



HOUSE of REPRESENTATIVES

STATE OF MICHIGAN

Appropriations Requests for Legislatively Directed Spending Items

1. The sponsoring representative's first name:
Kathy
2. The sponsoring representative's last name:
Schmaltz
3. The cosponsoring representatives' names. All cosponsors must be listed. If none, please type 'n/a.' A signed letter from the sponsor approving the co-sponsorship and a signed letter from the member wishing to co-sponsor are required. Attach letters at question #9 below.
n/a
4. Name of the entity that the spending item is intended for:
Jackson County Sheriff's Office
5. Physical address of the entity that the spending item is intended for:
212 W Wesley Street, Jackson, MI
6. If there is not a specific recipient, the intended location of the project or activity:
1995 Chanter Road, Jackson, MI
7. Name of the representative and the district number where the legislatively directed spending item is located:
HD 46- Kathy Schmaltz
8. Purpose of the legislatively directed spending item. Please include how it provides a public benefit and why it is an appropriate use of taxpayer funding. Please also demonstrate that the item does not violate Article IV, S 30 of the Michigan Constitution.

By remodeling and adding an addition to the Chanter Road Facility and eliminating the Jail at the Wesley Street Facility, the public would benefit from decreased liability, increased security and safety by combining staff, and a decrease in recidivism by enhancing mental health and drug addiction services. Jackson County operates two jails: 212 W Wesley and 1995 Chanter Road. The Wesley Facility, which houses pre-trial detainees, is 72 years old, too small, and in severe Appropriations Requests for Legislatively Directed Spending Items disrepair. Issues include frequent sewer pipe breaks that result in raw sewage spilling onto deputies and inmates, exposed asbestos-covered pipes, malfunctioning locks, and radios that fail to work inside the building.

The Chanter Road Facility, built 22 years ago, is designed only for low security inmates, and it is too large for its purpose. The proposed plan is to reduce the Chanter Road Facility from two barracks to one, converting one barrack into a booking center. The next step would be to build an addition for pre-trial inmates creating a safer more secure facility. It would also provide for both male and female inmates to have a step-down unit to address mental health and drug addiction issues. The money, if appropriated, would enhance public safety and security by alleviating overcrowding and modernizing the facilities. It will also provide for rehabilitation programming and reduce recidivism which will ultimately save tax dollars. It combines both existing facilities to create one modern and safe facility, further saving tax dollars. The safety enhancements are not only better for the public, but also for law enforcement.

9. Attach documents here if needed:

Attachments added to the end of this file.

10. The amount of state funding requested for the legislatively directed spending item.

54462520.41

11. Has the legislatively directed spending item previously received any of the following types of funding? Check all that apply.

["None"]

12. Please select one of the following groups that describes the entity requesting the legislatively directed spending item:

Local unit government

13. For a non-profit organization, has the organization been operating within Michigan for the preceding 36 months?

Not applicable

14. For a non-profit organization, has the entity had a physical office within Michigan for the preceding 12 months?

Not applicable

15. For a non-profit organization, does the organization have a board of directors?

Not applicable

16. For a non-profit organization, list all the active members on the organization's board of directors and any other officers. If this question is not applicable, please type 'n/a.'

n/a

17. "I certify that neither the sponsoring representative nor the sponsoring representative's staff or immediate family has a direct or indirect pecuniary interest in the legislatively directed spending item."

Yes, this is correct

18. Anticipated start and end dates for the legislatively directed spending item:

January 2026-December 2027

19. "I hereby certify that all information provided in this request is true and accurate."

Yes

JACKSON COUNTY JUSTICE STUDY

RQAW Corporation

Jackson County Jail, JACKSON, MICH.

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ADVANCE THE ART OF BUILDING

RQAW
ARCHITECTURE

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ACKNOWLEDGEMENTS

The preparation of a study of this nature and scope requires a great deal of cooperation and time by county officials, criminal justice system personnel, interested citizens and committee members. The RQAW Jail Planning Team would like to give special recognition to everyone who participated and contributed to this effort by including their names in this Acknowledgement section.

Charles Adkins, Circuit Court Administrator
Jeremy Burns, District Court Administrator
Sheriff Gary Schuette
Christopher Simpson, Undersheriff
Rene Rod, Admin. Secretary to Sheriff
Captain Anthony Stewart
Lieutenant Michael Coburn
Sergeant Eric Kennedy
Sergeant Emily Anderson
Ric Scheele, Facilities Department
Derek Eisle, Facilities Department
Bryan Wood, Facilities Department
Andrew Castle, Facilities Department

STUDY OBJECTIVE

The objective of this study is to explore and advocate for needed improvements to the Jackson County Jail facilities and provide ideas for a facility design to support the county justice system with a focus on victim rights, community safety, and participant rehabilitation with deep consideration for financial constraints. We will accomplish this through a study of the existing system, use today's data to project for future needs and collaborate to determine the best course of action for the benefit of the county.



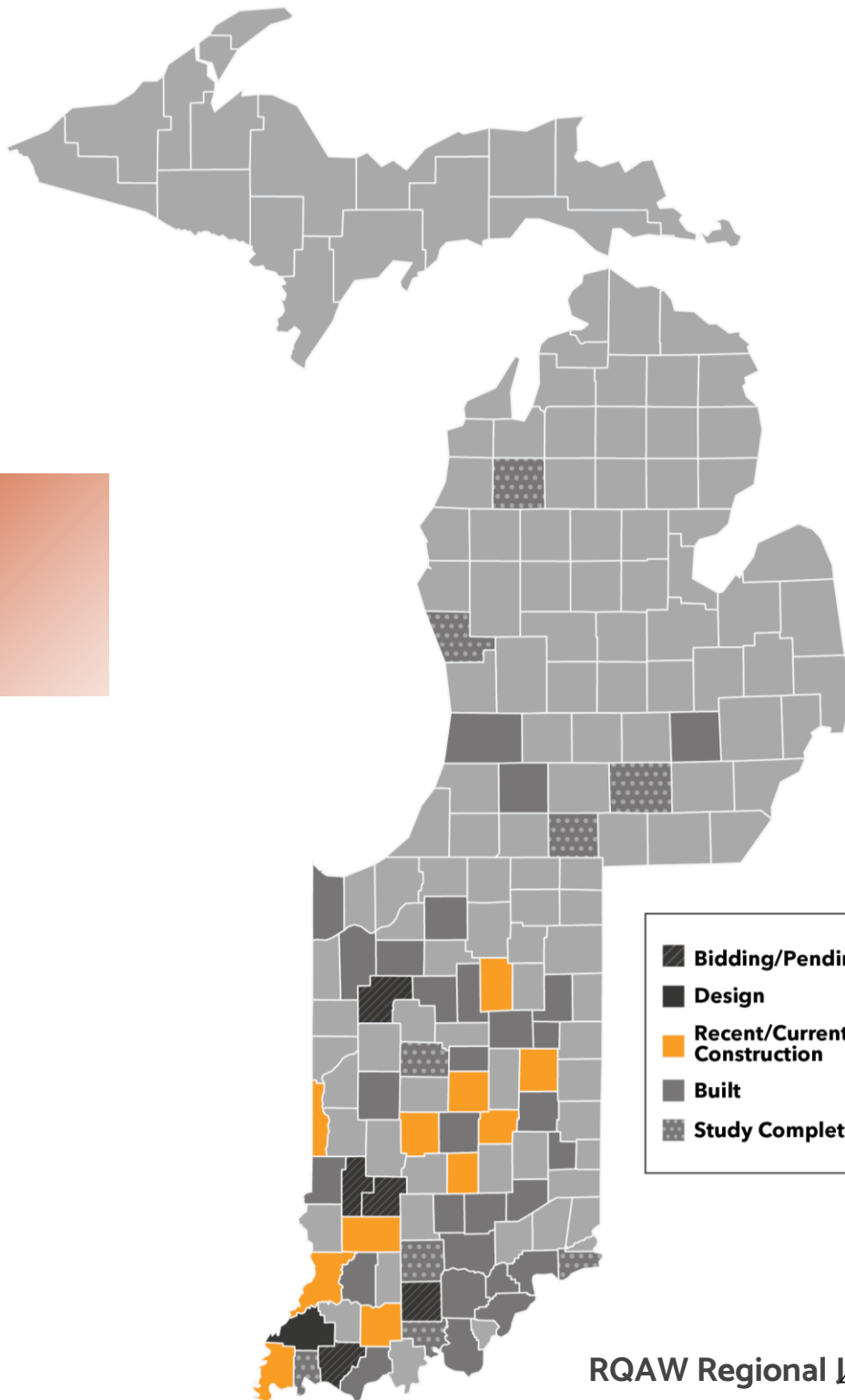


ABOUT RQAW

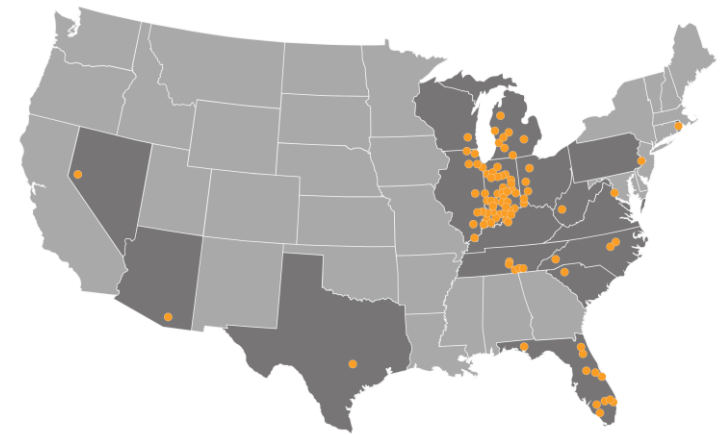
RQAW's architects and engineers are industry leaders in design for justice, municipal, and public safety facilities. We provide our clients with the right design that aligns with a budget. Creating cost-effective solutions for state-of-the-art facilities is our specialty.

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RQAW Regional Justice Projects



RQAW Architectural Projects done in U.S.

EXPERIENCE

RQAW is the region's most experienced team of correctional and justice facility planning professionals. We've completed more than 150 criminal justice projects from county jails and juvenile detention centers to state and federal correctional facilities. Our extensive experience with designing new construction, additions, and renovations of jails and justice facilities has given us the insight into a variety of issues that need to be considered and addressed.

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EXECUTIVE SUMMARY

01

INTRODUCTION

RQAW Michigan, LLC (RQAW) conducted a Jail Study to determine the immediate and future space needs of Jackson County's Wesley Street Jail and Chanter Road Jail. The study evaluated the Wesley Street facility to determine the feasibility of renovating the facility to improve the physical condition of the facility, enhance safety, and increase operational efficiency. If the Wesley Street facility was determined to be not suitable for continued operations, the Chanter Street facility was evaluated to determine the feasibility of constructing an expansion at this location to accommodate all of Jackson County's adult detention housing needs. Finally, if it was determined that the Wesley Street facility should be demolished, the study was to provide information regarding the space needs of a new operations facility at the Wesley Street location. To conduct this study, the existing facilities were documented. An evaluation of the existing conditions and spaces (refer to [Section 3 - Existing Space Evaluation](#)) was performed to understand the space needs and operations of the facilities. For the Wesley Street facility, the Existing Space Evaluation also identified operational challenges caused by the facility configuration and construction. Further, a condition assessment was conducted to determine the status of the facilities' systems, infrastructure and physical condition.

INTRODUCTION

INTRODUCTION

Questionnaires (refer to [Section 10 – Questionnaires and Meeting Minutes](#)) were also used to gather qualitative information about existing conditions, staffing, and programmatic uses. Then interviews of users, stakeholder and elected officials were conducted (refer to the [Acknowledgements](#)) and additional programmatic needs were identified. During this time, data was also collected and organized (refer to [Section 2 – Data and Projections](#)) to not only develop an understanding of the current conditions at the facility but also to determine the future space needs, particularly as they relate to detention housing and other inmate spaces. All this information was then utilized to develop a space program (refer to [Section 4 - Architectural Space Program](#)). The architectural space program was then utilized to develop conceptual plans and diagrams (refer to [Section 6 – Conceptual Design](#)) of a proposed facility that will improve the functionality of the components involved, accommodate immediate and future space needs while enabling Jackson County to accommodate the evolving operational demands associated with this type of facility.

INTRODUCTION

PROCESS

In April 2022, **RQAW Michigan, LLC** was retained by the Jackson County Sheriff to study the existing jail facilities, identify the immediate and future space needs and how they might be accommodated by either renovating the Wesley Street Jail or expanding the Chanter Street Jail. To do this, an initial primary focus of the study was to assess the existing condition of the Wesley Street facility and determine the feasibility of its continued use. The study included consideration of the existing and future needs of the other Sheriff's Office components including but not limited to Patrol, Investigations and Administration. Additionally, the City of Jackson's Police Department was included. Several steps were undertaken for the study, and they include:

- Planning Process
- Data Collection
- Facility Criteria
- Final Report

Step 1: Planning Process

The primary objective of the first step of the Study is to provide organization for the process while establishing the goals and direction the County wishes to take in the development of the Study.

Step 2: Data Collection

The primary objective of the second step of the Study is to collect and summarize the data and establish the space needs, adult (inmate) population projections, and future inmate classification/characteristics to be used as a basis to determine the detailed architectural program for each element of the project. Facility assessments are completed as well.



Step 3: Facility Criteria

The primary objective of the third step is to compile the data collected in Step 2 into an architectural program that begins to establish the scope of the proposed project. Size, site, character, and cost will be developed in this step.

Step 4: Final Report

Provide all data accumulated and the summary recommendations for the original goals and objectives of the Study for review prior to final recommendations and presentation of the Study document.



PROCESS

- Inventory and assessment of current buildings' systems, space, staffing, and other elements necessary to complete the assessment
- Data gathering and analysis necessary to define a 20-year capacity, likely classification needs/future inmate characteristics, and space and staff requirements
- Development of an architectural space program that accounts for all space and operational needs
- Conceptual design to accommodate the architectural space program
- Site evaluation for a new facility (at Wesley if demolished) and expansion of existing (at Chanter, if Wesley demolished)
- Estimated total project costs for the proposed facilities and scenarios, including likely hard costs and soft costs
- Estimated operational costs for the proposed facility relative to the existing operational costs
- Estimated Project Schedule/Implementation Plan of the selected project option, including all tasks associated with implementation
- Preparation of a final report with recommendations

Utilizing the process described above, **RQAW Corporation** was charged with working with Jackson County to determine the likely long-term space and operational needs of the Jail and Sheriff's Office. It was then the task of RQAW, as Architects and Engineers, to develop a conceptual facility design that accommodates the determined needs and improves the functionality and operations of the facilities and accounts for the challenges identified at the Wesley Street Jail.

DATA AND STATISTICS SUMMARY

Data was collected and utilized to gain an understanding about the jail population, classification needs and potential future housing needs. Generally, the statistics show that the jail population has been increasing and is likely to continue to increase as the severity of crimes increases, the average length of stay increases, and the female population increases.

- The rated capacity for Wesley Street is 185 and for Chanter Road is 252 for a combined rated capacity of 437 and a classification threshold of approximately 350.
- County population has been relatively flat for the past twenty years
- Chanter Rd. has been consistently at an inmate population of approximately 200 since 2014, excluding 2020-2021 (Covid)
- Wesley Street has consistently exceeded the classification threshold of 148 since 2014, excluding 2020-2021 (Covid)
- Since 2014, excluding 2020-2021 (Covid), the average daily population (ADP) of both facilities combined is 364. Properly classified, this requires 455 beds. This does not account for any projected needs.
- For the years 2014 through 2019, the average of the highest monthly ADP for Chanter is 214 and for Wesley is 178. Combined this is 392 and properly classified this would require 490 beds.
- Female admissions account for approximately 28% of total admissions.
- A beds per 1000 (county population) calculation utilizing comparable sized counties suggests a need of 474 rated beds
- A beds per 1000 (county population) calculation based on a “Rule of Thumb” suggests a need of 711 rated beds.

(Refer to *Section 2 – Data and Projections* for more information)

EXISTING FACILITY CLASSIFICATION

Classification, or segregation, enables the jail to separate inmates within a system that can lead to a safer and more manageable facility. Classification is a system by which the jail staff determines who should be housed with whom. For instance, it is a requirement that men and women be sight and sound separated.

Within these two groups, the jail should also segregate the most violent from the non-violent. Other groups that are typically segregated include but are not limited to sex offenders, those in treatment programs and the mentally unstable, including the acute mentally ill. This type of segregation results in what is often referred to as a classification factor. For planning and operational purposes, this number is usually twenty percent (20%). The Wesley Street Jail facility houses both males and females and the most serious offenders. Therefore, the classification factor is appropriate. However, the Chanter Road facility (252 beds) can only house low level offenders due to its dormitory design and only consists of two classifications. Therefore, at times, the 20% classification factor may be low as it can be challenging to identify this many inmates that can be housed together in only two dormitory blocks. Regardless, for planning purposes, we have continued to use the 20% classification factor for all housing.

EXISTING FACILITY CLASSIFICATION

Wesley Street's 185-bed is at its operational capacity with 148 inmates, if properly classified. The facility bed count and resulting classification threshold is compounded at the Wesley Street facility by the facility configuration. The facility was originally designed for 90 beds and later expansions increased the bed count to 117, then 130 and finally 185. These expansions created a very staffing inefficient facility with limited sight and sound separation, blind spots and other operational challenges (refer to Existing Space Evaluation for more information). There are currently sixteen housing blocks for classification but only four of these are sight and sound separated. Further, the housing blocks are on multiple floors, making the facility more staffing inefficient.

The combined operational capacity of both facilities, based on the information above is 350 (Chanter: $252 \times .8 = 202$; Wesley: $185 \times .8 = 148$).

WESLEY STREET FACILITY SPACE EVALUATION SUMMARY

General

- The building is difficult to observe – several areas have “blind spots,” and this has resulted in several attempted rapes, rapes, attempted suicides and suicides.
- Due to the linear and multi-floor design, the facility is staffing inefficient and challenging to move through quickly in an emergency.
- The building does not meet accessibility requirements
- There is a significant lack of storage
- Mechanical, electrical, plumbing systems are all at the end of their useful life and need replaced
- Water infiltration has occurred throughout the facility
- Elevators, doors, locks and other critical systems are frequently malfunctioning
- Several systems still utilize discontinued parts. Replacements must either be fabricated or sourced at a premium cost.
- The facility consists of thick concrete walls and several additions making renovations for even simple systems like IT very challenging. Minor renovations like adding devices or cameras that can improve operational efficiency are therefore very costly.
- There are structural issues with the existing facility and a portion is separating at a measurable rate per year.

EXECUTIVE SUMMARY

WESLEY STREET FACILITY SPACE EVALUATION SUMMARY

Intake and Booking

- There is a lack of seating in intake and booking
- Need for attorney/client meeting space
- More office space is necessary
- Poor configuration for process – there is no pre-scan or pre-assessment holding, there is not a body scanner.
- Travel distance to the sally port is not ideal
- There are not enough individual, group or padded holding cells
- Negative air is not provided in this area that would prevent sharing air-borne contaminants
- Vehicular sally port is single file and therefore challenging for vehicle movement
- Property storage is too small and does not utilize available organizational systems that help manage chain of custody of property

WESLEY STREET FACILITY SPACE EVALUATION SUMMARY

Detention Housing

- Overcrowding
- Inmate areas are not designed to be anti-ligature
- There are contraband hiding spots throughout
- There are multiple housing control locations on multiple floors and is therefore staffing inefficient
- Access to plumbing fixtures is in secure areas and are challenging to maintain
- Some housing blocks are challenging to observe because they include cells that are out of view
- Classification is challenging because the cell blocks are enclosed by bars – there are sightlines to other blocks and no sound separation on the same floor
- The access control system is antiquated
- Some locks do not engage
- Housing is on multiple levels requiring vertical travel for everything including but not limited to food, healthcare, programming, video court, recreation and transport.

Support areas

- Laundry is not expandable and is outside the secure perimeter
- There is not enough area for cart storage in the kitchen
- Video court/arraignment and programming areas are significantly lacking and are too far from housing areas (staff intensive for movement)

WESLEY STREET FACILITY SPACE EVALUATION SUMMARY

Medical

- There is not enough space for medical staff
- The exam space is open to office space
- There is no medical waiting or inmate restrooms
- Medical storage is lacking
- There is no negative air
- Lack of medical exam rooms and medical isolation cells, especially for today's mental health challenges and communicable diseases

Sheriff's Office

- Space is limited for offices, patrol and training and is on multiple floors
- Does not meet ADA requirements
- Multiple floors are accessed via a shared elevator that serves secure areas
- Evidence storage and processing area is too small

Existing Facility Expansion

- The site is landlocked and cannot be expanded on adjacent site
- Even if it were possible, any expansion on the existing site would make the facility more staff intensive and renovations would be challenging due to existing construction.
- The facility cannot be expanded vertically for code and structural reasons

(Refer to Section 3 – Existing Space Evaluation for more information)

WESLEY STREET FACILITY EXISTING M/E/P EVALUATION SUMMARY

Mechanical

- The Air-Cooled Chiller is original to the building and does not have the capacity to cool the facility.
- The Hydronic AHU's are functioning but have reached end of life. Fans break down often and coil inner walls are very thin.

Electrical

- The correctional grade light fixtures in inmate cells are original and are beyond their usable life. Inmates have been tampering with the internal wiring components of the light fixtures. The existing interior lighting controls do not meet current ASHRAE energy standards.
- The existing door controls and security camera throughout the facility are obsolete and should be replaced with a modern system.

Plumbing

- Piping is in very poor condition and leaking occurs frequently. Corrosion, rusting, and rodding indicate that the piping is beyond its usable life.
- Many plumbing failures cannot be accessed without removing portions of concrete masonry unit walls.

(Refer to Section 3 – Existing Space Evaluation for more information)

CHANTER ROAD FACILITY SPACE EVALUATION SUMMARY

(Due to the evaluation of the Wesley Street facility, this evaluation was completed in the context of it being highly likely that the Wesley Street facility would need to be demolished and an expansion occur at Chanter)

General

- The building is designed for low-level offenders
- Circulation between components such as dining, medical, booking and housing occurs exterior to buildings and the secure perimeter is a fence with concertina wire.
- Exterior walls are poorly insulated, and this can cause condensation that will damage finishes and promote mold growth
- Finishes in areas occupied by inmates are not hardened. These areas include but are not limited to main corridors, medical, laundry and intake/booking. For other classifications (like inmates from Wesley), these areas would require an upgrade to detention grade. Items that should be upgraded if other classifications will be collocated included glazing, doors, frames, locks and walls.

CHANTER ROAD FACILITY SPACE EVALUATION SUMMARY

(Due to the evaluation of the Wesley Street facility, this evaluation was completed in the context of it being highly likely that the Wesley Street facility would need to be demolished and an expansion occur at Chanter)

Intake and Booking

- There is a lack of seating in intake and booking
- Need for attorney/client meeting space
- More office space is necessary
- Poor configuration for process – there is no pre-scan or pre-assessment holding, there is not a scanner.
- There are not enough individual, group or padded holding cells, especially if the facility is expanded
- There is not an area to stage and hold transports for court
- If other (more severe) classifications were to be held at this facility, the area would require detention equipment upgrades
- Negative air is not provided in this area that would prevent sharing air-borne contaminants
- There is no enclosed sally port
- Property storage is too small (especially if facility is expanded) and does not utilize available organizational systems that help manage chain of custody of property.

CHANTER ROAD FACILITY SPACE EVALUATION SUMMARY

Detention Housing

- Large dormitories do not provide classification flexibility. If the population of the facility is to be increased, as many additional classifications as possible should be added with 2-person and 4-person cells and blocks that do not exceed 24 persons.
- Dormitory space for female low-level offenders should be provided as well with the same privileges and access to the exterior as the existing male population. Sight and sound separation will need to be managed
- Inmate areas are not designed to be anti-ligature
- There are contraband hiding spots throughout
- There are multiple housing control locations on multiple floors and is therefore staffing inefficient
- Access to plumbing fixtures is in secure areas and are challenging to maintain
- The housing blocks are challenging to observe because they are linear style dormitories.
- The facility access control system will need to be upgraded if higher classifications are consolidated to this location
- Some locks do not engage

CHANTER ROAD FACILITY SPACE EVALUATION SUMMARY

Support areas

- Laundry will need to be expanded for additional inmates
- The kitchen and dining area are sufficient for maintaining the current population and projected population. However, processes will have to be developed to deliver food via carts to an expanded housing pod if Wesley Street population is moved to this location.
- Video court/arraignment and programming areas are significantly lacking and are too far from housing areas (staff intensive for movement).

CHANTER ROAD FACILITY SPACE EVALUATION SUMMARY

Medical

- There is one exam room. There will need to be more if the facility is expanded. The exam room is not hardened and will need to be for higher classifications.
- There is no secure medical waiting, and the inmate restroom is not detention grade
- Medical storage is adequate for now, but more will be needed for additional inmates.
- There is no negative air
- There are no medical isolation cells, especially for today's mental health challenges and communicable diseases
- There are not enough padded cells
- Additional nurse station space will be needed if the facility is expanded

Administration Space

- Additional locker rooms and fitness room space will be necessary if the staff is expanded for a larger facility (closing Wesley Street)

(Refer to Section 3 – Existing Space Evaluation for more information)

CHANTER ROAD FACILITY EXISTING M/E/P EVALUATION SUMMARY

Mechanical

- All four air handling units are single zone units with factory provided controls and have been recently replaced and have 10+ years of remaining life.
- Due to the single-zone nature of the AHU's, modifications to the building may have significant impacts on zone control.
- Due to thermal bridging occurring in the exterior walls, the facility tends to bring in unneeded outside air. This can cause higher energy bills, condensation, and mold throughout the building.

Electrical

- 60-70% of the existing fluorescent lamps throughout the facility areas have been replaced with LED retrofit lamps. The jail expansion will require LED light fixtures to meet current ASHRAE energy standards.
- The generator may be undersized to serve the whole campus. The generator has reliability issues. Maintenance staff has indicated the generator failed to operate during a loss of power event on more than one occasion.

Plumbing

- Most of the plumbing system is original to the building and is in fair condition.
- All or much of the existing plumbing equipment (water heaters, hot water storage tanks, water softeners) has been replaced within the past six to thirty-six months due to malfunctioning equipment and normal wear. The domestic water meter/service mains lack backflow prevention which is hazardous to the drinking water quality.

(Refer to Section 3 – Existing Space Evaluation for more information)

PROGRAMMING, MENTAL HEALTH & OTHER SUPPORT SPACES

Historically, jails were utilized to temporarily “warehouse” those that had been arrested and accused of a crime. Individuals were typically incarcerated in a jail for a relatively short period of time while a court determined whether they were sentenced to prison or released. Over the last decade, jails are increasingly housing sentenced individuals and most importantly, focusing on **rehabilitation**. Two populations that have grown and can benefit most from rehabilitation efforts are those with **substance abuse problems** and those with **mental health issues**. Therefore, there is a need for certain types of spaces that were not required in jails only twenty years ago. Like most older facilities, the Wesley Street facility lacks space dedicated for **programming and mental health**.

One of the best opportunities for Jackson County to slow the growth of the jail population is through a reduction in recidivism and **drug treatment** related programs (including AA/NA) can play a significant role. There are anecdotal reports that a lot of the crimes, other than direct drug offenses (possession, dealing, etc.), are drug related. Crimes like domestic violence are often the result of the drug epidemic, including meth and opioids. Therefore, a focus on space where these programs can be effectively administered, in a more **therapeutic environment**, should be included in any future designs.

PROGRAMMING, MENTAL HEALTH & OTHER SUPPORT SPACES

Proper classification and abundant classroom spaces for programs will also enable the professional staff to administer **evidence-based programming** that is shown to reduce recidivism.

The deinstitutionalizing of the mentally ill has had a significant impact on county jails. Judges and Sheriffs have been faced with having to “lock up” the acute mentally ill in the interest of public safety because there is currently no other option. Therefore, it is critical that **housing spaces are designed to be anti-ligature to help prevent self-harm**. Additionally, programming rooms, offices, exam rooms, assessment rooms, padded cells and other supporting spaces dedicated to efforts to **improve the mental health** of inmates should be provided. These spaces should be immediately adjacent to general detention housing so that they are easily accessed and therefore are utilized as often as possible.

VIDEO ARRAIGNMENT

Jackson County currently utilizes Video Arraignment/Initial Hearings, and this feature will be expanded and enhanced in the proposed design. Video Arraignment is a technology that uses a two-way interactive video system to connect judicial proceedings conducted with parties at remote locations, thereby reducing the need to transport prisoners to court. Benefits include enhanced security because of reduced prisoner transports and expediting the arraignment process. In the proposed design, space will be provided for this function immediately adjacent to housing, improving operational efficiency. Appropriate support spaces like waiting (can be divided for men's and women's) and restrooms will be incorporated as well.

To accommodate the **space and operational needs** that were identified through the space evaluation and data projections, the following summarizes the spaces that would be needed for a new facility and expanded facility at the Chanter Road location.

CHANTER ROAD FACILITY ADDITION & RENOVATION

ADDITIONS

Intake and Processing = 8,117 SF

Confinement Housing = 26,046 SF

Female Dorm (alternate) = 0 SF

Connector = 1,603 SF

Mechanical/Electrical/Support = 1,400 SF

Subtotal Sheriff's Office = 37,166 SF

+ Grossing Factor = 10,066 SF

Total Chanter Road Addition = 47,232 SF

RENOVATIONS

Medical = 1,732 SF

Laundry = 920 SF

Weekenders = 924 SF

Male & Female Lockers = 1,018 SF

Fitness Expansion = 677 SF

Administration (JC, Lt., Patrol Operations) = 1,359 SF

Subtotal Sheriff's Office = 6,630 SF

+ Grossing Factor = 1,160 SF

Total Chanter Road Renovation = 7,790 SF

ARCHITECTURAL PROGRAM

(Refer to **Section 4 – Architectural Space Program** for more information)

To accommodate the space and operational needs that were identified through the space evaluation and data projections, the following summarizes the spaces that would be needed if the Wesley Street facility were demolished. The priority components were incorporated in recommended design for the Chanter Road facility. The components listed below would enhance operations at the Wesley location if that project becomes feasible.

WESLEY STREET SHERIFF'S OFFICE & CITY POLICE DEPARTMENT

ARCHITECTURAL PROGRAM

Sheriff's Administration	= 3,510 SF
Investigations	= 3,110 SF
Operations	= 430 SF
Connector/Holding	= 3,420 SF
<u>Mechanical/Electrical/Support</u>	<u>= 1,100 SF</u>
Subtotal Sheriff's Office	= 11,570 SF
+ <u>Grossing Factor</u>	<u>= 3,306 SF</u>
Total Sheriff's Office	= 14,876 SF
Subtotal City Police Department	= 10,770 SF
+ <u>Grossing Factor</u>	<u>= 3,231 SF</u>
Total City Police Department	= 14,001 SF
Total Sheriff's Office & City Police Department	= 28,877 SF

(Refer to *Section 4 – Architectural Space Program* for more information)

PROPOSED SOLUTION CONFIGURATION – PODULAR DESIGN

The proposed facility should utilize an “indirect supervision” podular housing design. This configuration provides multiple cell blocks, including cells, dormitories, and dayrooms around a centrally located control station maximizing staffing efficiency. Direct visibility into the dayrooms and the cell fronts is achieved through one-way glass from the second level control room. This observation location includes access panels for an elevated strategic advantage to deal with “events” in the dayroom. The indoor-outdoor recreation spaces will also be observable from this location. The cell blocks generally consist of 2-person or 4-person prefabricated steel tiered cells coated in polyurea with a mezzanine walkway. Blocks can also be configured as dormitories to increase bed counts and reduce costs. The cells and dormitories are positioned so that a continuous rear mechanical chase, outside the secure perimeter, is available for easy maintenance. Extending from the elevated control areas will be an elevated corridor with one-way glass for observation into other components like programming space, honor dorms and video arraignment.

(Refer to [Section 5 – Podular Design](#) for more information)

RECOMMENDATION

After evaluating and assessing the Wesley Street facility and considering the additions and renovations that would be needed to make the building useful for the next twenty years (minimum), our recommendation is to demolish the facility. The reasons for this conclusion include but are not limited to:

- The building has structural issues (movement of ¼" last year alone)
- The existing construction consists of multiple additions and hardened construction with thick concrete walls and low ceilings. This makes renovations for system upgrades and floor plan changes challenging
- The detention equipment and areas would need to be completely removed and replaced. This is the most expensive portion of jail construction, and the county would gain very financial benefit from utilizing the existing facility because none of the detention equipment would be reused.
- The facility is not ADA compliant and because of the multiple additions and hardened construction, modifications to correct it will be difficult.
- The facility is multi-story and therefore, everything including food, medical, transports, etc. are dependent on one elevator. Staff also shares the same elevator as inmates.
- The facility is very difficult to observe, and any inmate movement requires significant staff time.
- The facility is not designed to be anti-ligature and deter self harm.
- There are several areas that do not have the necessary space required including but not limited to holding, housing control, staff spaces, programming, padded cells, laundry, and medical.

RECOMMENDATION

- All mechanical, electrical and plumbing systems are at the end of their useful life (some equipment has been replaced but portions of all need addressed)
- The vehicular sally port is not feasible for continued use. Emergency vehicles cannot access, and the single file configuration is not efficient.
- To accommodate the necessary additional square footage required for continued use, another horizontal expansion would be required. This would compound several issues already identified.

Therefore, it is RQAW Michigan, LLC's recommendation that an expansion be constructed at the Chanter Road facility location.

The proposed new facility should include approximately 500 and 550 rated beds that not only accommodates the projected housing and support space needs but does so in the most operationally efficient manner possible. The intent of the proposed design is to no longer simply "warehouse" inmates but rather, the new facility will be designed to enhance the county's ability to rehabilitate inmates. The spaces that are proposed will not only enable the opportunity to reduce recidivism but will also enhance inmate and staff safety and meet the short-term and long-term detention housing needs of the county.

RECOMMENDATION

The recommendation also utilizes the existing county's facility to accommodate the different classifications and existing operational expectations regarding these populations. The population that is currently housed at the Chanter Road facility would continue to be housed in the same manner. They would have access to the exterior "yard," be able to walk to the dining hall and be housed in the existing dormitories. The population that is currently housed at the Wesley Street facility would occupy the new indirect supervision housing pod described earlier.

The solution will provide enough housing for the projected twenty (20) year need. To accommodate this, this solution proposes constructing an expanded building that includes a new vehicular sally port, intake/booking and housing pod with approximately 250 beds. The new intake/booking area not only provides the necessary additional holding cells but also will be designed to be detention grade, unlike the existing Chanter Road intake/booking. The vehicular sally port will also be designed to accommodate emergency vehicles and have multiple bays.

The control room will be on an elevated secure level so that jail staff can move freely. This elevated control location also provides direct sight lines into the blocks, support spaces and recreation area and therefore, enable a minimal number of staff the ability to observe many inmates. This level also includes staff spaces/offices for report writing and meetings, restrooms, and break areas so that staff does not need to move out of this area for these purposes.

RECOMMENDATION

The proposed conceptual plan for the new facility is designed to be extremely operationally efficient. The housing pod will not only include tiered cells (2-person and 4-person), but also inmate support areas like programming spaces, an indoor/outdoor recreation area, video arraignment, exam rooms, segregation, padded cells, and contact visitation space (attorney, clergy, etc.). The design should prioritize cells over dormitories (because the Chanter Road facility already includes large dormitories); however, dormitories can be considered for some beds for budget or bed count purposes. Not only does the support spaces' proximity to the housing areas improve inmate safety, but it also increases operational efficiency. Each housing block in the housing pod will be sight and sound separated giving the county total flexibility to utilize them for any classification. This means that each block can be used for either men or women allowing the staff to maximize operational efficiency regarding bed count.

Immediately adjacent to the housing area would be Intake/Booking that includes a pre-process area. The pre-process area not only provides space for body scanning but also other assessments including mental and physical health. The area can significantly improve the safety of both inmates and staff. These spaces would be connected to the housing area by a corridor and offer the county the opportunity to plan for expansion of these components, as they are located on outside walls. Adjacent to the support spaces is the Sheriff's Office and other administration components.

(Refer to [Section 6 – Conceptual Design](#) for more information)

RECOMMENDATION

The intent of this design option is to limit the amount of movement for staff and inmates. By doing so, the required staff is kept to a minimum and inmate/staff safety is maximized.

To accommodate the space and operational needs of the Sheriff's Office that were identified through the space evaluation and data projections, the design for a new Sheriff's Office and City Police department was investigated. The new facility would require approximately 28,877 square feet. (See Section 4 – Architectural Program for more information). The program would be accommodated on two or three levels with connectors to the existing courthouse. The new facility would include space for Sheriff's Administration, City Police Department, a large training room, and several other supporting spaces. The secure connectors should include a vehicular sally port at the ground level, holding cells, transportation office, attorney client rooms, and vertical circulation to access each floor of the existing Courthouse (refer to [Section 6 – Conceptual Design for more information](#))

The priority components identified through the study were incorporated in the recommended design for the Chanter Road facility, including Patrol. The components listed above would enhance operations at the Wesley location if that project becomes feasible.

ALTERNATIVE USES FOR EXISTING JAIL FACILITY

Due to the nature of the type of construction of the existing facility (detention), a typical reuse of facilities like this are for other detention type projects, like work release. There will be significant remodeling costs associated with a project like this due to the existing construction, MEP system upgrades required and inefficient layout. It is recommended that an alternative use not be considered for the Wesley Street facility.

REASONS RENOVATION ARE CHALLENGING OR NOT FEASIBLE

Renovation Challenges:

While the structure is stoutly constructed, this is an impediment to renovation. The existing building is a cast-in-place concrete structure that appears to include interior concrete load bearing walls. The cost for selective demolition will be at least triple the cost of tearing down the building because of the need for shoring, cutting, patching/infilling, and hauling materials down multiple floors. Additionally, demolishing mechanical, electrical, and plumbing systems will require demolition of building elements to access piping for demolition which will add at least 10% to MEP costs.

Wesley Street was built in three separate phases. The newest addition has started to separate from the building. Stabilizing the existing structure that is experiencing settlement isn't possible to quantify without some extensive investigation but will be very expensive to correct.

The only elements of the existing building suitable for reuse would be the structure itself along with some minor MEP equipment which on the high side is only \$80/SF or \$3M (concrete, structural steel, and earthwork/utilities). This will easily be consumed by the additional work required to renovate the facility. In fact, if considering a renovation of the facility, we would recommend a 10% contingency to address unknown conditions and the increased contingency would account for more than \$900,000 alone.

The inherent issues below will still plague the Wesley Street Facility after renovation.

- Floor to floor heights
- Two-foot-thick concrete walls will make communications challenging.
- The building does not meet accessibility requirements

PROPOSED PROJECT OPERATIONAL COSTS

- The existing facility operates with 55 staff, and this includes seven part-time staff
- The proposed facility would require 60 full time staff, and this includes two new transport officers to account for the unknown site location.
- Salary/benefit costs, health insurance, life insurance, FICA, Retirement, etc. increase approximately \$1,164,637 (assumes a 1.23 multiplier for additional staff)
- Anticipated inmate related costs increase approximately \$268,120 to account for an increase in inmate population (assumes a 1.10 multiplier to account for additional inmates)
- Facility maintenance costs remain the same.
- Total operational costs are likely to increase \$1,601,552.
- The proposed facility is 100% larger than the existing building and the proposed staffing accounts for housing the 20-year projected need.

*(Refer to **Section 7 – Staffing and Operational Costs** for more information)*

PROPOSED TOTAL PROJECT COST ESTIMATE

Recommended Scope: Chanter Road Facility

	Low	Mid	High
Construction Hard Costs	\$24,710,708	\$26,313,884	\$28,174,025
Construction Soft Costs	\$6,312,735	\$6,658,879	\$7,060,506
Owner Soft Costs	\$3,029,793	\$3,350,234	\$3,690,365
Chanter Total Project Cost	\$36,392,312	\$38,663,269	\$41,298,230

Potential Future Scope: Option to Replace Wesley Street Facility

	Low	Mid	High
Wesley Street Sheriff's Office	\$11,796,912	\$12,421,447	\$13,073,165

Option for Female Dorm Addition to Chanter Road Facility

	Low	Mid	High
Female Dorm Addition	\$1,074,905	\$1,128,660	\$1,185,080

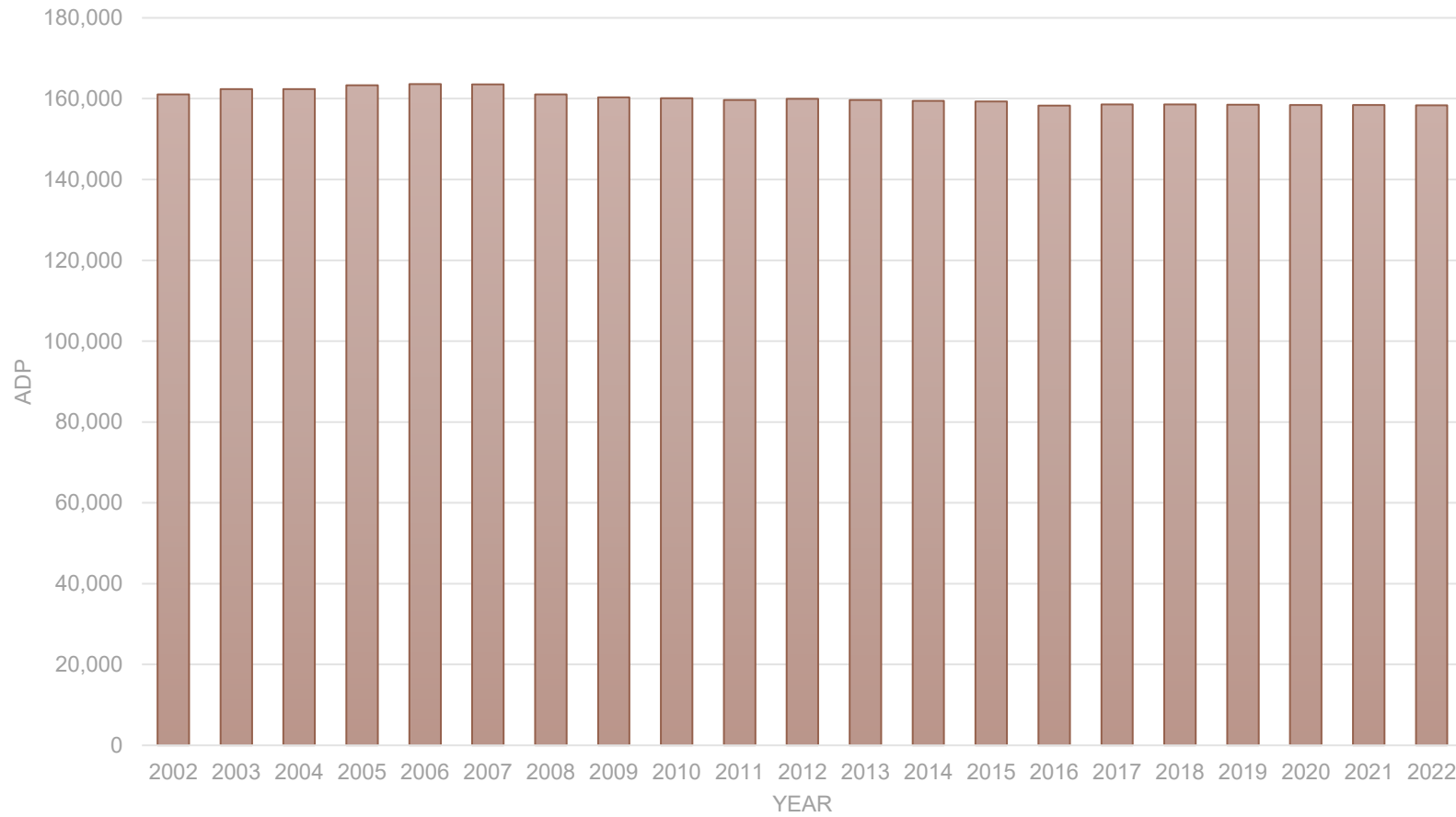
(Refer to *Section 8 – Statement of Probable Cost* for more information)



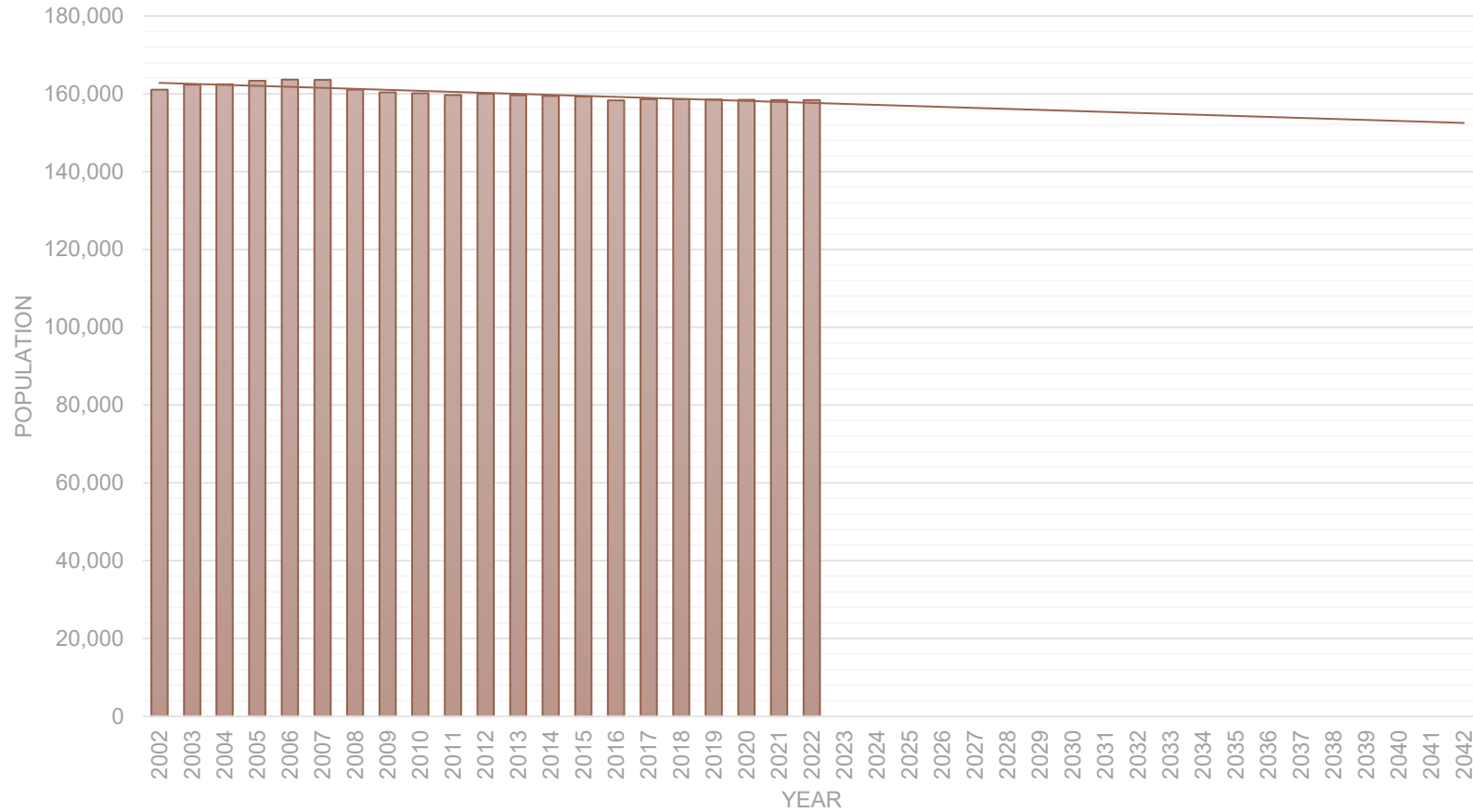
DATA & PROJECTIONS

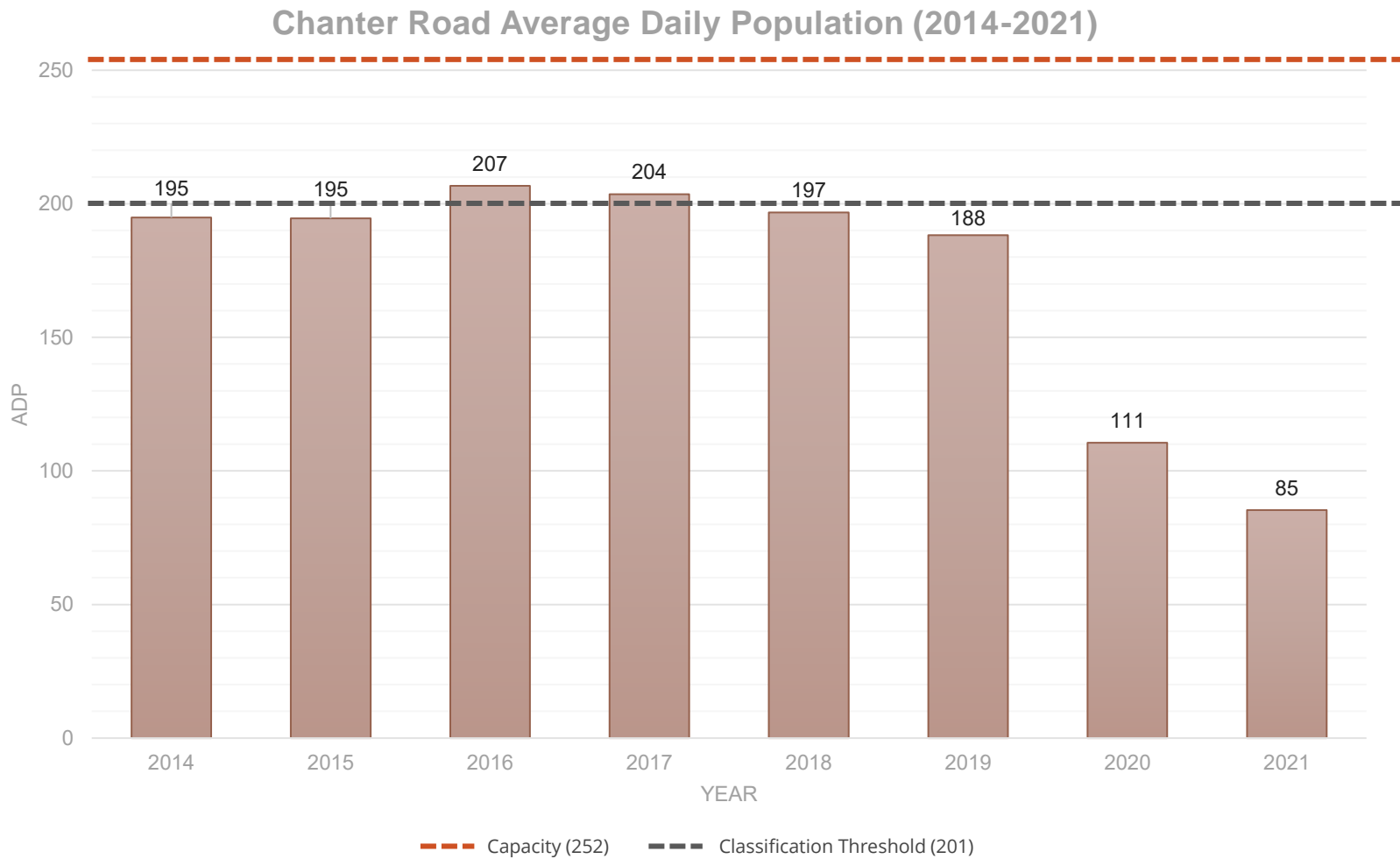
02

Jackson County Population (2002-2022)

