

Pierce's three parks total approximately three acres. Any decision by the Town of Pierce to increase and/or improve recreational facilities should be examined in terms of what recreational facilities are needed, future population estimates, the service area of a new recreational area, the location and design of a facility, and the economic feasibility of providing a recreational facility.

Results from the Pierce Socio-Demographic Survey indicate that 77 percent of the Pierce residents want existing recreational areas improved. The recreational interests of the town reveal the following types of recreational activities and facilities are desired:

TABLE IX

Recreational Interests of Pierce Residents  
Pierce Socio-Demographic Survey, 1976

<u>Recreational Interests</u>	<u>Number</u>	<u>Per Cent</u>
Playgrounds	63	21.0
Playground Equipment	54	18.2
Swimming Pool	51	17.0
Teen Recreational Center	48	16.2
Tennis Courts	36	12.0
Horseshoe Courts	23	7.6
Parks	21	7.0
Other	3	1.0

## RECREATIONAL FUTURE LAND USE

### Goals

To assure a full range of recreational facilities and programs for the Town residents.

To develop an integrated system of parks and open space areas that fulfills the recreational and aesthetic needs of the Town's residents.

To provide for the conservation and effective use of natural resources and landscape qualities.

### Objectives

1. Establish landscaping programs for all park areas and playgrounds.
2. Promote recreational uses that include passive and unstructured uses as well as active and structured recreation.
3. Encourage existing parks within the town to be improved to meet the needs of the town. Such improvements might include, but are not limited to the following:
  - a) Playgrounds and Playground Equipment
  - b) Swimming Pool
  - c) Teen Recreational Center
  - d) Tennis Courts or Multi-Purpose Paved Courts
  - e) Landscaping
4. Establish close and on-going communication with neighboring communities in order to coordinate possible joint recreational projects so that the benefits to the area-citizens are maximized and the duplication of efforts are minimized.

## EXISTING WATER AND SANITARY SEWER

### Water

Water quantity and quality are major determinants of how Pierce will develop in the future. The availability of potable water, and the financial ability to distribute water for domestic use is perhaps the single most important element to the future development of Pierce. Without water resources, residential, commercial, industrial, and recreational land use are unnecessarily restricted. For these reasons, careful examination will be given to the existing water system in Pierce.

The existing water supply for Pierce is supplied from three shallow wells located in the town. A map of the distribution system is shown on the Pierce Water Map, Figure 3, Page 36. A brief description of the location and condition of each well is provided below:

1. Well No. 1 is located by the Pierce elevated water tank near the intersection of Main Street and Franklin Street. This well was reconditioned in 1970 with a new pump, motor, building, and chlorination equipment. Because of these improvements Well No. 1 is considered to be in good mechanical condition. Under optimal conditions Well No. 1 will produce a maximum of 135 gallons per minute (gpm) with acceptable drawdown.
2. Well No. 2 is located near the Pierce Town Hall on Main Street between Second and Third Streets. The well was completed in August, 1953, and is in fair condition. A pumping test in 1970 indicated that this well will produce a peak output of 175 gpm.

