

Maryland Historical Trust

Maryland Inventory of Historic Properties number:

B-4623

Name:

CUFTON AVE OVER WINDSOR MILL RD

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended <input checked="" type="checkbox"/> X	Eligibility Not Recommended <input type="checkbox"/>
Criteria: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G <input type="checkbox"/> None
Comments: _____	

Reviewer, OPS: <u>Anne E. Bruder</u>	Date: <u>3 April 2001</u>
Reviewer, NR Program: <u>Peter E. Kurtze</u>	Date: <u>3 April 2001</u>

MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. B-4623

SHA Bridge No. BC 2502 Bridge name Clifton Avenue over Windsor Mill Road

LOCATION:

Street/Road name and number [facility carried] Clifton Avenue

City/town Baltimore Vicinity _____

County Baltimore

This bridge projects over: Road X Railway _____ Water _____ Land _____

Ownership: State _____ County _____ Municipal X Other _____

HISTORIC STATUS:

Is the bridge located within a designated historic district? Yes _____ No X

National Register-listed district _____ National Register-determined-eligible district _____

Locally-designated district _____ Other _____

Name of district _____

BRIDGE TYPE:

Timber Bridge _____:
Beam Bridge _____ Truss -Covered _____ Trestle _____ Timber-And-Concrete _____

Stone Arch Bridge _____

Metal Truss Bridge _____

Movable Bridge _____:
Swing _____ Bascule Single Leaf _____ Bascule Multiple Leaf _____
Vertical Lift _____ Retractable _____ Pontoon _____

Metal Girder _____:
Rolled Girder _____ Rolled Girder Concrete Encased _____
Plate Girder _____ Plate Girder Concrete Encased _____

Metal Suspension _____

Metal Arch _____

Metal Cantilever _____

Concrete X _____:
Concrete Arch X Concrete Slab _____ Concrete Beam _____ Rigid Frame _____

Other _____ Type Name _____

B-4623

DESCRIPTION:

Setting: Urban X Small town Rural

Describe Setting:

Bridge BC 2502 carries Clifton Avenue over Windsor Mill Road in Baltimore City. Clifton Avenue runs north-south, while Windsor Mill Road extends east-west. The bridge links the West Baltimore neighborhoods of Walbrook and Windsor Hills. The bridge is located in the City of Baltimore.

Describe Superstructure and Substructure:

The Clifton Avenue Bridge is a 5 span reinforced concrete arch structure 85 meters (279 feet) in length and 17.8 meters (58 feet 4 inches) in total width. The main span consists of a two-ribbed, open spandrel arch 35.5 meters (116 feet 7 inches) long. Spandrel walls are open and consist of 6 spandrel columns which diminish in size toward the arch crown, transferring the deck loads to the arch ribs. The bridge deck consists of a reinforced concrete slab supported by reinforced concrete girders which carry the loads to the arch ribs at the crown, and to the top of the spandrel columns in the open spandrel walls. Each reinforced concrete arch rib is approximately 3.4 meters (11 feet) wide, with a clear span of nearly 35.6 meters (117 feet). The arch ribs spring from 2 massive piers located on either side of Windsor Mill Road. The open spandrel arch is flanked symmetrically on either side by 2 girder spans, 4.3 and 3.9 meters (14 and 13 feet) long. The 2 flanking short approach spans are supported by the main piers, intermediate piers and abutments. The superstructure is capped by a simple ornamented concrete parapet. Two 1.8 meter (6-foot) sidewalks are supported on cantilevered beams.

Viewed from the deck and from below, the bridge's decorative treatment is representative of simply ornamented municipal park-setting bridges. Visually, the spandrel walls of the Clifton Avenue Bridge are pierced by symmetrical arches rising from the spandrel columns. The approach spans balance this aesthetic with arch-shaped fascia beams. On the deck, the parapets reflect the structure below; they are simply ornamented with rectangular balustrade-type panels above the span openings, and punctuated at the main piers by solid set-back blocks topped with ornamental light standards. Simpler blocks mark the intermediate piers, while the retaining walls are topped with solid concrete panels. At the northwest end of the bridge, a 6.1-meter (20-foot), curved retaining wall extends the north parapet, curving along the edge of Talbot Road. From below, the exterior faces of the 2 large piers feature long, single vertical incised panels and set-backs.

The Clifton Avenue Bridge has changed little since its documented construction in 1927-1928, by the J.L. Robinson Construction Company to a design by the Bridge Division of the Bureau of Highways in the Baltimore City Department of Public Works. As built, the parapets above each large pier were marked by four ornamental metal lamp standards that also supported posts used in conjunction with the electric streetcars the Clifton Avenue Bridge was designed to carry. Two of the original lamp standards presently remain at the bridge, though in altered and deteriorated condition. The 2 original bronze bridge plates have been removed from the interior faces of the parapets. A wooden stairway originally led to Windsor Mill Road from the southwest corner of the bridge, but was replaced some time after 1949 by a now-deteriorated concrete stairway.

