local road mileage where feasible.
7. The function of highway corridors for purposes other than movement between two points needs to be recognized. Their physical and visual relationships to the region should be more adequately defined.



the development of community school districts in the region.

There are 19 school districts within the four counties which make up the Northwest Iowa Region. Six each, are located within Sioux and O'Brien Counties; Lyon has four and Osceola three. The present districts, established between 1953 and 1966, were brought into being by state legislation seeking to upgrade educational quality and to eliminate non-high school districts. The purpose of reorganization as stated in the Code of Iowa 275.1 was as follows:

"It is hereby declared to be the policy of the State to encourage . . . the reorganization of school districts into such units as are necessary, economical and efficient. . . and which will insure equal opportunity of all children of the State."

The last non-high school district in the Northwest Iowa Region was Lyon Township-Beloit No. 8, which was consolidated with the West Lyon Community District at the end of the 1965-66 school year. Prior to the establishment of the community school districts, it was possible for a district to maintain only primary facilities and send secondary pupils to neighboring high schools on a tuition basis. (See Plate 7.)

All 19 school districts are community school districts. In the State of Iowa, there are three types of school organization. "Community school districts are districts with a K-12 program and created or enlarged under reorganization laws after 1953. Consolidated school districts are districts with a K-12 program created after 1906 and before 1947 with contiguous territory of sixteen sections or more and a central school. Independent school districts are districts with a K-12 program encompassing a city or town with contiguous rural area."<sup>1</sup>

The existing school districts vary substantially in size. Sanborn, which is 59.2 square miles in size, is the smallest, and West Lyon, with 247.5 square miles, is the largest, although at no point within the West Lyon district is a dwelling more than 15 miles from the





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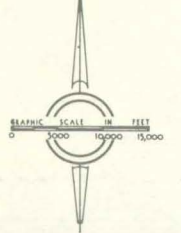
1. "Data on Iowa Schools"



NORTHWEST  
IOWA  
REGIONAL  
AREA

SCHOOL FACILITIES  
1969

-  PRIMARY
-  SECONDARY
-  REGION IV  
VOCATIONAL SCHOOL
-  COMMUNITY SCHOOL  
DISTRICT BOUNDARY

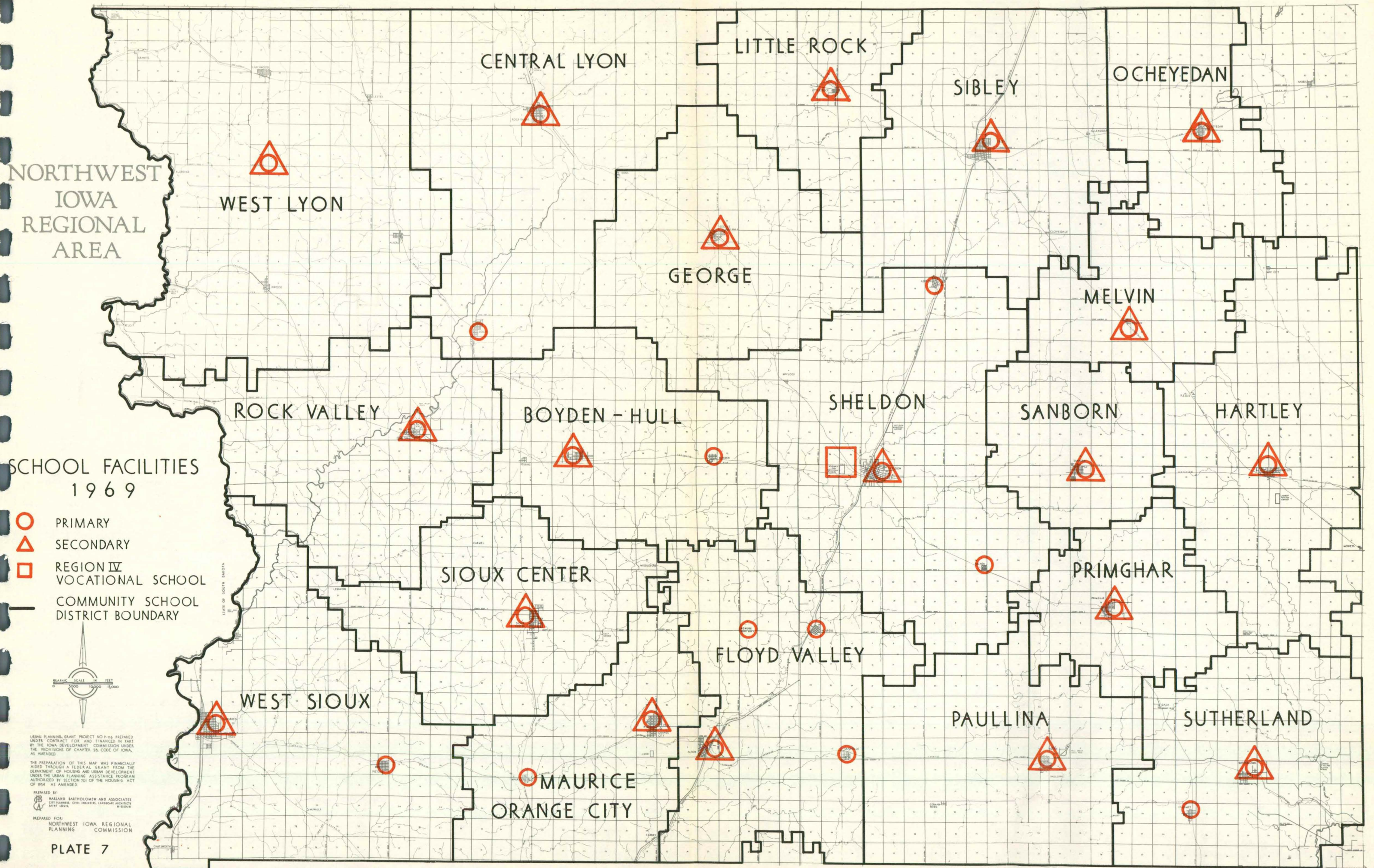


URBAN PLANNING GRANT PROJECT NO. 2-118 PREPARED UNDER CONTRACT FOR AND FINANCED IN PART BY THE IOWA DEVELOPMENT COMMISSION UNDER THE PROVISIONS OF CHAPTER 28, CODE OF IOWA, AS AMENDED.

THE PREPARATION OF THIS MAP WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT UNDER THE URBAN PLANNING ASSISTANCE PROGRAM AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED.

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PREPARED FOR  
NORTHWEST IOWA REGIONAL  
PLANNING  
COMMISSION





central school. The number of square miles encompassed within each district is shown in the following table.

<u>Lyon County</u>		<u>Osceola County</u>	
Central Lyon	160.2	Melvin	64.2
George	109.0	Ocheyedan	70.3
Little Rock	64.5	Sibley	139.0
West Lyon	247.5		

<u>O'Brien County</u>		<u>Sioux County</u>	
Hartley	138.4	Boyden-Hull	109.5
Paullina	126.9	Floyd Valley	135.1
Primghar	63.5	Orange City	96.2
Sanborn	59.2	Rock Valley	125.2
Sheldon	187.4	Sioux Center	107.3
Sutherland	112.4	West Sioux	154.3

Source: County School Superintendents

The median sized district is 112.4 square miles which means half the districts are smaller than that, and the other half are larger. This compares to a statewide median of 103.0 square miles. The smallest district within the region is larger than the smallest in the state, while the largest in the region is only half the size of the largest within the state.

These figures suggest that an effort has been made to accommodate to the relatively sparse population of the region. Should further consolidations be made, they could be carried out within the existing locational framework, inasmuch as many of the districts are substantially smaller than others.

One of the school objectives for the region is to limit bus travel for elementary students to 40 minutes, and for secondary students to one hour. These maximums do not seem to be exceeded at any point within the four counties except for a few isolated cases at the edges of district boundaries. Given the dispersed population of the region, 15 miles is the maximum distance any student should live from an attendance center. With greater distances than that, the time factor becomes prohibitive.



