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

1. Name of Property

historic name 1907 Dorris Motor Car Company Building

other names/site number Brauer Brothers Shoe Company

2. Location

street & number 4063 - 4065 Forest Park Avenue [n/a] not for publication

city or town St. Louis [Independent City] [n/a] vicinity

state Missouri code MO county St. Louis City code 510 zip code 63108

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this [X] nomination [ ] request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property [X] meets [ ] does not meet the National Register criteria. I recommend that this property be considered significant [ ] nationally [ ] statewide [X] locally.
(See continuation sheet for additional comments [ ].)

Signature of certifying official/Title Claire F. Blackwell/Deputy SHPO Date 10 January 2000

Missouri Department of Natural Resources
State or Federal agency and bureau

In my opinion, the property [ ] meets [ ] does not meet the National Register criteria.
(See continuation sheet for additional comments [ ].)

Signature of certifying official/Title

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is: Signature of the Keeper Date

[ ] entered in the National Register
See continuation sheet [ ].
[ ] determined eligible for the
National Register
See continuation sheet [ ].
[ ] determined not eligible for the
National Register.
[ ] removed from the
National Register
[ ] other, explain
See continuation sheet [ ].

5.Classification

Ownership of Property

[X] private
[ ] public-local
[ ] public-State
[ ] public-Federal

Category of Property

[X] building(s)
[ ] district
[ ] site
[ ] structure
[ ] object

Number of Resources within Property

Contributing	Noncontributing	
1	0	buildings
0	0	sites
0	0	structures
0	0	objects
1	0	Total

Name of related multiple property listing.

N/A

Number of contributing resources previously listed in the National Register.

N/A

6. Function or Use

Historic Function

INDUSTRY/Manufacturing Facility

Current Functions

INDUSTRY/Industrial Storage

7. Description

Architectural Classification

LATE 19TH AND EARLY 20TH CENTURY AMERICAN MOVEMENTS-Commercial Style

Materials

foundation STONE
walls BRICK
roof ASPHALT
other METAL
WOOD

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets.)

8.Statement of Significance

Applicable National Register Criteria

[X] **A** Property is associated with events that have made a significant contribution to the broad patterns of our history

[ ] **B** Property is associated with the lives of persons significant in our past.

[ ] **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.

Criteria Considerations

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.

Areas of Significance
INDUSTRY

Periods of Significance
1907-1926

Significant Dates
1907
1909

Significant Person(s)
N/A

Cultural Affiliation
N/A

Architect/Builder
Wees, John L.

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographic References

Bibliography
(Cite the books, articles and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

[ ] 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

#_____

Primary location of additional data:

[X] State Historic Preservation Office

[ ] Other State Agency

[ ] Federal Agency

[ ] Local Government

[ ] University

[X] Other:

Name of repository: Center for Emerging Technologies

10.Geographical Data

Acreage of Property less than one acre

UTM References

A. Zone	Easting	Northing	B. Zone	Easting	Northing
15	739700	4279990			

C. Zone	Easting	Northing	D. Zone	Easting	Northing

[ ] See continuation sheet

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Marcia Mellitz, President

organization Center for Emerging Technologies date August 20, 1999

street & number 4041 Forest Park Avenue telephone 314/615-6903

city or town St. Louis state MO zip code 63108

Additional Documentation
Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional Items
(Check with the SHPO or FPO for any additional items)

Property Owner
(Complete this item at the request of SHPO or FPO.)
name Michael & Sally Gilbert

street & number 4065 Forest Park Avenue telephone 314/535-1500

city or town St. Louis state Missouri zip code 63108

Summary
The 1907 Dorris Motor Car Company Building, 4063-4065 Forest Park Avenue, St. Louis, Missouri, is a three-story rectangular plan building sited on the northeast corner of the intersection of Forest Park Avenue and South Sarah Street. The building, originally constructed as a auto manufacturing facility, measures 100 feet by 180 feet, and was designed by St. Louis architect, John L. Wees. The Early 20th Century Commercial Style building has two public facades featuring restrained ornamentation; the rear elevations are simple and utilitarian. In 1909, a third story was added by the Dorris Company to the original 1907 two-story structure establishing its present silhouette. Despite some reversible modifications to the exterior, the building's integrity of design, materials and workmanship conveys its historic identity and character.

Elaboration
The load-bearing brick exterior walls rest on a coursed rubble foundation. There are five bays on the south and north elevations and ten bays on the east and west. The building has a flat roof with several sawtooth skylights and a low parapet wall with raised corner piers and slightly raised center sections.

The two main facades facing Forest Park Avenue and South Sarah Street are ornamented while the south and west elevations are simple and utilitarian. The street facades feature pilasters enhanced on the first level with smooth stone caps and rustication. These public facades also have double belt courses at the second and third floor window heads and a dressed stone belt course at the sill line of the first and second floors. The street facades are further accented with a wood and sheet metal cornice between the second and third floor and a slightly smaller cornice of similar construction and design directly below the tile-coped parapet wall.

The south elevation along Forest Park Avenue features large window openings fitted with glass block on the first floor and aluminum nine pane windows on the second and third floors. A single-door entrance has been fashioned in the middle of the window nearest South Sarah Street on the first floor and is flanked by glass block.

The building originally fronted on Sarah Street and this west elevation includes four double-wide main doorways. These door openings, currently closed with brick, are distinguished by dressed stone surrounds and segmented jack arches with double keystones and crossettes. The doorway and large window openings on this first floor have been closed in with brick. The window openings of the two remaining floors have been fitted with a combination of nine pane and six pane aluminum windows.

The north (rear) elevation is divided into five bays by simple unornamented brick buttresses with at-grade, iron bumpers. The first floor openings are enclosed except for the two west bays which were converted to loading docks. The two upper floors retain their original windows. Each bay has a band of three, three-over-three wood sash windows, except for the second bay from the west corner which has one, small, one-over-one window east-of-center on the second floor and a similar small window and a single full size three-over-three window on the third floor; these windows are set in openings with low arched headers. Windows throughout the building have stone lug sills. This elevation also has a steel fire escape on the west corner and a brick chimney with a large metal cap on the east corner. The tile coped parapet wall is raised over the three center bays and retains the original "DORRIS MOTOR CAR CO." painted sign.

The east elevation is similar to the north elevation; the ten bays are divided by simple brick buttress and carry a similar variety of windows. Like the north elevation all first floor openings are closed but the upper floors still retain the original windows. The south three bays have tripartite banded windows with three over three sash; the second bay on this side of the elevation retains a metal fire escape. The remaining bays have three over three windows with arched headers and stone lug sills in a variety of sizes. In general there are two windows per bay on each floor. The tile-coped parapet on this elevation remains at a constant height except for a section that extends vertically about six feet at the elevator penthouse.

The first floor area inside the principal elevations had exterior walls finished with plaster and a pressed metal ceiling. The extent of these finishes has not been identified as they are mostly concealed. The most recent use of the first two bays facing onto the Forest Park is an office furniture sales area. The original ceilings are concealed in this area, as are the majority in the rest of the first floor. Some drywall enclosures at the current furniture sales area conceal the exterior wall condition, but at other locations, the original plaster finish can be observed. Cast iron columns on this level are mostly concealed by subsequent construction, but where they can be seen, they have simple flanged capitals similar to those on the second floor. The first floor is subdivided by two main transverse interior masonry walls as well as heavy masonry walls which enclose a smaller room; the original rolling fire door still exists in this room. Numerous frame partitions have been added over time throughout this level. The northeast quadrant of this floor has exposed floor structure above and is used as a loading dock area. A freight elevator is also located in this area.

