



MCIS, Inc.
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www.mciszone.com

**City of Columbus, OH
Public Safety Camera Project
South Park Neighborhood Expansion
#P6238832-03**

DATE: February 12, 2024

PROPOSAL FOR: City of Columbus, OH (Client)
Attention: John Johnston

MCIS, Inc. sincerely appreciates the opportunity to continue supporting the City of Columbus, OH (City) Neighborhood Safety Camera project (NSC).

This proposal estimate is for engineering and labor services to deliver wireless communications in support of the new camera sites to be installed in the South Park neighborhood. No written Scope-of-Work was provided to MCIS; therefore, assumptions were required in the development of this proposal. Following are the approximate GPS coordinates for each proposed CCTV/wireless site as provided by client:

Site 1: Canonby Pl. (South)	39°56'35.55"N 83° 1'17.87"W
Site 2: Canonby Pl. (North)	39°56'40.32"N 83° 1'18.15"W
Site 3: Canonby Pl. & Greenfield Dr.	39°56'35.43"N 83° 1'14.42"W
Site 4: Greenfield Dr. & S. Souder Ave.	39°56'30.19"N 83° 1'10.53"W
Site 5: Greenfield Dr. & Griggs Ave.	39°56'38.65"N 83° 1'12.18"W
Site 6: Franklin Co. Municipal Court	39°57'13.16"N 82°59'59.43"W

In preparation of this proposal, MCIS has reviewed the available information, performed preliminary site reviews to assess the conditions and considered the City's observations. The intent of this proposal is to provide the appropriate engineering, field services and performance management to achieve the following objectives:

1. Deliver a turn-key wireless network to support proposed camera sites with capacity for future expansion.
2. Wireless network migration into WinManage Network Management System for performance management.
3. Develop a comprehensive report with performance metrics for the client.

Preliminary Site Assessment

MCIS completed a site walk-through with the client in late June 2023. This preliminary assessment addressed general client objectives, infrastructure, and means and methods to deliver wireless communications.



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The general evaluation included the following:

1. Physical inspection of proposed camera and radio sites.
2. Identify existing infrastructure assets for equipment mounting.
3. Identify demarcation sites for the backhaul link.
4. Safety assessment of the work environment.

Based on our review of the information relative to the scope of this proposal, the following approximates the proposed wireless system:

- Physical deployment sites: Six (6) sites.
- Microwave Radios: Ten (10) point-to-point (PTP) radios.
- Unique microwave links: One (1) backhaul link ~1.2 miles distance.
- CCTV Cameras: Five (5) cameras (25 Mbps per camera).
- Site configuration types: Poles, Roof Top.

Engineering, Installation, & Commissioning

The following information outlines MCIS' scope of work for the project:

Phase I:

This phase for engineering work and documentation will be completed by one (1) MCIS System/Network Engineer and one (1) Project Manager/Sr. Technician and assumes up to four (4) business days to complete.

1. Engineering:
 - a. It is assumed that the wireless network will utilize an FCC unlicensed frequency as part of the system design. As such, engineering will incorporate spectrum analysis work at each site to establish frequency utilization based on the data collected.
 - b. Data budget calculations will assume CCTV's operating at the maximum resolution/frame rate as published by the manufacturer.
 - c. Site and path surveys will be completed to identify the following:
 - i. Validate and document site locations, and link distances (i.e., address, location, GPS coordinates).
 - ii. Identify mounting infrastructure requirements to include new pole location(s), pole height(s), and roof top infrastructure requirements.
 - iii. Spectrum analyses will be completed at each proposed site to record RF environment noise levels.
 - d. Link budget calculations may be completed on the backhaul link due to the estimated distance (<1 mile). Based on the short distances between the proposed CCTV sites (>650'), link budget analyses will not be required.



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- e. Engineering data, design requirements, and recommendations will be provided to the client in MCIS' Standard Summary Engineering Report.
- f. MCIS assumes the summary engineering report will be completed and sent to client thirty (30) days prior to Phase II, to allow client time for review and provide comment, changes, and/or recommendations.

This phase for engineering work and documentation will be completed by one (1) MCIS System/Network Engineer and one (1) Project Manager/Sr. Technician and assumes up to seven (7) business days to complete.

