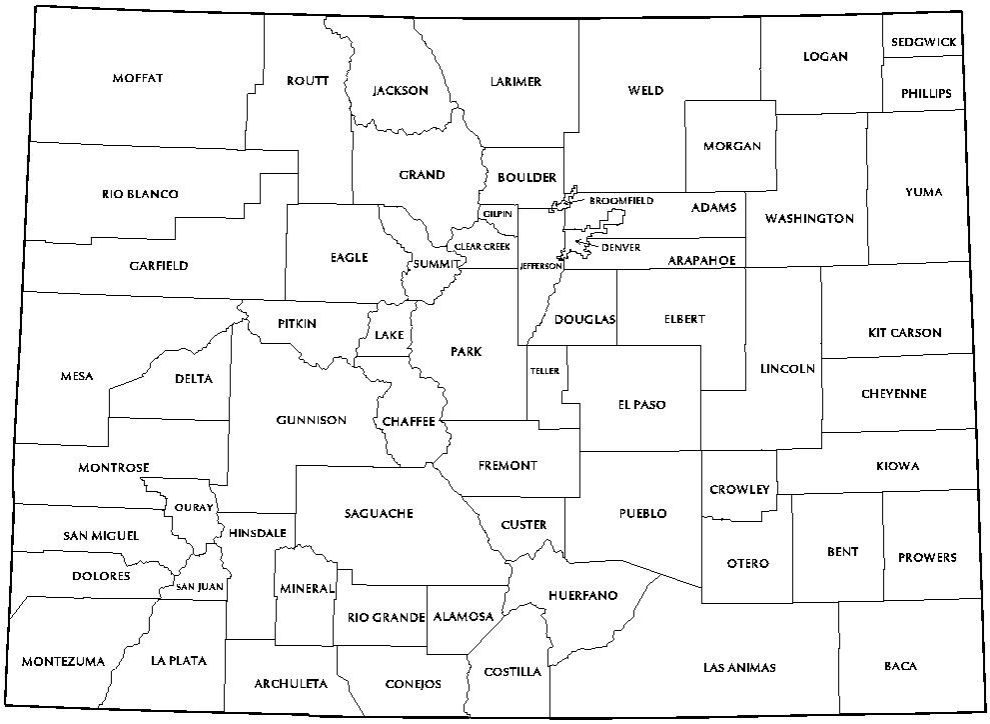
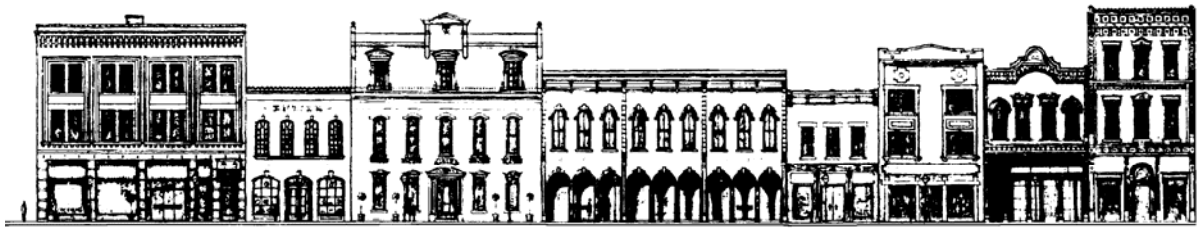
COLORADO URBANIZATION AND PLANNING CONTEXT





OFFICE *of* ARCHAEOLOGY *and* HISTORIC PRESERVATION

COLORADO URBANIZATION AND PLANNING CONTEXT

DAVID R. HILL

FACSIMILE EDITION 2007

OFFICE OF ARCHAEOLOGY
AND HISTORIC PRESERVATION
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PUBLICATIONS IN THE RESOURCE PROTECTION PLANNING PROCESS (RP3) CONTEXT SERIES

Title	Number
Colorado Plateau Country	606
Colorado Southern Frontier	607
Colorado Mountains	608
Colorado Plains	609
Colorado Engineering	610
Colorado Urbanization and Planning	611

These publications are available online at:
https://www.historycolorado.org/historic-prehistoric-contexts

Since the completion of the RP3 context series in 1984, a number of new regional and thematic contexts have been developed that expand on this Context document. These too are available online:

Title	Number
Denver Park and Parkway System	613
Denver Mountain Parks	616
Highway Bridges of Colorado	632
Historic Residential Suburbs in the United States, 1830-1960	652
Historic Resources of Downtown Denver	646
Railroads in Colorado, 1858-1948	625

PREFACE

The Colorado Historical Society, Office of Archaeology and Historic Preservation, is proud to present this set of historic contexts for the State of Colorado. The set includes regional historic contexts and also topical contexts which summarize and evaluate the history of the state from the earliest historic events up through World War II.

The four regional historic contexts include the Plains, the Mountains, the Southern Frontier in southeast Colorado, and the Plateau Country along the western edge of the state. For each of these regions, themes are based on socio-economic units of development in the region. These are presented in rough chronological order, but they are not strictly chronological units. They reflect the historic themes of development in each region and the historic properties associated with them.

Four "topical" contexts were developed: Engineering, Urbanization and Planning, Historical Archaeology and Architecture. The Engineering context is oriented toward a history of engineering technology. This context is organized by topics including Water Resources, Power Resources, Transportation, Industry, Mining, Communications, and Waste Disposal. Within each topic are themes for the various specific resources types. For example, the themes within Power Resources include Petroleum and Shale Oil, Natural Gas, Uranium, Electric Power and Coal.

The Urbanization and Planning context was developed to focus attention on the significance of town planning, layout and transportation modes, the latter including the Stage/Wagon Era, Rail Era and Auto Era. The themes within this context address town form or town function and selected aspects of towns during the transportation eras. Additional themes are presented for the three major urban centers in the state including the Central Business Districts, Residential Development, and Rail/Industrial/Warehousing Districts during the transportation eras.

For all of the historic contexts, the presentation of data for each theme begins with a narrative of the history and description of the theme. A chronology, description of the location of historic properties, and a list of cultural resource types are presented. Then the quality and quantity of existing data about the theme are evaluated. This includes an assessment of the historical documentation, number and location of sites, data gaps, future needs and important resources. Research questions and a guide to evaluation standards for physical condition are presented. References and a map are included for each theme.

The Historical Archaeology context is based on ten temporal units identified as socio-politically significant periods spanning the history of the state. For each unit the quality and quantity of past historical archaeology work is presented and research recommendations and identification and dating problems are considered. In addition, the context presents a research framework for future historical archaeology work in the state.

The architectural context for the project is presented as "A Guide to Colorado Architecture." The guide standardizes the terminology used for architecture styles in Colorado and presents pictures and descriptions of these styles.

The overall purpose of these reports is to provide a framework to identify and record the historical resources in the state and to provide research direction to analyze the significance and preservation of these resources. The contexts can provide guidance for state and federally mandated cultural resource management, as well as direction for pure research. We anticipate that the recording and evaluation of historic sites will benefit by using the combined contexts.

The reports were produced by the Colorado Historical Society with the assistance of a grant from the Colorado Commission on Higher Education. The development of these reports is a direct outcome of the RP-3 (Resource Protection Planning Process) effort led by Office of Archaeology and Historic Preservation Archaeologist Judith Halasi who provided research, coordination and editing for the project.

The editorial content of this publication was supported by a grant-in-aid through the funding provisions of the National Historic Preservation Act of 1966, as amended, which is administered by the National Park Service, Department of the Interior. The content and opinions do not necessarily reflect the views or policies of the Department of the Interior nor does mention of trade names or referenced publications constitute endorsement or recommendation by the Department of the Interior.

We hope that these volumes will stimulate an awareness of and appreciation for the historical resources of Colorado.

Barbara Sudler
President
State Historic Preservation Officer

CONTENTS

URBANIZATION & PLANNING CONTEXT

1. STAGE/WAGON ERA: TOWNS 1858-70

NARRATIVE

A Colorado stage/wagon town is a small community platted and significantly developed during the pre-rail era, 1858-1870. Transportation was either pedestrian or by wheeled vehicles pulled by animals. The constraints of this system structured most towns, regional movement and land use locations. These towns depended upon either local supplies of water, wood, and food, or else were required to import them at great expense overland. The towns were also sufficiently isolated that they were required to act politically and militarily as almost sovereign units.

The Americans that built Colorado's stage/wagon towns and regions in the 1860's were armed with an established planning tradition. For the past half century the establishment of towns and the stage/wagon/river networks that united them had been proceeding at a gallop across the mid-continent from east to west. The movement was driven by the wealth generated by developing enormous untouched midwestern resources, in an atmosphere of laissez faire. The town plat layout that suited this rapid speculative planning was the neutral grid. It was an open checkerboard on which the land market could locate the buildings of the town quickly, and with as little interference as possible from the public or other non-commercial interests. This type of planning usually generated a central core of contiguous main street commercial buildings, with residents and churches decentralized loosely around it. The stark, uniform character of these scattered town buildings on an infinite prairie was mitigated by the grace of midwestern elms and other vegetation which pulled the composition together in a soft green, and sheltered it from a very big sky.

When gold was discovered in Colorado, these town building traditions and physical components were reassembled here with astonishing speed. It was as though the urban frontier had been contained at the point where the rain stopped in Kansas and Nebraska, and the gold rush gave it an opening to hop over the dry plains and to gush up the wet mountain valleys searching again for quick wealth.

What is unique about Colorado's stage/wagon town building experience is that it was built upon a temporary mining economy, not a relatively renewable agricultural base. It was the latter that fed the eastern urban frontiers. Colorado was also higher, more mountainous, drier, less forested, colder and further from the urban frontier than the old midwest systems. How would Coloradans reassemble these midwestern agricultural components, given their peculiar circumstances? Actually, variations were few. It seemed more prudent, perhaps, to do things the old way. Generally, the old way was familiar and it usually worked adequately. Given the temporary nature of the situation, adequacy was perhaps an understandable standard for the built environment.

Towns were located in the region according to function. Pueblo, Colorado City, Denver/Auraria, Golden and Boulder gave broad services to the mining towns from the safety, warmth, water and transport access of the plains and foothills. Mining towns in the mountains like Georgetown, Central City, Breckenridge, Oro City and Nederland specialized in extracting the stone wealth. Transport towns like Julesburg, Laporte, Parker and Ft. Lyons aided travelers on their way across the high plains to the mining and mining service towns.

The towns seemed to go through somewhat uniform growth stages. First there was a tent/cabin/adult male phase, clustering informally along major roads or scattered on claims. Then followed a framehome/family/main street phase, organized on some form of accepted town platting. Finally there was a period in which there was a struggle to diversify town economics and make the mining economy more permanent. Diversification and permanence was unlikely, however, without better linkage to the nation. This is one reason why the stage/wagon period was so short in Colorado. Without transport and smelting of lesser grade ores, the hard rock mining economy could not sustain permanent growth. The next coal/rail period in Colorado's regional design puts the state on the national map to stay.

Perhaps five town planning forms are typical of this period in Colorado history and they can be viewed in the photocopies that follow. First, there is the typical prairie grid oriented usually to water courses or major roads. It is bleak, bustling, speculative and sprawling. The Denver grid is a good example here. Second, there is the wide-valley mountain grid, like Georgetown. Third is the stage road string town, in which homes, businesses and other buildings are informally strung out along a major road.

Fourth, there is the somewhat unique gulch town like Central City, in which linear grids string along following the curve of the narrow mountain gulch. Finally, there is the mining claim pattern. Here, the housing pattern is generated by the irregular orientations of overlapping mining claims, and the whimsical criteria by which miners located their shacks and cabins on them.

The prairie grids and string towns are straight extensions of the midwestern frontier tradition. Actually, so is the wide valley grid, except for its spectacular new setting. Gulch towns and mine claim patterns are more unique and innovative solutions. But all deserve more study.

Chronology: Stage/Wagon Towns' Developmental Phases

A. Stage/Wagon socio-economic developmental phases, within functional town types 1858-1870.

1. Mining service towns, i.e. Denver.
   a. Mining camp or Indian/trapper trade center or both.
   b. Mining service specialization.
   c. Local economy diversification.
   d. Sociological diversification and stabilization with families, churches and cultural facilities.
   e. Development of empire building and "city" consciousness and activities.
2. Mining towns: developmental phases. 1858-1870.
   a. Pre-government, adult male, mutual aid (and hindrance) patterns. (The tent, saloon, general store, and brothel syndrome).
   b. Mining district formation and rough political ordering.
   c. Structured town platting and speculation.
   d. Development of a "slightly" diversified town economy and a beginning family-oriented social structure.
   e. Further stabilization dependent upon the supply and market for the ores.
   f. Smelting functions possibly begin.
3. Transport towns.
   a. Begin as stage stops and postal offices.
   b. Town platting.
   c. Search for secondary economic bases.
   d. Usually declined rapidly if the railroad passed them by.
   e. Restructured if railroad passed through.

B. The developmental dynamics between town types in the S/W regions (1858-70).

1. Mining service towns start as mining camps and transport camps along the front range.
2. Mining camps in the mountains are soon established.

3. Mining service towns then specialize more in transport, service, retail, wholesale and political functions.
4. New transport stations and towns are established between both mining service towns and the mining camps and mining service towns and the eastern midwest frontier cities.
5. Mining camps begin to mature into stable communities (depending upon their prosperity).
6. Mining service towns struggle to become permanent and rounded control centers of a new urban frontier empire.
7. Permanent agricultural support settlements begin to appear.

C. Phases of S/W physical town planning and design 1858-1870.

1. Mining service towns
   a. Power struggle between competing town companies for plat location and legitimacy (particularly in the Denver situation). In this period, various temporary tents, teepees, covered wagons and log cabins cluster loosely, impermanently, informally and without contiguity. Sometimes they string out linearly along wagon routes.
   b. Plat stabilization. Uniformly, neutral grids are laid out by town companies. They are usually oriented to water courses, land forms, vistas down the streets or the cardinal points. None except Old Pueblo were strictly north/south in orientation, as would be the rule later.
   c. Main commercial streets. These were linear and located where major regional roads intersected within the plat. The buildings were constructed of wood or brick and were generally tightly packed and contiguous. The towns are now entering their diversification and stabilization phase.
   d. Residences. Wealthier permanent residents moved up the hills away from the town core and river. The poorer and more transient population stayed near the center. Both groups generally lived in wood structures, built on open plans. Without vegetation, these traditional town designs, originating in the verdant midwest, seemed ble k indeed on the limitless expanses of the treeless plains.
   e. The physical form of early stability and permanence. Brick design regulations, large homes for the wealthy, schools, churches, opera houses, court houses, horse race tracks,

parks and trees began to give at least the look of respectability to Denver by 1870. Small factories, broader services and warehousing diversified the economy. Mining service towns were maturing, but without better regional transport access or more resources from the mountain towns, their growth was limited. By 1868 they were merely small, isolated speculative prairie towns, without even the prairie towns' agricultural base.

2. Types of stage wagon mining town physical planning.
   a. Common characteristics of S/W Colorado mining towns.
      1. Narrow valley or gulch locations near the claims at high elevations in dominating, spectacular natural settings.
      2. Extremely harsh and long winter periods, with work often stopping during the winter.
      3. Surrounding hillsides cut bare of trees and dominated by digging remains.
      4. Plats were usually superimposed upon and designed in the context of the non-grid "claim" system of the mining district planning.
      5. The architecture followed a "camp/adult male" phase to a "wood/family phase," to a "stone and brick/church and school" phase--economy permitting.
      6. Easy victims of fire.
      7. Generally higher densities due to cramped gulch or valley sites.
      8. Vertical changes within the town have strong visual impacts.
      9. Extremely isolated, expensive to build and live in.
      10. A struggle to approximate neutral grid planning even in wide valley terrain.
      11. Later introduction of smeltering to the town economy and valley ecosystems.
3. Variations in stage/wagon mining town planning
   a. Wide valley grids.

1. Examples: Idaho Springs, Breckenridge (?) and Georgetown.
2. Less dense, with open space.
3. More horizontal.
4. Orthogonal.

b. Gulch grids
1. Examples: Central City and Blackhawk.
2. Curvilinear following of valley and stream contours.
3. Dense and more contiguous.
4. Horizontal changes within the town are dramatic.
5. Almost "medieval" street scale and spirit.

c. Claim cabins on the town fringes
1. Many early miners built cabins next to their claims on the hillsides.
2. The surveying of these claims was highly erratic and overlapping, and the cabins were almost random on orientation.
3. Each town seems to lose its planning integrity as it reaches these claim cabins on the fringe.

d. Stage road string (linear) towns
1. Patterns where building simply strung out along stage roads.
2. Usually an early form of development, that later went to grids.

LOCATION

Location is best described in the accompanying maps. Cattle trail towns followed the cattle drive trails and rail heads on the high plains. Mining towns were in northern South Park, the upper Arkansas River area, the Upper Blue River area, and up the mountain creeks of the Denver, Golden and Boulder areas. Mining service towns were on the present front range corridor. Transport towns were on the stage lines that followed the major river valleys on the plains.

CULTURAL RESOURCE TYPES

The following defines the town itself as a cultural resource type. Within each town, there can be many sub-districts of great interest. Examples might be residential or commercial districts, ethnic sections, and mining claim platting areas. Clusters of these towns could also be defined as districts, such as the Idaho Springs to Silver Plume town corridor.

A. Transport Service Towns*

Old Julesburg
Franktown
Ft. Lyons (?)
Henderson 1858
Laporte 1859
Parkdale 1878
Virginia Dale 1862
Mt. Vernon
Trinidad 1859
Conifer 1860
Rollinsville 1861
Jefferson 1861
Parker 1870
Colorado City 1859

B. Mining Service Towns

Denver 1858
Highland 1858
Old Pueblo 1858
Canon City 1859
Auraria 1858
Golden 1859
Boulder 1859

C. Mining Towns (and camps)

Blackhawk 1859
Central City 1859
Nevada
Idaho Springs 1860
Silver Plume 1860-70
Georgetown 1864
Boulder 1859
Jamestown 1864
Nederland (Brownsville) 1860
Gold Hill
Caribou
Ward 1865

*The dates following the to
refer to the Colorado Place Names esti
mate of their establishment.

Empire 1860
Oro City 1859
Fairplay 1859
Buckskin Joe
California Gulch
Silverton 1874
Tarryall 1858 (?)
Breckenridge 1859
Hamilton

D. Agricultural Colonies & Cooperative Communities

Greeley 1870
Longmont 1871
Evans

E. Cattle Trail Towns (transitional between S/W and rail towns)

Iliff
Bovina
Hugo
Trail City
Brush

F. The Hispanic Region (treated as a separate theme)

QUANTITY AND QUALITY OF HISTORIC INFORMATION

Historic Documentation

There is general work done on these towns in Colorado histories and in the local histories of the towns themselves. Also note the regional studies done by other historians on this project, especially those concerned with the high plains, the mountains and the southern frontier. The town planning and urban form dimensions of these towns is not at all well studied, and my speculations here are somewhat unique. The CHS's excellent model of early Denver/Auraria is a remarkable resource. John Reps' work, Cities of the American West is the best national town planning history that touches on Colorado S/W towns.

Number and Condition

What follows is a matrix aimed at summarizing my speculations upon the likely number and condition of the towns discussed. Down the left side of the matrix is listed the typical economic functions of the towns. Along the horizontal dimension across the top is a categorization of the likely conditions that these towns might be found in presently. The towns themselves are then listed in the matrix cells where appropriate. These are, of course, rough judgments. The categories on the horizontal axis are:

a. The structures and platting are likely to be gone, with a return to agriculture, open land or forest uses.
b. The structures and platting are still there, but the people are gone. (The ghost town).
c. The town is in low level human use with some integrity likely.
d. The town is in human use with considerable integrity likely.
e. The town has been rebuilt and overlain with new uses, but with important building and platting remains.
f. The town is rebuilt so completely that probably only little of the plat and a few building fragments are likely to remain from the original.

The matrix is as follows.

	a	b	c	d	e	f
Mining Service Towns				Colo.City	Denver Boulder Golden Old Pueblo	Auraria
Transport Service Towns	Old Julesburg Mt. Vernon Henderson		Franktown Rollinsville Laporte Jefferson Parkdale Parker Virginia Dale	Ft.Lyons	Trinidad Conifer	
Mining Towns		Tarryall Buckskin Joe Hamilton Calif. Gulch Oro City (?) Gold Hill Caribou	Fairplay Ward	Blackhawk Central Cty. Nevada (?) Silver Plume Georgetown Silverton Jamestown	Idaho Spgs. Breckenridge	Oro City Boulder
Agricultural Colonies						Greeley Longmont
Cattle Trail Towns			Bovina Iliff Hugo Trail City		Brush	

Surveys

The major front range towns, Pueblo, Old Colorado Springs and Denver, have been architecturally surveyed. These surveys generally record buildings within the cities and therefore may be useful to identify buildings which survive from this period. However, the quality of these are mixed, and the level of concern with planning and urban form issues is usually slight. Also note the regional themes under this project, and the sections of the urbanization themes in this project for the early periods in Denver, Colorado Springs and Pueblo.

Date Gaps

The impact and patterns generated by the mining claim system needs more research. The configuration of the town plans in Colorado, which developed as a result of the mining claim system may be unique. In particular, gulch towns have not been researched or analyzed and are also somewhat unique to the high country of the west. Generally, detailed planning and urban form knowledge of all these towns is limited and fragmentary. It all needs descriptive, analytic and evaluative work.

Future Needs

Identifying stage/wagon towns is not difficult. They are towns that began 1850-70, before railroads arrived. Finding those which are representative and have integrity is more difficult. Essentially, one should try to define either by old photos or bird's-eye views what the old town looked like. Then describe the present town and see what has been changed. This might be done with air photos presently available in the state planning office. The best technique, however, is to send a trained individual into the field to do a visual and oral history analysis. Identifying and preserving the major examples of each stage wagon town type (or at least key sections of those towns) should be a high priority in research.

Important Resources

A major contemporary problem in planning Colorado towns is their being torn apart by auto highway by-passes and the resulting shopping centers. Therefore, those few towns which still display the characteristics (as specified above) of their stage/wagon period functional type or planning grid are important as examples of this period. Although most of these have had an impact from later building or from neglect over time, it is important to attempt to preserve a few of these stage/wagon towns which still retain these characteristics and association with the period. They are important as examples to show the beauty and sociability of small town pedestrian-oriented main streets before the train or auto. The main streets are of particular importance. Also, as stated before, towns which followed curvilinear gulches or highways are of particular aesthetic import.

Research Questions

- To what extent did the "boom and bust," temporary, quick wealth, expensive and rowdy nature of our early towns lower the state's expectations toward quality urban development?
- How important did the "speed" with which the towns developed affect their planning?
- Did adapting the grid to mountain sites generate any innovations in grid planning?
- Did the means of organizing the mining claims outside the mountain towns affect their internal organization or expansion patterns?
- Did the "mining, materialist and exploitive" mentality built into the state's early environments extend to later cultural and built environmental values?
- Did the lack of vegetation in early towns decrease aesthetic expectations for urban design?
- Why did the high plains and southern areas reject the Hispanic solutions to town planning so completely?
- What effect did the spectacular settings of the mining towns have on town design, or the aesthetic perceptions of the town dwellers?

Evaluation Standards

Physical Conditions

Under the typology generated for the analysis of number and condition above, I would suggest that if the town has characteristics from "b" to "e" they are worth looking at. Categories "c" and "d" are the most important categories.

Representation

Stage/wagon towns are somewhat unique in Colorado simply due to the fact that the railroad dominated the design of so many of our communities. Any of them that are well preserved should be looked at carefully. It should be noted that again there are stage/wagon towns that are dated later than the 1858-1870 period that this theme deals with. They were the feeder towns that were at the end of the branch roads that led to the rail towns. These may

be sources of stage/wagon town design that could have more integrity than the plains and front range ones. However, these later ones have been almost totally redeveloped. I would expect few more than ten stage wagon towns to be preservable as wholes, including the feeder towns. Sections of these towns with integrity may be more common.

Other examples of town planning configurations which would be important are as follows:

Any variations from neutral grids.

Any attempt to orient the streets in unique directions for aesthetic, engineering, or transport efficiency reasons.

Struggles to overcome the lack of enclosure, through either tree cover above, or community squares and so forth horizontally.

Variations from the grids due to precepts of the cooperative colonies.

Plans where the location of the grids is unique with respect to issues of water, transport, flooding, heating/cooling, topography.

Plans where the churches located centrally and carefully with respect to the main street, topography and neighborhood organization.

Plans where the town fabric is a particularly good example of one of the "phases" of town growth.

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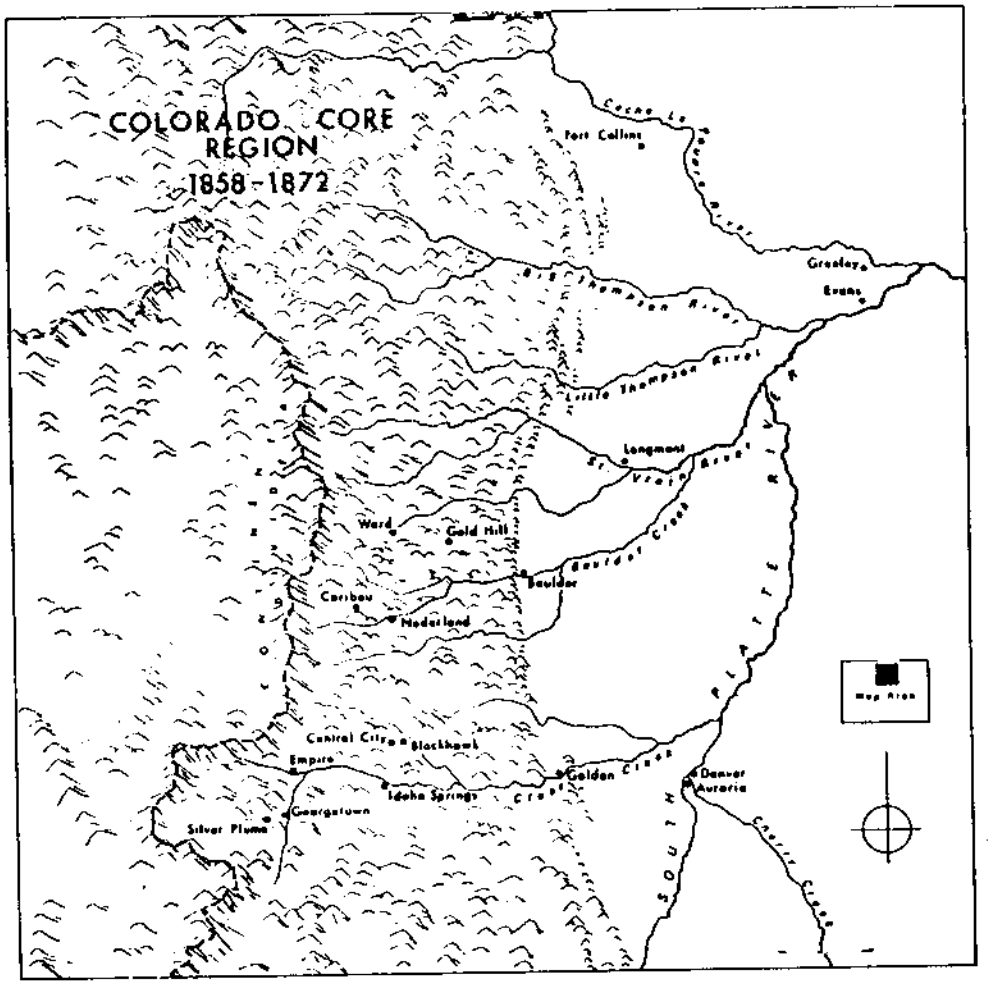

Figure 1 Colorado Core Region. Abbott, Colorado.

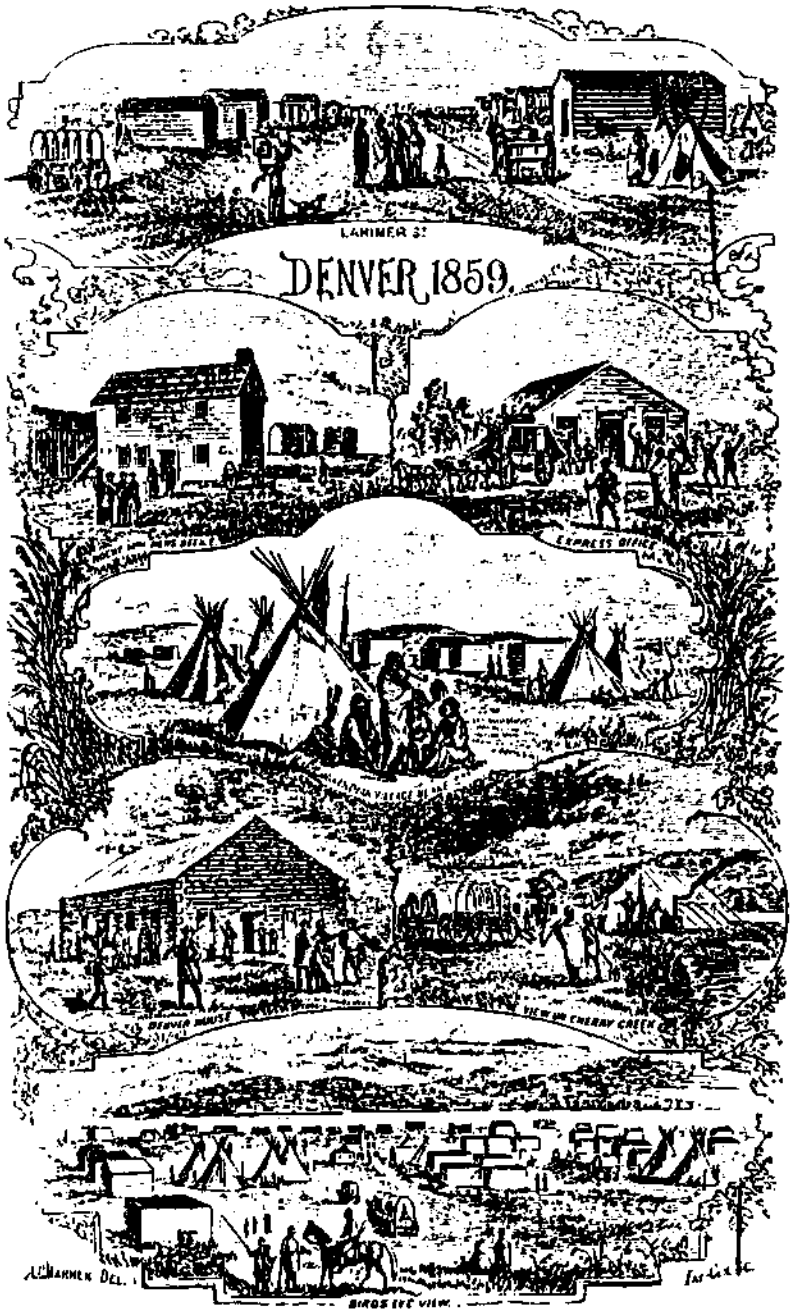

Figure 2
Early "Temporary" Planning and Architecture
Source: Reps, Cities of the American West, (CAW).

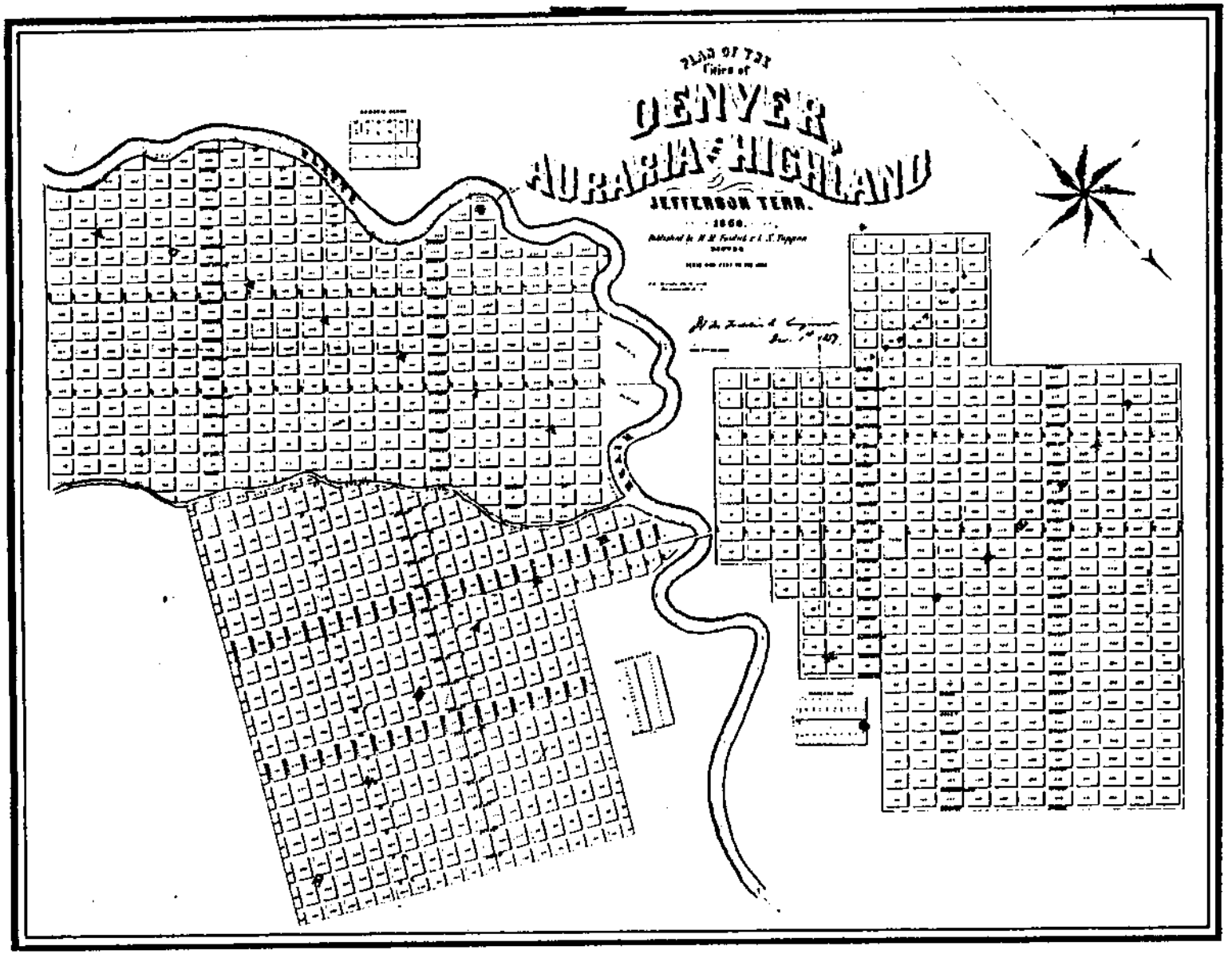

Figure 3. Dever 1859. Source: Reps, CAW.

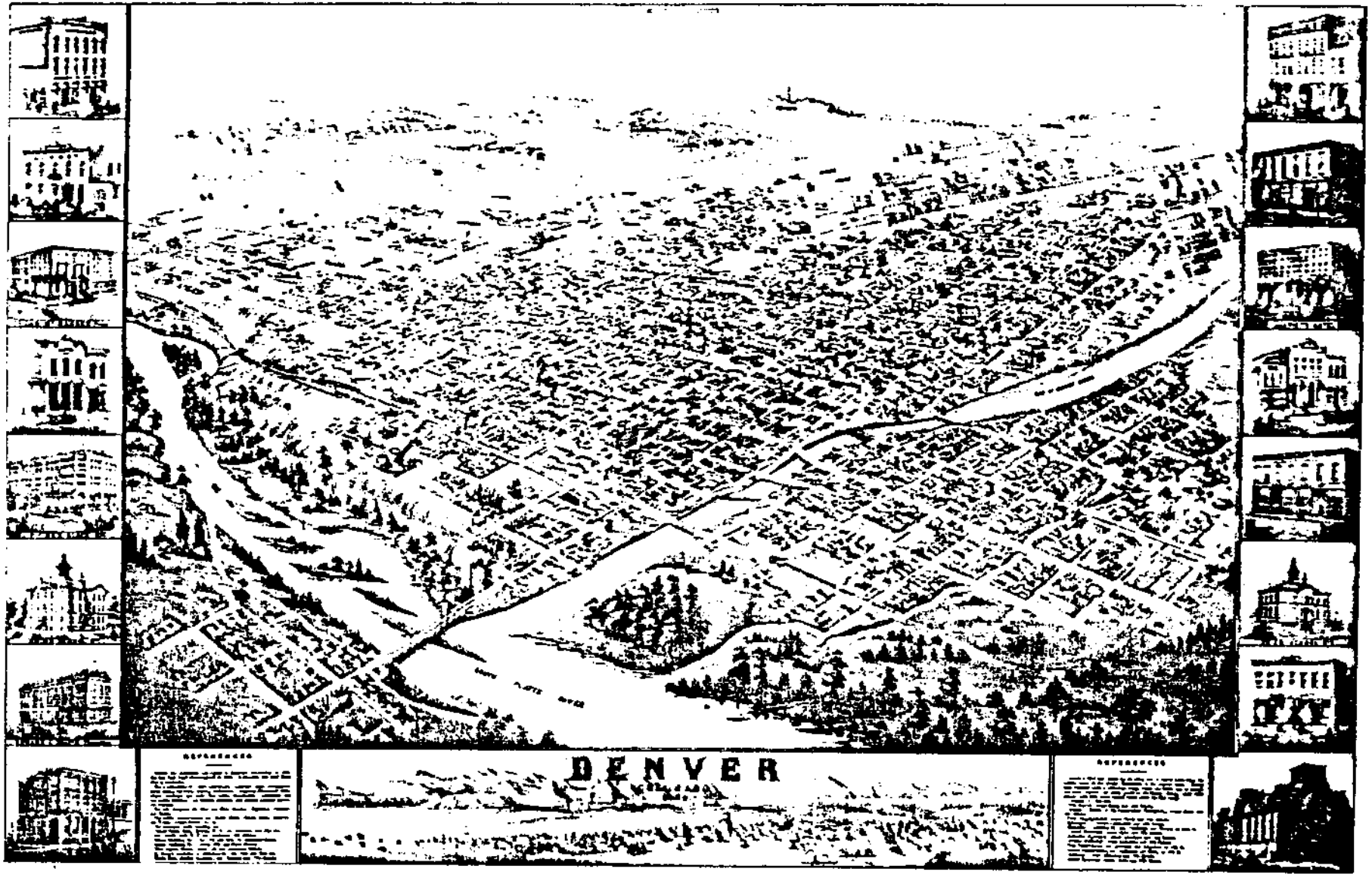

Figure 4. Denver 1874. Prairie Grid, Bird's-eye View. Source: Reps, CAW.

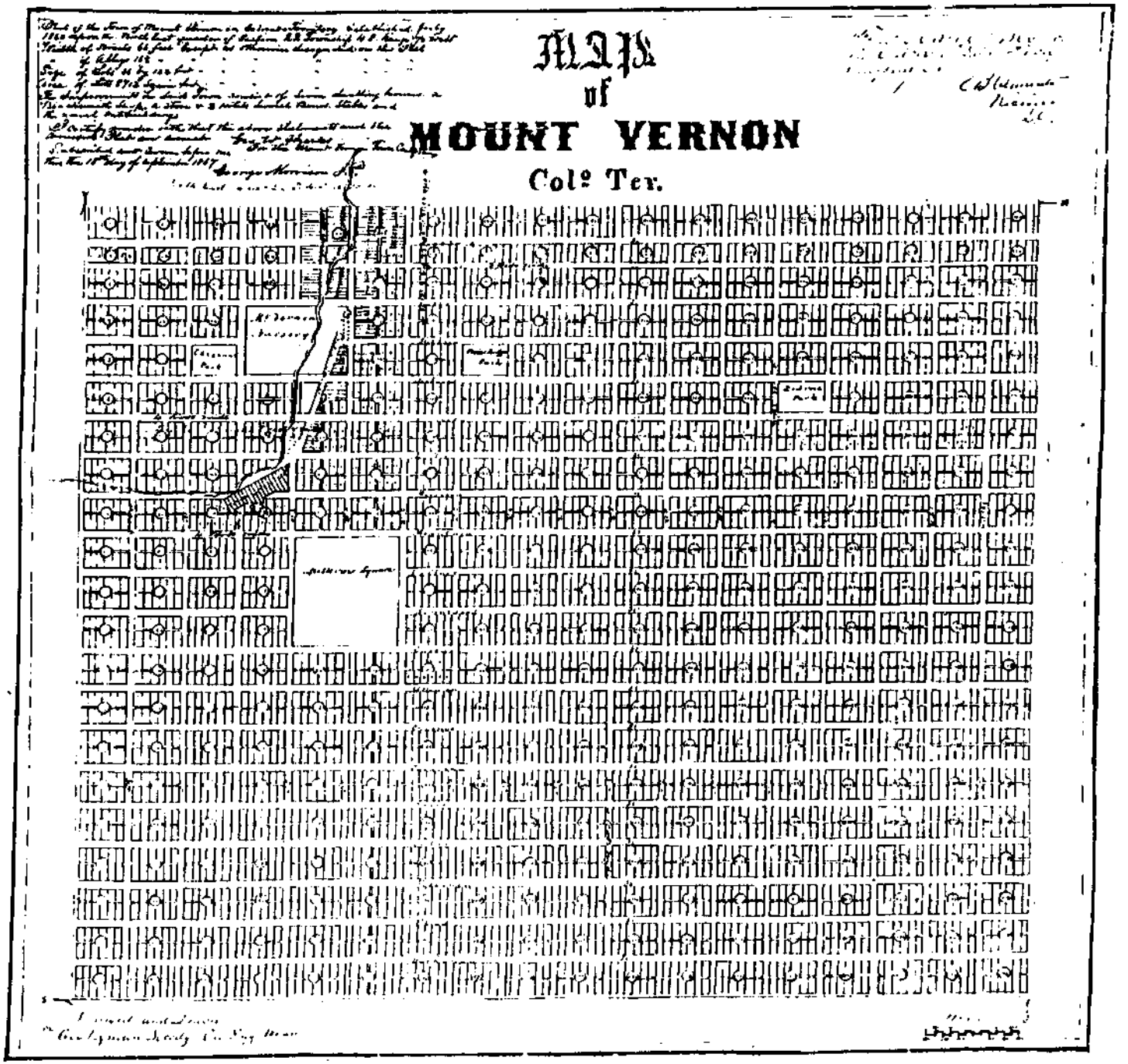

Figure 5. Mt. Vernon, 1866. A Huge Mountain Speculative Grid.
Source: Reps, CAM.

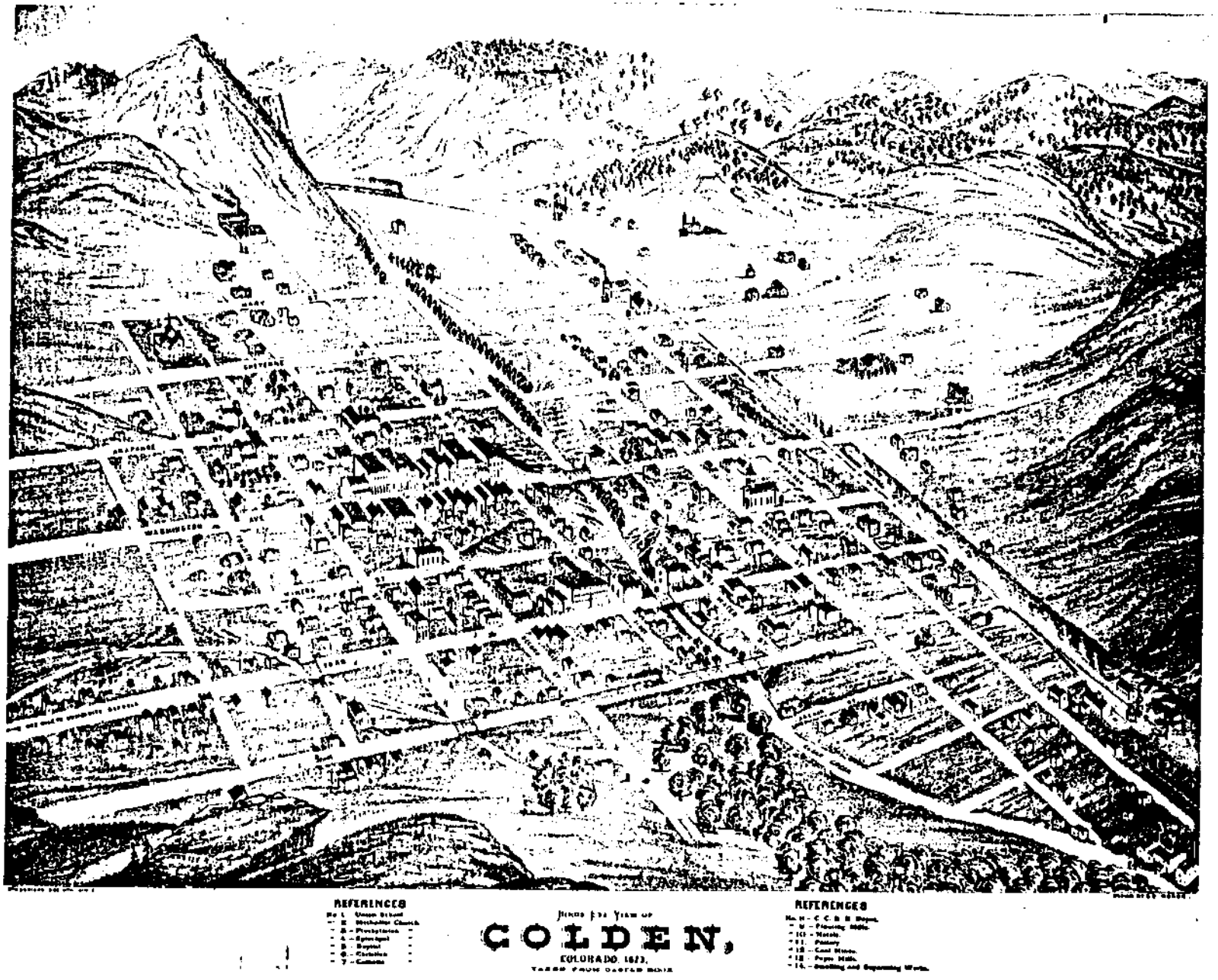

Figure 6. Wide Mountain Valley Grid in the Foothills. Source: Reps, CAW.

Figure 7. Wide Mountain-valley Grid. Source: Reps, CAW.

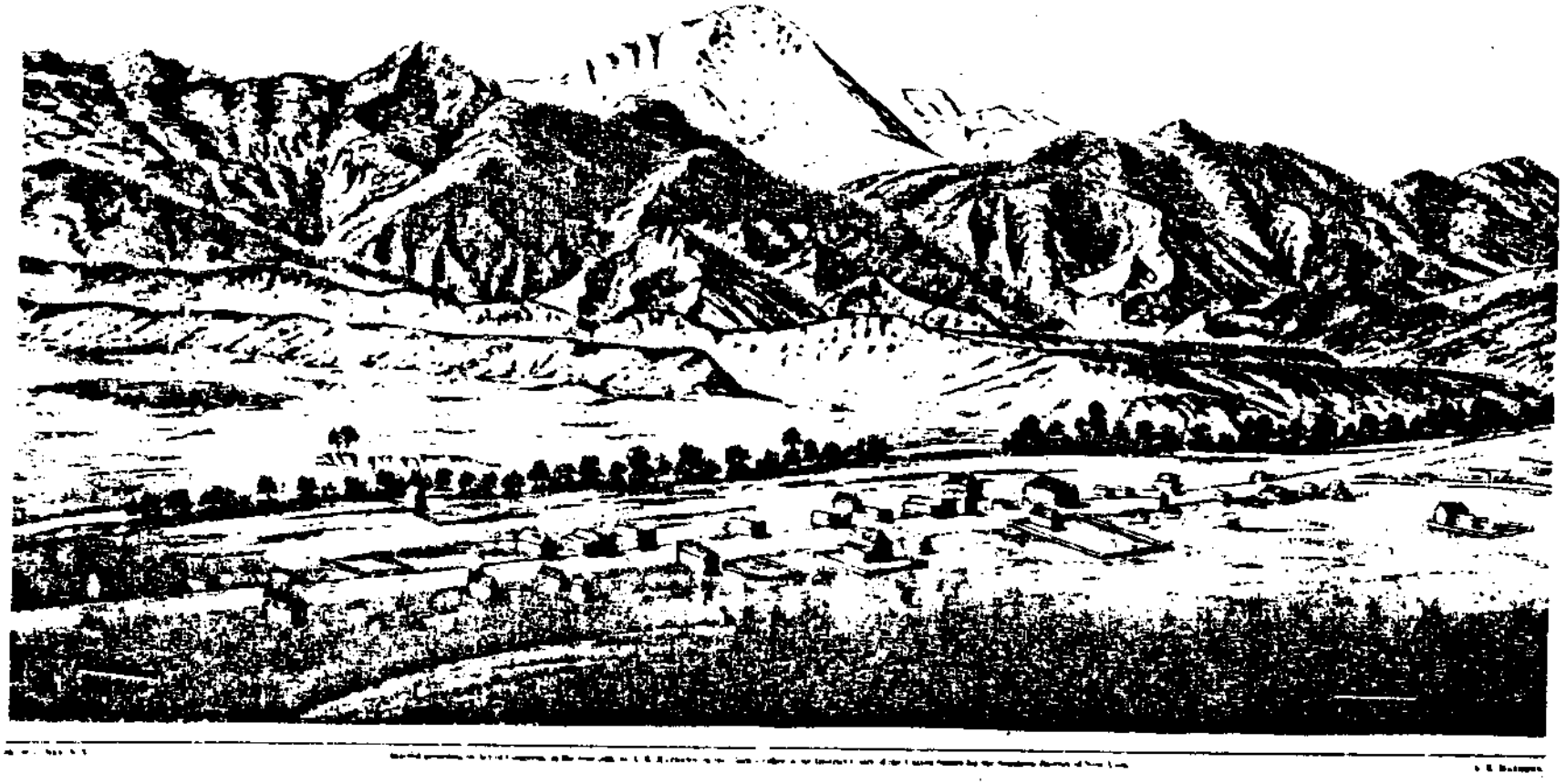

Figure 8. Colorado City, 1866. Stage Town in Linear form. Source: Reps, CAW.

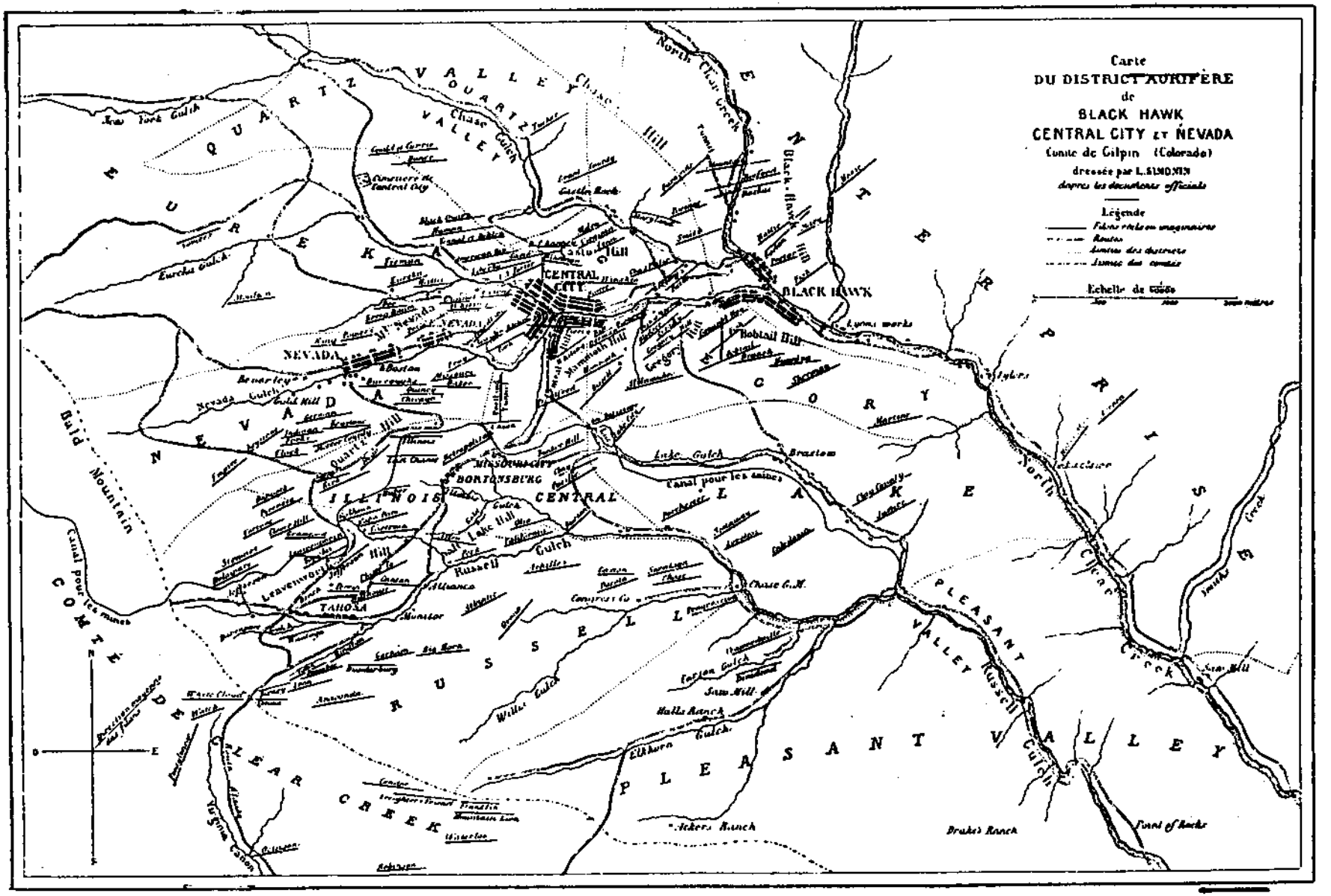

Figure 14.7 Map of Central City, Colorado and Vicinity: 1867

Figure 9. Central City and Vicinity, 1867. Mine Claim Patterns and Gulch Towns. Source: Reps, CAW.

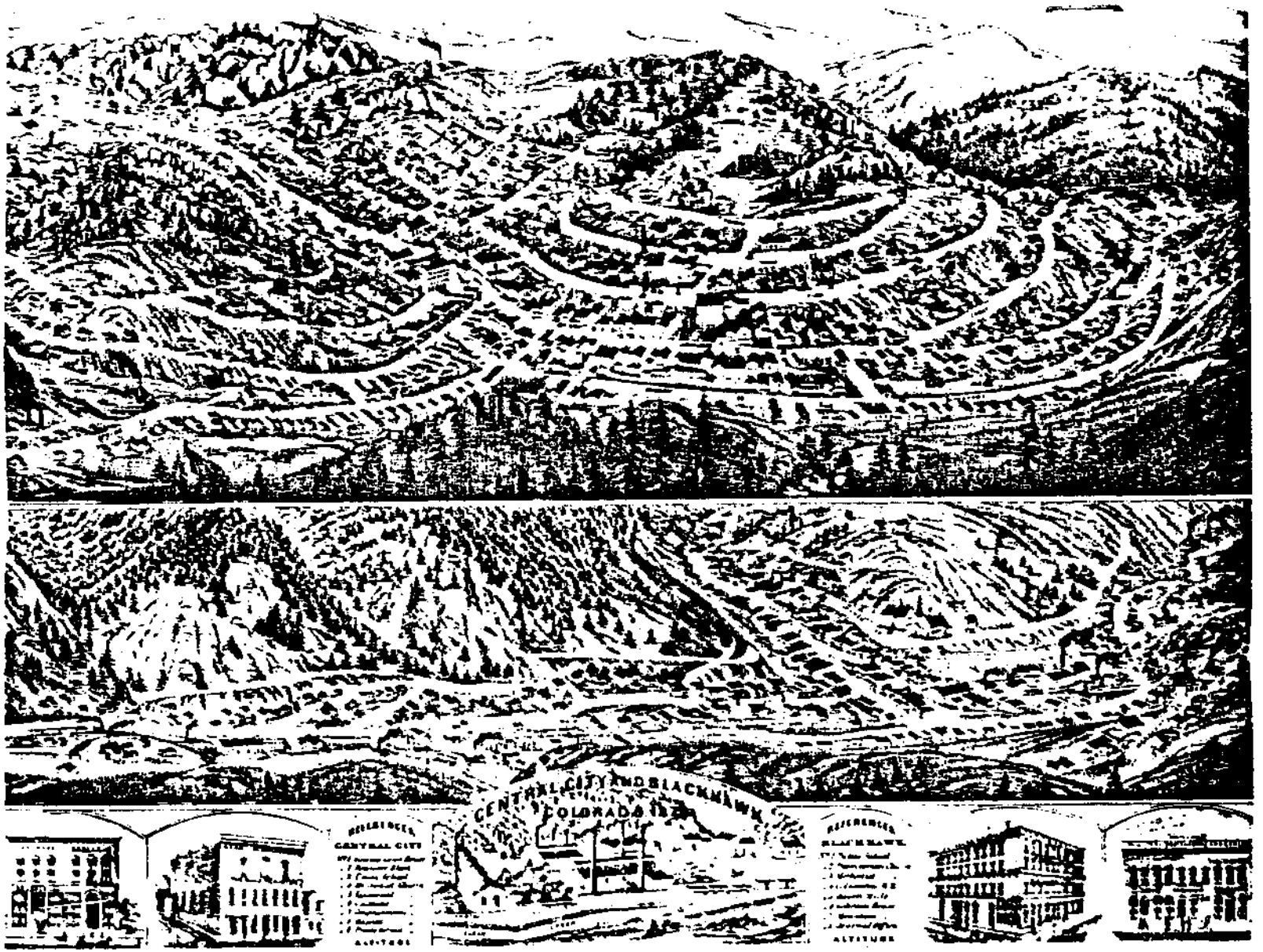

Figure 14.11 Views of Central City and Black Hawk, Colorado 1873

Figure 10. Gulch Town Bird's-eye View. Source: Reps, 1 CAW.

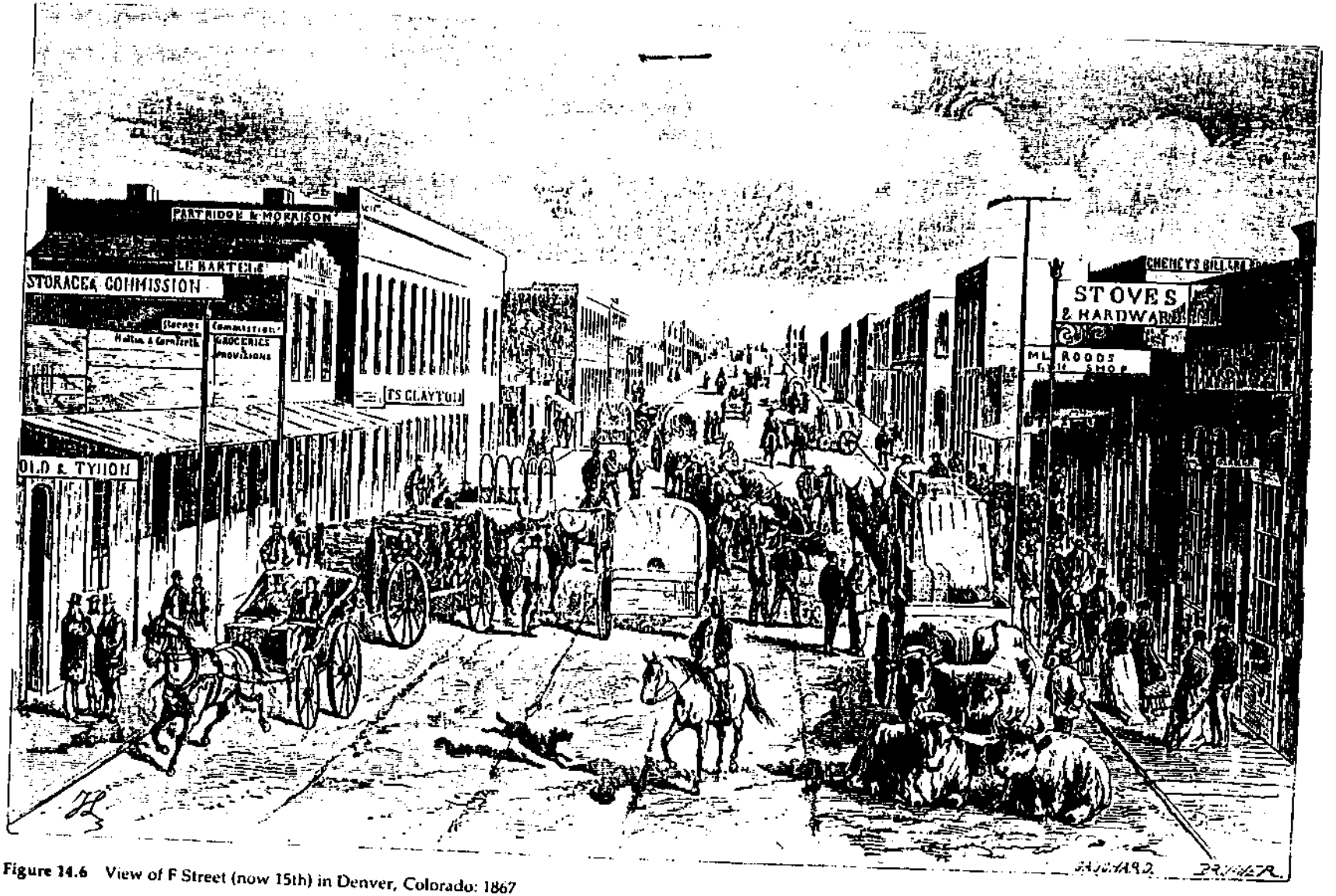

Figure 14.6 View of F Street (now 15th) in Denver, Colorado: 1867

Figure 11. Stage/wagon Town Streetscape. Source: Reps CAW

2. STAGE/WAGON ERA: OVERLAND ROUTES, FORTS & STAGE STATIONS 1840-1870

NARRATIVE

Pioneering a civilization in an area both horizontally and vertically far from the rest of the nation demands a strong emphasis on transport. Without a coastline or navigatable river, Americans first came to Colorado on overland wagon and stage roads. These routes, which were often overlapping on Indian trails, were some of the first permanent traces of urban development from the east. The routes first came in use in the 1830's and 40's servicing transcontinental travelers, fur trappers, buffalo hunters and Indian traders. In the 1850's and 60's, they moved labor, goods and service to and from Colorado mining towns and mining service towns, and the towns of Kansas and Nebraska's western frontiers. With the coming of the railroads, the stage/wagon routes died out as the only or major spines along which settlement took place. They sprang up again, however, as branch feeder lines to the railroads, towns and junctions, and continued in the "feeder" roles until coming of the auto era. This thematic section will discuss primarily the pre-rail stage/wagon development.

On the plains, the routes usually began as horse and pack animal trails with an occasional fort, for protection and as trading stations. Next, townspeople, farmers and ranchers created covered wagon routes as they moved west to areas of activity at the Colorado ends of trails. Almost at the same time, a more mature stage and freight road was initiated along some routes and may include bridges, selected road cuts and fills, stage relay stations and sometimes telegraph lines. In the mountains, the mule train and pack animal lines lasted longer due to unyielding terrain.

Transcontinental routes crossed Colorado in two places. (Fig. 6 and 7). In the north, the southern branch of the Omaha to Salt Lake route touched present Colorado at Julesburg. In the south, the Santa Fe Trail followed the Arkansas River to Bent's Fort and from there south over Raton Pass to Santa Fe. Before the discovery of gold there were also two north-south trails along what is now called the front range, the Cherokee and the Trapper trails. Note the "Historical Map of Early Colorado" (HMEC).

Early gold seekers used routes extending either down the South Platte from Julesburg on the South Platte Emigrant Trail to Denver, or up the Arkansas to Fort Pueblo, Denver, or Canon City, (HMEC). The Smoky Hill Trail was a middle route between these two which followed the Smoky Hill River and Big Sandy Creek across the high plains to Cherry Creek, and from there to Auraria and Denver (Fig. 1). Stage lines then followed (Fig. 2). The "Overland" line cut off the South Platte route at Ft. Morgan and avoided the long bend around to Ft. St. Vrain on the way to Denver, (HMEC). The "Leavenworth and Pikes Peak" (or sometimes called Republican River Route), stage took a middle course to Denver through the Republican River Basin (Fig. 1). The eastern take-off point for the northern route was usually Omaha, the middle and southern routes origins were Nebraska City, St. Joseph, Independence and Leavenworth (Fig. 6).

The stage route from Denver to Salt Lake went through Boulder and La Porte to Big Laramie, apparently following the Cache de la Poudre River (Fig. 3). Access to the mountain gold fields was by a number of stage and freight wagon routes. Lines originating in Denver often went through Mt. Vernon or Golden to Central City, Empire and Georgetown (Fig. 5) or southwest to Hamilton, Fairplay, Oro City (later Leadville), and Breckenridge. Colorado City also serviced lines to the South Park region. Pueblo was a base town for routes up the Arkansas to Canon City, Fairplay and Oro City. Pueblo also serviced southeastern routes through La Veta Pass to Ft. Garland, San Luis and Santa Fe.

The common design character, and cultural experience of these routes were, roughly:

1. The dominance of an awesome sky and earth over a modest humanity.
2. The danger from Indians and accidents.
3. The sense of being at the fringe of civilization (in time as well as space).
4. The linear sense of "the journey" across symbolic deserts and mountains.
5. The compulsive rush toward the image of rapid wealth.
6. The icon of the "magic mountain(s)" at the end of the "trail of trials."
7. The sense of cameraderie that developed among the travelers as they coped with the complexities of the above.
8. Linear routes located due to land and water demands.

Technically, the routes were designed to follow the lines of minimal grade, maximum road bed stability, close and regular access to water, proximity to evening animal grazing areas, and safety from Indian attack. Stage stations were of two types: home and relay. The former had food and usually lodging, and the latter had rest areas, maintenance for the teams and protection in case of attack. In the mountains, of course, the relay stations were closer together, and fear of Indian attack was minimal. Fear of falling, on the other hand, was considerable.

The fort and stage station shared character of places of safety, bodily renewal, and sociability. The fort, however, was more complex. It was more a total outpost of the American empire, including trade, defense and political functions. The stage stop was more narrowly transport service for people, beasts, freight and mail.

The crossing of the Great American Desert by stage or wagon train, with constant fear of Indian attack, is a central image in American folklore. These early plains routes, with their forts and stage stations, are typical and important elements of that pioneer experience and their rebuilding and preservation is important for this reason alone. It is unlikely, however, that there is a great technical uniqueness in the design of prairie roads, forts or stage stops. (Although research needs to be done to prove this). Colorado's varieties were likely to be extensions of types that had already been tested in developing the midwest. With the constant sense of the railroad about to put them out of business, and the great speed with which the transport industry built these routes to service the rush to gold, there was possibly little chance or motive for in-depth design thought and engineering. The site planning around the forts and stage stops may be of more interest than the architecture of the structures.

Originality, however, may be found in the mountain stage line and station designs, as these were forced to solve engineering problems that flatland transport did not face. These lines and stations are also of importance with respect to their establishment of early routes and places to be followed by towns, railroads and highways. They established key corridors and sites of future urbanism. Unfortunately, while there is a good written record, the actual survival of these stations and roads is rare. Study may turn up hidden examples, however, and the entire subject needs descriptive analytical and evaluative research.

CHRONOLOGY: OVERLAND ROUTES

A. Trails
   1. Cherokee 1849-1870
   2. Trapper's Trail 1820-1870
   3. South Platte Immigrant Trail (c. 1858-67)

B. Stage and Wagon Train Routes
   1. Transcontinental
      a. Santa Fe Trail (Mountain Branch) 1825-1875
      b. Overland Trail (1823-1865)
      c. Overland Stage (Julesburg to Ft. Collins and Salt Lake) 1860-1867
   2. To Denver from the east directly
      a. Leavenworth and Pike's Peak Stage (1859-64)
      b. Smoky Hill Trail (1855-1870)
   3. Denver to Gold Areas
      a. Wells Fargo Mtn. Route--Denver to Central City and Empire, 1867-1872.
      b. Mt. Vernon Route (Idaho and Georgetown Express) 1860-74
      c. To Fairplay (Barlow and Saunderoon) 1860-1875
   4. Pueblo-Oro City 1860-1878
   5. Pueblo-Alamosa 1867-1880
   6. Alamosa-Santa Fe (The Chili Line)

LOCATION

Note narrative and figures. Generally, of course, the stage lines followed paths of least resistance between origins and destinations: ridges, creek valleys, gentle slopes and so forth. On the plains, they also followed water sources, animal grazing areas and defensible locations. In the mountains, topography was the key locational determinant.

CULTURAL RESOURCE TYPES

A. Types of Stage Stations
   1. Home stops
   2. Relay stations
   3. Destination stations (i.e. Denver offices)
      a. Warehousing
      b. Post Office
      c. Travelers waiting rooms and restaurants
      d. Ticket operations
      e. Animal and vehicle care

B. Stage Stations (Home)
   1. Accommodations for travelers and drivers
   2. Stables
   3. Hay storage
   4. Post Offices
   5. Freight storage
   6. Permanent staff quarters and facilities
   7. Telegraph facilities
   8. Water sources
   9. Defense facilities
   10. Landscaping and siting for climate and protection
   11. Waste sites

C. Forts (Dealt with in regional studies and architectural history)

D. Transport Line Types
   1. Horse and pack animal trails
   2. Immigrant wagon train routes (brief)
   3. Mature stage lines

E. Present Towns of Likely Stage Stop Origins
   1. Cheyenne Wells
   2. Kiowa
   3. Parker

4. Laporte E. 1859
5. Larkspur(?)
6. Ft. Lupton (?)
7. Virginia Dale E. 1862
8. Byers (Bijou) 1868
9. Rollinsville 1861

F. Towns with Possible or Known Locations Related to Early Forts

1. Ft. Collins Ft. E. 1864 TE 1872
2. Ft. Lyons (Las Animas) Ft. E 1853 TE 1869
3. Ft. Morgan Ft. E? 1865 TE 1884 (?)
4. Ft. Garland Ft. E. 1858
5. Ft. Lupton (?) TE 1882
6. Pueblo 1842
7. Ft. St. Vrain 1838

QUANTITY AND QUALITY OF EXISTING DATA

Historical Documentation

Overland routes are most easily researched on old maps of the era. It is also likely that military archives might be important, as well as the records of the stage companies. Forts in the west have been researched summarily, both by historians and the commercial press. There is little careful archaeological work done. The regional themes of the CHS study of which this is a part are also an excellent source of information on forts. Stage stops are much less exotic, and hence, even less researched. Luckily, W. Turrentine Jackson's study, Wells Fargo in the Colorado Territory, was completed in time for this discussion. It is probably the best information presently available, at least from the Wells Fargo point of view. More work needs to be done on stage stations, thought. Local histories should be consulted. It is possible that railroad histories might have discussions of the stage routes on the west slope that fed their rail stations. Also note regional themes for possible stage route information.

Number and Condition

There have been probably one to two dozen forts in Colorado, depending upon definition of fort vs. stockade. Most are gone. A few have rebuilt. Again, check regional themes for details. There were three to six major overland trails into Colorado over the high plains, and numerous shorter lines into and through the mountains. Toll roads were common in the mountains. High plains and front range wagon roads are still visible, and hikers follow them for recreation. However, they are fast being plowed up, grown over and eroded. Most mountain routes have been re-used as rail routes and auto routes, and have been lost. Wagon roads to mining areas that were unserviceable by rail might have retained some of their integrity. On rough estimate, Colorado probably had fifty to one hundred home stage stations and probably four times that number of relay stations, from 1840 to 1890. The vast majority are gone, but with perhaps foundations remaining. Denver's "four mile house" is perhaps the state's major example of preservation.

Surveys

Only very selective surveys have been done on either forts or stage stops. Surveys associated with the reconstructions of Four Mile House and

Bent's Fort should be consulted. Also note the U.S.G.S. survey of stage trails in the Denver region. It is a useful model for future surveys.

Data Gaps

Forts have generally been located, but careful archaeology is rare. Stage/wagon routes and their stations need both locational and archaeological work. Jackson's study helps with the northeast part of the stage and front range, but the other three sections have not nearly the depth of breadth of investigation.

Future Needs

In order to locate old stage/wagon routes and stations, old maps need to be studied, many of which are listed below. Also, the stage company records and card distances will be useful. Then, on-the-ground walking of the trails will probably be the best way to locate fort and stage stop site design. Finally, careful archaeological work needs to be done, especially regarding the priority of these studies is average to moderately high. Key examples of the system should be preserved, but the state has perhaps greater needs for research discussed in later themes.

Important Resources

All Colorado forts and stage stops are important from the point of view of their place in the American historical imagination. A few should be reconstructed in careful archaeologically-researched detail in order to preserve the concept; the site planning as well as the architecture is especially important here. Particularly lacking is a good mountain stage stop example. It is also important to realize the resource of the fort/stage stop/ stage trail system throughout the state as a whole. These systems were the windows through which early travellers and settlers viewed and conceived the region, which forts or stages stops are most important is difficult to judge, given present information.

RESEARCH QUESTIONS

1. Are these stage/wagon places and lines of primary historical interest?
2. Is the stage/wagon prairie crossing experience sufficiently important in the American cultural imagination that work should be done here even if the architectural and planning quality may be marginal?
3. How did the early stage routes affect later farming locations, farm town locations, rail corridor locations, and rail town locations, and present urban highways (i.e. Parker Road)?
4. Is there a market for the commercial recreation of a mountain or prairie stage trip experience within the tourist industry?
5. Where and in what condition are the forts, stage stops and stage lines?

EVALUATION STANDARDS

1. For stage stops, forts and stage routes. Basically, if anything can be found that is in reasonable condition with some integrity, it should be analyzed carefully for preservation and re-use.
2. The physical condition of the supporting site planning and stage road at the stage stops is also important. These stops were not just single buildings, but farming, storage, social and defense complexes.
3. The state of knowledge is too low to establish exactly what represents typicality in stage stops. They vary from plains to mountains, and from those expecting to be replaced by the railroads quickly to those expecting to be functioning for the long term.

PERTINENT REFERENCES

For additional bibliography relating to forts, check the regional studies and the architectural studies of this project.

A number of the important maps dealing with stage and wagon roads have been attached as illustrations to this theme. In addition, the following items marked with an asterisk are likely to be of interest. Again, W. Turrentine Jackson's Wells Fargo in Colorado Territory, Colorado Historical Society Monograph Series, 1982, is of central importance. Also note the following.

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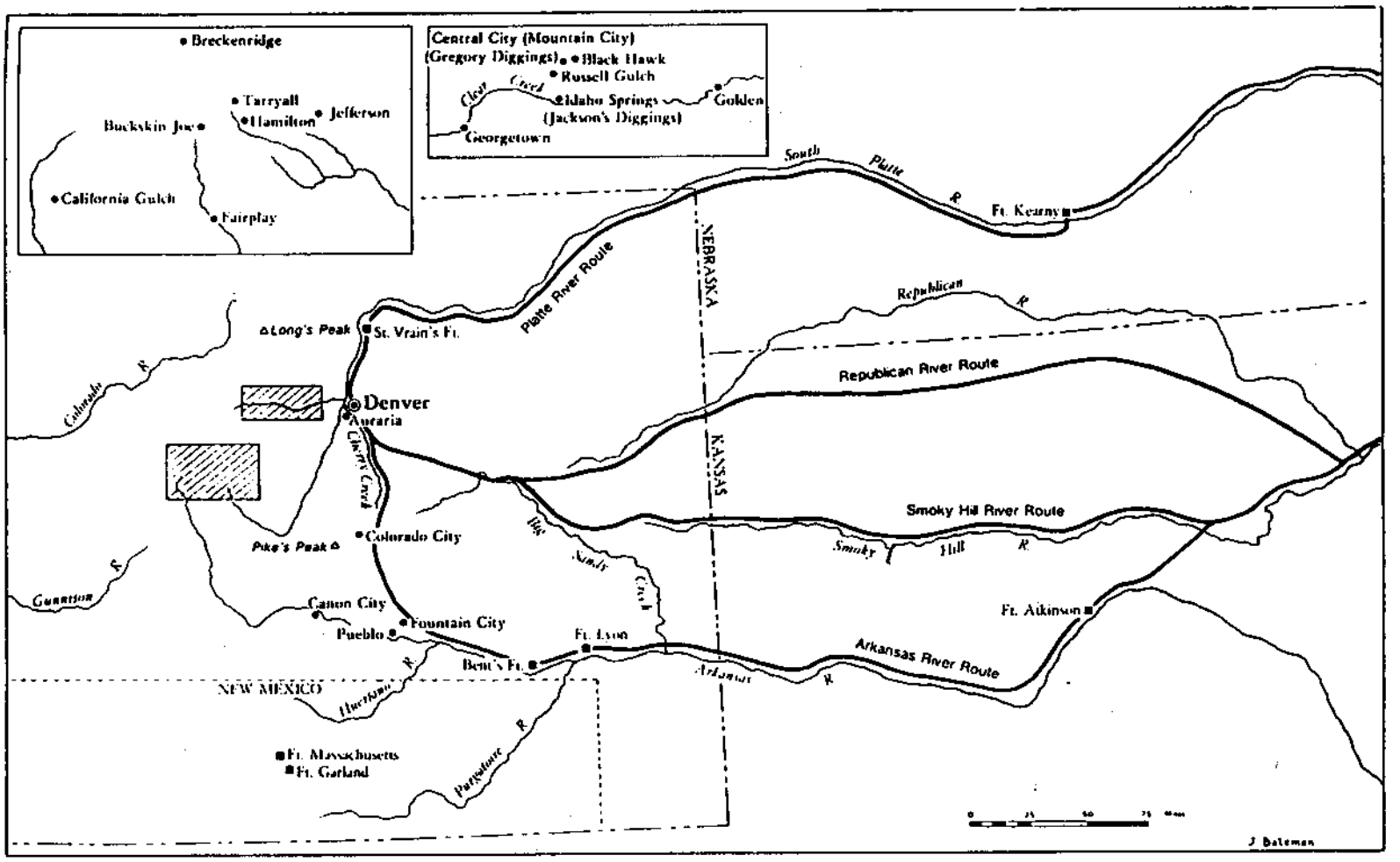
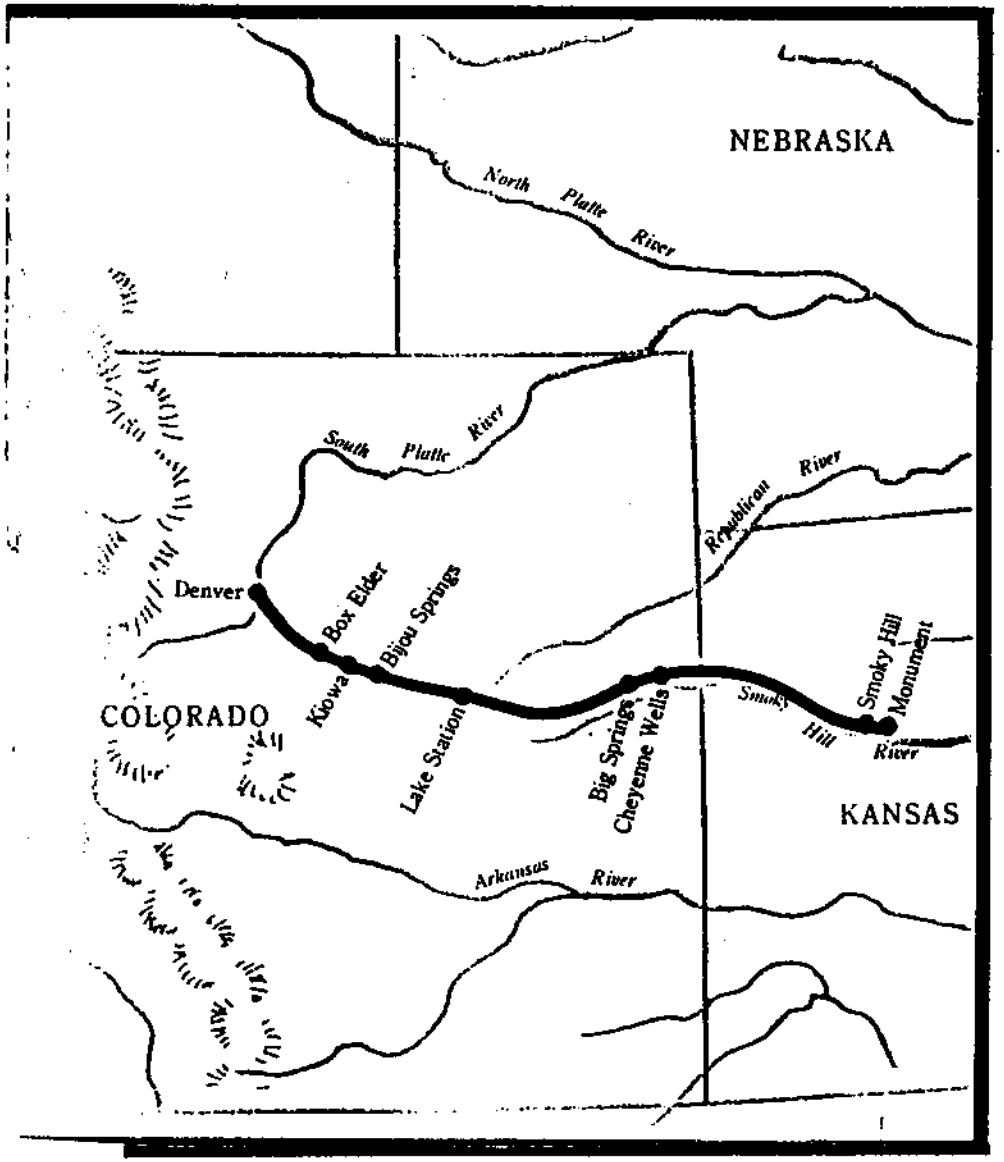


Figure 1. Pike's Peak Country, 1858-1861. Source: Athearn, The Coloradans.

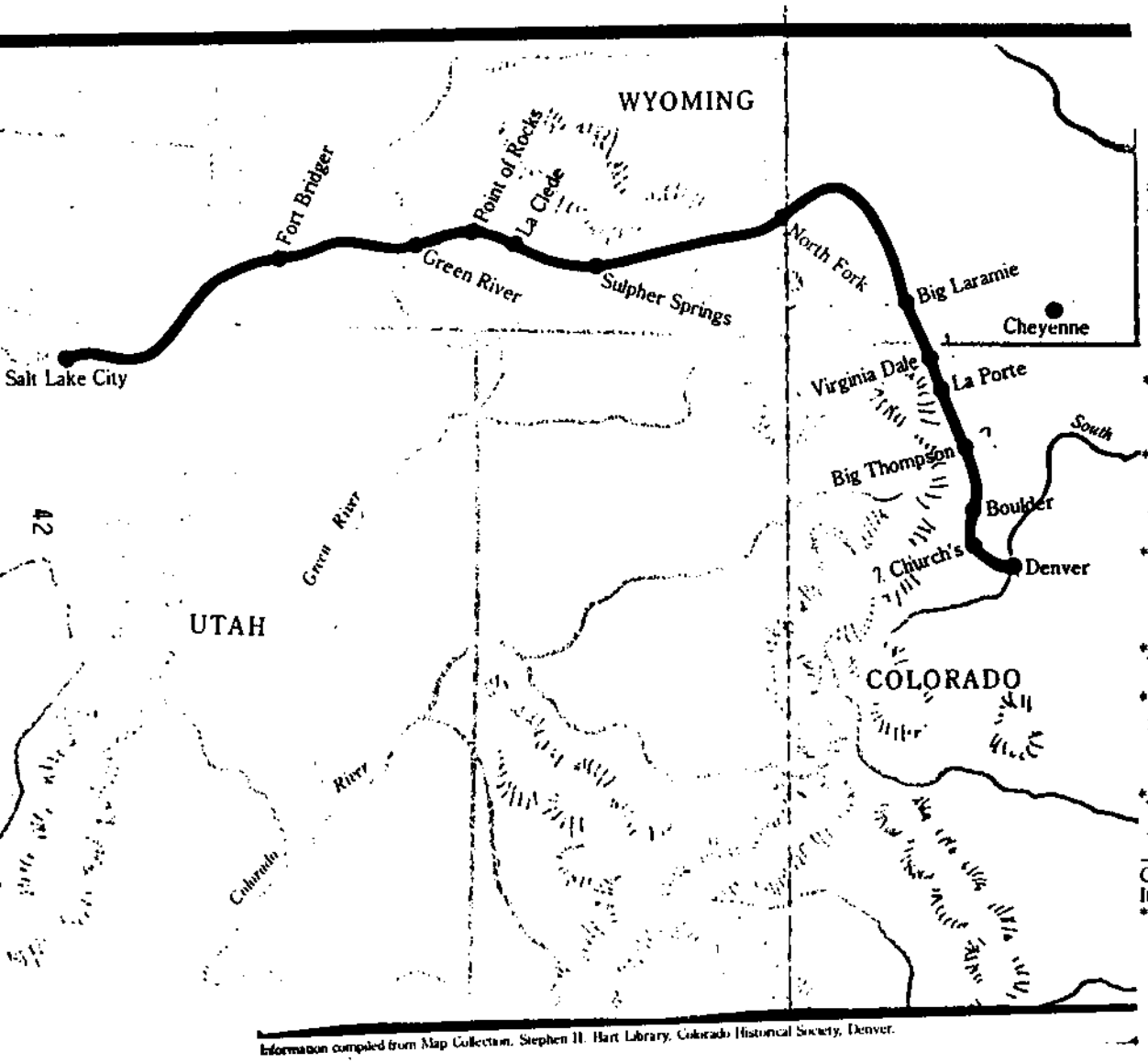


Smoky Hill Route Card of Distances

	MILES			MILES	
Chapman's Creek	12		Smoky Hill	12	243
Aberline City	13	25	Russell Springs	10	253
*SOLOMON	10	35	Henshaw Springs	14	267
Owens	10	45	*POND CREEK	11	278
Spring Creek	13	58	Goose Creek	11	289
Rocky Ranch	14	72	Big Timber	10	299
Ellsworth	10	82	*CHEYENNE WELLS	15	314
Buffalo Creek	10	92	Deering's Wells	13	327
*WILSON'S CREEK	9	101	BIG SPRINGS	13	340
Bunker Hill	8	109	David's Wells	10	350
Fossil Creek	8	117	Hugo Springs	10	360
Walker's Creek	10	127	Willow Springs	13	373
*BIG CREEK	12	139	*LAKE STATION	11	384
Look Out	9	148	Cedar Point	9	393
Stormy Hollow	12	160	Fairmount	8	401
White Rock	11	171	Benham Springs	9	410
*DOWNER	10	181	*BIJOU SPRINGS	11	421
Castle Rock	11	192	Kiowa	10	431
Grinnell Springs	8	200	Box Elder	12	443
Chalk Bluffs	13	213	Toll Gate	12	455
Carlyle Hall	8	221	DENVER	10	463
*MONUMENT	10	231			

*Home or eating stations

Figure 2. Wells Fargo Smoky Hill Route.
Source: Jackson, Wells Fargo in Colorado Territory



Overland Route Card of Distances

	MILES			MILES	
Church's	11	599	Dug Springs	12	882
Boulder	11	610	**La Clede*	16	910
Burlington	11	621	Big Pond	12	922
Little Thompson	10	631	Black Buttes	14	936
Big Thompson	10	641	*Point of Rocks*	14	950
Spring Cañon	10	651	Salt Wells	13	963
**La Porte*	8	659	Rock Springs	15	978
Overland Park	10	669	*GREEN RIVER	17	995
Stone Wall	8	677	Lone Tree	14	1009
**Virginia Dale*	12	689	Antelope	9	1018
Willow Springs	14	703	South Bend	9	1027
Big Laramie	15	718	Church Buttes	12	1039
Little Laramie	17	735	Millersville	8	1047
**Cooper's Creek*	15	750	**Fort Bridger*	13	1060
Rock Creek	11	761	Muddy	12	1072
Wagon Hound	10	771	Quaking Asp	10	1082
Medicine Bow	7	778	*Bear River*	10	1092
**Elk Mountain*	8	786	Yellow Creek	10	1102
Pass Creek	12	798	Echo Cañon	10	1112
*NORTH FORK	16	814	Hanging Rock	10	1122
Sage Creek	15	829	**Weber*	10	1132
Pine Grove	10	839	Daniels	12	1144
Bridger's Pass	10	849	Kimball's	12	1156
**Sulpher Springs*	9	858	Hardy's	14	1160
Wash-a-kee	11	869	GREAT SALT LAKE		
Duck Lake	13	882	CITY	14	1184

Capital letters: Terminus of Division
Italics: Home stations
*: Telegraph

Figure 3. Wells Fargo Overland Route. Source: Jackson, Wells Fargo in Colorado Territory (WFCT)

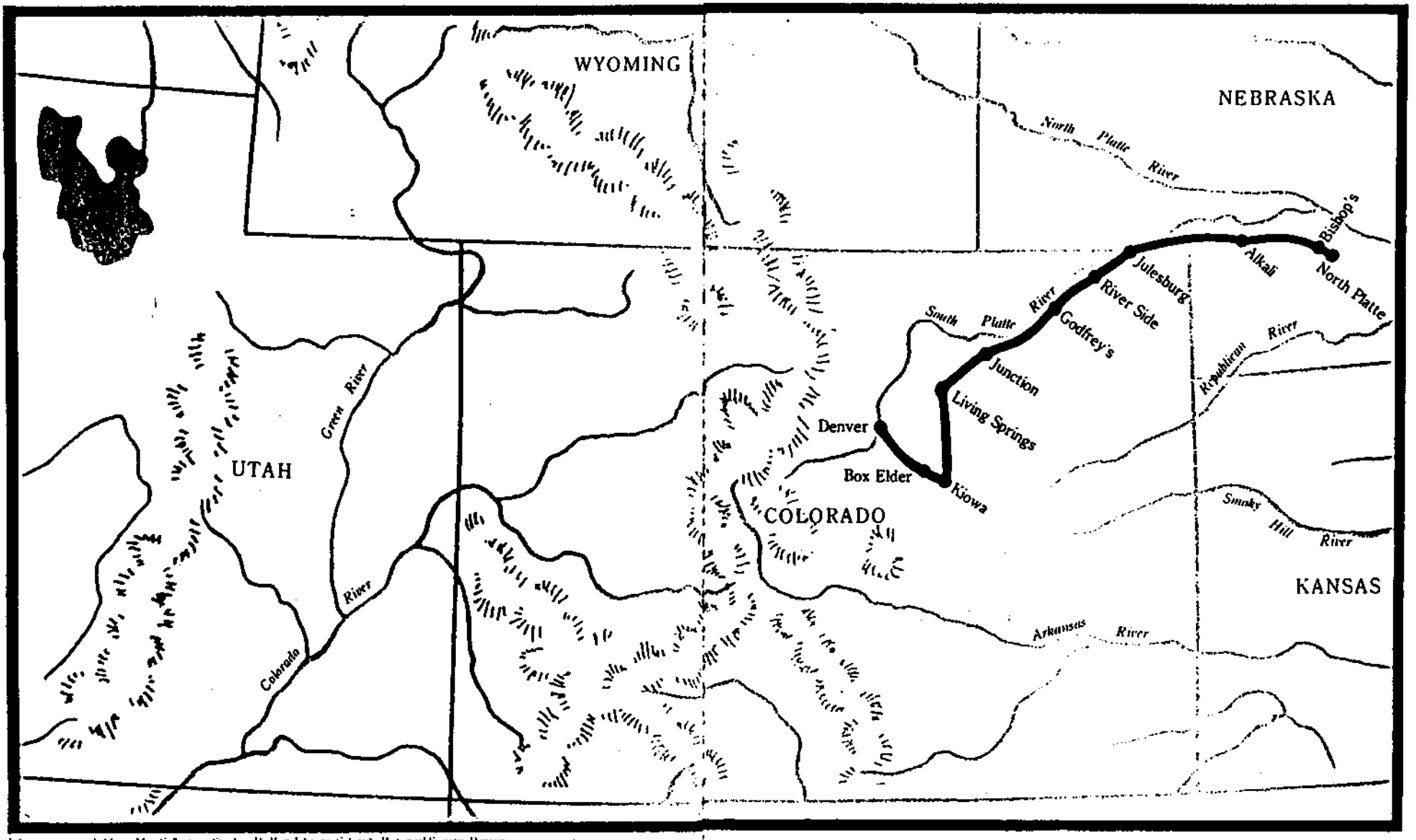


Figure 4. Wells Fargo Platte River Route. Source: Jackson, WFOT

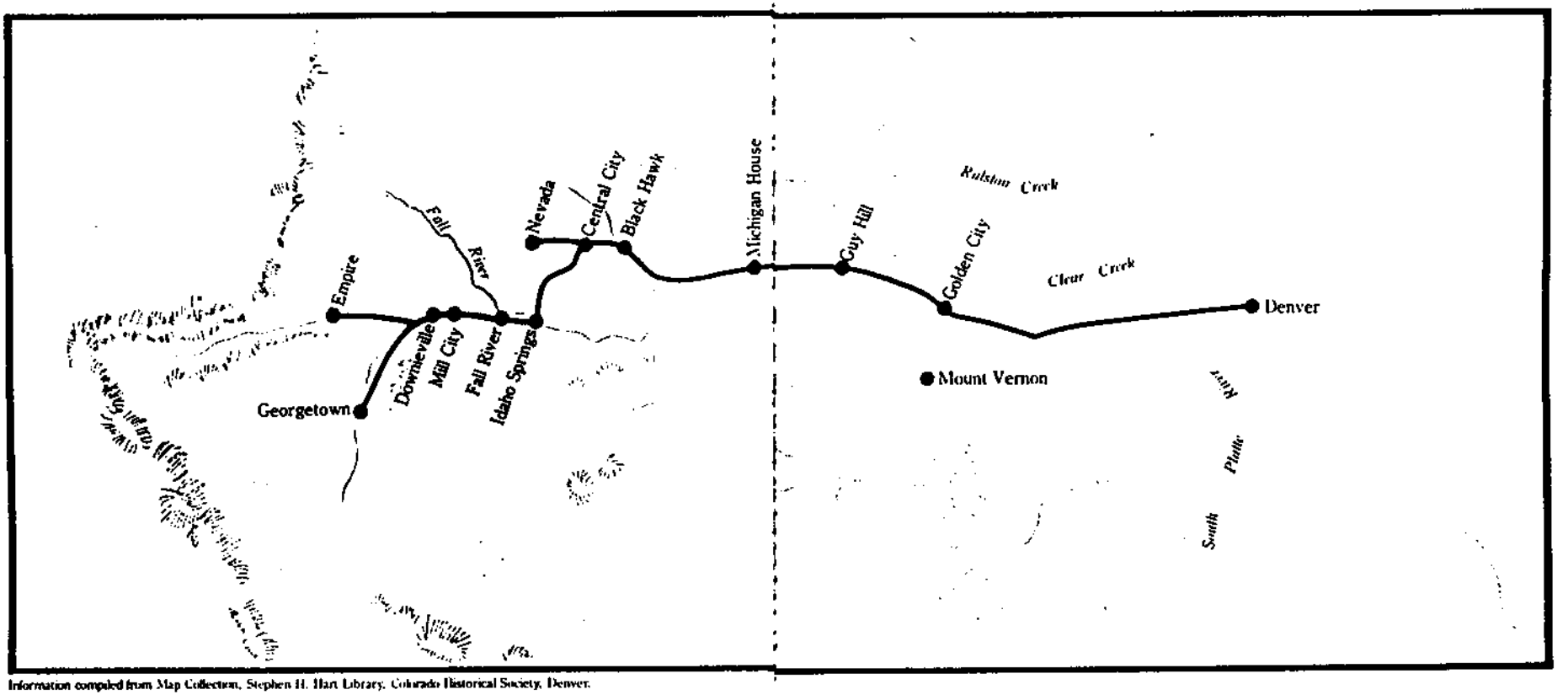
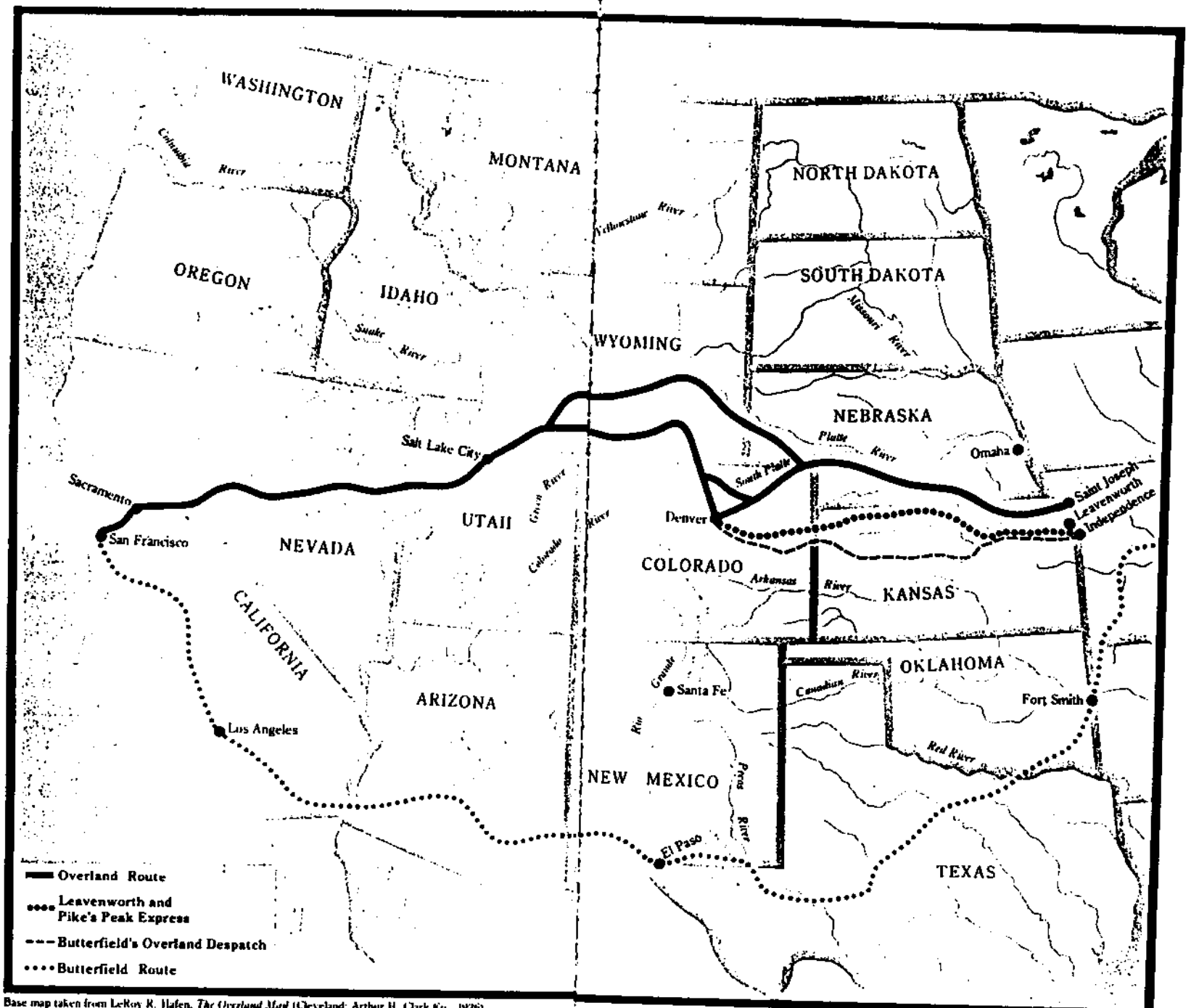


Figure 5. Wells Fargo Mountain Route. Source: Jackson, WFCT.



Base map taken from LeRoy R. Hafen, *The Overland Mail* (Cleveland: Arthur H. Clark Co., 1926).

Figure 5 National Overland Routes.

Source: WFCT.

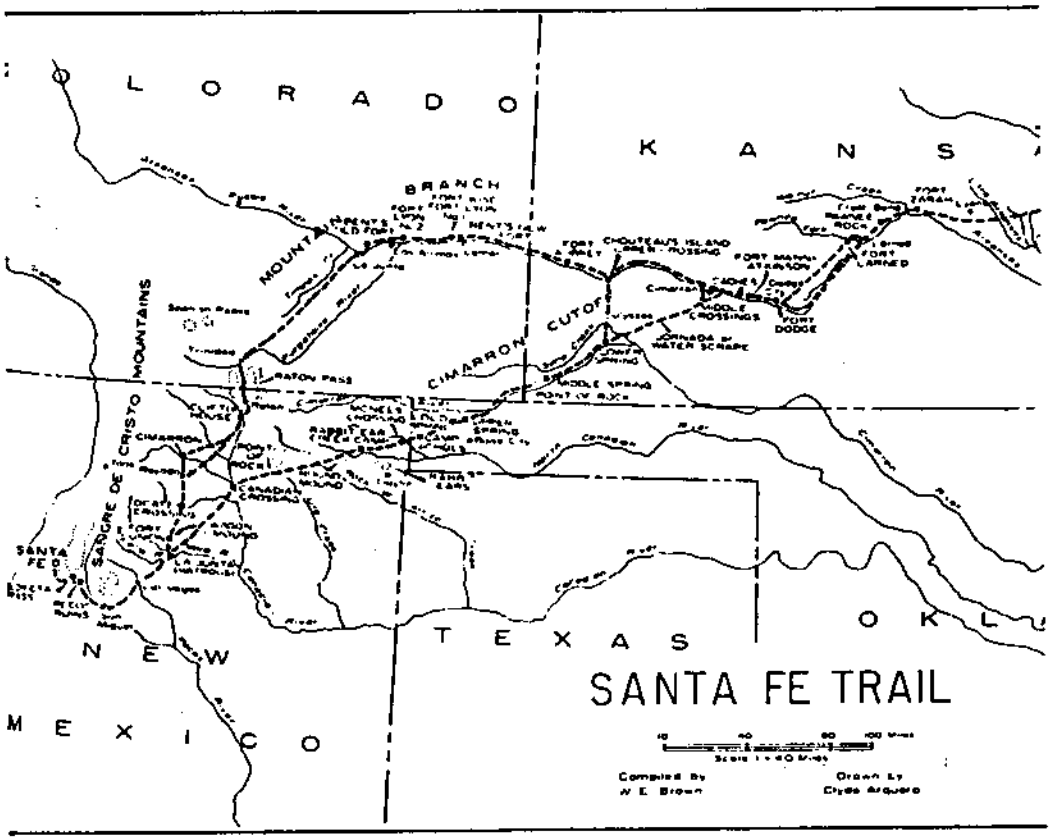


Figure 7. The Santa Fe Ftrail. Source:Ubbelohde et al, A Colorado History.

3. EARLY HISPANIC PLANNING IN THE SAN LUIS VALLEY

NARRATIVE

Colorado has a remarkable historic planning resource in the San Luis Valley. It represents one of three basic ways in which land has been organized in the state. The first is the dominant rural survey using the rectilinear township, range and section system. This pattern was decreed by the Northwest Ordinance of 1786. It is applicable to federal and fee land. Second, there are Native American Reservations. These systems are outside the scope of this Historical Project. Third, and of interest here, is the pre-Anglo Spanish and Mexican planning system found in the San Luis Valley.

Early Spanish planning is unique in Colorado because of the large regional units in which it was organized, the rural survey system within those regions, the planning of the towns themselves, and the architectural, transport, and open space arrangements within the town plans. The regional units were called Las Mercedes or "Land Grants," and they were made to individuals or organizations which agreed to develop the new territory. (Figure 1. Also note Figure 2 for a map of the San Luis Valley.) Within the regional unit, the rural survey method was called the "vara" system. In it, land was laid out in narrow strips from the river to the ridge, so that each owner would have equal access to bottom land, higher grazing land, and timber. The towns themselves were organized as enclosed plazas (Figures 3, 4 and 5). Also there were corrilleras, which are linear arrangements of homes facing each

other along a road. These were separate from the plazas. Usually the homes in the corrilleras were contiguous. (Note the upper and lower portions on Figure 5).

The town economy was based on subsistence stock raising and crop growing. There were selected commonly-owned open spaces for hunting and grazing. Water was brought in by ditches and, later, wells. The Spanish ditches and commons are some of the state's oldest. The transportation system relied upon pedestrians and oxcarts. The buildings were adobe, including the early churches. The communities were small, intimate, humanly scaled, economically modest, highly religious, and sociologically tightly knit. The built environmental system in these towns derives from the Mediterranean tradition in planning. This is in contrast to the northern European traditions influencing most of the rest of Anglo Colorado. The plaza orientation derived loosely from Spain's "Law of the Indies" system for colonial town planning.

Most of the original land grants were made in the 1830's and 1840's. They were justified as a means to establish Mexican legitimacy in the area, to provide resources for land-hungry peasants, and to create a barrier between the Indians and more developed communities like Taos to the south. Oddly, it was not until the Americans provided protection from the Indians (after the Mexican American War ended in 1848) that the Spanish really began to settle the area.

San Luis is the most famous town in the area, being the state's oldest continuously settled community. It was founded

in 1851-52. Shown to the lower right in Figure 2, a series of hamlets and towns followed San Luis soon after. Other communities also sprang up on the west side of the Rio Grande. Conejos is an example.

Slowly the Spanish land grant system (and the varas rural survey system) was reorganized by the U.S. government into the traditional township grid pattern. Costilla County, however, retained the traditional land grant and vara system and stands alone today as Colorado's only county-wide break in the national grid. The San Luis cluster in this county is a particularly interesting planning, design, social, religious, and economic enclave in the state. It adds remarkable diversity to the state's otherwise strong tendency toward planning homogeneity.

CHRONOLOGY

1833	Spanish hunting parties visit the area.
1833	Conejos Land Grant.
1840's	Attempts to move north from Taos beaten back by Indians.
1841	Selected sheep herding in the Valley.
1842	More grant applications.
1848	George Gold's settlement near present Costilla fails.
1848	Mexican War ended.
1850-1861	San Luis Valley administered as part of New Mexico.
1851-1852	San Luis began. Other related hamlets, San Francisco, San Pablo, San Pedro and San Acacio follow.
1852	Oldest water right in state on Culebra river.
1852	Ft. Massachusetts built.
1854	Guadalupe settlement.

1854 Conejos established.

1854 People in Conejos began process of adapting to federal grid and the land organization of the homestead system.

1858 Ft. Garland completed.

1860 Hispanic in-migration slows.

1861 Colorado Territory formed and Conejos and Costilla counties are established.

LOCATION

Note the illustrations for location and physical form issues.

CULTURAL RESOURCE TYPES

Costilla county itself, as the state's only county retaining Hispanic land grant planning.

Rural road layouts. These were sensitive to topography and designed for oxcarts and pedestrians.

Subsistence farming techniques.

Varas system of rural private land surveying.

Some of state's earliest irrigation ditches.

Village common designs. (Some reputed to be older than the Boston Commons.)

Plaza and placita towns, i.e., San Luis.

Town charters of the early towns as indications of early environmental controls.

Corilleras style towns and hamlets.

Contiguous adobe housing, using outer housing walls and roof for defense.

Adobe churches.

Hispanic bridges.

Flour mills and craft-scale industry.

Wells and outdoor ovens.

