Historic Railroad Structural Resources:

Chicago to St. Louis High Speed Rail

IDOT Sequence #17337 & #17337A

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FREE OF EXTRA CHARGE AND WITHOUT CHANGE
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PULLMAN PALACE Buffet Sleeping CARS
A. Drysdale, Northern Passenger Agent, Chicago, Ills.

CHAPTER 1: Methodology & Report Summary

This report investigates the history of the Chicago & Alton Railroad and the Chicago, Rock Island & Pacific Railroad as it relates to the development and evolution of the High Speed Rail corridor between Chicago and St. Louis. It also discusses railroad structures and identifies any, predicated on fieldwork completed to date, that were associated with those two railroads and that may today be significant enough to merit consideration for National Register eligibility or documentation in the Illinois Historic American Engineering Record or Illinois Historic American Building Survey recordation programs.

Developing a concise, corridor-related historic context for the railroads in general, and the project alignment in particular, was a key component of this effort. It is the result of that work which then provides the necessary informational context within which judgments about individual resources, and their potential for historical, technological or architectural significance, can be made. The historic context is developed in Chapter 2.

Chapter 3 acknowledges the types of resources typically found along rail properties in the United States in the late nineteenth and early twentieth centuries in general, and the project corridor in particular, and discusses them. This context is important because it establishes the parameters necessary for rendering the decisions of significance that are discussed and illustrated in Chapter 4.

The subject rail line has been quite sanitized in the last fifty years. As many railroads endured financial difficulties in the 1960s, 1970s and 1980s, any numbers of resources, or resource types, were sold or demolished. Then, as railroads merged and regained their health, they retained only those resources necessary for meeting their contemporary objectives.

One of the resource-types that was demolished or sold is depots. Several remain along the route today. And for those communities that retain theirs, the depots – assuming they have sufficient historical, locational and architectural integrity – are significant as the point of interface between the railroad and the community it served. Depots had the unique ability to affect one's impression of the railroad, as well as of the associated town. All depots that remain in their original location on the project line are included in the survey and discussed in this report, examples of which include the depots at Blue Island (Photo 6935), Lincoln (Photo 7088), Chatham (Photo 7172) and Alton (Photo 7228).

More problematical today are the bridges and culverts in the project corridor and the need to evaluate them. Approximately 157 bridges and 337 culverts are located in the project corridor. A complete list of those structures is found in Appendix C, followed by photographs of all those that were field reviewed. Many are visible from, or easily accessed by adjacent roadways. Others are well removed from roadways and must be reached on foot,

if at all. A procedure for reviewing the bridges and culverts was discussed with IDOT. In concurrence with IHPA, it was determined that an initial review of all bridges and culverts would be completed by studying project photo logs. (Of the total 494 structures reviewed, no photographs were available for eighty-nine of them. They will be reviewed as photographs become available.) Structures identified in those logs that appeared to have some distinct or intriguing features, whether they be design or construction material-related, were then identified for a field visit. Additionally visited were a variety of unremarkable structures, a task completed simply to verify the veracity of the photo log review.

Four specific bridges along the Rock Island line in the Chicago area notwithstanding, virtually all other bridges are structures that employ a simple a post-and-beam structural system, including those on the Rock Island line between Chicago and Joliet. As such, and by their nature, those resources are not considered to be eligible for the National Register of Historic Places. There are exceptions, of course, three of which were identified in the corridor (i.e., Kankakee River bridge in Wilmington [Photo 6964], Sangamon River bridge in Sherman [Photo 7143], and the Wood River bridge in Alton [Photo 7231]).

Regarding culverts, only those with arches are thought to be historically significant. An understanding evolved that suggests all stone arches on the Alton road date to the last quarter of the nineteenth century. Any of those that retain their historical integrity may well be significant under National Register Criterion A and C. Examples include the stone culverts located at MP 112.20 (Photo 7039, 7249), MP 163.60 (Phot 7097, 7127, 7130, 7126), MP 254.30 (Photo 7220/IL HAER documentation under way) and MP 254.65 (Photo 7214).

Concrete began replacing stone as the preferred construction material on the Chicago & Alton in circa 1900, about the time that Edward H. Harriman assumed control of the railroad. But while Harriman's control of the road was important, it was short lived and lasted only about seven years. The use of concrete on the Alton road in the twentieth century was ubiquitous. It also failed to convey a sense of craftsmanship which stone arches did so well and is considered to be quite unremarkable. No concrete resources were identified, to date, that merit any further consideration.

Finally, two, non-depot railroad buildings were found along the line. These are unique structures that illustrate the variety of other rail-related buildings that are now gone. One is the Chicago & Alton Freight Depot across the tracks from the location of the old Alton shop complex in Bloomington (Photo 7060), while the other is the Lenox Interlocking Tower located in Mitchell (Photo 7244/IL HAER documentation under way). Should other structures of this sort be identified, they may well be considered significant and worthy of documentation as well.

CHAPTER 2: General History -- the Chicago & Alton and the Rock Island Railroads:

The Chicago & Alton Railroad grew to include over 1,000 miles of track in two states. It was, for the most part, a well-run and profitable railroad in the last thirty-five years of the nineteenth century. But with the company's commitment to its Chicago-St. Louis and Chicago-Kansas City routes, and, more particularly, its reluctance to expand much beyond them, the railroad largely set itself up to fail in the twentieth century when other roads knew they had to expand—and did it.

A route from Alton, on the Mississippi River, to Springfield and the northeast was not the first railroad line contemplated in Illinois. As early as 1834, an east/west line from Danville to Quincy, passing through Decatur and Springfield, had been proposed. Others saw an opportunity to assist in the development of Alton as a shipping point on the Mississippi and proposed an Alton to Springfield connection. One such advocate was Abraham Lincoln. A survey in order to establish an Alton to Springfield alignment was authorized in May 1835.[1]

Civil engineer W.B. Mitchell surveyed the Alton to Springfield route. He saw much potential for a good alignment that would require little grading, the need to pass over some water courses notwithstanding. The big problem was at Alton, where bluffs to the east towered about 200 feet above the Mississippi. There was little room to accommodate the grade that trains needed as they departed the River Bottoms for the east. Estimates at that time suggested the route to Springfield could be constructed for about $500,000, or a cost of $6,831 per mile. Benjamin Godfrey, a significant Madison County businessman, promoted the route to the state legislature at Vandalia. His efforts were not well received. The plan was further hampered by the Panic of 1837 which soon followed.[2]

Advocates for the route from Alton persisted and efforts to rally support continued. A bill was introduced by Lincoln to the Illinois legislative session of 1840-1841. It proposed to involve the state in the Alton to Springfield venture by turning over to it supplies compiled from other railroads planned but that had not materialized in return for stock. The bill authorizing the Springfield and Alton Turnpike Company was signed on 27 February 1841. The company soon failed for its inability to find investors willing to buy its stock.[3]

The Alton and Sangamon Railroad, a predecessor to the Chicago & Alton, was formally

[1] Gene V. Glendinning, *The Chicago & Alton Railroad: The Only Way* (DeKalb, IL: Northern Illinois University Press, 2002), 9.

[2] Ibid., 9-11.

[3] Ibid., 11-12.

chartered on 27 February 1847.[4] The route was to extend from Alton to Carlinville to Springfield. Capital totaling $500,000 had to be raised in order to validate the company's incorporation, $83,000 of which was subscribed to by investors between Alton and Springfield. Abraham Lincoln played an important role in helping to raise the necessary funds. He hoped to attract investors by suggesting that the railroad could evolve into something consequentially more than just a local, Alton to Springfield line. Indeed, there was talk by the summer of 1847 that the endeavour might ultimately extend to Chicago! A major drawback at the time was that the case for the road was being built on an 1835 survey. A new survey was undertaken by William Crocker, an engineer from Boston. This effort was not quite as daunting in the Alton area since, in the intervening twelve years, locomotive improvements made the bluffs around the city more manageable. Now trains could operate effectively on grades of fifty-three to sixty feet per mile. Over $400,000 of stock was sold in Illinois, the balance needed being raised out east. Railroad supporters announced in October 1849 that the necessary funds had been secured. The company was formally incorporated in February 1850. With that announcement, the Alton road was ready to proceed.[5]

The necessary capital had barely been raised when talk began late in 1849 about continuing the road to Chicago. That discussion was premature, but the State Legislature did agree in 1851 to extend rails from Springfield to Bloomington. Meanwhile, in the summer of 1850, construction materials were received and held in Alton. Work was soon underway. January 1851 arrived with 779 men working on the project assisted by sixty-nine horses. Bridges and culverts along the line were being erected. Grading had been completed on twenty-three miles of alignment and was underway on ten more. As well, the company's first shops were under construction in Alton.[6]

Work moved rapidly. John Shipman, a New Yorker hired to oversee construction on the entire line, determined that the route to Bloomington could generally proceed from Springfield northeast to a point near Funks Grove, after which the alignment crossed Sugar Creek and extended to Bloomington on an alignment between Sugar Creek to the northwest and Kickapoo Creek to the southeast. Shipman's track crews were also busy to the southwest. Grading between Carlinville and Springfield was underway in August 1851. Many masonry bridges were under construction, as was a 100-foot timber structure across Macoupin Creek. By April 1852, all had been satisfactorily graded from Alton to Virden. Supplies had been stockpiled and 1,200 men were working on the railroad, 250 in Sangamon County alone. The railroad was operating to a point northeast of Shipman by mid-May 1852. To the northeast of Springfield, the terrain was generally favourable for the laying of track,

[4] Also chartered that day were the Nauvoo & Warsaw Railroad and the Rock Island & LaSalle Railroad. Ibid., 7.

[5] Ibid., 12-15.

[6] Ibid., 17-18.

the need to cross the Sangamon River notwithstanding. [7]

Legislative action affecting the railroad also continued in Springfield. The state's General Assembly passed on 19 June 1852 a bill that authorized the Alton & Sangamon Railroad to reach Chicago, an action that inspired renaming the company as the Chicago & Mississippi. The legislation stated that the road could either build its own line from Joliet to Chicago or use that of the Chicago & Rock Island Railroad.[8]

The railroad's arrival in a community as it built across the state was a highly anticipated event. A celebration for that very purpose was held in Carlinville 01 July 1852 which drew 6,000 to 7,000 attendees. Another celebration was held about three months later to recognize the iron horse's appearance in Springfield. Soon there was train service between Springfield and Alton every day of the week—except Sunday. Alton benefitted from this for its position as a commercial center grew. And Springfield's stature as the Illinois State Capital was certainly enhanced. Indeed, the price of land up and down the line increased. The new conveyance generated passengers and freight, but construction costs were high. Almost $17,500 a mile was needed, which put total costs for the Alton to Springfield route at about $1.3 million, or about $400,000 over budget. Henry Dwight, Jr., a financier involved with the railroad, covered the shortage. He also secured control of the railroad.[9]

An imposing obstacle to be crossed by the Chicago & Mississippi as it progressed to Bloomington was the Sangamon River. As 1852 drew to a close and winter approached, several thirty-foot high, cut stone piers had been built for the structure, while pilings had been driven for several more. The plan was to build three, 100-foot approach spans, as well as one 450-foot trestle to the north and an 800-foot trestle to the south. The structure ultimately required 450,000 feet of timber and nine tons of iron. To the northeast, Peter Badeau had started surveying in February 1853 a route extension from Bloomington to Joliet. The railroad was moving closer to Chicago, though the laying of track had reached no further than the Springfield to Bloomington segment of the line. And along with the laying of the track, the railroad was also helping to establish new towns. They were needed along a line in a way that would accommodate a farmer's travels in a day, which is to say that they needed to be placed about ten miles apart. This led to the founding of the communities of Elkhart and Atlanta. The railroad also decided to build its shops complex in Bloomington, generally about midway between Alton and Chicago.[10] Finally, on 18 October 1853, the

[7] Ibid., 15, 19-22.

[8] Ibid., 21.

[9] Ibid., 20, 22-24.

[10] Construction of the Bloomington Shops started in the late 1850s. They continued to serve the railroad until 1972, when the Gulf, Mobile & Ohio merged with the Illinois Central. Thereafter was the activity limited to one building and a few employees until 1979 when the building burned down. One tangentially associated structure remains east of the tracks,

Chicago & Mississippi operated its first income producing train between Alton and Bloomington.[11]

The propriety of Dwight's financial dealings with and for the railroad was questionable in some cases and illegal in others. He declared bankruptcy in November 1853, but continued his involvement with the company. Edwin Litchfield talked with Dwight about assisting the railroad on 25 December 1853, a discussion which led in February 1854 to Litchfield investing $150,000 in the road, along with the appointment of an associate, George Bliss, as the Chicago & Mississippi's new president.[12]

While Dwight's troubled association with the Chicago & Mississippi continued for a couple of more years, the railroad continued to grow. Track laying to the northeast continued in the spring of 1854. Soon the company was able to run trains from Alton to Joliet on its own alignment. Then, utilizing on 31 July 1854 the tracks of the Chicago & Rock Island Railroad, the Chicago & Mississippi's first train reached the City of Chicago. The arrangement with the Rock Island line, however, did not last long. On 15 February 1855 the Chicago & Joliet Railroad was chartered to build a line from the Alton's Joliet depot to Chicago via Lockport. Thus was its own route into Chicago assured for the Chicago & Mississippi. Additional 1855 events included establishing along the line the towns of Chenoa, Pontiac, Cayuga, Odell and Dwight, as well as changing the name of the railroad to the Chicago, Alton & St. Louis. Despite these promising events, consequential financial issues plagued the railroad. Second and third mortgages were not being paid in the fall of 1856, nor were suppliers. There were also a number of accidents along the line.[13]

Troubles on the road seem to reflect the problems of the Chicago, Alton & St. Louis's management. Henry Dwight's bankruptcy did nothing to hinder his rather devious machinations. He was able to regain control of the railroad from Litchfield and was not at all concerned about the difficulties his actions had caused for Benjamin Godfrey. Dwight's finances and those of the railroad were intricately and almost inextricably mixed. He took railroad money and originated mortgages that were not authorized. Finally, with Dwight under indictment in the State of New York and unable to attend, the Chicago, Alton & St. Louis was sold at bankruptcy court on 15 December 1856 to Litchfield and former Illinois Governor Joel Matteson. On 21 January 1857, the Illinois State Legislature chartered its

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but the heart and great expanse of the complex was west of the tracks—and those structures have all been removed. A brief discussion about railroad shops in general, with an historic and contemporary image of the Bloomington complex area in particular, can be found in Chapter 3, pages 27-30.

[11] Glendinning, *Chicago & Alton*, 26-27.

[12] Ibid., 27-30.

[13] Ibid., 31, 32-33, 34, 37-38, 39.

successor, the St. Louis, Alton and Chicago Railroad. Matteson was the new company's president.[14]

Almost immediately Matteson's attention was diverted by the need to mollify first, second and third bond holders, as well as to manage the railroad's debt. There were also infrastructure problems. Ties needed to be replaced and ballasted. And the integrity of the rails themselves was problematical. There were also concerns about the pilings on which the Sangamon River Bridge had been built. Passenger cars were usable but needed much care. Freight cars and motive power also demanded attention, as did construction on the new Joliet to Chicago alignment which had also started in 1857 with virtually no financial support from either Joliet or Chicago. It was only money from east coast financiers that facilitated the start of construction in June. At a cost of almost $960,000, or approximately $25,000 per mile, the St. Louis, Alton & Chicago reached downtown Chicago on its own line for the first time on 18 March 1858.[15]

The 1850s had been an eventful time for the Alton & Sangamon and its successors. The railroad was built across the State of Illinois, from the Mississippi River to the City of Chicago. Travelers on the road included Abraham Lincoln and Stephen Douglas, as well as United States President Millard Fillmore who, in 1854, was in Illinois to acknowledge the 1850 Land Grant bill and its first beneficiary, the Illinois Central Railroad. Still, as the decade of the 50s drew to a close, there were many of the railroad's bondholders who were very dissatisfied with Matteson and Litchfield and the leadership they offered. Thus did a court elect to deliver the railroad to receivers Charles Congdon and James Robb on 30 November 1859.[16]

Congdon and Robb took immediate action to stabilize the railroad and its financial condition. Workers were laid off at the Bloomington Shops. Train crews were furloughed. Perhaps more significantly, the company's offices were moved to Chicago in order to help find men capable of helping to lead the railroad into the future. Robb hired Roswell Mason, who had started his professional career as an engineer on the Erie Canal in New York State, to deal with the infrastructure issues that Matteson and Litchfield had not. The mainline was in poor condition, especially that segment from Bloomington to Joliet given the speed with which it

[14] Ibid., 31-32, 39,44, 45.

[15] Ibid., 47, 51-53.

[16] Ibid., 48, 57. There was a particular event with which Matteson was associated and that merits recognizing. George Pullman and a partner had established in 1859 a firm to create a new type of sleeping car. Matteson offered Pullman two passenger cars for conversion to sleeping cars of the sort Pullman envisioned. This led to the Chicago & Alton running the first Pullman cars ever produced. Pullman, who subsequently started building his cars from the ground up, also became friends with Blackstone, who made space available for a time for Pullman to construct cars in the Alton's shop in downtown Chicago. By 1867 there were thirty-seven Pullman sleepers on six railroads. Ibid., 56, 69, 80.

was built, including its bridges and culverts. And of the road's thirty-eight locomotives, seven were unrepairable. Nineteen needed work. Addressing the motive power issues, the court appointed receivers ordered in February 1860 six, "state-of-the-art, high-speed, wood burning passenger engines" from Norris & Company in Philadelphia. They also ordered ten Rogers engines, nine of which were coal burners—the railroad's first.[17]

On 27 February 1861 the entity under the guidance of Robb and Congdon received a new charter as the Chicago & Alton Railroad. Historian Gene V. Glendinning identified that day as the one "that marked the beginning of the most glorious period in the company's history—the last four decades of the nineteenth century. It was then that the railroad forged a powerful presence, achieved its greatest profitability, and earned the admiration of Wall Street and the leaders of the nation's other railroads." Improvements on the railroad continued in 1862. The company acquired seven new engines, eight coaches and four baggage/mail/express cars, in addition to eighty-eight freight cars. It also rehabilitated fifty-four miles of track and laid 130,000 new ties. Cuts in the terrain through which trains needed to pass in order to meet their grade-related requirements were also widened, as was fill deposited along trestles in order to slowly facilitate the creation of much more durable embankments.[18]

The year 1863 was a momentous one for the Alton road. Most significantly, the Joliet & Chicago Railroad, the line leased annually to the Chicago & Alton which facilitated the latter's access to the City of Chicago, was offered to Robb. The Joliet road's president, Timothy B. Blackstone, specifically proposed either a sale of the alignment, or a permanent lease for it. It was the perpetual lease for which the Alton road opted, Blackstone himself having played an active and constructive role in the negotiations. He further helped the Chicago & Alton successfully address with the St. Louis, Jacksonville & Chicago Railroad some issues related to access in the St. Louis area. Robb subsequently resigned the presidency of the Alton road in April 1863 for another opportunity and was succeeded by the then thirty-five year old Blackstone.[19]

Under Robb's direction, the Chicago & Alton had started to experience a sense of financial success. Revenues in 1861 had reached $1.1 million. In early 1864, shortly after Blackstone had assumed the presidency, a 3.5% dividend was declared on the railroad's preferred stock while a dividend of 2.5% was declared on its common stock. Still, working on the railroad during the Civil War presented some consequential problems. Robb had acquired 847 acres

[17] Ibid., 59-60. Of the nine, coal-burning engines ordered, two were 0-4-0 switchers, while seven were 4-4-0 road engines. Note that the 0-0-0 reference identifies the number of wheels and the arrangement of those wheels under the engine. The first number refers to the wheel arrangement under the front of the train, while the second number identifies the driving wheels located beneath the boiler. The wheels identified by the third number are those under the engineer's cab, if any.

[18] Ibid., 62-63.

[19] Ibid., 64, 65, 68; "History of the Alton Railroad," *Chicago Tribune*, 2 March 1899, 2.

of timberland along the Illinois River in order to provide ties for track rehabilitation and reconstruction. He also built a sawmill. But he could not find the labor needed for cutting the timber and milling ties. At one point Civil War prisoners were used. He then tried to hire 300 laborers from England. Such difficulties notwithstanding, there were successes during the war. One example was that, after seven years of using the tracks of the Terre Haut, Alton and St. Louis Railroad to reach East St. Louis from Alton, Blackstone's road finally constructed its own line between the two cities. It was first used on 01 January 1865.[20]

The Chicago & Alton Railroad was a very active entity in the State of Illinois with the conclusion of the Civil War. In the City of Chicago, the railroad contributed in 1865 $50,000, along with eight other railroads, eight packing companies and several individuals, for the development of the city's stock yards. It also replaced 40 miles of iron track with steel that year. Motive power was increased in 1867 with the addition of six switch engines, thus bringing the road's locomotive count then to seventy-two. The company also required more flat, stock and box cars, a need that inspired the plan to build one car a day. Additionally, Braceville received in 1868 a new depot and a new section house, the latter being where a crew of men responsible for maintaining a specific section of track would live. Indeed, following the plans for the Braceville section house, eleven more were built in the following two years, including houses at Nilwood, Chatham, Lincoln, Atlanta and Bloomington. A new, four-stall round house and turntable were also built at Braidwood, as was a water tank and coal chute.[21]

Illinois grew significantly as the state entered the 1870s. It claimed 2.5 million residents, 298,977 of which lived in the City of Chicago. There were also many new towns and cities around the state. Much of the growth was attributable, at least in part, to mechanization and the resulting growth in the size of farms. As well, industrial development was aided by the fact that factories were no longer reliant on water power to drive their various machines. The growing use of steam, for instance, essentially meant that manufacturers could locate any where they might want. Many located next to railroad tracks. And general growth in the state was mirrored by the growth of its railroads. Illinois claimed, at the time, twenty railroads with more than 4,800 miles of track. Of those, the Chicago & Alton was considered one of the state's "principal railroads." Nevertheless, unlike several railroads, the Chicago & North Western and the Chicago, Burlington & Quincy for instance, the Alton road, led by Timothy Blackstone, was not inclined to expand—at least not much.[22]

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[20] Glendinning, *Chicago & Alton*, 63, 65, 66-67.

[21] Ibid., 77, 78, 81, 82; Walter G. Berg, C.E., *Buildings and Structures of American Railroads: A Reference Book for Railroad Managers, Superintendents, Master Mechanics, Engineers, Architects, and Students* (New York: John Wiley & Sons, 1893; reprint, Kessinger Publishing, n.d.), 14.

[22] Glendinning, *Chicago & Alton*, 83, 85, 87, 88.

The one significant element of growth embraced by the Chicago & Alton was its decision to enter the State of Missouri and push on to Kansas City. The Missouri line departed a more circuitous route from Bloomington to St. Louis at Roodhouse, Illinois, which is about forty-four miles southwest of Springfield. Thereafter, the route crossed the Mississippi River at Louisiana, pushed on to Mexico and, ultimately, Kansas City. Initially the line relied upon a ferry to cross the Mississippi River adjacent to Louisiana. But after the river froze two winters in a row (1871 and 1872), thus hampering the Alton's crossing procedures at a time when both the Chicago & Rock Island and the Chicago, Burlington & Quincy railroads relied on bridges to cross the river, Blackstone determined that the Alton, too, needed a bridge. That decision led to the construction of a 3,900 foot, ten-span structure with a moveable span of 446 feet that was needed to accommodate transportation on the river. The first crossing on the new bridge occurred on 24 December 1873.[23]

In addition to the Kansas City extension, the railroad's future continued to brighten in the first years of the 1870s. The Alton acquired five more passenger coaches, giving it a total eighty-one such cars. It also obtained 218 new freight cars, thus elevating the number of those conveyances to 2,256. The road's profit in 1870 was $2 million. A significant contribution to that total came from the coal that the line hauled. The railroad claimed revenue of $5.2 million and profits of $2.2 million in 1871. That year, the Alton decided to order fifteen locomotives, four passenger coaches and 199 freight cars. Those additions to the railroads livery no doubt contributed to its 1872 results, which included an 8% increase in passengers carried and a 7% increase in the tonnage of freight hauled. Much of the growth was attributable to the Kansas City extension. As well, the Braidwood area coal mines increased the coal tonnage hauled by 25%. The mines of that vicinity, according to historian Glendinning "…had become the largest single source of traffic on the railroad." (See a separate discussion of the Alton's coal-related traffic found on pages 18-19.)[24]

Early 1870s results for the Chicago & Alton were hampered somewhat by the Panic of 1873, an economic downturn that affected the entire country. The Kansas City line was still considered successful, but general tonnage hauled by the road was down 14%, corn was down 24% and coal was down 26%. The coal numbers were further hindered by the facts that there had been a three month miners' strike at Braidwood and a ten month hiatus in production at the Joliet Iron and Steel plant. Freight revenue dropped in 1874 by $450,000. Yet strong passenger demand and cost cutting yielded for the road a $215,000 increase in earnings for the year. Passengers were important to the financial success of the Alton, which worked hard to offer service and equipment that was exceptional on its Chicago to St. Louis

[23] Ibid., 90, 100.

