LUMBER HERITAGE
of
SPRINGFIELD, OREGON
1848-1901

prepared for
The City of Springfield, Oregon

by

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TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

INTRODUCTION

INTRODUCTION

As noted in Springfield's city-wide historic context document, "Springfield Historic Context Statement, Springfield, Oregon 1848-1955" of 1999, a historic context statement is used in planning for the treatment and management of a community's historic resources. It describes the broad patterns of historic development of the theme or community and identifies historic property types, such as buildings, sites, structures, objects or districts, which may represent these patterns of development. In addition, a historic context statement provides direction for evaluating and protecting significant historic resources. As a planning tool, it is intended to be a dynamic document, evolving as preservation work progresses and community needs and desires change.

This document focuses solely on the lumber industry history and related resources of the City of Springfield, although for general community history it depends heavily on the previous city-wide studies prepared of 1991 and 1999. The introductory and general information sections of this context document are derived directly from the earlier contexts; the Historical Background and Resource Identification sections utilize the previous studies, and build on them to provide a more comprehensive look at the specific theme of lumber-industry heritage in the community.

In Springfield, the lumber industry refers primarily to the milling of trees (or timber) for the use of constructing buildings and structures, although related industries such as planing mills, the manufacture of shingles, window sash and doors also clearly relate to and depend on a supply of sawn lumber. The process of felling timber and transporting it to the local mills was and is important to understanding the overall industry. However, after the initial settlement of the area, these activities and the attendant built features that supported them took place outside the bounds of the City and will therefore be discussed as peripheral to the focus of this study.

The original city-wide historic context statement for the City of Springfield was completed in 1991 by Lynda Sekora of Koler/Morrison Planning Consultants. That document was followed by an updated version, prepared in 1999 by Michelle Dennis, which has served as the basis for this work. Combined, those documents addressed the history of Springfield and its historic resources from the city's beginnings through 1955.

In addition, there are several historic contexts that overlap geographically and thematically with the City of Springfield Lumber Heritage Context Statement. A statewide railroad logging context, "Draft Context Statement for Railroad Logging in Oregon," was drafted in 1993 by Ward Tonsfeldt which identifies survey and research needs, preservation activities, and goals and priorities for the preservation of historic agricultural resources. In 1986, "The Cultural and Historic Landscapes of Lane County, Oregon" was developed. Although this document does not spell out specific preservation activities for the county, there are sections of the document that pertain to historic resources within Springfield's urban growth boundaries, as well as lumber-related resources throughout the County that may relate directly to Springfield. The "Eugene Area Historic Context Statement," published in 1996 also provides some contextual information on the area's historical development, resource types, and goals and strategies for preservation. In addition, the Willamette National Forest maintains a reasonably good collection of forest history that may be useful in more detailed studies on Springfield's

milling history.

As was intended with the previous context statements, information in this document is not meant to be a comprehensive historical study, but it will provide sufficient information to aid in planning efforts and decision-making with regards to historic resources related to Springfield's lumber heritage. Its purpose is to serve as a springboard from which additional, more detailed studies can be undertaken.

HISTORIC CONTEXT DEFINITION[1]

THEME

The Springfield, Oregon Lumber Heritage Historic Context Statement is a thematically-based study that focuses on the early history of the lumber industry in the City of Springfield prior to 1901. The study addresses the history and potential appearance and/or location of above- and below-ground resources related to this specific theme, time period and location.

TIME

The temporal boundaries, or time frame, for this context document span the years 1848 to 1901. The year 1848 witnessed the arrival of the first Euro-American settlers in the Springfield area. The closing date of 1901 corresponds to Booth Kelly Lumber Company's purchase of the Springfield sawmill in that year, from which point in time the City experienced expansive growth and prosperity that was directly related to the success of Booth Kelly's investment in the mill. This closing date also correlates to the beginning of a period of unprecedented growth in the lumber industry both locally and statewide, as transportation and technology advanced to allow for significant increases in demand and production. Springfield's local, community-based sawmill became a much more far-reaching commercial entity under Booth-Kelly's ownership.

This time frame covers Springfield's initial settlement, the appearance and disappearance of small local mills, the arrival of the railroad to the region, advances in transportation and milling technology, population increases, and overall community growth. Because the 1999 city-wide context addresses Native American occupation and the pre-settlement period in some detail, this document will provide only brief discussion of that period. Other historical themes not directly related to Springfield's lumber heritage are discussed briefly, but more detailed discussions are covered in previous studies and/or will be addressed in future work.

As planning documents, historic context statements are intended to undergo periodic review and revision, adding additional historic information as appropriate and revising goals and strategies for preservation-related activities as needed. Because this document focuses on the nineteenth century, and does not address the significant growth and success of twentieth century lumber milling and its impact on the Springfield community, it is anticipated that a second phase of this study will be undertaken to focus on the period 1901 through perhaps 1965 or 1970 (dates to be determined). This would bring the study current and more or less complete within the historic period (defined as fifty years prior to the present day), as defined by the National Park Service.

PLACE

The boundaries of the project area encompass everything within the 2015 urban growth boundary for the City of Springfield, Oregon. (Fig. 1) Although the study focuses on a specific industry that had its center in and around downtown Springfield, the overall boundaries include the neighborhoods of Gateway, Thurston, Kelly Butte, North, East, Central, South, and

[1] Much of the information in this and the following sections was drawn directly from the 1999 Springfield Historic Context Statement, with changes made to accommodate the lumber industry theme.

Downtown Springfield and the communities of Glenwood and Natron.

Springfield is located in the upper Willamette Valley in the north central portion of Lane County, Oregon. It is situated on the east bank of the Willamette River, about three miles east of Eugene, the county seat. Glenwood is located on the west bank of the river between Eugene and the Springfield city center.

The temperate climate of the area is influenced by mild, moist winds from the Pacific Ocean, which produce warm summers and cool winters; long periods of extremes in temperature are uncommon. During the summer, rainfall is light until mid-July, when precipitation ceases altogether. The near-drought condition at summer's end often drops river levels significantly and necessitates the use of irrigation for some agricultural crops. Winter is a wet season that produces 40 to 50 inches of precipitation between October and March; ice and snow occur, but rarely. Spring rain and Cascade mountain snow melt typically raise local creek and river levels substantially, at times to or above flood stage. Such climate conditions are ideal for conifer growth west of the Cascades, producing very large trees with clear-grained wood that was (and is) prized for building construction of all types. The seasonal ebb and flow of water in the region's rivers dictated when cut timber could be easily transported downstream to mills, and like agriculture the timber and lumber industries were keyed to annual weather patterns.

Springfield occupies a floodplain formed by two major tributaries of the Willamette River, both of which flow in a westerly direction out of the Cascade Mountains that form the eastern boundary of the Willamette Valley. The McKenzie River borders the northernmost portions of the city, while the Middle Fork of the Willamette River roughly delineates the urban growth boundary on the south. Timber from upstream was readily transported to milling centers via both rivers, the dominant nineteenth-century mill in the immediate vicinity being that located at Springfield. These drainages are characterized by meandering channels that produce an interlaced network of secondary streams and sloughs that in some cases were adapted/preempted and transformed into mill races and mill ponds, used to power mills and store uncut logs. Typical of alluvial areas, the topography undulates along the rivers as a result of repeated channeling and flooding of the stream system over the centuries. Portions of central and northwestern Springfield are relatively level except for several isolated buttes that rise from the floodplain. The first federal land survey map of this area, dated 1853, labels the area as gently rolling high prairie. (Fig. 2)

The eastern sector of the city, the areas of Thurston and to the southeast, Natron, lies between the Middle Fork of the Willamette River and the foothills of the Cascade Mountains. Low undulating bottomland borders the river. To the north and east the landscape changes to gently rolling prairie, around Natron it becomes hilly. Like other parts of Springfield, elevations in this area gradually increase from west to east, from 458 to 600 feet, with wooded areas becoming denser as the hills rise into the Cascade range. Surveyor's notes from the 1854 federal survey of this township state that the land of the Middle Fork was "...a very fertile and productive loamy soil with gently rolling surface. There is a large quantity of bottom land which

is generally very heavily timbered with fir, cedar, ash, maple, and Balm of Gilead. The upland grows oak and fir timber."[2]

The early surveys of the 1850s described the vegetation of the area at that time as being forested along the stream systems, primarily by cottonwood, ash, maple, fir, and oak trees, with section having heavy undergrowth of vine maple. The prairie grassland between the McKenzie River and the Middle Fork of the Willamette was dotted with small groves of oak and fir known as "oak and fir openings." The surrounding grassland had been maintained for generations by large-scale annual burnings by the Native American population, which sought to improve the environment for food resources. The fires also engulfed the low-elevation buttes keeping them free of heavy timber, but the Cascade foothills to the east were lightly forested to their peaks with oak openings and scattered stands of fir.[3] The woodlands, both close to Springfield's center and the lands further afield outside the current Urban Growth Boundary, fed the lumber industry from the earliest years of Springfield's existence well into the twentieth century.

[2] Michelle Dennis, "Springfield Historic Context Statement, Springfield, Oregon 1848-1955." (Springfield, Oregon: City of Springfield Development Services Department, 1999), p. 4.

[3] General Land Office maps of 1853, 1854 and 1855. United States Department of the Interior, Bureau of Land Management (BLM). "Land Status and Cadastral Survey Records" website. <http://www.blm.gov/or/landrecords/index.php>

OVERVIEW
OF
SPRINGFIELD'S
LUMBER INDUSTRY HISTORY

1848-1901

WILLAMETTE VALLEY and SPRINGFIELD HISTORIC OVERVIEW to 1901

The Kalapuya

When the first Europeans and Euro-Americans arrived to explore and settle the Oregon Country, they found a Willamette Valley landscape that had long been altered and tended by the native Kalapuya people, who used prescriptive burning to encourage growth of desired food sources such as camas root and oak acorns, as well as to improve habitat for wild game. This land management also kept the encroaching evergreen forest at bay, leaving the valley as open prairie. Contact between the Kalapuya and Euro-Americans proved devastating to the indigenous people whose population was virtually destroyed by epidemic diseases transmitted by the explorers and fur traders of the late seventeenth and early eighteenth centuries. American aggression toward the Indians further diminished their numbers, and when American pioneers arrived in the Springfield area in 1848, those that remained offered little or no resistance to white settlement. In 1856, the remaining Kalapuya groups were forcibly removed to the Grand Ronde Reservation (in present-day Yamhill County), following the signing of treaties that terminated their right to occupy their ancestral lands.[4] Without the annual burning, the landscape that had been tended by the native people began to change, and would change even more dramatically with the arrival and exploitation of the American settlers.

Early Nineteenth Century Exploration and Fur Trade

Euro-American exploration of the Willamette Valley began in 1812, led by Donald McKenzie, a partner in the Pacific Fur Company that had located at Fort Astoria at the mouth of the Columbia River one year earlier. The company and the fort were sold in 1813 to the North West Fur Company, a British enterprise. "In 1821, with the merger of the North West Company and the Hudson's Bay Company, the post, then known as Fort George, became headquarters for the H.B.C. in the Pacific Northwest. It lost that position in 1825 with the construction of Fort Vancouver."[5]

Although the fur trade began to decline in the 1820s, employees of the Hudson's Bay Company continued their activities in the region through about 1830. They established a well-known north-south trade route called the Hudson's Bay pack trail, which facilitated trade movement through the region and later developed into the transportation system used by American settlers for travel and transport of goods. With the fur industry decline, the HBC's Fort Vancouver workers were instructed to return home to Canada, but a number of retired employees instead moved south of the Columbia River and the Fort to become the first permanent settler-farmers in the Willamette Valley.[6]

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[4] Beckham, Minor and Toepel, "Prehistory and History...," (1981), pp. 80-81.

[5] Stephen Dow Beckham, "Fort Astoria," State of Oregon Inventory Historic Sites and Buildings (1974). Astor's was the Pacific Fur Company; the North West Company was British, as was the subsequent Hudson's Bay Company.

[6] William A. Bowen, *The Willamette Valley, Migration and Settlement on the Oregon Frontier* (Seattle: University of Washington Press, 1978), pp. 7-8

Willamette Valley Settlement

Hudson's Bay "retirees," American free-trappers, and American missionaries (specifically Jason Lee's Methodist mission) were the first groups to move into and settle in the Willamette Valley, primarily in the French Prairie and Chehalem regions of present-day Marion and Yamhill Counties.

By 1840, word of the agricultural and economic potential of the Willamette Valley had spread throughout the States. The initial overland trips via the route that later became known as the Oregon Trail began in 1842 when American missionary Elijah White's wagon train of about 125 souls arrived in Oregon with the express intent of permanent settlement. Oregon's population grew significantly in 1843 with the first major settler migration of about 900 pioneer men, women and children to the territory, known as the "Great Migration." Each of the next ten years brought increasing numbers of new emigrants and Oregon's population grew to over 45,000 by the mid-1850s.[7]

Further impetus to emigration was the passage of the federal Donation Land Claim Act of 1850, which was in force through 1855. Provisions of the act granted settlers anywhere from 160 to 640 acres, depending on their date of arrival in the territory, their marital status, and their ability to live on and improve the claim for four successive years. In order to "prove up" on land claims, evidence of occupancy and improvement was required, which usually included the construction of a dwelling. Initially, crude log construction was all that was achievable by most settlers, but sawn lumber was employed as soon as it was available, often from localized private mills. Land claims were widely dispersed across the Willamette Valley landscape, and ideal claims included access to a water source, woodland (for heating and construction) and prairie (for farming and grazing), all providing the necessities of survival on the frontier. Those with commercial aspirations or the desire to establish mills (usually grist- or sawmills) would select claims adjacent to a river or stream that could serve as transportation or power source.

As an alternative to the dangerous rapids of the Columbia River, a southern route into the Willamette Valley, known as the South Road or Applegate Trail, was established in 1846. It branched off of the main route of the Oregon Trail at Fort Hall, traversed the Humboldt River and Klamath Basin, and entered the valley by way of southern Oregon, headed north through the narrow mountain canyons and into the southern Willamette Valley. The opening of the Applegate Trail facilitated the settlement of southern Oregon as well as the southern Willamette Valley, and a number of Springfield's early pioneers arrived by way of this southern route.

Springfield Settlement, 1848-1870

Lane County's first white settlers in arrived in 1846: Elijah Bristow, William Dodson and Captain Felix Scott took land in the Pleasant Hill area, and Eugene Skinner opted for a claim around Skinner Butte in Eugene. According to donation land claim records, the first settler to stake a claim in the Springfield locale was William M. Stevens, who in 1848 filed on a 641-acre

[7] Liz Carter, "Pioneer Houses and Homesteads of the Willamette Valley, Oregon, 1841-1865" (Portland: Restore Oregon, 2014), p. 38.

tract in the northern portion of present-day Springfield in the Game Farm Road area.[8] Stevens had journeyed over the Oregon Trail and the Barlow Road, arriving in the Territory in September of 1847, and settling his claim about a year later in October 1848.[9] Together with his three eldest sons (Ashley, Alvin and Isaac), Stevens built a small log cabin and proceeded to prove up on his claim by breaking prairie, building fence and planting crops.[10]

In 1849, Felix Scott abandoned his earlier claim in Pleasant Hill to move to a site on the McKenzie River in 1849, and hired Stevens to build a double log house for his family.[11] Having chosen a claim with excellent access to the McKenzie River and standing timber, Scott then proceeded in 1851-1852 to dig an extensive millrace and establish a sawmill on the south bank of the river near present-day Hayden Bridge. (Fig. 3)

The pioneers regarded as the first settlers of the original town site of Springfield were Elias M. and Mary Briggs, who (with his parents Isaac and Elizabeth Briggs) arrived in the winter of 1847 having traveled the newly-opened but arduous South Road, initially landing in the Pleasant Hill area.[12] After relocating downriver to the present site of Springfield, Elias and Mary Briggs took a 642-acre claim in October 1849.[13]

> [Briggs] chose as the site of his dwelling a spot convenient to a spring of water that sent up its bubbled with ceaseless energy. A portion of the prairie where stood this found in due time was fenced in the inclosure [*sic*] becoming known as the Spring-field - hence the name of the town. Here for two years dwelt the Briggs family, the father and his belongings removing at the end of that time to a farm about a mile and a half from their original location. The Briggs' father and son conducted the ferry where the fine bridge spans the Willamette…[14]

Most of the initial claims in the Springfield locality were settled in the early- to mid-1850s, and the area was mapped by the General Land Office between 1853 and 1861.[15] Major roads such as the "Road from Oregon City to the Mines," smaller inter-neighborhood roads, as

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[8] U.S. Department of the Interior, Bureau of Land Management (BLM), "William Stevens / General Land Office Records." <http://www.glo.records.blm.gov/default.aspx>; "William Stevens," *Genealogical Material in Oregon Donation Land Claims*, Vol. III (Portland: Portland Genealogical Forum, 1957), p. 132. William Stevens' lumber house, which succeeded his log cabin, is still standing, albeit in heavily altered form, at 450 Game Farm Road.

[9] "William Stevens," *Genealogical Material in Oregon Donation Land Claims*.

[10] A.G. Walling, *Illustrated History of Lane County...*, (Portland: A.G. Walling, 1884), p. 451. The circa 1854 Ashley Stevens house, which may have actually been and is sometimes referred to as the Abraham and Amanda Landes house, stood on Old Coburg Road until the early 2000s when it was either demolished or moved to a currently-unknown location.

[11] Walling, *History of Lane County...* (1884), pp. 451 and 454; No Author, "The Old Mill at Springfield, Ore," *American Miller and Processor: A Monthly Journal Devoted to the Art and Science of Milling* (Chicago: Mitchell Brothers Publishing Co., July 1, 1912), p. 573. Scott's son, Felix Scott, Jr., later blazed the wagon road that was the forerunner of the present-day McKenzie River Highway. Howard McKinley Corning, *Dictionary of Oregon History* (Portland: Binfords and Mort, 1956), pp. 217-218.

[12] "Elias Briggs," *Genealogical Material in Oregon Donation Land Claims*; Walling, *History of Lane County...*, (1884), p. 326; BLM, "Elias Briggs / General Land Office Records."

[13] "Elias Briggs," *Genealogical Material in Oregon Donation Land Claims*, Vol. I, p. 68.

[14] Walling, *History of Lane County...*, (1884), p. 452.

[15] U.S. Department of the Interior, Bureau of Land Management (BLM), "Land Status and Cadastral Survey Records." <http://www.blm.gov/or/landrecords/survey/ySrvy1.php>

well as the Briggs, Spores and Skinner's ferries are all included on early survey maps. (Fig. 2) Until the arrival of the railroad, transportation for the early period was limited to this primitive system of roads and ferries that linked farms to each other and to market centers. Aside from the Hudson's Bay trail, the earliest road through the Springfield area was the South Road, or Applegate Trail, established in 1846. Soon after initial settlement of the southern portion of the Willamette Valley and what would be come Lane County, the road network grew to include the East Side Territorial Road established in 1847 between Oregon City and Brownsville.[16] It was extended southward through the Springfield area in 1851, and by 1853 it was connected with the Briggs Ferry on the Willamette River.[17] Portions of the Hudson's Bay pack trail became the West Side Territorial Road, which was a major route through the valley during the pioneer period. Stage coaches were put into service in the Oregon territory as soon as the roads permitted; a weekly stage schedule was in force from Oregon City to Jacksonville (in southern Oregon's Jackson County) by 1859, and a year later it had tied in with the stage to Sacramento.[18]

Between 1852 and 1853, a route that later became known as the McKenzie Highway was completed into Eastern Oregon, passing through the Thurston area as it traveled from Springfield through the Cascade Range. Originally called Scott's trail (named for Felix Scott Jr.'s efforts in establishing the route), the trail operated as a toll road from 1872 to 1894. Within the current bounds of Springfield proper, remnants of the pioneer road network survive today as Mill Street, Game Farm Road, High Banks Road, Thurston Road and parts of Jasper Road, as well as the McKenzie Highway.

Private ferries provided river crossings, which were an intrinsic part of the regional transportation network. Locally, Briggs' ferry, located near the present-day bridge, was originally established circa 1849 by early settler William Stevens and his neighbor, George H. Armitage. Ferry operation was taken over by Elias and Isaac Briggs in the early 1850s, who received an official license to operate in 1854.[19] Another ferry service operated by Jacob Spores crossed the McKenzie River a few miles to the north, and Skinner's ferry near Skinner Butte in Eugene provided access across the Willamette.[20]

The Willamette River in the Eugene-Springfield area was historically navigable for large vessels only during periods of high water, and while some ventured to Eugene (Willamette Steam Navigation Company's vessels *Active, Alert* and *Echo*), only a handful of steamboats ever made it successfully as far as Springfield. The steamboat *Relief* did manage a single trip up the river from Eugene to Springfield in 1862 to deliver a load of freight, and in 1869 the steamer *Echo* also stopped at Eugene and Springfield to take up freight.[21]

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[16] Dennis, "Springfield Historic Context...," (1999), p. 10.

[17] BLM, "Land...Records," General Land Office Map T17S R3W (1853); Dennis, "Springfield Historic Context...," (1999), p. 10.

[18] Dennis, "Springfield Historic Context...," (1999), p. 18.

[19] Clarke, "The Springfield Millrace and Early Mills," (Springfield, Oregon: Springfield Historical Commission, 1983), p. 25.

[20] Jerold Williams, "Lane County's Early Ferries," Lane County Historian Vol. 13, No. 1 (Winter 2005), p. 30; BLM, General Land Office Maps, T17S R3W (1853).

[21] Elizabeth Yates, "Early Steamboating, Pioneer Thoroughfare to Eugene and Springfield Via Willamette River," *Lane County Historian* Vol. 4, No. 1 (Eugene: Lane County Historical Society, 1959), p. 7; Howard McKinley Corning, *Willamette Landings: Ghost Towns of the River* (Portland: Oregon Historical Society Press, 2004), pp. 125-126. The type of freight on this specific trip was not stated, but steamer freight typically included

> The steamer Echo arrived at this place in Sunday evening with considerable fright, and went immediately to Springfield, where it remained overnight, and returned on Monday, leaving this place with 101 tons of freight, the heaviest load ever taken by boat from this market. Another boat came up on Wednesday and also went to Springfield, returning the same day. The two boats were not able to take near all the freight from this place and Springfield, and as the river is falling very fast, it is not likely that they will be able to reach here again until there is another rain. Rain enough for farmers in Oregon does not answer the purpose of steamboat men.[22]

Springfield's commercial center development began in the early 1850s. The earliest known business was the ferry operated by Stevens and Armitage. J.N. Donalds kept a small trading post near the corner of present-day Mill and Main Streets (probably started early in 1853), and Elias and Isaac Briggs constructed a millrace, gristmill, and sawmill just south of Donalds' post in 1852-54.[23] This small enclave near the Main and Mill street intersection formed the early nucleus of commercial activity in town, and over time the city's commercial district expanded along these two thoroughfares. Springfield was platted in 1856, at which time two blocks between South A, Main, Mill, and Third Streets were laid out into eight lots each. (Fig. 4) As with many Oregon frontier towns, Springfield developed on the banks of the Willamette River, around a standard grid system oriented to the cardinal directions.

The 1860 government survey of the Isaac Briggs property provided brief description of the town: "The town of Springfield is situated on this claim near the bank of the river. It contains 8 or 10 dwelling houses, one store, a Black Smith shop, a Cabinet Shop and a grist and sawmill."[24] The census of the same year listed several established businesses including a shoemaker, wagonmaker, cabinet maker, four carpenters, two blacksmiths, a physician and a merchant; there were no doubt others who operated businesses in addition to their primary farming occupations.[25]

As with many early Oregon towns, although the Springfield mills established the place as a small industrial center, census data clearly show that an overwhelming majority of the settlers in the area were primarily engaged in agriculture.[26] Even the Briggs' continued to farm while maintaining their commercial enterprises, namely the operation of the ferry and the mills. In the early years, the persistence of subsistence-level farming and the often exclusively local distribution of products such as lumber was due to several conditions, including poor transportation and a lack of readily accessible markets.[27] In addition, equipment was primitive and the labor force insufficient for large-scale farming and industrial purposes. The California Gold Rush of 1849 had provided the first major market for products produced in the region,

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wheat, flour, oats, some farm goods, and occasionally small livestock. Preliminary research suggests that lumber was not typically part of steamer freight, at least not from the southern Valley. "Oregon Products," Portland *Oregonian*, (June 24, 1868), p. 3.

