

Landmarks Preservation Commission  
July 12, 1988; Designation List 206  
LP-1636

THE CYCLONE, 834 Surf Avenue at West 10th Street, Brooklyn.  
Built 1927. Inventor Harry C. Baker. Engineer Vernon Keenan.

Landmark Site: Borough of Brooklyn Tax Map Block 8697, Lot 4 in part consisting of the land on which the described improvement is situated.

On September 15, 1987, the Landmarks Preservation Commission held a public hearing on the proposed designation as a Landmark of the Cyclone and the proposed designation of the related Landmark Site (Item No. 12). The hearing had been duly advertised in accordance with the provisions of law. Six witnesses spoke in favor of designation, including the ride's owner, whose support was given dependant upon his ability to perform routine repair and maintenance. One witness spoke in opposition to designation. The Commission has received many letters in favor of designation.

#### DESCRIPTION AND ANALYSIS

##### Summary

Descended from the ice slides enjoyed in eighteenth-century Russia, through the many changes incorporated by French and American inventors, the Cyclone has been one of our country's premier roller coasters since its construction in 1927. Designed by engineer Vernon Keenan and built by noted amusement ride inventor Harry C. Baker for Jack and Irving Rosenthal, the Cyclone belongs to an increasingly rare group of wood-track coasters; modern building codes make it irreplaceable. The design of its twister-type circuit and the enormous weight of the cars allow the trains to travel on their own momentum after being carried up to the first plunge by mechanical means. Now part of Astroland amusement park, the Cyclone is not only a well-recognized feature of Coney Island, where the first "modern" coaster was built in 1884, but, sadly, is the only roller coaster still operating there.

The president of the American Coaster Enthusiasts sums up the ride's continued popularity:

The world-famous Cyclone has earned a place in history through its reputation as the world's best roller coaster, through the enjoyment and pleasure it has afforded countless generations of families and friends, through its starring role in many films, literature, art, photography, the news. The Cyclone is a classic

beauty and we need to have it recognized as an irreplaceable part of history and Americana.<sup>1</sup>

### The History of Coney Island<sup>2</sup>

Coney Island has played a part in the history of New York since the first days of European exploration, when Henry Hudson docked his ship, the Half Moon, off its coast in 1609. Lady Deborah Moody and forty followers settled Gravesend, the area north of Coney Island, in 1643; she bought the island itself from the Canarsie Indians in 1654. Not until 1824 did the Gravesend and Coney Island Road and Bridge Company build a shell road from the thriving center of Gravesend to what is now West 8th Street on the island. Along with the commencement of steamer ship service from New York in 1847, this improved access allowed about a half dozen small hotels to spring up by the 1860s. During this period many famous Americans rusticated there: Washington Irving, Herman Melville, Henry Clay, Daniel Webster, and Walt Whitman.

But the nature of vacationing at Coney Island changed quickly during the 1870s, when several railroad companies began service from Brooklyn; the completion of F.L. Olmsted's Ocean Parkway, a designated New York City Scenic Landmark, also provided a comfortable route for carriages. Grand hotels and restaurants accommodated the mostly well-to-do visitors, who came to enjoy not only the ocean and cool sea breezes but also the amusements which were transforming Coney into the most famous family park among its American counterparts. A festive atmosphere was ensured by the transferral to Coney Island of structures from the dismantled Centennial Exposition which had been held in Philadelphia in 1876.

Coney Island developed into "America's first and probably still most symbolic commitment to mechanized leisure."<sup>3</sup> The island increasingly became the site for technologically advanced structures such as the balloon hangar, elephant-shaped hotel and observatory (built in 1882, it became an unofficial symbol of American amusement parks), and the Iron Pier (1878) which housed many amusements. Mechanically-driven rides were pioneered at Coney; most of these rides succeeded because they combined socially acceptable thrills with undertones of sexual intimacy.<sup>4</sup> Indeed, Coney Island, which earned the sobriquet "Sodom by the Sea," was "the only place in the United States that Sigmund Freud said interested him."<sup>5</sup> As early as 1883, Coney's name was identified with entertainment, proven by the renaming of a midwestern park as "Ohio Grove, The Coney Island of the West."<sup>6</sup>

Between 1880 and 1910 its three large and successful racetracks gave Coney Island the reputation of horseracing capital of the country. In addition to gamblers, such features attracted confidence men, roughnecks, and prostitutes. Coney's

many activities could be viewed from above in the three-hundred-foot Iron Tower (originally the Sawyer Tower at the 1876 Exposition). This most notorious phase of Coney's history ended around the turn of the century after many hotels burned down in fires during the 1890s and racetrack betting was outlawed by the state in 1910.