The second floor contains two main transverse brick walls with limited openings. The cast iron columns extend through this floor and support heavy timber beams on flanged capitals. The joist and sub-floor structure of the third floor is exposed and painted throughout this entire floor. Other than the two walls mentioned above, this floor has an open floor plan. The hardwood floors, which have been repaired and overlaid in many areas, are very worn and pitted. Large window openings dominate the exposed, painted brick masonry exterior walls on three sides and smaller openings with segmental arches extend along the east side.

This third floor, added two years after the original building was completed, also has two main transverse brick masonry walls with limited openings. The window pattern is repeated and the floors are in similar condition. The roof structure overhead was exposed and painted, but currently is mostly covered with insulation board panels. The columns on this level are a combination of cast iron and wood. There are two locations where a king post truss member is used to eliminate the columns between the transverse brick walls. It appears that originally there were three sawtooth skylights; two have been "roofed over" intact; the third was removed, framed in with dimension lumber and roofed over as a slightly raised area observable from the roof.

The 1907 Dorris Motor Car Company Building has been altered over its history of use. But, although many of the first level openings have been altered and many of the windows have been replaced, the massing and fenestration patterns, the main character defining features, are still clearly evident. The building clearly retains the essential physical features that defined its character and appearance during the period of significance.

Statement of Significance

Summary

The 1907 Dorris Motor Car Company Building is eligible for listing in the National Register of Historic Places under Criterion A and is locally significant in the area of INDUSTRY with 1907 – 1926 as the period of significance. The Dorris Motor Car Company, created and inspired by the engineering genius of George P. Dorris, made important contributions to the evolution of the American automobile and the early development of the automotive industry in St. Louis. Constructed in 1907, and expanded with a third floor in 1909, this building was the first factory and offices built for the Dorris Motor Car Company and was continuously used by the Dorris Company until it went out of business in 1926. The pioneering efforts of the Dorris Motor Car Company helped establish St. Louis as an early automotive center laying the groundwork for St. Louis' later significance as a location for major assembly plants and automobile parts manufacturing.

Elaboration

In 1898, George Preston Dorris and his boyhood friend, John L. French, organized the first automobile manufacturing company in St. Louis named the St. Louis Motor Carriage Company. Dorris was its Vice President and Chief Engineer due primarily to an experimental car he had developed earlier.[1] Their first car, the *St. Louis*, had a patented single-cylinder engine, clutch and transmission assembly in one unit. The car also included the Dorris float-feed carburetor, the first designed in the United States. After a 1903 win in the New York to Buffalo Race, French sold sixty-five of the cars in Boston that summer, practically the entire year's output, and hence the car was renamed the *Boston Model*.[2]

French subsequently died and in 1905 French's brother moved the St. Louis Motor Carriage Company to Peoria, Illinois where he operated it for a few more years. Dorris, who did not want to leave St. Louis, resigned and with wealthy grocer, Henry B. Krenning as President, established the Dorris Motor Car Company at the site of the former St. Louis Motor Carriage Company on North Vandeventer.[3] This North Vandeventer site was a three-story building in Dorris' day but it is now reduced to only one story and currently is used as a garage for automotive repair.

The company's first automobile, introduced in 1906, appropriately was named the *Dorris*. It was an innovative car incorporating a four-cylinder vertical valve-in-head motor with in-line valves, a unique concept Dorris had been working on for several years. It also used a single unit power plant that combined the engine, clutch and transmission but was improved with four cylinders cast in pairs and a multiple-disc clutch. The use of Timken roller bearings and the body-to-frame construction (two traverse arms to a central support with the engine carried directly on the main frame) added to the sturdiness of the machine.[4]

The introduction of the *Dorris* at the New York Automobile Show in January 1906, captured the attention of the automotive industry.[5] The exhibit of the St. Louis-made autos was called "complete and excellent" by one

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1. McConnell, Curt. "When Dorris Had His Day." Automobile Quarterly, (December, 1997): 61

2. National Register of Historic Places Inventory - Nomination Form, Dorris Motor Car Company, 1985, Section 8.

3. McConnell, Curt. "When Dorris Had His Day." Automobile Quarterly, (December, 1997): 62. Metz, Nelson. "Dorris: Great Name in St. Louis Automotive History." St. Louis Commerce, (October, 1977): 84

4. Metz, Nelson. "Dorris: Great Name in St. Louis Automotive History." St. Louis Commerce, (October, 1977): 84

5. Cuthbert, Bill. "The Dorris Automobile." Horseless Carriage Gazette, (September/October, 1994): 51

New York paper.[6] An early automobile enthusiasts' periodical, *The Auto Review,* reported in 1907 that St. Louis was "rapidly becoming recognized as an automobile center."[7] *The Auto Review* also praised the *Dorris*: "The wonderful success of the Dorris car this past season, which was its first appearance on the American automobile market, was so pronounced and gave St. Louis such a proud distinction for having manufactured such an excellent automobile, that the coming season for this car means that the Dorris Motor Car Co. will be able to sell all the cars they can build. This car has a wonderful record for reliability, endurance and for the least cost of maintenance in the East, Middle West and Far West. All hail the 1907 Dorris!"[8]

Therefore in 1907, due to increasing demand, national attention and the need for more production space, the Dorris Motor Car Company moved into the first factory built to its specifications at 22-38 South Sarah Street located on the corner of Forest Park Boulevard (currently 4063-4065 Forest Park Avenue). It was a very large and commodious $50,000 two-story factory.[9] The handsome building, of masonry construction and interior iron columns, was designed by St. Louis architect, John L. Wees. (Wees previously had designed a 1902 mercantile building for Krenning's wholesale grocery operation.)[10]

John Ludwig Wees, (1861-1942), was born in Alsace-Lorraine and educated in Heidelberg. At eighteen he spent a year of architectural study in Paris before emigrating to the United States in 1879 where he worked in a sewing machine factory in Bridgeport, Connecticut while studying art at night After employment as a draughtsman in Bridgeport and New York City, Wees came to St. Louis in 1882. Wees was in partnership with August M. Beinke until the latter's retirement in 1894. Wees practiced on his own in St. Louis from 1894 - 1916. His portfolio included houses, commercial and institutional buildings. Other industrial commissions included the 1912 Dorris Motor Car Company plant and also automobile plants for Packard and Cadillac. Wees also designed ball parks for both the American and National league clubs. He spent the last 25 years of his career in Paris, Texas.[11]

The Dorris factory was what architects termed a "slow combustion building," practically fireproof. It was constructed of the very best materials and the Dorris Company spared no expense in equipping this modern factory with the latest improved machinery especially adapted to auto manufacturing.[12] On the first floor it included an assembly room, machine shop, black smith shop and offices. The second floor housed the painting and finishing room, the trimming room and wood working area.[13] The most important department in the new factory was the specially equipped testing rooms.[14] Unlike mere car assemblers, Dorris, by contrast,

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6. Metz, Nelson. "Dorris: Great Name in St. Louis Automotive History." St. Louis Commerce, (October, 1977): 84

7. Metz, Nelson. "St. Louis Pioneer Automaker." St. Louis Commerce, (September, 1977): 95

8. Metz, Nelson. "Dorris: Great Name in St. Louis Automotive History." St. Louis Commerce, (October, 1977): 84

9. McConnell, Curt. "When Dorris Had His Day." Automotive Quarterly, (December, 1997): 64

10. National Register of Historic Places Inventory - Nomination Form, Dorris Motor Car Company, 1985, Section 8

11. Ibid.

12. Auto Review, (October, 1907): 45

13. 1909 Sanborn Insurance Map, Volume 5, Page 78

14. Auto Review, (October, 1907): 45

had an entire engineering department conducting tests and experiments.[15] Hence, the origination of numerous Dorris improvements and innovations.

