The Former

VIGO COUNTY SECURITY CENTER

201 Cherry Street
Terre Haute, Indiana 47807

Repurpose Existing Facility Study

May 25, 2022

DLZ
ARCHITECTURE • ENGINEERING • PLANNING
SURVEYING • CONSTRUCTION SERVICES

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INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

May 25, 2022

Vigo County Board of Commissioners
650 South 1st Street
Terre Haute, Indiana 47807

RE: The Former Vigo County Security Center
Repurpose Existing Facility Study

DLZ Indiana, LLC (DLZ)
2263.1082.90

Dear Commissioners,

The objective of the Repurpose Study is to explore and validate potential uses for the former Vigo County Security Center located at 201 Cherry Street in Terre Haute, Indiana. The facility first opened in 1980 and there was a major project in 2000. With the DLZ designed new Vigo County Security Center opening at 600 Honey Creek Drive in Terre Haute, the existing facility will become mostly vacant by the summer of 2022.

It is understood the County realizes the facility has many needs, has potential to be repurposed, or possibly to be partially demolished, or fully demolished, to create another direction for long term site and building visions. DLZ explored several options which are included in the Study.

Our Study process includes a multi-step process encompassing the visual observation, collection, and analysis of existing conditions, as well as developing options on how to repurpose the facility. The following document summarizes the facility assessment by discipline.

DLZ appreciates all the Vigo County officials and staff that contributed to the success of the Repurpose Study. Working together, Vigo County and DLZ developed a useful Repurpose Study for the future opportunities for this site and facility. Upon review, please forward any comments you may have. DLZ appreciates the opportunity to be part of the Vigo County Team for this project.

Respectfully submitted,
DLZ INDIANA, LLC

Eric B. Ratts, AIA
Principal Architect

OVERALL EXISTING CONDITIONS

The existing Vigo County Security Center (VCSC) was built in 1980 with a major renovation/expansion in 2000. The original architect was Fleck & Hickey, Inc., and the architect for the 2000 project was RQAW.

Unfortunately, the design of the facility, among other items, has contributed to multiple lawsuits and issues throughout the years of operation. DLZ was commissioned in 2016 to develop a Jail Feasibility Study which resulted in the design for the new Vigo County Security Center. The new VCSC will be fully operational in the summer of 2022.

Located just north of the historic Vigo County Courthouse, the site is at the southwest corner of the Cherry Street and US Highway 41 (North 3rd Street). The existing VCSC is a prominent site in Terre Haute and has a high volume of traffic. A large new surface parking area is being reconstructed just to the west of the existing VCSC site. The site is poised for tremendous growth opportunities within Terre Haute and the "Turn to the River" campaign.

The existing VCSC houses the following:

- Sheriff's Office
- Adult Jail with 268 rated beds in both linear and indirect podular remote supervision
- 911 Dispatch

Spaces and systems in the building are designed specifically to meet the needs of the user groups. Typically, repurposing areas of a former jail are cost prohibitive due to the nature of the security design/construction.

The overall condition of the existing VCSC is fair to poor. Maintenance work has been budgeted, scheduled, and completed on an ongoing basis over the years, but extensive renovations to maintain the facility has not occurred. As a result, the consistent wear and tear of a jail atmosphere, has resulted in the existing conditions.

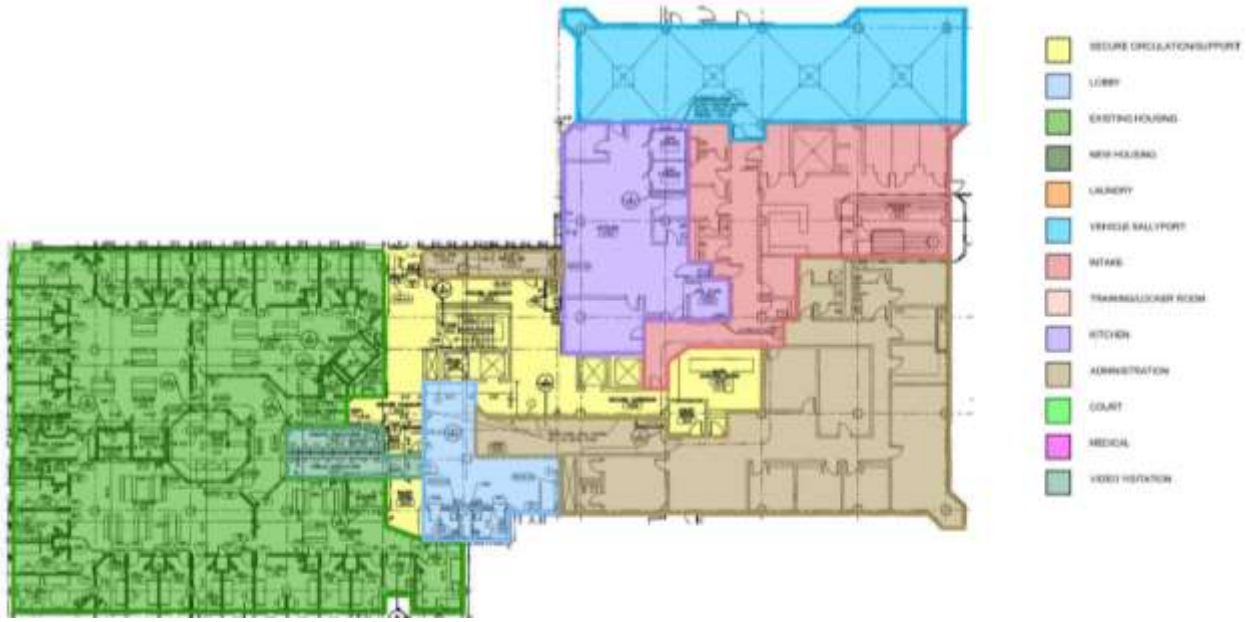
Part of the existing VCSC still serves as a purposeful space for the Vigo County government. Located in the lower level is the 911 Dispatch and associated spaces.

If the building is repurposed or demolished, the 911 Dispatch would need to be relocated. This would also include the communication tower and equipment supporting the 911 Dispatch.

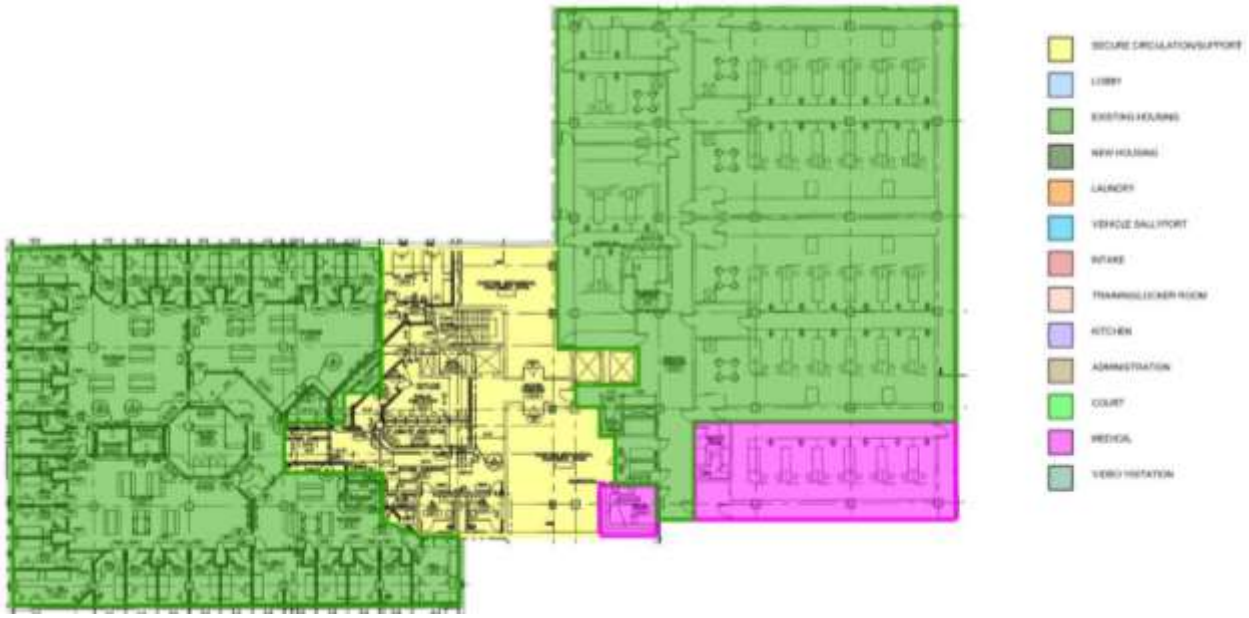
With the new Vigo County Security Center being located a few miles south of the courthouse, the existing vehicle sallyport, intake/booking/holding area could be utilized for inmates transported from the jail to the courthouse.