A movement led by George C. Tilyou to transform Coney's corrupt image introduced the idea of the enclosed amusement park to American recreation. By 1894 there were dozens of separately owned rides; but the following year Capt. Paul Boyton opened Sea Lion Park, a group of rides and attractions one enjoyed after paying an admission fee at the gate. During the next decade, Coney's three most famous enclosed parks opened: Steeplechase Park (Tilyou's own endeavor), Luna Park, and Dreamland, forming "the largest and most glittering amusement area in the world."<sup>7</sup> Throughout Coney Island and intermingled with rides (such as the Barrel of Love and the Hoop-la) and food vendors, were other typical carnival features such as freak shows, guess-your-weight stands, and games. This scene was enlivened by barkers calling out to potential spectators, elaborate pavilions of eclectic design, and thousands of incandescent light bulbs. The size of the crowd on a typical Sunday afternoon in the summer of 1900 was about 100,000.

Another transformation occurred at Coney Island around 1920, with the influx of lower-income visitors, who arrived on the newly-completed subway lines for a mere nickel. Many elegant eating places had suffered with the beginning of Prohibition; the democratization of Coney facilitated their replacement by stands offering cheaper fare. The best known example is Nathan's Famous which, in 1916, began selling hot dogs for a nickel. Visitors were entertained at Tilyou's theater by Irving Berlin, Mae West, and John Philip Sousa.<sup>8</sup> By 1925, an average Sunday afternoon attendance had soared to one million.

In spite of the nighttime blackout imposed on Coney's lights during World War II, the amusement parks flourished, due to entertainment-seeking servicemen on leave and to the rationing of gasoline. But Coney's heyday came to an end after the war. Although the island survived attempts by Parks Commissioner Robert Moses to obliterate the animated jumble of buildings, rides, and attractions, it did not fare as well with fire damage and the growing mobility provided by the automobile. The New York City Housing Authority sought to revitalize the area by replacing small summer cottages with high-rise residential towers, a plan which only further undermined the neighborhood's character. Today many of Coney Island's landmarks have disappeared, due to neglect, fire, or poor planning; however, enough still stands to remind us of Coney Island's importance as New York's playground and as the prototype for amusement parks throughout the country, from Playland in Rye, New York, to Abbott

Kinney's amusement piers in Venice, California.<sup>9</sup>

### The Development of the Roller Coaster<sup>10</sup>

The earliest recorded use of slides built for public amusement are from Russia and were especially popular in St. Petersburg. Stairs led to the top of a seventy-foot hill covered with snow, inclined at a forty-to-fifty-degree slope with a twenty-foot-wide lane at the base. After mounting the stairs, a passenger sat on a guide's lap in a sled equipped with iron runners. A parallel track, sloping in the opposite direction, brought the team back to their point of beginning.

In the nineteenth century, the sport was brought to France, where the climate required the adoption of a timber "hill" with a small carriage rolling on a track. Beginning with the dangerous and crowded "Russian Mountains" (1804), built in a Parisian public garden, Frenchmen experimented with track profile (descent followed by incline), configuration (circular track), and safety features (guide rail with a lining to prevent cars from jumping.) In 1826, M. Leboujer patented a cable device to elevate coaster cars.

Development then shifted to the United States. A railway which carried coal from a mountaintop quarry to a slack-water canal below at Mauch Chunk (now Jim Thorpe), Pennsylvania, was outfitted with a return track, thus establishing a "switchback" layout. In 1870 the ride was converted into a pleasure excursion for tourists and touched off a surge in American "Artificial Sliding Hills" and "Artificial Coasting Courses"--short, inclined runways covered with wide rollers (resembling today's conveyors.) The name "roller coaster" survived, even though rollers were soon replaced by cars mounted on wheels. In 1884 LaMarcus Adna Thompson (1848-1930), a Philadelphia Sunday School teacher, solved his quest to provide young people with wholesome amusement by building the "Switchback Railway" at Coney Island. In this ride, attendants pushed the car to the top of the track followed by the ten persons who then rode the car down a straight run of 450 feet. A parallel track sloping in the opposite direction provided the return route. Competitors introduced features such as the oval track and power-operated chain elevator; Thompson quickly incorporated these improvements into his subsequent designs. He also invented automatic cable grips (fixed beneath cars, they automatically opened and closed upon touching a trigger on the track) and the articulated train (two long car bodies mounted on three small railway trucks.) With James J. Griffith, another Philadelphian, Thompson built tunnels with illuminated painted scenery, creating, at Atlantic City, New Jersey, the first Scenic Railway (1887).