[24] Ibid., 94-95.

route.[25]

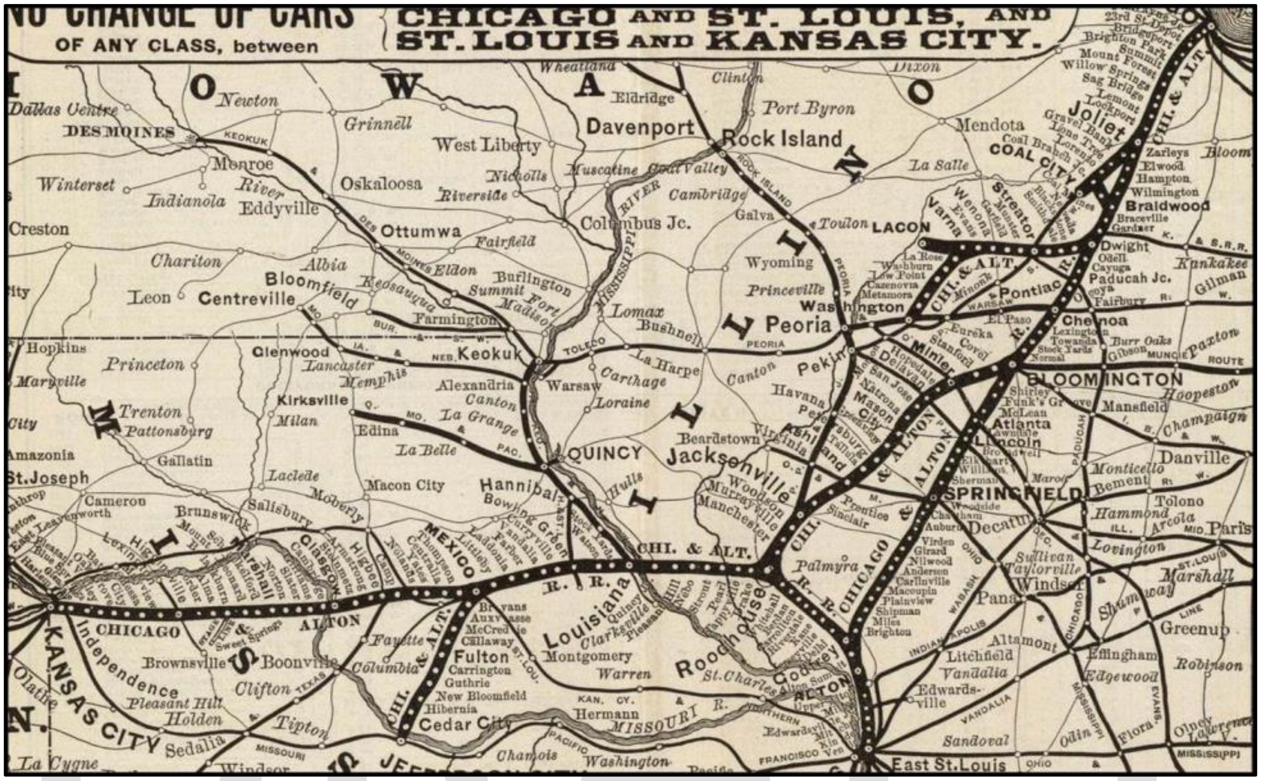

Figure 1: An illustration of the Chicago & Alton Railroad system in 1885. Chicago & Alton Railroad Company, *Chicago & Alton R.R.* [Timetable] (Chicago: Rand McNally, 1885).

The last decades of the nineteenth century continued with ups and downs. In the 1870s, farm produce carried in 1875 fell by 45% from that typically hauled due to a crop failure. Yet Kansas wheat moved from Kansas City was up by about 1 million bushels, while oats carried were up by about 250,000 bushels. Lumber transported increased by 12 million feet and coal hauled grew by 164,907 tons. Final numbers for the year revealed that overall revenue was down 9%. Of that, passenger traffic was down 5% with passenger revenue down 12%. Results improved in 1876. The number of passengers increased by 11,611 yet revenue was still down by 3%. Offsetting that was an 18% increase in freight revenue and an overall revenue increase of 12%. Much of the success was attributable to freight from Kansas City. Losses occurred again in 1877, however, as decreases in both passengers and freight hauled dropped earnings by 10%. Contributing to that was another coal mine strike in the Braidwood area. The Alton's infrastructure at the end of the 1870s included 840 miles of main line, sixty-two miles of supplemental main line, 187 locomotives, ninety-five passenger cars and 4,112 freight cars. The Chicago & Alton also had a depot in practically every town served.[26]

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[25] Ibid., 100, 102.

[26] Ibid., 106, 112.

The profit earned in 1880 reached $3.6 million, an increase of $1 million over the year before. $1.7 million of that profit came from the Kansas City route. It reached $3.9 million in 1883. But economic difficulties in 1884 and 1885 drove profits down. President Blackstone addressed the lower profit by reducing the purchase of new equipment and reducing the number of maintenance projects pursued. Overall, profits were down 5% yet totaled $3.3 million. Blackstone then paid his investors $1.4 million in dividends. He also retired some debt. Similar numbers were reported in 1886. An upturn in 1887 led to a 10% increase in revenues and an 8% increase in earnings, yet an 1888 downturn generated revenues that were down by 16%. Blackstone tried to address that by cutting expenses 11% though profits were still down a total of 23%. The road's president was avowedly against government regulation of the nation's railroads and placed much of the blame for the downturn on the regulation inflicted by the government.[27]

Timothy Blackstone was proud of the Alton and saw it as a stand-alone company. Thus did he say no in 1883 when both the Santa Fe and Burlington roads decided to establish a line between Kansas City and Chicago and sought to acquire his company in order to get such a route. Santa Fe president William Strong did not take Blackstone's rejection lightly. His road pushed on and reached Chicago in 1886. He also stopped his road from interchanging traffic with the Alton in Kansas City. In retaliation, Blackstone cut rates at Kansas City in 1888 for hauling livestock, to the great consternation of all other railroads serving the city. And two years later he cut rates for transporting lumber. Blackstone no longer had any friends in Kansas City. The effects of this struggle on the Alton's bottom line were real. Freight revenue fell in 1888 to $4.9 million, the lowest it had been since 1879.[28]

Regarding the 1890s, the Chicago & Alton carried two million passengers in a year for the first time in 1892. There was also some new passenger equipment on the line and a new reason to travel to Chicago—the 1893 World's Fair. But all was not well as the Panic of 1893 struck the nation's economy. Many railroads were hit much harder than was the Alton, due in part to the fact that for the last fifteen years Blackstone had not borrowed any money. Reporting that fact to investors with great relish, he went on to say that "'while it has been said that no American railroad is completed…your road may now be considered as nearly completed as any other railroad in this country.'" The Alton went on to see a 6% increase in its income in 1895. Still, there were financial retreats before the decade was concluded. Passenger traffic was down in 1897, as were earnings which fell 10%. Farm production carried also declined, all of which was compounded by a three month coal miners' strike. As well, the tonnage carried by the line had increased substantially. The average weight hauled

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[27] Ibid., 116, 118-119, 120.

[28] Ibid., 120-121.

by a single freight car, for example, increased from 160 to 180 tons. The growth was good, but it took its toll on the road's infrastructure—its rails, culverts, trestles and bridges.[29]

Blackstone's commitment to his railroad and its stockholders was real and tangible. Yet the Alton became isolated as the 1890s wore on. Alliances with other roads were not sought. Nor was additional capitalization in order to rebuild infrastructure or expand territory served. Railroad biographer Glendinning observed that Blackstone "to be sure…made money for his stockholders, but anyone with an ounce of vision could see the company, under Blackstone, was ill prepared for doing business in the new environment" of the twentieth century. And his directors were no more insightful than was Blackstone.[30]

The dawning of the twentieth century brought with it the fact that the Chicago & Alton needed new leadership. Stockholder John Mitchell, who was also president of the Illinois Trust and Savings Company, along with Charles Chappell, the Alton's general manager and a director of the railroad, wanted to help direct the company's future. They knew that, in order to find someone with the money needed, they had to look in New York City. There they found Edward H. Harriman, a railroad financier who had helped to revitalize the financially troubled Illinois Central and Union Pacific railroads. Predicated on experience, Harriman knew that railroads in good physical shape could be salable, in contrast to those that were not.[31]

Harriman conducted an investigation of the Chicago & Alton Railroad and found that it would make a good purchase. Mitchell and Chappell coordinated the sale, which Blackstone protested and fought. Yet the railroad needed investment that he could not generate. The sale concluded and the Alton became part of the Harriman syndicate for a price of $38.8 million, $12 million of which went to Timothy Blackstone. Harriman did not see the need to make immediate changes, but he did assume the presidency of the road. Timothy Beach Blackstone, in contrast, died of pneumonia on 26 May 1900. He was seventy-one years old.[32]

The *Chicago Tribune* anticipated Harriman's plans "to provide new feeders and outlets for the road in every direction, and thus make the investment of the syndicate which purchased the road a profitable one." Harriman soon selected Samuel Felton to serve as president of the Alton. Felton's method of management was absolute. As he arrived in his new position, the

[29] Ibid., 123-125.

[30] Ibid., 127, 128.

[31] Ibid., 130-131.

[32] Ibid., 133; "Alton Railroad in New Hands," *Chicago Tribune*, 02 March 1899, 1; "T.B. Blackstone is Dead," *Chicago Tribune*, 27 May 1900, 8.

railroad claimed 232 locomotives, the vast majority of which were twenty years old or older. New equipment was needed and Felton added it. He acquired seventy new freight engines, 1,500 box cars, 300 stock cars, 1,000 forty ton hoppers and 1,300 fifty ton hoppers, for example. Regarding the locomotives, their tractive effort (i.e., their ability to pull) grew from 15,000 pounds to 21,000, thus enabling the creation of longer, heavier trains. Indeed, the railroad's ability to transport freight almost doubled to 276,000 tons. New passenger equipment was also acquired, among which was twenty new coaches and two new café/smoking cars. This facilitated the number of seats offered by the road to increase from 4,686 to 7,525.[33]

Time controlling the Chicago & Alton was limited for Harriman since the group that owned the Chicago & Rock Island and the St. Louis & San Francisco railroads had been acquiring consequential amounts of Alton stock. The Rock Island line wanted the Alton's Chicago to Kansas City route whereas the St. Louis & San Francisco wanted the Alton's St. Louis area connections. They accumulated enough stock to sway elections for railroad directors, but since those directors served staggered terms, there were several years of overlap in which Harriman-selected directors had to serve with Rock Island directors.[34]

Harriman's time with the Chicago & Alton ended in 1907. And the interest of the Rock Island and San Francisco railroads was soon diminished when it became apparent that anti-trust actions by the Theodore Roosevelt Administration in Washington, D.C., would not permit their acquisition. A new buyer for the road was found by the Rock Island group in one Edwin Hawley. His interest in the railroad notwithstanding, it is important to recognize the contribution Harriman made in resurrecting the moribund infrastructure of the Alton. He had spent $22.3 million which put 80 lb. rail on virtually the entire system. Stone ballast had been installed on 72% of the mainline and 40% of the road's branches. Efforts had been made to level and straighten various grades, as had automatic signaling been installed on much of the road's lines. Motive power was up 133% and most of the rolling stock had been replaced. Freight capacity was up 195% and coal constituted 53% of the Alton's freight traffic. Finally, the railroad's gross revenues increased from $2.7 million to $4.4 million from 1898 to 1907.[35]

Hawley's tenure directing the Chicago & Alton was also relatively short. Significantly, he acquired in 1909 additional motive power, three 2-6-6-2 Mallets and thirty 2-8-2 Mikados. His hope was that they could move more traffic with greater savings—an economy of scale of sorts. In 1911, freight traffic was up 13% while that for passengers increased 3%.

[33] "News of the Railways," *Chicago Tribune*, 25 May 1899, 10; Glendinning, *Chicago & Alton*, 142-143.

[34] Ibid., 149-150.

[35] "Harriman Give Up Alton," *Chicago Tribune*, 15 July 1907, 1; Glendinning, *Chicago & Alton*, 159-160.

Revenue overall was up 9%, reaching $14.4 million. Offsetting those increases, however, were operating expenses. They were up 16%, meaning that the railroad had a deficit for the third year in a row. Unfortunately Hawley died of a heart attack on 01 February 1912. He had designated no successor nor offered any plans for consolidating the various railroad interests he owned. Samuel Insull, who led Commonwealth Edison, one of the Alton's most significant customers, replaced Hawley on the road's Board of Directors. B.A. Worthington replaced Hawley as the Alton's president.[36]

The financial condition of the Chicago & Alton was slowly deteriorating. The road's chairman of the board, Thomas Hubbard, knew that something significant needed to be done to stabilize the situation. Hubbard also knew that the Union Pacific still held a significant interest in his railroad due to stock that Harriman once owned but that he had transferred to the UP. Thus did Hubbard approach Robert Lovett, Harriman's successor, for help. Lovett agreed in 1912 to loan the Alton $15.3 million, in return for which he became chairman of the Alton's board of directors in addition to securing two more seats on the board for Union Pacific representatives. With that influx of capital, the railroad's performance improved in 1913. Overall tonnage was up 5.5% and freight revenue was up 6.5%. Tonnage was moved more efficiently as there were heavier loads on fewer cars. Freight train mileage was down 4%, but average net ton miles were up 13%. Passenger traffic was also up.[37]

Worthington yielded the presidency of the Alton in 1913 and was succeeded by William Bierd whose first full year in office saw the road's performance fall badly. Freight tonnage was down 21%. Coal was down 34%. Combined with operating revenues down 25% and bond interest up 49% since 1909, there was a $5.7 million deficit for 1914. Despite the losses, the Union Pacific investment helped. The UP acquired equipment and leased it back to the Alton. Additionally, a fourteen year project to elevate track in Chicago was completed. There was also a new passenger station in Bloomington and a new freight yard at E. St. Louis.[38]

Lovett left the Union Pacific and Chicago & Alton for World War I, government-related railroad duties. Thus was the Alton's leadership turned over to C.B. Seger, the Union Pacific's vice president and controller. Little was done to the road's infrastructure during the war years of 1917 and 1918. 1919 saw a pick up as a new depot was constructed at Chenoa and a new coalfield north of Carlinville was developed by Standard Oil that would be serviced by the Alton. Yet losses continued. The excessive reliance on hauling coal, a commodity that generated lower freight rates, was problematical. President Bierd tried to

[36] Ibid., 165-166, 167, 169.

[37] Ibid., 170-171.

[38] Ibid., 171-172.

limit costs. Branch lines were limited to runs every other day. Many workers were laid off. He saved $2 million, but still the red ink grew.[39]

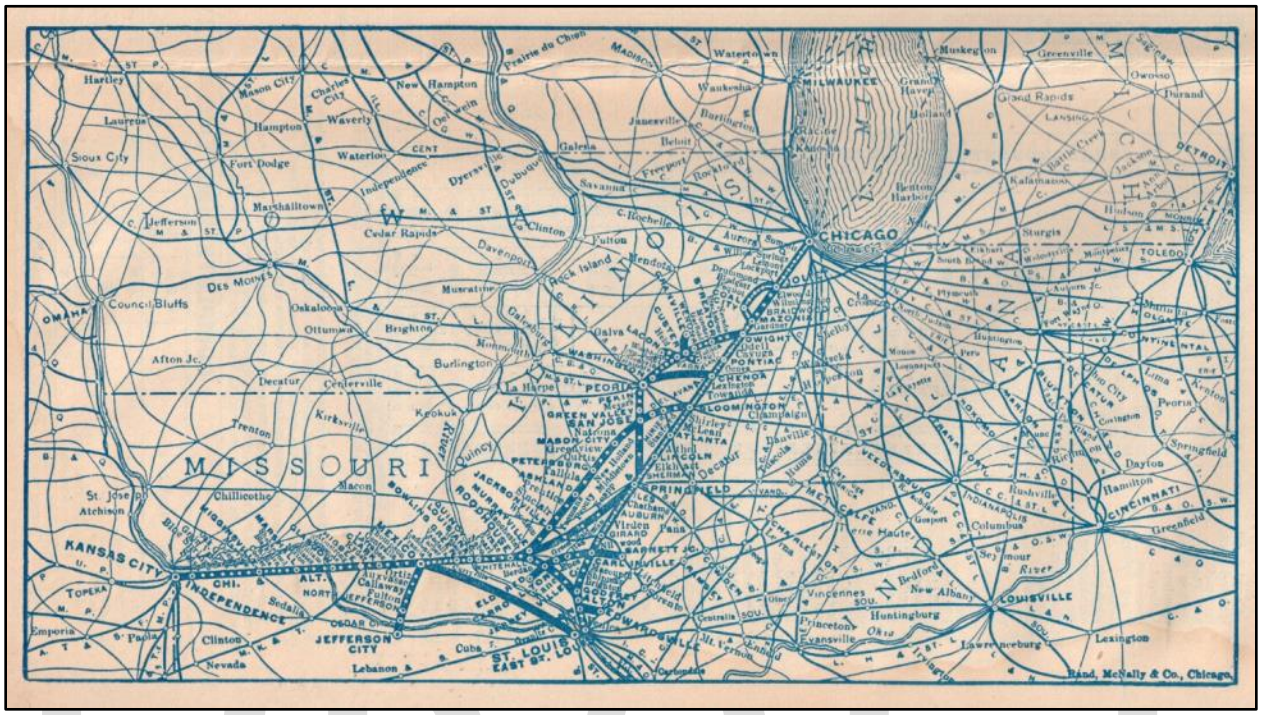

Figure 2: This image illustrates the mature Alton Railroad in 1916. With the exception of the airline route from Springfield to Murrayville, this is very much the mature system that Blackstone yielded to Harriman in 1899. Chicago & Alton Railroad, *Chicago & Alton Railroad: Official Local Time Tables* (Chicago: Poole Brothers, 1916).

The Chicago & Alton Railroad filed for bankruptcy on 31 August 1922. With that, further efforts were made to try and constrain costs. Regulators would not allow the cessation of trains that did not meet expenses. Bierd then turned to the use of motor cars – essentially self-propelled passenger cars – on various runs. He also developed in 1926 a railroad owned subsidiary that operated busses for passengers in lieu of trains. There were regulatory difficulties in developing a functional bus system, however, and that experiment was halted in 1930. It was ultimately determined that reorganization was not feasible, thus did the court authorize the railroad's sale on 6 July 1928. Gene Glendinning explains that "unlike the circumstances 75 years earlier, the pending liquidation had not been brought on by fraud. Rather, following Harriman's ownership, it was the result of too frequent changes of management, too many missed consolidation opportunities, and in the final analysis too little revenue-generating traffic to support the heavy capitalization incurred over a 30-year period." The railroad was sold on 11 December 1930 to the Alton Railroad, a new subsidiary of the Baltimore & Ohio Railroad. The date of formal acquisition by the Baltimore road was 17 July 1931.[40]

[39] Ibid., 177, 179-180, 181.

[40] Ibid., 185, 193, 199, 202-203.

The sale of the Alton occurred in the early years of the Great Depression, a fact that had a significant impact on the railroad and its viability. The nationwide, depression-driven reduction in manufacturing meant less demand for coal. Of fifty-eight mines on its lines, thirty-three closed down. Indeed, Alton revenues declined by half between 1929 and 1932, from $28.7 million to $14 million. The railroad reacted by significantly reducing service to Kansas City, as well as on branch lines. Motive power was cut by more than half, as were the number of freight and passenger cars. Some track abandonments even occurred in 1932.[41]

Those reductions notwithstanding, Chicago to St. Louis passenger traffic generally stayed strong. The 1930s was the decade in which railroads started the transition from steam to diesel. The Illinois Central ordered in December 1934 a new train for its Chicago to St. Louis service. Fearing the impact that could have on the Alton's corridor service, the Baltimore & Ohio assigned one of its new streamlined engines, the Lord Baltimore, to Illinois. Soon the Alton had two new trains, the *Abraham Lincoln* and the *Ann Rutledge*, serving the corridor. And while the two trains were successful, the automobile was claiming a greater and greater percentage of intercity travels. In that respect, the Alton line was unfortunate in the sense that Route 66 paralleled much of its line between Chicago and St. Louis. The bleeding continued. Losses for the road averaged $3.3 million in 1932-1935, but increased to $6.8 million and $7.7 million in 1937.[42]

The Baltimore & Ohio had operated the Alton as a separate entity under its corporate umbrella. But the parent decided in 1942 to sever the relationship. With debts and interest outstanding in the amount of $48.4 million, the Alton filed for bankruptcy and sought reorganization on 25 November 1942. A receiver was appointed on 22 January 1943. It became clear at a reorganization hearing in February 1944 that, give the road's post-1900 history, there was virtually no interest in it. Soon, however, the Gulf, Mobile & Ohio Railroad showed some interest in the Alton. The Gulf essentially was a system that operated between Mobile (Alabama), New Orleans (Louisiana) and St. Louis. Issac Tigrett, president of the road, proposed to acquire the Alton and merge it into his operation. He would then have a north/south railroad that reached from the Gulf of Mexico to the Great Lakes, the line to Kansas City, which he really did not want, notwithstanding. Tigrett got the support of Alton bondholders and offered nominal money to the Baltimore & Ohio in order to insure that all potential claims it might have against the Alton were addressed. The deal was

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[41] Ibid., 204-207.

[42] Ibid., 185, 208-210, 212-213.

approved by the bankruptcy judge on 28 May 1946 and officially closed on 31 May 1947.[43]

The Chicago & Alton and Coal:

Although the Alton road started in its namesake city on the Mississippi River, the freight most frequently carried by the line, and to which its fortunes were most closely tied – coal – was initially discovered in the region southwest of Chicago. The community of Braceville was established in 1861 around the Cotton Mine, one of the first coal producing ventures in the area. Three years later, in 1864, 6,000 tons of Braidwood area coal had been mined and shipped to Chicago. Efforts to locate veins of coal in the Gardner vicinity also began in 1864. Soon there were fifty mines in the general Braidwood vicinity, with other, smaller mines along the railroad toward Springfield and the southwest.[44]

Soon Braidwood area coal trains made the Bloomington to Wilmington segment of rail the most heavily used portion of the Alton line, which started to create traffic delays. Double-tracking was the response to those delays. The sixteen-and-a-half miles between Braceville and Wilmington, and the eight miles between Odell and Dwight, were the first segments of the Alton line to be double-tracked in 1868. The railroad earned a $2 million profit in 1870, and hauling coal was a significant part of that success. Tonnage was up twenty-five percent the next year, at which time the mines in the Braidwood area "… had become the largest single source of traffic on the railroad."[45]

The railroad's relationship with the coal industry, however, was also very temperamental. Coal production was down by twenty-six percent in 1874 due to a three month miner's strike at Braidwood and a ten month hiatus at a major coal consumer, Joliet Iron & Steel. And there was another strike at Braidwood area mines in 1877. Potential competitors were also an issue for the Alton. Another road built twenty-four miles of track in 1873, wanting to connect Coal City (about three-and-a-half miles northwest of Braidwood) to Streator. Those plans never fully materialized and the company offered its tracks to Blackstone, who signed a lease on 01 March 1875.[46]

Competition for the transportation of Braidwood area coal heated up significantly in the

[43] Ibid., 215, 223-224, 229; James H. Lemly, *The Gulf, Mobile and Ohio: A Railroad That Had to Expand or Expire* (Homewood, IL: Richard D. Irwin, Inc., 1953), 183-191. The book by Lemly is a very detailed investigation of the Gulf, Mobile and Ohio Railroad. One who might want details regarding the Gulf's acquisition of the Alton is referred to that source.