QUALITY AND QUANTITY OF EXISTING DOCUMENTATION

Historic Documentation

The planning and design history of these towns and region has not been systematically studied, analyzed or evaluated. John Reps in Cities of the American West has excellent chapters on Hispanic planning for the south, from Texas to California. His study is important for comparative purposes and for establishing general principles. Reps does, however, emphasize major centers, rather than the town planning in outlying areas such as the San Luis Valley. The best general interpretive documents on these communities are listed in this project's Southern Frontier theme titled, Mexican Land Grants and Hispanic Settlements. Also note the Hispanic chapters in standard Colorado state histories. My introduction to planning here is based upon Olibama Lopez Tushar's study, The People of "El Valle" (1975). This theme was also aided by very helpful telephone interviews with Josie Lobatos and Alfred Chavez, residents of the Valley.

Typical primary documents and sources used in planning studies are listed below. Due to the archeologically sensitive nature of many of the material resource types in these communities, all future research and reconstruction should be performed by someone with expertise in this field. Also, the

people of this culture are likely to be private. Study methods should be unobtrusive, and agreed upon by the subjects. An additional resource is the city museum in San Luis, staffed by Ms. Josie Lobatos.

Historical Documents

Written documents.

General state and local histories.

Municipal records.

Real estate records.

Land company records.

Private papers of planners, architects, landscape architects, developers and builders.

Newspapers, magazines and journals.

County, town and city plans.

Records of major industries, banks and chambers of commerce.

Railroad, streetcar, toll road, stagecoach and utility company records.

Graphic records.

Map collections.

Bird's eye view collections.

Real estate atlases.

Insurance maps.

Assessor's maps.

Aerial photos.

Satellite photos.

Post card and architectural photo collections.

County, town and city plan maps.

Railroad, streetcar, toll road, stage coach and utility company maps.

State highway department maps.

Commercial highway maps.

USGS maps.

County, state and national atlases.

Federal land surveys.

Oral histories.

Number and Condition

There are probably 5-15 communities (or remnants of communities) in the Valley with significant planning material resources. Other cultural resource types listed in the above section of this theme may number twice or three times as many. Due to insufficient research, this number of resources is unknown.

The condition of these resources is likely to be highly variable. Time and an agressive Anglo culture will have taken their toll. Plaza's likely will be compromised, adobe will have been washed away, old curved roads may have been straightened, the varas system will be adapted to modern agricultural machinery, and commons may be reused for various new purposes. On the other hand, many towns may be in remarkably good shape due to their isolation and maintenance of old ways. It is important to find out.

No systematic planning and urban design surveys have been done. Research at other levels has been discussed.

Data Gaps

These areas did not go through the "booster" era as did

most Colorado towns in the late 19th and early 20th centuries. Hence the boosters' bird's-eye views are missing. I also do not know the quality of the historic land records for that period. Some photos and etchings are likely to exist. Generally, the data is likely to be of average quality, but it is certainly worth investigating.

Future Needs

A description, analysis and evaluation of this area's past and present planning is important. Field research is important. An analysis of aerial photo and highway maps would be a reasonable first step. Field studies with an archeological dimension will also be useful.

Important Resources

Due to the uniqueness of this sort of planning in Colorado, all resource types should be considered important until proven otherwise.

RESEARCH QUESTIONS

What, in detail, is left of this Hispanic culture's planning and urban design?

How does it compare with the early Hispanic planning further south in New Mexico?

How did at least the Costilla County section of this culture retain its isolation and integrity?

Did the unique "penitente" form of Catholicism generate unusual church design or town planning?

Did the Costilla County retention of the old town and country planning systems help them retain their

cultural identity as opposed to those who changed in Conejos county?

Did the loss of the placita's integrity in San Luis speed the loss of the cultural identity of the Hispanics?

What role did the railroad and highway play in relocating land uses in these communities?

What energy saving and other ecological design lessons can be learned from studying these communities?

How do these Hispanic environments compare with like Anglo communities in the San Luis Valley?

How have modern agricultural techniques affected the varas system?

What is the interrelation of San Luis and the smaller hamlets nearby?

EVALUATION STANDARDS

Physical Condition

At this point, too little is known about the number and condition of planning resources in this region to be specific. Due to the rarity of resources such as these, all are likely to be important for a while as a basis for research. It is important to check with other southwest states which are likely to have more experience with these sorts of planning artifacts to find out their condition standards.

Representation

As mentioned, this resource type is quite rare in Colorado, and more common to the south. Whether the San Luis Valley has uniqueness within the larger 19th century Hispanic planning

experience is beyond the scope of this study. The "penitente" communities may be unique even within the Hispanic culture of the times. The sample size for preservation should be large for research purposes alone, perhaps at least 3-5 of each of the items listed in the "Cultural Resource Types" above.

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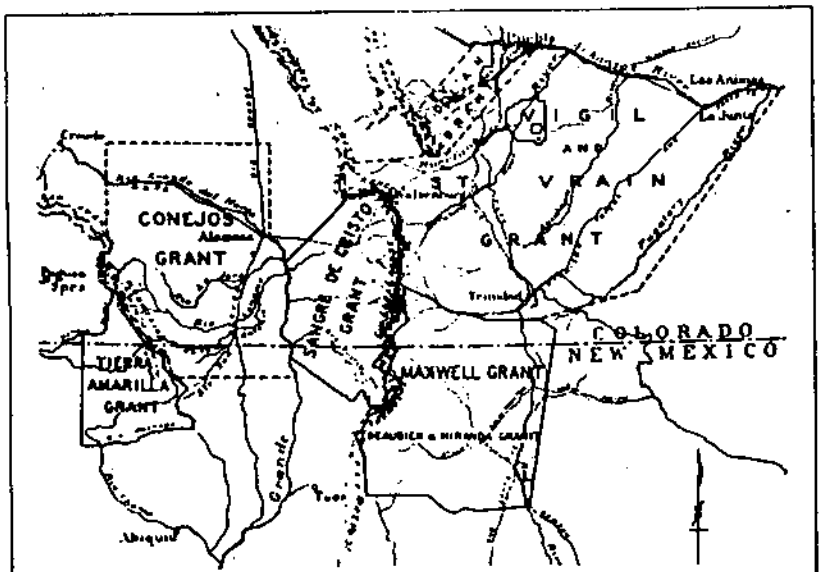

MEXICAN LAND GRANTS IN COLORADO

The solid black lines are boundaries of confirmed grants as surveyed and marked. A broken line marks the approximate boundary of the unconfirmed Conejos Grant. The broken lines enclosing the Nolan Grant and the Vigil and St. Vrain Grant indicate the approximate boundaries of the original grants. The boundaries as defined were often vague and sometimes contradictory and cannot be drawn with exactness.

Courtesy of the Library of the State Historical Society of Colorado.

Figure 1. Mexican Land Grants in Colorado. From Tushar, The People of "El Valle".

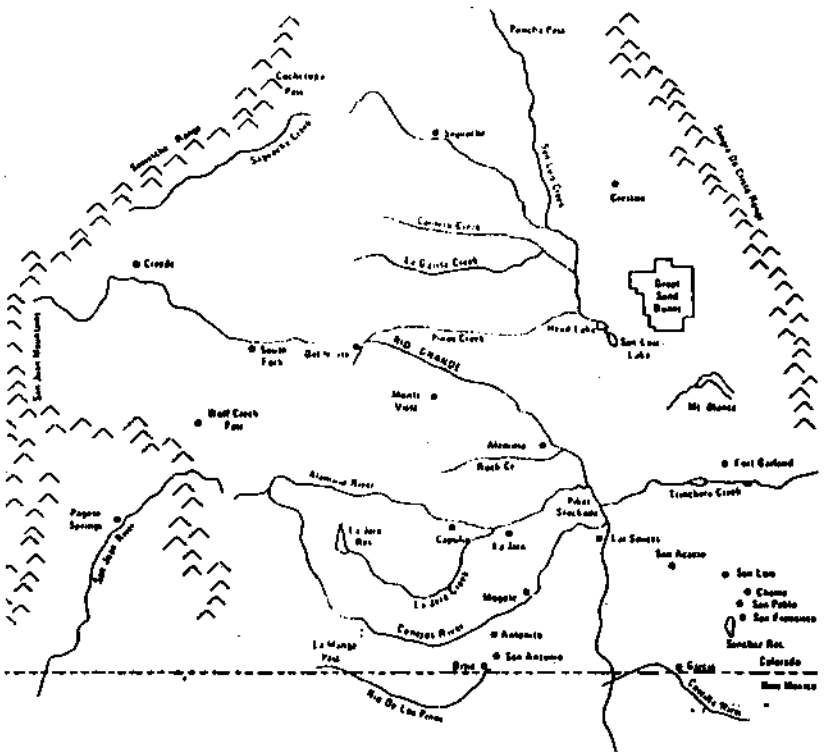

Figure 2. The San Luis Valley. From Tushar, op cit.

Figure 3. An artist's interpretation of a San Luis Valley placita. From Tushar, op cit.

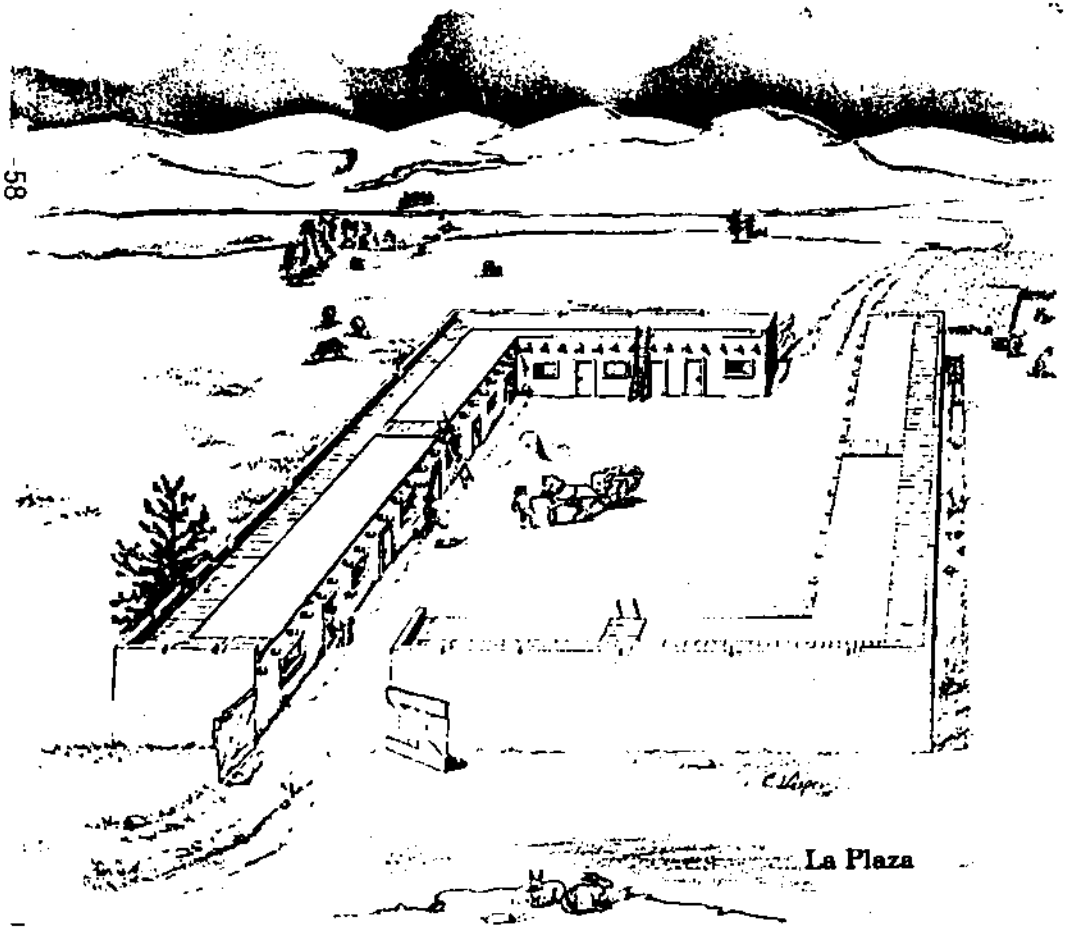

Figure 4. An early etching of the plaza at Conejos. From Abbott, Colorado: A History of the Centennial State.

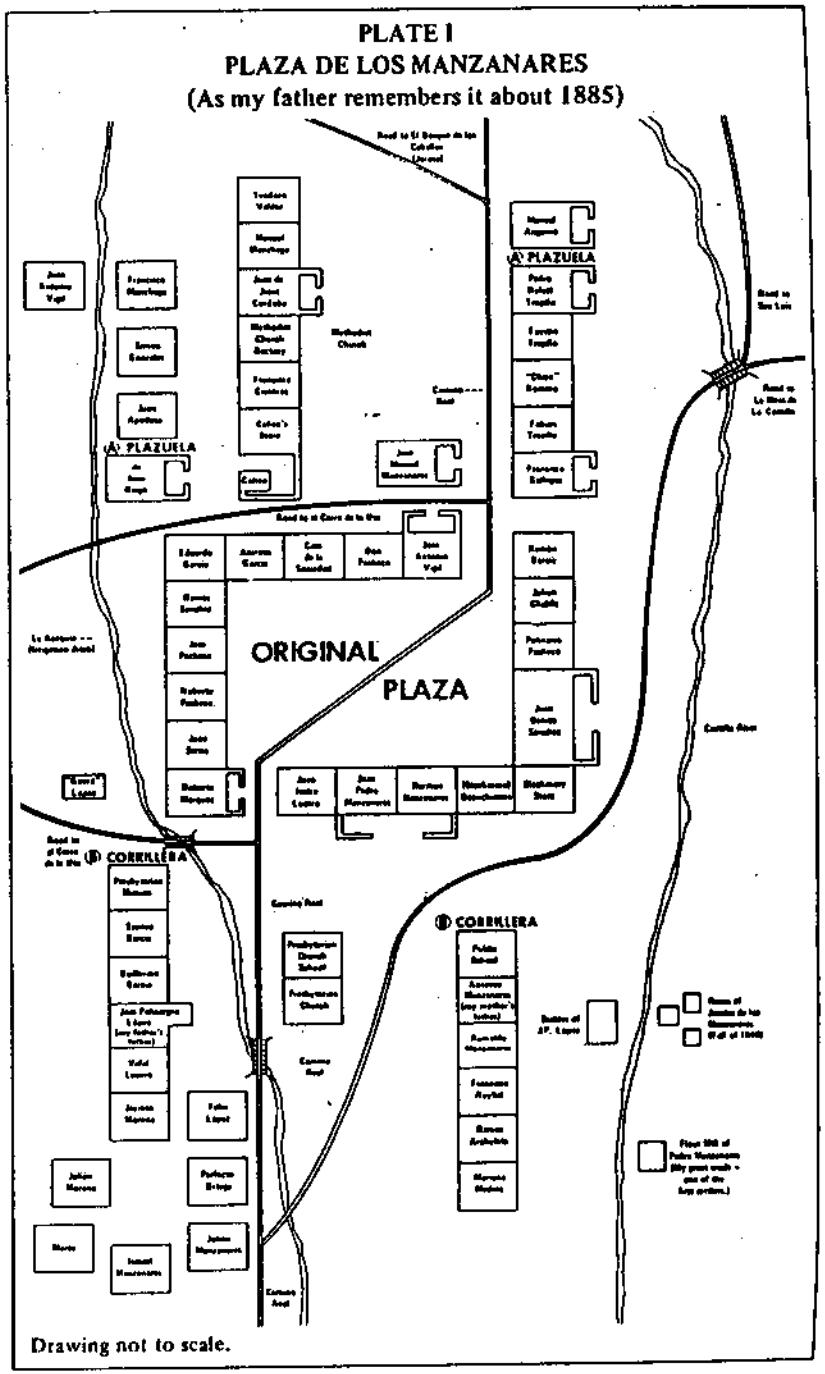

Figure 5. Recollections of Plaza de los Manzanares. From Tushar, op cit.

4. RAIL ERA: RAIL TOWN PHYSICAL FORM 1870-1920

NARRATIVE

The physical form of Colorado's rail towns is a continuation of the town design traditions that dominated midwestern and western America rail town planning generally, but with a number of interesting variations.*

The typical midwestern rail town, built on raw, flat land in the 1860 to 1910 period was a traditional stage/ wagon speculative neutral grid (Fig.1), but one with a railroad through the middle. (Fig.2&3). The difference appears to be small, but it is important. The railroad splits the community physically in two, and creates a powerful new central focus at the freight and passenger train station. Reinforcing the linear split of the community, there is often a strip of warehousing, small manufacturing, and other utilitarian uses that take up residence along the tracks. We will title this typical form, "the split grid".

The new central node at the train station pulls the community together on the one hand, but often creates a difficult interrelation problem with the commercial main street on the other. Typically, the main street develops one block away from the rail line and parallel to it, with the train station defining the main street's central point. Sometimes, however, the main street develops at right angles to the railroad path at the train station. The overland stage/ wagon roads that also service the rail towns

*A rail town is defined broadly here, including towns "significantly impacted" by the railroads as well as those completely organized and marketed by the railroads and/or their land companies.

almost always intersect at the main street/rail station central point. This secondary crossroads increased the central focus of the town at the train station even further. If the town were large enough to support a streetcar, it usually followed these main roads to the station and also reinforced this linear commercial main street strip and train station node. Sometimes, the "number one corner" sharing rail, street car and stage access became important enough to justify the steel supported construction of banks and office buildings of four to six stories.

This typical split grid town design also tended to create an economic and social class barrier. The more prosperous "WASP" citizens lived on the main street side of the rails; the poorer, immigrant and ethnically unpopular lived on "the wrong side of the tracks." This was particularly likely if the town was laid out next to a river. Then, the soggy flood plain could be assigned to the poor, with the solid, clear-aired high ground utilized by the better off.

With this basic class division in place, the residential areas sprawled informally outward on the grid according to the demands of the private, speculative land market. A sprinkling of churches, schools and small, individually owned service commercial stores usually punctuated this otherwise uniform spread of low density single family dwellings. Occasionally, streetcar stops might structure this market informality. Wherever possible, shade trees and shrubs were planted to pull these stark residential boxes together in a web of vegetative greenery. The blocks in the typical rail town were either square or rectangular with the long side parallel to the tracks. The streets were almost always oriented north/south and east/west

(NS/EW) in order to fit into the similarly platted national survey of the surrounding rural land. The streets were usually of generous width.

The physical form differences between the typical rail town and the typical older stage/wagon towns were not great if the rail towns remained small and the rail traffic slight. But as the rail town grew large, the socio-economic split created by the sometimes dangerous, dirty and noisy railroad and its adjacent utilitarian land uses became more pronounced. Also, the main street/rail station/ streetcar connection created, physically and politically, a more vertical and centralized system. The single, simple main street crossroads of the stage/wagon grids were split by the regional railroad and re-punctuated at the center by the streetcar. As the rail towns became rail cities, these differences became even more pronounced, and a profoundly new rail metropolis was formed. (Of course, the rail town splits and tensions rarely generated the problems of main street distress, traffic disorganization and land use diffusion that cars, truck routes and high-way bypass commercial developments were going to create in the future).

The developmental stages of the rail town also differed somewhat from that of the stage/wagon town, especially those rail towns built on the urban frontiers. The major difference was in the rate at which a permanent built form and social structure could be achieved. The rail-road's ability to haul bulk goods and people rapidly and cheaply allowed a shortening of these periods compared to the stage/wagon town in which tents, soddies, and log cabins dominated the built environment, and in which transient adult males without families were the trouble-some backbone of the community. In fact, the railroads occasionally brought in complete pre-fabricated frame family housing.

In Colorado this typical new, flatland "split grid" rail town rarely occurred in pure form. Often the rail town and planner had to adapt the ideal to the already established land use location and patterns of an existing stage/wagon town. This "interweaving" problem generated a number of stage town vs. rail town "superimposition variations." First is the "total bypass and new town," solution (Fig.4). In this case, the railroad starts its own town a short distance away from the old community. It then slowly pulls the latter toward it, creating a roughly linked pair of towns. Sometimes as well, the old town simply moved itself totally to the new. Second is the town's edge "tangent" solution in which the railroad touches the edge of the old town's residential area, and the town slowly shifts its land uses and main street activities awkwardly to adjust to the new activity generation on the periphery (Fig.5). Third, there is the "off-center penetration" solution, (Fig.6). Here,the community allows the rail system access closer to the inner portions of the town. But it does not give up the prime central areas.

Another major cause of variations from the typical rail town is geography. Steam railroads in the 19th century located their tracks near water sources, and where grades were minimal. This usually meant laying track along river and stream bottom lands. These valley water courses were often not NS/EW, and the fitting of the NS/EW platting of the town grids to the diagonal pattern of the railroad through the rural grid creates complexities. The usual solutions are a "diagonal rail - NS/EW plat" (Fig.7), design or a "diagonal rail and plat"plan (Fig.8). A third solution is to dispense with the formal grid altogether and to move to an informal curvilinear platting roughly paralleling the rails and valley.

Dealing with the river itself also generates variations from the typical. Its flood plains, its soil conditions and its varying slopes create serious problems of spatial community balance with respect to the railroad. The first variation is the "river/rail straddle" form, in which the railroad goes parallel to the stream, and the town is balanced on either side of the stream, tied together with a bridge, (Fig.9). Second, there can be a "rail and town separation" in which the railroad is next to the river and the town is located above, on the high ground (Fig.10). And, of course, there is the common river's edge "tangency" solution, in which the river and rail touch the town's lower edge as it moves up toward higher ground for the bulk of its territory, (Fig.11).

The final major reasons for varying from the typical split grid rail town are economic. Two types of rail towns which had planned economies consistently retained their particular centralized focus despite the introduction of the railroad. These cases created somewhat different spatial arrangements. The company town usually gave highest locational priority to its mine or factory (rather than the rail station) in town layout, and it had a more geometrically planned residential system than the laissez-faire grids. The centrally organized cooperative communities, on the other hand, usually gave higher priority to public and community uses at the town center, rather than rail yards, manufacturing and trade functions.

A second economically-based cause for variation from the typical was the difference generated by the spatial demands of the town's major economic function. Ranching, farming, orcharding, hunting and regional service communities usually tend to be close to the typical split grid, because they had no large single economic function inside

or near the town to warp the typical pattern. On the other hand, towns dependent upon large, internally located mines, factories, lumber mills, rail service yards, tourist attractions or court house complexes naturally skewed the layout to favor their prime economic interests.

A final category of economic importance that determines the character of the built environmental fabric of the rail town as a whole is the town's economic stability over time. It is very costly to construct the brick and frame buildings, the substantial streets and sidewalks, the park and open space amenities, and complex water systems to irrigate lawns and trees. If the economic base of the town cannot be depended upon to pay off long term private loans and public bonds, the town fabric will remain undeveloped or declining, even though the town plat may be complete on paper.

This rail town classification system has not been applied to Colorado, but it would be a relatively straightforward task. The typical split grids are likely to be found along rail routes over undeveloped agricultural flat land that run either north/south or east/west. Rail towns that varied from the typical due to having to adapt to existing stage/wagon towns could be found by researching which stage/wagon towns (listed under the stage/wagon town theme) were later serviced by the railroad. Then each of these would be analyzed to note their linkage type. Colorado's incredibly varied topography, of course, will generate numerous variations according to this geographical category. Even on the flat eastern plains, where variations would be expected to be minimal, the wide flood plains along the rivers force unexpected changes. Finally, our variety in economic function in rail towns (listed in the earlier rail town theme) is considerable. Possible Colorado examples under these topics will be suggested

in later sections of this theme.

At a minimum, it seems that the state needs to identify a number of examples of the typical rail town, and at least one of each of the variations. These should be chosen on the basis of their integrity and representativeness. Of course, this typology is not water-tight and will also generate numerous hybrids. These may prove as interesting as those representing the major categories in the classification scheme.

In any event, the science of rail town analysis is at the stage of early classification and specimen collection, nationally. Our brief study here is ahead of most American research. Final analysis for "historicity" within this classification system needs much further investigation.

CHRONOLOGY (Estimates)

I. The Typical Split Grid, Oriented NS/EW 1870-1915

II. Variations from the Typical

- A. Variations caused by adapting to Old Stage/Wagon Town Fabrics
  - 1. The By-pass Solution 1870-1885.
  - 2. The Tangency Solution 1870-1885.
  - 3. The Off-Center Penetration 1870-1885.
- B. Variations Due to Geography
  - 1. Adapting to Non-NS/EW Rivers and Valleys.
    - a. Diagonal Railroad, with NS/EW Plat 1870-1900.
    - b. Diagonal Railroad with the Plat Parallel to the Rails 1870-1915.
    - c. Curvilinear Rails and Plats 1870-1900.
  - 2. Adapting the Plat to the River Flood Plain.
    - a. The River Straddle with the Rail in the Center 1870-1915.
    - b. The Plat Separated Uphill From the River and Rail 1870-1915.
    - c. The Plat Tangent to the River/Rail Corridor 1870-1915.

C. Variations Due to Economic Factors

1. Adapting to the Interests of the Major Economic Function in Town

a. The scattered externally located economic bases, i.e. Agriculture, Orcharding, Ranching, sometimes mining 1870-1920.

b. The large internally located base industry cases: manufacturing, rail service yards, lumber mills, court houses, hot springs 1870-1920.

2. Adapting to Centralized Economic Planning

a. Company Towns 1870-1900

b. Cooperative Colonies 1870-1900

3. Adapting to the Perceived Long-Term Stability of the Base Economic Function 1870-1920

III. Various Combinations and Permutations of the Above 1870-1920

IV. Others--Colorado Springs neo-Baroque Scheme 1870's.

LOCATION

I. The typical flatland split grid.

A. Location--on any flat location in which the railroad's path was east/west or north/south. These locations were most likely on the plains and front range areas, though some wide mountain valleys and western plateau areas could also support them. Note Figure 2.

B. Possible examples* Brush, Eads, Genoa, Castle Rock, Gunnison, Buena Vista (Not NS/EW),Rocky Ford (Not NS/EW), Walsenburg (Not NS/EW).

* Estimates only.

II. The stage/wagon town by-pass plan.
   A. Location--note the stage/wagon theme for stage/wagon locations generally on overland stage routes, in early hard rock mining areas, and along front range mining service areas.
   B. Possible examples: Colorado City, Colorado Springs, Julesburg (Old Town)/Julesburg, Durango/Animas City, Pueblo.

III. The stage/wagon town tangency solution.
   A. Location--this solution demands considerable space, so it is most likely to occur on the plains and along non-mountain rivers.
   B. Possible examples: Greeley, Boulder, Central City, El Pueblo, Glenwood Springs, Longmont, Canon City, Aspen, Craig, Littleton.

IV. The stage/wagon off-center penetration plan.
   A. Location--stage/wagon town areas, (see earlier theme). Front range mining service town locations. Arkansas and South Platte River corridors. Stage/wagon hard rock mining town areas.
   B. Possible examples: Denver, Georgetown, Auraria, Idaho Springs, Blackhawk, Leadville and Breckenridge.

V. Diagonal railroad with a NS/EW Plat
   A. Location--usually employed where the railroad was forced for various reasons to follow a diagonal regional path, yet where the land was flat enough to use a neutral grid efficiently. High plains, mountain valleys.
   B. Possible examples: Holyoke, Eagle, Trinidad (the new part), Crowley, Ordway, Brighton, Delta.

VI. Diagonal railroad with a plat parallel to the rails.
   A. Location--wherever the rails were forced to make a diagonal, but where there was no reason to twist

the grid into a NS/EW orientation. Mountain valleys and occasionally on the high plains.

B. Possible examples: Old Sterling, La Salle, Salida, Agate, Deer Trail.

VII. Curvilinear rails, and plats parallel to the rails.

A. Location--in very narrow mountain valleys.

B. Possible examples: Creede (?), Somerset (?), Morrison(?).

VIII. The river straddle, with the rail in the center.

A. Location--in moderately narrow mountain valleys and on the high plains where the river flood plains are narrow, with good bridging points at the town. Also, where towns are large there is a market for building on both sides of the river.

B. Possible examples: Pueblo, Boulder, Denver, Colorado Springs.

IX. The plat separated uphill from the river and the rail.

A. Location--wherever the rail needs to be placed near the river, but either the flood plain or topography forces the town uphill.

B. Possible examples: Colorado Springs, Ramah, Newcastle, Rollinsville, Del Norte.

X. The plat tangent to the river and rails.

A. Location--situations in which the rail is next to the river, and the town can touch, but not straddle the river/rail unit. Often the flood plain and topographical constraints are few, on the side of the river platted.

B. Possible examples: Rifle, Durango.

XI. Externally Scattered Economic Bases Towns

A. Location--throughout the stage.

B. Possible examples: Agriculture: Windsor, Watkins
Orchard: Palisade, Paonia
Ranching: Brush, Craig, Rifle

XII. Internally located economic bases
  A. Location: throughout the state.
  B. Possible examples: Agriculture(Beets)--Longmont
     Mining--Black Hawk, Central City
     Factory--Pueblo,Florence
     Coal--Somerset,Baldwin, Newcastle
     Rail--Limon
     Tourism--Glenwood Springs
     Government--Canon City

XIII. Company town plans
  A. Location--usually in coal or hard rock mining areas.
  B. Possible examples: Redstone

XIV. Cooperative Colony Plans
  A. Location--usually in the better agricultural areas.
  B. Examples: Longmont, Greeley.

XV. Fabrics based upon long-term stability of the town's economic base.
  A. Location--generally mining towns and non-irrigated agricultural towns are unstable financially. Irrigated agriculture towns, diversified coordination towns and government towns were more stable for long-term investments. Generally speaking, high plains agriculture areas and mountain mining areas produce less financially secure towns.

XVI. Combination Solutions
  A. Location--throughout the state.

CULTURAL RESOURCE TYPES

I. The Typical Split Grid, Oriented NS/EW

II. Variations from the Typical
  A. Variations Caused by Adapting to Old Stage/Wagon Town Fabrics
    1. The By-pass solution.

2. The Tangency Solution.
3. The Off-Center Penetration.

B. Variations Due to Geography
   1. Adapting to Non-NS/EW Rivers and Valleys
      a. Diagonal Railroad, with NS/EW Plat.
      b. Diagonal Railroad with the Plat Parallel the Rails.
      c. Curvilinear Rails and Plats.
   2. Adapting the Plat to the River Flood Plain.
      a. The River Straddle with the Rail in the Center.
      b. The Plat Separated from the River and Rail.
      c. The Plat tangent to the River/Rail Corridor.

C. Variations Due to Economic Factors
   1. Adapting to the Interests of the Major Economic Function in Town.
      a. The scattered externally located economic basis: Agriculture, Orcharding, Ranching, sometimes mining, etc.
      b. The large internally located base industry cases: Manufacturing, Rail Service Yards, Lumber Mills, Court Houses, Hot Springs, etc.
   2. Adapting to Centralized Economic Planning
      a. Company Towns.
      b. Cooperative Colonies.
   3. Adapting to the Perceived Long-Term Stability of the Base Economic Function.

III. Various Combinations and Permutations of the Above.

QUANTITY AND QUALITY OF HISTORIC INFORMATION

Historical Documentation

The best sources on this theme are the railroad histories. They often contain the early plats, and they

are often illustrated with early town photos. The studies are usually very well done, but their bias is naturally toward the virtues of the railroads under discussion. Also, they emphasize the trains and their rails more than the establishment of towns or secondary impacts of the railroads on the built and natural environments. A short title listing follows in the "pertinent reference section." Perhaps the best resource for our purposes was Colorado Railroads, by Tivis E. Wilkins. Geological Survey and Department of Highway maps are also very helpful. General Colorado histories do not usually go into physical form issues, and only occasionally will local town histories deal with the large scale built environment explicitly. The study of rail town configuration in Colorado appears to be a new research exploration.

The following are typical historical documents used in city planning and urban form research.

Written documents.

- General state and local histories
- Municipal records.
- Real estate records.
- Land company records.
- Private papers of planners, architects, landscape architects and developers.
- Newspapers, magazines, and journals.
- County, town and city plans.
- Records of major industries, banks and chambers of commerce.
- Railroad, streetcar, toll road, stagecoach and utility company records.

Graphic records.

- Map collections.
- Bird's-eye view collections.
- Real estate atlases.

Insurance maps.
Assessors' maps.
Aerial photos.
Satellite photos.
Post card and architectural photo collections.
County, town and city plan maps.
Railroad, streetcar, toll road, stage coach and utility company maps.
State highway department maps.
Commercial highway maps.
USGS maps.
County, state and national atlases.
Federal land surveys.

Oral histories. Variable according to topic.

Number and Condition

The examples found suggest at least five towns in each plan type category, with the exception of the "gulch-following curvilinear" type. There were not as many "typical" split grids as expected, so these should be looked at carefully. The condition of most of the examples listed seems sufficient to justify further study. A wide range of "hybrids" are still to be found. Most rail towns that are currently surviving, it should be remembered, are now serviced by highways and freeways as well. This means the "pure" rail town configurations, which have not been reshaped seriously by highway systems, are quite important.

Surveys

To this writer's knowledge, there have been no systematic surveys of rail town physical form in Colorado.

Data Gaps

No one has pulled together the numerous birds-eye views and aerial photos of early Colorado rail towns in one place. This would allow analysis of Colorado town

fabrics as a whole. Existing Geological Survey and Department of Highways maps do not usually keep track of old rail lines and streetcar lines after they have been torn out. This is a mistake. Local histories that have emphasized physical form have also not been indexed according to this category. This would also help.

Future Needs

1. A slide catalogue of all old photos, town maps, postcards, and aerial photos showing town plans.
2. A typology developed akin to what we have done here to organize, compare and analyze the towns.
3. A slide catalogue from Geographical Survey maps would be a quick and appropriate beginning.

Important Resources

The state should study and begin to preserve at least one of each of the varieties of rail towns discussed here. Particularly important is the "typical"split grid, of which others are variants. Unique hybrids should be studied as well. Particularly, surviving rail towns that have not been seriously impacted by the auto systems are critical to isolate.

IMPORTANT RESEARCH QUESTIONS

1) Is the typology suggested here valid?

2) What are the best examples within each of the categories?

3) How have the main streets related to the overall town configurations in each category?

4) Are there identifiable rail town designers and planners who laid out these towns?

5) Was there a common body of doctrine that these planners might have put down on paper somewhere?

6) Did the City Beautiful movement that impacted the front range cities in this period have an impact on rail

town urban design?

7) Are there corridors of rail towns that exhibit many of these different planning solutions and might there be commercial possibilities in developing them as historical and tourist-oriented districts?

8) Are there significant variations among rail towns due to the great geographical changes in the state?

9) Which rail town types were most easily redesigned for highway and auto use?

EVALUATION STANDARDS

Physical Condition

The original plat, the main street, the rail corridor and the major town buildings should be intact. Residential areas are not quite so important. Each of the categories of rail towns listed above are defined by a critical variable. In each case, that physical item--the river channel, the original rail line, that major economic facility, the early stage/wagon town--should still be intact or replaceable. It is difficult to generalize on this matter, however, because each town should really be studied individually.

Representation

The Colorado rail town, outside the mountain areas, is not likely to be seriously unique by national standards. Within a regional and state context, however, this typology suggests differences that are worthy of closer study to investigate uniqueness or typicality. However, this typology is new, and perhaps research needs to be done to establish its validity before detailed work is done to establish representativeness within it.

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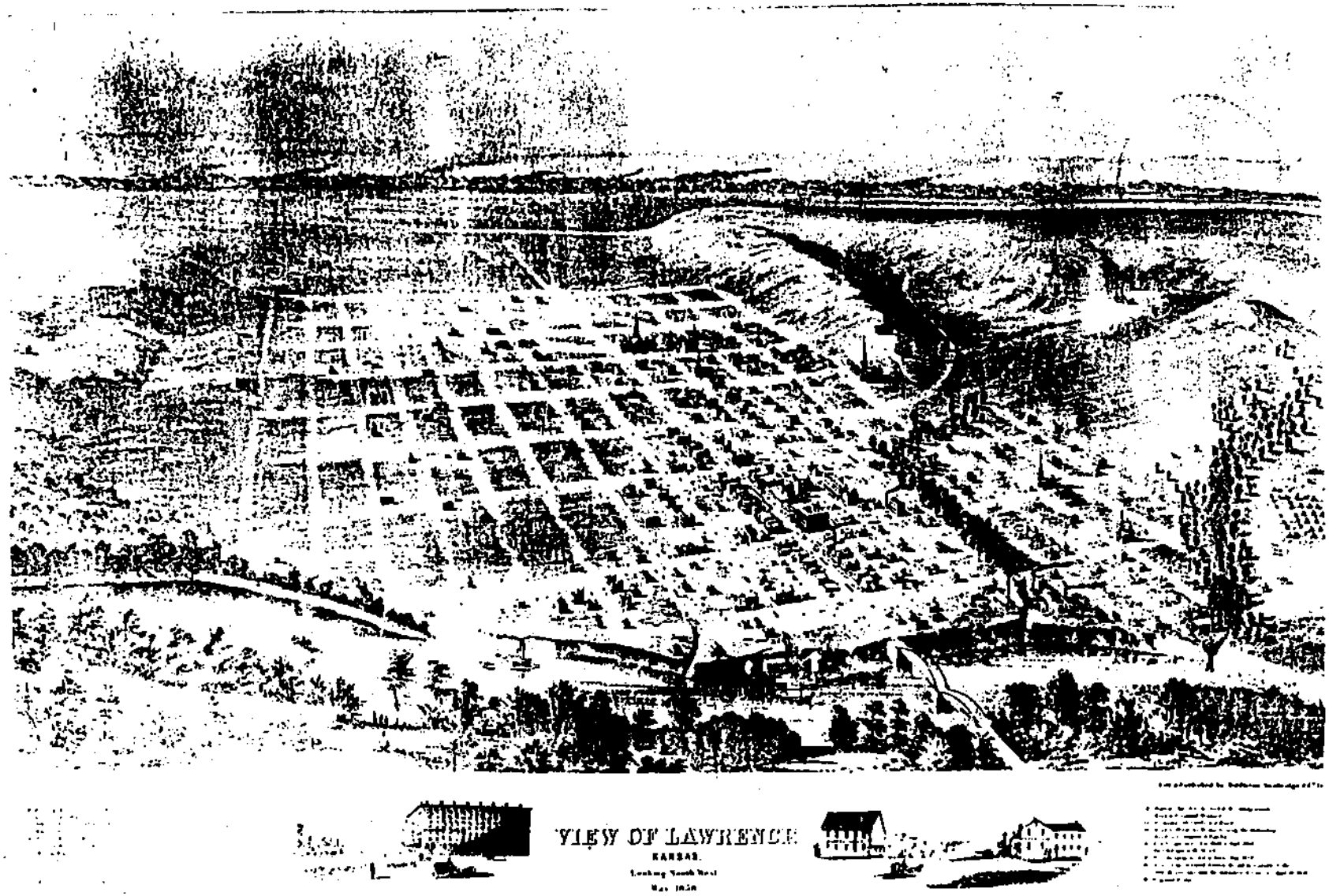


Figure 1. A Neutral Grid From Reps, Cities of the American West.

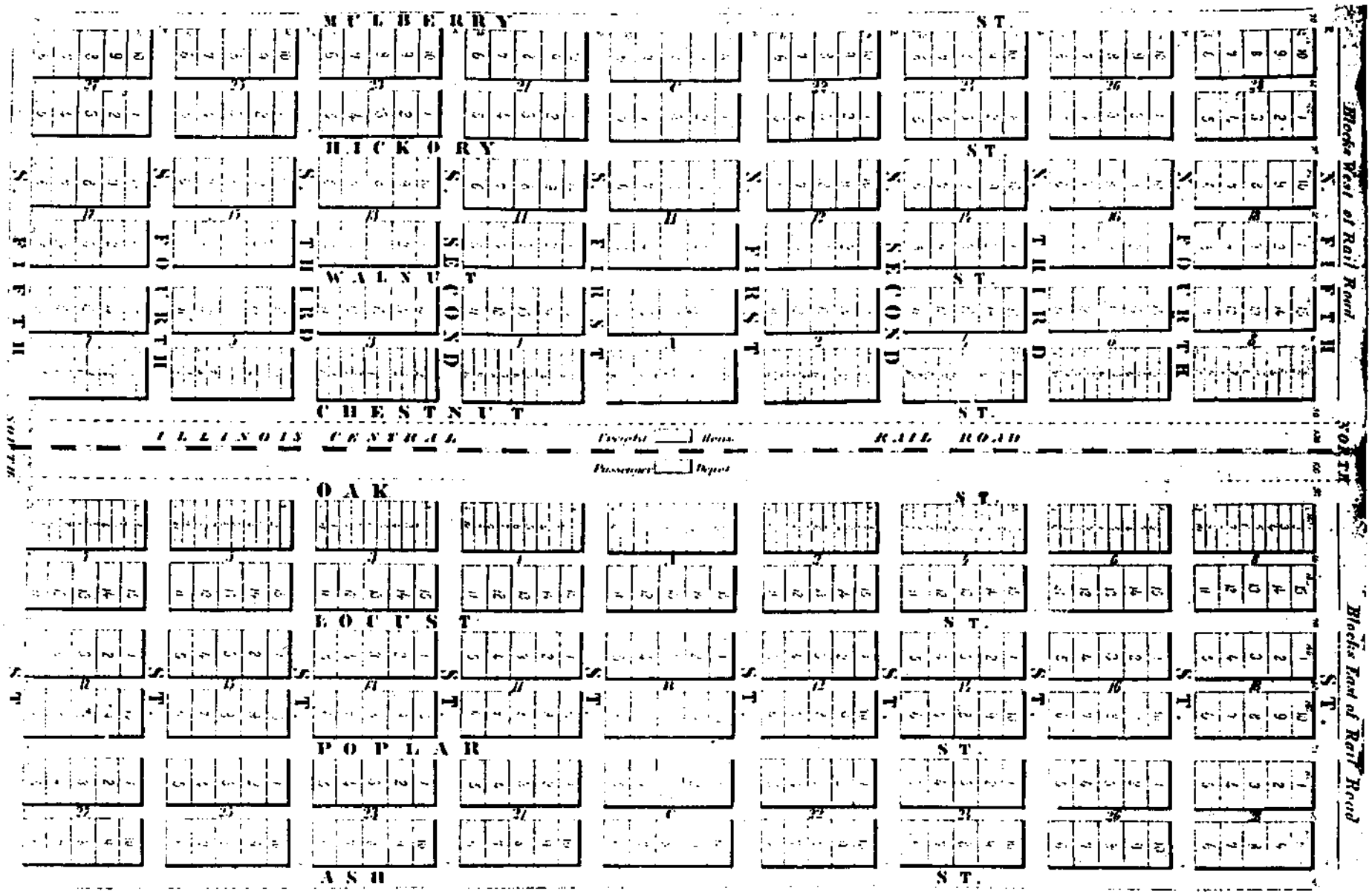


Figure 233. The Illinois Central Associates Standard Town Plat

Figure 2. A Typical Rail Town Split Grid. From Reps, The Making of Urban America

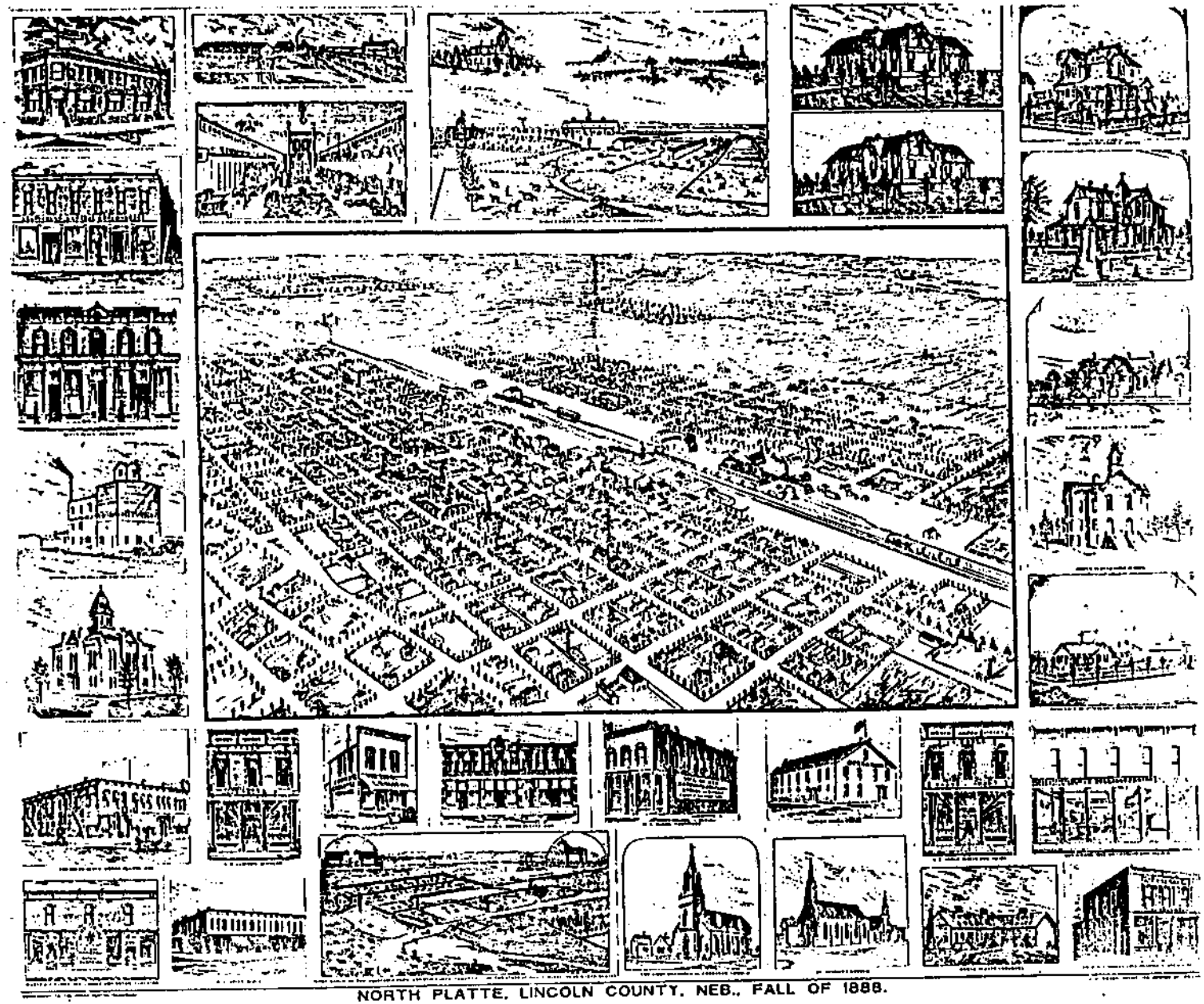


Figure 3. A Rail Town Split Grid. From Reps, Cities of the Am. West.

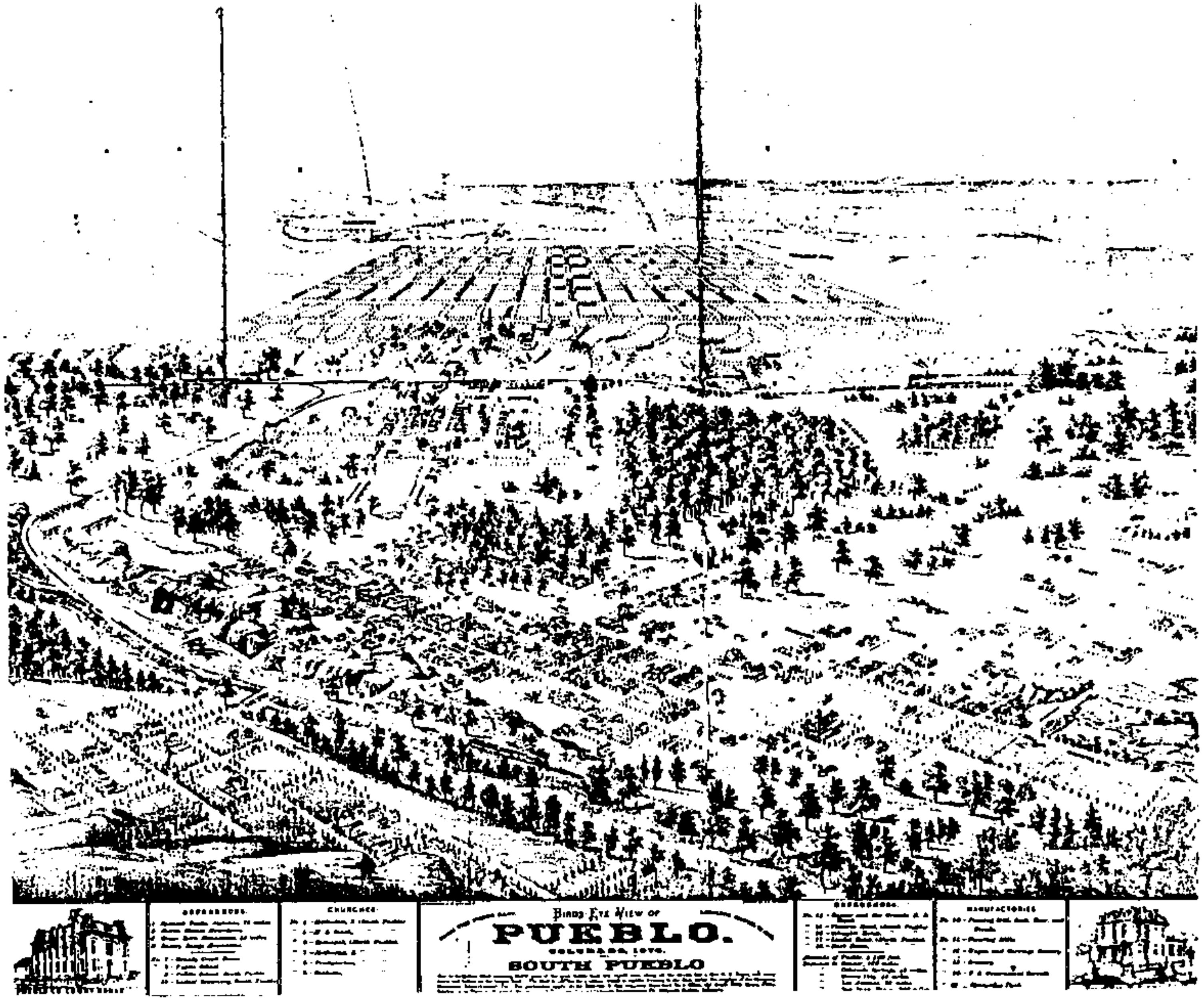
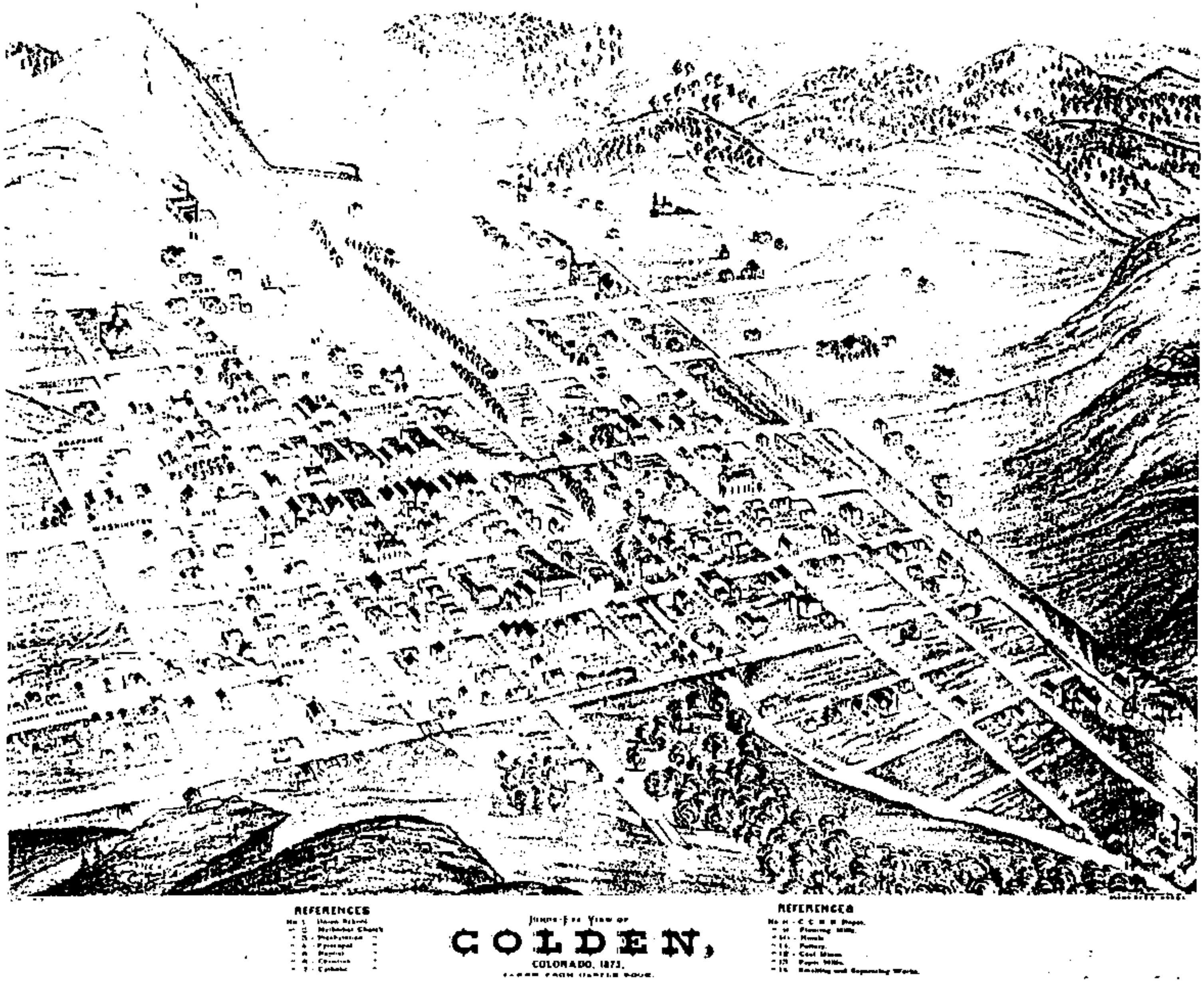


Figure 4. A Stage/wagon Town By-pass Solution. From Reps, Cag



14.17 View of Golden, Colorado: 1873

Figure 5. A Stage/wagon Town Tangency Solution. From Reps, CAW.

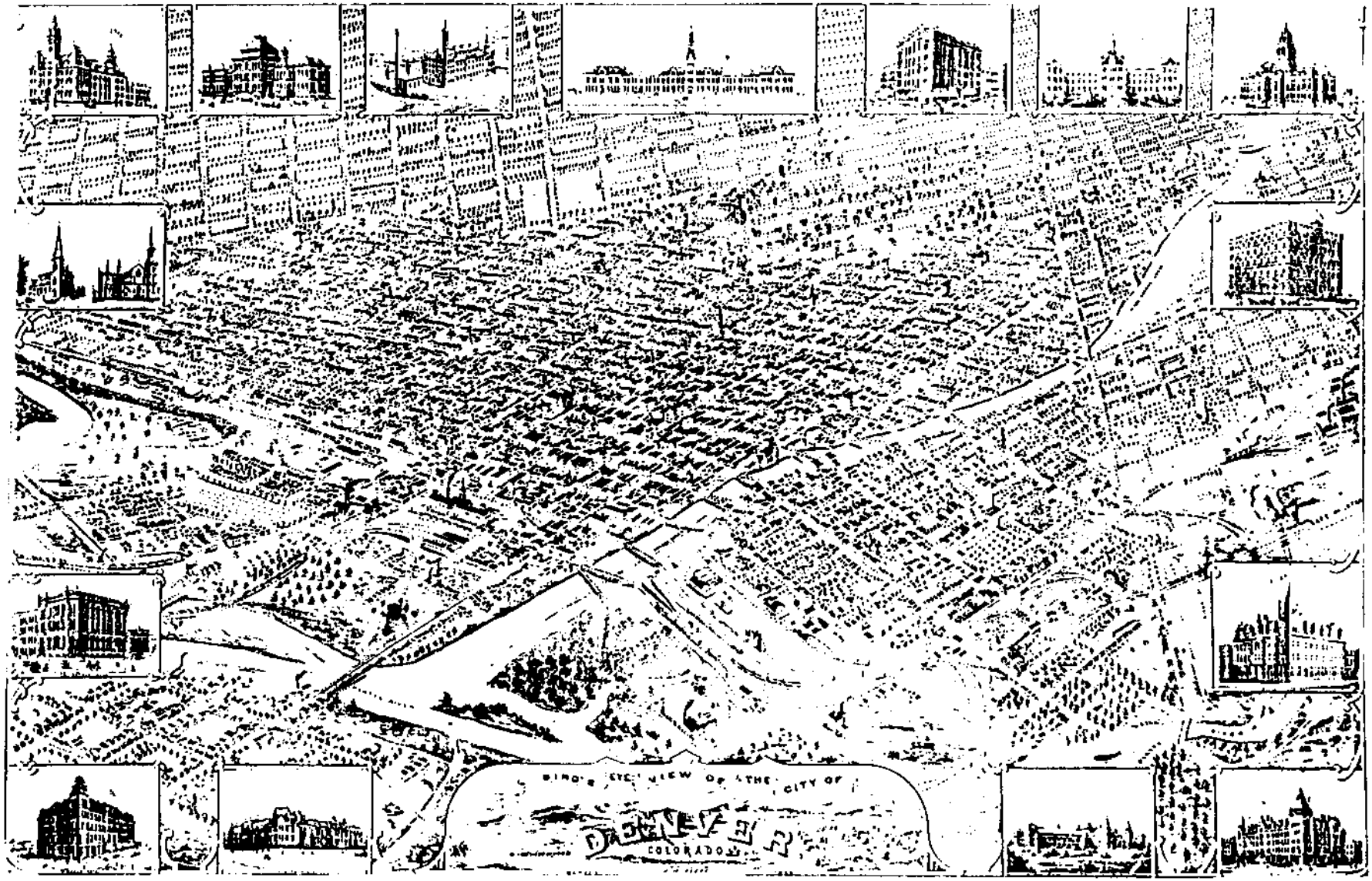


Figure 6. Stage/wagon Town Off-center Penetration Solution. From Reps, CAN.

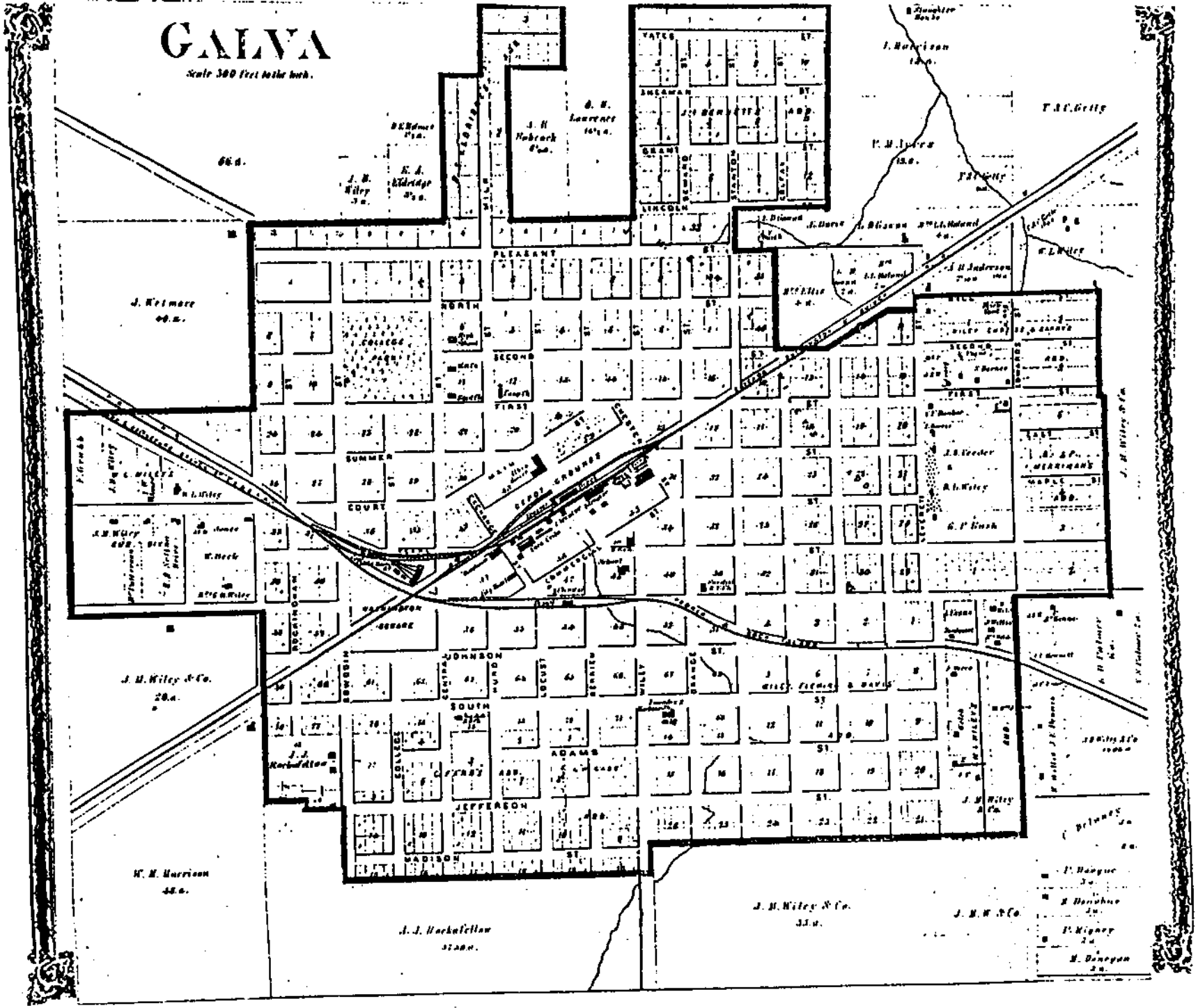


Figure 236. Plan of Galva, Illinois: 1875

Figure 7. Diagonal Railroad with NS/EW Plat Orientation. From Reps, MUA.

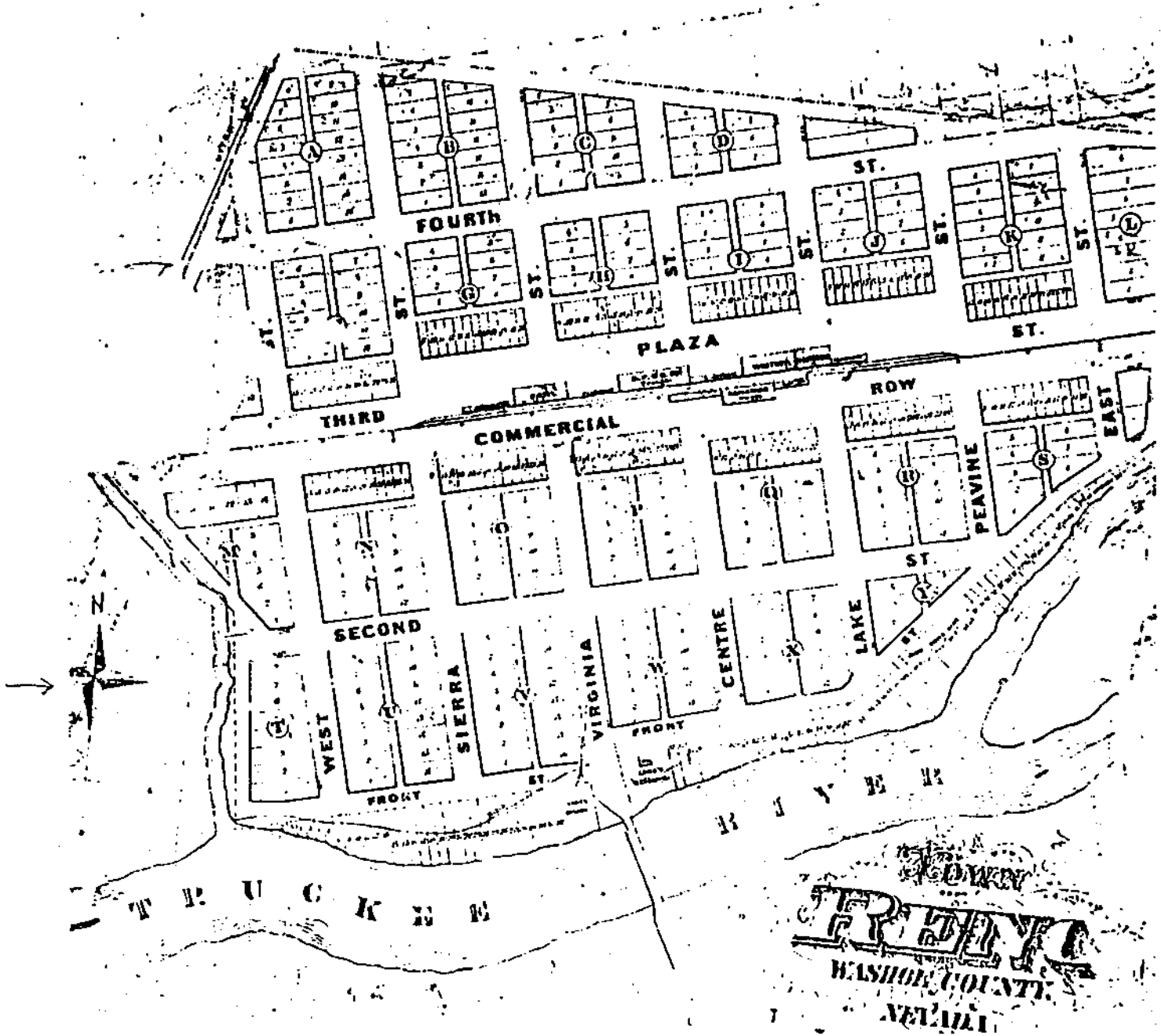


Figure 8. Diagonal Railroad with a Parallel Plat Orientation. From Reps, CAM.

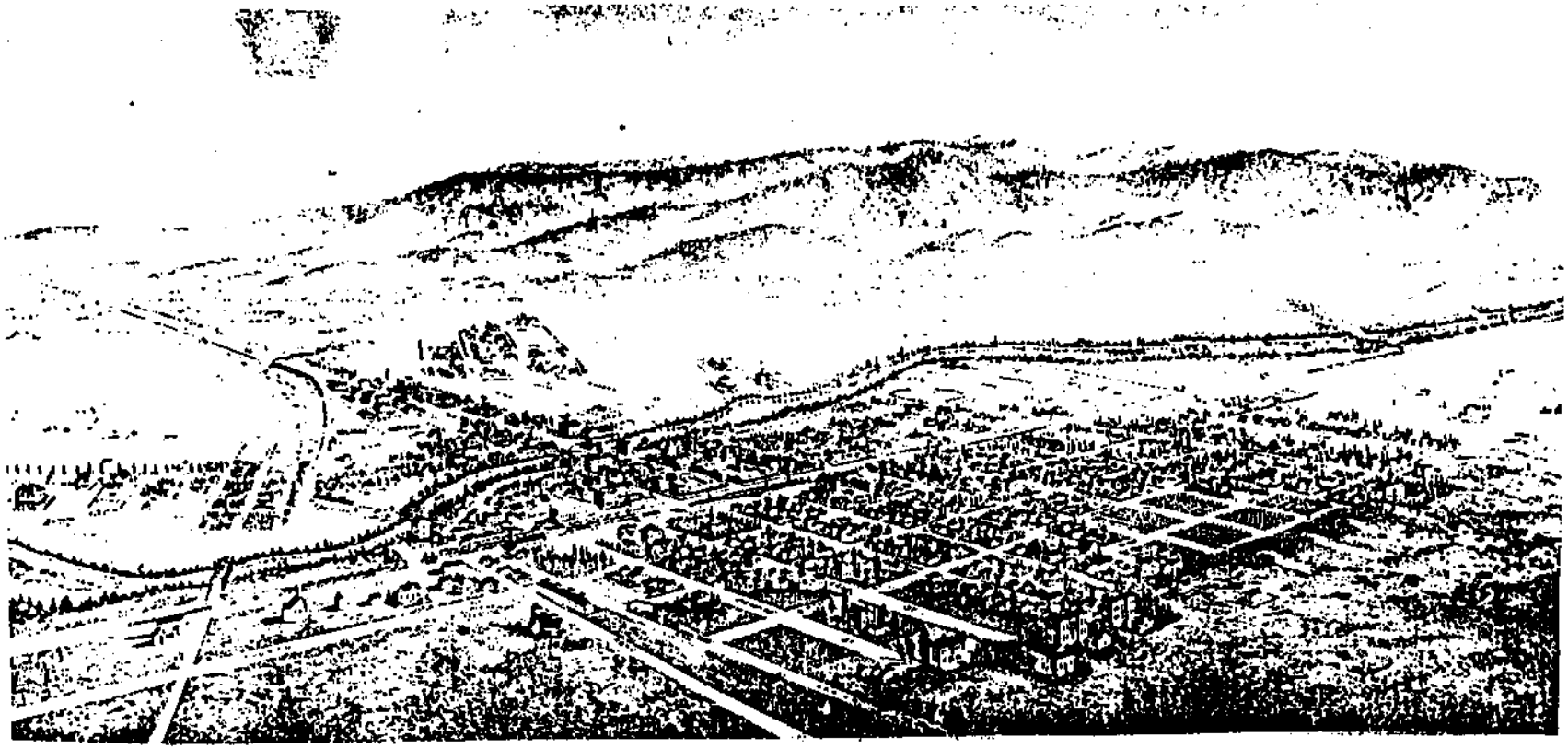
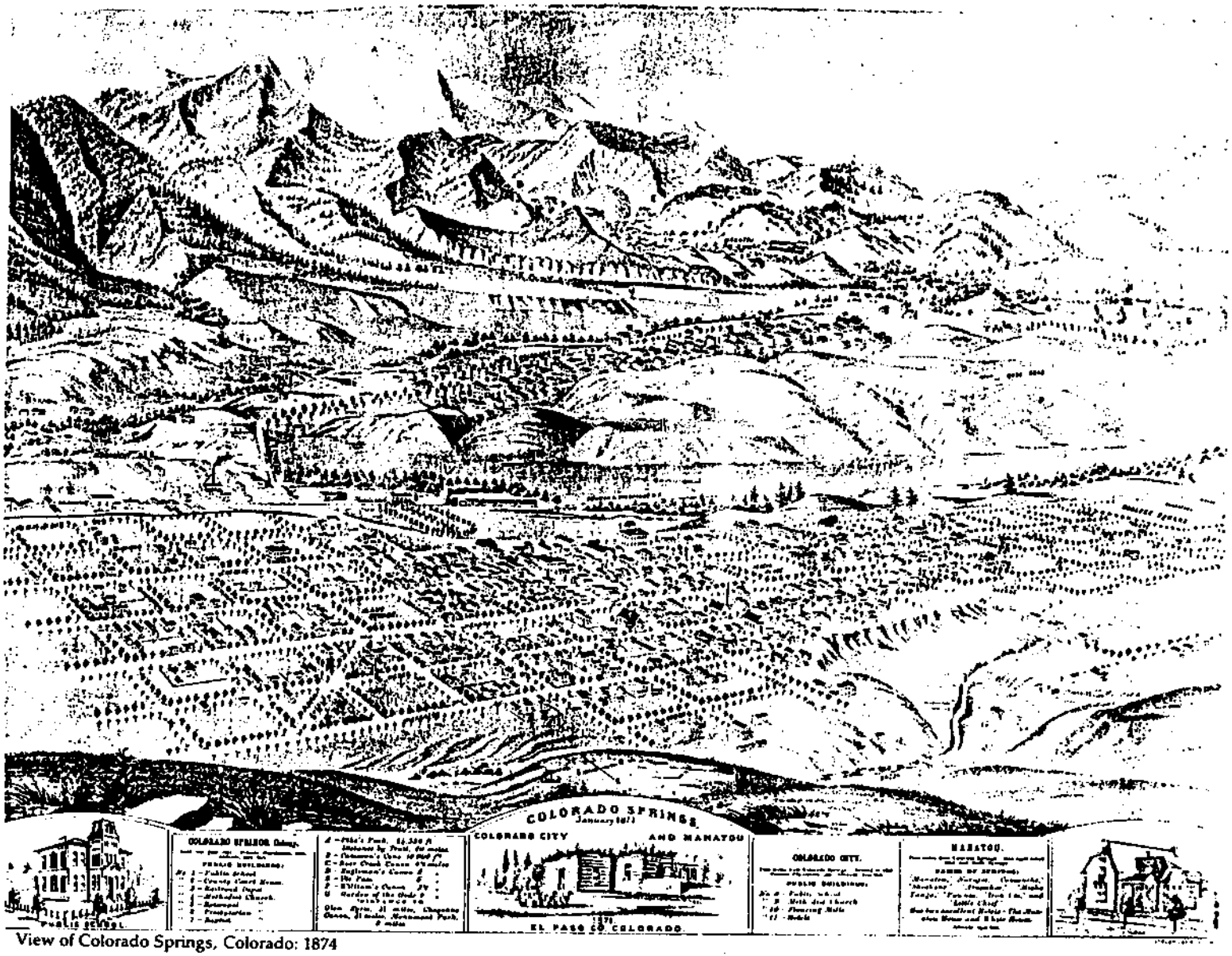


Figure 9. River Straddle Solution, With RR at Center. From Reps, CAW.



View of Colorado Springs, Colorado: 1874

Figure 10. Plat Separate and Up-the-Bluff From the RR. Reps, CAW.

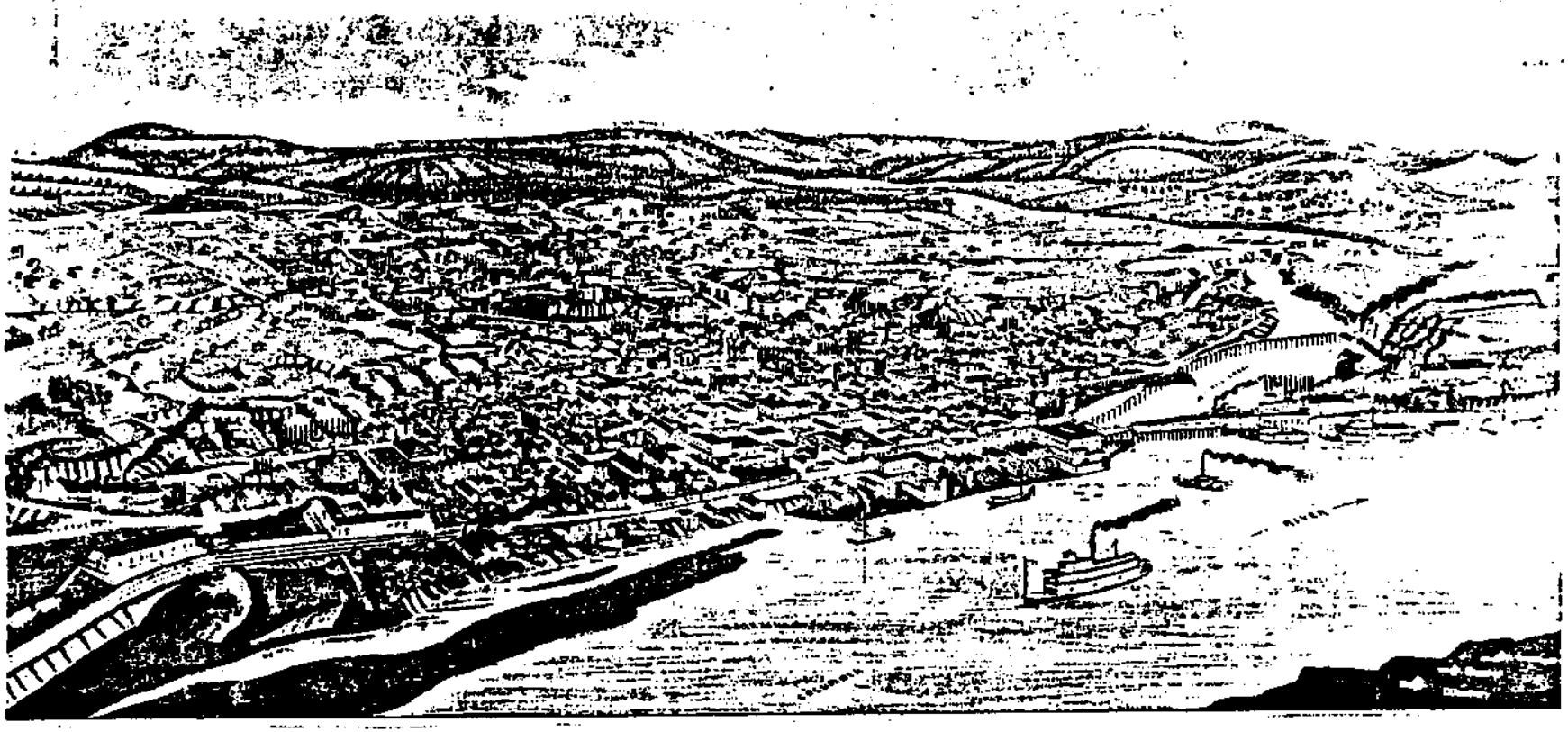


Figure 11. Plat Tangent to River/rail Corridor. From Reps, CAW.

5. RAIL TOWNS: THEIR TIME, PLACE AND ECONOMIC FUNCTIONS COLORADO, 1870-1920

NARRATIVE

The railroads came to Colorado in 1870, when the territory had at most about forty struggling outpost towns. By 1890, approximately 4,500 miles of track had been constructed, crisscrossing the state, and linking it to national and continental economic networks. The building of these railroads, particularly in the mountains, is probably Colorado's most unique undertaking in transportation planning and engineering. These railroads also overcame Colorado's number one early economic problem: vertical and horizontal regional transport. By 1890, the state boasted at least 350 rail towns.* The majority of these towns the railroads organized and planned.

Towns are the major units of economic linkage between primary natural resource "extractors" on farms and in the mines, and the secondary natural resource "processors" in the cities. Towns both aggregate and ship raw mining, farming, ranching, lumbering and fishing resources to the cities, and take the processed goods and services from the city, and retail them back to the farmers and miners in the field. Often, as John Reps, in Cities of the American West, points out, the townsmen also pioneer a new resource extraction area first, to lead, organize and profit by the settlement of the farmers and miners. The railroads were

*Rail town is defined broadly here. It includes towns significantly impacted by the railroad, as well as those totally organized and marketed by the railroads and/or their land companies.

crucial in this town building process because they hauled the goods, labor and services to and from the larger processing cities far more cheaply than could wagons and stages. On the other hand, railroads could not go everywhere, and they needed the towns to centrally aggregate and distribute their cargoes to the field extractors. Powerful common interests fused town planning and railroad building in Colorado.

Due to the enormous complexity of the Colorado rail town subject matter and the brief space assigned, the following discussion must be simplified. The towns will be located in time and space not by each town individually, but by rail "corridors." The corridors will be described by the towns at their beginning and end. Maps 1-12 are provided to estimate the details of railroad and town location and timing. Secondly, selected towns will be categorized according to major extractive function (or functions) under the formal topic of "cultural resource types." These functional categorizations refer to the towns' major economic export functions (1880-1920). They must be regarded as estimates only, and some towns have more than one major economic base.

From the point of view of general spatial economic organization, Colorado draws from its western boundaries and its eastern boundaries inward to a single north/south corridor down the middle at the intersection of the mountains and the plains. This "front range" corridor then links with the nation's major east/west transcontinental rail corridors in southern Wyoming and central New Mexico. The state's major cities--Denver, Colorado Springs and Pueblo--inhabit this relatively fertile urban economic linear territory. The cities then send their roots east and west to find resources, and to establish towns and markets.

Between 1870 and 1879, Colorado had the entire north/

south railroad spine between Cheyenne and Santa Fe constructed, often in double trackage. The corridor sprouted approximately 50 towns by 1888. (Note Figure 18). Between 1870 and 1888, seven rail corridors were completed east from this north/south line. These lines planted approximately eighty towns. On the high plains, where these towns occurred they functioned primarily as grain elevator, milling, and cattle feeding towns. If they occurred along the South Platte and Arkansas Rivers, they emphasized intensive irrigation, agriculture and sugar beets, as well as the above.

Mining drove the building of railroads to the west of the front range. Narrow gauge tracks predominated. By 1892, the entire system to the west was completed with the exception of the Denver-Craig line.(See Figures 2-13 and 31). Boulder Valley, Central City and Georgetown were served from Denver/Golden early in the 1870's, but the railroads could not cross the divide at those points. The only rail exit out of the state to the west was at Grand Junction. A north/south corridor from Durango to Grand Junction tied two east/west lines to it. These east/west lines went roughly from Trinidad to Durango and from Pueblo to Montrose. Another north/south corridor linked the Eagle River and Leadville, to Alamosa and Santa Fe. This north/south line picked up east/west corridors from Denver and Colorado Springs and then turned west to Grand Junction via Glenwood Springs. The completion of the Moffat Tunnel in 1928 and the Dotsero Cutoff in 1934 provided a direct link from Denver to Grand Junction, and then west to Salt Lake City. At least two hundred towns were built on these routes in the mountains and western plateau regions by 1890. Most of them were rooted in mining, smelting, ranching, irrigated agriculture, lumber, fruit growing, and sugar beets. Some also developed larger general service towns managing

clusters of smaller ones.

What is historically interesting about Colorado rail town systems? Perhaps on the plains the towns are most intriguing as extensions of midwest agricultural rail town planning, adapted to seriously new ecological conditions, primarily dryness and only moderate soil fertility. The front range corridor is interesting because it is the first time that the American rail town system was required to overcome a major, geographical barrier since the Alleghenies (while at the same time, planning for an urban corridor). Third, the Pueblo urban region within the front range created perhaps the west's first major heavy industrial system of extraction towns, including coal towns, lime towns, factory towns, and iron ore towns. Fourth, of course, there is the narrow gauge engineering and town planning gymnastics of attempting to service the alpine, isolated hard rock mine sites in the high country. Associated with this is the unique railroad and town design experience which demands planning under conditions of intrinsic impermanence and boom/bust cycles. The western plateau country during this period illustrates the typical variety of rail towns built upon mining, irrigated agriculture, ranching, rail service, sugar beets and fruit characteristic of the arid regions of the west. This area, because of its distance from markets, its dry climate and its varied but widely distributed resources, is still dominated (or blessed) by small towns as the basic unit of social and economic life.

The rail town system is also important because it was literally the backbone of the state. Outside of the three major cities on the front range, the rail towns and the corridors they established remain <u>the</u> regional pattern of the state. Probably eighty percent of Colorado's towns were established as rail towns, even though the railroads

might now be abandoned, with highways in their place. Finally, it should be remembered that these towns have often been well preserved. With a few exceptions, rural Colorado has not grown or declined enormously. The rail towns have reoriented their commercial sections to adjust to the automobile, but their original buildings and layouts are often intact. The sites, except when they have been ravaged as ghost towns or totally engulfed by suburban growth, retain considerable integrity.

CHRONOLOGY

Note Fig. 1-13 for the timing of the major rail towns and town corridors in Colorado.

LOCATION

Detailed photocopies from Wilkins' Colorado Railroads and Athearn's Rebel of the Rockies give individual rail lines and their towns. These are Fig. 14-42. The Colorado sketch maps are estimates only. A few towns had identities before the railroads came through. But even these were highly influenced in form and function by the rail arrivals and needs. Abandonments are estimated on Fig. 12.

CULTURAL RESOURCE TYPE

NOTE: The categorization that follows is based upon the towns' primary economic function, 1870-1920. The lists are not exhaustive and are sometimes estimates only. Denver, Colorado Springs, Pueblo and their suburbs are excluded. Listing towns under two categories means that they have two strong primary functions.

A. Railroad management, switching yard and maintenance functions.

1. Alamosa
2. La Junta
3. Trinidad (?)
4. Walsenburg (?)
5. Ridgway
6. Grand Junction
7. Durango
8. Cimarron
9. Delta
10. Mack
11. Julesburg
12. LaSalle
13. Sterling
14. Holyoke

15. Akron
16. Ft. Morgan
17. Ft. Collins
18. Longmont
19. Golden
20. Cheyenne Wells
21. Boyero
22. Limon
23. Burlington
24. Manitou Junction
25. Palmer Lake
26. Franceville Jct.
27. Eads
28. Lamar
29. Buena Vista
30. Como
31. Gunnison
32. Minturn
33. Basalt
34. Toland
35. Tabernash
36. Bond

B. Agriculture Rail Towns

1. Wheat, with some cattle
   a. Ordway to Sheridan Lake corridor towns
   b. Las Animas to Walsh corridor towns
   c. Chatoga-Amherst corridor
   d. Hayden/Julesburg corridor
   e. Watkins-Arapahoe corridor
   f. Granger-Burlington corridor
   g. Booneville-Tower corridor
   h. Booneville-Holly corridor
   i. Denver-Granger corridor
   j. Milner
   k. Hayden
   l. Granby
   m. Craig
   n. Phippsburg
   o. Toponas
   p. Eagle
   q. Gypsum
   r. Kremmling
2. Irrigated (intensive) agriculture rail towns with some cattle ranching

a. Pueblo to Holly corridor towns (AT & SF)
b. Antonito
c. Delta
d. Montrose
e. Harden-Julesburg
(mixed with wheat farming)
f. Greeley
g. Evans
h. Platteville
i. Ft. Lupton
j. Brighton
k. Longmont
l. Walden

3. Fruit rail towns
a. Grand Junction
b. Palisade
c. Clifton
d. Fruita
e. Loma
f. Paonia
g. Hotchkiss
h. Lazear
i. Orchard City

4. Sugar beet rail towns
a. Grand Junction
b. Rocky Ford
c. Swink
d. Sugar City
e. Beethurst
f. Ft. Morgan
g. Beta
h. Merino
i. Beetland
j. Ovid
k. Loveland
l. Windsor
m. Longmont-Eaton corridor on Great Western RR.

5. Cooperative agricultural towns
a. Greeley (early)
b. Mercer Colony

c. Colorado Agricultural Colony
d. Evans
e. Longmont (Chicago Colony)
f. Deerfield
g. Sterling
h. Colfax
i. Cotopaxi

C. Ranching towns on the rails

1. Del Norte
2. Trinidad
3. Holly
4. Granada
5. Lamar
6. La Junta
7. Delta
8. Ridgway
9. Dolores
10. Florida
11. Mancos
12. Meeker
13. Rifle
14. Craig
15. Hayden
16. Steamboat Springs
17. Yampa
18. Sedalia
19. Buttes
20. Pinon
21. Brush
22. Fraser
23. Gypsum
24. Sapimero
25. Eljebel
26. Cotopaxi
27. Hartsel
28. Egeria

D. Lumber Towns

1. McPhee
2. Pagosa Springs
3. Saw Pit (?)
4. Granby
5. Fraser

E. Manufacturing Towns

1. Smeltering
   a. Durango

F. Mining Towns

1. Coal
   a. Crested Butte
   b. Somerset
   c. Newcastle
   d. Carbondale
   e. Coal Basin
   f. Cardiff

g. Redstone
h. Oak Creek
i. Phippsburg
j. Walsenburg
k. Jansen
l. Firestone
m. Trinidad
n. Cokedale
o. Dacono
p. Aguilar
q. Segundo
r. Franceville
s. Cardiff
t. Weston
u. Eastonville
v. Redstone
w. Hesperus (?)
x. Agate
y. Carbondale
z. Erie
aa. Buick
bb. Cameo
cc. Frederick
dd. Placita
ee. Carpenter
ff. Coalmont
gg. Sunlight
hh. Somerset
ii. Walden
jj. Spring Valley
kk. Baldwin

e. Precious metals, primarily gold and silver

a. Ouray
b. Sunset
c. Georgetown
d. Aspen
e. Gold Hill
f. Silverplume
g. Silverton
h. Sugar Loaf
i. Redcliff
j. Telluride
k. Nederland
l. Pancho
m. Summitville
n. Central City
o. Gilman
p. Platora
q. Blackhawk
r. Fairplay
s. Creede
t. Idaho Springs
u. Leadville
v. Ward
w. Dumont
x. Climax
y. Cripple Creek
z. Lawson
aa. Aspen
bb. Goldfield
cc. Victor
dd. Westcliffe
ee. Silvercliff

4. Oil/Gas

a. Canon City (not dominant)
b. Boulder
c.Walsenburg
d. Florence

5. Iron ore
   a. Orient
6. Quarrying
   a. Marble
   b. Lyons
   c. Stout
   d. Morrison
   e. Monarch
7. Cement
   a. Portland

G. Government
1. County seats. The county seat towns are substantially the same now as in the period under discussion.
2. Military bases and facilities.
   Ft. Lyons (?)
3. Prisons and other facilities--Canon City
4. Higher education
   a. Boulder
   b. Ft. Collins

H. Tourist rail towns
1. Health towns
   a. Villa Grove
   b. Ft. Lyons (Hospital?)
   c. Glenwood Springs
   d. Trimble Springs
   e. Hot Sulphur Springs
   f. Eldorado Springs
   g. Penny Hot Springs
   h. Mount Princeton
   i. Manitou Springs
2. Outdoor recreation towns
   a. Silverton
   b. Telluride
   c. Creede
   d. Deckers
   e. Ox Yoke
   f. Berthoud Falls
   g. Larkspur
   h. Steamboat Springs
   i. Ouray

I. Sub-regional, general service rail towns (retail, office, finance, warehousing, entertainment, government, etc.).

1. La Junta
2. Alamosa
3. Trinidad
4. Rocky Ford
5. Walsenburg
6. Del Norte
7. Las Animas
8. Lamar
9. Montrose
10. Grand Junction
11. Craig
12. Durango
13. Glenwood
14. Sterling
15. Julesburg
16. Ft. Morgan
17. Greeley
18. Boulder
19. Limon
20. Wray
21. Canon City
22. Gunnison
23. Salida
24. Steamboat Springs
25. Boulder

It should be noted that subdistricts of the towns are important, for example, neighborhoods, main streets and industrial areas. The clustering of various towns together to form an economic region is also significant. Corridors of towns along railroads or river valleys may likewise form identifiable districts.

QUANTITY AND QUALITY OF EXISTING HISTORICAL INFORMATION

Historical Documentation

The best documents on this topic are the railroad histories. The best I have listed under pertinent references. General discussions are also available in the standard Colorado histories. Introductions to the towns can also be found in local histories, the WPA Writer's Program Colorado--Thousand Towns File, and O'Rourke's Historical Surveys of Colorado Communities. Most of the 23 communities surveyed in this latter report were rail towns. None of these go into town planning or urban form detail, however.

John Reps' Cities of the American West is helpful in discussing a few towns specifically and giving comparisons with other forms of western town planning. Old photo files, old map collections, and old real estate records are of particular interest to the town planning aspects of the towns. Colorado Place Names also gives beginning information. Note the references at the end of this theme as well, and the work of the regional and architectural writers in this project for more bibliographic detail.

The following are typical historical documents used in city planning and urban form research.

Written documents.

- General state and local histories
- Municipal records.
- Real estate records.
- Land company records.
- Private papers of planners, architects, landscape architects and developers.
- Newspapers, magazines, and journals.
- County, town and city plans.
- Records of major industries, banks and chambers of commerce.
- Railroad, streetcar, toll road, stagecoach and utility company records.

Graphic records.

- Map collections.
- Bird's-eye view collections.
- Real estate atlases.
- Insurance maps.
- Assessor's maps.
- Aerial photos.
- Satellite photos.
- Post card and architectural photo collections.
- County, town and city plan maps.

Railroad, streetcar, toll road, stage coach and utility company maps.
State highway department maps.
Commercial highway maps.
USGS maps.
County, state and national atlases.
Federal land surveys.

Oral histories. Variable according to topic.

Number and Condition

There is too much material to generalize with confidence. Rough numbers of towns can be estimated by returning to the cultural resource type section of this theme. Their present condition is likely to be highly variable. Many, however are in very good shape. Those towns which were by-passed by the freeway system and in which the railroad remained, will be in good shape. Those towns which lost the railroad and the freeway, but found new economic functions may also be in good shape. Those which lost their economic function as well as the railroad are likely to be financially depressed or ghost towns. Many front range rail towns have been engulfed by suburbia, like Littleton. Most mining ghost towns in the mountains have been ravaged by thieves, tourists and the last survivors who tore them down for firewood. Prairie ghost towns may be in better shape, but I am not sure. Overall, however, there should be at least 100 rail towns of sufficient quality to survey for detailed planning information.

Surveys

Formal surveys, beyond O'Rourke's report cited above, have not been done. A number of these towns have been surveyed for architecture, but the planning detail in them is likely to be weak. Again, the railroad histories, particularly Wilkins, Colorado Railroads is the best place to begin.

Data Gaps

In the railroad histories there is beginning descriptive material on many rail towns. On the other hand, there is little if any systematic cataloging and analysis of this descriptive material. Likewise there is almost no evaluation of the material or the sites themselves according to representativeness, condition, integrity, uniqueness, and so forth. This is true for the towns as wholes, as well as for subdistricts within towns and clusters or corridors of towns. The entire area is in need of study.

Future Needs

The types of studies that need to be done are many. The railroad histories need to be analyzed carefully to get basic information. The records of the railroad land companies need to be analysed. The major figures in rail planning need to be identified, and the source of their ideas and values traced to their origins. The role of the federal government in establishing the free land corridors, and therefore the locations of these towns, may also be of interest. Once the towns were established, to what extend did the railroads continue to dominate their planning? This subject should be surveyed through old town and railroad histories and oral history. Perhaps the last of the older railroaders are still alive, and they should be interviewed for oral historical accounts. Aerial photo studies may also assist in the quick survey of basic urban form information, but these should be followed up by on-the-ground analysis, and careful documentation of the town platting records. Since rail towns are the major town type in Colorado, and since we are now rebuilding them for an auto system without much knowledge of what the logic of their original layouts was, rail towns should be near the top of Colorado's town planning historical research.

Important Resources

Some of the most interesting subdistricts in the rail towns are the rail yards themselves. Particularly the narrow gauge rail systems which were unusual may have generated subdistrict, town form and town locations that were nationally unique. Also, the linking of the rail, railtown, mine, and smelter within the high mountain settings may have generated unusual planning solutions. The methods used by the railroad to cross and service the dry high plains may also have generated unique solutions to town planning location and design. The great speed with which these towns were designed, and the sometimes short life expectancy of the towns may have also given rise to a throwaway town plan, which would be an interesting historical resource. Of course, as mentioned before, the rail town is Colorado's most representative type. They are all important resources because they still form the backbone of the state. But we do not know enough to judge all the important resources that may be hidden within them.

RESEARCH QUESTIONS

*To what extent did geography determine Colorado town location and function vs. other factors?

* Did the larger national rail system pattern outside Colorado determine what went on inside the state?

* What role did personalities and situational factors play in Colorado railroad and town location?

* What are the principles of mountain rail design and planning that help determine town location and function?

* What are the "typical" Colorado towns according to economic function?

* What are "unique" towns in Colorado according to economic function and location?

* How important were rail towns in the overall

Colorado economy?

* Which unique or typical towns are best preserved and likely to remain so?

* What were the developmental stages of the non-mining rail towns?

* What did rail abandonments do to the town systems?

* Where are non-mining ghost towns?

* What stage/wagon towns were bypassed by the railroads and what was the effect?

EVALUATION STANDARDS

Physical Condition

The quality of the physical condition standard depends upon what issue one is considering "historical". If it is town location and siting, then the physical condition of the specifically rail-determined dimensions of town planning within the town are not so important. On the other hand, if it is the internal planning and economic function that is "historical" then it is important to make sure that the railroad is still functioning and that the original economic uses, that were the basis for the railroad planning the town as it did, still remain. In some cases the railroad need not still be functioning, but the major facilities still need to be there, even though they may have found new uses. Again, we need better information and analysis before these matters can be addressed with any confidence.

Representation

A number of issues relating to this topic have been discussed under "number and condition" above. Outside the mountain mining rail towns, it is unlikely that Colorado rail towns are particularly unique. They are part of a tradition that crossed the continent with the railroads in a mere half century. Most Colorado rail towns and their

functions should be rather typical of the nation as a whole. Exceptions might be those oriented to mountain terrain, mountain tourism, irrigated agriculture, ranching and other town functions that are somewhat unique to the west. The number and type of Colorado towns in each economic category have been listed above. At least two or three in each category should be studied and at least one preserved.

PERTINENT REFERENCES

Each of the regional studies and the other two specialty area studies done under this project should be reviewed for insights and bibliography. Rail towns are such a critical portion of Colorado culture that they pervade the entire society in the latter half of the 19th and early 20th centuries. I am particularly grateful to the other regional writers in this project for their kind assistance in the creation of this theme. Other references of interest follow.

