

**The Cincinnati Subway:
Past Geological Failure or Hope of Future Transportation?
Patricia Brianne Fahey 2002**

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Background

Most major cities have subway systems--New York, LA, Chicago, Washington. In the years following World War One, when the economy was booming, Cincinnati decided to build one for itself.

At first, there was the Miami and Erie Canal. This was part of the massive crisscross of waterways throughout Ohio and the Midwest. In 1850, the canal carried Cincinnatians and goods made in Cincinnati all over the country. But, in 1880, trains not boats, carried the majority of passengers and cargo. The canal became an unused, smelly



Early Subway Tunnel Construction at Central Parkway

backwater, except for the few children who still played in its filth. On September 27th, 1884, a Cincinnati newspaper, the "Graphic", told Cincinnati what it should do with its canal (Dept Trans Eng). The newspaper printed a picture showing the stagnant old canal being replaced by a beautiful new street.

And below the street's surface, was a subway for steam trains. The

idea became the dream of the "Graphic" and it was the dream of many Cincinnatians. At the turn of the century, Cincinnati was a leading trade center. It was one of the ten largest cities in the country and with its thriving businesses and industries, came a population that was growing beyond the downtown area and into its steep hills. This was a time when interurban electric railroads crisscrossed much of the country connecting cities and small towns. Nine major interurban rail lines converged on Cincinnati. The city wanted a swift way to bring passengers into the downtown area and public support was abundant (Dept of Trans Eng). Transportation needs grew until 1912 and had begun to choke off growth. The systems were at capacity. At that point the city was looking for rapid ways of moving people out of city center and along what was then the major industrial corridor now occupied by I-75 (Fritze).

History

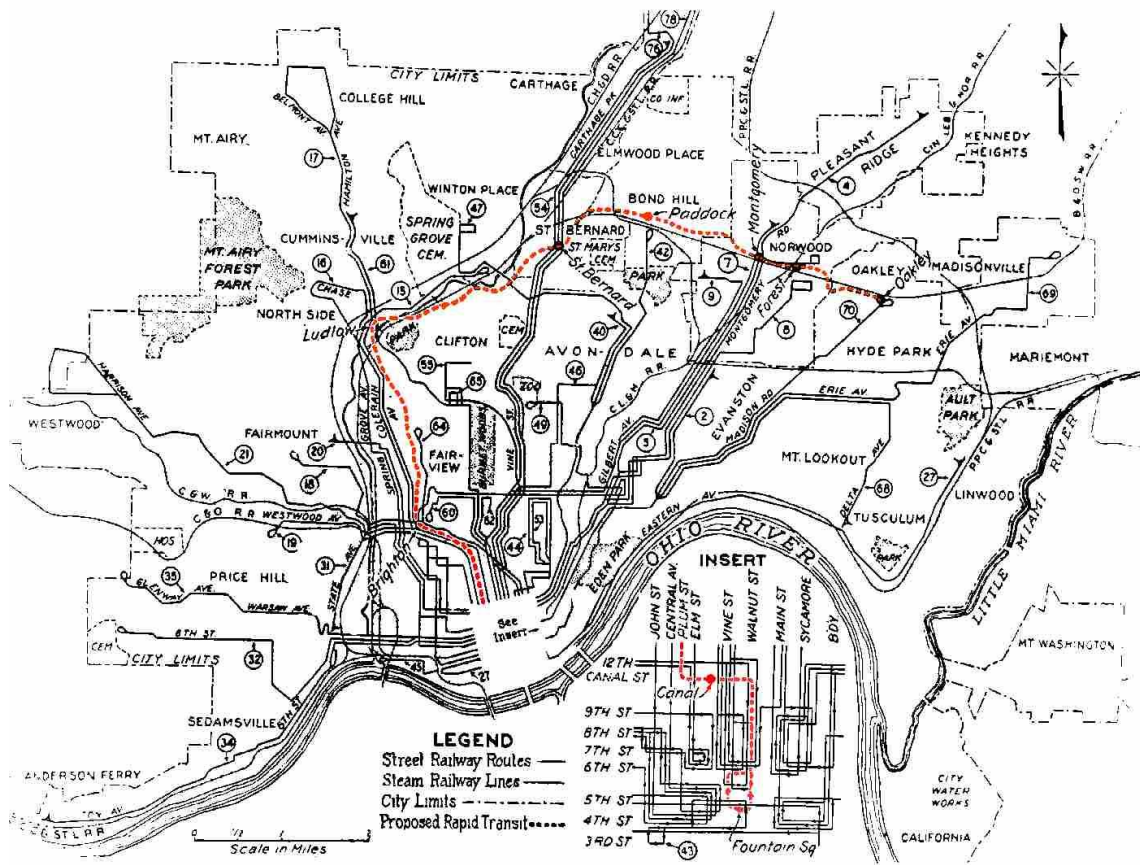
The In March of 1912, a three-man board of rapid transit commissioners was appointed by the county to find a way to make transit rapid in Cincinnati. A transit planner from Chicago was hired; and he came up with six workable plans for a rapid transit loop around the city. The plan which was selected had a \$12,000,000 price tag which had to be slimmed down to a \$6,000,000 version (Dept Trans & Eng). The proposed loop around