However, if this area is to be utilized, an extensive renovation to upgrade the area is necessary.

EXISTING FLOOR PLANS



Main Level



Upper Level

SITE

There is ample parking to the west of the VCSC. The parking is area was in very poor condition, but there is a current project to completely redo the parking.

With the location of the main entrance into VCSC, it is difficult to visually see the entrance from the parking lot. It is also a long walk as there no parking spaces near the entrance to VCSC.

There are some pylon directional signs on site to help guide visitors to the correct location.

A large communication tower is located on the southwest corner of the VCSC. It has stone ground covering and a security fence surrounding.

The concrete sidewalks are in fair condition. The lawn area is in fair to poor condition.

A high security fence surrounds the secure side of the VCSC. This prevents the public from getting too close to the secure housing portion of the VCSC.

Adjacent to the main entrance, there is an emergency generator and HVAC air handling unit. Both are surrounded by a fence with a gate. However, the units in this location are unsightly.

On the north side of the VCSC is parking dedicated to the staff. It is also the location of the vehicle sallyport. The intercom to the vehicle sallyport has rusted – two intercom heights should be explored. Slip covers should be provided at the bollards as the paint is in poor condition.

The wood fencing to screen the mechanical equipment is in poor condition.

Much of the landscaping needs to be pruned.

The lack of splash blocks at the bottom of downspouts has created erosion. The erosion could cause possible foundation settlement issues.

Several of the required exits need to have concrete walks extended to public right-of-ways.

The storage barn is in poor condition. Additional storage is required.

EXTERIOR ENVELOP

Façade

The exterior façade is a brick veneer. The brick veneer is in fair to poor condition due to settlements in the structural foundation system, failures in steel lintels, improper loading on the structure, water infiltration, construction quality, and several other potential issues.

In several areas, there are multiple cracks and separations in the veneer brick. The cracks and separations occur both in a vertical and horizontal shift in the brick veneer. In some instances, the shifts are nearing 1" in change.

Several areas of the brick veneer have been tuckpointed due to cracks and failures. Mortar color matching is always difficult, as mortar color weathers over the years.

Several steel lintels have rusted and should be replaced. The lintels are sagging in several locations.

Most of the sealants are in poor condition. They have failed, cracked, and separated from the materials they are sealing. Replacing exterior sealants before they fail is one of the most important contributors to maintaining a healthy building envelope. An estimated 90 per cent of air and water leakage occurs at one per cent of a building's sealant locations (vulnerable sites such as terminations, transitions, and penetrations).

Making sure that this one per cent of the exterior is properly sealed is critical. Despite their importance, exterior sealants are also one of the least understood and maintained components of a building envelope. The simplest explanation for this might be that sealants are, for the most part, out of sight and therefore out of mind. Sealants typically have a long replacement cycle — 10 to 15 years, depending on product and environmental exposure. However, rarely our sealants replaced as part of maintenance plans. Sealants may only account for an extremely small percentage of building construction, but building envelope repair and replacement account for significant spending.

The exterior windows and door systems are in fair condition. There are both commercial grade and detention grade openings around the building, pending the location and internal use. Some windows are showing signs of surface rust.

Several exterior door opening locations are showing signs of rust at the bottom of the doors and Wall louvers in the façade are in fair condition.

Extensive work is recommended to repair the facade issues.

Roof

The existing roof is a fully adhered EPDM (Ethylene propylene diene terpolymer membrane) roofing system. EPDM is a durable synthetic rubber roofing widely used in low-slope buildings. The two primary ingredients, ethylene, and propylene are derived from oil and natural gas. The EPDM system is black and 60 mils in thickness. The seams of the roofing system are sealed with liquid adhesives and/or specially formulated tape.

Tapered insulation typically provides the low slope for drainage. The tapered insulation system slopes at approximately ¼" per foot to area roof drains. Strainers are provided at each roof drain – some strainers are broken or missing. Per the current building code, at each location there should be a roof drain and an overflow drain (basically a 2" trim around the drain) – overflow drains are not present. The roof drains are then piped internally through the building to an underground stormwater collection.

There are several areas on the roof system where ponding water occurs. Ponding water is defined as the water which remains on a roof 48 hours or longer. Water may accumulate on a low-slope roof due to rain, snow, or runoff from rooftop equipment. Ponding water can have major negative consequences, regardless of the type of roofing system. Proper design, installation and maintenance of roofing structures can prevent this condition and its associated problems.

The adverse effects of ponding water on roofs can include:

- Deformation of the deck structure: Ponding water can substantially increase the load on roof decks. As water accumulates, deck deflections can increase, thereby resulting in additional ponding water, which could compromise the structural integrity of the deck.
- Damage to the roof surface: Ice formations develop and move constantly with changes in temperature. This movement can "scrub" the roof membrane to such an extent that considerable physical damage to the membrane can occur.
- Growth of algae and vegetation: When water stands for long periods of time, algae and vegetation growth will likely occur, and may cause damage to the roof membrane. Additionally, vegetation can clog drains and cause additional ponding.
- Accumulation of dirt and debris in the ponding area: Dirt, debris, and other contaminants can affect and damage the membrane surface. These issues can also lead to clogged drains.

Roof curbs for equipment are usually a minimum of 12" above the roof membrane. The heights vary from a few inches to more than 12" on this roof. Flashings to be in fair condition.

Metal coping and edge trim are in fair condition.

Inside the facility, there are signs of likely roof leaks. Areas of the roof have been patched, or reworked, which coincide with the likely roof leaks.

Overall, the roofing system appears to be in fair condition, but replacement should be considered with a full renovation and repurposing of the facility.

Soffit
At the soffits, there are several cracks that need repaired. The full soffit needs to be patched, cleaned, and painted.

Additional joints in the soffit are required to control the cracking.

Sallyport / Intake
The intake area is not ADA compliant due to the step into the area. An ADA compliant ramp is required.

INTERIOR

Although the building was renovated in 2000, there are several non-compliant ADA issues in the VCSC. From door hardware to floor space clearances, lack of grab bars, counter heights, steps in lieu of ramps, etc., there are several renovations required if the VCSC is repurposed.

Finishes

The finishes of the building are in varying conditions of fair to poor, pending the area of the building.

The Sheriff's Office area finishes are typically of such spaces: carpet floors, painted walls and suspended acoustic ceiling systems. Spaces have been revised/reconfigured over the past forty years to meet the needs of the Sheriff's Office. If the area is to be repurposed for another use, the complete area should be renovated, including all new finishes.

Overall, the Jail side of the facility is in poor condition. Typical of Indiana jails, floors are concrete, walls are painted, and a variety of ceiling types. Due to the area being used by inmates 24/7 for the past several decades, the finishes need to be fully renovated if repurposed.

