



Scott County JDC and Jail Assessment



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Roger Schroepfer	Wold Architects and Engineers
Kirsta Ehmke	Wold Architects and Engineers

We wish to thank the County, including all participating Departments, for their time in providing the resources and information necessary to complete this study. We are prepared to aid the County with any additional analysis and services required to explore the implementation of this study. Thank you for your consideration.

A handwritten signature in black ink, appearing to read 'R. Schroepfer', written over a horizontal line.

**Roger Schroepfer, AIA, LEED AP BD+C, NENA
Partner**



EXECUTIVE SUMMARY

In the summer of 2018 Scott County began the process of assessing the needs of the Juvenile Detention Center (JDC) and the Jail. The impetus of this assessment was the perceivable change in correctional populations and the ability of the existing facilities to adapt to these changes. The County then partnered with Wold Architects and Engineers and Justice Planners to complete an assessment study with the intent to develop a plan that will establish current and future capacity requirements, and associated operational costs.

This document is the result of numerous conversations with the Core Planning Group working toward a better understanding of the short term and long-term space and staffing needs of the Juvenile Detention Center and the Jail. Due to the nature of the study, the Juvenile Detention Center and Jail needs were divided into separate sections within the following report. Each section documents the methodologies, calculations and recommendations for each facility as a standalone model allowing the County to assess each facility as its own entity. Building options for each facility are documented at the end of the report in a combined section due to the possibility of the facilities sharing the same site and documenting potential opportunities or complications.

The specific staffing and space needs identified for the JDC and the Jail, as shown in the tables below, are the basis for determining the potential building options. This data is expounded upon in each facility section.

Table JDC ES-1
Projected JDC Bedspace Need

Juvenile Bed Space (JDC + Out County)	2017	2022	2027	2032	2037
Juvenile ADP - Projected	13	26	33	40	48
Peaking (27.9%)	4	7	9	11	13
Classification (5.0%)	1	1	2	2	2
Bedspace Needed	18	34	43	53	64

Source: Justice Planners, January 2019.

Table JDC ES-4
Recommended JDC Staffing Summary

Scott County JDC - 64 Beds	Admin	Day	Evening	Night	Days/Week	Rounded FTEs
Post/Position	M-F					
Subtotal Director	1.00	0.00	0.00	0.00	5.00	1.00
Subtotal Assistant Director	1.00	0.00	0.00	0.00	5.00	1.00
Subtotal Shift Leaders	0.00	1.00	0.00	1.00	5.00	2.00
Subtotal Youth Counselors	0.00	14.00	13.00	9.00	7.00	60.00
Subtotal Non-Counselors	2.00	0.00	0.00	0.00	5.00	2.00
Total Staff Needed:						66

Table JAIL ES-1
Scott County Jail Bedspace Projections

Bedspace Projections	2017	2022	2027	2032	2037
Adult ADP - Projected	335	352	375	400	425
Peaking (9.0%)	30	32	34	36	38
Classification (5.0%)	17	18	19	20	21
Bedspace Needed - Projected	382	401	428	456	484

Table JAIL ES-4
Expanded Jail Staffing Summary

Expanded Scott County Jail Post/Position	Admin				Total FTEs	Rounded FTEs
	M-F	Day	Night	NAWH		
Subtotal Major	1.00	0.00	0.00		1.00	1
Subtotal Captain	1.00	0.00	0.00		1.00	1
Subtotal Lieutenants	0.00	1.00	1.00		2.00	2
Subtotal Sergeants	1.00	3.00	3.00	1,754.14	16.98	17
Subtotal Correctional Officers	0.00	21.33	17.00	1,852.80	89.37	89
Subtotal Non-Correctional Officer	14.00	44.66	112.66		18.00	18
Total Staff Needed:					128	

From this data, three building/site options were developed. Each option was evaluated on long-term usefulness, operations impacts, site impacts, and security and required juvenile/adult sight and sound separation.

Option #1 – Separate JDC and Jail buildings located on the Downtown Campus Site;



MAIN LEVEL

Option #2 – Combined JDC and Jail buildings located on the Downtown Campus Site;



MAIN LEVEL



UPPER LEVEL

Option #3 – Addition to Jail on Downtown Courthouse Campus; Relocate the JDC to new facility on new site.



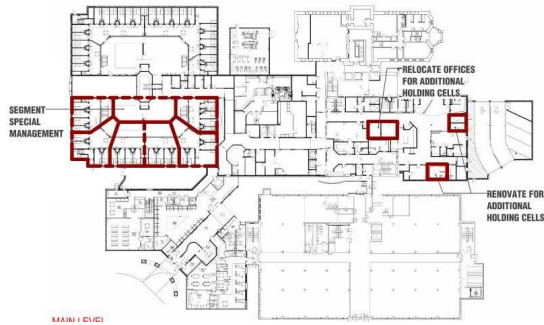
JDC – NEW BUILDING NEW SITE



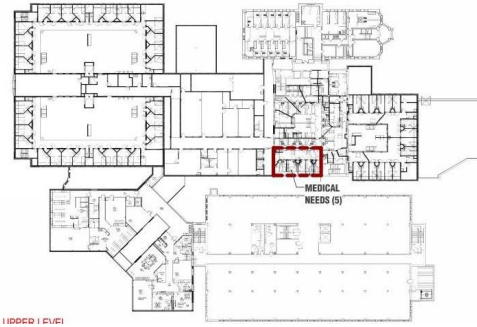
JAIL – MAX FOOTPRINT BUILD-OUT

Each option was budgeted into phases based on projected bedspace needs. Phase One assumes construction to meet the projected bedspace needs of 2027. Phase Two assumes construction to meet the projected bedspace needs of 2037. Not to lose sight of immediate needs, an additional option (Option #3A and #3B) was evaluated for potential interior renovations at the Jail, which would be considered an interim step, or Phase 0, that can be implemented prior to Phase One construction at the Jail.

Phase 0 – Interior Renovations at the Jail



JAIL – MAIN LEVEL



JAIL – UPPER LEVEL

After evaluating all of the Options, the Core Planning Group determined that the ideal course of action would be to continue with the construction of Option #3. The phasing of Option #3 should provide an immediate focus on the long-term needs of the JDC beginning with a Phase One design, and focus only on the short-term interior renovations Option #3B for the Jail. The intent for this recommendation would be to begin design immediately with building occupancy in 2022. Estimated budget numbers for this recommendation is \$23,298,600 for the JDC Phase One work, and \$6,590,675 for the Jail renovations. The Group determined that the Phase One work of the Jail should be included in the County Master Plan for occupancy in the next 5-8 years.

JUVENILE DETENTION CENTER NEEDS ASSESSMENT

Executive Summary

The Scott County Juvenile Detention Center (JDC) and Adult Jail have been experiencing growth in their respective populations. The JDC population remained fairly steady from 2008 through 2016. With averages between 8.4 and 11.5 youths, the 16-bed JDC could easily accommodate housing those remanded to this facility. However, in 2017 the average number of youths increased to 13.3 and then rose to 21.9 in 2018 making it necessary to house many of the youth in other counties. Policy changes had been enacted to address the rising number of youth-related automobile thefts in the County. These changes have resulted in an increase in the number of youth charged with criminal offenses and, in turn, an increase in the number of commitments to the JDC. The JDC does not have the capacity to house the rising number of youth that are being committed to the facility.

County Trends

In the last decade, from 2008 through 2017, the general population in Scott County has grown from 164,437 to 172,509, a 4.9 percent increase. By the year 2037 this is expected to increase to 182,434 residents. And while the general population is increasing, the number of juveniles aged 15 to 19 is projected to decline steadily.

Figure JDC ES-1
Historic and Projected County Population

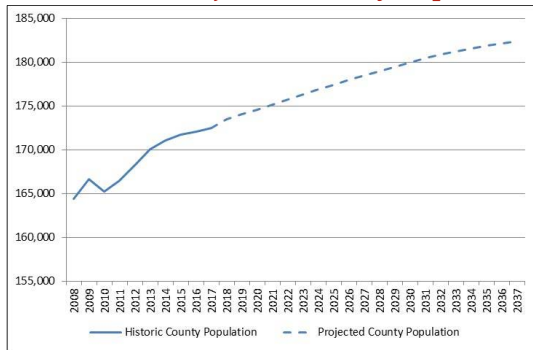
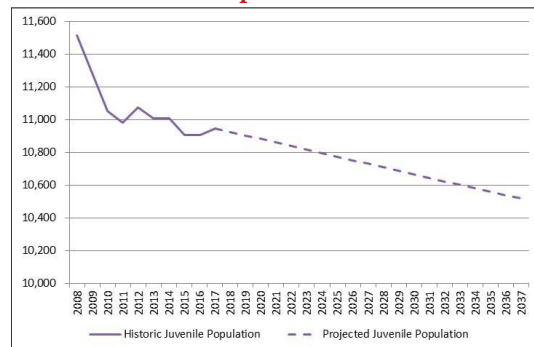


Figure JDC ES-2
Historic and Projected County Juvenile Population



The total number of reported criminal offenses have fluctuated over the last 10 years but were only about 10% higher in 2017 than in 2008. This rate has kept pace with the overall increase in the general population.

Juvenile Detention Center Trends

The number of juvenile admissions dropped from a 10-year high of 300 in 2008 to a low of 176 in 2014. However, it has been steadily increasing since, reaching a high of 384 admissions in 2018. The average daily population (ADP) trends have been consistent with the number of admissions. The recent increase in the ADP is also influenced by an increase in the average length of stay (ALOS) of the population.

Figure JDC ES-3
Scott County Juvenile Annual Bookings

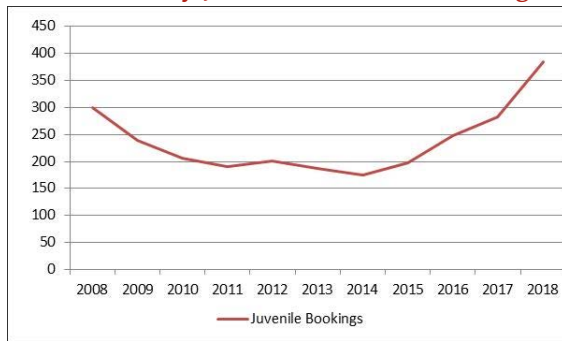
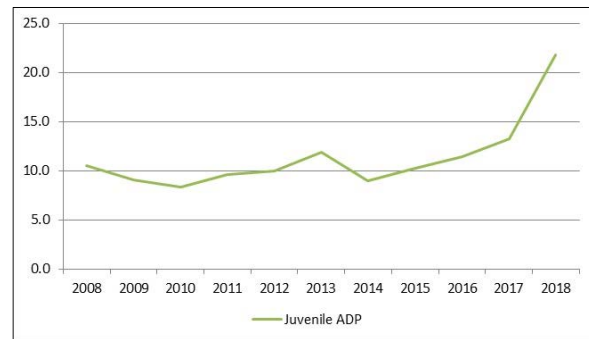


Figure JDC ES-4
Juvenile ADP, Including Out of County Placements



County staff have reported that policy changes were enacted to address the rising number of youth-related crimes in the County, primarily automobile thefts. These changes have resulted in an increase in the number of youth being criminally charged and committed to the JDC.