Later innovations include the figure-eight track, safety

rails, electric block systems, emergency brakes, and underfriction to prevent derailment. These features enabled the six-mile-per-hour rides of the late-nineteenth century to be improved on greatly: today the average roller coaster has a track between 2000-4500 feet long, travels at twenty-four miles per hour on curves, and hits the valleys at thirty-to-forty miles per hour.

### The Cyclone<sup>11</sup>

Designed by engineer Vernon Keenan, The Cyclone was built for Jack and Irving Rosenthal by Harry C. Baker (d. 1939), a leading operator of amusement park rides who, along with John Miller, controlled patents for the under-friction roller coaster and for various fun houses. The steel was installed by the National Bridge Company of New York; Cross, Austin & Ireland of Long Island City furnished the lumber. The signage was produced by Menheimer & Weiss of New York and the powerhouse was built by Eisenberg Brothers of Brooklyn. The Cyclone opened on June 26, 1927.

The Cyclone is particularly significant for Coney Island where the world's first roller coaster (in the modern sense of cars on wheels) had been introduced and where, in the following decades, the ride came of age. Of the nearly two dozen roller coasters erected at Coney, the Cyclone is one of the only two to survive, and the only one still in operation. Nationally, the Cyclone belongs to an increasingly rare group of wood-track coasters, there being only about eighty-five extant from the more than 1,500 that once thrilled America. The special qualities of wood are its natural resilience, the distinctive sound it makes, its unique aesthetic as a structural frame, and the relative ease of replacing parts. Today the Building Code of the City of New York prohibits the construction of timber-supported roller coasters; thus the Cyclone is irreplaceable.

Technically, the Cyclone is classified as a gravity ride of the wood-track twister type, reinforced with steel supports at the center and at each curved end, with six fan turns and nine drops, including the first plunge of about ninety feet just twenty-two degrees off the perpendicular. Each of the ride's trains has three linked cars which accommodate eight passengers. The tremendous weight of the cars allows the Cyclone to reach the record-breaking speed (for a coaster) of sixty-eight miles an hour and to maintain velocity over its 3,000 feet of track. A chain carries the cars up to the first plunge; thereafter, they travel on their own momentum.

The Cyclone's enormous popularity has not faltered over the decades. Two years after he traversed the Atlantic, Charles Lindbergh rode the Cyclone and testified: "A ride on Cyclone is a



greater thrill than flying an airplane at top speed."<sup>12</sup> Enhancing the Cyclone's legend is the story of how West Virginian Emilio Franco, struck by hysteriaophonia in 1943 while serving as a private in the Army, regained his ability to speak as he rode on the Cyclone five years later. After screaming all through the ride, Franco exited with the words, "I feel sick."<sup>13</sup> In a 1977 description of the world's "top ten" roller coasters, historian Gary Kyriazi wrote that the:

. . . Cyclone is by far the perfect roller coaster. It never stops or slows for a second after it leaves the lift. Its drops, turns and twists are unsurpassed in the coaster world, and it is as smooth and graceful as a sea gull. New Yorkers should consider the Cyclone as valuable as the Statue of Liberty or the Empire State Building.<sup>14</sup>

### Description

The Cyclone is a roller coaster of the twister type, a compact configuration that turns on itself. The steel supports are connected to horizontal tie bars and cross bracing by riveted plates. This framework supports the wooden track and wooden railing to which curved lightposts have been added. The entire framework is painted white.

Metal letters spelling out "CYCLONE" and highlighted with incandescent bulbs are fixed to the side of the ride's highest peak. Above them, stands a painted sign advertising "ASTROLAND." A shed with side arcades of segmental arches shelters the loading area. Nondescript utility structures are fitted into the spaces within the framework.