[22] Corning, *Willamette Landings (2004), p.* 125-126

[23] Walling, *History of Lane County...*, (1884), p. 452

[24] BLM, "Elias Briggs / General Land Office Records."

[25] U.S. Bureau of the Census, Eighth Census of the United States, 1860. Accessed via Ancestry.com.

[26] U.S. Bureau of the Census, Seventh and Eighth Census of the United States, 1850 and 1860. Accessed via Ancestry.com.

[27] Dennis, "Springfield Historic Context...," (1999), p. 14.

prompting increased production of wheat, oats, lumber and other commodities needed in California, but the surge in demand quickly diminished and production soon returned to local market levels.

The saw- and flour mills were the primary industrial pursuits in Springfield, although in 1865 an attempt was made to establish a woolen factory at Springfield, to be called the Springfield Woolen Manufacturing Company. Capital was raised and construction planned, but the venture never materialized beyond setting up a carding machine operated by Charles Goodchild. The operation lasted only a short time before being purchased circa 1873 by the Pengra brothers (B.J. and William); the machinery was then sold to Drury S. Stayton, who started the woolen mill in Stayton, Oregon.[28]

By the end of the pioneer period, the white settlers of Springfield had transformed what they perceived to be a raw, frontier landscape to one of "order," their efforts resulting in agricultural, commercial and the beginnings of industrial production that reflected the societies they had left in their communities east of the Mississippi. They had established productive farms, constructed a network of roads, and founded a well-planned town site that supported fledgling commercial and industrial enterprises. The 1867 *Pacific Coast Business Directory* described Springfield as having "...a splendid water-power [that] gives motion to several saw and flour mills...," as well as schools, churches, general merchandise and professional offices. In addition to the Springfield Manufacturing Company, which produced flour and sawn lumber, small industrial manufactories included a planing mill (run by A.S. Powers); several carpenters and builders; wagon makers; a furniture, door, sash and blind manufacturer; and a mill and wheelwright.[29] The community was looking forward to a future of growth, which was promised by the building of a railroad system.

Springfield Railroads, Industry, and Community Growth, 1871-1901

The population of Springfield in 1870 was still only 649, though the County was home to 6,426 souls. (Fig. 5) Most were listed as farmers. A decade later, the County's population had grown by about 3,000 people; Springfield's residents numbered about 770, and a diversification of occupations began to be evident.[30]

The coming of the railroad that spurred the development of other communities throughout the Willamette Valley in the 1870s did not initially have a significant impact on Springfield commerce and industry. Despite Springfield's hopes and best efforts, in 1871 the Oregon and California Railroad bypassed the city in favor of Eugene after a group of Eugene businessmen paid railroad financier Ben Holladay $48,000 to reroute the line. While Eugene

[28] Dennis, "Springfield Historic Context...," (1999), p. 12; Walling, *History of Lane County...* (1884), p. 453.

[29] Henry G. Langley, *Pacific Coast Business Directory for 1876-1878* (San Francisco: Henry G. Langley, Publisher, 1875), pp. 549 and 573.

[30] U.S. Bureau of the Census, Ninth Census of the United States, 1870.

prospered, the city of Springfield stagnated without direct access to this important transportation resource.[31]

The Briggs Ferry continued operation until 1874 or 1875 at which time a wooden covered bridge across the Willamette River was constructed using public conscription and county funds; the bridge was flooded out and replaced in 1881 with another covered bridge.[32] Both bridges were heavily used by pedestrians, livestock and wagons traveling to and from Eugene and points beyond. Nine years later in the flood of 1890, the bridge washed out again, and a steel truss structure was constructed in the hope that it would withstand future floodwaters.[33]

Business directories from this period indicate that a number of commercial services were available in Springfield. During the decade of the 1870s, the city had a hotel, two blacksmiths, a general store, meat market, harness and saddlery shop, physician, druggist, four carpenters and a painter. A shoemaker, hardware store, boarding house and wagon and carriage store were added in the early 1880s.[34] Industry in Springfield continued to be centered around the mills although small manufactories were also listed in the business directories, including a wagon maker, tannery, chair manufacturer and sash and door factory.[35]

Despite the fact that the railroad had bypassed Springfield in favor of Eugene in the 1870s, the city continued steady growth, especially in the areas of agriculture and milling. These two endeavors were to remain the primary industries supporting the local economy into the twentieth century. It was during this period that the commercial district expanded and became the center of town, around which the residential and industrial areas localized. The community also developed culturally by organizing and building several schools, churches, and fraternal organizations. Springfield was coming into its own, and Walling described the locale in his 1884 publication as having "...level rich soil, good water, convenience to timber, excellent water facilities, splendid mills, proximity to the railroad, easy outlet in every direction, ...a thriving business place [and] containing one of the best water-powers in the country..."[36]

Springfield had had an official post office since 1868, and it was finally incorporated as a city on February 25, 1885. The first city officials were Mayor, Albert Walker, a blacksmith; Treasurer, Joseph W. Stewart, merchant; City Recorder, W.R. Walker, farmer; and Councilmen, T.O. Maxwell, owner of a livery stable, and W.B. Pengra, mill owner and county surveyor. The

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[31] Barbara Graham, "General History of the City of Springfield," Unpublished manuscript on file at the City of Springfield Development Services Department, (1978), pp. 2-3. Cited in Dennis, "Springfield Historic Context," (1999), p. 14.

[32] Walling, *History of Lane County...* (1884), p. 453; Kurt Madar, "The Spans of History," Eugene *Register Guard*, Springfield Extra Section (January 31, 2008).

[33] Madar, "The Spans of History," (2008), pp. 1-2.

[34] Dennis, "Springfield Historic Context," (1999), p. 15.

[35] Dennis, "Springfield Historic Context," (1999), p. 15.

[36] Walling, *History of Lane County...* (1884), p. 306. Although there seem to be few statistics on Lane County lumber production specifically, Walling notes (p. 377) that between 1865 and 1875, lumber production in Lane County increased from 744,000 feet in 1865 to 3,867,215 feet in 1875. Although included in the graph, no data was presented for the year 1880. The Pacific Coast business Directory for 1876-78 (published in 1875) indicated that there were 184 sawmills operating in Oregon, of which 141 were water-powered, and 43 steam-powered. The aggregate cost of these mills was estimated at $1,100,000, and the capacity about 1,000,000 feet of lumber per day. The directory listed twelve sawmills in Lane County, ten run by water and two by steam. Langley, *Pacific Coast Business Directory...* (1875), pp. 507-508.

town's population grew slowly but steadily at the end of the nineteenth century, while the boundaries of the community continued to expand with various plats and annexations in the 1880s and 1890s.

The arrival of the railroad in 1891 "ushered in the twentieth century for Springfield," ending its isolation, stimulating economic growth and acting as a catalyst for civic and industrial improvements.[37] (Fig. 6) A line running between Woodburn and Springfield, which had begun in the 1880s as a narrow-gauge railroad operated by the Oregonian Railway Company offering both freight and passenger service, was ultimately purchased by Southern Pacific in 1890. The SP then extended the line into Springfield and then to Natron (the terminus) in 1891.[38] The new rail route gave the area much-desired direct access to commercial markets, and set Springfield on a path for significant future growth. Southern Pacific's 1891 passenger depot was erected on a tract of land donated by the Springfield Investment and Power Company.[39] In 1900, the Southern Pacific network in the area was further expanded by the addition of an eastern track to Wendling, a company town built by the Booth-Kelly Lumber Company who provided Southern Pacific with much-needed lumber (namely railroad ties) for the expansion of the rail system.[40]

As the rail system was improving, so was the turn-of-the-century road system into and around Springfield, which had improved enough by 1901 to include regular stage transportation to and from Eugene, and to points east, with extended service to Thurston, Walterville and Leaburg. Because Springfield was located on the East Side Territorial Road that connected with Oregon City, it is possible that stage service for the town started at an earlier date. [41]

The Hayden Bridge across the McKenzie River north of the town center was installed at the turn of the twentieth century by the Southern Pacific Railroad, with assembly completed in 1901.[42] "The Bridge helped the Southern Pacific reach the Booth Kelly mill at Wendling, where badly needed railroad ties were manufactured. The SP used the ties to expands its tracks through Oregon."[43] The 228-foot iron structure was fabricated in 1869 in Pennsylvania and was originally used in Corrine, Utah before being dismantled and shipped to Springfield, where it aided in the development of both the railroad system and the local lumber industry.[44] Another steel railroad bridge for Southern Pacific was completed in 1906 across the Willamette, just upstream from the vehicular bridge.[45] The rail line passed by the industrial area of Springfield,

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[37] Dennis, "Springfield Historic Context," (1999), p. 17.

[38] This route between Woodburn and Springfield was begun in 1880, and purchased by Southern Pacific in 1890 and converted to a standard gauge line. It passed through Tallman (Linn County) and Coburg before reaching the Springfield area, where it terminated at Natron. <http://www.abandonedrails.com/Oregonian_Railway> Accessed June 2015; Ed Austin, *The Oregonian Railway* (Charleston, S.C.: Arcadia Publishing, 2014), pp. 8-9.

[39] Dennis, "Springfield Historic Context," (1999), p. 17.

[40] Dennis, "Springfield Historic Context," (1999), p. 17.

[41] Dennis, "Springfield Historic Context," (1999), p. 18.

[42] "Hayden Bridge," Written Historical and Descriptive Data (Data Sheets), Historic American Engineering Record HAER OR-19 (1990).

[43] Steven Conway, "The Bridge That Won the West," Eugene *Register Guard*, Emerald Empire Section (May 18, 1969), p. 13.

[44] Conway, "The Bridge That Won...," (1969), p. 13. Hayden Bridge is located at or very close to the location of Felix Scott's 1850s sawmill site.

[45] Dennis, "Springfield Historic Context...," (1999), p. 20. A third span, just downstream from both bridges, was built across the river in 1910 by Lord Nelson (Nels) Roney for the electric streetcars of the Portland, Eugene and Eastern Railway.

namely the site of the lumber and flour mills near the river just south of the commercial core, and provided transport of raw material to the mill and manufactured products to outside markets. (Figs. 7-9)

The growth of Springfield after 1891 is evident in the increased number and variety of commercial enterprises that appeared in the 1890s and early twentieth century. Between 1883 and 1893, the number of businesses tripled from thirteen establishments to 35, and by 1915, the number had grown to 55.[46] In the 1890s, aside from the general stores and services that provided the necessities, Springfield boasted two hotels, two undertaking parlors, and two real estate-insurance businesses. There were two photographers, a travel agent, two druggists, and a physician.[47] Milling, both flour and lumber, had been the impetus for the establishment and continuation of the town, and by the late nineteenth century, the successful Booth-Kelly Lumber Company was poised to invest in Springfield industry, which they did just after the turn of the century.

East of Springfield, the small, agricultural community of Thurston was established in vicinity of the Thurston Road and present-day 66th Street (formerly called Russell Road) intersection. Thurston had seen initial settlement in the early 1850s, and grew into its own during the latter part of the nineteenth century with a school, churches, a general store, blacksmith and sawmill, which was operated by George Williams.[48] The first sawmill in Thurston was operated by George Williams; the location, date of establishment and length of operation of the mill are not currently clear. The community's namesake was George H. Thurston, a pioneer settler of the region, and a post office of the same name was established in 1877.[49]

The small community of Natron, which also had its beginnings during this period, was an early terminus of a branch line of the Southern Pacific railroad that extended into the area in 1891. A year later, a local post office was opened and operated until 1924.[50]

The first development in Glenwood, sometimes historically referred to as West Springfield, began when a plat for a subdivision to be called Glenwood Park was filed in 1888 and amended in 1890. Although the community never reached any substantial growth in population or development of housing stock, largely due to the annual flooding of the Willamette River, Glenwood functioned as a crossroads for the upper Willamette Valley and connected Eugene to Springfield, first in the form of the east-west county road, later as the Pacific Highway, and eventually as Franklin Boulevard-McVay Highway. An area of Glenwood known as Springfield Junction developed along the McVay Highway at the point that the original wagon road and railroad crossed into Springfield.

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[46] Dennis, "Springfield Historic Context" (1999), p. 20.

[47] Dennis, "Springfield Historic Context" (1999), p. 20.

[48] Jones, "Brief History of Thurston," (Summer 1985), pp. 32-36; "George Williams...," photo number WR184 (c. 1895), Lane County Historical Museum photo collection.

[49] Lewis A. McArthur and Lewis L. McArthur, *Oregon Geographic Names* (Portland: Oregon Historical Society Press, 2003), p. 953.

[50] McArthur, *Oregon Geographic Names* (2003), p. 691. In the 1920s, the railroad was extended to Klamath Falls and the route was referred to as the Natron Cutoff. The community was named for the abundance of the mineral known as Natrolite, found in the vicinity.

In addition to its physical, commercial and industrial growth, Springfield progressed culturally, as well. In 1892, a weekly newspaper called *The Springfield Messenger* was published for a year by W.F. and W.G. Gilstrap, who set and printed the local news on a hand press. John Kelly began publishing a newspaper called the *Nonpareil* in 1896. Two years later, he sold the paper to J.G. Woods, who changed the name of the publication to the *Springfield News*. Although ownership changed over the ensuing years, the *News* is still the principal newspaper in the Springfield area.[51] In 2006, the *News* ceased to exist. Soon thereafter, Scott Olson established the *Springfield Times* to fill the void.

In the 1890s, the city had a local baseball team, an opera house, and a library that was housed in the City Hall.[52] By the turn of the century, eleven fraternal organizations were active in the Springfield community, some of which related to the community's growing timber-based economy. As listed in various city directories, these included the Foresters of America, Modern Woodmen of America, Women of Woodcraft, and Woodmen of the World, as well as other well-known groups such as the International Order of the Odd Fellows, Grand Army of the Republic, and others.

The last quarter of the nineteenth century was clearly a period of vigorous growth for Springfield as the railroad allowed for more robust trade and export of the area's abundant agricultural goods and the lumber derived from its vast nearby timberlands. After constructing their company town of Wendling (outside of Springfield, in the Marcola Valley to the north), Booth-Kelly purchased the Springfield sawmill in 1901, and the community enjoyed a surge in growth and prosperity. As a result, the number of businesses in the commercial district tripled and Main Street began to take on the appearance that it has today. With the installation of modern amenities such as electricity, a public water system and telephones, Springfield entered the modern era.[53]

[51] Paragraph from Dennis, "Springfield Historic Context" (1999), p. 25.
[52] Dennis, "Springfield Historic Context" (1999), p. 25.
[53] Dennis, "Springfield Historic Context" (1999), p. 30.

EARLY OREGON LUMBER MILLS and SAWMILL TECHNOLOGY

In early to mid-nineteenth century America, sawn lumber was used for construction of a multitude of buildings and structures in most regions where wood was abundant and sawmills were in operation. However, on the leading edges of post-colonial-era American frontiers–from Kentucky and Tennessee westward to Missouri and, eventually, the Pacific Coast–log buildings dominated as relatively simple constructions that required nothing more to make than trees, hand tools, and manpower. Although then-modern milling and transportation technologies were available and in use in the eastern states, bringing them to the Pacific coast was difficult at best, and so the earliest Euro-American dwellings, outbuildings, and fences in Pacific Northwest were typically of log construction or hand-milled/hand-hewn lumber. Features such as windows, doors, architectural detailing and sometimes siding were also made by hand. The architectural elements of early styles such as the Federal and Classical Revivals were achievable using hand tools, making Oregon's earliest buildings all the more remarkable.

"As communities grew and the mills slowly improved, however, they began to acquire more sophisticated equipment..." which allowed for more sophisticated buildings.[54] Once milled lumber became available, box construction, balloon framing, and, eventually, platform framing methods were commonplace. Milling technology (such as moulders, planers and lathes) allowed for production of machine-made windows, mouldings, turned elements, and other architectural features that eventually provided the material that defined styles such as the Italianate and Queen Anne of the 1880s and 1890s. Pre-1900 wood buildings of all types typically made use of box construction or balloon framing until about the 1890s when platform framing came into common use (and continues to be used today).

Before mechanical mills were established, some lumber on the frontier was produced using pit- or whipsaws. (Figs. 10 and 11) In this man-powered method,

> The logs were raised on tall, sawhorse-like trestles or set over a pit [the pits were about 6 feet deep, 12-14 feet long, and 3-4 feet wide]. The top sawyer stood on the log and guided the saw along a line marked by snapping a string coated with chalk or charcoal. The pit man stood under the log, time after time pulling the saw down on its cutting stroke and helping to lift it back for the next pass. Pitsaws were made in both open 'whipsaw' and framed types.[55]

In 1846 or 1847, John Waymire set up Portland's first sawmill on Front Street, with "...the sole machinery being a whip-saw, operated by one man who stood on the log above and did the up

[54] Ward Tonsfeldt, "Draft Context Statement for Railroad Logging in Oregon." (Salem: Oregon State Historic Preservation Office, 1993), p. 3.

[55] Philip Dole Papers, "Saw, Pitsaws" (file), Eugene, Oregon: University of Oregon Special Collections (n.d.); R.A. Salaman, *Dictionary of Tools used in the woodworking and allied trades c. 1700-1970* (London: George Allen & Unwin, 1975), pp. 442-43. The saw blade itself could be held at either end (the blade open, with the tiller at the top and the box at the bottom), or it could be mounted in a frame and operated the same way. (see "Ledyard Up-Down Sawmill / A Sash Sawmill Glossary," <http://www.ledyardsawmill.org/historic-technology/sash-sawmill-glossary>) The lumber from a pitsaw is clearly recognizable, as the relatively variable up-and-down action of this saw left distinctive, irregularly-spaced vertical marks in the lumber.

stroke, and by another who stood below and did the down stroke and got the dust."[56] Research suggests that pit-sawing was relatively rare in Oregon, and its use seems to have been short-lived. Despite the wild and isolated nature of the territory in the first half of the nineteenth century(from the explorers' and settlers' perspectives), the first mechanized sawmills in Oregon appeared surprisingly early, owing in no small part to Oregon's abundant water (and thus, power) sources.

While the initial permanent European and Euro-American settlements in the Oregon country were economically focused on the fur trade, the abundant timber made for early discussion of lumber export.

> Construction of the real progenitor of the northwest lumber industry was started in 1827... Governor Simpson and Chief Factor John McLoughlin conceived lumber production not only for building ships and facilities at the fort, but for sale to the Sandwich Islands, California, the west coast of South American and other markets available to Hudson's Bay Company ships.[57]

In 1827-1828, McLoughlin constructed and operated the first sawmill in the territory on a small stream a few miles above Fort Vancouver. This early affair was built with machinery shipped from England, and the overshot water-wheel drove "...a single saw operating on the primitive 'muley' system, and an eight-man crew of Sandwich Islanders."[58] The mill produced lumber for fur shipping containers, but also was able to generate sufficient lumber for export to the Sandwich Islands, specifically to Oahu, Hawaii.

These muley or sash sawmills (also known as reciprocating, "up-down" or "up-and-down" saws) were initially water powered, with a few running on steam as settlement progressed.[59] (Figures 12 and 13)

> In a sash mill, the blade is straight, and to give it strength and rigidity, it is mounted in a frame or sash. In the simple old form, the bottom of this sash is coupled directly to a crank extending out from the main bearing of the water wheel. As the wheel revolves, it causes the crank to move the sash up and down. The log, on a carriage, is propelled against the reciprocating saw blade. The

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[56] Harvey W. Scott, *History of Portland, Oregon*, (Syracuse, N.Y.: D. Mason & Co., Publishers, 1890), p. 90; see also Joseph Gaston, *The Centennial History of Oregon, 1811-1912*, Volume 1 (Chicago: The S.J. Clarke Publishing Company, 1912), pp. 359-360.

[57] Donald H. Clark, "Sawmill on the Columbia," *The Beaver: a Magazine of the North*, Outfit 281 (Winnipeg, Manitoba, Canada(?): The Hudson's Bay Company, 1950), p. 42. George Simpson was the Governor of the Hudson's Bay Company Northern Department, which covered the region of the present-day Pacific Northwest. <http://www.hbcheritage.ca/hbcheritage/history/people/builders/simpson> Accessed May, 2015.

[58] Clark, "Sawmill on the Columbia" (1950), p. 42.

[59] The terms muley saw and sash saw are sometimes used interchangeably, as both are reciprocating "up and down" saws that were operationally very similar. It seems there are slight differences in their configuration, however, in that mulay or muley saws moved between wood guides at the top and bottom, rather than being mounted in a frame. Being unframed, muley saws also took a larger kerf, owing to the necessary stiffness of the un-framed blade. Ledyard Up-Down Sawmill, "A Sash Sawmill Glossary," <http://www.ledyardsawmill.org/historic-technology/sash-sawmill-glossary>.

> cutting is done only on the down stroke. It is all slow and primitive, but with time a great amount of lumber may be cut.[60]

Water-powered sash sawmills saved some on physical labor, but they weren't necessarily quick. The slow reliability of the sash saw was described in one source as "...up today and down tomorrow. Grandpap Gordon used to start the saw in the log and then go away, sometimes to catch a fish, then after a while he would go back to see what effect the saw had on the log."[61] The output of a sash sawmill could be multiplied by grouping the blades in the frame to form a gang saw, a strategy that was employed in a number of early Oregon mills. (Fig. 14)

As early as 1829, John McLoughlin recognized the potential of Willamette Falls (at present-day Oregon City) as a mill site, and considered replacing the Fort Vancouver mill with one at the Falls in order to produce more lumber for export. There he claimed land, and through the 1830s made attempts to begin mill site development, including construction of a millrace in 1832 and at least one building by 1838.[62]

HBC retirees and American trappers moved into the Willamette Valley starting around 1830, building houses and establishing farms. The second mill in the territory–and the first in the current state of Oregon–was erected in 1836 along Chehalem Creek (near Newberg in Yamhill County) by American trapper Ewing Young.[63] This mill, which provided material for local use (not for export), was located significantly closer to the nascent Willamette Valley settlements, thus diminishing the need for travel to Fort Vancouver. Although built at "considerable expense," Young's mill was destroyed by flood waters during the winter of 1840-41.[64]

The Methodist missionaries, led by Jason Lee, also made permanent settlement in the Valley (at Mission Bottom near Salem) in the mid-1830s, and as part of the mission complex a sawmill was established, providing sawn lumber for the construction of a second generation of buildings at the Lee Mission. "By spring of 1841, the first lumber milled by the missionaries was available, and the...first of the buildings to be erected with the new lumber was "Mill Place," [the Jason Lee House] adjacent to the sawmill."[65]

The Willamette Falls site continued to hold interest. The additional "reinforcement" American missionaries in 1839 and 1840, some of whom opted to settle at or near the Falls, added to the existing small cluster of houses and the millrace. In 1841, Methodist Reverend Alvan F. Waller established the Island Milling Company. By 1842, Waller was operating a

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[60] Dole, "Sash Saw Oregon" file (n.d.). "The term [sash sawmill] was not needed prior to the advent and then widespread use of circular and bandsaws in the middle of the 19th century and later. All early sawmills were sash-type, so they were simply called sawmills." Ledyard Sash Sawmill Glossary.

[61] Tonsfeldt , "Railroad Logging...," (1993), p. 7.

[62] J.A. Hussey, *Champoeg: Place of Transition* (Portland: Oregon Historical Society, 1967), p. 39.

[63] Hussey, *Champoeg...*, (1967), p. 68.

[64] Hussey, *Champoeg...*, (1967), p. 68; Hubert Howe Bancroft, *The Works of Hubert Howe Bancroft, Volume XXIX, History of Oregon Volume I - 1834-1848 (*San Francisco: The History Co., Publishers, 1886), p. 151.