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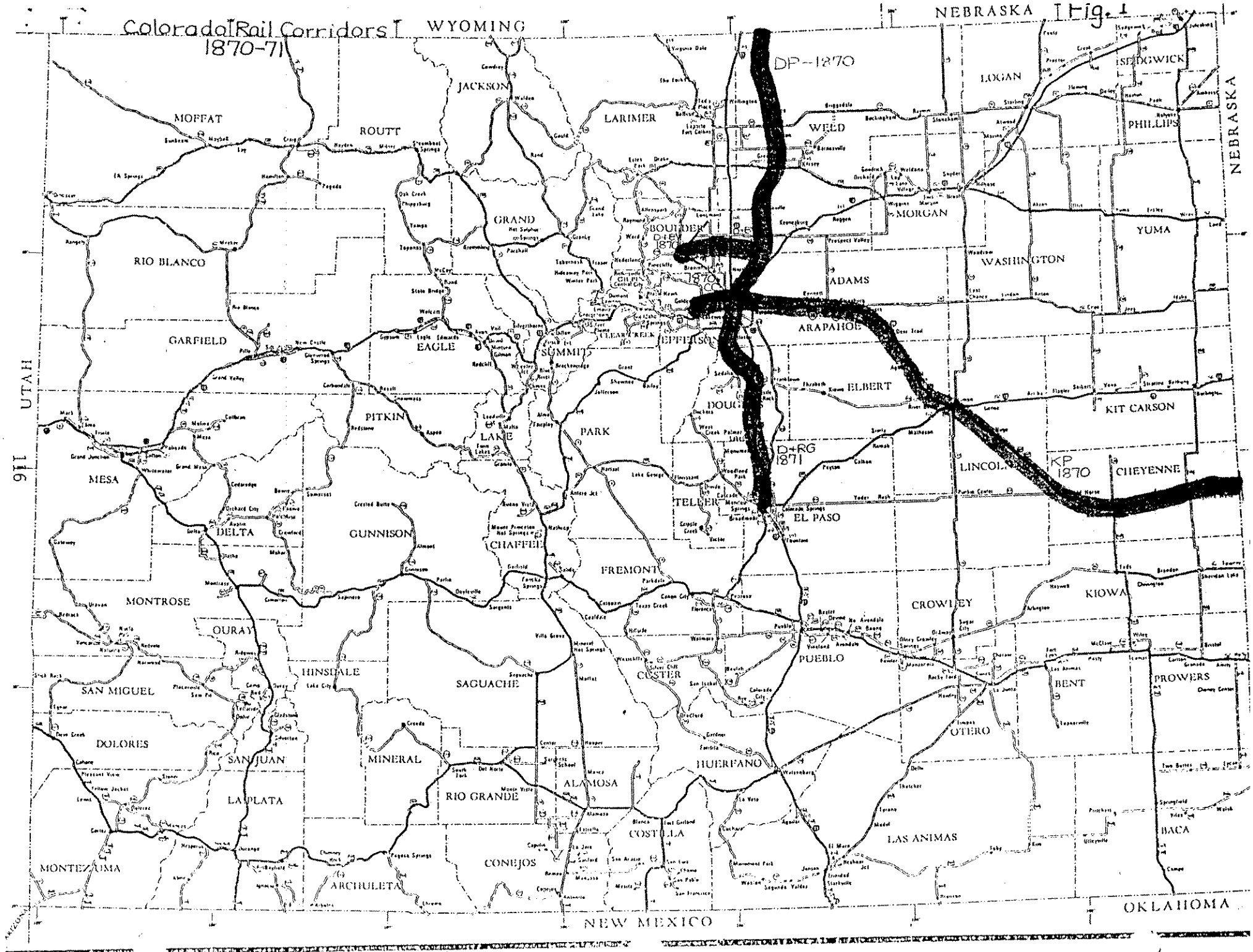
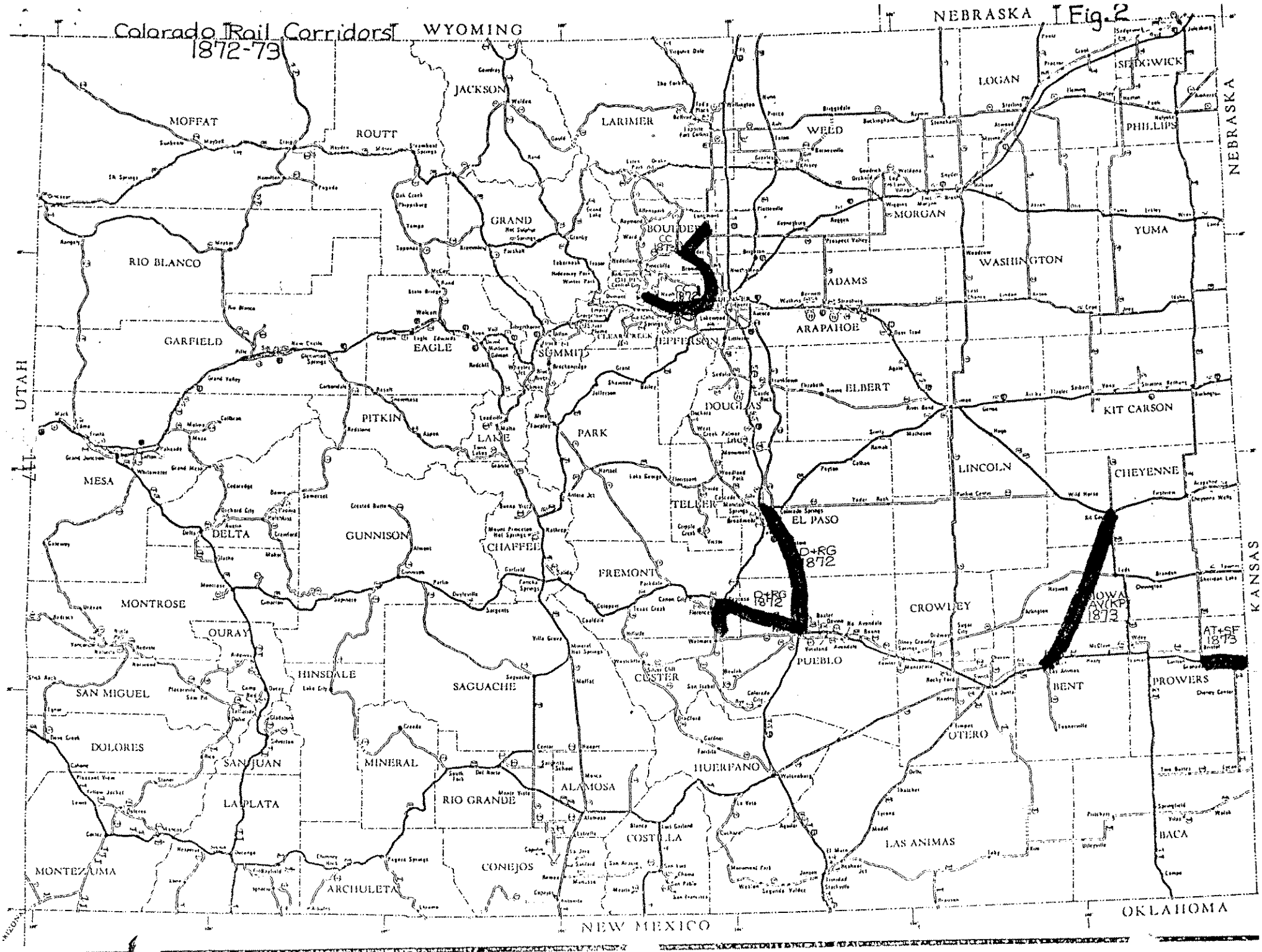
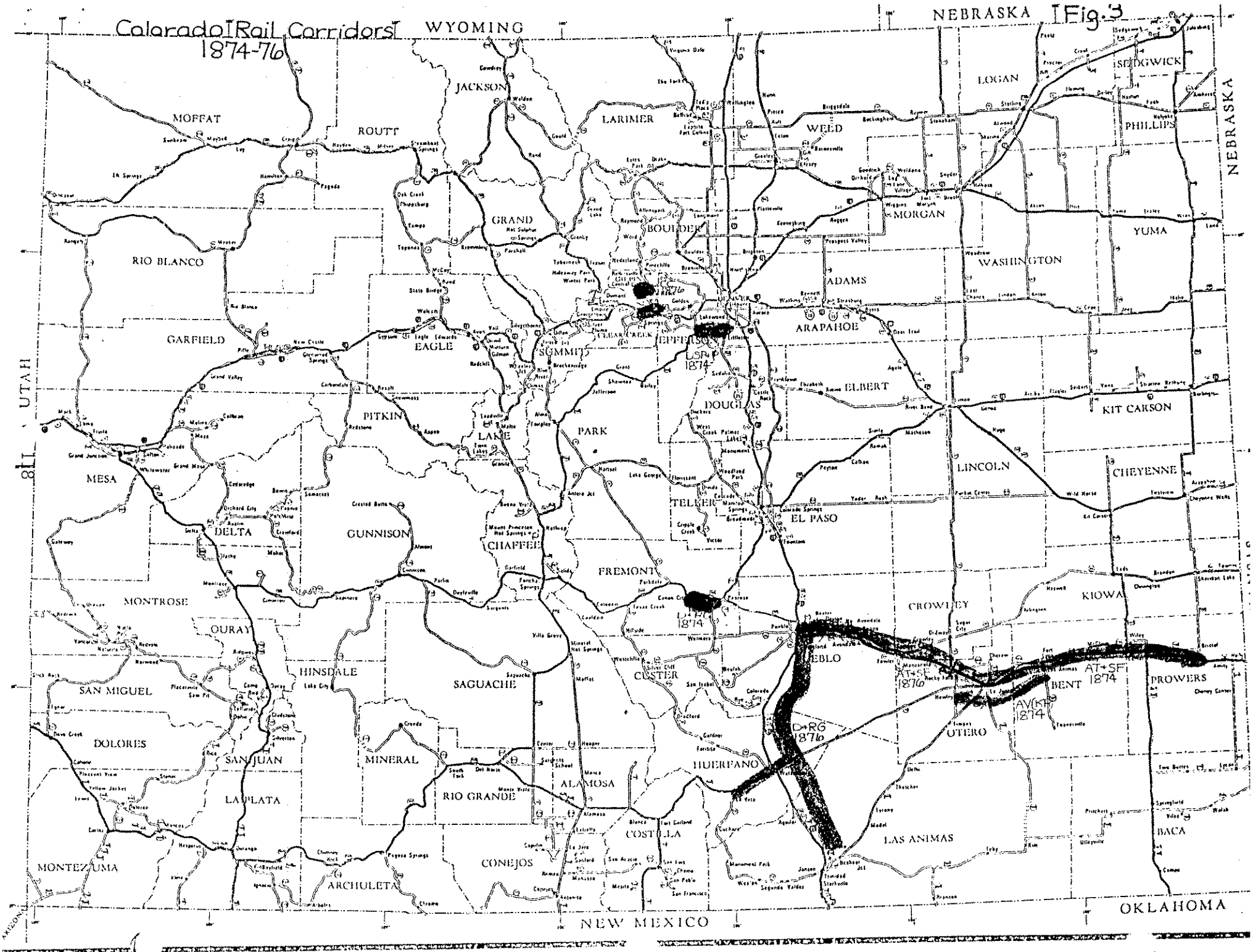
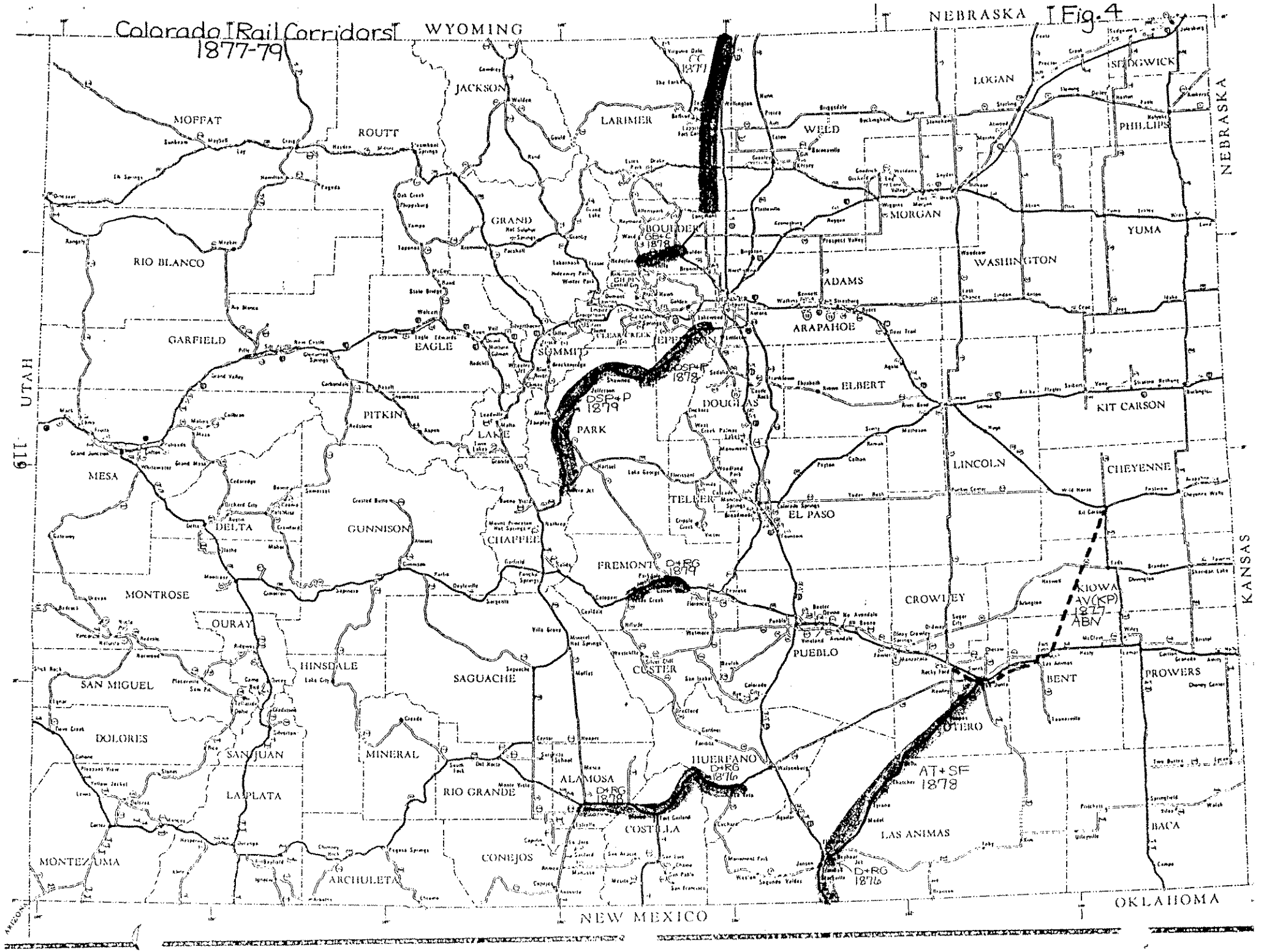
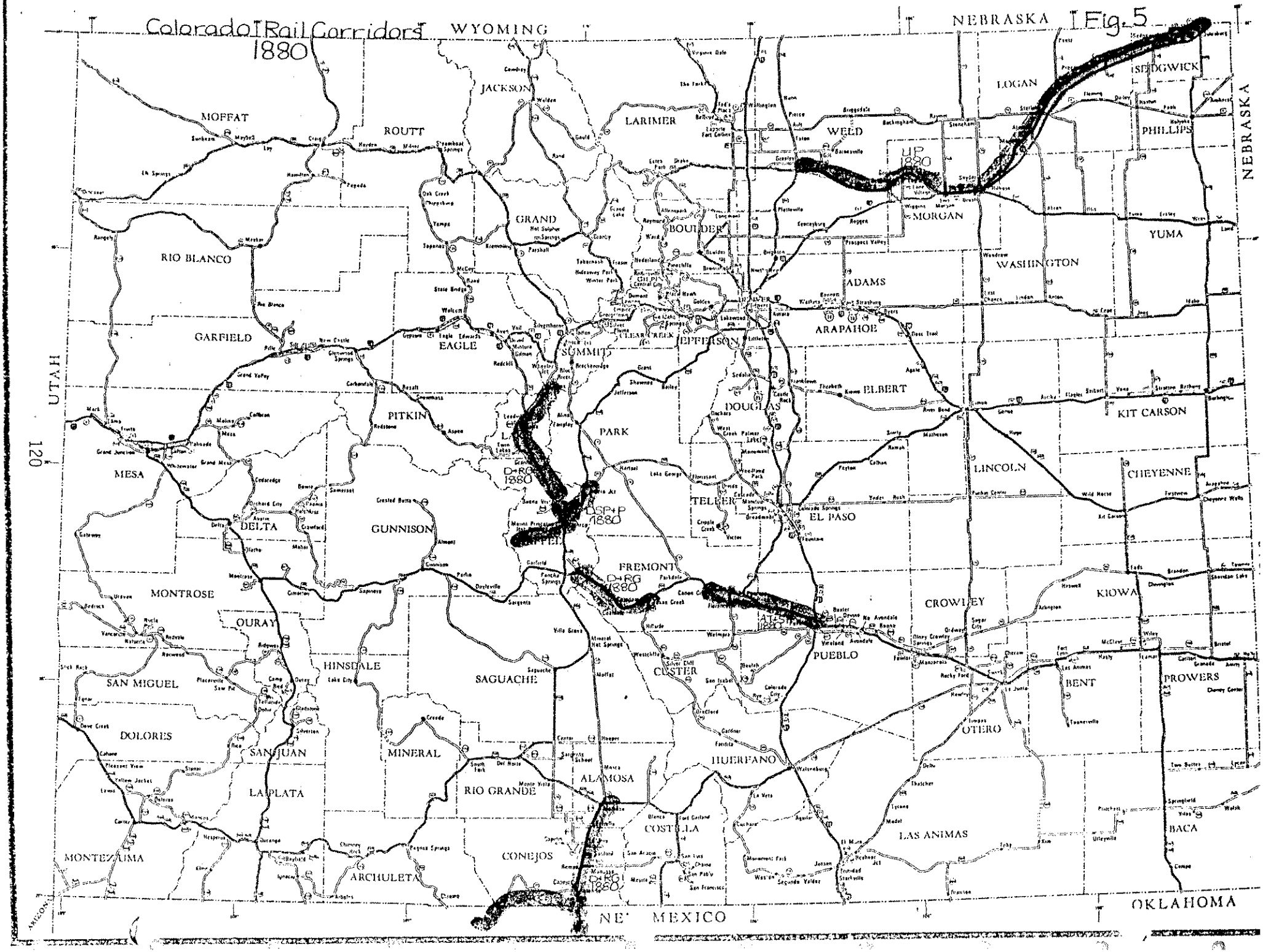
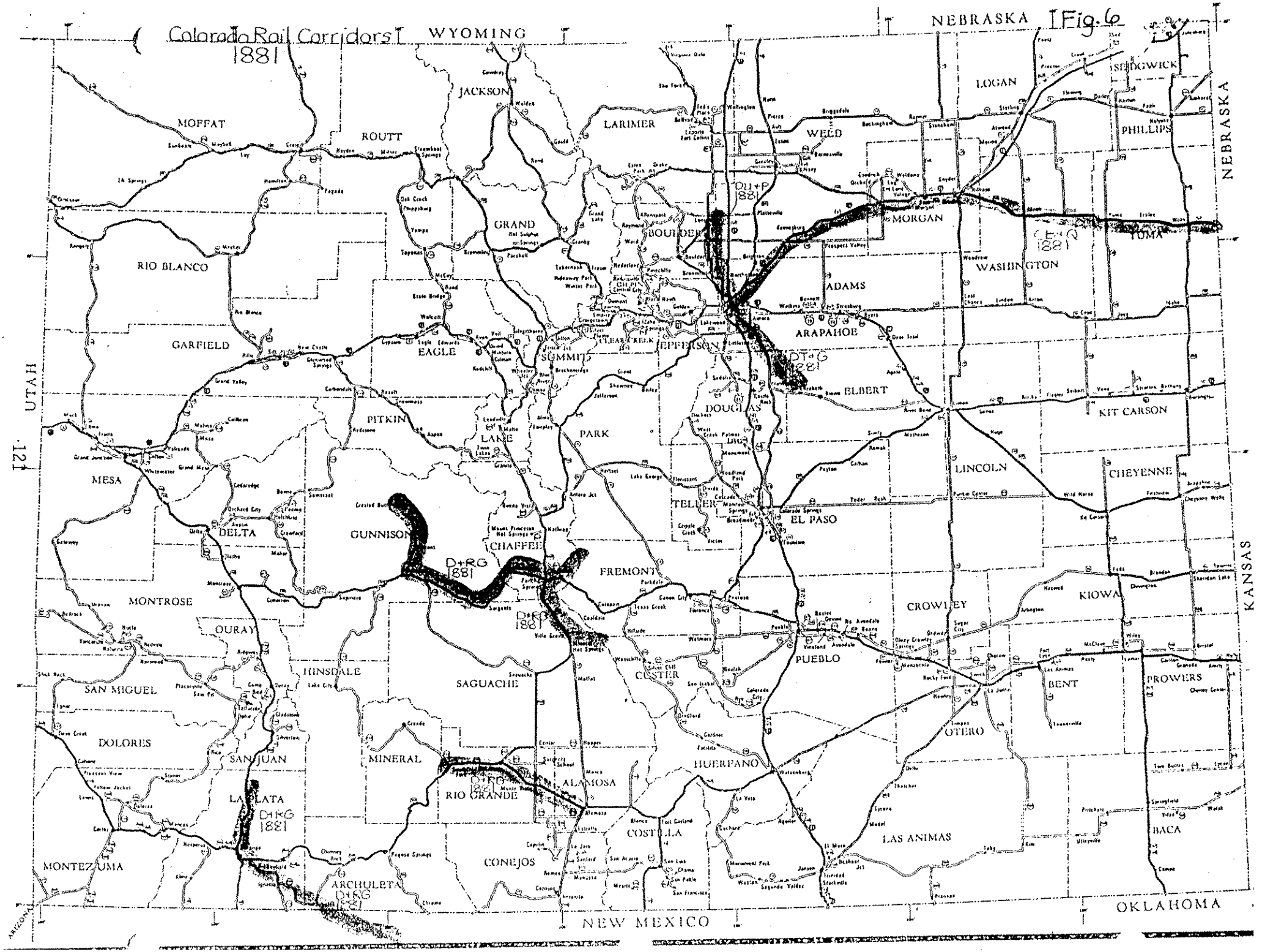

Colorado Rail Corridors
1870-71
Fig. 1
WYOMING
NEBRASKA
DP--1870
D+RG
1870
D+RG
1871
KP
1870
JACKSON
LARIMER
WELD
LOGAN
SEDGWICK
PHILLIPS
MOFFAT
ROUTT
GRAND
BOULDER
MORGAN
YUMA
RIO BLANCO
ADAMS
WASHINGTON
GARFIELD
EAGLE
SUMMIT
CLEAR CREEK
JEFFERSON
ARAPAHOE
ELBERT
KIT CARSON
PITKIN
LAKE
PARK
DOUGLAS
LINCOLN
CHEYENNE
MESA
TELLER
EL PASO
DELTA
GUNNISON
CHAFFEE
FREMONT
CROWLEY
KIOWA
MONTROSE
OURAY
PUEBLO
HINSDALE
SAGUACHE
CUSTER
BENT
PROWERS
SAN MIGUEL
DOLORES
SAN JUAN
MINERAL
HUERFANO
OTERO
LA PLATA
RIO GRANDE
ALAMOSA
COSTILLA
LAS ANIMAS
BACA
MONTEZUMA
CONEJOS
ARCHULETA
UTAH
116
NEW MEXICO
OKLAHOMA


Colorado Rail Corridors
1872-73
Fig. 2
WYOMING
NEBRASKA
UTAH
KANSAS
NEW MEXICO
OKLAHOMA
JACKSON
LARIMER
WELD
LOGAN
SEDGWICK
PHILLIPS
MOFFAT
ROUTT
GRAND
BOULDER
CC 1873
MORGAN
YUMA
RIO BLANCO
WASHINGTON
ADAMS
GARFIELD
EAGLE
SUMMIT
CLEAR CREEK
JEFFERSON
ARAPAHOE
ELBERT
KIT CARSON
PITKIN
LAKE
PARK
DOUGLAS
LINCOLN
CHEYENNE
MESA
TELLER
EL PASO
D+RG 1872
DELTA
GUNNISON
CHAFFEE
FREMONT
MONTROSE
CROWLEY
IOWA AV(KP) 1873
AT+SF 1875
OURAY
PUEBLO
HINSDALE
SAGUACHE
CUSTER
SAN MIGUEL
BENT
PROWERS
DOLORES
SAN JUAN
MINERAL
HUERFANO
OTERO
ALAMOSA
LA PLATA
RIO GRANDE
COSTILLA
LAS ANIMAS
BACA
MONTEZUMA
CONEJOS
ARCHULETA


Colorado Rail Corridors
1874-76
Fig. 3
WYOMING
NEBRASKA
UTAH
NEW MEXICO
OKLAHOMA
JACKSON
MOFFAT
ROUTT
LARIMER
WELD
LOGAN
SEDGWICK
PHILLIPS
NEBRASKA
GRAND
BOULDER
MORGAN
YUMA
RIO BLANCO
WASHINGTON
ADAMS
GARFIELD
EAGLE
SUMMIT
ARAPAHOE
ELBERT
KIT CARSON
PITKIN
LAKE
PARK
DOUGLAS
LINCOLN
CHEYENNE
MESA
TELLER
EL PASO
DELTA
GUNNISON
CHAFFEE
FREMONT
CROWLEY
KIOWA
MONTROSE
OURAY
PUEBLO
CUSTER
BENT
PROWERS
SAN MIGUEL
HINSDALE
SAGUACHE
OTERO
DOLORES
SAN JUAN
MINERAL
HUERFANO
LA PLATA
RIO GRANDE
ALAMOSA
COSTILLA
LAS ANIMAS
BACA
MONTEZUMA
CONEJOS
ARCHULETA
D&RG 1876
AT+SF 1874
AT+SF 1876
AV(KT) 1874
USP 1874


Colorado Rail Corridors
1877-79
Fig. 4
WYOMING
NEBRASKA
UTAH
KANSAS
NEW MEXICO
OKLAHOMA
ARIZONA
JACKSON
MOFFAT
ROUTT
LARIMER
WELD
LOGAN
SEDGWICK
PHILLIPS
YUMA
MORGAN
GRAND
BOULDER
CBP+C 1878
RIO BLANCO
WASHINGTON
ADAMS
GARFIELD
EAGLE
SUMMIT
CLEAR CREEK
ARAPAHOE
DSP+P 1878
DSP+P 1879
ELBERT
KIT CARSON
PITKIN
LAKE
PARK
DOUGLAS
LINCOLN
CHEYENNE
MESA
TELLER
EL PASO
DELTA
GUNNISON
CHAFFEE
FREMONT D+RG 1879
MONTROSE
CROWLEY
KIOWA
AV(KP) 1877-ABN
OURAY
PUEBLO
HINSDALE
SAGUACHE
CUSTER
SAN MIGUEL
BENT
PROWERS
DOLORES
SAN JUAN
MINERAL
HUERFANO D+RG 1876
OTERO
AT+SF 1878
LA PLATA
RIO GRANDE
ALAMOSA D+RG 1878
COSTILLA
LAS ANIMAS
BACA
MONTEZUMA
CONEJOS
ARCHULETA
D+RG 1876


Colorado Rail Corridors
1880
Fig. 5
WYOMING
NEBRASKA
UTAH
NEW MEXICO
OKLAHOMA
MOFFAT
ROUTT
JACKSON
LARIMER
WELD
LOGAN
SEDGWICK
PHILLIPS
YUMA
MORGAN
WASHINGTON
ADAMS
ARAPAHOE
GRAND
BOULDER
RIO BLANCO
GARFIELD
EAGLE
SUMMIT
CLEAR CREEK
JEFFERSON
ELBERT
KIT CARSON
DOUGLAS
PARK
PITKIN
LINCOLN
CHEYENNE
MESA
TELLER
EL PASO
DELTA
GUNNISON
FREMONT
MONTROSE
CROWLEY
KIOWA
OURAY
PUEBLO
HINSDALE
SAGUACHE
CUSTER
SAN MIGUEL
BENT
PROWERS
DOLORES
SAN JUAN
MINERAL
HUERFANO
OTERO
LA PLATA
RIO GRANDE
ALAMOSA
COSTILLA
LAS ANIMAS
BACA
MONTEZUMA
CONEJOS
ARCHULETA
UP 1880
D&RG 1880
DSP&P 1880
ATSF 1885
120


Colorado Rail Corridors 1881
Fig. 6
WYOMING
NEBRASKA
UTAH
NEW MEXICO
OKLAHOMA
KANSAS
JACKSON
LARIMER
WELD
LOGAN
SEDGWICK
PHILLIPS
MOFFAT
ROUTT
GRAND
BOULDER
D+P 1881
MORGAN
YUMA
RIO BLANCO
WASHINGTON
ADAMS
ARAPAHOE
GARFIELD
EAGLE
SUMMIT
CLEAR CREEK
JEFFERSON
D+G 1881
ELBERT
KIT CARSON
PITKIN
LAKE
PARK
DOUGLAS
LINCOLN
CHEYENNE
MESA
TELLER
EL PASO
DELTA
GUNNISON
CHAFFEE
D+RG 1881
FREMONT
MONTROSE
CROWLEY
KIOWA
OURAY
D+RG 1881
PUEBLO
HINSDALE
SAGUACHE
CUSTER
BENT
PROWERS
SAN MIGUEL
DOLORES
SAN JUAN
MINERAL
RIO GRANDE
D+RG 1881
ALAMOSA
HUERFANO
OTERO
LA PLATA
D+RG 1881
COSTILLA
LAS ANIMAS
BACA
MONTEZUMA
CONEJOS
ARCHULETA
D+RG 1881

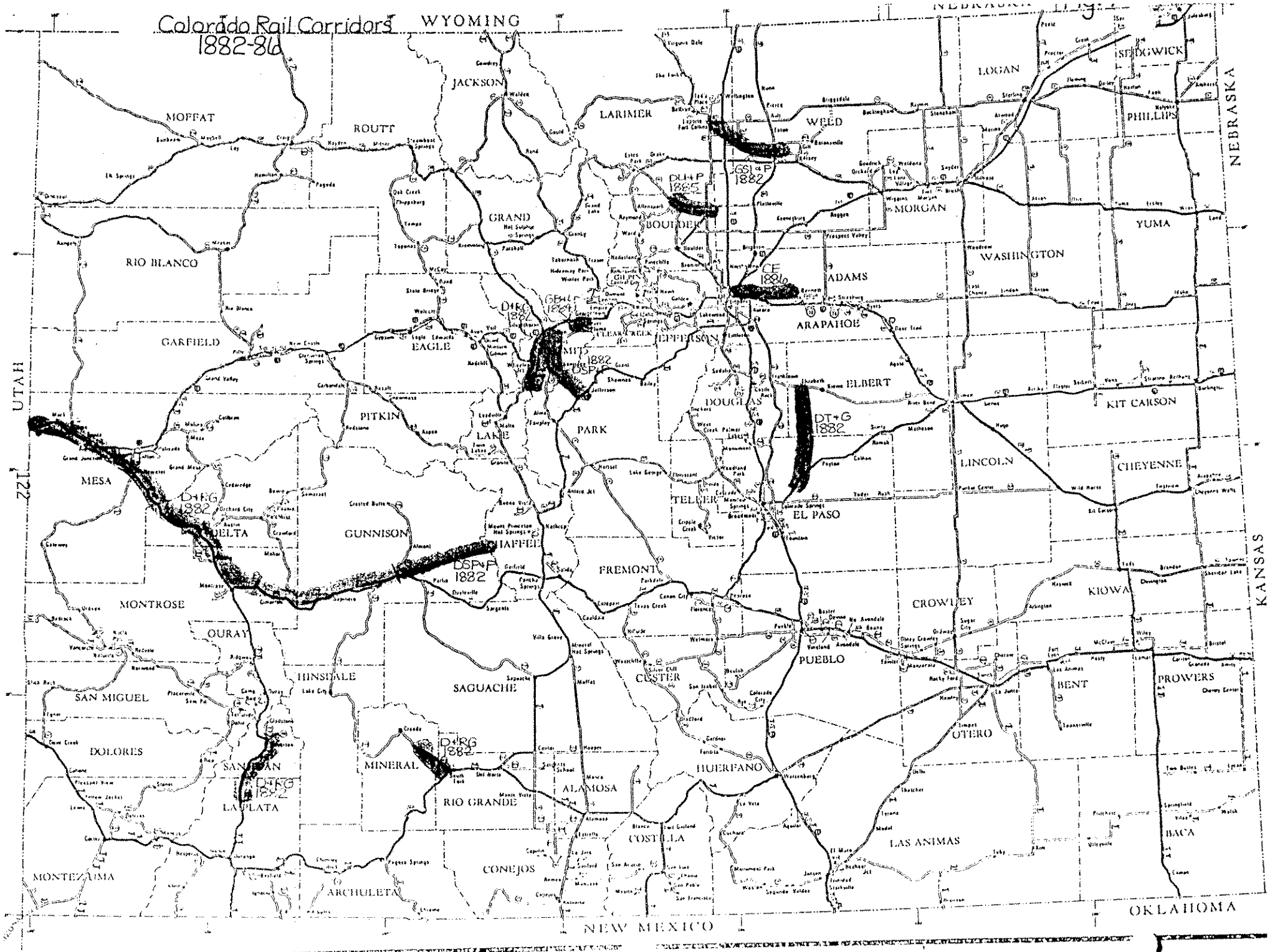
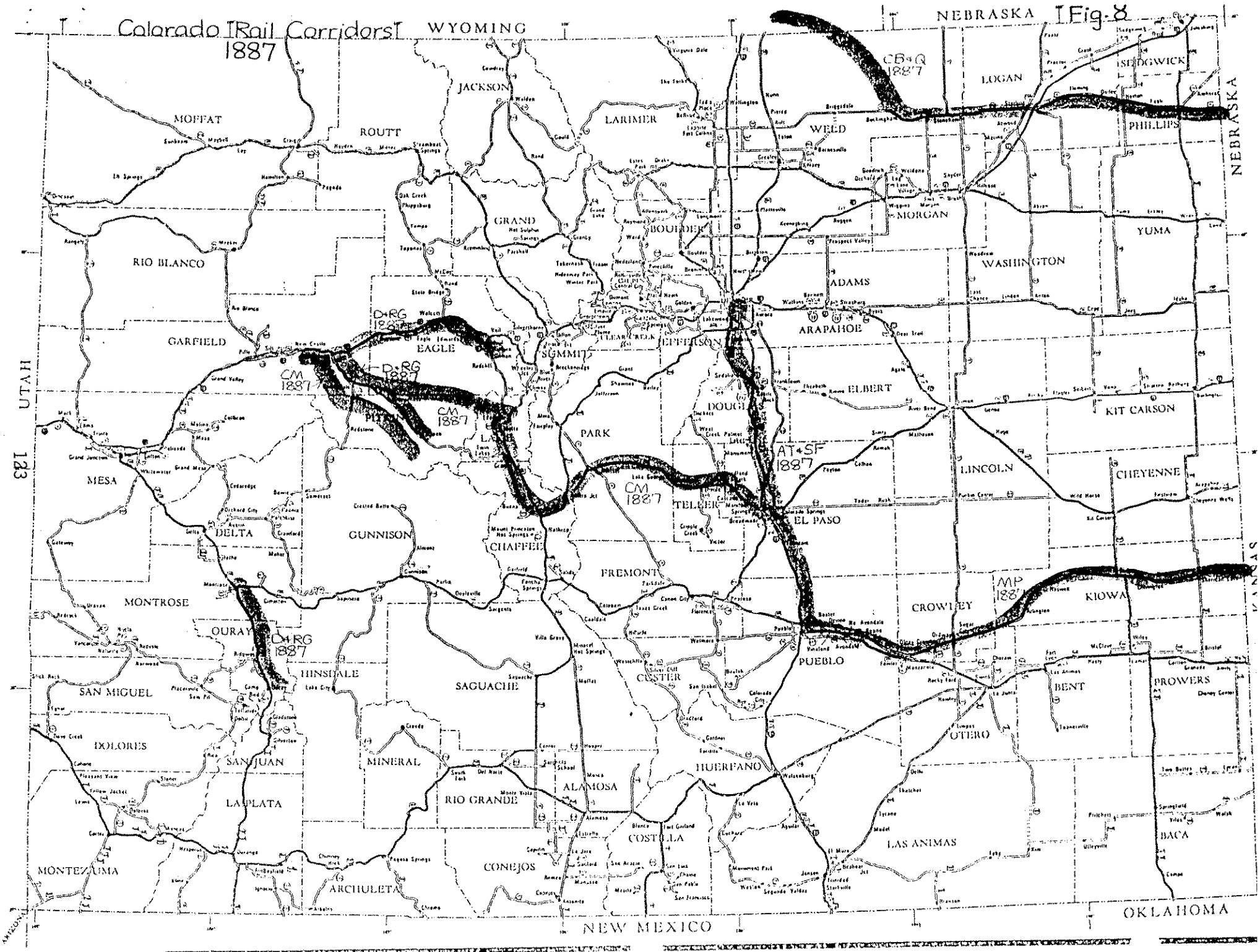
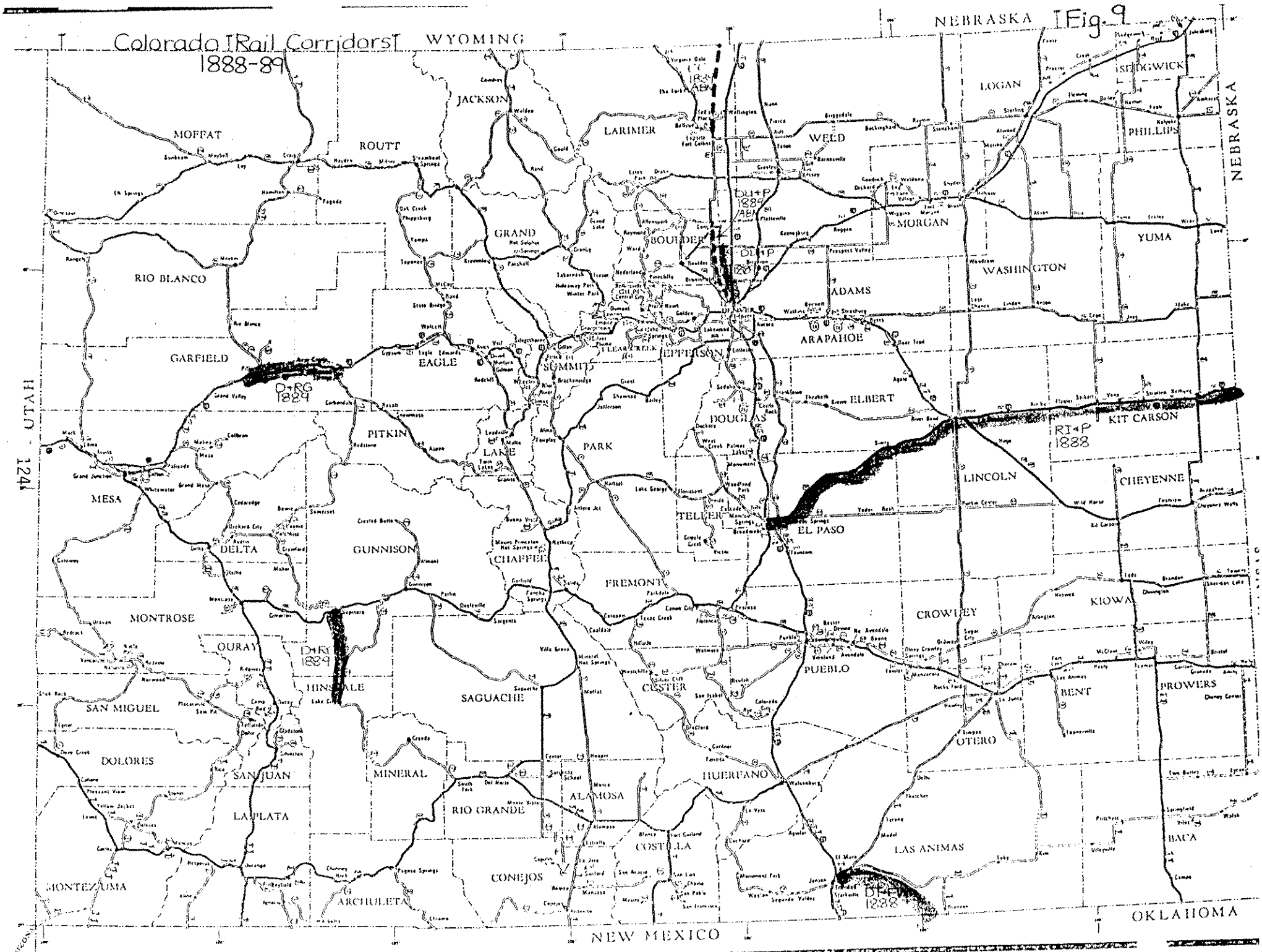
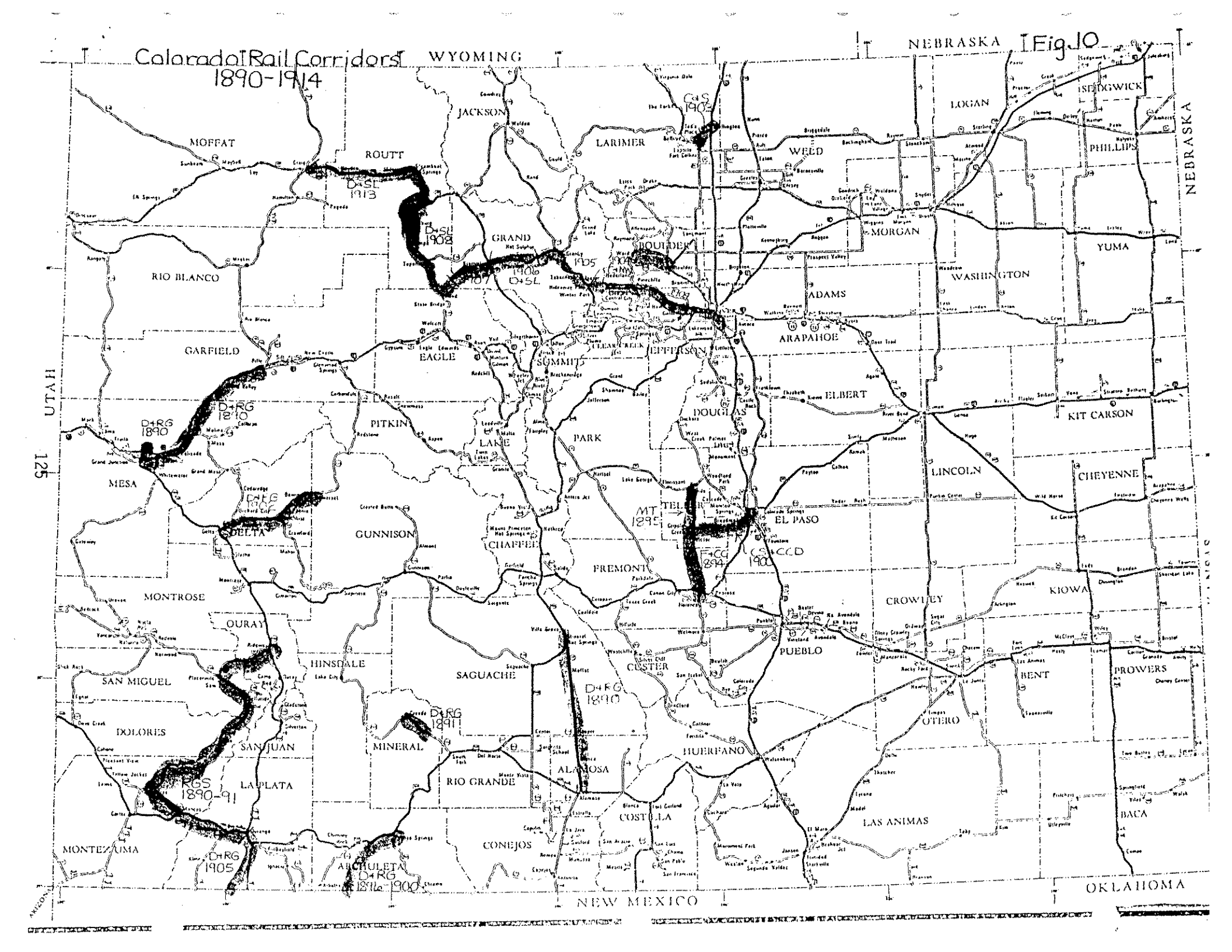
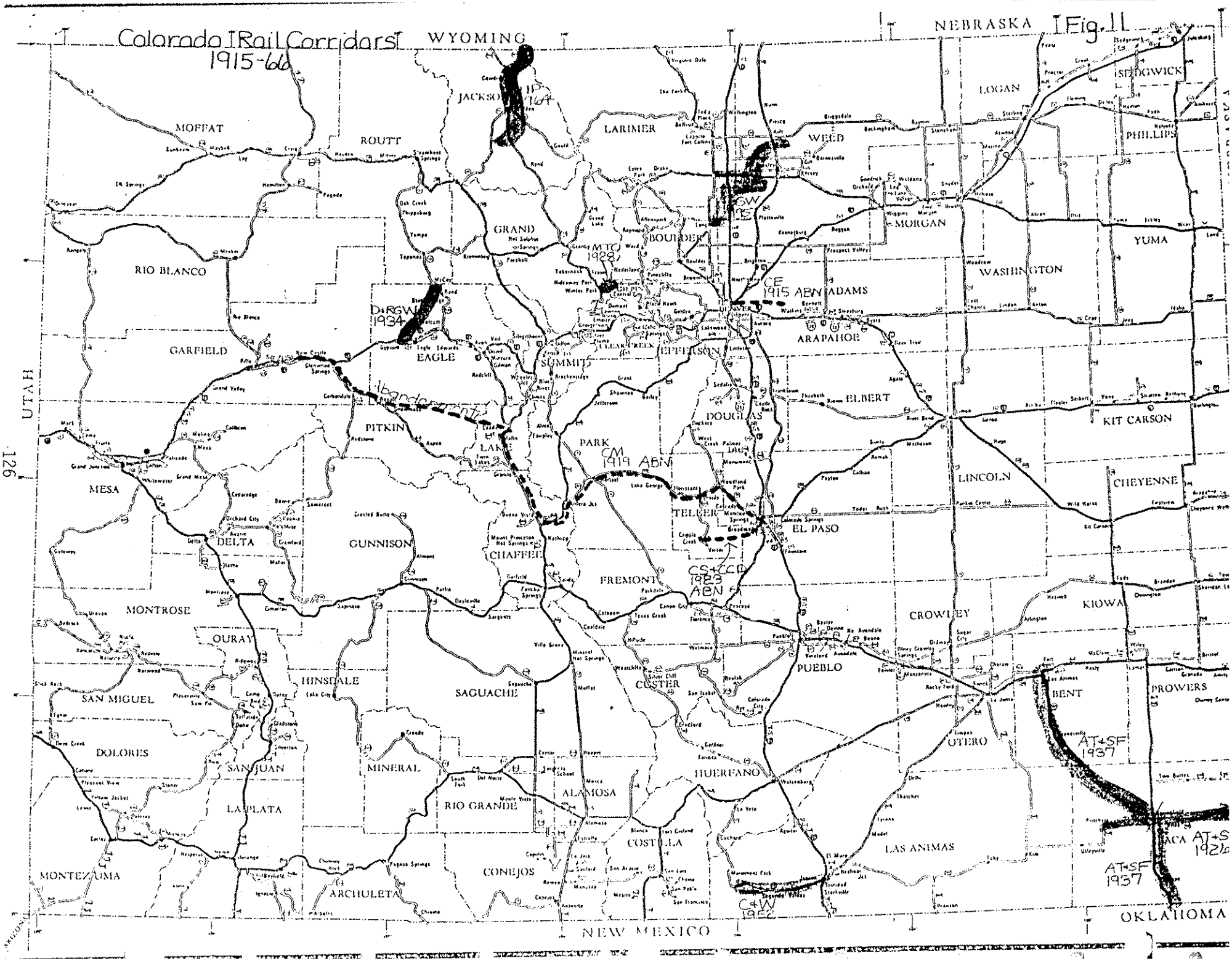


EXHIBIT 2 FEDERAL AID SYSTEMS


Colorado Rail Corridors 1887
Fig-8
WYOMING
NEBRASKA
UTAH
NEW MEXICO
OKLAHOMA
123
CB+Q 1887
D+RG 1887
CM 1887
AT+SF 1887
MP 1887
MOFFAT
ROUTT
JACKSON
LARIMER
WELD
LOGAN
SEDGWICK
PHILLIPS
RIO BLANCO
GRAND
BOULDER
MORGAN
YUMA
GARFIELD
EAGLE
SUMMIT
JEFFERSON
ADAMS
WASHINGTON
ARAPAHOE
ELBERT
KIT CARSON
PARK
DOUGLAS
LINCOLN
CHEYENNE
MESA
DELTA
GUNNISON
CHAFFEE
TELLER
EL PASO
FREMONT
MONTROSE
OURAY
CROWLEY
KIOWA
PUEBLO
SAN MIGUEL
HINSDALE
SAGUACHE
CUSTER
BENT
PROWERS
DOLORES
SAN JUAN
MINERAL
HUERFANO
OTERO
LA PLATA
RIO GRANDE
ALAMOSA
COSTILLA
LAS ANIMAS
BACA
MONTEZUMA
ARCHULETA
CONEJOS


Colorado Rail Corridors
1888-89
Fig. 9
WYOMING
NEBRASKA
NEBRASKA
UTAH
NEW MEXICO
OKLAHOMA
JACKSON
LARIMER
WELD
LOGAN
SEDGWICK
PHILLIPS
MOFFAT
ROUTT
GRAND
BOULDER
MORGAN
YUMA
RIO BLANCO
ADAMS
WASHINGTON
GARFIELD
EAGLE
SUMMIT
JEFFERSON
ARAPAHOE
CLEAR CREEK
ELBERT
KIT CARSON
PITKIN
LAKE
PARK
DOUGLAS
LINCOLN
CHEYENNE
MESA
TELLER
EL PASO
DELTA
GUNNISON
CHAFFEE
FREMONT
MONTROSE
CROWLEY
KIOWA
OURAY
HINSDALE
SAGUACHE
CUSTER
PUEBLO
PROWERS
BENT
SAN MIGUEL
OTERO
DOLORES
SAN JUAN
MINERAL
HUERFANO
LA PLATA
RIO GRANDE
ALAMOSA
COSTILLA
LAS ANIMAS
BACA
MONTEZUMA
CONEJOS
ARCHULETA
D&RG 1889
D&RG 1824
D&RG 1888
RI&P 1888
D&RG 1888
D&RG 1888
D&RG 1888


Colorado Rail Corridors
1890-1914
Fig 10
WYOMING
NEBRASKA
UTAH
NEW MEXICO
OKLAHOMA
JACKSON
MOFFAT
ROUTT
LARIMER
WELD
LOGAN
SEDGWICK
PHILLIPS
YUMA
MORGAN
WASHINGTON
ADAMS
ARAPAHOE
RIO BLANCO
GARFIELD
EAGLE
GRAND
BOULDER
CLEAR CREEK
JEFFERSON
SUMMIT
ELBERT
KIT CARSON
LINCOLN
CHEYENNE
PITKIN
LAKE
PARK
DOUGLAS
TELLER
EL PASO
MESA
DELTA
GUNNISON
CHAFFEE
FREMONT
CROWLEY
KIOWA
MONTROSE
OURAY
HINSDALE
SAGUACHE
CUSTER
PUEBLO
BENT
PROWERS
SAN MIGUEL
DOLORES
SAN JUAN
MINERAL
HUERFANO
OTERO
LA PLATA
RIO GRANDE
ALAMOSA
COSTILLA
LAS ANIMAS
BACA
MONTEZUMA
CONEJOS
ARCHULETA
D&SL 1913
D&SL 1908
D&SL 1906
D&RG 1890
D&RG 1910
D&RG 1907
MT 1895
FCG 1894
CS&CCD 1900
D&RG 1890
D&RG 1891
RGS 1890-91
D&RG 1905
D&RG 1891-1900
C&S 1902


Colorado Rail Corridors
1915-66
Fig. 1
WYOMING
NEBRASKA
UTAH
NEW MEXICO
OKLAHOMA
JACKSON
MOFFAT
ROUTT
LARIMER
WELD
LOGAN
SEDGWICK
PHILLIPS
MORGAN
YUMA
GRAND
BOULDER
RIO BLANCO
D&RGW 1934
MTO 1928
CE 1915 ABN
ADAMS
WASHINGTON
ARAPAHOE
GARFIELD
EAGLE
CLEAR CREEK
JEFFERSON
SUMMIT
Abandonment
ELBERT
KIT CARSON
PITKIN
LAKE
PARK
DOUGLAS
CM 1919 ABN
LINCOLN
CHEYENNE
MESA
TELLER
EL PASO
DELTA
GUNNISON
CHAFFEE
FREMONT
CS+CC 1923 ABN
MONTROSE
CROWLEY
KIOWA
OURAY
PUEBLO
HINSDALE
SAGUACHE
CUSTER
BENT
PROWERS
SAN MIGUEL
DOLORES
SAN JUAN
MINERAL
HUERFANO
OTERO
AT+SF 1937
LA PLATA
RIO GRANDE
ALAMOSA
COSTILLA
LAS ANIMAS
MONTEZUMA
CONEJOS
ARCHULETA
C+W 1942
AT+SF 1937

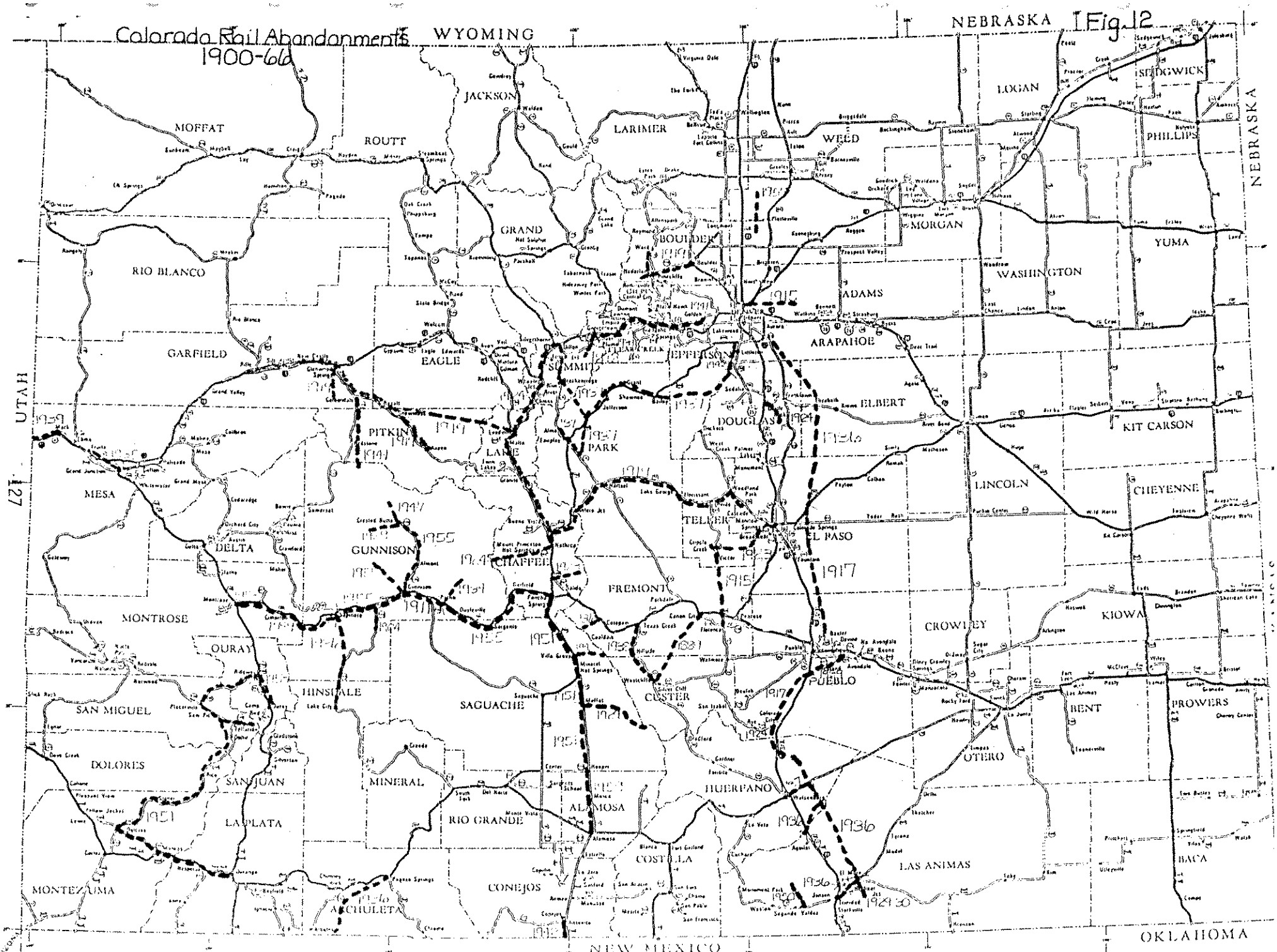


EXHIBIT 2 FEDERAL AID SYSTEMS

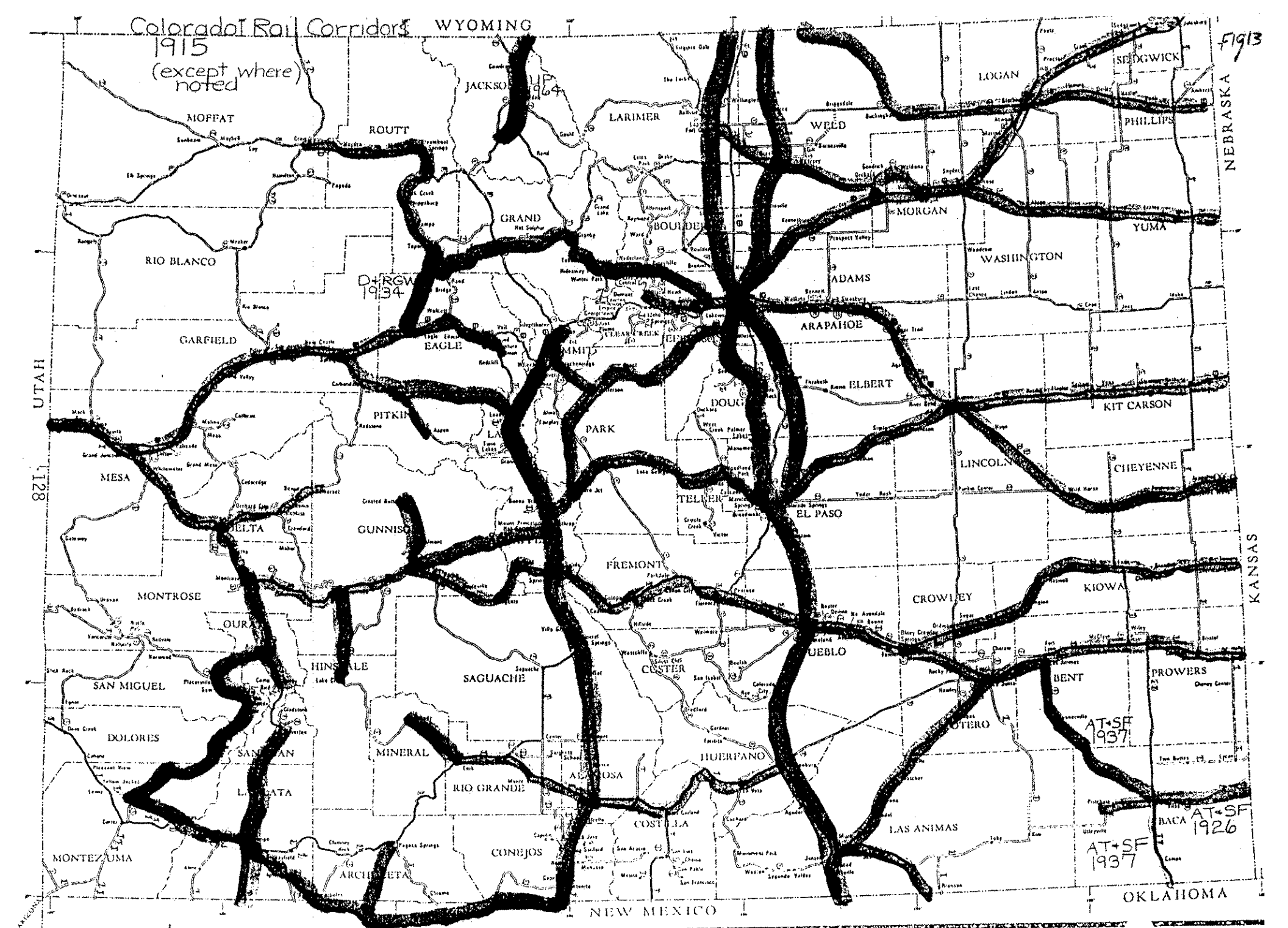


EXHIBIT 2 FEDERAL AID SYSTEMS

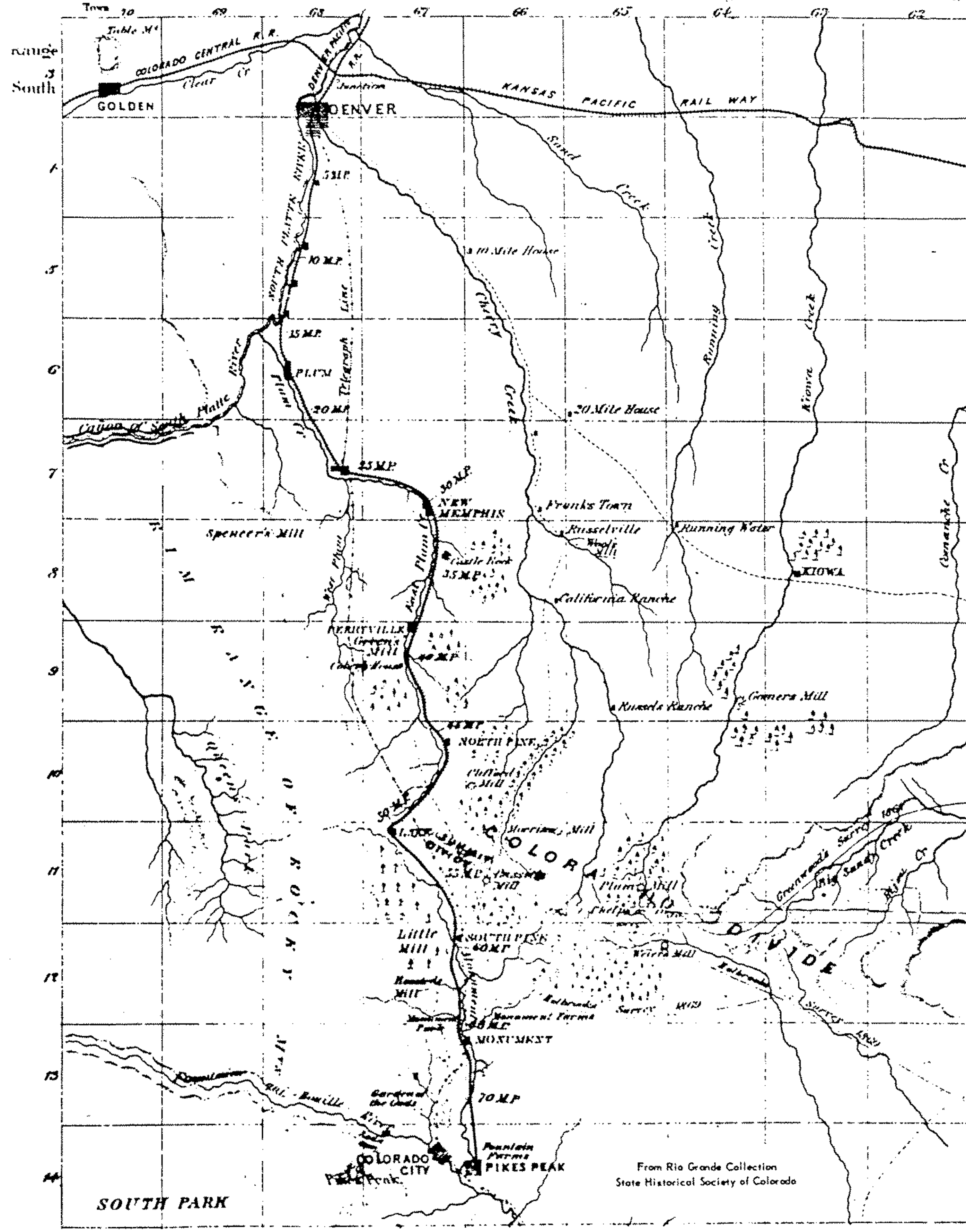
FIG. 14

1871 MAP OF THE

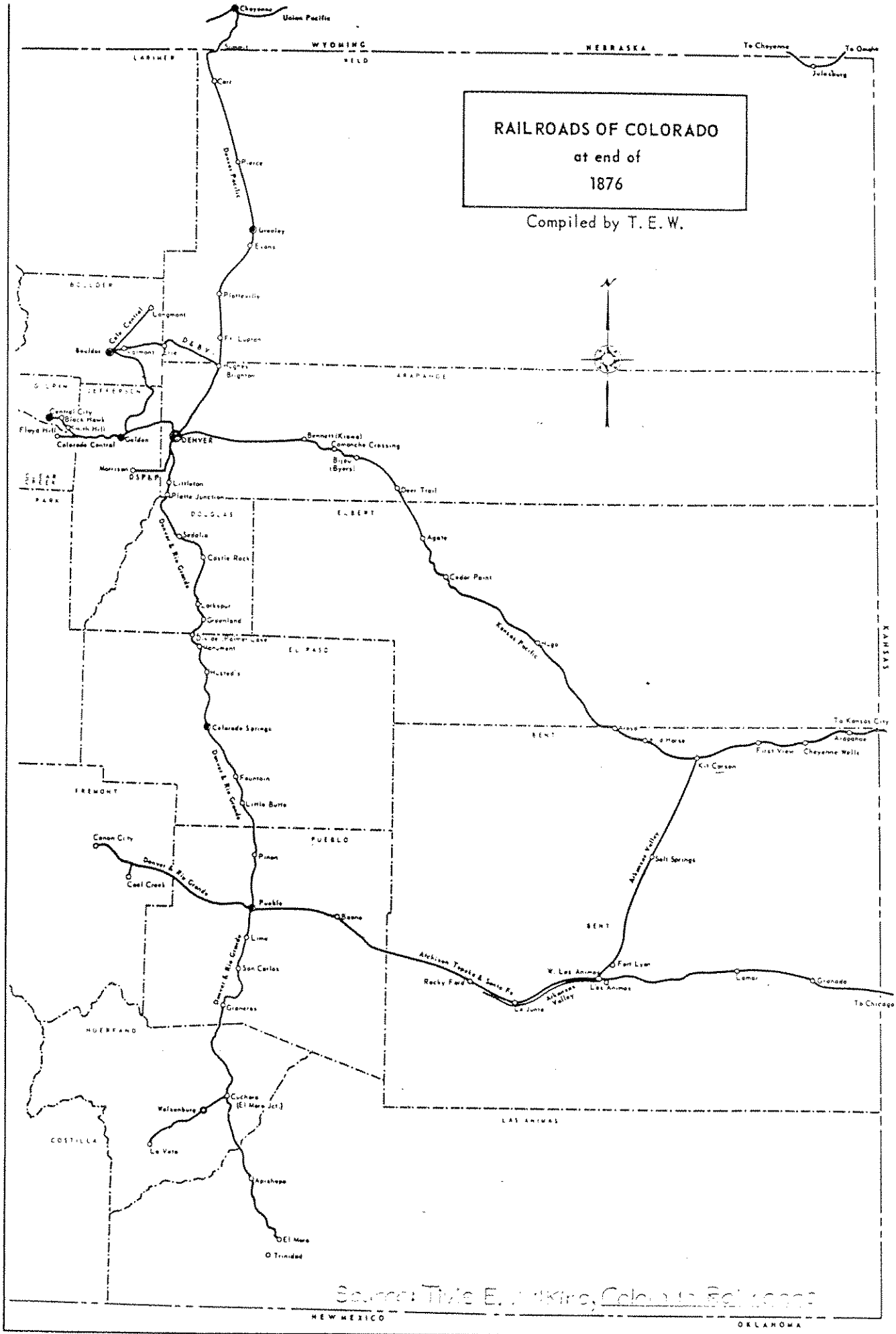
DENVER AND RIO GRANDE RAILWAY

Scale One inch Six Miles

W. J. Palmer, Prest. Robt. H. Lamborn, V. Prest. W. H. Greenwood, Genl. Manager. J. P. Meserean, Ch. Eng.

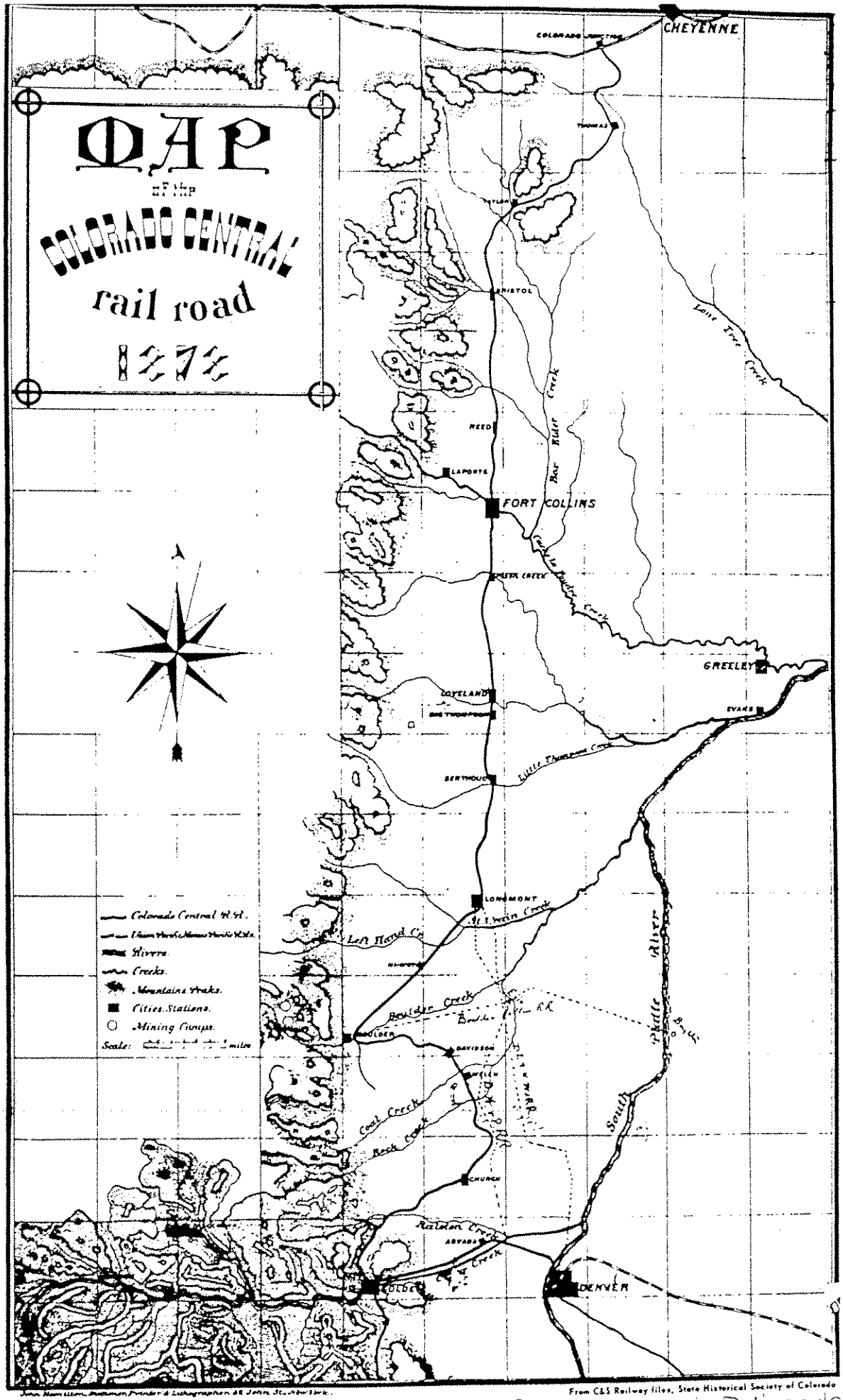


Source: Tivis E. Wilkins, Colorado Railroads



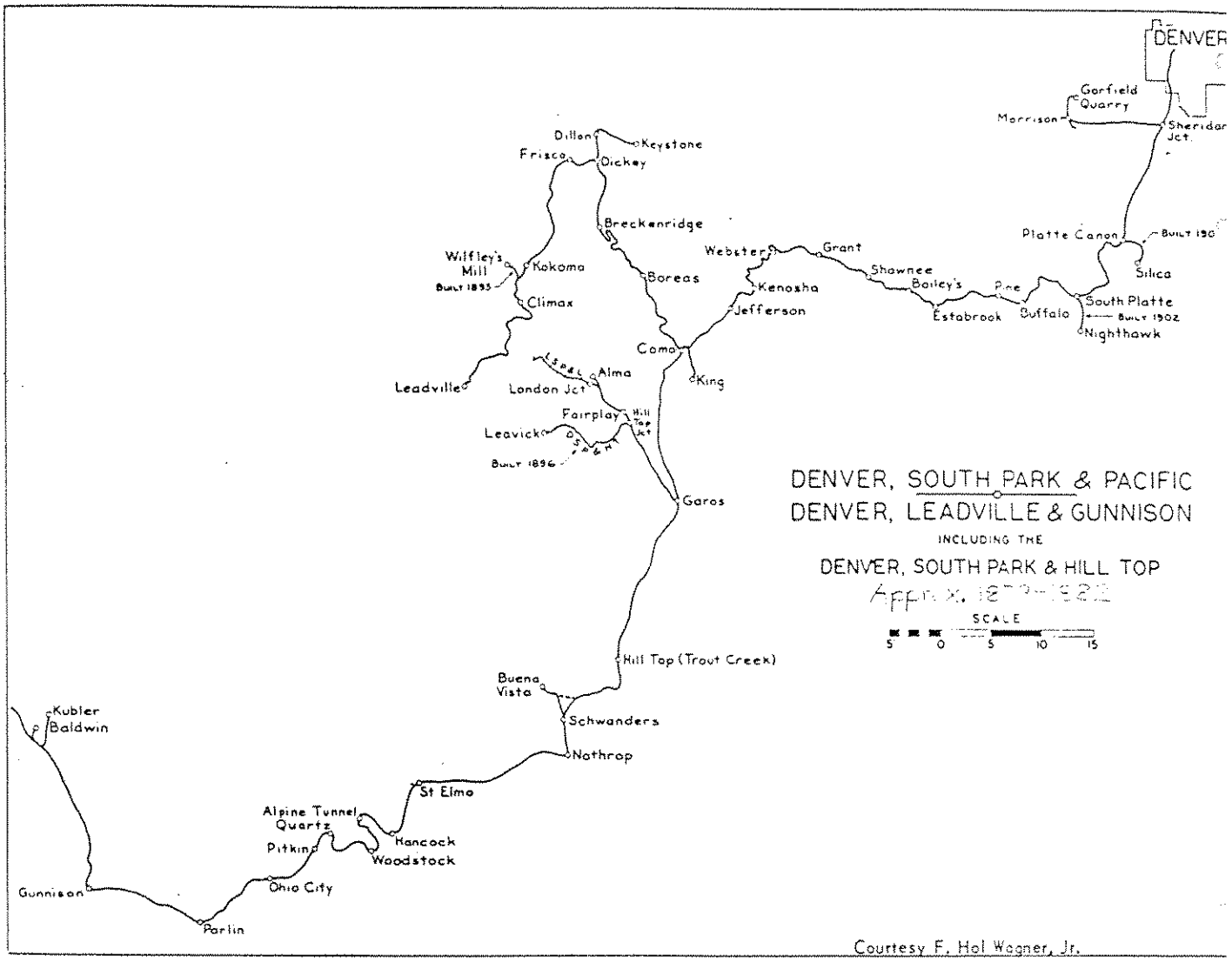
Source: Tivis E. Wilkins, Colorado Railroads

FIG. 1



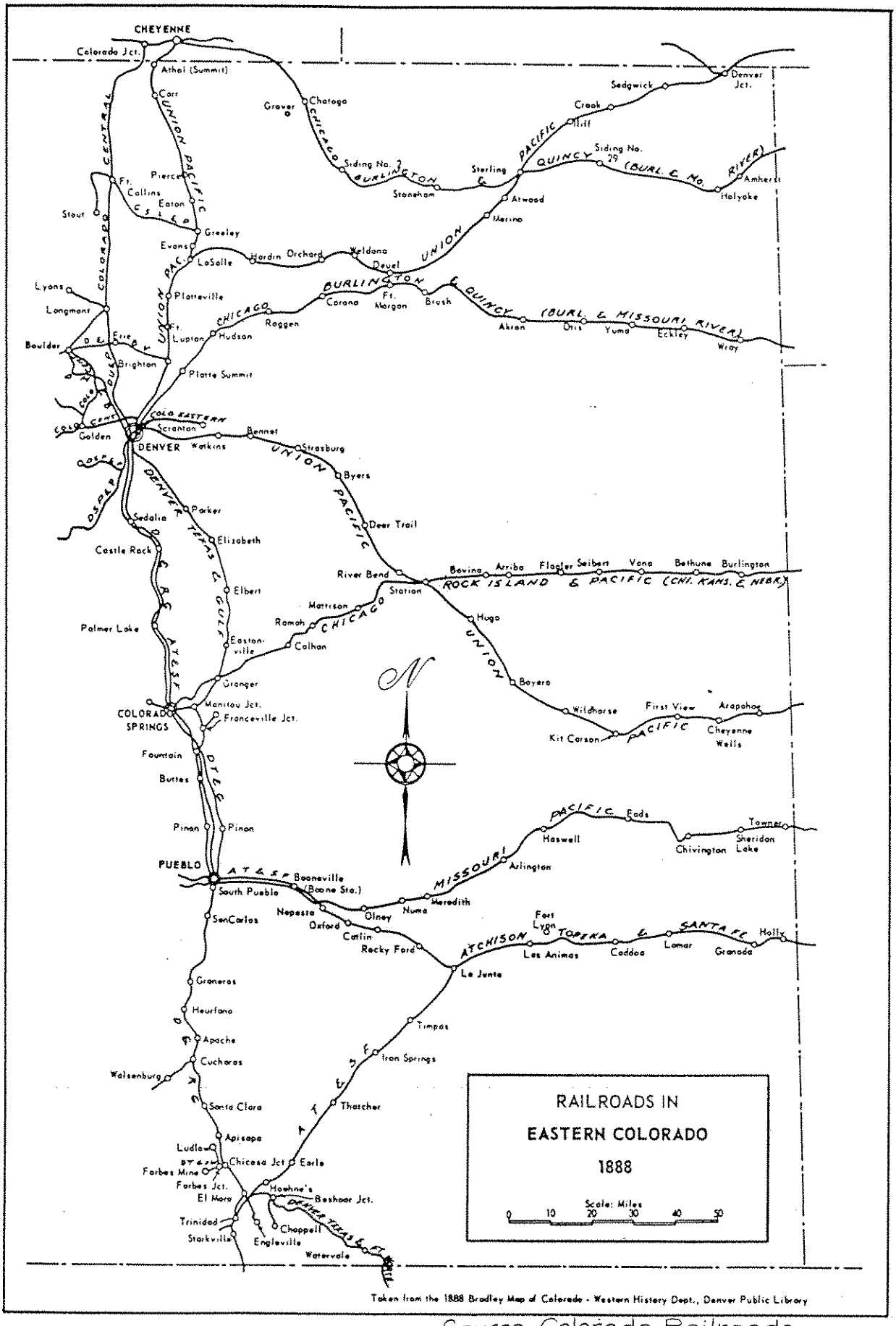
From C&S Railway files, State Historical Society of Colorado

Source: Colorado Railroads



Map of the DSP&P.— (Courtesy of F. Hol Wagner, Jr.)

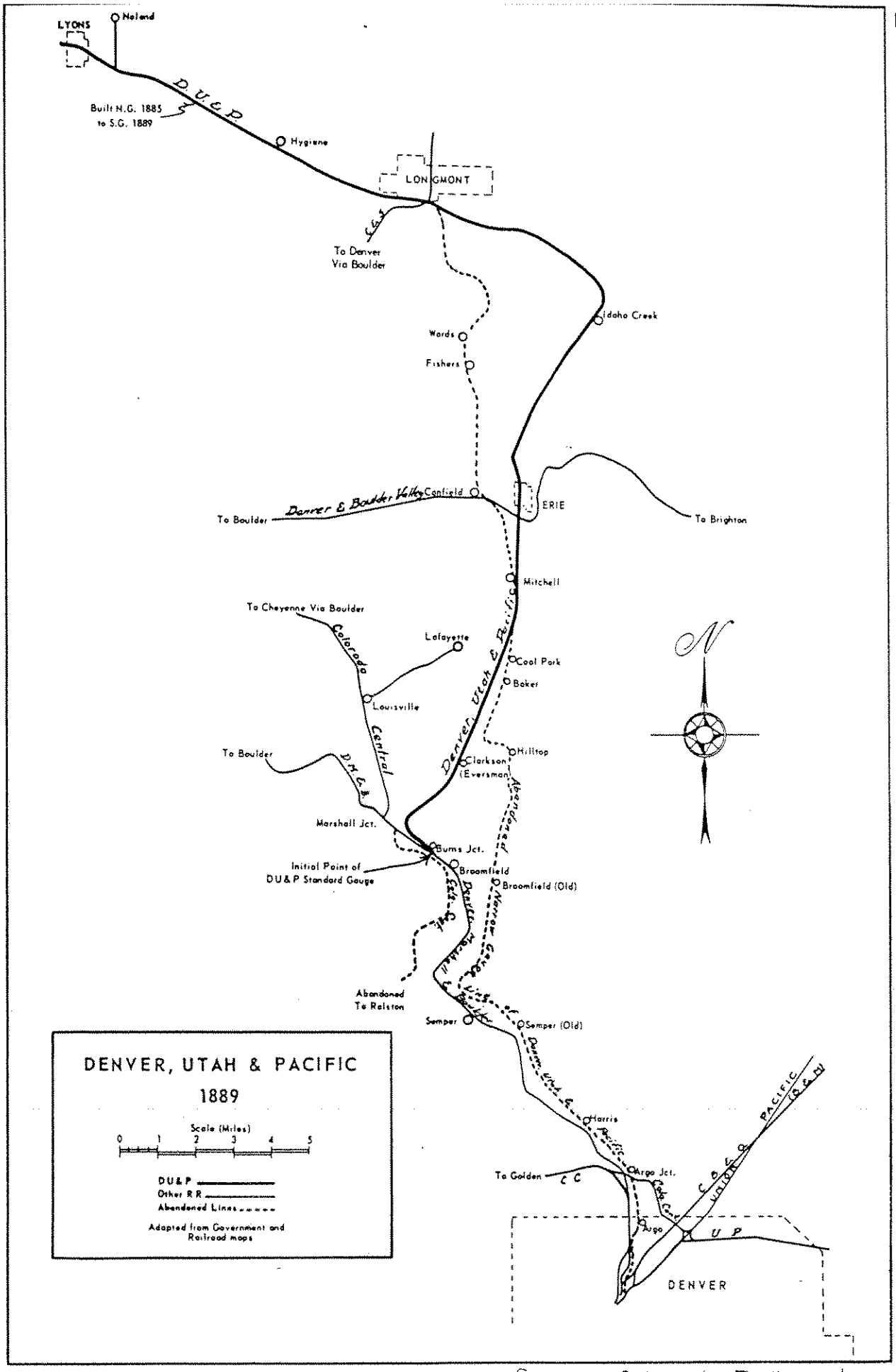
Source: Colorado Railroads



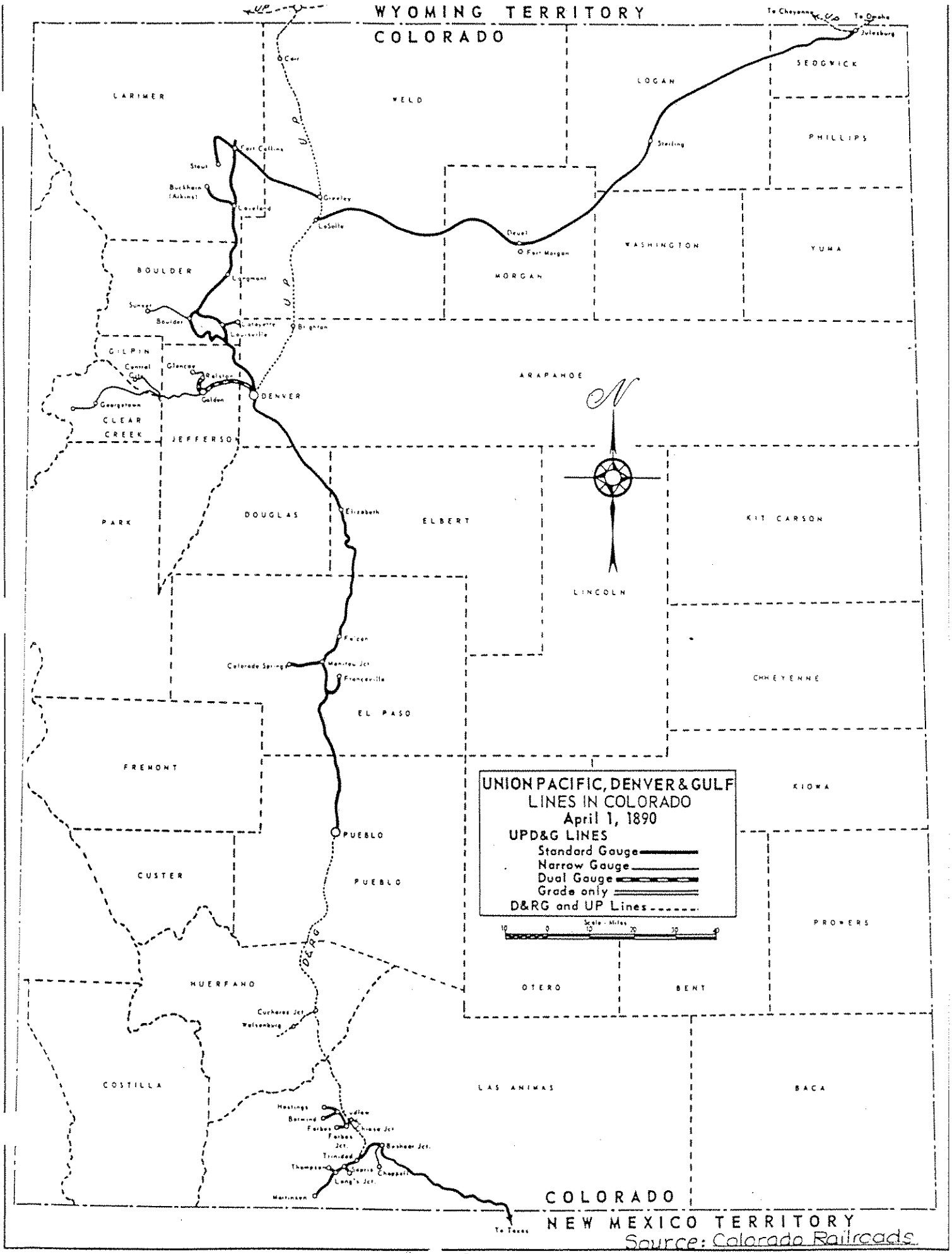
Taken from the 1888 Bradley Map of Colorado - Western History Dept., Denver Public Library

Source: Colorado Railroads

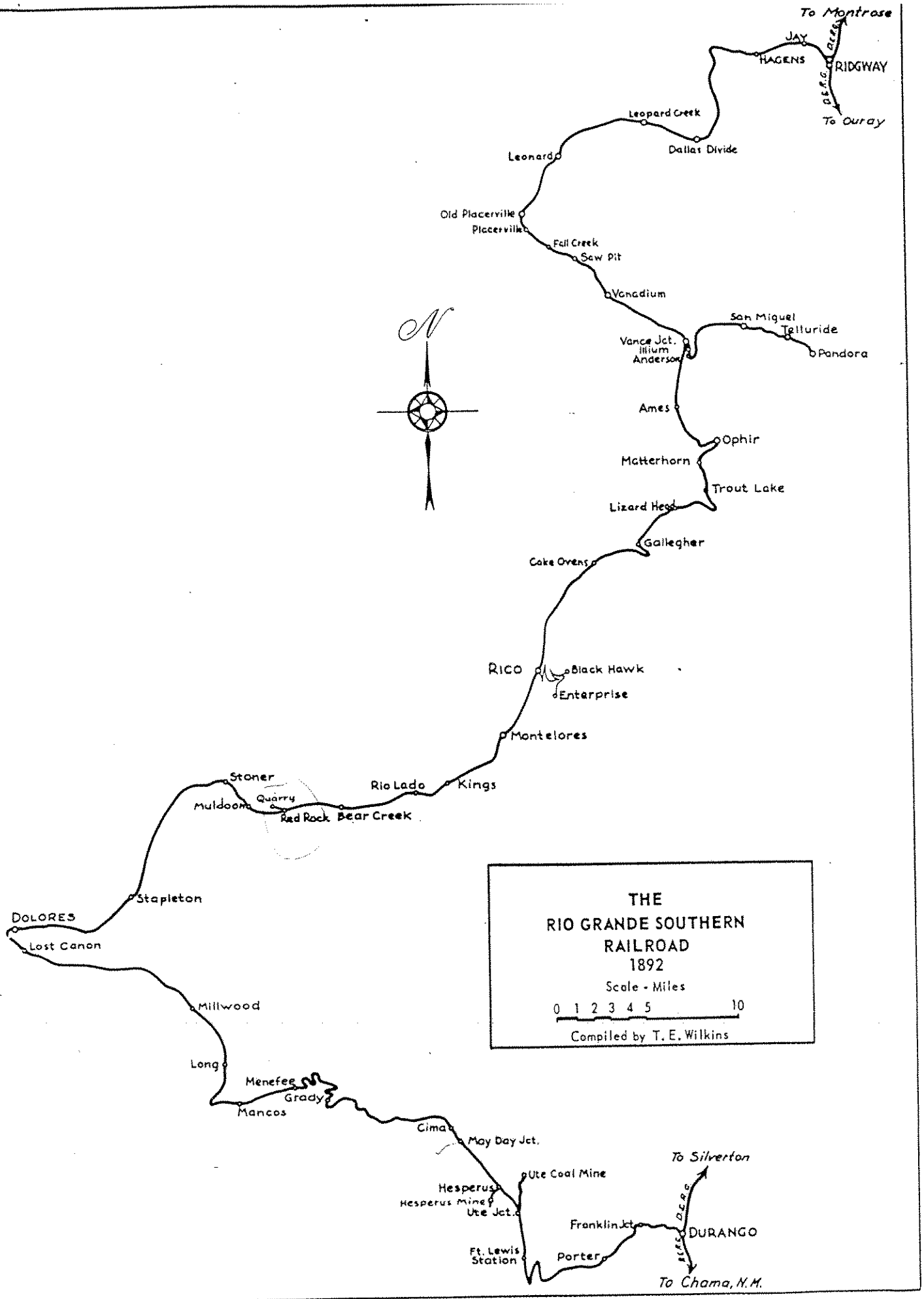
FIG. 19



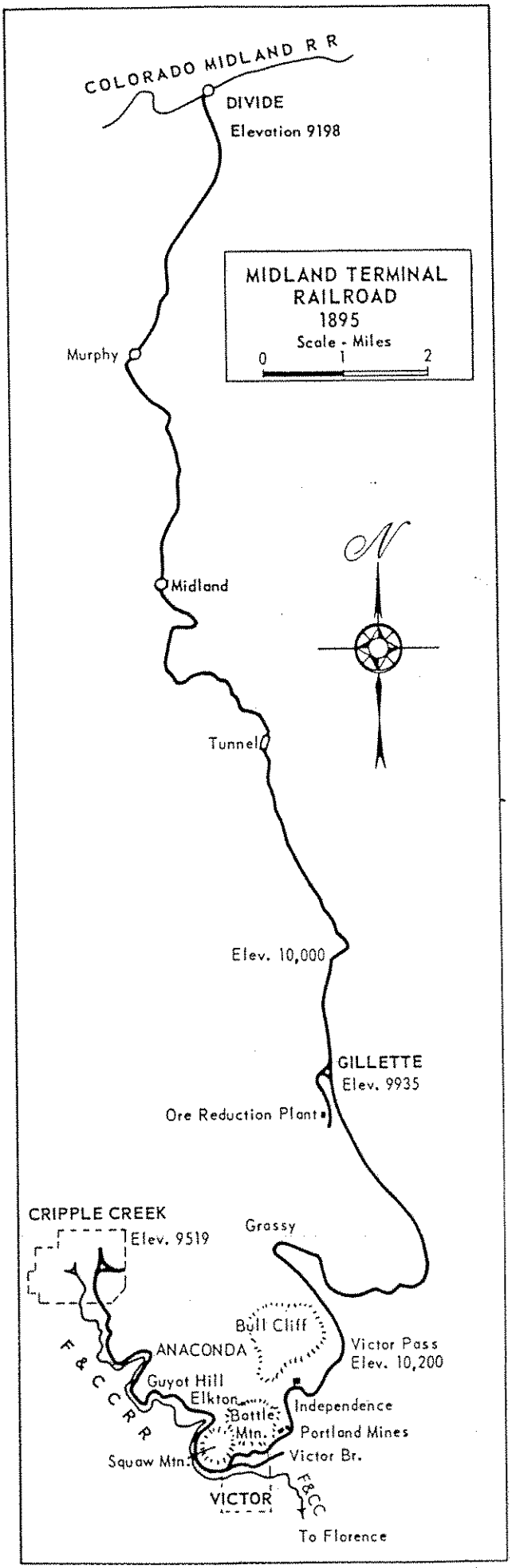
Source: Colorado Railroads.



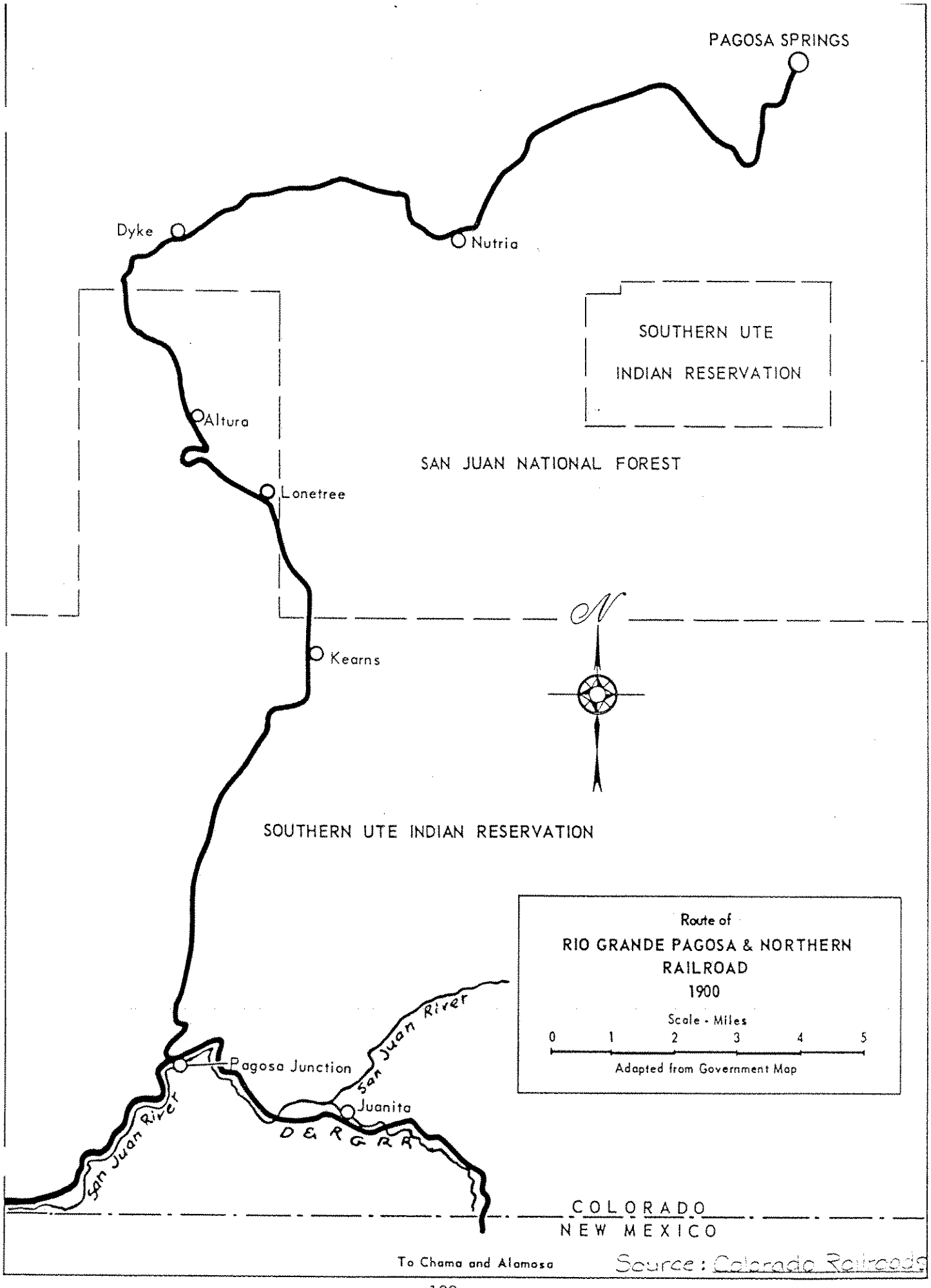
Source: Colorado Railroads



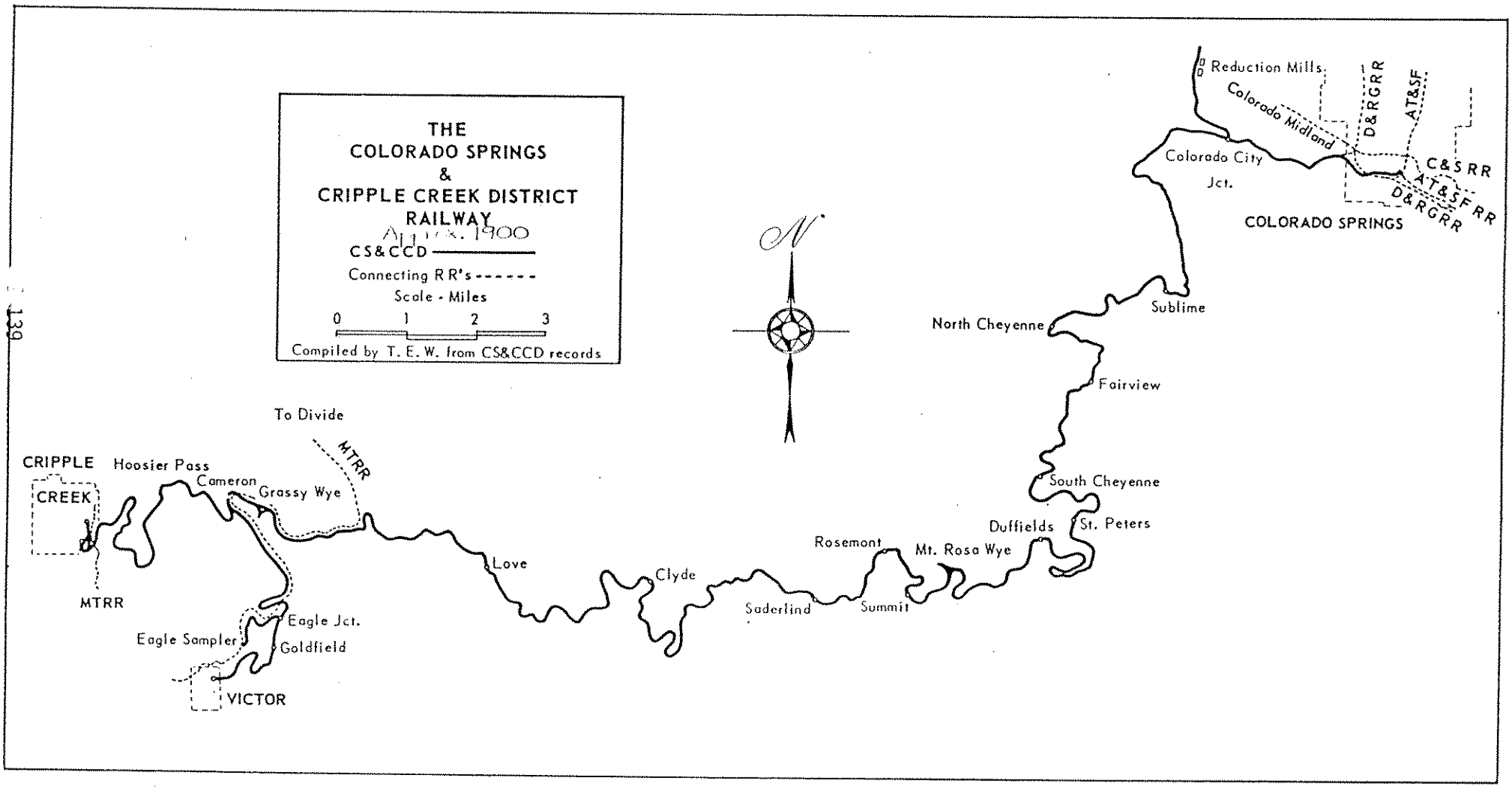
Source: Colorado Railroads



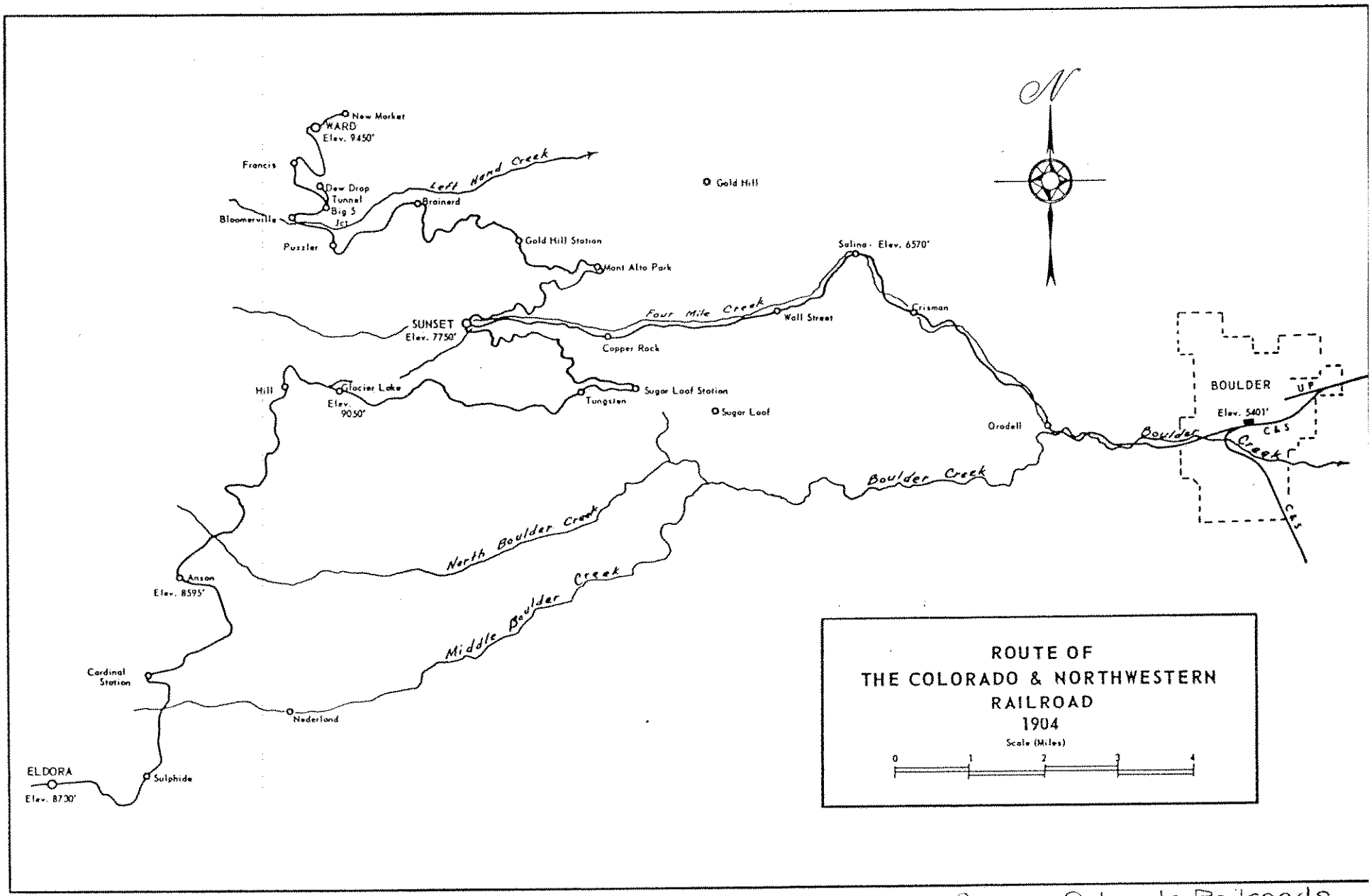
 Source: Colorado Railroads



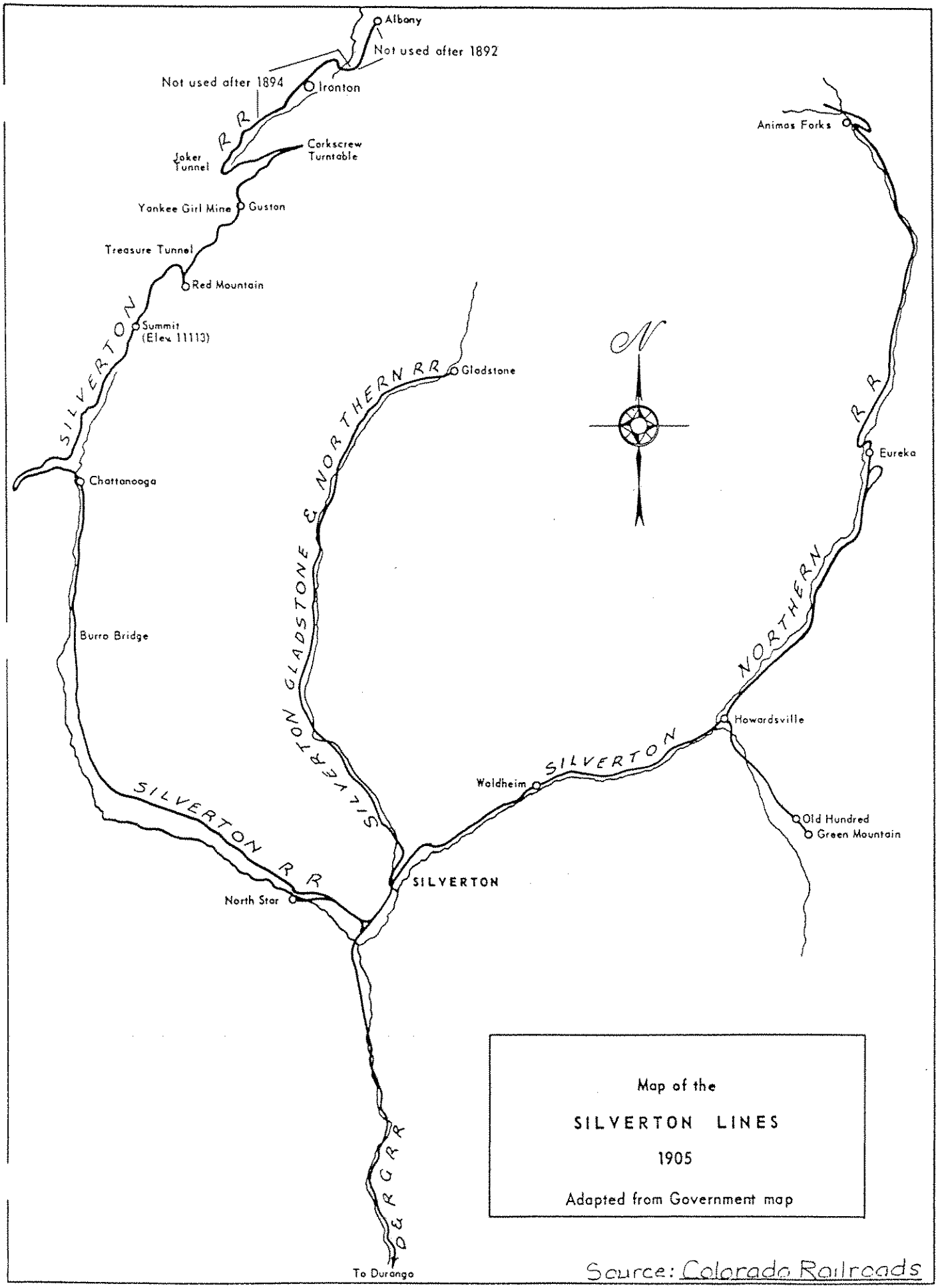
Source: Colorado Railroads



Source: Colorado Railroads



Source: Colorado Railroads



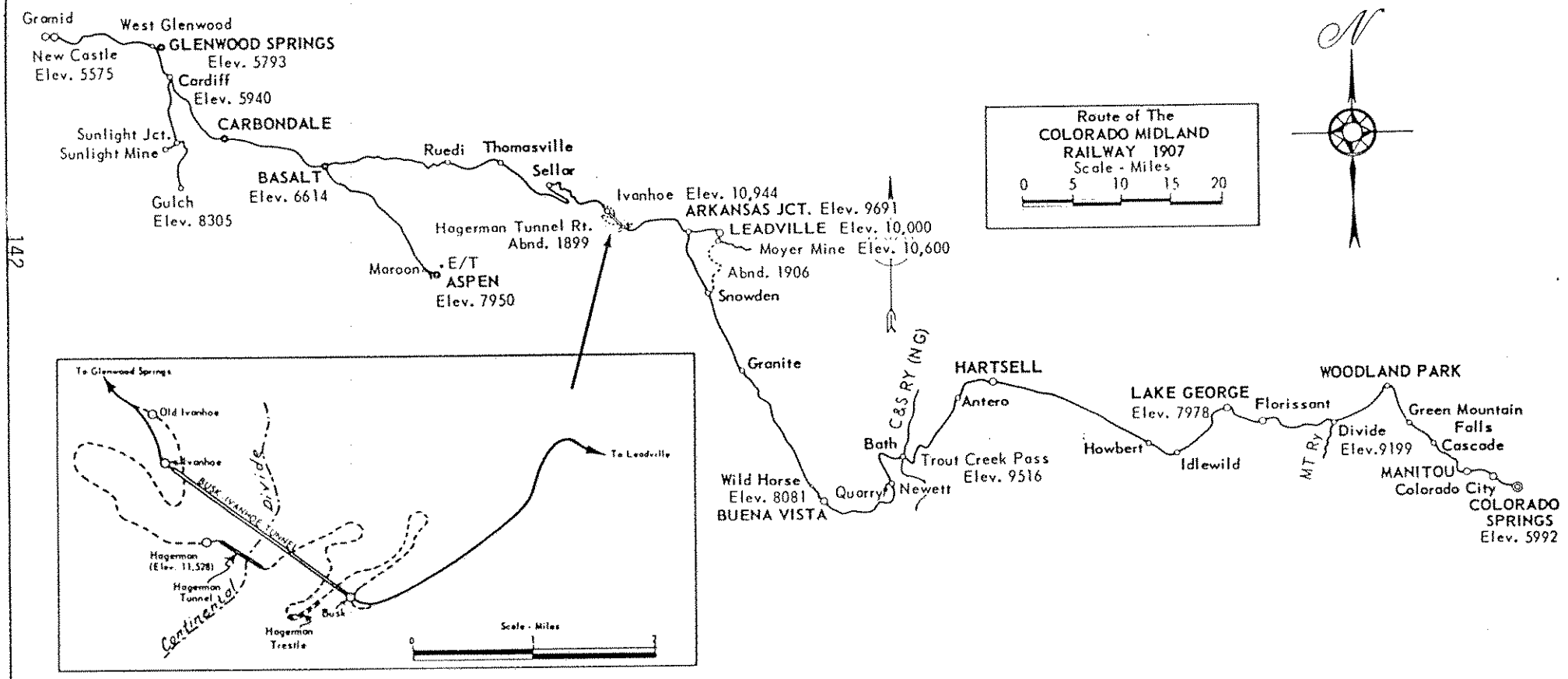
Map of the

SILVERTON LINES

1905

Adapted from Government map

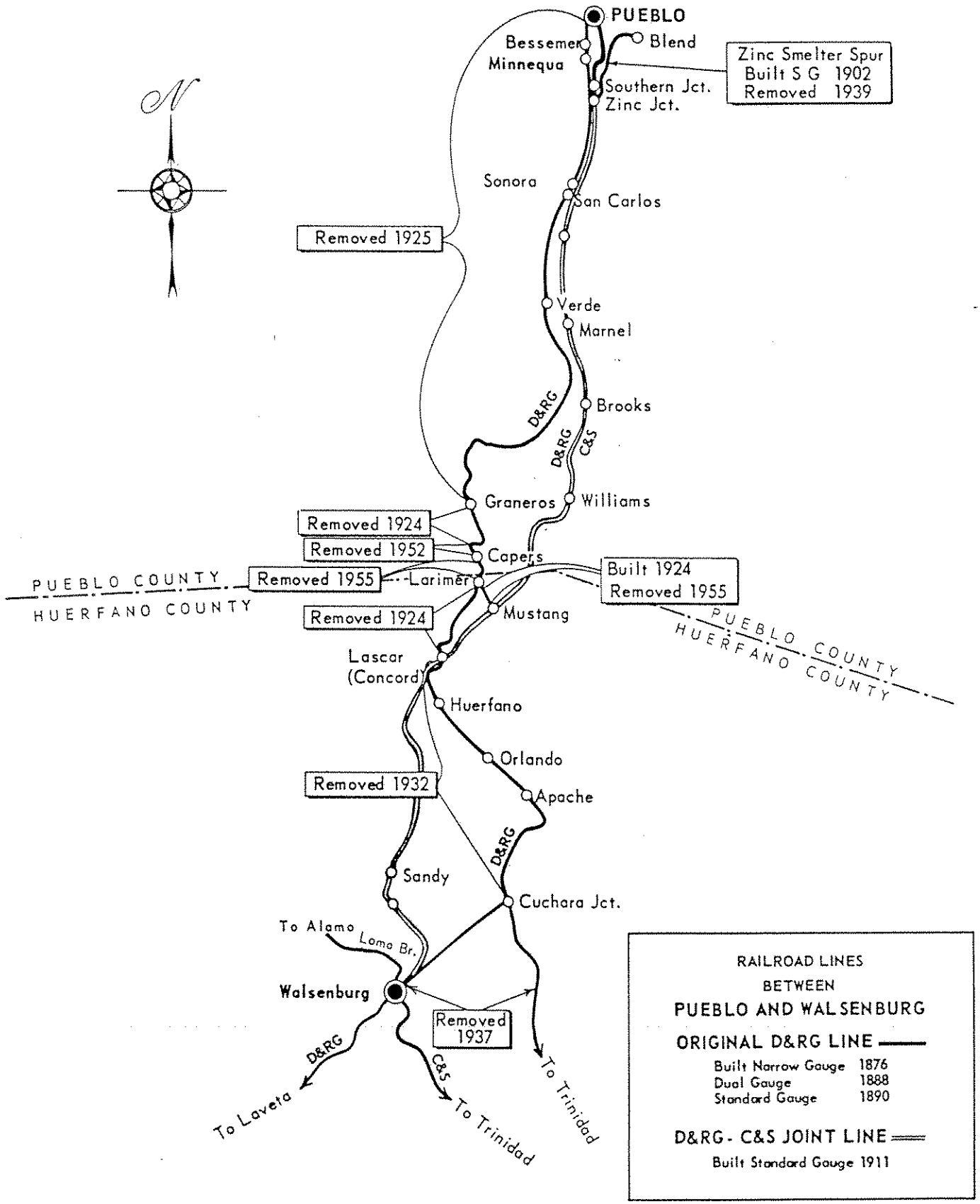
Source: Colorado Railroads



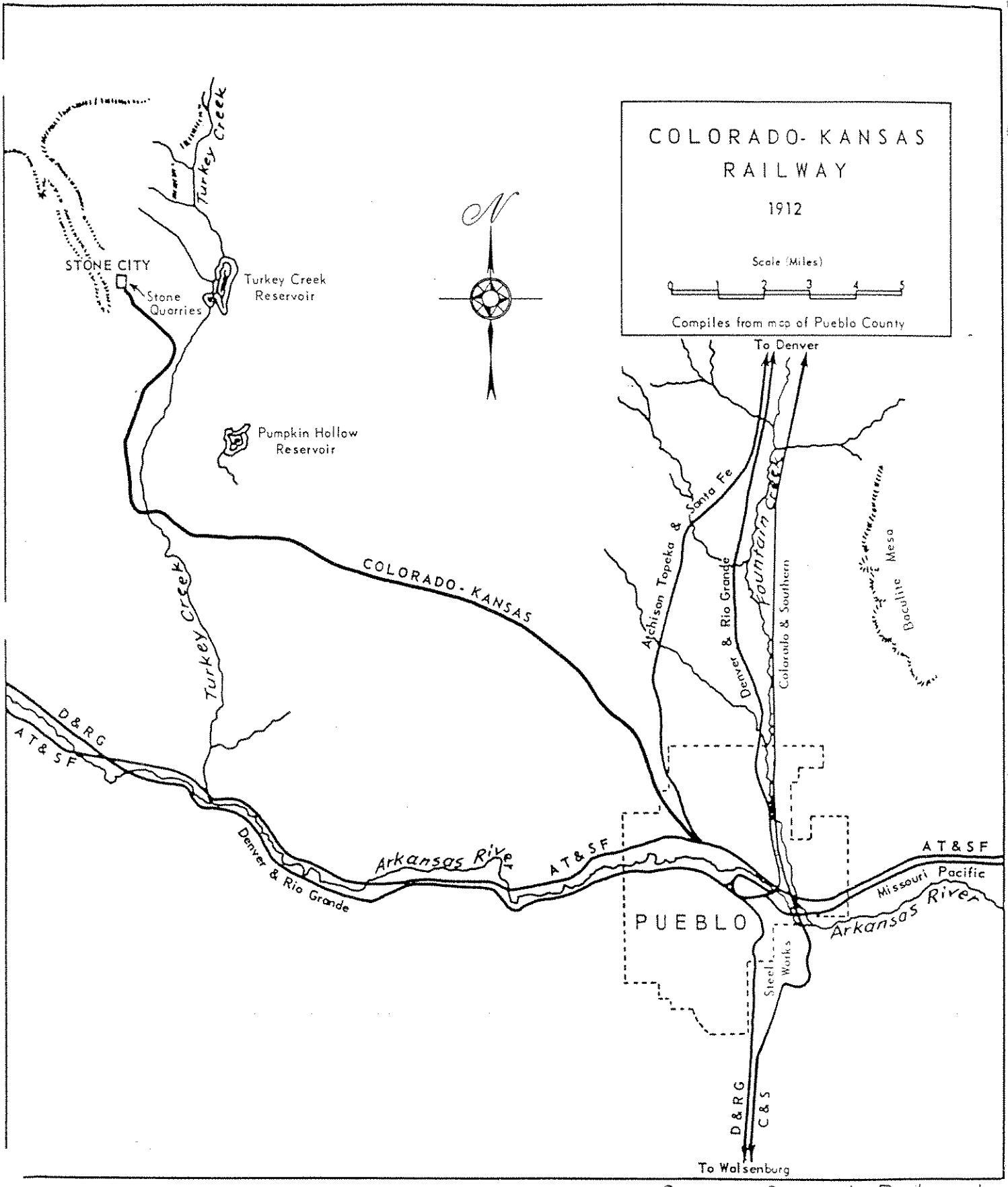
Compiled from CM records in State Historical Society of Colorado archives

