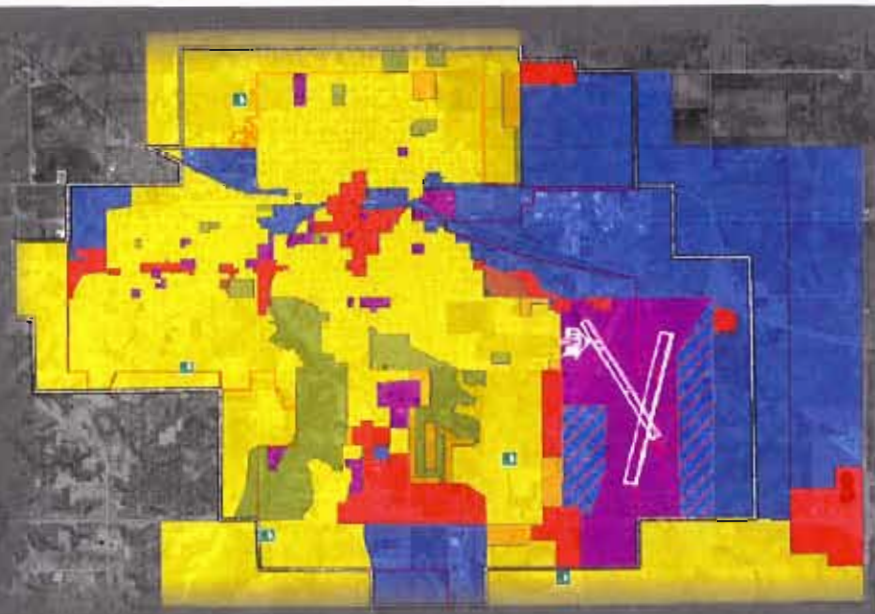
Boone Comprehensive Plan

for the City of Boone, Iowa

2005-2030

December 2006



SNYDER & ASSOCIATES
Engineers and Planners

Boone Comprehensive Plan

Prepared for:

The City of Boone, Iowa

2005-2030

City Council

John Slight, Mayor

Merrill Tam
Nick Mallas
Lila Kruse
Steven Ray
Shari Gillespie
Glen Thompson
Travis Stevenson

City Planning and Zoning Commission

Craig Downs
John Niemants
Donny Paris
Robert Kelly
Robert Westrum
Cindy Plymale
Marillyn Hansen

City Administrator/Clerk: Brent Trout
Economic Development Director: Darrel Rensink
Building Official: Ed Higgins

Prepared by:

Snyder & Associates, Inc.

December, 2006

Comprehensive Plan-City of Boone

Table of Contents

Tables

Tables continued

Exhibits

1.0 Introduction

There is a city in central Iowa whose population remained around 12, 000 people for much of the 20th century. It's located on the busiest rail line in the state, with almost 60 trains per day passing through its corporate limits. It is host to several major employers, including the Iowa National Guard, Fareway Food Stores, and Communication Data Services. There are 2,300 students served by six elementary schools, one middle school, and one high school in the community's school district. There are also 2 parochial elementary schools and a community college in town, with a major state institution less than 15 miles away. There are approximately 300 acres of city parks in the city, with a major state park a few miles to the south. These are a few details about the City of Boone.

The City of Boone (hereafter Boone) last updated its Comprehensive Plan in 1995. The City Council decided to update its Comprehensive Plan because a new Census had been completed and community leaders recognized there was sufficient need.

Comprehensive Plans provide community decision-makers with a tool that helps guide key decisions about community growth and development. The plan also provides a framework for more detailed plans and ordinances. More specifically, the plan accomplishes the following:

- Establishes a community vision (answering the question: What does Boone want to be?)
- Guides the physical growth and development of Boone.
- Identifies policies and priorities for preserving open space and historic resources.
- Provides a framework for the efficient expenditure of public money.
- Coordinates decisions across multiple government agencies and private jurisdictions.
- Promotes the strengths and assets of the community and serves as a marketing tool.
- Provides a plan for the timing of capital improvements.

Sometimes the plan can be met with opposition from individuals who simply may not agree with a portion of the plan, or who want to advance a specific project that may not be consistent with the community's overall vision. The Planning Commission must use the comprehensive plan to evaluate the merits of such proposals and make sound recommendations to the City Council. The City Council, in turn, must either uphold the plan's direction, or decide that the plan needs to be reviewed or changed. The City Council's decisions must be consistent with the general intent of the Comprehensive Plan. If Council decisions are not consistent with the plan, a change in direction may be evident and the Plan may need to be re-evaluated.

2.0 Executive Summary

The main body of the City of Boone Comprehensive Plan 2006 Update is composed of chapters on location, environment, population, economic development, land use, housing, transportation, infrastructure, parks, and public buildings. Within these subject areas, needs are defined and

recommendations are made to guide future development and redevelopment within the City of Boone.

Each chapter contains 3 interrelated components:

- Existing Conditions
- Needs and Opportunities
- Recommendations for the 2030 Land Use Plan

The "Existing Conditions" and the "Needs and Opportunities" portion of each chapter provide detailed background information about the community. The Existing Conditions are documented for each chapter, identifying key development topics within each section. Their effect on the community creates a need or opportunity to be addressed by the community for the future.

Each chapter concludes with recommendations for the 2030 Land Use Plan. Some recommendations may be scheduled outside of the time frame of this plan. They are included to aid the City in avoiding any potential long-term land use conflicts with Boone County. Supporting information such as detailed maps and tables are included within each section, with reference documents included as Appendixes.

The 2030 Land Use Plan, and how each chapter's subject influences it, is described throughout the document. The Plan is a fold-out map which illustrates the anticipated 2030 land use pattern, and reflects the recommendations for the City of Boone based on current needs and opportunities.

The document begins by setting forth the "Goals" in Section: 3.0. These are used as the guiding development principles which shape the desired future growth pattern and development themes for the Year 2030 and beyond.

"Section 4.0: Public Process" describes citizen input activities contributing to the creation of The City of Boone Comprehensive Plan 2006 Update. These activities took place monthly for the better part of a year to solicit public feedback and revise drafts of the land use plan.

The overall location and history of Boone is described in "Section 5.0: Location." Maps of the County and City are included, and the Ames-Boone Metropolitan Statistical Area (MSA), formed in 2003, is introduced.

"Chapter 6.0: Environment" describes the natural features in and around Boone, such as the soils and climate, including Boone's history of tornado activity.

This City's population growth and related information is answered in "Section 7.0: Population." Information on the percentage of Boone County represented by the population of the city of Boone is presented.

Section 8.0: Economic Development includes various economic factors such as employment, labor force, retail information, sales tax revenues and lists of major employers.

Section 9.0 contains the Land Use Plan portion of the document. It describes the changing land use patterns of the City of Boone. Also included are the existing land uses, tables, growth pattern, planning area, 2 mile area, and future land use.

Existing housing statistics are contained in "Section 10.0: Housing." There are statistics on household size, number of homes, income, building permit information, and growth type and areas.

Road, airport, shuttle service, and rail information are discussed in Section 11.0: Transportation. Traffic data (accidents, volume), existing street class, regional connectors, and proposed system improvements are described.

"Section 12.0: Infrastructure" contains descriptions of the underground utilities: water, sanitary and storm sewer systems. It identifies the existing service areas as well as the problem areas and the proposed upgrades.

Existing and recommended additions to the park network are discussed in "Section 13.0: Park and Recreation." Various opportunities for recreation and tourism are also described.

The existing and recommended improvements to various public buildings, such as DMACC and the Hospital, are included in "Section 14.0: Public Buildings." Changes completed since the 1995 Comprehensive Plan are also described.

The final chapter, "Section 15: Implementation of Recommendations," combines and prioritizes the recommendations from each previous chapter into one of three categories:

- Strategic (1-5 years),
- Intermediate (6-15 years), or
- Long Range (16-25 years).

Maps, survey results, and other reference information are included in "Section 16.0: Appendix."

3.0 Goals to Guide the Planning Process

One of the first steps that a community must take is to visualize the community as they would like to see it in the future. This visualization will guide and direct the plan and move the process toward this goal. The Steering Committee participated in a process that identified the assets and issues in Boone, and the results helped create an understanding of the goal. The "Goal Statements" for each subject are a continuation of the 1995 Comprehensive Plan, updated by the change in time, society, the Steering Committee meetings, and public input.

Land Use Goals

- Utilize the vacant and undeveloped agriculture lands inside the corporate limits of Boone for development and redevelopment to maximize the existing infrastructure and keep the community urban and compact.

- Expand the industrial land currently available by annexing lands adjacent to the industrial development on Industrial Park Road and utilizing part of the airport property, especially when the airport is expanded, for industrial and mixed–use development with urban standards.

- Identify key locations for new retail/commercial areas to be developed where traffic improvements and the surrounding development may change the market.

- Continue to promote the strong public-private partnership that exists to promote the development and redevelopment of the available industrial sites and buildings in Boone.

- Create an inventory of "development ready" sites that can be conveyed to developers "on demand" with no hidden surprises, i.e. already certified for hazards and obstacles to development such as soil conditions, title descriptions, ownership, access and others.

- Develop a program that coordinates all the needs identified in the Comprehensive Plan and other documents that expands the industrial development, especially east of Boone and surrounding the airport and railroad.

- Develop a land use concept for Boone that provides direction to the City and County that conveys the intent and growth influence of the City of Boone into the two-mile jurisdiction area and the area that may be urbanized in the future.

- Actively pursue the annexation of industrial development that is supported and influenced by the City of Boone.

- Update the Zoning Ordinance that was originally written in 1969 and updated in 1980 to include the most current information and concepts and to be as user-friendly as possible.

Housing Goals

- Develop a system of incentives and programs that promotes the development of new residential housing that provides for all levels of housing-low density, medium density, multi-family/condominiums, and new infill housing.

- Develop a series of programs and grants that will encourage the preservation, rehabilitation, or restoration of the older housing stock, historic housing, and deteriorating housing units in Boone.

- Identify the historical and architectural resources of the existing housing in Boone and create an inventory of the data that will provide a resource for future projects and identify the opportunity for an historic district.

- Develop the ability to pursue and obtain state and federal grant monies that could be directed toward the housing needs of the city.

Public Infrastructure Goals

- To provide the citizens of Boone with an adequate safe and sanitary water supply, sanitary sewer system, and storm water drainage system.

- To expand the water system and to have the capacity to serve areas outside Boone in the two-mile jurisdiction area.

- To develop the sanitary sewer system to be capable of providing service into territory that may become part of Boone in future years.

- To create a storm water system that will handle the water runoff and a method of providing capital to maintain and develop the infrastructure.

- Continue to provide new infrastructure extensions that are developer driven/responsible while balancing the capital cost for city-wide improvements and the developer's responsibility.

Transportation Goals

- The local street network should be completed to provide good travel continuity, especially east/west through Boone.

- A grade separation over the railroad corridor on Snedden Drive needs to be constructed to provide for public safety and the movement of traffic and goods. Consequently, Snedden Drive will then need to be improved.

- A second grade separation of the railroad corridor needs to be examined for the west part of Boone to improve the public safety and traffic movement.

- The Boone Municipal Airport needs to be expanded to provide an adequate main runway and crosswind runway to serve the area and the Iowa Air National Guard in the future.

Parks and Recreation Goals

- Provide adequate park and recreation opportunities to the undeveloped area that will develop in the future by including appropriate park lands into the developments as they occur.

- Develop a trail system inside Boone that connects key parks and open spaces and has the capacity to be extended south to Ledges State Park and eventually a regional trail when available.

Environmental Resource Goals

- Preserve and protect the natural resources and ecological system in Boone and the Des Moines River Valley adjacent to Boone.

- Use the natural beauty of Boone and its surroundings to provide citizen activities and promote tourism in a sensitive way.

- Preserve the natural areas in and around Boone by promoting smart growth and sustainable development principles (e.g. promoting infill and mixed-use development) as growth takes place.

Elderly and Health Services Goals

- Provide Boone's citizens a series of alternative solutions or actions that will address the future needs of an aging population and the changing services being provided by the health services providers.

- Examine the transportation services being provided to the elderly and handicapped segment of Boone's population and plan for the future.

4.0 Public Participation Process

Public participation was an active component in the Boone Comprehensive Plan 2006 Update planning process. Key components of public participation included:

- Key person Interviews
- City of Boone Steering Committee
- Public Meetings
- Outreach Efforts
- Media

Personal interviews were conducted during the information gathering stage of the planning process to gain detailed knowledge about specific planning issues. Interviews were conducted with city staff, community leaders, and business owners.

Several public meetings were held in order to inform the public on progress made, describe the planning process, present draft land use plans, seek input, and answer questions. The land use plan was developed with input from the public meetings. The City was divided into 6 "Neighborhood Areas" grouped by the areas' predominant land use and physical features (Exhibit 4.1). At a public meeting, citizens familiar with each separate area provided

background information regarding street development, parks and trails, public building locations, retail and commercial buildings, and utility infrastructure.

The steering committee provided specific information as knowledge gaps were identified. Sanitary sewer and municipal water projects are currently underway, and the systems' design information was shared as it became available. The latest traffic data was provided by the Iowa Department of Transportation, and a student group from Iowa State University finished a study to determine the feasibility of an overpass on Corporal Snedden Drive. Meeting minutes are included in the Appendix, as are our "Issues and Assets" questionnaire (with tabulated results), which were used to prioritize the wishes of Boone in our public scoping process.

Two main media were used to engage the public in the planning process. City staff and Steering Committee members used print and radio coverage to invite the public to participate in the public meetings. These media helped to keep the public involved and updated as the planning process refined the final product.

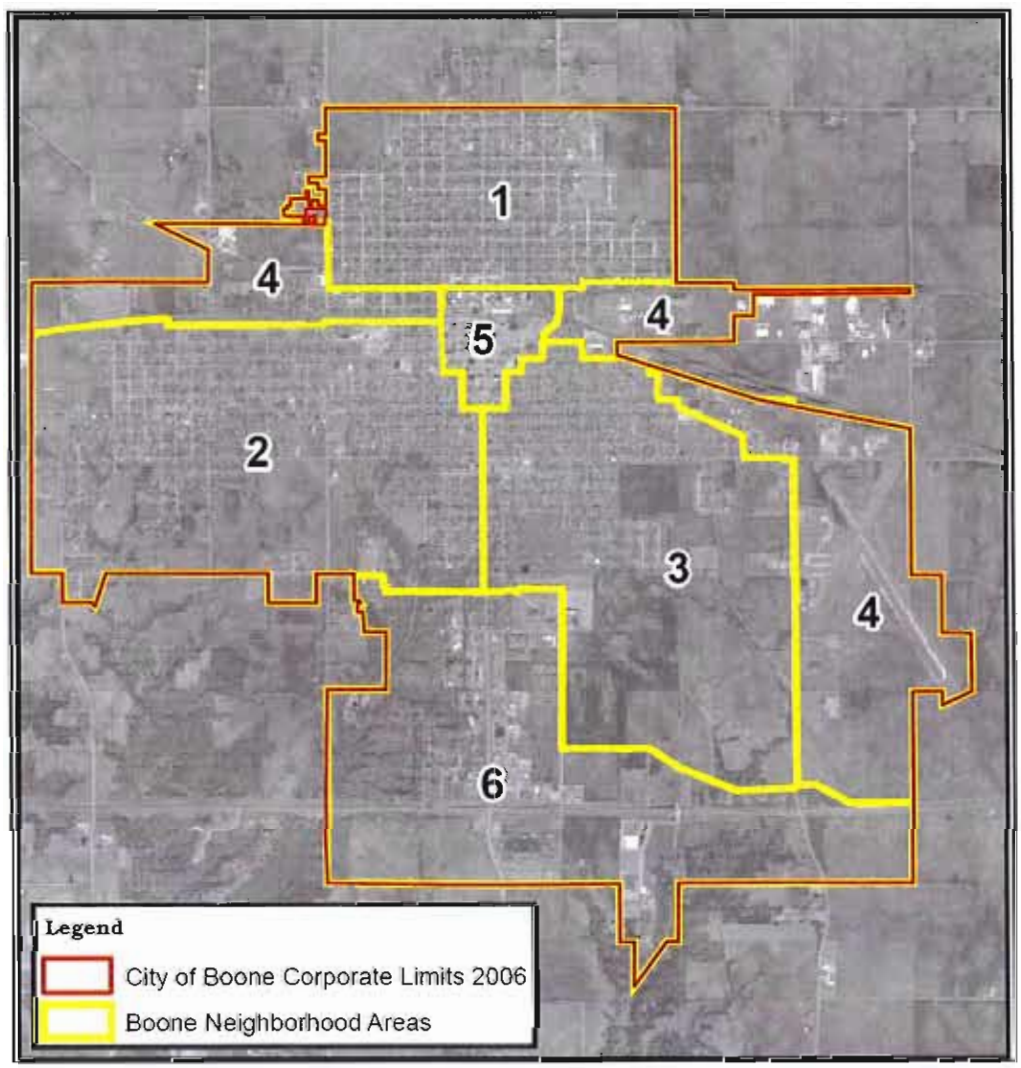
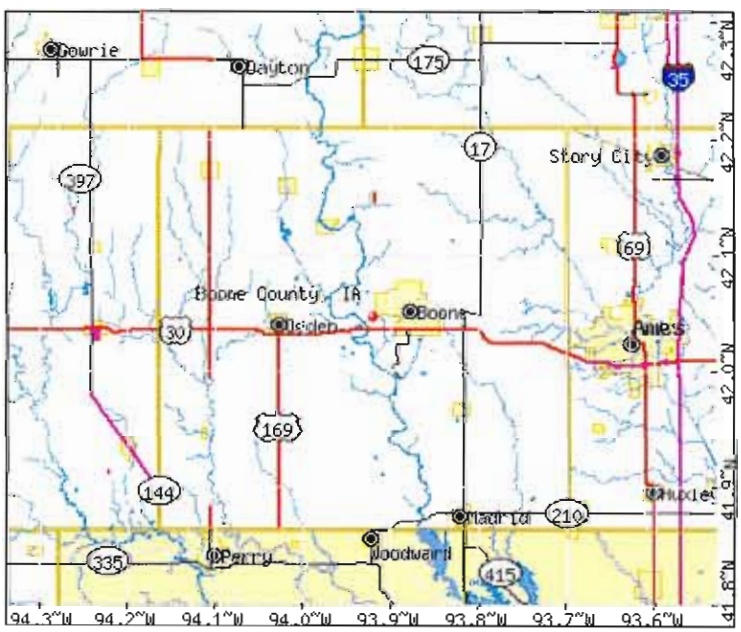


Exhibit 4-1: Six Neighborhood Areas
Source: Snyder & Associates, Inc.

5.0 Location of the Community

Boone, Iowa is located 10 miles West of Ames and I-35 on US Highway 30. It is the county seat of Boone County. Both the City and County are named after the Kentucky-pioneer Daniel Boone's youngest son, Captain Nathan Boone. Once an army camp near the Des Moines River, the City of Boone was known by other names such as Boonesboro, Booneville, and Montana. In 1865, the railroad was completed and development intensified. The City was incorporated in the same year. In 1871, the city's name was officially changed to "Boone" by a petition filed in the Circuit Court. The city's corporate limits enclose 8.9 square-miles of area. It is located 50 miles northwest of Des Moines.

Exhibit 5-1: Vicinity Map (City of Boone is circled in red)
Source: Iowa Geographic Map Server, 2006



Boone County covers an area of 571.5 square miles, and in 2004 had an estimated population of 26,478 people (SETA 2004). Cities in the County of Boone include Madrid, Ogden, Boxholm, Pilot Mound, Luther, Fraser, Sheldahl, Beaver, Berkley and Boone. Educational, health and social services provide 25.8 percent of the County's employment (Retail: 14%, Manufacturing: 10.2%).

Metropolitan Statistical Area (MSA)

According to Iowa Workforce Development, a labor market area (LMA) is "an economically integrated unit within which workers may readily change jobs without changing their place of residence." The Office of Management and Budget (OMB) revises the LMA's each census. In June of 2003, the OMB defined Boone County as a micropolitan statistical area. A micropolitan statistical area is defined as a community having at least one urban cluster between 10-50,000 people. Boone County was also combined with the larger Ames-Story Co. Metropolitan Statistical Area, based on their proximity and amount of employment crossover between the communities (see Laborshed map, Section 8.0). This formed the Ames-Boone Combined Statistical Area, to reflect the extent to which people commute to live and work in neighboring communities.

6.0 The Physical Environment

Boone is located just east of the Des Moines River Valley (Exhibit 5-1), which was carved from the glacial plain following the retreat of the Wisconsin glacier about 13,000 years ago. The area immediately surrounding the river is mostly deciduous, hardwood forest made of stands of Oak and Hickory trees. These forests give way to productive agricultural soils with distance from the river. The topography also smoothes with increasing distance from the river, but is quite steep and irregular in the valley. The City of Boone is at an elevation of 1100 feet, but the river flows at 890 feet or about 200 feet below.

Boone has a common weather pattern in Iowa: hot and humid in the summer and cold and windy in the winter. July is the hottest month and January is the coldest. The maximum average high temperature is 86 degrees Fahrenheit in July (Exhibit 6-1). January has a mean minimum temperature of 12 degrees Fahrenheit. Boone receives an average of 34.11 inches of precipitation annually.

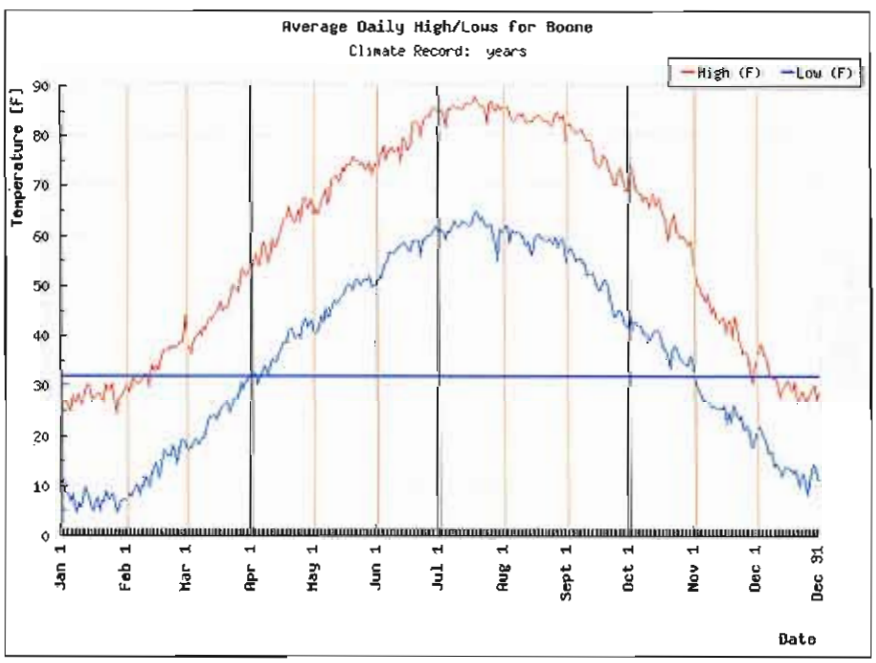


Exhibit 6-1: Annual Climate Variation at Boone Municipal Airport
(Source: Iowa Environmental Mesonet, ISU Agronomy)

Prevailing winds are from the northwest in winter and from the south in summer, and average 13 miles per hour in March and April, the windiest months (*Source: NCDC*). Boone has a history of strong tornado activity, and is above the average set for the state of Iowa in terms of number of annual events. Tragically, Boone County was the site of the most recent F5 tornado in Iowa, known as the Jordan Tornado, which damaged both Boone and Story County on June 13, 1976. Winds from the storm exceeded 300 miles per hour. Tornadoes in Boone County have caused one fatality and 95 injuries between 1950 and 2004. Most recently, on June 29, 1998, a category 2 (max. wind speeds 113-157 mph) tornado injured 85 people and caused $11 million in damages. For reference, the State of Iowa averages 31 tornadoes with one fatality and 39 injuries each year, causing an average of $15,551,038 in damages
(*Source: http://www.disastercenter.com/iowa/tornado.html*).

Soils are a primary consideration for locating septic fields or sewer systems, structural foundations, and pavement. Three major soil characteristics are factors in determining feasible land uses for an area of permeability, agricultural productivity, and erosion. Permeability is a measure of water's ability to penetrate the soil. Permeability is a very important factor in locating septic fields. Agricultural productivity is an important characteristic since land that is best for farming is often best for development as well. Soil erosion occurs when wind or water carry away unprotected soils, and deposit them elsewhere. This factor is extremely important in determining proper land uses for an area, as the water quality is directly affected by the negative effects of erosion. (Source: 1995 Boone Comprehensive Plan)

Soil Types:

Canisteo-Clarion-Nicollet Association
This association consists of nearly level to gently rolling soils in swells and swales. Many potholes are scattered throughout the broad level areas. Natural drainage is very poor in some areas, but most of these areas have been drained by tile and surface inlets. These soils are suitable for all crops grown in the country, but are poorly suited to urban development. Low soil strength, high shrink-swell potential, and a seasonal high water table are key hazards.

Hayden-Storden Association
These soils are on the uplands along the Des Moines River. The uplands are very steep, with numerous ravines and gullies. In most areas the soils in this association are wooded, and have good potential as wildlife habitat. These soils are poorly suited to crops and urban development with slope as the major limitation. The major concern for soil conservation is control of water erosion.

Hayden-Lester-Luther Association
This soil association occurs in rises and swales adjacent to deep gullies extending from the side slopes of the Des Moines River valley. These soils are suitable for growing crops, for urban development, and for wildlife habitat with the exception of a few steep areas. The main concern for soil conservation is erosion control in the steep areas, and drainage improvement in the swales.

(Source: Boone County Soil Survey, 1981)

Bedrock is no less than 60 inches below the surface of soil throughout the entire area.

7.0 Population Trends and Growth Projections

History and Trends

The population of Boone has remained virtually the same over the past eighty years and within the 12,000 to 13,000 category for sixty straight years. The 1940 to 2000 official U.S. Census has recorded a low of 12,164 in 1950 and a high of 12,803 in 2000. Forecasting models are somewhat academic with the little change that has occurred. However, the estimates by the U.S. Census Bureau for 2001 through 2004 and the record of new housing starts would indicate that Boone may be starting to grow. Table 7-1 shows the population change from 1940-2005 for the City of Boone and Boone County. Exhibit 7-1 illustrates the change for the City of Boone from 1940 to the 2005 estimate.

Table 7-1
Population for the City and County of Boone, IA

Boone Population	1940	1950	1960	1970	1980	1990	2000	2001*	2002*	2003*	2004*	2005*
City	12,373	12,164	12,468	12,468	12,602	12,392	12803	12713	12768	12783	12856	12831
County	29,782	28,139	28,037	26,470	26,184	25,186	26,224	26253	26110	26250	26478	26602

(Source: U.S. Census. Office of Social and Economic Trends Analysis [SETA]. 2005)
*U.S. Census Estimates

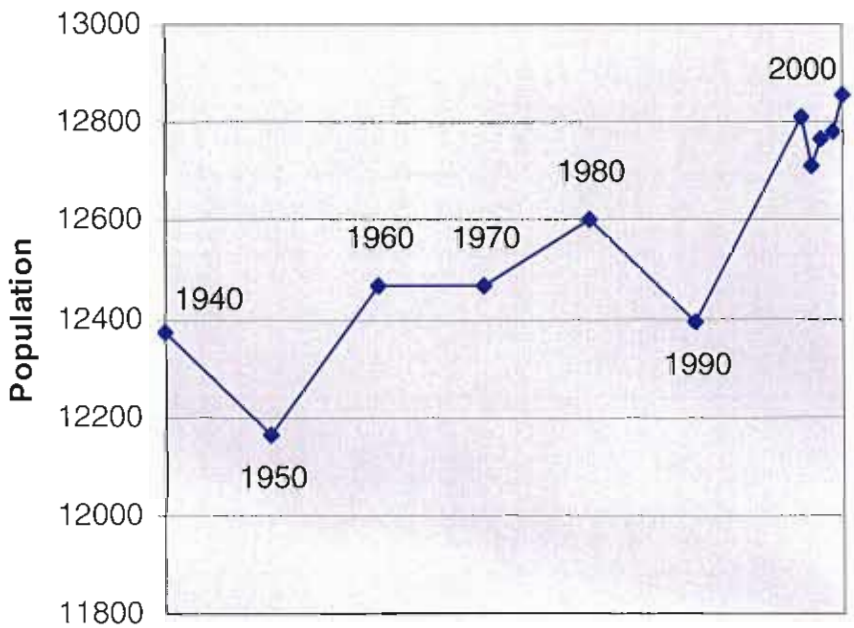


Exhibit 7-1: City of Boone Population (1940-2004)
(Source: U.S. Census. SETA)

The population of Boone was somewhat unchanged since 1940, but the county as a whole declined. Boone County was 29,782 in 1940 and 26,224 in 2000. The county declined to a low of 23,186 in 1990 and then started to grow and was back to the 2000 total of 26,224. The growth during this last decade is appearing to continue as the 2005 estimate of 26,602 would indicate. In 2003, the county of Boone was designated as a micropolitan area which is defined as an urban cluster with a population between 10,000 and 50,000. This was a part of the change where in 2003, Story County was added to the list of Metropolitan Statistical Areas (MSA's), in Iowa by the U.S. Census Bureau and Office of Management and Budget. Mentioned earlier, the MSA is defined as Story and Boone Counties.

The changes in Boone County and the City of Boone were both up and down over the sixty years, but as the county declined, the city's population remained stable. Table 7-1 provided the numeric changes for the population and Table 7-2 shows the percentage of change from one census to the next. As shown, the county declined every decade until 2000 while the city remained nearly the same. Exhibit 7-2 shows the change in the two for each census, 1940 to 2000.

Table 7-2
Population Growth Rate for the City and County of Boone, IA.

	1940	1950	1960	1970	1980	1990	2000	2001*	2002*	2003*	2004*	2005*
City		-1.7	2.5	0	1.1	-1.7	3.3	-0.78	0.43	0.12	0.57	-0.19
County		-5.5	-0.4	-5.6	-1.1	-3.8	4.1	0.1	-5.4	5.4	.87	0.47

(Source: U.S. Census, Office of Social and Economic Trends Analysis, 2005)
*U.S. Census Estimates

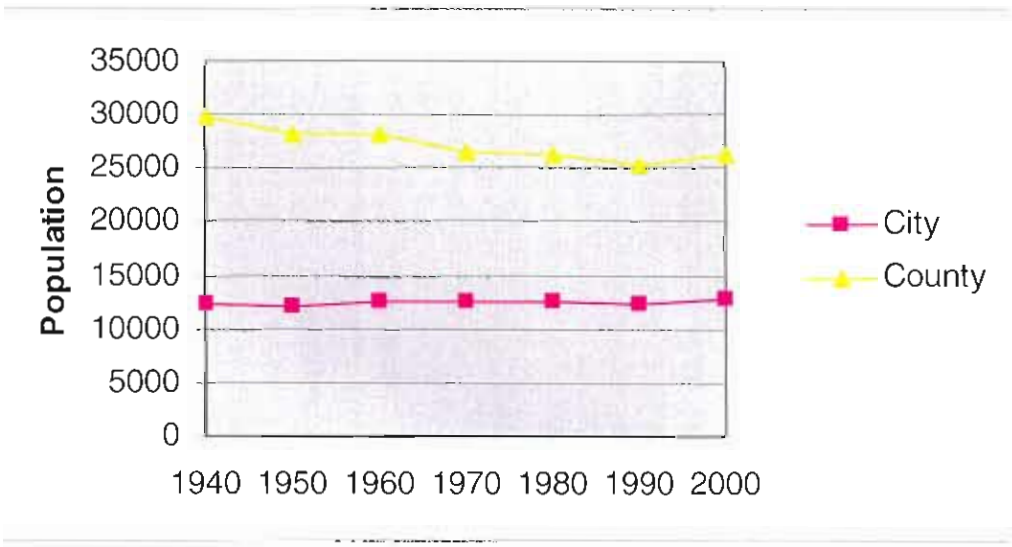


Exhibit 7-2: City and County of Boone Populations
(Source: U.S. Census Bureau)

Analysis of Exhibit 7-2 indicates that the City of Boone was becoming a bigger percentage of the county until the 2000 census. In 1940, the city was 41.5% of the county and the percentage grew to 49.2% in 1990. This change was steadily growing each decade. In 2000, the trend was reversed, and the percentage was back to 48.8, a change of 0.4%. The city of Boone represents

about one half of the county population which is common for many counties where one city is preponderate in the county. Exhibit 7-3 shows the percentage of the county represented by the city population from 1940 to 2000.