[65] The extant Jason Lee House is located at Salem's Willamette Heritage Center/Mission Mill complex. It is one of the two earliest extant buildings standing in the Willamette Valley. Elisabeth Walton, "Jason Lee House National Register Nomination Form," 1973. It is not clear whether lumber from this mill was purchased or used by other settlers not affiliated with the Mission.

small sawmill and making plans for a flour mill; McLoughlin followed soon thereafter with construction of his mill nearby.[66]

Throughout the 1840s, market centers were limited to the well-established Fort Vancouver and Oregon City, both places where lumber could be purchased. But transportation was difficult and time-consuming, and most settlers arrived in Oregon in the fall of the year, often destitute. Most rushed to erect temporary shelter, usually in the form of log cabins, delaying construction of their "real lumber" houses–sometimes for many years–until finances and circumstances allowed. Nonetheless, small, private, water-powered sawmills appeared throughout the Willamette Valley on individual land claims at points along waterways that provided strong flow for the operation of mills; some of these were documented on the early government surveys of the 1850s. Where water power was consistent and substantial enough for sustained production, larger mills (both saw- and gristmills) became the nuclei for towns, as was the case in Oregon City, Portland, Corvallis, Eugene, and Springfield, as well as smaller communities such as Coburg and Harrisburg.

Many of the small "neighborhood" mills in Oregon were isolated and temporary in nature, set up to supply the immediate area with lumber for the construction of houses, fences, barns and other outbuildings. This very localized sawmilling was frequently an adjunct to the pioneers' primary occupation of farming, and was not necessarily a long-lived endeavor. Material was sawn from nearby, easily-accessible timber, and the mills shut down when demand diminished or other sources became available. In most cases, "...plans for reaching beyond neighborhood markets were not part of the owners' strategies. [...] The equipment typically consisted of a single sash or muley saw, and little else. The most distant market they could reach were those available to their teams and freight wagons–usually within a radius of twenty to fifty miles. Poor roads or long winters could limit this market even more."[67] While these local mills had little competition, few of them seem to have prospered. "Their staple products, rough boards and large timbers, could be duplicated on any homestead equipped with a pit saw, a broad axe, and a froe."[68]

Construction details for the mill structures are few, but research indicates the use of heavy timber framing, usually open on at least three sides and with a gable or shed roof. "Structures were not large as we think now, and in most cases foundation loads were well handled by the huge logs then readily available to the mill sites. Wood was used extensively for gears, walking beams and other moving parts, for iron was scarce."[69] Some iron parts were brought over the plains or shipped around the Horn by those with the intention of setting up a mill, and local blacksmiths (and eventually foundries) also fabricated some parts. The size of the mill might have depended on the intention of the sawyer, the location, and the type of power and

[66] Bancroft, *Works...* Vol. I (1886), 207. Because they depended on the same power source (typically water), early commercial saw- and gristmills often appeared together or in close physical proximity.

[67] Tonsfeldt , "Railroad Logging...," (1993), p. 3. "Lumber and timber are traditionally measured in board feet, usually in even thousands." (One board foot is a piece of lumber one foot square by one inch thick.) "A thousand board feet of lumber can be visualized as a pile of lumber 10' long, 4' wide and 2' high. A thousand feet was also the traditional load for a farm wagon."

[68] Tonsfeldt , "Railroad Logging...," (1993), p. 3

[69] Lewis L. McArthur, "Industrial Building," in *Space, Style and Structure: Building in Northwest America*, Vol. 1 (Portland: Oregon Historical Society, 1974), p. 162.

saw. The 1850 steam-powered circular sawmill built in Portland by Abrams and Reed was described as being rather substantial:

> ...forty feet wide and eighty feet long; the timbers being hewed out of the giant firs growing alongside the mill site, and being sixteen inches square were so heavy that all the men in town were unable to put the timbers in place or 'raise' the building... Reed was forced to rig a derrick, and with block and tackle, and all the men to pull on the ropes, they hoisted the timbers to place and erected the first saw mill in Portland, Oregon, a mill that would cut about ten thousand feet a day.[70]

On the other end of the spectrum, Sutter's mill in California, although obviously not in the Pacific Northwest, was probably typical of frontier sawmills, and was relatively modest in scale in spite of Sutter's original intentions on establishing a commercial mill. (Fig. 15)

Water power originating from adjacent streams or rivers was provided by channeling through a millrace fitted with gates, which allowed some control of the flow and also created storage ponds for logs yet to be milled. Although the millrace gates provided some control, seasonal flows often had an impact on production and output, sometimes affecting a sawmill's ability to operate at all.

Overshot-, undershot-, breastshot- and flutterwheels, as well as turbines, were used in nineteenth century water-powered sawmills. All but the turbine were vertical wheels mounted on a horizontal axel. As the name implies, overshot wheels were rotated by falling water striking at the top of the wheel. Undershot wheels were driven by water flowing into buckets at the bottom of the wheel. Water struck breastshot wheels near the center of the wheel. (Fig. 16) Flutterwheels were very commonly used in eighteenth and nineteenth century sash mills, including some in Oregon. They differed from over- and undershot wheels in that the moving water struck paddles or blades (rather than "buckets"), thus driving the wheel by impact. While the type of power utilized in early Willamette Valley sawmills is often mentioned in historical accounts, there is scant information on the specific type of wheel used at particular mills. It is known that Joel Palmer's mill in Yamhill County utilized a flutterwheel, and the A.C. Finley mill at Crawfordsville (Linn County) had an overshot wheel, but few are the descriptions that specify much beyond the source of power (water, steam, etc.).[71]

A turbine is described as,

> A shaft with rotor blades inside a case (typically fabricated from cast iron). Water entering into the case forces the rotor and its shaft to turn to power the mill. Turbines came into use around 1830-1840 in Europe and then were introduced into the U.S. [Turbines] ...gradually replaced wood water wheels in small

[70] Joseph Gaston, *Centennial History of Oregon, 1811-1912* (Chicago: S.J. Clarke Publishing Co., 1912), p. 369; Dole Papers, "Sawmills Oregon" file. This was the first steam sawmill in Oregon, and one of the earliest circular saws.

[71] Dole Papers, files labeled "Palmer, Joel, Sawmill" and "Sash saw - Oregon."

sawmills over the next 30-40 years (and then were in turn were replaced by steam power).[72]

Leffel turbines were patented in 1862, and one was installed at the Springfield sawmill in its 1866 upgrade.[73] The horizontal wheel within a cast-iron case was designed to produce more power with less water than the traditional water wheel systems. (Fig. 17)

Given the abundance of flowing water in Oregon, it appears that nearly all early mills began with water power and if the business survived, later converted to steam. "Steam mills represented a significant improvement over those driven by water, for they freed mill men from having to locate their plants near flowing streams."[74] Steam mills also provided greater and more reliable power, as they weren't dependent on water flow (which varied by season), and could consistently run multiple sash (gang) or circular saws with little trouble.

By 1846, only three years after the first major migration to the territory, Oregon City was firmly established as an American community with a growing number of businesses, and Portland was soon to follow.[75] There, supplies such as building materials (lumber, nails and window glass), household goods and foodstuffs were available through American merchants rather than the British HBC post.

The economics of Oregon lumber production changed with the discovery of gold in California in 1849. A seemingly insatiable demand for lumber and agricultural goods opened up, and Oregon was poised to oblige. Although nearly two-thirds of the men in the territory had departed for the mines, "...markets had been established which promised a certain and profitable outlet for all that farmers and lumbermen could produce; flour mills and sawmills flourished, whenever they could obtain hands to operate them."[76] Sawmills proliferated, and lumber and agricultural goods were transported to the nearest shipping points and sent to California, reaping great profits for those who chose to remain in Oregon.[77] The surge in demand and the resulting spike in prices diminished as rapidly as it had appeared, but it did leave a lasting imprint on Oregon's industry. According to one source, by 1860 there were 126 mills in operation as compared with the thirty-seven mills of ten years before.[78]

The early up-down/reciprocating sawmills ran readily on water power via either an overshot or undershot wheel, but "...neither configuration had enough torque to run a circular saw."[79] Circular saws were introduced in the late eighteenth century in Europe. Unlike reciprocating saws, circular saws did not have to repeatedly overcome the intertia of the up-and-

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[72] Ledyard Sash Sawmill Glossary.

[73] Jerold Williams of the Lane County Historical Museum indicated that the Springfield mill received a Leffel turbine during its 1866 upgrade. Personal communication with author, April 30, 2015.

[74] Thomas R. Cox, *Mills and Markets: a history of the Pacific coast lumber industry to 1900.* (Seattle: University of Washington Press, 1974), p. 22.

[75] *Oregon Spectator* (February 5, 1846), page 3, advertisements.

[76] Charles H. Carey, *General History of Oregon: Through Early Statehood (*Portland: Binfords & Mort, Publishers, 1971) p. 478.

[77] McArthur, "Industrial Building," (1974), p. 161.

[78] Dorothy Marie Sherman, "A brief history of the lumber history in the fir belt of Oregon." Masters Thesis, University of Oregon Graduate School (June 1934), p. 12; Thomas R. Cox, *Mills and Markets: A History of the Pacific Coast Lumber Industry to 1900 (Seattle: University of Washington Press, 1974), p. 55.*

[79] Tonsfeldt , "Railroad Logging...," (1993), p. 6.

down motion, and therefore had the advantage of both continuous and higher-speed cutting.[80] This continuous motion required more power and torque than water wheels could produce, and therefore most ran on turbines or steam. Although circular saws may be considered a later, more modern type, there was at least one in use by the mid-1840s in Oregon City, and in Portland starting in 1850.[81] As sawmills were upgraded, they often replaced sash-type saws with circular saws, and water power with steam.

The earliest circular saws must have been relatively small in diameter, and thus could not saw completely through the large Oregon logs in a single pass. "The size of log that could be cut with one was limited to slightly less than half the diameter of the saw."[82] By the mid-1860s, circular saws were routinely paired–one mounted above the other–which allowed mills to saw through very large logs in one pass. (Fig. 18) These double or over-and-under saws, some 50" or more in diameter, made for increased production capacity, and when multiplied in a single mill, output could reach tens of thousands of board feet per day. Although the basic design of mill buildings changed little in the smaller mills of the nineteenth century, the size of the structures adjusted to accommodate increased capacity enabled by better power and larger saws. (Figs. 20 and 21)

In addition to improved equipment, good, reliable, and accessible transportation was crucial to the success of lumber production and eventual export. This included not only the process of extraction (getting timber from the forest to the mill), but the movement of the finished product to the market (getting lumber to the customer).

In pre-railroad Oregon, the ability to export was limited by the relatively rudimentary transportation system that consisted primarily of wagon roads and the larger rivers of the region. Shipping (transport by ship) was the only efficient method of moving large amounts of lumber any distance, giving the mills located close to ports a distinct advantage in the commercial markets. The challenges in getting lumber from smaller mills, or those without direct access to deep ports or navigable waterways, slowed progress until the railroad provided a reliable transportation option.

Effective transportation also affected production. "From the 1850s to the late 1870s, most logging was done by hand with the help of horses and oxen to clear the felled timber," which was then gathered and floated down rivers or streams to the milling site.[83] Initially, logs were felled in the winter, gathered at a transport point using horses or oxen, and floated downstream. (Fig. 22) Where stream flow was relatively calm, log rafts were constructed to float downstream en masse. In the Springfield vicinity, where rapids were common, logs were floated down loose with the spring freshets, and caught in a boom set up across the river near the sawmill site.[84] Logs were then transferred to the log pond where they could be safely stored until ready for the mill.

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[80] Grimshaw, *Saws...* (1880), p. 53; Cox, *Mills and Markets* (1974), p. 234.

[81] *Oregon Spectator*, February 5, 1846; Dole Papers, "Sawmill Oregon."

[82] Cox, *Mills and Markets* (1974), p. 234.

[83] Thomas B. Forster (ed.) et al, "Cultural and Historic Landscapes of Lane County, Oregon." (Eugene, Oregon, December 1986), pp. 39-40; McArthur, "Industrial Building," (1974), p. 161.

[84] Jerold Williams, personal communication with author (April 30, 2015).

As easily accessible timber close to waterways was cut, loggers necessarily moved further into the forests and away from river banks.

> Most of the first sawmills were supplied with logs from trees that had grown at waterside. The trees were felled directly into the water, or were simply rolled in, and the logs were then floated to the mill. However, as trees on the banks of the streams, bays and sloughs of the Far West were cut, new methods had to be adopted. Because of the size of logs in the Far West and the very different terrain and climate, methods that had been successfully used in the woods of the Lake States and the East were not practical.
>
> Western lumbermen developed the skid road system to solve the problem. By clearing paths through the forest, putting logs crossways on these paths at close intervals, greasing these skids, and attaching six to ten span of oxen to a string of logs, it was feasible to tap stands as far as two miles from the water. [85]

In addition to skid roads, log chutes and flumes were also used to move logs from the forest to gathering points. (Figs. 23 and 24) In some locations, splash dams were put in place, where smaller streams were dammed to create a head of water that, when released, would "...sluice logs that had been dumped into the pond behind the dam...".[86] (Figs. 25 and 26)

Eventually, "steam donkeys" were used in place of livestock for moving logs. (Fig. 27) These steam-powered winches, also known as "donkey engines," were developed in the early 1880s in California, and became invaluable tools in the woods of Oregon and throughout the Pacific Northwest. According to the Oregon Encyclopedia, "A donkey engine was an integrated machine consisting of a powerplant and gearing that turned one or more drums or winches containing wire rope. Designed to lift, drag, and move logs from the stump to an accumulation point, donkey engines were also used to load logs on [railroad] cars that transported logs to distant mill sites."[87]

The railroad was soon to provide a more efficient method of moving timber from the forest, and as rail lines or spurs were built into uncut areas, water transport was made all but obsolete. Typically lines were built and operated by larger companies (not smaller, local sawmills), and by the 1880s railroad logging was beginning to appear in Oregon. Companies set up mill camps, sometimes moving camps, and trees were cut from areas far more remote than in previous decades. While livestock was still sometimes used, steam donkeys were increasingly replacing them to move downed trees and cut logs to the rail transport point, where they were loaded onto flatcars for quick movement to mills. "By the first decade of the twentieth century, the consensus among West Coast lumbermen was that logging railroads were a necessity for any serious industrial producer."[88] (Figs. 28 and 29)

As noted, some small sawmills were only in force as long as they were needed in the immediate area. Others, including the Springfield mill, were established with commercial (albeit local) advancement in mind, and were successful in surviving the ups and downs of early

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[85] Cox, *Mills and Markets...*(1974), pp. 228-229.

[86] Cox, *Mills and Markets...*(1974), p. 229.

[87] Edward Kamholz, "Donkey Engine," Oregon Encyclopedia, (2015). Accessed July 2015. <http://www.oregonencyclopedia.org/articles/donkey_engine/#.VarSLSR6Nxc>

[88] Tonsfeldt , "Railroad Logging...," (1993), p. 42.

development to become significant and consistent contributors to community growth and development. Although the Springfield mill was not an "industrial producer," at least not in the nineteenth century, the expansion of the railroad was a key development that allowed even smaller local mills to expand their production.

SPRINGFIELD'S EARLY MILLS and LUMBER HISTORY[89]

Lane County's earliest American settlers arrived in 1846, and five years later the first lumber mills were being established to satisfy the local demand. The earliest known mill in the Springfield area was that of Felix Scott, built in 1852.[90] Sections or remnants of Scott's millrace, clearly delineated on the 1853 government survey map, may still be visible on the modern landscape. (Fig. 3) Little is known about the mechanics, size or appearance of this mill, and while any above-ground evidence of the mill seems to be long gone, associated archaeological deposits may be extant. It is not clear how long this mill was in operation, but it ran at least through part of 1854 when there is documentation that it provided lumber for construction of a local dwelling.[91] Apart from Scott's mill, no others appear on these maps in the immediate Springfield area, but the Springfield millrace, or a section of it, southeast of the Briggs dwelling is clearly labeled. (Fig. 2)

The greatest impetus to town growth was the construction of the millrace and water-powered sawmill and gristmill built by Elias Briggs. Briggs and his father, Isaac, completed the digging of a millrace, which started south of the Briggs' boundaries and ran at least in part through both claims, during the latter part of 1852. (Figs 2 and 30) The race was mentioned in surveyor's notes for both claims, and described as being fifty links wide (about 33 feet), and having a dam on Elias' property.[92] In partnership with Jeremiah Driggs and Thomas Monteith, two Linn County millers who financed the $10,000 enterprise, the Briggs' apparently hired an experienced millwright from the East Coast to design and supervise construction of the mills. The sash sawmill was constructed first, in the winter of 1853-54, and one source claimed that "the lumber for the building was sawed at a sawmill near the old Hayden bridge, owned by Felix Scott."[93] The grist mill followed in 1854, and was the first flouring mill in Lane County. (Figs. 31 and 32)

The first logs run through the Springfield sawmill were evidently from a place known as "Long Island," a location upstream from the original mill site.[94] The Briggs' won the contract to provide lumber for the first Lane County Courthouse in Eugene in 1855, and continued to run the mills smoothly, providing for the community for over ten years. Although apparently successful, A.G. Walling noted that "Springfield had not importance save as regards the mill, until it and the original claim of Mr. Briggs passed into the hands of Mr. Pengra and his associates in 1865."[95] In that year, the operation was sold to a local consortium of prominent businessmen, including

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[89] A more detailed discussion on Springfield's early mills is provided in David W. Clarke's "The Springfield Millrace and Early Mills." (Springfield, Oregon: Springfield Historic Commission, 1983).

[90] Walling, *History of Lane County*... (1884), p. 454. Scott's mill is often cited as being the first mill in Lane County, but Walling mentions E.P. Castleman's 1851 mill in Cloverdale as being "...among the first, if not the very first to be erected in Lane county..." The Castleman mill was purportedly built to saw lumber for the construction of a grist mill. (Walling, *History of Lane County*... (1884), p. 445) In addition, Hilyard Shaw and Prior Blair had water-powered, sash sawmills in Eugene, both established before the Springfield mill.

[91] Dole Papers, "Sawmill & Wood Talk..." file. Notes in this file include excerpts from Lester Hulin's daybook, which lists lumber purchased from Scott's mill sometime prior to January 1, 1855.

[92] Surveyor's notes for Isaac Briggs' claim number 62 (1860) and Elias Briggs' claim number 82 (1859). BLM, "Land Status and Cadastral Survey Records."

[93] No Author, "The Old Mill at Springfield, Ore," *(*1912), p. 573.

[94] Jerold Williams, Lane County Historical Society, personal communication with author, April 30, 2015.

[95] Walling, , *History of Lane County*... (1884), p. 453.

Paul Brattain, Judge R.E. Stratton, J.B. Underwood, Byron J. Pengra and others, who had incorporated under the name of the Springfield Manufacturing Company.[96]

> On the first day of April [1865] several prominent citizens of Eugene and Springfield incorporated and purchased the sawmill, the grist mill, the Millrace, and the entire Elias Briggs Donation Land Claim, virtually buying the whole townsite of Springfield. Elias Briggs continued to run his ferry at 'B' Street until his business was displaced by the first wooden bridge constructed at 'D' Street in 1875.[97]

One year later, the new owners determined that they needed a larger sawmill with associated planing capabilities, and,

> In 1866 the old saw mill was torn away and a new mill erected about one hundred and twenty-five yards farther to the south, on the same water power. It was run with a pair of double circular saws with a Leffel Turbine wheel and other machinery under an inexhaustible water head of twenty-one feet.[98]

By 1868, notification in Eugene's *Oregon State Journal* indicated that the mills "...at Springfield are again in operation. Wheat received in Store and floured for customers without further delay. Orders for Flour and Lumber filled promptly."[99]

With sawn lumber readily available and the population increasing, other milling- and building-related businesses, formal and informal, began to appear in the community. The 1870 census for the Springfield and Willamette Forks precincts listed at least ten men working in the sawmill industry as laborers, millwrights or sawyers, in addition to several carpenters, cabinet makers and a wagon maker.[100] Listed in early directories were wheelwrights, wagon makers, carpenters, sash and door manufacturers, and furniture makers. Local foundries and blacksmiths may have manufactured parts for the mills.

From the late 1860s and into the early 1870s, the Springfield Manufacturing Company was actively advertising that they were "prepared to fill bills on the shortest notice, and with the very best quality of lumber," suggesting that perhaps business was slower than desired.[101] (Figs. 33 and 34) Many of the limitations that kept agricultural production at a subsistence level also prevented larger-scale lumber production for the market. Transportation was key to the success of the mills, as evidenced by local advertising that offered free ferriage at the Springfield and Spores ferries to Springfield Manufacturing Company customers.[102] (Fig. 35) The Oregon & California railroad rolled into Eugene in 1871, but "the [Springfield] mill [was] handicapped by

[96] Walling, *History of Lane County*... (1884), p. 454; David W. Clarke, "The Springfield Millrace and Early Mills." (Springfield, Oregon: Springfield Historical Commission, 1983), pp. 27-28

[97] Clarke, "The Springfield Millrace...," (1983), pp. 27-28.

[98] Walling, *History of Lane County*... (1884), p. 454.

[99] "Notice," *Oregon State Journal* (November 28, 1868), p. 1.

[100] U.S. Bureau of the Census, Ninth Census of the United States, 1870. Accessed via Ancestry.com.

[101] "Lumber for All," *Oregon State Journal* (April 30, 1870), p. 3.

[102] "The Railroad is Coming to Springfield," *Oregon State Journal* (June 4, 1870).

its competitors on the line of the railroad in the matter of shipping facilities [and] ceased to be a lucrative enterprise."[103]

Shortly after expanding the flour mill, the Springfield Manufacturing Company sold the mills and water power in 1872 to brothers B.J. and William Pengra. It may be speculated that the rerouting of the railroad line to Eugene influenced the shareholders' decision to sell, although the Pengras successfully operated the mills despite the lack of direct railroad access. Mid-1870s advertisements suggested that business was picking up under the Pengras' management, and the mills were running "night and day, turning out a large quantity of lumber."[104] The Portland *Oregonian* in 1873 stated that "The water power, taken from the Willamette river, and the still greater power of the same kind at Springfield, supplied from the forks of the Willamette and owned by Messrs. Pengra Brother, are important auxiliaries to the business and wealth of the place in promoting its manufacturing interests."[105] An 1880 Oregon State Journal advertisement announced that J.B. Rhinehart had been "appointed agent for the Springfield Mill Co. [...] All kinds of building lumber delivered on short notice and at very low figures."[106]

An 1882 fire destroyed the Pengra's sawmill building (originally built in 1866), an event reported by Walling as "...a serious catastrophe to the district, as it was the best saw mill in the county."[107] It was quickly rebuilt with "...all of the best and newest improvements in machinery, including...new steel circular saw blades," housed in a three-story, 50' by 150' building.[108] According to Walling, the new mill had a capacity of 30,000 feet of sawed lumber and 5,000 feet of dressed lumber, which implies that the planing mill continued to be part of the complex.[109] (Fig. 32) Two years later, the Pengra brothers split the ownership of the lumber- and flour mills, which had been operating in tandem since their 1850s inception. B.J. Pengra assumed ownership of the sawmill and retained the millrace water rights, and William took over the flour mill and leased water rights back from his brother for 99 years.[110]

Walling identified "...two other saw mills in the district, one in the northeastern part, on the McKenzie, and the other in the southeastern quarter, on the Willamette, where large quantities of lumber for building purposes are annually manufactured."[111] Their locations were not specified, but the 1867-1875 business directory listed Gay's mill on the McKenzie River run by John Cogswell, and J.L. Brumley's mill on the Willamette, both water-powered and with capacity of 3,000 to 4,000 feet per day. The directory also did not locate the mills precisely, but one source states that James Gay's mill was started in 1871 and located just east of Thurston.[112] Local newspapers advertised the Beaver Creek sawmill, which was under lease by M.B. Gay by

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[103] Clarke, "The Springfield Millrace..." (1983), p. 32

[104] "Springfield Manufacturing Company," *Oregon State Journal* (July 11, 1874), p. 3.

[105] "Through Lane and Linn," Portland *Oregonian*, (November 14, 1873), p. 1.

[106] "Lumber! Lumber!," *Oregon State Journal* (June 26, 1880).

[107] Walling, *History of Lane County*... (1884), p. 454; Eugene *Register Guard*, June 4 1882.