[44] Glendinning, *Chicago & Alton*, 74-76.

[45] Ibid., 94-95.

[46] Ibid., 100, 103-104, 106.

1880s. The Alton lost some of its coal to the Wabash Railroad in 1883. Then, in 1888, the Elgin, Joliet & Eastern Railroad entered the territory and started hauling forty cars of coal a day for the Chicago, Milwaukee & St. Paul Railroad that once did the Alton. Next a slow decline in production led to the closing of some mines, which drove the miners to strike, which promoted the closure of more mines. Coal production in 1889 was 1million tons, down from 1.6 million tons the year before. Another strike in 1897 and 1898 drove annual production down to 894,017 tons, the fewest since 1879. Still, in 1907, coal accounted for 53% of the Alton's freight traffic.[47]

During World War I a new coal field was discovered in the Carlinville vicinity, south southwest of Springfield. It was owned by Standard Oil and produced up to 900 tons of the commodity a day. The Chicago & Alton secured that business. Nevertheless, all was not well. Competition was growing. This time from new highways and the trucks that used them. A strike in 1922 impacted mines across the country. Coal accounted for 49% of the freight then carried by the Alton, which was significantly affected by the strike. Bituminous miners settled their issues in August, but the anthracite miners remained on strike. Ultimately, these strikes were consequential factors that contributed to the Alton's 1922 declaration of bankruptcy. There was another six month strike in 1927 which drove the Chicago & Rock Island's decision to mine its own coal in the Peoria area and not rely on the Alton to haul Springfield area coal, which was affected by the strike, for it. New veins were discovered in the Braidwood area in 1928 that produced coal through the 1940s, and in some cases to the 1970s.[48]

The Infrastructure and Passenger Trains on the Alton's Chicago to St. Louis Route:

<u>The Track and Its Trains</u>

While the time associated with getting by train from one community to another was dependent on the technology then available, it was also affected by the quality of the roadbed and its tracks. There was the need to maintain the track almost as soon as it was laid. In 1861, for instance, travel time between Chicago and Alton was about twelve hours. Work occurred between 1861 and 1862 that led to the relaying of 15% of the main line using 200,000 new ties and ballasting about forty miles of track for the first time. Bridges over the Sangamon and Kankakee rivers were also replaced, while eighty two other bridges were repaired. Then, in 1869, was a new wrought iron, two-track, bridge constructed across the Mazon River that replaced a single-track, timber trestle. Four miles of a second mainline were also constructed between Braceville and Gardner, in the heart of the coal district. By 1874, the Alton had 649 miles of track, 28% of which claimed "heavier steel rails." The

[47] Ibid., 121, 125, 159-160.

[48] Ibid., 179-181, 185, 197, 198-199, 212-213.

Joliet to Chicago segment also had received a second track while a second, Joliet to Gardner mainline was almost finished in the coal district. The time taken for the Chicago to St. Louis runs had been reduced to eleven hours and fifteen minutes.[49]

A bypass around Alton was constructed in 1881between Godfrey and the east side of Milton Station (which is between Alton and East Alton).[50] It reduced a grade of ninety feet per mile to one that was only thirty-two feet per mile – a significant operational improvement. Seventy pound rail was also on all the mainline routes of the Alton by 1881, as was more ballast deposited on the tracks.[51]

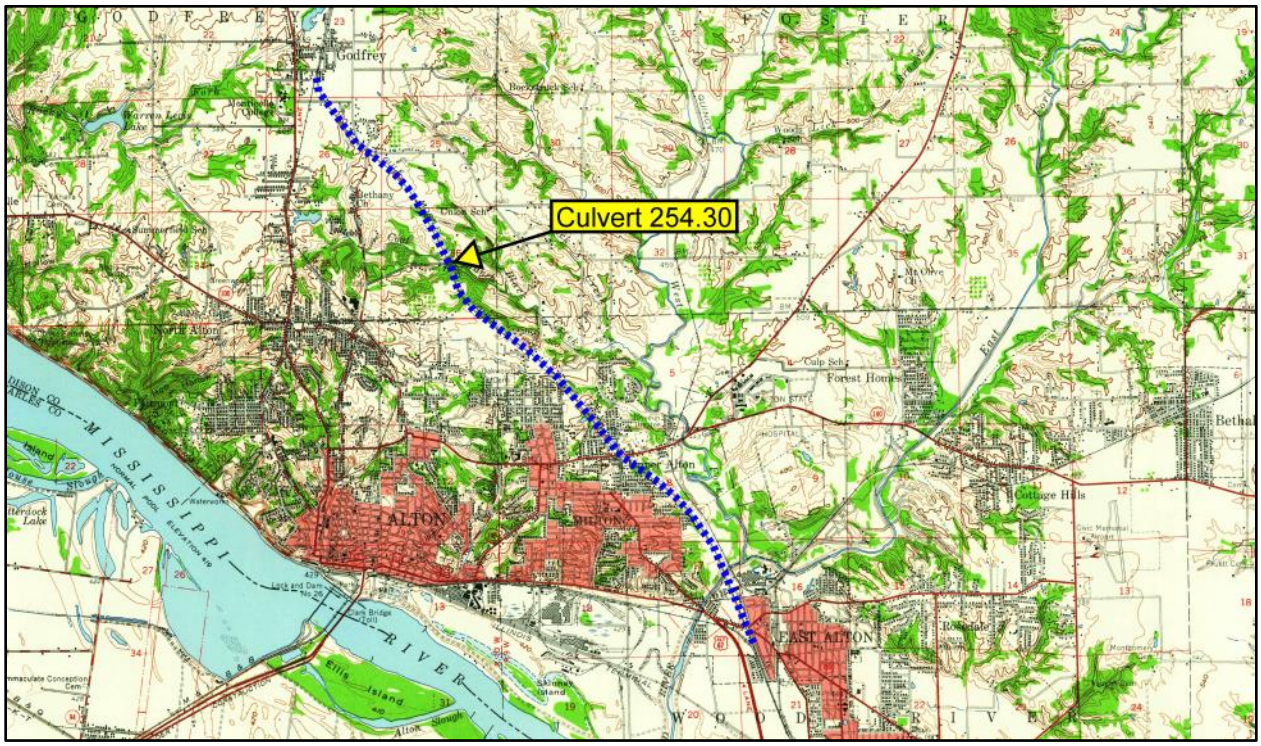

Figure 3: This USGS map illustrates the location of the 1881 Alton bypass, as well as the location of the large and significant culvert located on it at MP 254.30. U.S. Geological Survey, *Alton Quadrangle* [map], 1955, 1:62500, 15 Minute Series (Reston, VA: United States Department of the Interior, USGS, 1955).

Improvements to the line and its trains continued. The United States Post Office was an important customer of railroads and always wanted faster service. The Chicago & Alton responded and in 1889 the *Palace Express* completed the run between Chicago and St. Louis in ten-and-one-half hours. The *Chicago Limited* and the *St. Louis Limited* were new trains

[49] Ibid., 61, 63, 82, 101-102.

[50] Milton Station is recognized on several USGS maps of the mid-1950s. U.S. Geological Survey, *Alton Quadrangle* [map], 1955: 1:62500, 15 Minute Series (Reston, VA: United States Department of the Interior, USGS, 1955).

[51] Glendinning, *Chicago & Alton*, 116-117.

that started running in March 1892. They covered the route in eight-and-one-half hours and included special dinning arrangements for a buffet lunch that was continuously available between Chicago and St. Louis. It was reported in the *Chicago Tribune* that the railroad had "spared nothing in the construction of the equipment for the *St. Louis Limited* to make it the safest, most complete and luxurious train in the west." The two trains made the runs in just less than eight hours in 1899. A new train, the *Midnight Special*, was also installed on the route in June 1895. Thus were there "four daily fast trains" between Chicago and St. Louis each way every day.[52]

The *Alton Limited*, a new train between the two cities, was also inaugurated in 1899. It cut an impressive figure with a six-car consist – a passenger car, postal car, baggage/smoking car, parlor car, café/buffet/lounge car and a twenty-two seat parlor/observation car – all by the Pullman Company. The consist was pulled by one of twelve new 4-4-0 engines built by the Brooks Locomotive Works of Dunkirk, New York, and acquired by the railroad specifically for the *Limited*. The train was designated by George Charlton, the head of the Alton's passenger department, as "The Handsomest Train in the World." Its inaugural run was on 9 November 1899, barely six months after Blackstone yielded the company to E.H. Harriman, and completed in eight hours.[53]

Figure 4: The photograph of a slightly extended *Alton Limited* was the result of George Charlton's desire to advertise his train at the 1900 exposition in Paris, France. "Richard Renaldi's Photography Blog," Viewed at http://blog.renaldi.com/2009/10-george-r-lawrence.html on 30 November 2014.

Harriman had acquired the Chicago & Alton knowing that dramatic improvements were needed for the railroad and its infrastructure. Samuel Felton, the road's president under Harriman, soon implemented plans to rehabilitate sixty-one bridges and replace thirty-nine others. Track was realigned, curves straightened and grade flattened. Illustrating the latter, fourteen miles of grade were flattened to one-half of one percent for fourteen miles between Springfield and Bloomington, and to one-third of one percent for just less than thirteen miles

[52] Ibid., 138-139; "Reducing the Time to St. Louis," *Chicago Tribune*, 26 February 1892, 7; "Chicago and Alton's New Limited," *Chicago Tribune*, 28 June 1895, 9.

[53] Glendinning, *Chicago & Alton*, 138-139; *Engineering News and American Railway Journal* 42, no. 21 (23 November 1899), 329; "Fast Passenger Locomotives: Chicago & Alton R. R." *Engineering News and American Railway Journal* 43, no.1 (4 January 1900), 14.

between Bloomington and Chicago. Eighty pound rail was also installed on most of the system, as were 620,000 new ties, fifteen miles of passing track and a new semaphore signaling system.[54]

Two years later, in 1903, new motive power, including four Atlantics (so named because they were first used by the Atlantic City Railroad) with eighty-one inch drivers, which were considered ideal for the *Alton Limited*, were acquired. Eighty-four percent of the rail switches were replaced in 1904, as was fifty-nine percent of the rail and sixty-two percent of the ties. Additional acquisitions in 1905 included thirty coaches, six café/smoking cars and five baggage cars, as did work on the line itself. Fifty-one miles of a second mainline were constructed between Bloomington and Sherman, a two year project that cost $2 million. A key element of that project was to reduce the grade between Lawndale and Atlanta, where supplemental engines were often needed to assist north-bound trains. A three-tenths of one percent grade was achieved by twenty-five to thirty-five foot cuts. Two miles of double tracking through Springfield were also completed, as was a new connection constructed between Springfield and Woodson, which accommodated passage to Roodhouse and Kansas City. Also in the 1905-1906 period was the bridge over Kickapoo Creek, immediately north of Lawndale, replaced with a new structure that utilized three, seventy-foot spans. A new bridge with nine, sixty-four foot spans across Salt Creek, immediately south of Lincoln, was also under construction.[55]

Regarding the *Alton Limited* and its new motive power, the company started using in 1905 completely new equipment on the train. The consist was constructed by Pullman, which had a display at the Chicago World's Fair that exhibited new cars with interior lines that were more squared, as opposed to the more curved or arched lines traditionally found in cars. Thus did the cars, which also had green leather upholstery and vermillion mahogany, among many other appointments, seem to offer more room. As for the new *Limited*, the *Railroad Gazette* reported that "no one who sees these splendid trains will be inclined to dispute the Alton passenger department's claim that they set the 'high mark' in passenger equipment."[56]

Following Harriman was the brief ownership of the Rock Island group which was followed by Edwin Hawley. He, like Harriman, believed that first-rate properties, and the return they generated, required investment. Hawley extended in 1909 a second mainline from Isles, immediately south of Springfield, to Nilwood. He also reduced the grade between Atlanta

[54] Glendinning, *Chicago & Alton*, 143-145; "Extensive Improvements being Made on the Alton," *Chicago Tribune*, 6 December 1900, 12.

[55] Glendinning, *Chicago & Alton*, 147-149, 150-151; "Alton Decides on Extension," *Chicago Tribune*, 31 March 1905, 10.

[56] "The New 'Alton Limited,'" *Railroad Gazette* 39, no. 9 (1905), 204-206.

and Bloomington by twelve feet. Further track improvements were made as ninety-pound rail was laid on the fifty-one miles between Joliet and Chicago, as well as between Bloomington and Chenoa. The five truss spans across the Sangamon River, immediately south of Sherman, were also replaced in 1912, the same year that Hawley died. It was also during his tenure that the Alton inaugurated on 22 January 1911 a fast mail train between Chicago and St. Louis, one in each direction. The trip was made in six hours and fifteen minutes and included stops at Joliet, Pontiac, Bloomington, Springfield and East St. Louis. [57]

While track work continued in the 1910s, the decade was dominated by the First World War and America's late entry into it. The war placed a heavy burden on the Alton's infrastructure, what available money there was going into adding ballast and replacing rails and ties. Soon after the war ended, in 1922, the Alton completed a project of double-tracking the segment between and Godfrey and Brighton. And having filed for bankruptcy in 1922, it also secured from the court approval to lay fifteen more miles of ninety-pound track. The railroad installed double-track two years later on the eleven miles between Brighton and Plainview.[58]

The Alton's high profile passenger trains also continued running. A new *Alton Limited* was implemented starting on 23 September 1924 that made the Chicago to St. Louis run in six-and-one-half hours. It was also joined by the *Lincoln Limited*, an afternoon train that also made the trip in six-and-one-half hours. These trains helped to solidify the Alton's position of providing exceptional service to the traveler in the Chicago to St. Louis corridor. Eleven years later, when the Alton was the possession of the Baltimore & Ohio Railroad, the run between the two cities was taken over by the *Abraham Lincoln* which was scheduled to leave Chicago at 8:58 in the morning and arrive in St. Louis at 2:28 in the afternoon. With just less than one hour and forty-five minutes in St. Louis, the train departed that city for its Chicago return at 4:15. According to author Glendinning, the five-and-one-half hour trip "quickly began turning in the highest passenger revenue per mile returns of any long-haul passenger train." The *Lincoln* was soon joined in 1937 by the *Ann Rutledge*. Together they served the corridor in fine fashion. Both trainsets were significantly rehabilitated by the Gulf, Mobile & Ohio in 1947, "for the purpose of adding comfort and beauty." The trains also got new motive power that had previously been ordered by the Baltimore & Ohio. The *Rutledge* ended its original service on 27 April 1958, while the *Lincoln* survived into the Amtrak era.[59]

Depots and Stations

Depots and stations are the structure-type through which most people interacted with the

[57] Glendinning, *Chicago & Alton*, 161, 166, 168.

[58] Ibid., 187, 195, 220; "New Train to Break Record," *Chicago Tribune*, 11 January 1911, 13.

[59] Ibid., 191, 211, 212, 220; Lemly, *The Gulf, Mobile & Ohio*, 199.

railroad. Those anchoring the Alton's Chicago to St. Louis route are Union Station in St. Louis and Union Station in Chicago.[60] The former was constructed in the early 1890s and is listed on the National Register of Historic Places. It is also a National Historic Landmark and a St. Louis Landmark. The latter opened in 1925. It was listed as a City of Chicago Landmark in 2002. The LaSalle Street Station, which is the station historically associated with the Chicago, Rock Island and Pacific Railroad, is not historically designated. Other depots on the line that are listed on the National Register of Historic Places are located in Joliet (1912), Dwight (1891) and Springfield (1898).[61]

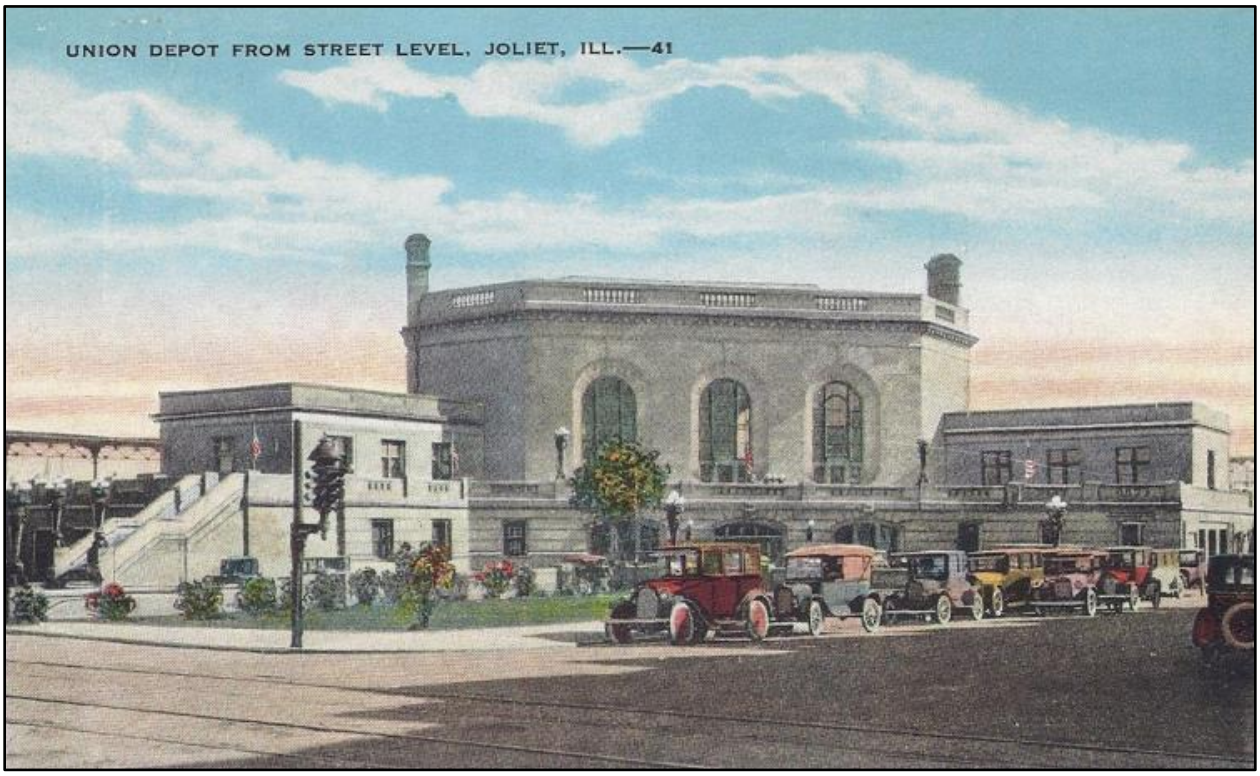

Figure 5: This historic image pictures the National Register-listed Joliet depot, which was used by the Chicago & Alton Railroad.

Over the years, the Chicago & Alton constructed depots in virtually all of the communities along its line. Pontiac received a new depot in 1866, its old depot being moved to Cayuga. A new depot was also built that year in Lawndale, while freight houses (COMPLETE)

[60] An extensive article detailing objectives and plans for, as well as illustrations of, the new Chicago station can be found in the *Chicago Tribune.* "Chicago's New Union Station to be Model Passenger Terminal," *Chicago Tribune*, 26 January 1915, 5.

[61] National Register of Historic Places, *Union Station, Joliet, Illinois*, City of Joliet, Will County, Illinois, NRHP Reference No. 19780801; National Register of Historic Places, *Dwight Chicago and Alton Railroad Depot*, City of Dwight, Livingston County, Illinois, NRHP Reference No. 19821227; National Register of Historic Places, *Union Station and Central Passenger Station*, City of Springfield, Sangamon County, Illinois, NRHP Reference No. 19781127.

Figure 6: The Dwight depot, which is listed on the National Register of Historic Places, was constructed in 1891.

Figure 7: Constructed in 1898, the Alton's Springfield, National Register-listed depot serves passengers today.

The Chicago, Rock Island & Pacific Railroad: Chicago to Joliet

(COMPLETE AND INSERT)

CHAPTER 3: Resource Types of the Chicago & Alton and Rock Island Railroads

Resources No Longer Extant:

In their heyday, essentially the late nineteenth and early twentieth centuries, railroads counted a variety of buildings and structures among their properties. These included, but are not necessarily limited to: 1) Watchman's Shanties; 2) Section Tool Houses; 3) Section Houses; 4) Dwellings for Employees; 5) Sleeping Quarters/Club Houses for Employees; 6) Snow Sheds and Protection Sheds; 7) Signal Towers; 8) Car Sheds and Car-Cleaning Yards; 9) Ashpits; 10) Ice Houses; 11) Sand Houses; 12) Oil Storage Houses; 13) Oil Mixing Houses; 14) Water Stations; 15) Coaling Stations for Locomotives; 16) Engine Houses; 17) Freight Houses; 18) Platforms, Platform Sheds and Shelters; 19) Combination Depots; 20) Flag Depots; 21) Local Passenger Depots; and 22) Terminal Passenger Depots.[62] With the exception of some depots, virtually all of these building types – if they all were actually built on the Chicago & Alton and the Rock Island lines in the project corridor – appear to be gone.

Another, very prominent resource type associated with a railroad was its primary shop complex where equipment and rolling stock was maintained, repaired and sometimes built. Companies usually had several smaller shops along their lines, but they typically had only one principal shop complex. It was generally located at one end of a system or the other, or at a mid-point, and consisted of the locomotive department and car department, in addition to several buildings that served both departments along with the greater railroad.

Engines were repaired, rebuilt or constructed from scratch in the locomotive department. It included the erecting shop, machine shop and boiler shop and required accessibility to the blacksmith shop, foundry and storehouse, all three of which were among those buildings that served both departments as well as the road in general.[63]

Locomotives were disassembled and assembled in the erecting shop, which could be arranged in either a longitudinal or transverse fashion. In the case of the former, the tracks ran parallel with the length of the shop. The center track provided access. An engine entered the shop and was lifted by two cranes from the center track to one of the parallel side tracks for work. Regarding the latter, tracks were placed at right angles to the shop's length and required either a round table or a transfer table for access. Once an engine entered this type of shop, the track on which it entered became its work station.[64]

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[62] Berg, *Buildings and Structures*, vii-xvi.

[63] R.H. Soule, "Railway Shops" (Part 8), *American Engineer and Railroad Journal*, May 1904, 161; F. Kingsley, "Railroad Shop Layout," *American Engineer and Railroad Journal*, May 1910, 202.

[64] R.H. Soule, "Railway Shops" (Part 1), *American Engineer and Railroad Journal*, April 1903, 121-123.

Various locomotive components were fabricated and repaired in the boiler shop, machine shop, foundry and blacksmith shop. The stores department furnished the pieces that were more economical to purchase. Roundhouses were also a part of the locomotive department and accommodated most minor repairs.[65]

Passenger and freight cars were repaired, overhauled and built by the car department. It consisted of the passenger car shop, planning mill, cabinet shop, upholstery shop, freight car shop and paint shop. The department also required accessibility to the blacksmith shop and stores department.[66]

The passenger car shop facilitated both repair and new car construction. These buildings were frequently laid out utilizing the transverse track arrangement. Single story structures were considered the best type of building for this shop, but with saw-tooth roofs for uniform daylight lighting. Major adjuncts to the passenger shop included the planning mill, cabinet shop, upholstery shop and paint shop.[67]

The freight car shop also facilitated repair work as well as new car construction. A committee of the American Railway Engineering and Maintenance of Way Association suggested in 1902 that longitudinal tracks be adopted for freight car work. Yet, at the turn of the century, this type of shop was pretty evenly divided between the longitudinal and transverse layouts.[68]

In addition to meeting the demands of the locomotive and car departments, the stores department and the foundry provided supplies for a railroad's entire network. Wheels were a major foundry product distributed system-wide, for instance. The stores department was the clearing house for all of a railroad's material purchases.[69]

There were many factors to consider when actually laying out a shop complex. The blacksmith shop, machine shop, foundry and stores department were typically located as conveniently as possible to the locomotive erecting shop. The foundry was also within easy reach of the stores department, since much of what it produced was for distribution along the

[65] R.H. Soule, "Railway Shops" (Part 7), *American Engineer and Railroad Journal*, April 1904, 123.

[66] Soule, "Shops" (Part 8), 161.

[67] R.H. Soule, "Railway Shops" (Part 2), *American Engineer and Railroad Journal*, October 1903, 350-351; Kingsley, "Shop Layout," 202; R.H. Soule, "Railway Shops" (Part 4), *American Engineer and Railroad Journal*, December 1903, 433-434.

