

BURNHAM YARDS RESEARCH REPORT



PREPARED BY HISTORIC DENVER, INC.
WITH SQUARE MOON CONSULTANTS
2016/2017

TABLE OF CONTENTS

1. Introduction.....	3
2. History.....	5
Burnham at the Beginning.....	5
Early Employment and 1885 Strike.....	8
Palmer Converts to Standard Gauge.....	9
Development of Neighborhoods.....	10
Post-World War I Upgrades at Burnham.....	11
World War II Changes in Labor and Locomotives.....	13
Dieselization at Burnham.....	15
Mergers, Last Burnham Assignments and Legacy.....	17
3. Physical & Architectural Description.....	20
Site Buildings & Elements.....	21
Coach Shop.....	22
Roundhouse Foreman’s Office	22
Backshop.....	23
Steel Car Shop.....	24
Testing Laboratory.....	24
Women’s Locker Room/Hospital.....	24
Site Features.....	25
4. Exhibits.....	26
5. Resources.....	35

I. INTRODUCTION

For nearly 150 years Burnham Shops and Yards was a major center of activity in Denver, stimulating Denver's economy, providing employment for thousands of residents, catalyzing adjacent industrial and residential development, facilitating access to Colorado's rich mineral resources, and linking communities throughout Colorado and the West. The contributing buildings and structures at Burnham Yards are impressive resources that collectively tell the story of railroading in its heyday, and to convey the stories of the men and women of all walks of life who contributed to Denver's development through industry.

The burgeoning Denver & Rio Grande, later Denver & Rio Grande Western (D&RG/D&RGW) built its original main railroad yard on military warrant lands purchased by former territorial governor, Alexander Cameron Hunt, in 1871, five years before Colorado became a state. The land served as a rail yard and service facility for more than 145 years, almost as long as Denver has existed, tying it closely to the city's story.

The D&RG and Burnham Yards prompted industrial and residential growth of Denver on all sides. The Denver-based railroad was Colorado's largest home-grown railroad, with 2,489 miles of track laid by 1917, and the most extensive network of narrow gauge lines in North America. Burnham Yards played an exceptional role in repairing, building, and maintaining virtually all the D&RG/D&RGW locomotives and rolling stock for 117 years, between 1871 and 1988. Significant innovations and new technologies in railroad manufacturing were developed and devised at Burnham Yards under the strong leadership of General William Jackson Palmer, and through the tutelage of his successors along with many skilled technicians and machinists over almost a century and a half of operations.

The history of Burnham Yards is also closely interwoven with its adjacent working class neighborhoods, particularly Hunt's Addition in greater Lincoln Park, and the thousands of workers—of all racial origins—who labored at Burnham, striving to make better lives for themselves and their families. The economic ups and downs of the Rio Grande Railroad also led to significant labor tensions and uprisings on occasion, such as major strikes resulting in newspaper headlines in 1885 and 1922. During World War II, large numbers of women and African Americans joined the workforce. These aspects of the D&RGW contributed to national social trends that led to the improvement of job and education prospects for women and individuals of all racial backgrounds after World War II. In 1988 D&RGW became Southern Pacific (SP), until SP's 1996 merger into Union Pacific, whereupon Burnham Yards continued to play a major role for UP until February 2016.

The six surviving historic buildings and three historic site features at Burnham Yards, and their associated relationships, create a highly unusual and significant surviving industrial historic district in Denver. The six contributing railroad buildings date from 1901 to 1943, with additions through 1965, and were built foremost as utilitarian industrial facilities to house the bustling activities of the D&RG/D&RGW's operations. The size and height of the 1901 Coach Shop, the 1924 Steel Car Shop, and enormous 1924 Backshop all reflect their uses to construct, repair, and maintain massive railroad equipment.

All six buildings were designed and built with durable materials and occasional flourishes of bricklayers' art. The masonry work on the buildings is of high quality, designed and executed by skilled workers. Brick masonry on these buildings reveals common practices that were once common knowledge for craftsman but are exceptional today.

Three surviving site features include the Transfer Table Pit, the Turntable Pit, and the original late 19th-century Mainline Track. These features represent the day-to-day operations of an expansive railroad repair and construction shop, the complexity of moving and lifting heavy railroad equipment, and Burnham Yards' historic connection with the railroad line.

Burnham Yards has been located at the crossroads of major transportation routes since Denver's earliest days, and is the only permanent use, other than natural space and occasional hunting and camping, ever located on this land. The city has grown around the D&RG/D&RGW shops and yards for nearly 150 years. Burnham Yards prompted adjacent residential settlements to the east and southeast. Burnham was a major impetus and focal point for these residential neighborhoods, including Lincoln Park and Baker, with their mutual livelihood and fate intertwined. When Denver extended its street grid west across Burnham via the 8th Avenue Viaduct in 1937 and again with the 6th Avenue Viaduct in 1956, the Burnham Shops and Yards became even more visually prominent to an automobile-centric public traveling east into Denver and west out of the city. Travel on the viaducts still provides an expansive view of Burnham, reinforcing its role as an orienting visual feature of modernizing Denver.

The survival of the expansive D&RG/D&RGW railroad shops and associated yards in Denver is highly unusual, making it a uniquely rare resource for Denver. The city once supported other railroad shops—Colorado & Southern/Santa Fe, Union Pacific, Denver & Salt Lake—but all these facilities have disappeared in the modern city (Forrest and Albi pp. 190–217). Burnham Yards also provides meaningful context for surrounding working class neighborhoods, such as Lincoln Park and Baker, whose origins and history is closely connected with the location and development of Burnham.

II. HISTORY

The first train arrived in Denver in 1870, when the city was just barely a decade old. This feat was only accomplished through the concerted efforts of Denver's civic leaders and the Chamber of Commerce, as the transcontinental railroad went through Cheyenne, Denver's rival. Following the 1870 rail connection to Cheyenne, several entrepreneurs and proposals emerged to connect more of Colorado with the national rail network, particularly the Territory's rich mining centers west and south of Denver.

One seasoned railroader, William Jackson Palmer—employed since 17 years of age by eastern rail lines and attaining the U.S. Army rank of general during extraordinary Civil War exploits—headed the new Denver & Rio Grande (D&RG) Railroad. The company, founded in 1870 – (the same year the railroad arrived in Colorado), listed its incorporators as W.J. Palmer, W. H. Greenwood, and Alexander Cameron (or A.C.) Hunt, who served as the fourth territorial Governor of Colorado between 1867 and 1869. A.C. Hunt served on the company's initial Board of Directors and was an avid promoter of the D&RG, surveying and purchasing properties for the railroad, serving as a representative to W.J. Palmer on railroad matters, and serving as president of the Denver and Rio Grande Extension Company, overseeing the construction of the D&RG's San Juan branch in the late 1870s and early 1880s (Hall, PP. 498-499).

The D&RG secured right of way south from Denver through Colorado Springs – a town it created in 1871 to support the D&RG – to Pueblo, intending to strike both south to Trinidad then across Raton Pass on the way to Mexico and the Pacific Ocean, and west from Pueblo into the mining districts scattered throughout the Colorado mountain ranges and their valleys. Palmer and his civil engineer Howard Schuyler began construction of the D&RG in 1871, starting in downtown Denver near the confluence of Cherry Creek and the South Platte River, and moving south with the unusual track gauge of 3 feet. Without land grants and large initial financing, D&RG chose 3-foot “narrow” gauge over “standard” gauge—4' 8½” —for lower costs and greater abilities to negotiate the mountains with tighter curves and steeper grades.

Burnham at the Beginning

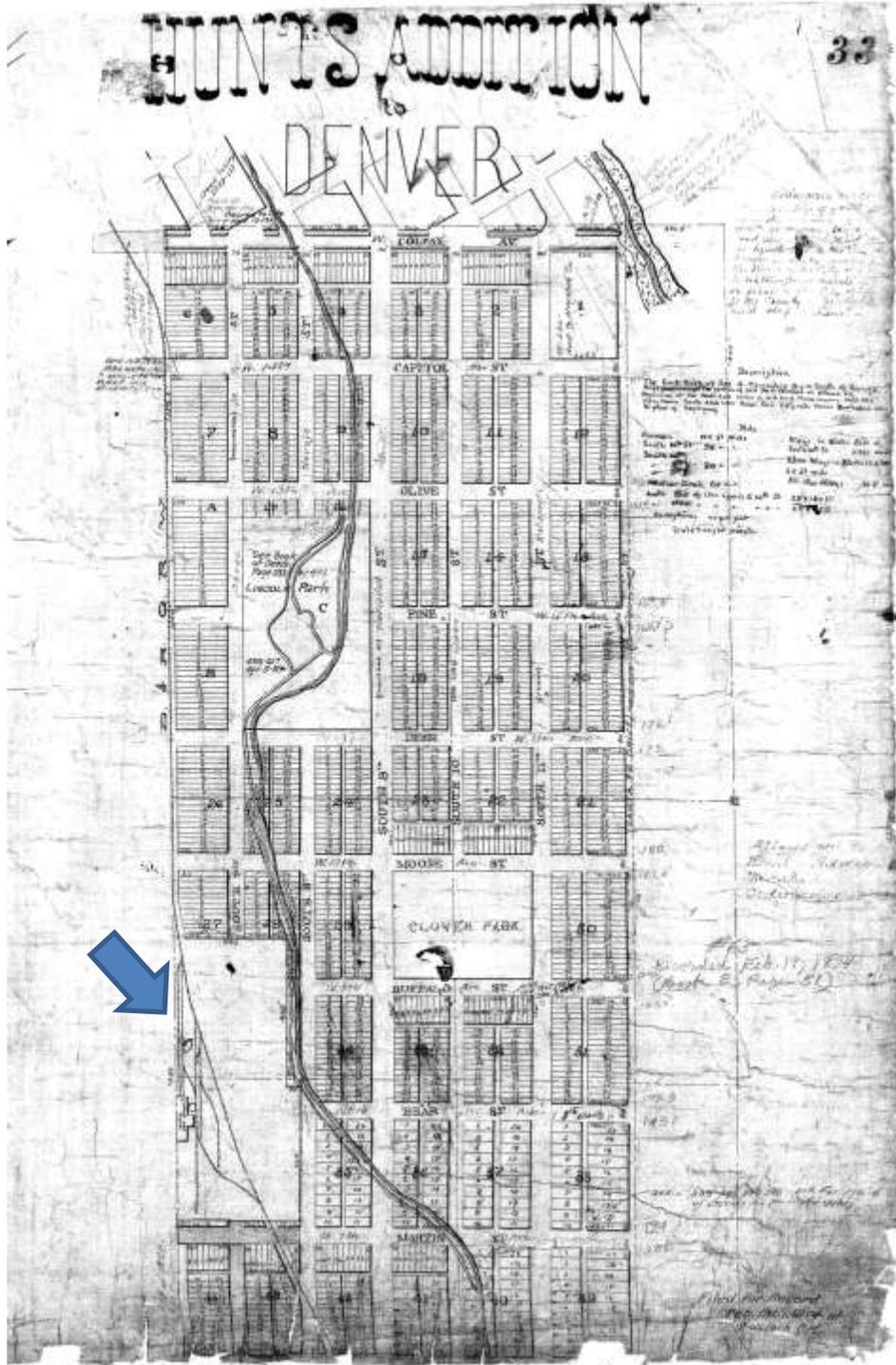
The D&RG quickly established its first station 2 miles south of central Denver as “Burnham” and immediately began construction of mechanical shops to maintain the railroad's initial fleet of seven steam locomotives acquired from the Baldwin Locomotive Works of Philadelphia. Baldwin's chief financial officer, George Burnham, is credited as the namesake for the D&RG station at Burnham, Colorado. According to traveling businessman Nathaniel W. Sample, Jr., his father Nathaniel Sample, Sr. accompanied those first locomotives from Philadelphia to Denver. Sample “named the place,” his son told the *Denver Post* in 1935, “after George Burnham, who was then head of the Baldwin Locomotive works, and who was responsible for sending Sample to Denver” (*Denver Post*, December 10, 1935). The first D&RG locomotives might have been an investment by Baldwin and Burnham in Palmer's grand vision rather than a straight cash sale, and perhaps Palmer expressed his gratitude by agreeing with engineer Sample to name the important stop for George Burnham. Beginning in 1871, Burnham Yards became and remained the railroad's primary facility for servicing its rolling stock, from locomotives—including many more products from Baldwin—and freight cars to passenger equipment and cabooses (LeMassena p. 67). The railroad's Master Mechanic—the position first held by Nathaniel Sample, who upon Palmer's offer remained with the railroad for 30 years (*Denver Post*)—headed Burnham as the highest ranking D&RG, and later D&RGW, officer at the facility (Tudak).

