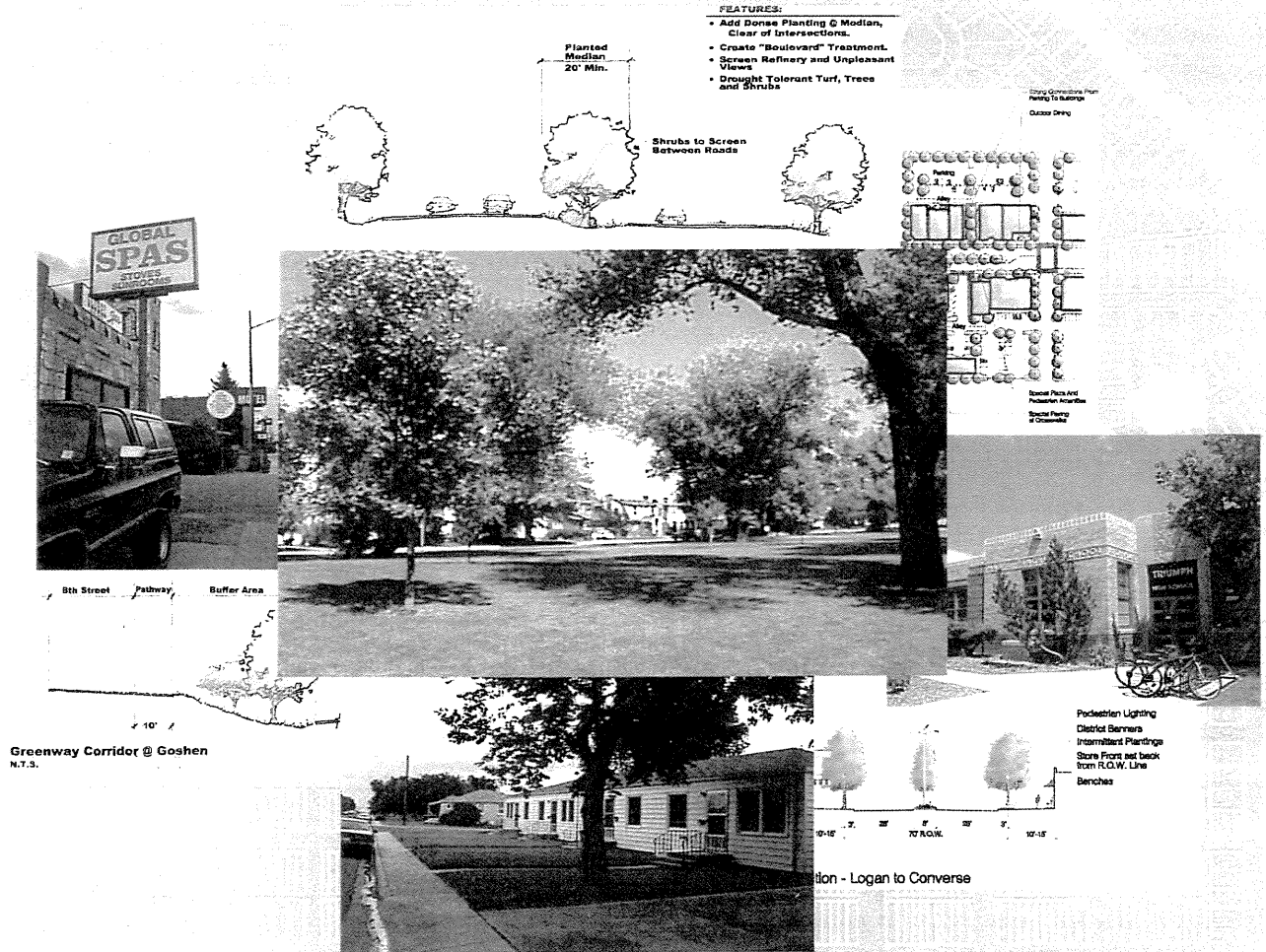


East Central Cheyenne Infrastructure Improvements Plan

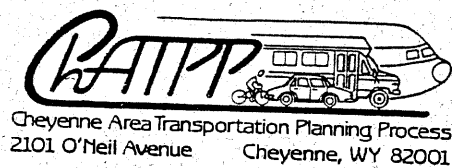


Prepared for
Cheyenne Area Transportation
Planning Process

April 2000

EAST-CENTRAL CHEYENNE INFRASTRUCTURE IMPROVEMENT PLAN

Prepared For:



Prepared By:

BENCHMARK OF CHEYENNE, P.C.
1920 Thomes Avenue, Suite 620
Cheyenne, WY 82001
(307) 634-9064
FAX 778-8010

EDAW, Inc.
240 E. Mountain Avenue
Fort Collins, CO 80524

April, 2000

RESOLUTION NO. 4094

APPROVED AS TO
FORM ONLY:
MB Guthrie
DATE: 06-06-00

ENTITLED: "A RESOLUTION ADOPTING THE EAST CENTRAL INFRASTRUCTURE IMPROVEMENTS PLAN AS AN UPDATE TO THE CHEYENNE AREA DEVELOPMENT PLAN - 1992 FOR THE EAST CENTRAL CHEYENNE AREA."

WHEREAS, Wyoming Statutes § 15-1-503 and § 18-5-202, allow cities and counties to prepare and adopt master plans to guide the growth and development of an area; and

WHEREAS, the Cheyenne Area Development Plan - 1992 was prepared and adopted by the Governing Body of the City of Cheyenne as the comprehensive or master plan for the development of the Cheyenne area in accordance with the requirements of those statutes; and

WHEREAS, the Cheyenne Area Development Plan - 1992 is a dynamic document which should be amended as needs of the community change or as planning in greater detail is conducted and Wyoming Statutes § 15-1-503(b) and § 18-5-202(b) anticipate and provide for these plan amendment changes; and

WHEREAS, the Cheyenne Area Development Plan - 1992 may be amended in the same manner and process as required for the comprehensive plan; and

WHEREAS, an amendment, The East Central Infrastructure Improvements Plan, was prepared with citizen involvement and was discussed in detail at two advertised public meetings within the area encompassed by the plan during its development and further that the notice of the amendments to the Cheyenne Area Development Plan - 1992 was advertised April 14, 2000 and April 30, 2000 for a public hearing held by the Regional Planning Commission on May 15, 2000; and

WHEREAS, the Regional Planning Commission held a public hearing on May 15, 2000 and accepted public comments and did recommend this plan as the update for this area to the Governing Body of the City of Cheyenne for adoption.

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF CHEYENNE, WYOMING, that The East Central Infrastructure Improvements Plan is adopted as an amendment to the Cheyenne Area Development Plan - 1992 for the East Central Cheyenne Area and supersedes or replaces the existing Cheyenne Area Development Plan - 1992 for East Central Cheyenne.

BE IT FURTHER RESOLVED that the City and County Planning staffs are to incorporate the text and mapping into the next update of the Cheyenne Area Development Plan.

PRESENTED, READ AND ADOPTED ON THIS 26th DAY OF June, 2000.

(SEAL)
ATTEST:

Carol A. Intlekofer
Carol A. Intlekofer, City Clerk

Leo A. Pando
Leo A. Pando, Mayor

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I – Introduction

CHAPTER I – INTRODUCTION

The Purpose of the Plan

The purpose of the study is to define a vision for East Central Cheyenne and identify specific actions to improve identified problems and create the desired climate for the development and redevelopment of the study area (see Map 1.2 for study area boundaries). The plan focuses on a 10-year horizon in terms of actions, but is longer range in vision.

Description of the Study Area

The study area includes the east-central area of the City of Cheyenne as shown in Map 1-1. The boundaries are Morrie Avenue on the west, Ridge Road on the east, the Union Pacific Railroad on the south, and Airport Parkway on the north. The estimated population in the study area in 1997 was 10,586. The projected population for the study area in 2017 is 10,922.

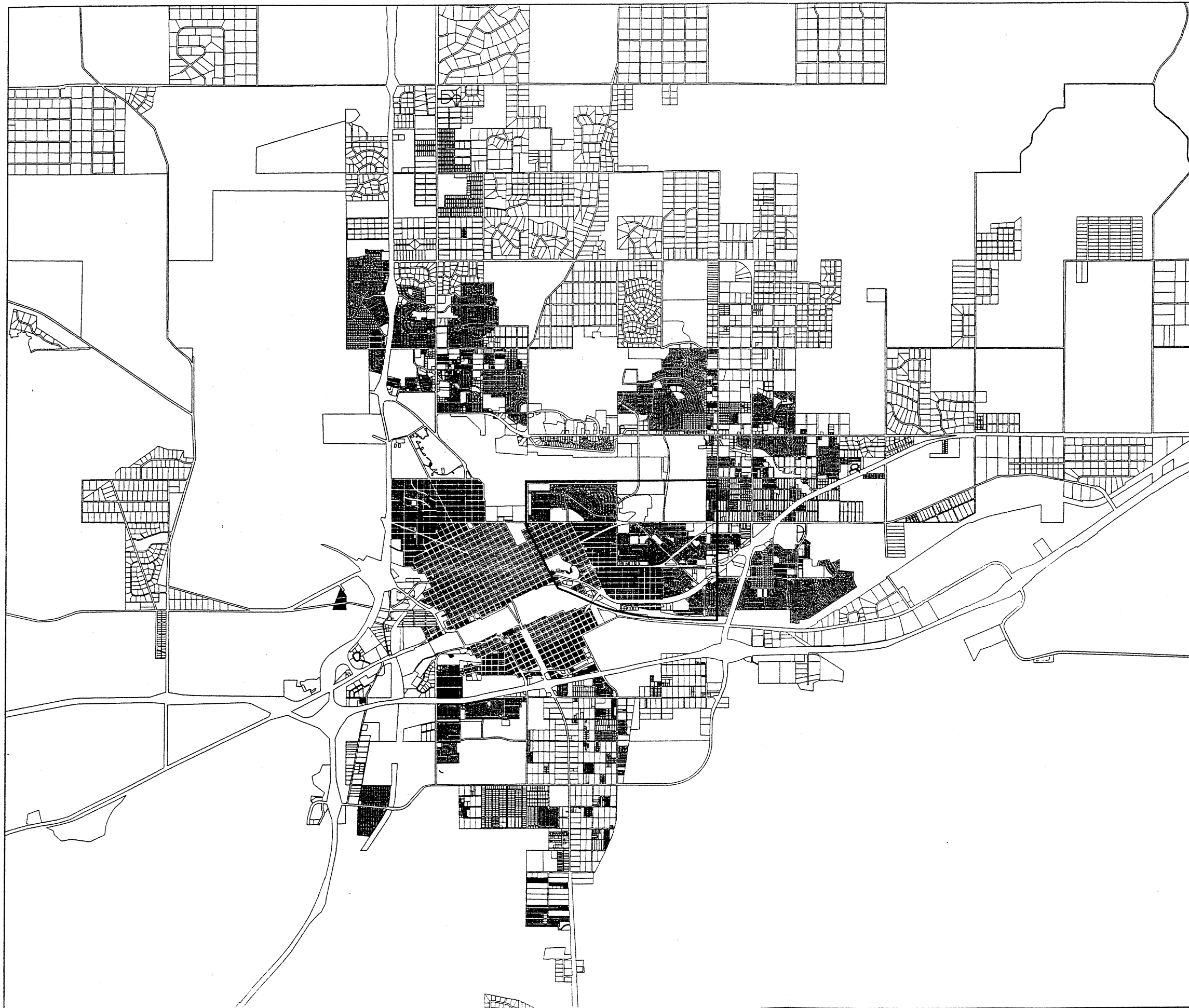
As indicated in Map 1-2, all of the study area is within the incorporated limits of the City of Cheyenne, except for two small areas – one in the northeast corner of the study area, and one adjacent to the Union Pacific Railroad.

Background

A total planning project for the Cheyenne area is being done in phases, so that it remains within the funding capabilities of the Cheyenne Area Transportation Planning Process (ChATPP). The East-Central Cheyenne Infrastructure Plan is the fifth of these studies of sub-areas. The previous studies were:

- South Cheyenne Infrastructure Improvement and Development Action Plan (1994)
- Hebard, Cole and Goins Neighborhoods Plan (1995)
- East Cheyenne Infrastructure Improvement Plan (1998)
- Northwest Cheyenne Infrastructure Improvements & Development Plan (1999)

In addition to these reports, several other planning studies have been completed in recent years which relate to all or a part of the study area. These studies and other related docu-



STUDY AREA LOCATION

MAP I-1

LEGEND

STUDY AREA LOCATION



1"=6000'



EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

BENCHMARK Of Cheyenne, P.C.
EDAW, INC.

FEBRUARY, 2000

Cheyenne Area
Transportation
Planning Process
(CHATPP)

ments were reviewed as a part of this study, and some of them are discussed in more detail in the following chapters of this Report. These studies and documents include:

- Cheyenne Area On-Street Bicycle Plan, Report of Investigation, 1993.
- Traffic Report, Airport Parkway Project, Cheyenne, Wyoming, as revised June 21, 1989.
- City of Cheyenne Parks & Recreation Facilities Master Plan, 1992.
- Greenway Development Plan, Cheyenne, Wyoming, A Recreational Transportation System, 1992.
- 35% Design, Cheyenne Greenway Extensions Plan, 1999.
- Morrie Avenue Tunnel Feasibility Study, (Updated about 1987).
- Study, Future Development, Morrie Avenue, 15th St. to Pershing Blvd., Cheyenne, Wyoming, 1996.
- Cost Estimate, Morrie Avenue, 15th Street to 20th Street, Cheyenne, Wyoming, 1998.
- Transportation Improvement Program, Annual and Three Year Element fo Fiscal Years 1999-2002, 1999.
- Pershing Blvd., Master Plan and Preliminary Design, 1988 (4 volumes)
- Drainage Master Plan, Henderson and East Lincolnway Basins, (1988)
- Implementing the Drainage Master Plan for the Greater Cheyenne Area, Surface Water Drainage Committee Preliminary Report, 1999.
- Cheyenne Water Supply Level II Project, 1996.

The Planning and Public Involvement Process

The Cheyenne Area Transportation Planning Process (ChATPP) retained the firm of BENCHMARK OF CHEYENNE, P.C., with assistance from EDAW, Inc., a planning and landscape architecture firm, to prepare the plan. The process involved (1) preparing a vision of what East Central Cheyenne should be in the future, (2) determining what types of land uses and public amenities are desirable, (3) identifying existing problems, (4) determining the infrastructure needs of the study area to support the proposed land uses, and (5) identifying specific projects that are needed to provide a high quality of life for existing and future residents.

The involvement of citizens in the study area was an important part of developing the East Central Cheyenne Infrastructure Improvement Plan. A Steering Committee with representation from both the City and Laramie County met five times with the consulting team to discuss the important aspects of the study. Members of the Steering Committee are:

- Tom Bonds (Director, City Planning)
- Tom Mason (Director, ChATPP)
- Brad Oberg (Planning Director, LSCD #1)
- Shawn Reese (ChATPP Transportation Planner)
- Mark Reid (County Planner)
- Ruth Case (Citizen)
- Frank M. Cole (Citizen)
- Lucie Osborn (Planning Commission)
- Vickie Heidbreder-Grubbs (Citizen)
- Tom Scherr (Citizen)
- Art Georgelas, (Citizen)

In addition to the involvement of the Steering Committee, one public open house was held in the study area during the preparation of the Plan. The open house was held at East High School on 20 January 2000. Approximately 30 people attended. The open house provided the opportunity for the public to ask questions and provide opinions of the study to the consultants.

II – Inventory of Existing Conditions

II – INVENTORY OF EXISTING CONDITIONS

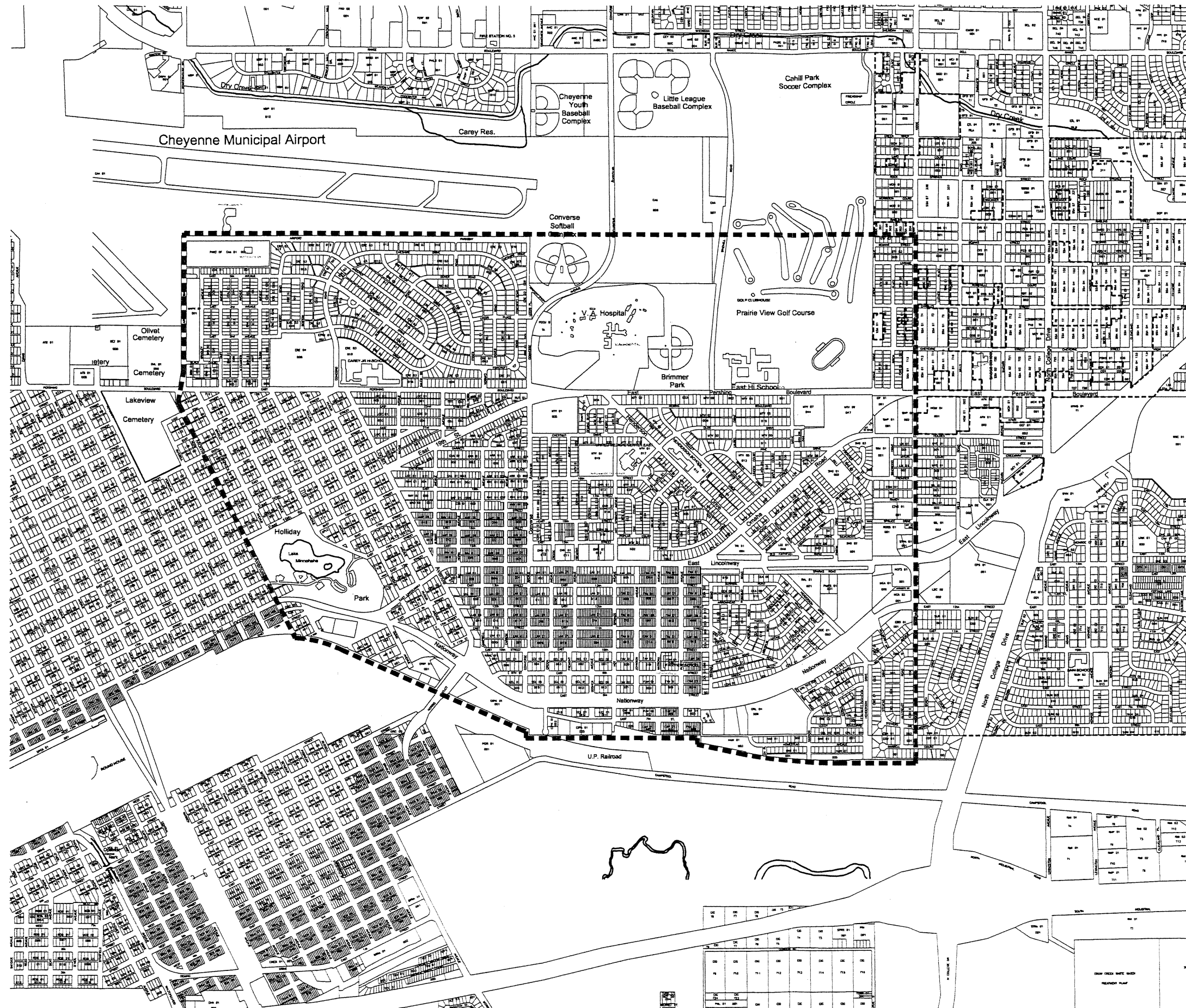
Existing Zoning

The existing zoning districts within the study area (as of March 1997) were mapped to understand the land uses that have been approved by the City (see Map 2.1, Existing Zoning). Medium Density Residential (MR-1) and Public (P) (primarily parks, schools and sports complexes) are the predominant zoning classifications in the study area.

Residential zones are distributed across the study area, and are bounded by the Airport District and sports complexes on the north and industrial and railroad properties to the south. Medium Density zones (MR-1 and MR-2) are most common, covering more than half of all residential areas. The MR zones allow uses such as single-family residences (minimum lot size of 6,000 square feet), family day-care homes, and home occupations. Also, 3,500 square foot offices, duplexes and townhomes require administrative approval, but may be found in these areas.

High density residential zones (HR-1 and HR-2) are scattered through the urban area and are typically developed to densities greater than 8 dwelling units per acre. The HR zone districts allow uses such as single-family residences (minimum lot size of 5,000 square feet), group day-care homes, offices, townhomes, duplexes and apartments. In all, the residential land uses support a population of approximately 10,586 people or approximately 12% of the City of Cheyenne's population (ChATPP, 1997 est.).

Business zones (NB-Neighborhood Business, CB-Community Business and MUB-Mixed Use and with Business Emphasis) are located along arterial roadways, with the largest concentration occurring at the convergence of Nationway, Lincolnway, and proceeding west along Lincolnway through the study area. The NB zone district is intended for retail businesses and offices that support the needs of the nearby neighborhood. The NB zone allows uses such as retail sales (within a building), offices, child care facilities and light manufacturing that is contained within a building. Bars, liquor stores, drive-up facilities and retail sales requiring storage outdoors may be approved after public hearings. The CB zone

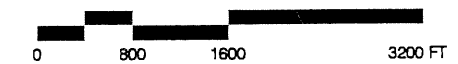


STUDY AREA

Map 1.2

LEGEND

- Project Boundary ■■■■■■
- City Limits - - - - -



EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

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(CHATPP)

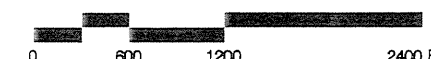


EXISTING ZONING

Map 2.1

LEGEND

Low Density Residential (Estb.)	LR-1
Low Density Residential (Developing)	LR-2
Medium Density Residential (Estb.)	MR-1
Medium Density Residential (Developing)	MR-2
High Density Residential (Estb.)	HR-1
High Density Residential (Developing)	HR-2
Agricultural Residential	AR
Mixed Use (Residential Emphasis)	MUR
Mixed Use (Business Emphasis)	MUB
Neighborhood Business	NB
Community Business	CB
Central Business District	CBD
Light Industrial	LI
Heavy Industrial	HI
Airport District	AD
Planned Unit Development	PUD
Public	P
Flood Hazard Area	
City Limits	

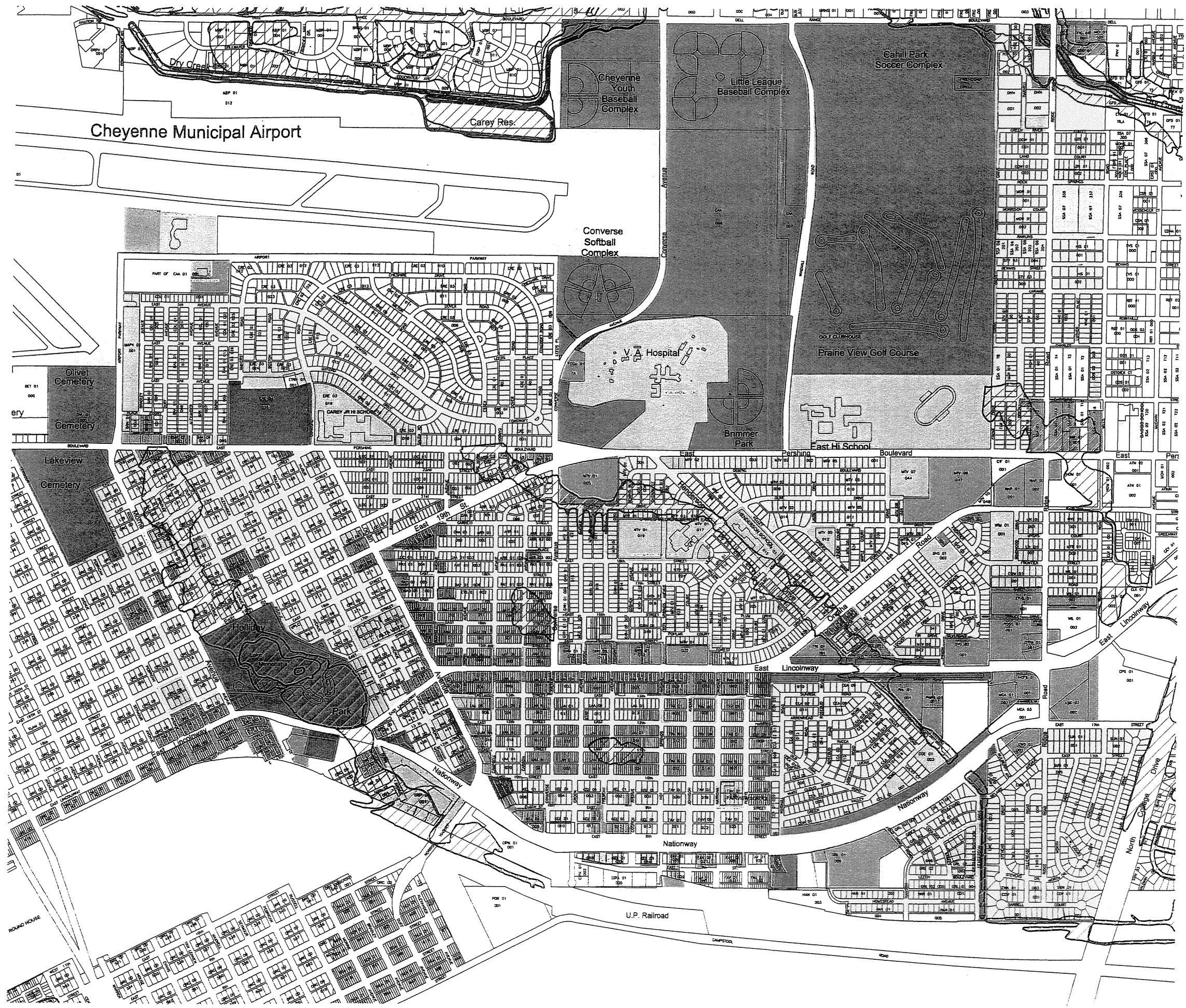


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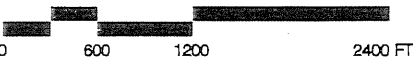
EXISTING LAND USE

Map 2.2

LEGEND

- Regional Business
- Community Business
- High Density Residential
- Medium Density Residential
- Low Density Residential
- Park / Open Space
- Public / Semi-Public / Institutional
- Vacant
- Airport
- Light Industrial
- Flood Hazard Area

Sources: 1. CHATTP Public R.O.W.'s, parcels, and 100 yr floodplain, 1997.
2. CHATTP Land Use Inventory; modified by reviewing 1994 aerial photography.



EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

district will be used for retail business and convenience services for several neighborhoods. The CB zone allows uses such as retail and wholesale establishments (indoor and outdoor), offices, hotels and motels, restaurants, drive-up facilities, child care facilities, entertainment establishments, light manufacturing that is contained within a building, and fireworks stands (county only). Bars, liquor stores, storage parks and transportation facilities may be approved after a public hearing. The MUB zone district is intended for areas that are transitioning from residential uses to the business uses described above.

Light industrial uses (LI) are all located along the south boundary of the study area and coincide with the U.P. Railroad Right-Of-Way. The LI areas are to be primarily developed for environmentally controlled manufacturing or intensive employment uses and may have accessory commercial or office uses. The LI zone allows for any industrial, manufacturing, fabrication or processing uses that do not emit noxious noise, smoke, odor or dust beyond the confines of the property, and that do not emit pollutants to the soil. Other uses include uses such as railroad yards, storage parks, warehousing and wholesaling.

Other zone districts within the study area include: P-Public, and PUD-Planned Unit Development. These zone districts are scattered throughout the study area. P-Public is primarily for government buildings and uses, schools, open space and parks, hospitals, recreational facilities and child care facilities. The PUD zone district allows for creative design of sites to accommodate a variety of land uses.

Existing Land Use

Land uses were mapped (see Map 2.2 – Existing Land Use and Figures 2.1 and 2.2 – Site Photos) using the existing City/County land use data and modified by reviewing 1994 aerial photography of the study area. The land uses within the study area correspond quite closely with the existing zoning, with the exception of existing residential areas near major roads that have been zoned for Community Business. Table 2.1 summarizes the land use associated with each land use in the study area.

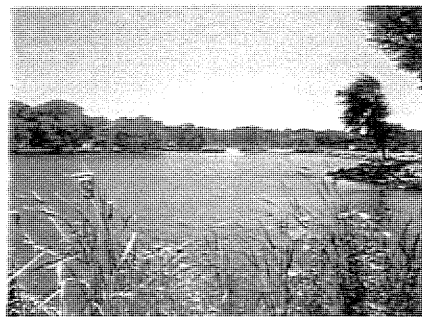
SITE PHOTOS

Figure 2.1

LEGEND



Lincoln Way & Morrie Ave. - Holliday Park



Lincolnway & Morrie Ave. - Holliday Park



E. Lincolnway @ Crook Ave.



Lincolnway @ Hot Springs Ave.

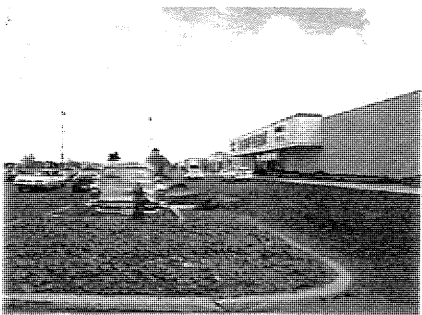


Lincolnway @ Hot Springs Ave.

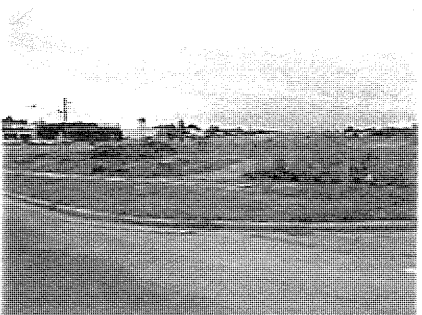
This area (3 photos) have since been redeveloped with a new use since photographed.



Lincolnway @ Big Horn Ave.



E. Lincolnway @ Wills Rd.



E. Lincolnway @ Ridge Rd.



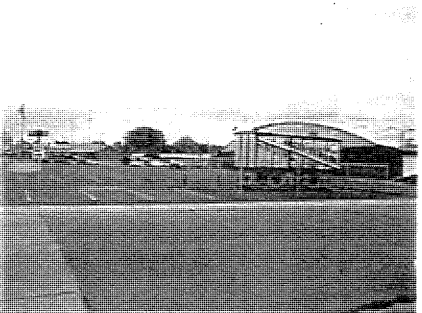
E. Lincolnway @ Kelly Ave



E. Lincolnway @ Crook Ave.



E. Lincolnway @ Crook Ave.



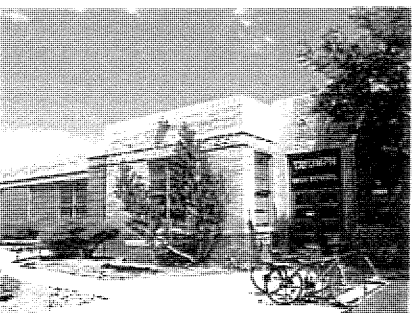
E. Lincolnway @ Big Horn Ave.



E. Lincolnway @ Big Horn Ave.



George E. Brimmer Park & East High School



Morrie Ave. - Triumph High School



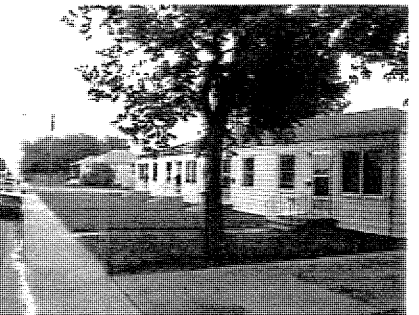
Logan Ave. @ 13th St.



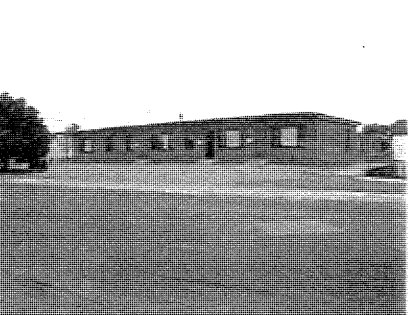
Myers & Windwood



Windwood & Frontier



13th St. @ Crook Ave.



Logan Ave. @ 13th St.



EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

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**SITE
PHOTOS**

Figure 2.2

LEGEND



**EAST - CENTRAL
INFRASTRUCTURE
IMPROVEMENT PLAN**

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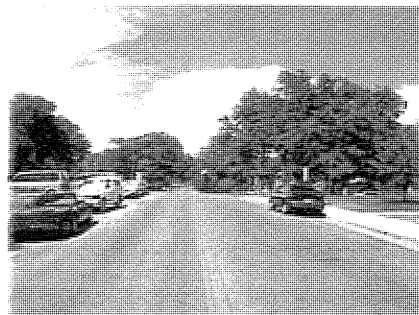
Cheyenne Area
Transportation
Planning Process
(CHATPP)



Airport Parkway



Big Horn Ave. & E. 15th St.



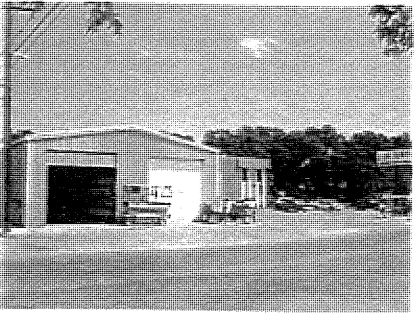
23rd St. & Morrie Ave.



Wills Rd.



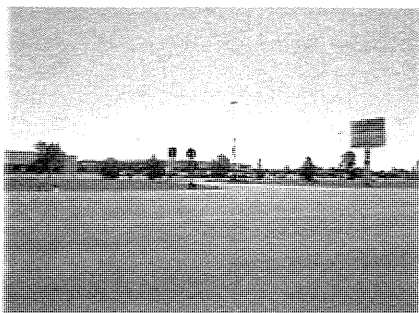
Logan Ave. @ Nationway



Morrie Ave. @ 22nd St.



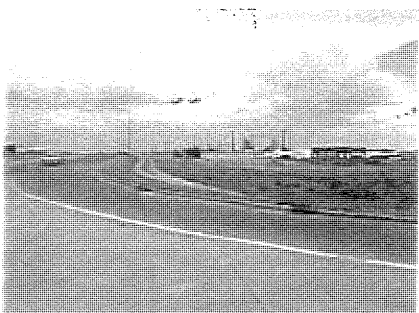
Logan Ave. @ 13th St.



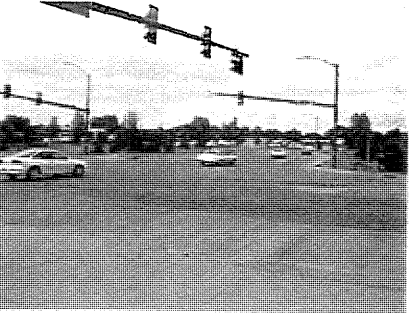
Nationway



E. Pershing Blvd. @ Ridge Rd.



Nationway @ Logan Ave.



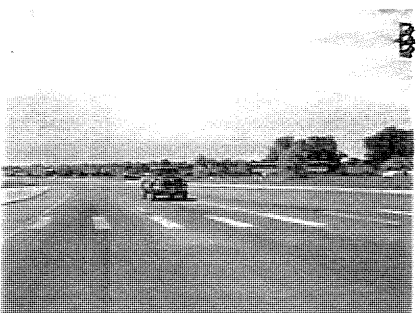
Logan Ave. @ Nationway



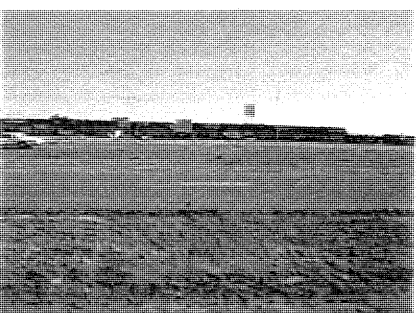
Nationway



Nationway



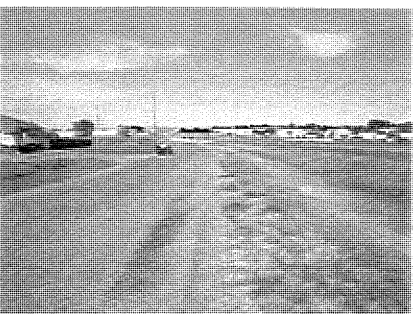
Nationway



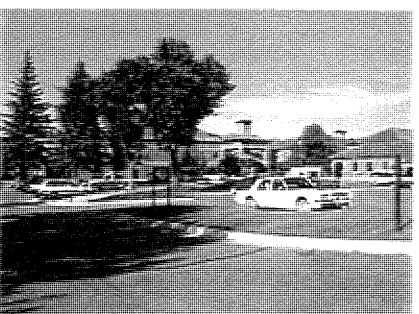
Nationway



Nationway



Nationway, North frontage road



V. A. Facility



V. A. Grounds - Southwest corner.



V. A. Grounds - Southwest corner.

Table 2.1 Existing Land Use Summary

Land Use	Area (acres)	% of Study Area
High Density Residential	62.4	3.5
Medium Density Residential	714.9	39.6
Low Density Residential	181.0	10.0
Open Space/Park	230.7	12.8
Public/Semi-Public/Institutional	178.9	9.9
Community Business	115.4	6.4
Neighborhood Business	0	0
Regional Business	29.0	1.6
Mixed Uses	0	0
Light Industrial	5.0	0.3
Vacant	97.0	5.4
Undesignated (rights-of-way)	193.2	10.7
Total	1807.5	100

The largest single land use is medium density residential with 715 acres (39.6% of the study area) devoted to this use. The medium density land uses are relatively uniform throughout the study area. Total residential uses, including high, medium, and low density residential occupy 958 acres (53.1% of the study area). High density residential land uses (more than 8 units per acre) are located in relatively small developments throughout the study area and total 62.4 acres. Several of these developments are mobile home parks. Low density land uses are found in two areas; one neighborhood adjacent to the south edge of the Airport and another area south of East High School between Pershing Boulevard, Henderson Drive and Omaha Road and occupy 181 acres (10.0% of the study area).

Vacant lands occupy a minor proportion (97 acres or 5.4%) of the study area. The largest vacant properties are located south of Nationway in the Light Industrial zoning area. Other vacant parcels are primarily community business areas on the east side of the study area around Lincolnway and Nationway. These areas are expected to develop over time.

The majority of parks and open space in the study is located in the northeast quadrant. This includes the Cheyenne Youth Baseball Complex, Little League Baseball Complex, Cahill Park Soccer Complex, Converse Softball Complex, Prairie View Golf Course, and Brimmer Park. The other major area of open space is Holliday Park, located in the southwest corner of the study area.

The need for additional parks, recreational facilities and open space in East Central Cheyenne was not considered a priority. A few opportunities for small neighborhood parks have been identified, but due to the fact that 12.8% of the study area is currently classified Park/Open Space, this was not identified as a priority. It was noted however, that the Park/Open Space areas within the study area tend to be very large city/regional facilities and not within a preferred walking distance from residences. The challenge in correcting this is due to the lack of adequately sized vacant lands within existing residential areas.

Public/Semi-Public/Institutional uses in the study area include schools (Lebhardt School, Fairview School, East High School, Alta Vista School, Triumph High School, Carey Junior High School, Henderson School, United Medical Center East, and the V. A. Hospital), fire stations, various public agency offices and assisted housing projects.

Commercial uses (neighborhood business and community business) are located almost exclusively along arterial roads, with the largest being Wyoming Plaza at the intersection of Nationway and Old Trail Road. This development has seen a decline in recent years as several large tenants have left due to a lack of business. Currently there are no areas classified as neighborhood business. The amount of land that has been zoned for community business is at least two times the amount that currently exists.

Industrial uses are primarily located at the southern portion of the study area south of Nationway, and occupy 5 acres or 0.3% of the study area.

Two major and two minor flood hazard areas exist within the study area and are indicated on the maps herein. The section headed "Drainage and Storm Sewer Improvements" in Chapter IV discusses these areas and makes recommendations for their improvement.

III – The Vision for East Central Cheyenne

III – THE VISION FOR EAST CENTRAL CHEYENNE

Introduction

This chapter contains a list of perceived assets and opportunities, needs and concerns, the vision statement, goals and objectives and proposed land use plan that were developed as part of the planning process.

To develop the vision, goals and objectives, the consultant team worked with the steering committee and asked the neighbors who attended the public meeting to identify existing assets and opportunities in the area, elements that were needed or lacking, and specific items or areas of concern. The assets and opportunities in the neighborhoods should be preserved and enhanced; elements that are needed or lacking should be targeted and pursued for inclusion in the study area; and community concerns should be addressed in this plan.

The following is a list of perceived assets and opportunities, needs and concerns in the study area:

Assets and Opportunities

- Good place to raise a family:
 - Safe
 - Good schools
 - Greenway path system
 - Quiet residential streets
 - Easy access to major roads
 - Many long-term residents that genuinely care about the community.
- Good regional parks and recreation facilities close at hand.
- Convenient services.

Needs

- Consistent installation of sidewalks in both directions from all street corners.
- Screening of the refinery and rail yard from Nationway.
- Additional businesses (e.g., shopping, entertainment, restaurants, and other services) in the neighborhood along Lincolnway.
- Vehicular intersection improvements at 19th and Logan, 19th and Converse, Logan and Nationway, and Windmill and Nationway.
- Pedestrian crosswalk improvements at the following

intersections;

- Pershing Boulevard and Morrie Avenue
- Pershing Boulevard and Logan Avenue
- Pershing Boulevard and Converse Avenue
- Pershing Boulevard and Henderson Drive
- Pershing Boulevard and Ridge Road
- Lincolnway and Logan Avenue
- Lincolnway and Ridge Road
- Nationway and Ridge Road
- Lincolnway and Nationway
- Lincolnway and Henderson Drive
- Lincolnway and Omaha Road
- Lincolnway and Converse Avenue.
- Better bicycle and pedestrian connections with nearby retail, parks, and neighborhoods.
- Trails, pedestrian walks and greenways.
- Storm sewer improvements, especially along Henderson Drive and Henderson Ditch.
- Streetscape improvements on major roads.
- Better utilization of Nationway as a major arterial connection from the east to and from downtown, with the goal to distribute traffic volumes more evenly between Lincolnway and Nationway.

Concerns

- The main business district along Lincolnway is run down and in need of revitalization, and possesses too many driveways creating hazardous conditions.
- Declining viability of commercial areas.
- Increasing traffic volumes and speed leading to greater fragmentation of neighborhoods.
- Appearance of some residential and commercial properties.
- Local and basin-wide storm drainage/flooding problems. The future of existing development in the 100-year floodplain should be addressed.
- Poor enforcement of existing regulations protecting sight distances at street intersections. This has been attributed with many of the traffic accidents in the study area.
- New uses coming in to existing buildings and not being required to upgrade the buildings or site to current standards.
- Fragmentation of residential neighborhoods with business infiltration.

Visions and Goals

The vision for East Central Cheyenne is to be an attractive, safe and high quality core of the city with features that encourage pedestrian activity. The area will have a mix of residential housing types, and vibrant commercial areas, parks and schools within easy access to residents.

Goal 1: Encourage high quality development of commercial areas and reuse and redevelopment of declining shopping centers and other commercial areas.

Objectives:

- 1.1 Improve the street image of, and pedestrian environment within existing commercial areas with trees, landscaping, screened service areas, attractive signage, continuous pedestrian walkways, pedestrian scale lighting and other amenities. Require new uses within existing buildings and sites to comply with current City standards for site design and landscaping.
- 1.2 Establish a unified image, unique character and specific market for the core commercial area along E. Lincolnway.
- 1.3 Develop overall redevelopment concepts for identified commercial nodes.
- 1.4 Develop requirements and standards for the development of commercial areas and upgrades for new users in existing developments to ensure high quality development and redevelopment.
- 1.5 Provide financial incentives for redevelopment.
- 1.6 Identify projects that have the best potential to leverage public monies with private investment in redevelopment.
- 1.7 Provide assurances that public facilities and private properties will be well maintained.
- 1.8 Ensure adequate utility and roadway capacities to support growth.

Goal 2: Protect and enhance the residential character of the established neighborhoods.

Objectives:

- 2.1 Protect existing residential areas from encroachment by commercial, office and industrial uses.
- 2.2 Provide adequate buffers between commercial, office or industrial uses and residential areas.
- 2.3 Maintain shade trees along neighborhood streets.
- 2.4 Improve streets and walks in the county islands.
- 2.5 Provide safe, convenient, and pedestrian-accessible neighborhood parks, recreational facilities, schools and neighborhood commercial services.
- 2.6 Maintain an even distribution of traffic through neighborhoods. Avoid concentrating traffic on roads that will split neighborhoods and create barriers for pedestrians and bicyclists.

Goal 3: Improve transportation options throughout the study area for all modes of travel (Pedestrians, bicycles, automobiles, mass transit).

Objectives:

- 3.1 Continue implementation of Greenways to connect neighborhoods to parks, schools, commercial and employment areas, as well as provide recreational trails.
- 3.2 Incorporate bicycle lanes, 8' wide walks and trail connections into future road designs to complete connections on designated pedestrian, bicycle and greenway routes.
- 3.3 Provide continuous walks along all streets.
- 3.4 Improve the safety of and flow through, at constrained roadway intersections.
- 3.5 Develop intersections with pedestrian safety and comfort as a priority at key locations.

Goal 4: Improve the visual quality of both public

and private lands.

Objectives:

- 4.1 Add landscaping and pedestrian amenities along major roadways.
- 4.2 Implement a community pride program.
- 4.3 Develop incentives for property owners to properly maintain their properties, such as a "Most Improved Property" award.
- 4.4 Clarify public rights-of way maintenance responsibilities with private land owners.
- 4.5 Develop a litter control ordinance.
- 4.6 Continue to provide City and County support for special clean-up efforts.
- 4.7 Enforce nuisance and weed-control ordinances.
- 4.8 Seek tighter regulations regarding the responsibilities of absentee landlords.

Land Use Plan














Map 3.1, Land Use Plan, illustrates the land uses that are desirable in East Central Cheyenne. The plan is somewhat similar to the land uses and zoning that exist in the study area. However, between Hot Springs and Converse along Lincolnway, a composite use development area has been recommended to integrate ground floor retail (business) with second story high density residential such as loft studios and apartments (see Figures 3.1 and 3.2).

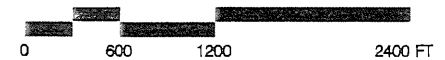
Map 3.1, Land Use Plan, shows a mix of land uses, predominantly residential, in the study area. The uses are summarized and compared with existing land uses in Table 3.1.

This is a detailed black and white map of Cheyenne, Wyoming, showing a grid of streets, parks, and landmarks. Key features include:

- Airport:** Cheyenne Municipal Airport is located in the upper left quadrant.
- Parks and Recreation:** Cheyenne Youth Baseball Complex, Little League Baseball Complex, Cahill Park Soccer Complex, and Prairie View Golf Course are situated in the upper right quadrant.
- Healthcare:** V.A. Hospital is located in the center of the map.
- Cemeteries:** Olivet Cemetery, Lakeview Cemetery, and Carey Res. are located in the lower left quadrant.
- Streets:** Major streets like East 19th St, East 20th St, East 21st St, East 22nd St, East 23rd St, East 24th St, East 25th St, East 26th St, East 27th St, East 28th St, East 29th St, East 30th St, East 31st St, East 32nd St, East 33rd St, East 34th St, East 35th St, East 36th St, East 37th St, East 38th St, East 39th St, East 40th St, East 41st St, East 42nd St, East 43rd St, East 44th St, East 45th St, East 46th St, East 47th St, East 48th St, East 49th St, East 50th St, East 51st St, East 52nd St, East 53rd St, East 54th St, East 55th St, East 56th St, East 57th St, East 58th St, East 59th St, East 60th St, East 61st St, East 62nd St, East 63rd St, East 64th St, East 65th St, East 66th St, East 67th St, East 68th St, East 69th St, East 70th St, East 71st St, East 72nd St, East 73rd St, East 74th St, East 75th St, East 76th St, East 77th St, East 78th St, East 79th St, East 80th St, East 81st St, East 82nd St, East 83rd St, East 84th St, East 85th St, East 86th St, East 87th St, 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LEGEND

- | | |
|--------------------------------------|---|
| Community Business |  |
| Neighborhood Business |  |
| Mixed Use |  |
| High Density Residential |  |
| Medium Density Residential |  |
| Low Density Residential |  |
| Park / Open Space |  |
| Public / Semi-Public / Institutional |  |
| Light Industrial |  |
| Airport District |  |
| Key Pedestrian/ Bike Connection |  |
| Shared-use Path |  |
| Flood Hazard Area |  |



EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

Cheyenne Area
Transportation
Planning Process
(CHATPP)

APRIL 2000

TABLE 3.1

Land Uses	Existing Land Use		Proposed Land Use		Percent Change
	Acres	% of Study Area	Acres	% of Study Area	% Change of Area
High Density Residential	62.4	3.5%	75.2	4.2%	0.7%
Medium Density Residential	714.9	39.6%	659.1	36.5%	-3.1%
Low Density Residential	181.0	10.1%	169.0	9.3%	-0.7%
Park/Open Space	230.7	12.8%	246.4	13.6%	0.9%
Public/Semi-Public/Institutional	178.9	9.9%	160.3	8.9%	-1.0%
Light Industrial	5.0	0.3%	40.9	2.3%	2.0%
Community Business	115.4	6.4%	154.2	8.5%	2.1%
Neighborhood Business	0.0	0.0%	2.9	0.2%	0.2%
Regional Business	29.0	1.6%	0.0	0.0%	-1.6%
Mixed Uses	0.0	0.0%	106.3	5.9%	5.9%
Major Roadway (ROW)	193.2	10.7%	193.2	10.7%	0.0%
Vacant	97.0	5.4%	0.0	0.0%	-5.4%
Total Area	1807.5	100.0%	1807.5	100.0%	0.0%

Airport District was not included in the above comparisons. This study does not recommend changes to the Airport District Master Plan. Minor roadway right-of-way areas to road centerline are included in the adjacent land use.

The study area consists mainly of older established residential areas with retail and commercial uses along the major City streets.

At the current growth of 1% per year, the City of Cheyenne can expect to have an additional 10,400 people in 20 years. Most all of this growth is expected to occur outside of the study area, and in some areas, the population is expected to decline as retail and commercial uses fill in along the major roadways that currently have a business and residential mix. Within the study area, the projected increase from 1997 to 2017 is only 336 people. The growth outside of the study area will however place increasing pressure on the road system to expand. Major roadways in the study area such as Nationway, Lincolnway, Pershing, Converse, Logan and Morrie Avenue are all expected to see increasing volumes. Roadway traffic volumes and recommendations are discussed later in this report.

The airport district is currently considering a tunnel from north of the airport connecting with Airport Parkway on the south. This alternative would cause volumes on Morrie to exceed its current capacity. Three alternatives considered were widening Morrie Avenue, a Morrie Avenue/Bradley Avenue couplet, and a Morrie Avenue/Russell Avenue couplet. The Morrie Avenue/Bradley Avenue couplet was the steering committee's preferred alternative. Refer to Chapter IV – Infrastructure Considerations for a more exhaustive discussion.

Additional shared use paths are shown along other major roadways (see Map 3.2) to provide primary pedestrian routes in the community. The use of the rights-of-way along Nationway, Lincolnway and the Henderson Ditch as a pedestrian corridor should also be investigated, as it would provide a feasible connection between these corridors as well as south to the proposed Greenway next to the Union Pacific rail corridor. The Nationway shared use path could serve as an alternative to the rail corridor Greenway if an agreement with Union Pacific cannot be reached.

Two neighborhood parks (1½-2 acres) are also conceptually shown on the plan. The park recommendations in this document are based upon providing a neighborhood park within each area confined on all sides by major arterial streets. This document is recommending that neighborhood parks be between 1 to 2 acres in size as vacant parcels become available. Ideally, the park would be sized to meet the standard of one acre per 2,000 people served.