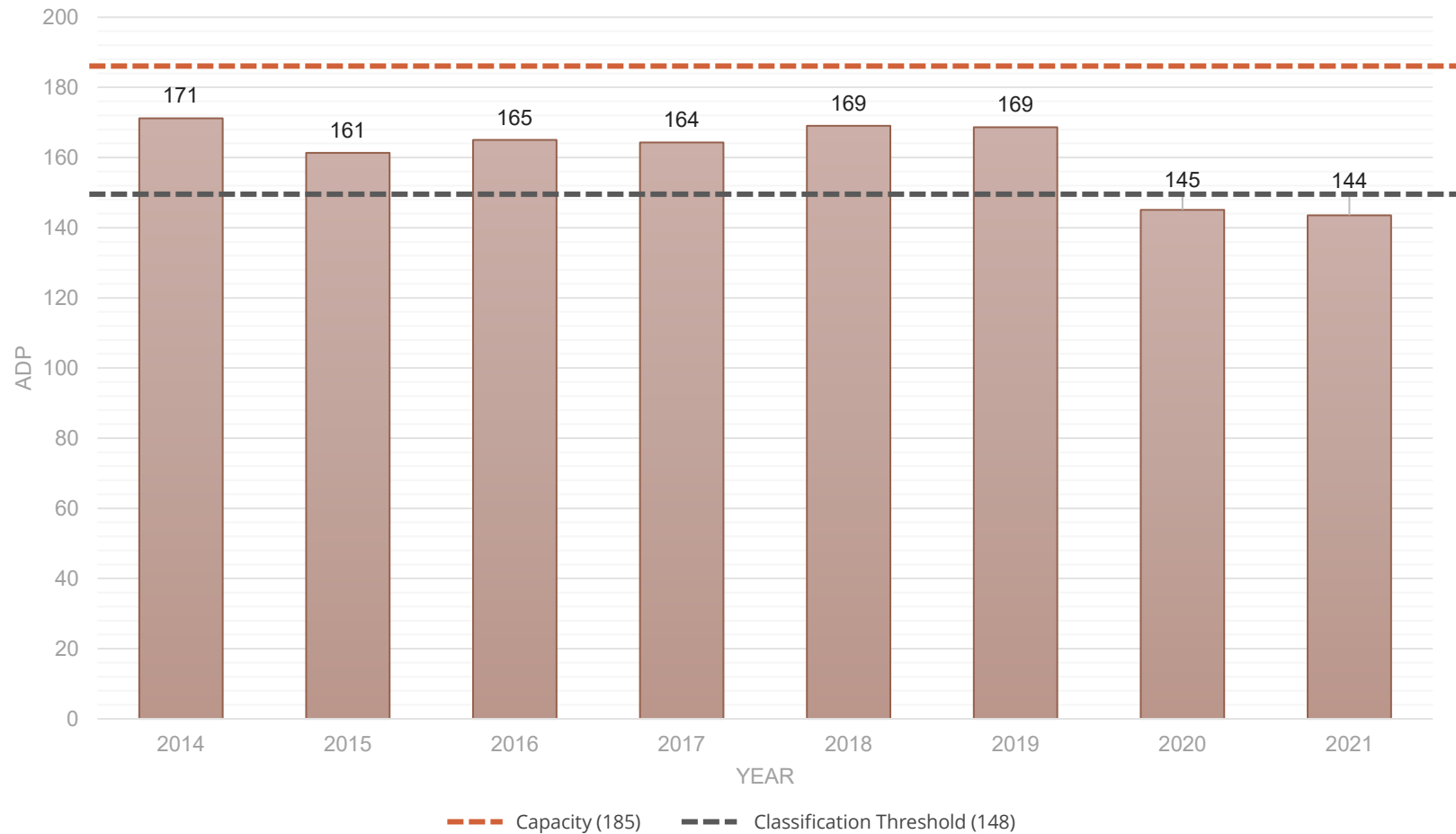


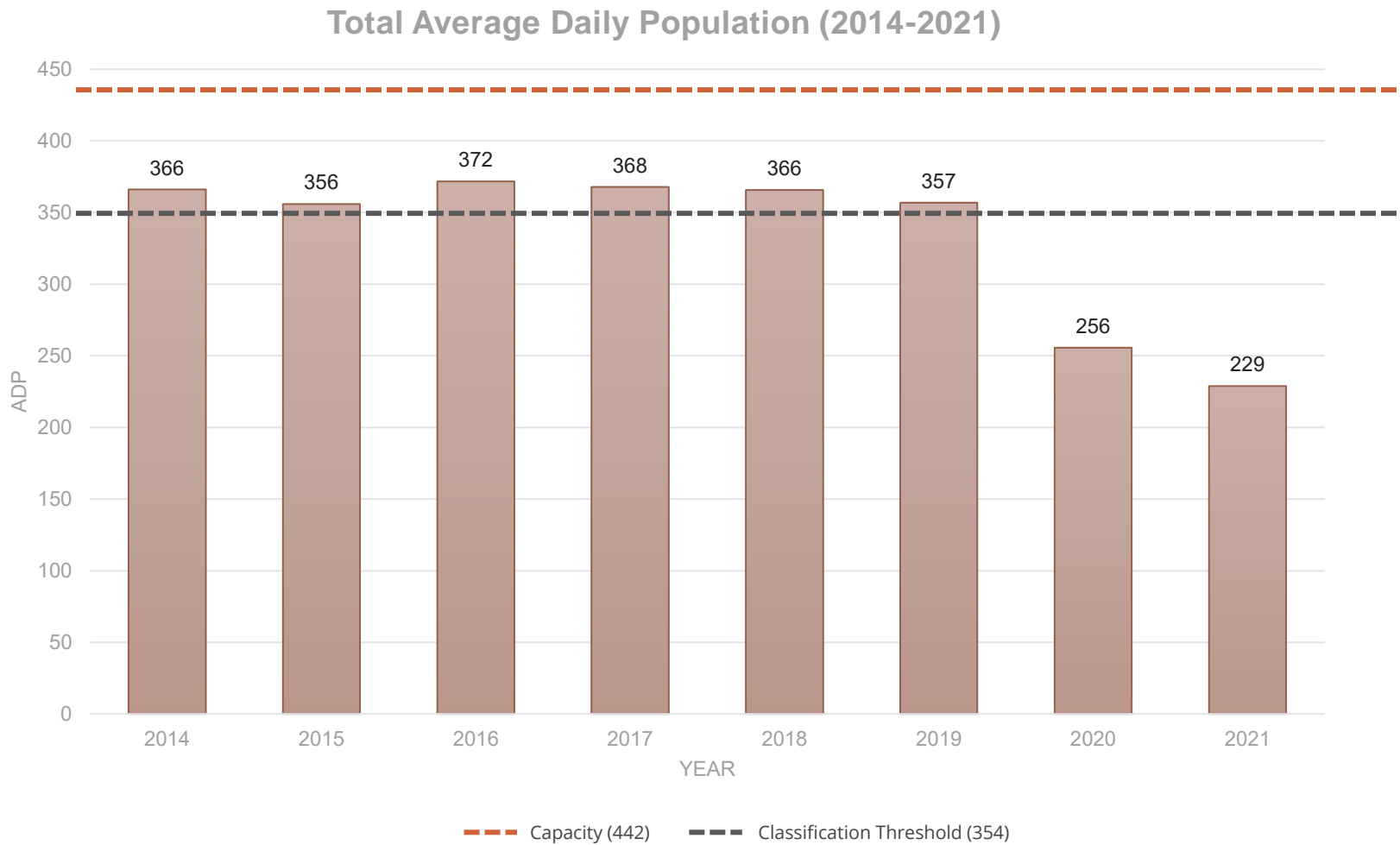
Jackson County Projected 20-Year Population (2002-2022)

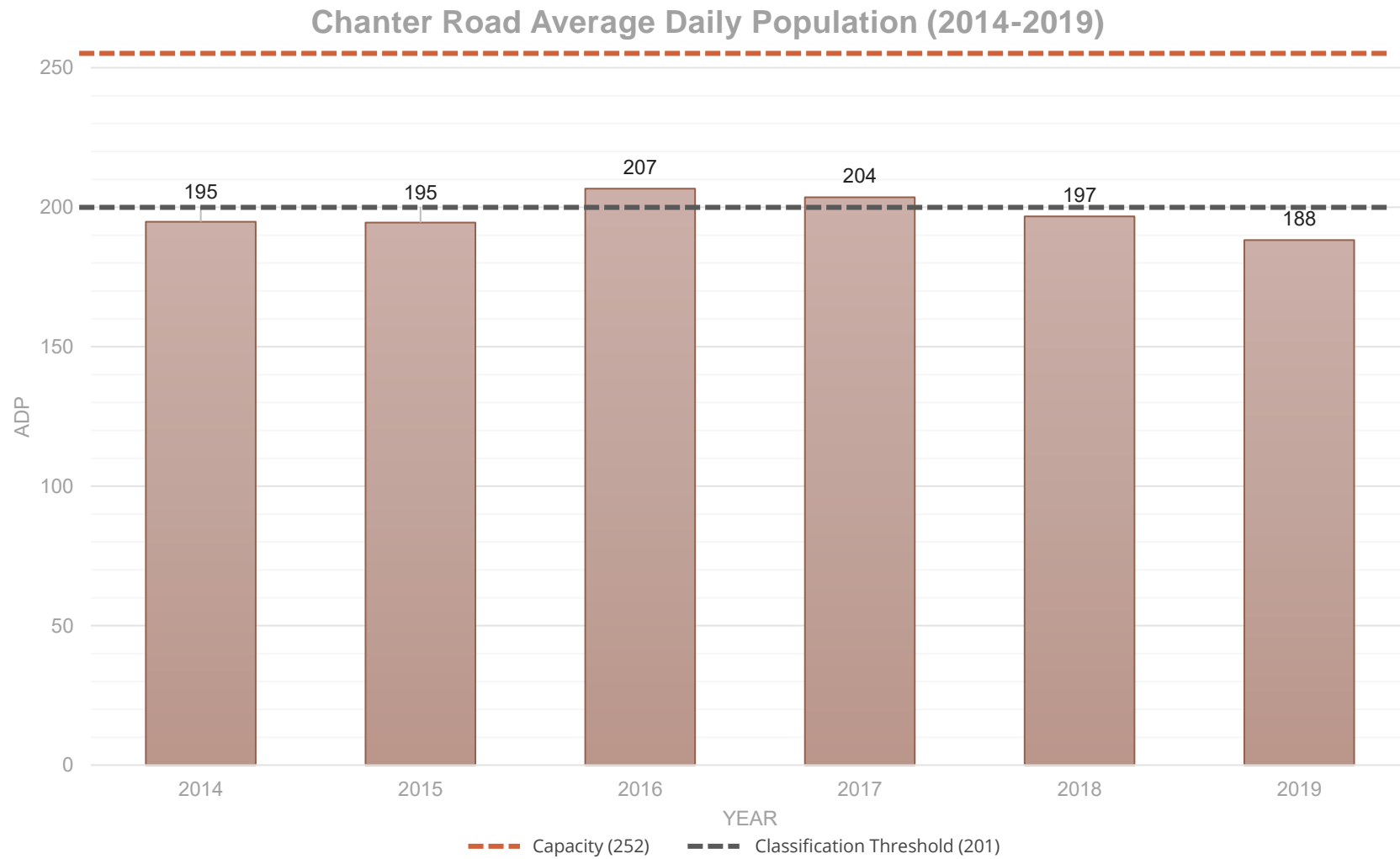




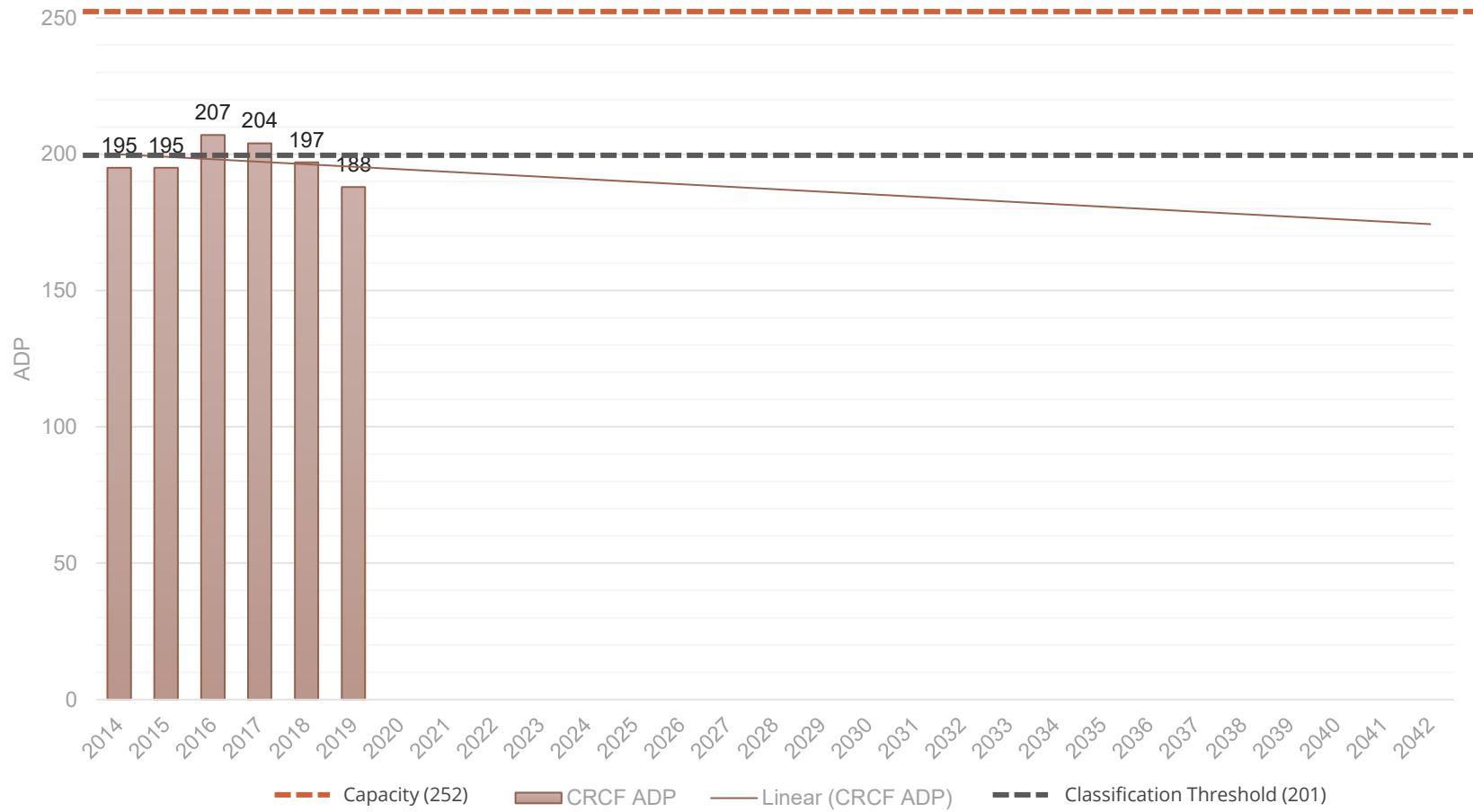
Wesley Street Average Daily Population (2014-2021)



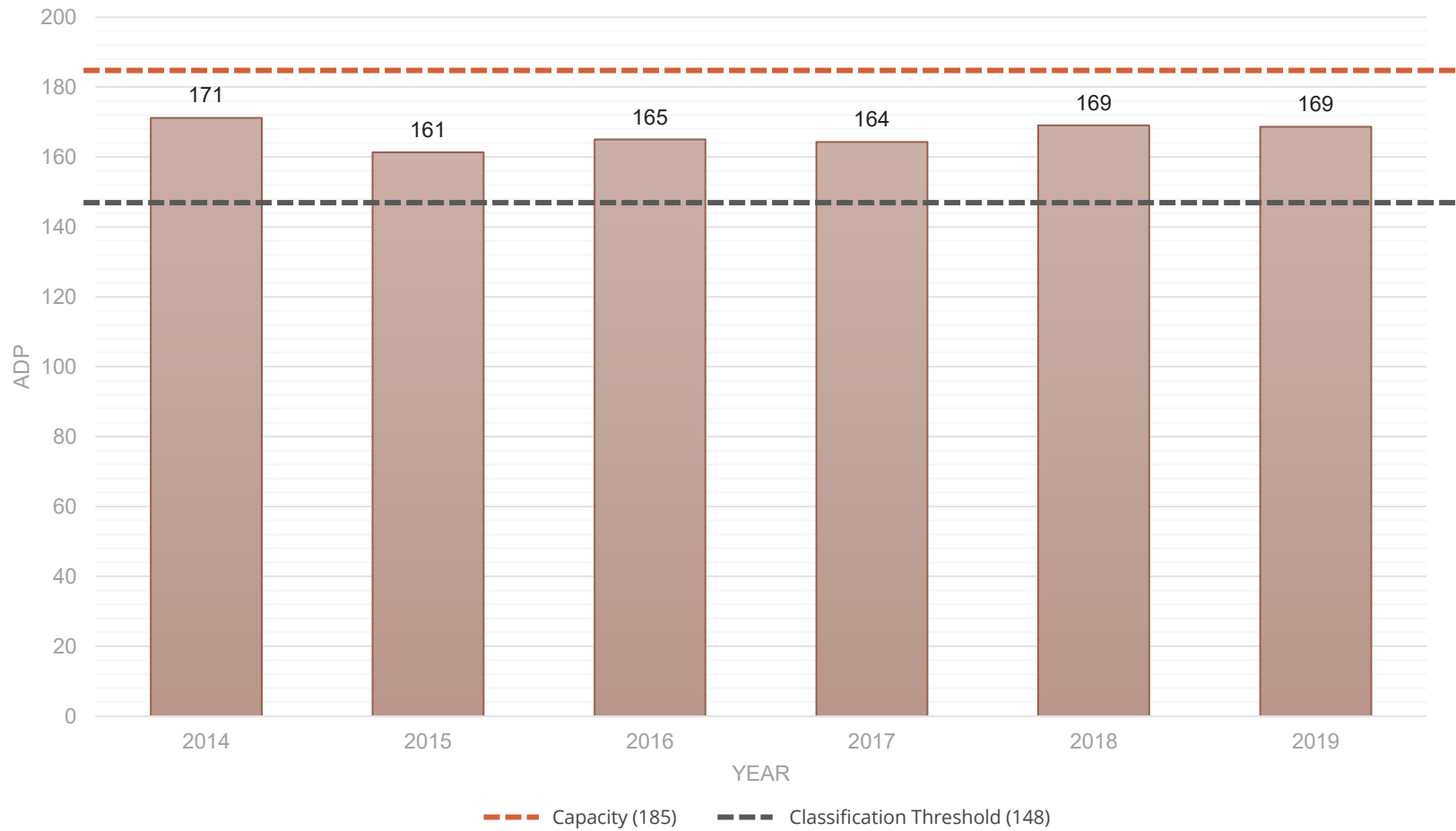


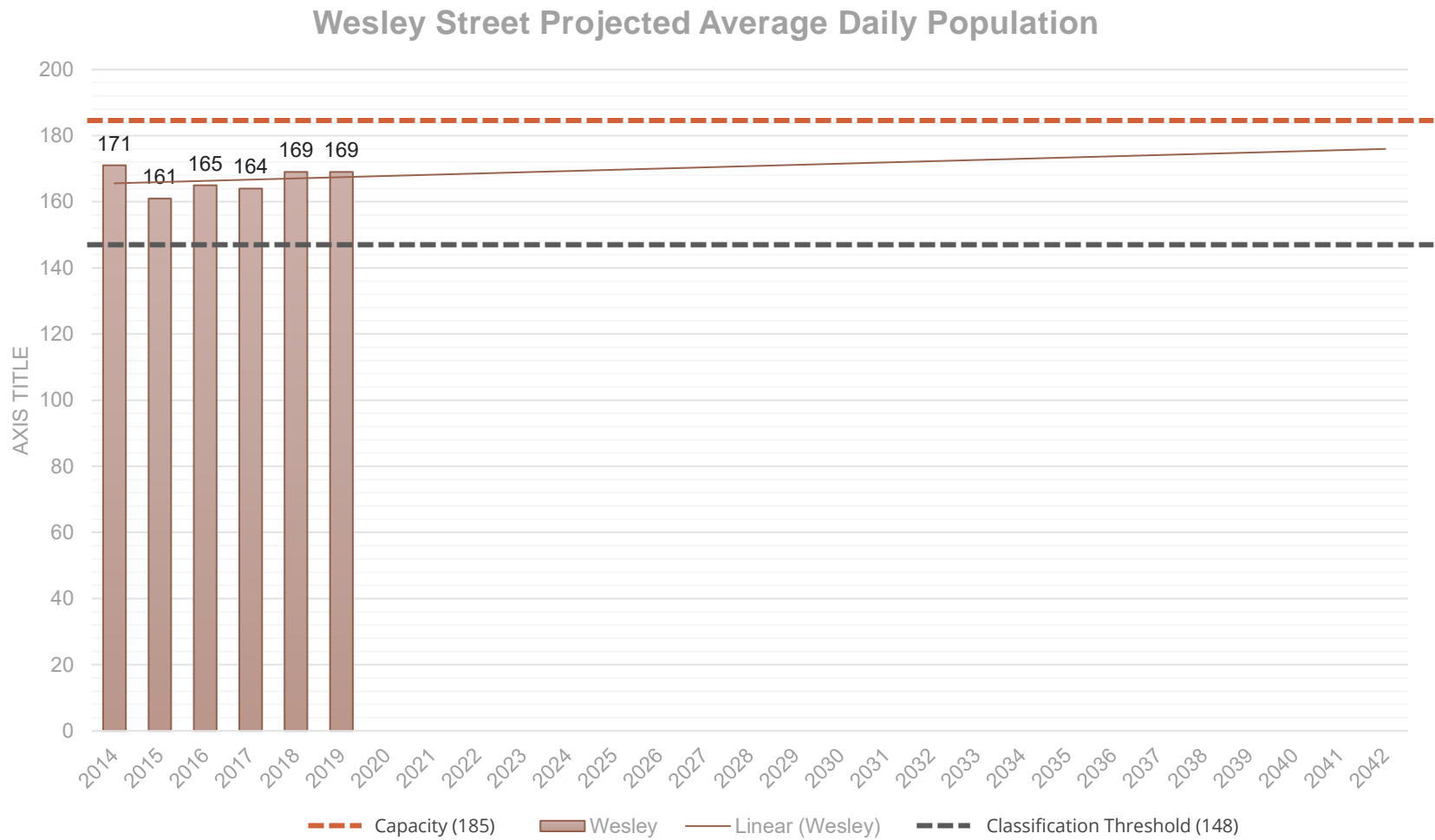


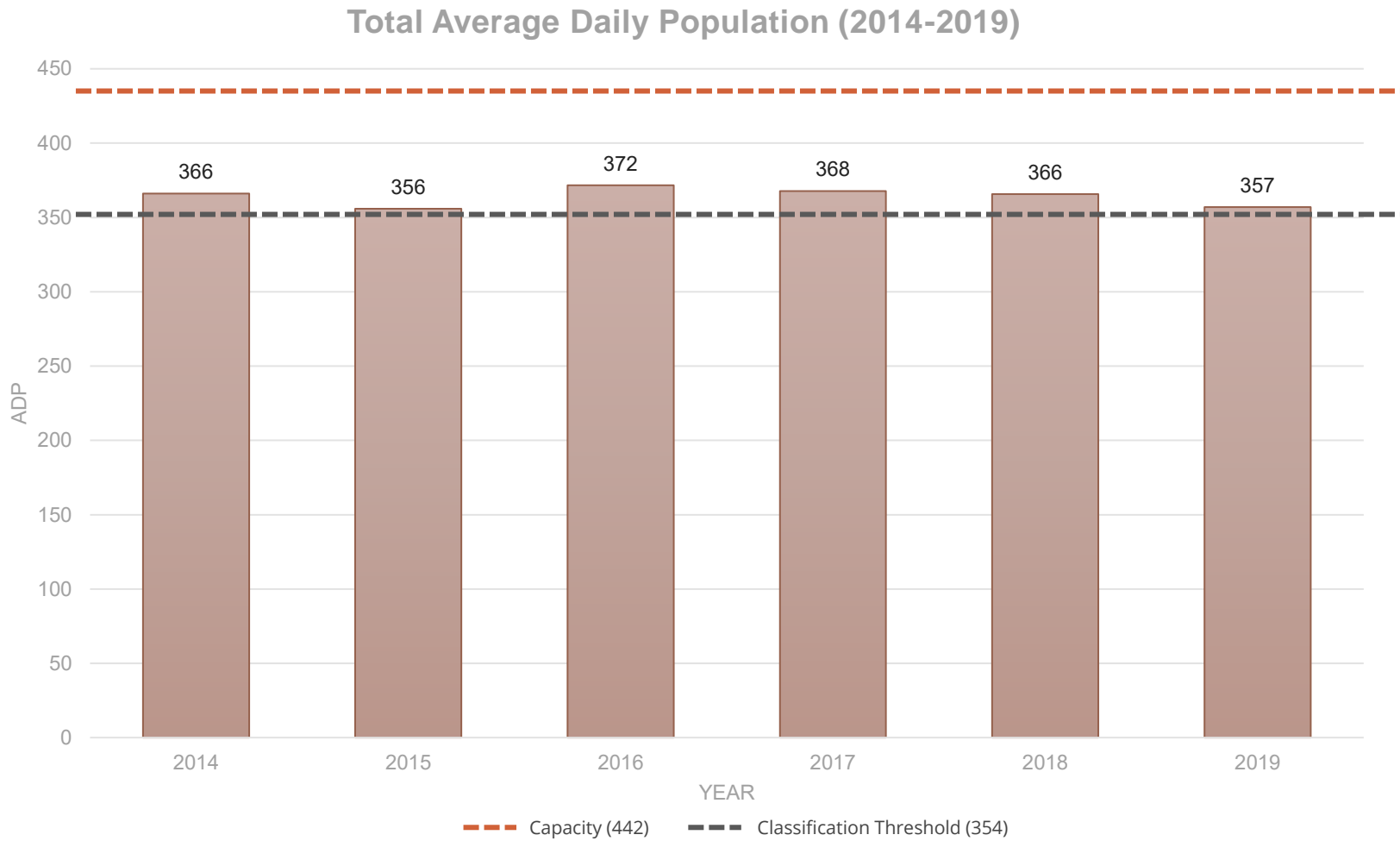
Chanter Road Projected Average Daily Population



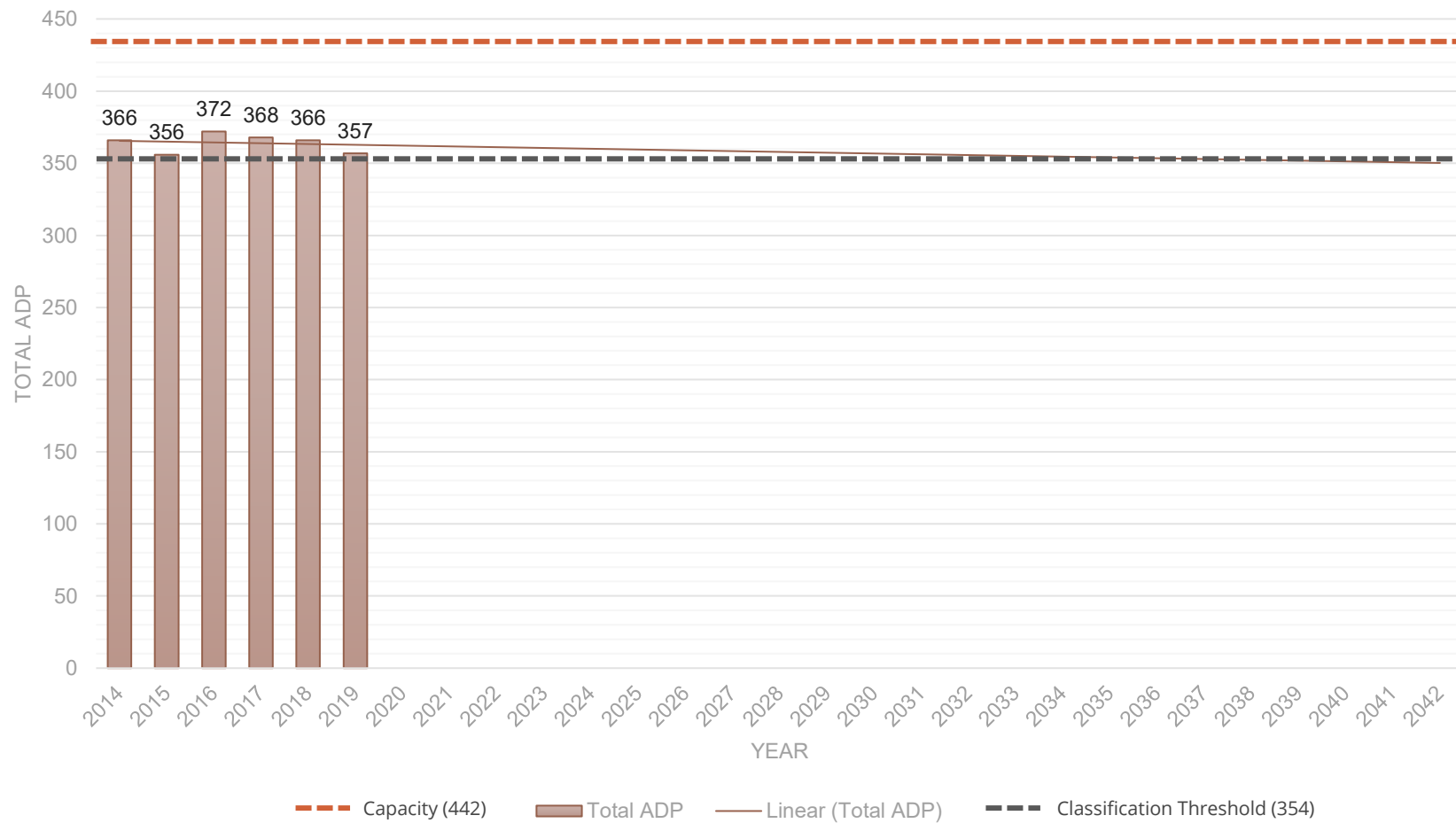
Wesley Street Average Daily Population (2014-2019)

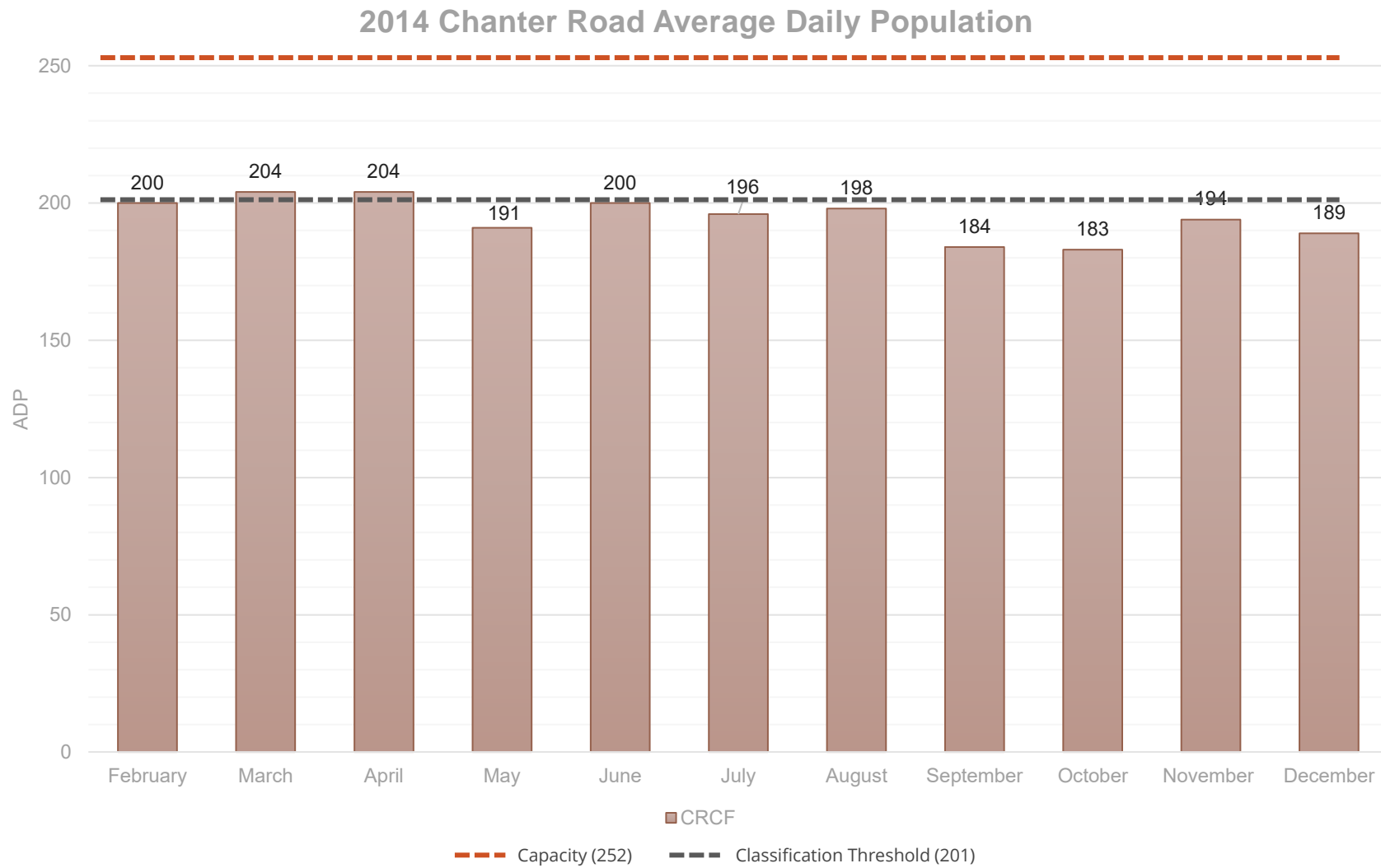




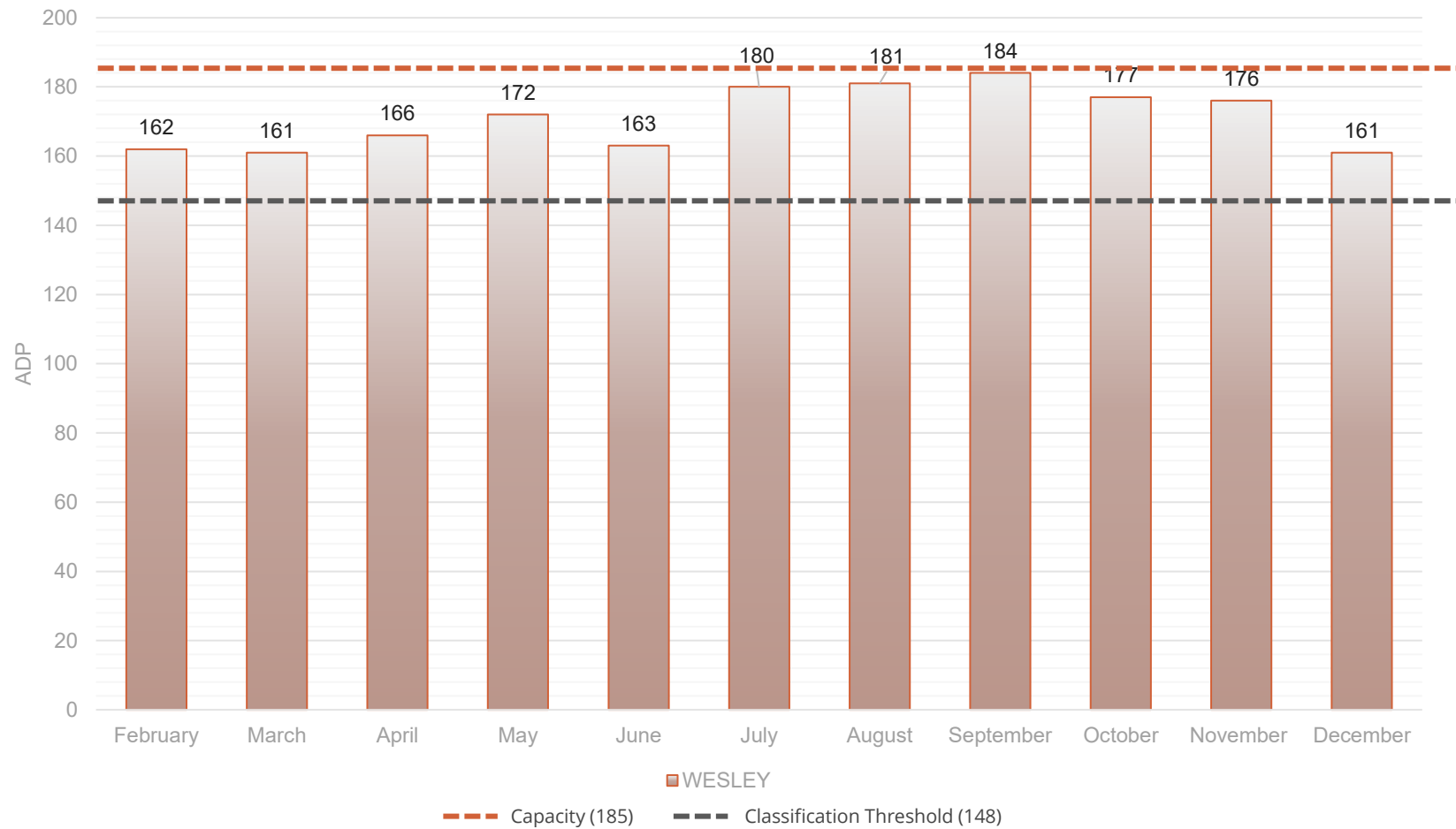


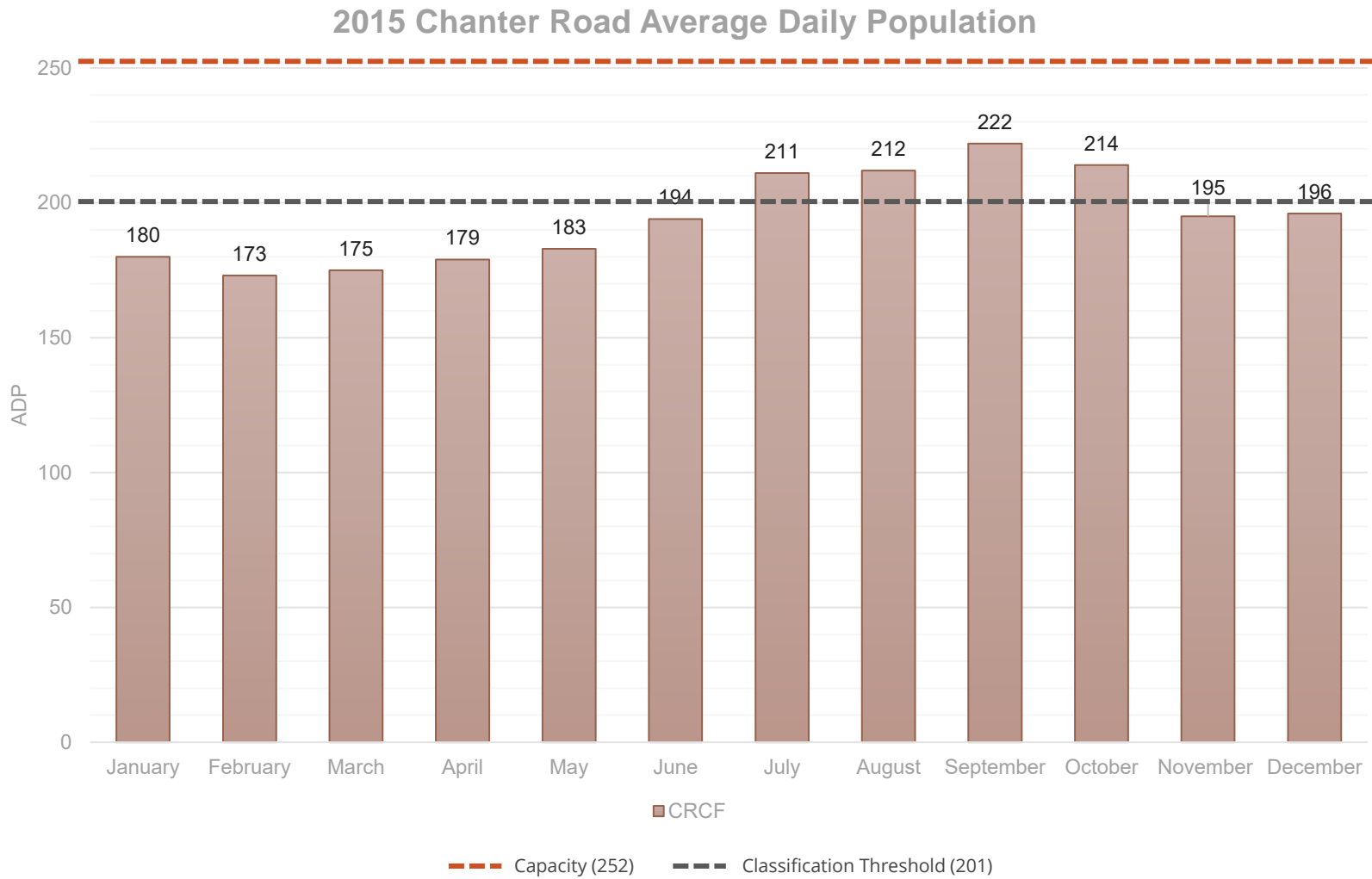
Total Projected Average Daily Population (2014-2019)



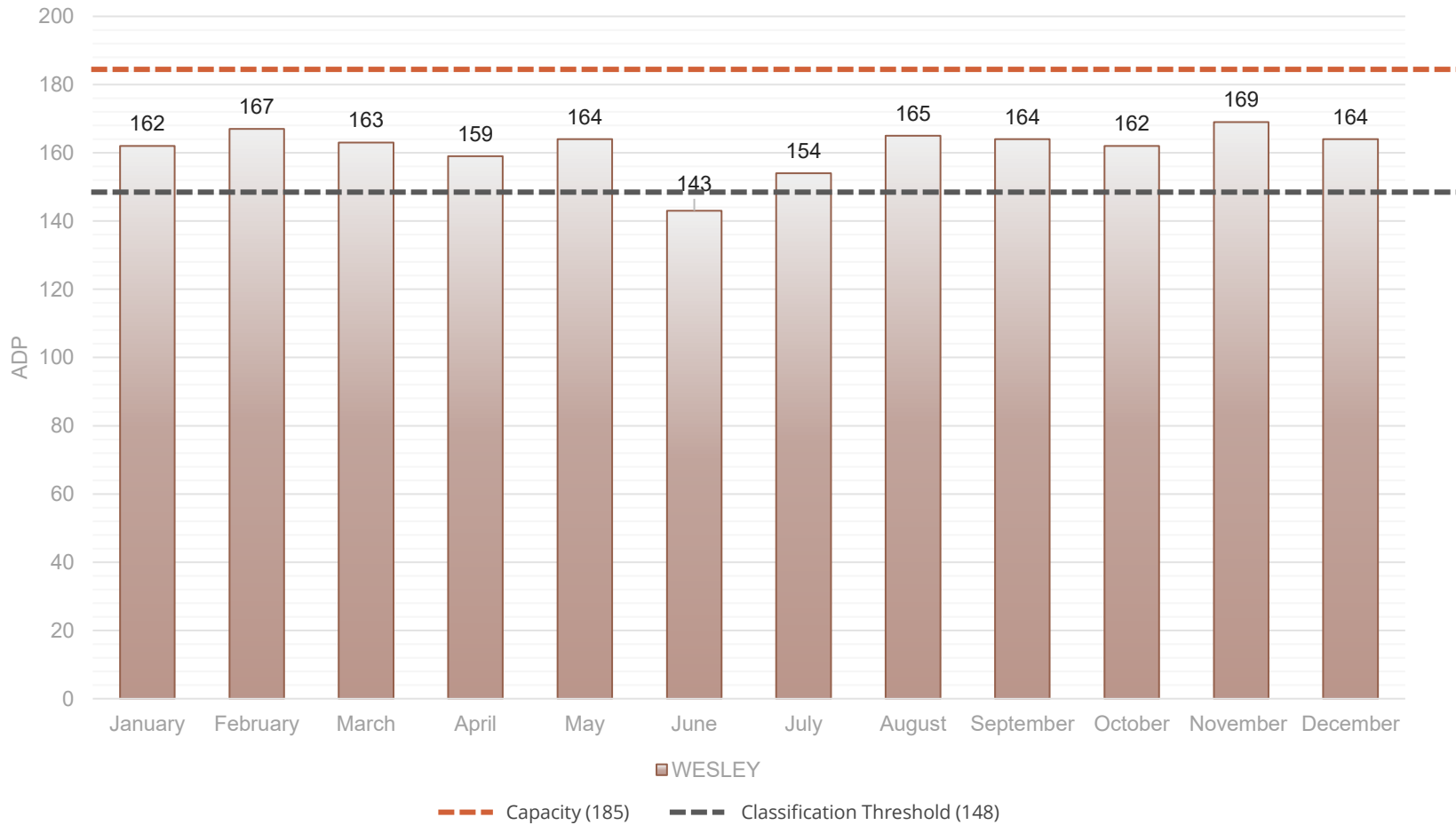


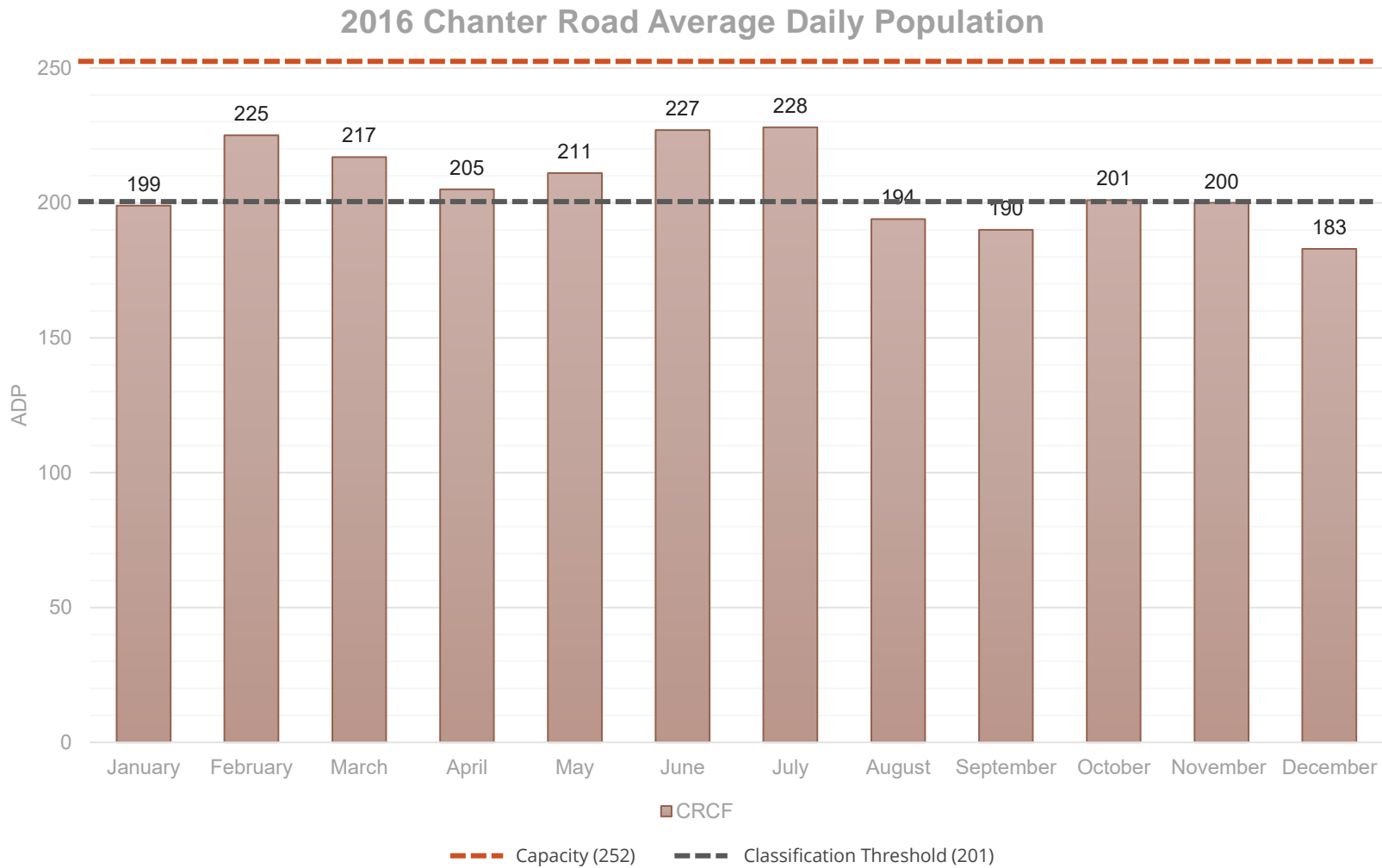
2014 Wesley Street Average Daily Population



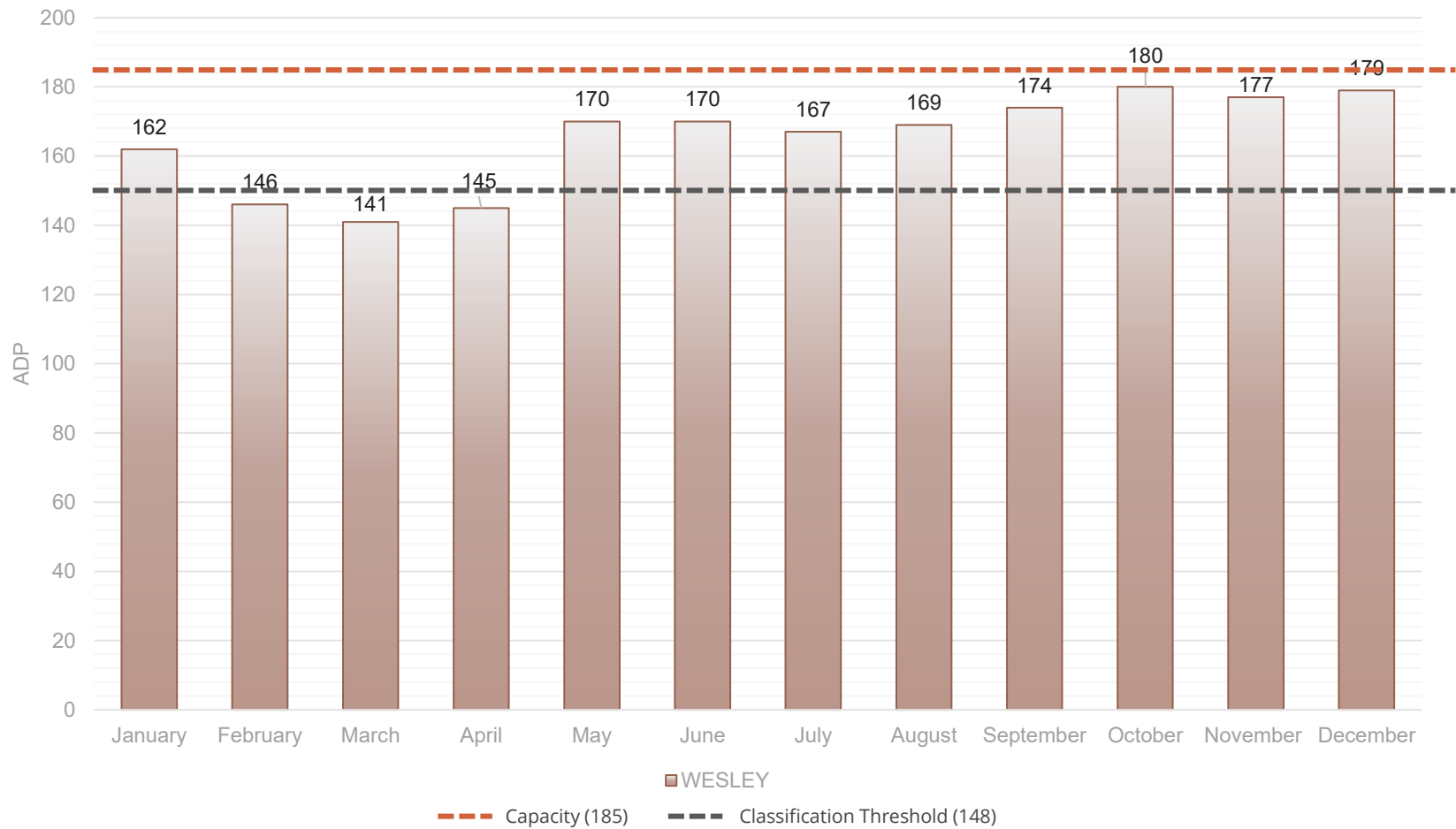


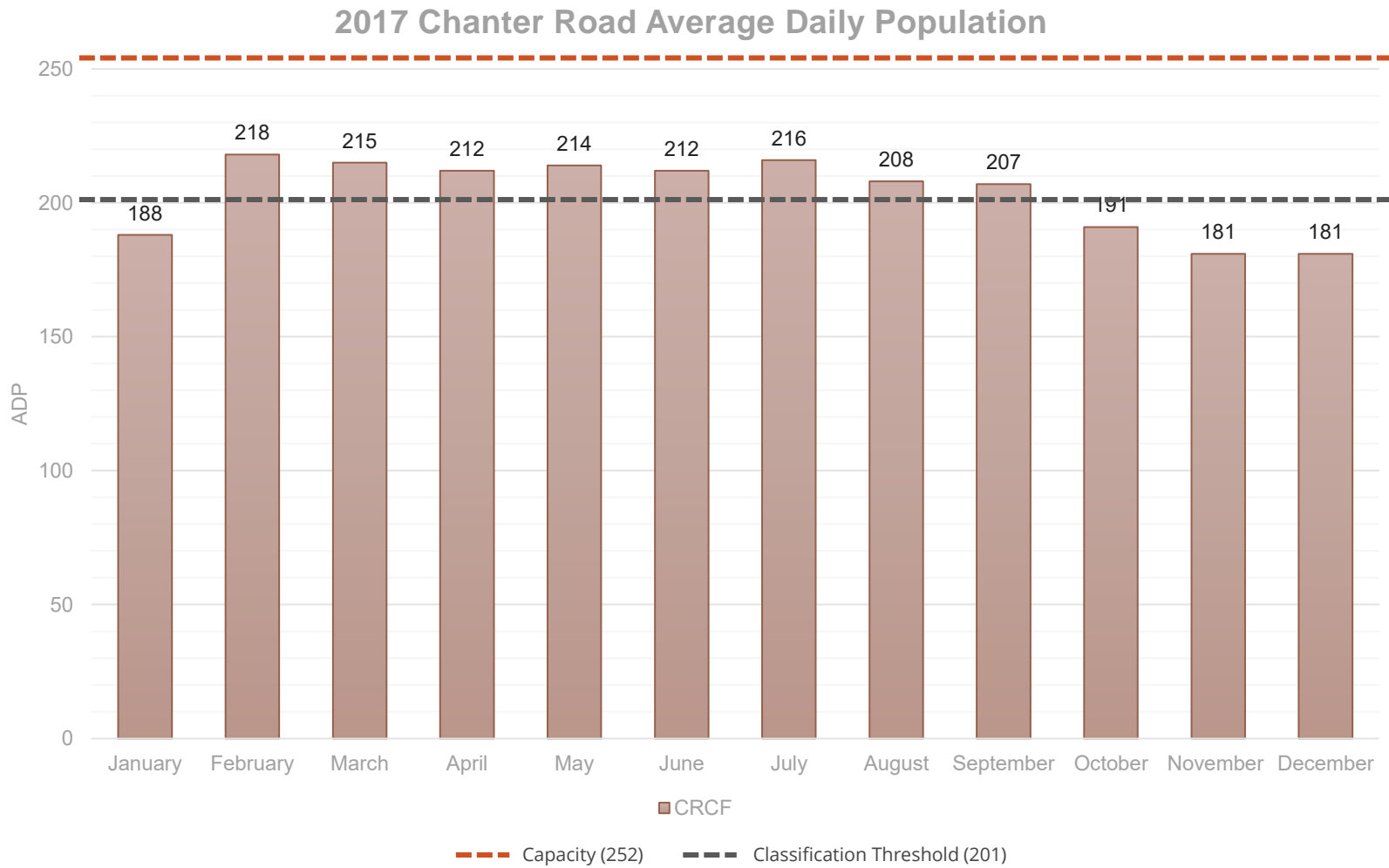
2015 Wesley Street Average Daily Population