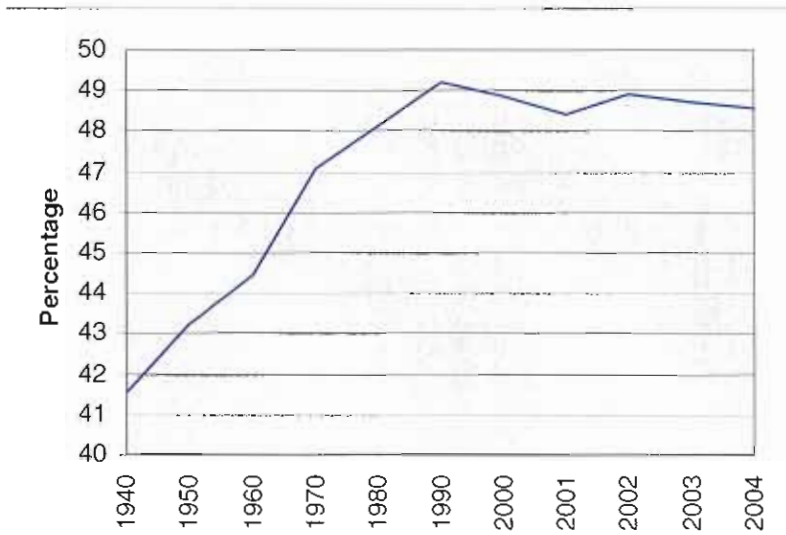


Exhibit 7-3: Percent of the County Population Represented by the City
(Source: U.S. Census Bureau; 2001-2005 are U.S. Census Estimates)

Population Projection

The population projection for Boone in the 1995 Comprehensive Plan used the population Cohort Survival model and an economic model that relates to a percentage share of the regional projection. The population that was selected to represent Boone's growth was 14,400 by the year 2015 which was between the two model projections. The method of projection selected for the 2030 update was a linear projection using five sets of assumptions from recent growth data. The 2000 population of 12,803 was the base.

The five sets of data and assumptions are as follows:

1). The lowest projection resulted by considering the mean change from 1940 to 2000, excluding the negative fluctuations. The projection for 2015 was just over 12,900 and the 2030 population was 13,025.

2). When the 1990 and 2000 census is compared to the mean change including the 2004 estimate, the projection for 2015 is 13,300 and 2030 is 13,800.

3). The growth that occurred from 1990 to 2000 was calculated per year and projected through the time span assuming that the rate of change will continue. The 2015 projection was 13,450 and 2030 was 14,100.

4). Projection assumption numbers 2 and 3 were analyzed together and the growth factors were increased to reflect the growth trend indicated by the new housing start information provided

by the City of Boone for the last six years. The 2015 projection was 14,100 and 2030 was 14,800.

5). Assuming that the entire growth trend for the last six years will continue through the time period of 2005 through 2030, the highest projection results. The projection for 2015 is 14,700 and 2030 is 15,700.

Exhibit 7-4 illustrates the five projections and shows the difference between the forecasts in a graph form. As you can see, the 1995 Comprehensive Plan recommended 14,400 which is near the point on projection number 5. The preferred projection that the 2030 Comprehensive Plan will be using for the consideration of all the other parts of the plan is projection number 4, or 14,800. However, the planning will be based on the range included from projection number 3 to number 5, or 14,100 to 15,700. The growth that occurred from 1990 to 2000, if continued, is very possible (no. 3), and if the new construction trend continues for some period of time, number 5 is also plausible. To choose the middle project is prudent and may more realistically represent the new construction trends.

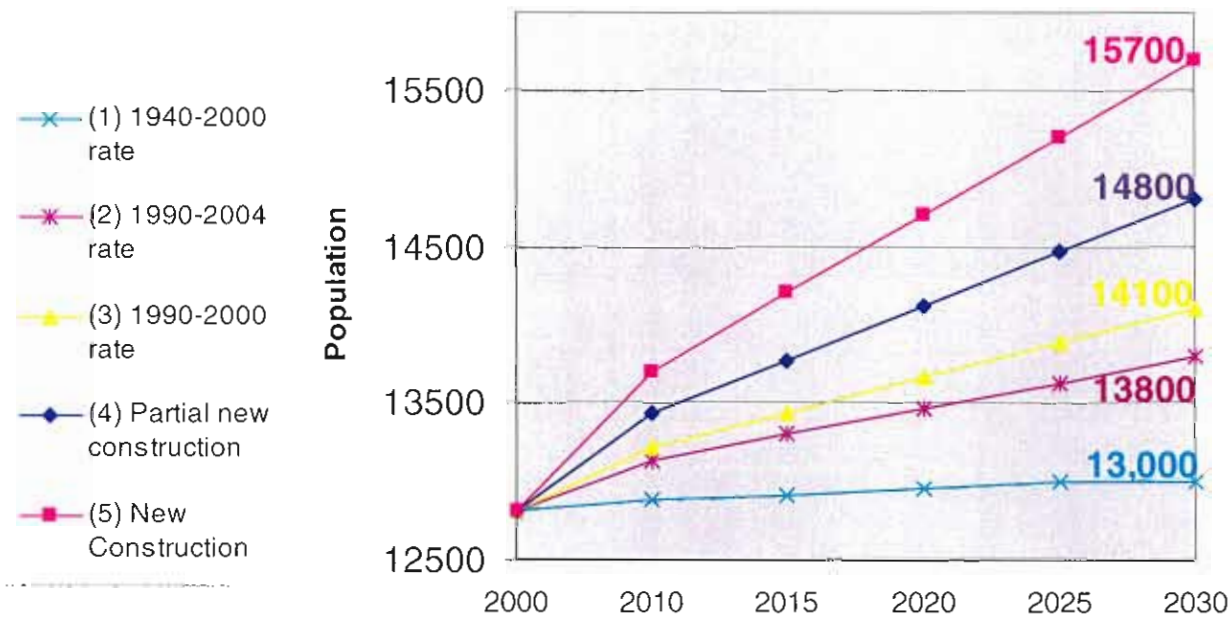


Exhibit 7-4: City of Boone Population Forecast (2000-2030)
(Source: Snyder & Associates, Inc.)

Finally, it is wise to look at the age and gender cohorts for the 2000 census to better understand the population (Exhibit 7-5). In 2000, several facts surface from this analysis. They are:

- Preschool and the school-aged population was over one-fourth of the population at 27.2%. The largest cohorts are the age 10-14 and 15-19 age groups, both at 7%.

- The largest age bulge is the 35 to 49 age group that makes up almost one-fourth at 22%.

- The over 65 cohort is at 17.6% with almost twice as many females as males in the age group. This age group is continuing to grow and could become the largest cohort during the life of this plan.
- The median age for Boone is 37.7 which is older than the state (36.6 years) and younger than the county (38.6 years).

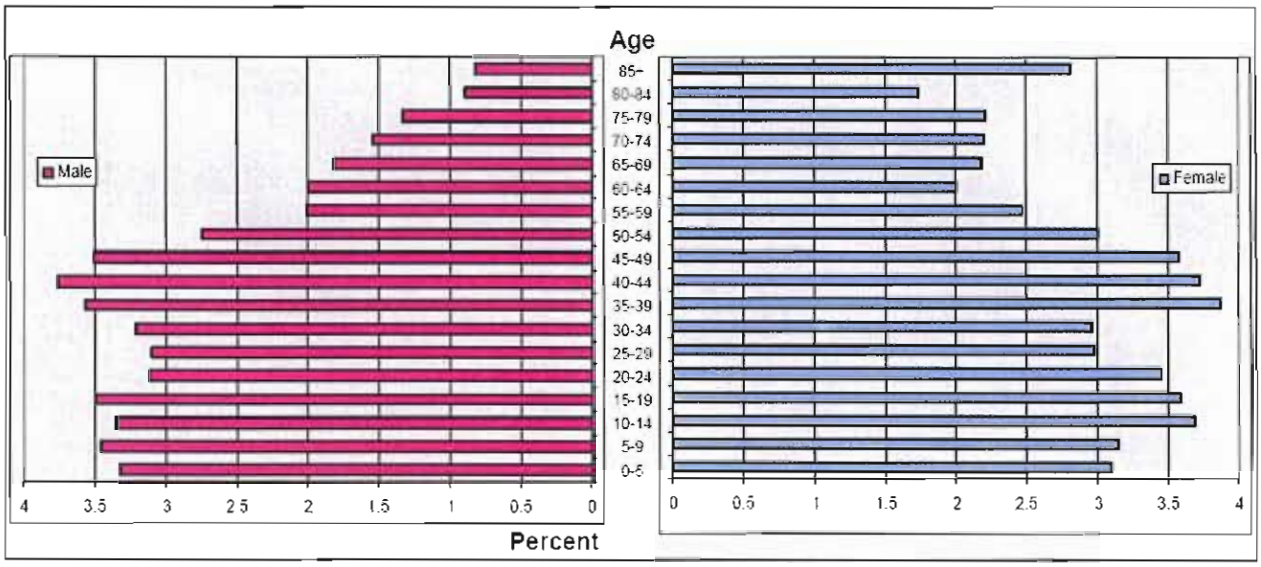


Exhibit 7-5: Gender Cohort Survival for City of Boone
(Source: U.S. Census Bureau, 2000)

8.0 Economic Development

Data for the Boone Laborshed was compiled by Boone's Future (An Economic Development Corporation) and Iowa Workforce Development. The Boone Laborshed is shown below (Exhibit 8-1). A Laborshed is hereby defined as the area from which an employment center draws its workers.

The Boone Laborshed has a total potential laborforce of 59,266 employed people. There are 37,074 unlikely to change their employment, while 22,192 people say they are at least somewhat likely to change jobs.

Income

The County of Boone had an average per capita income (adjusted for inflation) of $28,880, compared to a state average $28,340 and national average of $31,472 (NWAF, 2005). Boone County ranked 9th highest in the State in per capita income (*ibid*, 2005). Average salaries in selected industries are shown below in Exhibit 8.2. Average wages of hourly jobs are shown in Exhibit 8-3.

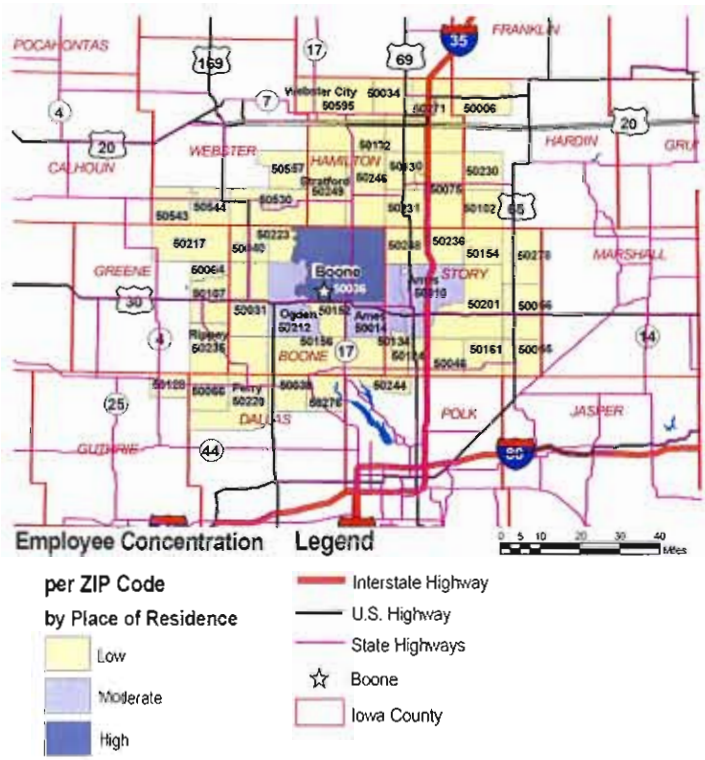


Exhibit 8-1: Boone Laborshed Area
(Source: Iowa Workforce Development Boone – Laborshed Study, 2004)

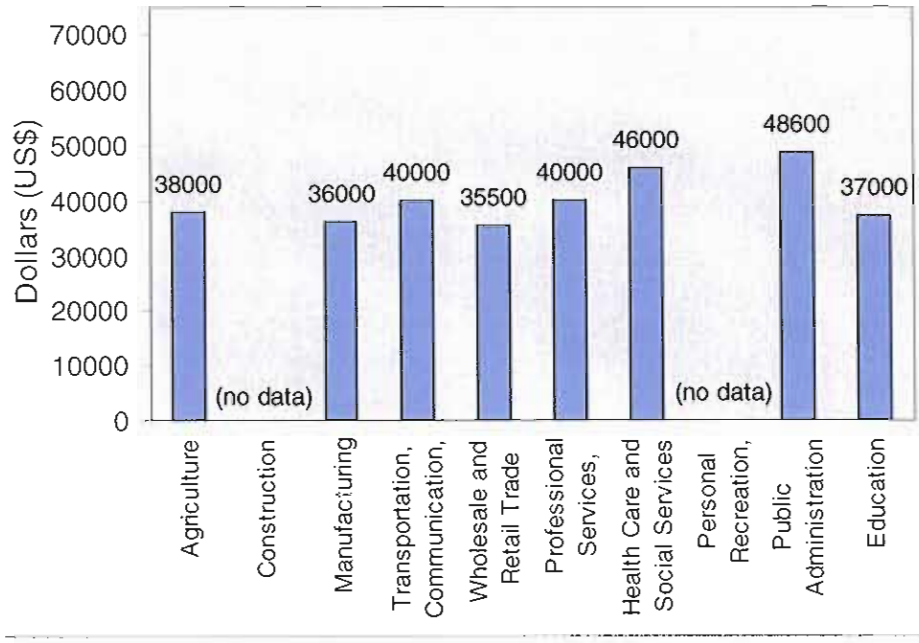


Exhibit 8-2: Profile of Median Salary per Person by Industry
(Source: Iowa Workforce Development, 2004)

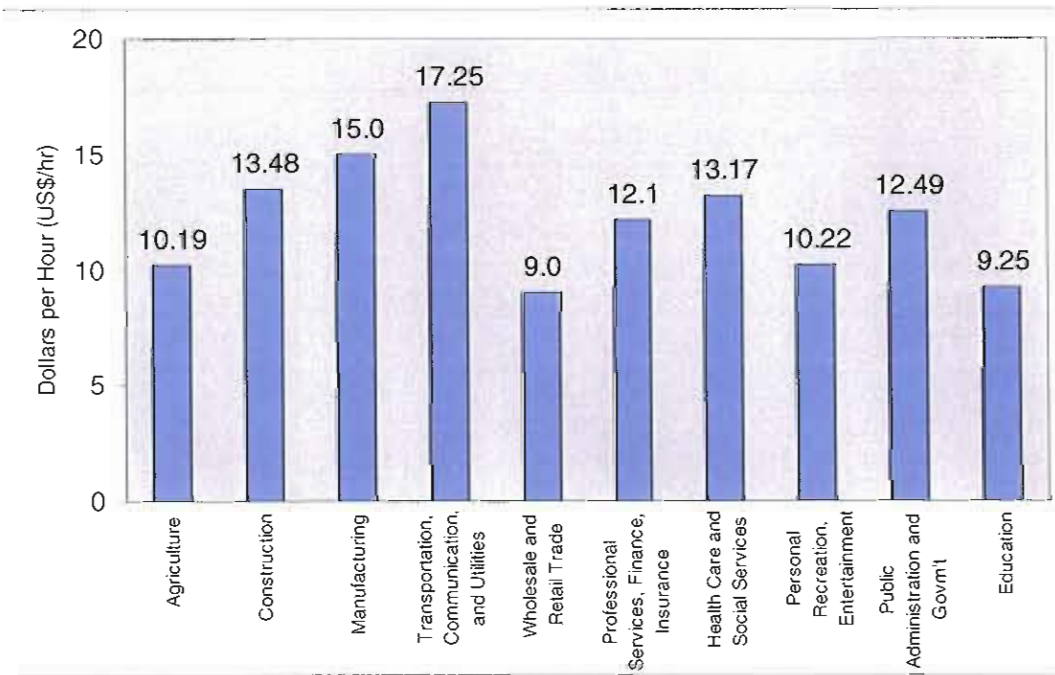


Exhibit 8-3: Profile of Median Wage (per Person per Hour) by Industry
(Source: Iowa Workforce Development, 2004)

Labor Force

A few facts and figures begin to summarize the workforce of the Boone area. According to the 2004 Laborshed study from Iowa Workforce Development and Boone's Future, 70.2 percent of the jobs sampled above are full-time, 16.9 percent are part-time, 11.6 percent are self-employed, and 1.3 percent of the jobs are seasonal or temporary. "Health Care" and "Professional" occupations comprise a total of 31.7 percent of the jobs below (Exhibit 8-4). Exactly one-fifth (20 percent) are employed in production/construction occupations, which did not provide salary information. The Boone Laborshed is 55.3 percent female, and 44.7 percent male, and has an average age of 41 years old. Over 70 percent of the workforce has educational experience beyond high school, but only 30 percent completed an undergraduate degree. Eight percent have a postgraduate degree. The average (one-way) commute in the Boone Laborshed is 13 miles.

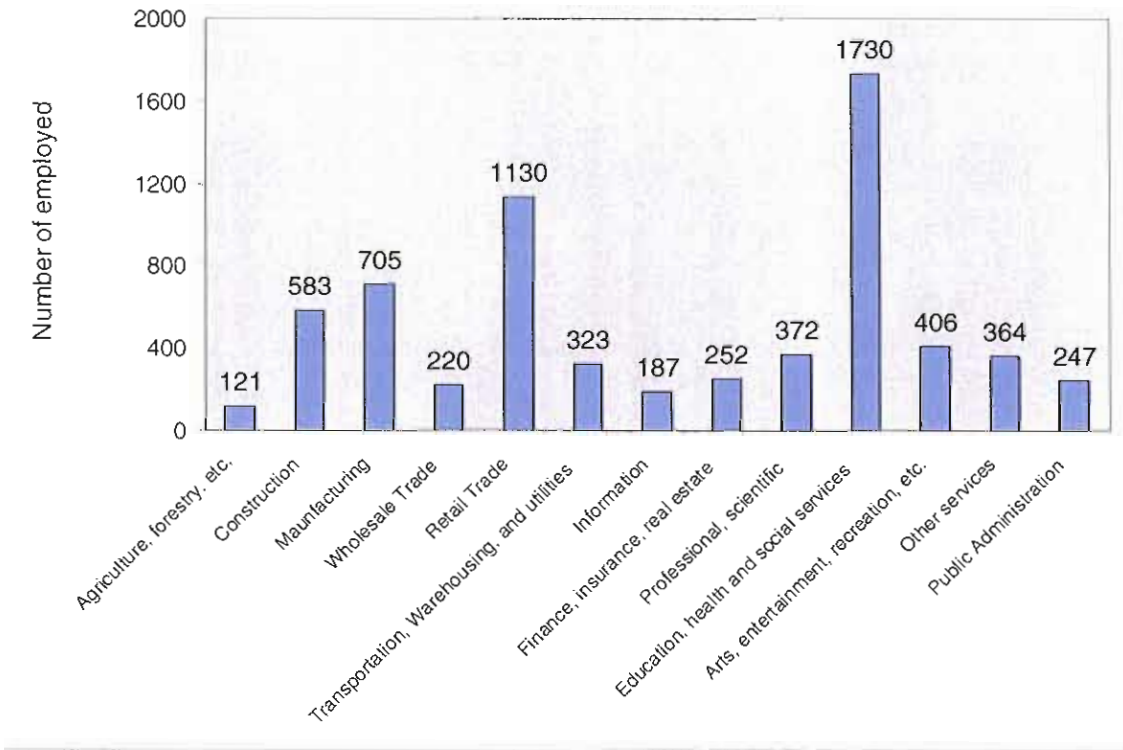


Exhibit 8-4: Number of Employed by Industry Within the Boone Laborshed
(Source: Iowa Workforce Development, 2004)

The labor market statistics below are for the City of Boone and its outlying areas (Table 8-1), defined as the Boone micropolitan area. The data is not seasonally adjusted. With an unemployment rate well below state (4.6) and national (4.9) averages, Boone's labor force exceeds 15,000 persons in the second half of the year (2005).

Table 8-1
Boone County micropolitan statistical area labor force information

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Labor force	13770	14200	14250	14210	14350	14680	15020	15220	15230	15280	15600
Unemployed	410	380	390	330	290	330	410	480	520	560	570
Percent unemployed	3	2.7	2.7	2.3	2	2.3	2.7	3.1	3.4	3.6	3.7
Total employment	13340	13810	13860	13880	14060	14350	14610	14740	14710	14720	15020

(Source: Iowa Workforce Development, 2005)

The Labor Force data from 1995-2005 is shown graphically in Exhibit 8-4, as is the change in Unemployment Rate through the same years (Exhibit 8-5).

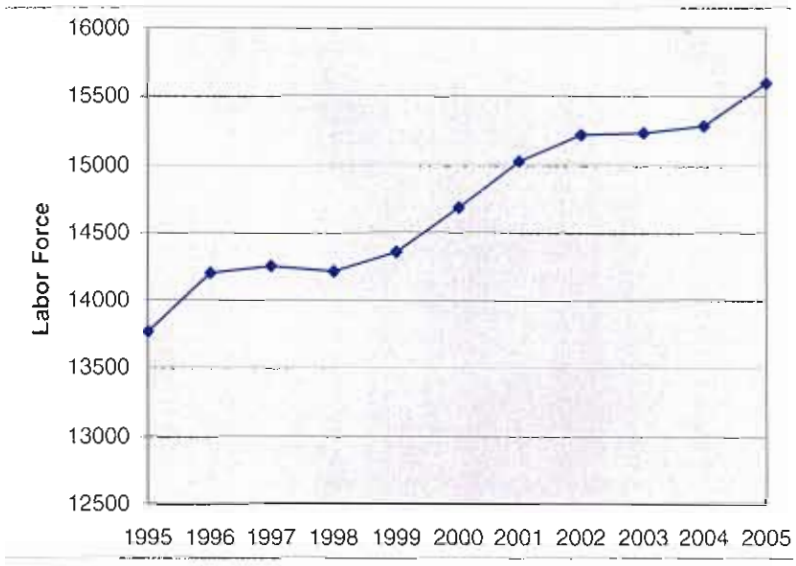


Exhibit 8-5: Annual Employment for Boone County (1995-2005)
(Source: Iowa Workforce Development)

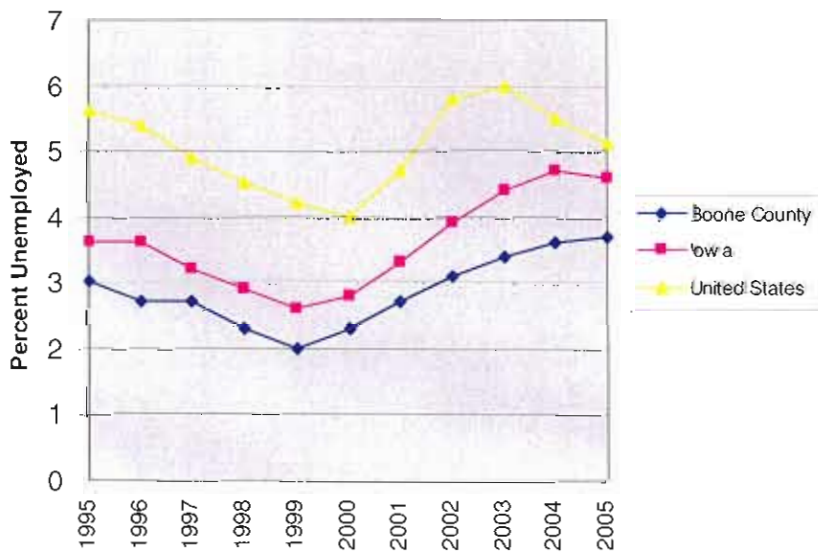


Exhibit 8-6: Annual Unemployment Rate for Boone County (1995-2005)
(Source: Iowa Workforce Development, U.S. Dept. of Labor – Bureau of Labor Statistics)

Employment data for the City of Boone was available through the U.S. Census Bureau and the 2000 Census. Education, health, and social services employ more people in Boone than any other industry (Exhibit 8-7). Retail trade and manufacturing industries were second and third largest employers in Boone. According to the 2000 Census, there are 6640 jobs in the City of Boone.

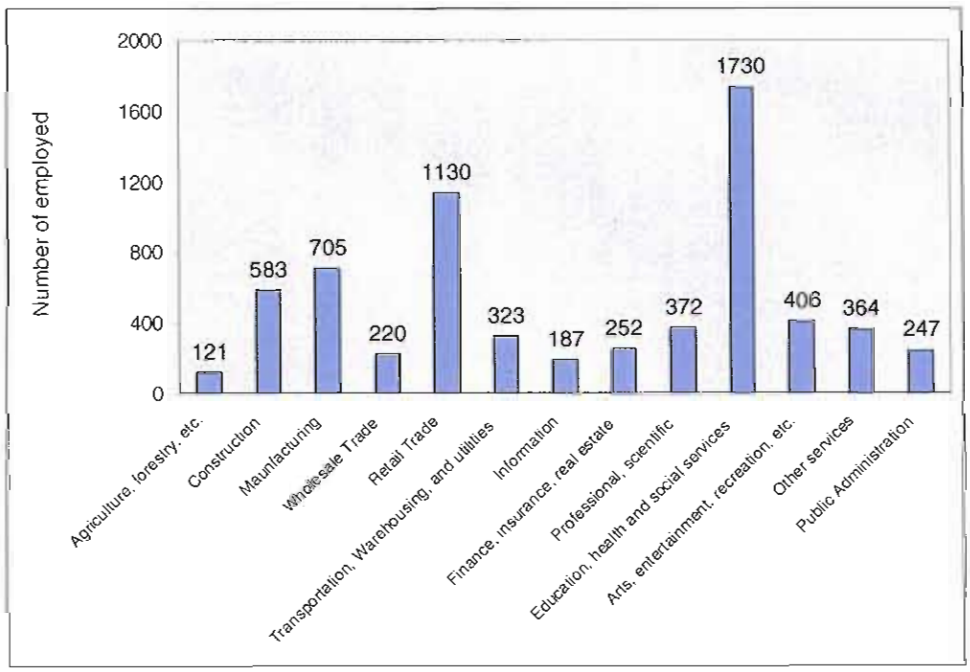


Exhibit 8-7: City of Boone Employment Profile
(Source: U.S. Census 2000)

Employers

The eleven largest employers in the city are listed below (Table 8-2), in decreasing order. The Iowa National Guard and Union Pacific Railroad are the two largest employers in the city.

Table 8-2
City of Boone's Major Employers

Name	Business or Product	Employment Estimate
Iowa National Guard	Civil Defense	450
Union Pacific Railroad	Railroad	450
Boone County Hospital	General Hospital	430
Communication Data Services	Magazine Billing Services	400
Boone Community School District	Educational Services	370
Fareway Food Stores	Company Headquarters and Warehousing	350
Hy-Vee Food Stores	Grocery-Retail	175
Gates Rubber Co.	Coupled Hydraulic Hose Assemblies	160
Quinn Machinery	Steel Forms and Machinery	150
Boone County Government	Government Services	135
Evangelical Free Church Home	Nursing Home	128

(Source: Boone General Obligation Capital Loan Notes, Series 2006)

The largest employers for central Iowa are listed in Table 8-3. Six of these employers are in the insurance or financial industry. Four employers are major governmental units. Four health service providers are on the list, as are three educational institutions. It can be inferred that many people who live in Boone work for some component of these large central Iowan employers.

Table 8-3
Major Area Employers*

Employer	Business/Service/Product	Employment Estimate**
Wells Fargo Bank Iowa N.A.	Financial Services	9,200
Iowa State University	Higher Education	8,434
Principal Financial Group	Insurance and Financial Services	8,000
State of Iowa	State Government	6,900
Mercy Hospital Medical Center	Healthcare (Hospitals and Clinics)	5,600
Iowa Health – Des Moines	Healthcare (Hospitals and Clinics)	5,345
Des Moines Independent Community School District	Education	4,750
Allied Group	Financial Services	2,200
City of Des Moines	City Government	1,950
Pioneer Hybrid International	Agricultural Seed	1,800
Bridgestone-Firestone Tire & Rubber	Tire Manufacturing	1,600
CitiCards	Retail Credit Card Services	1,550
Wellmark Blue Cross & Blue Shield of Iowa	Insurance	1,450
Mary Greeley Medical Center	Healthcare	1,437
Racing Association of Central Iowa (dba Prairie Meadows)	Entertainment Facility	1,400
Hy-Vee Food Stores	Grocery Stores	1,400
Foods Inc. (dba Dahl's Foods)	Retail Food Stores	1,400
Communications Data Services	Data Entry	1,250
John Deere Des Moines Works	Farm Equipment Manufacturing	1,250
Iowa Department of Transportation	State Government	1,200
Qwest	Telecommunications	1,200
MidAmerican Energy Company	Utility	1,100
Drake University	Education	1,050
Polk County	County Government	1,040
Des Moines Register and Tribune Company	Newspaper Publishing	1,000
Broadlawns Medical Center	Healthcare	1,000
United Parcel Service	Package Shipping	1,000
Seabury & Smith (formerly KVI)	Insurance	1,000

* Major area employers within the Des Moines area, which includes Polk, Story, Warren, and Dallas Counties.
** Contains information from the Iowa Manufacturer's 2006 Directory, Greater Des Moines Chamber of Commerce Federation, the City of Des Moines, and selected telephone survey.
(Source: Boone General Obligation Capital Loan Notes, Series 2006)

Local Option Sales Tax

Through special referendum, the City of Boone approved a 1 percent local sales and service tax ("local option tax"), effective in 1991. The referendum stipulated monies received (beginning 1991 fiscal year) would be used as follows: 75 percent for capital projects, 20 percent for property tax relief, and 5 percent for human services. Boone will continue to pay down its $12,405,000 "general obligation" debt using Local Option Tax revenues. (Source: Boone General Obligation Capital Loan Notes, Series 2006)

Table 8-4
Boone's Local Option Sales Tax Receipts (1995-2006)

Fiscal Year	Local Option Sales Tax Receipts ($)	Percent Change
1995-96	628,969	10.07*
1996-97	698,423	11.04
1997-98	789,423	13.03
1998-99	665,962	-15.64
1999-00	791,625	18.87
2000-01	728,401	-7.99
2001-02	730,233	0.25
2002-03	760,920	4.20
2003-04	894,117	17.50
2004-05	859,586	-3.86
2005-06	670,251 **	N/A

* 1994-95 Local Option Tax Receipt of $571,414
** Local Option Sales Tax receipts collected through March 31, 2006
(Source: Boone General Obligation Capital Loan Notes, Series 2006)

The local option sales tax has been very productive for Boone, raising an average of $747,082.7 every year since 1995-6. After 1998, the percent change is unpredictable from year to year, but that is a trend echoed in the national economy, shown below in Exhibit 8-8. There are slow but steady gains (between 0 and +2%) until 2000, at which point retail trends become more chaotic.

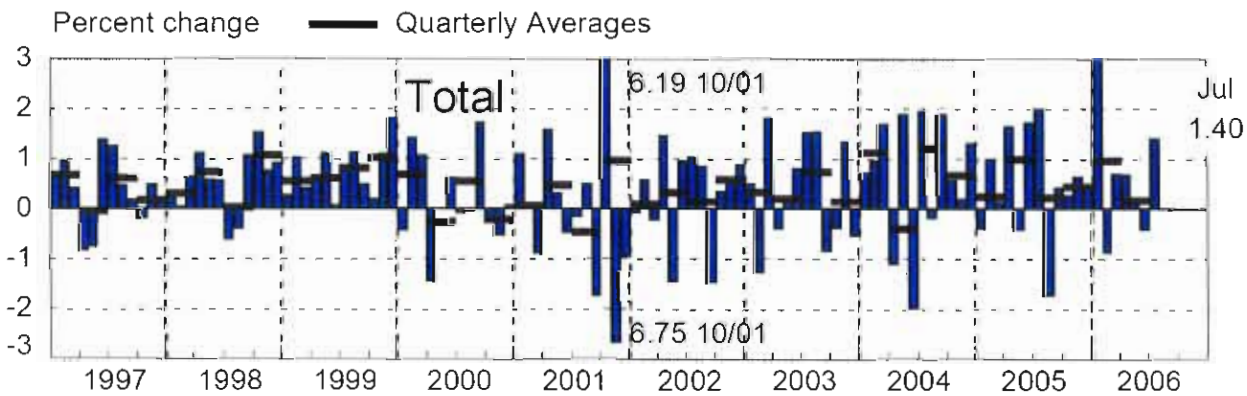


Exhibit 8-8: National Retail Sales (seasonally adjusted), excluding autos (1997-2006)
(Source: U.S. Census Bureau)

The income from these tax revenues are used to pay for capital improvements for the City of Boone, to reimburse the City's remaining debts, and to refund the cost of creating the Notes, such as:

- $40,000 for community planning and development improvements
- $260,000 for road projects
- $280,000 for tennis court and pool improvements
- $1,000,000 for "capital equipment purchases"
- City Hall and police service upgrades
- $900,000 of capital improvements to be made at the discretion of the City

(Source: Boone General Obligation Capital Loan Notes, Series 2006)

Table 8-5
City of Boone Retail Taxable Sales (1996-2005)

Year Ending March 31	Retail Taxable Sales ($)	Annual Percent Change
1996	108,971,710	3.07 *
1997	113,252,793	3.93
1998	119,048,795	5.12
1999	124,632,257	4.69
2000	129,309,576	3.75
2001	129,910,464	0.46
2002	130,697,849	0.61
2003	136,657,408	4.56
2004	149,829,039	9.64
2005	154,134,353	2.87
Growth from 1995 to 2005		38.70

* Based on 1995 taxable sales of $105,725,629 (*Source: Iowa Department of Revenue and Finance*)

Table 8-5 shows an average annual percent change of +3.87 percent in retail taxable sales, a very good trend for the city.

Tax Increment Financing Districts

The City of Boone has four Tax Increment Financing Districts (T.I.F.) that includes over two-thirds of the city. The funding generated from the T.I.F. districts can be used to provide improvements in the district or area that they are generated. The physical needs of the city and the planning and engineering to construct the projects are permitted expenditures using these funds. The funds can be used to construct or reconstruct streets, utilities, and parks in addition to the other urban renewal activities required to improve the district. T.I.F. funds are a valuable tool both to the physical health of the city and the economic viability to the city. A map in Appendix 16.0 illustrates the location of the four T.I. F. districts in Boone.

