

HOEFER WELKER

THE CITY OF CHILLICOTHE, MISSOURI  
POLICE DEPARTMENT HEADQUARTERS

# **FACILITY ASSESSMENT**

613 WALNUT ST. CHILLICOTHE, MO 64601

**DATE COMPLETED:** April 8, 2024

**REPORT COMPLETED BY:** Hoefler Welker  
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# EXECUTIVE SUMMARY

The existing City of Chillicothe police station is a shared facility with the Livingston County sheriff's office. The building has served multiple tenants over the years including at one time serving as a doctor's office. The police department has utilized the facility to the best of their ability with some minor modifications to meet the daily operational needs of a modern police force. Many spaces within the police department are undersized and effect the efficiency of the police staff. Police stations have many critical areas that need to be designed to allow for the best use of the space. It is challenging to turn an existing building into a police station.

This shared facility is in poor condition. The existing parking lots, curbs, and sidewalks are in various states of disrepair. Site drainage is currently insufficient, and ponding occurs in many locations across the site. Asphalt failures are present and concrete sidewalks are crumbling. Americans with Disability Act compliance is also a concern. The handicap parking stalls do not meet the required slopes. The existing alley is also in very poor condition with low spots of ponding water.

Police buildings must also have robust structural systems to handle seismic, wind, and snow loads. This code requirement helps to maintain critical facilities in case of a city-wide emergency event. The existing building does not appear to meet those current requirements. Retrofitting an existing building would be impractical and very expensive.

MEP systems are in bad condition. Water heaters, major mechanical equipment, and plumbing fixtures are beyond their useful life. There is inadequate heating and cooling throughout the building. Two-thirds of the exhaust fans no longer operate. Regarding the electrical system, major equipment is nearing its useful life. There are a few electrical items within the building that are currently not in compliance with the national electrical code. The building also does not meet current building code energy requirements. The International Energy Conservation code requires facilities to be designed to reduce the amount of electricity needed to run the facility. For example, this would require the building to include continuous insulation within the facades, more efficient HVAC equipment, and lighting controls.

The building appears to have some façade and roof failures with minor repairs done over time. Brick settlement and cracking is seen on the south and west facades of the building. Caulk joints failures are seen at various locations, leading to the possibility of water intrusion into the exterior wall assembly. The roof has significant wear and tear. Poor slope and drainage have led to ponding throughout the roof where rainwater can't reach the drain. Sheet metal coping caps at the top of walls are rusted in some locations. This cap is an integral part of the building's weather barrier. It not only terminates the roofing membrane but also caps the exterior wall.

The interior of the building is also in poor condition. Within the detention area, concrete masonry unit walls have surface cracks, and the paint is peeling from the walls. Various ceilings are in a state of disrepair including some ceiling tiles with cracks potentially due to wall movement or settlement issues. There are also several areas that do not comply with accessibility requirements. One major issue is that the police department is located on two different floor elevations with the only way for staff to get from one level to another by using the stairs. An elevator or ramp would need to be added to comply with the applicable accessibility codes.

Hoefer Welker has spent the last couple of months working with the City and the police personnel to determine space needs for the department. The current facility is missing many spaces that are desired. These spaces include a training room, conference rooms, sallyport, and adequate locker room areas for both men and women. We have also discussed several areas where the existing facility is deficient or antiquated.

There are several spaces that do not function well for the police department. The safety of police staff is a concern. There is no secure parking area, nor is there a secure way to transfer detainees into the facility. Property processing and packaging is occurring right next to officer work areas and conference room space. This is not recommended and can lead to potential contamination of police officer regularly used spaces.

A new facility will allow for increases in efficiency of the daily operation of the police force. It would also allow for the betterment of the health and safety of the police officers, civilian staff, and communication specialists. Recruitment and retention of staff is also an important aspect of any municipal service. To stay competitive with the needed workforce, police facilities must provide a safe and comfort place for the employees. A police building needs to not only serve the citizens of Chillicothe, but also provide a safe and practical place for police staff to work each and every day.