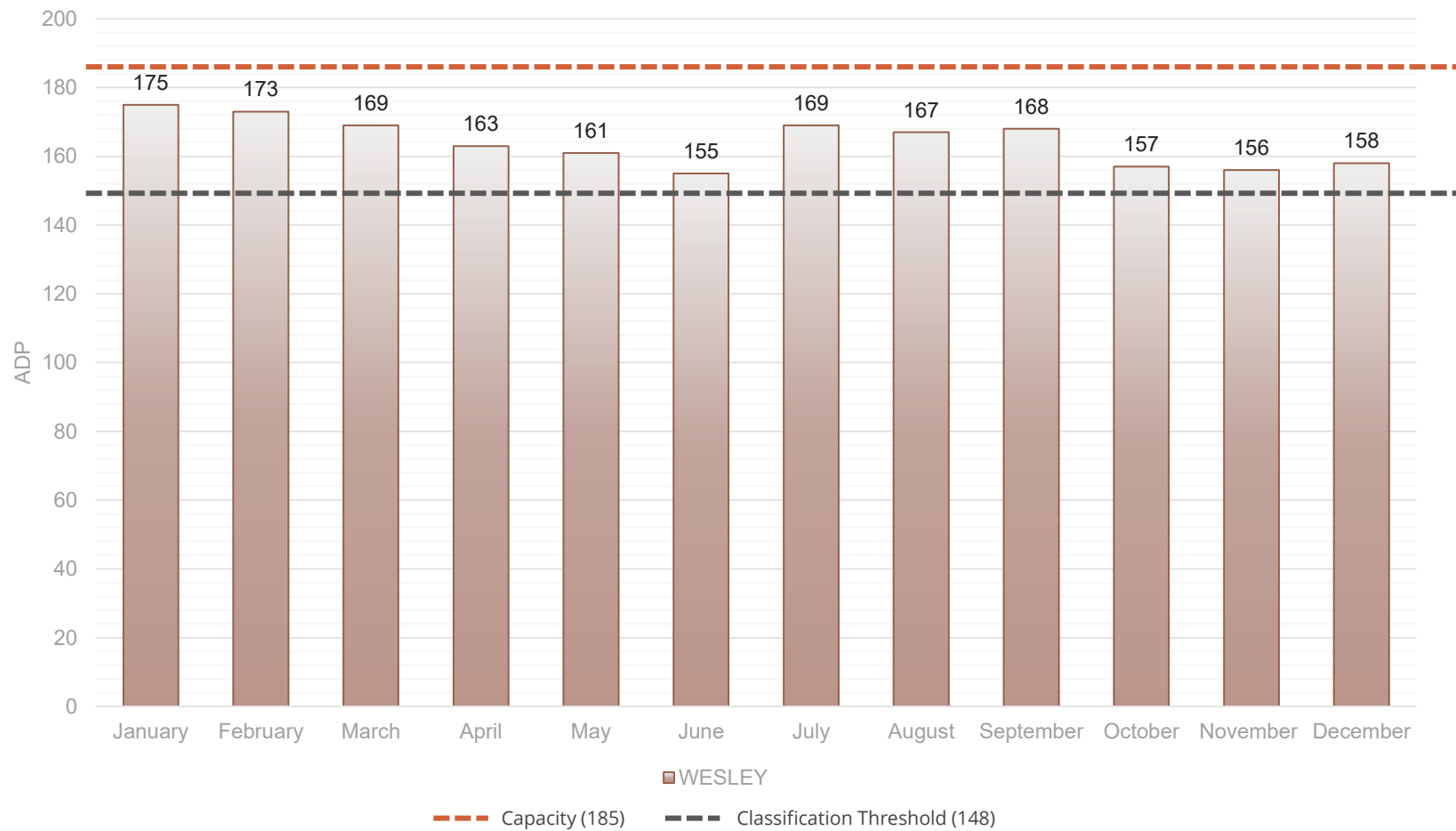


2016 Wesley Street Average Daily Population

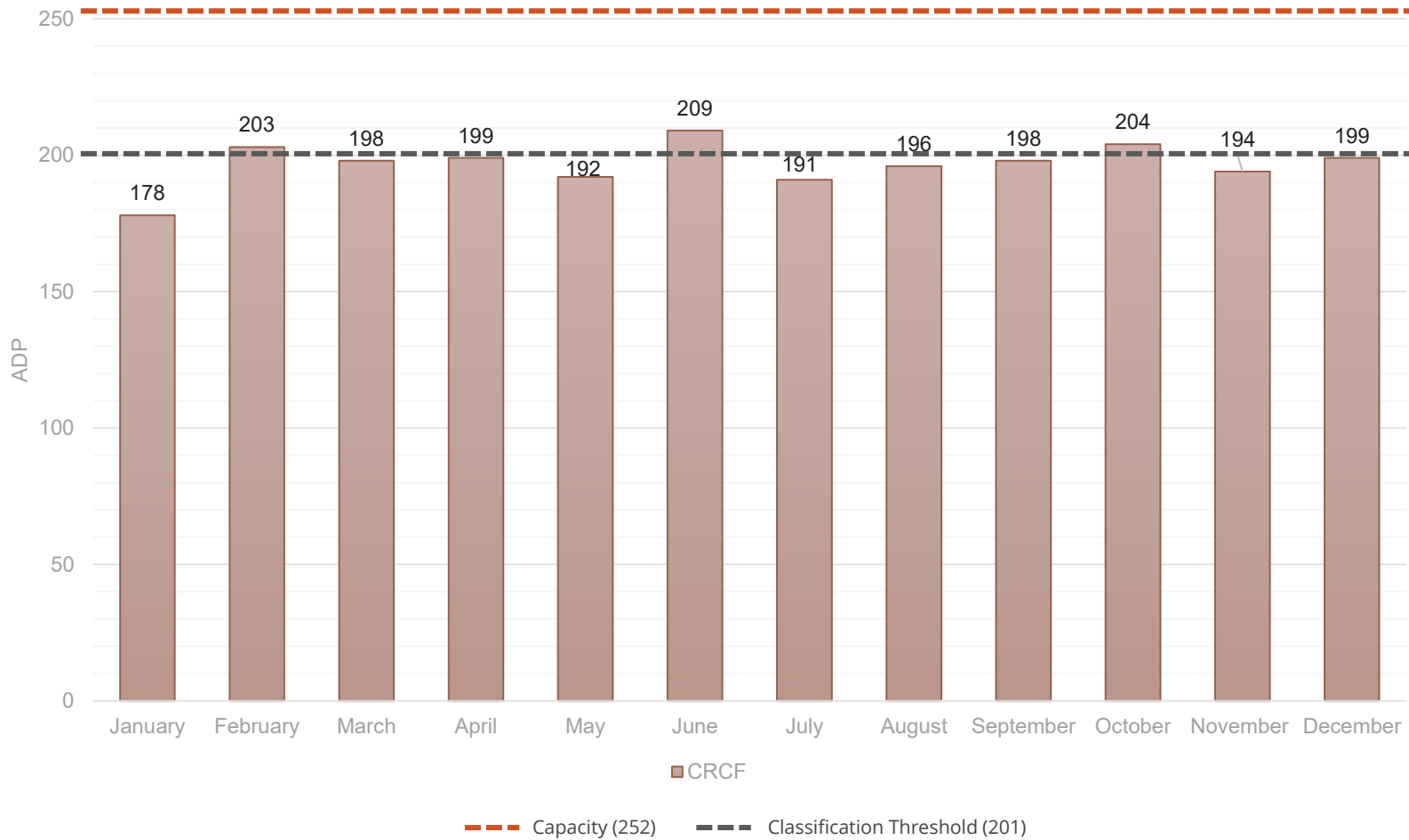




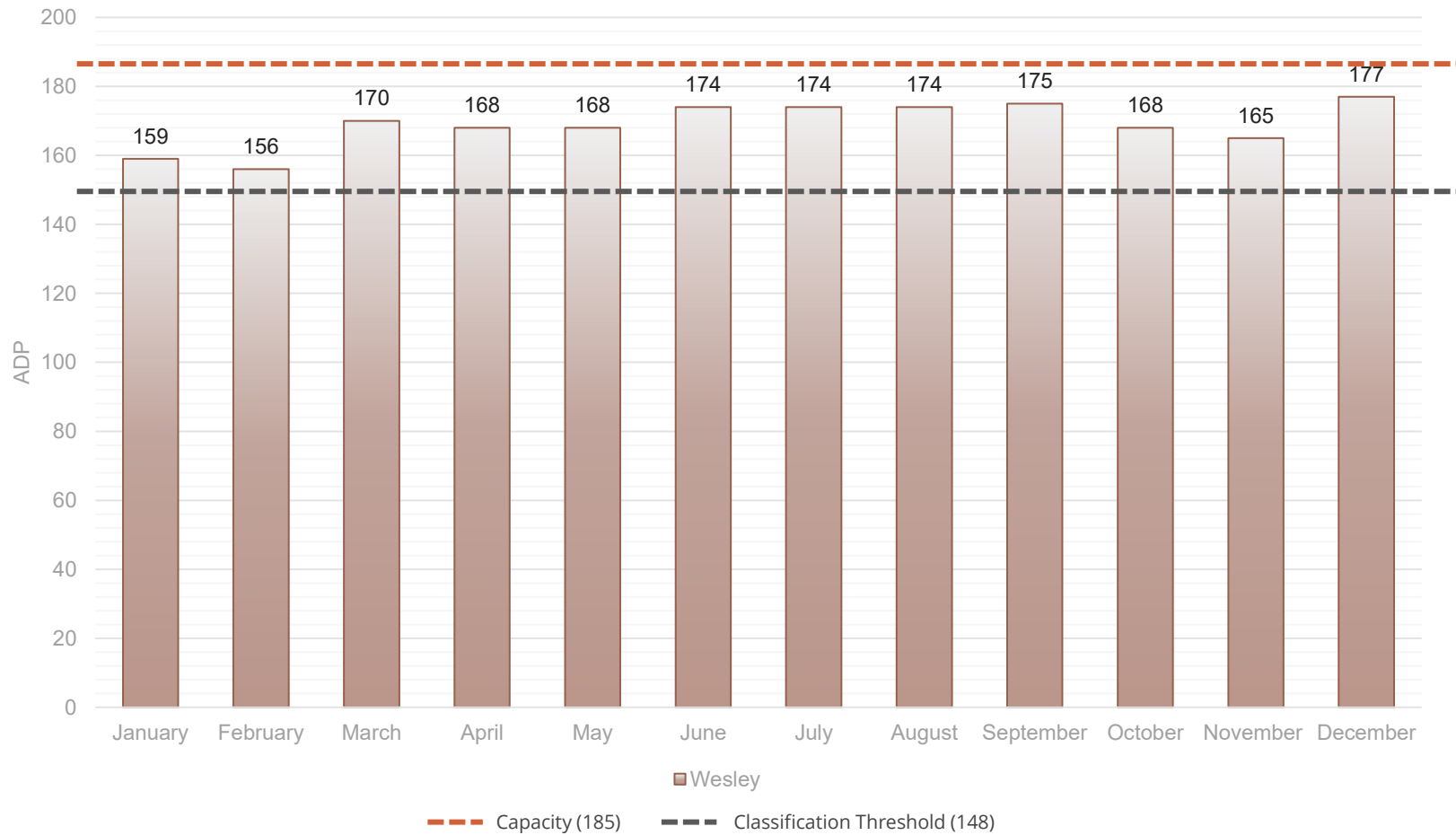
2017 Wesley Street Average Daily Population

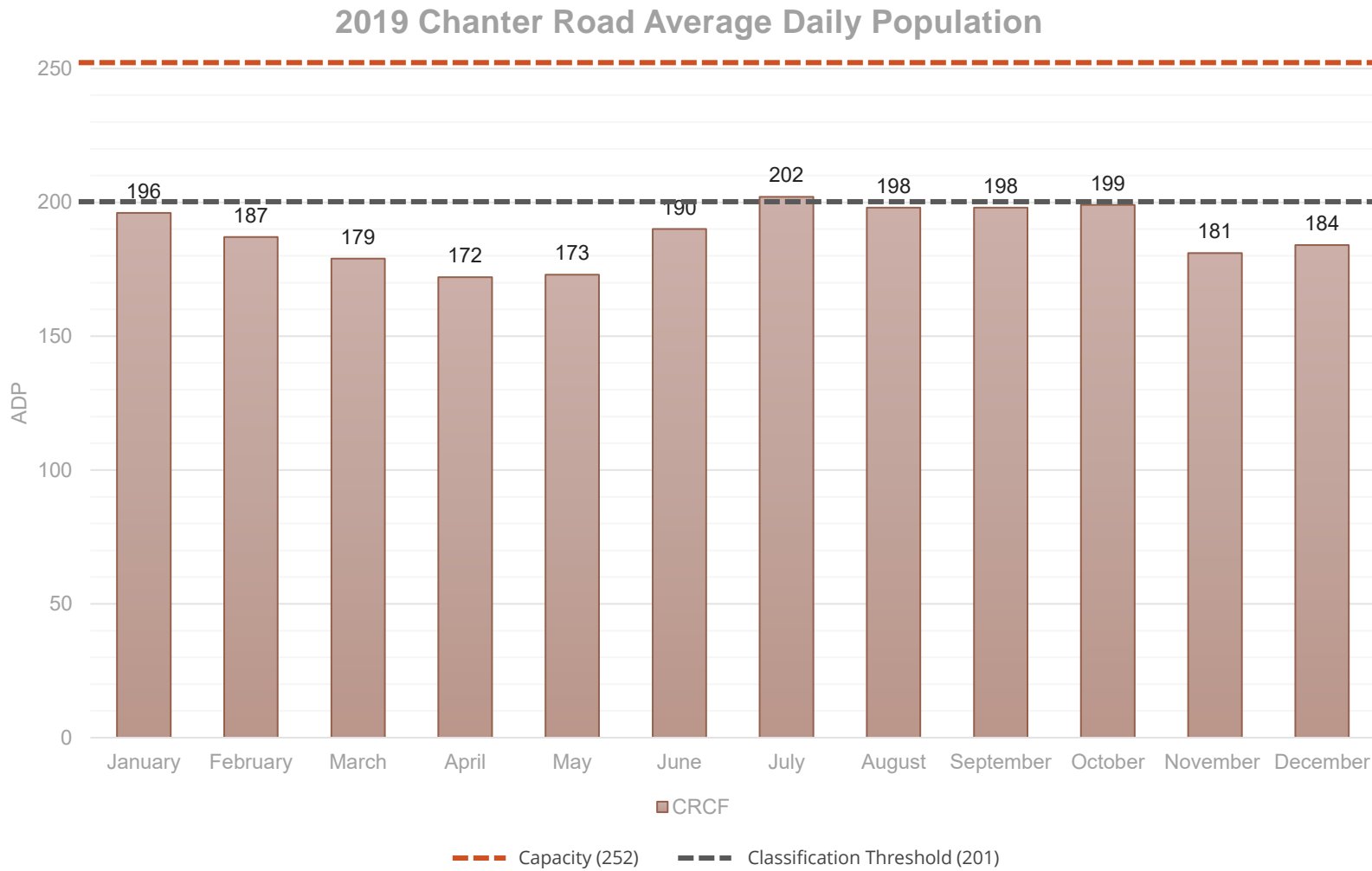


2018 Chanter Road Average Daily Population

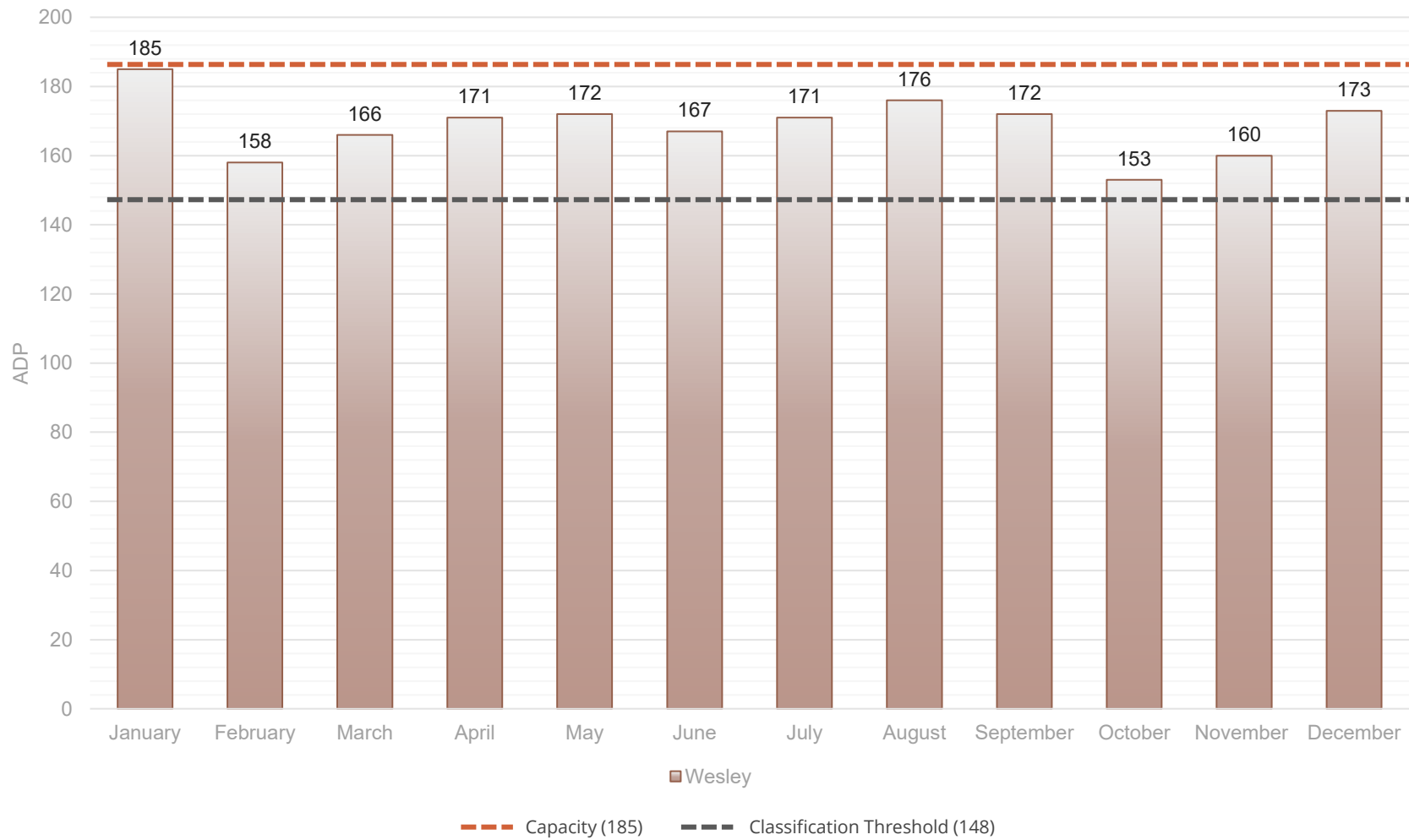


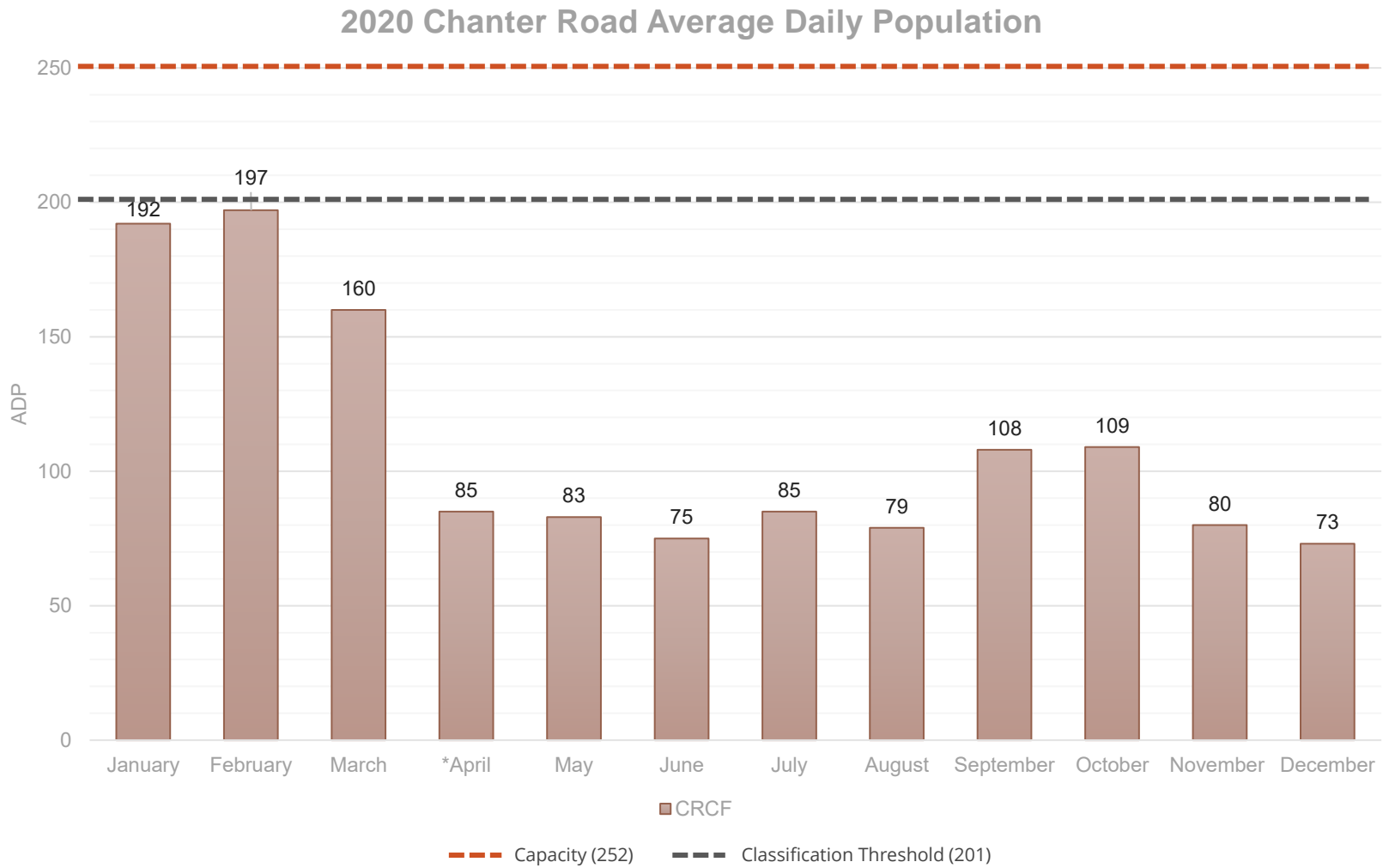
2018 Wesley Street Average Daily Population



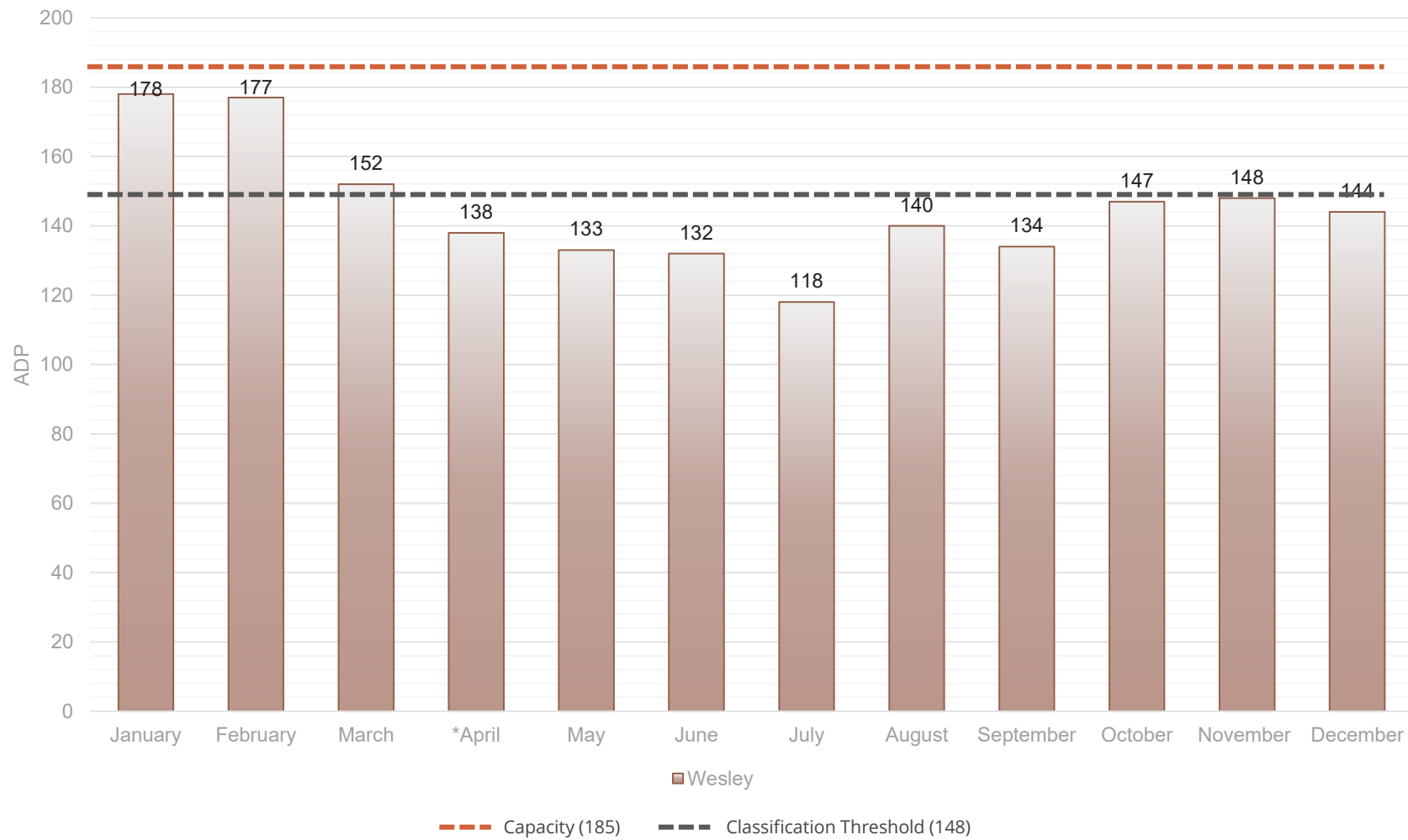


2019 Wesley Street Average Daily Population

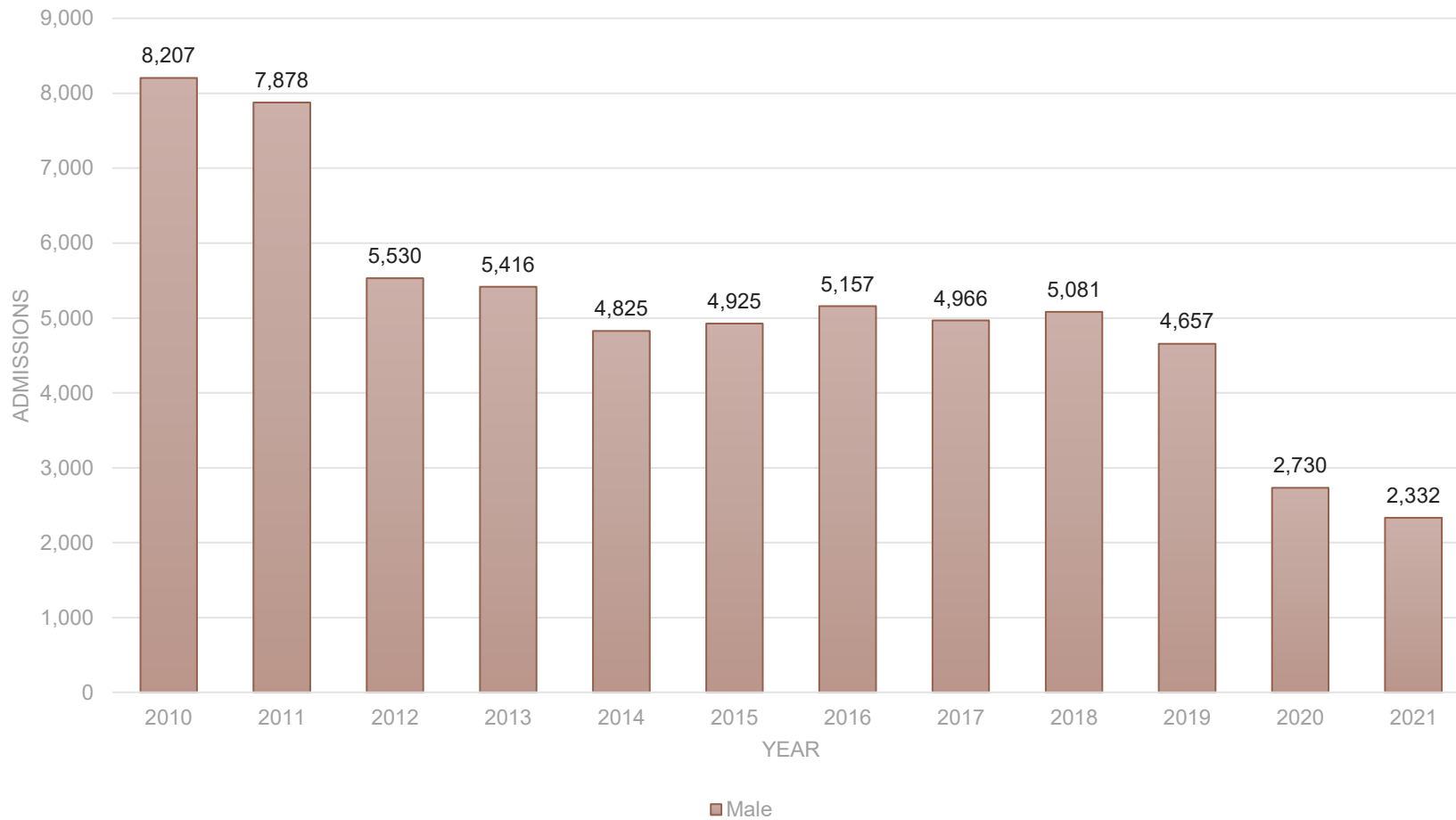




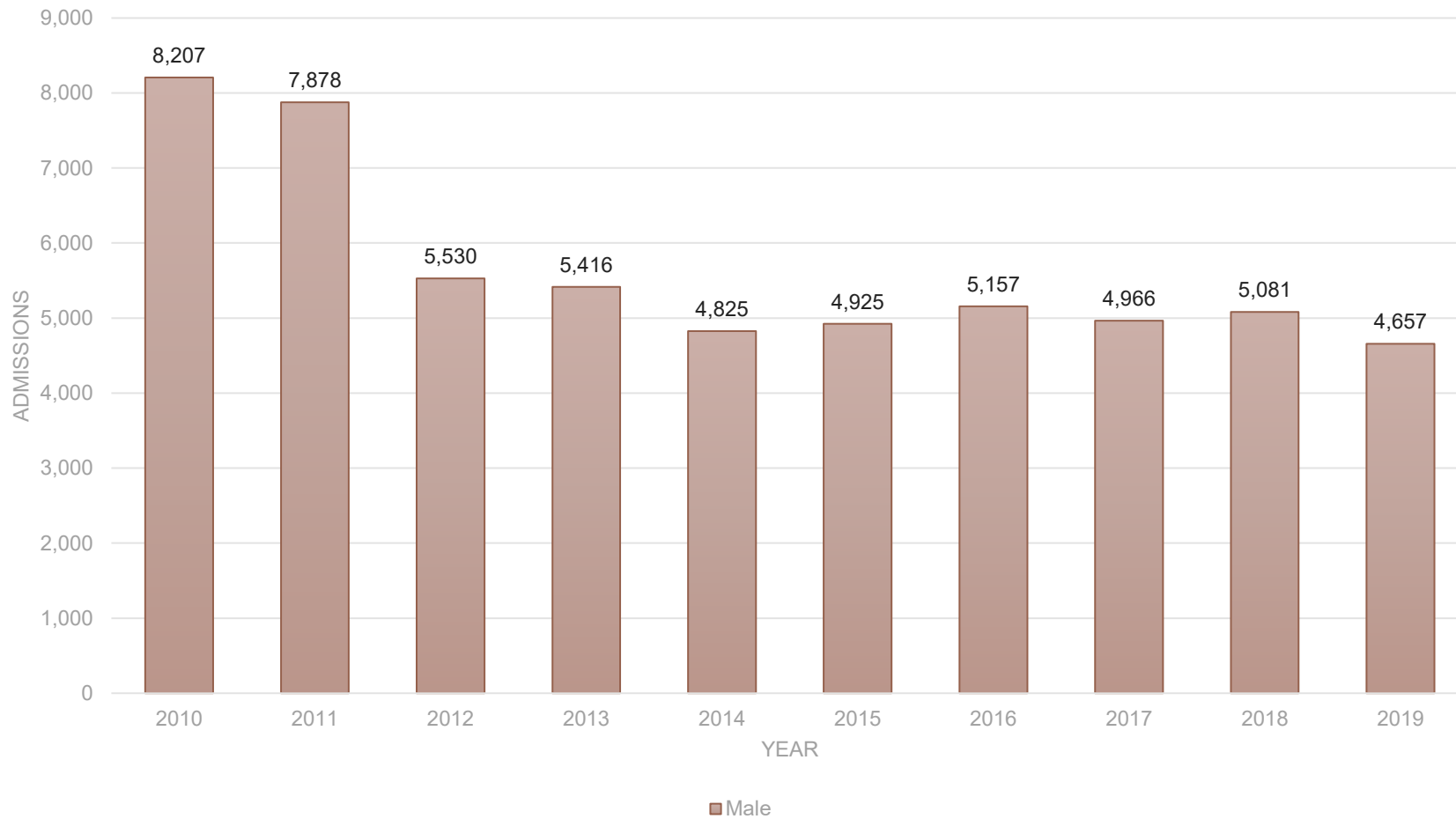
2020 Wesley Street Average Daily Population

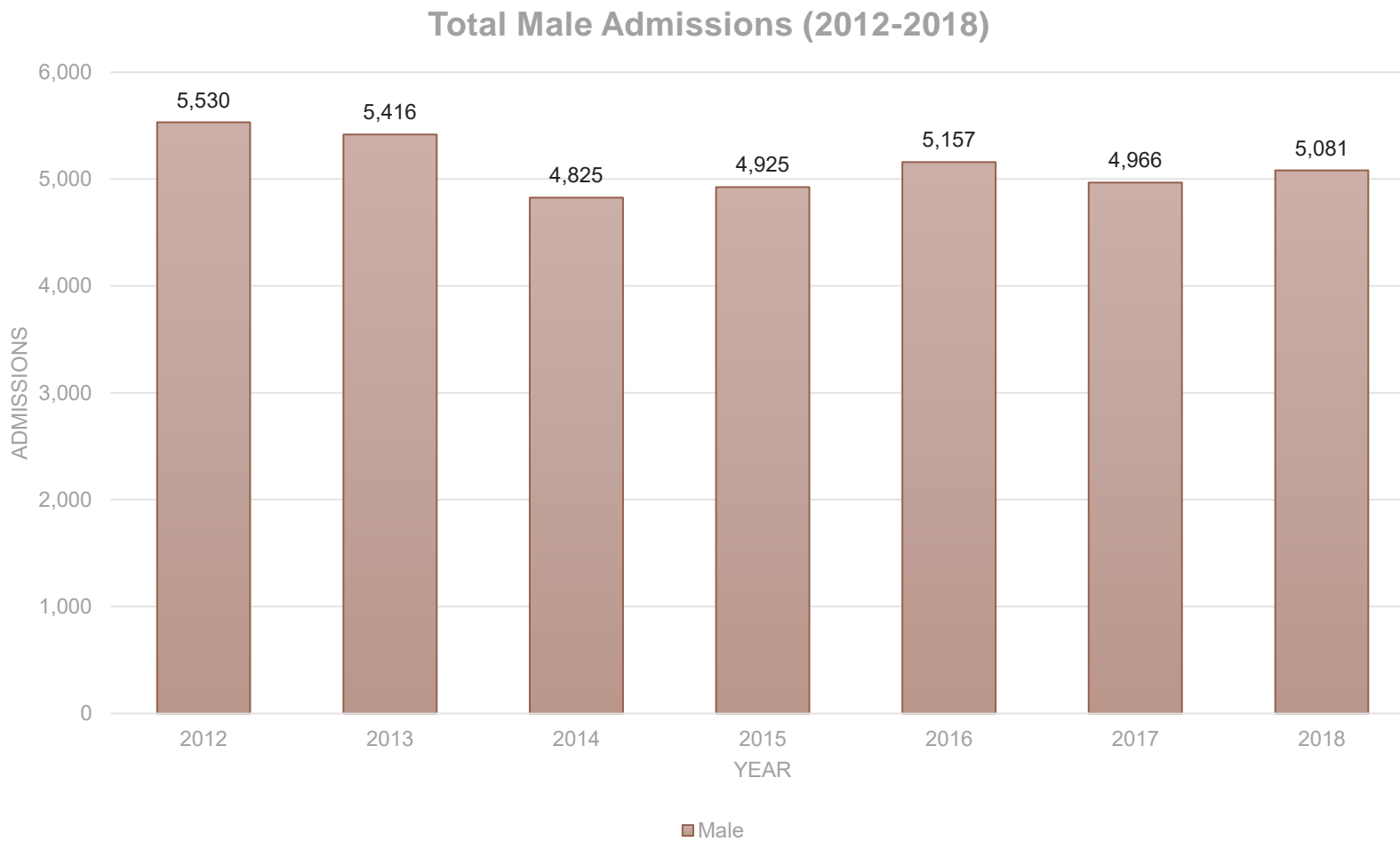


Total Male Admissions (2010-2021)

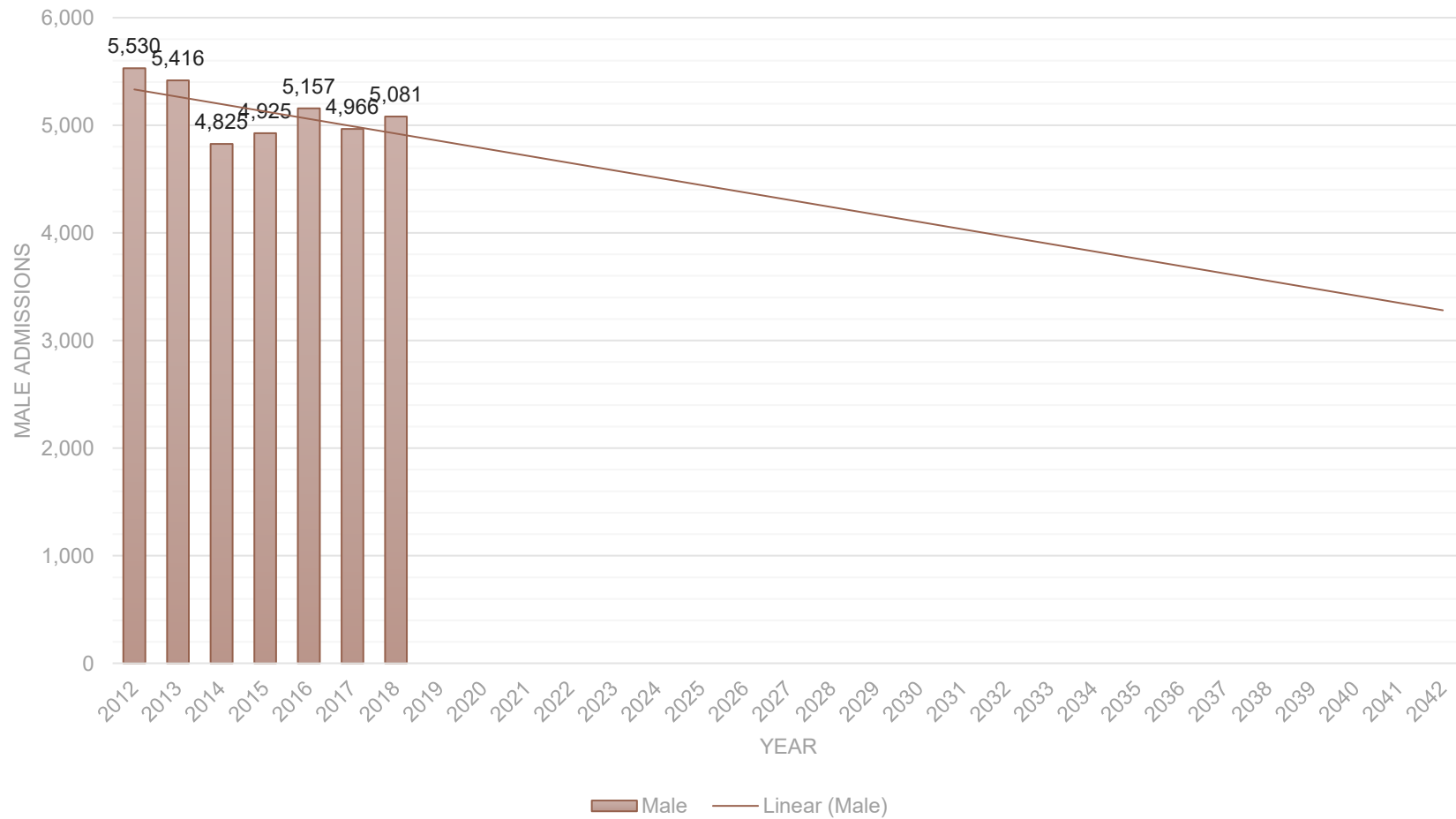


Total Male Admissions (2010-2019)

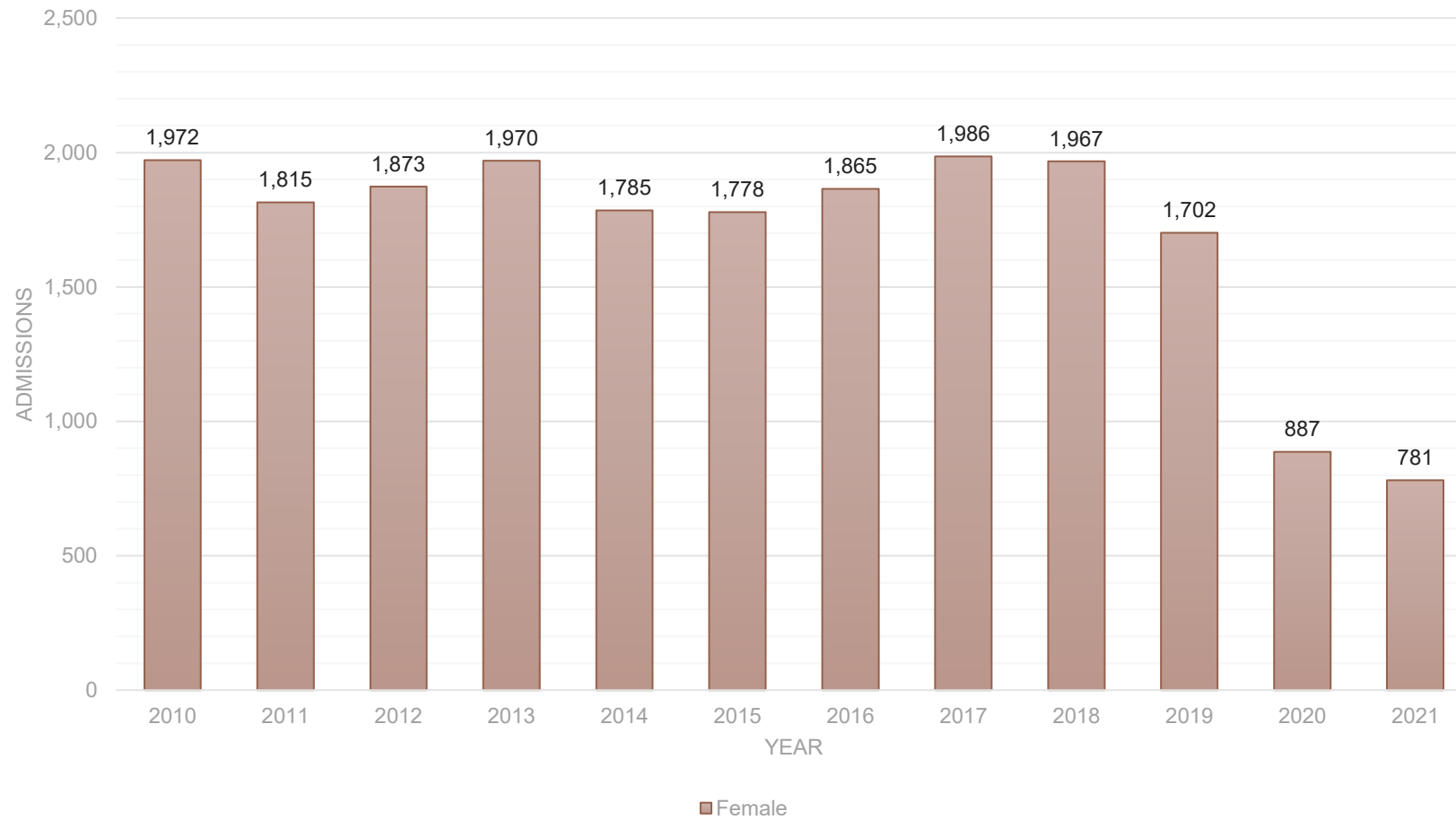


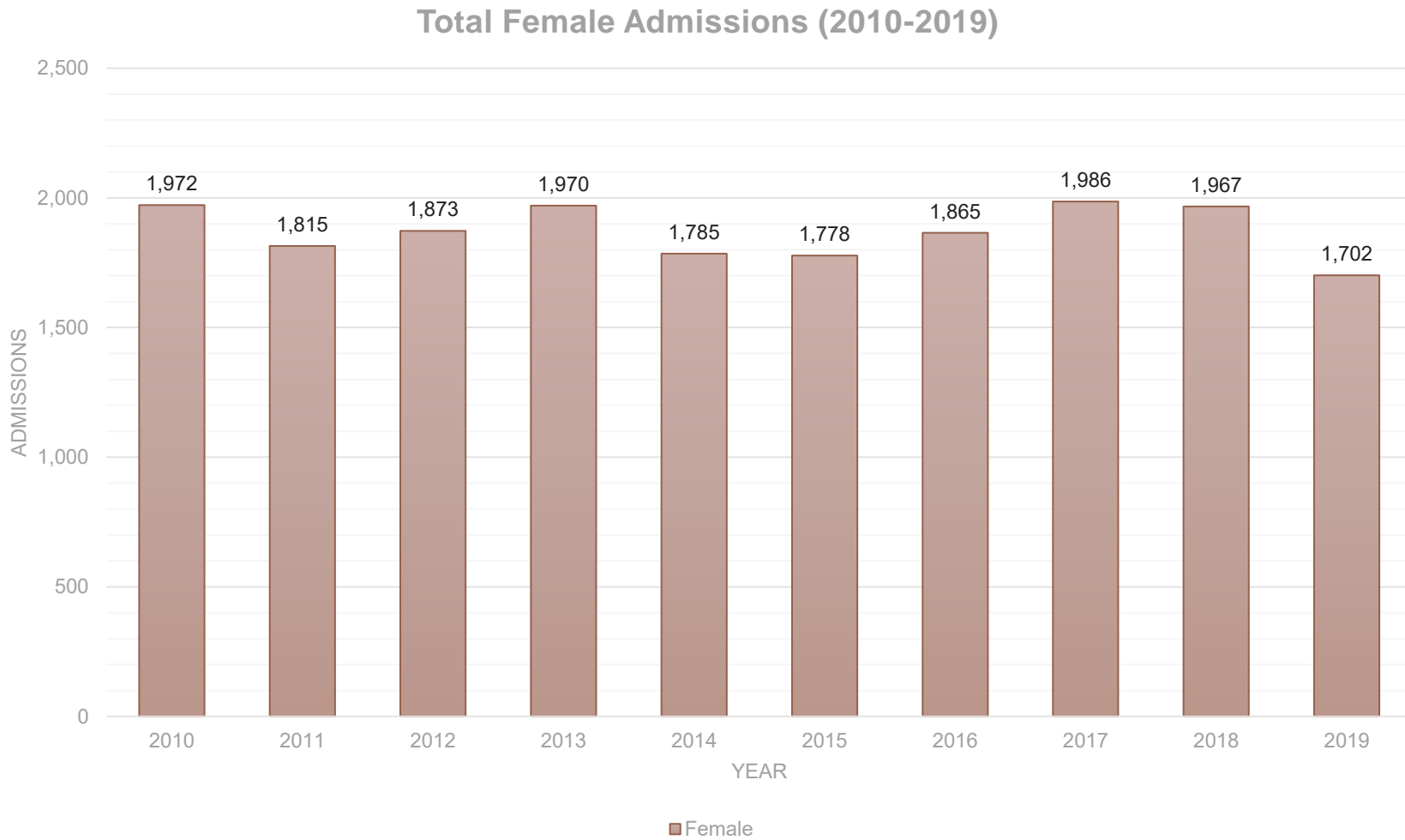


Total Projected Male Admissions (2012-2018)