More Early Subway Tunnel Construction

Cincinnati was to be 16 miles long. The project was funded through bond issues amounting to more than 6 million dollars between 1916 and 1925. Actual construction began in 1920. Construction continued through 1927 by which time about two miles of tunnel and seven miles of surface route had been completed except for laying track. By this time the 6 million dollars had been spent, and here came the problem. It appears that no one was willing to push for the needed additional money to finish the project. At that time 10 million more was required (Fritze).

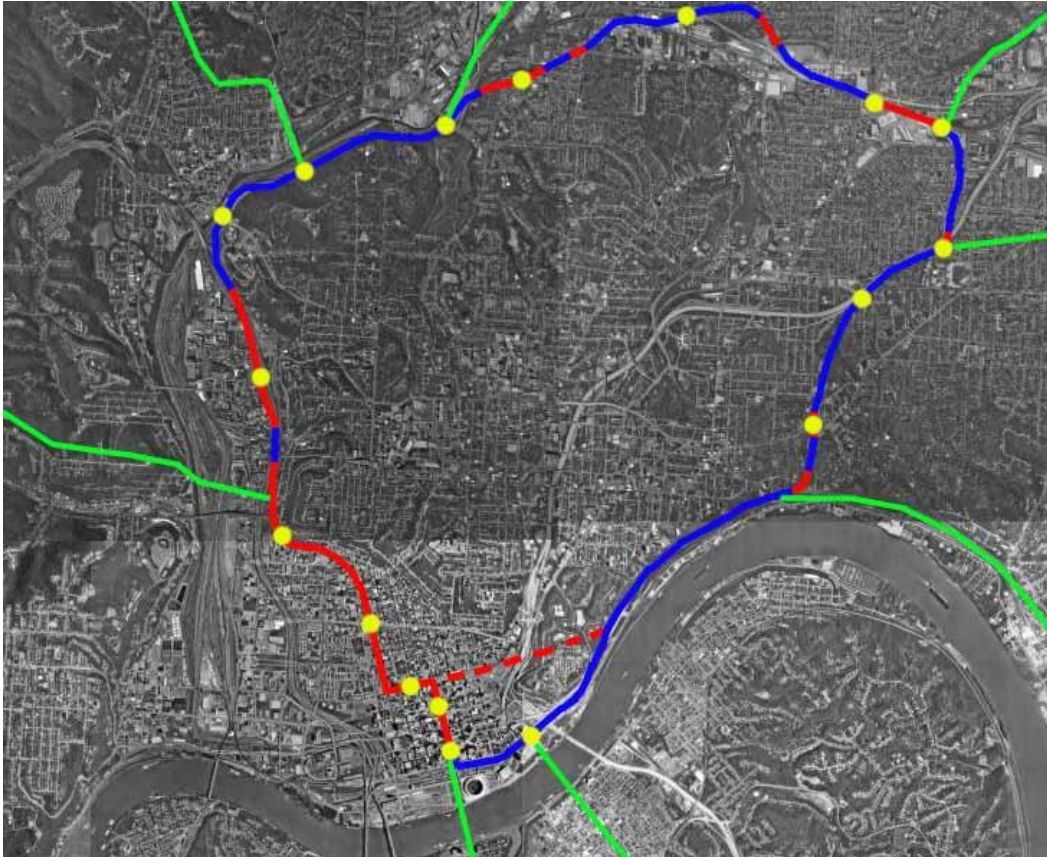
Construction began after the war. On January 28, 1920, the first steamshovel of ground was lifted from the canal at Walnut Street (Dept Trans & Eng). The two-mile subway tunnels were finished early in 1923. The aboveground sections of the loop were near completion by early 1927, but there was no money to equip any of it. Tracks had not been laid, several crucial links to the system were missing and the dollar balance in the books was near zero (Mecklenborg). The Cincinnati Subway, for the moment, was going absolutely nowhere. The mayor at the time, Henry Hunt, was the project's major proponent. Between 1920 and 1927 the city built the subway's one line, which ran seven miles south through downtown. When they ran out of money the project was placed on hiatus, but the Great Depression really buried it. World War Two meant conservation of steel and a shortage of workers. The project was scrapped without a single train ever having run. The debt incurred by the project wasn't fully paid until 1966, at a cost of \$13 million--in addition to the lives of several workers (Dept Trans & Eng).