# SITE ANALYSIS

This site analysis is for the consideration of a new Police Department facility for the City of Chillicothe, Missouri. The project site is bounded to the North by Webster Street, to the South by Jackson Street, to the East by Cherry Street, and to the West by Walnut Street and contains Lots 1-8, of Block 30, of the Original Survey of the City of Chillicothe, Livingston County, Missouri. The current Police Department and its associated parking lot occupies Lots 2, 3, 6, and 7. Lots 1, 4, and 5 are currently vacant and Lot 8 contains an existing building and is not part of the project.

The site generally slopes to the Northwest corner of the site where stormwater is discharged into the public street via an area inlet in the parking lot. Any stormwater not discharging to this inlet is captured in the public stormwater infrastructure along Webster, Walnut, and Cherry Street. Roof drains from the Police Department and the existing building on Lot 8 discharge to an alley that bisects the project area, to the vacant lots in the Northeast portion of the site, and

directly to the East curb line of Walnut Street.

The project site is served by existing sanitary mains in Webster Street. A sanitary service line runs through the alley. Water mains exist in both Webster and Jackson Street. Overhead electric lines are found along the entire perimeter of the site and down the alley. A gas main is found in Walnut and Webster Street. A gas service line serves the existing police station and runs through the alley. Fiber optic communication lines traverse the site in multiple locations, most notably in the alley and the Northern and Southern portions of the site. There is an existing communication tower in the middle of the east side of the parking lot north of the existing police station.

A site investigation was conducted by BHC on March 15, 2024, to investigate the condition of the project site. Areas of concern are documented below via pictures taken during the site visit and supporting explanations:

## ADA COMPLIANCE



The ADA parking stall and ramp at the North entrance of the Police Department are not in compliance with ADA code. The existing cross slope is 4.20%, which exceeds the maximum of 2.08% in any one direction.



**ADA COMPLIANCE CONT.**



The ramp leading to the North entrance door is under the 5.0% maximum running slope to qualify as a ramp and is therefore in compliance with ADA code. This same requirement applied to the landing to the north of the ramp, which has a slope of 3.30%.



The ADA parking stall to the South of the Police Department is out of compliance with ADA code as its cross slope of 2.20% exceeds the maximum of 2.08% in any one direction.



**PAVEMENT**

Existing asphalt pavement on all portions of the Police Department parking lot and general site is in poor condition. The parking lot has multiple areas where the surface asphalt has been chipped, rutted, and cracked. Existing curbs have also been cracked and destroyed. Many of these areas have become localized low points where water accumulates as evidenced by sediment deposits. BHC's site visit occurred a few days after a period of rain and these areas were still damp or had evidence of previous standing water.





**PAVEMENT CONT.**

The existing concrete parking lot at the far North portion of the site appears to be in acceptable condition. However, the area inlet in the Northwest corner of this parking lot appears to allow standing water as evidenced by sediment deposits.





## PAVEMENT CONT.



On the East side of the property, there are three partial driveways with curb cuts onto Cherry Street.



The paved alley that bisects the Police Department site is in poor condition and has multiple areas of partially destroyed asphalt pavement. Roof drains from the Police Department and exiting building to the East discharge into this alley. In some areas, this discharge point is rutted out and appears to be a local low point where water stands.



PAVEMENT CONT.





## SIDEWALKS

The existing sidewalks surrounding the Police Department property are in a mixed state, varying from poor to acceptable conditions. There is a portion of the sidewalk on the West property line that has destroyed curb blocking the walkway with what appears to be base course covering it. Many of the sidewalk ramps to the public street and crosswalks do not meet ADA standards for a ramp as the sidewalk ends at a full height curb. Many of the sidewalks have areas that appear to have standing water as evidenced by sediment deposits.





# MECHANICAL



The majority of the HVAC equipment serving both sides of the building is at or beyond its expected useful life. The building is heated and cooled by several split systems with condensers on the roof and 2 rooftop units. Few units have outside air, and none meet the currently adopted building codes for ventilation. Boiler flues are too close to outside air intakes, which can allow flue gases to enter the building ventilation. RTUs and Condensing units on the roof are rusting. Several units contain R22, a refrigerant which is no longer manufactured due to EPA regulations. Some split systems are in closets too small to allow service or replacement, and walls would need to be demolished to replace them.