According to the 1995 inspection report, this structure was in poor condition with cracking, spalling and efflorescence. The asphalt wearing surface is heavily cracked with an area of heavy deterioration and wide patches which have failed. The concrete of the superstructure has been patched at various times. The majority of the repaired areas have failed or deteriorated further. The stringers,

floorbeams and arch ribs have cracks and spalls with efflorescence and exposed reinforcing bars. The bridge is posted for 12.7 tonnes (14 tons), 25.4 tonnes (28 tons), 22.7 tonnes (25 tons), 36.3 tonnes (40 tons) for H, HS, MD Type 3 and MD Type 3S-2, respectively. The bridge has a sufficiency rating of 42.4.

Discuss Major Alterations:

According to the 1995 Bridge Inspection Report, the bridge has been repaired at various times using different methods. These repairs included using pneumatically applied mortar to reinforce deteriorated concrete. There have been no major alterations to the structure.

HISTORY:

WHEN was the bridge built: 1927
This date is: Actual X Estimated _____
Source of date: Plaque _____ Design plans _____ City/County bridge files/inspection form X
Other (specify): _____

WHY was the bridge built?

The bridge was constructed to replace a timber trestle bridge at the site, to open, widen, and grade Clifton Avenue from Mount Holly Street in Walbrook to Queen Anne Avenue in Windsor Hills.

WHO was the designer?

Bridge Division of the Bureau of Highways in the Baltimore City Department of Public Works.

WHO was the builder?

J.L. Robinson Construction Company

WHY was the bridge altered?

The bridge was altered to ensure its structural integrity.

Was this bridge built as part of an organized bridge-building campaign?

No, this bridge was not built as part of an organized bridge building campaign.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:

- A - Events X
- B- Person _____
- C- Engineering/architectural character X

This bridge was previously surveyed by P.A.C. Spero and Company, and determined eligible for the National Register of Historic Places by the Maryland Historical Trust.

The bridge is eligible for the National Register of Historic Places under Criteria A and C, as a significant example of concrete arch construction. Planned and executed by the City of Baltimore between 1923 and 1928, the Clifton Avenue Bridge is locally significant under Criterion A for its association with the economic development, public works history, and municipal construction of early twentieth century Baltimore. The bridge for the first time opened direct vehicular and pedestrian travel along Clifton Avenue between two key streetcar suburbs, the West Baltimore residential neighborhoods of Walbrook and Windsor Hills. Additionally, the bridge carried full streetcar service between the two communities, replacing an earlier, obsolete timber trestle of the United Railways and Electric Company. The present Clifton Avenue Bridge was thus the first vehicular crossing built at the site, facilitating early automotive and truck travel in Baltimore and environs.

An engineered structure possessing considerable integrity of design, setting, and workmanship, the Clifton Avenue Bridge also is significant under Criterion C, for its embodiment of the distinctive characteristics of reinforced concrete arch bridge design during the early twentieth century. This five span reinforced concrete pierced spandrel crossing consists of a ribbed open spandrel main span and four girder spans, highly ornamented in parapet style, light standards and spandrel and pier articulation. Reflecting the standards and aesthetics described by noteworthy engineers of the early twentieth century for urban bridges in park settings, the bridge is an excellent example of an ornamented concrete arch bridge designed in the tradition of park bridges. Baltimore's choice of a simply ornamented, high reinforced concrete, ribbed arch to carry Clifton Avenue over Windsor Mill Road reflected a preference for durability as well as beauty. The bridge has carried traffic as intended yet has also served as a dramatic portal into Gwynns Falls Park along Windsor Mill Road. This function, too, was planned by city authorities, who in 1926 recommended enlargement of the park boundaries to permanently include the steep, wooded ground to the north and south of Clifton Avenue Bridge.

Was the bridge constructed in response to significant events in Maryland or local history?

The advent of modern concrete technology fostered a renaissance of arch bridge construction in the United States. Reinforced concrete allowed the arch bridge to be constructed with much more ease than ever before and maintained the load-bearing capabilities of the form. As the structural advantages of reinforced concrete became apparent, the heavy, filled barrel of the arch was lightened into ribs. Spandrel walls were opened, to give a lighter appearance and to decrease dead load. This enabled the concrete arch to become flatter and multi-centered, with longer spans possible. Designers were no longer limited to the semicircular or segmental arch form of the stone arch bridge. The versatility of reinforced concrete permitted development of a variety of economical bridges for use on roads crossing small streams and rivers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7 year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920-1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic, with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of \$3,000,000.00 for road construction; the primary purpose of these monies was

to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund (with an equal sum from the counties) the building of lateral roads. The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930. By 1930, Maryland's primary system had been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's.

As the nation's automotive traffic increased in the early twentieth century, local road networks were consolidated, and state highway departments were formed to supervise the construction and improvement of state roads. With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction through the standardization of bridge designs.