142

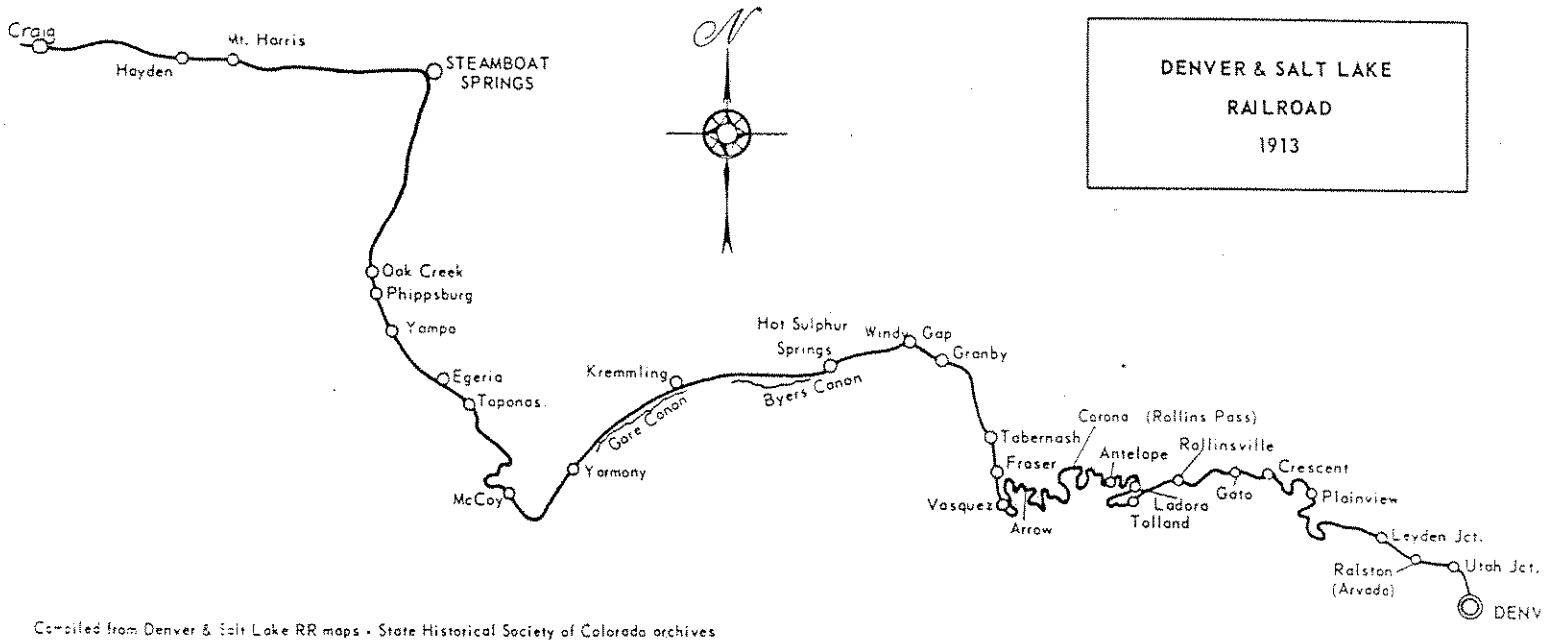
Source: Colorado Railroads



Source: Colorado Railroads



Source: Colorado Railroads

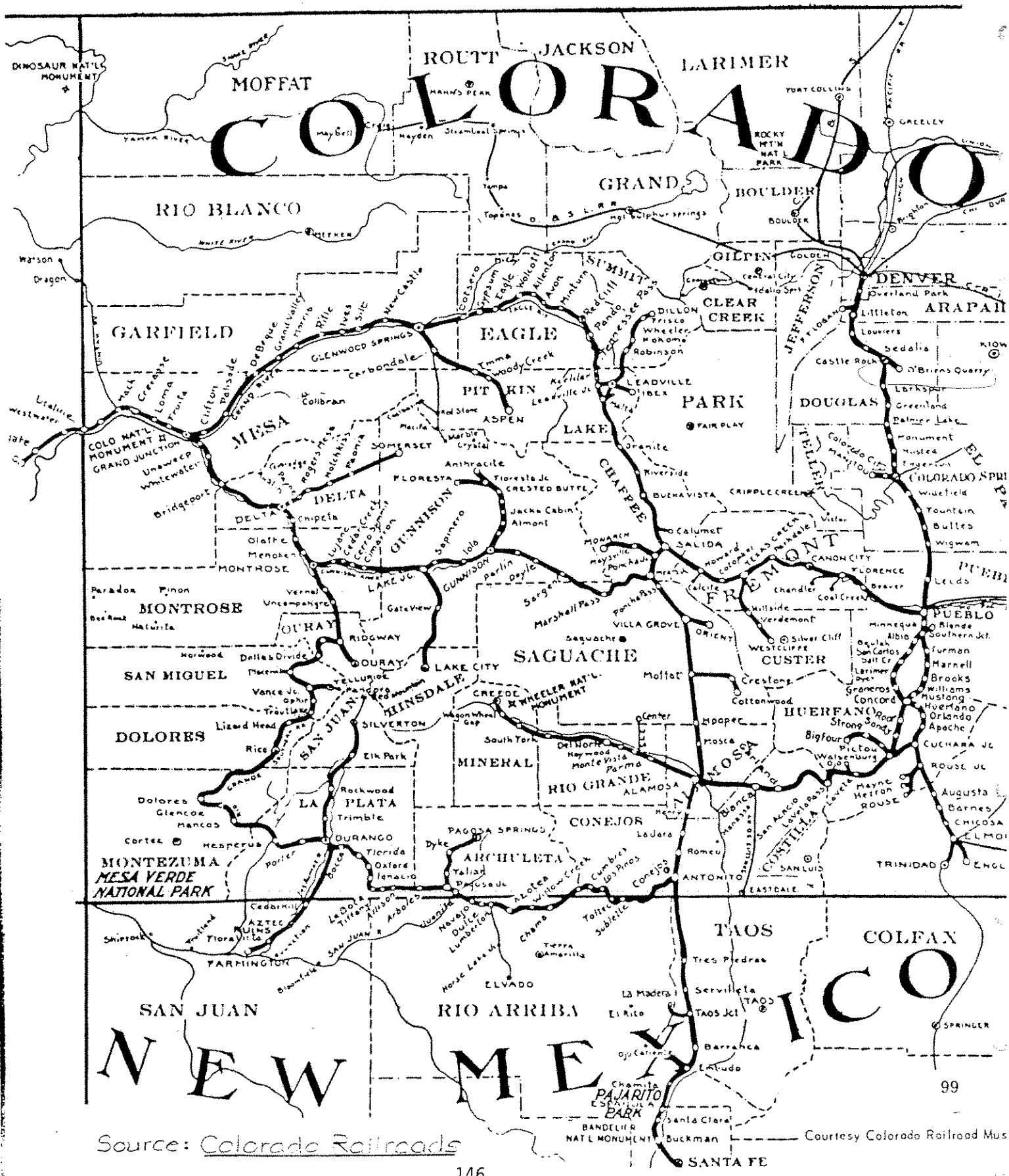


Source: Colorado Railroad

Denver & Rio Grande Railroad

IN COLORADO AND NEW MEXICO

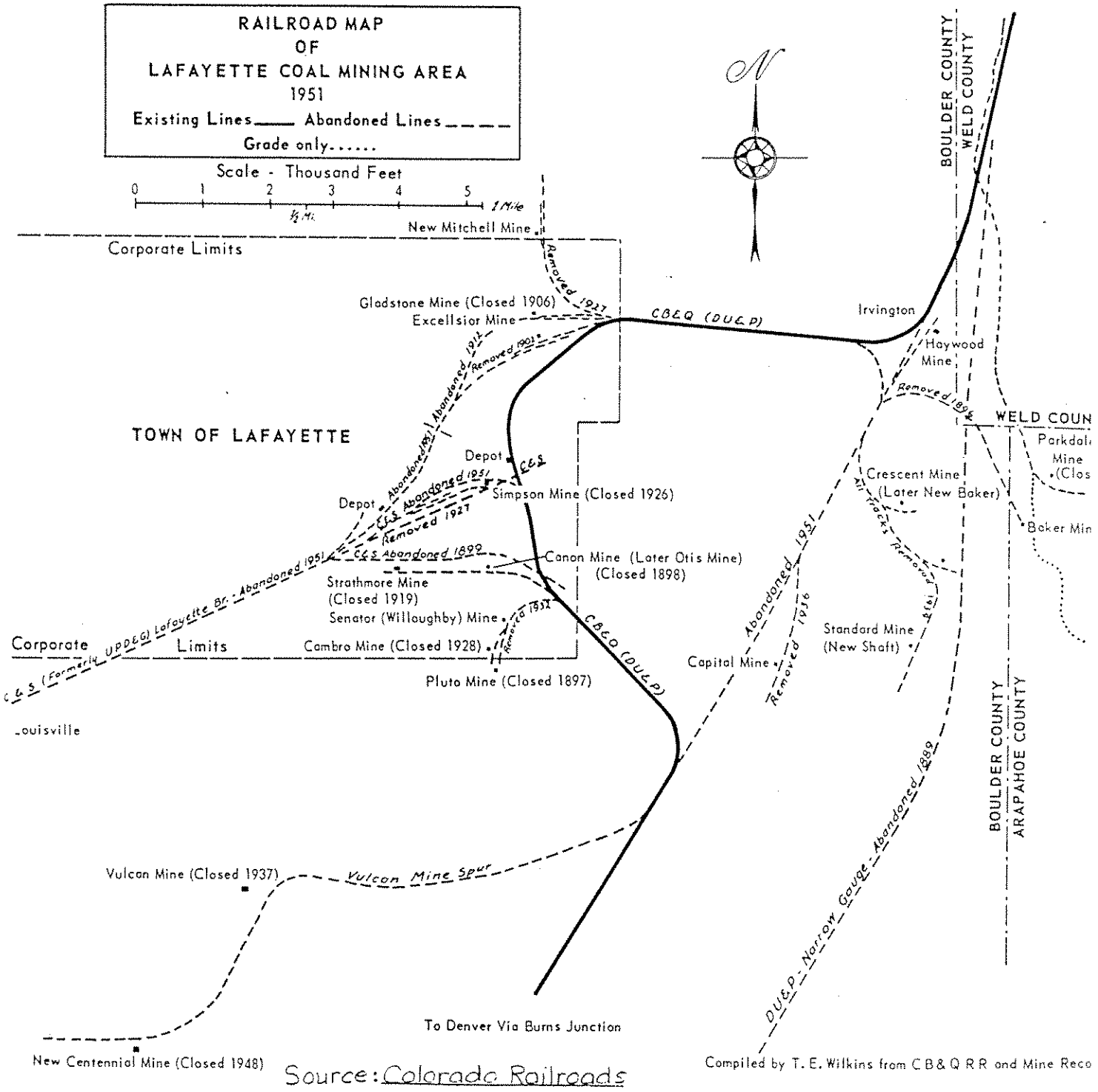
1916

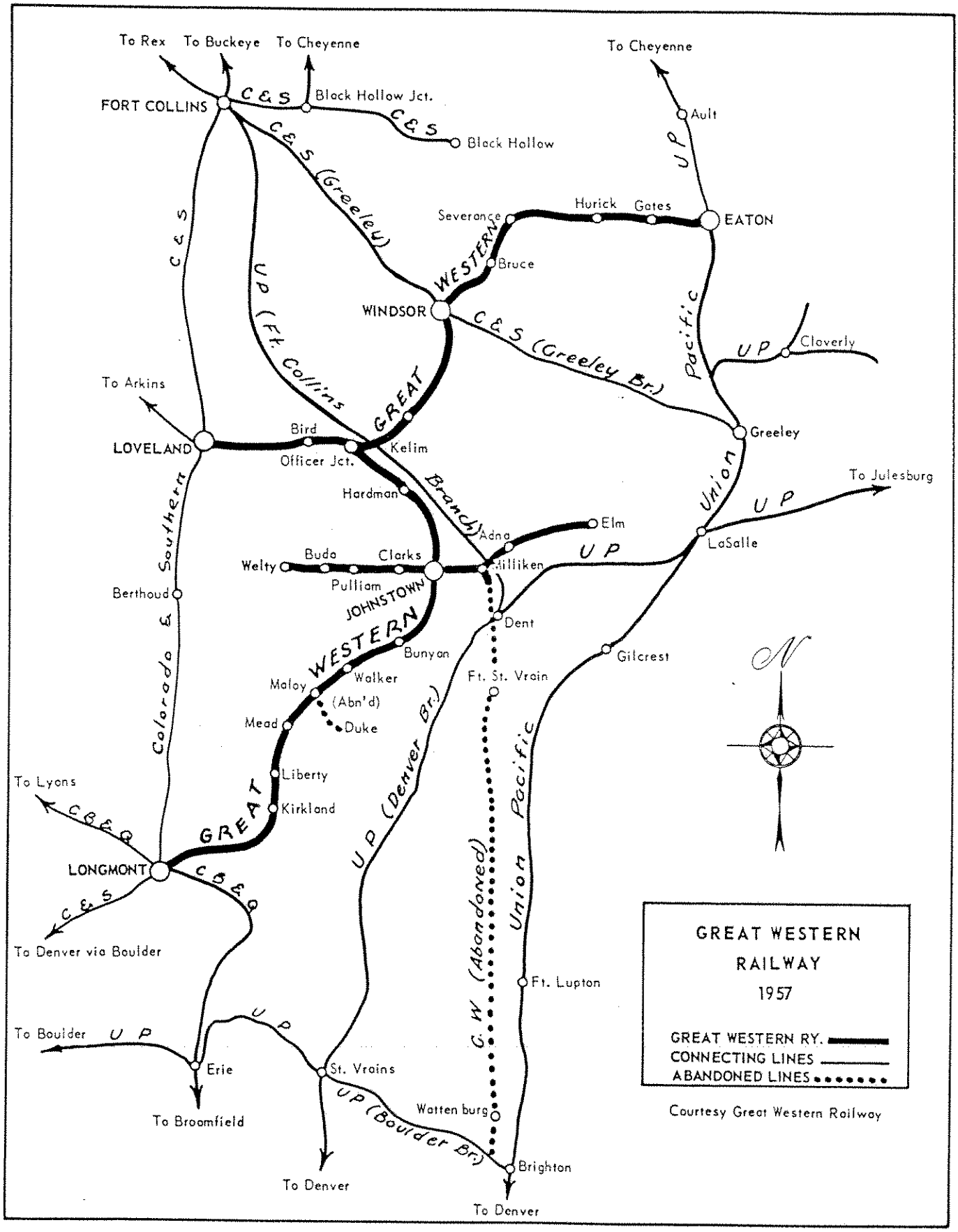


99

Source: Colorado Railroads

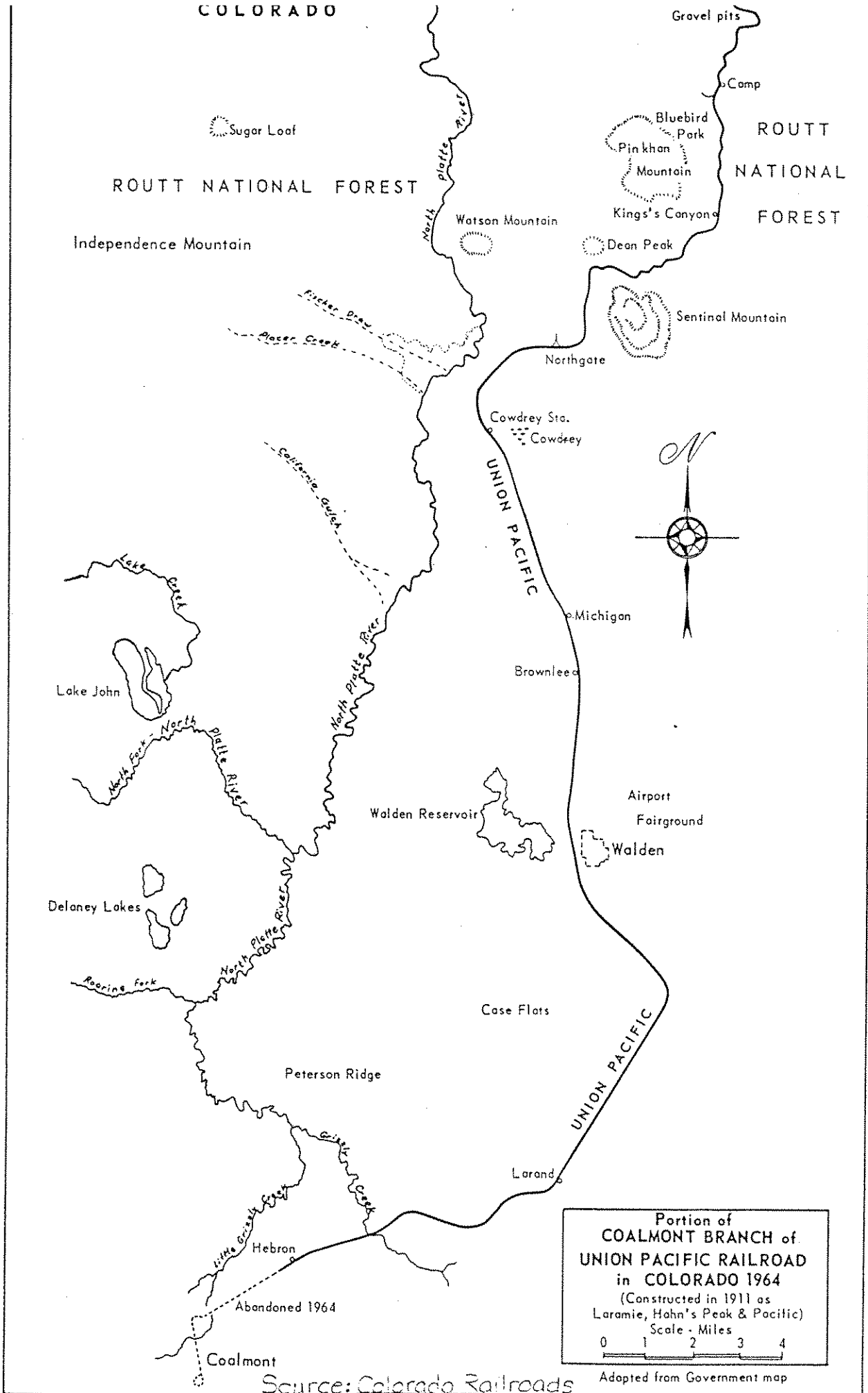
Courtesy Colorado Railroad Mus


RAILROAD MAP
OF
LAFAYETTE COAL MINING AREA
1951
Existing Lines ____ Abandoned Lines _ _ _ _
Grade only.....
Scale - Thousand Feet
0 1 2 3 4 5
1/2 Mi.
1 Mile
N
BOULDER COUNTY
WELD COUNTY
New Mitchell Mine
Corporate Limits
Removed 1927
Gladstone Mine (Closed 1906)
Excellsior Mine
CB&Q (DUL&P)
Irvington
Haywood Mine
Removed 1901
Abandoned 1951
Removed 1896
TOWN OF LAFAYETTE
WELD COUN
Parkdal
Mine
(Clos
Depot
C&S
Crescent Mine
(Later New Baker)
Depot
Abandoned 1951
C&S Abandoned 1951
Simpson Mine (Closed 1926)
C&S Removed 1927
Baker Min
C&S Abandoned 1899
Canon Mine (Later Otis Mine)
(Closed 1898)
Strathmore Mine
(Closed 1919)
Senator (Willoughby) Mine
Removed 1932
Abandoned 1951
Removed 1936
Standard Mine
(New Shaft)
Corporate Limits
Cambro Mine (Closed 1928)
CB&Q (DUL&P)
Capital Mine
C & S (Formerly UP D&G) Lafayette Br. - Abandoned 1951
Pluto Mine (Closed 1897)
Louisville
BOULDER COUNTY
ARAPAHOE COUNTY
Vulcan Mine (Closed 1937)
Vulcan Mine Spur
DU&P - Narrow Gauge - Abandoned 1889
To Denver Via Burns Junction
New Centennial Mine (Closed 1948)
Source: Colorado Railroads
Compiled by T. E. Wilkins from C B & Q R R and Mine Reco

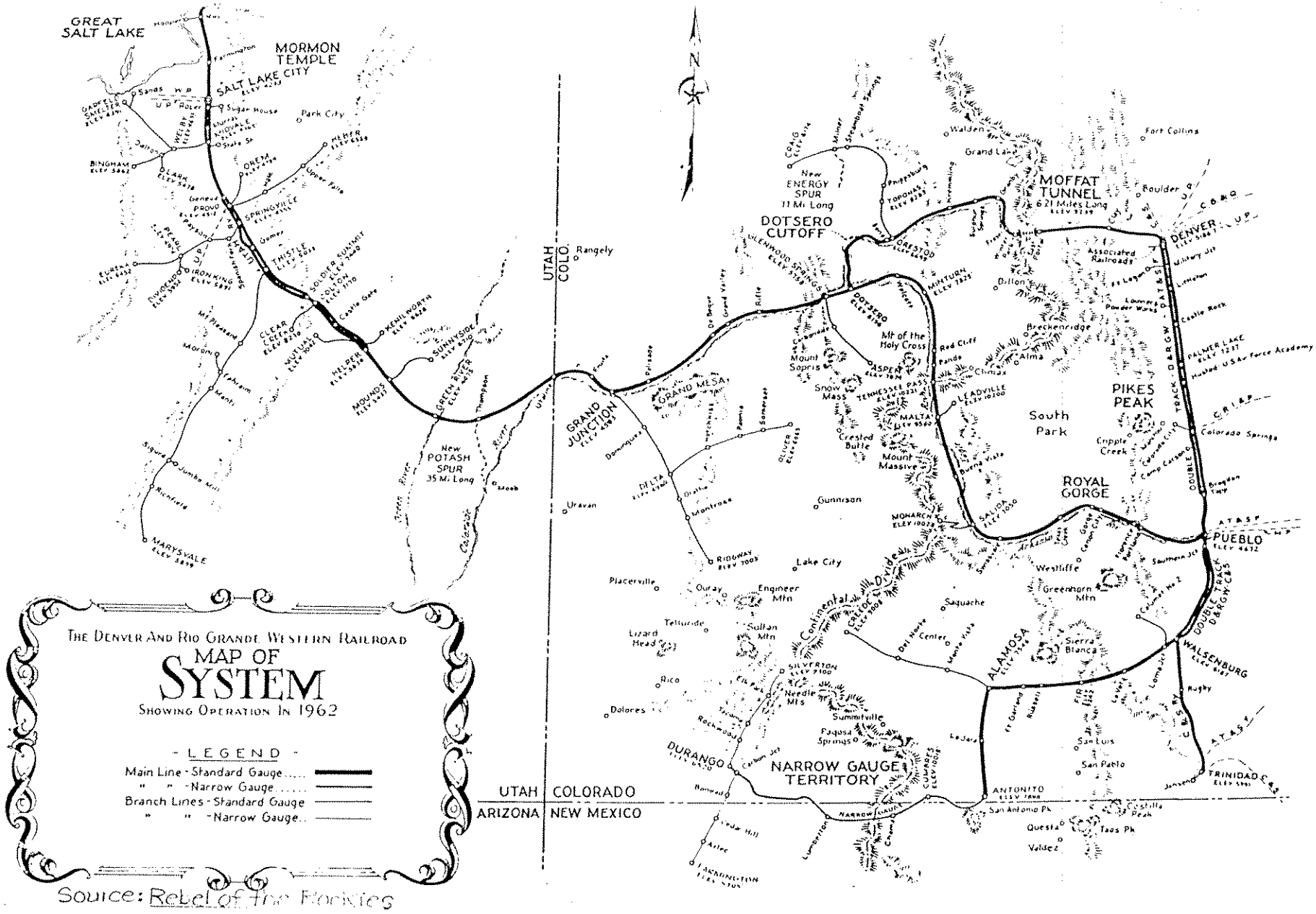


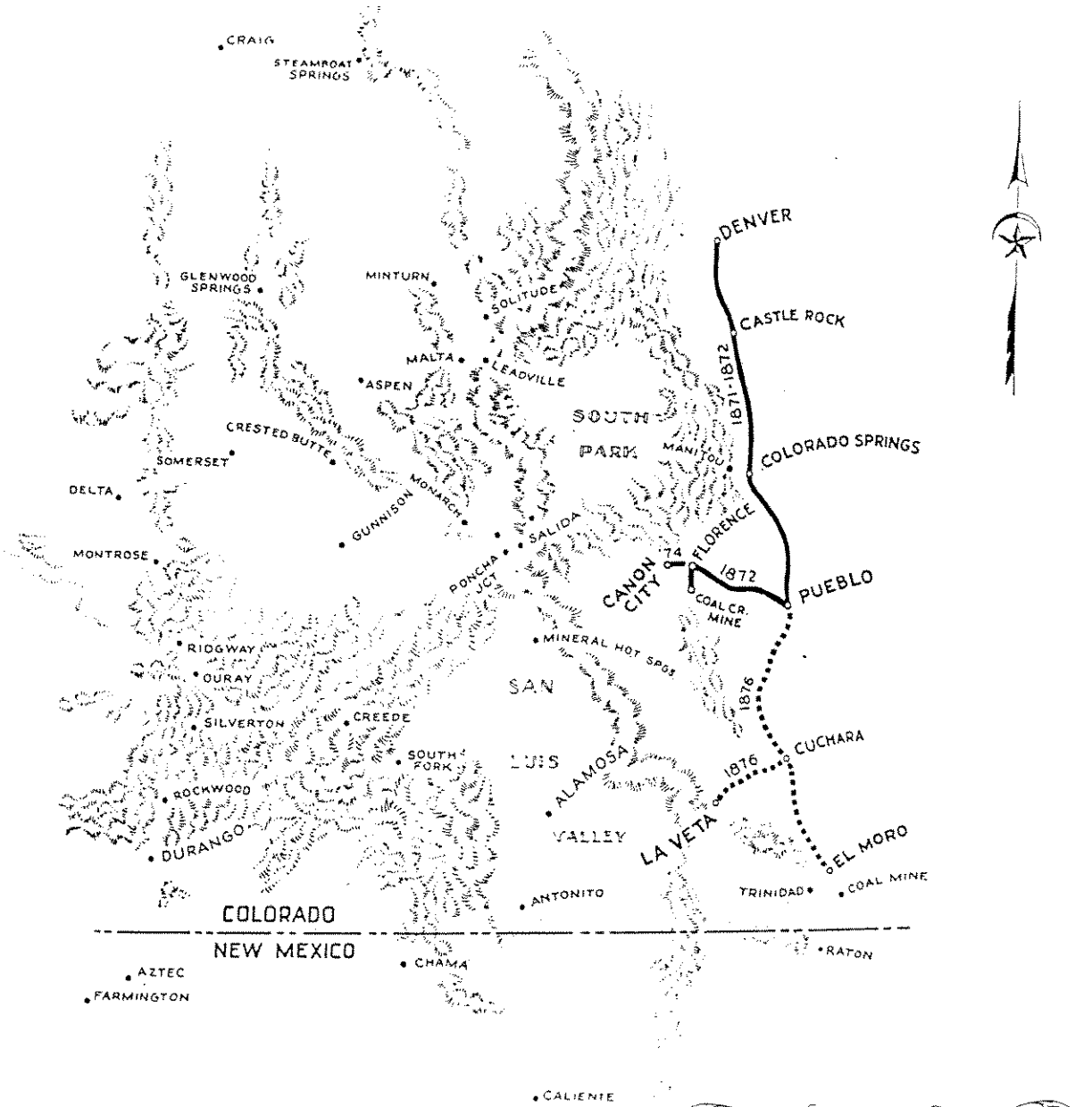
Courtesy Great Western Railway

Source: Colorado Railroads



Source: Colorado Railroads


GREAT SALT LAKE
MORMON TEMPLE
SALT LAKE CITY
Park City
Sugar House
Sandy
Bingham
Clark
Orem
Provo
Springville
Helper
Spanish Fork
Thistle
Soldier Summit
Colton
Castle Gate
Kenilworth
Sunnyside
Mounds
Green River
Thompson
Utaline
Rangely
UTAH
COLO.
New POTASH SPUR 35 Mi. Long
Grand Junction
Grand Mesa
Delta
Montrose
Ridgway
Uravan
Gunnison
Lake City
Placerville
Ouray
Telluride
Lizard Head
Sultan Mtn
Engineer Mtn
Rico
Dolores
Durango
Cedar Hill
Aztec
Farmington
Lumberton
Chama
Cumbres
Antonito
San Antonio Pk
Questa
Taos Pk
Velarde
Monarch
Salida
Monarch Pass
Crested Butte
Mount Massive
Mt of the Holy Cross
Red Cliff
Minturn
Dotsero
New ENERGY SPUR 11 Mi. Long
Craig
Steamboat Springs
Walden
Grand Lake
Fort Collins
Boulder
Denver
MOFFAT TUNNEL 6.21 Miles Long
Dillon
Breckenridge
Alma
Leadville
Tennessee Pass
Aspen
Snowmass
Mount Sopris
Glenwood Springs
Rifle
Grand Valley
De Beque
Palisade
Fruita
Somerset
Paonia
Oliver
Dotsero
Orestod
Toponas
Phippsburg
Yampa
Hayden
Milner
Kremmling
Granby
Winter Park
Fraser
Tabernash
Associated Railroads
Ft Logan
Littleton
Lincoln
Lowry
Powder Mass
Castle Rock
Palmer Lake
Husted
U.S.A.F. Academy
Colorado Springs
Cripple Creek
Victor
Florence
Canon City
Pueblo
Westcliffe
Greenhorn Mtn
Saguache
Del Norte
Monte Vista
Alamosa
Sierra Blanca
Walsenburg
Rugby
Fir
Gardner
Ridgell
La Jara
San Luis
San Pablo
Trinidad
Jansen
Stilla Peak
Summitville
Wagon Wheel Gap
Pagosa Springs
Needle Mts
Silverton
Ophir
Rockwood
Carbon Jct
Ramona
Narrow Gauge
Continental Divide
Cresto
Toltec
Osier
Sublette
Saffordine
Lumberton
Farmington
Arizona
New Mexico
Utah
Colorado
NARROW GAUGE TERRITORY
PIKES PEAK
South Park
ROYAL GORGE
DOTSERO CUTOFF
DENVER & RIO GRANDE WESTERN RAILROAD
MAP OF
SYSTEM
SHOWING OPERATION IN 1962
- LEGEND -
Main Line - Standard Gauge
" " - Narrow Gauge
Branch Lines - Standard Gauge
" " - Narrow Gauge
Source: Rebel of the Rockies

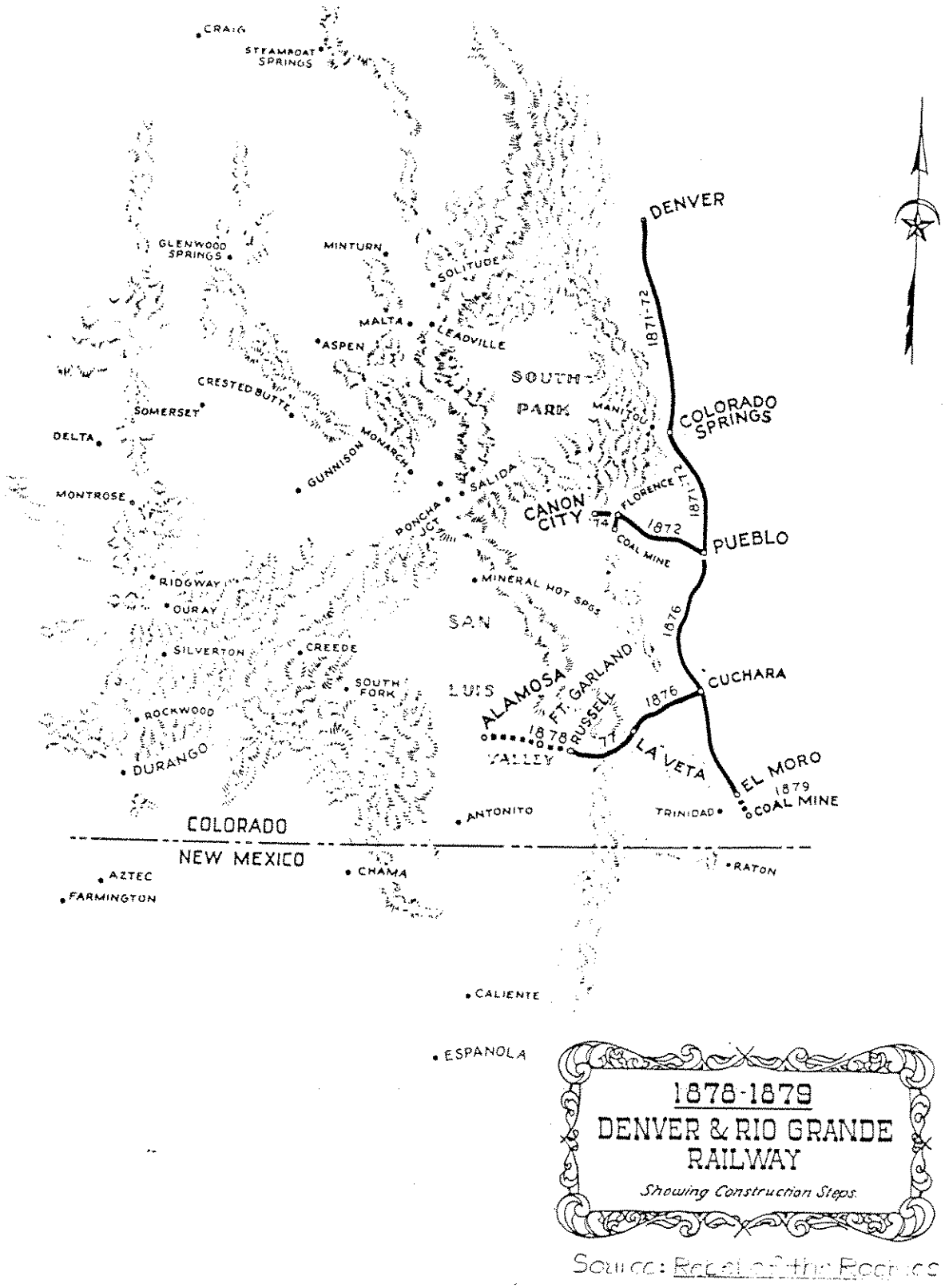


1876

DENVER & RIO GRANDE RAILWAY

Showing Construction Steps

Source: Robert G. Athearn, Rebel of the Rockies

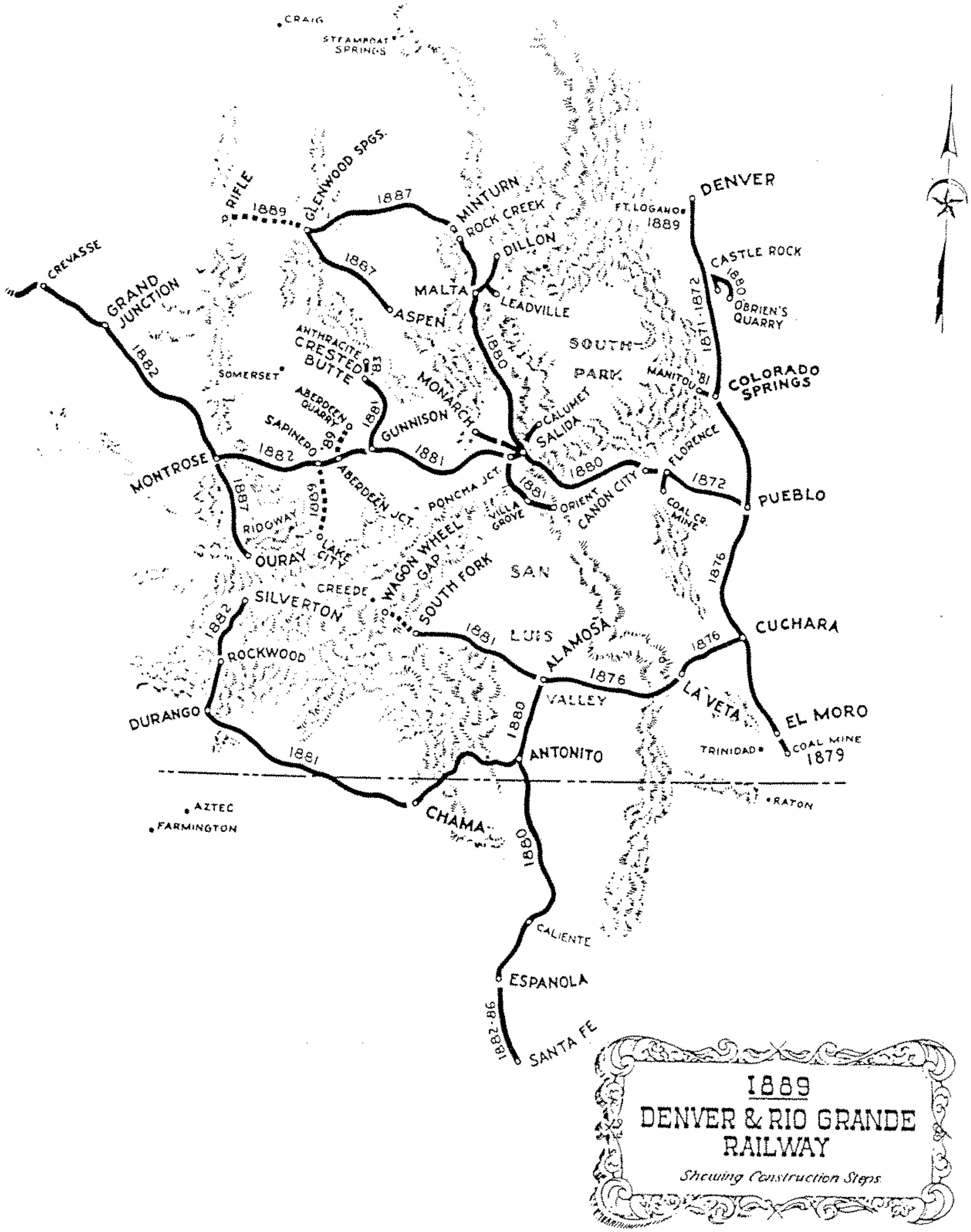


1878-1879

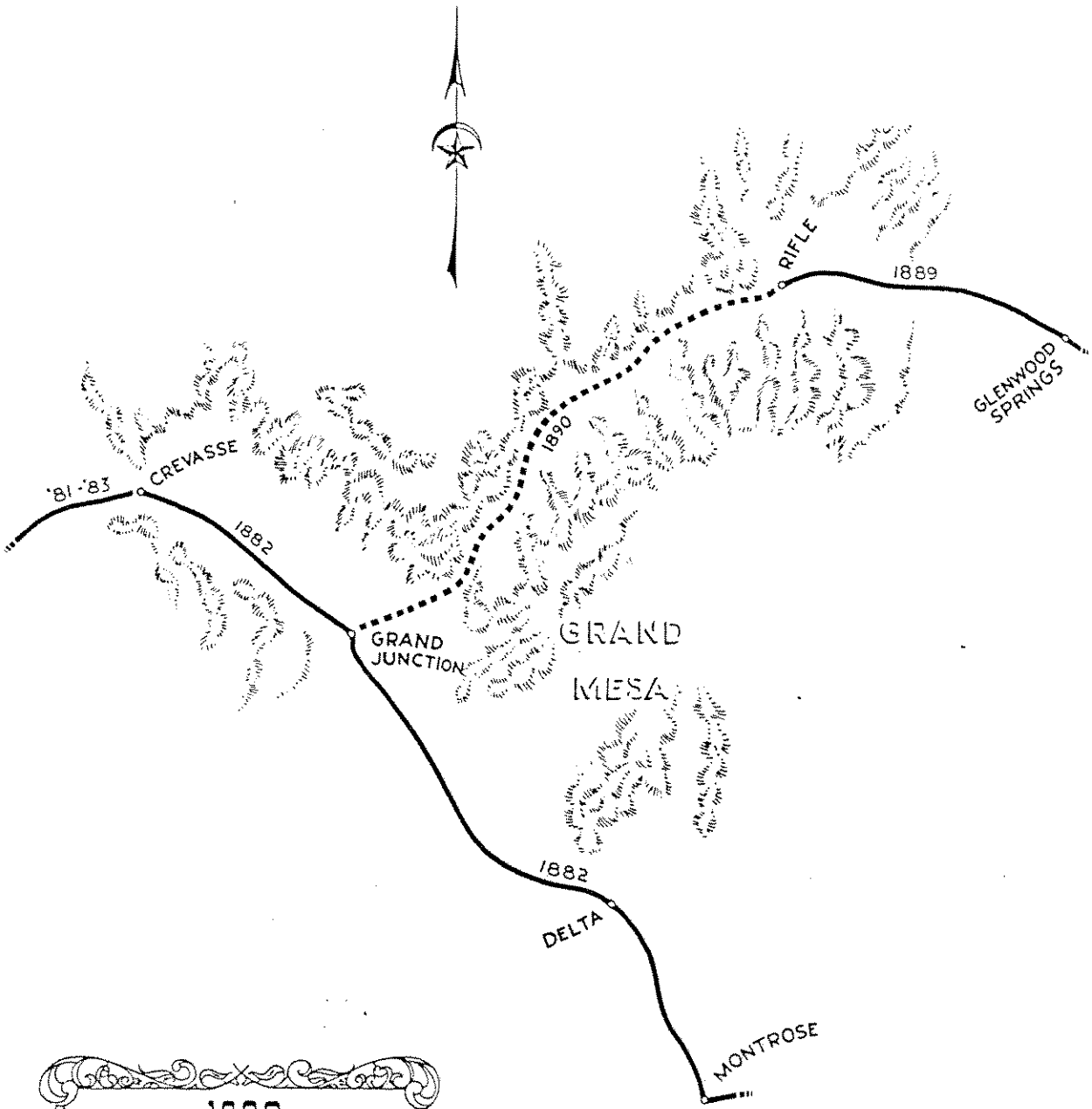
DENVER & RIO GRANDE RAILWAY

Showing Construction Steps

Source: Rocky Mtn Rockies

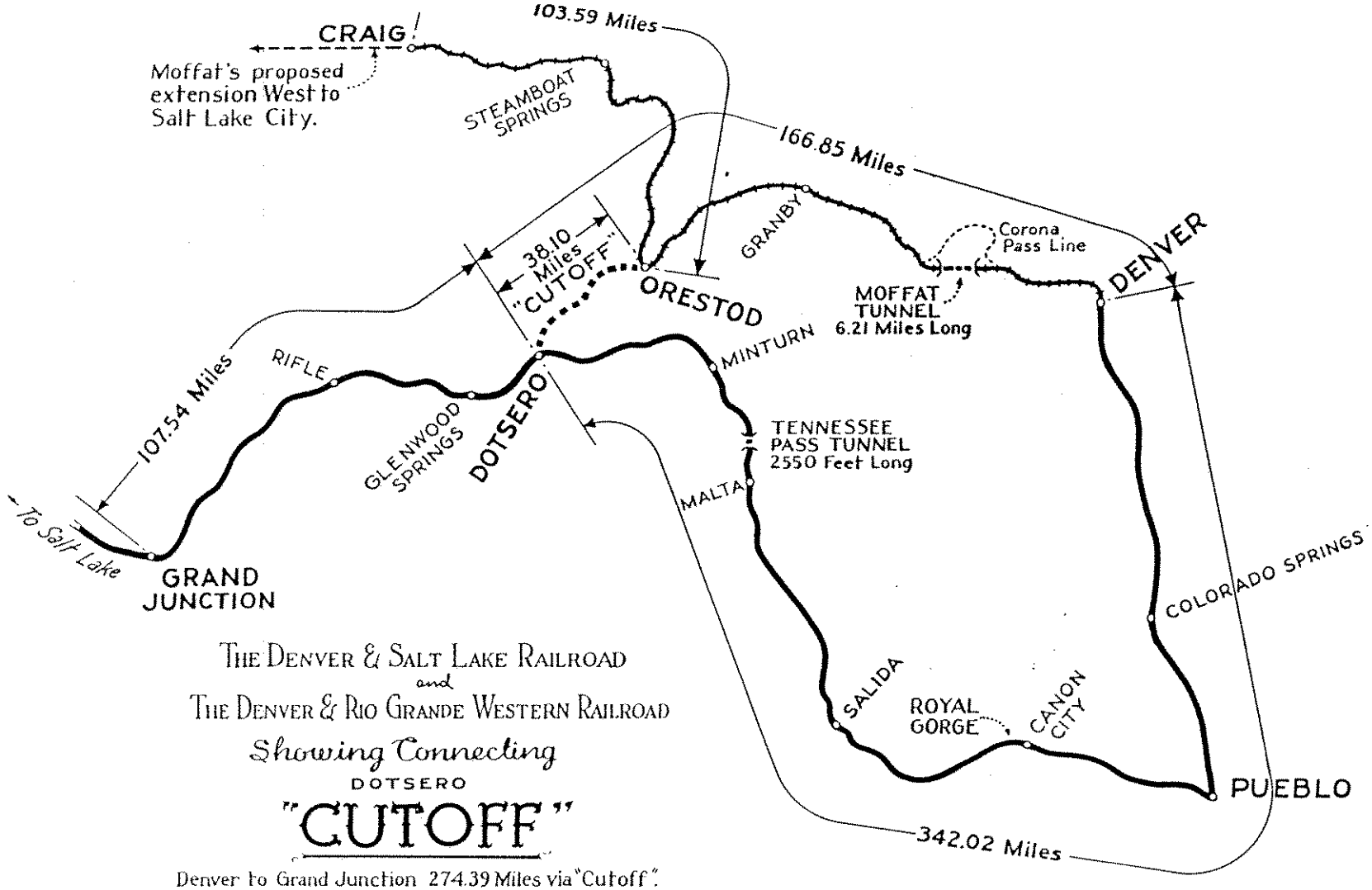

1889
DENVER & RIO GRANDE RAILWAY
Shewing Construction Steps
CRAIG
STEAMBOAT SPRINGS
RIFLE
GLENWOOD SPGS.
MINTURN
ROCK CREEK
DILLON
DENVER
FT. LOGAN
CASTLE ROCK
OBRIEN'S QUARRY
CREVASSE
GRAND JUNCTION
MALTA
LEADVILLE
ASPEN
ANTHRACITE
CRESTED BUTTE
SOUTH PARK
MANITOU
COLORADO SPRINGS
SOMERSET
ABERDEEN QUARRY
MONARCH
GUNNISON
SAPINERO
CALUMET
SALIDA
FLORENCE
MONTROSE
ABERDEEN JCT.
PONCHA JCT.
VILLA GROVE
ORIENT
CANON CITY
PUEBLO
COAL CR. MINE
RIDGWAY
LAKE CITY
OURAY
WAGON WHEEL GAP
SOUTH FORK
SAN LUIS VALLEY
CREEDE
SILVERTON
ALAMOSA
CUCHARA
ROCKWOOD
LA VETA
EL MORO
DURANGO
ANTONITO
TRINIDAD
COAL MINE
CHAMA
RATON
AZTEC
FARMINGTON
CALIENTE
ESPANOLA
SANTA FE

Source: Book of ...



1890
DENVER & RIO GRANDE RAILWAY
Showing Construction Steps

Source: Rebel of the Rockies



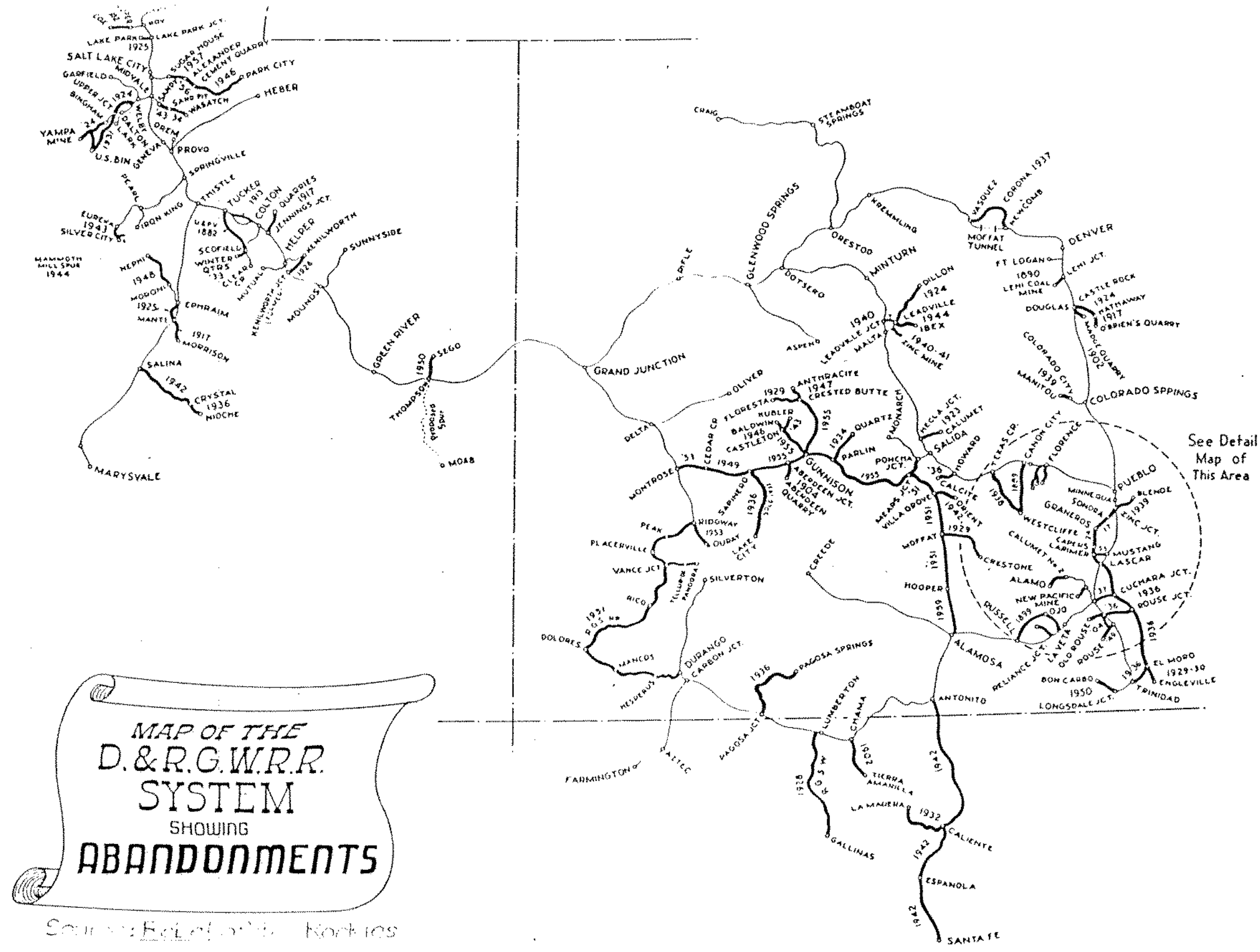
THE DENVER & SALT LAKE RAILROAD
and
THE DENVER & RIO GRANDE WESTERN RAILROAD
Showing Connecting
DOTSERO
"CUTOFF"

Denver to Grand Junction 274.39 Miles via "Cutoff".
" " " " 449.56 " " "Royal Gorge.

-LEGEND-
D. & S. L. R. R. MAIN LINE
D. & R. G. W. R. R. MAIN LINE

Courtesy of the Archives

FIG. 41


MAP OF THE
D.&R.G.W.R.R.
SYSTEM
SHOWING
ABANDONMENTS
See Detail
Map of
This Area
SALT LAKE CITY
LAKE PARK
1925
LAKE PARK JCT.
ROY
MIDVALE
GARFIELD
UPPER JCT.
BINGHAM
YAMPA MINE
U.S. BIN
GENEVA
OREM
PROVO
SPRINGVILLE
SUGAR HOUSE
1957
ALEXANDER
CEMENT QUARRY
1946
PARK CITY
HEBER
SAND PIT
WASATCH
PEARL
IRON KING
EUREKA
1943
SILVER CITY
MAMMOTH MILL SPUR
1944
THISTLE
TUCKER
COLTON
QUARRIES
1917
JENNINGS JCT.
HELPER
KENILWORTH
SUNNYSIDE
U&PV
1882
SCOFIELD
WINTER QTRS
MUTUAL
MOUNDS
NEPHI
1948
MORONI
1925
MANTI
EPHRAIM
1917
MORRISON
SALINA
1942
CRYSTAL
1936
NIOCHE
MARYSVALE
GREEN RIVER
1950
SEGO
THOMPSON
MOAB
GRAND JUNCTION
RIFLE
CRAIG
STEAMBOAT SPRINGS
GLENWOOD SPRINGS
DOTSERO
ASPEN
ORESTOD
KREMMLING
MINTURN
VASQUEZ
CORONA 1937
NEWCOMB
MOFFAT TUNNEL
DENVER
FT LOGAN
1890
LEHI COAL MINE
LEHI JCT.
DOUGLAS
CASTLE ROCK
1924
HATHAWAY
1917
O'BRIEN'S QUARRY
1902
COLORADO CITY
1939
MANITOU
COLORADO SPPINGS
DILLON
1924
LEADVILLE
1944
IBEX
1940
LEADVILLE JCT.
MALTA
1940-41
ZINC MINE
OLIVER
ANTHRACITE
1947
CRESTED BUTTE
1929
FLORESTA
CEDAR CR
KUBLER
BALDWIN
1946
CASTLETON
1955
DELTA
MONTROSE
1949
SAPINERO
1936
LAKE CITY
GUNNISON
ABERDEEN JCT.
1904
ABERDEEN QUARRY
QUARTZ
1934
PARLIN
MONARCH
PONCHA JCT.
HECLA JCT.
CALUMET
SALIDA
HOWARD
CALCITE
ORIENT
1942
1929
MEARS JCT.
VILLA GROVE
MOFFAT
1951
HOOPER
1959
CRESTONE
TEXAS CR.
CANON CITY
FLORENCE
1938
WESTCLIFFE
MINNEQUA
SONORA
GRANEROS
PUEBLO
BLENDE
1939
ZINC JCT.
CAPERS
LARIMER
MUSTANG
LASCAR
CALUMET No 2
ALAMO
NEW PACIFIC MINE
OJO
RUSSELL
CUCHARA JCT.
1936
ROUSE JCT.
LA VETA
OLD ROUSE
ROUSE
RELIANCE JCT.
BON CARBO
1950
LONGSDALE JCT.
EL MORO
1929-30
ENGLEVILLE
TRINIDAD
ALAMOSA
ANTONITO
RIDGWAY
1953
OURAY
PEAK
PLACERVILLE
VANCE JCT
RICO
1951
DOLORES
MANCOS
HESPERUS
SILVERTON
DURANGO
CARBON JCT.
FARMINGTON
AZTEC
CREEDE
PAGOSA SPRINGS
1936
PAGOSA JCT.
LUMBERTON
CHAMA
1902
TIERRA AMARILLA
LA MADERA
1932
CALIENTE
1942
ESPANOLA
SANTA FE
1928
GALLINAS

6. COLORADO TOWN FORM IN THE EARLY AUTO ERA: 1910-1945

NARRATIVE

The car, bus, truck and airplane have radically altered American urban form in the twentieth century, with wealth, cheap gas, consumerist values, individualist traditions and a technological culture supporting this "oil/rubber tire" revolution. The virulence of this transport system in Colorado since 1945 obscures, however, the slow, balanced and rather benign development of the auto environments in the State between 1910 and 1945. This theme makes a preliminary exploration into the urban form impacts of the auto and highway, particularly on Colorado towns, in this "early" auto period. It does not focus on Denver, Colorado Springs or Pueblo; their early auto experiences have suggested in this writer's thematic discussions of those cities specifically.

The general features of car and truck transport are that they give relatively cheap, rapid, heavy-load, door-to-door service. This can happen day and night, rain or shine, and at up to 5-7% grades. This contrasts with horse and wagon systems which cannot match the car or truck for speed, flexibility or heavy loads. It contrasts with railroad and streetcar systems which are not door-to-door, available at the temporal whim of the owner or capable of managing steep grades. The problems with the auto system are not inconsiderable. It demands expensive, uniformly high quality roads to service its door-to-door capability; it pushes pedestrians to narrow sidewalks instead of aiding in street sociability; it often creates very dangerous, noisy and dirty streets; it increases air and water pollution; it pushes many buildings and open spaces aside for car parking and storage; and it generates very low density cities that are expensive to service.

Auto systems stimulated new buildings and landscape forms as well as transport changes. These are listed in more detail below under "Cultural Resource Types." Oil fields, refineries, parking lots, national and regional park systems, tourist camps, motor courts, used car lots, service stations, gravel operations, drive-ins, suburban homes, and highway warehousing, to name a few, all made their appearance in this period around the world and in Colorado. Likewise, other buildings, such as livery stables and streetcar barns, declined in usage.

Perhaps as important as the new types and shapes of buildings and service associated with the auto industry was the ease with which they were located on the fringe and even beyond the fringe of existing town development. Without

strong zone management tools, these rural and fringe locational decisions were made more on the judgment of landowners as how to turn a profit than the public good. However, though auto sprawl began in the early auto period, it did not become the dominant form of urban growth during that time.

A number of regional auto road construction types developed during this period: graded dirt roads, gravelled new road construction, gravelled improvements on stage and wagon roads, oiled gravel routes, concrete state and federal highways (usually parallel to older rail lines), and roads constructed on abandoned rail lines. Culverts, bridges and tunnels accompanied these improvements. These auto road types were applied widely. There were town alleys and streets, rural country roads, intercity connectors, national cross-country highways, mountain pass roads, suburban commuter routes, and aesthetic mountain tourist roads.

The statistics of the early auto period are interesting. The Colorado economy moderated after the mining booms of the turn of the century. Likewise, the Depression and war kept auto consumption at a moderate level by post-World War II standards. Population also grew relatively slowly in the period--from 779,024 in 1910 to 103,948 in 1929 and to approximately 190,000 in 1940. Most of this growth was in the major cities. The first passenger car arrived in Colorado in 1899. By 1913 there were 13,000, and by 1929, 304,000 registered vehicles. The first bus line in Denver was chartered in 1916, and the first concrete road was paved between Denver and Littleton in 1918. The first highway commission was established in 1909, in response partly to lobbying by the newly formed auto clubs and the tourist industry. The Commission's 1910 budget was $56,000; in 1940, $5.5 million was spent on construction. By 1949, the Colorado Highway Department had spent $212,151,000 on state roads since 1910. A considerable proportion of this was federal funds, especially during the Depression. Note figures 2 through 4 for the spatial pattern of a number of these highway improvements. Figure 1 outlines Colorado's 1915 rail system for comparison.

As one observes the dynamic interaction between the railroad system and the auto system at Colorado's state-as-a-whole scale, some interesting patterns develop between 1910 and 1945. Sub-state regions composed of a number of towns become identifiable according to different ways that the railroads and highways interrelated. Five "Early Auto Town Regions" can be hypothesized on this basis. The The first is located in the Mountain mineral belt where auto roads helped sustain mining towns after the railroads were abandoned. This region is suggested in

Figure 5. Another regional type, suggested in Figure 6, is the happier case where a major highway connected a series of towns in which the railroad continued to be active. A third case is outlined in Figure 7, where highways linked towns that never had rail service. Regions of this type cover a remarkably large area of the state. A fourth region is defined roughly by the auto commuting distance circling major Colorado cities. In these commuter regions, older, small towns began to feel increased growth pressure as embryonic dormitory suburbs and second home areas. Finally, there are combinations of the above. Titles for this regional typology appear in the Cultural Resource section below.

A second form of auto-related development occurring during this period takes place within or near individual older towns, rather than at the regional scale as described in the last paragraph. Districts began to appear. Examples are: commercial strips, motor-court rows, industrial parks, trailer courts, and so forth. Again, more examples are suggested in the Cultural Resource section below.

Another interesting feature of early auto town design is how the new highway was located with respect to the older town main street. A listing of various solutions to this locational problem is noted below and in the Cultural Resource section. Knowledge of how this new highway location was made is important because it usually determined the placement of post-World War II auto strip and shopping mall competition for the older town's main street core, and hence the likelihood of long-term main street prosperity.

A "New Highway Locational Typology" can be hypothesized as follows. The new highway might continue through and widen the older main street of a town. It could bypass the main street by a block or two from the center. It might also bypass the main street, but touch the edge of the residential area of the town. Then, there is the possibility of the bypass being a mile or so from the town's edge, but within its sphere of influence and being connected with a linking road. Also, there is the case where the town is for all practical purposes bypassed by the highway. Finally, combinations of the above are possible. It should be remembered, however, that the early auto period did not generate nearly the number or variety of new highway location decisions as did the post-World War II auto-dominant period. This six-part highway location typology can be expanded if we add to it the variety of rail town types upon which these new highway locations were placed. The source of this varied rail town typology is this writer's theme, "Rail Town Physical Form, 1870-1920." The rail town typology

can be related to the new highway location typology in a matrix format. This matrix is constructed to create 78 cells as alternative categories for typing early auto towns. The "Rail Town/Highway Interface Options Matrix" is presented in the following Cultural Resource section. Though some of the categories may be somewhat redundant, this give some idea of the possible rich variety in Colorado town planning if we focus on the highway/railroad interface issue. More research must be done here, however, before the impact and reliability of this perspective can be established.

Overall, the early auto period in Colorado was a time of a transportation balance. Autos, buses and trucks supplemented the railroad and streetcar systems without destroying them. The growth pace of the oil/rubber tire system was relatively slow; cars did not yet deluge and overload the older street systems destructively. Colorado towns and cities were already laid out in a relatively decentralized pattern. Except for Denver's central business district (CBD), major traffic jams were few and the car could blend into the older residential areas without serious overcrowding. Cars also helped overcome the rural isolation of the miner and farmer, opened the scenic and recreation areas of the state to tourists and city dwellers, and linked homes to the urban rail, pedestrian and streetcar transport systems. The difficulty of our present transport system is that this balance between rail, pedestrian and auto has been upset, at least in the larger cities where autos dominate. Colorado towns, as opposed to Colorado cities, need more study to assess the historic impact of the early auto period on their present plight. This theme has suggested a beginning context and some analytic frameworks to begin studying these towns and town regions.

CHRONOLOGY

1899	First auto reported in Denver.
	First convict labor used for road building.
1900	Good Roads Movement began in Colorado (by bicyclists).
1901-1902	Oil Extraction begins at Wattenberg Field.
1902	Denver's first annual automobile exposition.
	Founding of the Colorado Auto Club.
1905	Colorado Good Roads Association founded.
1910	Colorado's first Highway Commission established.
1910-1920	Colorado state road system takes over from counties.
1913	Highway Commission reorganized and strengthened.
	Model T makes mass use of the auto possible.

1914-1917	World War I slowed car production but aided truck development.
1916	Federal Road Act involved federal government in road building.
	Wolf Creek pass completed.
1916-1940	Various conversions of abandoned railroad beds and tunnels to auto roads, i.e. Colorado Midland and Carlton Tunnel.
1917	Links within municipalities between state highways became eligible for state and federal highway funds.
	State Highway Department organized.
1918	First concrete paving in Colorado between Denver and Littleton.
1919	First Colorado tax on auto fuel.
1920	First commercial air flights.
1910-1920	Auto architecture begins; gas stations, parking lots, commercial strips, motels, etc. Also auto-oriented site planning.
1920	$5 million bond issue for road building approved by Colorado voters.
1920s	First land use master plans (note DeBoer's work).
	Expansion of auto tourist trade in Colorado.
	First zoning.
1921	145,000 registered cars in Colorado.
	Overland Park becomes tourist camp.
1922	U. S. Bureau of Roads approves Colorado's first federal aid road system.
	$5.7 million paid out by Colorado Highway Department for road construction.
1923	188,000 registered cars in Colorado.
1925	Wellington Dome oil field developed. Also fields near Craig.
1927	Mt. Evans aesthetic highway completed.
1928	Tennessee Pass kept open all winter. Colorado's first pass kept open.
	First road oiling successful.
1929	304,000 registered vehicles in Colorado.
	Trail Ridge Road begun.
	Stock market crash.
1930s	Rangely Field developed.
1930-1945	Curtailed auto tourist trade.
	Increasing "franchise" auto strip architecture.
1932	Manual labor used extensively in road construction as a National Recovery Administration technique.
1933	Road projects in eastern Colorado for dust bowl relief.

1933	83,000 cars entered Rocky Mountain National Park.
1939	Monarch Pass completed.
	Work Projects Administration (WPA) aids Colorado roads.
1940	Clear Creek Canyon won over Floyd Hill as the major route west from Denver.
1940s	Rural school consolidations in response to new busing capabilities, etc.
1941-1945	Highway construction declined from 5.3 million to 2.0 million.

LOCATION

(Note Cultural Resource Types below for individual items within each topic in this section. Also note illustration for locational information.)

Transport and utility innovations were distributed throughout the state.

Building and park innovations also had wide distribution, depending upon the economies and resources of individual towns and regions.

Early Auto town regions are suggested in Figures 5 to 7.

Auto-based land use districts within towns were also located according to economic need and resources. Industries and warehouses located near major towns and cities, railroads, water and raw materials. Suburban additions developed near major growing cities. Tourist camps located at large cities, recreation areas and natural stop-over areas on longer routes. Commercial strips begin to develop along highways near towns across the entire state.

Towns representing the "New Highway Location Typology" and the "Rail Town/ Highway Interface Options Matrix" need further study before adequate location is possible.

CULTURAL RESOURCE TYPES

Transport, Communications and Utilities

Graded dirt roads
Gravel roads
Oiled roads
Concrete roads
Asphalt roads
Airports
Parking lots and parking on the streets
Aesthetic auto boulevards

Aesthetic mountain highways
Bridges, tunnels, grading systems
Cars
Trucks
Buses
Forklift trucks
Farm tractors and implements
Rubber tire mining equipment
Radios
Telephone
Oil pipelines
Diesel-pumped irrigation systems
Electrification systems
Natural gas pipelines

Buildings and Parks

Parking structures and residential garages
Truck-serviced warehouses and factories
Auto-serviced retail structures
Auto-serviced office structures
Auto-serviced entertainment structures
Auto-maintenance--gas stations, repair shops, graveyards
Auto-serviced parks--national parks, regional, roadside
Cement factories
Tank farms and refineries
Second homes and private summer cabins
Auto-serviced residential: single, duplex, garden apartments, etc.
Transport structures: bus stations, airport structures, truck terminals
Auto-serviced education: consolidated high schools
Auto-service tourism: camps, hotels, motor courts, cabins

Early Auto Town Regions

Rail town areas serviced by autos where the railroad had been abandoned
Town strips where the highway follows a functioning railroad
Stage-serviced towns which never had rail service but which became auto-serviced
Commuter town regions near larger cities
Mixes of the above

Auto-based Land Use Districts

Industrial and warehouse parks
Commercial strips and clusters
Residential suburban subdivisions and additions
Second home developments
Motel and tourist camp strips
Migrant-labor camps
Trailer courts

A New Highway Location Typology

The highway follows the older main street
The highway bypasses the main street a few blocks off center
The highway bypasses the town but touches the town edge
The highway bypasses the town at a near distance to the town
The highway bypasses the town at a considerable distance
Mixes of the above

Rail Town/Highway Interface Options Matrix

	Highway follows main street	Highway just off center	Highway touches town's edge	Highway bypasses near distance	Highway bypasses at a distance	Combinations
Flatland split grid						
Stage/wagon town bypass						
Stage/wagon tangency						
Stage/wagon off-center penetration plan						
Diagonal RR with a NS/EW plat						
Diagonal RR with a plat parallel the RR						
Curvilinear rails and plats						
The plat tangent to rivers and rails						
Externally scattered ec. base towns						
Internally located economic bases						
Company towns						
Cooperative Colony Plans						
Combinations						

QUALITY AND QUANTITY OF EXISTING INFORMATION

Historical Interpretive Documents

There is very little interpretive historical literature that focuses on the physical planning implications of the auto revolution between 1910 and 1945 in Colorado. The standard Colorado histories (Ubbelohde et al., Sprague, Athearn, and Abbott) usually deal with auto impacts in an introductory fashion and should be consulted. The state transportation side is dealt with in Marion C. Wiley's report, The High Road, 1976. It is a brief history of Colorado highways and the Colorado Division of Highways. Occasional articles also appear, such as LeRoy Hafen's study in Colorado Magazine in 1931, "The Coming of the Automobile and Improved Roads to Colorado." The "regional" writers in this Historical Project also dealt with the auto theme and are good reviews. Local town and county histories sometimes become concerned with these issues. Picture histories of towns, such as William Jones' Denver, should also be consulted as a helpful resource.

Historical Documents

The following are the typical historical documents used in urbanization, city planning and urban form research:

Written documents
- General state and local histories.
- Municipal records
- Real estate records
- Land company records
- Private papers of planners, architects, landscape architects and developers
- Newspapers, magazines and journals
- County, town and city plans
- Records of major industries, banks and chambers of commerce
- Railroad, streetcar, toll road, auto club and utility records

Graphic records
- Map collections
- Bird's-eye view collections
- Real estate atlases
- Insurance maps
- Assessor's maps
- Aerial photos
- Satellite photos
- Post card and architectural photo collections
- County, town and city plan maps
- Railroad, streetcar, toll road, stagecoach and utility company maps
- State highway department maps

Commercial highway maps
USGS maps
County, state and national atlases
Federal land surveys

Oral histories
Variable according to topic

A number of items need to be highlighted. Particularly, the collection of Colorado state maps at the Colorado Historical Society library is excellent. There are some 100 maps available, spanning the entire 1910-1945 period. The Western History Collection at the Denver Public Library is also very good. Also of interest are the records of the Colorado Highway Department, county highway departments, municipal street departments, Colorado automobile clubs, auto trade journals, the real estate section of newspapers and the records of gravel and highway construction companies. The Colorado Highway Department atlases are particularly interesting. A number of towns also began land use planning, subdivision control and zoning in this period. These are of considerable importance. Post cards and other aerial photos begin to be common in this period and should be consulted. It should also be remembered that many Colorado towns have not changed rapidly since 1945. Contemporary plans and aerial photos still reveal much 1910-1945 change. Finally, individual planners' records, like De Boer's, deserve careful study.

Number and Condition of Resources

There should be existing examples of the vast majority of resources mentioned in the Cultural Resource Types section above. With the exception of temporary tourist camps and the like, the condition of the resources should also be adequate. Old "strips" in the larger cities, however, are being replaced.

Surveys

This investigator is not aware of systematic surveys of planning issues at the town scale during this period. Important work at the introductory level was done in Paul M. O'Rourke's study, "Historical Surveys of Colorado Communities."

Data Gaps

Gathered data at the "district" or "town-as-a-whole" level is likely to be missing. Data on independent items (streets, cars, architectural forms, etc.) is likely to be more available. Oral histories are rare.

Future Resource Needs

A well designed survey administered to existing local planners, historians and real estate people would probably turn up basic information. Investigating all old maps, aerial photos, Colorado Historical Society atlases, and post card aerials would also be a good start. Interviews with planners of the time would also uncover interesting material. Surveys of contemporary town and county comprehensive plans are useful, when the plans have an historical section and when the town or county has not changed drastically since the early auto period. Probably this latter study should be done first. Of course, a sound framework for analysis should be designed before anything is done.

Important Physical Resources

There are so many vaguely understood resource types available under this theme that it is difficult to sort them out, let alone to prioritize. The earliest towns and subdivisions designed specifically with cars as the sole transport system should be documented carefully. Also, early auto "strip" development is important, as are the new adaptations to the rail town that the auto system demanded. Of course, the vehicles themselves are resources, but old car clubs seem to be saving these. Historic road-building machinery, trucks and buses may not be being preserved as well. Early aesthetic routes and national highways may also prove important to save. More study needs to be done to define what is historic before these matters can be dealt with precisely. The number of resources available are likely to be quite large and located diffusely around the populated parts of the state.

RESEARCH QUESTIONS

What methodology is appropriate to define and find early auto historical districts?

What are the facts and resources of the early auto period, in detail?

How have other scholars and preservation officers approached this period?

Is the "oil rubber tire revolution" approach valid?

How does the early auto period in Colorado compare and contrast with other American states and foreign countries?

How do we define "historic" in the case of this period?

Who were the major figures in designing these auto towns?

Was there any attempt to fight the auto revolution in Colorado? If not, why not?

What unique early auto land planning might have taken place due to Colorado's unique geography?

How did the auto, rail and wagon systems superimpose themselves upon one another to create a new complex urban design fabric having historic value in itself?

What was the land economics and politics of the auto? Who won and who lost?

What were early air, noise and water quality impacts of the auto system?

Why was the safety issue in the auto system never played up?

Do we have sufficient perspective on the recent period to have objectivity?

Given the matrix of early town types in the Cultural Resources section above, what Colorado towns fit into the categories?

What impact did early auto planning have on undermining the viability of town main streets, and setting them up for competition from later shopping centers on the fringe?

How did the aesthetics of motion experienced in cars change architectural facade design, outdoor advertising, building siting on lots, and roadway design?

EVALUATION STANDARDS

Physical Condition

Resources should be abundant from the early auto period. The evaluator should be choosy. The area should have integrity, long-term real estate value in its present form, identifiable boundaries, an enthusiastic preservation constituency and be full of representative samples of early auto design. Physical condition should be good and likely to remain so. Early auto trailer courts or migratory labor camps might be rebuilt and preserved as we do with historic forts presently. Also, regional strips of towns along early national highways might unite to form an historic district, with each town developing its own unique auto and rail design features. This might attract the national and front range auto tourist.

Representation

Colorado is likely to have only modest numbers of truly unique early auto resources from a national perspective. It imported many of its early auto planning

ideas. The planning of mountain aesthetic and functional highways and high-country towns is likely to be the exception here. These resources should be studied and good examples preserved quickly. The landscaping of early auto subdivisions and parks may also be unique due to lack of water in some areas.

The matrix of auto town types hypothesized in the Cultural Resources section is also suggestive. To the extent that it has value, there are dozens of identifiable town designs in Colorado that could be categorized as representative or unique. Without testing the matrix framework, it is difficult to suggest sample size. But one would expect at least two dozen early auto town planning districts around the state deserving to be preserved.

PERTINENT REFERENCES

The general Colorado histories and Writer's Program materials are useful introductions to the early auto period. Maps are too numerous to mention and are readily available at the Denver Public or the Colorado Historical Society Library. Articles of interest are also listed, along with selected national studies to help establish context.

General Colorado Histories

Abbott, Carl. Colorado: A History of the Centennial State. Boulder, Colorado: Colorado Associated University Press, 1976.

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Ubbelohde, Carl; Benson, Maxine; and Smith, Duane A. A Colorado History. rev. Centennial ed. Boulder, Colorado: Pruett Publishing Co., 1976.

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Newton, Normon T. Design on the Land. Cambridge, Mass.: Harvard University Press, 1971.

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Reps, John W. Cities of the American West. Princeton: Princeton University Press, 1979. (This study is useful mostly to illustrate what the 19th century cities were like. The forces of the early auto era then changed these earlier forms.)

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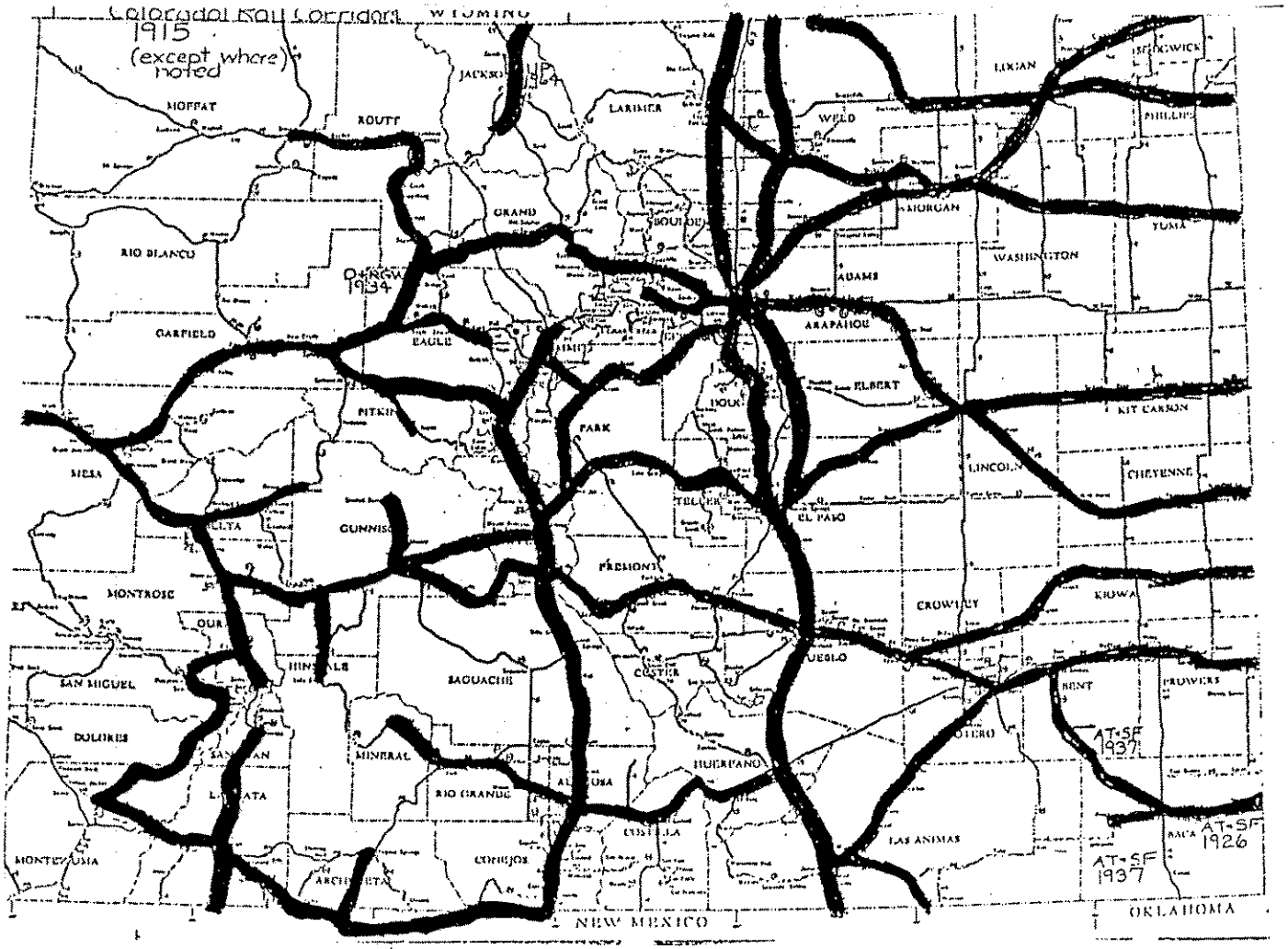
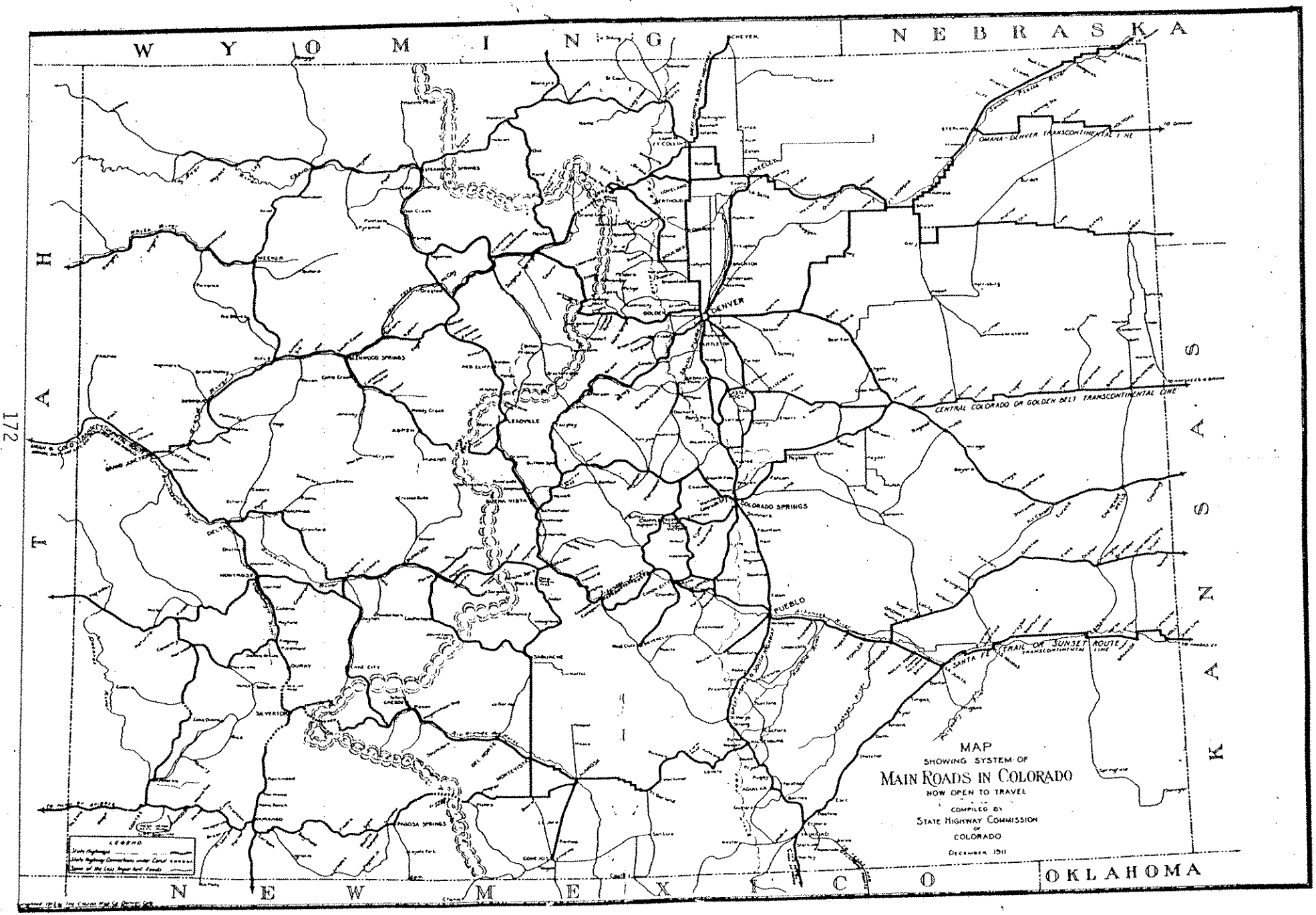


Figure 1. Colorado Railroad Corridors, 1915. (Note that the base map is contemporary.)

Figure 2. Colorado Wagon Roads Designated as State Highways by 1911.



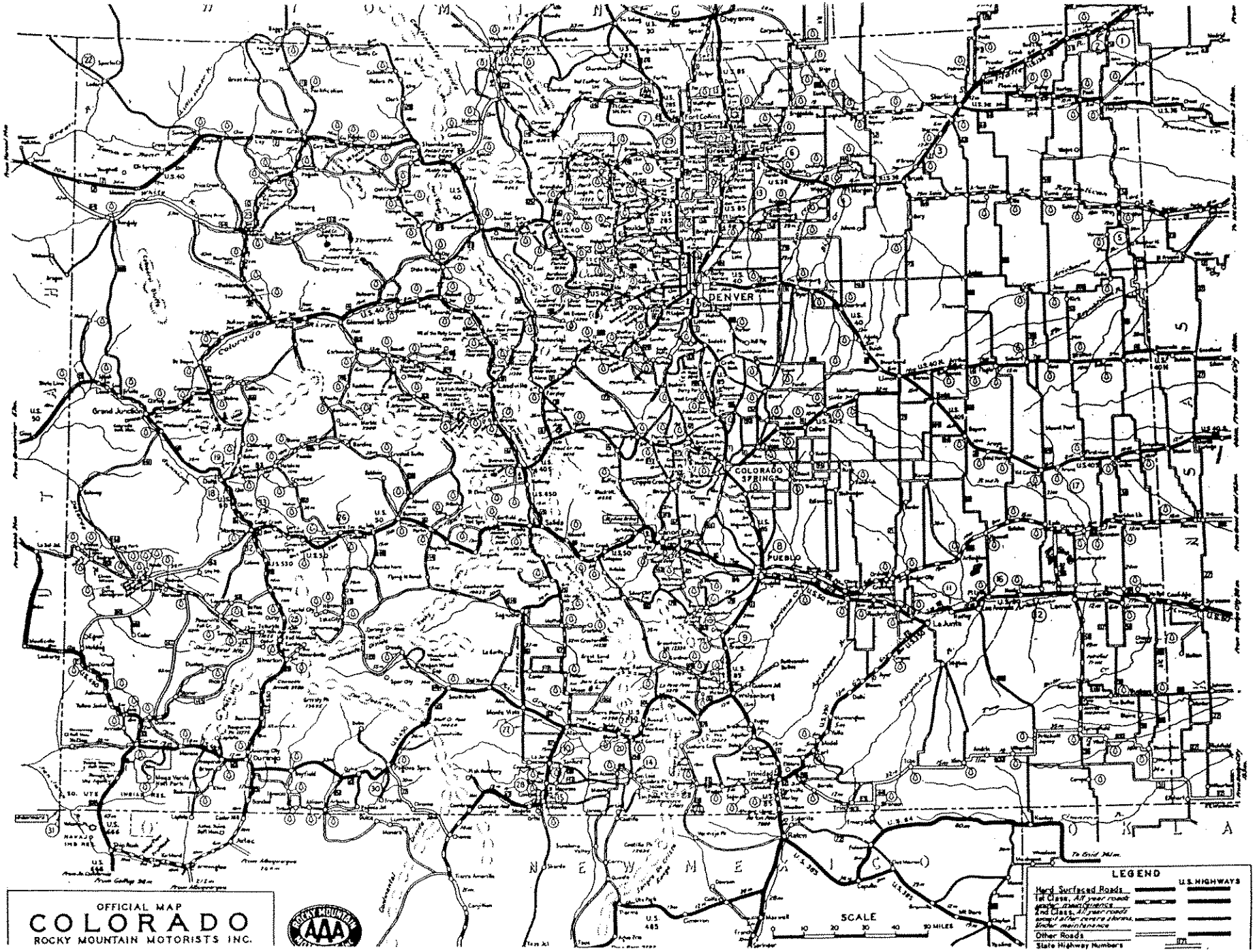


Figure 3. Colorado Auto Roads, Ca. 1928.

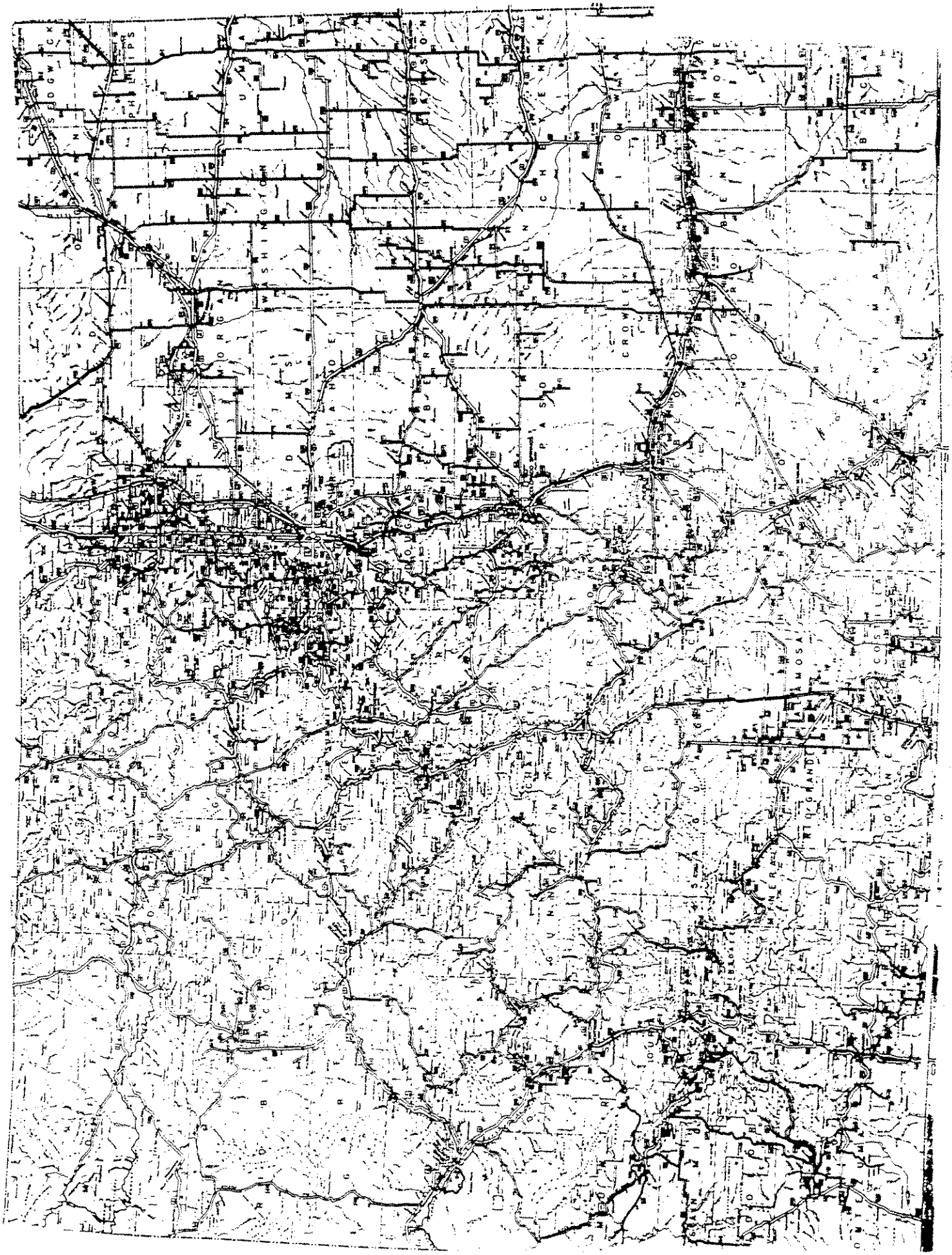


Figure 4. Colorado Auto Roads 1948.

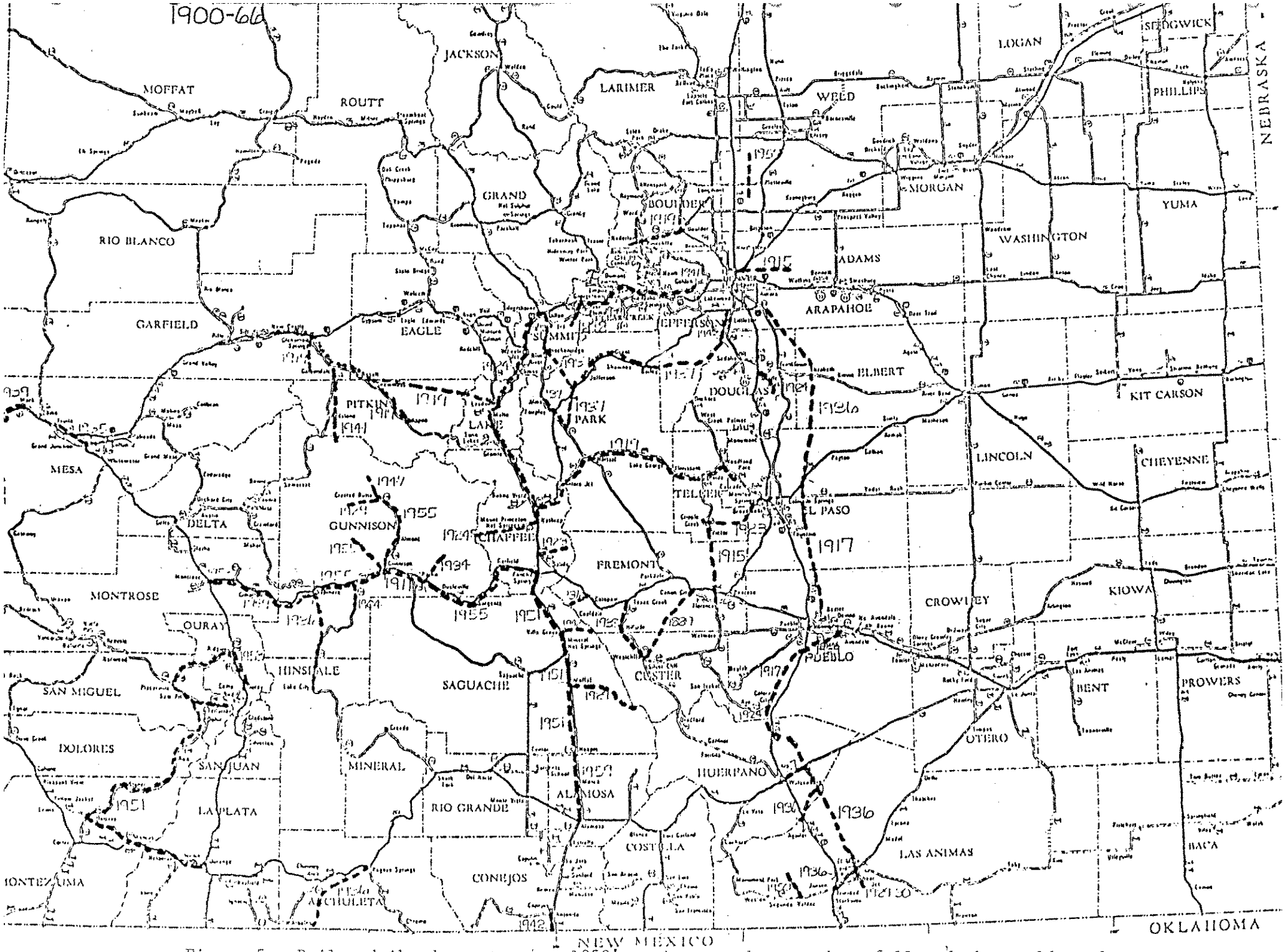


Figure 5. Railroad Abandonments: to 1950's. Auto roads sometimes followed these old grades. Auto roads also followed to service the towns.

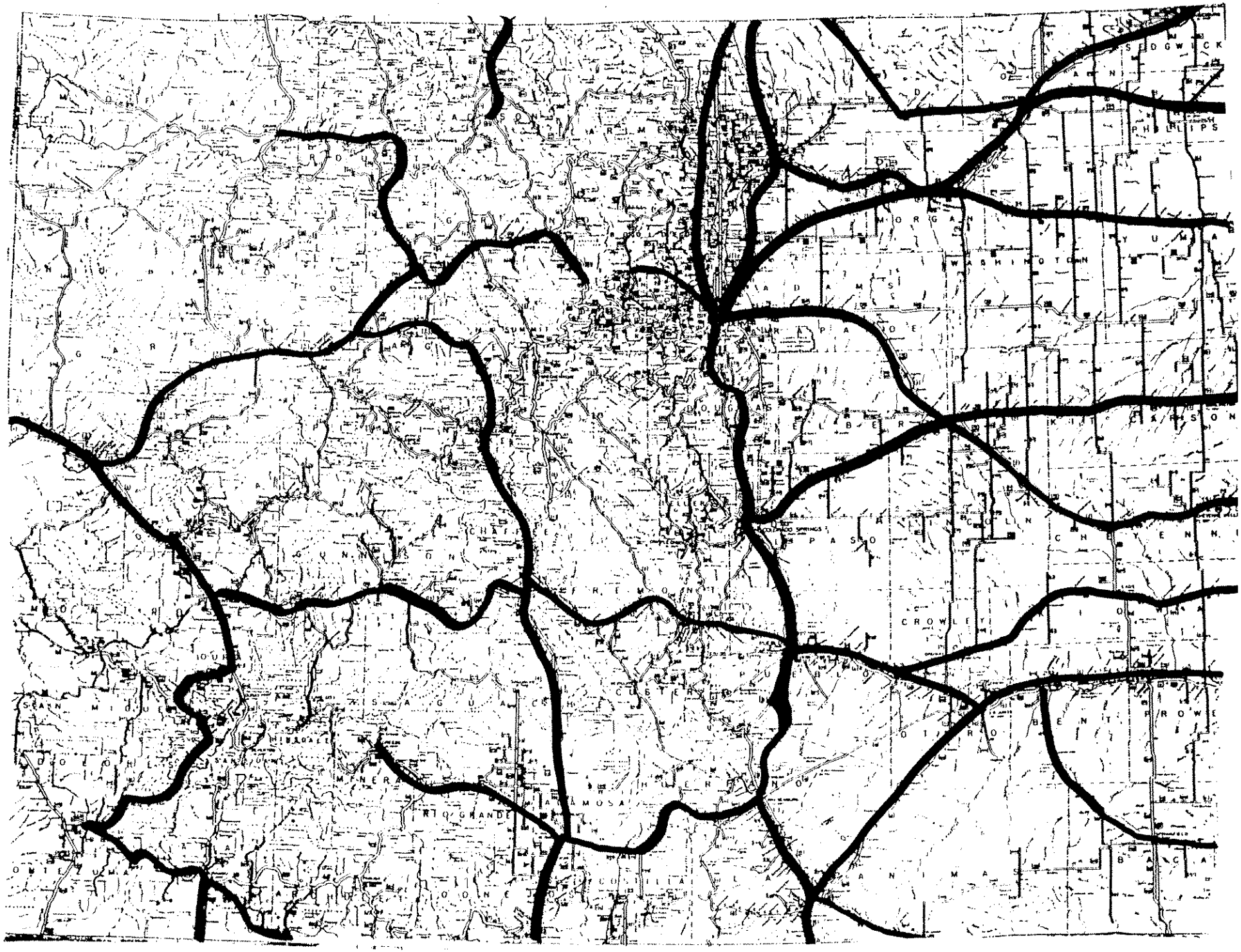


Figure 6. Linear Town Systems, Where the New Highway Parallels a Functioning Railroad. 1948.

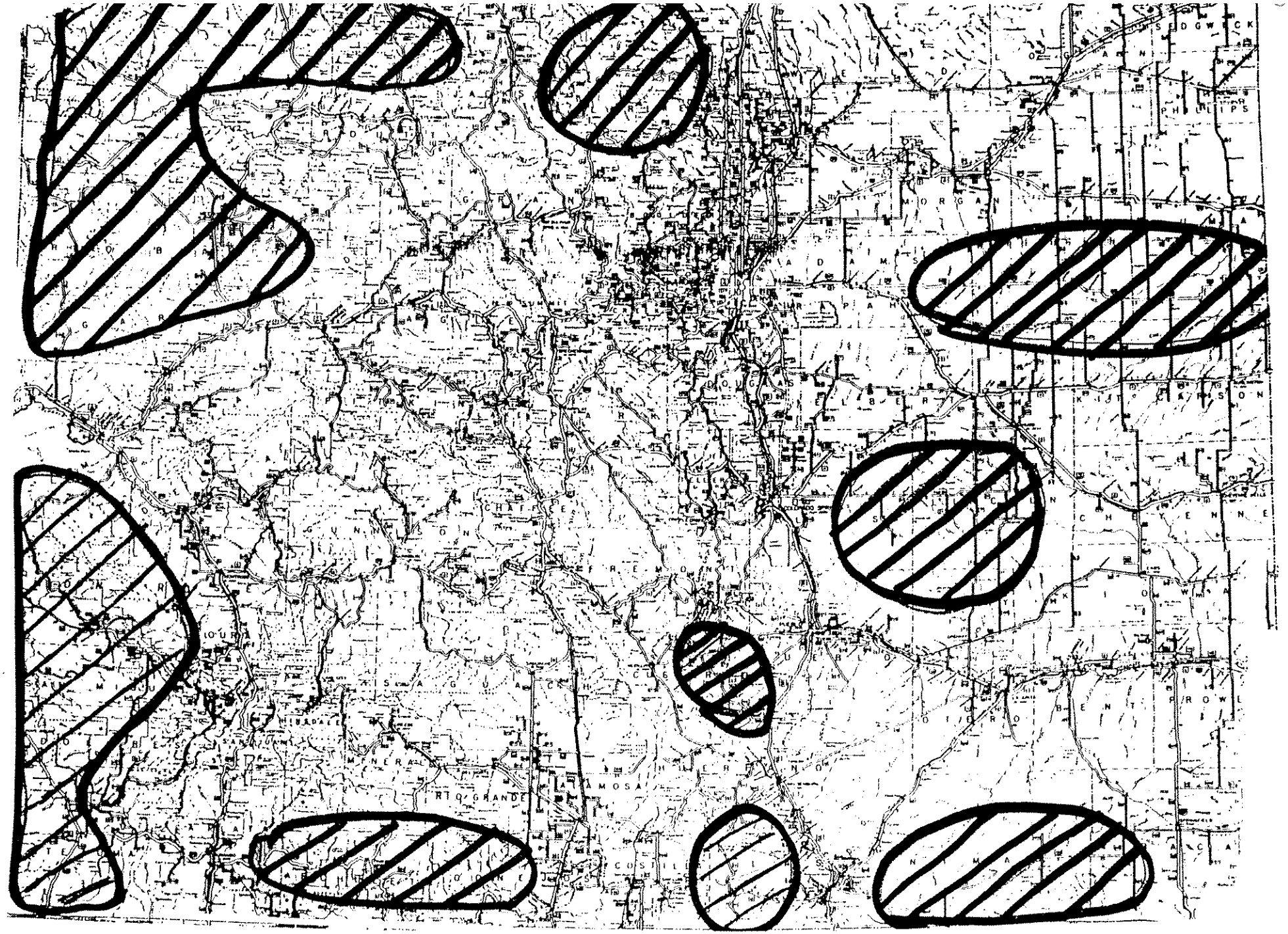


Figure 7. Wagon Road Areas That Never Had Railroad Service, But Were Connected by Highways 1910-1945. (1948 Base Map).

7. RAIL/STREETCAR DENVER 1870 - 1920: THE CENTRAL BUSINESS DISTRICT

NARRATIVE

Denver's change from a stage/wagon transport system in 1870 to a developed rail/streetcar pattern in 1920 had profound effects upon the city's CBD. The city grew rapidly in population, from about 5,000 to about 256,000, and the CBD expanded proportionately. At the same time, the city economy developed from a mining service town to a manufacturing city to a diversified Rocky Mountain economic and political empire capital. Particularly these latter financial and political office functions gravitated toward the dense elite communication node of the CBD.

During the same period the rail/streetcar system, driven by relatively cheap coal and electricity, changed the size, shape and location of CBD land uses and transport. Both the intercity radial rail pattern and the intracity radial streetcar system focused on the Denver CBD. Unlike grid patterns, radial rail layouts have a very centralizing effect because they come together at one point. When both the inter- and intracity radial systems came together at the same Union Station location, the centralizing tendencies snowballed even further. The response to these complex forces was a rapid growth in CBD height, width, and depth. The change also tended to generate larger and more horizontally differentiated functional CBD subdistricts. By 1920 there were roughly identifiable hotel, banking, office, political, residential, entertainment, retail, wholesale and transport areas. This theme attempts to outline briefly the land use developmental processes by which Denver's humble stage/wagon core area became a national scale, skyscraping rail/streetcar central business district in a half century.

Figure 1 illustrates the stage and horse car intersection at Larimer and 15th that formed the major crossroads of the city and region in 1874. (The railroad has entered the picture, but has not yet had a major effect.) The Broadway and Colfax intersection has also been established, but without yet having a significant impact. Figure 2 suggests the location of major building types of the same period. Mixtures of 3- and 4-storey brick structures center about Blake, Market and Larimer between 15th and 17th Streets. Surrounding

that area is a district of mixed frame and brick structures of less than three storeys. The district bulged out at the edges on 15th and Larimer Streets. A particularly long extension went into Auraria (Old West Denver) in response to the original double-centered form of pre-rail Denver.

Finding identifiable "functional districts" in pre-rail Denver, as evidenced in the 1874 bird's-eye data, is difficult. The town's core area was a boisterous, rather fine-grained mixture of everything from banks to bordellos. However, a few patterns are suggested in Figure 3, notably retail, hotel and banking districts. The dominance of the rectangle of Larimer-Market-Blake between 15th and 16th Streets is important as a reminder that the CBD was relatively compact. It is also important to note the stronger north-south orientation along Larimer and Market from the east-west orientation along 15th and 17th Streets. Of course, all this activity took place in what is presently called "lower downtown." Figures 4 - 6 illustrate a number of streetscapes from Denver's core area.

Figure 7 highlights the major new construction illustrated in the 1882 bird's-eye. A number of building locations foreshadowed important new growth frontiers. Union Station's placement at the foot of 17th Street pulled the CBD to the north, further isolating Auraria. This movement was further supported by Tabor's office block and the Windsor Hotel locating north of the 15th and Larimer prime corner. The horse car line on 17th was also extended to the Broadway/Colfax intersection, pulling development eastward. The location of the Tabor Opera House and the Arapahoe County Courthouse also reinforced 16th while pulling development eastward as well. Counter to these new colonization probes of the CBD fringes, the location of the Denver City Hall at Larimer, at the intersection of the Denver and Auraria grids, reinforced the older core area's compactness.

Figures 8, 9, and 10 illustrate respectively transport, building type, and functional districts. They are based upon an 1889 bird's-eye view. 1882 to 1889 were a critical five years in downtown Denver's transport development. Essentially, the CBD was gridded internally by cable or electric streetcar lines. It was also linked by the same systems to the entire city externally. The connnections to West Denver crossed the river at 15th and 16th Streets, again reinforcing the 16th Street axis. The ties to South Denver were at the now crucial intersection of Broadway and Colfax. This focus bypassed Auraria

and further isolated it. Major streetcar lines to the north and Curtis Park followed Larimer and Curtis. To the east, lines down 17th and 18th Avenues on the NS/EW grid were tied to 17th and 18th Streets on the CBD, thus reinforcing the slow movement of the CBD to the north and east. Most streetcars made connections at or near the railroad depot, thereby supporting the new State Capitol/Union Station corridor on 17th.

