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Provide the following information on continuation sheets. Cite the letter and the title before each section of the narrative. Assign page numbers according to the instructions for continuation sheets in *Howto Complete the Multiple Property Documentation Form* (National Register Bulletin 16B). Fill in page numbers for each in the space below.

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Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

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Statement of Amendments

This amended form is submitted as a replacement for the original form, approved in May 2006. It incorporates the former documentation and new information into a cohesive document. No narrative changes are included for the six previously approved and listed historic contexts and the majority of the related historic property types. The pages after the original E85 have been renumbered for the cohesive document. To summarize, minor changes have been made for E1-E2 to incorporate this statement, original pages E3-E85 of Section E remain unaltered as approved, two new residential historic contexts have been added at the end of Section E (pages E86-E132), original pages F86-F113 remain generally unaltered with repagination to F133-F169 and inclusion/reflection of residential types, a new associated property type section has been added to the end of Section F (pages F170-F181), Section G (original pages G114-G115) remain unaltered except for repagination to G182-G183, Section H has been edited to include additional completed survey work (pages H184-H188), and Section I has been edited to include new sources (pages I189-I193).

E. Statement of Historic Contexts

Muscatine, the county seat of Muscatine County, is located on the northwest bank of the Mississippi River in southeast Iowa. The prehistory and the early history of the Muscatine area prior to 1833 are not specifically discussed in this current document. There are approximately 50 recorded archaeological sites within Muscatine; many of these sites are prehistoric sites. However, it is clear from modern archaeological investigations that American Indian peoples had inhabited this land along the Mississippi River for a long time prior to European settlement. Further research would be needed to evaluate the current archaeological information available from the Muscatine area and to define the contexts of the different cultural periods represented at the sites in the Muscatine area.

Euro-American settlement began in Muscatine soon after the Black Hawk Purchase, which opened this portion of eastern Iowa to these settlers as part of the public domain on June 1, 1833. Initially, a trading post was established at "Sandstone Bluffs" or "Grindstone Bluffs" to conduct business with the nearby Sauk and Meskwaki tribes. The town of Muscatine (initially Bloomington) was laid out on this claim in 1836. Numerous other Mississippi River communities also formed in this period. By 1840, the 18 counties nearest to the Mississippi River had significant settlement, led by Des Moines, Lee, and Van Buren counties in southeast Iowa. These southeast Iowa counties continued to lead settlement in 1850 and 1860, with Dubuque also posting a large population. The population of Muscatine climbed to 2,540 by 1850, third in Iowa behind fellow Mississippi River communities of Dubuque and Burlington. With the increase of rail travel in this period, Dubuque, Clinton, Davenport, and Burlington successfully lobbied for rail connections directly to Chicago. Muscatine enjoyed a spur from the Davenport line, and population grew to 5,324 by 1860. Muscatine remained the fifth largest city in the state, behind Dubuque, Davenport, Keokuk, and Burlington. In these pre-Civil War years, Muscatine had a large African-American population in comparison to other Iowa communities. With increased settlement and rail connections, other communities began to surpass the combination of river and railroad transportation that spelled early prominence for Muscatine. By 1870, the population reached 6,718, with Muscatine falling to seventh in the state. Likewise, Muscatine fell to ninth in terms of African-American population with 107 residents (1.59%), far behind the leader of Keokuk with 1,015 (7.95%). These population trends would continue for the next century.

The location on the Mississippi River led directly to the first three major industries in Muscatine: agricultural processing, lumber, and pearl buttons. The original plat of Muscatine was centered on a relatively flat section of land along the river, framed by the surrounding hills included within this rectilinear plat. The city began in the flatter land near the river and expanded to the hills to the east, west, and north. Residential development occurred primarily in these surrounding areas, leaving commercial and industrial development on the more level land near the river. The "island" created by the Muscatine slough boasted the most fertile soil of the area. Muscatine developed as an agricultural processing center, supported by the surrounding countryside. Goods were shipped via the river and then also by railroad following its arrival in 1855. Following the Civil War, the lumber industry grew significantly. Lumber was a typical Mississippi River town industry, and Muscatine enjoyed its own success though outpaced by other communities. Industrial growth expanded to the areas east-northeast and south of the downtown, and other development followed

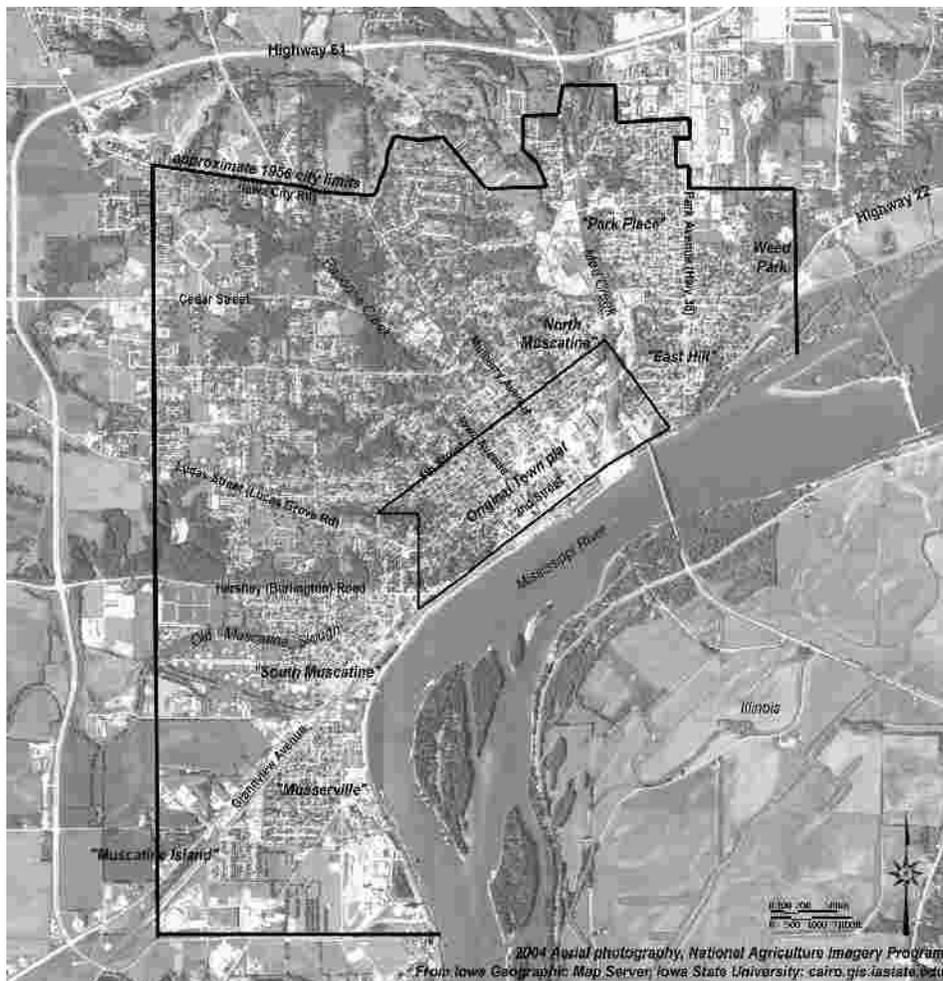
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into these areas. Additional residential areas were also platted, primarily to the west and north of the original plat. Agricultural processing continued to play a significant role, particularly with the construction of the H.J. Heinz plant. By the 1890s, the pearl button industry began to boom, beginning in Muscatine.

At the turn of the 20th century, Muscatine reached a population of 14,073, the 11th largest city in the state. The pearl button industry outpaced the lumber industry by 1902, providing the backbone of Muscatine's economy into World War II. Though other river communities participated in the industry, Muscatine remained the focal point of the industry in Iowa and nationally in the first half of the 20th century. Muscatine entered a period of civic pride and improvements in the early 20th century, spurred by the strong local prosperity. Other business and industry grew in this period, including local and national businesses. The arrival of the automobile brought new businesses and changes to Muscatine. Following World War II, residential development occurred at areas further from the downtown. New businesses, such as the precursors to HNI Corporation, Stanley Consultants, Allsteel, Kent Feeds, and Bandag, strengthened Muscatine's post-WWII economy. By 1960, Muscatine's population grew to 19,813, and Muscatine stood as the 17th largest community in Iowa.



Overview map of the City of Muscatine.

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Early Settlement (c.1833-c.1865)

Located on the Mississippi River, Muscatine reflects some of Iowa's earliest history. The first settlement in the area that would become Muscatine occurred soon after Iowa was opened to Euro-American settlement in 1833. Its location at a bend on the Mississippi River made it an excellent location for a community to blossom, though the topography was less than friendly. However, the potential steamboat landing, key to early success along the Mississippi, outweighed the negative aspects. The number of steamboats landing at Muscatine increased significantly through the 1840s, nearly doubling in the first five years. With this traffic, numerous buildings were found throughout the original section of the town by the end of the 1840s. The shipping industry continued to feed the local economy through the 1850s.

With the growing steamboat and shipping industry, other early businesses developed in Muscatine, supporting and supported by this industry. Agricultural processing and lumber formed the early backbone of Muscatine industry and commerce, both benefiting from the location on the river. The population of Muscatine grew to 2,540, with 453 buildings in the town, by 1850. Other businesses developed to meet the needs of the increasing population, providing necessary goods and services. These businesses began to form the downtown commercial area as early wood buildings were replaced with more substantial brick construction in the 1850s. Residential settlement became focused on the fringes of this downtown area.

These industries and Muscatine's prominence on the river were enhanced by the arrival of the railroad in 1855. The railroad spelled the key to future growth and development as it began to replace steamboats in the shipping industry. With the confluence of these two transportation types, Muscatine held a prominence in the 1850s and 1860s only shared by other Mississippi River communities in Iowa. With the increased settlement, the population grew to 5,374 in 1860. Muscatine remained the fifth largest city in the state, behind Dubuque, Davenport, Keokuk, and Burlington. While the Panic of 1857 and the Civil War slowed development in the late 1850s through 1865, the earlier economic development of Muscatine sustained the community through this period of hardship.

This early settlement period in Muscatine is significant as it set the stage for the future growth and development of the community. The remaining historic resources from c.1833 to c.1865 reflect this early history as Muscatine grew due to its location on the Mississippi River and ability to attract business and industry. These resources primarily include commercial, industrial, and residential buildings. Many of these commercial and industrial resources are concentrated in the downtown area, but others are located along Mad Creek, Papoose Creek, or on Muscatine Island, the area that would become known as South Muscatine. Residential resources were concentrated on the edges of these commercial and industrial centers, providing nearby housing for workers. The significance of the early history of Muscatine is reflected in these historic resources.

Settlement and Early Buildings

Most early towns on the Iowa frontier developed along the Mississippi River as the major transportation route into and out of the territory. After this section of Iowa was opened to settlement in 1833, Colonel George Davenport staked a claim to 160 acres at the bend of the river in the area that would become Muscatine. The trading post was established at "Sandstone Bluffs" or "Grindstone Bluffs" (the reference to the area at the time) to conduct business with the Sauk and Meskwaki tribes who maintained villages within Muscatine and Louisa Counties. The tribes remained in Muscatine and Louisa counties for several years following their treaty cession known as the Black Hawk Purchase in 1832 as a result of the Black Hawk War. A cabin was erected near the current intersection of Iowa and Mississippi streets, and Russell Farnham, one of Davenport's men, operated the trading post here. Others settled further up and down the river around the same period, including James W. Casey immediately to the south near the foot of present-day Broadway. A nearby settler noted that this was the only building

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in the area in 1834. In February 1836, Colonel John Vanatta bought Davenport's claim, measuring about one-half mile by one-half mile. In May, Major William Gordon was hired to lay out a town on their claim, and Bloomington was settled on as the name. About twenty settlers arrived in town by the end of the year. Bloomington became the county seat of Musquitine (later Muscatine) County in 1837 (*History of Muscatine County* 1879: 501-502; Richman 1911, Vol. 1: 61; Lewis 1901: 8; Carlson 1984: 12; EPRI 1977: 3; Horton 1978: 289, 293-294).

While this location had the benefits of its location along the river, the terrain was less favorable for development. Josiah P. Walton observed that "If one would look up the roughest place in our county he would hardly find an equal to Bloomington in 1836. It was all hills and hollows. They were largely covered with trees and brush. The town was located between them and on four hills – one of them the highest for several miles away – with two large creeks and several small duck ponds to add variety to the wilderness." However, many of the towns along the river reflected the same characteristics, and the potential benefits of the steamboat landing outweighed the drawbacks of the terrain (Horton 1978: 290).

On January 23, 1839, Bloomington was incorporated as a "second-class" town with a population of 71 people and 33 buildings. By November, 84 buildings were found in town. Plans for a courthouse were quickly made on Block 24, which was reserved for governmental purposes by the city. The first jail, 16 by 24 feet, was erected on the northwest corner of the square in 1839, and Stephen Brophy designed the first courthouse. On March 30, 1840, George Baumgardner resurveyed the town to correct some earlier errors. A post office was also finally established in town, as well as a school under the direction of John A. Parvin. Over the next year, settlers flocked to this area, attracted by its location on the Mississippi River, fertile soil, and available building materials. Josiah Parvin built the first brick hotel in 1841 at the corner of Second and Walnut, later known as the Kemble House. In 1842, a motion to change the town's name to Muscatine failed. Population grew to 507 by 1840, and to 911 by 1844 (Horton 1978: 304, 363-364; *History of Muscatine County* 1879: 507-508, 521, 535; Richman 1911, Vol. 1: 205, 448; Lewis 1901: 8; Carlson 1984: 12-14; EPRI 1977: 3).

The earliest buildings in the 1830s were constructed of log, built from timber on the site. The typical log house was described as 16 by 20 feet with a large chimney outside of one end, projecting out about 4 or 5 feet. William Gordon built the first frame structure for Robert C. Kinney to use as a hotel in September 1836. The one-and-one-half-story building measured 16 by 30 feet with three rooms on each floor, and it sat at Chestnut and Water streets. William Gordon also constructed the second frame structure the following spring for John Vanatta to use as a tavern at the southwest corner of Iowa and Second streets. Since oak was readily available near the site, all the timbers and weatherboards were made from this wood. Three carpenters operated in Muscatine by 1837: William Gordon, Henry Reece, and H.H. Hine. As Bloomington developed, the newspaper noted in 1841 that "almost every day adds another skeleton frame building to the place, and some of them large and substantial." In the 1840s, log structures became outnumbered by this more refined type of building (*History of Muscatine County* 1879: 504; Richman 1911, Vol. 1: 65; Horton 1978: 343, 358-359; EPRI 1977: 4).

Across Iowa, the first commercial buildings in town were typically wood. The "style" of these buildings was similar to residential architecture, often evolving from early buildings that were both commercial and residential in nature. Most buildings had gable roofs in this period and sat on stone foundations. Most commercial areas developed in a linear format. The business district might stretch along one block or several blocks, depending on the community. Commercial uses were also often supported on nearby parallel streets. Lots along "Main Street" typically were divided into smaller narrow lots than the typical residential lot, permitting two or three commercial buildings to sit on a single platted lot (Nash 2002: E11-12, E25-26). While early commercial activity was focused on the road along the river (Front Street, currently Mississippi Drive), the commercial district developed one block inland along Second Street.

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Since Muscatine is located on a loamy clay deposit, the manufacture of brick also began in the early years. Modest iron deposits are found in this clay, creating a distinctive color to the red brick. Hiram Matthews built the first brick building in 1839 for his brother Matthew. Bricks were advertised for sale as early as 1843. By 1844, a traveler docked at the landing described Muscatine as having “quite a number of handsome brick dwellings and mercantile establishments.” This red brick was used for several mid-19th century brick buildings in Muscatine; unfortunately, it is also very permeable, and many of these buildings have been painted to prevent moisture infiltration (*History of Muscatine County* 1879: 504; Richman 1911, Vol. 1: 65; Horton 1978: 344-345, 360-361; EPRI 1977: 4).

Early Business and Industry

The trading post and steamboat landing were the early focus of the economy in Muscatine. Steamboats began to land at this location in the 1830s, increasing significantly in the 1840s. While 339 landings were made in 1840, the number increased to 449 in 1843, 610 in 1844, and 710 in 1845. Ice prohibited travel in the winter, resulting in inflation for imported goods. The length of the closure of the river was crucial to the local residents. A typical winter consisted of four or five months of impassable waters, with the landing reopening as early as March 1 in 1844 and March 5 in 1842 (Horton 1978: 310-313).

With the influx of people, industry began to develop. The town became a regional commercial and trading center within a few years, shipping goods along the Mississippi River. J. Bennett & Company shipped the first shipment of wheat, consisting of 130 bushels, to St. Louis on October 15, 1842. Other produce was shipped over the next few years on nine different boats. Trade was further enhanced in 1844 when a road was extended further inland from the Illinois side of the river (Richman 1911, Vol. 1: 410; EPRI 1977: 3).

Lumber was a typical early industry in many communities. David and Asbury Warfield built the first water mill on Mad Creek in 1838. They sold it to the Brooks Brothers in the 1840s, who continued to operate it until it washed out in a flood in August 1851. Several other small mills formed in Muscatine in the 1840s. Cornelius Cadle built the first steam sawmill in 1843 on Front Street near Oak. The earliest lumberyard was established by the fall of 1839, selling lumber from other areas. Pine lumber was sold from Pennsylvania and Wisconsin by J. Bridgman and Company in 1840. Additional lumberyards also began in the 1840s, typically selling lumber from other areas (“Centennial Edition” 1940: 76; Richman 1911, Vol. 1: 204-205; Walton 1899: 137-138; Horton 1978: 342-343, 346-347).

Muscatine developed an agricultural processing industry in the 1840s, based on the river access and surrounding countryside. Grist mills developed along creeks in the community. J.M. Barlow opened the first steam flour mill at 2nd and Sycamore in 1843, which sustained a fire in 1850. Isett & Blydes packed the first pork in 1844, totaling 322 hogs. By 1848, pork packing was a significant business in Muscatine. Green & Stone’s slaughterhouse was described as “one of the more convenient in the west,” outfitted with the necessary pens and equipment. Their 50 by 56 foot building provided sufficient space to slaughter 400 hogs daily with the labor of 10 men. As the pork packing industry grew, they shipped to farther markets, and the first shipment reached the Atlantic seaboard in 1859 (*History of Muscatine County* 1879: 508-509; Richman 1911, Vol. 1: 448-449, 453; Horton 1978: 318).

Joseph Bennett built a steam flour mill in 1849 along Front, later Mississippi, Street. The five-story building measured 50 by 85 feet. In January 1850, his mill ground and packed 520 barrels of flour in a single day. The original mill sustained a fire on August 23, 1851, and a new five-story building was built from local brick within 90 days. It continued to operate as a flour mill until 1873, and it continues to stand on the riverfront today (Richman 1911, Vol. 1: 450-452; Carlson 1984: 21).

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Another typical early business was the newspaper. The *Bloomington Herald* printed its first edition on October 27, 1840. The paper grew under the editorial direction of N.L. Stout in the mid-1840s before ceasing operations in 1849. In July 1849, Noah H. McCormick launched the *Muscatine Journal*, and he sold it to John and Jacob Mahin three years later. Orion Clemens (brother of Samuel Clemens) purchased interest in the newspaper in 1853, and over the next decade it passed through several owners. From 1857 to 1866, John A. Mahin operated the *Journal* himself. A second newspaper also operated in Muscatine throughout this period. H.D. LaCossit started the *Democratic Enquirer* in 1848, and it also passed through several hands in the 1850s. The name was later changed to the *Tribune*, and then the *News-Tribune* (Richman 1911, Vol. 1: 383-399).

Other businesses also developed in this period to meet the needs of the local residents. Dry goods stores formed soon after settlement. By 1841, Henry Molis opened the first gun shop; A.M. Hare opened the first hat shop; and Joseph Brentlinger opened the first tin shop. The following year, P.W. Hamilton began the first cigar factory, and W.B. Fish started the first broom factory. By 1848, the newspaper reported that Muscatine had “a population of about 2000 and contains many handsome and permanent business houses, beside[s] a large number of near private residences” (Horton 1978: 318-318).

Muscatine also offered the services of many professionals by the 1840s. Several physicians moved to this area, armed with the latest in medical care and technology. Various names are linked with this aspect of Muscatine history – Charles Drury, Eli Reynolds, McKee, Benjamin Reed, George Reeder, George Fulliam, D.P. Johnson, and James Horton – all of whom moved to Muscatine in the 1830s or 1840s. Dr. George Reeder appears to have been particularly prominent among the early physicians, practicing from 1841 to his death in 1862. He was one of the founding members of the Iowa State Medical Society. Two physicians passed the trade down to their children, who continued to practice in Muscatine. Dr. Benjamin Reed began practicing out of a log cabin on 2nd Street in 1839, and his son James was also a physician. Dr. George Fulliam practiced medicine in Muscatine from 1843 to 1893, and two of his sons, Edward and Jefferson, continued the practice upon his death (Richman 1911, Vol. 1: 354-355).

Town Planning and Development

Early Muscatine consisted of the area north of the Muscatine Slough. The Muscatine Slough was a “river” that extended around a section of the land, making an island in the Mississippi. Muscatine Island was generally swampland, extending about 18 miles downstream. A dam was built across the Muscatine Slough in 1845, just south of the present day intersection of Mississippi Drive and Hershey Avenue. About 22,000 acres were reclaimed from swampland, and the fertile area was opened to settlement with safe and dependable access. Only three houses were built in this area by 1850, as the log levee habitually washed out. A more solid levee was built in 1851, and improvements were built on the island (Richman 1911, Vol. 1: 449). As settlement and industry increased, this area became known as South Muscatine.

An early plat of Muscatine shows the layout of the original town as well as the adjacent areas (Figure 1). The original town was laid out parallel to the river at this point in the bend, facing southeast. The block reserved for the courthouse appears on this map, as well as the public square on the west end of town. Adjacent lands are laid out on the typical north-south, east-west grid. Muscatine Slough is clearly depicted with one of the several dams at the head of Muscatine Island (Smally (sic) pre-1853).

Bloomington continued to develop as a community in the late 1840s. The telegraph line was completed to town on August 23, 1848. On June 6, 1849, a petition signed by about 200 citizens was filed with Richard Cadle, clerk of the county court, to change the name from Bloomington to Muscatine, like the county. Other reasons cited were the postal service confusion with nearby Burlington and Bloomington, Illinois. The petition was granted on June 7, and the town became Muscatine. The city of Muscatine officially incorporated two years later on February 1, 1851. The city was divided into three wards, with two

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aldermen representing each ward. Duties of all elected officials were specified as well. A special election approved the charter on February 21, and election of officials followed (Richman 1911, Vol. 1: 287-288; Horton 1978: 305-306).



Figure 1. pre-1853 Plat of Muscatine by Abraham Smally (sic).

By 1848, an effort had begun to establish a public school system in Muscatine. John A. Parvin started the first school in 1839, teaching out of a “town house” on Iowa Avenue beginning in 1840. Two school districts formed. District 1 stretched east of Sycamore, south of 8th Street; District 2 covered the area west of Sycamore, south of 8th Street. District 2 voted in 1848 to construct a brick school, which was completed in 1851. Not to be outdone, District 1 voted in 1850 to build a larger brick school, measuring 40 by 45 feet, and it opened in 1853. John A. Parvin served as president of District 1, and N.L. Stout as president of District 2. The two districts were consolidated in 1858. By 1864, an African-American school also operated out of the Methodist Episcopal church on East 7th Street. In 1864, a graded system was established, including primary, grammar, and high schools (Richman 1911, Vol. 1: 342-345; *History of Muscatine County* 1879: 536).

With Papoose Creek meandering through town and running along Sycamore from Third Street to the river through the developing commercial area, bridges became crucial to maintaining circulation. A bridge on Second Street was built, and then rebuilt after washing out in a flood in July 1844. Flooding continued to be a severe problem for this bridge, as well as others in town. On August 10, 1851, a flood washed out the Papoose Creek bridge on Second Street as well as two others, destroyed a house, drowned four people, and resulted in \$12,000 property loss. The flood in 1859 washed out the Second Street bridge as well as collapsing two adjacent brick buildings, the J.B. Dougherty Drugstore and John G. Deshler Block (Horton 1978: 328).

By 1850, the population of Muscatine had grown to 2,540, with 453 dwellings in the town (Richman 1911, Vol. 1: 451). It ranked third in Iowa in population, behind fellow Mississippi River communities of Dubuque and Burlington. Muscatine boasted a significant African-American population in 1850, leading the state with 68 African-Americans (2.68%) though Keokuk would soon outpace Muscatine. A Keokuk visitor published an account of Muscatine in the *Keokuk Dispatch* that was reprinted in the local

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newspaper in November 1851. The author notes that the success and progress has not been exaggerated – “it seems to have taken the lead of Burlington and of Keokuk.” Many brick commercial buildings, churches, two schools, a Masonic Hall, and a hotel had recently been constructed or were under construction. A city tax had been levied to grade streets, which was reportedly “a work of more extent and difficulty than in Keokuk” (“Muscatine,” 1851: 3:3).

Economic Growth in the 1850s

The first bank opened in Muscatine in 1851. Joseph A. Greene and George C. Stone were previously engaged in the grain and pork packing business. They launched Green & Stone in a small frame building before building a brick building on the south side of Second between Iowa and Chestnut. With the financial panic in 1857, the bank closed. In the early 1850s, a second banking firm formed, Isett & Brewster, which soon became the Merchants Exchange Bank. It reorganized as the First National Bank in 1865 (Richman 1911, Vol. 1: 400-402).

In 1853, a new resident described Muscatine as one of Iowa’s “few smart towns on the river which derive their business directly and indirectly from the agricultural resources of the surrounding county.” In the business portion of town, lots sold for \$100 to \$125 per front footage. In the county, farmland could be bought for \$15 to \$25 per acre. The site of the town at the western end of the bend of the Mississippi was “very rough, a succession of hills and valleys” that were being graded and filled as the community grew (Reps 1994: 230).

The local lumber industry continued to develop in the 1850s, shifting the focus to locally milled timber. Cornelius Cadle continued to be involved in his mill operations into the 1870s, and his brother, Richard Cadle, began a complementary sash, door, and blind business by the mid-1850s. In 1851, Rev. R.W. Brent started a small lumber company in Muscatine, which became the Brent Manufacturing Company. In the 1850s, S.M. McKibbin and Company operated briefly before closing in the panic of 1857. The four Chambers brothers – William, Vincent, Anderson, and John – also entered the lumber business in Muscatine. Benjamin Hershey entered the milling business in 1853, followed by Richard and Peter Musser in 1855. These early mills began to buy timber from the upper Mississippi River, rafting the logs to the mills in Muscatine. Abraham Smalley and Jacob Pickel operated the earliest sash and door business around 1850 at their windmill on 3rd and Cherry. Sashes were not made in advance but custom made for the order of a builder, though some eight-light sash was kept on hand (*History of Muscatine County* 1879: 613-614; Richman 1911, Vol. 2: 67, 159; Walton 1899: 148-149, 170-171; County Directory 1879: 21-22; “Centennial Edition” 1940: 76).

Other related business also grew due to the lumber mills in town. Reportedly, Simon G. Stein, Sr. arrived on a lumber raft in Muscatine in 1849, bringing a supply of lumber for a retail trade. He began manufacturing sash and doors with S.G. Hill in 1851 in a factory west of Pine on Front, continuing this business through 1865. On April 26, 1854, Stein entered into the furniture business with Philip Stein under the name of S.G. & P. Stein, manufacturing and selling furniture from their production and from Cincinnati. By 1858, they moved into a large new building, where they continued to operate through the end of the 19th century. In the late 1850s, S.G. Stein also manufactured bedsteads with George P. Vesey (Richman 1911, Vol. 2: 128; Carlson 1998: 21; *Portrait and Biographical Album* 1889: 312).

Muscatine boasted one famous resident in the mid-1850s. Samuel Clemens, later known as Mark Twain, lived with his mother and brothers in a house on Walnut Street near the river for a few months around 1854 at age 18. His older brother, Orion Clemens, owned half interest in the *Muscatine Journal* at the time. Samuel wrote several letters to the *Journal* early in his career, and later remembered Muscatine in *Life on the Mississippi* (Richman 1911, Vol. 1: 297-298; Carlson 1984: 15).

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With the maturation of the community, several social or fraternal organizations formed in the 1850s and 1860s as well. Linked to the prevalent agricultural base of Muscatine, the Muscatine County Agricultural Society was organized on October 23, 1852, with officers of George Meason, Dr. James Weed, J.H. Wallace, and J.G. Jordon. Board members consisted of people from throughout the county. Membership grew to 399 by 1853. The first exhibition fair was held on October 12 and 13, 1853. Fairs were held annually through the end of the century (*History of Muscatine County* 1879: 552; Richman 1911, Vol. 1: 422-423).

On February 9, 1856, the Old Settlers' Association formed in the lecture room of the Congregational church. Joseph Williams, Sr., Thomas Burdett, and Theodore Parvin were elected as officers. A total of fifteen pioneers met for the first annual meeting. Meetings continued to be held yearly, and the members worked to preserve the history of the early settlement of the county. Papers were often read before the society on topics in the history of Muscatine (Richman 1911, Vol. 1: 420-421).

Fraternal organizations, a common feature of most early communities, also began in this period with the maturation of the community. The Iowa Lodge of the Free and Accepted Masons No. 2 organized on February 15, 1841, as the second Masonic lodge in Iowa. The first building was constructed with Trinity Episcopal Church later that year. With the growth of the membership, a new lodge of the Free and Accepted Masons – the Hawkeye (initially Humphreys) Lodge No. 30 – was organized on September 5, 1851. The Muscatine Lodge of the International Order of Odd Fellows (I.O.O.F.) No. 5 formed on March 23, 1846. The Royal Arch Masons organized the Washington Chapter, No. 4, on September 17, 1852, followed by the second I.O.O.F. lodge, Prairie Encampment in 1853. Around 1850, the Masonic Hall Company was organized to build a lodge hall for all Masonic organizations, and they moved to this location on 2nd Street in 1854. Finally, the Knights Templar organized the De Molay Commandery, No. 1, on March 14, 1855 (Richman 1911, Vol. 1: 423-429; *History of Muscatine County* 1879: 545-549).

A view of Muscatine appeared in *Ballou's Pictorial Drawing-Room Companion* of Boston on Saturday, August 4, 1855 (Figure 2). It depicted the density and general type of the buildings, as viewed from slightly downstream. Bennett's five-story, gable-front, brick mill is clearly visible facing the river on Front Street at Pine (extant). Immediately to its west (left) is the four-story Green & Stone pork packing operation (extant). The remainder of the core of downtown stretches to northeast (right). Small gable-front buildings are depicted in this area, as well as larger three-story buildings with flat roofs. While a number of buildings are depicted, there continues to be a general feeling of empty lots in the area. Houses are scattered around and to the southwest of the downtown area on a large hill. A few churches are also seen through the town (*Ballou's* 1855: 73).

Muscatine continued to prosper with the arrival of a spur of the Mississippi and Missouri Railroad that connected Muscatine to Davenport in 1855. The first passenger train arrived in Muscatine on November 20. Goods could be shipped along this line to Davenport, ferried across the river to Rock Island, and then shipped to Chicago via the Chicago, Rock Island, and Pacific Railroad. (Richman 1911, Vol. 1: 410-411, 451-452; Carlson 1984: 14).

With the arrival of the railroad in 1855, the town boomed. Richman notes "This year was signalized by a greater increase of business and the erection of more houses than during any previous year. More than forty business houses, mostly brick, were built and opened during the year, and about 200 dwellings, nearly all of substantial character." Produce shipped from the town included 125,000 barrels of flour and 375,000 bushels of wheat. During the 1854-55 season, the pork packing industry processed 17,000 hogs. Finally, 8,750,000 feet of lumber, 7,500,000 shingles, and additional logs and timber were bought in Muscatine (Richman 1911: Vol. 1, 452; Mahin 1856: 47-48).

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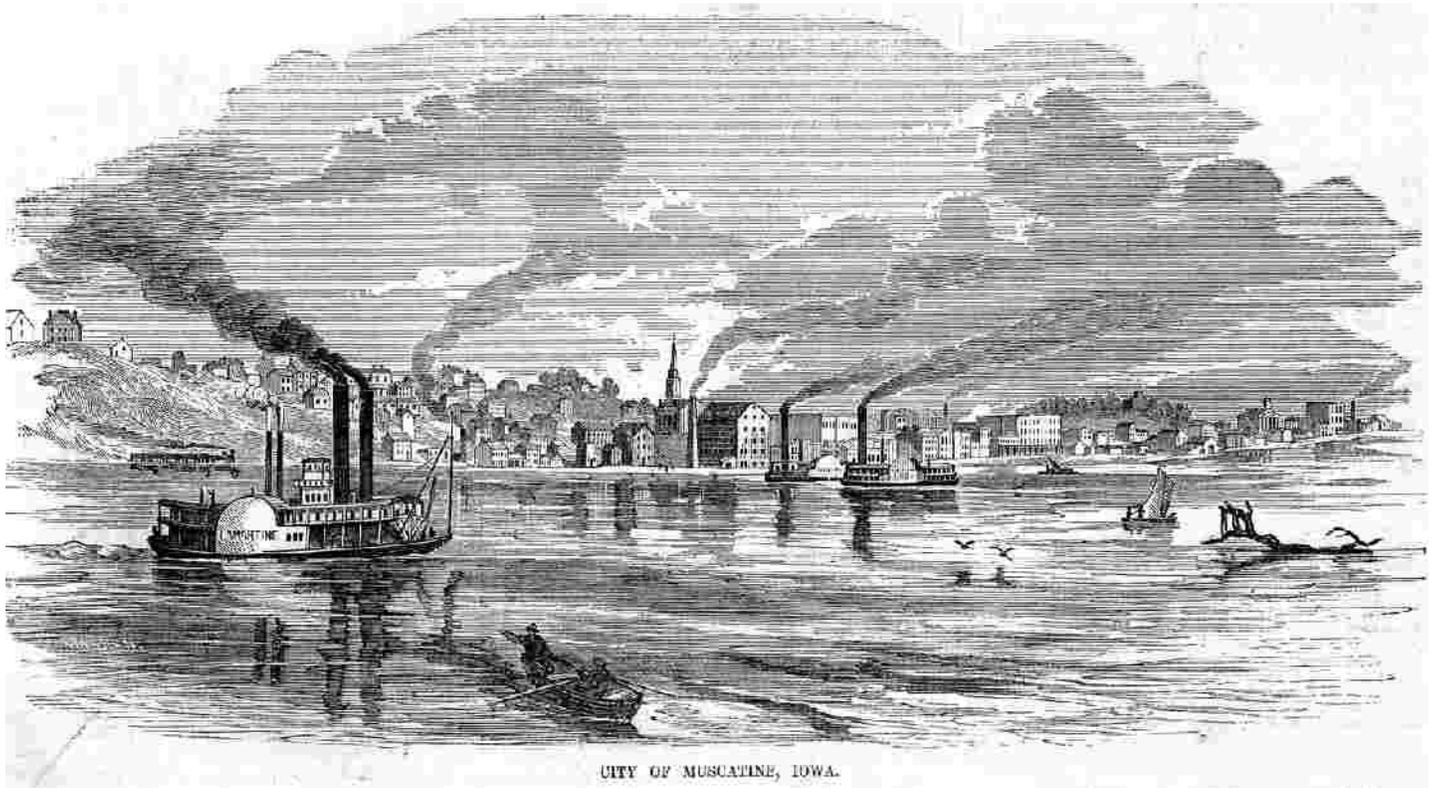


Figure 2. View of Muscatine in 1855 (*Ballou's 1855: 73*).

By the late 1850s, several businesses had developed on the “island” of South Muscatine. The railroad built a brick engine house on the upper end of the island. The first Hershey sawmill was also built at this end of the island, later taking over the property of the railroad. Binz & Stengle ran a brewery for a number of years. An agricultural warehouse and factory operated until the panic of 1857. Green & Stone’s slaughterhouse was also located near this area. Other early businesses on the island included Leindecker & Zeigler’s foundry (later Kleinfelder’s), Coe & Wells’ cooper shop, and Greeley & Rockafellow’s wind mill factory. A number of dwellings were built on the island in the 1850s and 1860s. However, the majority of this island was devoted to agricultural production, particularly fruits and vegetables (Walton 1899: 160-162).

New Construction and Development in the 1850s

Continued growth and prosperity, particularly with the arrival of the railroad, often led to increased density in commercial areas as well as rebuilding. The first settlement period buildings were replaced by more substantial buildings, predominantly brick. Additional undeveloped lots were built on, as the demand for new businesses increased. New settlers in the area continued to bring the latest architectural fashions with them, and older residents kept up with the latest styles through architectural patternbooks and agricultural journals. With the railroad connection, new building components could be shipped from production facilities (Nash 2002: E29). The earliest extant brick commercial buildings in downtown Muscatine date to this boom period in the 1850s. Additionally, several new houses were constructed on the nearby hills to the west and east of the downtown area. The more substantial of these houses also used brick for their construction.

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The growth of the town is reflected in the state census of Iowa in 1856. In 1850, the population of Muscatine stood at 2,540, with 453 dwellings in the town. By 1856, the population had grown significantly to 6,173. Additionally, 1,040 dwellings existed in town. A large number of people were listed in the building trades, with apparently ample work in town. The census recorded 109 carpenters, 31 stonemasons, 14 brickmakers, and 5 bricklayers. Fourteen carpenters were listed in the 1859 city directory, representing the major construction businesses in the city and likely employing several of the additional carpenters listed in the 1856 census. These carpenters include Brown & Mahlon, S.B. Hill, J.J. Hoopes, E.M. Kissinger, Magoon & Martin, Mayes & Coffman, Ed Olmsted, Purcell & Brothers, W.G. Ritchie, Swan & Madden, G.P. Van Kleeck, J.P. & J.W. Walton, David Washburn, and Christian Weaver. Early brickyards were operated by two men. Cyrus Hawley, after farming for several years outside of Muscatine, moved into the city in 1850 and opened a brickyard. He manufactured his brick locally, likely providing a significant amount of the building material used during this period. Another brickyard, operated by Samuel C. Adams, also apparently operated in this period, listed in the 1859 city directory. Foundries listed in the 1856 and 1859 city directories may have locally produced cast iron ornament for buildings as well (City Directory 1859: 86; Richman 1911, Vol. 1: 451; Horton 1978: 348-349; *Portrait and Biographical Album* 1879: 571).

While no “architects” are listed as such in the 1856 census of Muscatine, many builders both designed and constructed buildings in this period. Early bricklayers Matthew and Hiram Matthews likely designed the first brick house that they built in 1839 as well as the first Episcopal Church. When a new structure was built in 1851, New York architect Frank Willis designed the structure, but the subsequent wings added to enlarge the structure in 1855 were designed and built by local craftsmen Josiah P. Walton and J.P. Wand, blending into the earlier structure. Walton is listed as a local architect in the 1856 directory, as well as the 1859 directory. George Daniels was also listed in the 1859 city directory as an architect, though none of his designs are known (Horton 1978: 350-351).

Josiah P. Walton, who grew up nearby, moved to Muscatine in the 1840s to learn carpentry. He worked as an apprentice for J.J. Hoopes for two years. Around 1850, he began his own business as an architect and builder. His advertisement in the 1856 city directory states that “The undersigned is prepared to furnish DESIGNS AND DRAWINGS, provide material, superintend or erect Stores, Dwellings, Suburban or County Residences, in the most approved styles and on the lowest terms; also to lay out and plant ornamental gardens.” Over the next decades, he designed and built the Episcopal Church addition, Dr. James Weed House, Dr. Horton House, Muscatine High School, Wilton Junction High School, B. Hershey House, Lindley Hoopes House, and several other buildings in Muscatine. In his 1899 reminiscences of the early days and businesses of Muscatine, he notes several other buildings that he built in Muscatine, including several buildings for the lumber industry (*History of Muscatine County* 1879: 621; Walton 1899; Horton 1978: 351-352).

As Muscatine developed, additions were platted outside the original town plat. The first addition was platted in 1853, followed by three additions in 1856, and five additions over the next three years. The additions generally followed the layout of the original town and ranged in size from a few blocks to over 40 blocks. The largest addition in this period was Abraham Smalley’s addition to South Muscatine in 1856, consisting of 45 full and fractional blocks. These lots tended to be smaller, about 70 by 40 feet, than the typical lot in Muscatine proper. Though South Muscatine technically developed independently, it was annexed by Muscatine before much building had occurred (Horton 1978: 306-307, 420; *Portrait and Biographical Album* 1889: 370).

Impact of the Panic of 1857 and Civil War

The banking interests of Muscatine sustained a blow with the Panic of 1857. The Panic of 1857 was spurred by the failure of the New York branch of the Ohio Life Insurance and Trust Company, followed by the retreat of British investors in

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American banks, collapse of additional banks, fall of grain prices, oversupply of manufactured goods, railroad failures, and collapse of many land speculators. The first bank in Muscatine, Green & Stone, closed in 1857. The second banking firm, the Merchants Exchange Bank, survived the panic and continued to operate. The Muscatine branch of the State Bank began after the Panic of 1857 on the southeast corner of 2nd and Iowa with A.O. Patterson as president. This bank evolved into Hershey State Bank (Richman 1911, Vol. 1: 400-402).

The Panic of 1857 did affect business throughout the city, closing some establishments while merely cutting into profits of others. Notably, construction is described as grinding to a halt, not significantly picking up until after the Civil War, which is largely credited for pulling the North out of the economic depression. Overall the city weathered the panic and pushed forward with new conveniences and improvements. The Muscatine Gas Light and Coke Company was organized in 1857. On August 18, 1857, the city was first illuminated by gas (*History of Muscatine County* 1879: 550-551; County Directory 1879: 19; Horton 1978: 323, 362).