[68] R.H. Soule, "Railway Shops" (Part 3), *American Engineer and Railroad Journal*, November 1903, 393-394.

[69] R.H. Soule, "Railway Shops" (Part 5), *American Engineer and Railroad Journal*, February 1904, 43.

line. The blacksmith shop and foundry also had to be accessible to the car department in which the dry kiln was typically placed between the lumberyard and the planning mill. The upholstery shop was immediately adjacent to the passenger shop. The freight car shop was most often next to the mainline in order to accommodate quickly moving cars off and back on to the line. Buildings were laid out close enough to each other to provide room for future expansion, yet be far enough apart, fifty to seventy-five feet, to provide a fire barrier.[70]

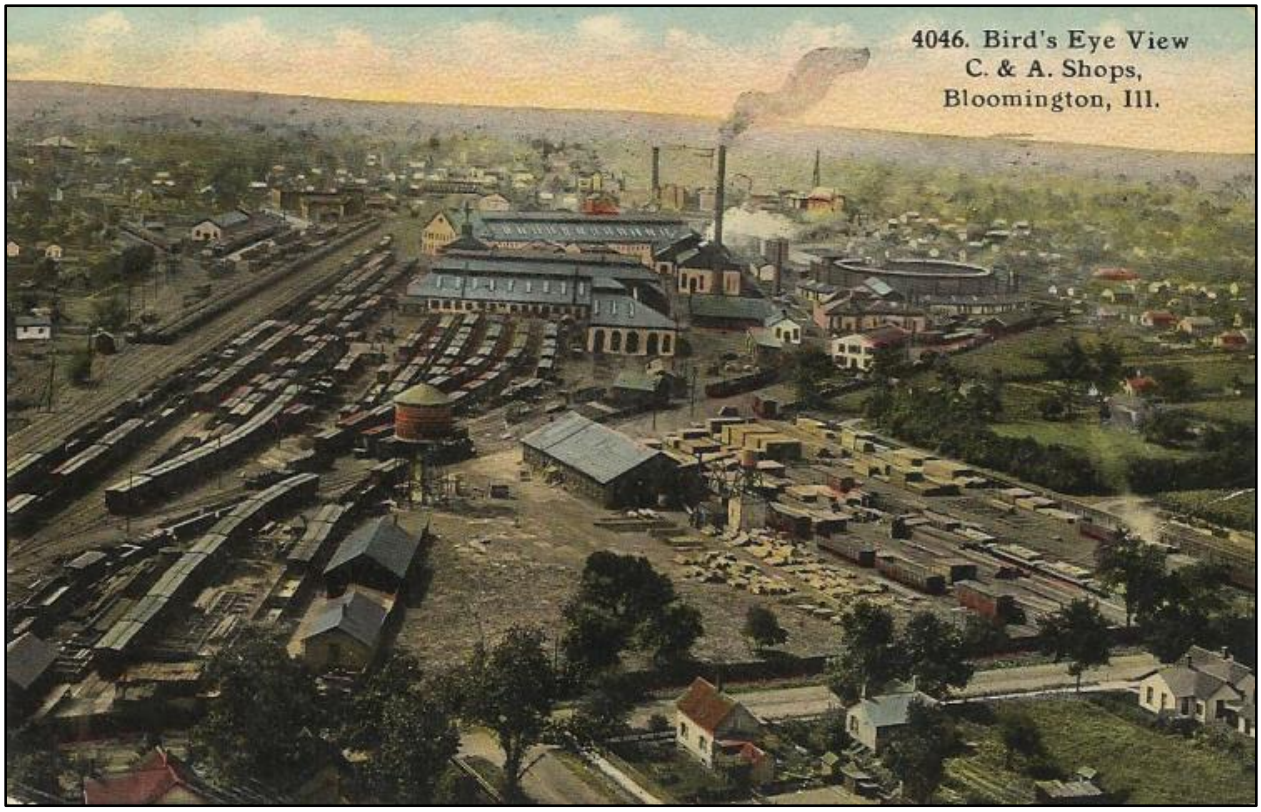

Figure 8: This image pictures the Chicago & Alton's primary shop complex in Bloomington. Based on the arrangement of cars and tracks, it appears that the transverse arrangement of tracks was prominently used as the shops were designed.

This brief context suggests how important a railroad's shop complex was to its successful operation. The primary shop for the Alton was located in Bloomington. Activity there started with construction in the late 1850s and continued until 1972 when the Gulf, Mobile & Ohio merged with the Illinois Central, although activity in one building continued until 1979 when it burned down. The complex was subsequently removed, although its sense of size, and the activity that occurred there, are implied in the image identified as Figure 8.[71] The

[70] Kingsley, "Shop Layout," 202; Soule, "Shops" (Part 5), 41-43; R.H. Soule, "Railway Shops" (Part 6), *American Engineer and Railroad Journal*, March 1904, 81-83.

[71] Readers wanting to know more about the Alton's Bloomington shops and their history, are referred to other published sources that deal with the shops, an example of which is Michael G. Matejka and Greg Koos, eds., *Bloomington's C & A Shops: Our Lives Remembered* (Bloomington, IL: McLean County Historical Society, 1988). George Perkins, Archivist-

ground on which the shop complex stood is today vacant and overgrown, as generally illustrated in Figure 9.

Figure 9: This 1994 image from Google Earth still shows some remaining features of the shop complex – the location of the roundhouse, for instance, in the lower center part of the picture. Immediately above (in the picture) the foundation of the roundhouse is a single, old building that is no longer extant.

The Rock Island had no shops on its Chicago to Joliet route (VERIFY).

Extant Resources:

Although once laden with a variety of structural resources, the Chicago & Alton's historic Joliet to St. Louis route today, and the Rock Island's Chicago to Joliet route, claim only a few. And those are essentially bridges, culverts and stations.

Bridges:

Bridges are structures that typically carry a conveyance over a depression or across a body of water. Three prominent bridges in the United States that have piqued the popular imagination and about which much has been written, both in the academic and popular presses, are the Brooklyn Bridge in New York City, Eads Bridge in St. Louis and Golden Gate Bridge in San

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McLean County Historical Society, Telephone Conversation with John N. Vogel, Heritage Research, 26 November 2014, Notes on file at Heritage Research, Ltd., Menomonee Falls, WI.

Francisco. Much has also been written about railroad bridges. A fine, late nineteenth century example is Theodore Cooper's *American Railroad Bridges*. A more contemporary work is Richard J. Cook's book *The Beauty of Railroad Bridges*. Another that also deals heavily with bridges is William D. Middleton's *Landmarks on the Iron Road: Two Centuries of North American Railroad Engineering*. Indeed, the Chicago & Alton's bridge across the Missouri River at Glasgow, Missouri is referenced briefly in Middleton's book and illustrated in Figure 10.[72]

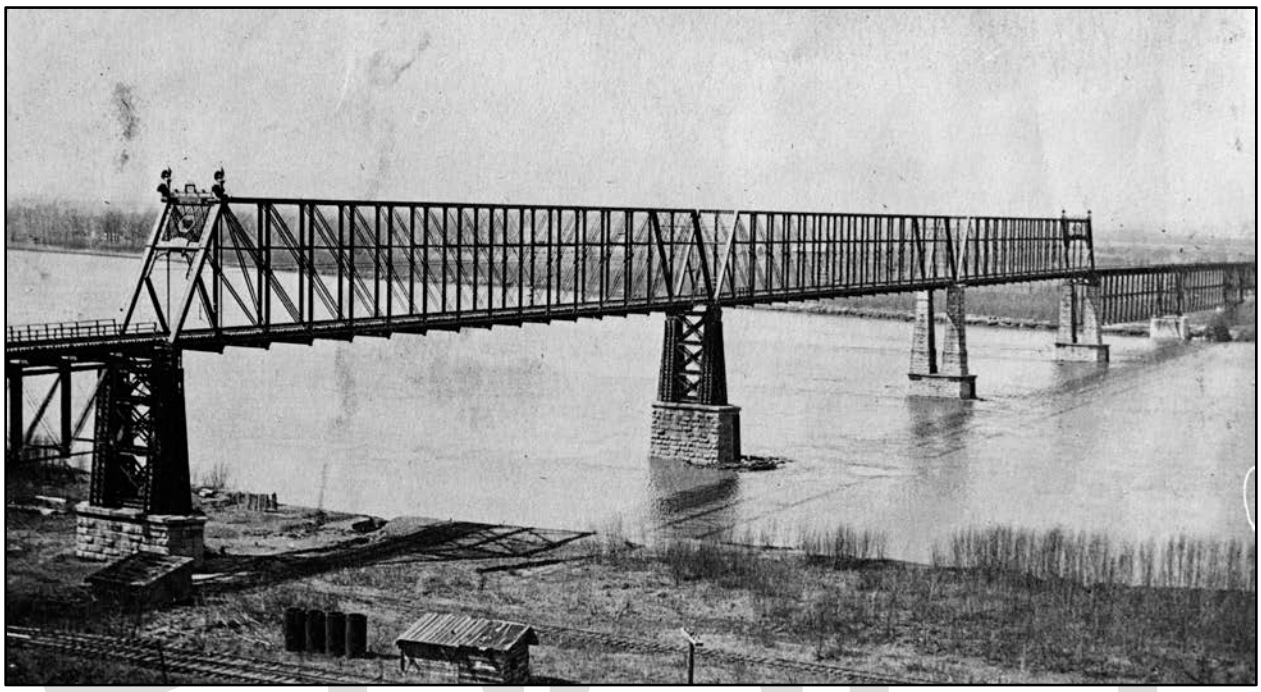

Figure 10: Constructed in 1879, the Chicago & Alton Bridge across the Missouri River, adjacent to the Missouri community of Glasgow, was the first such structure ever erected completely of steel. It was subsequently replaced about twenty years later by a four span Parker Through Truss (and its approaches) that could accommodate heavier trains. "Chicago and Alton Railway Bridge, Howard County, Missouri," HABS No. MO-1465, Included in the Historic American Building Survey, Library of Congress, Washington, D.C.

There are four unique bridges in the Chicago area, all of which are on the Rock Island line to Joliet, three of which are moveable structures over the Chicago River. The St. Charles Airline Bridge (B0005) and the 18th Street Bridge (B0030) have both been documented for the Historic American Engineering Record, their identification numbers being HAER No. IL-67 and HAER No. IL-112, respectively. A third moveable bridge, structure B0010, is also in the vicinity of the other two. The fourth unique bridge is a Parker Through Truss (B0590) that carries the former Rock Island line across the Calumet Sag Channel in the suburban

[72] Theodore Cooper, *American Railroad Bridges* (New York: Engineering News Publishing Company, 1889); Richard J. Cook, *The Beauty of Railroad Bridges In North America: Then and Now* (San Marino, CA: Golden West Books, 1987); William D. Middleton, *Landmarks on the Iron Road: Two Centuries of North American Railroad Engineering* (Bloomington, IN: Indiana University Press, 1999), 5.

Chicago community of Blue Island. All other bridges on the high speed rail alignment are simple post-and-beam fabrications. That is the tracks are carried by beams laid horizontally and on top of posts (uprights). In the case of a single span bridge, the abutments act as the posts. A multiple span, post-and-beam bridge continued to use the abutments as the outer posts, while intermediate posts (additional uprights, or piers) supported the spans between the abutments.

Post-and-beam bridges with plate girder beams offered many advantages to railroads. As trains became heavier, other types of bridges were thought to be too flexible to serve dependably. Continuous span structures, such as those constructed with plate girders and supported by posts, were generally free of unwanted, secondary stresses that concerned railroads. Additionally, and with a simple design, there was only a small possibility of error in plate girder bridge construction and performance. As well, the risk of faulty workmanship was minimized because the bridge components were fabricated under supervised, factory conditions. The girders were then transported to their location, "leaving the bracing between the girders as the only parts requiring hand riveting after the girders are in place on the piers." Plate girder bridges required little attention besides occasional coats of paint once they were in place.[73]

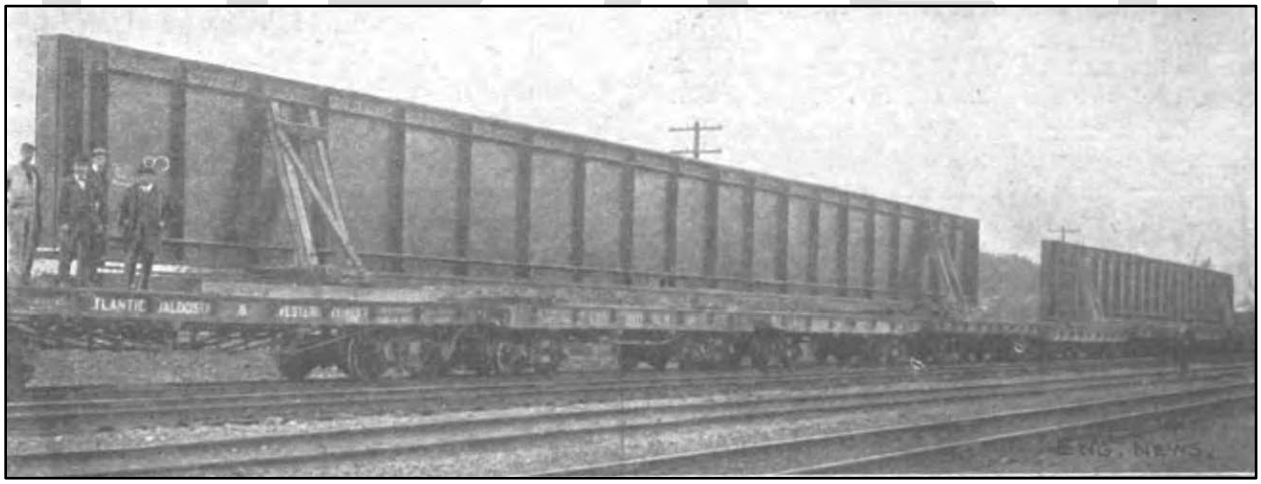

Figure 11: The movement of two completed plate girders for use on the Erie Railroad is pictured in this image. "Two Large Plate Girder Railway Bridges," *Engineering News* 51, no. 7 (18 February 1904), 166-168.

Many of the bridges on the Chicago to St. Louis line were constructed by the American Bridge Company or its predecessors. The company was organized in New York on 14 April 1900 by J.P. Morgan and Company. It became a subsidiary of the United States Steel Corporation in April 1901 and continues operation today. American Bridge was an amalgamation of many smaller firms – "twenty-four companies, fifty percent of the nation's

[73] J.B. Johnson, C.W. Bryan and F.E. Turneaure, *The Theory and Practice of Modern Framed Structures* (New York: J. Wiley & Sons, 1910), 3-4.

fabricating capacity, were purchased the first year" representing many of the nation's foremost bridge builders at the turn of the century. Company headquarters in New York was responsible for contracts, construction and sales until at least 1913. Drawings were generally prepared and then distributed to the shops for fabricating – thus maintaining a sense of central control over the process. With steel plate girders as the primary structural components, the American Bridge Company offered railroads, including the Chicago & Alton, a cost effective alternative to the truss bridges that were still popular at the time.[74]

Culverts:

Culverts typically differ from bridges in that the roadbed and its embankment continues over them unbroken, sometimes at great height. That differs from bridges where a roadbed typically breaks to accommodate abutments and the beams that extend between them. There are three primary types of culverts on the Alton's and Rock Island's Chicago to St. Louis line. The most common simply consists of a pipe of some width at the base of the right-of-way's embankment that accommodates the passage of water from one side of the tracks to the other. The second culvert-type employs a very small-scale post-and-beam arrangement consisting of short-stacked stone walls (post) and a stone cap (beam). And the third is culverts with arches, of which there are two sub-types: those constructed of stone and those erected of concrete.

The significance of culverts for the longevity of a railroad alignment cannot be under estimated. The *Engineering News and American Contract Journal* reported in 1886 that "the importance of thorough drainage of any roadbed, whether it be that of a railroad, a common highway or a city street, is no so universally acknowledged by everybody, who has even the most primitive ideas concerning a good road, that it is not necessary to further emphasize it." But a material suitable for long-lived culverts was necessary. The Highway Commissioners of the State of Illinois subsequently reported that they "are satisfied…that Sewer Pipe for Culverts [sic] is a decided success…" The Blackmer and Post enterprise of St. Louis had been making such a commodity since 1879. It was specifically a "double strength culvert pipe" for placement under railroad tracks. The shell of the pipe was "equal in thickness to one-twelfth of the diameter of the pipe. This pipe has been used by many railroads: over one hundred companies being enrolled on the books of the firm…. There have been no recorded instances of failure from effect of frost, or pressure of earth and trains." Figure 12 illustrates well, and with explanation, how Blackmer and Post's pipe culverts should be installed, as well as how they may look at completion.[75]

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[74] Victor Darnell, *A Directory of American Bridge-Building Companies, 1840-1900* (Washington, D.C.: Society for Industrial Archaeology, Occasional Publication No. 4, 1984).

[75] "Railroad Culverts," *Engineering News and American Contract Journal* 15, (13 March 1886), 174; "Culvert Pipes for Railroads," *Engineering News and American Contract Journal* 13, (16 May 1885), 317.

Culvert Pipe for Railroads.

In regions devoid of stone the material to be used in small culverts is a subject for consideration. Among these materials the one found to possess all the elements of strength, durability and economy, when applied to the purpose named, is "double strength," vitrified clay sewer pipe.

In 1879, Blackmer & Post, manufacturers of sewer-pipe in St. Louis, Mo., first made a special pipe for railroad purposes, under a requisition from Col. H. C. Moore, Chf. Eng. of the Eastern Div., Indianapolis, Decatur & Springfield R. R.; the shell, according to the specification, being equal in thickness to one-twelfth of the diameter of the pipe. This pipe has been used by many railroads; over one hundred companies being enrolled on the books of the firm with orders ranging from 500 to 10,000 lin. feet. There have been no recorded instances of failure from effect of frost, or pressure of earth and trains.

The pipe is easily inserted under an embankment where required; it being only necessary to tunnel through the roadbed to the dimensions demanded by the pipe, and then solidly bed the pipe by ramming the earth well about it.

The following instructions for laying culvert pipe are taken from the catalogue of Messrs. Blackmer & Post:

How to Lay Culvert Pipe.—"If you have never used any kind of pipe for culverts, we may be able to give

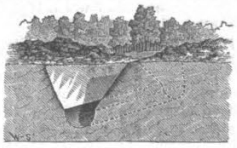

Fig. 1.

you some ideas that will be of service to you in laying our culvert pipe, and enable you to secure the best and most permanent service from it. The too common way of doing it has been to dig a trench, put the pipe in carelessly and cover it up. This is wrong. The

Fig. 2.

bottom of the trench should be rounded out to fit, as nearly as possible, the body of the pipe from the lower surface up to the horizontal centre line; then cut little depressions in the bottom of the trench to fit the sockets, so that when the pipe is laid, its entire lower surface, from end to end, will rest solidly on the ground (see Figs. 1, 2 and 3). When the ground is soft

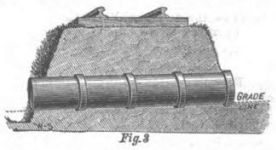

Fig. 3

or sandy this cannot be done, but the same result may be obtained by carefully ramming the loose earth under and around the lower surface of the pipe, after they are placed in position.

"When this is done properly, it is a matter of no consequence how high the bank is above the pipe, for it

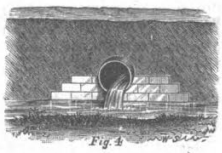

Fig. 4

cannot be broken by the weight of the earth. If the face of the bank is solid, and not likely to cave or slide, the end pipes need no protection other than to secure a firm rest for their lower surface. Sometimes the earth will be found hard enough to obtain this without other protection; if not, then a foundation of brick, stone or cement should be made to receive the end of the pipe, and extended up to the center line of the pipe (see Fig. 4). If, however, from heavy rains or overflows, the bank is liable to be undermined, then this parapet wall should be extended up high enough to give the desired

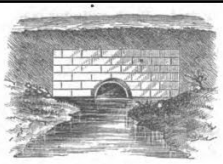

Fig. 5.

protection. The joints should be put together with good cement, plenty of it, and not much sand in the mixture: care should also be taken that the inside of each joint is scraped out when cemented, in order that no loose cement be left projecting into the pipe, which, when it hardens, will help to check the discharge.

"In northern latitudes, where severe cold prevails, the culvert should have a good fall, and be so constructed that it will drain itself (see Fig. 4); for if the pipe is allowed to stand partly full of water, as would

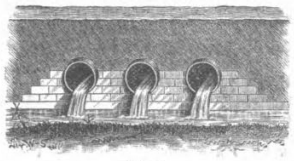

Fig. 6.

be the case where the outlet of the culvert was so low as to admit of backwater (see Fig. 5), the expansion of the water in freezing will burst the pipe as certainly as it would burst an iron pipe or a solid rock.

"The diameter of these pipes are 12, 14, 15, 16, 18, 20, 21, 22 and 24 inches; length, 2 feet in the clear.

"When the capacity of one pipe is not sufficient, two or more may be laid side by side, as shown in Fig. 6. This practice is quite common, and there is an advantage in it, in that the water would not need to rise so high to utilize the full capacity of the pipes, but they should be placed far enough apart to secure a solid bed for each pipe. In our illustrations we have shown only the outlet of the culvert, but it will be understood that both ends need the same protection.

"Of course no arbitrary rules can be formulated for such work as this, but we have aimed to give, in a general way, the main points to be considered, necessarily leaving much to the better discretion and judgement of the engineer in charge of the work."

Culverts made of this pipe are more durable than those made of either iron, brick or timber. They are equal to stone, and much cheaper than any other kind.

Among the many railroad companies who have this pipe in use, we mention the following who have been the largest purchasers, and to these parties reference is made:

Richmond & Danville Extension Co.; Texas & Colorado Improvement Co.; Vicksburg, Shreveport & Pacific Railway; Alabama Great Southern Railway; Burlington Cedar Rapids & Northern Railway; Chicago & Northwestern Railway; Chesapeake, Ohio & Southwestern Railway; Chesapeake & Ohio Railway; Detroit, Lansing & Northern Railway; International Railway Improvement Co.; Inter-State Improvement Co.; Kansas City, St. Joseph & Council Bluffs Railway; Pacific Railway Improvement Co.; Plant Investment Co.; Chicago, Burlington & Quincy Railway; St. Louis & San Francisco Railway. (Adv.)

Brick Cylinder Foundations.

Solid and hollow cylinders of brickwork make in some situations good foundations without a cast-iron sheel or incasement, though the ironwork doubtless increases the crushing resistance. In India, at the Sutlej Bridge, and elsewhere on sandy soils, brick cylinders from 12 feet to nearly 20 feet in diameter have been used for bridge piers on the same principle as shafts are sunk in this country through clay, gravel, bowlders and sand. The brickwork is usaully 3 feet or more in thickness, the first 10 feet or less in height being built upon a driving shoe or kerb of iron or hard timber or both combined, placed on the ground and gradually sunk straight and vertical by undermining it from within, and loading it on the top with another length. It is thus sunk 70 feet or more, at the rate, perhaps, of 2 feet a day. The Plantations Quay, at Glasgow, Scotland, is founded on brick cylinders, grooved and tongued to each other, sunk in quicksand on to rock to an average

Figure 12: An 1885 article describing the construction of culverts that are similar to those found on the Chicago to St. Louis project. "Culvert Pipes," *Engineering News* 13, (16 May 1885), 317.

The second type of culvert (see Figure 13) noted is a simple, nineteenth century structure that is built of stone and uses a post-and-beam structural system. While not technologically intriguing, it accomplishes its purpose, which is to accommodate the passage of water beneath the tracks and their embankment as it maintains the integrity of that embankment.

Figure 13: This small, two-opening structure located at mile post 46.95 (between Elwood and Wilmington) illustrates the second type of culvert noted.