The concept and practice of standardization was one of the most important developments in engineering of the twentieth century. In Maryland, as in the rest of the nation, the standardized concrete types became the predominant bridge types built. In the period 1911 to 1920 (the decade in which standardized plans were introduced), beams and slabs constituted 65 percent and arches 35 percent of the extant 29 bridges built in Maryland during this period. In the following decade, 1921-1930, the beam (now the T-beam) and slab increased to 73 percent and the arch had declined to 27 percent of the 129 extant bridges; in the next decade (1931-1940), the beam and slab achieved 82 percent and arches had further declined, constituting only 18 percent of the total of extant bridges built on state-owned roads between 1931 and 1946.

Although beam and slab bridges became the utilitarian choice, it appears that the arch was selected when aesthetic as well as other site conditions were considered. The architectural treatment of extant arch bridges supports this assessment. Many of these bridges were multiple span structures with open spandrels or masonry facing. Another decorative feature of the concrete arch bridge was an open, balustrade-style parapet. Despite the popularity of ornamental arches and the increase in use of beam and slab bridges, examples of simpler, single and multiple span closed concrete arch bridges with solid parapets continued to be constructed throughout the early twentieth century.

Begun in the early 1920s, planning for construction of the present Clifton Avenue Bridge necessarily took into account the first structure built at the site, a timber trestle erected by the United Railways and Electric Company in 1902 to carry streetcar traffic alone from Walbrook into Windsor Mills. Baltimore City Ordinance No. 74, approved June 11, 1902, authorized construction of the timber trestle with the provision that "the bottom of the superstructure... shall not be less than 16 feet from the surface of the center" of Windsor Mill Road. The company was granted a 25-year charter for the bridge; the city could buy the structure at a fair valuation upon the charter's expiration in 1927.

Descriptions of this timber trestle, called the Mount Holly Viaduct, note that it was a high span of red timber. The trestle successfully carried a small streetcar, variously described by one resident as a "tripper, a stump-dodger, or a jerkwater", from Walbrook Junction into Windsor Hills and beyond to Dickeyville and Gwynn Oak Amusement Park, then operated by the trolley company. Plans prepared for the current Clifton Avenue Bridge depict the trestle as built on a series of timber bents. Through use of temporary extra bents and cross-overs, railway traffic on the trestle was maintained during construction of the Clifton Avenue Bridge on virtually the same alignment at the same height. The United Railways and Electric Company "abandoned" the trestle to the city but was permitted to keep the demolished timber.

Records indicate that preliminary planning for the current Clifton Avenue Bridge began as early as February 1923, when the Baltimore City Highways Department drafted a "situation plan" showing

the timber trestle and the approximate location of a "new concrete bridge" taking Clifton Avenue over Windsor Mill Road. On November 19, 1923, Fifth District City Councilman John T. Ford (son of the founder of Ford's Theater) introduced an ordinance "to condemn, open, widen and grade" Clifton Avenue from Mount Holly Street in Walbrook to Queen Anne Road in Windsor Hills. Passed unanimously, the ordinance was approved by Mayor Howard ("Harry") Jackson on February 7, 1924. The 1925 annual report of the Commissioners for Opening Streets noted that the Clifton Avenue extension was "a very important opening" which would "enable the City to proceed with the construction of the new viaduct with vehicular driveway..."

Work on the new bridge was expected to start in 1926, but the Department of Public Works did not complete plans until April 15, 1927, and contract bids were accepted until June 22, 1927. As the annual reports of the department reveal, the Clifton Avenue Bridge was regarded as a major Baltimore engineering accomplishment; the 1927 annual report included a full page construction photograph of the structure with formwork still in place. A 1926 article in the Baltimore Municipal Journal (the city's semi-monthly magazine between 1913 and 1931) listed the Clifton Avenue Bridge as one of four major bridge projects planned for the year. In an April 30, 1928, article recounting the 1927-1928 record of the Bureau of Highways, Highways Engineer Nathan L. Smith noted the Clifton Avenue structure as a significant "reinforced concrete arch" nearing completion. Similarly, Mayor William F. Broening's 1931 radio talks on "The Progress of Greater Baltimore" mentioned the Clifton Avenue span as the first of many "modern concrete bridges" constructed in Baltimore between 1927 and 1931.

Under "designing engineer" Samuel M. Johnson, the city Bridge Division drew up detailed plans for the Clifton Avenue Bridge and issued extensive specifications covering construction of the new crossing. Prospective bidders for the building contract were given a copy of all plans (see Figure 13, Page D-20, for the general plan and elevation) and were informed of the kind of structure the Bureau of Highways required:

DESCRIPTION. The bridge to be constructed under this contract has a roadway forty feet wide between curbs, with two electric railway tracks in center. The roadway is supported on a reinforced concrete deck slab and is flanked by two reinforced concrete footways, each having a clear width of six feet between face of curb and reinforced concrete handrail. The roadway deck is supported on reinforced concrete beams and girders, resting on concrete piers, columns and walls. The footways are carried on cantilever brackets.