The lower level finishes are in fair to poor condition, pending the area. The toilet rooms need to be updated, while the Training Room is fair and the 911 Dispatch area is fair. Storage areas and evidence processing areas are typical of other facilities.

Ceilings

Most of the ceilings in the building are in fair to poor condition. Many areas indicate either roof leaks or piping leaks. Ceilings should be replaced if the facility is repurposed.

Casework, Doors, and Hardware

The overall condition of the casework and counters are in fair condition. Several areas have been replaced or added over the years. Considering the age and amount of use, the casework and counters have held up relatively well.

Doors are in fair condition, but they should be painted or refinished. There are hollow metal frames showing rust at the bottom due to continual floor mopping and the possibility of accelerates used when originally grouting the frames solid.

Not all door hardware is fully compliant with ADA requirements. Doorknobs in lieu of levers are used at several locations.

Door hardware is old and, in several areas, should be upgraded or replaced. Many doors have hardware that must be retrofitted in lieu of replacement, due to the age of the hardware and availability of replacement parts.

Secure Circulation

One of the primary design guidelines in jail design is the line of sight observing inmates. It is imperative for correctional officers be able to see the movement of inmates in as many areas of the secure area as possible.

In the existing VCSC, line of sight separation of male and female inmates is achieved by provide coverings over windows and doors. Unfortunately, these coverings reduce the ability for correctional officers to have line of sight into secure housing units.

Showers

Majority of the shower areas in the Jail are in poor condition. Paint is peeling and metal surfaces have rusted.

Construction Materials

Due to the requirements of a jail, with respect to the typical Indiana Jail Standards and American Correctional Association guidelines, repurposing such an area is typically extremely difficult and cost prohibitive. Walls are typically grouted solid and security bars are placed in walls to meet the standards and guidelines. Floor plan layouts are specifically designed for a jail setting, so renovation may include relocating several walls and ceilings.

The original 1980 construction included open bar fronts at secure housing. This has tremendous liability on the County due to potential suicide risk.

The intake/Processing/Holding area is very small with limited storage and high security risk.

The existing secure housing is staff intensive due to the design layout and lack of good sightlines for observation.

Shower curtain rods at several showers pose a liability threat.

Designing for Today's Inmates

Across the country, jail designs have evolved significantly to address the societal issues of inmates today. Jails were once designed for those who committed crimes, but today's inmates are committing crimes who also have significant medical, mental health, behavioral management, and addiction issues. Simply put, today's inmates failing considerably in yesterday jail designs.

For example, the new VCSC secure areas have large skylights, multiple opportunities for programming/rehabilitation, normalized colors, and visitation options as following:

- Video visitation
- Non-contact visitation
- Contact visitation

The multiple types and locations for visitation allows the inmates the opportunities to have meaningful and plentiful visitations. This is key to quality mental health.

The new VCSC has multiple video court opportunities through dedicated space and technology. The multiple locations will allow the courts the opportunity to streamline hearings with the inmates, with the goal to help monitor and control the average daily population and average length of stay.

The existing VCSC design has been modified to address some of these issues, but most of them are compromised as the facility was not designed for such.

If the facility is repurposed as a secure environment, DLZ will share experiences on several other projects we have designed that address today's inmates with the societal issues noted.

Our Franklin County Ohio project has been identified by the National Institute of Corrections as the best pilot facility in the county addressing societal issues.

HVAC SYSTEM

The facility is served by three (3) air handling units, two (2) that served the western half of the building (Renovated Housing Areas) and one (1) that serves the eastern half of the building (Administrative, Intake/Booking, original housing pods). The eastern half of the building is zoned utilizing variable-air volume (VAV) boxes.

The primarily heating and cooling is provided by central plant equipment. Three (3) gas fired boilers produce the heating hot water that serves the air-handling units and heating equipment throughout the building. One (1) air-cooled chiller located outside provided the chilled water used by the air-handling units and other equipment to provide the cooling in the building.

Each dayroom is served by a dedicated exhaust fan, but the system does not appear to be a smoke evacuation system that meets existing code for a correctional facility that is an I-3 occupancy.

While most of the equipment is operational and did not appear to be in poor shape, the overall system is generally observed to be in poor condition.

- There is not sufficient heating or cooling available on the 2nd Floor of the eastern portion of the building.
- The air distribution is poor, and the air quality does not appear to be good. This is especially evident in the older housing pods on the 2nd Floor.
- Grilles and diffusers in poor condition and dirty.
- The HVAC controls appear to be a mix of DDC controls and old pneumatic controls, but due to other deficiencies, it is unclear if they are operating in an efficient manner.
- The glycol system has been eliminated from the chilled water system, causing at least part of a coil on AHU-3 to freeze and burst.
- No exhaust system in Vehicle Sallyport.

If the building is to be re-used in any capacity, it will likely require replacement of major equipment and rework of the air distribution system to provide proper comfort and indoor air quality.

See below for specific information for each of the systems.

CHILLER

The air-cooled chiller is located outside on the south side of the building behind a fenced area. The chiller is observed to be approximately ten (10) years old and is in good condition. Per previous reports and discussions with the staff, the chiller does not provide sufficient capacity to cool the facility. This is further evidenced as the facility has indicated that the glycol feed is no longer used due to the lack of cooling capacity. Providing glycol in the system further reduces cooling capacity, so it was eliminated. However, removing this freeze protection has caused issues, which is indicated in the 'Air Handling Units' portion below.

CHILLED WATER PUMPS

The chilled water pumps do not appear to be as old as the chilled water pumps, but appear to be at least 10+ years old and were likely installed at the same time as the chiller. The pumps appear to operate as constant flow.

BOILERS

The existing boilers are gas-fired boilers, Patterson-Kelly Thermific models. There are two (2) larger boilers and one (1) smaller boiler. The boilers appear to be 10+ years old and in fair condition. No specific issues were noted with the boilers, though it was noted that the two larger boilers had the exchangers replaced within the last two (2) years.

HEATING HOT WATER PUMPS

The heating hot water distribution pumps appear to be 20+ years old and are in poor condition. The pumps show evidence of corrosion at the connections. One pump appears to have had a motor replaced more recently than the other pump. The pumps appear to operate as constant flow

AIR HANDLING UNITS

The air-handling unit AHU-1 serving the eastern half of the building was replaced in 2014. The air-handling unit was observed to be in good condition. The unit is a variable air volume unit that supplies air to the VAV boxes serving the zones on the eastern half of the building. The associated return fan RF-2 appears to be 20+ years old and in poor condition. The fan was not operating at the time of the site visit.

Air-handling units AHU-2 and AHU-3 were installed as part of the 2000 renovation of the western half of the building. The units are constant volume units that serve the south half (AHU-2) and north half (AHU-3) of the west housing unit. The units are in fair condition, but maintenance mentioned that the top half of the cooling coil on AHU-3 froze and burst. This is due to the lack of glycol in the system for freeze protection. Maintenance indicated that the damaged portion of the coil is not currently scheduled to be replaced.

None of the air-handling units are provided with energy recovery ventilators (ERVs). ERVs would allow pre-conditioning of the ventilation air and reduce energy costs. Modern HVAC systems in Correctional Facilities often have an ERV to take advantage of energy recovery from the large amounts of exhaust air required.

AIR DISTRIBUTION

The eastern portion of the building is served by variable air volume (VAV) boxes to provide individual zone control. The boxes were replaced in 2014 at the same time that AHU-1 was replaced. However, the facility has indicated that the 2nd Floor in particular is not provided with sufficient heating or cooling. It was also observed while walking around on the 1st Floor in the Intake/Booking area that there was minimal air distribution and the air felt stagnant. The indoor air quality in general was observed to be

poor throughout the facility, whether it was due to lack of air movement or the presence of odors in the inmate housing areas.

The grilles and diffusers in the Inmate Housing areas were in poor condition and observed to be dirty and rusting. The condition of the grilles and diffusers is an indication that the ductwork is also likely dirty, further reducing the indoor air quality in the facility.