The third type of culvert is that which employs an arch, the use of which dates at least to early Rome. Perhaps nothing illustrates the use of the arch more effectively than the Pont du Gard Aqueduct, a three tier, fifty-two arch structure that was built in the first century A.D. by the Romans to carry water across a river valley near Nimes, France. In the United States, early arch bridges were used on the National Road. Arched structures were rigid and strong and were embraced by railroads starting to build across the nation. While the use of arches by railroads prior to the Civil War was limited – a result of the labor and money needed for their construction – the railroads' needs to have structures on their lines that accommodated increasingly heavy equipment and freight loads made arched structures very popular by the end of the nineteenth century.[76]

Initially arched culverts had semi-circular vaults constructed of stone, although there were reports of some railroads that built their arched culverts of brick. Concrete, which was

[76] L. Sprague De Camp, *The Ancient Engineers* (New York: Ballantine Books, 1963), 173-175; Richard Shelton Kirby, et. al., *Engineering In History* (New York: McGraw-Hill Book Company, 1956; Dover Publications, Inc., 1990), 63; Donald C. Jackson, *Great American Bridges and Dams* (New York: John Wiley & Sons, Inc. for the Preservation Press, 1988), 18-19.

established as an alternative to stone or brick culverts in the 1890s, became the primary material from which arched culverts were constructed in the twentieth century. Helping to validate the transition of construction materials was an article in the *Engineering News and American Railway Journal* which reported in 1895 that a concrete culvert built in Syracuse, New York in 1887 was "said to be as good now as when first built." The stone to concrete transition notwithstanding, some railroads, the Chicago & North Western for example, continued to construct its culverts of stone into the twentieth century.[77]

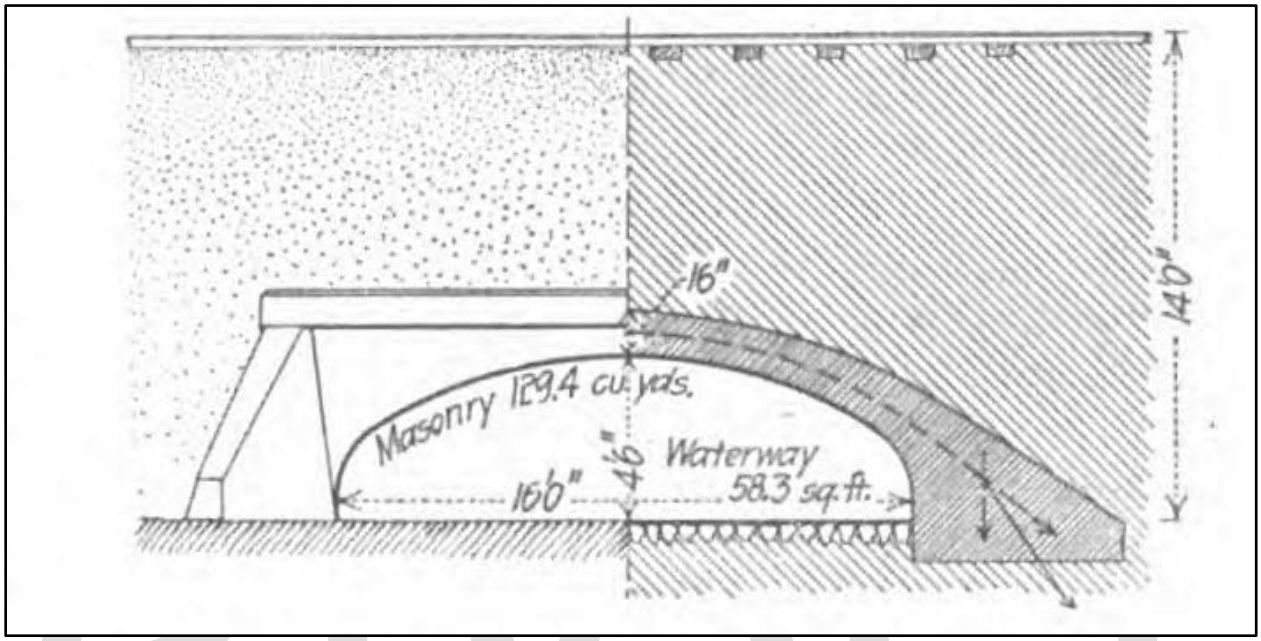

Figure 14: An example of a flatter-arched culvert. Daniel B. Luten, "The Design of Arch Culverts," *Engineering News and American Railway Journal* 45, no. 24 (13 June 1901), 435.

There was also an effort in the early twentieth century to reshape culvert vaults. The popularity of the semi-circular vault was clear. It was also recognized that the radius of the semi-circle was equal to the height of the arch, a fact that was often accomplished with the use of walls below the arch. Argued, however, was the fact that the semi-circle was "ill adapted to resist vertical loads, or moving loads," both of which were associated with heavy trains. Heavy fill around the arch was needed to protect its integrity. But the thrust of that heavy fill against the walls would threaten them, thus putting the entire arched culvert in jeopardy. The new theory was to use flatter arches with no sidewalls (see Figure 14). This evolving arch-related technology seems not to have been adapted by the Chicago & Alton.[78]

[77] "Brick Arch Culverts: St. Louis, Keokuk & Northwestern R.R. Extension," *Engineering News and American Railway Journal* 33, no. 22 (30 May 1895), 347; "Concrete Arch of 12 Ft. Span," *Engineering News and American railway Journal* 33, no. 15 (11 April 1895), 247; "Stone Arch Bridges," *Engineering News* 52, no. 4 (28 July 1904), 94.

[78] Daniel B. Luten, "The Design of Arch Culverts," *Engineering News and American Railway Journal* 45, no. 24 (13 June 1901), 435.

Railroad Stations

Railroad stations were important and significant structures for both the railroad and the communities in which they existed. Stations were typically the first point of contact between a customer and the railroad. They were also the first point of contact as visitors and new residents arrived in a community. Stations and depots have long held the interest of many. It is not surprising, therefore, that many books describing and analyzing them have been written. An excellent example that deals with stations in both the United States and Europe is *The Railroad Station*, by Carroll L.V. Meeks. Discussing the more typical type of stations found in the smaller towns along the Chicago to St. Louis route is *The Country Railroad Station in America*, by H. Roger Grant and Charles W. Bohi. A third example is Kim Tschudy's *Milwaukee Road Depots: 1856-1954 Photo Archive*.[79]

(COMPLETE AND INSERT)

[79] Carroll L.V. Meeks, *The Railroad Station: An Architectural History* (New Haven, CT: Yale University Press, 1956; reprint, Castle Books, 1978); H. Roger Grant and Charles W. Bohi, *The Country Railroad Station in America* (Boulder, CO: Pruett Publishing Company, 1978); Kim Tschudy, *Milwaukee Road Depots: 1856-1954 Photo Archive* (Hudson, WI: Iconografix, 2001).

CHAPTER 4: Significant Resources of the Chicago & Alton and Rock Island Railroads

The question of National Register eligibility for the entire Chicago & Alton corridor between Chicago and St. Louis was addressed in May 2013. It was determined that the corridor itself was not eligible for the Register (see Appendix A for the correspondence associated with that finding, as well as IHPA's concurrence with it). While the corridor is not eligible, however, it leaves open the question of what resources – if any – along either the Chicago & Alton or the Rock Island lines may individually, or as a group, be eligible for listing on the Register.

The history provided in Chapter 2, in addition to the listing of resource types typically associated with railroads in the United States that is provided at the beginning of Chapter 3, clearly suggests that a wide variety of building and structures were historically found, or associated with transportation, on American rails. Unfortunately, the nation's rail network began to suffer as the twentieth century progressed. It was largely the victim of an evolving transportation system that began to rely heavily on the automobile and airplane for the timely movement of passengers. As for the transport of freight, the railroads were challenged by semi-trailer trucks that operated on the nation's highways. The result of this evolution on railroads led to bankruptcies, alignment abandonments and consolidations. Rail companies had to learn to operate on a leaner and more focused basis. Unneeded properties, buildings and structures were jettisoned. Similarly were new technologies embraced, which led to the abandonment of those antiquated and the structures that were associated with them. The results of this evolution on the railroad leads to the very situation we find today on the former Chicago & Alton alignment. For passenger trains, small towns are simply something through which to pass – nothing more. Some towns, however, do retain their depots. And between the towns, as a train passes through the open country, there are rivers, creeks, depressions and roads over which to pass – which means that bridges and culverts were absolutely vital to a railroad's transportation objectives. There are exceptions, of course, which include the interlocking Lenox Tower at Mitchell, Illinois (see Figure 15) and the former Chicago & Alton building so clearly identified across the tracks from the location of the old Bloomington shops complex (see Figure 16).

As noted in Chapter 2, several stations and/or depots along the former Chicago & Alton alignment have been listed on the National Register of Historic Places, including those in Joliet, Dwight and Springfield. Given the station's historic role of accommodating the railroad/passenger/community interface, with all that meant to both the railroad and the community, it is reasonable to argue that any depot along the Alton's or Rock Island's project lines should be considered eligible for the Register under Criterion A (history) and, possibly, Criterion C (architecture). Such a conclusion, however, is predicated on a depot retaining its historical and architectural integrity in a degree sufficient to clearly convey its role in the evolution of the historical community. Thus would depots such as those located in Lexington, Funk's Grove and McLean not be eligible for the Register since they have been moved and no longer maintain their relationship with the railroad proper (at least as far as

Figure 15: The Lenox Tower situated adjacent to the crossing of several railroads in Mitchell, Illinois (Photo 7245).

Figure 16: The remaining, 1888 Alton Freight Depot situated across the tracks from the location of the former railroad shops in Bloomington (Photo 7059).

Criterion A is concerned). (ROCK ISLAND DEPOTS ARE YET TO BE SURVEYED)

Similarly is it reasonable to conclude that non-station, railroad-related structures remaining today should be considered for National Register eligibility if they retain sufficient integrity to justify consideration under Criterion A and/or C. Such is the case with the Lenox Tower in Mitchell and the Alton Freight Depot in Bloomington. (INCLUDE STRUCTUES ALONG THE PROJECT'S ROCK ISLAND LINE, AS WELL AS ON THE ALTON'S MITCHELL TO MISSISSIPPI RIVER ALIGNMENT, AS MAY BE APPROPRIATE)

All culverts and bridges found on the project line employ either a post-and-beam or an arch-related structural system. There are four exceptions, three of which are moveable bridges on the Rock Island line across the south branch of the Chicago River in the City of Chicago (Structure B0005/Photo 6923, Structure B0010/Photo 6915 and B0030/Photo 6896), two of which have been documented for the Historic American Engineering Record. The fourth is the truss bridge across the Calumet SAG Canal in Blue Island (Structure B0590/Photo 6933 [suburban Chicago]) (see Figure 17), again on the Rock Island line.

The post-and-beam structural system is very simple and explained briefly in the Extant Resources/Bridges section of Chapter 3. The three moveable and one Rock Island truss bridges notwithstanding, the structures on the Rock Island line between Chicago and Joliet employ this system, as do all of the bridges between Joliet and Mitchell. There is nothing inherently unique about the technology or design used in this type of bridge, whether the structures were built in 1900 or 2000. The vast majority are one-span fabrications, although several are two or three spans. Given their modest character and design, as well as their lack of distinction, they are generally considered to be not unique or eligible for the Register regardless of their age. But there are exceptions, post-and-beam erections that are monumental and that convey a sense of craftsmanship. Three examples are the following: 1) the five span bridge in Wilmington across the Kankakee River (MP 052.70/Photos 6964, 6965) (see Figure 18), with its concrete abutments, stone piers with later-period concrete cutwaters; 2) the five span bridge north of Springfield across the Sangamon River (MP 180.00/Photos7144, 7145) (see Figure 19), with its intermediate piers constructed of quarried stone; and 3) the four span bridge across the Wood River in Alton (MP 258.21/Photo 7231) with concrete piers and built in the late 1890s by the Lassig Iron Company (see Figure 20), one of the entities that joined to form the American Bridge Company in 1901. All three of these bridges are examples of post-and-beam structures that would merit consideration for nomination to the National Register or IL HAER documentation.

Arches are quite the opposite of post-and-beam structures. They are, by their nature, more complex. There are two types of arches on the Chicago & Alton line (no such structures are thought to be located on the Rock Island line), those of stone and those of concrete. All are associated with culverts. Stone arches on the line date to the last quarter of the nineteenth century, when Timothy Blackstone was the company's president. Blackstone's vision for the

Figure 17: The only truss bridge located between Union Station in Chicago and Granite City, Illinois. Five similar bridges, on the Calumet SAG Canal immediately to the west have been documented for the Historic American Engineering Record (Photo 6933).

Figure18: Bridge over the Kankakee River in Wilmington (Photo 6964).

Figure 19: Five span structure across the Sangamon River immediately north of Springfield (Photo 7143).

Figure 20: Lassig Iron Works 1890s bridge across the Wood River in Alton (Photo 7231).

Alton was limited. He did not want to build a large rail system. Indeed, that may have been one of the factors leading to the railroad's sale in the post 1900 period and its bankruptcy in 1922. Blackstone built and operated a first class railroad with a first rate and durable infrastructure between Chicago, St. Louis and Kansas City. And that road was consistently profitable through the turn of the twentieth century. This is all to say that stone arch structures are more emblematic of what the Alton was in its heyday than are the more common concrete structures.

An interesting example of a structure that evokes Blackstone's passion for a quality railroad with quality infrastructure is found at MP 163.60. Viewed from the west, this appears to be a concrete arch fabrication. Viewed from the east, however, the culvert reveals an original, cut-stone arch structure that was built in 1876. The concrete extension was constructed when the roadbed was widened to the west – likely post 1900. This edifice is illustrated in Photos, 21, 22, 23 and 24. Another stone arch, this one with more consistent integrity than the one at MP 163.60, but without a date stone, is located at MP 112.20. Its original construction was likely consistent with the construction of MP 163.60 (i.e., ca. late 1870s). Interestingly, the stonework of the arch on the east side of the structure differs stylistically from that on the west, which may be a bit more recent. Both arches are of stone, which clearly suggests nineteenth century construction. This arch is illustrated in Photos 25 and 26. It is thought that both of these structures may be eligible for listing on the National Register of Historic Places under both Criterion A and C.

Figure 21: The east side of the culvert at MP 163.60 was constructed in 1876 of stone (Photo 7127).

Figure 22: The west side of the culvert located at MP 163.60 was constructed of concrete, as often happened when a roadbed was being widened in the early twentieth century. A new, two-pipe culvert is presently being erected immediately to the southwest. Hopefully its construction does not mean that the original 1876 culvert will be removed (Photo 7097).

Figure 23: MP 163.60. Arch interior. Note the stone to concrete matching line (Photo 7130).

Figure 24: MP 163.60. 1876 date stone on the east side of the culvert (Photo 7126).

Figure 25: This is the west side of the stone culvert located at MP 112.20. This stonework is slightly different than that on the east side of the structure – which suggests it may be a bit newer. Nevertheless, this side of the structure exhibits significant character (Photo 7039).

Figure 26: The east side of the culvert at MP 112.20 is likely the original. The segmental arch stones are finished and placed in a manner similar to the structure at MP 163.60. The retaining wall extension is a minor intrusion that is not thought to affect the overall integrity of the structure in a significant way (Photo 7249).

The stone culvert with what is likely the best integrity of all stone structures on the Chicago & Alton's line to St. Louis is that located at MP 254.30 and pictured in Figure 27. It is also monumental, when compared to any other stone arch on the route. This structure, in agreement with IHPA, is being documented for the IL HAER recordation program. What is interesting about this culvert is that it was constructed on a short, seven-mile segment of the Alton line that was built in 1881to improve some grade-related problems, as well as to avoid the need for freight trains to pass through the City of Alton proper when it was otherwise not necessary (see the map in Figure 3, Page 20 for a delineation of this seven mile segment). At least three other, smaller culverts were also constructed on the Alton bypass route, one of which is illustrated in Figure 28 and located at MP 254.65. It is quite possible that the arch at MP 254.65, and upon inspection any other arches situated on the seven-mile bypass segment, as a discrete unit of the old Alton alignment, may also be eligible for the Register under Criterion A and/or C if they maintain their integrity.

In terms of evolving railroad infrastructure, fabrications built of concrete typically followed those constructed of stone. Generally speaking and by their nature, while acknowledging that there are exceptions, concrete structures of the twentieth century helped to maintain service whereas stone arrangements of the nineteenth century were more associated with the original construction, or a significant upgrading of a rail line and its service. Arguably, the National Register has more interest in the latter than the former, at least when it comes to

Figure 27: This very impressive, stone culvert is located at MP 254.30. It is located on the seven mile, City of Alton bypass and was constructed in 1881. It is presently being documented for the IL HAER recordation collection (Photo 7220).

Figure 28: Located at MP 254.65, this stone culvert was constructed to facilitate drainage and the passage of water beneath the 1881 City of Alton bypass (Photo 7214).

Criterion A (historical significance). That is unless there is something technologically unique about a concrete structure, in which case an edifice could still be eligible under Criterion C (engineering/architectural significance). As for the matter of Register eligibility for arched, concrete structures, they do not embody the piece work or craftsmanship found in the stone arches on the route. Nor, as twentieth century structures, are they generally associated with a railroad's establishment or growth. Thus may it be concluded that concrete culverts on the Alton would not typically be eligible for the National Register. To be so, there would have to be something individually unique about them. No such concrete structures have yet been identified in the project corridor.

Conclusions (as of 14 December 214):

The historic rail lines of the Chicago, Rock Island & Pacific Railroad between Union Station in downtown Chicago and Union Station in Joliet, and the Chicago & Alton Railroad between Union Station in Joliet and that point at which the rail line crosses the Mississippi River into St. Louis, have been consequentially sanitized over the last number of years. The vast majority of rail-related, historic-period structures that once existed along those tracks are now gone. Yet certain resource-types endure, primarily stations, bridges and culverts. And of those, several retain the character, craftsmanship, integrity and/or historical significance sufficient to merit evaluation for listing on the National Register of Historic Places and/or recordation in the Illinois Historic American Engineering Record/Illinois Historic American Building Survey.

Those identified and considered to date include the following:

Depots:

Blue Island, IL	Photo 6935
Lincoln, IL	Photo 7088
Catham, IL	Photo 7172
Alton, IL	Photo 7228

Non-Depot, Railroad Structures:

Chicago & Alton Freight Depot, Bloomington	Photo 7060
Lenox Interlocking Tower, Mitchell, IL	Photo 7244 (IL HAER underway)

Bridges:

Kankakee River Bridge, Wilmington, IL	Photo 6964
Sangamon River Bridge, Sherman, IL	Photo 7144

Wood River Bridge, Alton, IL	Photo 7231

Culverts:

MP 112.20	Photo 7039, 7249
MP 163.60	Photo 7097, 7127, 7130, 7126
MP 254.30	Photo 7220 (IL HAER underway)
MP 254.65	Photo 7214

It is possible that, as this survey and report are finalized and completed, additional resources may be added to the list.

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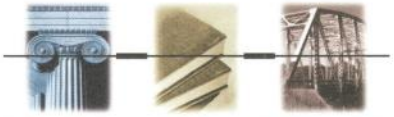
Appendix A

Correspondence Regarding National Register Non-Eligibility of Chicago & Alton Corridor



HERITAGE RESEARCH, LTD.

31 May 2013

Mr. Brad H. Koldehoff, RPA
Cultural Resources Unit Chief
Bureau of Design & Environment
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, IL 62764

RE: High Speed Rail
St. Louis to Chicago
Various Counties

Dear Brad,

The consideration of thematically related railroad properties for eligibility in the National Register of Historic Places is an evolving practice. A brief review of readily available materials reveals some examples, for instance the *Railroad Related Historic Commercial and Industrial Resources in Kansas City, Missouri*, prepared in 2000, and the *Point of Rocks Historic Transportation Corridor*, which deals with transportation resources in Mineral County, Montana, prepared in 2009. Each has commendable assets. But neither document attempts to establish a statewide approach for evaluating the historical significance of railroads in general, or railroad-related resources in particular, and then proscribing how they should or should not be considered for National Register eligibility.

The State of Minnesota appears to have made some significant progress in such matters. Its Department of Transportation (MNDOT) commissioned a study that culminated in the June 2007 study titled *Minnesota Statewide Historic Railroads Study Project Report.* Two months later the study's authors produced a Thematic Property National Register nomination for the *Railroads in Minnesota, 1862-1956*. That nomination appears to be a very useful document prepared for a Midwestern state. Given the methodical and deliberate approach to the data presented, as well as the generalities with which it deals, in addition to the fact that both Illinois and Minnesota are Midwestern states and that Illinois appears to have no such comparable study, the Minnesota nomination provided much of the structure for this evaluation.

It must be acknowledged that several buildings associated with the historic Chicago & Alton (C&A) railroad line are already listed on, or have been determined eligible for, the

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National Register, including the depots in Dwight, Lincoln and Alton. There are also other individual structures along the line, depots and, perhaps, some bridges, that may well be potentially eligible for the Register. This analysis, however, focuses on the rail corridor itself.

The primary feature of a rail corridor is the rail bed and the track thereon, as well as the bridges, trestles and culverts that help to carry the tracks over various obstacles (i.e., other tracks, roads, streams and rivers). Supplemental, but complimentary, features in a corridor might include stations and depots, freight houses, section houses, water tanks, coaling towers, rail yards and shop complexes. Utilizing these various assets, railroads helped to settle regions by delivering settlers and then helped those settlers prosper by delivering to them supplies and moving to market the goods (i.e., farm produce or manufactured goods) they subsequently generated. Railroads opened whole regions for development and extraction. They hauled raw materials directly to manufacturing centers, or to transfer points that enabled the materials to get to such production facilities. Railroads were also important conveyances that carried people from city to city, or from city to tourist destinations. Thus did railroads have the ability to significantly affect a region.

The Minnesota study reasonably and generally submits that National Register Criterion B (association with prominent individuals) and C (architectural or engineering significance) do not come into play when considering corridors for eligibility. Regarding Criterion B, it was argued that corridors were not the work of any one particular individual. They were, rather, products of large groups of people. As for Criterion C, recognizing that "a railroad corridor would need to be a significant and distinguishable entity that embodies the distinctive characteristics of a type, period or method of construction, or that represents the work of a master," the evolutionary nature of a corridor largely precludes that possibility.[1]

Thus does the eligibility of a railroad corridor largely fall on Criterion A. The Minnesota document suggests four situations that might apply, which are identified as follows:

1. "A railroad corridor historic district opened to settlement a region of the state with no, or virtually no, regional roads or navigable rivers by providing the only long-distance transportation option, and construction of the railroad was followed by a significant increase in the rate of settlement."

2. "A railroad corridor historic district provided transportation between a significant class of resource or a significant manufacturing or commerce node and an important transfer point or terminal for commodities, products or services."

[1] Section F – Associated Property Types, Railroads in Minnesota, 1862-1956 (National Register Nomination), p.196, viewed on 29 May 2013 at www.dot.state.mn.us/culturalresources/pdf_files/rail/sectionftext.pdf.

3. "A railroad corridor historic district was an influential component of the state's railroad network, or it made important early connections within the network or with other modes of transportation."

4. "A railroad corridor historic district provided a critical link or junction between two or more important railroad corridors, and the connection led to significant expansion of operations in the transportation network or in commerce or industry."[2]

Given these possibilities, the C&A railroad's St. Louis to Chicago corridor does have some potential for Register eligibility. While the northeast to west central portion of the state did have a contemporary travel route in the I&M canal/Illinois River corridor, it could be argued that the C&A helped to develop and accommodate the coal mining industry along the line in general, and that in the Braidwood area in particular. It also promoted agricultural growth across the state and connected two major Midwestern cities, Chicago and St. Louis, each a prominent destination and market, as well as a prominent transportation transfer point—Chicago for rail and Great Lakes ship traffic to the east and St. Louis for rail traffic to the trans-Mississippi west and boat traffic up and down the Mississippi River. The potential for eligibility notwithstanding, the integrity of the corridor is a matter of additional consideration.

The integrity of historic resources that might be eligible for the National Register of Historic Places focuses on seven components: 1) location; 2) design; 3) materials; 4) setting; 5) feeling; 6) association; and 7) workmanship. The really key points here, I think, are location, design, materials, setting and feeling.

Regarding location, a concept that is largely self-explanatory, the Minnesota document refers to both the horizontal and vertical alignment.[3] The horizontal alignment of the historic corridor generally appears to be good. There was a significant change made in the 20th century to the horizontal alignment between Lawndale and Atlanta, which was necessitated by a difficult grade. But that change occurred in the historic period and would be attributable to the corridor's evolution. The vertical alignment is more problematical. The track in the corridor between Chicago and St. Louis has undergone a complete rebuilding in the last several years. And as part of that reconstruction, the grade of the mainline, especially between Joliet and Springfield was elevated by perhaps 1 to 1.5 feet. That height difference is quite evident when comparing the mainline to immediately adjacent tracks.