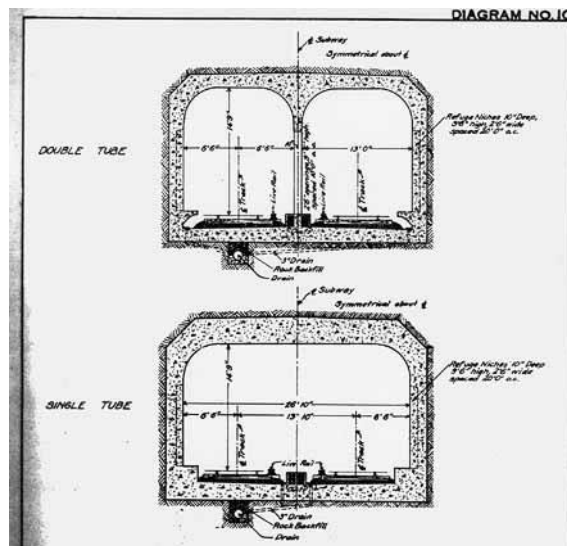
Cincinnati Subway Map From 1925

Subway's Path

The original plans for the transit loop according to Mecklenborg, began at 4th and Walnut Street near Fountain Square. The old subway system was going to run north along Walnut Street to the canal, and then when it hit the canal, it was going to follow under Central Parkway up through the Mohawk and Brighton areas to Ludlow Avenue. The subway was constructed only to a point just north of the Western Hills Viaduct, with a short tunnel under Hopple Street that was never completed. The line would have then run above ground in the canal along a section which is now Interstate 75, to Saint Bernard. The map below shows the 1914 original intended path for the Cincinnati Rapid Transit Loop and Subway Lines. Red lines indicate tunnels, blue lines indicate above ground lines, yellow dots indicate stations, and the green lines show urban connecting routes from buses and trolleys (Mecklenborg).