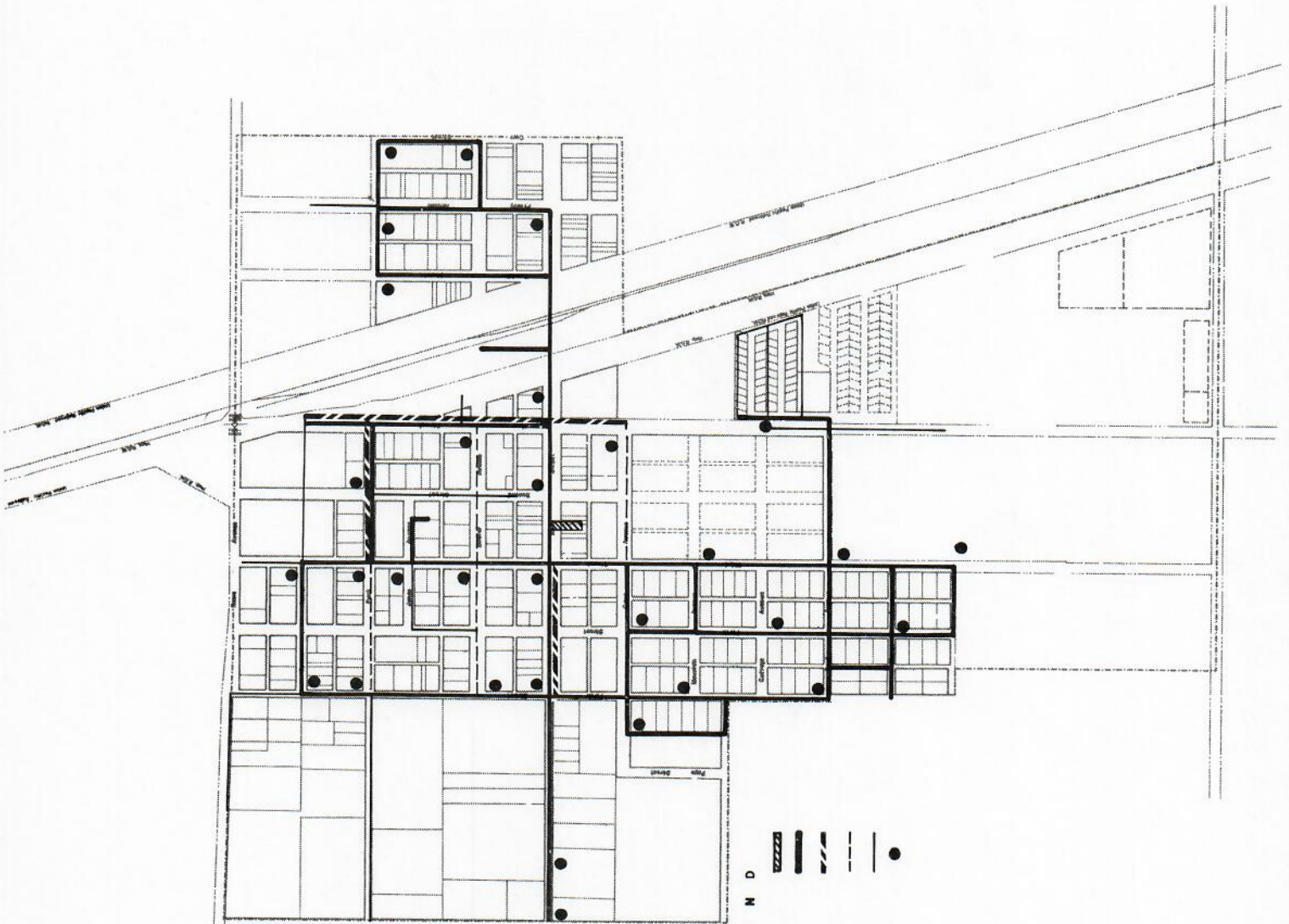


# existing water



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3



L E G E N D

- eight (8) inch line
- six (6) inch line
- four (4) inch line
- three (3) inch line
- two (2) inch line
- fire hydrant

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3. Well No. 3 is on Jones Avenue between Second and Third Streets near the Town Park. Well No.

3 is the newest well in Pierce being built in 1970, and producing a maximum of 290 gpm with acceptable drawdown. In 1974 a new pump was installed in order to increase well pressure.

Water storage for the town consists of an elevated storage tank and a new ground storage reservoir.

The elevated storage tank is located near the intersection of Main Avenue and Franklin Street. The elevated tank has a capacity of 35,000 gallons and is 54 years old. The high water level elevation is approximately 90 feet above ground level. This factor limits the pressure which can be maintained in the water system. In order to maintain adequate pressure, the tank is operated at near capacity.

The second and newest water storage facility is located on Main Street between Second and Third Avenue.

This ground storage tank became operational in May of 1975, and has a maximum storage capacity of 200,000 gallons.

Water from the three wells is pumped directly into the town's distribution system. Chlorination takes place at each individual well. Generally, the water distribution system is composed of 6 inch and smaller lines. Construction in 1970 helped to provide a major grid work of 6 inch lines which looped into other lines. The three existing wells are designed to produce a maximum of 600 gpm. However, between May and early September the total water produced in only 300 - 325 gpm. This reduction of gpm is, in part, caused by yard watering, and climatic conditions; however, general drought conditions in the Pierce area have decreased the ground water level. This reduction of the ground water level does not allow for adequate recharge of the aquifer which in turn causes a low gpm output.



Since the town increased its storage capacity and improved its distribution lines, the existing wells provide adequate pressure for fire protection and domestic use. However, because the overall quantity of available water for Pierce is limited to the existing wells the town is currently examining alternate sources of water such as utilizing other town-owned wells, and/or the purchase of treated water from a water district. In May of 1976, the Pierce Town Council gave approval of the development of one well located directly north of Reed Avenue. It is felt that the development of this well will adequately increase the town's overall water supply, however the actual gpm output and water quality have not been determined at this time.

Related to Pierce's water quality are various state and federal regulations regarding water quality standards. One such federal program is the Safe Drinking Water Act of 1974 which is intended to upgrade public drinking water supplies by establishing minimum national standards for public water supplies and to regulate underground injections of waste. While many of the Safe Drinking Water Act provisions and standards are in the formulation process, Pierce residents and Town officials are encouraged to become aware of future requirements of the Act.

#### Sanitary Sewer

Pierce is presently operating a central sewage system which utilizes an aerobic lagoon (oxidation pond) for the treatment of waste water. This treatment facility is located roughly one mile south of the town and outfall is into the Lone Tree Creek. The oxidation pond contains two cells and has six acres of water surface. While the mechanical operation of the sanitary sewer system is in relatively good

condition, the system is operating at capacity. Expansion of the town's treatment facility is currently being examined to accommodate future growth.

The collection system for the town is composed of eight inch pipe. This system is in relatively good condition, and serves approximately 95 percent of the town. A map of the existing sanitary sewer system is shown on Figure 4 of the Pierce Plan. Pierce's sanitary sewer system was constructed so that flow velocity insures a self-cleaning action, thus keeping maintenance costs to a minimum. Pierce's system meets existing standards set forth by the Colorado Department of Public Health.

#### FUTURE WATER AND SEWER

##### Goal

To eliminate water pollution and provide adequate water service to the Pierce area.

##### Objectives

1. Assure adequate water storage, treatment, and distribution within Pierce.
2. Maintain and continue to improve water facilities and services to ensure adequate service at reasonable consumer and municipal cost.
3. Establish close and on-going relations with the Colorado State Health Department, Weld County Health Department, and other agencies in order to maintain awareness of the latest water quality research and development.
4. Establish a water improvement program which specifies improvements and other measures which the Town of Pierce can realistically follow.