The D&RG's main shops and yard were not coincidentally on lands owned by former Colorado Governor A.C. Hunt, Palmer's friend and partner in the D&RG. The Burnham complex was built on approximately 16 acres of land that the D&RG purchased from Hunt about 1870. Hunt had acquired a military warrant for one quarter of a section of land—160 acres—"in Denver City" in February 1866 (Hall, PP. 498-499), when the city was only eight years old and still centered around the confluence of Cherry Creek and the South Platte River to the north. Hunt also acquired military warrants for an adjacent 160 acres south of the 1866 warrant, giving him 320 acres of contiguous land south of Denver.¹ Three years after the D&RG Shops opened, Hunt recorded "Hunt's Addition," a residential subdivision, on February 19, 1874. Refer to **Exhibit B** earlier in this report and the diagram below.

Palmer's railroad reached Colorado Springs later in 1871 and Pueblo in 1872. In 1872 the railroad also purchased Westinghouse air brake systems for six of its locomotives, the first freight application of air brakes in the nation, likely installed and maintained at Burnham's mechanical shops. The nation's financial Panic of 1873, however, halted further D&RG construction until 1876, coincidentally the year of Colorado's statehood. Meanwhile, another railroad—the Atchison, Topeka & Santa Fe (AT&SF)—entered Colorado from Kansas and by 1876 had reached Pueblo, also with plans to move south and cross Raton Pass. In 1878 Palmer lost his right of way over Raton Pass to the AT&SF but turned west from Pueblo along the Arkansas River and its Royal Gorge toward a silver rush that year in Leadville. For the short term, the cost of expansion proved too great an expense and Palmer lost control of the entire D&RG to the AT&SF. With help of financier Jay Gould, Palmer regained control of the D&RG in 1880, and the D&RG moved toward Leadville and the Tennessee Pass route toward the Pacific.

By 1881 Palmer and the D&RG incorporated a railroad in Utah—the Denver & Rio Grande Western (aka RGW and "Western," not the ultimate 1921 D&RGW)—to continue the narrow-gauge empire farther west through many more mining districts and the continued hope of a Pacific extension. In 1882 a long D&RG branch reached Silverton, Colorado, the railroad's first construction on steel rails produced and rolled in Pueblo at the D&RG's subsidiary Colorado Coal & Iron Company (later CF&I). In 1883 the Colorado and Utah narrow-gauge companies met and completed Palmer's projections of the moment, but in 1884 he again lost control of the railroad. Still, the D&RG had made its mark. By the mid-1880s, the D&RG had the largest narrow gauge railroad network in North America with 2,783 miles of track connecting the states of Colorado, New Mexico and Utah (Puffert, pp. 933-960).

¹ Bureau of Land Management records evidence that a military warrant for the NE Quarter Section, Township 4, Range 68 in Denver City was awarded to Granville Jones, a private captain for the Missouri Volunteers in the Osage Indian Disturbance, on February 15, 1866, and that A.C. Hunt served as his assignee on the warrant. (Ascension MW-0233-115). A.C. Hunt purchased military warrants for the SE Quarter Section, Township 4, Range 68, after their original assignments (Accession MW-023-009, Nov. 1, 1865 and MW-023-044, Dec. 1, 1865). Researchers were not able to locate Hunt's purchase of SE Quarter Section, although he clearly owns the property at time of subdivision in 1874.



Former Governor A. C. Hunt's 320 Acre Tract of Land in Denver, Including Land Carved Out for D&RG Railroad, Denoted by the Blue Arrow.

Source: Book 2, Page 51, Denver Plat Records, Denver Real Property Records for Subparcel 2, 701 Navajo Street, #162338091

Early Employment and 1885 Strike at Burnham



Special headline for an article on Burnham Shops in the *Denver Sunday Times* of July 10, 1898.

Source: *Denver Sunday Times*, Denver Public Library microfilm.

Employment at Burnham Yards fluctuated greatly as the D&RG's economic fortunes expanded and contracted over the years. In the late 19th century, Burnham Yards employed several hundred to more than a thousand workers (Tudak). Many workers were needed for a myriad of tasks, including planing wood for passenger cars, testing and installing air brakes, washing locomotives, assembling and repairing locomotives, building and repairing wheels, blacksmithing to build nuts and bolts, operators of the boiler room, to name a few assignments at Burnham. An 1898 newspaper article recounted what daily life was like for workers in Burnham Shops and Yards. The article describes the training process for its workers:

This road takes a boy at the age of 16 and if he is willing to work, and what is of more importance, if he is willing to study will educate him in the shops and advance him.... When a boy serves his four years of apprenticeship...he comes out with a first class scientific education in his chosen line.... They go to work at 7:30 a.m. and work until 4 p.m. with half an hour at noon.... (Denver Sunday Times, July 10, 1898).

The article further described the types of work done at the Burnham Yards and Shops:

Burnham is the Denver & Rio Grande hospital for sick, injured and broken down railroad cars and engines.... The master mechanic looks her over...[and] decides that she needs...a general overhauling.... The doctor of engines orders her into the machine shop. Here she is taken all apart.... It is then thoroughly cleaned and repaired in every part.... In the Burnham shops are 400 men. They do the work by means of brains and machinery of an army of workers....(Denver Sunday Times, July 10, 1898).

The article continues, by describing operations to build passenger and freight cars. At one point the article quips: "...the minds which control the machinery...have a perfect system for building freight cars.... The matter cannot be explained here, but it is one of the returns that the Denver & Rio Grande road is getting for good treatment and good wages to its men." (Denver Sunday Times, July 10, 1898). The D&RG records and photographs from the early to mid-1900s evidence that the Burnham Yards workforce was integrated, and included workers of multiple races working in close quarters, an unusual situation for the times.

While the D&RG may have had a reputation as a solid employer, the company was not without its fair share of labor difficulties. In one such incident, the 1884 financial troubles at the D&RG led to sharply reduced revenues from a statewide mining turndown, and nervous foreign bondholders. Cost cutting then resulted in labor unrest

and demands for higher wages, and on May 4, 1885, according to the railroad's chief biographer Robert Athearn, "between four and five hundred Denver [Burnham] shopmen walked off the job, followed by two hundred at Salida and over a hundred at Gunnison" (Athearn p. 151).

The course of the strike paralleled that of similar actions across the nation during these years.... When the Burnham shops were [re-]opened, with scab laborers protected by police officers, typical mob scenes took place with jeering and spitting at the forces of law highlighting the proceedings. During late May and throughout the summer there were a number of attempts to dynamite trains and other equipment, with the Knights [of Labor union] heatedly denying any responsibility for violence. Management held to its position, letting the news of unsuccessful strikes by Knights in other parts of the nation, and public revulsion to dynamiting, do its work. By early November [1885] the strike was dead, although the labor organization issued no formal admission of defeat. (Athearn p. 152)



Burnham Shops and workers c. 1900: General Store/Storehouse at left, Blacksmith Shop & Foundry at right, all demolished 1963. Source: John Tudak Collection.

Palmer Converts to Standard Gauge Followed by Financial Difficulties

Palmer regained control in 1886 and with the eventual help of Denver tycoon David Moffat set about standard-gauging the Utah end of the system, completed by 1890. Most of the Colorado standard-gauge conversion halted while the country endured another financial calamity in the early 1890s as a result of the 1893 Silver Crash, which brought Denver's growth and development to sharp halt for several years. Despite this, the expanding D&RG Railroad built locomotive roundhouses with some maintenance capabilities great distances from Denver, including Alamosa and Salida, and Burnham Yards continued to grow, handling the most complicated repairs and building some steam engines from the rails up until 1897 (LeMassena p. 67). By 1900 the railroad completed standard-gauging its Tennessee Pass mainline through Colorado and added a number of buildings at Burnham, including a 30-stall Roundhouse to service standard-gauge locomotives (D&RG pre-1924 Ledger).

In 1901 the late Jay Gould's son, George, bought Palmer's shares in the company and acquired the D&RG along with the Utah RGW connection, using their joint assets finally to build the long-projected California extension,

naming it the Western Pacific Railroad. Many critics accused Gould of draining the D&RG to “deterioration,” but Burnham Yards continued site improvements during the early 1900s, building the Coach Shop in 1901 and the Power House building in 1906 for the standard-gauge Roundhouse (see attached Inventory Forms for both).

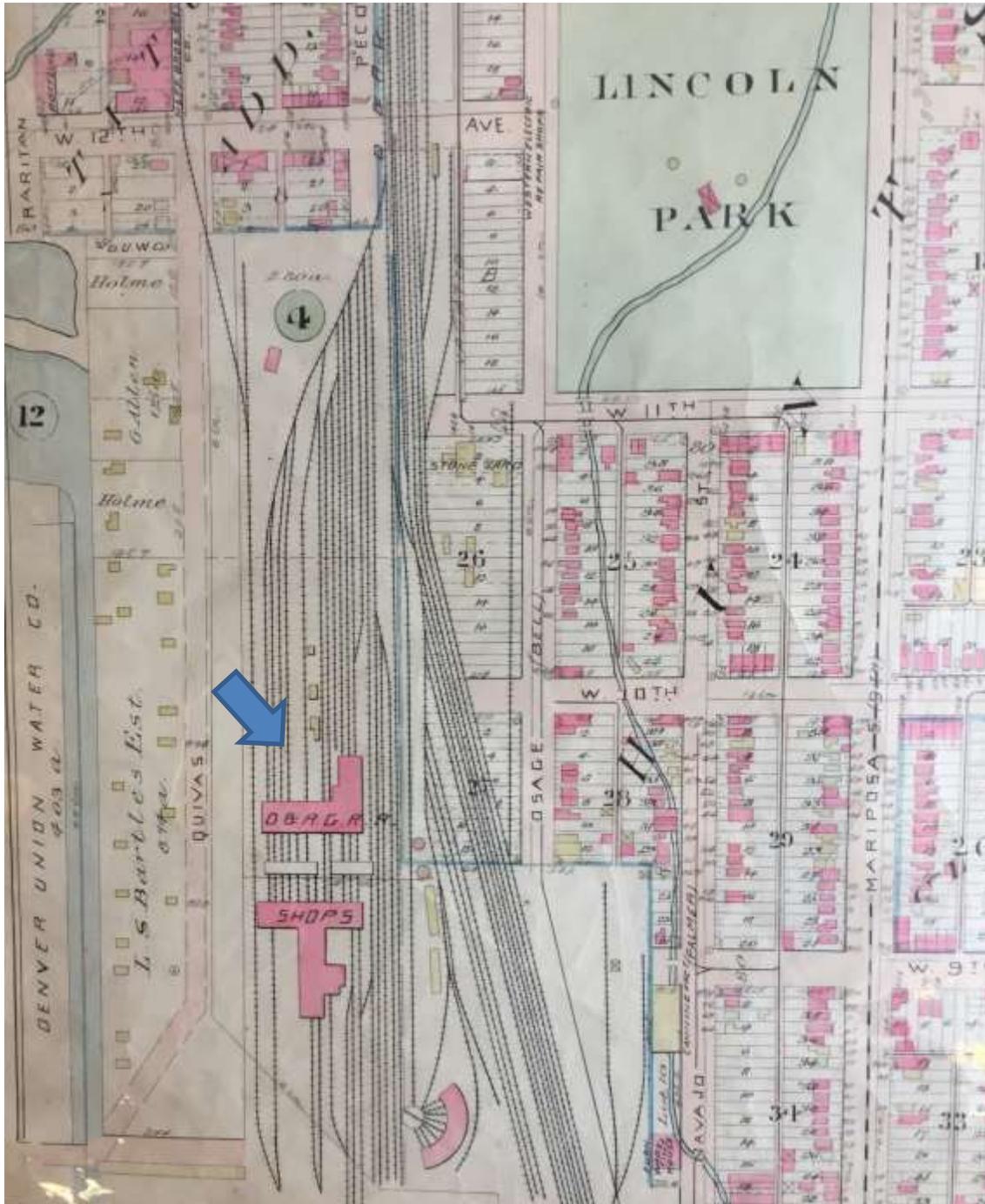
Gould’s overreach caused Western Pacific to enter receivership in 1915, ironically just as traffic picked up nationally with as the US began supporting the war effort in Europe. In 1918 the D&RG itself collapsed financially, but was taken over by the federal government as part of the wider nationalization of US railroads during the war. The US Railroad Administration (USRA) ran the nation’s private railroads as a coordinated system through early 1920, with tremendous dependence upon D&RG’s Royal Gorge/Arkansas River/Tennessee Pass/Glenwood Canyon mainline between Pueblo and Salt Lake City.