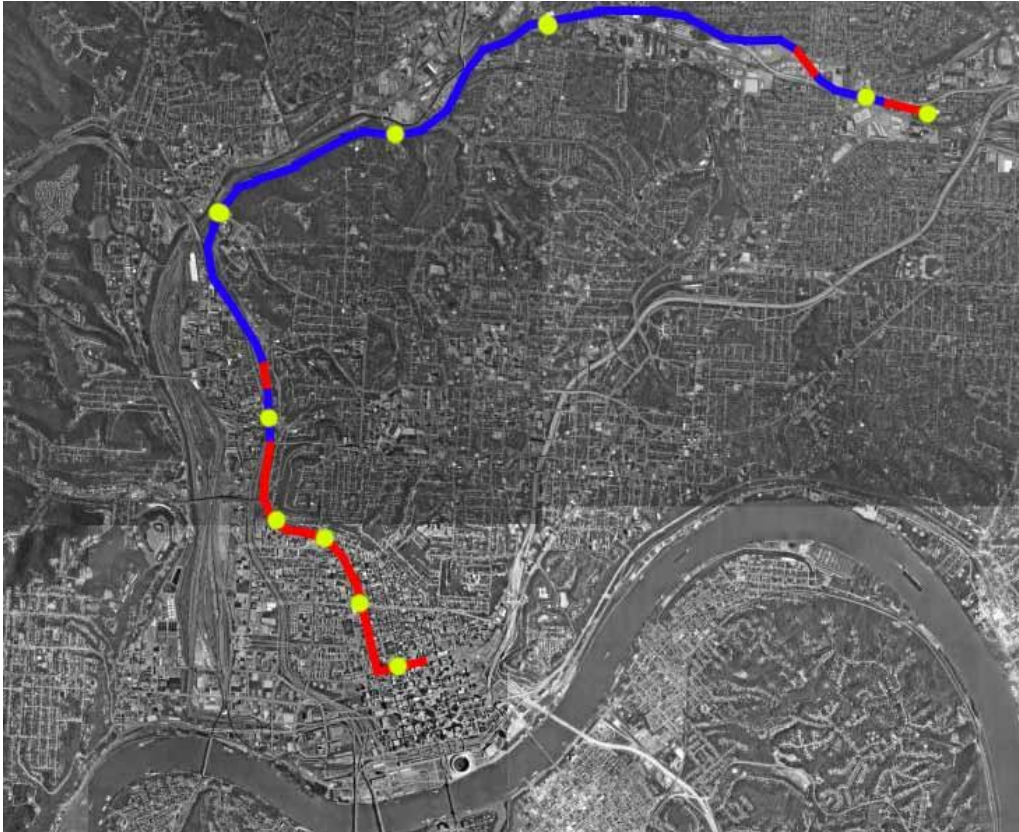


1914 Proposed Map of Subway Tracks



Typical Subway Cross Section

The map on the following page shows sections of the subway tunnels and stations that were actually constructed. The red lines are subway tunnels. The yellow marks are subway stations.



Subway Tunnels and Stations Completed by 1927

Geology of the Subway

The major impetus was the draining of the Miami and Erie Canal, along which the subway would be built (Forgotten Ohio). However,

the draining of the canal did not prove to be as much of an issue as the tunnel construction. In order to save money, and due to the complicated, hilly geology of Cincinnati, there were aboveground and underground sections of track planned for the subway. The

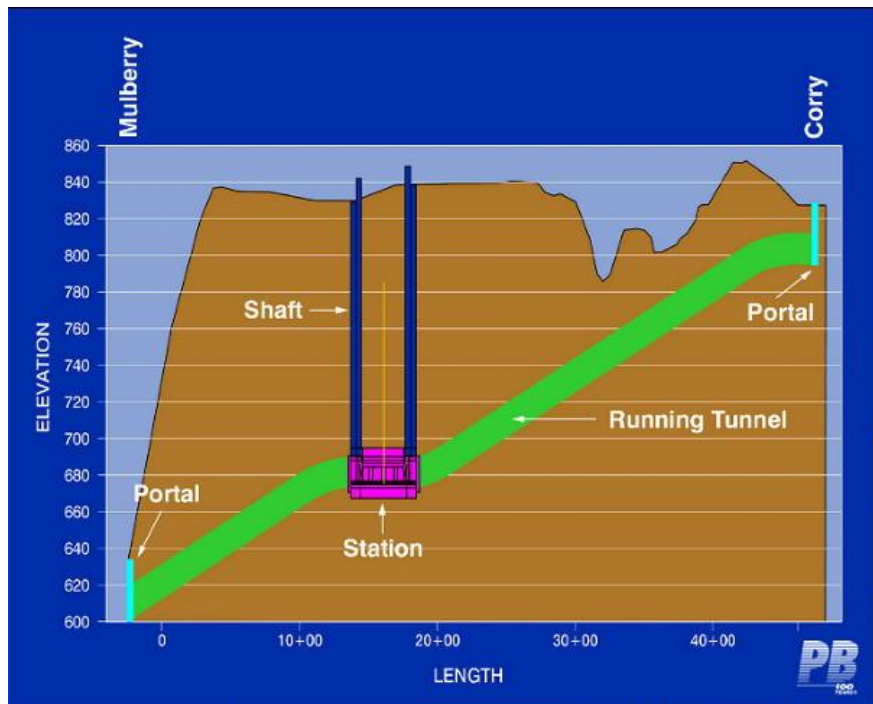


image below for the proposed Mt Auburn Tunnel (for the light rail tracks) shows an example of the geologic planning under consideration in construction a tunnel beneath the city.

The subway tunnels that were constructed are extremely stable. Although 80 years old, the tunnels have survived rather intactly with only minor maintenance. If the subway tunnels were collapsing, Central Parkway would be one large pothole, slowly sinking into the ground.

Alternative Uses

Only eleven of the sixteen proposed miles of subway track and tunnels were ever constructed. Because the city paid such a large price for the subway construction, there



has always been discussion of what to use the abandoned tunnels for. In the Thirties, there was talk of connecting the remaining trolley lines with the subway tunnels, but the trolley cars were too long to make the tight turns in the subway tunnels (Dept Trans & Eng). City Manager C. O. Sherrill, in 1939, thought that if the trolley cars wouldn't fit, automobiles would. So he proposed that

the city extend the subway under the crowded downtown streets to a large riverfront parking lot. The cars would have fit, but the cost to complete such a project wouldn't (Dept Trans & Eng).