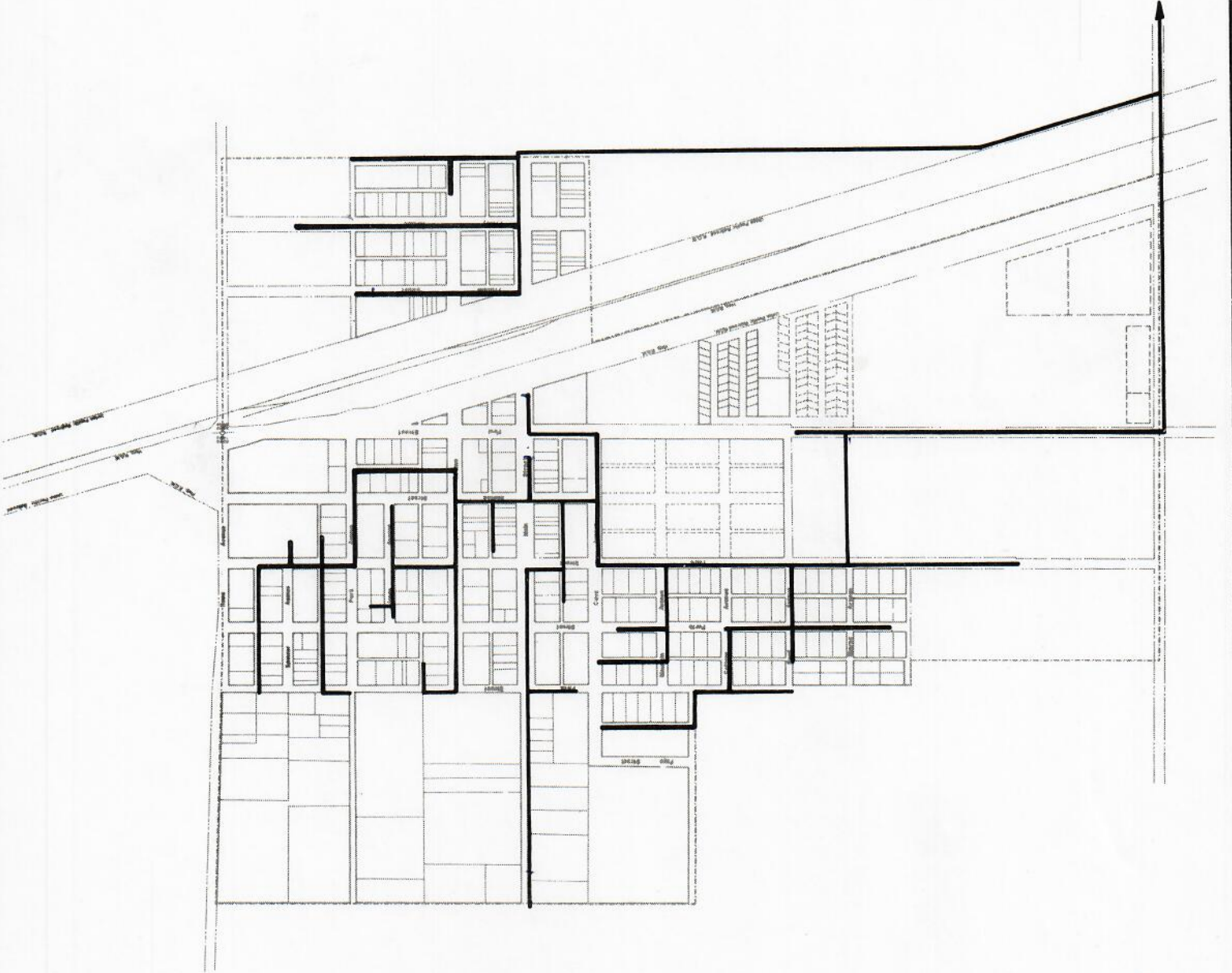


# existing sewer



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4

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## STORM DRAINAGE

Planning for storm drainage is an important factor in a town comprehensive plan. Storm sewers are used to collect and carry rain or surface water to some natural water course or body of water in such a way as to prevent flooding. Planning for storm drainage allows a town to better manage and control various land uses which might otherwise be damaged.

As previously discussed in the Geography section of this text, Pierce has severe drainage problems due to flooding from the Spring Creek. In addition, Pierce has several drainage problems due to the lack of storm sewers, and residential units which have been constructed below town roads and intersections. It is reported by town residents, that during a moderate or severe rain, most storm runoff flows from north to south down Third Street. The town has placed a culvert at the intersection of Third Street and Sharpe Avenue carrying the storm water to Reed Avenue and east to First Street where storm waters drain naturally. Related storm drainage problems are caused by the lack of paved streets, curbs, and gutters.

Because Pierce has experienced several floods which date back to the 1920's, the town has become an active member in the National Flood Insurance Program. Basically, the program is designed to provide flood insurance for both communities and individuals at rates made affordable through a Federal subsidy. Communities must, however, adopt and administer local measures that protect lives and new construction for future flooding.

In order to help communities identify possible flood areas the Federal Insurance Administration (FIA) prepares a "Flood Hazard Boundary Map" which delineates the areas subject to severe flooding within the community. Please refer to the Flood Hazard Boundary Map for Pierce, Figure 5, Page 43. A flood hazard area is subject to inundation by the base flood - or a flood that has a one-percent chance of occurrence in any given year. The Flood Hazard Boundary Map is usually the first map FIA sends to a flood-prone community. After further engineering and analysis FIA furnishes the community with a "Flood Insurance Rate Map" which more clearly delineates flood hazard areas.