When the D&RG emerged from USRA control and bankruptcy in 1921, the newly organized Denver & Rio Grande Western (D&RGW) Railroad merged the Colorado and Utah rail operations.

Development of Neighborhoods near Burnham Shops

Many D&RG workers chose to live close to Burnham in residential subdivisions on the east side of the Burnham complex, such as Hunt’s Addition north of 6th Avenue (now part of the Lincoln Park neighborhood) and Sumner’s Addition south of 6th Avenue (now part of the Baker neighborhood). In Hunt’s Addition, the small 25-foot-wide lots, were particularly well-suited to accommodate worker housing for employees of D&RG and other nearby industrial operations along the South Platte River. By the early 20th century, these neighborhoods were largely built out with modest-scale single-family and multi-family worker housing. Most residents chose to build brick homes on the subdivisions’ small lots, creating a tight knit neighborhood with rows of homes built close to one another, and residents living and working in close proximity (Denver Real Property Records).

According to local histories, and corroborated by directories and census records, most residents living in the neighborhoods just east and southeast of Burnham Yards worked in railroading, milling, brewing, smelting and other nearby industries that relied on water from the South Platte River. These neighborhoods were well known for housing European and Russian immigrants, as well as Mexicans fleeing the revolution of 1910 (Stauffer). A close examination of Denver city directories from 1926 evidence that many employees of the D&RG and Burnham Yards lived in Hunt’s Addition just east of the railroad complex. This included Walter Robbeson, who owned a home at 829 Mariposa, and worked as a helper in Burnham Yards. Also in the same block was Thomas A. Wood and his wife Florence, who rented a home at 875 Mariposa; Thomas was a brakemen for the D&RG. In the next block north lived Joseph Lucero, a D&RG machinist, and his family, who rented quarters at 966 Mariposa. Within a few years, Joseph Lucero owned a home nearby at 942 W. 5th Avenue, suggesting that his status with the D&RG had improved. City directories in the 1920s show Latinos and Anglos living side by side in Hunt’s Addition, with most residents working at D&RG or nearby manufacturing plants, or in the service industry, working as waiters, bakers and brewers. (Ballenger& Richards; Denver Householders Directory).



1905 Map Showing the Burnham Complex and Adjacent Residential Development to the East. Brick construction is shown in pink with wood construction in yellow.

Source: 1905 Baist's Real Estate Atlas of Denver, Plate 13.

Post-World War I Upgrades at Burnham

Gradually, D&RGW regained its footing after the war, probably assisted by US Rail Administration cash payment for D&RG's depreciation between 1918 and 1920 as a result of the nationalization of the railroads during World War I. However, the new D&RGW continued to have financial difficulty soon and saw its share of labor unrest in the early 1920s. The railroad's economic woes led to worker layoffs, and an eventual system-wide employee

walk out in July 1922. This move led the D&RGW to bring in strike-breakers, including as many as 500 at Burnham alone. (Telluride Daily Journal, March 24, 1923).

In both 1924 and 1926 D&RGW made significant investments at Burnham. A newspaper article at the time reported on a plan to spend \$973,000 for shop improvements at the Burnham facility (Salida Mail, Sept. 19, 1922). D&RGW also upgraded lighter engine facilities at Salida, Grand Junction, and Salt Lake City, and consolidated most remaining narrow-gauge repair work at Alamosa, during the same period (D&RGW Annual Report 1923). Another of the USRA's legacies came with comprehensive and modern designs for all US locomotives and railcars, so Burnham's updating coincided with much new and larger equipment to service and maintain. Burnham's 1920s rebuilding centered on the huge brick 1924–1926 Backshop (see attached Inventory Form) just north of the 1900 Roundhouse. Numerous other large and small buildings filled every useful space in the Yards not occupied by tracks.

Meanwhile the late David Moffat's dream of his own trans-Rocky Mountains line, the Denver, Northwestern & Pacific Railway (changed to Denver & Salt Lake, D&SL in 1913, and nicknamed the Moffat Road) became a regional competitor and transcontinental threat to the D&RGW. When the Moffat Tunnel opened in 1928, Denver's access to Pacific ports would shorten by 176 miles without needing the D&RGW—if the D&SL could complete its own line to Salt Lake City. To prevent this imminent threat, the D&RGW moved to acquire the D&SL in 1930, and in 1934 with a federal loan completed its Dotsero Cutoff along the Colorado River, connecting the former D&SL with D&RGW's 1880s mainline just east of Glenwood Canyon. This expansion, while designed to forestall any competition, ended in default -- landing D&RGW back in bankruptcy (Athearn pp. 321–322). The railroad was forced to consolidate its operations and Burnham Shops took over the locomotive power and rolling stock of another railroad whose smaller shops had been in North Denver ("Utah Junction" in the area's track network), thus becoming an even more strategic servicing location with D&RGW's network of operations..

Despite growing equipment demands, Burnham relied primarily on its upgraded 1920s facilities throughout the Great Depression and into World War II, adding few physical plant improvements beyond the small brick Testing Laboratory building in 1937 (see attached Inventory Form). But shop work remained steady, and even increased during the 1930s. A 1936 newspaper article spoke of an uptick in the construction of railroad cars, including a plan for building "additional air-conditioned coaches, lounge-observation cars, and dining cars" at Burnham, requiring the employment of 908 men. The article goes on to describe Burnham Yards as "a beehive of industry" which "furnishes employment for local labor" to construct the finest cars in the United States. (The Eagle Valley Enterprise, April 3, 1936).

Robert Athearn's 1962 narrative history of the D&RGW highlighted the innovative 1937 Testing Laboratory. "At its Burnham Shops laboratory, established in 1936 [sic] during the [1930s bankruptcy's] trusteeship, the railroad carried on a relentless quest for new methods of saving and prolonging the life of expensive rolling stock ... In his annual report for 1954 [D&RGW president Wilson] McCarthy stated that lower fuel costs, resulting from the use of this [Laboratory's] scientific equipment, had saved the road \$372,790 during the year" (Athearn pp. 349–350).



A woman employee of the D&RGW Railroad works in the 1937 Testing Laboratory, probably in the early 1940s during World War II. This building and the Women's Locker Room building of 1943 are extant in 2017.

Source: Denver & Rio Grande Collection, Print Photographs, Box 15, Envelope No. 591-645 Stephen F. Hart Library and Research Center, History Colorado.

World War II Changes in Labor and Locomotives

During World War II, the D&RGW significantly increased the number of female employees to work mechanical and scientific jobs at Burnham, taking the places of men gone to war, and addressing the heavy traffic demands of the conflict's Home Front (CLICK Magazine). Consequently, in 1943 D&RGW constructed a small brick building west of the Backshop for the "Women's Locker Room & Hospital" (see attached Inventory Form), taking the place of a smaller wood-frame Emergency Hospital nearby. Likewise, in 1944 Burnham Shops added a wing to the 1906 Roundhouse Foreman's Office (formerly the Boiler House) as the "Colored Men's Locker Room," indicating a substantial expansion of African Americans in the wartime workforce as well, mirroring national hiring trends that would ultimately reshape the second half of the 20th century.

The D&RGW acquired its first diesel locomotives in 1941, a group of small yard 'switchers' that stayed close to their various terminals while Burnham Yards learned to keep them running. In January 1942, just after US entry into World War II, D&RGW received the first of 12 large and powerful multi-unit mainline freight diesels built throughout the war, further realigning Burnham and the various skills of its workforce (drgw.net). Burnham workers and the diesel manufacturer in 1942 converted the facility's separate 7-stall Roundhouse into the railroad's first diesel shop (D&RGW Annual Report 1951). When the war ended in 1945, D&RGW ordered more mainline diesels and began to phase out its standard-gauge steam locomotive fleet. Most diesel maintenance continued at Burnham but D&RGW built a subsidiary diesel shop at Salt Lake City in the late 1940s. By 1951 some bays inside Burnham's 1924 Backshop, much larger than the 7-stall Roundhouse, were converted to "running repairs" and more complicated diesel locomotive servicing, and the original "line shaft" overhead power system in the building was replaced with electricity (D&RGW post-1924 Ledger; D&RGW Annual Report 1951).



Burnham Shops c. 1955: steam and diesel locomotives gather at the Coal Chute/Tower, demolished 1963.
Source: John Tudak Collection.

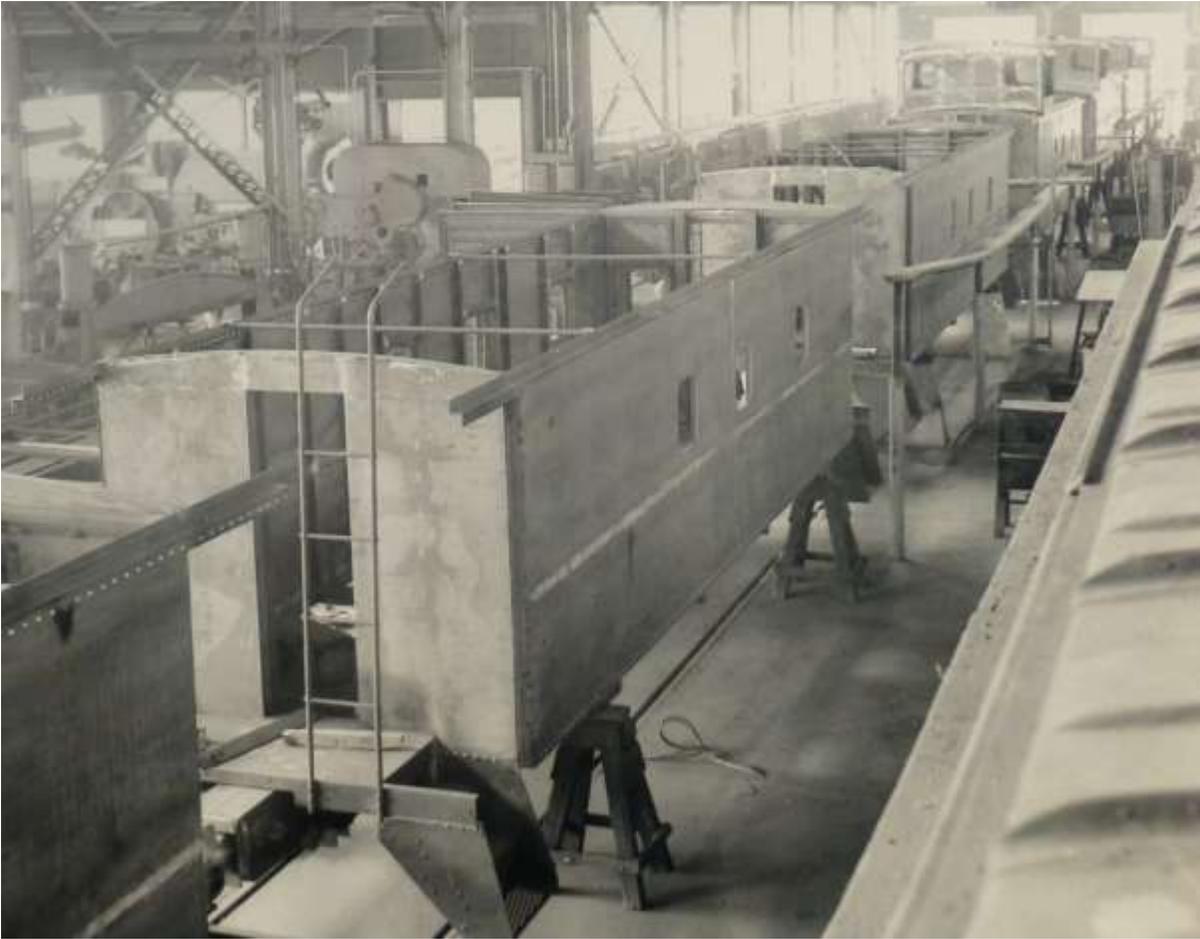
In 1949, D&RGW, in tandem with its connecting Burlington and Western Pacific Railroads, inaugurated the diesel-powered, streamlined *California Zephyr* passenger train running from Chicago to Oakland. Burnham serviced the *California Zephyr's* equipment including its distinctive dome cars when the train passed through Denver each day. Burnham continued to service the railroad's other passenger equipment used on various shorter runs, including periodic maintenance for the narrow-gauge passenger cars of the Alamosa-to-Durango *San Juan* passenger train that steadily increased as a popular tourist attraction after World War II (see Coach Shop Inventory Forms attached).