An evaluation of district lines indicates that they have been established by a variety of divergent forces. However, an attempt to achieve a balanced regional framework of attendance centers was not one of them. Boundaries often meander according to the preferences of individual property owners. Some districts established extensive areas realistically suited to the region, while some smaller communities retained local control over a limited district with limited enrollment.

In every case but one, the school districts have been drawn around a central community, which vary in size from a few hundred persons to 4,500. Some towns with populations under 500 persons do not have their own districts, but have merged with a larger one. When this has happened, the smaller towns have retained elementary facilities.

#### Existing Schools

Each of the 19 school districts within the region maintains a complete K-12 system. As presently constituted, most districts represent a combination of several smaller ones, with buildings and attendance boundaries being juggled to meet the needs of the larger district.

In preparing the school facilities evaluation, each school site was visited in the field to obtain a general observation as to the condition of each school building. Most were rated as being either in excellent or good condition. Several, however, have deteriorated to the point of becoming substandard. (See Table 6.) In some cases, the rating given represents an averaging of the original building and subsequent additions. Additions completed since 1950 were considered as being in excellent condition.

Most of the school buildings were built between 1910 and 1935, and again from 1954 to the present. In a few cases, buildings date back to the turn of the century and before, but these facilities are either in the process of being replaced, or have been extensively remodeled and are in a suitable condition for continued use. The older buildings are multi-story brick structures constructed in the style of that day. They replaced the first wooden school buildings, a few examples of which may be seen in the towns, but are more frequently observed as vacant one room schoolhouses in



rural areas. The most common deficiency of these older facilities is that they are located on inadequate sites within built-up areas, and, therefore, are difficult to expand. Taking present day school site standards as a measure, the older buildings were uniformly constructed on sites insufficient in size to provide adequate play areas. Where school buildings are located on the edge of town, this deficiency has been remedied to some extent by expanding the site into the adjacent rural area.

With a few exceptions, the 14 school buildings over 50 years old have been maintained in satisfactory condition for continued use. The State of Iowa inspects school buildings and enforces a high standard of maintenance.

Newer post World War II construction has been single-story on spacious tracts with adequate space for expansion. Since 1960 one elementary school, two high schools, and one K-12 building have been completed. In addition, two high schools are presently under construction.

Each district has undertaken a program to expand existing buildings. This practice of expanding to increase classroom space and upgrade the facilities provided has been going on since the 1920's, although most additions date from 1950 on, when it was necessary to accommodate rapidly increasing student enrollment. Besides new classrooms, many of the additions include facilities, such as gymnasiums, libraries, dining halls, office space, and facilities for vocational education. These improvements have kept schools in the four county region up to increasingly high state standards.

A majority of school sites include an older central building with several additions being made over the years. Five districts have or will move their high schools to new sites, with the older facilities being given over to the lower grades.

West Lyon Community District, comprising largely a rural area, chose to locate all grades on one site. This site is centrally located, in the open country rather than in one of the four small towns within the district. Older and smaller facilities located in Inwood, Alvord and Lester were subsequently closed, and the school at Larchwood was converted into a community center.



Table 6

EXISTING SCHOOL FACILITIES

Northwest Iowa Region

<u>District</u>	<u>Grades Taught</u>	<u>Original Construction</u>	<u>Most Recent Addition</u>	<u>Structural Rating*</u>	<u>Number of Class-rooms</u>	<u>Number of Teachers</u>	<u>Pupil/Teacher Ratio</u>
Central Lyon (Doon)	K-8 9-12 K-6	1968 1924 1933	- 1954 1935	I II III	35) 24) 8)	63	19.9
George	K-6 7-12	1962 1920	- 1957	I II	15) 16)	40	17.0
Little Rock	K-12	1915	1962	II	19	27	12.5
West Lyon	K-12	1967	-	I	53	58	20.0
Melvin	K-12	1914	1958	II	26	28	12.5
Ocheyedan	K-12	1903	1963	II	27	25	12.4
Sibley	K-4 5-12	1951 1902	1968 1936	I III	14) 26)	41	26.0
Hartley	K-8 9-12	1937 1963	1957 -	II I	26) 10)	48	16.5
Paullina	K-12	1925	1963	II	29	40	15.6
Primghar	K-12	1933	1967	II	37	30	13.9
Sanborn	K-12	1939	1957	II	24	29	15.4
Sheldon (Ashton) (Archer)	K-4 7-9 9-12 5 6	1956 1918 1969 1926 1918	1962 1947 - 1952 1950	I III I II II	17) 30) 30) 8) 12)	82	19.1
Sutherland (Calumet)	K-6 10-12 7-9	1924 1957 1925	- - 1957	II I III	14) 11) 9)	36	17.0
Boyden-Hull (Boyden)	K-12 K-8	1917 1915	1964 1964	II II	31) 13)	43	18.0



Table 6, Existing School Facilities, (Continued)

<u>District</u>	<u>Grades Taught</u>	<u>Original Construction</u>	<u>Most Recent Addition</u>	<u>Structural Rating*</u>	<u>Number of Class-rooms</u>	<u>Number of Teachers</u>	<u>Pupil/Teacher Ratio</u>
Floyd Valley							
(Alton)	K; 9-12	1916	-	III	17)		
(Hospers)	1-3	1954	-	I	6)		
	7-8	1895	-	IV	18)	36	16.3
(Newkirk)	K; 4-6	1918	1954	III	8)		
(Granville)	K	1895	-	III	3)		
Maurice-	K-4; 7-8	1924	1968	II	17)		
Orange City	K-6; 9-12	1924	1956	II	25)	57	15.5
Rock Valley	K-12	1909	1965	II	35	39	18.2
Sioux Center	K-12	1913	1965	II	51	57	17.5
West Sioux	K-5	1958	-	I	18)		
	6-8	1923	-	II	14)		
	9-12	1962	-	I	23)	74	16.8
(Ireton)	K-8	1962	-	I	7)		

\*General Building Condition

- I = Excellent
- II = Good
- III = Fair
- IV = Poor

Source: Individual School District Offices



so do many of the in-between districts. Clearly, there is a point below which a system cannot operate efficiently, but the threshold of efficiency within the region is relatively low, and expanding attendance centers beyond a certain point will have limited benefits in terms of efficiency of operation. For Iowa, per pupil instructional costs are lowest in districts enrolling 800-899 students. Administrative costs show consistent declines per pupil as school districts increase in size.

The greatest expense in maintaining a school system goes for day-to-day operation, particularly salaries. The cost of physical facilities or paying off bond issues for capital improvements, is relatively minor, comprising not more than 20 percent of the total, and usually less. In the 1967-68 school year, the average millage rate for Iowa was 46.837, a figure exceeded by only three districts within the region.

#### Student Enrollments

A comparison of public school enrollments in the region for 1961-62 and 1968-69 shows an increase of 298 students overall. In the 1968-69 school year, enrollment totaled 14,767.

During the same period, high school enrollment was up by 1,098. The sharp increase in these grades may be explained by the post World War II increase in family formation and the higher birthrates at that time. These young people reached high school after 1960, and created a bulge in enrollments. The largest percentage increase occurred in the 11th grade, up by 49 percent. This post-war "baby boom" caused the schools within the region to expand physical facilities and staff in order to meet the rising demand for educational facilities. It is no coincidence that most of the capital improvements being completed at the present time are high schools designed to accommodate the upsurge in these age groups.

A wave-like appearance of student enrollments is typical, with periods of higher enrollment followed by lower levels. Elementary enrollment dropped 766 at the same time the high school total was increasing. The seventh and eighth grades were above earlier levels, but the percentage declines become substantial in the lower grades, with the second grade down by 13 percent. The drop in elementary students seems to substantiate the conclusion that the region is experiencing a population



decline, but more important, birthrates in the four counties have declined by almost 35 percent in recent years. There are simply not as many children to go to school as there used to be.