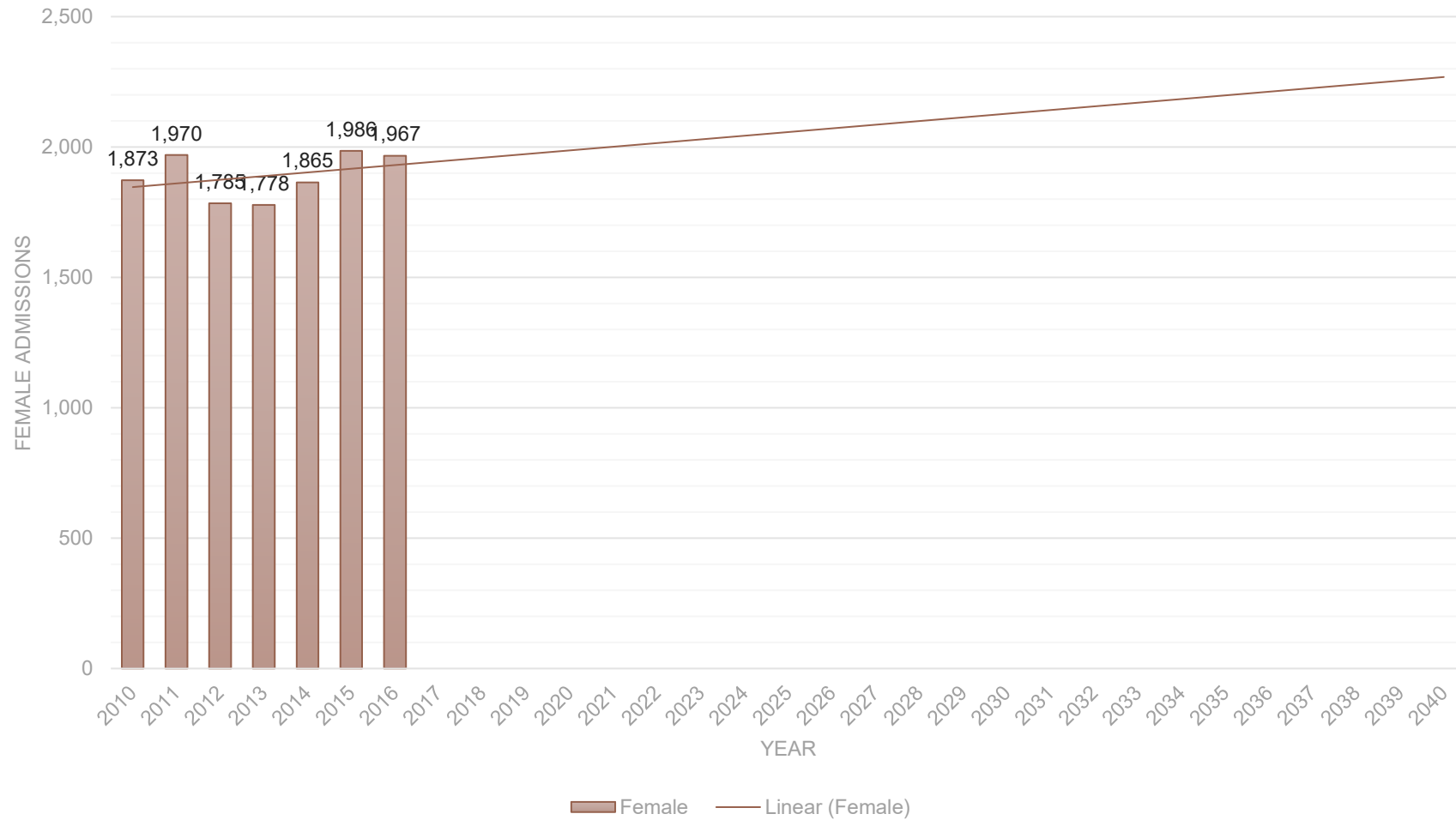


Total Female Admissions (2010-2021)

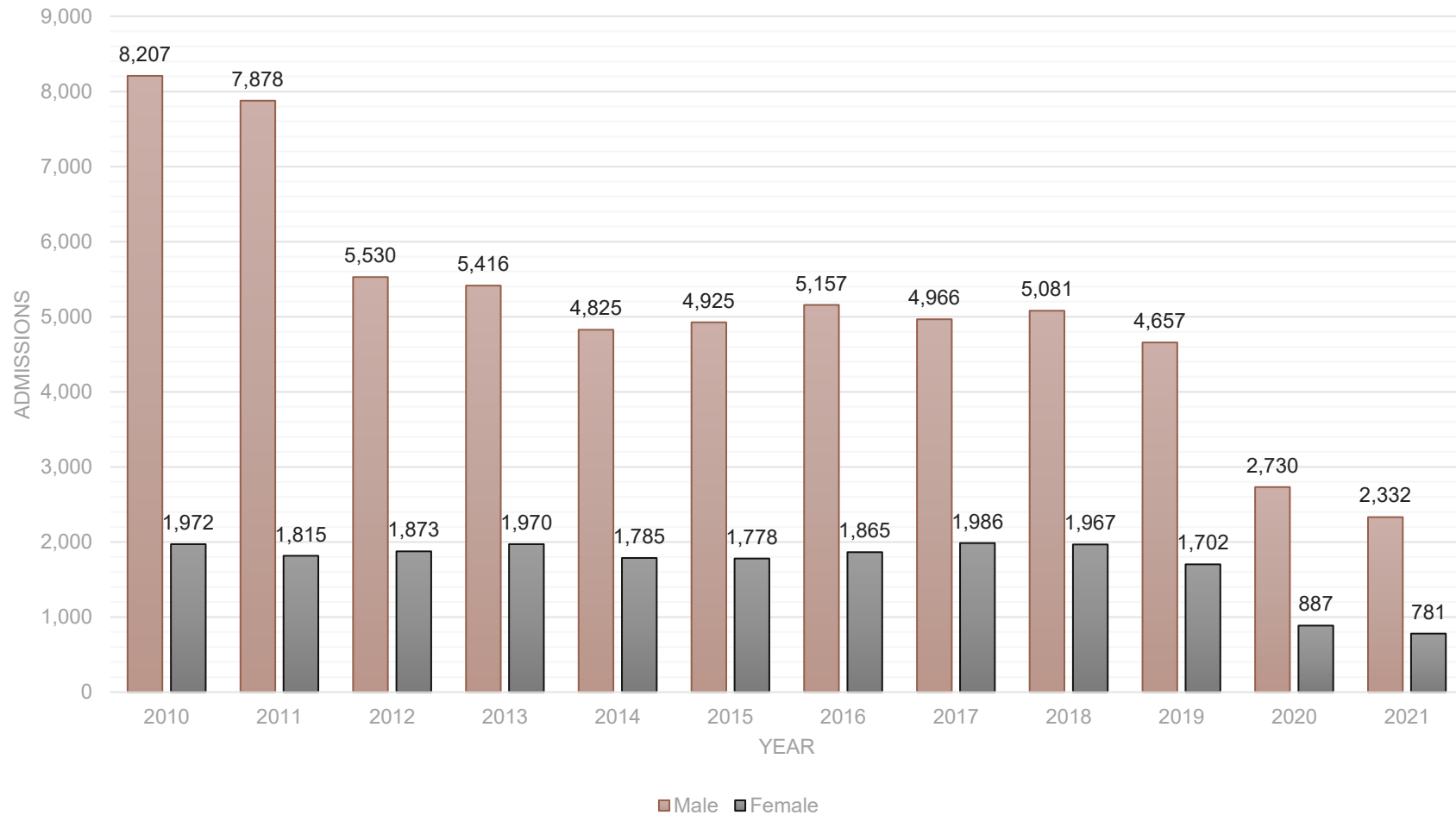




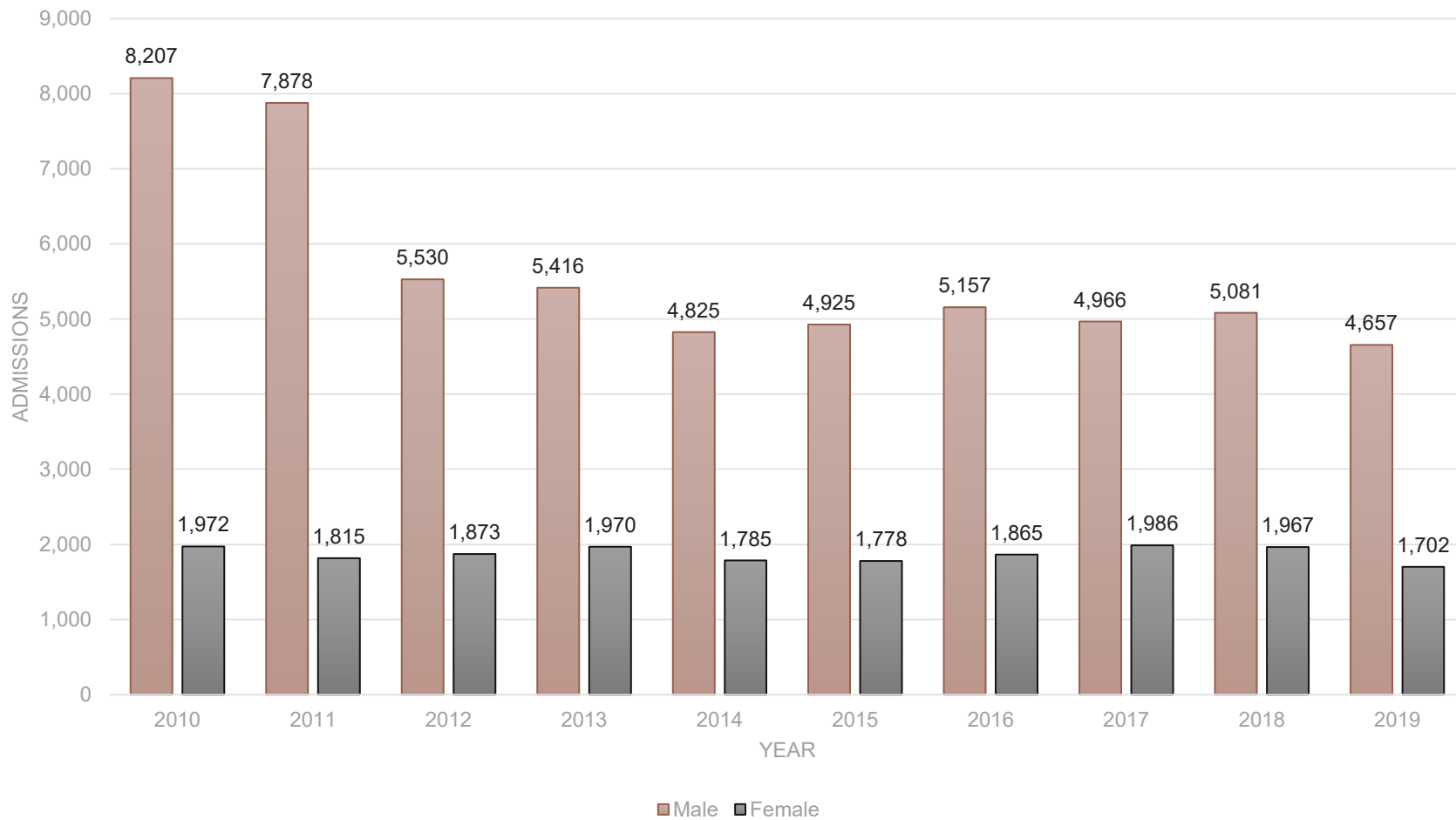
Total Projected Female Admissions (2010-2018)



Total Admissions (2010-2021)



Total Admissions (2010-2019)



DATA & PROJECTIONS

Snapshot 4/19/21

JSO	Location	#Cells	#Beds	#Assigned	Classification
	1A JSO	holding	Holding		5 Female Holding
	1B JSO		1	1	1 Medical/Detox
	1C JSO		1	1	1 Medical/Detox
	1D JSO		1	1	0 Isolation/Detox
	1F JSO	Holding	Holding		7 Male Holding
	2A JSO		1	12	5 Female Max Cell
	2B JSO		1	12	7 Female Max Cell
	2C JSO		1	12	10 Female Max Cell
	2E JSO		1	6	0 Female Min/Med
	2G JSO		1	14	11 Female Min/Med
	2H JSO		1	14	10 Female - Min/Med
	2F JSO		1	14	7 Male Trustee Tank
	2ISO A JSO		1	1	1 Female Isolation
	2 ISO B JSO		1	1	1 Female Isolation
	3A JSO		1	12	7 Male Max Cell
	3B JSO		1	12	10 Male Max Cell
	3C JSO		1	12	10 Male Max Cell
	3J JSO		1	14	13 Male Max Cell
	3G JSO		1	14	6 Male Min/Med
	3H JSO		1	14	7 Male Min/Med
	3I JSO		1	14	12 Male Max Cell
	3 WS JSO		1	10	9 10 single man cells
	3 ISO A JSO		1	1	1 Male Isolation
	3ISO B JSO		1	1	1 Male Isolation
	Total Inmates			193	142

DATA & PROJECTIONS

Snapshot 4/19/21
CRCF

Location	#Cells holding	#Beds Holding	#Assigned	Classification
CRCF Holding				0 Male Holding
CRCF ISO	1	1		0 Medical/Detox
A Barracks	20	128	99	Min/Med Males
B Barracks	20	128	0	Min/Med Males
Total Inmates		257	99	

CURRENT BED COUNT COMPARISON BY COUNTY

<u>County</u>	<u>Population</u>	<u>Capacity</u>	<u>Beds/1000</u>
Livingston	190,832	411	2.2
Muskegon	173,679	542	3.1
St. Clair	159,285	500	3.1
Jackson	158,174	442	2.8
Berrien	153,797	341	2.2
Monroe	150,500	400	2.7
Calhoun	133,943	630	4.7

Average Number of Beds/1000 = 3.00

DATA & PROJECTIONS

Jail Capacity Calculation “A”: 20 Year

Projected Pop. / 1,000 x 3.00 = Average Daily Population

Calculation: **158,000 People / 1,000 x 3.00 = 474 Beds**

<input type="checkbox"/> ADP (Average Daily Population)	474 Beds
<input type="checkbox"/> Classification Factor @ 20%	included
<hr/>	
<input type="checkbox"/> Total Recommended Capacity	474 Beds

*based on the county population trend, this assumes the county population will be 158,000 in 20 years

Jail Capacity Calculation “B”: 20 Year (Rule of Thumb)

Projected Pop. / 1,000 x 4.5 = Average Daily Population

Calculation: **158,000 People / 1,000 x 4.5 = 711 Beds**

<input type="checkbox"/> ADP (Average Daily Population)	711 Beds
<input type="checkbox"/> Classification Factor @ 20%	included
<hr/>	
<input type="checkbox"/> Total Recommended Capacity	711 Beds

*based on the county population trend, this assumes the county population will be 158,000 in 20 years

An aerial photograph of a school campus. In the center is a large, long building with a grey roof. To its right is a fenced-in area with a basketball court. The campus is surrounded by green fields and trees. A large orange rectangle is overlaid on the left side of the image, containing the text 'EXISTING SPACE EVALUATION'. Another orange rectangle is on the right side, containing the number '03'.

EXISTING SPACE EVALUATION

03

IMPORTANT CONSIDERATIONS



EXISTING SPACE EVALUATION

HOUSING

- Historical Data
- Classifications
- Projections

OPERATIONAL DEFICIENCIES

- Codes & Standards
- Space Needs
- Safety
- Observation
- Maintenance
- Inefficiencies

SPECIALTY SUPPORT

- Programming
- Court (Video/Courtroom)
- Medical
- Mental Health
- Quarantine

WESLEY STREET FACILITY





Deteriorating Finishes

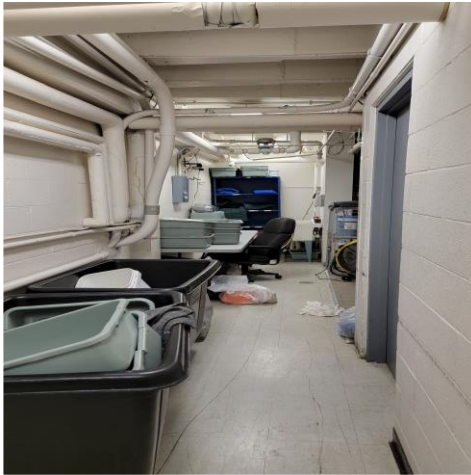
- Water pipe below is delaminating the tile in the Squad Room.
- Other damage may have occurred below the floor – more investigation will be required.



IT/Electrical Remodel Challenges

- Conduit lines running through the room
- Existing construction is not conducive to infrastructure renovations (thick concrete walls, multi-story, low ceilings, etc.) therefore, a lot of utilities are surface mounted.

EXISTING SPACE EVALUATION



Corridor to Laundry Room

- Lack of cart storage
- Safety and security is compromised as access to the Laundry Room is outside of the secure perimeter.



Laundry Room

- Limited space
- Not expandable
- Inmates have access to chemicals, power, water, etc. while outside of the secure perimeter. This is a safety issue.
- Observability is challenging.

EXISTING SPACE EVALUATION



Laundry Room

- Water infiltration is occurring in multiple location from piping above



Laundry Room

- Insufficient amount of space for property and uniform storage

EXISTING SPACE EVALUATION



Leaking Pipes

- Facility infrastructure is at the end of its useful life

Corroded Piping

- Causing damage to finishes and causing additional wear to the building

EXISTING SPACE EVALUATION



Mechanical Room

- Access to equipment for repair or replacement is challenging.



Mechanical Room

- Portions of systems have been replaced

EXISTING SPACE EVALUATION



Corridor

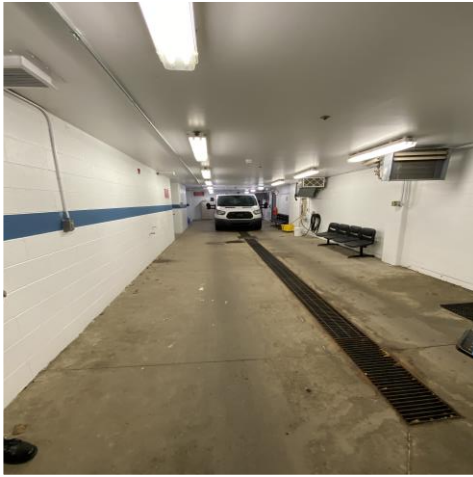
- Lack of storage space results in corridors being utilized for storage.
- This can result in egress paths being compromised.



Storage Room

- Storage rooms are full

EXISTING SPACE EVALUATION



Sallyport

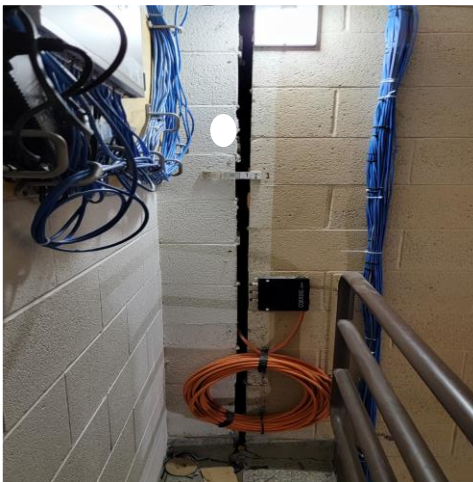
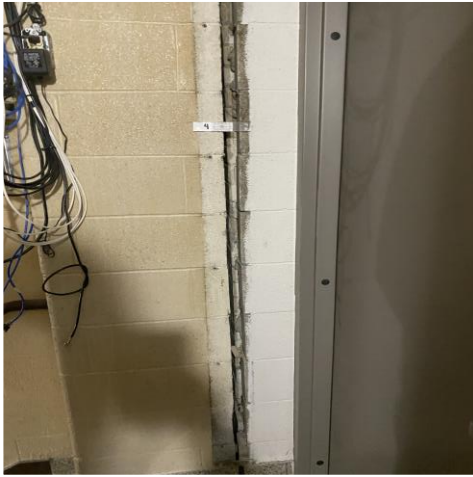
- Single file entry – vehicles must wait for the closest to the door to exit first
- Emergency vehicles like an ambulance are too large to enter



Mold

- Mold growing on Sally Port ceiling.

EXISTING SPACE EVALUATION



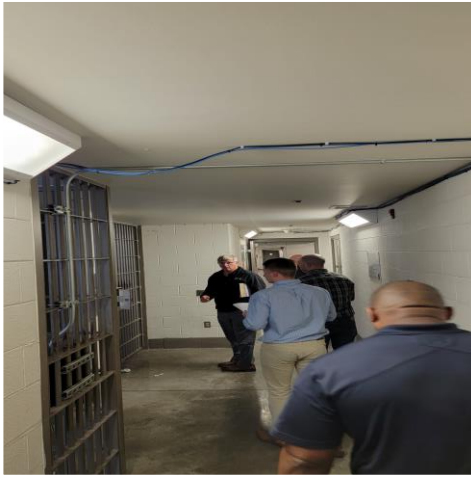
Structural Failure

- The addition has started to separate from the existing. This has occurred most recently at a rate of approximately $\frac{1}{4}$ " per year.

Structural Failure

- The building is moving and can lead to other issues including water infiltration, finish deterioration and ultimately, a potential major structural failure.

EXISTING SPACE EVALUATION



Secure Corridor

- IT and other wiring easily accessible in secure area due to renovation challenges created by existing construction (thick walls, etc.)



Secure Corridor

- Mechanical ducts are as low as 7 feet in some locations in the secure corridor. These are areas that can be utilized to hide contraband or other security risks (access to non-tamper resistant fasteners, etc.)

EXISTING SPACE EVALUATION



Door Control

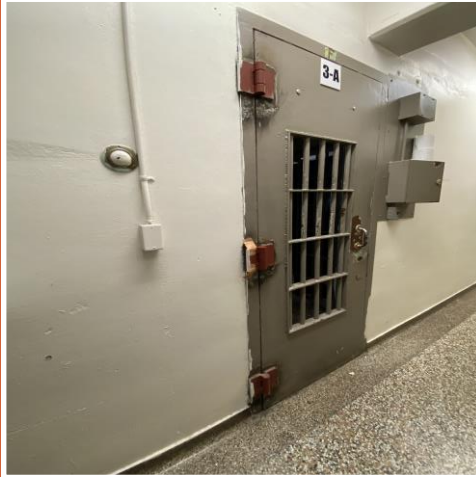
- Parts are typically not readily available for antiquated systems' repairs or replacement.
- Systems are not typically reliable.



Door Control

- Antiquated door controls

EXISTING SPACE EVALUATION



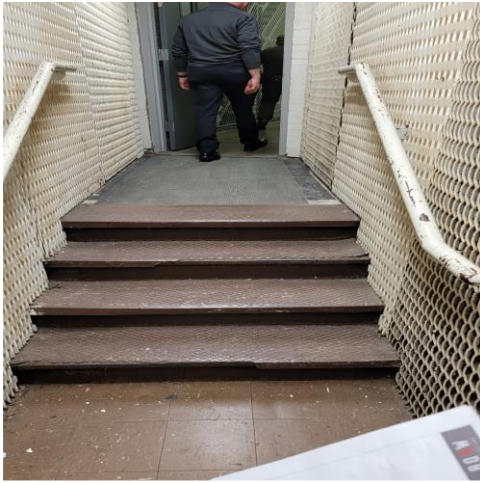
Detention Door

- Some detention equipment is failing
- Door hinges have failed and required repair due to inmate tampering
- Inmates have figured out how to compromise security elements of the facility



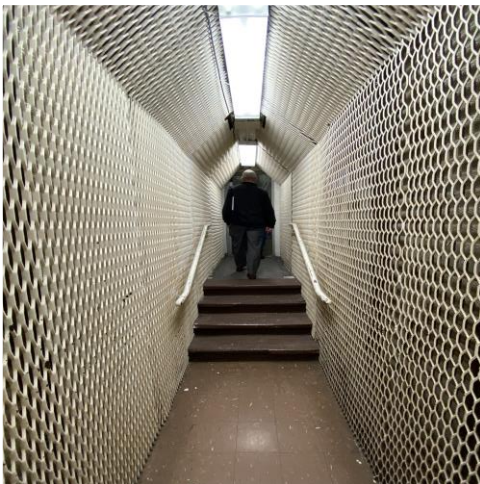
Door Hinge

- Hinges failing and require repair



Stair

- The stair finishes leading to the courthouse are deteriorating
- Tile appears to be asbestos (9" tiles)



Corridor

- Secure circulation to the courthouse is narrow and confined. Secure circulation should be spacious and meet accessibility requirements.

EXISTING SPACE EVALUATION



Storage

- Lack of janitorial storage space



Access to Courthouse

- There is access to other areas of the courthouse in the same area as secure circulation.



Secure Circulation

- Detention housing is not sight and sound separated
- Linear style housing is challenging to observe
- Bars are not anti-ligature
- Bars allow for direct contact between inmates and guards (bodily fluids, etc.)

Housing Control

- Control is within secure circulation
- Lack of camera viewing, desk space and other staff space (filing, restroom, etc.)
- Lack of HVAC compartmentalization and control.

EXISTING SPACE EVALUATION



Medical Area

- There is no separation between office and exam space
- No dedicated inmate restroom or staff restroom within medical
- There is no dedicated medical isolation cells
- There is no negative air for this space
- No camera coverage

Medical Area

- Lack of dedicated, lockable medical storage
- Medical is on the second floor so access from intake/booking or other housing floors is challenging because it is by elevator

EXISTING SPACE EVALUATION



Detention Housing

- Is not anti-ligature
- Is not sight and sound separated
- Limited classifications
- Challenging to observe

Detention Housing

- Lots of opportunities to hide contraband
- There are areas that cannot be observed (PREA)

EXISTING SPACE EVALUATION



Detention Housing

- Maintenance must be done within the secure areas
- Inmates must be moved to complete maintenance tasks
- Tools within the secure area are a safety risk
- Modifications must be surface mounted and non-secure.

Detention Housing

- The facility must be constantly repaired and access to systems is within the secure areas. This disrupts housing, classification and observation.

EXISTING SPACE EVALUATION



Detention Lighting

- Lighting is not detention grade
- There is access to surface mounted conduits



Detention Lighting

- Lighting is not detention grade

EXISTING SPACE EVALUATION



Office

- Lack of storage space for staff
- Accessibility issues throughout



Sergeant's Office

- Ceiling pipes in Sergeant's Office are leaking

EXISTING SPACE EVALUATION



Booking

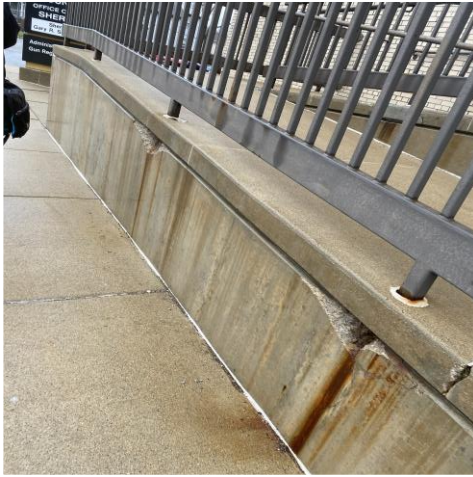
- Insufficient space for booking
- Two separate kinds of camera systems for staff to observe inmates; analog is poor quality.



Booking

- Antiquated control system still in use

EXISTING SPACE EVALUATION



Ramp

- The ramp leading to the main lobby is deteriorating



Ramp

- The concrete around the base of the railing is crumbling

EXISTING SPACE EVALUATION

MECHANICAL



Pipe Leaks

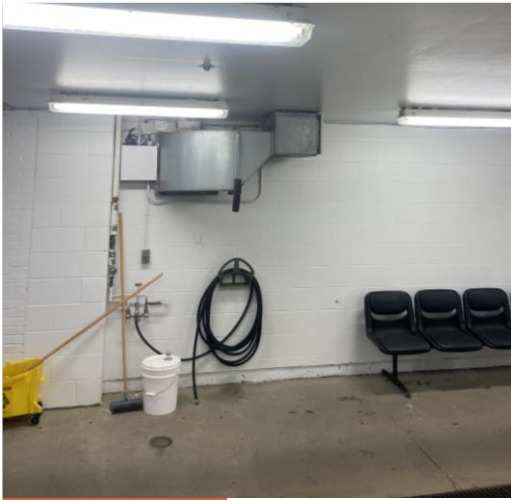
- One of many locations where leaks are readily apparent in piping systems.

Pneumatic Controls

- Antiquated controls, evidence of a retrofit to DDC controls that was not completed years back leaves system in disarray.

EXISTING SPACE EVALUATION

MECHANICAL



Sallyport

- Equipment in sallyport is too low and is regularly hit by entering vehicles. - slab ceiling does not leave many options for redesign.



Rusting Pipe Accessories

- More evidence of pipe leaks and corrosion.

EXISTING SPACE EVALUATION

MECHANICAL



Access Chases to Dayrooms

- Access is small 2'x4' opening, used to access two stories of MEP equipment. - Permanent puddles at bottom from constant leaks.



Boilers

- The new addition received new boilers when it was erected in 2003 and only serve the new addition.
- The original boilers that are located throughout the rest of the facility are original and are at their end of life. The staff use meat thermometers to measure cold air intake in order to adjust the temperature in the building. In addition, the staff adjust the temperature settings with a vise grip that is attached to a valve and is propped up by metal poles.

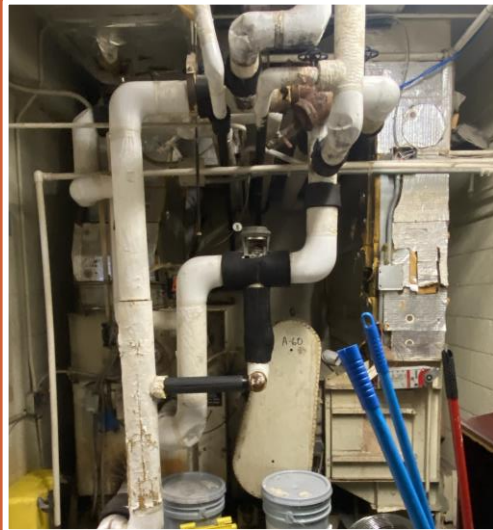
EXISTING SPACE EVALUATION

MECHANICAL



Original Chiller

- 1984 chiller with newer compressors. End of life was a decade ago. Impressive it is still functioning as well as it is. – facility has outgrown the rated capacity of this chiller.



Typical Hydronic AHU

- Aging Air Handling Unit's located in cramped spaces

EXISTING SPACE EVALUATION

MECHANICAL



Below ceiling ductwork

- Ductwork that was added after original building construction has been routed in corridors. Testament to limited infrastructure space in facility.



Above Cell Access

- Above same corridor ductwork previously mentioned are access doors to original infrastructure in tight crawl spaces above cells and dayrooms.

EXISTING SPACE EVALUATION

ELECTRICAL

EXISTING SPACE EVALUATION



Interior Lighting

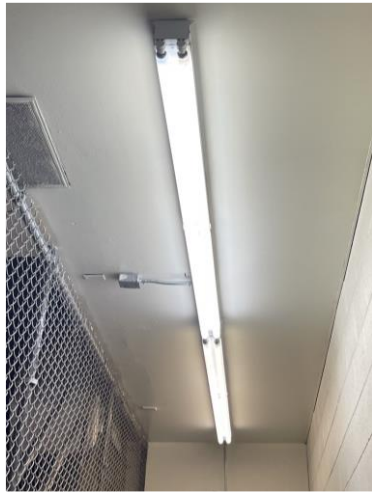
- Emergency egress lighting non-energy efficient incandescent lamps



Interior Lighting

- Active water/waste leak is occurring above light fixture. It has been confirmed the existing lighting fixture is connected to an electrical circuit. This is a major safety hazard to the jail staff.

ELECTRICAL



Interior Lighting

- Existing ceiling mounting lighting with T-12 compact fluorescent lamp. LEDs would be more energy efficient.

Interior Lighting

- Active sanitary leak is occurring above light fixture. Existing light fixture is connected to an electrical circuit. This is a major safety hazard to the nursing staff and inmates.

EXISTING SPACE EVALUATION

ELECTRICAL



Telecommunicaiton

- The main Telcom room lacks an adequate wire management system

Telecommunication

- Telecom equipment located in main mechanical room lacks a wire management system.
- Power and data wires are overlapping in such a way that it makes it nearly impossible to maintain.

EXISTING SPACE EVALUATION

ELECTRICAL



Telcommunicaiton

- Telecom equipment located in a non-conditioned spaced. This will reduce the life of the equipment.



Emergency Power

- Existing 300KW Caterpillar Diesel Generator.

EXISTING SPACE EVALUATION

ELECTRICAL



Power Systems

- Coke machine is not on a GFCI receptacle or breaker, per NEC.

Power Systems

- The UPS (Uninterrupted Power Supply) system for the facility may not be sized properly to meet the users needs.
- Duplex receptacles located throughout the IT room are not properly secured per NEC.

EXISTING SPACE EVALUATION

ELECTRICAL

EXISTING SPACE EVALUATION



Power Systems

- Obsolete electrical distribution system installed in 1978.



Power Systems

- Obsolete electrical distribution system installed in 1978.

ELECTRICAL



Power Systems

- Loose wire running through secure corridor. This poses as a major safety hazard.



Power Systems

- Storm, sanitary lines, water, and steam lines are running directly over the top of electrical panels.
- Proper working zone clearance above electrical panels is not being maintained per NEC.
- Major safety hazard. Possible electrical failure and or electric shock could occur.

EXISTING SPACE EVALUATION

ELECTRICAL



Power Systems

- Water supply lines are running directly over the top of electrical panels.
- Proper working zone clearance above electrical panels is not being maintained per NEC.
- Major safety hazard. Possible electrical failure and or electric shock could occur.

Power Systems

- Water lines and spicket are located right next to an electrical panel.
- Proper working zone clearance above electrical panels is not being maintained per NEC.
- Major safety hazard. Possible electrical failure and or electric shock could occur.

EXISTING SPACE EVALUATION

ELECTRICAL



Power Systems

- Proper working clearances in front electrical panels and equipment are not being maintained per NEC throughout the facility.



Power Systems

- There is loose electrical wiring and junction boxes on the roof. They are not properly secured per NEC.

EXISTING SPACE EVALUATION

ELECTRICAL



Power Systems

- A large portion of the electrical wiring on the roof is enclosed in non-exterior rated conduit per NEC.
- Corrosion is starting to occur, which can become a safety hazard.

Elevator

- Elevator was installed in 1978. Serviceability may become an issue due to scarcity of replacement parts.
- Currently the elevator machine room is a non-conditioned space. It is required per electrical code. No items shall be in the elevator machine room unless it directly serves the elevator per NEC and NFPA 101.

EXISTING SPACE EVALUATION

ELECTRICAL



Door Control System

- The lights on the door controls system does not properly indicate which door is open or closed. This is due to the system being original to the building and the equipment is now obsolete.



Security Cameras

- Obsolete and low-resolution security camera

EXISTING SPACE EVALUATION

PLUMBING



Corroded Piping

- Age old piping shows signs of corrosion, rusting and water damage.

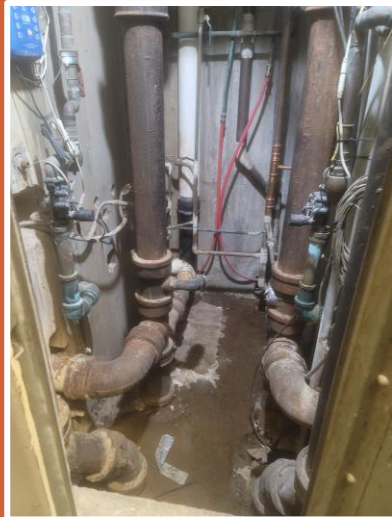


Correctional Fixtures

- Original piping for correctional plumbing fixtures w/upgraded pneumatic controls.

EXISTING SPACE EVALUATION

PLUMBING



Domestic Water Service

- No backflow prevention provided, at risk for water contamination.

Cell Chase

- Ponding water from frequent pipe leaks.
- Sprinkler system cell flooding due to inmate tampering of sprinklers.

EXISTING SPACE EVALUATION

PLUMBING



Medical Exam Area

- Consistent pipe leak above ceiling was temporarily resolved with the installation of a drain pan above the ceiling.

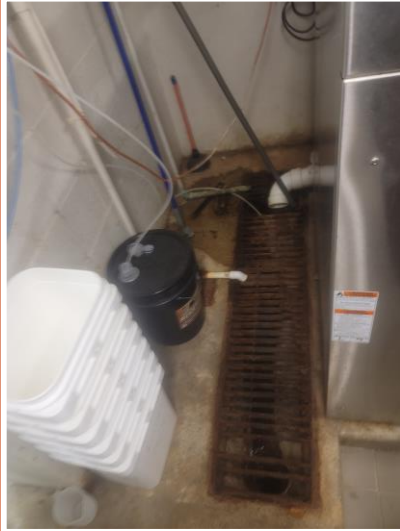


Roof Drains

- Insufficient roof drainage causes ponding water which can be a trip hazard.

EXISTING SPACE EVALUATION

PLUMBING



Laundry Room

- Rusted and corroded trench drains.



Maintenance Room

- Leaking and rusted piping. Buckets placed below as a temporary solution.

EXISTING SPACE EVALUATION

PLUMBING



Mold and Mildew

- Constant piping leaks cause mold and mildew damage to ceiling.



Boiler Room

- Inaccessible fire protection valve that requires testing and servicing yearly.

EXISTING SPACE EVALUATION

Existing Conditions Observation Key

1. Insufficient amount of space
2. Sally Port overhead doors are not tall enough for a bus/ambulance for an emergency.
3. Elevators create challenges for movement of staff, inmates, meals, and laundry.
4. Leaking pipes
5. Lack of storage space
6. Limited holding and no sight/sound separation in intake
7. No pre-process
8. Analog/new camera system
9. New addition is structurally separating from existing facility.



FIRST FLOOR PLAN

EXISTING SPACE
OBSERVATIONS

Existing Conditions Observation Key

1. Insufficient amount of space
2. Narrow secure corridors can be dangerous for staff
3. Elevators create challenges for movement of staff, inmates, meals, and laundry.
4. No medical isolation cell, private exam space, restrooms
5. Not anti-ligature design
6. Electrical wiring in secure corridors/dayrooms.
7. Blind spot cell block
8. Control desk in Secure Corridor
9. New addition is structurally separating from existing facility.

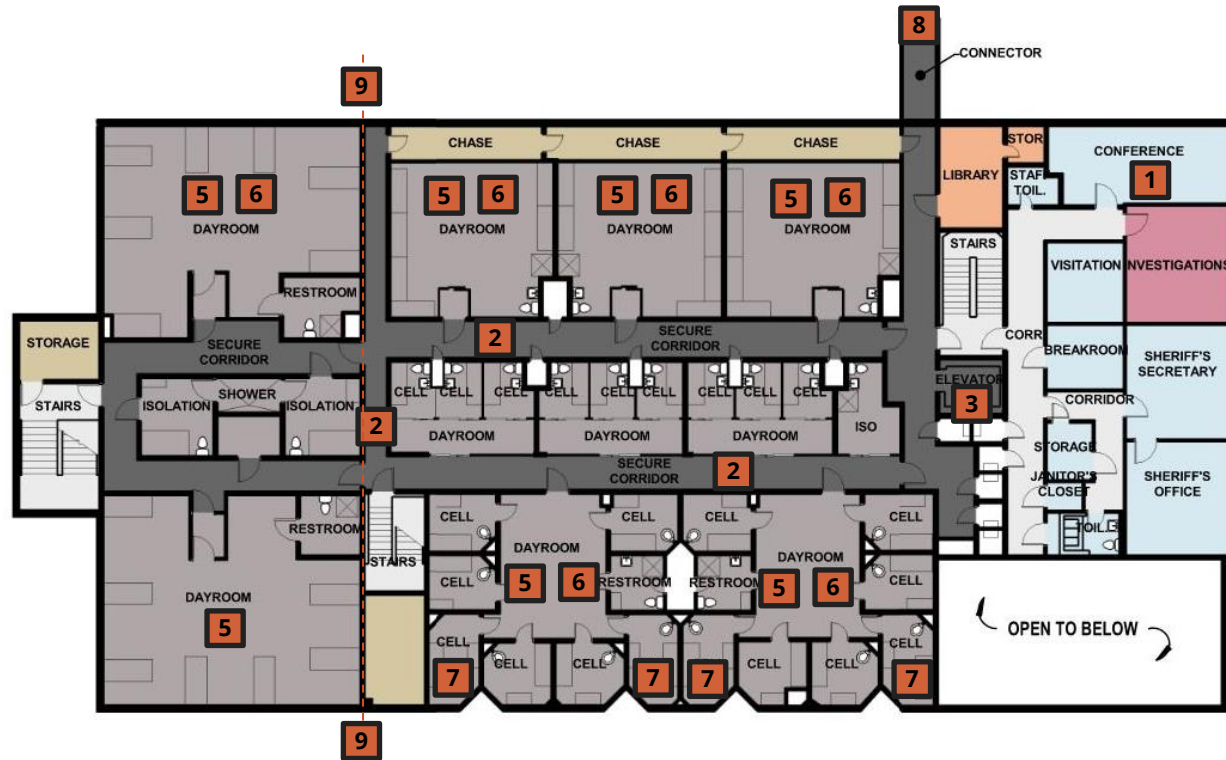


SECOND FLOOR PLAN

EXISTING SPACE
OBSERVATIONS

Existing Conditions Observation Key

1. Insufficient amount of space
2. Narrow secure corridors can be dangerous for staff
3. Elevators create challenges for movement of staff, inmates, meals, and laundry.
4. Vertical circulation for offices is shared with jail
5. Not anti-ligature design
6. Non-detention grade electrical fixtures/wiring
7. Blind spot cell block
8. Non-ADA compliant connector to Courthouse



THIRD FLOOR PLAN

EXISTING SPACE
OBSERVATIONS

WESLEY STREET EXISTING FACILITY MECH, ELEC, & PLUMBING ASSESSMENT

Jail facilities typically see accelerated deterioration, especially after the initial twenty (20) years. Not only do the inmates typically abuse the facility, but due to operating twenty-four hours a day, seven days a week, this facility type is in use far more often than other facility types. This affects everything, especially plumbing fixtures, doors and locks, and HVAC equipment. The Jackson County Wesley Street Facility was built in 1952 for 90 inmates and has operated at a significantly higher population for many years. Because it is operating at a higher capacity than what was intended, the effect of the twenty-four hour a day, seven days a week use is compounded. Additionally, many components become obsolete and are no longer manufactured and therefore, are “custom” parts and therefore expensive. A summary list of maintenance challenges follows (refer to Section 3 - Existing Space Evaluation for more information):

EXISTING SPACE EVALUATION

WESLEY STREET MECHANICAL ASSESSMENT

Hydronic Hot Water System:

The facility has two (2) Hydronic Hot Water Boilers that are sized for the existing capacity of the facility. The boilers operate in an N+1 design. i.e., a spare boiler in standby if an operating boiler goes down. When the addition to the facility was erected in 2003, new boilers were installed to serve the new addition. The rest of the facility is served by boilers that are original to the facility. These boilers are at their end of life and are often in need of maintenance. The staff uses a meat thermometer to measure cold air intake in order to adjust the temperature in the building. In addition, the staff adjusts the temperature settings with a vise grip that is attached to a valve and is propped up by metal poles. This is an issue the maintenance and jail staff are constantly fighting.

Chilled Water System:

The facility has an original Air-Cooled Chiller on the roof. The Chiller is original to the building and does not have the capacity to cool the facility. Maintenance staff have resorted to installing commercial garden drip sprinklers to the evaporator coils to increase effectiveness of the chiller. Compressors have been replaced but the refrigerant used is no longer produced and cannot be replaced if there is an issue. The chiller pumps are nearing end of life.

Building Hydronic Distribution (Piping):

Hot water and chilled water are distributed through the building. Piping is in poor condition. Leaking occurs frequently with repairs apparent throughout. Access to piping is substandard, with evidence of entire CMU walls being removed to repair leaks in places. Piping system offers zero potential for re-use.

EXISTING SPACE EVALUATION

WESLEY STREET MECHANICAL ASSESSMENT

Air Handling Units:

The existing facility is served by nine different Air Handling Units (AHUs). Two in the basement, three on the second floor and one in the roof penthouse are served by the Hydronic System. Three additional Packaged DX Air Handling Units are installed on floors one, two, and three.

The Hydronic AHU's are functioning but have reached end of life. Fans break down often and coil inner walls are very thin. Additionally, actuators on dampers are broken and must be manually indexed, i.e., The system cannot control to the thermostats in their respective AHU zones and can only be adjusted by maintenance based on user feedback. Units provide a fraction of the amount of outside air that is code required for the facility type, resulting in poor indoor air quality.

Replacing the Hydronic units would require local demolition due to limited access and new units would need to be built piece by piece inside the building. The three Packaged DX units are newer and appear to have another 10+ years of life to them but each one only serves a very small portion of the facility and do not take advantage of the hydronic system efficiencies that serve the rest of the facility.

EXISTING SPACE EVALUATION

WESLEY STREET MECHANICAL ASSESSMENT

Ductwork:

The ductwork system is original to the building and has reached end of life. Additionally, the ductwork is undersized for modern ventilation requirements and would need to be completely replaced and upsized during a redesign. Complicating the issue, much of the ductwork is encased within CMU chases. These masonry chases would likely need to be demolished and rebuilt to access this ductwork. Site visit reported that at several locations, they have had to cut into masonry walls just to access certain locations for maintenance.

Controls:

Existing controls are pneumatic type and are not functioning properly. Facility had some work done to keep system functioning but had limited success and retrofit operations were halted by a previous administration. Many processes are actuated manually (by hand) based on outdoor conditions and time of year. The Control System needs a complete replacement. The entire facility has limited control of its HVAC system. If the 1st Floor is hot, the 2nd floor is cold and vice versa. A new controls system and more zone reheat boxes will be required to resolve this issue.

EXISTING SPACE EVALUATION

WESLEY STREET ELECTRICAL ASSESSMENT

Electrical Distribution:

The main distribution switchboard and main distribution panels were upgraded in 2003. The original branch panels that were installed in 1978 were disconnected and replaced by the 2003 distribution system. The 2003 electrical distribution system appears to be fair condition. The original branch panels are beyond their typical useful life period of thirty years. Replacement parts for these panel boards may not be readily available in the near future.

Emergency Power:

300KW Caterpillar Diesel Generator, ATS, and emergency power distribution panel were added in 2003. They provide standby emergency power for the whole building. Emergency power system is not separated per NEC, article 700 Emergency Systems, i.e., emergency, legally required, and optional standby. Mechanical equipment and egress lights shall not be on the same emergency power system. The generator is exercised weekly and appears to be in good working order. The generator may not be properly sized to serve the whole building.

Lighting – Interior:

40-50% of the existing fluorescent light fixtures in non-detention areas have been replaced with LED flat panels and or LED retrofit lamps. The correctional grade light fixtures in inmate cells are original and are beyond their usable life. Inmates have been tampering with the internal wiring components of the light fixtures. The existing interior lighting controls do not meet current ASHRAE energy standards.

WESLEY STREET ELECTRICAL ASSESSMENT

Lighting – Exterior:

The existing exterior site lighting poles and building mounted lighting consist of HPS (High Pressure Sodium) lamps. They appear to be original equipment installed in 1978. It's not clear if the exterior lights are on dusk to dawn operation or a time scheduler. The existing exterior lighting controls do not meet current ASHRAE energy standards

Elevator and Controls:

The elevator system and associated equipment is original to the building. There is a significant amount of wear on the cabling due to lack of lubrication. The existing elevators are at the end of their usable life. Replacement parts may be hard to find due to its age.

Security Electronics:

The existing door controls and security cameras throughout the facility are obsolete and should be replaced with a modern system. The door control systems do not function properly due to its age. The analog security cameras are an outdated technology and do not meet the picture quality needs of the end users.

Approximately 40-50% of the analog security cameras were replaced with analog cameras. The picture quality they provide is not optimal since they were installed in the center of a ceiling, providing a “fish eyed” view.

Telecommunications:

The existing telecom system is not original to the building and has been continuously upgraded over the past five years. It appears to be in satisfactory working order.

EXISTING SPACE EVALUATION

WESLEY STREET ELECTRICAL ASSESSMENT

Fire Alarm System:

The fire alarm system is original to the building. Maintenance staff did not report any issues. However, parts of the administration area lack proper notification device coverage per NFPA.

WESLEY STREET PLUMBING/FIRE PROTECTION ASSESSMENT

Fire Protection System:

The fire protection system is not original to the building as some areas within the existing facility are partially sprinklered, while other areas are not protected by a fire sprinkler system. The cell areas are protected by an automatic sprinkler system where exposed sprinkler heads are subject to inmate tampering. The result has caused frequent flooding of the cells and will continue to cause water damage to the building's infrastructure over time.

Plumbing System:

Most of the plumbing system is original to the building and exhibits signs of stress.

Domestic Water Piping System:

The domestic water system is at risk of drinking water quality from backflow contamination and poses a threat due to the lack of backflow prevention at the service main. The domestic water piping is original to the building and failing due to age of pipe and normal wear. Newly installed piping is only near areas where major equipment was replaced. All other piping is in poor condition and leaking occurs frequently. The piping insulation is failing, and calcium deposited covered pipes are throughout the entire facility.

EXISTING SPACE EVALUATION

WESLEY STREET PLUMBING/FIRE PROTECTION ASSESSMENT

Sanitary Waste and Vent Piping:

The sanitary piping is original to the building and failing due to age of pipe and normal wear. Piping is in very poor condition and leaking occurs frequently. Corrosion, rusting, and rodding indicate life expectancy has passed and a complete replacement is required.

Water Valves:

The majority of the plumbing valves are original to the building and are failing due to age. Valves are in poor condition and frequently leak when operated.

Access to Valves:

Many of the hot and cold-water plumbing valves are currently located in spaces that are extremely difficult to access and to maintain. Due to the construction type, concrete block wall sections have to be removed to access leaking pipes and valves.

Difficult to Maintain:

Many plumbing failures cannot be accessed without removing portions of concrete masonry unit walls. The wall must then be repaired once the maintenance has been completed.

Equipment

NEW BOILER ROOM:

All or much of the existing plumbing equipment (water heater, hot water storage tanks, water softener) has been replaced within the past six to twelve months due to malfunctioning equipment. The existing water softener currently does not have a brine tank.

EXISTING SPACE EVALUATION

WESLEY STREET PLUMBING/FIRE PROTECTION ASSESSMENT

Old Boiler Room:

Some of the existing plumbing equipment (water heater, water softener) has been replaced or rebuilt within the past two years. The domestic water meter/service lacks backflow prevention which is hazardous to the drinking water quality and the fire service backflow has limited accessibility.

Correctional Plumbing Fixtures:

The correctional plumbing fixtures and piping within cell areas are original to the building. Within the past seven years the fixtures have been equipped with pneumatic type controls. This type of control system can cause excessive water usage. The control system needs a complete replacement which will allow staff to effectively control water usage of inmates and potentially deter drug use and solicitation.

(Refer to [Section 3 – Existing Space Evaluation](#) for more information)

EXISTING SPACE EVALUATION

CHANTER ROAD FACILITY





Thermal Bridging

- Single wyeth CMU wall allows for thermal bridging and causes interior condensation which is resulting in finish failures



Thermal Bridging

- Exterior walls are not properly insulated. This is inefficient for the HVAC system to overcome heating or cooling load.

EXISTING SPACE EVALUATION



Corridor

- Wasted space in corridor
- Inefficient layout



Lobby

- Wasted space in corridor
- Inefficient designed lobby area

EXISTING SPACE EVALUATION



Office/Counter

- Intake counter space and office that are no longer used.



Public Visitation

- Public visitation area that is rarely utilized.

EXISTING SPACE EVALUATION

ARCHITECTURE



Intake/Booking

- Booking counter is small for a facility this size, especially if the bed count is expanded.



Intake/Booking

- There is limited waiting space and finishes are not hardened. Available holding space is limited.

EXISTING SPACE EVALUATION

ARCHITECTURE



Central Control

- Intake/Booking and Central Control share a space and therefore, there is no backup control location.
- No secondary means of egress from Intake/Booking/Central Control.
- Access is only from area shared with inmates/arrestees.

