NPS Form 10-900 (Oct. 1990)

OMB No. 10024-0018

United States Department of the Interior National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x' in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

histori	c name _	<u>Railwa</u>	y Exchange	Building	, and the second			_			_	
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street	& town	600 Lo	ocust Street						N/A	not	for public	cation
city or	town	St. Louis	<u> </u>							N/A	vicinity	
state	Missou	ri	co <u>de</u>	МО	county St. Lou	uis (Independent C	City) C	ode <u>5</u>	10_zi _l	o code	63101	_
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Name of Property		County and State				
5. Classification						
Ownership of Property (check as many boxes as apply)	Category of Property (check only one box)	Number of Resources within (Do not include previously listed resour	Property ces in the count.)			
		Contributing Noncor	ntributing			
☐ private	□ building(s)	_ 1	buildings			
public-local	district		o:t-o-o			
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Name of related multiple property is not part of a		Number of contributing reso	urces previously listed			
N/A		N/A				
6. Function or Use						
Historic Function		Current Function				
(Enter categories from instructions)		(Enter categories from instructions)				
Commerce: business		Commerce: department store				
professional		restaurant				
department store		business				
restaurant						
7. Description						
Architectural Classification		Materials				
(Enter categories from instructions)		(Enter categories from instru	ctions)			
Late 19 th and Early 20 th Century American	Movements: Commercial Style	foundation Concre	ete			
		walls Brick				
		Terra (Cotta			
		roof Concre	ete			
		other				
Narrative Description (Describe the historic and current cond	lition of the property on one or more co	ontinuation sheets.)				

St. Louis (Independent City), MO

See continuation sheet(s) for Section No. 7

Railway Exchange Building

Name of Property	County and State
8. Statement of Significance Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)	Areas of Significance (enter categories from instructions)
A Property is associated with events that have made a significant contribution to the broad patterns of our history.	<u>Commerce</u> <u>Engineering</u>
■ B Property is associated with the lives of persons significant in our past.	Architecture
☑ C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.	
D Property has yielded, or is likely to yield, information important in prehistory or history.	Period of Significance _1913-1959
Criteria Considerations (Mark "x" in all the boxes that apply.) Property is: A owned by a religious institution or used for religious purposes. B removed from its original location. C a birthplace or grave. D a cemetery. E a reconstructed building, object, or structure. F a commemorative property. G less than 50 years of age or achieved significance within the past 50 years. Narrative Statement of Significance	Significant Dates
(Explain the significance of the property on one or more continuation sheets.) 9. Major Bibliographical References	See continuation sheet(s) for Section No. 8
Bibliography (Cite the books, articles, and other sources used in preparing this form on one or more con	tinuation sheets.
Previous documentation on file (NPS):	Primary location of additional data:
 □ preliminary determination of individual listing (36 CFR 67) has been requested □ previously listed in the National Register □ previously determined eligible by the National Register □ designated a National Historic Landmark □ recorded by Historic American Buildings Survey # □ recorded by Historic American Engineering Record # 	State Historic Preservation Office Other State agency Federal agency Local government University Other Name of repository:
	See continuation sheet(s) for Section No. 9

St. Louis (Independent City, MO

Railway Exchange Building

Railway Exchange Building Name of Property	St. Louis (Independent City), MO County and State
10. Geographical Data	
Acreage of Property less than one acre	
UTM References (Place additional boundaries of the property on a continuation sheet.)	
1 <u>1/5</u> 7/4/4/6/5/2 <u>4/2/7/9/3/1/4</u> Zone Easting Northing	2 / Zone Easting Northing
3 / / Zone Easting Northing	4 / Zone Easting Northing
Verbal Boundary Description (Describe the boundaries of the property.) See Attached	
Property Tax No.	
Boundary Justification (Explain why the boundaries were selected.) See Attached	☑See continuation sheet(s) for Section No. 10
11. Form Prepared By	See continuation sheet(s) for Section No. 10
name/title Julie Ann LaMouria	
organization Lafser & Associates, Inc.	date June 19, 2008
street & number 1028 North Kingshighway Suite 1	telephone 573-339-4625
city or town Cape Girardeau	state MO zip code 63701
Additional Documentation Submit the following items with the completed form:	
Continuation Sheets Maps A USGS map (7.5 or 15 minute series) indicating the pr A Sketch map for historic districts and properties having Photographs: Representative black and white photographs of Additional items: (Check with the SHPO or FPO for any additional items)	g large acreage or numerous resources. of the property.
Property Owner name/title Duane Vaughn- Macy's Inc.	
street & number 611 Olive Street	telephone
city or town St. Louis	state MO zip code 63101
Paperwork Reduction Act Statement: This information is being collected for ap properties for listing or determine eligibility for listing, to list properties, and to an benefit in accordance with the National Historic Preservation Act, as amended (pplications to the National Register of Historic Places to nominate nend existing listings. Response to this request is required to obtain a

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20503.

OMB Approval No. 1024-0018 (8-86)

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				St. Louis (Independent City), MO

Summary

The twenty-one-story Railway Exchange Building is located at 600 Locust Street in downtown St. Louis (Independent City), MO and occupies the entirety of City Block 128, bounded by Sixth Street on the east, Locust Street on the north, Seventh Street on the west, and Olive Street on the south. The building was designed by the St. Louis architectural firm Mauran, Russell & Crowell in 1912. The cream color terra cotta and brick Commercial Style building features marble paneling and large display windows with transom panels on the lower story. Terra cotta courses are found above the first, second, fifth, sixth, and twentieth levels. A thick terra cotta cornice line rests just below the piers and balustrade of the roofline (Photo # 1). The interior of the building was constructed to house a department store on the first 10 floors and offices above. The lower stories had open floor plates to allow for circulation and changing displays. Finishes on these floors have changed, but the open floor plan remains. Upper floors retain their historic circulation patterns and some finishes, though office spaces have been updated as needed. The exterior terra cotta is in excellent condition and many original windows remain in place. The exterior has undergone some modification at the entry level, the parapet and on the north and south elevations. The most notable of these changes are two walkways that were constructed in 1959 and 1984 (Photos 2 & 3) that connect the Railway Exchange to adjacent buildings. The massing of the Railway Exchange dwarfs these connectors and they do not extensively impact the significant architectural characteristics of the building, or the ability of the building to convey its historic commercial significance.