Burnham Shops 1950, Photos Showing a Variety of Shop Work, Clockwise from Upper Left: Repairs to Box Car Underframe; Brake Repairs to Box Car; Stenciling of Logo to Box Car (Wood Car Shop in Background, Not Extant); Constructing a Caboose Cupola inside the Steel Car Shop (Extant)
 Source: Denver & Rio Grande Collection, Print Photographs, Book 1A, Stephen F. Hart Library and Research Center, History Colorado.

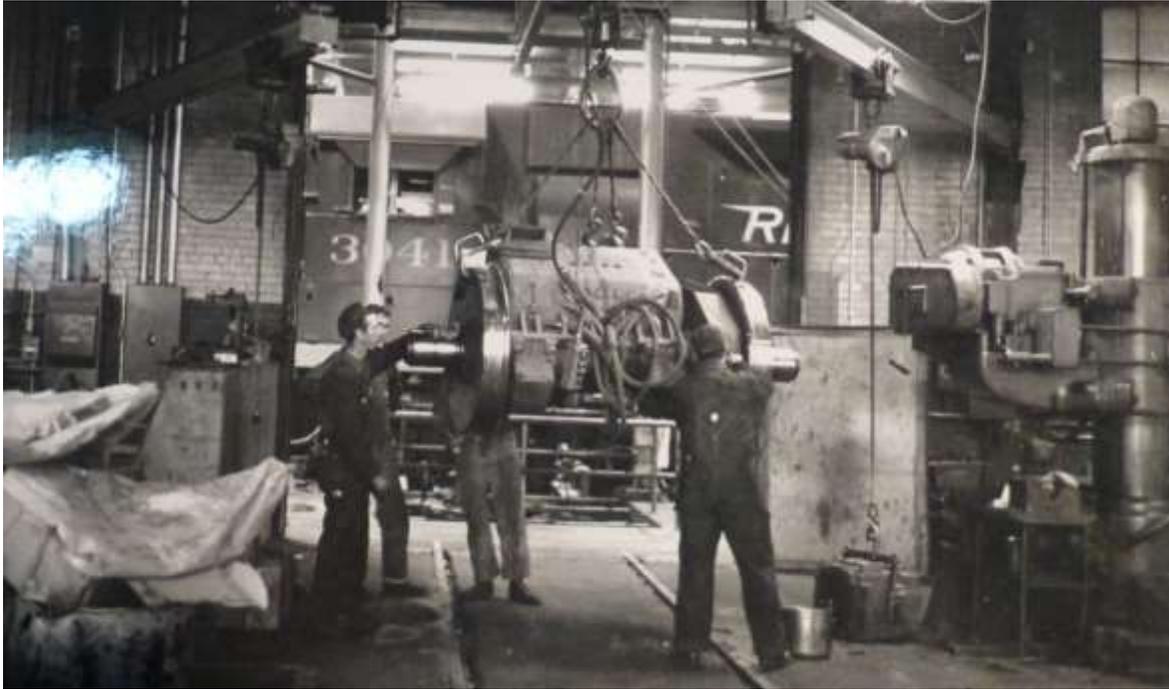
Dieselization at Burnham

Throughout the 1950s, Burnham's 1924 Backshop gradually received more diesel-maintenance alterations, as the mainline diesel locomotives didn't usually need a turntable and fit awkwardly in their converted roundhouse. In 1956 D&RGW operated its last mainline steam locomotive (while maintaining a small fleet of narrow-gauge steam engines for the continuing Alamosa-Silverton-Farmington operations) (LeMassena), thus Burnham performed maintenance exclusively on diesel locomotives while continuing to maintain the railroad's freight and passenger equipment. In the mid-1950s Burnham built a new fleet of steel cabooses for the D&RGW system, inside the 1924 Steel Car Shop and 1901 Coach Shop (Tudak).



Burnham Shops c. 1955: workers assemble new steel cabooses inside the 1924 Steel Car Shop.
Source: John Tudak Collection.

“Centralization” of all D&RGW locomotive “repair and maintenance activities” consolidated from Pueblo, Grand Junction, and other locations into Burnham from the late 1950s through the early 1960s (D&RGW Annual Report 1961). Beginning in 1963 the railroad demolished both Burnham Roundhouses, the nearby Coal Chute/Tower, the 2-story brick Depot and Storehouse at the base of 8th Avenue, and the large brick Blacksmith Shop & Foundry, to make room for updated diesel-maintenance facilities (Tudak; D&RGW Annual Report 1963). By 1965, with an investment of \$2.5 million, the steel-clad building extensions of the Backshop provided modern purpose-built diesel facilities, primarily for the railroad’s large and growing fleet of General Motors/Electro-Motive Division locomotives (Tudak; D&RGW Annual Report 1964; McMahan).



Burnham Shops c. 1970: workers wrestle a rebuilt traction motor from a General Motors/EMD diesel locomotive, looking south from the 1924 Backshop into the 1965 diesel-shop addition.

Source: John Tudak Collection.

Mergers, Last Burnham Assignments and Legacy

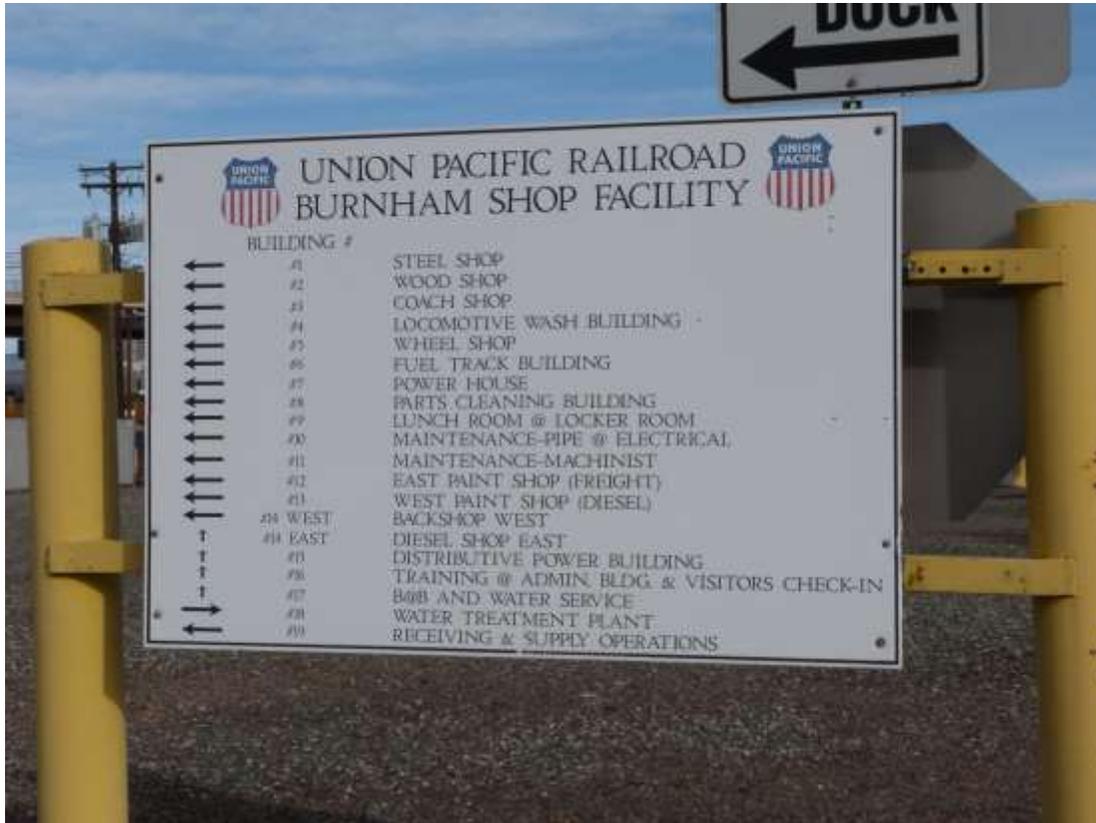
By 1966 Burnham Yards took on most of its current (2017) appearance. There was drastic cutback in passenger service in the late 1960s, but Burnham built new narrow-gauge passenger cars for Durango in 1963, continued to service the *California Zephyr* equipment until its fold into Amtrak in 1983, and serviced the seasonal Denver-to-Winter Park *Ski Train* passenger equipment via Moffat Tunnel until that train’s end of service in 2009 (Tudak; D&RGW Annual Report 1963). In 1988 D&RGW became part of the Southern Pacific (SP) Railroad through the merging of lines owned by Denver tycoon Philip Anschutz. SP closed its venerable Sacramento, California, shops and moved those functions to Burnham with an investment of \$15 million, employing up to 404 workers (McMahan). In 1996 SP merged into its historic partner and rival Union Pacific (UP) Railroad, whereupon Burnham continued to play a major role for UP’s General Electric locomotives—as UP’s second largest locomotive shop behind Jenks Shops in North Little Rock, Arkansas (McMahan)—primarily hauling coal trains out of Wyoming. With dramatic downturn in UP’s share of Wyoming power-plant coal hauling in 2014 and 2015, Burnham ceased all operations in February 2016, and UP offered its 200 remaining workers similar jobs elsewhere on the UP system (Noel, Tudak).

Conclusion

Burnham Yards played a central role in the operations of the D&RG (later D&RGW), Colorado’s largest home-grown railroad, with 2,489 miles of track by 1917, and the most extensive network of narrow gauge lines in North America. In its heyday, the D&RGW extended west from Denver through the Moffat Tunnel to Grand Junction, and then northwest to Salt Lake City and Ogden; south to Colorado Springs, and Pueblo and turning south west to Alamosa, Antonito, and Durango; with a branch line between Pueblo and Dotsero via Leadville and the Royal Gorge. Burnham played a critical and central role in the operations of this Colorado-based railroad for 145 years, from its origins in 1871 to its eventual merger with SP in 1988, and continued to serve as a SP maintenance facility for another 20 years until its closure in 2016.