HVAC CONTROLS

The local staff indicates there are portions of the basement level that still operate with pneumatic controls. An air-compressor was observed in the basement mechanical room that was in fair condition. Direct Digital Controls (DDC) were observed at the air-handling units that were part of the 2000 Renovation and the 2014 Air Handling Unit Replacement, so it appears some of the equipment is part of a more modern DDC system.

It is unclear how well the Controls are working, in part due to the previously mentioned issues with insufficient heating and cooling being available in the eastern portion of the building.

DISPATCH AREA

The 911 Dispatch Area is served by a dedicated unit that supplied air thru the raised floor. The unit is in good condition and the area felt comfortable and properly conditioned, especially as it related to other spaces throughout the building.

VEHICLE SALLYPORT

The vehicle sallyport is heated through hot water unit heaters. No vehicle exhaust was observed in the vehicle sallyport. If a vehicle is idled in the space, it could result in the build up of dangerous gases such as carbon monoxide. The space should have a vehicle exhaust fan that is controlled by a CO/NO2 sensor.

APPENDIX I – PHOTOS

	**Photo 1:** Existing chiller. Chiller is in good condition but undersized to sufficiently cool the entire building.
	**Photo 2:** Heating Hot Water boilers. Boilers in fair condition. The heat exchangers have been replaced on the two larger boilers in the last two (2) years.

	**Photo 3:** Heating hot water pumps on the left, chilled water pumps on the right. Heating hot water pumps appear to be in better condition and are newer.
	**Photo 4:** Vehicle Sallyport heating by hot water unit heater. No exhaust observed in the area.

	**Photo 5:** Air Compressor used for pneumatic controls in basement.
	**Photo 6:** HVAC Unit serving the room with the security electronics equipment. Unit in good condition.

	**Photo 7:** HVAC Unit serving the Dispatch Area distribution system. Unit is in good condition.
	**Photo 8:** Dispatch Area floor grille that is part of the underfloor HVAC system.

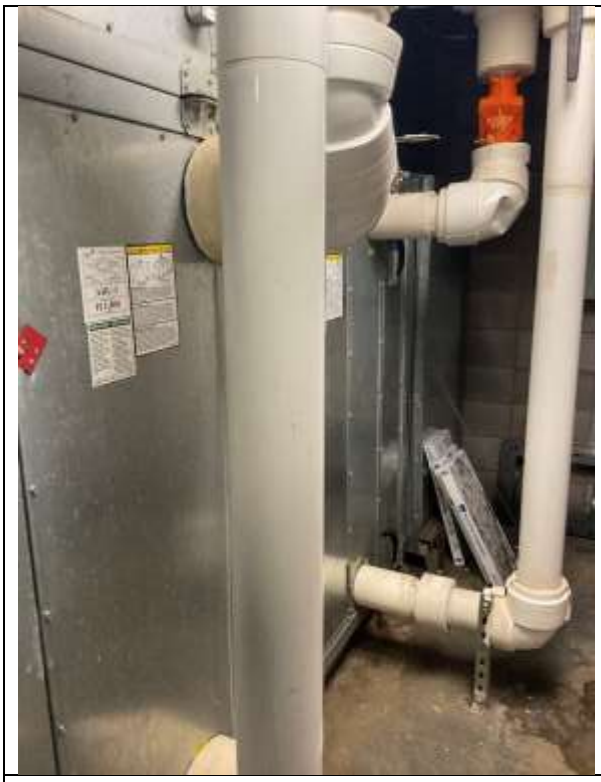
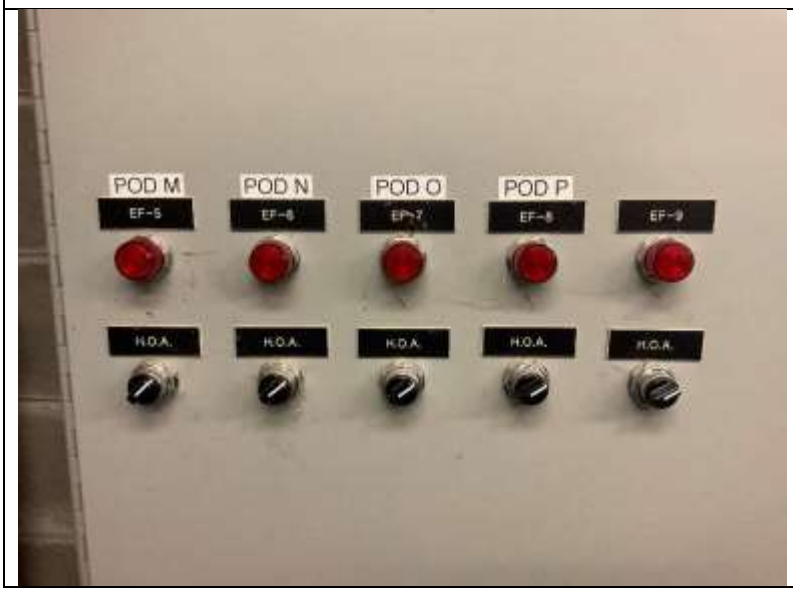
	**Photo 9:** AHU-1 serving the eastern half of the building. Unit installed in 2014 and is in good condition.
	**Photo 10:** DDC Controls serving AHU-1.

	**Photo 11:** AHU-2 serving a portion of the 2000 Renovation. Unit is in fair condition but 20 years old.
	**Photo 12:** AHU-3 on the 3rd Floor Mechanical Room. AHU is to the left. Dry pipe fire protection system, hydronic piping serving AHU to the right.

	**Photo 13:** Access to the piping near AHU-3 is thru a space between the duct and the air handling unit.
	**Photo 14:** Typical condition of exhaust fans on the roof. Fans have exceeded their anticipated service life.

	**Photo 15:** Typical condition of grilles observed in the 2000 Renovation Housing Pods. Grilles are rusted and dirty.
	**Photo 16:** Supply diffusers in 2000 Renovation Area. Grilles is dirty and likely a sign of the condition of the ductwork.

	**Photo 17:** Status panel and Hand-Off-Auto switches for exhaust fans serving housing pods.
	**Photo 18:** Status panel and Hand-Off-Auto switches for exhaust fans serving housing pods.

PLUMBING SYSTEM

The plumbing system throughout the facility is in poor condition and the primary cause for issues the facility is currently experiencing. The primary issues include, but are not limited to:

- Sanitary system that is in bad shape, experiences flooding, and is often clogged.
- Piping that is in poor condition and leaks.
- Inmates causing flooding with the fixtures in their cells on the 2nd floor that then leaks thru the floor into the first floor spaces.
- Dishwasher drainage system in poor shape and leaks into Evidence Storage area directly below it.
- Pipe and valve access in chases is poor, making repairs difficult.

If building is to be re-used in any capacity, it will be critical to replace significant portions of the plumbing system.

See below for specific information for each of the systems.

SANITARY DRAINAGE SYSTEM

The cast iron piping that was originally installed to serve the building is in poor condition. The pipe has rusted to the point that items get caught in the sanitary piping, causing backflow conditions throughout the facility. The clogging is such a problem that it can result in 3-4 inches of water in the intake booking area and the padded cells. During the site visit on March 25, 2022, maintenance indicated they had been at the facility since 3 AM due to a clog that resulted in flooding in the Intake/Booking area. The clog was so bad that water was shooting up into the air from floor drains.

The sanitary system that serves the dishwasher is also a major issue. When the dishwasher operates, there are times that the drainage piping leaks. The piping is located directly above the Evidence Storage area and has required evidence to be moved when this condition occurs. Continued issues risks issues with damaging the evidence that is being stored below.

The kitchen is served by a grease interceptor that is emptied once per month. There are no known issues with the grease interceptor.