During the stakeholder interviews in October 2018 it was reported that the amount of juvenile-involved crime was remaining fairly steady. However, the way the juveniles are now being charged and processed has resulted in an increase in the amount of bookings into the JDC.

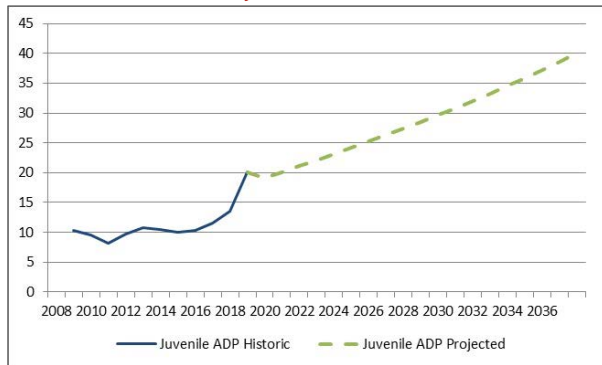
Juvenile Detention Center Projections

Baseline estimates of the juvenile detention and adult jail population were generated in five-year increments using twelve projection models. Each model uses different independent variables and different statistical methods to analyze and project historic data. The 2018 annual average daily population served as the base year.

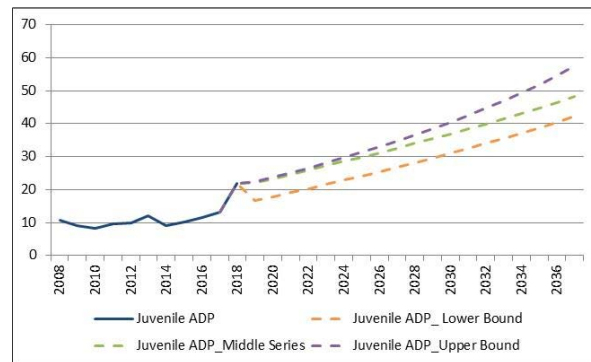
The total juvenile ADP, including those housed out of county, is projected to increase to 48 in 2037. This will be an increase of 263 percent from 2017. These projected juvenile numbers consider the projected decreases in the county general juvenile population and are heavily influenced by the recent increases in the juveniles detained by the County.

The same models used in the projected ADP are used for the lower and upper bound projections. The lower ratios and lower confidence intervals of the regression models yield the lower bounds projected juvenile ADP which increases from 13 in 2017 to 27 in 2027 to 42 in 2037. While the higher ratios from the historical data and the upper confidence intervals of the regression models used for the upper bounds projections increases the ADP from 13 in 2017 to 57 in 2037.

**Figure JDC ES-5
Historic and Projected Total Juvenile ADP**



**Figure JDC ES-6
ADP Projections: Lower, Middle and Upper Bounds**



Juvenile Detention Bedspace Needs

Criminal justice facilities cannot be planned for the ADP solely; peaks in population must be accommodated, along with beds for differing inmate classification. The peaking and classification factors for juveniles are 27.9 percent peaking from historical monthly juvenile data and a 5.0 percent classification figure. The bedspace need for juveniles is projected to be 34 beds in 2022, and then nearly double to 64 beds by 2037.

**Table JDC-ES-1
Projected JDC Bedspace Need**

Juvenile Bed Space (JDC + Out County)	2017	2022	2027	2032	2037
Juvenile ADP - Projected	13	26	33	40	48
Peaking (27.9%)	4	7	9	11	13
Classification (5.0%)	1	1	2	2	2
Bedspace Needed	18	34	43	53	64

Source: Justice Planners, January 2019.



Juvenile Justice Delinquency Prevention Act

In March 2019, the JDC staff received notice that the Juvenile Justice Delinquency Prevention Act (JJDP A) was re-authorized by the US Congress. The JDC staff anticipates that as of December 2021, all adult wavier juveniles awaiting trial will need to be held in juvenile detention centers unless a judge makes a finding that the juvenile cannot safely be held in a JDC and must be held in an adult jail. Staff estimate that most adult wavier juveniles will need to be held in juvenile detention centers as of that date to comply with federal law.

According to the monthly data provided for the Needs Assessment, the Juveniles in the adult jail averaged less than one from March 2008 to September 2018. This number has increased in the last 18 months, and updated classification data provided in March 2019 increases the recent average daily population of juveniles held in the jail. The updated ADP was 9.1 juveniles in 2017 and 11.7 juveniles in jail in 2018, and the partial year data for 2019 is 13.1 juveniles.

Along with the policy impacts of the JJDP A in 2021, Scott County should monitor the effects of these recent changes in juvenile justice. The Needs Assessment shows a bed space need for Juveniles at 64 from its current 16 bed capacity. Anticipating legislative and/or policy changes is a prudent exercise, however in this case the effects should be absorbed within the upper and lower bound bed space needs analysis.

JDC Proposed Expansion

To increase the housing capacity of the JDC to meet the projected 2037 need would require the addition of 48 youth beds, along with support space consisting of Staff Spaces, Health Services, Program Services, and Support Service (food and laundry).

Table JDC ES-2
48-Bed JDC Expansion Space Requirement

Component	Net Square Feet	Department Gross SF	Bldg Gross - 15%	Total BGSF
1.000 Staff Spaces	808.00	1,050.40	157.56	1,207.96
2.000 Health Services	625.00	875.00	131.25	1,006.25
3.000 Program Services	1,880.00	2,444.00	366.60	2,810.60
4.000 Living Units	12,432.00	18,026.40	2,703.96	20,730.36
5.000 Support Services	1,967.00	2,360.40	354.06	2,714.46
6.000 Court	2,380.00	2,975.00	446.25	3,421.25
GRAND TOTALS	20,092.00	27,731.20	4,159.68	31,890.88

Source: Wold-Justice Planners, January 2019

The additional administrative spaces needed for the JDC staff consists of two additional staff offices and a meeting space for 6 staff. Staff facilities space would also be needed for the additional staff including a secure staff entry vestibule, staff break room and washrooms.



The proposed space addition includes a health services area with proper office space, examination room, and proper storage space for medications, equipment, supplies and refuse.

Increasing the size of the JDC will require additional program spaces for the youth. This proposed new space will include additional interview rooms, classrooms with storage space for class supplies, and additional visitation space.

To accommodate the housing of 48 additional youth, the proposed space plan includes four 12-bed living units. Each living unit will have 12 individual bedrooms, program and recreation space and an outdoor recreation courtyard.

If it is decided that the JDC will be a self-sufficient operation, completely separate from the adult jail, then fully operational food preparation and laundry services areas will be required.

A dedicated courtroom is suggested for the expanded JDC which will improve operational efficiency and eliminate the need to transport the juveniles outside the building to go to court.

Staffing

Even though the Juvenile Detention Center is experiencing some of the highest numbers of youth held in recent memory, the staffing complement in the JDC appears adequate. However, if the housing capacity is increased, the staff must increase as well.

Methodology

The process used for evaluating the staff needs was based on the *Staffing Analysis Workbook for Jails: Second Edition*, which was produced by the National Institute of Corrections, and is considered the “industry standard” process for determining appropriate staffing for local corrections. Completed tasks included document reviews, on-site analyses, evaluation of security post assignments, and staff relief calculations.

Relief Calculations

Properly staffing a jail involves much more than multiplying the number of posts to be covered by the number of shifts. Due to longevity, differences in leave accrual and benefits, a separate relief factor, known as Net Annual Work Hours (NAWH), was calculated for each rank and classification of staff that require relief coverage. This ensures the most accurate projected of staff required.

**Table JDC ES-3
Relief Factor Calculations**

Relief Factor	JDC
Hours per year	8,760
Hours per year divided by NAWH	5.04
Relief Factor	1.26

Source: Justice Planners, November 2018

Simply put, for the amount of time *actually taken* away from their post/position each JDC staff that work with the youth requires 1.19 staff to fully fill each position.

JDC Staffing Findings Recommendations

1. If the Board of Supervisors decides to expand to 64 youth beds, the number of recommended Youth Counselors will need to be increased.
2. An increase in the resident population of the JDC will create the need for an Assistant Director.
3. The increase in administrative activities will also justify adding an Administrative Assistant position.
4. A Nurse should be added to the staffing complement of the JDC as the capacity of the facility is increased, rather than relying on the nurses from the adult jail.

5. Table JDC ES-4 shows the recommended JDC staff position summaries for a 64-bed JDC with relief calculations added.

Table JDC ES-4
Recommended JDC Staffing Summary

Scott County JDC - 64 Beds		Admin	Day	Evening	Night	Days/ Week	Rounded FTEs
Post/Position	M-F	Day	Evening	Night	Days/ Week	Rounded FTEs	
Subtotal Director	1.00	0.00	0.00	0.00	5.00	1.00	
Subtotal Assistant Director	1.00	0.00	0.00	0.00	5.00	1.00	
Subtotal Shift Leaders	0.00	1.00	0.00	1.00	5.00	2.00	
Subtotal Youth Counselors	0.00	14.00	13.00	9.00	7.00	60.00	
Subtotal Non-Counselors	2.00	0.00	0.00	0.00	5.00	2.00	
Total Staff Needed:						66	

Not all new staff will be needed at one time. While the bedspace need of the JDC is expected to grow to 64 beds by 2037, they will not all come at once. After 2022, when the bedspace need is projected to be 34 beds, the growth will average 9.5 beds every 5 years. Therefore, the County should plan for staffing increases to keep pace with the growing numbers of youth to be detained, maintaining a 1:5 ratio of staff-to-youth during the day as required by *Title XII Licensing and Approved Standards, Chapter 105: Juvenile Detention and Shelter Care Homes*.

- The bedspace need in 2030 will be approximately 50 beds. A first phase of construction could be to add three of the four projected Living Units and add the fourth Living Unit as a future phase. This would reduce the initial construction by approximately 8,000 square feet and reduce the initial staffing addition by 14 FTEs.