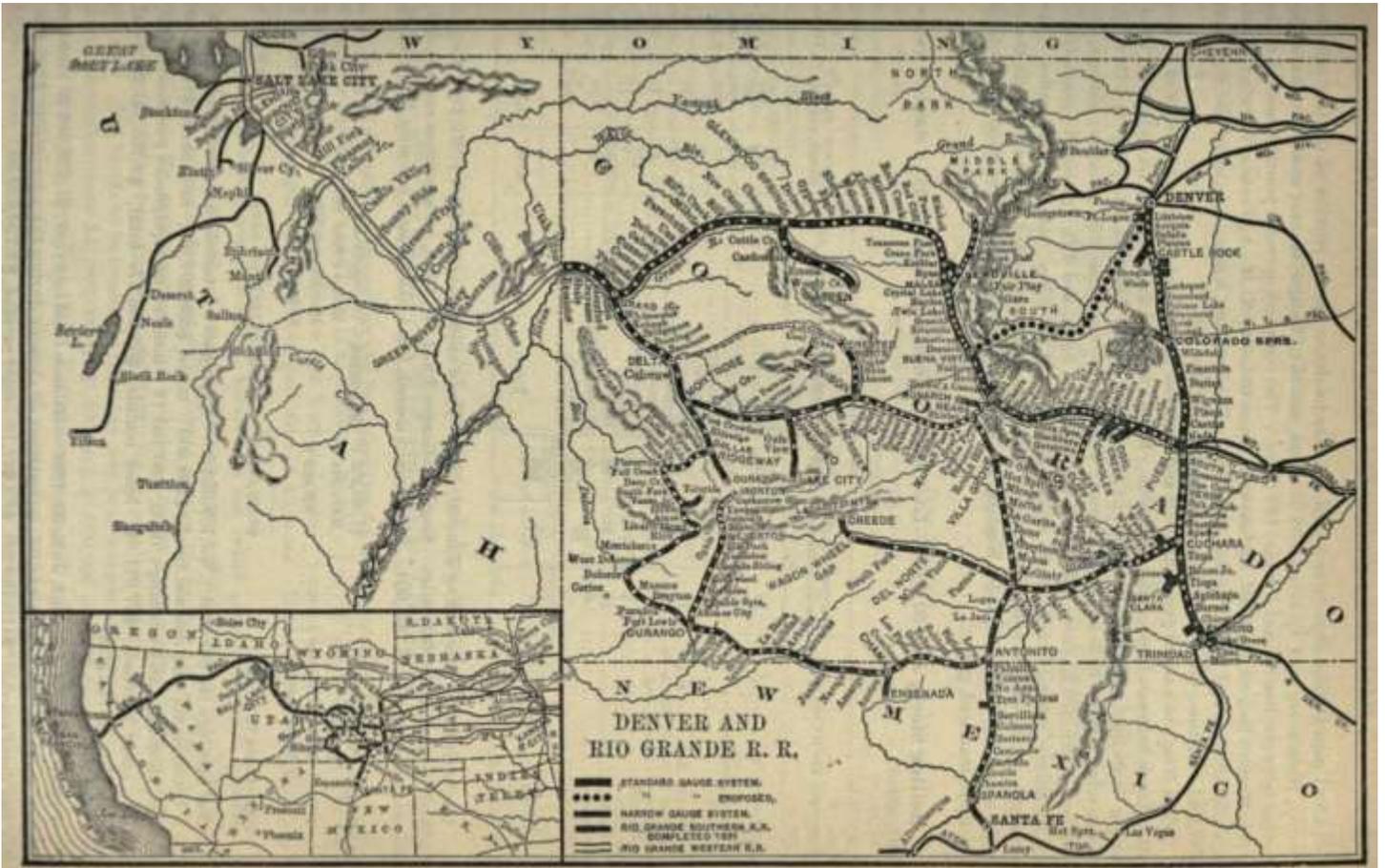
Burnham Yards was a major source of pride for the Rio Grande Railroad as well as for Denver and Colorado. The D&RG/D&RGW’s locomotives, cars, and other essential railroad equipment were designed, produced, and maintained at the Burnham complex throughout the railroad’s tenure. Innovations and new technologies in railroad manufacturing were developed and devised at Burnham under the strong leadership of General Palmer, and through the tutelage of his successors along with many skilled technicians and machinists over almost a century and a half of operations.

The history of Burnham Yards is also interwoven with its adjacent working class neighborhoods, particularly Hunt’s Addition in greater Lincoln Park, and the thousands of workers who labored at Burnham, striving to make better lives for themselves and their families. Burnham Yards comprised a hubbub of activity for 145 years, stimulating Denver’s economy, facilitating access to Colorado’s rich mineral resources, and linking communities throughout Colorado and the West. The contributing buildings and structures in this nomination are impressive resources that remain to tell the story of Burnham in its heyday, and to convey the stories of the men and women of all walks of life that contributed to this story.



Burnham Shops under Union Pacific Railroad’s final configuration.

Source: Daniel Quiat photograph collection, 2016.



Denver & Rio Grande Railroad in 1893, including connecting Rio Grande Western RR lines in Utah (2,489 miles in 1917).
Source: [Poor's Manual of the Railroads of the United States](#), from Wikipedia Commons.

III. PHYSICAL & ARCHITECTURAL DESCRIPTION

Constructing its mainline south in 1871 from Denver to Colorado Springs, the D&RG Railroad used the level basin of the South Platte River through Denver, and selected a broad area of the river's east floodplain to build its "Mechanical Department," soon named Burnham Shops and associated Burnham Yards (LeMassena, pp. 15,16). Steam locomotives used large amounts of water, so proximity to the South Platte River provided an important resource (Fraser, p. F/173). Other industries, such as warehouses, stone yards, canning plants, and water facilities also developed close to the railroad and South Platte River.

In the 1880s and 1890s, residential growth largely occurred in subdivisions to the east and south of the Burnham complex. Hunt's Addition, immediately east of Burnham Yards, was a substantial residential subdivision recorded by Alexander Cameron (A.C.) Hunt, former Territorial Governor of Colorado (1867-1869), on February 19, 1874. A.C. Hunt, a major promoter of the D&RG, had already carved approximately 16 acres of land from his own holdings to accommodate Burnham Yards. Not coincidentally, a few years later Hunt platted Hunt's Addition on his remaining land holdings adjacent to Burnham. The subdivision's small 25-foot-wide lots, typically 3,125 to 3,750 square feet in total size, were particularly well suited to accommodate worker housing for employees of D&RG and other nearby industrial operations along the South Platte River. Residential development adjacent to Burnham Shops was slow at first, but accelerated near the turn of the 20th century as Denver's development pushed south, and new street car lines extended from downtown. By the early 20th century, the Hunt's Addition north of 6th Avenue (now part of Lincoln Park Neighborhood), and Sumner's Addition south of 6th Avenue (now part of Baker Neighborhood), were largely built out with modest-scale single-family and multi-family worker housing. This juxtaposition of sprawling Burnham Yards and adjacent industrial uses with the larger residential setting to the immediate east and southeast survives today (in 2017).

Burnham Yards initially radiated from the railroad's 2-story brick depot and Mechanical Department office building at the foot of 8th Avenue near its termination into Navajo Street (Refer to Exhibit B.2). Immediately west, north, and south of the Burnham depot, the railroad constructed substantial buildings in the 1870s through the 1910s, including: the Blacksmith Shop & Foundry; Roundhouses for both narrow and standard gauge locomotives; Wood Car Shop; and the T-plan Carpenter Shop/Planing Mill/Wheel Shop - none of which remain today. However, the surviving brick Coach Shop and brick Roundhouse Foreman's Office also date to this early period. All these facilities spread north to south on the west side of the D&RG Railroad's mainline (extant in 2017 as the former Mainline Track), framed by a connecting yard of tracks on Burnham's far west side for serving passenger cars out of Union Station. This yard of tracks remains. Refer to **Exhibits B-2 and B-3**.

Following World War I and payments from the federal government for depreciation during the D&RG's wartime control by the US Railroad Administration, the railroad extensively rebuilt Burnham Yards, centered on the huge brick 1924 Backshop just north of the standard-gauge Roundhouse. Numerous large and smaller buildings—ranging from the looming Ice House and Power House to scattered fire-fighting stations (not extant)—filled every useful space in the Yards not occupied by tracks and the above-named facilities.

In the early 20th century the City and County of Denver extended its street grid west across Burnham Yards by building the 8th Avenue Viaduct in 1937 (rebuilt 1985) and later the 6th Avenue Viaduct in 1956 (widened 1966) over the extremely busy tracks of the complex. The floodplain west of the Shops—platted variously as the Titus Addition, Middaugh's Addition, and Burnham Gardens (or Fletchers Addition) — never fully developed for residential uses. This area remained thinly developed until the mid-20th century when a new warehouse area, serviced by the D&RGW and other railroads, joined the large industrial district begun by the D&RG around Burnham (D&RGW ICC Valuation Records, Map S1c; Leonard and Noel; 1887 Robinson Atlas).

Buildings & Site Features

Given its use, the buildings at Burnham were constructed primarily for their engineering and functional efficiencies. Yet, accomplished builders planned each of the six surviving pre-1970 buildings, and skilled masons assembled them with durable materials and occasional flourishes of bricklayers' art. Characterized as industrial in design, they primarily consist of brick, heavy wood, concrete, and steel in their construction with few, if any interior details. All of these surviving buildings display design knowledge of underlying proportion systems. For example, window and railcar-door openings on the lofty 1-story 1901 Coach Shop are evenly distributed across elevations; steel industrial-sash windows on the 1924 Backshop take advantage of the interior brick-and-steel building frame for maximum natural light, all filtered through windows based on multiples of a 16"x16" pane (Tudak and Quiat photographs).

The six surviving historic buildings and three structures at Burnham Yards, and their relationships, create a highly unusual and significant surviving industrial historic district in Denver. They date from at least 1901 to 1943, with additions through 1965, and were built foremost as utilitarian industrial facilities to house the bustling activities of the D&RG/D&RGW's operations. The size and height of the 1901 Coach Shop, the 1924 Steel Car Shop, and enormous 1924 Backshop all reflect their uses to construct, repair, and maintain large railroad equipment.

The shops at Burnham were developed in an era when great changes were being introduced in industry, coinciding with the expansion of the industrial revolution in America. Mass production became possible in glass, iron, and steel in the latter half of the nineteenth century and into the twentieth century. The machine tool industry introduced a precision in manufacturing which, when applied to buildings, enabled the erection of large and safe structures built from uniform components. The demands for factories, storage, and transport led to new types of utility buildings in American cities. Railroads were one of the great drivers of this industrial architecture and took great pride in celebrating their own growth, technological advancement, and importance by making statements with the size and style of their buildings, often employing architects and skilled workers. The buildings were built to withstand the rigors of daily use and display the longevity of the company and their creations.

For the surviving buildings at Burnham, which date to the early 20th century development phase, girth and solid masonry construction was a distinguishing characteristic. As the decades went on, newer, smaller buildings were distinguished through the use of color. This is exemplified on the 1937 Laboratory and 1943 Hospital, which have various tones of bricks and structural tiles on the walls.

Industrial buildings of similar construction were once scattered throughout the metro area, especially along the corridor closest to the South Platte River. However, due to past and ongoing changes many industrial buildings in areas such as Prospect, Globeville, Gates, and LoDo were demolished when those industries ceased operations. The Burnham Yards holds one of the last intact examples of the campus type of industry construction in the Denver area.

See additional photos below under **Exhibit C**, the map diagram and table of surviving historic buildings and features under **Exhibit D**. There are several non-contributing buildings and site features remaining at Burnham, and while these have been identified they are not included in this report as they do not contribute to the historic character or understanding of the Burnham site.

Coach Shop (Caboose Shop)

This building is the oldest remaining structure on the site. Company records list a 1901 construction date, but there is some evidence that the building incorporated an earlier 1881 or 1885 wood-clad Paint Shop inside the north-south wing. The 1901 building is a lofty 1-story industrial building with an L plan, 240 feet on its south elevation, 225 feet on its east elevation, and 20 feet high at the eaves. The building is constructed of load-bearing brick walls and a wood interior post-and-beam roofing system, with regularly spaced tall, narrow, 24-light wood windows on its west and east elevations, large railcar doors on its south elevation (some infilled with concrete blocks), and 3 large modern roll-up railcar doors on the east end of its south elevation (see photo), which were added in the early 1980s. The roof is a shallow-pitched cross-gable clad in composite materials with intermittent vents along the east-west and north-south ridgelines. The roof once included a series of skylights that are filled in but still evident through the framing system visible inside.