When examined on a county and district basis, the changes in population distribution within the region become evident. Four of the five smallest districts experienced enrollment declines, while four of the five largest districts had more pupils. As farm units consolidate and the smaller towns in the region have difficulty in holding on, student enrollments have gone down in these rural districts. Those districts centered around growing towns, particularly over 2,500 population, have more pupils. Several smaller communities such as Hull, George and Rock Valley, which have begun to expand in non-farm employment, show relatively stronger trends.

Overall, 11 districts had higher enrollments and eight declined. Only two districts had fewer high school students in 1968 than in 1961, but 14 of 19 districts lost elementary students. (See Table 7.) The five districts with elementary increases, Orange City, Paullina, Rock Valley, Sheldon, and Sioux Center, have experienced economic growth and population increases since 1960.

Sioux County experienced an increase of 455 students overall; O'Brien lost 26, and Lyon and Osceola registered the sharpest declines, 90 and 41 respectively. These latter two counties have larger rural farm populations and, therefore, the agricultural revolution has had a greater impact than in counties with a more urbanized complexion.

Private school enrollment makes up 22.4 percent of the regional total (4,273 in 1968), which represents an increase of seven percent over 1961. This occurred in the face of statewide declines in private school enrollment. Almost 75 percent of the total private school enrollment is concentrated in Sioux County, which contains nearly half of the Christian Schools in Iowa. (See Table 8.) Parochial enrollments declined in Lyon and O'Brien Counties and increased in Osceola and Sioux Counties.

Without state aid, it appears that private schools will increasingly transfer students to the public school



Table 7

PERCENTAGE ENROLLMENT CHANGE  
1961-62 - 1968-69  
Northwest Iowa School Districts

	<u>Elementary</u> (K-8)	<u>Secondary</u> (9-12)	<u>Total</u>
Central Lyon	-10.8	+18.3	- 3.4
George	- 4.8	- 6.4	- 5.3
Little Rock	-10.7	+51.5	+ 4.2
West Lyon	-22.8	+15.4	-14.0
Lyon County	-11.0	+21.8	- 2.6
Hartley	-17.1	+12.8	- 7.0
Paullina	+ 0.8	+34.1	+10.9
Primghar	-27.8	+13.6	-17.6
Sanborn	- 9.7	+48.9	+ 3.0
Sheldon	+ 1.2	+28.2	+ 9.6
Sutherland	-14.0	- 1.5	-10.2
O'Brien County	- 9.3	+21.5	- 0.6
Melvin	-29.0	+76.4	- 9.3
Ocheyedan	-21.3	+26.7	- 9.1
Sibley	- 4.9	+17.7	+ 1.4
Osceola County	-13.1	+28.8	- 2.3
Boyden-Hull	-14.2	+61.5	+ 3.5
Floyd Valley	- 7.0	+60.0	+ 8.9
M-Orange City	+13.3	+37.4	+20.1
Rock Valley	+ 1.3	+57.3	+14.8
Sioux Center	+ 8.6	+21.7	+13.7
West Sioux	- 3.7	+28.2	+ 4.7
Sioux County	- 0.3	+41.2	+ 9.6
Region Total	- 7.2	+28.6	+ 2.1

Source: County School Superintendents  
O'Brien - Osceola  
Lyon - Sioux



Table 8  
 PRIVATE SCHOOL ENROLLMENT  
 Northwest Iowa Region

<u>County</u>	<u>Year</u>	<u>Facilities</u>	<u>Elementary</u>	<u>Secondary</u>	<u>Total</u>
Lyon	1961-62	4	130	44	174
	1968-69	4	158	-	158
O'Brien	1961-62	5	1,046	-	1,046
	1968-69	5	821	-	821
Osceola	1961-62	5	30	-	30
	1968-69	5	201	-	201
Sioux	1961-62	14	2,068	678	2,746
	1968-69	16	2,118	975	3,093
Total	1961-62	28	3,274	722	3,996
	1968-69	30	3,298	975	4,273
Percent Change			+1	+35	+7

Source: County School Superintendents  
 O'Brien - Osceola  
 Lyon - Sioux



systems. In recent years, Catholic high schools have closed in Alton and Larchwood, and one elementary school at Hawarden is to be phased out at the end of the 1968-69 school year. During the planning period, the Christian schools will probably eliminate small inefficient rural schools in favor of fewer large and centrally located facilities, serving a wide area. Western Christian High School at Hull is an example of such a regional facility.

ENROLLMENT AS PERCENTAGE OF TOTAL POPULATION

<u>Year</u>	<u>Lyon</u>	<u>O'Brien</u>	<u>Osceola</u>	<u>Sioux</u>	<u>Region</u>
1961	25.5	29.4	17.7	28.3	26.5
1969	26.5	29.3	20.4	31.1	28.2

In the face of county declines in population, students represent a somewhat greater percentage of population in 1969 than eight years earlier. The variations among counties may be explained in part by the fact that school district boundaries do not follow county lines. In Osceola County, students in Ashton and Harris were not included in the totals as these towns are in school districts having most of their area in other counties.

The principal implication of the enrollment pattern is that enrollments will decline from present levels as the large upper grades graduate and are replaced by smaller classes. For districts which are presently losing, the loss will continue, and where increases have been registered, student enrollments will stabilize. In part, these developments may be affected by church school students transferring to the public school systems.

As soon as the construction programs presently underway are finished, additions to the physical plant will be limited, largely dependent upon population increases in the urban areas of the region.

Enrollment Projection

Enrollment projections are based upon certain assumptions concerning economic and population trends within the region.

The population projection made in the Economic Background and Population Characteristics report for the region anticipates an increase of 1,000 industrial jobs within the region by 1990. This activity, together with



a leveling off in the birthrate and reduced out-migration, is expected to result in a total regional population of 65,000 by 1990.

School enrollment projections were determined by calculating the student age groups as a percent of total population. Recently as high as 28.2 percent of the total, stabilization of present trends should reduce the figure to 22 percent in 1990. On this basis, an estimated 1990 public school enrollment for each county and the region was determined as follows:

<u>Lyon</u>	<u>O'Brien</u>	<u>Osceola</u>	<u>Sioux</u>	<u>Region</u>
2,700	3,800	1,900	5,900	14,300

The figures are calculated on a county line basis, not by school district.

An alternative projection, based upon a stable birthrate of 16.0 per thousand gives a figure of 13,500, assuming that yearly increments into the school age population would total 1,040 (the 1967 increment was 1,057). This estimate seems somewhat low in that an increase in family formation in the counties should take place in the next several years. If the region is able to retain a large portion of its high school and college age population, future enrollment projections would have to be revised upward.

For the future, some districts, particularly those containing growing towns, will experience growth. Others, including stable communities and largely rural areas, will undergo a contraction in enrollments. In view of the present small size of many districts, they will be faced with the prospect of rising costs which will necessitate curtailing educational services, or combining with larger districts that exhibit a pattern of growth.

#### Summary

1. The future pattern of attendance centers within the region will be determined by time-distance factors and population trends.

2. Districts vary sharply in terms of size, assessed valuation, millage rates, size of enrollments, and cost to the taxpayers.