Exterior:

The rectangular-planned building fronts approximately 270 feet on Locust Street (north façade), and Olive Street (south façade); and 228 feet on Sixth Street (east façade) and Seventh Street (west façade). This creates ten bays on the north and south elevations and nine bays on the east and west. The building does not have a "main façade" but rather features decorative entrances on each elevation that access either the nine-story department store or the upper offices. The department store entrances consist of recessed paired metal and glass doors with transom windows, usually in triplicate, divided by carved terra cotta pilasters. An entablature separates the doors from tri-part cast iron grill work. Arcaded rounded arches hold an elaborate entablature decorated in foliage and geometric shapes (Photo # 4). This is further supported by complicated pilasters surrounding the entrance, featuring Ionic and Corinthian motifs as well as human busts and S-scroll capitals. Above the first level, the entrance elaboration is continued with an intricate balustrade featuring "S" shapes and foliage motifs (Photo # 5). The entrances to the upper offices are separate from those that access the department store. Though the Olive Street entrance is similar to the department store

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entrances (Photo # 6), the openings to the Railway Exchange Building found on Sixth and Seventh Street consist of large glass and metal doors with transom windows (boarded and unused at this time) with lighted metal canopies and wood paneling above the entrances (Photo # 7).

The first level contains the store front, with large metal display windows and wood paneled transoms. Marble paneling rises half way up the pillar supports, with a bronze name plate separating the paneling from stamped terra cotta that stretches to the course above the first level (Photo # 8). The second and fifth levels feature two sets of paired, four pane sash windows with small transoms. Each bay is separated by a wide column culminating in exaggerated projections in the belt course above these floors. The third and fourth levels mimic the fenestration pattern of the second floor, with carved terra cotta lintels replacing the belt course. The sixth floor mimics the fifth, but the transoms above the windows are not present. The seventh to twenty-first floors mimic the third and fourth, though the transoms above the windows are not present, and the original wood frames have been replaced with metal (Photo # 9). A belt course runs above the twentieth floor, and a dentiled cornice rises to the balustrades and piers that line the roof. Two-story rectangular pent houses are found on the north and south elevations between the fourth and seventh bays (Photo # 10). An eleven-story light well drops through the center of the building (beginning at the tenth-story). One-over-one sash windows are found grouped in fours on the smooth concrete walls. The light well is three bays wide between the tenth and seventieth floors, and two bays wider from the eighteenth to the twenty-first floor (Photo # 11).

Each elevation is identical, with exceptions as follows:

North Elevation:

The north elevation features entrances in the second, fifth through sixth, and ninth bays. The outer entrances are the ornate openings as described above. The central entrance is located under the 1984s walkway. It retains some decorative grill work, but the entrance doors have been changed to revolving doors, and most of the terra cotta was replaced with marble paneling when the 1984 walkway was constructed (Photo # 12). Though it covers five bays of the second, third, and fourth floors, the walkway is a freestanding structure that is supported by pillars that are not attached to the building. Because it does not rely on the Railway Exchange Building for stability, it is likely that the covered sections are still relatively intact. There are plans to remove the walkway, exposing the covered portions of the Railway Exchange Building, which could likely be restored (Photo # 13).

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South Elevation:

With ornate entrances in the second, fifth through sixth, and ninth bays (Photo # 15), the south facade mimics the other elevations except for the narrow walkway located on the 4th floor (Photo # 2). Constructed in 1959 the connector joins the Railway Exchange Building to the parking lot across Olive Street. The glass and steel walkway impacts only one window bay, and does not drastically change the feeling or fenestration of the remainder of the façade.

East Elevation:

The east façade has undergone few changes since construction. A single, canopied entrance (as described above, Photo # 7) is found in the central bay (Photo # 16).

West Elevation:

The west façade mimics the east elevation (Photo # 17).

Interior:

The Railway Exchange Building has undergone almost constant interior alterations. When it was constructed, the first twelve levels were used by May Department Stores, and became the headquarters for the Famous Barr Company. The department store occupied the lower ten floors. The remainder of the building was originally used as the general offices for the Wabash Railway Company, with some of the floors leased out to other businesses for office use.

The lower levels continue to be used as department store space (See Figure 1 & 2). Wide open floor plans allow for display space (Photo # 18), with the original escalator system intact (Photo # 19). Two restaurants are also found in the department store, featuring the original wood and brick work, and paneling, doors, and exposed beams (Photo # 20). Many of the original elements on the lower floors have been covered from public view, though the ornate column capitals are still visible above the boxed supports (Photo # 21). In the spaces not used as show rooms, the department store levels retain much of the original architecture. The executive offices are intact, featuring the original cabinetry, wood paneling, and flooring (Photo # 22). Other areas continue to express the fireproof structural details that made the Railway Exchange Building an important part of engineering history. These include the concrete walls, steel stairwells and heavy metal doors designed for quick and safe evacuation (Photo # 23).

The upper office levels have changed significantly since construction, though they retain the same basic layout (See Figures 4 & 5), with hallways off the elevator lobbies that lead to several open spaces now used for unattached partition cubicles. Like the executive offices of the lower levels, some cabinetry, wood paneling, and molded

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ceilings have been retained (Photo # 25). Some of the floors, especially the 20th level, retain the white and gray marble floor and wall coverings included at construction, with intact glass and wood doors present as well (Photo # 26). The marble and steel stairwells have also been retained in good condition (Photo # 27).

Though it has experience quite a bit of interior alteration to remain in service, the Railway Exchange Building continues to retain many of its 1913 elements. Though public spaces have been changed, areas restricted to employee access continue to express the architecture and designs incorporated by the architects. The alterations to building have not impacted the structure's use, but rather continued the architects original intentions of creating a safe and luxurious working environment that would be a commercial center for the downtown.