1901 Coach Shop. Built with solid brick walls and expansive windows. Source: Daniel Quait Photo Collection, 2016.

Roundhouse Foreman's Office (Boiler House or Engine House)

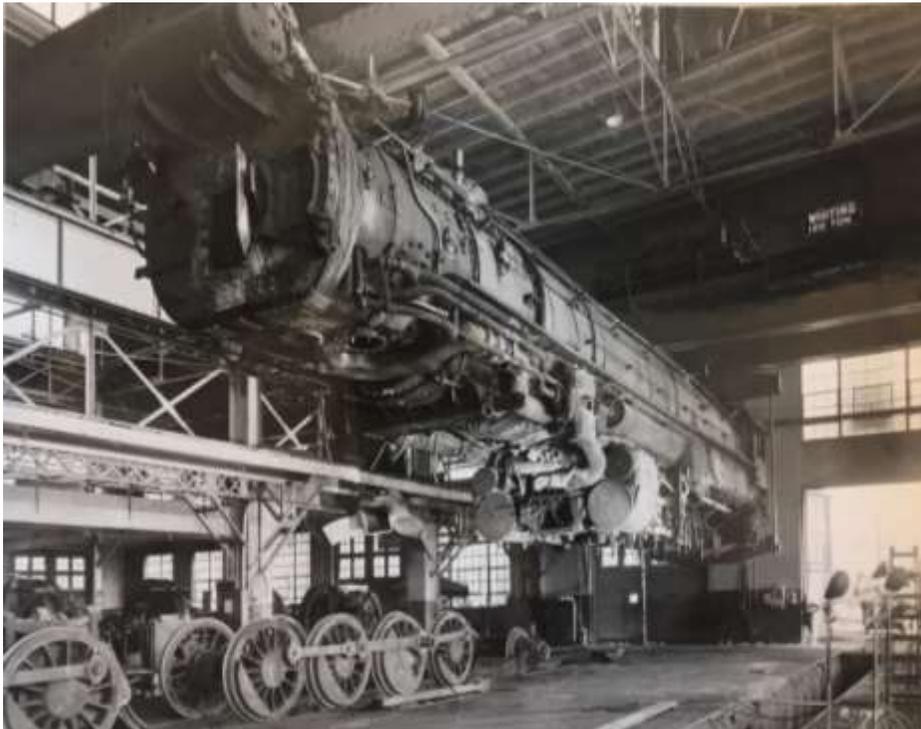
The 1906 Roundhouse Foreman's Office (name of its most recognized use, 1926–1967) is a 1-story railroad-depot-type building with a linear plan, demonstrating both Italianate and Prairie School influences. It was designed on the same drafting table as the railroad's many regional depot buildings and appears to be a displaced example of a community station. Yet this adaptable building with large interior spaces never housed a depot, instead it first housed a steam boiler and its services, then the Roundhouse Foreman and later the African-American shop workers' locker room, and finally offices and storage for the railroad's water services and construction crews. It is 38 feet on its north elevation, about 135 feet on its east elevation, and 10 feet high at the eaves. The building is constructed of load-bearing brick walls with regularly spaced 3/3 wood sash windows on its north rooms, and high, square steel-sash windows on other elevations, with doorways on the west, north, and east elevations into several interior spaces. The hipped roof is a moderate 1/3-pitch, clad with composition shingles in a staggered interlocking pattern, with moderately extended eaves over all elevations.



1906 Roundhouse Foreman's Office. Built with solid brick walls and a moderately pitched roof resembling a typical railroad depot. Photo by James Steely, 2016.

Backshop (Locomotive Shop)

The 1924 Backshop is a large but still elegant example of industrial design, but given its size and columnar structure also exhibits classical influences. It is constructed of load-bearing brick walls with regularly spaced steel-sash, multi-pane windows on all elevations and locomotive doorways on the north and south elevations which lead into the various interior shop bays. It is a 48-foot high (at highest eave) industrial building with a rectangular plan, originally 168 feet by 436 feet in footprint, divided into two huge bays each served by an overhead crane. In 1965, the D&RGW Railroad added two large pre-engineered steel additions on the east, a combined 145 feet by 312 feet, served by two additional overhead cranes, and a similar but lower metal addition on the west. This building was completed to expand Burnham's capacity to service steam locomotives, explaining the building's expansive size. After World War II the building serviced an all diesel fleet, and images of engines inside the building as recently as 2016 demonstrate the full expanse of the building's dimensions.



1924 Backshop showing how the design of the structure with high open span interior and generous windows allowed overhead cranes to lift an entire steam locomotive off its wheel sets to perform maintenance.

Source: Denver & Rio Grande Collection, Print Photographs, Book 1-A, Photo 5, Stephen F. Hart Library and Research Center, History Colorado.

Steel Car Shop

The 1924 Steel Car Shop was built contemporaneously to the Backshop as part of the Burnham Shops expansion of the mid-1920s, adding a “steel-car” shop to the older “wood-car” shop to maintain modern post-World War I rolling stock. It is utilitarian in design and is 39-foot-tall (at eaves) with a linear plan, 64 feet wide on its south elevation, 380 feet on its west elevation, and shed additions on its northeast side measuring 40 feet by 220 feet. The building is constructed of steel framing with steel-clad sides and roof, with banks of large multi-light steel-sash windows on its west and east elevations, and 3 large modern roll-up railcar doors on the south elevation (see photo). The roof is a shallow-pitched gable-end clad in steel with modern intermittent vents along the north-south ridgelines. The roof once included a clerestory-window monitor along its ridgeline, likely removed in 1981.

Testing Laboratory

The 1937 Testing Laboratory is the only building from the 1930s, not surprising given the economic challenges of the Great Depression. It is simple and utilitarian, its primary design flare added by varying colors of brick and structural tile across all facades. It was constructed as a lab to detect impurities in lubricating oils and liquid fuels. It is a 1-story masonry office building with an L plan of wings 30 feet wide, 90 feet along its east elevation, 110 feet along its north elevation, and 10 feet high at the eaves. The building is constructed of load-bearing brick and structural tile walls with regularly spaced fixed-pane replacement windows on all elevations (some partly or wholly brick-infilled), an infilled-brick doorway and gable vents on the west addition, and doorways centered at the gable ends on the south, northeast, and west elevations, likely accessing central hallways. The gabled roof, intersecting at an L with parapet caps at each end is low pitched, clad with recent steel sheeting. The building was extended in 1941 and 1955. More recently it served as a training and administration building

Women’s Locker Room & Hospital

The 1943 Women’s Locker Room & Hospital is a 1-story masonry office building with a rectangular plan 34 feet wide and 80 feet long. The building is constructed of load-bearing structural tile and brick walls with regularly spaced high windows on all elevations, and double-doorways centered on the east and west elevations. The flat “pitch & gravel” (D&RGW post-1924 Ledger) roof is bordered by a continuous parapet with coping. The building replaced an older wood-frame “Emergency Hospital / Building 50” on the same location during World War II, and included worker facilities for the women hired at Burnham to supplement the wartime shortage of male laborers. After the war, the building housed the Master Mechanic’s Office (senior D&RGW official at Burnham Shops), the General Car Foreman Office, and the Master Mechanic’s Conference Room. In 1967 the building transferred to the Signal Crew as its office, shop, and storage, the role it continued to play through the closing of Burnham Shops in early 2016.



1943 Women’s Locker Room & Hospital Building, built with variegated brick and structural tile. 1924 Backshop/Locomotive Shop in background. Source: Daniel Quait Photo Collection, 2016.

Mainline Track

Track 001 through Burnham Yards is the last surviving track structure of the original Denver & Rio Grande Railroad's Mainline from Denver south to Pueblo and El Moro (Trinidad). While the original grading and 3' narrow-gauge track were constructed in 1871, this typical standard-gauge—4' 8-1/2"—track segment is of 20th century gravel ballast, wood ties, and heavy steel rails. It was in place by 1900, as all sections of the main-line were standard-gauged, retaining a 3rd rail for the company's continued narrow-gauge service into Denver. It is this track that connected Burnham to sites across Colorado and the West, contributing significantly to the development and industrial growth of the region, with Burnham a central stopping place.

Transfer Table (Pit)

The 1924 Transfer Table was a specialized railroad structure, built by Whiting Corporation (still a manufacturer of overhead cranes) of Monee, Illinois, near Chicago, and the only one serving Burnham since its installation in 1924. The Transfer Table (not extant) was 78 feet long traveling along the extant pit at 362 feet in width and about 3 feet deep, accessing 7 doors into the south elevation of the Coach Shop, 3 doors into the Steel Car Shop, and 1 outside spur alongside the Steel Car Shop. The Table was likely constructed of a series of parallel steel beams, with a wooden deck supporting a length of parallel standard-gauge rails, and 5 pairs of wheels evenly spaced beneath the Table's platform which provided the movement. The control cab for the Transfer Table was a small wood-sided, shed-roofed booth sitting atop a large box that holds the moving mechanism. Five parallel lengths of standard rails carried the platform's wheels along the extant Pit to distribute the load weight and move railcars with little friction along its path. The Whiting Transfer Table of 1924 replaced an earlier Transfer Table at this location. The Transfer Table was removed probably in 2016; the pit and parallel rails is extant as a site feature.

Turntable (Pit)

The 1940 Turntable was a specialized railroad structure, built by American Bridge Company to replace the shorter Turntable installed in 1900. The Turntable (not extant) was 130 feet long pivoting around the extant pit about 6 feet deep, accessing the two Roundhouses (not extant) and several spurs that led locomotives into the Backshop, the Coal Chute/Tower, Fuel Tower, other servicing facilities, and the Mainline Track for road service. The Turntable was constructed of two parallel steel beams, with a wooden deck supporting a length of parallel standard-gauge rails. The Turntable was sold to the Illinois Railroad Museum and removed in 2016; the pit is extant and clearly recognizable.



Extant turntable pit marking the location and size of the 1940 turntable, removed in 2016. Photo by James Steely, 2016.

EXHIBIT A.1: CURRENT MAP SHOWING FIVE SUB-PARCELS OF LAND AT BURNHAM YARDS



Source: Google Earth image, September 2016.

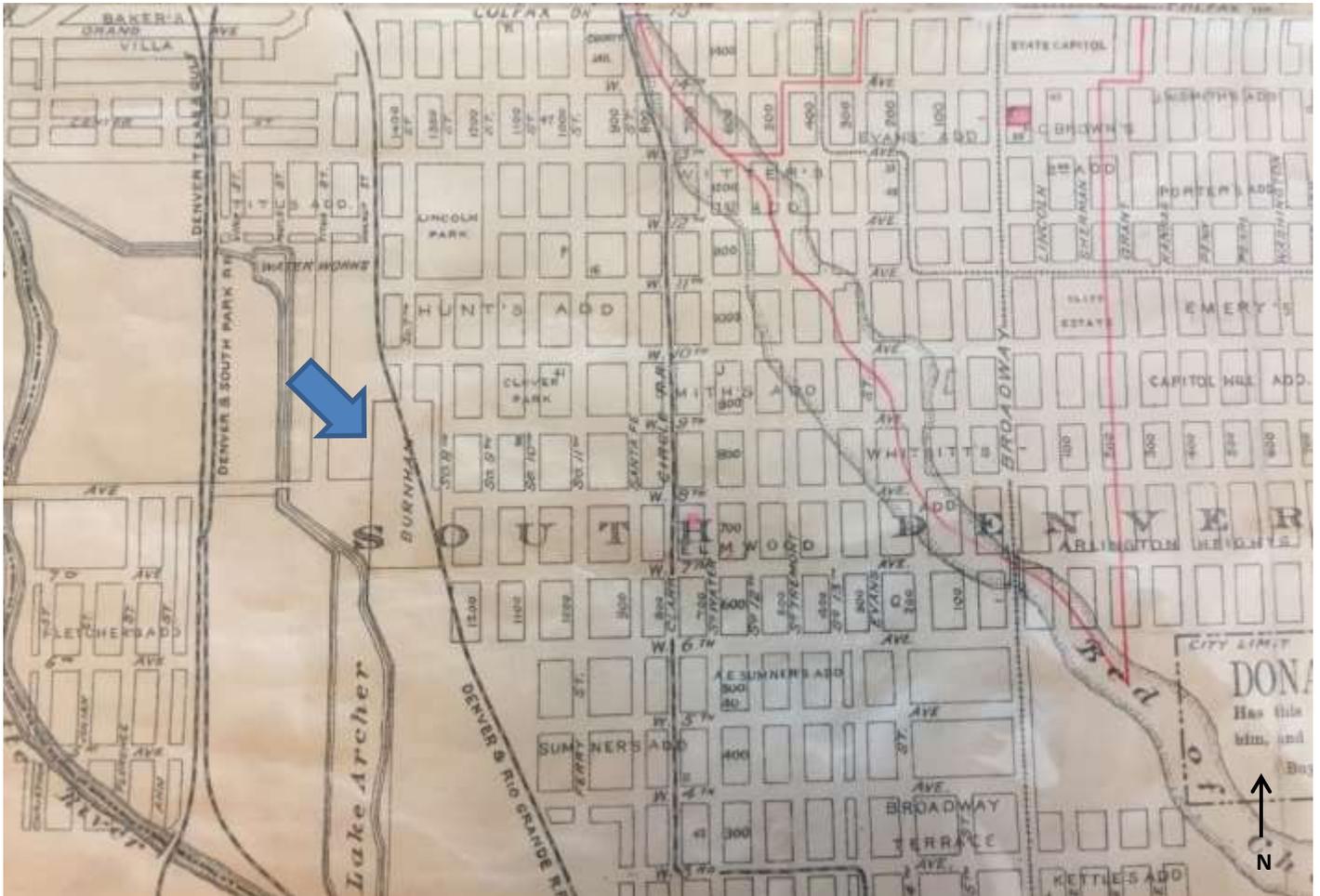
EXHIBIT A.2: CURRENT MAP SHOWING ELIGIBLE HISTORIC DISTRICT BOUNDARY (IN RED), WITH CONTRIBUTING (IN YELLOW) AND NON-CONTRIBUTING PROPERTIES (IN WHITE) DENOTED