[108] Walling, *History of Lane County*... (1884), p. 454.

[109] Walling, *History of Lane County*... (1884), p. 454.

[110] Clarke, "The Springfield Millrace..." (1983), p. 34.

[111] Walling, *History of Lane County*... (1884), p. 306.

[112] Charlotte Mitchell, "John Cogswell," *Lane County Historian* Vol. VI No. 2 (June 1961), p. 29. George Williams is credited with having the first sawmill in Thurston, though research has yielded little about it. The Williams mill may have been in operation in the early 1900s, outside the time parameters of this study. Jones, "Brief History of Thurston," (Summer 1985), p. 36.

1868 and was "...situated 12 miles east of Eugene on the McKenzie river." [113] According to the ad, the mill ran day and night, produced fencing, square timber, floor and ceiling, and apparently had "on hand" 150,000 to 200,000 feet. The J.L. Brumley mill, although listed in Springfield, was actually located on Jacob Spores and John Diamond's 1855 sash saw mill site in Coburg. Although outside the study area, it is worth mentioning because of the description provided by Walling. Brumley in 1865 purchased the site from Isaac Vanduyne after the facility was washed out in the 1861 flood. He built a new structure, with a "...water-wheel...of the Turbine pattern...manufactured by G.G. Smith [which] drives two circular saws, one above the other, of fifty-four inches in diameter, while it is provided with one cut-off saw and an edger. The capacity of the mill is fifteen thousand feet in twenty-four hours. In an out-building on the east side are the planer and matcher, which are driven by a separate water-wheel, which also is of the Turbine pattern."[114] The directory also listed another McKenzie River mill, "McKinzie Bluffs," operated by Abrams & Co., which was steam powered and had a 10,000 feet-per-day capacity. The exact location of that mill is not clear.

After twelve years of primary ownership and operation, in 1884, Byron Pengra sold the sawmill and millrace to Almon Wheeler, whose operation grew until the demand for finer grades of dressed lumber exceeded the capacity of the mill.[115] In response, Wheeler made improvements to the mill in 1891, some of which were outlined in an 1892 newspaper announcement and included a new planing mill fitted with additional machinery, purchase of an engine and boiler to run the planer, construction of a furnace, and improvements to the channel of Fall Creek (including "removing obstructions and constructing dams") from where the mill got at least some of its timber.[116] In 1892, Wheeler and others incorporated to form the Lane Lumber League, having "...acquired the mill, the yards, the lease of water and ponds, the stock of logs, the stock of lumber, the teams, the merchandise, and all the property used by A. Wheeler in the business of making lumber at Springfield..."[117] Stock shares were offered for sale, and the organization touted its improvements, capacity and "good stocks of lumber in Springfield, Albany and...Eugene."[118] (Fig. 36)

Despite his apparent success, Wheeler evidently over-extended, and the mill was advertised for sale or rent in 1894. It sat idle, and an 1896 Eugene City Guard notice suggested that the property had gone through foreclosure:

> The sale of the Springfield Power and Improvement Company's lands and property, including the Springfield saw mill and machinery, the water power and

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[113] "Beaver Creek Saw Mill" advertisement, *Oregon State Journal* (September 26, 1868), p. 1.

[114] Walling, *History of Lane County*... (1884), p. 467. Brumley sold this mill in 1876 to Horace Stone. There is a significant discrepancy between the Walling's account and that of the Pacific Coast Business Directory with regard to the mill's capacity, and it is therefore possibly that Brumley had another, smaller mill at another location. Langley, *Pacific Coast Business Directory*... (1875), p. 508.

[115] Clarke, "The Springfield Millrace..." (1983), p. 44. In 1890 Charles W. Washburne, a Junction City banker, purchased the flour mill from William Pengra and set about enlarging the mill and refitting it with new high-speed machinery that increased flour production to 150 barrels a day. Washburne put his son, Byron A. Washburne, in charge of the operation, which became extremely successful in producing a brand of flour called "Snowball XXX". Clarke, "The Springfield Millrace..." (1983), pp. 35-41.

[116] "Lane:Lumber:League." Eugene *Daily Guard* (October 22, 1892), p. 7.

[117] Ibid.

[118] Ibid.; Eugene *Daily Guard* (October 22, 1892), p. 1. Apparently the mill shipped 500,000 board feet of lumber between August and October, 1892.

> several hundred acres of land lying in and adjoining the town of Springfield, which was advertised to be sold by the sheriff at mortgage sale...has been postponed...[119]

Finally in 1899, newspapers announced the restarting of the mill, which had been purchased by a Portland firm, leased to Idaho sawmill man H.A. Skeels, and was to be "overhauled and renovated to increase production from 20,000 board feet to 35-40,000 board feet per day.[120] Henry Skeels was listed in the census of 1900 as a "sawmill owner," and his son Nelson as "sawmill foreman."

Meanwhile, the company that would make Springfield a major industrial center, the Booth-Kelly Lumber Company, was incorporated in 1896 by Robert and Henry Booth and George and Tom Kelly. Booth-Kelly had made their foray into the local market by purchasing the Jones mill in Saginaw (south of Springfield) in 1896.[121] The same year, they bought about 40,000 acres outside of Marcola (northeast of Springfield) and "...built a steam-powered mill [and] a community, a company town" called Wendling.[122] The Southern Pacific railroad network was extended to Wendling to facilitate transportation of the much-needed railroad ties produced by the mill, with the positive corollary of increasing the mill's shipping capacity.

In August 1901, the Booth-Kelly Corporation purchased the Springfield sawmill and several thousand acres of timberland in the region. The still water-powered saw mill was repaired, overhauled, and the capacity improved; E.O. Martin was the plant foreman, and G.W. Catching the millwright.[123] The company and mill expansion "...was welcomed and recognized as 'the largest lumber concern in the state of Oregon.' The company was an integral part of Springfield's economic growth ... [and they] then purchased 140,000 acres in the Mill Creek, Willamette, McKenzie, Fall Creek and Cottage Grove areas to supply 'The Mill'."[124]

The sawmill was dismantled in 1902 and a larger, more efficient mill with a capacity for greater production was constructed on the same site.[125] The new, Booth-Kelly sawmill was not directly powered by the millrace, but by a steam plant that was built adjacent to the millrace and used the the mill's sawdust and refuse lumber as fuel. Since this fuel was in excess of the demands for operating the plant, and destroying it would be an expense to the company, a proposition was made to the Eugene Electric Light Company to erect a light plant in Springfield with the fuel furnished by Booth-Kelly.[126]

Dominance in the lumber industry, primarily in the larger, more commercially-driven realm of the cargo mills, shifted southward from the state of Washington (where the deep and accessible Puget Sound ports were taken advantage of from the time of initial settlement), to

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[119] "Sale Postponed," Eugene *City Guard* (Sept. 12, 1896), p. 1.

[120] "Springfield Saw Mill," Eugene *City Guard* (January 21, 1899), p. 1; Clarke, "The Springfield Millrace..." (1983), pp. 44-46.

[121] Joan Kelley, "Booth-Kelly Lumber Company: An Empire in the Douglas Fir Country," *Lane County Historian* Vol 35, No 3 (Fall 1990), p. 56; Dennis, "Springfield Historic Context," (1999), p. 23; Clarke, "The Springfield Millrace..." (1983), p. 46.

[122] Bob Welch, "Town Lives On in Recollection," Eugene *Register Guard* (Feb. 6, 2001), p. 1B.

[123] Eugene Register Guard (June 18, 1902), p. 1.

[124] Kelley, "Booth-Kelly Lumber Company...," (Fall 1990), p. 57.

[125] Clarke, "The Springfield Millrace..." (1983), p. 46.

[126] Clarke, "The Springfield Millrace..." (1983), pp. 46-48.

western Oregon between 1900 and 1920.[127] Coupled with the shift was an increased demand for timber generated by the Alaska gold rush of 1900-1903, the 1906 San Francisco earthquake and the advent of the First World War. As a result, there was an abrupt growth in the size and number of Oregon sawmills. Smaller mills and timber land were purchased by larger interests, some from out of state, and rail lines spurred industry expansion into previously isolated or even un-reachable stands of timber.

The early iterations of the Springfield lumber mill survived through the first half-century of Oregon's existence, providing much-needed lumber to the local community but with the hope of growing into a bigger concern. This persistence was rewarded in the twentieth century as the larger and now locally-based Booth-Kelly Lumber Company sought to expand its reach with the newly-updated and expanded Springfield sawmill.

[127] Archie W. Mbogho, "Sawmilling in Lane County, Oregon: a Geographical Examination of Its Development." (Eugene, Oregon: University of Oregon Master's Thesis, 1965), pp. 30-32.

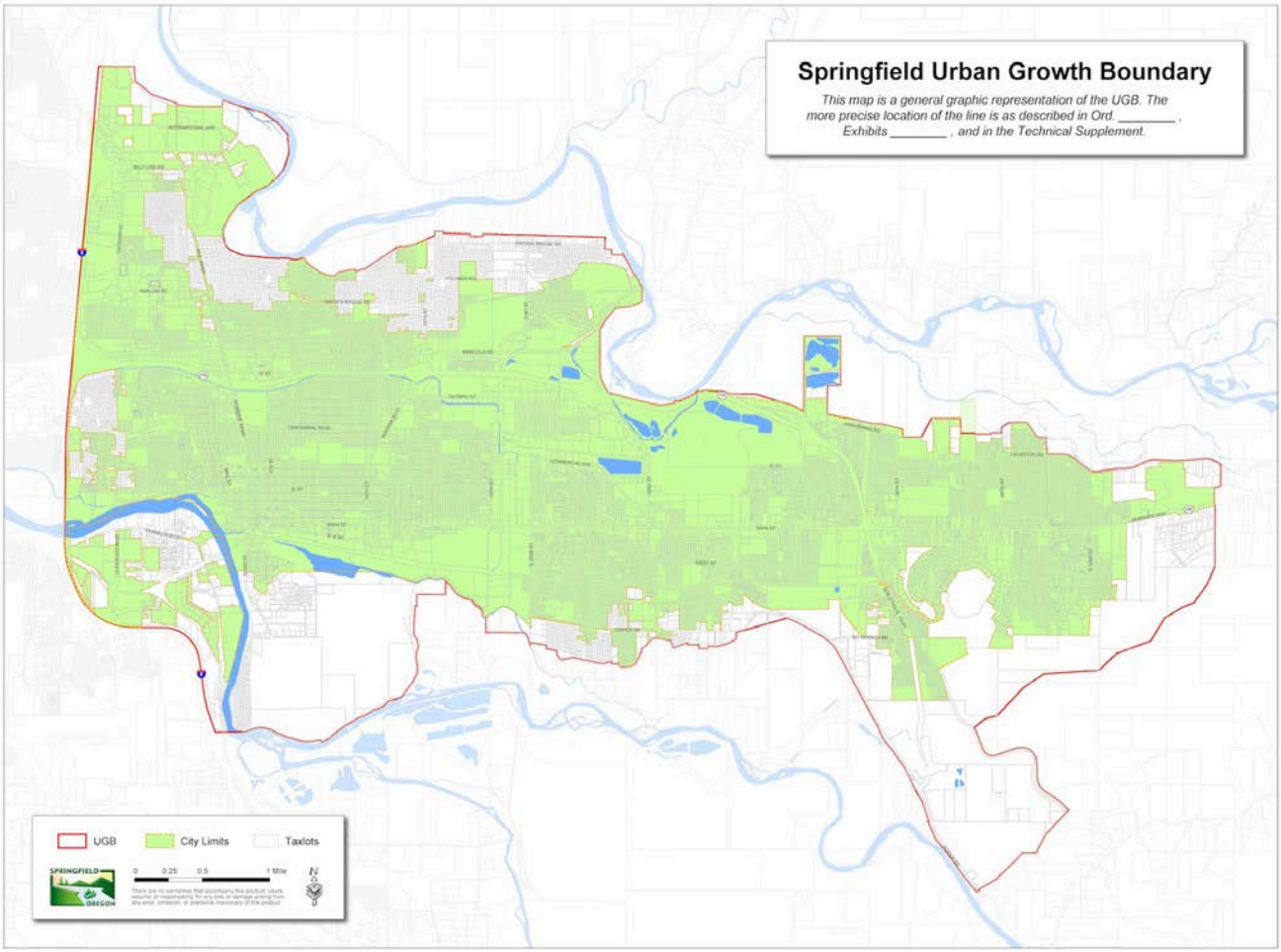


Figure 1. Map of the current (August 2015) Springfield Urban Growth Boundary.

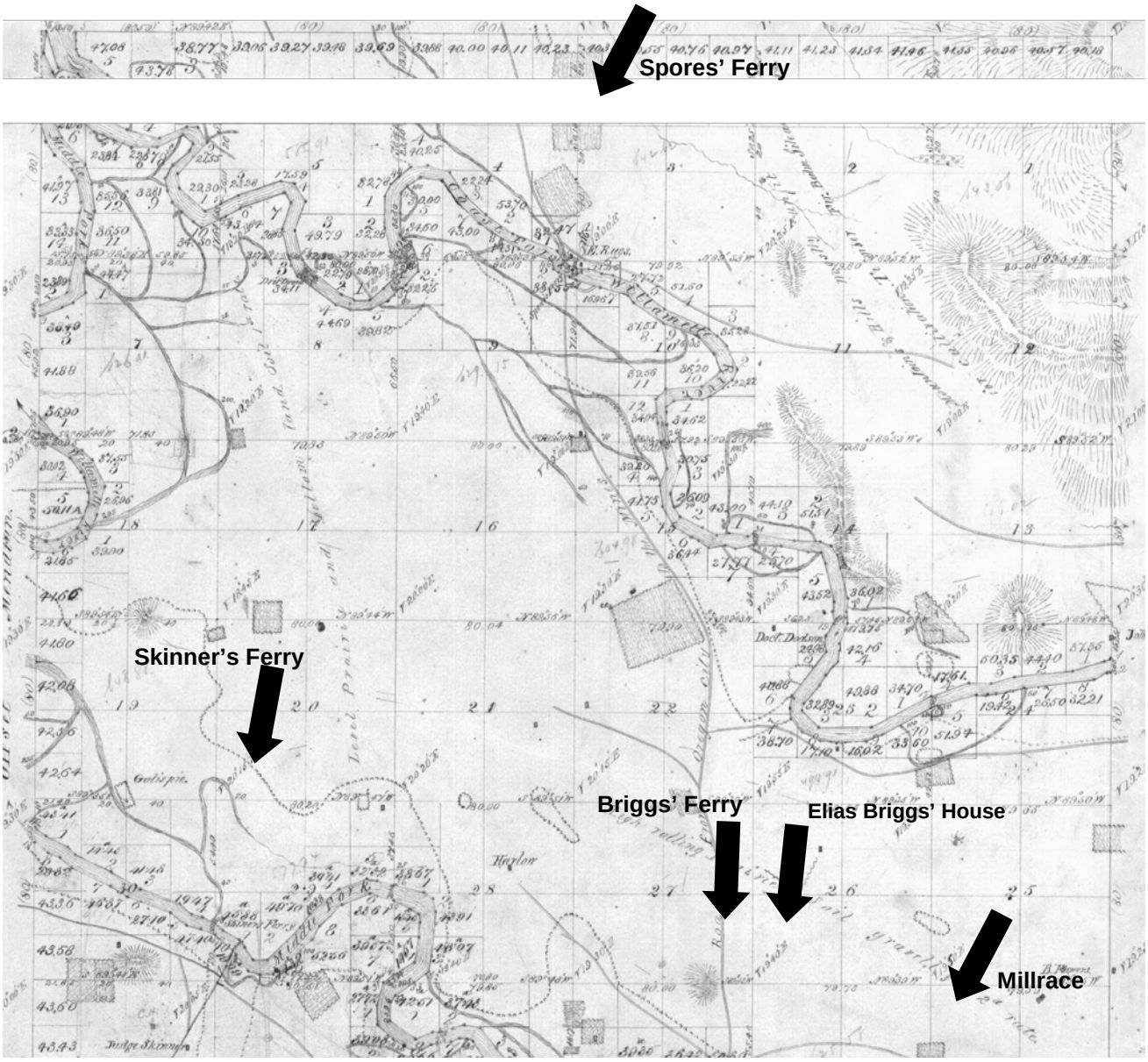


Figure 2. 1853 General Land Office map of Township 17 South Range 3 West, depicting a portion of the present-day area of Springfield.

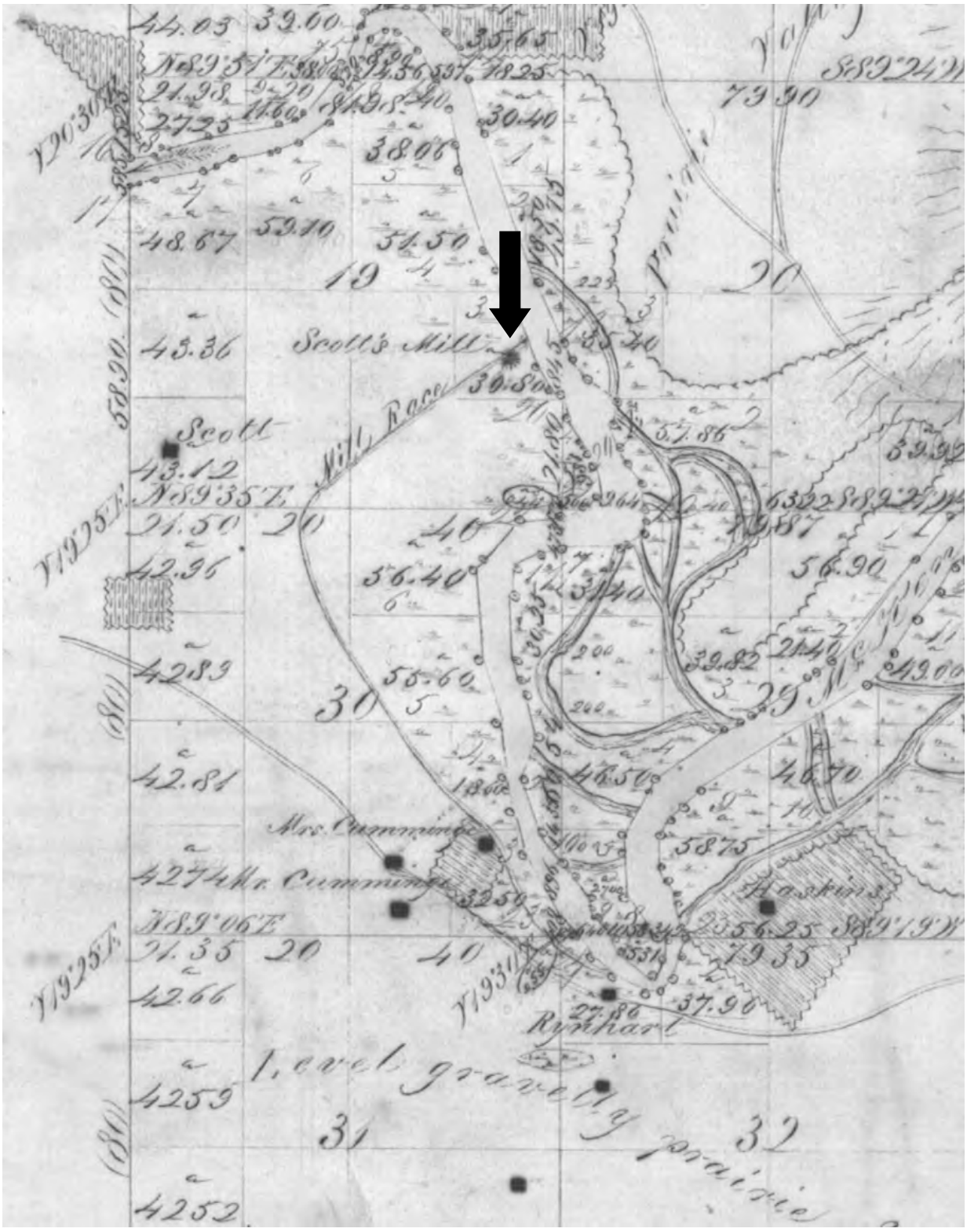


Figure 3. 1855 General Land Office map detail of Township 17 South, Range 2 West, showing Felix Scott's mill and millrace.

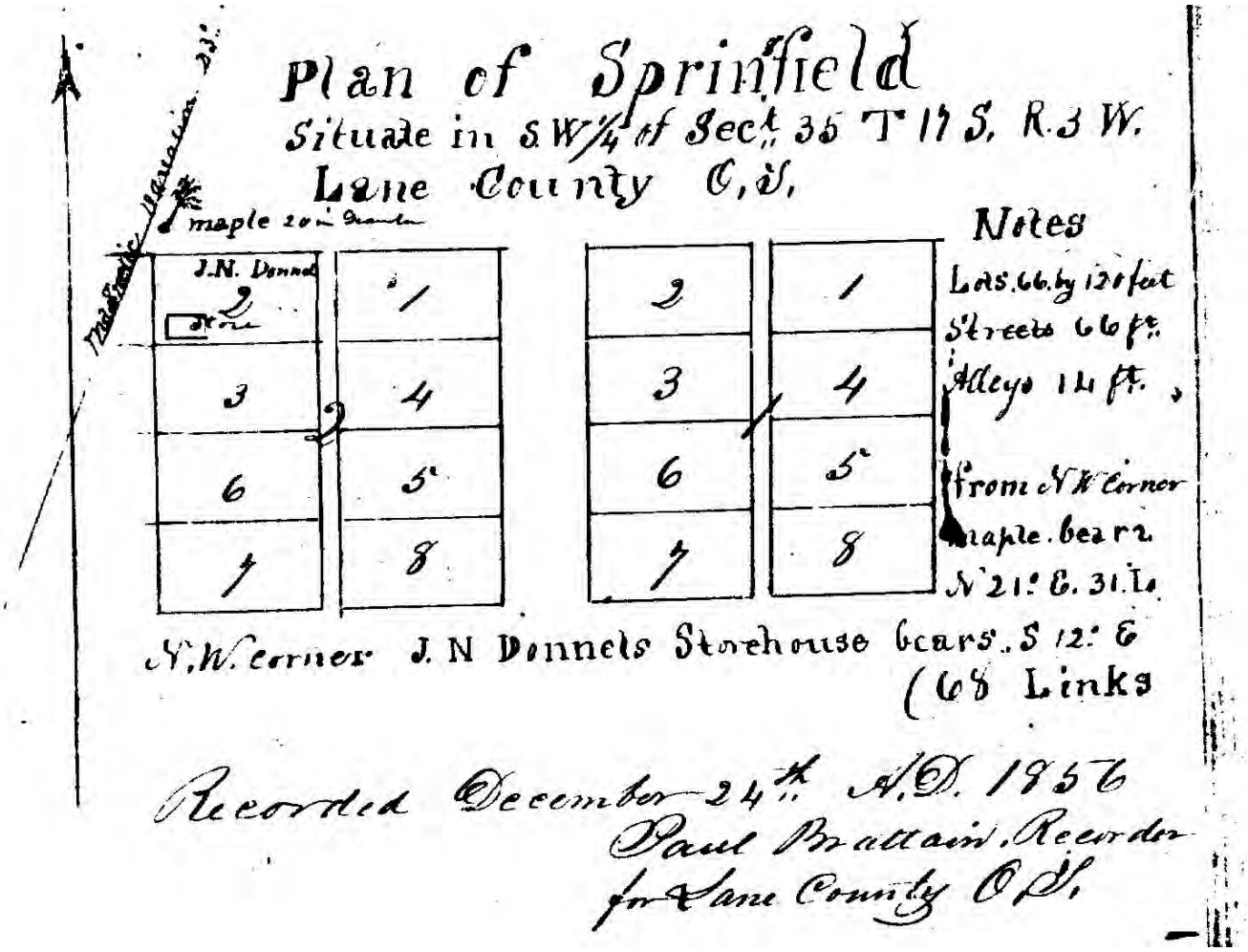


Figure 4. 1856 plat map of Springfield.
Note J.N. Donalds store–the first in Springfield–in Block 2, Lot 2 (upper left corner of plat).