## MECHANICAL CONT.

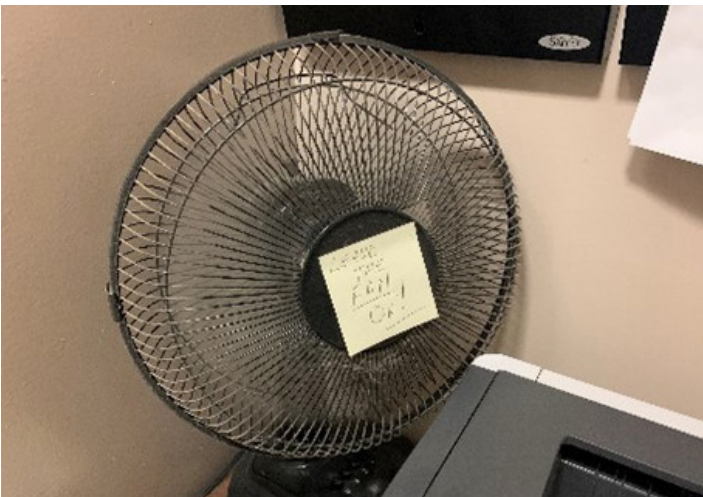
HVAC zoning is inadequate and not up to the currently adopted building codes. Exterior rooms are zoned with interior rooms creating hot and cold swings. Total HVAC capacity is inadequate, leading to uncomfortably hot spaces and high humidity. 2/3rds of the exhaust fans within the building no longer operate, creating humidity and odor issues. There is no exhaust in the property storage areas. Most diffusers are covered in dust.





## MECHANICAL CONT.

Most ductwork does not have insulation. Transfer grilles create holes in walls reducing sound privacy to zero. The ceiling is insulated with unfaced Batt insulation that lays on top of the ceiling tiles. This insulation is not tight, and allows significant infiltration from ceiling plenum. This ceiling return plenum is uninsulated.



# PLUMBING



Water heaters are 5-8 years old. General window of replacement is 15 years. Most water heaters do not have drain pans below them. Most other plumbing fixtures such as sinks, toilets, and showers are beyond their expected useful life.





# ELECTRICAL

On the police side of the building, the electrical system is in surprisingly good condition given its age; however, the equipment is nearing the end of its useful life, and it is recommended it be replaced before it begins malfunctioning. Clearances for the panels are being violated by stored boxes, vacuums, and equipment, and there are no obvious alternate locations for everything being stored in the space.





## ELECTRICAL CONT.

On the sheriff side of the building, the electrical system is past its useful life and needs to be replaced in its entirety. The service conductors above the roof are a code violation (NEC 230.24) and fire hazard. Meters are located inside the building, which makes gathering information difficult for the utility provider. Panel clearances are violated by numerous items, including items that are heavy and/or difficult to move if someone needed to access the panel quickly. It is recommended this portion of the building be brought up to code as soon as possible for everyone's safety.







## ELECTRICAL CONT.

The condition of lighting and receptacles in the building is as expected for a building of this age. Numerous light fixtures have broken or discolored lenses, bulbs that have burned out, or simply don't work. Several receptacles were observed to be broken, with exposed live parts. Cords were observed going through ceilings, which is a code violation (NEC 400.12) Repairs can be made for all this equipment, but the repairs will be necessary in the majority of the building.