PHASE II:

2. Installation and Commissioning:

- a. Installation efforts will be completed based on the Phase I engineered wireless system design.
- b. RF equipment will be bench tested and configured prior to deployment to validate functionality and performance.
- c. RF equipment installation will commence once mounting infrastructure and power installations are completed by the client.
- d. Performance data will be recorded and documented.
- e. Validate CCTV settings against engineering requirements for wireless backhaul.
- f. Validate video quality and functionality of CCTVs at each point of demarcation (i.e. wireless interface with hardwired network switches). This procedure shall be accomplished by connecting directly to the point of demarcation and logging directly into each camera via wireless link and browser interfaces.
- g. Acceptance testing completed with the client present and signed off by stake holders at completion.

This phase for I&C, and documentation will be completed by one (1) Project Manager/Sr. Tech, and one (1) Wireless Technician and assumes seven (7) business days to complete.

RF Equipment and Components

Following is a list of proposed RF equipment and associated components based on preliminary design assumptions, to be installed at each of the sites:

CCTV Site 1: One (1) Radwin 2000 Alpha 5.x GHz – 500 Mbps
One (1) Radwin Smart Node (non-battery)
Cat5E/Cat6 Ethernet cable (up to 25')
Radio mount and mast



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CCTV Site 2: One (1) Radwin 2000 Alpha 5.x GHz – 500 Mbps
Cat5E/Cat6 Ethernet cable (up to 25')
Radio mount and mast

CCTV Site 3: One (1) Radwin 2000 Alpha 5.x GHz – 500 Mbps
Cat5E/Cat6 Ethernet cable (up to 25')
Radio mount and mast

CCTV Site 4: One (1) Radwin 2000 Alpha 5.x GHz – 500 Mbps
Cat5E/Cat6 Ethernet cable (up to 25')
Radio mount and mast

CCTV Site 5: One (1) Radwin 2000 Alpha 5.x GHz – 500 Mbps
Cat5E/Cat6 Ethernet cable (up to 25')
Radio mount and mast

Muni Court: One (1) Radwin 2000 Alpha 5.x GHz – 500 Mbps w/ 24 VDC PoE
One (1) 4-port hardened switch
Cat5E/Cat6 Ethernet cable (up to 100')
Wall mount and mast

*Note: Smart Nodes will not include internal batteries. No cost for batteries and associated labor/expenses to install batteries are included in this proposal. Equipment and project costs are subject to change, based on the results of engineering studies and analyses.

Final Reporting and Documentation

Upon completion of acceptance testing, MCIS shall compile the data collected and develop performance metrics for inclusion in a comprehensive deliverable for the City of Columbus, OH. MCIS assumes fifteen (15) business days to complete the final deliverable, upon project completion.

Project Scheduling

MCIS will create a project schedule for RF engineering, installation, and commissioning of the wireless system and deliver to the client with ten (10) business days of receipt of client purchase order. The wireless project schedule will assume all preliminary work required to accommodate installation and operation of RF equipment will be completed by client prior to MCIS' schedule start date.



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*NOTE: Upon start of project work by MCIS, any client project delays are considered compensable to the contractor (MCIS). Contractor costs associated with these delays will be billed to the client in a change order directive based on MCIS' 2023 Professional Fee Schedule, to include labor and associated expenses at a minimum.

High-Risk Work Environment

Upon completion of the preliminary walk-through and safety assessment, it is recognized that there is a high-risk safety factor due to crime and violence within the South Park neighborhood. As such, MCIS will require a special duty officer(s) on site during Phase I and Phase II of the project. A line-item cost adder of \$5,000.00 for special duty officer services is included in this proposal.

Final Reporting and Documentation

Upon completion of acceptance testing, MCIS shall compile the data collected and develop performance metrics for inclusion in a comprehensive deliverable for the City of Columbus, OH. MCIS assumes fifteen (15) business days to complete the final deliverable.

NOTE:

DUE TO SUPPLY AND SHIPPING COMPLEXITIES WITHIN THE MARKET PLACE, PRODUCT AVAILABILITY AND SHIPPING TIMEFRAMES MAY BE IMPACTED. MCIS WILL MAKE EVERY EFFORT TO PROCURE EQUIPMENT AS QUICKLY AS POSSIBLE. MCIS MAKES NO GUARANTEE AS TO THE TIMEFRAME WHEN EQUIPMENT WILL BE RECEIVED AND CONSEQUENTLY WILL REFRAIN FROM SCHEDULING ANY WORK UNTIL EQUIPMENT IS RECEIVED.