According to the 1859 "business mirror" in the city directory, Muscatine had a number of manufacturers, retail stores, service industries, and professionals on the eve of the Civil War. In these listings, there are 12 dry goods stores, 38 retail grocers, 3 wholesale grocers, 1 produce dealer, 7 meat markets, 4 bakers, 5 confectionaries, 4 barbers, 5 drug stores, 4 clothing stores, 4 fancy goods and millinery stores, 9 boot and shoe stores, 3 hat and cap stores, 8 tailors, 2 dress makers, 2 sewing machine dealers, 1 stove dealer, 4 jewelry stores, 2 leather and hide dealers, 2 book stores, 1 piano dealer, 1 gun and pistol dealer, 4 hardware stores, 1 harness store, 4 breweries, 1 distillery, 3 liquor stores, 2 billiard saloons, 28 saloons, 1 bowling saloon, 1 restaurant, 1 ice dealer, 1 flour and feed store, 3 saddlery stores, 2 agricultural implement dealers, 12 blacksmiths, 7 coopers, 1 locksmith, and 2 undertakers (City Directory 1859: 85-91).

The more industrial and construction oriented listings in 1859 include 7 wagon manufacturers, 2 carriage manufacturers, 2 plow manufacturers, 3 flour mills, 3 pork packers, 1 coal and lime dealer, 1 coal yard, 3 stove manufacturers, 1 iron foundry, 1 machine shop, 3 soap and candle manufacturers, 1 vinegar manufacturer, 5 lumber dealers, 2 saw mills, 2 planing mills, 3 sash and door manufacturers, 1 wood yard, 14 carpentry firms, 4 cabinet companies, 2 brickyards, 2 carpet dealers, 1 supplier of iron and nails, 1 marble works, 3 painters, 2 wallpaper dealers, 2 paper hangers, 1 tin, copper and sheet iron dealer, and 2 nurseries (City Directory 1859: 85-91).

A number of professionals are also listed: 2 architects, 14 lawyers, 11 doctors, 1 civil engineer & surveyor, 2 dentists, 2 justices of the peace, 2 land agents, 2 real estate agents, 1 music professor, 12 public notaries, 2 photographers, and 2 auctioneers. Other listings in the 1859 business mirror include 3 banks, 6 insurance companies, 3 livery and sale stables, 4 boarding houses, 4 hotels, 1 gas company, 3 newspapers, 4 printing companies, 1 express company, 1 telegraph company, 2 steam boat agents, and 1 house mover (City Directory 1859: 85-91).

With the large German population immigrating to Muscatine, several specifically German organizations were also formed in the 1850s and 1860s. The Muscatine Turnverein started in 1856, and reorganized several times. Two aid societies were also organized: German-American Roman Catholic Beneficial Society in 1859 (renamed St. Joseph's Mutual Aid Society) and the German Mechanics' Aid Society in 1865 (*History of Muscatine County* 1879: 548-549; Richman 1911, Vol. 1: 432-433).

During the Civil War, Muscatine continued to prosper. It did not develop significantly, nor were many buildings constructed in this period, as was typical of many communities in this period. A number of local residents enlisted in the Union Army troops. Muscatine County was represented in nine military organizations. Two of the regiments were organized at Muscatine and rendezvoused at Camp Strong, on Muscatine Island. The first was the 35th Iowa Volunteer Infantry. Eight of the ten

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companies were Muscatine residents. The regiment was attached to Sherman's army, fighting at Vicksburg and throughout Kentucky, Tennessee, and Alabama. The second was the 37th Iowa Infantry, better known as the "Greybeards," older men who did not meet the war department's criteria from across the state of Iowa. They were organized under special authorization of Edwin M. Stanton, secretary of war, in August 1862. Officers included: George W. Kincaid, colonel; George R. West, lieutenant colonel; and Lyman Allen, major. They served primarily as prison guards throughout Union territory, including St. Louis; Rock Island and Alton, Illinois; Memphis; and Indianapolis (Richman 1911: 129-130).

Summary

Throughout the period from 1833 to 1860, the economy of Muscatine focused on the production, processing and distribution of agricultural products as well as providing goods and services for the local population. Development occurred slowly in the 1830s, picking up in the 1840s with increased steamboat landings. With increased business in the early 1850s and the arrival of the railroad in 1855, Muscatine boomed. Many additional residential, commercial, and industrial buildings were erected in this period. Their initial period of prosperity was cut short by the Panic of 1857, but Muscatine continued to push forward in the late 1850s, sustaining the businesses that were developed. At the eve of the Civil War, Muscatine sat as a prominent river town in Iowa, and it entered the post-bellum period ready to capitalize on its early significance.

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19th Century Business and Industry (c.1865-c.1900)

Following the Civil War, Muscatine continued to prosper as a regional commercial center and through its local businesses and industries. Railroad and steamboat trade formed the basis of the local economy, supporting and supported by the local businesses and industries. With the prosperity at the end of the war, numerous commercial buildings and blocks were erected in the late 1860s. Population continued to grow from 5,324 in 1860 to 6,718 in 1870. Muscatine ranked 7th in population, behind Davenport, Dubuque, Burlington, Keokuk, Des Moines and Council Bluffs.

Muscatine's early prominence as a Mississippi River commercial center had began to fade as railroads replaced the steamboats. The railroad connection sustained some of the prominence, but other communities boomed with the arrival of the railroad. However, the lumber industry grew significantly in the 1870s, contributing considerably to the local economy of Muscatine as well as other Mississippi River communities. Agricultural processing also remained a strong factor in Muscatine, and population rose to 8,295 in 1880. While the population continued to rise, other cities grew at a faster rate with additional rail connections and industry. In 1880, Muscatine ranked 10th, behind Des Moines, Dubuque, Davenport, Burlington, Council Bluffs, Keokuk, Cedar Rapids, Clinton, and Ottumwa.

Fueled by the lumber industry, Muscatine grew significantly in the 1880s and 1890s, and many new buildings were constructed to support the resulting business and industry. Additional development was planned throughout the community, and neighborhood commercial districts were constructed to provide nearby services for expanding residential areas. In the 1890s, the pearl button industry developed, which would soon become the backbone of Muscatine's economy. With the increased industry, the population grew rapidly, increasing to 11,454 in 1890 and 14,073 in 1900 with Muscatine ranking as the 11th largest city in the state.

The 19th century business and industry in Muscatine is significant as it reflects the development of Muscatine in the 1870s, 1880s, and 1890s. While other Mississippi River towns faded, Muscatine sustained its growth and prosperity, due to the lumber industry and the strong commercial and industrial development in this period. The commercial and industrial historic resources from c.1865 to c.1900 reflect this growth. Many of these commercial and industrial resources are concentrated in the downtown area, but others are located in the more industrial South Muscatine and in neighborhoods.

Development and Growth after the Civil War

One of the early improvements in Muscatine following the Civil War was the rebuilding of the courthouse. After a fire in December 1864, J.C. Farrand rebuilt the courthouse in 1865. The square was described as a "spacious park with numerous trees." As an early civic activity, a monument was erected in the courthouse square for the soldiers who had died in the Civil War. The Soldiers' Monument Association was formed in September 1867. Around \$700 was raised by 1874, and local craftsman W.B. Sprague designed the 11-foot monument. The names of those who died were inscribed on the sides (Richman 1911, Vol. 1: 100, 189-191; *History of Muscatine County* 1879: 515).

With the end of the war, business boomed in Muscatine. In 1865, several new business blocks and dwellings were built around the town. Later accounts estimate that between 200 and 300 buildings were built in 1866, including L.W. Old's opera house block. By 1868, Muscatine had 16 dry goods stores, 37 retail grocery stores, 3 wholesale grocery stores, 7 drug stores, 5 boot and shoe stores, 7 cobbler stores, 5 jewelry establishments, 2 music stores, 6 hardware stores, 5 clothing stores, 8 tailors, 7 milliners, 5 stove and tinware stores, 4 furniture stores, 2 bookstores, 3 crockery stores, 3 cigar shops, 5 saddlery and harness manufacturers, 1 hat and cap store, 2 daguerrean galleries, 46 saloons, 7 barbers, 7 meat markets, 1 marble yard, 3 flour mills, 1 planing mill, 3 sawmills, 11 lumberyards, 10 hotels and boarding houses, 13 doctors, and 16 lawyers (Richman 1911, Vol. 1: 458).

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With the growth and prosperity following the Civil War, downtown Muscatine continued to develop, replacing settlement period wood buildings and increasing the overall density. Additional undeveloped lots were built on, as the demand for new businesses increased. New settlers in the area continued to bring the latest architectural fashions with them, and older residents kept up with the latest styles through architectural patternbooks and agricultural journals. The majority of buildings in this period were brick, with features characteristic of the Italianate style. Details were often reflected in intricate brick work in Muscatine. Additional materials were also sometimes incorporated, such as stone, tin, and cast iron. Sandstone was quarried locally, and limestone was imported from Bedford, Indiana (Nash 2002: E19, E29-31; EPRI 1977: 4).

Cast iron elements and stamped sheet metal architectural details became available in the 1860s and 1870s. With the railroad connection, new building components could be shipped from distant production facilities, ordered from catalogs. Entire cast iron storefronts arrived, while local foundries might provide supplemental details. Cast iron was used for storefronts as well as other decorative features, such as cornices, window lintels and hoods, and columns or pilasters. Cast iron replaced the storefront brick columns, providing increased sizes of storefront windows to display merchandise. Lightweight sheet metal was often stamped into patterns for interior ceilings and exterior elements like cornices and window hoods. Styles became more ornate through the 1880s and 1890s. Two of the largest Midwest suppliers were George L. Mesker & Company of Evansville, Indiana, and the Mesker Brothers of St. Louis, Missouri. Often name plates appear on the storefront columns from these companies (Nash 2002: E19-21, E29-31).

With the new construction came an additional demand for carpenters and bricklayers. Little information is known about many of these craftsmen, though they likely shared similar backgrounds. For example, in 1857, Peter Maher, native of Ireland, moved to Muscatine from Trenton, New Jersey. In New Jersey, he had learned the trade of carpenter and builder. He began a contracting and building business in Muscatine, building some of the finest buildings in Muscatine over the next two decades. As the lumber mills supplied the wood building materials, brickyards also grew to supply the demand for this “fireproof” material. Two major early brickyards include those of G.J. Nyenhuis and Henry Fuller. G.J. Nyenhuis, native of Holland, moved to Muscatine from Baltimore in 1853. He worked in town for several years before establishing his own brickyard on Lucas Grove around 1864. In 1854, Henry Fuller, native of Germany, moved to Muscatine from St. Louis and began to manufacture brick. By 1879, his brickyard produced between 2,000,000 and 3,000,000 bricks annually (*History of Muscatine County* 1879: 603, 611, 614).

Muddy streets were a typical problem in early communities. In the 1850s, the newspaper commented that “We have heard of muddy towns before this, but if any person has seen one which can beat certain portions of Muscatine at this present writing, he can take our hat, that is all. Second Street has very recently been filled up, the mud ranges from three to six inches in depth – if a rain at this season of the year renders it so nearly impassible, it will be entirely so in the Spring when the frost comes out of the ground.” This issue was finally addressed in 1867 as the first macadamized surfaces appeared in Muscatine. The typical macadam surface consisted of gravel pressed with a heavy roller. With the paving, the typical sidewalk width was reduced from ten feet to four feet or completely eliminated (Horton 1978: 327).

Roads throughout town were also improved through grading and fill in the 1850s and 1860s. The hilly terrain gradually became more level, leaving earlier buildings significantly higher or lower than the adjacent street and creating a new business, moving houses. Josiah P. Walton, who began his practice as an architect and builder around 1850, continued his business through the 1890s, building several notable buildings including the Dr. James Weed House, Dr. Horton House, Muscatine High School, Wilton Junction High School, B. Hershey House, Lindley Hoopes House, and several buildings for the lumber industry. Additionally, he moved houses, including raising or lowering them, becoming a local expert by 1891: “He is one of

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the most successful house movers. He has had forty years experience in the business, and several of our largest brick buildings have been raised or moved by him” (Horton 1978: 353).

Growing Businesses and Industries in the 1860s and 1870s

Agricultural processing and shipping continued to play a significant role in the Muscatine economy in the 1860s and 1870s. Overall, pork packing declined and rebounded, with 12,000 hogs packed in 1868. In 1866, 659,334 bushels of grain were bought and shipped. In 1868, Charles Stone shipped 4,000 Osage oranges to Ireland. Flour mills shipped 1,030,970 bushels of grain in 1869. Hagens & Company alone slaughtered 12,000 hogs in 1871 (Richman 1911, Vol. 1: 458-462).

The “island” of South Muscatine continued to develop as an industrial center in this period as well. Though the majority of the lower island was devoted to agricultural production, the northeastern upper portion within the city limits was attractive for business and industry. With the pork packing, foundry, cooper shop, and Hershey’s lumber mill, residential development followed on the island in the 1860s on the high ground. On April 25, 1870, flood waters rose to a record height, breaking through the levee. Most of the lower section of the island was flooded completely. Flood waters subsided, and agricultural and industrial production resumed. In 1871, Musser & Company built a new sawmill on the island, further south from the Hershey mill. This section of the island developed as new workers built houses near the mill, creating an area that soon became known as Musserville. Around 1875, the Musserville school and Methodist church were built to serve these residents. Brent Brothers also built a window shade and washboard factory on the upper part of the island, and in 1875 the Union Lumber Company built a large facility. Though lumber interests were beginning to dominate industry on the city portion of the island, other business like Barlett & Hoopes’ pork packing and ice house also developed (Walton 1899: 162-163).

With the demand for building materials in Chicago after the 1871 fire, the local lumber industry flourished, resulting in Muscatine feeling little impact of the 1873 national depression. By 1876, the lumber industry was recognized as a leading factor in the local economy. With the lumber boom, commercial interests throughout town flourished. The lumber companies also had an impact on other business interests in Muscatine. For example, Silverman, Cook, & Company established their bank in 1870, which became the banking firm of Cook, Musser & Company in 1876 with Peter M. Musser, S.B. Cook, and H. Funck. In December 1896, it reorganized as Cook, Musser, & Company State Bank and Trust Company, which organized as the Muscatine State Bank in the early 1900s (*History of Muscatine County* 1879: 613; Lewis 1901: 91-92; Richman 1911, Vol. 2: 159).

Prosperity and Growth

By 1875, the population of Muscatine had grown to 7,537 from 5,324 in 1860. The number of males and females were nearly evenly divided, with a total of 1,495 families. A total of 130 African-Americans lived in Muscatine, comprising less than 2% of the overall population. Other southeastern Iowa communities, including Keokuk, Mt. Pleasant, Burlington, and Wapello, had significant African-American populations in comparison, as did larger cities such as Des Moines and Davenport. Building improvements in 1875 were valued at \$169,000. In 1877, building improvements were valued at \$104,000, with 5,400,000 bricks made by the four brickyards (Richman 1911, Vol. 1: 465).

The 1875 *Illustrated Atlas of the State of Iowa* by A.T. Andreas includes a bird’s-eye view of Muscatine, showing significant development in comparison with *Ballou’s* 1855 bird’s-eye view with the near doubling of the population (Figure 3). Not nearly all the area platted is developed, including a significant portion of the original town plat. Commercial development is concentrated along 2nd Street, parallel to the river. The majority of the buildings depicted along this street are two or three

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story buildings. The courthouse and courthouse square are visible on 3rd between Walnut and Mulberry. Large industrial buildings are found on Front Street from Pine to Iowa. The five-story Bennett Mill is clearly depicted at Front and Pine. Residential development is concentrated further west and north of the downtown area, extending up to about 5th Street. The Andreas atlas also included a plan of Muscatine, which showed the original town parallel to the river, rotated about 45 degrees off the typical Midwestern grid. A small portion of Muscatine Slough has been filled in on this map, providing more dependable access to Muscatine Island. South Muscatine has begun to develop at the head of the island, with an additional area further to the south that was noted as A. Smalley's Addition. This area would become known as Musserville. These additions are aligned on differing grids. Two additions, Ogilvie's Addition and "North Muscatine," have also been laid out on the north/northeast side of town, in line with the original plat (Andreas 1875).

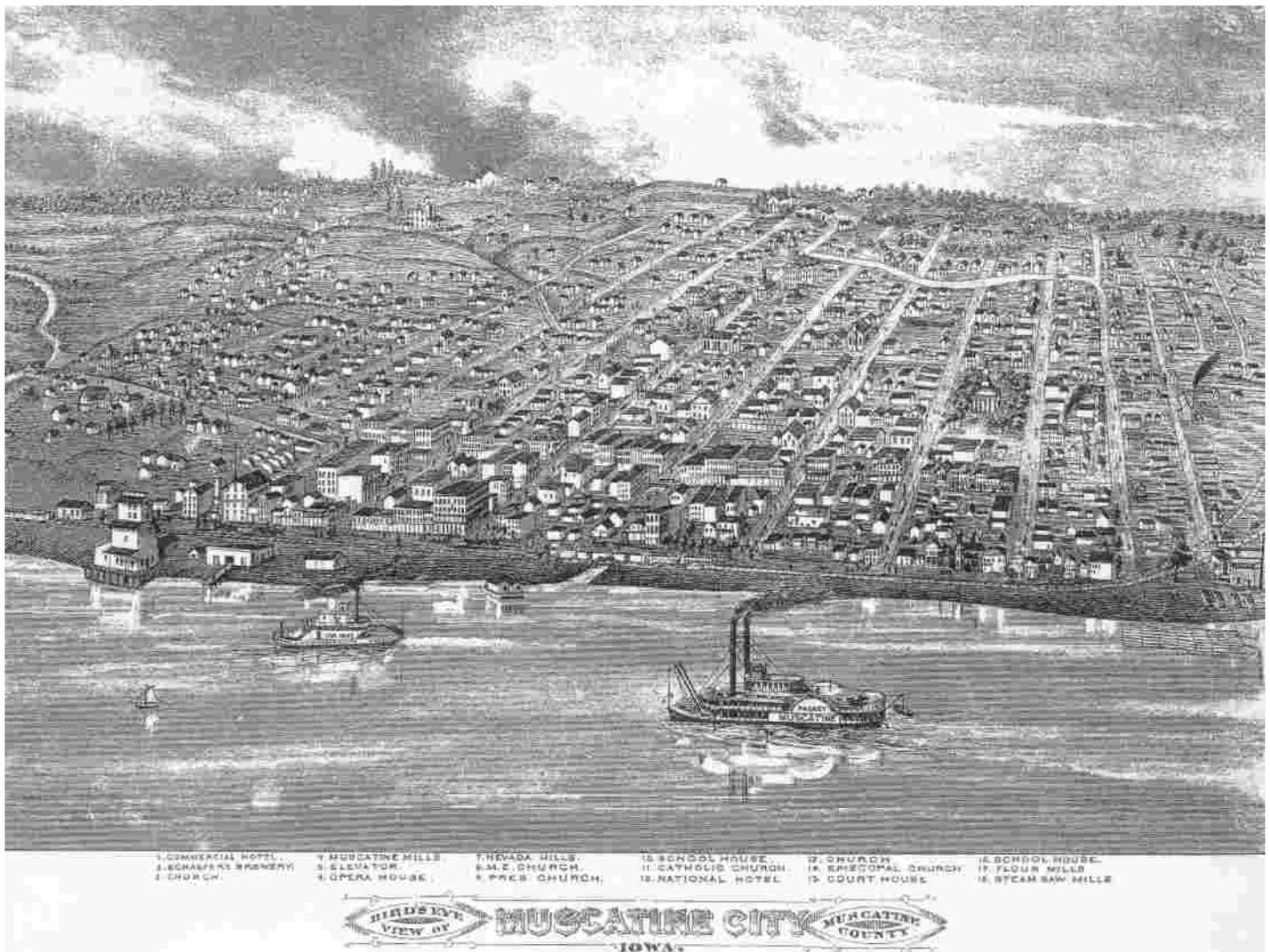


Figure 3. Birdseye View of Muscatine (Andreas 1875).

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By 1879, Muscatine had a police department and fire department. The fire department was formed in 1875, and it was considered fully organized by 1877 with several hose companies. The Muscatine Water Works Company was formed on November 9, 1875 to create a water system for protection from fire and for domestic use. The reservoir and pumping works were completed by April 1876, with several branches to the main line laid over the next few years. A reservoir was built on the "public square" at Fourth and Broadway to hold about 2 million gallons. The waterworks on West Hill were successfully tested on July 12, 1878. By 1883, five miles of pipe had been installed as well as 54 hydrants. By the turn of the century, eleven miles of mains were laid, providing water to 125 hydrants (*History of Muscatine County* 1879: 515-521; City Directory 1883-1886: 20; Richman 1911, Vol. 1: 290-291, 466; *Muscatine Journal*, December 20, 1906, 9).

The Muscatine Gas Light and Coke Company continued to prosper through this period. R.T. Coverdale sold the gas works to T. Cowell for \$55,000 on December 23, 1879. By 1883, the gas works occupied three lots on Oak Street. Over eight miles of mains and over 200 street lamps were found in Muscatine. The management and production of the company was known to be excellent (Richman 1911, Vol. 1: 466; City Directory 1883-1886: 21).

Several new lodges and benevolent organizations were established in the 1870s and 1880s. A third aid society, Muscatine Catholic Mutual Aid Society, started in 1871. The Electa Chapter of the Eastern Star, No. 32, began on January 10, 1875. Two lodges of the Ancient Order of United Workmen formed in Muscatine as well, the Eagle Lodge, No. 10, on June 9, 1875, and the Muscatine Lodge, No. 99, on February 16, 1877. On May 18, 1882, the Wyoming Lodge, No. 76, of the Knights of Pythias began. The Elks did not organize in Muscatine until 1895 (Richman 1911, Vol. 1: 427-430; *History of Muscatine County* 1879: 545-549). These organizations continued to operate out of buildings in the downtown area.

Other businesses and industries also grew and prospered, including those that catered to the German population. Two main German newspapers operated throughout this period. *Deutsche Zeitung* (*German Newspaper*) was established by J.W. Weippiert in 1874, and the paper was sold to Rev. Gass and Herman Stoltzenan in 1881, who renamed it *Die Wacht am Mississippi* (*Awake on the Mississippi*). *Der Correspondent* (*The Correspondent*) began in 1889 under the direction of Henry Heinz. In 1896, Gustav Weis bought *Die Wacht am Mississippi*, renaming it *Deutscher Anzeiger* (*German Indicator*). These two German newspapers were consolidated in 1907 as the *Muscatine Herald*, managed by Weis and Heinz (Richman 1911, Vol. 1: 271-272; Carlson 1984: 38).

In 1879, Simon G. Stein, Sr., president of First National Bank and engaged in the furniture business of S.G. & P. Stein, and a group of businessmen established the Muscatine Oat Meal Mills in the former Bennett Mill building. Stein developed special cutting machines for preparation of the oats, obtaining patent rights for the machines. At this time, this mill was said to be only one of two in the nation to use the process. The mill was known for its cleanliness. The mill became one of the largest of its type in the nation (Richman 1911, Vol. 2: 128; Carlson 1984: 68).

Second Street, the main business street, was described in 1879 as outshining a much larger city. *The History of Muscatine County* notes "There are few finer blocks of buildings to be found in Iowa than those which give solidity and beauty to Second Street." Business was also found "scattered over a large area" rather than merely confined to this street (*History of Muscatine County* 1879: 555).

The 1879 *Gazetteer and Directory of Muscatine County* highlighted the prominent businesses of Muscatine in their narrative front section. The directory notes that the largest industry is the lumber trade, surpassed in the state only by the lumber industry of Clinton. Profiles of the Musser & Company and the Hershey Lumber Company are included. The dry goods businesses of the Fowler Brothers (Opera House Block) and C.C. Weeks & Company (Olds Block) are discussed in detail, as well as the china and queensware business of George Dillaway, the furniture business of C.T.M. Campbell, and the foundry and machine shop of J.G. Gunzenhauser. Other prominent businesses highlighted with a brief description include the dry goods and carpet store of McColem &

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Son, real estate and loan business of Thompson & Tallant, photographer J.P. Phelps, blacksmith and wagon makers Elicker & Adams, carriage manufacturer A.S. Knowles, restaurant and confectionary of E.M. Van Patten, livery stable of T.J. Thompson, and the Nevada Mills flour business (County Directory 1879: 22-24).

For the residents of Muscatine, the most significant commercial enterprises were those that provided basic everyday goods, such as groceries. By the early 1880s, at least eleven grocers serviced Muscatine, with eight located along 2nd Street. Two others were located nearby on Front and Mulberry streets, with the grocery of Frank Eitman near South Muscatine at 1065-1067 Burlington (now Hershey) Road. Grocers often continued for several years, with the business continuing in the same location with a new owner after the first retired. Frederick Giesenhaus opened his grocery store in 1867 in a three-story block that he built for the store, continuing the business through the 1890s. Byrne and Murphy operated a grocery at 128 W. 2nd Street for two decades in the 1870s and 1880s.

In 1872, Henry Bodman bought out the Huttig & Brothers grocery as they focused solely on the lumber industry. In 1889, he moved his grocery into the Byrne and Murphy store. Additional wholesale grocers operated in Muscatine in this period, such as Charles Mull. He began in the retail business in 1856, switching to wholesale in 1864. Along with his sons, the business continued into the 1890s as the oldest wholesale grocery in Muscatine under one ownership (*History of Muscatine County, Iowa* 1879: 596, 613; *Portrait and Biographical Album of Muscatine County, Iowa* 1889: 283, 289, 308).

With the growing town came the demand for additional services. Telephone service began in Muscatine on June 7, 1881. The need for a street railway system surfaced by the early 1880s. In 1883, a company was formed to construct the railway, with the officers of Peter Musser, George Dillaway, T.R. Fitzgerald, and Orange Chapman. Over two miles of tracks were laid by September 11, 1883, and the system began operations. The cars were pulled by horse and mule power (Richman 1911, Vol. 1: 412, 467).

The actual commercial and industrial development of Muscatine in this period is visible on the 1883 Sanborn Fire Insurance Map. These maps focused on the most concentrated areas of development, thus the greatest fire risk. The 1883 map shows that the development has yet to completely occupy every block in the original town plat (Figure 4a). The most concentrated areas rated individual pages showing the buildings on each block, while additional residential blocks have a notation as to the number of houses.

The commercial area is concentrated primarily along 2nd Street from Pine to Mulberry, as seen in the shaded commercial and industrial sections of town. Additional commercial buildings are found on the adjacent blocks. Commercial and industrial interests are mixed along Front Street from Linn to Cedar. Additional industry is found on the (north)east end of town. Scattered commercial interests are also located along Mulberry. Mad Creek and Papoose Creek as well as the railroad are depicted on this map. Development in South Muscatine focused around the two major lumber companies (Figure 4b). Some additional residential buildings were found on the island, as well as smaller manufacturing interests.

The 1883-1886 *Directory and Business Record of the City of Muscatine* highlights about 50 prominent businesses in Muscatine through a paragraph review of each business. Several typical downtown businesses appeared, including J.W. Berry (grocer), H.F. Bodman (grocer), J.H. Canon (druggist), S.&L. Cohn (clothiers), the Eastern House, Jacob Fisch (hardware), Fowler Brothers (dry goods), Henry Geiss (druggist), Frederick Giesenhaus (grocer), Geo. Innes & Company (dry goods), Lilly & Hine (dry goods), McQuesten & Sawyer (hardware), F. Reppert (druggist), J.A. Reuling (grocer), F. Stewart (boots and shoes), and Thurston & Dolson (boots and shoes). Specialty stores also were highlighted, including the businesses of Jerry Carl (confectionary and cigars), A.F. Demorest (books and stationery), George Dillaway (china and glassware), F. Gerdes (jeweler), Chas. Giesenhaus (jeweler), H.G.W. Gremmel (tobacco), A. Kemble's Vienna Bakery, J.T. Krehe (druggist and optician), G.E. Phelps (photographer), G. Schmidt & Bro (pianos, organs, blank books), and F. Stewert & Company (hatters and men's

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Figure 4a. 1883 Sanborn Fire Insurance Map of the main section of Muscatine, detailed maps overlaid on first page key with commercial and industrial areas roughly shaded.

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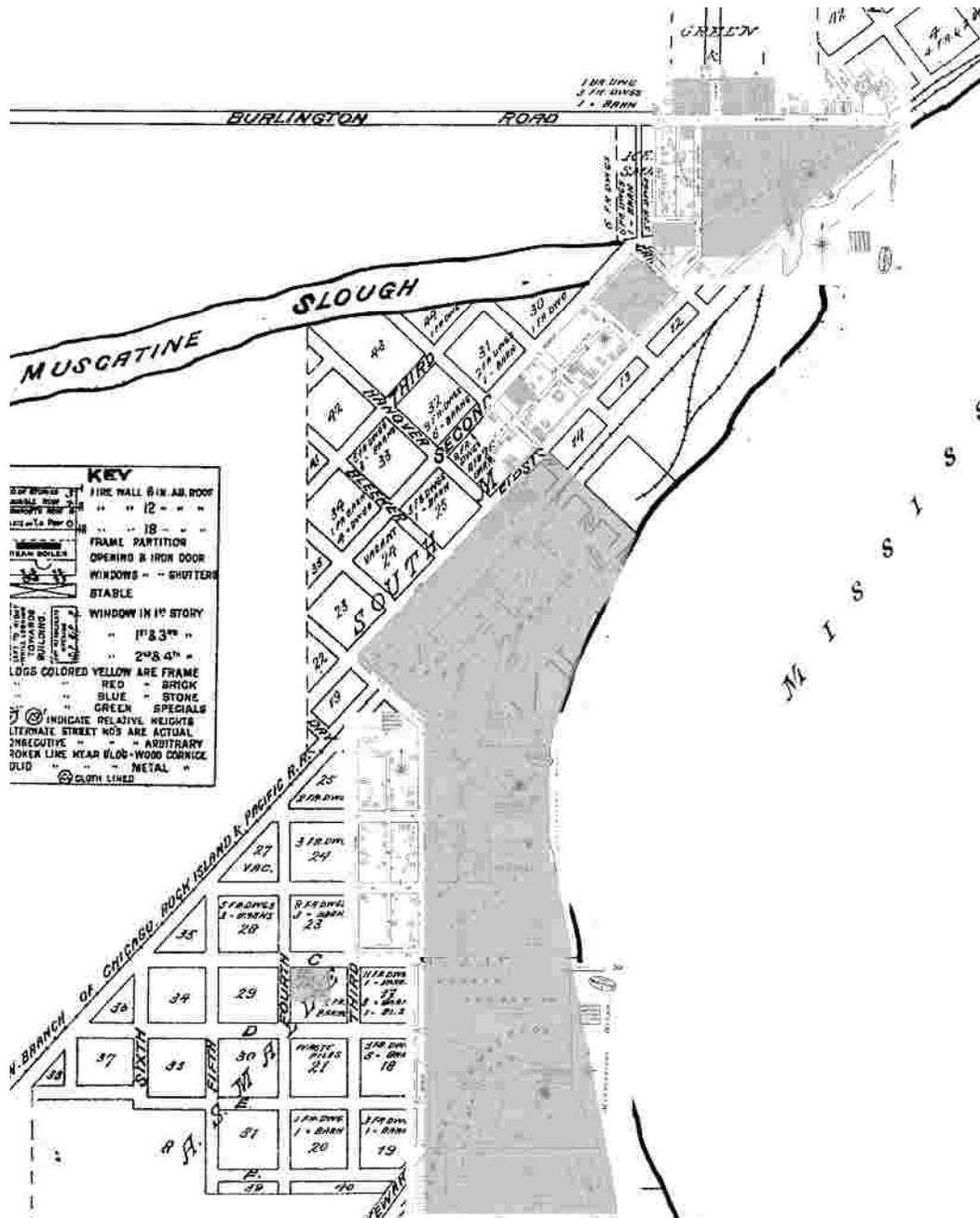


Figure 4b. 1883 Sanborn Fire Insurance Map of "south" Muscatine, detailed maps overlaid on first page key with commercial and industrial areas roughly shaded.

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clothing). A number of liquor stores and related establishments were also included: James Fitzgerald (liquor), Keating & Zedeker (liquor), Kleinfelder's Sample Rooms, the Muscatine Brewery, James Weir (liquor), and Robert Welch (liquor) (City Directory 1883-1886: 22-40).

In addition to the business establishments, manufacturing and industrial interests were also represented in the paragraph summaries in the 1883-1886 directory, including W.D. Ament (wagons), N. Barry & Son (foundry and plumbing), Huttig Brothers Manufacturing Company (lumber and sash), Joseph Kleinfelder (foundry and machine shop), Musser Lumber Company, Stockdale & Logan (blacksmith), R.T. Wallace (coal and lime), and W.W. Webster (marble and granite). Professional businesses and services appeared in the summaries as well, including Bowman's Hack and Express Line, Cook, Musser & Company (bank), Garrettson & Company (bank), Hardman & Son (dentists), John Hoehl (tailor), McCampbell & Day (funeral directors), Merchant's Exchange National Bank, and Wm. Woodward (insurance and loan). Finally, Phelps & Battey provided a roller skating facility that was noted to provide both fun and healthy activity for the residents of Muscatine (City Directory 1883-1886: 22-40).

Improvements in the 1880s and 1890s

As building continued through the 1880s and 1890s, the commercial styles developed with the current architectural fashions. Brick continued to be the dominant material for commercial buildings. Terra cotta elements were also common in this period, either a standard brick red or a glazed white or colored surface. These elements were imported from regional manufacturers, particularly in Chicago, as well as made locally. Stone was used primarily as a foundation or accent material for sills, lintels, coping, or trim. Additional manufactured building materials, including cast iron and stamped metal elements, were increasingly incorporated into buildings. The upper facades projected over sidewalks with oriel windows, conical towers, and exaggerated cornices, reflecting the decorative influences of the Queen Anne style. Details became increasingly decorative through this period (Nash 2002: E18, E29-31).

With the prosperity and increasing population in the last two decades of the 19th century, several improvements occurred throughout the city. In 1887, there were 196 businesses with 2,560 employees in Muscatine. Over \$200,000 in building improvements occurred in Muscatine that year. The city worked on transportation improvements to enhance movement throughout the city. In 1885, Front (Mississippi) Street was macadamized. The stone arch bridge over Papoose Creek on 3rd Street was built in 1887. After nearly twenty years of lobbying, the high bridge was finally constructed over the Mississippi River at Muscatine, completed on May 8, 1891. The street railway, previously operated by the Street Railway Company by mule and horse power, converted to electric streetcars on May 28, 1893. On September 19, 1894, the first brick for the street paving was laid on 2nd Street between Pine and Chestnut. In 1895 Papoose Creek was buried, opening up new lots along Sycamore Street in downtown Muscatine (Richman 1911, Vol. 1: 283, 305, 470, 473-474; *Muscatine Journal*, September 19, 1894, 3; Carlson 1984: 15).

New Businesses

Other types of industries were also established in Muscatine in the late 19th century. Nicholas Barry, former superintendent of the gas works, began N. Barry & Sons in the 1870s to provide plumbing supplies. Along with his sons, Patrick and Nicholas, Jr., they strove to improve upon modern plumbing and gas fixtures. The company installed piping in homes for gas and water. In 1889, they incorporated the company as Barry Manufacturing Company. The Barry lead trap, with its patented design, became the leading product of the firm by the 1890s. They expanded to the point of opening a branch on Fulton Street in Chicago to manufacture the trap. In 1894, Nicholas, Sr. retired, and the firm was continued by the three sons, Nicholas, Jr., Patrick, and Thomas (Richman 1911, Vol. 2: 50; Lewis 1901: 67-68; Petersen 1952: 33).

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On November 20, 1889, John S. Sterneman, Phil J. Mackey, and W.F. Bishop established the Sterneman Clothing Company. John S. Sterneman later purchased the other interests. The company purchased piece work from New York to produce its own clothing. It occupied the three-story building at 208 W. 2nd Street, with shipping and children's suits on the first story, men's suits on the 2nd story, and overcoats and heavy garments on the 3rd floor. In 1901, it was noted to be the only wholesale clothing house in the state (Lewis 1901: 84-85).

Though certainly not the first photography business in town, one of the most prominent developed in the 1880s and 1890s. Two brothers, Alexander and Oscar Grossheim, opened their photography business in Muscatine on May 16, 1886. In the late 1870s, Oscar was an apprentice in J.G. Evans' studio as he completed high school. The elder brother, Alexander, traveled to Berlin to study photography in 1883, returning to Berlin a year later to continue his studies. Upon his return, he and Oscar opened the Berlin Studio in Muscatine at 117-119 E. 2nd Street. Oscar's training was more local, working with his brother and other artists. In the 1890s, they parted ways, each continuing with his own studio. In 1897, Oscar Grossheim opened his new studio in the building at 317 E. 2nd Street. It was described as a thoroughly modern facility, preparing him better than ever to "do his usual high grade art work." By 1901, the Grossheim prints were locally recognized as superior to the work of other artists (*Portrait and Biographical Album of Muscatine County, Iowa* 1889: 506; Lewis 1901: 100; Bublitz et al 1996: 1, 35, 40).

Several pharmacies operated in town through this period. Graham's Drug Store began in the 1850s, continuing to operate in this period. Havercamp's Pharmacy, established in 1879, was known to be "one of the most modern pharmacies in Eastern Iowa" by the turn of the century. It carried a complete line of drugs, chemicals, perfumes, and toilet goods (Richman 1911: 10; Lewis 1901: 102-103).

The largest new business of the late 19th century was the manufacture of pearl buttons. A German immigrant and button cutter, J.F. Boepple, began making pearl buttons from mussel shells found in the Mississippi River around 1890. In the late 1890s, this industry boomed as an alternative to imported buttons with increased tariffs. Three button manufacturing companies operated in Muscatine in 1897, with Boepple's as the largest. By 1897, there were 13 button or blank manufacturing establishments in 4 cities on the Mississippi, which increased to 49 businesses by 1898. As the industry spread, Muscatine remained the center, with 28 blank cutting plants and 5 full button factories in town (Coker 1919: 65-66). This industry would define the economy of Muscatine in the early 1900s, and it is discussed at greater depth later in this nomination.

With the prominent lumber and pearl button industries, it is important not to forget the significant contributions that agriculture continued to make to the local economy. At the turn of the century, "food products" still stood as one of the three leading industries in Muscatine. Muscatine Island was divided into large fruit and vegetable farms. Sweet potatoes, watermelons, and muskmelons were leading products. The amount of produce shipped nationally significantly increased in the 1890s with the completion of the Muscatine North and South Railroad across the island. W.H. Hoopes was the leading producer on Muscatine Island in the late 19th century, with a grocery business in the town. His irrigation system was well-known. Charles B. Vail also had a large farm on the island in this period (Lewis 1901: 63-64).

New Development and Business Growth in the 1890s

In the early 1890s, several groups formed in Muscatine to promote commercial and industrial growth, development, and improvements throughout the community. The Commercial Club organized in 1892. William L. Roach is credited with the founding, and the first meetings were held at the Commercial House, later moving to the Hershey Building upon its completion in 1908. By 1901, it was described as being "behind all important public improvements and pushed them to successful termination," including paving 10 miles of streets with bricks, constructing a new sewer system, burying Papoose Creek in the downtown, replacing the old railway system with an electric street railway, building the new Grand Opera House, and the future development of Weed Park.

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Officers in 1901 were John H. Munroe, Charles Page, Ed C. Cook, and W.G. Block, with board members W.L. Roach, Fred Daut, J.W. Eelis, S.B. Cook, Charles Cadle, William H. Hoffman, and Phil J. Mackey (Lewis 1901: 26-27; Richman 1911: Vol. 1, 435).

The Commercial Club focused less on the attraction of new industry partially due to the efforts of the Muscatine Improvement and Manufacturing Company. They began in late 1887 as the Muscatine Real Estate Company, purchasing 313 acres on the northeast side of Muscatine. Forty lots were platted at the northeast corner of Washington and Park Avenue in 1890. Land was available on good terms for any business willing to locate along the railroad line that ran through their property. By the fall of 1892, they reorganized as the Muscatine Improvement and Manufacturing Company. They worked to plat the large tract of land that they had acquired, creating the largest addition to Muscatine in its history. Their goal was to develop the new Park Place addition, using the revenue from the development to "securing substantial manufacturing concerns." Officers in 1893 included William Huttig, president; Peter M. Musser, vice president; J.L. Hoopes, secretary; G.A. Funck, treasurer; and S.A. Collins, manager. The executive committee included additional prominent businessmen: W.H. Johnson, W.H. Hoopes, William L. Roach, J.M. Gobble, and Gus Schmidt. The Muscatine Improvement and Manufacturing Company worked to uphold their role in the development. Plans were laid to sell lots for \$160 through an allotment process to potential lot owners. On January 29, 1893, they closed the contract with H.J. Heinz to build their first plant outside of Pittsburgh in the new Park Place addition. The plat for the entire 83-block Park Place Addition, including the small corner platted in 1890, was officially filed on February 21, 1893. The dedication of the Park Place project was set for April 5, the day that ground would be broken for the new Williams Rolling Mill, attracted to Muscatine over nearby Davenport and Moline (*Semi-Centennial Souvenir Edition of the Muscatine Journal* 1891; "The Papers Signed," *Muscatine Journal*, September 7, 1892, 4; "The Electric Street Railroad will be Built to Park Place," *Muscatine Journal*, October 19, 1892, 3; "A Great Event," *Muscatine Journal*, April 4, 1893, 4; "It Is Dedicated," *Muscatine Journal*, April 5, 1893, 31; Muscatine Improvement and Manufacturing Company 1893).

