

December 21, 2017

**FOR YOUR INFORMATION**

To: Mayor and Members of Council  
From: Harry Black, City Manager **HB**  
Subject: Smart Cincy Update: Downtown 'Fiber Ring'

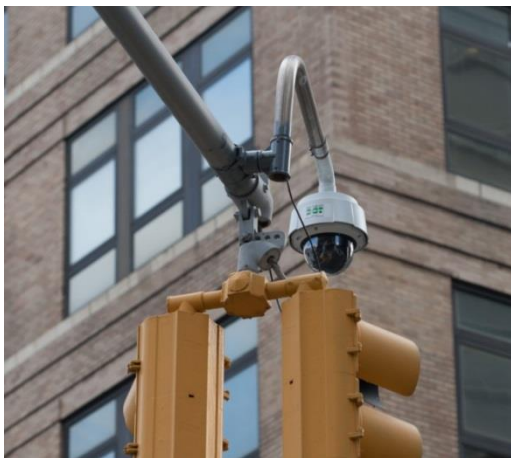
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As part of the comprehensive effort to transform Cincinnati into a smarter city, known as our Smart Cincy initiative, the Administration is preparing to install a new 'fiber ring' around the entire Central Business District (CBD).

This system is being built to greatly improve the way traffic signals are managed and modified. It also presents an excellent opportunity to light up the CBD with free Wi-Fi and for the City to explore novel partnerships with businesses that may have a need for use of the fiber network.

**Purpose**

This new grid will replace Downtown's current analog traffic-control communications system and will connect to the City's existing municipal fiber grid, which facilitates communications for all City departments, including emergency services.



The upgrade to fiber will provide the Department of Transportation & Engineering greater flexibility as well as improve reliability and reduce service times for signal changes and adjustments.

The system will also update all traffic signal controllers and include video cameras for traffic monitoring and counting purposes at key locations throughout Downtown.

The image to the left shows the type of traffic camera that will be installed (local above the traffic signal).

## **Project Scope & Timeline**

Crews will install approximately 20,000 feet of underground conduit and fiber optic cable around the perimeter of Downtown, specifically along Central Avenue, Central Parkway, Broadway and Second Street, as well as east-west along Sixth Street and north-south on Vine Street.

Remaining connections to Downtown intersections will be made by routing fiber through existing duct banks and utility tunnels. A map indicating the location of the new grid is attached.

The grid is expected to take approximately 15 months to install, tentatively beginning in January 2018 and continuing until March 2019. It will require construction crews to dig a 30-inch trench in the street to install the ducts and cable.

Crews will dig about 200 feet of trench at a time and restore each segment as it is completed. The entire lane affected by the trench will be repaved after the completion of major segments of the grid.

The work will require lane restrictions for motorists; however, the overall impact on traffic during construction will be minor. As always, DOTE will communicate information about the traffic impact by news release and Twitter posts on RoadmapCincy once the construction schedule is finalized.

## **Procurement and Funding**

The project was bid three times; the first two attempts received no bids. On the third attempt, the project received an apparent low bid of \$8.9 million. DOTE has secured \$7.5 million in funding from a federal Congestion Mitigation and Air Quality grant including \$4 million from the Ohio-Kentucky-Indiana Regional Council of Governments and a state grant from the Ohio Public Works Commission for \$3.5 million.

To cover the difference, the Administration will transmit a recommended Ordinance re-programming approximately \$1.3 million from recently closed project accounts for Council's consideration and passage. Note, this City investment leverages over 5 times the outside grant resources. Upon approval of this legislation, the Administration can finalize the award of the contract and schedule the start of construction.

## **Smart Cincy**

In addition to modernizing the City's traffic signal system, the project will include additional conduits to be used for Cincinnati's Smart Cincy initiatives, and leased to other utilities or businesses. The additional capacity will also facilitate the ability to respond to future innovations when available (i.e. connected and/or autonomous vehicles) and to assist with improving overall economic competitiveness.

This upgrade to fiber for the Downtown traffic-communications system is one of several Smart Cincy initiatives the Administration is aggressively pursuing including the Smart

Cincy RFP and the development of a comprehensive Mobility App, both of which are underway. Read about it and other Smart Cincy initiatives under way at:

<https://www.cincinnati-oh.gov/cityofcincinnati/news/city-making-strides-in-smart-city-initiatives/>

### **Conclusion**

Organizations, and especially local governments, that are not using technology and data to innovate and enhance the customer experience are destined for irrelevancy. The effort to continue to transform the City of Cincinnati into a truly smart city is simply not possible without the continued vision and support offered by the Mayor and City Council.

Attachment