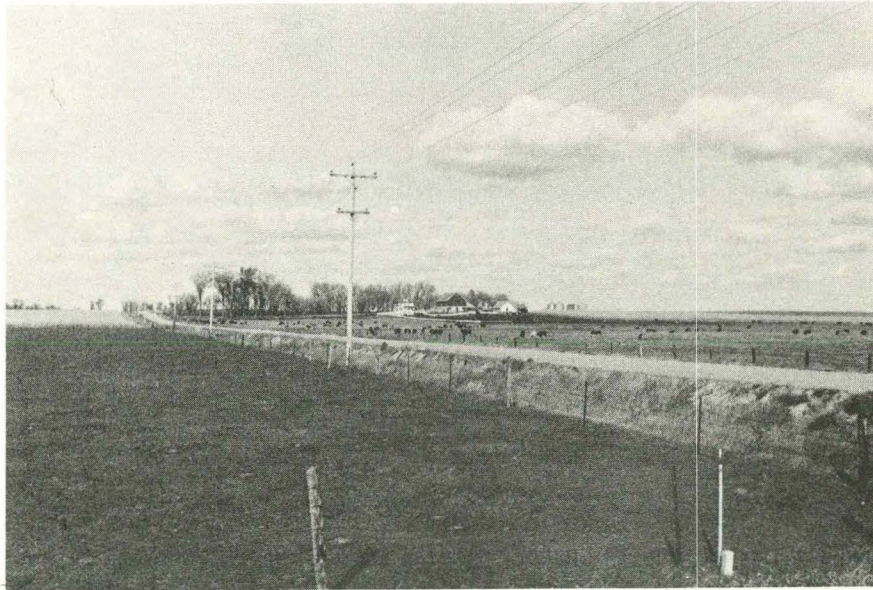


3. The existing school plant has proven adequate to meet the needs of pupils. There is little crowding and teacher loads are not excessive.

4. Student enrollments have increased slightly, with a large increase in high school grades, and a drop in the elementary years. Variations are much greater among individual counties and districts.

5. A further decline in enrollments during the planning period must be anticipated. The more urban districts counter this trend.

6. School standards have been proposed. If implemented, they would mean fewer high schools with larger enrollments. Elementary schools would continue to serve more restricted areas. Some small districts would be merged with neighboring districts.





## GOALS FOR THE REGION

To be effective, a planning program must establish goals and objectives toward which the region can work. This approach is called policies planning and should be "viewed as a series of related actions and decisions that are organized around and moving toward the accomplishment of objectives. These goals and objectives themselves are viewed as the cornerstone of the planning process, for . . . they form the framework for public and private decision making."<sup>(2)</sup>

The idea is that first the ends should be determined and then the means shaped to achieve the desired ends. Planning objectives are centered about the preparation of a comprehensive plan for the region. This section establishes broad guidelines for making policy decisions and implementing the planning program.

The value of this approach can be summarized as follows:

1. Determining policies for the region facilitates public participation in the planning program and enhances understanding of the ultimate objectives of the project.
2. The goals, objectives and policies encourage municipal and county officials to become involved in the planning process.
3. Acceptance of these guidelines will help promote inter-county cooperation, understanding of problems, and encourage coordination of efforts to achieve social and economic progress.
4. The goals and objectives can serve as a guide for public and private bodies undertaking capital improvements within the region and will prove useful to county zoning commissions empowered to administer land use controls.

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<sup>(2)</sup> Principles and Practice of Urban Planning.



5. With rapid changes occurring in Iowa, the policy determinations will continue to remain valid despite the social and economic changes taking place.

#### The Regional Commission and Goals

Planning activity in the four counties began in the early 1960's, when several communities undertook individual planning projects. When the need for a regional approach became understood, Lyon, O'Brien, Osceola and Sioux Counties formed the Northwest Iowa Regional Planning Commission. The initial goal of the Commission has been to initiate a regional planning program, carrying out the studies necessary to develop a regional land use plan. The Commission is closely involved with the goal determination process, as the objectives which are established will become the framework within which the regional planning effort will operate. This is the planning goal for the region. Once it has been completed, the goal of coordinating planning activities for the region will follow. This, in turn, will lead to the need to implement the regional program with specific improvements.

#### Basis for Goal Determination

Goals, objectives, and policies must be based upon a realistic appraisal of the present conditions and future prospects of the region. They must be realistic in that they are reasonable and within the realm of accomplishment, but they must also be challenging, awakening the residents to the wide spectrum of opportunity that lies about them, and the potential improvements that may be attained as a result of effort and perseverance. It is important that there be widespread public acceptance of the proposed goals and objectives, in that they will lead to projects expressing the direction in which the region wishes to move. This can only happen when citizens have learned about the proposals, understood them and the rationale behind them. Once goals have been decided upon, a program for action can be prepared. This program will depend upon the resources available to carry it out.

Because society is made up of people, social objectives are of prime importance. Facilities and services should be designed to insure that all people have the opportunity of leading healthy, satisfying and meaningful lives.



An important way of achieving the good life is through economic policies. Public agencies and private citizens and groups should cooperate to attain the desired ends. Government can create a climate where opportunity is available and citizens and businesses can build upon this foundation, providing new jobs, homes, and the facilities needed for the future.

Then there is the land itself, which must be used wisely, and with care, for the present generation is only a caretaker for those which will follow. It is from the land that the wealth and sustenance of the region are drawn, and if this resource is abused or wasted, everyone will suffer for it.

In this section, goals, objectives and policies are divided into five parts, dealing with land use, social and economic considerations, transportation, housing, and community facilities. First, one or more goals are set forth for each category. A goal may be defined as an aim toward which the region is working. An objective specifies in greater detail how goals can be reached and what alternates are available. Policies are more practical steps which need to be taken in order to attain the goals and objectives. They may be equated with standards for development.

One all-inclusive goal has been specified: to recognize the interdependence of the region and its various parts, that it functions as part of a larger whole, and that the goals, objectives, and policies must be tied to regional needs rather than the narrow interest of any individual community.

### Land Use

#### Goals

1. Recognize that agriculture is the dominant land use within the region, and that farming must be kept socially and economically strong if the region is to prosper. The land use pattern should maximize the social satisfactions of farm people, while making sense economically.
2. Maintain the cities and towns of the region as attractive and efficient residential communities, with a balanced relationship between



people and land. Land uses should provide for an efficient, convenient, and harmonious pattern, with future growth and development taking place in an orderly fashion.

### Objectives

1. Direct urban growth to those centers within the region which have the greatest social and economic viability, and potential for expansion.
2. Development should reflect the fact that expansion will take place in areas of valuable agricultural land, upon which the foundations of the community rest.
3. Avoid mixtures of incompatible land uses. No commercial, industrial, or other non-residential land use should be so located as to have a deleterious effect upon nearby residential uses.
4. Provide for both convenient and efficient concentrations of living and working areas while preserving open space. The land use plan should be an organic and functional whole, designed to create a better life for all.

### Policies

1. Direct public investment for schools, parks, streets and other public facilities in line with the proposals of the land use plan.
2. Rate each community in the region according to the number and kind of social and economic facilities which it has available.
3. Establish a hierarchy of communities within the region with each providing the functions for which it is best suited.
4. Assist the adjustment of towns to the new pattern which is developed.
5. Encourage one or more communities to become primary retail trade centers within the Northwest Iowa Region.



6. Encourage urban growth in the locations best suited for it and contiguous to existing residential areas.
7. Discourage scattered residential and commercial development in agricultural areas.
8. Seek to improve the physical setting of residential villages within the region by upgrading utilities, housing, and the basic amenities of small town life.
9. Encourage communities to incorporate areas sufficient to accommodate future growth.
10. Provide for a region-wide system of solid waste disposal and establish strict controls over sand pit operations.
11. No area, which is unsuitable for development because of topography or soils, should be developed.
12. Watercourses and existing topography should be disturbed as little as possible by new development.
13. Attempt to bring about more efficient provision of governmental services by clustering urban and rural populations in contrast to the dispersed pattern which exists today.
14. Redistribute social services, including church, educational and medical facilities in order to accommodate to the new realities.

#### Social and Economic

##### Goals

1. Expand the economic base of the region in order to develop a more equitable balance between agriculture, commerce, government and industry as mainstays of the local economy.
2. Eliminate the social and economic disparities between farm and town living, by raising farm incomes and improving social opportunities for rural dwellers.



3. Recognize that the primary asset of the region is its spacious, friendly, small town atmosphere, where interpersonal relationships dominate day-to-day living. The scale of business and industrial life is small enough for each person to understand and accept his place in the whole. No industrial or commercial developments which would have the effect of impairing the aesthetic and social qualities of the region should be permitted.
4. The rural towns should seek to provide an improved social and institutional framework within which the entire region may function.