STORM DRAINAGE SYSTEM

Storm drainage is provided by roof drains and storm piping located within the building. No issues were indicated regarding this system.

DOMESTIC WATER SYSTEM

The domestic water piping located in the eastern portion of the building is original and in poor condition. While walking around in the maintenance area in the basement, buckets were observed to be hung above the ceiling to catch water from various pipe links. Puddles were also observed in multiple locations in the basement.

The system is also not equipment with any water management systems in the inmate area. This makes it easier for inmates to floor their cells at times where there is not staff nearby to make them stop. This flooding often occurs on the 2nd level and leaks down in the Intake/Booking and Interview areas, adding to the flooding issues that occur on the 1st floor previously indicated in this report.

DOMESTIC HOT WATER HEATER

The domestic water heaters in the building appear to be less than five (5) years old and are in good condition. There is a water heater located in the basement mechanical room that serves the eastern half of the building. There is another water heater in the 2nd Floor Mechanical room that serves the western portion of the building that was renovated in 2000.

WATER SOFTENER SYSTEM

The facility is not currently served by a water softener. Maintenance indicated there was previously a water softener, but it had been abandoned in place.

PLUMBING FIXTURES

The plumbing fixtures in the Administrative and Staff Restrooms are dated but in fair condition. The fixtures have manual flush valves and manual faucets.

The fixtures in inmate areas are generally in poor condition, especially in the shower areas. Several shower panels were observed to be rusted and pulled away from the wall. Fixtures in this condition provide an area to conceal contraband. Several showers were also indicated to have issues with backflow due to the poor condition of the sanitary system.

PIPE AND VALVE ACCESS

The domestic water and sanitary piping serving the Inmate Housing areas is difficult to access. The chases located between cells in Intake/Booking are small and getting to portions of the pipe is difficult due to other piping located in the chase. The longer chases between the Housing Pods on the 2nd Floor of the eastern portion of the building are also difficult to access. In order to get to any piping further in the chase, the maintenance staff has to step over and around other piping. The location of the piping is such that more damage can be caused getting around the piping to get to shutoff valves, leaks or clogs further in the chase.

PLUMBING SYSTEM PHOTOS

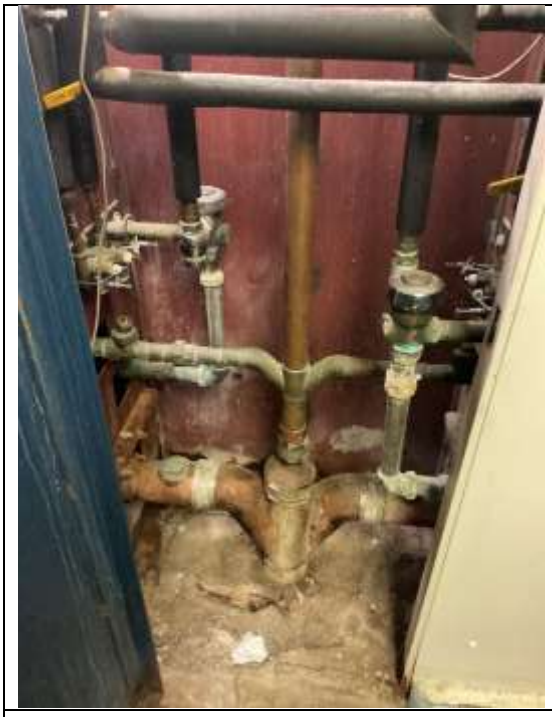
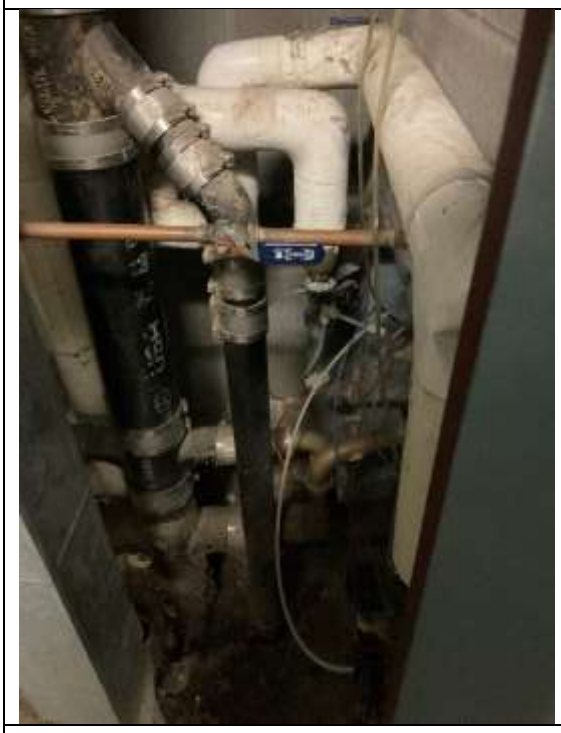
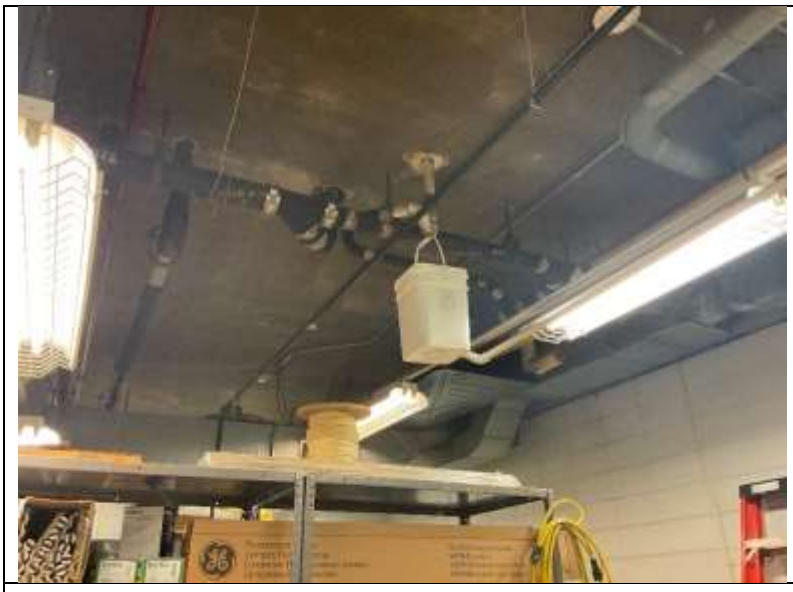
	**Photo 1:** Intake/Booking Area Chase. These chases have more space than some others. Piping is old.
	**Photo 2:** Chase in 2000 Renovation Housing Pods. Chase has more piping, ductwork, etc. and is more difficult to maintain.

	**Photo 3:** 2nd Floor East Housing Pods, chase between two Pods. Requires stepping over and around piping, especially the further back in the chase someone needs to go. Staff has indicated piping has been damaged when trying to get to shutoff valves further in the chase.
	**Photo 4:** 2nd Floor East Housing pods, chase serving one pod. Limited room on edge to get back into chase but does involve less piping to step over.

	**Photo 5:** Bucket hanging from ceiling to catch water from a leaky pipe.
	**Photo 6:** Water on the floor in the basement Maintenance Shop due to leaking pipes.