Table: JDC ES-5
Initial Phase: JDC Space Summary

Component	Net Square Feet	Department Gross SF	Bldg Gross - 15%	Total BGSF
1.000 Staff Spaces	808.00	1,050.40	157.56	1,207.96
2.000 Health Services	625.00	875.00	131.25	1,006.25
3.000 Program Services	1,880.00	2,444.00	366.60	2,810.60
4.000 Living Units (3)	9,324.00	13,519.80	2,027.97	15,547.77
GRAND TOTALS	12,637.00	17,889.20	2,683.38	20,572.58

Table: JDC ES-6
Initial Phase: JDC Staffing Summary

Scott County JDC - 48 Beds		Admin	Day	Evening	Night	Days/ Week	Rounded FTEs
Post/Position	M-F	Day	Evening	Night	Days/ Week	Rounded FTEs	
Subtotal Director	1.00	0.00	0.00	0.00	5.00	1	
Subtotal Assistant Director	1.00	0.00	0.00	0.00	5.00	1	
Subtotal Shift Leaders	0.00	1.00	0.00	1.00	5.00	2	
Subtotal Youth Counselors	0.00	10.00	10.00	7.00	7.00	45	
Subtotal Non-Counselors	2.00	0.00	0.00	0.00	5.00	2	
Total Staff Needed:						51	



JDC Salaries and Benefits

Projected salaries have been applied to the recommended staffing using multiple sources provided by County officials. For existing positions (posts) the average salaries were applied to each job classification based upon the *Position Budget Report for Budget Year 2020*. These amounts include the base wage, tax, benefit and workers' compensation.

The Phase One addition to the JDC involves building 48 beds of housing, which is the majority of the 2037 capacity of 64 youth. This will require increasing the number of Youth Counselors from 15 (currently) to 45. These additional staff positions have been added at Step 1 of the pay scale based upon the *Scott County Salary Rate Table for FY 2020* and escalated accordingly.

Table: JDC ES-7
Recommended JDC 2022 Staffing & Salary Summary

Scott County JDC - 2022	Total	Rounded			
Post/Position	FTEs	FTEs	2022	2027	2031
Subtotal Director	1.00	1	\$ 153,621.14	\$ 171,698.93	\$ 187,681.23
Subtotal Assistant Director	1.00	1	\$ 117,173.18	\$ 130,961.85	\$ 143,152.21
Subtotal Shift Leaders	2.00	2	\$ 194,305.15	\$ 217,170.53	\$ 237,385.48
Subtotal Youth Counselors	45.34	45	\$ 3,122,412.11	\$ 3,563,477.44	\$ 3,918,499.34
Subtotal Non-Counselors	2.00	2	\$ 158,414.05	\$ 177,055.85	\$ 193,536.80
Total Staff Needed:		51	\$ 3,745,925.64	\$ 4,260,364.59	\$ 4,680,255.06

Source: Justice Planners, May 2019

The first phase of construction is estimated to provide adequate inmate housing until 2032. At this time the Phase Two expansion should come online to provide an additional housing unit that should provide enough housing through 2037. This housing unit will require an additional 15 Youth Counselor FTEs to provide for safe, secure operations. These additional positions have been added to the projected staffing and salaries beginning in 2032. They have been added at Step 1 of the pay scale based upon the Scott County Salary Rate Table for FY 2020 and escalated accordingly.

Table: JDC ES-8
Recommended JDC 2032 Staffing & Salary Summary

Scott County JDC - 2032	Total	Rounded		
Post/Position	FTEs	FTEs	2032	2037
Subtotal Director	1.00	1	\$ 191,904.06	\$ 214,486.89
Subtotal Assistant Director	1.00	1	\$ 146,373.14	\$ 163,597.99
Subtotal Shift Leaders	2.00	2	\$ 242,726.66	\$ 271,290.17
Subtotal Youth Counselors	59.97	60	\$ 5,160,293.87	\$ 5,797,187.01
Subtotal Non-Counselors	2.00	2	\$ 197,891.37	\$ 221,178.77
Total Staff Needed:		66	\$ 5,939,189.09	\$ 6,667,740.83

Source: Justice Planners, May 2019



JDC phased-ADDITIONAL CAPACITY

When the JDC completes the initial phase of constructing additional capacity, there will (should) be a period of time when there are additional beds beyond the immediate need for Scott County.

The projected bedspace need for the JDC in 2022 is 34 beds. If the County were to build to the 2032 need of 53 beds, then upon opening in/around 2022 there would be an additional 19 beds on average. The County could choose to rent the additional these 19 beds to other jurisdictions until the Scott County juvenile population increases.

Scott County is currently paying \$150 - \$200 per day to house excess juveniles in other jurisdictions. Using this range of fees, the initial 19 additional beds could be rented for between \$999,000 and \$1,332,000 the first year (2019 dollars). To meet the required ratio of one staff person for every 5 youth, additional Youth Counselors would be required to fully staff these rented bedspaces. The table below shows the additional Youth Counselors that would be required and their escalated salary costs.

Table: JDC ES-9
Additional Bed Rental if Phased

JDC Year	Additional Beds	Per Diem*			Youth Counselor	Counselor Costs**
		\$150	\$175	\$200		
2022	19	\$ 999,000	\$ 1,165,500	\$ 1,332,000	18	\$ 1,492,269
2023	17	\$ 891,000	\$ 1,039,500	\$ 1,188,000	18	\$ 1,525,845
2024	15	\$ 783,000	\$ 913,500	\$ 1,044,000	13	\$ 1,126,794
2025	13	\$ 675,000	\$ 787,500	\$ 900,000	13	\$ 1,152,147
2026	11	\$ 567,000	\$ 661,500	\$ 756,000	13	\$ 1,178,070
2027	9	\$ 459,000	\$ 535,500	\$ 612,000	10	\$ 526,597
2028	7	\$ 351,000	\$ 409,500	\$ 468,000	10	\$ 947,446
2029	5	\$ 243,000	\$ 283,500	\$ 324,000	5	\$ 484,382
2030	3	\$ 135,000	\$ 157,500	\$ 180,000	5	\$ 495,280
2031	1	\$ 27,000	\$ 31,500	\$ 36,000	5	\$ 506,424
2032	0	\$ -	\$ -	\$ -	\$ -	\$ -

* per diem amounts are shown in 2019 dollars

** Counselor costs are escalated each year

Source: Justice Planners

Another option is, rather than phasing the construction, build to the full 2037 need of 64 beds. This will result in about 30 additional beds upon opening in/around 2022. Using the same ranges of fees, the County could see revenues between \$1,593,000 and \$2,124,000 if all 30 beds were rented to youth from other jurisdictions the first year (2019 dollars). As described above, one Youth Counselor will be needed for every 5 youth to fully staff these rented bedspaces. The table below shows the additional Youth Counselors that would be required and their escalated salary costs.

Table: JDC ES-10
Additional Bed Rental for Full Buildout

JDC Year	Additional Beds	Per Diem			Youth Counselor	Counselor Costs**
		\$150	\$175	\$200		
2022	30	\$1,593,000	\$1,858,500	\$2,124,000	27	\$ 2,238,403
2023	28	\$1,485,000	\$1,732,500	\$1,980,000	27	\$ 2,288,767
2024	26	\$1,377,000	\$1,606,500	\$1,836,000	27	\$ 2,340,264
2025	24	\$1,269,000	\$1,480,500	\$1,692,000	22	\$ 1,949,787
2026	22	\$1,161,000	\$1,354,500	\$1,548,000	22	\$ 1,993,657
2027	20	\$1,053,000	\$1,228,500	\$1,404,000	22	\$ 2,038,514
2028	18	\$ 945,000	\$1,102,500	\$1,260,000	18	\$ 1,705,403
2029	16	\$ 837,000	\$ 976,500	\$1,116,000	18	\$ 1,743,774
2030	14	\$ 729,000	\$ 850,500	\$ 972,000	12	\$ 1,188,673
2031	12	\$ 621,000	\$ 724,500	\$ 828,000	12	\$ 1,215,418
2032	10	\$ 513,000	\$ 598,500	\$ 684,000	10	\$ 828,510
2033	8	\$ 405,000	\$ 472,500	\$ 540,000	10	\$ 847,151
2034	6	\$ 297,000	\$ 346,500	\$ 396,000	10	\$ 866,212
2035	4	\$ 189,000	\$ 220,500	\$ 252,000	5	\$ 553,563
2036	2	\$ 81,000	\$ 94,500	\$ 108,000	5	\$ 566,019
2037	0	\$ -	\$ -	\$ -	0	

* per diem amounts are shown in 2019 dollars

** Counselor costs are escalated each year

Source: Justice Planners

There are many considerations that must be taken into account before deciding to build to the full 2037 capacity at once, or even renting beds in an additional housing unit if the JDC expansion is built in phases. They include realistically gauging the demand for beds to avoid getting into an over built situation. Unused housing can be expensive to maintain without inmate use or expected revenue from other jurisdictions.

The upfront project costs will be higher if the full facility is built-out all at once rather than phasing the construction. This will require an additional \$1 million+ to fund the project.

The maximum amount of revenue generated by renting bedspace will likely be in the first year or two. However, as time progresses, a County’s own need for bedspace will increase. This means the number of beds available to rent out will decrease, and so will the anticipated revenue. So as the revenue decreases annually, this “loss” must be replaced by the County for the Jail to maintain staffing and operations.



Introduction

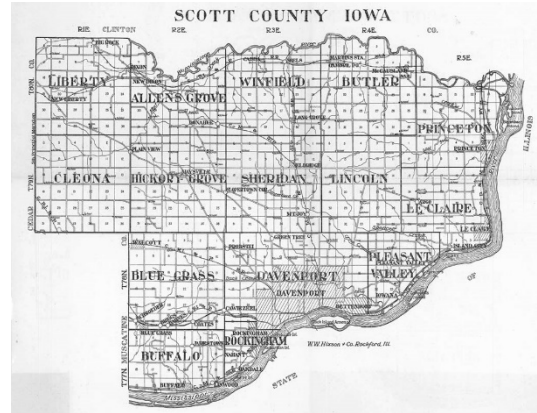
Scott County retained the team of Wold Architects and Engineers and Justice Planners in 2018 to conduct a comprehensive juvenile detention and adult jail Needs Assessment. The purpose of the study is to develop a plan that will establish current and future capacity requirements for both facilities over the next twenty years. The study includes separate bedspace projections for the juvenile detention center and the jail.