9.0 Existing and Future Land Use Plan

The Land Use Plan that is developed as a part of any Comprehensive Plan is the lead element of the plan. The land use becomes the principle document that guides the planning of the other elements and serves as one of the implementation tools once tied to zoning. The land use plan is based on extensive research and uses the inventories and analysis conducted for housing population, economy, the physical and environmental character of the area, the land use patterns that have existed in the past, and the projections and proposals of programs and projects that could affect the region and area. The needs and desires of the community are formed into goals for the community and together with the inventories and analyses are developed into a plan.

The Land Use Plan is developed to create the best future living environment for the community. The patterns of land uses and the quantities of each category are complex and should reflect the physical backbone that was determined in all the previous studies. The better the uses work with each other and are sustainable over time, the better the other needs will compliment the overall plan, such as streets, sewers, water, parks, schools, and housing. The plan needs to have some flexibility and ability to be phased since it is a dynamic document that can be used and revised as

times and society changes. New uses and ideas can change the landscape like the advent of the shopping mall in the 1960's.

The goals that were established for the land use plan are stated in section 3.0 and will be addressed by the proposed plan. The plan will also consider the other goals for industrial, transportation, utilities and infrastructure, the environment, housing, parks, and the economy. These elements will coordinate with and follow the future land use plan that is recommended.

Existing Land Use

The 1995 Comprehensive Plan - Existing Land Use

The following is the Land Use Classification and Existing Land Use sections of the 1995 Comprehensive Plan and is as valid today as it was in 1995. This reprint provides an excellent explanation of land uses and inventory of what existed ten years ago. The history will help provide an understanding of the proposal for 2030. The 2030 concept is being expanded beyond the corporate limits and will recommend changes that were not included in the past plan.

Land Use Classifications

The different land uses found in most communities have been classified into certain broad categories such as residential, commercial, industrial, institutional, parks and open space, transportation, and agriculture. These single broad categories have been further subdivided into more specialized categories. For example, residential may be subdivided into the categories of single family homes, townhouses, apartments, and mobile homes; commercial may be subdivided into the central business district, retail business, highway business and so on.

One of the characteristics of the land use system is that it is constantly changing. In an urbanizing area this change is likely to be rapid, especially in the urban-rural fringe areas where there is steady change from agricultural to various urban land uses. On a national scale, an estimated 4,000 acres of agricultural land is being converted daily to industrial development. This adds up to 1.5 million acres per year (U.S. Soil Conservation Service).

In rural areas and small towns, land use change may be slow. Nevertheless, over a period of time, changes can also be observed in these areas as houses are constructed on the outer edges of the towns or along county or township roads in primarily agricultural areas. Another characteristic of the land use system is that the interrelationships of different land uses are often very complex. Some land uses can have a substantial effect on land uses far beyond its immediate vicinity. This is especially true of transportation facilities such as airports and freight terminals.

Similar relationships can be observed between other public utilities and facilities such as sanitary sewers, water systems and parks, and various urban land uses. Thus, the placement and timing of construction of these public facilities can have a profound effect on development in general. In the past, these public facilities were most often constructed to meet the demands created by existing or proposed private developments in different areas. An increasing number of planners and public officials, however, are now advocating that public extension policies be used to purposely influence the timing and location of development and thereby encourage orderly development in a community or region.

A comprehensive method of assessing existing land uses within a community is the land use survey. The land use survey is a method whereby each land parcel is individually inspected and classified according to the land use classification system. The data collected during the survey is then plotted on a map and utilized as the Existing Land Use Map. An accurate and up to date land use map and survey is necessary and valuable tool to be used in the planning process.

The land use map and survey can help to answer many questions which concern planning for the community. For example:

1. *What types of land uses exist?*
2. *What is the geographic location of each use?*
3. *How do the different uses relate to each other, are they compatible?*
4. *What types of new development should take place and where?*

Existing Land Use

In the past few years, Boone has experienced development in the southern and eastern areas of the city towards the Des Moines and Ames metro areas. As shown on the land use map, the majority of growth has been centralized along the south Story Street corridor. However, a large amount of incorporated land remains undeveloped. As far as developed land is concerned, only 56 percent of the land within the city limits is urban. The other 44 percent is comprised of areas currently vacant or allocated for agriculture. As shown on the land use map (map EL-1) in the southeast portion of the city, there is roughly 600 acres of land available for development, 100 acres in the northeast, 160 acres in the northwest, and 120 acres in the southwest.

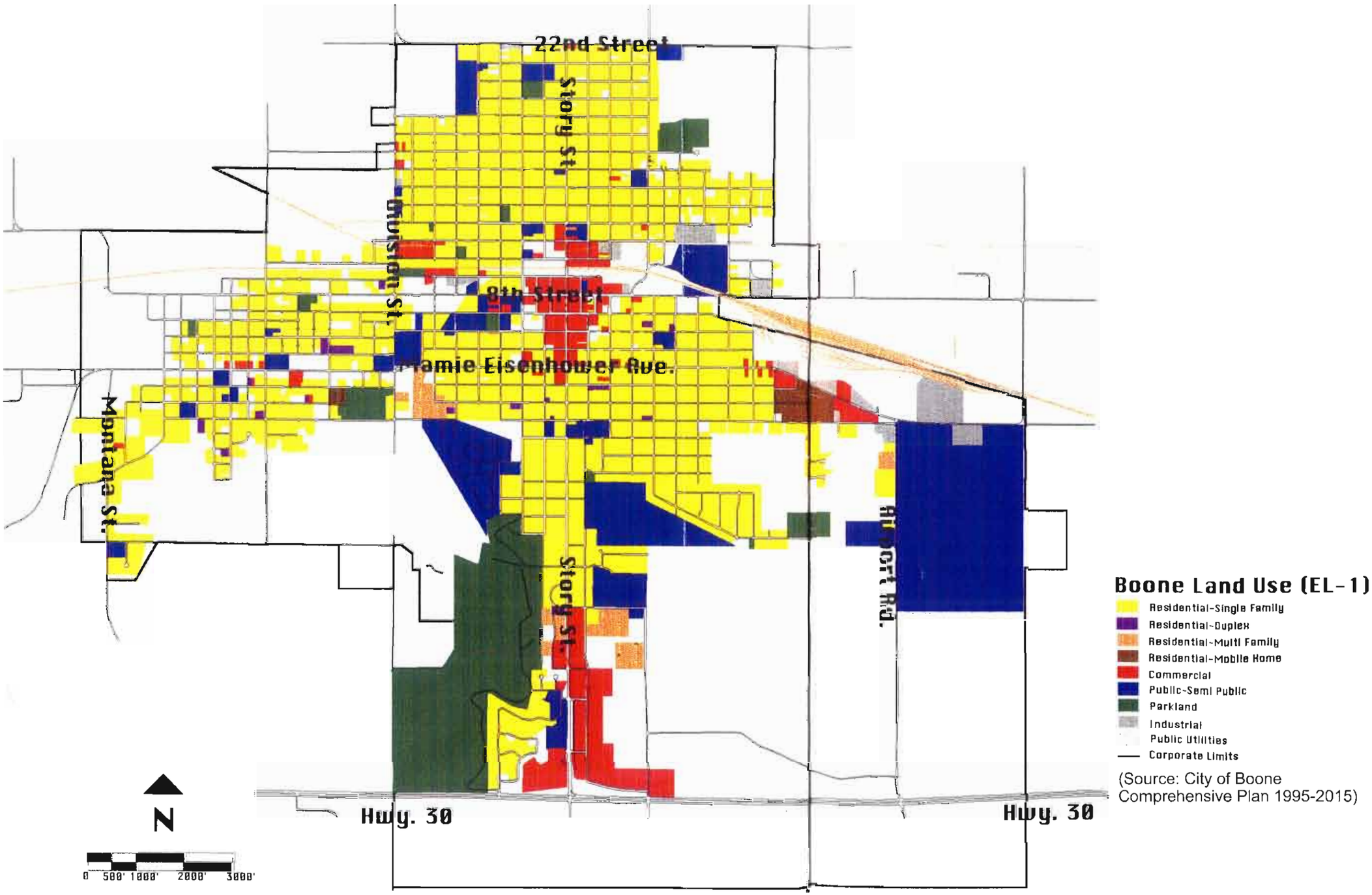
Analysis of Land Use

The following table shows the distribution of land use in the City of Boone. The largest amount is vacant/agriculture. Almost 45 percent of the land in the city limits is vacant or used for agricultural purposes. The next largest uses are roads, alleys, and right of ways with single family residential following close behind.

Table 9-1*
Analysis of Land Use

Land Use	*# of acres*	*%*
Residential-Single Family	*966.52*	*17.58*
Residential-Duplex	*8.74*	*.16*
Residential-Multi-Family	*38.76*	*.7*
Commercial	*134.09*	*2.44*
Public-Quasi-Public	*475.72*	*8.65*
Industrial	*37.08*	*.67*
Public Parks/Public Recreation	*280.28*	*5.10*
Public Utilities	*108.85*	*1.98*
Mobile Home Park	*21.7*	*.39*
Vacant/Agriculture	*2453.76*	*44.62*
Roads, Alleys, and Right of Ways	*973.1*	*17.71*
Total	*5498.6*	*100*

**2030 Comprehensive Plan reference number.*



City of Boone
Comprehensive Plan

SNYDER & ASSOCIATES
Engineers and Planners

Reprint of the1995 Land Use Plan

EXHIBIT 9-1

Current Zoning

Iowa law allows the counties and cities to adopt ordinances and regulatory controls that manage development so as to create orderly growth. One of these tools is the zoning of each parcel that regulates the use and development of the parcel. Zoning provides a tool that the government uses to guide the city and implement the land use plan. The Iowa law also allows some control in the first two miles outside the city called "extraterritorial jurisdiction." In counties that do not exercise zoning controls, the city can also choose to provide zoning control in the two mile area. Boone County does have zoning, so the City of Boone does not have that authority. Exhibit 9-2 is the current zoning map of Boone.

The City of Boone has six different land use categories inside the corporate limits: parks, agriculture/vacant, residential, commercial, industrial, and public use. Within each of those broad groups there exists between two and four distinct zoning categories. The zoning distinctions represent different intensities of land use within each category and category to category. For instance, a property zoned "R-1" is meant to be used for single family residential housing while "R-2" land is zoned for one and two-family residential. The land use plan combines R-1 and R-2 into one category of "Low-density Residential." "R-3" properties are zoned for multi-family use (three or more units in each structure), and so those parcels are identified in the land use plan as "Medium Density." Property zoned as "R-5" is used for "Land-lease Parks (manufactured housing)."

The Commercial zoning classifications are all combined into a single land use category of "commercial." The Special Commercial (C-1), Limited Commercial (C-2), General Commercial (C-3), and Special Planned Commercial are all combined into the "Commercial" land use category. Commercial uses are typically retail, office, and service uses. The same is true for land zoned for Industrial land use. Special Planned Commercial Office or Industrial (M-1), Planned Commercial Office or Industrial (M-2), Light Industrial (M-3), and General Industrial (M-4) are all combined into the "Industrial" land use category. Industrial uses are the most intense and typically require larger tracts of land.

Table 9-2 documents the existing generalized land use by category for 2006 as compared to the historical record for 1995. The land use is shown by acres and percentage of the total to depict both the magnitude and relative comparison for each category. The data is a "snap shot" of one point in time, and continues to change each day. The growth in each category depicts the land absorbed in new development for that category, and the decrease in agriculture/vacant totals the growth in all the other categories combined.

Future Land Use

The 1995 Comprehensive Plan for Boone concentrated its attention on developing land inside the corporate limits and utilizing the infrastructure that was in place or nearby. The goal was to develop the areas already existing in the city that was zoned and ready to be developed. This was to maximize the assets and reduce cost. In 1995, the City of Boone had 2,981 acres of agriculture/vacant land or 54% of the city. However, by 2006, the agriculture/vacant land had declined to 2,116 acres or 38% due to new development. This is about 80 acres per year that has

been absorbed into new development, both private and public in all land use categories. During that time, the city grew about 61 acres, most of which was for the airport.

Exhibit 9-3 provides a snap shot of the existing land use in Boone in 2006. The map is generalized by using zoning categories but some of the large tracts of land in the southeast, southwest, northeast, and northwest are vacant but colored as residential. Since the current aerial photograph is the base, the vacant tracts pop out as undeveloped because there are no structures or parcel lines under the color. The acreages shown in Table 9.2 include the vacant land in the agriculture/vacant category. The vacant land is zoned primarily low-density residential, R-1 and R-2.

Recommended Future Land Use Plan -2030

The proposed "Future Land Use Plan-2030" is shown on Exhibit 9-4. This proposal is following a different philosophy than that of 1995 and is based on the goals and desires of the Boone community. The city is trying to stretch their vision and understanding of how and where the city may grow. What areas around the city may be influenced by the City of Boone and could ultimately be urbanized and become part of the city in the future? The "Future Land Use-2030" goes beyond the corporate limits but is within the two-mile jurisdiction review area. It also stays within the "urban transition" area being contemplated at this time in the new Boone County Comprehensive Plan.

The "Future Land Use Plan for 2030" (FLUP-2030), represents a geographical area that includes lands that probably will not develop in the 2030 time frame. However, the City of Boone does influence this expanded area and there is a need to understand the relationships of land that may develop beyond 2030. This will provide direction to future governing bodies and will help to insure orderly growth and guide coordination of the growth with Boone County and other future influences. The full growth area shown on the FLUP-2030 is being designated as the City of Boone's "Planning Area."

Planning Area

The Planning Area includes lands outside the corporate limits on the north, west, and south for primarily residential expansion, and on the east for industrial and some commercial. The industrial uses shown include territory out to IA Highway 17 and on the west side of the interchange of U.S. 30 and IA 17 for commercial. The planning that goes into the Planning Area geography is very important as future infrastructure and streets and highway planning takes place.

The Planning Area concept is illustrated in Exhibit 9-4 and shown in quantities by category in Table 9-3. The map in Exhibit 9-3 does not have a category for agriculture/vacant included, and the full Planning Area is therefore shown to be used for one of the developing land uses. This would then assume that the entire Planning Area is built-out at that time. However, Table 9-2 includes a category for agriculture/vacant to provide a magnitude of low-density residential shown on the exhibit that in all probability will not be developed in the 2030 timeframe. The

industrial categories do not have the same estimate since the uses are less predictable as to the absorption before and after 2030.

Urban Service Area

Another concept that is being recommended in developing the FLUP-2030 is that of an "Urban Services Area, USA. The USA represents that area surrounding the City of Boone that could be expected to develop as a part of the city in the next 20 to 25 years. The land in the USA is being planned for urban development with a water and sanitary sewer system developed to serve the area. The area should be protected from inappropriate development that would diminish the future growth of Boone. Development that is consistent with the FLUP-2030, with integrated wastewater systems and city water, would promote future urban growth. The City of Boone and Boone County must work in partnership to implement the concept of the USA and establish policies that promotes and supports this concept.

Exhibit 9-4 and Table 9-3 reflect the USA uses and quantities as it was discussed above in the Planning Area description. There is one difference, however, that should be noted. The industrial land shown for the USA is expected to develop in the 2030 time frame and does not contribute greatly to the agriculture/vacant land category. As described in the Planning Area, the USA category for agriculture/vacant land measures the low-density residential land that is estimated to remain undeveloped. The lands undeveloped will be both inside and outside the corporate limits.

Development in the USA should be required to provide the infrastructure and public improvements necessary to not inhibit future urban expansion. Urban sewer and water services should be required in the USA's.

The infrastructure systems should be in place at the time of the development or assurance must be provided that the implementation of the service extensions required are possible and capitalized. The areas beyond the USA's, especially in the "Planning Area" and the two mile jurisdictional review area, should have some limiting restrictions that further avoid creating development obstacles for future urbanization.

All of the land use concepts and policies should consider the ability of the city and county to provide the necessary improvements to accommodate the development. Phases and priorities will need to be established to encourage orderly growth and promote growth where the capacity and desire is coordinated with the fiscal abilities. Indiscriminate growth that is not based on a fiscally sound program that coordinates and ties the public and private responsibilities is not wise. New development should pay their fair share of the development costs.

The above recommendations address the first four goals that were established for land use. The plan addresses the vacant and undeveloped land inside the city, expanding industrial land, identifying key retail/commercial areas, and providing guidance for the growth areas outside the city and the two mile area. The fifth and final goal for land use is the zoning ordinance. It is recommended that the zoning ordinance for the City of Boone be updated upon adoption of the 2030 Comprehensive Plan document. The concepts and policies and land use recommendations in this plan will provide direction in preparing an updated plan. It will take about one year to

complete the revisions, prepare new ordinance concepts and allow for a good public review and adoption process. The subdivision ordinance will also need to be revised to make the two documents complement each other and implement some of the concepts suggested for the USA areas. Policies and standards will also need to be formulated for the subdivision regulations and the USA. It is recommended that until this happens, the Statewide Urban Designs and Specifications, SUDAS, be used as the standard for developments in the USA. The SUDAS standards can be used in the future or modified as required to regulate USA development.

The Future Land Use Plan for 2030 is a composite of the six land use categories in Boone. Each will be discussed to better understand the plan and provide some logic for the plan and the land use patterns that emerge. Exhibit 9-4 and Table 9-3 provide the magnitude of growth in the Planning Area.

Table 9-2
Existing Land Use
City of Boone, Iowa (by acres and percentage)

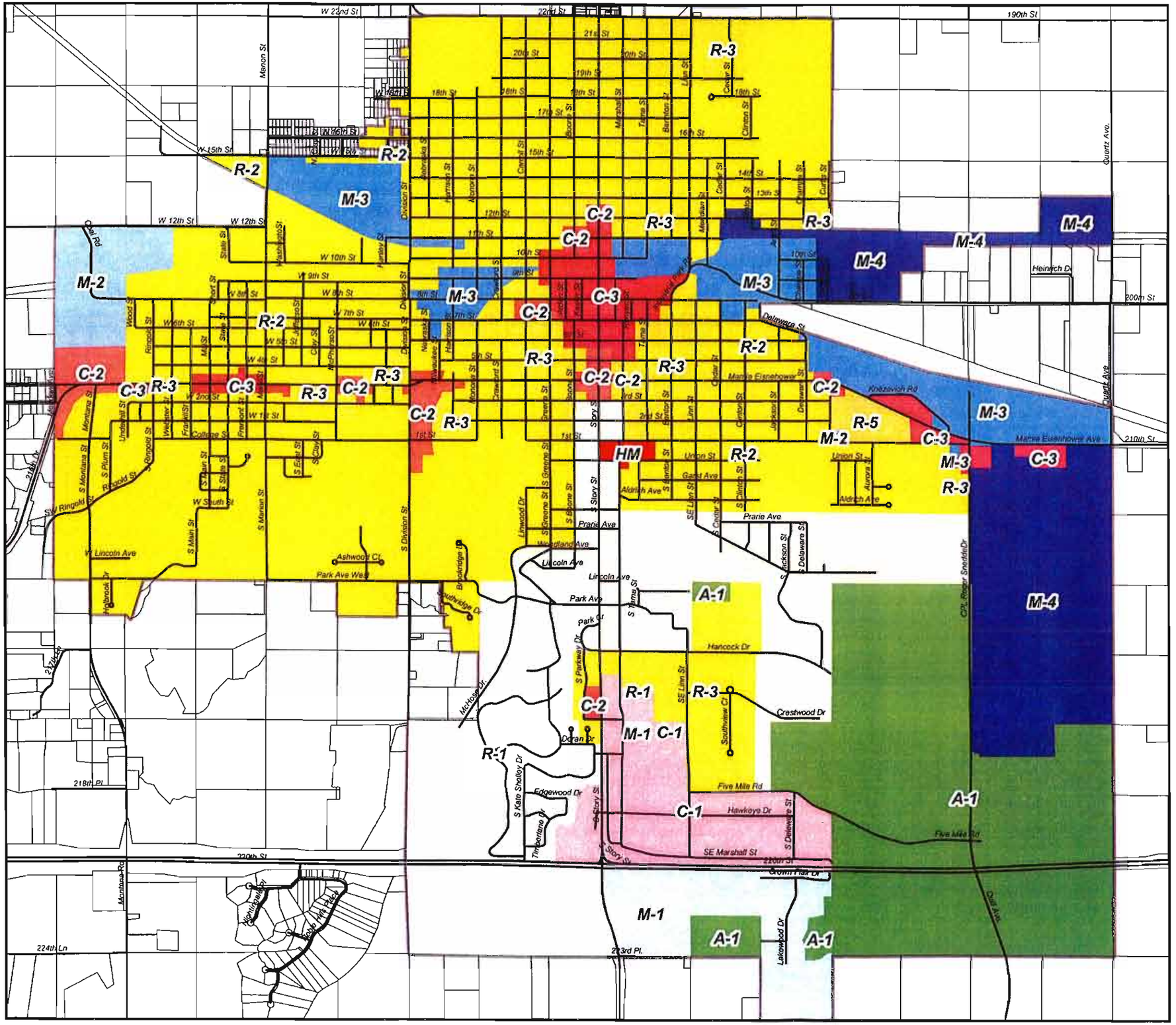
Land Use Category	1995[1] (acres	Percentage	2006 [2] (acres)	Percentage
Residential-low density	1210	21%	1410	25%
Res.-medium density	47	1%	110	2%
Res.-land lease park	26	0%	26	0%
Commercial	188	3%	340	6%
Public	528	10%	670	12%
Industrial	177	1%	425	8%
Park	341	6%	465	8%
Agricultural/Vacant	2981	54%	2115	38%
Total	5499		5561	

Source:
(1) Boone Comprehensive Plan: 1995-2015
(2) S& A, Inc., based on 2006 City of Boone Zoning Map
(3) S&A, Inc.

Table 9-3
Existing and Future Land Use
City of Boone, Iowa – acres and percentages by category

	Existing-2006[1]		Urban Service Area-2030[2]		Planning Area-2030[3]	
Land Use Category	(acres)	(percent)	(acres)	(percent)	(acres)	(percent)
Residential-low density	1410	25	2305	33	3150	30
Residential-medium density	110	2	200	3	200	2
Residential-land lease	26	0	30	0	30	0
Commercial	340	6	520	7	710	7
Public	670	12	710	10	710	7
Industrial	425	8	1174	17	2645	25
Park	465	8	590	9	590	6
Agriculture / vacant	2115	38	1500	21	2420	23
Total	5,561	100	7,029	100	10,455	100

Source:
(1) Boone Comprehensive Plan: 1995-2015
(2) S&A, Inc., based on 2006 City of Boone Zoning Map
(3) S&A, Inc.



Legend

Roads

City Zoning

ZONE_NAME

- A-1 : Agriculture
- HM : Hospital - Medical
- C-1 : Special Commercial
- C-2 : Limited Commercial
- C-3 : General Commercial
- M-1 : Special Planned Commercial, Office or Industrial
- M-2 : Planned Commercial, Office or Industrial
- M-3 : Light Industrial
- M-4 : General Industrial
- R-1 : Single Family Residential
- R-2 : One and Two Family Residential
- R-3 : Multi-Family Residential
- R-5 : Mobile Home Park

Created - 12/20/07
City of Boone, Iowa

Legend

- City of Boone Corporate Limits 2006

City of Boone Original LandUse

Original LandUse

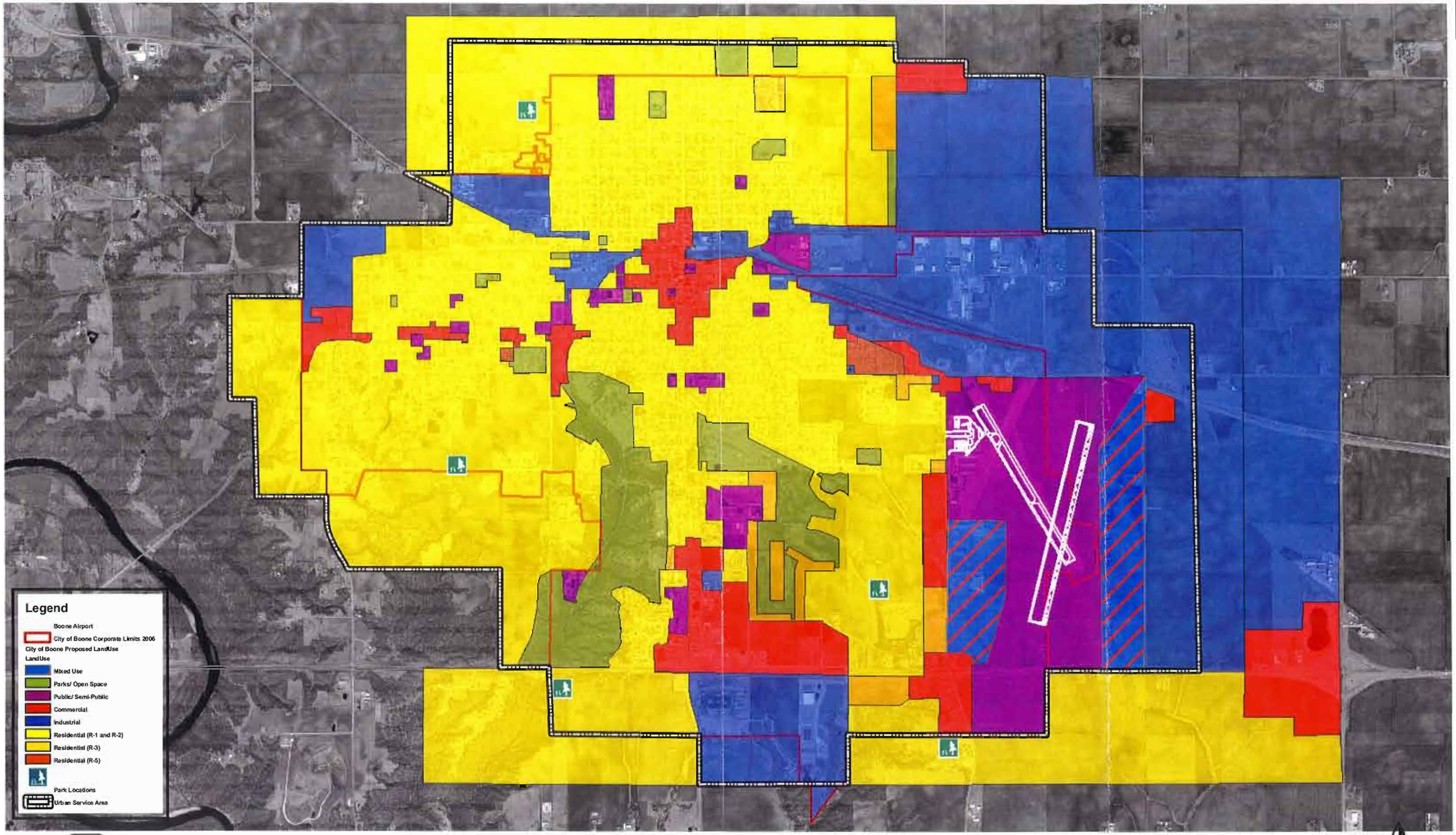
- Agriculture
- Residential
- Commercial
- Civic
- Industrial
- Parcels

SNYDER & ASSOCIATES
Engineers and Planners

City of Boone
Comprehensive Plan

Existing Land Use - 2006

EXHIBIT 9-3



SNYDER & ASSOCIATES
Engineers and Planners

City of Boone
Comprehensive Plan

Future Land Use - 2030

EXHIBIT 9-4

Residential

In the 1995 Comprehensive Plan, the City of Boone's residential land use occupied 1,210 acres, or 21 percent of the city (Table 9-2). Currently, it covers a total of 1,410 acres, or over 27 percent of all land inside the corporate limits. Residential land use is divided into 3 sub-groups as described below:

- Low Density Residential (R-1, 2) – These properties are defined as one structure on a single parcel of land. This category includes single family homes (R-1) and duplexes (R-2). In 1995 there were 1,210 acres (21 percent) of land in Boone used for one and two-family housing. In 2006, this category increased by 200 acres, to 1,410 ac., based on the amount of new housing constructed. The residential projection for year 2030 includes land area which may remain undeveloped past the timeframe of this comprehensive plan. However, It is included in this plan so that the County and the City of Boone can coordinate the long term growth pattern outside the City of Boone in the 2-mile area. The influence that Boone's growth has on the surrounding territory needs to be included as part of this comprehensive plan revision.

  The plan provides for development of the vacant/agriculture land inside the corporate limits in all four quadrants of the city. Sufficient land is available to accommodate the residential growth for some time. However, the ability to provide infrastructure, demand, and availability of the land of development also controls where development occurs. Therefore, the plan also provides for some adjacent territory outside the corporate limits to be annexed for residential development. A variety of land choices needs to be provided to keep the residential growth healthy.

- High Medium Density Residential (R-3) – This land use category is made of higher density dwellings, such as properties with condominiums, town homes or apartment buildings. The existing dwellings are primarily north of Mamie Eisenhower Ave., but there are also some new town homes being constructed along the new golf course and the downtown commercial district. In 1995, there were 47 acres used for multi-family/medium density housing. In 2006, that number had increased to 110 acres, based on the townhomes recently started on the new golf course. The demand for medium density housing is expected to continue growing through the year 2030 to a projected amount of 200 acres.

- Residential, Land Lease (Mobile Home Park (R-5) – These are defined as a factory-built housing on a moveable chassis without motive power. The two mobile home parks are both south of the industrial district on the east side of town and occupied 26 acres in 1995 and 2006. Their rate of growth is projected to remain slow through the year 2030, possibly increasing to 29 acres by that time. If a new land-lease project is developed before 2030, the land area required to accommodate the project could double the land shown for this category. The location and need for such a project will need to be evaluated at that time on its own merits.

Commercial

In the 1995 Comprehensive Plan, the City of Boone's commercial land covered 188 acres (3 percent) within the corporate limits (Table 9-2). Currently, commercial land use covers 340 acres, or over 6 percent of land within the corporate limits. Much of the commercial development has taken place near the intersection of Story Street and HWY 30, with some commercial land also in use on Mamie Eisenhower Ave., west of Story Street. The Planning Area for the City of Boone includes 710 acres (7 percent) of the land used for commercial purposes. As with other land use projections for 2030, the City of Boone's commercial market may not require commercial development to this extent, but it is beneficial for the Boone County government to know the City's long range growth patterns.

The first goal was to fill in the established commercial and retail areas along Story Street, U.S. 30, Mamie Eisenhower Avenue and preserve the downtown. After that, key locations were selected at future major intersections or corridors. The intersections of Snedden Drive with U.S. 30 and NE 22nd Street will be new locations for commercial/retail to develop due to the traffic, traffic improvements, street and overpass improvement, and adjacent development in the vicinity. This is true to some extent for the area on Snedden Drive across from the airport. The commercial area at the interchange of U.S. 30 and IA 17 will occur sometime in the future, maybe before or after the planning time period, but will ultimately happen. When it does, the city should reach out with annexation and infrastructure that keeps the development urban and in the city. What will it take to balance the benefit cost formula to make it feasible? Probably a sizable use or complex that contributes to the city that does not damage the existing commercial areas in town. The balance must be maintained and carefully planned. Development should not proceed until these assurances are in place. IDOT standards for access, which may include a frontage road, will help determine how the development is designed and used.

The downtown was the heart of the commercial/retail services being provided to Boone residents and the nearby retail trade area. The community changes and gradually became like other cities where the downtown was not the retail center and, consequently, adversely impacted the area. The downtown remains to have many assets and could evolve into a lively area to work in and live.

It is recommended that the City and private sector entertain a study of the downtown area to determine the best uses to be in the downtown, the improvements that can be undertaken to stimulate the area physically, and propose an incentive program that will draw into the downtown, the housing, parking, retail/commercial, and office mix that the study recommends.

Industrial

In the 1995, the City of Boone's industrial space used 177 acres (1 percent) of the land within the corporate limits. Currently, there are 424 acres (8 percent) of land in industrial use inside the corporate limits. The increase in industrial land use has occurred primarily around the railroad and airport since 1996, and it is predicted to continue on the east side of town through the timeframe of this study. The Planning Area for the City of Boone plans for as much as 2645

acres (25 percent) of the land in industrial use. The USA area is planned to absorb about 50% of the development shown. This scenario includes the possible annexation of the industrial park northwest of the airport, as well as to improve and expand the industrial park along the railroad to IA 17 and the Boone's Business Park, south of US 30. It is better to plan for the long range and be prepared than allow inappropriate development to occur and constrain the future industrial development potential that could happen in the long term i.e. 30 to 50 years.

A new category of industrial land use that is included in the plan is referred to as "mixed use." The mixed use zone is being proposed as primarily industrial uses that are compatible with the airport, mixed with commercial uses and limited retail. Development could be entirely industrial or mixed with commercial on the same site or within the same building. The retail is intended to serve the area with retail and service business, and not intended to be destination retail. To develop and manage the property to be used in this manner will require a change in the present zoning ordinance such as a Mixed-Use Overlay District. It is recommended that this be implemented as part of an overall rewrite of the zoning ordinance.