Community Business or Mixed Use is concentrated along Lincolnway, the east end of Pershing and portions of Nationway, in areas that are presently zoned for Community Business. The major exception to this is the area south of Nationway between Lincolnway and Norris Viaduct. The majority of Logan Avenue is also suggested as Mixed Use. The Community Business areas will be destinations for people throughout Cheyenne, and are easily accessible from major roads and commuter bike routes. They should be designed to accommodate large volumes of traffic, while respecting the needs of pedestrians.

The Mixed Use areas are shown in areas that are currently zoned Community Business, except in areas where the properties were more specifically designated for Neighborhood

Business uses. See the following discussion on East Lincolnway under the Opportunities and Constraints heading for a description of how Mixed Use areas should be treated. Also, refer to Appendix C for an example of Design Guidelines for this type of special area.

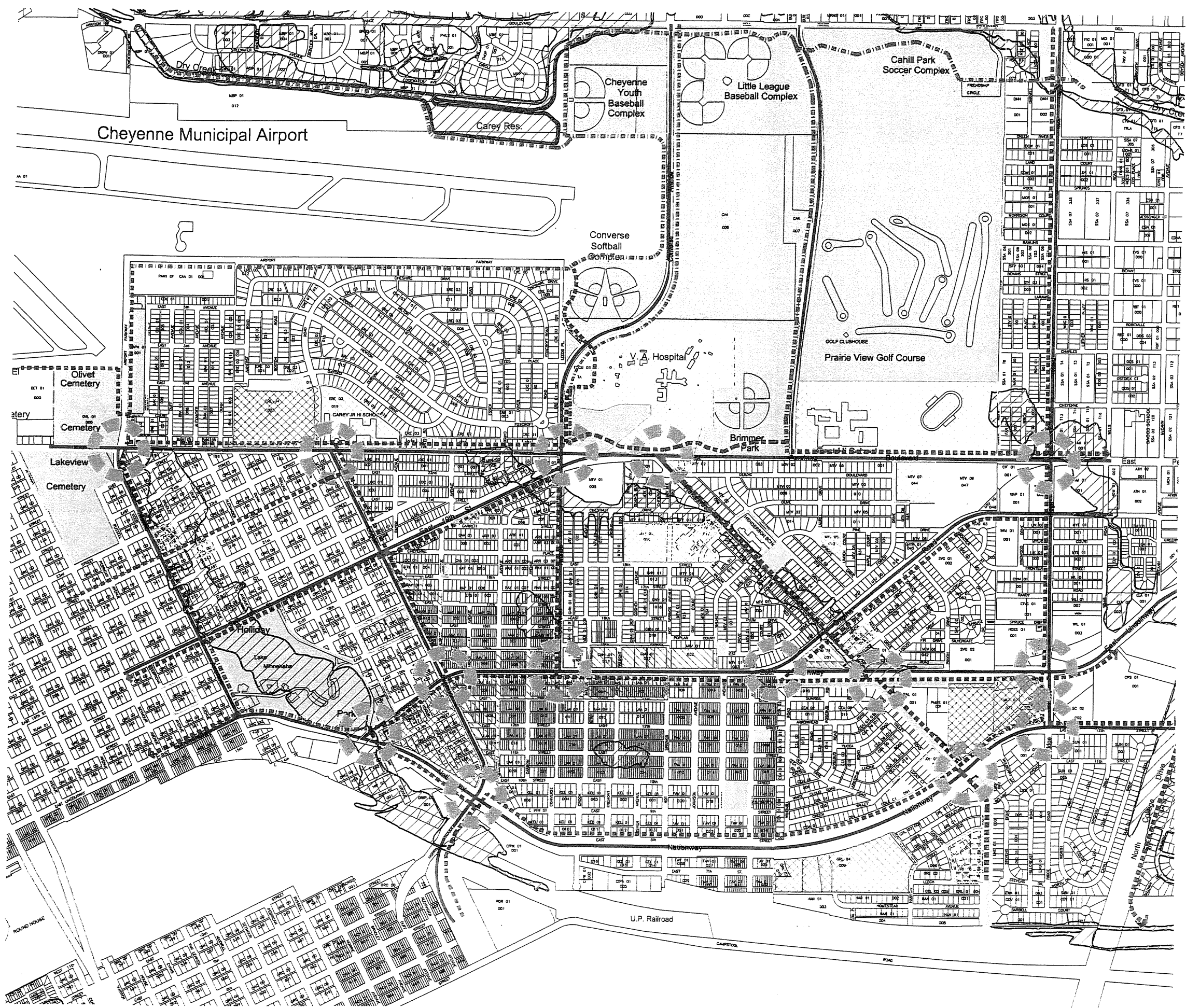
The only significant changes in residential uses are along the east side of Holliday Park where allowing the density to increase from medium to high density is recommended. The other change in residential is along Lincolnway, where a mix of ground floor retail business and upper story high density residential is suggested.

Light Industrial areas have been reduced from that indicated on the current zoning maps. It is however more consistent with the existing land uses.

Neighborhood Opportunities and Constraints

The planning team evaluated the pedestrian and bicycle circulation patterns in the study area, noted barriers to circulation, highlighted intersections in need of pedestrian enhancements, and identified key redevelopment opportunity areas as shown on Map 3.2.

Key pedestrian and bicycle routes as shown should receive priority treatment to ensure that walks are continuous and accessible, and off-street shared paths are installed where possible. Perhaps one of the most important routes is the connection across East Lincolnway and Nationway along the Henderson Ditch alignment, as this connects the neighborhoods to Lebardt Elementary school, providing a direct route for children. An underpass is proposed at Nationway as discussed in the infrastructure section of this plan. A key bicycle route is the proposed on-street bike lanes on 21st Street that connects to downtown. Other connections throughout the study area are also shown.

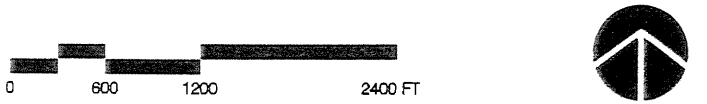


NEIGHBORHOOD OPPORTUNITIES & CONSTRAINTS

Map 3.2

LEGEND

- Existing Park / Open Space
- Potential Park Opportunities
- Potential Commercial Redevelopment Corridor
- Potential Commercial / Redevelopment Node
- Public
- Existing Multi-Purpose Trail
- Key Proposed Pedestrian / Bike Connection
- Major Pedestrian Crossing
- Barrier to Pedestrian / Bike Movement
- Flood Hazard Area



EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

Integral to the pedestrian routes are recommended intersection enhancements at major street crossings to improve comfort and safety, and enhance the area as a “pedestrian friendly” district. Where feasible, the corners of intersections should be extended to the edge of the travel lane to reduce the crossing distance. Special paving, such as colored, scored concrete, should be installed at the corners and in the crosswalks to serve as pedestrian refuges and visual warnings to motorists. Pedestrian-activated crossing signals should be installed and sequenced to allow for adequate pedestrian crossing time. The design of all corners and crosswalks in the study area should be similar, using the same materials and patterning in order to establish unity throughout the area.

The East Lincolnway commercial corridor, Logan Avenue commercial corridor, underutilized or vacant existing shopping centers and a key triangular area bounded by Lincolnway, Nationway and Logan Avenue present opportunities for redevelopment. The Lincolnway and Logan commercial corridors have a mix of older and newer businesses, many of which have structures located near the roadway. This area has the potential to become a “Main Street” for the nearby residents and a unique shopping district. This plan recommends that redevelopment projects in these areas incorporate traditional Main Street elements, such as:

- A “build-to” line near the road for the faces of buildings;
- Structures sharing a side wall to provide short distances between businesses and a continuous building front line;
- Providing longer-term parking in the rear of buildings and short term on the street in front;
- Clear walk connections from the parking areas to the building entrances;
- Outdoor eating and sitting areas; and
- Unified, thematic streetscape enhancements for a pleasant pedestrian experience.

Figures 3.1 and 3.2 illustrate these concepts. An overall site-specific plan should be developed for this area and demonstration project for a one block area implemented. The plan should identify improvements within the right-of-way, further study building in-fill opportunities, identify shared parking areas and define streetscape and architectural guidelines. Business owners in the area should organize

themselves to take advantage of the funding opportunities that are possible with the establishment of a special district.

Figure 3.1

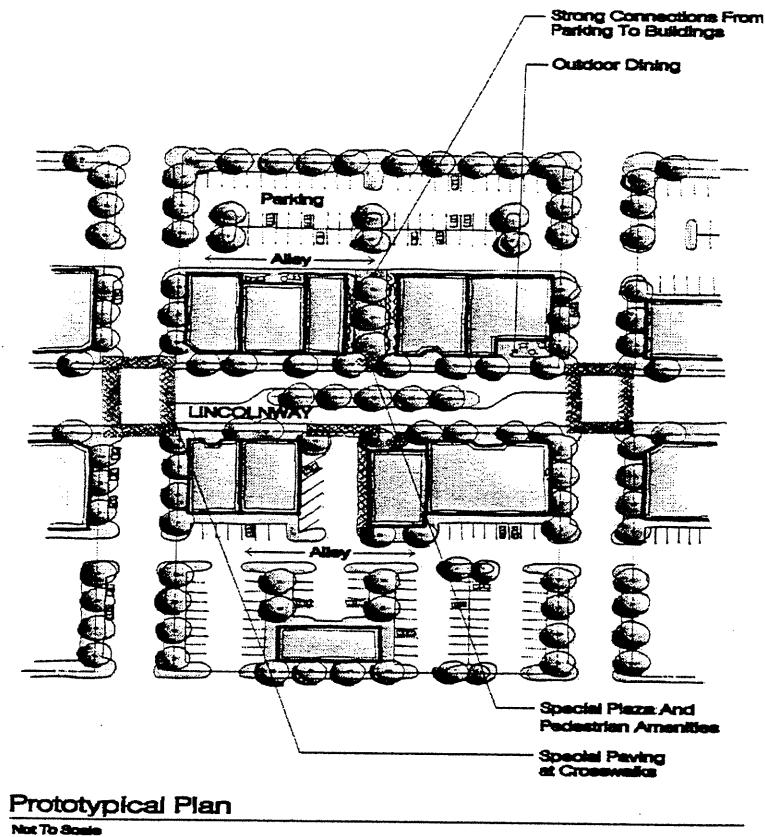
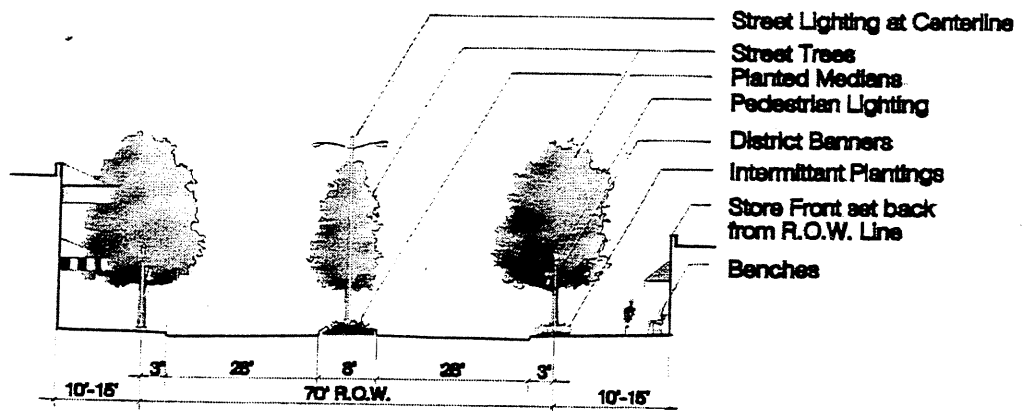


Figure 3.2



Three areas have been identified as redevelopment nodes: the Wyoming Plaza shopping center, the old Montgomery Wards building and the six block area between Nationway and Lincolnway, west of Logan. The Wyoming Plaza frequently has many vacancies and was identified by the steering committee as an area that needs aesthetic improvements. This shopping center, as well as the now vacant Montgomery Wards building suffer from expansive paved parking lots, lack of landscaping and architecturally outdated storefronts. These properties should include streetscape enhancements, parking lot landscaping, new striping, additional pedestrian walkways, and facade improvements with canopies and sheltered areas when they are redeveloped. Vehicular access to the Montgomery Wards property should be consolidated and more clearly defined.

One locations has been suggested as a potential location for a new library: the southwest corner of the V. A. Hospital property. After the spatial and program requirements for a new library have been determined, further study of this area should be explored to determine site suitability. A suitable site is one that has clear, convenient and safe pedestrian, bicycle and vehicular access as well as other physical characteristics that allow for economical construction of the facility. Alternative sites are also being considered.

The triangular area bordered by Logan Avenue, East Lincolnway and Nationway is one of the more strategically located areas within the city; it is the pivot point between 3 major roadways. Its location on top of a knoll further enhances its importance as a landmark area. This plan recommends that the city work with property owners in the area to develop a plan for this district that identifies an overall character and includes a mix of uses, including high density residential.

IV – Infrastructure Considerations

IV – Infrastructure Considerations

As indicated in the Introduction, the East-Central Cheyenne study area is almost fully developed, and it therefore has a fully developed street system. Due to the barriers to the north (Airport) and to the south (Railroad) of the study area, most of the major streets and traffic movements are east/west. The major north/south streets in the study area are Converse Avenue which is located at the east boundary of the Airport, and Morrie Avenue which is planned to connect to a future tunnel under the Airport's east/west runway.

Functional Classification

The functional classification of the streets in the study area is indicated on Map IV-1. There are two principal arterials in the study area – East Lincolnway and East Pershing Blvd., which both carry high volumes of east/west traffic. There are four Minor Arterials – Nationway and the 19th/20th one-way couplet, which are both east/west; and Converse Avenue and Morrie Avenue, which both run north/south. There are also eight streets which are functionally classified as collectors – Logan/Norris Viaduct, Henderson Drive, Chestnut Drive, Hot Springs Avenue, Ridge Road, Omaha Road/Holmes Street, Windmill Road, and Airport Parkway.

Major Street Inventory

An inventory of the major streets in the study area was developed, and is included as Appendix D to this Report. The inventory sheets provide basic information about each street, including the current traffic, and provide the projected traffic both with an airport runway underpass and without an airport runway underpass.

Traffic Volumes

Traffic volume information collected during the past several years is indicated on Map IV-2. The approximate daily volume is indicated by the type of line on the drawing.

Traffic volume projections were prepared only for the major streets and these can be found on the Street Inventory sheets in Appendix A. The traffic volume forecasts were based on the assumption that the population of the Cheyenne area in twenty years will be 88,000.

FUNCTIONAL CLASSIFICATION

MAP IV-1

LEGEND

PRINCIPAL ARTERIAL STREETS

MINOR ARTERIAL STREETS

COLLECTOR STREETS

NO SCALE

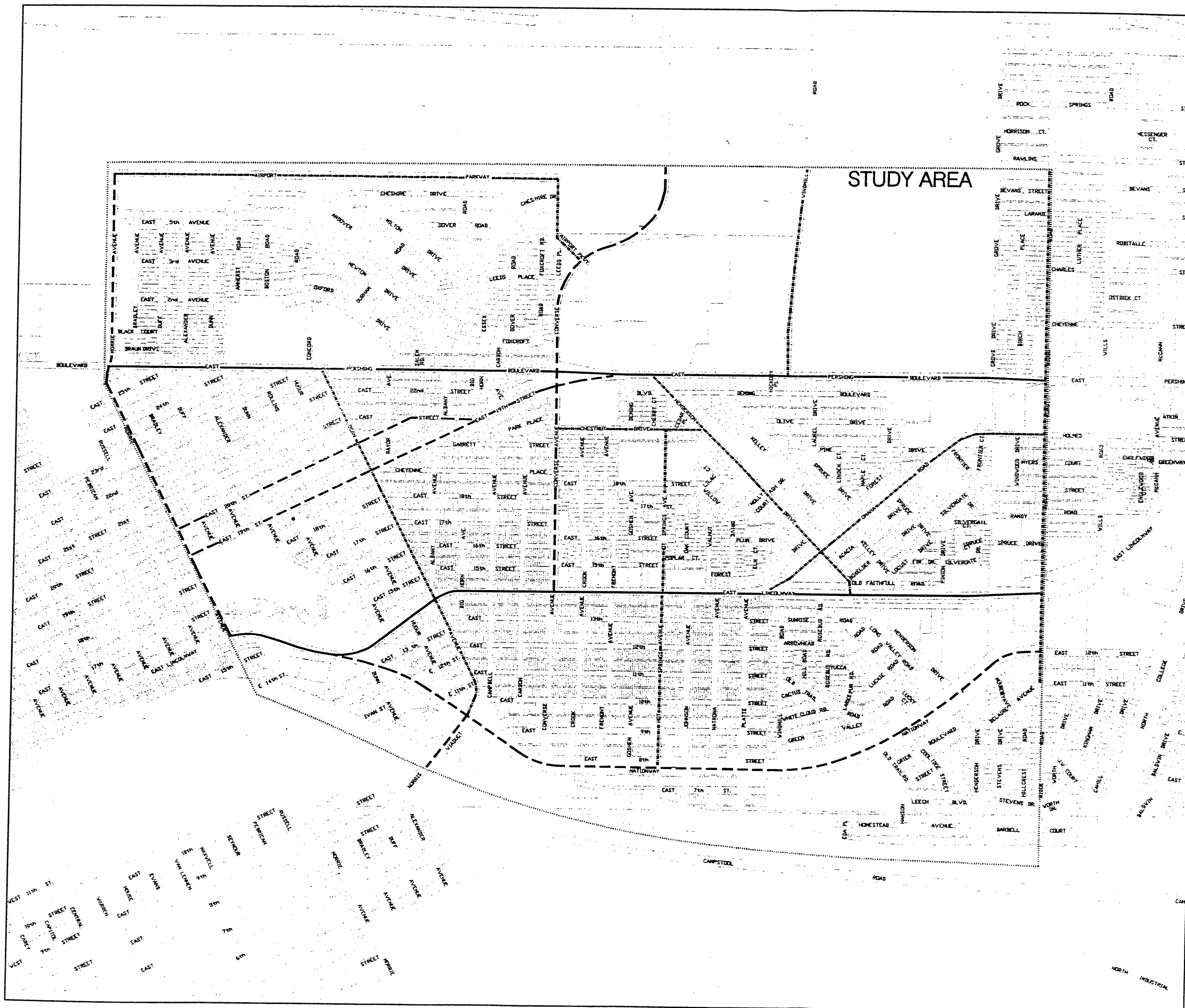


EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

BENCHMARK Of Cheyenne, P.C.
EDAW, INC.

FEBRUARY, 2000

Cheyenne Area
Transportation
Planning Process
(CHATPP)



TRAFFIC VOLUMES

MAP IV-2

LEGEND

Traffic Count	
5,000 to 7,500	-----
7,500 to 10,000	- - - - -
10,000 to 12,500	-----
12,500 +	—————

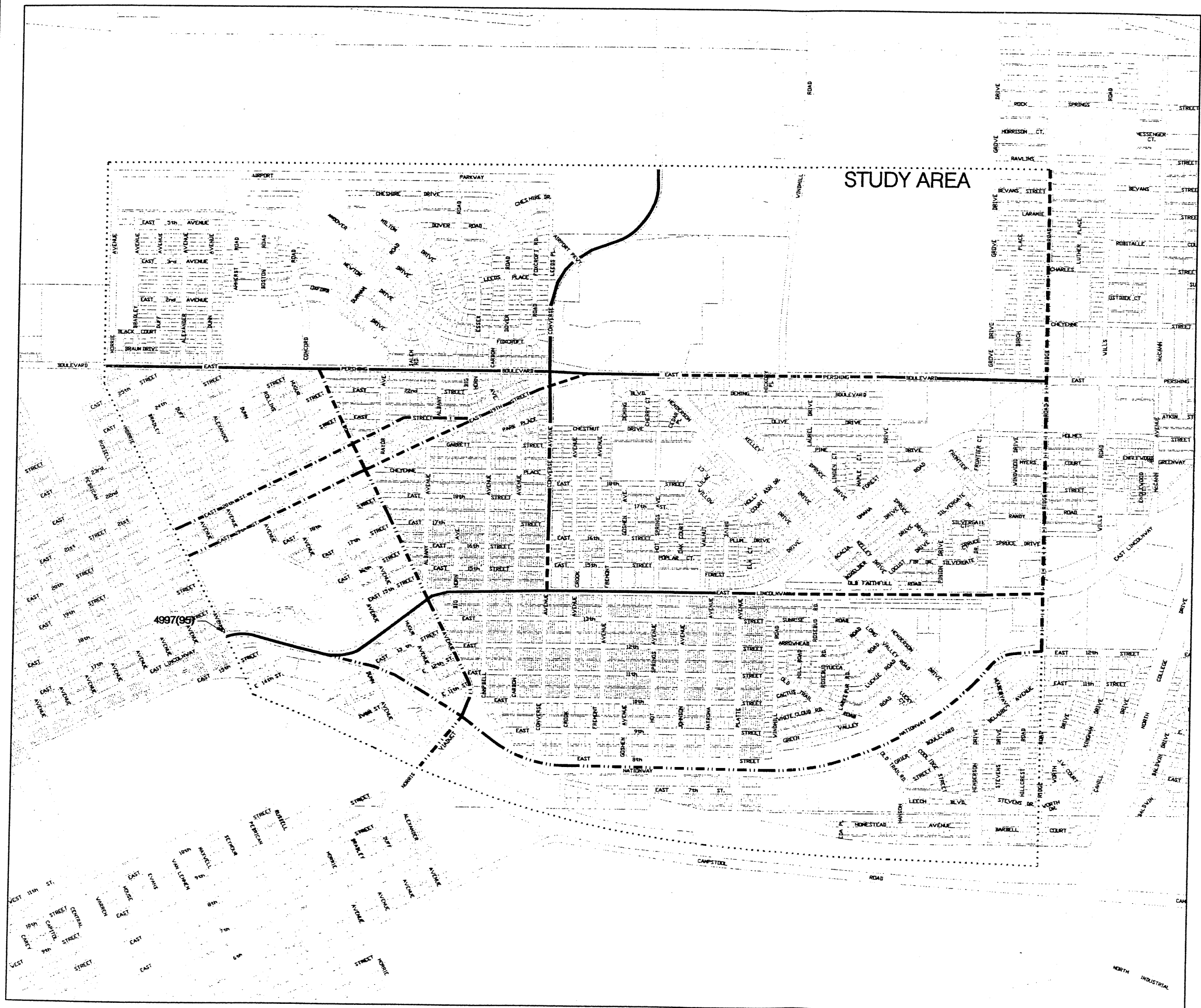


EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

BENCHMARK Of Cheyenne, P.C.
EDAW, INC.

FEBRUARY, 2000

Cheyenne Area
Transportation
Planning Process
(CHATPP)



**Projects Included in the
One-Percent Overage
Money (1995-98)**

Three improvement projects in the East-Central Cheyenne study area were included in the City Council Resolution authorizing the expenditure of the overage money from the 1995-1998 optional one percent sales tax fund. The projects are:

- ADA sidewalk upgrade: Holliday Park \$ 45,000
- Brimmer Park improvements/drainage 250,000
- Holliday Park tennis court renovation 120,000

**Projects Included in
the One-Percent Sales
Tax for 1999 – 2002**

The City Council approved Resolution No. 3942 in August, 1998, which authorized \$19,390,000 for public works improvements if the one percent sales tax was renewed by the voters of Laramie County. The specific projects in the East-Central Cheyenne study area are:

- Omaha Road Reconstruction from Henderson Dr. to Ridge Rd. \$ 459,000
- Morrie Ave. Reconstruction from 15th St. to 20th St. \$1,560,000

A conceptual plan has been developed for the improvement of Omaha Road/Holmes Street, and a grant application for matching funds has been submitted to State. The conceptual plan for Omaha Road recommends one lane in each direction, a continuous center turn lane, and shoulders. It also recommends a 10' shared use path along the south side of the road, and a 5' sidewalk along the north side of the road. The Holmes Street segment of the project, due to the 60' right-of-way, continues to have one lane in each direction with parking lanes on each side.

The Morrie Avenue Reconstruction, specified in the Resolution, is to have a reconstructed street cross-section of 45' except at the major intersections where turning lanes may be installed. This section is 8' narrower than recommended in the Study prepared by HNB Consulting Engineers, and was adopted at the request of the citizens in the area. The project includes the realignment of the west entrance to Holliday Park to intersect with 17th St. and required modification of the parking area within the Park.

**Other Projects in
the Transportation
Improvement Program**

In addition to the above projects, the Transportation Improvement Program indicates the Norris Viaduct design should be prepared in fiscal year 1999-2000, and the project construction is included in the 1999-2002 project listing.

**Transit Routes in
the Study Area**

The Cheyenne Transit Program provides good service to the East-Central Cheyenne study area. The Transfer Station is located in the northeast quadrant of the intersection of Lincolnway and Morrie Avenue (southeast corner of Holliday Park), and four of the bus routes connect to this location.

The Downtown Route enters the study area from the west on Pershing Blvd., and goes east to the Cole Shopping Center. The Route then goes south on Hot Springs to Lincolnway and then west on Lincolnway to the Transfer Station.

The East Route goes east on Lincolnway from the Transfer Station to Omaha Road. It then follows Omaha Road/Holmes Street to Ridge Road where it turns south to the Cheyenne Plaza, which is east of the study area. The East Route then enters the study area from the north on Ridge Road and turns west on Pershing Blvd. At Logan, the Route turns south to Lincolnway where it goes west to the Transfer Station.

The West Route is basically west of the study area, but uses Lincolnway from the Transfer Station to Morrie Avenue, and Morrie Avenue between Lincolnway and 20th St.

The South Route is south of the study area, except Lincolnway is used between the Transfer Station and Nationway, and Nationway is used to reach the Norris Viaduct where the Route goes south.

In addition, the Cheyenne Transit Program offers a dial-a-ride service which provides curb-to-curb service.