For the designated flood hazard areas in Pierce preventive measures must be followed in order to reduce potential flood damage. Such regulations already exist in the Pierce Zoning Ordinance and Subdivision Regulations. For instance, Section 5.1.D. and 5.1.E. of the Pierce Subdivision Regulations state:

- D. No land shall be subdivided in areas where soil, sub-soil, or flooding conditions are potential danger to health and safety.
- E. Drainage areas wherever possible shall be left in a natural state, and no encroachment shall be made on the natural channel. A plan to prevent water pollution shall be submitted and adhered to wherever any modification of topography is required during construction within 100 feet of any stream, ditch or drainage channel.

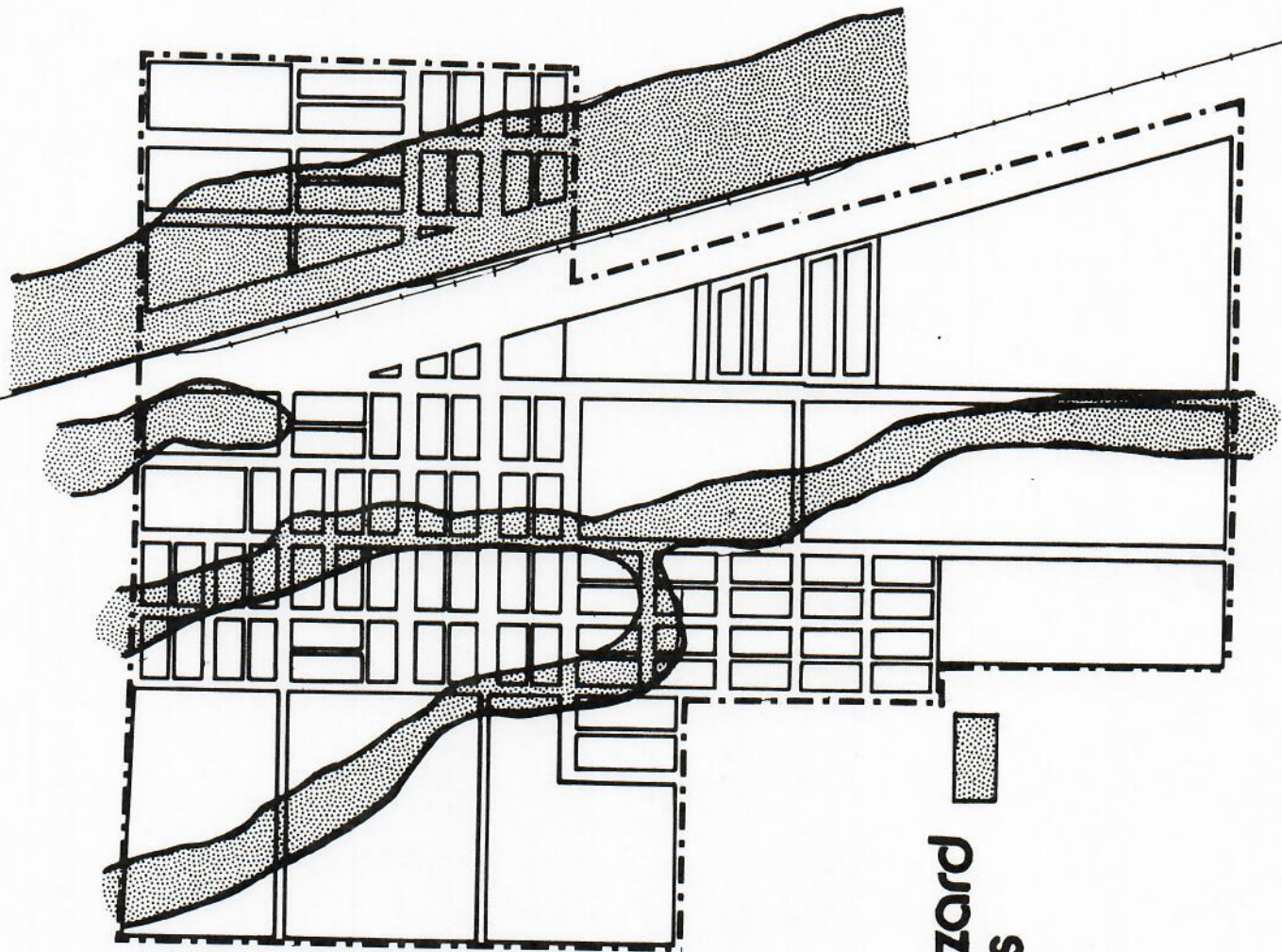
Such regulations cannot only save lives and personal property, but assure that the amount of potential damage from future flooding will be reduced.



# flood hazard



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flood hazard areas



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GOAL

1. Flood plains and natural drainage ways in the Pierce planning area will be preserved.

OBJECTIVES

1. Insure that areas subject to flooding are adequately protected from the construction of structures that would be damaged by high waters.
2. Maintain and continue to develop flood control regulations.
3. Encourage and support suitable open space uses within identified flood hazard areas.



## THOROUGHFARE SYSTEM

The objective of a thoroughfare system is to bring people and goods into a community and to provide the means by which they can move freely from one activity to another. Simply, the thoroughfare system circulates people and goods to other land uses. Because a thoroughfare system affects all land uses it is a strong determinant of future growth of a town, the safety of pedestrians, the location of housing, industry, commerce, and the privacy of neighborhoods. The thoroughfare system is an integral part of the Pierce Comprehensive Plan.

The majority of roads within the Town of Pierce are not paved. There are only three paved roads within the town; part of Main and Second Streets, and First Street. Please refer to the Future Thoroughfare Map, Figure 12, Page 70. The other surfaced roads in the Pierce area are County Road 90 which is directly north of the town limits and County Road 88 to the south. In addition, County Road 33 which connects to First Street and U. S. Highway 85 are also major paved roads.