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Summary:

The Railway Exchange Building, located at 600 Locust Street in St. Louis, MO, is locally significant under National Register Criterion A in the area of Commerce, and National Register Criterion C in the areas of Engineering and Architecture. The design and construction of the Railway Exchange Building was met with great fanfare and claims that the building would be "the most spacious office building in the world" and a "perfectly fireproof building." Though these claims cannot be easily verified, the building designers took pains to incorporate the latest fireproof technologies and safety measures into the design. Architects Mauran, Russell and Crowell incorporated concrete floors and ceilings as well as its steel supports, enclosure of all floor openings, and an automatic sprinkler system in the cream color, terra cotta Commercial Style tower. The proposed safety features convinced the city to allow a variance to the ordinance that limited height of downtown buildings. The result was the construction of St. Louis's largest commercial and office building with more than 31 acres of floor space in its 21 floors. The grand structure was also recognized for its most prominent tenant, the Famous-Barr Dry Goods Company, which occupied the lower ten stories of the building. Utilizing the open floor plan and four elevations of display windows, the company emerged as downtown St. Louis's largest department store. Famous-Barr is an excellent example of a local company that encouraged the national department store phenomenon by marketing the consumer experience to women shoppers as a leisure and social activity. Famous-Barr remained in business as one of the largest retail chains in the country until it was bought out by Federated Department Stores in 2006. The Railway Exchange Building is still occupied as an office building above the tenth floor and a department store below. The building's 1913 construction marks the beginning of its period of significance, which is extended to 1959, the 50 year closing date for periods of significance where activities begun historically continue to have importance but no specific date can be defined.

Commercial Significance:

The Railway Exchange Building was recognized as an architectural and engineering wonder even before it was constructed. But the building's rich history was built more on the shoulders of the companies it was designed to house than the structural supports and ornamental flare it boasted in its design. The building has been a commercial asset to the St. Louis downtown since its construction, housing what became the city's largest department store. In addition, many local businesses operated on the upper floors of the

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¹ "St. Louis Has Most Spacious Office Building in the World." <u>Know St. Louis Weekly</u>. November 1924; Claude B. Ricketts. "Railway Exchange Building: A Perfectly Fireproof Building." <u>Safety Engineering</u>, 1914.

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building, and the building's official moniker derived from the abundance of railroad company tenants occupying the building when it opened.

The Railway Exchange Building was designed in 1912 by Mauran, Russell and Crowell as a home for the newly merged Famous-Barr Company. By the time Famous and Barr were merged, each had established themselves as a prominent department store in St. Louis. William Barr & Company opened as a drygoods store in 1850. Located on Fourth Street between St. Charles and Vine, the drygoods company grew rapidly, and by 1876 boasted over 300 employees and 32 departments with a separate manager for each division.² In 1880 William Barr moved into the Julia Building, a four-story construction that occupied half the block at 6th an Olive Streets. As the city's first department store, Barr's took advantage of the mail-order trade as well as the in-house sales.³ The company remained in this building until it was replaced in 1913 by the Railway Exchange Building.

Though several other department stores were established during the late 19th and early 20th century, one of St. Louis's most recognized retail names was the Famous Shoe and Clothing Company. With its beginnings in a small building on Franklin Avenue in 1873, the company grew substantially over the decade, and by 1880 it moved into the Broadway Trades Palace on Broadway between Morgan Street and Lucas Avenue.4 But in 1892 the company was acquired by May Department Stores of Cleveland, a retail giant founded by David May in 1877. In September of 1892 Famous moved into its own five-story building at the corner of Morgan and North Broadway, attached to the Broadway Trades Palace. May opened his own store in 1903 at the corner of Sixth and Washington, incorporating the city's first escalator into the building and including a full service restaurant.5

William Barr's company began to struggle during the last decade of the 19th century, and was sold to Hargadine-McKittrick in 1900, though Barr's name was retained. 6 With Barr's rival, Grand Leader, and the May Company occupying new buildings designed for department store traffic, the outdated Julia Building posed significant problems for the retail conglomerate. With competition burgeoning all over downtown, Hargadine-McKittrick began plans to construct a new building in 1908 that would house both the

⁵ Ibid, 15.

² J. A. Dacus and James W. Buel, A Tour of St. Louis: Or the Inside Life of a Great City. (St. Louis: Western Publishing co., 1878), 194.

³ Rockwell Gray, A Century of Enterprise; St. Louis 1894-1994. St. Louis, MO: Missouri Historical Society Press, 1994, 14.

Ibid, 13.

⁶ William E. Foley, Perry McCandless, William Earl Parrish. <u>A History of Missouri, Vol IV 1875-1919.</u> (Columbia, MO: University of Missouri Press, 1997), 88-89.

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department store and executive offices for the railroad companies. Unfortunately, the undertaking proved to be a financial challenge with little cooperation from the railroads, and in 1911 Barr's merged with the Famous Company, becoming a part of the May Department Stores Company. That same year May's was listed to the New York Stock Exchange, and began making plans for the construction of a new retail store occupying the entire block at Olive and 6th Streets, which would also act as the company's headquarters building.

The company moved into its impressive new home in the Railway Exchange Building in the late summer of 1913. Two restaurants, three level escalators, four elevator shafts for public use, and seven stories of retail commercial space were all elements of a department store that any retail company owner would marvel at, and which made Famous-Barr the largest department store in the city. The new building enticed shoppers to explore the many levels of goods and services, with the most sought after items placed strategically at the center of the store and on different levels, encouraging customers to browse other merchandise in the store and buy on impulse. Within four years the company found itself with so much business that it reconfigured the store for ease of shopping, and did the same again in 1923 and 1927.

Famous-Barr became the largest retailer in the city, and when it opened its first suburban store in 1949 the company was making double the profits of any other company in St. Louis. 10 The downtown store remained open until 2006, when Federated Department Stores bought out the May Department Store Company and replaced Famous with Macy's. The company utilized the building's lower department store and several of the upper levels for its Midwest headquarters until 2008, when Macy's reconfigured the national lay out and moved its headquarters to Ohio. The department store remains in business (2008) despite the lack of executives in the building.

The Famous-Barr Company, and its earlier components, was a large part of the department store phenomenon that swept the nation at the turn of the century, and contributed significantly to the downtown retail evolution in St. Louis.