The bridge proper is supported on two reinforced concrete arch ribs, each 11 feet 4 inches wide, having a clear span of 116 feet, 6 inches. The over-all width of the bridge is 56 feet, 4 inches, and the length including wing-walls is 257 feet, 6 inches. There is also a supplementary retaining wall 20 feet long at the northwest end.

On July 6, 1927, the contract for construction of Clifton Avenue Bridge was awarded to the J.L. Robinson Construction Company for a sum of \$90,400. This company was founded in 1912 by James L. Robinson, previously listed as an unincorporated "contractor" in Baltimore city directories. Architect Carl Hegerfeld joined Robinson in establishing the company. By 1936, the firm was out of business or had been absorbed, but during its heyday it was frequently hired by the City of Baltimore to construct bridges and schools. Between 1926 and 1935, in addition to the Clifton Avenue Bridge, the J.L. Robinson Construction Company built the Mount Washington Viaduct, the Hanover Street Bridge over the Western Maryland Railroad, the Forty-First Street Bridge, the

Garrett Heights School in Northeast Baltimore, the Southeast Baltimore Junior High School, and the "West Baltimore Colored Elementary School" at Riggs Avenue and Mount Street.

The Clifton Avenue Bridge contract specified that vehicular and trolley traffic along Windsor Mill Road, as well as streetcar travel on the old wood trestle, was to be interrupted "as little as possible" during the work. The Bureau of Highways paved the bridge roadway and graded and paved adjacent street beds, while the United Railways and Electric Company placed "all temporary and permanent track structures" including "combination lamp and trolley posts." Bridge construction proceeded with some on-site changes to the specifications. The 1927 annual report of the Department of Public Works noted that the structure's "length is 279 feet end to end, and the width 58 feet, 4 inches out to out." By December 31, 1927, the work was 70% complete. In July 1928, at a total cost of \$107,000, the Clifton Avenue Bridge was finished.

Records indicate that the bridge ably fulfilled its intended purpose of linking Walbrook and Windsor Hills for trolley, vehicle, and pedestrian use. Following 1926 recommendations of the City Plan Committee of the Department of Public Works, the steep, wooded land parcels immediately to the north and south of the Clifton Avenue Bridge were purchased by the city in order to preserve the bucolic setting of the Gwynns Falls Park border near the structure. In 1937, extensive repairs were made to a wooden stairway leading down to Windsor Mill Road from the southwest corner of the bridge, and minor repairs were made to pipe railing and footways on the bridge approaches. In 1949 and 1961, further repairs were made, primarily to the stairway and sidewalks. After 1964, annual reports of the Department of Public Works do not specify further repairs to the structure.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

After 1865, Baltimore's expansion periodically involved annexation of contiguous areas in surrounding Baltimore County. The 1888 annexation particularly encouraged the development of "streetcar suburbs", or outlying residential communities promoted as country locations linked to the business center of the city via horsecars and their successors the electric trolleys. To secure passage of the 1888 annexation bill in the Maryland General Assembly, Baltimore officials agreed to a twenty-two year grace period on raising municipal taxes in the desired "Annex", where the county tax rate of 1887 would apply until 1910. Additionally, all tax revenue collected in the Annex would fund Annex improvements, rather than public services in the older city. The street railway companies were also granted an incentive to build and develop; exempted from the municipal park tax for all trackage built in the Annex, they were allowed to figure their tax relief on the basis of mileage rather than receipts or passenger usage.

Such provisions spurred the physical growth of the city. Although the 1888 annexation referendum was voted down by residents of Canton and Highlandtown to the east of the city limits (they would not become Baltimoreans until the 1918-1919 annexation), dwellers to the west of the old city limits generally favored joining the municipality. As historian Joseph Arnold notes, the 1888 annexation "took in over two-thirds of the suburban area opened by the horsecar lines between 1865 and 1888, but the lines were electrified and expanded in the 1890s and a new suburban belt grew up beyond the municipal boundaries." The present Clifton Avenue Bridge connects two West Baltimore neighborhoods, Walbrook and Windsor Hills, which developed between 1888 and 1928 as streetcar suburbs of the old, pre-1888 city.

Both neighborhoods were planned and built as residential, non-industrial communities, unlike the Jones Falls Valley mill villages or the heavy waterfront industry center of Canton. At the western

terminus of North Avenue, development of what is now the Walbrook area began with Highland Park (1870-1889), a summer community of some forty cottages and a large hotel. As a year-round residential neighborhood, Walbrook was initially developed in the early 1890s by the West Boundary Real Estate Company and Associates. The area was first reached by the North Avenue trolley cars in 1889. By 1905, thanks in part to the \$2-million Annex Improvement Loan which the Walbrook Improvement Association vigorously supported, the community boasted a city-built firehouse and schoolhouse in addition to several churches and a station for the streetcars of the United Railways and Electric Company at Walbrook Junction (Clifton Avenue and Garrison Boulevard).