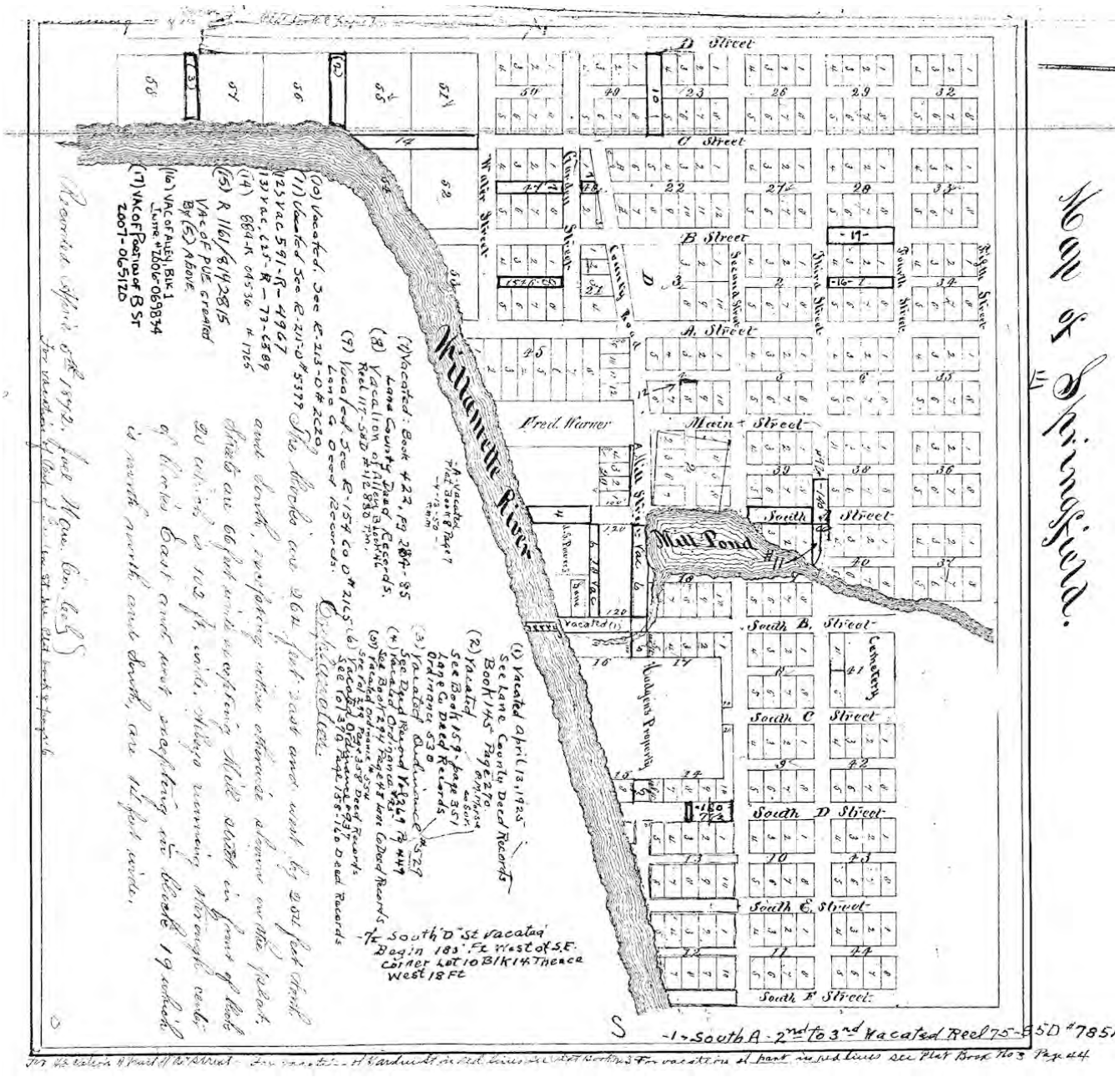


Figure 5. 1872 plat map of Springfield.

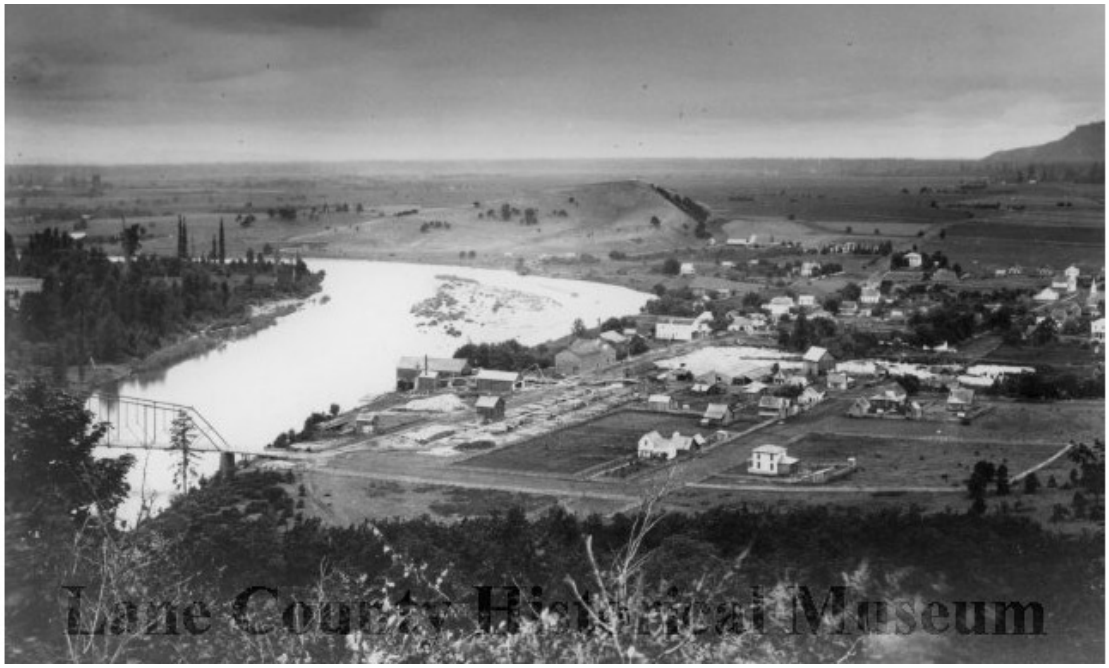


Figure 6. "Overview of Springfield from Willamette Heights, looking north. Scene shows farms and residences in foreground; Springfield wagon bridge crosses river at far left. Williams sawmill is on river shore at center, Kelly Butte is in background, center, and Coburg Hills on far right. Circa 1890."
Courtesy Lane County Historical Museum, #GN6649.

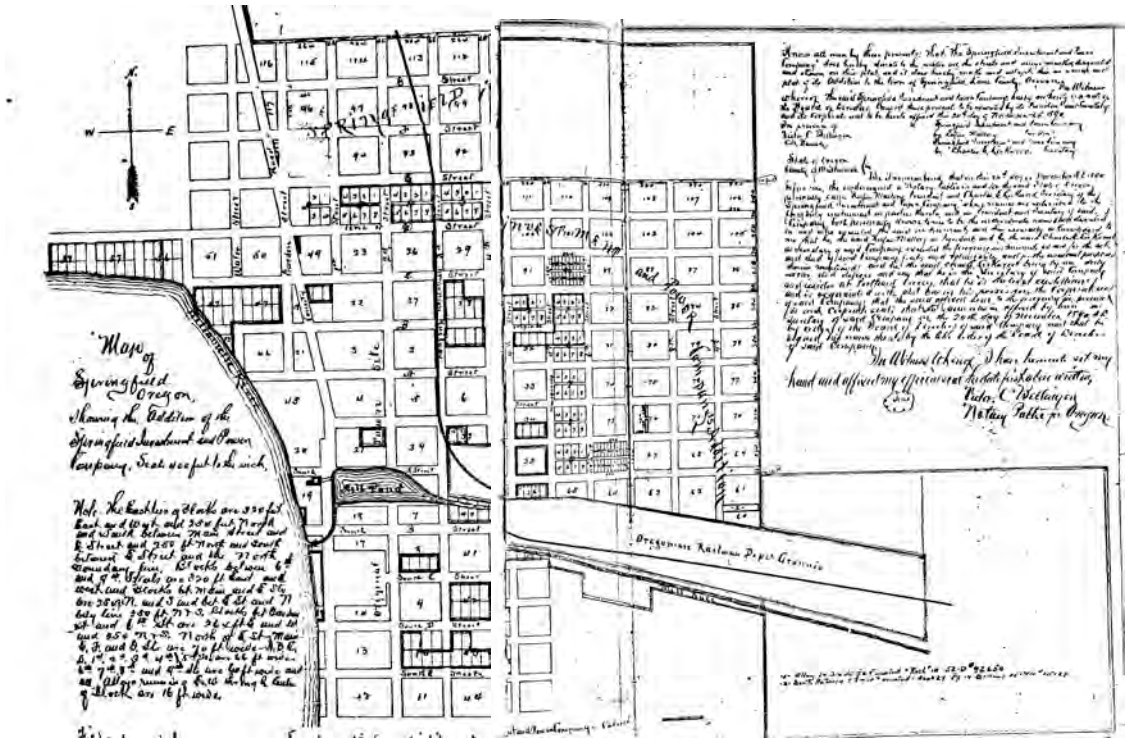


Figure 7. 1890 map of Springfield.

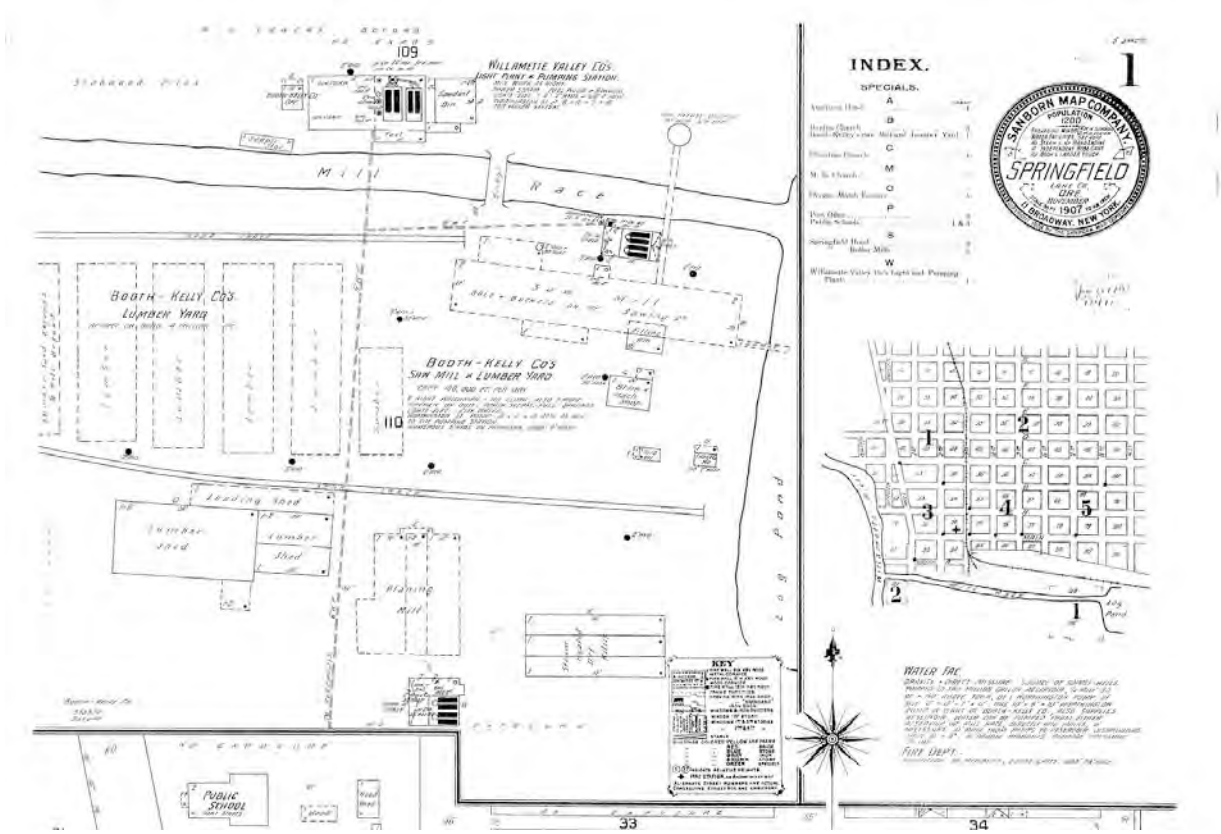


Figure 8. 1907 Sanborn map of historic mill area (left), and simplified plat map (right). Note that after 1900, the industrial area expanded to the east, along the rail line.

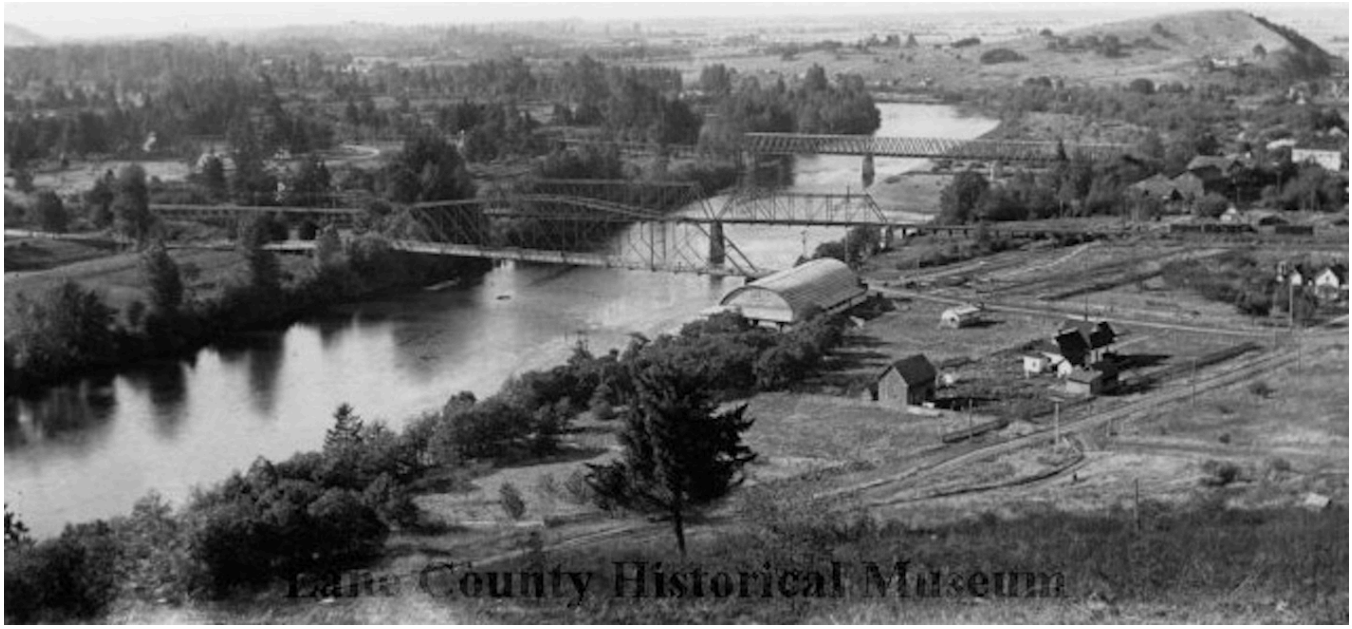


Figure 9. The bridges over the Willamette River at Springfield. "Wagon and automobile bridge is in foreground, Southern Pacific Company railroad bridge is in center, Portland, Eugene and Eastern Company's wooden truss streetcar bridge...is in the background. 1915." Courtesy of the Lane County Historical Museum #SM90.

Figure 10. Photo of men working a pitsaw. Courtesy *The Beaver* (HBC Publication), Outfit 281 (1950).

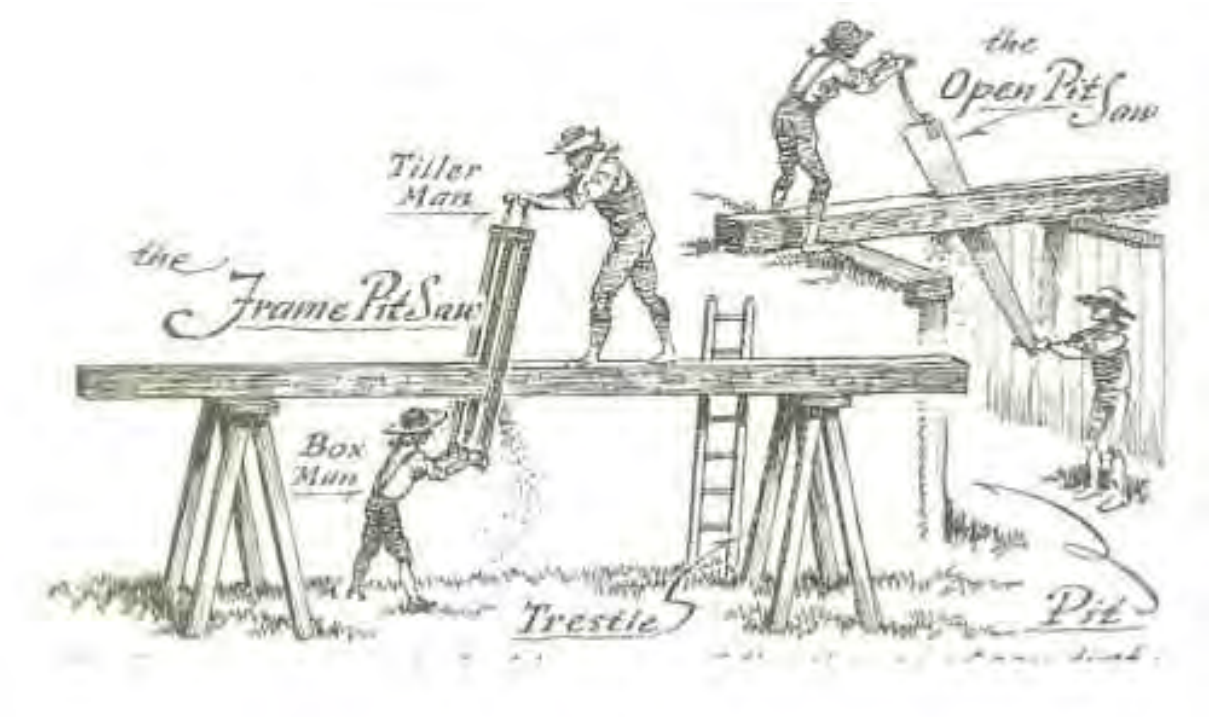


Figure 11. Image of men working a pitsaw. Courtesy Eric Sloane, *A Reverence for Wood*.

Figures 12 and 13. Views of a mid-nineteenth century, water-powered "up-and-down sawmill" in Chester County, Pennsylvania as documented by the Historic American Building Survey in 1979. "This is a water-powered vertical saw with a single blade and wooden log carriage set in a heavy wooden frame. The saw operated at 100-130 strokes per minute and the log advanced approximately 2' per minute. The saw was contained in a frame superstructure on a stone foundation built over a millrace. A wooden undershot waterwheel was housed in a shed on the side. Water was supplied by an adjacent stone dam." The structure was later dismantled and moved to the National Museum of History and Technology, Smithsonian Institution in Washington D.C. Courtesy Historic American Building Survey.

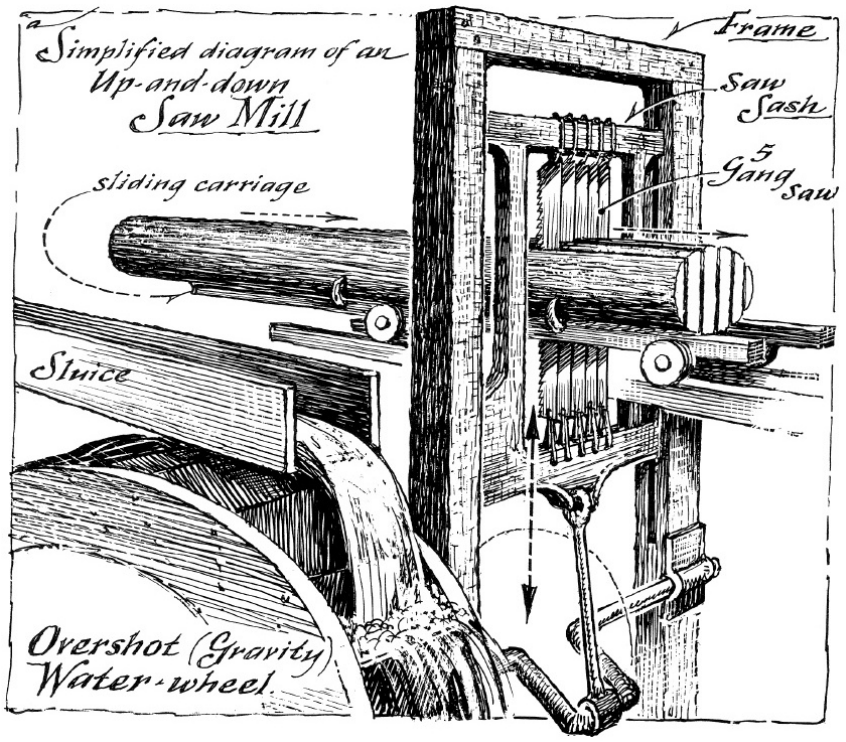


Figure 14. Diagram of a sash-style gang saw. Courtesy Eric Sloane, *A Reverence for Wood*.

Figure 15. Sutter's sawmill building, circa 1850. Courtesy "Sutter's Mill," Wikipedia site.

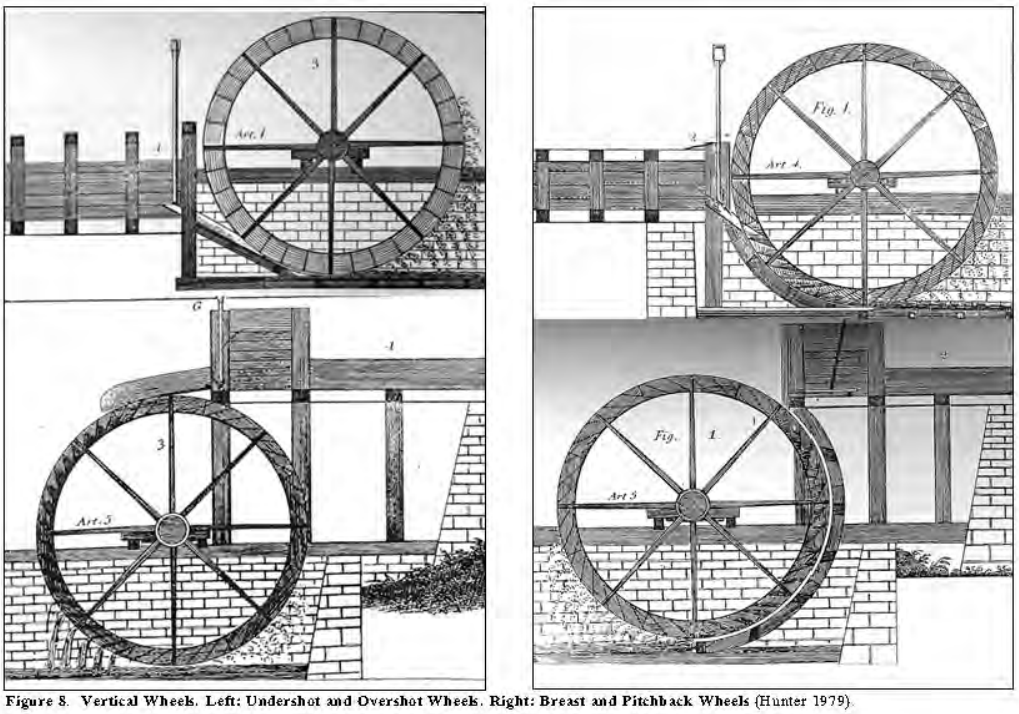


Figure 16. Various waterwheel types. From Braley, "Mills in the Upcountry...," (2005), p. 17.