PROPOSED PROJECT COSTING

Preliminary Assessment, Evaluation, Expenses	\$ 1,000.00
Link 1 (Site 1<>Site 2) Eng., Labor, Equipment, Expenses	\$ 15,500.00
Link 2 (Site 2<>Site 3) Eng., Labor, Equipment, Expenses	\$ 15,500.00
Link 3 (Site 3<>Site 4) Eng., Labor, Equipment, Expenses	\$ 15,500.00
Link 4 (Site 3<>Site 5) Eng., Labor, Equipment, Expenses	\$ 15,500.00
Link 5 (Site 5<>Muni Court) Eng., Labor, Equipment, Expenses	\$ 15,500.00
Documentation, Final Report, NMS Integration	\$ 1,500.00
Special Duty Police Officers	\$ 5,000.00

TOTAL PROJECT COST: \$85,000.00 (estimated)

Assumptions:

1. It is assumed Client will handle any permitting required. No vehicle permits or any other type of permits to perform the work as outlined herein has been assumed.



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2. Any work requested by Client that is outside of this Scope shall be billed at the hourly rate(s) per MCIS' 2024 Professional Fee Schedule (See attachment #1).
3. Client shall provide MCIS with access to the poles, roofs, shelters, towers, and network rooms where the radios and/or power injectors are mounted, and other areas as needed to support the scope of work.
4. Client shall facilitate authorization for remote access into and across the wireless network and attached components.
5. This price assumes no new hardware, material, or supplies beyond the budgetary amount.
6. This price assumes no performance bond will be required.
7. MCIS is not responsible for Force Majeure events causing damage or delays and no repair, correction, or replacement for such events is covered under this maintenance contract. Force Majeure is defined as any unforeseeable or unpreventable event beyond the reasonable control and without gross negligence of the party alleging its occurrence, which, despite all reasonable efforts such party to prevent its occurrence or mitigate its effects, causes a delay or disruption in the performance of any obligation imposed on such a party hereunder. Subject to the foregoing, Force Majeure shall include but not be limited to: acts of god; meteorological or atmospheric conditions; interference from new or existing sources; explosions; fires; storms; floods; lightning; system emergencies; terrorism; vandalism; any Force Majeure event described in the foregoing clauses that affects the performance of any person that is party to any material services; and any events that are deemed to be Force Majeure events under applicable law.
8. Pricing included herein assumes no sales tax.

TERMS AND CONDITIONS

This proposal and quotation are based on MCIS performing the entire scope of work as outlined above. Price assumes non-congested access to towers, buildings, and cabling. Contingencies also include delays for inclement weather. If any additional electrical or mechanical defects due to lightning damage or other types of damage are found during maintenance, these issues will be brought to Client's immediate attention.

FEE AND TERM OF CONTRACT

This proposal is valid for 30 calendar days from the date listed on this proposal. The above work will be provided for the CLIENT. Work for this project will begin in accordance with the schedule developed by MCIS for the above provided price(s). Pricing does not include any applicable sales tax. Payment terms are net 30 days.

MCIS represents and warrants that it is acting as an independent contractor, and none of its personnel shall be employees of CLIENT. MCIS will be responsible for all taxes, benefits, and insurance pertaining to its personnel. MCIS shall not be an agent for CLIENT or hold itself as an



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agent for CLIENT and shall not have the authority or power to enter any contract, make any purchase for or otherwise obligate CLIENT in any manner.

CONFIDENTIALITY

Any non-public information relating to the Client, or its business will be kept confidential by MCIS.

MCIS, Inc.

Client

By: _____

Paul Kerby
Vice President of Operations

By: _____

Date: _____

Date: _____



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**PROFESSIONAL FEE
SCHEDULE
Effective January 2024**

GENERAL

MCIS, Inc. will provide engineering, consulting, testing, and field services in accordance with the following fee schedule. Should you have any questions or require further details, please contact us.