Since the town lacks improved streets, the town will be concerned with designating existing unimproved streets to their best future use. Typically, these street designations are arterials, collectors, and local streets;

**Arterials:** The function of an arterial is to move large volumes of vehicles such as automobiles, trucks, and buses. Arterials are typically used for longer trips, and to carry traffic to an expressway or freeway.

**Collectors:** The Main function of a collector street is to carry traffic from local residential streets to arterials or freeways. The collector should also serve commercial vehicles, particularly delivery trucks serving residences in the area.

**Locals:** The principal purpose of a local street is to provide access to property abutting the public right-of-way. Local streets should be designed to discourage through traffic, and most commercial traffic.

The typical cross-sections of local, collector, and arterial streets, as shown on Figure 13, Page are intended to indicate how streets should be designed in the future. The street widths provide pedestrian and bicycle movement, utility easements, buffer for adjacent land uses, and generally improve traffic circulation. The street widths are further defined in the Pierce Subdivision Ordinance, Section V.

The existing circulation pattern for the Town of Pierce consists primarily of unimproved local streets with the majority having 60 foot right-of-way. Pierce's local street design greatly affects traffic within the town. Usually, a long street tends to increase traffic volumes. Street inter-sections with acute angles are likely to cause accidents. The local street pattern in Pierce is currently a grid system - having 300 foot block lengths and no curvilinear street patterns. As the town develops, however, there will be an increasing need to collect traffic from within neighborhood areas and route the traffic to collector streets. The major collectors serving the Town of Pierce are First Street and Main Street. First Street is the major north-south street connecting County Road 90 to the north and County Road 88 to the south. Main Street runs east and west providing major access



to U. S. Highway 85 and First Street. Main Street is paved west of U. S. Highway 85 to Third Street.

In order to maintain First Street and Main Street as the towns two primary collectors it is proposed that Third Street not extend south to County Road 88, but connect with First Street to the east. Such a change would increase the overall town circulation pattern as the southern section of town develops.

#### Street Vacations

There are approximately 6.5 miles of town streets excluding U. S. Highway 85. Approximately 1.15 miles of these streets are paved, leaving 5.4 miles of unpaved streets. An effective means of reducing the large amount of land dedicated for street rights-of-way is to vacate unnecessary streets. Such a program would:

1. Reduce the amount of paving to be constructed and maintained lessening the burden on the town for improving and maintaining unnecessary street rights-of-way.
2. Provide better neighborhood circulation and access to residential properties, and to discourage through traffic.
3. Provide useable utility easements which could be used for landscaping or other private purposes.

The only two streets proposed for vacation within the Town of Pierce are Sharpe Avenue between Fourth Street and Third Street, and Cottage Avenue between Fifth Street and Fourth Street. The selection for the vacation of these particular streets was based on the following criteria: first, vacate streets that would not hamper the over-all circulation pattern; second, vacate streets, where possible, which would not promote resident opposition.

The existing thoroughfare system for the Town of Pierce is sufficient; however, the town does lack improved streets. This problem is further intensified by the relatively short block lengths (300' - 0") which increases the overall number of intersections. Those streets proposed for vacation should help to alleviate this problem. Again, the general welfare of the town demands a functional street network that will facilitate and serve anticipated town growth.

#### FUTURE THOROUGHFARE SYSTEM

##### GOALS

To provide a balanced thoroughfare system which will serve the town's travel demands with maximum efficiency, comfort, safety, economy and flexibility.

To provide a diversified thoroughfare system in order to move people and goods.

##### OBJECTIVES

1. Encourage the street vacation of Sharpe Avenue between Fourth Street and Third Street, and Cottage Avenue between Fifth Street and Fourth Street.
2. Encourage the use and identification of First Street and Main Street as the town's primary collectors.
3. Limit the use of local streets to serve only residential properties.
4. Assure adequate access, egress, and general traffic circulation to future residents of Pierce by promoting the use and designation of arterials and collectors as shown on the Future Thoroughfare Map, Figure 12.



6. Assure adequate traffic-sign control measures as shown on the Future Thoroughfare Map until traffic volume increases to the extent that signalization is required to properly regulate traffic.

the use of  
the land



EXISTING LAND USE

The Pierce existing land use map on Figure 8 is intended to show the location and area of land for various types of land uses. This map provides an overview of the town indicating the pattern of its growth and the relationship of all land uses within the town. Essentially, the existing land use map should be considered as a description of how the Town of Pierce uses its land at this point in time. The amount of land utilized for various uses is shown in Table V.

TABLE V

Percentages of Land Use for Each Category Within the Town of Pierce

<u>USE</u>	<u>ACRES</u>	<u>PERCENTAGE</u>
Residential	88.86	21.91
Commercial	1.67	.41
Industrial	10.73	2.64
Public	7.54	1.86
Parks	3.09	.76
Vacant and R.O.W.	<u>293.66</u>	<u>72.42</u>
TOTAL	405.55	100.00%
Total developed land area	111.89	27.58
Total undeveloped land area	<u>293.66</u>	<u>72.42</u>
TOTAL	405.55	100.00%