A great deal of building took place in the CBD during the 1880's. Most of the retail, office, hotel and warehousing structures were non-contiguous 4 - 8 storey elevator "blocks," as opposed to the earlier 2 or 3-storey "contiguous shotgun" commercial structures. The "blocks" usually covered from one-fourth to one-sixteenth of a (surveyed) block. Often they were placed on corners, and regularly they used the ground floor next to the street for small shops and window displays. This added to the already bustling sidewalk life of the streetcar/pedestrian CBD era. These blocks spread from the old stage/wagon core to the south, the north, and above all to the east, toward the projected state capitol building, Capitol Hill upper income residential areas, and the new Broadway/Colfax intersection. There was little new construction of frame buildings or traditional 2-storey contiguous brick commercial building on one or two lots. Figure 9 suggests the boundary of the 1889 expansion of "block" type construction.

The 1889 bird's-eye (in Figure 10) shows the beginning formation of Denver's present downtown land use districts. Warehouses and hotels moved toward Union Station. Retail activity was diffused at the street level of many office and hotel blocks, but basically moved north toward 16th and away from the older Larimer Street/Auraria strip. Government began its movement toward the Broadway/Colfax area with the Courthouse and the State Capitol locations. A church sector continued to develop around the Capitol area as older churches were pushed out of the central parts of the CBD, and wealthy churchgoers settled in Capitol Hill's fashionable residential areas. Banking at this point started to move east and north on 16th and 17th, though the general office sector also colonized north and east aggressively.

Manufacturing was pushed out of the core CBD area, toward Auraria and the railroad spine sector. Larimer Street was by now experiencing considerable decline, and many large older residential structures surviving in the CBD were divided into small units for the poor. Of course, the CBD remained the center

of entertainment, though it is difficult yet to establish isolated districts. Perhaps Tabor's opera house location initiated Curtis Street's rise as an entertainment strip.

A 1908 bird's-eye view of Denver (Figure 12) clearly illustrates the CBD's increasing verticality. Areas colonized on the CBD fringe had now become consolidated functional districts. Sixteenth Street became the core department store strip, with names like Daniels and Fisher, May, Denver Dry Goods, A. T. Lewis, Joslins and Symes appearing along or near it. Seventeenth Street became the banking and general office strip with the Equitable, Railroad Exchange, Ideal and other buildings rising sometimes to ten storeys. Curtis was expanding fast as an entertainment street, and the U. S. Mint and the Denver Public Library were added to the Courthouse and Capitol government district at Broadway and Colfax.

A new hotel district expanded speedily around the Brown Palace at 17th Street and Broadway, including names like the Savoy, Shirley, Plymouth, Metropole and Majestic. By 1908, two viaducts had been built across the Platte by 14th and 17th Streets, but even they could not revitalize the Auraria area and Larimer Street. The latter became the center of the CBD's busy mixed-use district, but one specializing in serving the transient and poor. Apartment blocks for downtown middle and lower middle income workers were located in North Capitol Hill and around the Capitol.

Figure 11 is from a photograph of the CBD taken in the early 1920's. Transport serving the CBD was quite sophisticated and mature. Streetcars tied the entire city (east and west of the Platte) to the CBD very efficiently, the railroads linked it to the region, and the new interurban connected downtown with intermediate towns like Boulder and Golden. Cars supplemented the rail system, without yet getting in the way or creating serious economic competition. Broadway was cut through Curtis Park to better bind Northwest Denver to the CBD, and the Colfax viaduct pulled West and Southwest Denver into downtown's sphere of influence. The first third of the twentieth century was probably Denver's most efficient transport period. It was characterized by a dominant radial pattern rail system, supplemented by an open grid auto system that was as yet too small to pollute or congest.

Land use development from 1908 to the early 1920's took the form of infill within the dominant sectors. The sectors of Curtis Street entertainment,

16th Street retail, 17th Street financial and office, Broadway/Colfax government, Capitol Hill churches, and lower downtown diversity/poverty continued to strengthen and consolidate. Office and hotels were 8 - 12 storey elevator structures, while the other CBD blocks remained in the 4 - 8 storey area. All continued to have shops and other activities at the street level and street life in the period was energetic and exciting. It should also be remembered that the CBD in 1920 had virtually no hotel, retail, entertainment, or office competition in the city. Denver was a well-functioning single-noded urban area.

From an urban design point of view, 1920's Denver showed remarkable versatility and quality. It had the monumental City Beautiful tradition in the Civic Center and the intimate stage/wagon tradition lower downtown. It also had the skyscraper capitalism motif on 16th and 17th Streets, but without the inhuman scale of Manhattan's commercial canyons. Throughout, it had an active day and night street life, due in part to the many people who still called the CBD their residential home. It also attracted street life through the power of its retail and entertainment district. Streets were still safe for pedestrians and all buildings had street level activity. It was not a perfect CBD, but its diversity, efficiency, activity and human scale remain as measures of what the present CBD physical form has yet to reconstruct.

CHRONOLOGY

This summary is organized around the bird's-eye view documents used in this theme's narrative and illustrations. Dorsett's The Queen City presents a much more detailed political and economic chronology, and Jones and Forrest's Denver: A Pictorial History is an excellent source for the dates of major individual buildings, networks and parks. Tom Noel's Denver: Rocky Mountain Gold and Denver's Larimer Street are also very helpful.

1874 Pre-rail bird's-eye view

Diversified stage/wagon core area, straddling Cherry Creek. Some differentiation of banking, retail and hotel districts.

1882 Bird's-eye. Beginning of the CBD's rail/streetcar district. Union Station-Broadway/Colfax intersection axis begins. Movement away from Auraria and Larimer's north-south axis.

Mining boom period in Denver's history begins.

"Blocks" as major structured building types.

1889 Bird's-eye

State Capitol location anchors Broadway/Colfax/Union Station axis.

Streetcars completely grid CBD and connect to whole city.

Union Station completely links state and nation to CBD.

Continued differentiation and frontier colonization of CBD land use districts.

Retail on 16th Street.

Offices on 17th Street.

Government at Broadway and Colfax.

Wholesale uses at Union Station.

Hotels at Union Station.

Larimer Street and Auraria begin to decline.

"Blocks" dominant structural types.

1893 End of mining boom as stimulant to CBD growth.

1908 Bird's-eye (in narrative)

Denver as political/economic empire capital.

Continued diversified growth of CBD.

Continued streetcar linkage to city, especially West Denver.

Hotel district develops around the Brown Palace.

Church district scatters around the Capitol.

Infilling of sectors colonized in 1890's (listed above).

Apartments in north Capitol Hill.

Early 1920's Aerial Photo Stabilized and consolidated streetcar/rail land use districts.

8 - 12 storey office block dominance.

Highly efficient streetcar/rail/auto interface.

City Beautiful Civic Center nears completion.

Single nodal city of 1920's is the heyday of the CBD.

Diverse urban design:

City Beautiful baroque: Civic Center and Speer Blvd.
Intimate stage/wagon: lower downtown.
Moderate scaled skyscraper canyons: 16th and 17th.
Residential function and active street life as important CBD design considerations.

LOCATION

The illustrations establish location. They are as follows:

1. 1874 Pre-rail CBD: Transport.
2. 1874 Pre-rail CBD: Building Form.
3. 1874 Pre-rail CBD: Approximate Land Use Districts.
4. CBD Streetscape 1870's: 2 - 3 storey brick (Noel)
5. CBD Streetscape 1880's: Blocks (Mixed) (Noel)
6. CBD Streetscape 1915: Blocks Dominant (Jones & Forrest)
7. 1882 Early Rail CBD: Pioneering CBD Frontiers
8. 1889 Expanding Rail CBD: Transport.
9. 1889 Expanding Rail CBD: Building Form.
10. 1889 Expanding Rail CBD: Land Use Districts.
11. 1920's Continued Consolidation of CBD Land Use Districts.
12. 1908 Bird's-eye View of Denver.

CULTURAL RESOURCES

Since about 1960, urban renewal, the excessive dependence upon the auto as the only transport system in the city, suburbanization and the virulent growth of the office sector in the CBD have destroyed the bulk of the 1870 - 1920 streetcar city resource. Demolition for new uses or parking lots has leveled a half century of Denver's urban design creativity--a staggering waste. Apart from a few blocks in lower downtown, virtually nothing remains. Even the outskirts of the old CBD in the inner ring neighborhoods are so over-zoned and overrun by one-way streets that protection is very difficult.

Individual buildings remain in the CBD proper. These should be protected with zeal. A few districts and multiple block areas (like lower downtown) remain, near the CBD periphery. They need careful preservation and reuse. Extensions of the old fabric down streets like Santa Fe, Broadway, Lincoln, Colfax, Larimer, Market and Blake and others need to be carefully protected. Inner ring neighborhoods like Capitol Hill, North Capitol Hill, La Alma/Lincoln Park, Baker, Highlands, and Curtis Park all need analyses to see what fragments of old CBD-related activities might still be hidden away within them. Surveys of Denver's historic buildings have begun the process, but little systematic work has been done on larger complexes of rail/streetcar buildings and districts.

QUALITY AND QUANTITY OF EXISTING INFORMATION

Historical Documentation

Though no interpretive planning and urban design history has been written on the Denver CBD, writers dealing with other aspects of the area and the city as a whole have dealt with it in passing. These studies have had important planning insight. The most important histories are those by Barth, Dallas, Dorsett, Noel, Jones and Forrest, Reps, Smiley and the Writer's Program. They are listed in the references below. Tom Noel's new book, The City and the Saloon: Denver 1858 - 1917, should also be noted. Secondary resources on the Denver CBD are probably the best on any downtown in the state.

Typical primary documents used in planning and urban design analyses are the following. These are generally available, complete and in good physical condition, with respect to the Denver CBD.

Written documents.
- General state and local histories.
- Municipal records.
- Real estate records.
- Private papers of planners, architects, landscape architects, developers and landowners.
- Newspapers, magazines and journals.
- County, town and city plans.
- Records of major industries, banks and chambers of commerce.
- Railroad, streetcar, toll road, stagecoach and utility company records.

Graphic records.
- Map collections.
- Bird's-eye view collections.
- Real estate atlases.
- Insurance maps.
- Assessors' maps.
- Aerial photos.
- Satellite photos.
- Post card and architectural photo collections.
- County, town and city plan maps.
- Railraod, streetcar, toll road, stagecoach and utility company maps.
- State highway department maps.
- Commercial highway maps.
- U.S.G.S. maps.
- County, state and national atlases.
- Federal land surveys.

Oral histories.

Number/Condition

As the illustrations show, Denver once had a highly developed and organized rail/streetcar CBD. It was a unity, with an organized hierarchy of transport systems from pedestrian to intercity rail, and a land use hierarchy that went from individual buildings to the CBD as a whole. Within that rail/streetcar CBD many rich remnants from the earlier stage/wagon city still survived. Depending on how they might be defined, there were probably about five hundred historic resources in the CBD in 1920. The resources were mostly in good condition at that time.

Currently, as discussed in the Cultural Resources section above, most have been lost. The entire passenger streetcar and rail system has been dismantled, with the exception of Amtrak, etc. The office core has been gutted and virtually the entire Auraria area demolished. There are some enclaves left: selected buildings, streetscapes, the B-7 zone, the Golden Triangle area, and sections of the CBD that stretched into the inner ring neighborhoods. It is beyond the scope of this theme to offer a detailed description of present conditions, however.

Surveys

No systematic surveys of the planning of the rail/streetcar CBD have been done. The Denver Planning Office's Denver Inventory has catalogued many historic buildings, and the libraries of Historic Denver, Inc., and the Denver Partnership should be examined for possibly more contemporary informal information and site-specific studies. Studies of the streetcars are available and are quite interesting. Tom Noel's survey/interpretation, Denver's Larimer Street, is quite useful.

Data Gaps

Data is not the problem in managing historic resources in downtown Denver. There is more than enough. The problem is transforming data into public policy studies which will improve preservation management.

Future Needs

The types of studies that need to be done to preserve what is left of the rail/streetcar CBD are economic, political, comparative and administrative.

The long-term costs of destroying older buildings must be established; the political popularity of the issue of preservation must be documented; comparative studies that show Denver's mistakes vis à vis other American and world cities must be made explicit; and a management plan should be drawn up and an actionplan adopted to implement the historic management process. This needs to be a very high priority in State as well as in Denver politics.

Important Resources

So much of rail/streetcar Denver has been demolished that almost anything still surviving should be researched carefully. Specifically, remnants from the stage/wagon period are pricesless; key buildings are important; blocks that preserve the scale of the rail/streetcar era should be retained; streetcars should be put back on some streets; districts like the B-7 zone are gigantic resources to be defended ferociously; and the CBD as a whole should be analyzed and conceptualized as perhaps one large historic district.

RESEARCH QUESTIONS

What caused the Denver rail/streetcar CBD (DRSCBD) to take the form that it did?

What role, if any, did the public interest play in defining Denver's CBD form during this period?

How did the DRSCBD compare and contrast with other Colorado, American, and world CBD's of its era?

What were the aesthetics and metropolitan functions of the DRSCBD?

What effect did rapid growth have on the area's physical form?

Is there anything unique in the internal form or external interrelations of the DRSCBD functional subdistricts?

Who were the major personalities that figured in the decisions to locate and form the CBD of this era? What were their interests and motives?

What was the role of desnity and street life in making the CBD of this period socially successful?

How did the housing of people in the CBD operate? Why was it popular then and not now?

Why did the DRSCBD not prepare for the devastating impact of the automobile?

What role did the form of stage/wagon Denver play in determining the form of the DRSCBD?

For the purposes of planning analysis, what are the appropriate stages of development within the DRSCBD time period?

And many more...

EVALUATION STANDARDS

Physical Condition

There are so few remnants of the DRSCBD left that all of them should be preserved. Even old shotgun commercial structures floating like derelicts in a sea of parking have dramatic contrast appeal. The need for architectural and planning diversity is so great that almost all older structures and larger compositions should be shored up and re-used, even if the present physical condition is poor.

Representation

The scale, diversity and power of the DRSCBD is unique in Colorado and the Rocky Mountain West. It also possessed unique architectural compositions. Overall, however, the major pattern and form is not unlike many across the North American mid-continent. In fact, had it survived, Denver's RSCBD would have been a remarkably representative case of 19th century Western American CBD planning. Those parts that remain are of great value for these reasons, as well as for their critical contrast to the bland homogeneity of the existing office function monoculture.

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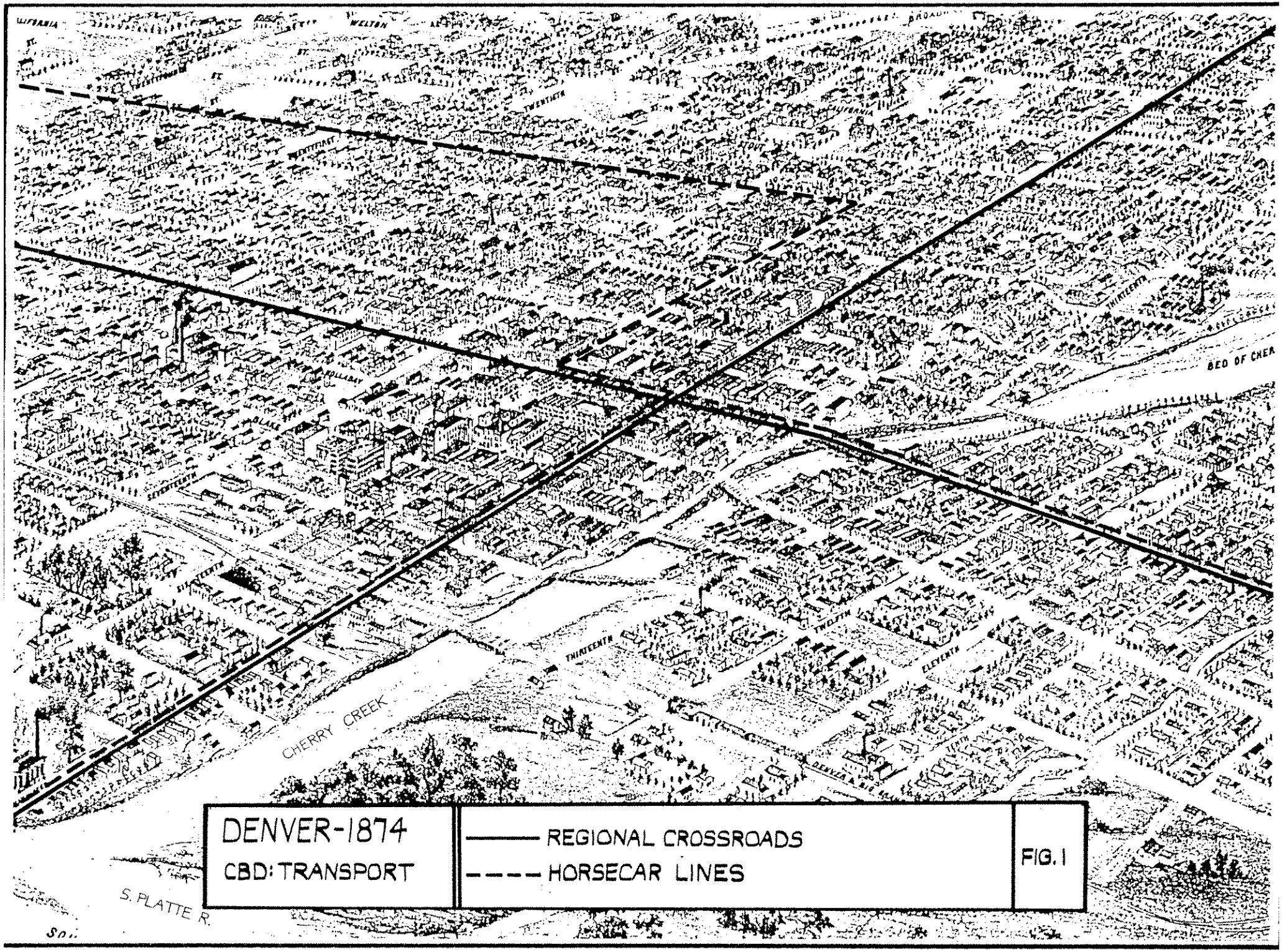
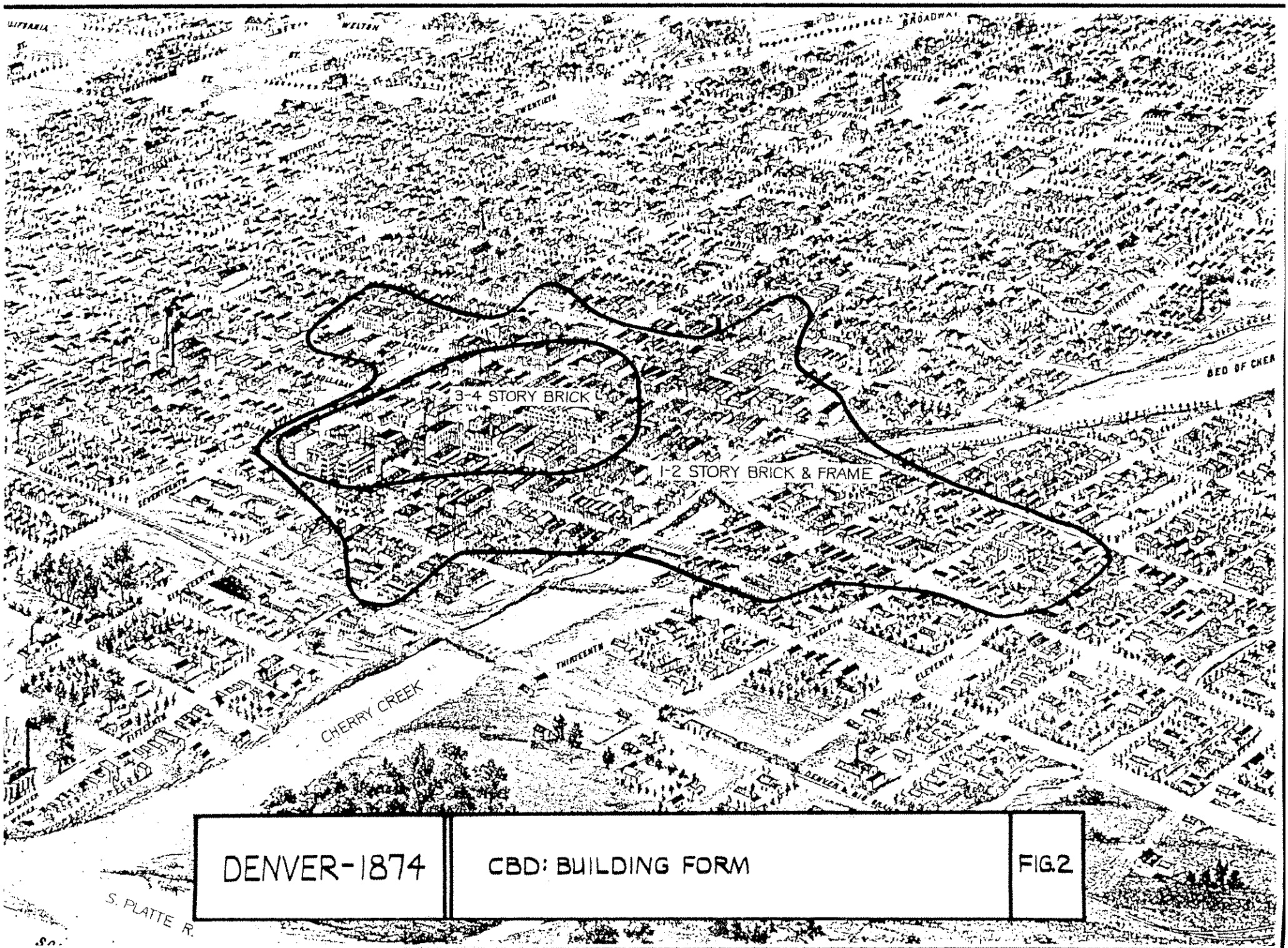


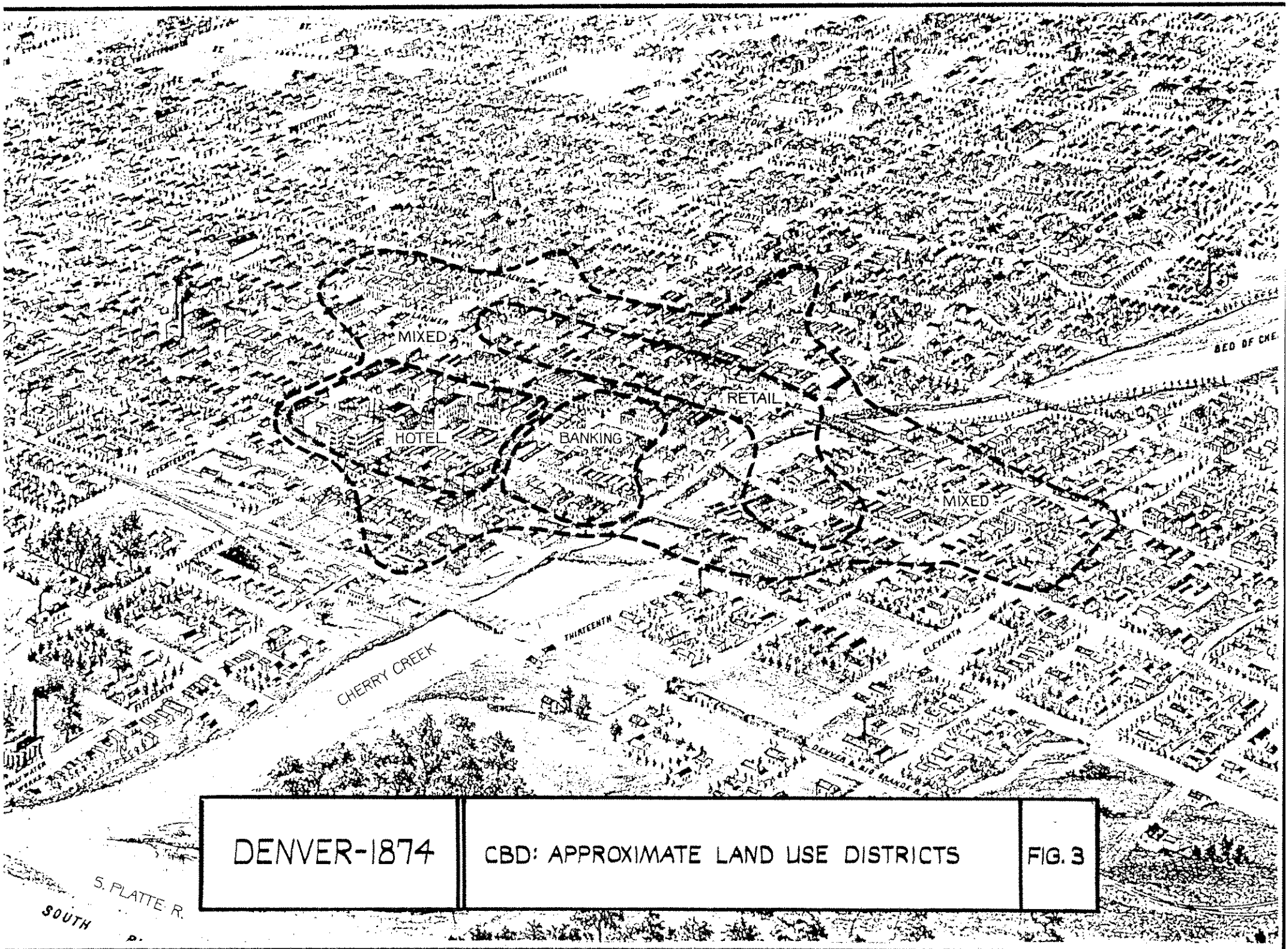
DENVER-1874
CBD: TRANSPORT

——— REGIONAL CROSSROADS
– – – – HORSECAR LINES

FIG. 1



DENVER-1874	CBD: BUILDING FORM	FIG.2



DENVER-1874

CBD: APPROXIMATE LAND USE DISTRICTS

FIG. 3

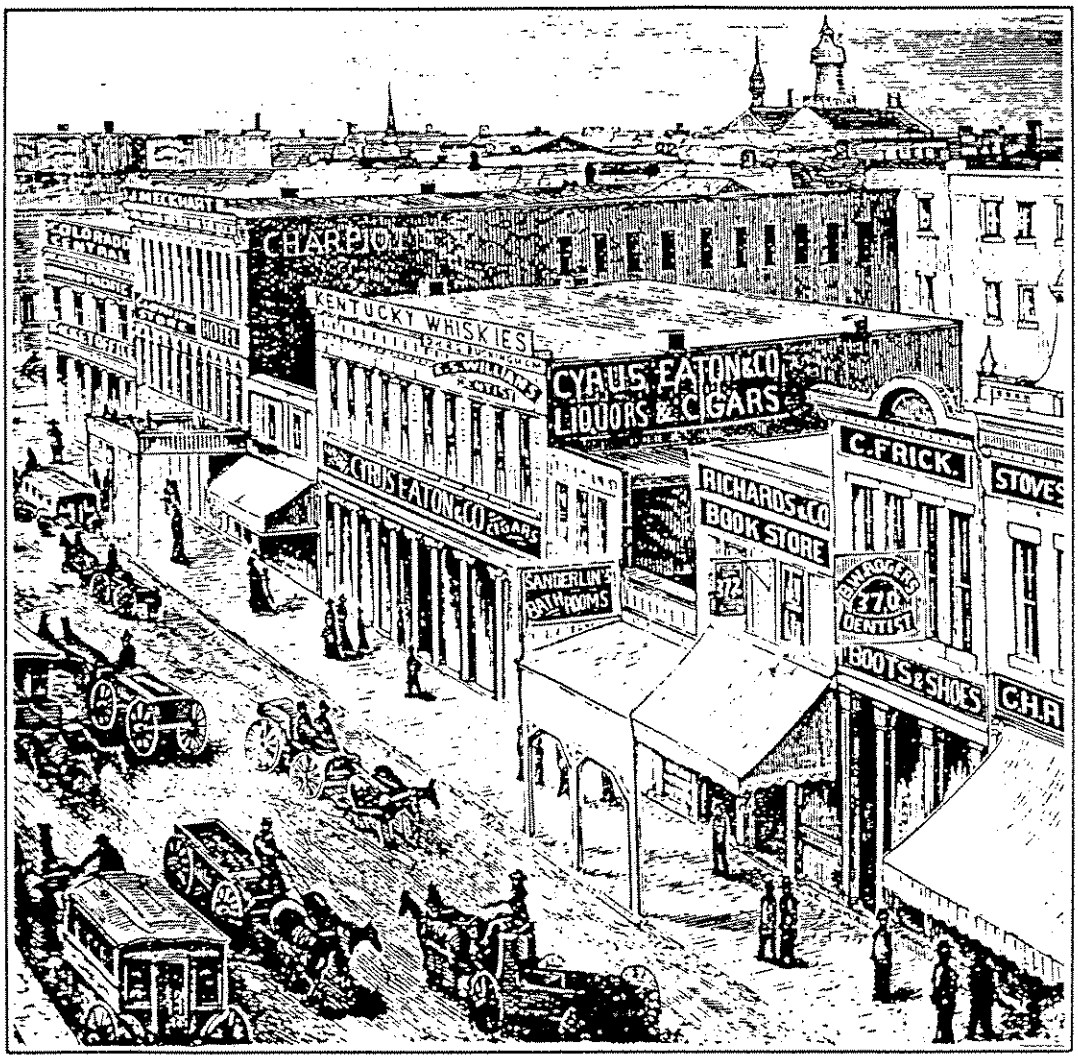


FIG. 4 1870'S CBD STREETSCAPE: 2-3 STORY BRICK (NOEL, LARIMER ST.)

FIG. 5 1880'S CBD STREETSCAPE/ BLOCKS (MIXED) (NOEL, DENVER'S ARIMER ST)

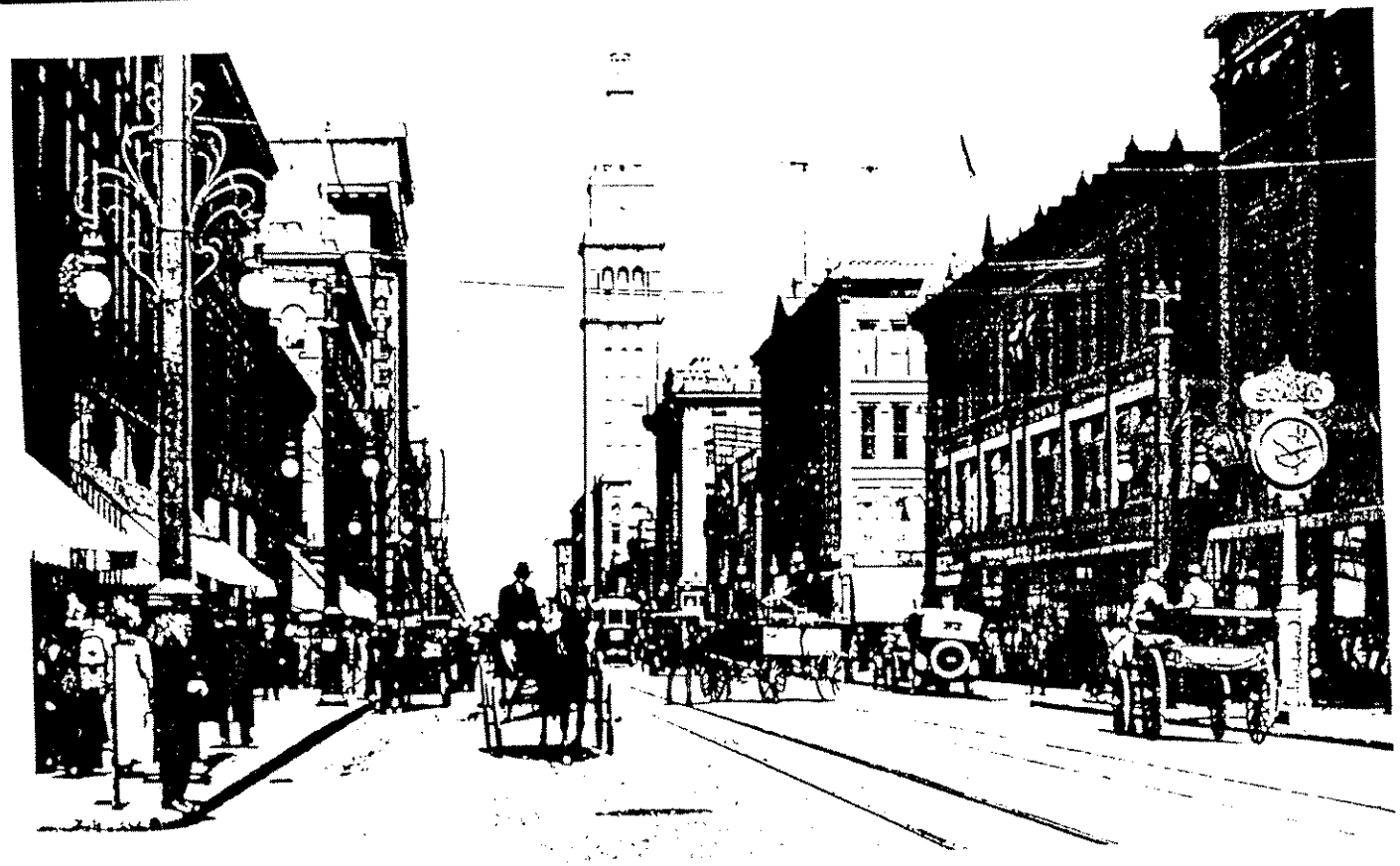


FIG. 6 1915 CBD STREETSCAPE: BLOCKS DOMINANT (JONES & FORREST, DENVER)

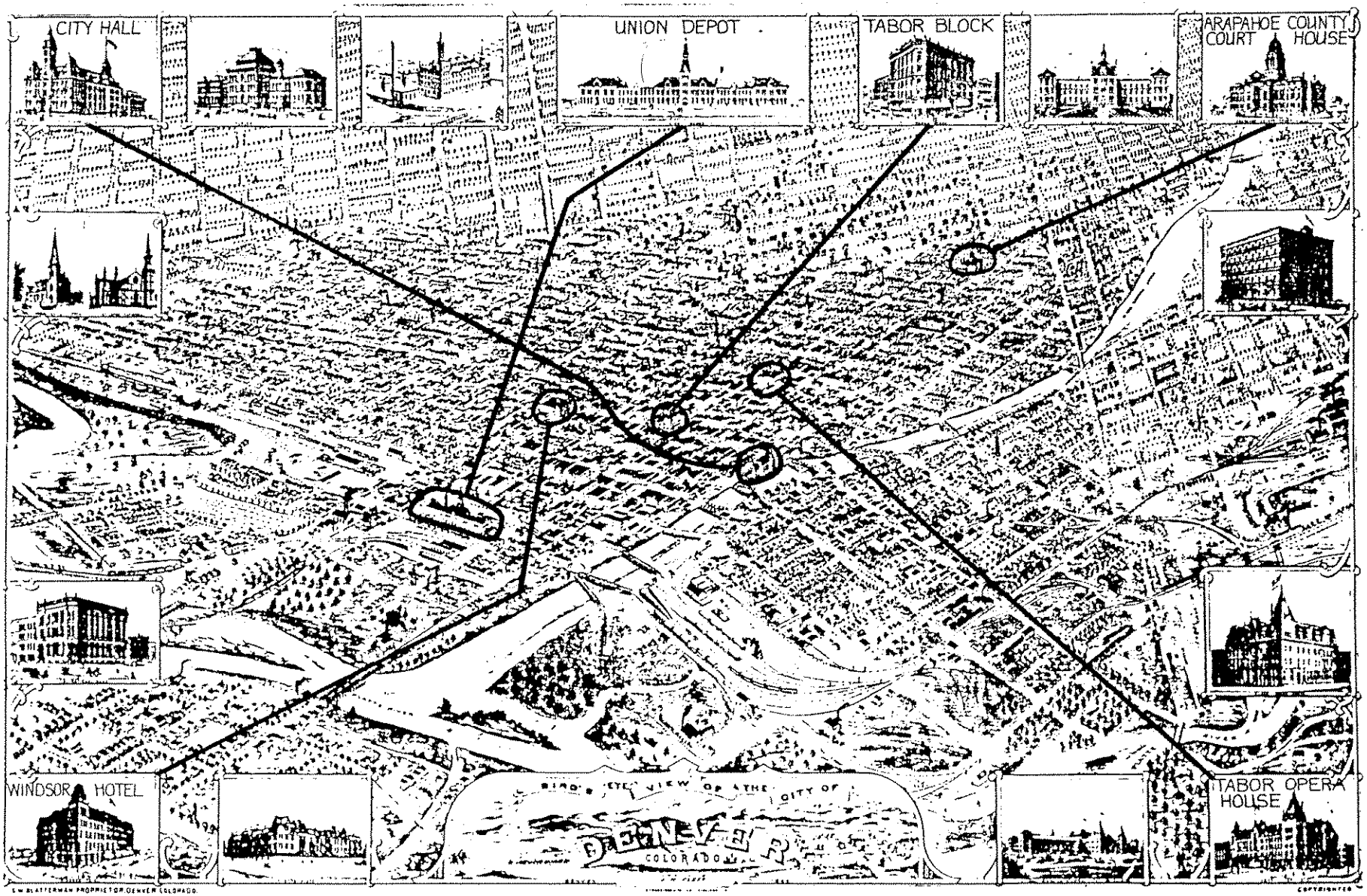
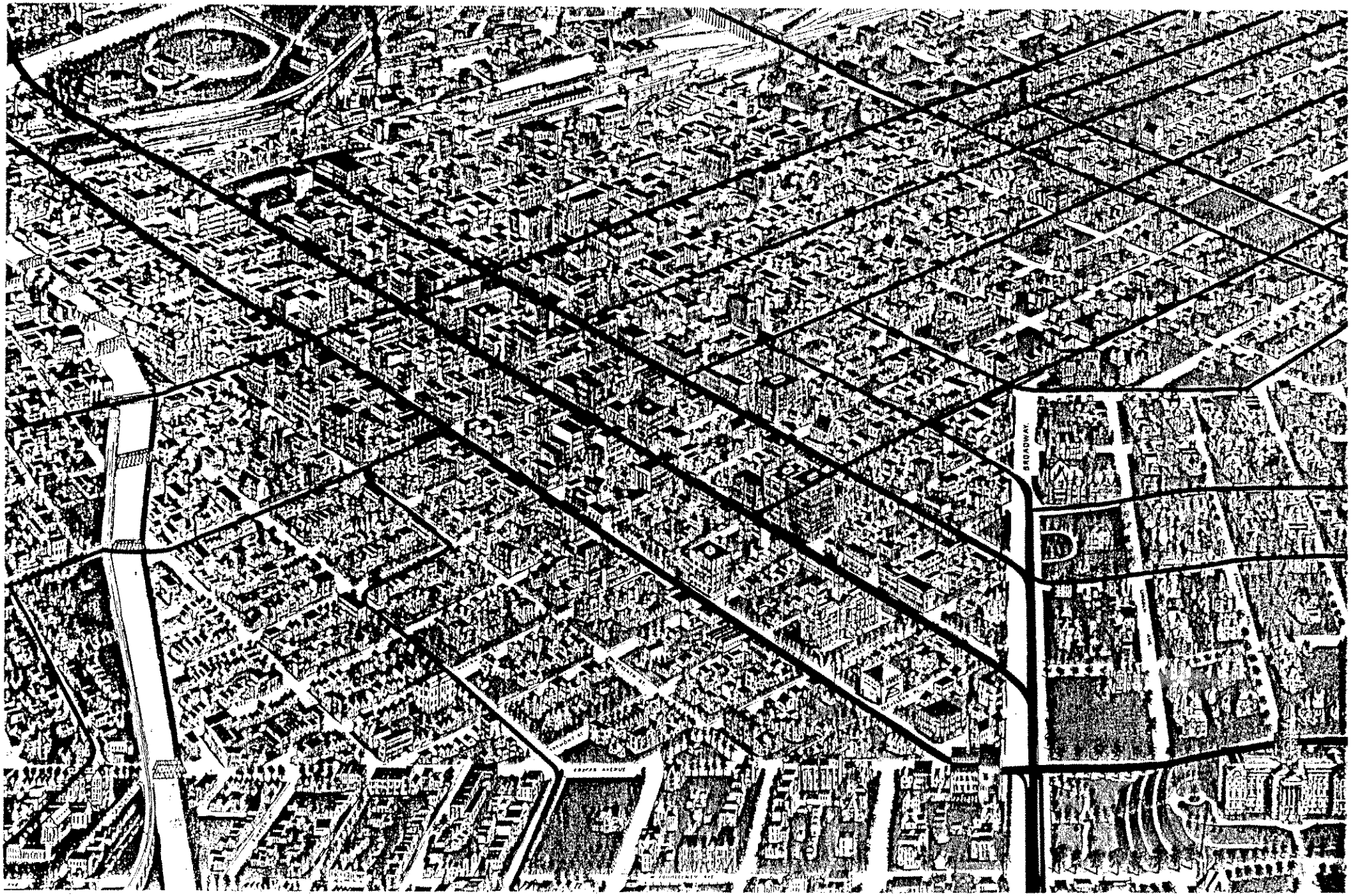


FIG. 7 1882 EARLY RAIL CBD: PIONEERING CBD FRONTIERS

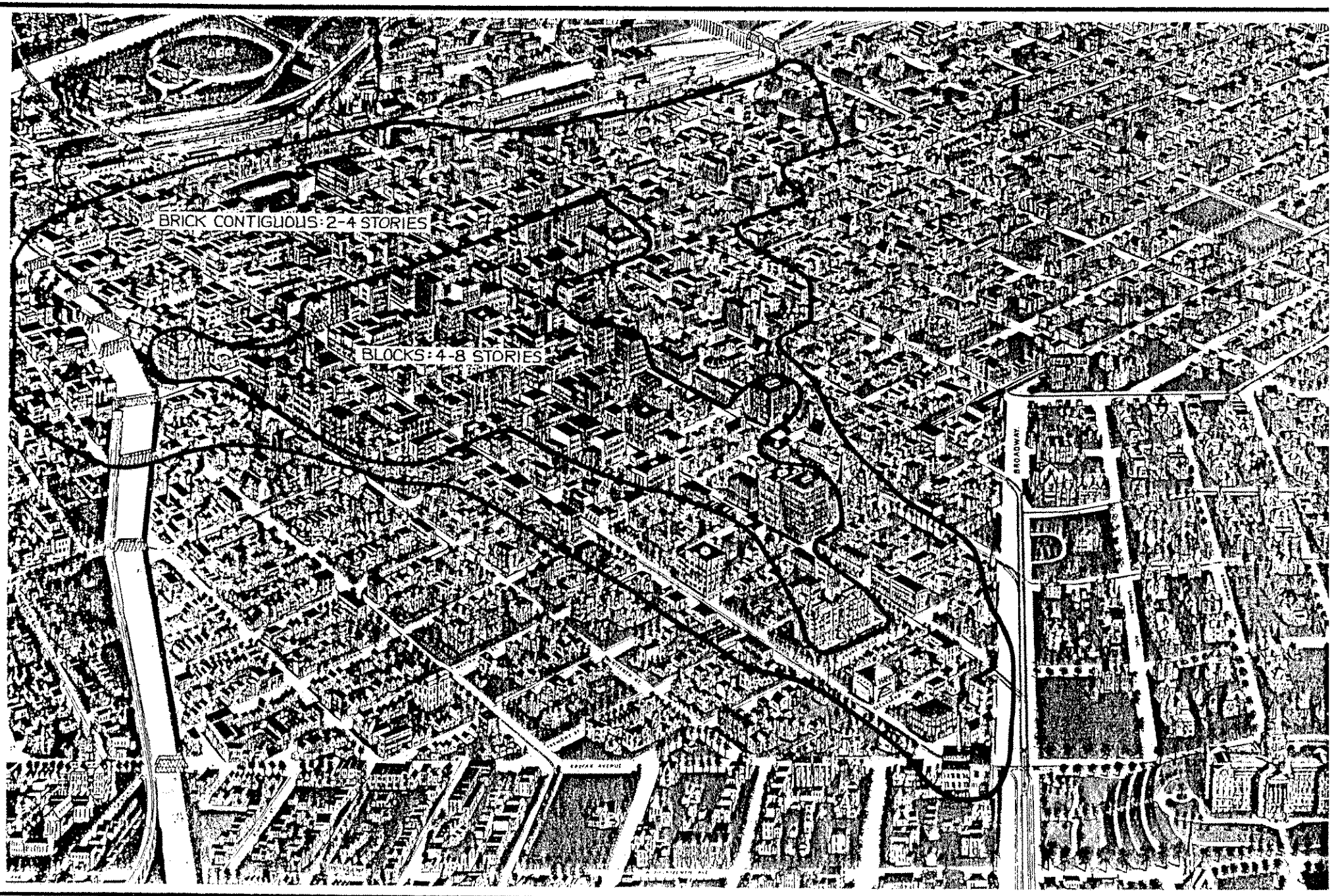


DENVER-1889
EXPANDING RAIL CBD

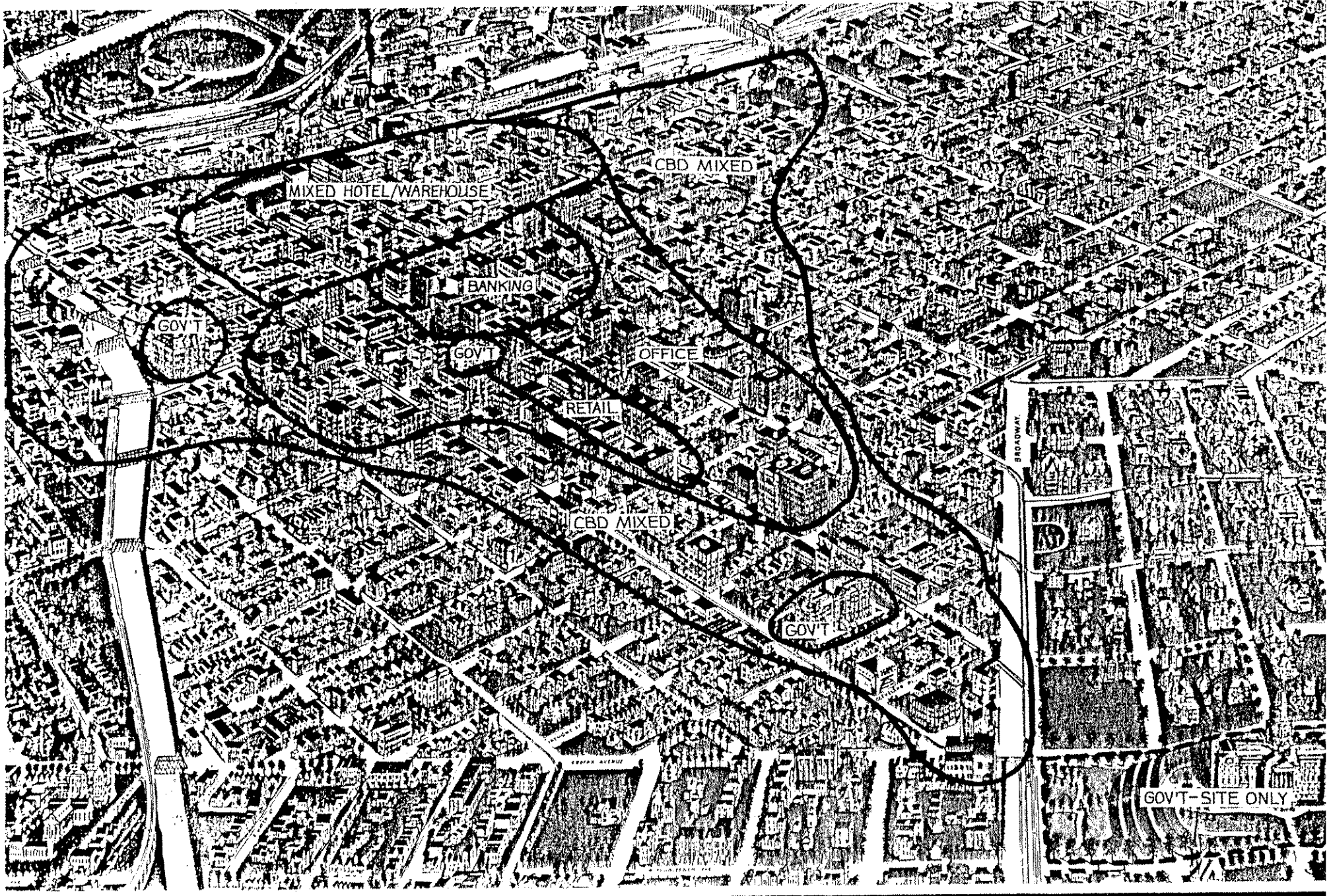
TRANSPORT: APPROXIMATE CBD STREETCAR SYSTEM
(FROM 1889 BIRD'S-EYE)

MAJOR CORRIDOR
MINOR LINE

FIG.8



DENVER-1889 | EXPANDING RAIL CBD: BUILDING FORM | FIG. 9



DENVER-1889

EXPANDING RAIL CBD: APPROXIMATE LAND USE DISTRICTS

FIG. 1

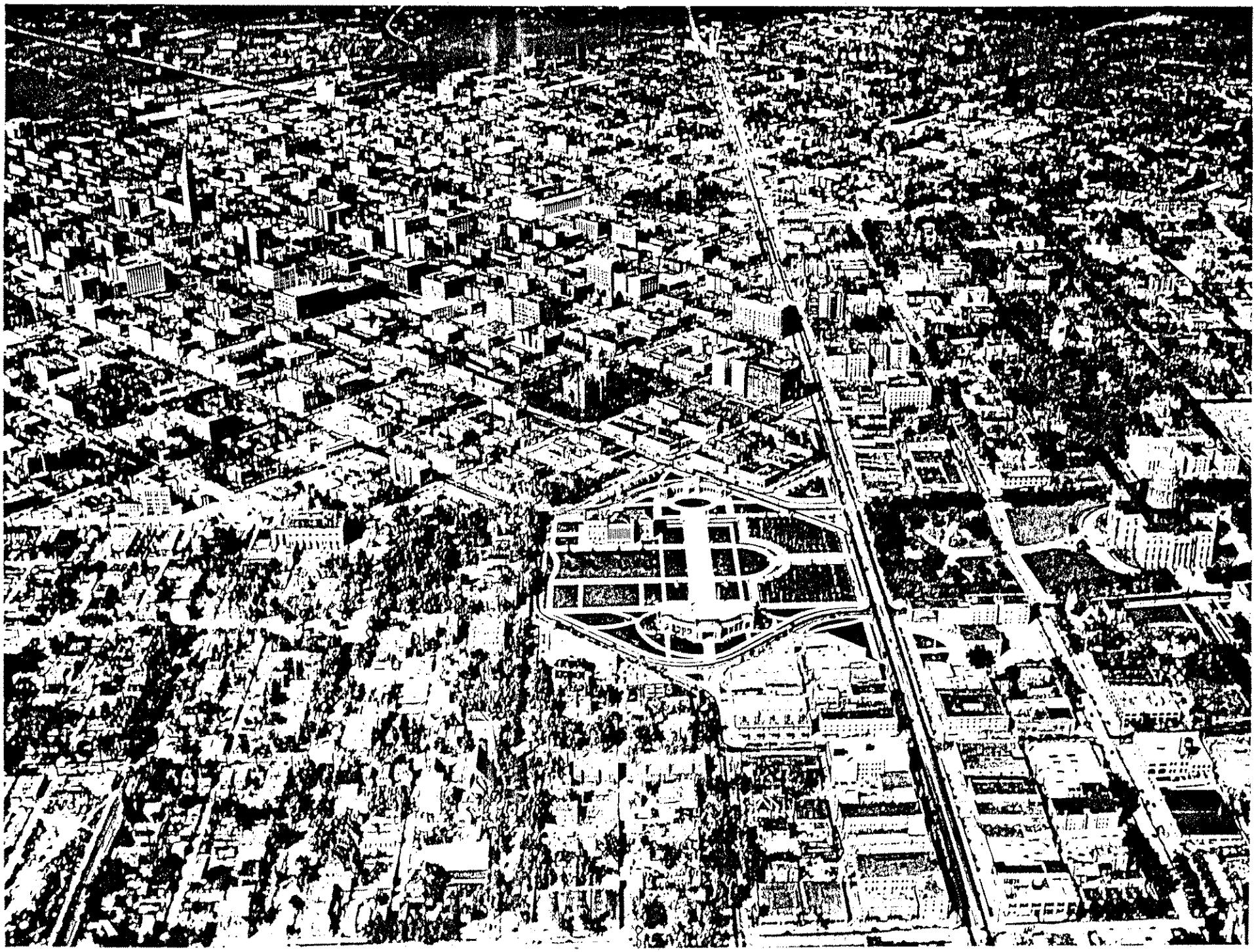


Figure 11. 1920's Aerial Photo. Continued CBD L.U. Consolidation. DPLWHC Photo.

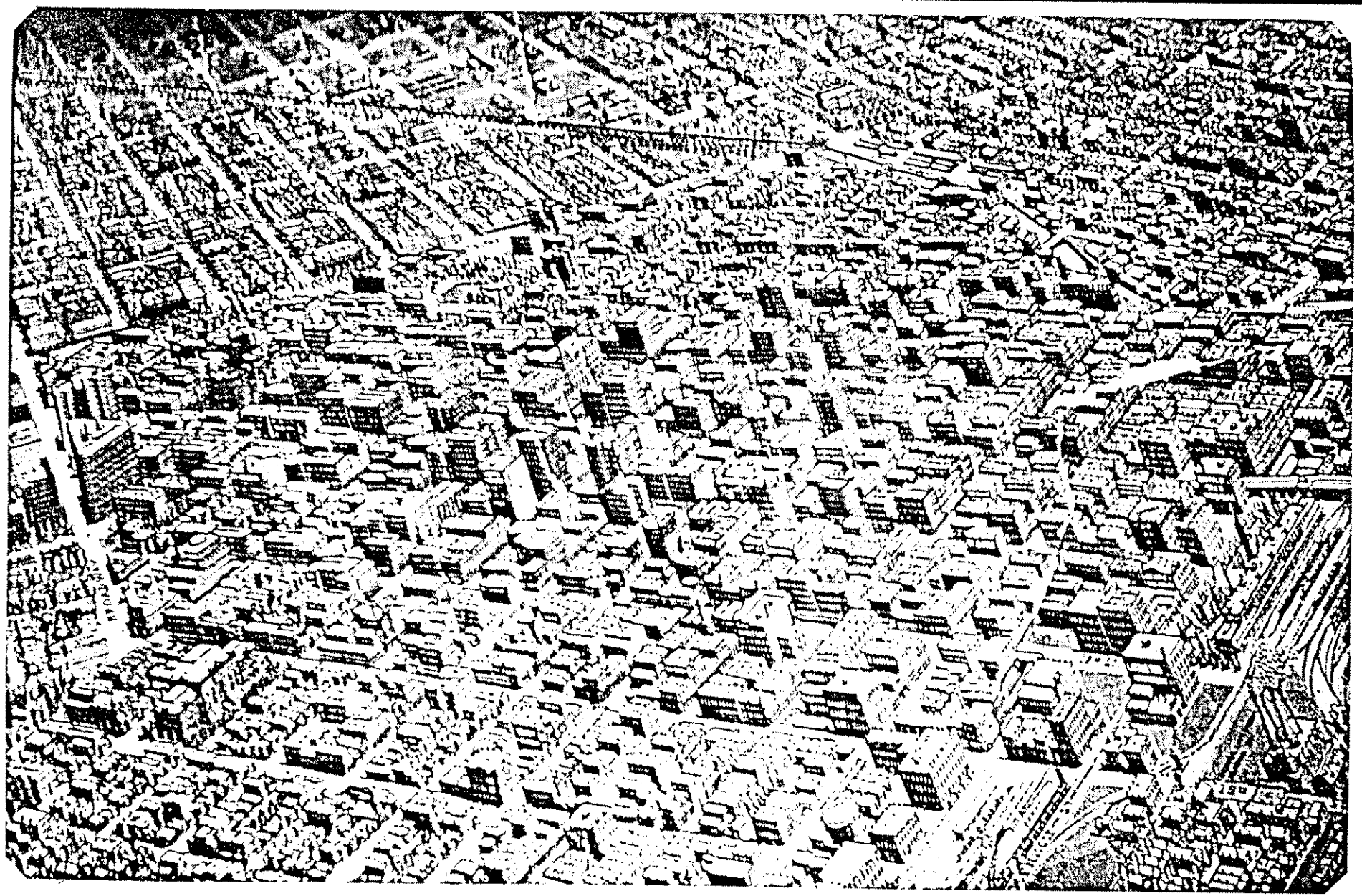


FIG. 12 BIRD'S-EYE VIEW OF DENVER, 1908 (DPL WESTERN HISTORY COLLECTION)

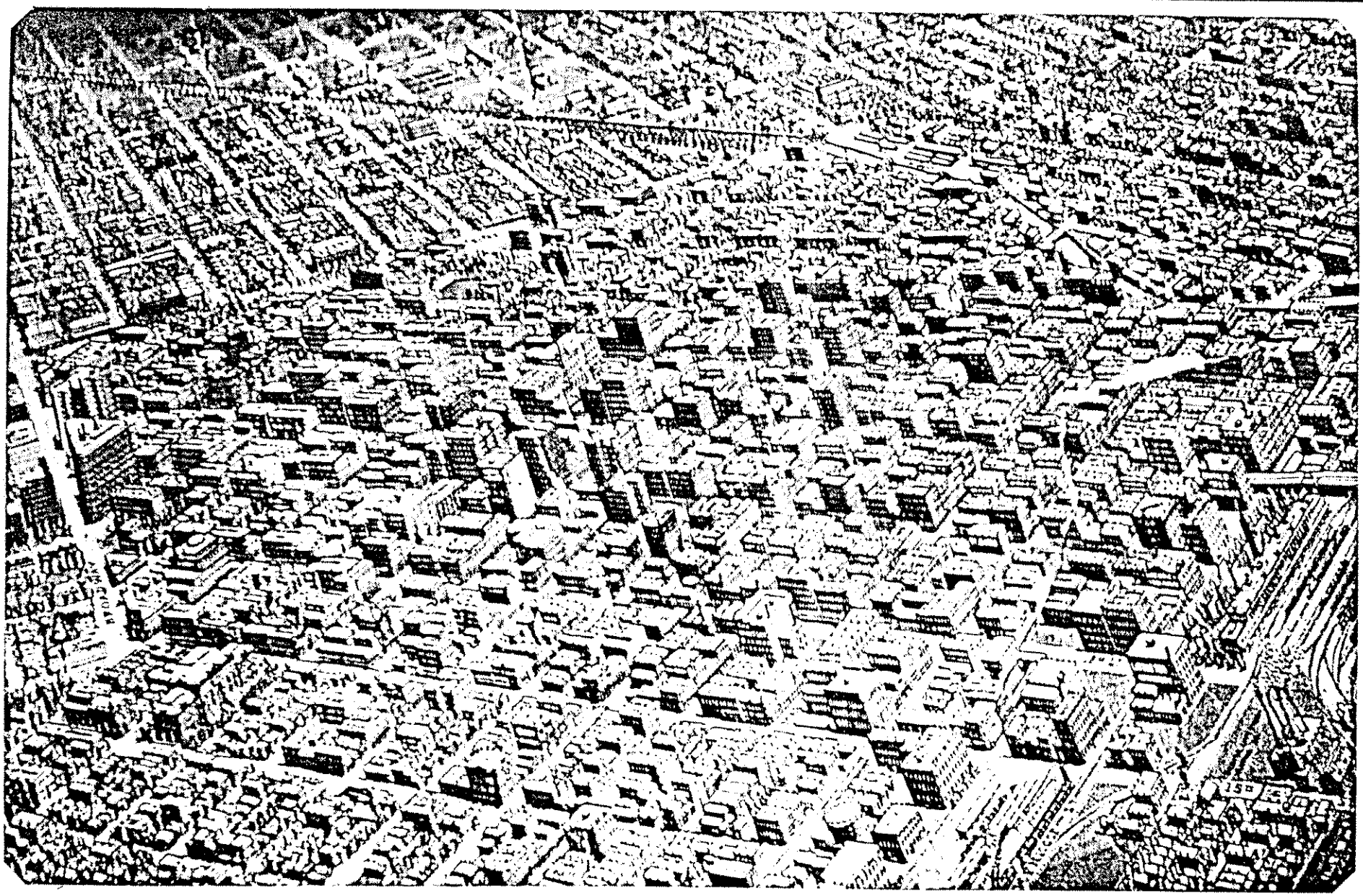
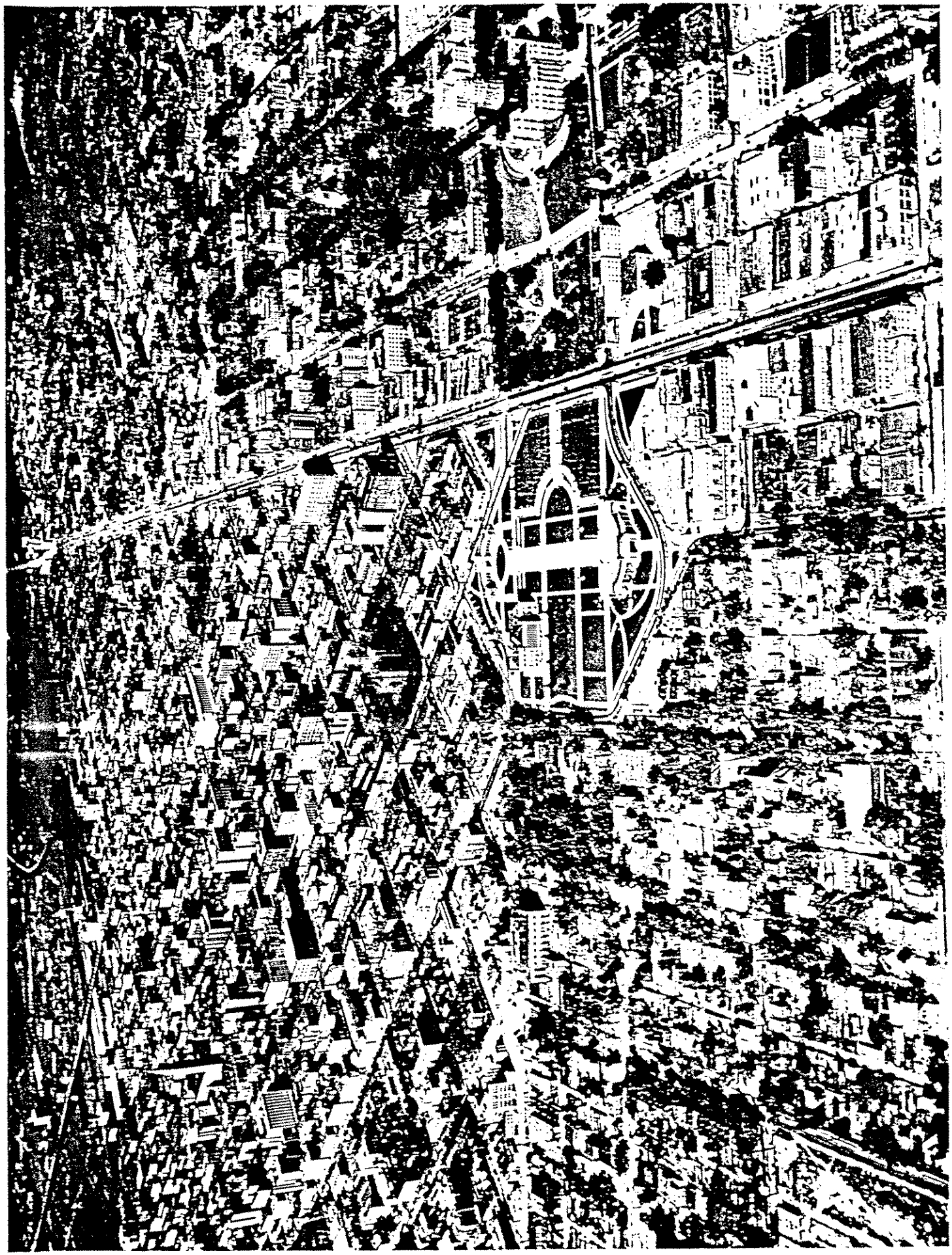


FIG. 12 BIRD'S-EYE VIEW OF DENVER, 1908 (DPL WESTERN HISTORY COLLECTION)



8. DENVER'S RAIL/STREETCAR PERIOD 1870 - 1920: RAIL/INDUSTRIAL/WAREHOUSING

NARRATIVE

The radically new components of the industrial city were grafted on to the pre-industrial cities built with stage/wagon components in many different ways. In Europe, the coal-driven railroads, streetcars, factories and elevator buildings of the industrial city were often deflected off powerful masses of pre-industrial circuit walls and dense three-storey buildings. In the eastern U. S., these components penetrated the stage/wagon centers of large, older Atlantic coast cities with considerable difficulty. In Denver, however, the rail/streetcar industrial components were considered a godsend, and they quickly penetrated almost to the core of the small, vulnerable stage/wagon prairie town. In addition, Denver's major growth occurred when these rail/streetcar components were the dominant city-building implements. Hence, Denver, at least until the recent automobile revolution, was a rather pure expression of rail/streetcar city design.

The rail/streetcar period in Denver has three stages. The first is the period between 1870 and 1875, when the relatively weak railroad regime was forced to adapt to the old stage/wagon city. Then, between 1875 and about 1895, the essential structure of the city built upon rail and streetcar was constructed. In this period, the old stage/wagon city was usually too weak to fight back. The industrial system demolished what was in its way, and rebuilt the city in its own image. This was also the period of rapid growth in Denver due to mining booms. In the last period, after the end of the mining booms, and up to 1920, Denver consolidated, diversified and refined its economy, and the rail/streetcar design of the system did the same. After 1920, the automobile, driven by cheap petroleum, begins to erode the rail/streetcar regime, and a new urban form revolution begins. The three rail/streetcar periods will be labelled: adaptive rail, dominant rail, and maintenance rail.

These three time periods will be used to help organize the discussion of three important land use district themes in Denver's rail/streetcar development: the Rail/Industrial/Warehousing Districts (RIW), the Central Busi-

ness District (CBD), and the Residential Districts. This narrative continues with the development of the RIW district theme.

Pre-rail Denver, up to 1870, had important transport, warehousing and industrial functions, but, with rare exceptions, they were not separated spatially or highly differentiated within the general functions of the business core area of the city. Figures 1 and 2 illustrate the form and location of the stage/wagon business center as a compact complex of intersecting main streets, primarily Lawrence, Fifteenth and Larimer. (Note that there are railroads in the 1874 bird's-eye, but the rails have not yet changed the pre-rail land use patterns significantly.)

Transportation in this system was based upon walking, wagons, and stagecoaches. All these had great flexibility; they allowed the transporter to service any parcel in the city. This lowered the need for a large central depot, and the transport loading and unloading system was, with a few exceptions, decentralized within the pre-rail CBD. Likewise, the warehousing function could be spread out within the downtown. The storage and sorting of goods could take place at the same sites as the unloading and selling of the goods. Retailing and warehousing were not highly differentiated.

Similarly, manufacturing was not highly differentiated. Of course, it was not yet the central sector of the town's economy, either. It was oriented toward: 1) manufacturing goods that were too expensive to be hauled overland from the east; 2) the making of goods that were feasible to manufacture locally; and 3) goods that the frontier mining and town building economy could afford. This meant primarily lumbering, milling, brewing, brickmaking, food processing, metal and woodworking, printing and so forth. There was no water power from the South Platte, so most of these functions located near labor supplies and markets in the downtown. Some of these functions also located in small towns and hamlets near Denver, but overall the pre-rail downtown housed warehousing, transport and industry, as well as retail, office, residential, and entertainment functions. The buildings of the downtown core were contiguous, and rarely more than three storeys in height.

The "adaptive rail" period displayed few changes in this pattern. The inter-city rails entered from the north, and continued south down the South Platte Valley to Colorado Springs. They cut into old residential fabric in

order to get closer to Denver's central area but for the most part did not disrupt the existing fabric greatly. The east-west rail entry to the city was also not greatly disruptive, merely crossing the north-south corridor on the far north edge of town, just south of the junction of Clear Creek and Sand Creek with the South Platte. Likewise, the first intracity rail lines were unobtrusive, merely being horse cars on rails that were often less problematic than traditional wagons. Hence, the "adaptive rail period" was a quiet one. The bird's-eye view in Figure 1 and the sketch in Figure 3 give a rough view of this period.

In the "dominant rail" period, between 1875 and 1895, most of this is changed. Figure 4 is a transitional bird's-eye drawn in 1882. Figures 5, 6, and 7 illustrate the "great reorganization" by 1889. Population increased rapidly. New rail, industrial, and warehouse functions were added; existing RIW functions expanded; almost all RIW functions relocated away from older main street locations; most changed designs to much larger horizontal or vertical dimensions; most became more air and water polluting; most became more labor intensive; most located on their own private land; and most located in a linear railroad spine down the east bank of the South Platte from Alameda to 40th Avenue. Passenger rail stations were also consolidated at Union Station in this period. At the same time, as shown in Figure 8, a streetcar system in a highly centralized pattern focused all major mass transit toward the CBD and Union Station. The intercity rail spine and the intracity streetcar system worked in unison. Figures 9 - 12 describe these intracity rail systems in more detail.

The character of the South Platte rail spine was complex. On the north, near the junction of the north-south and east-west rail corridors, and (somewhat) downwind of the city, a number of very large smelters developed, often with their own "company suburb" housing nearby. Closer to downtown, industry became more mixed, and rail service switching yards are dominant. Rounding the Auraria bend, rail yards continued and a complex of milling, brewing, utility and other three to five storey manufacturing operations was located. Many of these replaced old residential areas in Auraria. The bird's-eye view of Figure 5 illustrates this area best. Roughly speaking, this spine pushed residential development east approximately one-half mile from the Platte River bed, from 40th Avenue to Alameda. Much of the spine

was on the flood plain. Warehousing was mixed throughout this spinal corridor, but its most pronounced district was along Wazee and Blake between 10th and 20th Streets. Perhaps the most monumental remaining warehouse structures are near Union Station. This district blended well with other CBD uses. Manufacturing located much more sparsely on the west side of the river, though scattered activity was evident, especially smelting in the north.

The urban design of these districts varied from purely functional factories and rail yards to architecturally styled warehouses and passenger terminals. There was little systematic planning of the RIW district as a whole, though each individual factory, rail yard or warehouse site itself appears carefully engineered. "Technoscape" is a term used to characterize the urban design of most of the rail yards and heavy manufacturing. The spine seemed to function efficiently, though redesigns were proposed in 1935 (see Fig. 15).

The 1895 to 1920 "maintenance rail" period made few structural changes in this RIW spinal system. New industrial and utility additions were in paper, food processing, sewer and water works. Smelting declined somewhat, and rails and warehousing increased slightly. Small expansions took place on all four extremities of the RIW crossroads, but most of the new growth took the form of infill on vacant land within the existing E-W/N-S corridors. The streetcar system was completely changed from cable to overhead electric by 1900, and new electric interurbans were serving commuters from Boulder and Golden to Denver efficiently. The rail/streetcar system was consolidated and functioning well.

The influence of these wide, large RIW crossroads in Denver's land use structure was enormous. A few of the major impacts will be mentioned here. The early location of the E-W corridor to the north, and the introduction of smelters there as major land uses, tended to lower the north's value for high income residences, and helped contain and establish the north central area of the city as a lower income residential section. Locating the rail swath down the east side of the South Platte gave that side of the river a considerable head start on all forms of growth. The dirt, pollution and ugliness of the rail swath, however, cut nearby residents off from the river's beauty. Along the rail swath, primarily low income housing was constructed. The low amenity of the rail swath down the city's center also forced the middle and upper classes up the hills to the east, south and southeast. When viaducts were built, these classes also began moving to the west. Also, the

focus of the streetcar system and the Union Station terminal at the Denver CBD forever cut Auraria out as a contender for business dominance. And finally, the large complex streetcar system, linked to the rail spine and the high density downtown, gave Denver perhaps the most unified and successful transportation system in its history.

Detailed studies of the planning of the RIW spines of Denver have not been done. This narrative and theme is meant as an exploration only. A rough judgment, however, is that Denver's rail spine is probably more typical of the western and midwestern cities of its time than unique. The scale of the rail spine is unique in Colorado, however. Smelter "company suburbs" may also be of historic interest. Additionally, individual buildings will have great historic value. The warehouse district surrounding Union Station is of enormous historic value. The now famous "B-7" zone between the station and the new skyscrapers is of inestimable value because it contains high quality buildings and whole blocks of both the stage/wagon city on Blake, and the rail/streetcar city on Wazee. What a remarkable urban design experience, to juxtapose permanently these two periods against the steel and glass towers of present downtown office functions!

CHRONOLOGY

Adaptive Rail Period

1870 Population 4,759.

1870 Denver Pacific built.

1870 Kansas Pacific arrives.

1870 Colorado Central connects Golden and Denver.

1871 Horse-drawn street railway begins operations.

1871 D & RG Railroad begins construction.

1872 Denver City Water Co. operations begin.

1872 Denver Gas Works constructed.

1873 - 1876 Street railway extensions.

1874 Population 14,000.

1874 Denver South Park and Pacific RR construction begins.

Rail Dominance Period

1878 Silver mining boom.

1878 Boston and Colorado Smelter built.

1879 First telephones.

1880 Population 35,000.

1880 - 1890 Decade of rapid growth.

1880 First electricity in evidence.

1881 Union Station completed.

1881 Denver, Texaco and Gulf RR begun.

1881 Chicago, Burlington and Quincy RR reaches Denver.

1881 First gas street lighting.

1881 Denver Union Stockyards located in north.

1882 National Mining and Industrial Exposition.

1882 - 1883 Omaha and Grant Smelter moved to Denver.

1884 Denver Chamber of Commerce organized.

1884 15th Street Bridge constructed.

1885 - 1886 Holden Smelter built.

1886 Colorado Eastern RR begun.

1886 - 1887 Professor Short's electric streetcars.

1886 - 1887 Expansion of the horse railway system.

1887 Atchison, Topeka, and Santa Fe RR enters Denver.

1888 Suburban steam railways in operation.

1888 Viaducts over South Platte constructed.

1888 Cable car power plant constructed.

1889 Introduction of the electric trolley.

1890 Population 106,700.

1891 First auto.

1890 - 1893 Conversions of cable to electric trolleys; route expansions.

1893 Silver panic and economic depression.

1893 - 1899 Economic diversification: tourism, agriculture, non-mining industry.

Rail Maintenance Period

1899	Formation of the Denver City Tramway Co.
1899	Total street railway mileage, 132 miles.
1900	Population 134,000.
1900	Cable system totally replaced by electric trolleys.
1900	Start of Cheesman Dam construction.
1900	Meat processing a major industry.
1902 - 1906	Cherry Creek channelized.
1904	Denver & Salt Lake RR begun.
1908	Denver Auditorium built.
1908	Denver and Interurban to Boulder completed.
1910	Population approx. 213,000.
1911	Colorado Tire & Leather Co.
1911	20th Street Viaduct opened.
1913	South and west side sewers completed.
1917	Colfax and Larimer St. Viaducts built.
1920	30,000 automobiles in Denver.

LOCATION

Pre-Rail and Adaptive Periods, 1859 - 1875. The rail/streetcar warehousing and industrial locations are illustrated in Figures 1, 2, 3 and 14. Also note Figure 4 as a transitional period.

Dominant Rail Period, 1875 - 1895. Figures 5 - 12.

Maintenance Rail Period, 1895 - 1920. Figure 14.

CULTURAL RESOURCES

There is considerable and important variety in cultural resource areas in the RIW spine. I would speculate upon the following. It includes the intersection of the two major water courses in the local region, and hence may have complex pre-Anglo Indian artifacts under the rail yards and factories. In the early Anglo period, it was the location of recreation, transient tent and cabin communities, brick-making, river-fording devices, small-scale irri-

gation and solid waste disposal. The remains of these could be of historic interest.

The "adaptive rail" period also generated numerous areas of interest. These include early rail service facilities, various early rail passenger stations, rail yards and freight depots. The "dominant rail" period also displayed RIW physical planning districts or cultural resource types. The rail spine itself is a major resource, with its hierarchy of trunk and branch lines. The individual rail company yards and facility complexes also form important units. Smelting districts, like those in the north end of the spine, could be conceived as resource areas. Diverse manufacturing districts, like those at the river bend at Auraria, might be important (though they are now largely demolished). Residential enclaves within the RIW swath could also be interesting artifacts. Union Station and the mixed warehouse/industrial district near it is clearly a critical resource, as is the remnant of the stage/wagon retail district on Blake, Market and Larimer. Early water works and sewers were located in the area, along with numerous solid waste sites. (Remnants of early uranium milling complexes may also be in the swath.) Finally, vestiges of the streetcar system endure, usually below asphalt. The streetcar system shaped early land use and is a valuable cultural resource.

The "maintenance rail" period produced cultural resources of lesser impact. Food processing, ranching/agricultural product warehousing, and stock show entertainment in the spine were important. Also, the streetcar, viaduct and tramway system in this period was at its peak.

QUANTITY AND QUALITY OF HISTORIC INFORMATION

Historical Documentation

The Denver RIW spine has not been studied or interpreted as a planning and urban design whole or district. Railroad histories have described many of the railroad facilities, but from the points of view of the individual companies. Pictorial histories of Denver have also dealt with individual buildings and facilities within the spine. The works of Tom Noel, Lyle Dorsett, and Jerome Smiley listed in the references below are probably the best introductions to the area. Selected histories of neighborhoods along the spine might also prove interesting, but were beyond the scope of this project. The general Colorado histories also deal with Denver in passing and provide rough contextual material for understanding the spine.

Standard documents used in analyzing physical planning history are the following.

Written documents.
- General state and local histories.
- Municipal records.
- Real estate records.
- Land company records.
- Private papers of planners, architects, landscape architects, developers and landowners.
- Newspapers, magazines and journals.
- County, town and city plans.
- Records of major industries, banks and chambers of commerce.
- Railroad, streetcar, toll road, stagecoach and utility company records.

Graphic records.
- Map collections.
- Bird's-eye view collections.
- Real estate atlases.
- Insurance maps.
- Assessors' maps.
- Aerial photos.
- Satellite photos.
- Post card and architectural photo collections.
- County, town and city plan maps.
- Railroad, streetcar, toll road, stagecoach and utility company maps.
- State highway department maps.
- Commercial highway maps.
- U.S.G.S. maps.
- County, state and national atlases.

Federal land surveys.

Oral histories.

The vast majority of the above are likely to be readily available to RIW spine researchers. There are excellent bird's-eye views of the area. This project found a 1908 view that is of particular interest; it is located at the DPL Western History Collection. Bird's-eye views are especially important because they pull together land use, urban design and architectural information in the same visual document. These documents and many other maps are listed in the references below. The Denver Inventory, a survey of architec- significant buildings, should also be consulted for selected information at the building and individual facility level.

Number and Condition

It is beyond the scope of this theme to suggest detailed numbers and conditions of subdistricts and individual items within the RIW spine. A quick examination of the bird's-eye views of the time could establish rough numbers. Since the 1920's, the RIW spine has been slowly adapting to the auto and truck transport systems. These changes have forced demolitions, road widenings, demands for parking, infill buildings designed for truck loading and single-storey wholesaling sheds. The construction of I-25 also required the demolition of many older areas. At present, there is a complex mix of old and new forms in the spine, but with most older structures in a declining state. Near downtown, many older warehousing and manufacturing buildings are being re-used as office buildings. In the Central Platte Valley, most historic structures are in danger from demolition and redevelopment. It is unclear to this writer what is happening to the outer areas of the older spine, but it is unlikely to be good from the point of view of historic preservation.

Surveys

The RIW spine's major buildings and other specific facilities have been catalogued in the Denver Inventory. That survey should be used as introductory material, not as a definitive statement. It does not address urban design and planning issues directly.

Data Gaps

At the planning and urban design level, the area needs a complete set of descriptive, analytical and evaluative studies.

Future Needs

Besides filling the data gaps mentioned above, conceptual work needs to be done on the planning andurban design of RIW spines. They have not been fashionable in planning historical research and there is little literature to guide the analyst and evaluator. A framework of analysis should be agreed upon before spending large sums on surveys. On the other hand, the resources in the Central Platte Valley need to be researched and defended immediately, or else the redevelopment bulldozer will act first. (Also note Research Questions below for more research priorities.)

Important Resources

The rail spine as a whole is an important resource. It is a form of city planning that was unique to the 19th century, and Denver has a fine example of the pattern. Of particular importance are the rail complexes themselves, the rail stations, the warehouse areas next to the CBD, the smelters (or their remnants), the streetcar linkages, and the early mining-related manufacturing areas. More study is needed, of course, to find the most important resources. This sketch could do little more than identify the area and outline its most prominent features.

RESEARCH QUESTIONS

What are the detailed facts about the Denver RIW district's design and planning?

What caused Denver's particular forms to evolve?

Of what quality are the aesthetic and functional characteristics of Denver's RIW spine?

How does Denver's RIW spine compare with others in Colorado, the West, the U.S., and the world?

How did the RIW spine influence residential and CBD land use patterns in the city?

What role did competition for urban land by the railroad companies play

in determining the RIW land use pattern?

How did the RIW uses so easily displace other uses for the prime river-access land in the 19th century?

What effect did the changing industrial and warehouse developments in Denver between 1870 and 1920 have on the form and uses of the RIW spine?

How did the Denver streetcar system interrelate with the RIW spine?

Why did the smelters locate so far from the city center, and to the north?

What role did the gas, coal, electricity, sewer and water utilities play in determining the form of the RIW spine?

What subdistricts are identifiable within the spine, and how did these subdistricts change over time?

What remnants of retail, agricultural and recreational functions remained in the spine even after the RIW functions attained dominance?

EVALUATION STANDARDS

Physical Condition

There are at least four useful historical resource types in the spine: the spine as a whole, major spine subdistricts, minor spine subdistricts, and individual building and single-site complexes. These might then be subdivided according to the time categories used to break down the 1870 to 1920 period in the narrative. Too little is known now to be specific regarding the physical condition standards appropriate for each, and work needs to be done here in definition. As mentioned before, however, the problem is that many of the original uses have either been discontinued (smelters), relocated to suburbia (warehousing), reused (warehousing to offices), demolished for parking, or demolished for new horizontal non-elevator sheds that can be serviced by trucks. The important standards to use in those cases where significant remnants from the 19th century spine still exist are likely to be structural soundness, integrity of the complex, the unity of the design and planning concept exhibited in what remains, and likelihood that the area will be demolished if nothing is done.

Representation

The uniqueness of Denver's RIW spine with respect to Colorado derives

from its large scale and its diversity of uses. Its only real competitor is in Pueblo, and that city's spine developed from a different economic base and on a different set of topographical features. With respect to spines in other midwestern cities, Denver's uniqueness is likely to be related to the smelting and mining-related uses, as well as its being a center for the nation's largest narrow-gauge railroad. Denver's spine is also representative of the western city's extremely rapid growth. It "boomed" into existence, and shows much of the erratic planning of hastily conceived urban development. Denver is also representative of most 19th century American cities' tendency to give railroads, industry and warehousing prime central locations in the city land use pattern. This contrasts with the European tradition of usually putting the same functional uses in the city edges. And because railroads, manufacturing and warehousing were welcomed to this uncertain outpost city with such abandon, Denver is an example of an American 19th century RIW spine that developed with particular freedom from public control. The RIW spine may not always be aesthetically handsome, but it is a remarkable resource in 19th century functional planning. It deserves careful research and preservation.

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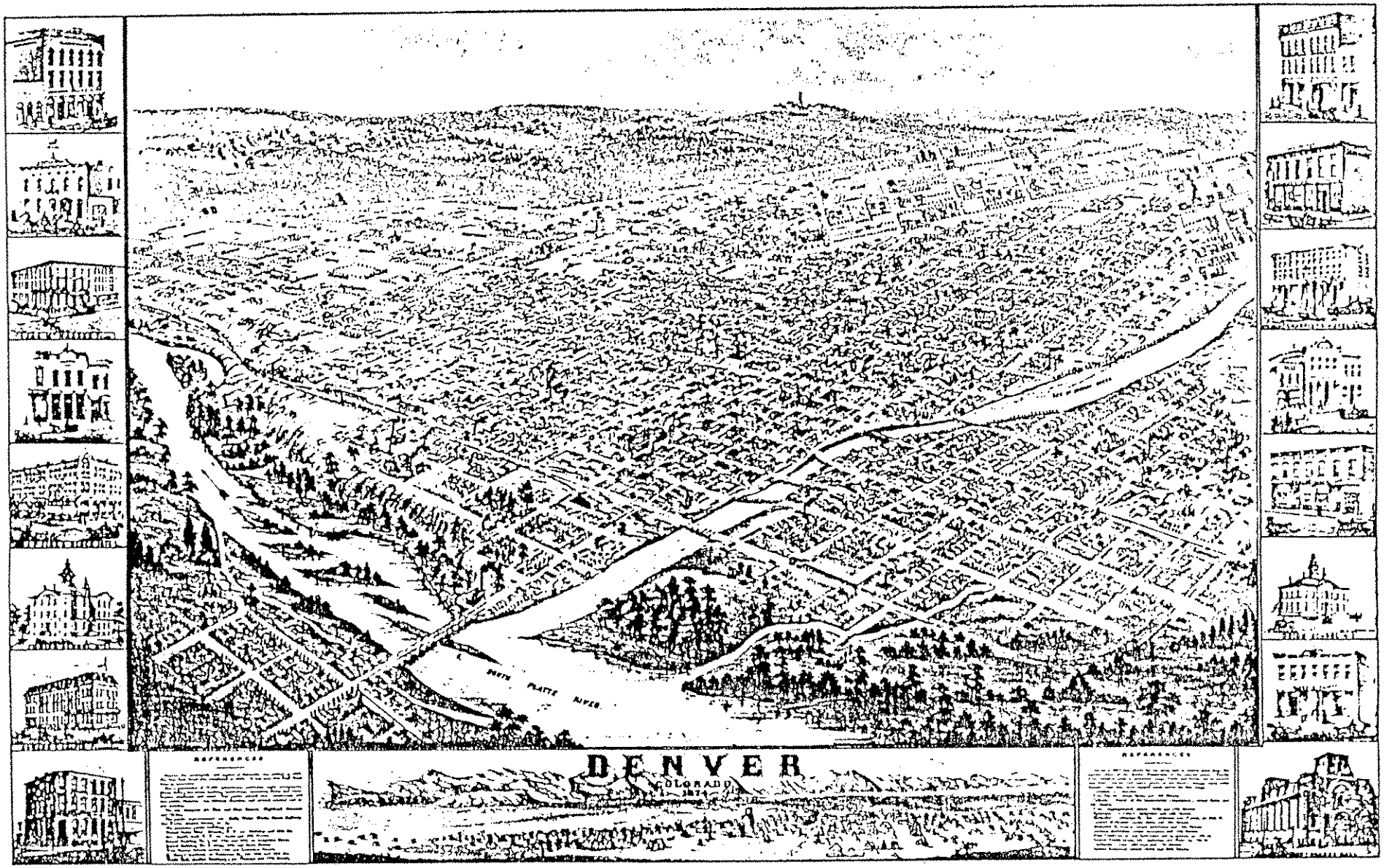
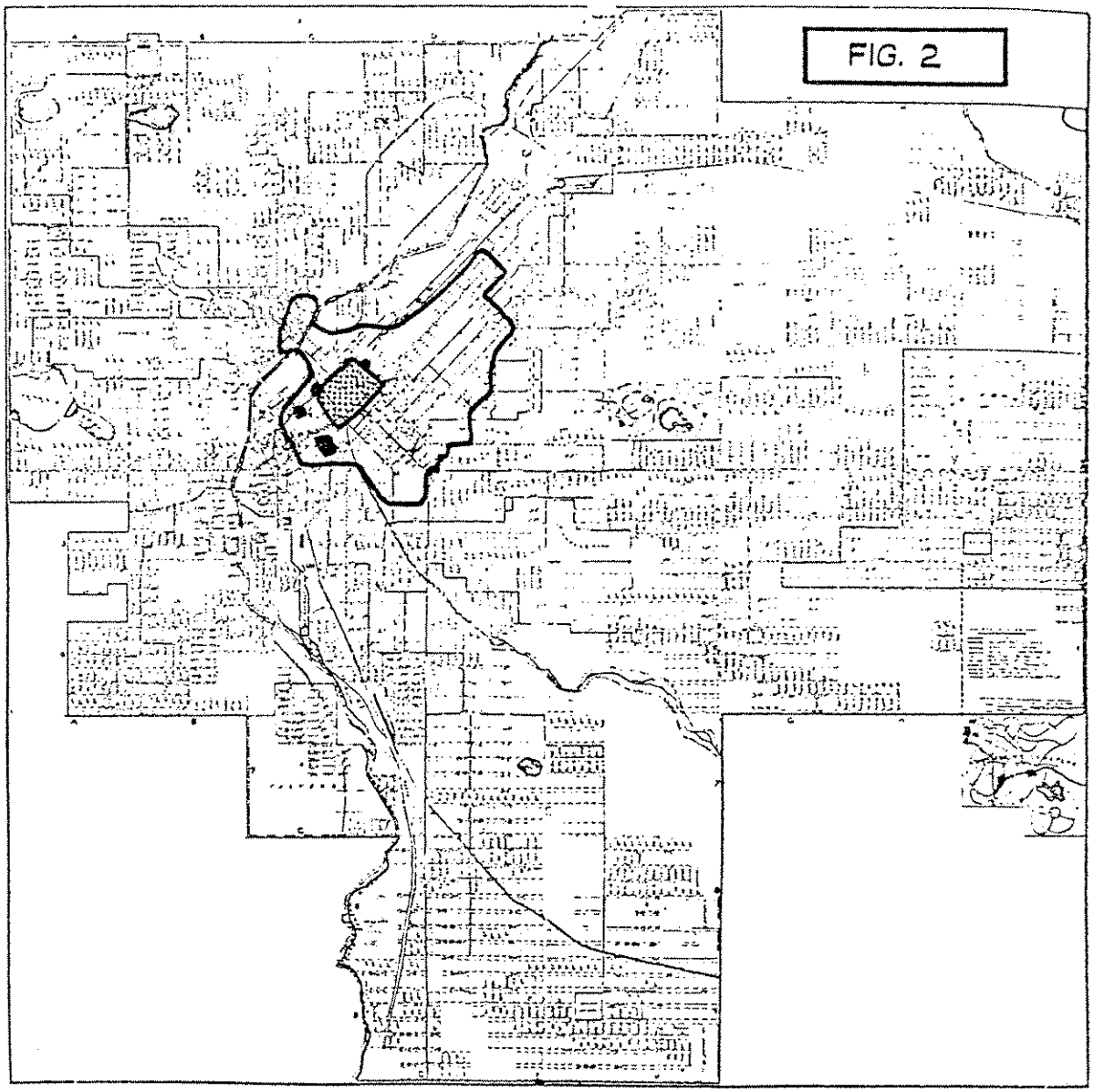


FIG. 1 DENVER IN 1874: BEFORE MAJOR RAIL IMPACT (REPS, CAW)

FIG. 2



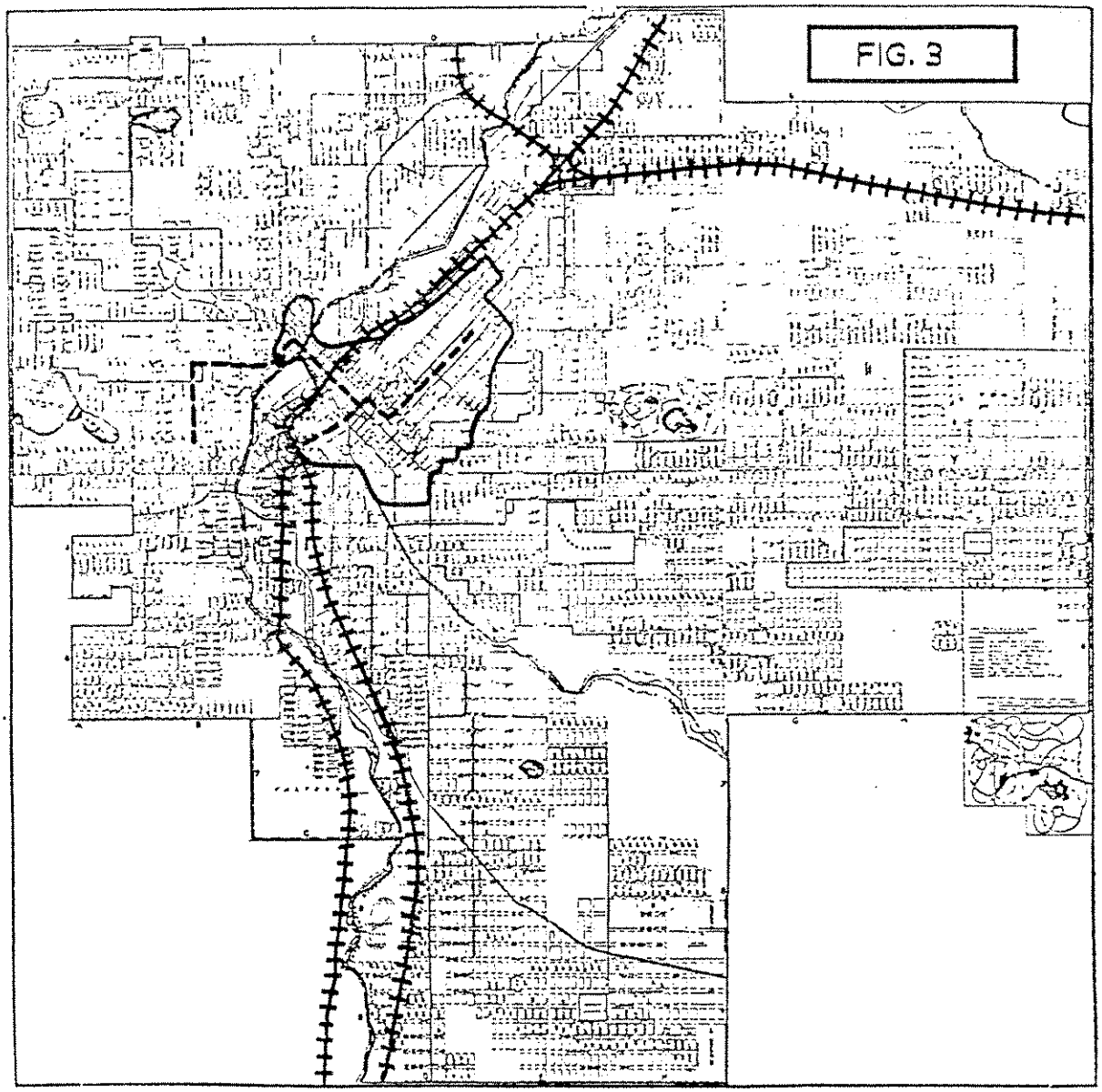
Map of Denver in 1900. Reduced from the Rollandet Company's copyrighted map. (Smiley, 1901: p.450)

DENVER
PRE-RAIL

BOUNDARY OF ACTUAL BUILDOUT
CENTRAL BUSINESS DISTRICT
INDUSTRIAL AREA

NORTH

FIG. 3



Map of Denver in 1900. Reduced from the Rollandet Company's copyrighted map. (Smiley, 1901: p.450)

DENVER-1874
RAIL/HORSECAR
SYSTEM

+++ RAILROAD
--- HORSECAR
——— BOUNDARY OF ACTUAL BUILDOUT

NORTH

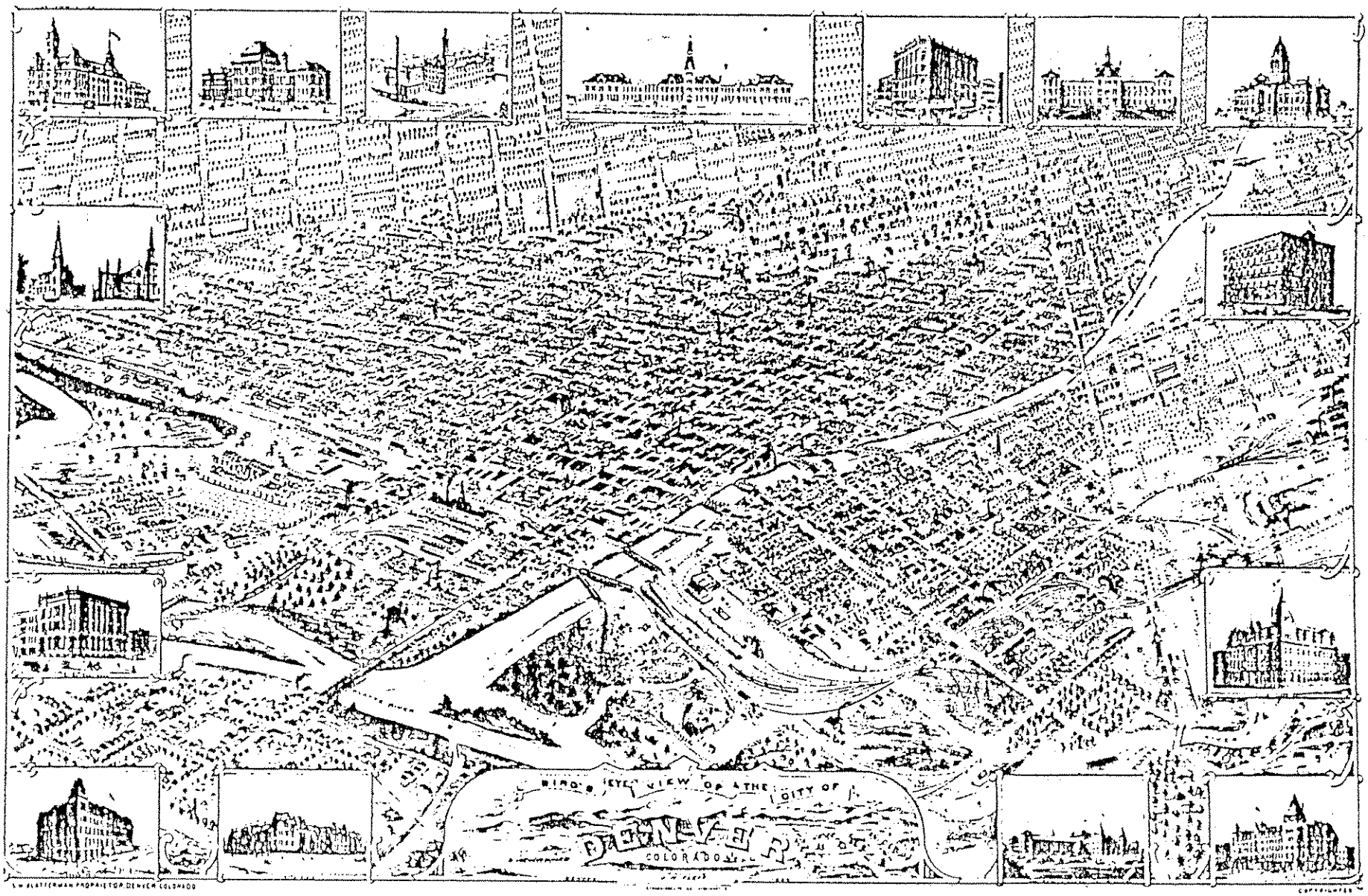


FIG. 4 VIEW OF DENVER: ca. 1882—TRANSITION TO DOMINANT RAIL CITY (REPS, CAW)

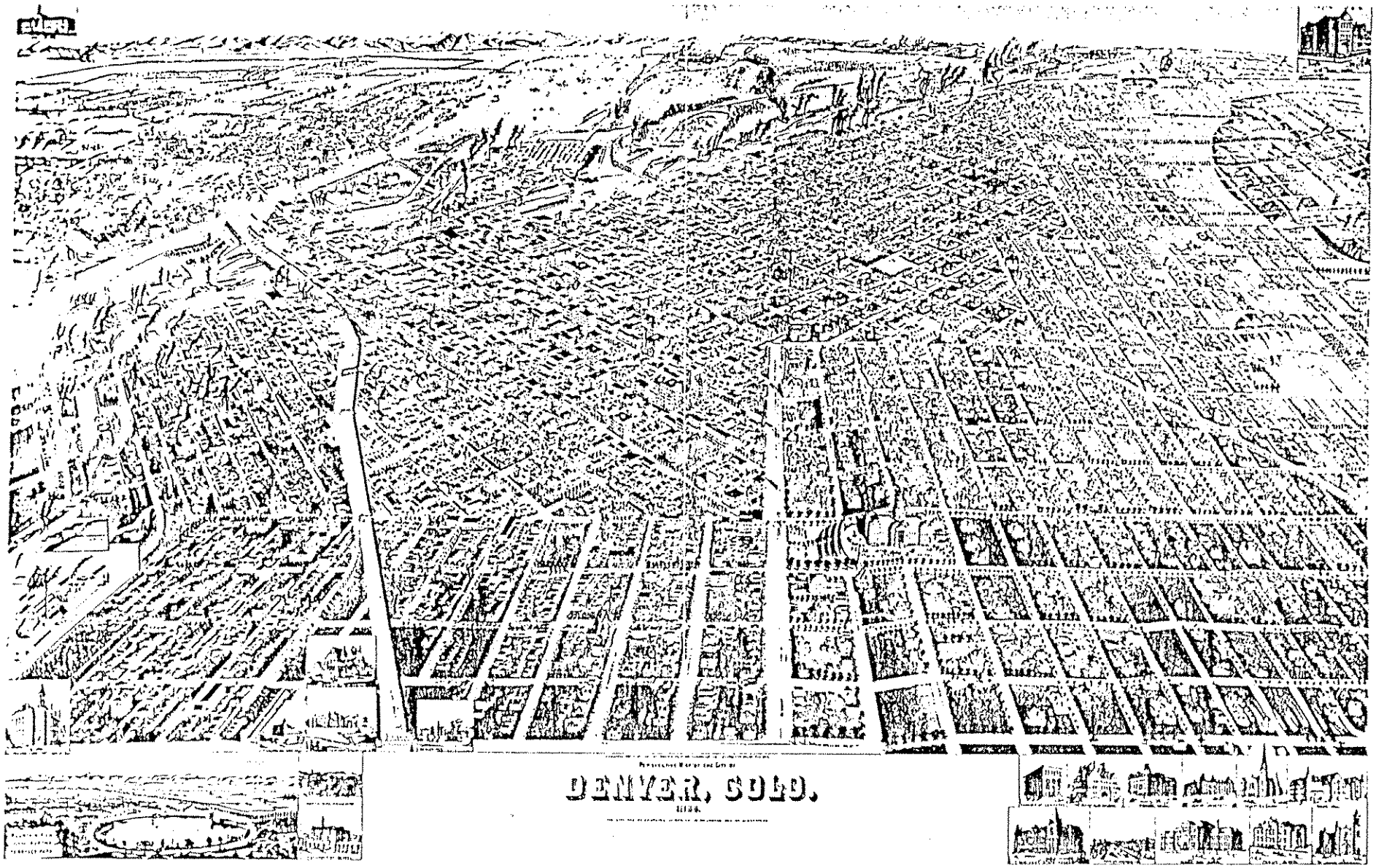
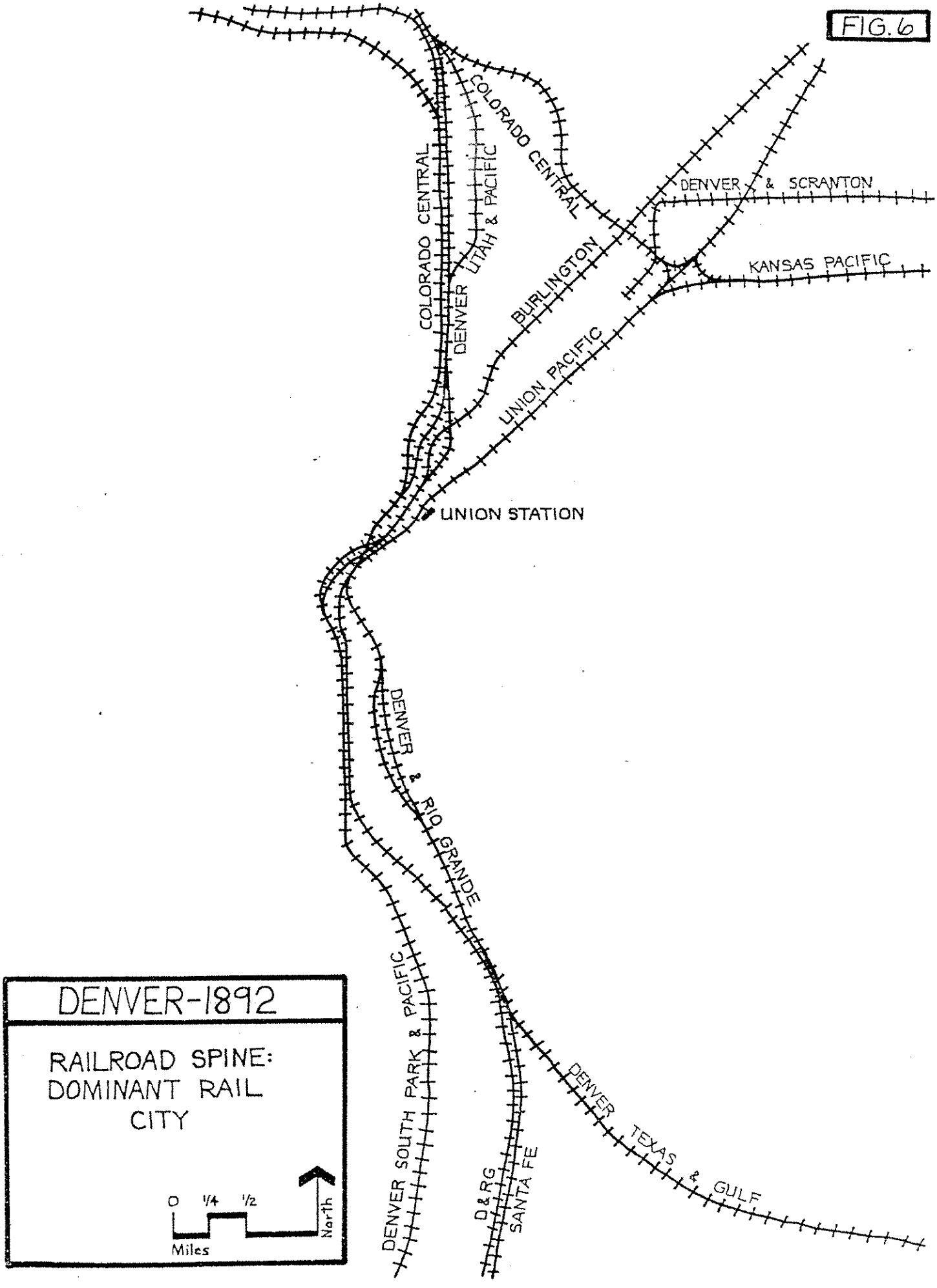


FIG. 5 VIEW OF DENVER IN 1889: DOMINANT RAIL CITY (REPS. CAW)