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⁷ James Neal Primm. <u>Lion of the Valley: St. Louis, Missouri 1764-1980.</u> (St. Louis: Missouri Historical Society Press, 1998), 335-337.

⁸ Ricketts.

⁹ Building permits on file with the City Of St. Louis Comptroller's Office. City Hall, 1200 Market Street, Room 1, St. Louis, MO 63103.

¹⁰David E. Babcock. "May Department Stores Company Enters its 100th Year." <u>St. Louis Post Dispatch.</u> 9 January 1977.

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As Robert D. Tamilia noted, "The rise of the department store from the mid 1850s to the end of the 19th century was nothing short of a major revolution, not only for business but also for all of society." He further explained that "the department store affected every facet of social and economic life through being a very entrepreneurial and innovative institution." ¹¹

Because of the architectural requisites necessary for a department store, new technologies had to be incorporated into the building designs. These included heating and cooling devices as well as lighting and inter-level customer moving mechanisms like elevators and escalators. Department stores also introduced services that had never been offered to customers, including home delivery, restrooms, wrapping services, and new types of merchandise display. Additionally, department stores made shopping a leisure and social activity for women that allowed them to be seen in public by themselves and to use the department store for more than just commercial consumption. The inclusion of restaurants, tea rooms, and "resting rooms" all made the shopping experience a luxurious activity for not only the social elite, but for people of all social and economic levels. 12

The department store also offered a new way of shopping and ensured that businesses could maintain their profits throughout the year. By incorporating many small specialties into departments under a single executive head, a company could maintain a steady profit and rely on the sale of merchandise in another department when its seasonal items were not in high demand. In addition, the department store introduced the fixed price, eliminating haggling and bargaining and creating equal service for all customers. The department store also changed the way goods were made, demanding factory constructed items that had consistent quality in order to sell the same item to multiple customers for the same price. ¹³

While the first recognized department store is typically Bon Marche of Paris that opened in 1838, it only took ten years for the department store to make its way to the United States, and St. Louis was boasting its first department stores (known at that time as drygoods companies) as early as 1850. While Rowland Hussy Macy was slowly building his drygoods store in New York City in 1858, St. Louis was already boasting two large stores, William Barr & Company and Scruggs, Vandervoort & Barney. The transition from drygoods to department store seemed easily delineated by the 1870s, with D.

¹¹ Robert D. Tamilia, PhD. "The Wonderful World of the Department Store in Historical Perspective: A Comprehensive International Bibliography Partially Annotated." Accessed 19 June 2008. Available Online through Quinnipiac University at http://faculty.quinnipiac.edu/charm/dept.store.pdf
¹² Ibid.

¹³Maridith L. Clausen. "The Department Store: Development of the Type." <u>Journal of Architectural Education.</u> Volume 39, No. 1 (Autumn, 1985), 20-29.

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Crawford Dry Goods Company and William Barr & Company both boasting their incorporation of several specialties under one roof with different managers for each division. He are specialties under one roof with different managers for each division. He are specialties under a strike the strike of the several specialties under stores in St. Louis, with Barr and Scruggs recognized as the other two leading stores in the city. By 1911 there were at least eight prominent stores operating under the department store design, though only two advertised themselves as this instead of drygoods companies. He is a companie of the several special themselves as this instead of drygoods companies.

Several specialized buildings were constructed for department store use, especially after the Civil War when more drygoods and department store companies opened in St. Louis. While most were home to one or two retail centers, the Railway Exchange Building, constructed for the Famous-Barr Company, also incorporated office space on the upper levels used by a variety of commercial entities.

When it opened, the Railway Exchange Building housed more than 24 individual railway companies. Thus the appropriate moniker was given to the structure, which rivaled the Pierce Building for the number of railway companies operating within its walls. The largest tenant was the Wabash Railway Company, whose general offices occupied the 13th, 14th, and 16th floors. Other businesses occupied within the building's 21 stories included doctors, lawyers, dress makers, landscape gardeners, construction companies, detective agencies, insurance companies, dry cleaners, thermometer manufacturers, dentists, real estate agents, and hair dressers. ¹⁶

Housing all these businesses under one roof required a strong and safe building, and Mauran, Russell, and Crowell stepped up to the challenge, having constructed other office and department store buildings across the city.

Engineering Significance:

Attempts at fireproofing buildings began in the United States even before the country declared its independence. As early as 1631, laws were set in place to prevent the spread of fire between homes to ensure that a whole village would not be destroyed by a single fire. Some of the first laws were introduced in Boston, prohibiting the use of wooden chimneys and thatched roofs. New Amsterdam adopted the same regulations in 1656, the year of Boston's first large scale conflagration. After numerous fires plagued the city in the 1670s, Boston declared that only brick and stone buildings could be constructed in the city.¹⁷

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¹⁴ Ibid, 20-29.

¹⁵ Gould's St. Louis, Missouri City Directory. St. Louis, MO.: Polk-Gould Directory Co., 1911.

¹⁶ Gould's St. Louis, Missouri City Directory. St. Louis, MO.: Polk-Gould Directory Co., 1913.

¹⁷ Sara E. Wermiel. The Fireproof Building: Technology and Public Safety in the Nineteenth Century

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The first building referred to as "fireproof" emerged in the United States in the late eighteenth century. Utilizing all masonry elements and a "vault" arch support plan, the Philadelphia Walnut Street jail (constructed between 1774 and 1784) was designed to not only ensure that the exterior of a building remained standing, but also create horizontal barriers that would prevent fires from moving between levels. Construction of "fireproof" buildings continued in this manner through the 1840s. 18

The 1835 New York fire sparked a new direction in fireproof construction. After the destruction of most of the commercial downtown, buildings constructed only of masonry materials were no longer considered completely fireproof. New technology encouraged the incorporation of iron beams and columns, and eventually led to the construction of cast iron facades. The strength and slender proportions of cast iron also allowed for larger window construction, and iron facades and structural elements could be constructed quickly without skilled labor. This led to the rapid spread of iron integration across the country, and soon "fireproof" became synonymous with all forms of iron. But the cast iron storefronts that withstood the Chicago fire of 1871 were blamed for the collapse of many of the buildings (whether justified or not), and thus the stronger, more durable wrought-iron was introduced as I beams for homes and commercial buildings, eventually giving way to the much more popular steel I beams by the 1890s. ¹⁹