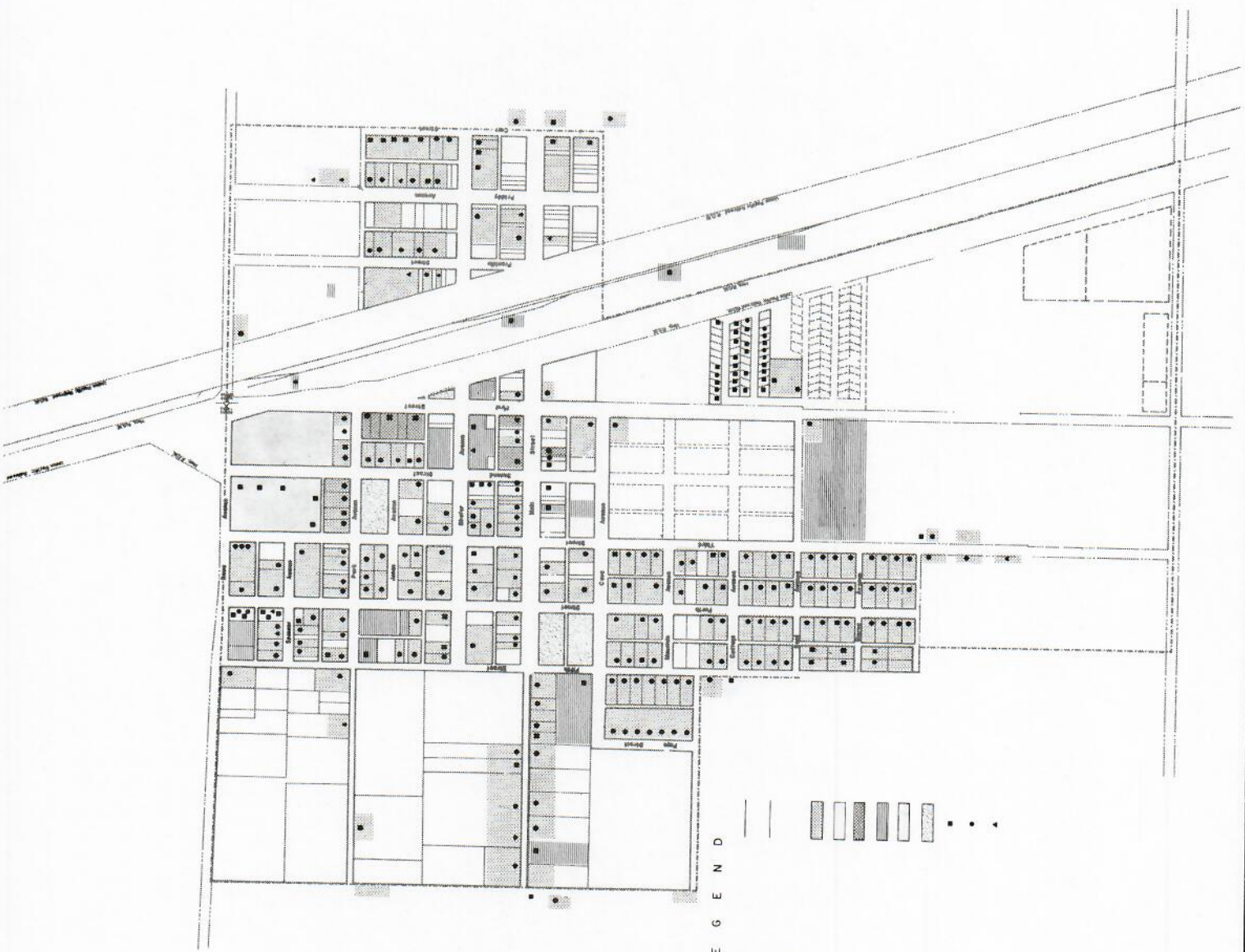
Source: Weld County Planning Commission, 1975.

# existing land use



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6



## LEGEND

- BLOCK LINE
- LOT LINE
- CITY LIMITS
- RESIDENTIAL
- MOBILE HOME
- COMMERCIAL
- INDUSTRIAL
- PUBLIC
- PARKS
- STANDARD
- REHABILITATE
- DISPARATED

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The following is a brief general summary of the existing land use characteristics:

- Residential - This accounts for approximately 22% of the land in Pierce. During the period from 1970 to 1975, approximately 76 residential building permits were issued.
- Commercial - A mixture of commercial establishments compose this category. The existing commercial land uses include a grocery store, cafe, garage, welding shop, dealership for farm machinery, barber shop, beauty parlor, gas station, and a blacksmith shop. While the existing commercial land use accounts for only 1.67 acres the Town anticipates close to 17 acres to be developed for commercial uses in the near future, making a total of approximately 30 acres commercially zoned.
- Industrial - Existing industrial land use is primarily centered around Hawkin's Manufacturing Company, and the Pierce Grain Elevator. In addition there is Pierce Packing, a meat packing company located on Gaylore Street, and Melvin Geib, Incorporated which is a land-leveling, earth-moving company. Within the Town of Pierce there is approximately 11 acres or 3% of existing industry.
- Public - This category comprises 7.5 acres in the Town of Pierce. Public land uses include the Pierce Town Hall, Pierce Fire Station, and the Highland Middle School.
- Parks - There is a public park and a public baseball park within the Town of Pierce, as well as the newly dedicated Priddy Park. This category of land use accounts for approximately 3 acres.

Utilities - The Town of Pierce currently has gas, electric, and telephone service. Telephone lines within Pierce are both overhead and underground; however Mountain Bell Telephone Company is continually abandoning overhead lines and installing underground lines. All electrical lines are overhead and usually run in alley easements. Maps showing the general location of gas, electric, and telephone service lines are provided on Figures 7, 8, and 9 in order to indicate future areas of utility service.