During the cold war a portion of the subway was converted to use as a fallout shelter and in 1957 a water main was run through part of the tubes (Fritze). There were many ideas in recent years for something to do with the Cincinnati Subway. In 1969, the Diocese of southern Ohio wanted to hold a candlelight



Communion service for 500 people, in what they called the 'Catacombs of Cincinnati'.

The church officials couldn't get insurance (Dept Trans & Eng). During the mid 1970s there was some private interest in making the subway an underground retail restaurant mall, winery, and nightclubs. The tunnels are currently home to a 52 inch pressurized water pipe and a network of fiber-optic cables (City Beat). As residents of Cincinnati well know that study, now for light rail is still underway in 1999.

Present State of the Subway

Over the years Cincinnati failed to grow in the way that the subway's conceivers had hoped. Today it's only the third-largest city in the state. I-71 was built, destroying a large segment of the subway and making it impossible for the subway to be revived in its current form. But one of the Queen City's best-



kept secrets is the fact that sections of the original subway still remain (Forgotten Ohio). The unfinished subway can be attributed to a combination of factors including politics, financing, changing demographics, and the automobile. No one is sure what Cincinnati's tunnel is worth, but engineers have tentatively pegged the value at \$250 million (Cincinnati Business Courier).



The tunnels are mostly intact and mostly empty. The completed subway began at Walnut Street on central parkway and followed the central parkway north (Fritze). Portions of the tubes can be seen from I-75 under Central Parkway.

You will notice grill covered vents at periodic intervals. The two tubes exit to surface right of way along I-75 and you can see the bars closing their ends. The air vents and



station entrances have all been covered over downtown. The subway tunnel under the streets has been silent and abandoned for over 50 years. Its entrances have been sealed with concrete and its tunnels are blocked by brick walls and steel fences (Dept Trans & Eng).

There were several stations constructed in this section that remained for many years. There were bridges completed, everything but the track (Dept Trans & Eng). No cars ever ran in or on this system. Despite some really interesting urban legends of buried cars with crash victims still entombed (Forgotten Ohio.

Official permission to tour the subway is granted by Prem Garg at city hall, who can be reached at (513) 352-5216. The Cincinnati Historical Society periodically also gives official tours and slide lectures (Mecklenborg).