Windsor Hills development proceeded along similar lines. In 1900, as Walbrook expanded west, the Mount Holly Inn was built at the current site of the Cahill Recreation Center, overlooking Clifton Avenue to the north and the Gwynns Falls Valley to the south. Active as a summer retreat and hotel until a 1920 fire, the inn's success prompted Charles K. Swartz and other developers to build large houses and lay out lanes on the other side of the deep Windsor Mill Road ravine in the hope of attracting affluent Baltimoreans interested in "desirable homesites." In a 1971 article, Baltimore Sun reporter Helen Henry asserted that "many Windsor Hills dwellings were begun in 1902, and most of the houses still standing were built between then and 1910."

Until the 1928 opening of the present Clifton Avenue Bridge, Clifton Avenue terminated near the Mount Holly Inn. From 1902 to 1928, however, streetcars reached Windsor Hills from Walbrook by crossing a high wooden trestle, erected by the United Railways and Electric Company strictly to carry trolley traffic into Windsor Hills and beyond to Dickeyville (see Page D-14 for additional information regarding this trestle, the only predecessor to the current Clifton Avenue Bridge). This trestle carried only streetcar traffic. The present Clifton Avenue Bridge is the first vehicular and pedestrian crossing erected at the site.

By 1920, much of the 1888 Annex in northwest Baltimore had assumed its present urban street grid and pattern of residential dwellings. Walbrook was increasingly characterized by rowhouses, while Windsor Hills remained a community of spacious, separate dwellings. Both neighborhoods were permanently bounded on the south by Gwynns Falls Park, acquired by the city in 1902 and established as a bucolic "steep-sided valley" park according to the recommendations of the Olmsted Brothers in their 1904 Report on the Development of Public Grounds for Greater Baltimore.

Both neighborhoods were also affected by the coming of the automobile and the consequent need for greater auto and truck access to home, business, market, school, and church. In the 1920s, responding to the need for better roads in Baltimore (which embraced the 1888 Annex as well as a new large suburban and rural territory incorporated in 1918-1919), municipal engineers and planners opened a record number of streets and built numerous new highway bridges. An understanding of the history and challenges of public works planning and decision-making in the city sheds light on the construction of the present Clifton Avenue Bridge in 1927-1928.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?

Unknown

Is the bridge a significant example of its type?

The bridge is an excellent example of a park-setting urban bridge, reflecting standards and aesthetics described in contemporary engineering treatises. It embodies the distinctive characteristics of open spandrel reinforced concrete arch bridge construction in the mid-twentieth century.

Does the bridge retain integrity of important elements described in Context Addendum?

The bridge retains the character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including spandrel columns and arch, arch ribs, parapets, abutments and piers, however some deterioration is evident.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

This bridge is a significant example of the work of the Baltimore City Department of Public Works.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