#### Objectives

1. Encourage further improvements in agricultural techniques and promote their adoption within the region so that local farmers will keep pace with the rapid changes taking place in agriculture throughout the country.
2. Develop commercial activities within existing business areas by upgrading structures, parking, appearance, and the quality and variety of merchandise. Commercial areas need to be reinforced where they exist, not dispersed along the highways of the region.
3. Reduce the out-migration of young persons by providing a sufficient variety of employment opportunities within the region.
4. Upgrade the labor force through formal and on-the-job training programs so that the skills needed by prospective new industries can be found in the four counties.
5. Strengthen retail trade by having a smaller number of large and well-located stores, which can compete in quality and price with outlets in metropolitan areas.
6. Undertake a concentrated program to eliminate the last vestiges of poverty and unemployment from the region. Each resident has the right to a useful and productive place in society.



Policies

1. Promote economic development by establishing industrial areas, served by both highways and rail facilities, within the regional growth centers.
2. Retailers need to view markets from a regional, not local perspective. Increasingly, customers should be drawn from a wide area to offset the reality of a stable or declining population.
3. Each community should upgrade its business district. Possibilities exist such as adopting a uniform color scheme or architectural style, which will draw attention to the unique character of every business area.
4. Full use of the vocational school at Sheldon should be made by employers. This facility should be expanded to its full potential as the link between education and industry in Northwest Iowa.
5. Growth centers should be given priority as the location for new schools, public buildings, cultural facilities, and other social foundations of the region.
6. Take advantage of all federal programs which are directed toward improvement of agricultural and rural areas. These programs should be used to assist the region in its transition to the new land use pattern.
7. Provide adequate off-street parking for all commercial areas. This parking should be landscaped, a visual asset to each community.
8. Each resident should be no more than 20 miles distant from a primary retail center.
9. Seek to preserve the present pattern of even geographic dispersal throughout the four counties for the farm input business, including sale of feed, agricultural chemicals, and fertilizer.



10. Protect industrial areas from the encroachment of residences and vice versa.

### Transportation

#### Goals

1. Provide for an adequate, efficient and rapid means for the movement of people and products within the region, and between the region and other areas.
2. Recognize the importance of transportation systems in uniting residents of the region, giving them an understanding of common problems and opportunities.
3. View highways not as simply a facility to meet existing demand, but as a tool which can be used to help structure the region into a more desirable pattern.

#### Objectives

1. Upgrade all primary and secondary roads to the highest standard of safety and efficiency. Primary roads must be designed to accommodate increasing volumes of traffic. Rights-of-way, grades, and pavement widths should be adequate.
2. Establish three major road categories for the region: primary trunk lines, the purpose of which is to connect towns within and outside the region; secondary trunk lines for rapid intra-county movement, and rural collectors, which accommodate traffic in agricultural areas.
3. Insure adequate access to the growth centers from all parts of their respective hinterlands, and improve movement among the principal communities of the region.
4. Undertake a program to improve the aesthetic qualities of highways within the four counties.
5. Limit the arbitrary construction of land consuming highway projects, especially when they cut up the land into unfarmable fragments.



6. Recognize that the automobile is the servant of man and not his master. Cars should not be allowed to dominate commercial and residential areas to the detriment of human and aesthetic values.
7. By closing unneeded rural roads, seek to create rural "super sections" with paved roads on a two by three or two by four mile basis, resulting in improvements in the ease of movement in rural areas, and greater efficiency in county government.
8. Provide up-to-date air and rail service for the principal communities of the Northwest Iowa Region.

#### Policies

1. Based upon an analysis of existing roads, a region-wide system of rural secondary roads will be designated, all to be paved during the planning period.
2. Upgrade all primary trunk lines to a standard pavement width of 24 feet, removing all existing curbing.
3. Eliminate all at-grade railroad crossings on state and federal highways.
4. Abandon all dirt roads within the region. Eliminate gravel roads not designated part of the rural collector system when no farmstead remains on any one mile link.
5. Widen to four lanes any highway with traffic volumes in excess of 4,000 vehicles per day.
6. Provide for a pedestrian orientation along "main street" in each of the commercially oriented towns in the four counties.
7. Eliminate mowing and spraying along rights-of-way in order that these areas might become prairie swaths through the region and refuges for wildlife.



8. Consider the possibility of using abandoned railroad rights-of-way as automobile transportation corridors.
9. Design new subdivisions which do not commit such a large part of the total land area to streets. A good rule of thumb is 20 percent of the total.
10. Road standards should vary according to the use to which they are put. A residential street need not be built to the standard of a commercial street.
11. When an extensive section of rural road mileage can be eliminated except for the presence of one farmstead, the farmer should be encouraged to move his home to the designated rural collector system with government financial assistance.

### Housing

#### Goals

1. Provide decent, safe, and sanitary housing for all inhabitants of the region. The living environment should promote group interaction, variety of experience, and the values of family life.

#### Objectives

1. Provide a greater variety of housing types among communities of varying size.
2. Encourage expansion of housing in areas with easy access to retail trade opportunities and job opportunities.
3. Eliminate all substandard and inadequate housing in the four counties.
4. Recognize the need to cluster dwellings in rural areas, both from the social and economic standpoints.



Policies

1. Make use of all relevant governmental programs in upgrading the regional housing stock.
2. Encourage the construction of multi-family housing in the growth centers of the region.
3. Continue development of housing to meet the specialized needs of older citizens.
4. Locate all new housing so as to minimize the possibility of future deterioration due to the presence of incompatible land use.
5. Each community should undertake a program of eliminating derelict housing within its boundaries through condemnation. Counties should require the removal of abandoned farmhouses within a reasonable period of time.
6. All trailers should be located within a designated trailer court.
7. With adequate provision for design, apartment housing can be located in or close to commercial areas.

Community Facilities

Goals

1. Develop the system of schools, churches, parks and community facilities best suited to the Northwest Iowa Region. Facilities should be of the highest standard, and provided at the lowest possible cost.
2. The function of these facilities should be to develop a citizenry with an understanding of human values and the traditions of the United States, prepared to play a worthwhile role in the region, contributing to family, business, and public life.



### Objectives

1. Recognize that the provision of community facilities within the region must be cognizant of the large area and dispersed population in Northwest Iowa.
2. Develop a school system which can provide a full range of course opportunities for all students in the region, preparing them for life in Iowa and the rest of the country.
3. Insure that all school facilities are up-to-date and that the physical plant is not such as to retard the learning process.
4. Establish school districts of such size as to provide the kind of education needed in the future as economically as possible.
5. Eliminate any variations in the standard of education provided between urban and rural school districts.
6. Acquire school and park sites and open areas in advance of need and in accordance with an overall plan.
7. To the greatest extent possible, limit new parks to terrain which is unsuitable for agriculture, such as sand pits and areas of steep topography or intensive wooded areas.
8. There should be opportunities to enjoy broadening cultural and artistic activities.
9. A wide variety of both active and passive recreation areas will be needed in the future.

### Policies

1. Expand the Northwest Iowa Vocational School into a two-year junior college accepting all high school graduates from the four counties within a ten-year period.
2. Limit one-way travel time to or from an attendance center to 40 minutes for elementary grade pupils, and one hour for secondary grade pupils.