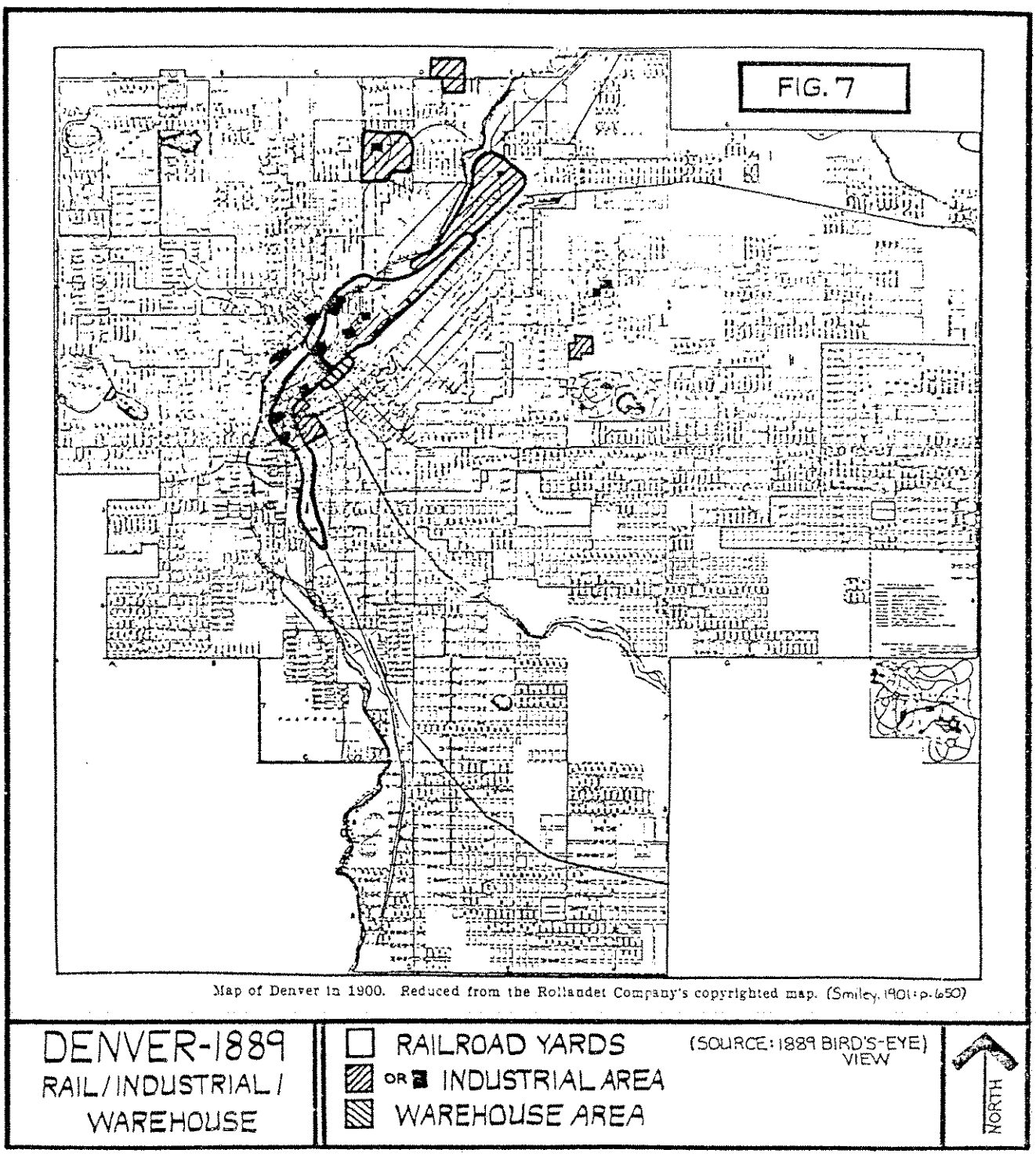
FIG. 6



DENVER-1892

RAILROAD SPINE:
DOMINANT RAIL
CITY

0 1/4 1/2
Miles
North



Map of Denver in 1900. Reduced from the Rollandet Company's copyrighted map. (Smiley, 1901: p. 650)

FIG. 8

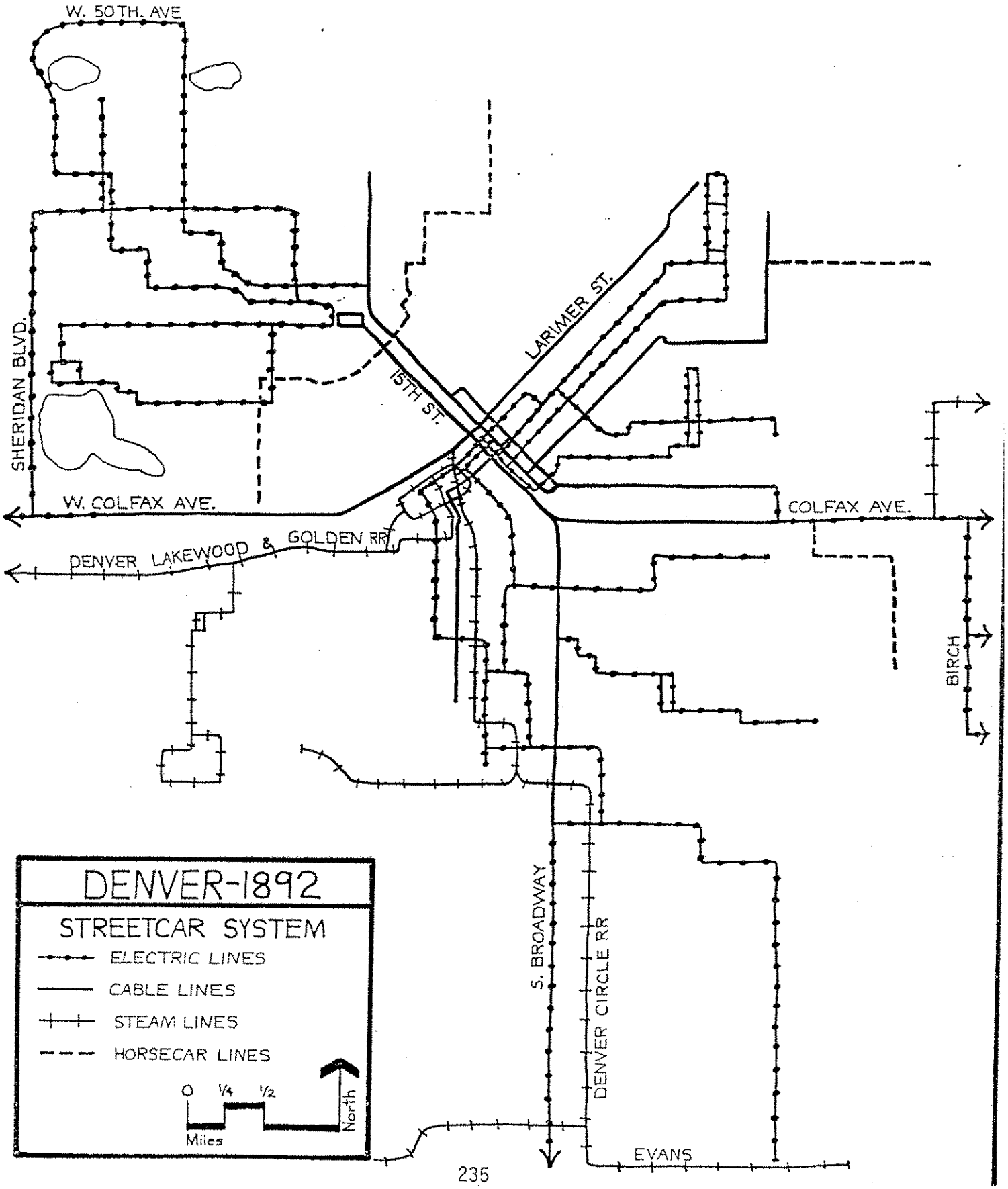
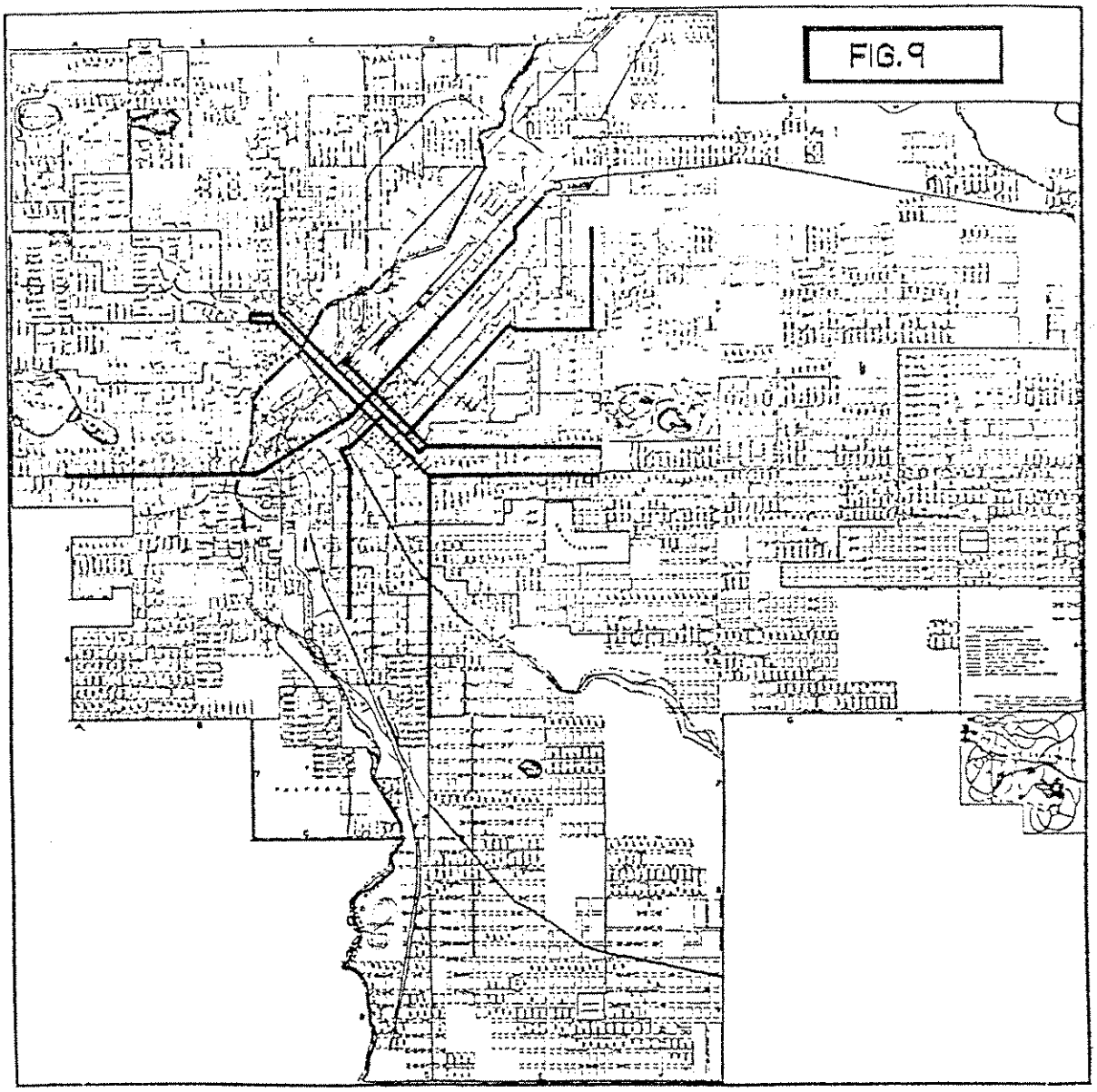

W. 50TH. AVE
SHERIDAN BLVD.
W. COLFAX AVE.
15TH ST.
LARIMER ST.
COLFAX AVE.
DENVER LAKEWOOD & GOLDEN RR
BIRCH
S. BROADWAY
DENVER CIRCLE RR
EVANS
DENVER-1892
STREETCAR SYSTEM
ELECTRIC LINES
CABLE LINES
STEAM LINES
HORSECAR LINES
0 1/4 1/2
Miles
North

FIG. 9



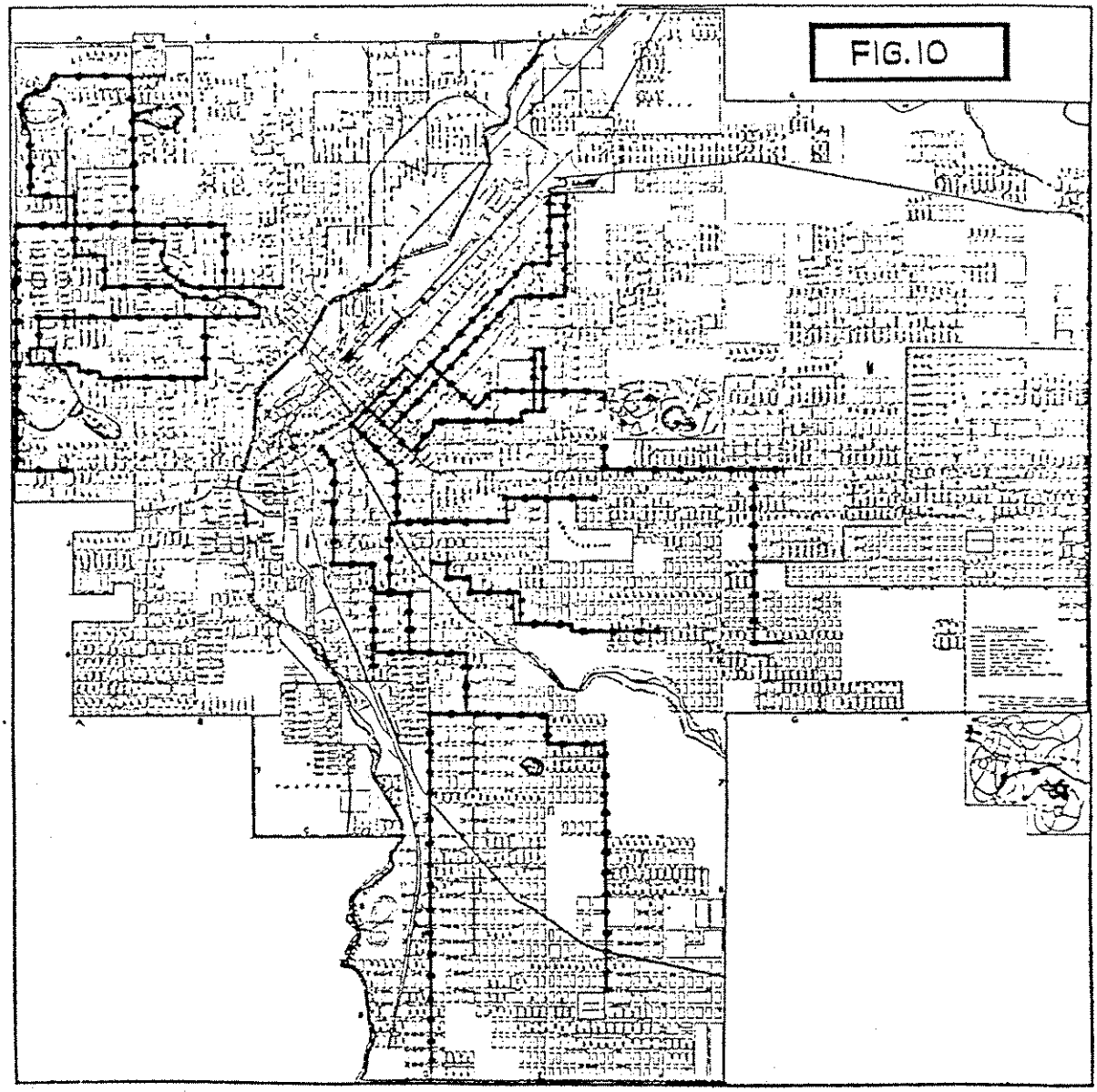
Map of Denver in 1900. Reduced from the Rollande: Company's copyrighted map. (Smiley, 1901 p. 650)

DENVER-1892

CABLE RAILWAY SYSTEM

NORTH

FIG. 10



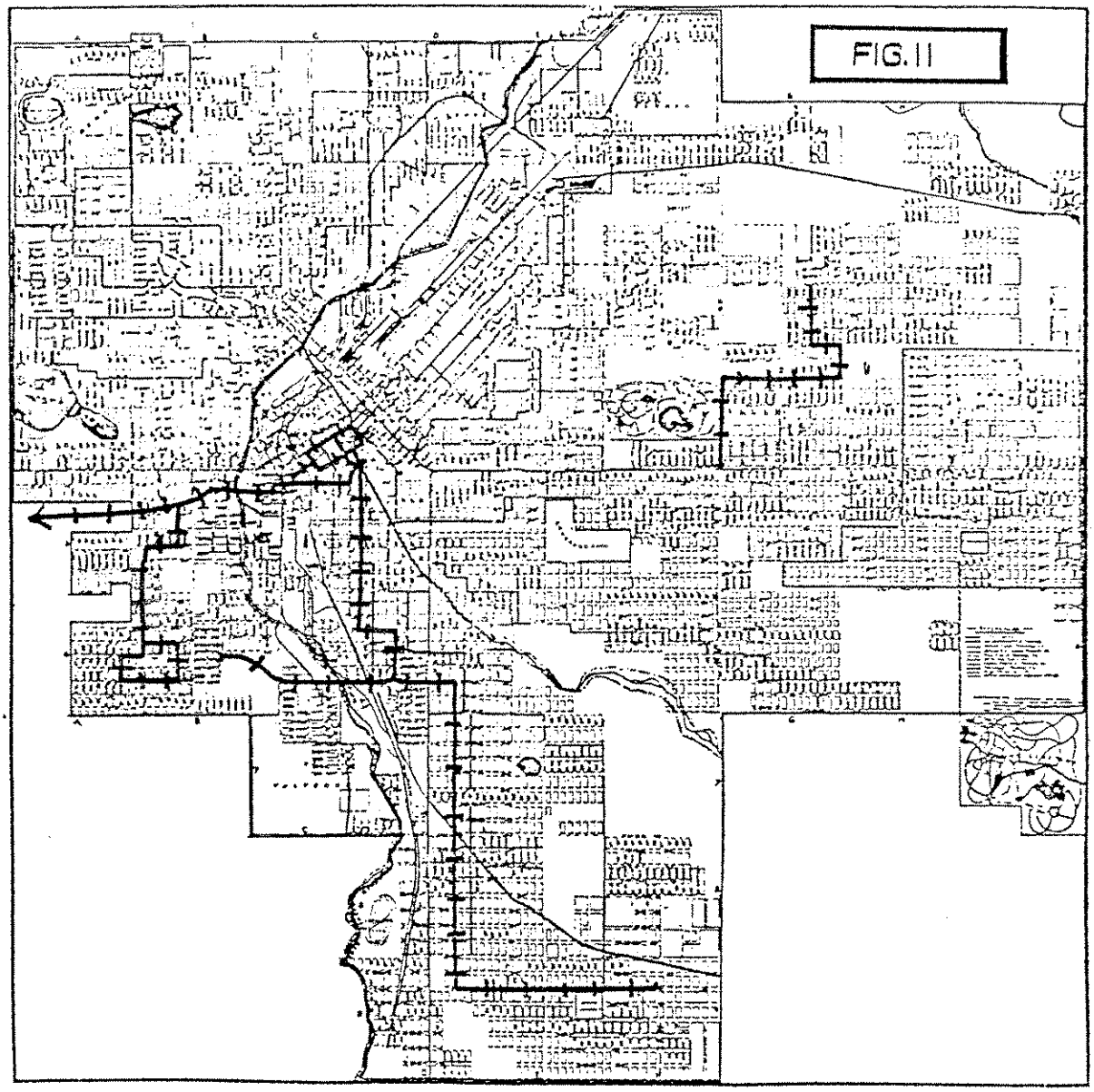
Map of Denver in 1900. Reduced from the Rollandet Company's copyrighted map. (Smiley, 1901 - p. 450)

DENVER-1892

ELECTRIC TROLLEY SYSTEM

NORTH

FIG. 11

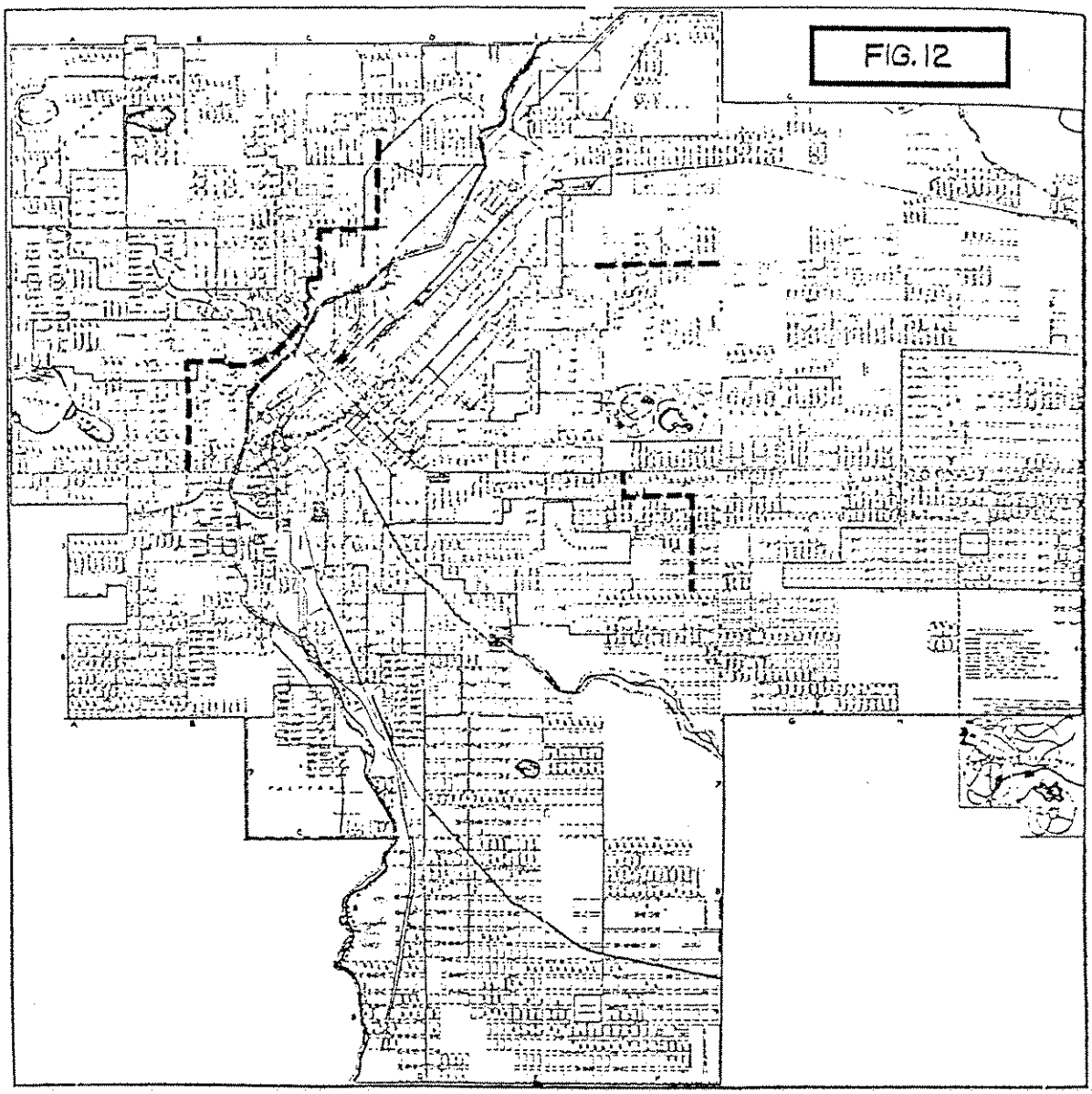


Map of Denver in 1900. Reduced from the Rollandet Company's copyrighted map. (Smiley, 1901: p. 650)

DENVER-1892

STEAM TRAMWAYS

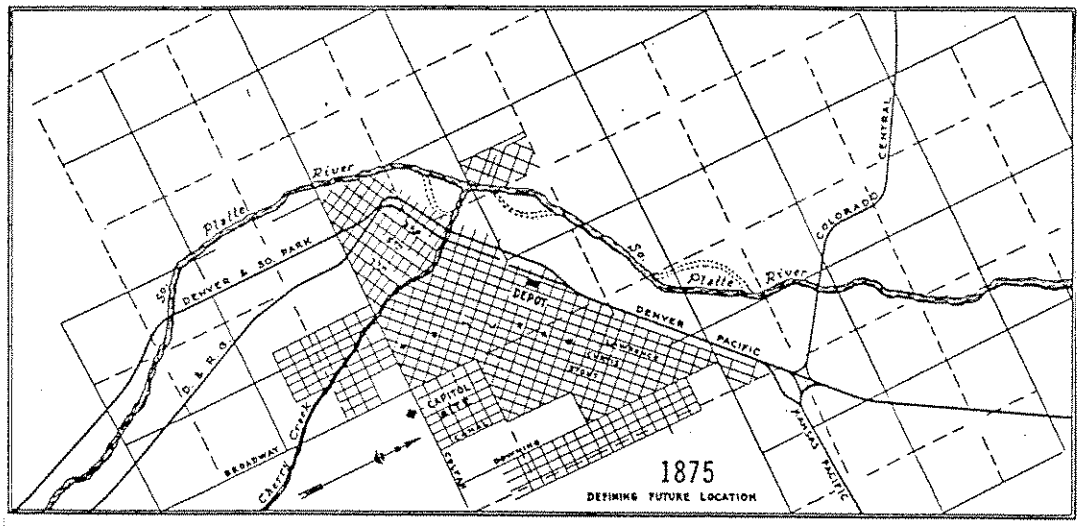
NORTH

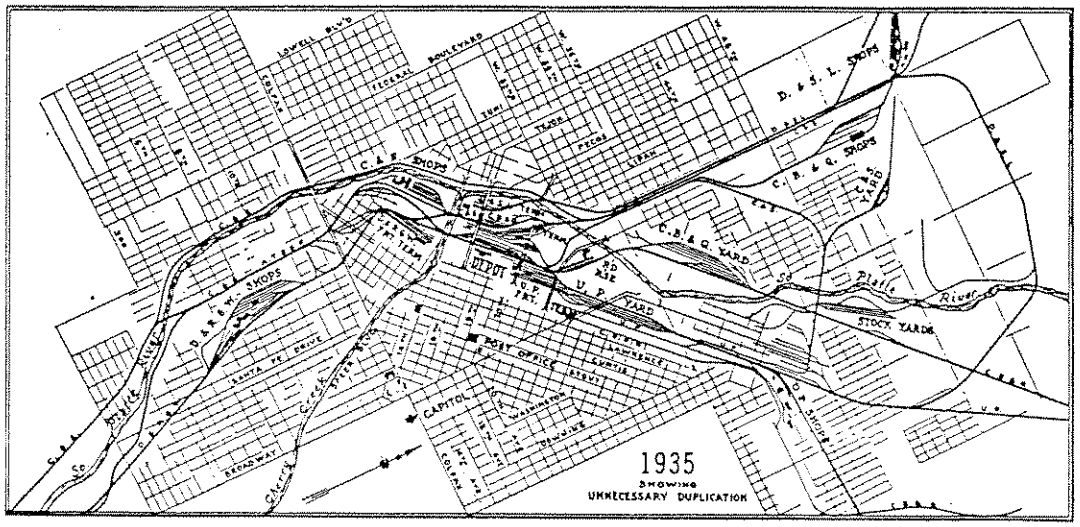


Map of Denver in 1900. Reduced from the Rollandet Company's copyrighted map. (Smiley, 1901: p. 650)

DENVER-1892

HORSECAR SYSTEM





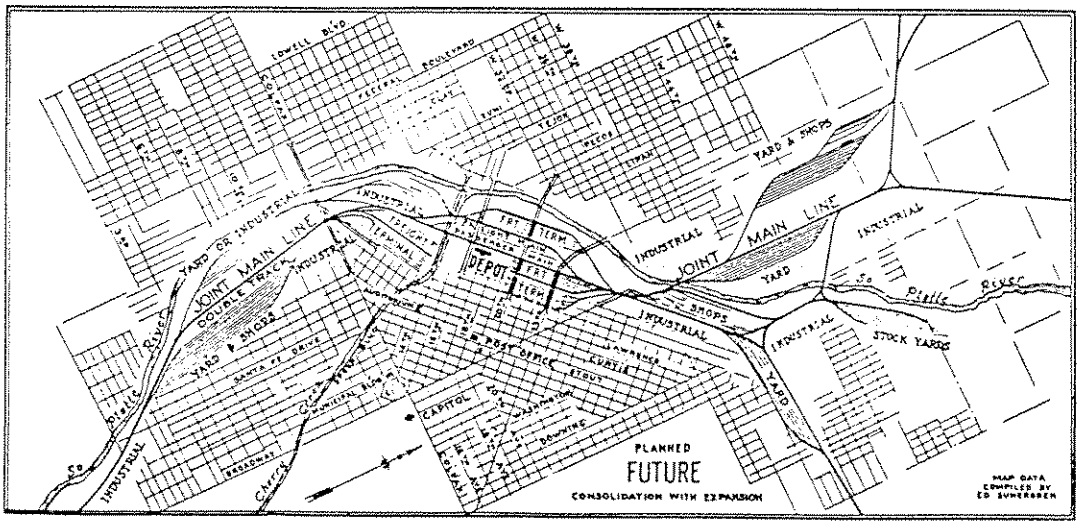


FIG. 13 DEVELOPMENT AND PROPOSED RAIL SPINE SYSTEM, 1935. (DP, VOL. 6)

9. RAIL/STREETCAR DENVER 1870 - 1920: RESIDENTIAL DEVELOPMENT

NARRATIVE

The coal and electrically powered industrial city introduced changes in the shape and location of residential districts, as well as revolutionizing the transport and manufacturing systems. Two types of transport systems influenced the residential changes, elevators and streetcars. The streetcar's radial concentric pattern differed from Denver's neutral grid street system of the past. Streetcars generated greater decentralization of detached single family housing in streetcar suburbs on the urban edges. On the other hand, it generated greater residential density at the center where all the streetcar lines came together. This higher density development was also made possible by new steel construction techniques and the efficiency of the elevators for internal building transportation.

This general tendency of rail/streetcar components to extend the city residential fringe and to increase density at the residential center took many different specific forms, depending upon what the peculiar stage/wagon shape of the city was before the grafting on of the new components. In western Europe, the streetcar (and subway and elevated rail systems) developed density at the center in the traditional stage/wagon form of contiguous 4 - 6 storey apartments, rather than in highrise apartments. The European upper class continued to live in the city center area, and the working class resided in manufacturing suburbs. The American laissez-faire economy made it easier to break the stage/wagon four storey walk-up tradition of American eastern cities. Eastern cities erected skyscraper apartments quickly at the city center. But the American middle and upper classes enjoyed the decentralized railroad and streetcar suburban homes more. This meant that the American working class was forced to locate either near the rail/industrial/warehouse spines or in hand-me-down inner city areas left over from the suburbanizing middle and upper income groups.

Rail/streetcar Denver seems to be a complex special case of this American pattern. It never had a powerful stage/wagon, four storey, contiguous building tradition in the European manner, so the European option was not really taken seriously. Denver was also relatively small, unlike eastern American cities of this time period. It never developed "els" or subways. This kept

the pressure for skyscraper residential apartments to a minimum. On the other hand, it shared the strong romantic drive toward moving out of the city center to open space on the fringe. The pattern of middle and upper class flight to streetcar suburbs took hold firmly. The low income classes occupied the areas next to the RIW spine and the older central hand-me-down sectors from other classes. Like the European tradition, however, the special needs of the smelting industry also generated a few working class suburbs.

Pre-rail Denver's residential patterns were not remarkably complex (note Figure 1). There were a few hotels in the core area, along with a number of boarding houses and even occasional single family dwellings. Residences above first-floor work areas were rare, though occasionally present. As Figure 2 illustrates, the city was predominantly detached single family dwellings. The lower income and transient groups lived near the river or in Auraria (Old West Denver). Middle and upper classes moved northeast from the town core up the valley plain to Curtis Park, following the horse car line. The most wealthy, however, built houses to the southeast, toward the newly defined intersection of Colfax and Broadway. (With the arrival of the federal NS/EW rural grid, Denver adjusted and all new platting followed this orthogonal pattern. Most blocks in the new grid were rectilinear, and longer on the north-south axis.) Generally, the middle and upper income groups were American-born and of white and Protestant origin. Most non-"WASPs" lived in boarding houses or camped near the rivers. A small black community was established near the flood plain of Cherry Creek. (See Figure 3 for a sketch of Denver's early residential class structure. Figure 4 notes platting activity in the early 1870's.)

Between 1870 and 1895, Denver grew rapidly in population from 4,759 to approximately 115,000. The city's residential form changed rapidly as well, responding to both population expansion and the new rail/streetcar revolution in transport. Figure 5 suggests the approximate actual buildout of residential areas by 1889. Figure 6 summarizes the streetcar system. Housing is sketched according to building type, economic class and ethnicity in Figures 7, 8, and 9, respectively. The land that was platted by 1888, but not necessarily built upon, is shown in Figure 10. The dates and locations of annexations to the city are shown in Figure 11. Figure 12 pictures the streetcar suburb beginnings of Englewood.

Let us begin the discussion of the 1890's residential patterns by noting the types and distribution of residential structures. Compared to older eastern cities, Denver was moderate to low in density. There were five-storey hotels

near the railroad station, and apartment flats near downtown and at critical junctures in the rail streetcar system. But for the most part, duplexes and single family dwellings were dominant, even in inner ring neighborhoods (see Figure 7). Working class single family dwellings could be very tightly packed, however, as is shown in the present La Alma/Lincoln Park neighborhood.

The economic class structure of the residential areas followed roughly Homer Hoyt's sector theory (Figure 13). Transients, the elderly, the working class and low income groups had to live either within the rail/industrial/warehouse spine, within walking distance of it, or in company suburbs near it. These groups also circled downtown in older residential sections held by speculators. The upper income groups established a corridor from downtown southeast from the CBD to Capitol Hill and further toward the Country Club district. The middle class filled the wedges between the upper class corridor and the RIW and low income spine down the city center. One item that separates Denver from Hoyt's conception is the middle class's ability to hop over the low income groups on the west side of the city, in areas like Berkeley Park.

Summarizing the turn-of-the-century ethnic residential communities in spatial terms is more difficult. Denver's ghettoes were small compared to large eastern cities. Also, many immigrant groups were accepted quickly by the original WASP population and were dispersed into the general WASP/northern European majority communities. The Germans, Scandinavians and English were rapidly assimilated in this fashion, as were the Irish after an early enclave community in Old West Denver matured and dispersed. The Dutch developed a community in south Denver between Alameda and Evans, but it is unclear if this was forced or their preference. Slavs and Czechs were most concentrated around the Globeville smelter and the Cornish and Welsh lived near the smelters in Swansea and Elyria.

The black community began along the south flood plain of Cherry Creek. They then moved slowly north and east between 1870 and 1890 to begin stabilizing in the Five Points area. Italians lived on the western edge of the Curtis Park area near the railroads. They slowly worked their way directly across the river to west Denver between 42nd and 32nd. The Jewish population began by following the Irish into Old West Denver and Lincoln Park. They then crossed the river at Colfax and established a linear community along that West Denver thoroughfare. The Chinese tended to remain downtown, living in small

enclaves just to the southwest and northwest of Union Station. A rough sketch of these ethnic patterns appears in Figure 9.

The 1900 to 1920 period was one of continued streetcar expansion in residential Denver. Poplation went from 134,000 to 256,000. The city's growth as an industrial metropolis, however, moderated. Its position as political, economic and cultural empire capital of the western plains and eastern Rocky Mountains continued to expand and consolidate. The region's rail and small town system was well developed and Denver was the hub of the empire's rail spokes. The transition to a political "royalty" role was signified by the metropolis's growing belief in itself as a "Queen City." Two other national movements influenced the city during this period, the progressive era's political values and the "City Beautiful" movement's planning values. The political figure who oversaw these complex activities was Mayor Robert Speer.

This narrative can only suggest in broadest outline the nature of this period. The streetcar class sectors developed during the 1870 - 1900 period did not essentially change; they simply got larger, usually by extensions at the periphery and by infill between the original isolated streetcar suburbs and the city proper. More high density apartments and hotels were built in and around the city center, especially near Union Station and in North Capitol Hill. The upper class corridor continued southeast to the country club, reinforced by Speer Boulevard. West Denver also grew rapidly, with additions of more bridges and viaducts over the South Platte.

The reform movement's environmental impacts in the early 20th century have not been well researched. One would expect with the somewhat increased power of the "many" over the "few" that improved administrative offices, housing and police, education and social service facilities for the poor would slowly become evident. The expansion of church social services and rescue missions took place and union halls began to spring up.

The City Beautiful movement was essentially the importation of the late European baroque planning to the U. S. Baroque planning was used primarily in European political capitals. George E. Kessler, a German-born planner who had become famous for work in Kansas City, consulted to Mayor Speer. They designed a complex boulevard system, planted thousands of trees, began the Civic Center and increased the park land from 572 to 1,183 acres. Residential development now often followed the boulevards and parks as well as the streetcar lines (Figure 14).

Denver's physical and economic form changed greatly from 1870 - 1920. The city grew from a stage/wagon mining service town, to a rail/streetcar manufacturing city, to the controlling metropolis of a huge empire. It linked its regional rail system to its urban manufacturing and warehousing land in a great urban RIW spine. This spine was connected to the CBD at Union Station. Seventeenth Street was then used to service the economic elite, and the political elite at the Civic Center. Residential patterns followed pedestrian access to jobs, streetcar access, ethnicity and economic class. The city provided dense hustle and bustle at the center and streetcar and boulevard suburban quiet at the edges. Denver had a permanent economic base, a workable physical structure, and a beginning eye for beautiful planning and civic design.

There are many residential areas of historic value remaining from this period in Denver. Contemporary auto suburbanization has channeled growth to the urban fringe, and demolition around the center has not proceeded rapidly. Exceptions here are the inner ring neighborhoods which have been mined by the CBD for parking space, the remarkable Old West Denver, parts of lower downtown that were leveled for CBD uses, and the historic areas taken for freeway expansion near the river in West Denver. Architectural surveys have been done for much of Denver, but a complete survey of its residential planning heritage remains to be done. Most of streetcar Denver's planning still exists behind aluminum fronts and along forgotten older streets. Its rebirth would add great depth and interest to the city's urban design.

CHRONOLOGY

1874 Residential buildout, Figure 1. (Note that this is drawn on a 1900 base map. This base is for scale only.)

1874 Residential districting according to building type. Figure 2.

1874 Economic class estimates. Figure 3.

1874 Platting activity. Figure 4.

1882 Bird's-eye view of the city, 1874-82.

1888 Platting activity. Figure 10.

1889 Streetcar system essentially laid out, though not all electrified. Figure 6.

1889 Residential areas estimated by building structural type. Figure 7.

1889 Residential areas estimated by economic class. Figure 8.

1889 Residential areas estimated by ethnicity. Figure 9.

1854 - 1941 Annexation activity. Figure 11.

1926 Residential density and the streetcar system. Figure 14.

LOCATION

The best method of establishing location is through the figures, as listed in the "Chronology" above.

CULTURAL RESOURCE TYPES

There are many ways to define residential districts in rail/streetcar Denver. A number of major ones will be introduced here. The first is classification by predominant building type: single family detached dwellings, townhouses, apartments, high rise hotels, and so forth. A second is by dominant architectural style: Victorian, Queen Anne, and self-help shanties. Third, there is ordering by plat layout; i.e., grids, radial concentric, linear, curvilinear, and axial. A forth approach divides the city residential areas according to large economic class "sectors," such as the "rich sections of town," the "wrong side of the tracks," middle class areas, and "skid row."

There are also classification schemes built upon different social and economic bases for residential "neighborhoods." The identity might have been built into the area's first marketing concept, by the original developer. Park Hill might be an example here. The identity might be generated by the area's origin as an isolated streetcar suburb like University Hills, or a company town like Denver's northern smelter neighborhoods. Also, old free-standing towns can be engulfed by the larger city, but later retain their identity as a neighborhood. Highland neighborhood might be an example here. Transportation focuses can give neighborhoods identity, like Five Points or the major commercial activity intersections at the streetcar stops on Colfax or Broadway. Finally, of course, there is the ethnic and nationalistic basis for neighborhood identification: black, Italian, Chinese, Dutch, Irish and so forth. Which of these types to choose in selecting historic districts for Denver is a difficult question. This study's introductory level of analysis is too general to settle the

issue.

It should be remembered that subdistricts within neighborhoods can be of great historic value. Single streets may be particularly representative of certain urban design, planning, or architectural style concepts. An apparently insignificant cluster of old commercial buildings lost in a residential area might be a perfect example of an old neighborhood streetcar intersection. A cluster of churches might represent an old marketing technique of setting aside subdivision land for religious purposes. Further study is likely to find many of these subtle yet enriching historical remnants.

QUALITY AND QUANTITY OF EXISTING INFORMATION

Historical Documentation

An interpretive planning and urban design history of the rail/streetcar residential areas of Denver has not been written. Certain brief statements are made in passing in the general Colorado histories, the general Denver histories and Denver pictorial histories. Sandra Dallas's works stand out as architectural interpretations. Also, neighborhood organizations, especially those in the first and second tier neighborhoods, have begun to generate their own local histories. The typical primary documents used in planning and urban design history are listed below. There are likely to be fewer of these documents available to residential investigators than CBD researchers, but basic data is still likely to be plentiful and of high quality. Oral histories may be a particularly rich information source in neighborhood historical analysis.

Written documents.

- General state and local histories.
- Municipal records.
- Real estate records.
- Land company records.
- Private papers of planners, architects, landscape architects, developers and landowners.
- Newspapers, magazines and journals.
- County, town and city plans.
- Records of major industries, banks and chambers of commerce.
- Railroad, streetcar, toll road, stagecoach and utility company records.

Graphic records.
- Map collections.
- Bird's-eye view collections.
- Real estate atlases.
- Insurance maps.
- Assessors' maps.
- Aerial photos.
- Satellite photos.
- Post card and architectural photo collections.
- County, town and city plan maps.
- Railroad, streetcar, toll road, stagecoach and utility company maps.
- State highway department maps.
- Commercial highway maps.
- U.S.G.S. maps.
- County, state and national atlases.
- Federal land surveys.

Oral histories.

Number/Condition

With a very few exceptions the rail/streetcar period residential identity of Auraria and the CBD have been destroyed. Even now the hotel districts in these areas are being demolished. Dozens of potential small and large scale districts from this period have been lost in these areas. One of the beneficial aspects of building most new construction in the suburbs is that the inner ring neighborhoods have not been redeveloped. They have been seriously damaged by parking lots, one-way streets and deferred maintenance, near the CBD, however. There were probably ten to thirty potential historic districts in these areas lost to demolition and other factors. There are probably about the same number still available. The second and third ring residential neighborhoods are in rather good condition. They likely hide numerous historic resources which have been forgotten. The working class smelter neighborhoods and others along the RIW spine are also in reasonably good condition. Also well preserved are the streetcar suburban subdivisions like Park Hill and University Park, and many of the residential areas that followed the streetcar stops along Broadway and Colfax. (The reader should be aware that the above judgments are suggestive only and need careful follow-up study. They also mention only the most general items.)

Surveys

Urban design surveys have been done for selected districts in Denver,

such as the Curtis Park area. These have usually been undertaken as part of applications for historic district designation. The applications themselves might be fruitful survey documents. The Denver Inventory should also be consulted for architectural information. Sometimes the clustering of historically significant houses shown in the Inventory suggests the likelihood of a meaningful urban design and planning concept used in the area as well. The historical investigator should also consult with Historic Denver, Inc. Finally, the Denver Planning Office has in the last few decades written plans for a number of Denver neighborhoods. There are often introductory historical sections to these plans which might prove interesting.

Data Gaps

Data for the historical investigation of these matters is usually adequate.

Future Needs

The whole area needs further descriptive, analytic and evaluative study, especially with respect to the planning and urban design issues. But most important, a systematic framework of analysis is needed, organizing, explaining and justifying the public and private value of these remarkable historic resources. Research on the first and second ring neighborhoods is most important, both because they have the oldest resources, and because the invasion by CBD uses is most powerful there. Other resources should not be forgotten, however, especially those along Colfax and Broadway. These resources can be turned into fast-food outlets and parking lots with alarming speed.

Important Resources

This topic has been addressed in the above discussions.

RESEARCH QUESTIONS

What are the details of Denver's residential urban design and planning in the rail/streetcar period?

How does Denver's pattern of the time compare with other Colorado towns and cities, other western cities, other American cities, and other European

cities?

What were the major causes for Denver's residential planning's taking the pattern it did? Influences needing investigation and prioritization are:

Land speculation and land ownership patterns.
Planning and design leadership by certain individuals.
Streetcar line and station locations.
The layout of the rural land survey which was converted to the urban road and streetcar system.
Land forms, and views of the mountains.
Parks and boulevards.
Ethnic and national origins of various groups in the city.
Economic class conflicts.
And so forth.

What were the national fashions in residential design aesthetics that influenced the spirit of Denver's residential plans?

What were the non-residential land uses located in the residential areas, and what is their historical value?

How did the ups and downs of the Denver economy affect residential location and form during the rail/streetcar period?

And many more...

EVALUATION STANDARDS

Physical Condition

This study did not deal at the level of detail necessary to establish specific standards in this category. Each potential historic district is likely to have sufficient individuality so that flexibility in standards should be respected. Of course, the districts should have structural and economic soundness, and the areas should be able to keep that structural and economic soundness. This can happen by continued residential use, adaptive re-use, or by public subsidy and protection.

Representation

Without an intercity comparative dimension in this thematic format, it is very difficult to state adequately whether areas of Denver's residential fabric are representative or unique. Intuition suggests, however, that many of our residential areas are likely to be quite representative of patterns throughout western and midwestern cities of the rail/streetcar era. Fewer,

perhaps, are likely to be unique. Uniqueness is a subtle quality, and a detailed analysis is required to establish it with certainty. Overall, there are probably thirty to fifty historic districts in Denver's rail/streetcar residential areas. At a minimum, one of each of the district types mentioned in the Cultural Resource Types section above should be preserved. Finally, re-establishing selected streetcar lines would also be a remarkable historic and urban design feat for Denver.

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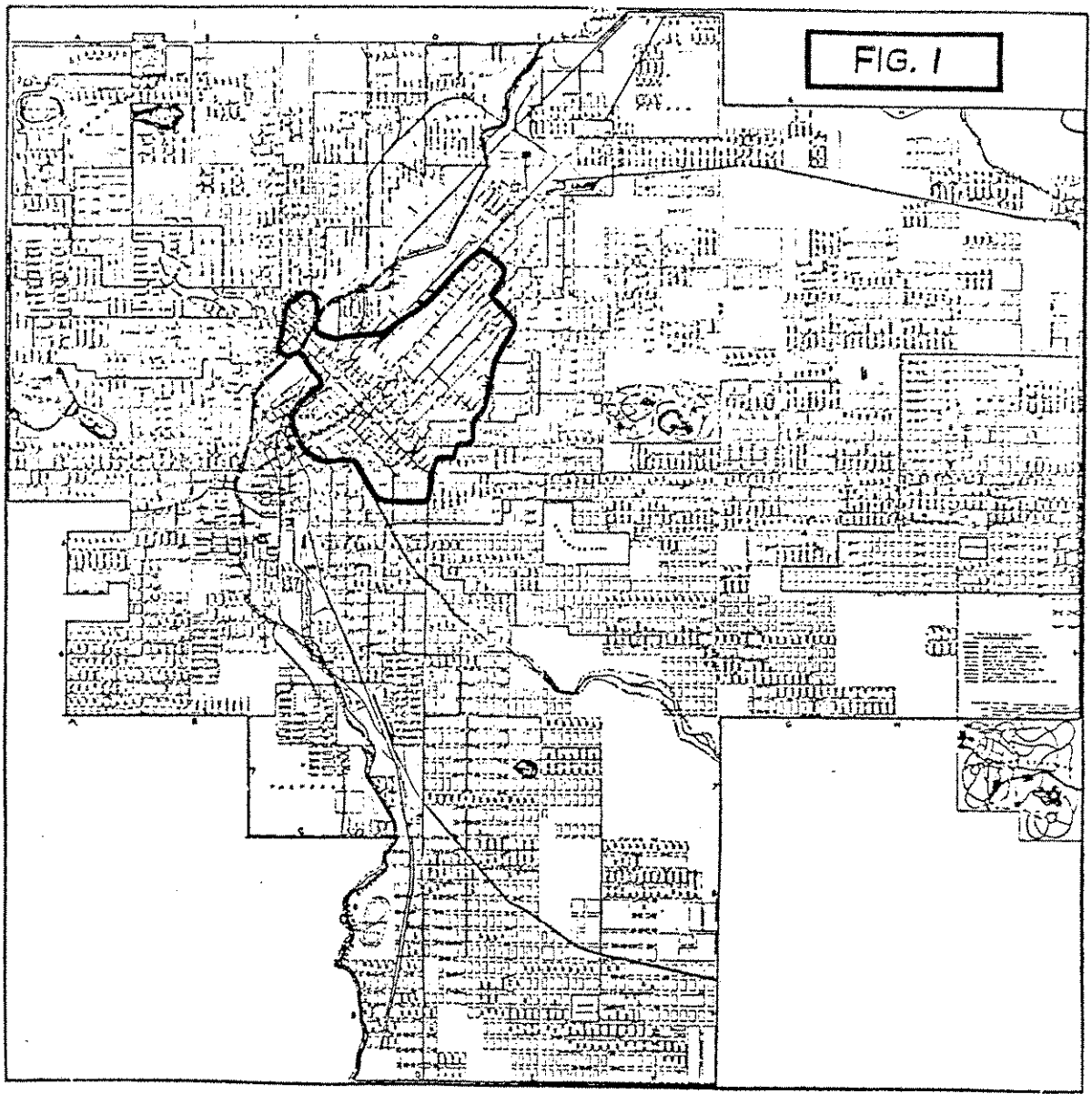


Map of Denver in 1900. Reduced from the Rollandet Company's copyrighted map. (Smiley, 1901: p. 650)

DENVER-1874
APPROXIMATE RES.
BUILDOUT & FORM

BEFORE MAJOR RAIL IMPACTS
(NOTE: 1900 ROLLANDET BACKGROUND
MAP FOR SCALE ONLY)

NORTH

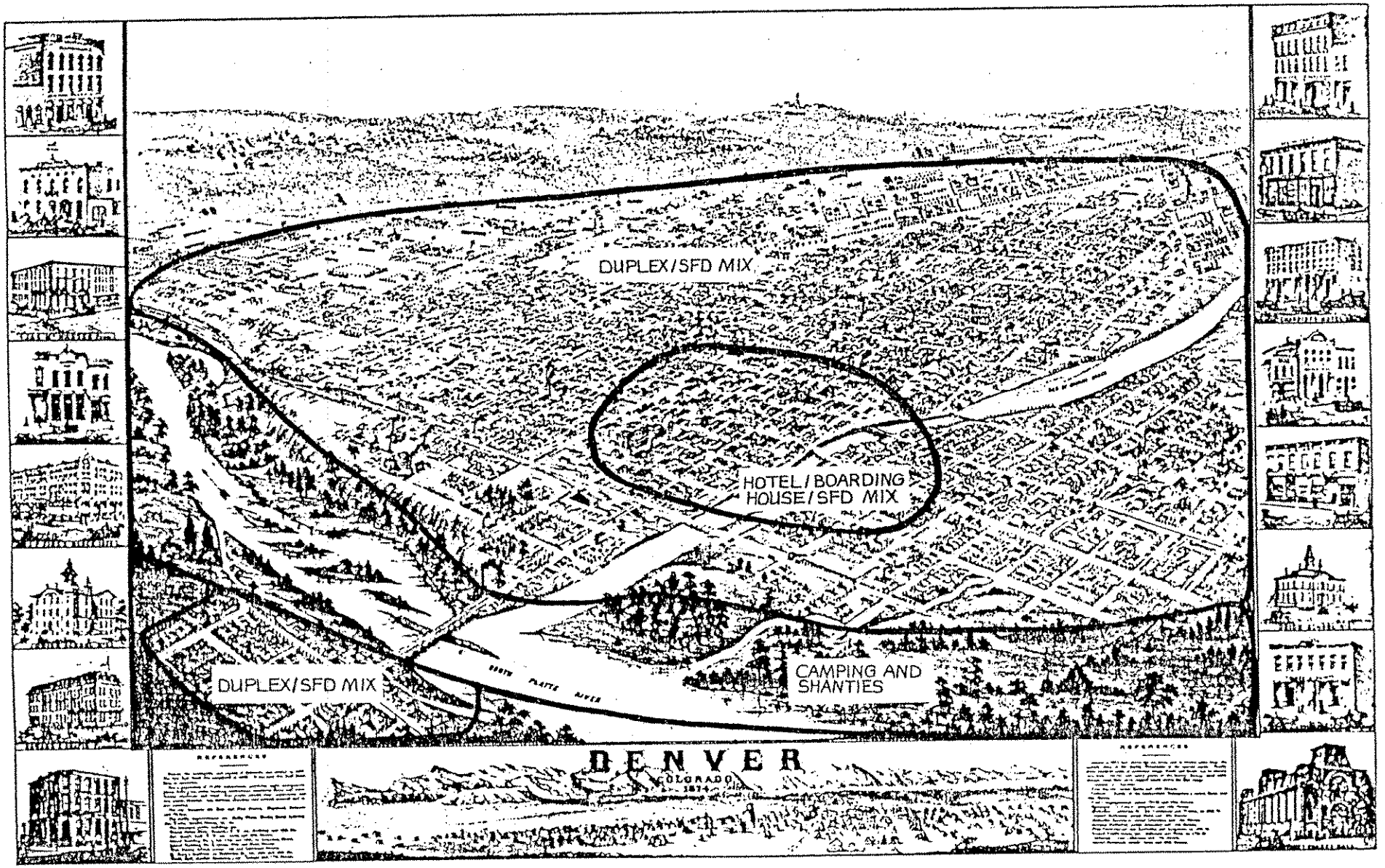


FIG. 2 1874 BIRD'S-EYE VIEW, WITH APPROXIMATE LOCATIONS OF PRE-RAIL HOUSING BY STRUCTURAL TYPE

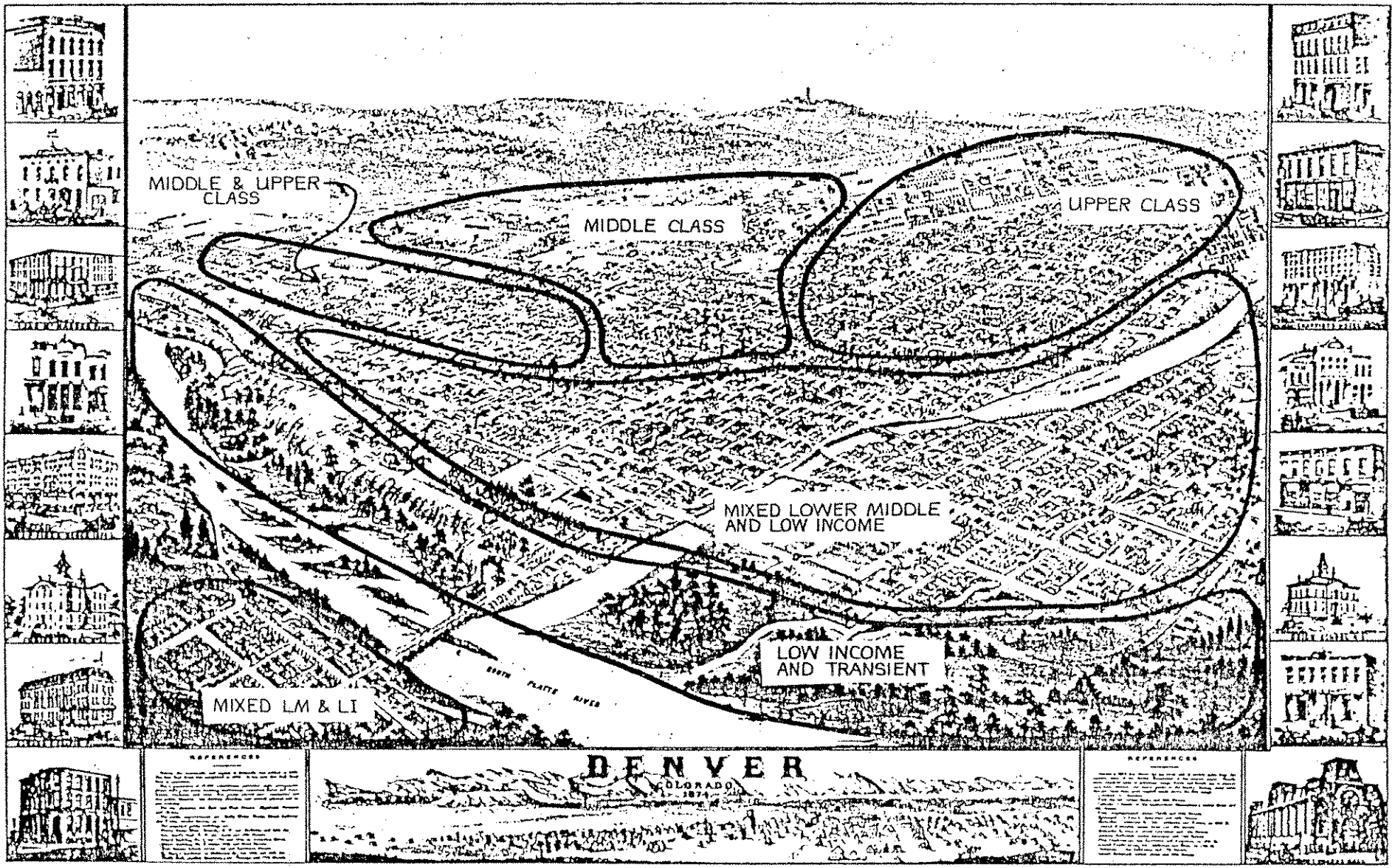
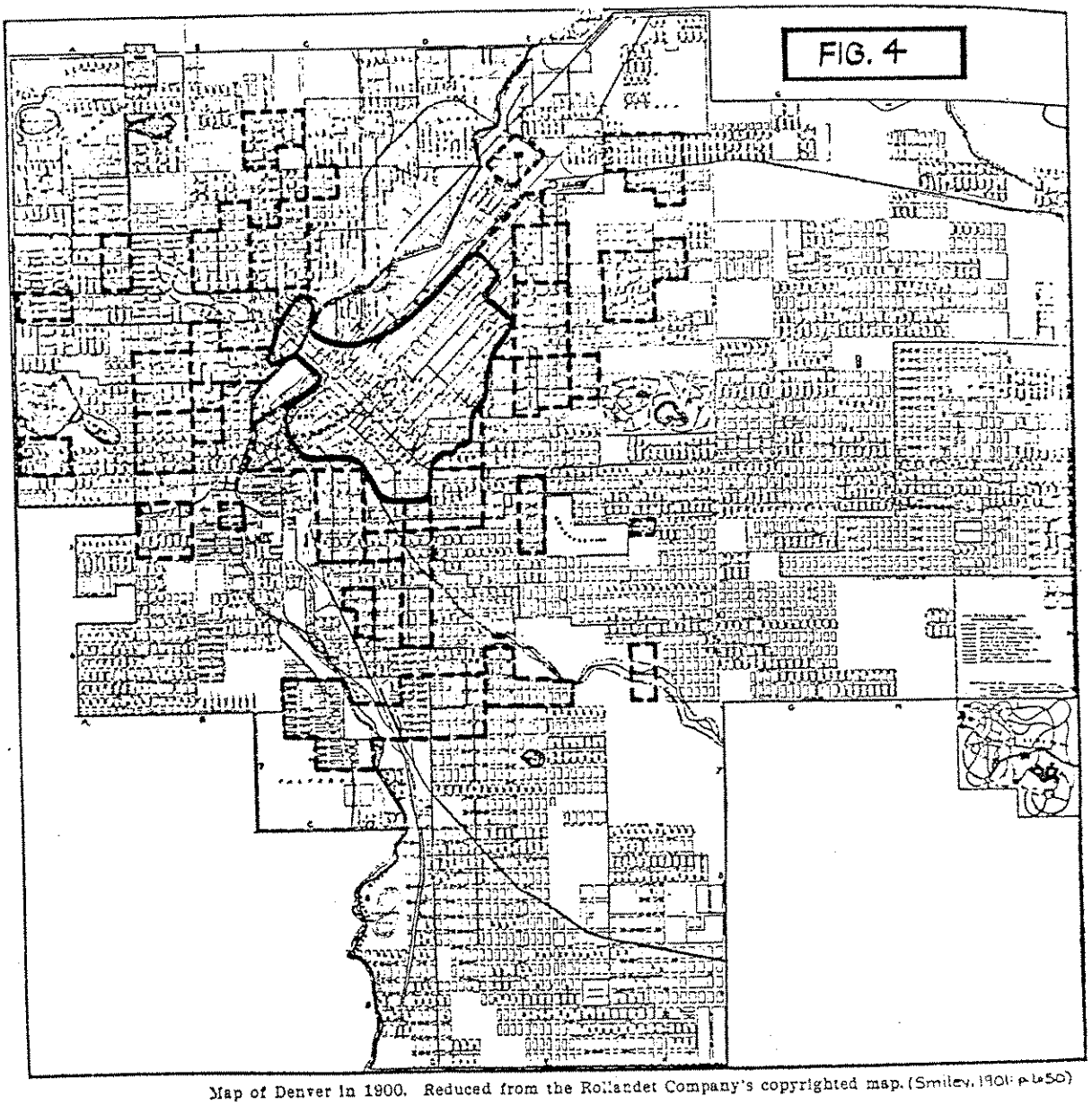


FIG. 3 1874 BIRD'S-EYE VIEW, WITH APPROXIMATE RESIDENTIAL DISTRICTS BY ECONOMIC CLASS

FIG. 4



Map of Denver in 1900. Reduced from the Rollandet Company's copyrighted map. (Smiley, 1901: p. 450)

DENVER-1874

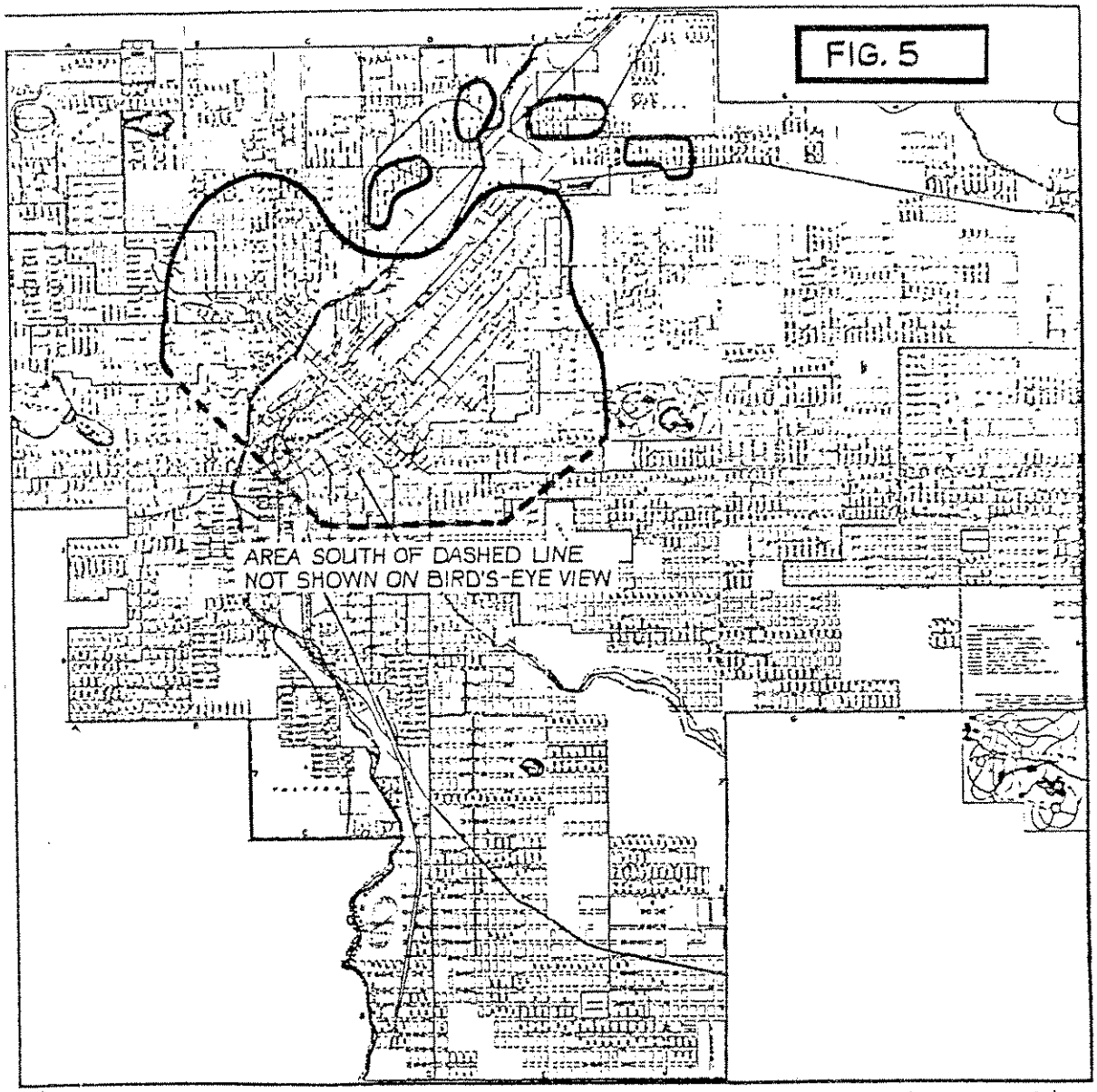
NOTE: 1900 BASE MAP IS FOR SCALE ONLY

APPROXIMATE ADDITION & SUBDIVISION ACTIVITY (FROM THAYER MAP OF 1874)

—— ACTUAL BUILDOUT - - - - PLATTED AREAS

NORTH

FIG. 5



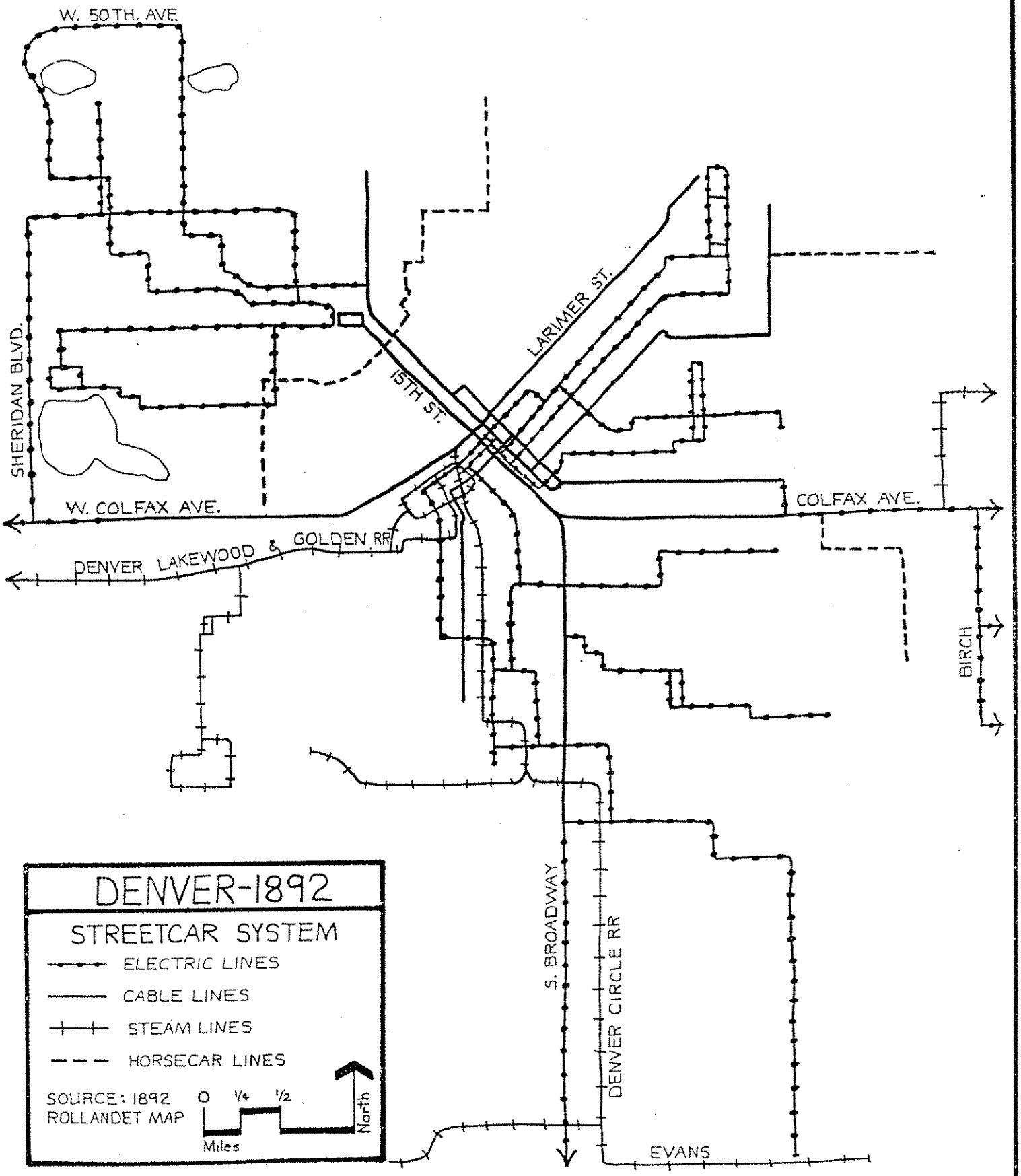
Map of Denver in 1900. Reduced from the Rollandet Company's copyrighted map. (Smiley, 1901 p. 650)

DENVER-1889

APPROXIMATE RESIDENTIAL BUILDOUT
(LIMITED TO ILLUSTRATED AREA
OF 1889 BIRD'S-EYE VIEW)

NORTH

FIG. 6


W. 50TH. AVE
SHERIDAN BLVD.
W. COLFAX AVE.
DENVER LAKEWOOD & GOLDEN RR
15TH ST.
LARIMER ST.
COLFAX AVE.
BIRCH
S. BROADWAY
DENVER CIRCLE RR
EVANS
DENVER-1892
STREETCAR SYSTEM
ELECTRIC LINES
CABLE LINES
STEAM LINES
HORSECAR LINES
SOURCE: 1892 ROLLANDET MAP
0 1/4 1/2
Miles
North

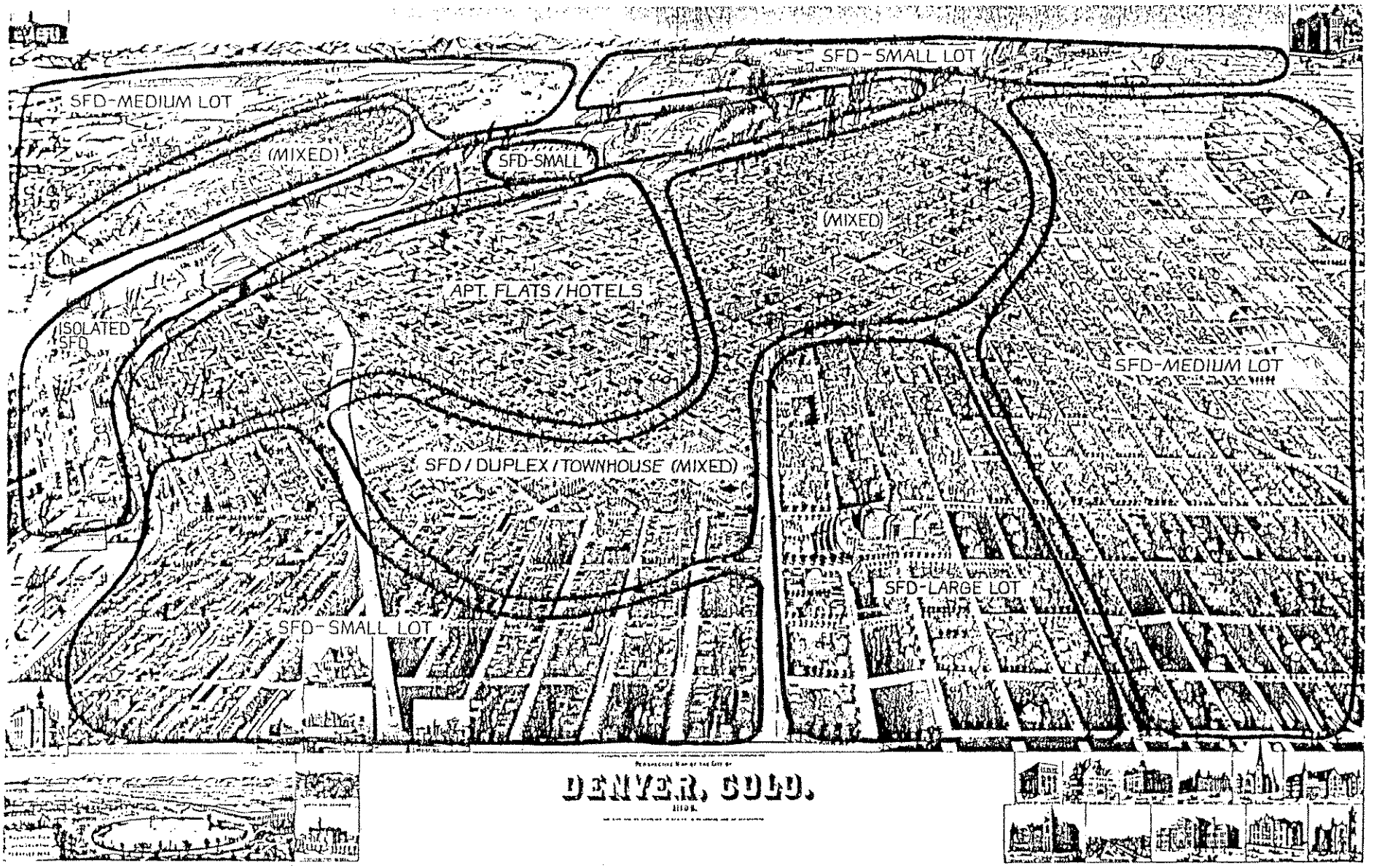


FIG.7 1889 BIRD'S-EYE VIEW WITH APPROXIMATE LOCATIONS OF HOUSING DISTRICTS BY STRUCTURAL TYPE

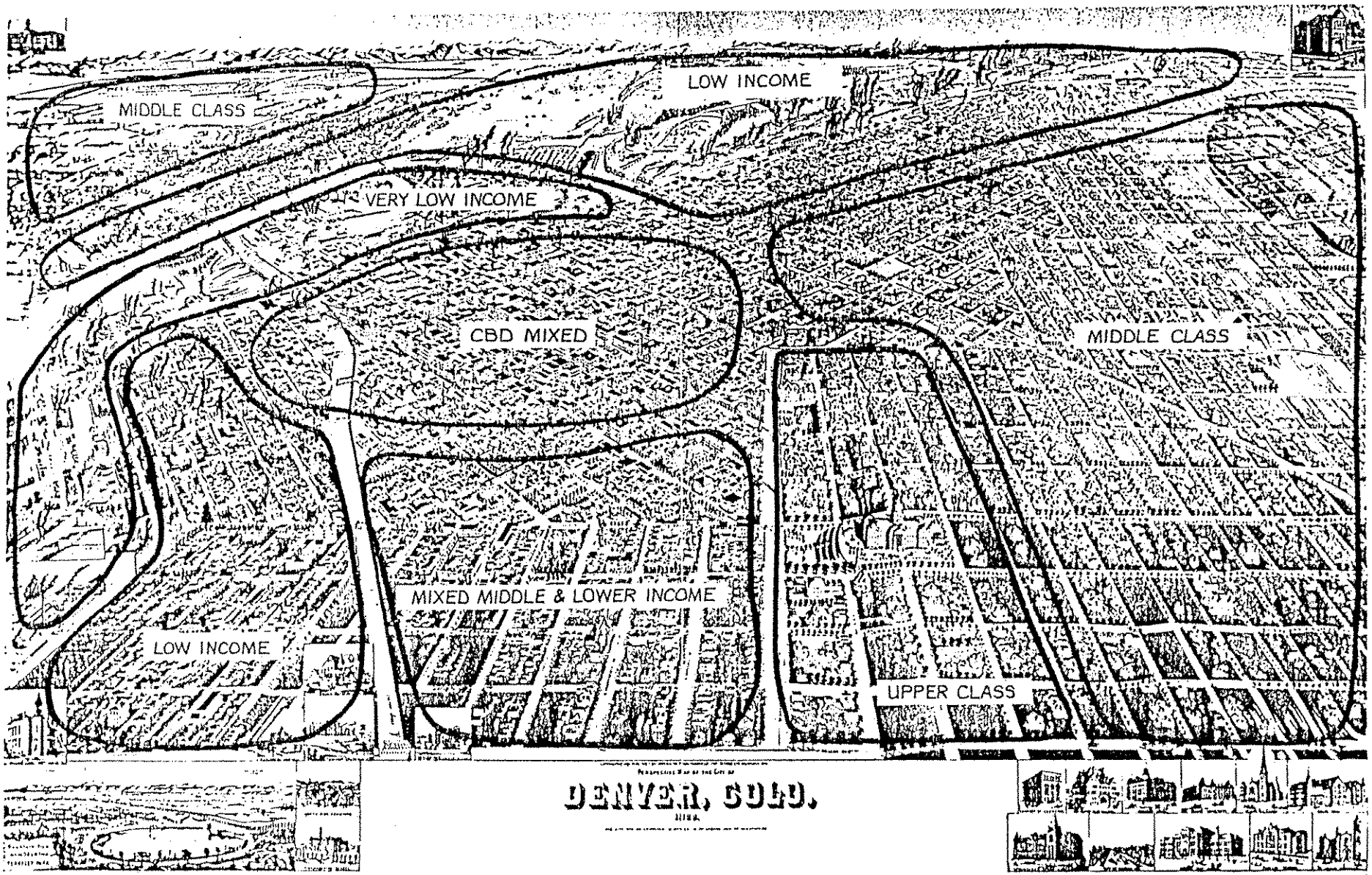


FIG. 8 1889 BIRD'S-EYE VIEW WITH APPROXIMATE LOCATIONS OF HOUSING DISTRICTS BY ECONOMIC CLASS

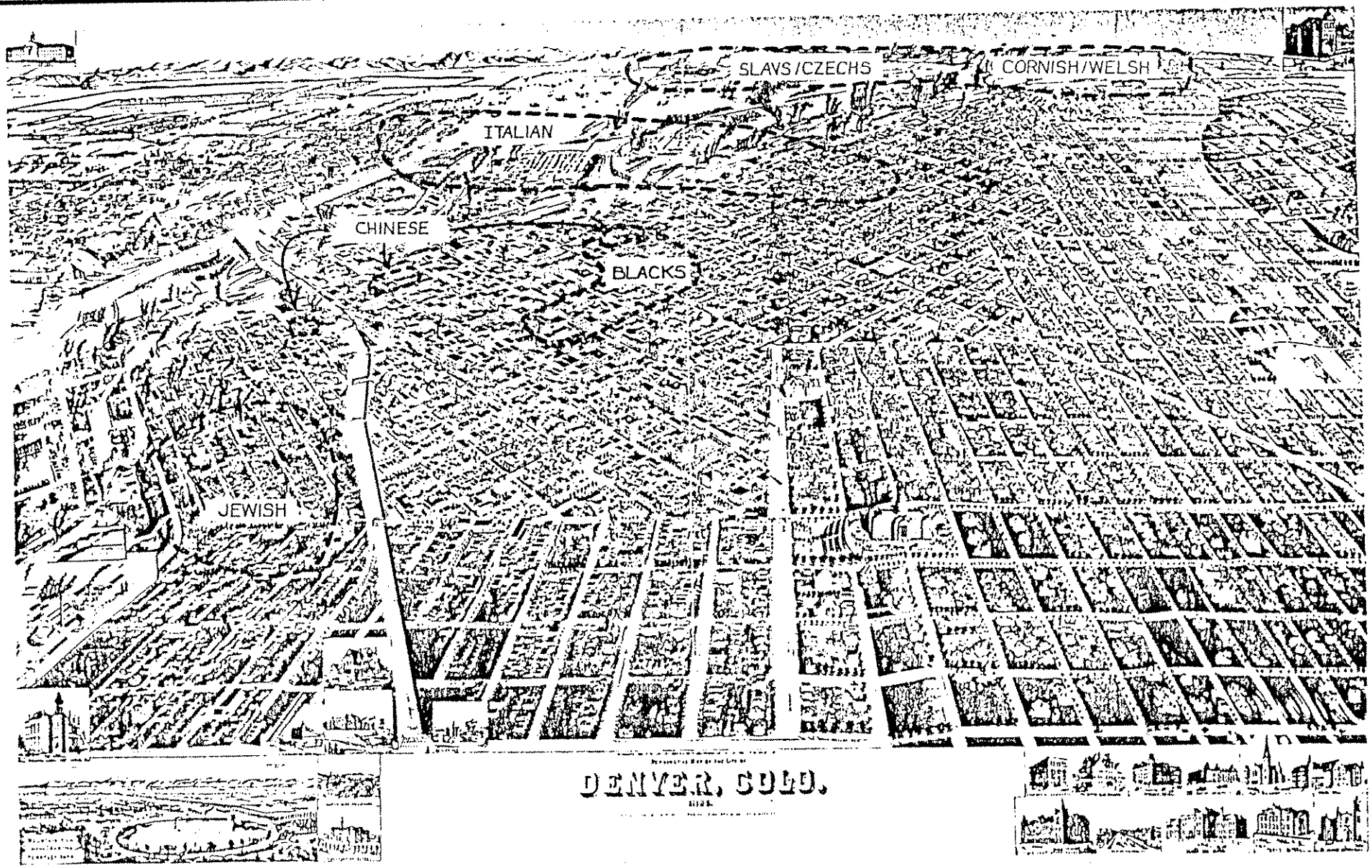


FIG. 9 1889 BIRD'S-EYE VIEW WITH APPROXIMATE LOCATIONS OF HOUSING DISTRICTS BY ETHNICITY

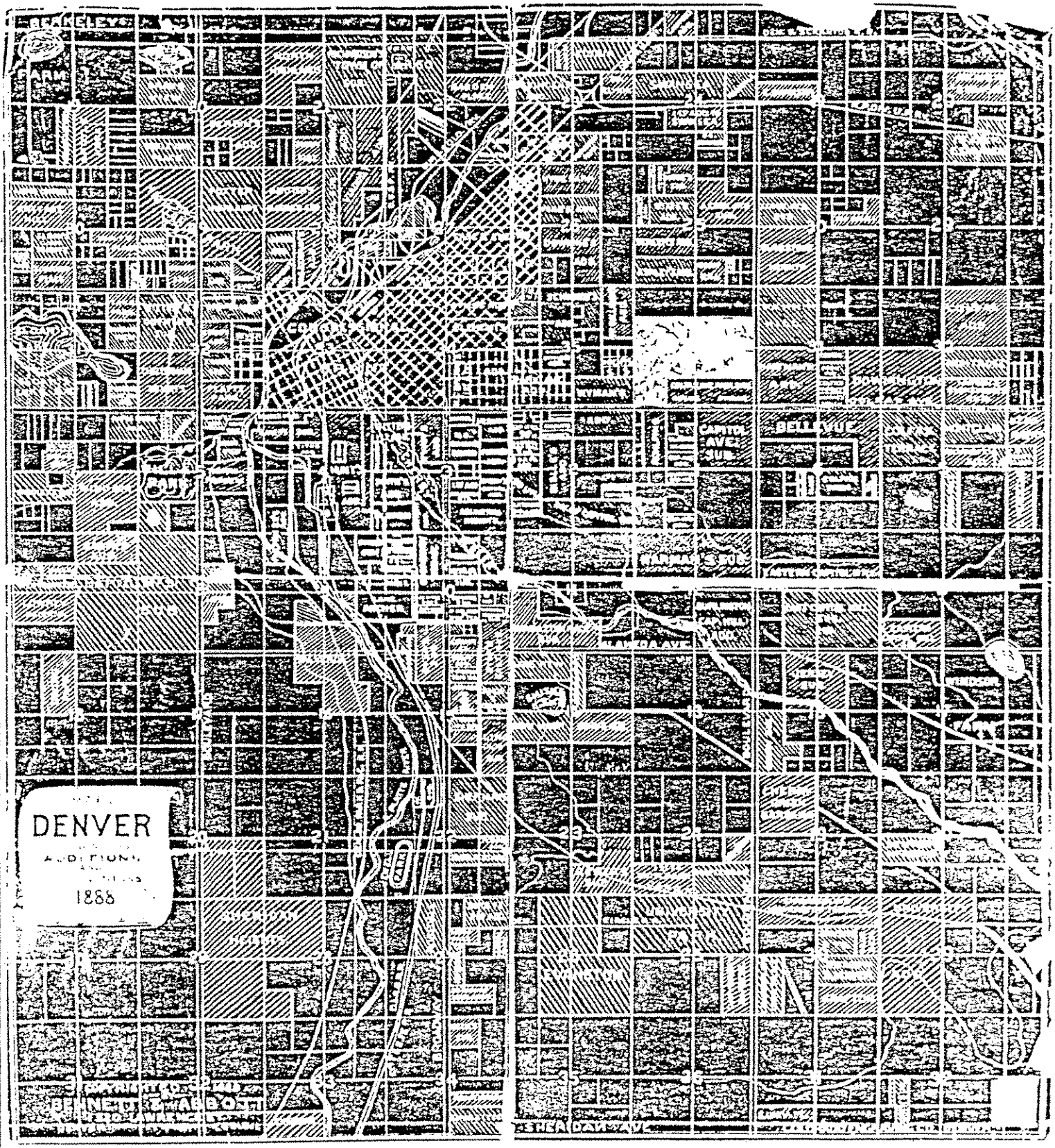


FIG. 10 1888 PLATTING ACTIVITY (FROM NOEL, DENVER: ROCKY MOUNTAIN GOLD)

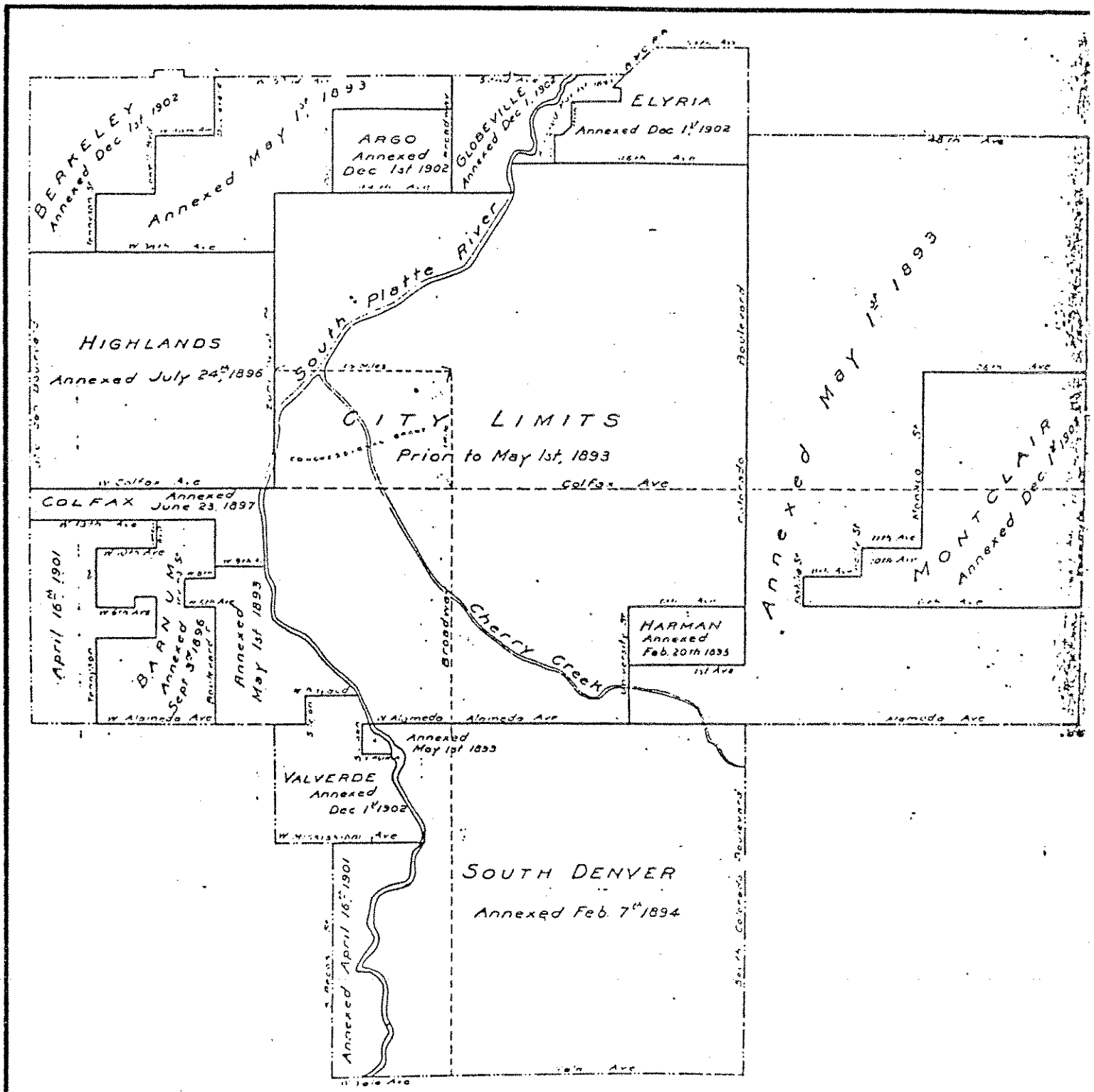


FIG. 11 DENVER CITY ANNEXATION MAP, 1858-1902

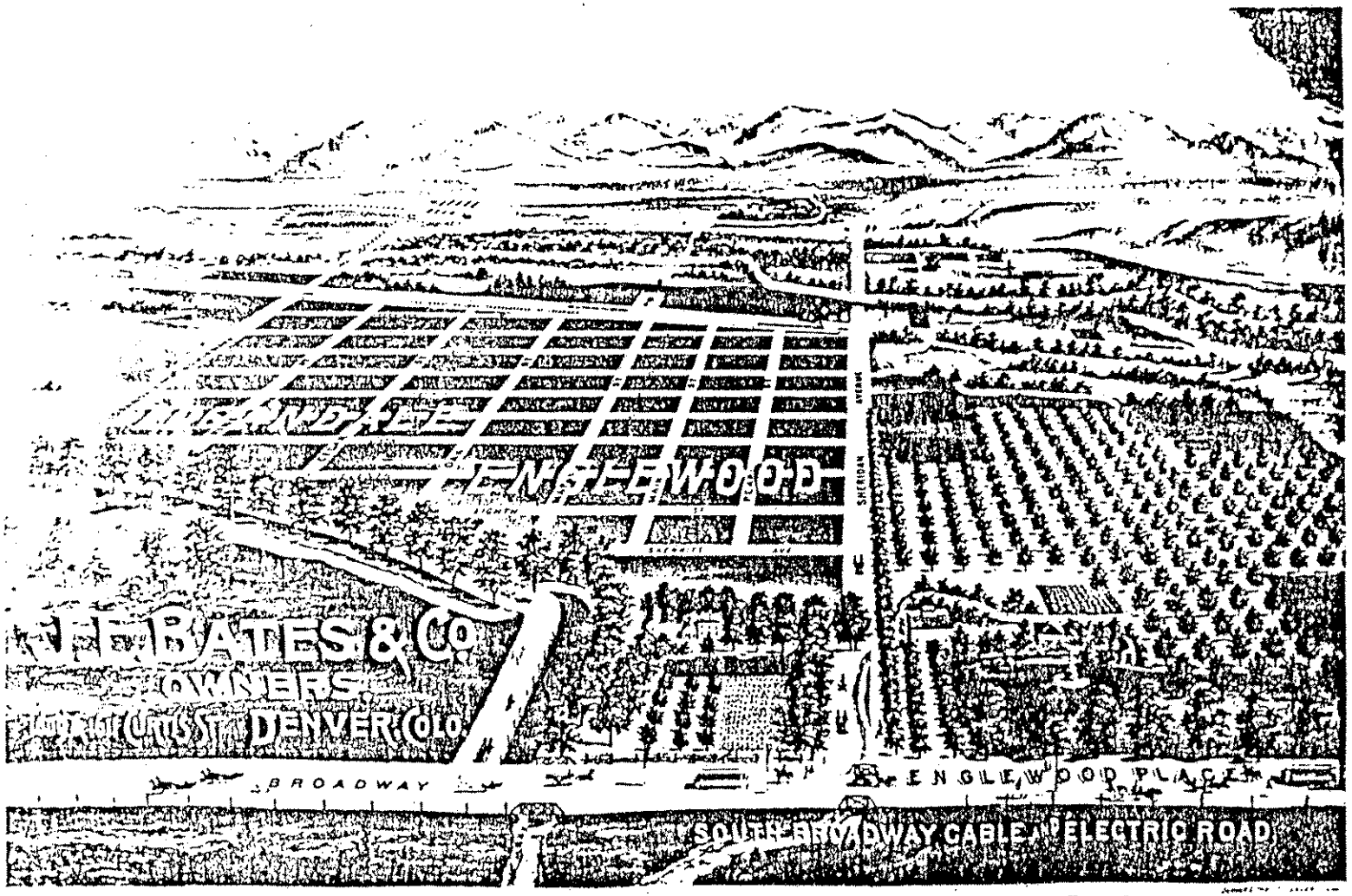


FIG. 12 LOGANDALE-ENGLEWOOD STREETCAR SUBURB AROUND THE TURN OF THE CENTURY

SECTOR CONCEPT

1. Central Business District
2. Wholesale and Light Manufacturing
3. Low-Class Residential
4. Middle-Class Residential
5. High-Class Residential

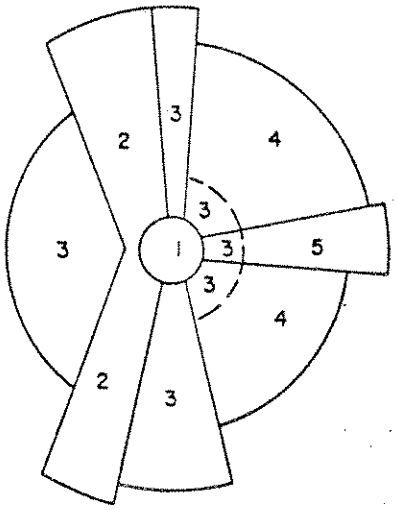


FIG. 13 HOMER HOYT'S SECTOR THEORY OF URBAN GROWTH (CHAPIN)

Street car tracks are indicated by the heavy solid lines; bus routes are shown by the heavy broken lines. One dot denotes fifty families as of April 15, 1927.

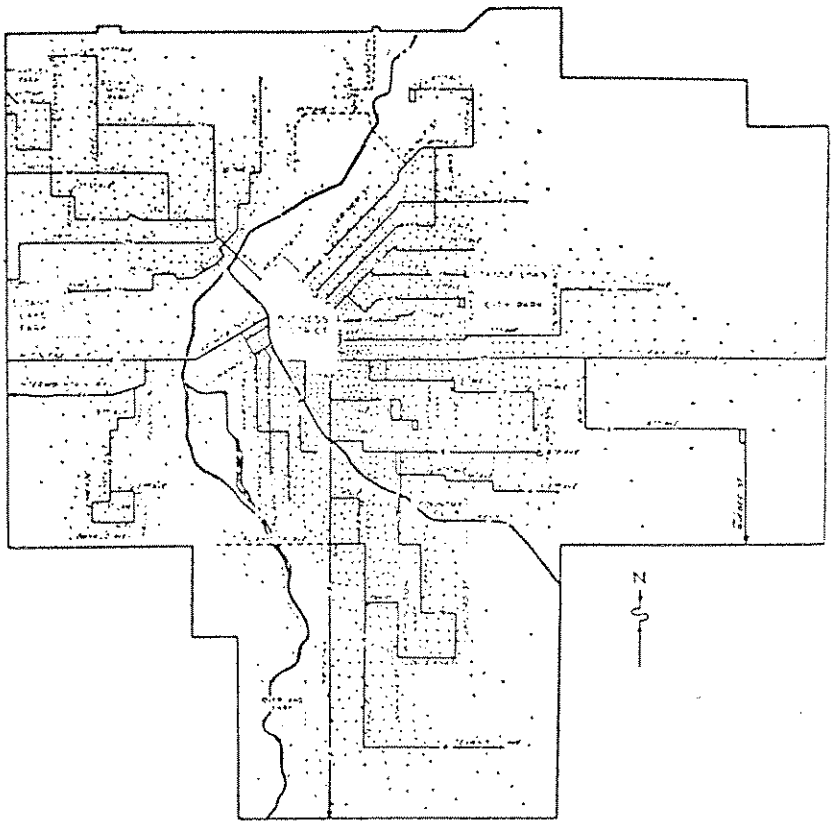


FIG. 14 1920'S RESIDENT DENSITIES ALONG STREETCAR LINES (ABBOTT, "STAGES")

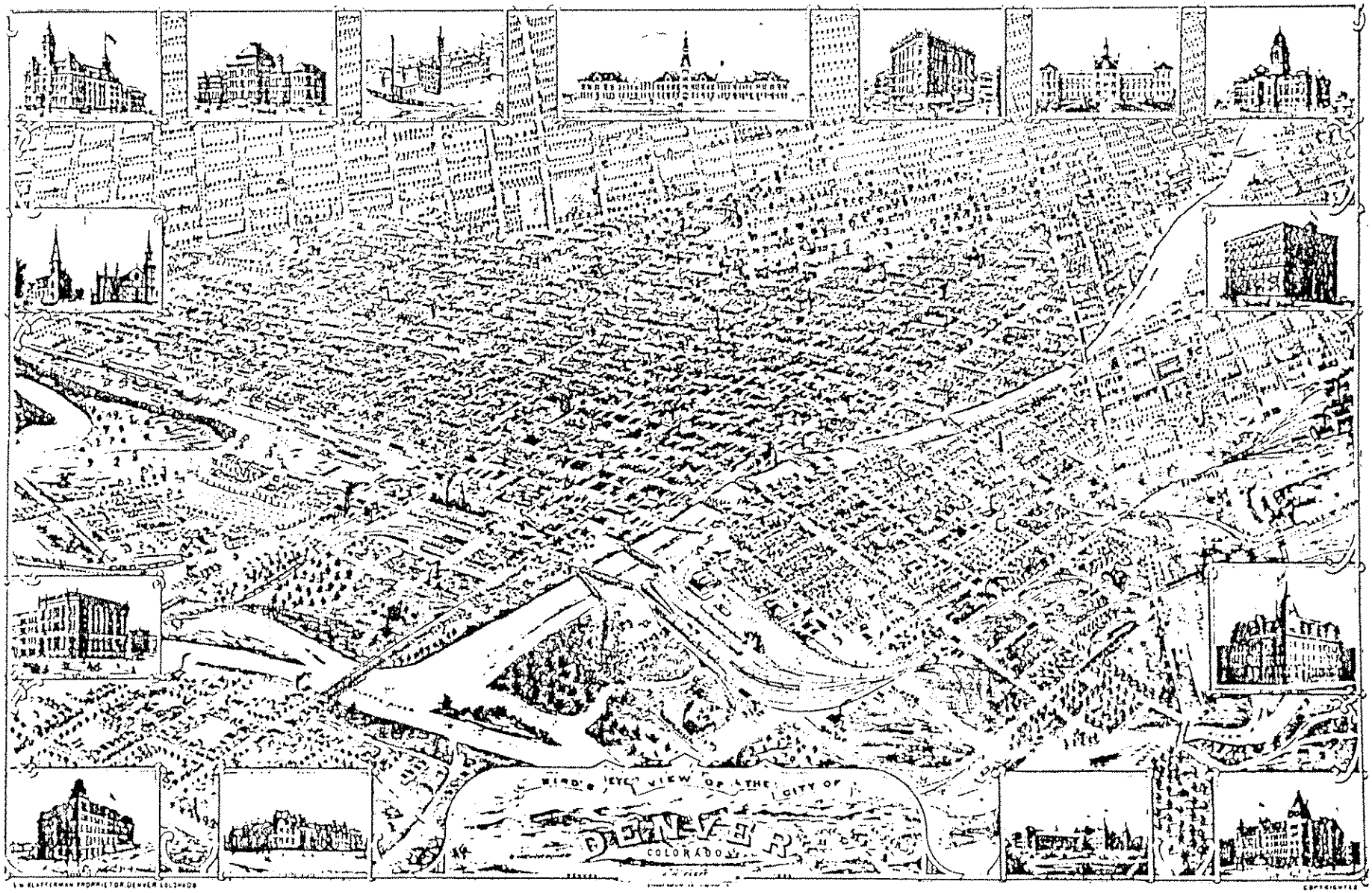


FIG. 15 1882 TRANSITIONAL BIRD'S-EYE VIEW OF DENVER RESIDENTIAL DEVELOPMENT (REPS. CAW)

10. DENVER'S EARLY AUTO PERIOD: 1920 - 1945

NARRATIVE

Denver's built environment began briefly in the stage/wagon era to 1870. It then developed powerfully as a rail/streetcar city to 1920 and continued growing rapidly to the present as an auto city. This theme deals with the early auto period, 1920 - 1940, when rail/streetcar Denver was beginning to adapt to the mass use of the automobile, the airplane, the truck, the bus, and the hundreds of other rubber-tire transport devices driven by cheap petroleum and the internal combustion engine. These changes were going to alter the shape, location and design of the city's built environment radically in the long run. In this early period, however, we will briefly outline major adaptations proposed and built in the transition period before the spectre of air pollution and megalopolitan sprawl developed.

Between 1920 and 1940, Denver and its hinterland grew steadily, from approximately 256,000 to 445,000 persons. Its economic elite was conservative, according to Dorsett's The Queen City, and it held the potential for heavy, labor-intensive industrial growth in check. The frugality and fledgling planning orientation of Mayor Stapleton's long reign during this period supported this economic policy with cautious municipal spending. The result was a period in which the city's economy diversified and consolidated, while still slowly growing. It grew upon the base of relatively clean, stable non-heavy industrial economic sectors. The great mining, smelting and railroading booms were over. The city managed the droughts of the 20's, the depression of the 30's and the war years of the 40's without serious trauma, and it expanded with care and considerable aesthetic quality. This was also the first era in which Denver's growth was considered comprehensively and regionally. The Denver Planning Commission (DPC) began in 1923. It produced a series of research and planning documents which at least began to establish public concern with the land speculation and development process that was determining so much of Denver's urban form.

The central technical planning problem of this era was adequately superimposing the early auto/truck city onto the well developed rail/streetcar

city. Rail/streetcar Denver in 1920 was characterized by the downtown intersection of three highly centralizing radial-patterned rail systems: the regional freight and passenger rail, the interurban commuting rail, and the intra-city streetcar rail. These reinforcing foci generated a very dense, lively, powerful central business district (CBD). The regional rail terminal monopolized regional travel for the CBD, and the other two rail modes focused most commuting travel downtown. There were few outer "concentric" connectors to the radial systems to encourage outlying suburban centers. Denver was essentially a single noded metropolis. The only serious exception was the industrial/warehouse spine, which followed the South Platte valley rail yards from Alameda to 40th.

Mass auto transport disrupted this radial system's tidy centralism. As opposed to streetcars, autos need large parking areas and wide roads to get access to CBD's, As opposed to freight rail spines, trucks generate industrial/warehouse locations on urban fringes often more easily than near the center. And,as opposed to downtown rail stations, airports take regional passenger travel terminals to the edge of town. In short, the petroleum/auto system naturally decentralizes; the rail/streetcar system centralizes.

The first location that felt the auto pressure was the dense rail/streetcar CBD. The second was the urban fringe. By 1929, the Denver Planning Commission's cry was for an auto bypass loop of the CBD. By 1940, only one out of five of Denver's new residents were locating within the city's limits. The battle between streetcar and auto was well into its first skirmishes. The following discussion of the changes will focus on Denver's CBD, its residential areas and its industrial/warehouse spine.

The CBD struggled to protect itself from auto erosion by a number of DPC proposals during this period. It suggested an inner area auto belt to keep traffic off its internal streets (Figure 1); it proposed a new set of external diagonal streets to help focus auto traffic toward itself rather than to other external locations (Figure 2); and it proposed an elaborate streetcar plan (Figures 3 and 4) which continued to center trolley traffic on the CBD. These actions were deemed necessary due to the 1931 drop in streetcar ridership (while the city was still growing). Figures 5 and 6 illustrate the existing streetcar and auto/truck volumes of the late 20's and early 30's. These illustrations are taken from "The Denver Plan" pamphlets of the Denver Planning Commission.

Compromise with the auto was still the norm, however. The DPC also

advocated a decentralizing regional auto loop (Figures 7 and 8), though the loop was conceived sufficiently distant in those times to be far beyond the streetcar and residential realm. Regional auto radials did, however, still focus on the downtown. The DPC also advocated another decentralizing force (Figure 9), a municipal airport serviced by a decentralized loop of smaller airports. Union Station was being seriously threatened, though no one quite knew at the time how much.

The new buildings of the CBD of 1945 did not radically differ from those of 1920. (See Rail/Streetcar CBD theme.) Cars were a considerable nuisance but not yet a dominant building form shaper. New building construction was perhaps a bit taller, but still only the D & F Tower went beyond fifteen storeys. The functional sectors of the CBD also remained fundamentally stable. Sixteenth Street retail experienced the addition of Neusteter's and the Denver Dry extension on California. Montgomery Ward's 1926 decentralizing move to Broadway and Virginia was an important negative omen, however. The Telephone Building became an exception to the 16th/17th Street office sector, locating on 14th and Curtis with its 1926 structure. The Republic Building on 16th and Tremont, on the other hand, stabilized the north end of the 16th/17th office sector.

The CBD's first inner area park was completed when the old county courthouse was razed at Tremont and 16th Street; local government and its functions were moved to the Civic Center in 1932. The city worked hard late in this period to encourage a new federal center in downtown around the Post Office and New Customs House at 19th Street and Stout. It was to be in a clear "City Beautiful" classical style. New hotel construction favored the Brown Palace area rather than the Union Station area. The Cosmopolitan was constructed in 1926. The 1928 Park Lane Hotel on Marion Street moved too far from the CBD, however, and eventually had financial difficulties.

The Paramount (1930) and the Denver Theatre (1926) were solid additions to the CBD's entertainment sector, but the Aladdin's withdrawal to residential Colfax signaled a break in the downtown movie monopoly. Other entertainment functions like sports, stock shows, amusement parks, auto racing and zoological gardens had already moved out of the CBD. In part, this was due to their large space needs, but also people could get there by car. The church district north and east of the Capitol did not grow during this period

and lower downtown and Auraria continued to provide mainly mixed-use functions and support facilities for the poor and transient. Overall, the CBD during this period continued its dominant place in the city. Its changes were incremental, and its leaders could not really foresee the pressures it would face in the post-war, "dominant auto" period. Streetcars had been challenged, not yet beaten.

Residential density in the Denver region was mapped by a 1933 DPC study, illustrated in Figure 10. The strong residential core around the CBD was clear. From there, residential density followed a "T" determined by the streetcar lines: Colfax toward Aurora, west and northwest toward Arvada, and south down the Broadway corridor. Aurora, Arvada, Westminster, Englewood, Sheridan and Littleton already seemed well established in the demographic region, if not yet contiguous with the city limits of Denver. The overall city density remained low by eastern city standards. It averaged about 6.7 persons per gross acre. Apartment districts were in the CBD, in neighborhoods surrounding the CBD, in major streetcar corridors, and at major streetcar intersections. Certain areas were quite dense; the Civic Center district, for example, had 37.8 persons per acre.

