Comments?
Introduction

Arc Lighting Tower

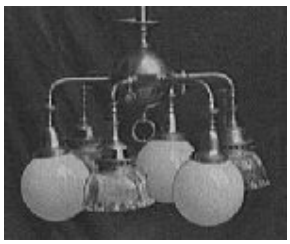
Urban public lighting took three forms in the 19th century: gas lighting, electric arc lighting, and electric incandescent lighting. Of course, incandescent lighting eventually became the standard, but all three were used in Detroit.



Gas lighting was used for public lighting and interior lighting in both residences and businesses. (The photo at left was taken specifically to document the 15 gaslight fixtures installed by Bertrams Gas Co.) The gas used was not the natural gas that powers our furnaces and ranges today, but coal gas which was accidentally discovered in the 1840's as a by-product of tar production.

Detroit had its main gasworks (coal gasification plant) on the riverfront just west of Belle Isle. After gas was extracted from the coal, it was stored, then delivered to users through a network of pipes laid under city streets.





The primary drawback to gas lighting was the danger of fire, particularly indoors. Leaking or partially closed light fixtures could fill a room or building with an explosive volume of gas, resulting in a deadly blast that often led to fire. The Great San Fancisco Earthquake of 1906 is also known as The Great Fire because the greater part of its destruction was the result of fire caused by the quake-shattered gas lighting network. Detroit newspapers of the gaslight era are filled with tragic reports of whole families and blocks of homes being lost in gas explosions or fires. Apparently, turn-of-the-century Detroiters resignedly accepted these in the same way they would later accept motor vehicle accidents, as part of the cost of Progress.

Further, gas light, known for its soft glow, was not the total lighting source we have come to expect from electric lighting. Indoors, it was barely adequate, but outdoors, the dim glow scarcely carried from the lamppost, creating a

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Campus Martius, Detroit, Michigan, 1906

This is downtown Detroit, 1906, on the eve of the automobile explosion. There are no automobiles in the three-picture perspective at right, even though Henry Ford had driven his first model through the streets of Detroit ten years earlier. People and cargo travel by horse or electric streetcar, and pedestrians roam freely through the streets. Detroit City Hall (1871) is in the center with its wide lawn sloping to Woodward, Detroit's main street. The scene has an aura of civic idealism, equal parts bustling metropolis and manicured garden; the dusty streets, striped by vehicle tracks, lend a rural air.

Detroit's major roads radiate from this public square known as Campus Martius. (Ironically, the city had been laid out in the shape of a spoked-wheel nearly one hundred years before Henry Ford manufactured the first Model T.) All distances in Detroit were once measured from this point, including the "Mile Roads" that march into Detroit's northern suburbs. Woodward Avenue, Fort Street, and Michigan Avenue meet here, and Gratiot and Grand River start only a few blocks away. These are main arteries along which Detroit is still developing in the outer suburbs.

As the automobile transformed the country, Detroit quadrupled in population (1900-1930). Concrete was poured, skyscrapers soared, and the retail district, seen in the right panel of the panorama, expanded to world class status. Increasingly prosperous Detroiters bought more and more of their own product, and downtown overflowed with cars.

By 1928, Campus Martius was the busiest intersection in the country according to a contemporary visitor's guide.

As early as 1920, civic leaders made plans to relieve the congestion around Campus Martius. Streets were widened, traffic signals installed, and subway schemes studied. The Great Depression put an end to the subway plans, and the city's growth slowed.

After the war, Detroiters, like most Americans, were far more interested in the open spaces of their suburbs than in the grimy confines of the central city. Despite well-intentioned (yet often clumsy) attempts at urban renewal, the central city and Campus Martius slowly withered as families left the city to raise baby boomers in the clean air of suburban tract housing.

The City Hall in the center of this picture was torn down in 1961, leaving an open public space. New buildings were set back from the street, and the streets were widened, but by the late 60's, the number of people in downtown was declining. The closing of the huge Hudson's department store in 1982 signaled the end of retail in downtown, and only government

shadowland on the street below.

Arc lighting, which gives a bright light similar to a modern mercury vapor lamp, offered a solution to this problem. In the type of arc lighting used here on Campus Martius, an electric current is passed between two carbon electrodes, creating an arc (sort of a spark of continuous duration). Light results from both the arc and the incandescence of the carbon electrodes as they burn in the open air.

In the 1880's, the City of Detroit contracted for six arc lighting towers in downtown around Campus Martius. Direct current electricity to the towers was supplied by a coal-burning generator located nearby. Contemporary accounts report that the light was abundant if perhaps surreal in cast. (Arc light, like its modern cousin, the flourescent light, contains a narrower spectrum of light than gas or incandescent.)

Though the arc lighting towers continue to appear in downtown photographs up to the late 1910's, it is unclear when they fell into disuse. Requiring frequent replacement of the carbon electrodes, they presented a maintenance headache. Further, they were unable to be integrated into the expanding alternating current power grid being developed for incandescent lighting. At some point, the city installed incandescent fixtures on ordinary streetpoles and abandonned the tower-mounted arc lights.



Left, Campus Martius *ca.* 1920 is seen at night lit by incandescent lighting from both public lightpoles and commercial signs.

Today, mercury vapor lamps, descendants of arc lights, sit atop downtown skyscrapers casting a shopping-mall-parking-lot glow on the usually abandonned public square below.

and financial institutions hang on today, awash in a sea of unused office space and boarded storefronts. General Motors' recent purchase of the Renaissance Center for a bargain basement price ($72 million for a complex that cost $350 million to build twenty years ago) is an indication of how far the decline has gone.

Campus Martius is still a relatively busy intersection, but no more so than dozens of other places across town and probably less so than many rural interstate exit ramps.

In the photographs at right, scattered pedestrians walk at random slants across the open space. Today, they cling together at crosswalks or huddle at bus stops, numbed by the thrum of tires and the dull grinding of laboring motors.

Detroiters have a bittersweet nostalgia for their downtown, and some still go back for sporting events, parades, and the like; but none of them would give up their strip malls and cineplexes to go back to 1906. The collective psychology that built civic plazas like Campus Martius no longer exists, dissipated in the march of technology, time, and social turmoil that goes by the name of Progress.

The average Detroiter walking across Campus Martius in 1906 probably had a pretty good opinion of Progress; the frontier days were still in living memory, and the technological and material improvements in daily life were manifest.

The average Detroiter today wouldn't walk across Campus Martius at all, though he may drive through it on the way to a Red Wings game. He may even have a fair opinion of Progress, but It probably doesn't cross his mind as he waits at just another stoplight at what was once "the busiest intersection in the country, by *actual* count!"

James B. Moran

View the modern panorama Use the scroll arrows to pan left or right and up or down in the picture.



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