Each train is composed of three cars, mounted on platforms, with four padded, metal "benches" (two persons per bench) and a front shield. On one train, the foremost shield is decorated with the words "61st Anniversary"; the other shield is adorned with a painted face of the Statue of Liberty. These decorations are the most recent in a series of changes. Over the years, the routine maintenance that has taken place has not significantly altered the Cyclone's appearance.

### Recent History<sup>15</sup>

In 1971, the city purchased the Cyclone from Silvio Pinto for one million dollars, offered to turn it over to the adjacent New York Aquarium, and leased it back to Pinto.

Beginning in June 1975, the structure was operated, under a license, by the father-and-son team of Dewey and Jerome Albert, owners of the Astroland amusement park. They now own the

Cyclone, although the land on which it stands belongs to the Parks Department. Previously in the construction business, the Alberts opened Astroland in 1962, Coney's first new amusement park since Dreamland (1904). Jerome went to Europe and began purchasing rides to establish Astroland as a first-class amusement park. One item, the Swiss Sky ride, had only one competitor in the United States: the sky ride at Disneyland. Astroland also had one of the first diving bells in America and the Astrotower, which provides panoramic views of the city.

Since its construction in 1927, the integrity and configuration of the Cyclone has remained intact, although necessary replacements have been made on a continuing basis for public health and safety and in order to meet insurance requirements as well as those of the Building Code. The most recent changes have been the replacement of deteriorated pieces, a complete repainting, and the installation of lights following the structure's contours.

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#### NOTES

1. Liucija Ambrosini [President, American Coaster Enthusiasts], Letter to Chairman Gene Norman, Aug. 10, 1984.
2. See Eugene L. Armbruster, Coney Island (New York, 1924), 5-12; Edo McCullough, Good Old Coney Island (New York, 1957), 17-25, 155 passim; Gary Kyriazi, The Great American Amusement Parks: A Pictorial History (Secaucus, N. J., 1976), 17-98, 118; Richard Peck, "In Gravesend, The Past Bends To a New Day Slowly, Slowly," New York Times, Sept. 16, 1973, sec 8, pp. 1, 14; International Herald Tribune June 20-21, 1987, p. 16; Frederick and Mary Fried, "Amusement Parks and Fairs," Built in the U.S.A., ed. Diane Maddex (Washington, D. C., 1985), 12-13; Burton Lindheim, "Coney Has A War Boom," NYT, June 27, 1943, sec. 2, p. 11.

3. Robert E. Snow & David E. Wright, "Coney Island: A Case Study in Popular Culture and Technical Change," Journal of Popular Culture, 11 (Spring 1976), 960.
4. Snow, 966.
5. International Herald Tribune, June 20-21, 1987, p. 16.
6. See William F. Mangels, The Outdoor Amusement Industry (New York, 1952), 19.
7. Fried, 13.
8. Mrs. Lena Goldberg, in a conversation, July 12, 1988.
9. See Kyriazi (1976), 118.
10. Mangels, 82-95; Kyriazi, (1976), 34; Al Griffin, Step Right Up, Folks! (Chicago, [1974]), chapter 4; Robert Cartmell, "Roller Coaster: king of the park," Smithsonian, 8 (Aug. 1977), 44-49.
11. "Coney's Latest Ride, The Cyclone, Opens," The Billboard (July 9, 1927); George Siessel, Conversation with Janet Adams, Aug. 18, 1987. Regarding Baker, see "Harry C. Baker, 52, Amusement Man," NYT, Aug. 24, 1939, p. 19. Mr. Baker was treasurer of the American Recreational Equipment Association and director of the American Museum of Public Recreation. Baker and Miller produced amusement devices for many cities across the country, from Baltimore to Spokane. At the New York World's Fair (1939), Baker was the treasurer of the Concessionaires Association and a member of the Fair's advisory committee. He was president of Baker & Traver, a firm which built roller coasters as far away as Rio de Janeiro.
12. Time (July 4, 1977).
13. "Roller Coaster Ride Brings Back Speech To Army Veteran Who Lost Voice in 1943," NYT, Aug. 12, 1948.
14. Gary Kyriazi, "In Search of the Ultimate Roller Coaster," Town & Country (July 1977), 100.
15. Bill Farrell, "By Coney sand, 2 with grit," Daily News, June 22, 1987; "Aquarium Urges Razing of Coney Island Cyclone," NYT, May 27, 1975; Milton H. Berger, Letter to Chairman Gene Norman, Jan. 19, 1988.