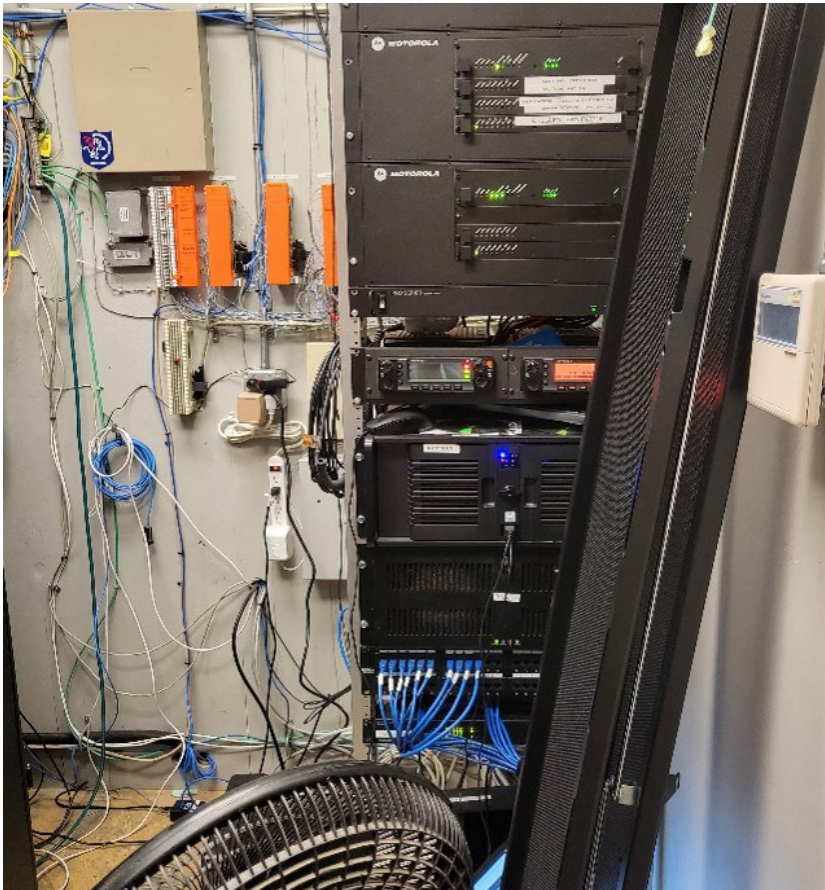






## TECHNOLOGY

Technology on the police side of the building has been updated and appears to be appropriate for the building use. The technology room has apparent cooling challenges, and the location is not ideal but workable.





## TECHNOLOGY CONT.

On the sheriff side, the technology is clearly antiquated, spread out through the building, and is generally not located in an enclosed room. It was unclear if this technology is still in use, or if the sheriff's side has been fed with the new equipment. If the equipment is no longer used, it should be removed in its entirety per code (NEC 800.25).



# ARCHITECTURAL



## **BUILDING FAÇADE CONDITIONS**

Existing site retaining wall is in poor condition. The steel reinforcement elements have been exposed and rust stains clearly shown. The brick cladding has failed to the point that large pieces have broken off and crumbled. Brick efflorescence is also clearly present which signifies water has penetrated the wall assembly.



Settlement issues are present on the south façade near the existing entrance door. Cracks within the brick wall seem to have had some minor repair.



## BUILDING FAÇADE CONDITIONS CONT.

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Significant settlement and minor repair work of the brick facade has been done on the southwest corner of the building.



Brick façade settlement on the west façade has occurred with minor repair. The entire west building façade could have settlement issues. Unknown if there's foundation failures causing the settlement.



## **BUILDING FAÇADE CONDITIONS** CONT.

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Brick control joints need to be re-repaired and recaulked.



Caulk joints between window systems and brick cladding have failed.





## BUILDING FAÇADE CONDITIONS CONT.



Existing sidewalk elevation on the outside of the building is actually higher than the interior finish floor elevation. This relationship could allow for water intrusion from the exterior to the interior. The exterior wall is acting as a retaining wall and also serving as the only barrier to keep water out. It is preferred to keep exterior grade below interior finish grade.



Soffit damage is present. Repairs are needed.



## **BUILDING FAÇADE CONDITIONS CONT.**

Soffit vents are rusted and need to be placed.



**ROOF CONDITIONS**

Mansard roofs have water infiltration, surface stains, and damage from coping cap failures along the top of the wall.



Roof membrane has significant wear and tear.





**ROOF CONDITIONS CONT.**

Roof ponding is occurring where roof is not properly sloped to drains. This increases the chances of roof failures and in turn building leaks.



Exterior wall roofing coping cap has significant damage including material failures, water ponding, and rust. This could lead to rain water entering the wall cavity and in turn into the building.





## **ROOF CONDITIONS** CONT.

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Building gutters need repair and repainting.



**INTERIOR CONDITIONS**

Casework failures are present including countertop damage of the plastic laminate.



Countertop and cabinet damage is present throughout the facility.