**Greenways in the
Study Area**

The Greenway Development Plan, prepared in 1992, included only one greenway in the East-Central Cheyenne study area. The greenway was known as "Railroad" and the west terminus was in Holliday Park. It then went east along the south side of

Nationway to the east side of the Norris Viaduct. It then went south for a short distance and then went east along the north side of the Union Pacific Railroad through the study area. However, the proposed alignment was on Railroad right-of-way, and the Railroad has denied the request to use the right-of-way for safety reasons. As a substitute alignment for a bike path, a suggested joint use path is proposed along Nationway and information about that proposal is included as a later section of this Report.

A greenway connection between the Dry Creek Greenway and the area of the City known as the Avenues is also being considered by the City. The "Avenues Connection" would begin at approximately the intersection of Airport Parkway (formerly Morrie Avenue) and Black Court, and extend north along the west side of Airport Parkway (formerly Morrie Avenue) for about one block, and then go west toward the avenues. The connection to the east would be along Airport Parkway.

On-Street Bicycle Plan

An on-street bicycle plan was developed by ChATPP in 1993. The purpose of the plan was to present a proposed network of bike routes and bike lanes to serve the cycling public. It considered the needs of cyclists and the motoring public, including safety standards, and cost estimates.

In addition to the existing bike route on 22nd Street from Morrie to Logan, on-street bike routes were recommended on the following streets in the study area:

- Airport Parkway (east/west) from Airport Parkway (north/south) to Converse,
- 19th Street from Morrie to Pershing,
- Henderson from Deming to Lincolnway, and
- Lincolnway from Henderson east to Ridge.

Two of the shared-use paths proposed in this Study will connect to the on-street route on Henderson – the path along Omaha Road, and the path proposed along Nationway, assuming a path is constructed along the edge of Henderson Ditch between Lincolnway and Nationway.

Capacity Analyses

The capacity and level of service of the major streets in the

East-Central Cheyenne study area are controlled by the signalized intersections.

Capacity analyses were made at several of the signalized intersections to determine the level of service using current traffic volumes and the projected traffic volumes. The capacity analyses were done using Highway Capacity Software (HCS-3), which computes the average delay per vehicle and indicates the level of service.

The current volumes at many of the signalized intersections were provided by ChATPP and indicated the turning movements during the periods 7 - 9 am, 11 am - 1 pm, and 3:30 - 5:30 pm in May, 1998. Generally, the peak hour on Cheyenne's major streets is from 4:30 - 5:30 pm.

The projected volumes were provided by ChATPP and WYDOT and indicated the projected average daily traffic in the year 2017. The peak hour in 2017 was determined by expanding the May, 1998 peak hour by the growth in the 24-hour counts from 1999 to 2017. A growth factor was determined for two situations: with an Airport runway underpass, and without an Airport runway underpass.

The signal timing assumed for the capacity analyses was a 70 second cycle, with 38 seconds of green time on the major street and 24 seconds of green time on the minor street. A 3-second clearance interval and a 1-second all-red interval were utilized. A peak-hour factor of 0.93 was used.

Three intersections on Pershing Blvd. were analyzed – Morrie Avenue, Converse Avenue and Ridge Road. Using the assumptions indicated above, all of the intersection movements at all three intersections have levels of service of "A" or "B" for both of the existing volumes, and the future volumes without an underpass of the Airport runway. The current problems at Converse Avenue are not indicated in a capacity analysis since only the one intersection is analyzed, and the problems are the result of the close proximity of the intersections of 19th and Converse, and 19th and Pershing.

The capacity analysis for the intersection of Logan Avenue and 19th Street indicated a Level of Service "C" for the intersection in the future, both with and without the Airport runway underpass. Adding a second lane eastbound improves the

Level of Service to "B" and reduces the delay per vehicle by almost one-half.

In general, the capacity analyses indicate the City has done a good job of providing high levels of service, with corresponding low average vehicle delays, at the major intersections in the study area.

One explanation for the lack of problems in the future, except with the Airport runway tunnel, may be that the use of a projected population of 88,000 in the metropolitan area in the year 2017 may be conservative and result in traffic projections that are too low. Another possible explanation may be that the current daily traffic volume counts may have been made in the summer when the volumes are higher than average, which resulted in low expansion factors. In some locations, the projected volumes were less than the current volumes, and in these cases a negative expansion factor was used.

In summary, the capacity analyses assist in the justification of the Action Plan recommended for the East-Central Cheyenne study area.

Airport Related Issues

The Cheyenne Airport is located at the north edge of the study area. The airport was originally located north of the City, but over time the City has grown around it, and it now forms a barrier to north/south traffic some two miles in length. Several issues related to the Airport affect the residents of the study area and these are discussed in this section.

Extension of Airport Parkway to the East

Airport Parkway was a part of a development done by the Airport Board in 1989 to provide a location for airport-related businesses. The road connected to Morrie Avenue on the west, and at the east end it turned south before connecting to Converse Avenue. An issue is whether or not Airport Parkway should be extended directly east to connect with Converse Avenue.

Business sites on the north side of Airport Parkway abut the south side of the Airport, and a residential neighborhood known as Eastridge is on the south side of Airport Parkway. There was opposition from some of the residents of the Eastridge neighborhood to the proposed road and

development, and concessions were made by the Airport Board to reduce that opposition.

The excerpts from reports done in 1989 indicate the commitments to maintain the alignment of Airport Parkway where it was constructed.

From the Traffic Report, Airport Parkway Project, Cheyenne, Wyoming, June 11, 1989, Revised June 21, 1989.

"The original plan was to connect Airport Parkway to the new alignment of Converse Avenue by continuing it to the east. However, the residents felt this would result in the Parkway being used as a bypass and attract large volumes of traffic. To minimize the traffic using the road as a bypass, it was decided to end Airport Parkway at existing Converse and connect it as indicated in the initial section of this Report."

From the Meeting Summary of a meeting held at 11:45 AM, on June 15, 1989, in the Airport Conference Room at 200 East 8th Avenue. Those in attendance included residents of Eastridge, members of the Airport Board, Ward II Councilman Joe Dougherty, and Airport Manager Jerry Olson.

"Some areas of apparent agreement by those present were as follows:

- *To reduce the number of vehicles using the new road as a bypass between Converse Avenue and Pershing Blvd., the east terminus of the Airport Parkway will be the existing alignment of Converse Avenue.*
- *Airport Parkway will not be opened to traffic at Converse Avenue, until the new alignment of Converse is completed, assuming the project is completed as scheduled in the summer of 1990.*
- *The Airport Board will support a connection from the east end of the Airport Parkway to the new alignment of Converse Avenue which is circuitous for traffic traveling with a northeast to southwest orientation."*

From the Cheyenne Aviation Technical Center, Airport Parkway Development Plan, Summary, August 2, 1989.

**Safety and Noise
Impacts of the
Cheyenne Airport**

Project Limits

Morrie Avenue will be improved from the south property line of the Airport, north to Airport Parkway. Airport Parkway will be constructed from Morrie Avenue to the existing alignment of Converse Avenue. At the request of the citizens of Eastridge, the Airport Board will oppose any effort to extend Airport Parkway easterly to intersect the new alignment of Converse Avenue.

Access

The only access to the Airport Parkway will be at Morrie Avenue and at the existing alignment of Converse Avenue. It was the desire of the Eastridge residents that no additional access points be permitted."

The Cheyenne Airport has both safety and noise impacts on the East-Central Cheyenne Study Area.

The primary safety impact results from the approach to Runway End 30 being over a portion of the Study Area. According to the Cheyenne Airport FAR 150 Noise Exposure and Land Use Compatibility Study, prepared by Barnard Dunkelberg & Company and Mestre Greve Associates, in June, 1992, the clear zone for Runway End 30 extends approximately 500' south of Pershing Boulevard and includes the residential area indicated on Figure IV-1, Enlarged Land Acquisition Map, from the above-mentioned study.

Runway 12/30, which is the northeast/southwest runway, is not the longest runway at the Cheyenne Airport, nor the one which has the instrument landing system. According to the Airport Layout Plan (ALP) prepared by Isbill Associates Inc., dated November, 1998, Runway 12/30 is 150' wide and has a takeoff distance available of 6689'. The ALP indicates the Landing Distance Available is 4929' for Approach Category B, Airplane Design Group III aircraft, and 4529' for Approach Category C, Airplane Design Group IV aircraft. Runway 8/26, which runs east/west, and has the instrument landing system, is 150' wide and 9176' long. In the future, Runway 8/26 is proposed to be lengthened to 9700'.

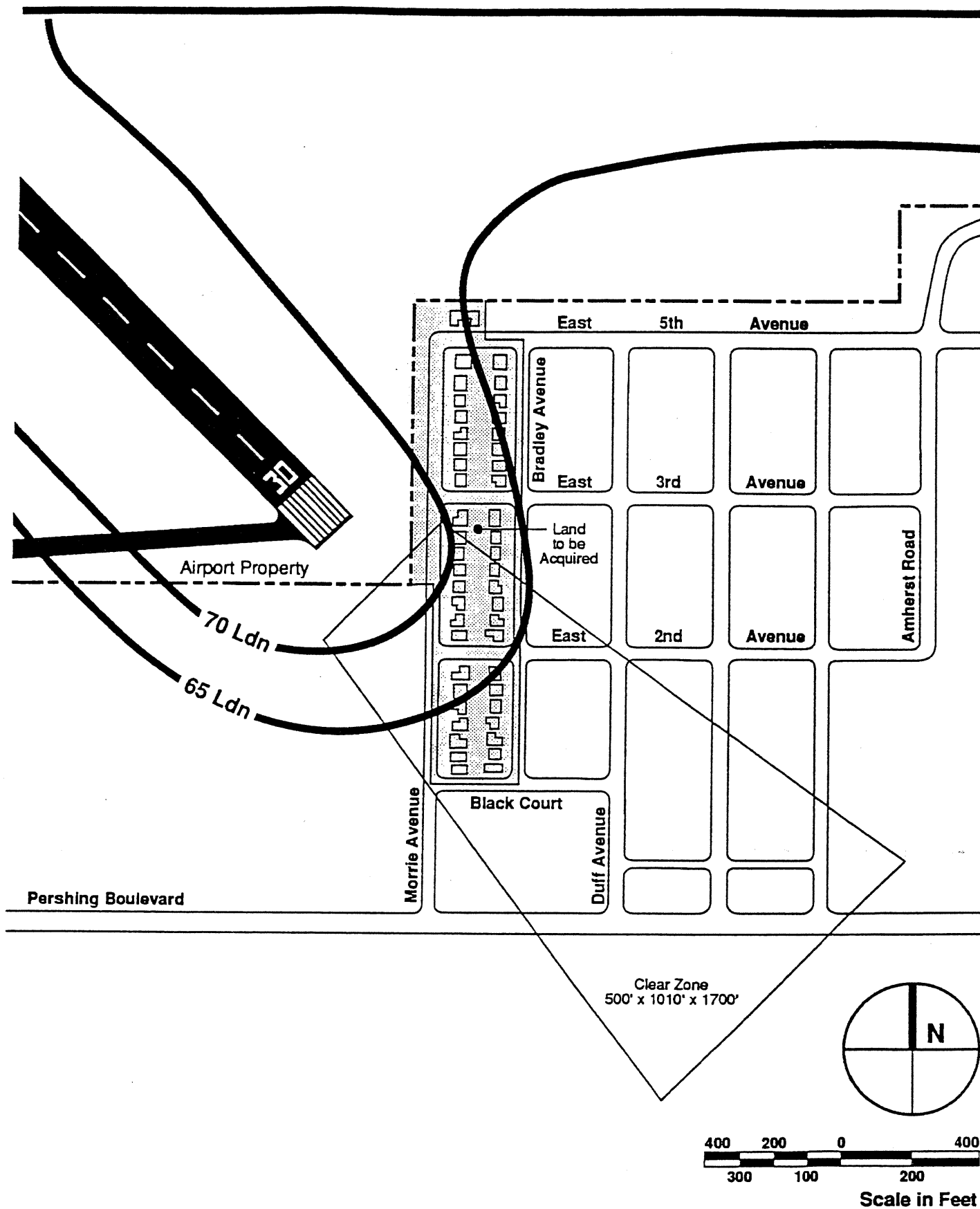


Figure G2 Enlarged Land Acquisition Map

Cheyenne Airport
FAR Part 150 Noise Exposure and
Land Use Compatibility Study

As a result of the 1992 Noise Study, the Cheyenne Airport made several operational changes to reduce the noise generated by the airport. These included 1) a voluntary runway use plan consisting of shifting all commuter, corporate jet, and C-130 approaches from Runway 30 to 08/26 during conditions when the wind allows; 2) moving the C-130 runup operations to reduce noise impacts to residents north of the airport; 3) institute a noise complaint system to assist the airport in annually evaluating the effectiveness of the noise abatement procedures contained in the Noise Exposure and Land Use Compatibility Study; and 4) update and monitor the measures presented in the Noise Exposure Study every five years. The Airport has also acquired and relocated several homes located southeast of the Airport which were within the DNL 65 dB contour.

The Airport Board is currently constructing a facility which will be used by Great Lakes Aviation. The facility is located on the north side of Airport Parkway and is scheduled for completion in June, 2000. Great Lakes Aviation is currently doing some maintenance work at the Airport and does runups during the early morning hours.

Other improvements planned by the Airport Board include:

- The relocation of the Tower to the proposed new terminal site on the west side of Airport Parkway, within five years;
- The relocation of the airport terminal to the new terminal area in about five years;
- The extension of Runway 8/26 in about three years; and
- The continuing development of the lots along Airport Parkway.

Underpass of the Airport Runway Connecting Powderhouse Road and Morrie Avenue

In 1978, a Steering Committee for the Airport Master Plan recommended the Cheyenne Airport be relocated to a site south of Cheyenne on the east side of I-25. However, the City Council, by a vote of 5 to 4 defeated the proposal.

Since then, an effort has been made to reduce the barrier effect of the Airport by the construction of a tunnel under the

east/west runway. A part of the effort was the preparation of the Morrie Avenue Tunnel Feasibility Study in 1987, by DeLeuw, Cather & Company. The study objectives were to: 1) evaluate the need of a transportation tunnel connecting Pershing Boulevard (south of the airport) to Dell Range Boulevard (north of the airport) underneath the east/west runway; 2) estimate the approximate time frame a tunnel would need to be built; 3) evaluate cost effectiveness of the tunnel as compared to only upgraded adjacent corridors; and 4) evaluate financial opportunities and mechanisms that can be applied toward construction of the Morrie Avenue Tunnel.

It was concluded that the addition of a road between Dell Range Blvd. and Pershing Blvd. on the Morrie Avenue alignment would reduce the traffic delay in 1987 and in the future. This reduction in delay would be more noticeable as the Cheyenne area population increases.

Four major improvement alternatives were studied. Three alternatives included a tunnel, and one was an improved street network without a tunnel. The three tunnel alternatives considered three situations south of Pershing: 1) a one-way pair of Morrie/ Russell; 2) a one-way pair of Morrie/Bradley; and 3) Morrie as a four-lane arterial. The Study found that the tunnel option with Morrie/Russell was the outstanding option, and recommended this link be classified as a major arterial.

The Study found that most the projected growth of Cheyenne will take place north of Dell Range Blvd. between Yellowstone Road and College Drive.

The Study also indicated the tunnel is not feasible before the population reaches a level of 100,000 or more and a long term decision is made about the airport location.

More recently, in 1996, the ChATPP retained HNB Consulting Engineers to prepare a study to define the possible needs for future traffic demands along Morrie Avenue, from 15th Street to Morrie Avenue. The Study pointed out that the construction of a tunnel under the airport runway would significantly increase the projected traffic volume on Morrie Avenue. It also pointed out that three areas along Morrie Avenue currently have public zoning – Holliday Park, Lakeview Cemetery, and Triumph High School. The Report includes a discussion of public right-of-way encroachments between 15th Street and Lincolnway.

A 53' roadway section was recommended for use under three conditions: 1) two thru lanes with parking on both sides could be used for the estimated traffic without the Morrie Avenue Tunnel; 2) for the bike route in place from 22nd St. to 19th St., a section could be used without the left turn lane placing bike lanes between the parking and travel lanes; and 3) in the event a tunnel is constructed and traffic conditions warrant, a four lane section could be used with no parking.

In 1998, a new cost estimate was prepared by HNB Consulting Engineers which indicated the estimated cost of improving Morrie Avenue from 15th Street north to 20th Street as \$1,770,216.60.

In October of 1999, the ChATPP and WYDOT prepared twenty year estimates of the traffic volumes using the three alternates indicated in the DeLeuw, Cather & Company Study. These estimated volumes are indicated in Map IV-3. It can be noted that the projected volume using the tunnel in the year 2020 will be over 33,000 vehicles per day.

Although additional study is needed, the analysis done as a part of this Study indicated a preference for the Morrie/Bradley one-way couplet. The primary reason for the preference of this alternative is the improved ability to accommodate traffic at the intersection with Pershing Blvd.

In February, 1997, the ChATPP, with the support of the City, the Airport Board, and the Chamber of Commerce, requested the State's Congressional delegation to include funding (\$25,000,000) for the tunnel (referred to as the "Cheyenne Area Intermodal Connector") in the Federal Transportation Act known as TEA-21. The effort was unsuccessful, but the effort should be renewed in 2003 when there will be new Federal transportation funding legislation.

Renaming of Morrie Avenue – North of Pershing Blvd.

On October 28, 1996, the City Council adopted Resolution No. 3797, which directed the City Engineer to change the name of Morrie Avenue north of Pershing Boulevard to Airport Parkway. The change was made at the request of the Cheyenne Airport Board to assist them in marketing the Cheyenne Aviation Technical Center.

PROJECTED TRAFFIC FOR THREE ALTERNATES SOUTH OF AIRPORT RUNWAY TUNNEL

MAP IV-3

LEGEND

NUMBERS INDICATE ESTIMATES OF 24 HOUR TRAFFIC VOLUME IN THE YEAR 2019.

FOR DISCUSSION, SEE NARRATIVE ON UNDERPASS OF THE AIRPORT RUNWAY CONNECTING POWDERHOUSE ROAD AND MORRIE AVENUE.

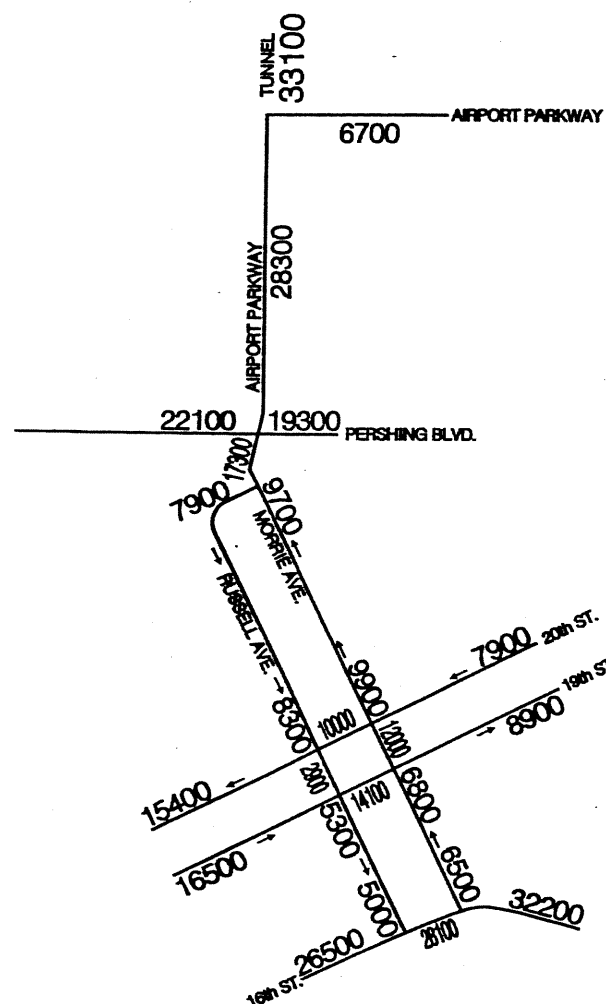


EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

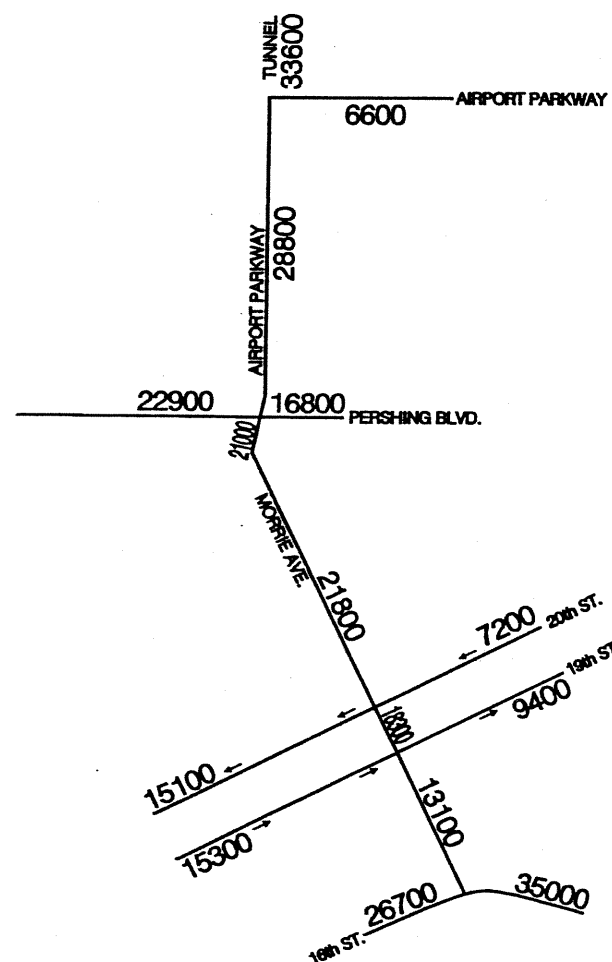
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FEBRUARY, 2000

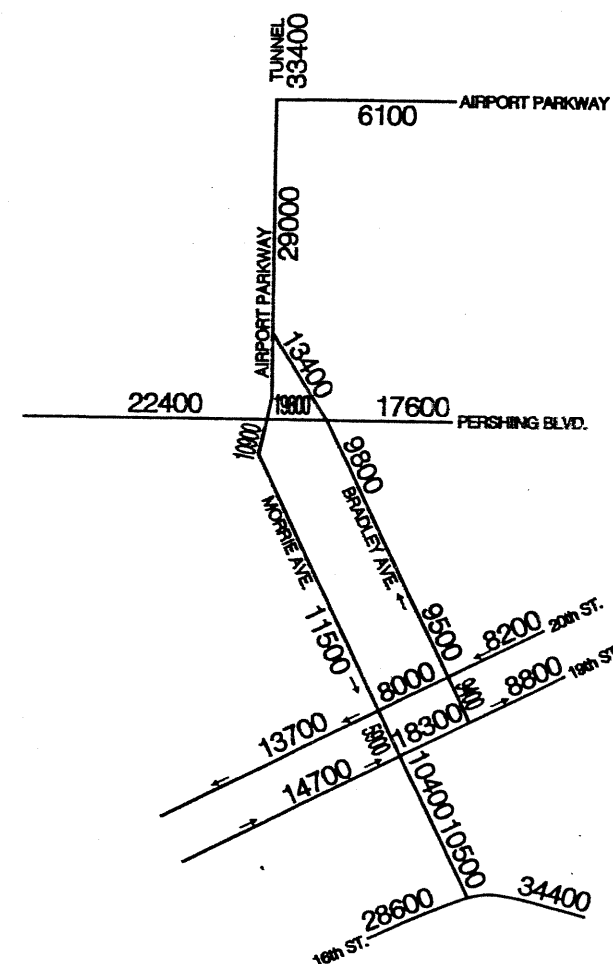
Cheyenne Area
Transportation
Planning Process
(CHATPP)



ALTERNATIVE —
MORRIE AVE. AND RUSSELL AVE.
AS A ONE-WAY PAIR



ALTERNATIVE —
MORRIE AVE. AS A
FOUR-LANE ALTERNATIVE



ALTERNATIVE —
MORRIE AVE. AND BRADLEY AVE.
AS A ONE-WAY PAIR

Prior to this change, Airport Parkway began at Morrie Avenue and went east to Converse Avenue. Discussion of the tunnel and other issues in the area are much easier to comprehend if the north/south street is referred to as "Morrie Avenue", and the east/west street is referred to as "Airport Parkway". For example, if the name change stays in effect, the tunnel will connect Powder House Road to Morrie Avenue via a short section of Airport Parkway. Also, the Great Lakes Aviation Facility will be near the intersection of Airport Parkway and Airport Parkway.

It is recommended that the section of street between Pershing Avenue and Airport Parkway be changed back to "Morrie Avenue to avoid confusion".

Review of Traffic Accidents

Traffic accident information for three years (1996 - 1998) was prepared by the ChATPP and provided to the consultant for review and analysis. The information was provided in five formats:

- Crashes involving pedestrians (Map IV-4)
- Crashes involving bicycles (Map IV-5)
- Crashes at business driveways (Map IV-6)
- Crashes at uncontrolled intersections (Map IV-7)
- Crashes at controlled intersections with 10 or more accidents (Map IV-8)

Crashes Involving Pedestrians

During the three-year period, there were 8 collisions involving pedestrians and they occurred at eight different locations in the study area. Five occurred when the pavement was dry, and the other three when the roadway was snowy or icy. Seven of the pedestrians were in a crosswalk and the other one was standing in the road. Four of the collisions were at locations with traffic signals, and one was at an intersection controlled by a stop sign. Five of the collisions occurred during daylight, two when it was dark, and one at dusk. The cause of the accidents were listed as: pedestrian confusion - 3, inattentive driver - 3, failure to grant right-of-way - 1, and unsafe speed - 1.