Changing

- Area is not detention grade and does not have access to shower or toilet.

EXISTING SPACE EVALUATION



Laundry

- Area does not include detention level finishes. This may need upgraded and expanded if bed count is increased.



Property Storage

- Additional property storage will be needed if the bed count is increased.
- A vacuum seal system can improve efficiency as well.

EXISTING SPACE EVALUATION



Medical

- Additional storage, including lockable, will be required for more beds
- More office/nurses' station space will be required for more staff if the bed count increases
- More waiting space will be necessary if more beds are added
- There are no dedicated medical isolation or mental health cells (padded)
- There is no dedicated negative air for this area

Exam Room

- Room will need to be hardened for different inmate classifications
- Additional exam rooms will be needed if the bed count is increased

EXISTING SPACE EVALUATION



Fitness/Weight Room

- Tile flooring is deteriorating
- Temperatures fluctuate significantly
- More space will be necessary if a facility consolidation occurs (more staff).



Interview Room

- Sound isolation should be improved
- Sealing of the door, insulating interior walls, moving ducts, etc. is needed to limit sound from leaving the space.

EXISTING SPACE EVALUATION



Records Storage

- Significant number of hardcopy records are stored.
- Significant space could be repurposed if files are digitized.
- Access to the records room is through a corridor that is shared with inmates.

Records Storage

- Views of the records are through tempered glass and non-detention walls and doors
- Views of the records from a corridor that is accessed by inmates.

EXISTING SPACE EVALUATION



Structural Settlement

- There is some structural cracking on the interior side of an exterior wall
- Extent of settlement will require further investigation

Mechanical Units

- Mechanical units impede ADA access of an emergency exit.

EXISTING SPACE EVALUATION



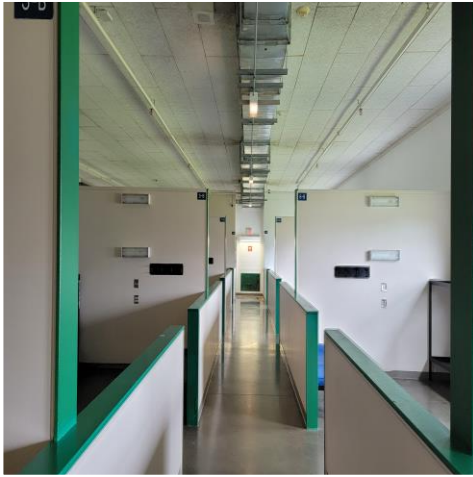
Dorm Restroom

- Facility is not designed to be anti-ligature
- Porcelain fixtures and other finishes are not detention grade



Dorm Restroom

- Tile floors and stalls can be challenging to clean and are not detention grade.



Dormitory

- Interior finishes are not hardened and are subject to abuse.
- Areas are challenging to observe due to linear design

Dormitory

- Design is not anti-ligature

EXISTING SPACE EVALUATION



Dormitory

- Ample space for sleeping area
- Access to glass and exterior windows (subject to abuse)
- Operable windows can create challenges for the HVAC system.

Structural Settlement

- Floor and wall separation can cause cleanability issues or contraband hiding areas
- The extent of the settlement will require further investigation

EXISTING SPACE EVALUATION

MECHANICAL



Outdoor AHU and Ductwork

- Typical construction and arrangement. Units are from 2017.



Ductwork

- Typical Ductwork throughout. No major issues observed or reported.

EXISTING SPACE EVALUATION

PLUMBING



IT Room

- Water and sprinkler piping routed above IT racks.



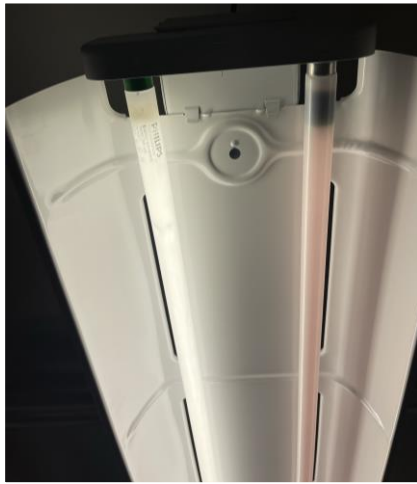
IT Room

- Water service meter and Fire sprinkler main located in close proximity to IT/electrical equipment.

EXISTING SPACE EVALUATION

ELECTRICAL

EXISTING SPACE EVALUATION



Interior Lighting

- Compact fluorescent lamps should be replaced with LED retrofit lamps.



Exterior Lighting

- Replace high pressure sodium exterior lighting with LED equivalent.

ELECTRICAL



Power Systems

- Security Control station in admin building does not have an adequate number of receptacles for equipment and devices.

Power Systems

- Some of the offices in the admin building do not have an adequate number of receptacles.
- Plugging in multiple devices into a single power strip can cause electrical circuits to become overload and cause breakers to trip intermittently.

EXISTING SPACE EVALUATION

ELECTRICAL



Power Systems

- Provide waterproof covers for outlets in laundry areas to reduce the risk of an electrical incident.

Power Systems

- Some of the offices in the admin building do not have an adequate number of receptacles.
- Plugging in multiple devices into a single power strip can cause electrical circuits to become overload and cause breakers to trip intermittently.

EXISTING SPACE EVALUATION

ELECTRICAL



Power Systems

- NEC's working clearance requirement of 36-inches is not being met. Fire protection lines are too close the electrical switch board.



Power Systems

- Electrical panels in kitchen are starting to rust due to the moisture in the air.

EXISTING SPACE EVALUATION

ELECTRICAL



Power Systems

- Receptacles in mech chase must be GFCI type due proximity of water.

Power Systems

- Receptacles in inmate accessible areas (dormitory) should be controlled and or on a GFCI/Arc fault breaker to reduce risk of electric shock and inmate tampering.

EXISTING SPACE EVALUATION

ELECTRICAL



EXISTING SPACE EVALUATION

Telecommunication

- The administration buildings main I.T. equipment is located in an electrical room.
- The space is not properly conditioned, and a catastrophic equipment failure could occur.



Telecommunication

- Telecom equipment at the administration building lacks a proper wire management system.
- This creates a service ability issue, and it can also reduce the signal quality of the low voltage system.

ELECTRICAL



Telecommunication

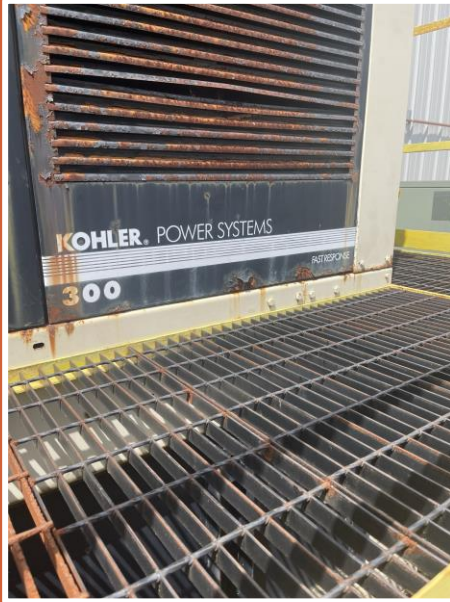
- Telecom equipment is too close to fire sprinkler system.

Telecommunication

- Telecom equipment located in stand alone mech building is near multiple water hazards.
- Telcom equipment is in a non-conditioned space. Which reduces the life of the equipment.

EXISTING SPACE EVALUATION

ELECTRICAL



Emergency Power

- Generator enclosure is in poor condition. It may be affecting the generator's reliability.

EXISTING SPACE EVALUATION

PLUMBING



Medical Exam Area

- No inmate restroom located in Medical Area. Inmates are currently being escorted by staff to the nearest restroom.



Laundry Room

- Additional washing and drying equipment required for larger population due to expansion.

EXISTING SPACE EVALUATION

PLUMBING



Dorm Restroom

- Commercial grade plumbing fixtures are subject to use for inmates to produce weapons.

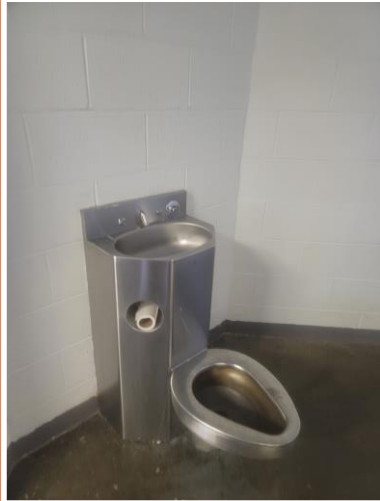


Dorm Restroom

- Non anti-ligature fixtures and exposed piping can be potentially dangerous for inmates.

EXISTING SPACE EVALUATION

PLUMBING



Holding Area

- Pneumatic correctional grade fixtures not used with a Water Management System controlled by staff.

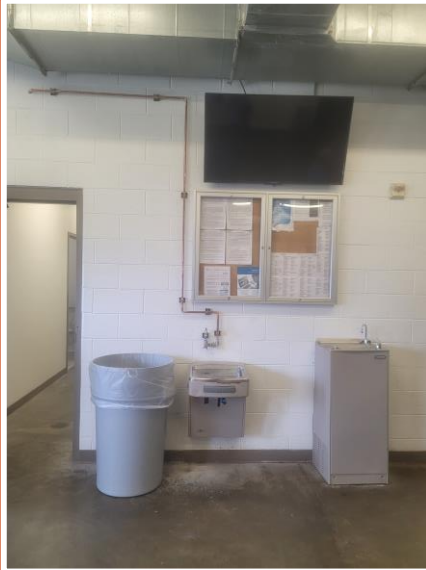


Dorm Restroom

- Floor drains are subject to inmate tampering.

EXISTING SPACE EVALUATION

PLUMBING



Dorm Restroom

- Drinking fountain converted to use hot water for handwashing.



Dorm Restroom

- Floor drains are subject to inmate tampering.

EXISTING SPACE EVALUATION

PLUMBING



Mechanical Room

- No backflow prevention provided, at risk for water contamination.



Mechanical Room

- Recently replaced hot water storage tanks due to normal wear.

EXISTING SPACE EVALUATION

PLUMBING



Mechanical Chase

- Calcium deposited piping.



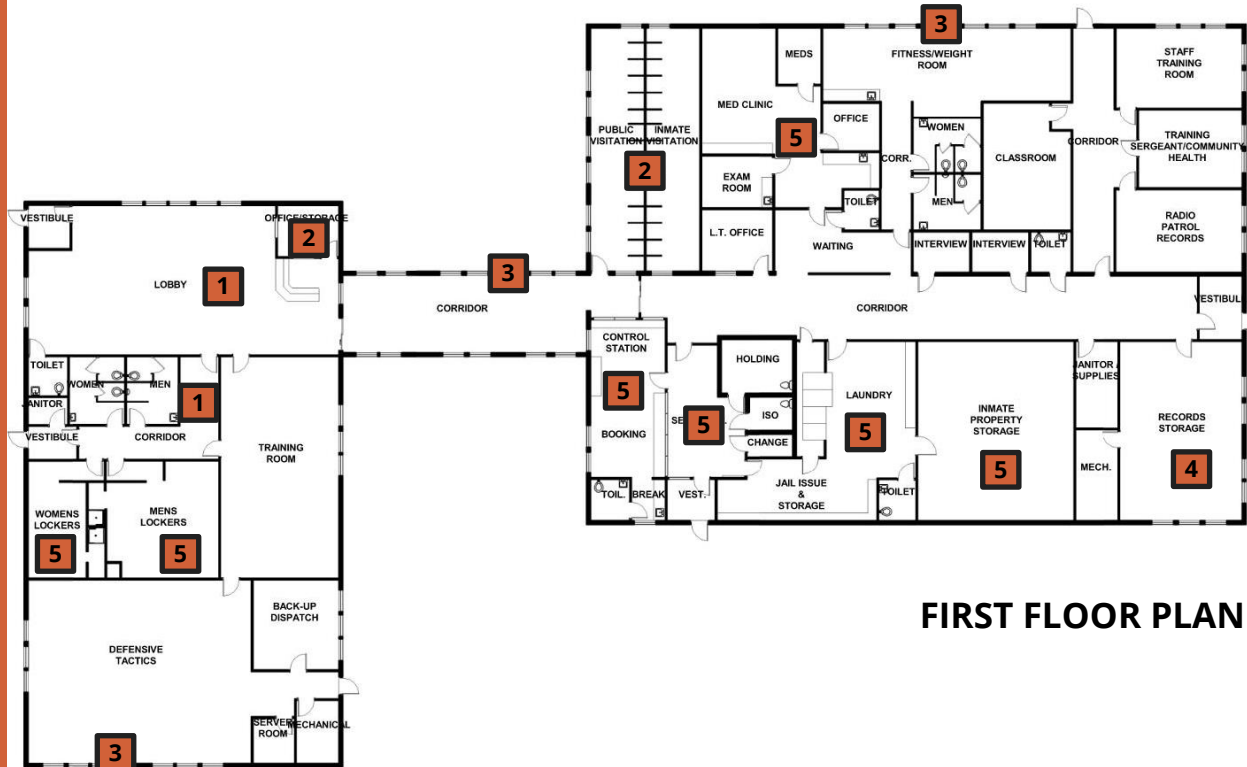
Dorm Housing

- Exposed sprinkler piping subject to sprinkler tampering.
- Potentially harmful if used as a hanging device.

EXISTING SPACE EVALUATION

Existing Conditions Observation Key

1. Inefficiently designed layout
2. Unused space
3. Thermal bridging is occurring through exterior walls
4. Lack of storage space
5. Will need expanded if housing is added.



FIRST FLOOR PLAN

EXISTING SPACE
OBSERVATIONS

Existing Conditions Observation Key

1. Chapel should be partitioned to allow for classification
2. Exterior wall is separating from the floor

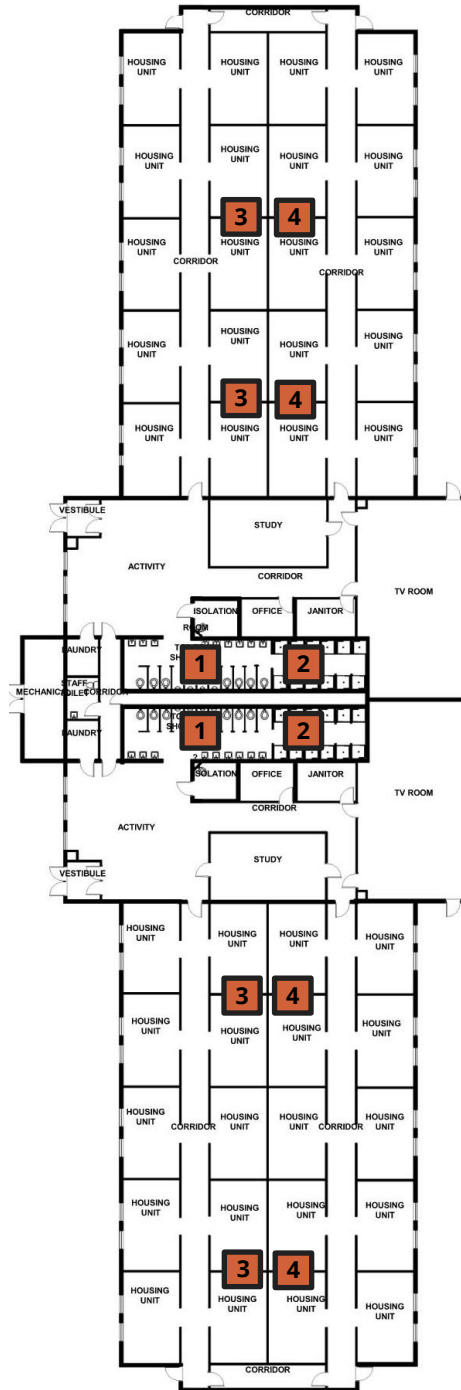


FIRST FLOOR PLAN

EXISTING SPACE
OBSERVATIONS

Existing Conditions Observation Key

1. Porcelain plumbing fixtures in detention areas
2. Porcelain walls surrounding showers
3. Non-detention grade light fixtures and outlets
4. Non-detention grade coat hooks mounted to the walls



EXISTING SPACE OBSERVATIONS

FIRST FLOOR PLAN

GRANGER
ADVANCE THE ART OF BUILDING

RQAW
ARCHITECTURE

CHANTER ROAD EXISTING FACILITY MECH, ELEC, & PLUMBING CHALLENGES

The Jackson County's Chanter Road facility was built in 2002 for 252 inmates and is operating as a minimum security only. The facility may be in good condition, but a number of mechanical, electrical, and plumbing modifications must be made to accommodate violent and maximum-security inmates. A summary list of M,E,P challenges follows (refer to Section 3 - Existing Space Evaluation for more information):

EXISTING SPACE EVALUATION

CHANTER ROAD MECHANICAL ASSESSMENT

Air Handling Units:

The Administrations Building is served by four Packaged DX Air handling Units. All 4 AHU's are grade mounted outside with ductwork routing up the exterior wall before penetrating the building above the ceiling. All 4 AHU's are single zone units with factory provided controls. All 4 AHU's have been recently replaced and have 10+ years of remaining life.

Due to the single-zone nature of these air handling units, modifications to the building may have significant impacts on zone control and the need to modify the HVAC system may become a large factor in how the administrations building can be renovated to fit future needs. It will be important for the architect and engineer to work hand in hand to optimize the design to limit the HVAC Impact on costs.

Ductwork:

The Ductwork System is original to the building but appears in good working order. Ductwork is internally insulated which tends to decrease the life of the ductwork system. Due to the nature of internal insulation to collect and hold onto moisture and duct but should not cause problems for the next 15 years. An externally insulated ductwork system can last 50+ years in a well-maintained facility. Diffusers,

EXISTING SPACE EVALUATION

CHANTER ROAD MECHANICAL ASSESSMENT

Diffusers, Grilles and Accessories:

Diffusers, Grilles, and Accessories such Thermostats all appear in good working order. Depending on changes in security classifications, some of these items will need to be replaced with devices that are more tamper proof and meet the requirements of the security classification assigned to each space.

Controls:

Controls are packaged with the Air Handling Units and locally monitored. Control Points can be pulled from the AHU's and brought into a central monitoring system if the owner would like more control the convenience of remote monitoring.

EXISTING SPACE EVALUATION

CHANTER ROAD ELECTRICAL ASSESSMENT

Electrical Distribution:

The main distribution switchboard and main distribution panels were installed in 2003 and are original to the facility. The 2003 electrical distribution system appears to be good condition. The jail expansion will require a new 1600A, 480v, 3ph electrical distribution system. Due to housing medium and high security threat inmate will also require tamper resistant and controlled receptacles in inmate accessible areas.

Emergency Power:

300KW KOHLER Diesel Generator, ATS, and emergency power distribution panel are original to the facility and installed in 2003. The EM system provides standby emergency power for the entire facility. The emergency power system is not separated per NEC, article 700 Emergency Systems, i.e., emergency, legally required, and optional standby. Mechanical equipment and egress lights shall not be on the same emergency power system. The generator is exercised weekly and may not be in good working order. The generator may be undersized to serve the whole campus. The generator has reliability issues. Maintenance staff has indicated the generator failed to operate during a loss of power event on more than one occasion. An additional emergency power system will be required to supply power to the jail expansion.

Lighting – Interior:

60-70% of the existing fluorescent lamps throughout the facility areas have been replaced with LED retrofit lamps. The jail expansion will require LED light fixtures to meet current ASHRAE energy standards.

EXISTING SPACE EVALUATION

CHANTER ROAD ELECTRICAL ASSESSMENT

Lighting – Exterior:

The existing exterior site lighting poles and building mounted lighting consist of HPS (High Pressure Sodium) lamps. They appear to be original equipment installed in 2003. It is recommended the existing site lighting poles be replaced with an LED equivalent to meet current ASHRAE energy standards. Existing site lighting layout must be modified to meet the needs of the jail expansion. The jail expansion will require correction grade light fixtures in the existing medical infill to protect the lights from medium to high security inmates.

Security Electronics:

The existing door controls and security camera throughout the facility are original to the facility and seem to be in fair condition. In order to support the jail expansion a fully integrated security electronics system is required to increase the jails security and efficiency i.e., high resolution security cameras, provide 90-days of storage, access control, and a 15-20kva UPS.

Telecommunications:

Most of the existing telecom system is original to the facility, while some components have been upgraded over the past few years. The telecom equipment does not reside in spaces where it is being properly cooled and conditioned. Excessive heat can reduce the life of the equipment and possibly cause a catastrophic equipment failure. The telecom equipment appears to be in good working order. Existing telecom and fiber runs must be expanded to meet the demands of the jail expansion.

EXISTING SPACE EVALUATION

CHANTER ROAD ELECTRICAL ASSESSMENT

Fire Alarm System:

The fire alarm system is original to the facility. Maintenance staff did not report any issues. The fire alarm system must be expanded to meet the life safety needs of the jail expansion.

EXISTING SPACE EVALUATION

CHANTER ROAD PLUMBING/FIRE PROTECTION ASSESSMENT

Fire Protection System:

The fire protection system is original to the building and in good working condition. The location of some main fire risers are hazardous due to installation in close proximity to IT/Electrical equipment, in some instances within the same room. Some exposed sprinkler pipes are located in areas where accessible to inmates and can be used as a hanging device. Exposed sprinkler heads in certain areas are subject to inmate tampering and can be used to flood inmate housing areas.

Plumbing System:

Most of the plumbing system is original to the building and is in fair condition.

Domestic Water Piping System:

The domestic water system is at risk of drinking water quality from backflow contamination and poses a threat due to the lack of backflow prevention at the service main. The domestic water piping is original to the building and in fair working condition. In some areas, piping indicated signs of calcium deposits. There are issues regarding insufficient hot water demand at the three- compartment sink in the Kitchen area.

EXISTING SPACE EVALUATION

CHANTER ROAD PLUMBING/FIRE PROTECTION ASSESSMENT

Sanitary Waste and Vent Piping:

The sanitary piping is original to the building and is in fair working condition. Most of the waste piping is PVC and does not show signs of stress or damage. There are issues of constant foul odors near the above ground grease interceptor in the Kitchen area.

Water Valves:

The majority of the plumbing valves are original to the building and are in fair working condition.

MECHANICAL ROOMS:

All or much of the existing plumbing equipment (water heaters, hot water storage tanks, water softeners) has been replaced within the past six to thirty-six months due to malfunctioning equipment and normal wear. The domestic water meter/service mains lack backflow prevention which is hazardous to the drinking water quality.

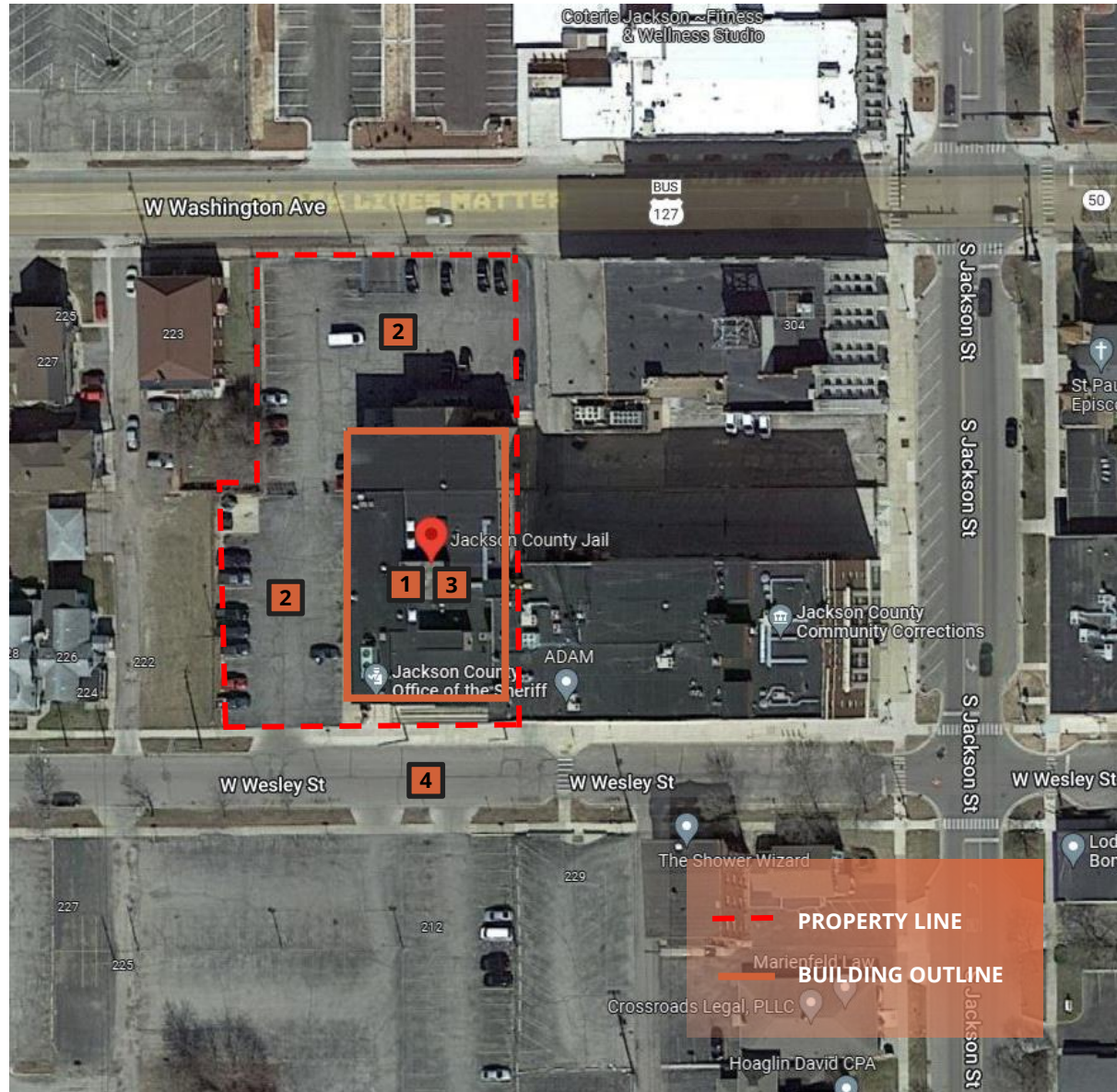
CORRECTIONAL PLUMBING FIXTURES:

The correctional plumbing fixtures and piping within cell areas are original to the building and are equipped with pneumatic type controls. This type of control system can cause excessive water usage. The control system needs a complete replacement which will allow staff to effectively control the water usage of inmates and potentially deter drug use and solicitation. Commercial grade fixtures are installed in some inmate areas where they are subject to tampering. Exposed piping in those areas are not anti-ligature resistant and may cause physical harm.

EXISTING SPACE EVALUATION

Existing Site Observation Key

1. No space for expansion without land acquisition
2. Insufficient parking with any expansion
3. Vertical expansion will require extensive upgrading of structure and shut down parts of the facility during construction
4. Wesley Street would have to be shut down during construction



EXISTING SITE OBSERVATIONS

ARCHITECTURAL SPACE PROGRAM

Jackson County Architectural Program

Chanter Road Facility Addition

Space		Square Footage		Primary Function
		Initial	Revised	
B4	Intake and Processing - Chanter Road	8,117		
C1	Confinement Housing - Chanter Road	26,046		
E	Mechanical/Electrical/Support - Chanter Road	1,400		
F	Connector	1,603		
F1	Female Dorm	0		
Subtotal Sheriff and Jail		37,166		
Grossing Factor		10,066		
ADDITION SUBTOTAL		47,232		
B5	Medical - Chanter Road	1,732		
D1	Laundry - Chanter Road	920		
G	Weekenders	924		
H	Male & Female Lockers	1,018		
I	Fitness Expansion	677		
J	Administration	1,359		
Subtotal Sheriff and Jail		6,630		
Grossing Factor		1,160		
RENOVATION SUBTOTAL		7,790		
Total Chanter Road Addition & Renovation		55,022		

ARCHITECTURAL SPACE PROGRAM

Jackson County

Sheriff/Jail

No.	Space	Size Quantity	Each Space Sq. Ft.	Area Sq. Ft.	Comments
B4	Intake and Processing - Chanter Road				Addition
B4.1	Vehicular Sallyport	1	2,000	2,000	Cruisers) enough for 4 vehicles min.
B4.2	Book-In Center	1	1,500	1,500	immediately adjacent)
B4.3	Processing Area	1	200	200	Detention seating/benches (*included in Book-In)
B4.4	Breathalyzer	1	80	80	Work surface with breathalyzer, adjacent to SP/Book-In
B4.5	Photo/Mug Shot	1	0	0	Included in Processing Area
B4.6	Staff Toilet	1	97	97	ADA
B4.7	Pre-Screen Holding	2	160	320	Pre-Intake group holding
B4.8	Holding Cells	11	80	880	80 sf each with combination security toilet/sink fixture
B4.9	Padded Holding Cells	4	80	320	One on each housing level
B4.10	Padded Cell Toilet/Shower	2	80	160	Shared between padded cells
B4.11	Group Holding	2	300	600	
B4.12	Changing/Dressing/Search	1	40	40	Adjacent to property storage
B4.13	Janitor	1	60	60	
B4.14	Property/Clothing Storage	1	800	800	
B4.15	Body Scan Area	1	120	120	(*included in Booking)
B4.16	Sallyport Storage Area	1	100	100	Adjacent to Sallyport
B4.17	Sallyport Shower/Restroom/Decontamination	1	80	80	Adjacent to Sallyport
B4.18	Sallyport	1	80	80	
B4.19	Transport Office	1	120	120	
B4.20	Transport Holding	2	80	160	
B4.21	Release	1	400	400	
	Subtotal	38		8,117	
	Grossing Factor at 22%			1,786	
	SUBTOTAL			9,903	
B5	Medical - Chanter Road				Renovation
B5.1	Doctor/Nurse	2	120	240	10 Medical Staff with a 24 hour Nurse
B5.2	Reception/Waiting	1	200	200	Seating for 8 to 10. Includes reception/security station
B5.3	Examination	2	180	360	portable X-ray
B5.4	Detainee Toilet	1	80	80	ADA Accessible, secure toilet/sink and shower
B5.5	Staff Toilet	1	88	88	ADA Accessible
B5.6	Drug Storage	1	80	80	Secure drug storage, shelving, refrigerated
B5.7	Medical Isolation Cells	4	86	344	Cells at 80sf.ft each
B5.8	Supplies Storage	1	100	100	Shelving
B5.9	Padded Cells	2	80	160	
B5.10	Padded Toilet	1	80	80	One shared between padded cells
	Subtotal	16		1,732	
	Grossing Factor at 20%			346	
	SUBTOTAL			2,078	
C1	Confinement Housing - Chanter Road				Addition
C1.1	Jail Commander	0	200	0	Included in Administration Renovation

ARCHITECTURAL SPACE PROGRAM

Jackson County

Sheriff/Jail

No.	Space	Size Quantity	Each Space Sq. Ft.	Area Sq. Ft.	Comments
C1.2	Lieutenant	0	160	0	Included in Administration Renovation
C1.3	Interview Room/Visitation	2	100	200	
C1.4	1 and 2 Man Cells	64	53	3,392	
C1.5	4 Man Cells	184	36	6,624	
C1.6	Control Room	1	400	400	1 per level
C1.7	Control Room Toilet	1	60	60	
C1.8	Dayroom	248	55	13,640	
C1.9	Indoor/Outdoor Recreation	1	1,000	1,000	
C1.10	Break Room	1	200	200	Kitchenette with seating (One per each secure level)
C1.11	Isolation / Seg. / Padded	2	90	180	
C1.12	Classroom	1	350	350	
	Subtotal	505		26,046	
	Grossing Factor at 30%			7,814	
	SUBTOTAL			33,860	
D1	Laundry - Chanter Road				Renovation
D1.1	Laundry Room	1	500	500	2 additional washers and dryers & 2 future
D1.2	Laundry and Housekeeping Storage	1	300	300	
D1.3	Contaminant Laundry	1	120	120	
	Subtotal	3		920	
	Grossing Factor at 20%			184	
	SUBTOTAL			1,104	
E	Mechanical/Electrical/Support - Chanter Road				Addition
E.1	Mechanical	1	400	400	
E.2	Electrical	1	300	300	(Shared MEP)
E.3	Plumbing Equipment Room	1	200	200	(Shared MEP)
E.4	Emergency Generator	1	0	0	outdoors
E.5	Building Storage	1	200	200	

ARCHITECTURAL SPACE PROGRAM

Jackson County

Sheriff/Jail

No.	Space	Size Quantity	Each Space Sq. Ft.	Area Sq. Ft.	Comments
E.6	Maintenance/Material	1	100	100	(also included in Maintenance Area)
E.7	Stairs	0	242	0	(includes all main egress stairs)
E.8	Elevator	0	64	0	
E.9	Elevator Equipment	0	80	0	(N/A)
E.10	Security & Electronics	1	200	200	
	Subtotal	7		1,400	
	Grossing Factor at 15%			210	
	SUBTOTAL			1,610	
F	Connector				Addition
F.1	Connector	1	1603	1,603	
	Subtotal	0		1,603	
	Grossing Factor at 16%			256	
	SUBTOTAL			1,859	
F1	Female Dorm				Addition
F1.1	Female Dorm	0	2500	0	
	Subtotal	0		0	
	Grossing Factor at 30%			0	
	SUBTOTAL			0	
G	Weekenders				Renovation
G.1	Weekender	1	924	924	
	Subtotal	0		924	
	Grossing Factor at 15%			139	
	SUBTOTAL			1,063	
H	Male & Female Lockers				Renovation
H.1	Male & Female Lockers	1	1018	1,018	
	Subtotal	1		1,018	
	Grossing Factor at 20%			204	
	SUBTOTAL			1,222	
I	Fitness Expansion				Renovation
I.1	Fitness Expansion	1	677	677	
	Subtotal	1		677	
	Grossing Factor at 15%			102	
	SUBTOTAL			779	
J	Administration				Renovation
J.1	Administration	1	1359	1,359	
	Subtotal	1		1,359	
	Grossing Factor at 15%			204	
	SUBTOTAL			1,563	

ARCHITECTURAL SPACE PROGRAM

Due to budgetary constraints the architectural program for the Sheriff's Office/City Police Department were not a part of the recommendations but should be considered to address the current and future needs of the County.

Jackson County Architectural Program

Sheriff Administration/City Police Department

Space		Square Footage		Primary Function
		Initial	Revised	
A	Administration (8 to 4 operation)	3,510		Included in Chanter Road Renovation
B	Patrol Operations	0		
B2	Investigations	3,110		
B3	Operations - Wesley Street	430		
C	Connector/Holding - Welsey Street	3,420		
D	Mechanical/Electrical/Support - Wesley Street	1,100		
Subtotal Sheriff's Office		11,570		
Grossing Factor		3,306		
SUBTOTAL		14,876		
B4A	City Police Department	10,770		
Subtotal City PD		10,770		
Grossing Factor		3,231		
SUBTOTAL		14,001		
Total Sheriff's Office & City PD		28,877		

ARCHITECTURAL SPACE PROGRAM

Jackson County

Sheriff/Jail

No.	Space	Size Quantity	Each Space Sq. Ft.	Area Sq. Ft.	Comments
A	Administration (8 to 4 operation)				
A.1	Sheriff	1	200	200	
A.2	Undersheriff	1	160	160	Private Office Type "B"
A.3	Sheriff Secretary	1	120	120	
A.4	Patrol Captain	1	120	120	
A.5	Administration Sergeant	1	120	120	Workstation type "E"
A.6	Reception/Waiting Lobby	1	600	600	Seating for 6 to 8 @ 15sf each.
A.7	Workroom/Galley	1	120	120	Base/Wall Cabinets, sink and copier
A.8	Large Conference Room	0	700	0	Seating for 30 to 35 (Use Training Room)
A.9	File/Storage	1	100	100	
A.10	Women's Restroom	1	150	150	
A.11	Men's Restroom	1	150	150	
A.12	Processing / Fingerprinting / Permits	1	100	100	"Staging area" - private
A.13	Public Men's Restroom	1	75	75	
A.14	Public Women's Restroom	1	75	75	
A.15	Interview Room	2	80	160	Off the lobby
A.16	Access Port - Kiosk	1	0	0	Side Booth
A.17	Staff Break Room	1	240	240	
A.18	Archive Records	1	200	200	
A.19	Video Visitation - Kiosks	1	100	100	Adjacent to the Reception/Waiting Lobby
A.20	Records Coordinator	1	120	120	handles reception
A.21	Records Workstations	5	80	400	
A.22	Records	1	200	200	
	Net Subtotal	26		3,510	
	Grossing Factor at 30%			1,053	
	SUBTOTAL			4,563	
B	Patrol Operations				Included in Renovation of Chanter Road
B.1	Division Commander	0	160	0	Private Office Type "B" (Modified).
B.2	Patrol Sergeant	0	120	0	Workstation Type "E"
B.3	Deputies	0	12	0	Workstation Type "E" (11 Workstations)
B.4	Future Office/Small Conference	0	120	0	Private Office Type "C"
B.5	Workroom/Galley	0	120	0	Base/Wall Cabinets, sink and copier (*shared w/ admin)
B.6	Office/Supply Storage	0	100	0	
B.7	Training Room	0	700	0	Sub divided, Seating for 40 to 60 w/Operable Partition
B.8	Training Storage	0	100	0	
B.9	File/Records Storage	0	100	0	(*Included in Admin)
B.10	Briefing Room	0	300	0	Seating for 16 to 20 (Of Patrol/Mail Cubbies)
B.11	Men's Locker	0	15	0	
B.12	Men's Toilets/Showers	0	300	0	
B.13	Women's Lockers	0	60	0	
B.14	Women's Toilets/Showers	0	15	0	
B.15	Armory	0	100	0	Includes gun cleaning/maintenance and storage
B.16	Janitor	0	60	0	

ARCHITECTURAL SPACE PROGRAM

Jackson County

Sheriff/Jail

No.	Space	Size Quantity	Each Space Sq. Ft.	Area Sq. Ft.	Comments
B.17	Department Storage	0	100	0	
B.18	Break Area for Deputy/Investigation/Kitchenette	0	100	0	
	Net Subtotal	0		0	
	Grossing Factor at 30%			0	
	SUBTOTAL			0	
B2	Investigations				
B2.1	Detective Sergeant	1	160	160	Private Office Type "B" (Modified).
B2.2	Detective/Deputy/Narcotics	5	120	600	Private Office Type "C"
B2.3	Hard Interview	2	100	200	Covert CCTV, Acoustical Treatment
B2.4	Soft Interview	1	180	180	Soft Seating, Child Area
B2.5	Evidence Transfer Vestibule	1	200	200	Wall mounted work/processing station (standing counter space)
B2.6	Evidence Transfer Lockers	1	80	80	Approximately 12' in length, variety of sized lockers, wet and refrigerated compartments (existing jail has 18 lockers, non refrigerated)
B2.7	General Evidence Storage	1	900	900	(Existing: Photographing/Superglue Fuming/Counter top tank/Ventilation/Drying Cabinet/Isolation area to secure smell) (*included in Large Evidence Storage)
B2.8	Evidence Processing Station	1	100	100	
B2.9	Conference Room	1	250	250	
B2.10	Departmental Storage	1	200	200	
B2.11	Workroom/Galley	1	120	120	
B2.12	IT investigations/Cyber Crime workroom	1	120	120	Lockable/Access Controlled
	Subtotal	17		3,110	
	Grossing Factor at 30%			933	
	SUBTOTAL			4,043	
B3	Operations - Wesley Street				
B3.1	Maintenance Office	1	120	120	Private Office Type "C"
B3.2	IT/Data / Security	1	120	120	
B3.3	Division Storage	1	120	120	
B3.4	Janitor	1	70	70	
	Subtotal	4		430	
	Grossing Factor at 30%			129	
	Subtotal			559	
C	Connector/Holding - Welsey Street				
C.1	Holding	6	80	480	Two holding cell on 1st, 4th, & 5th floor / restroom included
C.2	Group Holding	2	200	400	Two group holds on first floor / restroom included
C.3	Court Deputy	1	120	120	Share space with Transport Officer
C.4	Jail Captain	1	120	120	
C.5	Transport Officer	0	120	0	Share space with court deputy

ARCHITECTURAL SPACE PROGRAM

Jackson County

Sheriff/Jail

No.	Space	Size Quantity	Each Space Sq. Ft.	Area Sq. Ft.	Comments
C.6	Secure Circulation (Elevator, Stair, Elevator Equipment)	1	1,200	1,200	
C.7	Attorney Room	3	100	300	Attorney rooms on 2nd, 4th, & 5th floor
C.8	Vehicular Sallyport	1	800	800	Two vehicles side by side (needs to be pull through)
	Subtotal	15		3,420	
	Grossing Factor at 30%			1,026	
	SUBTOTAL			4,446	
D	Mechanical/Electrical/Support - Wesley Street				
E.1	Mechanical	1	400	400	
E.2	Electrical	1	300	300	
E.3	Plumbing Equipment Room	1	200	200	
E.4	Emergency Generator	1	0	0	outdoors
E.5	Building Storage	1	200	200	
E.6	Security & Electronics	0	200	0	
	Subtotal	5		1,100	
	Grossing Factor at 15%			165	
	SUBTOTAL			1,265	
B4A	City Police Department				
B4.1A	Chief	1	240	240	
B4.2A	Deputy Chief	1	120	120	
B4.3A	Chief Secretary	1	120	120	Private Office Type "B"
B4.4A	Lieutenant	2	120	240	Workstation type "E"
B4.5A	Officers	42	10	420	Workstations type "E" (open space) (10 Workstations)
B4.6A	Sergeant's Office	1	120	120	
B4.7A	Workroom/Galley	1	120	120	Base/Wall Cabinets, sink and copier
B4.8A	Office/Supply Storage	1	100	100	
B4.9A	File/Records Storage	1	200	200	
B4.10A	Staff Women's Restroom	1	150	150	
B4.11A	Staff Men's Restroom	1	150	150	
B4.12A	Staff Break Room	1	240	240	
B4.13A	Men's Locker Room	60	15	900	shared with investigations
B4.14A	Women's Locker Room	20	15	300	shared with investigations
B4.15A	Archive Records	1	300	300	
B4.16A	Storage Closets	1	60	60	For sheriff and chief deputy
B4.17A	Processing / Fingerprinting	0	60	0	"Staging area" - private
B4.18A	Squad Room	1	400	400	Seating for 16 to 20 (Of Patrol/Mail Cubbies)
B4.19A	Janitor	1	60	60	
B4.20A	Indoor Gun Range	1	2,000	2,000	6
B4.21A	Communications Room	1	500	500	3 workstations
B4.23A	Armory	1	80	80	
B4.24A	Training Room	1	600	600	
B4.25A	Training Room Storage	1	100	100	

ARCHITECTURAL SPACE PROGRAM

Jackson County

Sheriff/Jail

No.	Space	Size Quantity	Each Space Sq. Ft.	Area Sq. Ft.	Comments
B4.26A	Investigation's Department	1	3,250	3,250	General Evidence Storage, Evidence Lockers would be shared with Sheriff's Office
Net Subtotal		143		10,770	
Grossing Factor at 30%				3,231	
SUBTOTAL				14,001	

ARCHITECTURAL
SPACE PROGRAM

SPACE PROGRAM

SPACE: PRIVATE OFFICE "A"

AA.1 240 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 36" x 72"
- C. Desk Chair
- D. Guest Chairs, Qty. -2
- E. Bookshelf Units, Qty. -3
- F. Conference Table, Qty. -1
- G. Conference Chairs, Qty. -3

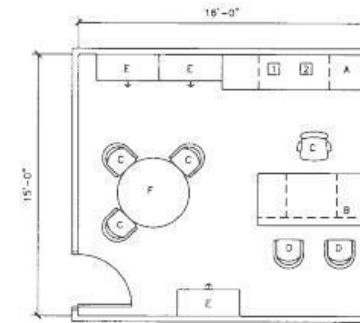
Storage

File	156"
Drawer	136"
Bookshelf	368"

*Additional filing could replace bookshelves

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: PRIVATE OFFICE “A”

AA.2 240 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 36” x 72”
- C. Desk Chair
- D. Guest Chairs, Qty. -2
- E. Bookshelf Units, Qty. -3
- F. Lounge Seating, Qty. -2
- G. Coffee Table, Qty. -1

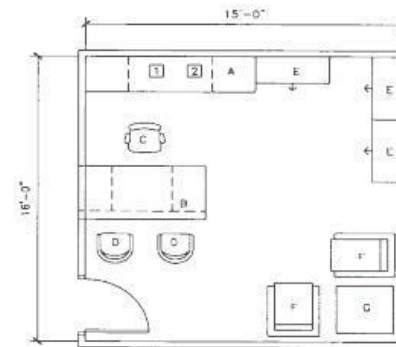
Storage

File	156”
Drawer	136”
Bookshelf	368”

*Additional filing could replace bookshelves

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: PRIVATE OFFICE “A”

AA.3 240 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 36” x 72”
- C. Desk Chair
- D. Guest Chairs, Qty. -2
- E. Bookshelf Units, Qty. -3
- F. Conference Table, Qty. -1
- G. Conference Chairs, Qty. -5

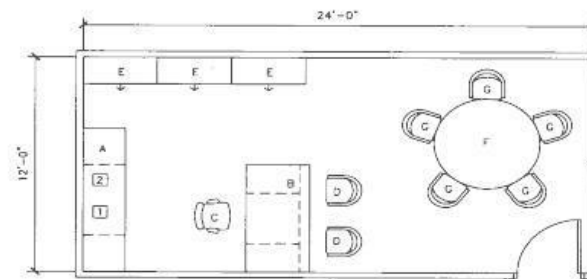
Storage

File	156”
Drawer	136”
Bookshelf	368”

*Additional filing could replace bookshelves

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment



ARCHITECTURAL
SPACE PROGRAM

SPACE PROGRAM

SPACE: PRIVATE OFFICE “B”

BB.1 192 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 36” x 72”
- C. Desk Chair
- D. Guest Chairs, Qty. -2
- E. Bookshelf Unit, Qty. -1
- F. Conference Table, Qty. -1
- G. Conference Chairs, Qty. -4-5

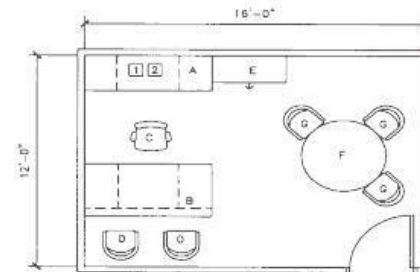
Storage

File	156”
Drawer	136”
Bookshelf	368”

*Additional filing could replace bookshelves

Equipment

1. Suggested Location of Equipment
2. Suggested Location of Equipment



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: PRIVATE OFFICE “B”

BB.2 192 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 36” x 72”
- C. Desk Chair
- D. Guest Chairs, Qty. -2
- E. Bookshelf Units, Qty. -1
- F. Conference Table, Qty. -1
- G. Conference Chairs, Qty. -3-4

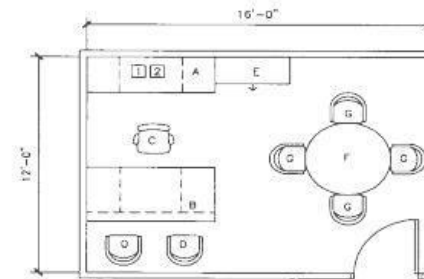
Storage

File	156”
Drawer	136”
Bookshelf	368”

*Additional filing could replace bookshelves

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: PRIVATE OFFICE "B"

BB.3 192 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 36" x 72"
- C. Desk Chair
- D. Guest Chairs, Qty. -2
- E. Bookshelf Unit, Qty. -1
- F. Lounge Seating, Qty. -2
- G. End Table, Qty. -1

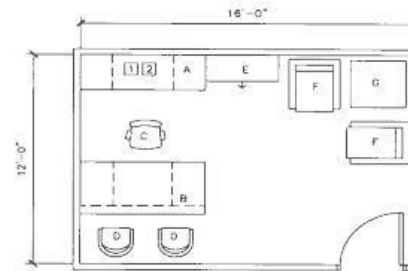
Storage

File	156"
Drawer	136"
Bookshelf	368"

*Additional filing could replace bookshelves

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: PRIVATE OFFICE "C"

CC.1 120 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 30" x 60"
- C. Desk Chair
- D. Guest Chairs, Qty. -2
- E. Bookshelf Units, Qty. -3

Storage

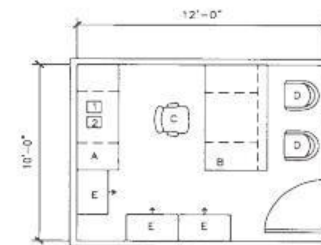
File	144"
Drawer	112"
Bookshelf	408"

*Additional filing could replace bookshelves

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment

NOTE: This layout will accommodate either an open or semi-private office also.



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: PRIVATE OFFICE "C"

CC.2 120 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2) and Typewriter (3)
- B. Double Pedestal Desk- 36" x 72" with Return
- C. Desk Chair
- D. Guest Chairs, Qty. -2
- E. Bookshelf Units, Qty. -2

Storage

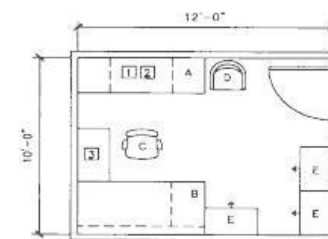
File	116"
Drawer	56"
Bookshelf	408"

*Additional filing could replace bookshelves

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment

NOTE: This layout will accommodate either an open or semi-private office also.



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: PRIVATE OFFICE "C"

CC.3 120 Square Feet

ARCHITECTURAL SPACE PROGRAM

Plan View

- A. Credenza- shown with PC (1) and Printer (2) and Typewriter (3)
- B. Double Pedestal Desk- 36" x 72" with Return
- C. Desk Chair
- D. Guest Chairs, Qty. -2
- E. Bookshelf Units, Qty. -2

Storage

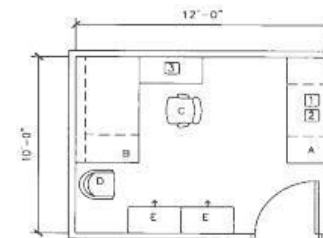
File	116"
Drawer	56"
Bookshelf	272"

*Additional filing could replace bookshelves

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment
- 3. Suggested Location of Equipment

NOTE: This layout will accommodate either an open or semi-private office also.



SPACE PROGRAM

SPACE: WORKSTATION “D”

DD.1 96 Square Feet

Plan View

- A. Work Surface 36” x 96”- shown with PC (1) and Printer (2)
- B. Drafting Table or Large Work Surface
- C. Desk Chair
- D. Rolled Drawing, Qty.-1

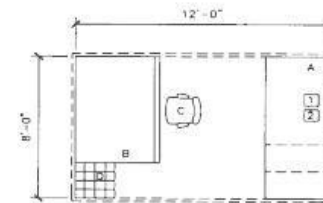
Storage

File	84”
Drawer	56”

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment

NOTE: This layout will accommodate a private office also.



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: WORKSTATION “D”

DD.2 96 Square Feet

Plan View

- A. Work Surface 30” x 96”- shown with PC (1) and Printer (2)
- B. Drafting Table or Large Work Surface
- C. Desk Chair
- D. Rolled Drawing, Qty.-1
- E. Bookshelves, Qty.-2

Storage

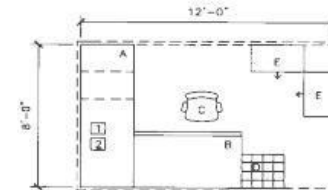
File	66”
Drawer	44”
Bookshelf	272”

*Additional filing could replace bookshelves.

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment

NOTE: This layout will accommodate either an open or semi-private office also.



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: WORKSTATION “D”

DD.3 96 Square Feet

Plan View

- A. Work Surface 24” x 144”- shown with PC (1) and Printer (2)
- B. Drafting Table or Large Work Surface
- C. Desk Chair
- D. Rolled Drawing, Qty.-1
- E. Bookshelf Unit, Qty.-1

Storage

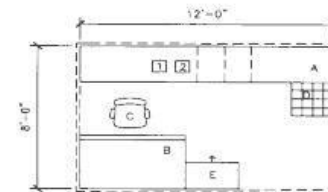
File	66”
Drawer	44”
Bookshelf	136”

*Additional filing could replace bookshelves.