Internal and external factors contributing to the populations in these facilities were examined. Jails have little or no control over most factors influencing their populations. In reality, the practices of other components of the County's criminal justice system have the largest effect on these populations. This includes the speed of criminal case processing, county population trends and local crime rates. These external factors impact nearly every aspect of a facility's operation including staff workload, the number of staff needed, the capacity and type of youth housing required, and the level of programs and services. Therefore, an accurate assessment of practices within the entire County's criminal justice system was required to clearly project future needs and to develop a sound, rational proposal for key system stakeholders.

The Needs Assessment used data provided by the Scott County Juvenile Detention Center from 2008 through 2017. Projections for average daily population and bedspace needs were calculated to the year 2037 for the purposes of effective and efficient facility planning.

Background

Scott County is part of the Quad Cities Metropolitan Statistical Area in the eastern part of the state of Iowa. It is situated in the southeastern section of Iowa, and has a total area of 468 square miles, a population of 172,509 as of 2017. It is bordered by Clinton, Cedar and Muscatine Counties in Iowa and Rock Island County, Illinois across the Mississippi River. There are 18 cities in Scott County, with the largest being the cities of Davenport (county seat), Bettendorf, Eldridge and Le Claire. In addition to the Scott County Sheriff's Office, there are 9 municipal police departments that commit arrestees to the Scott County Jail, 5 state agencies, 6 federal agencies, several private prisoner transportation and bonding companies, and the Canadian Pacific Railway. The most recent population count for Scott County was 172,509 in 2017.



The Scott County Juvenile Detention Center (JDC) is a sixteen bed, short term detention center that provides short-term secure placement for youth under the age of eighteen. The JDC, which is located across the parking lot from the County Jail, began accepting youth for detention in 1980 with a capacity of 5 youth. It has since been expanded in 1986, 1994, and most recently in 2003 to its current capacity of 16 youth.

There are two housing sections of the JDC; one with 10 single-occupancy rooms and the other with six; one pod has 8 single occupancy rooms and 2 double occupancy rooms, and the other pod has 4 single occupancy rooms. Male and female juveniles are housed in the same areas, however most sleeping rooms are single-occupancy. There are also classrooms and indoor activity spaces. The Juvenile Detention Center provides detention and diversion programs as well as community-based programs. Recent increases in crimes committed by juveniles and the subsequent increase in bedspace need for juveniles in Scott County was a major driver into the Needs Assessment.



Expectations

In October 2018 Scott County entered into a contract with the Consultants to begin the process of conducting a Needs Assessment for the County Jail and Juvenile Detention Center. A kick-off meeting for the Needs Assessment was held in the Scott County Courthouse on September 16, 2018 with members of the Core Planning Group (CPG). Those that attended the kick-off meeting are as follows:

<u>Name</u>	<u>Agency</u>
Sheriff Tim Lane	County Sheriff's Office
Major Shawn Roth	County Sheriff's Office
Major Bryce Schmidt	County Jail
Captain Stefanie Bush	County Jail
Jeremy Kaiser	Juvenile Detention Center
Mary Thee	Assistant County Administrator
David Farmer	Budget and Administrative Services
Tammy Speidel	Facility and Support Services
Alan Richardson	Justice Planners
Roger Schroepfer	Wold AE
Kirsta Ehmke	Wold AE

At the kick-off meeting the scope of work for this Needs Assessment was presented and discussed. The CPG discussed their needs and the desired outcomes and goals of the study. The primary points made during this discussion are as follows.

1. The purpose of detention is to reduce recidivism.
2. The County wants to plan for flexibility and expandability of the existing facilities. There is no intent to move the detention facilities away from the current downtown campus location.
3. There is a desire to house an increase in population while maintaining proper classification and separation of inmates.
4. There is a need of approximately twice the number of juvenile beds as exists today. There is a desire to house these detainees in County, since housing juveniles at off-site locations is expensive and an inefficient use of staff time. Housing youth outside of Scott County distances them from their family and community support systems. This can be detrimental to their mental well-being and lessens their chances for successful reintegration.
5. The jail should be configured to allow for the most efficient use of bedspace. The current configuration does not allow for full use of the facilities.
6. The female inmate population is growing and there should be a protocol for housing females off-site.
7. There is a need for dedicated mental health and medical housing.

On October 16-18, 2018 the Consultants interviewed staff from all departments in the Jail and JDC as well as representatives from the Board of Supervisors, local law enforcement, Human Resources, the County Attorney’s Office, Public Defender’s Office, the Judiciary, Court Administration, Specialty Courts, County Information Technology, the County Health Department, Mental Health, and Adult and Juvenile Probation to discuss their involvement with the County Jail and JDC and their priorities concerning potential facility additions.

Historic Data and Trends

A database was developed to support the analysis, profiling, and forecasting activities for the Scott County Jail and Juvenile Detention Center. This database included information on the inmate population and other components of the criminal justice system that can impact on the jail population levels. The database supports the multiple models considered for the juvenile detention average daily population (ADP) projections and subsequent bedspace need projection. Data was collected from the jail, juvenile detention center, US Census, and other relevant sources.

Historic and Projected County Population

Historic county population data for the study is from the US Census Bureau. County population projections are from Woods & Poole Economics, Incorporated. County population data is a key variable in jail population projections.

Table COU-1 presents the county population trends from 2008 to 2017. Scott County population has grown by 8,072 residents since 2008, an increase of 4.9 percent. The annual growth rate in Scott County from 2008 to 2017 was 0.5 percent.

Table: COU-1
Scott County Historic Population

Year	County Population	Juvenile Pop (15-19)
2008	164,437	11,514
2009	166,650	11,286
2010	165,261	11,053
2011	166,521	10,981
2012	168,266	11,075
2013	170,071	11,009
2014	171,118	11,007
2015	171,724	10,907
2016	172,054	10,906
2017	172,509	10,948
Total # Change 2007-2017:		8,072 -566
Total % Change 2007-2017:		4.9% -4.9%
Compound Annual % Change:		0.5% -0.6%

Source: US Census Bureau, October 2018.

The juvenile population in Scott County have decreased since 2008. For analysis of the juvenile detention center bedspace need, the juvenile population will be a primary factor. The juvenile population is identified as youth aged 15 to 19. The juvenile population in Scott County decreased 4.9 percent from 2008 to 2017, an annual decrease of 0.6 percent. The 2017 juvenile population in Scott County was 10,948.

The population in Scott County is projected to increase from 2017 to 2037, however at a slower pace than the population increase from 2008 to 2017. The resident population is projected to increase to 182,434 by the year 2037, an increase of 5.8 percent overall, or an average annual increase of 0.3 percent.

The juvenile population is projected to keep decreasing, to 10,518 in 2037. This is a decrease of 3.9 percent from 2017 to 2037. The annual percentage decrease for the juvenile population is 0.2 percent. Table COU-2 shows the projected total population and juvenile population in Scott County to 2037 in 5-year increments.

Table: COU-2
Scott County Projected Population

Year	Population	Juvenile Pop (15-19)
2017	172,509	10,948
2022	175,754	10,839
2027	178,500	10,731
2032	180,879	10,624
2037	182,434	10,518
Total # Change 2017-2037:	9,925	-430
Total % Change 2017-2037:	5.8%	-3.9%
Compund Annual % Change:	0.3%	-0.2%

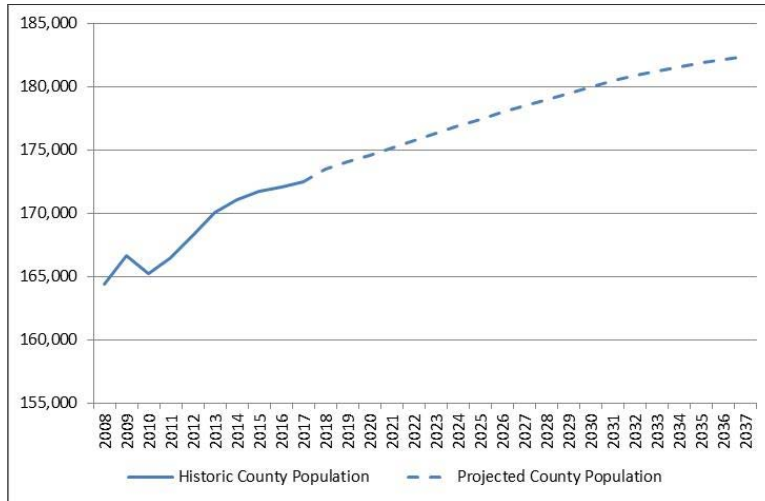
Source: Woods & Poole Economics, Inc., 2018.

Note: Woods & Poole data are projections

Figure COU-1 illustrates the historic and projected population in Scott County.



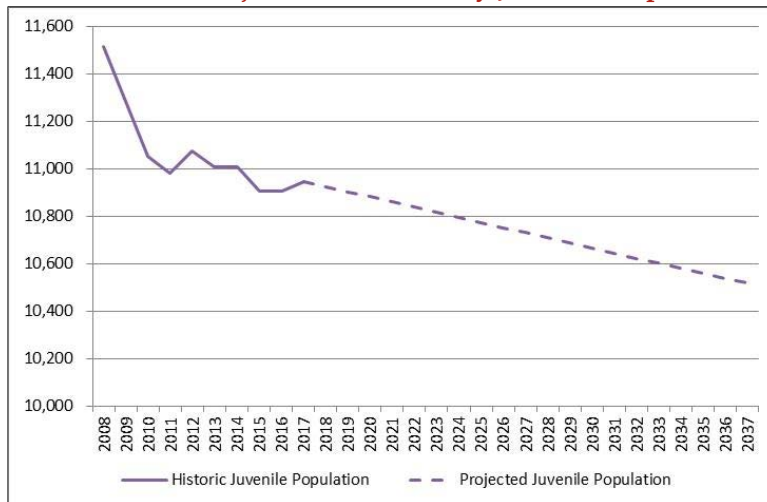
Figure: COU-1
Historic and Projected Scott County Population



The total population continues an increasing arc to 2037, exceeding 180,000 residents by 2030.

The historic and projected juvenile population is shown in Figure COU-2. The historic decrease in juvenile population in Scott County is projected to continue through the time frame examined.