The Muscatine Improvement and Manufacturing Company issued a new map of Muscatine showing the extensively platted area and promoting their recently platted Park Place addition (Figure 5). Though not nearly all the area on the map was developed, the map demonstrates the extent of the area opened for development. The original town is easily identifiable as parallel to the river, with the closest additions platted in line with this area. A number of new additions have been platted in the last 20 years since the 1875 map. Both major creeks, Mad Creek to the east and Papoose Creek through the mid-section of town, are noted on this map. Additions beyond the west end of town are more irregular. A significant portion of Muscatine Slough has been filled in on this map, providing more dependable access to Muscatine Island. South Muscatine has developed at the head of the island, with an additional area further to the south that was known as Musserville. The additions to the east and northeast of town are primarily laid out in the north-south-east-west pattern. Park Place is the most extensive of these additions, having been recently platted and opened for development (Muscatine Improvement and Manufacturing Company 1893).

The long history of agricultural processing began a new chapter in 1894 with the opening of the first Heinz plant outside of Pittsburgh. H.J. Heinz began producing ketchup in Pittsburgh in 1875 and expanded to include other condiments and canning products. As business escalated, they searched for a location for their first canning plant outside of Pittsburgh in 1892. Reportedly, W.H. Hoopes, a wholesale grocer who did national melon business, knew Heinz. Company history states that it was Muscatine's central location and surrounding fertile countryside that brought Heinz to Muscatine. He struck an agreement with the Muscatine Improvement and Manufacturing Company in January 1893 to build a factory for the Heinz Pickling Works in the new Park Place industrial addition. They also leased 52 acres for growing vegetables. The three-story brick building between Monroe Street, the railroad, and Mad Creek opened in 1894 under the management of John Koehrer. The first products made in Muscatine were pickles, kraut, and tomato products. Horseradish was soon added to their line (Lash 1993: 2-4; "Local Company" 1948; Richman 1911, Vol. 1: 303).

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The 1899 Sanborn map shows increased development throughout town, though it has far from filling up the extent of its platted areas. The 1899 map shows significant additional residential development throughout the original town area (Figure 6a). The general land use had not changed, though the commercial and industrial areas show greater density. The commercial area continues to be concentrated primarily along 2nd Street from Pine to Mulberry, as noted by the shading of the industrial and commercial areas. Additional commercial buildings are found on the adjacent blocks. Commercial and industrial interests also are mixed along Front Street from Linn to Cedar. Additional industry is found on the (north)east end of town. Scattered commercial interests are also located along Mulberry, particularly concentrated near 5th Street. Development in South Muscatine continued to focus around the two major lumber companies (Figure 6b). Hershey Lumber Company is located near Hershey Avenue, and Musser Lumber Company and South Muscatine Lumber Company are located further to the south. Additional residential buildings are found on the island, as well as smaller manufacturing interests.

At the end of the 19th century, Muscatine had a number of manufacturers, retail stores, service industries, and professionals listed in the 1899-1900 directory. Overall, the number of these basic stores and services is not significantly higher in comparison to the listings in 1859. Significant increases were seen in the number of barbers and some specialty stores (confectionaries, notions and fancy goods, stove and tinware, book and stationery, hardware and cutlery, ice dealers, and flour and feed stores). Many of these increases reflect the development of the town, which is also reflected in the dramatic rise in the number of restaurants from 1 in 1859 to 10 in 1899. Additionally, there are some more specialized listings, including 7 clothing and gents' furnishings, 7 ladies furnishing goods, 3 china and queensware dealers, 6 silver and plated wares, 16 cigar dealers and manufacturers, 2 fish and oyster markets, 16 fruit and vegetable dealers and shippers, 5 ice cream rooms, 4 furniture manufacturers and dealers, 4 laundries, 2 music and musical instrument stores, 12 suppliers of paints, oils, and glass, 4 picture frame and molding dealers, 2 sporting good dealers, and 1 toy store.

In these 1899-1900 listings of basic stores and services, there are 9 dry goods stores, 34 retail grocers, 3 wholesale grocers, 6 meat markets, 6 bakeries, 10 confectionaries, 17 barbers, 12 drug stores, 3 clothing stores, 10 notions and fancy goods stores, 7 milliners, 7 boot and shoe makers and stores, 2 hat and cap stores, 8 tailors, 4 merchant tailors, 14 dress makers, 2 sewing machine dealers, 8 stove and tinware dealers, 6 watch makers and jewelers, 1 leather dealers, 6 book and stationery stores, 1 piano dealer, 1 gunsmith, 7 hardware and cutlery stores, 4 breweries, 5 wholesale dealers in wines and liquors, 22 sampling rooms, 10 restaurants, 3 ice dealers, 5 flour and feed store, 6 saddle and harness makers, 4 agricultural implement dealers, 11 blacksmiths, 3 coopers, and 3 undertakers (City Directory 1859: 85-91; City Directory 1899-1900: 232-259).

The more industrial and construction oriented listings reflect increased numbers in several areas in the 1899-1900 directory in comparison with the 1859 directory. While the number of wagon manufacturers has declined, there are significant increases in the number of coal dealers, saw mills, planing mills, brick makers, suppliers of iron, nails, and steel, marble works, and painters and paper hangers. Additionally, there is a listing for 3 lime and cement dealers. Many of these businesses reflect the physical and built growth of Muscatine in the late 19th century, increasing the demand for these products. The 1899-1900 listings include 3 wagon manufacturers, 3 carriage manufacturers, 2 flour mills, 4 coal dealers, 3 lime and cement dealers, 6 iron works, 3 gas and steam fitters, 5 lumber mills and merchants, 4 saw mills, 6 planing mills, 4 box, sash, and door manufacturers, 3 wood dealers, 17 carpenters and builders, 6 brick makers, 3 carpet dealers, 7 suppliers of iron, nails, and steel, 3 marble works, and 17 painter and paper hangers. Additionally, there are new categories that were not listed in 1859, including 1 basket manufacturer, 1 blank book manufacturer, 2 boiler makers, 2 bottling works, 14 button manufacturers, 3 candy manufacturers, 3 coffin warerooms, 3 feed yards, 2 grain buyers, 1 pickle works, 1 pottery, and 1 spice mill. Soap and candle makers and pork packing have been removed from the directory listings in 1899 (City Directory 1859: 85-91; City Directory 1899-1900: 232-259).

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Figure 6a. 1899 Sanborn Fire Insurance Map of the main section of Muscatine, detailed maps overlaid on first page key with commercial and industrial areas roughly shaded.

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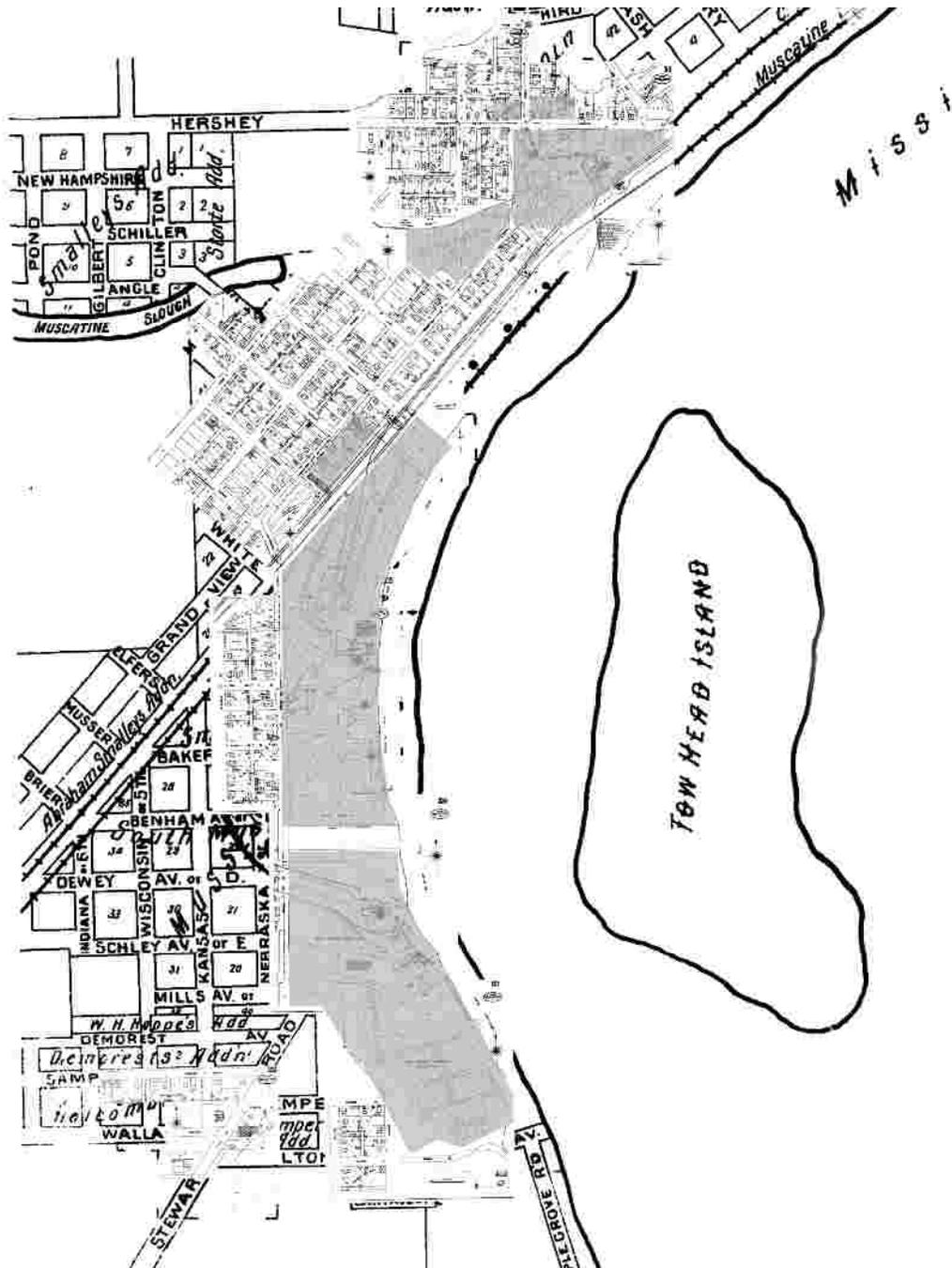


Figure 6b. 1899 Sanborn Fire Insurance Map of the south section of Muscatine, detailed maps overlaid on first page key with commercial and industrial areas roughly shaded.

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Perhaps most noticeable in the listing from 1899-1900 in comparison with the 1859 directory listings is the dramatic increase in the number of professionals. The number of lawyers, physicians and surgeons, insurance agents, real estate agents, public notaries, and music teachers has increased dramatically. Additionally, there are 3 florists and gardeners, 1 locksmith, and 3 veterinarians in town.

The professionals listed in 1899-1900 include 2 architects, 3 artists, 25 lawyers, 27 physicians and surgeons, 4 banks, 7 dentists, 22 insurance agents, 2 justices of the peace, 21 real estate agents, 13 music teachers, 31 public notaries, 3 florists and gardeners, 5 photographers and jewelers, 1 locksmith, and 3 veterinarians (City Directory 1859: 85-91; City Directory 1899-1900: 232-259).

Among the miscellaneous listings in the 1899-1900 city directory for Muscatine there were also a few noticeable increases in comparison to the 1859 directory, particularly in the number of boarding houses, feed and boarding stables, printers, and newspapers.

Additionally, two packet companies and two telephones companies have been added. Two "places of amusement" are also listed: Stein's Music Hall and Union Hall. Steamboat agents are no longer listed as transportation has evolved to include three railroads. The miscellaneous listings in the 1899-1900 directory include 8 feed and boarding stables, 5 livery and sales stables, 8 boarding houses, 4 hotels, 2 gas and light companies, 1 waterworks, 6 newspapers, 7 printers, 2 express companies, 2 packet companies, 3 railroads, 2 telegraph companies, and 2 telephone companies (City Directory 1859: 85-91; City Directory 1899-1900: 232-259).

Summary

Throughout the period from 1865 to 1900, the economy of Muscatine grew significantly with the rise of the lumber industry and commercial interests of Muscatine. The population more than doubled from 6,718 in 1870 to 14,073 in 1900. Though it lost its early prominence as a river town, its railroad connections, location on the river, and fertile surrounding land spelled prosperity for the community. In addition to the new industries that employed large numbers of residents, new commercial interests grew in town to serve the growing population, employing a number of additional workers. New businesses and services developed throughout this period that reflected the development and maturity of Muscatine. The physical result of this prosperity was construction of new commercial and industrial buildings in downtown. Several new buildings were built in the 1880s and 1890s, many of which continue to define the commercial areas of town. By the last two decades of the 19th century, new businesses and industries were beginning that would carry Muscatine well into the 20th century.

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Lumber Industry (c.1843-c.1960)

The lumber industry created the backbone of Muscatine in the late 19th century. Its contributions to the local economy, however, had begun nearly three decades earlier. The first sawmill was built in Muscatine (then Bloomington) in 1843. White pine, cut in Wisconsin and Minnesota, was floated down the Mississippi River to the mills in Muscatine for use in the booming construction industry. The lumber industry grew along the river in several communities in the 1850s. By 1867, the lumber industry in Muscatine ranked second in the state.

With the growth of the lumber industry in the 1860s and 1870s, operations expanded to supply communities well beyond Muscatine, making the most of Muscatine's rail connections. Additional products were also developed, particularly windows and doors. The development of new mills led to the development of new areas of the community, such as Musserville. The strong business climate enabled companies to bounce back from difficulties. Consolidation of smaller mills into larger companies created giants within the lumber industry in Muscatine. The Mussers, Huttigs, and Hersheys ran the largest interests in Muscatine. Along the Mississippi River, the lumber industry peaked in the early 1890s. The lumber industry in Muscatine continued to prosper throughout the end of the 19th century, building some of the most prominent families of the community. These families contributed to the community through their civic and social activities.

With the changing conditions in the lumber industry and the rise of the pearl button industry, the lumber industry began to fade from its prominent position in the early 20th century. However, the large lumber businesses continued to contribute significantly to the local economy. Many of the familiar names of the industry disappeared as companies reorganized. In 1959, six descendants of the early prominent companies continued to operate in Muscatine.

The lumber industry in Muscatine is significant as it fueled the prosperity of the community in the second half of the 19th century. Rail connections provided markets well beyond the local communities, and manufactured lumber products supplemented the industry beyond the basic products of the mills. The related historic resources from c.1843 to c.1960 reflect the growth, prominence, and decline of the lumber industry in Muscatine. These resources are primarily commercial, industrial, civic/social, and residential buildings. Most of these commercial and industrial resources are concentrated on the edges of the downtown area and in South Muscatine. Related residential resources are located primarily within neighborhoods that developed in the second half of the 19th century, particularly near the lumber companies.

Early Lumber Yards and Mills

As more refined frame buildings began to appear more consistently in the 1840s, the demand for milled lumber increased. The earliest lumberyards in Muscatine relied on timber from other sources. F.H. Stone and Jack Richmond sold hardwood from the Maquoketa River in the fall of 1839. Yards also sold pine from Wisconsin and Pennsylvania. In 1840, J. Bridgman & Company advertised 100,000 feet of pine boards for sale. Pine shingles arrived the following year, direct from the Allegheny Mountains. When John C. Irwin and Thomas Darlington established their lumberyard in 1842, they advertised that they would also "furnish architectural drawings of every kind, upon short notice." By contracting with this firm, a client could get drawings, materials, and labor to build their structure. David Clark also opened his lumberyard in 1842, arranging with the "Upper Mississippi lumber merchants" to be supplied with the best pine lumber and shingles. This began a practice of rafting unfinished or milled timber from the upper Mississippi to the lumberyards and mills of Muscatine that would form the basis of the industry through the end of the 19th century (Horton 1978: 346-347).

Even as lumber was supplied from other sources, Muscatine residents worked to mill their own lumber locally. David Warfield settled in the Muscatine area in 1837, buying the land north of the east half of Davenport's claim (8th Street). In the spring of 1838,

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he and Asbury Warfield built a water mill with a sash saw on Mad Creek near the later 9th Street. The mill was 16 by 40 feet in size, and the stock consisted mostly of native hardwoods. According to a 1911 account, “considerable lumber was sawed” at this location. The mill was sold in the 1840s to brothers Sherman and Hiram Brooks, who operated it until it washed out in August 1851.

This water mill represents the earliest lumbering business in Muscatine (“Centennial Edition” 1940: 76; Richman 1911, Vol. 1: 204-205; Walton 1899: 137-138).

Throughout the 1840s and 1850s, several small mills popped up in Muscatine. The first steam sawmill was built in Muscatine in 1843 on Front Street near Oak (Block 18, Lot 2) by Cornelius Cadle, who continued to be involved in its operations into the 1870s. The mill operated under the name of Chambers, Cadle, and Company for a number of years. His brother, Richard Cadle, began a complementary sash, door, and blind business by the mid-1850s. In 1851, Rev. R.W. Brent started a small lumber company in Muscatine, which became the Brent Manufacturing Company. J.G. Deshler and Col. John Vannata operated a saw mill and lumber yard briefly in the 1840s as well, near the later site of the Huttig Brothers on E. 2nd Street. In the 1850s, S.M. McKibbin and Company operated briefly before closing in the Panic of 1857 (*History of Muscatine County* 1879: 596; “Centennial Edition” 1940: 76; Walton 1899: 137; Horton 1978: 343).

Other related business also grew due to the lumber mills in town. Reportedly, Simon G. Stein, Sr. arrived on a lumber raft in Muscatine in 1849, bringing a supply of lumber for a retail trade. He began manufacturing sash and doors with S.G. Hill in 1851 in a factory west of Pine on Front, continuing this business through 1865. On April 26, 1854, Stein entered into the furniture business with Philip Stein under the name of S.G. & P. Stein, manufacturing and selling furniture from their production and Cincinnati. By 1858, they moved into a large new building, where they continued to operate through the end of the 19th century. In the late 1850s, S.G. Stein also manufactured bedsteads with George P. Vesey (Richman 1911, Vol. 2: 128; Carlson 1998: 21; *Portrait and Biographical Album of Muscatine County, Iowa* 1889: 312).

Growth of the Lumber industry in the 1850s through the Civil War

Abraham Smalley and Jacob Pickel operated the earliest sash and door business around 1850 at their windmill on 3rd and Cherry streets. Sashes were not made in advance but custom made for the order of a builder, though some eight-light sash was kept on hand. A man by the name of Worthington began manufacturing sash at 2nd and Sycamore in 1851, and soon James S. Patten, a native of Columbus, Ohio, joined him as a partner to provide necessary capital. Patten bought out Worthington and continued to manufacture sash, doors, and blinds until 1856 when he sold it to John Glover. Pickel’s sash was considered superior to that manufactured by both Patten/Glover and Stein & Hill, and he continued to craft sash through 1859 though Smalley left the business in 1855. After briefly engaging in a marble business, Patten returned to the lumber business in the firm of S.S. Patten & Company, wholesale and retail dealers in lumber (*History of Muscatine County* 1879: 614; Richman 1911, Vol. 2: 67; Walton 1899: 170-171).

In the 1850s, the four Chambers brothers – William, Vincent, Anderson, and John – also entered the lumber business in Muscatine. By the 1860s, they had one of the largest operations in Muscatine, including two sawmills, a large packing house, grain elevator, and general store. The firm was one of the first to buy timber land in Wisconsin and Minnesota and raft the cut logs down to Muscatine.

Others soon followed their example, and log rafts became a common sight on the Mississippi River (“Centennial Edition” 1940: 76). The early supply of logs for the upper Mississippi River lumber companies was derived from the Black River, which emptied into the Mississippi at La Crosse, Wisconsin, and the St. Croix River, which emptied into Lake St. Croix at Stillwater. These rivers formed the basis of the supply through the 1860s (Norton 1912: 10-11).

Two of the lumber businesses that would become prominent in Muscatine began in the mid-1850s. Jacob Hershey built a sawmill in 1852, leasing it to his cousin Benjamin Hershey in 1853. In 1855, Benjamin bought it from his cousin, making substantial improvements the following year. At this time, he built a new mill with gang saws. Richard Musser, Pennsylvania native, moved to Muscatine in 1855 and began a lumber business with his brother Peter Musser. The business was established under the firm name of

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Hoch, Musser & Company, and established a branch yard in Iowa City in 1856. In 1858, Mr. Hoch withdrew, and they changed the firm name to R. Musser & Company (Richman 1911, Vol. 2: 159; *History of Muscatine County* 1879: 613; County Directory 1879: 21-22; "Centennial Edition" 1940: 76; Walton 1899: 148-149, 199).

The 1859-60 city directory of Muscatine listed five lumber dealers in the town: Hatch & Fullerton, Hoch & Whitehouse, R. Musser & Company, S.G. Stein, and C.C. Washburn. Additionally there were two sawmills, Dunsmore & Chambers and Benjamin Hershey, and two planing mills, W.H. Dulaney and Stein & Hill. Finally, Hatch & Fullerton, Hoch & Whitehouse, and Stein & Hill sold sash and doors. Though Cadle is not listed in the business listings, he continued to operate his mill in this period as well. O.W. Eckel and Levi Eckel, lumber dealers, formed a partnership on February 6, 1863, combining interests and stock (City Directory 1859; Richman 1911, Vol. 1: 456).

Hill & Stein continued to successfully operate their sash and door factory and planing mill into the early 1860s. General S.G. Hill died during the Civil War, leaving Stein without his key partner in this business. Cadle, Mulford & Company bought the business from Stein, soon moving to a location on Front near Sycamore in 1869. They sold it to George D. Magoon and C.U. Hatch for a short period of time before buying it back (Walton 1899: 172-173; "Centennial Edition" 1940: 76).

Boom of the Lumber Industry following the Civil War

The Civil War ended in 1865, spurring much business growth throughout the country. The lumber business in Muscatine boomed in 1866, with an estimated 200 to 300 buildings constructed in the city. In April 1866, a flatboat with 110,000 feet of flooring and siding was shipped to Memphis. Trade continued to grow in 1867. A total of 12,260,000 feet were sawed, 12,750,000 shingles sold, 8,527,000 lath sold, 33,000,000 feet were sold, and 8,400,000 feet were bought in the water. Muscatine ranked second in the state for lumber trade. By 1868, eleven lumberyards operated in town, including one planing mill and three sawmills (Richman 1911, Vol. 1: 458).

The business listings in the 1866 city directory reflect the expanding lumber industry. Many businesses are listed in multiple related categories, representing a total of nine unique businesses. Lumber dealers included C. Cadle (SE corner 2nd and Mulberry), W.H. Dulaney (SE corner Orange and 4th St), O.W. Eckel & Brother (NE corner 2nd and Orange), Musser & Company (SE corner 2nd and Walnut) and S.G. Stein (SW corner Pine and 2nd). Additional lumber manufacturers listed are John Chambers & Company (NW corner Front and Spring) and B. Hershey (Burlington Road, south side west of Elm). Cadle & Mulford (NW corner Front and Linn) and John Chambers & Company (NW corner Front and Spring) were also specifically listed under planing mills. Cadle & Mulford and W.H. Dulaney were listed as manufacturers of sash and doors, while C. Cadle, John Chambers & Company, O.W. Eckel & Brother, Musser & Company, and J.S. Garlock were listed as dealers in sash and doors.

The number of lumber businesses grew to 12 by 1869, according to the listings in the city directory. The lumber dealers included Cornelius Cadle, Chamber Brothers, Charles Drury, W.H. Dulaney, Levi Eckel, O.W. Eckel & Brother, John S. Garlock, Ed Hoch, R. Musser & Company, S.G. Stein. Additional companies were represented under planing mills, Cadle & Mulford, and saw mills, Benjamin Hershey. In August 1869, Cadle & Mulford's new planing mill at Sycamore and Front began operations (Richman 1911, Vol. 1: 459).

Frederick and William Huttig began their lumber company, the Huttig Brothers, in Muscatine with a focus on producing standard cut lumber from local resources. In the mid-1850s, Frederick Huttig moved to Muscatine from Germany, working as a stone mason. His brother, William, soon followed, working as a music teacher. They invested together in running a grocery store for a number of years. They started a lumber yard around 1868, and they later bought into the Cadle & Mulford

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planing mill, beginning a sash and door business. However, it soon sustained a fire and closed. They reorganized as Huttig Brothers Manufacturing Company, opening a saw and planing mill on W. Front Street west of Linn. Early officers were William Huttig, president; F. Lumpe, vice president; Richard Cadle, secretary; Fred Huttig, treasurer; and Joseph Mulford, superintendent (“Centennial Edition” 1940: 76; *Portrait and Biographical Album of Muscatine County, Iowa* 1889: 281; Richman 1911, Vol. 2: 736; Carlson 1998: 21; Walton 1899: 168-169, 172-173).

During the 1870s, the lumber mills of Muscatine provided materials for the reconstruction of Chicago following the October 1871 fire. The economic development helped the community weather the 1873 depression (EPRI 1977: 3). Several “firsts” occurred in the lumber industry over the next few years. On March 7, 1872, Chambers Brothers shipped a carload of lumber to Denver, CO (Richman 1911, Vol. 1: 462). On March 8, 1873, C. Cadle made the largest lumber sale in history of Muscatine, selling 400,000 feet of lumber, lath, shingles, and pickets to Omaha (Richman 1911, Vol. 1: 463)

With the growing lumber business came labor issues as well. On August 28, 1872, the *Muscatine Journal* reported that “about twenty of the men employed in Musser & Company’s saw mill – nearly the whole force – struck” for a decrease in the hours in a day from 11 to 10 without decreasing pay. By the following day, employees at the Hershey and Chambers mills also joined the strike. The *Journal* estimated that about 100 men from Hershey’s, 80 from Chambers’, and 60 from Musser’s were striking, stopping all mill operations. On Friday, August 30, mill owners met with the strike leaders but did not resolve the issue. After several days, the mill hands returned to work on September 3, continuing to work an 11-hour day. As typical with these early strikes, the mill owners managed to continue operations with few if any concessions (Richman 1911, Vol. 1: 463; *Muscatine Journal*, August 28 to September 4, 1872, 4).

As the lumber businesses developed, their owners became leaders in the community, economically and socially. While a healthy economy existed outside of the lumber companies, they significantly contributed to the economic health through their production and workforce. Additionally, these successful businessmen were viewed as community leaders, often taking a leadership role in other business or civic positions. For example, Benjamin Hershey, an early prominent lumberman, served as mayor of Muscatine in 1865 and 1866. As the Musser Lumber Company prospered in the 1860s and 1870s, Richard Musser served two years as mayor of Muscatine in 1874 and 1878 (“Centennial Edition” 1940: 78; Walton 1899: 204, “Richard Musser” 1896).

Business Development and Expansion

As the industry on the Mississippi River developed, the mills in Muscatine attracted the interest of fellow river companies. The Union Lumber Company of Chippewa Falls, Wisconsin, was a member of the Mississippi River Logging Company, perhaps indicating their connection to Muscatine. On October 10, 1873, the Union Lumber Company bought Eckel’s lumberyard on the northeast corner of 2nd and Orange Streets. Thad C. Pound was president, and William Van Name was the manager. They continued to mill the lumber at Chippewa Falls, rafting it down the river with steam towboats for sale at the Muscatine yard. Within a few years, they bought additional land in South Muscatine, building a dry house. They operated their offices, retail yard, and a planing mill at this location (Richman 1911, Vol. 1: 464; Walton 1899: 142-143).

Other lumber companies also grew and prospered in the early 1870s, bouncing back from setbacks quickly as the market for their products was strong. On March 20, 1874, Kirk & Bailey’s new planing mill at 2nd and Mulberry opened. The most disastrous fire to hit the city to date destroyed the Chamber Brothers’ lower sawmill on August 25, 1874. Damage to the planing mill and pork house (used for storage) was estimated at \$75,000. The mill had been built in 1851, employing 50-75 men, and producing 25,000 feet of lumber daily. The upper mill continued operations as the Chamber Brothers rebuilt the

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lower mill. The new one-story brick planing mill opened on December 11, 1874 at an estimated cost of \$10,000. Most of the machinery was new as only one piece could be salvaged from the fire (Richman 1911, Vol. 1: 464; *Muscatine Journal*, August 25, 1874, December 11, 1874, 4).

With the booming lumber business, the listings in the city directories continued to grow in the 1870s, with many companies expanding their operations. There also was a noticeable shift in location to South Muscatine by this period. By 1875, nine lumber dealers, five planing mills, and seven sash and door manufacturers or dealers were listed, representing thirteen distinct businesses. The businesses under Lumber, Lath and Shingles included the Chambers Brothers (NE corner Oak and Front), Eckel and Patten (NE corner 2nd and Walnut), John S. Garlock (ns 2nd w Walnut) R. Hawley (S. Muscatine), B. Hershey & Company (ss Front w Elm), Ed Hoch (S. Muscatine), P.M. Musser & Company (on River, S. Muscatine), S.G. Stein (SW corner Pine and 2nd), and Union Lumbering Company (NE corner 2nd and Orange). Planing mills included Chambers Brothers, Hershey & Irvine (ss Front w Elm), Kirk & Battey (SE corner 2nd and Mulberry), Mulford & Company (NE corner Front and Sycamore), and P.M. Musser & Company. Finally, under Sash, Doors, and Blinds, the following companies were listed: Chambers Brothers & Company, Eckel and Patten, John S. Garlock, Hershey & Irvine, P.M. Musser & Company, S.G. Stein, and Union Lumbering Company (NE corner 2nd and Orange - Thad Pound).

By 1876, the lumber industry dominated the local economy of Muscatine. A visitor from New York reported that "The principal industry of this city is the manufacture of lumber, there being three large sawmills and two extensive drying houses. The annual product is about 25,000,000 feet of lumber, beside Lath and Shingles in great quantities. There are, in addition, six Lumber Yards selling lumber rafted down the river, and a large proportion of the logs sawed here are brought from Wisconsin in great rafts" (Horton 1978: 348).

Fire continued to be constant threat to the lumber business. In the fall of 1877, the new Union Lumber Company's dry house and its stock in South Muscatine was destroyed by fire. With this loss, they pulled out of Muscatine. Their office and planing mill was sold to U.N. Roberts & Company, a sash, door and millwork business based in Davenport. They added a sawmill to the complex and operated this branch only for a few years before selling it to their manager, Burdick. Fire also hit the Cadle & Mulford planing mill on June 13, 1880, which sustained a \$20,000 loss (Walton 1899: 143; Richman 1911, Vol. 1: 467).

However, even with these setbacks, the industry remained strong. In August 1879, lumber business was so strong that Chambers' mill was idle due to a lack of workers. In 1881, 79,500,000 feet of lumber were cut in Muscatine. Additionally, 90,000 windows, 65,000 doors, 35,000 pairs of blinds, and 28,000 oatmeal barrels were manufactured (Richman 1911, Vol. 1: 466).

Rise of the Major Lumber Companies

The last quarter of the 19th century spelled success for lumber companies up and down the Mississippi River. While logs were rafted together down the Mississippi River in the 1860s, the 1870s saw the rise of steamboats towing logs. This method of transportation was quicker and more reliable. With this innovation and the large pine forests of Minnesota and Wisconsin, lumber companies focused their efforts on harvesting timber in this region for milling further down the river. By the last quarter of the 19th century, the lumber interests of Musser, Huttig, and Hershey emerged as the most successful and prominent in Muscatine.

Musser & Company organized in 1870, consisting of Richard Musser, Peter Musser, Peter M. Musser, Charles Fox, and John

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Musser (Peter M.'s father in Pennsylvania) from the earlier lumber mill of R. Musser & Company. Richard and Peter's nephew, Peter M. Musser, had moved to the area briefly in 1863 and worked for them, before moving to Iowa City in 1864 and managing the branch yard there. In 1871, they erected a steam saw mill on Muscatine Island, in the area that would soon be known as Musserville. On June 18, 1871, the new sawmill began operations. Lumber in Muscatine supplied their yard in Iowa City. Peter M. returned to Muscatine in 1873 to manage his uncles' business, buying Richard's interest. At this time, the name changed to P. M. Musser & Company. When Richard Musser once more took an interest in the business in 1876, the firm name finally became Musser & Company. Also in 1876, Peter M. Musser also became a part of the banking firm of Cook, Musser & Company (Richman 1911, Vol. 1: 461; Richman 1911, Vol. 2: 159; *History of Muscatine County* 1879: 613; County Directory 1879: 21-22; "Centennial Edition" 1940: 76-78; Walton 1899: 200).

After Musser & Company built their new sawmill on the island, this section of the island boomed as new workers moved into houses near the mill. The area that developed was soon known as Musserville. Around 1875, the Musserville school and Methodist church were built to serve these residents. In 1877, the Mussers rebuilt their mill, enlarging to nearly double its previous capacity. By 1879, Musserville had grown into a significant community in South Muscatine (*History of Muscatine County* 1879: 613; County Directory 1879: 21-22; Walton 1899: 162-163, 200-201).

With the growing business, the Mussers looked to secure a steady supply of logs for the mill. In 1871, the Musser Lumber Company became one of 14 charter members of the Mississippi River Logging Company. This interest was largely begun by Frederick Weyerhauser, who owned lumber operations in Rock Island, Illinois, but consisted of members spanning the Mississippi River from Winona, Minnesota, to St. Louis, Missouri. Other members in Iowa included the Schricker & Miller mill in Davenport and the C. Lamb & Sons Lumber Company in Clinton. This company represented a unified front for Mississippi River lumber companies looking to log in Wisconsin, particularly in the Chippewa River valley. Though the Black River and St. Croix River provided ample supply in the 1860s, they began to look to the timber along the Chippewa River around 1870. However, successful lumber companies at Eau Claire and Chippewa Falls sought to control the timber supply and keep profits in the state. Though they resisted the competition of the Mississippi River Logging Company in the 1870s, Weyerhauser strove to unite the lumber companies in the common goal of supplying logs as inexpensively as possible. In 1881, they fixed the logging ratios at 35% for the Chippewa River companies and 65% for the Mississippi River companies. The Musser Lumber Company supplied milled lumber throughout Iowa, as well as to Nebraska, Kansas, Missouri, and Colorado ("Musser" Clipping File, Musser Public Library; Norton 1912: 12-13, 30-31).

Musser & Company was described by 1879 as having the largest and most complete mills on the Mississippi, producing 18,000,000 to 20,000,000 feet of lumber. The Musser Lumber Company was incorporated in 1881 with capital stock of \$200,000, taking over all the assets of Musser & Company. They extensively remodeled their facility, installing new machinery and increasing capacity. In 1882, a new planing mill was constructed. The officers of the new company were: Peter Musser, president; Richard Musser, vice president; Peter M. Musser, secretary and treasurer; and Charles R. Fox, yard superintendent. In 1883, it was noted that "the name of Musser is inseparably connected with Muscatine, and has been through a series of years, a name to which the city could always discover attached to those happy virtues – liberality, public spirit, and enterprise (Richman 1911, Vol. 2: 159; *History of Muscatine County* 1879: 613; City Directory 1883-1886: 22; "Centennial Edition" 1940: 76; Walton 1899: 201).

With the success of their saw and planing mills, the Huttig Brothers looked to expand their operations. They had retail operations selling sash and doors from Davenport for a number of years but had not produced their own products. On May 21, 1873, Huttig Brothers began manufacturing sash, doors, and blinds in Muscatine with W. Faulter of Davenport, previously a sash and door salesman. As this business succeeded, they closed their lumberyard to focus on this aspect of the business.

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They were the first lumber company to specialize on this aspect of the industry in Muscatine. Around 1876, they began carrying polished plate glass, used in many downtown commercial buildings (Lewis 1901: 47-48; Richman 1911, Vol. 1: 463; Richman 1911, Vol. 2: 736; Carlson 1984: 75; Carlson 1998: 21; Walton 1899: 166-169).

In 1880, the Huttig Brothers Manufacturing Company was officially incorporated with Fred Huttig, President; Joseph Mulford, Vice President; and William Huttig, Secretary and Treasurer. Additionally, C. Cadle and Fred Lumpe were directly involved in the business. Fire had hit the Cadle & Mulford planing mill on June 13, 1880, which sustained a \$20,000 loss. At this time, the lumber firm of Cadle, Mulford & Company apparently was dissolved, with the men becoming associated with Huttig. Huttig Brothers Manufacturing Company continued to operate on W. Front Street briefly. In 1881, they constructed a large factory and plant on E. 2nd Street between Oak and Orange streets. They began to expand operations beyond Muscatine.

In 1883, they incorporated the Western Sash & Door Company of Kansas City, Missouri, with William Huttig (Frederick's son) as president. In this year, they employed about 200 men manufacturing sash, doors, blinds, moldings, and glazed windows, shipping their products to Minnesota, Wisconsin, Illinois, Nebraska, Texas, Kansas, Missouri, Tennessee, and Colorado. It was noted to "stand prominently among the prime factors of Muscatine's solidity and success," and the public spirit of its owners was well known (Richman 1911, Vol. 2: 736; City Directory 1883-1886: 36; *Portrait and Biographical Album of Muscatine County, Iowa* 1889: 281).

Comparatively, the Hershey Lumber Company had a much smaller reach, though a significant local impact. After operating for 20 years, the Hershey Lumber Company was incorporated with a stock of \$200,000 in 1875. Benjamin Hershey continued to hold three-fourths of the stock. The officers were Benjamin Hershey, president; S.G. Stein, vice president; and William L. Ewart, secretary. Stein also continued to operate his lumberyard through the 1890s. In order to further increase efficiency, they built a mill at Stillwater, Minnesota to saw the rough logs before rafting them to Muscatine. In 1880, the Hershey Lumber Company built a \$10,000 office. On January 25, 1881, Benjamin Hershey bought Burdick's lumber mill and stock for about \$100,000 (on the site of the old Eckel mill sold in 1873 to Union Lumber Company then to Roberts Company in 1877 and to Burdick). The upper and lower mills in Muscatine and the Stillwater mill formed the basis of their operations (*History of Muscatine County* 1879: 551; "Centennial Edition" 1940: 76; Walton 1899: 149; Richman 1911, Vol. 1: 467).

Impact of the Lumber Industry on the Built Landscape

The 1883 and 1888 Sanborn maps provide insight on the physical impact of the lumber industry on Muscatine (Figures 4a and 4b). Overall, the lumber companies occupied more land than any other industry in this period, particularly to the east of the downtown and in South Muscatine. The index on the first page of the 1883 Sanborn fire insurance map included seven lumber companies: J.A. Deemer Lumber Yard, Hershey Lumber Company, Huttig Brothers Manufacturing Company, Knopp & Freeman Planing Mill, Muscatine Lumber Company (planing mill and saw mill), Musser Lumber Company, and the S.G. Stein Lumber Company. The Hershey Lumber Company and Musser Lumber Company cover most of the area south of Burlington (now Hershey) Avenue to near the current Sampson Street within a few blocks of the river. The main office of the Hershey Lumber Company is located near the north end of the island and South Muscatine, with elevated track running throughout about a four-block area that included a saw mill, planing mill, dry house, office, and numerous stacked lumber piles. Their lower sawmill and lumberyard spanned about seven blocks south of Musser Lumber Company and about Baker Avenue. The Musser Lumber Company spanned about a twelve-block area between Franklin and Baker Avenue. Their sawmill and planing mill were located near the south end of the complex. An elevated tram also connected this facility to a number of their lumber piles. The Brent Manufacturing Company (screen doors, washboards, and boxes) was located across the street of the north end of the Musser complex.

On the opposite, east, end of town, the Huttig Brothers Manufacturing Company, Muscatine Lumber Company, and J.A. Deemer Lumber Yard covered about a four-block area. The Huttig Brothers complex included an office, warehouse, and several wood

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working buildings. Lumberyards associated with the Muscatine Lumber Company appear throughout this area, with additional lumber piles and their lath and shingle mill on the northeast side of Mad Creek. The office of J.A. Deemer is located on the northeast corner of E. 2nd and Orange, with minimal space for lumberyards. Knopp & Freeman and S.G. Stein Lumber Company were located on the southwest side of the downtown area. Knopp & Freeman covered a small area, including sash, door and cabinet production, near 2nd and Cedar. Most of the block between Pine and Linn along Front and Second was S.G. Stein Lumber Company. The area was primarily lumber piles.

In 1888, the index to the Sanborn map includes six of these companies: J.A. Deemer Lumber Yard, Hershey Lumber Company, Huttig Brothers Manufacturing Company, Muscatine Manufacturing Company, Musser Lumber Company, and S.G. Stein Lumber Company. These companies also represent a further consolidation of lumber interests in two main areas of town. One area, including Huttig Brothers, Muscatine Lumber Company, and the Deemer yard, was located east of Mulberry and the main commercial downtown. The other area, including Musser Lumber Company and Hershey Lumber, was located well south of the downtown area in the section of town dubbed South Muscatine and Musserville.

The 1886-1887 city directory also reflects this transition in the lumber industry. It lists five of these companies under Lumber Mills and Merchants: J.A. Deemer (601 E. 2nd), Hershey Lumber Company (1001-03 Burlington Rd), Muscatine Lumber Company (113 Oak), J.S. Patten (601 E. 2nd), and S.G. Stein (corner Pine and 2nd). Additionally, planing mills include the Hershey Lumber Company, Huttig Brothers (615-619 E. 2nd), Henry P. Jones (502 E. 2nd), Muscatine Manufacturing Company (upper end Island, South Muscatine), Musser Lumber Company (White bet 1st and 2nd), and C. Walton (500 E. 2nd), and sawmills include Hershey Lumber Company, Musser Lumber Company, and Muscatine Lumber Company (E. Front, corner Cypress - Peter Musser, pres.). The addresses reflect the concentration of lumber interests in South Muscatine and east of Mulberry near downtown.