Equipment

1. Suggested Location of Equipment
2. Suggested Location of Equipment

NOTE: This layout will accommodate either an open or semi-private office also.



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: WORKSTATION “E”

EE.1 80 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 30” x 60”
- C. Desk Chair
- D. Bookshelf Units, Qty.-3

Storage

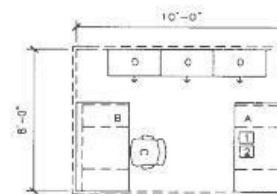
File	132”
Drawer	88”
Bookshelf	408”

*Additional filing could replace bookshelves.

Equipment

1. Suggested Location of Equipment
2. Suggested Location of Equipment

NOTE: This layout will accommodate a private office also.



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: WORKSTATION “E”

EE.2 80 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 30” x 60”
- C. Desk Chair
- D. Guest Chair, Qty.-1
- E. Bookshelf Units, Qty.-3

Storage

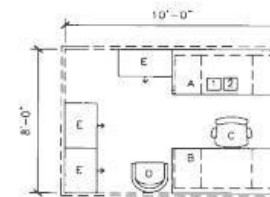
File	132”
Drawer	88”
Bookshelf	408”

*Additional filing could replace bookshelves.

Equipment

1. Suggested Location of Equipment
2. Suggested Location of Equipment

NOTE: This layout will accommodate a private office also.



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: WORKSTATION “E”

EE.3 80 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 30” x 60”
- C. Desk Chair
- D. Guest Chair, Qty.-1
- E. Bookshelf Units, Qty.-2

Storage

File	132”
Drawer	88”
Bookshelf	272”

*Additional filing could replace bookshelves.

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment

NOTE: This layout will accommodate a private office also.



ARCHITECTURAL
SPACE PROGRAM

SPACE PROGRAM

SPACE: WORKSTATION “E”

EE.4 80 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 30” x 60”
- C. Desk Chair
- D. Guest Chair, Qty.-1
- E. Bookshelf Units, Qty.-1

Storage

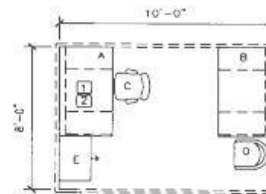
File	132”
Drawer	88”
Bookshelf	136”

*Additional filing could replace bookshelves.

Equipment

1. Suggested Location of Equipment
2. Suggested Location of Equipment

NOTE: This layout will accommodate a private office also.



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: WORKSTATION “E”

EE.5 80 Square Feet

Plan View

- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 30” x 60”
- C. Desk Chair
- D. Bookshelf Units, Qty.-3

Storage

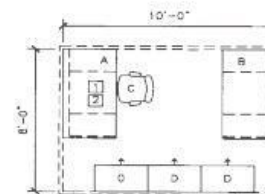
File	132”
Drawer	88”
Bookshelf	408”

*Additional filing could replace bookshelves.

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment

NOTE: This layout will accommodate a private office also.



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: WORKSTATION “F”

FF.1 48 Square Feet

Plan View

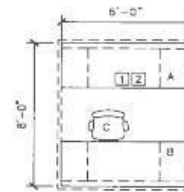
- A. Credenza- shown with PC (1) and Printer (2)
- B. Double Pedestal Desk- 33", 36" X 72"
- C. Desk Chair

Storage

File	132"
Drawer	88"

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: WORKSTATION “F”

FF.2 48 Square Feet

Plan View

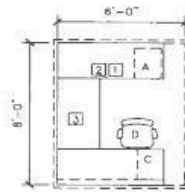
- A. Work Surface 24" x 48", shown with Typewriter (3)
- B. Desk with PC (1) and Return, shown with Printer (2)
- C. Desk Chair

Storage

- | | |
|--------|-----|
| File | 22" |
| Drawer | 44" |

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment
- 3. Suggested Location of Equipment



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: WORKSTATION "F"

FF.3 48 Square Feet

Plan View

- A. Work Surface 24" x 60", shown with PC (1) and Printer (2)
- B. Work Surface, shown with Typewriter (3)
- C. Desk 30" x 60"
- D. Desk Chair

Storage

File	66"
Drawer	44"

Equipment

- 1. Suggested Location of Equipment
- 2. Suggested Location of Equipment
- 3. Suggested Location of Equipment



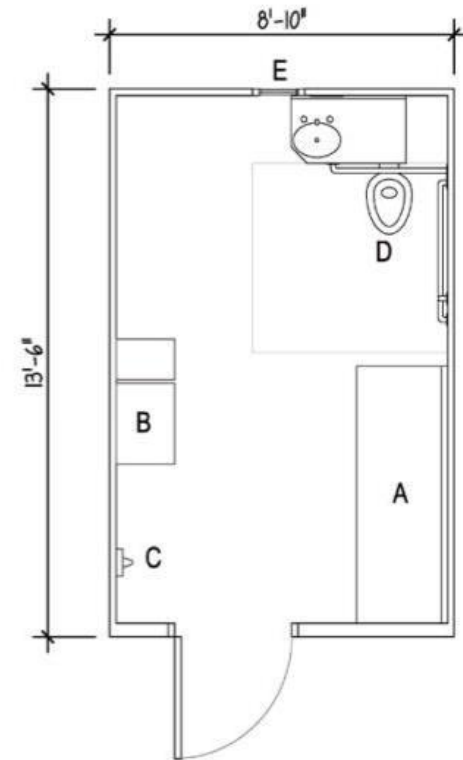
ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

SPACE: ONE MAN ACCESSIBLE CELL
120 Square Feet

Plan View

- A. Wall Mounted Bunk, Qty. -1
- B. Cell Desk With One Seat, Qty. -1
- C. Stainless Steel Robe Hook, Qty. -1
- D. Stainless Steel Toilet Sink Combo Unit, Qty. -1
- E. Window, Qty. -1



ARCHITECTURAL SPACE PROGRAM

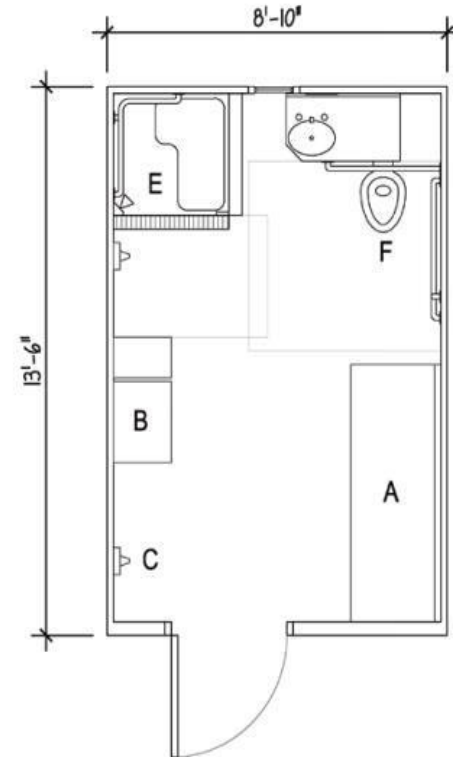
SPACE PROGRAM

SPACE: ONE MAN ACCESSIBLE CELL WITH SHOWER

120 Square Feet

Plan View

- A. Wall Mounted Bunk , Qty. -1
- B. Cell Desk With One Seat, Qty. -1
- C. Stainless Steel Robe Hook, Qty. -1
- D. Stainless Steel Robe Hook for Shower, Qty. -1
- E. Stainless Steel Accessible Shower Unit with Anti-Microbial Curtain, Qty. -1
- F. Stainless Steel Toilet Sink Combo Unit, Qty. -1
- G. Window, Qty. -1



ARCHITECTURAL SPACE PROGRAM

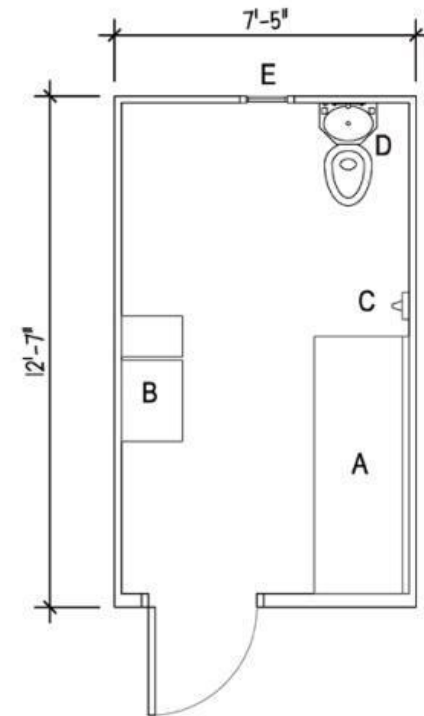
SPACE PROGRAM

SPACE: ONE MAN CELL

94 Square Feet

Plan View

- A. Wall Mounted Bunk, Qty. -1
- B. Cell Desk With One Seat, Qty. -1
- C. Stainless Steel Robe Hook , Qty. -1
- D. Stainless Steel Toilet Sink Combo Unit, Qty. -1
- E. Window, Qty. -1



ARCHITECTURAL
SPACE PROGRAM

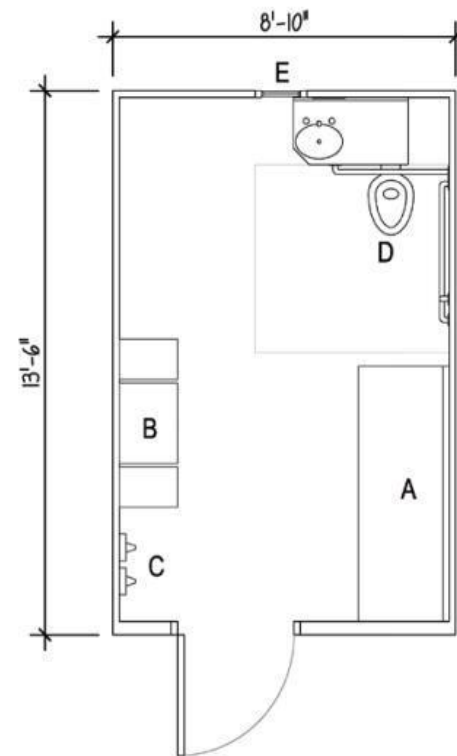
SPACE PROGRAM

SPACE: TWO MAN ACCESSIBLE CELL
120 Square Feet

ARCHITECTURAL SPACE PROGRAM

Plan View

- A. Wall Mounted Bunk, Qty. -2
- B. Cell Desk With Two Seats, Qty. -1
- C. Stainless Steel Robe Hook, Qty. -2
- D. Stainless Steel Toilet Sink Combo Unit, Qty. -1
- E. Window, Qty. -1



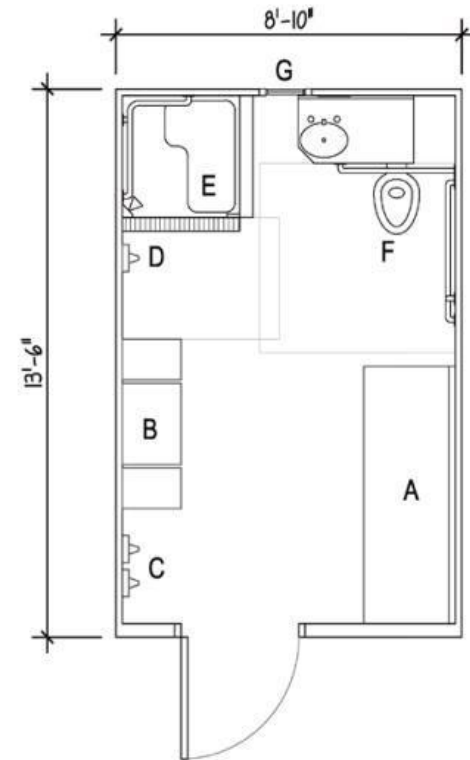
SPACE PROGRAM

SPACE: TWO MAN ACCESSIBLE CELL WITH SHOWER

120 Square Feet

Plan View

- A. Wall Mounted Bunk , Qty. -2
- B. Cell Desk With Two Seats, Qty. -1
- C. Stainless Steel Robe Hook, Qty. -2
- D. Stainless Steel Robe Hook for Shower, Qty. -1
- E. Stainless Steel Accessible Shower Unit with Anti-Microbial Curtain, Qty. -1
- F. Stainless Steel Toilet Sink Combo Unit, Qty. -1
- G. Window, Qty. -1



ARCHITECTURAL
SPACE PROGRAM

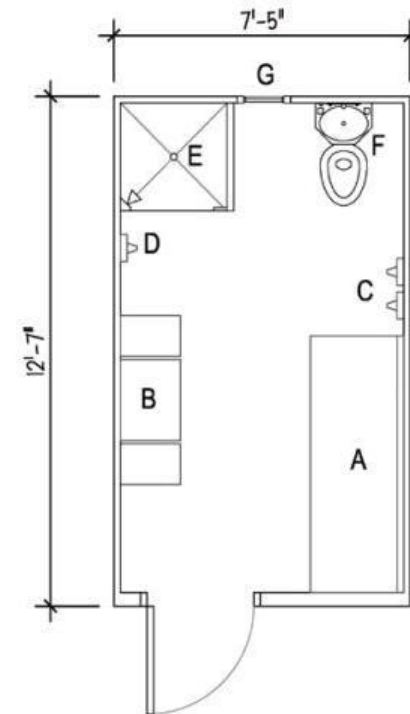
SPACE PROGRAM

SPACE: TWO MAN CELL WITH SHOWER

94 Square Feet

Plan View

- A. Wall Mounted Bunk, Qty. -2
- B. Cell Desk With Two Seats, Qty. -1
- C. Stainless Steel Robe Hook, Qty. -2
- D. Stainless Steel Robe Hook for Shower, Qty. -1
- E. Stainless Steel Shower Unit with Anti-Microbial Curtain, Qty. -1
- F. Stainless Steel Toilet Sink Combo Unit, Qty. -1
- G. Window, Qty. -1



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

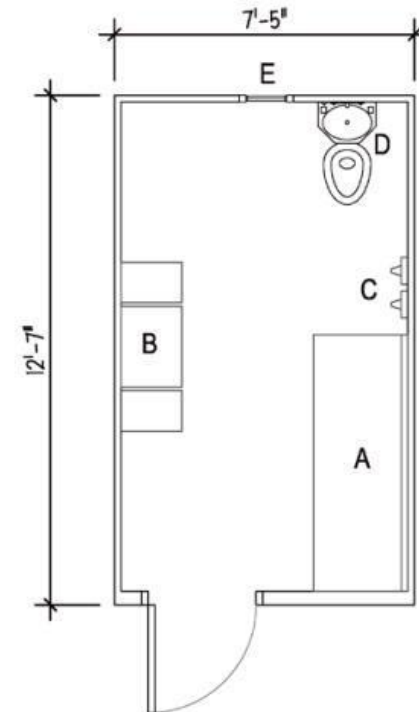
SPACE: TWO MAN CELL

94 Square Feet

Plan View

- A. Wall Mounted Bunk, Qty. -2
- B. Cell Desk With Two Seats, Qty. -1
- C. Stainless Steel Robe Hook , Qty. -2
- D. Stainless Steel Toilet Sink Combo Unit, Qty. -1
- E. Window, Qty. -1

Z



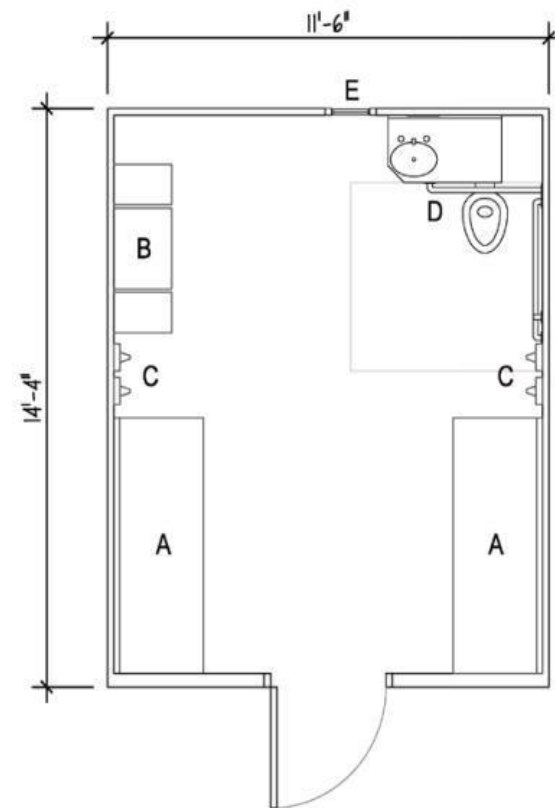
ARCHITECTURAL
SPACE PROGRAM

SPACE PROGRAM

SPACE: FOUR MAN ACCESSIBLE CELL
165 Square Feet

Plan View

- A. Wall Mounted Bunk, Qty. -4
- B. Cell Desk With Two Seats, Qty. -1
- C. Stainless Steel Robe Hook, Qty. -4
- D. Stainless Steel Toilet Sink Combo Unit, Qty. -1
- E. Window, Qty. -1



ARCHITECTURAL SPACE PROGRAM

SPACE PROGRAM

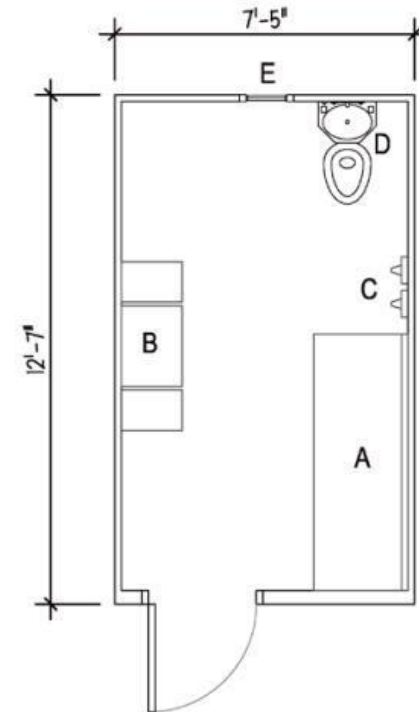
SPACE: TWO MAN CELL

94 Square Feet

Plan View

- A. Wall Mounted Bunk, Qty. -2
- B. Cell Desk With Two Seats, Qty. -1
- C. Stainless Steel Robe Hook , Qty. -2
- D. Stainless Steel Toilet Sink Combo Unit, Qty. -1
- E. Window, Qty. -1

z



ARCHITECTURAL SPACE PROGRAM

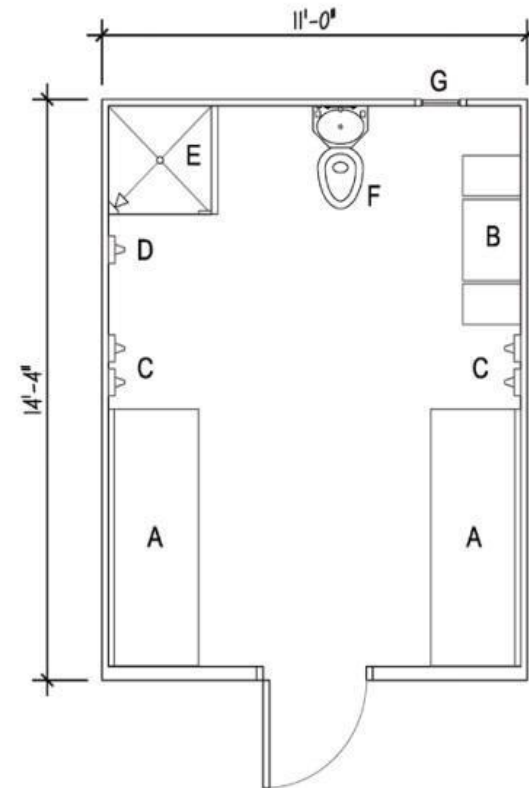
SPACE PROGRAM

SPACE: FOUR MAN CELL WITH SHOWER

158 Square Feet

Plan View

- A. Wall Mounted Bunk, Qty. -4
- B. Cell Desk With Two Seats, Qty. -1
- C. Stainless Steel Robe Hook, Qty. -4
- D. Stainless Steel Robe Hook for Shower, Qty. -1
- E. Stainless Steel Shower Unit with Anti-Microbial Curtain, Qty. -1
- F. Stainless Steel Toilet Sink Combo Unit, Qty. -1
- G. Window, Qty. -1



ARCHITECTURAL SPACE PROGRAM

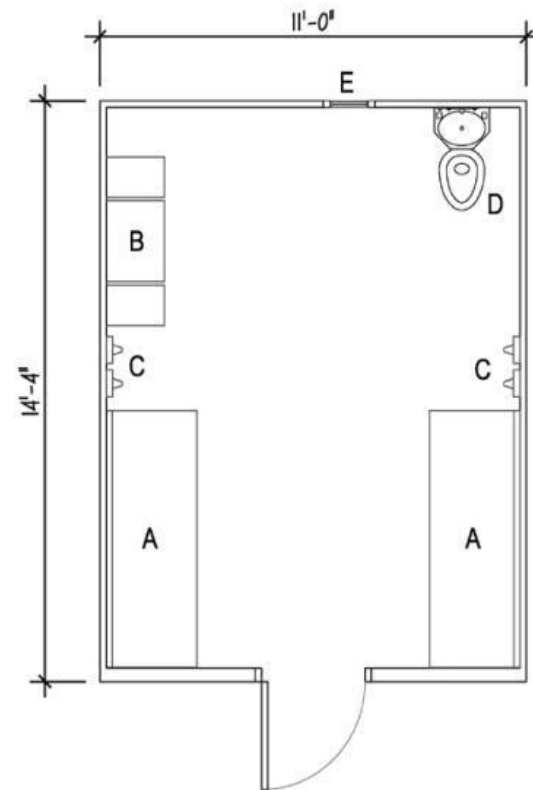
SPACE PROGRAM

SPACE: FOUR MAN CELL

158 Square Feet

Plan View

- A. Wall Mounted Bunk, Qty. -4
- B. Cell Desk With Two Seats, Qty. -1
- C. Stainless Steel Robe Hook , Qty. -4
- D. Stainless Steel Toilet Sink Combo Unit, Qty. -1
- E. Window, Qty. -1



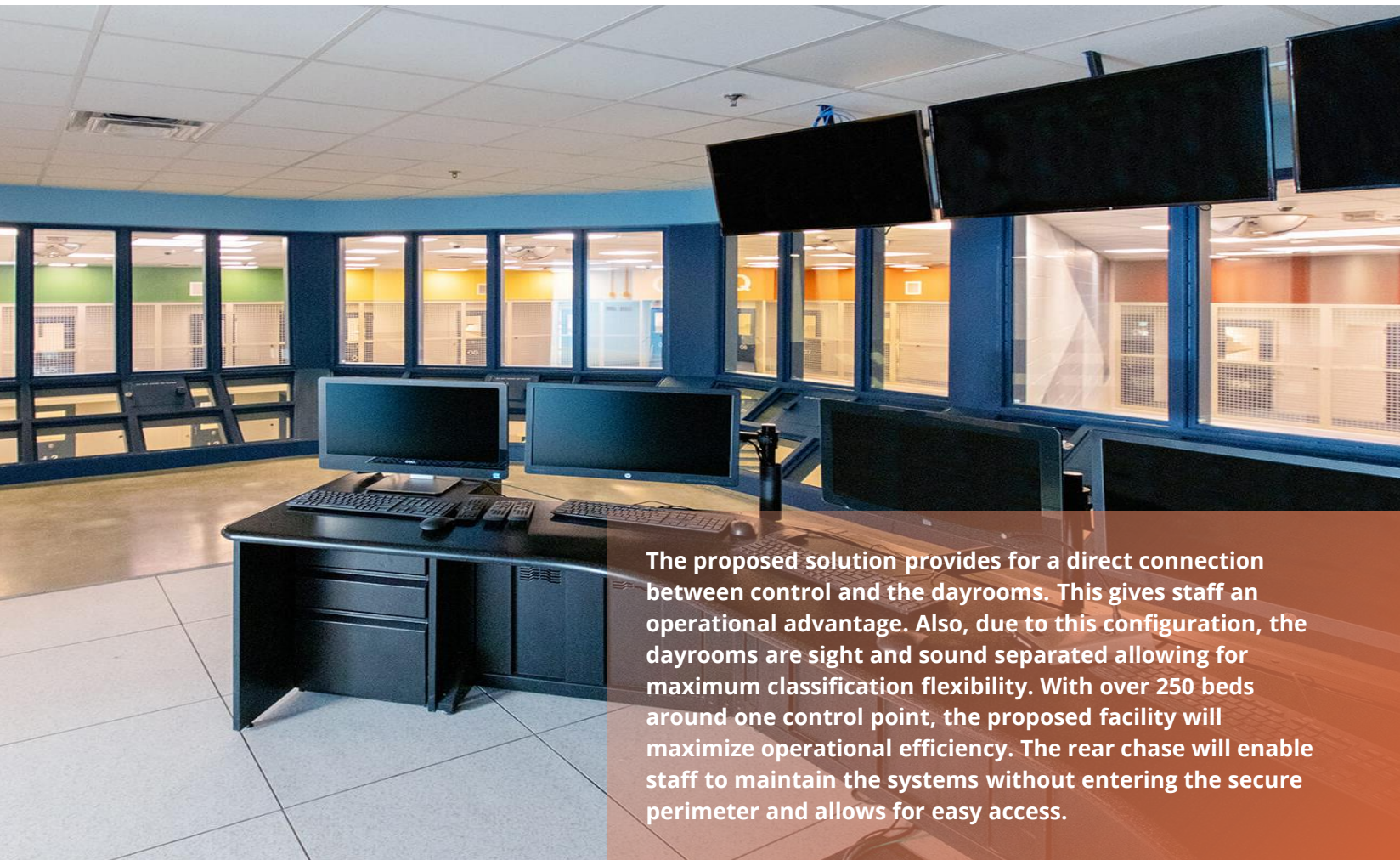
ARCHITECTURAL
SPACE PROGRAM

PODULAR DESIGN

05

NOW





The proposed solution provides for a direct connection between control and the dayrooms. This gives staff an operational advantage. Also, due to this configuration, the dayrooms are sight and sound separated allowing for maximum classification flexibility. With over 250 beds around one control point, the proposed facility will maximize operational efficiency. The rear chase will enable staff to maintain the systems without entering the secure perimeter and allows for easy access.

FUTURE



DAYROOM



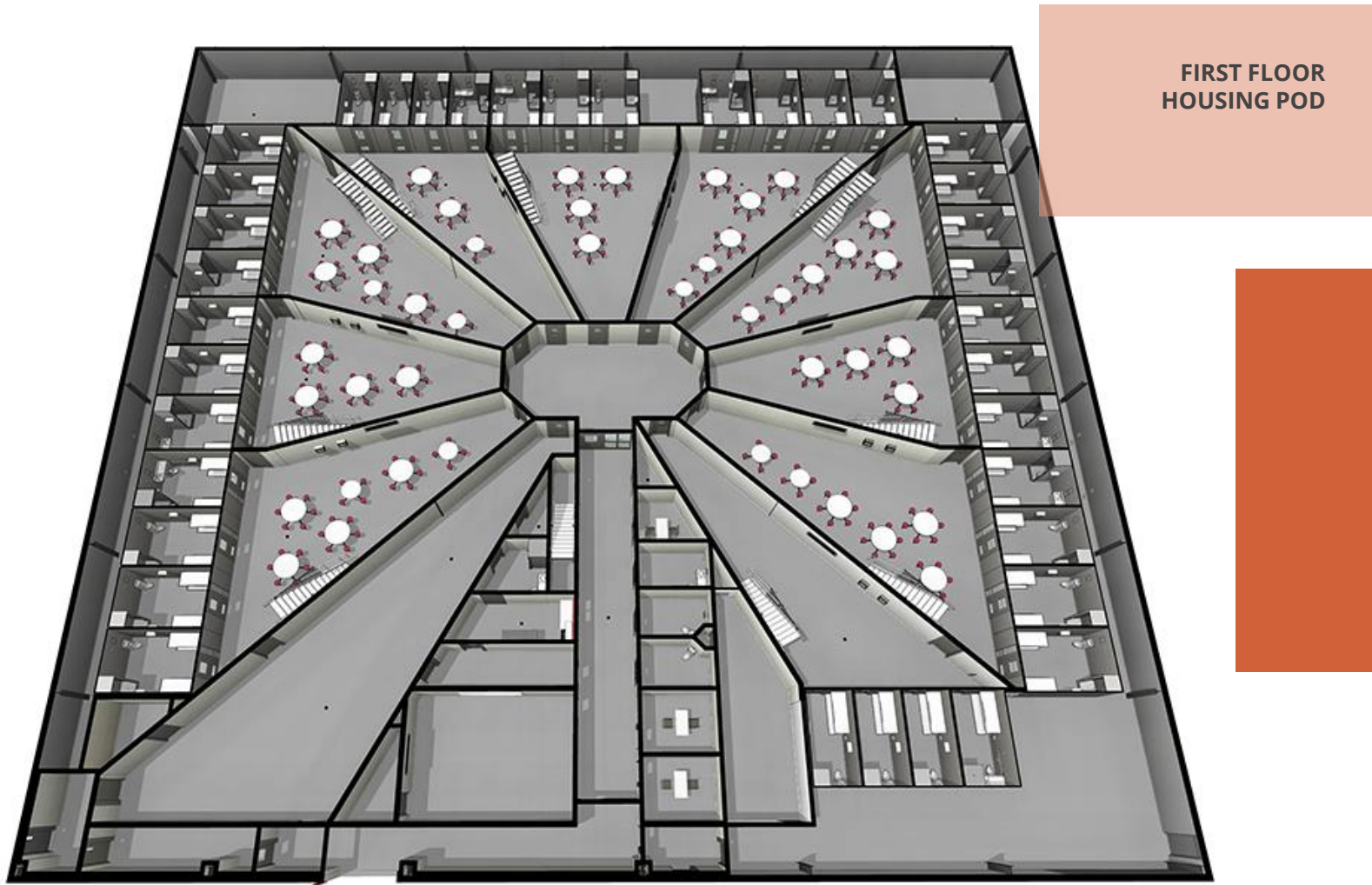
CONTROL ROOM

OPERATIONS

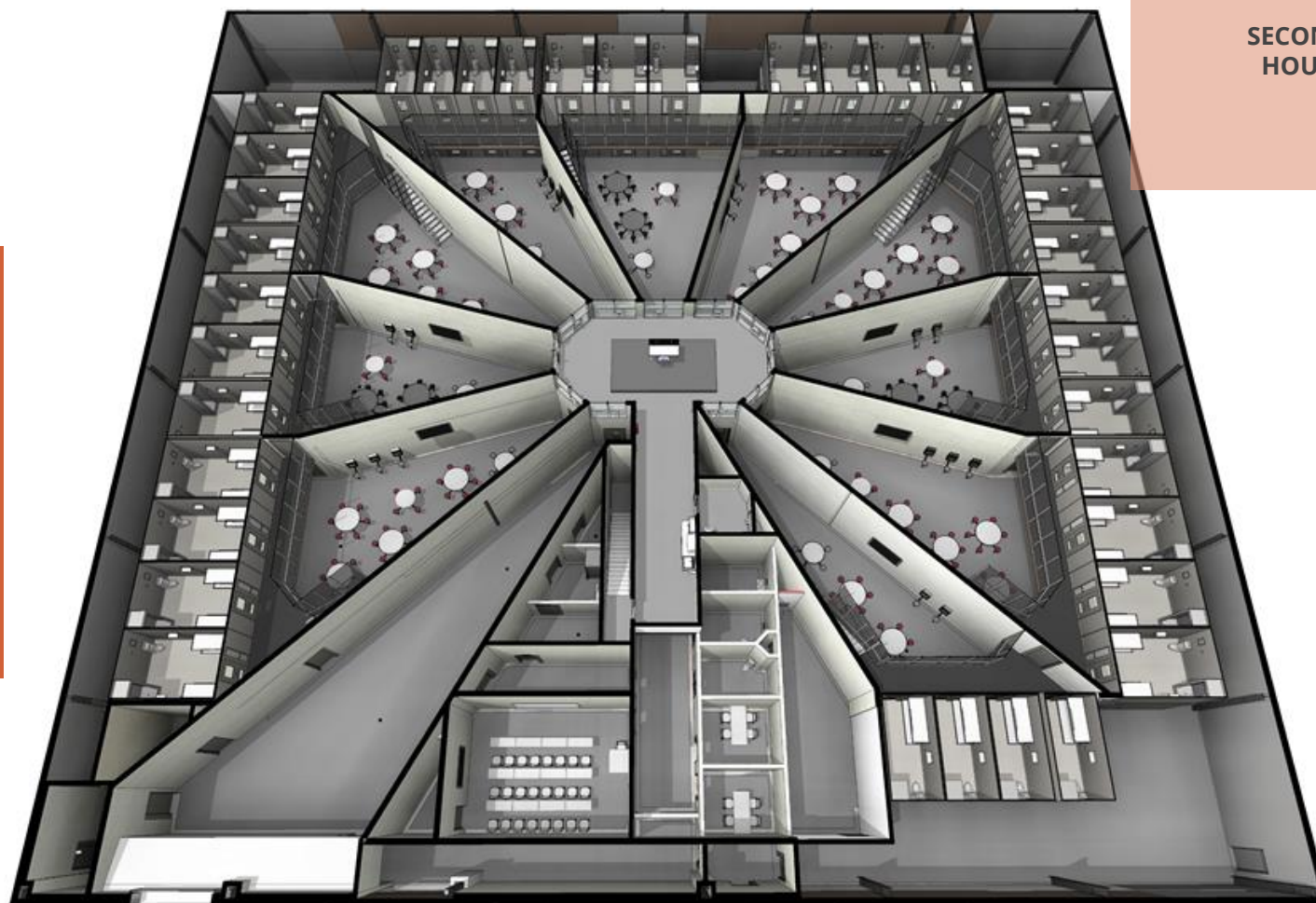


OPERATIONS

PODULAR DESIGN



Classrooms and other support spaces are shown along the pod corridor



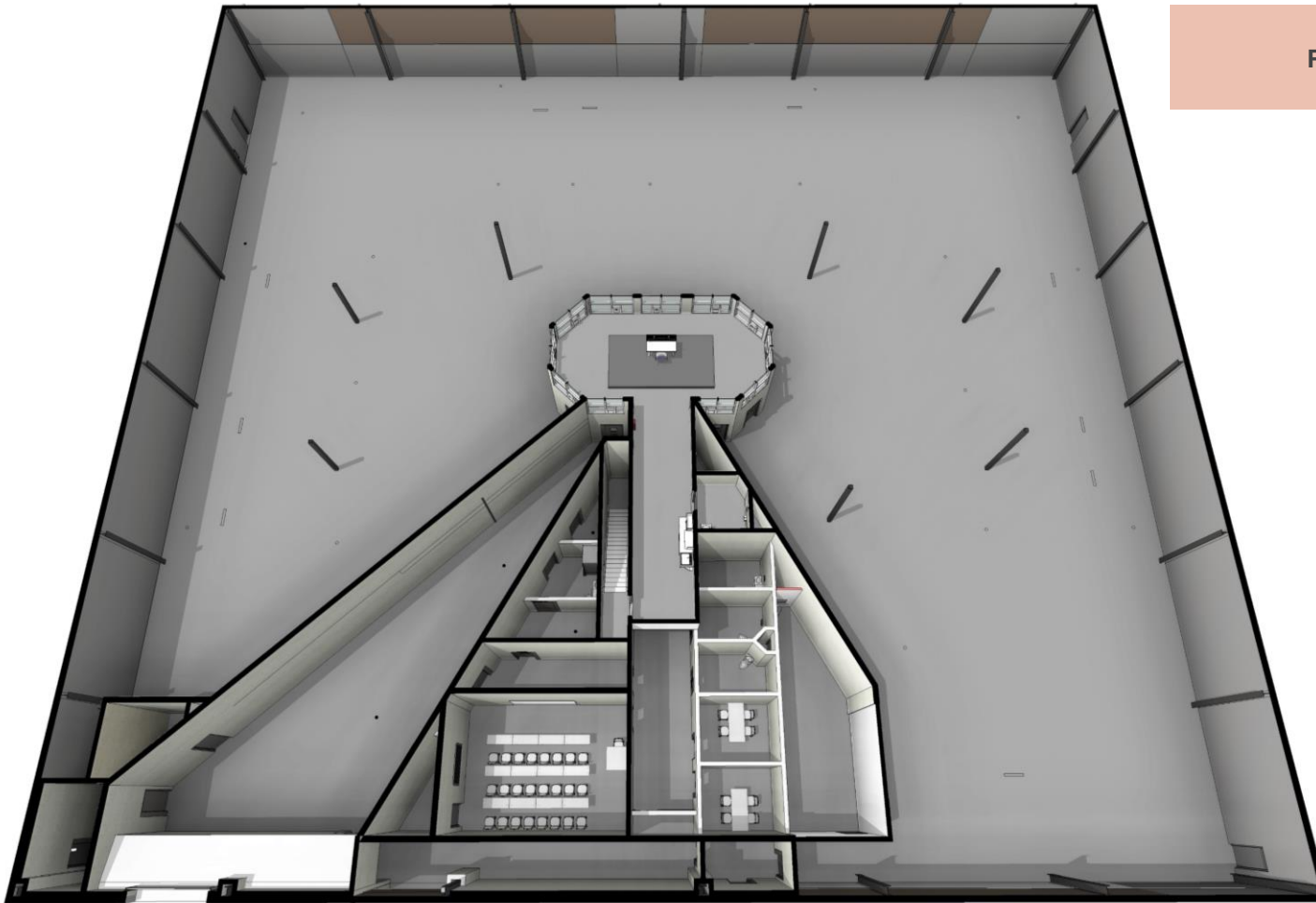
SECOND FLOOR
HOUSING POD

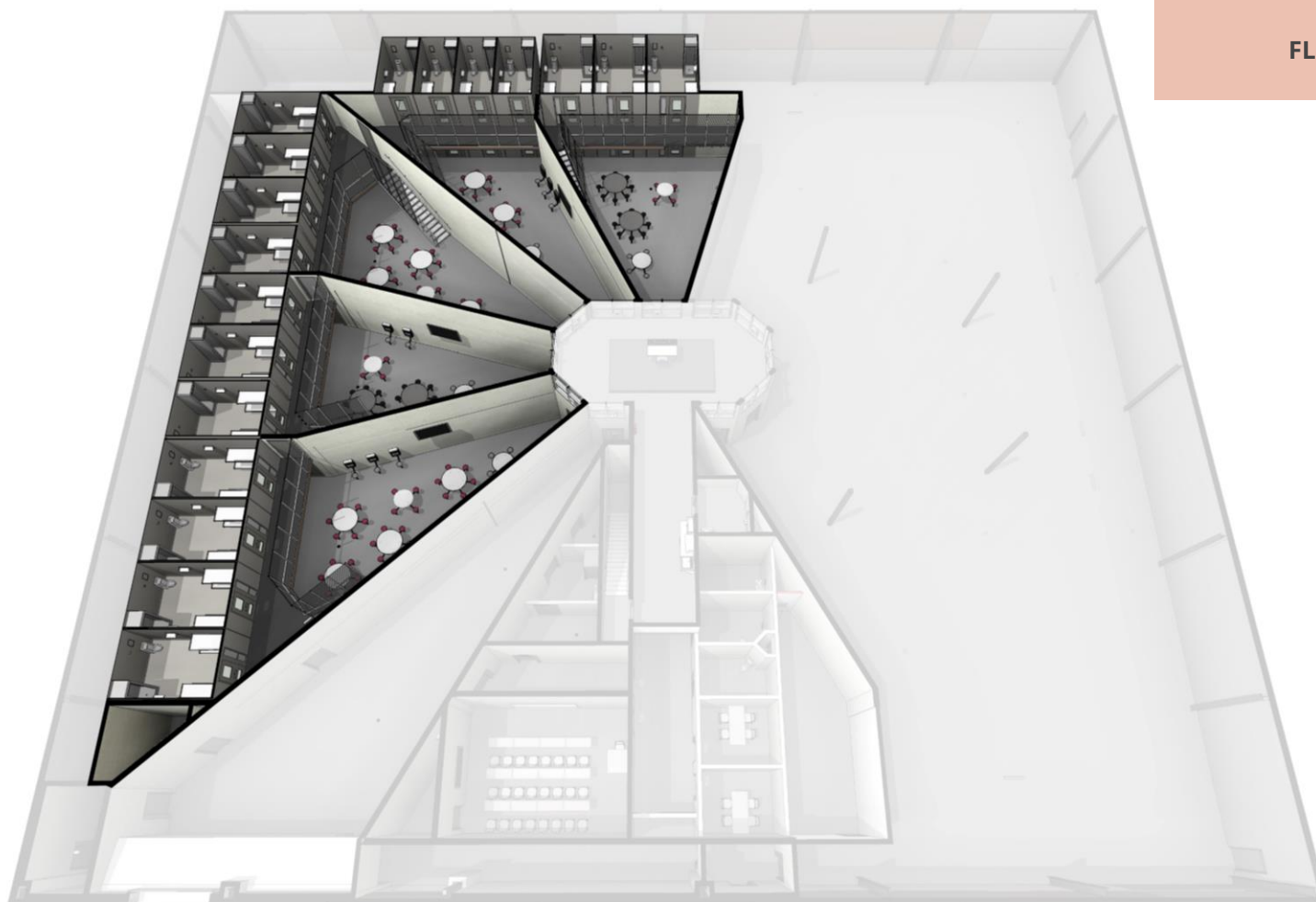
PODULAR DESIGN

The staff level allows for views into the dayrooms and support spaces along the pod corridor

PODULAR DESIGN

FLEXIBILITY

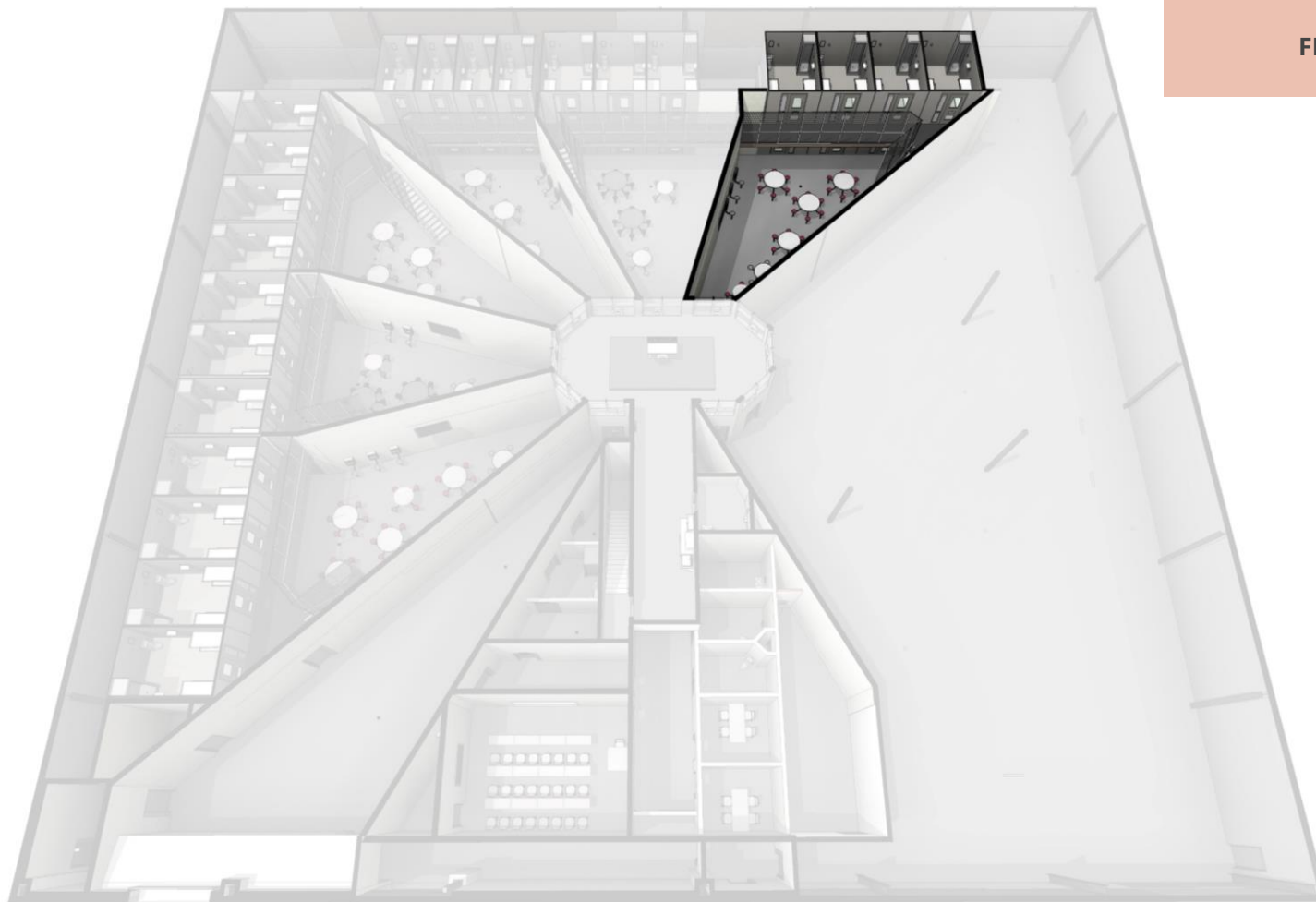




FLEXIBILITY

MODULAR DESIGN

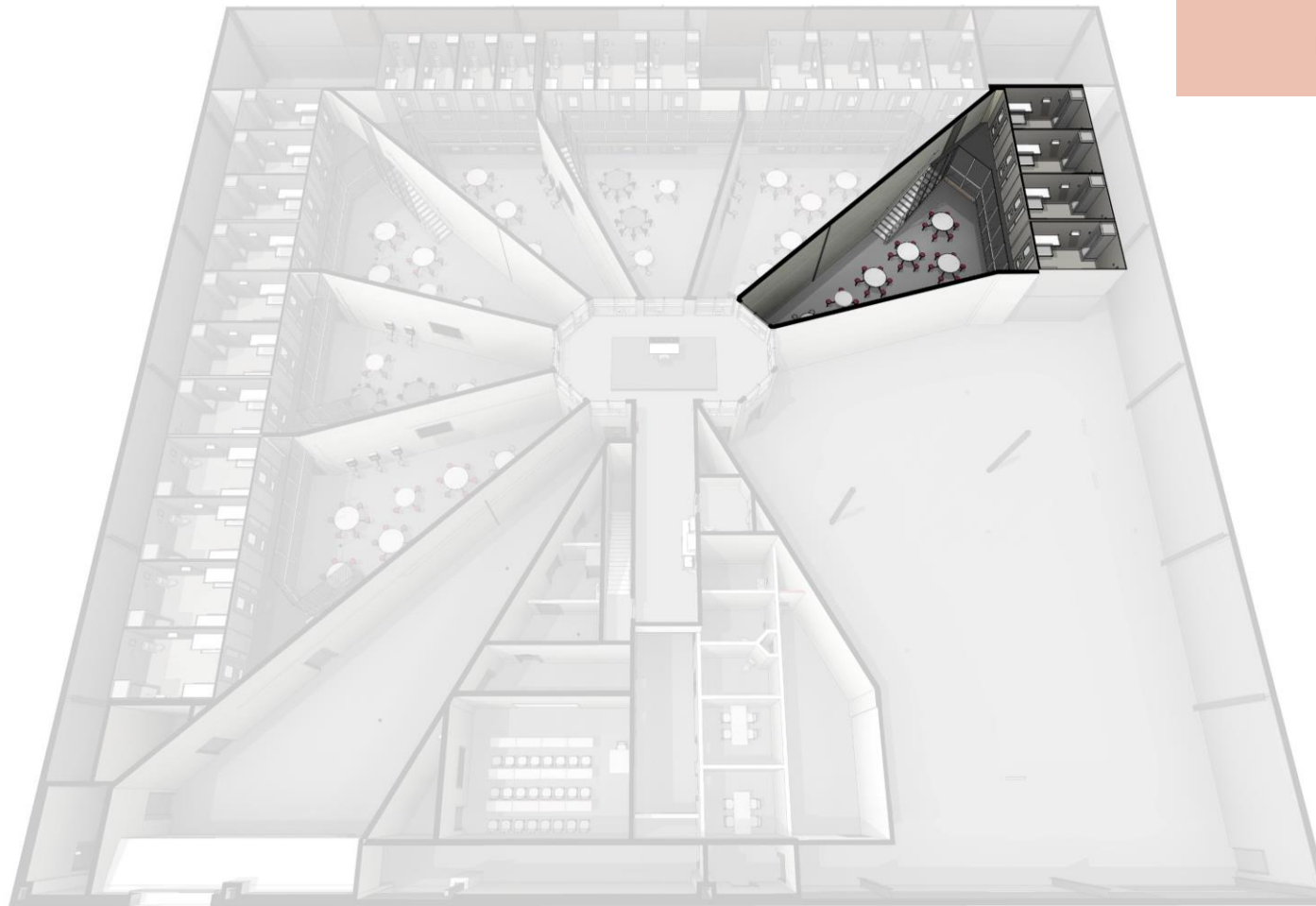
A certain number of beds can be designed as base bid, leaving an area for future expansion.



FLEXIBILITY

PODULAR DESIGN

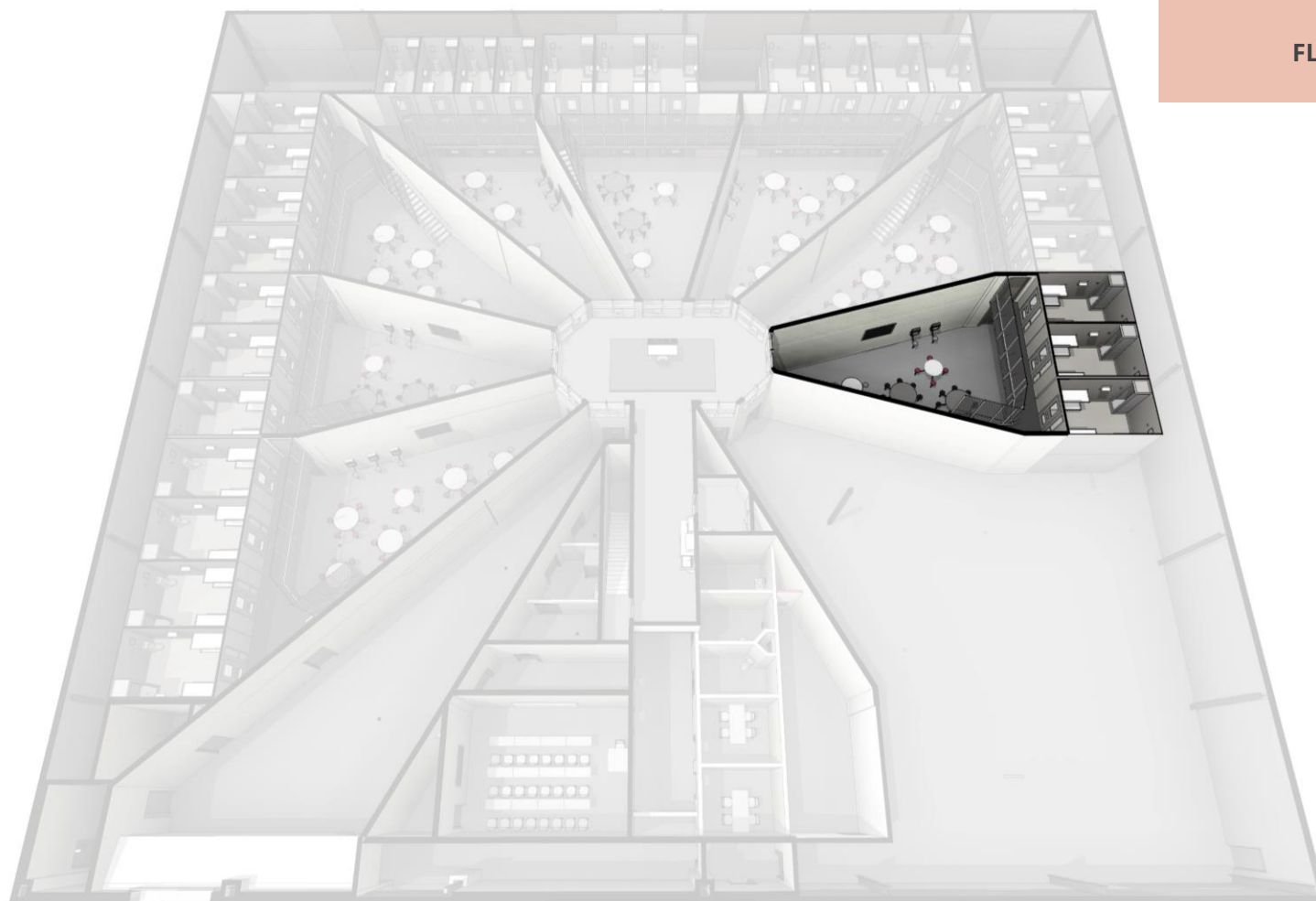
Each additional housing block can be bid as an alternate, providing the county with budget flexibility.