The industrial land use projected in the Planning Area is to some degree over planning and yet suggestive of the long range future. The collocation of the airport and railroad, the existing development that can have great access resulting from the overpass construction, the location of highways U.S. 30 and IA 17, the potential expansion of the airport, and the adjacent undeveloped land, makes the eastern area of the county west of IA-17 a prime location for industrial growth. For instance, the area on the northeastern edge of town, and immediately north of the Boone Scenic Valley Railroad eastern terminus, is currently in agricultural use. It is an attractive location for a bulk-commodity industrial business because of its proximity to major road and rail transportation infrastructure. Much of the land will remain zoned as county agriculture and in the urban reserve, but with the City of Boone's long-range intention for the area to be planned for industrial.

The industrial planning also includes more than doubling Boone's Business Park. The two quarter sections east and the one south of the Boone Speedway are planned to be future expansion areas for development. It is assumed that the Boone Speedway will remain during the planning period. The airport and airport expansion area are also planned for mixed use development. The underlying use is anticipated to be planned industrial mixed with commercial, office development, warehousing, and a limited amount of retail. Some of the uses will be airport related while others will like the location or being in the mixed area. Whatever the reasoning, it is better to use the excess airport property for taxable, job producing businesses, than be permanently off the tax base.

Public

In the 1995 Comprehensive Plan, the City of Boone had 528 acres (10 percent) of the land in public use. This includes, but is not limited to, schools, hospitals, government buildings, and the airport. Currently, there are 670 acres (12 percent) of the land in public use. Much of this change can be accounted for by the expansion of the airport grounds. The new airport plan calls for a new primary runway, making the current primary the crosswind runway. The 2030 estimate for public land area is predicted to be 710 acres (7 percent) which will again reflect the airport expansion not including the mixed use property. Also, a new police headquarters was

established in the downtown. No other changes are anticipated at this time. However, when the city becomes large enough to require additional fire protection services, there may be a need to locate a facility (or branch) in the southeast by the airport.

Parks and Open Space

In 1995, the City of Boone's parks and open space land use occupied 341 acres (6 percent) of the total land area within the city limits. Parks and open space provide recreational facilities and protect wooded areas, riparian corridors, and floodplains from future development. The golf course and cemetery are two examples in Boone. Currently, there are 465 acres (8 percent) used for park uses. The increase can be attributed to the development of a new golf course. By 2030, there could be 590 acres (6 percent) of land inside the city limits dedicated to park uses. This would include a possible extension of McHose Park to the southwest and new neighborhood parks added as new residential communities develop. The plan includes symbols in five areas that, when developed, may need a neighborhood or community park. By planning ahead, the location and implementation could be coordinated with the residential development.

Agricultural and Vacant Land

In the 1995 Comprehensive Plan, agriculture was the single-largest land use category, with 2981 acres (54 percent) inside the corporate limits dedicated to agriculture or yet to be developed. Development in the last decade has reduced this number to 2115 acres (38 percent) today. There are still large tracts of undeveloped farmland in every corner of the City of Boone. We anticipate these areas to be coordinated with the annexation of new land into the city, to avoid so-called "leap-frog" development. In the 2030 projection, much of the agricultural land was transferred into the other land use categories to reflect this basic assumption of coordinated growth. This assumes full build out of the city which usually does not happen often. When the vacant/agriculture inventory gets below ten percent, or about 600 acres, the city will, out of necessity, need to be looking at expansion of the city. People and developers like variety and choice, and the 10% surplus is not enough. Often, a large portion of the 10% is in small scatter sites that are hard to develop or too small. If the public and development communities are not given a choice, they choose to be elsewhere, like another area or city. When the time comes, Boone needs to be prepared. The maximum amount of development projected, would use all of the vacant land within the Boone's Corporate Boundaries.

Exhibit 9-5 (below) shows the past, current, and future distribution of land use in the City of Boone. The largest use category was Agriculture/Vacant, though development has converted over 800 acres since 1995. The percentage of Agriculture/Vacant land has decreased from 54 percent to 38 percent in the past 10 years, while the total city's area increased by 61 acres (Table 9-2).

As stated earlier, the 2030 Planning Area is not a prediction for the amount of land to be absorbed and developed by 2030. Instead, it depicts the total area planned for development in the long range future.

Urban Service Area Policies

The City of Boone should establish some policies that reflect the growth that would take place in the USA area prior to becoming part of the city. Some discussions have already taken place regarding what may be an appropriate policy and what should be considered. The policies will need to be conceptually concurred and agreed to by the Boone County Board of Supervisors and county staff. They should have an opportunity to input ideas and comments as the policies are drafted and placed into formal policies to be carried out by the City of Boone. Hopefully, the Boone County officials will implement the same policies concurrently with the City.

Examples of the policies are provided to give the basic level of guidance and a starting point for the future public process to draft them. Also, as the zoning ordinance and the subdivision regulations are updated in the next year or two, the policies will need to be coordinated with the updated ordinances.

USA Policy

- The land use and intensity of development for projects in the USA should be in agreement with the FLUP-2030.
- SUDAS standards should be used in designing all public improvements required for a development in the USA.
- Require all new developments to provide water improvements that are connected to the Boone water system and provide adequate fire protection.
- Street and storm water drainage should be provided equal to the Boone Subdivision Ordinance.
- The wastewater system provided for the development needs to connect to the Boone system, be capitalized to ensure the future connection, or provide an interim system that can be connected in the future.

These policies can all be expanded to ensure appropriate development and flexible enough to allow some development to be interim but able in a reasonable time to meet the permanent policies. The goal is not to stop development that is good for the community, but to make sure that the development is consistent with the long term growth plans for the city.

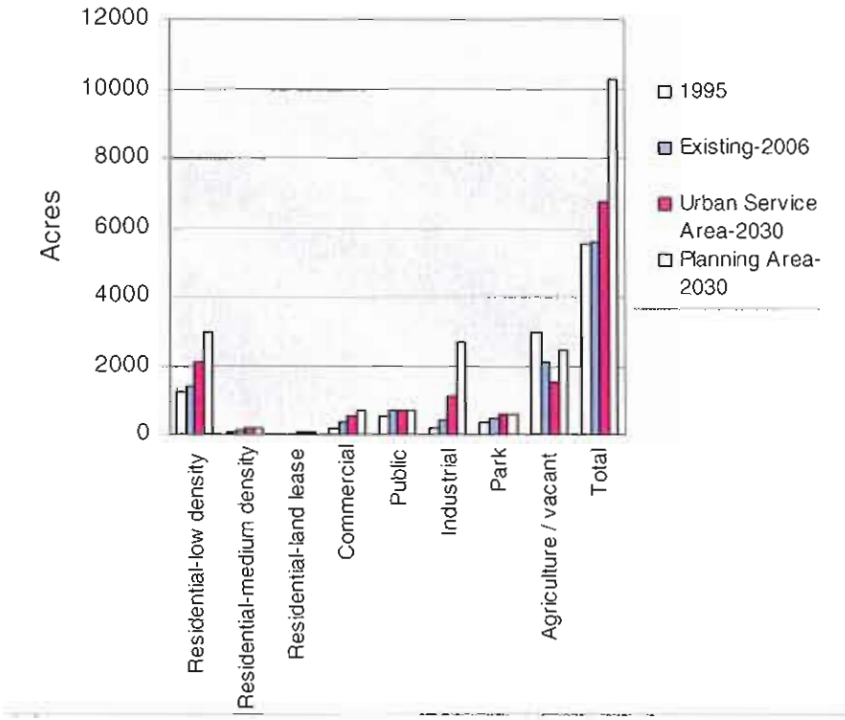


Exhibit 9-5: Land Use Categories Summarized from Tables 9-1 and 9-2

Source: Tables 9.1, 9.2; 1995 and 2006 represent the Corporate Limits of the City of Boone and 2030 includes the Planning Area.

10. 0 Housing Characteristics

Background

The homes on Story Street are historic in nature, mostly larger, multi-story structures that are well maintained. This is one of the positive features that the residents of Boone identified with: the great entryway into Boone. This perception has been true for past generations and should continue for future generations.

The housing inventory in Boone is similar to many Iowa communities of like size and status. Cities that are the designated county seats in Iowa and have one larger city have many common growth influences and are comparable in many ways. The county government resides there. The population is around 8,000-12,000. There often is a railroad line passing through, a recognizable downtown center, and a highway or major arterial passing through town with older historic housing and businesses constructed along the street(s). Boone fits this pattern like Spencer, Carroll and Oskaloosa and many others.

The housing stock in Boone has grown in the past two plus years, and has been growing about forty plus housing units each since 2000. See Table 10.1 That shows the permitting activity. The 2000 census reported that Boone contained 5,585 housing units, an increase of 253 since 1990, or about twenty-five per year. The total housing units are a composite of owner-occupied units, rental units and vacant units. In 2000, the total occupied units made up over 95% of the units and 5% were vacant, which is a fairly common vacancy rate. The split between owner-occupied and

renter occupied is 70-30 respectively, which is a typical healthy ratio for a city the size of Boone. Since 1990, the ratio has slightly changed from a 68-32 split to the 70-30 ratio with more owner and less rental units. The 2000 average household occupancy was 2.52 people per unit for owner-occupied units and 1.90 for rental-occupied units.

"Residential building permits have averaged $12,076,530 over the last five years in the City, excluding the value of land."

10-1
City Building Permit Activity
(Excludes the Value of Land)

Fiscal Year	Permits Issued	Total Value ($)	Single Family Permits	Total Housing Units
1996	281	3,703,150		
1997	382	8,220,746		
1998	295	9,333,074		
1999	275	25,201,629		
2000	241	7,623,837	30	39
2001	263	11,972,951	25	32
2002	283	12,120,393	30	68
2003	248	7,201,082	29	64
2004	228	21,764,150	18	26
2005	270	7,324,078	26	38

(Source: City of Boone)

The composite of housing is heavily weighted on the low-density segment with over 75% of the housing units in single family detached or attached structures and just under 5% in two-family structures. This represents a typical pattern of 80% in low-density housing and 20% in multi-family structures of 3 or more units. Boone had about 9% of its housing units in three to nine unit structures in 2000, and 8% in larger facilities of ten or more units. The city had 154 mobile home units in 2000, down from 192 in 1990.

The quantity of historically appearing housing is significant because of the number of structures that were constructed in 1939 or before. Nearly one-half, or 46.7% of the housing in Boone was built in 1939 or before. The pre-1939 years saw much of the Victorian, arts and crafts, and revival style housing constructed compared to after 1940. The Post World War II housing styles switch over to being more contemporary with ranch/split-level/shed type architecture with minimal detail and many with attached garages. The period of the 1940's and 1950's saw about 20% of Boone's housing constructed and about the same during the 1960's and 1970's. The final twenty years, the 1980's and 1990's, had less housing constructed, about 14%. This high percentage of pre-1939 homes is what gives Boone its strong attractive appearance, but could be an issue if the structures are not maintained. The average built in 1939 or before Iowa is 31.1%.

The housing values and rents also provide information on the health and strength of the housing market in Boone. The rental market has about the normal vacancy rate of just over 5%, but the median gross rent is about 9% less than the state average of $470. This is not significant, but demonstrates that the rental rate is a good value to the renter. The reduced rental rate will result in less taxes since most rentals are assessed as commercial based on the income they generate.

The median value for owner-occupied housing units is 18% below the state median of $82,500 or about $15,000 per unit lower. In comparison to other similar cities, Carroll is plus 5%, Marshalltown is the same as Boone, Oskaloosa is 20% lower than the state, and Spencer is 2% lower than the state. In contrast, Ames is 59% higher than the state and the Des Moines Metropolitan Statistical Area (MSA) is 25% higher. Boone County is 10% lower than the state median. The values are similar to many other cities but raises several questions. What is the effect of the age of the structures, the structural condition and maybe the economy of cities like Boone just outside the MSA, yet still influenced by the MSA? Raising the owner-occupied housing values in Boone is one of the goals being sought through the improvements recommended in the Comprehensive Plan.

Table 10.2 reports the owner-occupied housing values for the City of Boone, Boone County and the State of Iowa.

The 2000 Census reported that the median value of the City's owner-occupied homes was $67,400, which compares with $74,900 for the County and $82,500 for the State. The 2000 market value of specified owner-occupied units for the City, Boone County, and the State was as follows:

Table 10-2
Housing Value
City of Boone, Boone County and Iowa

	City of Boone		Boone County		State of Iowa	
Value ($)	Number	Percent	Number	Percent	Number	Percent
Under 50,000	906	27.04	1,460	23.59	135,833	20.41
50,000 to 99,999	1,731	51.67	2,934	47.40	301,591	45.32
100,000 to 149,999	510	15.22	1,113	17.98	134,212	20.17
150,000 to 199,999	115	3.43	409	6.61	53,228	8.00
200,000 to 299,999	80	2.39	241	3.89	29,483	4.43
300,000 to 499,999	8	0.24	33	0.53	8,938	1.34
500,000 to 999,999	0	0.00	0	0.00	1,743	0.26
1,000,000 or more	0	0.00	0	0.00	414	0.06
Total	3,350	100.00	6,190	100.00	665,442	100.00
Median Value	$67,400		$74,900		$82,500	

Source: U.S. Bureau of Census-2000 Census

Table 10-3 reports the median value of owner-occupied houses for several cities in Iowa similar to Boone, and Des Moines and Ames for comparison.

Table 10-3
Median Value of Owner Occupied Homes

	Number	Percent		Number	Percent
Storm Lake	71,300	-14	Des Moines	103,300	+25
Indianola	103,700	+25	Boone County	74,9100	-10
Knoxville	72,900	-12	Ames	130,900	+59
Oskaloosa	65,700	-20	Story County	115,800	+40
Carroll	86,400	+5	Spencer	80,900	-2
Marshalltown	68,000	-17			

Source: U.S, Bureau of Census-2000 Census

The house hold income for Boone illustrates a different picture than the owner-occupied values shown in Table 10-2. The median income for the city is only three percentage points under the state median, which places Boone in the mainstream for Iowa. Table 10-4 shows the household income for the City of Boone, Boone County, and the State of Iowa.

Table 10-4
Household Income

	City of Boone		Boone County		State of Iowa	
Income ($)	Number	Percent	Number	Percent	Number	Percent
Under 10,000	504	9.43	786	7.55	93,783	8.15
10,000 to 14,999	427	7.99	644	6.18	77,333	6.72
15,000 to 24,999	774	14.49	1,367	13.13	165,122	14.36
25,000 to 34,999	759	14.21	1,556	14.94	168,713	14.67
35,000 to 49,999	1,011	18.92	2,065	19.83	218,204	18.97
50,000 to 74,999	1,265	23.68	2,526	24.25	242,022	21.04
75,000 to 99,999	339	6.34	846	8.12	101,287	8.81
100,000 to 149,999	182	3.41	423	4.06	55,998	4.87
150,000 to 199,999	46	0.86	110	1.06	12,879	1.12
200,000 or more	36	0.67	92	0.88	14,856	1.29
Total	5,343	100.00	10,415	100.00	1,150,197	100.00
Median Income	$38,179		$40,763		$39,469	

(Source: U.S. Bureau of Census-2000 Census)

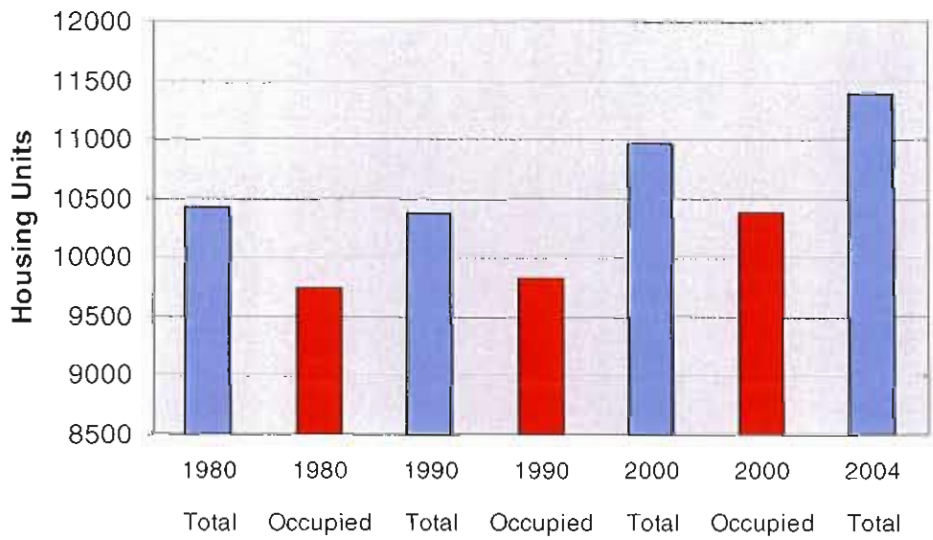


Exhibit 10-1: Housing Units for Boone County

Table 10-5
City of Boone Housing Profile (2000)

Total housing units	5,594	100.0
1-unit, detached	4,117	73.6
1-unit, attached	109	1.9
2 units	259	4.6
3 or 4 units	303	5.4
5 to 9 units	209	3.7
10 to 19 units	205	3.7
20 or more units	238	4.3
Mobile home	154	2.8
Boat, RV, van, etc.	0	0.0

(Source: U.S. Bureau of Census-2000 Census)

Housing Recommendations

The goal of the housing recommendations is to identify the tools and programs that will stimulate housing development and improvements. The planned result should be more new housing in Boone and visible improvements to the existing housing stock. Through incentives and grants and loans, the housing stock should continue to increase and the housing that is in need of repair or updating will receive improvements. Additions and other improvements made to existing housing allow the occupants an opportunity to stay where they live and, at the same time, improve the housing stock.

- Develop a tax abatement program that promotes the construction of new housing. Give the greatest incentives in existing urban renewal areas to help promote new housing in these areas.
- Develop a tax abatement program that provides a reason for residents to fix up their existing housing rather than sell and move. This program should be usable by all owner/residents regardless of where they are located in the city, and for all income ranges. This should include the restoration of historic housing and improvements such as detached garages.
- Work with the Iowa Department of Cultural Affairs to undertake a survey of historic structures in Boone with consideration of creating an historic district if one were to qualify.
- Develop the capacity to annually prepare and apply for state and federal grant and loan programs. Grants and loans are available in the areas of housing, housing rehab, sewer and water, historic restoration, civic improvements and others.
- Coordinate the housing programs and assistance with the activities and reviews undertaken in the Urban Service Ares and the two-mile review area.

11.0 Transportation

Transportation in Boone is provided by the combination of five different components that work together to form a system. The system components function as individual facilities that complement each other and link together to transport people, goods and services both inside and outside of the city. The five components are highways, streets, railroad, the airport, and local transit. Trails can in some cases and cities provide some component of transportation, but are recreational in Boone and will be discussed in Chapter 13.0, Parks and Open Spaces.

Highways

The City of Boone is served by U.S. Highway 30 and Iowa Highway 17. U.S. 30 runs along the southern edge of Boone as a principal arterial in a four-lane configuration that serves the entire state of Iowa and interstate beyond in an east/west direction. The annual average-daily-traffic count (AADT) for U.S. 30 ranged from 9,000 to 13,100 in 2003 inside the corporate limits. The highway is under the jurisdiction of the Iowa Department of Transportation (IDOT).

Iowa Highway 17 runs north and south from the Des Moines Metropolitan area to Iowa Highway 18 in northern Iowa. Iowa 17 intersects with U.S. 30 about one and one-half miles east of Boone at a full interchange of the two. The AADT north and south of U.S. 30 is around 3,900 to 4,000 and is generally about 2,500 continuing north after it makes a one mile jog to the east. IA 17 has an at grade crossing with the mainline of the Union Pacific Railroad immediately after becoming northbound at the jog.

There are no improvements in the five year IDOT plan for U.S. 30 or IA 17. Maintenance and minor improvements will occur as normal. See the AADT map for Boone in the Appendix.

Streets

The street system in Boone has four classifications of streets based on the volume of traffic they transport, and the function that they serve. The highest classification is the principal arterial which is U.S. 30, there are fourteen minor arterials such as Story Street, thirteen collectors such as Marshall Street, and many local streets that comprise most of the system. See Exhibit 11-1 that maps the street system by classification. The IDOT considers the City of Boone an urban area and has developed the classifications in cooperation with the United States Department of Transportation. The map reflects conditions in 2003.

The street system in Boone is well developed and provides general satisfaction for getting around from its citizens. However, there are some improvements that are being recommended to provide better east/west travel and route continuity, access to the major industrial area in the northeast part of the City of Boone/USA, and public safety movement when the railroads are being actively used.

Projects on Park Avenue west of S. Division Street, Hancock Drive east of S. Jackson Street, SE Linn Street east to Snedden Drive, Prairie Avenue east of S. Delaware Street and Aurora Street

south to SE Linn Street are being recommended to provide better east /west traffic movement. These improvements will have the affect of reducing travel distances where the current route now causes backtracking or out of distance travel, and may stimulate some of the vacant ag territory near the improvements to develop. The majority of the improvements are part of the collector or minor arterial system which functions to shift traffic off the local streets and onto the major streets. This keeps the local residential streets for local circulation and not for through traffic.

The City of Boone for some time has sought a solution that would provide good access to the Industrial Park Road area and create a solution for providing access north and south of the Union Pacific Railroad (UPRR) when it is in use. This is especially needed for public safety reasons. The extension of Snedden Drive north to E. 22 Street (Boone County E26) with a grade separation over the UPRR provides a beginning solution to both issues. When the citizen participation process measured the primary issues facing Boone, the participants overwhelmingly identified the railroad overpass as one of the top issues.

A grade separation on Snedden Drive, as extended, is being recommended to provide direct access to the industrial area and enable public safety vehicles north/south access at all times. The volume of traffic, especially truck traffic, entering and existing on U.S. 30 via Snedden Drive and IA 17 is significant. When the railroad usage is added, an average of 58 trains per day, the access issue become even more complex. With the advent of more industrial growth, a good part of which will be north of the railroad, the ingress and egress issue for the movement of traffic becomes important. The grade separation positively addresses the current and future needs. And, the City of Boone has been notified that the project has been earmarked for $750,000 in federal funds to begin the planning process that would develop and overpass in this location.

A second grade separation has been discussed for a location west of Story Street. This would provide traffic access north and south between neighborhoods 1 and 2 as defined in the citizen participation process. More importantly, the public safety needs of neighborhood 1, north of the UPRR, would have reduced trip times when the UPRR was in use. Therefore, it is recommended that the informal discussions and the locational study currently being conducted by an Iowa State University (ISU) engineering class be continued. The next update of the Comprehensive Plan for the City of Boone should locate and program a second overpass based on a formal study and the perceived need at the time.

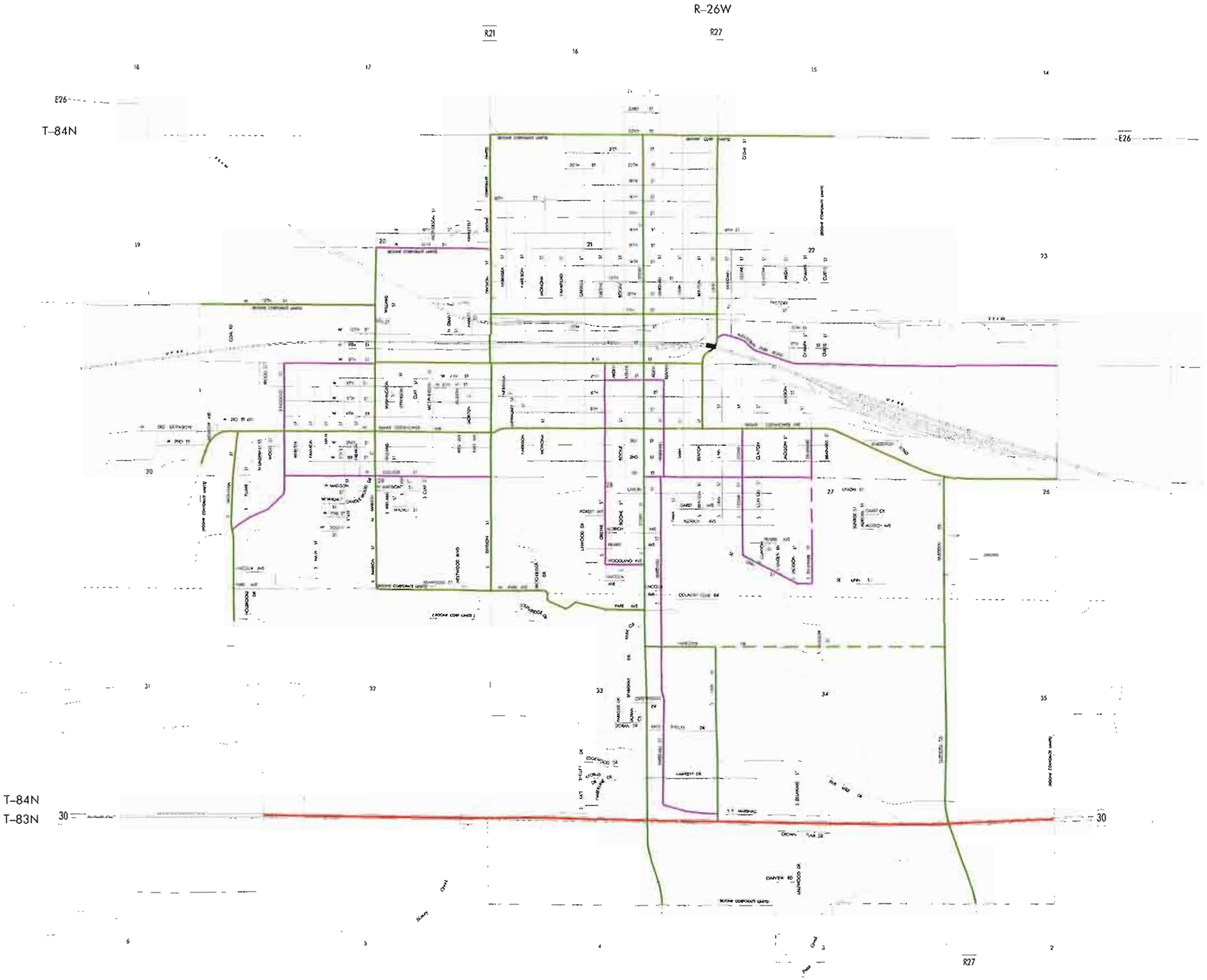
The development of an overpass on Snedden Drive will require the extension and, eventually, improvements associated with the traffic growth and usage of the street. The extension from Mamie Eisenhower Avenue north to the Industrial Park Road is essential to enable the overpass to function. This will need to be a part of the overpass project. It is recommended that an extension from the Industrial Park Road north to East 22nd Street (County E26) be completed to provide a minor arterial from U.S. 30 through the entire city. Currently, only one street has route continuity north/south through the city, Story Street, and two east/west, Mamie Eisenhower Avenue and 8th Street. This would provide a second north/south route that ties U.S. 30 to the Airport and National Guard, the industrial area, and planned industrial development north of the UPRR and the Industrial Park Road.

At some point in time, the intersection of Snedden Drive and U.S. 30 will need to be improved. The traffic will increase once the above improvements are completed, or partially completed, and the function of the intersection will need to be examined for improvement. It is recommended that the intersection of U.S. 30 and Snedden Drive be monitored in the future for crash volumes, the type of crashes, and the severity of crashes. The monitoring should determine when it may be appropriate to consider improving the traffic configuration of the intersection and the type of improvements that should be completed. It is also recommended that the Intersection of U.S. 30 and Story Street be monitored in the future for crashes. The monitoring will help determine if any future improvements are needed or the intersection is still functioning safely.

It is advisable to work closely with the IDOT when studying and implementing the transportation improvements. The IDOT will assist in the process of planning and monitoring the project and will be a partner when implementing the final product.

Exhibit 11-2 provides an illustration of the transportation plan proposed for the City of Boone.

Sidewalks are not consistently located in residential areas. Additional sidewalks throughout the community would improve walking and biking conditions and provide additional recreation opportunities.



Federal Functional Classification System
The Urban Area of

Boone
IOWA

Prepared by
IOWA DEPARTMENT OF TRANSPORTATION
Phone (515) 239-1669
In Cooperation with
UNITED STATES DEPARTMENT OF TRANSPORTATION

December 31, 1992
Revised 09-16-03

PRODUCED WITH CADD
03-09-04
SYSTEMS PLANNING

URBAN FEDERAL FUNCTIONAL CLASSIFICATIONS

- Interstate
- Other Principal Arterial
- Minor Arterial
- Collector
- Local
- Urban Area Boundary

Future classified routes shown as dashed lines.

City of Boone
Comprehensive Plan

Federal Functional Classification

EXHIBIT 11-1

SNYDER & ASSOCIATES
Engineers and Planners

Continue to study the location and need for a western grade separation

Proposed Overpass

Monitor Intersection

Monitor Intersection

Legend

- City of Boone Corporate Limits 2006
- Railroads

Transportation

- <all other values>
- Existing Principal Arterial
- Existing Minor Arterial
- Existing Collector
- Existing Runway
- Proposed Minor Arterial
- Proposed Collector
- Proposed Runway
- Proposed Local

SNYDER & ASSOCIATES
Engineers and Planners

City of Boone
Comprehensive Plan

Proposed Transportation Plan

EXHIBIT 11-2

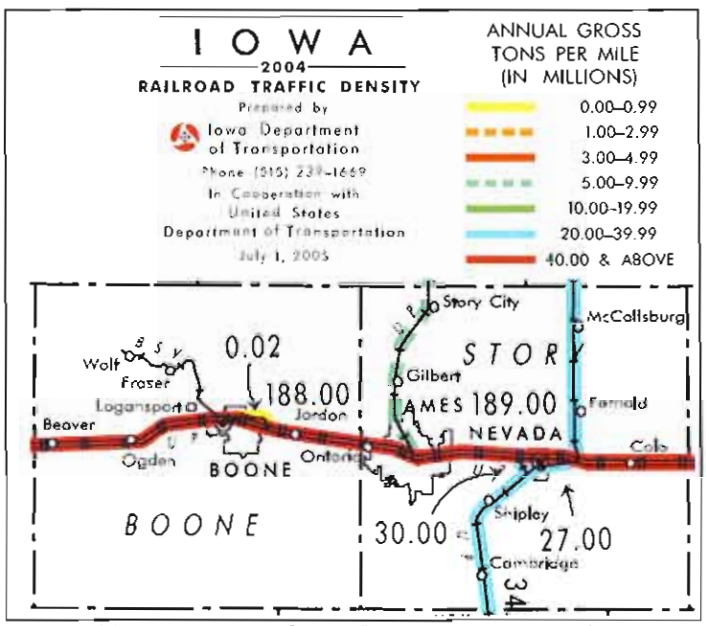
Rail

Rail is an important aspect of the character of Boone. Historically, Boone was one of the district headquarters for railroad operations in Iowa. The presence of a railroad that traverses the state of Iowa and continues interstate east and west, was and is of great influence on the physical layout and operations of the community. About ten streets cross the UPRR in Boone, some every block, and there is one section that is about two miles between street crossings. Both conditions impact the city.

The Union Pacific (UP) main line goes directly through town (see Exhibit 11-3). In 2004, 188 million gross tons per mile rolled through Boone. The short line on the northeast side carried another 20,000 gross tons per mile in the same year. The UP line through Boone and Ames carries more freight traffic than any other line in the state of Iowa. The UP facilities in Boone include piggyback ramp service and one-day switching capability.

The Boone and Scenic Valley Railroad (BSVR) is a rail museum which operates 15 miles round trip (22 mile Dinner and Dessert train) of track to the northwest of Boone, including two bridges over the Des Moines River Valley. In addition to the museum, the BSVR also serves two industrial customers in the northeast section of town: Mid-State Steel and Structural Component Systems. The Union Pacific drops loaded cars off its mainline in downtown Boone, and the BSVR controls two switch lines to move the cars the extra 1.75 miles to the industrial customers and pick up empty cars. If more industrial businesses were to develop properties in that area, it is recommended that spur lines be added and served by the BSVR.

The BSVR is one of the few rail museums in the world where you can ride a train powered by one of all three major types of engine: diesel, electric, and steam. The BSVR is an important tourist attraction for Boone and Iowa and is the central theme for the annual festival each September. The BSVR is generally the strongest image-maker and symbol for Boone. It is very unique and should be promoted and preserved as a piece of Boone. It is further recommended that the end of the BSVR line (in the northeast of Boone's corporate limits) be developed to include a rail spur to serve future bulk-commodity industrial users, should sufficient demand arise.



11-3: Boone and Story County Rail Traffic Density (in million gross tons/mile)
(Iowa DOT - Office of Rail, 2004)

Airport

The Boone Municipal Airport (BMA) is located on the fringe of the urbanized area within the City of Boone. The airport supports two (2) runway facilities. Runway 15/33, the primary runway, is 4,807 feet in length and 75 feet in width. Runway 02/20 is a turf facility that is 290 feet wide and 3,298 feet long and serves as a crosswind runway to complement the main runway. The airport currently serves general aviation, chartered commercial aircraft, and the Iowa Air National Guard (IANG).

Nearly all of the general aviation operational activity is by fixed wing aircraft whereas nearly all of the military operations are by helicopter. Military aircraft frequently operates at civil airports as a joint-use airport which should also meet the physical characteristics of the military aircraft. The airport averages 11,440 operations per year and the IANG adds 11,000 operations per year for a total of over 22,000 operations.

The BMA currently is the home base for 44 civil based fixed wing aircraft and six (6) military helicopters (IANG). The number of civil based aircraft is projected to grow to 52 aircraft in 2025. The current tee hangar storage is for 26 aircraft and there is conventional storage space for another 14-20 aircraft. The terminal building is located within the 10,000 square foot FBO conventional hangar facility. One other conventional hangar structure of 8,000 square feet and a 3,000 square foot maintenance/equipment storage structure is located on the airport. The local transit service, Boone County Transportation, is located along Snedden Drive, north of the airport entrance, and the IANG complex is along Snedden Drive south of the main entrance.