Crashes Involving Bicycles

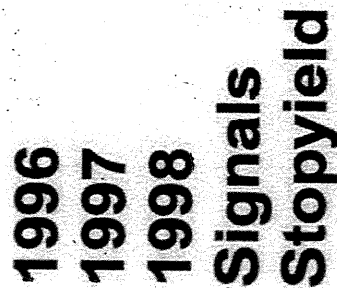
There were seventeen collisions involving bicycles during the three-year period. Ten of the crashes were listed as bicycle error, and seven were driver error. Six of the collisions occurred on Monday, four on Tuesday, and two each on Sunday, Wednesday, and Thursday, and one on Friday. Five of the collisions occurred during August, four during September, three in April, two in July, and one each in March, November, and December. Sixteen of the collisions occurred during daylight and one at night. Eight of the locations had traffic signals, four had stop signs, and there was no control at the other five. Only two locations had more than one collision – there were four at the intersection of Converse/ Pershing/19th, and two at the intersection of East Lincolnway and Logan.

Crashes at Business Driveways

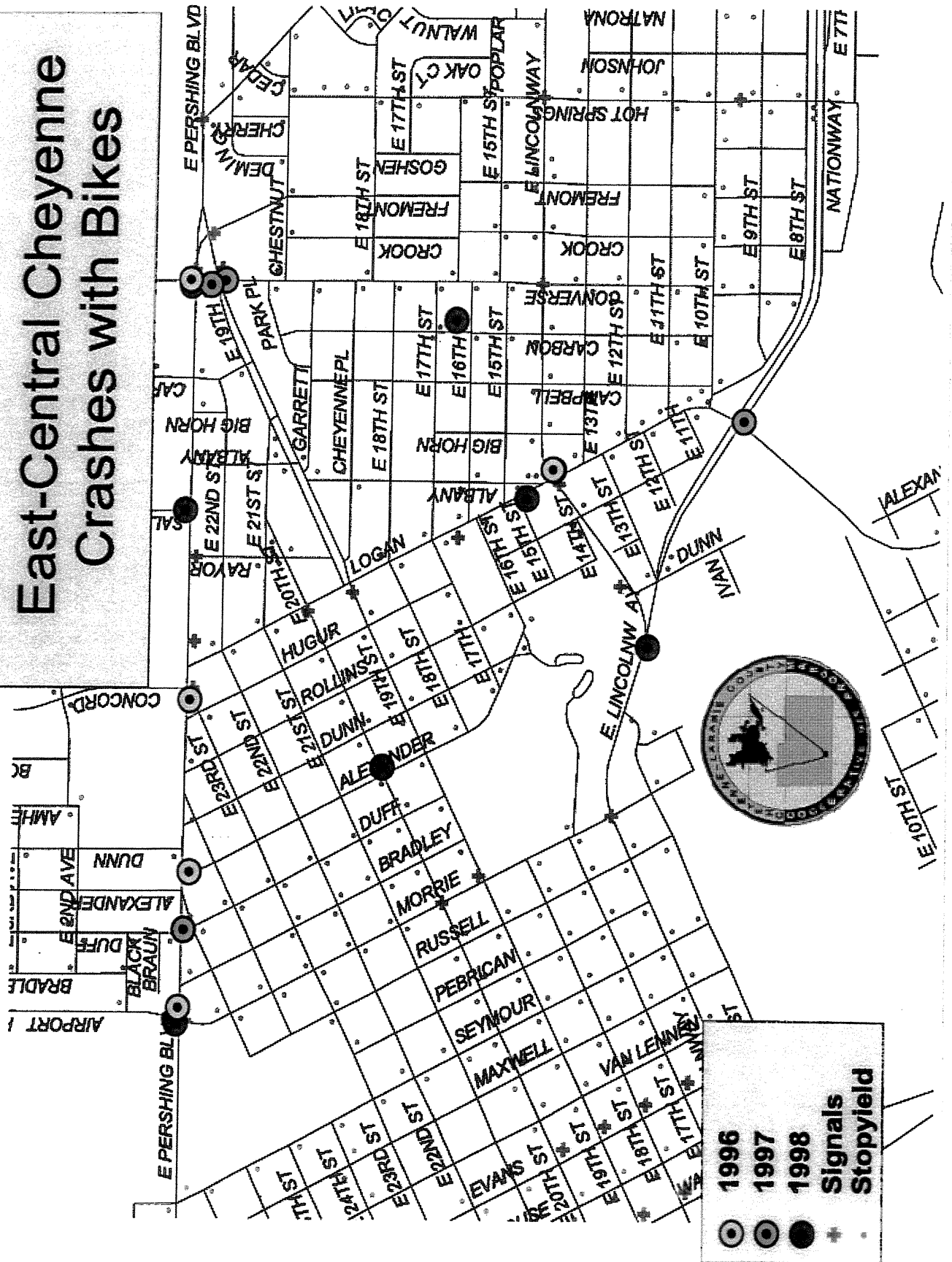
There were 85 crashes at business driveways during the three-year period, involving 17 injuries. The largest number, 30, occurred on East Lincolnway, and Pershing Blvd. was second highest with 14. Windmill and Converse both had 8, and there were six on Ridge Road. There were two on Morrie Avenue, and only one each on Nationway and Chestnut. The types of accidents occurring at the driveways were: left-turn 32, rear-end 21, angle collisions 17, and right-turn 9.

Some of the steps that can be taken to decrease collisions at business driveways include:

- Encourage traffic to use driveways on the side streets where there is less traffic and slower speeds.
- Discourage business driveways on major streets.
- Encourage driveways to be one-way entrances with the exits on side streets.
- Encourage large radii on driveways to permit exit and entrance movements to occur at higher speeds.
- Utilize shared entrances.
- Construct speed-change lanes.



East-Central Cheyenne Crashes with Bikes



Crashes at Uncontrolled Intersections

Uncontrolled intersections are those intersections where traffic on the approaches is not controlled by a traffic signal, stop signs or yield signs. Uncontrolled intersections in the City are generally in areas where the traffic volumes are low.

During the three-year period, there were 60 accidents at uncontrolled intersections in the study area. Thirty-three occurred on dry roads, twenty-one on icy/snowy roads, and six on wet roads.

Five of the crashes occurred at the intersection of Bradley and 24th St. However, a field investigation indicated that the City had installed stop signs on the north and south approaches to the intersection.

Four collisions occurred at the intersection of East 13th and Natrona. A field review indicated numerous parked vehicles in the area primarily due to its proximity to Cheyenne Health Care Center. It appeared that vehicles were parked too close to the intersection and the parking restricted sight distance.

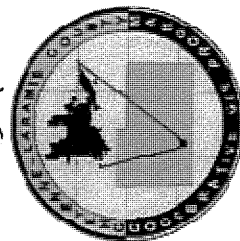
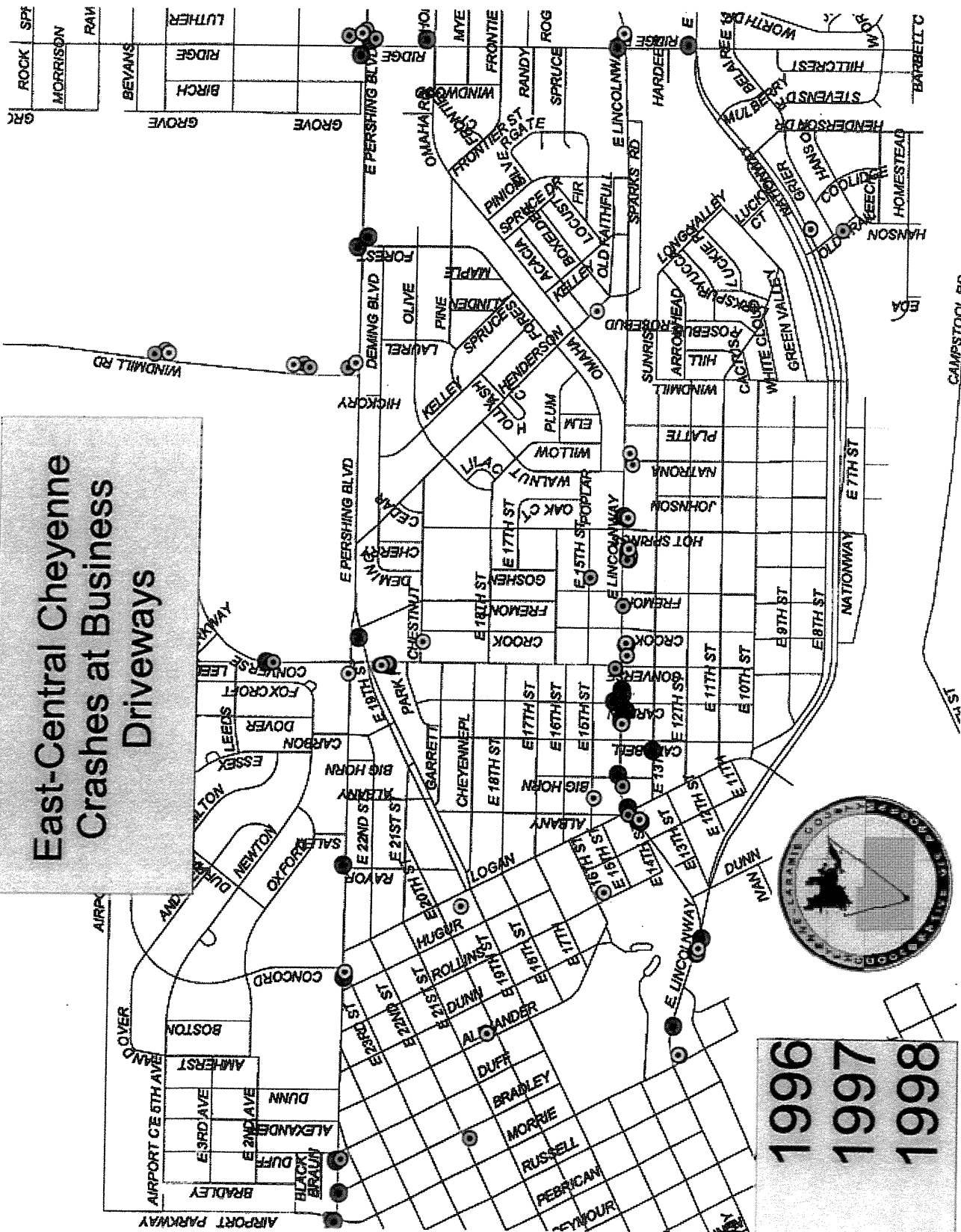
The elimination of parking to provide a sight triangle at the intersection should improve the accident record at this intersection.

There were three collisions at the intersections of Rollins and 18th, 18th and Crook, and at Alexander and 22nd. Field reviews indicated sight restrictions in at least one quadrant at first two of the intersections, respectively.

The question of whether or not all intersections should be controlled by a traffic signal, stop signs, or yield signs is an issue in Cheyenne. It was subject of a front page story in the Wyoming Tribune-Eagle on Sunday, August 8, 1999. The article was written by Dana Biebersmith, and reported the views of local residents as well as local police and planning officials.

The Manual on Uniform Traffic Control Devices For Streets and Highways (MUTCD) has been adopted by both the State and the City as the standard for the installation of traffic control devices. It includes warrants for the installation of traffic signals, stop signs, and yield signs.

East-Central Cheyenne Crashes at Business Driveways



1996
1997
1998

A traffic signal is expensive to install and a large volume of traffic is required to justify its installation. Since traffic signals are not a part of the issue of installing traffic control at uncontrolled intersections, further discussion of traffic signals is unnecessary.

The MUTCD indicates four warrants for stop signs:

"Because the STOP sign causes a substantial inconvenience to motorists, it should be used only where warranted. A STOP sign may be warranted at an intersection where one or more of the following conditions exist:

- 1. Intersection of a less important road with a main road where application of the normal right-of-way rule is unduly hazardous.*
- 2. Street entering a through highway or street.*
- 3. Unsignalized intersection in a signalized area.*
- 4. Other intersections where a combination of high speed, restricted view, and other serious accident record indicates a need for control by the STOP sign.*

Prior to the application of these warrants, consideration should be given to less restrictive measures, such as the YIELD sign (2B-7) where a full stop is not necessary at all times"

The Traffic Control Devices Handbook augments and interprets the MUTCD. The Traffic Control Devices Handbook indicates that unnecessary Stop signs:

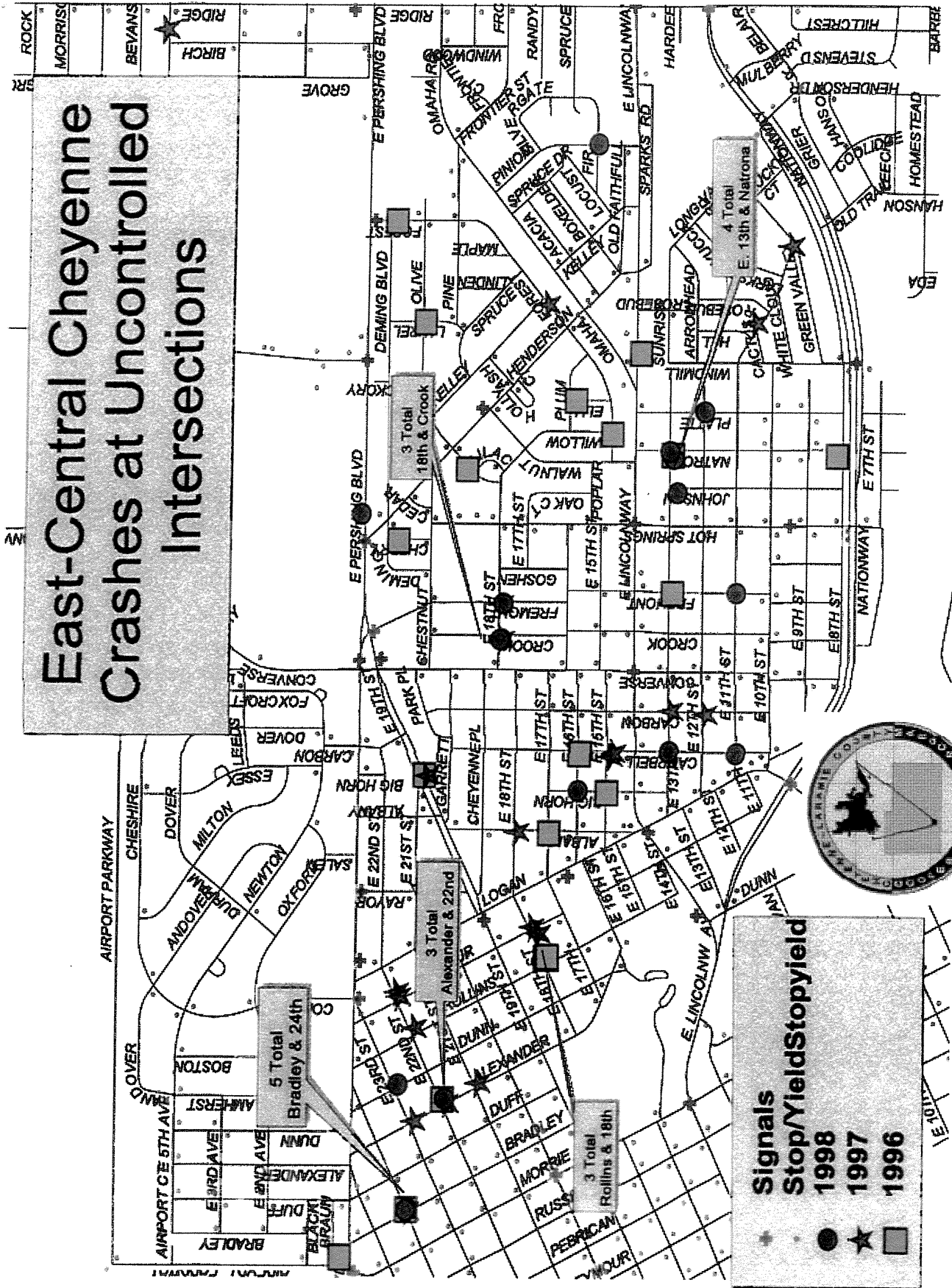
*"Cause accidents they are designed to prevent.
Breed contempt for other necessary STOP signs.
Waste millions of gallons of gasoline annually.
Create added noise and air pollution.
Increase, rather than decrease, speeds between intersections."*

Although it is not mentioned above, there is also a significant cost to the City to install and maintain unnecessary stop signs.

The MUTCD indicates five warrants for Yield signs:

- 1. "At the entrance to an intersection where it is necessary to assign right-of-way and where the safe approach speed on the entrance exceeds 10 miles per hour.*
- 2. On the entrance ramp to an expressway where an*

East-Central Cheyenne Crashes at Uncontrolled Intersections



HIGH ACCIDENT LOCATIONS IN THE STUDY AREA

MAP IV-8

LEGEND

TOTAL COLLISIONS 1996 - 1998	12
COLLISIONS PER 1,000,000 VEHICLES THROUGH THE INTERSECTION	1.02

FOR DISCUSSION, SEE NARRATIVE ON CRASHES AT
CONTROLLED INTERSECTIONS WITH 10 OR MORE
CRASHES.

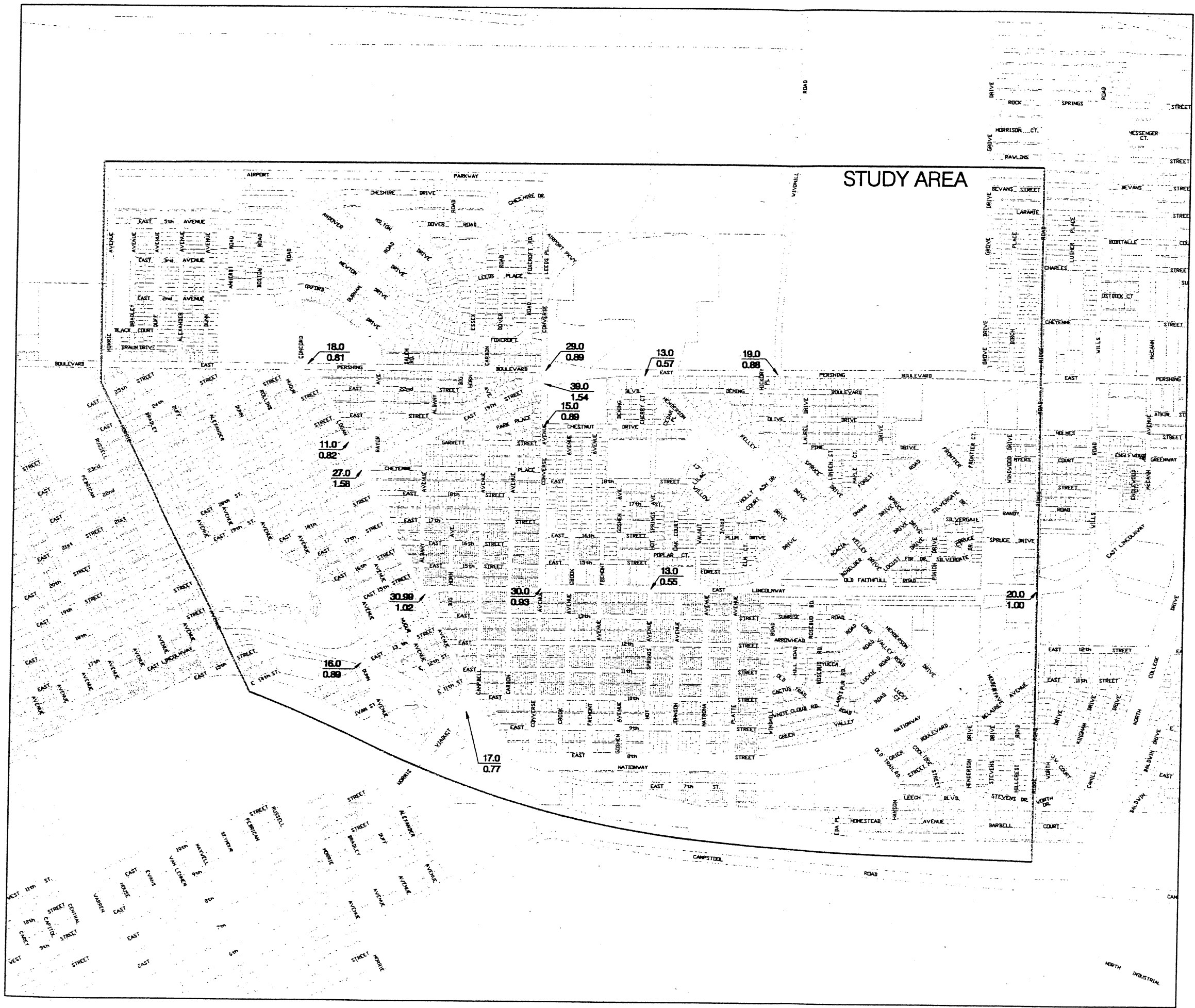


EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

BENCHMARK Of Cheyenne, P.C.
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FEBRUARY, 2000

Cheyenne Area
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Converse are being withheld pending a more detailed study which has been authorized but will not be completed for approximately three months.

The intersection of 19th Street and Logan Avenue is confusing, and much of the confusion is related to 1) the need for eastbound traffic to transition from two lanes to one lane in advance of the intersection, and 2) for westbound traffic, the appearance of opposing traffic along with a requirement to turn either left or right at the intersection.

The traffic volumes on the west approach justify two through lanes in addition to right and left turn lanes. Two lanes should be provided for eastbound traffic between Logan and Converse by a) reducing the width of the median by 5'; b) eliminating parking on the street; or c) a combination of (a) and (b). A possible alternative, which is less desirable, would be to have two eastbound lanes through the intersection and then merge them into one lane. The intersection is shown in Figure IV-8a.

For westbound traffic, there is no signing at the beginning of the one-way couplet (21st St. and 19th St.) to convey to the unfamiliar driver that 21st St. is the route to the one-way couplet and to the downtown area. Therefore, the initial work recommended is to install appropriate signing at 21st and 19th Streets to assist unfamiliar drivers.

INTERSECTION 19th & LOGAN

MAP IV-8A

LEGEND

LAYOUT OF INTERSECTION WITH PLANNED TRAFFIC CONTROL AND OTHER MODIFICATIONS WAS OBTAINED FROM THE CITY OF CHEYENNE.

SOME INFORMATION WAS REMOVED FOR CLARITY.

ARROWS WERE ADDED ON EASTBOUND 19th ST. TO INDICATE TWO LANES OF TRAFFIC.

SEE NARRATIVE FOR RECOMMENDED IMPROVEMENTS

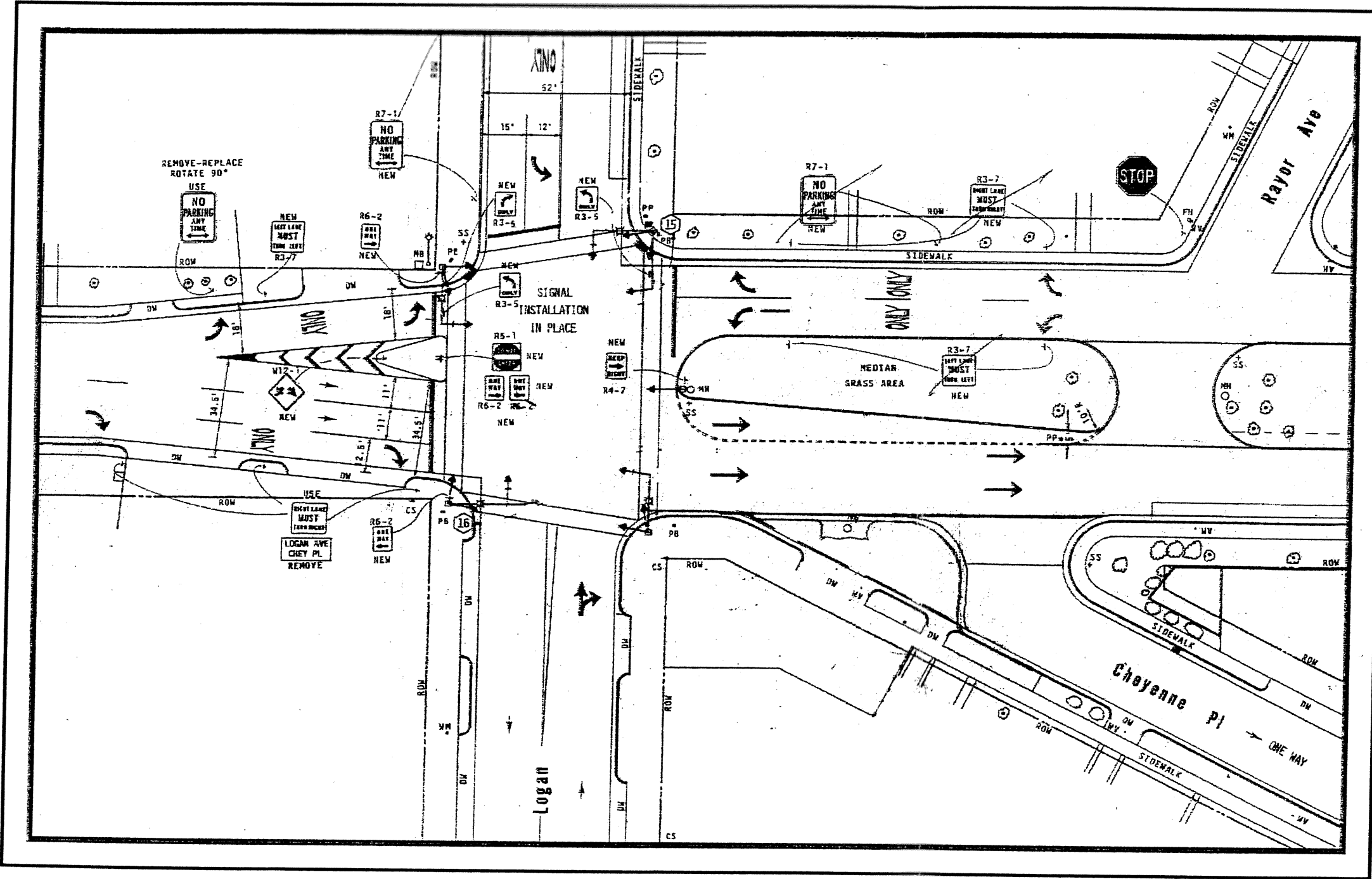


EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

BENCHMARK Of Cheyenne, P.C.
EDAW, INC.