	<u>Regular</u>	<u>Field Services</u>
SENIOR CONSULTING ENGINEERS	\$250 /hour	\$300 /hour
PRINCIPAL ENGINEERS	\$185 /hour	\$225 /hour
SENIOR SYSTEM & NETWORK ENGINEERS	\$175 /hour	\$215 /hour
PROJECT, NETWORK SYSTEM ENGINEERS	\$150 /hour	\$185 /hour
PROJECT MANAGER & SENIOR TECHNICIAN	\$115 /hour	\$140 /hour
TOWER CLIMBER	\$105 /hour	\$125 /hour
WIRELESS TECHNICIAN	\$90 /hour	\$110 /hour
ENGINEERING ASSISTANT	\$75 /hour	
CAD DRAFTING	\$75 /hour	
CLERICAL	\$55 /hour	

EXPENSES AND CONSIDERATIONS

- A. Services over 8 hours per day and Saturdays or in excess of 40 hours per week will be billed at 1.5 times the Applicable Service hourly rate. Sundays, Holidays, Emergency Call-Outs and hours over 12 hours per day will be billed at 2.0 times the Applicable Service rate.
- B. Time includes travel time at regular rates to and from corporate headquarters located in Lakeland, FL.
- C. Domestic air travel will be Coach Class.
- D. International air travel will be Business Class.
- E. Expenses will be billed at cost.
- F. Car mileage will be billed at current government rates unless otherwise agreed to.

FIRM CONTRACTS

MCIS, Inc. will provide fixed fee bids for any job having a clearly defined scope or work definition. Rates are subject to change without notice. Resumes available upon request.

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Aerial Map





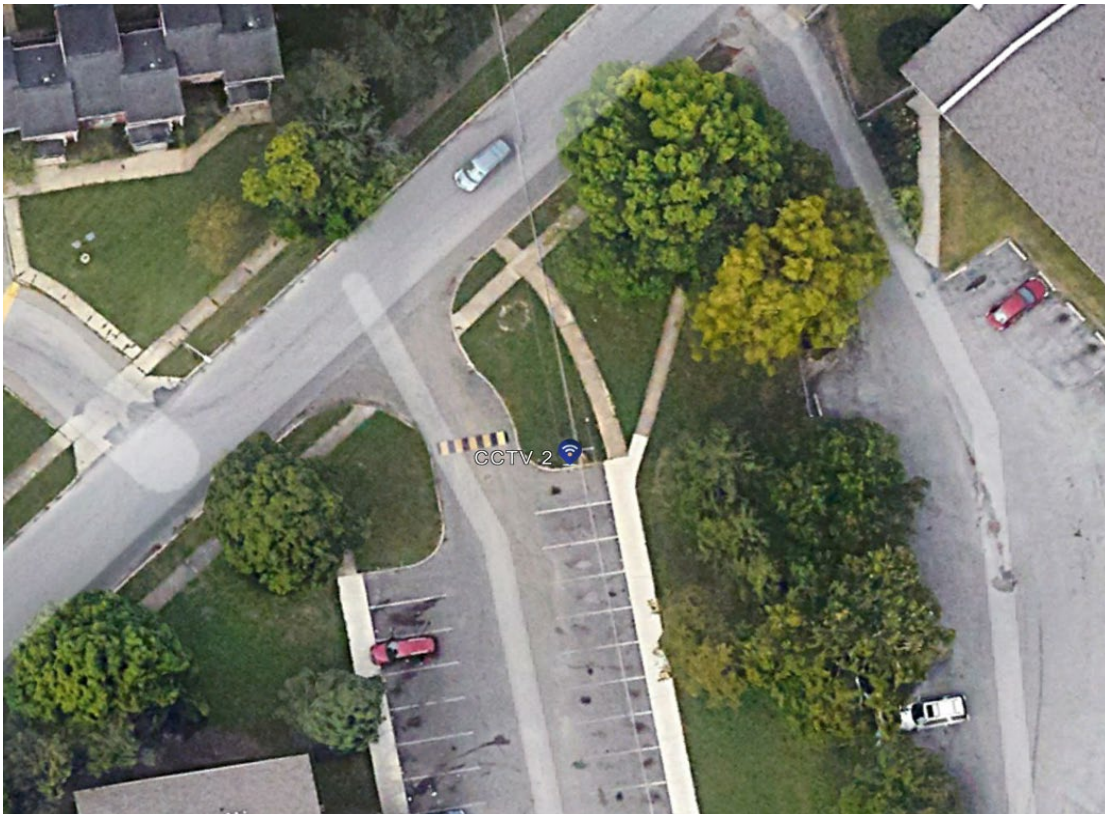
An aerial photograph of a school campus with a network diagram overlaid. The diagram shows four CCTV cameras (CCTV 2, CCTV 3, CCTV 4, and CCTV 5) connected by a blue line. CCTV 5 is labeled 'BackHaul'. The network is connected to a red dot on a building. The campus includes several buildings, parking lots, and a playground.