3. All school construction should be undertaken with an awareness that further consolidations will be necessary.
4. School locations should be determined by the distribution of population and the need to concentrate growth in viable growth centers.
5. Areas adjacent to new school sites should be considered for park use.
6. School sites should be of sufficient size to provide for future expansion.
7. Incorporate forested areas, and areas of unusual topography into the park system. Recognize the importance of protecting historical and other structures of unusual interest.
8. Give special consideration to the potential of the bluff areas along the Big Sioux River in western Sioux and Lyon Counties for development as a regional recreation area.
9. Promote the development of a large reservoir within the region, provided it is suitable for recreational purposes.
10. Existing parks and recreation areas should be protected from encroachment by other uses, such as residential, commercial, reservoir development and agriculture.
11. Small urban parks and community centers with leisure time recreational facilities should be directed toward the needs of elderly residents of the region.
12. Governmental facilities, such as courthouses, agricultural and soil service, county school offices and social security and welfare agencies should be located in the growth center communities of the region.
13. Develop the rivers within the four counties as positive recreational assets. Protect them from encroachment by urban uses.



14. Utilize terracing, contour plowing, grass waterways and farm ponds as the principal water control measures in the region.

#### Alternative Sketch Plans

A careful reading of the goals, objectives and policies for the region will reveal that while substantial change can be anticipated, there is no single best way for this to be accomplished. Several alternative patterns could serve the purpose of achieving the desired goals, and conversely, there is the approach of doing nothing at all, and letting the land use pattern of the future develop by chance. It is important that the citizens of the Northwest Iowa Region understand where they are going and that the decision as to what land use plan to adopt be made after a careful examination of the alternative possibilities.

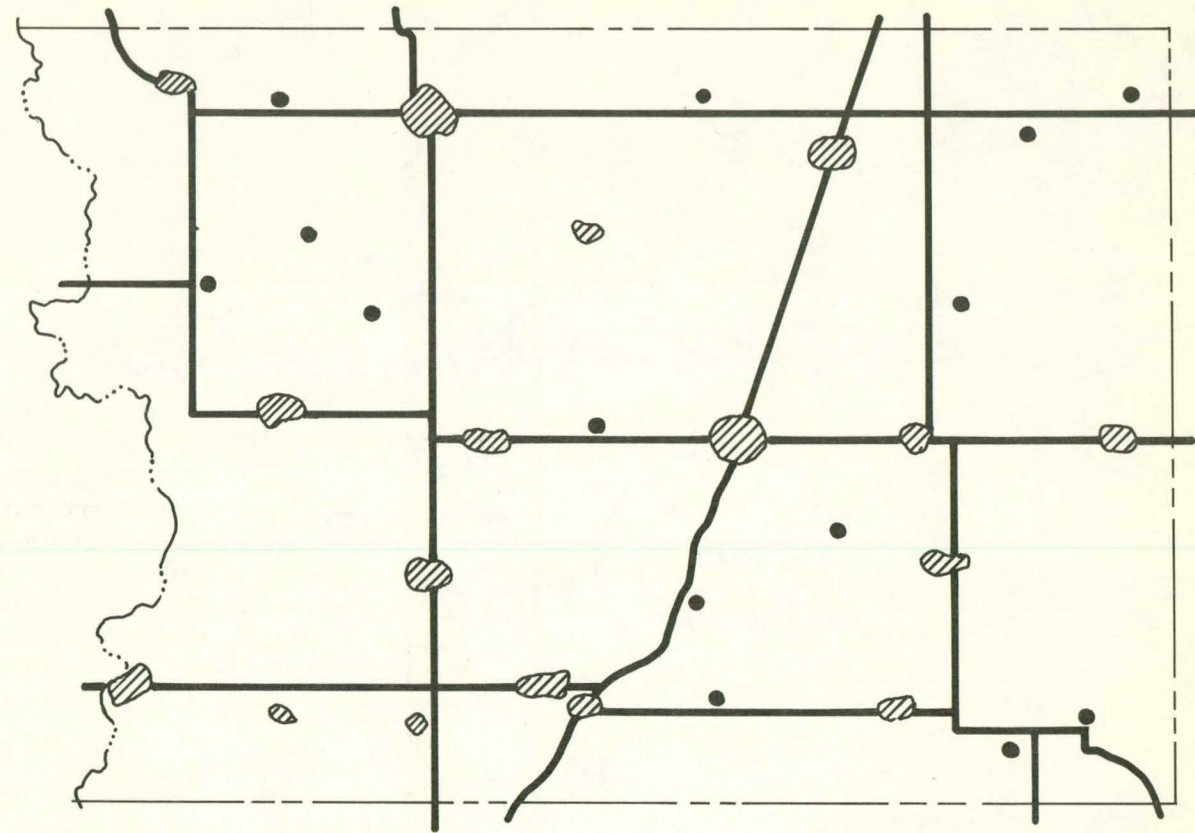
The land use plan for 1990 will not be brought into complete existence during the next 22 years for the patterns which man establishes upon the landscape change very slowly. But, if there is widespread understanding of the land use plan and the rationale behind it a considerable amount of progress can be made.

Four alternative sketch plans and their implications for the region are discussed in this section. A sketch plan is a tentative land use plan, showing the relationships between population centers and transportation facilities. These ideas are limited by the constraints established in the economic base and population report. The region will have a lower population as well as industrial growth. What is anticipated is that there will be internal shifts in population within the region. However, in the event that the growth is greater than anticipated, the basic concepts will still have validity. Whichever plan seems best, the movement of people off the land will continue. These things are non-variable, in that they cannot be altered through the efforts of the Northwest Iowa Regional Planning Commission. The best approach is to recognize these trends and mold them so that the end result will be beneficial.

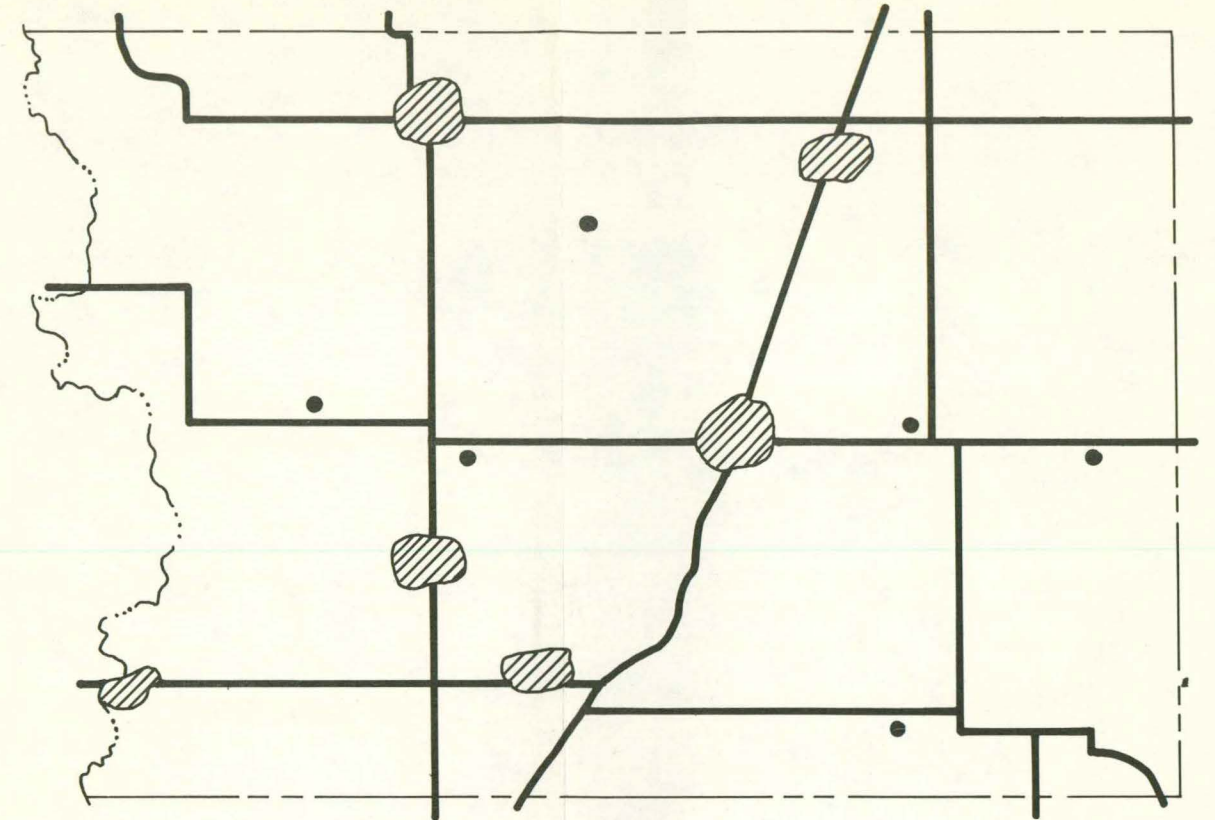
Among subjects not discussed in the sketch plan are recreation areas. It is assumed that both local and regional recreational facilities will be expanded regardless of the configuration of the various sketch plans. A discussion of each of the four sketch plans shown on Plate 8 follows.