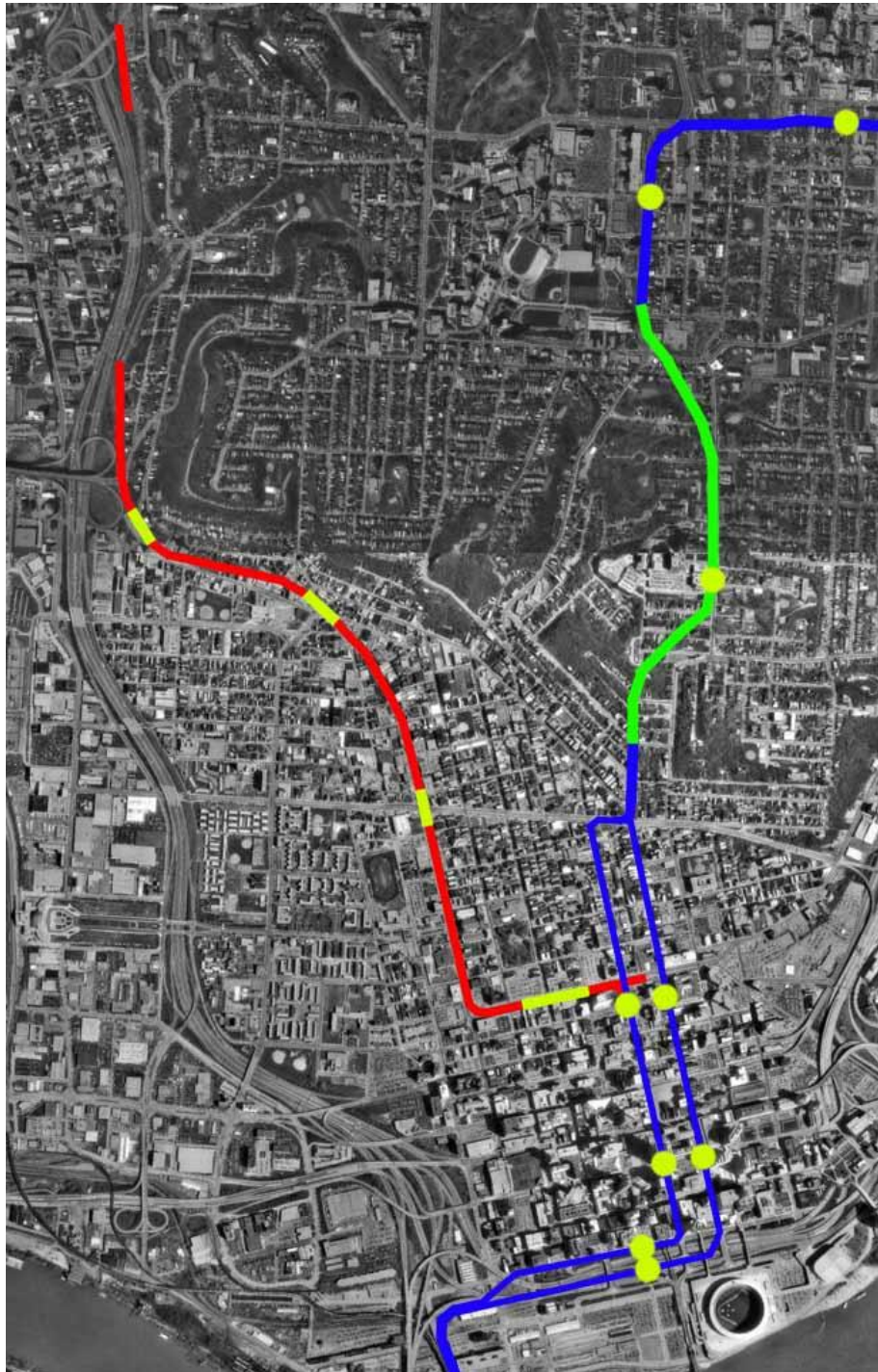
Future of the Subway

The current buzz in the city is that the abandoned, 80-year-old subway tunnel beneath Central Parkway could be reborn as part of a Cincinnati-to-Hamilton light rail line. Transportation planners are looking closely at the two-mile tunnel as part of a larger

study of transportation needs in the Interstate 75 corridor between Cincinnati and Dayton (Dept Trans & Eng). According to their preliminary review, the tunnel is not only adaptable to light rail, but it could be used as a local match to draw down as much as \$500 million in federal light rail funding (Cincinnati Business Courier). The tunnel would offer faster service in the downtown area, allowing trains to travel from the Western Hills viaduct to the Hamilton County Courthouse without interacting with traffic. A Central Parkway station between Main and Walnut streets could link an I-75 rail line to an I-71 line, which planners hope will someday run from Kings Island to the airport. The Central Parkway tunnel line could ultimately extend down Eggleston Avenue, connecting the I-75 line to rail lines (Dept Trans & Eng).

The picture to the right shows the proposed alignment of the existing tunnels (red), stations (yellow), and the Mt Auburn Tunnel (green), with the light rail line (blue).

But the tunnels might also pose problems. They're small. In their tightest spots, the twin shafts are 13 feet wide and 16 feet



tall (Mecklenborg). That's slightly smaller than a Mount Auburn tunnel that light rail planners have proposed for the I-71 line. And it would limit the types of trains that could be used. Another problem: The three stations built into the tunnel do not meet standards for wheelchair accessibility (Dept Trans & Eng). Planners say the tunnel would provide a crucial link between downtown and the University of Cincinnati (Cincinnati Business Courier). The tunnels might later become part of a light rail line serving the West Side.

The current city engineer in charge of subway maintenance, Joe Vogel, has provided the following information: The 2 mile Central Parkway tunnel has been maintained regularly and is usable for at least 50 more years (Mecklenborg). A 1994 study by OKI concluded that the tunnel can be used by a light rail line, with modern rolling stock, requiring no reconstruction of any part of the tunnel (one of the major rumors running around town is that subway cars "can't fit" in the subway -- according to Mr. Vogel this is absolutely FALSE) (OKI). Overall, it seems that the Cincinnati subway tunnels are always being considered for use in transportation project. However, the red tape of politics and geological engineering may make the price too high to ever even consider.

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This Report was written and prepared by Patricia Brianne Fahey in June of 2002.