FEBRUARY, 2000

Cheyenne Area
Transportation
Planning Process
(CHATPP)



Nationway – 10% Conceptual Plans

Scope of Work

The Request for Proposals for the East-Central Cheyenne Infrastructure Improvement Plan indicated the scope of work will include “The study will develop and incorporate 10% conceptual plans for the redevelopment and reconstruction of the Nationway corridor from Lincolnway to Ridge Road”

Route Characteristics

Nationway is approximately 1.4 miles long from its west terminus at Lincolnway to its east terminus at Ridge Road. It was constructed in the early 1950's as a limited-access facility to serve as a section of the east-west truck route through Cheyenne. At that time, Nationway began at Lincolnway at its east end, and the truck route followed Nationway from Lincolnway to the Norris Viaduct. In 1976, the east end of Nationway was realigned to connect to 12th Street at Ridge Road, rather than Lincolnway.

Nationway is functionally classified as a minor arterial, and serves as a connection between the downtown area and the eastern portion of the City. There is a combination of residential, commercial and industrial land uses adjacent to the Nationway corridor.

Nationway runs east-west and is along a hillside which slopes from north to south.

There are frontage roads along much of the route, and in addition, there are alleys outside the frontage roads on some sections. Eighth Street serves as the north frontage road between Windmill Road and 10th Street.

Previous Conceptual Plan

A Nationway Corridor Study was prepared for the ChATPP in November, 1987, by Jack Noblitt & Associates. The 62-page report included a recommended design, phasing, and cost estimates. Recommendations which have been implemented include the reconstruction of the intersections of Nationway/Dunn/Lincolnway and Nationway/Logan (including the curve at Converse Avenue). Recommendations which have not been implemented include the acquisition of the CB&Q Railroad right-of-way to flatten the slope on the curve near Converse Avenue, and reconstruction of Nationway from Converse east to Mulberry.

Significant Changes Since 1987

There have been several changes affecting the Nationway Corridor since 1987.

A concrete drainage box was installed to increase the capacity for drainage flow in Henderson Ditch. The box was installed only under the through lanes, and the frontage roads were not included, which had the effect of terminating the frontage roads at Henderson Ditch. Provision was made for pedestrians to cross Henderson Ditch at the north end of the box. As a part of the construction, Henderson Drive was extended from the south to connect with the eastbound and westbound through lanes and the north frontage road.

Old Trail Road has also been extended from the south frontage road to connect to both the eastbound and westbound lanes and with the north frontage road.

Access for a storage unit development was permitted from the south at Crook Avenue to both the eastbound and westbound lanes. It appears that the median opening will also provide access to 7th Street. Gravel was placed in the median so that it could be crossed, and no deceleration or acceleration lanes were provided adjacent to the through lanes. It is understood the City will be responsible for providing needed improvements in the median and adjacent to the through lanes.

A new development is underway on the east side of Henderson Ditch, that is north of, but does not abut, Nationway. Several new buildings are being constructed as a part of the development and the access is from Lincolnway. However, there is still vacant property to the south and east of this new development which abuts Nationway, and it is anticipated that access will be desired from Nationway.

There is also a new development underway in the northwest quadrant of the intersection of Nationway and Ridge Road. This is understood to be a small shopping area which will have access only from Ridge Road.

One other significant land use change since 1987 was the closing of Bob Brunner Motors located south of the intersection of Nationway and Windmill Road. The building is now used as an office building.

Traffic Volumes

Turning movement counts were made in May of 1998, for the peak six hours at three intersections on Nationway – Logan, Windmill and Ridge. The highest number of vehicles went through the intersection at Logan Avenue with 9119 observations, Ridge was next with 6375 observations, and there were 4630 observations at Windmill and Nationway. During the afternoon peak hour at Logan, there were 506 vehicles eastbound on the west approach, and 358 vehicles westbound on the east approach to the intersection.

Previous 24-hour counts on Nationway indicate the average daily traffic is in the range of 9,000 to 10,000. Extrapolation of the six hour counts indicate similar daily traffic volumes.

Traffic volume projections were provided by the ChATPP for twenty years in the future. The forecasts, assuming the underpass connecting Morrie Avenue and Powderhouse Road under the airport runway was not constructed, indicated:

Between Lincolnway and Logan Ave.	9,000 to 10,000 vehicles/day
Between Logan Ave. and Hot Springs	Over 12,000 vehicles/day
Between Hot Springs and Ridge Rd.	Declining, but over 9,000/day

The projected volumes, assuming the airport underpass was constructed, were slightly higher, particularly between Lincolnway and Logan Avenue where they were above 13,000 vehicles/day.

Traffic Signals

There are four signalized intersections on Nationway, at Lincolnway, Logan Avenue, Windmill Road, and Ridge Road. The signal at Lincolnway is coordinated with the system along Lincolnway, and the other three are fully actuated and operate independently. All of the locations except Ridge Road have pedestrian indications.

A preliminary analysis of providing traffic progression through the signals on Nationway indicated that a good progression could be achieved with a sixty second cycle. However, coordination along the north/south streets may take precedence as well as the progression along Lincolnway. If progression is desired, a background cycle is desirable with

interruptions by side street actuations only when progression on Nationway is not disrupted.

Utilities

There are several underground utilities along Nationway. A cable locate should be obtained when the survey for the improvement of Nationway is done, but some of the important utilities are indicated below.

U.S. West has four-four inch ducts which cross Nationway along the west side of Ridge Road, and within the Ridge Road right-of-way.

Cheyenne Light, Fuel and Power has a 2" gas line along the centerline of 12th Street crossing Nationway; a 12 inch gas line along the east side of Hot Springs crossing Nationway; and an 8" gas line along the south side of the Nationway south frontage road from Hot Springs east to west of Ridge road. The only revision in the natural gas lines since 1987 has been the addition of an 8" gas line parallel to Henderson Ditch southerly from the existing line on the south side of the south frontage road.

There are several water and sanitary sewer lines which cross Nationway, and which parallel segments of the frontage road. These are indicated on the water and sewer maps available from the Board of Public Utilities.

There is an oil pipeline which runs north/south that crosses Nationway. The alignment is along Grove Drive (north of Nationway) and Henderson Drive where it is on a north/south alignment, south of Nationway.

Also, as indicated in the section of this report on water system improvements, the Board of Public Utilities is proposing a 36" water line within the Nationway right-of-way between Converse Avenue and Henderson Drive.

City Bus Route

The only segment of Nationway used as a City Bus route is the segment between Lincolnway and Logan Avenue, where the busses use the south (Norris Viaduct) approach.

Nationway Cross Section

The existing cross section of Nationway, between Logan and

Mulberry, is two 12' lanes with an 8' outside shoulder in each direction, and a 38' median which includes 4' inside shoulders for both the eastbound and westbound lanes. The median is depressed with an 8:1 slope from the edge of the shoulder to the bottom of the ditch.

The Road, Street and Site, Planning and Design Standards recommend that a minor arterial have a minimum median width of 14', a minimum design speed of 40 MPH, and 10' parking lanes.

The 1987 Conceptual Plan recommended a 28' raised median which included 4' inside shoulders; a curb along the inside of the shoulder; and a 5' level area behind the curb of the lower roadway to reduce drainage from the median onto the roadway. It also recommended the median be landscaped with small shrubs and grass.

Discussion

One of the issues related to the redesign of Nationway is to determine whether the road should have two lanes or four lanes. The traffic volumes projected twenty years in the future are marginal regarding the justification for a four-lane facility. However, four lanes now exist and the projected traffic beyond twenty years will justify four lanes, so it is recommended that a four-lane road be continued.

Another issue is the question of whether the current amount of pavement is justified. It may have been needed as a State Highway, but is it needed as a City Street, and can the City afford to maintain it? Nationway has parallel frontage roads for much of its length – some of which appear unnecessary for it to function adequately as a City Street. It also appears that the outside shoulder could be somewhat narrower than the current 8'.

Another issue is the question of what should be done with the existing right-of-way, which appears wider than necessary, particularly if some of the frontage roads are eliminated and the roadway pavement width is reduced. Some of the possibilities could be to use surplus areas for drainage detention, landscaping, or for a joint-use path as discussed in the following section.

It appears that the "Railroad Greenway" which was planned to

run east/west along the north side of the Union Pacific Railroad (on Railroad right-of-way) will not be permitted by the Union Pacific Railroad. Since it is desirable for bicycles and pedestrians (including wheelchairs, in-line skaters, etc.) to have an east west route through this corridor, it appears feasible to locate a 10' wide path within the right-of-way connecting Holliday Park on the west, with Henderson Ditch and Ridge Road on the east. At Henderson Ditch, there is adequate right-of-way for a path to go both north and south paralleling the Ditch. An underpass of Nationway in the vicinity of Henderson Ditch will provide for path users along the Ditch, and will be beneficial to school children needing to cross Nationway in the future.

The safety record on Nationway has been good, particularly with regard to accidents at driveways. It is recommended that the City not permit driveway connections to the through lanes of Nationway. It is also recommended that right- and left-turn bays be installed at all of the major intersections on Nationway so that turning vehicles will have the minimum effect on the vehicles in the through lanes.

One of the major generators of trips on Nationway is the VFW (F.E. Warren Post 1881) located at 2816 East 7th Street. The VFW, in addition to its building, owns the land to the south which is developed as a softball field; the land to the west which is developed as a park; and the land to the east which it plans to develop for parking. The VFW currently has access from the off-ramp to Windmill Road (which is proposed to be closed), and at Hot Springs Avenue at the west edge of its property. To provide good access to the VFW, it is proposed to construct an intersection to connect Platte Street from both the north and south to the through lanes of Nationway

The level of service on Nationway, as a suburban highway, is expected to be "A" during most of the planning period. The current flow rate during the peak 15 minute period (5 pm to 5:15 pm) is 290 vehicles per hour per lane, and the maximum service flow rate for level of service "A" is 540 passenger cars per hour per lane. The number of trucks, and the access points will decrease the maximum service flow rate slightly, but level of service "A" should exist for many years.

Capacity will be controlled by the signalized intersections along Nationway. The critical location, currently, is the intersection

at Logan Avenue, which has limited approach lanes on the north and south approaches resulting from the narrow width on the Norris Viaduct. The Viaduct is scheduled for widening in the near future and it will then adequately handle the existing and projected traffic volumes. At the current time, the intersection operates at level of service "B".

Recommended Plan

The recommended 10% Conceptual Plan for Nationway is indicated in Maps IV-9, 10, 11, and 12. It includes a shared use path within the right-of-way from Holliday Park to Henderson Ditch. West of Logan Avenue, the path is on the south side of Nationway, and the path is on the north side of Nationway east of Logan Avenue. Figure IV-2 indicates a conceptual view of the shared use path.

Underpasses are proposed for the shared-use path at two locations. The path would go under Lincolnway to connect with Holliday Park at its west end; and there would be an underpass just west of Henderson Ditch.

It is proposed to maintain the existing location of the south edge of the pavement and reduce the width of the cross section by reducing the median width by 10' and the width of the outside shoulder to 6'. A possible method to "squeeze in" the path where there is restricted width is indicated in Figure IV-3.

A new intersection is proposed at Goshen Avenue, and some segments of frontage road are eliminated. It is also proposed to revise the access to the church at 3260 Nationway.

Landscaping is proposed as indicated on the Maps and shown in Figure IV-4.

Civil Engineering Improvements

The purpose of this Section is to discuss the civil engineering issues in the study area, other than transportation. These issues include needed improvements of the water system, sanitary sewer system, and the storm sewer system.

Figure IV-2

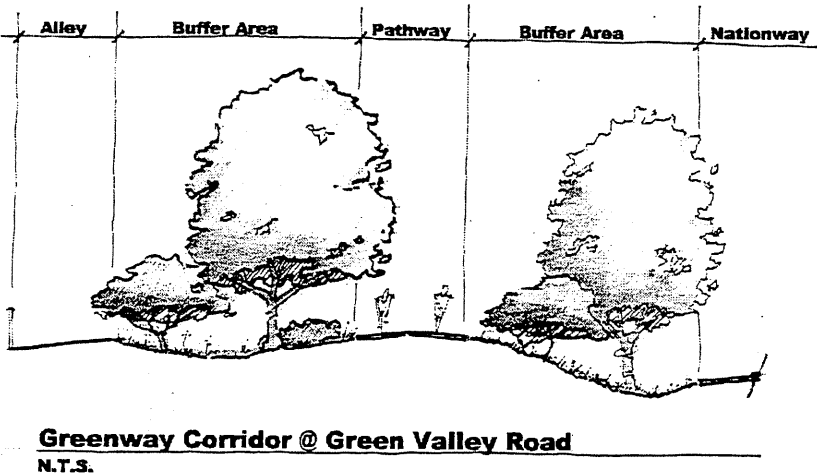


Figure IV-3

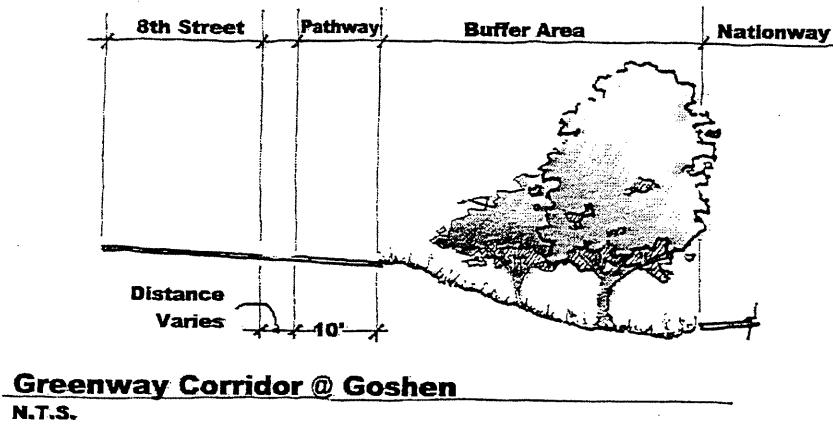
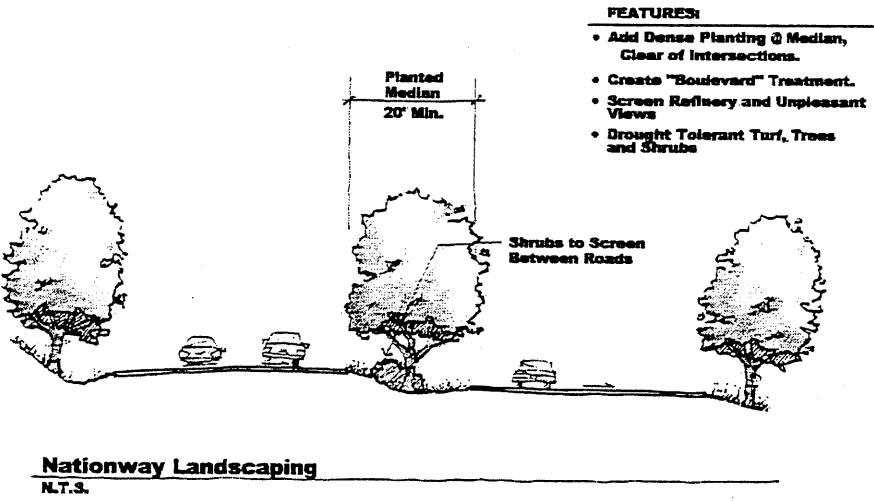
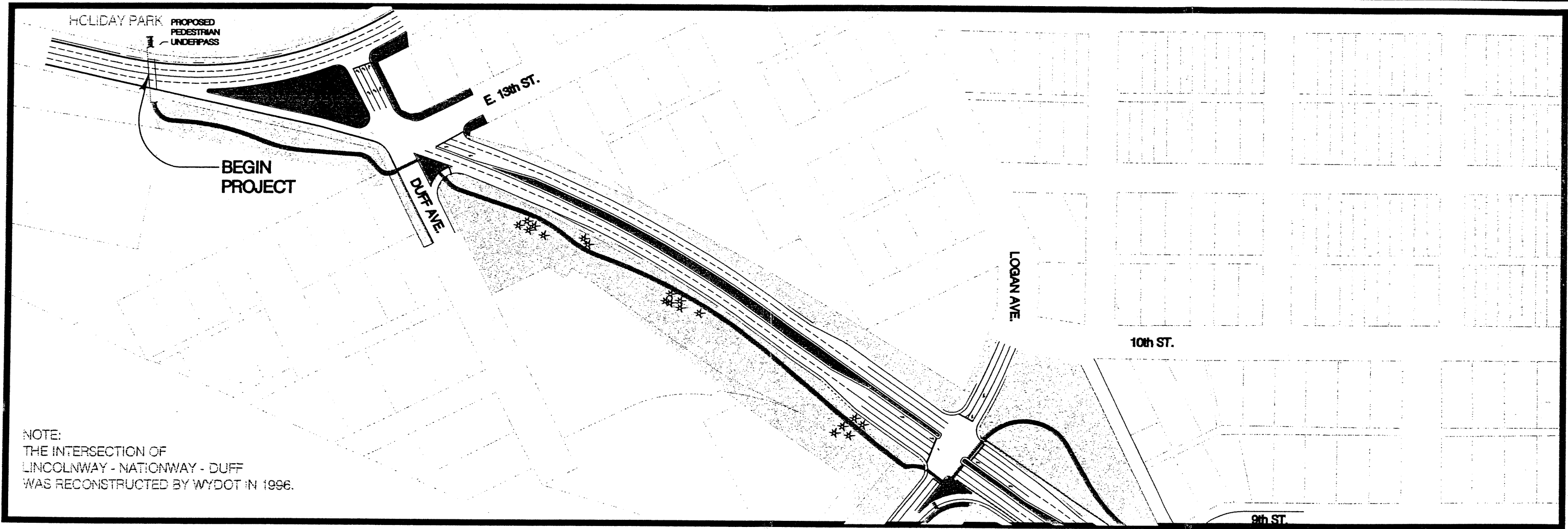


Figure IV-4



**CONCEPTUAL PLAN
(10%) FOR
NATIONWAY**

MAP IV-9



**EAST - CENTRAL
INFRASTRUCTURE
IMPROVEMENT PLAN**

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EDAW, INC.

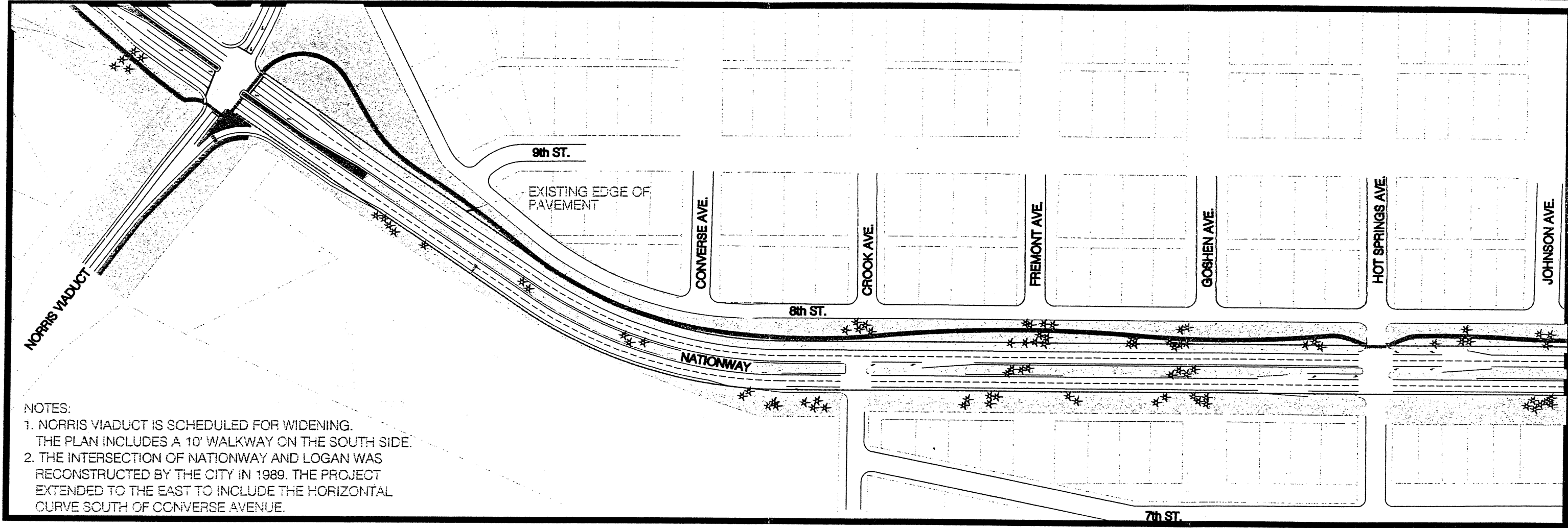
FEBRUARY, 2000

Cheyenne Area
Transportation
Planning Process
(CHATPP)



CONCEPTUAL PLAN (10%) FOR NATIONWAY

MAP IV-10

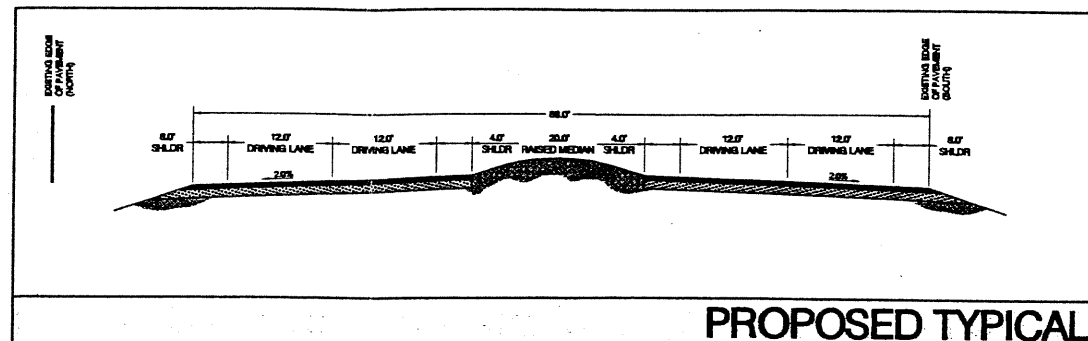
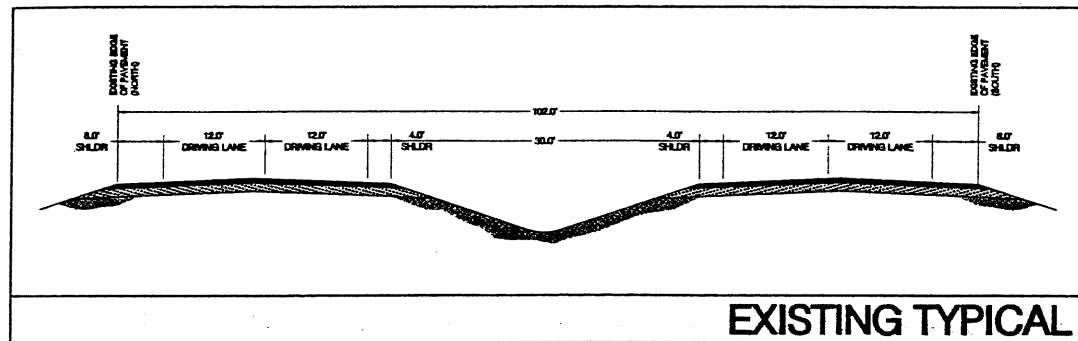


EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

BENCHMARK Of Cheyenne, P.C.
EDAW, INC.
FEBRUARY, 2000

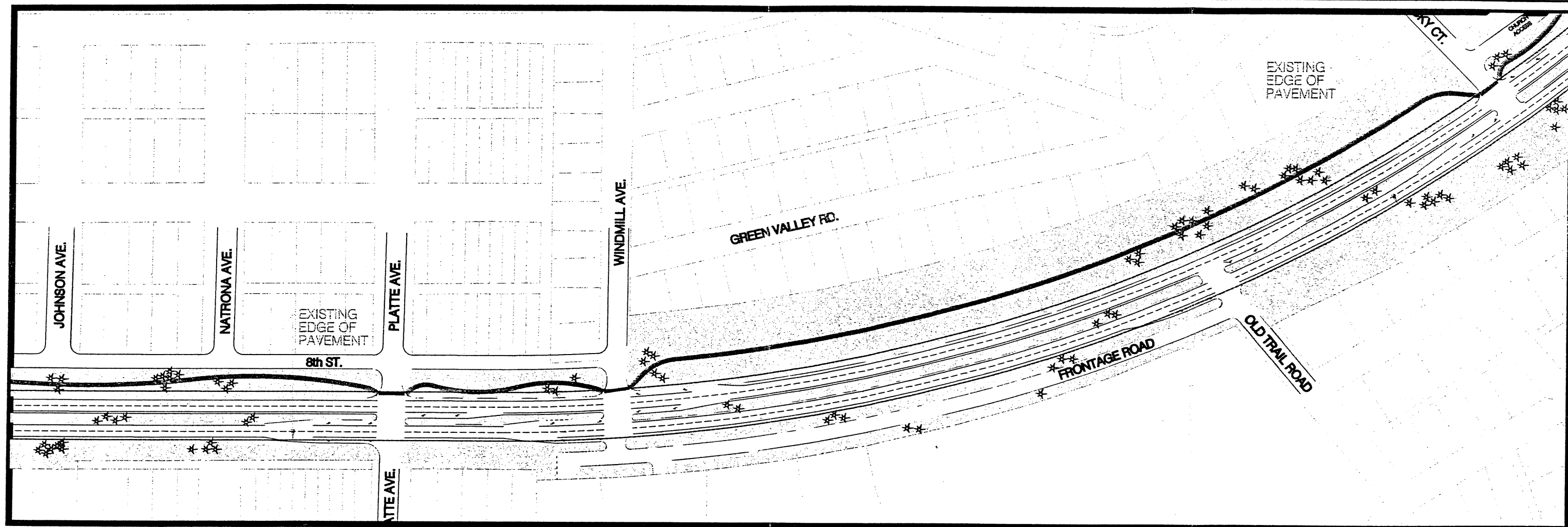
Cheyenne Area
Transportation
Planning Process
(CHATPP)





CONCEPTUAL PLAN (10%) FOR NATIONWAY

MAP IV-11



EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

1"=200'

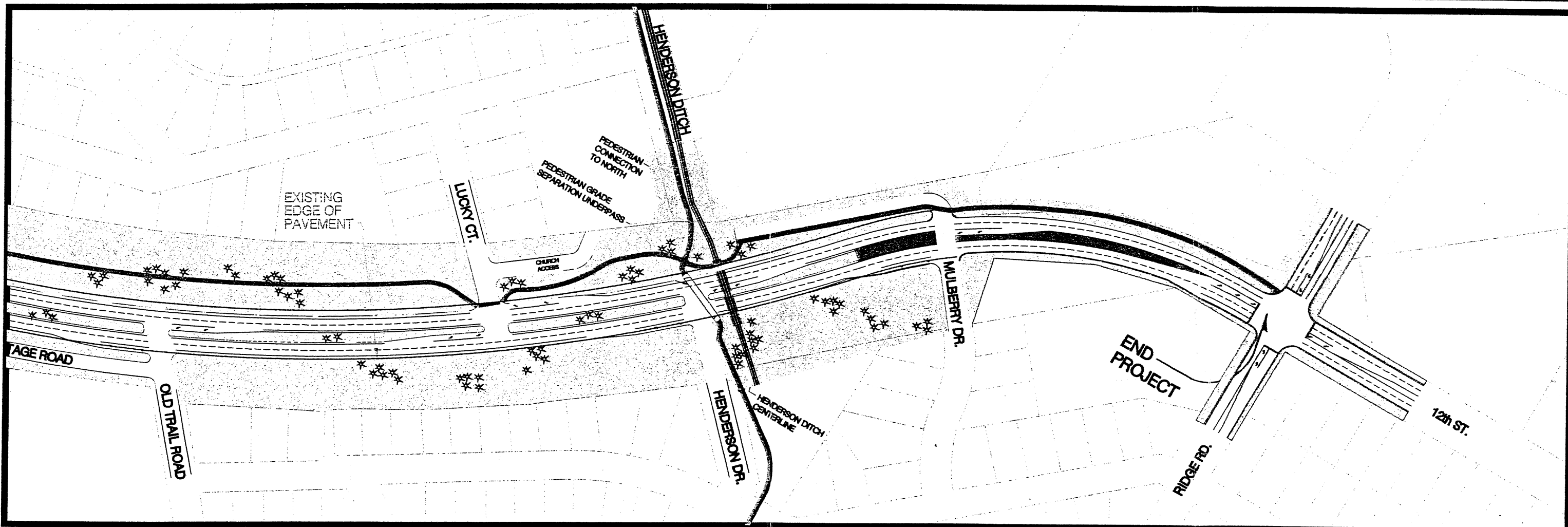
BENCHMARK Of Cheyenne, P.C.
EDAW, INC.