**INTERIOR CONDITIONS CONT.**



Existing concrete masonry unit walls have water damage leading to surface failures including some surface cracking as well as paint peeling from the surface.

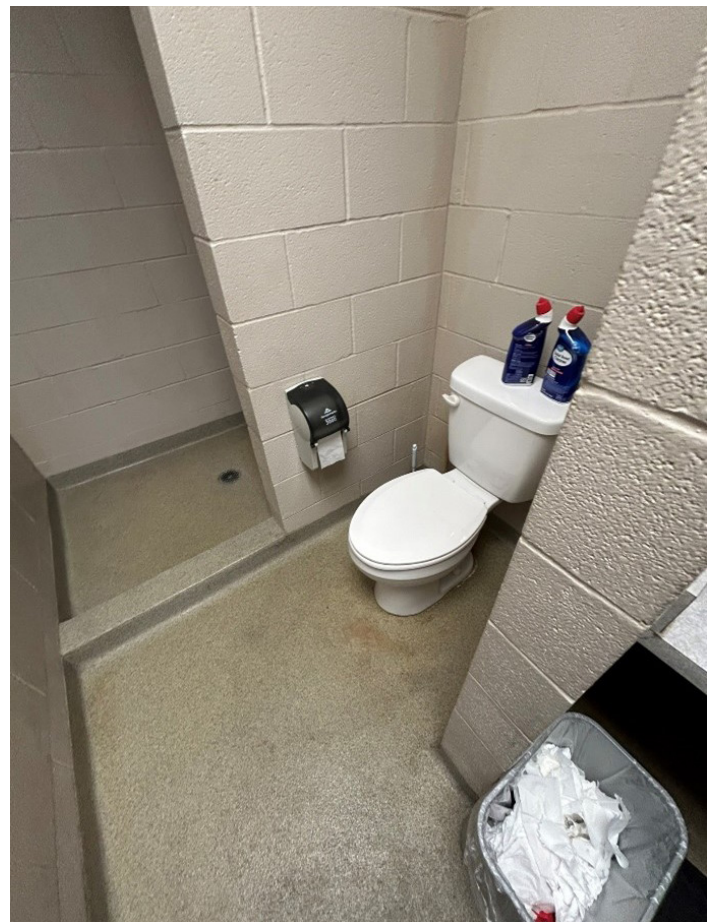






## **INTERIOR CONDITIONS CONT.**

Restrooms are in poor condition. Flooring, wall finishes, plumbing fixtures, and ceilings need to be replaced. Existing mechanical diffusers need to be replaced.





**INTERIOR CONDITIONS CONT.**



Various ceiling systems are in disrepair. Ceiling tiles are broken, damaged, or missing throughout the facility. Cracking of tiles may be an indication of interior wall movement due to structural issues such as building settlement.



**INTERIOR CONDITIONS CONT.**



Ceiling grid systems are failing in various areas.



Drywall ceiling has extensive water damage. This is probably due to roof leaks in this area.



## ACCESSIBILITY (ADA COMPLIANCE)

The existing police department is separated on two levels. Only steps have been provided for access. No elevator or ramp has been provided.