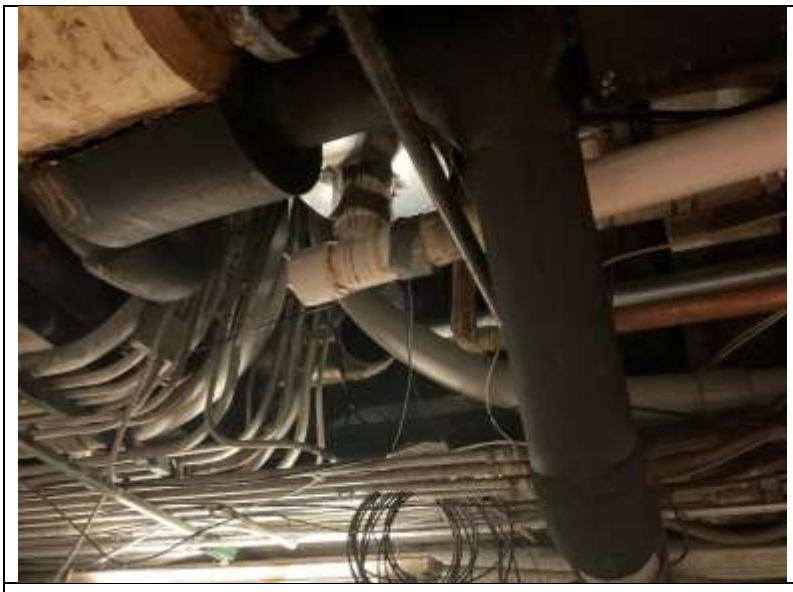
	**Photo 7:** Sanitary pipe fitting with duct tape for temporary fix where there was a leak.
	**Photo 8:** Evidence of a pipe leak in the Basement Mechanical Room.

	**Photo 9:** Intake/Booking Shower with water in the basin. Sanitary pipe is clogged. This was part of the issue that happened at 3 AM prior to the site visit.
	**Photo 10:** New water heater in Basement Mechanical Room.

	**Photo 11:** Water Heater serving the 2000 Renovation. Water heater in good condition and about five (5) years old.
	**Photo 12:** 2000 Renovation Housing Unit. Shower panel in poor condition and pulled away from the wall. Contraband can be hidden behind the shower panel.

	**Photo 13:** 2000 Renovation Housing Unit. Floor drains in shower in poor condition.
	**Photo 14:** Typical fixtures in staff restroom areas.

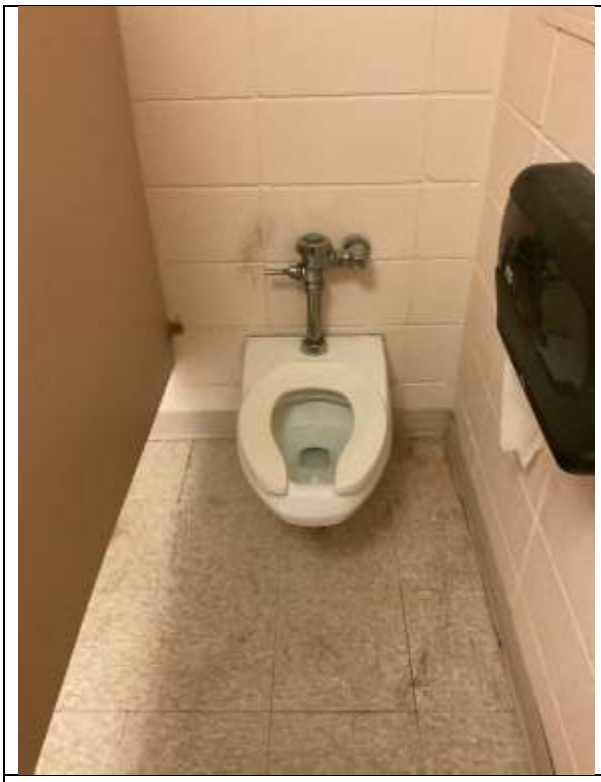
	**Photo 15:** Typical fixtures in public restrooms.
	**Photo 16:** Typical sinks in public restrooms.

	**Photo 17:** Combination Unit in Intake/Booking. Unit in fair condition.

FIRE PROTECTION SYSTEM

The building has a fire pump located in the basement mechanical room and is in fair condition.

The eastern half of the building does is not served by a sprinkler system but has fire hose cabinets on Level 2 and a standpipe in the north stairwell that extends up thru the roof. No sprinkler heads were observed on the 1st Floor Intake/Booking and support areas. The western half that was renovated in 2000 does have a full wet pipe sprinkler system with sprinkler heads. The basement spaces, including the Dispatch Area, are also provided with sprinkler heads.

A dry pipe system serves the Inmate Recreation Area (Gym) on the 3rd floor.

No specific issues were reported from the staff regarding the fire pump, or the fire protection system as currently installed.

FIRE PROTECTION SYSTEM PHOTOS

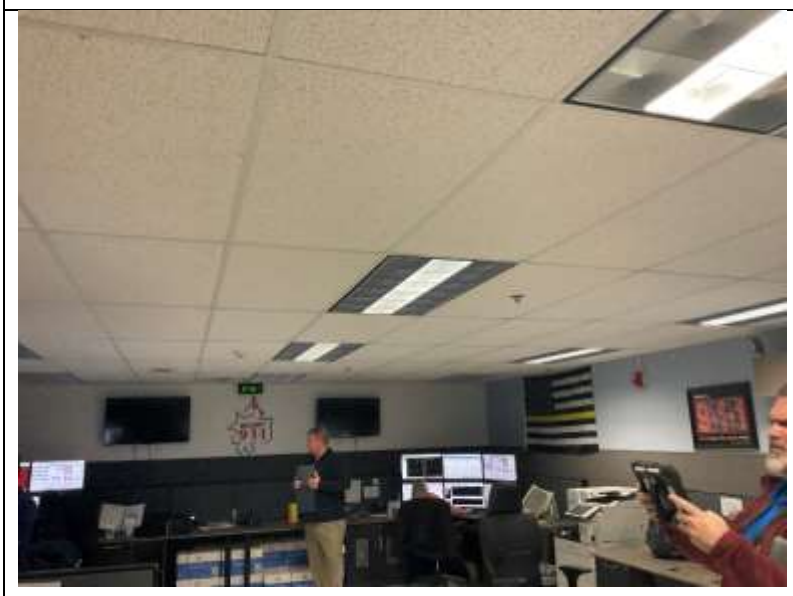
	**Photo 1:** Fire Pump in Basement Mechanical Room.
	**Photo 2:** Sprinkler heads in Dispatch Area.

	**Photo 3:** Dry Pipe system serving the Recreation/Gym Area on the 3rd Floor.
	**Photo 4:** Typical Institutional type sprinkler head in Housing Pods in western portion of the building.

ELECTRICAL SYSTEMS

The facility is connected to a power service provided by Duke Energy underground via a utility owned pad mounted transformer located just southeast of the building. The facility electrical service is connected to the main distribution switchboard at 277/480V, 3-phase, 4-wire, 2000A, grounded wye system.

The facility is partially backed up by an emergency generator. The generator also provides backup power to the adjacent County Courthouse.

The facility is protected by a fire alarm system.

All lighting in the facility is fluorescent.

While most of the equipment is operational and did not appear to be in poor shape, the overall system is generally observed to be in poor condition.

- There original distribution equipment is obsolete making replacement parts difficult to find. Several existing panels have been modified with non-original manufacturer components invalidating the UL listed of the equipment.
- The Emergency distribution is in good condition.
- The lighting is in poor condition. Fixtures have been damaged or are missing components. There are two different color exit signs in the facility.
- The fire alarm control panel was recently replaced and is in good condition. The annunciation and initiation devices are obsolete and not synchronized with newer devices.
- The facility access control system is obsolete making replacement parts difficult to find.
- The facility intercom system is analog is obsolete making replacement parts difficult to find.
- The facility radio repeater is obsolete making replacement parts difficult to find.

See below for specific information for each of the systems.

DISTRIBUTION EQUIPMENT

The facility electrical service is connected to the original 1979 Federal Pacific Main Distribution Switchboard at 277/480V, 3-phase, 4-wire, 2000A, grounded wye system. The Main Switchboard contains four (4) main service disconnects; Chiller, Normal Power Distribution, Emergency Power Transfer Switch, with one (1) breaker labeled “BAD”. The Main Distribution Switchboard has previously been modified to add four (4) Westinghouse service breakers. The use of a different manufacturers product potentially violates the UL listing the Switchboard. The switchboard is in need replacement as it is beyond life expectancy and to ensure it is UL listed.