## FINDINGS AND DESIGNATIONS

On the basis of a careful consideration of the history, the architecture and other features of this structure, the Landmarks Preservation Commission finds that the Cyclone has a special character, special historical and aesthetic interest and value as part of the development, heritage and cultural characteristics of New York City.

The Commission further finds that, among its important qualities, the Cyclone is often cited as one of our country's best designed roller coasters, known for its speed and famed for its exhilarating fan turns and steep drops; that it belongs to an increasingly rare group of wood-track coasters, one of about eighty-five extant from the 1,500 that once thrilled America, whose special qualities are natural resilience, distinctive sound, unique aesthetic as a structural frame, and relative ease of replacing parts; that the Cyclone's rarity is assured by modern building codes which prohibit a timber-supported coaster like the Cyclone from being duplicated; that it was built in 1927, at the zenith of Coney Island's popularity; that it is one of nearly two dozen roller coasters built at Coney Island, where the world's first coaster with cars mounted on wheels had been introduced and where the ride came of age; that it was conceived by Harry C. Baker, a leading operator of amusement park rides in the early-twentieth century; and that necessary maintenance and repairs have conserved the Cyclone's original integrity and configuration.

Accordingly, pursuant to the provisions of Chapter 21, Section 534, of the Charter of the City of New York and Chapter 3 of Title 25 of the Administrative Code of the City of New York, the Landmarks Preservation Commission designates as a Landmark the Cyclone, 834 Surf Avenue at West 10th Street, Borough of Brooklyn, and designates Tax Map Block 8697, Lot 4 in part consisting of the land on which the described improvement is situated, Borough of Brooklyn, as its Landmark Site.

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New York Times. Feb. 3, 1927 ("Coney Island Site Leased"); Aug. 24, 1939 ("Harry Baker, 52, Amusement Man"), p. 19; June 27, 1948 ("Coney Has A War Boom"), sec. 2, p. 11; Aug. 12, 1948 ("Roller Coaster Ride Brings Back Speech To Army Veteran Who Lost Voice in 1943"); Sept. 16, 1973 ("In Gravesend, The Past Bends To a New Day Slowly, Slowly"); May 27, 1975 ("Aquarium Urges Razing of Coney Island Cyclone").

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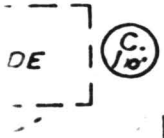
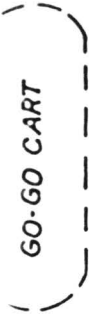
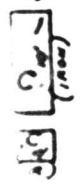
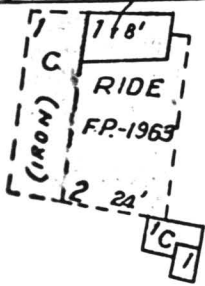
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Time. July 4, 1977.



"The Switchback Railroad"  
(Kasson, 75)

1012 ● F.P.-1963 (c.B.) 1002



3002 ●

3032 ● W. 10TH ST.

3034 ●

3034 ●

12" W. PIPE

12" W. PIPE (H.P.S.)

W. 10TH ST.

75

T.H. 3015 ●

T.H. 3031 ●

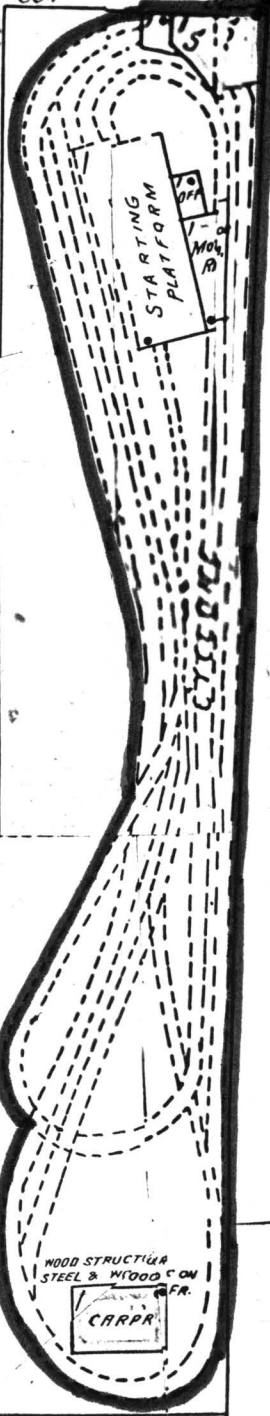
T.H. ●

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3001 ●

3031 ●

3038 ●



WOOD STRUCTURE STEEL & WOOD CON. CARPR

T.H. 834 ●

Outline indicates extent of Landmark Site

826100 822 ● 820

8697

AV.