Hardships of the Lumber Industry

Lumber companies continued to experience labor issues through the end of the 19th century. Workers at the Hershey upper mill, employing about 250-300 men, struck at the end of June 1885, though the 250 lower mill workers declined to join them. Again the goal was setting 10 hours as the length of a working day, and again the workers resumed operations within a few days. On July 6, the *Journal* reported that the upper mill resumed operations with "its full complement of hands" (Richman 1911, Vol. 1: 471; *Muscatine Journal*, June 28-July 6, 1885, 4).

Fire also continued to be an ongoing issue at the lumber mills. On June 12, 1886, a disastrous fire destroyed the Muscatine Lumber Company as well as damaging the nearby Huttig Brothers facility. In addition to destroying the buildings, it burned two railroad bridges, the Front Street bridge, the Second Street bridge, four houses, and a water main and bridge. The water main break also compromised the fire fighting efforts. The fire caused an estimated loss of \$200,000, with damage at the Huttig mill around \$4,000-\$8,000. They chose not to rebuild, continuing their other lumber interests. They did sue the railroad for the fire, citing sparks from a locomotive as the cause, and the suit was settled out of court in August 1889 ("Centennial Edition" 1940: 78; Richman 1911, Vol. 1: 472; *Muscatine Journal*, June 12-14, 1886, 4, August 9, 1889, 4). The 1888 Sanborn map shows the area primarily unoccupied, with the Huttig Brothers slightly expanded into their former location.

To help combat fire in South Muscatine, the Musser Lumber Company had installed a system of water works with hydrants throughout their 35-acre site. Their mains were connected to the Kaiser mill to the south and the Muscatine Sash & Door Company to the north, as well as the nearby Hershey Lumber Company. Each mill was well equipped with pumps and hydrants; it was described as the "best system of fire protection in the city" in 1899 (Walton 1899: 201).

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Consolidation and Changes in the late 19th century

The Musser Lumber Company continued to operate perhaps the largest milling operation in Muscatine in the 1880s and 1890s. They remained part of the Mississippi River Logging Company, insuring their timber supply from the Chippewa River valley. In 1881, the Mississippi River Logging Company had purchased the Chippewa Lumber & Boom Company, the Chippewa River Improvement & Log Driving Company, and a significant interest in the Chippewa Logging Company. With the unified operations, the company stood stronger than ever. In 1883, William Musser (son of Richard) began to work for the family company. He worked at the operations in Muscatine as well as Iowa City before taking the reins of the company (Norton 1912: 50-57, "Centennial Edition" 1940: 76).

The Musser Lumber Company expanded its interests in 1885 with the acquisition of an affiliated business. In 1881, William Roach, age 18, went to work for the Musser Lumber Company, and he quickly made a name for himself. In 1885 he negotiated the acquisition of the Brent Manufacturing Company, including a planing mill and a business producing packing boxes which Rev. Brent and his four sons had operated since 1851. It was reorganized as the Muscatine Manufacturing Company with a capital of \$90,000. The Brents continued to be involved in the company. In 1889, the company reorganized again as the Muscatine Sash & Door Company with capital of \$200,000. Officers included William L. Roach, president; Charles R. Fox, vice president; Clifton R. Musser (son of Peter M.), secretary, and S.B. Cook, treasurer. In addition to doors, sash, and blinds, they also manufactured moldings, stairs, mantels, and "everything required for the finishing of buildings of all classes." Their products included high end elements as well as common sash and doors. They also operated a branch in Kansas City, Missouri ("Centennial Edition" 1940: 76; Lewis 1901: 69-70; Carlson 1984: 74-75).

The Huttig Brothers Manufacturing Company continued to expand in the 1880s and 1890s. After incorporating the Western Sash & Door Company in Kansas City, Missouri in 1883 under the eye of William Huttig (Frederick's son), they opened the Huttig Sash & Door Company in St. Louis in 1885, with Charles Huttig as manager (Frederick's son). The elder William Huttig's son, Harry W., attended business college in Poughkeepsie, New York, and returned to Muscatine to manage the Huttig Brothers Manufacturing Company in 1888. On October 6, 1891, Harry married Kathryn Musser (daughter of Richard), joining two of the largest lumber fortunes. In the same year, Harry W. Huttig established a branch company in St. Joseph, Missouri – the Huttig-Moss Manufacturing Company with Harry as president, William Huttig as vice president, and F.J. Moss as general manager (Carlson 1984: 75; Richman 1911, Vol. 2: 566).

By the early 1890s, the lumber businesses in Muscatine had been reduced to five main operations. The 1891-92 city directory lists Hershey Lumber Company (1001-03 Burlington Road) under lumber merchants, planing mills and saw mills; Huttig Brothers (2nd and Oak) under planing mills; Musser Lumber Company (White between 1st and 2nd, South Muscatine) under lumber merchants, planing mills, and saw mills; S.G. Stein (corner Pine and 2nd) under lumber merchants, and the Muscatine Sash and Door Company (Front Street, South Muscatine). Likewise, the index to the 1892 Sanborn fire insurance map lists five companies: Hershey Lumber Company Yards and Mills, Huttig Brothers Manufacturing Company, Muscatine Terra Cotta Lumber Company, Musser Lumber Company, and S.G. Stein Lumber Company. Most of these names are familiar, and William and Harry W. Huttig served on the board of the Muscatine Terra Cotta Lumber Company, which only briefly operated as such.

The lumber industry peaked on the Mississippi River in the early 1890s, with the decreasing amount of available timber. While lumber remained a strong industry through the end of the 19th century, milling gradually declined. Successful businesses shifted the focus of their operations to manufacturing interests, such as millwork, sash, and doors. While the Hershey Lumber Company gradually decreased operations, the Huttig Brothers Manufacturing Company remained strong, as

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well as did the Mussers and the Muscatine Sash & Door Company.

The Hershey Lumber Company continued to operate its three mills, and Benjamin's daughter Mira (Almira) joined the business in the 1880s. In 1890, the Hershey Lumber Company produced 70,000,000 feet of lumber and 20,000,000 shingles. Around 20,000,000 feet of lumber were cut in Stillwater annually ("Centennial Edition" 1940: 76). In 1893, Benjamin Hershey died in an accident in Chicago, leaving his wife Elizabeth, daughter Mira Hershey, and daughter Sarah Eddy of Chicago. The company continued to operate through the 1890s, though reducing their operations. On May 30, 1895, a mill was sold to Consolidated Box Company. Elizabeth Hershey donated a house and five acres on the edge of town to the German Lutheran Orphans' Home in 1894. Elizabeth died in May 1895, two months after pledging \$10,000 to Iowa Wesleyan College in Mt. Pleasant, which was used for the Elizabeth Hershey Hall that was completed in 1899. In the late 1890s, Mira bought a house as well as other real estate in Hollywood, California ("Hershey" clipping file, Musser Public Library; Walton 1899: 143; Richman 1911, Vol. 1: 478).

One new company did form in this period. The South Muscatine Lumber Company began around 1897 at the site of Hershey's "lower mill." The previous mill was bought and extensively remodeled for the new company. Over 375 workers were employed by 1901 in the sawmill and box factory. Officers in 1901 were John H. Kaiser, Mrs. John H. Kaiser, and L.C. Lenck (Lewis 1901: 73-74).

The Muscatine Sash & Door Company continued to grow through the 1890s. The plant was enlarged soon after the organization in 1889, including new boilers, engines, and machinery. Three or four two-story brick buildings were erected in the 1890s, and the plant occupied about fourteen city lots by 1899 in South Muscatine. This company gradually became the focus of the Musser operations in Muscatine, as the timber resources from Minnesota and Wisconsin declined. By 1901, they employed about 300 men and had the capacity to produce over 1,000 doors, 1,200 windows, and 100 pairs of blinds daily, in addition to the other millwork. They also operated a branch in Kansas City, Missouri known as Roach & Musser Company ("Centennial Edition" 1940: 76; Lewis 1901: 69-70; Carlson 1984: 74-75; Walton 1899: 194-195).

Likewise, the Huttig Brothers Manufacturing Company continued to increase its production in the 1890s. At this time, William Huttig remained as president, Fred Lumpe as vice president, D.S. McDermid (William's son-in-law) was treasurer, and Harry W. Huttig (William's son) was secretary and general manager, generally in charge of operations. Frederick and his sons operated the companies in Missouri. Harry W. Huttig individually remained a prominent citizen, serving as lieutenant colonel on staff of the governor from 1894 to 1898. By 1898, they claimed the title of the "largest sash and door business in the world" with their main office at Muscatine and associated businesses in St. Louis, Kansas City, St. Joseph, and Wichita. They operated the second largest sash and door plant in Iowa, after a business in Dubuque, though it was generally conceded that Huttig did the largest business of any Mississippi Valley sash and door company. The Huttig-Moss Manufacturing Company in St. Joseph was the largest sash and door plant west of the Mississippi, producing windows, doors, woodwork, wainscoting, mantles, store fixtures, and show cases. Their principal shipments were to the West and South, though they also shipped across the seas to England and Australia. In addition to the lumber firms, Harry W. Huttig maintained an interest in the Muscatine Real Estate Company, Oklahoma Lumber & Grain Company, Muscatine Mining and Milling Company (gold and silver – Colorado), and Cascade Rock Mining Company (zinc and lead – Joplin, MO). By 1901, Huttig Brothers was the largest "sash and door concern west of the Mississippi River district" and one of the "best known manufacturers along the river" with steady and loyal employees ("Huttig" clipping file, Musser Public Library; Lewis 1901: 47-48).

Seven lumber companies are included on the index for the 1899 Sanborn map: Hershey Lumber Company Yards and Mills, Huttig Brothers Manufacturing Company, Muscatine Lumber & Box Company, Muscatine Sash & Door Company, Musser

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Lumber Company, South Muscatine Lumber Company, and S.G. Stein Lumberyard. The Hershey Lumber Company and Musser Lumber Company continue to be the large operations in South Muscatine. The Hershey Lumber Company spans about the same four block area that it did in 1883, on the south side of Hershey Avenue. Further south, the Musser Lumber Company spanned a slightly larger area from Franklin to Baker Avenue. Their sawmill and planing mill were located directly along the Mississippi River. The South Muscatine Lumber Company occupied the previous area of Hershey's lower mill south of the Musser Lumber Company. Their complex included a saw mill, planing mill, dry house, and box factory along the river. Finally, the Muscatine Sash & Door Company was located on two narrow blocks on the southeast side of Grandview Avenue between Franklin and Bleeker across from the north end of the Musser complex.

The remaining companies were located on the east side of town, with the exception of the S.G. Stein Lumberyard, which continued to operate at the southwest end of the downtown area, between Pine and Linn. The Huttig Brothers spanned about a two-block area on E. 2nd Street between Orange and Spring streets, including several building involving the production of sash, doors, and blinds. The Muscatine Lumber & Box Company also covered a large area on this side of town. Their operations included roughly a two-block area east of Spring and spanning Mad Creek that was part of the Muscatine Lumber Company.

Seven lumber companies were listed in the 1900 city directory of Muscatine under Lumber: Hershey Lumber Company (1001 Hershey), Huttig Bros Manufacturing Company (office 701 E. 2nd), Muscatine Lumber and Box Company (E. 2nd SW corner Cypress), Muscatine Sash and Door Company (506 Grandview), Musser Lumber Company (901 Oregon), Stein Lumber Company (126 Pine), and South Muscatine Lumber & Box Company (office 109 W. 2nd, mill Oregon opposite Schley). Within a few years, the City Lumber Yard developed at the former location of the Stein Lumber Company, as this early lumbering business ended.

With the lumber industries, Musserville and South Muscatine continued to grow and develop through the end of the 19th century. By 1903, this area was described as having "many fine homes." The residents pushed for improvements typical in the main section of town to extend down to this area. As development occurred, names of streets changed often, and the residents particularly requested that street signs be erected at their corners. The city council soon granted their request, reflecting the progress of this area ("To Place Names," *Muscatine Journal*, June 2, 1903,7).

Community Pride and Contributions

Around the turn of the century, the lumber companies focused on community outreach. Secure in their prominence as the leading industry of Muscatine, they contributed both time and resources to enhance the quality of life. Elizabeth Hershey donated a house and five acres on the edge of town to the German Lutheran Orphans' Home in 1894. In 1896, Mrs. Peter M. Musser donated a home at 1119 Mulberry Street for the Old Ladies Home. Peter Musser also built the Greenwood Chapel in Greenwood Cemetery in memory of his wife. Soon after the turn of the century in 1901, he built a public library for the community at the corner of Iowa and 3rd Streets. Mira Hershey commissioned a three-story, brick hospital on N. Mulberry in memory of her father, Benjamin, in 1901 as well. Finally, the new building for the Young Men's Christian Association (Y.M.C.A.), significantly financed by Peter M. Musser, was dedicated in 1903 (Richman 1911, Vol. 1: 436-445, 484; Lewis 1901: 22-24). These efforts are discussed in greater depth later in this document.

The Lumber Industry at the turn of the century

The "building materials" industry was described as one of the leading three industries at the turn of the century. *Picturesque Muscatine* notes that "Despite the many new industries that have sprung up in the last quarter of a century, the manufacture of Sash,

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Doors, Blinds, and House Furnishings continues to be the leading industry in Muscatine. It was the first manufactory, aside from the saw and planing mills, to gain a foothold in this portion of the west, and each year has seen it increase” (Lewis 1901: 47).

A series of business histories in the *Muscatine Journal* on July 17, 1902 highlighted the prominent lumber businesses. The Musser Lumber Company was described as “one of the largest and wealthiest corporations in the Mississippi Valley, is Muscatine’s leading lumber industry and has been for over thirty years.” The company had increased its production from 12,000,000 feet of timber per year in 1881 to 40,000,000 feet of timber by 1902, shipping across the country from Ohio to Colorado. Their plant was one of the finest in South Muscatine, employing 225 men in the wholesale lumber business (Carlson 1998: 5).

The Huttig Manufacturing Company was described as “a recognized leader among Muscatine’s large manufacturing industries,” producing sash and doors for over thirty years. It was “one of the most prominent corporations of its kind in the middle west for over twenty years.” It had reorganized in the previous month from the Huttig Brothers Manufacturing Company, and its new officers were William Huttig, president; Harry W. Huttig (William’s son), vice president, treasurer, and general manager; and D.S. McDermid (William’s son-in-law), secretary.

Decline of the Lumber Industry in the early 20th century

With the changing conditions of the lumber industry and the rise of the pearl button industry, the lumbering companies began to fade from the spotlight in the early 20th century. A December 13, 1902 article boasted that the button industry had claimed first place in Muscatine, finally outpacing the lumber industry. The products of these button factories were valued at \$1,500,000. The lumber barons, however, had a secure place within the society and politics of Muscatine. They continued to hold prominent offices and contribute significantly to the community throughout the early 20th century (“Button Industry Claims First Place” 1902). As Mississippi Valley logging and milling declined, specialization in terms of sash, door, millwork, and other products increased.

The Musser Lumber Company continued to operate after the turn of the century. William Musser remained affiliated with operations from Iowa City, as well as Peter M. and his son Clifton R. Musser locally. The Mississippi River Logging Company began to recognize the end of the timber supply in their Wisconsin lands by the late 1890s, restricting cutting activities. Railroads had crossed through this land as well, serving as another mode of transportation for logging activities and increasing the rate of depletion of these resources. Membership declined, partially with the death and dissolution of original members, and the board reduced its number to nine. As the supply of logs was depleted, the Musser Lumber Company sold much of its interests to the Fox, Hutchinson & Lake Company in 1903, and then closed and dismantled their mill in 1905. Part of their land holdings were donated as Musser Park to the city by Clifton. In 1909, the Mississippi River Logging Company was dissolved in Iowa. By 1911, the Musser Lumber Company had been “practically closed up” with its only asset the actual grounds and office. Peter M. Musser had already expanded into other community business by this time (Richman 1911, Vol. 2: 159; “Musser” clippings file, Musser Public Library; Norton 1912: 84-91).

Through the Mississippi River Logging Company, the Mussers were not only linked to Frederick Weyerhauser and the Denkmans but also with such families as the Lairds and Nortons of Winona, Minnesota, the Youngs, Lambs, and Joyces of Clinton, Iowa, the Ingrams, Carsons, and Moons in Eau Claire, Wisconsin, the Humbirds of Mason, Wisconsin, and Edward Rutledge of Chippewa Falls, Wisconsin. In January 1900, the Weyerhauser Timber Company was incorporated with 15 partners to shift interests to logging in the Pacific Northwest, opening an office in Tacoma, Washington. In 1903, Clifton R. Musser became a director of the Potlatch Lumber Company, and he became a director of Weyerhauser Timber Company in 1919. His son, John M. Musser, also worked for Weyerhauser interests in St. Paul, Minnesota until his retirement (“Musser” clippings file, Musser Public Library).

Additionally, the Mussers, with William L. Roach, continued to expand their interests in Muscatine, incorporating the Roach Timber Company on June 11, 1906 for \$1,000,000. The company was to “do a general business in logs and timber, and will buy and sell lumber, logs, and everything pertaining to that industry.” The board included W.L. Roach, William Musser, R.M. Fox, C.M. Crego,

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and J.B. Chaplin (Richman 1911, Vol. 1: 485; *Muscatine Journal*, June 11, 1906, 5, December 20, 1906, 7). Similar to other Musser concerns, the Roach Timber Company would also be linked to the Weyerhaeuser name in the Pacific Northwest in the early 20th century.

Musser interests in Muscatine also focused on the Muscatine Sash & Door Company, which became the Roach & Musser Sash & Door Company in the early 1900s. On December 20, 1906, the Roach & Musser Sash and Door Company in South Muscatine closed for several weeks to overhaul the factory and invoice the stock. Business continued to significantly expand through the early 1900s, requiring additional space and new machinery. A second-story addition to house the sash department was constructed as well as large additions to two warehouses. It was described as “Muscatine’s greatest plant” which was “the largest mill of its kind in America” in 1909. Nearly 600 workers were employed in the factory (*Muscatine Journal*, December 16, 1909, 36, 44; Richman 1911, Vol. 1: 485; *Muscatine Journal*, June 11, 1906, 5, December 20, 1906: 7).

The Huttig Manufacturing Company also continued to grow in this period. The sash, door, and millwork business was less linked to the Mississippi Valley logging concerns, and this aspect of the lumber business continued to be strong. While William’s family ran the Muscatine operations, Frederick’s sons William, Frederick, Jr., and Charles continued to manage the “southern” Huttig companies. By 1909, they had expanded their products to include rubber roofing. They were reportedly the “largest distributor of rubber roofing in the world and their product goes to Europe, South America, and Canada,” known as Huttig’s Green Flag Roofing (*Muscatine Journal*, December 16, 1909, 36). In 1911, the Huttig Manufacturing Company was known as “one of the most substantial concerns of the kind in the west,” distributing its “products to all the principal centers in the United States.” Additionally, Harry W. Huttig further expanded his interests beyond lumber and mining to the new booming industry in Muscatine of pearl buttons, serving as president of the Pioneer Pearl Button Company (Richman 1911: 566). In 1913, Huttig Sash & Door in St. Louis was reincorporated as Huttig Building Products, which would form the core company throughout the 20th century.

The Hershey Lumber Company reincorporated as the Mira Hershey Lumber Company in June 1902, focusing on the retail business, as the next generation took the reins. Officers were Miss Mira Hershey, Fred Beach, P.W. Francis, A.S. Lawrence, Frank Ashcraft, and John A. Stortz. They built a new building in 1903 for the operations. Though the company was named for Mira and she served as president, the name and a financial investment was the extent of her involvement. By this period, she was spending a significant amount of time in Hollywood, investing in real estate. However, she also made a real estate investment in Muscatine in this period, constructing the five-story Hershey Building in 1907-1908 at Sycamore and 3rd streets. This building was viewed as a significant modern contribution to the downtown, appreciated by the city (City directories; “Centennial Edition” 1940: 76; “Hershey” clipping file, Musser Public Library).

The 1908-09 city directory lists the lumber companies that were quite familiar by this period: City Lumber Yard (126 Pine), Mira Hershey Lumber Company (1030 Hershey), Muscatine Lumber & Box Company (930 E. 2nd), Musser Lumber Company (901 Oregon), and South Muscatine Lumber Company (1314 Oregon). Two of these companies are listed also under Sash and Door Manufacturers, Mira Hershey Lumber Company and Muscatine Lumber & Box Company, as well as two additional companies, Huttig Manufacturing Company (701 E. 2nd) and Roach & Musser Sash & Door Company (601 Grandview Ave).

In the 1910s, shifts continued within the lumber industry. By 1911, the Collins Lumber Yard was located in the previous location of the City Lumber Yard. Around 1915, they vacated this location and moved to the 800 block of E. 2nd Street. About the same time, the Muscatine Lumber and Box Company became the Muscatine Lumber and Coal Company. The Fox Lumber Company appeared for a few years, with an office in the Hershey Building. In 1919, the Mira Hershey Lumber Company became known as the Beach-Stortz Lumber Company, as Fred Beach and John Stortz bought out the other interests. The Huttig Manufacturing Company and Roach & Musser Sash & Door Company were listed as the only sash and door manufacturers through this period. Both continued to do a significant and prosperous business.

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The 1919 Sanborn map reflects these name changes, though the general areas of town devoted to lumber operation remained nearly the same. The overall amount of land included in these operations was significantly less than at the end of the 19th century. The index included: Beach & Stortz Lumber Company, Collins-Hill Lumber and Coal Company, Huttig Manufacturing Company, Muscatine Lumber & Coal Company, and Roach & Musser Sash & Door Works. In South Muscatine, the Roach & Musser Sash & Door Works operated in the former location of Muscatine Sash & Door Company on Grandview between Franklin and Bleeker with support areas on the former grounds of the Musser Lumber Company on the southeast side of the railroad tracks. Beach-Stortz Lumber Company operated in about a half block area on the south side of Hershey Ave, a small portion of the former Hershey Lumber Company. Collins-Hill operated in a one-block area on E. 2nd Street at Spring, and Muscatine Lumber & Coal Company about a half block further east on the northeast side of Mad Creek, in a smaller area than the previous Muscatine Lumber & Box Company. Only the Huttig Brothers retained most of their previous area on E. 2nd Street at Oak (Sanborn Map Company 1919).

Interestingly, as the pearl button industry replaced the 19th century prominence of the lumber businesses, it also physically replaced previously lumber operations in some areas. For example, the majority of the area of the old Hershey mill and yards along the river in South Muscatine became the McKee & Bliven Button Factory. On the east side of town, part of the area previously utilized by the Huttig Brothers Manufacturing Company became the Hawkeye Pearl Button Factory (Sanborn Map Company 1919).

Remnants of the Lumber Industry in the middle of the 20th century

By 1921, the number of lumber companies had been reduced to three: the Beach-Stortz Lumber Company (1030 Hershey), Collins-Hill Lumber & Coal Company (807 E. 2nd St), and Muscatine Lumber and Coal Company (930 E. 2nd). The Huttig Bros Manufacturing Company (701 E. 2nd) and Roach & Musser Sash & Door Company (601 Grandview Ave) continued to manufacture sash, doors, and blinds. These companies continued to operate, with minor name changes, through the 1920s and 1930s, meeting all the local lumber needs. In 1928, Fred Beach bought out his partner, and Beach Lumber & Supply Company was formed. Fire continued to be a threat to the lumber industry into the 20th century. On August 7, 1940, a fire destroyed most of the Roach & Musser Sash & Door's plant on Oregon Street near Grandview (City directories 1921, 1923, 1927, 1929, 1931, 1934, 1936; Muscatine Fire Department: 33).

The 1946 Sanborn map index included: Beach Lumber Company, Collins-Hill Lumber and Coal Company, Huttig Manufacturing Company, Muscatine Lumber & Coal Company, and Roach & Musser Woodworking. The Beach & Stortz Lumber Company and Roach & Musser Woodworking continued to operate on their reduced parcels of land in South Muscatine. The size of Beach Lumber remained about the same as it was in 1919. Roach & Musser Woodworking operated almost solely on the two narrow blocks along Grandview between Franklin and Bleeker, with buildings spanning the entire area. Hill-Goetz Lumber & Coal Company operated in their block area on E. 2nd Street at Spring, while the Muscatine Lumber & Coal Company continued to reduce their area further to the east across Mad Creek. The Huttig Brothers spanned two half block areas on E. 2nd Street at Oak with significant growth of the Hawkeye Pearl Button Company to the southwest in the area along Orange (Sanborn Map Company 1946).

While the golden age of the lumber companies was well past, the businesses continued to contribute significantly to the local economy. Additionally, Huttig maintained a successful nationwide presence, continuing to operate and expand its branch offices. Around 1940, shifts occurred again within the lumber companies. The Collins-Hill Lumber & Coal Company reorganized as the Hill-Goetz Lumber & Coal Company at 805-807 E. 2nd Street. Hawkeye Lumber Company began operating in the location of the Muscatine Lumber and Coal Company at 930 E. 2nd Street. Beach Lumber & Supply Company continued to operate at 1030 Hershey Ave, after having been extensively remodeled in the late 1930s. The Huttig Manufacturing Company (701 E. 2nd St) and Roach & Musser Sash & Door Company (601 Grandview Ave) continued to manufacture sash, doors, and blinds, joined by the Hawkeye Lumber Company. In the mid-1940s, the Muscatine Roofing & Lumber Company also opened in Muscatine at 901 Grandview Avenue.

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In 1949, the main lumber companies continued to occupy a prominent position in Muscatine. Roach & Musser produced windows, millwork, weather-stripped window units, garage doors, corner cupboards, mantels, wardrobes, and other products under the direction of A.R. Tipton, John W. Roach, Robert L. Roach, C.R. Musser, R.M. Fox, and F.J. Ziethamel, Jr. Huttig Manufacturing Company continued to produce quality windows and millwork sold under the trade name "Woodwork of Merit" through dealers throughout most of the states. Arthur C. Hansen was the general manager, working with the officers of Theodore Sander, Jr. and F.H. Winn. Fred Beach, who had started with the Hershey Lumber Company in 1888, continued to supply lumber locally through his company, Beach Lumber & Supply Company (Randall 1949).

These six companies continued to operate in Muscatine east of Mulberry and the downtown or in South Muscatine into the 1950s. The 1959 city directory continued to list four retail lumber companies: Beach Lumber & Supply Company (1030 Hershey), Hawkeye Lumber Company (910 E. 2nd St), Hill Lumber Company (805-807 E. 2nd St), and Roth Lumber & Oil Company (808 Grandview Ave). Roach & Musser Millwork Corporation and Huttig Manufacturing Company continued to produce sash and door, as well as other related products, which were shipped locally and nationally.

Roach & Musser continued to be one of the largest locally owned companies into the 1950s. In April 1957, it was sold to the New York based Empire Millwork Company. They continued operations as an independent company for a few years. In December 1962, production in Muscatine ceased, and the buildings were dismantled over the next few months. The remaining complex was destroyed by fire in 1965 ("Roach & Musser" clipping file, Musser Public Library; Carlson 1984: 151; Arpy 1963).

Throughout the last half of the 20th century, these historic lumber companies gradually disappeared from Muscatine. Hawkeye Lumber Company continued the longest, closing in 2003 after repeated flooding. The Huttig Sash and Door Works operated in Muscatine until 1977. Huttig Building Products, incorporated in 1913 from Charles Huttig's sash and door branch in St. Louis, continues to distribute building products today. According to its website, Huttig Building Products is the largest distributor of building products in the nation. Its products include: doors, windows, moldings, nails, lumber, house wrap, cornice, shutters, stairs and stair parts, adhesives, decking, fencing, trusses, wall panels, dry wall, paneling, gutters, soffits, roofing materials, poly vinyl sheeting and insulation, and many other associated building products (Huttig Building Products website: www.huttig.com, last accessed on October 15, 2005).

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Pearl Button Center of the World (c.1890-1966)

While buttons were typically imported from Europe in the 19th century, demand for locally produced buttons increased in the 1890s. Johann F. Boepple is credited with beginning the national pearl button industry in Muscatine around 1890. With increased tariffs on imported buttons, demand for American buttons increased in the 1890s. By 1897, three companies focused on pearl button manufacturing existed in Muscatine, increasing to 14 companies involved in button production by 1899.

The number of button companies in Muscatine boomed in the early 1900s, with some businesses focused on button production and other companies focused on producing button blanks used to make buttons. New machinery developed in Muscatine led to increased production across the country. By 1905, button makers in Muscatine produced almost 40 percent of the buttons in the world, about 1.5 billion buttons. The industry stabilized in the 1910s, with additional growth following the start of World War I. The 1920s were viewed as the golden age of pearl button production. Through this period, Muscatine continued to be nationally prominent within this industry.

While depletion of mussel shells to produce buttons was a constant factor, the increasing plastic button industry began to eat into the pearl button industry. Experimentation with plastic products led to a new, more durable plastic button in the 1940s. Additionally, mechanized washing machines and detergents were rough on the pearl buttons. Local button manufacturers began to switch to plastic buttons in the 1940s and 1950s or closed their doors. Pearl buttons and button blanks continued being produced in Muscatine until 1966. Button companies continue to operate in Muscatine today, producing plastic buttons.

The pearl button industry in Muscatine is significant as the community led the nation in the development of this industry. It also fueled the prosperity of the community in the first half of the 20th century. As the lumber industry declined, the pearl button industry solidified the local economy. The related historic resources from c.1890 to 1966 reflect the growth, prominence, and decline of the pearl button industry in Muscatine. These resources are primarily commercial, industrial, and residential buildings. Most of these commercial and industrial resources are concentrated on the edges of the downtown area along the railroad lines and in South Muscatine. Related residential resources are located primarily within neighborhoods that developed in the early 20th century.

The Beginning

In 1887, Johann F. Boepple immigrated to the United States, bringing with him the knowledge of button cutting. Tariffs on imported shells were limiting his business in Germany, and he sought a location that would be more prosperous. He reportedly had received a sample of crude buttons made from freshwater shells “somewhere about 200 miles southwest of Chicago.” He immigrated to this area, discovering the abundant supply of mussel shells. The soft shells of the fresh water streams of the Midwest posed a challenge for Boepple and his traditional equipment designed for hard marine shells and horns. By working with the shells, he developed new methods suitable for the mussel shells and discovered they were ideal for the manufacture of pearl buttons with a naturally attractive luster. With a new American tariff on imported goods, including buttons, in 1890, the price of buttons skyrocketed and Boepple saw the potential for launching a local business. After moving around between several streams in the area, Boepple set up shop in Muscatine, finally acquiring funding from William Molis. He opened his first shop on Cedar Street under the Davis cooper shop on January 26, 1891. Using the foot-powered equipment that he developed, Boepple began production of freshwater pearl buttons. Within two years, he had a two-story brick factory and 100 employees (O’Hara 1981: 46-48; Richman 1911, Vol. 1: 270; J.F. Boepple, “Story of Mr.

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Boepple," *Muscatine Journal*, October 4, 1900; EPRI 1977: 3; Carlson 1984: 38; Madson 1985: 55-56; "Centennial Edition" 1940: 92).

As Boepple's methods of production became known, other button makers started in Muscatine in the late 1890s. The industry attracted numerous people to town and spurred over 50 businesses in the first decade. Some hoped to work on the manufacturing side while others focused on fishing for mussel shells. Some entrepreneurs attempted to do both tasks. In the 1890s, business gradually increased for the button manufacturers. However, when the Dingley Bill passed in 1897 further raising tariffs on imports such as buttons and the demand for pearl buttons across the country increased, the pearl button industry in Muscatine boomed. Additional button industries sprung up along the Mississippi, but Muscatine rightfully claimed the title of "Pearl Button Capital of the World." Even at the height of the industry, Muscatine produced more buttons than any of the other button centers in the country (O'Hara 1981: 49-50; Carlson 1984: 38-39).

Later publications traced the beginning of the freshwater pearl button industry to Boepple in Muscatine. A 1919 study of the industry noted that American production of buttons of brass and wood dated to 1750, metal buttons dated to 1800, buttons of horn dated to 1812, marine buttons dated to 1855, and buttons of composition to 1862. Throughout this period, mussel shells were readily available in many rivers, particularly Midwest streams. The earliest plant to use these shells in button production dated to 1883 in Knoxville, Tennessee, which closed after a short time. Some pearl button factories operated in Cincinnati, Ohio, and St. Paul, Minnesota, using imported ocean shells in the late 1880s. Machinery used for this type of production was unsuitable for the softer fresh water shells. The 1919 report points to Boepple, "a man of singular tenacity of purpose," as the man who single handedly began the freshwater pearl button industry. Thus, Muscatine developed as the center of pearl button production. By 1897, there were 13 button or blank manufacturing establishments in 4 cities on the Mississippi, which increased to 49 businesses by 1898. As the industry spread, Muscatine remained the center, with 28 blank cutting plants and 5 full button factories in town (Coker 1919: 65-66).

The growth of the button business in the late 1890s is seen in the city directories for Muscatine. In the 1895-1896 directory, the Boepple Button Company was the only listing under "Button Manufacturing." The company at 3rd and Oak was joined by two others by the 1897-1898 directory, the Peerless Button Factory at 401 W. Front and the Muscatine Pearl Button Company at 311 Mulberry. About this time, the button industry truly took off, with a total of fourteen listings under "Button Manufacturing" by the 1899-1900 directory. Several new companies appeared at this time that would continue to operate for the next couple decades, including Schmalz Brothers and Teichmiller Button Factory. The boom is further illustrated by the numerous button factories highlighted as places of "Special Interest" on the first page of the 1899 Sanborn map. Over twenty button-related businesses are listed in this directory, including twelve not listed in the slightly previous city directory's business listings.

About half of the 49 button factories on the Upper Mississippi in 1898 were located in Muscatine. Twelve other cities along the river split the remaining factories. By the late 1890s, the mussel beds of Muscatine and southeastern Iowa were already suffering from overfishing. As the number of beds in these areas decreased, the mussel fishing industry spread further from Muscatine, downriver to Missouri and upriver into Minnesota and Wisconsin. Other rivers, such as the Illinois River, were also a resource for shells. Many of these shells were shipped back to the factories in Muscatine (Mason 1985: 57).

A special "Pearls and Prosperity" edition of the *Muscatine Evening Journal* was printed on December 9, 1899. According to the figures presented in this paper, there were 25 button factories employing 1200 people who produced 98,000 buttons each week. Wages totaled \$8,000, and the average wage ranged from \$7.50 to \$16 per week depending on the type of button produced and speed of the worker. Around 175 tons of shells were used each week. Blank cutting machines were relatively

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cheap, and many people could afford to buy one to cut shells that they collected. Blanks were sold to local button producers as well as eastern button companies that previously relied on imported shells ("Pearls and Prosperity" edition, *Muscatine Journal*, December 9, 1899).

This 1899 edition also gave the history of the button companies currently in operation. Vacuum systems were key to all companies to remove the associated dust of the production, reducing health problems. The Boepple Button Company was the largest, with J.F. Boepple as the president, William Huttig as vice president, C.K. Nebling as secretary, and D.S. McDermid as treasurer. The two-story building constructed for the company was located at 3rd and Orange. In April, Boepple had also opened a branch upriver in Davenport, and the company also had a sales office run by W.C. Wadworth in New York City. The second company formed was the Peerless Button Company, began by James McKee and William Bliven. As it opened in the former Electric Light and Power Company building, it was unique as having its own electric plant. They produced about 2,500 buttons and 1,500 blanks each week ("Pearls and Prosperity" edition, *Muscatine Journal*, December 9, 1899).

Less than half of the other companies highlighted in this special edition would survive through the next decade. A small company, George Fry & Company, operated out of the lower/rear part of the old Van Nostrand Saddlery Company on Chestnut. Several button sawing companies operated in South Muscatine, near the lumber companies, including W.H. Franklin (also a blacksmith), Manthey Factory, Anchor Button Works (L.H. Concannon), Boston Button Works (W.F. Boston), Teichmiller Brothers, Holzhauser & Bauerbach, and Jones Brothers. Huttig & Gertz were the only company in South Muscatine to also do finishing. Eastern interests were also represented in Muscatine with the New York Button Company and Leo H. Hirsch Company ("Pearls and Prosperity" edition, *Muscatine Journal*, December 9, 1899).

As the industry grew, former workers branched off into their companies and companies reorganized, creating the ever changing names of button producers in Muscatine. John Weber is one example. He made buttons from wood, horns, and shells in Vienna, Austria in the 1880s on a lathe. At this time, Vienna was one of the button centers of the world, but when America raised the tariff on buttons around 1890 the industry declined sharply. Weber chose to immigrate to America, working for several years as a button maker in Philadelphia. His skill reportedly attracted the attention of John F. Boepple in Muscatine, who asked him to move to town in 1896. He worked briefly at Boepple's factory briefly before moving to the Royal Button Company ("Weber Button Company Signalizes Most Prosperous Year by Expansion," *Muscatine Journal and Tribune*. Jubilee Edition, December 11, 1915).

One company began around this period would continue to play a significant role in the button industry for a number of years. Leaving the Royal Button Company, John Weber and Henry Umlandt went into the button business together in 1898 as the Automatic Pearl Works. Their company grew slowly, but they operated out of a converted dwelling next to the plumbing firm of Nicholas, Patrick, and Thomas Barry on Third Street near Mulberry. Unlike many companies, they catered to the western markets in California, Denver, and Salt Lake City. Umlandt bought Barry's first machine, and business began to increase. In 1903, Weber left the company, and Umlandt moved into his old building at Third and Mulberry. He renamed the business the Automatic Button Company, due to the new machines that reduced labor needs ("Weber Button Company Signalizes Most Prosperous Year by Expansion," *Muscatine Journal and Tribune*, Jubilee Edition, December 11, 1915; Richman 1911, Vol. 2: 621; Carlson 1984: 81; "Pearls and Prosperity" edition, *Muscatine Journal*, December 9, 1899).

The lack of good equipment design initially limited the gross production of buttons. However, the Barrys' plumbing company designed a new machine that could produce better buttons with less labor. The Barry Manufacturing Company was incorporated under this name in 1889 to provide plumbing supplies. The Barry lead trap, with its patented design, became the leading product of the firm by the 1890s. In 1894, Nicholas, Sr. retired, and the firm was continued by the three sons,

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Nicholas, Jr., Patrick, and Thomas. In 1895, they devoted the company solely to the manufacture of pearl button machinery. They worked on machines for various aspects of button production, including cutting, classifying, hand facing, and drilling. Their main focus was on the automatic button cutter. They sold the first button machine to Henry Umlandt, founder of the Automatic Button Company. The Barrys continued to work on their machine, further reducing the number of steps required to produce buttons. About fifty workers were employed by 1901. The advent of this machinery greatly increased production of the button industry throughout the region. In 1904, they patented the double automatic button cutting machine, further increasing production. By 1911, the Barry Manufacturing Plant was among the largest businesses in Muscatine, and one of the largest of its kind in the country. They employed over 100 people in their three-story, three building plant. The firm name changed to the Barry Company in 1915 (Carlson 1984: 38, 82; Richman 1911, Vol. 1: 303; Richman 1911, Vol. 2: 50; Lewis 1901: 67-68; Coker 1919: 66; Petersen 1952).

Growth and Prosperity in the Early 20th Century

At the turn of the century, Muscatine was described as “The Pearl City.” Pearl buttons were one of the three leading manufacturing industries (Lewis 1901: 14-15). By this time, they were out-producing the more established button-making centers in Europe, where buttons were made primarily from the shells of Indo-Pacific marine mollusks (AMNH 2001). Interestingly, within the next 14 years, the pearl button industry seems to have quickly surpassed the lumber and building materials industry. Already in the 1900-1901 city directory, the button industry had visibly grown again. The directory now sub-divided the industry into four categories: Button Manufacturers, Button Blank Manufacturers, Button Machinery, and Button Saw Manufacturers. Only three companies were listed as official button manufacturers, in addition to the Boepple Button Company: A & B Pearl Button Company at 303-309 Mulberry, Automatic Pearl Works at 509 E. 3rd Street, and the Royal Pearl Button Company at 121-125 E. Front (Mississippi).

Button blank manufacturing had become a huge industry by this period. The first step of the button manufacturing process was the cutting of the round disks from the shells. These “button blanks” would then be sold to a button manufacturing company to add a fastener or holes, creating the actual button. The majority of “button” companies in the early 20th century were actually listed as button blank manufacturers. In the 1900-1901 city directory, twenty button blank manufacturers are listed, including the earlier Schmalz Brothers and Teichmiller Button Factory. The listings in this directory include:

Barnard & Nickey Pearl Button Company (C.S. Barnard, A.J. Nickey) – rear 1112 Mulberry
W.F. Boston Button Factory – 1113 Oregon
Brogan & Stiles (C.W. Brogan & A.D. Stiles) – 211 Orange
Levi H. Concannon – 710 Sampson
Cooperative Button Company (Fred Weimann, pres; Andrew Johnson, v.p.; W.J. Moylan, sec; Wm. Zetler, tres) – 217 Walnut
Wm. H. Franklin – rear 1082 Hershey
George Frey & Company (George Frey, Henry Becke) – rear 213 Chestnut
Charles A. Griffin – 115 W. Front – (fish)
Hagerman Button Company (Charles C. Hagerman) – 401 W. Front
Leo H. Hirsch & Company (F.C. Vetter, mgr) – 301 Mulberry
Holzhauser & Bauerbach (William Holzhauser, A.J. Bauerbach) – rear 516 Main
Huttig & Gertz (August C. Huttig, Harry Gertz) – Franklin, northeast corner Bismark
Keystone Button Works (E.B. Becker, mgr) – 311 Mulberry
Thomas F. Maher - 414 E. 3rd
Henry Manthey – 219 Main
New York Button Factory (D.A. Willis, mgr) – 223 Orange
Peerless Button Company (Bliven & McKee, proprietors) 317-319 W. Front
St. John Button Works (James H. St. John) – rear 414 E. 3rd

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Schmalz Brothers (Charles F. and Ferdinand F.) – 318 Bleeker
Schnier & Wenak (Charles L. Schnier & A.C. Wenak) – 513 W. 5th Street
Teichmiller Bros (Henry and John) – 415 Hanover
Tice & Klebey (Thomas E. Tice and Christ Klebey) – 323 Oak
M. Weggen & Bros (Mary, Jacob, and John) – rear 1051 Lucas
Andrew J. Westbrook – 117-119 Sycamore
Christ Whisler – 107 Chestnut

It appears that these listings include people who were fishing in the Mississippi River for the shells, as well as those companies with machinery to produce the button blanks. Several of these people also had another occupation or business, including W.F. Boston (saloon), William Franklin (blacksmith), James St. John (grocer), and the Schmalz Brothers (grocers).