Another attempt at fire protection was introduced in the 1870s. The encapsulation of columns and beams had been around for several decades, primarily employing brick enclosures to wood structural supports. Because the wood needed to breathe to avoid rotting, the use of more substantial applied elements had not been undertaken. With the advancing technology of iron and steel supports, terra cotta became the new "fireproofing" material for wrapping structural elements.²⁰

The use of terra cotta to insulate structural supports soon encouraged the terra cotta tiling of floors. But ceilings and floors posed a danger if their supports gave way, so a new metal decking encased in concrete became the choice for fireproof plans. During the first decades of the twentieth century many buildings constructed with concrete floors and terra cotta encasements were touted as being "perfectly fireproof." However, economics and the occasional accident proved that creating a building resistant to every kind of fire was impossible, and attitudes about fireproofing buildings began to change to fire protection. Architects and builders began implementing additional features like

American City. (Baltimore: Johns Hopkins University Press, 2000), 11-15.

²⁰ Ibid.

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¹⁸ Ibid, 16.

¹⁹ Donald Friedman. <u>Historical Building Construction: Design, Materials & Technology.</u> (New York: Norton & Company, 1995), 56-67.

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enclosed, reinforced stairwells and sprinkler systems into a building's design in order to make the building safer for occupant exit should a fire occur.²¹

When the Railway Exchange Building was designed in 1912, these fireproof designs had already made their way to St. Louis. One of the first fireproof buildings to be constructed in the city was the St. Louis Customs House (constructed 1873-1884, National Register listed 1968). Its solid granite exterior created a sturdy sheathing for the cast and wrought iron structural supports, brick and masonry vaulted ceilings, and concrete floors. Another fireproof building was Martin Shaunessy's storage facility, marketed as the city's "first fireproof public storage warehouse." Constructed in 1906, the building featured hollow-tile and concrete shafts, heavy fire doors on each floor, individual private vaults, and multiple elevators and stairwells. 22

Like these structures, the Railway Exchange Building boasted its status as a "perfectly fireproof building." A pamphlet distributed by the first building manager, Claude B. Ricketts, and *Safety Engineering*, a publication produced by the American Society of Safety Engineers²³, outlined the vitally essential elements that established the building's high standard in fire resistance. Recognizing that the incombustible materials of partitions and floors, brick walls, and steel framework (See Figure 6) were ineffective in combating fire on their own, the pamphlet brought attention to the extensive automatic sprinkler system. Besides the nozzles placed every 94 feet, the system was designed to circulate water throughout the building from a ground level fire engine should the sprinkler's water supply fail. *Safety Engineering* mentioned that this was the only public building to have such a complete sprinkler system.²⁴

Another of the important design elements that helped combat fire was the "complete enclosure of all floor openings." This kept fires from spreading down stairwells and between floors. Other elements that contributed to the building's fireproof nature included the glazed brick and terra cotta exterior, metal frame windows above the seventh story, and the placement of the steam and electric generators underground

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²¹ Ibid.

²² Matthew Bivens and Carolyn Toft. Shaughnessy, Martin Building nomination to the National Register of Historic Places, (Washington, D.C.: National Park Service, listed 2005).

Historic Places. (Washington, D.C.: National Park Service, listed 2005).

²³ The American Society of Safety Engineers (ASSE) was founded in 1911 in New York City as the United Society of Casualty Inspectors. The group organized as a reaction to the Triangle Shirtwaist Factory Fire in New York on March 25, 1911 that killed 146 female garment workers. ASSE consists of individuals that are, "qualified by education, training and experience, who in working with and through others, and following a Code of Professional Conduct, help to identify hazards and develop appropriate controls for these hazards, that when effectively implemented, prevent occupational injury, illness, and property damage." The group produced pamphlets on safety, health, and engineering, publishing a regularly distributed journal called *Safety Engineering* beginning in 1919.

²⁴ Claude B. Ricketts. (10).

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across Locust Street (now located below the St. Louis Center complex). Though technically designed outside the building restrictions for downtown office structures, the Railway Exchange building's sprinkler system and reinforced concrete floors and ceilings, together with the additional fireproof elements, assured the Fire Prevention Bureau and the Commissioner of Public Buildings that the twenty-one-story structure would be a fire barrier rather than a fire hazard, and could be considered as "fireproof" as any other building following the height requirements for structures in the Central Business District. Thus, the city waved the usual design conditions that limited building height and allowed Mauran, Russell, and Crowell's 21-story cream colored terra cotta tower to be constructed on an entire city block.²⁵

Architectural Significance:

The superior design of the Railway Exchange Building made it an engineering marvel, and publications consistently listed "interesting facts" about the building's construction, even into the 1920s (See Figure 5). While the design was praised for its magnificent engineering, it was not the structural elements alone that drew attention. The selection of well know architects Mauran, Russell, and Crowell for the project ensured that the exterior design would make as much of a statement as the structural system.

Mauran, Russell and Crowell was one of St. Louis's most prolific architectural firms. John Mauran was born in Providence, RI, and after attending the Massachusetts Institute of Technology, joined the architectural firm of Shepley, Rutan & Coolidge in Boston. The company moved to Chicago in 1891, and Mauran represented a branch of the firm in St. Louis in 1893, becoming partner two years later. While working for the firm, Mauran designed buildings in the residential neighborhoods of the Central West End, and designed three rather large buildings in the new loft district developing along Washington Avenue. Mauran's skills found him a place as the St. Louis delegate to the national convention of the American Institute of Architects, later becoming president of the St. Louis Chapter. When Shepley, Rutan & Coolidge closed their local office in 1900, Mauran formed a new partnership with the firm's remaining St. Louis employees, Ernest Russell and Edward G. Garden. Endough the Massachusetts are attending to the Massachusetts are provided to the national convention of the American Institute of Architects, later becoming president of the St. Louis Chapter. When Shepley, Rutan & Coolidge closed their local office in 1900, Mauran formed a new partnership with the firm's remaining St. Louis employees, Ernest Russell and Edward G. Garden.