The existing land use pattern for the Town of Pierce is largely due to the small area of the town, and the willingness and foresight of town officials to encourage well-managed and orderly town development. Pierce is still a small conglomerate of land uses, with the largest developed land use being residential. Few uses are nuisances to adjacent uses because of the high percentage of undeveloped land, and the overall compatibility of existing land uses. Finally, each land use category was examined separately in order to better analyze and assess the relationship of any combination of land uses to each other and to the whole.

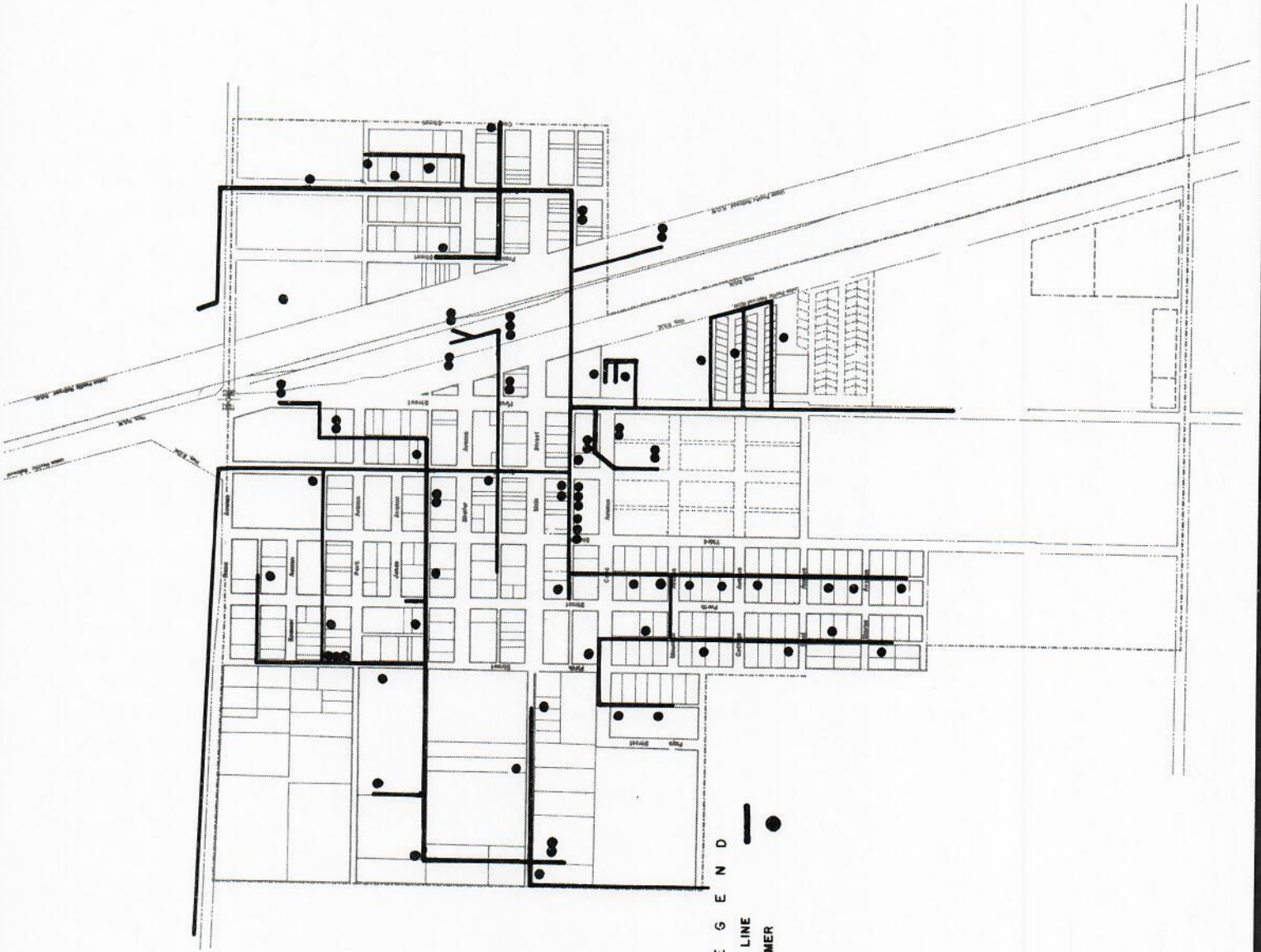




# existing electric



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LEGEND  
ELECTRIC LINE  
TRANSFORMER