Denver worked hard to support its residential areas during these years. The mass transit proposal of 1932 (Figures 3 and 4), when compared with the actual service of 1931 (Figure 11), illustrates the concern for residential streetcar service(at the planning level). The 1929 street proposal (Figure 2) was woven with boulevards, especially toward the east part of town. The new roads in Figure 2 were mostly built, as opposed to the proposed streetcar lines. Parks were planned so that no resident was required to walk more than about five long blocks to find public open space. Large parks like City Park, Washington Park, Berkeley Lake and Sloan's Lake were now developed carefully, as opposed to being merely "set aside." The Red Rocks and other mountain parks were also developed during the 1930's. Education centered in residential areas, and this era produced major complexes such as East, South and West High Schools. This was also a major hospital-building era, usually in residential parts of the city, and especially in the residential areas just east of the CBD.

Radical shifts in the class and ethnic spatial patterns of the city did not take place during this period (note the residential theme, "Rail/

Streetcar Denver 1870 - 1920: Residential Areas"). Generally, there was some blurring of class and ethnic areas for the white population, but much less so for blacks. The major new factor was the influx of the male transients, the agricultural poor, and Hispanics during the depression. Many of these groups were forced into shanties within the rail spine area.

Denver's rail/industrial/warehouse (RIW) spine was of considerable concern during the late 1930's (Fig. 12). A 1935 DPC pamphlet argued for the reorganization of the spine to help remove shanties (and whole neighborhoods) to expand and speed rail operations, and to open up more industrial and warehouse land. The proposal was not generally followed, but considerable infill replacing the smelters in the spine did take place. Power generation was a large use. Shanties were sometimes removed, but whole working class neighborhoods resisted uprooting. Later, I-25 was more disruptive in carving a path through Denver's residential fabric.

Figure 7 illustrates the extent of the RIW spine in the "Plan of the Region." It had remained a major Denver land use district since the 1870's. By 1936, it pushed down the South Platte to the Englewood city limits, and the regional plan suggests its extension to Littleton. The plan argued against the rail spine industrial uses branching through the residential areas of S. E. Denver along the diagonal railroad that paralleled Buchtel Boulevard. This protected present S. E. Denver from heavy manufacturing use. The figure describes an RIW spine east at 40th Avenue to about Yosemite, and west to about Navajo. The northern RIW boundary extended to the Denver city limits. The regional plan proposed a major expansion of this northern boundary. It extended north about a mile along the city limits continuously. It also protruded to about one-third of the way toward Brighton. It even suggested a huge industrial island to the east in the present Montbello.

Actual job locations in the 1930's and early 40's were not so closely tied to the rail spine as the regional scheme suggested. Fitzsimons Hospital employed many on the fringes of Aurora, and federal wartime airfields further pulled employment eastward, away from the spine. On the west, the huge Remington plant, in what is now the Federal Center, pulled development in that direction. This plant was the first real harbinger of industrial decentralization away from the old rail corridor. On the other hand, Gates Rubber Com-

pany and the Samsonite Corporation located within the spine. As in all matters, 1920 to 1945 job location patterns exhibited the mixed rail spine and suburban patterns typical of an era of transition from streetcar city to auto city.

In summary, the Denver built environment had a relatively happy early adjustment to the auto. There were enough of the cars to provide extra flexibility for those city people, tourists and farm folks who needed more flexibility than rail systems could provide. Yet the car had not become so virulent as to destroy the viability of existing building/transport investments, nor yet begun to seriously pollute the air or become a safety problem. These easy days were numbered.

CHRONOLOGY

These are taken primarily from Jones and Forrest, Denver: A Pictorial History. Also note narrative.

1920 - 1925

1920 Population 256,491.
1920 State Office Building begun.
1920 Livestock Exchange Building.
1920 Overland Park became an auto tourist camp.
1921 Gates buys Ford plant.
1922 Union Park (baseball).
1923 Denver Planning Commission founded.
1924 First radio broadcasting.
1924 C. U. Medical School opens.
1925 New West High School.
1925 New East High School.

1926 - 1929

1926 South High School opens.
1926 D. U. football stadium completed.
1926 Denver and Interurban Line closes.
1926 Cosmopolitan Hotel.

1926 Aladdin Theatre opens.

1927 The Denver Theatre opens.

1926-7 Telephone Building.

1927 DPC Tentative Major Street Plan.

1928 Park Lane Hotel.

1928 First use of natural gas.

1929 Denver Municipal Airport opens.

1929 Museum of Natural History completed.

1930 - 1935

1930 Population 287,861.

1930's Saco R. DeBoer was the city head of planning.

1932 City & County Building completed.

1932 RKO Orpheum Theatre.

1934 Presbyterian Hospital opens.

1934 Arapahoe County Courthouse demolished.

1935 George E. Cranmer named Manager of Parks.

1935 Electric trolley bus introduced.

1936 - 1939

1937 Lowry Air Field established.

1939 Denver General Hospital enlarged.

Late 1930's Red Rocks, Mountain Parks, Winter Park.

1940 - 1945

1940 Denver population within city limits 322,412.

1940 Denver population outside city limits 122,784.

1940 New police building downtown.

1941 Denver Ordnance Plant.

LOCATION

Locational issues are best reviewed in the narrative discussion and the illustrations.

CULTURAL RESOURCES

Many of the buildings and networks constructed during the 1920's and 30's still survive: roadways, parks, hospitals, subdivisions, schools, factories, government buildings, hotels, colleges, and so forth. As a general rule, if the facility could be serviced by car and truck, it is likely to have survived to the 1980's. Since most of Denver was built at relatively low densities during this period, much of the city could be retrofitted with parking lots and wider roads without great technical difficulty. (The urban design costs were often considerable, however.)

Losses from this period are those tied closely to the streetcar/rail system. These include the entire structural urban and interurban rail system, the rail yards and facilities aimed at servicing regional coal/steam locomotives, all buildings (particularly those many in or around downtown) that were needed for parking lots, all buildings and street trees in the way of street widenings, and all built environment in the way of new highways and freeway construction.

Nationally unique cultural resources developed during this period have not yet surfaced in this general study. Unlike the focus in the 19th century, Denver in this period was not so much pioneering a new ecological region with new mining-oriented industries as constructing a rather typical American regional capital city. Many components for this type of development could be imported from other areas of the nation and the world without the need for unique local innovation. Adapting those national components to the peculiarities of this ecosystem and Denver's existing built environment demanded a number of clever adjustments, however, and these need to be studied. Municipal ski parks and mountain parks come to mind here. Also, health facilities like TB hospitals could be unique. To find the unique demands more detailed study. The Union Station/State Capitol axis may be unusual.

Typical items stand out more in this period than the unique. Denver's rail spine, downtown, and residential patterns are representative of western and midwestern American cities, even though geography and chance forced variations in detail. The component districts that make up these areas are also rich sources of typical American urban planning history. Among these are:

rail yards and their auto overpasses

major rail-oriented manufacturing complexes

elevator warehouse areas

skid row, housing for destitute and poor

linear CBD department store streets

linear CBD office tower streets

linear CBD entertainment streets

streetcar suburbs

early auto commuting suburbs

streetcar/auto commuting corridors like Colfax and Broadway

City Beautiful government centers, parks, and boulevard districts

less defined white ethnic sectors

more defined black and Hispanic ethnic areas

class-defined residential sections of town

early auto-oriented retail strips

early motel, drive-in, and gas station strips

early airports and their support services

parking structures and lots

early truck-oriented warehousing

tourist parks and campgrounds

auto sales strips

radio stations and transmission towers

Victory gardens and gardening

mountain parks

federal industrial and military installations

QUANTITY AND QUALITY OF EXISTING INFORMATION

Historical Documentation

There are no developed interpretive histories of the planning and urban design of Denver during this period. General State and Denver histories deal with physical planning lightly, with perhaps Dorsett taking the most interest. This is also the time of Mayors Speer and Stapleton: studies of their careers discuss how planning developed administratively, and outline major projects. Rail, streetcar, trolley, and architectural histories also touch on certain dimensions of city form. The standard primary sources in planning history listed below are all likely to be useful for further research. Since many of the builders of Denver during this period are still alive, oral historical sources are likely to be quite useful. Also, special attention should be given to the new actors in the urban design system: owners of the early highway strips, drive-in franchisers, parking lot companies, tourist camp owners, highway builders, auto club leaders, auto dealers, gas suppliers, federal bureaucrats and military men, radio station operators; and art deco designers, young architects of the "modern" movement, and suburban land developers. The following sources are also likely to be helpful.

Written documents.
- General state and local histories.
- Municipal records.
- Real estate records.
- Land company records.
- Private papers of planners, architects, landscape architects, developers, and landowners.
- Newspapers, magazines and journals.
- County, town and city plans.
- Records of major industries, banks and chambers of commerce.
- Railroad, streetcar, toll road, stagecoach and utility company records.

Graphic records.
- Map collections.
- Bird's-eye view collections.
- Real estate atlases.
- Insurance maps.
- Assessors' maps.
- Aerial photos.
- Satellite photos.
- Post card and architectural photo collections.
- County, town and city plan maps.
- Railroad, streetcar, toll road, stagecoach and utility company maps.

State highway department maps.
Commercial highway maps.
U.S.G.S. maps.
County, state and national atlases.
Federal land surveys.

Oral histories.

Number and Condition

As a very rough estimate, there are probably 200 - 500 resources of the types listed above in the "Cultural Resource Types" section remaining from this period. From one-half to two-thirds are probably still in use, but not all of these are likely to be in quality condition. The early auto strips, such as those on Santa Fe, East Colfax, and South Broadway are disappearing rapidly.

Surveys

The Denver Inventory should be consulted for background. No purely urban design surveys have been done. With the beginning of public planning with the DPC, the publications and studies from that group become very useful. Also, the work of planning professionals such as S. R. DeBoer are insightful resources. His collected works are in the DPL Western History Collection. During the Depression, there were also federal studies carried on, and these will be worth evaluating.

Data Gaps

Most data are likely to be available and in good condition.

Future Needs

This time period, 1920 - 1945, is somewhat arbitrarily chosen, defined mainly by agreement of the project researchers. In many areas of Denver history, 1945 is well justified as a break point; i.e., the end of World War II. From the point of view of physical form history, it is acceptable. But perhaps it is still worth asking whether it is the best. The era is essentially an early transitional period, one in which the oil/rubber-tire city experimented with its new forms and locations. Is this early period really worth great effort, compared to the radical changes that were to come later? If this early period is agreed upon as important, there needs to be a careful framework of

analysis devised which captures the subtleties of the early experimentation with the new auto-based forms, and the subtleties of the small changes that took place in the older rail/streetcar buildings and transport systems, as they adapted to the coming urban form upheaval. Also, the impact of the entrance of the public into comprehensive planning, zoning and subdivision control must be analyzed. The survey methodologies and data sources are likely to be eclectic, in order effectively to address the complexities of these issues and the questions posed below.

Important Resources

Further study is needed before serious recommendations can be made here. Generally, however, it is those adaptations in building, transport and landscape design and location, driven by the changeover from a rail city to a rubber-tire city, that are most important from a physical planning point of view. Early auto strips are of particular interest.

RESEARCH QUESTIONS

What are the details of the urban design and planning of this period?

What factors determined urban form besides the transition from rail to auto (as has been emphasized here)? For example,

- changes toward corporate capitalism?
- innovations in rapid and mass communications?
- the "modern movement" in design?
- increasing influence of federal public funds and forces?
- increasing influence of national private commercial forces?
- maturation of the city as a political capital of the Rocky Mountain region?
- the influence of the Depression and World War II? .

How did early Denver's adaptations to the auto system compare with other cities in Colorado, other western cities, other American cities, and the European experience?

Why did planners and designers not resist the automobile system?

What were the urban design benefits of the new auto forms? Whom did they help? Whom did they hinder?

Did the topography of Denver aid or hinder the development of the early auto city?

What stimulated the increasing local public interest in planning during

this period, and what effect did it have on physical form?

Was there any consciousness in this period of the role that auto congestion would have in limiting the streets of Denver for social, aesthetic and public uses?

And others...

EVALUATION STANDARDS

Physical Condition

The complexity of the physical resources dealt with in this theme makes it difficult to establish standards for their physical condition. Generally, the districts should be structurally sound, economically useful and legally preservable. These conditions should also be likely to hold in the future. Of course, they should also embody defensible standards of historical import.

Representation

Without a comparative dimension to this study it is difficult to make reliable statements regarding these resources' uniqueness or representativeness. Resources examined under these criteria also need more research in descriptive detail to establish the "facts" before we can employ standards of uniqueness and representativeness. However, the estimate of this writer is that Denver has a significant number of resources from this period in both categories, but with more being representative of the typical than of the radically unique.

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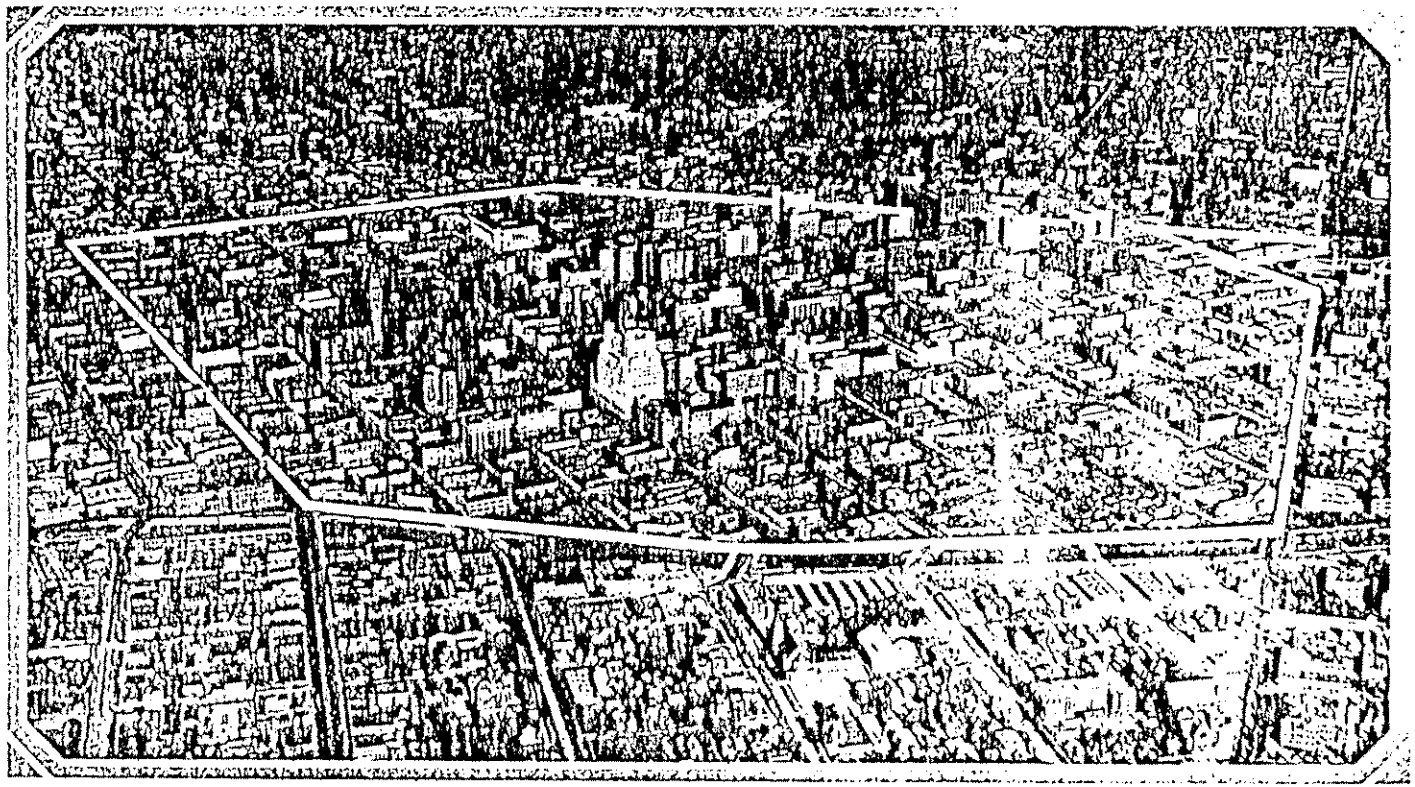


FIG. 1 PROPOSED AUTO-TRUCK CBD BYPASS, 1929, (THE DENVER PLAN [DP] VOL. 1)

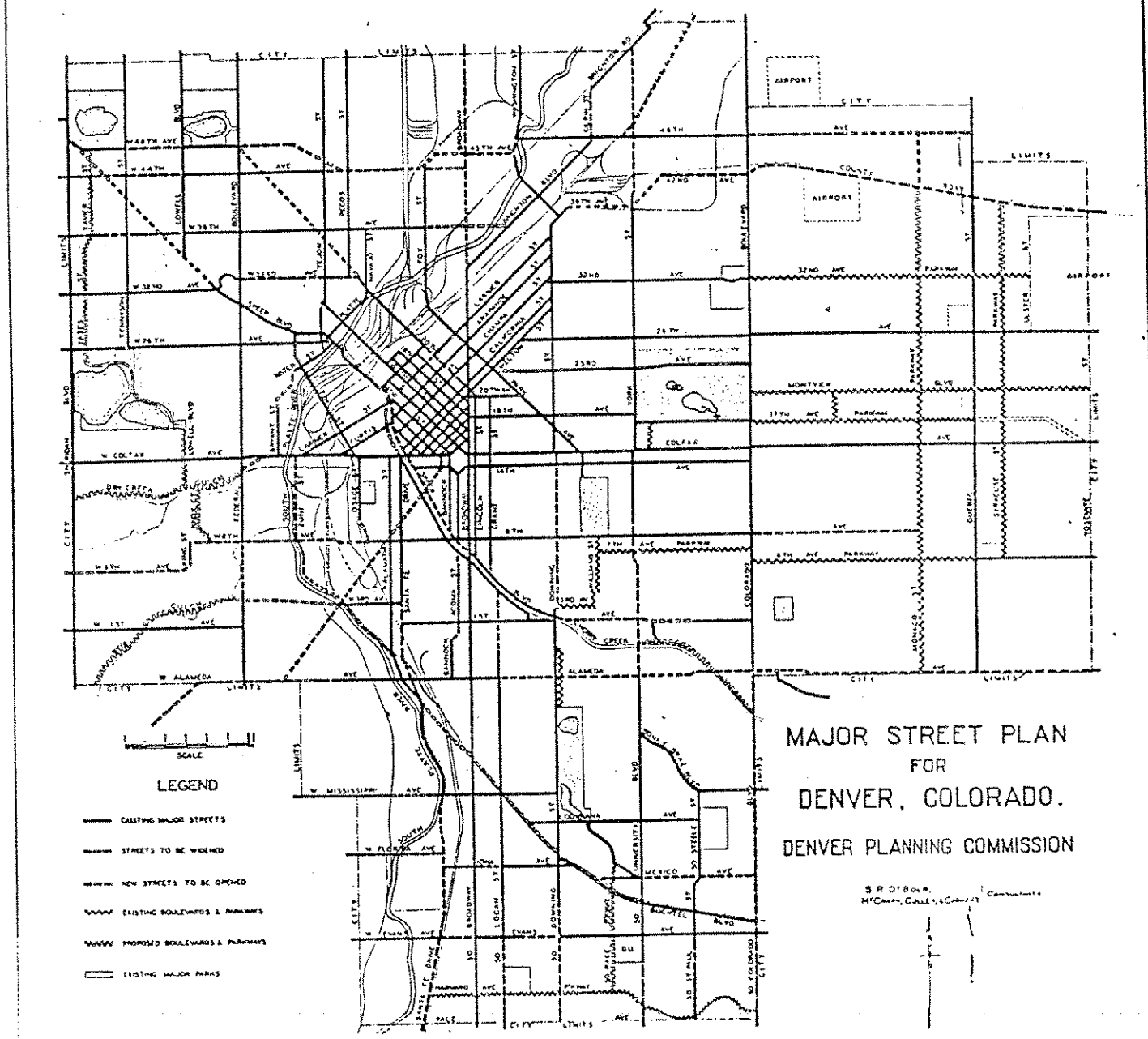


FIG. 2 MAJOR STREET PLAN, 1929. (DP, VOL. 2)

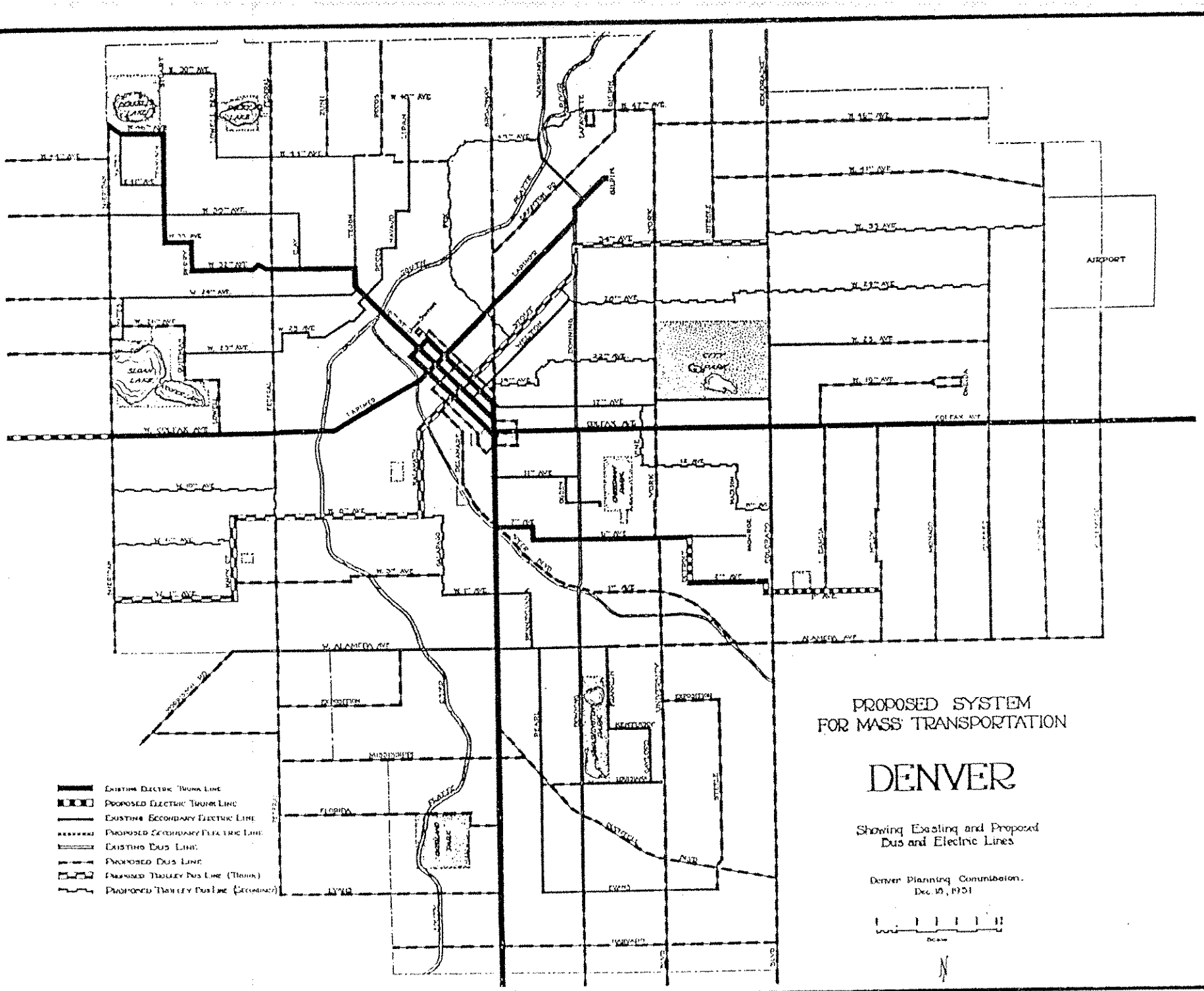


FIG. 3 PROPOSED SYSTEM FOR MASS TRANSIT, 1931, (DP VOL.3)

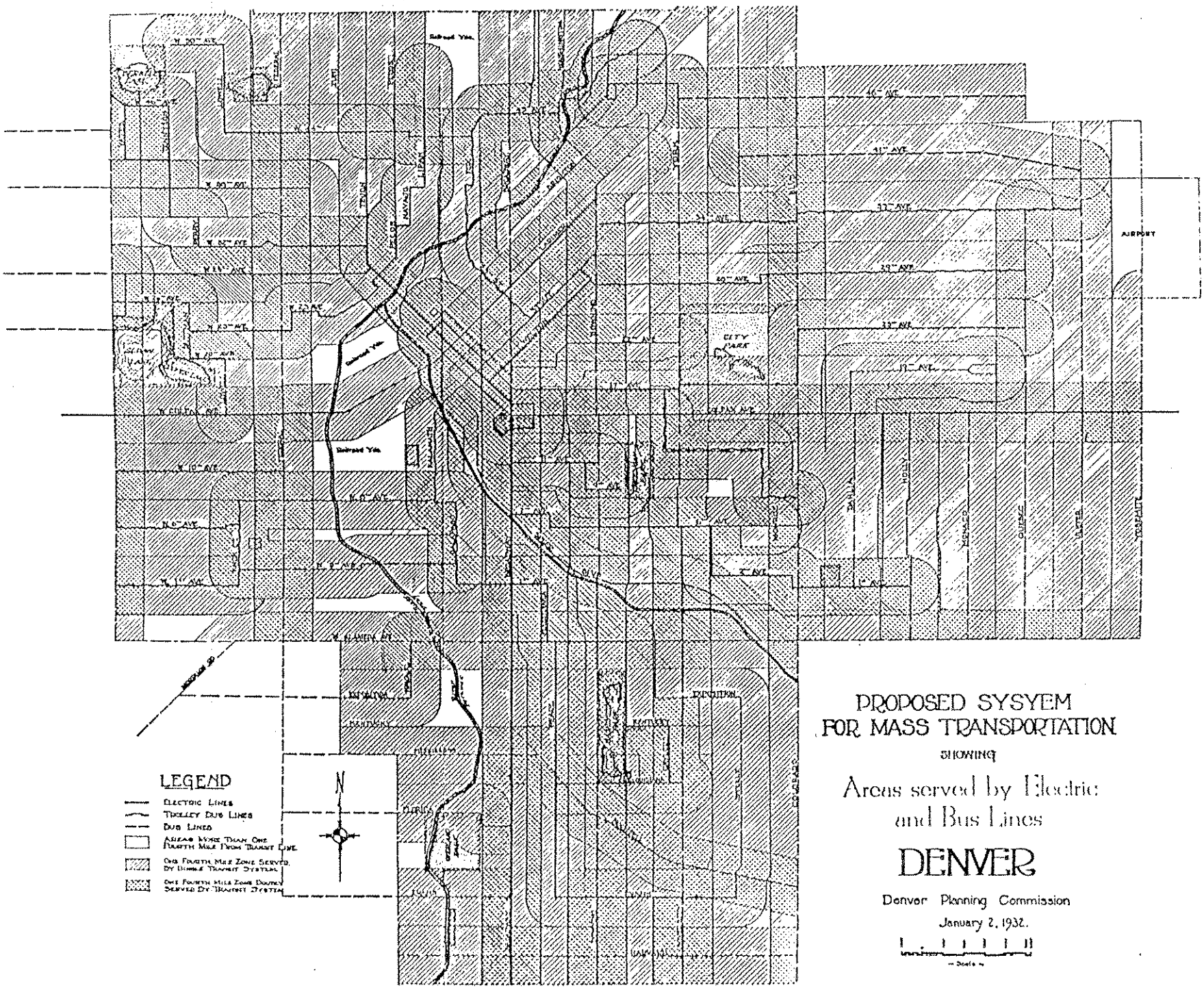


FIG. 4 PROPOSED SYSTEM FOR MASS TRANSIT WITH AREAS SERVED, 1932, (DP, VOL. 3)

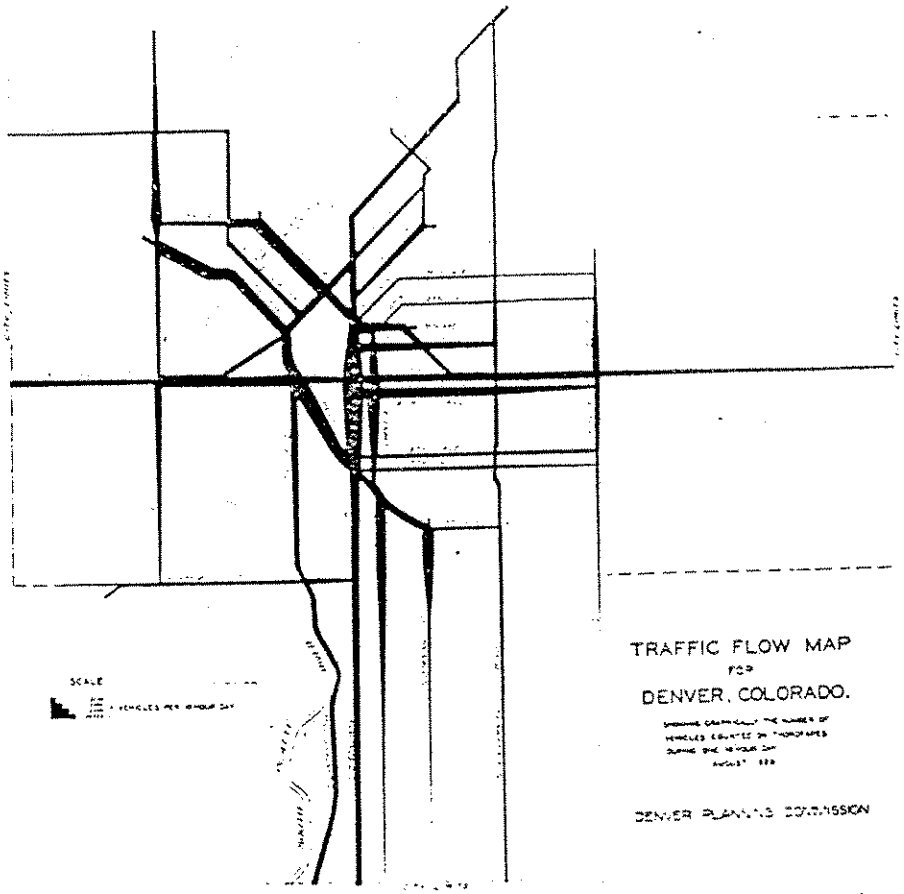


FIG. 5 AUTO/TRUCK TRAFFIC FLOW, 1929, (DP, VOL. 3)

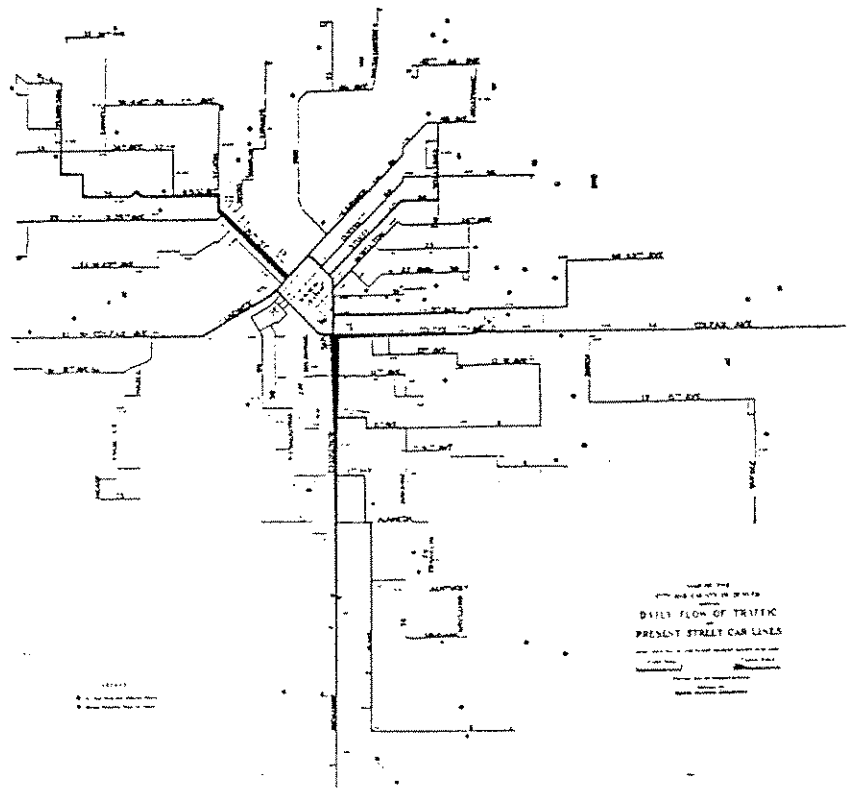


FIG. 6 VOLUME OF TRAVEL ON STREETCAR LINES, ca. 1932, (DP, VOL. 3)

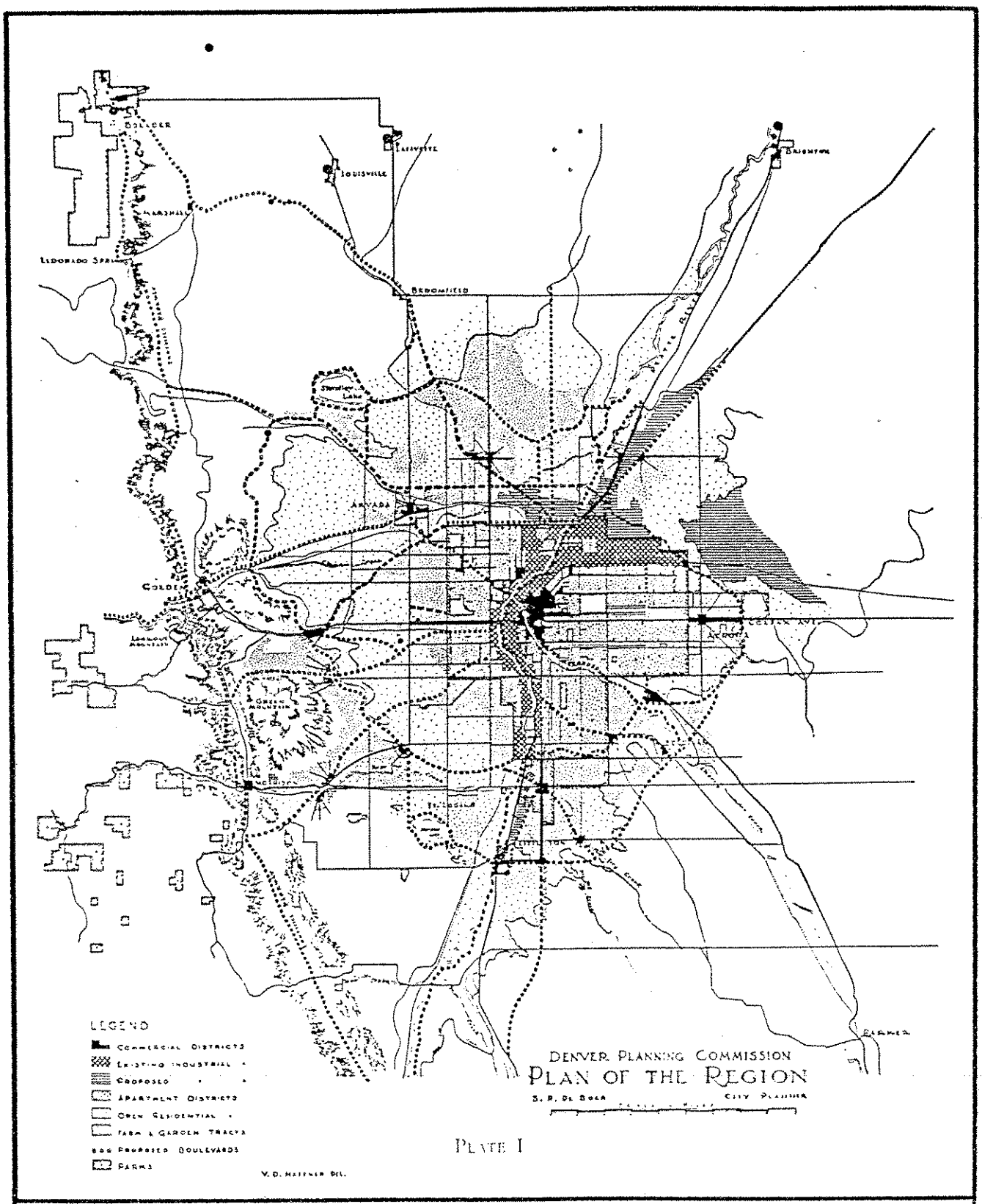


FIG. 7 PLAN OF THE REGION, ca. 1937, (DP, VOL. 4.)

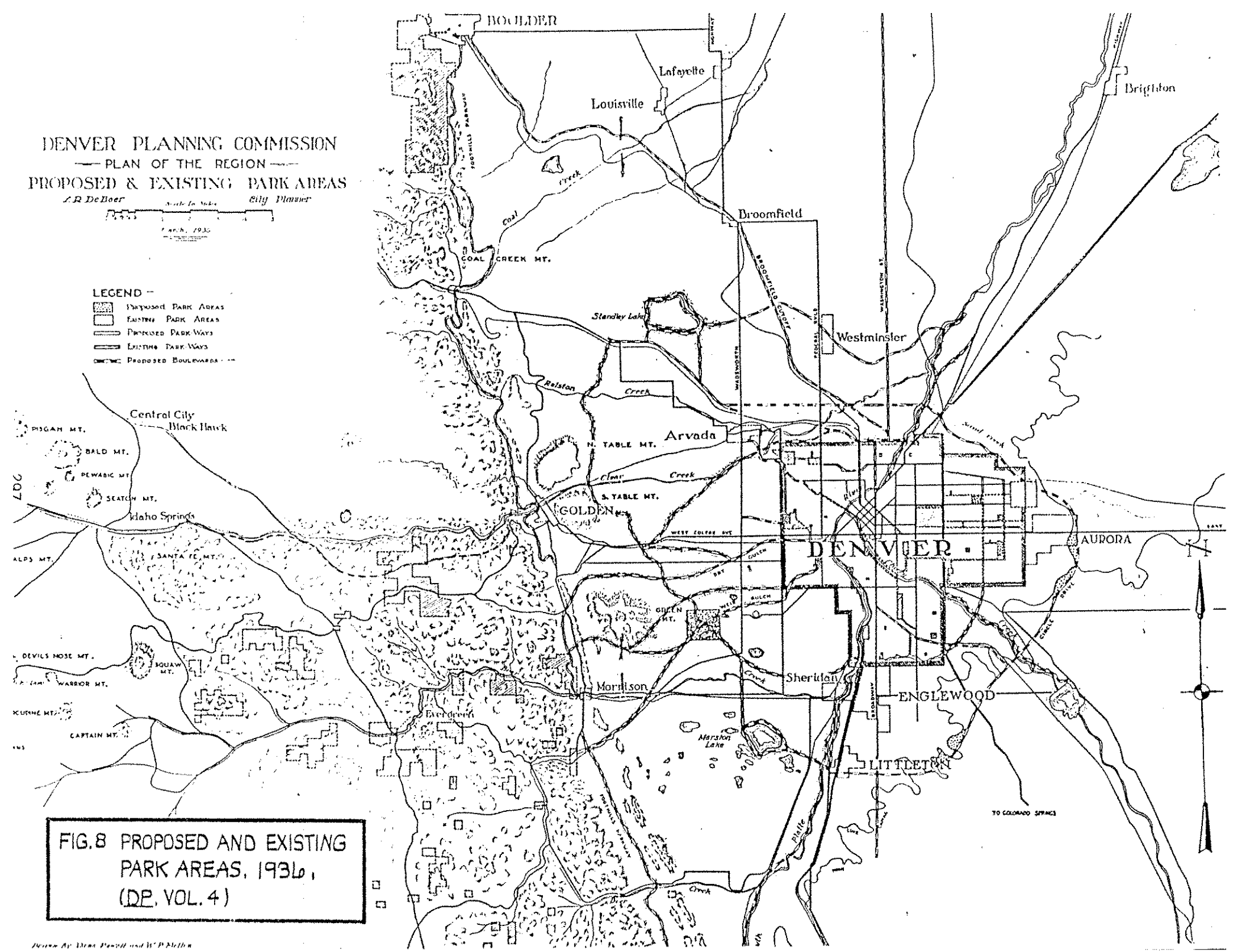


FIG. 8 PROPOSED AND EXISTING PARK AREAS, 1930, (DP, VOL. 4)

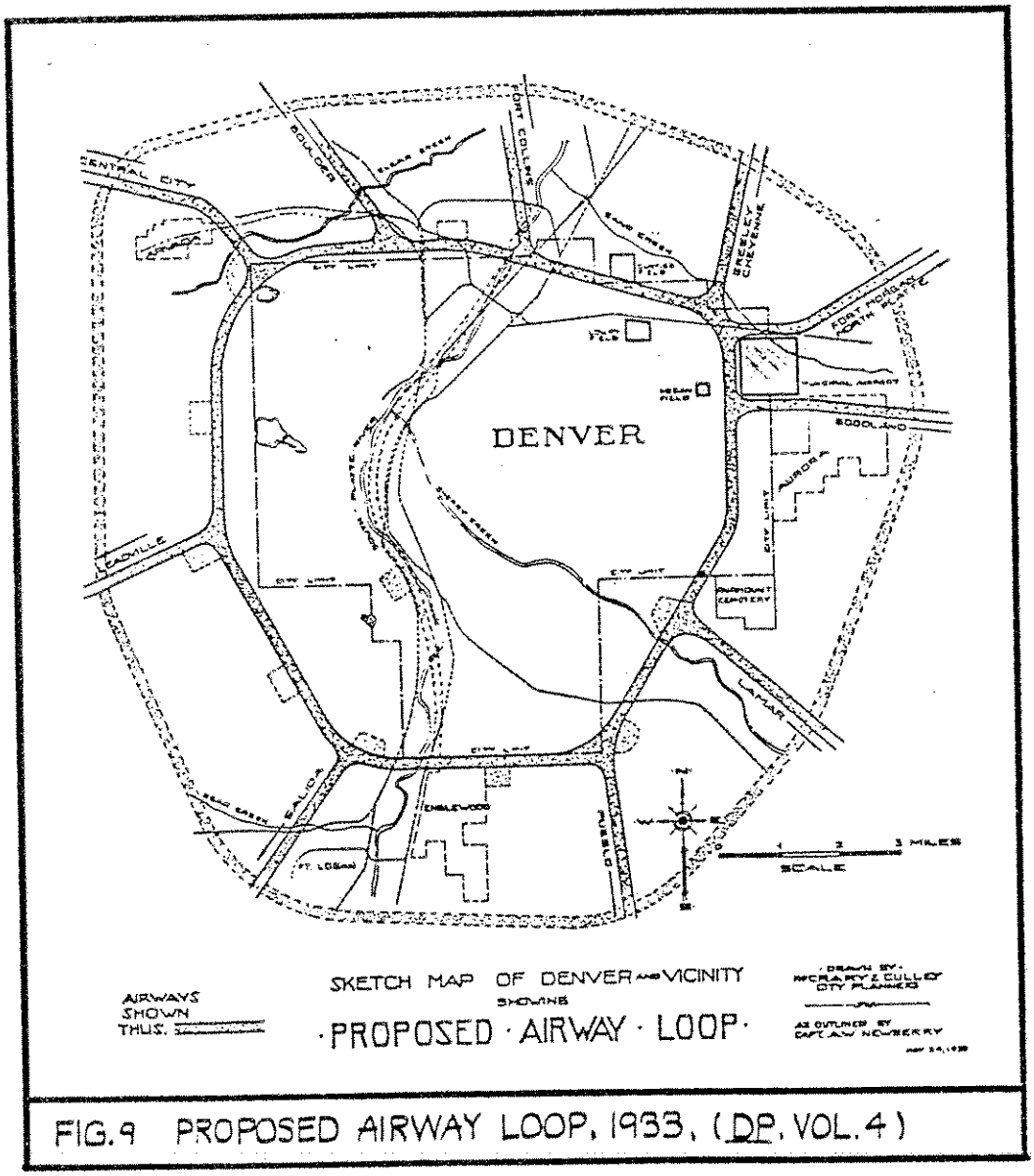


FIG. 9 PROPOSED AIRWAY LOOP, 1933, (DP, VOL. 4)

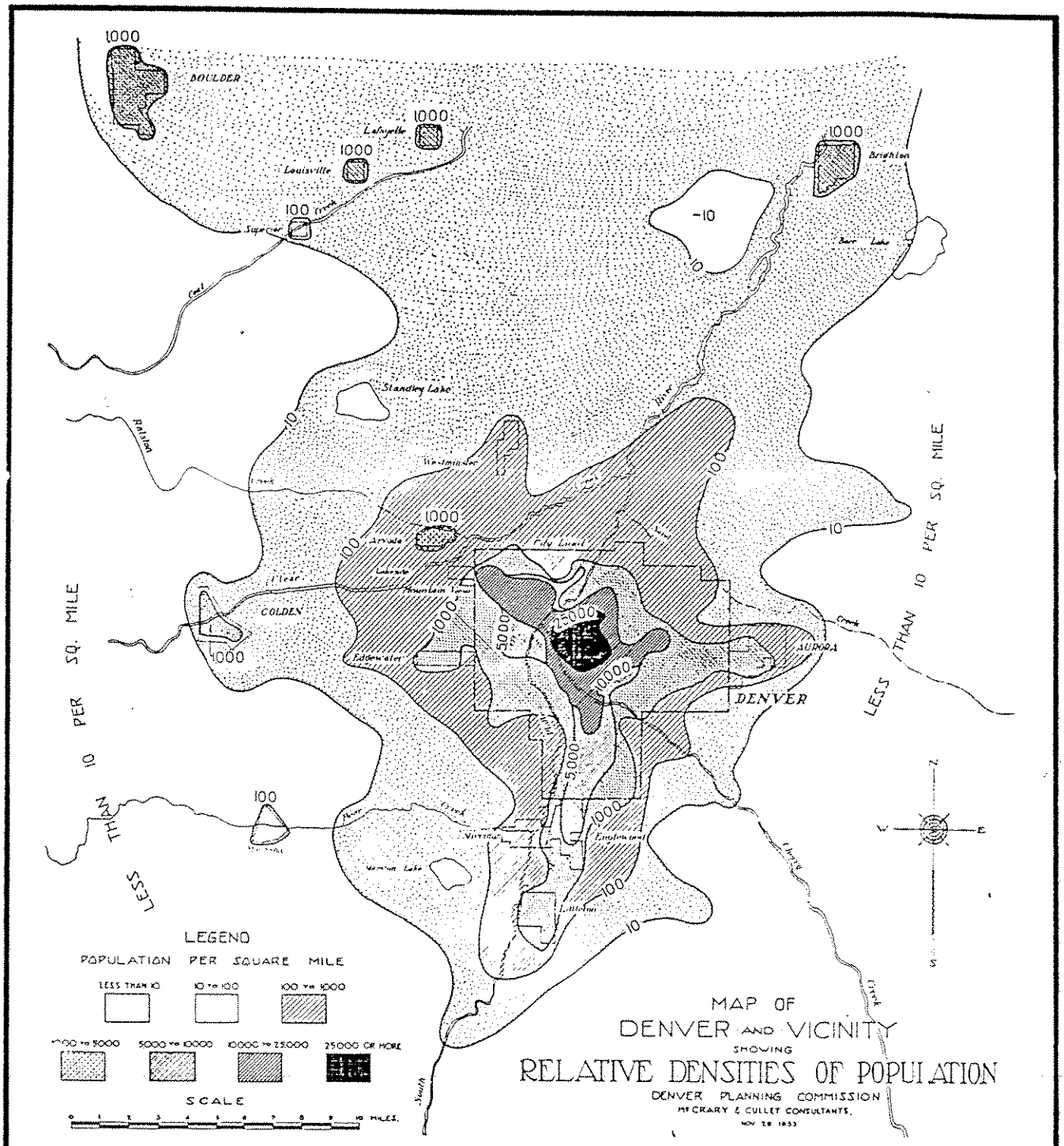


FIG. 10 RESIDENTIAL DENSITIES, 1933 (DP)

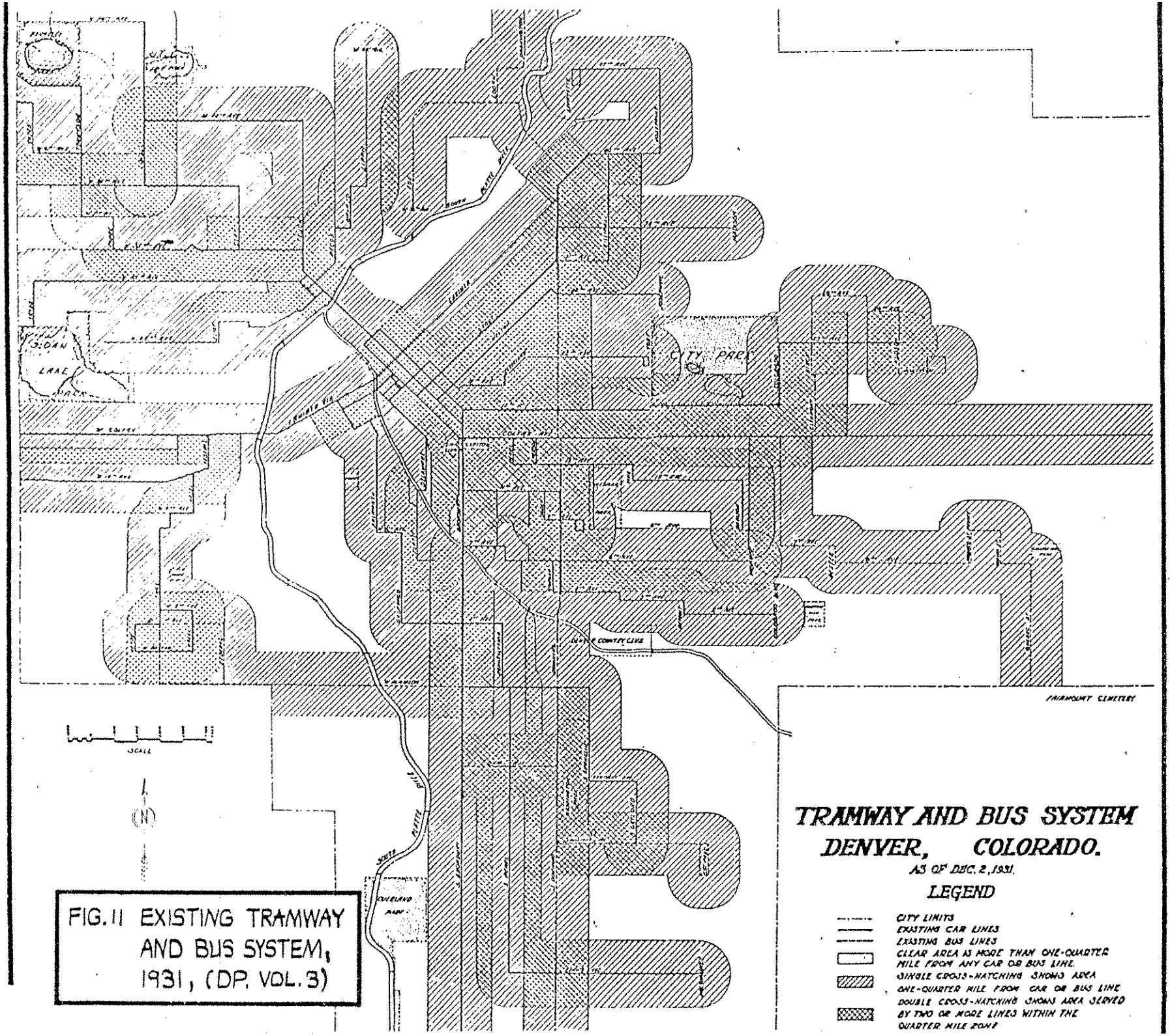
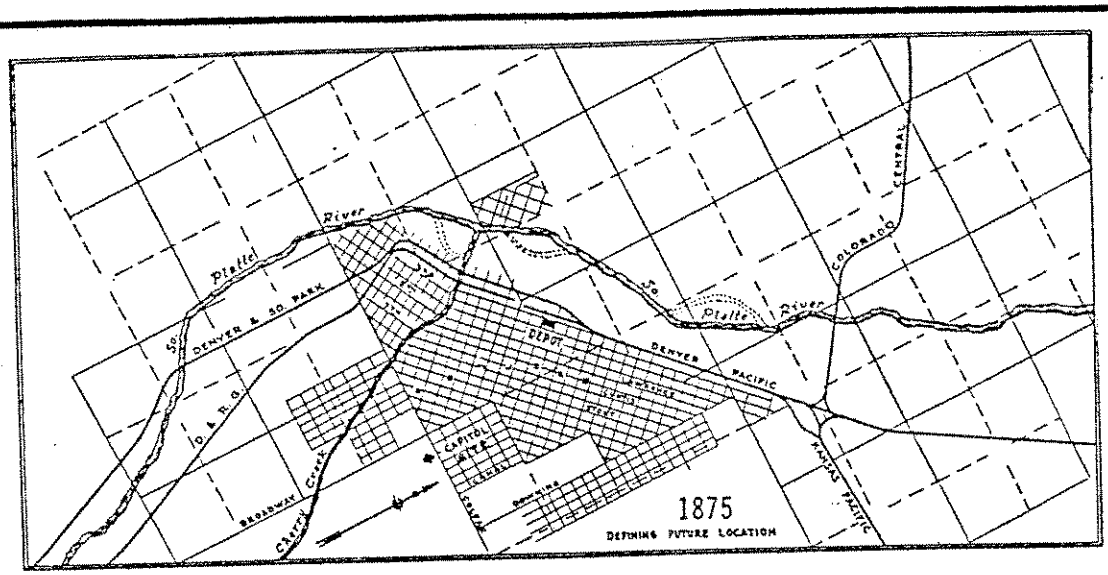
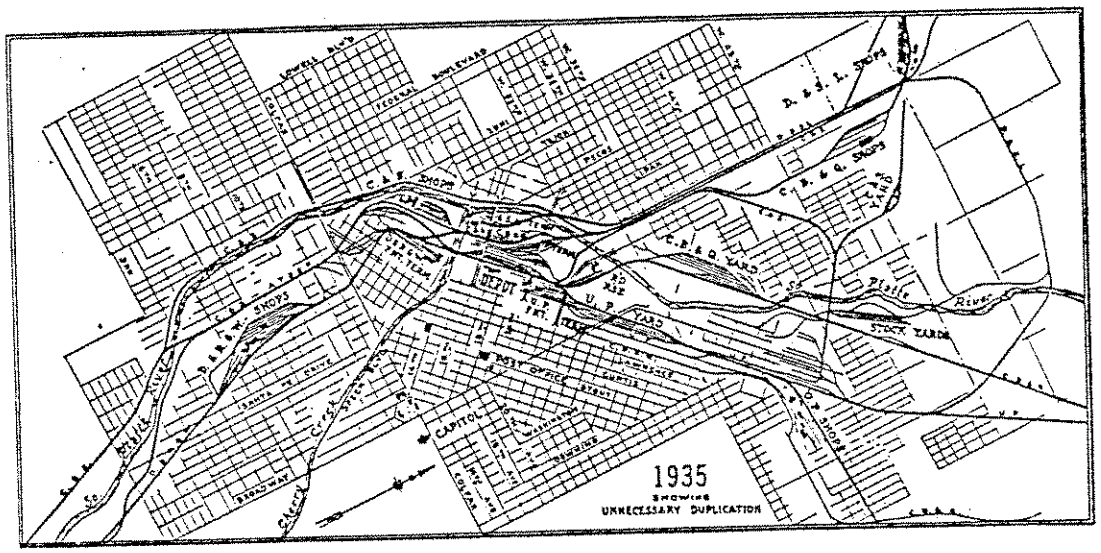


FIG. 11 EXISTING TRAMWAY AND BUS SYSTEM, 1931, (DP. VOL. 3)





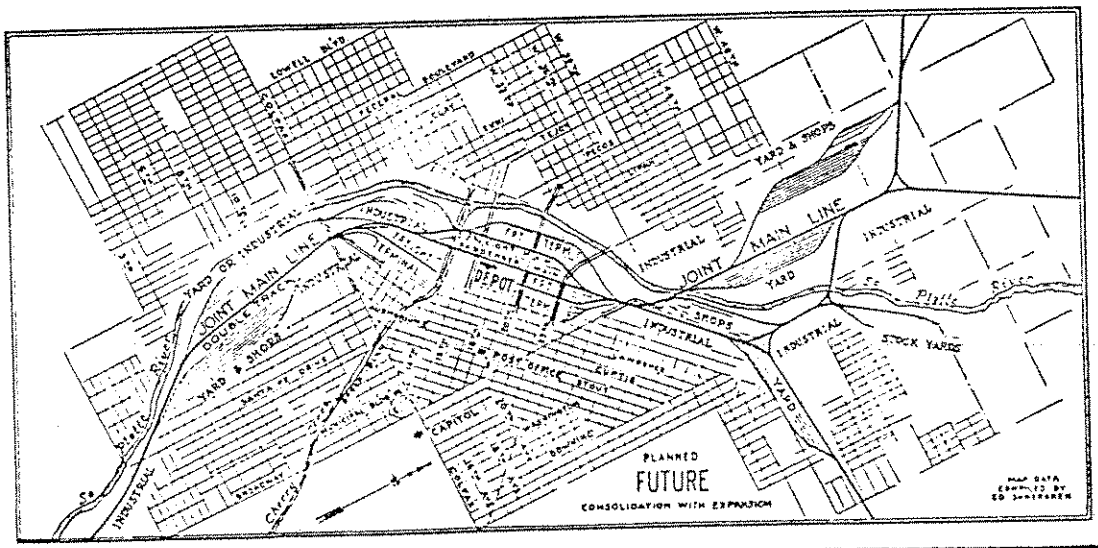


FIG. 12 DEVELOPMENT AND PROPOSED RAIL SPINE SYSTEM, 1935. (DP, VOL. 1b)

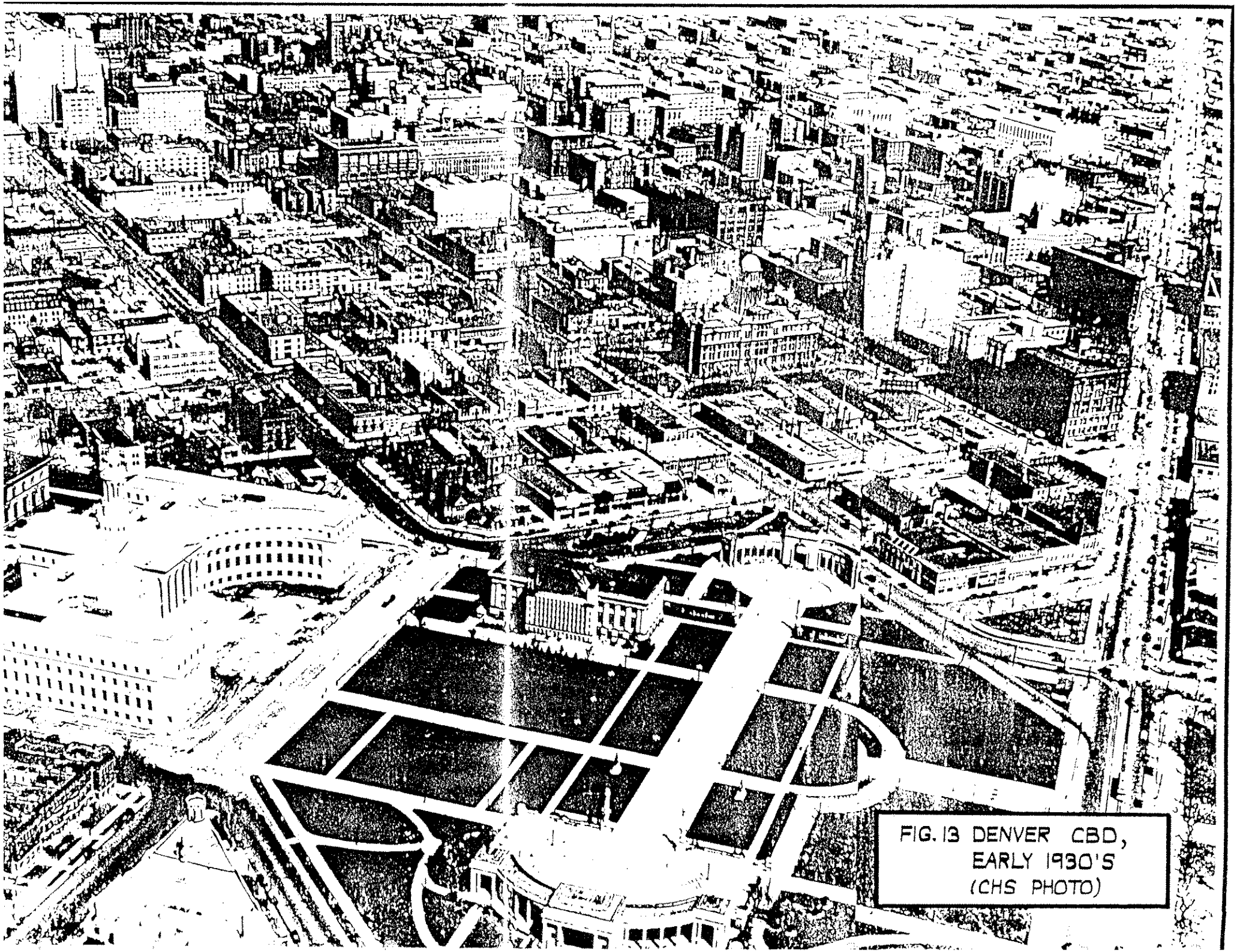


FIG. 13 DENVER CBD, EARLY 1930'S (CHS PHOTO)

11. THE COLORADO SPRINGS AREA: 1858 - 1945

NARRATIVE

The Colorado Springs region has some of the most varied and interesting urban planning history in the state. Before rapid post-war growth and auto suburbanization complicated the area, Colorado Springs, Colorado City and Manitou Springs represented three settlements, each organizing its affairs and urban form in different ways. This theme outlines briefly the historical development of these varied urban settlements, as the area passed through the following periods: stage/wagon (1858 - 1871), rail (1871 - 1920) and early auto (1920 - 1945). Of course, thematic sketches at this level of generality are meant to be suggestive only and introductory.

The geography of the Colorado Springs area is important to its urban form. It is located, like so many front range urban regions, at an entry point to the mountains, specifically the Ute Indian Trail along Fountain Creek. Like Boulder and Golden, and unlike Denver and Pueblo, the area is nestled close to the foothills.

Unlike any of the above towns, it is dominated by a single mountain, Pikes Peak, which is only 20 miles away. Figure 1 illustrates beautifully the geographical settings of the three towns. Manitou Springs is located within the canyoned foothills where flat land is virtually non-existent; Colorado City is placed on a narrow linear strip that is the first flat land out of the mountains; and Colorado Springs is situated at the first place where both north/south railroad could efficiently intersect the mountain traffic and where there was enough Pikes Peak viewing flat land that a tourist-oriented city might be constructed. In turn, the urban forms generated by the locations are: 1) Manitou's mountain curvilinear; 2) Colorado City's linear orthogonal grid; and 3) Colorado Springs' mountain-viewing baroque prairie grid.

Figure 2 portrays Colorado City in 1866. It dramatizes the humble extent of stage/wagon era town development in the Colorado Springs area before the railroad arrived in 1871. Since little mineral activity developed up the Ute Pass Trail, Colorado City did not prosper greatly in its early mining depot and service town role. The territorial legislature met there once, but quickly retired to Denver and Golden. These humble beginnings may have made the town

vulnerable to being the poor cousin of the more aristocratic and plutocratic Colorado Springs. In any event, its linear gridded form, hemmed in by bluffs and Fountain Creek, was clear from the beginning.

Colorado Springs was a creature of the rail transport systems, not of wagon roads. Colorado Springs was conceived all at once, as a high amenity, sophistocated, cosmopolitan home for railroad tycoon General William Jackson Palmer. The original plat was laid out circa 1871 by the D & RG's chief railway engineer Colonel Greenwood, likely under Palmer's guidance. It was seventy-five miles south of the D & RG's functional yards and services in Denver. The economy of the town was to be "clean," primarily education, tourism and health-related services for the upper classes of the U.S. and England.

Figure 3 illustrates the original plat. It was situated on a narrow north/south peninsula between Monument Creek and Shook's Run. The D & RG railroad followed Monument Creek, with its depot located just below the town's business core and the monumental Pikes Peak Avenue. The grid was aligned NS/EW. Its streets are quite wide, with E-W avenues at 120' and NS streets at 100'. Each E-W avenue had a powerful view of the mountains. But in addition, an exciting dash of the baroque was present. This was perhaps appropriate for the "railroad royalty" in charge of the design. Two diagonal avenues focus on two parks. If these diagonal avenues were to be extended, they would cross at the end of Pikes Peak Avenue in front of the railroad station. The intersection was also behind the later Antlers Hotel, which closed the avenue in baroque fashion but did not block the view of the peak. This is probably Colorado's earliest conscious use of baroque town design. The original plat also defined its commercial areas with smaller lots; it set aside many street corner lots throughout town for churches, and it laid out a four-block reservation for a college.

Figure 1 illustrates the three-dimensional aspects of 1874 Colorado Springs. By then, it had about 2500 people. Already, it was irrigated for lawns and trees; it had a county courthouse, a major hotel, and elementary school, four churches, and an active commercial district centering on the corner of Pikes Peak and Tejon. The county courthouse was oddly located away from town squares or major avenues--counter to baroque principles. The hotel, commercial area and depot were given major central prominence, perhaps empha-

sizing the railroad tourist orientation of the town economy. Almost all structures were organized on open plans and were one or two stories high. The most common building material was wood, taken from the nearby Black Forest. Very little industry attached itself to the railroad corridor by 1874. Finally, the ridge location of the town gave most homes, public buildings and businesses commanding views of the mountains.

Figure 1 also illustrates the early growth of Colorado City and Manitou Springs. The former has filled out to at least a one-block deep linear town. It has begun a flour milling industry near the creek. Manitou has a large hotel near its springs, and its secondary roads have begun to follow the tortuously winding gulches in search of buildable housing sites, on very steep slopes. Baroque, linear and curvilinear planning have already established themselves in the three settlements.

The 1882 plans and views of Colorado Springs (Figures 5 & 6) depict a few further developments. The Monument Creek slopes and flood plains were surveyed in curvilinear fashion, in contrast to the rest of the town grid. This is almost unique in the Colorado period, not only because of the curves, but also because it captured the creek area for residential and recreational uses. This is in contrast to Denver's solution of turning the central water course over to industry. Colorado Springs' solution also protected the wealthy residences on the north side of town from industrial encroachment. The southern section of town had no such provisions. Also, the College Reservation expanded, with a baroque crescent siting design for its first building. Additionally, two major avenues were given axial focus. Pikes Peak was closed with the Antlers Hotel, and Kiowa was given focus high to the east with an asylum for the deaf and blind. Finally, the D & RG railroad laid a span up Fountain Creek, parallel to the Colorado City strip and linked to Manitou Springs.

Figures 7 and 8 depict the Colorado Springs area circa 1890, before the Cripple Creek boom of 1891 to about 1905. The three towns had grown steadily but hardly explosively. The population in Colorado Springs in 1890 was 11,200. The rail systems did expand, however. The original plat of Colorado Springs was now surrounded by four rail lines, the Colorado and Southern and the Rock Island being added to the D & RG and the AT & SF. To the west, the cog railway was built to Pikes Peak and Hagerman's Colorado Midland RR located its eastern terminal facilities in Colorado City. That settlement now expanded

as a rail town. The horse car lines followed the old linear main street of Colorado City and reinforced its stringbean shape. The Colorado Springs horse car pattern was a simple NS/EW cross, at Pikes Peak and Tejon. The two towns' horse car lines were linked via the Colorado Avenue bridge. They became electric in 1890. Figure 9 suggests residential and business locations in 1890. (Manitou information was not available.)

The second major pre-Cripple Creek change was the platting of "Broadmoor City," by Count James Pourtales. Its center was a monumental, somewhat rococo casino. Behind were the mountains and Cheyenne Lake, and in front an intersecting set of broad avenues focusing inward and upward to the casino. This complex is probably Colorado's most powerful example of baroque planning.

The 1891 - 1910 Cripple Creek era affected the Colorado Springs region's built environment in many ways. Population increased to the mid-20,000's in Colorado Springs alone. Hotels and more winding streets scaled Manitou slopes, and Colorado City became a booming rail and smelter town expanding in a hodge-podge of additions that crossed Fountain Creek to the southwest and scaled the bluffs to the northeast. Single linearity was gone, except on the original plat. Colorado Springs was given parks, one of the nation's best trolley systems, and a remarkable complex for the aged by a poor man turned millionaire, Winfield Scott Stratton. The CBD prospered as an office and financial center for the gold boom, and a new breed of middle class entrepreneurs challenged the older plutocrats on the town's north end. Philanthropy from the wealthy continued, however, with donations of a zoo, mountain parks, and the north end's Monument Valley Park. Throughout this period, hotel, education and health facilities were built, rebuilt and expanded as a continuing center of the region's economy. Robinson's City Beautiful Plan (Fig. 11) was perhaps the symbol of the end of this era. The plan was only partially implemented.

The early auto era began as the Cripple Creek boom wound down (Fig. 10). Population growth leveled off, the region took a rest, and the economy reverted to its "clean" traditions. The wealthy invested in an expanded Broadmoor, rather than rails and smelters. Slowly, buses replaced streetcars, and highways supplemented cog railways to the mountain scenic and recreation areas. Manitou's tortuous slopes were, happily, more easily negotiated by cars than buggy or rail, so it continued to hold its own. Colorado City stabilized and was annexed to Colorado Springs in 1917. Its strong linear main street con-

tinued to hold on; its rail yards and smelters did not.

Colorado Springs continued its front range transport and commercial crossroads function, as well as its health, education, and recreation traditions. The only major economic change came with the WW II influx of military functions. The wide streets of the CBD simply adapted to the cars (Figure I3) and the wide avenues in the residential areas absorbed the moderate highway traffic. The early auto era was a relaxed one for the Pikes Peak region, though after the war such ease would end with the new booms.

Overall, this region is rich in surviving historic planning scale artifacts and potential for those artifacts to continue enriching the area's environmental future. Three different geographic areas generated three different town economies, which generated three different 19th century urban design layouts, which adapted to three different forms of transportation systems! The synergism of these produced a richness of historic urban fabric which is rare in Colorado. The area deserves high priority in conservation study and planning.

CHRONOLOGY

1870 - 1879

1871	D & RG arrives; irrigation canals built; road up Ute Pass constructed; town site laid out.
1872	Colorado Springs incorporated; Colorado Springs hotel opens; other hotels built in Colorado Springs.
1873	5,000 cottonwoods planted.
1874	Colorado College founded.

1880 - 1889

Early 1880's	Lull in Colorado mining activity.
1881	Population 4,500; Colorado Springs Opera House built.
1883	Antlers Hotel opens.
1887 - 1890	More new resorts built along Midland Line up Ute Pass; first horse-drawn street railway; Colorado Midland begins Colorado Springs to Buena Vista service; Santa Fe builds its own tracks into Colorado Springs.
1889	Count Pourtales--first Broadmoor streets laid out.

Late 1880's	Out West Building, Hagerman Building, 1st National Bank Building, more new hotels in Colorado Springs.

1890 - 1899

Early 1890's	Population 11,200; Cripple Creek gold discoveries; Cripple Creek wealth flows into Colorado Springs; Pikes Peak Cog Railway built; electric streetcars replace horse-drawn; Rock Island RR arrives; high reservoirs constructed; shaping of a mountain water system; Pourtales plans 2,400-acre development--Broadmoor City Casino; opens in 1891; 1893 goes into receivership; Cheyenne Mountain Country Club built.
1893	Mining panic.
1895	Mining offices expand in CBD.
1896	Colorado - Philadeophic mill opens in Colorado City.
1898	Fire destroys Antlers Hotel.
1899	First auto in town.
Late 1890's	North End millionaires increase.

1900 - 1909

1900	Stratton buys Colorado Springs Transit Co.; improves and expands system (total miles 41).
1901	"Short Line" to Cripple Creek; new Antlers Hotel opens; Stratton Park created.
1902	Mining Exchange Building.
1903 - 1904	Glen Eyrie greatly expanded.
1905 - 1914	Cragmor Sanitorium built; Cripple Creek boom on the wane.
1905	Zoo Park opens (closes 1916).
1907	"Claremont" (Trianon) finished.

1910 - 1919

1910	811 autos registered with the city.
1911	Beginning of decline of trolley system.
1912	Robinson "City Beautiful" Plan.
1913	Cripple Creek decline continues; mining companies folding, only 1 mill left in Colorado City; population 30,000; Broadmoor area still has few homes.
1914	Myron Stratton home opens.

1915 Pikes Peak Highway constructed.

1917 Annexation of Colorado City.

1918 Broadmoor Hotel opens.

1920 - 1929

1918 - 1928 Expansion of Broadmoor; lots finally begin to sell.

1925 Most of Stratton Park sold for development as a residential area; Cheyenne Mountain Highway constructed.

1930 - 1939

1931 Streetcars replaced by buses.

1936 Fine Arts Center completed.

1937 Will Rogers Shrine of the Sun built.

1940 - 1945

1941 Population 35,000; Ft. Carson awarded to Colorado Springs.

1942 Ft. Carson built.

LOCATION

Locational issues are best dealt with in the narrative and illustrations. The following is a list of illustrations:

Fig. 1 -- Bird's Eye View of Colorado Springs Area, 1974 (CAW, p. 588).

Fig. 2 -- View of Colorado City, 1866 (CAW, p. 478).

Fig. 3 -- Plan of Colorado Springs, 1874 (CAW, p. 587).

Fig. 4 -- Approximate Land Use Organization, From the 1874 Bird's Eye View.

Fig. 5 -- Plan of Colorado Springs, 1882 (CAW, p. 589).

Fig. 6 -- Bird's Eye View of Colorado Springs Area, 1882 (CAW, p. 590).

Fig. 7 -- View of Colorado Springs, ca. 1890 (CAW, p. 683).

Fig. 8 -- Rail, Streetcar, and Industrial Land Use Schematics, ca. 1890.

Fig. 9 -- Business and Residential Land Use Schematics, ca. 1890.

Fig. 10 -- 1911 Colorado Springs Area Map.

Fig. 11 -- Robinson's City Beautiful Scheme.

Fig. 12 -- Rail Transport/Land Use Schematic.

Fig. 13 -- Colorado Springs CBD, ca. 1930.

CULTURAL RESOURCES

The cultural resources of the Colorado Springs area have been discussed in the narrative and reference should be made to that section. Also, our very general perspective here allows only suggestive insight, not definitive statements.

Colorado Springs proper is unique in a number of regards: its broad streets and avenues, the baroque diagonals in town and at the Broadmoor, its early protection of the RR flood plain from industrial encroachment, its use of major buildings to create end-of-street vistas, its posh residential areas and so on. Its 19th century form is also unique in its being a rather clearly implemented representation of the dream of a single man, a Yankee WASP businessman aristocrat. It might fit in as a small scale version of the "royalty new town" tradition in western history. These towns and cities have occurred when royalty, oligarchs or aristocrats were able to amass sufficient resources to plan and build a whole town or city according to their ideal, rather than being forced constantly to compromise according to the needs of the moment. These are very rare in the west and are worth considerable study and conservation. This is particularly so when so much of the original city still remains.

Colorado City has typical as well as unique characteristics. It was a typical stage/wagon depot town, diagonal stringbean grid, parallel to a stream above the flood plain. The street car reinforced its typical main street linearity. The railroads came in along the stream with track and industry, and cut the town off from the amenity of the waterway. New residential additions typically ignored the original diagonal grid for a NS/EW orientation congruent with the rural survey. The uniqueness of the town's planning resides primarily in its smelting boom planning and its functions as a major railroad's terminus. It is also interesting as a study of how a rail/smelting town adjusts to the auto revolution.

Manitou's uniqueness lies in its powerful geomorphic curvilinearity. There are a number of curvilinear town layouts in Colorado, but they have not survived well. Manitou Springs, on the other hand, has a healthy economy and should be preserved as a critical state resource. Its residential areas are on grades and at angles that are almost unique urban design phenomena in the state. The 19th century fixation on the neutral grid was broken in Manitou, and the aesthetic option it offered to planners was crucial. The option was regularly ignored in the 19th and early 20th centuries. More descriptive

analytical and evaluative research needs to be done on Manitou. Note particularly the urban design impacts of curving streets, retaining walls and radical changes in elevation.

QUANTITY AND QUALITY OF EXISTING HISTORICAL INFORMATION

Historical Documentation

A systematic study of the Colorado Springs area planning and urban design history has not been done. On the other hand, the area has attracted national attention in John Reps's work and has been studied by Ormes and Sprague as general historians. Note these and others in "Pertinent References" below. Examples of maps available are listed in "Pertinent References," as well. The standard historical documents used in planning research are also listed below.

Written documents.
- General state and local histories.
- Municipal records.
- Real estate records.
- Land company records.
- Private papers of planners, architects, landscape architects, and developers.
- Newspapers, magazines and journals.
- County, town and city plans.
- Records of major industries, banks and chambers of commerce.
- Railroad, streetcar, toll road, stagecoach, and utility company records.

Graphic records.
- Map collections.
- Bird's eye view collections.
- Real estate atlases.
- Insurance maps.
- Assessors' maps.
- Aerial photos.
- Satellite photos.
- Postcard and architectural photo collections.
- County, town and city plan maps.
- Railroad, streetcar, toll road, stage coach and utility company maps.
- State high department maps.
- Commercial highway maps.
- USGS maps.
- County, state and national atlases.
- Federal land surveys.

Oral histories.

Number and Condition.

Outside certain areas of the Colorado Springs CBD and the Colorado City rail and smelter areas, most of the potential historic districts in the three centers of growth in the region are in reasonable repair and use. There are probably 8 - 16 historic districts justifiable in these three towns: 3 CBD's, 2 railroad districts, 8 residential neighborhoods, the Broadmoor, and a college campus. More research is, of course, necessary in order to be sure.

Surveys.

No surveys have focused on the region's planning and urban design. The area does, however, have one of the state's most active architectural research programs, and urban design and planning issues often surface in these in passing. Note particularly The Shooks Run Inventory of Historic Sites, by Jill Cummings. Also in progress is a study of Colorado City. The Colorado Springs City Planning Department should be consulted on developing research in this area. This theme makes no pretense at completeness in this regard.

Data Gaps.

Planning and urban design descriptive, analytical, and evaluative studies of all potential historical areas.

Future Needs.

The area needs overview in order to establish historic district priorities. This should be done by a trained planning analyst who is capable of putting this region's planning in state, regional and national perspective. From that base a reasonable set of priorities can be established. Even based upon this sketch, however, it seems clear that the region's potential has not been tapped.

Important Resources.

These have been mentioned in the narrative and cultural resource sections. Particularly, the region's baroque grid, its radial baroque, its

linear grid and its geomorphic curvilinear districts are important. Other districts are likely to be found with study. The rail and smelter districts and the CBD seem most disrupted by demolition.

RESEARCH QUESTIONS

Who designed Colorado Springs' baroque grid, and why was it somewhat timid? Why was it not used as the major theme for future development or copied by other Colorado towns?

What did the complex of railroads and their uses do to change and disrupt Palmer's ideal plan and the baroque scheme?

How is Colorado City unique among Colorado towns by linking a linear grid to a linear rail system across a creek?

Why did Manitou not get gridded? Why did other 19th century Colorado towns not follow its lead?

What are the particular characteristics of the Broadmoor baroque layout, and why did it not impact Colorado planning further?

How did these three or four town planning types influence each other? How did these various planning layouts intersect when the towns came together? What effect have they had on present planning?

EVALUATION STANDARDS

Physical Condition.

The plats, major vegetation, central architectural structures and basic urban design scale should be intact, or reconstructable. Further study is needed to be sure. Condition is better in most potential Colorado Springs historic districts than in the majority of Colorado major cities.

Representation.

As mentioned previously, the Colorado Springs area's planning strength is its variety and uniqueness in 19th century Colorado planning. More study is needed to determine exactly which areas should be preserved. None, however, should be demolished until a study has been completed.

PERTINENT REFERENCES

This thematic overview has found the attached documents useful.

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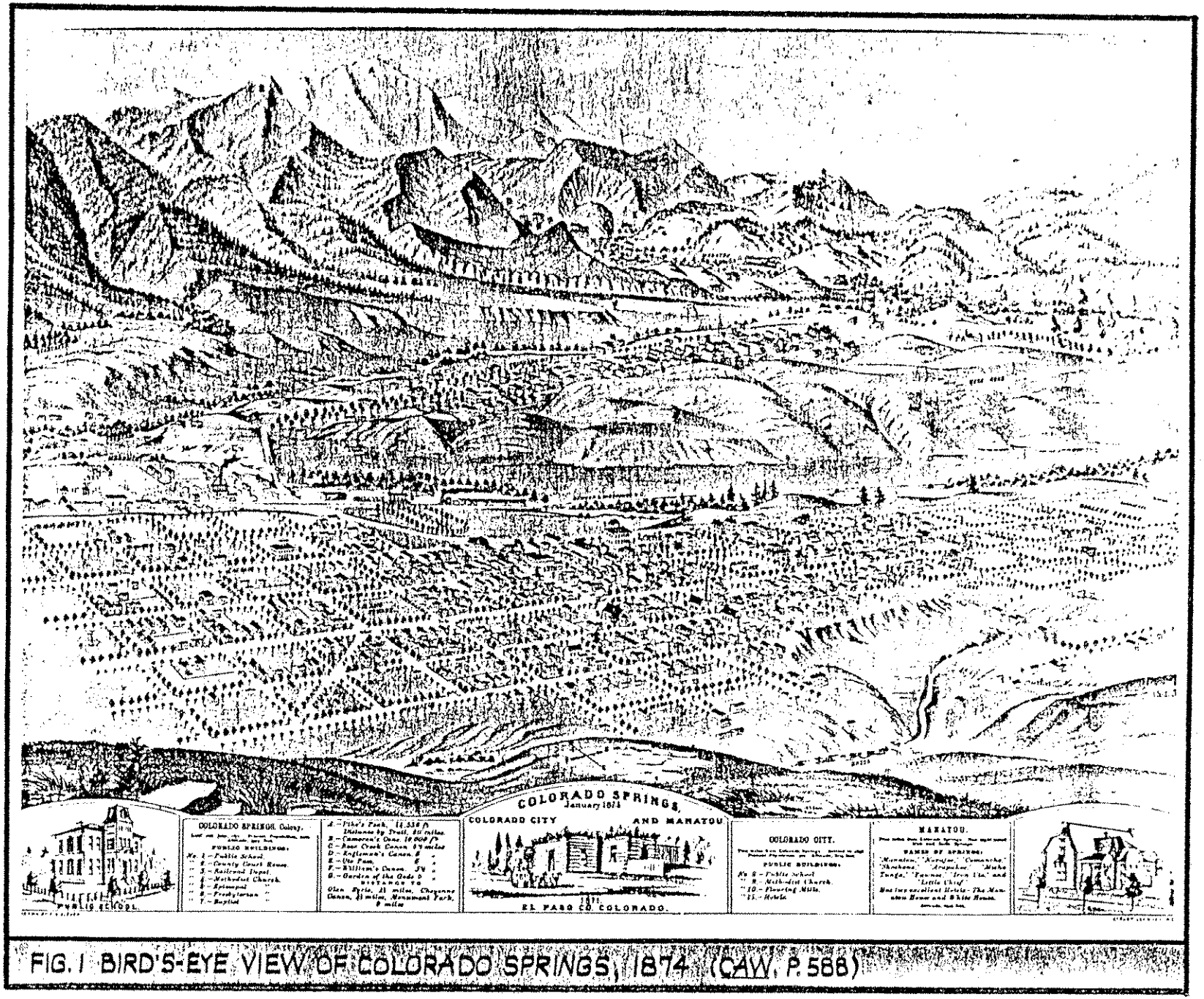


FIG. 1 BIRD'S-EYE VIEW OF COLORADO SPRINGS, 1874 (CAW, P. 588)

PIKE'S PEAK AND COLORADO CITY.

FIG. 2 VIEW OF COLORADO CITY, 1860 (CAW. P. 478)

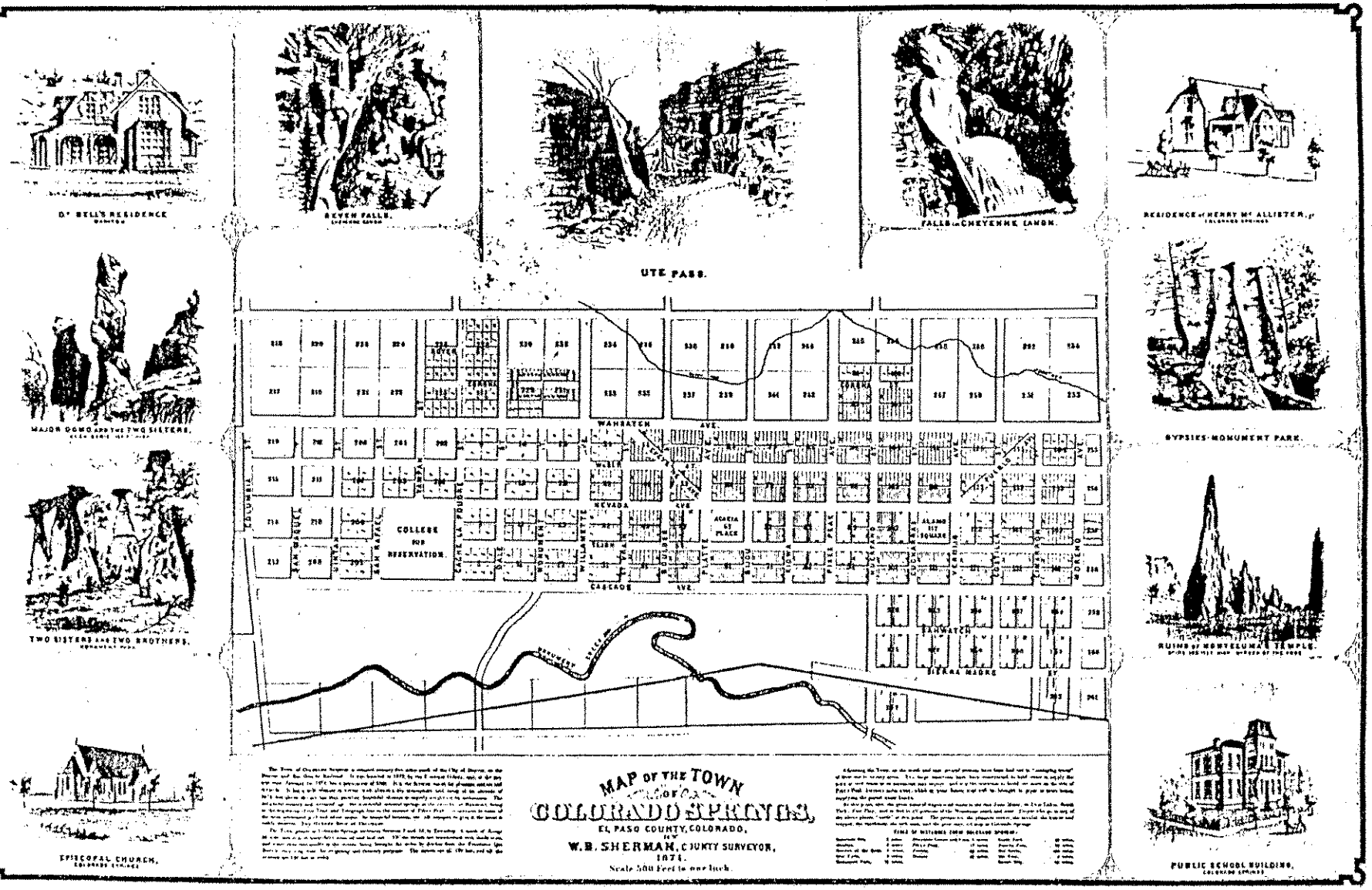
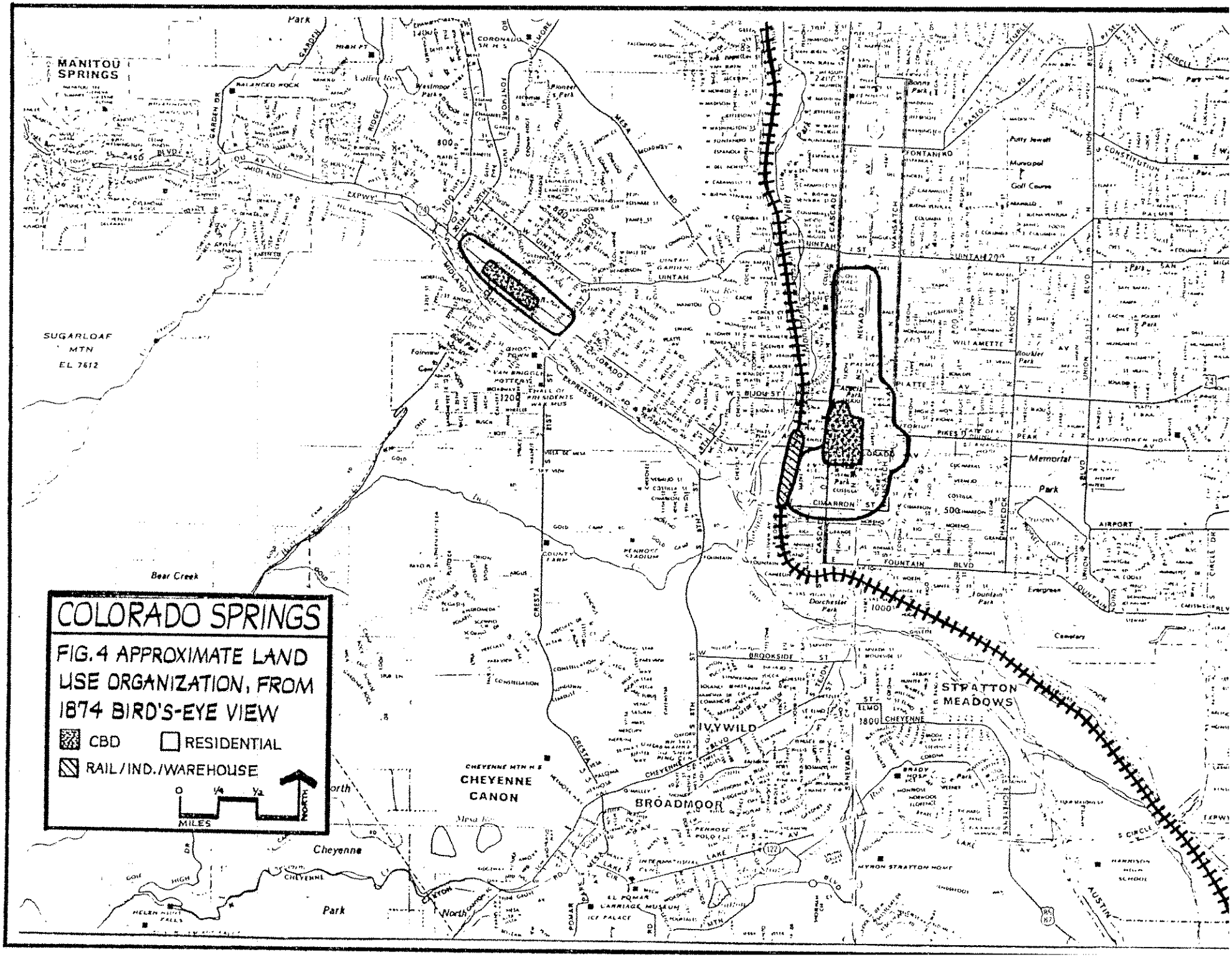


FIG. 3 PLAN OF COLORADO SPRINGS, 1874 (CAW. P.587)


MANITOU SPRINGS
SUGARLOAF MTN EL 7612
Bear Creek
Cheyenne
Park
CHEYENNE CANON
BROADMOOR
IVYWILD
STRATTON MEADOWS
COLORADO SPRINGS
FIG. 4 APPROXIMATE LAND USE ORGANIZATION, FROM 1874 BIRD'S-EYE VIEW
CBD
RESIDENTIAL
RAIL/IND./WAREHOUSE
0 1/4 1/2
MILES
NORTH

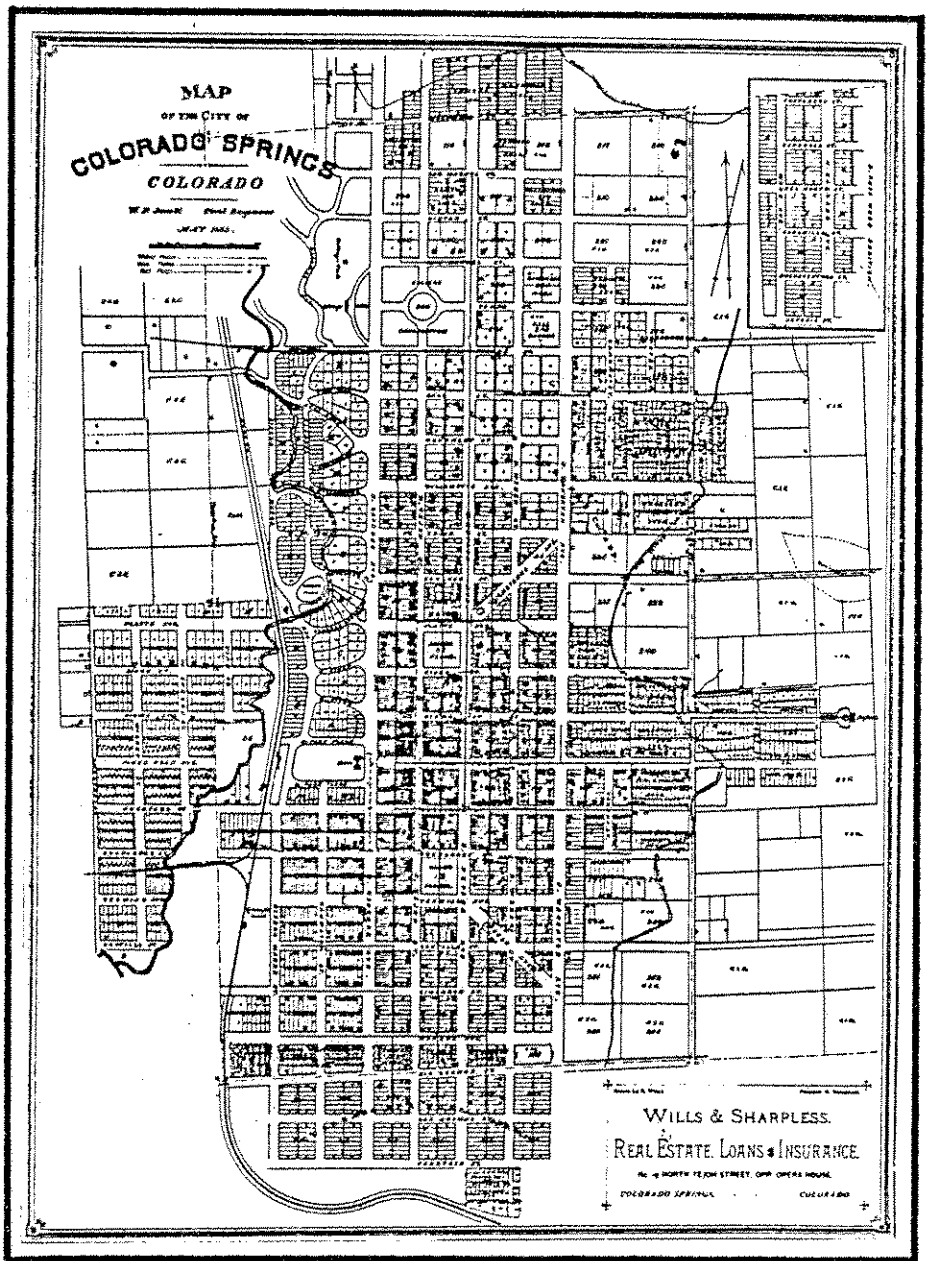


FIG. 5 PLAN OF COLORADO SPRINGS, 1882 (CAW, P. 589)

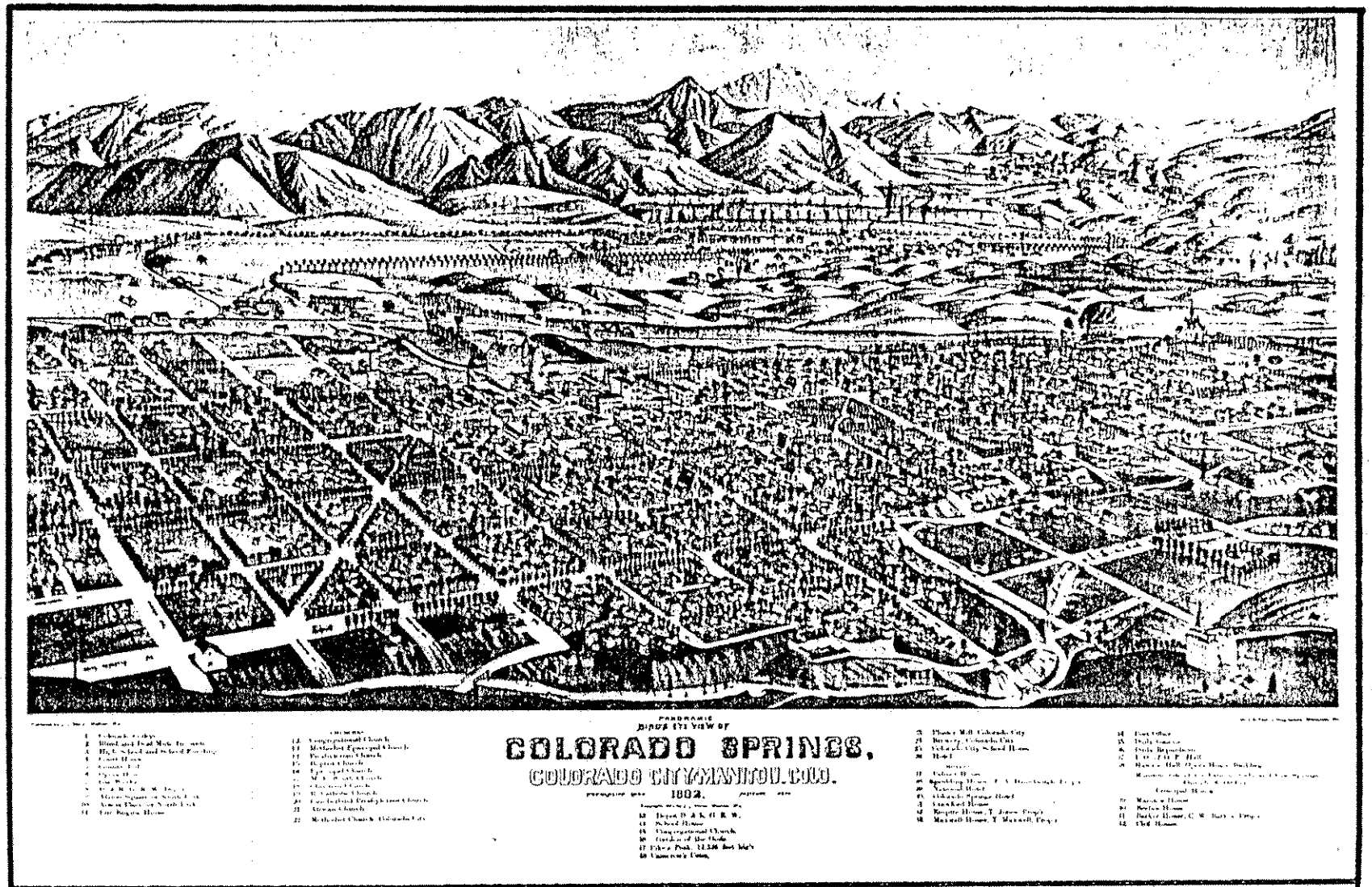


FIG. 6 BIRD'S-EYE VIEW OF COLORADO SPRINGS AREA, 1882 (CAW, P. 590)

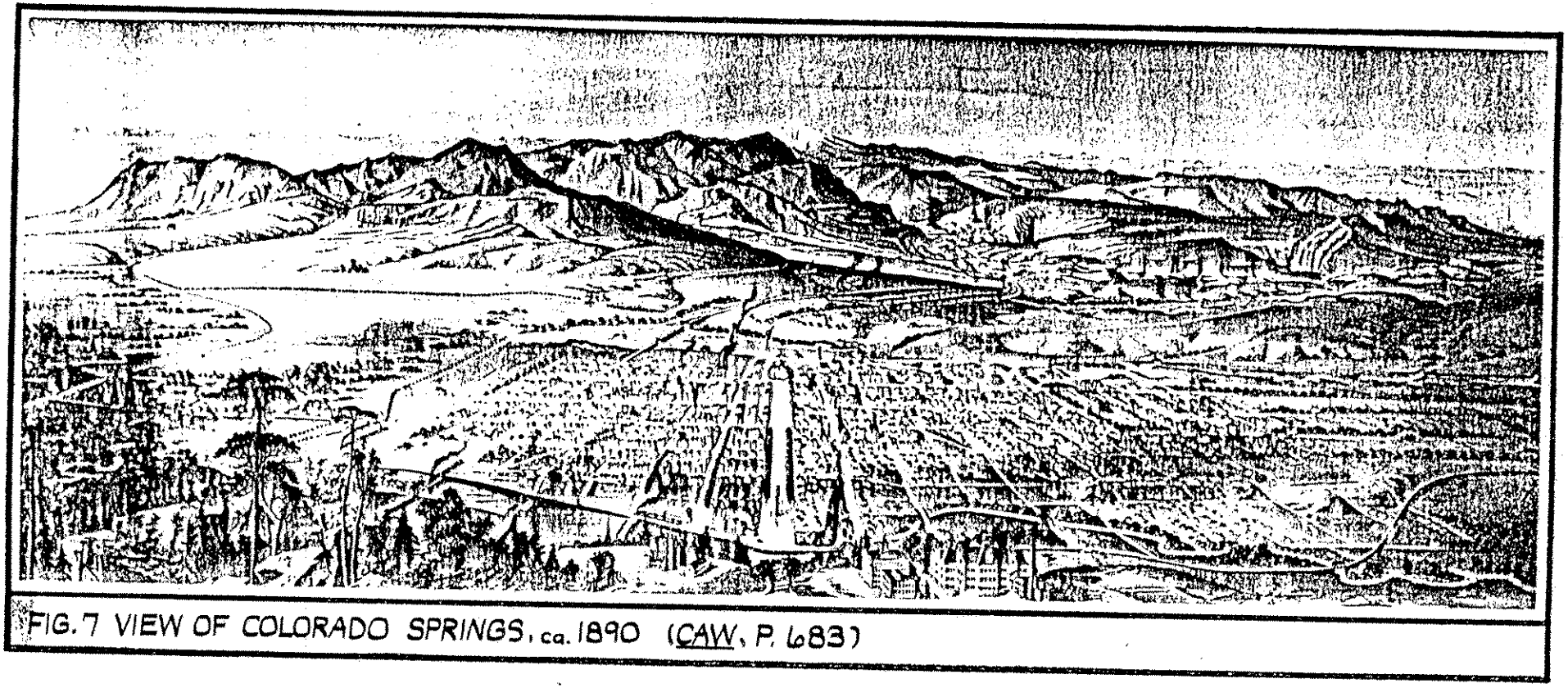
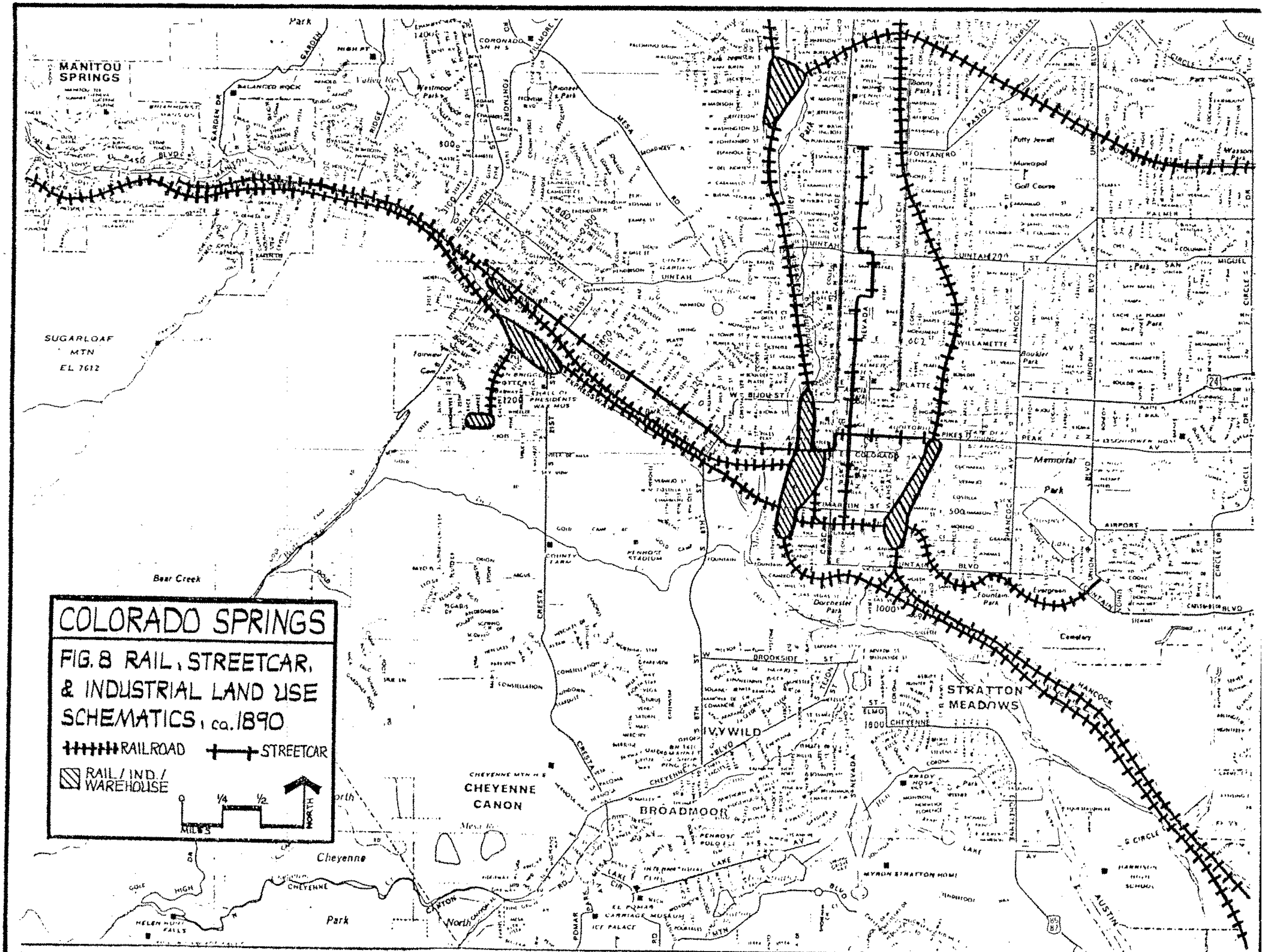
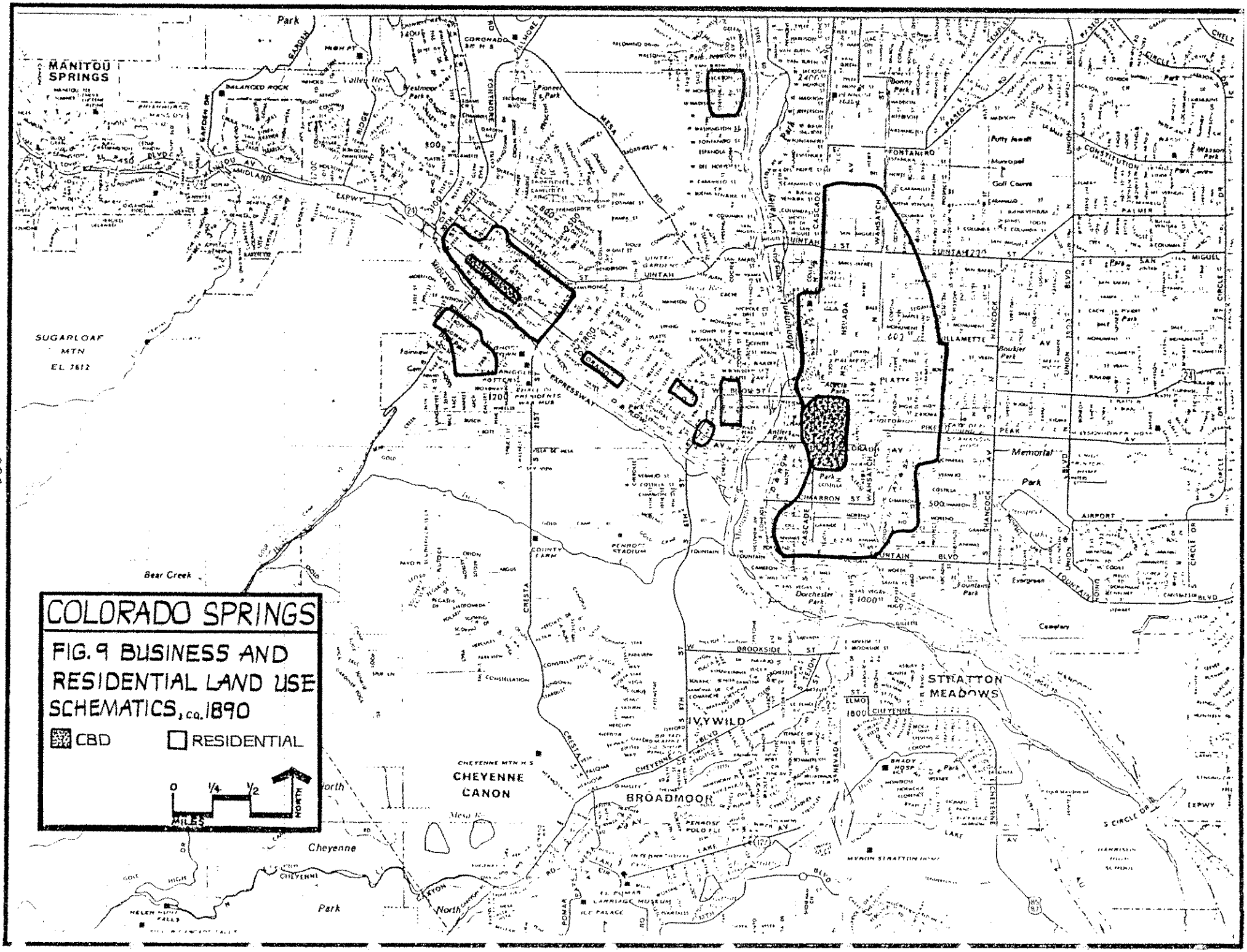


FIG. 7 VIEW OF COLORADO SPRINGS, ca. 1890 (CAW, P. 683)


COLORADO SPRINGS
FIG. 8 RAIL, STREETCAR, & INDUSTRIAL LAND USE SCHEMATICS, ca. 1890
RAILROAD
STREETCAR
RAIL / IND. / WAREHOUSE
0
1/4
1/2
MILES
NORTH
MANITOU SPRINGS
SUGARLOAF MTN EL 7612
Bear Creek
CHEYENNE CANON
BROADMOOR
IVYWILD
STRATTON MEADOWS
Memorial Park
Cheyenne
Park


COLORADO SPRINGS
FIG. 9 BUSINESS AND RESIDENTIAL LAND USE SCHEMATICS, ca. 1890
CBD
RESIDENTIAL
0
1/4
1/2
MILES
NORTH
MANITOU SPRINGS
SUGARLOAF MTN EL 7612
Bear Creek
CHEYENNE CANON
BROADMOOR
IVYWILD
STRATTON MEADOWS
Cheyenne
Park

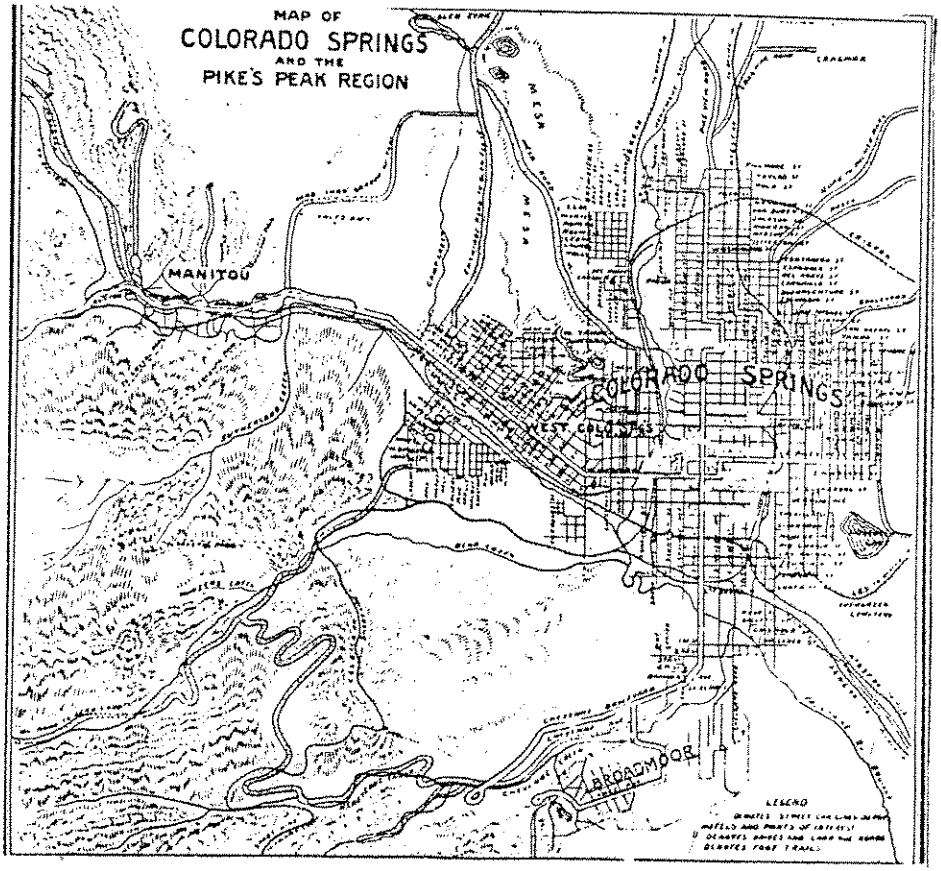


FIG. 10 1911 COLORADO SPRINGS AREA MAP (COLO. HIST. SOC.)