Figure: COU-2
Historic and Projected Scott County Juvenile Population



Crime Data

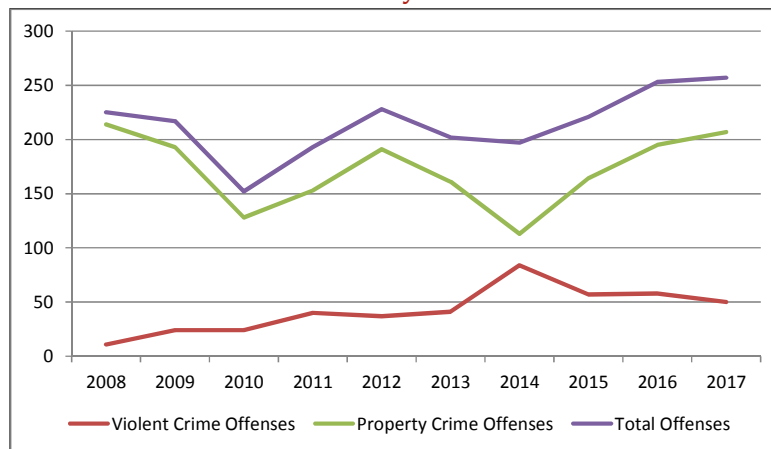
Historic annual offenses known to law enforcement are used in population projection modeling, tying the number of reported offenses to the average daily population (ADP) and the juvenile detention center admissions (ADM) when the variables are correlated. Most often, annual reported offenses will correlate more directly with ADM, while the ADP of most facilities often do not correlate with the number of annual offenses and arrests. ADP is more dependent on the number of bookings (not all arrests will result in a booking to the facility; some are cited and released or ordered to appear in court without being placed in detention).

Offenses known to Law Enforcement data comes from the FBI’s Uniform Crime Report, from 2008 to 2017. The offenses known to law enforcement are split into violent crimes and property crimes that has come to the attention of local law enforcement.

Violent crime offenses in Scott County has increased from 11 in 2008 to 50 in 2017, an increase of 354.5 percent. This increase in violent crime offenses is opposite of the nation-wide trend. The number of violent crime offenses peaked in 2014 at 84. The property crime offenses declined by 3.3 percent from 2008 to 2017, dropping from 214 to 207. The average number of annual property crimes in Scott County from 2008 to 2017 was 172.

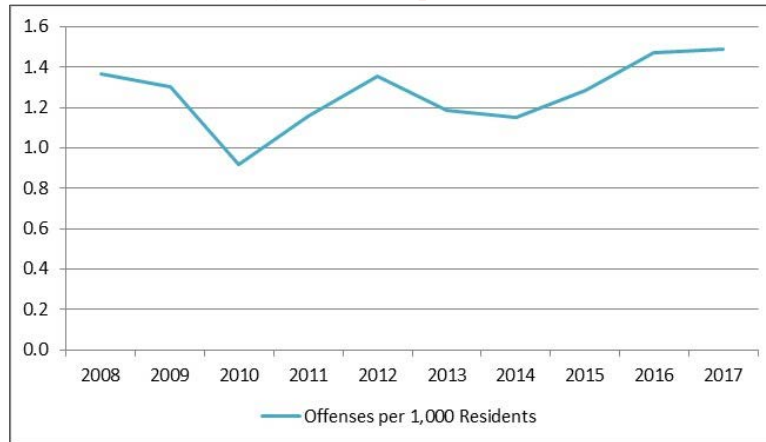
Summing the violent and property crime offenses known to law enforcement in Scott County shows an increase in total offenses from 225 in 2008 to 257 in 2018, an increase of 14.2 percent, see Figure 3.

Figure: COU-3
Scott County Offenses



The offenses known to law enforcement rate per 1,000 Scott County residents increased from 1.4 in 2008 to 1.5 in 2018, an increase of 8.9 percent. Figure COU-4 shows the historic offenses known to law enforcement per 1,000 residents in Scott County from 2008 to 2017.

Figure: COU-4
Scott County Offenses per 1,000 Residents



The total offenses known to law enforcement in Scott County is used in the juvenile population projections. The offenses are set against the corresponding ADP by year, and that rate is applied to projected offenses in the county.

Juvenile Detention Center Historic Data

Juvenile Detention Bookings:

Annual juvenile detention bookings (ADM) have increased 28.0 percent from 2008 to 2018, from 300 to 384. Juvenile annual ADM dipped to 176 in 2014 but has seen significant increases the last four years. The annual juvenile ADM averaged 238 from 2008 to 2018.

The number of juvenile ADM per 1,000 juvenile population increased 36.9 percent from 2008 to 2018, an annual percentage increase of 3.2 percent, see Table JDC-1. While the juvenile population has decreased in Scott County from 2008 to 2018, the number of annual juvenile ADM increased at a faster rate.

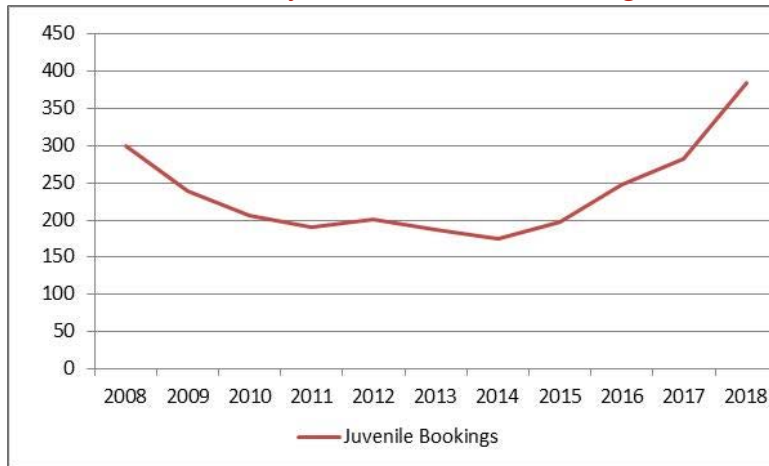
Table: JDC-1
Scott County Historic Juvenile Bookings

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	# Change	% Change	CAGR	Average
Scott County Juvenile Population (15-19)	11,514	11,286	11,053	10,981	11,075	11,009	11,007	10,907	10,906	10,948	10,763	-751	-6.5%	-0.7%	11,041
JDC ADM	300	239	207	191	201	187	176	198	248	283	384	84	28.0%	2.5%	238
Juvenile Bookings per 1,000 Juvenile Pop	26.1	21.2	18.7	17.4	18.1	16.9	15.9	18.2	22.7	25.8	35.7	9.6	36.9%	3.2%	21.5

Source: US Census Bureau, Scott County Juvenile Detention Center, December 2018.

Figure JDC-1 shows the annual juvenile ADM from 2008 to 2018. The ADM have spiked since 2014 and are at their highest level in the time frame analyzed.

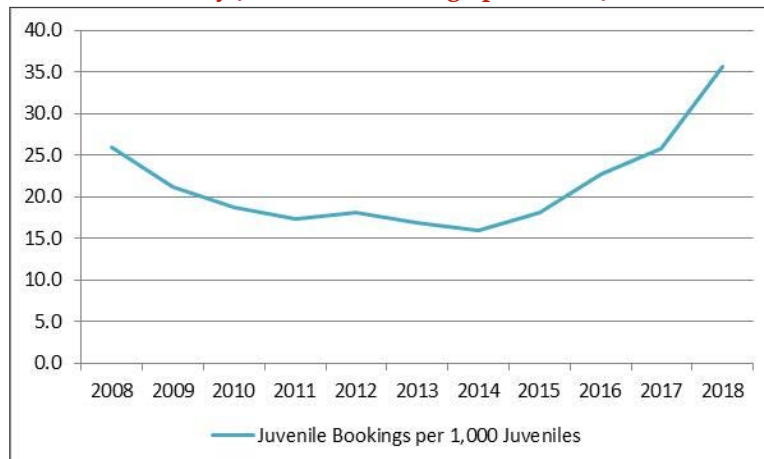
Figure: JDC-1
Scott County Juvenile Annual Bookings



For the Needs Assessment, the Scott County staff provided monthly juvenile data for ADM from January 2008 to August 2018. The juvenile ADM peaked in May 2018 with 42 bookings. The 41 juveniles booked in October 2017 is the next highest amount of juvenile bookings. The recent uptick of booking has increased the juvenile ADP.

Figure JDC-2 shows the annual juvenile ADM per 1,000 juvenile residents from 2008 to 2018. The juvenile ADM per 1,000 juveniles ranges from 15.9 in 2014 to the current 35.7.

Figure: JDC-2
Scott County Juvenile Bookings per 1,000 Juveniles



During the stakeholder interviews in October 2018 it was reported that the amount of juvenile-involved crime was remaining fairly steady. However, the way the juveniles are now being charged and processed has resulted in an increase in the amount of bookings into the JDC. This is reported to be the result of a local policy change due mainly to a marked increase in the number of car thefts by juveniles since 2015.

Juvenile Detention Average Daily Population:

The average daily population (ADP) is the primary variable for projections, as it determines future bedspace need. The historic annual ADP from 2008 to 2018 is the average daily number of youth held in the Scott County Juvenile Detention Center. The juvenile annual ADP in the JDC has increased from 10.4 in 2008 to 20.1 in 2018, an increase of 94.1 percent. The juvenile annual ADP used for projections includes the in-county facility and the ADP of juveniles housed out of the county. The juvenile ADP including, out of county, increased from 10.6 in 2008 to 21.9 in 2018, an increase of 121.6 percent. The juvenile ADP including, out of county, peaked in August 2018 at 23. The juvenile IR per 1,000 juvenile residents has increased 121.6 percent from 2008 to 2018. The average juvenile IR is 1.0 per 1,000 juvenile residents, and currently the juvenile IR is 2.0, see Table JDC-2.

Table: JDC-2
Scott County Historic Juvenile ADP and IR

Juvenile Data	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 #	Change	% Change	CAGR	Average
JDC ADP	10.4	9.6	8.2	9.6	10.8	10.4	10.0	10.3	11.5	13.5	20.1	9.8	94.1%	6.9%	11.3
JDC + Out County ADP	10.6	9.1	8.4	9.6	10.0	11.9	9.0	10.2	11.5	13.3	21.9	11.3	107.1%	7.6%	11.4
Juvenile IR per 1,000 Juvenile Pop	0.9	0.8	0.8	0.9	0.9	1.1	0.8	0.9	1.1	1.2	2.0	1.1	121.6%	8.3%	1.0

Source: US Census Bureau, Scott County Juvenile Detention Center, December 2018.

Figure JDC-3 plots the annual juvenile ADP, including the juvenile housed out of county from 2008 to 2018. The past two years have seen the juvenile ADP increase dramatically.