The Main Switchboard provides power to various distribution panels and lighting panelboards throughout the facility. The various distribution and lighting panels are a mixture of original 1979 Federal Pacific panels and newer General Electric, Square-D and Cutler-Hammer panels. All the original 1979 Federal Pacific type panels and are in need replacement as they are beyond life expectancy and replacement parts are no longer available. Several existing panels are missing circuit identification numbers and panel directories.

Panel ‘2LE-4’ is showing signs of corrosion and is in violation of the NEC and OSHA as a piece of plywood has been installed behind the panel cover over the bus. The piece of plywood should be removed, and proper protection be provided over the opening left by removal of original components.

The original 1979 Federal Pacific Kitchen panel does have the code required clearance in front of it. The Kitchen panel has had a padlock added to it and is also showing signs of corrosion.

The existing Federal Pacific #5320 motor control center is obsolete and no longer supported. The control center and are in need replacement as they are beyond life expectancy and replacement parts are no longer available.

The existing 911/Dispatch distribution panels are General Electric and are in good working order.

No Suge Protection Devices were found on the any of the Jail gear. A Surge Protection device was found on the 911/Dispatch Uninterruptible Power Supply Distribution Panel.

GENERATOR

The existing Generac 400KW (model #SD400) diesel generator provides backup emergency power to the facility and the County Courthouse. The generator is maintained thru a service contract with Evapar. The service contract includes operational test, changing fluids and filters, checking batteries and belts, and taking samples of lubricant oil and coolant for testing. The generator, which was last tested on November 02, 2021, is in good working order.

The generator is connected to a double pole switch located near the unit to allow for portable generator connection. The switch is connected to an ASCO #7000 series automatic transfer switch located in the basement Mechanical/Electrical room. Staff noted the internal mechanisms of the automatic transfer switch were replaced within the last 3 years. The double pole switch was added at the same time.

UNITERRUPTIBLE POWER SUPPLY

The existing 911/Dispatch Eaton #9355 Uninterruptible Power Supply is in good working order. Staff noted the batteries were replaced within the last 3 years.

LIGHTING

All light fixtures are fluorescent with varying vintage of fixtures, color temperature and damage. All light fixtures in need of replacement as they are beyond life expectancy. A few of the existing Kitchen lights are missing the fixture lens which is a Health Department/U.S. Food and Drug Administration violation.

Additional lighting has been added to each Holding Cell. This was accomplished by cutting in an incandescent light fixture in the cells associated chase.

Custom metal enclosure with padlocks were added to fixtures to prevent access.

EXIT SIGNS

The original 1979 exit signs installed in the facility were “green”. Some of the original “green” exit signs remain, those that have been replaced were done in ‘red”. A mix of “red” and “green” exit signs in a

facility is a code violation. The remaining original “green” exit signs need replacement as they are beyond life expectancy. The replacement “red” exit signs show signs of abuse and should also be considered for replacement.

LIGHTING CONTROLS

All light fixtures are controlled by manual lighting control switches.

WIRING DEVICES

Not all wiring devices in inmate accessible areas are in detention grade enclosures.

FIRE ALARM

The Fire Alarm Control Panel was replaced with a new Fire-Lite Alarms #MS-9600LS addressable fire alarm control in 2019/2020 after a lightning strike.

The current initiation and annunciation devices are a mix of original 1979 and current 2019/2020 devices. The original 1979 devices need replacement as they are beyond life expectancy. Additionally, all strobes may not be synchronized as they are of varying vintage and manufacturer which is a code violation (NFPA 72).

SECURITY ELECTRONICS

The original 1979 security system was put in by Integrator.com before 2000. The security system was retrofitted in 2019 by Security Automation Systems, INC (SAS). In 2019 SAS consolidated three existing touchscreen stations (Central Control and two (2) Satellite Control rooms) down to one new control station (Central Control), replaced the obsolete Allen-Bradley PLC equipment with new Omron PLC equipment, and provided an integration between the touchscreen system and the Exacqvision digital video recorders to camera call-up.

The existing jail access control system “S2” software expired in 2016. The controller also controls the Vigo County Courthouse. The “S2” controller needs replacement along with getting the software on a current support plan.

The original 1979 Dukane analog intercom system is obsolete and is still in use.

RADIO REPEATER

The existing radio repeater is outdated and no longer supported and provides a “master” connection between the Juvenile Center, the Existing Jail and New Detention Center. The repeater is under a service agreement with RACOMM and is in need replacement as it is beyond life expectancy.

ELECTRICAL SYSTEM PHOTOS

	**Photo 1:** Existing Federal Pacific Main Distribution Switchboard with four (4) Westinghouse service breakers.

	**Photo 2:** Existing Panel '2LE-4'. Panel is showing signs of corrosion and is in violation of the NEC and OSHA as a piece of plywood has been installed behind the panel cover over the bus.
	**Photo 3:** Existing Panel '2LE-4' showing signs of corrosion around breakers.

	**Photo 4:** Panel ‘2LE-2’ with no issues.

	**Photo 5:** Existing original 1979 Kitchen panel using different manufacturers (Federal Pacifice and Westinghouse) products potentially violating the panelboard UL listing.
	**Photo 6:** Existing Federal Pacific #5320 Motor Control Center.

	**Photo 7:** Transtector Surge Suppression device on 911/Dispatch Uninterruptible Power Supply distribution panel.
	**Photo 8:** Existing Generac generator on site outside the Facility.

	**Photo 9:** Existing 911/Dispatch Eaton #9355 Uninterruptible Power Supply.
	**Photo 10:** Existing fluorescent acrylic troffer light fixtures in Intake Booking with different color temperature.

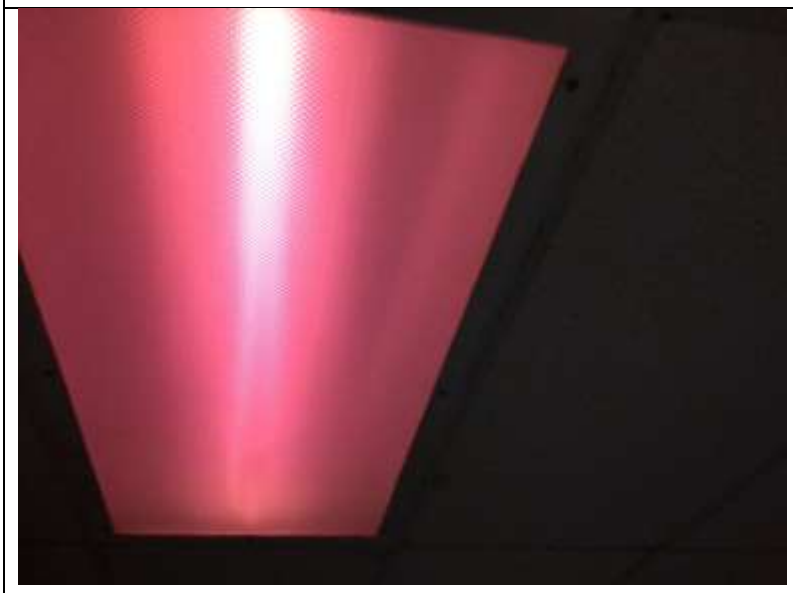
	**Photo 11:** Existing fluorescent cubed troffer light fixture in Admin Area.
	**Photo 12:** Existing fluorescent acrylic troffer light fixtures in Detention Area Interlocks.

	**Photo 13:** Existing fixture base from past light fixture. Base is located in area around inmate housing.
	**Photo 14:** Existing fluorescent Detention fixture showing signs of corrosion.