FEBRUARY, 2000

Cheyenne Area
Transportation
Planning Process
(CHATPP)

**CONCEPTUAL PLAN
(10%) FOR
NATIONWAY**

MAP IV-12



**EAST - CENTRAL
INFRASTRUCTURE
IMPROVEMENT PLAN**

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FEBRUARY, 2000

Cheyenne Area
Transportation
Planning Process
(CHATPP)



Water System Improvements

The staff of the Cheyenne Board of Public Utilities indicate the water system in the East-central Cheyenne study area is generally adequate and in good condition. However, one major project is (planned although it has not been scheduled) and several others are included in the program, as described below.

According to the Cheyenne Water Supply Master Plan, Level 1, prepared in 1994, a major water line should be constructed to better serve the study area, and the areas to the east and southeast of the study area. The water line would enter the study area from the west at approximately Morrie Ave. and 21st St, and then generally follow 21st St. to Logan Ave.; Logan Ave. to 13th St.; 13th St. to Henderson; Henderson to Stevens; and then Belaire to Ridge Road. The line was proposed to be 36" in diameter except the east segment which is 30".

However, in 1996, the Wyoming Water Development Commission and the Cheyenne Board of Public Utilities retained States West Water Resources to prepare the Cheyenne Water Supply Level II Project. In that study, three alternative routes were studied for the major water line. Alternate I was the line suggested in the Master Plan. Alternate II was further south and followed the Nationway alignment from Holliday Park to Henderson Drive. Alternative III was south of the UPRR west of the Frontier Refinery, and is indicated in Map IV-13. The Level II Study indicated that Alternative II had the lowest cost (\$10,800,000), but that the Board of Public Utilities preferred Alternative III (\$11,200,000). Alternative I had the highest cost (\$12,800,000). The Level II Study suggested the line be installed when the need for it becomes more critical.

Table 12, of the Transportation Improvement Program indicates the Board of Public Utilities has the following water distribution projects schedules for Fiscal Years 2003 and 2004.

- FY-03, Morrie Avenue, Phase II, East 23rd St. to 25th St., 2000' of 8" main, \$180,000.
- FY-03, East 25th St. from Russell to Pershing, 1,100' of 8" main, \$175,000.
- FY-03, 24th St. (Cemetery) to Pershing, 1900' of 8" main, \$225,000.

MAP IV-13

LEGEND

SOURCE:
CHEYENNE WATER SUPPLY LEVEL
II PROJECT, VOL-1, FINAL REPORT,
1996

NO SCALE 

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Cheyenne Area
Transportation
Planning Process
(CHATPP)

- FY-03, Henderson from Pershing to Olive Drive, Abandon existing 8" and tie all facilities into existing 12" main, \$60,000.
- FY-04, Pershing Blvd. (phase V), City Street Project, Replace old water mains, \$250,000.

Sanitary Sewer Improvements

The staff of the Cheyenne Board of Public Utilities also indicate the sanitary sewer system in the study area is generally adequate and in good condition, although the following sewer collection projects are scheduled.

- FY-01, 19th Street between Bradley and Duff, Reline 350' of 15", \$40,000.
- FY-01, 3rd Avenue and Duff, Dover and Foxcroft, Carbon and Foxcroft, Replace manholes with various City projects, \$40,000.
- FY-02, 2800-3000 blocks of Forest Drive, Reline 1,300' of 8" diameter main, rehab 6 manholes, \$95,000.
- FY-02, 2521 E. 18th, Replace 350' of 8" sewer and 3 manholes. \$75,000.
- FY-04, Pershing Phase V, Replace manholes, \$175,000.

Drainage and Storm Sewer Improvements

The current storm sewer system in the study area is indicated in Figure IV-14.

The Drainage Master Plan, Henderson and East Lincolnway Basins, which was prepared in 1988, indicated numerous improvements were needed in the East-Central Cheyenne study area. The estimated cost of the needed improvements, using 1988 prices were:

Henderson Mainstream	\$10,141,000
East Lincolnway	5,519,000

One of the major needs is for a new storm sewer along Henderson Drive from Chestnut southeasterly to Henderson Ditch. There are currently two storm sewers in Chestnut, one is 54' and one is 48". The 48" terminates at Henderson, and when the single 54' line in Henderson fills to capacity, the water discharges through inlets and flows in the streets.

STORM SEWERS

MAP IV-14

LEGEND

EXISTING STORM SEWER	_____
EXISTING STORM SEWER SIZE IN INCHES	36
EXISTING DETENTION POND	P
PROPOSED STORM SEWER	-----

NOTE:
SIZE IS SHOWN ONLY FOR LINES OVER 30"

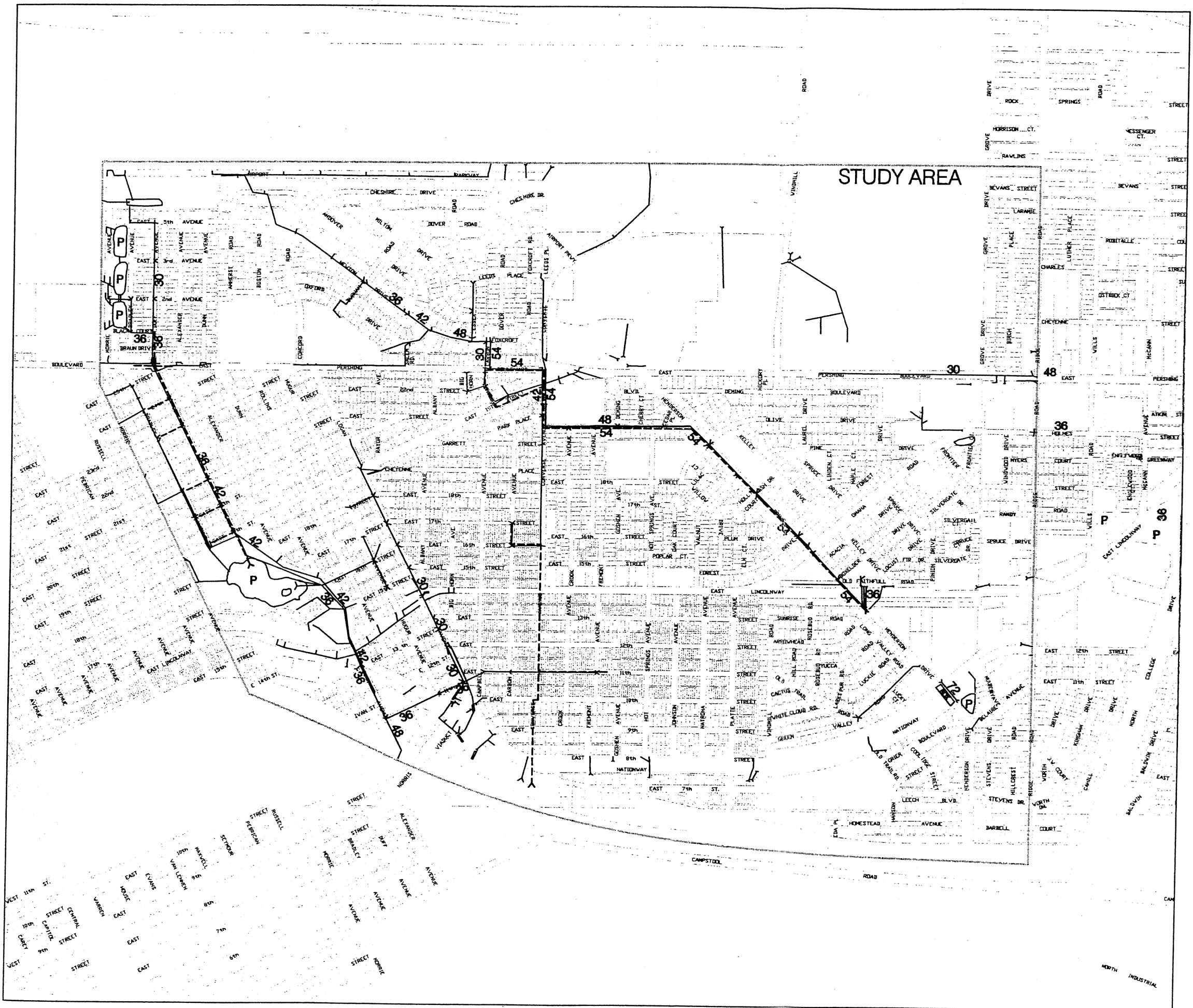


EAST - CENTRAL INFRASTRUCTURE IMPROVEMENT PLAN

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In an effort to solve the drainage problems in the City, a Surface Water Drainage Committee was formed and it issued a preliminary report in March, 1999. The report recommends creation of a Surface Water Drainage Utility under a joint powers board. The board's responsibilities would range from planning and engineering, drainage improvement to maintenance of drainage facilities. The board would be financed by fees on residential, commercial and industrial property.

The Report, Implementing the Drainage Master Plan for the Greater Cheyenne Area, also updates some of the information in the Master Plan. For example, the cost of needed drainage work in the Henderson and East Lincolnway basins is reduced from over \$15,000,000 to slightly over \$12,000,000, primarily as a result of some drainage needs being completed.

In summary, there are many drainage and storm sewer needs in the study area which need improvement, and these needs are included in the Action Plan of this Study.

V – Action Plan

V – THE ACTION PLAN

In the previous four chapters, we have reviewed the existing conditions in East Central Cheyenne and discussed the vision for the area. In this chapter, an Action Plan is suggested that includes actions by both governmental agencies as well as capital improvement projects that need to be accomplished. This chapter also includes sections on determining the unit costs of improvements, and the possible sources of funds to finance the recommended improvements.

Several studies have been done in the past that concerned the East Central Cheyenne Study area. These include the Memorandum of Agreement between the City of Cheyenne and Laramie County (1995); the 201 Facilities Plan Final Report (1982); the Subdivision Regulations (1979, updated 1990); Road, Street and Site Planning and Design Standards (1990); and the Cheyenne and Laramie County Zoning Ordinance (1988).

Planning Action Items

Develop 35% Plans for Nationway

Develop tree locations and trails in first phase.

Estimated Cost:	To Be Determined
Funding:	ChATPP
Schedule:	2000 - 2005
Responsibility:	ChATPP

Prepare Specific Plan for Lincolnway

Establish local encore area, business owners' group. Identify granting opportunities and other funding mechanisms, e.g., tax increment financing. Develop specific guidelines for redevelopment. Explore City participation in storefront improvement program.

Estimated Cost:	\$35,000
Funding:	ChATPP
Schedule:	2000 - 2005
Responsibility:	ChATPP

Implement Brimmer Park Improvements

Add more neighborhood park elements (e.g. – shelter and playground) and integrate shared use path along south edge.

Estimated Cost: \$130,000
Funding: Redevelopment Grants, City
Schedule: 2000 - 2002
Responsibility: City

Develop Southwest Corner of V.A. Hospital Property as Library/Neighborhood Park

Study space / programmatic requirements.

Estimated Cost: To Be Determined
Funding: To Be Determined
Schedule: 2000 - 2003
Responsibility: City

Improve Pedestrian Crossings as Shown

Constructing underpass/crossings at Lincolnway and Nationway along Henderson Ditch is a priority.

Estimated Cost: \$1,000,000
Funding: City
Schedule: 2000 - 2005
Responsibility: City

Work with LCSD #1 to Improve School Yards as Parks

Improve Henderson and Fairview as irrigated turf play areas with picnic tables and benches. City may need to take over some maintenance responsibility.

Estimated Cost: \$300,000
Funding: City
Schedule: 2006 - 2010
Responsibility: City / LCSD #1

Construct Walks Along Key Connection Corridors

First task is to develop detailed needs list. Minimum design standards.

Estimated Cost: \$10,000 for detailed plan
Funding: City
Schedule: 2006 - 2010
Responsibility: City

Develop Plans and Guidelines for "Mixed Use" area along Lincolnway

Design should address specific street, architectural and pedestrian elements within a one-block trial area.

Estimated Cost: \$95,000
Funding: ChATPP
Schedule: 2000 - 2005
Responsibility: ChATPP

Implement Plans and Guidelines for "Mixed Use" area along Lincolnway

Implement specific plans for the one block trial area.

Estimated Cost: To Be Determined
Funding: ChATPP
Schedule: 2000 - 2005
Responsibility: ChATPP

Infrastructure

There are several infrastructure improvement projects planned for the East-Central Cheyenne Study Area. Information about each of these projects is summarized below.

It is common knowledge that the major intersections near the corners of the Airport are having increasing traffic and safety problems. The intersection of Converse Avenue and Pershing Boulevard is one of these intersections, and it is particularly complicated due to the converging alignment of 19th Street and the resulting two additional intersections which are in close proximity.

Two alternative solutions to improving the traffic and safety problems at the intersections near the corners of the Airport are to 1) relocate the Airport, or 2) construct a new north/south road across the airport with a tunnel under the runway and taxiway. The community appears to favor the second alternative due to the lower cost.

The Transportation Plan for the City includes a new arterial connecting Powderhouse Road, north of the Airport, with Airport Parkway/Morrie Avenue, south of the Airport. This new facility is estimated to cost in the range of \$20 to \$30 million, depending on the method of construction utilized.

Assuming the proposed underpass facility is constructed, the

projected traffic using it in 2017 is approximately 34,000 vehicles per day. This volume of traffic will require improved streets in the East-Central Cheyenne study area, particularly along the Morrie Avenue corridor.

The infrastructure action plan therefore deals primarily with the improvement of the street system to accommodate the existing and growing traffic demands, as well as improvements required by the construction of an underpass of the airport runway.

Reconstruction of Omaha Road/Holmes Street, Lincolnway to Ridge Road

The City recognized the need to improve Omaha Road/Holmes Street and included it in the list of projects to be done with One-Percent Sales Tax funds. Conceptual plans have been prepared, and a grant application has been submitted to the State.

Estimated Cost: \$1,202,000
Funding: City One-Percent Sales Tax for 1999-2002 – \$459,000 and a grant from the State
Schedule: Summer, 2000
Responsibility: City of Cheyenne

Reconstruction of Norris Viaduct

The current Federal Transportation legislation included \$3,500,000 for this project. The City is currently requesting financial assistance from the Wyoming Department of Transportation so that the project can be constructed. Conceptual plans for the project have been completed.

Estimated Cost: \$12,700,000
Funding: Federal \$6,444,000 : City \$6,256,000
Schedule: 2002
Responsibility: City of Cheyenne

35% Design of Nationway

In an effort to determine the feasibility of constructing the shared-use path prior to the reconstruction of the roadway, it is suggested that 35% conceptual plans be prepared for Nationway. The plans should determine and closely review those locations where it is questionable whether the path can be constructed prior to the narrowing of the existing roadway

section.

Estimated Cost: \$30,000
Funding: ChATPP
Schedule: 2001 - 2005
Responsibility: City of Cheyenne

Reconstruction of Nationway

Ten percent conceptual plans were prepared for Nationway, including Henderson path underpass, as a part of this study. No funds are currently programmed for this project.

Estimated Cost: \$6,000,000
Funding: City of Cheyenne with assistance from the State
Schedule: 2011 - 2020
Responsibility: City of Cheyenne

Reconstruction of Morrie Avenue, Phase I

Phase I is the section of Morrie Avenue from 15th Street to 20th Street. The City Council has limited the width to 45' with the exception that turn lanes may be installed at major intersections. The project will improve drainage and align the entrance to Holliday Park with 17th Street. However, this project will be of little value to accommodate the traffic associated with the tunnel under the Airport runway when it is constructed at some future date.

Estimated Cost: \$1,560,000
Funding: One-Percent Sales Tax, 1999 - 2002
Schedule: 2002
Responsibility: City of Cheyenne

Reconstruction of Pershing Boulevard, Phase IV

Pershing Boulevard is currently a four-lane street between Concord Avenue and Converse Avenue, and capacity is not a problem. It is understood the City Council plans to construct Phase 5a, from Snyder to Pioneer, before scheduling Phase IV.

Estimated Cost: \$1,425,000
Funding: City of Cheyenne
Schedule: 2010 - 2020
Responsibility: City of Cheyenne

Implement On-Street Bicycle Plan

The On-Street Bicycle Plan proposes a limited number of on-street bicycle lanes as a result of many streets having inadequate width for the lanes in addition to traffic lanes and parking. However, in the East-Central Cheyenne study area, the on-street lanes will assist, in conjunction with the Greenways and shared use paths, in providing a system of routes for cyclists.

Estimated Cost: \$115,000 (Citywide) (1992 dollars)
Funding: City of Cheyenne
Schedule: 2000 - 2005
Responsibility: City of Cheyenne

Provide Two Lanes on 19th Street – Logan to Converse

The intersection of 19th and Logan was computed to have the highest accident rate in the study area. It is also a congested location as a result of the eastbound lanes narrowing from two lanes to one at the intersection. The study indicates alternatives to achieve the need for providing two lanes from Logan to Converse. The following estimate is based on removing and relocating the curb and gutter on the median side of the eastbound lanes.

Estimated Cost: \$45,000
Funding: City of Cheyenne
Schedule: 2000 - 2005
Responsibility: City of Cheyenne

Install Sign for Westbound Traffic on 19th Street Directing Traffic to One-Way Street & CBD

One of the apparent reasons for the high accident rate at the intersection of Logan Avenue and 19th Street is confusion resulting from the unfamiliar driver arriving at the intersection from the east where he must turn either right or left. A sign at 21st Street indicating the route to the one-way couplet and the downtown area should improve the situation.

Estimated Cost: \$200
Funding: City of Cheyenne Public Works
Department
Schedule: 2000
Responsibility: City of Cheyenne

Change Name of North/South Segment of Airport Parkway back to Morrie Avenue

Confusion also results from the east/west street and the north/south street both having the same name. The Airport Parkway situation is confusing now and will be more so when the tunnel is constructed under the Airport runway. It is recommended the north/south section of the street be renamed Morrie Avenue.

Estimated Cost: \$200 (To install previous signs)
Funding: Staff Budget
Schedule: 2000
Responsibility: City Council

Prepare Environmental Assessment for Tunnel Under the Airport Runway

An Environmental Assessment should be prepared for the construction of a tunnel under the Airport Runway. The Assessment should look at alternative methods of construction along with determining the impacts of the project on the adjacent properties as well as the area and the region.

Estimated Cost: \$90,000
Funding: ChATPP
Schedule: 2006 - 2010
Responsibility: ChATPP

Construct Tunnel Under Airport Runway and Connections

The long-range solution to the congestion and safety problems at the intersections near the corners of the Airport is to either relocate the Airport or construct a tunnel under the east/west runway and taxiway. The more economical solution is to construct the tunnel.

Estimated Cost: \$25,000,000
Funding: Federal \$20,000,000; City and State \$5,000,000
Schedule: 2011 - 2020
Responsibility: City of Cheyenne

Prepare Environmental Assessment for Morrie/Bradley One-Way Couplet, North of 19th Street

A planning study to consider the alternatives and related impacts for handling traffic south of the Airport runway tunnel should be done in the near future.

Estimated Cost: \$60,000
Funding: ChATPP
Schedule: 2000 - 2005
Responsibility: ChATPP

Obtain Right-of-Way for North Terminus of Morrie/Bradley One-Way Couplet

Assuming the Morrie/Bradley couplet is determined to be the preferred alternative for accommodating traffic south of the Airport runway tunnel, it will be necessary to acquire right-of-way immediately north of Pershing Blvd.

Estimated Cost: Unknown (an appraisal should be done)
Funding: City of Cheyenne with assistance from the State
Schedule: 2006 - 2010
Responsibility: City of Cheyenne

Implement On-Way Couplet on Morrie/Bradley

A means of accommodating traffic south of the Airport runway tunnel should be implemented to coincide with the completion of the tunnel. The project will involve some roadway construction north of Pershing Blvd., a new traffic signal at Bradley and Pershing, and new signs and markings.

Estimated Cost: \$450,000
Funding: City of Cheyenne with assistance from the State
Schedule: 2011 - 2020
Responsibility: City of Cheyenne

Enforce Sight Triangle Regulations at Uncontrolled Intersections

Better coordination is suggested between the City Departments involved in traffic safety. Uncontrolled intersections with sight restrictions should be determined by enforcement or engineering personnel, or from accident records or citizen complaints, and appropriate action taken by the City to correct the problem.

Estimated Cost: No new cost.
Funding: Existing City Budget
Schedule: Continuing

Responsibility: City of Cheyenne

Avenues Greenway Connection

The proposed connection begins at approximately the intersection of Airport Parkway (formerly Morrie Avenue) and Black Court, extends north along the west side of Airport Parkway for about one block, and then goes west toward the area of the City known as the "Avenues".

Estimated Cost: \$363,000
Funding: City of Cheyenne
Schedule: 2000 - 2005
Responsibility: City of Cheyenne

Drainage and Storm Sewers

Probably the most pressing drainage need in the East-Central Cheyenne study area is the construction of a new storm sewer along Henderson Drive from Chestnut to Henderson Ditch. It is anticipated this need and the other drainage needs will be addressed when the Surface Water Drainage Utility is formed.

Construct Storm Sewer on Henderson Drive from Chestnut to Henderson Ditch

Estimated Cost: \$8,051,000
Funding: City Surface Water Drainage Utility
Schedule: 2000 - 2005
Responsibility: City Surface Water Drainage Utility

Water System Improvements

It appears the Cheyenne Board of Public Utilities will need to construct a major water line on the Nationway right-of-way in the future. It should be coordinated with the reconstruction of Nationway.

Estimated Cost: \$11,200,000
Funding: Board of Public Utilities
Schedule: 2011 - 2020
Responsibility: Board of Public Utilities

Action Plan – Planning

Short Range Improvements (2000 - 2005)

Develop 35% Plans for Nationway	Unknown
Prepare Specific Plan for Nationway	\$35,000
Implement Brimmer Park Improvements	130,000
Develop southwest corner of V.A. Hospital Property as Library/Neighborhood Park	Unknown
Improve Pedestrian Crossings as Shown	1,000,000
Develop Plans and Guidelines for "Mixed Use" Area along Lincolnway	95,000
Implement Plans and Guidelines for "Mixed Use" Area along Lincolnway	Unknown

Medium Range Improvements (2006 - 2010)

Work with LCSD #1 to Improve School Yards as parks	\$300,000
Construct Walks along Key Connection Corridors	10,000

Action Plan – Infrastructure

Short Range Improvements (2000 - 2005)

Reconstruction of Omaha Rd./Holmes St., Lincolnway to Ridge Rd.	\$1,202,000
Reconstruction of Norris Viaduct	12,700,000
35% Design of Nationway	15,000
Reconstruction of Morrie Avenue, Phase I	1,560,000
Implement On-Street Bicycle Plan	115,000
Provide Two Lanes on 19 th Street, Logan to Converse	45,000
Install Sign for WB Traffic on 19 th St. Directing Traffic to One-Way Connection to CBD	200
Change Name of North/South Segment of Airport Parkway Back to Morrie Avenue	200
Obtain Funding for Tunnel Under Airport Runway and Connections	2,000
Prepare Environmental Assessment for Morrie/Bradley One-Way Couplet	60,000
Enforce Sight Triangle Regulations at Uncontrolled Intersections	No New Cost
Construct Avenues Greenway Connection	363,000

Medium Range Improvements (2006 - 2010)

Prepare Environmental Assessment for Tunnel	\$90,000
Obtain Right-of Way for North Terminus of Morrie/Bradley One-Way Couplet	Unknown
Implement on-Way Couplet on Morrie/Bradley	450,000
Construct Storm Sewer on Henderson Drive from Chestnut to Henderson Ditch	8,051,000

Long-Range Improvements (2011 - 2020)

Construct Tunnel Under Airport Runway and Connections	\$25,000,000
Reconstruction of Nationway	6,000,000
Reconstruction of Pershing Boulevard, Phase 5a	1,425,000
Construct Major Water Line Recommended by the Board of Public Utilities	11,200,000

Explanation of Acronyms and Abbreviations

AASHTO	The American Association of State Highway and Transportation Officials
BOPU	Cheyenne Board of Public Utilities
CADP	Cheyenne Area Development Plan
CDBG	Community Development Block Grant
CFT	Capital Facilities Tax
ChATPP	Cheyenne Area Transportation Planning Process
DEQ	The Wyoming Department of Environmental Quality
FEMA	Federal Emergency Management Agency
FLB	The Wyoming State Land & Investment Board
ISTEA	Intermodal Surface Transportation Efficiency Act
LEADS	The Cheyenne-Laramie County Corporation for Economic Development
LCSD #1	Laramie County School District No. One
SID	Special Improvement District
TEA-21	Transportation Equity Act for the 21 st Century
UGL	Urban Growth Limits
UPRR	Union Pacific Railroad
W.S.	Wyoming Statute
WYDOT	Wyoming Department of Transportation

Appendix B

Definitions

Generally, the words used in planning have the customary dictionary definitions. However, definitions of some of the technical terms found in this Report are indicated below. The source of the definition, in most cases, is indicated in parentheses at the end of the definition.