The concept of design looks at the plan for the railroad corridor and all of the amenities

[2] Ibid., Section F, p.196-197.

[3] Ibid., Section F, p. 199.

that evolved in it. The Minnesota document further observes that "physical changes to the railroad roadway undertaken after the close of the period of significance will affect its integrity of design."[4] While other issues could be considered here, the most consequential design issue pertains to the track itself. The historic C&A route was originally constructed as a single track, although it evolved into a double track route thereafter and maintained that configuration through the twentieth century. When recently reconstructed, however, a single track was laid, with occasional passing tracks. That means that the vast majority of the route no longer retains its historical, double track character.

Materials associated with a historically significant rail corridor must also be retained. The rails themselves have evolved over time, as necessitated over time by heavier and heavier trains. But that is an inconsequential change, from the visual perspective of integrity. The impact of replacing ballast and ties can be more consequential.[5] As noted in the discussion about location, it was observed that the vertical alignment of the C&A mainline had been increased by the placement of additional ballast. And along with that, the timber ties for virtually the entire corridor were replaced by larger and more visually distinct concrete ties.

The agricultural and rural character of much of Illinois through which the C&A passed, and which represents the railroad's setting, has changed nominally over the years. More significantly, the urban areas around Chicago and St. Louis have expanded, as have the intermediate communities of Springfield and Bloomington/Normal. Nevertheless, issues regarding setting do not weigh heavily in this matter.

More significant is the matter of feeling. The Minnesota document explains that "feeling is conveyed by a railroad corridor historic district's ability to illustrate its historic function and feel from its period of significance. It is the cumulative presence of a railroad corridor historic district's character defining features, such as a linear railroad roadway, railroad yards, depots and compatible setting, that conveys the feeling of traveling on a railroad corridor during the late nineteenth or early twentieth centuries."[6] Or, put another way, a historic district must be able to evoke a sense of time and place—a historic time and place. Over the years many of the depots on the C&A between St. Louis and Chicago have been lost, as has the C&A's primary shop complex in Bloomington. Yet much of rural Illinois, through which the route historically passed, remains. That notwithstanding, the former C&A line retains little, if any, ability at all to evoke that sense of time and place.

---

[4] Ibid., Section F, p. 200.

[5] Ibid.

[6] Ibid., Section F, p. 201.

The remaining components of integrity are association and workmanship, neither of which factors heavily into this consideration.

Thus may it be concluded that there was some potential under Criterion A for the National Register eligibility of the Chicago & Alton Railroad's line from St. Louis to Chicago. That potential notwithstanding, it may be unequivocally stated that the line retains none of the integrity necessary to support the potential significance. In summary, the vertical alignment for much of the Joliet to Springfield portion of the route has been increased, the historically double tracked line has been reconstructed as a single track, consequential amounts of ballast have been added and the wooden ties removed and replaced by larger, more visibly dominant concrete ties, and the corridor retains no ability to evoke a sense of a historic time and place.

It is my opinion and recommendation that the St. Louis to Chicago corridor of the historic period Chicago & Alton Railroad is not eligible for the National Register of Historic Places.

Yours truly,

John N. Vogel, Ph.D.

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

RECEIVED
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Preservation Services

May 31, 2013

High-Speed Rail Corridor
Chicago to East St. Louis

Federal Section 106 Project

DETERMINATION OF ELIGIBILITY

Ms. Anne Haaker
Deputy State Historic Preservation Officer
Illinois Historic Preservation Agency
Springfield, Illinois 62701

Dear Ms. Haaker:

In coordination with the Federal Railroad Administration (FRA) the Illinois Department of Transportation (IDOT) has completed a National Register evaluation of the existing railroad bed and overall rail alignment within the High Speed Rail (HSR) project corridor from Union Station in Chicago to the Mississippi River in East St. Louis (see attached).

On behalf of FRA, it is IDOT's recommendation that the rail bed and overall rail alignment lack integrity and are not eligible for the National Register of Historic Places. Railroad structures, buildings, and related resources will be evaluated separately. This determination is limited to the rail bed and overall rail alignment.

Pursuant Section 106 of the National Historic Preservation Act of 1966, as amended, and in accordance with the established procedure for coordination of proposed IDOT projects, we request the concurrence of the State Historic Preservation Officer in this determination.

Very truly yours,

Brad H. Koldehoff, RPA
Cultural Resources Unit
Bureau of Design and Environment

CONCUR
By: Anne E. Haaker
Deputy State Historic Preservation Officer
Date: 5-31-13

Appendix B

Inventory of Railroad Stations and Miscellaneous Railroad-Related Buildings in the Corridor

Stations yet to be photographed/surveyed:

1. Union Station, Chicago
2. LaSalle Street Station, Chicago
3. RI – 35th Street/Lou Jones
4. RI – 103rd Street, Washington Heights
5. RI – Brainerd
6. RI – Beverly Hills – 91st Street
7. RI – Beverly Hills – 99th Street
8. RI – Morgan Park – 111th Street
9. RI – Morgan Park – 115th Street
10. RI – 119th Street
11. RI – Robbins
12. RI – New Lenox
13. C&A – Williamsville
14. C&A – Springfield

Blue Island (Historic Period) Depot/Photo 6935

Joliet Depot (National Register-Listed, now serves Amtrak & METRA)/Photo 3969


Dwight Station (National Register-Listed)/Photo 6986

Lexington Depot (thought to be moved and relocated Chicago & Alton station)/Photo 7033


Chicago & Alton freight building adjacent to site of former Bloomington Shops/Photo 7060

Funks Grove Station (this building has been moved and relocated in the community)/Photo 7072

McLean Station (this building has been moved and is located across the street from the Dixie Truckers Home)/Photo 7079

Lincoln Station now privately owned. A small Amtrak shelter is nearby/Photo 7088

Chatham Depot (now operated by a local historical society)/Photo 7172

Alton Depot serves today both Amtrak and St. Louis commuter trains/Photo 7228

Interlocking tower located in Mitchell, Madison County/Photo 7244

Appendix C

Inventory of Railroad Bridges and Culverts in the Corridor

Column 1: Mile Post/Bridge ID Number
Column 2: City/Village/Township
Column 3: County
Column 4: Type – Culvert (C); Bridge (B)
Column 5: Built of– Concrete (C), Stone (SN), Steel (SL), Modified (M), Corrugated Metal (CM), Cast Iron (CI)
Column 6: Structural System – Truss, Moveable, Post-and-Beam, Arch, Squared, Tube (steel or ceramic)
Column 7: Crossing – That entity being crossed (i.e., river, road, etc.)
Column 8: Date – Date of Construction
Column 9: Photo Review – Was structure identified in project/railroad photologs? Yes (Y), No (No)
Column 10 Field Review – Was structure field reviewed? Yes (Y), No (N)
Column 11: Findings

MP/ ID#	C/V/T	Cty	B/ C	Built of	Structural System	Crossing	Date	PR	FR	Findings
000.00										
B0005	Chicago	Cook	B	SL	Moveable	SB Chicago Ri	1917	Y	Y	St. Charles Airline Bridge; moved 1930; HAER IL-67 B0010??? CLARIFY
B0010	Chicago	Cook	B	SL	Moveable	SB Chicago Ri		Y	Y	B0005??? CLARIFY - Photo 6903
B0030	Chicago	Cook	B	SL	Moveable	SB Chicago Ri	1914	Y	Y	18th Street Bridge; built by Penn RR; HAER No. IL-112
B0040	Chicago	Cook	B	SL	P & B	Cermak Rd	--	Y	N	Unremarkable
B0050	Chicago	Cook	B	SL	P & B	Archer Av	--	Y	N	Unremarkable
B0060	Chicago	Cook	B	SL	P & B	W 23rd St	--	Y	N	Unremarkable
B0070	Chicago	Cook	B	SL	P & B	W 23rd Pl	--	Y	N	Unremarkable
B0080	Chicago	Cook	B	SL	P & B	W 24th St	--	Y	N	Unremarkable
B0090	Chicago	Cook	B	SL	P & B	W 24th Pl	--	Y	N	Unremarkable
B0100	Chicago	Cook	B	SL	P & B	W 25th Pl	--	Y	N	Unremarkable
B0110	Chicago	Cook	B	C/SL	P & B	W 26th St	--	Y	N	Unremarkable
B0120	Chicago	Cook	B	SL	P & B	W 28th St	--	Y	N	Unremarkable
B0130	Chicago	Cook	B	SL	P & B	W 28th Pl	--	Y	N	Unremarkable
B0140	Chicago	Cook	B	SL	P & B	W 29th St	--	Y	N	Unremarkable
B0150	Chicago	Cook	B	SL	P & B	W 31st St	--	Y	N	Unremarkable
B0160	Chicago	Cook	B	SL	P & B	W 32nd St	--	Y	N	Unremarkable
B0170	Chicago	Cook	B	SL	P & B	W 33rd St	--	Y	N	Unremarkable
B0180	Chicago	Cook	B	C	P & B	W 35th St	--	Y	N	Unremarkable
B0190	Chicago	Cook	B	C	P & B	W 37th St	--	Y	N	Unremarkable
B0200	Chicago	Cook	B	SL	P & B	W 38th St	--	Y	N	Unremarkable
B0210	Chicago	Cook	B	SL	P & B	Pershing Rd	--	Y	N	Unremarkable
B0220	Chicago	Cook	B	SL	P & B	Princeton Av	--	Y	N	Unremarkable
B0230	Chicago	Cook	B	SL	P & B	Wells St	--	Y	N	Unremarkable
B0240	Chicago	Cook	B	C/SL	P & B	Wentworth Av	--	Y	N	Unremarkable
B0250	Chicago	Cook	B	C/SL	P & B	IH-90/94	--	Y	N	Unremarkable
B0260	Chicago	Cook	B	C/SL	P & B	IH-90/94	--	Y	N	Unremarkable
B0270	Chicago	Cook	B	SL	P & B	W Root St	--	Y	N	Unremarkable
B0280	Chicago	Cook	B	SL	P & B	W 43rd St	--	Y	N	Unremarkable
B0290	Chicago	Cook	B	SL	P & B	W 47th St	--	Y	N	Unremarkable
B0300	Chicago	Cook	B	SL	P & B	W 51st St	--	Y	N	Unremarkable
B0310	Chicago	Cook	B	C/SL	P & B	W Garfield	--	Y	N	Unremarkable
B0320	Chicago	Cook	B	SL	P & B	W 57th St	--	Y	N	Unremarkable
B0330	Chicago	Cook	B	SL	P & B	W 59th St	--	Y	N	Unremarkable
B0340	Chicago	Cook	B	SL	P & B	W 60th St	--	Y	N	Unremarkable/Stone Abutments
B0350	Chicago	Cook	B	C/SL	P & B	W 61st St	--	Y	N	Unremarkable/Stone Abutments
B0360	Chicago	Cook	B	SL	P & B	W 63rd St	--	Y	N	Unremarkable
B0370	Chicago	Cook	B	C/SL	P & B	IH-90/94	--	Y	N	Unremarkable
B0380	Chicago	Cook	B	C/SL	P & B	Wentworth Av	--	Y	N	Unremarkable
B0390	Chicago	Cook	B	SL	P & B	W 66th St	--	Y	N	Unremarkable
B0400	Chicago	Cook	B	SL	P & B	Marquette Rd	--	Y	N	Unremarkable
B0410	Chicago	Cook	B	SL	P & B	W 69th St	--	Y	N	Unremarkable
B0420	Chicago	Cook	B	SL	P & B	W 70th St	--	Y	N	Unremarkable
B0430	Chicago	Cook	B	SL	P & B	W 71st St	--	Y	N	Unremarkable
B0440	Chicago	Cook	B	SL	P & B	W 72nd St	--	Y	N	Unremarkable
B0450	Chicago	Cook	B	C	P & B	W 74th St	--	Y	N	Unremarkable
B0460	Chicago	Cook	B	C	P & B	W 75th St	--	Y	N	Unremarkable
B0470	Chicago	Cook	B	C	P & B	W 76th St	--	Y	N	Unremarkable
B0480	Chicago	Cook	B	C	P & B	W 78th St	--	Y	N	Unremarkable
B0490	Chicago	Cook	B	C	P & B	W 79th St	--	Y	N	Unremarkable
B0500	Chicago	Cook	B	C	P & B	W 80th St	--	Y	N	Unremarkable
B0510	Chicago	Cook	B	C	P & B	W 81st St	--	Y	N	Unremarkable

B0520	Chicago	Cook	B	C	P & B	W 83rd St	--	Y	N	Unremarkable
B0530	Chicago	Cook	B	C/SL	P & B	Halsted St	--	Y	N	Unremarkable
B0540	Chicago	Cook	B	C	P & B	Vincennes Av	--	Y	N	Unremarkable
B0550	Chicago	Cook	B	C	P & B	W 87th St	--	Y	N	Unremarkable
B0560	Chicago	Cook	B	C	P & B	W 88th St	--	Y	N	Unremarkable
B0590	Blue Island	Cook	B	SL	Truss	SAG Canal	--	Y	Y	Rock Island RR Truss Bridge. VERY NICE. Bridges to west documented for HAER – Photo 6933
B0600	Blue Island	Cook	B	SL	P & B	Broadway St	--	Y	Y	Unremarkable – Photo 6929
B0610	Blue Island	Cook	B	C/SL	P & B	SCO RR	--	Y	N	Unremarkable
B0620	Blue Island	Cook	B	C/SL	P & B	SCO RR	--	Y	N	Unremarkable
B0625	Blue Island	Cook	C?	C ?	P & B	Midlothian Ck	--	Y	N	Unremarkable
B0645	Oak Forest	Cook	C?	C ?	P & B	Midlothian Ck	--	Y	N	Unremarkable
B0650	Oak Forest	Cook	B	C/SL	P & B	S Cicero Av	--	Y	N	Unremarkable
B0660	Oak Forest	Cook	B	C/SL	P & B	159th St	--	Y	N	Unremarkable
B0665	Tinley Park	Cook	C?	C ?	P & B	Midlothian Ck	--	Y	N	Unremarkable
B0670	Tinley Park	Cook	B	C/SL	P & B	S Harlem Av	--	Y	N	Unremarkable
B0690	Mokena	Will	B	C/SL	P & B	96th Av	--	Y	N	Unremarkable
B0710	New Lenox	Will	B	C/SL	P & B	Lincolnway	--	Y	N	Unremarkable
B0715	New Lenox	Will	C	C	P & B	Tributary	--	Y	N	Unremarkable
B0730	New Lenox	Will	B	SL	Truss	NS RR	--	Y	N	Unremarkable
B0735	New Lenox	Will	C	SL	P & B	Tributary	--	Y	N	Unremarkable
B0737	New Lenox	Will	C	SL	P & B	Tributary	--	Y	N	Unremarkable
B0752	Highland	Will	C	SL	Tube	Tributary	--	Y	N	Unremarkable
B0755	Highland	Will	B	C/SL?	P & B	Hickory Ck	--	Y	N	Unremarkable
B0760	Highland	Will	B	C/SL	P & B	Lincoln Hy	--	Y	N	Unremarkable
B0780	Joliet	Will	B	C	P & B	Henderson Av	--	Y	N	Unremarkable
B0785	Joliet	Will	C	C?	P & B	Spring Ck	--	Y	N	Unremarkable
B0800	Joliet	Will	B	SL	P & B	Richards St	--	Y	N	Unremarkable
B0810	Joliet	Will	B	SL	P & B	Eastern Av	--	Y	N	Unremarkable
B0820	Joliet	Will	B	SL	P & B	Michigan St	--	Y	N	Unremarkable
B0830	Joliet	Will	B	SL	P & B	Washington St	--	Y	N	Unremarkable
B0840	Joliet	Will	B	C	P & B	York Av	--	Y	N	Unremarkable
B0850	Joliet	Will	B	SL	P & B	Lincoln Hy	--	Y	N	Unremarkable
B0860	Joliet	Will	B	SL	P & B	New St	--	Y	N	Unremarkable
B0870	Joliet	Will	B	C	P & B	Ped Xing	--	Y	N	Unremarkable
B0880	Joliet	Will	B	SL	P & B	S Chicago St	--	Y	N	Unremarkable
B0890	Joliet	Will	B	SL	P & B	Osgood St	--	Y	N	Unremarkable
B1000	Chicago	Cook	B	C/SL	P & B	Access Rd	--	Y	N	Unremarkable
B1010	Chicago	Cook	B	SL	P & B	W 18th St	--	Y	N	Unremarkable
B1020	Chicago	Cook	B	SL	P & B	S Archer Av	--	Y	N	Unremarkable
B1030	Chicago	Cook	B	C	P & B	Cermak Rd	--	Y	N	Unremarkable
B1040	Chicago	Cook	B	SL	P & B	W 23rd St	--	Y	N	Unremarkable
B1050	Chicago	Cook	B	C	P & B	IH-55	--	Y	N	Unremarkable
B1060	Chicago	Cook	B	SL	P & B	W 26th St	--	Y	N	Unremarkable
B1070	Chicago	Cook	B	SL	P & B	W 31st St	--	Y	N	Unremarkable
B1080	Chicago	Cook	B	C	P & B	W 33rd St	--	Y	N	Unremarkable
B1090	Chicago	Cook	B	SL	P & B	W 35th St	--	Y	N	Unremarkable
B1100	Chicago	Cook	B	SL	P & B	S Federal St	--	Y	N	Unremarkable
B1110	Chicago	Cook	B	SL	P & B	W 39th St	--	Y	N	Unremarkable
038.80	Joliet	Will	C	C	Arch	Drainage	--	Y	N	Field review attempted. Not accessible
039.35	Joliet	Will	C	C	Pipe	Drainage	--	Y	N	Unremarkable
039.40	Joliet	Will	C							No data received
039.64	Joliet	Will	C							No data received
040.10	Joliet	Will	C							No data received
040.49	Joliet	Will	C	C/CM	Squared/Tube	Drainage	--	Y	N	Unremarkable/Modern
040.51	Joliet	Will	C	C/CM	Squared/Tube	Drainage	--	Y	N	Unremarkable/Modern
041.20	Joliet	Will	C	?	Tube	Drainage	--	Y	N	Unremarkable
041.80	Joliet	Will	C	C/?	Tube	Drainage	--	Y	N	Unremarkable
041.90	Joliet	Will	C	?	Tube	Drainage	--	Y	N	Unremarkable
041.97	Joliet	Will	C	C	Tube	Drainage	--	Y	N	Unremarkable
042.20	Joliet	Will	C	C	Tube	Drainage	--	Y	N	Unremarkable
042.55	Joliet	Will	C							No data received
042.95	Joliet	Will	C	C or CI	Tube	Drainage	--	Y	N	Unremarkable
043.20	Joliet	Will	C	CI/SN	Tube	Drainage	--	Y	N	Unremarkable
043.58	Joliet	Will	C	CI/SN	Tube	Drainage	--	Y	N	Unremarkable
043.90	Joliet	Will	C	SN	Squared	Drainage	--	Y	N	Field review attempted. Could not find
044.10	Joliet	Will	C	CM	Tube	Drainage	--	Y	N	Unremarkable/Modern
044.45	Joliet	Will	C							No data received
044.90	Joliet	Will	C	CM	Tube	Drainage	--	Y	N	Unremarkable/Modern
045.30	Joliet	Will	C	--	--	Drainage	--	Y	N	Buried by debris
045.70	Joliet	Will	C	--	--	Drainage	--	Y	N	Buried by debris
045.90	Joliet	Will	C	--	--	Drainage	--	Y	N	Buried by debris

046.09	Joliet	Will	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable
046.74	Joliet	Will	C	C	Pipe	Drainage	--	Y	N	Unremarkable/Modern
046.95	Joliet	Will	C	SN	Squared	Drainage	--	Y	Y	Unremarkable/Deteriorating – Photos 6938, 6940
047.30	Joliet	Will	C	SN/C	Arch	Drainage	--	Y	Y	Unremarkable. Arch has a concrete lining – Photo 6941
048.75	Wilmington	Will	C	C or CI	Tube	Drainage	--	Y	N	Unremarkable
048.90	Wilmington	Will	C	CM	Tube	Drainage	--	Y	N	Unremarkable
049.20	Wilmington	Will	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable/Overgrown
049.52	Wilmington	Will	B	C/SL	P & B (2 span)	Prairie Ck	1899	N	Y	(Lassig Bridge) Good Integrity – Photos 6944, 6949
051.57	Wilmington	Will	B	C	P & B	Unnamed Ck	--	N	Y	Unremarkable – Photo 6952
052.47	Wilmington	Will	B	C/SL	P & B	Forked Ck	1884/ 1930	N	Y	(McGlintig-Marshall, American Bridge Co) Unremarkable – Photos 6955, 6959
000.00	Wilmington	Will	B	SN/C/SL	P & B	Water St	--	N	Y	Unremarkable – Photos 6971, 6972
052.70	Wilmington	Will	B	SN/C/SL	P & B	Kankakee Rvr	1930?	Y	Y	(American Bridge Co.?) Five Spans – Photos 6964, 6965
053.45	Wilmington	Will	C							No data received
054.20	Wilmington	Will	C	CI/SN	Tube	Drainage	--	Y	N	Unremarkable
054.98	Reed	Will	C							No data received
055.70	Reed	Will	C							No data received
056.30	Reed	Will	C							No data received
057.20	Reed	Will	C							No data received
057.71	Reed	Will	C	C	Squared	Drainage	--	Y	N	Unremarkable
058.60	Reed	Will	C	SN	Squared	Drainage	--	Y	N	Field review attempted. Could not find
058.70	Reed	Will	C	C	Tube	Drainage	--	Y	N	Unremarkable
059.50	Reed	Will	C	C or CI	Tube	Drainage	--	Y	N	Unremarkable
060.30	Braceville	Grundy	C	CI	Tube	Drainage	--	Y	N	Unremarkable
060.90	Braceville	Grundy	C	CI/CM	Tube	Drainage	--	Y	N	Unremarkable
062.40	Braceville	Grundy	C							No data received
062.71	Braceville	Grundy	B			Mazon Rvr				Try to field review
066.10	Garfield	Grundy	C	C	Tube (2)	Drainage	2001	N	Y	Modern – No Photo
066.90	Garfield	Grundy	C	CI/SN/C	Tube	Drainage	--	Y	N	Unremarkable/Amalgamation
067.30	Garfield	Grundy	C							No data received
067.60	Garfield	Grundy	C	C/SL	Tube	Drainage	--	Y	N	Unremarkable
069.09	Goodfarm	Grundy	C	CM	Tube	Drainage	--	Y	N	Unremarkable
069.80	Goodfarm	Grundy	C	CM	Tube	Drainage	--	Y	N	Unremarkable
070.20	Goodfarm	Grundy	C	C	Tube (2)	Drainage	2002	N	Y	Modern – No Photo
070.74	Goodfarm	Grundy	C	CI	Tube	Drainage	--	Y	N	Unremarkable
071.02	Goodfarm	Grundy	C	CM	Tube	Drainage	--	Y	N	Unremarkable
071.30	Goodfarm	Grundy	C	C	Squared	Drainage	1925	Y	Y	Unremarkable – Photo 6975
071.96	Goodfarm	Livingston	C	CM	Tube	Drainage	--	Y	N	Unremarkable
072.20	Dwight	Livingston	C	SN	Squared	Drainage	--	Y	Y	Unremarkable – Photos 6976, 6977
072.60	Dwight	Livingston	C		Squared (2)	Gooseberry Ck	--	Y	Y	Unremarkable – Photo 6978
073.26	Dwight	Livingston	B	C	P & B	Gooseberry Ck	--	N	Y	Modern rehabilitation - Photo 6982
075.90	Dwight	Livingston	C							No data received
077.41	Nevada	Livingston	C							No data received
077.64	Nevada	Livingston	B	C	P & B	WF Mazon Rvr	--	N	Y	Modern rehabilitation – Photo 6988
078.18	Nevada	Livingston	C							No data received
078.66	Nevada	Livingston	C							No data received
078.95	Nevada	Livingston	C							No data received
079.60	Nevada	Livingston	C	C	Squared	Drainage	1925	N	Y	Unremarkable – Photo 6990
079.78	Nevada	Livingston	C	C	Squared	Drainage	1925	N	Y	Modern rehabilitation – Photo 6991
080.09	Nevada	Livingston	C	CI	Tube	Drainage	--	N	Y	Unremarkable – Photo 6992
080.31	Odell	Livingston	C	CI	Tube	Drainage	--	N	Y	Unremarkable/Rehabilitation – Photo 6993
080.67	Odell	Livingston	B	C	P & B	Drainage	1922	N	Y	Modern rehabilitation – Photo 6994
081.97	Odell	Livingston	B	C	P & B	Drainage	1922	N	Y	Modern rehabilitation (minor) – Photo 7000
082.83	Odell	Livingston	C	SL	Tube	Drainage	1922	N	Y	Modern rehabilitation – Photo 7001
083.28	Odell	Livingston	C	SL	Tube	Drainage	2001	N	Y	Modern replacement – No Photo
084.75	Odell	Livingston	C	CI	Tube	Drainage	1922	N	Y	Modern rehabilitation – Photo 7002
085.73	Odell	Livingston	C	SL	Tube	Drainage	--	N	Y	Modern rehabilitation – No Photo
000.00	Odell	Livingston	B	C/SL	P & B	Roadway	--	N	Y	East side steel beam originals. West side new concrete deck – Photos 7003, 7005
086.67	Odell	Livingston	B		P & B	Drainage	--	N	Y	Unremarkable – Photo 7006
087.09	Odell	Livingston	C	CI	Tube	Drainage	--	N	Y	Modern rehabilitation – Photo 7009
087.40	Pontiac	Livingston	C							No data received
088.64	Pontiac	Livingston	C		Tube/Arch	Drainage	--	N	Y	Modern rehabilitation – Photo 7010
088.83	Pontiac	Livingston	C		Tube	Drainage	--	N	Y	Unremarkable – Photos 7012, 7014
088.90	Pontiac	Livingston	C	SL	Tube	Drainage	--	N	Y	Modern replacement – No Photo
089.24	Pontiac	Livingston	C		Tube	Drainage	--	N	Y	Unremarkable/Rehabilitation – Photo 7015