8" W. PIPE

15" W. PIPE

8" W. PIPE

8" W. PIPE (H.P.S.)

5.30

120'

PARK'G.

W. 8TH ST. 3014 3012 3010

W. PIPE

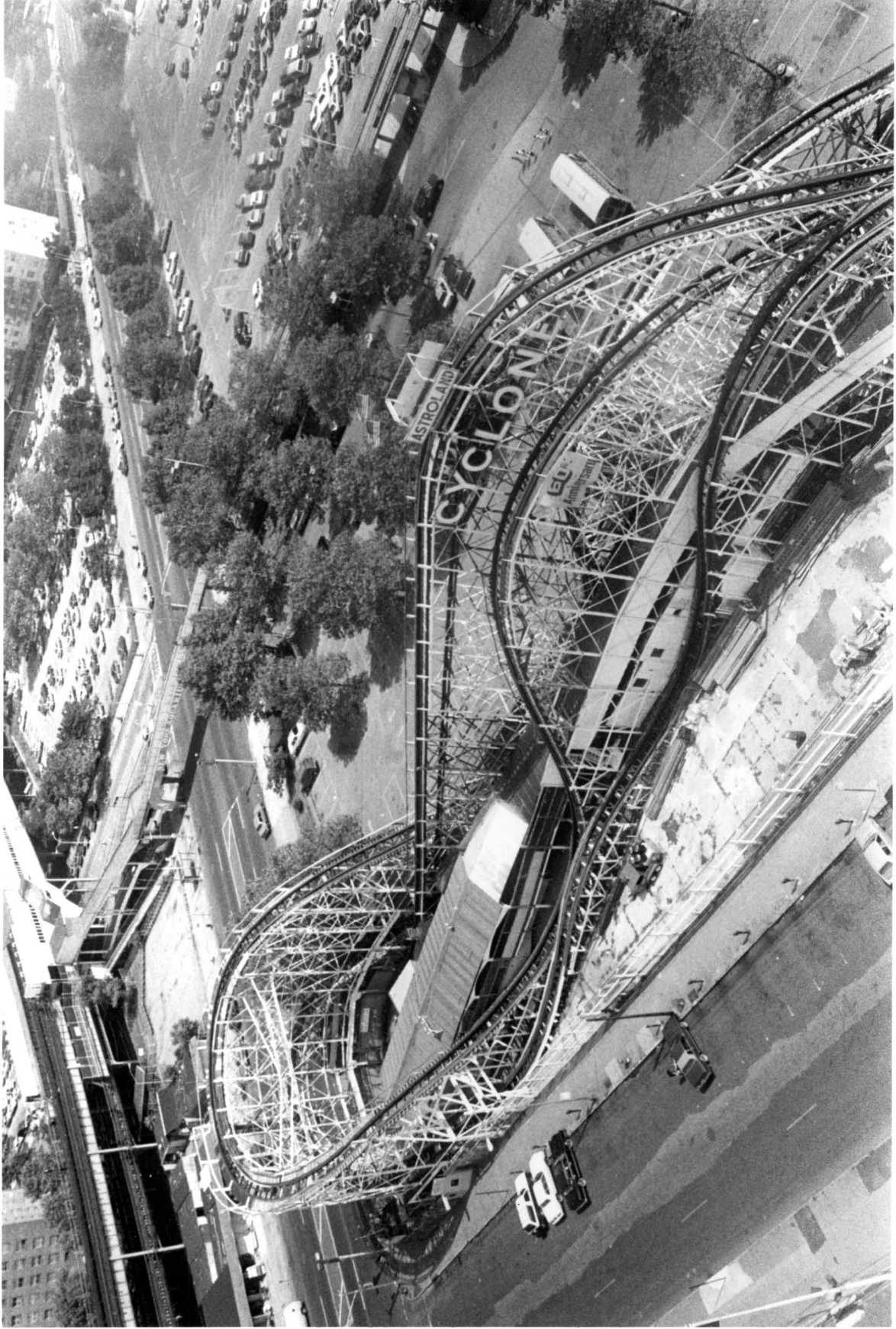
D.H. ●

W. 8TH ST.

RAMP

50'