Eligible Contributing Properties		Non-Contributing Properties	
1.	1901 Coach Shop/Caboose Shop	10.	Metal Pre-Engineered Butler Type Buildings
2.	C. 1901 DNRG Mainline Track	11.	Loading Dock
3.	1906 Boiler House/Roundhouse Foremen’s Office/B&B and Water Service Crews Offices	12.	Locomotive Wash Area
4.	1924 Backshop/Locomotive Shop	13.	Storage Tank Group
5.	1924 Steel Car Shop		
6.	1924 Transfer Table Pit		
7.	1927 Test Laboratory		
8.	1950 Turntable Pit		
9.	1943 Women’s Locker Room & Hospital/Signal Shop		

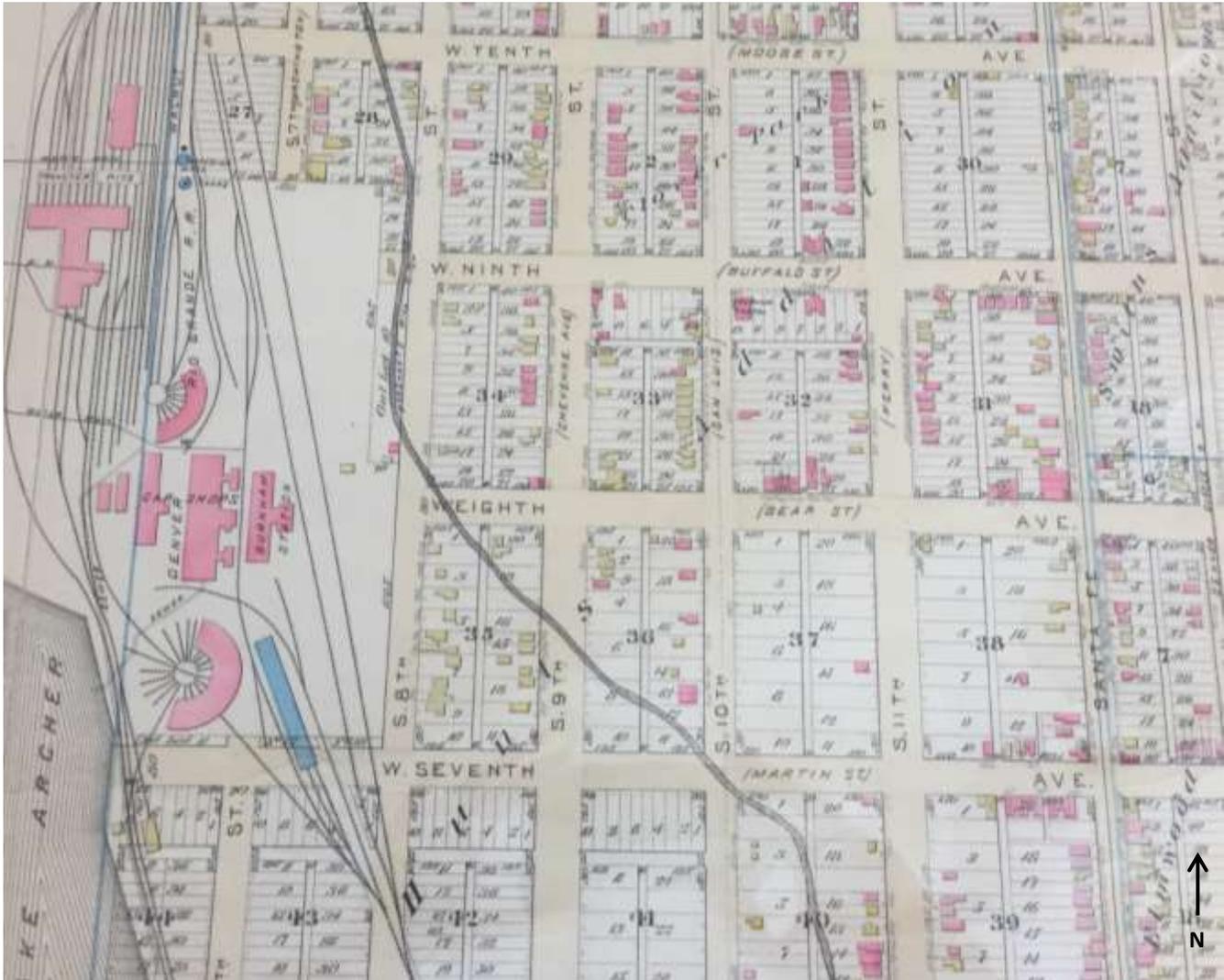
Note: The Historic District Boundary corresponds with the 4 Sub-Parcels shown on Exhibit A.1. Source: Google Earth image, September 2016.

EXHIBIT B.1: 1886 MAP SHOWING PROXIMITY OF BURNHAM SHOPS TO THE ADJACENT RESIDENTIAL NEIGHBORHOODS TO THE EAST AND SOUTHEAST.



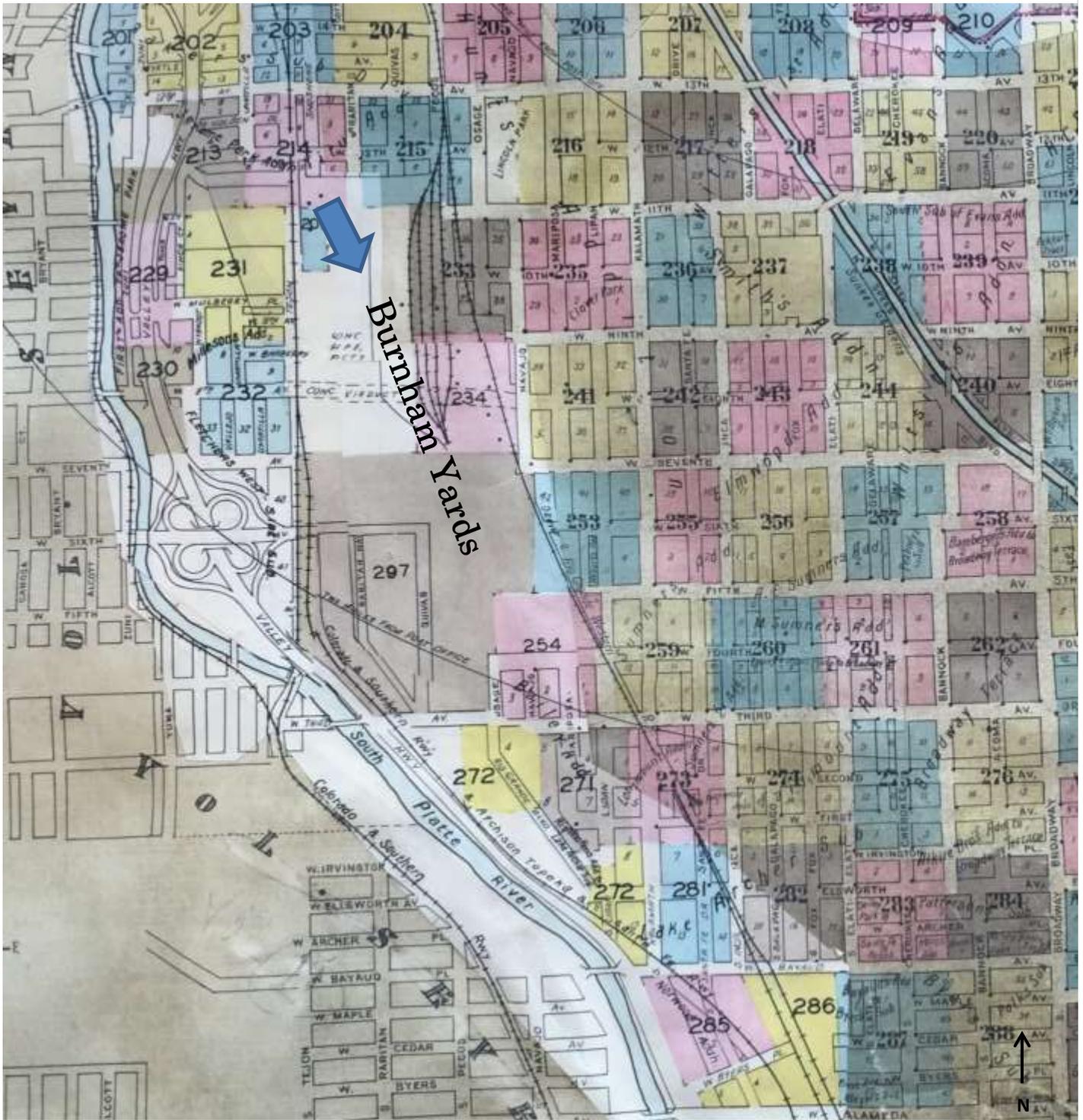
Source: Rollandets Guide Map of 1886, Denver Public Library.

EXHIBIT B.2: 1887 MAP SHOWING BURNHAM SHOPS AND EARLY RESIDENTIAL DEVELOPMENT TO THE EAST. THE SMALL ROUNDHOUSE TO THE NORTH IS THE NARROW-GAUGE LOCOMOTIVE FACILITY (NOT EXTANT).



Note: Buildings are shaded in pink (masonry) and yellow (wood). Source: Robinson Atlas of Denver, 1887, p. 26, Denver Public Library

EXHIBIT B.3: 1929 SANBORN FIRE INSURANCE MAP UPDATED TO C. 1950 SHOWING BURNHAM AND ADJACENT DEVELOPMENT. NOTE 8TH AVENUE VIADUCT ACROSS THE YARDS AND SHOPS.