	**Photo 15:** Existing fluorescent light fixtures in Kitchen area without lens.
	**Photo 16:** Existing chase at Holding cells where light fixtures were added to provide additional lighting levels in cells.

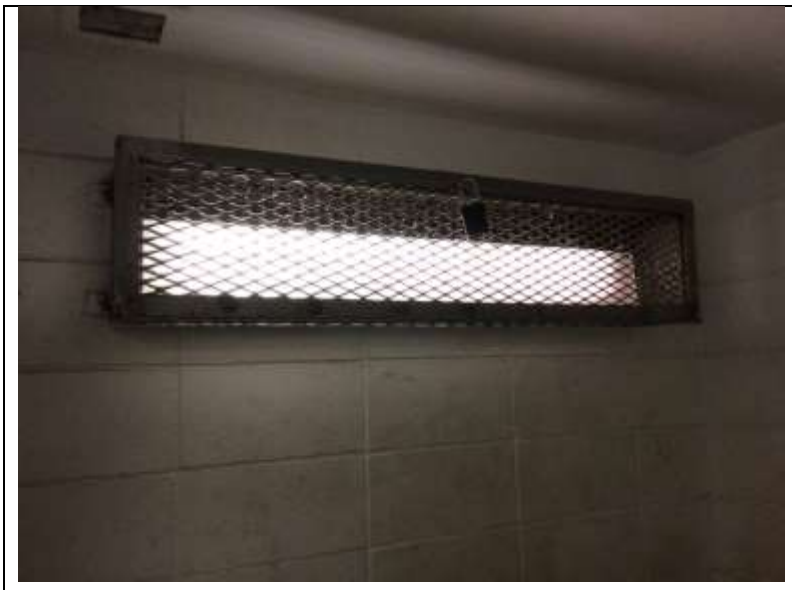
	**Photo 17:** Existing light fixture with custom metal cage and padlock.
	**Photo 18:** Existing light fixture in inmate accessible area without protective lenses.

	**Photo 19:** Existing “red” exit sign hanging by conductors. Multiple colored exit signs are a code violation.
	**Photo 20:** Existing “green exit sign. Multiple colored exit signs are a code violation.

	**Photo 21:** Non-detention grade wiring device outside of Holding Cells.
	**Photo 22:** Existing Fire-Lite #MS-9600LS Addressable Fire Alarm panel that was replaced after a lightning strike.

	**Photo 23:** Original 1979 Fire Alarm Horn/Strobe. NOTE: Device mounted at +94”
	**Photo 24:** Current 2019/2020 Fire Alarm Horn/Strobe.

	**Photo 25:** Central Control touchscreen station.
	**Photo 26:** Existing “analog” intercom cabling.

OPTIONS

For this Facility Repurpose Study, DLZ has conceptualized several options for consideration. Each option serves a purpose and has merit as a successful solution. Although the scopes of work for each option vary considerably, probable hard construction costs are included for each option.

Repurposing a former county jail is a common discussion in most counties when a new facility is constructed. Many counties demolish their old county jails and repurpose the site for other uses. Some counties throughout the Midwest have repurposed their facilities as follows:

- Storage for County offices and departments
- Residential use
- Repurpose to Community Corrections with Work Release
- Repurpose to Transition from Jail to Community (TJC) facility
- Museum
- Adult detention / overflow housing for in-county inmates, as well as out-of-county inmates

The Probable Hard Construction Costs are based on a Fall 2022 Bid period. For projects bid at a different time, inflation costs and market conditions need to be reviewed to capture the applicable probable hard construction costs of the revised bidding/construction period.

Estimates during a Study are developed using industry averages for construction in Indiana, specifically in the Terre Haute area. Methods include costs for square footages and cubic footages, as well as hypotheticals for various materials, systems, and equipment. Although estimates can be used for planning purposes, probable hard construction costs should be updated as the eventual design concept is developed into a working design.

In addition to Probable Hard Construction Costs, there are soft costs that are necessary. Soft Costs typically include legal fees, contingencies, professional fees, financing, builder's risk insurance, permitting, surveying, geotechnical, environmental, reproductions, etc. Together, the Hard Costs and Softs Costs are the Project Costs. Ultimately, the Project Costs are what is required for planning and financing a project.

The options include:

Option A
Option A demolishes the existing Vigo County Security Center, including full site and building. This option allows for the site to be redeveloped to best meet the current and future needs of the County and City, possibly in a joint venture.

With this, a new facility for 911 Dispatch, as well as a means for a vehicle sallyport and holding cells for inmates transported from the jail to the courthouse would be needed. The 911 Dispatch could be located on a different site. However, the spaces required for the transport of inmates would need to be constructed near the courthouse.

Probable Hard Construction Cost

• Demolition of existing VCSC, including site	$950,000
• New 911 Dispatch including communication tower	$3,500,000
• New Vehicle Sallyport, Intake, Holding	$3,000,000
Option A Probable Hard Construction Costs	**$7,450,000**

Option B
Option B demolishes the ca. 2000 portion of the existing Vigo County Security Center. This area is generally utilized for general population and inmate recreation. The remaining portions of the existing VCSC would be extensively renovated and repurposed. The 911 Dispatch would stay in the lower level and the vehicle sallyport and holding cell area would remain.

Probable Hard Construction Cost

• Demolition of 2000 portion (west half of VCSC)	$500,000
• Renovation of east half of VCSC	$6,000,000 - $8,000,000
Option B Probable Hard Construction Costs	**$6,500,000 - $8,500,000**

Option C
Option C would repurpose the facility into a rehabilitation/treatment facility. This option would require extensive renovation and repurposing several areas of the facility to meet program needs. Although a rehabilitation/treatment facility is in much demand, the cost to do such with the existing VCSC may be cost prohibitive.

With this, a new facility for 911 Dispatch, as well as a means for a vehicle sallyport and holding cells for inmates transported from the jail to the courthouse would be needed. The 911 Dispatch could be located on a different site. However, the spaces required for the transport of inmates would need to be constructed near the courthouse.

Probable Hard Construction Cost

• Repurpose facility into a rehabilitation/treatment facility	$15,000,000 - $20,000,000
• New 911 Dispatch including communication tower	$3,500,000
• New Vehicle Sallyport, Intake, Holding	$3,000,000
Option C Probable Hard Construction Costs	**$21,500,000 - $26,500,000**

Option D

Option D would repurpose the facility into a Vigo County Juvenile Center. This option would require extensive renovation and repurposing several areas of the facility to meet program needs. Juvenile design standards are different than jail standards, so repurposing many of the areas would be costly. The overall square footage of the existing VCSC is also significantly more than required for a Juvenile Center.

Although extensively renovated, the 911 Dispatch would stay in the lower level.

However, due to sight and sound separation for adults and juveniles, the vehicle sallyport and holding cells for inmates transported from the jail to the courthouse would need to be constructed near the courthouse.

Probable Hard Construction Cost

• Repurpose facility into a juvenile facility	$13,000,000 - $16,000,000
• New Vehicle Sallyport, Intake, Holding	$3,000,000
Option D Probable Hard Construction Costs	**$16,000,000 - $19,000,000**

Option E

Option E requires the least amount of work as the majority of the existing VCSC would simply be used for County storage. The 911 Dispatch would stay in the lower level and the vehicle sallyport and holding cell area would remain as is. The Sheriff's Office area would be minimally repurposed for the Public Defender and CASA departments.

Other areas would not be renovated.

This is not a long term solution, but it does provide immediate relief for the County government.

Probable Hard Construction Cost

Minimal work (allowance)	$500,000
Option E Probable Hard Construction Costs (allowance)	**$500,000**

If the option to build a new Vehicle Sallyport, Intake, and Holding is selected, the specific location will need to be analyzed. A direct connection to the historic courthouse is needed for the preferred operations of transporting inmates to the courthouse.