089.83	Pontiac	Livingston	B	C	P & B (2 span)	North Ck	--	N	Y	Unremarkable – Photo 7016
090.13	Pontiac	Livingston	C	SL	Tube	Drainage	--	N	Y	Try to field review
090.91	Pontiac	Livingston	B	C/SL	P & B (2)	North Ck	--	N	Y	Modern rehabilitation - Photo 7018
092.12	Pontiac	Livingston	B	C/SL	P & B (2)	Vermillion Ck	--	N	Y	Modern rehabilitation - Photo 7020
093.82	Pontiac	Livingston	B	---	P & B	Drainage	--	N	Y	Modern replacement/rehabilitation – No Photo
094.73	Eppards Pt	Livingston	B	SL	Tube	Drainage	--	N	Y	Modern replacement – No Photo
094.80	Eppards Pt	Livingston	C	SL	Tube	Drainage	--	N	Y	Modern replacement – No Photo
095.80	Eppards Pt	Livingston	C							No data received
097.00	Eppards Pt	Livingston	B	SN/SL	P & B (2)	Rood Ck	--	N	Y	Unremarkable. Five Spans – Photos 7024, 7025
098.20	Eppards Pt	Livingston	C							No data received
098.98	Eppards Pt	Livingston	C	C	Squared	Drainage	192?	Y	Y	Current rehabilitation – Photo 7026
100.20	Pike	Livingston	B	C/SL	P & B	Root Ck	--	N	Y	Modern rehabilitation – Photo 7027
100.85	Pike	Livingston	B	C	P & B		1923	Y	Y	Modern rehabilitation (aka MP 100.90?) – Photos 7028, 7029
102.70	Chenoa	Livingston	C							No data received
103.79	Chenoa	McLean	C	SN/CM	Squared/Tube	Drainage	--	Y	N	Unremarkable. Amalgamation
104.80	Chenoa	McLean	B	SL	P & B	Drainage	1928	Y	N	Unremarkable
105.40	Chenoa	McLean	C	CI	Tube	Drainage	--	Y	N	Unremarkable
106.00	Chenoa	McLean	C	SN/CI	Tube	Drainage	--	Y	N	Unremarkable
106.65	Chenoa	McLean	C	CI	Tube					No data received
106.80	Chenoa	McLean	C							No data received
108.50	Lexington	McLean	B	C/SL	P & B	Turkey Ck	--	Y	Y	Modern rehabilitation in progress (aka MP 108.47?) – Photo 7031
109.00	Lexington	McLean	C	C	P & B	Drainage	--	N	Y	Illustrates 1 period of stone construction and 2 periods of concrete construction – Photo 7032
111.20	Lexington	McLean	B	SL	P & B	Makin Rvr	--	Y	Y	Modern rehabilitation in progress – Photos 7034, 7035
112.20	Money Ck	McLean	B	SN	Arch	Drainage	--	Y	Y	EXCEPTIONAL – Photos 7039, 7249
113.80	Money Ck	McLean	B	C/SL	P & B	Drainage	--	N	Y	Unremarkable – No Photo
114.40	Money Ck	McLean	C	C	Arch	Drainage	--	N	Y	Unremarkable – Photo 7041
114.42	Money Ck	McLean	C	CI	Tube	Drainage	--	Y	Y	Unremarkable – No Photo
114.50	Money Ck	McLean	C	SN/C	Arch	Drainage	--	Y	N	1 side stone, 1 side concrete
115.40	Money Ck	McLean	C	SN/CI	Tube	Drainage	--	Y	N	Unremarkable. Fair integrity
116.10	Money Ck	McLean	C	SN/CI	Tube	Drainage	--	Y	Y	Unremarkable – Photo 7042
116.99	Money Ck	McLean	C	SN/CI	Tube	Drainage	--	Y	Y	Unremarkable – Photos 7045, 7046
117.30	Towanda	McLean	B	SN/C	P & B (2 spans)	Money Ck	--	N	Y	Modern rehabilitation – Photo 7047
118.60	Towanda	McLean	C	SN	Squared	Drainage	--	Y	Y	Stonework on both sides differs. Good integrity – Photo 7048, 7049
119.74	Towanda	McLean	C	SN/CI	Tube	Drainage	--	Y	N	Unremarkable. Overgrown.
119.80	Towanda	McLean	C							No data received
120.01	Towanda	McLean	C	SN/C	Squared	Drainage	--	Y	Y	Unremarkable. Only east side visible – Photo 7050
120.70	Normal	McLean	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable.
121.80	Normal	McLean	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable.
121.81	Normal	McLean	C							No data received
122.05	Normal	McLean	C							No data received
122.90	Normal	McLean	C							No data received
123.39	Normal	McLean	C							No data received
000.00	Normal	McLean	B	C/SL	P & B	School St	--	N	Y	Unremarkable – Photo 7051
000.00	Normal	McLean	B	C/SL	P & B (2 spans)	W. Vernon Av	1972	N	Y	Unremarkable – Photo 7052
000.00	Normal	McLean	B	C/SL	P & B	S. Main St	--	N	Y	Unremarkable – Photo 7054
000.00	Normal	McLean	B	C/SL	P & B	S. Center St	--	N	Y	Unremarkable – Photo 7055
125.00	Normal	McLean	B	C/SL	P & B	Sugar Ck	--	N	Y	Unremarkable – Photo 7056
000.00	Bloomington	McLean	B	C	P & B	Division St	--	N	Y	Unremarkable – Photo 7057
000.00	Bloomington	McLean	B	C/SL	P & B	Market St	--	N	Y	Unremarkable – Photos 7061, 7062
126.03	Bloomington	McLean	C	C	??	Ped. Underpass	--	Y	?	Field review attempted. Could not find
000.00	Bloomington	McLean	B	C/SL	P & B	Olive St	--	N	Y	One side deck steel beam originals. One side new concrete deck – Photos 7063, 7065
127.10	Bloomington	McLean	C	C	Arch	Drainage	--	Y	Y	Unremarkable – Photos 7066, 7068
127.50	Bloomington	McLean	C							No data received
127.90	Bloomington	McLean	C							No data received
128.20	Bloomington	McLean	C	C	Tube	Drainage	--	Y	N	Unremarkable
128.71	Bloomington	McLean	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable
129.60	Bloomington	McLean	C	C/CM	Arch/Tube	Drainage	--	Y	N	Unremarkable. Altered
129.98	Bloomington	McLean	C	C	Arch	Drainage	--	Y	N	Unremarkable
130.00	Bloomington	McLean	C							No data received
130.25	Bloomington	McLean	B	C/SL	P & B	1000N Rd	--	N	Y	Unremarkable – Photo 7069
131.10	Funks Grove	McLean	C	C	Squared	Drainage	--	Y	N	Unremarkable
131.60	Funks Grove	McLean	C	C	Tube	Drainage	--	Y	N	Unremarkable
133.60	Funks Grove	McLean	C	C	Tube	Drainage	--	Y	N	Unremarkable. Overgrown

134.60	Funks Grove	McLean	C	C	Arch	Drainage	--	Y	Y	Unremarkable. Extension 1 side – Photos 7070, 7071
134.89	Funks Grove	McLean	C							No data received
135.70	Funks Grove	McLean	C	CI/CM	Tube	Drainage	--	Y	N	Unremarkable
135.80	Funks Grove	McLean	C							No data received
135.81	Funks Grove	McLean	C							No data received
136.50	Funks Grove	McLean	B	C/SL	P & B	Timber Ck	--	N	Y	Unremarkable – Photos 7073, 7074
137.70	Funks Grove	McLean	C	C	Tube (?)	Drainage	--	Y	Y	Unremarkable – Photo 7077
137.90	Funks Grove	McLean	C	C	Arch (?)	Drainage	--	Y	Y	Unremarkable – Photo 7078
138.50	Funks Grove	McLean	C							No data received
139.70	Mt Hope	McLean	C							No data received. Not found by PB
140.24	Mt Hope	McLean	C	CI/M	Tube	Drainage	--	Y	N	Unremarkable
140.30	Mt Hope	McLean	C							No data received
140.80	Mt Hope	McLean	C	C	Tube	Drainage	--	Y	N	Unremarkable
141.10	Mt Hope	McLean	C	C/CM/CI	Tube	Drainage	--	Y	N	Unremarkable. Altered
141.40	Mt Hope	McLean	C							No data received
141.80	Mt Hope	McLean	C	---	Tube	Drainage	--	Y	N	Buried by debris/water
142.10	Mt Hope	McLean	C							No data received
142.70	Mt Hope	McLean	C							No data received
143.20	Mt Hope	McLean	C	CI	Tube	Drainage	--	Y	N	Unremarkable. Much debris
144.10	Mt Hope	Mclean	B	SN/SL/C	P & B	Clear Ck	--	N	Y	Modern rehabilitation – Photo 7082
144.70	Atlanta	Logan	C							No data received
145.00	Atlanta	Logan	C	C/CI	Tube	Drainage	--	Y	N	Large retaining wall
147.53	Atlanta	Logan	C	C/SN	Arch	Drainage	--	Y	N	1 side stone. 1 side concrete (aka MP 147.50?)
147.70	Atlanta	Logan	C							No data received
147.95	Atlanta	Logan	C							No data received
149.50	E Lincoln	Logan	B	C/SL	P & B (2)	Kickapoo Ck	--	N	Y	Modern rehabilitation – Photo 7084
149.90	E Lincoln	Logan	C	C	Arch	Drainage	--	Y	N	Unremarkable
150.80	E Lincoln	Logan	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable. Altered
151.50	E Lincoln	Logan	C	CI	Tube	Drainage	--	Y	N	Unremarkable
152.70	E Lincoln	Logan	C	C	Arch	Drainage	--	Y	Y	Unremarkable – Photos 7085, 7086
154.10	E Lincoln	Logan	C	C	Tube	Drainage	--	Y	N	Unremarkable
155.75	E Lincoln	Logan	C	??	??		--	Y	?	Field review attempted. Could not find
157.10	Broadwell	Logan	C							No data received
157.60	Broadwell	Logan	C	C	Tube	Drainage	--	Y	N	Unremarkable
157.70	Broadwell	Logan	B							No data received
158.10	Broadwell	Logan	B	C/SL	P & B	Salt Ck	--	N	Y	Modern rehabilitation – Photo 7091
159.50	Broadwell	Logan	C	??	Tube	Drainage	--	Y	N	Unremarkable. Overgrown
159.90	Broadwell	Logan	C							No data received
162.70	Broadwell	Logan	C	C	Arch	Drainage	--	Y	Y	Unremarkable – Photos 7094, 7096
163.60	Broadwell	Logan	C	C/SN	Arch	Drainage	1876	Y	Y	VERY NICE. East side stone with 1876 date. West side concrete – Photos 7097, 7127
164.10	Broadwell	Logan	C	C/SN	Squared	Drainage	--	Y	N	1 side stone. 1 side concrete
165.20	Broadwell	Logan	C	C	Arch (2)	Drainage	--	Y	Y	Current rehabilitation – Photo 7133
166.70	Elkhart	Logan	C	CI/CM	Tube	Drainage	--	Y	N	Unremarkable
167.25	Elkhart	Logan	C	CM/C	Tube	Drainage	--	Y	N	Unremarkable
167.40	Elkhart	Logan	C	CI/SN	Tube	Drainage	--	Y	N	Stone retaining wall 1 side
167.50	Hurlbut	Logan	C	C	Tube	Drainage	c2003	Y	N	Unremarkable. Modern
168.05	Hurlbut	Logan	C	C/CI	Tube (2)	Drainage	--	Y	N	Unremarkable
168.20	Hurlbut	Logan	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable
170.30	Hurlbut	Sangamon	C							No data received
170.40	Hurlbut	Sangamon	C	SN/CI	Tube	Drainage	--	Y	N	Unremarkable. Altered
171.10	Williams	Sangamon	C	C/CM	Tube (2)	Drainage	--	Y	N	Unremarkable
172.10	Williams	Sangamon	C	SN/ C	Arch	Drainage	--	Y	Y	Loss of integrity on stone side – Photo 7134, 7135
172.40	Williams	Sangamon	C	C	Arch	Drainage	--	Y	Y	Unremarkable – Photos 7137, 7138
175.80	Williams	Sangamon	C							No data received
176.20	Williams	Sangamon	C	C/SN	Squared	Drainage	--	Y	N	Unremarkable. Altered
176.40	Williams	Sangamon	C	C/CM	Tube/Arch	Unnamed Ck	--	Y	Y	Unremarkable/Rehabilitated – Photo 7139
177.20	Williams	Sangamon	C	CI	Tube	Drainage	--	Y	N	Unremarkable. Obscured view
177.40	Williams	Sangamon	C	SN/CI	Tube/Arch	Drainage	--	Y	N	Unremarkable. Arch is partially brick lined
177.80	Springfield	Sangamon	C	C/SN	Squared	Drainage	--	Y	N	1 side stone. 1 side concrete
178.29	Springfield	Sangamon	C							No data received
178.50	Springfield	Sangamon	C	SN/CI	Tube	Drainage	--	Y	N	Unremarkable
178.70	Springfield	Sangamon	C	SN?	?	Drainage	--	Y	N	Small culvert. Very overgrown
179.00	Springfield	Sangamon	B	C/SL	P & B	Meredith Dr	--	N	Y	Modern – Photo 7141
179.08	Springfield	Sangamon	C	C	Squared/Arch	Drainage	--	Y	N	Unremarkable
179.50	Springfield	Sangamon	?							No data received
179.60	Springfield	Sangamon	C							No data received
180.00	Springfield	Sangamon	B	SN/SL	P & B	Sangamon Rvr	--	N	Y	VERY NICE – Photos 7144, 7145

180.40	Springfield	Sangamon	C	SN/CI	Tube	Drainage	--	Y	N	Unremarkable. Fair integrity
180.75	Springfield	Sangamon	C	SN	Arch	Drainage	--	Y	?	Field review attempted. Could not find
180.80	Springfield	Sangamon	B	C/SL	P & B	Dirksen Pkwy	--	N	Y	Unremarkable – Photo 7147
180.91	Springfield	Sangamon	C	C	Tube	Drainage	--	Y	N	Unremarkable
181.04	Springfield	Sangamon	C	SN/CI	Tube	Drainage	--	Y	N	Unremarkable
181.90	Springfield	Sangamon	C	C	Arch	Drainage	--	Y	Y	Unremarkable. Very over grown – Photo 7148
182.02	Springfield	Sangamon	C							No data received
182.30	Springfield	Sangamon	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable
182.40	Springfield	Sangamon	C							No data received
000.00	Springfield	Sangamon	B	C/SL	P & B	Sangamon Av	--	N	Y	Unremarkable – Photos 7149, 7150
000.00	Springfield	Sangamon	B	C/SL	P & B	9th St	--	N	Y	(American Bridge Co.) Unremarkable – Photos 7152, 7155
000.00	Springfield	Sangamon	B	SL/SN	P & B	Dodge St	1902	N	Y	(American Bridge Co.) Unremarkable – Photos 7156, 7159
000.00	Springfield	Sangamon	B	SL/SN	P & B	E Capital St	1902	N	Y	(American Bridge Co.) Unremarkable – Photos7162, 7166
187.50	Springfield	Sangamon	C							No data received
189.61	Springfield	Sangamon	C							No data received
190.80	Woodside	Sangamon	C	C	Squared	Drainage	--	Y	N	Unremarkable. Modern
191.15	Woodside	Sangamon	C	C/CI/SN	Squared/Tube	Drainage	--	Y	N	Unremarkable. Amalgamation
191.65	Woodside	Sangamon	C	SN/C	Squared/Tube	Drainage	--	Y	Y	One side stone, one side concrete – Photos 7169, 7170
192.10	Woodside	Sangamon	B	C/SL	P & B (2 spans)	Springfield Lk			Y	Unremarkable – Photo 7168
192.90	Chatham	Sangamon	C							No data received
193.05	Chatham	Sangamon	C							No data received
193.15	Chatham	Sangamon	C							No data received
193.25	Chatham	Sangamon	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable
193.60	Chatham	Sangamon	C							No data received
193.70	Chatham	Sangamon	C							No data received
194.82	Chatham	Sangamon	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable. Partially buried
195.40	Chatham	Sangamon	C							No data received
196.80	Chatham	Sangamon	C	SN/C	Arch	Drainage	--	Y	N	Unremarkable
196.90	Chatham	Sangamon	C	C/CM	Tube (2)	Drainage	--	Y	N	Unremarkable
197.30	Chatham	Sangamon	C	SN/CI	Tube	Drainage	--	Y	N	Unremarkable. Debris covered
197.72	Chatham	Sangamon	B	SN/C/SL	P & B	Panther Ck	--	Y	Y	Distinct appearance of construction in 1870s, 1920s & 2010s – Photos 7173, 7174
199.20	Chatham	Sangamon	C	SN/CI	Tube	Drainage	--	Y	N	Unremarkable
199.40	Auburn	Sangamon	C	SN/CI	Tube	Drainage	--	Y	N	Unremarkable
200.15	Auburn	Sangamon	C	SN/CI	Tube	Drainage	--	Y	N	Stone wall 1 side only
201.64	Auburn	Sangamon	B	SN/C	P & B	Sugar Ck	--	Y	Y	Under reconstruction/rehabilitation – Photos 7181, 7183
202.50	Auburn	Sangamon	C							No data received
202.70	Auburn	Sangamon	C							No data received
203.11	Auburn	Sangamon	B	SL	P & B	Sugar Ck	--	Y	N	Unremarkable
203.60	Auburn	Sangamon	C							No data received
203.91	Auburn	Sangamon	C							No data received
204.43	Auburn	Sangamon	C	C	Squared	Drainage	--	Y	Y	Unremarkable – Photos 7184, 7185
204.50	Auburn	Sangamon	C	C	Squared	Drainage	--	Y	N	Unremarkable
205.30	Virden	Macoupin	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable. Concrete 1 side
206.50	Virden	Macoupin	C	C	Squared/Tube	Drainage	--	Y	N	Unremarkable
207.10	Virden	Macoupin	C							No data received
208.10	Virden	Macoupin	C	SN/C	Squared	Drainage	--	Y	N	1 side stone. 1 side concrete
208.80	Girard	Macoupin	C	C	Tube (3)	Drainage	--	Y	N	Unremarkable
209.60	Girard	Macoupin	C	SN/C	Tube (2)	Drainage	--	Y	N	1 side stone. 1 side concrete
209.85	Girard	Macoupin	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable
210.61	Girard	Macoupin	C	C	Squared	Drainage	c1910	Y	N	Unremarkable. Good integrity
211.79	Nilwood	Macoupin	C	C	Squared/Tube	Drainage	--	Y	N	Square intake. 2 tube outlet
212.42	Nilwood	Macoupin	C	C/SN	Tube	Drainage	--	Y	N	1 side stone. 1 side concrete
213.30	Nilwood	Macoupin	C	C	Arch	Drainage	--	Y	N	Unremarkable
214.00	Nilwood	Macoupin	C	C/SN	Arch	Drainage	2014	Y	Y	Arch now gone. 4 modern tubes – Photo 7189
214.85	Nilwood	Macoupin	C	?	Tube	Drainage	--	Y	N	Unremarkable. Partially buried
216.50	South Otter	Macoupin	C	C/SN/CI	Tube	Drainage	--	Y	N	1 side stone. 1 side concrete
218.20	South Otter	Macoupin	C	C	Arch	Drainage	--	Y	N	Unremarkable
218.35	South Otter	Macoupin	C	C	Tube	Drainage	--	Y	N	Unremarkable
218.50	Carlinville	Macoupin	C	C/CI	Tube	Drainage	--	Y	N	Concrete wall partially gone
218.80	Carlinville	Macoupin	C	C/SN	Tube	Drainage	--	Y	N	1 side stone. 1 side concrete
219.70	Carlinville	Macoupin	C	C/SN	Tube	Drainage	--	Y	N	1 side stone. 1 side concrete
221.89	Carlinville	Macoupin	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable
222.53	Carlinville	Macoupin	B	C/SL	P & B	IL 4	--	N	Y	Unremarkable – Photo 7190
222.89	Carlinville	Macoupin	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable
224.25	Carlinville	Macoupin	C	C/SN	Squared/Tube	Drainage	--	Y	N	1 side stone. 1 side concrete