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An aerial view of a residential street intersection. A red car is visible on the left side of the road, and a blue car is visible on the right side. The surrounding area includes green lawns, trees, and a building with a grey roof. The text "CCTV 1" and a blue circular icon with a white Wi-Fi symbol are overlaid on the image.

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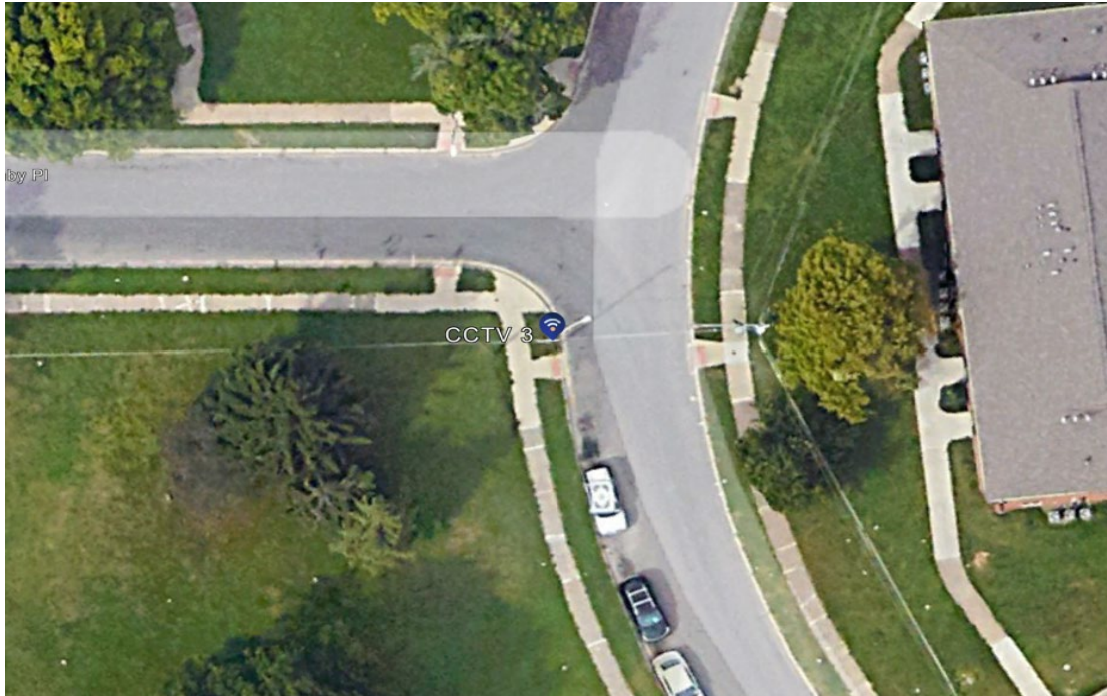


CCTV 2



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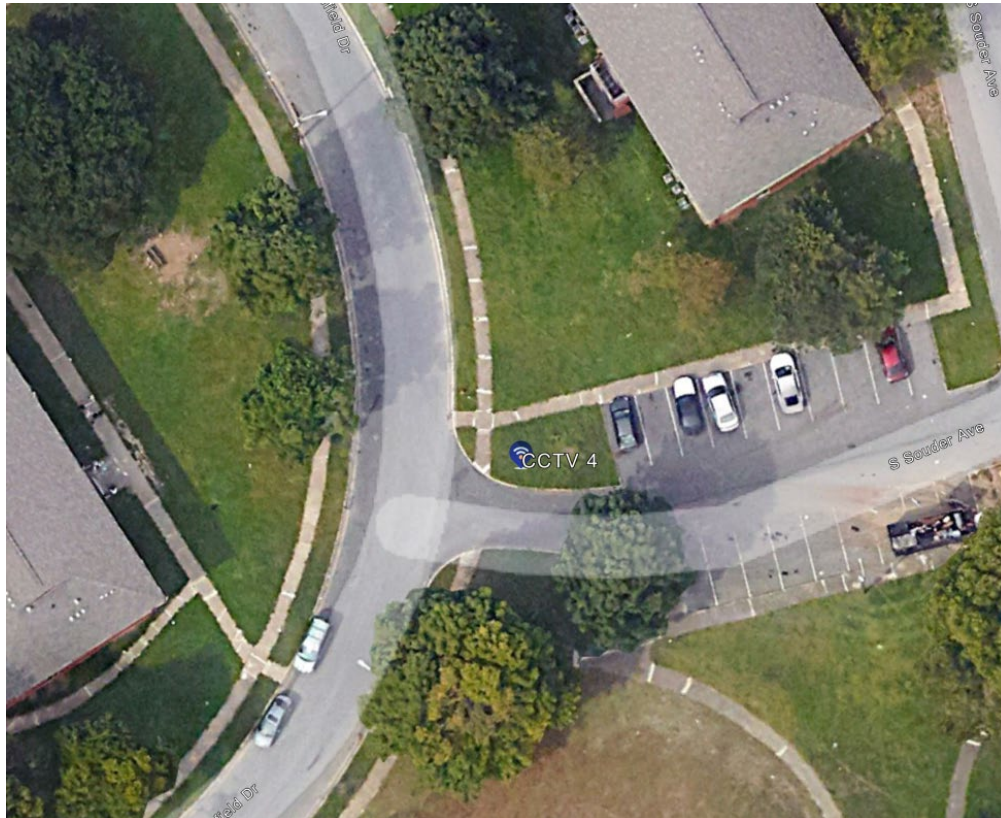