Access Point: A driveway or intersection that provides an entrance or exit to private land from a public street.

Alley: A street or highway intended to provide access to the rear or side of lots or buildings in urban districts and not intended for the purpose of through vehicular traffic. (City Code)

Arterial Street: Any U.S. or State numbered route, controlled-access roadway, or other major radial or circumferential street or highway designed by local authorities within their respective jurisdictions as part of a major arterial system of streets or highways. (W.S. 31-5-102)

City: The City of Cheyenne, Wyoming. (City Code)

Collector Street: A street or road designed to collect or distribute vehicular traffic from one or more residential or nonresidential areas to or from a freeway, expressway, or arterial street. (Subdivision Regulations)

County: The County of Laramie, Wyoming. (City Code)

Cul-de-sac: A short dead-end street terminating in a vehicular turn-around area. (Subdivision Regulations)

Developer: The persons who petition the City for the annexation of land to the city, or their successor in interest, or the owners of land in the addition. (City Code) Developers are also person, partnerships or corporations that desire the plat (or replat), zone (or rezone) land in preparation for its development as indicated in the following definition.

Development: Any man-made change to real estate, including, but not limited to, the construction of buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling. (City Code)

Street: The entire width between the boundary lines of every way publicly maintained or, if not publicly maintained, dedicated to public use when any part thereof is open to the use of the public for purposes of vehicular travel. (W.S. 31-5-102)

Subdivider: Any person who lays out any subdivision or parts thereof either for the account of the subdivider or others. (W.S. 18-5-302)

Use: The purpose for which land is designed, arranged, or intended to be utilized. (City Code)

Zoning: A form of regulatory control granted to local governments which may be used to guide and to develop specific allowable land use. (W.S. 9-8-102)

Appendix C

Example Guidelines or Standards for Design of Mixed-Use and Commercial Areas

A. Building Orientation

1. Any building or structure proposed next to a residential zone shall be designed so that door openings, freight and delivery doors and docks, vents, exhausts, storage areas and other functions which create noise, or unsightly views are located on sides of the building other than the side facing the residential zone. If in the design there are no other options available than to locate one or more of these items on the residential side of the building the planning commission shall review the plan to consider if it is appropriate to allow exceptions. The Planning Commission may grant an exception if a site design mitigation plan is proposed which increases landscaped setbacks, increases screening, or uses grade alterations which would reduce the impacts which could be experienced by those uses in the residential zone.
2. To the maximum extent feasible, primary facades and entries shall face the adjacent street.

B. Building Placement

Note: The intent of "build-to" lines is to establish unity of character of the development in a given area, create attractive street fronts and create pedestrian-friendly streets. This is typical of the pattern seen in historic downtowns.

1. Buildings shall be located no more than 15 feet from the right-of-way adjacent to local and

of roof lines, architectural detailing and landscaping features.

4. Glare

- a. Building materials shall not create excessive glare. If highly reflective building materials are proposed, the potential for glare from such materials will be evaluated for their potential adverse impact on adjacent property owner(s) in terms of vehicular safety, outdoor activities, privacy or enjoyment of views.
- b. Mirror glass with a reflectivity of greater than 60% is prohibited.

D. Amenities

1. Each retail development shall contribute to the establishment or enhancement of community and public spaces by providing at least 2 of the following: patio/seating areas, plaza with benches, outdoor playground area, window shopping walkway, kiosk area, water feature, clock tower or other focal feature or amenity that enhances such public spaces.
2. Neighborhood commercial areas shall include a centrally located or prominent outdoor gathering space with pedestrian amenities. The materials used in the design of the space should be of similar quality as that used on the surrounding buildings.
3. Transit stops, if required, shall be integrated into the design of a site, centrally located and easily accessible for pedestrians.

E. Screening and Operation of Service and Storage Areas and Utilities

1. These requirements apply to, but are not limited to above-ground utility appurtenances, storage areas, and open areas where machinery, vehicles or equipment are stored or repaired.
 - a. Outdoor storage, trash collection or

- compaction, loading or other such uses shall be located to the rear or side of the building, and not next to public streets or public sidewalks.
- b. Outdoor storage, truck parking, HVAC equipment, trash facilities and other service functions shall be located and screened so that the visual and acoustic impacts of these uses are fully contained and out of view from public use areas. Landscape, plant and building elements shall be used to screen all sides of such elements, except where an opening is required for access. If access is only possible on a side that is visible from public use areas, a removable screen shall be required. The screen shall prevent 80% of the screened element from being visible.
 - c. When outdoor storage is the only use on the site the storage areas shall be setback 20 feet from any public street property line. The 20 foot setback area shall be landscaped according to the standards of this section.
 - d. Screening measures shall be incorporated into the overall design of the building, so that the architectural design of the building and screening is compatible.
 - e. Acceptable screening materials include plants, walls, fences, topographic changes or a combination of these techniques.
2. All rooftop mechanical equipment shall be screened from public view by integrating it into building and roof design to the maximum extent feasible.
 3. Delivery, loading, trash removal or compaction, or other such operations shall not be permitted between the hours of 10pm and 6am unless noise emissions of 45 dB or less are achieved at the property line of the adjoining property.

F. Exterior Illumination

1. All development, except developments that contain only single family residential uses, shall submit for approval a proposed lighting plan.
2. All development shall design lighting to meet the safety and security needs of the development. When exterior lighting is used, lighting shall be designed to minimize glare and diffusion onto other properties. When the use is next to a residential zone direct and defused light shall be shielded from the residential zoned area.
3. Site lighting that may be confused with warning, emergency or traffic signals is prohibited.

G. Parking Lots

1. Vehicle maneuvering
 - a. The parking area shall be designed so those vehicles do not back out into the public right of way or use the public right of way for their parking maneuvers. The parking area shall be designed so that vehicle backing and turning movements will not conflict or obstruct public streets.
 - b. Potential conflicts with pedestrian circulation shall be minimized by orienting parking stalls and drive aisles perpendicular to the destination use.
2. Parking Lot Perimeter Landscaping
 - a. Parking lots with 4 or more spaces shall be screened from adjacent uses and from the street. Adjacent to public streets, sidewalks and non-residential uses, at least 70 percent of the length of the parking lot shall be screened to a height of 36 inches. To screen the parking area, the landscaped area may either be bermed, planted with shrubs or evergreen trees, or be a decorative masonry wall three feet in height.

3. Parking Lot Interior Landscaping
- a. A minimum of 6 percent of the interior space (as measured by drawing a rectangular shaped area around the maximum extents of each parking area) of all parking lots with less than 100 spaces, and 10 percent of all parking lots with 100 or more spaces shall be landscape areas.
 - b. When landscaped islands are required, one deciduous tree shall be planted in each island. This tree requirement is in addition to the number of trees required on the remainder of the lot. The surface of the island shall be planted in grass or shrubs and shall meet the requirement of 75 percent live coverage on the ground surface. Plantings shall be maintained at a height not to exceed 3 feet.
 - c. Required parking areas shall install landscaped islands with raised curbs. Islands shall not be placed over asphalt or concrete. Whenever a landscaped island under this provision is required it shall be a minimum width of 10 feet and the length of the parking stalls it abuts. Landscaped islands shall be required for each of the following conditions:
 - The end of each row of stalls if the row exceeds 10 parking stalls in length.
 - A row of parking has over 20 parking stalls. One island shall be placed between every 20 stalls in the row unless a landscape island perpendicular to the parking stalls exists next to the row.
 - Interior circulation routes which pass through parking areas. The islands shall be designed to identify the circulation route from the parking areas.
 - d. Required public and employee parking areas over 200 stalls shall be divided by

a minimum 10 foot wide landscaped planting island perpendicular to the parking stalls. The planting island shall be placed along every sixth row of parking.

4. Walkways

- a. A designated, paved, pedestrian pathway shall connect customer parking to any general office or space devoted for customer use. A paved walkway shall be provided in the right-of-way of all public streets that the property abuts. Installation of the sidewalk in the public right-of-way may be deferred according to recommendations and conditions established in the City Engineer Division.
- b. Where it is necessary for the primary pedestrian access to cross drive aisles or internal roadways, the material and layout of the walkway shall be continuous as it crosses the driveway, with a break in continuity of the driveway paving and not the pedestrian walkway. Crossings shall be well-marked, with priority placed on pedestrian circulation.

Appendix D

MAJOR STREET INVENTORIES

Airport Parkway

Functional Classification: Collector

Length as a Major Street in the Study Area: 1.21 miles

Number of Lanes: 2 Median? No

Adjacent Development: Business, Residential on south faces south

Description: Runs east/west from Converse to Morrie, then south to Pershing.

Traffic Controls: Stops at Converse, and signal at Pershing.

Comments: There is some confusion resulting from the section of the former Morrie Ave., north of Pershing, is being named Airport Parkway.

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
Airport Parkway	681 (98)	7,892	2,480

- The projected volume is much higher with the Airport Underpass.

Critical Capacity Locations: Airport Parkway at the former Morrie Ave., with an Airport Underpass.

Safety Information: The Morrie Avenue Tunnel Feasibility Study was done before the east/west section of Airport Parkway was developed, and the proposed intersection will be just north of the crest of a 300' vertical curve unless the profile is revised. This intersection will probably justify signalization in the future, and adequate sight distance needs to be provided on the approaches.

Chestnut Drive

Functional Classification: Collector

Length as a Major Street in the Study Area: 0.32 miles

Number of Lanes: 2 Median? No

Adjacent Development: Cole Shopping Center and residential

Description: An east/west street that connects Converse Avenue and Henderson Drive.

Traffic Controls: Stop signs at Converse and Henderson

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
E. of Converse	4,721 (90)	3,602	3,584
W. of Hot Springs	?	2,651	2,647
E. of Hot Springs	1,693 (90)	1,766	1,655

- No impact from Airport Underpass.
- Projected volume at Converse is less than the current volume.
- Projected growth in traffic volumes is not significant.

Critical Capacity Locations: There is now a delay problem at Converse during some hours of the day. However, if forecasts are correct, the problem should lessen.

Safety Information: There were five accidents at the intersection of Chestnut and Converse in the three year period 1996 - 1998.

Converse Avenue

Functional Classification: Minor Arterial

Length as a Major Street in the Study Area: 1.4 miles

Number of Lanes: 4 Median? Paint

Adjacent Development: North of Pershing – public South of Pershing – mixed

Description: Major north/south route that is projected to extend further to the north in the future.

Traffic Controls: Traffic signals at Pershing, 19th St. , and Lincolnway.

Comments: Converse carries traffic around the east end of the Cheyenne Airport.

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
N. of Airport Parkway		9,764	21,065
N. of Pershing	20,829 (99)	15,863	19,399
S. of Pershing		16,157	21,218
S. of 19 th	13,726 (99)	12,280	15,426
S. of Chestnut	13,926 (97)	9,991	13,172
N. of Lincolnway	12,143 (99)	9,755	12,886

- Volumes around Airport are significantly higher without the Airport Underpass.
- Current volumes are somewhat higher than future, south of 19th.

Critical Capacity Locations: The close proximity of Pershing and 19th St. intersections create storage problems.

Safety Information: The intersection of Converse and 19th has a high accident rate (1.54 accidents/million vehicles through intersection).

19th/20th One-way Couplet

Functional Classification: Minor Arterial

Length as a Major Street in the Study Area: 0.95 miles

Number of Lanes: 2 on each street, except on 19th from Logan to Converse

Median? One block separation

Adjacent Development: Primarily residential

Description: This one-way couplet has its west terminus at Dey Avenue, west of the CBD. 20th Street becomes one-way at Rayor Ave. 19th Street becomes one-way at Logan.

Traffic Controls: Traffic signals at Morrie and Logan on 20th, and at Morrie, Logan, Converse, and Pershing on 19th.

Comments: This couplet serves traffic between the downtown area and the northeast part of the City. It has been in operation for approximately 20 years.

Traffic Volumes:

Section	Projection for Year 2017					
	Current		With Underpass		Without Underpass	
	19 th	20 th	19 th	20 th	19 th	20 th
E. of Morrie	7,669 (99)	6,979 (95)	9,004	7,445	10,850	8,954
W. of Logan	6,531 (97)	7,148 (99)	8,612	7,885	10,462	9,364
E. of Logan	6,611 (98)	5,117 (95)	8,331	5,957	10,514	6,984
E. of Bifurcation	12,038 (95)		12,589		15,954	
W. of Converse	12,038 (95)		13,011		16,385	
E. of Converse			10,490		10,504	

- The future volumes are higher without the airport underpass than with it.
- The future volumes are not much higher than the current volumes.

Critical Capacity Locations: The major capacity problem is eastbound at Logan where there is only one lane for eastbound traffic at the signal, widening to two lanes is recommended.

Safety Information: The intersection of 19th and Logan (east terminus of one-way) has the highest intersection accident rate in the study area.

Henderson Drive

Functional Classification: Collector

Length as a Major Street in the Study Area: 0.7 miles

Number of Lanes: 2 Median? No, except at major intersections, including Omaha Rd.

Adjacent Development: Residential

Description: Runs southeasterly from Pershing Blvd. to Lincolnway.

Traffic Controls: Traffic signal at Pershing, (entrance to V.A. Hospital)
Stop signs at Omaha Road and Lincolnway

Comments: Provides access to United Medical East, and Henderson Elementary School

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
S. of Pershing	3,082 (99)	6,932	5,484
N. of Chestnut		5,771	4,420
S. of Chestnut	2,471 (99)	6,780	5,316
N. of Omaha	3,405 (99)	6,690	5,217
S. of Omaha	2,625 (99)	5,075	3,828

- Future volumes are higher with the Airport Underpass.
- Capacity Comments: Future volumes are higher than current, but well within the capacity of a two-lane street.

Safety Information: The major issue on Henderson Drive is drainage. An additional storm sewer is needed from Chestnut to Henderson Ditch, south of Lincolnway, to correct the flooding problem.

Hot Springs Avenue

Functional Classification: Collector

Length as a Major Street in the Study Area: 0.78 miles

Number of Lanes: 2 Median? No

Adjacent Development: Residential

Description: Runs north/south from Chestnut to Nationway

Traffic Controls: Traffic signal at Lincolnway. Stop signs at Chestnut and Nationway.

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
S. of Chestnut	2,284 (93)	1,422	1,536
N. of Lincolnway	624 (99)	2,687	2,813
S. of Lincolnway	3,394 (99)	3,279	3,620
N. of Nationway	3,012 (99)	2,423	2,653

- No impact from Airport Underpass
- No projected growth.

Critical Capacity Locations: None.

Safety Information: No known problems.

East Lincolnway

Functional Classification: Principal Arterial

Length as a Major Street in the Study Area: 1.86 miles

Number of Lanes: 4 Median? Paint, except at east and where it is depressed

Adjacent Development: Primarily Commercial

Description: Runs east/west through the study area

Traffic Controls: Traffic signals at Morrie, Dunn/Nationway, Logan, Converse, Hot Springs, and Ridge.

Comments: Maintained by WYDOT. No major improvements are planned by WYDOT.

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
E. of Morrie	17,877 (90)	32,308	28,915
W. of Nationway/	20,310 (97)	31,026	27,910
E. of Nationway	25,044 (93)	18,819	19,366
W. of Logan	14,096 (90)	18,365	19,255
E. of Logan	23,326 (93)	25,336	28,387
W. of Converse	23,902 (93)	26,364	29,626
E. of Converse	19,709 (95)	22,081	22,607
W. of Hot Springs	19,292 (94)	20,061	20,593
E. of Hot Springs	18,933 (97)	18,829	19,159
E. of Omaha	14,369 (90)	13,034	13,355
W. of Ridge	12,561 (97)	15,363	14,625

- Volumes east of Morrie are higher w/ underpass, increase fades as you go east.
- Volume is less east of Omaha – future vs. present

Critical Capacity Locations: Intersection with Morrie Ave., when Airport Underpass exists.
Safety Information: Accidents at commercial driveways are a major problem on some sections of East Lincolnway.

Logan/Norris Overpass

Functional Classification: Collector

Length as a Major Street in the Study Area: 0.91 miles

Number of Lanes: 2 Median? No

Adjacent Development: Mixed, residential and commercial

Description: Logan begins at Pershing and runs southeast to Nationway, where it becomes the north approach to the Norris Overpass.

Traffic Controls: Traffic signals at Pershing, 20th, 19th, Lincolnway, and Nationway.

Comments: The Norris Viaduct is scheduled for replacement with the next five years.

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
S. of Pershing	5,589 (96)	8,637	9,041
N. of 20 th	4,610 (99)	9,083	9,605
S. of 20 th		9,828	11,044
S. of 19 th	8,983 (93)	6,720	7,353
N. of Lincolnway	8,587 (93)	6,474	7,217
S. of Lincolnway	9,430 (93)	10,482	12,404
N. of Nationway	8,000 (90)	10,127	12,169
S. of Nationway	11,783 (90)	18,990	18,416

- The Airport Underpass does not create a significant impact on the future volumes.
- The future volumes are not significantly higher than the current volumes.

Critical Capacity Locations: The intersection of Logan/Pershing/Concord is poor, but any improvement will be expensive.

Safety Information: The intersection of Logan and Lincolnway has the highest total number of accidents of any intersection in the study area (31 in 3 years).

Morrie Avenue / Airport Parkway (north/south segment)

Functional Classification: Minor Arterial

Length as a Major Street in the Study Area: 1.21 miles

Number of Lanes: 4, north of Pershing. 2, south of Pershing
Median? Yes, physical median north of Pershing

Adjacent Development: Primarily residential south of Pershing; public north of Pershing.

Description: North terminus is Airport Parkway. South terminus is at Lincolnway

Traffic Controls: Traffic signals at Pershing, 20th, 19th, and Lincolnway.

Comments: The Transportation Plan includes a northerly extension of Morrie under the Airport runway to connect to Powder House Road.

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
N. of Airport Parkway	0	40,041	0
S. of Airport Parkway	1,664 (90)	33,371	3,759
N. of Pershing	1,395 (99)	33,706	4,731
S. of Pershing	2,186 (99)	21,774	1,580
N. of 20 th	2,427 (99)	22,525	2,924
S. of 20 th	2,784 (99)	20,951	3,384
S. of 19 th	4,130 (95)	16,788	5,676
N. of Lincolnway	4,997 (95)	14,601	4,781

The impact of the construction of the Airport Underpass is discussed as a section of this Report. The need to rename the north/south segment of the Airport Parkway is also discussed.

Critical Capacity Locations: From Pershing to Lincolnway with the Airport Underpass.

Safety Information: The Airport Underpass is expected to create the need for a traffic signal at Airport Parkway, and adequate sight distance will need to be provided at that intersection. Provision will need to be made for left turn lanes, where they are permitted, north of Pershing. Adequate capacity will need to be provided south of Pershing for there to be safe operation.

Nationway

Functional Classification: Minor Arterial

Length as a Major Street in the Study Area: 1.67 miles

Number of Lanes: 4 Median? Depressed

Adjacent Development: Mixed, residential and commercial

Description: Full length is in the study area. The west terminus is at Dunn/Lincolnway near Holliday Park, and Nationway becomes 12th Street at Ridge Road.

Traffic Controls: Traffic signals at Dunn/Lincolnway, Logan/Norris, Windmill, and Ridge.

Comments: Conceptual plans (10%) are being prepared as a part of this project.

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
E. of Lincolnway	8,107 (99)	13,121	9,715
W. of Logan	8,107 (99)	13,059	9,841
E. of Logan	9,148 (90)	13,234	12,596
W. of Hot Springs		13,007	12,422
E. of Hot Springs	9,632 (99)	12,496	12,143
W. of Ridge	8,716 (95)	10,049	9,621

- Airport underpass results in somewhat higher volumes.
- Current volumes appear low

Critical Capacity Locations

Nationway appears to have surplus capacity both now and in the future.

Safety Information: There are essentially no accidents related to driveways.

Omaha Road/Holmes Street

Functional Classification: Collector

Length as a Major Street in the Study Area: 0.74 miles

Number of Lanes: 2 Median? No

Adjacent Development: Primarily residential

Description: At one time Omaha Road was U.S. 30, but it has been realigned to connect with Holmes Street..

Traffic Controls: Stop signs at Lincolnway and Ridge Road.

Comments: Omaha Road is scheduled for reconstruction as a three-lane street in the year 2000.

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
N. of Lincolnway	2,416 (99)	5,523	5,515
E. of Henderson	3,374 (99)	7,930	7,704
W. of Ridge	3,072 (99)	5,208	5,285

- The traffic volumes are not impacted by the Airport Underpass
- The projected volumes are approximately double the current volumes.

Capacity Comments: Even though the volumes in the future are higher, there are no anticipated capacity problems.

Safety Information: Raised channelization was installed at the intersection of Omaha and Henderson in 1995. There were 17 reported accidents in the three years prior to the change, and 4 reported accidents in the three years after.

East Pershing Blvd.

Functional Classification: Principal Arterial

Length as a Major Street in the Study Area: 2.12 miles

Number of Lanes: 4 Median? Painted

Adjacent Development: Primarily commercial

Description: Runs east/west through the study area

Traffic Controls: Signals at Morrie, Concord/Logan, Rayor, Converse, Henderson, Windmill, Ridge.

Comments: Adjacent development includes V.A. Hospital, East High School, Carey Jr. H.S., and the Cemetery.

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
E. of Morrie	14,727 (90)	16,448	16,822
W. of Logan	12,061 (90)	15,877	16,755
E. of Logan	?	11,357	12,525
W. of Converse	15,477 (99)	11,135	12,749
E. of Converse	17,986 (98)	13,239	11,552
W. of Henderson	17,986 (98)	24,125	22,498
E. of Henderson	14,218 (90)	17,948	17,893
E. of Windmill	12,517 (90)	16,146	16,146
W. of Ridge	14,950 (99)	15,149	15,081

- Future increases are small
- Airport underpass has no impact on future volumes

Critical Capacity Locations: Intersection with Morrie Avenue, when Airport Underpass exists.

Safety Information: Accidents at driveways is a problem; particularly near Ridge Road.

Ridge Road

Functional Classification: Collector

Length as a Major Street in the Study Area: 1 mile +/-.

Number of Lanes: 2 Median? No

Adjacent Development: mixed commercial and residential

Description: Runs north/south from Riding Club on the north to Barbell on the south.

Traffic Controls: Traffic signals at Pershing, Lincolnway and Nationway

Comments: Ridge Road, north of Pershing, was recently reconstructed.

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
N. of Laramie St.		15,215	17,667
S. of Laramie St.		14,612	16,922
N. of Pershing	10,190 (98)	14,844	17,129
S. of Pershing	9,267 (98)	18,507	19,883
N. of Holmes	8,194 (99)	15,089	16,254
S. of Holmes	7,053 (99)	10,845	11,939
N. of Lincolnway	7,026 (98)	10,470	11,268
S. of Lincolnway	7,981 (98)	11,942	12,057
N. of Nationway	7,029 (98)	12,380	12,409
S. of Nationway	2,619 (93)	2,393	2,381

- Volume, north of Pershing, is less with the Airport Underpass
- Future volumes are 50% to 100% higher than current volume.

Capacity Information: On Ridge, additional capacity is provided at intersections with additional lanes.

Safety Information: There have been 20 accidents at the intersection of Ridge and Lincolnway in the past three years.

Windmill Road

Functional Classification: Collector, from Pershing to Dell Range

Length as a Major Street in the Study Area: 0.34 mile

Number of Lanes: 2 Median? No

Adjacent Development: Public or Government

Description: A north/south connection between Dell Range Blvd. and Pershing Blvd.

Traffic Controls: Traffic signal at Pershing.

Comments: East High School and Brimmer Park are adjacent land uses.
(The section of Windmill, south of Pershing, is not classified as a Collector)

Traffic Volumes:

		Projection for Year 2017	
Section	Current	With Underpass	Without Underpass
N. of Pershing	3,847 (99)	4,268	5,131

- There is less volume in the future with an Airport Underpass.

Capacity Comments: There are no capacity problems in the study area.

Safety Information: The number of accidents per million vehicles through the intersection of Pershing and Windmill is 0.88, assuming the number of vehicles through the intersection each day is 19,642.

There are two driveway locations on Windmill, north of Pershing which have had three or more accidents in the past three years. Based on the time of year that the accidents occurred, the locations are probably the driveways into the East High School parking areas.

Conclusions and Recommendations: The driveways north of Pershing need to be checked to see if anything can be done to improve the accident situation.