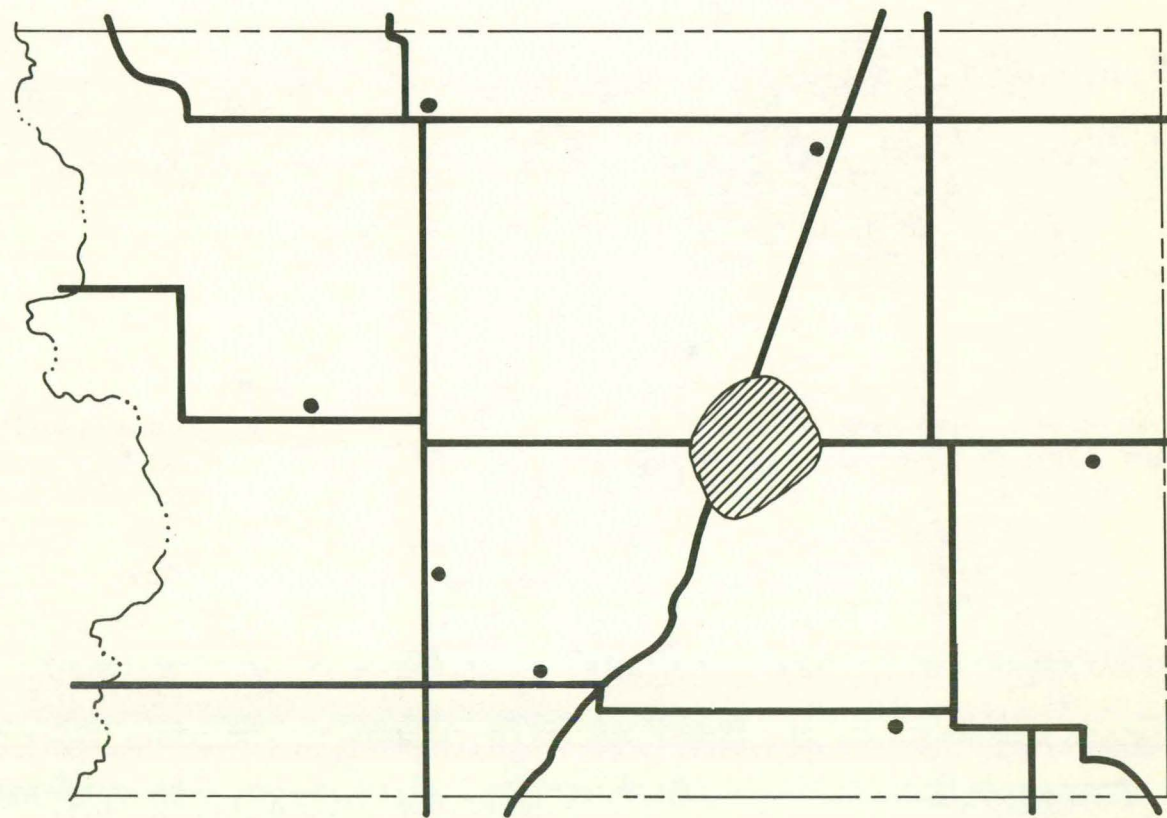
# ALTERNATE SKETCH PLANS



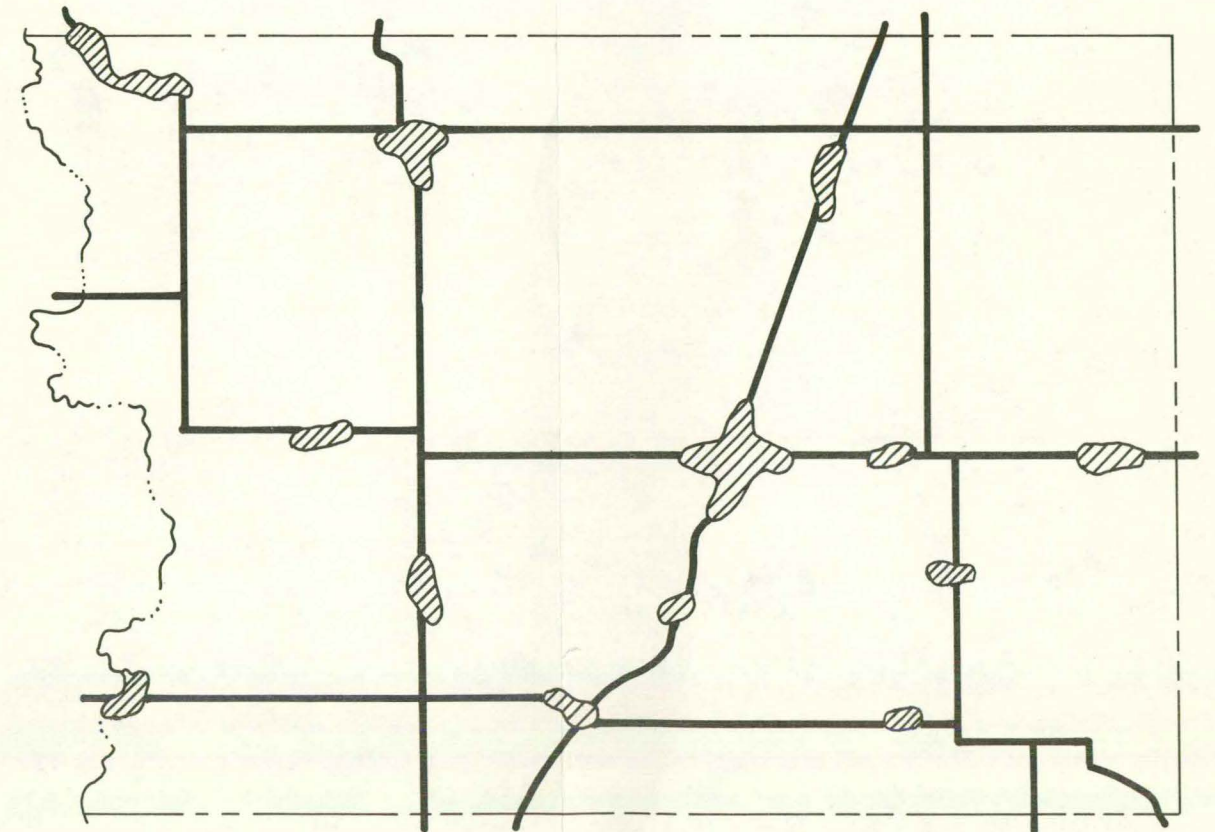
CONTINUATION OF EXISTING TRENDS



CONCENTRATIONS WITHIN COUNTIES



REGIONAL CENTER



DEVELOPMENT ALONG TRANSPORTATION CORRIDORS



Continuation of Present Trends

This plan assumes that no attempt will be made to alter existing trends. What then might be expected to take place?