FLEXIBILITY

MODULAR DESIGN

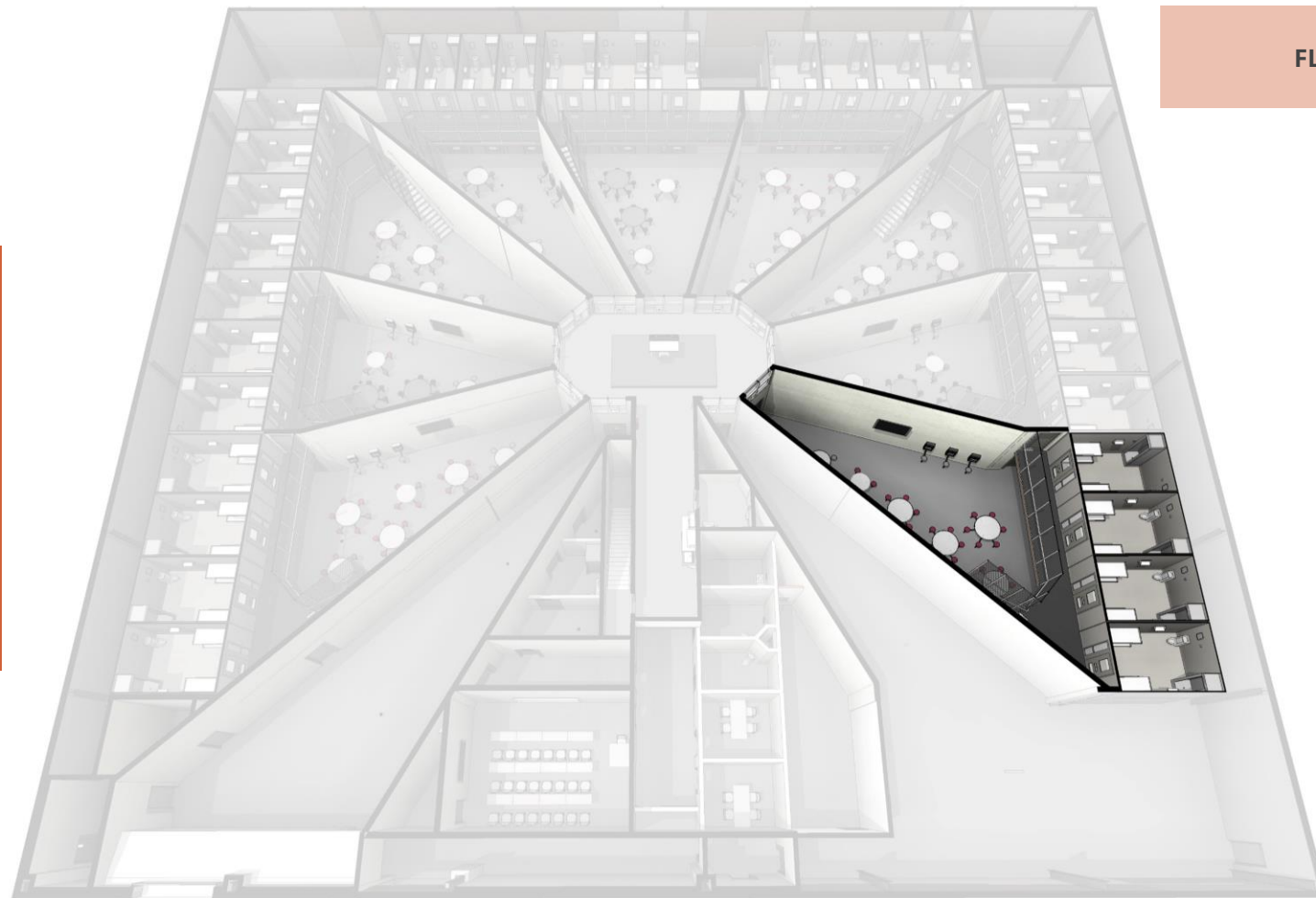
Each additional housing block can be bid as an alternate, providing the county with budget flexibility.



FLEXIBILITY

PODULAR DESIGN

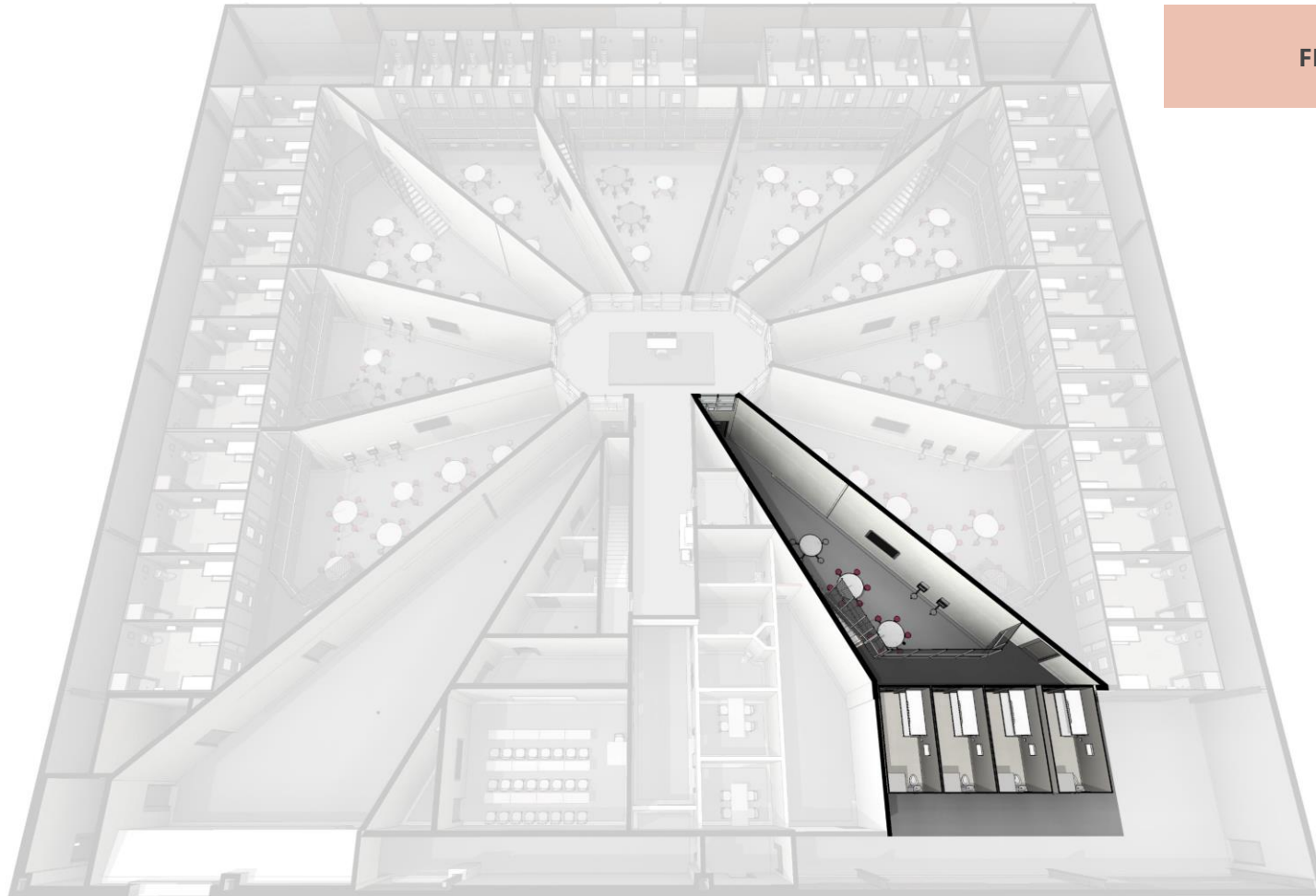
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FLEXIBILITY

MODULAR DESIGN

Each additional housing block can be bid as an alternate, providing the county with budget flexibility.

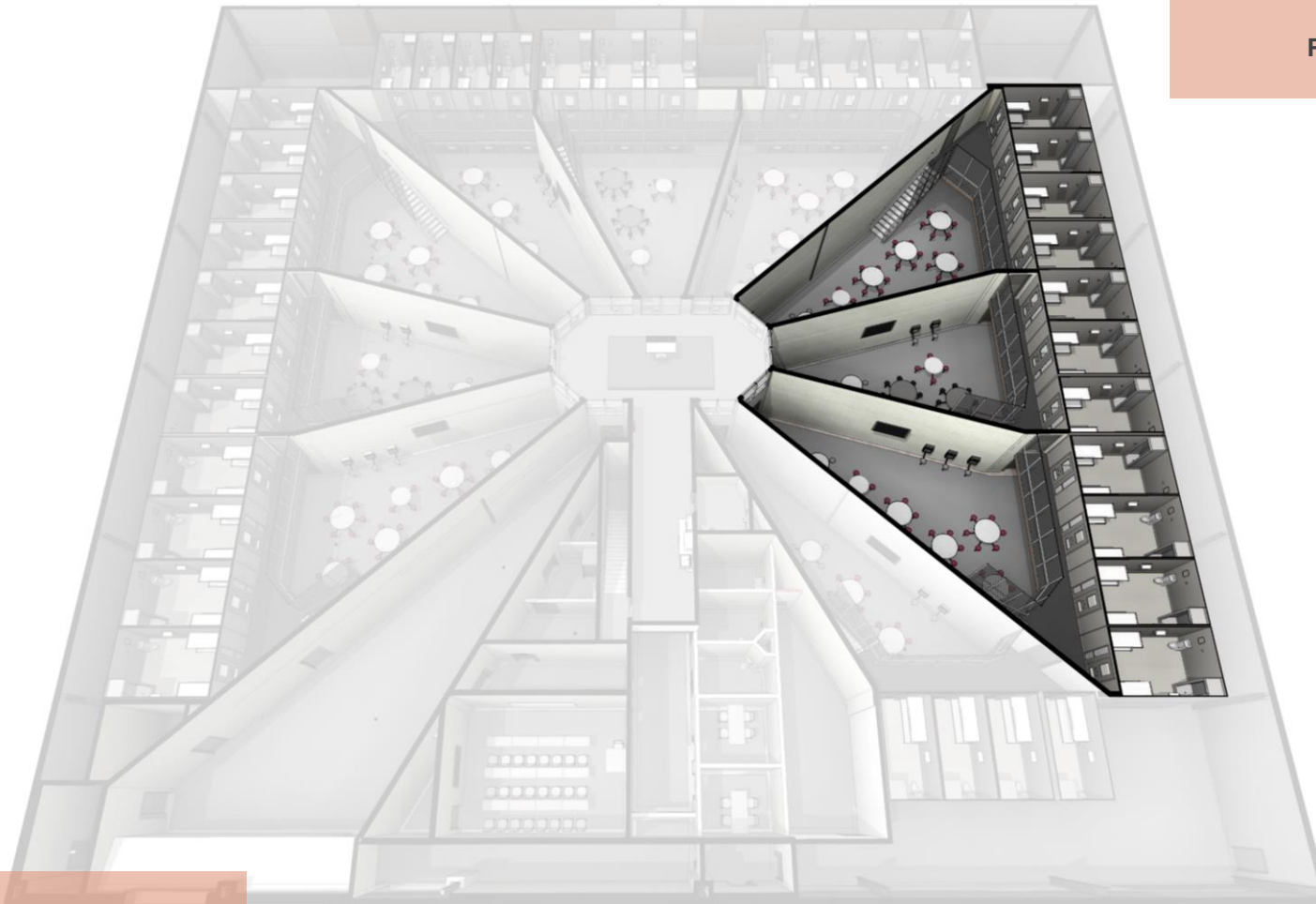


FLEXIBILITY

MODULAR DESIGN

PODULAR DESIGN

FLEXIBILITY

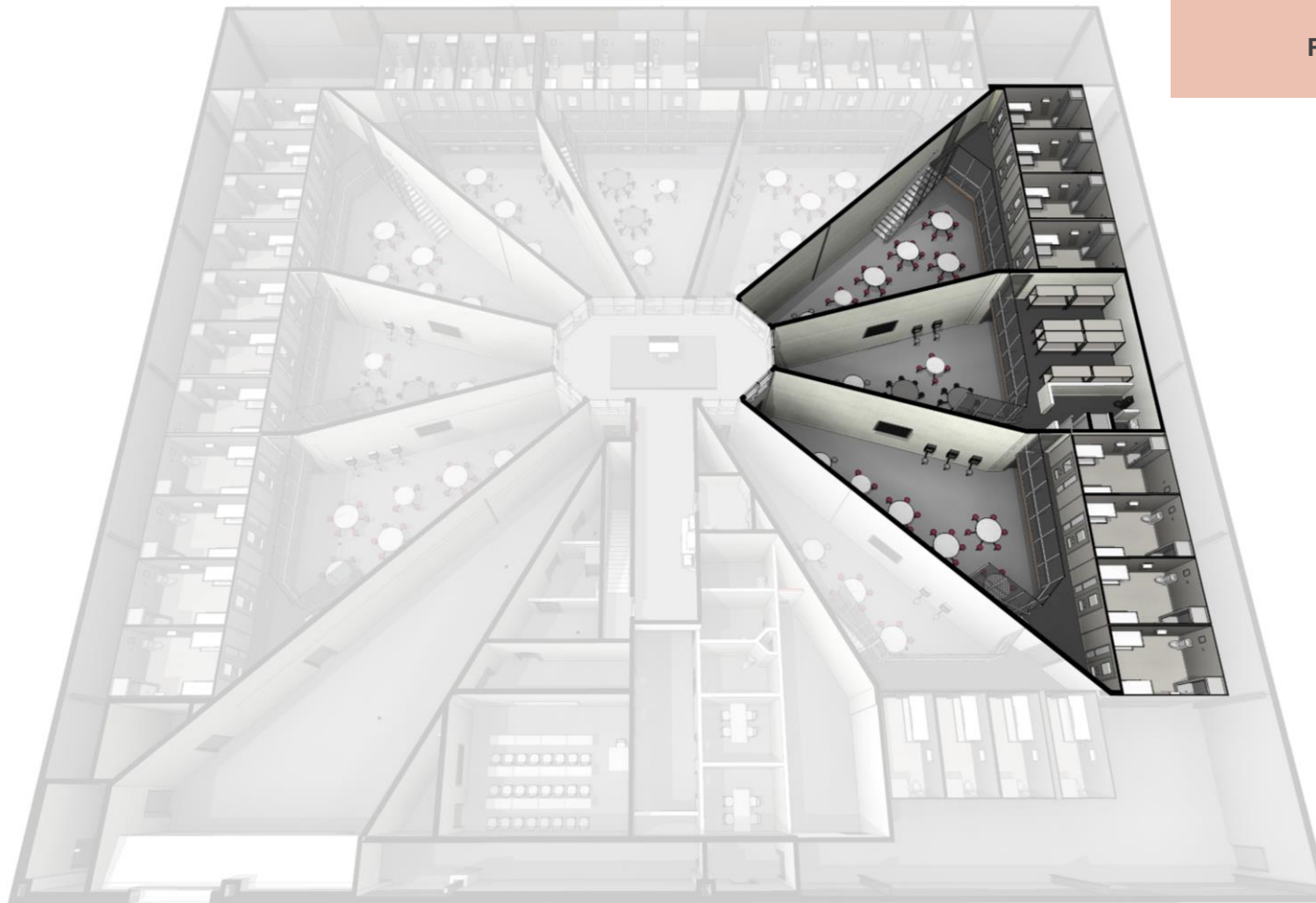


ALL CELLS

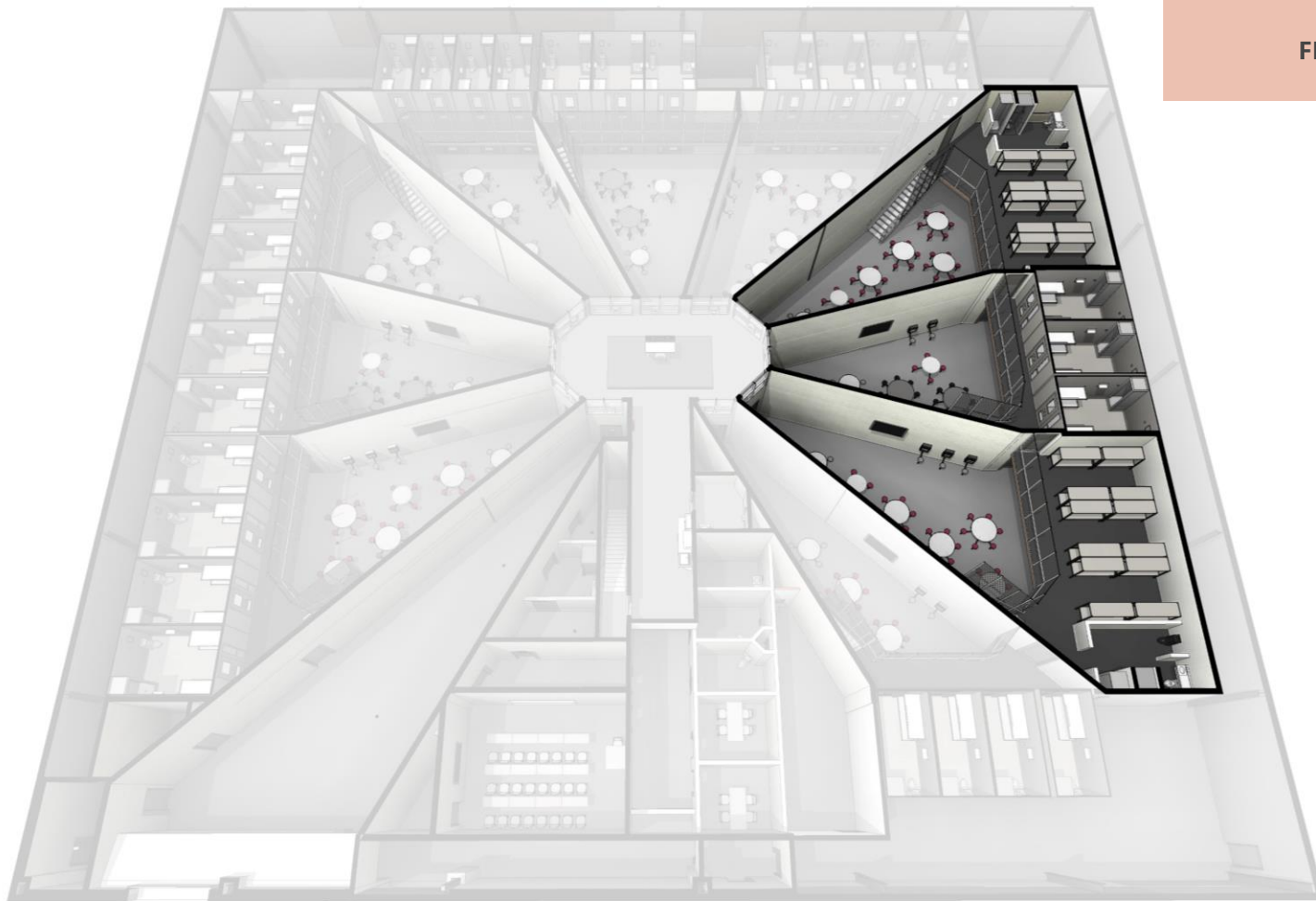
Housing blocks can be designed as cells (2-person or 4-person)

FLEXIBILITY

PODULAR DESIGN



Or blocks can be designed as dormitories



FLEXIBILITY

MODULAR DESIGN

More dormitory examples

FLEXIBILITY

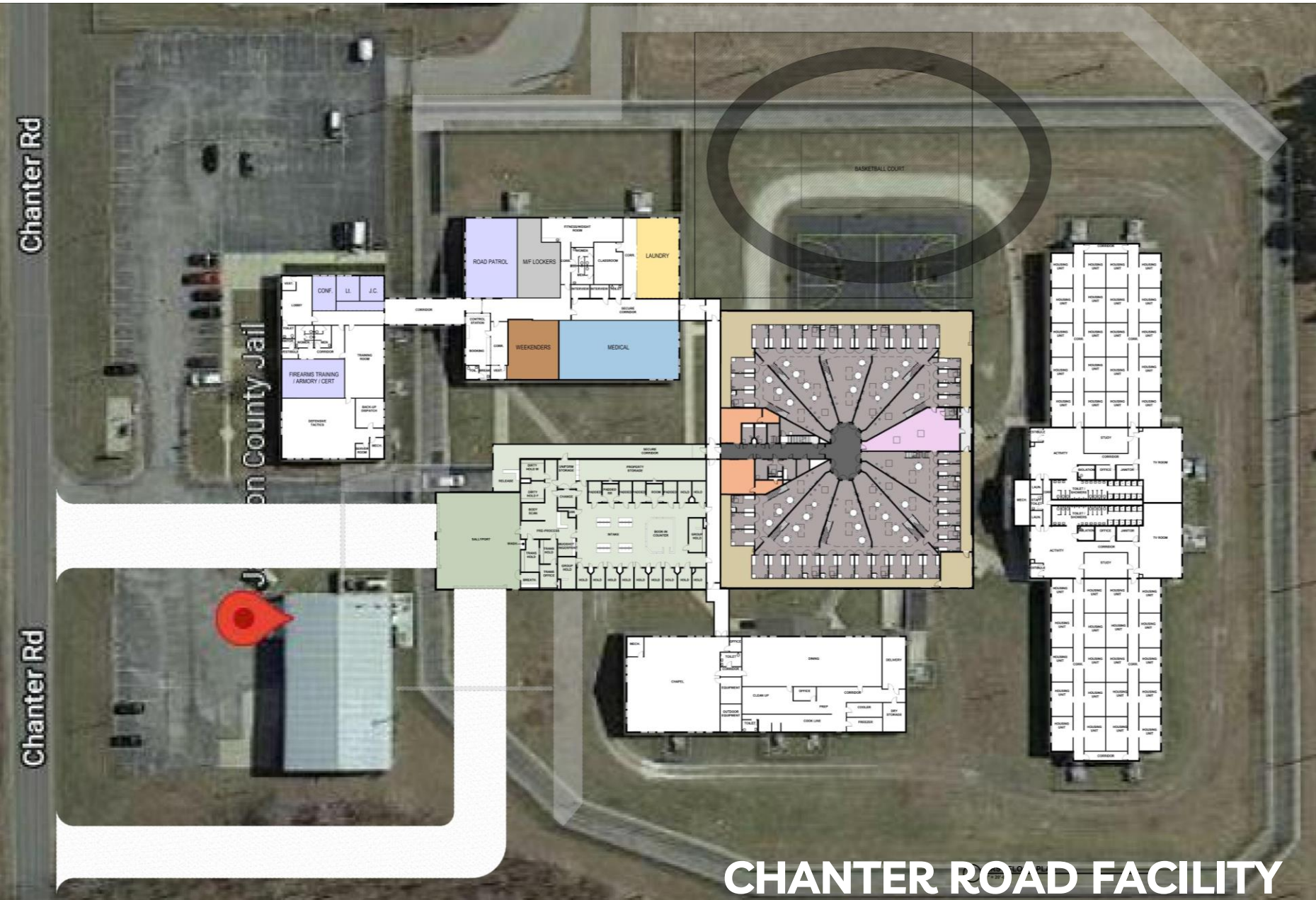


**SHELLED FOR
FUTURE EXPANSION**

MODULAR DESIGN

CONCEPTUAL DESIGN

06



CONCEPTUAL DESIGN

CHANTER ROAD FACILITY

GRANGER
ADVANCE THE ART OF BUILDING

RQAW
ARCHITECTURE

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

General Overview:

This narrative describes the design criteria for the electrical systems serving the facility. Final design for installation of new electrical services shall be coordinated with the HVAC, Plumbing, Security and Telecommunications designs for all new construction and renovations to existing jail facility.

BUILDING CODE INFORMATION:

The Electrical systems shall comply with all local and state building codes, NFPA and ADA requirements. The following codes and standards shall be applied:

- a. 2015 - Michigan Building Code
 - a. 2012 - International Fire Code and NFPA
- b. 2017 - NFPA 70 - National Electrical Code
- c. Americans with Disabilities Act 1994
- d. 2015 - Michigan Energy Code
- e. ASHRAE 90.1 - Energy Standards for Buildings Except Low-Rise Residential Buildings (2019)
- f. 2010 - ASME A17.1 Safety Code for Elevators and Escalators

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

ASSUMPTIONS AND OPEN ISSUES:

The following assumptions have been made to establish design needs:

- 1) A new generator will be sized to provide full emergency power to new jail pod addition.
- 2) The owner will provide rough in locations and types for security monitoring and access control to be provided power and communication wiring.
- 3) The owner shall provide location, type, and quantity for computer data ports. Terminations within server racks is assumed by the owner's contractor.

NORMAL (UTILITY) POWER SERVICE:

Utility power will be supplied to the new facility by Consumers Energy. Consumers Energy will provide a single feed to the site. Consumers Energy will provide one, outdoor, pad mounted transformer on grade to outside of the new MEP room. The new power feed will serve this transformer. Service to the facility will be provided underground from the secondary of the transformer in concrete encased duct bank. The secondary voltage will be 480/277-Volt, 3 Φ . Grounding will be provided at the transformer per Consumers Energy requirements.

CONCEPTUAL DESIGN

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

NORMAL (UTILITY) POWER DISTRIBUTION:

The service entrance equipment will be switchboard construction. The 480/277-Volt, 3 Φ utility transformer will extended 1,800Amp service to main switchboard through (8) 4-inch underground conduits. Sub-Metering will not be incorporated into the main switchboard. Transient surge protection means shall be included in the service entrance.

The service entrance will be as follows:

- Switchboard construction
- 1,800-Amp at 480/277-Volt
- Copper bussing
- Main breakers will be draw-out type rated 1,800-Amp. Breakers will be 100% rated, electronic type with LSIG field adjustability.
- Power quality meter in a separate compartment within the main section.
- Distribution (Feeder) breakers will be draw-out type, 100% rated, electronic type with LSIG field adjustability. These breakers will vary in size from approximately 200-Amp to 800-Amp.
- A surge protection device (SPD) will be provided for each main in a separate compartment.
- Acceptable manufacturers include Eaton, GE, Siemens, and Square D.

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

NORMAL (UTILITY) POWER DISTRIBUTION:

Normal power distribution throughout the facility at 480-Volt. There will be one main electrical room along with several small electrical rooms. Utilize branch feeds to local distribution panels and to minimize wiring installation costs and provide heightened serviceability. Higher demand loads, particularly motors over 1 HP, shall utilize 480V 3 Φ . Separate feeders will be provided to serve lighting loads at 277-volt and to serve step-down transformers for 120-volt loads. 480-volt feeders will also be provided to each area containing mechanical equipment.

EMERGENCY POWER SYSTEMS:

This site will utilize emergency power generation. Emergency power shall be provided through a diesel generator rated at 300-kW at 480/277-Volt. The generator shall consist of the following:

- Outdoor, sound-attenuated enclosure with standard finish.
- Listed and labeled as a Level 1 system.
- Tier II rated for emergency standby use only.
- Sub-base fuel tank supplying a minimum of 48-hours of fuel at full capacity. A plan may need to be in place for refueling of the tank for up to 96-hours.
- Single generator breaker. Breaker shall be 100% rated, electronic-trip type with field adjustable LSI settings and ground-fault indication.

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

- Integral load center serving all auxiliary components (heaters, lights, chargers, etc).
- Listed and labeled in compliance with UL 2200 and comply with NFPA 70, 99, 101, & 110.
- Acceptable manufacturers include Caterpillar, Cummins, and Kohler.

The normal branch and optional stand-by branch shall have load shedding capabilities. A manual transfer switch will be provided to allow for a second generator to be connected to the building in the event of a failure of the on-site generator.

A dual-purpose generator docking station (GDS) shall be provided adjacent to the generator. This station shall allow Camlock connection of a load bank for testing and shall also allow for connection of a portable generator. The GDS shall be of aluminum construction with a breaker kirk-key interlocked with the generator main breaker.

The incoming generator service shall route from the generator through the GDS and into the main electrical room. The incoming shall route underground within a concrete encased ductbank maintaining clearance from the incoming utility feeders. The incoming feed will route to the main emergency distribution which will be of switchboard construction.

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

The emergency distribution switchboard will serve multiple automatic transfer switches. The automatic transfer switches will be contactor style, closed-transition, bypass-isolation type similar to ASCO 7000 series. The following transfer switches are anticipated at this time:

- ATS-EM Emergency Branch. The following loads are to be connected to the Emergency branch of the standby power distribution system:
 - Code required egress, cell block lighting, and exit lights
 - Building fire alarm and security systems.
- ATS-OP – Optional Standby. The following loads are to connect to the Legally required Stand-by Branch of the power distribution system:
 - Building hot water circulating pumps.
 - General Lighting
 - Building sump pumps.
 - Telecommunications computer room units and condensing units.
 - Telecommunications room duplex outlets.
 - One elevator (if applicable)
 - Large kitchen freezers, refrigerators, and medical refrigerators (if applicable)

CONCEPTUAL DESIGN

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

- ATS-LR – Legally Required. The following loads are to connect to the Legally required Stand-by Branch of the power distribution system:
 - HVAC exhaust system in dayrooms.
 - Radio System (if applicable)
 - Voice of IP (if applicable)
 - Muffin Monster (if applicable)
- ATS-FP-1– Fire Pump (if applicable). The fire pump controller shall be provided with an integral transfer switch.

The emergency power system is intended to serve loads such as receptacles, security, lighting, mechanical equipment associated with heating, fire pump (if applicable), and elevator. The generator is not intended to fully support the entire facility. Cooling throughout the facility is currently not intended to be powered by the emergency system.

Areas served emergency power include:

- a. Complete Jail Addition

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

UNINTERRUPTIBLE POWER (IF APPLICABLE):

Electrical power design shall include a centralized battery and inverter temporary power supply to provide emergency power carryover for security systems, fire alarm systems, computer and telephone communication systems, and necessary control tower outlets as required by applicable codes and owner requirements.

LIGHTING SYSTEMS:

Exterior lighting shall consist of the following:

- Shall be LED type.
- General area and parking lot lighting will consist of pole mounted fixture. Fixture pole type, height and finish shall be finalized during submittal process.
- Wall mounted fixtures will be provided for security and to meet egress lighting requirements.
- Control of exterior lighting will be a combination of photocell and time-based control.
- Light pollution reduction and light trespass reduction strategies will be included in exterior lighting design. Lighting selections shall have 0% uplight and minimal backlight.

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

In general, the interior lighting systems provided for the facility shall be as follows:

- Lighting throughout the facility shall be suitable for an institutional high abuse environment. Inmate shall have vandal resistant lighting consisting of cold rolled steel and polycarbonate lensing with a minimum of IP64 damp location listing.
- Source: LED.
- General light sources shall have a color temperature of 3500 deg. K and a color rendering index (CRI) of 80 or above.
- Drivers: LED fixtures shall utilize 0-10V dimming drivers.
- Manufacturers: A minimum of three (3) acceptable manufacturers shall be specified for each fixture type. Where there is not feasible, allowance pricing shall be provided.
- Lighting shall be connected at 277-Volt.

Exit lights shall be LED type and connected to the standby emergency system.

Lighting fixtures for offices, conference rooms, and common areas shall utilize LED lamps in surface mounted or ceiling grid mounted fixtures installed in the ceiling and using 277V fixtures. All Cell Block Lighting shall be provided with emergency power. Lighting fixtures and intensity shall generally follow the schedule below:

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

Room Type	Lamp Type	Lighting Intensity (Foot Candles)	Lighting Power Density (Watts / sqft)	Comments
Bedroom / Dorm Room	LED	20-30	0.38	
Cafeteria- Eating	LED	20-30	0.65	
Classroom - General	LED	30-50	1.24	
Conference Room	LED	30-50	1.23	Time Clock / Occ Sensor
Corridor	LED	5-10	0.66	
Detention – Cells	LED	20-30	0.95	
Detention – Day Rooms	LED	20-40	0.95	
Gymnasium -Exercise / Workout Rooms	LED	20-30	0.72	Time Clock / Occ Sensor
Kitchen / Food Prep	LED	30-75	1.21	
Library - Stacks	LED	20-50	1.71	
Loading Dock	LED	10-30	0.47	
Lobby- Office / General	LED	20-30	0.9	
Locker Room	LED	10-30	0.75	
Lounge / Breakroom	LED	10-30	0.73	
Mechanical / Electrical Rooms	LED	20-50	0.95	
Office- Open	LED	30-50	0.98	
Office - Private, Closed	LED	30-50	1.11	
Restroom / Toilet	LED	10-30	0.98	
Retail Sales	LED	20-50	1.59	
Stairway	LED	5-10	0.69	2-stage occ sensor
Storage Room	LED	5-20	0.63	2-stage occ sensor
Vehicular Sally Ports	LED	20-40	1.25	
Workshop	LED	30-75	1.59	
Exterior	LED			Time Clock Control

Design criteria: The lighting design shall be consistent with the illumination levels defined in the latest edition of the IES Handbook. The design shall also comply with the density requirements defined by ASHRAE 90.1-2007.

CONCEPTUAL DESIGN

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

LIGHTING CONTROL SYSTEMS:

Lighting control systems: The building lighting control strategy shall be consistent with the requirements for 2010 Indiana Energy Conservation Code which is comprised of ASHRAE 90.1-2007. The lighting systems shall have automatic shut off controls through a networked lighting controller. The lighting control systems shall integrate with the building automation system and be programmable from the BAS computer in the mechanical room and remotely accessed for control from the security office. All lobbies and corridors shall have network addressable LED drivers for time-of-day scheduling with night lighting capabilities. All Office areas and Conference rooms shall have network addressable and dimmable LED drivers for daylight harvesting controls, network scheduling with occupancy override. Local switches and occupancy sensors shall override controller-based scheduling functions for all offices and conference rooms with closeable doors. All detention lighting shall utilize a smart panel with dimming control to allow the lighting to be tuned for time of day and function (night lighting).

Egress lighting: Egress lighting shall be designed in compliance with NFPA 101 and shall be served from the standby emergency generator.

CONCEPTUAL DESIGN

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

TELECOMMUNICATIONS SYSTEMS:

Provisions for voice and data outlets shall be provided. Each office shall have one data connection provided on an interior wall. Each open office area shall have data connections coordinated with proposed furniture layouts for use by the office staff. It is anticipated that the servers, network switches, uninterruptable power supplies, are supplied by the owner. Data connections shall be coordinated between the owner's supplied material and the space.

3/4" fire retardant plywood will be provided on all walls within the telecom rooms. Plywood will be mounted vertically at 2" A.F.F. up to 8' A.F.F.

Grounding bus will be provided in each telecommunications room. A continuous 3/0 telecommunications main grounding conductor will connect the main telecommunications room to the Main Electrical Busbar.

Data cabling to be Category 6A with an Alternate for Category 6. Panduit data connectivity to be used with Belden or General cable.

AUDIO-VISUAL SYSTEMS:

Owner furnished television screens are anticipated in every conference room and lobby. Elevated power outlets and means of connecting communication cables to the wall mounted televisions shall be provided. Televisions are expected in each day room. The day room televisions will be powered through a programmable relay or smart panel to allow the staff to enable/disable the television from the security control center. A mass notification system has not been anticipated.

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

SECURITY AND ACCESS CONTROL SYSTEMS:

Provisions shall be provided for installation of a PLC based computer-controlled card access system and security monitoring system for areas not served by the Detention Access Control System (DACS).

- a. The DACS shall:
 - i. Monitor all Security Cameras within the facility.
 - ii. Monitoring of Detention Door Status (open/closed).
 - iii. Operation of Vehicular Sally Ports.
 - iv. Operation of Detention Doors.
 - v. Monitor and Control Detention Communication Systems, such as video visitation and direct intercom.
 - vi. Control operational luxuries within the detention area, such as enabling or disabling televisions, microwaves, etc.
 - vii. Control (via integration) the lighting system light levels within the individual day room groups (day/night light control).
- b. The owner shall select camera systems and provide the rough in requirements (power and signal) for coordination. Camera rough-ins shall be provided in the following locations:
 - i. Exterior Corners of the building.
 - ii. Building Entrances and Exits
 - iii. IT Area Entrances
 - iv. Storage Area Entrances
 - v. Detention Areas

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

- c. The DACS system supplier shall also supply a commercial card access system to be compatible with the Detention Security Access Control system for use in non-detention areas, such as:
 - i. Building Staff Entrances and Exits (badge in and out, non-detention)
 - ii. Major Office Area Demarcations
 - iii. IT Areas
 - iv. Mechanical and Electrical Rooms
 - v. Secure Storage Rooms

FIRE ALARM SYSTEMS:

The fire alarm system control panel will be in the emergency power room. The system will be designed to integrate with the existing fire alarm system.

The fully addressable fire alarm system shall include pull stations at all exits and each staircase entrance within the building. The building shall have full fire alarm annunciation throughout including audible and visual alarming. The fire alarm system shall monitor the sprinkler system, emergency generator, and HVAC smoke/fire detectors. The Fire Alarm System shall also control the smoke evacuation fans from a UL Listed control panel.

The system will meet NFPA 72, Life Safety NFPA 101 and ADA requirements.

The system wiring shall be provided in dedicated, red, EMT conduit.

CHANTER ROAD ELECTRICAL SYSTEMS DESIGN NARRATIVE

GROUNDING AND BONDING SYSTEM:

The new incoming electrical service shall be grounded to both a triangular ground rod grid (ground rod 3/4" diameter X 8 ft length), the steel water piping, and connect to building steel with 3/0 awg conductor. An equipment grounding system shall be extended to all equipment requiring an isolated ground.

Lightning protection is not anticipated.

MAINTAINABILITY EFFORTS:

To the most economical extent possible, electrical equipment, including panelboards, circuit breakers, switches, etc. shall be selected from a single common manufacturer. Switchgear shall be selected with proper inspection windows for periodic infrared analysis.

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

General Systems Overview:

This narrative describes the design criteria for the mechanical systems serving the facility. The new addition to the existing facility will be approximately 62,000 SF and will be designed to meet the needs of the varying programs. The mechanical systems shall be designed to maintain the indoor environmental quality in an energy efficient manner while meeting the requirements for building occupancy. Systems and equipment will be designed for security, serviceability, and energy efficiency.

Codes and Standards:

Building Code Information: The HVAC systems shall comply with all local and state building codes, NFPA, and ADA requirements. The following codes and standards shall be applied:

- 2015 – Michigan Building Code
- 2012 – International Fire Code
- 2015 – Michigan Mechanical Code
- 2015 – Michigan Energy Code
- ASHRAE 55 Thermal Environmental Conditions for Human Occupancy
- ASHRAE 62.1 Ventilation for Acceptable Indoor Air Quality (2010)
- ASHRAE 90.1 – Energy Standards for Buildings Except Low-Rise Residential Buildings (2007)
- SMACNA “HVAC DUCT DESIGN”

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

Assumptions and Open Issues:

The following assumptions have been made to establish the basic design needs.

- The Air Handling Units will be sized for the current program and will not include additional capacity for future additions.
- The Chillers and Boilers will be sized for the current program and will not include spare capacity for the future addition of another Pod equivalent in size to the pod in the current program.
- Emergency power requirements will be designed to feed the Pod Exhaust Systems, Temperature Controls, Air Handling Units, Heating System, and Equipment serving critical infrastructure (DX Splits for Electrical/IT Rooms). Emergency power for cooling will not be required.
- Heating hot water shall be supplied by an energy recovery system for summer dehumidification control and condensing water boilers for winter heating.
- The vehicle bay, in the Sally Port expansion area, shall be provided with gas-fired, infrared heaters and general exhaust for summer ventilation.

General Mechanical Systems:

The HVAC design will incorporate security, serviceability, safety, occupant comfort, and energy efficiency. The design will facilitate access for maintenance and adjustment.

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

HVAC Systems:

Heating Hot Water System:

Hot water will be distributed to AHUs, reheat coils, fan coils, and any supplemental unit heaters. The system will include an air separator, expansion tank, and chemical feed. Backflow prevention will be included as part of the plumbing work for make-up water. At the heart of the heating system will be 90%+ high efficiency condensing boilers. The heating system will be designed for redundancy to allow for the maintenance or failure of any one boiler with remaining boiler(s) to meet heating load. The design will include (3) 2,500 MBH boilers and associated primary pumps. A modular heat recovery chiller (HRC) unit will be designed to meet the heating hot water reheat demands in the summer while adding additional capacity for the chilled water-cooling system in the summer. The HRC will be approximately 75 tons. Two (2) secondary VFD controlled pumps will be sized for 100% capacity. The boilers and pumps will be designed to switch between lead and lag boiler/pump to balance operation and allow for redundancy in the heating system. The heating system will be in the central mechanical room.

CONCEPTUAL DESIGN

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

Chilled Water-Cooling System:

The cooling system will center around (2) air-cooled chillers. Both chillers will be approximately 150-tons and will be located on grade. The heat recovery chiller will be designed to produce chilled water and heating water while saving energy and will act as the lead chiller. The chilled water will be a 30% propylene/water mix and include a glycol feed system to prevent freezing. Four (two on each chiller) chilled water VFD controlled pumps will be sized for 100% of the capacity of their respective chillers. The pumps will be designed to switch between lead and lag pump to balance operation. The chilled water will be distributed to AHUs, fan coils, and supplemental units where cooling is needed intermittently. The system will include an air separator, expansion tank, and chemical feed. Backflow prevention will be included as part of the plumbing work for make-up water. The cooling system will be mainly on grade next to the central mechanical room with some equipment located within the central mechanical room.

Pod:

- The Pod shall be served by (2) nominal 15,000 CFM air handling unit sized for the cooling, heating, and ventilation loads of occupancy zones. This unit shall incorporate air to air heat exchanger plates for energy recovery. Maintenance chases within the pod shall be conditioned with fan coil units for winter and summer tempering. Variable air volume boxes with hydronic reheat will be installed for each zone.

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

- Cooling shall be provided by the central two air cooled chillers serving the air handlers.
- Heating shall be provided by the central three condensing boiler units. Heating hot water will be used for air handler pre-heat, terminal box reheat coils, fan coil units, and unit heaters. Reheat coils are anticipated for each zone.
- Each POD AHU zone will be designed with motorized dampers for zone air purge and include approximately (11) motorized control dampers per AHU. Each POD level will have approximately (11) pod exhaust fans on the roof. The HVAC system will be fully ducted. Each dorm or dayroom will be individually zoned with a terminal VAV unit with reheat.
- A dedicated back-up DX cooling split-system with fan coil units will be designed for the Central Control Rooms. Condensing unit to be located on roof or on grade depending on proximity.
- A dedicated back-up DX cooling split-system with fan coil units will be designed for the Central Control Rooms. Condensing unit to be located on roof or on grade depending on proximity.

CONCEPTUAL DESIGN

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

Intake and Booking:

- The Intake and Booking shall be served by (1) nominal 15,000 CFM air handling unit sized for the cooling, heating, and ventilation load of occupancy zones. Variable air volume boxes with hydronic reheat will be installed for each zone.
- Cooling shall be provided by the central two air cooled chillers serving the air handlers.
- Heating shall be provided by the central three condensing boiler units. Heating hot water will be used for air handler pre-heat, terminal box reheat coils, and unit heaters.

Administration:

- The Administration area shall be served by (1) nominal 7,500 CFM air handling unit sized for the cooling, heating, and ventilation load of occupancy zones. Variable air volume boxes with hydronic reheat will be installed for each zone.
- Cooling shall be provided by the central two air cooled chillers serving the air handlers.
- Heating shall be provided by the central three condensing boiler units. Heating hot water will be used for air handler pre-heat, terminal box reheat coils, and unit heaters.

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

Sally Port Addition:

The Sally port addition shall be provided with gas fired infrared heaters. A temperature and carbon monoxide control system shall be installed in the vehicle bay, with air intake control dampers and louvers near the floor. The dampers shall open, and the exhaust fans engage whenever carbon monoxide level or indoor space temperature exceeds the setpoint. Additionally, during the summer when the outside air temperature reaches a TBD setpoint, the exhaust fan shall kick on to provide fresh unconditioned outside air to aid in ventilation and evaporative cooling.

Additional Items:

- Heavy duty security grilles and diffusers will be designed for all applicable areas. Ducts penetrating through secured wall will be equipped with security bars. Ducts penetrating through fire and/or smoke walls will be equipped with fire and/or smoke dampers where applicable.
- Exhaust fans will be designed to capture odors in compliance with code for toilets, janitor closets, et al room requirements. Room pressurization relative to adjacent space will be designed for odor control and mitigation, i.e. toilet rooms and cells will be slightly negative to adjacent space. The goal will be to capture the exhaust air through a heat recovery coil where applicable.
- The facility will be designed for a slightly positive pressurization. This coupled with a tight building envelope will minimize infiltration and increase energy efficiency.

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

System Design Criteria:

The table below summarizes the climate data and indoor environmental quality data that shall be used for developing the system designs:

HVAC DESIGN CONDITIONS				
	OUTSIDE DESIGN CONDITIONS:		SUMMER (F)	82 F DB 70.0 WB
			WINTER (F)	16 F DB NA WB
	DESIGN ALTITUDE		932FT	Jackson, MI
INTERIOR DESIGN AREA	TEMP (F)	HUMIDITY (%)	TEMP (F)	HUMIDITY (%)
EQUIPMENT ROOMS	95	NOT CONTROLLED	60	NOT CONTROLLED
GARAGE / SALLY PORT	95	NOT APPLICABLE	60	NOT APPLICABLE
CELLS / DORMITORY / DAY ROOMS / HOLDING	74-78	50% MAX	68-74	NOT APPLICABLE
OFFICES / CONFERENCE ROOMS / CONTROL ROOMS	72-75	50% MAX	68-74	NOT APPLICABLE

CONCEPTUAL DESIGN

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

Ductwork:

Effort shall be made to conceal all ductwork in the ceiling and walls. All exposed ductwork shall be painted to match surroundings. Ductwork shall follow the schedule below:

DUCTWORK TYPE		CONSTRUCTION	INSULATION	MAX VELOCITY (FPM)	MAX FRICTION LOSS (" PER 100')
SUPPLY DUCT	EXPOSED	DOUBLE WALL	1.5" INTERNAL RIGID MINERAL FIBER	MAIN 1500 BRANCH 1000	0.25 0.15
	CONCEALED	SINGLE WALL	2" EXTERNAL MINERAL FIBER WRAP	MAIN 2000 BRANCH 1250	0.50 0.25
RETURN DUCT	EXPOSED	SINGLE WALL	NONE	MAIN 1000 BRANCH 750	0.15
	CONCEALED	SINGLE WALL	NONE		0.10
OUTSIDE AIR INTAKE DUCT	EXPOSED	DOUBLE WALL	1.5" INTERNAL RIGID MINERAL FIBER	750	0.15
	CONCEALED	SINGLE WALL	2" EXTERNAL MINERAL FIBER WRAP		
EXHAUST DUCT	EXPOSED	SINGLE WALL	NONE	750	0.15
	CONCEALED	SINGLE WALL	NONE	1500	0.25

CONCEPTUAL DESIGN

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

Piping:

Effort shall be made to conceal all piping in the ceiling and walls. All exposed piping shall be painted to match surroundings. HVAC piping systems shall follow the schedule below:

Piping Service	Pressure Class	Design Temp or Pressure	Pipe MOC
Heating Hot Water	ANSI 150	100-200	ASTM-40 Carbon Steel or Type L Copper
Chilled Water		40-60	
Refrigerant - Liquid	Per Manufacturer		Type L Copper Tubing
Refrigerant - Suction			

HVAC Building Automation System:

The HVAC systems shall utilize a central control system for monitoring, scheduling, trending, and optimization purposes. This control system shall have primary control of the heating and cooling equipment, air distribution equipment, and zone temperature control equipment. A workstation shall be provided in the mechanical room, with remote access for alarming in the security office.

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

Testing, Adjusting, and Balancing:

Provisions shall be incorporated to facilitate testing, adjusting, and balancing of the HVAC systems. At minimum, these provisions shall include:

- Airflow Systems
 - Variable Frequency Drives for all fans larger than 5 HP
 - Hand Balance Dampers in all major runs
 - Hand Balance Dampers for all Diffusers
 - Clear expectations of design air flow rates expected
 - Access to straight duct runs for branch and main air flow readings
- Pumping Systems
 - Variable Frequency Drives for all pumps larger than 5 HP or requiring variable flow
 - Circuit Setters for large loads
 - Testing Ports at coil connections
 - Thermometers and Pressure gauges at large coil connections

CONCEPTUAL DESIGN

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

Commissioning:

The mechanical systems shall require commissioning to include the following:

- Pre-functional checks
- Functional Performance Testing
- Formal Turnover Including
 - Installation, Operation, and Maintenance Documentation
 - Asset lists including:
 - List of Filters for all air handling equipment
 - List of Belt sizes for belt driven devices
 - Terminal Device Schedule
 - Control Valve Schedule
 - Isolation Valve Schedule

Sustainability:

The mechanical systems shall be engineered to balance construction costs with operating costs, ongoing energy consumption, and emissions. Several attributes of the mechanical systems that promote sustainability include the following:

- Systems selected with energy recovery capabilities to minimize energy consumption to condition the space.
- Commissioning the building to ensure it operates properly and in its lowest energy consuming state.
- Selection of environmentally acceptable refrigerants.

CHANTER ROAD HVAC SYSTEMS DESIGN NARRATIVE

Maintainability:

Each system shall be designed for ease of maintenance including:

- Appropriate clear space for removal of components.
- Easily changed filter media.
- Isolation valves in piping systems for each floor and major branch.
- Access ports in ductwork for service of specialties.
- Commissioning Documentation detailing operation and maintenance requirements of the HVAC systems.

CONCEPTUAL DESIGN

CHANTER ROAD PLUMBING DESIGN NARRATIVE

General Systems Overview:

This narrative describes the existing conditions and design criteria for the plumbing systems serving the facility. The plumbing systems shall be designed to maintain plumbing fixtures and equipment in an energy efficient manner while meeting the requirements for building occupancy.

Codes and Standards:

1. Building Code Information: The plumbing systems shall comply with all local and state building codes, NFPA and ADA requirements. The following codes and standards shall be applied:
 - a. 2018 - Michigan Plumbing Code
 - b. 2015 - Michigan Building Code
 - c. 2012 – International Fire Code
 - d. 2015 - International Fuel Gas Code
 - e. Americans with Disabilities Act 1994
 - f. 2015 – Michigan Energy Code
 - g. ASHRAE 90.1 – Energy Standards for Buildings Except Low-Rise Residential Buildings (2019)
 - h. 2010 – ASME A17.1 Safety Code for Elevators and Escalators

CHANTER ROAD PLUMBING DESIGN NARRATIVE

Assumptions and Open Issues:

The following assumptions have been made to establish the basic design needs.

- 1) The plumbing systems shall be sized for the current occupancy and space use and for the future expansion that is planned.
- 2) It is anticipated that adequate water pressure is available for this project. Verification of water pressures and flows will need to be determined.
- 3) The installation of a water softening system is required to assure the water tubing serving the POD Water Management System is kept in good working order.
- 4) Emergency power is required for:
 - a. The Water Management System and its related controls.
 - b. Water Heaters.
 - c. Pumps.
- 5) The vehicle bay in the Sallyport expansion area shall be provided with large capacity floor drains and cold water, wall mounted hose bibbs.

CONCEPTUAL DESIGN

CHANTER ROAD PLUMBING DESIGN NARRATIVE

The new construction will be served by new utilities routed into the building. A 6" water line will be extended from the existing water main located in the street. A new meter and backflow device will be in an exterior pit, in the front of the jail. A new gas service and meter setting to be installed. New storm water sewers and sanitary sewers to be installed.

The domestic hot water supply will consist of two gas-fired water heaters and two hot water storage tanks to provides redundancy. A hot water recirculation piping system will assure that tempered hot water will be available within a reasonable amount of time, typically less than fifteen seconds.