A December 13, 1902 article boasted that the button industry had claimed first place in Muscatine, finally outpacing the lumber industry. The products of the factories were valued at \$1,500,000. A total of 3,500,000 button blanks were cut with 2,750,000 buttons produced. The number of shells used almost doubled from 1899 at 18,000 tons. The number of workers had increased from 1,200 in 1899 to 1,957 in 1902. However, most factories sat idle at some point due to lack of workers. Factories were divided into three types: cutting and finishing plants, blank manufacturers, and feeders for each finishing plants. They were reportedly scattered across the city to be near workers, as rental housing was scarce. The largest were Automatic Button Company, Boepple Pearl Button Company, Leo H. Hirsch & Company, Peerless Pearl Button Company, Royal Pearl Button Company, and Vienna Pearl Button Manufacturing. Smaller button blank manufacturers included Bishop & Hagerman, Boston Button Works, Co-operative Button Company, Giesler & Block Button Company, W.H. Franklin Company, Holzhauer & Bauerbach, Schmalz Brothers, and Schreurs Button Company. Teichmiller Brothers and Empire City Pearl Button Company specifically supplied eastern finishing plants (“Button Industry Claims First Place” 1902).

The 1904 *Atlas of the State of Iowa* described the business establishments of Muscatine. After noting other industries, the articles continued with “The most important of all is perhaps the pearl button business, Muscatine being the pioneer in a business that has grown to great proportions. Pearl buttons are made from clam shells gathered from the Mississippi River, and Muscatine leads all other cities in the number of its factories and laborers employed in this industry” (Huebinger 1904: 307).

As typical with a “boom” industry, many companies closed and others were born throughout the first decade of the 1900s. The number of “button manufacturers” grew to eight by 1904: Automatic Button Company (309 Mulberry), Boepple Button Company (701 E. 3rd Street), Giesler-Stewart Pearl Button Company (116 Walnut), Hawkeye Pearl Button Company (125 E. Front), Leo H. Hirsch & Company (809 E. 4th Street), Peerless Pearl Button Company (315 W. Front), Royal Pearl Button Company (Main & Grandview), and Vienna Pearl Button Company (604 E. 3rd Street). Nineteen button blank manufacturers are also included in the 1904 business listings, including only six listed in the 1900-1901 business listings in the city directory. A number of people are listed on houseboats or at the foot of a street, indicating their role is in the fishing aspect of the business. The market for wholesale buttons also grew, with the Boepple Button Company and Batterson Button Company listed under this heading.

With the growth of the button industry also came the growing demand for button machinery. Though the first machine used by Boepple was operated with a foot pump, the Barry Manufacturing Company continued to develop their “automatic” button machinery to further reduce the labor needed to make buttons. Other firms and people also tailored their businesses to making machinery or tools needed in various aspects of the production. Six companies were listed under “Button Machinery” in the 1904 business listings of the city directory: Barry Manufacturing (901 E. 4th Street), J.C. Brumwell (401

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Oak), Hess Machine Works (428 E. 2nd Street), J.T. Nester (311 Mulberry), Thormann Manufacturing (301 Mulberry), and Thormann, Ward, & Company (215 E. 2nd Street).

In the census of 1900, pearl buttons had been recognized as the second most important branch of the button industry in the United States, after the imported ocean shells. By the 1905 census report, pearl buttons ranked number one, exceeding the combined value of the next two highest sources of buttons, ocean shells and vegetable ivory. The gross product of freshwater buttons in the country rose from \$1,176,285 in 1899 to \$3,359,167 in 1904 (Coker 1919: 67).

Statistics show that by 1905 button makers in Muscatine, Iowa, produced almost 40 percent of the buttons in the world, about 1.5 billion buttons (AMNH 2001). The button companies appear scattered over the 1905 Sanborn fire insurance map. Again, the largest companies are listed on the first page. These companies were Automatic Button Company (p. 3), Bishop & Hagerman Pearl Button Factory (p. 16), Boepple Button Company (p. 3), Empire City Pearl Button Works (p. 4), W.H. Franklin Button Factory (p. 15), Giestner & Bloch Button Factory (p. 22), Giestner & Stewart Pearl Button Factory (p. 22), Hawkeye Button Company (p. 3), L.H. Hirsch & Company Button Company (p. 22), Holzhauer & Bauerbach Button Factory (p. 15), McKee & Bliven Button Company (p. 13), Muscatine Pearl Novelty Company (p. 9), Royal Pearl Button Company (p. 16), Schmalz Brothers Button Factory (p. 17), South Muscatine Pearl Button Company (p. 6), and Vienna Pearl Button Manufacturing Company (p. 3).

Interestingly, as the pearl button industry grew in prominence over the lumber industry, some lumbermen also became involved in this prosperous business. Harry W. Huttig, son of one of the Huttig Brothers, was president of the Pioneer Pearl Button Company. He continued to serve as an officer at Huttig Manufacturing Company as well as being involved in a number of other business interests along the Mississippi. The Pioneer Pearl Button Company operated on E. 3rd Street near the other Huttig facilities (Richman 1911, Vol. 2: 566).

Prominent Local Button Companies

A number of companies had been formed by this point that would continue to operate successfully in Muscatine for decades. Around 1895, James S. McKee and William E. Bliven entered in the button business. After working as the Peerless Button Company at 315-319 W. Front (Mississippi), they launched their namesake business in 1906, the McKee & Bliven Button Company. Around 1910, they moved to their permanent location at 1000 Hershey, on the south side of Hershey at the end of Front Street and Elm Street, along the railroad tracks in South Muscatine. By 1911, they reportedly employed between 500 and 600 people, and they sold buttons throughout the United States (Sanborn Map Company 1905, 1912; Muscatine City Directories, 1908-1909, 1911; Richman 1911, Vol. 2: 117).

The Automatic Button Company was launched by Henry Umlandt after the departure of John Weber in 1903. At first the company manufactured about 100 gross of button per day. By 1911, it had the capacity of 7,000 gross per day and employed about 500 people as one of the largest button companies in Muscatine. The buttons were reportedly sold worldwide by this year. The officers in 1911 were Henry Umlandt, president and general manager; Peter Umlandt, vice president; William Umlandt, treasurer; and H. H. Hack, secretary. Henry was also involved in several other organizations, including the National Association of Pearl Button Manufacturers (Richman 1911, Vol. 2: 621).

After bouncing through several other companies, John Weber began his own button company in 1904 on Park Avenue. This business venture grew rapidly, and by 1915 he needed to build a new facility. At this time, he built a stone and concrete plant in the 1000 block of E. 6th Street near the railroad tracks. The most modern machinery was included in the factory, which employed 150 to 200 people as cutters, sorters, and finishers. His sons, Louis, Jack, Bill, Charlie, and Walter, worked with him in the factory. The name

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of the company changed to the Weber & Sons Button Company around the same time that they built their new facility (“Weber Button Company Signalizes Most Prosperous Year by Expansion,” *Muscatine Journal and Tribune*, Jubilee Edition, December 11, 1915).

The Hawkeye Pearl Button Company was begun in 1903 by W.F. Bishop, F.C. Vetter, C.C. Hagermann, and George Jackson. Jackson soon retired, leaving the other three men in charge. The company grew significantly within the first decade, moving several times before finding a large enough facility at 2nd and Orange streets. This facility still required a large addition in 1909. At this time, they were the only true day and night industrial institution in Muscatine, operating 24 hours a day. They could produce about 40,000 gross of buttons in six days. Offices and stock rooms were maintained in New York and St. Louis, and they had blank cutting facilities in several other cities, including Keokuk, IA, and Canton, MO. In 1914, W.F. Bishop sold most of his interest to Hagermann and Vetter, remaining president until 1916 when he started the Iowa Pearl Button Company (“Centennial Edition” 1940: 78).

Related Industries

A side industry of the button industry was the “pearl novelty” business. The Muscatine Pearl Novelty Company started in 1898, making hat pins, pearl stick pins, pearl buckles, and pearl slides in a small shop on Mulberry Avenue. They produced novelty items other than buttons, recognizing the ornamental quality of the shells. The variety of items made and production increased, and the company moved to 218 W. 2nd Street. The 1905 Sanborn map shows that the office was located on the first story, with the cutting and finishing room on the second story. By 1908, it was reportedly the largest of its type on the Mississippi. The name of the company was changed in 1920 to the Muscatine Pearl Works, and incorporated as such (“Muscatine Pearl Novelty Company,” *Muscatine Journal*, 12-17-1908; “Muscatine Pearl Works” 1940: 54). Soon after their formation they did have competition. The American Pearl Novelty Company was incorporated on November 20, 1906 (Richman 1911, Vol. 1: 485).

Industries focused on the use of the byproducts of the button industry also surfaced in the early 20th century. By 1901, the city had realized the potential of crushed waste shells as a paving material, substituting it for the crushed rock in a traditional macadam surface. The shells with holes left over from the button manufacturing were crushed and laid about 12 inches deep on the street. This layer was covered with 3 inches of gravel, and the layers were compacted with a heavy roller to create a hard surface. Crushed shells roads could be found in Muscatine into the 1950s (*Muscatine Journal*, December 14, 1901, 4; Carlson 1984: 95). It is likely that some roads continue to have this surface under current paving material, but it is unknown where these roads might exist. Universal Crushed Shell Company formed in 1906 to market uses for shell fragments and crushed shells (“Universal Crushed Shell Firm Turns out Unique Product,” *Muscatine Journal*, December 31, 1927, 3).

Local and National Button Industry in the 1910s

Concern of the depletion of mussels through overfishing and pollution became an issue by the early 1900s. In 1909, the federal government conducted a study to see if they could raise bivalves (clams and mussels). On December 15, the U.S. Bureau of Fisheries established the Fairport Biological Station to study the habits and needs of the mussel, about seven miles upriver from Muscatine. Several buildings were completed on the 60-acre site by 1910, mostly for offices and employees. Dr. R.E. Cooker of Washington, D.C. was the director of the facility. Boepple, the original button maker, was outpaced by the larger companies by this time, and he retired to Fairport Biological Station as an engineer and “shell expert” (Richman 1911, Vol. 1: 271, 305; Carlson 1984: 38, 87). However, conventional wisdom dictated that mussels reproduced so quickly that depletion was not an issue (EPRI 1977: 3).

The number of “button manufacturers” as well as “button blank manufacturers” continued to grow through the end of the first decade of the 20th century in Muscatine. According to the business listings in the 1911 directory, the number of button manufacturers had grown to fourteen from eight in 1904, with some shifted from the button blanks listings. The listings included the Automatic Button Company (301 Mulberry), Bishop & Hagerman (416 Bismark), Empire Button Company (327 Oak), Hawkeye Pearl Button Company

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(201-205 Orange), Leo H. Hirsch & Company (800-900 E. 4th Street), McKee & Bliven (1000 Hershey), Muscatine Button Company (913-916 W. Front), Muscatine Pearl Novelty Works (216 W. 2nd Street), Muscatine Pearl Company (1008-1014 E. 6th Street), Pioneer Pearl Button Company (701 E. 3rd Street), Richards-Smith Button Company (415-417 Hanover), Chas Schner & Company (101 Sycamore), Schmalz Brothers (418 Bleeker), and John Weber (905 Park Lane).

Button blank manufacturing also continued to be a significant portion of the industry. The 25 businesses listed under this category in the 1911 directory include:

Becker Button Company – 935 Roscoe
Block Button Company – 407 Benham
Burr & Osborne – rear 915 E. 5th Street
Doty Button Company – riverfront so Hershey Lumber
J.A. Fisher – 116 Bridgman
Fred Grau – 1089 Lucas
Herget Button Company – 955 Logan
Holzhauser & Bauerbach – 516 Main
Ideal Button Company – 905 E. 4th Street
Independent Button Company – 417 W. Front
McClung Button Company – 100 Cypress
John McClun - 217 Mulberry
Model Button Company – 1216 Kansas
Morgan Button Company – 100 Spring
Rabedeaux Button Company – 1207 Cedar
Roby Button Company – riverfront, so Hershey Lumber Co
Schildberg Brothers – 126 Maple
Andrew Schultz – 3rd and Mad Creek
South Muscatine Button Company – 107 Dewey
Storms Button Company – E end Front
Summit & Perkins – 3rd and Mad Creek
Turkey Ridge Button Company – Stewart Rd
Viner & Wells - 822 E. 2nd
Wm Welch – 217 Mulberry, 2nd floor
Wheeler & Stortz – 709 Lombard

The Barry Manufacturing Company appears to have outpaced its main competitors by 1911 as it was the only company still listed under “Button Machinery.”

In 1912 there were 196 plants in the United States that used mussel shells in button production. Of these plants, 153, or 78%, were devoted to cutting only, producing button blanks, and 36 focused on finishing and grading the buttons, the actual button production. Of these button factories, 20 also had cutting rooms, thus completing all aspects of button production in house. An additional 6 businesses focused on pearl novelties, while one plant only graded buttons. They were located throughout 20 states, though concentrated in the Mississippi River valley near Muscatine (Coker 1919: 89). According to the 1911 city directory as noted previously, Muscatine had 25 blank button establishments in town. Other blank button factories were nearby, shipping blanks to Muscatine. Muscatine’s 14 button factories in this period account for approximately 40% of the 36 button factories nationally.

After the initial boom in the first five or ten years, the industry waned a bit as it worked to become a more steady economic force in the late 1910s. However, throughout this period, it dominated the economy in Muscatine. According to the 1910

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federal census, over half of the city's 3,500 wage earners worked in the button industry. Estimates in 1911 asserted that over 2,000 men and 800 women were employed in the pearl button industry. Women worked either at home or in a factory. Button workers were paid by the number of "gross" that they produced, generally set at 168. However, blanks regarded as lower quality may be discarded, increasing the number manufactured to reach the gross. Debate over the grading of the button and blanks often resulted in conflicts (O'Hara 1982: 247; Richman 1911, Vol. 1: 270, 304; Churches of Christ in America 1912: 9).

The button industry ranked fourth among the state's industries employing women. Women worked in various aspects, most often as carders or sorters. Women were employed in the industry to tie the buttons to cards through 1920. Most large factories had a room set aside for this operation; other carders worked at home. They were paid around \$.02 for 144 buttons sewed, totaling about \$5 to \$12 per week. Even as the industry became more automated, companies were required to employ button sorters. These women sorted buttons according to color, size, and form. These sorters were rewarded for setting aside the higher quality buttons that were cut from the iridescent portion of the mussel shell. Other women worked as polishers near the button machinery, which often resulted in injury and breathing harmful dust (O'Hara 1982: 249-250; Carlson 1984: 84).

With the economic force of the button industry, unions were discouraged both by the companies and the city. Initial attempts at unionizing occurred in 1897 and 1903 but neither were successful. In November 1910, the Muscatine Button Workers Protective Union formed, and membership grew to over 1,000 by January. Soon it reached 2,500 members with all but a few hundred workers in the union. On February 25, 1911 tensions reached a new peak when the button manufacturers closed their doors on their workers. An unknown number of button factories originally initiated "shutdown," citing overproduction due to the garment workers' strike as the reason, but soon all 43 manufacturers shutdown. However, the 2,500 laid-off workers saw the "lockout" as a reaction to their newly formed union. While the button industry insisted otherwise, some offered jobs to former employees who would leave the union. By mid-March, some plants reopened with non-union workers. The strike began peacefully as the union settled in for a long battle and carefully organized their meetings and rallies. Generally, most of the city at this time supported the unionists as many had been employed in the industry at some point and were wary of too much control by the industry. Minor rioting occurred at the plants or home of "scabs." Around April 13, a law was passed prohibiting public congregation and "strike breakers" were brought in from Chicago. Incited by an incident with the strike breakers, 5,000 workers and supporters took to the streets. The state militia, including the local Company C, was called out to patrol the city. Two initial settlements were tried in May, and both were broken by the button manufacturers, leading to more conflict. The state militia was called back in the fall. After fifteen months of striking, the workers gradually went back to work, and the union all but dissolved with few changes made as a result of the event (Rousmaniere 1982: 243-244, 250-254, 257-262; Churches of Christ of America 1912: 1-6; Carlson 1984: 90).

A c.1914 publication, *Muscatine, Iowa, The Pearl City: Pearl Button Center of the World* conveys the significance of the industry to the community. Interestingly, whereas the "building materials" industry was still highlighted as the "leading industry" in Muscatine in 1901, it received little attention in this later, similar publication. As the title suggests, Muscatine was the "Pearl Button Center of the World" at the time. Over 35 button factories made fresh water clam shells into buttons and button blanks. Buttons of all sizes and styles were shipped around the world. The industry income was estimated to be over three million dollars. In addition to buttons, Muscatine also had the largest button machine manufacturing industry in the country, shipping machines worldwide (Lewis 1901: 14; RPC 1914: 3).

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Second Boom of the Button Industry

With the beginning of World War I, the supply of imported buttons from Europe dwindled, increasing the demand for buttons from Muscatine. The button industry boomed once again in the late 1910s and 1920s. The button companies continued to appear and disappear, with the overall number growing. Barry Manufacturing continued to be the only company listed for the supply of button machinery in the business listings of the 1916 city directory. Ten button companies were listed: Automatic Button Company (301 Mulberry), Hanover Pearl Button Company (415-417 Hanover), Hawkeye Pearl Button Company (210-215 Orange), Leo H. Hirsch & Company (800-900 E. 4th Street), McKee & Bliven (1000 Hershey), Pioneer Pearl Button Company (116 Chestnut), Schreurs Button Company (327 Oak Street), U.S. Button Company (701 E. 3rd St), Vienna Pearl Button Company (3rd and Orange St), and Weber & Sons (1008-1010 E. 6th St).

A record number of button blank manufacturers – 43 – were also listed in the 1916 directory. A number were recognizable from earlier directories, including the Block Button Company (407 Benham), Doty Button Company (riverfront south of Hershey Lumber), Grau Button Factory (Climer St, west of Logan), Schildberg Brothers (126 Maple), Andrew Schultz (Isett Ave), South Muscatine Button Company (107 Dewey), Teichmiller Button Company (421 Hanover), and Charles Schmalz (418 Bleeker). Others were new firms that would continue to appear in the coming decade, such as the Boldt Button Factory (913 Newell Ave), Geo P. Christopherson (Mad Creek Bottoms), Fred Guber (1006 E. 7th Street), Humpleby Button Company (1314 Sherman St), Claus Schmarje (318 Stewart), and Yarek Brothers Button Company (Riverfront near Hershey Ave).

The majority of workers in the button industry were employed as cutters. For example, at the Hawkeye Pearl Button Company, one of the largest producers, about 500 of their 971 employees were working as cutters, probably all men. Additional skilled laborers operated various machinery, including automatic machines (74), “fancy” machines (47), and carding machines (20). Another 100 were button sorters and 100 were hand carders, most likely women. The remaining workers were divided between shell sorters (15), grinders (22), and general day workers (100) (Hawkeye Pearl Button Company 1917: 34).

The largest operations continued to be listed on the front page of the 1919 Sanborn fire insurance map. A total of twenty-five were included in this directory, including button manufacturers, button blank manufacturers, button machinery manufacturers, pearl novelty companies, and button sewing operations: Automatic Button Factory No. 1 (p. 4), Automatic Button Factory No. 2 (p. 12), Barry Company Button Machine Manufacturing (p. 16), H. Christophersen Pearl Button Blanks Sawing (p. 13), R.J. Crow Pearl Button Sewing (p. 17), C. Doty Button Company - Pearl Button Blank Sewing (p. 12), G. Gebhardt Button Company (p. 13), Hanover Button Company, Pearl Button Manufacturing (p. 11), Hawkeye Button Company, Factory No. 1 (p. 4), Hawkeye Button Company, Factory No. 2 (p. 4), L.H. Hirsch & Company Button Company (p. 22), C. Holzhauer Button Blank Factory, p. 11), Iowa Pearl Button Factory No. 1 (p. 10), A.J. James Blank Button Cutting (p. 17), C.J. Jameson Button Factory (p. 2), Lowe & Company Jewelry & Pearl Novelties Manufacturing (p. 12), McKee & Bliven Button Company (p. 13), Muscatine Pearl Novelty Company (p. 9), Pennant Pearl Button Company (p. 4), W.W. Richards Button Blank Cutting (p. 20), C. Schmalz Button Blanks Cutting (p. 14), C. Schmarje Button Blanks Cutting (p. 17), Schreurs Button Company (p. 3), Star Button Company (p. 2), and Weber & Sons Button Company (p. 16).

The 1920s are described as the “golden” years for the pearl button industry (Raffensperger, “The Passing of an Era in Muscatine,” August 7, 1966, 20). Ten “button manufacturers” were listed in the 1921 city directory: Automatic Button Company (301 Mulberry), Hanover Pearl Button Company (415-421 Bond), Hawkeye Pearl Button Company (601-605 E 2nd St), Leo H. Hirsch & Company (801-827 E. 4th Street), McKee & Bliven (1000 Hershey), Pennant Pearl Button Company (600 E. 3rd Street), Pioneer Pearl Button Company (115 Chestnut), Schreurs Button Company (327 Oak St), U.S. Button Company (701 E. 3rd St), and Weber & Sons (1008-1014 E. 6th St). The number of button blank manufacturers totaled 36 in 1921, including those focused on fishing:

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Block Button Company – 407 Benham
Boldt Button Factory – 913 Newell Ave
Geo P. Christopherson – foot of Grover
Crow Button Factory – 714 Sampson
Dollman Button Company – 1467 Washington
Sam Etter – 1401 E. 5th Street
Gabel Button Factory – 203 Fillmore
Gebhardt Button Company – cor Angle and Pond St
Grau Button Factory – 1089 Lucas
Fred Guder – 1006 E. 7th
Hawkeye Pearl Button Company – 701-705 E. Front
Healey Button Company – 416 Liberty
Holzhauser Button Company – 516 Main
Hubbel Cutting Plant – 707 E. 4th
Humpleby Button Company – 1314 Sherman
J.A. Irvin Jr – 1502 Park
Jamison Cutting Plant – 1000 E. 4th
Lemkau Button Factory – 408 Pond
Lindsley & Eutsler – 1017 E. 6th
C. Malone – 880 E 2nd
Paul Button Company – 2406 Monroe
C.H. Perkins – 880 E. 2nd
Porter Pratt – 1206 Smalley Ave
Rehbehn Bros – 805 E. 9th
Reightnouer & Schwalm – ft E 10th St
W.W. Richards – 107 Dewey
Geo Royster – 910 E 7th St
Schildberg Brothers – 124 Maple
Chas F. Schmalz – 418 Bleeker
Claus Schmarje – 318 Stewart
R.A. Schmitt – 1224 Adams
Star Pearl Button Company – 3rd Street and Mad Creek
Teichmiller Button Company – 421 Bond
Tiedeman Button Factory – 2520 Monroe St
Whittaker Button Factory – 613 E. 6th St
Yarek Bros Button Company – 1004 E. 4th St

The Barry Manufacturing Company had been joined in the category of “Button Cutters Supplies” by the Standard Manufacturing Company (117 W. Front), though they continued to be the only listing under “Button Machinery.” Two wholesale button dealers were also listed in 1921, the Batterson-Wessels Company (212-214 W 2nd St) and Schner-Block Company (101 Sycamore).

By 1927, the button manufacturers included the Automatic Button Company, Hawkeye Pearl Button Company, Iowa Pearl Button Company, Leo H. Hirsch & Company, McKee & Bliven, U.S. Button Company, Pennant Pearl Button Company, and Weber & Sons. The Iowa Pearl Button Company was also added under the “blank button manufacturers” along with Larry D. Clark, J.H. Davis, the Lik Bros, the Schwalm Cutting Plant, Albert Shepard, and Peter Umlandt. A number of other companies remained in business from 1921, including the Boldt Button Factory, H.G. Christopherson, Dollman & Hoffman Button Company, Grau Button Factory, Fred Guder, Hawkeye Pearl Button Company, Hirsch & Company, Hoffman Button Company, Humpleby Button Company, Jamison Cutting Plant, Lemkau Button Factory, McKee Button Company, C. Malone, Malone Button Company, Paul Button Company, Rehbehn Brothers, Ludwig Resnick, Royster Button Company, Schildberg Button Company, Claus Schmarje, Claus Schmarje, No. 2, Schmitt Button Company, Teichmiller Button Company, Whittaker Button Factory, and Yarek Bros Button Company.

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Additionally, businesses continued to operate that used by-products of the button industry. In 1927, Universal Crushed Shell Company, founded by George Gebhardt in 1906, was reportedly the largest of these companies. They employed 30 men and had output of 10,000 tons of shell product annually. Pearl chips, often colored, were used in fish bowls, flower pots, and other decorative items. They supplied products to Kresge and Woolworth nationwide. The American Shell Products Company was also based in Muscatine, serving as the distribution point for central and northern United States and Canada. They utilized the mussel shells in Muscatine and also operated branches in the South, including a large plant in Biloxi, Mississippi, using oyster shells. They were the originators of the pearl button dash for exterior stucco applications. Pearl Spray, using small shell particles, was produced for interior applications in a variety of colors. They also produced decorative shells for several uses such as aquariums. Crushed shells were also utilized in mineral feeds for hogs and cattle with a high calcium content, and the high lime content of ground shells also created a fertilizer for farmers (“Universal Crushed Shell Firm Turns out Unique Product,” *Muscatine Journal*, December 31, 1927, 3; “American Shell Products Co. Originated Some of its Articles Here,” *Muscatine Journal*, December 31, 1927, 2).

The 1928 Sanborn fire insurance map listed the fifteen largest button and button industry by-products companies in their front page index. These companies included: American Shell Products Company (p. 6), Automatic Button Company (p. 5), Barry Manufacturing Company (p. 13), Block Button Company (p. 34), Christophersen Button Company (p. 31), Hawkeye Pearl Button Company (p. 5), L.H. Hirsch Button Blanks (p. 13), Iowa Pearl Button Company (p. 2), Jamison Button Blank Factory (p. 6), McKee Button Company (p. 30), Pennent Pearl Button Company (p. 5), United States Button Company (p. 5), Universal Crushed Shell Company (p. 13), Weber & Sons Button Company (p. 13), and Yarek Brothers Button Blanks (p. 32).

In the 1929 city directory, button blank manufacturing no longer rated its own category in the business listings for the first time since 1900. Fred Guder, Rehbehn Brothers, Resnick Button Factory, Royster Button Company, and Peter Umlandt were the only listings in the “button manufacturing” category with the notation “blanks” after their name. Button machinery was no longer a category in this directory, though the Barry Manufacturing Company continued operations and was listed under the regular alphabetical listings. Three companies - Batterson-Wessels Company, Hawkeye Pearl Button Export Company, and Schner-Block Company – were listed under “Button – Wholesale and Jobbers.”

Diminishing Pearl Button Production in the 1930s

An invention from New York in 1907 was slowly eroding business from the pearl button industry. While trying to develop a synthetic shellac, Leo Baekeland discovered that if he heated it longer, he could create a moldable synthetic substance: plastic. After filing patents, he revealed the first plastic product in 1909. Potential customers soon discovered it could be developed into molded insulation, valve parts, pipe stems, billiard balls, knobs, buttons, knife handles and other items. His product was named Bakelite, and the company grew in the 1920s and 1930s. Baekeland was featured on the cover of *Time* on September 22, 1924 (Amato 1999). Gradually, composite buttons began to be produced in this period.

In 1932, there were 16 plants in the United States producing buttons from mussel shells, according to a study by the Bureau of Fisheries. Ten were located in Iowa, mostly in Muscatine, as well as three in New York and one each in New Jersey, Wisconsin, and Missouri. By-products of the shells were utilized in 15 plants, including eight plants in Iowa. Additionally, two plants in Iowa manufactured shell novelties. Overall, 10,501,702 of the 15,184,472 pearl buttons (69%) manufactured from mussel shells were made in Iowa, primarily Muscatine, in 1932. Additionally, 90,661 of the 93,014 tons of crushed shell for poultry feed (97%) was produced in Iowa and 1,081 of 1,185 tons of agricultural lime (Johnson 1934: 9-12).

A study on the aquatic shell industries released in 1934 by the Bureau of Fisheries noted that the pearl button was the primary product of the fresh-water mussel shell. The mussel shell was primarily utilized for domestic button production, followed

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distantly by marine shells. Shells were soaked in water to be less brittle, then cut by tubular saws. These “blanks” were often produced near fishing locations along the Mississippi, Illinois, and other Midwestern rivers and then shipped to finishing plants. These button “finishing” plants were “concentrated principally at Muscatine, Iowa, with scattered factories elsewhere.” The by-products of production, the remaining parts of the shells, were utilized for poultry feed, lime, and chips (Johnson 1934: 7-8, 14).

In the 1936-1937 city directory, only one company, Weber & Sons Button Company (1008-14 E. 6th St), is listed under the new category of “Button Manufacturers – Pearl.” They were also listed under the general “Button Manufacturers” category, which included the majority of the button listings, presumably some that were also producing composite buttons. However, many companies continued to only produce pearl buttons or blanks, such the Claus Schmarje Button Works. The 37 companies in operation were:

Automatic Button Company – 301-15 Mulberry
Wm Boldt – rear 913 Newell
Christopherson Button Company – ns Angle near Pine
Frank Cozzens – 1000 E. Front
Tandy R. Davis – 500 Jackson
Dollman Button Shop – Jefferson and Lincoln
Harry P Gabel – 203 Fillmore
Ivan Goddard – 531 Adams
Jules Gosset – 1108 Hershey
Fred Grau – 1031 Climer
Fred Guder – 1006 E. 7th
Hawkeye Pearl Button Company – 601 E. 2nd
Otto Herron – ns Smith I w Howard
Leo Hirsch & Company – 821-827 E. 4th
Edward Hoffman – 1220 Smalley rear
Fred Humpleby – rear 114 Sherman
Iowa Pearl Button Company – 315-319 W. Front
Emil Lick – 306 Clinton
Earl Lippelgoes – 430 Jackson
McKee Button Company – 1000 Hershey
Ross Mickey - Scott sw cor Isett
John F. Moore – 503 Adams
Pennant Pearl Button Company – 600-04 E. 3rd
Resnick Button Factory – 900 Park Lane
Royster Button Company – 910 E. 7th
J. Arthur Schildberg – 608 Maple
Claus Schmarje Button Works – ss Sterneman blvd near League
Robert A. Schmitt – 500 Adams
Schwalm Cutting Plant – rear 705 E. 4th St
Albert Shepard – 414 Lee St
Wm I Symmonds – 203 Bridgman
Teichmiller Button Company – 413 Bond
Peter Umlandt – 1011 Grandview Ave (blanks)
US Button Company – 701 e. 3rd
Weber & Sons Button Company – 1008-14 E. 6th St
Whittaker Button Company – rear 613 E. 6th St
Louis Yarek Button Company – 416 Liberty St

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Only Peter Umlandt was noted to be manufacturing blanks, though other companies did also. Two companies continued to be listed under "Buttons – Wholesale and Jobbers," the Batterson-Wessels Company at 212-14 W 2nd Street and Muscatine Pearl Works at 227-229 E. 2nd Street.

In December 1938, the *Muscatine Journal* reported that the "button industry represents the backbone of the community's industrial life." However, difficulties were facing the industry with the manufacture of composite buttons and the general economic downturn. Overall, sales had dropped. In an effort to counter this trend, eight companies formed Pearl Button Industries, Inc., including seven Muscatine companies (Automatic Pearl Button Company, Hawkeye Pearl Button Company, Iowa Pearl Button Company, McKee Button Company, Muscatine Pearl Works, U.S. Button Company, and Weber and Sons Button Company) and one Washington, Iowa company (American Pearl Button Company). Plans were underway for a nationwide marketing campaign on the benefits of pearl buttons. These companies had recently passed laundering tests, and their buttons were awarded the seal of approval by the American Institute of Laundering ("Manufacturers Join in Promotional Drive," *Muscatine Journal*, December 30, 1938, 2).

Profiles of button companies show that the transition from pearl buttons to composite buttons was underway even in Muscatine. McKee Button Company, known as the largest freshwater pearl button factory in the United States, appears to have continued to only manufacture fresh water shell products, with branches throughout the country and distribution worldwide. The Automatic Button Company, another large local company with branches across the country, continued to produce a large number of pearl buttons, but "in recent years it has expanded its line to include the manufacture of composition buttons, trimmings, and other dress ornaments out of a catalin material" ("McKee Button Factory is Largest in Nation," *Muscatine Journal*, December 30, 1938, 4; "Automatic Button Company, One of Pioneers in Field, is Observing its 40th Anniversary this Year," *Muscatine Journal*, December 30, 1938, 5).

In 1940, the Centennial Edition of the *Muscatine Journal* noted that "For more than half a century now, the button industry has formed the backbone of the city's industrial life, focusing nation-wide attention on its lustrous title as 'The Pearl City' and giving widespread prominence to its well-grounded claim as the center of the freshwater pearl button industry." Over the years, thousands of people had been employed in the industry, but, in recent years, economic conditions and cheaper composition products had reduced the demand. The article went on to note that steps were being taken to revitalize the industry, positively looking at the future ("Centennial Edition," *Muscatine Journal*, 1940: 92). However, it appears that the pearl button industry peaked by the late 1930s in Muscatine, slowly reducing production of pearl buttons over the next few decades.

Decline and Legacy of the Pearl Button Industry

In 1946, it was estimated that nearly 2,000 were employed in the pearl button industry in Muscatine, with annual sales between \$5 million and \$6 million. About 65% of the pearl button production in the United States was reportedly located in Muscatine, with another 25% located in other plants in Iowa and along the Mississippi River. Mussel shells, originally just obtained locally, were now shipped from a wider area, with buyers in contact with sources throughout the Midwest and South ("Button Industry Notes Half Century of Operations Here," *Muscatine Journal*, December 30, 1946, section 3, page 7).

After World War II, a new family of plastic buttons was developed that were cheaper and tougher than earlier buttons. In order to keep their businesses running, more of the pearl button manufacturers began to switch over from pearl buttons to plastic buttons. Over 50,000 plastic buttons could be manufactured weekly with the developing technology (Mason 1985: 58).

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According to a local website: “The peak production years for the pearl button industry would last from the mid-1920's to around 1945. With the decreased mussel populations and the improvement in plastics, the button industry was about to change. William Umlandt, the president of Muscatine's Automatic Button Company, established a process to make buttons out of plastic. From 50,000 to 60,000 buttons could be manufactured out of plastic every week. Muscatine had now begun the transition of moving from pearls to plastic” (Jan Hartsock. “From Pearls to Plastic,” [www.muscatine.k12.ia.us/was/History/pearlbuttons/p9 .htm](http://www.muscatine.k12.ia.us/was/History/pearlbuttons/p9.htm), 2001, last accessed on July 7, 2005).

Over the next decade, the majority of these companies continued their operations in Muscatine. Weber & Sons Button Company continued to be the only company listed under the category of “Button Manufacturers – Pearl” in the 1946 city directory. A total of 27 companies were listed under “Button Manufacturers,” including 16 from the 1936-1937 business listings: Automatic Button Company, Wm Boldt, Hawkeye Pearl Button Company, Leo Hirsch & Company, Edward Hoffman, Iowa Pearl Button Company, Emil Lick, McKee Button Company, Arthur Schildberg, John Schmarje Button Works, Robert A Schmitt, Schwalm Cutting Plant, Teichmiller Button Company, Weber & Sons Button Company, Whittaker Button Company, and Louis Yarek Button Company. Many of these plants continued to produce pearl button blanks. Interestingly, the “Button Equipment Manufacturers” category returned to the directories, with Barry Manufacturing Company as the only listing.

Throughout the first three decades of the 20th century, automatic button machinery evolved to a more refined form, though the basis of the technology changed little. In the 1940s, the Schmarje Tool and Engineering Company worked to redesign machinery to increase the quality and speed of button blank manufacturing at their office at 109 Pine. Its affiliated company, the Ronda Button Company, was formed to act as a testing ground for this new machinery. It was a family operation with Clarence Schmarje as the head and president, his uncle John Schmarje as vice president, his wife Doris as secretary-treasurer, and his father Claus Schmarje as plant superintendent. Ronda was named for his sons, Ronald and David, and operated within the attached old five-story Bennett mill and Oatmeal Company. By 1948, their redesigned machines were offered for sale and used for their own production of button blanks. Saws on the new machines operated vertically rather than horizontally, permitting the user to be seated. The saws also had cemented tungsten carbide tips, harder than traditional steel tools. With the new machinery, button blank production could be increased at a lower cost, reducing the overall cost of pearl button production to better compete with composite buttons. The Ronda Button Company had production capacity of two million blanks per week (“Ronda Button Company” 1948).

The number of listings under “button manufacturers” declined slightly by the 1952 city directory, with only 14 listings: Acme Pearl Company (rear 500 Adams), Automatic Button Company (301-15 Mulberry), Hawkeye Pearl Button Company (601 E. 2nd Street), Iowa Pearl Button Company (315 W. Front), Law's Machine Works (rear 313 Stewart), McKee Button Company (1000 Hershey), Ernest P. Morgan (1006 E. 7th Street), Kay C. Morrow (127 Clay), Muscatine Pearl Works (227-229 W. 2nd Street), Ronda Button Company (109 Pine), Shell Processing Company (1201 E. 5th Street), Teichmiller Button Company (415 Bond), Weber & Sons Button Company (1008-14 E. 6th Street), and Yarek Button Company (416 Liberty Street).

Some of these names were familiar from 50 years earlier in the first decade of the pearl button industry. The Teichmiller Button Factory was first listed in the city directories in 1899. The Automatic Button Company organized under this name in 1900. McKee and Bliven began in the Peerless Button Company at 317-319 W. Front around this same time, before launching McKee & Bliven in 1906. Around 1911, they moved to 1000 Hershey, and it became the McKee Button Company around 1926. The Hawkeye Pearl Button Factory opened by 1904. John Weber began manufacturing buttons by 1907. The Yarek Brothers were first listed in the city directories in 1913. A later arrival, the Iowa Pearl Button Company was not launched

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until the early 1920s. Others, such as the Ronda Button Company, formed at a later date but were key in the pearl button industry in the mid-1950s.

In 1955, William Umlandt and Barnard Hahn began the J&K Button Company at 315 W. Front Street. The partners were previously associated with the Automatic Button Company, and this new company never produced pearl buttons. In 1956, they employed about 20 people. They manufactured "Jewel-Kist" buttons in a variety of shapes and colors, particularly for women's clothing. These buttons were made of a heat resistant plastic resin, and thus were durable for home or commercial laundering. William Umlandt continued to serve as the president in 1966 at age 79 (Raffensperger, "The Passing of an Era in Muscatine," August 7, 1966, 20).

Several factors are cited for the decline of the pearl button industry. Naturally, the depleted supply of mussel shells was a factor. However, the lower expense of producing plastic buttons – about 5 times less by 1966 – and the durability of these buttons spelled the final decline for the pearl button industry. The introduction of stronger detergents and washing machines were rough on pearl buttons, and the new plastic buttons stood up much better to the country's new methods of laundering. With the increase in the plastic button industry through the 1950s, imported buttons gained significantly in the United States market. The value of imitation pearl button imports, produced in Hong Kong and Japan, rose from \$260,000 in 1955 to \$1,528,000 in 1960. With the competition, the button industry in Muscatine continued to decline with the 1,200 employees in 1955 reduced by one-third to 461 by August 1961 (Raffensperger, "The Passing of an Era in Muscatine," August 7, 1966, 20; Hickok 1962: 6L).

In 1966, Muscatine was called the "Garment Button Capital of the World" due to the manufacture of plastic buttons for the garment industry. The Ronda Button Company, the last company still producing pearl button blanks, some pearl buttons, and pearl novelties, quit producing buttons in 1966. Plastic buttons were produced by the Automatic Button Company, J & K Button Company, McKee Button Company, Muscatine Pearl Works, Pearl Products Company, and Weber & Sons Button Company. Production remained nearly the same as in the pearl button days, with cutting of the buttons and sewing them onto cards for sales at the center (Raffensperger, "The Passing of an Era in Muscatine," August 7, 1966, 20; Arpy 1969: 10D).

The legacy of the button industry continues in Muscatine today in the first decade of the 21st century. Currently in 2005, the McKee Button Company continues to manufacture buttons at 1000 Hershey; 70% of their line is custom-made buttons. Weber & Sons Button Company operates in the 1000 block of E. 6th St, their location since 1916. J & K Button Company operates at 315-319 W. Mississippi (Front) at the original location of McKee & Bliven (Peerless Button Company) and the later location of the Iowa Pearl Button Company. Additionally, the town motto is the "Pearl of the Mississippi," reflecting this significant portion of their history. The local Muscatine History & Industry Center (formerly Pearl Button Museum) focuses on the pearl button industry as well.