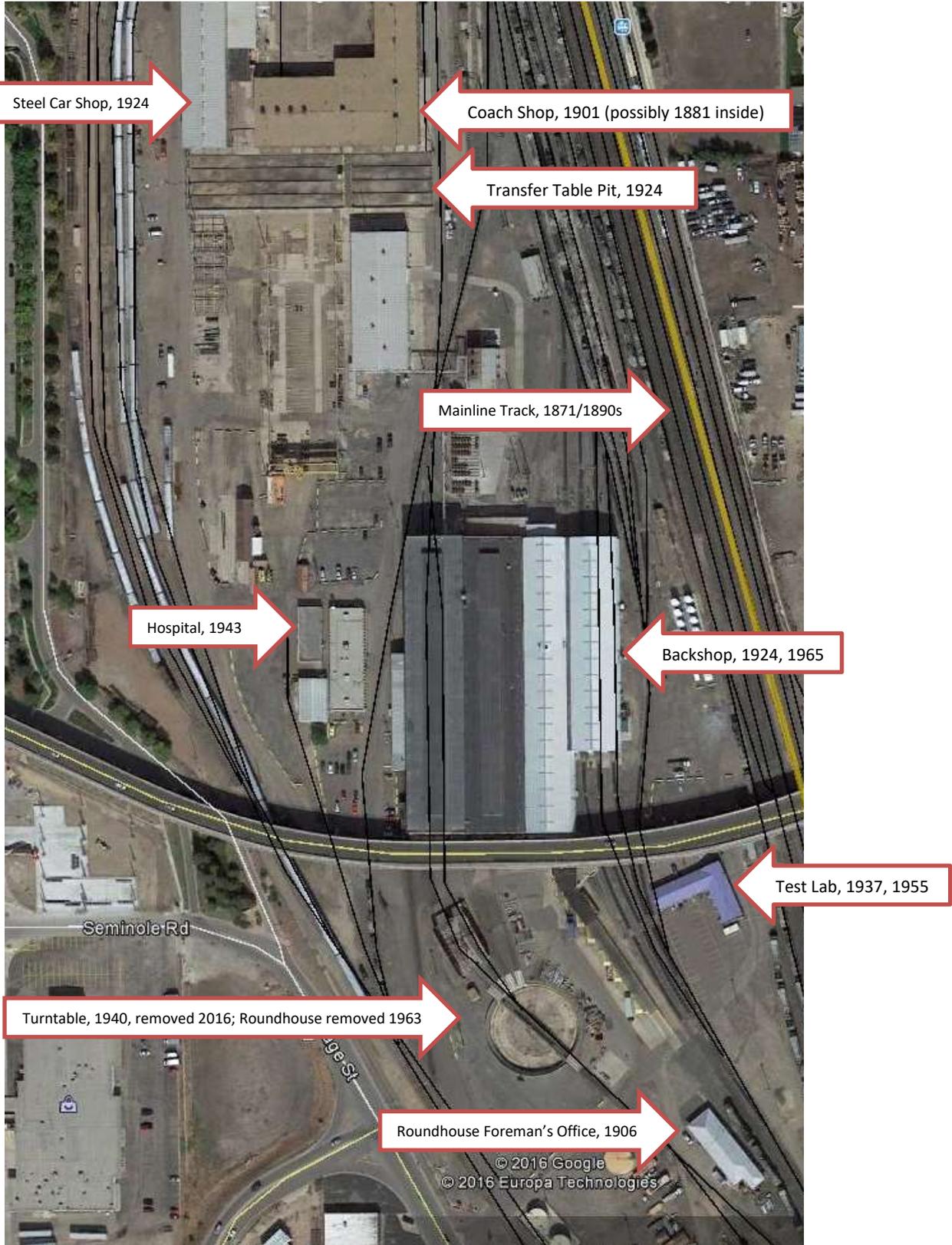
Source: Sanborn First Insurance Map of Denver, 1929 with c. 1950 updates, p. 8.

EXHIBIT B.4: 1944 AERIAL MAP SHOWING EXTENT OF BURNHAM YARDS, AND ADJACENT RESIDENTIAL DEVELOPMENT TO THE EAST (LINCOLN PARK NEIGHBORHOOD)



Source: Denver & Rio Grande Collection, Print Photographs, #854, Stephen F. Hart Library and Research Center, History Colorado

EXHIBIT D.1: CURRENT AERIAL MAP SHOWING REMAINING HISTORIC STRUCTURES & FEATURES AT BURNHAM SHOPS



Note: Noncontributing properties are not labelled; refer to Table below and inventory forms for more information. Source: Google Earth image September 2016.

EXHIBIT D.2: INVENTORY OF CONTRIBUTING STRUCTURES AND FEATURES AT BURNHAM SHOPS AND YARD

Historic Name	Current Name	Dates of Construction	Brief Description	Photo
1. Coach Shop (Caboose Shop)	Coach Shop	1901	Masonry Walls; Flat Roof; Tall Windows; Car-Entry Doors facing onto Transfer Table	
2. c. 1901 D&RG Mainline Track	Burnham Yard Track 001	1871; c. 1900	At location of original 1871 D&RG Mainline; service moved to Consolidated Main Line in early 2000s	
3. Roundhouse Foremen's Office (Boiler House)	B&B and Water Service Crews Offices	1906; 1924; 1943	Masonry Walls; Moderate Pitch Roof; Metal Windows; design resembles typical community depot	
4. Backshop (Locomotive Shop)	Backshop West, Diesel Shop East	1924; 1965	Masonry and Steel Walls; Shallow Roofs with Clerestory Monitor; Steel Windows; Large Shop Doors	
5. Steel Car Shop	Steel Shop	1924; 1965	Masonry Walls; Shallow Roof Pitch; Car-Entry Doors facing Transfer Table; Steel Windows partly blocked in 1965	
6. Transfer Table	Transfer Table Pit	1924	Steel-Frame, Wood-Deck Table moved cars from Door Bay to Door Bay in Coach Shop, Steel Car Shop, Wood Car Shop	
7. Testing Laboratory	Training and Adm. Building	1937	Masonry Walls, Shallow-Pitch Roofs; Windows replaced with single-panes	

EXHIBIT D.2: INVENTORY OF CONTRIBUTING STRUCTURES AND FEATURES AT BURNHAM SHOPS AND YARD				
Historic Name	Current Name	Dates of Construction	Brief Description	Photo
8. Turntable	Turntable Pit	1940	Steel-Frame Turntable moved Locomotives between Stalls of Roundhouses (not extant)	
9. Women's Locker Room & Hospital	Maintenance -Pipe & Electrical	1943	Masonry Walls, Flat Roof, Steel Windows	

Note: The numbers in the above table correspond with the map in Exhibit A-2. Inventory forms have been completed for both Contributing and Non-Contributing Properties.



Longtime D&RGW/SP/UP and Burnham Shops employee (1967–2006) John Tudak shared his knowledge and photograph collection with this Burnham Shops evaluation effort. Mr. Tudak also guided research at the Colorado Railroad Museum, which holds numerous records, drawings, and other information on the D&RGW and Burnham Shops. Above, Mr. Tudak shows a photograph series of the railroad’s own construction in the 1950s of a new fleet of steel cabooses inside the 1924 Steel Car Shop.

Source: Square Moon Solutions, LLC, photograph, October 1, 2016.

Resources

- Athearn, Robert G. Rebel of the Rockies: A History of the Denver and Rio Grande Western Railroad. Yale University Press, 1962.
- Ballenger and Richards Denver Directory. Denver, Colorado, 1926
- Beebe, Lucius, and Charles Clegg. Rio Grande: Mainline of the Rockies. Berkeley, CA: Howell-North, 1962.
- Bureau of Land Management, General Land Management Records. Includes Accession Nos. MW-0233-009, MW-0233-044 and MW-0233-115. Available at: <https://glorerecords.blm.gov/search/>
- CLICK Magazine. "Mrs. Casey Jones Take Over: She's workin' on the railroad...and doing a bang-up job!" October 1943. Vol. 6, No. 10, p. 10. Available at: http://www.oldmagazinearticles.com/WW2_women_Railroad_Workers-pdf. Accessed 3 November 2016.
- D&RG. AFE (Authorization for Expenditure) Ledger. Pre-1924 (vertical cloth-bound volume). At Colorado Railroad Museum. Golden. Accession: SB-191.
- D&RGW. AFE (Authorization for Expenditure) Ledger. Post-1924 (horizontal cloth-bound volume). At Colorado Railroad Museum. Golden. Accession: SB-709-13.
- D&RGW Annual Reports. Available at History Colorado's Stephen H. Hart Library and Research Center.
- D&RG. ICC (Interstate Commerce Commission) Valuation Records. 1920, with 1920s–1940s updates. At Colorado Railroad Museum. Accession: SB-709-283-B.
- D&RGW. ICC (Interstate Commerce Commission) Valuation Records. 1920 and 1927. "Right of Way and Track Maps." Copies from Colorado Railroad Museum. Map Set No. 26. Burnham on (3) maps S1c at Stations 41+94 through 93+04.
- drgw.net. "Rio Grande Diesel Locomotive Roster." Available at: <http://www.drgw.net/info/Diesel>. Accessed 17 November 2016.
- Denver Householders Directory. Denver, Col: The Gazeteer Publishing and Printing Co., 1926.
- Denver Post*. "Denver Visitor Inspects Shops Father Built." December 10, 1935. Denver Public Library microfilm.
- Denver Public Library. Western History Collection. Maps highlighting Burnham Shops and Denver streets:
- 1886 Rollandets Guide Map
 - 1887 Robinson Atlas Map
 - 1888 *Denver World* Map
 - 1903 Sanborn Fire Insurance Map
 - 1929 Sanborn Fire Insurance Map
- Denver Real Property Records. Available at: <https://www.denvergov.org/apps/realpropertyapplication/realproperty.asp>
- Denver Sunday Times*. "A Day in the Shops at Burnham." July 18, 1898. Denver Public Library microfilm.

The Eagle Valley Enterprise, Vol. XXXIX, No. 26, April 3, 1936. "Railroad Officials Announce Plans for Improvement."

Forrest, Kenton, and Charles Albi. Denver's Railroads: The Story of Union Station and the Railroads of Denver. Denver: Colorado Railroad Museum, 1981.

Fraser, Clayton B., and Jennifer H. Strand. "Railroads in Colorado 1858–1948." National Register of Historic Places, Multiple Property Documentation Form. Denver, CO: Fraserdesign, 1997.

Hall, Frank. History of the State of Colorado. Four Volumes. Chicago: The Blakely Printing Company, 1889.

Jordan, John W. "BURNHAM, George." Encyclopedia of Pennsylvania Biography. Available at: <http://www.ebooksread.com/authors-eng/john-w-john-woolf-jordan/encyclopedia-of-pennsylvania-biography--illustrated-volume-10-dro/page-27-encyclopedia-of-pennsylvania-biography--illustrated-volume-10-dro.shtml>. Accessed 3 November 2016.

LeMassena, Robert A. Rio Grande...to the Pacific! Denver: Sundance Limited, 1974.

Leonard, Stephen J., and Thomas Jacob Noel. Denver: mining camp to metropolis. Boulder: University Press of Colorado. 1990.

Lewis, Allan C. Rails Around Denver. Charleston, South Carolina: Arcadia Publishing, 2007.

Lincoln Park Neighborhood Association (2016). Website on Lincoln Park. Available at: <http://www.lincolnparkneighborhood.org/history/>. Accessed 28 January 2017.

McMahan, Tim. "The Burnham Shops: A Tradition of Craftsmanship." INFO Magazine. July/August 1997. Available at: <http://www.timmcmahan.com/burnham.htm>. Accessed 3 November 2016.

Noel, Tom. "Derailing Denver's Oldest Rail Hub." Denver Post, 11 December 2015.

Philadelphia Museum of Art. "Portrait of George Burnham, Cecilia Beaux, American, 1855 – 1942." Available at: <http://www.philamuseum.org/collections/permanent/82476.html>. Accessed 3 November 2016.

Poor's Manual of the Railroads of the United States. Poor's Denver and Rio Grande Railroad, 1893. Available at: https://commons.wikimedia.org/wiki/File:1893_Poor's_Denver_and_Rio_Grande_Railroad.jpg

Puffert, D.J. The Standardization of Track Gauge on North American Railways, 1830-1890. The Journal of Economic History, Vol. 60, No. 4 (Dec., 2000), pp. 933-960.

Quiat, Daniel. Personal communications with Barbara Stocklin-Steely and James Steely, including copies of recent photographs by Quiat of Burnham Shops buildings. October–November 2016. rrpreservation@comcast.net.

RTD (Regional Transportation District), Aerial Photograph, South End of Burnham Shops, 1997.

Salida Mail, No. 26, Sep. 19, 1922. "D&RGW Proposes Budget for Improvement of System."

Sanborn Fire Insurance Company. Sanborn maps from 1887, 1890-1893, 1903-1904, 1929 (revised through 1950s)

Stauffer, Dave. "Across the Creek" website on Lincoln Park and related historical topics. Available at: <https://lincolnparkhistory.wordpress.com/>. Accessed 28 January 2017.

Telluride Daily Journal. March 24, 1923. "Rio Grande Discharging Many Shop Workers Report."

Thode, Jackson C. George L. Beam and the Denver & Rio Grande. Denver: Sundance Publications Limited. 1987.

Tudak, John. Personal conversation with James Steely, including copies of his personal collection of D&RGW and Burnham Shops photographs and other documents. 1 October 2016. Colorado Railroad Museum.

Wikipedia Commons, 1893 Poor's Denver and Rio Grande Railroad.jpg. Available from Poor'https://commons.wikimedia.org/wiki/File:1893_Poor's_Denver_and_Rio_Grande_Railroad.jpg