Earnest Russell was born in England in 1870, but grew up in Colorado. He began his study of architecture in 1887, and after moving to St. Louis he became president of the Architect's League of America, a member of the American Institute of Architects, the

Shepley, Ruton, and Coolige was the successor company to H. H. Richardson's well know firm.
 The Book of St. Louisans: A Biographical Dictionary of Leading Living Men of the City of St. Louis and Vicinity.
 St. Louis, The St. Louis Republic, 1912.

²⁵ Railway Exchange Building. St. Louis: 1913. (Booklet on file with the Missouri Historical Society).

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		-		St. Louis (Independent City), MO

chairman of the Public Baths Commission, and a member of the St. Louis Architectural Club. Russell worked closely with Mauran and Garden, the later of which had moved to St. Louis from Chicago during the last decades of the nineteenth century. The new firm adopted the works-in-progress left by Shepley, Rutan & Coolidge, and quickly found several more projects to engage their expertise.²⁸

Mauran, Russell, and Garden became engaged in St. Louis's central business district, but had to compete with some well known contemporaries. Firms such as Barnett, Haynes & Barnett, and Eams and Young, as well and individual architects like Isaac Taylor, Albert B. Groves, and Preston Bradshaw were completing designs for multitudes of projects on Locust Street, Olive Street and Washington Avenue in the heart of downtown. One of the first projects the company embarked upon was the seven-story terra cotta loft at 1015 Washington Avenue. With Isaac Taylor's seven-story Chicago Style Bee Hat Company building immediately to the west, another of Taylor's buildings to the east, and the Eams and Young Dorsa building directly to the east, the firm had to design a structure that would complement the block's Sullivanesque décor and would be unique enough to build Mauran, Russell and Garden's reputation as quality designers. The firm chose to encapsulate the entire façade of the seven-story building in gray terra cotta, incorporating octagonal columns, rosette decorated spandrel panels and Sullivanesque ornamentation on the entrance piers.

The building design was a success, and the firm went on to construct two more lofts on Washington Avenue: 1204-06 and the Lesan-Gould Building at 1320-24, both of which featured brick and terra cotta facades in the Chicago Style. The firm also accepted residential projects in the city, as well as commercial, religious, and institutional commissions. Mauran, Russell, and Garden found work in several states, with notable buildings in Texas, Arkansas, and across Missouri. But in 1909, Garden decided to retire from the company, eventually moving to San Francisco. For two years Mauran and Russell carried on their work, constructing several notable buildings in Texas, including the 1911 Spanish Revival Style Galvez Hotel (National Register listed 1979).

Joining Muaran & Russell in 1911, MIT trained William DeFeforrest Crowell became a partner in the company just as Laclede Power approached the firm for a headquarters building. Located at the corner of Olive and 10th, the Laclede Building was a towering Commercial Style building with classical columns and wide arches on its terra cotta and brick façade. Muaran, Russell and Crowell went on to design several buildings throughout the city and across the country into the 1930s. The firm became well known for its Chicago Style towers, incorporating classical elements and later designing in current fashionable architectural motifs. The firm obtained large commissions in New

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²⁸ The Book of St. Louisans.

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Hampshire, Illinois, Texas, Kansas, Maine, Wisconsin, and Arkansas, with some of the more recognized later works including the 26 story Art Deco Southwestern Bell Tower in St. Louis (constructed 1926), the 1924 Federal Reserve Bank Building in St. Louis, and the 1912 Rice Hotel in Houston, Texas.

The Railway Exchange Building was perhaps the largest of the firm's commissions. Though a few of the company's buildings topped out taller than the Railway Exchange Building, the 21-story terra cotta structure was considered the largest office building in the world well into the 1920s.²⁹ and was the tallest structure in St. Louis until 1926 when it was replaced by the Southwestern Bell Building. The building's terra cotta exterior was not a new material for the company, and the Chicago Style tower with classical elements is representative of the firms work (See Figure 7). The incorporation of intricately carved terra cotta facings, including piers, spandrels, brackets, and columns, have recently earned it a distinction as "perhaps the most lavishly ornamented building in the entire city." But the grandiose size of the structure made it one of the firm's most talked about buildings, and though the company had already made a name for itself, the Railway Exchange Building reconfirmed the Mauran, Russell, and Crowell's talent and quality work. After completing the Railway Exchange Building, Mauran, Russell and Crowell designed a dozen well know skyscrapers, and produced well known buildings all over the country, with more than 10 individually listed in the National Register of Historic Places.

The firm delved into several different spheres of buildings, designing churches, hospitals, public buildings, office structures, factories, and department stores. But the Railway Exchange Building is unique in that it is both an office building and a department store in one large structure. As and office building, the Railway Exchange Building featured long interior elevator lobbies with offices against the outer windows. The lower levels of the building were designed to encourage traffic to move throughout the building, with elevators and escalators available to move customers from one floor to another. The department store incorporated two restaurants for the luxury of fine dining during the shopping day, and acted as a meeting place for women to socialize. The fine interior design work, skylights and electric technology, as well as the striking

³⁰ Powers, Rob. <u>Built St. Louis- Historic Downtown.</u> Accessed 19 June 2008. Available Online at http://www.builtstlouis.net/opos/railwayexchange.html

²⁹ Stephen J. Kelley & Jerry G. Stockbridge. "The Railway Exchange Building: A Terra Cotta Renovation." (APT Bulletin Volume 20, No. 3, 1988).

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elaborate exterior made the building "an architectural achievement," known as "the most complete and practical mercantile building" and "a tribute to the growing industry and commerce of St. Louis and the west." ³¹

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³¹Kelley & Stockbridge.

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Other Resources

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Section number	9	Page _	17	Railway Exchange Building
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Verbal Boundary Description:

The Railway Exchange Building encompasses all of City Block 129, bounded on the north by Locust Street, the south by Olive Street, the east by 6th Street, and the west by 7th Street.

Boundary Justification:

The selected boundaries include all of the property historically associated with the Building, encompassing the entire City Block.