City/County inspection/bridge files X SHA inspection/bridge files _____

Other (list): _____

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P.A.C. Spero & Company

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Tyrrell, H. Grattan

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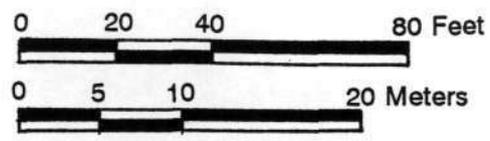
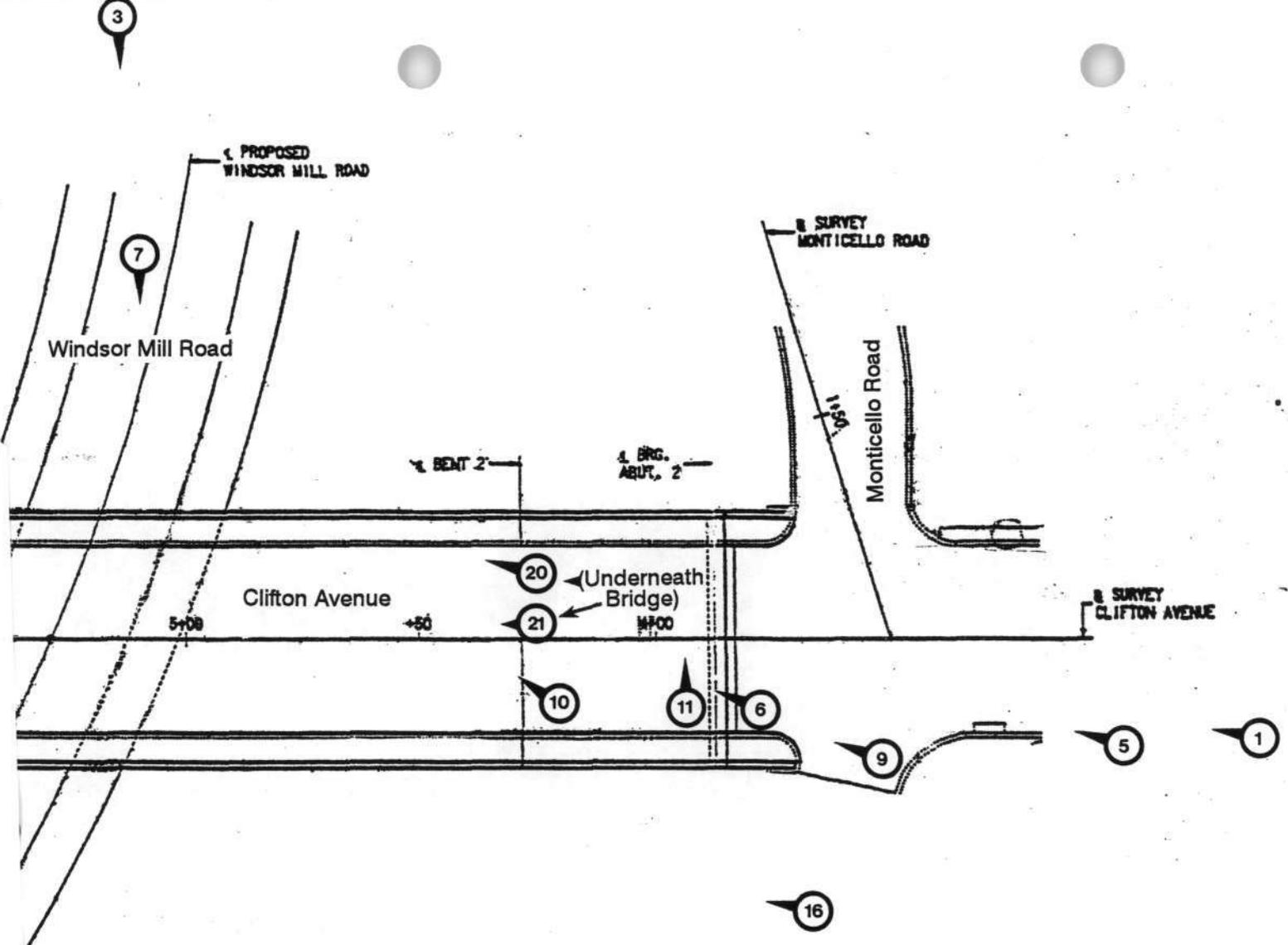
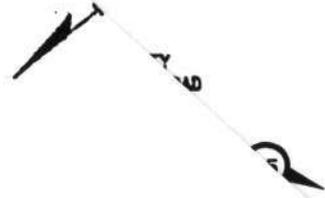
SURVEYOR:

Date bridge recorded December 1997

Name of surveyor Wallace, Montgomery & Associates / P.A.C. Spero & Company

Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204

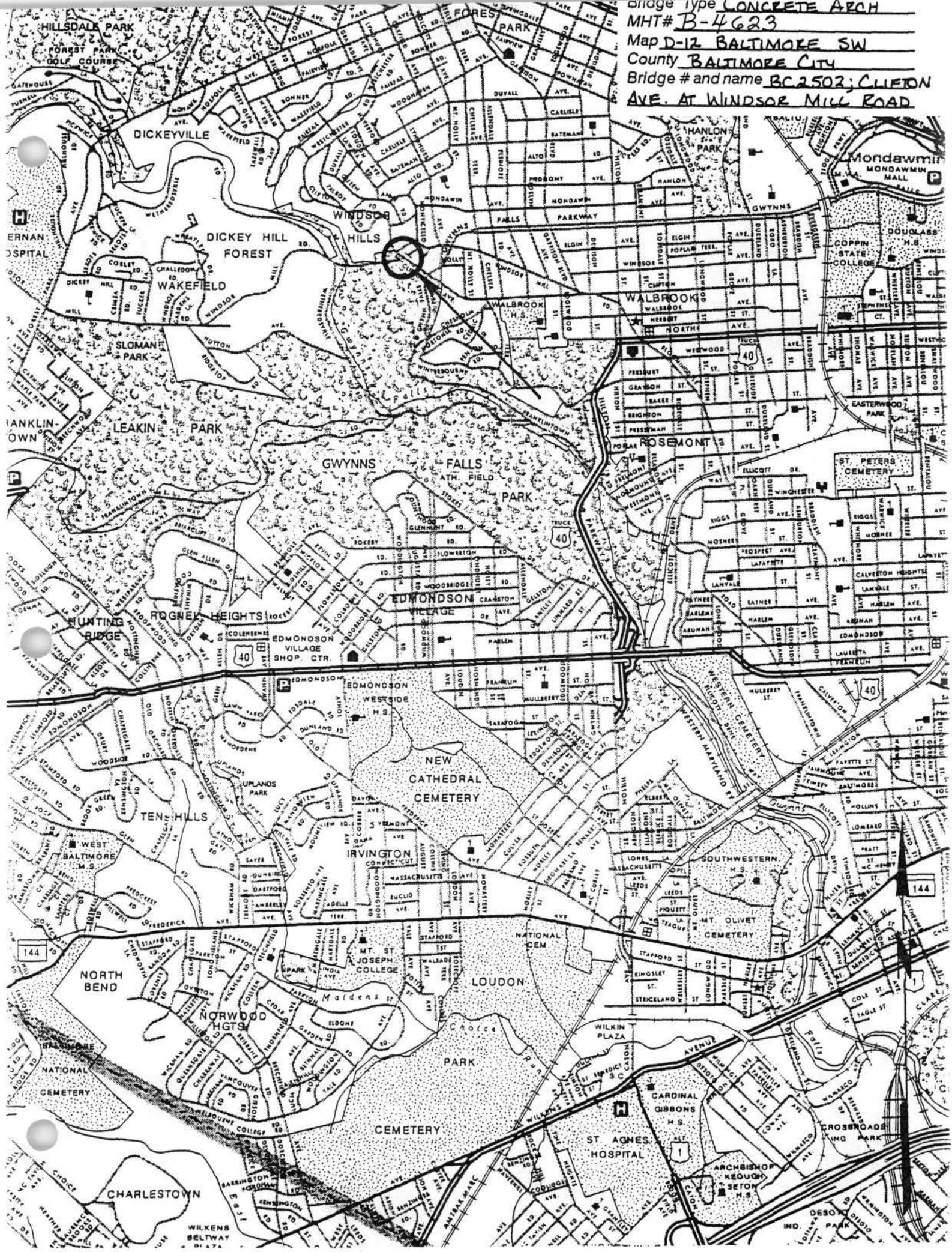
Phone number (410) 296-1635 FAX number (410) 296-1670