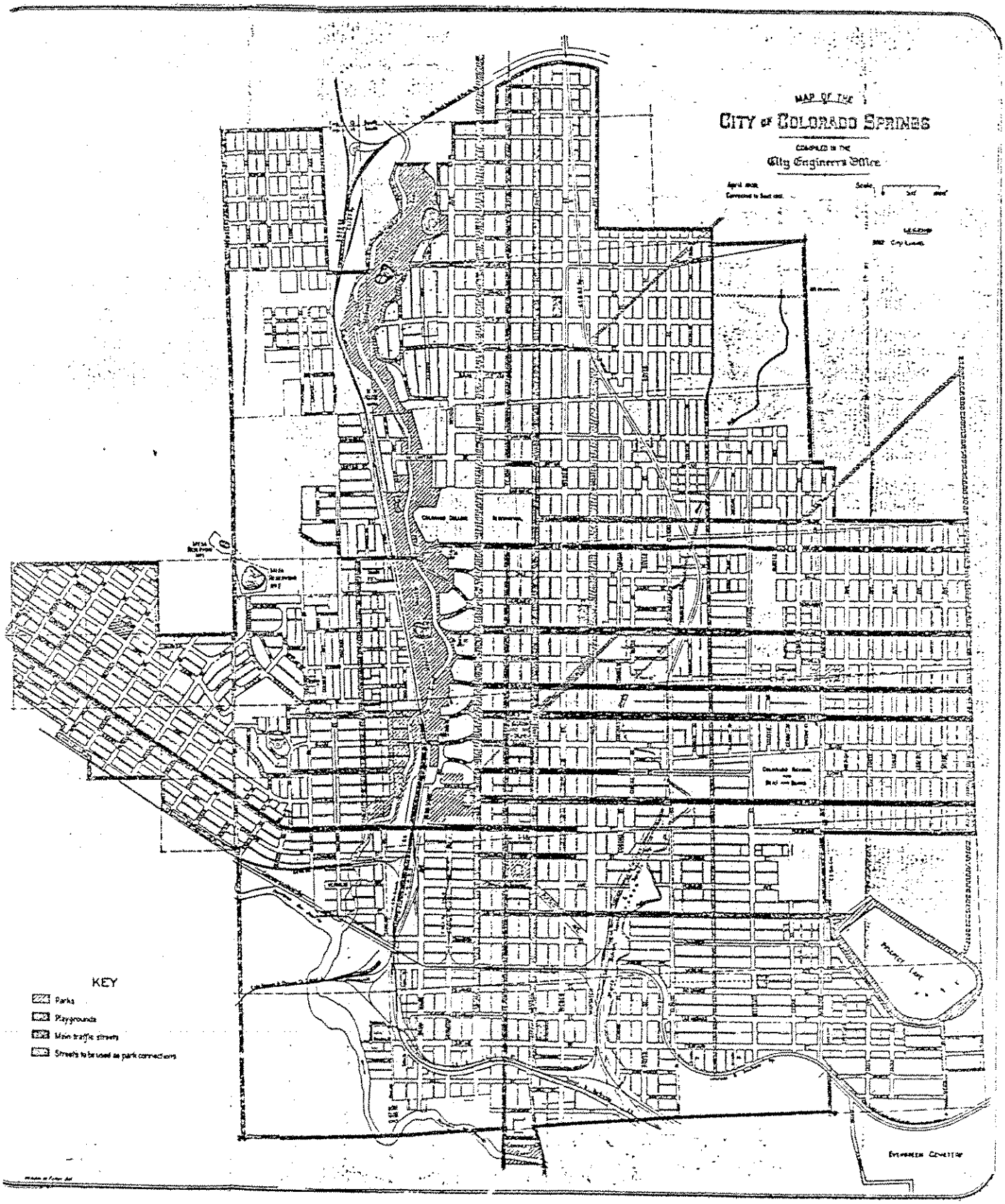
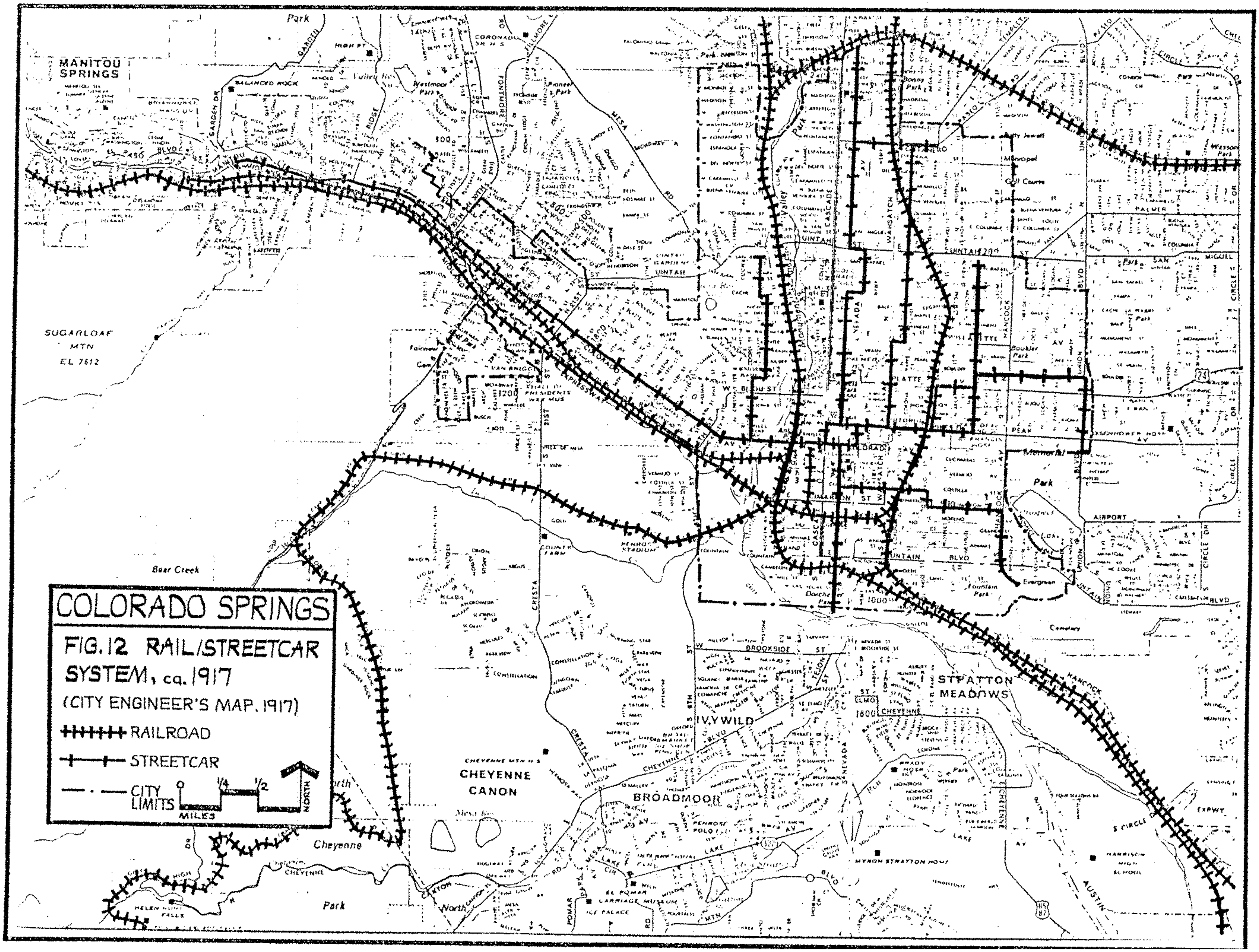


FIG. 11. ROBINSON'S CITY BEAUTIFUL SCHEME


COLORADO SPRINGS
FIG. 12 RAIL/STREETCAR SYSTEM, ca. 1917
(CITY ENGINEER'S MAP. 1917)
RAILROAD
STREETCAR
CITY LIMITS
0
1/4
1/2
MILES
NORTH
MANITOU SPRINGS
SUGARLOAF MTN EL 7612
Bear Creek
CHEYENNE CANON
BROADMOOR
IVYWILD
MEADOWS
Cheyenne
Park
Memorial Park
Cemetery
AUSTIN
HANCOCK
NEVADA
CASCADE
WAHSATCH
UINTAH
COLORADO
PLATTE
PEAK
AIRPORT
UNION
FOUNTAIN BLVD
CHEYENNE
MESA
CRESTA
FONTMORE
RIDGE
GARDEN DR
BALANCED ROCK
Golf Course
Boulder Park
Bonny Park
Fountain Park
PENROSE STADIUM
COUNTY FARM
HARRISON HIGH SCHOOL
MYRON STRATTON HOME
EL POMAR CARRIAGE MUSEUM
ICE PALACE
HELEN HUNT FALLS

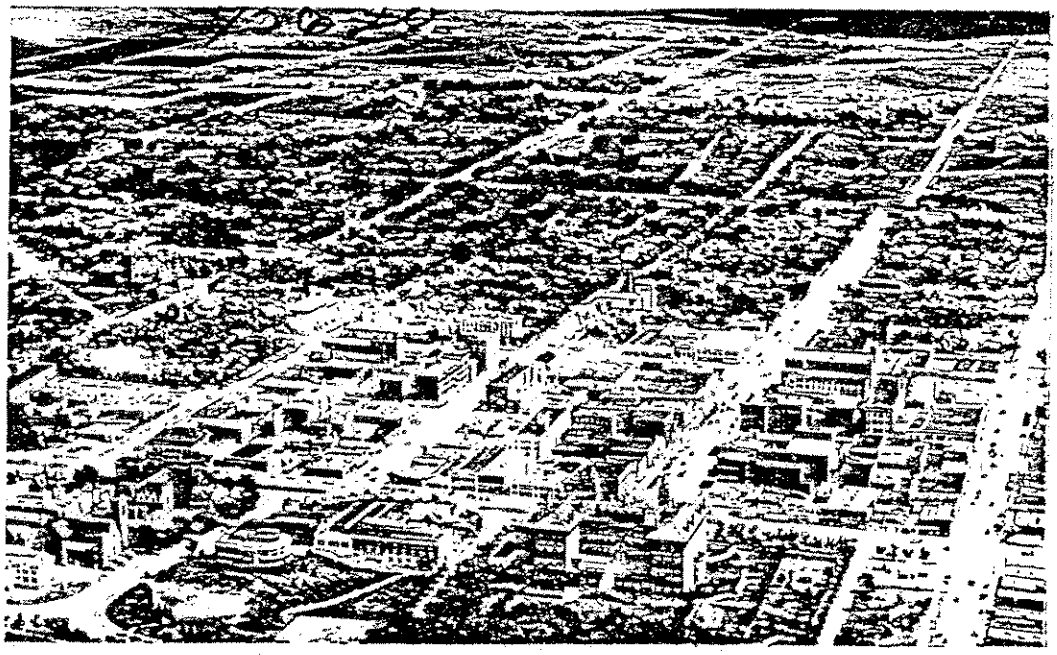


FIG. 13. COLORADO SPRINGS CBD, ca. 1930 (COLO. HIST. SOC.)

12. PUEBLO: THE STAGE/WAGON, RAIL/STREETCAR AND EARLY AUTO CITY

NARRATIVE

Pueblo developed differently from Denver and Colorado Springs. It was older. Forts, trading posts and other settlements related to the Santa Fe Trail trade were there decades before the other two towns. It had a deep Hispanic tradition, being on the boundary between the Mexican and U. S. spheres of influence in the 19th century. It was drier, sunnier and hotter, with less rain required for the crops traditional to the wetter mid-west. The mountains were also more distant; Pueblo is further out on the plains than either Denver or Colorado Springs. On the other hand, Pueblo had easier 19th century stage and rail access to the Colorado heartland. It dominated the Arkansas River Valley which provided good transport corridors to Leadville, Gunnison and Grand Junction. Pueblo was also more narrowly a heavy industrial city than the other two. Its downhill location from coal, precious mineral ores, and iron ore made it a natural 19th century smelting and steel capital. Finally, Pueblo's urban topography (Figure 1) differs from the other two. Its townsite has high flat bluffs over a wide, dangerous, flat flood plain valley, rather than the more even rolling terrain of Denver and Colorado Springs.

Pueblo also shares characteristics with the other two cities. Like the others, it was located on the natural intersection of north-south traffic on the front range plains and the east-west traffic generated by river/transport corridors flowing out of the mountains. It likewise shared early origins as a depot town servicing the mountain mining camps in the 1860's, followed by a major growth period from the 1870's to 1900. This city growth was planned, as in Denver and Colorado Springs, using rail/streetcar components. These spines were the transport skeleton to which the city functions were attached, and they all used coal as the major 19th century urban power source. Pueblo also shares with Denver (and to a lesser extent Colorado Springs) a certain "multiple centered" early history, with a number of small communities struggling to capture "downtown" status. Finally, all three cities accepted the auto with open arms from the 1910's on, and attempted to diversify both their economies and transport systems from then to WW II. This theme proceeds to outline Pueblo's

growth patterns. It is based primarily upon Taylor's Pueblo, Dodds's Pueblo, Colorado: An Industrial Heritage, and historical maps and bird's-eye views of the city.

The confluence of Fountain Creek and the Arkansas Valley was the junction of two major natural corridors, running north-south along the Front Range and east-west from the Plains into the mountains. This confluence was well known to explorers, trappers and traders long before a permanent settlement was established. This junction was the site of several impermanent structures or settlements. Pike built a stockade there in 1806 while exploring Colorado for the U. S. Government. During the period 1833 to 1840 several seasonal posts were established at the mouth of Fountain Creek and additional posts were established along the Arkansas within the area. By 1842, Fort Pueblo (Figure 2) was established and functioned as a fur trading, defense and alcohol distribution point. A group of gold seekers wintered at the confluence in 1858-9 and laid out Fountain City on the east bank of Fountain Creek. This settlement was overshadowed by what was to become the permanent settlement, the community of Pueblo, organized by a group of settlers in 1870 and subsequently incorporated as a town in 1870.

A classic dilemma in city location is important in Pueblo. How does one place development close to the bridge points, water, timber, wild game, agricultural land, protection and flat land of the river bottom--yet not position it so close to the river that it gets flooded out or is made unhealthful by the soggy lowlands? Pueblo's wide river bottom land and highly bluffed surroundings (Figure 1) have made it a challenge in the struggle to manage this trade-off.

Early settlements located near the intersection of Fountain Creek and the Arkansas. They were more concerned with bridging, timber, water and protection than floods. Pueblo's first more permanent location (Figure 3) was a north-south stage/wagon strip, also located on a river bottom bridge point, but on a slightly higher peninsula between Fountain Creek and the Arkansas (also note Figure 5). The original town plat (Figure 4) supported this linear system by creating a N-S strip of business lots along Santa Fe Avenue. Rectilinear residential blocks were laid out running east-west. But as Figure 5 shows, a problem surfaced. The town site was constrained to the west by bluffs, to the south by the river, and to the east by possible flood plains. The only direction for easy growth was north. Perhaps this was why the courthouse square

was located toward the north end of the plat.

Figure 5 illustrates the transitional dynamics between Pueblo's stage/wagon period and its rail era. The major Denver and Rio Grande trunk line followed the base of the Arkansas River bluff. It arrived in 1872. General Palmer, the D & RG's owner, planned a new and competitive "South Pueblo." It was a neutral grid, 45° off the N/S grid of the earlier Pueblo grid, but parallel to the bluff and rail line. It also continued on the flood-prone bottom land between the bluff and Old Pueblo. The South Pueblo plan is unusual in two respects. Usually the earliest grids in Colorado and the Midwest are off the NS/EW traditions of the rural national survey, and later grids line up with it. Colorado examples here are the Denver, Auraria, Ft. Collins, and Colorado City grids. But in Pueblo, the original grid was NS/EW and the later grid was at an angle. A second uniqueness is the curvilinear street design that adapted the grid to the irregularities of the bluff and assisted it in linking down to the river bottom and rail area. Its use predates the same technique employed in the 1882 scheme for Colorado Springs. The varied lotting on those curvilinear shapes is also remarkable! (Figure 6). Note should also be taken of the Spanish street names in the original grid. Palmer may have expected South Pueblo to be a serious social link in his ambition to connect Denver and Mexico City. The street names were later changed to American presidents and Colorado governors. The blocks appear to be perfect squares, also not common in Colorado grid planning.

Figure 5 illustrates two other crucial developments in Pueblo planning. The river botton part of the South Pueblo grid began a new commercial node to compete with Santa Fe Avenue. The node centered on the new rail station. South Pueblo was also incorporated independently of Old Pueblo. The degree to which Palmer was unfair to Pueblo residents in his location of South Pueblo and his rail facilities is disputed between Taylor in Pueblo and Reps in Cities of the American West. The second event is the plat laid out on higher ground east of Fountain Creek, parallel to the original NS/EW Pueblo grid. It begins Pueblo's significant eastward residential expansion. Figure 7 illustrates a Santa Fe streetscape in 1880. Figure 8 maps two more early municipalities in the early Pueblo area, Bessemer and Central Pueblo. Figure 9 documents the impact of these 1874 platting decisions by 1890, after the town(s) had begun growing into a mature heavy industrial rail city. By then it had rail service from the D & RG, the Santa Fe, the Denver and New Orleans, Colorado and Southern, and Missouri and Pacific RR. All struggled for rail facility land on the river

bottoms and competed with the CBD (Figures 9 and 10). Figure 11 describes the regional rail system in 1889. Smelting was one of the area's first heavy industries, responding to the Leadville silver discoveries. Smelting united urban labor, coal from the south, and precious mineral ore resources from the upland west. Steel began a year or so earlier, with the first Colorado Coal and Iron Company furnace in 1881. To advertise its early mineral processing identity, the city built a nationally unique mineral palace in 1890.

The Colorado Coal and Iron Company was primarily controlled by the D & RG's General Palmer and his colleagues. From this point of view, perhaps the three major Colorado front range cities of this time can be interpreted as a balanced rail-dominated axial system: Palmer's commercial base in Denver, his industrial capital in Pueblo, and his regal railroad residential capital between, in Colorado Springs.

Downtown Pueblo in the 1890's was split, torn between the Santa Fe Avenue area and the newer Union and Central Street area. The latter focused on the rail station. Most of the heaviest industry located on the bluffs in South Pueblo, but much, including the Pueblo Smelter, remained in the flood plain (Figures 12 and 13). This created danger during floods and added smoke to the low valley areas. The state hospital was located on the northern urban edge of the time.

Pueblo's 19th century rail/industrial economy attracted uniquely large sectors of non-Anglo ethnic groups as industrial labor. Socioeconomically, the city deserved its nickname, the Pittsburgh of the West. Most of these groups lived near the industries. According to Taylor, the largest ethnic group was traditionally Mexican. (They were more farmers than industrial laborers, however.) Little Mexico on "Goat Hill" illustrates the informal barrio planning of the Latin American poor (Figure 14). These settlements were among Colorado's very few examples of this self-help, agglomerative urban form. Slovenians lived in "The Grove" north of the steel mills and near the smelters on the flood plain. Italians lived near the industries and St. Charles Mesa. The Jewish population was large until the flood of 1921 destroyed many of their commercial resources. Chinese came in with the railroads' construction. The Japanese arrived after the turn of the century and lived mainly in Bessemer. The Japanese were important in Pueblo's later truck garden industry. Northern European nationalities did not usually locate as territorial groups in the city and blended in with the Yankee population.

Interestingly, families of the immigrants did not always come on the first trips with the working fathers. Fathers stayed in boarding houses and only later brought the whole family. According to Dodds, boarding house districts are likely to be of historical interest in Pueblo. Even in the case where ethnic neighborhoods were identifiable, there was always great transiency within them, back and forth to the home country. Pueblo could not count on a stable ethnic work force. Of course, due to the ups and downs of the industries, the labor force could not count on jobs, either. Colorado's boom and bust syndrome is reflected in its urban design as well as its small mining town design.

The residential location of economic classes in Pueblo during the rail era is also important. (Note that the city's speculative platting of 1889, Figure 15, extended far beyond the built-up areas.) The upper classes lived north and northwest of the courthouse area on the Pueblo grid. There were also enclaves in the center of the South Pueblo grid and the north end of the curvilinear part of South Pueblo plat. The shanty areas were in the flood plains, usually near the mills or near truck gardening areas. Hispanic groups had a large community in the Salt Creek area. All immigrant groups seemed to cycle through these squatter communities. The better-off working class lived in streetcar suburbs in the South Lake area near Fairmount Park. The middle class was naturally small in an industrial town. Businessmen and clerks lived either above their businesses or across Fountain Creek along 4th Street in East Pueblo. There were many open spaces between residential developments, and a certain temporary and transient attitude was built into most residential construction. Without middle class patrons, the boulevards, classical civic centers, and park systems of the City Beautiful Movement also were not as well developed in Pueblo as in Denver and Colorado Springs.

The streetcar system in the rail era is illustrated in Figure 16. (Note: This figure is overlaid on a later Pueblo map.) Electric streetcars began replacing the horse cars in 1890, and they ran until 1940. The central transfer point was at Mesa Junction in the downtown. The streetcar lines then radiated out in most directions. They first served the mills. Then, at their extremities, they served City Park, Mineral Palace Park, Fairmount Park, various cemeteries, and dispersed amusement areas. With the coming of the streetcars, the hay and livery stable industry, of course, declined rapidly. The tradition of most homes having a horse and cow also ended. Figure 17

maps Pueblo in perhaps its most mature streetcar/rail/industrial period, about 1918.

Pueblo's downtown and present flood plain development was considerably influenced by its disastrous flood of 1921 (Figure 18). After the flood, a new river channel was dug, railroads were rerouted, many shanty communities were relocated, and the downtown was restructured. In 1921, the long-standing tension between the city and the river came to a head, and the river briefly won. New flood control projects have apparently solved the problem.

The economic impact of the flood was enormous. It closed key industries, wiped out small nascent industries that might have grown, destroyed many small businesses, and took public monies for repair that could have been used for growth functions. It also happened at a time of decreasing steel demand, a decline in precious ore smelting, and dust bowl-stimulated agricultural decline. The timing could not have been worse. New industry did not appear until the military production and bases of World War II.

The 1920 - 1945 early auto period began in Pueblo just as the economy levelled off. What physical growth there was infilled vacant areas, rather than building new middle class auto suburbs on the town's edge. Steet paving began in 1906, and by the 1920's through auto traffic arteries had been established. The north/south route followed Lake, Santa Fe and Grant. The east/west route was 4th and Thatcher, and Santa Fe and Northern. Motels, tourist campgrounds, bars, farmers' vending stands and tourist cabins scattered along these auto roads at the urban periphery. But for the most part, the growth was slow enough, the streetcar city was sufficiently low density, and Pueblo's streets were wide enough to handle the early auto period without radical reconstruction. The last streetcar was put out of business by 1940; earlier, however, amusement parks at the streetcar endpoints were shut down, and "mom and pop" retailers at the streetcar stops began to close earlier. The early auto period was an era of stable or declining economic activity for all Colorado cities, but Pueblo was particularly hard hit. It had the heavy industries of a Pittsburgh, but not Pittsburgh's ability to diversify into agriculture, government offices, wholesale, retail, light manufacturing, education, tourism and services that could keep growth going in hard times. Many of the industrial and real estate fortunes that were made there, of course, were also not plowed back into the community. Things improved after WW II for this unique and interesting western industrial city.

CHRONOLOGY - Selected from Dodds and Taylor

1706	First Spaniard camps in Pueblo
1803	Louisiana Purchase puts Pueblo area in U. S.
1806	Pike's stockade
1832	Bent's Fort
1842	Fort Pueblo
1846	First Anglo settlement and Mormons winter in the area
1858	Fountain City founded
1859	Pueblo founded
1862	First stage service to Pueblo
1867	Fort Reynolds
1868	First brick construction
1868	First telegraph
1869	Pueblo platted
1870	Pueblo incorporates
1870	Population 1,002
1871	First bank
1872	D & RG arrives
1872	South Pueblo platted
1874	Water works starts operation
1876	Last stage services Pueblo
1876	Santa Fe Railroad arrives
1878	First unions
1879	State hospital opens
1880	Pueblo population 3,217
1881	CC & IW operates first blast furnace
1882	CC & IW produces first rails
1882	First smelter
1882	Central High completed
1882	CC & I Hospital
1882	Central Pueblo platted
1884	Massachusetts and Colorado smelter
1885	Consolidation of Pueblo and South Pueblo
1886	Bessemer platted and incorporated

1886	Residential development moves east and north of core area
1888	1 in 11 Pueblo citizens was an immigrant
1888	Philadelphia Smelter
1888	Denver - Fort Worth Railroad arrives
1888	Rock Island Railroad arrives
1888	Gas is manufactured
1890	Pueblo population is 24,157
1890	Streetcars electrified
1890	Mineral Palace, Union Station, Opera House, Central Block
1893	Anton Eilers builds smelter
1894	Bessemer annexed
1890 - 1900	Period of company housing projects and population boom
1890 - 1900	Ethnic boarding houses
1900	50% of Pueblo population is immigrant or first-generation Americans
1900 - 1910	Ethnic neighborhoods south of the Arkansas develop
1903	City Park
1904	Zinc Smelter
1910	Population 41,747
1919	Memorial and City Halls open
1920	Population 45,050
1921	Disastrous flood
1920's	Park Hill neighborhood develops
1928	First radio station
1930	Population 50,090
1933	Pueblo Junior College opens
1934	First air mail
1940	Last rail streetcars run
1940	Population 52,162
1942	Pueblo Army Air Base built
1942	Pueblo Ordinance Depot

LOCATION - The best location maps for issues dealt with in this theme are in the figures. A list of them follows:

Figure 1 Natural Features of the Pueblo Area, 1800's.

Figure 2 Recent interpretations of Fort Pueblo, 1842 (Pueblo, p. 2).

Figure 3 Pueblo in 1861 as a tinker-constructed, stage/wagon river bottom linear strip (Pueblo, p. 9).

Figure 4 Plan of Pueblo, ca. 1870 (Reps, Cities of the American West, p. 582).

Figure 5 Early Rail Period View of Pueblo, 1874 (CAW, p. 584).

Figure 6 Lotting of South Pueblo's Curvilinear Section (Dodds, Pueblo, Colorado, Appendix 26).

Figure 7 Santa Fe Streetscape, 1880 (Pueblo, p. 65).

Figure 8 Separate Municipalities of Early Pueblo.

Figure 9 View of Pueblo, 1890 (CAW, p. 585).

Figure 10 Pueblo CBD (Pueblo, Colorado).

Figure 11 Pueblo as Regional Rail Hub, 1889 (West. Hist. Col., Denver Public Library).

Figure 12 Pueblo's Rail and Industrial Locations.

Figure 13 Industrial Buildings and Nearby Housing.

Figure 14 Hispanic Informal Barrio Planning (Pueblo, p. 26).

Figure 15 Pueblo Platting, 1889 (DPL, WHC).

Figure 16 Pueblo's Streetcar System, 1896 (Pueblo, Colorado, Appendix 30).

Figure 17 Pueblo Platting, ca. 1918 (DPL, WHC).

Figure 18 Pueblo: Flood Route in 1921 (Pueblo, Colorado, Appendix 4).

CULTURAL RESOURCE TYPES

Cultural resources likely to be important due to their typicality in Colorado are:

Residential grids

Industrial architecture and planning

Rail facilities

Parks

19th century CBD architecture

Ice cream parlors

Schools

Streetcar system planning

More unique items might be*:

Hispanic barrio planning

South Pueblo's curvilinear bluff planning

South Pueblo's diagonal grid and Abriendo Boulevard

The CBD's bending linear pattern

The built environmental impacts of the city's four-town competitive origins

The CBD's unique location in the flood plain and within the rail/industrial swath

Church clusterings as buffers between the elite and poor in South Pueblo on Broadway

Boarding house districts

Temporary architecture for ethnic transients

Elite districts: their location and protection

The role of lodges in the political life of the ethnic communities

The post-flood planning

The interrelation of heavy industrial planning (steel and smelting) in a western city

Middle class residences in an industrial city

The effects of air pollution in the late 1900's

Religion-based welfare systems

Labor union architecture and planning

Early air quality planning

*Ms. Dodds suggested a number of these.

QUANTITY AND QUALITY OF EXISTING INFORMATION

Historic Documentation

Pueblo, like other Colorado cities, has not had an interpretive urban design and planning history completed. Ms. Joanne Dodds has a new history in press at this time, and it is likely to be the city's best social and built environmental interpretation. The books, reports and maps listed in the "References" section below suggest the major studies and documents available at this time. Interpretations by Dodds and Taylor were the main sources for this thematic discussion. John Reps's Cities of the American West has important sections on Pueblo. The general Colorado histories deal with Pueblo in passing, but with little built environmental detail. Examples are: Carl Abbott's Colorado, Robert Athearn's The Coloradans, and Car Ubbelohde, et al., A Colorado History.

The typical primary documents used in planning and urban design historical research are listed below. Most are likely to be found for Pueblo. This study found that the maps, bird's-eye views and aerial photo documents became scarce after 1900. It is also likely that the records of the major industries of the city are kept privately. Most primary documents should be available, however, with patient search. Ms. Dodds was an excellent and gracious aid in our inquiry.

Written documents.
- General state and local histories.
- Municipal records.
- Real estate records.
- Land company records.
- Private papers of planners, architects, landscape architects, developers, and landowners.
- Newspapers, magazines and journals.
- County, town and city plans.
- Records of major industries, banks and chambers of commerce.
- Railroad, streetcar, toll road, stagecoach and utility company records.

Graphic records.
- Map collections.
- Bird's-eye view collections.
- Real estate atlases.
- Insurance maps.
- Assessors' maps.
- Aerial photos.
- Satellite photos.

Post card and architectural photo collections.
County, town and city plan maps.
Railroad, streetcar, toll road, stagecoach and utility company maps.
State highway department maps.
Commercial highway maps.
U.S.G.S. maps.
County, state and national atlases.
Federal land surveys.

Oral histories.

Number and Condition

Twenty-six "cultural resource types" have been listed. More could easily be added. Their diversity is too great and their condition too uncertain to generalize upon, especially given the brief nature of this thematic sketch. Most of the resources listed probably still exist. (Pueblo has not had the radical growth and redevelopment demolition that Denver has.) Exceptions would be items lost in the flood, those associated directly with the streetcar system, and those related to the smelting industry. Many of the resources built in the boom years of the late 1800's are likely to be simply wearing out, and prompt action should be taken.

Surveys

The surveys of Ms. Joanne Dodds stand out here. Also work done by the Pueblo Planning Commission should be researched. The author of this thematic analysis unfortunately could not visit the city's local public and planning libraries.

Data Gaps

Data, in the sense of available primary records and information, are likely to be available in Pueblo.

Future Needs

As with most major Colorado cities, the establishment of credible urban design and planning knowledge requires reliable base inventories, focused and appropriate frameworks of analysis, strong analyses of environmental causation, defensible standards of historical quality, and disciplined applications of

those standards to the facts of the situation. At present, Pueblo, like other major Colorado cities, has rough estimates of all of the above, but the descriptive detail and analytical quality necessary in order to have public policy "clout" are still only at the beginning stages of development.

Important Resources

The types of urban planning resources likely to be important in Pueblo have been mentioned in passing throughout the discussions above. Particularly, those listed in the "Cultural Resource Types" section should be noted.

RESEARCH QUESTIONS

What are the details of Pueblo's urban design and planning history?

How does Pueblo's urban form compare with other Colorado cities, other western industrial cities, other American industrial cities, and other international 19th century industrial cities?

What are the major causes of Pueblo's urban form typicality and

- uniqueness?
- geographical and topographical situation?
- aggressive leadership?
- industrial character?
- railroad centrality?
- deeper Hispanic traditions?
- diversity in ethnic make-up?
- abundance of water?
- other?

How did the railroads, heavy industries, and major downtown commercial interests agree upon the location of their facilities? How did competition among these entities affect the location of these facilities?

How did the smallness of the middle class affect planning in Pueblo?

How did the alleged tendencies of the fortunes made in Pueblo not to be reinvested in the city hurt the quality of the city's environment?

How did the auto period's new transport system superimpose itself on Pueblo's older streetcar system?

Was there an "aesthetic feeling" developed in the hearts of the people of Pueblo for their functional factories and rail yards?

What uniqueness might be found in Pueblo's ethnic neighborhoods and boarding house areas?

What peculiar planning problems have arisen because Pueblo's CBD is so tightly bounded by bluffs, rivers and rail yards?

And many more...

EVALUATION STANDARDS

Physical Condition

The variety and complexity of the many resources and districts likely to be of historic interest in Pueblo suggest many different standards for physical condition. Of course, the potential resource or district should be structurally and economically sound, and likely to remain so. If these conditions cannot be met, public subsidies should be offered for rehabilitation. Actually, each resource should be studied in detail before standards for physical condition are set. The standards should be variable according to the historic import and economic function of the district in question. Urban design districts, unlike specific historical artifacts such as ax handles, cannot be easily assigned detailed condition standards.

Representation

Pueblo has numerous unique characteristics as a Colorado city. Most of them have to do with its 19th century industrial identity. These unique resources have been suggested in the "Cultural Resource Types" section above, as have some resources that seem more typical. This list needs much further study for accuracy and for appropriate additions. After this is done, it will be more clear as to how many of each resource currently exist and which should be preserved. It seems clear to this writer, however, that one to four dozen urban design districts are possible, depending upon one's definition of "urban design district." Pueblo is a considerable urban industrial historical resource for Colorado, as well as remaining an interesting late twentieth century western manufacturing city.

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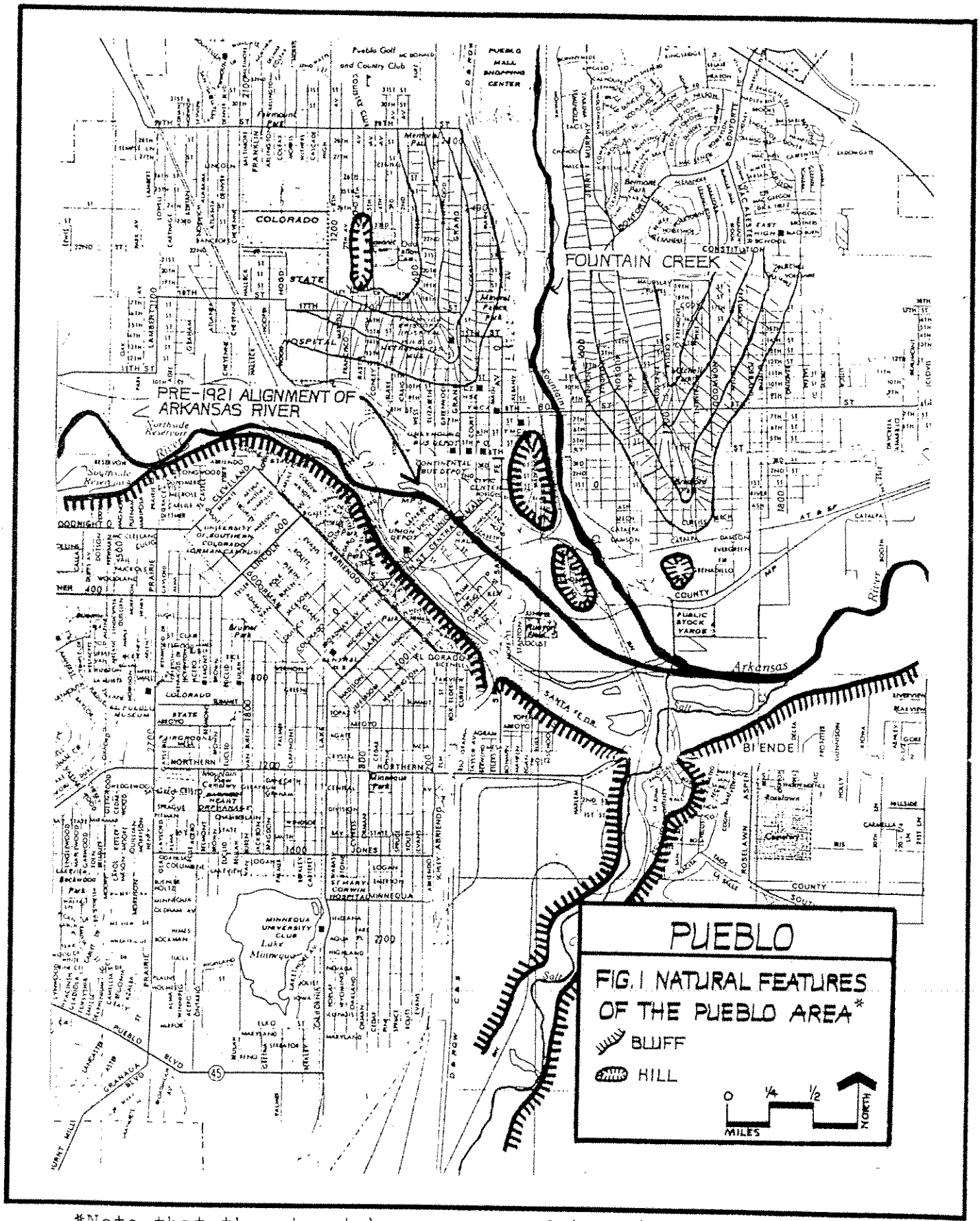


*Note that the street base map used to orient and scale this figure is contemporary.

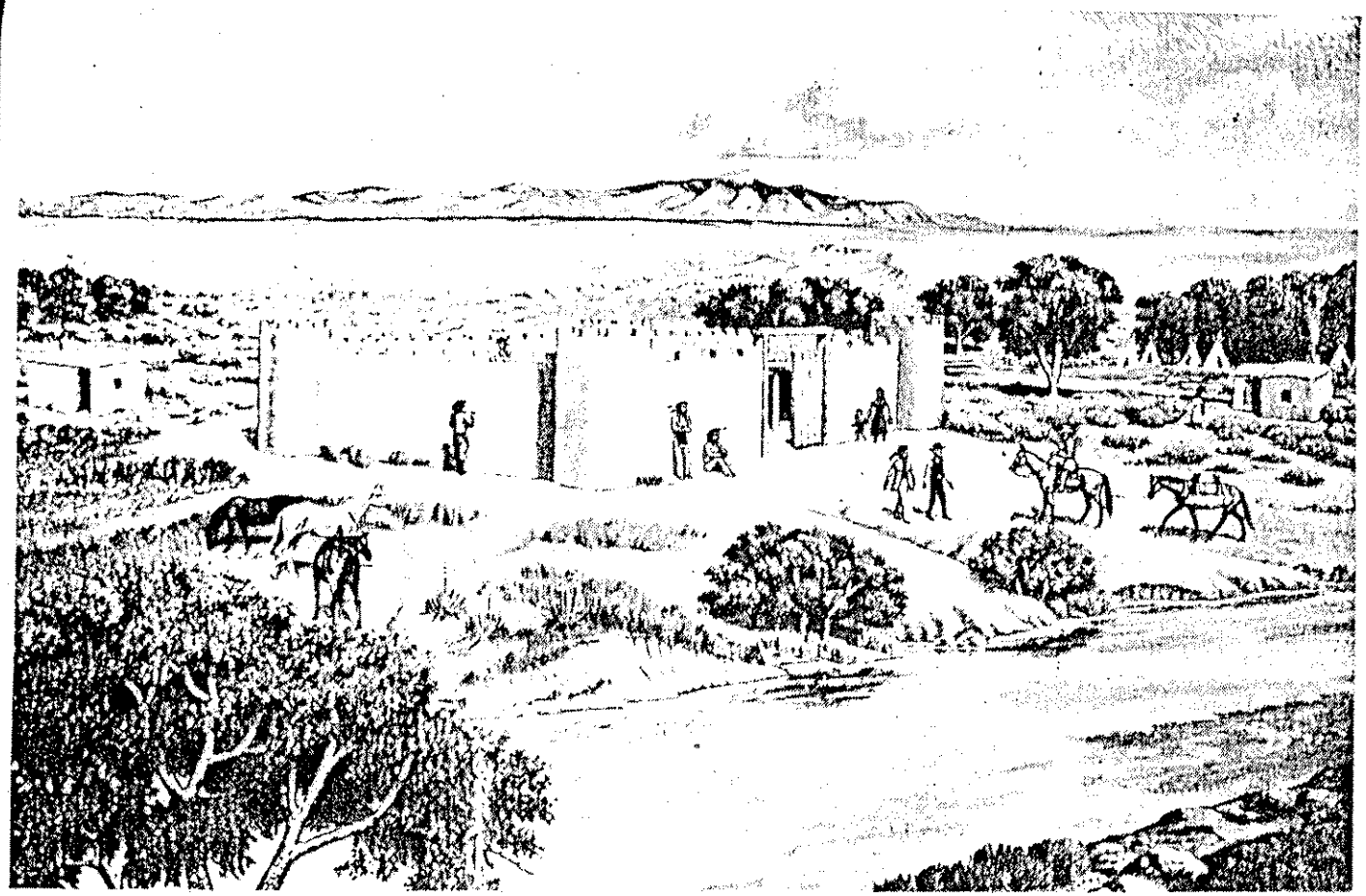


FIG. 2 RECENT INTERPRETATION OF FORT PUEBLO, 1842 (PUEBLO, P. 2)

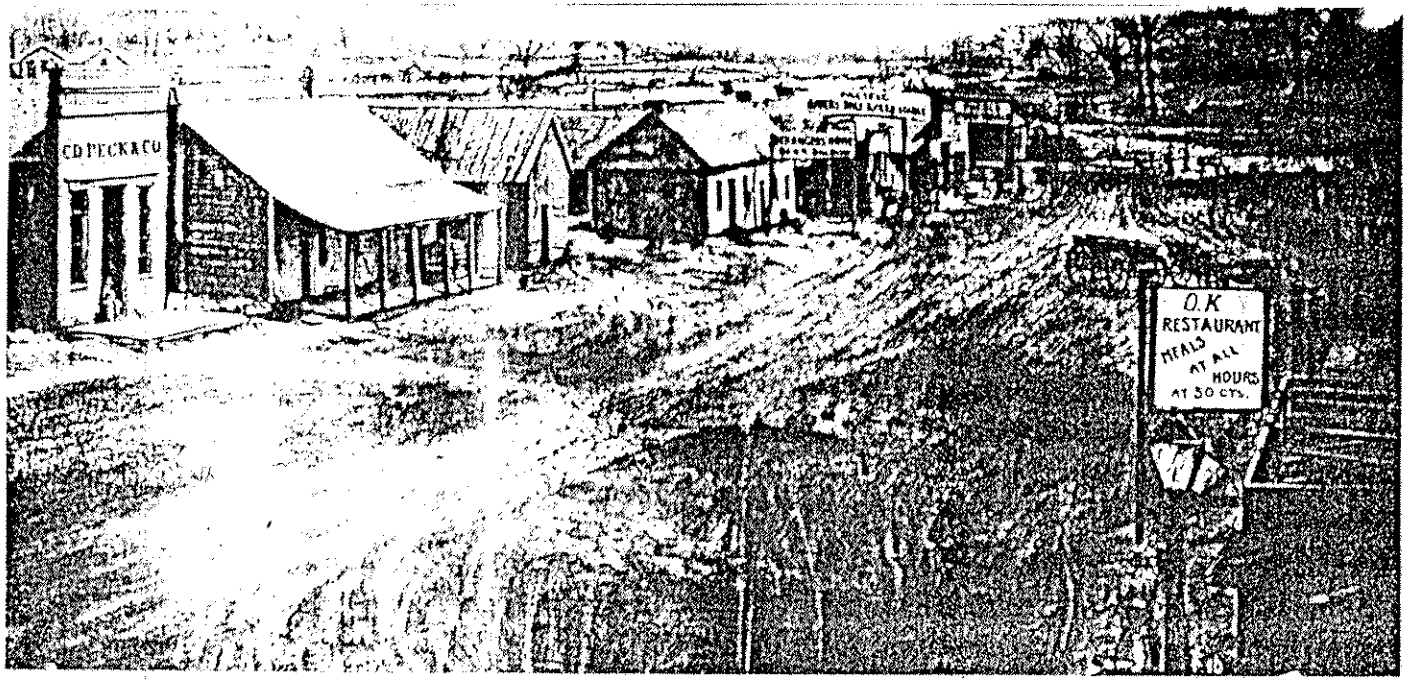


FIG.3 PUEBLO IN 1861 AS A TIMBER-CONSTRUCTED, STAGE/WAGON RIVER BOTTOM LINEAR STRIP (PUEBLO, P. 91)

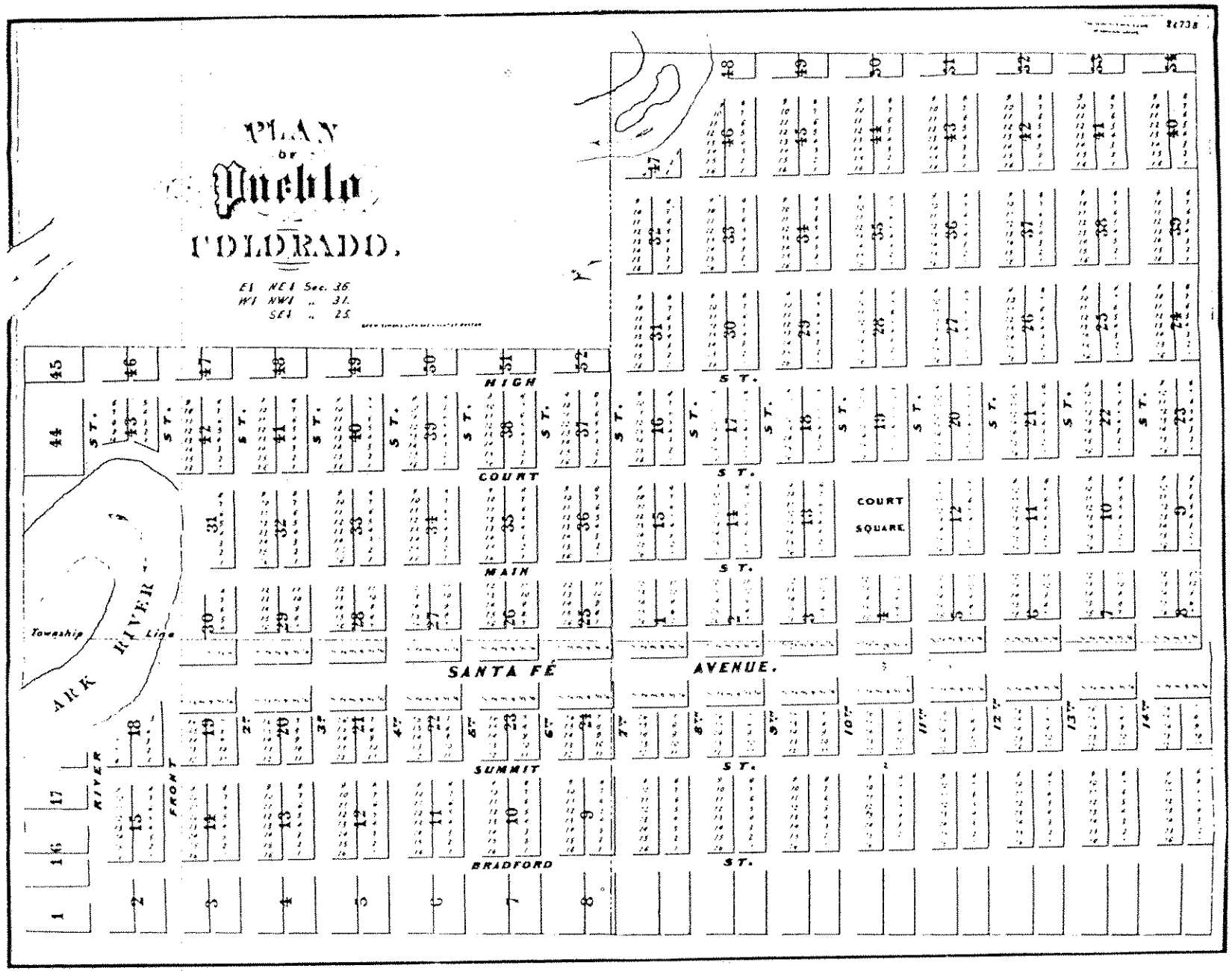


FIG. 4 PLAN OF PUEBLO, ca. 1870 (REPS, CITIES OF THE AMERICAN WEST, P. 582)

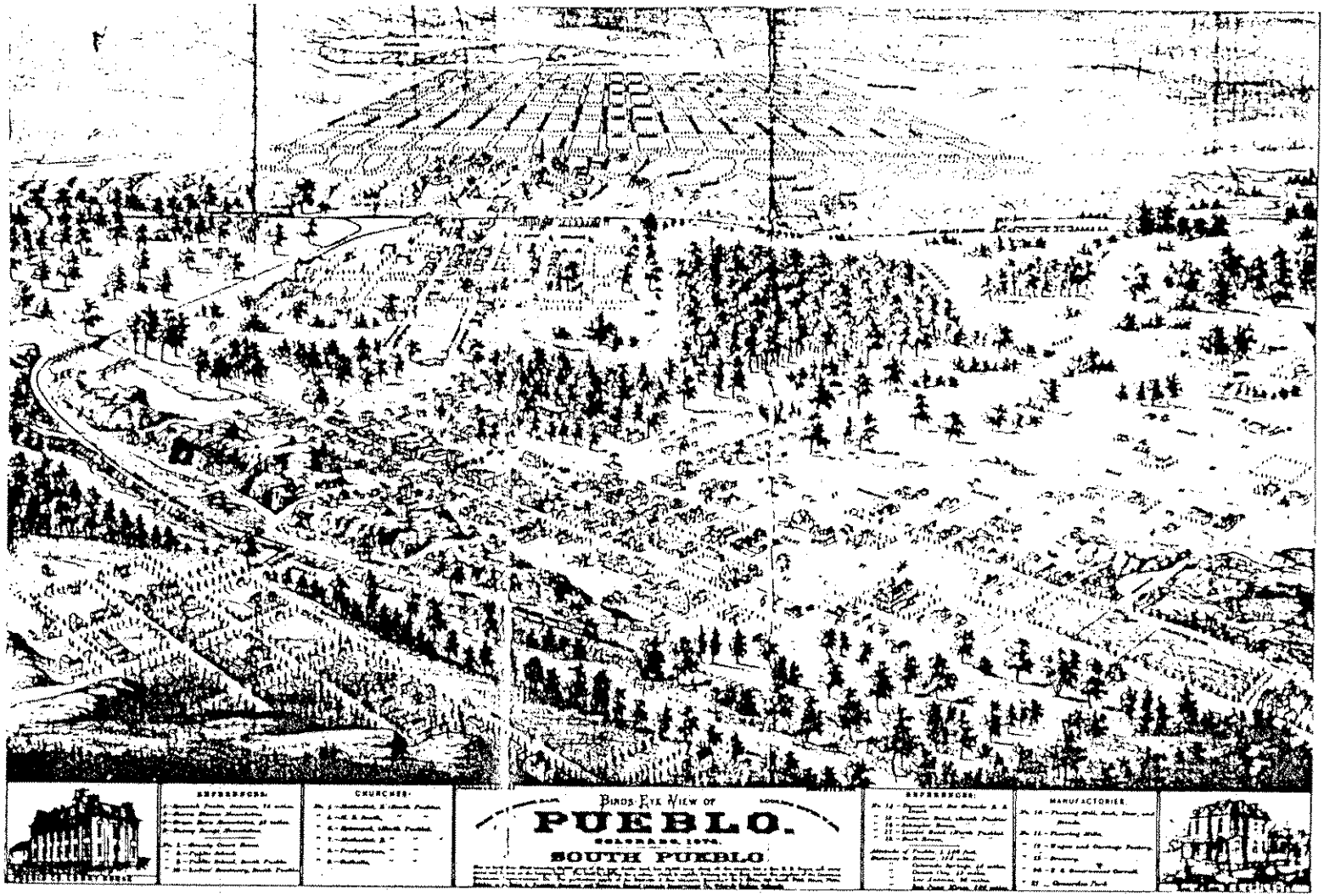


FIG. 5 EARLY RAIL PERIOD VIEW OF PUEBLO, 1874 (CAW, P. 584)

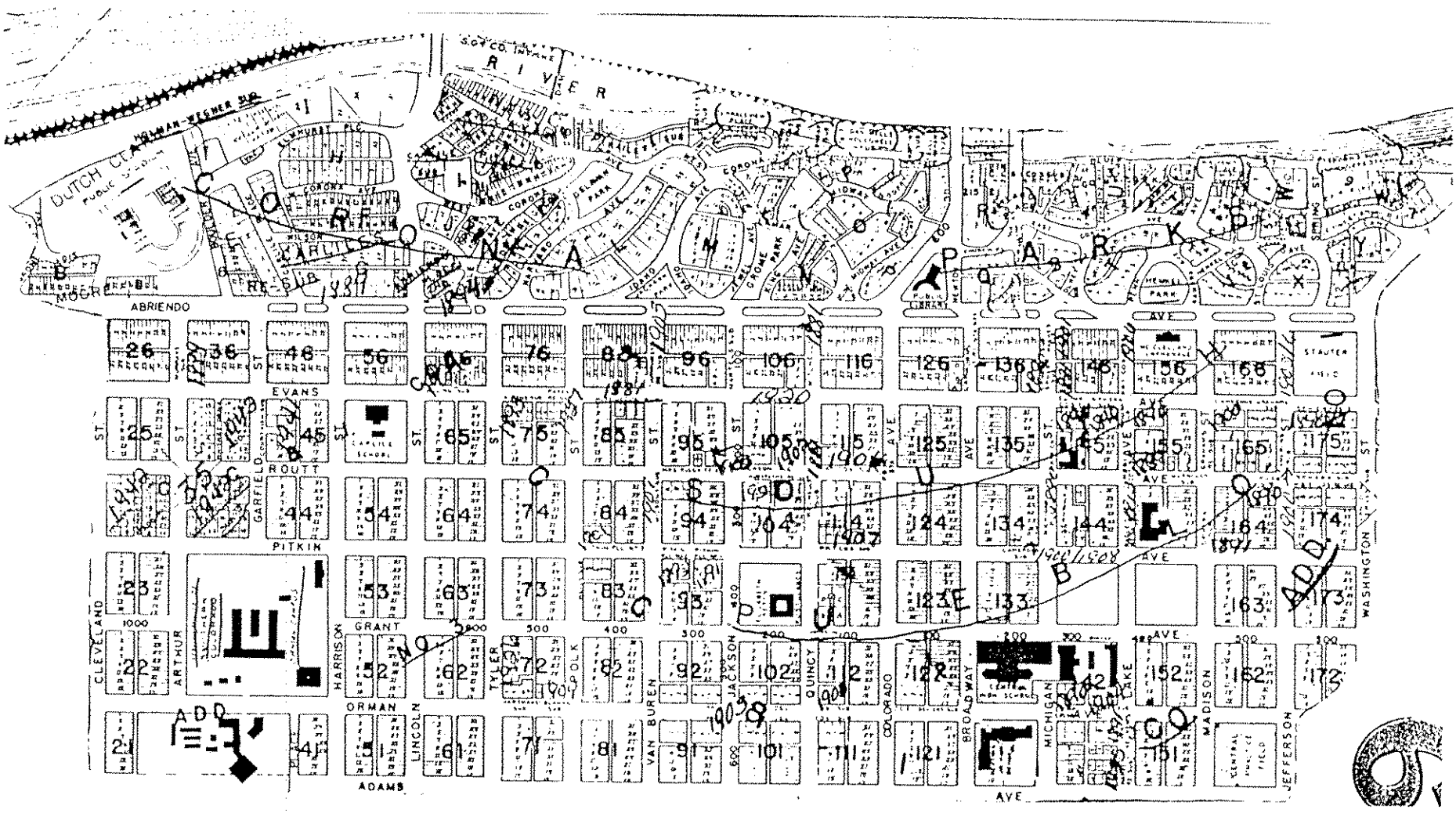


FIG. 6 LOTTING OF SOUTH PUEBLO'S CURVILINEAR SECTION (PUEBLO, COLORADO, DODDS, APPENDIX 26)

FIG. 7 SANTA FE STREETSCAPE, 1880 (PUEBLO, P. 65)

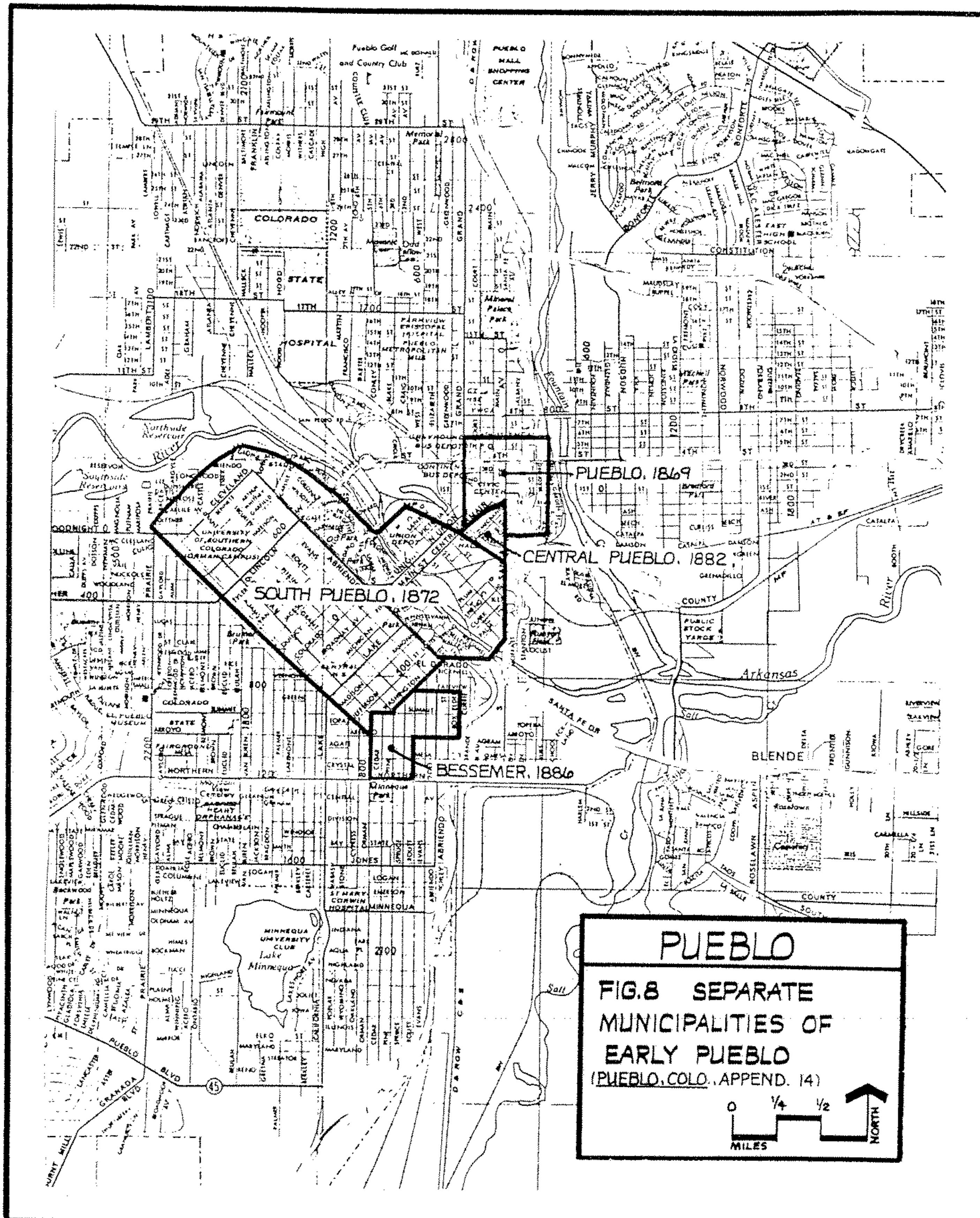


FIG.8 SEPARATE MUNICIPALITIES OF EARLY PUEBLO (PUEBLO, COLO., APPEND. 14)

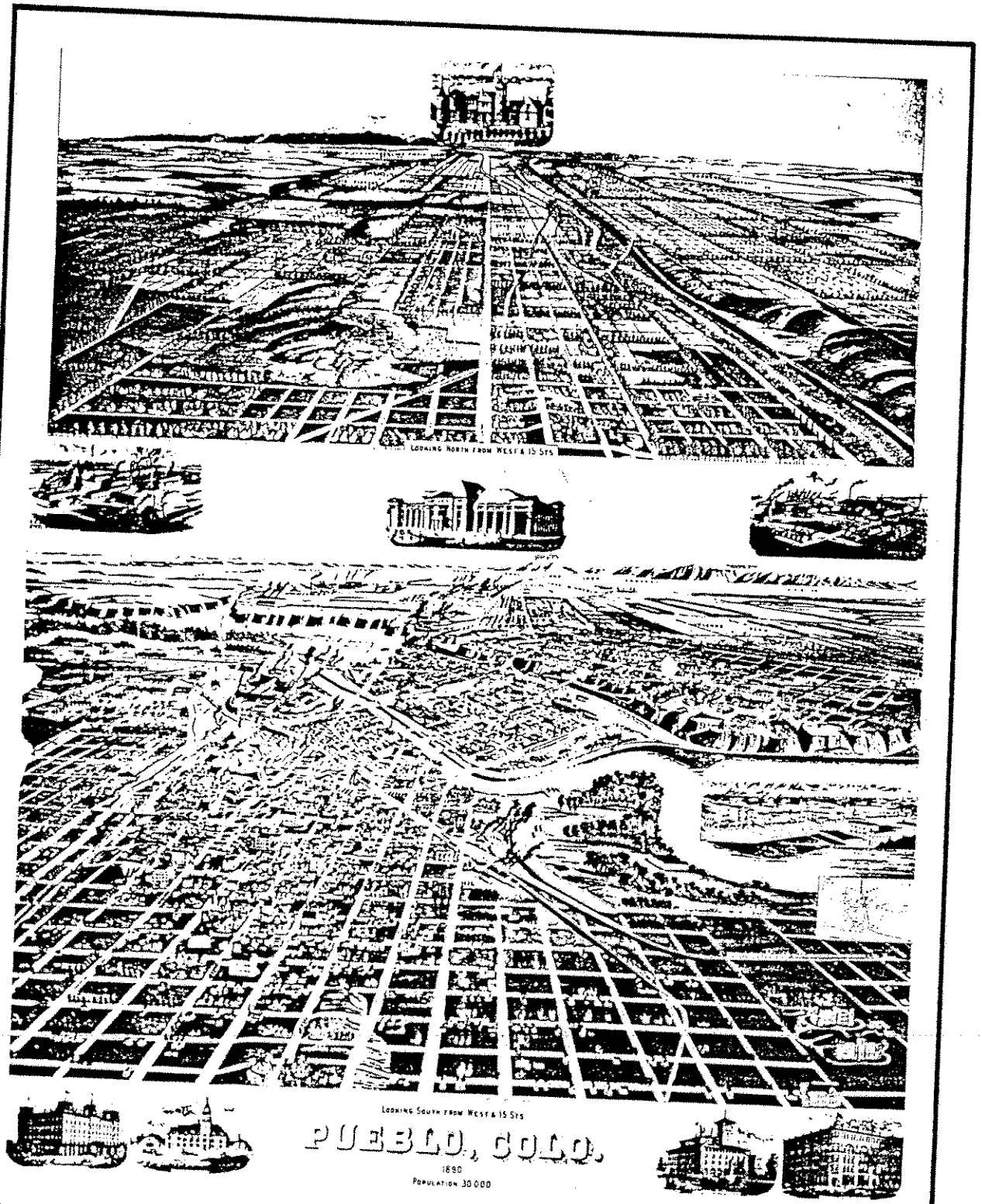


FIG. 9 VIEW OF PUEBLO, 1890 (CAW, P. 585)

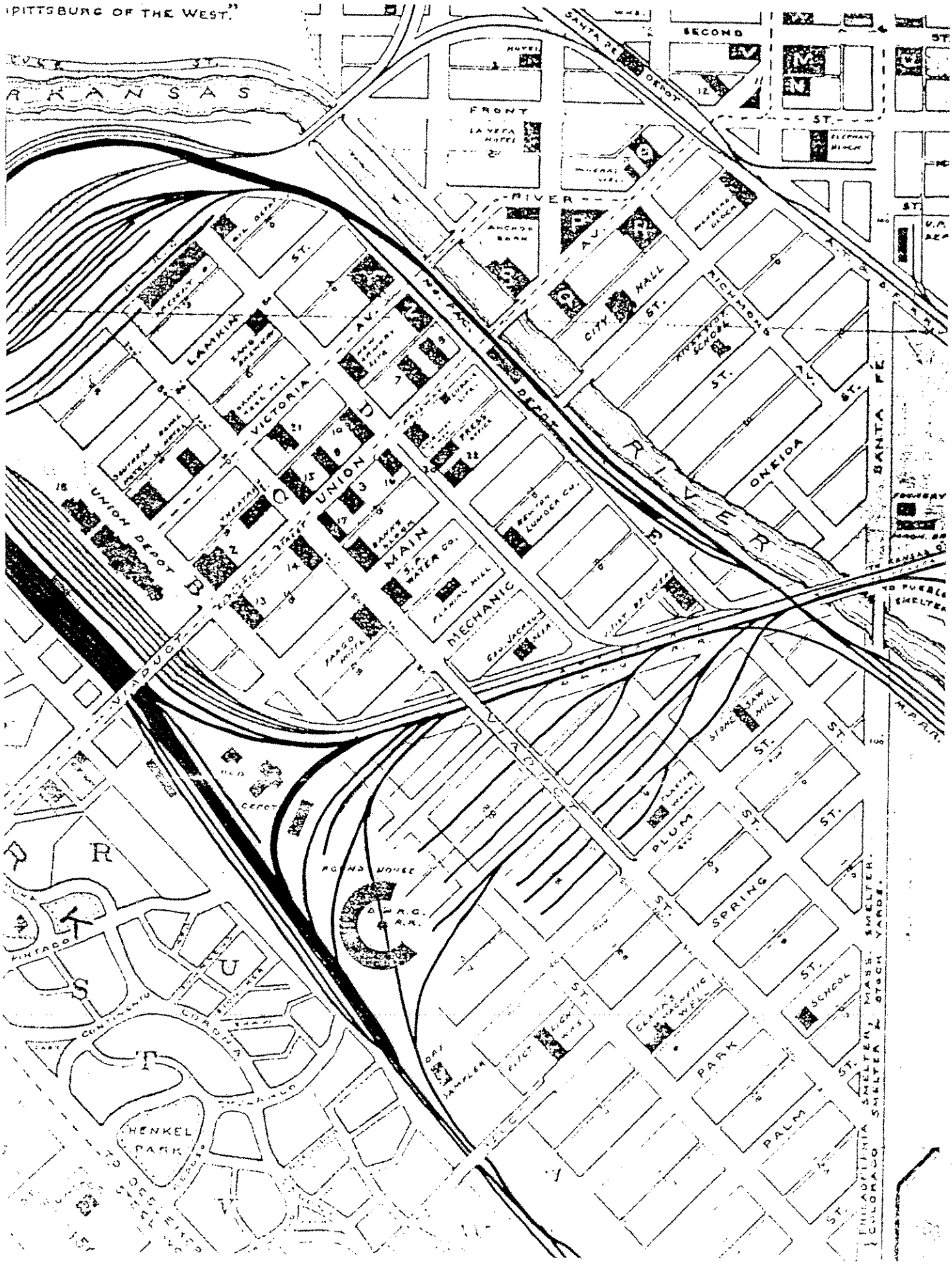


FIG. 10 PUEBLO CBD (PUEBLO, COLORADO, APPENDIX 9)

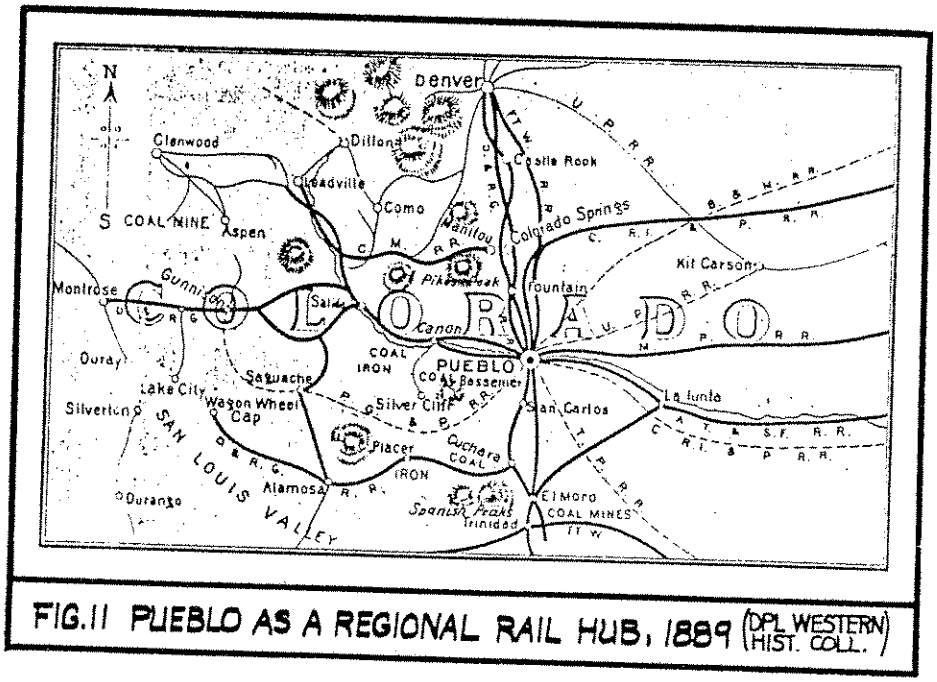
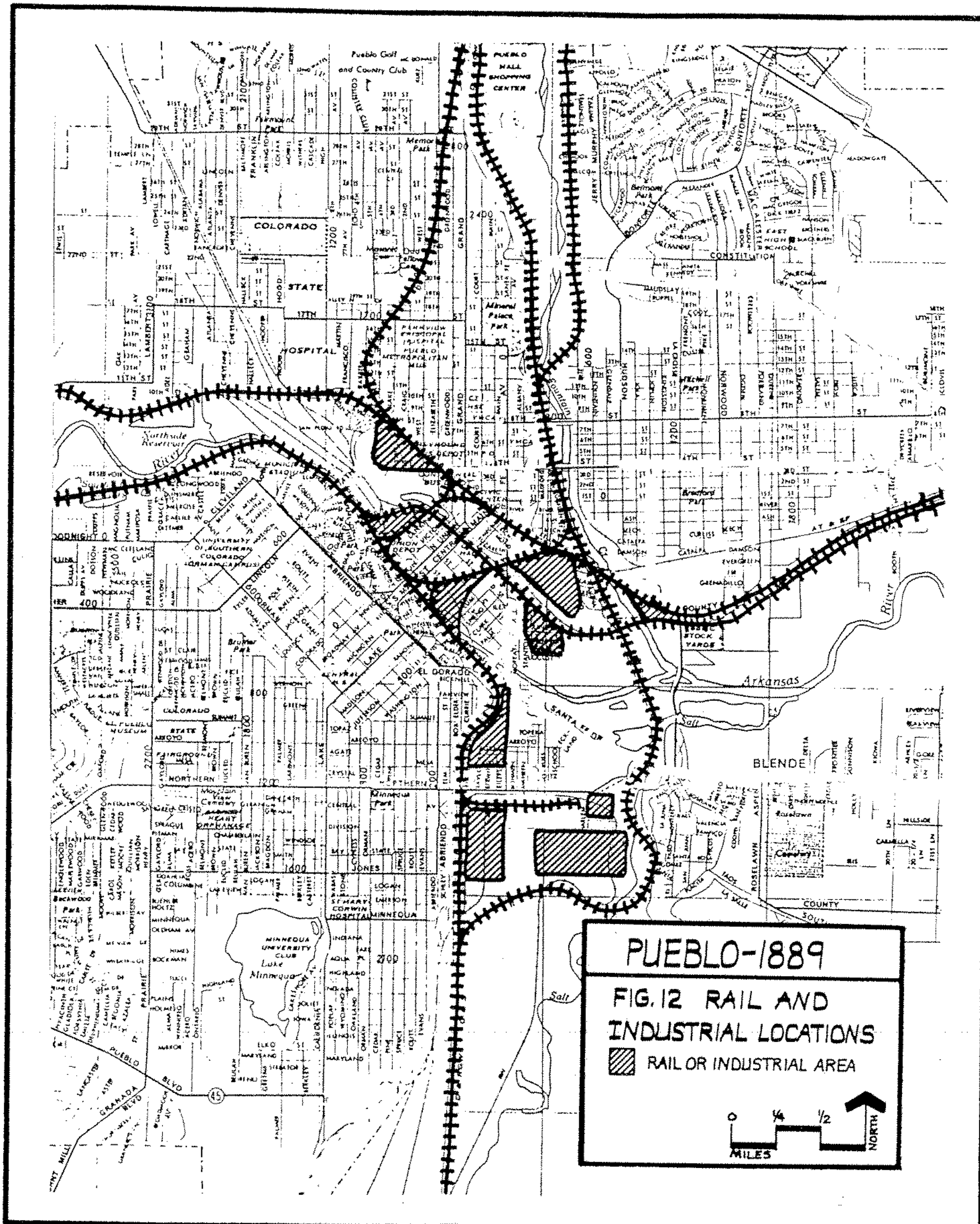
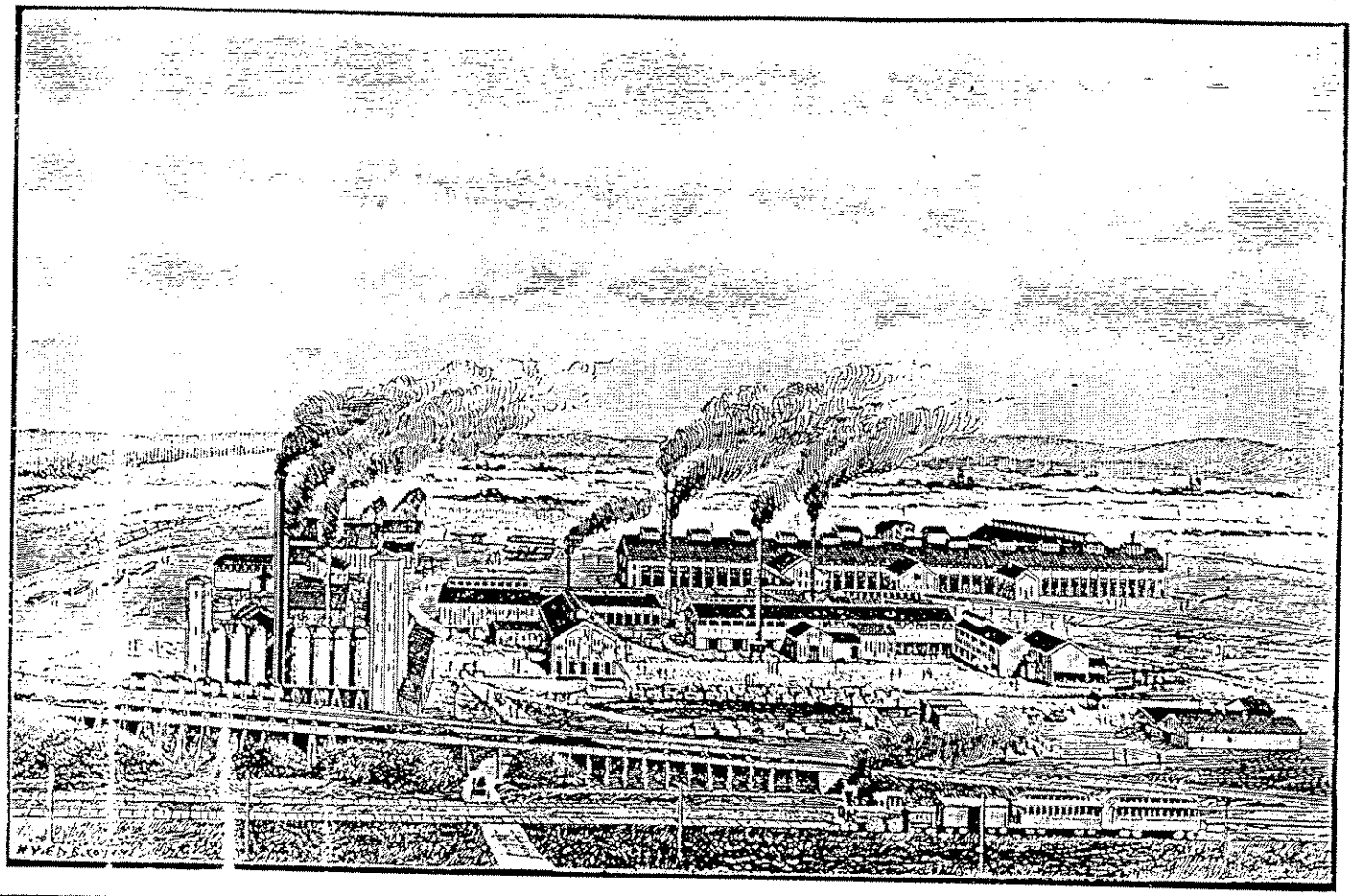


FIG.11 PUEBLO AS A REGIONAL RAIL HUB, 1889 (DPL WESTERN HIST. COLL.)



PUEBLO-1889

FIG. 12 RAIL AND INDUSTRIAL LOCATIONS



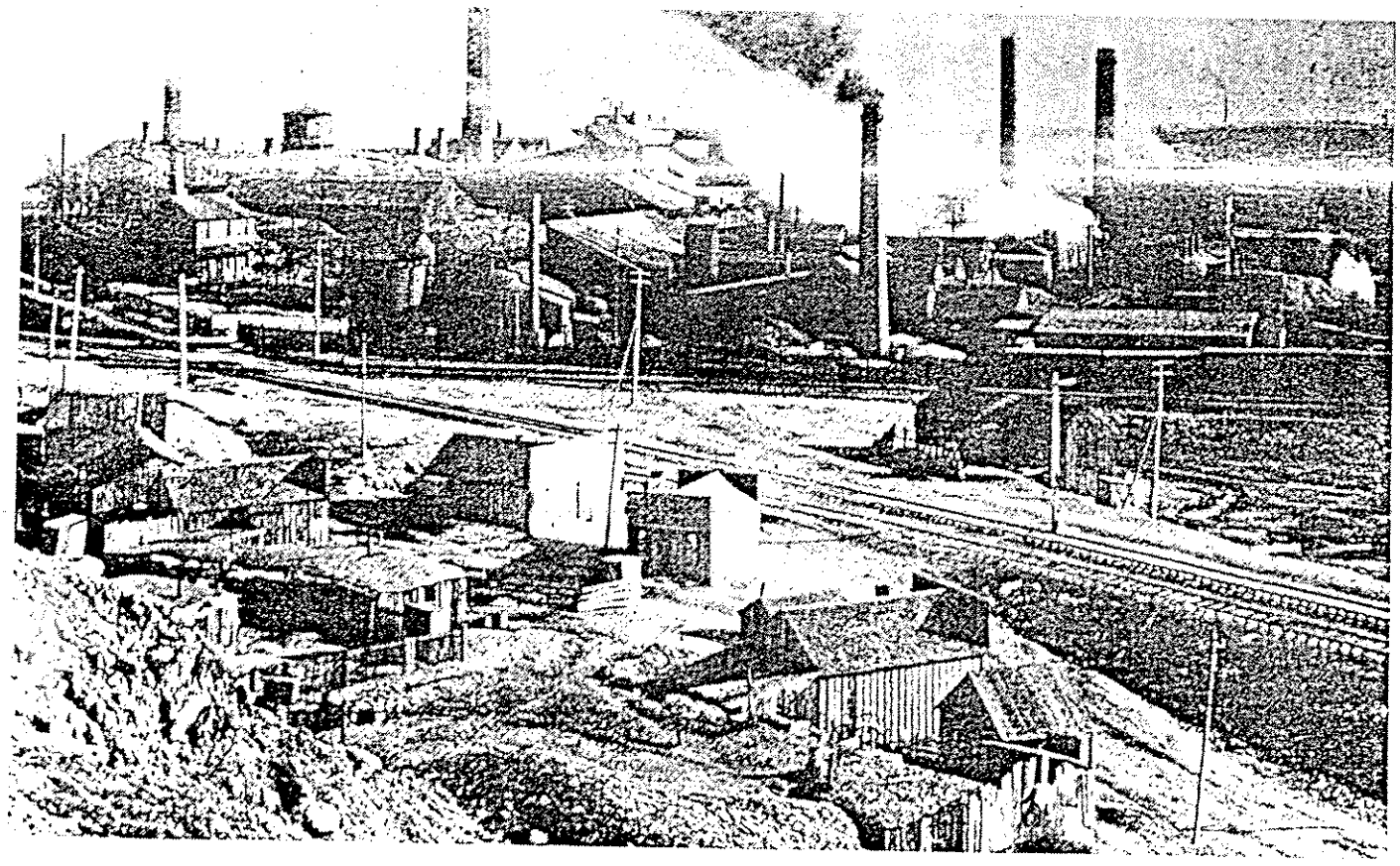


FIG. 13 INDUSTRIAL BUILDINGS AND NEARBY HOUSING

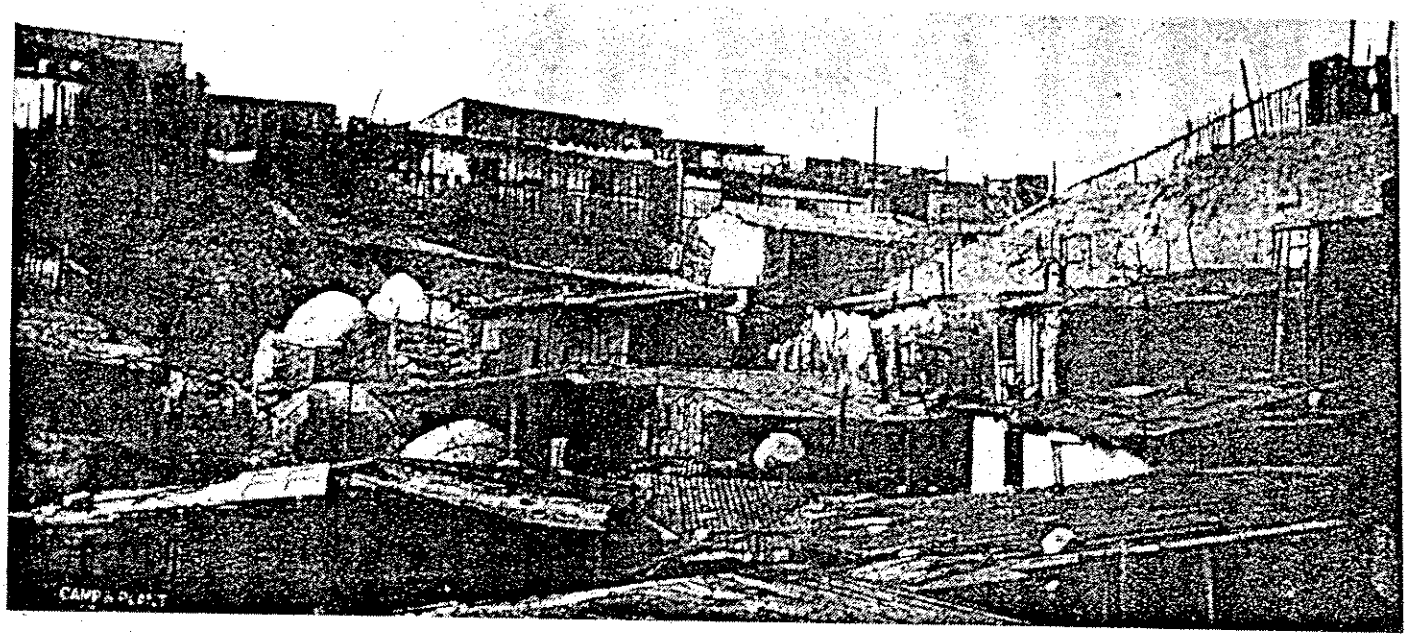


FIG. 14 HISPANIC INFORMAL BARRIO PLANNING (PUEBLO, P. 216)

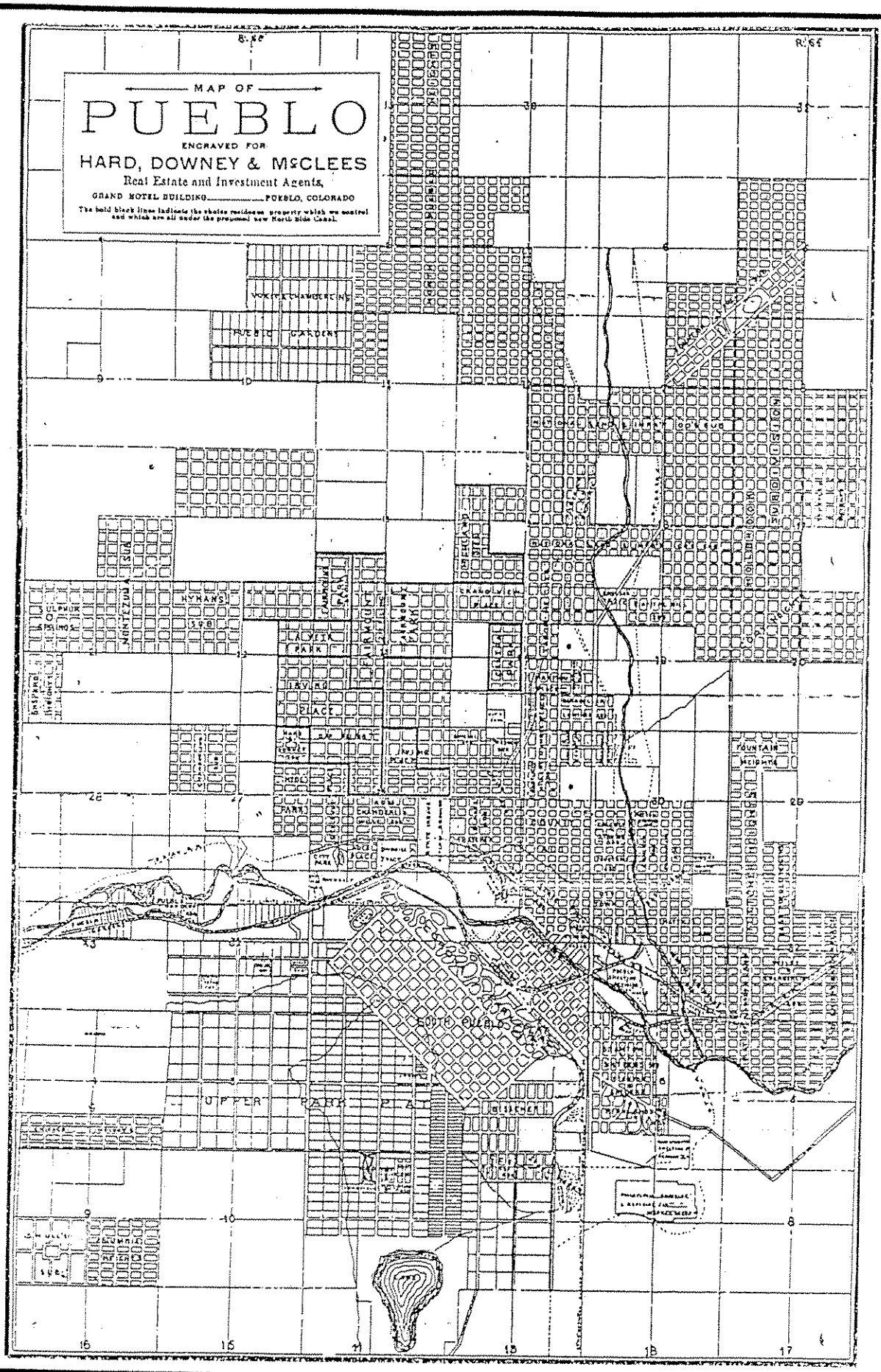


FIG. 15 PUEBLO PLATTING, 1889 (DPL, WHC)

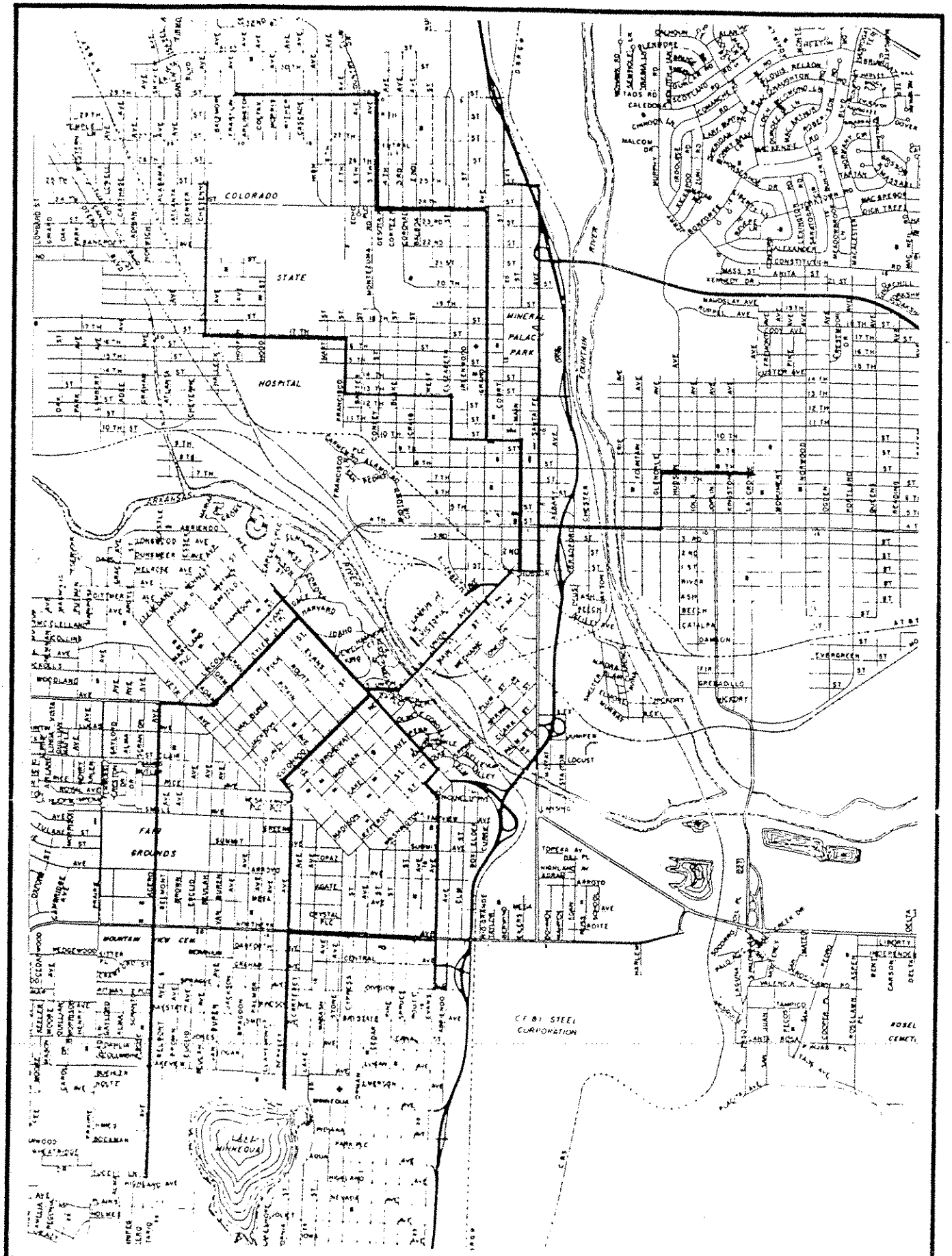


FIG. 16 PUEBLO'S STREETCAR SYSTEM, 1896 (PUEBLO, COLORADO, APPENDIX 30)

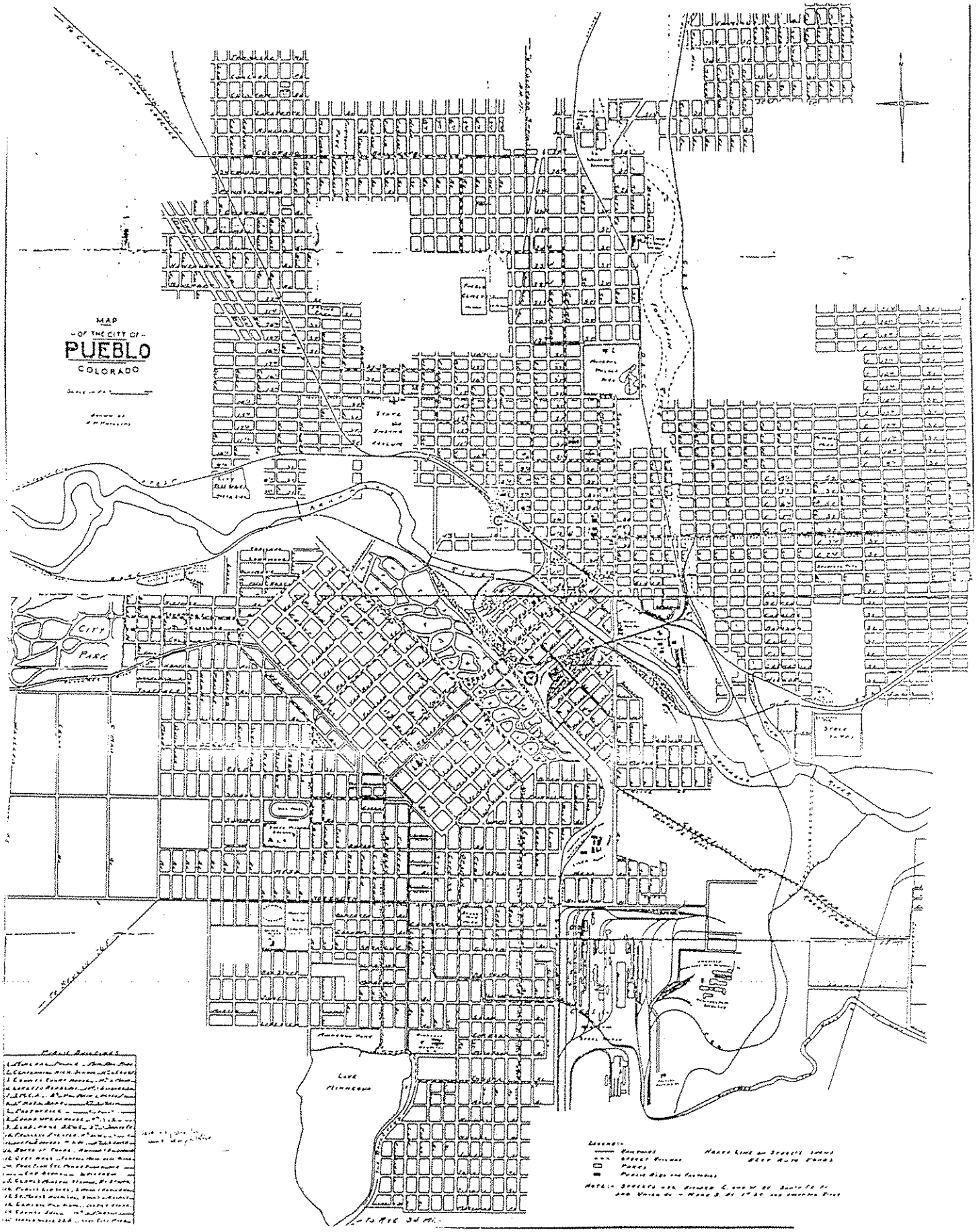
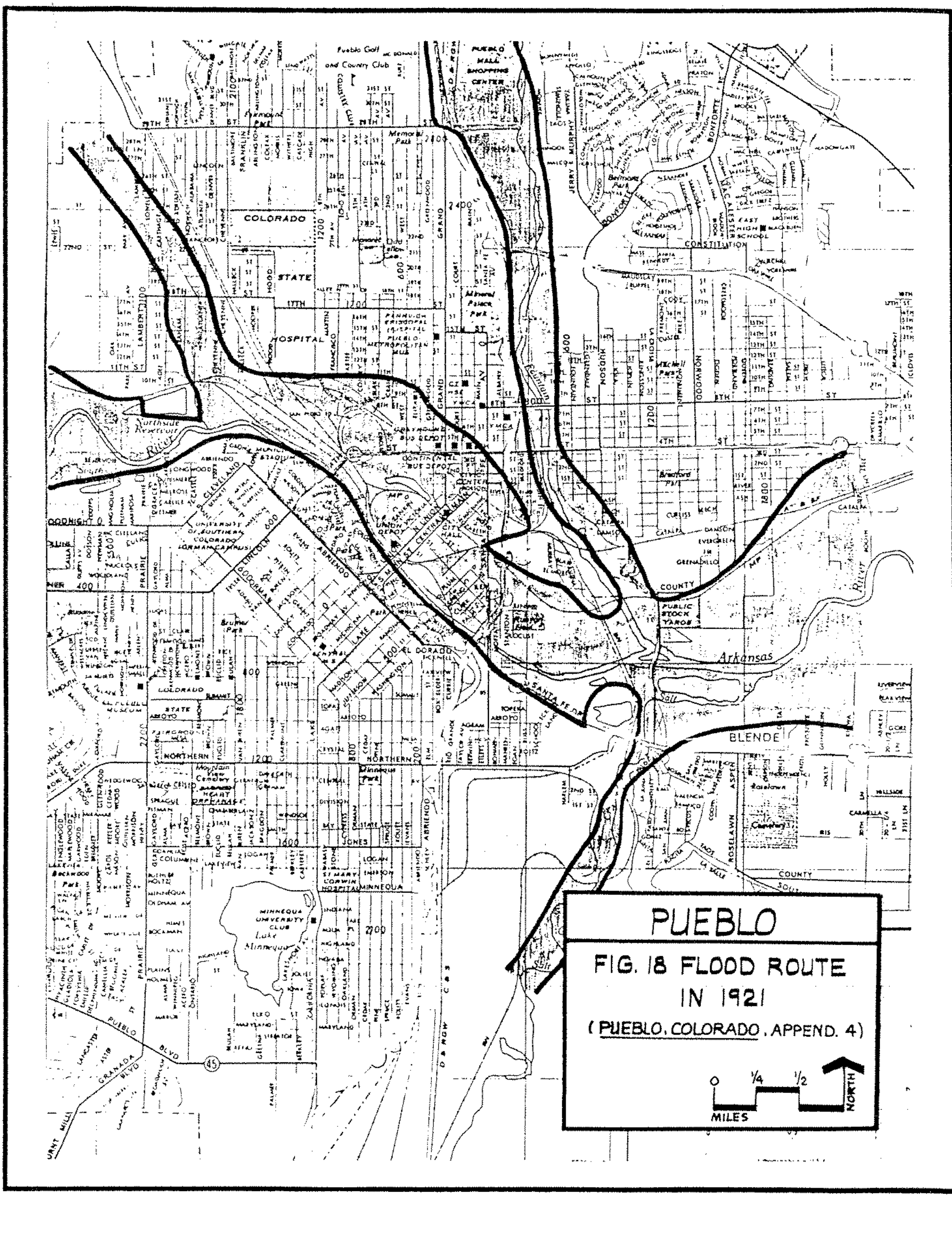


FIG. 17 PUEBLO PLATTING, ca. 1918 (DPL, WHC)


Pueblo Golf and Country Club
PUEBLO MALL SHOPPING CENTER
COLORADO STATE HOSPITAL
Mineral Palace Park
Belmont Park
EAST HIGH SCHOOL
CONSTITUTION
Northside Reservoir
River
UNIVERSITY OF SOUTHERN COLORADO (ORMAN CAMPUS)
GREYHOUND BUS DEPOT
CONTINENTAL BUS DEPOT
UNION DEPOT
CITY HALL
PUBLIC STOCK YARDS
COUNTY
Arkansas
River
SANTA FE DR
BLENDE
NORTHERN
Minnequa Park
MINNEQUA UNIVERSITY CLUB
Lake Minnequa
ST MARY CORWIN HOSPITAL
MINNEQUA
PUEBLO BLVD
GRANADA BLVD
Roselawn
Cemetery
0
1/4
1/2
MILES
NORTH

PUEBLO

FIG. 18 FLOOD ROUTE IN 1921

(PUEBLO, COLORADO, APPEND. 4)