In this new factory, the Dorris Company was able to build most of its own motor car parts, the only exceptions were the tires and tops. This practice brought all the different branches of construction under the supervision of its own mechanical experts, thereby enabling the company to make the *Dorris* an extremely reliable touring car.[16] The capacity of the 1907 factory for a season was approximately 300; demand was great. [17]With business booming, the Dorris Company expanded again by adding a third story to the South Sarah Street facility in 1909.[18]

The 1907, October issue of the *Auto Review,* praised the 1908 *Dorris* as the "same reliable standard model of a real automobile that has won for it an enviable reputation during the past two years of its existence. The 1908 car, however will have a straight-line body, but in other respects very few changes will be made. There are in use in St. Louis something like forty Dorris cars and they are all giving the very best of satisfaction. You very seldom see a Dorris car stalled on either a level or on the steepest kind of hill. We predict a remarkable career for this enterprising company and their exceptionally reliable car."[19]

The 1909 *Dorris* featured another important innovation, a speedometer geared to the transmission via a short cable. Other cars ran their speedometers off an exposed front-wheel gear using cables that were in harm's way and prone to kink. This innovation was the first known instance in which the transmission was used for driving an auxiliary of this sort.[20] (See Figures 1-5, *1909 Dorris Sales Catalog*)

The Dorris Company again planned for expansion and in 1912 built a larger $100,000 three-story factory and showroom just west of the existing plant across South Sarah and a half-block north on Laclede Avenue.[21] This building was converted into condominiums in 1985 and listed on the National Register of Historic Places the following year.[22] After completion of the new plant, the automaker utilized the 1907 building at Forest Park and South Sarah as an auto servicing and repair facility.[23]

The 1913 *Dorris*, the first line produced in the new plant and like all preceding models, was produced entirely by hand with all parts manufactured by Dorris. The *Dorris* six-cylinder engine with improved fuel "distillator" was inaugurated in 1916. The "distillator" collected heavy petroleum residues in the low-grade gasoline of the day where heat from the warming engine would vaporize the residue before being drawn into the engine and

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15. McConnell, Curt. "When Dorris Had His Day." Automotive Quarterly, (December, 1997): 64

16. Auto Review, (October, 1907): 46

17. Metz, Nelson. "Dorris: Great Name in St. Louis Automotive History." St. Louis Commerce, (October, 1977): 86

18. McConnell, Curt. "When Dorris Had His Day." Automotive Quarterly, (December, 1997): 64

19. Auto Review, (October, 1907): 46

20. McConnell, Curt. "When Dorris Had His Day." Automotive Quarterly, (December, 1997): 63

21. Id., p. 64

22. National Register of Historic Places Inventory - Nomination Form, Dorris Motor Car Company, 1985

23. St. Louis Globe Democrat, October 1, 1911: 16A

burned. The "distillator" resulted in greater fuel and oil economy, longer engine life, fewer carbon deposits and smoother engine performance at colder temperatures. The car included the transmission-run speedometer and a self-starter, standard in the "Dorris" since 1911 -- a year before Cadillac. The model held the economy record for its class and weight for three successive years.[24]

Dorris believed that the automobile should be as timeless as possible and the Company slogan became "Built Up to a Standard -- Not Down to a Price." In spite of the technological success of the new car, actual production of the automobile declined due to its rising retail price. As the retail price rose and demand for the *Dorris* declined during the World War I era, the Company gradually turned its emphasis to trucks and buses. Although Dorris' production peaked following the War, it produced almost 400 cars and 117 trucks in 1920,[25] the disastrous slowdowns during World War I and competitors' use of mass produced bodies and automated assembly lines brought the demise of the high-priced, hand-crafted Dorris auto.[26] Output plummeted in 1921 to fewer than three cars per week.[27] Production methods had not been improved significantly since the birth of the *Dorris* automobile, which was still essentially a hand-built machine. Over its 20 years the Dorris Company produced a total of 3,044 cars and 909 trucks.[28]

By 1923, stock holders anxious to protect their investments, were considering proposals for refinancing.[29] None of the options materialized and in December 1923, Dorris stockholders voted to liquidate. In response to a suit to block liquidation that argued the liquidation would benefit only Krenning, the major shareholder, the Circuit Court ordered dissolution of the Dorris Company. A year later, the Missouri Supreme Court in Jefferson City affirmed the judgment of the lower court. The Dorris Motor Car Company finally dissolved in 1926 and the 1907 Building passed out of the Dorris Company.[30] The Dorris Company was simply unable to meet the strong competition of more aggressive firms with large capital using mass production techniques.[31] Later the building was owned by the Brauer Brothers Shoe Company for a number of years and is currently used as an office furniture warehouse. Present plans provide for the renovation of the 1907 Building as open, loft-style office space following the Secretary of the Interior's standards for rehabilitation.

Already in the early 1900's, St. Louis was becoming a major engineering and auto production center, and men like Dorris helped make it so. By 1911, St. Louis could boast of eight automobile manufacturers (however over the next six years it was reduced to two major producers of automobiles: Dorris and Moon) three immense assembly plants and eight truck manufacturers.[32] George P. Dorris and the Dorris Motor Car Company pioneered the automotive industry in St. Louis by giving the city its first automobile company as well as the

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24. Cuthbert, Bill. "The Dorris Automobile." Horseless Carriage Gazette, (September/October, 1994): 53

25. Id.

26. St. Louis Home Magazine, (October, 1985)

27. Metz, Nelson. "Dorris: Great Name in St. Louis Automotive History." St. Louis Commerce, (October, 1977): 88

28. McConnell, Curt. "When Dorris Had His Day." Automobile Quarterly, (December, 1997): 77

29. Cuthbert, Bill. "The Dorris Automobile." Horseless Carriage Gazette, (September/October 1994): 53

30. McConnell, Curt. "When Dorris Had His Day." Automotive Quarterly, (December, 1997): 72-73

31. Cuthbert, Bill. "The Dorris Automobile." Horseless Carriage Gazette, (September/October, 1994): 53

32. Metz, Nelson. "St. Louis Pioneer Automaker." St. Louis Commerce, (September, 1977): 95

designer and producer of the city's first cars, the first truck, the first bus and the first skidoo or paddy wagon. The Dorris Company was the first to use Timken roller bearings, to perfect the one-cylinder engine with multiple-disc clutch and sliding gear transmission running in oil, to invent the first float-feed carburetor, to design the first valve-in-head four cylinder engine and to produce the first transmission-run speedometer. The Dorris Company "distillator" was considered a key innovation in the era of low-grade gasoline. It is estimated that only a dozen or so Dorris-designed cars are still in existence. One of the earliest, a 1901 *St. Louis*, is on display at the National Museum of Transport in St. Louis County.[33]