The Airport Layout Plan (ALP) is currently being updated. The draft narrative envisions the development of a new runway designed to accommodate fixed wing military aircraft as well as civil turbine aircraft with an approach speed up to 141 knots and a certificated gross takeoff weight greater than 12,500 pounds.

- Develop a new runway (Runway 01/19) to an ultimate length of 5,500 feet width) and 150 feet wide. Runway 01-19 would be designed to support C-130 aircraft for the IANG.
- Retaining the turf runway, Runway 02-20, until such time that Runway 01/19 was constructed.
- Runway 15/33 would be maintained as the crosswind runway.
- One existing 6-unit tee hangar would need to be removed
- A parking apron for two (2) C-130 aircraft would need to be constructed
- The other necessary navigation and flight aids (precision instrument approach) and physical changes necessary to accommodate the previous improvements and changes.

Please refer to the Boone Municipal Airport Layout Plan, Narrative Report draft, dated August 2006 for the complete discussion and scenario requirements.

The BMA facility does impact the future land use of Boone and the recommended improvements are supported by the transportation and infrastructure plans. The future land use plan shows the development of the land surrounding the airport to be developed with mixed uses that are

primarily industrial mixed with the appropriate commercial. Residential uses would be excluded from the mixed use area. The BMA facility would need to be expanded east and south to provide space for the proposed Runway 01/19 and the appropriate airport protection zones at each end.

Local Transit

The Boone County Transportation (BCT) operation provides a shuttle service to Boone County residents including the City of Boone. They are a contracting agency with the Heart of Iowa Regional Transit Agency (HIRTA), an organization under an Iowa Chapter 28E Agreement to serve as the transit provider for IDOT's Region II, which includes Boone County and six other central Iowa counties.

Public transit service is available to anyone in the county, including persons with disabilities as required by the American with Disabilities Act (ADA). The shuttle vehicles are all ADA-accessible and the service is provided door-to-door. The rides are provided on a demand-response basis, with the trips scheduled 24 hours in advance. The service is Monday through Friday from 7:00am to 5:00pm in the City of Boone.

It is recommended that the shuttle service provided by the Boone County Transportation agency as a member of the HIRTA organization be continued as a service to the residents of the City of Boone.

12.0 Public Infrastructure

Water Supply and Treatment

The City of Boone Water Works provides potable water to its residents and businesses from a series of wells located northwest of the city on the east bank of the Des Moines River. A new treatment facility began serving the city in 2000, and has a treatment capacity of 6.0 million gallons of treated water per day. The average daily consumption is about 1.9 million gallons per day. The system has three elevated storage towers with a storage capacity of 1.6 million gallons and an underground storage facility at the plant with a capacity of 2.0 million gallons.

The city is developing a plan that would upgrade the trunk system in Boone to increase the capacity in the developed part of the city and expand the system to areas in the city that are undeveloped but capable of development in the future. This will require that a new 1 million gallon elevated storage tank be erected in the western part of the city. The location of the tower has not been currently sited as the planning is still in process.

Zenia water system is an important partner for the City of Boone in providing water service to residents both in and outside of the city limits. This relationship will be of increasing importance in the future; especially in the residential expansion of West Boone.

Exhibit 12-1 illustrates the areas of the city that are served with potable water.

LEGEND

EXISTING WATER MAIN

EXISTING LOT LINE

SNYDER & ASSOCIATES
Engineers and Planners

City of Boone
Comprehensive Plan

Existing Water Utility Map

(Source: Engineering Alliance, Inc./Nilles Associates, Inc.)

EXHIBIT 12-1

Storm Water System

The City of Boone, like most cities, did not develop a storm water drainage system in the 20th Century. We now realize that a system is needed. The ability to model and predict the flooding and surface run-off from rainfall has become much more predictable. The necessity to manage the run-off has made storm water management a part of a city's basic services.

The City of Boone has become an active partner in managing storm water for the city. Two storm basins were purchased and designed to handle storm water north of 22nd Street in the recent past. The city realized the importance of managing storm water, and it is recommended that a plan be developed to guide future capital improvements and operations, improving the system over time.

It is recommended that the final plan includes standards for individual site responsibilities and a method to finance the improvements, like a storm water management district.

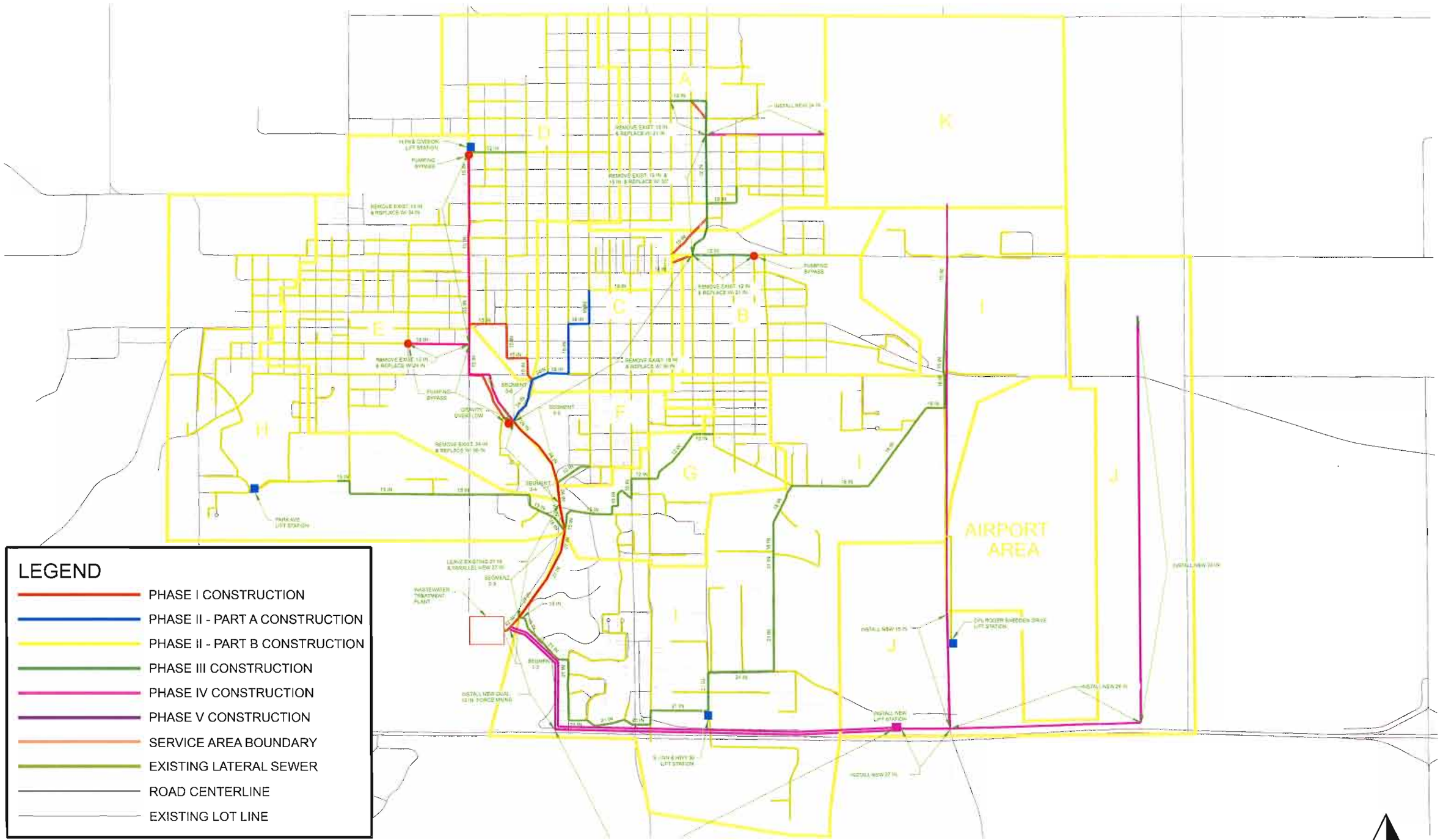
Wastewater Treatment System

The wastewater treatment facility for the City of Boone is located in the southwest corner of the city adjacent to McHose Park along Honey Creek. The design capacity for the treatment works is specified in Construction Permit #94-243-S issued May 31, 1994. The treatment plant is designed to treat an average dry weather (ADW) flow of 2.1 million gallons per day (MGD), an average wet weather (AWW) flow of 7.0 MGD, and a maximum wet weather (MWW) flow of 15.1 MGD. The design 5-day biochemical oxygen demand (BOD_5) load is 4,000 lbs/day.

The City of Boone is in the process of replacing several of the main trunk lines that are now undersized given the growth of the city and constructing several new trunks that will provide new service. The wastewater sewer plan is broken down into five phases where the first four phases remove and replace the existing sewers to provide greater capacity in the trunk system, and eliminate as much infiltration as possible. The first four phases are planned to be implemented by 2011. The last phase provides sanitary sewer service to areas that do not presently have service and will include one lift station. Area "J" is planned to be implemented in 2012 and Area "K" in 2013.

Exhibit 12-2 illustrates where the trunk sewer lines will be constructed, the trunk sewer size, and the five phases. The exhibit also shows the entire wastewater sewer system by including the lateral system serving each area.

The firm of Engineering Alliance, Inc. is working with the City of Boone to develop the water system, a storm water plan, and the wastewater treatment plan.



SNYDER & ASSOCIATES
Engineers and Planners

City of Boone
Comprehensive Plan

Proposed Sewer Map

(Source: Engineering Alliance, Inc./Nilles Associates, Inc.)

EXHIBIT 12-2

13.0 Park and Recreation

Boone has dedicated approximately 300 acres of the city to 13 parks located throughout the city. McHose Park is the largest, and extends 200 acres to the southwest of Story Street. There are forest trails and recreational space. The municipal swimming pool, playgrounds, baseball fields, tennis courts and picnic areas are also in McHose Park. There are also several other smaller neighborhood parks around the city. As agriculture / vacant land is developed for residential housing in the future, new parks should be included into the system.

Ledges State Park, just south of the City, offers 1,200 acres of hiking and camping opportunities. The Des Moines River, Pease Creek and Davis Creek flow through the park area, and create many opportunities for camping and hiking along the bluffs and waterways. The park takes its name from the 25 sandstone ledges which overlook the water 150 feet below.

Located nearby is the Iowa Arboretum, founded in 1967. It is a privately-funded, non-profit facility. The Arboretum is located nine miles south of the City, on approximately 380 acres. Within the Arboretum is a 40-acre "Library of Living Plants" containing hundreds of species of trees, shrubs and flowers. The arboretum also functions as an outdoor laboratory, a biodiversity refuge, and a meeting center for horticultural and conservation organizations.

Constructed in 1901, the Kate Shelley Bridge is known as the longest and highest double track railroad bridge in the world. The bridge is located three and one-half miles northwest of Boone, and spans a distance of 2,685 feet. The Des Moines River flows 185 feet below. The oldest daughter of a railroad widow, in 1881 Kate Shelley crossed the Des Moines River during a dangerous storm in the middle of the night to warn an oncoming train that the bridge was destroyed.

The Boone and Scenic Valley Railroad (see Section 11.3) is a unique railroad attraction for the City, entertaining 50,000 riders each year. It is a private business, funded by donations from the City's approximately 2,250 charter member Boone Railroad Historical Society. In 1989, the railroad purchased the first ever Chinese Steam Locomotive imported into the United States. It is the only engine of its class in the U.S.

In keeping with Boone's stated goal of "smart growth," there are several neighborhood parks planned to accompany residential housing developments throughout town, such as in the Lowell Neighborhood in northeast Boone. The updated land use plan in Chapter 9 shows a park symbol in areas where parks should be added as residential areas are developed. Low-impact, environmentally-sensitive development is encouraged throughout the Comprehensive Plan.

A public informational meeting discovered interest in the development of a trail system inside Boone that connects key parks and open spaces and can be extended south to Ledges State Park and eventually a regional trail when available. Costs could be partially offset by fundraising among those willing to use the trail. Future population growth may necessitate and expansion of McHose Park to the south long the path of the trail.

This City of Boone has separate divisions to control recreational programs and park operations. Recreation is operated by the Boone County YMCA, while Park operations are under the control of the Boone Park Commission.

Boone City Parks

The operation and maintenance of the parks are controlled by the Boone Parks Commission. The Boone Park Commission is a:

> *"....five member board who are elected by the citizens of Boone. They hire the Parks Director, set goals, and advise on park operations."*

14.0 Public Facilities

Existing

In 1900 the first hospital in Boone County was built at the present site of the Boone County Hospital. Upgrades and additions were added in 1940, 1956, 1968, and 2002. The Hospital operates both acute care and skilled nursing beds and provides many other health services such as neurology, plastic surgery, radiology, respiratory care, 24-hour emergency services and various laboratory services and testing. The Boone county Hospital's most recent renovation was a $9 million expansion.

Public education is provided for the City residents by the Boone Community School District (BCSD). BCSD has five elementary schools, one middle school, and one high school. Their combined enrollment is approximately 2,300. In 2003 there were 183 teachers. The City also has two elementary parochial schools. The BCSD is currently in a whole grade sharing agreement with the United Community School District to share the education requirements in the two districts. Currently, grades 7 through 12 in the United District are schooled at the Boone High School facility and the grade 6 students in the Boone District are schooled in the United Middle School facility. This agreement will continue, at least, through the 2007/2008 school year.

Opportunities for continuing and higher education are provided for Boone residents at the Des Moines Area Community College campus located on south Story Street. Iowa State University is located in nearby Ames. Drake University, Grandview College, Upper Iowa University, and the University of Osteopathic Medicine are located in Des Moines.

The Boone County Cultural Center and Historical Museum is listed on the National Register of Historic Places and is located inside the City of Boone. The center is a multi-purpose facility. It serves as a museum for valuable collections of Boone County natural history and historical artifacts. It also serves City and County residents as a cultural and community center where businesses, individuals and civic groups can gather for meetings, special programs and social events.

The Boone Police Department was moved into a new station at 6th Street and Story Street in September of 2006. The majority of the old car dealership was renovated to fit the specific needs of the police department and a new joint law enforcement "Communications Center" for the city and county. The police department was previously located in City Hall.

Recommendations

The space in City Hall that was vacated by the police department will be renovated and improved for the space needs of the city administration and departments. This will provide the required space needs for the city operations.

Boone has a full-time (24/7) fire department that is currently in a central location and will remain in their present facilities. Their future facility needs can be accomplished at their present location by improving and refining the facility and operation site. The primary improvements that will facilitate their service is the recommended construction of the overpass on Snedden Drive over the UPRR operations, and the possible second overpass that is planned in the western part of Boone. The public safety provided by the Fire and Police Department will both be enhanced when the facilities are a reality.

At some point in time, the city will grow large enough to require additional fire protection services. When this occurs, there may be a need to locate a facility in the southeast on Snedden Drive by or on the airport. It could be a joint facility for the city, the airport, and the IANG.

15.0 Implementation of the Plan

The implementation of a comprehensive plan occurs over time. The decisions that are made with each city council action and planning commission recommendation can impact and influence the direction the community is moving. If these decisions are consistent with the goals and recommendations of the comprehensive plan, then the plan will begin to incrementally happen over time. The capital projects selected and constructed each year as a part of the Capital Improvement Plan, C.I.P., that follows the comprehensive plan will stimulate the implementation of the future land use and growth of the city.

The overall implementation will be completed in phases that logically follow a pattern to first strengthen the existing city, secondly prepare for growth, and finally assist in the growth. The projects or actions in each phase are not in absolute order but in groupings. They are flexible enough to be taken in an order that is logical, at the time, to take advantage of the circumstances that are dynamic and change. Grants become available and public demand and need change and the implementation process must change to reflect this.

The comprehensive plan recommendations and actions are shown in three phases. The first phase is the first five years and could be part or most of a strategic plan for Boone. If more economic and social actions or implementation strategies were added to this phase, it could be a five year strategic plan.

The strategic goals to be accomplished in the first 5 years are primarily related to the land use plan described in Chapter 9.

The second and third phases are ten years each or a total of twenty-five years. The second phase includes some of the C.I.P. actions already planned for the period beyond 2010 and are linked to the first phase in a logical progression. Phase four is longer range and more subject to the events in phase one and two being completed. As the comprehensive plan is updated every five to ten years, phase four is the implementation plan will change the most.

Table 15-1 lists the recommendations in the plan by the three phases. Some projects are shown for more than one phase to reflect the continuation of a project or the planning phase followed by the construction or implementation phase.

Table 15-1
Schedule of Recommendations for City of Boone (2006)

Recommendation	Strategic (1-5 yrs)	Intermediate (6-15 yrs)	Long Range (16-25 yrs)
Adopt 2030 Comprehensive Plan	X		
USA: develop policies	X		
USA: work/County	X		
Redraft Zoning Ordinance – mixed use zone	X		
Redraft Subdivision Ordinance	X		
Establish priority areas: Residential	X		
Commercial	X		
Industrial	X		
Policy for land-lease projects	X		
Preserve downtown – study	X	X	
Annexation Policy: Current industrial area	X		
Residential areas	X		
Other	X		
Annex current industrial park	X		
Annex N.E. Industrial Area	X		
And south expansion of Boone Business Park (So. of US30)		X	
Design and construct overpass on Snedden	X	X	
New airport planned expansion – follow Airport Master Plan		X	
McHose Park Expansion		X	X
New neighborhood parks		X	X
Tax Abatement for: New Housing	X		
Rehabilitation	X		
Historic	X		
Other	X		
Architectural and Historic survey		X	
Applications for State and Federal grants	X		
Street Improvements			
Park Ave.(strategic)	X		
Prairie Dr.			X
Hancock Dr.		X	
Aurora		X	
Jackson St.			X
Snedden: south	X	X	
north		X	
overpass	X		
Linn St.		X	
Monitor Story / US 30 Intersection	X	X	
Snedden / US 30 intersection		X	

Table 15-1 continued

West Boone grade separation – formal study	X		
Construction of proposed West Boone grade separation		X	
Sidewalks		X	
Trail to Ledges		X	
Local transit	X	X	X
Water: Trunks	X	X	
Storage tower	X		
Other lines	X		
Plan	X		
Storm water - Plan	X		
Standards per site	X		
Management district		X	
Wastewater: First 4 phases 2011	X	X	
J – South 2012		X	
K – North 2013		X	
City Hall Improvement	X		
Fire – Current site	X	X	
New fire station at airport			X

16.0 Appendix

Steering Committee Meeting

Issues and Assets Results (see Exhibit 16.1)

Receiving no votes

Retail, service, commercial, etc., Low Income, Housing Agency, Commercial Signs, Vacant sites, lots and buildings, railroad service, Public Transportation, electrical service, Natural gas service, cable TV service.

Only Issues

History, jobs and job creation, downtown business district, Housing conditions, Trails, Routine, cultural activities, public art, traffic circulation – general, traffic circulation – railroad, sewer service, day care/preschool, parking, sidewalks, and lighting, civic facilities, annexation.

Only assets

Population future, general economic health, housing: residential development, rental housing market, park facilities, special events, recreation activities, access to IA 17 and US 30, Elementary, High School, Community college, Historic Structures

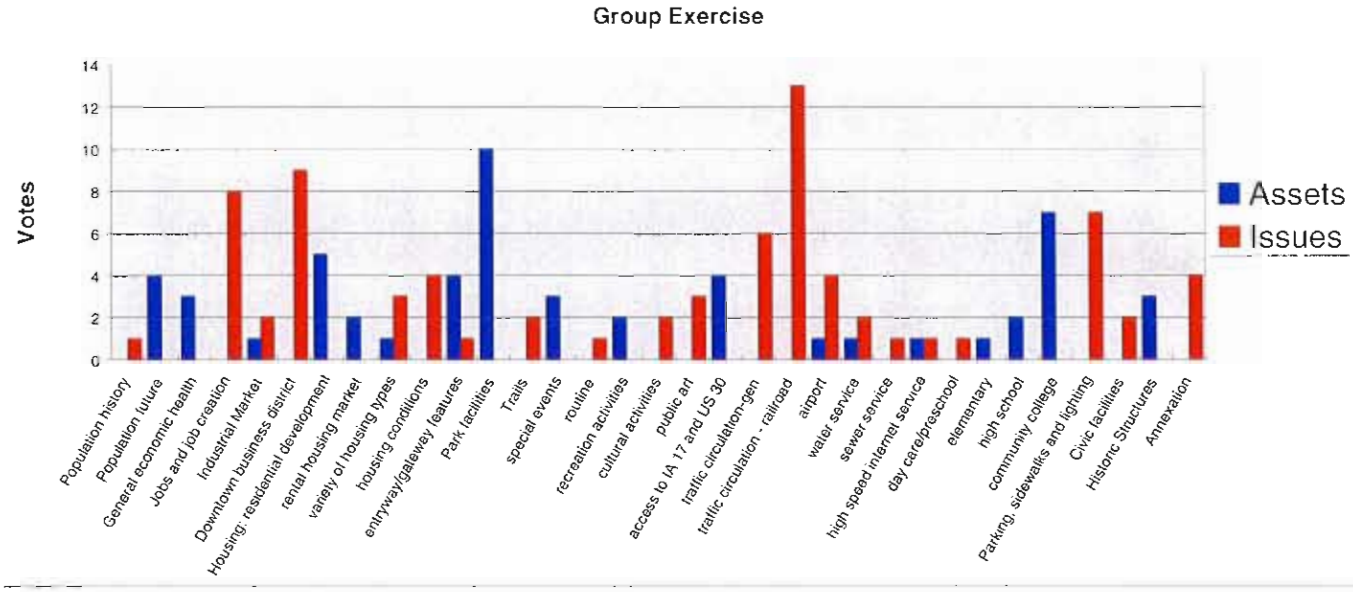
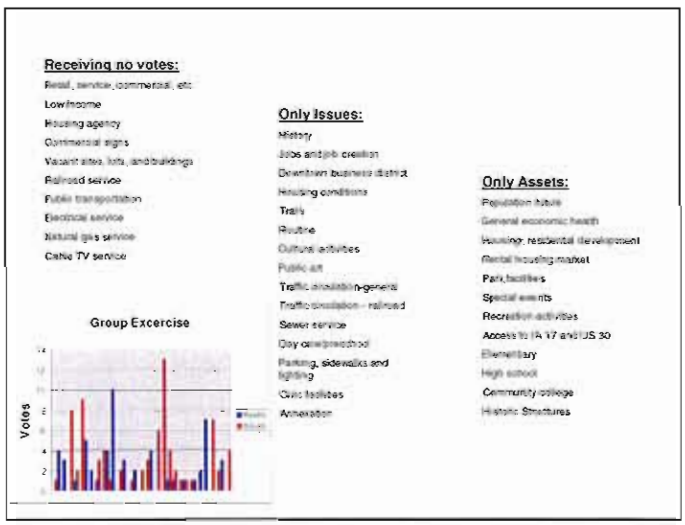
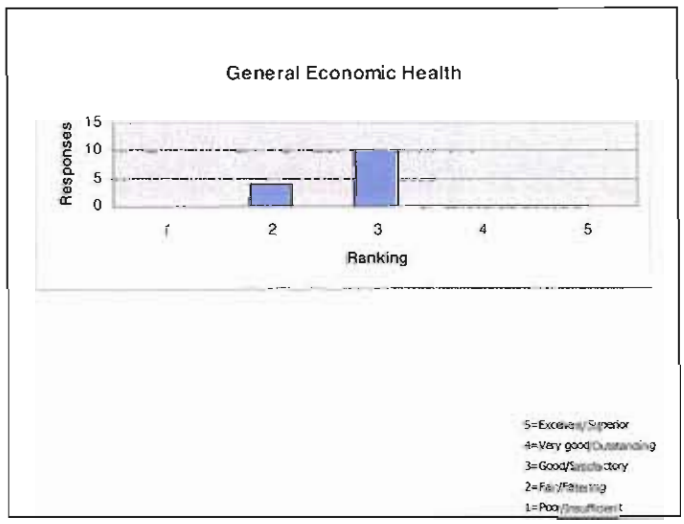
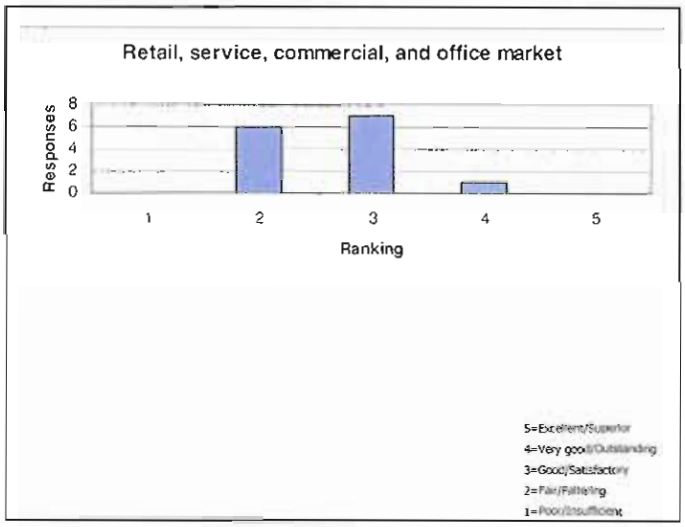
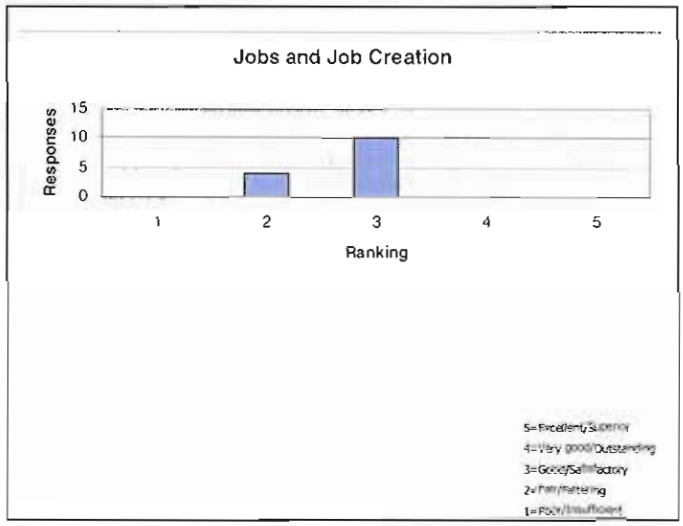


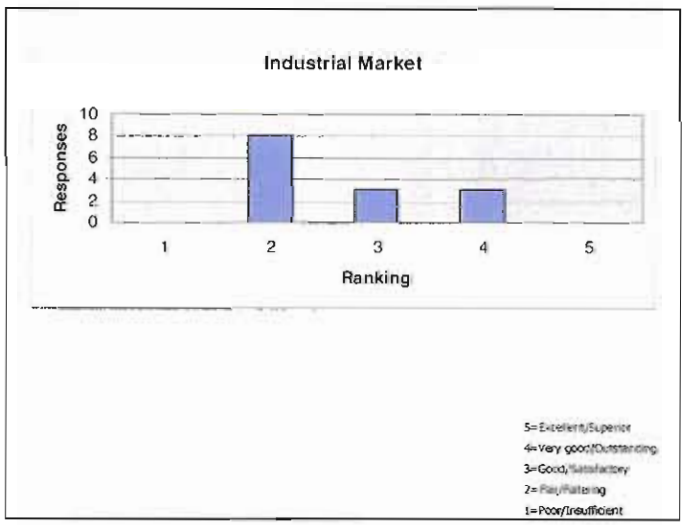
Exhibit 16-1: Results from Issues/Assets Group Survey

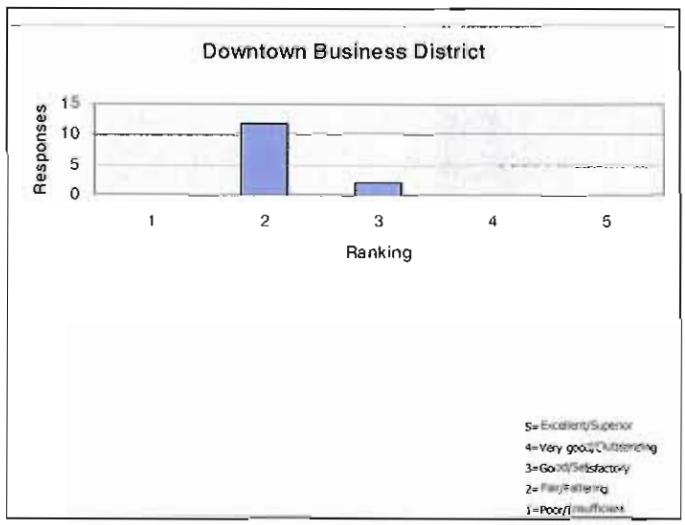


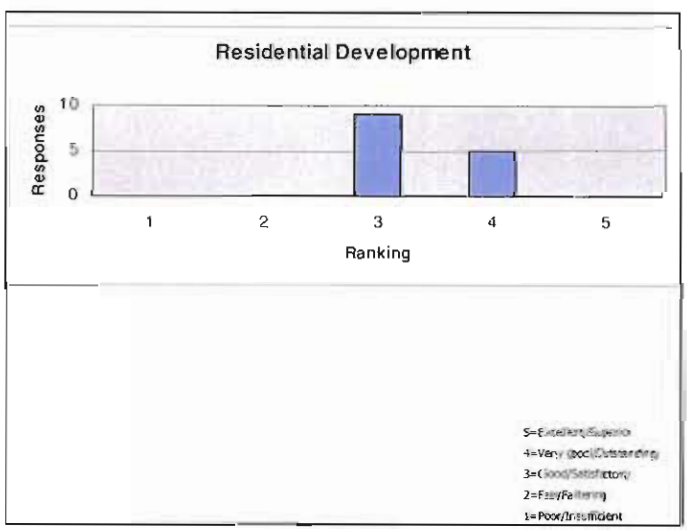


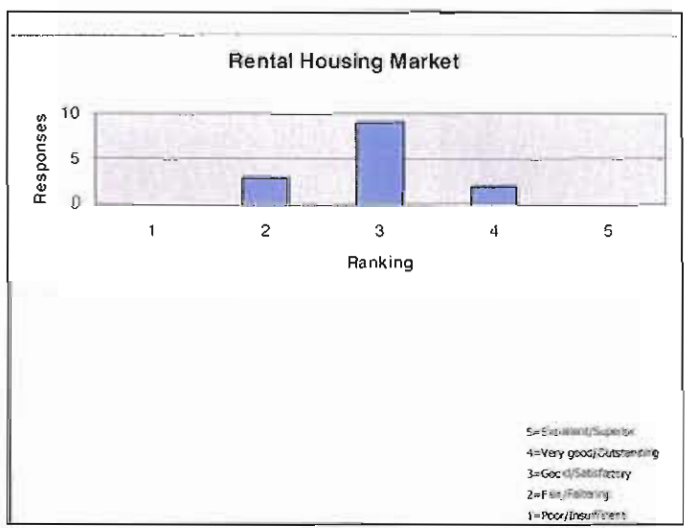

Retail, service, commercial, and office market
Responses
8
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

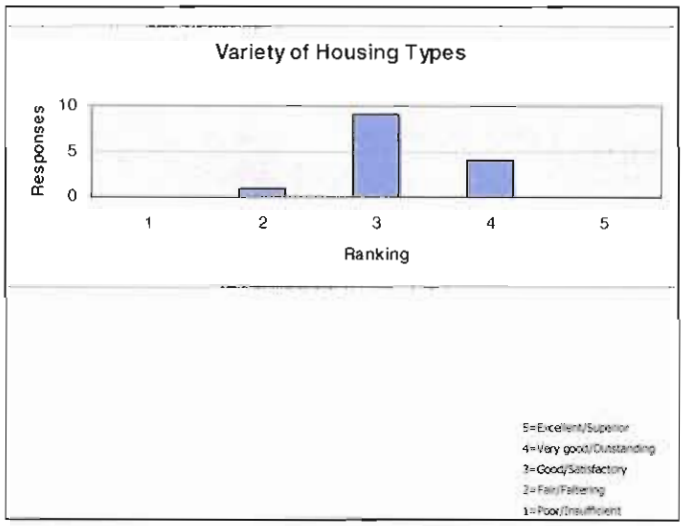

Jobs and Job Creation
Responses
15
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

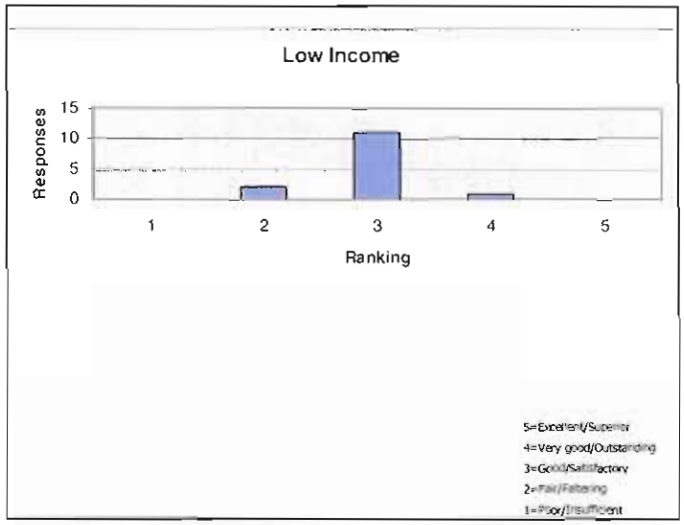

Industrial Market
Responses
10
8
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