CCTV3



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CCTV 4

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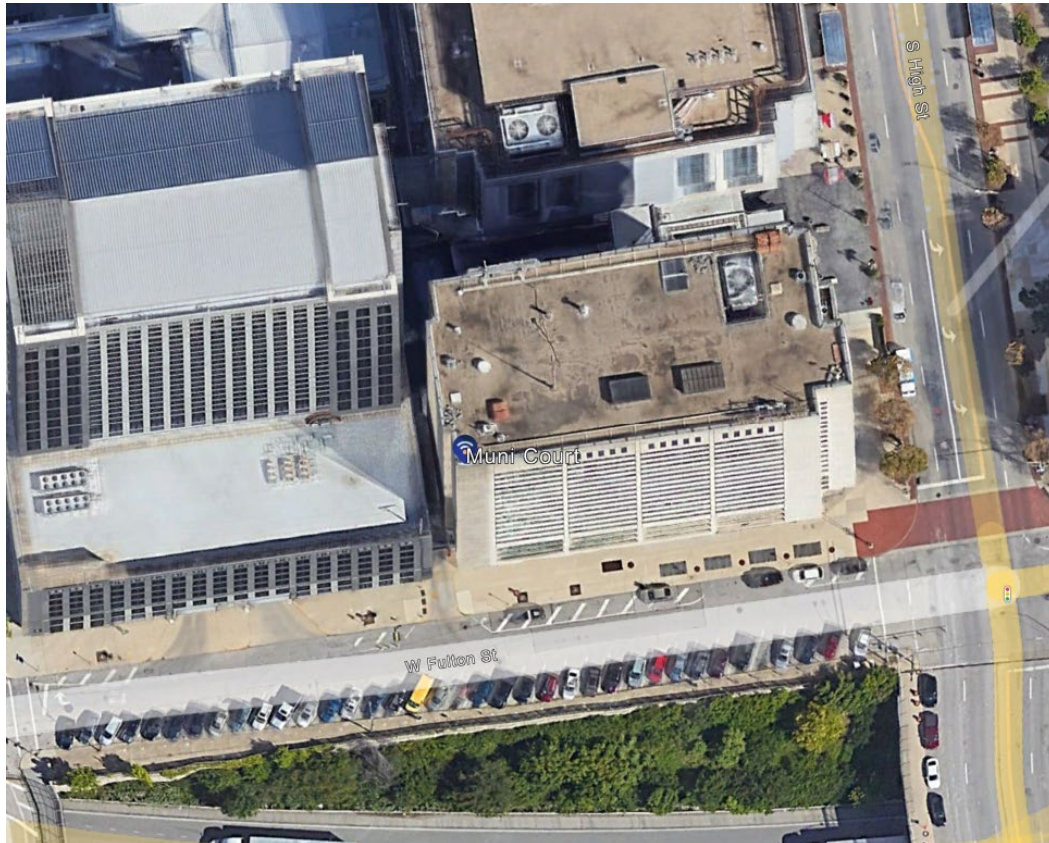


CCTV 5



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Franklin Co. Municipal Court