Figure: JDC-3
Scott County Juvenile ADP, Including Out of County Placements

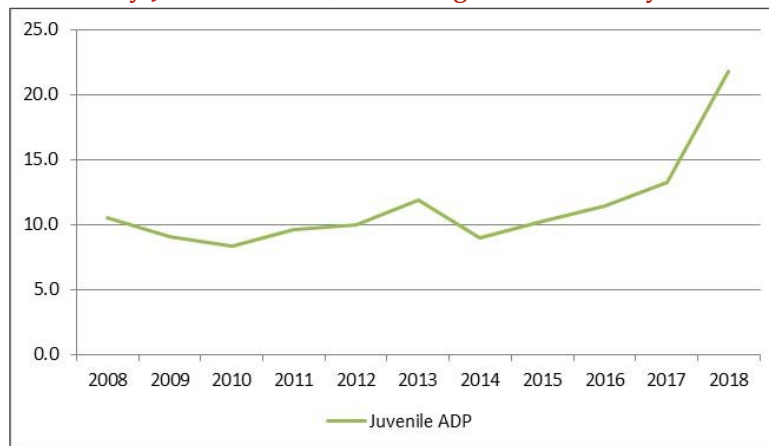
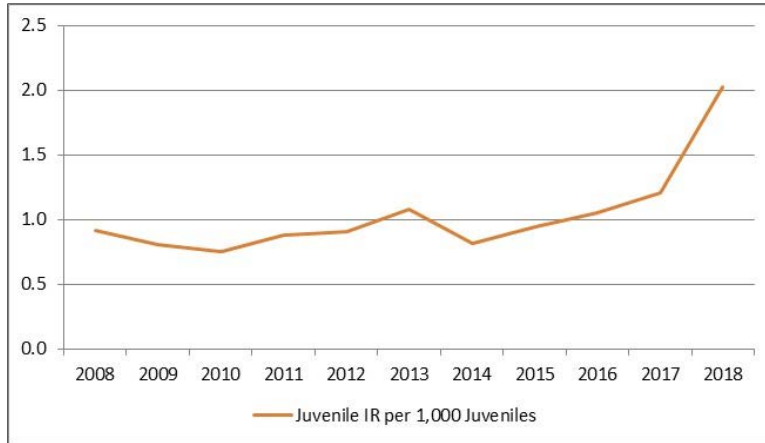


Figure JDC-4 plots the annual juvenile IR per 1,000 juveniles from 2008 to 2018. The recent uptick in juvenile ADP coupled with the decrease in county juvenile population amplifies the trend line.

Figure: JDC-4
Scott County Juvenile IR per 1,000 Juveniles



Juvenile Detention Average Length of Stay (ALOS):

The juvenile annual ALOS of inmates in the system was provided by the JDC. Table JDC-3 shows the juvenile annual ALOS from 2008 to 2018 for both the JDC population and the JDC and juveniles housed out of the county population. The JDC juvenile annual ALOS increased 6.0 percent from 2008 to 2018, from 12.8 days to 13.1 days. The JDC and housed outside of the county juvenile annual ALOS increased 141.6 percent, from 12.8 days to 30.2 days.

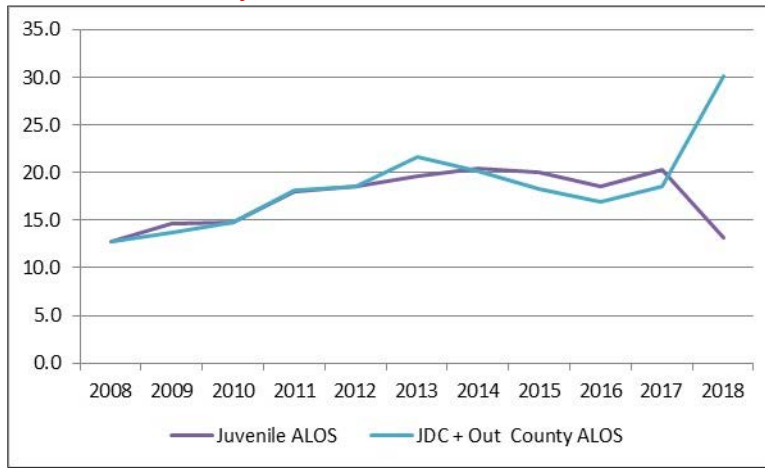
Table: JDC-3
Scott County Historic Juvenile ALOS

Juvenile Data	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 # Change	% Change	CAGR	Average	
JDC ALOS	12.8	14.7	14.8	18.0	18.6	19.6	20.5	20.1	18.6	20.3	13.1	0.7	6.0%	0.6%	16.9
JDC + Out County ALOS	12.8	13.7	14.8	18.2	18.5	21.7	20.2	18.3	17.0	18.6	30.2	17.7	141.6%	9.2%	18.0

Source: US Census Bureau, Scott County Juvenile Detention Center, December 2018.

Figure JDC-5 illustrates the ALOS of the JDC population and the JDC and housed out of county population. There are years where the JDC and out of county ALOS is lower than the JDC population's ALOS, indicating that those years the out of county placements were shorter term. However, the more recent spike in JDC and housed out population's ALOS suggests the out of county placements are being detained much longer than the JDC population.

Figure: JDC-5
Scott County Juvenile Detention Annual ALOS



Projections Overview

Baseline estimates of the juvenile detention population were generated in five-year increments. The estimates model the historical patterns and project those trends out to the planning horizon. The baseline estimates model the growth scenarios based on various assumptions about changes in JDC bookings and ALOS.

The next step of this task transformed the baseline estimates into a forecast of the future JDC population. This conversion process involved modifying the baseline estimates to account for policy and programmatic impacts.

The consensus forecast reflects the County's fiscal conditions as demands for correctional and other criminal justice services are balanced with other County public service obligations.

The development of the Needs Assessment projection model centered around twelve forecast models to the year 2037. The primary factors used for the models were the annual average youth counts and population projections for Scott County. The 2018 annual average daily population served as the base year.

Statistical Models Employed

The following is a description of each forecast model considered for Scott County JDC population projections:

Model 1 - Historic Trend Percentage Change calculates the total percentage change from the beginning point to the end point of the historic data series. The annual percentage increase rate used in the model was applied to the base year 2018 and subsequent years to calculate future average daily counts.

Model 2 – Historic Compound Annual Growth Rate (CAGR) uses the historic annual growth rates to determine a percentage of growth. Often used in financial forecasting, the CAGR is applied to the projection end date of Fiscal Year 2037.

Model 3 – Mean Deviation compares the peak year population to the average from the historic data. The models are standardized by dividing the number of years observed. The mean deviation model shows the high points in most models as it is projected forward.

Model 4 - Bookings/Average Length of Stay uses historic bookings to project bookings to the year 2037. The existing, average, high and low average length of stay in days is calculated using historic data and applied to the projected bookings to determine a projected institutional count.

Model 5- Part One Offenses/Average Daily Population uses historic reported type one offenses to project average daily population to the year 2037. The existing, average, high and low average part one offense rates are calculated using historic data.

Model 6 – Ratio to Scott County Population Percentage Change uses the percentage change in the incarceration rate per 1,000 residents in Scott County. The percentage change is applied to the baseline incarceration rate and extended to the fiscal year 2037. The resulting incarceration rate is multiplied by the projected Scott County population projection to yield an annual average daily population.

Model 7 – Incarceration Rate to Scott County Population determines the incarceration rate per County population. The existing, average, high and low incarceration rates are applied to the projected Scott County population projections to the year 2037.

Model 8 - Linear Regression determines a best fit line considering the historic inmate count over time. This best fit line is extended to fiscal year 2037.

Model 9 – Multiple Regressions: County Population determines a best fit line considering the historic inmate counts over time and county population. This best fit line is extended to fiscal year 2037.

Model 10 – Multiple Regressions: County Population and Bookings determines a best fit line considering the historic inmate counts over time, county population and total annual bookings. This best fit line is extended to fiscal year 2037.

Model 11– Box-Jenkins ARIMA uses an Autoregressive Integrated Moving Average technique. This model is used typically for accurate short-term projections of data that shows predictable repetitive cycles and patterns. The Box Jenkins model uses historic annual data from 2008 to 2018.

Model 12 – Exponential Smoothing ARIMA identifies levels and trends by smoothing the latest data points to decrease irregularity and adds a seasonality factor. The seasonal indexes are obtained by smoothing seasonal patterns in the historic data. Exponential Smoothing is an alternate ARIMA model. The exponential smoothing model gives older data progressively-less weight while new data is weighted more. The Exponential Smoothing model uses historic annual data from 2008 to 2018.

Models determined to have appropriate statistical reliability and significance were weighted equally to determine forecast figures. For the ARIMA models, the r-squared values below 0.8 were not used in the final average. R-squared shows the amount of explained variance in the statistical model. There are no concrete levels for acceptable r-squared.

All statistically significant models were selected and averaged. Each model presents a differing snap shot to the future that is beneficial to the final projection. While one must recognize that all have limitations and precautions in the forecasting model, the averaging of multiple models dampens the extremes and finds some model agreement necessary for long-range projections.

Juvenile Detention Center Projections

The juvenile ADP projections employ seven models, Historical CAGR Model, Mean Deviation, Ratio to Juvenile Population Percentage Change Model, Juvenile IR Model, and Admissions to ALOS Model, Ratio to Total Offenses Model and the Multiple Regression with Juvenile Population and Bookings model. Each model is given equal weight. Projections are in five-year increments to the year 2037.

The total juvenile ADP, including those housed out of county, is projected to increase from 13 in 2017 to 48 in 2037, an increase of 263 percent. The projected total juvenile ADP, with the corresponding projected decreases in the county juvenile population, raises the juvenile IR from 1.2 to 4.6 detained juveniles per 1,000 juveniles in the county, see Table JDC-4.