By the sunset of the Dorris Motor Car Company in 1926, the legacy of this and other St. Louis' early automotive entrepreneurs had forever changed the economic landscape of the city. Five large manufacturing plants by that time were building passenger cars. Six plants were building trucks or light delivery cars. One great body-building concern was turning out thousands of auto bodies for St. Louis manufacturers or for those in other cities. At least six other body building plants were manufacturing trucks bodies. Two local plants were specializing in what was then a new method of transportation, the passenger bus. Two of the plants were subsidiaries of great automobile manufacturing institutions, Ford and General Motors/Fisher Body. In addition, Cupples Co., a great tire producing plant, was shipping tires to all parts of the United States. McQuay-Norris Manufacturing Co. was one of the world's leading manufacturers of piston and piston rings. Numerous other St. Louis firms manufactured spark plugs, accessories and supplies for motor cars.[34] In the few short decades following the turn of the century, the automotive industry had become a dominant commercial and economic force in St. Louis and so it has remained to the present day.[35]

The 1907 Dorris Motor Car Company Building was the first factory built for the Dorris Company and was also the site of its early and exciting, innovative years. It was during this period (1907 – 1926) that George P. Dorris and the Dorris Motor Car Company helped launch St. Louis as a major automotive center thereby creating a new and significant economic sector that has thrived in St. Louis for nearly a century.

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33. National Register of Historic Places Inventory - Nomination Form, Dorris Motor Car Company, 1985, Section 8

34. Lee, Robert E.. "Auto Builders and Distributors Here Do $162,300,000 Business A Year." Greater St. Louis, (May, 1926): 11-12

35. St. Louis Post Dispatch, October 17, 1999: M10

Bibliography

McConnell, Curt. "When Dorris Had His Day." Automobile Quarterly, (December, 1997): 58-73

Cuthbert, Bill. "This Dorris Automobile." Horseless Carriage Gazette, (September/October, 1994): 50-53

Cuthbert, Bill. "The St. Louis Automobile - Rigs That Run." Horseless Carriage Gazette, (July/August, 1999): 14-19

Lee, Robert E.. "Auto Builders and Distributors Here Do $162,300,000 Business A Year." Greater St. Louis, (May, 1926): 11-12

Metz, Nelson. "St. Louis Pioneer Automaker." St. Louis Commerce, (September, 1977): 94-100

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Maunder, Margaret. "George P. Dorris' Rude Contraption First Rattled Along Vandventer in '98." St. Louis Globe-Democrat, October, 24, 1943

Start, Clarissa. "California, Here They Come." St. Louis Post-Dispatch, July 23, 1954

Nicklaus, David. "Industry," St. Louis Post-Dispatch, October 17, 1999:M10

"Dorrises End Trip in 'Rosie' Due to Illness of One." St. Louis Post-Dispatch, August 7, 1954

Auto Review, (October, 1907): 45-46

St. Louis Home Magazine, (October, 1985)

St. Louis Globe-Democrat, October 1, 1911: 16A

St. Louis Gobe-Democrat, August 10, 1954

National Register of Historic Places Inventory - Nomination Form, Dorris Motor Car Company, 1985, Section 8

1909 Sanborn Insurance Map, Volume 5, Page 78

Verbal Boundary Description

City Block 3919 W. Forest Park Bl.; Forest Park ADDN; Lots 27 & 28.

Boundary Justification

The boundaries encompass the entire parcel historically associated with the building.

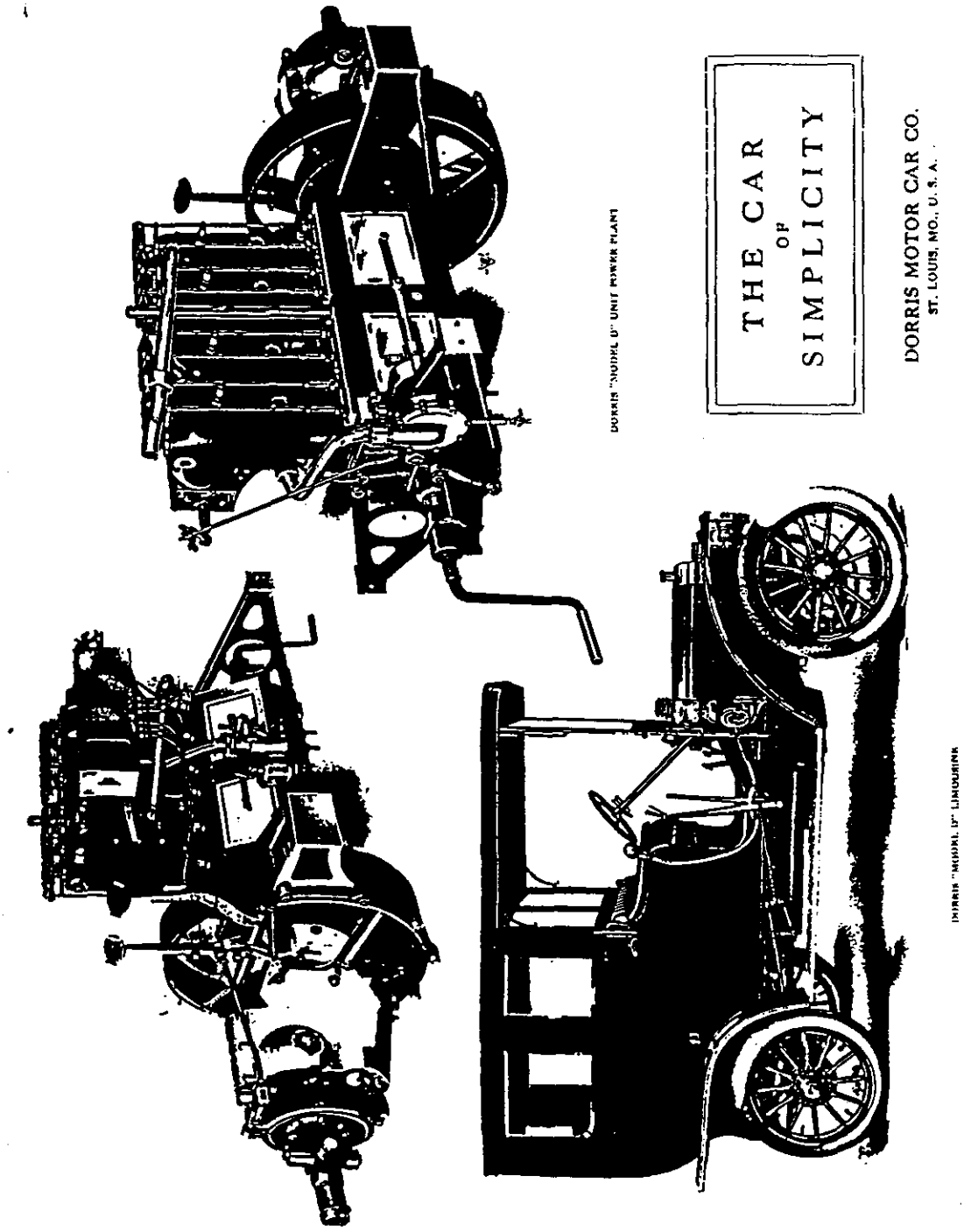
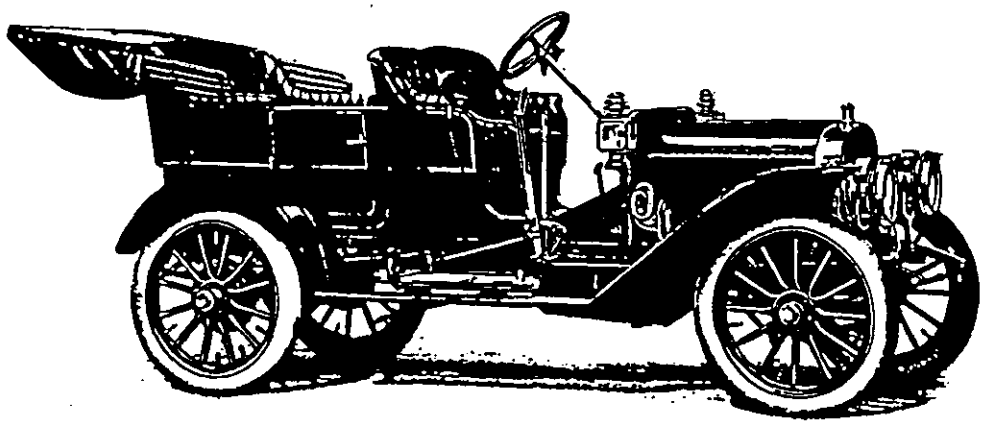
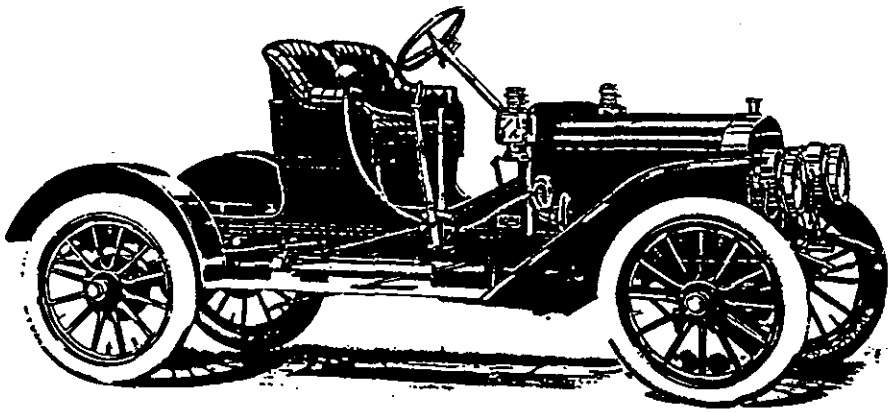