Domestic water piping material will be copper. Domestic cold and hot water piping to be sized with a maximum pressure drop of 2 PSI per 100 feet and a maximum velocity of 5 feet per second. The domestic hot water return shall be calculated with a maximum velocity not greater than 4 ft/second to reduce wear and erosion of piping. All waste and vent piping will be schedule PVC. Sanitary floor cleanouts will be installed not more than seventy-five feet apar. Plumbing fixtures serving the public and jail staff will be made of vitreous China and be operated by electronic sensor controls. Inmate plumbing fixtures will be stainless steel and controlled by a Water Management System.

CHANTER ROAD PLUMBING DESIGN NARRATIVE

Natural Gas Supply:

New gas piping work will be extended from the existing gas service on the site. All gas piping 2-1/2" and smaller shall be schedule 40 black iron pipes with screwed fittings or approved steel press-type fittings. Gas piping 3" and larger shall be of welded or pressed construction.

Sally port:

The sally port shall be provided with two interior hose bibbs, plus one exterior wall hydrant. The floor will have four floor drains which will be connected to an exterior buried oil interceptor tank to intercept oil and debris from entering the public sewer.

Intake:

The Intake Area will consist of heavy-duty correctional type, stainless steel plumbing fixtures for Group Holding and Holding areas. Cold water hose bibbs shall be in several of the new chases for general floor and room cleaning of this entire area. Group holding rooms will be provided with a floor toilet with a remote flushing system. Domestic hot water to the plumbing fixtures in this area will be limited to a maximum of 105 degrees (F).

CHANTER ROAD PLUMBING DESIGN NARRATIVE

Housing Pod:

Domestic Water: The domestic water heating system for the POD shall consist of two gas-fired water heaters connected to two hot water storage tanks. Water heaters shall be equipped with thermostatic mixing valve to temper hot water supplies serving inmates to a maximum of 105 deg. F. All new flush valves serving water closets and combination security fixtures shall be rated for 1.28 gallons gpf (gallons per flush). Flow rate for all new shower heads shall be rated for 1.5 gpm.

Sanitary Sewer System:

The sanitary drainage system serving the POD will be by gravity flow and will be routed to a point five feet from the building. The Civil contractor will extend sanitary piping throughout the site. Generally, in the POD the below slab sanitary piping will be schedule 40 PVC, 6" in size with cleanouts spaced no more than 50 lineal feet apart. New sanitary lines above grade will be schedule 40 PVC and be 4" in size when connected to a toilet fixture, otherwise a 3" pipe to be installed. Branch main cleanouts installed in the floor or above accessible ceilings will provide access and maintenance. All new floor drains shall have a cast iron bottom outlet body. Floor drains subject to inmate abuse will have tamper-resistant screws. The below-floor sanitary sewer system will consist of two separate systems to add redundancy in case of a major sewage blockage.

CHANTER ROAD PLUMBING DESIGN NARRATIVE

Storm Water Drainage:

The storm water system will consist basically of roof drains and roof over-flow drains for new roof areas. External gutters and downspouts may be used for some roof areas.

FIRE PROTECTION DESIGN NARRATIVE:

Fire Protection Systems shall comply with all local and state building and fire codes. The following codes and standards shall be applied:

- a. 2018 - Michigan Plumbing Code
- b. 2015 - Michigan Building Code
- c. 2012 – International Fire Code
- d. 2015 - International Fuel Gas Code
- e. Americans with Disabilities Act 1994
- f. 2015 – Michigan Energy Code
- g. ASHRAE 90.1 – Energy Standards for Buildings Except Low-Rise Residential Buildings (2019)
- h. 2010 – ASME A17.1 Safety Code for Elevators and Escalators
- i. NFPA 10
- j. NFPA 13
- k. NFPA 20
- l. NFPA 25
- m. NFPA 72
- n. NFPA 2001

CHANTER ROAD PLUMBING DESIGN NARRATIVE

New Housing Pod:

Fire Service:

A new 6" fire service and associated double-check detector backflow preventer to be installed to meet local code requirements. The fire service will be routed into the fire building by the plumbing contractor and work terminated 18" A.F.F. with a blind flange. The fire protection contractor shall begin his work at the blind flange. No fire pump is anticipated to be associated with this system.

Sprinkler Requirements:

Concealed type sprinklers to be in public areas and office support areas which have ceilings. Exposed upright type sprinklers installed in areas without dropped ceilings. Institutional type tamper resistant sprinklers shall be installed in all areas that are subject to inmate tampering. The temperature ratings of all sprinklers will be matched to each individual area for proper activation.

CONCEPTUAL DESIGN

CHANTER ROAD PLUMBING DESIGN NARRATIVE

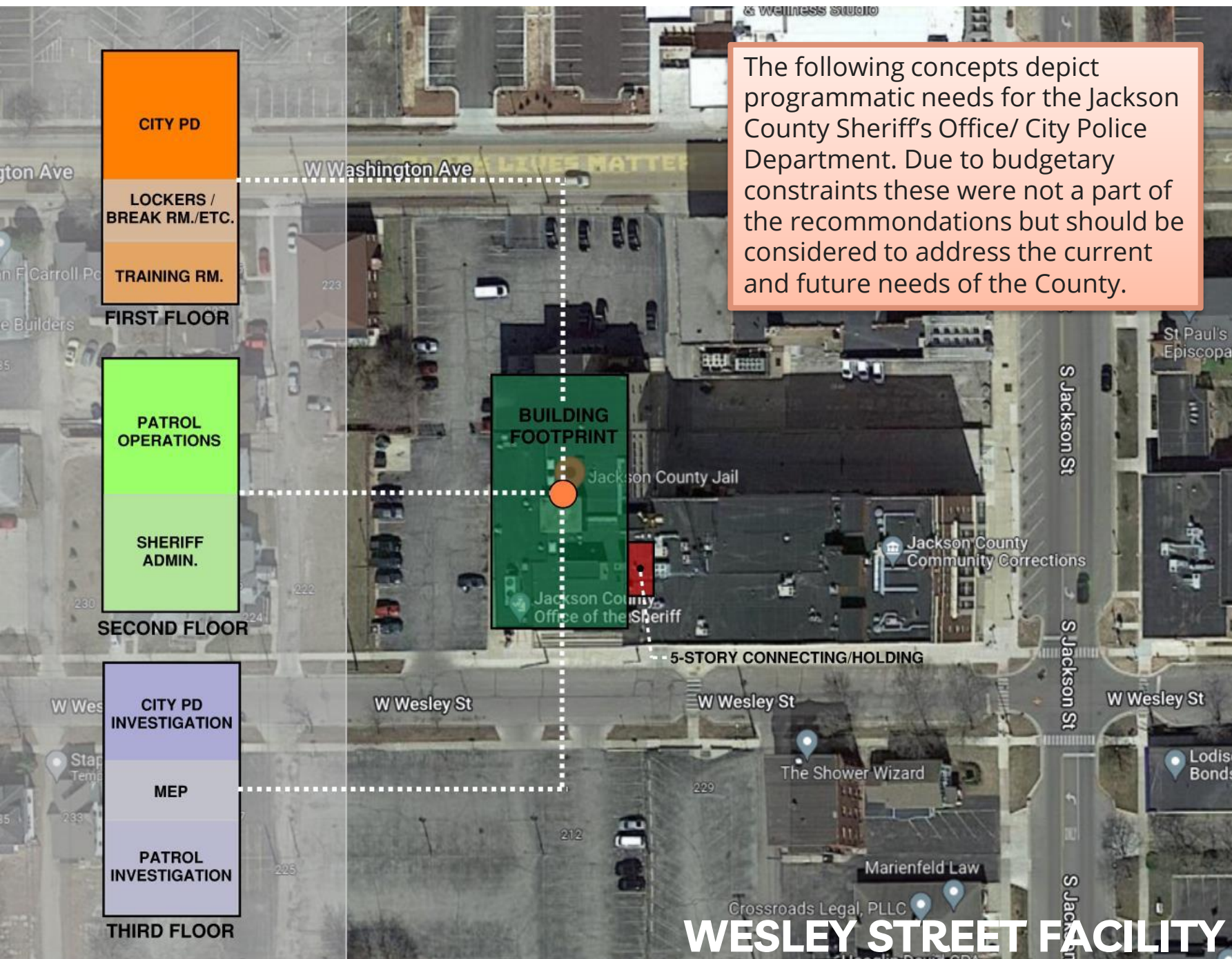
POD - Inmate Cells:

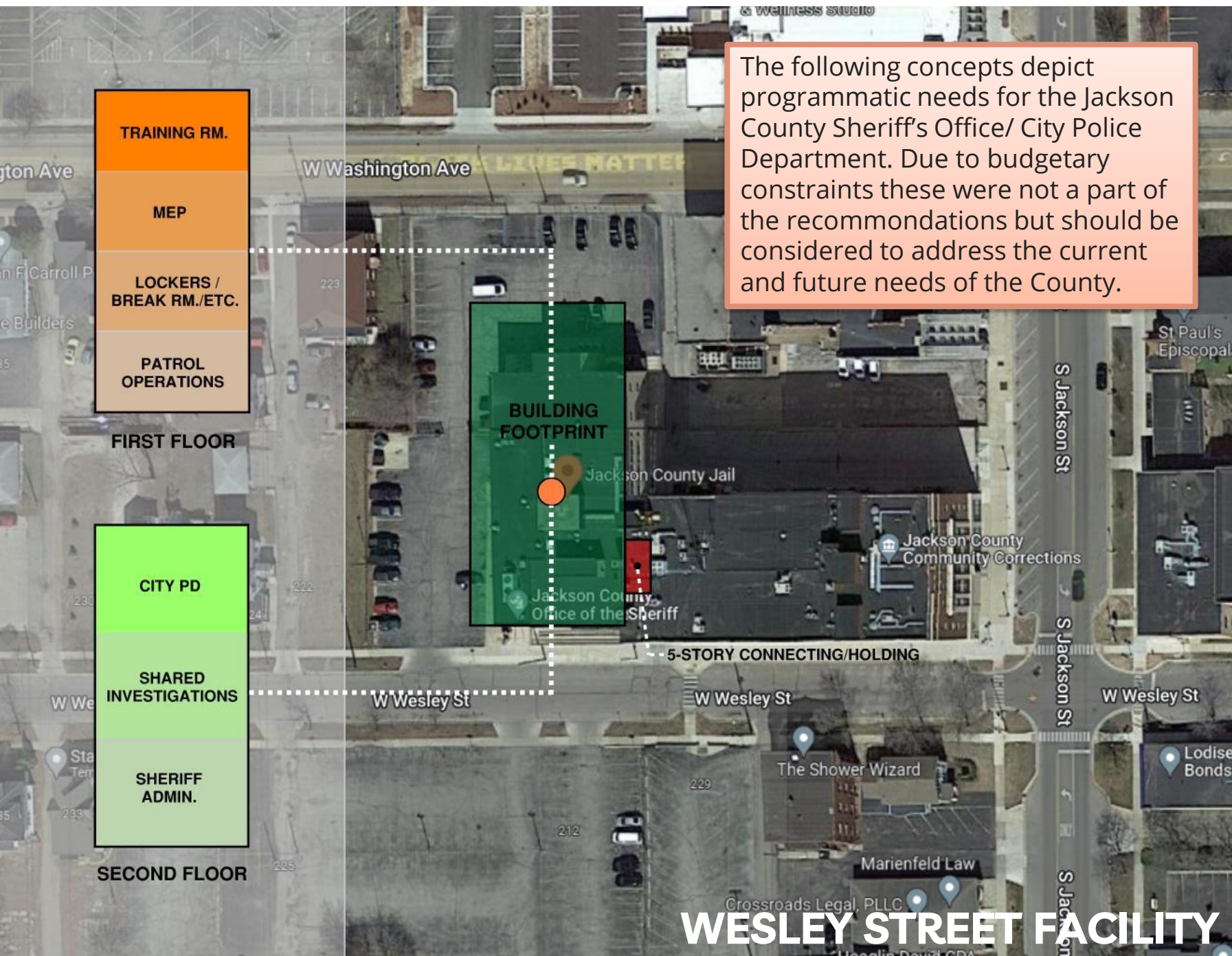
Shall be served from a manual wet-pipe sprinkler system which is supervised and manually controlled by the 24/7 stationed jail staff. Typically, the sprinkler piping serving the cell areas shall be void of water to reduce the chance of inmate tampering and willful sprinkler discharge. Inmate cell areas shall be capable to receive an alarm from either a smoke detector or low air (or Nitrogen) pressure alarm (tampering) which then notifies the jail staff of a potential problem. The jail staff can then determine if the alarm is valid and manually open the sprinkler control valve or valves which are located within the Control Room to charge the sprinkler piping with water.

Fire Alarm System:

Sprinkler system electronic monitoring and alarm devices shall be connected to the new building fire alarm system, see electrical narrative.

CONCEPTUAL DESIGN

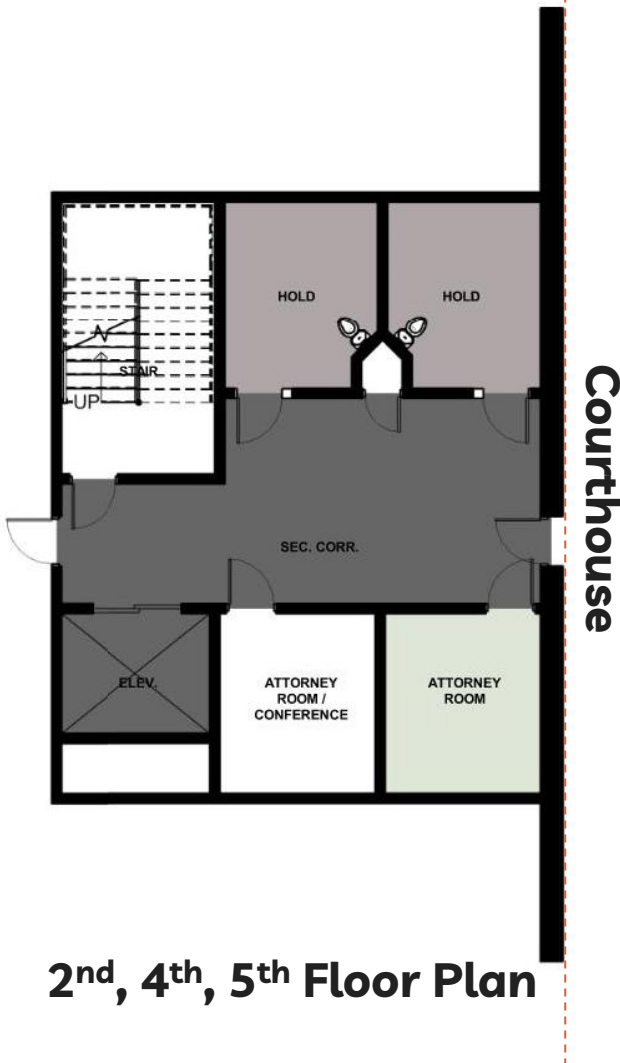




CONCEPTUAL DESIGN

WESLEY STREET FACILITY

WESLEY STREET FACILITY



STAFFING & OPERATIONAL COSTS

07

STAFFING & OPERATIONAL COSTS

JACKSON COUNTY JAIL - STAFFING ANALYSIS - 12 HR Shifts							
Position	Ref. Number	Days	Evenings	Nights	Total Positions	Relief Factor	Total Staff
Security							
Captain		1.00	0.00	0.00	1.00	1.00	1.00
Lieutenant		1.00	0.00	0.00	1.00	1.00	1.00
Sergeant		2.00	0.00	2.00	4.00	2.23	8.92
Control Point Deputies		6.00	0.00	5.00	11.00	2.23	24.53
Rover Deputies		6.00	0.00	5.00	11.00	2.23	24.53
Subtotal		16.00	0.00	12.00	28.00		59.98
Support Services							
Head Cook (Contracted)		0.00	0.00	0.00	0.00	0.00	0.00
Subtotal		0.00	0.00	0.00	0.00		0.00
Program Services							
Nurse (Contracted)		0.00	0.00	0.00	0.00	0.00	0.00
Subtotal		0.00	0.00	0.00	0.00	0.00	0.00
Summary							
Security		16.00	0.00	12.00	28.00		59.98
Support Services		0.00	0.00	0.00	0.00		0.00
Program Services		0.00	0.00	0.00	0.00		0.00
TOTAL		16.00	0.00	12.00	28.00		59.98
<i>Existing Staff = 55</i>							

STAFFING & OPERATIONAL COSTS

JACKSON COUNTY JAIL - OPERATING COST ANALYSIS			
Jail Facility			
Item	Cost		Comments
	Existing	Proposed	
Personnel Services			
Salaries	\$3,596,865.00	\$4,424,143.95	1.23 multiplier (60/55)
Wages-Longevity/Incentive	\$60,000.00	\$73,800.00	1.23 multiplier (60/55)
Wages-Casual	\$5,670.00	\$6,974.10	1.23 multiplier (60/55)
Wages-In Lieu of Insurance	\$24,000.00	\$29,520.00	1.23 multiplier (60/55)
FICA	\$271,865.00	\$334,393.95	1.23 multiplier (60/55)
Health Insurance	\$708,000.00	\$870,840.00	1.23 multiplier (60/55)
Life Insurance	\$11,250.00	\$13,837.50	1.23 multiplier (60/55)
Retirement	\$277,000.00	\$340,710.00	1.23 multiplier (60/55)
RHS Employer Contribution	\$60,450.00	\$74,353.50	1.23 multiplier (60/55)
Worker's Compensation	\$33,540.00	\$41,254.20	1.23 multiplier (60/55)
Employee Training	\$15,000.00	\$18,450.00	1.23 multiplier (60/55)
Supplies			
Printing	\$4,250.00	\$4,675.00	1.10 multiplier
Office Supplies	\$5,500.00	\$6,050.00	1.10 multiplier
Operating Supplies/Materials	\$25,700.00	\$28,270.00	1.10 multiplier
Employee Uniforms	\$40,000.00	\$44,000.00	1.10 multiplier
Professional Services/Other Supplies			
Clothing and Bedding	\$20,000.00	\$22,000.00	1.10 multiplier
Inmate Meals	\$510,000.00	\$684,375.00	\$3.75 per meal x 500 inmates x 365 days
Medical Services	\$750,000.00	\$825,000.00	1.10 multiplier
Cleaning Supplies	\$72,500.00	\$79,750.00	1.10 multiplier
Service Contracts	\$87,900.00	\$96,690.00	1.10 multiplier
Refuse Service	\$6,500.00	\$7,150.00	1.10 multiplier
Telephone Usage	\$550.00	\$605.00	1.10 multiplier
Inmate Transportation	\$0.00	\$0.00	1.10 multiplier
Telephone	\$0.00	\$0.00	1.10 multiplier
CERT Team	\$0.00	\$0.00	1.10 multiplier
Rentals / Inmate Housing (2021)	\$0.00	\$0.00	1.10 multiplier
Operating Expense Subtotal	\$6,586,540.00	\$8,026,842.20	\$1,440,302.20
Utilities and Maintenance/Repairs			
Facility Maintenance	\$86,500.00	\$86,500.00	
Utility (Water, Electric, Gas, Sewer)	\$322,500.00	\$483,750.00	1.50 multiplier
Service Contract (Elevators)	\$10,000.00	\$10,000.00	
Maint. & Repair (equipment, grounds, etc)	\$18,100.00	\$18,100.00	
Utility/Maintenance Expense Subtotal	\$437,100.00	\$598,350.00	
Total Operating Expense	\$7,023,640.00	\$8,625,192.20	\$1,601,552.20
Revenues			
Telephone	\$220,000.00	\$242,000.00	1.10 multiplier
Incarceration Fees	\$12,500.00	\$13,750.00	1.10 multiplier
Inmate Collections	\$140,000.00	\$154,000.00	1.10 multiplier
Bond Fees	\$7,200.00	\$7,920.00	1.10 multiplier
Reimbursement-Fica Reward	\$4,000.00	\$4,400.00	1.10 multiplier
Reimbursement - Medical	\$25,000.00	\$27,500.00	1.10 multiplier
Parole Violators	\$125,700.00	\$138,270.00	1.10 multiplier
Collections of DNA Samples	\$4,000.00	\$4,400.00	1.10 multiplier
Diverted Felon	\$265,000.00	\$291,500.00	1.10 multiplier
Revenue Subtotal	\$803,400.00	\$883,740.00	
Total Revenue	\$7,827,040.00	\$9,508,932.20	\$1,681,892.20



STATEMENT OF PROBABLE COST

80

PROJECTED COST DATA



PROJECT : Jackson County Chanter Road Addition & Renovations
LOCATION : Jackson, MI

Chanter Rd Addition & Renovations Program 55,023

STATEMENT OF PROBABLE COST

Chanter Road Addition & Renovation Program Opinion of Cost									
CSI	Description of Work	Quantity	Unit	Unit Cost (Low)	Unit Cost (Medium)	Unit Cost (High)	Total (Low)	Total (Medium)	Total (High)
02 00 00	Existing Conditions	55023	SF	\$1.71	\$2.66	\$3.61	\$93,900.09	\$146,274.15	\$198,726.12
03 00 00	Concrete	55023	SF	\$23.59	\$24.90	\$26.21	\$1,298,170.29	\$1,370,128.62	\$1,442,086.95
04 00 00	Masonry	55023	SF	\$26.75	\$28.11	\$29.48	\$1,471,750.17	\$1,546,951.41	\$1,622,225.70
05 00 00	Metals	55023	SF	\$26.75	\$29.04	\$31.40	\$1,472,022.18	\$1,597,717.77	\$1,727,820.06
06 00 00	Woods, Plastics, and Composites	55023	SF	\$17.72	\$18.71	\$19.68	\$975,098.25	\$1,029,361.59	\$1,083,074.70
07 00 00	Thermal and Moisture Protection	55023	SF	\$35.64	\$37.67	\$39.73	\$1,960,861.35	\$2,072,709.00	\$2,186,192.76
08 00 00	Openings	55023	SF	\$4.31	\$4.60	\$4.89	\$237,081.54	\$253,067.52	\$269,053.50
09 00 00	Finishes	55023	SF	\$28.68	\$30.81	\$35.55	\$1,578,197.82	\$1,695,163.53	\$1,955,899.65
11 00 00	Equipment	55023	SF	\$92.77	\$98.79	\$106.74	\$5,104,646.16	\$5,435,826.00	\$5,873,277.84
13 00 00	Special Construction	55023	SF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
14 00 00	Conveying Systems	55023	SF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
21 00 00	Fire Suppression	55023	SF	\$5.42	\$6.27	\$7.70	\$298,379.88	\$345,047.07	\$423,909.93
22 00 00	Plumbing, Heating, Ventilating, & AC	55023	SF	\$87.61	\$92.48	\$97.34	\$4,820,775.33	\$5,088,308.61	\$5,356,153.53
26 00 00	Electrical	55023	SF	\$57.15	\$59.08	\$61.34	\$3,144,612.45	\$3,250,651.62	\$3,374,901.99
28 00 00	Electronic Security	55023	SF	\$15.59	\$16.50	\$17.41	\$857,866.29	\$907,990.83	\$958,115.37
31 00 00	Earthwork	55023	SF	\$25.40	\$28.62	\$30.94	\$1,397,346.87	\$1,574,686.02	\$1,702,587.39
CONSTRUCTION HARD COSTS SUBTOTAL :							\$24,710,708.67	\$26,313,883.74	\$28,174,025.49
00 00 00	Design & Inflation Contingency	10.00	%				\$2,471,070.87	\$2,631,388.37	\$2,817,402.55
00 00 00	CM Construction Contingency	3.00	%				\$741,321.26	\$789,416.51	\$845,220.76
00 00 00	Construction General Conditions	3.00	%				\$741,321.26	\$789,416.51	\$845,220.76
00 00 00	CM Staffing & CM General Conditions	1	LS				\$932,452.00	\$932,452.00	\$932,452.00
00 00 00	CM Fee, Bonds, & Insurances	4.82	%				\$1,426,569.33	\$1,516,206.05	\$1,620,210.30
CONSTRUCTION SOFT COSTS SUBTOTAL :							\$6,312,734.72	\$6,658,879.45	\$7,060,506.38
TOTAL CONSTRUCTION COST :			SF	\$563.83	\$599.25	\$640.36	\$31,023,443.39	\$32,972,763.19	\$35,234,531.87
00 00 00	Design Fees	6.50	%				\$2,016,523.82	\$2,143,229.61	\$2,290,244.57
00 00 00	Owner FF&E	5.00	%				\$1,551,172.17	\$1,648,638.16	\$1,761,726.59
00 00 00	Owner Contingency	5.00	%				\$1,551,172.17	\$1,648,638.16	\$1,761,726.59
00 00 00	Utility Fees, Geotechnical, & Testing	1	LS				\$250,000.00	\$250,000.00	\$250,000.00
OWNER SOFT COSTS SUBTOTAL :							\$5,368,868.16	\$5,690,505.93	\$6,063,697.76
TOTAL CHANTER RD PROJECT COST :			SF	\$661.40	\$702.67	\$750.56	\$36,392,311.55	\$38,663,269.12	\$41,298,229.63
OPTION TO REPLACE WESLEY ST SHERIFF OFFICE			SF	\$560.74	\$590.43	\$621.41	\$11,796,912.00	\$12,421,447.00	\$13,073,165.00
OPTION FOR 3,250 SF FEMALE DORM ADDITION AT CHANTER			SF	\$330.74	\$347.28	\$364.64	\$1,074,905.00	\$1,128,660.00	\$1,185,080.00
Recommended Escalation Contingency (Not Included above)			7%						



A background image of a business meeting. In the foreground, a person's hand is holding a white document. To the left, a laptop screen displays a spreadsheet. In the background, another person is seated at the table with their hands clasped. The scene is set in a modern office environment with large windows.

QUESTIONNAIRES & MEETING MINUTES

60

Jail Data:**Question #4**

There have been no previous studies on jail conditions.

Question #6

Information will be forthcoming.

Question #7

- A. Work release program is in place although temporarily suspended due to COVID.
- B. Probation is in place at both the district and circuit court levels.
- C. Community Service is available but is administered by the courts.
- D. Weekend sentencing is in place but is temporarily suspended due to COVID.
- E. House arrest is something we take part in.
- F. There is no Sheriff work detail.
- G. We do not participate in drug testing.
- H. Our current substance abuse programs are as follows: Medically Assisted Treatment program; Smart Recovery; Narcotics Anonymous and Alcoholics Anonymous 12 step program.
- I. Group Therapy is done in the jail with Community Mental Health and Community Outreach.
- J. All transition programs are handled through the courts.

Question #8

Community Corrections is currently handled separately through the courts. We do not have the room to house their personnel so other accommodations were made in the court building.

Question #9

Currently we are not housing inmates outside of the county. Occasionally this does occur but is done on an "as needed" basis.

Question #10

As of April 21, 2022, there are 12,616 unserved warrants in Jackson County.

Question #11

Typically we house about 25 inmates from the Michigan Department of Corrections.

QUESTIONNAIRES & MEETING MINUTES

Questions #12

At the Wesley Street Facility, we have only one punitive cell for separating disruptive inmates.

Currently we use the Medically Assisted Treatment Program for inmates that are addicted to drugs.

Question #13

Our space is severely limited. As previously mentioned, we have only one punitive cell. This is highly problematic with the population that we serve, which includes several violent gang members.

We have attempted to institute new programs in the jail but have been unable to because of the limitations of the physical structure; i.e. concrete walls not conducive to WiFi, no space for offices of people offering programs, and the areas to hold programming are either too small or inadequate.

Our lack of technology and inability to get more technology because of physical plant limitations has severely hampered our ability to service the population appropriately.

QUESTIONNAIRES & MEETING MINUTES

Questionnaire

Facility: Sheriff

Department/Division: Corrections

Responder: Lieutenant Michael Coburn and Sheriff Gary Schuette

Date of Response: April 20, 2022

The following Questionnaire related to the Jackson County Jail is in a word format that can be altered to expand response categories as required to complete the information requested. If there are items that you do not believe apply to your Department/Division note "Not Applicable" or "N/A" after the item.

The goal is to receive all requested Questionnaires a week after handing them out. If there are items that will take more time to complete or if you have questions about the information requested, please feel free to contact by phone or e-mail the designated RQAW Team member noted at the end of this document. Thank you for your assistance.

A. Strategic Planning

1. Historic Staffing Data:

Division	Staff Position/Title	2012	2017	2022	Comments
A. Jail	1.Captain	1	1	1	
	2.Lieutenant	1	1	1	
	3.Sergeant	6	6	8	
	4.Deputy	46	45	45	
	5.				
	6.				
	7.				
	8.				
	9.				
	10.				
B.	1.				
	2.				
	3.				
	4.				
	5.				
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	7.				
	8.				
	9.				
	10.				
C.	1.				
	2.				
	3.				
	4.				
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QUESTIONNAIRES & MEETING MINUTES

	8.				
	9.				
	10.				
D.	1.				
	2.				
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	10.				

2. What additional staff do you anticipate in the next 20 years:

Division	Staff Position/Title	2027	2032	2037	2042	Comments
A. Jail	1.Captain	1	1	1	1	
	2.Lieutenant	1	1	2	2	
	3.Sergeant	10	10	10	10	
	4.Deputy	47	49	51	53	
	5.					
	6.					
	7.					
	8.					
	9.					
	10.					
B.	1.					
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C.	1.					
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	5.					
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	8.					
	9.					
	10.					
D.	1.					

QUESTIONNAIRES & MEETING MINUTES

	2.					
	3.					
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3. Are there recent or current Federal, State or county legislative, philosophical or operational changes implemented or anticipated to be implemented that will affect the current means you are conducting business or providing services? If so, please describe and outline the anticipated impact and or responsive changes that are anticipated:
The Chanter Road Facility is designed to house inmates that have been sentenced. The law requires us to keep pre-trial inmates separate from sentenced inmates which causes a number of difficulties. The Chanter Road Facility is larger and able to accommodate more inmates, but because of its design, we cannot utilize it to its full potential.
4. Summarize thoughts, opinions, or observations you have about the current County Justice System and outline potential philosophical, procedural, or operational changes that may improve the current system:
 - a. Currently we are unable to accept inmates on work release because of COVID restrictions coupled with the physical limitations of the jail. This is highly problematic. For instance, drunk driving 2nd offense requires a person to serve 30 days of jail time. Judges often do this on weekends so the person does not lose their job. We are unable to accommodate this as COVID as severely limited space. When we will be able to do this again, this has been a source of contraband being entered into the institution. In addition, we can only do so on a limited basis because of over-crowding issues.
 - b. We have instituted a medically assisted treatment program for the inmates. We would also like to be able to offer additional services in this area to assist in cutting back recidivism. There are many ways in which to accomplish this, but we are unable to institute new programs because of the limitations of the current jail.
 - c. The State Court Administrator's Office (SCAO) has required that all pre-trial hearings be conducted via Zoom or other electronic means. The Wesley Street Facility is not only "space" challenged for setting up these virtual classrooms, but it also is not conducive to WiFi or corded computer hook ups. This is extremely challenging giving the limited space as well as very time consuming. We simply must have easier access to these platforms.
 - d. Pre-Covid, the Wesley Street Jail was chronically overcrowded. We need additional space to house inmates from court, and fresh arrests coming in from the street.
 - e. Lack of sufficient electrical systems causes us to run extension cords in the jail, when accommodating subjects that need an oxygen machine, or other electronic medical devices. This has been particularly problematic and costly.
 - f. Would like to offer additional substance abuse treatment programs for pre-trial inmates, but lack of adequate space prohibits it.

B. Space Evaluation/Architectural Space Programming

1. Describe any space deficiencies you are currently experiencing that are adversely affecting your operations or ability to provide programs and/or services:
 - a. **Inadequate programing, school, religion, and recreation space.**
 - b. **Currently utilize the gym to facilitate programs, school, religious services, and recreation.**
 - c. **Limited punitive cells to isolate disruptive inmates.**
 - d. **No office space for mental health worker.**
 - e. **Medical station is not adequate, and has a leaking sewer and water pipes inside that are drained from a metal pan located in the drop ceiling, to a bucket on the floor.**
 - f. **Limited isolation cells to separate medical and/or mental health inmates in crisis.**

2. Describe special space, technology, storage, etc. space needs your Department/Division requires that is currently not provided:
 - a. **Inadequate space for video monitors.**
 - b. **No space for a classification deputy.**
 - c. **Area needed, separate from booking, to release inmates.**
 - d. **Sally port/garage inadequate one way traffic. Cannot accommodate ambulance or fire truck. Police vehicles are often "stuck" inside waiting for other police units to clear from their arrests.**

3. How many visitors do you typically have on a daily basis and what type?

a. Public:	25	
b. Attorneys:	10	
c. Other Department Staff:		5
d. Vendors:	7	
e. Other:		
i. Church N/A A/A		3
ii. Probation/Parole	5	
iii. CPS/APS/DHS	3	
iv. Repairmen	2	
v. CMH/Segue	3-5	

C. Other Comments

1. Summarize or include any additional information you believe relevant to the efforts of this study:
 - a. **Significant technology concerns due to physical plant (e.g. 24inch and 16 inch cement walls).**
 - b. **Zoom very difficult, deputy radios are not operable in some areas of jail, antiquated cameras.**
 - c. **Inmate cells poor design, blind spots, and conducive for physical assault, rape and suicide.**
 - d. **Significant plumbing problems, sewage pipes bursting into booking area.**
 - f. **Currently we have no showers for staff.**
 - g. **Locks on cell doors have recently broken and parts are no longer available. Hinges on cell doors are also sagging creating additional issues.**
 - h. **There are no working thermostats in the building. The temperature is monitored by a 7 inch meat thermometer that is stuck inside the cold air return. The water for the boiler is controlled by a vice grip attached to the valve to manipulate it, and then is propped up by a metal rod on the floor to set the temperature.**

The background of the slide is a blurred photograph of a person's face and hands behind vertical metal bars, suggesting a prison or detention facility. The image is desaturated and has a blueish tint.

FEDERAL PERFORMANCE BASED DETENTION STANDARDS

10

PERFORMANCE STANDARDS: BUILDING AND SAFETY CODES

Wesley Street Facility:

The facility complies with professional building and fire safety codes to help ensure the safety of all persons within the facility.

Check the box on the left if the facility meets the standard. Check the box on the right if the facility does not meet the standards indicated.



Building Codes



5-ACI-2A-01 (Ref. 4-4123): The institution conforms to applicable federal, state, and/or local building codes.

Fire Codes



5-ACI-2A-02 (Ref. 4-4124): (MANDATORY) The institution conforms with applicable federal, state, and/or local fire safety codes. Compliance is documented by the authority having jurisdiction. A fire alarm and automatic detection system are required, as approved by the authority having jurisdiction, or there is a plan for addressing these or other deficiencies within a reasonable time period. The authority approves any variances, exceptions, or equivalencies that do not constitute a serious life safety threat to the occupants or the facility.

Physical Plant



5-ACI-2A-03 (Ref. 4-4427): Equipment, supplies, and materials for health services are provided and maintained as determined by the health authority.


Facility Size




5-ACI-2B-02 (Ref. 4-4126): The facility should encourage staff/inmate interaction. The facility has a management system that provides staff with the authority to make decisions, and the ability to make recommendations regarding security, classification, services, and programs for inmates.

PERFORMANCE STANDARDS

Unit Size

- ☐  **5-ACI-2B-03 (Ref. 4-4127):** The maximum size of a single management unit is variable and is based on the characteristics of its inmate population. The exact size of each management unit is determined by (1) the security classification of the inmate occupants (higher security levels require smaller unit size), and (2) the ability of staff to complete regular security checks, maintain visual and auditory contact, maintain personal contact and interaction with inmates, and be aware of unit conditions.

Inmate Sleeping Areas


- ☐  **5-ACI-2C-01 (Ref. 4-4132):** Cells/rooms used for housing inmates shall provide at a minimum, 25 square feet of unencumbered space per occupant. *Unencumbered space* is usable space that is not encumbered by furnishing or fixtures. At least one dimension of the unencumbered space is no less than seven feet. In determining unencumbered space in the cell or room, the total square footage is obtained, and the square footage of fixtures and equipment is subtracted. All fixtures and equipment must be in operational position.

- ☒ ☐ **5-ACI-2C-02 (Ref. 4-4133):** Written policy, procedure, and practice provide that single-occupancy cells/ rooms shall be available, when indicated, for the following:


- + inmates with severe medical disabilities
- + inmates suffering from serious mental illness
- + sexual predators
- + inmates likely to be exploited or victimized by others
- + inmates who have other special needs for single housing

When confinement exceeds 10 hours a day, there is at least 80-square feet of total floor space, of which 35-square feet is unencumbered space.


Cell Furnishing

- ☐  **5-ACI-2C-03 (Ref. 4-4134):** Each inmate confined to a cell/room for ten or more hours daily is provided a sleeping area with the following: a sleeping surface and mattress at least 12 inches off the floor; a writing surface and proximate area to sit; storage for personal items; and adequate storage space for clothes and personal belongings.

Dayrooms


- ☐  **5-ACI-2C-04 (Ref. 4-4135):** Dayrooms with space for varied inmate activities are situated immediately adjacent to the inmate sleeping areas. Dayrooms provide sufficient seating and writing surfaces and all furnishings are consistent with the custody level of the inmates assigned. Dayrooms provide a minimum of 35-square feet of space per inmate (exclusive of lavatories, showers, and toilets) for the maximum number of inmates who use the dayroom at one time, and no dayroom encompasses less than 100 square feet of space (exclusive of lavatories, showers, and toilets).

Toilets


- ☐  **5-ACI-2C-05 (Ref. 4-4137):** Inmates have access to toilets and hand-washing facilities 24 hours per day and are able to use toilet facilities without staff assistance when they are confined in their cells/sleeping areas.

Toilets are provided at a minimum ratio of 1 for every 12 inmates in male facilities and 1 for every 8 inmates in female facilities. Urinals may be substituted for up to one-half of the toilets in male facilities. All housing units with three or more inmates have a minimum of two toilets. These ratios apply unless national or state building or health codes specify a different ratio.


Washbasins

- ☐  **5-ACI-2C-07 (Ref. 4-4138):** Inmates have access to operable wash basins with hot and cold running water in the housing units at a minimum ratio of one basin for every 12 occupants, unless national or state building or health codes specify a different ratio.


Showers

- ☐  **5-ACI-2C-09 (Ref. 4-4139):** Inmates have access to operable showers with temperature-controlled hot and cold running water, at a minimum ratio of one shower for every 12 inmates. Water for showers is thermostatically controlled to temperatures ranging from 100 degrees Fahrenheit to 120 degrees Fahrenheit to ensure the safety of inmates and to promote hygienic practices. These ratios and temperatures shall apply unless national or state building or health codes specify a different ratio.

Housing for the Disabled



- ☐  **5-ACI-2C-11 (Ref. 4-4142):** Inmates with disabilities are housed in a manner that provides for their safety and security. Housing used by inmates with disabilities is designed for their use and provides for integration with other inmates. Programs and services are accessible to inmates with disabilities who reside in the facility.

Light Levels



- ☐  **5-ACI-2D-01 (Ref. 4-4145):** Lighting throughout the facility is determined by the tasks to be performed, interior surface finishes and colors, type and spacing of light sources, outside lighting, and shadows and glare.

5-ACI-2D-02 (Ref. 4-4146): Lighting in inmate rooms/cells is at least 20-foot-candles at desk level and in personal grooming areas, as documented by a qualified source, and is checked at least once per accreditation cycle.



Natural Light (Inmate Rooms/Cells)

- ☐  5-ACI-2D-03 (Ref. 4-4147): (Existing only). All inmate rooms/cells provide access to natural light.
- ☐  5-ACI-2D-04 (Ref. 4-4147-1): (Renovation, New Construction after June 1, 2008). All inmate rooms/cells provide inmates with access to natural light by means of at least three-square feet of transparent glazing, plus two additional square feet of transparent glazing per inmate in rooms/cells with three or more inmates.


Natural Light (Dayrooms)

- ☐  5-ACI-2D-05 (Ref. 4-4147-2): (New Construction or Renovation after June 1, 2014). Each dormitory provides inmates with access to natural light by means of at least 12 square feet, plus two additional square feet of transparent glazing per inmate in the dormitory.
- ☐  5-ACI-2D-07 (Ref. 4-4150): Noise levels in inmate housing units do not exceed 70 dBA (A Scale). Measurements shall be conducted annually by a qualified source with at least one measurement taking place during nighttime and one measurement taking place during daytime.


Indoor Air Quality

- ☐  5-ACI-2D-08 (Ref. 4-4151): (Renovation, New Construction Only after January 1, 1990). Circulation is at least 15 cubic feet of outside or recirculated filtered air per minute per occupant for cells/rooms, officer stations, and dining areas, as documented by a qualified technician and should be checked not less than once every 3-year accreditation cycle.
- ☐  5-ACI-2D-09 (Ref. 4-4152): (Existing). Circulation is at least 10-cubic feet of fresh or recirculated filtered air per minute per occupant for inmate rooms/cells, officer stations, and dining areas, as documented by a qualified technician and should be checked not less than once every 3-year accreditation cycle.

Heating and Cooling

- ☐  **5-ACI-2D-10 (Ref. 4-4153):** Temperatures in indoor living and work areas are appropriate to the summer and winter comfort zones.


Exercise and Recreation

- ☐  **5-ACI-2E-01 (Ref. 4-4154):** Both outdoor and covered/enclosed exercise areas for general population in- mates are provided in sufficient number to ensure that each inmate is offered at least one hour of access daily. Use of outdoor areas is preferred but covered/enclosed areas must be available for use in inclement weather. Covered/ enclosed areas can be designed for multiple uses as long as the design and furnishings do not interfere with scheduled exercise activities. The minimum space requirements for exercise areas are as follows:


- + Outdoor exercise areas in facilities where 100 or more inmates utilize one recreation area: 15-square feet per inmate for the maximum number of inmates expected to use the space at one time, but not less than 1,500 square feet of unencumbered space
- + Outdoor exercise areas in facilities where less than 100 inmates have unlimited access to an individual recreation area: 15-square feet per inmate for the maximum number of inmates expected to use the space at one time, but not less than 750-square feet of unencumbered space
- + Covered/enclosed exercise areas in facilities where 100 or more inmates utilize one recreation area: 15-square feet per inmate for the maximum number of inmates expected to use the space at one time, with a minimum ceiling height of 18 feet, but not less than 1,000-square feet of unencumbered space
- + Covered/enclosed exercise areas in facilities where less than 100 inmates utilize one recreation area: 15-square feet per inmate for the maximum number of inmates expected to use the space at one time, with a minimum ceiling height of 18 feet, but not less than 500-square feet of unencumbered space

PERFORMANCE STANDARDS


Visiting

- ☐  5-ACI-2E-03 (Ref. 4-4156): Sufficient space is provided for a visiting room or area for contact visiting and, if necessary, noncontact visiting. There is adequately designed space to permit screening and searching of both inmates and visitors. Space is provided for the proper storage of visitors' coats, handbags, and other personal items not allowed into the visiting area.

Classrooms

- ☐  5-ACI-2E-04 (Ref. 4-4157): (Renovation, New Construction Only after January 1, 1990). In institutions offering academic and vocational training programs, classrooms are designed in consultation with school authorities.


Dining

- ☐  5-ACI-2E-05 (Ref. 4-4158): There is space for group dining except when security or safety considerations justify otherwise, and the space is large enough to allow for meals to be served, affording each inmate the opportunity to have at least 20 minutes of dining time for each meal.

Housekeeping

- ☐  5-ACI-2E-08 (Ref. 4-4162): Adequate space is provided for janitorial closets accessible to the living and activity areas. The closets are equipped with a sink and cleaning implements.


Clothing and Supplies

- ☐  5-ACI-2E-09 (Ref. 4-4163): Space is provided in the institution to store and issue clothing, bedding, cleaning supplies, and other items required for daily operations.

Personal Property

- ☐  5-ACI-2E-10 (Ref. 4-4164): Space is provided for storing the personal property of inmates safely and securely.

Mechanical Equipment

- ☐  5-ACI-2E-11 (Ref. 4-4165): Separate and adequate space is provided for mechanical and electrical equipment.

Commissary/Canteen



5-ACI-2E-12 (Ref. 4-4166): Space is provided for an inmate commissary or canteen, or provisions are made for a commissary service.

Administrative Areas



5-ACI-2F-01 (Ref. 4-4167): Adequate space is provided for administrative, security, professional, and clerical staff; this space includes conference rooms, storage room for records, a public lobby, and toilet facilities.

Staff Areas



5-ACI-2F-02 (Ref. 4-4168): Staff needs are met through providing adequate spaces in locations that are convenient for use. Staff are provided with the following:

- + an area to change clothes and to shower
- + an area, room, and/or employee lounge that offers privacy from inmates and provides space for meals
- + access to exercise/physical training facilities and equipment
- + space for training
- + space for shift-change briefings
- + toilets and washbasins that are not used by inmates

JACKSON COUNTY CHANTER ROAD FACILITY CONCEPTUAL DESIGN



JACKSON COUNTY CHANTER ROAD FACILITY COSTS

PROJECT : Jackson County Chanter Road Addition & Renovations

LOCATION : Jackson, MI

Chanter Rd Addition & Renovations Program 60,375

Chanter Road Addition & Renovation Program Opinion of Cost									
CSI	Description of Work	Quantity	Unit	Unit Cost (Low)	Unit Cost (Medium)	Unit Cost (High)	Total (Low)	Total (Medium)	Total (High)
02 00 00	Existing Conditions	60,375	SF	\$3.53	\$3.67	\$5.42	\$212,832.66	\$221,727.75	\$327,169.93
03 00 00	Concrete	60,375	SF	\$21.05	\$22.16	\$24.37	\$1,270,943.73	\$1,337,835.50	\$1,471,619.05
04 00 00	Masonry	60,375	SF	\$40.44	\$42.57	\$46.83	\$2,441,651.05	\$2,570,159.00	\$2,827,174.90
05 00 00	Metals	60,375	SF	\$30.87	\$32.50	\$35.74	\$1,863,804.05	\$1,961,899.00	\$2,158,088.90
06 00 00	Woods, Plastics, and Composites	60,375	SF	\$12.40	\$13.05	\$14.35	\$748,396.23	\$787,785.50	\$866,564.05
07 00 00	Thermal and Moisture Protection	60,375	SF	\$54.57	\$57.44	\$63.19	\$3,294,648.21	\$3,468,050.75	\$3,814,855.83
08 00 00	Openings	60,375	SF	\$15.49	\$16.31	\$17.94	\$935,318.23	\$984,545.50	\$1,083,000.05
09 00 00	Finishes	60,375	SF	\$28.81	\$30.33	\$33.36	\$1,739,471.14	\$1,831,022.25	\$2,014,124.48
11 00 00	Equipment	60,375	SF	\$106.06	\$111.64	\$122.80	\$6,403,242.73	\$6,740,255.50	\$7,414,281.05
13 00 00	Special Construction	60,375	SF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
14 00 00	Conveying Systems	60,375	SF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
21 00 00	Fire Suppression	60,375	SF	\$6.58	\$6.93	\$7.62	\$397,563.36	\$418,487.75	\$460,336.53
22 00 00	Plumbing, Heating, Ventilating, & AC	60,375	SF	\$97.55	\$102.68	\$112.95	\$5,889,504.34	\$6,199,478.25	\$6,819,426.08
26 00 00	Electrical	60,375	SF	\$48.42	\$50.97	\$56.07	\$2,923,569.19	\$3,077,441.25	\$3,385,185.38
28 00 00	Electronic Security	60,375	SF	\$19.92	\$20.97	\$23.07	\$1,202,881.69	\$1,266,191.25	\$1,392,810.38
31 00 00	Earthwork	60,375	SF	\$47.64	\$50.14	\$55.16	\$2,876,025.44	\$3,027,395.20	\$3,330,134.72
CONSTRUCTION HARD COSTS SUBTOTAL :							\$32,199,852.03	\$33,892,274.45	\$37,364,771.30
00 00 00	Design Contingency	10.00	%				\$3,219,985.20	\$3,389,227.45	\$3,736,477.13
00 00 00	CM Construction Contingency	3.00	%				\$965,995.56	\$1,016,768.23	\$1,120,943.14
00 00 00	Construction General Conditions	3.00	%				\$965,995.56	\$1,016,768.23	\$1,120,943.14
00 00 00	CM Staffing & CM General Conditions	1	LS				\$1,035,023.00	\$1,035,023.00	\$1,035,023.00
00 00 00	CM Fee, Bonds, & Insurances	4.82	%				\$1,850,246.24	\$1,944,872.96	\$2,139,027.20
CONSTRUCTION SOFT COSTS SUBTOTAL :							\$8,037,245.56	\$8,402,659.87	\$9,152,413.61
TOTAL CONSTRUCTION COST :			SF	\$666.45	\$700.54	\$770.47	\$40,237,097.59	\$42,294,934.32	\$46,517,184.90
00 00 00	Design Fees	6.50	%				\$2,615,411.34	\$2,749,170.73	\$3,023,617.02
00 00 00	Owner FF&E	5.00	%				\$2,011,854.88	\$2,114,746.72	\$2,325,859.25
00 00 00	Owner Contingency	5.00	%				\$2,011,854.88	\$2,114,746.72	\$2,325,859.25
00 00 00	Utility Fees, Geotechnical, & Testing	1	LS				\$270,000.00	\$270,000.00	\$270,000.00
OWNER SOFT COSTS SUBTOTAL :							\$6,909,121.10	\$7,248,664.16	\$7,945,335.51
TOTAL CHANTER RD PROJECT COST :			SF	\$780.89	\$820.60	\$902.07	\$47,146,218.69	\$49,543,598.48	\$54,462,520.41

Public opinion was analyzed to confirm we are proceeding on the correct course. As a result, it became clear that public safety is the most important factor to be considered. To enhance public safety, the Sheriff began looking at ways to combine the patrol and corrections divisions instead of keeping them separate. Moving the jail onto Chanter Road will have an impact on how the Sheriff's Office conducts business. Combining patrol and corrections reduces the impact and results in increased efficiency.

Total project cost:	Low	Mid	High
	\$47,146,218.69	\$49,543,598.48	\$54,462,520.41

Overview of Modifications and Additions:

A Barracks becomes Booking: Same as Option 2 with one addition, the covered walkway would become an enclosed walkway for the transportation of food to the jail from the current chow hall.

A Barracks 126 single purpose beds would be replaced with the booking center. Booking will have 25 holding cells, four of which would be padded.

Laundry, property, and medical would be moved to booking as well.

The addition of a secured, covered, and enclosed corridor would be added between booking and the new jail, along with a secured corridor for the release of inmates.

Jail Addition: The jail addition would contain 250 all-purpose beds. This is an increase of 65 all-purpose beds.

Women's Dormitory: Currently there is no step-down unit for female inmates. This would solve that problem and create a dorm, similar to the male dorms that currently exist. Total space created would be between 30 to 55 beds.

Control Center: This is where the majority of the modifications occur. The locker room is inserted in this area to encompass all employees. The movement of the current fitness center is necessary to accommodate this as well as other modifications. Patrol's movement necessitates the need for a detail room, armory, and a sergeant's office.

Command movement will not take many modifications. It will essentially be the addition of two walls and three doors, with the rest of the area remaining unchanged. This will include the Sheriff and Undersheriff's satellite offices.

Administrative and Training Building:

The firearms simulator is moved from the control center to the administrative building, and would be housed where the men's locker room now sits. The Accident Investigation room would also move from the control center to where the women's locker room now sits.

A wall would be erected in the lobby area greatly reducing the space open to the public. This addresses a security concern, and opens up possibilities for use of the space in the future.

Summary:

This proposal eliminates many of the issues that occur with the separation of the two divisions, thereby enhancing public safety. It does this in a number of ways:

- Emergencies and Resource Efficiency: Allows for resources to be deployed easier and faster where they are needed during an emergency or large scale event, such as an escape, riot, or major disturbance.
- More Efficient Resource Utilization: It enhances our ability to meet needs for more personnel for medical and court transports. Reduces the duplication of administrative efforts. Centralizes equipment, which is incredibly important during an emergency.
- Streamlines Communication: Proximity fosters better communication and collaboration improving coordination during emergencies and joint operations. It also makes regular sharing of critical information easier.
- Enhanced Training Opportunities: Facilitates joint trainings making us more versatile and prepared for various scenarios.
- Increases accountability: Having both divisions in one location enhances oversight and makes the operation safer.

In addition, it optimizes our space. It reduces our overall footprint and is the smartest plan for Jackson County.