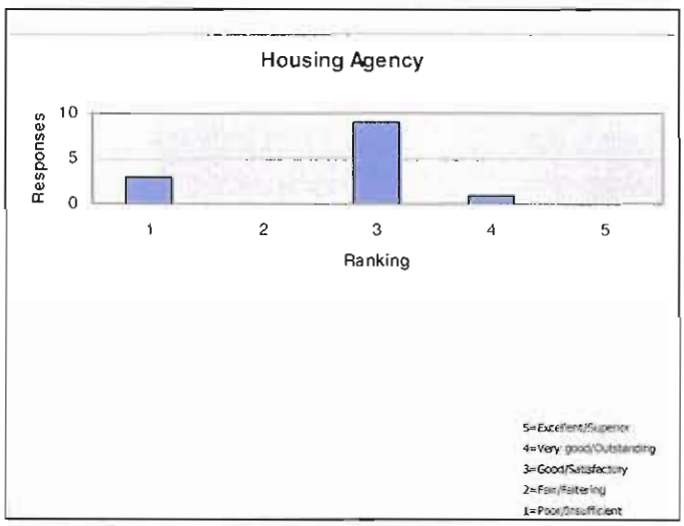

Downtown Business District
Responses
15
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

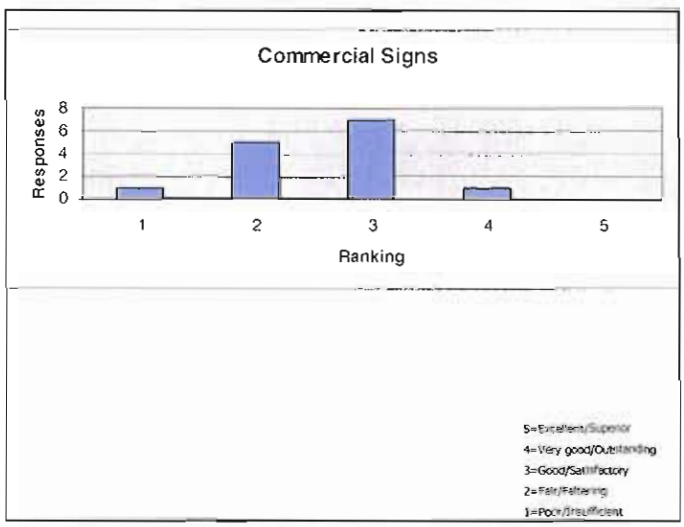

Residential Development
Responses
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

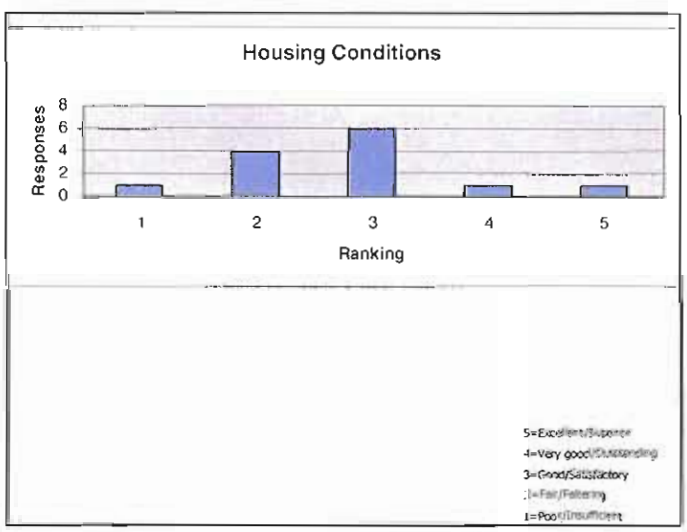

Rental Housing Market
Responses
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

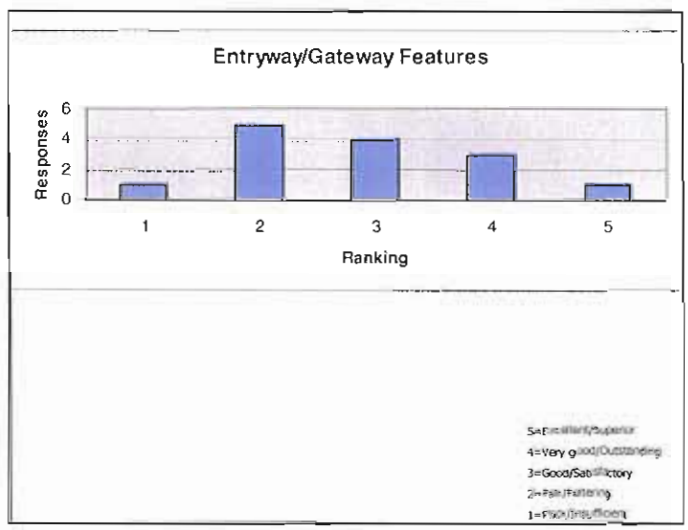

Variety of Housing Types
Responses
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

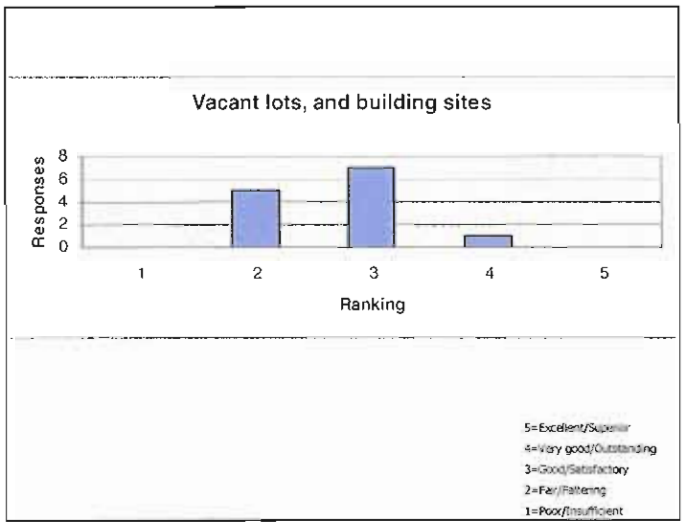

Low Income
Responses
15
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

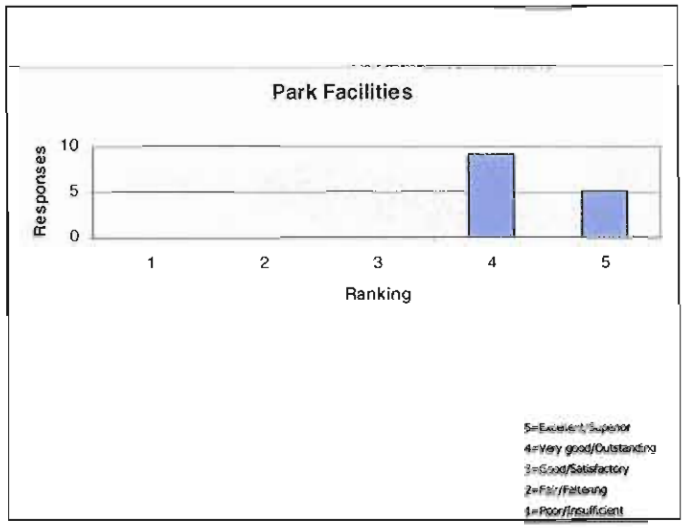

Housing Agency
Responses
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

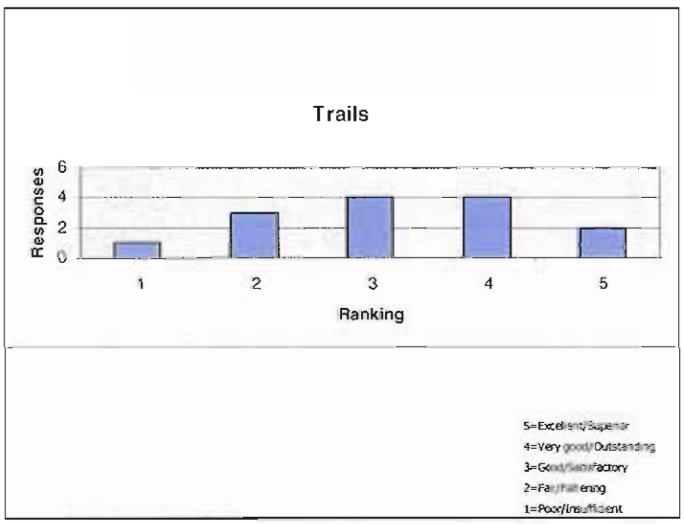

Commercial Signs
Responses
8
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

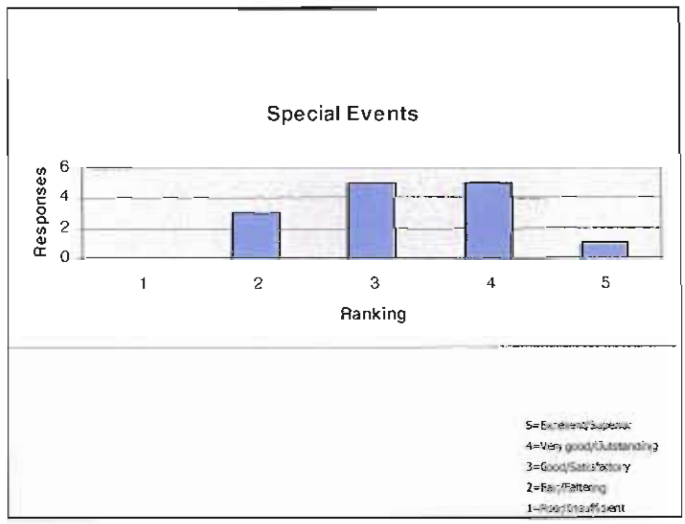

Housing Conditions
Responses
8
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

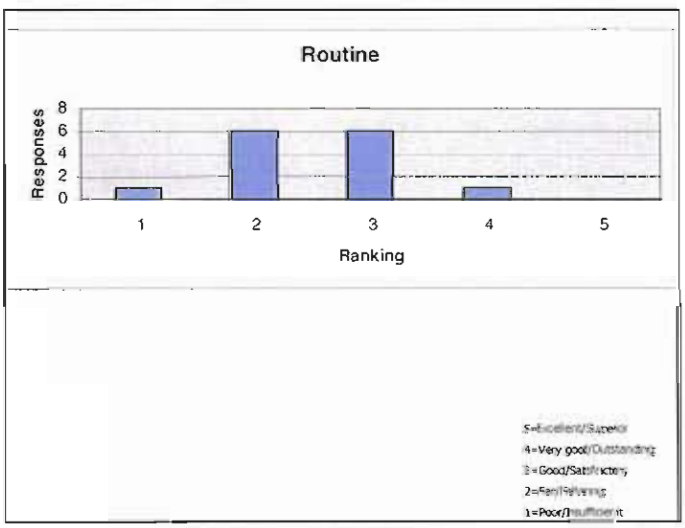

Entryway/Gateway Features
Responses
6
4
2
0
1
2
3
4
5
Ranking

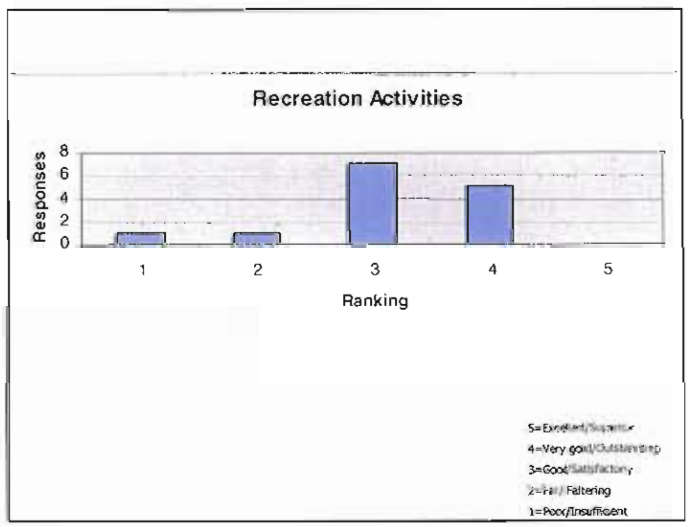

Vacant lots, and building sites
Responses
8
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

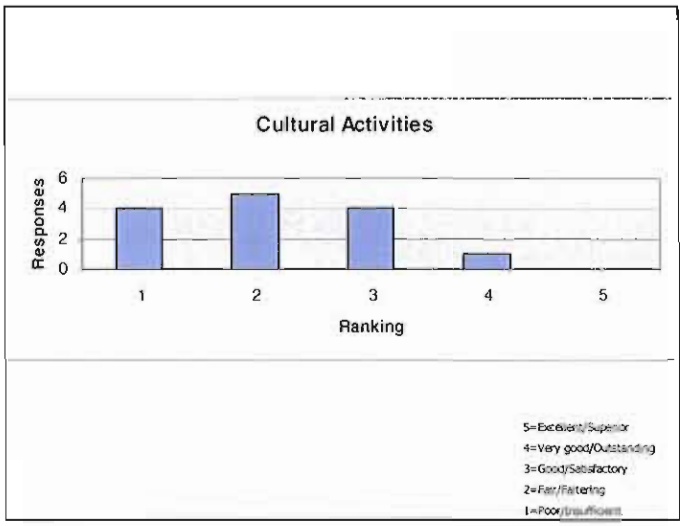

Park Facilities
Responses
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

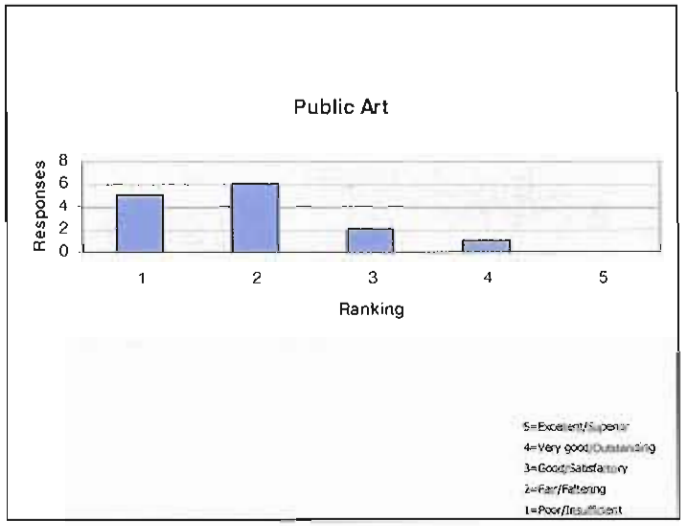

Trails
Responses
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

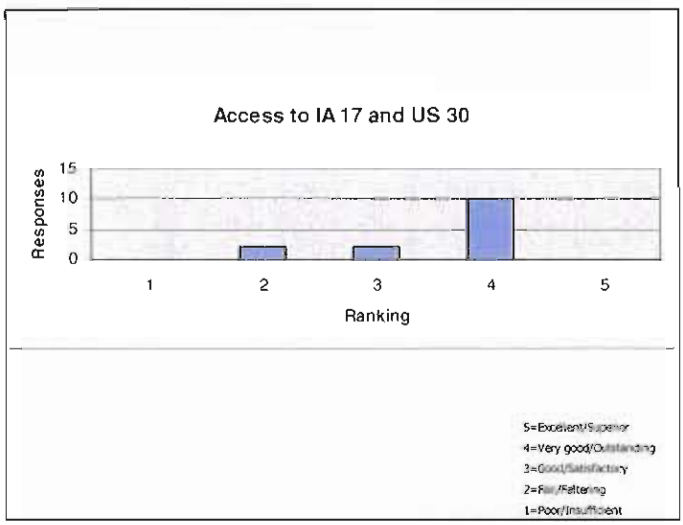

Special Events
Responses
6
4
2
0
1
2
3
4
5
Ranking

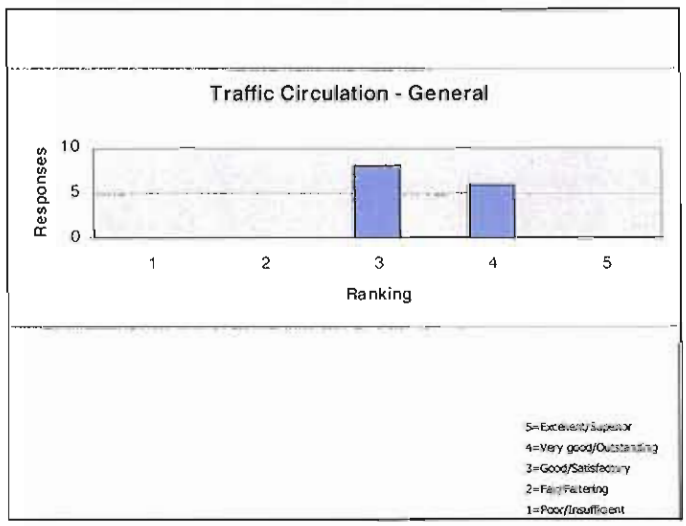

Routine
Responses
8
6
4
2
0
1
2
3
4
5
Ranking

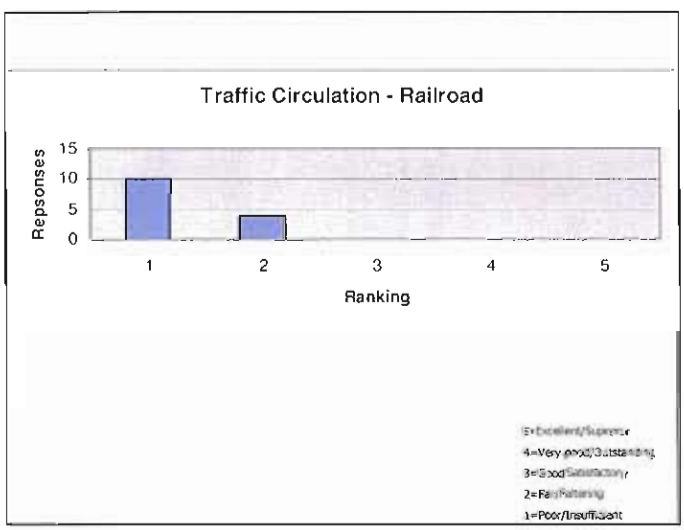

Recreation Activities
Responses
8
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

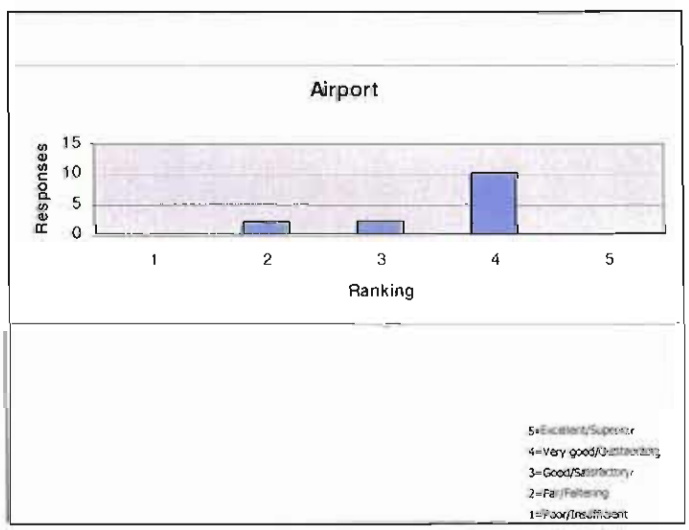

Cultural Activities
Responses
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

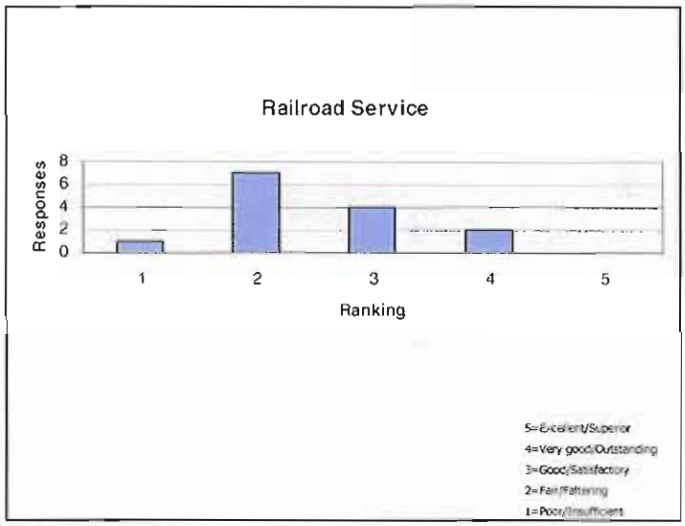

Public Art
Responses
8
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

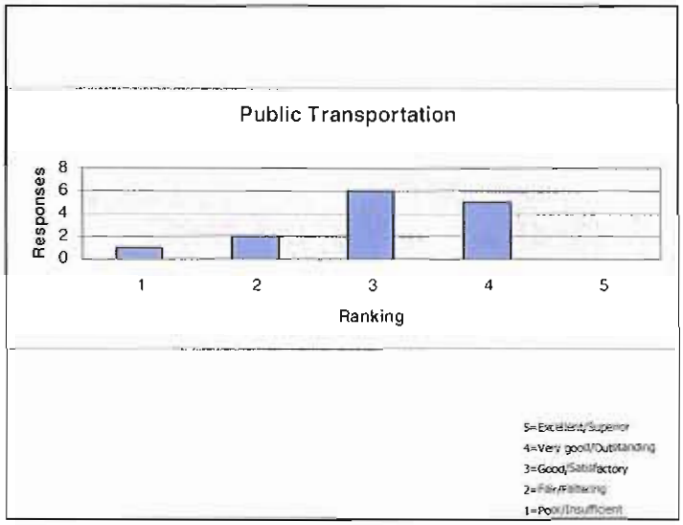

Access to IA 17 and US 30
Responses
15
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

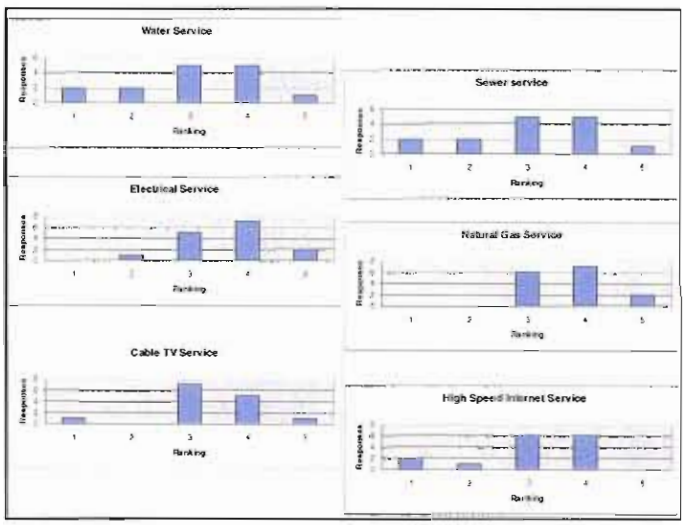

Traffic Circulation - General
Responses
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

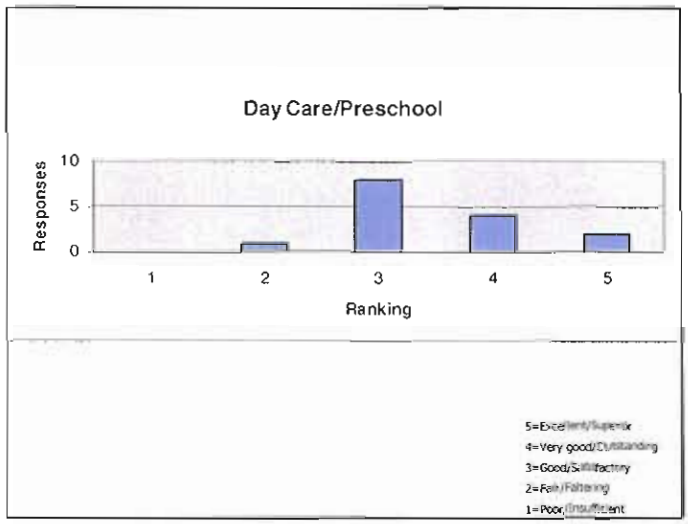

Traffic Circulation - Railroad
Repsonses
15
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

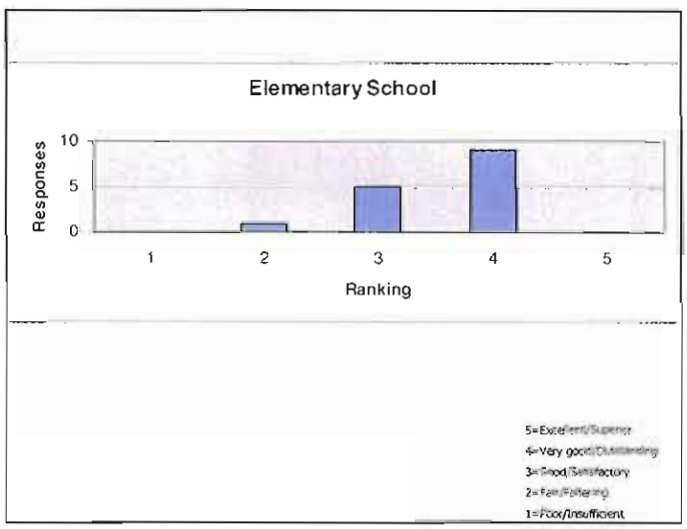

Airport
Responses
15
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

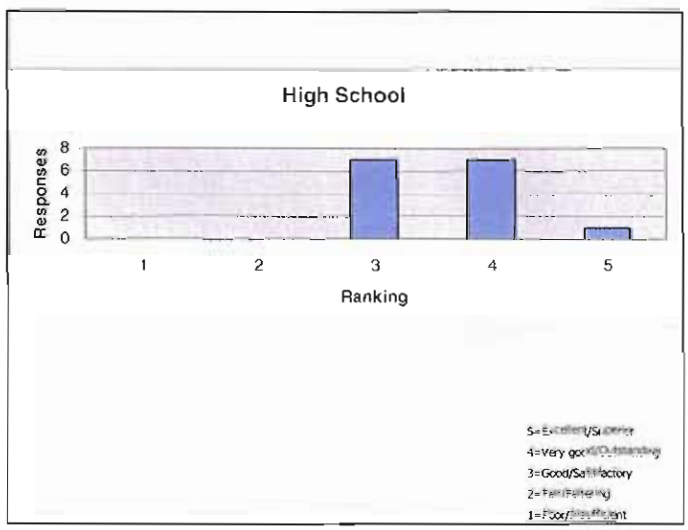

Railroad Service
Responses
0
2
4
6
8
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

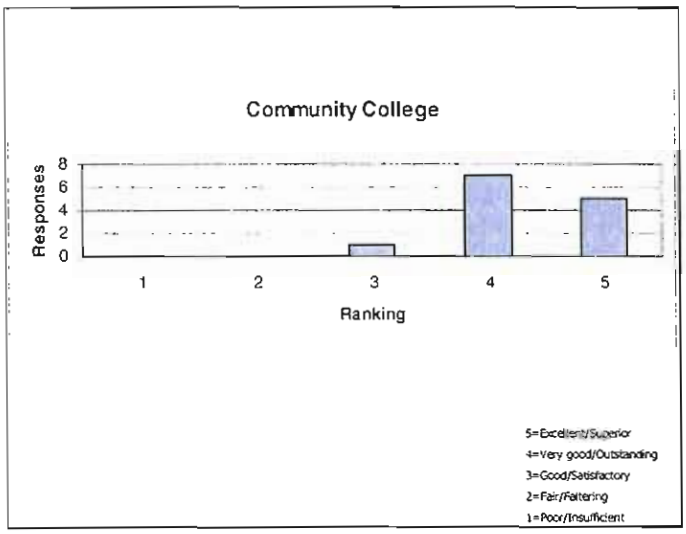

Public Transportation
Responses
0
2
4
6
8
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

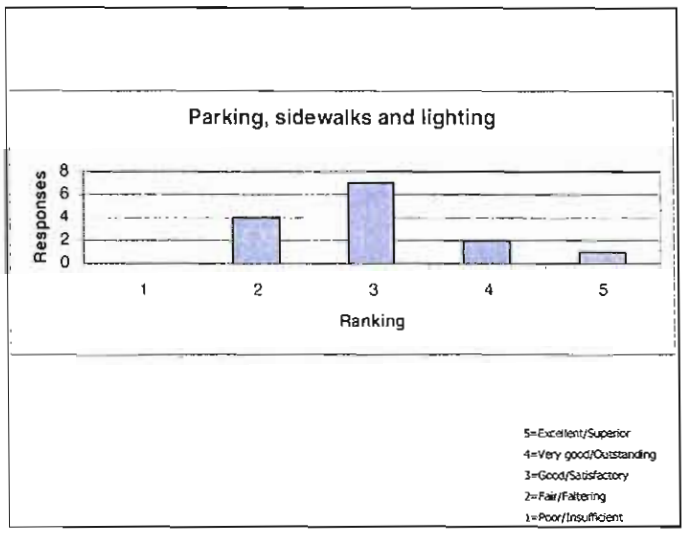

Water Service
Sewer service
Electrical Service
Natural Gas Service
Cable TV Service
High Speed Internet Service

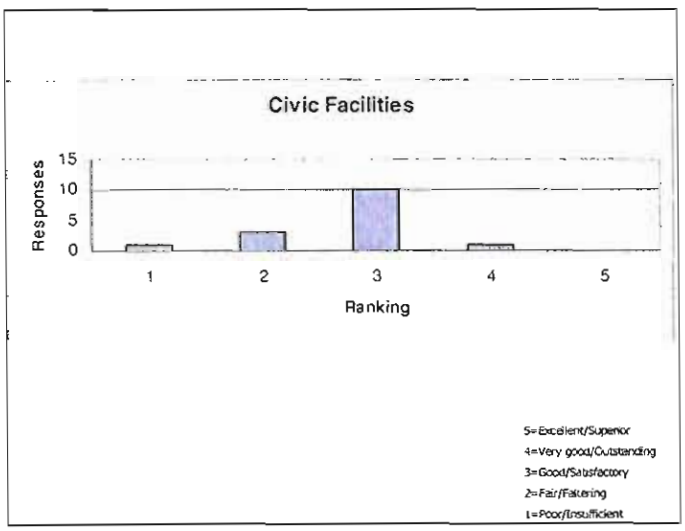

Day Care/Preschool
Responses
0
5
10
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

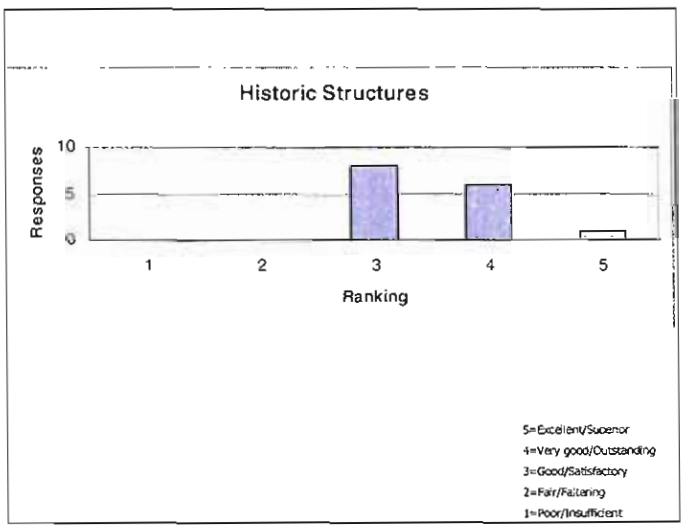

Elementary School
Responses
0
5
10
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

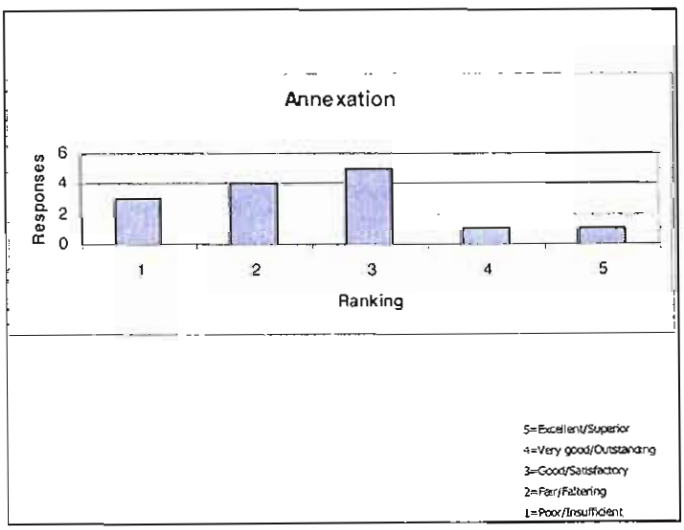

High School
Responses
0
2
4
6
8
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