1. The shift away from the farms will continue. This has the effect of further undermining support for towns under 1,000 population. With the exception of providing for agricultural inputs, the retail function has disappeared in these communities. A majority have become residential settlements, housing retired farmers and those who prefer small town living. One or two have attracted small employers, and have experienced population increases. Most have not.
2. Some communities with a population between 1,000 and 2,500 have expanded industrially and have grown to urban size. In these towns, retail trade has survived and they vary little from towns of this size today. Others have lost population resulting in school consolidations and reduced social services. They have become demoralized and seem to be heading in the direction of the smaller category of towns.
3. Some growth in population for the communities above 2,500 has occurred, but most have tended toward stability. Retail trade has grown, but the next smaller category of communities still retains some of this function. Various projects improving social facilities in some of the towns have been carried out. Industrialization has continued, but not rapidly. Day-to-day life has not changed to any appreciable degree.
4. The randomly dispersed rural population is experiencing higher costs for public utilities, schools and rural roads. Recreational and social opportunities are available to more of the total population, but it is necessary to drive some distance to reach them. In the minds of many, increased prosperity makes the higher cost of rural living an acceptable burden.



Greater Concentration Within Counties

This projection is based upon the hypothesis that the forces for centralization grow stronger, and it becomes regional policy to encourage development within those communities which are strongest economically and have the widest range of social facilities.

1. Most towns of under 1,000 population have disappeared as residents recognize that they cannot provide needed services, and viable communities exist elsewhere in the county. Several might retain an elementary school attendance center, but primarily to serve the reduced farm population.
2. Several towns in the 1,000-2,500 population class remain in the region. The site of vigorous industrial operations, they are too strong to become extinct. The industrial base is supplemented by highway-oriented commercial activity. A majority of such towns retain a secondary school attendance center. All have primary grades. Populations are stable.
3. Most growth has occurred in the centrally located, principal communities in each county. Farmers choose them for retirement due to their wider variety of church and social activities. Retail trade, including that tied in with agriculture, has become centralized within these communities and there is considerable competition among them to get the business of an increasingly mobile population. Governmental expenditures for new schools, offices, etc., are concentrated here. Populations have increased substantially, and this allows community social and cultural activities to be broadened. New industries have chosen the growth centers for locating new plants, as they are situated on the primary transportation routes. These communities have become the centers of enlarged school districts.
4. The rural areas have lost even more population that might have otherwise been the case, as more farmers prefer to live in the county



centers and commute to the fields. Overall out-migration from the region continues, but has been reduced somewhat because of more desirable living and working conditions in some of the towns. The greater concentrations of population make for the more efficient provision of public services. County road mileage is reduced.

### Development of a Single Regional Center

This sketch plan carries centralization one step further with the establishment of Sheldon as the major regional center.

1. It is assumed that Sheldon would capitalize on its central location within the region. Population could possibly double as the community grows to the size of Spencer and Storm Lake. With this growth, retail trade would expand, and a regional shopping center would pull customers from all over the region. As governmental consolidations take place all over Iowa, Sheldon becomes the center of governmental administration for the four county region. The Vocational School becomes the primary institution of higher education in the region and is elevated to junior college status. This, in turn, causes additional industries to locate at Sheldon. Social and cultural facilities are substantially upgraded with the increase in population.
2. A second category of smaller communities would remain, supported by small industry, a college, or a combination of the two. Communities relying on agriculture and former county seat towns would be hard hit by population loss and economic decline. Those retaining primary and secondary educational facilities would be better off than those that did not. Some residents would commute to work in Sheldon. The very small towns would disappear completely as rural residents became willing to travel longer distances for business and social purposes.
3. This land use pattern would require a willingness to rely upon automobile transportation to a greater extent than at present. In exchange for a more varied and stimulating life available



in Sheldon, some residents of the other communities would suffer economic dislocation. Out-migration would be slightly less than for Sketch Plan 2, due to the attractions of Sheldon, and would be substantially lower than would be the case with the no change hypothesis. The wide variety of goods and services available at the regional center would reduce the trade outflow occurring in the first two examples.

### Development Along Transportation Corridors

This hypothesis assumes that the principal determinant of the land use pattern in the region will be transportation. This concept is a variant of Sketch Plan 2, but differs from it in several important aspects.

1. In this case, community size would not determine whether growth occurred. All towns, large and small, on the principal north-south and east-west highways would grow. Many residents of the region would live in small towns, and commute by automobile to work each day in the larger towns. There would still be centralization of the retail function in the larger towns, but the others would still retain some commercial activity along with their individual identities. Social and economic activity would be relatively dispersed, in that rapid highway transportation would allow easy access to schools, stores, theaters, etc. whether or not they were located in the same town.
2. This design would lead to the eventual elimination of communities not located on the prime transportation routes. Due to their relative isolation, and the difficulties inherent in attracting new development given such conditions, they would not be able to compete.
3. Travel would be a more important part of everyday life. The farmer who could once transact all his business in one place now might find it necessary to go to several different towns to accomplish this. Industrial sites might be in the open country, along the highway and rail corridors, which would provide access to metropolitan centers outside the region. Substantial upgrading of the highway network, including expansion to four lanes, would be necessary to accommodate the increase in traffic.



### Conclusions

Sketch Plan 2, which assumes greater concentration within counties, has the most to recommend it for several reasons.

1. It represents an intensification of existing trends, carrying them to their logical conclusion. Therefore, this scheme should be more easy to accomplish as it is designed to reflect the existing realities of the Northwest Iowa Region.
2. Existing economic and social patterns would be disturbed to only a minimum extent. The primary towns in each county would be strengthened and made into more desirable places to live and work.
3. A significantly greater proportion of the total population would live in close proximity to the economic and social facilities available to town dwellers.

Prior to the preparation of land use plans for each county, a consensus as to the kind of land use approach to be taken in the region will be needed.



APPENDIX



Table 9

## LYON COUNTY LAND USE

## Northwest Iowa Region

Category	Alvord	Doon	George	Inwood	Larchwood	Lester	Little Rock	Rock Rapids	Total Urban	Rural	Total County
Single Family	25.8	44.7	109.4	62.6	50.5	18.2	46.8	197.8	555.8	106.6	662.4
Two Family	-	-	1.1	-	-	0.1	0.2	-	1.4	-	1.4
Multi-Family	-	-	-	-	-	0.1	0.2	10.8	11.1	0.1	11.2
Farms	2.4	2.3	5.0	0.3	6.8	2.0	10.6	-	29.4	3,548.0	3,577.4
Trailers	0.1	-	-	0.4	0.2	-	-	-	0.7	2.7	3.4
Total Residential	28.3	47.0	115.5	63.3	57.5	20.4	57.8	208.6	598.4	3,657.4	4,255.8
Commercial	2.5	3.0	9.8	8.5	3.0	2.5	2.3	18.0	49.6	12.6	62.2
Light Industry	1.4	8.2	8.4	6.9	6.2	3.7	3.9	96.1	134.8	233.8	368.6
Heavy Industry	-	6.0	12.8	-	0.3	-	0.6	-	19.7	25.9	45.6
Parks	-	35.7	11.2	4.7	6.6	1.0	1.7	40.6	101.5	496.4	597.9
Public and Semi-Public	25.4	7.0	15.3	14.4	20.6	18.6	13.7	93.3	208.3	347.9	556.2
Railroads	11.3	30.4	19.5	7.7	13.4	36.9	18.4	53.0	190.6	816.5	1,007.1
Streets	51.2	79.4	111.5	62.9	78.6	40.7	61.0	199.4	684.7	9,419.0	10,103.7
Total Developed	120.1	216.7	304.0	168.4	186.2	123.8	159.4	709.0	1,987.6	15,009.5	16,997.1
Wooded Areas	-	-	-	-	-	-	-	-	-	3,223.0	3,223.0
Water	-	5.7	2.6	-	-	-	9.3	45.0	62.6	609.9	672.5
Vacant and Agriculture	249.0	379.2	414.9	171.6	376.8	527.7	981.6	1,716.0	4,816.8	346,129.8	350,946.6
Total Area	369.1	601.6	721.5	340.0	563.0	651.5	1,150.3	2,470.0	6,867.0	364,972.2	371,839.2

Source: Harland Bartholomew and Associates Field Survey



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