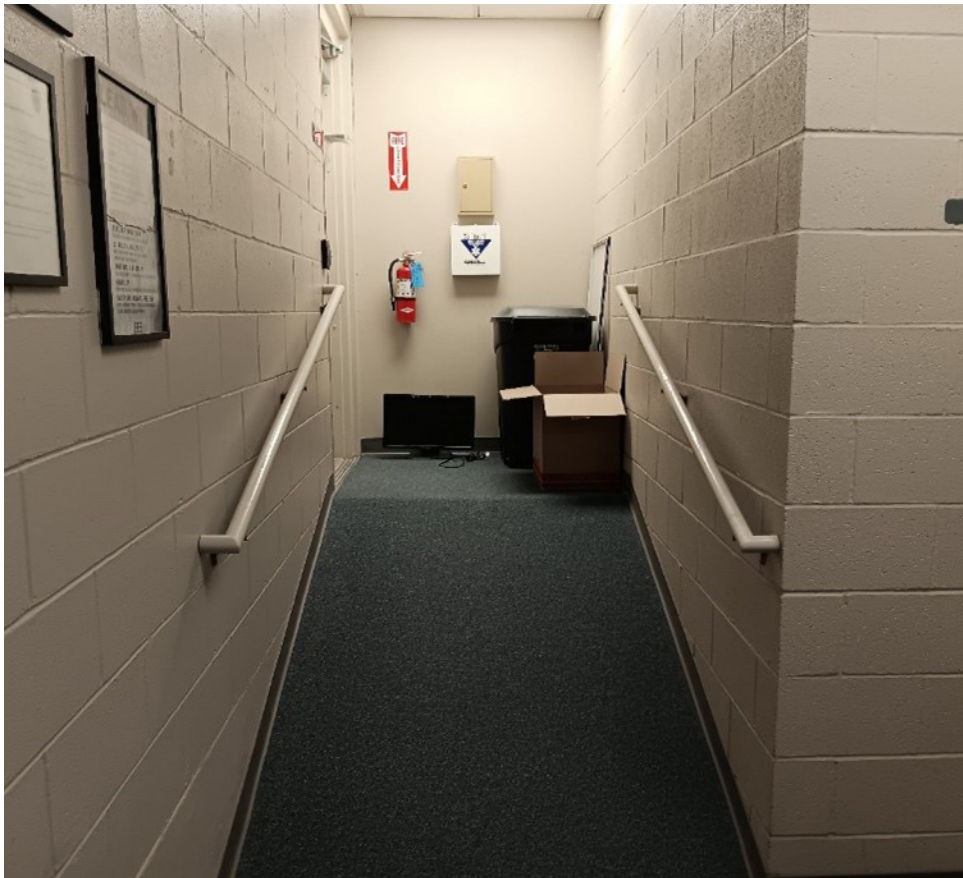


Restrooms entrances need to be 32" clear width for wheelchair access. The doors are currently too narrow. The required push and pull clearance is also not provided.



## ACCESSIBILITY (ADA COMPLIANCE) CONT.

Within the restrooms, the required fixture clearance and turning radius have not been provided. For example a minimum turning area with a diameter of 5'-0" clear is needed.



Interior ramp to access the property room does not meet slope requirements or provide the required clearances. The ramp is too steep for wheelchair use.





## **DEFICIENCIES IN BUILDING SPACES**

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No sallyport exists. No secure transfer area of prisoners is currently provided. Officers are vulnerable with direct public access when moving prisoners from the patrol vehicles into the detention area.





## DEFICIENCIES IN BUILDING SPACES CONT.

Patrol officer work area is significantly smaller than needed. There is not enough space for staff mailboxes, radio charging, and staff supplies. Various items are located on the floor due to lack of storage space.







## DEFICIENCIES IN BUILDING SPACES CONT.

Breakroom areas are not large enough to function for staff. Storage is lacking. Appliances appear to be beyond their usable life





## DEFICIENCIES IN BUILDING SPACES CONT.

Restroom, locker, and shower facilities are inadequate. Dedicated private shower facilities are not provided. Female staff shares locker area with male staff without any ability for privacy. Storage space is undersized and various items are placed on the floor.







## **DEFICIENCIES IN BUILDING SPACES CONT.**

Communications center is undersized. Staff is currently working in very tight proximity. There is not enough existing space to add standard size dispatch consoles for existing staff.



## DEFICIENCIES IN BUILDING SPACES CONT.

Property processing and intake areas are insufficient. These spaces should be much larger and provided with proper exhaust systems to ensure the health of those utilizing these spaces. These spaces should also be located near patrol functions for efficiency. They should not be combined with officer work areas where containments could enter daily work spaces.







## DEFICIENCIES IN BUILDING SPACES CONT.

Radio tower technology equipment is located in a free-standing metal building structure located in the parking lot. This structure is not hardened or protected from potential storm damage. There is also not adequate HVAC to prevent equipment damage related to temperatures within the space. Dust and dirt could also damage this equipment,







## DEFICIENCIES IN BUILDING SPACES CONT.

Storage space is lacking throughout the facility. Records room also serves as a large storage room. Stud wall space is being utilized as shelving. The main electrical room is filled with miscellaneous items. Corridors have items piled on the floor potentially impeding the path of egress.











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