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Civic Pride & Accomplishment – (c.1890-c.1925)

With the growth and success of Muscatine, thoughts of the leading businessmen and the city government turned to ensuring continued prosperity as the town entered the 20th century. Transportation was key to the appearance and success of a community, and early efforts focused on these improvements. Many of the prominent businessmen at the turn-of-the-century were associated with the lumber industry, including well-known names such as Musser and Hershey. These well-known families contributed to the community through the construction of several public and social buildings. At the same time, the city and county governments strove to improve their facilities and services offered in the community. Most of the early improvements were made by 1915, but efforts reflective of the theme of civic pride and accomplishment continued through 1925. A significant later project was the construction of the Masonic Temple in 1921.

The resources associated with the civic pride and accomplishment in Muscatine are significant as they reflect the community pride in the early 20th century. This was a period initiated after the peak of the lumber industry and at the beginning of the boom of the pearl button industry. Significant improvements were made throughout the community in this period, reflecting the maturation of the town. These associated resources include public buildings, social buildings, parks, churches, schools, transportation structures, and facilities associated with improved city services. Many of these commercial and industrial resources are concentrated in the downtown area, but others are located throughout Muscatine.

Transportation Improvements in the 1890s

Public transportation improvements marked the last decade of the 19th century. The Mississippi River, the focus of early transportation, increasingly segregated Muscatine from Illinois and its markets as the railroad became the new means of transportation. After nearly twenty years of lobbying, authorization for a bridge, high enough for steamboats to pass under, was obtained in May 1888. The Muscatine Bridge Company organized and held a public meeting. At the meeting, a tax was discussed to help fund the bridge, as well as a new location at the end of Mulberry or Walnut rather than on a bluff. On February 27, 1889, the tax issue passed, and the city passed an ordinance permitting the footing to cross its property. On July 15, 1889, the Milwaukee Construction Company began work. High Bridge was completed on May 8, 1891, opening to public traffic a few days later (Randall 1981: 97-99; Richman 1911, Vol. 1: 305; Carlson 1984: 15).

The Commercial Club organized in 1892, perhaps beginning this era of improvement. William L. Roach is credited with the founding, and the first meetings were held at the Commercial House. By 1893, the club moved to the Stein Building on W. 2nd Street, and then it moved to the Hershey Building upon its completion in 1908. By 1901, it was described as being “behind all important public improvements and pushed them to successful termination.” It was credited with movements to pave 10 miles of streets with bricks, construct a new sewer system, bury Papoose Creek in the downtown, replace the old railway system with an electric street railway, build the new Grand Opera House, and develop the future Weed Park. Officers in 1901 were John H. Munroe, Charles Page, Ed C. Cook, and W.G. Block, with board members W.L. Roach, Fred Daut, J.W. Eelis, S.B. Cook, Charles Cadle, William H. Hoffman, and Phil J. Mackey (Lewis 1901: 26-27; Richman 1911: Vol. 1, 435).

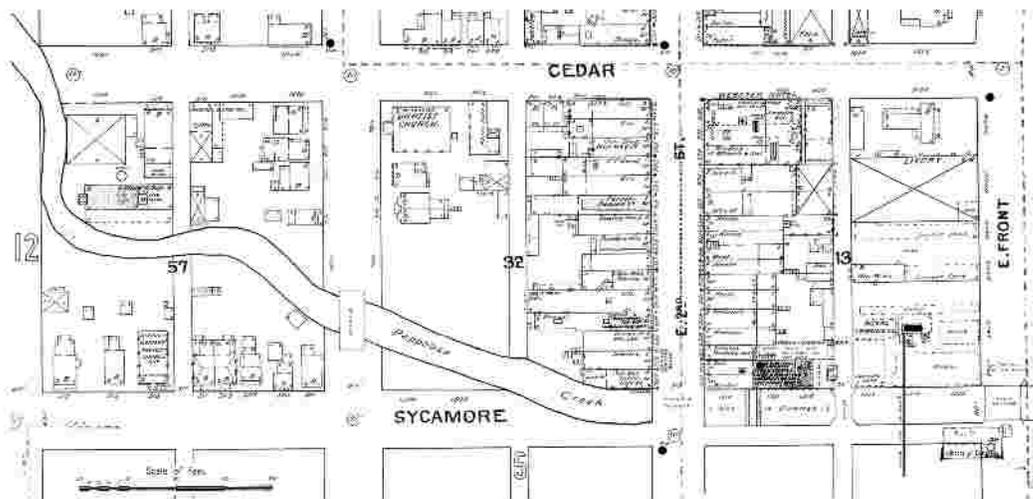
Many of their initial projects focused on street and transportation improvements for Muscatine, which would enhance business development. On September 19, 1894, the first brick for the street paving was laid on 2nd Street between Pine and Chestnut at 9:00 a.m. The mayor laid the first brick in front of a large crowd. The *Muscatine Journal* noted near the end of the day that “the work is progressing rapidly and in another day one block of paving will be completed, and if the weather continues good it will not be many days before Second Street will present a much better appearance than it does now” (*Muscatine Journal*, September 19, 1894, 3; Carlson 1989: 36).

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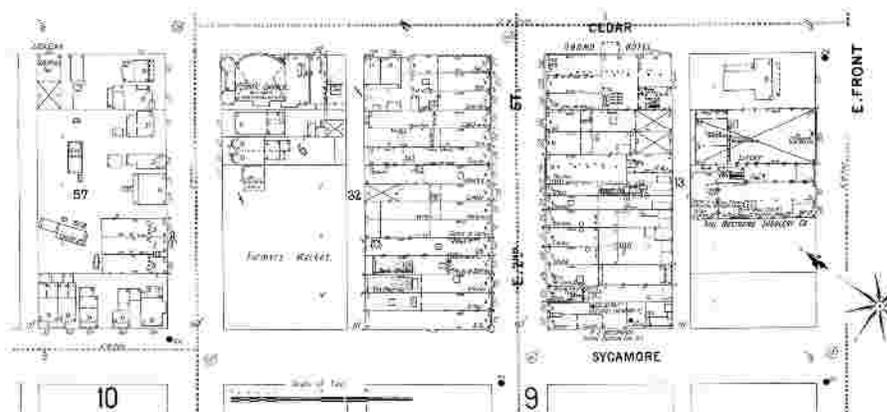
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Brick paving projects continued throughout the following year. By the end of 1895, Paving District No. 3 (Mulberry from 10th to Parham), District No. 8 (12 blocks east of Iowa Ave on 3rd and Walnut), and District No. 9 (12 blocks west of Iowa Ave) were complete. The most important improvement in 1895, however, was the burying of Papoose Creek between Front and 3rd Street, opening up new lots along Sycamore Street in downtown Muscatine. The 1892 Sanborn map depicts the meandering path of the creek through the downtown area, with the series of bridges that continually washed out with flooding (Figure 7). The burying of Papoose Creek improved the conditions in downtown as well as reducing the threat of floods. It also served as a portion of a stormwater sewer for the city. Additional sections were buried in the following years. The area reclaimed from this project appears on the 1899 Sanborn map (Richman 1911, Vol. 1: 283, 473-474; *Muscatine Journal*, December 14, 1895, 1).



Sanborn Fire Insurance Map, 1892, p. 4



Sanborn Fire Insurance Map, 1899, p. 8

Figure 7. Sanborn Fire Insurance Maps depicting the burial of Papoose Creek (Sanborn Map Company).

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Social and Civic Contributions of the Lumber Industry

Two of the most prominent lumber families, the Hersheys and Mussers, contributed several significant social and civic institutions to the city around 1900. In 1894, Rev. Reinemund began the German Lutheran Orphans' Home. The Hersheys had built a summer house on five acres of land outside of Muscatine but never used it, as Benjamin died in 1893. His widow, Elizabeth, donated the house and land to the orphanage for their use. The German Lutheran Orphans Home was dedicated on June 21, 1896. The cornerstone for a modern, \$30,000 structure was laid on August 7, 1904 on the property for the Old Peoples' Home, and it was dedicated on July 2, 1905. A school was also held on the grounds by 1909 for the orphans. Rev. Reinemund continued to operate the properties in 1911 through the support of the Lutheran church, with an average of 40 orphans and 25 old people (Richman 1911, Vol. 1: 444-445, 478; *Muscatine Journal*, December 16, 1909, 42).

Prior to the turn of the century, the Old Ladies Home incorporated, with Mrs. Peter M. Musser as president, to provide a home for elderly women. After seeking a building for several years, Peter M. Musser bought the house at 1119 Mulberry Street in 1896 for \$5,000, and the Musser family donated it to the association. In 1897, the first resident moved in. By the early 20th century, the home had several occupants. Many set aside portions of their estate for its maintenance and support (Richman 1911, Vol. 1: 443-444; Lewis 1901: 24).

The Greenwood Chapel in Greenwood Cemetery was built by Peter C. Musser in the memory of his wife Tamson. Early in 1900, the city council began discussing the possibility of constructing a small building at the cemetery to provide shelter for burials in inclement weather. As they were discussing the proposition, a gift of a chapel that could seat at least 100 people was announced on July 19, 1900 from an anonymous donor. It later became known that Musser had donated it in memory of his wife Tamson who had died a few years earlier. The brick structure with stone detailing measures 65 by 35 feet, and it was dedicated on May 12, 1901. The chapel was received very well by the local residents with "thousands of people" attending the dedication. Peter Musser also donated a marble statue of "Hope" to be placed in front of the chapel. This statue was carved locally by Becke and Wilson, and it was completed in September 1902 (Rudisill 2000: 8:7-9; Richman 1911, Vol. 1: 308).

In the same period, Muscatine benefited from the generosity of his nephew, Peter M. Musser, through the donation of a library building. The public library formed in 1897, with the small book collection kept at the high school. Interestingly, an article in the *Muscatine Saturday Mail* by J. Walton on April 30, 1898 encouraged this action. Walton wrote "We have a suggestion to make to the Mussers. The city needs a public building for an Academy of Science and a Library. If they would now in the life time devote a few thousand dollars and put up a "Musser Building" to be used for such purposes, it would place the Musser name on "perpetual record." On June 4, 1900, the proposal to build and donate the library to the city was made by Peter M. Musser. The sandstone structure was erected at the corner of Iowa and 3rd streets at a cost of nearly \$50,000, designed by Patton, Fisher, and Miller of Chicago, who were known for their designs of Carnegie libraries. On December 20, Musser transferred the library building to the city in a formal dedication ceremony. A number of people spoke at the ceremony, expressing their appreciation of this generous gift.

In addition to the building and lot, the library was also furnished with a wide variety of books (Richman 1911, Vol. 1: 436-438; Lewis 1901: 22; Walton 1899: 209; *Muscatine Journal*, Dec. 20, 1901, 9).

Benjamin Hershey's daughter, Mira Hershey, constructed a three-story, brick hospital on north Mulberry Avenue in memory of her father for the community. The cost of construction was estimated at \$40,000 in 1901, and the hospital opened on June 26, 1902. The hospital offered services for acute, curable, non-contagious, and emergency conditions. Wards, as well as private rooms, were available for patients. The first class of nurses graduated from Hershey Hospital on December 8, 1904. In 1925, the nurses' home was built (Richman 1911, Vol. 1: 442-443, 484; Lewis 1901: 23; "Centennial Edition" 1940: 76). The Hershey family's generosity also extended beyond Muscatine. Elizabeth Hershey pledged \$10,000 to a building on the Iowa Wesleyan College in Mt. Pleasant before her death in 1895, which was used for the Elizabeth Hershey Hall that was completed in 1899. Mira, after moving out to

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Hollywood, California permanently in the early 20th century, donated to several local colleges and charities (“Hershey” clipping file, Musser Public Library).

The Young Men’s Christian Association (Y.M.C.A.) was formed in 1855, reorganized several times before successfully organizing in 1888. A collection soon began for a building fund, but it grew slowly. Peter M. Musser offered to exceed all contributions by twenty percent in 1901, and the building campaign assumed full force. Former resident Thomas Irvine contributed \$10,000, and S.G. Stein contributed \$5,000. The young men canvassed the streets for additional donations, and ground was broken at Iowa and 4th streets in November. The structure was dedicated on December 28, 1903 (Richman 1911, Vol. 1: 439-441).

Additional Civic and Cultural Improvements

Other prominent citizens were also moved by the civic spirit and made significant contributions to Muscatine. In 1899, James and Mary Weed donated about 63 acres in the northeast section of the city for a park, leasing the land to the city for \$200/year. In 1901, Weed Park was described as a natural attraction in Muscatine, similar to Forest Park in St. Louis. It had oaks, elms, thick grass, high points of observation, rustic walks, prehistoric mounds, and an old stage route. The Weed Park Association formed, charged with the caretaking responsibilities for the park. Soon after, the Weed Park Club was organized to improve and beautify the park. In 1905, the deed for the property was officially transferred to the city. The Weed Park Club House opened on September 27, 1905 (Richman 1911, Vol. 1: 306, 484; Lewis 1901: 20-22; *Muscatine Journal*, March 24, 1905, 5).

The Grand Opera House on the northeast corner of Second and Walnut was also built around the turn-of-the-century. Construction began in the spring of 1900, and it was completed in the fall. The buff brick and stone building cost \$30,000 to construct. Though its seating capacity was advertised at 1,100, it could hold up to 1,500 people. In 1911, the stage was described as “spacious with many modern conveniences” (Richman 1911, Vol. 1.: 306).

A c.1910 publication entitled *Muscatine Boosters* highlighted this public spirit as well as the businesses in Muscatine. At this time, Muscatine boasted many buildings that were “examples of Muscatine public spirit and generosity.” The Musser Public Library, Hershey Memorial Hospital, Greenwood Chapel, and Weed Park were highlighted as examples of the gifts of private citizens to the community. At this time, Muscatine had 16 miles of brick paving, 28 miles of permanent sidewalk, and 15 miles of electric railways (*Muscatine Boosters* 1910).

New and Improved City Services

Brick paving continued through this period. In 1901, streets and alleys in District No. 19 were paved, as well as about 10 additional blocks. Most of the paving used Galesburg brick. Other roads received a macadam surface. With the large number of pearl button factories, Muscatine had a surplus of discarded shells after the blanks had been cut. The city used this material in their paving efforts, substituting crushed shells for the traditional crushed rock for the macadam paving. About 12 inches of shells were laid, followed by three inches of gravel. A heavy roller compacted the layers, creating a hard surface road. By December 1901, the *Muscatine Journal* noted that “one thing to which Muscatine can point with pride is her streets. They are in excellent shape and this city has as much paving as any other city of its size or even larger in the state.” Street improvements necessitated a significant amount of grading, installation of storm sewers, and construction of bridges and culverts (*Muscatine Journal*, December 14, 1901, 14).

Lighting and railway lines were also among the improvements at the beginning of the 20th century in Muscatine. On October 16, 1903, the city council passed an ordinance for 300 gas lights to be provided by the Welsbach lighting company. In 1901, the Muscatine Electric Railway built a new power plant for their lines. On May 30, 1903, the Citizens Railway Park was opened. The *Journal* described the excitement of Muscatine at this new resort and the number of people planning to spend many summer evenings out at the park (Lewis 1901: 23; Richman 1911, Vol. 1: 483; *Muscatine Journal*, May 30, 1903, 2).

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In addition to contributing to the social and cultural welfare of the community, the lumber companies were also involved in other businesses to increase the prosperity of the community. For example, Harry W. Huttig and William Musser were integrally involved in the Citizens Railway and Light Company. On December 4, 1903, they bought out the other two investors, resulting in their full possession of this company and its system of lighting and street railway. They continued to expand service throughout Muscatine. In 1905, they extended the East Hill line out to Weed Park, an improvement that was projected to significantly increase the use of the "most beautiful plot of park land in Iowa" that summer (Richman 1911, Vol. 1: 483; *Muscatine Journal*, December 4, 1903, 8; *Muscatine Journal*, March 24, 1903, 5).

Regional transportation connections were also important in this period. Interurbans were a more localized train service, or extension of the street railway system, intended to provide easy transportation between cities prior to the popularity of the automobile. The first survey for the Muscatine-Davenport interurban began on May 8, 1906. The interurban survey was completed on January 1, 1907 (Richman 1911, Vol. 1: 485). Construction spanned several years, and by 1912 the Davenport & Muscatine Railway Company, providing "interurban and city railway service," was organized.

In 1906, the greatest improvement of the year was the completion of the new water works station in the southern part of the city. The city purchased the water company in December 1900 for \$100,000 when the Muscatine Water Works Company reached the end of its existence. The city had begun the investigation of a new station soon after they purchased the water works to provide the city with a clean and steady supply of water. After much investigation, the location along the river on the Muscatine Island was selected and land purchased from W.H. Hoopes & Son. J.E. Howe built the brick buildings at this location, including the pump house and boiler room, large smokestack, and two-story dwelling for employees. The water supply was drawn from 14 wells spaced from 100-110 feet apart. These wells extended through gravel to pump particularly clean and pure water. By the end of 1906, the city had 16 miles of mains and 185 hydrants in operation (*Muscatine Journal*, December 20, 1906, 14; RPC 1914: 3).

Governmental Improvements

The city and county strove to improve their facilities in the early 20th century. A bond issue for \$150,000 was passed on May 7, 1907 for the construction of a new courthouse and jail. J.E. Mills, an architect from Detroit, was selected for both projects. He began with designing the three-story, Bedford limestone courthouse, and the contractor, W.J. McAlpine of Dixon, IL, was selected by September 1907. The contract for the two-story, Bedford limestone jail was awarded to J.H. Selden in July 1908 for \$14,600. Both limestone buildings were completed by spring 1909 within budget (Richman 1911, Vol. 1: 98-102).

The new post office was completed in 1909 at the corner of Iowa and Fourth. Similar to the county buildings, this structure was also built of Bedford limestone. The two-story Beaux Arts building was completed at a cost of \$65,232. Richman noted in 1911 that "The building has a magnificent exterior view and the furniture and finishing of the interior is in keeping with buildings of that character in all of the large cities of the country. It stands out prominently as a strong feature in beautiful building effects of the city and is an object of pride to every inhabitant in the place (Richman 1911, Vol. 1: 292-293).

As the community blossomed, the city lobbied to erect a new building for their offices as well. A bond issue passed in 1913 for the new structure, and Detroit architect J.E. Mills returned to town to design the structure. After much debate, they decided that Haymarket Square would be the site of the new offices. This square had been reclaimed as a building lot through the burying of Papoose Creek in 1895. The Classical Revival building was completed in 1914, and it was the first

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structure in Muscatine built for the sole purpose of city administration (Carlson 1984: 90, 140). The police also received their first permanent home at this time, the lower level of this building (Carlson 1984: 146).

Pride and Accomplishment

Throughout the rest of the community, the private sector also reflected this theme of civic pride and accomplishment. Within a few years of each other, three new bank buildings were built: German American Savings Bank (1908), Hershey State Bank (1908), and Muscatine State Bank (1910). In its 1908 Prosperity & Improvement Sections, the *Muscatine Journal* identified the newly constructed Hershey Building as proof of the city's growth and viability: "Nothing so absolutely proves that Muscatine is growing and advancing as does the erection of the new Hershey bank building, which when completed, will be the most modern and up to date structure in the city." This was following on the heels of the complete German American Savings Bank ("Muscatine's Largest Commercial Building Completed," 1908, 15).

Evidence of civic pride is revealed through a c.1914 publication *Muscatine, Iowa, The Pearl City: Pearl Button Center of the World*. The publisher presents photographs of the community with a glowing introduction about the city. Various aspects of community life are highlighted, including strong financial institutions, educational support and funding, numerous fraternal organizations, water and electric companies, street cars, businesses and industries, and the low cost of living. Overall, Muscatine is promoted as a thoroughly modern, clean, and attractive community (RPC 1914).

Civic improvements by 1914 included many "modern" city services. In 1906, the new filtration plant and pump house had opened on Muscatine Island, boasting fourteen drive wells by 1914. Reservoir Park also held the 1,500,000-gallon reservoir constructed in 1876, and the new reservoir on the Kemble place in west Muscatine was double this capacity. The supply of water attracted several industrial companies. Over 38 miles of water mains stretched through the city, with 390 fire hydrants, by 1914. Additionally, eleven miles of electric streetcars were found in Muscatine. Muscatine also boasted street lights and telephone service. The Iowa Telephone Company had around 4,000 phones installed locally by 1914 (Richman 1911, Vol. 1: 283, 291; Lewis 1901: 17-18; RPC 1914: 3; Carlson 1984: 144).

Additional significant buildings were completed in Muscatine in the 1910s that reflected this period of accomplishment. The Hotel Muscatine, designed by architect Paul Hyland, was built in 1914-15. Its costs of \$215,000 plus another \$40,000 for furnishings put it at one of the most expensive buildings constructed thus far in Muscatine. The construction was feasible due to a large number of citizens who bought the common stock which helped to build it. At seven stories, it remained the tallest building in downtown Muscatine until the 1970s ("Beautiful New Hotel," *Muscatine Journal*, December 12, 1914, 1-2). Within a couple years, Hyland also designed the six-story Laurel Building, a combination department store and office building. Completed in 1917, the McColm Department Store opened on five floors with a special grand opening that continued for three days ("Laurel, Home of McColm & Co. is Formally Dedicated," October 9, 1917, 2).

The Masons also worked to leave their mark on the community in the early 20th century. Though claiming the first lodge building in Iowa, they always shared their building with other organizations. Plans were laid to construct their own Masonic Temple, a sandstone building, at the corner of Third and Walnut. Due to cost restraints, brick was used instead of stone. Construction proceeded throughout 1920 and early 1921, culminating in a formal dedication on May 26, 1921. Cost of the building, excluding furnishings, was in excess of \$104,000 (Carlson 1984: 107; Randleman 1981: 53).

Civic improvement projects on the streets, lights and sewers continued into the 1920s. In 1915, the city council created the Muscatine Levee Improvement Commission to manage the lands along the Mississippi River. The city services expanded to

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light and power in the early 1920s. In 1922, a \$350,000 bond was passed to construct a municipal light and power plant. The plant began operation on June 1, 1924, gradually taking over the private companies. The demand for electricity grew in the 1930s, requiring an addition to the power plant on Maple Grove Road by 1939 (*Polk's Muscatine City Directory* 1949: 15; Carlson 1984: 144).

Additional buildings throughout Muscatine were constructed in the early 20th century during this period of pride and accomplishment. New schools and churches were constructed in this period, such as the First Baptist Church near the new Masonic Temple. This church was built in 1921 for a growing congregation, and the substantial brick architecture reflected the theme of civic improvement. Residential development also occurred in this period that echoed these themes. Substantial new houses were constructed in several areas of town, following the revival and Craftsman styles popular in this period.

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20th Century Business and Industry (c.1900-c.1960)

On the eve of the 20th century, Muscatine was perched on the edge of a new boom for the town – the pearl button industry. In the early 1900s, the button industry grew from a few companies to a significant industry, marking Muscatine as the national leader in this industry. Additionally, lumber and food products continued to be significant factors in the local economy. Other businesses and industries formed in Muscatine in response to the strong economy, and others were attracted by the strength of the community. Muscatine swelled with civic pride and accomplishment, building new civic and social buildings. Population grew from 14,073 in 1900 to 16,178 in 1910, continuing the growth of the last quarter of the 19th century. By the 1910s, the button industry stabilized as the lumber businesses continued to decline in number.

Old and new businesses continued to operate in Muscatine in the 1910s and 1920s. While pearl buttons dominated the local economy, other businesses also made a significant impact, such as the H.J. Heinz company. Muscatine's population declined for the first time in its history to 16,068 in 1920 before slightly rebounding to 16,778 in 1930. The economy remained stable through this period, faring better during the Depression than in many other communities. New businesses and industries grew in town in the 1930s and 1940s, focused on manufacturing concerns. The population began to grow again, reaching 18,286 in 1940, 19,041 in 1950, and 22,997 in 1960.

The business and industry from c.1900 to c.1960 in Muscatine is significant as it reflects the boom of the early 20th century and stabilization in the mid-20th century. Muscatine sustained its economic prosperity through the pearl button industry and other significant businesses and industries. The commercial and industrial historic resources from c.1900 to c.1960 reflect this history. Many of these commercial and industrial resources are concentrated in the downtown area. The largest industrial complexes were located near the edges of the downtown, city limits, and South Muscatine in the first half of the 20th century. Additional commercial resources were built within neighborhoods.

Leading Industries at the Beginning of the 20th century

Picturesque Muscatine was published in 1901, providing an interesting snapshot of Muscatine at the turn of the century. It was described as having “steady and healthful” growth, never with a boom and then bust cycle. “Enterprise has never lagged,” and the city was full of “substantial homes.” Additionally, the surrounding “excellent agricultural country” had led to the development and sustaining of Muscatine as a trading and processing center. Reportedly, Muscatine Island had the “largest and most extensive melon and sweet potato farms in the world.” At the turn of the century, building materials, food products, and pearl buttons were the three leading manufacturing industries. The leading manufactured items were lumber, sash, doors, blinds, house furnishings, boxes, barrels, pearl buttons, oat meal, pickles, catsup, kraut, saddlery hardware, and specialty iron, steel, and copper products (Lewis 1901: 13-16).

“Food products,” the oldest industry in Muscatine, was largely represented by a few key businesses. In 1909, the *Muscatine Journal* boasted “Many hundreds of cars laden with the products of the Muscatine Island are shipped to all parts of the continent each year, and there are but few towns in which Muscatine fruits and vegetables do no enter.” The Muscatine Oat Meal Mill, now run by Simon G. Stein, Jr., continued its operations on the riverfront. In the early 1900s, the company merged with Great Western Cereal Company. Meat packing, an early prominent business that declined in the late 19th century, also continued to have a presence in the form of the Blanchard Packing Company, National Poultry Company, and Schroeder & Zoeller Slaughter House. Several breweries operated in Muscatine, including branches of Anheuser-Busch and Pabst Brewing Company. Other bottling works, focused on non-alcoholic beverages, also operated, such as the City Bottling Works, Muscatine Bottling Works, J. St. Clair Bottling Works, and F.L. Schwertfeger Bottle Works. Finally, a number of feed

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mills were found in town (Richman 1911, Vol. 2: 128; Sanborn Map Company 1905; *Muscatine Journal*, December 16, 1909, 24).

The Heinz pickle works, or “Factory No. 4,” continued operations in the early 20th century. In 1901, it continued to be the largest branch of the Heinz pickle factory outside of Pittsburgh, encompassing three large buildings to produce ketchup, pickles, and sauerkraut. At full capacity, 30,000 bottles of ketchup could be corked, labeled, and packed in a ten-hour workday. About 175 men and women were employed at the factory, with an additional 150 at the nearby farm. H.J. Heinz visited Muscatine on August 30, 1906 to announce extensive improvements at the pickle works. Muscatine benefited both from the employment opportunities as well as the market for local produce. By 1906, Heinz had opened twelve other branches near fertile farmland as the company continued to grow. In 1909, it produced ketchup, pickles, sauerkraut, chili sauce, small onion, and other products in Muscatine (Richman 1911, Vol. 1: 485; *Muscatine Journal*, December 14, 1901, 10; *Muscatine Journal*, December 20, 1906, 29; *Muscatine Journal*, December 16, 1909, 36).

Somewhat related, Zeigler Canning moved to South Muscatine from What Cheer, Iowa, in 1909, attracted through the efforts of the Commercial Club. It was located in the old Hershey mill buildings on Hershey Avenue, with a significant remodeling effort. A railroad spur extended directly to the main building to facilitate shipping. This factory provided a market for local farmers, as well as providing employment for a large number of citizens. Up to 75 people were employed in the first year, though additional hands could have been used if not for a labor shortage. They canned solid tomatoes, sweet potatoes, pumpkins, and other locally grown produce (Richman 1911, Vol. 1: 303; *Muscatine Journal*, December 16, 1909, 22, 36).

By the early 20th century, the lumber companies had began to decline, though they continued to be a part of the local business economy. The lumber barons, however, had a secure place within the society and politics of Muscatine. They continued to hold prominent offices and contribute significantly to the community throughout the early 20th century. By 1902, production by the pearl button industry outpaced the lumber companies. The 1908-09 city directory lists the lumber companies that were quite familiar by this period: City Lumber Yard (126 Pine), Mira Hershey Lumber Company (1030 Hershey), Muscatine Lumber & Box Company (930 E. 2nd), Musser Lumber Company (901 Oregon), and South Muscatine Lumber Company (1314 Oregon). Two of these companies are listed also under Sash and Door Manufacturers, Mira Hershey Lumber Company and Muscatine Lumber & Box Company, as well as two additional companies, Huttig Manufacturing Company (701 E. 2nd) and Roach & Musser Sash & Door Company (601 Grand View Ave). Though the Musser Lumber Company closed by 1911, the remaining companies continued to function in some form well into the mid-20th century (“Button Industry Claims First Place” 1902; Richman 1911, Vol. 2: 159).

The pearl button industry grew significantly throughout the first two decades of the 20th century, spurring other business growth and development. The 1911 city directory listed 14 button manufacturers and 25 button blank manufacturers. In 1914, Muscatine claimed the title of “Pearl Button Center of the World.” Buttons of all sizes and styles, as well as button machinery, were shipped around the world. The industry income was estimated to be over three million dollars (RPC 1914: 3). The pearl button industry continued to grow through the 1920s and into the 1930s, pumping economic resources into Muscatine.

Additional Businesses in the Early 20th Century

The *Atlas of the State of Iowa* noted in 1904 that Muscatine had “a steady and substantial growth, and is one of the important cities of the Mississippi River valley...Its business establishments embrace five strong and prosperous banks, six newspapers, two of which are daily, extensive saw mill and lumbering interests, sash door and blind factories, a large oat meal mill, two mammoth box

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factories and many other industries. The most important of all is perhaps the pearl button business, Muscatine being the pioneer... Water melons, sweet potatoes, and cabbage are raised in immense quantities on Muscatine Island and are shipped from there..." (Huebinger 1904: 307).

The 1905 Sanborn Fire Insurance Map depicts the businesses and industry throughout Muscatine. Though some commercial interests were located in neighborhood areas, the central business district continued to be concentrated in a six-block area along 2nd Street between Pine and Mulberry. A variety of businesses were located in the downtown area. For example, the western block between Pine and Chestnut included several groceries, furniture stores, ice cream factory and restaurant, printer, clothing store, saloon, undertaker, cigars, electrical supplies, meat market, tailor, plumber, marble shop, pearl novelty company, and a bowling alley. These types of businesses, along with banks, millineries, drug stores, dry goods stores, jewelers, and other commercial interests, were found along the blocks further to the east to Walnut. The block between Walnut and Mulberry was less commercial in nature, with the Grand Opera House, Trinity Church, livery and feed yard, plumber, saloons, awning factory, machine shop, and second hand stores (Sanborn Map Company 1905).

More industrial interests were focused along Front Street between Linn and Cedar in 1905. Button companies and storage areas were located along this strip, including the largest in this section of town, McKee and Bliven. The Great Western Cereal Company was the largest enterprise in this section of town, spanning Front Street to the river. Van Nostrand Saddlery Company was also a significant business in this area of town. The Commercial Hotel provided lodging for travelers disembarking at the passenger depot between Iowa and Sycamore. Other industrial and commercial enterprises along Front Street included a lime and cement dealer, livery and carriage house, blacksmith, saloon, machine shop, wholesale groceries, and storage piles and buildings.

A number of manufacturing companies were located further east of the downtown area, east of Mulberry, along E. 2nd and E. 3rd streets. Huttig Manufacturing Company, producing sash, doors, and blinds, spanned portions of three blocks. A number of large and smaller pearl button companies also found their homes in this area, including the Boepple Button Company, Automatic Button Company, Hawkeye Button Company, and Vienna Button Pearl Manufacturing Company. A number of other business interests had large buildings in this section of town: Citizens Railway and Light Company, Thorman Manufacturing (button machinery), Niver Iron Works Foundry, Vance & Baker Boiler and Machine Works, Wiles Adams & Company Plow and Wagon Works, J.B. Hunt Feed Mill, Greenblatt Brothers Junk Warehouse, Anheuser-Busch Beer Depot, Muscatine City Mills, Mississippi Box Company, and Muscatine Lumber & Box Company.

Likewise, manufacturing companies were also concentrated in South Muscatine. These interests were generally more spread out than on the east end of town, and they tended to cover larger areas. Roach & Musser Sash & Door Works spanned several blocks, as did the Musser Lumber Company and the South Muscatine Lumber Company. The Mira Hershey Company also continued to be depicted on the 1905 map, though covering significantly less area than the other lumber interests. Some pearl button factories were also located in this section of town, including the Royal Pearl Button Company, Bishop & Hagerman Pearl Manufactory, and Holzhauer & Bauerbach Pearl Button Factory. Other small interests were also represented in South Muscatine, such as the Rock Island Brewing Company Beer Depot, Joseph Manthey Machine Shop, and Muscatine Cigar Box Factory. Smaller commercial interests were also located throughout South Muscatine.

The German population continued to play a significant role in the community in the early 20th century. On July 1, 1899, the German American Savings Bank opened its doors for the German population of Muscatine. It was located in the Houdek Block on the southeast corner of 2nd and Sycamore before building its own building across the street in 1908. The two German newspapers consolidated as the *Muscatine Herald* in 1907 under Weis and Heinz. In September 1908, the German-American Alliance of Muscatine was organized, and several existing German organizations became members. This led to the formation of the German Home Society in 1910 to build a hall for the organizations (Richman 1911, Vol. 1: 281; Lewis 1901: 43-44; Carlson 1984: 67).

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Entertainment was a profitable business in Muscatine in the early 20th century. In spring 1900, the Grand Opera House opened on the northeast corner of Second and Walnut, next to the Episcopal Church. The “strictly modern” building had a seating capacity of 1,100. In 1907, the Family Theater opened, operated by W.S. Hill. Vaudeville and moving pictures could be seen at this location, which had a seating capacity of 800. The A-Muse-U Theater opened in 1911 on Sycamore between 2nd and Front streets. It was exclusively devoted to “high class” motion pictures, with a seating capacity of 600. Three other motion picture houses were also located in town at this time (Richman 1911, Vol. 1: 307).

Building Improvements

With the prosperity, building improvements were seen throughout the city in the early 20th century. In 1906, over \$200,000 was invested in new buildings in the town, mostly in residences and small commercial buildings. With the new and remodeled businesses, the appearance of Second Street had changed substantially: “Many of the stores have made extensive improvements and in some instances double stores have been made in order to facilitate the rapidly increased trade of many of the commercial houses. Besides the home merchants several new business houses have opened up in this city and as a result the property owners were compelled to make improvements which have greatly assisted in changing the appearance of the main thoroughfare.” Additionally, many of the factories had expanded or improved their facilities (*Muscatine Journal*, December 20, 1906, 9).

Likewise, South Muscatine also continued to grow in this period. As the lumber mills gradually reduced business in the late 19th century, the area was facing a significant reduction in employment. However, the growth of the button industry rejuvenated this area by 1909, and additional types of new industries were attracted to the area, such as the Zeigler Canning Factory. The increased number of jobs created a demand for additional housing in this area, and a number of new houses were built to provide housing near the places of employment. With these new businesses, South Muscatine retained its position as the center of industrial activity in Muscatine (*Muscatine Journal*, December 16, 1909, 44).

Several new banking houses were completed in the early 1900s. Hershey State Bank built a business and banking block at 3rd and Sycamore in 1908. The new German-American Savings Bank was also under construction in 1908 at the corner of 2nd and Sycamore. In 1910, the Muscatine State Bank’s new building at Iowa and 2nd was completed at a cost of \$100,000. Finally, First National Bank opened the doors at its new building at 3rd and Iowa in the summer of 1911, completed at a cost of \$100,000. Finally, the new German American Savings Bank opened in 1908 (Richman 1911, Vol. 1: 281, 403).

These early 20th century commercial buildings reflected a variety of architectural styles and utilized a variety of building materials. The Queen Anne style continued to be reflected in several buildings after the turn of the century, demonstrated in decorative metal elements and detailing such as oriel windows, cornices, parapet walls, and surface treatments. Revival styles gained in popularity through the first two decades. Classical Revival and Beaux Arts buildings reflected earlier traditions in symmetry and details. Concrete increased as a building material, initially used primarily for foundations. Molds produced decorative faces for the exterior surface, mimicking stone. Lightweight, hollow concrete block began being produced after 1917. Glazed terra cotta panels continued to provide decorative elements in this period (Nash 2002: E15-16, E33-34).

Industrial buildings in Muscatine tended to be more utilitarian, built with more simple lines and details though typically still brick. In 1909, Muscatine was “one of the great factory centers of eastern Iowa.” The lumber industries, though diminished, continued to be reflected in the Roach & Musser Sash & Door Company and Huttig Manufacturing Company. The button industry was “the most extensive and therefore the most important industry in Muscatine,” employing over 4,000 people. Muscatine had around 120 factories, producing products locally such as food products, wooden boxes, steel stamps, lawn and porch chairs, shoes and slippers, soap, brooms, American cleanser, clay pipes, gas and marine engines, harnesses and saddles, wagons and buggies, button machinery, jewelry, cigars, and carpets and rugs (*Muscatine Journal*, December 16, 1909, 36).

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With the growing community, the 70th Anniversary Edition of the *Muscatine Journal* published in 1910 noted with a headline “Second Street Stores Indicate Prosperity of the Pearl City.” The street was lined by flourishing businesses, making it one of the busiest in Eastern Iowa. While the buildings had been built for a number of years, they were thoroughly modern with the stores enlarged and improved by recent owners. The next headline read “The New Third Street, Muscatine’s Business Thoroughfare of Future.” Though it previously was seen as unwise to build off of 2nd Street or the intersecting blocks, “in the last few years the mercantile interests have developed to such an extent that it is now inevitable that the business district will be expanded.” With new construction, 3rd Street would pressure 2nd Street to maintain its building stock to remain known as “the main street” (Carlson 1997: 46).

Changes in Business and Industry

As transportation evolved in the early 20th century to include the automobile, new business grew up to meet this new clientele. In 1909, four new buildings were built for showcasing automobiles to meet the growing demand, and one additional building was significantly expanded. At this time, over 150 cars were estimated to be owned by residents of Muscatine (*Muscatine Journal*, December 16, 1909, 46). In 1910, the city directory listed six dealers under “Automobiles”: Frank Bowman (219-221 E. Front), Fred Bowman (123-131 E. Front), George W. Fisher (115-117 Mulberry), L.R. Heitz (804 E. 2nd), Jackson Motor Car Company (100-108 W. 4th), and Smalley Auto & Marine Company (313 E. Front). Additionally, one automobile painter, J.W. Richards (422 E. 2nd St), was listed as well as three automobile supply businesses, Jackson Motor Car Company (100 W. 4th), Phillip Ryan (106 Iowa), and Smalley Auto & Marine Company (313 E. Front).

Prohibition became a heated issue in the late 1880s and 1890s in Muscatine as some citizens protested against unruliness. Saloon owners argued back and forth in debates penned in the two local newspapers. The *Muscatine Journal*, edited by John Mahin, argued for prohibition, while the *News Tribune* staff supported the saloon owners. Mahin’s house was bombed late in 1893, bringing the sympathies of the town to the prohibitionist’s side. Prohibitionists finally succeeded in passing legislation to prohibit alcohol in Muscatine in 1908. This significantly changed the business culture in downtown as over thirty saloons closed. The *Journal* praised the new law at the end of 1909, bragging that Muscatine was the largest dry town in Iowa. By 1914, it was reported all these storefronts were filled with other businesses, and that despite difference of opinion on their absence, “business as a whole seems to have gone forward with as much marked success as it did before” (*Muscatine Journal* December 16, 1909, 45; RPC 1914: 3; Carlson 1984: 39).

Commercial and Industrial Growth in the 1910s and 1920s

The Commercial Club continued to work to improve the quality of life in Muscatine and attract new businesses and industries through the early 20th century. Organized in 1892, it moved to the Hershey Building upon its completion in 1908. By 1901, they were described as being “behind all important public improvements and pushed them to successful termination.” Their goals in 1910 focused on attracting and expanding industry, providing a sufficient work force for the factories, and providing sufficient housing for the work force. With the booming pearl button industry, Muscatine experienced a housing shortage in the early 1900s. The Commercial Club launched a new program to finance the construction of houses by its membership to meet this demand (Lewis 1901: 26-27; Richman 1911: Vol. 1, 435; *Muscatine Journal*, December 16, 1909, 16).

The 1910 map of Muscatine did not show any significant growth in subdivisions from the 1899 map, though the increased number of dwellings and businesses are reflected on the 1912 Sanborn map. The 1910 map highlighted the important public buildings and industries in the downtown area (Figure 8). The development is reflected in the division of the 3rd Ward. The 1912 Sanborn map depicts the boom in the pearl button industry, with factories scattered throughout town. The majority are concentrated in South Muscatine and east of the downtown area.