Figure 1 *1909 Dorris Sales Catalog*



DORRIS "MODEL D" CONVERTIBLE FOUR-PASSENGER CAR



DORRIS "MODEL D" CONVERTIBLE CAR WITH TONNEAU DETACHED

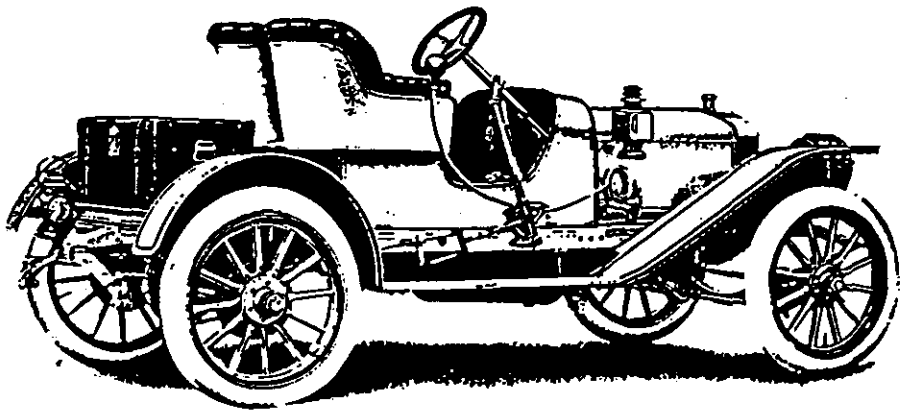


Figure 2 *1909 Dorris Sales Catalog*

Motor ¶ 30 Horse-Power, Four Cylinders. The Motor, Clutch and Transmission form a unit. This construction has been a feature of Dorris Cars from the first, and not only secures perfect alignment for all shafts and bearings, but does away with the necessity of universal joints between the motor and transmission. Thus reducing the number and weight of parts as well as repairs.

Crank Shaft ¶ The Crank Shaft is of unusual size, and is carried on three Main, Parsons White Brass Bearings of ample length. These bearings are provided with ring oil pockets, which in conjunction with the forced feed oil box, give a double lubricating system. At the rear end of the crank shaft, is an integral flange to which is bolted the large diameter fan fly-wheel. This large fan fly-wheel in connection with the snug-fitting hood and under pan, gives a full, evenly distributed air draft through the radiator. It is absolutely dependable, needs no oiling, and will never need repairing.

Here again our claim of simplicity is strengthened by eliminating the radiator fan with its extra weight, necessity for oiling, eventual repair, and unreliability due to slipping of the belt.

Cylinders ¶ The Cylinders are 4¼ inches bore x 5-inch stroke cast in pairs, with integral water jackets, bored and ground, and are fitted with ground pistons carrying four, lap joint, re-turned rings.

Valves ¶ The Valves are placed in cages and seated in the cylinder heads, and are water jacketed giving an acknowledged increase of power, due to the free admission and exhaust of the gases the entire circumference of the valves. By the reduced combustion chamber wall area, less heat is lost to the radiator, and more converted into power. This design does not demand as large a radiator, size for size as other types.

The valves are operated by a one-piece hardened and ground cam shaft, carried in three bearings in the crank case where ample lubrication is assured. The cam movement is transferred by roller-fitted plungers, operating against an over-head drop forged rocker beam.

Connecting Rods ¶ The Connecting Rods are drop forged I-beam section, and have a Parsons White Brass crank pin bearing fitted with means for adjustment.

A hardened and ground piston pin is clamped securely in the upper end of the connecting rod. ¶ Two piston pin bronze bushings are fitted in the piston bosses so that not only a larger bearing is secured, but the cylinder oil is worked directly into these bearings, thus insuring positive lubrication.

Crank Case ¶ The Crank Case is a one-piece casting. It is very rigid, and holds the three main crank bearings in perfect alignment. This is a feature that cannot be had by a horizontally split crank case, as it is impossible to obtain the same rigidity by that design.

It has four 4¼"x7" hand-holes closed by aluminum caps, which are readily removable. These hand-holes make easy inspection of all the crank bearings, and their adjustments.

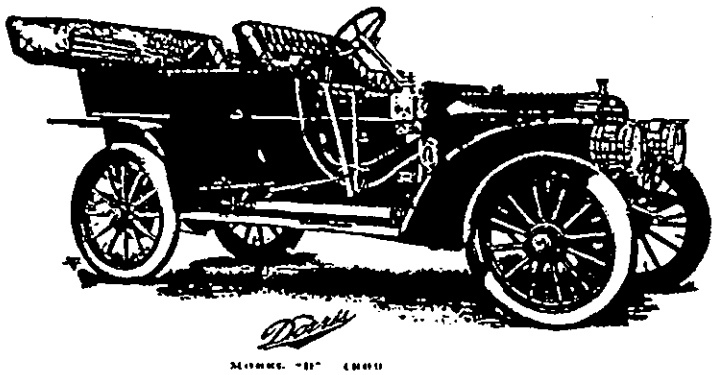
Accessibility ¶ It is never necessary to get under the engine for any purpose.