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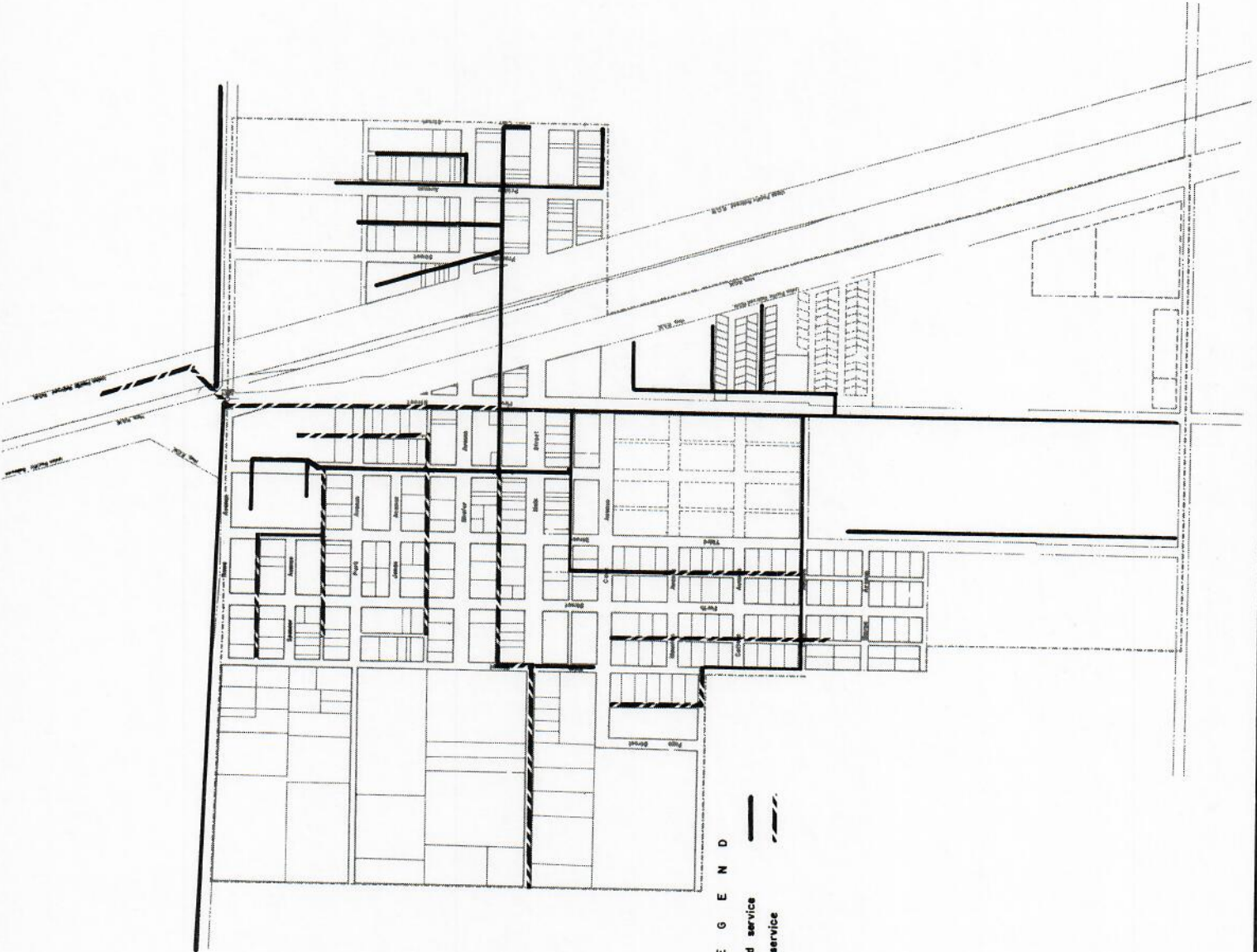


# existing telephone



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6



LEGEND  
underground service  
overhead service

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## FUTURE LAND USE PLAN

### Development Policies

The following discussion briefly explains development policies for the Town of Pierce. Basically, development policies are statements by the Planning Commission and Town Board of the directions in which the Town should move, in order to achieve the objectives contained in the Pierce Plan. Policies are guides to future development decisions. They give specific and helpful direction to the planning process as well as provide Pierce residents with direction on how and where the town should develop.

Pierce's overall town policy will be to encourage planned, innovative, and controlled growth which complies with local goals and objectives. Because there are large undeveloped areas within the town it is felt that Pierce will proceed at a reasonable pace to allow future growth. However, until the town develops that undeveloped portion of land within its corporate limits, it will be a town policy to generally oppose any effort to incorporate or annex areas at its fringe. Generally, areas not urban in character will not be encouraged to annex to the town.

The residential character of the Town of Pierce is primarily single-family with almost no multi-family units. It will therefore be a town policy to strongly encourage medium-density and high density residential developments in those areas designated for such use on the Future Land Use Map. Usually, single-family (low density) will be considered to be 1.0 - 4.0 dwelling units per acre (DU/AC);





MULTI-FAMILY - MEDIUM DENSITY

$$\begin{array}{r} \text{Acres} \\ \hline 12.39 \end{array} \times \begin{array}{r} \text{DU/AC} \\ \text{Density Range} \\ \hline 4.0 - 7.0 \end{array} = \begin{array}{r} \text{DU's Range} \\ \hline 49 - 86 \end{array} \times \begin{array}{r} \text{Average People} \\ \text{Per Unit} \\ \hline 3.0 \end{array} = \begin{array}{r} \text{Estimated} \\ \text{Future Population} \\ \hline 147 - 258 \end{array}$$

MULTI-FAMILY - HIGH DENSITY

$$\begin{array}{r} \text{Acres} \\ \hline 21.83 \end{array} \times \begin{array}{r} \text{DU/AC} \\ \text{Density Range} \\ \hline 8.0 - 13.0 \end{array} = \begin{array}{r} \text{DU's Range} \\ \hline 174 - 283 \end{array} \times \begin{array}{r} \text{Average People} \\ \text{Per Unit} \\ \hline 2.6 \end{array} = \begin{array}{r} \text{Estimated} \\ \text{Future Population} \\ \hline 452 - 735 \end{array}$$

Total Residential Acres = 171.72

Total Dwelling Units = 663 - 919 DU's

Total Estimated Population = 2,095 - 2,863

If the town develops its residential sector as perscribed above - the town may anticipate an eventual future town population of between, approximately 2,000 and 3,000 people. This future population range is desired by town officials and residents. It should be noted, however, that the timing of growth and development shall be a major concern in all land use decisions. Before development or expansion occurs, it will be the intent of the town to first determine that it can adequately service such areas with adequate utilities and community services. Again, one of Pierce's primary policies is to insure planned, orderly, and innovative growth and development.

In the same way that Pierce wants to improve and expand its housing market the town also encourages new