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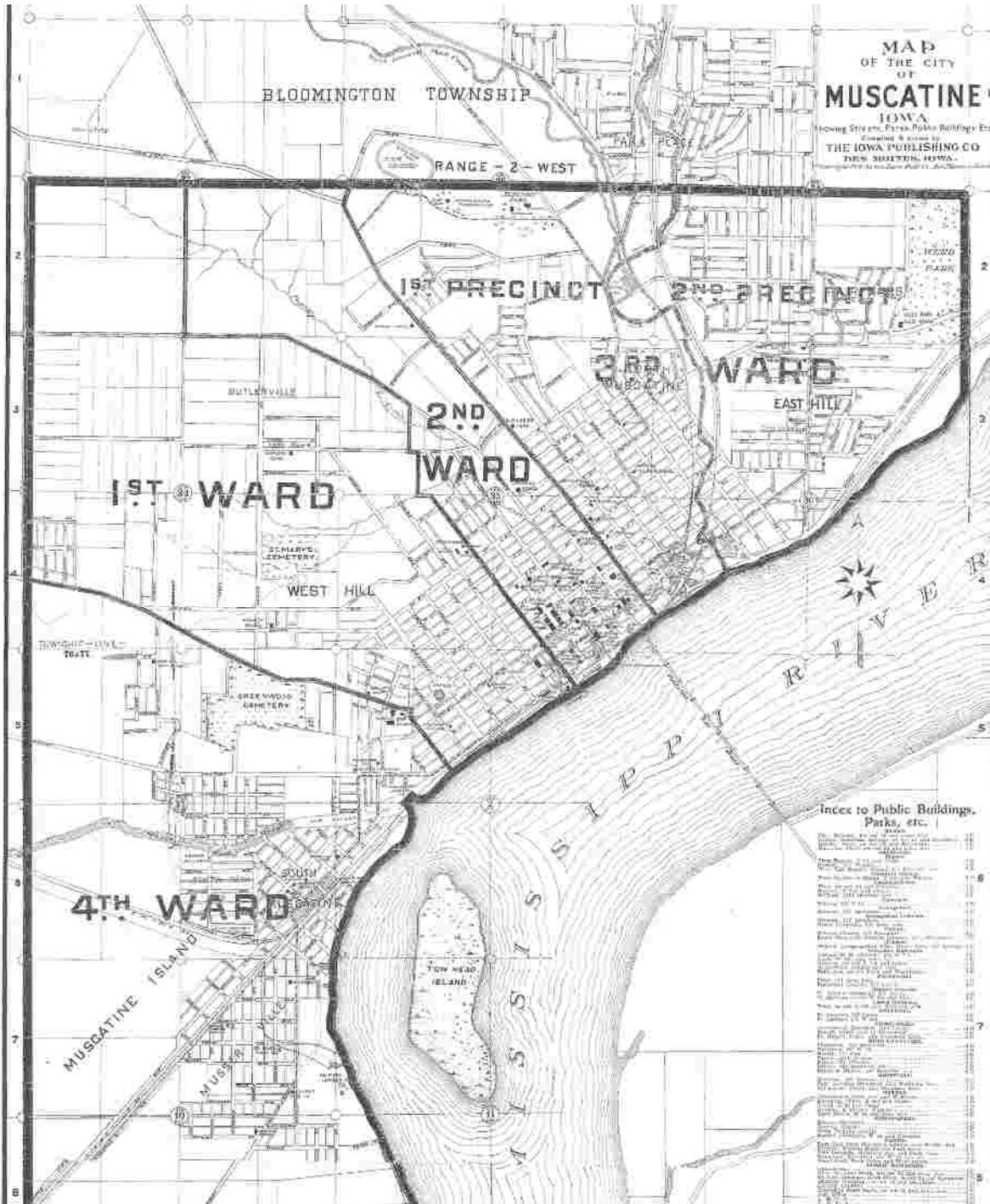


Figure 8. 1910 Map of Muscatine (Iowa Publishing Company 1910).

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A c.1914 publication highlighted the businesses and industries in Muscatine. The pearl button industry was naturally the largest, netting an estimated three million dollars annually. It was followed by the two sash and door mills. Other industries in town included iron foundries, boiler works, a clay pipe factory, concrete plants, wood and metal water tanks, cigar factories, box factories, and wagon and carriage factories. Muscatine also continued to boast a number of food or agricultural related businesses such as two ice plants, candy and ice cream factories, canning and preserving factories, and produce and seed shippers. The payroll was estimated to be approximately \$60,000 per week (RPC 1914: 3)

The same publication described Muscatine as an attractive, modern community with a population of around 17,000. The city boasted over 83 acres of park area and marvelous views from the bluff of the Mississippi. About 19 of the 81 miles of streets in the area were paved. The city had a fine water supply, transportation connections, and night street lights. Overall, the cost of living was relatively low, with 85% of the residents owning their own houses. The fact that Muscatine was one of the largest cities in the country without saloons was also emphasized for the quality of life. Finally, business owners had an extensive retail selection, which was sold for fair prices (RPC 1914: 1-3).

Muscatine reflected the growth of the community through the pearl button industry by erecting several new downtown buildings in the early 20th century. Hotel Muscatine was completed in 1915 by the design of Chicago architect Paul V. Hyland, who also designed the Muscatine State Bank Building in 1910. In January 1916, a fire at the Lilly Dry Goods building threatened other properties but was contained to the site. The Laurel Building rose in its place the following year.

The 1919 Sanborn Fire Insurance Map shows the significant growth of Muscatine in the first two decades of the 20th century. The original town was nearly completely developed, with residences extending beyond 8th Street (Figure 9a). Additional residential development was concentrated on the east side along Park Avenue. Some residences were also built in Park Place by this period, though the area was not covered on the detailed Sanborn maps. Commercial interests continued to be concentrated along 2nd Street between Pine and Mulberry, though additional stores were found scattered in some of the neighborhoods. Mulberry also had a number of commercial interests, particularly concentrated around 5th Street (Sanborn Map Company 1919).

Industrial interests continued to be concentrated along the river and railroad, particularly east of the downtown area and in South Muscatine in 1919. As the lumber interests faded, so did the land that they covered. Additionally, button companies had moved into existing buildings, as well as building new facilities. E. 2nd and E. 3rd Street between Mulberry and Cypress continued to be the most concentrated industrial area. The Huttig Manufacturing Company continued to be represented with buildings spanning several blocks. The button companies had expanded to include U.S. Button Company, Pennent Pearl Button Company, Automatic Button Company, and two buildings for the Hawkeye Pearl Button Company. A number of other business interests continued to have large buildings in this section of town, including the Citizens Railway and Light Company (Sanborn Map Company 1919).

South Muscatine / Musserville had undergone several changes in this period with the decreasing lumber business (Figure 9b). The old Musser Lumber Company site was depicted as a park. The Roach & Musser Sash & Door Company continued to operate in roughly the same area, with some storage on the old Musser Lumber Company grounds. The area once spanned by the Hershey mills at the north end of South Muscatine was occupied by their descendant (the Beach & Stortz Lumber Company), as well as the Zeigler Canning & Preserving Company, Puritan Ice Company, McKee & Bliven Button Company, and Automatic Button Company No. 2. Other button companies in this section of town included the James J. Heley Button Company, Charles Schmaltz Button Blank Factory, Hanover Button Company, Teichmiller Button Blank Factory, and W.W. Richard Button Blank Factory. Other businesses, such as Iowa Sheet Metal Products and F.O. Kemper Cooper Shop, were also located in South Muscatine (Sanborn Map Company 1919).

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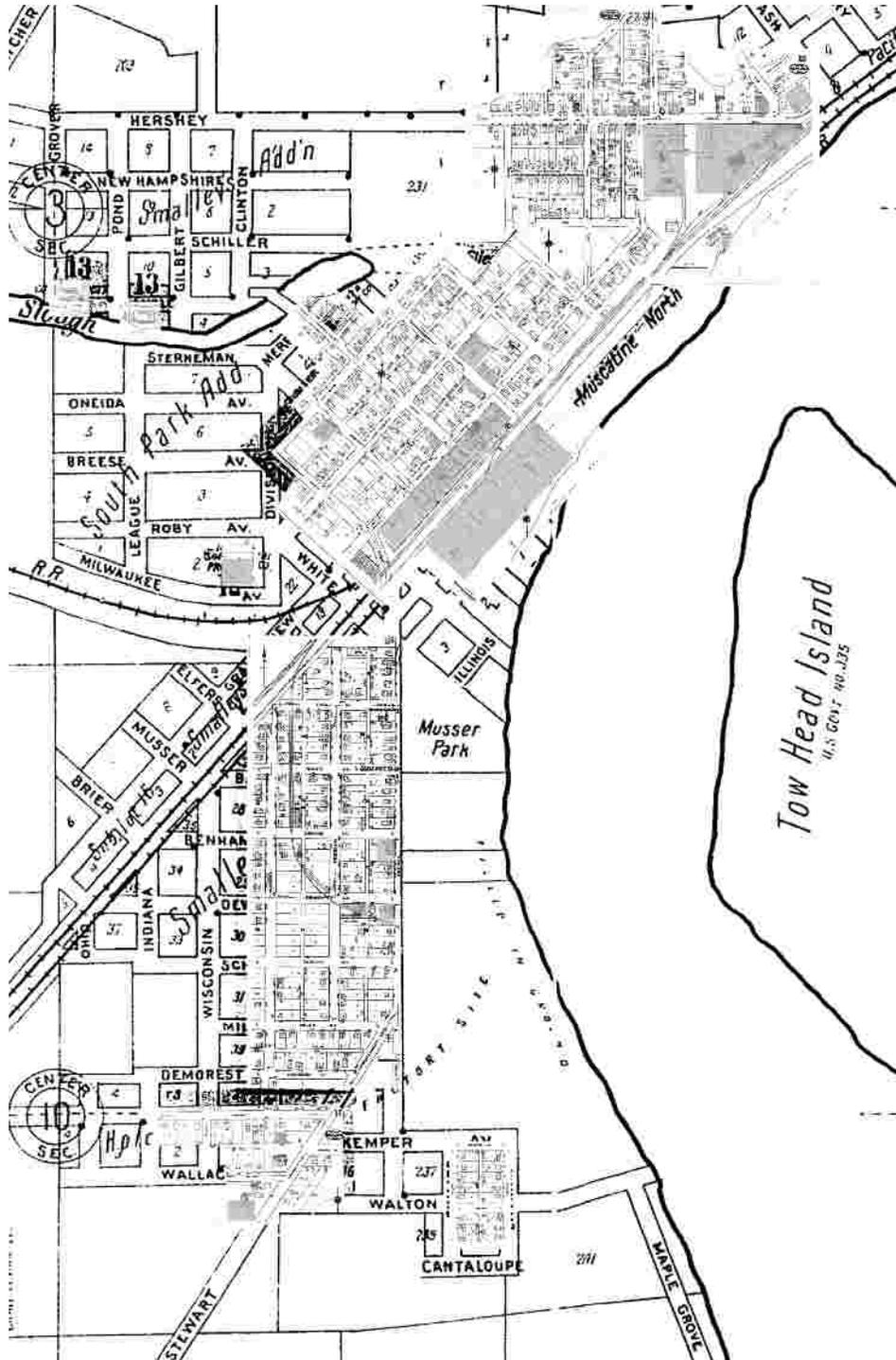


Figure 9b. 1919 Sanborn Fire Insurance Map of "south" Muscatine, detailed maps overlaid on first page key with commercial and industrial areas roughly shaded.

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Some additional businesses were in more isolated locations on the north and west edges of Muscatine in 1919. The Barry Manufacturing Company, the closest to the other industries, was located on E. 4th Street near the railroad tracks leading north out of town. Other industries further north along these tracks include the C.E. Richards Slaughter House near Woodlawn, the Heinz Pickle Company on Monroe and Isset, and the Continental Serum Laboratories on Isset at Bidwell. The Muscatine Broom Factory was located further west on Colver near Isset, as was the Kranz greenhouses on Parnam near Mulberry (Sanborn Map Company 1919).

Small businesses that began in the late 19th century also continued to contribute to the local economy and the image of Muscatine. The Berlin Studio, Grossheim's photography firm, continued to prosper throughout the first half of the 20th century. By 1901, Alexander Grossheim's photography was found in "almost all Muscatine homes." He, along with his younger brother Oscar, continued to photograph people, events, and buildings, eventually taking over 55,000 plates. Alexander retired from the photography business around 1911, while Oscar continued until 1954 when he retired at age 92. This collection, currently held by the Musser Public Library, continues to contribute to life in Muscatine through the images of Muscatine from 1887 to 1954 (Lewis 1901: 99-100; Bublitz et al 1996: 1, 43, 45-46; Grossheim Collection, Musser Public Library 2004).

The Barry Manufacturing Company, thriving on their production of machinery for the button industry, patented the double automatic button machine in 1904. They further improved on this design over the next decade. They continued to be innovative and patented the Barry steel pulley in 1914. With its success, a new plant for its manufacture was built at Poplar and Fifth streets. In 1915, it reincorporated as the Barry Company for \$500,000 with Nicholas, Jr., Patrick, and Thomas Barry still at the head. Four of their sons, John C., Robert K., Richard L., and Albert S., became involved in the business in the 1910s and 1920s, continuing it after the deaths and/or retirement of their fathers. During World War II, the Barry Company landed several defense contracts, producing machines for classifying bullets, precision parts for planes and guns, and various cutting tools (Carlson 1984: 38, 82; Lewis 1901: 67-68, Petersen 1952; "Historic Dates of Barry Firm are Recalled" 1943).

The Heinz plant in Muscatine also continued to grow and expand in this period. Chili sauce was added to the line in 1924, followed by tomato soup in Building #16 in 1926. By 1926, 1,000 people were employed during the peak season. Tomatoes (ketchup or chili), pickles, onion, or horseradish were processed locally depending on the season. Empty ketchup bottles arrived by train, and female workers glued on labels. The number of products continued to increase through 1933 when Muscatine truly produced "57 varieties." During WWII, the Muscatine plant produced pickles and baked beans for the U.S. Armed Forces. Additional women worked during this period, but most kept their jobs even after the war ended as there always had been jobs for both sexes at this plant. While men worked in warehousing, receiving, and maintenance, women worked as line operators, product sorters and processors, and managers. Extensive renovation of the plant began in 1956, expanding across Monroe Street. The new salt house and pickle building were completed in 1957 followed by Building #20 (warehouse) in 1960, kitchen building in 1962, manufacturing building and office in 1963, and Building #14 in 1964 (Lash 1993: 6-21, "Local Company" 1948).

Building Improvements in the 1910s and 1920s

New commercial buildings continued to reflect the Revival styles of the turn-of-the-century as well as new styles by the 1910s and 1920s. The vocabulary of the Classical Revival continued to be reflected in commercial buildings along with the newer Mission style, which introduced Spanish elements to Midwestern buildings. Overall, commercial buildings tended to be simpler, without the details found in late 19th century buildings. Decorative elements reflected the Prairie School and Art Deco styles. While the Prairie School and Craftsman style buildings focused on the horizon, the Art Deco style emphasized the vertical. Examples of these styles, less formalized than in many larger cities, appeared in smaller Midwest towns like Muscatine. Many of these new buildings were only one or two stories in height, compared to the typical three story building of the late 19th century (Nash 2002: E33-34).

Additionally, while brick continued to be the most popular material, modern materials were also introduced in these early 20th century buildings. Brick was often applied as a veneer over concrete in this period, and they were often molded decoratively such as

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the “wire cut” bricks. The increased popularity of steel as a building material permitted the development of large interior spaces uninterrupted by columns. Transoms above plate glass windows sometimes consisted of prism glass panels. Structural glass also developed in the 1920s and 1930s. Vitrolite and Carrara glass are the best known brands, colored opaque white, cream, black, red, blue and other popular shades. This glass was often utilized in storefront remodels in this period, as early 19th century buildings were “updated.” The sleek modern appearance reflected elements of the Art Deco and Art Moderne styles. Concrete, particularly in molded forms, also continued to gain in popularity through this period, and entire buildings of concrete began to appear. Structural clay tile also continued to develop, often used for infill in walls of steel or reinforced concrete. In the late 1920s, colorful clay tile became available for exterior applications. While these were used on new buildings, they also were utilized to “update” earlier 19th century buildings. Clay tile roofs also became popular in this period (Nash 2002: E17-19, E34).

Business Profile of Muscatine in 1923

In the 1923 city directory of Muscatine, the typical commercial enterprises seen in the 19th century continue to be listed, such as the 11 drug stores, 10 dry goods stores, 15 clothing stores, 9 gents’ furnishings, 12 ladies’ ready to wear garment stores, 15 boot and shoe stores, 7 millinery stores, 3 five and ten cent stores, 5 variety stores, 6 department stores, 6 hotels, 5 banks, 20 barbers, 3 beauty parlors, 5 hair dressers, 8 billiards and pool halls, 2 book and stationery stores, 2 tea and coffee stores, 4 china and glassware stores, 6 jewelers and watch dealers, 6 music and instruments stores, 3 sewing machine dealers, 7 stove and tinware stores, 9 carpet and rug stores, 12 coal and wood dealers, 3 wholesale grocers, 66 retail grocers, 5 commission merchants (groceries), 5 wholesale fruit and produce dealers, 8 fruit stores, 14 meat markets, 4 dairy and produce stores, 5 bakeries, 20 confectionaries, 9 ice parlors and manufactories, 15 restaurants, 3 ice dealers, 6 furniture stores, 1 gunsmith, 6 hardware stores, 2 house movers, 3 laundries, 3 newspapers, 3 piano stores, 3 printers, and 8 wallpaper stores.

Additionally, a number of professionals continue to work in town, including 20 lawyers, 25 physicians, 4 ear, nose, and throat specialists, 3 oculists, 3 optometrists, 3 osteopath physicians, 35 nurses, 12 dentists, 3 chiropractors, 4 veterinary surgeons, 4 civil engineering firms, 20 fire insurance agents and companies, 14 life insurance agents and companies, 29 real estate agents, 18 loan agents, 10 tailors, 8 merchant tailors, 20 music teachers, 3 piano tuners, 4 photographers, 69 notaries, 10 blacksmiths, 9 cement contractors, 27 contractors and builders, 5 brick contractors, 4 paving contractors, 34 painters, and 3 plasterers. Henry W. Zeidler continues to be listed as the town’s only local architect.

More industrial and construction oriented businesses listed in 1923 are 3 brick manufacturers, 5 lumber and building material stores, 2 planing mills, 2 roofing companies, 4 cement block dealers, 4 cement dealers, 2 culvert dealers, 3 bridge builders, 1 clay pipe manufacturer, 3 marble and granite works, 2 boat builders, 10 button manufacturers, 33 button blank factories, 4 wholesale button dealers, 5 crushed shell dealers, 4 grit suppliers, 1 button machinery supplier, 2 button cutter suppliers, a biological products manufacturer, 2 bottling works, 2 canning factories, 2 pickling works, 10 cigar manufacturers, 1 clock manufacturer, 1 wholesale harness and saddlery dealer, 4 feed yards, 5 flour and feed dealers, 5 sand and gravel dealers, 1 slaughterhouse, 3 foundries, 5 furnace dealers, 8 gas fixture stores, 7 machine shops, 9 tin and sheet metal dealers, and 5 welding shops.

New businesses include 2 art goods stores, 2 advertising companies, a bee supply dealer, 2 bicycle shops, a carpet weaver, 9 electrical supply stores, 5 graphophone stores, 2 junk dealers, 4 stores with Kodaks and supplies, 4 moving picture companies, 11 paint and oil stores, 4 popcorn stands, 4 radio and supply stores, 6 second hand stores, 8 soft drinks and lunch counters, and 4 sporting goods stores. Finally, there are 2 bands and orchestras, 2 bath rooms, a business college, an express company, 3 florists, 3 hose and ladder companies, 2 hospitals, a library, 4 railroad companies, 2 telegraph companies, a telephone company, and 5 theaters listed in the 1923 city directory.

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Rise of the Automotive Industry

New specialized buildings also developed in this period that focused on the automobile. The rise of the automobile led to the need for showrooms, repair shops, garages, and gas stations. Sales and service buildings were typically one-story buildings with a large footprint, filling an entire or multiple platted lots. Trusses supported the roof, eliminating interior posts that interfered with moving vehicles. Stepped parapets often hid the arched roofs. While concrete was typically the structure material, a brick veneer was usually applied to the exterior of these buildings. Early gas stations reflected residential architecture, evolving to more commercial and industrial buildings (Nash 2002: E34-35).

By the 1920s, the automobile became a key factor in business in Muscatine. The street railway had begun declining, replaced by free running motor coaches. In 1929, the city removed the tracks associated with the system, paving its streets. Companies, such as Bitulithic Pavement Company, were employed to remove rails and pave the streets. Several additional automobile related businesses opened around Muscatine in this period. The number of dealers selling automobiles increased to 13 in 1923 from 6 in 1910. An additional 2 dealers sold motorcycles, 5 dealers sold motor trucks, and 4 dealers sold tractors. Companies also specialized in aspects of the business, such as the 23 companies selling automobile accessories and tires, 7 companies selling used parts, 3 auto painters, 6 battery stores, and 17 businesses focused on automobile repair. One business, the Van Nostrand Saddlery Company, adapted their products to accommodate the automobile. Throughout town, 15 garages provided parking for cars, including several large facilities on Front Street (Mississippi Drive; US 61) and several others in and near the downtown. The number of filling stations also skyrocketed by 1923 to 10, including Cities Service Oil Company (400 E. 2nd and 917 W. Front), Go-Gas Station (129 W. Front), Hawkeye Oil Company (129 W. Front), Independent Oil Company (223 E. 3rd), William Montgomery (Park and Madison), Standard Oil Company (223 E. Front, 117 E. 4th, 1206 E. 2nd), and Wallace Coal Company (716 E. 2nd) (*City Directory* 1923; Carlson 1984: 91, 142). With the "Great White Way" and US 61 running through Muscatine by 1930, the automobile traffic increased and new related businesses located along this main route. In 1929, US 61 was paved from Muscatine north to the county line, and it was paved south to the county line in 1930.

New and Old Business Growth

In addition to the manufacturing from the pearl button industry, other manufacturing concerns also contributed to the local economic base. For example, Charles H. Lembke and John Knell founded the All-Steel-Equip Company in 1912. Through hard work, they made a fledging metal shop successful. Early on, they produced metal enclosures used by electrical contractors, striving to produce the highest quality products. They expanded to manufacture lockers and steel cabinets for office environments. By the late 1930s, the product line also included vertical files. When steel became readily available after World War II, Allsteel introduced a line of steel desks. Described as "knock down" in design, these modular units could be custom-configured at the dealership for individual requirements. They continue to maintain their international company in Muscatine today (Allsteel 2004).

Old businesses also continued to play a role in the economy. Agricultural trade and support businesses had formed the backbone of the community in the mid-19th century and continued to contribute in the early 20th century. Farm implement stores, such as the one began by Archie Bowser, Eugene Sheppard, and A.T. Seidler, sold implements and hardware to farmers. The Hahns continued to operate large farms, growing fruit and vegetables. They sold their produce from their headquarters on Mississippi as well as shipping to other states. Muscatine was also known for its melon production (Carlson 1984: 123).

One unique business arrived in Muscatine in the form of Norman G. Baker in the late 1920s. Publicized across the country by

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his radio station, KTNT, he launched a merchandising and manufacturing company called Tanglely Enterprises in Muscatine. He sold a variety of types of products, including tires, coffee, radios, batteries, paint, cigars, and medical products. His most controversial was a cure for cancer, and he founded two hospitals in Muscatine to treat patients. Though labeled a quack by the American Medical Association and the local newspaper, his hospitals attracted people to Muscatine in the early 1930s, helping the community weather the early years of the depression. He launched a newspaper and magazine to promote his ideas and respond to his critics. The A.M.A. sued him for libel in 1932, and his hospitals' numbers began to decline. Baker left the community in 1934, and the various operations at Tanglely industries and his hospitals closed within a few years (Carlson 1984: 92).

The 1928 Sanborn Fire Insurance map of Muscatine continues to show the increased growth of Muscatine. Additional sections of town are covered, including some previously developed and newly developed areas. A number of new residences are depicted on the north side of the east portion of town, in the neighborhoods along Park Avenue. Additionally, more houses are found just beyond the northeast section of the original town and in the West Hill neighborhood. Though some commercial interests are found in South Muscatine and some neighborhoods, the main central business district continues to be concentrated along E. 2nd Street between Pine and Mulberry. The east end of 2nd and 3rd Streets and South Muscatine are the primary industrial areas, with some additional industries scattered on the fringes of town to the north and west (Sanborn Map Company 1928).

Prominent new businesses of the 1930s and 1940s

Professional businesses, such as engineering, also played a significant role in the business development of Muscatine in the 20th century. Charlie Young founded Central States Engineering in 1913. In 1932, he was joined by a partner, C. Maxwell Stanley. Under this new partnership, the firm grew rapidly as Young & Stanley, Inc. In 1938, Young retired, and the firm became the Stanley Engineering Company. Stanley pioneered quality methods for rural electrification, state highways, sanitary systems, and running water. In 1957, the company opened its first international office in Monrovia, Liberia. Stanley's methods and service practices were codified in his 1961 book, *The Consulting Engineer*, as a staple source book for engineers. The name changed to Stanley Consultants, Inc. in 1966 to better reflect its work, and it continues to operate under a new parent company, The Stanley Group, as one of the largest engineering firms in the Midwest. The corporate headquarters in Muscatine supervise the eleven domestic and ten international offices (The Stanley Group 2004).

C. Maxwell Stanley also founded another industry in Muscatine after World War II that would become a backbone for the community into the 21st century. Along with his brother-in-law, Clement T. Hanson, a successful advertising executive, and H. Wood Miller, an industrial designer, they began to make newly designed steel kitchen cabinets. "The Home-O-Nize Company" incorporated in 1944. The company was founded on the operating principles that the company would treat its customers, suppliers, work force and neighbors with fairness and respect, something that Stanley believed was key to success. With the short supply of steel at the end of the war, they briefly made smaller file boxes. When sheet steel became available, they began making white metal storage cabinets, and adapted these for office use by simply painting them olive green. The company began in an office in Davenport, moving to the old U.S. Button Company Building at Third and Oak in October 1945. Because "Home-O-Nize" seemed inappropriate for an office cabinet manufacturer, they went by the initials only, evolving into The HON Company (Stanley 1992: 7-14; HON Industries 2004).

Gage A. Kent started a small feed plant in Muscatine in 1936, moving from Indianola to take advantage of the river. In 1927, he had introduced "Kent Baby Beef" to specifically address the nutritional needs of cattle. In this new location, Kent Feeds prospered. He teamed up with S.G. Stein III in 1943 to form the Grain Processing Corporation. With government financing,

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the firm built a grain alcohol manufacturing plant to supply the synthetic rubber program of World War II. After the war, they continued operations, producing industrial and beverage alcohol, starch, and maltodextrins (Kent Feeds 2004).

Business and Industry after World War II

Commercial buildings constructed in the 1940s and 1950s continued the trend towards simpler buildings. Brick continued to be the most common facing material, usually applied as a veneer over a concrete or steel structure. The detailing on these buildings was very simple, often consisting solely of a soldier (vertical) brick course. Openings were typically not emphasized, and storefronts incorporated steel elements and large windows. Buildings continued to be “updated” in this period, with storefronts remodeled or a new simple brick façade applied over the earlier decorative façade. These early and mid-20th century “updates” reflect the continuing use and transitions of these commercial buildings.

The 1946 Sanborn Fire Insurance Map is the revised version of the 1928 map (Figure 10a). Thus, it does not cover any additional area than the 1928 map, though it shows the updates within this area. Though some commercial interests were located in neighborhood areas, the central business district continues to be concentrated in a six block area along 2nd Street between Pine and Mulberry. The specific types of businesses in the downtown area are no longer described, with buildings only marked with the notation of “S” for store, but the city directories reveal that a variety of businesses continued to operate in this area. The largest buildings in downtown Muscatine were the Laurel Building, Hershey Building, and Hotel Muscatine (Sanborn Map Company 1946).

More industrial interests continued to be focused along Front Street between Linn and Cedar in 1946, expanding further east to Mulberry. The noticeable additions to the interests in this section of town are the numerous businesses catered to the automobile. Two automobiles sales and service businesses, two gas station, one service station, and two garages were located between Cedar and Mulberry in an area that was previously primarily residential. Additional garages, repair shops, and filling stations were found in the area between Linn and Cedar, as well as a wholesale wool business, restaurant, wholesale grocery, furnace shop, wholesale fruit, machine shops, and the Iowa Pearl Button Company (Sanborn Map Company 1946).

A number of manufacturing companies also continued to be found further east of the downtown area, east of Mulberry, along E. 2nd and E. 3rd streets. Huttig Manufacturing Company, producing sash, doors, and blinds, continued to operate in its primary buildings, though its storage area has been significantly reduced. Though the button industry has begun to decline, two of the large button factories still operated in this area, the Automatic Button Company and Hawkeye Pearl Button Company. Additional gas stations, repair shops, and garages are also depicted in this section of town. A number of other business interests had buildings in this section of town: Iowa Electric Company, McKee Grain & Feed Company, Hawkeye Soy Products, truck and farm machinery sales, oil warehouse, and fur and junk shop (Sanborn Map Company 1946). The HON Company is not yet shown in the old button factory at Oak and 3rd on this map, though they had recently moved here. Over the next decades, HON would slowly take over most of this section of Muscatine, reusing some old buildings and demolishing others for new buildings.

South Muscatine / Musserville also continued to evolve in this period, attracting new industries to this area as older ones declined (Figure 10b). The Beach & Stortz Lumber Company and McKee & Bliven Button Company continued to operate at the north end of the former island. The Carver Pump Company moved into the old Zeigler canning factory, and the Muscatine Processing Company (soy bean mill) is located next door in the old ice company building. The Romann, Liedde & Company (meat packers) and an ice cream factory are also located on Hershey Avenue. Roach & Musser Company continued to operate in their buildings along Grandview Ave, the last of the lumber interests in this section of town. A

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couple of button companies did continue to operate in this southern section of town, including the L.F. Yarek Button Works. Other companies in this section of town include the Kranz Greenhouses and Grain Processing Corporation (Sanborn Map Company 1946).

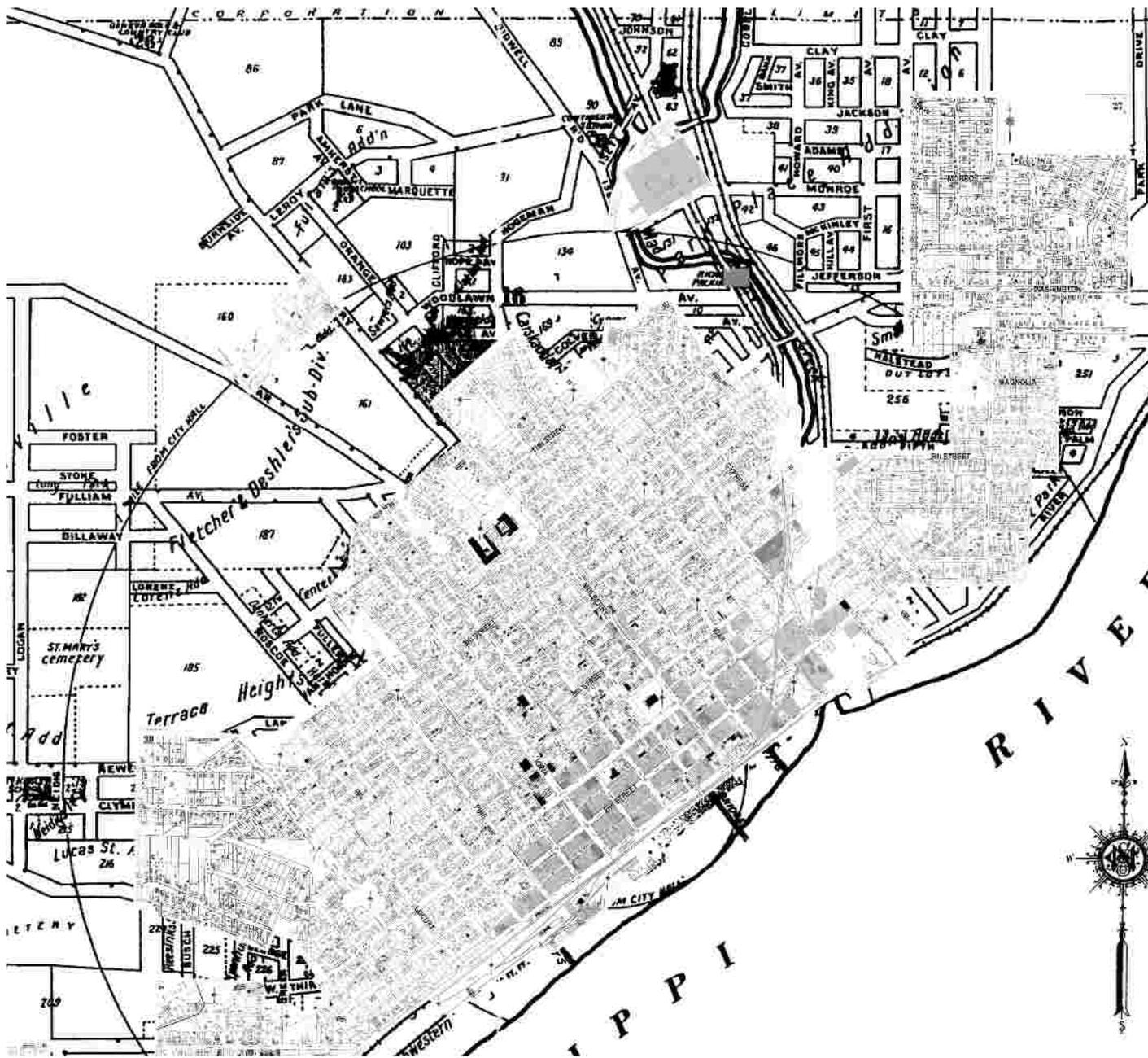


Figure 10a. 1946 (1928 revised) Sanborn Fire Insurance Map of the main section of Muscatine, detailed maps overlaid on first page key with commercial and industrial areas roughly shaded.

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Figure 10b. 1946 (1928 revised) Sanborn Fire Insurance Map of “south” Muscatine, detailed maps overlaid on first page key with commercial and industrial areas roughly shaded.

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Additional businesses were located on the western and northern edges of Muscatine. The H.J. Heinz factory is one of the largest, located on Monroe Street in the north end of town and Park Place Addition. Additional industries were found along the railroad tracks through this section of town, including the Barry Pulley Company at 5th and Poplar, Weber & Sons Button Company on E. 6th Street, Shell Processing Company on E. 5th Street, and Continental Serum Laboratories on Isett. These businesses represent the wide variety of types of industries found in Muscatine by 1946 (Sanborn Map Company 1946).

According to the 1949 city directory, the primary industries in Muscatine were producing pearl buttons, plastics, millwork, food products, machinery, burial vaults, sheet metal products, wooden toys, industrial alcohol, centrifugal pumps, grain and feeds, and clothing. These 54 manufacturing establishments employed 3,510 workers. An additional 2,773 workers were employed in the 339 retail stores. The three hotels had 250 rooms, and the three theaters had a seating capacity of 2,592.

In the 1952 city directory of Muscatine, the typical commercial enterprises seen in the early 20th century continue to be listed. The number of dry goods stores has dropped from 10 in 1923 to 2 in 1952, replaced by the department store. The number of fruit and produce stores has also decreased as groceries became the main suppliers of these goods. Meat markets have also been combined with grocery stores in the listings. No general clothing stores are listed, compared to 15 in 1923, though 4 men's clothing, 11 women's clothing and 1 children's clothing store are listed. The number of shoe stores has also decreased from 15 to 7. Only 2 banks continued to operate in town in 1952, though the town continued to support 6 hotels. Finally, the number of barbers fell to 20 as the number of beauty shops skyrocketed to 26.

Additionally, a number of professionals continued to work in town, including 23 lawyers, 18 physicians, 4 optometrists, 6 nurses, 13 dentists, 5 chiropractors, 3 veterinarians, 3 engineering firms, 22 insurance agents and companies, 10 real estate companies, 8 mortgage loan companies, 3 tailors, 6 music teachers, 3 piano tuners, 6 photographers, 1 notary, 1 blacksmith, 34 contractors, 1 brick and stone contractors, 1 cement contractor, 3 electrical contractors, 9 plumbers, 1 sheet metal contractor, 1 metal roofing dealer, and 20 painters. With the changing economic and social conditions, the number of tailors and independent nurses had significantly declined. Another notable change is the specialization of the insurance business. By 1952, there were listings for accident and health, automobile, casualty, fire, fire and marine, health and accident, and life insurance compared to only fire and life in 1923. Similarly, while the number of general contractors increased, the specialized builders decreased as the general contractors could also provide these services. The number of electricians, plumbers, and heating contractors on the other hand, has increased as these services became standard in buildings. A business also provided insulating materials. An office for the Sears & Roebuck Company for mail order houses also continued to operate at 227 E. 2nd Street, and Quonset Buildings could be bought at Lamp-Rehwaldt at 516-26 E. 2nd Street.

More industrial and construction oriented businesses were also listed in 1952. While the lumber companies have declined, the number of general building material and supply dealers has risen to 10 from 5 in 1923. Only 1 cement block manufacturer operated in town by 1952, and there were 2 cement dealers. Brick manufacturing has disappeared from the listings. With the declining pearl button industry, only 14 button manufacturers (including blank and plastic) are listed and 1 crushed shell dealer. As farming became more mechanized, the number of agricultural implement dealers rose again to 5 in Muscatine. A broom factory continued to operate in town. Four listings were found for beer distributors, and two companies, the St. Clair Bottling Works and Coca-Cola Bottling Company, are listed under "bottlers – carbonated beverages." A meat packing company was among the other industries located in town.

Automobile-oriented businesses continued to increase through 1952 as the automobile became more common. In comparison with the 1923 listings, the number of gas or filling stations increased from 10 to 36 stations and the repair shops increased from 17 to 24. The automobile dealers remained at 13, while 1 dealer sold motorcycles and 3 dealers sold trucks. At the same time, the initial growth in some other related businesses ended as the number of automobile accessory and parts dealers decreased from 23 to 12,

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battery dealers decreased from 6 to 4, and auto painters declined from 3 to 1. A new category for used automobiles was created by 1952, with 15 listings. Additionally, automobile wrecker service had a listing, as did automobile wheel alignment. Finally, 10 tire dealers and repairers were listed in 1952.

In addition to listings seen previously, a number of new categories are found in the 1952 city directory in comparison to the 1923 directory as technology progressed. Some of these businesses include the 5 air conditioning dealers and contractors, 4 electric appliance and service dealers, an antique dealer, a cheese manufacturer, a day nursery, a delivery service, 3 gift shops, 2 kennels, 1 credit bureau, the Municipal Airport, 2 taxi services, and 6 trucking companies. The “places of amusement” in 1952 included two ballparks and a roller skating rink, and 8 parks and playgrounds were also found in town.

The new industries in town, gradually replacing the diminishing pearl button business, continued to grow and develop in the 1950s. Kent Feeds continued to expand, building a modern feed manufacturing plant in Muscatine in 1952 to meet increasing demand. It also began a research farm along the Mississippi outside of Muscatine in 1955 to further improve the quality of their product. The 1952 Kent Feeds facility, constructed with a production capacity of 720 tons of feed per day, is still one of the largest capacity feed plants in the Midwest, and GPC is one of the largest corn processors in the nation (Kent Feeds 2004).

The Home-O-Nize (HON) Company developed rapidly in the 1950s as well. In 1951, it launched “Operation Independence,” an effort to focus on full-fledged manufacturing rather than solely producing to fulfill contracts. In 1950, office products accounted for only \$70,000 in sales, less than 20% of the company’s profits. It continued to expand this line, viewed as more difficult to sell than some of its other products. In 1953, HON had sold over \$1 million in products, reaching a cumulative total of \$2 million in 1955. Much of this business was accountable to the significantly expanding sales of office products. By 1955, the company’s founder, C. Maxwell Stanley, knew that this was the segment of its business to focus on. Contract work dropped from 28% of sales in 1955 to only 4% in 1958 as production increased. The company continued to grow and expand, becoming HON Industries in 1968 (Stanley 1992: 35-36, 61-62, 141). In 2004, the company became the HNI Corporation.

A new business was also launched in the 1950s that would become prominent in Muscatine through the end of the 20th century. Engineer Roy J. Carver began his career in the late 1930s making high quality contractor pumps at the Carver Pump Company in Matherville, Illinois. He later expanded to Muscatine, profiting off contracts in World War II. In the early 1950s, he launched Carver Foundry Products to supply the molds for his pump company. In 1957, Carver obtained North American rights to the Bandag system of retreading tires, named for the founder Bernhard Anton Nowak from Darmstadt, Germany. This business has grown into the world’s largest producer of tire retread materials and equipment for the transportation industry (Roy J. Carver Charitable Trust 2004; Bandag, Inc. 2004).

By 1960, the business and industry of Muscatine had shifted from dominance by the pearl button industry to a broader industrial base. This base included several industries that would continue to form the backbone of Muscatine’s economy through the end of the 20th century, including Heinz, Allsteel, Stanley Engineering, HNI (HON) Corporation, Kent Feeds, and Bandag. At the same time, some button companies continued to operate, producing plastic buttons. With these strong industries, the population grew from 20,997 in 1960 to 22,405 in 1970 before stabilizing in the later 20th century. The population of Muscatine in 2000 was 22,697.

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19th Century Residential and Neighborhood Development (c.1833-1900)

Located on the Mississippi River, settlement in the area that would become Muscatine occurred soon after Iowa was opened to Euro-Americans in 1833. Its location at a bend on the Mississippi River made it an excellent location for a community to blossom, though the topography was less than friendly. Development began in the more level ground near the river and soon expanded to the adjacent “West Hill” and “East Hill” areas. Residential development focused on these neighborhoods, while commercial and industrial development was concentrated on the more level area along 2nd Street between Pine and Walnut streets near the Mississippi River. With the steamboat and railroad traffic, Muscatine held a prominence in the 1850s and 1860s only shared by other Mississippi River communities in Iowa. New brick and frame residences were constructed within the boundaries platted for the original town, including West Hill, East Hill, and the area to the north of the downtown.