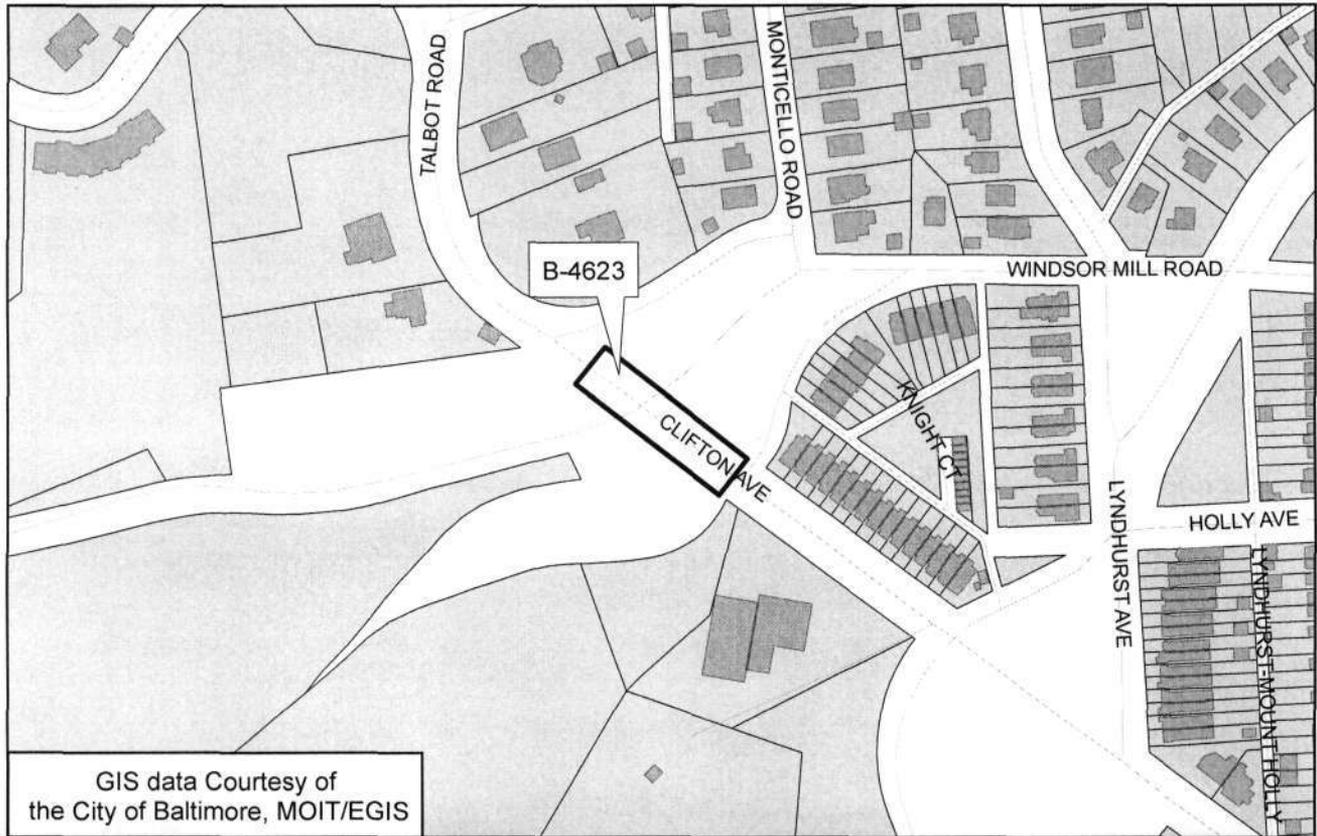
Clifton Avenue Bridge Replacement
Clifton Avenue Bridge over Windsor Mill Road
Baltimore, Maryland
MHT # B-4623