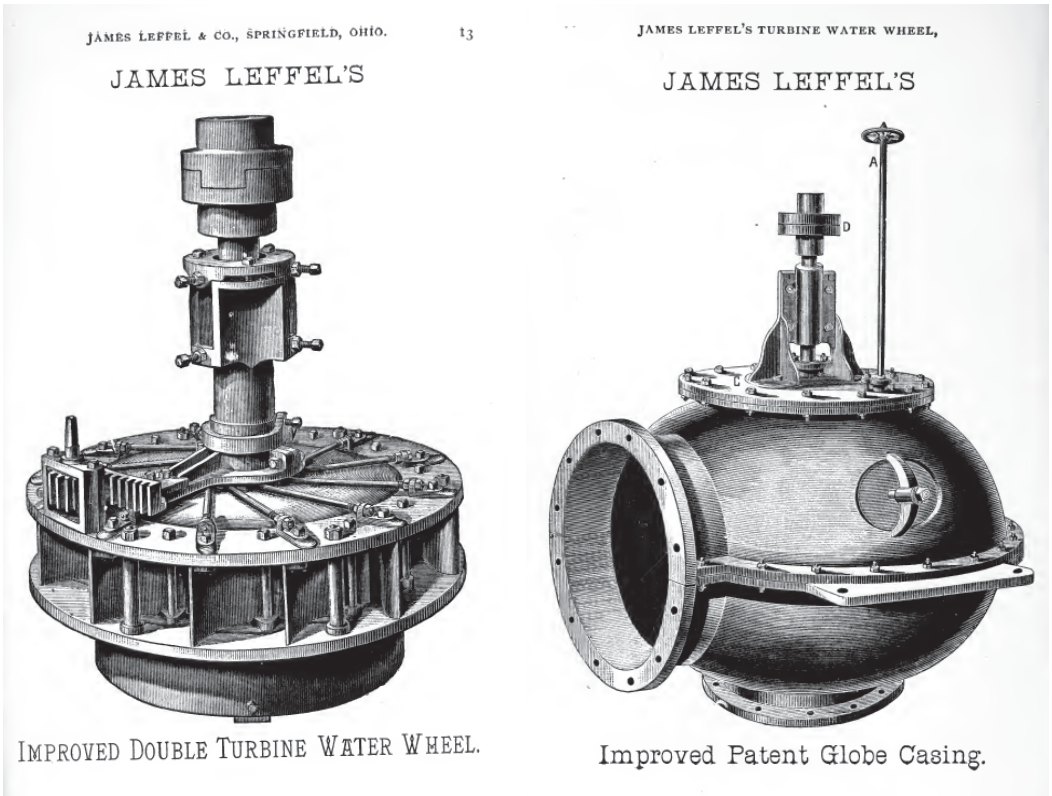


Figure 17. Views of Leffel turbine. From *Illustrated Handbook of James Leffel's Improved Double Turbine Water Wheel for 1885 and 1886* (Springfield, Ohio: Leffel News Print, 1885), pp. 13 and 22.

Figure 18. View of "over-and-under" or double circular saws. "Millworkers pose with log to be cut inside Booth Kelly sawmill building. Plant was located either at Wendling or Prune Hill. Rotating circular saws can be seen on left." c. 1900. Courtesy Lane County Historical Museum, #HR23.

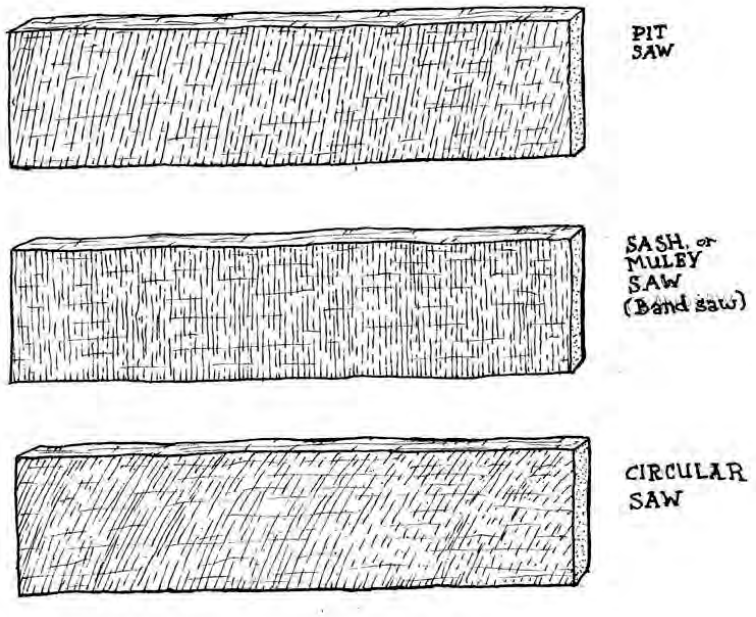


Figure 19. Illustration of saw marks left by various saw types.
Courtesy Eric Sloane, *A Reverence for Wood*.

Figure 20. A late nineteenth-century sawmill building in Oregon. "Mathews' sawmill on Lost Creek near Dexter. Scene shows river drivers using peaveys to guide logs in the creek; a log chute extends to sawmill building on the shore. c. 1898" Courtesy Lane County Historical Museum, #GN2767.

Figure 21. Late nineteenth-century sawmill buildings in Oregon. "Early Lane County sawmill at unidentified location. c. 1898." Courtesy Lane County Historical Museum, #GN2765

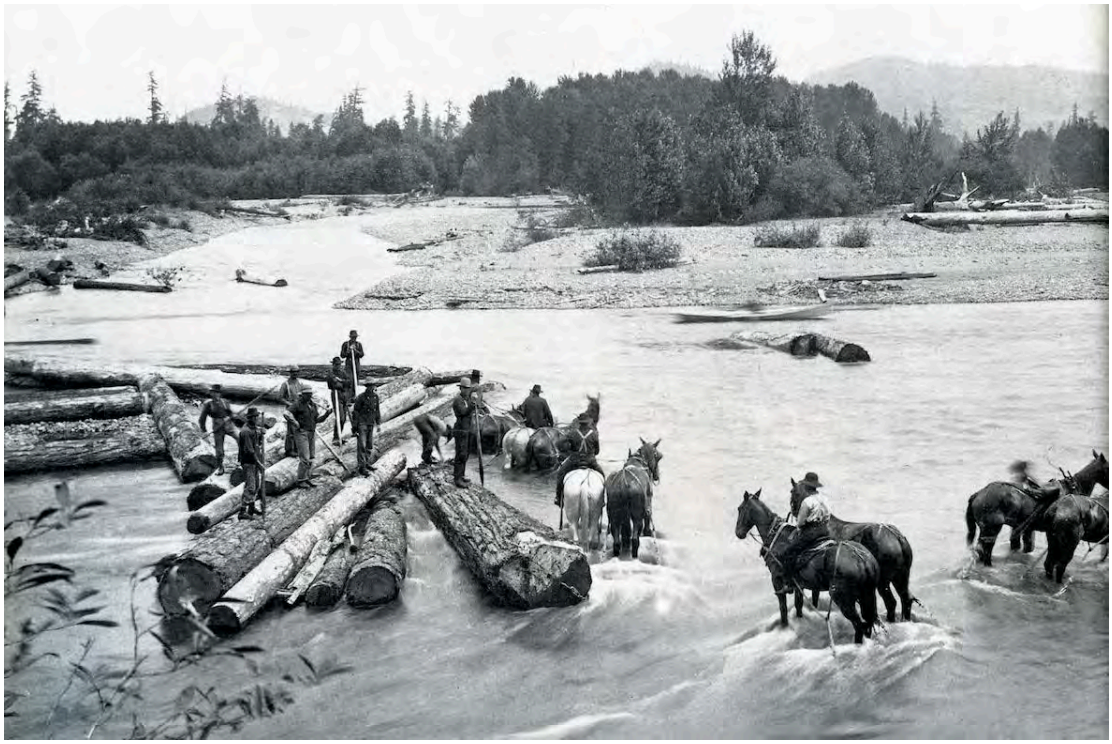


Figure 22. "A view of early-day river logging taken at the head Millrace leading from the Willamette to the Booth-Kelly sawmill..., early 1900s." Courtesy Springfield Museum.

Figure 23. "Combination skidroad and pole chute and Big Fall Creek, a lumber camp operated by Booth-Kelly Company." 1903. Courtesy Lane County Historical Museum, #GN2608.

Figure 24. "Booth Kelly operation near Wendling. Horse team hauls log down skid road; steam "donkey" engine can be seen in background yarding logs to transport point, c. 1901." Courtesy Lane Co. Historical Museum, #HR71.

Figure 25. "Booth Kelly Lumber Company's splash dam on Fall Creek, northeast of Lowell. Scene shows dam made of logs, pond in background is lined with logs destined for the sawmill..."
Courtesy Lane County Historical Museum, #GN4526.

Figure 26. "Splash dam built of logs at unidentified site. Loggers stand on top of dam; gates have been opened and water is being released...so that logs can be 'flooded' downriver from forest to sawmill." Courtesy Lane County Historical Museum, #HR100.

Figure 27. "Crew members pose with Booth Kelly Lumber Company's first steam donkey, an engine used for yarding logs. Cables for hauling logs through timber can be clearly seen." Courtesy Lane County Historical Museum, #GN2738.

Figure 28. "Bally-Fisher Company loggers relax after stacking logs on flatcars for shipment by rail to the Springfield sawmill. This logging site was located near Marcola. 1911" Courtesy Lane County Historical Museum #GN2757.

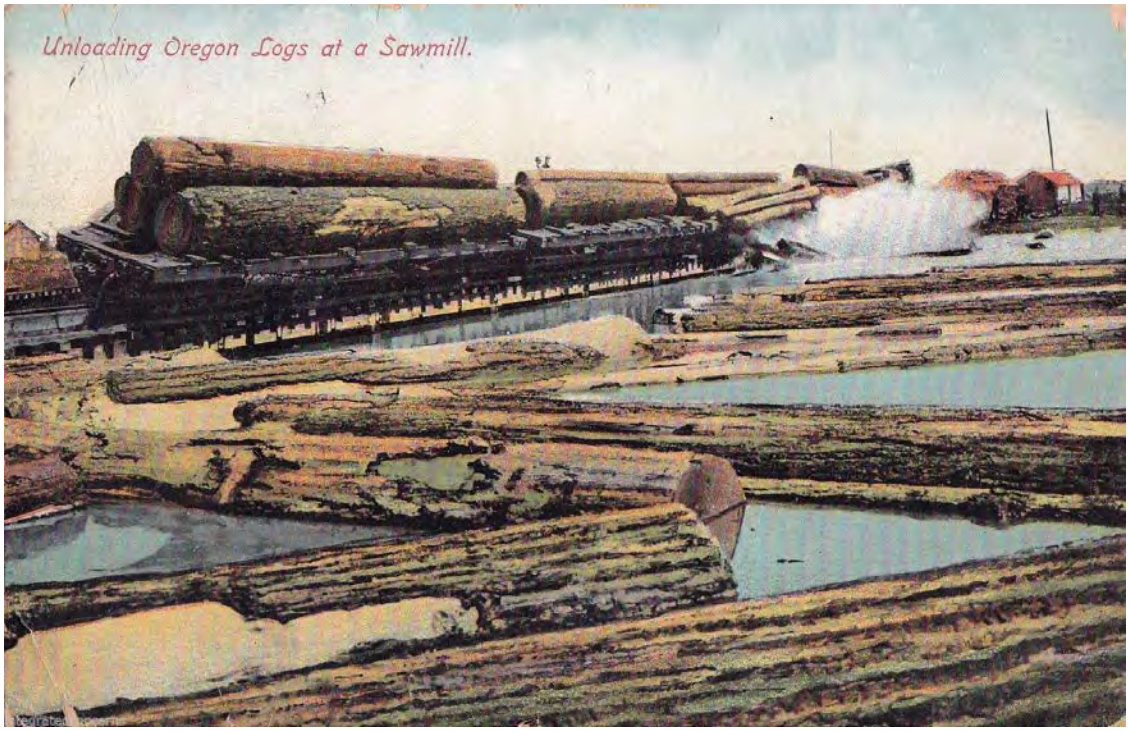


Figure 29. Unloading logs at logpond, site and date unknown. Courtesy author.

Figure 30. The Springfield millrace.
Note early wood-framed, false-front commercial buildings in left background.
Courtesy Springfield Museum

Figure 31. "Springfield Roller Mills, at the west end of South B Street on the Willamette River... View of...wooden flour mill buildings with pond in foreground."
Courtesy Lane County Historical Museum, #GN4802.

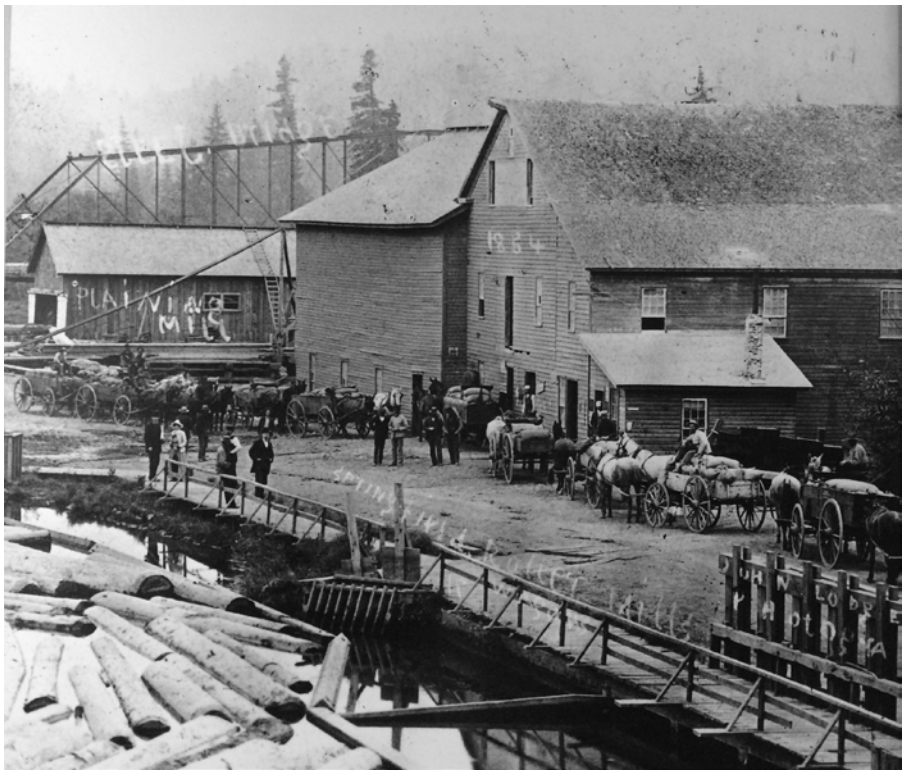


Figure 32. "Tailgate to millpond for Springfield Flouring Mills, at the west end of South B Street. Water pours through spillways of small dam at left into log-lined stream. Mill buildings can be seen in background." c. 1912. Courtesy Lane County Historical Museum, #GN3222.

LUMBER! LUMBER!

The undersigned would inform the public that they have in complete running order their

Double Circular Saw Mill

—AT—

SPRINGFIELD,

and are prepared to furnish any *QUANTITY*,

AND

all kinds of LUMBER

ON TERMS TO SUIT THE TRADE.

We also have a first class

PLAINING, TONGUING AND GROOVING MACHINE

connected with the SAW MILL, so that we are able to furnish a complete Bill of Lumber for building purposes, and on the shortest notice, as our Mill is able to cut 10,000 feet per day. Give us a call.

P. S, We have on hand a full set of Mill Irons for a sash saw mill, which we offer for sale at low rates.

UNDERWOOD & CO.

Springfield, Oregon, May 12, 1866. 12—tf

Figure 33. Ad in *Oregon State Journal*, June 23, 1866.

B. J. PENGRA, JOHN KELLY, A. G. HOVEY, W. H. ODELL.

Springfield Manufacturing Company,

SPRINGFIELD, OGN.

Having increased their Milling force; are now running their Flouring and Lumbering mills constantly.

Their Planer running daily; orders for Planed or Tongued and Groved Lumber can now be filled without delay.

PRICES REDUCED.

FIR,

1st quality, per M,	$ 15.
2d " " M,	$ 14
Edged Sheeting, per M,	$ 12.
Rough edg " " M,	$ 8.

CEDAR,

1st quality, per M,	$ 30.
2d " " M,	$ 25.

PLANING,

One side per M,	$ 5.
Two sides " M,	$ 10.
Tongue and Groove, per M,	$ 5.

WHEAT, HOGS, MERCHANDISE and CASH, will pay for Lumber.

☞ All persons patronizing our Mills from the west side of the Willamette can cross our Ferry FREE.

October 12th 1867. n31—tf.

Figure 34. *Oregon State Journal*, November 14, 1867.

The Railroad is Coming to

SPRINGFIELD,

AND THE SPRINGFIELD MANUFACTURING Company are prepared with increased facilities to furnish Lumber of all kinds, rough and planed, at Greatly Reduced Rates, for ready pay, Cash or Produce.

Lumber Planed and Matched in a Workmanlike Manner, at reasonable rates, and on short notice.

We have secured the services of an experienced and accommodating Miller (A. A. SIMMONS), and are ready to do Merchant and Custom Grinding in a superior and expeditious manner.

Wheat stored either for Shipment or Grinding, upon the "live and let live" principle. All persons patronizing our business will be entitled to cross

Free at the Springfield Ferry.

Free Ferriage will also be extended at SPORE'S FERRY to all persons living North of there, bringing to our mills a grist of 16 bushels or over, or a bill of Five Hundred Feet or over of Lumber.

Now that the toll road at Camas Swale has been thrown open, parties traveling to or from the Southern portion of the State, will find the route by

Springfield and Spore's Ferry

To Albany, Salem, Portland, and the Eastern portion of the Lower Willamette much more Level and Direct than the old routes hitherto traveled. By paying the usual rate charged at one of the above Ferries, a through ticket can be obtained at either.

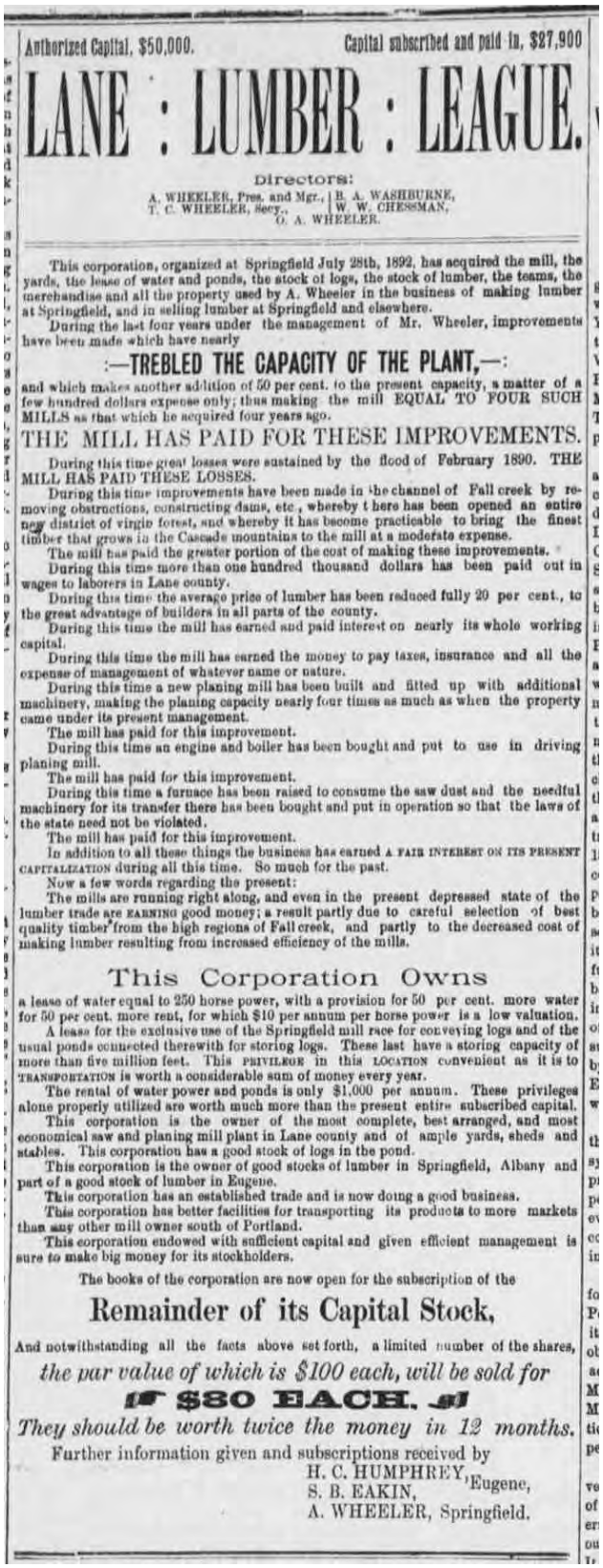
Cash, Cattle, and All Kinds of Produce taken in exchange for Lumber, Town Lots and Merchandise.

☞ Parties knowing themselves indebted to us will please call and settle.

SPRINGFIELD MFG CO.,
JOHN KELLY, Sup't.

Springfield, Lane Co., Ogn., Apr. 20, 1870. 11-3n

Figure 35. Oregon State Journal, June 4, 1870.



Authorized Capital, $50,000. Capital subscribed and paid in, $27,900

LANE : LUMBER : LEAGUE.

Directors:

A. WHEELER, Pres. and Mgr., | B. A. WASHBURNE,
T. C. WHEELER, Secy., | W. W. CHESSMAN,
O. A. WHEELER.

This corporation, organized at Springfield July 28th, 1892, has acquired the mill, the yards, the lease of water and ponds, the stock of logs, the stock of lumber, the teams, the merchandise and all the property used by A. Wheeler in the business of making lumber at Springfield, and in selling lumber at Springfield and elsewhere.

During the last four years under the management of Mr. Wheeler, improvements have been made which have nearly

:—TREBLED THE CAPACITY OF THE PLANT,—:

and which makes another addition of 50 per cent. to the present capacity, a matter of a few hundred dollars expense only; thus making the mill EQUAL TO FOUR SUCH MILLS as that which he acquired four years ago.

THE MILL HAS PAID FOR THESE IMPROVEMENTS.

During this time great losses were sustained by the flood of February 1890. THE MILL HAS PAID THESE LOSSES.

During this time improvements have been made in the channel of Fall creek by removing obstructions, constructing dams, etc., whereby there has been opened an entire new district of virgin forest, and whereby it has become practicable to bring the finest timber that grows in the Cascade mountains to the mill at a moderate expense.

The mill has paid the greater portion of the cost of making these improvements.

During this time more than one hundred thousand dollars has been paid out in wages to laborers in Lane county.

During this time the average price of lumber has been reduced fully 20 per cent., to the great advantage of builders in all parts of the county.

During this time the mill has earned and paid interest on nearly its whole working capital.

During this time the mill has earned the money to pay taxes, insurance and all the expense of management of whatever name or nature.

During this time a new planing mill has been built and fitted up with additional machinery, making the planing capacity nearly four times as much as when the property came under its present management.

The mill has paid for this improvement.

During this time an engine and boiler has been bought and put to use in driving planing mill.

The mill has paid for this improvement.

During this time a furnace has been raised to consume the saw dust and the needful machinery for its transfer there has been bought and put in operation so that the laws of the state need not be violated.

The mill has paid for this improvement.

In addition to all these things the business has earned A FAIR INTEREST ON ITS PRESENT CAPITALIZATION during all this time. So much for the past.

Now a few words regarding the present:

The mills are running right along, and even in the present depressed state of the lumber trade are EARNING good money; a result partly due to careful selection of best quality timber from the high regions of Fall creek, and partly to the decreased cost of making lumber resulting from increased efficiency of the mills.

This Corporation Owns

a lease of water equal to 250 horse power, with a provision for 50 per cent. more water for 50 per cent. more rent, for which $10 per annum per horse power is a low valuation.

A lease for the exclusive use of the Springfield mill race for conveying logs and of the usual ponds connected therewith for storing logs. These last have a storing capacity of more than five million feet. This PRIVILEGE in this LOCATION convenient as it is to TRANSPORTATION is worth a considerable sum of money every year.