Following the Civil War, Muscatine continued to prosper as a regional commercial center. Fueled by the lumber industry, Muscatine grew significantly in the 1880s and 1890s. New, larger residences replaced earlier houses. New residential neighborhoods also developed in Musserville and South Muscatine near the lumber mills and other industries in this area. Additional development was planned throughout the community, though much was not developed until the 20th century. The 19th century residential and neighborhood development in Muscatine is significant as it reflects the initial settlement and subsequent growth of Muscatine. While some early settlement buildings continue to stand, the majority of the 19th century resources reflect second or third generation houses, ranging from small vernacular buildings to high style large houses. Neighborhood development spilled beyond the original town plat to areas to the south, west, and north.

Settlement of Muscatine

Most early towns on the Iowa frontier developed along the Mississippi River as the major transportation route into and out of the territory. As noted in further detail in the “Early Settlement” context on pages E3-E13, Muscatine was laid out as Bloomington in 1836, soon becoming the county seat of Muscatine (later Muscatine) County. While this location had the benefits of its location along the river, the terrain was less favorable for development. Josiah P. Walton observed “If one would look up the roughest place in our county he would hardly find an equal to Bloomington in 1836. It was all hills and hollows. They were largely covered with trees and brush. The town was located between them and on four hills – one of them the highest for several miles away – with two large creeks and several small duck ponds to add variety to the wilderness.” However, many of the towns along the river reflected the same characteristics, and the potential benefits of the steamboat landing outweighed the drawbacks of the terrain (Horton 1978: 290). These characteristics of Bloomington defined the early development of the community. The relatively flat area near the river bend supported the first development and ensuing commercial development. Residential development initially occurred in this area as well, with additional houses on the surrounding hills described by Walton.

The original town plat was aligned with the river, facing south-southeast (Figure 1). Thus, diagonal lines were created at areas where the town plat met the standard township and range system through Muscatine County laid out on the strict north-south, east-west grid. It consisted of roughly 54 blocks, with some partial blocks due to the non-alignment. The east-west main streets were numbered while the north-south cross streets were named. Front Street stretched along the Mississippi River while 8th Street was the northern limit to the original town. Iowa Avenue separated east from west, and Broadway Street led to the public square in the west end. Most other cross streets were named for trees, such as Mulberry, Chestnut, Pine, Ash, and Cherry. Muscatine Slough is clearly depicted with one of the several dams at the head of Muscatine Island (Smally pre-1853).

The earliest residential neighborhoods in Bloomington developed within this “original town” plat. While the commercial area was concentrated along Front Street (Mississippi Drive) and 2nd Street between Pine and Mulberry, residential construction began further to the west, north, and east of this core. The majority of the streets were 60 feet in width, and 20-foot alleys typically ran parallel to the numbered streets and the river. By comparison, Iowa was a wider 80 feet. Broadway, measuring 100 feet in width, appears to

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have been envisioned as a wide street leading to the public square. This public square was near the peak of “West Hill,” and its original intended use is unknown. However, it remained open space into the 1870s, when a city reservoir was built on the southwest corner. A block was reserved for the courthouse near the center to the east, far from this public square in the west end. Typical lot size throughout the original town plat was 140 feet by 60 feet, a size that would be repeated in the earliest additions. The only known public or “park” space was the square in the west end.

Early Residential Buildings

The earliest buildings in the 1830s and 1840s were constructed of log, built from timber on the site. The typical log house was described as 16 by 20 feet with a large chimney outside of one end, projecting out about 4 or 5 feet. William Gordon built the first frame building in town, a hotel in September 1836. Since oak was readily available near the site, all the timbers and weatherboards were made from this wood (*History of Muscatine County* 1879: 504; Richman 1911, Vol. 1: 65; Horton 1978: 343, 358-359; EPRI 1977: 4). As Bloomington developed, in 1841 the newspaper reported: “Quite a number of frames have already been raised, and in every direction, the heavy timbers for others are to be seen, ready for the square and chisel. Mechanics of all the building professions, we believe, find ready employment” (Horton 1978: 358). In the 1840s, log buildings became outnumbered by this more refined type of building. Additional carpenters, masons, cabinetmakers, and painters arrived in Bloomington along with other settlers, building the community as well as their new life (Horton 1978: 343, 358-359; *Portrait and Biographical Album of Muscatine County* 1889: 635-636).

With the demand for building materials, the lumber and brick industries quickly began, providing material for residential buildings. The earliest lumberyard was established by the fall of 1839, selling lumber from other areas. The lumber industry would grow gradually through the early settlement period of the 1840s, with key businesses developing in the 1850s. Since Bloomington (Muscatine) is located on a loamy clay deposit, the manufacture of brick also began in the early years. Modest iron deposits are found in this clay, creating a distinctive color to the red brick. Hiram Matthews built the first brick building in 1839 for his brother Matthew (Horton 1978: 342-347, 360-361; *History of Muscatine County* 1879: 504; Richman 1911, Vol. 1: 65; EPRI 1977: 3-4).

By 1844, a steamboat traveler noted that there were “quite a number of handsome brick dwellings and mercantile establishments...On the whole, Bloomington is quite a smart little village of about one third the size of Burlington, and its citizens are very fine clever people” (Horton 1978: 360-61). This description indicates that the town was likely composed of log, timber frame, and brick houses in the 1840s. Overall, few houses have survived from this period of early settlement, so it is difficult to assess early types or styles. With the information known, it appears that most houses constructed in this period were vernacular in nature, including the brick houses. Some of these houses reflected the simple stylistic details of the Federal or Greek Revival styles, as was also reflected in some commercial and public buildings of this period. These houses were typically small buildings, which were replaced by larger or more permanent houses in the second half of the 19th century.

Growth of a Community

In 1849, the name of the community was changed to Muscatine, and the city was officially incorporated in 1851. By 1850, the population of Muscatine had grown to 2,540, with 453 dwellings in the town (Census Bureau 1850; Richman 1911, Vol. 1: 287-288, 451). This ushered in an era of concentrated growth and development for the community. The trading post and steamboat landing were the early focus of the economy in Muscatine in the 1840s and early 1850s. With the influx of people, other industry began to develop, as noted in the “Early Settlement” historic context (pages E3-E13).

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Attention was also turned to improving the community for its residents. While the town had been laid out on a grid, the grid was overlaid on significantly hilly terrain (Figure 11). “West Hill” and “East Hill” remain indicative of this early topography. In 1850, the focus on grading the hilly area around the core of Muscatine began, and the newspaper reported in November that grading was underway on Sycamore from the river to 3rd Street, on 3rd Street from Iowa to Pine, and on Iowa from 2nd to 4th Street, and Chestnut was being improved with a cut between 3rd and 4th Street. A more focused, strong effort followed in 1851 and the subsequent years. Later accounts noted the hills were pushed into the hollows, with the work generally coming out even. A new resident in 1853 continued to describe the site of the town as “very rough, a succession of hills and valleys” that were being graded and filled as the community grew (Reps 1994: 230; Carlson 1990: 56; Randall 1981: 54). Grading efforts would continue through the end of the 19th century, with buildings moved accordingly to align with new elevations.

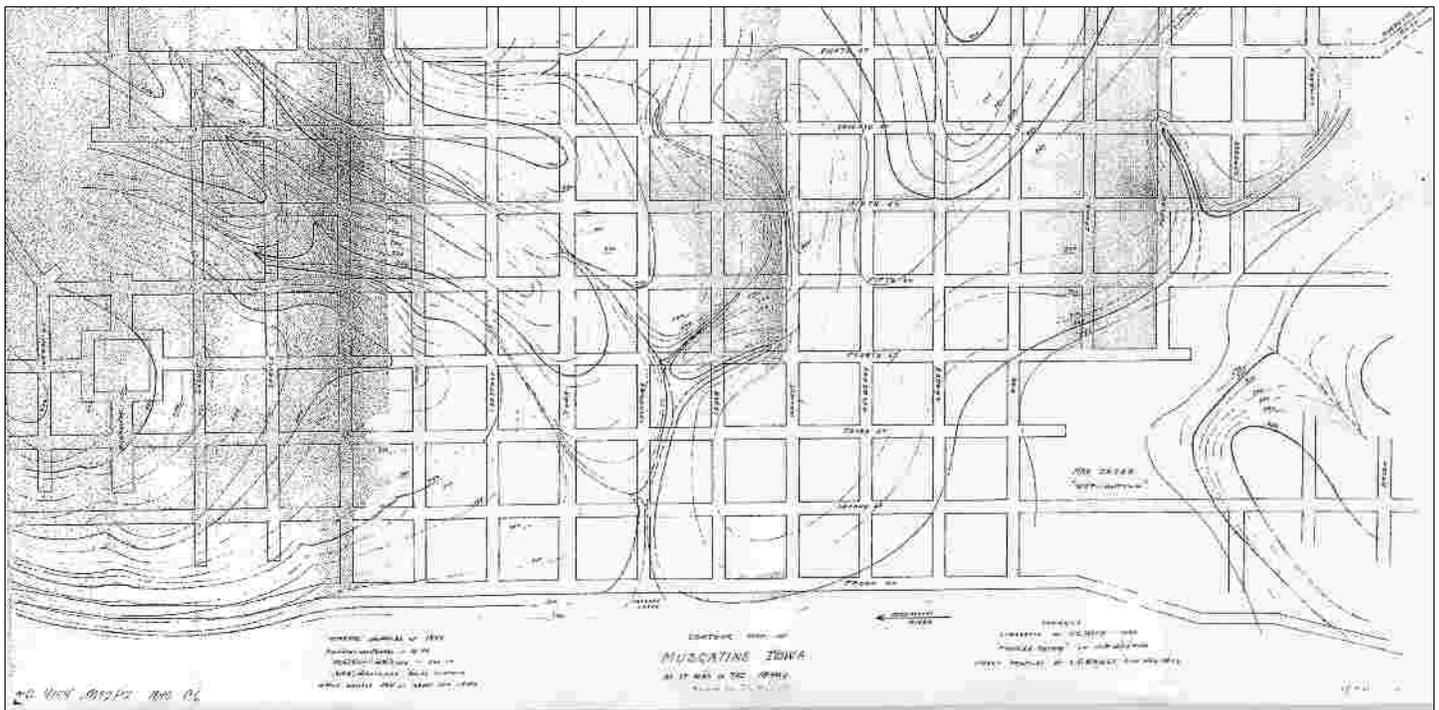


Figure 11. Contour map of Muscatine as it was in the 1840s (10 foot intervals), drawn based on historic profiles and depictions around 1955 (Musser Public Library).

A view of Muscatine appeared in *Ballou's Pictorial Drawing-Room Companion* of Boston on Saturday, August 4, 1855 (Figure 2). The overall hilly nature of the location is clearly visible in this illustration, with the core of downtown located in a relatively flat area surrounded by hills with residential development. Houses are scattered around and to the west-southwest of the downtown area on a large hill, later known as West Hill. Though residential development also occurred in some less visible areas by this time, West Hill was the focus of early residential development, particularly for Muscatine's most prominent citizens. A number of gable-roof small and large houses are visible in this early neighborhood (*Ballou's* 1855: 73).

Prosperity and Development with the Arrival of the Railroad

Muscatine continued to prosper with the arrival of a spur of the Mississippi and Missouri Railroad that connected Muscatine to Davenport in 1855. Richman notes “This year was signalized by a greater increase of business and the erection of more

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houses than during any previous year. More than forty business houses, mostly brick, were built and opened during the year, and about 200 dwellings, nearly all of substantial character” (Richman 1911, Vol. 1: 410-411, 451-452; Carlson 1984: 14).

Though Muscatine had not nearly filled the area platted with the original town, additions began to be added to the community during this period. The first addition had been platted in 1853, followed by three additions in 1856, and five additions over the next three years. The additions generally followed the layout of the original town and ranged in size from a few blocks to over 40 blocks. Farnsworth and Lillibridge’s Addition, as well as the later platted North Muscatine, extended the east-northeast end of the town to the north-northwest by about ten blocks. These additions adjacent to the Original Town plat continued the existing street pattern and width, and lots were also similar to the 60 by 140 foot size. Smaller additions platted on the west-southwest end of the town added around 50 lots to the community (Horton 1978: 306-307, 420; *Portrait and Biographical Album* 1889: 370; Muscatine County Recorder’s Office).

The largest additions in this period were on the head of Muscatine Island, including South Muscatine and Abraham Smalley’s addition to South Muscatine. Early Muscatine consisted of the area north of the Muscatine Slough. The Muscatine Slough was a “river” that extended around a section of the land, making an island in the Mississippi. Muscatine Island was generally swampland, extending about 18 miles downstream. Though a dam was built across the Muscatine Slough in 1845, only three houses were built in this area by 1850, as the log levee habitually washed out. A more solid levee was built in 1851, and improvements were built on the island. As settlement and industry increased, this area became known as South Muscatine. By the late 1850s, several businesses had developed on the “island” of South Muscatine. South Muscatine, about 250 lots on the head of the island, was platted in 1856, soon followed by Smalley’s similarly sized addition further to the south along the Mississippi River. A number of dwellings were built on the island in the 1850s and 1860s. However, the majority of this island was devoted to agricultural production, particularly fruits and vegetables. Though South Muscatine technically developed independently, it was annexed by Muscatine before much building had occurred (Richman 1911, Vol. 1: 449; Walton 1899: 160-162; Muscatine County Recorder’s Office).

Residential Construction and Design in the 1850s

The growth of the town is reflected in the state census of Iowa in 1856. In 1850, the population of Muscatine stood at 2,540, with 453 dwellings in the town. By 1856, the population had grown significantly to 6,173. Additionally, 1,040 dwellings existed in town (Census Bureau 1850; Richman 1911, Vol. 1: 451; Horton 1978: 348-349). This represented a significant construction effort in the first five years of the 1850s. The 1856 city directory notes that “about two hundred dwellings, nearly all of a substantial character” were built in 1855 with the anticipated arrival of the railroad in November. Additional residential construction continued through the end of the 1860s. Many of the first generation houses were replaced in this period, with new houses built of a more substantial character as well. Many of the oldest houses in Muscatine date from this period of construction in the 1850s. Residential construction occurred throughout most areas of the platted town, with no particular concentration noted in this period. While some concentration is found near the downtown area, additional houses were scattered through other neighborhoods to the west, north, and east in this period as well.

Though many of the houses continued to follow basic vernacular plans, more refined details also appeared on houses in this period. Greek Revival was a popular choice for houses, with some Federal details lingering as well. The country embraced the Greek Revival style in the first half of the 19th century as a “democratic” form of architecture, promoted by the leading architects of the period. The Greek Revival house exists in simple and more refined forms in Muscatine. These forms reflect the Greek Revival style with simple Classical corner pilasters, symmetrical façades, wide cornices, front porches with Classical columns, flat lintels, six-over-six-light double-hung windows, dentils, and entries with sidelights and transom

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windows. The one or two story gable-front house is the most simple of these forms, reflecting the historic form of the Greek temple. These houses were built of frame and brick construction. Larger houses were built with a side gable roof with a three or five bay symmetrical façade. Full height, gable-roof porches, either extending across the façade or centered on the entry, were common features of this style. The J.C.B. Warde House, began in 1852, is the most refined example of the Greek Revival style in Muscatine (#70-00370, 205 Cherry Street). Several simpler forms also are found throughout town, with Greek Revival houses continuing to be built into the 1860s (EPRI 1977: 5; McAlester 1997: 178-184).

Though popular throughout the country in the 1840s and 1850s, the Gothic Revival style appears to have been less so in Muscatine. The style emphasized picturesque details such as steeply pitched cross gable roofs, multi-light windows, pointed or Gothic arch openings, porches with intricate details, and decorative trim including bargeboard and bay windows. Andrew Jackson Downing particularly promoted the style as suitable for rural architecture, and the verticality of the style was often cited as suitable for religious architecture. In Muscatine, the style is primarily found in religious architecture, such as Trinity Episcopal Church, and a handful of houses. The best example is perhaps the James Weed house or "The Gables," originally built on a country estate just to the northeast of town, which was later developed as an early 20th century park and subdivision. The estate was also noted for its landscaping, another feature promoted by Downing (EPRI 1977: 5; McAlester 1997: 197-98; Horton 1978: 382-386).

Italianate, or the early Italian villa, is the most prominent early residential style in Muscatine in the 1850s and 1860s. The style reflected some of the picturesque features of the earlier Gothic Revival. Typical features include tall arch windows with elaborate hoods, two-over-two-light double-hung windows, wide eaves with large brackets, and low pitch roofs. While the early Italian villas had rambling plans, the characteristic Italianate house developed as a cubical form with a low hip roof that often had a cupola centered on the peak. This hip roof, cubical form is commonly seen for the larger Italianate houses in Muscatine, such as the George Stone House at 606 W. 3rd Street (#70-00227). Italianate houses in Muscatine were built of brick or frame construction. While some houses feature a central passage plan, many Italianate houses in Muscatine have a side passage layout with the entry to one side of a three-bay façade. Most gable-front versions of this style, distinguished by the large brackets under the eave from the earlier Greek Revival, have this plan. Window hoods or pediments are found on nearly all examples of this style in Muscatine, varying from the simple emphasis of this element to elaborate arch decorative features (EPRI 1977: 5; McAlester 1997: 211-12).

While these architectural styles are found throughout the community, more vernacular houses were also built. Early views of Muscatine show simple one or two story gable-roof houses throughout the community. Houses were oriented to a gable-front or side gable format. Early vernacular plans consisted of two basic rooms, with the addition of a central hall by the mid-19th century. A second or attic story contributed lofted sleeping accommodations for the family. Larger houses were built in the two-story I-house type, with a central hall separating two rooms on each story. I-houses were often decorated with stylistic features of the Greek Revival, Gothic Revival, or Italianate styles. However, the gable-front house appears to be a more common survivor of the early housing stock in Muscatine. This house type was well-suited for the narrower lots of the city, and the 60 by 140 typical lot in Muscatine could be sub-divided into two parcels. This house type continued to be built well into the 1870s and 1880s in Muscatine.

With this extensive construction, craftsmen continued to be in high demand in Muscatine. A large number of people were listed in the building trades in the 1856 census, with apparently ample work in town. The census recorded 109 carpenters, 31 stonemasons, 14 brickmakers, and 5 bricklayers. Foundries listed in the 1856 city directory may have locally produced cast iron ornament for buildings as well. Brickyards were locally operated by Cyrus Hawley and Samuel C. Adams in the 1850s. Fourteen carpenters were listed in the 1856 directory, representing the major businesses in the city and likely employing

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several of the additional carpenters listed in the 1856 census. These carpenters include Brown & Mahlon, S.B. Hill, J.J. Hoopes, E.M. Kissinger, Magoon & Martin, Mayes & Coffman, Ed Olmsted, Purcell & Brothers, W.G. Ritchie, Swan & Madden, G.P. Van Kleeck, J.P. & J.W. Walton, David Washburn, and Christian Weaver (City Directory 1859: 86; *Portrait and Biographical Album* 1879: 571; United States Census Bureau 1850; Richman 1911, Vol. 1: 451; Horton 1978: 348-349).

While no “architects” are listed as such in the 1856 census of Muscatine, many builders both designed and constructed buildings in this period. Early bricklayers Matthew and Hiram Matthews likely designed the first brick house that they built in 1839 as well as the first Episcopal Church. When a new building was built in 1851, New York architect Frank Willis designed the building, but the subsequent wings added to enlarge the building in 1855 were designed and built by local craftsmen Josiah P. Walton and J.P. Wand, blending into the earlier building. Walton is listed as a local architect in the 1856 directory, as well as the 1859 directory. George Daniels was also listed in the 1859 city directory as an architect, though none of his designs are known. While these builders/designers followed typical building practices, some ideas were likely gleaned from pattern books as well. An 1859 ad for “COTTAGE ARCHITECTURE: A new book for men of small means wishing to build. Decidedly the best book of the kind ever published” was published for Burnett’s Book Store at 178 2nd Street. Pattern books gained popularity throughout the country by this period, permitting future owners to build from published plans rather than through an architect. Most of the popular styles of the period, such as Gothic Revival and Italianate, were popularized through these books (Horton 1978: 350-31, 356)

Josiah P. Walton is perhaps the best known local architect, builder and house mover from the middle to late 19th century. He moved to Muscatine in the 1840s to learn carpentry and worked as an apprentice for J.J. Hoopes for two years. Around 1850, Walton began his own business as an architect and builder. His advertisement in the 1856 city directory states that “The undersigned is prepared to furnish DESIGNS AND DRAWINGS, provide material, superintend or erect Stores, Dwellings, Suburban or County Residences, in the most approved styles and on the lowest terms; also to lay out and plant ornamental gardens.” Over the next decades, he designed and built the Episcopal Church (addition), Dr. James Weed House, Dr. Horton House, Muscatine High School, Wilton Junction High School, B. Hershey House, Lindley Hoopes House, and several other buildings in Muscatine. In his 1899 reminiscences of the early days and businesses of Muscatine, he notes several buildings that he built in Muscatine, including a number of buildings for the lumber industry (*History of Muscatine County* 1879: 621; Walton 1899; Horton 351-353).

The number of regional architects that operated in Muscatine in the 1850s is unknown, though it is assumed not to be more than a few. While architects were commonly employed for the large and significant buildings, local builders handled most of the typical construction. However, it is known that Willet Carroll designed the house for George Stone at 606 W. 3rd Street in 1860. Carroll was one of nearby Davenport’s first architects, arriving in 1855. He practiced with George Edwards and then by himself. Only a few of his houses have been identified as standing in Davenport, also Italianate in design (“Improvements,” *Muscatine Journal*, September 25, 1860; Carlson 1990: 54; Shank 1999: 39).

Development and Growth After the Civil War

During the Civil War, Muscatine continued to prosper, recovering from the Panic of 1857. It did not develop significantly, nor were many buildings constructed in this period, as typical of many communities in this period. With the end of the war, business boomed in Muscatine. In 1865, several new business blocks and dwellings were built around the town. Later accounts estimate that between 200 and 300 buildings were built in 1866, including L.W. Old’s opera house block. By 1868, Muscatine had 16 dry goods stores, 37 retail grocery stores, 7 drug stores, 46 saloons, 1 marble yard, 1 planing mill, 3

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sawmills, 11 lumberyards, 10 hotels and boarding houses, 13 doctors, and 16 lawyers, among other businesses (Richman 1911, Vol. 1: 458).

The largest addition of the 1860s was Ogilvie's Addition in 1862. It extended the streets from Mulberry to Poplar further to the north-northwest for three blocks, creating a 12-block and 120-lot addition adjacent to North Muscatine. The addition was platted with the typical 60 by 140 foot lot size. The 1865 map of Muscatine shows this new addition, as well as the small adjacent additions of the 1850s (Figure 12). South Muscatine is visible at the head of the island, though the area of Smalley's Addition to the south is not included. Overall, with the exception of South Muscatine, the size of the town had not significantly grown from the initial plat. Three additional areas were platted by 1865 farther from this core area, including Butlerville to the northwest, and Smalley's Subdivision of Out Lot 1 and Brogan's Addition to the east-northeast. While Butlerville was divided into large rural lots, the additions to the east along Graded Road (Park Ave) had typical urban lot sizes. In 1868, Fletcher and Deschler's Addition to the north-northwest of the central part of the original town was platted to also divide rural land into smaller, yet large, rural lots. Lots remained four to five times larger than the typical 60 by 140 foot city lot in the Original Town. Other subdivision of large rural tracts continued into the 1870s (Muscatine County Recorder's Office).

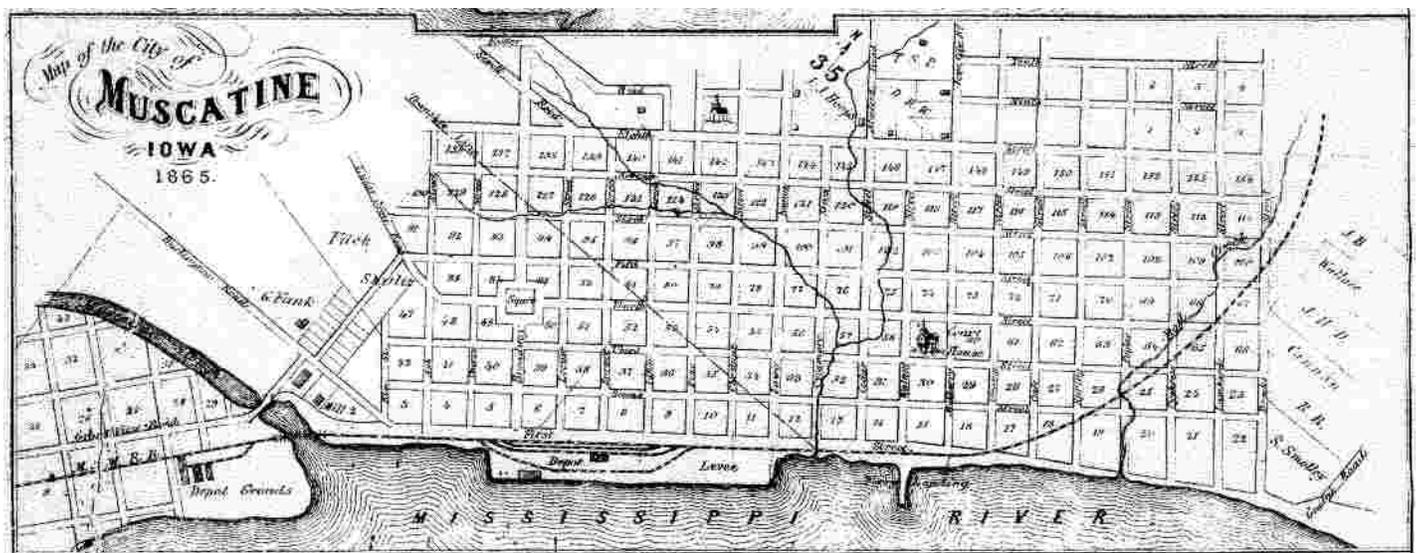


Figure 12. Map of the City of Muscatine, 1865 (Thompson and Bro 1865).

Construction of the late 1860s and 1870s continued along the same vein as in the 1850s. Additional lots were filled with houses, and smaller first generation houses were replaced by more substantial construction. Brick and frame houses were built, including those with defined architectural styles and more vernacular basic buildings. Italianate remained the most popular style for residential construction, as well as commercial construction in Muscatine. Many vernacular houses exhibited a basic gable-front form, with little decorative detail. This type of house was built up West Hill, as well as to the north and east of downtown. Choice lots overlooking the river on West Hill provided building sites for some of the larger houses in Muscatine. While architects were employed for some of the larger houses, other houses were likely constructed using typical building knowledge or following plans found in pattern books or journals of the period. House moving also continued throughout the 1860s and into the 1870s as grading continued throughout Muscatine.

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With the new construction came an additional demand for carpenters and bricklayers. Little information is known about many of these craftsmen, though the pattern is likely similar. For example, in 1857, Peter Maher, native of Ireland, moved to Muscatine from Trenton, New Jersey. In New Jersey, he had learned the trade of carpenter and builder. He began a contracting and building business in Muscatine, building some of the finest buildings in Muscatine over the next two decades. As the lumber mills supplied the wood building materials, brickyards also grew to supply the demand for this “fireproof” material. Two major early brickyards include those of G.J. Nyenhuis and Henry Fuller. G.J. Nyenhuis, native of Holland, moved to Muscatine from Baltimore in 1853. He worked in town for several years before establishing his own brickyard on Lucas Grove around 1864. In 1854, Henry Fuller, native of Germany, moved to Muscatine from St. Louis and began to manufacture brick. By 1879, his brickyard produced between 2,000,000 and 3,000,000 bricks annually (*History of Muscatine County* 1879: 603, 611, 614).

Development of South Muscatine and Musserville

The “island” of South Muscatine continued to develop as an industrial center in the 1860s and 1870s. Though the majority of the lower island was devoted to agricultural production, the northeastern upper portion within city limits was attractive for business and industry. With the pork packing, foundry, cooper shop, and Hershey’s lumber mill, residential development followed on the island in the 1860s on the high ground. On April 25, 1870, flood waters rose to a record height, breaking through the levee. Most of the lower section of the island was flooded completely. Flood waters subsided, and agricultural and industrial production resumed (Walton 1899: 162-163).

With the demand for building materials in Chicago after the 1871 fire, the local lumber industry flourished. By 1876, the lumber industry was recognized as a leading factor in the local economy. South Muscatine was prime territory for this development, with Hershey’s mill on the north head of the island on Burlington Road (Hershey Ave). In 1871, Musser & Company built a new sawmill on the island, further south from the Hershey mill. This section of the island boomed as new workers built houses near the mill, creating an area that soon became known as Musserville. Though Abraham Smalley’s addition dates to the late 1850s, a plat was filed in August 1871 to further clarify the lots, likely indicating the anticipated growth of this area. Brent Brothers also built a window shade and washboard factory on the upper part of the island, and in 1875 the Union Lumber Company built a large facility. Though lumber interests were beginning to dominate industry on the city portion of the island, other business like Barlett & Hoopes’ pork packing and icehouse also developed (Walton 1899: 162-163; Muscatine County Recorder’s Office).

With the increasing industry, residential development followed to house the workers in South Muscatine and Musserville. Around 1875, the Musserville school and Methodist church were built to serve these residents. Musserville Methodist Episcopal Church was built in 1875, with the church body formed later. Attendance grew to about 100 by 1879, and it had a flourishing Sunday School with about 100 scholars under the supervision of W.H. Hoopes, a prominent Muscatine Island fruit grower (Muscatine County Recorder’s Office; *History of Muscatine County, Iowa* 1879; *Portrait and Biographical Album* 1889: 640).

Muscatine in 1875

By 1875, the population of Muscatine had grown to 7,537 from 6,718 in 1870 and 5,324 in 1860. The number of males and females were nearly evenly divided, with a total of 1,495 families. Building improvements in 1875 were valued at \$169,000. In 1877, building improvements were valued at \$104,000, with 5,400,000 bricks made by the four brickyards. Most of the newly platted areas in the 1870s consisted of divisions of land located in large out lots near the original city plat. Only a few

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blocks of actual city blocks were platted in this period, as previous development continued to fill with housing (Richman 1911, Vol. 1: 465; Muscatine County Recorder's Office).

The 1875 *Illustrated Atlas of the State of Iowa* by A.T. Andreas includes a plan of Muscatine (Figure 13). The original town is easily identifiable as parallel to the river, rotated about 45 degree off the typical Midwestern grid. Both major creeks, Mad Creek to the east and Papoose Creek through the mid-section of town, are noted on this map. A small portion of Muscatine Slough has been filled in on this map, providing more dependable access to Muscatine Island. The additions on the head of the island are noted, with South Muscatine at the head and A. Smalley's Addition (later Musserville) further to the south. These additions are aligned on differing grids. The two additions to the north-northwest of the east end of the original town, Ogilvie's Addition and "North Muscatine," are visible, continuing the typical block layout. The small, scattered additions to the east-northeast and west-southwest of the original town are also depicted. The larger plats to the northwest primarily represent large tracts of rural land divided into smaller holdings, rather than city lots. The streets in Butlerville, however, are noted in the 1874 city directory (Andreas 1875).

While Andreas did include a bird's-eye view of Muscatine (Figure 3), the 1874 bird's-eye view by Koch provides a clearer representation of the residential development of Muscatine (Figure 14). While key houses are noted in detail, smaller houses are sketched in with basic detail just to represent a building on the lot. Within the original town, it appears that about half of the lots have buildings, with the commercial area concentrated on 2nd Street between Pine and Mulberry. The residential development on "West Hill," west of Pine between Front (Mississippi) and 5th Streets is perhaps a bit more concentrated, but vacant lots are still common. Additional one and two story houses are scattered along 4th, 5th, 6th, 7th, and 8th Streets north-northwest of the downtown area. More concentrated development is found east of Walnut and north of 4th Street over to Mad Creek, which created flat land that interrupted the east end of the original platted grid. The area developed as "North Muscatine" and Farnsworth and Lillibridge's Addition to the north of this far east end of the original town also has a significant number of houses. Only a few blocks appear laid out in Ogilvie's Addition between Mulberry and Poplar, north of 8th Street. Scattered houses are also found on the east side of Mad Creek, in early additions of "East Hill." Houses also line the streets extending out of town, including Mulberry Avenue (Iowa City Road), Cedar Street, Lucas Grove Road, and Burlington Road (Hershey Ave). The area south of the Muscatine Slough is not shown on this map, so it is unknown the extent of development that had occurred by this time (Koch 1874).

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Figure 13. Map of Muscatine (Andreas 1875).

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Figure 14. Bird's-eye View of Muscatine in 1874 (Koch 1874).

Increased Public Services

With the growing town came the demand for additional services. By 1879, Muscatine had a police department and fire department. The fire department was formed in 1875, and it was considered fully organized by 1877 with several hose companies. The Muscatine Water Works Company was formed on November 9, 1875 to create a water system for protection from fire and domestic use. The reservoir and pumping works were completed by April 1876, with several branches to the main line laid over the next few years. A reservoir was built on the “public square” at Fourth and Broadway to hold about 2 million gallons. The waterworks on West Hill were successfully tested on July 12, 1878. By 1883, five miles of pipe had been installed as well as 54 hydrants. By the turn of the century, eleven miles of mains were laid, providing water to 125 hydrants (*History of Muscatine County* 1879: 515-521; City Directory 1883-86: 20; Richman 1911, Vol. 1: 290-291, 466; *Journal*, Dec. 20, 1906, 9).

The Muscatine Gas Light and Coke Company continued to prosper through this period. R.T. Coverdale sold the gas works to T. Cowell for \$55,000 on December 23, 1879. By 1883, the gas works occupied three lots on Oak Street. Over eight miles of mains and over 200 street lamps were found in Muscatine. The management and production of the company was known to be excellent

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(Richman 1911, Vol. 1: 466; City Directory 1883-86: 21). Telephone service began in Muscatine on June 7, 1881. The need for a street railway system surfaced by the early 1880s. In 1883, a company was formed to construct the railway, with the officers of Peter Musser, George Dillaway, T.R. Fitzgerald, and Orange Chapman. Over two miles of tracks were laid by September 11, 1883, and the system began operations. The cars were pulled by horse and mule power (Richman 1911, Vol. 1: 412, 467). The streetcar lines would begin to guide and encourage residential development in the late 1880s and 1890s, in Muscatine as well as nationally. With easy access to further distances from the core of the city, additional neighborhoods developed along and near these lines.

Residential Areas in the 1880s

While the 1874 bird's-eye view of Muscatine shows the extent of the community development, the 1883 Sanborn map provides some additional details on the areas nearest the downtown (Figure 4a). Typically, small one-story or one-and-one-half-story houses are depicted, though some larger two-story houses are also present. A mixture of frame and brick dwellings are noted. However, the coverage is limited to those areas near the commercial core. Detail maps are provided of these areas, with the number of buildings noted within a few blocks. Thus several blocks of the original town are not depicted with any building, though the 1874 bird's-eye clearly shows development well to the west and northeast of the 1883 Sanborn. Additional platted developed and undeveloped areas are seen on the 1875 Andreas atlas as well. Additional development is depicted in South Muscatine on the 1883 Sanborn map. Development in South Muscatine focused around the two major lumber companies (Figure 4b). This 1883 Sanborn map shows detail of the residential development within a few blocks of the lumber mills, while the 1874 bird's-eye did not cover this area. Additional residential buildings are noted on the nearest adjacent blocks as well.

The population of Muscatine continued to grow in this period, from 6,718 in 1870 to 8,295 in 1880. In 1880, Muscatine ranked as the 10th largest city in Iowa, behind Des Moines, Dubuque, Davenport, Burlington, Council Bluffs, Keokuk, Cedar Rapids, Clinton, and Ottumwa. The schools listed in the 1879 city directory provide some interesting insight on community development. One high school was found in town (Iowa between 5th and 6th), as well as six elementary schools: No. 1 (7th between Orange and Oak – East Hill), No. 2 (3rd between Spruce and Locust – West Hill), East Muscatine, South Muscatine, Island School, and Butlerville. The population climbed nearly twice as fast to 11,454 in 1890. While the areas closest to the downtown continued to see some new construction, new residential building was concentrated in areas further to the south, west, north, and northeast within the original town.

The increasing population apparently spurred some new development. While the 1870s saw subdivision of large tracts of land, the 1880s witnessed more focused subdivisions with city lots. About two dozen new additions or subdivisions were platted in the 1880s, mostly smaller areas on the fringes of the original town. Overall, the new additions ranged in size from 7 to 70 lots, with an average size of about 24 lots, or 2 blocks. George Smalley's Addition to South Muscatine, west of Abraham Smalley's addition, was one of the largest with 70 lots, with Abraham's Smalley's 2nd Addition to South Muscatine, between the slough and Burlington Road (Hershey Ave) the second with 64 lots. In addition to these southern additions, small additions were located along Lucas Grove and Newell roads to the west of town, as well as some area immediately north-northwest of the original town plat. East Hill, east of Mad Creek, also had two subdivisions platted in this period (Muscatine County Recorder's Office).

The styles and types of houses built in the 1880s continued to reflect residential development of the late 1860s and 1870s. Italianate continued to be the predominant style, with prominent window hoods, tall windows, and bracketed eaves. A handful of Second Empire houses, such as the Rothschild-Cohn House at 507 W. 2nd Street (#70-00185), were built in Muscatine also in the 1880s, defined by the mansard roof form. Some features were carried over from the Italianate houses, such as brackets along the eaves and distinctive window hoods. Gable-front houses, both brick and frame, continued to be built throughout the community. Advances in building technology permitted more variations on floor plans, and some T-plan and L-plan frame houses were also built in Muscatine during this period. The basic gable-front house began to be enhanced with a small side cross-gable section or bay window as well. Though stone was used as a foundation and accent material, few buildings were constructed with stone. Some large asymmetrical

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plans also began appearing by the late 1880s, though the massing would become more common with the popularity of the Queen Anne style in the 1890s.

The large majority of houses constructed in Muscatine in the 1870s and 1880s were single-family dwellings. A handful of double houses, or side-by-side duplexes, were constructed in this period. These buildings also followed the typical styles of the period, typically with simpler Italianate features. For example, the Alexander Clark House, built in 1878-79, is an excellent example of a brick double house with Italianate influence (203-205 W. 3rd Street, #70-00203). The 1883 and 1888 Sanborn maps show few multi-family dwellings in Muscatine. The ones depicted are two unit, side-by-side buildings.

With the boom of the local lumber industry, building material was plentiful for Muscatine. In 1886-87, there were six lumber mills and merchants in Muscatine. The largest mills were the Hershey Lumber Company (1001-03 Burlington Road) and the Musser Lumber Company (White, in South Muscatine). S.G. Stein continued to operate his long running lumberyard at 2nd and Pine. J.A. Deemer and J.S. Patten also had small yards. The Muscatine Lumber Company operated at this time, though a fire would soon close the company. The Huttig Brothers Manufacturing Company was the main sash and door producer for Muscatine. Some of these companies, particularly Huttig, produced materials that were sold well outside of Muscatine and Iowa. The lumber mills employed a number of workers who owned their own houses, many of which were built with rejected lumber from the mills (Randall 1983, Vol. 4:14).

Several carpenters and builders continued to operate throughout this period. The 1877-78 city directory lists Frederick Eichhoff (Butlerville), Franklin Freeman (2nd and Sycamore), C.U. Hatch (2nd and Sycamore), Hickman Hine (2nd west of Cedar), Madison Kneese (8th east of Spring), Henry Madden (3rd and Iowa), George D. Magoon (5th west of Iowa), Peter Maher (3rd and Pine), Mayes and Hinkle (Chestnut between 2nd and 3rd), J.B. Nyenhuis (Lucas Grove Road), and Parvin & Company (3rd east of Cedar). J.P. Walton continued to design as well as construct buildings in this period, and an ad for I.A. Kerr in 1877 also notes the he was a "contractor, architect and builder" with "designs and plans furnished." Carpenters and builders in 1886-87 included C.U. Hatch (306 Iowa), M.M. Kneese (301 Iowa), George D. Magoon (Iowa between 5th and 6th), and Charles Patrick. Though many others worked as carpenters or builders in Muscatine, these represent the primary contractors for the city in this period. Four brick makers were also listed in 1886-87: Muscatine Pressed Brick Company (New and Oak), Garrett J. Nyenhuis (6th between Pine and Chestnut), Henry Fuller (207 E. 8th), and Joseph W. Fuller (503 [E.] 10th Street).

While builders continued to design the buildings they built for a large part, more formal designs for residential buildings were also sought. Regional architects were employed for some of the largest residences of Muscatine, such as the Clark-Blackwell House (206 Cherry Street, #70-00371) that was designed by Cleveland & Jay of Chicago in 1882. However, local builder-architect Josiah P. Walton moved a former building from the site, and the new house was built locally by George D. Magoon (Jacobsen 1982: 8:1).

The January 1891 Semi-Centennial Souvenir Edition of the *Muscatine Journal* highlighted Walton, as well as some other local builders and architects. James H. Selden was a contractor and builder raised in Muscatine, who would continue to work into the 20th century. J.E. Howe was a contractor and builder who also designed some buildings. In 1891, he had worked in Muscatine for the past 18 years, and he was cited as one of the best carpenters. In addition to several residences, he also built the Fourth Ward school, German Lutheran church, Muscatine Sash & Door, and Park Ave M.E. Church. William Zeidler had worked as a contractor and builder in Muscatine for the last 32 years, building many residential and commercial buildings throughout Muscatine. His son Henry was noted to be a natural architect, designing many of the buildings that they built. By 1893, he opened his own architectural practice. He advertised on June 1, 1893 as an "architect and superintendent of construction" at 7th and Chestnut who would furnish plans and specifications for buildings (Semi-Centennial Souvenir Edition of the *Muscatine Journal* 1891; "Henry W. Zeidler," ad, *Muscatine Journal*, June 1, 1893, 1).