B-4623

Bridge type CONCRETE ARCH
MHT# B-4623
Map D-12 BALTIMORE SW
County BALTIMORE CITY
Bridge # and name BC 2502; CLIFTON
AVE. AT WINDSOR MILL ROAD



B-4623
Clifton Avenue Bridge (BC2502)
Clifton Avenue over Windsor Mill Road
Baltimore City
Baltimore West Quad





1. B-4623
2. Clifton Avenue
3. Baltimore City, MD
4. Wallace, Montgomery & Associates
5. 12/97
6. MD SHPO
7. Elevation looking east
8. 1 of 6



1. B-4623
2. Clifton Avenue
3. Baltimore City, MD
4. Wallace, Montgomery & Assoc.
5. 12/97
6. MD SHPO
7. Looking Southeast
8. 2 of 6



1. B-4423
2. BC 2502, CLIFTON AVE. OVER WINDSOR MILL ROAD
3. BALTIMORE CITY, MARYLAND
4. WALLACE - MONTGOMERY
5. 12/97
6. MDSHPO
7. ELEVATION LOOKING WEST
8. 3 of 4



1. B-4623
2. Clifton Avenue
3. Baltimore City, MD
4. Wallace, Montgomery & Assoc.
5. 12/97
6. MD SHPO
7. Looking Northwest
8. 4 of 6



Inventory # B-4623

Name 2502 - CLIFTON AVENUE OVER WINDSOR MILL ROAD

County/State BALTIMORE CITY / MARYLAND

Name of Photographer TIM SCHDEN

Date 1/95

Location of Negative SHA

Description WEST APPROACH

Number 3
5 OF 6

02-11-95 11:56 AM 02010004



Inventory # B-4623

Name 2502 CLIFTON AVENUE OVER WINDSOR MILL ROAD

County/State BALTIMORE CITY / MARYLAND

Name of Photographer TIM SCHUEN

Date 1/95

Location of Negative SHA

Description EAST APPROACH

Number 4 6 OF 6

0830044 4611 N N-112

B-4623

HISTORIC AMERICAN ENGINEERING RECORD

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Clifton Avenue Bridge
Clifton Avenue
Over Windsor Mill Road,
Baltimore, Maryland

HAER NO. MD-B-4623

Photographer (Views 1-21): P.A.C. Spero & Company
Robert C. Shelley

April 1998

- MD-B-4623-1 ENVIRONMENT, FROM EAST, SHOWING CLIFTON AVENUE BRIDGE CARRYING CLIFTON AVENUE OVER WINDSOR MILL ROAD
- MD-B-4623-2 ENVIRONMENT, FROM WEST, SHOWING CLIFTON AVENUE BRIDGE CARRYING CLIFTON AVENUE OVER WINDSOR MILL ROAD
- MD-B-4623-3 ENVIRONMENT, FROM NORTH, SHOWING CLIFTON AVENUE BRIDGE CARRYING CLIFTON AVENUE OVER WINDSOR MILL ROAD
- MD-B-4623-4 ENVIRONMENT, FROM SOUTH, SHOWING CLIFTON AVENUE BRIDGE CARRYING CLIFTON AVENUE OVER WINDSOR MILL ROAD
- MD-B-4623-5 DECK VIEW, FROM EAST, OF CLIFTON AVENUE BRIDGE SHOWING REINFORCED CONCRETE SOLID PANEL AND PIERCED PARAPETS, CONCRETE SIDEWALK, AND BITUMINOUS WEARING SURFACE

(continued)

B-4623

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- MD-B-4623-6 DECK VIEW, FROM WEST, OF CLIFTON AVENUE BRIDGE SHOWING REINFORCED CONCRETE SOLID PANEL AND PIERCED PARAPETS, CONCRETE SIDEWALK, AND BITUMINOUS WEARING SURFACE

- MD-B-4623-7 NORTH ELEVATION OF CLIFTON AVENUE BRIDGE OVER WINDSOR MILL ROAD

- MD-B-4623-8 SOUTH ELEVATION OF CLIFTON AVENUE BRIDGE OVER WINDSOR MILL ROAD

- MD-B-4623-9 DETAIL, FROM SOUTH, SHOWING PIERCED PANEL REINFORCED CONCRETE PARAPET, SOLID REINFORCED CONCRETE SET-BACK BLOCKS, CONCRETE SIDEWALK, AND BITUMINOUS WEARING SURFACE

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