Accessibility to all the parts has been secured to the highest degree. The Motor, Clutch and Transmission, forming the unit power plant are each so simply demounted that it is not a difficult job to remove the crank shaft through the rear end of the crank case. This can be done without disturbing the hanging of the crank case in the frame, and does not call for the removal of the dash, steering gear, ignition system or radiator.

Figure 3 *1909 Dorris Sales Catalog*

Ignition	¶. After two years' trial we have again adopted the Atwater-Kent System of Ignition, as we *believe it to be the best and simplest made.* We can however, *equip with almost any* make of Magneto, and will furnish the Splitdorf Double System Magneto, without extra charge if desired.
Clutch	¶. Of the Multiple Disc type, of ample capacity, and is self-adjusting. The only change in the clutch is an oil-tight aluminum cap, which allows the plates to run in a complete oil bath. This clutch is of such design as to make the engagement so gradual that no shock whatever is applied to the transmission parts, and thereby relieves these parts from extraordinary strain, greatly increasing their life and reliability.
Transmission	¶. Selective type. Three speeds forward and reverse, direct on third speed. Gears made of nickel steel and hardened. A locking device prevents shifting of gears, while clutch is engaged, making stripping of gears impossible.
Brakes	¶. Two Internal Expanding on 12"x2" rear brake drums, and one contracting on propellor shaft, all lined with Thermoid Brake Banding.
Steering Gear	¶. The Steering Gear is the acme of perfection, utilizing a right-hand external thread with a left-hand internal thread on the lower end of the steering wheel shaft. These threads have nuts or followers provided with extended feet, operating against the ends of a tee-headed ball end crank, so that as the steering wheel is turned one nut advances, the other recedes and vice versa. The whole operating in a grease-packed housing. The points of excelling merit in this assembly are: Uniform Wear—Does not wear shoulders, which would make the steering tight in one position and loose in another. Adjustability—Every particle of lost motion can be taken up in the entire mechanism, by the adjusting of one screw. Cost of Maintainence—Practically nothing, as all wear is uniform and all parts can be adjusted by one screw. These points cannot be had by other designs, such as the commonly used worm and sector gear. The Connecting Link—Is fitted with drop forged adjustable ball socket joints which are mounted with grease cups.
Control	¶. The throttle and spark levers are carried on the steering column underneath the wheel, and are absolutely noiseless. No grating sound when you advance or retard either spark or throttle.
Frame	¶. Channel section, cold pressed steel. All rivet and bolt holes are jig drilled.
Axles	¶. The Front Axle is a one-piece drop forging of I-Beam section equipped with extra heavy steering knuckles. The front wheels equipped with Timken Roller Bearings. The Rear Axle is of more than sufficient strength, is driven by an extremely large bevel gear, and completely equipped with Timken Roller Bearings.
Wheels	¶. Made of second growth hickory, 1¼-inch spokes, 12 spokes to a wheel; large hubs.
Wheel Base	¶. 108 inches. Tread, 56 inches.
Tires	¶. 34 x 4 inches, all wheels.
Rims	¶. Clincher, or Goodyear Quick Detachable.
Gasoline Tank	¶. Under front seat, made of 18-oz. copper and holding fifteen gallons.

Figure 4 *1909 Dorris Sales Catalog*



Bodies	¶. Built in our own factory. Standard touring car seats five; Baby Tonneau, the "Convertible Car," can be used either as a Roadster or a strictly Four-passenger Car. Runabout is equipped either with a Trunk, or Single and Double Rumble Seats. Upholstering of best leather. Cushions equipped with Rough Rider Springs and Ventilator buttons.
Carbureter	¶. After trying almost every make, we adopted the Stromberg as the best for our engine. After it is once properly adjusted it will stay so, and carbureter troubles are reduced to a minimum.
Radiator	¶. Vertical Flat Tubes, with inserted fins, very efficient and easily repaired, in case of accident.
Speed Ratio	¶. 3 3-7 *to 1, on Touring Car, Limousine and Convertible Car,* and 3 to 1 on Roadster. We can however, furnish a 2 1-2 to 1 for Roadster if desired.
Standard Colors	¶. Touring Car or Convertible Car: Brewster Green Body, Red Running Gear, Gold Stripe. Light Red Body, and Running Gear, Black Stripe. Dark Blue Body and Running Gear, Gold Stripe. Roadster—Optional.
Weight	¶. Touring Car, 2550 pounds. Roadster, - 2300 pounds. Limousine, - 3000 pounds.

Dorris 1909 Price List

	Price
Touring Car, [illegible]	$2,500.00
Limousine, [illegible]	3,600.00
Roadster, [illegible]	2,500.00
Chassis, [illegible]	2,250.00
Convertible Car, [illegible]	2,500.00
Cab Landaulet, [illegible]	2,850.00
Touring Car Body, [illegible]	350.00
Convertible Car Body, [illegible]	350.00
Limousine Body, [illegible]	1,250.00
Roadster Body, [illegible]	250.00
Dorris Mahogany Folding Glass Front,	40.00

	Price
Dorris All Brass Folding Glass Front.....	$ 50.00
Pantasote Cape Cart Top, Dust Cover and Storm Curtain..	100.00
Pantasote Runabout Top, with Storm Curtains and Dust Cover	65.00
Special Trunk	35.00
Upholstery in Special Colors extra	15.00
Gabriel Horn, attached to car	18.00
Tire Holders, brass or malleable iron, attached	5.00
Spring attached to car	12.00
Metal Tool Box	5.00
Tire Cover	3.50
Pres-o-Lite Tank, when taken in place of Generator	15.00

EQUIPMENT

All cars are fully equipped ready for the road, with Full Set of Tools (including Tire Tools and Jack), two Gas Head Lights, two Side Oil and one Tail Lamp and Generator.

Figure 5 *1909 Dorris Sales Catalog*

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1909 Sanborn Insurance Map, Volume 5, Page 78