Photographs:

The following information applies to all photographs-

Railway Exchange Building

St. Louis (Independent City), MO Photographer: Julie Ann LaMouria

Date: June 2008

Negative Location: Lafser & Associates

1028 North Kingshighway Suite 1 Cape Girardeau, MO 63701

See Attached Photo Key for Exterior Pictures

Photo # 1 Photo # 2	6 th Street (east) Elevation from the corner of 6 th & Locust Olive Street (south) Elevation from the corner of 7 th and Olive
Photo #3	Locust Street (north) Elevation from the corner of Locust and 6 th
Photo # 4	Example of Historic entrance
Photo # 5	Detail of Entrance Balconies
Photo # 6	Olive Street Entrance
Photo #7	7 th Street Entrance
Photo #8	Corner Pillar
Photo #9	7 th Street (west) Elevation from the corner of 7 th and Olive
Photo # 10	Arial View of Building (Olive Street at bottom of photo)
Photo # 11	Central Light Well
Photo # 12	Locust Street entrance
Photo # 13	Locust Street (north) Elevation from corner of 7 th and Locust
Photo # 15	Olive Street (south) Elevation from corner of 6 th and Olive
Photo # 16	6 th Street (east) Elevation from corner of 6 th and Olive

Section number 10 Page 19 Railway Exchange Building St. Louis (Independent City), MO Photo # 17 7th Street (west) Elevation from corner of 7th and Locust Example of Department Store Display Room Photo # 18 Photo # 19 **Original Escalators** Example of Display Room Column support Photo # 20 Department Store Executive Office Photo # 21 Photo # 22 Fire Stairwell Photo # 23 **Example of Department Store Restaurant** Photo # 24 Upper Level Executive Office Photo # 25 Example of Elevator Lobby Photo # 26 Original Office Entrance Photo # 27 Public Stairwell

List of Figures/Illustrations:

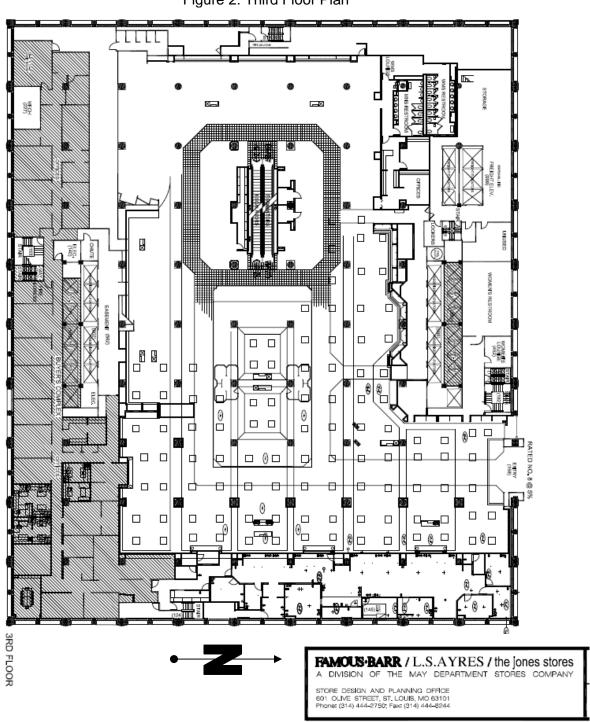
- 1. First Floor Plan
- 2. Third Floor Plan
- 3. Tenth Floor Plan
- 4. Nineteenth Floor Plan
- 5. Interesting Facts pulled from Railway Exchange Building. St. Louis: 1913. (Booklet on file with the Missouri Historical Society).
- 6. Image on file with the St. Louis Public Library.
- 7. Original building rendering. Located in the Building Manager's Office, Railway Exchange Building, 18th floor.

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Figure 1: First Floor Plan . . 1ST FLOOR FAMOUS-BARR / L.S.AYRES / the jones stores A DIVISION OF THE MAY DEPARTMENT STORES COMPANY STORE DESIGN AND PLANNING OFFICE 601 OLIVE STREET, ST. LOUIS, MO 63101 Phone: (314) 444-2750; Fax: (314) 444-8244

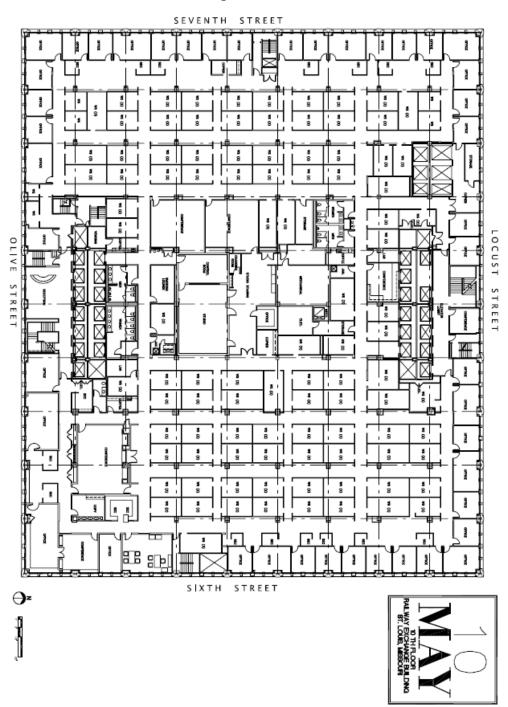
Section number <u>Figures</u> Page <u>21</u>

Figure 2: Third Floor Plan



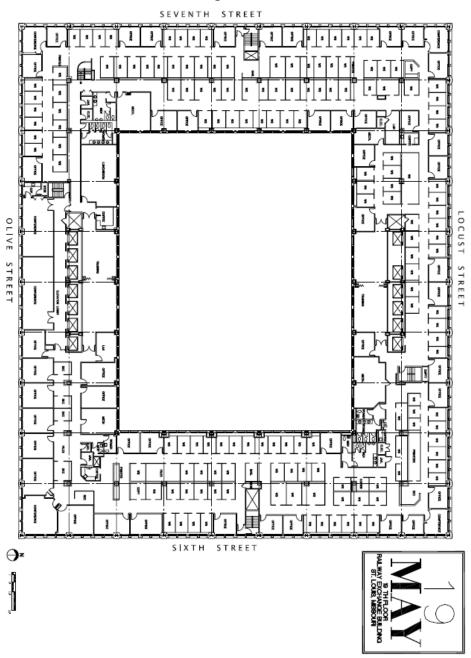
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Figure 3: 10th Floor Plan



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Figure 4: 19th Floor Plan



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Figure 5: Interesting Facts pulled from <u>Railway Exchange Building.</u> St. Louis: 1913. (Booklet on file with the Missouri Historical Society).