47



Cyclone - aerial view

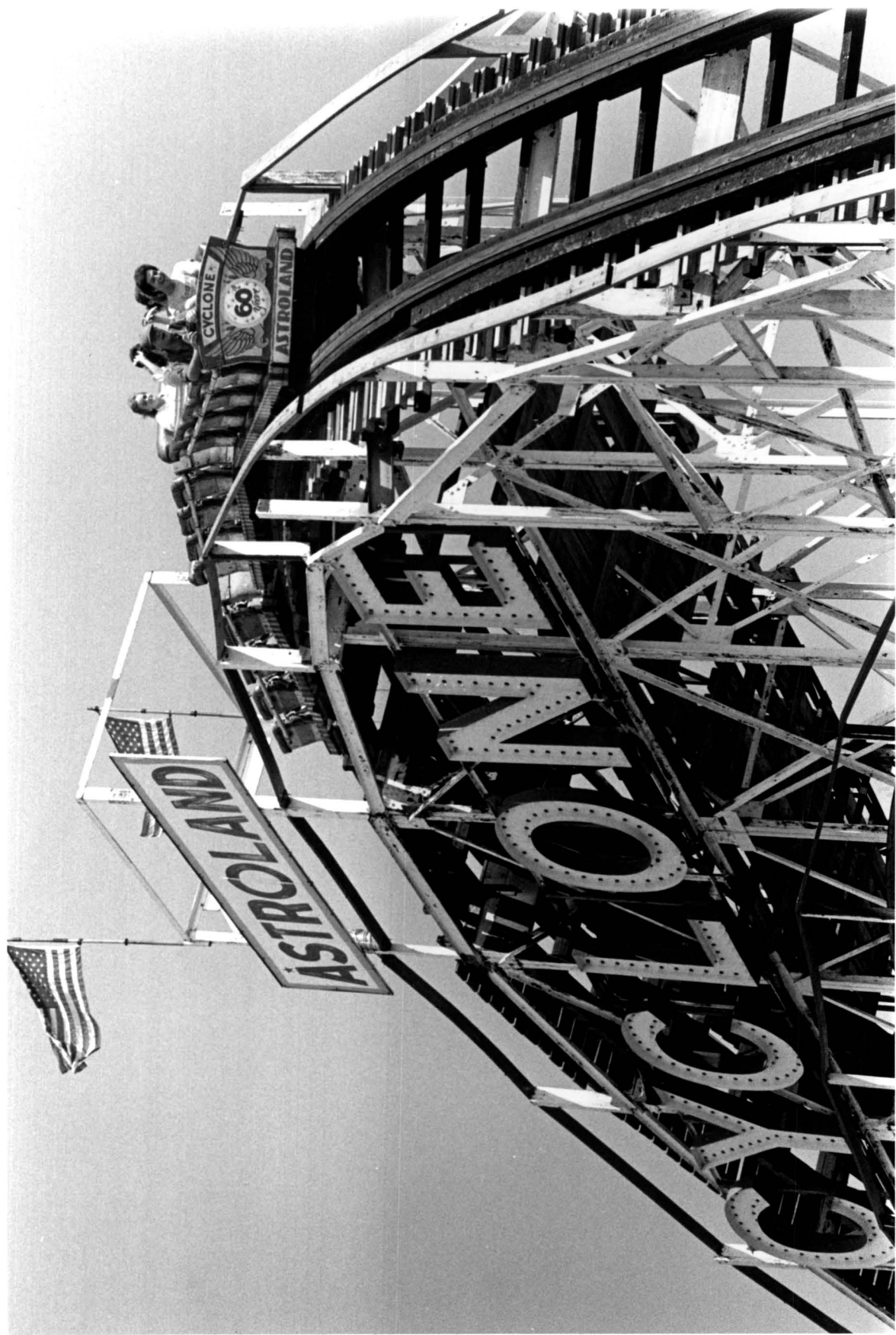




Cyclone - aerial view



Cyclone - view from Surf Avenue showing signage



Cyclone - summit with signage and train (1987 photo)





Cyclone - detail with train