Table: JDC-4
Scott County Total Juvenile ADP Projections

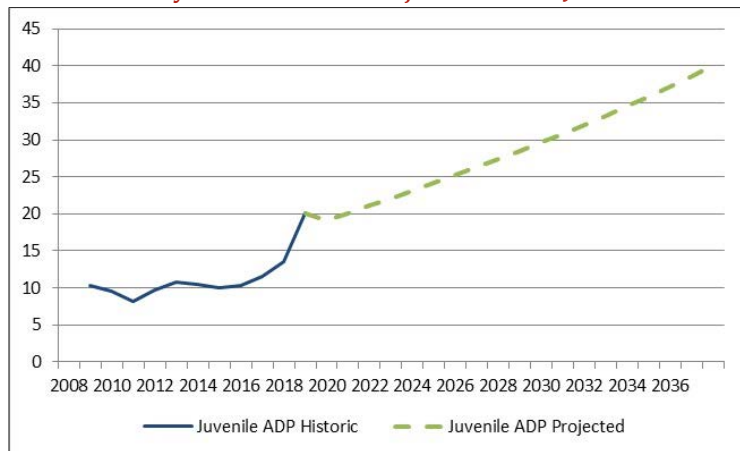
Juvenile ADP (JDC + Out County)	2017	2022	2027	2032	2037	# Change	% Change	CAGR	Average
Scott County Juvenile Population	10,948	10,839	10,731	10,624	10,518	-430	-3.9%	-0.2%	10,732
Juvenile ADP - Projected	13	26	33	40	48	35	263.4%	6.7%	33
Juvenile Bookings Total	295	307	335	363	400	105	35.7%	1.5%	345
Juvenile IR per 1,000 Population	1.2	2.4	3.0	3.8	4.6	3.4	2.8	6.9%	3.1

Source: Justice Planners, January 2019.

The total juvenile ADP projections are status quo projections and are heavily influenced by the recent increases in the juveniles detained by the county.

Figure JDC-6 graphs the historic and projected total juvenile ADP from 2008 to 2037.

Figure: JDC-6
Scott County Historic and Projected Total Juvenile ADP



The lower bound and upper bounds of the juvenile projected ADP is shown in Table JDC-5. The same models used in the projected ADP are used for the lower and upper bound projections. The lower ratios and lower confidence intervals of the regression models yield the lower bounds. The higher ratios from the historical data and the upper confidence intervals of the regression models are used for the upper bounds.

The lower bound juvenile ADP projection increases from 13 in 2017 to 27 in 2027 to 42 in 237. The upper bound juvenile ADP projection increases from 13 in 2017 to 57 in 2037.

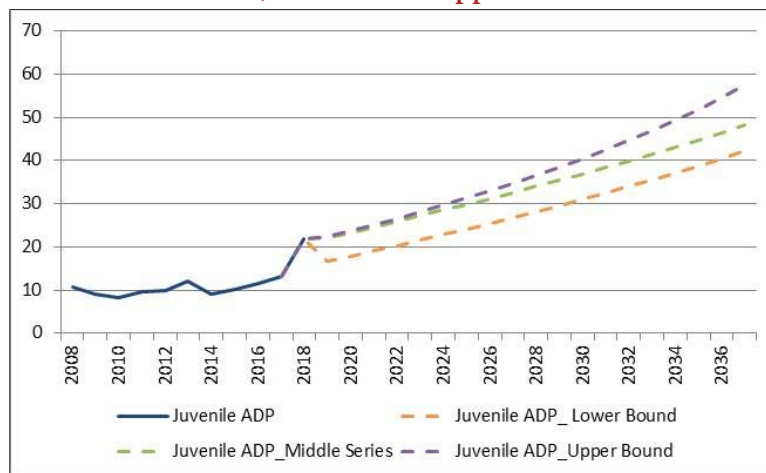
Table: JDC-5
Juvenile ADP Projections: Lower, Middle and Upper Bound

Juvenile ADP (Low, Mid, Upper)	2017	2022	2027	2032	2037	# Change	CAGR	Average
Juvenile ADP - Lower Bound	13	20	27	34	42	29	6.0%	28
Juvenile ADP - Middle Series	13	26	33	40	48	35	6.7%	33
Juvenile ADP - Upper Bound	13	27	35	45	57	44	7.6%	36
Bedspace Difference Upper -Low	-	6	8	11	15			

Source: Justice Planners, November 2018.

The juvenile historical ADP, projected ADP and lower and upper bound ADPs are shown in Figure JDC-7. The difference between the lower and upper bounds of the ADP is 8 in 2027 and 15 in 2037.

Figure: JDC-7
Scott County Juvenile ADP Projections:
Lower, Middle and Upper Bound



Juvenile Detention Bedspace Needs

Criminal justice facilities cannot be planned for the ADP solely; peaks in population must be accommodated, along with beds for differing inmate classification. A peaking factor accounts for seasonal variations in the inmate population, as there needs to be enough beds to accommodate seasonal increases without overcrowding. The peaking value of the JDC is calculated using monthly data from January 2008 to August 2018. The percentage difference from the highest months was compared to the annual ADP for each year to determine the peaking factor for the JDC.

A classification factor accounts for a fluctuation in the type of youth held at any given time. There may be times where there are more high-risk youth than the average number, and a much lower number at other times. There needs to be enough flexibility at any given time to provide appropriate separations between the various risks and needs of the youth. It is difficult to ascertain a historic percentage for a classification factor for the JDC with only two housing areas. Therefore, a 5 percent classification factor was applied based on experience working with similar sized facilities.

The peaking and classification factors for juveniles are 27.9 percent peaking from historical monthly juvenile data and a 5.0 percent classification figure. The bedspace need for juveniles is projected to increase by 263 percent from 2017 to 2037 see Table JDC-6 The 2027 total juvenile bedspace need is projected to increase to 43 beds and further increase to 64 beds in 2037.

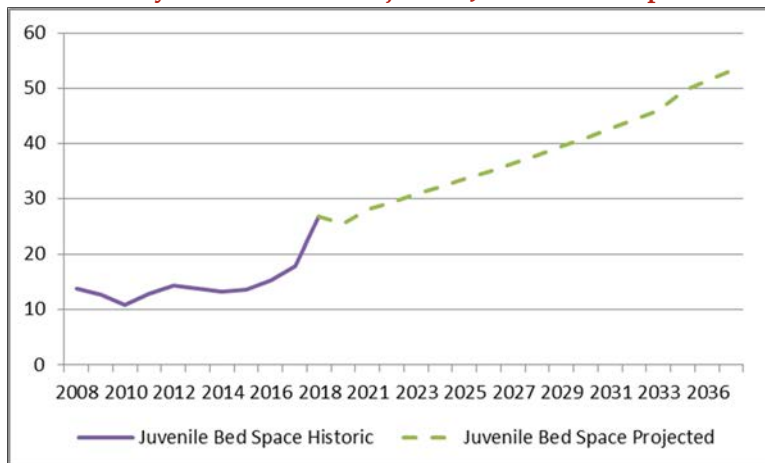
Table: JDC-6
Scott County Juvenile Bedspace Need Projections

Juvenile Bed Space (JDC + Out County)	2017	2022	2027	2032	2037	# Change	% Change	CAGR	Average
Juvenile ADP - Projected	13	26	33	40	48	35	263.4%	6.7%	33
Peaking (27.9%)	4	7	9	11	13	10	263.4%	6.7%	9
Classification (5.0%)	1	1	2	2	2	2	263.4%	6.7%	2
Bedspace Needed	18	34	43	53	64	46	263.4%	6.7%	44

Source: Justice Planners, January 2019.

Figure JDC-8 shows the increases in the historic and projected juvenile bedspace need for Scott County.

Figure JDC-8
Scott County Historic and Projected Juvenile Bedspace Need



The lower and upper peaking factors are added to the 5 percent classification factor to determine the lower and upper bounds juvenile bedspace need. The lower bound juvenile bedspace need, with a 12.2 percent peaking factor, is projected to be 31 beds in 2027 and 49 beds in 2037. The upper bound bedspace need, using a 47.9 percent peaking factor, is 53 beds in 2027 and 88 beds in 2037, see Table JDC-7.

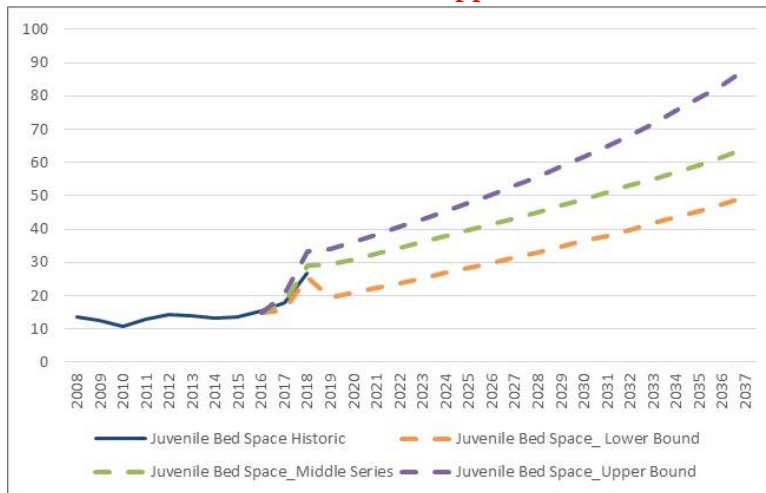
Table JDC-7
Juvenile Bedspace Need Projections: Lower, Middle and Upper Bound

Juvenile Bedspace (Low, Mid, Upper)	2017	2022	2027	2032	2037	# Change	CAGR	Average
Juvenile Bedspace - Lower Bound (Peaking 12.2%)	16	24	31	40	49	34	6.0%	32
Juvenile Bedspace -Middle Series (Peaking 27.9%)	18	34	43	53	64	46	6.7%	44
Juvenile Bedspace - Upper Bound (Peaking 47.9%)	20	41	53	68	88	68	7.6%	55
Bedspace Difference Upper -Low	5	17	22	28	38			

Source: Justice Planners, November 2018.

The historical juvenile bedspace need projected juvenile bedspace need and lower and upper bound juvenile bedspace needs are shown in Figure JDC-9. The difference between the lower and upper bounds of the bedspace needs is 22 in 2027 and 38 in 2037.

Figure JDC-9
Scott County Juvenile Bedspace Need Projections:
Lower, Middle and Upper Bound



Alternative Projections: Juvenile Detention Bedspace Needs

For the alternative juvenile bedspace needs projection, the out of county population is removed from the data base and only the JDC juvenile population is used for the projection model. The same seven projection models were used for the JDC population and are shown in Table JDC-8.

Without the out of county juveniles, the bedspace need for the JDC juveniles grows from 18 in 2017 to 36 in 2027 and 53 in 2037. The 53-bedspace need in 2037 is 11 beds less than the projection model for the total juvenile population bedspace need from Table JDC-8.