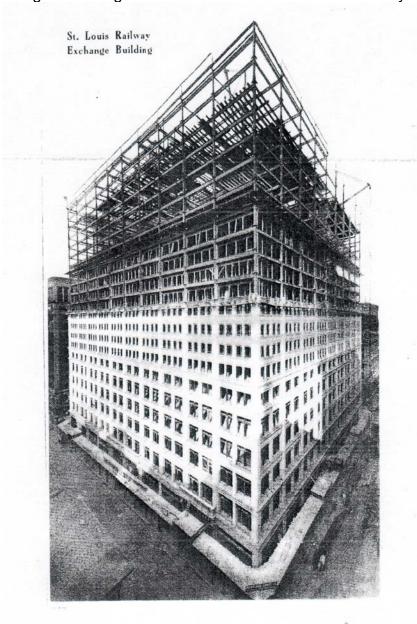
THE RAILWAY EXCHANGE BUILDING, ST. LOUIS

INTERESTING FACTS

Number of Stories	21	
Total Height from Bottom of Foundation to Roof		
Line of Pent House	355	Feet
Floor Space in entire building	30	Acres
Number of Offices on Typical Floor	105	
Number of Public Toilet Rooms	65	
Number of Caissons 6 to 8 feet in diameter	110	
If placed end to end they would measure	1	Mile
Weight of Building	,000	Pounds
Entire Weight of Steel		Tons
Total length of Structural Steel, end to end	25	Miles
Number of Elevators	38	
Length of highest Elevator Shaft	feet 6	inches
Elevator Cable	17	Miles
Daily Elevator Travel	800	Miles
Number of Escalators	4	
Number of Electric Motors	125	
Total Horse Power of Motors 2	,250	
Total Candle Power of Incandescent Lamps 1,280		
Total Horse Power of Electric Load		
Electric Light Wire	130	Miles
Steam and Water Pipes	12	Miles
Number of Vacuum Cleaner Attachments	176	
Pieces of Terra Cotta	2,978	
Drinking Fountains	65	
Automatic Sprinkler Heads	,525	
Total number of Windows above First Floor		
Wire Plate Glass in outside Windows9		Sq. Ft.
If the 35 car loads of Radiators were placed end		
to end they would make a line two miles long.		
50,000 wagon loads of earth were excavated.		

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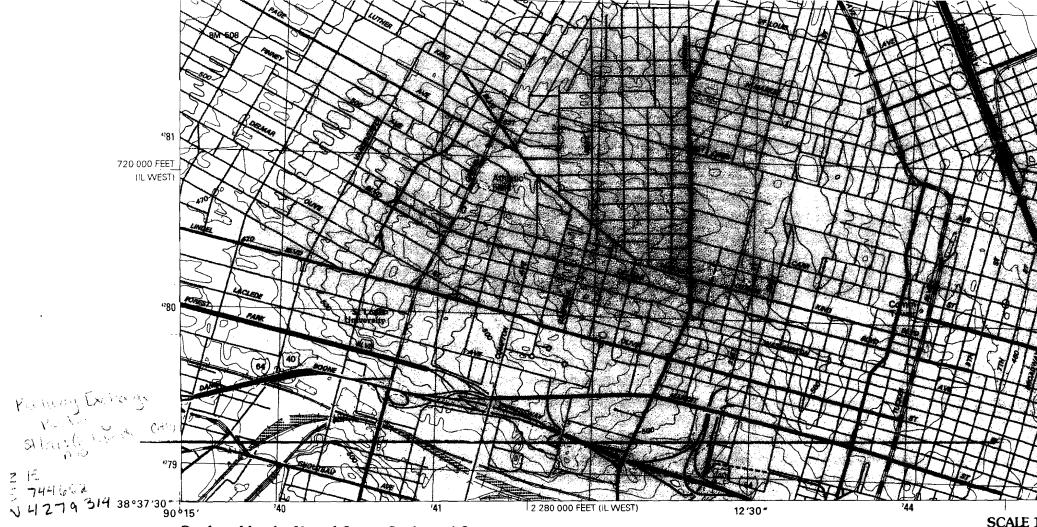
Figure 6: Image on file with the St. Louis Public Library.



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Figure 7: Original building rendering. Located in the Building Manager's Office, Railway Exchange Building, 18th floor.





Produced by the United States Geological Survey

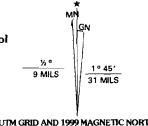
Topography compiled 1952. Planimetry derived from imagery taken 1993 and other sources. Photoinspected using imagery dated 1998; no major culture or drainage changes observed. PLSS and survey control current as of 1954. Boundaries, other than corporate, verified 1999

North American Datum of 1983 (NAD 83). Projection and 1000-meter grid: Universal Transverse Mercator, zone 15 10 000-foot ticks: Illinois (west zone) and Missouri (east zone) Coordinate Systems of 1983

North American Datum of 1927 (NAD 27) is shown by dashed corner ticks. The values of the shift between NAD 83 and NAD 27 for 7.5-minute intersections are obtainable from National Geodetic Survey NADCON software

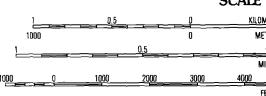
Contours that conflict with revised planimetry are dashed

There may be private inholdings within the boundaries of the National or State reservations shown on this map



UTM GRID AND 1999 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET





CONTOUR INTE SUPPLEMENTARY CONT NATIONAL GEODETIC VE TO CONVERT FROM FEET TO THIS MAP COMPLIES WITH NATION FOR SALE BY U.S. GEOLOGICAL SURVEY, P AND ILLINOIS GEOLOGICAL SURV AND DIVISION OF GEOLO MISSOURI DEPARTMENT OF NATURAL A FOLDER DESCRIBING TOPOGRAPHIC MAPS











Photos 6 and 7 unavailable





