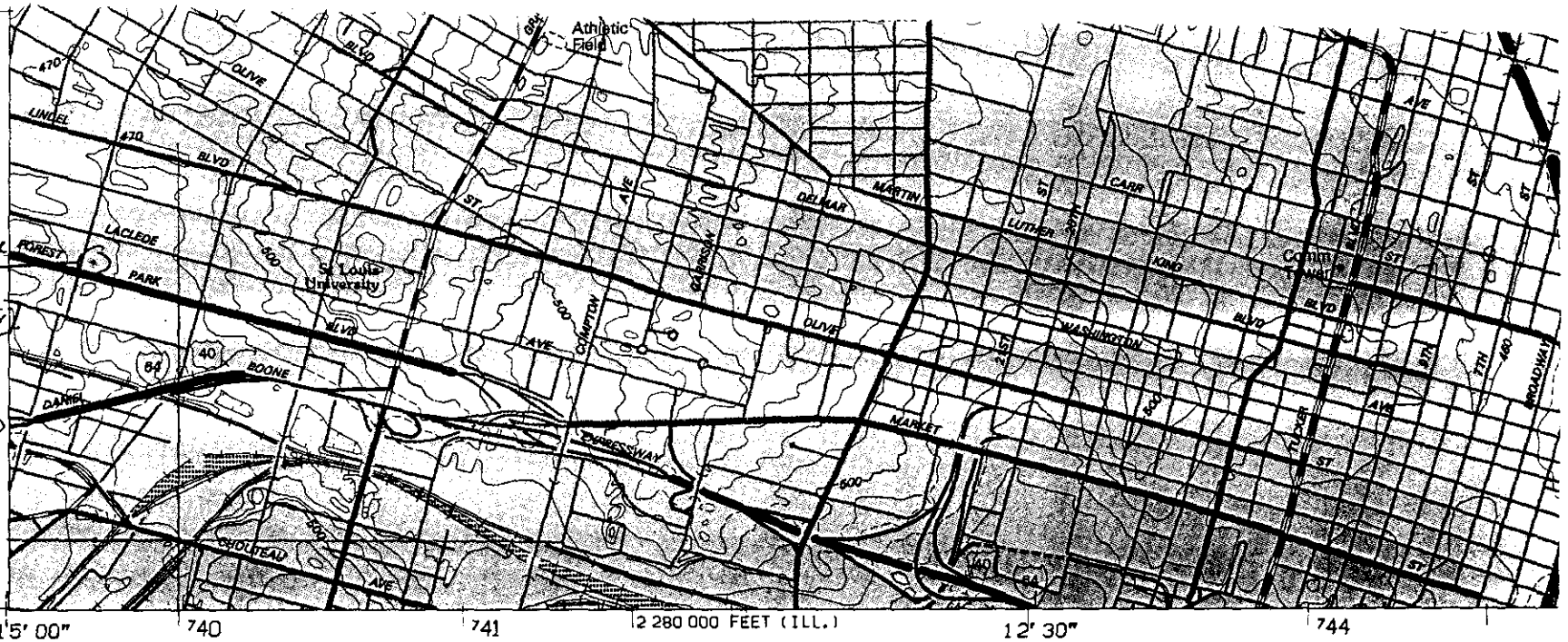
Verbal Boundary Description

City Block 3919 W. Forest Park Bl.; Forest Park ADDN; Lots 27 & 28.

Boundary Justification

The boundaries encompass the entire parcel historically associated with the building.

1907 Dorris Motor Car Company building
4626-4628 Forest Park Avenue
St Louis [Independent City]
Missouri
UTM Reference:
15/739700/4279990



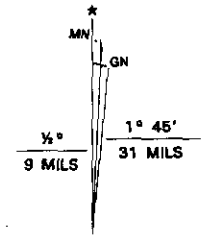
Produced by the United States Geological Survey in cooperation with U.S. Corps of Engineers

Compiled by planetable surveys 1930 and 1933. Revised from imagery dated 1952. Field checked 1954. Revised from imagery dated 1993. PLSS and survey control current as of 1954. Map edited 1996. Contours not revised
Contours that conflict with revised planimetry are dashed

North American Datum of 1983 (NAD 83). Projection and *blue 1000-meter ticks:* 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

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



UTM GRID AND 1996 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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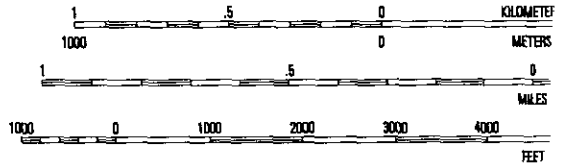

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A FOLDER DESCRIBING TOPOGRAPHIC MAPS A

1907 Dorris Motor Car Company Building
4063-4065 Forest Park Avenue
St Louis, Missouri

St Louis, Missouri (Independent City)

William Simon

August 18, 1999

Center For Emerging Technologies
4041 Forest Park Avenue
St Louis, Missouri 63108

NE corner of Forest Park Avenue and
S. Sarah Street (Side View - on S. Sarah)

1 of


S&K WESALES inc
S&K SALES

1907 Harris Motor Car Company Building
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St Louis, Missouri

St Louis, Missouri (Independent City)

William Simon

August 18, 1999

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St Louis, Missouri 63108

NE corner of Forest Park and
S. Sarah Street (Front View)

2


S&K
R. C. DISTRIBUTING

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St Louis, Missouri (Independent City)

William Simon

August 18, 1999

Center For Emerging Technologies
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St. Louis, Missouri 63108

N. E corner of Forest Park Avenue and
S. Sarah Street (Rear View)

3


DORRIS MOTOR CAR CO.

1901 Dorris Motor Car Company Building
4063 - 4065 Forest Park Avenue
St. Louis, Missouri 63108

St. Louis [Independent City] Missouri

William Simon

October 1999

Center For Emerging Technologies
4041 Forest Park Avenue
St. Louis, Missouri 63108

East Elevation - Front to Rear View

4

1901 Dorris Motor Car Company Building
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St Louis, Missouri 63108

St. Louis [Independent City] Missouri.

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October 1999

Center For Emerging Technologies
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St. Louis, Missouri 63108

East Elevation - Rear to Front View

5

1901 Dorris Motor Car Company Building
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St. Louis, Missouri 63108

St. Louis [Independent City] Missouri

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Center for Emerging Technologies
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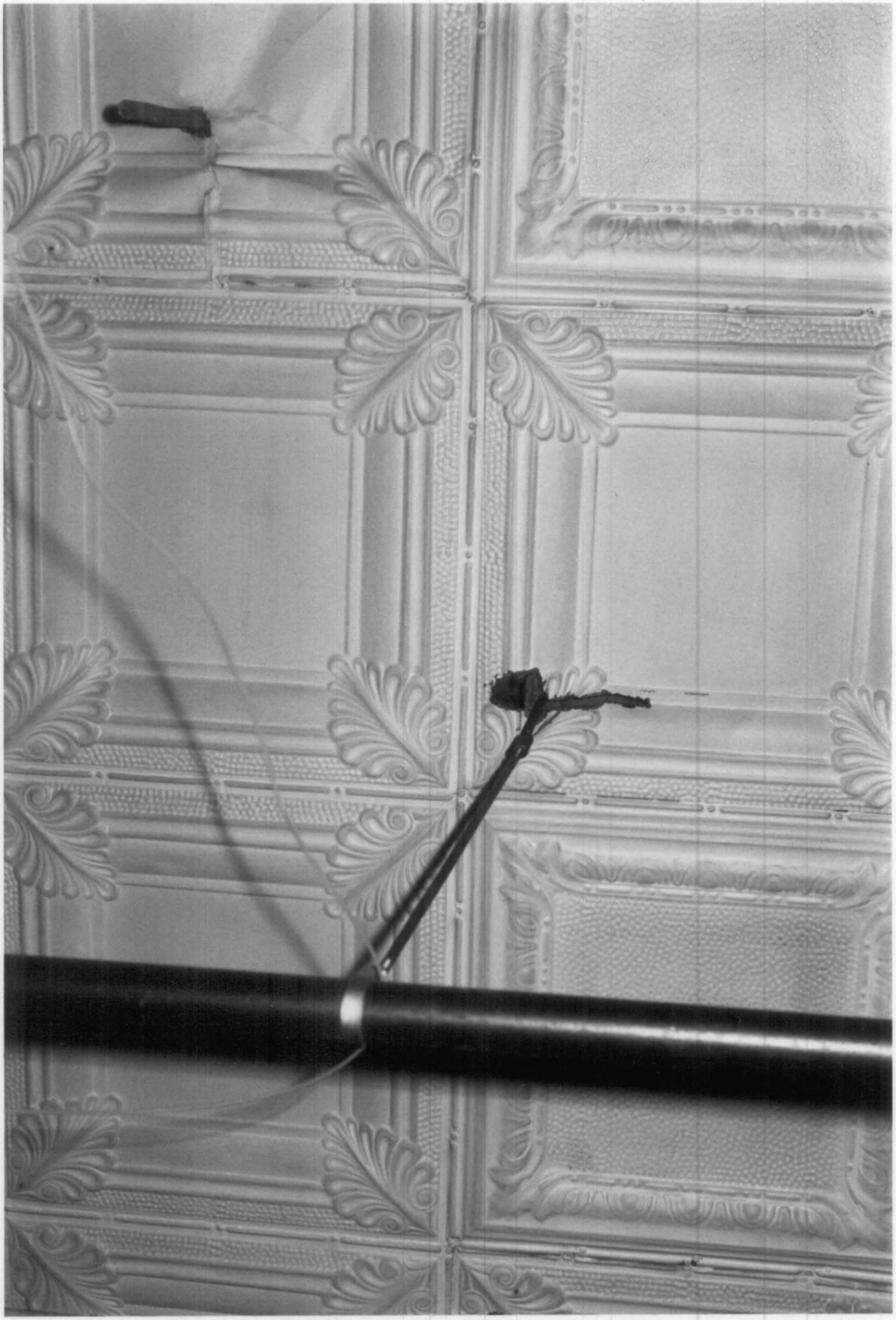
Interior - 1st Floor - Partial Ceiling