The rental of water power and ponds is only $1,000 per annum. These privileges alone properly utilized are worth much more than the present entire subscribed capital.

This corporation is the owner of the most complete, best arranged, and most economical saw and planing mill plant in Lane county and of ample yards, sheds and stables. This corporation has a good stock of logs in the pond.

This corporation is the owner of good stocks of lumber in Springfield, Albany and part of a good stock of lumber in Eugene.

This corporation has an established trade and is now doing a good business.

This corporation has better facilities for transporting its products to more markets than any other mill owner south of Portland.

This corporation endowed with sufficient capital and given efficient management is sure to make big money for its stockholders.

The books of the corporation are now open for the subscription of the

Remainder of its Capital Stock,

And notwithstanding all the facts above set forth, a limited number of the shares,

the par value of which is $100 each, will be sold for

☞ $80 EACH. ☜

They should be worth twice the money in 12 months.

Further information given and subscriptions received by

H. C. HUMPHREY, Eugene,
S. B. EAKIN,
A. WHEELER, Springfield.

Figure 36. Eugene *Daily Guard*, October 22, 1892.

HISTORIC RESOURCE IDENTIFICATION

HISTORIC RESOURCE IDENTIFICATION[128]

NOTE: Given the very few resources related to this period of lumber industry development, it will likely be necessary to update this section when the post-1901 context has been completed. This would provide a more continuous and comprehensive list of related resource types.

PREVIOUS SURVEYS

To date, historic resources within the Springfield area have been identified through several previous surveys, ranging from the 1976 Statewide Inventory of Historic Sites and Buildings conducted by Stephen Dow Beckham, to more recent surveys and evaluations of downtown commercial buildings and residential areas completed in the past five years. Currently, 1,211 resources in the Springfield area are listed in the Oregon Historic Sites Database. In addition to five individually-listed National Register-listed properties, the City has two National Register-listed historic districts. The Washburn Historic District is a predominantly residential area just north of the downtown core, and is composed of 246 contributing resources. The Dorris Ranch Historic District is an agricultural area situated south of the downtown core area that includes a number of contributing resources and now serves as parkland.

While some of the identified resources may have a link to Springfield's lumber heritage, very few appear to be directly associated with ninteenth century sawmilling in the community. Seventy-nine (79) of the 1, 211 previously-identified sites were built prior to 1900. Of those, none appear in the categories of Commercial, Industrial, Industrial Storage, Forest, Processing Site, Public Works, Road Related (vehicular), Transportation (general), Vacant, Warehouse, or Waterworks, any of which might have some relationship to the lumber industry.

Three are "Rail Related": the Southern Pacific Rail line from Woodburn to Springfield (c. 1891), the Booth-Kelly Railroad Bridge at Mohawk and Marcola Roads (1882), and the Southern Pacific Railroad Passenger Station and Freight House (1891), which is individually listed in the National Register. The only "Lumber Industry"-related resource that appears is the Springfield Millrace of 1852, which is also listed as "Water Related." It is not currently known whether any historical archaeological sites related to industry have been identified within the study area boundaries.

HISTORIC RESOURCE TYPES: DESCRIPTIONS AND DISTRIBUTION PATTERNS

A "resource type" indicates a generic class of related historic properties. Based in part on resources identified in previous surveys and in part on a predictive model of lumber-related resources likely to be found within the Springfield area, resource types in Springfield can be grouped on the basis of thematic association correlating to the specific areas discussed in the Historic Overview. The broad themes that relate to the lumber industry of this pre-1900 period

[128] The basic framework and much of the content of this section was taken directly from the 1999 Springfield Historic Context Statement written by Michelle Dennis, and condensed, altered or augmented as needed to fit the needs of this document.

are Settlement, Industry & Manufacturing, Transportation, and possibly Residential Architecture and Commerce. Archaeological sites related to the industry's history may also form another theme.

The location and distribution pattern of possible historic resources can be predicted based on the information in the historic context, as well as these themes. The quantity and type of existing historic resources within each thematic grouping can be identified through historic site surveys. Although a small handful of these resources have been identified through previous surveys, further study is needed to record and evaluate the quantity and quality of remaining historic resources in Springfield that represent the pre-1900 period that is the focus of this study.

Specific resources associated with each theme and their distribution patterns are described on the following pages. To provide a context for evaluation of relative integrity and significance of individual resources, the discussion focuses on the historic function of the resources, as well as the physical and/or architectural elements believed to be representative of the type. The resource types that are more likely to still exist have been described in greater detail than those that are less likely to be found extant.

Although surveys tend to identify individual buildings, sites, structures, objects or districts related to a theme or geographic area, Ward Tonsfeldt's 1993 "Context Statement for Railroad Logging in Oregon," recommends a "whole system" approach to lumber industry resource identification. This method suggests that it is

> ...useful to consider it [railroad logging] as a dynamic system made up of a series of subsystems...[that include] major elements [such as] railroad grades, the sites, and the landscape associated with logging. Specific elements include the mill where lumber was manufactured, railroads from the mill to a common carrier, railroads that brought logs to the mill, camps where the loggers and their families lived, the logging spurs, and such sites or features as reloads, sidings, spar trees, donkey settings, trestles, wyes, water tanks, and others.[129]

The advantage to this approach is that it places each element in context. However, the geographic boundaries of this study (the urban growth boundary of Springfield), and the limited timeframe being discussed (1848-1901) are likely to greatly diminish the likelihood of finding a number of the resources listed above, particularly those directly associated with timber extraction as opposed to actual milling of lumber. Nonetheless, it is important to acknowledge that the lumber industry as it was and is represented in Springfield was part of a larger system that extended far beyond the City's historic and current boundaries. Therefore, the identification and evaluation of individual elements, as well as their interpretation, should occur with the larger systems in mind in order to accurately place them in the larger historical and developmental context.

SETTLEMENT

DESCRIPTION

Resources associated with settlement in the Springfield area overlap with those found in

[129] Tonsfeldt , "Railroad Logging...," (1993), p. 151

the categories of Industry and Manufacturing, Transportation, Residential Architecture and Commerce. They may include early mill sites, millraces, other mill-related resources, early residences, trails and early roads, dwellings, and office or commercial buildings. Most of these resources are described in the sections below.

DISTRIBUTION PATTERN

Because resources associated with Settlement in the Springfield area overlap with resources found in the categories of Industry and Manufacturing, Transportation, Residential Architecture and Commerce, the distribution of these resources is likely to relate to the location of resources identified in these categories, as discussed below.

INDUSTRY & MANUFACTURING

DESCRIPTION

Buildings and/or features associated with the lumber industry in Springfield proper, specifically sawmill sites, may include (or may have included) a number of features. Most of the above-ground components of the early Springfield mills have been removed, but archaeological evidence of their location, size, layout, and materials may remain. The water power system would include the millrace, the millrace dam or gates, a mill pond, possibly a sluice through which water was directed to the water wheel or turbine, and a tailrace. Mill buildings would have been clustered around the power source, and any attendant structures (planing mill, sash and door factory, machine shop, or other industrial buildings such as grist mills) could have been either integrated into the main mill building, or situated nearby.

Buildings or features associated with the lumber industry, specifically sawmill sites, include:

> Millrace features typically diverted water from a larger source, sometimes starting some distance from the actual mill complex, and may remain visible on the landscape, in part or in whole. The race itself may vary in width and depth, and likely included dam or gate structures, installed to control the flow of water into the mill, and thus its power output.
>
> The tailrace, or the water channel below/beyond the mill, channeled water back into the river. The length of the tailrace would have been dependent on the location of the mill wheel or turbine relative to the river. In Springfield's case, the tailrace was presumably quite short while the mill was located close to the river.
>
> Mill- or log ponds were small bodies of impounded millrace water, upstream from the mill, used to store logs before they were processed by the mills.
>
> Sawmill buildings of the pre-1900 era were wood-framed, rectangular structures of one or more stories in height with a gable or shed roof. Buildings were typically built on stone or brick pier and post foundations, and framing may be hand-hewn or sawn, or a combination. Many early mill buildings were open on two, three, or all four sides. If they had any siding originally, most buildings were sided with wood, although the later application of secondary cladding (wood or metal) may obscure the original character of

the structure. Because walls were generally left open, windows were not common originally, but may have been added at a later date.

Planing mills, if separate from the main mill building, may be also be wood-framed, elongated rectangular buildings, one or more stories in height and open on one or more sides. In early mills, the planing mill component may have been integrated into the main building.

Machine sheds may be simple, rectangular, wood-frame buildings that housed the machinery that ran the mill. These may be attached or integrated into the main mill building.

Lumber sheds may be large, open, rectangular buildings that were used to store finished lumber under cover. They would likely be wood-framed and gable or shed roofed, and may be attached or integrated into the main mill building.

Power plants may not have appeared in the Springfield area until after 1900. These were housed in wood-frame or brick buildings, and were steam-powered, later to be replaced with electricity. The buildings may be one-story, rectangular structures with gable roofs and a number of windows, and would likely date to the later years of the period of this study.

This short list reflects the relatively short time period addressed in this study, as well as the fact that lumbering in Oregon grew exponentially in the twentieth century. As industry expanded and diversified, a number of additional building and structure types were constructed for specialized use.

DISTRIBUTION PATTERN

In Springfield, it is expected that any remaining pre-1900 industrial resources will be clustered on the south side of South A Street near the river, in the vicinity of the millrace and railroad tracks, the area that represents the city's original industrial district. According to the 1999 Springfield Historic Context and based on review of the current SHPO Historic Sites Database, with the exception of the millrace, there are no remaining above-ground industrial resources associated with Springfield's earliest history. It is possible that some pre-1900 industrial-related buildings, structures or sites may remain in or around the communities of Thurston and/or Natron, but none have thus far been identified.

However, there may be archaeological resources in the areas of the community's first sawmills, both the Springfield site in the area south of South A Street and west of South 2nd, and in the vicinity of Felix Scott's mill near present-day Hayden Bridge.

The millrace associated with the Springfield mills is extant and visible for what appears to be a little more than one-half its historic length. The race intake today appears to be located on the claim of John R. Magnuss (Donation Claim no. 50), outside the bounds of either Briggs claim, and is still evident on the landscape. It appears to be located where S. 42nd Street would intersect the Willamette River, if the road extended to the river. The Springfield millrace may have local significance as a historical landscape feature, industrial resource, and/or potentially significant archaeological feature. Steve Morgan's 2012 report entitled "Relics from the Booth-

Kelly Lumber Company Railroad and Early Logging" indicates that a number of archaeological features are (or were) located along the millrace and in and around the log pond. These features include mill-related elements, as well as features related to rail transportation.

The millrace associated with Scott's mill near Hayden Bridge may or may not be visible on the ground. The race diverted water from the McKenzie River at a point somewhere along the east side of present-day N. 42nd Street, perhaps near the intersection with Industrial Avenue.

TRANSPORTATION

DESCRIPTION

Resource types associated with transportation as it pertains to early timber industry and lumber production may include wagon roads, skid roads, bridges, trestles, chutes, railroads and freight depots. As noted in the historic background section above, many of these transportation-related resources are or were located outside of Springfield's city boundaries. However, their importance to the overall process of lumber production cannot be ignored, and there may be remnant sections or portions of these features that remain within the urban growth boundary.

Wagon roads are likely to be remnant paths if they are still visible on the landscape. A number of early wagon roads were well used and further developed as transportation routes that were first widened, then graded, and, eventually, paved, altering the historic path except possibly for its general route. Any extant unaltered historic wagon roads are likely to appear as simple trails or wagon ruts through forested land.

Skid roads are also likely to have been altered over time, or removed outright. If not removed, the logs used to form the road are likely to be overgrown and deteriorated to the point of disappearing from view to the casual observer, but should be considered potential archaeological sites. Skid roads consist of a series of logs laid crossways to the direction of travel, and greased to create a surface on which logs are more easily dragged to an appointed location. Note that skid roads are most likely to be found in the forest, outside the Urban Growth Boundary for Springfield.

Chutes were used to move logs down a slope from the cut point to a gathering point. Typically built of wood or log, chutes would likely be in ruinous condition today, and most likely located in the forest, well outside the Urban Growth Boundary.

Railroad-related resources may include steel rails and wooden ties on raised rail beds, spur lines, railroad bridges and trestles, crossings and switches, storage sheds, water towers, and rail yards. Rail lines constructed for the purpose of transporting raw material from the forest or sawn lumber to various markets may continue to serve as active railroad lines, or the alignments may remain visible with or without berms, ties and rails, or the alignments may no longer be visible on the landscape. Bridges may be steel truss or steel deck girder; trestles may be wooden or log. Storage sheds may be small, wood-framed buildings with a shed or gable roof and will likely have one door and no windows. Water towers may be wooden or metal. Note that many of these features may lie outside the Urban Growth Boundary for Springfield.

Depots may be small to medium-sized, wood-frame or masonry buildings, consisting of one to stories or a combination thereof. Although buildings constructed strictly for use as passenger depots would not necessarily relate to the lumber industry, some also had a freight storage or loading dock integrated into the building. Freight depots may also exist as entirely separate buildings. Freight-related buildings will include loading docks located along the side of the building adjacent to the rails, with large sliding freight doors. Such buildings may be of various architectural stylistic distinctions, depending on the period in which they were built.

Bridges may be of a variety of types, including truss systems and deck girder systems. Materials may be wood or steel or a combination of both. Occasionally, a steel truss bridge will have a wooden deck.

DISTRIBUTION PATTERN

Remnants of early (pre-1900) roads and railroad routes are located throughout the study area.

According to the 1999 Springfield Historic Context, three railroad lines in the study area date to the period between 1891 and 1901: the route leading from Coburg to Springfield and on to Natron, the Brownsville spur, and the Wendling line. That document states that "...historical records indicate that the Brownsville spur is now an abandoned railroad bed, and present-day maps indicate that the Wendling route has been expanded since its construction in 1900. The route from Coburg to Springfield and Natron has remained a functional line."[130]

The section of line terminating at Natron was the Southern Pacific (formerly Oregonian Railway) line constructed in the early 1890s. While the alignment remains visible in some locations, at least some sections of the track and ties have been removed. Because the terminus was located at Natron, some remnant buildings or features may remain there, as well as archaeological features related to the line. Along present-day Pioneer Parkway, the alignment has been converted to a bike and pedestrian path, and a small trestle remains in place. Further north, in the Game Farm Road vicinity, current aerial images suggest that the alignment has been altered or obliterated by new development. Features such as trestles, or remnants of trestles and track, signage, and other related features may remain along former alignments even if they are no longer active or readily visible.

The Southern Pacific Railroad Depot, constructed in 1891 and recently moved to a site between South A Street and the railroad tracks, is the only above-ground resource associated with early rail transportation identified in the SHPO database of historic sites, although it may be more associated with passenger travel than with pre-1900 industry. The freight component of this depot was added sometime between 1909 and 1911, and therefore relates to a later period. Smaller freight depots might be expected at particular points on the Southern Pacific line, but they may be sited outside the boundaries of this study.

None of the covered bridges in the study area have survived, as they were replaced by newer spans around 1900. Surviving bridges include the circa 1899 Booth Kelly/ Hayden Bridge, which spans the McKenzie river at Marcola Road, and the 1907 railroad bridge over the

[130] Dennis, "Springfield Historic Context...," (1999), p. 64.

Willamette River west of the city. Footings from the early wagon bridge and the streetcar bridge are extant on the banks on the Willamette River, and may have some archaeological value.

The Morgan report indicates that a number of railroad-related features were located, and may still be located, in the vicinity of the Springfield millrace. It is unclear whether any of these items relate to the pre-Booth-Kelly era.

No above-ground, transportation-related resources of the pre-1901 period have yet been identified and included in the SHPO database in the areas of Thurston or Natron.

RESIDENTIAL AND COMMERCIAL ARCHITECTURE

DESCRIPTION

Residential and commercial buildings may have been constructed as a result of investment in the lumber industry, but are/were typically not directly related to the industry except in examples of company towns, company-built worker housing, company-owned stores, offices or other developments. Review of the current Oregon Historic Sites Database revealed no currently-known residential or commercial buildings in Springfield from the period 1848-1901 that are related directly to the lumber industry through company ownership or development. However, this is not to imply that such resources may not be identified through future research or survey work.

The type and style of residential architecture from this pre-1901 period would have varied widely, from the earliest log cabins to late nineteenth century Queen Anne style dwellings. Once sawn lumber became available, the use of log construction diminished significantly, and wood-framed lumber houses dominated throughout nineteenth century Oregon. In addition to vernacular architecture, the earliest styles included Classical and Gothic Revivals (1840s to the mid-1880s), which were followed by Italianate (1870s to 1880s), and Queen Anne (late 1880s to 1900). Dwellings constructed as company housing may reflect architectural styles that were popular in the mid- to late-nineteenth century, or they may be wholly vernacular, with a high degree of functionality but little stylistic embellishment or influence. These may be simple one or two-room buildings with post-and-pier foundations, box or balloon-frame wall construction, and simple gable roofs. Commercial buildings would have reflected the earliest wood-frame, false-front types to late nineteenth century, small-scale commercial blocks exhibiting Italianate or Queen Anne influences. While these resource types exist in the City, it is not currently clear which, if any, have a direct association with the lumber industry.

DISTRIBUTION PATTERN

Residential architecture is found throughout the city and the surrounding areas, and those that were constructed by lumber companies or specifically for lumber company employees might have been situated near mill sites.

Previous surveys have identified four dwellings built before 1875, all located outside the core area of Springfield; the oldest of these is the William Stevens house on Game Farm Road, built circa 1851 but significantly altered. Sixty-one (61) residences with dates between 1876 and

1900 have been identified, the majority of which are located in the Washburne Historic District or nearby.

Commercial development historically began along Mill and Main Streets near the River, spreading outward primarily to the east along Main Street as the population and economy grew. According to the Historic Sites Database, no commercial buildings of any type pre-dating 1900 have been identified thus far in Springfield.

To date, no residential or commercial buildings directly related to the lumber industry have been identified. No architectural resources of the pre-1901 period have yet been included in the SHPO database in the areas of Thurston or Natron.

ARCHAEOLOGICAL RESOURCES

Resources of all types that pre-date 1900 are diminishing in numbers. Those related to early industry are perhaps more endangered because of their relatively few numbers (relative to residences or commercial buildings, for example) and owing to their heavy use and consistent upgrading and replacement as needed. As noted above, in Springfield it is likely that there are industrial archaeological deposits relating to the City's earliest mill sites. These include Felix Scott's mill near the Hayden Bridge crossing and length of the millrace from the intake to the outfall near Hayden Bridge. The site of the Springfield grist- and sawmill, initially constructed by Briggs south of South A Street near the Willamette River, and later moved and enlarged into an area about 125 yards south, may also contain significant archaeological deposits. The entire Springfield Millrace may also be considered an important archaeological site from the point of intake to the outfall. Given the relative rarity of early industrial resources in Springfield, archaeological sites may provide the best opportunities for education and interpretation of the community's earliest industrial history.

HISTORIC RESOURCE EVALUATION

HISTORIC RESOURCE EVALUATION

CRITERIA FOR EVALUATING HISTORIC PROPERTIES

Evaluation is the process by which the significance of identified resources is determined. Because age alone is insufficient grounds for historic designation, evaluation of historic resources is based on architectural, historical and/or cultural significance. Resources identified through previous surveys may have been evaluated using earlier ranking or evaluation methods, and have since been folded into the current statewide inventory of historic properties (now the Historic Sites Database). Those identified more recently have been evaluated using the current State Historic Preservation Office categories (defined below) of Eligible Significant, Eligible Contributing, Non-contributing, or Out of Period, and have also been included in the statewide inventory of historic properties (Historic Sites Database).

Local Inventory Review and Evaluation

Springfield currently has established criteria for evaluating historic resources for inclusion in the Historic Landmark Inventory, as described below (derived directly from City of Springfield Development Code Section 3.3-900, Historic Overlay District).

3.3-915 Review

A. The Historical Commission shall make recommendations to the Planning Commission or City Council on the following issues:
    2. The establishment of the Historic Landmark Inventory—Type III procedure and as specified in Section 3.3-920;

3.3-920 Establishment of the Historic Landmark Inventory

A. The following criteria shall be considered by the Historical Commission or Planning Commission in establishing sites or structures on the Historic Landmark Inventory. In each case the approval authority shall determine whether the Historic Landmark Site or Structure is:
    1. Associated with historic or famous events;
    2. Old (usually at least 50 years old);
    3. Representative of a period or style of architecture or method of construction;
    4. Recognized as having architectural merit, by reason of unusual or extraordinary design, detail, use of materials or craftsmanship;
    5. Identified as the work of an architect, designer, or master builder whose individual work has influenced development in the City, State or Nation;
    6. Included in the National Register of Historic Places;
    7. Related to the broad cultural history of the City, State or Nation;
    8. Identified with a person or persons, organizations or events that have

contributed significantly to the history of the City, State or Nation; or

9. Identified as a unique aesthetic or educational feature of the City.

B. If at least 2 of the criteria specified in Subsection A, above apply, and the Historic Landmark Site or Structure is not in an advanced state of deterioration, the Planning Commission upon the recommendation of the Historical Commission may add the Historic Landmark Site or Structure to the Historic Landmark Inventory.

C. Once a Historic Landmark Site or Structure is included in the Historic Landmark Inventory, it is automatically subject to the provisions of the H Overlay District.

Age

Generally speaking, a resource should be at least 50 years of age to be considered National Register-eligible. The Register makes exceptions for "younger" resources, but the exceptions are stringent and based on truly exceptional quality or importance of the resource. Those resources previously identified through survey projects in Springfield are at least 50 years of age. If future surveys identify resources less than 50 years of age, the National Register criteria for exception may provide direction for the City's consideration.

Significance

The National Register criteria recognize that historic resources may have value in association with significant events or people, may have design or construction significance, or may be significant for its ability to impart significant information (often reserved for archaeological sites). When evaluated within its historic context, a resource must be shown to be significant in at least one of the following areas to be considered potentially eligible for listing on the National Register:

Criterion A: The resource is associated with events that have made a significant contribution to the broad patterns of our history; or

Criterion B: The resource is associated with the lives of persons significant in our past; or

Criterion C: The resource embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or

Criterion D: The resource has yielded or may be likely to yield information important to history or prehistory. The resource has yielded information important to history or prehistory; or the resource may be likely to yield information important to history or prehistory.

Integrity and Condition

Integrity is the authenticity of a resource's historic identity, and is integral to the resource's ability to convey its significance. Alterations, either historic or contemporary, should be examined for compatibility, and in some cases changes may have acquired significance of their own. There must be identifiable evidence in all or some of the seven aspects of integrity–Location, Design, Setting, Materials, Workmanship, Feeling and Association–for a historic resource to be considered eligible for the National Register. Which aspects must have integrity should be determined on a case-by-case basis, as some aspects are more important in conveying significance than others, depending on specific contexts and resource types.

Condition of a historic resource should not be confused with integrity. Condition is generally defined as "state of repair," whereas integrity relates to the historical completeness of the property or resource. A resource can be in poor condition, but retain a high degree of historic integrity. The reverse also may be true when a resource is in very good condition, but may have lost a great deal of its historic integrity due to alterations or upgrades. Ideally, a historic resource will have a high degree of integrity and be in good condition, but it is not necessary for a resource to be in good condition in order to be considered eligible for the National Register. Archaeological as well as above-ground resources must retain sufficient integrity to be considered National Register-eligible.

Most lumber-related resources in Springfield from this period would be potentially eligible under National Register Criterion A, in association with the growth of this primary local industry and the impacts it had on the community's development. Depending on the particular resource, buildings, structures, sites or features that date from the earliest settlement period (as discussed above) may also be eligible under Criteria B, C or D in the areas of Settlement, Industry, Architecture/Engineering or Archaeology. Because so few relics (of any type) of the settlement era remain, the integrity threshold for such resources may be slightly lower.