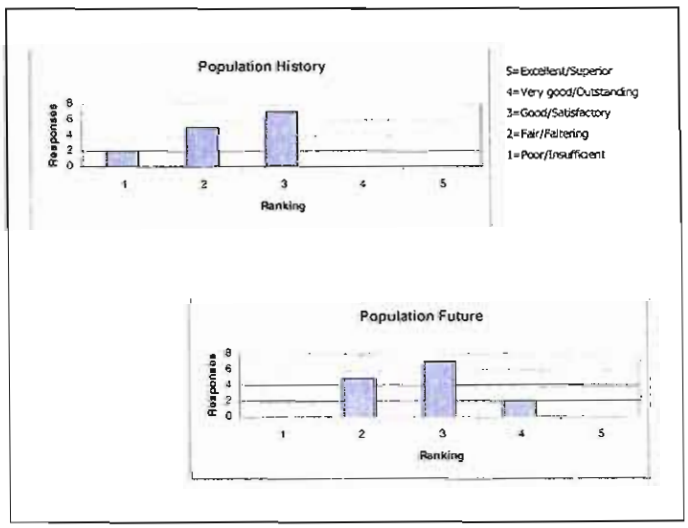

Community College
Responses
8
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

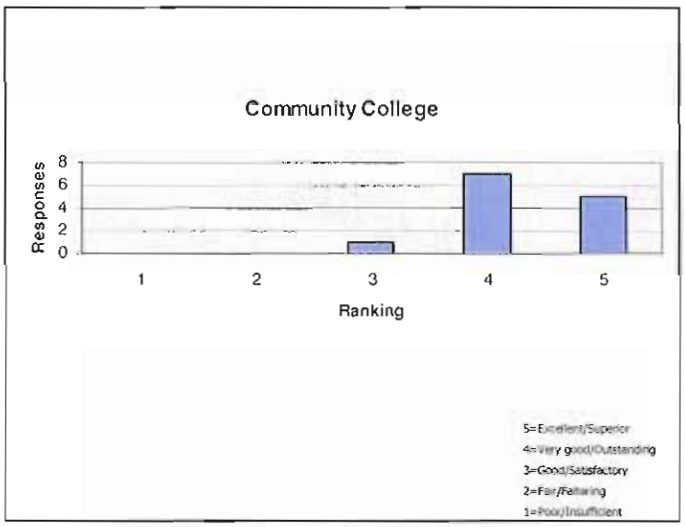

Parking, sidewalks and lighting
Responses
8
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

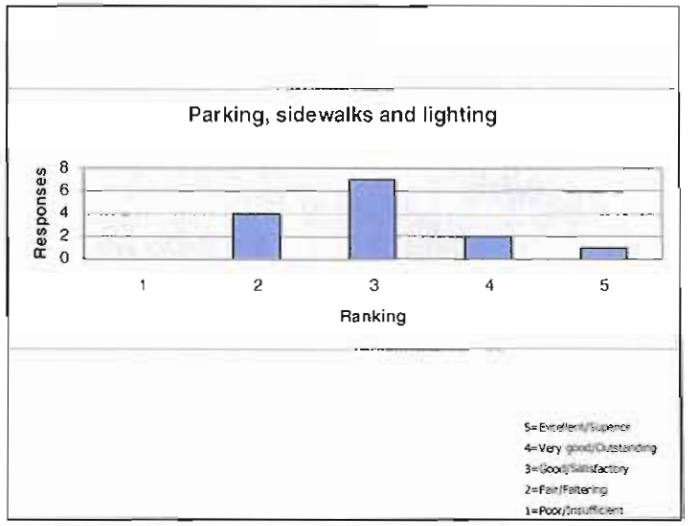

Civic Facilities
Responses
15
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

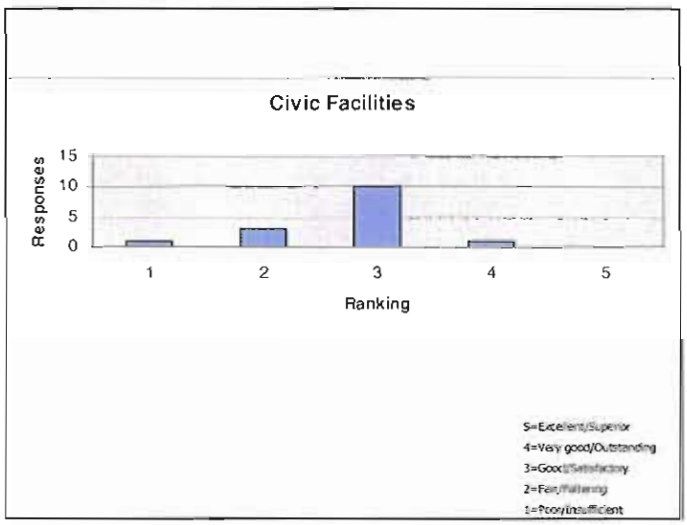

Historic Structures
Responses
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

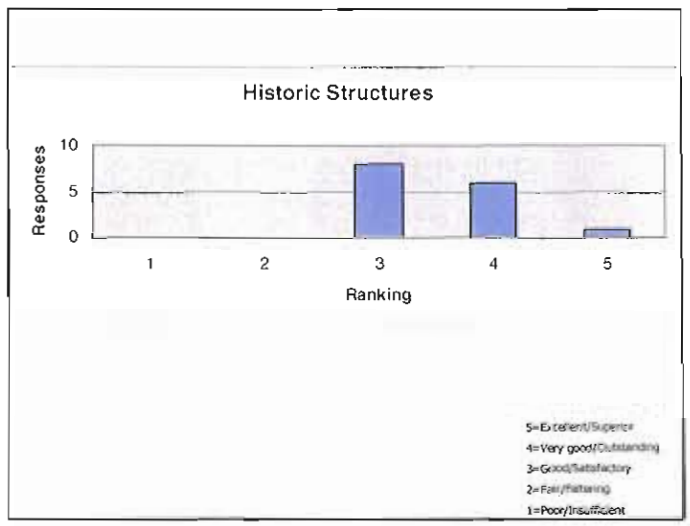

Annexation
Responses
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

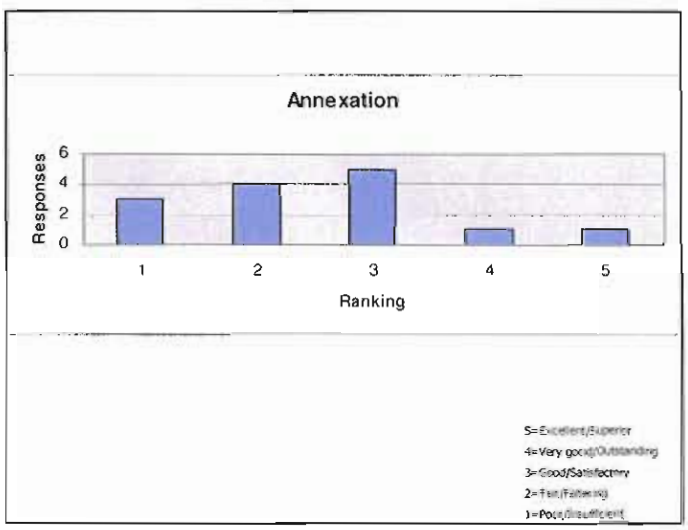

Population History
Responses
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient
Population Future
Responses
Ranking


Community College
Responses
8
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient


Parking, sidewalks and lighting
Responses
8
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient


Civic Facilities
Responses
15
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient


Historic Structures
Responses
10
5
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient


Annexation
Responses
6
4
2
0
1
2
3
4
5
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient

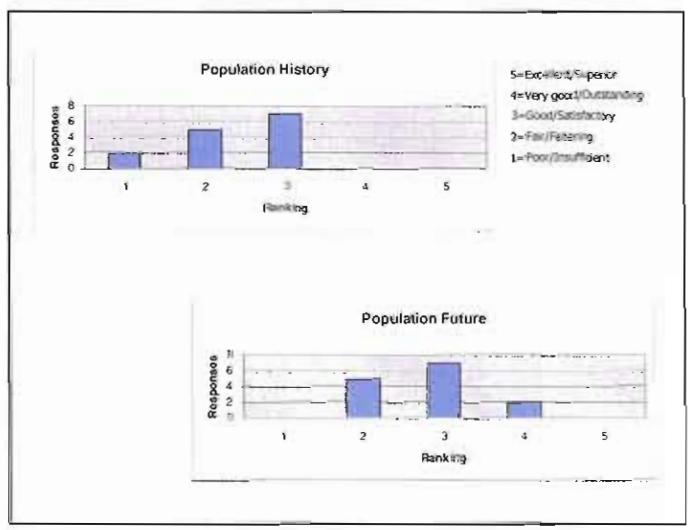

Population History
Responses
Ranking
5=Excellent/Superior
4=Very good/Outstanding
3=Good/Satisfactory
2=Fair/Faltering
1=Poor/Insufficient
Population Future
Responses
1
2
3
4
5
Ranking

Table 16-1
Highest ranked Boone intersections for potential improvements (2001-2005 data)

(See Exhibit 16-2)	Intersection	Crash Frequency
1	Story St & Hawkeye St/Hawkeye Dr	46
2	Park Ave & S Story St	23
3	Crestwood Dr & S Story St	13
4	5th St & Monona St	9
5	Co Rd E26/ 190th St & Co Rd R27/ Linn St/ P Ave	5
6	US 30/220th St & Airport Rd/Snedden Dr	8
7	5th St & Tama St	3
8	Mamie Eisenhower Dr & Story St	27
9	Mamie Eisenhower Dr & 4th St	10
10	Story St & 11th St	8
11	Mamie Eisenhower Dr & Marion St	5
12	Clinton St and 6th St	3
13	Mamie Eisenhower Dr & Marshall St	4
14	S Story St & 2nd St	5

Source: Iowa DOT – Statewide Intersection Safety Improvement Candidate List (2001-2005)

Rail Traffic – Crossing Crashes – Boone County

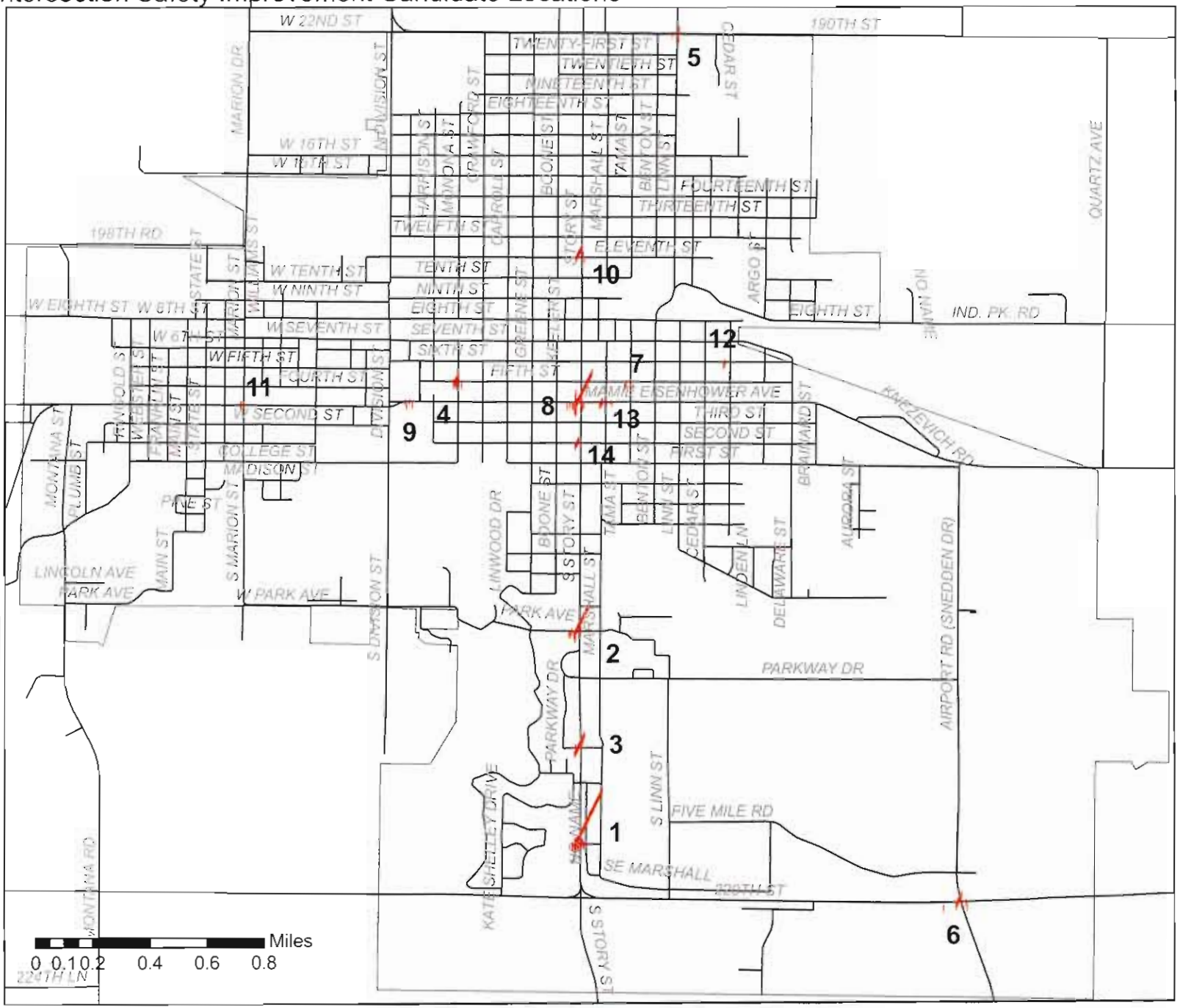
Table 16-2
Accident Reports Filed by Union Pacific in Boone County (2004-2006)

Report Number	Date	Accident Type	Equipment Damage ($)	Track Damage ($)	Killed/Injured	RR Equipment	Speed (mph)	Locomotives Derailed	Cars Derailed
0206CB001	2/1/2006	derail	6614	11900	0	Yard/Switching	5	2	0
0306CB019	3/23/2006	derail	0	13451	0	Yard/Switching	6	1	0
0306CB024	3/30/2006	derail	4243	121955	0	Yard/Switching	7	0	5
0306CB024	3/30/2006	derail	2332	0	0	Yard/Switching	0	0	0
0105CB012	1/13/2005	Run-through switch	0	7000	0	Freight Train	3	0	0
1205DB025	12/22/2005	derail	2145	5065	0	Freight Train	3	0	1
0404CB004	4/8/2004	derail	47	17189	0	Yard/Switching	4	0	1
0504CB004	5/5/2004	other	45058	0	1 (killed)	Freight Train	0	0	0
1204CB008	12/10/2004	derail	4826	15274	0	Freight Train	4	0	2

(See attached DOT-FRA "Rail Equipment Accident/Incident Reports")

City of Boone
2001-2005 Vehicle Crashes by Top Ranked Locations for Safety Improvements:
Iowa DOT Statewide Intersection Safety Improvement Candidate Locations

Exhibit 16-2



Note: Each dot represents one vehicle crash

Source: Iowa DOT Office of Traffic and Safety

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

OMB Approval No: 2130-0500

1. Name of Reporting Railroad: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No.: 0404CB004
2. Name of other Railroad Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad Responsible for Track Maintenance *(single entry)*: Union Pacific RR Co. [UP]	3a. Alphabetic Code: UP	3b Railroad Accident/Incident No.: 0404CB004
4. U. S. DOT Grade Crossing Identification Number	5. Date of Accident/Incident: month 0 4 day 0 8 year 2004	6. Time of Accident/Incident: 9:20 AM [X] PM [ ]

7. Type of Accident/ Incident *(single entry in code box)*	1. Derailment 2 Head on collision 3 Rear end collision	4. Side collision 5. Raking collision 6. Broken train collision	7. Hwy-rail crossing 8. RR grade crossing 9. Obstruction	10. Explosion-detonation 11. Fire/violent rupture 12. Other impacts	13. Other *(describe in narrative)*	Code: 01

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/ Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
N/A	N/A	N/A		COUNCIL BLUFFS

13. Nearest City/ Town	14. Milepost *(to nearest tenth)*	15. State Abbr.	Code	16. County
BOONE	202.3	IA	19	BOONE

17. Temperature (F) *(specify if minus)*	18. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark	Code	19. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow	Code	20. Type of Track 1. Main 2. Yard 3. Siding 4 Industry	Code
52 °F		2		1		2

21. Track Name/ Number	22. FRA Track Class (1-6, X)	Code	23. Annual Track Density *(gross tons in millions)*	24. Time Table Direction 1. North 2 South 3.East 4. West	Code
YARD		1			3

25. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9 Maint./inspect. car A. Spec. MoW Equip.	Code	26. Was Equipment Attended? 1. Yes 2. No	Code	27. Train Number/Symbol
	7		Y	YB05

28. Speed *(recorded speed if available)* R - Recorded E - Estimated		Code	30. Method(s) of Operation *(enter codes that apply)*			30a. Remotely Controlled Locomotive?
004	MPH	E	a. ATCS b. Auto train control c Auto train stop d. Cab signals e. Traffic control f. Interlocking	g. Automatic block h. Current of traffic i. Time table/train orders j. Track warrant control k. Direct traffic control l Yard limits	m. Special instructions n. Other than main track rules p. Positive train control o Other *(specify in narrative)*	0 = Not a remotely controlled operation 1 = Remote control portable transmitter 2 = Remote control tower operation 3 = Remote control portable transmitter - more than one remote control transmitter

29. Trailing Tons (gross tonnage, excluding power units)	Code(s)	Code
111	N	0

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c Loaded *(yes/no)*	32. If any railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.	Alcohol	Drugs
(1) First involved *(derailed, struck, etc)*	UP098419	005	Y			
(2) Causing *(if mechanical, cause reported)*		000		33.Was this consist transporting passengers ? *(y/n)*	No	

34. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End e. Remote	35. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c Freight	Empty d. Pass.	e. Caboose
(1) Total in Train	2	0	0	0	0	(1) Total in Equipment Consist	2	0	1	0	0
(2) Total Derailed	0	0	0	0	0	(2) Total Derailed	1	0	0	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
$ 47	$ 17,189	T110	

Number of Crew Members				Length of Time on Duty	
40. Engineers/ Operators	41. Firemen	42. Conductors	43. Brakemen	44. Engineer/Operator	45. Conductor
1		1		Hrs: 02 Mins: 20	Hrs: 02 Mins: 20

Casualties to:	46. Railroad Employees	47. Train Passengers	48. Others	49. Special Study Block
Fatal	0	0	0	
Nonfatal	0	0	0	

50. Latitude (optional)	51. Longitude (optional)
0	0

52. Narrative Description *(Be specific, and continue on separate sheet if necessary)*

YB051-08 SHOVING CARS INTO TRACK 01-018 WHEN UP98419 DERAILED DUE TO WIDE GAUGE.

53. Typed/Printed Name & Title of Preparer	54. Signature	55. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports status and, as such shall not " be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report .. ." 49 U.S C. 20903
See 49 C.F.R. 225.7 (h)

FORM FRA F 6180.54

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

OMB Approval No: 2130-0500

1. Name of Reporting Railroad: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No.: 0504CB004
2. Name of other Railroad Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad Responsible for Track Maintenance *(single entry)*: Union Pacific RR Co. [UP]	3a. Alphabetic Code: UP	3b. Railroad Accident/Incident No.: 0504CB004
4. U. S. DOT Grade Crossing Identification Number: 190721W	5. Date of Accident/Incident: month 05 day 05 year 2004	6. Time of Accident/Incident: 9:45 AM ☐ PM ☒

7. Type of Accident/ Incident *(single entry in code box)*	1. Derailment	4. Side collision	7. Hwy-rail crossing	10. Explosion-detonation	13. Other *(describe in narrative)*	Code: 07
	2. Head on collision	5. Raking collision	8. RR grade crossing	11. Fire/violent rupture		
	3. Rear end collision	6. Broken train collision	9. Obstruction	12. Other impacts		

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/ Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
N/A	N/A	N/A		COUNCIL BLUFFS

13. Nearest City/ Town	14. Milepost *(to nearest tenth)*	15. State Abbr.	Code	16. County
BOONE	199.4	IA	19	BOONE

17. Temperature (F) *(specify if minus)*	18. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark	Code	19. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow	Code	20. Type of Track 1 Main 2 Yard 3. Siding 4. Industry	Code
65 °F		4		1		1

21. Track Name/ Number	22. FRA Track Class (1-6, X)	Code	23. Annual Track Density *(gross tons in millions)*	24. Time Table Direction 1. North 2. South 3.East 4 West	Code
NO 1 MAIN		4	118.79		4

25. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3 Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect. car A. Spec. MoW Equip	Code	26. Was Equipment Attended? 1. Yes 2. No	Code	27. Train Number/Symbol
	1		Y	CNTA

28. Speed *(recorded speed if available)* R - Recorded E - Estimated		Code	30. Method(s) of Operation *(enter codes that apply)* a. ATCS b. Auto train control c. Auto train stop d. Cab signals e. Traffic control f. Interlocking g. Automatic block h Current of traffic i. Time table/train orders j. Track warrant control k Direct traffic control l. Yard limits m. Special instructions n. Other than main track rules p. Positive train control o. Other *(specify in narrative)*	30a. Remotely Controlled Locomotive? 0 = Not a remotely controlled operation 1 = Remote control portable transmitter 2 = Remote control tower operation 3 = Remote control portable transmitter - more than one remote control transmitter	Code
000	MPH	R	Code(s): B		0
29. Trailing Tons (gross tonnage, excluding power units)	2,437				

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded *(yes/no)*	32. If any railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.	Alcohol	Drugs
(1) First involved *(derailed, struck, etc)*	CIPX001050	094	N			
(2) Causing *(if mechanical, cause reported)*		000		33. Was this consist transporting passengers? *(y/n)*		No

34. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End e. Remote	35. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Train	2	0	0	0	0	(1) Total in Equipment Consist	0	0	115	0	0
(2) Total Derailed	0	0	0	0	0	(2) Total Derailed	0	0	0	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39 Contributing Cause Code
$ 45,058	$ 0	M399	

Number of Crew Members: 40. Engineers/ Operators	41 Firemen	42. Conductors	43. Brakemen	Length of Time on Duty: 44. Engineer/Operator	45. Conductor
1		1		Hrs: 01 Mins: 05	Hrs 01 Mins 05

Casualties to:	46. Railroad Employees	47. Train Passengers	48 Others	49. Special Study Block
Fatal	0	0	1	
Nonfatal	0	0	0	

50. Latitude (optional)	51. Longitude (optional)
0	0

52. Narrative Description *(Be specific, and continue on separate sheet if necessary)*

DRIVER OF AUTO TRAVELING AT HIGH SPEED WAS FATALLY INJURED AFTER FAILING TO STOP AT CROSSING AND STRUCK CAR CIPX1050 (CNTAT-05) STANDING ON NO. 1 MAIN TRACK. CAR CIPX1050 WAS DESTROYED.

53. Typed/Printed Name & Title of Preparer	54. Signature	55 Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports status and, as such shall not " be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report ...." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (h)

FORM FRA F 6180.54

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

OMB Approval No: 2130-0500

1. Name of Reporting Railroad: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No: 1204CB008
2. Name of other Railroad Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad Responsible for Track Maintenance *(single entry)*: Union Pacific RR Co. [UP]	3a. Alphabetic Code: UP	3b. Railroad Accident/Incident No.: 1204CB008
4. U. S. DOT Grade Crossing Identification Number	5. Date of Accident/Incident: month 1 2 / day 1 0 / year 2004	6. Time of Accident/Incident: 10:50 AM [X] PM [ ]

7. Type of Accident/Incident *(single entry in code box)*: 1. Derailment; 2. Head on collision; 3. Rear end collision; 4. Side collision; 5. Raking collision; 6. Broken train collision; 7. Hwy-rail crossing; 8. RR grade crossing; 9. Obstruction; 10. Explosion-detonation; 11. Fire/violent rupture; 12. Other impacts; 13. Other *(describe in narrative)* — Code: 01

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/ Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
N/A	N/A	N/A		COUNCIL BLUFFS

13. Nearest City/Town	14. Milepost *(to nearest tenth)*	15. State Abbr.	Code	16. County
BOONE	201.6	IA	19	BOONE

17. Temperature (F) *(specify if minus)*	18. Visibility (single entry) 1. Dawn 2 Day 3. Dusk 4. Dark — Code	19. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow — Code	20. Type of Track 1. Main 2. Yard 3 Siding 4 Industry — Code
38 °F	2	2	2

21. Track Name/ Number	22. FRA Track Class (1-6, X) — Code	23. Annual Track Density *(gross tons in millions)*	24. Time Table Direction 1. North 2. South 3.East 4. West — Code
YARD	1		3

25. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s) 9. Maint./inspect. car A. Spec. MoW Equip. — Code	26. Was Equipment Attended? 1. Yes 2. No — Code	27 Train Number/Symbol
1	Y	MNPB

28. Speed *(recorded speed if available)* R - Recorded E - Estimated — Code	30. Method(s) of Operation *(enter codes that apply)* a. ATCS; b. Auto train control; c. Auto train stop; d. Cab signals; e Traffic control; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j. Track warrant control; k. Direct traffic control; l Yard limits; m. Special instructions; n. Other than main track rules; p Positive train control; o. Other *(specify in narrative)* — Code(s)	30a. Remotely Controlled Locomotive? 0 = Not a remotely controlled operation; 1 = Remote control portable transmitter; 2 = Remote control tower operation; 3 = Remote control portable transmitter - more than one remote control transmitter — Code
004 MPH — R	N	0

29. Trailing Tons (gross tonnage, excluding power units): 4,289

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded *(yes/no)*
(1) First involved *(derailed, struck, etc)*	HLSC007618	013	Y
(2) Causing *(if mechanical, cause reported)*		000	

32. If any railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box. Alcohol: ; Drugs:

33. Was this consist transporting passengers? *(y/n)*: No

34. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End e. Remote
(1) Total in Train	2	0	0	0	0
(2) Total Derailed	0	0	0	0	0

35. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	35	0	5	0	0
(2) Total Derailed	2	0	0	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
$ 4,826	$ 15,274	T221	

Number of Crew Members: 40. Engineers/ Operators	41. Firemen	42. Conductors	43. Brakemen	Length of Time on Duty: 44. Engineer/Operator	45. Conductor
1		1		Hrs. 01 Mins. 50	Hrs. 01 Mins. 50

Casualties to:	46. Railroad Employees	47. Train Passengers	48. Others	49. Special Study Block
Fatal	0	0	0	
Nonfatal	0	0	0	

50 Latitude (optional)	51. Longitude (optional)
0	0

52. Narrative Description *(Be specific, and continue on separate sheet if necessary)*

MNPBY-09 OPERATING ON TRACK 01-010 WHEN HLSC7618 AND BR60070 DERAILED DUE TOA BROKEN RAIL.

53. Typed/Printed Name & Title of Preparer	54. Signature	55. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports status and, as such shall not " be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report ...." 49 U.S.C. 20903, Sec 49 C.F.R. 225.7 (b)

FORM FRA F 6180.54

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

OMB Approval No: 2130-0500

1. Name of Reporting Railroad: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No: 0105CB012
2. Name of other Railroad Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad Responsible for Track Maintenance *(single entry)*: Union Pacific RR Co. [UP]	3a. Alphabetic Code: UP	3b. Railroad Accident/Incident No: 0105CB012
4. U.S DOT Grade Crossing Identification Number	5. Date of Accident/Incident: month 0 1 / day 1 3 / year 2005	6. Time of Accident/Incident: 10:00 AM ☐ PM ☒

7. Type of Accident/Incident *(single entry in code box)*: 1 Derailment; 2 Head on collision; 3 Rear end collision; 4 Side collision; 5 Raking collision; 6 Broken train collision; 7 Hwy-rail crossing; 8 RR grade crossing; 9 Obstruction; 10 Explosion-detonation; 11 Fire/violent rupture; 12 Other impacts — Code: 13

13. Other *(describe in narrative)*

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
N/A	N/A	N/A		COUNCIL BLUFFS

13. Nearest City/Town	14. Milepost *(to nearest tenth)*	15. State Abbr	Code	16. County
BOONE	290.8	IA	19	BOONE

17. Temperature (F) *(specify if minus)*	18. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4 Dark — Code	19. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow — Code	20. Type of Track 1. Main 2. Yard 3. Siding 4. Industry — Code
-5 °F	4	1	1

21. Track Name/Number	22. FRA Track Class (1-6, X) — Code	23. Annual Track Density *(gross tons in millions)*	24. Time Table Direction 1. North 2 South 3.East 4. West — Code
NO 2 MAIN	1	46.07	3

25. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s) 9. Maint./inspect car A. Spec. MoW Equip — Code	26. Was Equipment Attended? 1 Yes 2. No — Code	27. Train Number/Symbol
1	Y	CSMM

28. Speed *(recorded speed if available)* R - Recorded E - Estimated	Code	30. Method(s) of Operation *(enter codes that apply)* a. ATCS; b. Auto train control; c. Auto train stop; d. Cab signals; e. Traffic control; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j. Track warrant control; k. Direct traffic control; l. Yard limits; m. Special instructions; n. Other than main track rules; p. Positive train control; o. Other *(specify in narrative)* — Code(s)	30a. Remotely Controlled Locomotive? 0 = Not a remotely controlled operation; 1 = Remote control portable transmitter; 2 = Remote control tower operation; 3 = Remote control portable transmitter - more than one remote control transmitter — Code
003 MPH	E	E	0

29. Trailing Tons (gross tonnage, excluding power units): 13,277

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded *(yes/no)*
(1) First involved *(derailed, struck, etc)*	UP006469	001	N
(2) Causing *(if mechanical, cause reported)*		000	

32. If any railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box: Alcohol 00; Drugs 00

33. Was this consist transporting passengers? *(y/n)*: No

34. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End e. Remote
(1) Total in Train	2	0	0	0	0
(2) Total Derailed	0	0	0	0	0

35. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	101	0	0	0	0
(2) Total Derailed	0	0	0	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
$ 0	$ 7,000	H702	

Number of Crew Members

40. Engineers/Operators	41. Firemen	42. Conductors	43. Brakemen
1		1	

Length of Time on Duty

44. Engineer/Operator	45. Conductor
Hrs: 06 Mins: 30	Hrs: 06 Mins: 30

Casualties to:	46. Railroad Employees	47. Train Passengers	48. Others
Fatal	0	0	0
Nonfatal	0	0	0

49. Special Study Block

50. Latitude (optional)	51. Longitude (optional)
0	0

52. Narrative Description *(Be specific, and continue on separate sheet if necessary)*

CSMMH-09 CONDUCTOR FAILED TO PROPERLY LINE SWITCH FROM NO.2 MAIN TRK TO NO. 1 MAIN TRK RESULTING INDAMAGE TO FROG, SWITCH POINTS AND SWITCH MACHINES WHEN SWITCH WAS RUN THROUGH. NO DERAILMENT. NO EQUIPMENT DAMAGE. 7. TYPE OF ACCIDENT: 13. OTHER = RUN THRU SWITCH.

53. Typed/Printed Name & Title of Preparer	54. Signature	55. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports status and, as such shall not " be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report ...." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

FORM FRA F 6180.54

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

OMB Approval No: 2130-0500

1. Name of Reporting Railroad: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No: 1205DB025
2. Name of other Railroad Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad Responsible for Track Maintenance *(single entry)*: Union Pacific RR Co. [UP]	3a. Alphabetic Code: UP	3b. Railroad Accident/Incident No.: 1205DB025
4. U. S. DOT Grade Crossing Identification Number	5. Date of Accident/Incident — month: 12 / day: 22 / year: 2005	6. Time of Accident/Incident: 5:00 AM [X] PM [ ]

7. Type of Accident/Incident *(single entry in code box)*: 1. Derailment; 2. Head on collision; 3. Rear end collision; 4. Side collision; 5. Raking collision; 6. Broken train collision; 7. Hwy-rail crossing; 8. RR grade crossing; 9. Obstruction; 10. Explosion-detonation; 11. Fire/violent rupture; 12. Other impacts; 13. Other *(describe in narrative)* — Code: 01

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/ Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
N/A	N/A	N/A		COUNCIL BLUFFS

13. Nearest City/Town	14. Milepost *(to nearest tenth)*	15. State Abbr.	Code	16. County
BOONE	335.0	IA	19	BOONE

17. Temperature (F) *(specify if minus)*	18. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark	Code	19. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow	Code	20. Type of Track 1. Main 2. Yard 3. Siding 4. Industry	Code
22 °F	4	4	2	1		2

21. Track Name/ Number	22. FRA Track Class (1-6, X)	Code	23. Annual Track Density *(gross tons in millions)*	24. Time Table Direction 1. North 2. South 3. East 4. West	Code
YARD		1			4

25. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect. car A. Spec. MoW Equip.	Code	26. Was Equipment Attended? 1. Yes 2. No	Code	27. Train Number/Symbol
	1	Y		1GNC

28. Speed *(recorded speed if available)* R - Recorded E - Estimated	Code	30. Method(s) of Operation *(enter codes that apply)* a. ATCS b. Auto train control c. Auto train stop d Cab signals e. Traffic control f. Interlocking g. Automatic block h. Current of traffic i. Time table/train orders j. Track warrant control k. Direct traffic control l Yard limits m. Special instructions n. Other than main track rules p. Positive train control o Other *(specify in narrative)*	30a. Remotely Controlled Locomotive? 0 = Not a remotely controlled operation 1 = Remote control portable transmitter 2 = Remote control tower operation 3 = Remote control portable transmitter - more than one remote control transmitter	Code
003 MPH	E	Code(s): N		0

29. Trailing Tons (gross tonnage, excluding power units): 1,564

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded *(yes/no)*
(1) First involved *(derailed, struck, etc)*	DTTX075656	036	N
(2) Causing *(if mechanical, cause reported)*		000	

32. If any railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

Alcohol	Drugs
00	00

33. Was this consist transporting passengers? *(y/n)*: No

34. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End e. Remote
(1) Total in Train	2	0	0	0	0
(2) Total Derailed	0	0	0	0	0

35. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	0	0	34	0	0
(2) Total Derailed	0	0	1	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
$ 2,145	$ 5,065	M101	

Number of Crew Members

40. Engineers/ Operators	41. Firemen	42. Conductors	43. Brakemen
1		1	

Length of Time on Duty

44. Engineer/Operator	45. Conductor
Hrs: 07 Mins:	Hrs: 07 Mins:

Casualties to:	46. Railroad Employees	47. Train Passengers	48. Others	49. Special Study Block
Fatal	0	0	0	
Nonfatal	0	0	0	

50. Latitude (optional)	51. Longitude (optional)
0	0

52. Narrative Description *(Be specific, and continue on separate sheet if necessary)*

1GNCH1-12 SHOVING INTO TRACK 01-014 HAD DTTX75656 DERAIL DUE TO ICE/SNOW BUILDUP ON THE CROSSING.