6



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St. Louis, Missouri 63108

St. Louis [Independent City] Missouri

William Simon

September 1999

Center For Emerging Technologies
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Interior - Interior Wall Opening - 2nd Floor

7

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St Louis, Missouri 63108

St Louis [Independent City] Missouri

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Center for Emerging Technologies
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St Louis, Missouri 63108

Interior - 2nd Floor

8


VIRCO
VIRCO

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St Louis, Missouri 63108

St Louis [Independent City] Missouri

William Simon

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Center For Emerging Technologies
4041 Forest Park Ave.
St Louis, Missouri 63108

Interior - 3rd Floor

9


LETTER FILE
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ANDERSON HICKEY

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St. Louis, Missouri 63108

St. Louis [Independent City] Missouri

William Simon

September 1999

Center For Emerging Technologies
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St. Louis, Missouri 63108

Interior - 3rd Floor - Skylight (1)

10

From Auto Review October 1907, P. 45

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1907 Dorris Motor Car Company Building
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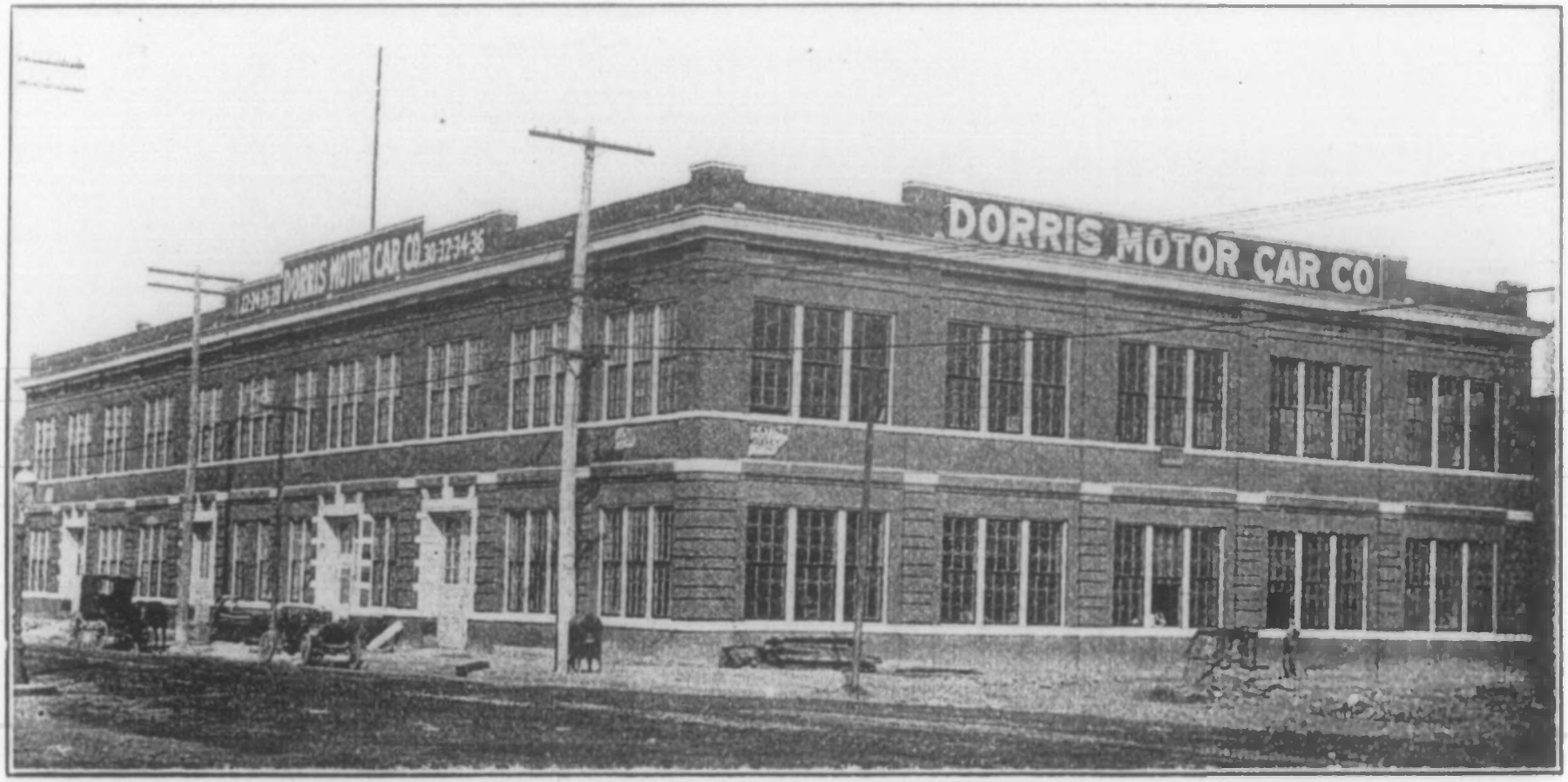
St Louis, Missouri

St Louis, Missouri (Independent City).
1907
NE Corner of S. Sarah Street and Forest Park

From Auto Review October 1907, P. 45
Collection of St. Louis Public Library

11



New Factory of Dorris Motor Car Co.

1907 Dorris Motor Car Company Building
4063-4065 Forest Park Avenue
St. Louis, Missouri

St. Louis, Missouri (Independent City)

NE Corner of S. Sarah Street and Forest Park Avenue

Circa 1919, Photo Courtesy of George P. Dorris III

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DORRIS MOTOR CAR CO.
DORRIS MOTOR CAR CO.
37. A

EXTRA PHOTOS