Industrial resources from this pre-1901 period may be potentially eligible under National Register Criteria A, C or D in the areas of Industry, Architecture/Engineering or Archaeology, or other areas as determined through research and analysis. In certain cases, they may also be significant under Criterion B if significance is directly linked to a particular person who was instrumental in the establishment or development of Springfield's lumber industry. Although none are currently known to remain, should a standing or above-ground lumber-related resource from this period be identified, it should retain sufficient historical integrity to visually convey its historic form and function. Archaeological sites, of which there may be several within the study area, should remain relatively intact, without significant damage by heavy grading or ground disturbance. The addition of fill over a site–a common occurrence in urban areas–may have had the effect of preserving it in situ, and the existence of fill should not lead to the assumption that the site has been destroyed. Potential archaeological sites will require detailed analysis by a qualified archaeologist to determine National Register eligibility.

Resources related to transportation, specifically the transport of timber or lumber goods to and from the Springfield mill(s), may be potentially eligible under Criteria A, C or D in the areas of Industry, Transportation, Architecture/Engineering, or Archaeology or other areas as determined through research and analysis. Sufficient integrity should remain to allow for ready recognition of the historic function, route, and/or design of the transportation resource.

Relocation of features such as bridges, or re-purposing of railroad or road alignments may not preclude National Register eligibility if integrity of essential characteristics remains evident.

Residential or commercial architecture with a direct connection to the lumber industry may be eligible under Criterion A. However, no such resources have been identified within Springfield's urban growth boundary to date. Such resources are more likely to be significant in other areas (architectural merit, for example), and eligibility for association with the lumber industry will require close study and a clear and defensible link to this local industry. Should industry-related or company-built dwellings or commercial buildings be identified, historical integrity should be such that the building remains recognizable in form and basic character. Relocation may not preclude National Register eligibility if integrity of essential characteristics remains evident.

Ranking

Springfield currently uses the State Historic Preservation Office (SHPO) ranking system for surveyed properties.

Eligible Significant properties are those that were constructed during the historic period, retain a high degree of integrity, and appear to be individually National Register eligible.

Eligible Contributing properties are those that were constructed during the historic period that retain and exhibit sufficient integrity to convey their type, period of significance and particular historical narrative. These properties may not be obviously National Register-eligible, but may be worthy of local landmark status, or and would be considered contributing properties in a historic district.

Non-Contributing properties are those that were either constructed outside the historic period, or that were constructed during the historic period but do not retain sufficient historical integrity to convey their original or historic period of significance, date of construction or historic associations.

As noted earlier in this document, it may be useful to consider Springfield's lumber-related historic resources as parts of a larger system, rather than evaluating each building, site or structure individually.

FUTURE ACTIONS AND STRATEGIES

FUTURE ACTIONS AND STRATEGIES

This historic context statement sets the stage for identifying, evaluating, and protecting the remaining historic resources related to Springfield's early (1848-1901) lumber heritage that are located within Springfield's Urban Growth Boundary. The intent of the section is to provide a broad plan for historic preservation activities related to these resources that may be undertaken in the future.

Currently, few above-ground resources related to the lumber industry from the nineteenth century have been identified within the Urban Growth Boundary of Springfield. Those that have been identified include the Millrace and rail lines (some intact and some altered or removed). It does not appear that there have been efforts to locate or identify archaeological sites specifically related to early mills. However, if such sites remain and retain any historical integrity, they could hold valuable information on early sawmilling in the Springfield community.

The Springfield Historic Commission's most recently (2012-2014) biennially-reviewed and approved goals are to:

- Educate the community about and develop public support for historic preservation.
- Understand Springfield's historic resources by developing historic context statements and conducting historic research, historic resource surveys, and historic resource inventories.
- Protect historic resources through City Landmark Inventory and National Register listings.
- Encourage property owners to restore and maintain the City's historic resources by developing incentive programs for property owners interested in preserving historic resources; and
- Maintain and strengthen the City's historic preservation program in concert with the City's planning and regulatory efforts.

To this end, the following list of potential activities, including planning and research strategies, have been developed for working toward these goals as it pertains to the theme of Springfield's Lumber Industry history.

This list may assist the Historic Commission in developing concrete approaches to future work and may also provide guidance when working with others in the community. It is not comprehensive, and as part of the Commission's on-going efforts in the community, the list should be reviewed and revised as work is accomplished, historic resources are discovered or lost, or the community's needs change. Note that this section may change following the completion of the context of twentieth century lumber industry history.

Because it is possible to pursue several preservation activities simultaneously, these actions need not be a single track in a linear fashion. Recognizing this, the Historic Commission may choose to prioritize the items listed. Activities to pursue on an on-going basis could be determined to be of primary priority, while those to be completed or as time, interest, or funding permits could be of secondary priority.

The following potential next steps are presented for consideration, pending discussion by the Springfield Historic Commission, City planning staff, and others as deemed appropriate.

- Complete the contextual study to include the post-1901 period through 1965 or 1970 (or a date determined appropriate by the Springfield Historic Commission and City Staff).

- Engage in a historic and cultural resource survey specifically targeting lumber industry-related resources within the Urban Growth Boundary (UGB), *including potential archaeological sites.*

- As time and funding permit, develop and/or update the Historic and Cultural Resource element of all of Springfield's adopted Refinement Plans to ensure the use of the most current information in the City's planning processes.

- Consider adopting a Historic & Cultural Resource element of the Jasper-Natron Specific Area Plan, as time and funding permit.

- Consider collaborating with Lane County and/or the Willamette National Forest on a survey of resources directly related to Springfield's lumber history that are outside the city's UGB. These may include old wagon roads, rail alignments, skid roads, chutes, trestles, logging camps, and other sites and resources with a direct link to Springfield's sawmilling history.

- If survey efforts reveal that a number of related resources remain, consider preparing a Multiple Property Documentation Form (MPD) addressing lumber heritage in the area, possibly in collaboration with Lane County and/or the Willamette National Forest. An MPD would streamline the National Register listing process by providing the historical background, more detailed resource identification, and the registration requirements for properties to be listed in the National Register under this common theme.

- If not already completed, engage with the community to gather as much information as possible on the early years of Springfield's lumber history, including oral interviews, historic photographs, company documentation and any other information that may be available.

Some of the goals and objectives that were outlined in the 1999 historic context may also apply to this thematic study. Those may include the following, which are not presented in any particular order (some have been adjusted to fit the lumber heritage theme):

EDUCATE THE COMMUNITY ABOUT HISTORIC PRESERVATION

- If they do not already exist, develop and produce brochures for walking tours of known lumber industry-related sites in the community.
- Work with the *Springfield Times* to develop a regular column about the community's lumber history and various resources.
- Develop and implement activities in conjunction with National Historic Preservation Week each May.
- Partner with the Springfield Museum and current local lumber companies, Lane County, and/or the Willamette National Forest to develop educational and information programs.

- Establish a lumber industry heritage education program or lecture for use in local schools.
- Develop interpretive signs about historic lumber-related resources.
- Develop and produce a book that could be entitled *Illustrated History of Springfield's Lumber Heritage* or consider an "Images of America" publication (Arcadia Publishing) on the topic of Springfield's lumber history.

CONTINUE SURVEY AND INVENTORY EFFORTS

- Conduct a windshield survey of the City and Urban Growth Boundary and generate a list of possible areas or lumber-related resources to survey.
- Prioritize and conduct surveys, including archaeological surveys, of areas identified during the windshield survey.

PROTECT SIGNIFICANT RESOURCES THROUGH NATIONAL REGISTER LISTINGS AS APPROPRIATE

- Identify potentially eligible districts, Multiple Property resources and/or individual resources.
- Encourage property owners to seek individual nominations.
- Pursue funding to nominate districts or multiple property groups.
- Issue news releases when resources are listed.

CONDUCT HISTORICAL RESEARCH

- Develop and implement more detailed research projects on aspects of the lumber history of the Springfield area.
- Develop and implement research projects on significant historic landscapes related to Springfield's lumber history.
- Develop and implement oral history projects.
- Cultivate partnerships with the Springfield Museum, local lumber and milling companies, and/or the University of Oregon to implement research projects.
- Develop and implement archaeological research projects.

DEVELOP PUBLIC SUPPORT

- Develop and implement strategic partnerships and networking to enhance the existing preservation efforts in Springfield.
- Provide outreach to significant persons, organizations, and/or businesses that may have an interest in how Springfield's historic resources contribute to the overall quality of life in the community.
- Increase visibility of the Historic Commission and preservation-related activities with the City Council and the Planning Commission.

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Oregon State Historic Preservation Office 503-986-0685
http://www.oregon.gov/oprd/HCD/SHPO/pages/clg.aspx

Molly Markarian, Senior Planner
City of Springfield, Oregon 541-726-4611
http://www.springfield-or.gov/dpw/HistoricCommissionHome.htm

Springfield Museum 541-726-2300
http://www.springfield-museum.com

Lane County Historical Museum 541-682-4242
http://lchm.org

Restore Oregon 503-243-1923
http://restoreoregon.org

BIBLIOGRAPHY

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APPENDICES

SELECT BIBLIOGRAPHY

BOOKS

Andrews, Ralph W. *This Was Logging!* Seattle: Superior Publishing Co., 1954.

Austin, Ed. *The Oregonian Railway*. Charleston, S.C.: Arcadia Publishing/Ed Austin, 2014.

Bancroft, Hubert Howe. *The Works of Hubert Howe Bancroft, Volume XXIX, History of Oregon Volume I - 1834-1848.* San Francisco: The History Company, Publishers, 1886.

Beckham, Stephen Dow, and Rick Minor and Kathryn Anne Toepel. "Prehistory and History of BLM Lands in West-Central Oregon: A Cultural Resource Overview" Eugene, Oregon: University of Oregon Anthropological Papers No. 25, 1981.

Bowen, William A. *The Willamette Valley, Migration and Settlement on the Oregon Frontier*. Seattle: University of Washington Press, 1978.

Carey, Charles H. *General History of Oregon: Through Early Statehood.* Portland: Binfords & Mort, Publishers, 1971.

Carter, Liz. "Pioneer Houses and Homesteads of the Willamette Valley, Oregon 1841-1865." Portland, Oregon: Restore Oregon, 2014.

Clark, Donald H. "Sawmill on the Columbia," in *The Beaver: a Magazine of the North*, Outfit 281 (June 1950). Winnipeg, Manitoba, Canada(?): The Hudson's Bay Company, 1950.

Clarke, David W. "The Springfield Millrace and Early Mills." Springfield, Oregon: Springfield Historical Commission, 1983.

Clark, Rosalind. *Architecture Oregon Style*. Portland: Professional Book Center, Inc., 1983.

Corning, Howard McKinley. *Dictionary of Oregon History*. Portland: Binfords and Mort, 1956.

-----. *Willamette Landings: Ghost Towns of the River*. Portland: Oregon Historical Society Press, 2004.

Cox, Thomas R. *Mills and Markets: a history of the Pacific coast lumber industry to 1900*. Seattle: University of Washington Press, 1974.

Dennis, Michelle. "Springfield Historic Context Statement, Springfield, Oregon 1848-1955." Springfield, Oregon: City of Springfield Development Services Department, 1999.

Dole, Philip. "Philip Dole Papers." University of Oregon Special Collections.

-----. "Farmhouses and Barns of the Willamette Valley," *Space, Style and Structure: Building in Northwest America*, edited by Thomas Vaughan and Virginia Guest Ferriday. Portland: Oregon Historical Society, 1974.

-----. "Farmhouse and Barn in Early Lane County," *Lane County Historian* Vol. 10, No. 2 (1965).

-----, Papers. University of Oregon Special Collections. Eugene, Oregon.

Forster, Thomas B. (Ed.), et al. "Cultural and Historic Landscapes of Lane County, Oregon." Eugene, Oregon, December 1986.

Gaston, Joseph. *Centennial History of Oregon, 1811-1912.* Chicago: S.J. Clarke Publishing Co., 1912.

Genealogical Forum of Portland. *Genealogical Material in Oregon Donation Land Claims*, Volumes I-IV. Portland: Genealogical Forum of Portland, 1957, 1959 and 1962.

Grimshaw, Robert. *Saws: the history, development, action, classification and comparison of saws of all kinds.* Philadelphia: Claxton, Remsen & Haffelfinger, 1880.

Hamell, Rick. "Booth-Kelly Company Ghost Town - Wendling Oregon." <http://pnwphotoblog.com/booth- kelly-company-ghost-town-wendling-oregon/> Accessed March 2015.

Hussey, J.A. *Champoeg: Place of Transition*. Portland: Oregon Historical Society, 1967.

Johansen, Dorothy O. "The Roll of Land Laws in the Settlement of Oregon," *Genealogical Material in Oregon Donation Land Claims*, Vol. 1. Portland: Genealogical Forum, 1957.

Kelley, Joan. "The History of the Lumber Industry in Oregon's Douglas Fir Region: An Examination of Historic Architecture in Five Mill Towns." University of Oregon Historic Preservation Program Master's Thesis, December 1992.

Langley, Henry G. *The Pacific Coast Business Directory for 1876-78*. San Francisco: Henry G. Langley, Publisher, 1875.

Ledyard Up-Down Sawmill. "A Sash Sawmill Glossary." <http://www.ledyardsawmill.org/historic-technology/sash-sawmill-glossary> Accessed March-July, 2015.

McArthur, Lewis A. and Lewis L. McArthur. *Oregon Geographic Names*, Seventh Edition. Portland: Oregon Historical Society Press, 2003.

McArthur, Lewis L. "Industrial Building," *Space, Style and Structure: Building in Northwest America*, Volumes 1 and 2. Edited by Thomas Vaughan. Portland: Oregon Historical Society, 1974.

Mbogho, Archie W. "Sawmilling in Lane County, Oregon: a Geographical Examination of Its Development." Eugene, Oregon: University of Oregon Master's Thesis, 1965.

Neill, Lydia. "Historical Resources Element - Gateway Area." Unpublished manuscript on file with the City of Springfield (Oregon), Development Services Department, 1990.

Oregon State Historic Preservation Office. "Oregon Historic Sites Database." http://heritagedata.prd.state.or.us/historic/ Accessed March-June, 2015.

Salaman, R.A. *Dictionary of Tools used in the woodworking and allied trades c. 1700-1970.* London: George Allen & Unwin, 1975.

Scott, Harvey W. *History of Portland, Oregon*. Syracuse, N.Y.: D. Mason & Co., Publishers, 1890.

Sherman, Dorothy Marie. "A brief history of the lumber history in the fir belt of Oregon." Masters Thesis, University of Oregon Graduate School, June 1934.

Sloane, Eric. *A Reverence for Wood.* New York: Wilfred Funk, Inc., 1965.

Thoele, Michael. *Bohemia: the lives and times of an Oregon Timber venture.* Portland, Oregon: Oregon Historical Society Press, 1998.

Tonsfeldt, Ward. "Draft Context Statement for Railroad Logging in Oregon." Prepared for the Oregon State Historic Preservation Office, October 1993.

United States Bureau of the Census. Accessed via Ancestry.com, <http://search.ancestry.com/search/category.aspx?cat=35>
Seventh Census of the United States, 1850.
Eighth Census of the United States, 1860.
Ninth Census of the United States, 1870.
Tenth Census of the United States, 1880.
Twelfth Census of the United States, 1900.

United States Department of the Interior, Bureau of Land Management (BLM). "Land Status and Cadastral Survey Records" (General Land Office Records) website. <http://www.blm.gov/or/landrecords/index.php> Accessed May-July, 2015.

Van Tassel, Alfred J. and David W. Bluestone. *Mechanization in the Lumber Industry: A Study of Technology in Relation to Resources and Employment Opportunity.* Philadelphia, Pennsylvania: Work Projects Administration, National Research Project, March 1940.

Walling, A.G. *Illustrated History of Lane County, Oregon....* Portland: A.G. Walling, 1884.

Zimiles, Martha and Murray Zimiles. *Early American Mills.* New York: C.N. Potter, 1973.

JOURNAL ARTICLES

American Lumberman [?]. *American Lumbermen: The Personal History and Public and Business Achievements of One Hundred Eminent Lumbermen of the United States.* Chicago: The American Lumberman, 1906.

Jones, Eric. "Brief History of Thurston," *Lane County Historian* Vol. 30, No. 2 (1958).

Kelley, Joan. "Booth-Kelly Lumber Company: An Empire in the Douglas Fir Country," *Lane County Historian* Vol 35, No 3 (Fall 1990), pp. 55-59.

Mitchell, Charlotte. "John Cogswell," *Lane County Historian* Vol. 6, No. 2 (June 1961).

No Author. "The Old Mill at Springfield, Ore." *American Miller and Processor: A Monthly Journal Devoted to the Art and Science of Milling* Volume 40, No. 7 (July 1, 1912). Chicago, Illinois: Mitchell Brothers Publishing Co. p 573.

Yates, Elizabeth. "Early Steamboating, Pioneer Thoroughfare to Eugene and Springfield Via Willamette River," *Lane County Historian*, Vol. 4, No. 1 (Fall 1959): 6-9.

NEWSPAPERS

Eugene *City Guard*

"Sale Postponed." Sept. 12, 1896, p. 1.
"Springfield Saw Mill." January 21, 1899, p. 1

Eugene *Daily Guard*

"Lane:Lumber:League." October 22, 1892, p. 7.

Eugene *Register Guard*

Madar, Kurt. "The Spans of History," Springfield Extra Section. January 31, 2008.
Conway, Steven. "The Bridge That Won the West," Emerald Empire Section. May 18, 1969.
Welch, Bob. "Town Lives On in Recollection." Feb. 6, 2001, p. 1B.

Oregon *Spectator* (Oregon City)

Oregon Spectator, February 5, 1846

Oregon State Journal (Eugene)

"Springfield Manufacturing Co., Springfield, Ogn," Advertisement. November 14, 1867.
"Notice." November 28, 1868, p. 1.
"Lumber for All." April 30, 1870, p. 3.
"The Railroad is Coming to Springfield." June 4, 1870.
"Springfield Manufacturing Company." July 11, 1874, p. 3.
"Lumber! Lumber!" June 26, 1880.

Portland *Oregonian*

"Through Lane and Linn." November 14, 1873, p. 1.

OTHER

Burns, Deborah S. "Up-and-Down-Sawmill, Chester County, Pennsylvania," HABS No. PA_116. Washington D.C.: U.S. Department of the Interior, Historic American Building Survey, 1979.

Kamholz, Edward. “Donkey Engine,” Oregon Encyclopedia, (2015). Accessed July 2015. <http://www.oregonencyclopedia.org/articles/donkey_engine/#.VarSLSR6Nxc>

Williams, Jerold. Lane County Historical Museum. Personal communication with author, April 30, 2015.

SIGNIFICANT PEOPLE
IN SPRINGFIELD'S EARLY LUMBER INDUSTRY

NOTE: This section may need to be updated when the Phase II/post-1901 study is complete.

Booth, Henry (n.d.-1906)
Brother of Robert A. Booth and co-owner of Booth-Kelly Lumber Company, which operated from 1896 to 1959.

Booth, Robert A. (1858-1944)
Banker and co-owner of Booth-Kelly Lumber Company. Booth served as State Senator (1900-1908), as a member of the State Highway Commission (1918-1923) and State Park Commission, and as a trustee of Willamette University. He was an active Republican and member of the Methodist-Episcopal Church.

Brattain, Paul (1801-1883)
Pioneer settler, who served as a Lane County clerk, auditor, and Justice-of-the-Peace. He was born in North Carolina and emigrated to Oregon in 1852.

Briggs, Elias M. (1823-1896)
Founder of the Springfield townsite together with his wife, Mary. Briggs operated the "Briggs Ferry" across the Willamette River and built the first sawmill and grist mill in the area, 1853-1854. He was born in Kentucky and emigrated to Oregon in 1849.

Donalds, J. N.
Owner of the earliest trading post in Springfield.

Harlow, Mahlon H. (1811-1896)
Pioneer settler of 1851, who constructed early schools in the Springfield locale, the 1854 Lane County Courthouse, and Columbia College in 1856. In 1865, Harlow helped to built the military wagon road up the Middle Fork of the Willamette River. He was a founding member of the Willamette Forks Baptist Church in 1852. That same year, Harlow was elected Lane County Clerk, and in 1864, he served as the County Assessor. In 1866, he was elected sheriff.

Kelly, George H.
Co-owner of the Booth-Kelly Lumber Company, which operated from 1896 to 1959. Born and raised in Springfield, Kelly was the superintendent of the operation. He was the brother of Tom Kelly, one of his business partners.

Kelly, John (1818-n.d.)
Namesake of Kelly Butte in the Springfield locale, where he first settled in 1866. He became interested in the milling industry of the city and entered into the business of lumber contracting, which he pursued until 1869. A restless, enterprising man, Kelly then served eight years as the Land Registerer in Roseburg, as a Collector of Customs in Portland (1876-1880), and was a Commissioner of the Northern Pacific Railroad for a

time in Montana. He was the father of George and Tom Kelly, co-owners of the Booth-Kelly Lumber Company.

Kelly, Tom

Co-owner of Booth-Kelly Lumber Company. Born and raised in Springfield, Kelly was a vice-president of the operation.

Pengra, Byron J. (1823-1903)

Leading businessman and entrepreneur, Pengra became the second owner of the Springfield Manufacturing Company (saw and grist mills) in 1865. That same year, he also purchased the Springfield townsite from Elias Briggs. An active Republican, Pengra established the first Republican newspaper in Oregon in 1858, and called it the *People's Press*. He was appointed Surveyor General of Oregon in 1862. He initiated the building of a military wagon road up the Middle Fork of the Willamette River.

Pengra, William B. (1834-1895)

Brother of Byron Pengra and, as of 1872, co-owner of the Springfield Manufacturing Company. A prominent businessman of the city, Pengra later became the sole owner of the flour mill form 1884 to 1890.

Powers Family

Pioneer craftsmen of Springfield (1850s-1870s): Albert S. Powers, furniture maker and sash and door manufacturer; A.W. Powers, tanner; B.B. Powers, chair manufacturer; Benjamin F. Powers, cabinet maker and builder; Edwin P. Powers, carpenter; John G. Powers, blacksmith.

Rees, T. L.

First store owner in the Thurston area.

Scott, Felix (1788-1858)

Earliest settler on the McKenzie River in 1848. Virginia-born Scott operated the first sawmill in the Springfield locale in 1851, and established a large successful cattle ranch on his donation land claim. He participated in the Rogue River Indian Wars and was killed by the Modoc Indians in 1858.

Scott, Felix, Jr. (1829-1879)

Son of Felix Scott. Engaged in stock raising and the freighting business. His greatest contribution to area history was the blazing of a wagon road from Eugene-Springfield up the McKenzie River, across the Cascade Range to Central Oregon. He was born in Missouri and arrived in Oregon in 1845.

Smith, Jesse H. (1815-1917)

Pioneer Natron settler of 1851, active in getting roads and railroads to that community. Kentucky-born Smith was a farmer and stock raiser, with a special interest in dairying. He helped to build the 1854 Pioneer Courthouse of Lane County. He was a Republican and member of the Christian Church.

Stevens, William (1805-1860)

First settler to arrive in the Springfield locale in 1847. With his brother-in-law, George H. Armitage, Stevens operated an early ferry across the Willamette River in 1849. Born in North Carolina, he was a farmer and builder of log cabins and hand-hewn houses.

Stewart, John W. (1835-n.d.)

Prominent Springfield businessman and general store owner for 38 years.

Stewart, H.W.

Associated with First Bank, the initial banking house of Springfield dated 1904.

Thurston, George H. (1846-n.d.)

Early Springfield rancher for whom the community of Thurston was named. He was the son of Samuel R. Thurston, Oregon's first territorial delegate to Congress. Thurston was a land surveyor in Oregon and participated in locating the Oregon Central Military Wagon Road.

Walker, Albert S. (1846-1915)

Springfield's first mayor in 1885. Walker owned a blacksmith shop.

Washburne, Byron A. (1865-1955)

Son of C.W. Washburne, who managed the Springfield Roller Mills. He was co-organizer in 1906 of the First National Bank of Springfield, for which he served as a director. Washburne owned extensive property in several Oregon counties. He was a Republican and active member of numerous fraternal organizations. Washburne was born in Junction City.

Washburne, Charles Wesley (1824-1919)

Prominent Junction City banker and mill owner. Washburne purchased the Springfield Roller Mill in 1890 and operated it to 1915.

Williams, George

Thurston's only sawmill owner-operator.