53. Typed/Printed Name & Title of Preparer	54. Signature	55. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports status and, as such shall not " be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report ...." 49 U S.C. 20903. See 49 C F R. 225.7 (b)

FORM FRA F 6180.54

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

OMB Approval No: 2130-0500

1. Name of Reporting Railroad: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No.: 0206CB001
2. Name of other Railroad Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad Responsible for Track Maintenance *(single entry)*: Union Pacific RR Co. [UP]	3a. Alphabetic Code: UP	3b. Railroad Accident/Incident No.: 0206CB001
4. U. S. DOT Grade Crossing Identification Number	5. Date of Accident/Incident: month 0 2 / day 0 1 / year 2006	6. Time of Accident/Incident: 11:10 AM [X] PM [ ]

7. Type of Accident/Incident *(single entry in code box)*: 1. Derailment; 2. Head on collision; 3. Rear end collision; 4. Side collision; 5. Raking collision; 6. Broken train collision; 7. Hwy-rail crossing; 8. RR grade crossing; 9. Obstruction; 10. Explosion-detonation; 11. Fire/violent rupture; 12. Other impacts; 13. Other *(describe in narrative)* — Code: 01

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/ Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
N/A	N/A	N/A		COUNCIL BLUFFS

13. Nearest City/Town	14. Milepost *(to nearest tenth)*	15. State Abbr.	Code	16. County
BOONE	202.3	IA	19	BOONE

17. Temperature (F) *(specify if minus)*	18. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark — Code	19. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow — Code	20. Type of Track 1. Main 2. Yard 3. Siding 4. Industry — Code
45 °F	2	1	2

21. Track Name/ Number	22. FRA Track Class (1-6, X) — Code	23. Annual Track Density *(gross tons in millions)*	24. Time Table Direction 1. North 2. South 3. East 4. West — Code
YARD	1		1

25. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s) 9. Maint./inspect. car A. Spec. MoW Equip. — Code	26. Was Equipment Attended? 1. Yes 2. No — Code	27. Train Number/Symbol
7	Y	YB05

28. Speed *(recorded speed if available)* R - Recorded E - Estimated — MPH — Code	30. Method(s) of Operation *(enter codes that apply)* a. ATCS; b. Auto train control; c. Auto train stop; d. Cab signals; e. Traffic control; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j. Track warrant control; k. Direct traffic control; l. Yard limits; m. Special instructions; n. Other than main track rules; p. Positive train control; o. Other *(specify in narrative)* — Code(s)	30a. Remotely Controlled Locomotive? 0 = Not a remotely controlled operation; 1 = Remote control portable transmitter; 2 = Remote control tower operation; 3 = Remote control portable transmitter - more than one remote control transmitter — Code
005 MPH — E	N	0
29. Trailing Tons (gross tonnage, excluding power units): 0		

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded *(yes/no)*	32. If any railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box. Alcohol / Drugs	33. Was this consist transporting passengers? *(y/n)*
(1) First involved *(derailed, struck, etc)*	UPY000709	001	N	00 / 00	
(2) Causing *(if mechanical, cause reported)*		000			No

34. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End e. Remote	35. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass	Empty e. Caboose
(1) Total in Train	2	0	0	0	0	(1) Total in Equipment Consist	5	0	2	0	0
(2) Total Derailed	2	0	0	0	0	(2) Total Derailed	0	0	0	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
$ 6,614	$ 11,900	T314	

Number of Crew Members

40. Engineers/ Operators	41. Firemen	42. Conductors	43. Brakemen
1		1	

Length of Time on Duty

44. Engineer/Operator	45. Conductor
Hrs: 05 Mins: 15	Hrs: 05 Mins: 15

Casualties to:	46. Railroad Employees	47. Train Passengers	48. Others	49. Special Study Block
Fatal	0	0	0	
Nonfatal	0	0	0	

50. Latitude (optional)	51. Longitude (optional)
0	0

52. Narrative Description *(Be specific, and continue on separate sheet if necessary)*

YB051-01 PULLING OUT OF TRACK 01-016 ONTO THE LEAD TO XOVER TO 6 TRACK HAD THE NORTH ENGINE LEAD SWITCH POINT LINED AGAINST THE RAIL AND IT BROKE OFF CAUSING UPY709 AND UPY699 TO DERAIL. NO DAMAGE TOUPY699.

53. Typed/Printed Name & Title of Preparer	54. Signature	55. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports status and, as such shall not " be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report ...." 49 U.S.C. 20903 See 49 C.F.R. 225.7 (b).

FORM FRA F 6180.54

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

1. Name of Reporting Railroad: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No.: 0306CB019
2. Name of other Railroad Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad Responsible for Track Maintenance *(single entry)*: Union Pacific RR Co. [UP]	3a. Alphabetic Code: UP	3b. Railroad Accident/Incident No.: 0306CB019
4. U. S. DOT Grade Crossing Identification Number	5. Date of Accident/Incident: month 03 day 23 year 2006	6. Time of Accident/Incident: 5:48 AM ☐ PM ☒

7. Type of Accident/Incident *(single entry in code box)*: 1. Derailment; 2. Head on collision; 3. Rear end collision; 4. Side collision; 5. Raking collision; 6. Broken train collision; 7. Hwy-rail collision; 8. RR grade crossing; 9. Obstruction; 10. Explosion-detonation; 11. Fire/violent rupture; 12. Other impacts

13. Other *(describe in narrative)*: Code 01

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
N/A	N/A	N/A		COUNCIL BLUFFS

13. Nearest City/Town	14. Milepost *(to nearest tenth)*	15. State Abbr.	Code	16. County
BOONE	200.0	IA	19	BOONE

17. Temperature (F) *(specify if minus)*	18. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark	Code	19. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow	Code	20. Type of Track 1. Main 2. Yard 3. Siding 4. Industry	Code
36 °F		2		1		2

21. Track Name/Number	22. FRA Track Class (1-6, X)	Code	23. Annual Track Density *(gross tons in millions)*	24. Time Table Direction 1. North 2. South 3. East 4. West	Code
YARD		1			4

25. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect. car A. Spec. MoW Equip.	Code	26. Was Equipment Attended? 1. Yes 2. No	Code	27. Train Number/Symbol
	7		Y	UP52

28. Speed *(recorded speed if available)* R - Recorded E - Estimated	Code	30. Method(s) of Operation *(enter codes that apply)* a. ATCS; b. Auto train control; c. Auto train stop; d. Cab signals; e. Traffic control; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j. Track warrant control; k. Direct traffic control; l. Yard limits; m. Special instructions; n. Other than main track rules; p. Positive train control; o. Other *(specify in narrative)*	30a. Remotely Controlled Locomotive? 0 = Not a remotely controlled operation; 1 = Remote control portable transmitter; 2 = Remote control tower operation; 3 = Remote control portable transmitter - more than one remote control transmitter	Code
006 MPH	E	Code(s): N		0

29. Trailing Tons (gross tonnage, excluding power units): 0

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded *(yes/no)*
(1) First involved *(derailed, struck, etc)*	UP005274	001	N
(2) Causing *(if mechanical, cause reported)*		000	

32. If any railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

Alcohol	Drugs
00	00

33. Was this consist transporting passengers? *(y/n)*: No

34. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End e. Remote
(1) Total in Train	3	0	0	0	0
(2) Total Derailed	1	0	0	0	0

35. Cars	Loaded a. Freight	Loaded b. Pass	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	0	0	0	0	0
(2) Total Derailed	0	0	0	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
$ 0	$ 13,451	H702	

Number of Crew Members: 40. Engineers/Operators	41. Firemen	42. Conductors	43. Brakemen	Length of Time on Duty: 44. Engineer/Operator	45. Conductor
1		1		Hrs: 02 Mins: 23	Hrs: 02 Mins: 23

Casualties to:	46. Railroad Employees	47. Train Passengers	48. Others	49. Special Study Block
Fatal	0	0	0	
Nonfatal	0	0	0	

50. Latitude (optional)	51. Longitude (optional)
0	0

52. Narrative Description *(Be specific, and continue on separate sheet if necessary)*

LITE POWER DOGCATCH CREW MOVING FROM WEST END OF YARD TO EAST END OF YARD LINED THE 5 SWITCH, BUT RAN THROUGH THE 7 SWITCH, THEN MADE A REVERSE MOVE CAUSING UP5274 TO DERAIL ON TRACK 01-007. NO DAMAGE TO UP5274.

53. Typed/Printed Name & Title of Preparer	54. Signature	55. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports status and, as such shall not " be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report . " 49 U.S.C. 20903. Sec 49 C.F.R. 225.7 (b)

FORM FRA F 6180.54

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

OMB Approval No: 2130-0500

1. Name of Reporting Railroad: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No.: 0306CB024
2. Name of other Railroad Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad Responsible for Track Maintenance *(single entry)*: Union Pacific RR Co. [UP]	3a. Alphabetic Code: UP	3b. Railroad Accident/Incident No: 0306CB024
4. U S. DOT Grade Crossing Identification Number	5. Date of Accident/Incident: month 0 3 day 3 0 year 2006	6. Time of Accident/Incident: 7:55 AM [X] PM [ ]

7. Type of Accident/ Incident *(single entry in code box)*	1. Derailment 2. Head on collision 3. Rear end collision	4. Side collision 5. Raking collision 6. Broken train collision	7. Hwy-rail crossing 8 RR grade crossing 9. Obstruction	10. Explosion-detonation 11. Fire/violent rupture 12. Other impacts	13. Other *(describe in narrative)* Code: 01

8 Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/ Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
N/A	N/A	N/A		COUNCIL BLUFFS

13. Nearest City/ Town	14. Milepost *(to nearest tenth)*	15. State Abbr.	Code	16. County
BOONE	202.3	IA	19	BOONE

17. Temperature (F) *(specify if minus)*	18 Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark	Code	19. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow	Code	20. Type of Track 1. Main 2 Yard 3. Siding 4. Industry	Code
41 °F		2		1		2

21. Track Name/ Number	22. FRA Track Class (1-6, X)	Code	23. Annual Track Density *(gross tons in millions)*	24. Time Table Direction 1. North 2 South 3.East 4. West	Code
YARD		1			4

25. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7 Yard/switching 8. Light loco(s). 9. Maint./inspect. car A. Spec. MoW Equip	Code	26. Was Equipment Attended? 1 Yes 2. No	Code	27. Train Number/Symbol
	7		Y	MBYN

28. Speed *(recorded speed if available)* R - Recorded E - Estimated		Code	30. Method(s) of Operation *(enter codes that apply)* a. ATCS b. Auto train control c. Auto train stop d. Cab signals e. Traffic control f. Interlocking g. Automatic block h. Current of traffic i. Time table/train orders j. Track warrant control k. Direct traffic control l. Yard limits m. Special instructions n. Other than main track rules p. Positive train control o Other *(specify in narrative)* Code(s)	30a. Remotely Controlled Locomotive? 0 = Not a remotely controlled operation 1 = Remote control portable transmitter 2 = Remote control tower operation 3 = Remote control portable transmitter - more than one remote control transmitter	Code
007	MPH	E	N		0
29. Trailing Tons (gross tonnage, excluding power units)	3,209				

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c Loaded *(yes/no)*	32. If any railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.	Alcohol	Drugs
(1) First involved *(derailed, struck, etc)*	SSW087742	037	Y		00	00
(2) Causing *(if mechanical, cause reported)*		000		33.Was this consist transporting passengers? *(y/n)*		No

34. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End e. Remote	35. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Train	2	0	0	0	0	(1) Total in Equipment Consist	29	0	35	0	0
(2) Total Derailed	0	0	0	0	0	(2) Total Derailed	3	0	2	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
$ 4,243	$ 121,955	T205	T111

Number of Crew Members: 40. Engineers/ Operators	41. Firemen	42. Conductors	43. Brakemen	Length of Time on Duty: 44 Engineer/Operator	45. Conductor
1		1		Hrs: 01 Mins: 20	Hrs: 01 Mins. 20

Casualties to:	46. Railroad Employees	47. Train Passengers	48. Others	49. Special Study Block
Fatal	0	0	0	
Nonfatal	0	0	0	

50. Latitude (optional)	51. Longitude (optional)
0	0

52. Narrative Description *(Be specific, and continue on separate sheet if necessary)*

MBYNP-30 PULLING OUT OF THE YARD ON LEAD TRACK 01-106 HAD 5 CARS DERAIL INTO THE SIDE OF THE AGBSE-29, STOPPED ON TRACK 01-100, DUE TO DEFECTIVES TIES. 4 CARS ON AGBSE-29 DAMAGED/NOT DERAILED.

53. Typed/Printed Name & Title of Preparer	54. Signature	55. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports status and, as such shall not " be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report ...." 49 U.S.C 20903 See 49 C.F.R. 225.7 (b)

FORM FRA F 6180.54

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

OMB Approval No: 2130-0500

1. Name of Reporting Railroad: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No: 0306CB024
2. Name of other Railroad Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad Responsible for Track Maintenance *(single entry)*: Union Pacific RR Co. [UP]	3a. Alphabetic Code: UP	3b. Railroad Accident/Incident No.: 0306CB024
4. U S. DOT Grade Crossing Identification Number	5. Date of Accident/Incident: month 0 3 / day 3 0 / year 2006	6. Time of Accident/Incident: 7:55 AM [X] PM [ ]

7. Type of Accident/Incident *(single entry in code box)*: 1. Derailment; 2. Head on collision; 3. Rear end collision; 4. Side collision; 5. Raking collision; 6. Broken train collision; 7. Hwy-rail crossing; 8. RR grade crossing; 9. Obstruction; 10. Explosion-detonation; 11 Fire/violent rupture; 12 Other impacts

13. Other *(describe in narrative)* Code: 01

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/ Derailed	10. Cars Releasing HAZMAT	11 People Evacuated	12. Division
N/A	N/A	N/A		COUNCIL BLUFFS

13 Nearest City/ Town	14. Milepost *(to nearest tenth)*	15. State Abbr.	Code	16. County
BOONE	202.3	IA	19	BOONE

17 Temperature (F) *(specify if minus)*	18. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark	Code	19. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6 Snow	Code	20. Type of Track 1. Main 2 Yard 3. Siding 4. Industry	Code
41 °F		2		1		2

21. Track Name/ Number	22. FRA Track Class (1-6, X)	Code	23. Annual Track Density *(gross tons in millions)*	24 Time Table Direction 1. North 2. South 3.East 4. West	Code
YARD		1			4

25. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect. car A. Spec. MoW Equip.	Code	26. Was Equipment Attended? 1. Yes 2. No	Code	27. Train Number/Symbol
	7	Y		AGBS

28. Speed *(recorded speed if available)* R - Recorded E - Estimated		Code	30. Method(s) of Operation *(enter codes that apply)* a. ATCS; b. Auto train control; c. Auto train stop; d. Cab signals; e. Traffic control; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j. Track warrant control; k. Direct traffic control; l. Yard limits; m. Special instructions; n Other than main track rules; p. Positive train control; o. Other *(specify in narrative)*	30a. Remotely Controlled Locomotive? 0 = Not a remotely controlled operation; 1 = Remote control portable transmitter; 2 = Remote control tower operation; 3 = Remote control portable transmitter - more than one remote control transmitter	Code
000	MPH	R			0

29 Trailing Tons (gross tonnage, excluding power units)	Code(s)
4,800	N

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded *(yes/no)*
(1) First involved *(derailed, struck, etc)*	TTGX991521	011	Y
(2) Causing *(if mechanical, cause reported)*		000	

32. If any railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

Alcohol	Drugs
00	00

33 Was this consist transporting passengers? *(y/n)*: No

34. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End e. Remote
(1) Total in Train	2	0	0	0	0
(2) Total Derailed	0	0	0	0	0

35. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	79	0	0	0	0
(2) Total Derailed	0	0	0	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
$ 2,332	$ 0	T205	T111

Number of Crew Members

40. Engineers/ Operators	41. Firemen	42 Conductors	43. Brakemen
1		1	

Length of Time on Duty

44. Engineer/Operator	45. Conductor
Hrs: 09 Mins: 50	Hrs: 09 Mins: 50

Casualties to:	46. Railroad Employees	47. Train Passengers	48 Others
Fatal	0	0	0
Nonfatal	0	0	0

49. Special Study Block

50. Latitude (optional)	51. Longitude (optional)
0	0

52. Narrative Description *(Be specific, and continue on separate sheet if necessary)*

MBYNP-30 PULLING OUT OF THE YARD ON LEAD TRACK 01-106 HAD 5 CARS DERAIL INTO THE SIDE OF THE AGBSE-29, STOPPED ON TRACK 01-100, DUE TO DEFECTIVES TIES. 4 CARS ON AGBSE-29 DAMAGED/NOT DERAILED.

53. Typed/Printed Name & Title of Preparer	54. Signature	55. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports status and, as such shall not " be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report .." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

FORM FRA F 6180 54

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

1. Name of Reporting Railroad: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No.: 0306CB024
2. Name of other Railroad Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad Responsible for Track Maintenance *(single entry)*: Union Pacific RR Co. [UP]	3a. Alphabetic Code: UP	3b. Railroad Accident/Incident No.: 0306CB024
4. U. S. DOT Grade Crossing Identification Number	5. Date of Accident/Incident: month 0 3 / day 3 0 / year 2006	6. Time of Accident/Incident: 7:55 AM [X] PM [ ]

7. Type of Accident/Incident *(single entry in code box)*: 1 Derailment; 2 Head on collision; 3. Rear end collision; 4 Side collision; 5. Raking collision; 6. Broken train collision; 7 Hwy-rail collision; 8. RR grade crossing; 9. Obstruction; 10 Explosion-detonation; 11. Fire/violent rupture; 12. Other impacts; 13 Other *(describe in narrative)* — Code: 01

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/ Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
N/A	N/A	N/A		COUNCIL BLUFFS

13. Nearest City/Town	14. Milepost *(to nearest tenth)*	15. State Abbr.	Code	16. County
BOONE	202.3	IA	19	BOONE

17. Temperature (F) *(specify if minus)*	18. Visibility (single entry) 1. Dawn 2. Day 3 Dusk 4. Dark — Code	19. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow — Code	20. Type of Track 1. Main 2. Yard 3. Siding 4. Industry — Code
41 °F	2	1	2

21. Track Name/ Number	22. FRA Track Class (1-6, X) — Code	23. Annual Track Density *(gross tons in millions)*	24. Time Table Direction 1. North 2. South 3 East 4. West — Code
YARD	1		4

25. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s) 9. Main/inspect. car A. Spec MoW Equip — Code	26. Was Equipment Attended? 1. Yes 2. No — Code	27. Train Number/Symbol
7	Y	MBYN

28. Speed *(recorded speed if available)* R - Recorded E - Estimated — MPH — Code	30. Method(s) of Operation *(enter codes that apply)* a. ATCS; b. Auto train control; c Auto train stop; d. Cab signals; e. Traffic control; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j. Track warrant control; k. Direct traffic control; l Yard limits; m. Special instructions; n. Other than main track rules; p. Positive train control; o. Other *(specify in narrative)* — Code(s)	30a. Remotely Controlled Locomotive? 0 = Not a remotely controlled operation; 1 = Remote control portable transmitter; 2 = Remote control tower operation; 3 = Remote control portable transmitter - more than one remote control transmitter — Code
007 MPH — E	N	0
29. Trailing Tons (gross tonnage, excluding power units): 3,209		

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded *(yes/no)*	32. If any railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.	Alcohol	Drugs
(1) First involved *(derailed, struck, etc)*	SSW087742	037	Y		00	00
(2) Causing *(if mechanical, cause reported)*		000		33. Was this consist transporting passengers ? *(y/n)*		No

34 Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End e. Remote
(1) Total in Train	2	0	0	0	0
(2) Total Derailed	0	0	0	0	0

35. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	29	0	35	0	0
(2) Total Derailed	3	0	2	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39 Contributing Cause Code
$ 4,243	$ 121,955	T205	T111

Number of Crew Members: 40 Engineers/ Operators	41. Firemen	42. Conductors	43. Brakemen	Length of Time on Duty: 44. Engineer/Operator	45. Conductor
1		1		Hrs: 01 Mins: 20	Hrs: 01 Mins: 20

Casualties to:	46. Railroad Employees	47 Train Passengers	48. Others	49. Special Study Block
Fatal	0	0	0	
Nonfatal	0	0	0	

50. Latitude (optional)	51. Longitude (optional)
0	0

52 Narrative Description *(Be specific, and continue on separate sheet if necessary)*

MBYNP-30 PULLING OUT OF THE YARD ON LEAD TRACK 01-106 HAD 5 CARS DERAIL INTO THE SIDE OF THE AGBSE-29, STOPPED ON TRACK 01-100, DUE TO DEFECTIVES TIES. 4 CARS ON AGBSE-29 DAMAGED/NOT DERAILED.

53. Typed/Printed Name & Title of Preparer	54. Signature	55. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports status and, as such shall not " be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report ..." 49 U S.C. 20903. Sec 49 C.F.R. 225.7 (b)

FORM FRA F 6180 54

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

OMB Approval No: 2130-0500

1. Name of Reporting Railroad: Union Pacific RR Co. |UP |	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No.: 0306CB024
2. Name of other Railroad Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad Responsible for Track Maintenance *(single entry)*: Union Pacific RR Co. |UP |	3a. Alphabetic Code: UP	3b. Railroad Accident/Incident No.: 0306CB024
4. U. S. DOT Grade Crossing Identification Number	5. Date of Accident/Incident: month 0 3 day 3 0 year 2006	6. Time of Accident/Incident: 7:55 AM [X] PM [ ]

7. Type of Accident/ Incident *(single entry in code box)*						Code
1. Derailment	4. Side collision	7. Hwy-rail crossing	10. Explosion-detonation	13. Other *(describe in narrative)*		01
2. Head on collision	5. Raking collision	8. RR grade crossing	11. Fire/violent rupture			
3. Rear end collision	6. Broken train collision	9. Obstruction	12. Other impacts			

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/ Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
N/A	N/A	N/A		COUNCIL BLUFFS

13. Nearest City/ Town	14. Milepost *(to nearest tenth)*	15. State Abbr.	Code	16. County
BOONE	202.3	IA	19	BOONE

17. Temperature (F) *(specify if minus)*	18. Visibility (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark	Code	19. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4 Fog 5. Sleet 6. Snow	Code	20. Type of Track 1. Main 2. Yard 3. Siding 4. Industry	Code
41 °F		2		1		2

21. Track Name/ Number	22. FRA Track Class (1-6, X)	Code	23. Annual Track Density *(gross tons in millions)*	24. Time Table Direction 1. North 2. South 3.East 4. West	Code
YARD		1			4

25. Type of Equipment Consist *(single entry)* 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect. car A. Spec. MoW Equip.	Code	26. Was Equipment Attended? 1. Yes 2. No	Code	27. Train Number/Symbol
	7		Y	AGBS

28. Speed *(recorded speed if available)* R - Recorded E - Estimated		Code	30. Method(s) of Operation *(enter codes that apply)* a. ATCS b. Auto train control c. Auto train stop d. Cab signals e. Traffic control f. Interlocking g. Automatic block h. Current of traffic i. Time table/train orders j. Track warrant control k. Direct traffic control l. Yard limits m. Special instructions n. Other than main track rules p. Positive train control o. Other *(specify in narrative)*	30a. Remotely Controlled Locomotive? 0 = Not a remotely controlled operation 1 = Remote control portable transmitter 2 = Remote control tower operation 3 = Remote control portable transmitter - more than one remote control transmitter	Code
000	MPH	R	Code(s): N		0
29. Trailing Tons (gross tonnage, excluding power units): 4,800					

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded *(y/n)*
(1) First involved *(derailed, struck, etc)*	TTGX991521	011	Y
(2) Causing *(if mechanical, cause reported)*		000	

32. If any railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.	Alcohol	Drugs
	00	00

33. Was this consist transporting passengers? *(y/n)*: No

34. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End e. Remote
(1) Total in Train	2	0	0	0	0
(2) Total Derailed	0	0	0	0	0

35. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	79	0	0	0	0
(2) Total Derailed	0	0	0	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
$ 2,332	$ 0	T205	T111

Number of Crew Members: 40. Engineers/ Operators	41. Firemen	42. Conductors	43. Brakemen
1		1	

Length of Time on Duty: 44. Engineer/Operator	45. Conductor
Hrs: 09 Mins. 50	Hrs: 09 Mins. 50

Casualties to:	46. Railroad Employees	47. Train Passengers	48. Others	49. Special Study Block
Fatal	0	0	0	
Nonfatal	0	0	0	

50. Latitude (optional)	51. Longitude (optional)
0	0

52. Narrative Description *(Be specific, and continue on separate sheet if necessary)*

MBYNP-30 PULLING OUT OF THE YARD ON LEAD TRACK 01-106 HAD 5 CARS DERAIL INTO THE SIDE OF THE AGBSE-29, STOPPED ON TRACK 01-100, DUE TO DEFECTIVES TIES. 4 CARS ON AGBSE-29 DAMAGED/NOT DERAILED.

53. Typed/Printed Name & Title of Preparer	54. Signature	55. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports status and, as such shall not " be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report ..." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b)

FORM FRA F 6180.54

Public Meeting Comments

Comments from the public meeting held at DMACC (6/27/06 – Neighborhood Groups)

Area #1 – Charles Lessmann (facilitator):

- Fire Service: Ok to the East, but not the West
- NE corner of area #1: Lowell addition could have sold more lots.
- Area 1 has mix of new and old houses; older to the West
- Preserve mostly residential character of this area, good place to add Residential growth
- Mixed new and old houses in the middle of Area #1.
- Tear down dilapidated houses – cheaper to build new than renovate
- Tom Walters commercial truck fleet parking outside of city limits (northwest corner)
- There is interest in moderately-priced townhomes – priced between retirement homes and golf course condominiums.

Area #2 – Ed Higgins (facilitator):

Building Construction methods
Infrastructure
Storm Sewer
Paving Park Ave., and paved trail
Annexation to include recreation
Train Whistles
Maintain shale piles
Preserving Historical Areas

Area #3 – Darrell Rensink (facilitator):

Annexation
1) More aggressive
2) West Boone overpass

Infrastructure
1) Surface Drainage

Housing
1) Housing agency to promote and develop housing needs

Trails
1) Need more study

Transportation
1) Extension of SE Linn to Snedden
2) Extension of Hancock to Sneeden
3) Aurora off 1st?

Likes: friendly people
User friendly

Parks
Change: Community Center

Development/Commercial: to include a larger lumberyard
Overpass/Underpass @ Montana, Division, Marion
Top 3 Positives: Parks, recreational areas, Story street entrance, BSURR, School system
Top 3 Negatives: Lower property tax/increase tax base, water rates, added employment

Area #4 – Jerry Searle (facilitator):

Change Commercial along "R" Ave to Industrial
Hancock to Snedden
Jackson to Five Mile Dr.
Five Mile Drive realigned to SNE
SE Linn to SNE

UP Grade Separation (5-8 years)
BioDiesel/Ethanol
Rail Access
Electricity/Natural Gas
Franchise Utilities

Infrastructure:
Sanitary N of UP
Road to Co. Rd. E-26 (22nd)
Water
Fire Flow Issues

South of UP:
Utilities Lacking
12" water/loop system
Sanitary
Need lift station N. of 30/Sen. Intersection
New intersection on US 30
24" Extend North along "R" Ave.
SNE = 2 lane rural

Area #5 – Brent Trout (facilitator):

Parking downtown – one way street
Outside investment – city incentives good
Main street appearance improving – keep it going
Good to fill vacant space with service businesses, but retail is better
Service Co. has people downtown which is good
Who is going to take over from current generation of business owner?
Restaurants, fast food, 24 hr, niche shop, ice cream

Greene St. option #2 for overpass
Concerns over people living downtown with parking issues, dogs, hanging out

Like:

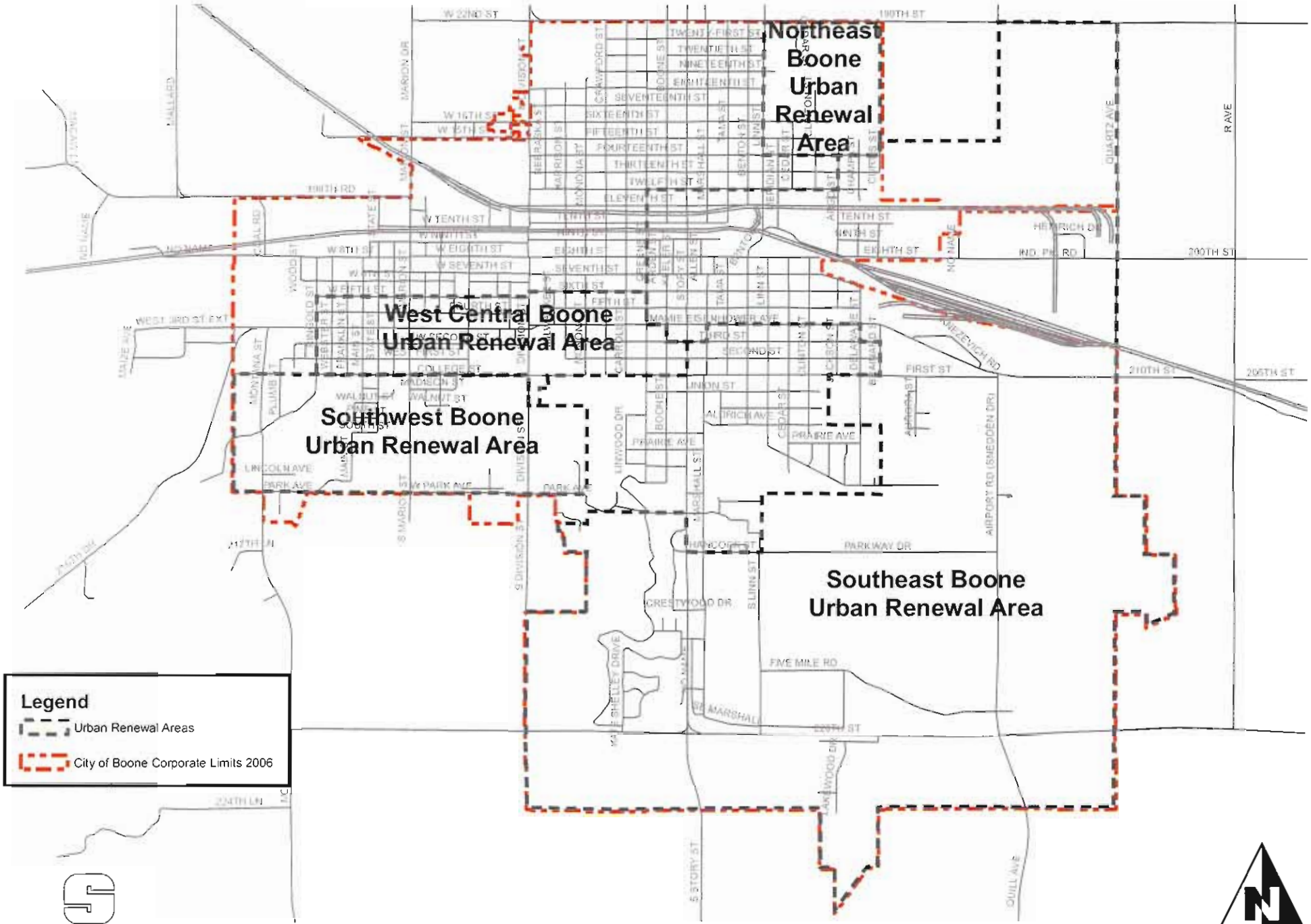
1) well-rounded community, everything you need here in town
2) Park system – recreation
3) School System

Change:

1) Taxes
2) Cooperation better with county/school/city
3) Brush clean-up day to help keep things cleaned up

Area #6 – Jim Grant (facilitator):

Snedden Overpass over US 30
Keep 5 mile drive same (not improved)
Historic bridge?
Snedden needs improving at US 30 – 4 lane?
Development north of 5 mile – access from Snedden
Hancock & SE Linn extended to Snedden
Commercial on US 30 will happen
Topography at US 30 & Snedden ? the commercial?
Annex B.C. Industrial Park
5 Mile area, low density only
Helicopter traffic a problem to housing
Drainage problem from Hancock Dr. South
Flat and nowhere to go – marsh previously
Favor new runway – City and guard should look into it
East/West Streets needed to spread traffic flow
Underpass at Linn? Any study on this??



SNYDER & ASSOCIATES
Engineers and Planners

City of Boone Comprehensive Plan - Urban Renewal Plans

EXHIBIT 16-3