224.95	Carlinville	Macoupin	C	C/CI	Tube	Drainage	--	Y	N	Unremarkable. Partially buried
225.10	Carlinville	Macoupin	C	C/ CI	Tube	Drainage	--	Y	N	Unremarkable. Partially buried
225.50	Polk	Macoupin	C	CM	Tube	Drainage	--	Y	N	Unremarkable
225.65	Polk	Macoupin	C	SN/C/CI	Tube	Drainage	--	Y	N	1 side stone. 1 side concrete
225.90	Polk	Macoupin	C	C	?	Drainage	--	Y	N	Unremarkable. Partially buried
226.10	Polk	Macoupin	C	SN/CI	Squared/Tube	Drainage	--	Y	N	1 side stone. 1 side concrete
226.36	Polk	Macoupin	C							No data received
226.50	Polk	Macoupin	C	C	Tube	Drainage	--	Y	N	Unremarkable
226.90	Polk	Macoupin	C	SN	Squared	Drainage	--	Y	N	Unremarkable. Partially buried
227.30	Polk	Macoupin	B	C/SL	P & B	Alton Rd	--	N	Y	Unremarkable. Rehabilitated – Photo 7193
227.45	Polk	Macoupin	C	SN	??	Drainage	--	Y	N	Unremarkable. Partially buried
227.50	Polk	Macoupin	C	SN/CI	??	Drainage	--	Y	N	Little visible. Partially buried
227.80	Polk	Macoupin	C	Ceramic	Tube	Drainage	--	Y	N	Unremarkable. Modern
227.98	Polk	Macoupin	C	??	??	Drainage	--	Y	N	Culvert completely buried
228.15	Polk	Macoupin	C	SN	??	Drainage	--	Y	N	Little visible. Partially buried
228.25	Polk	Macoupin	C	SN/CM	Squared/Tube	Drainage	--	Y	N	Unremarkable
228.40	Polk	Macoupin	C	SN	Squared	Drainage	--	Y	?	Field review attempted. Could not find
229.10	Polk	Macoupin	C							No data received
229.41	Polk	Macoupin	B	C/SL	P & B	Hurricane Ck	--	Y	Y	Modern rehabilitation – Photo 7195
229.80	Polk	Macoupin	C							No data received
229.90	Polk	Macoupin	C	??	??	Drainage	--	Y	N	Culvert completely buried
230.49	Polk	Macoupin	B							No data received
230.77	Polk	Macoupin	B							No data received
231.25	Polk	Macoupin	C	CI	Tube	Drainage	--	Y	N	Unremarkable. Deteriorating
231.52	Polk	Macoupin	B							No data received
231.60	Polk	Macoupin	C	C	Squared	Drainage	--	Y	N	Unremarkable. Partially flooded
231.85	Polk	Macoupin	C	CI	Tube	Drainage	--	Y	N	Unremarkable. Tube only
232.01	Polk	Macoupin	C	SN	Squared	Drainage	---	Y	N	Partially flooded. Deteriorating
232.10	Polk	Macoupin	C	CI	Tube	Drainage	---	Y	N	Unremarkable. Partially covered
232.50	Polk	Macoupin	C				---			No data received
232.70	Polk	Macoupin	C	SN	Arch	Drainage	---	Y	N	Partially flooded. Deteriorating
232.80	Polk	Macoupin	C	SN	Squared	Drainage	---	Y	N	Unremarkable. Partially flooded
233.06	Hillyard	Macoupin	C	CM	Tube	Drainage	---	Y	N	Unremarkable. Tube only
233.08	Hillyard	Macoupin	C	CM	Tube	Drainage	---	Y	N	Unremarkable. Tube only
233.30	Hillyard	Macoupin	C	SN	Squared	Drainage	---	Y	?	Field review not attempted
233.50	Hillyard	Macoupin	C	SN	Squared	Drainage	---	Y	?	Field review attempted. Could not find
234.10	Hillyard	Macoupin	C	C/CI/CM	Tube	Drainage	---	Y	N	Concrete wall 1 side only
235.15	Hillyard	Macoupin	C	C	Squared (2)	Drainage	---	Y	Y	Unremarkable – Photo 7198
235.50	Hillyard	Macoupin	C	C	Tube	Drainage	---	Y	N	Unremarkable
235.65	Hillyard	Macoupin	C	C/SN	Squared	Drainage	---	Y	N	1 side stone. 1 side concrete
236.30	Hillyard	Macoupin	C							No data received
236.70	Hillyard	Macoupin	C	C	Squared	Drainage	---	Y	N	Unremarkable
236.81	Hillyard	Macoupin	C	C/CI	Tube	Drainage	---	Y	N	Unremarkable
236.82	Hillyard	Macoupin	C	C/CI	Tube	Drainage	---	Y	N	Unremarkable
237.50	Shipman	Macoupin	C	C/SN	Squared	Drainage	---	Y	N	1 side stone. 1 side concrete
238.32	Shipman	Macoupin	C	C	Squared/Tube	Drainage	---	Y	N	Unremarkable
000.00	Shipman	Macoupin	B	C/SL	P & B	Railroad St	---	N	Y	Unremarkable – Photo 7200
238.75	Shipman	Macoupin	C	C/CI	Tube	Drainage	---	Y	Y	Unremarkable – Photos 7203, 7204, 7205
239.40	Shipman	Macoupin	C	C	Squared	Drainage	---	Y	N	Unremarkable
240.25	Shipman	Macoupin	C	C/CI	Tube	Drainage	---	Y	N	Unremarkable
240.50	Shipman	Macoupin	C	C	Squared	Drainage	---	Y	N	Unremarkable
240.80	Shipman	Macoupin	C	C	Squared	Drainage	---	Y	N	Unremarkable
242.50	Brighton	Macoupin	C	C	Tube	Drainage	---	Y	N	Concrete wall 1 side only
242.80	Brighton	Macoupin	C	C	Squared	Drainage	---	Y	N	Unremarkable
243.25	Brighton	Macoupin	C	C/SN	Squared	Drainage	---	Y	N	1 side stone. 1 side concrete
244.10	Brighton	Macoupin	C	C	Arch	Drainage	---	Y	N	Unremarkable
244.45	Brighton	Macoupin	C	C	Squared	Drainage	---	Y	N	Unremarkable
244.89	Brighton	Macoupin	C							No data received
246.30	Piasa	Jersey	C	C	Squared	Drainage	---	Y	N	Unremarkable
246.50	Piasa	Jersey	C	C/CI	Tube	Drainage	---	Y	N	Unremarkable
247.95	Piasa	Jersey	C	C/SN	Squared	Drainage	---	Y	N	1 side stone. 1 side concrete
248.60	Piasa	Jersey	C	C/CI	Tube	Drainage	---	Y	N	Unremarkable
248.70	Piasa	Jersey	C	C/CI	Tube	Drainage	---	Y	N	Unremarkable
248.90	Piasa	Jersey	C	C/CI	Tube	Drainage	---	Y	N	Unremarkable
249.01	Piasa	Jersey	C							No data received
249.90	Godfrey	Madison	C	C/CN/CI	Tube	Drainage	---	Y	N	Unremarkable. Bit of a mess
249.92	Godfrey	Madison	C							No data received
250.18	Godfrey	Madison	C							No data received
250.35	Godfrey	Madison	C	C	Squared	Drainage	---	Y	N	Unremarkable
251.25	Godfrey	Madison	C	C/CI	Tube	Drainage	---	Y	N	Unremarkable
251.35	Godfrey	Madison	C	C/CI	Tube	Drainage	---	Y	N	Unremarkable

251.40	Godfrey	Madison	C							No data received
251.70	Godfrey	Madison	C	C/CI	Tube	Drainage	---	Y	N	Unremarkable
251.95	Godfrey	Madison	C	C/CI	Tube	Drainage	---	Y	N	Unremarkable
252.09	Godfrey	Madison	C							No data received
252.20	Godfrey	Madison	C							No data received
252.25	Godfrey	Madison	C	SN	Squared	Drainage	---	Y	N	Partially covered. Deteriorating
252.60	Godfrey	Madison	C	C	Squared	Drainage	---	Y	N	Unremarkable
252.70	Godfrey	Madison	C	CI	Tube	Drainage	---	Y	N	1 intake. 2 outlets
252.80	Godfrey	Madison	C	CI	Tube	Drainage	---	Y	N	Unremarkable
253.30	Godfrey	Madison	C	CI	Tube	Drainage	---	N	N	Try to field review
253.80	Godfrey	Madison	C	SN/C	Arch	Drainage	---	Y	?	Field review not attempted. Neighbor's comments
253.99	Godfrey	Madison	C	SN	Tube(?)	Drainage	---	Y	N	Flooded. Overgrown
254.30	Godfrey	Madison	C	SN	Arch	Black Ck	---	Y	Y	IL HAER Documentation – Photo 7219
254.65	Alton	Madison	C	SN	Arch	Drainage	---	Y	Y	VERY NICE – Photos 7207, 7215
254.75	Alton	Madison	C	SN						No data received
254.95	Alton	Madison	C	SN	Squared	Drainage	---	Y	N	Unremarkable
255.01	Alton	Madison	C	C/SN	Squared	Drainage	---	Y	N	Unremarkable
255.10	Alton	Madison	C							No data received
255.15	Alton	Madison	C	C						No data received
255.35	Alton	Madison	C	CI	Tube					No data received
255.80	Alton	Madison	B	C/SL	P & B	H Adams Pkwy	1958	N	Y	Unremarkable – Photo 7221
255.93	Alton	Madison	B	SN/SL/C	P & b	Seminary St	---	N	Y	Unremarkable – Photo 7224, 7225
256.40	Alton	Madison	C	SN	Arch	Drainage	---	Y	?	Try to field review
256.50	Alton	Madison	C	SN	Squared	Drainage	---	Y	?	Try to field review
256.78	Alton	Madison	B							No data received
c256.85	Alton	Madison	B	C/SL	P & B (2 spans)	College Av	---	N	Y	Unremarkable – Photo 7226
256.88	Alton	Madison	C	SL						No data received
257.01	Alton	Madison	C	SL						No data received
257.25	Alton	Madison	C	SN	Squared	Drainage	---	Y	?	Try to field review
257.40	Alton	Madison	C	SN		Old RR Grade				No data received
258.12	Alton	Madison	B	C/SL	P & B	H Adams Pkwy	---	Y	Y	Unremarkable – Photo 7229
258.21	Alton	Madison	B	SN/SL	P & B	Wood Rvr	189?	Y	Y	(Lassig Bridge) VERY NICE – Photo 7231
258.45	Alton	Madison	B	SL	P & B		---	Y	?	Try to field review
258.78	Alton	Madison	B	C/SL	P & B (3 spans)	W St. Louis Av	---	N	Y	Unremarkable – Photo 7233
259.35	Alton	Madison	C	CI/SN	Tube	Drainage	---	Y	Y	Unremarkable – Photos 7234, 7235
262.05	Alton	Madison	C	CI	Tube	Drainage	---	Y	N	Unremarkable. Part buried
263.19	Alton	Madison	C	CI/SN	Tube	Drainage	---	Y	N	Unremarkable. Amalgamation
263.26	Alton	Madison	C	SN/CI/ C	Tube	Drainage	---	Y	N	Stone wall 1 side only
265.20	Alton	Madison	C	C	Tube		---	Y	N	Unremarkable. No walls
266.24	Chouteau	Madison	C	CM/CI	Tube		---	Y	N	Unremarkable. No walls
266.75	Chouteau	Madison	B	SL	P & B (7 spans)	Cahokia Ck	---	Y	Y	GOOD – Photo 7247
268.10	Chouteau	Madison	C	SN	Squared		---	Y	N	Unremarkable. Deteriorating

B0005 or B0010/Photo 6923: Resolve question of St. Charles Airline Bridge (HAER No. IL- 67). Which bridge is it?

B0005 or B0010/Photo 6915: Resolve question of St. Charles Airline Bridge (HAER No. IL067). Which bridge is it?

B0030/Photo 6896

B0590/Photo 6933

B0600/Photo 6929


MP 046.95/Photo 6938

MP 046.95/Photo 6940

MP 047.30/Photo 6941

MP 049.52/Photo 6944

MP 049.52/Photo 6949

MP 049.52/Photo 6952

MP 052.47/Photo6955

MP 052.47/Photo 6959

MP 052.70/Photo 6964

MP 052.70/Photo 6965

MP 071.30/Photo 6975

MP 072.20/Photo 6976

MP 072.20/Photo 6977

MP 072.60/Photo 6978

MP 073.26/Photo 6982

MP 077.64/Photo 6988

MP 079.60/Photo 6990

MP 079.78/Photo 6991

MP 080.09/Photo 6992

MP 080.31/Photo 6993

MP 080.67/Photo 6994

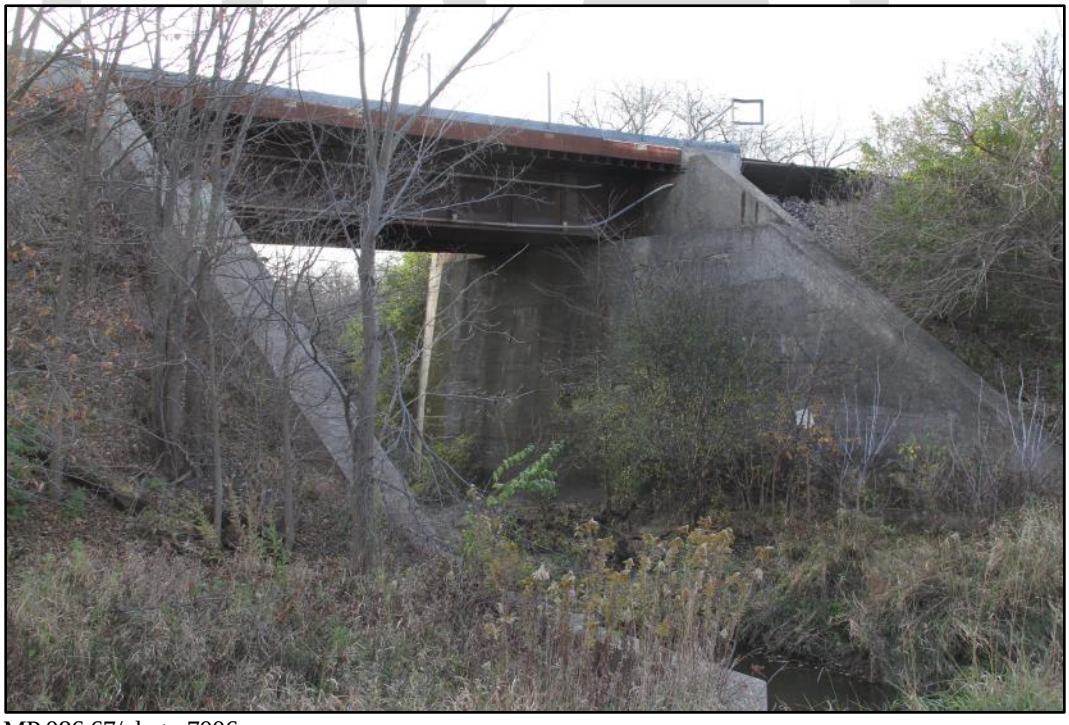
MP 081.97/Photo 7000

MP 082.83/Photo 7001

MP 084.75/Photo 7002

MP 000.00/Photo 7003

MP 000.00/Photo 7005



MP 086.67/photo 7006

MP 087.09/Photo 7009

MP 088.64/Photo 7010

MP 088.83/Photo 7012

MP 088.83/Photo 7014

MP 089.24/Photo 7015

MP 089.83/Photo 7016

MP 090.91/Photo 7018

MP 092.12/Photo 7020

MP 097.00/Photo 7024

MP 097.00/Photo 7025

MP 098.98/Photo 7026

MP 100.20/Photo 7027

MP 100.85/Photo 7028

MP 100.85/Photo 7029

MP 108.50/Photo 7031

MP 109.00/Photo 7032

MP 111.20/Photo 7034

MP 111.20/Photo 7035

MP 112.20/Photo 7039

MP 112.20/Photo 7249

MP 114.40/Photo 7041

MP 116.10/Photo 7042

MP 116.99/Photo 7045

MP 116.99/Photo 7046

MP 117.30/Photo 7047

MP 118.60/Photo 7048

MP118.60/Photo 7049

MP 120.01/Photo 7050

School Street/Photo 7051

W. Vernon Avenue/Photo 7052

S. Main Street/Photo 7054


S. Center Street/Photo 7055

MP 125.00 (Sugar Creek)/Photo 7056

Division Street/Photo 7057

Market Street/Photo 7061

Market Street/Photo 7062

Olive Street/Photo 7063


Olive Street/Photo 7065

MP 127.10/Photo 7066

MP 127.10/Photo 7068

MP 134.60/Photo 7070

MP 134.60/Photo 7071

MP 136.50/Photo 7073

MP 136.50/Photo 7074

MP 137.70/Photo 7077

MP 137.90/Photo 7078

MP 144.10/Photo 7082

MP 149.50/Photo 7084

MP 152.70/Photo 7085

MP 152.70/Photo 7086

MP 158.10/Photo 7091

MP 162.70/Photo 7094

MP 162.70/Photo 7096

MP 163.60/Photo 7097

MP 163.60/Photo 7127

MP 165.20/Photo 7133

MP 172.10/Photo 7134

MP 172.10/Photo 7135

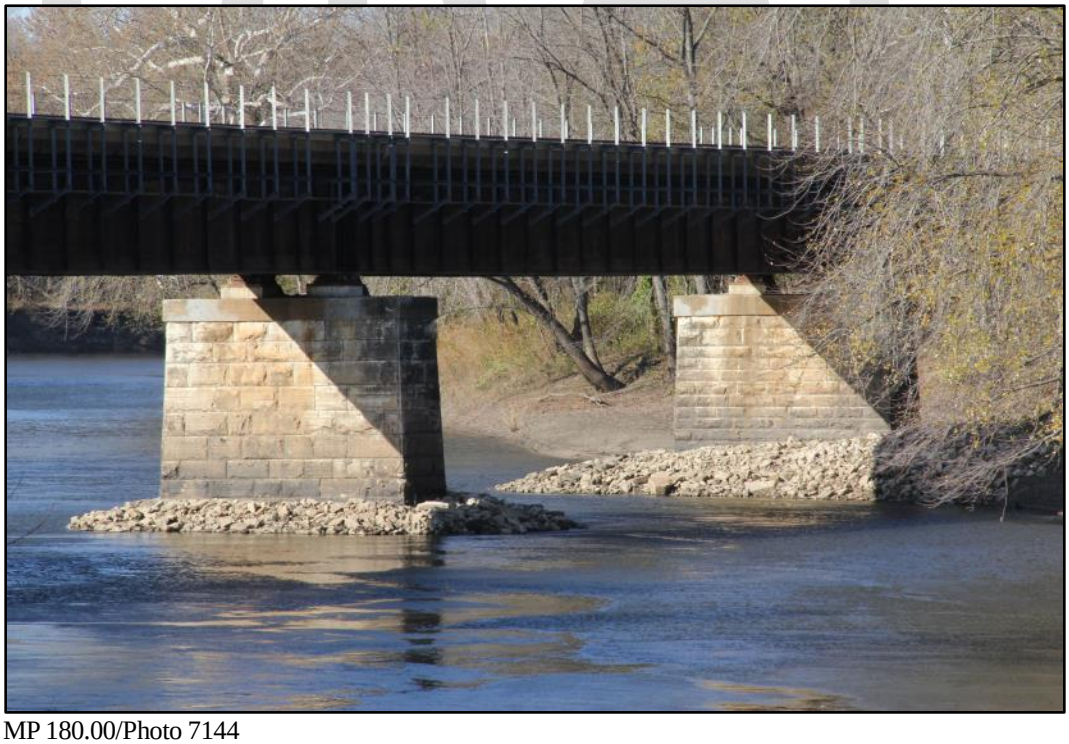
MP 172.40/Photo 7137

MP 172.40/Photo 7138

MP 176.40/Photo 7139

MP 179.00 (Meredith Drive)/Photo 7141

MP 180.00/Photo 7145



MP 180.00/Photo 7144

MP 180.80 (Dirksen Parkway)/Photo 7147


MP 181.90/Photo 7148

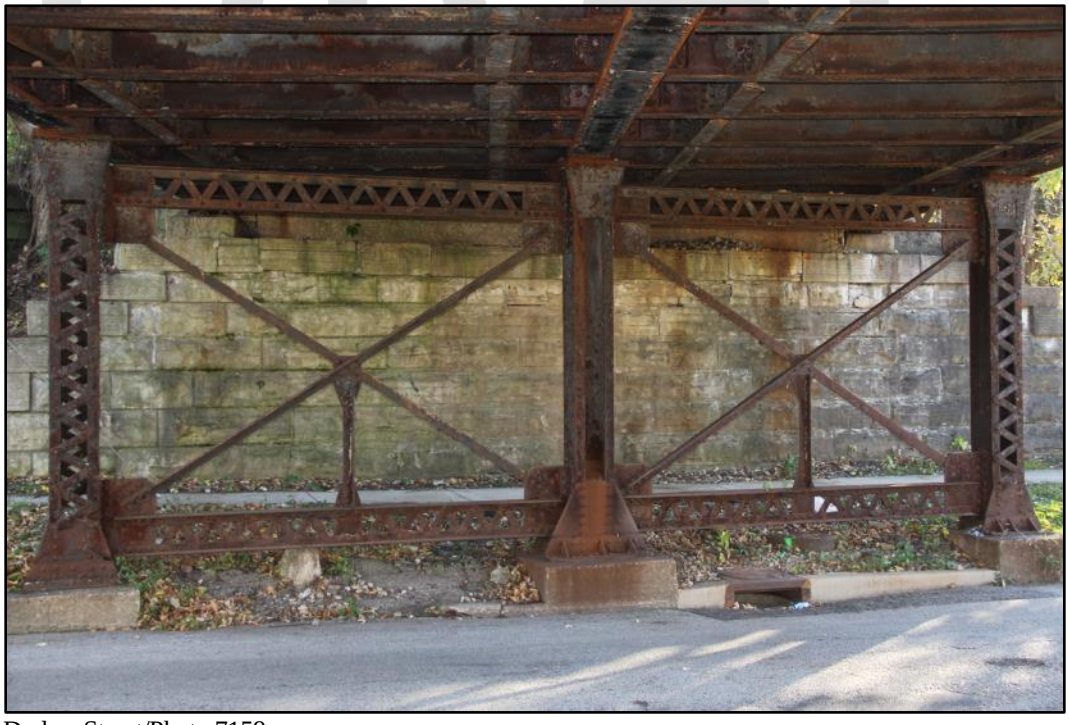
Sangamon Drive/Photo 7149


Sangamon Drive/Photo 7150

9th Street/Photo 7152


9th Street/Photo 7155

Dodge Street/Photo 7156



Dodge Street/Photo 7159

E. Capitol Street/Photo 7162


E. Capitol Street/Photo 7166

MP 191.65/Photo 7169

MP 191.65/Photo 7170

MP 192.10/Photo 7168

MP 197.72/Photo 7173

MP197.72/Photo 7174

MP 201.64/Photo 7181

MP 201.64/Photo 7183

MP 204.43/Photo 7184

MP 204.43/Photo 7185

MP 214.00/Photo 7189

MP 222.53 (IL 4)/Photo 7190

MP 227.30 (Alton Road)/Photo 7193

MP 229.41/Photo 7195

MP235.15/Photo 7198

Railroad Street/Photo 7200


MP 238.75/Photo 7203

MP 238.75/Photo 7204

MP 238.75/Photo 7205

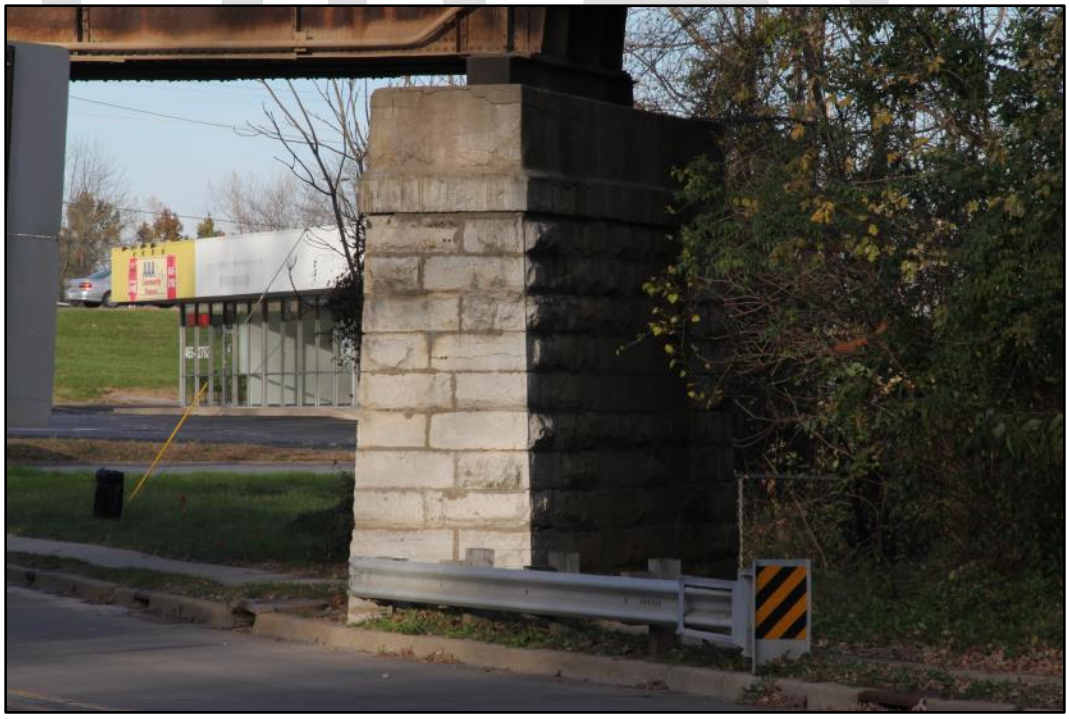
MP 254.30/Photo 7219

MP 254.65/Photo 7207

MP 254.65/Photo 7215

MP 255.80 (H. Adams Parkway)/Photo 7221

MP 255.93 (Seminary Street)/Photo 7224



MP 255.93 (Seminary Street)/Photo 7225

MP c256.85 (College Avenue)/Photo 7226

MP 258.12 (H. Adams Parkway)/Photo 7229

MP 258.21/Photo 7231

MP 258.78/Photo 7233

MP 259.35/Photo 7234

MP 259.35/Photo 7235

MP 266.75/Photo 7247