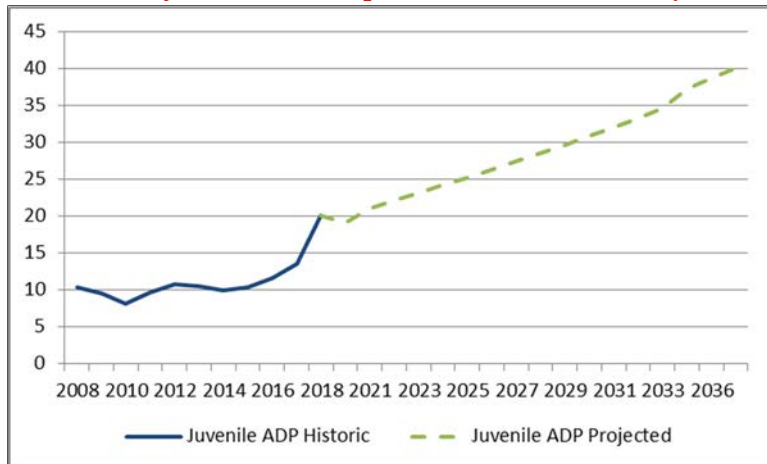
Table JDC-8
Scott County Juvenile Bedspace Need Alternate Projections: JDC Population

Bedspace Projections	2017	2022	2027	2032	2037	# Change	CAGR	Average
Juvenile ADP - Projected	13	22	27	33	40	27	5.6%	28
Peaking (27.9%)	4	6	8	9	11	7	5.6%	8
Classification (5.0%)	1	1	1	2	2	1	5.6%	1
Bedspace Needed	18	29	36	44	53	35	5.6%	37

Source: Justice Planners, January 2019.

Figure JDC-10 plots the historic and projected bedspace needs for the JDC population from 2008 to 2037. The growth is less than the total juvenile bedspace need that includes juveniles housed out of county.

Figure JDC-10
Scott County Juvenile Bedspace Need Alternate Projections





Juvenile Justice Delinquency Prevention Act

In March 2019, the JDC staff received notice that the Juvenile Justice Delinquency Prevention Act (JJDP A) was re-authorized by the US Congress. The effects on this reauthorization are limited to the short-term projections for the adult jail and the Juvenile Detention Center (JDC).

The JDC staff summarized the anticipated effects of the JJDP A as follows. As of December 2021, all adult wavier juveniles awaiting trial will need to be held in juvenile detention centers unless a judge makes a finding that the juvenile cannot safely be held in a JDC and must be held in an adult jail. The JDC staff estimate that most adult wavier juveniles will need to be held in juvenile detention centers as of that date to comply with federal law. Currently, the Scott County JDC is holding no adult waivers. All of these offenders are being held in the adult jail due to space.¹

From the monthly data provided by the County for the Needs Assessment, the Juveniles in the jail averaged 0.25 from March 2008 to September 2018. The maximum ADP for Juvenile in the Jail was 1.27 males in November 2015 all males.

Additionally, Scott County provided twelve special needs snapshots from the adult jail. The snapshots were from November 2017 to October 2018. The average number of juvenile females was 0.3 in the jail and the average number of juvenile males was 4.3, for a snapshot average daily population of 4.6 juveniles in the Scott County jail.

Classification data was provided in March 2019 for the average daily population of juveniles held in the jail, and the updated ADP is 9.1 juveniles in 2017 and 11.7 juveniles in jail in 2018. The partial year data for 2019 is 13.1 juveniles.

The two years of updated data are not enough data points for a twenty-year projection model. Along with the policy impacts of the JJDP A in 2020, Scott County should monitor the effects of these recent changes in juvenile justice. The Needs Assessment shows a bed space need for Juveniles at 64 (Table JDC-6) from its current 16 bed capacity. The range of juvenile detention beds (low to high) in 2037 is projected to be between 49 and 88.

The impact of the new data would be in the short-term projections. For the year 2027, the projected bed space need for juveniles is 43. If Scott County decides to build to the upper bound projection in 2027 in anticipation of the policy changes, the upper bound bed space need for juveniles in 2027 (Table JDC-7) is 53.

¹ Email from Scott County Juvenile Detention Center

The projections in the Needs Assessment are reliant on consistent data with ten years of historic information. The projection models are reliant on the historic trends of the dependent and independent variables. There is no doubt that the criminal justice system is a fluid, ever-changing system. Anticipating legislative and/or policy changes is a prudent exercise, however in this case the effects should be absorbed within the upper and lower bound bed space needs analysis.

JDC Proposed Expansion

To increase the housing capacity of the JDC to meet the projected 2037 need would require the addition of 48 youth beds, along with support space consisting of Staff Spaces, Health Services, Program Services, and Support Service (food and laundry).

Table JDC-9
48-Bed JDC Expansion Space Requirement

Component		Net Square Feet	Department Gross SF	Bldg Gross - 15%	Total BGSF
1.000	Staff Spaces	808.00	1,050.40	157.56	1,207.96
2.000	Health Services	625.00	875.00	131.25	1,006.25
3.000	Program Services	1,880.00	2,444.00	366.60	2,810.60
4.000	Living Units	12,432.00	18,026.40	2,703.96	20,730.36
5.000	Support Services	1,967.00	2,360.40	354.06	2,714.46
6.000	Court	2,380.00	2,975.00	446.25	3,421.25
GRAND TOTALS		20,092.00	27,731.20	4,159.68	31,890.88

Source: Wold-Justice Planners, January 2019

Additional JDC Staff Spaces:

The additional administrative spaces needed for the JDC staff consists of two additional staff offices and a meeting space for 6 staff. Staff facilities space would also be needed for the additional staff including a secure staff entry vestibule, staff break room and washrooms. The total estimate space required for this area is 1,208 square feet.

Table JDC-10
Additional JDC Staff Spaces

1,000 STAFF SPACES					
	Space Designation	Space Standard SF	No. of Spaces	Total Sq. Ft.	COMMENTS
1.100	Administrative Spaces				
1.101	Office	100	2	200	Desk, file cabinets and side chairs
1.102	Staff Meeting Room	24	6	144	Meeting table and chairs, cabinet
1.200	Staff Facilities				
1.201	Staff Entrance/Secure Vestibule	80	1	80	Dedicated staff access point
1.202	Staff Room	35	8	280	Seating for 8 people, on exterior wall with natural light, counter, sink, refrigerator, microwave, tables and chairs
1.203	Staff Washrooms	52	2	104	
				Net SF	808
				Grossing Factor 30%	242
				Total DGSF	1,050
				Total DGSF	1,050
				Building Gross 15%	158
				Total BGSF for Staff Spaces	1,208

Source: Wold-Justice Planners, January 2019



Additional JDC Health Spaces:

The health services space in the JDC is very small for today’s juvenile population. The addition of 48 more youth beds will require the addition of a proper health services area. The proposed space addition includes a health services area with proper office space, examination room, and proper storage space for medications, equipment, supplies and refuse. This space will service the health needs of all youth held in the JDC, and the total estimate space required for this area is 1,006 square feet.

Table JDC-11
Additional JDC Health Services Spaces

2.000 HEALTH SERVICES					
	Space Designation	Space Standard SF	No. of Spaces	Total Sq. Ft.	COMMENTS
2.100 Health Services					
2.101	Doctor/ Nurse Office	100	1	100	Private office
2.102	Washroom	50	1	50	Toilet, sink
2.103	Storage	40	1	40	Office supply closet with shelving
2.104	Examination Room	120	1	120	w/sink and cabinets
2.105	Medication Storage	60	1	60	Secure room, sink, cupboard, mini-refrigerator, ventilated
2.106	Medical Supplies/Equipment Storage	100	1	100	Space to store stretchers and wheelchairs
2.107	Clean Sterile Supply	40	1	40	Counter, shelving. Shared with Infirmary
2.108	Soiled Holding	40	1	40	Secure room
2.109	Bio-Hazardous Waste Storage	40	1	40	Secure room
2.110	Janitor's Closet	35	1	35	w/utility sink
Net SF				625	
Grossing Factor			40%	250	
Total DGSF				875	
Total DGSF				875	
Building Gross			15%	131	
Total BGSF for Health Services				1,006	

Source: Wold-Justice Planners, January 2019



Additional JDC Program Services Spaces:

Increasing the size of the JDC will require additional program spaces for the youth. This proposed new space will include additional interview rooms, classrooms with storage space for class supplies, and additional visitation space. The total estimate space required for this area is 2,811 square feet.

Table JDC-12
Additional JDC Program Services Spaces

3,000 PROGRAM SERVICES					
	Space Designation	Space Standard SF	No. of Spaces	Total Sq. Ft.	COMMENTS
3.100	Programs				Shared spaces
3.101	Interview Rooms	60	3	180	View panels in door, accessible from security vestibule only
3.102	Classrooms/ Programs	360	3	1,080	Capacity for 15 inmates each, tables and chairs w/glazing for observation by staff
3.103	Classroom Material Storage Room	60	3	180	shelving, classroom materials and supplies
3.104	Visitation Vestibule	80	1	80	Interlocked
3.105	Group Visitation	360	1	360	Comfortable seating
			Net SF	1,880	
		Grossing Factor	30%	564	
			Total DGSF	2,444	
			Total DGSF	2,444	
		Building Gross	15%	367	
			Total BGSF for Program Services	2,811	

Source: Wold-Justice Planners, January 2019

Additional JDC Living Unit Spaces:

To accommodate the housing of 48 additional youth, the proposed space plan includes four 12-bed living units. Each living unit will have 12 individual bedrooms, program and recreation space and an outdoor recreation courtyard. The total estimate space required for these four living units is 20,730 square feet.

Table JDC-13
Additional JDC Living Unit Spaces

4.000 LIVING UNITS					
	Space Designation	Space Standard SF	No. of Spaces/ Users	Total Sq. Ft.	COMMENTS
4.100	Juvenile Living Unit				12-Bed Living Unit
4.101	Dayroom Sallyport	100	1	100	Interlocking doors.
4.102	Dayroom	35	12	420	With natural light, television, durable seating and tables, wall-mounted phones
4.103	Bedrooms	80	12	960	Single bed , wall-mounted writing surface with seat, exterior window
4.104	Indoor Recreation/ Programs	30	12	360	Movable tables and chairs, computer-smartboard access, monitors
4.105	Showers (ADA)	55	4	220	Observable; ADA; dayroom level; semi-enclosed stalls
4.106	Dayroom sink	15	1	15	Cabinet and sink with hot water
4.107	Storage Room	48	1	48	Secured access
4.108	Inmate Toilets	50	4	200	ADA compliant
4.109	Janitor's Closet	35	1	35	Utility sink
4.110	<i>Outdoor Recreation Courtyard</i>	750	1	750	<i>Adjacent to and visible from dayroom</i>
Net SF				3,108	Outdoor courtyard not included in total
Grossing Factor			45%	1,399	
Total Gross SF				4,507	
Number of Housing Units =			4	18,026	
Total DGSF				18,026	
Building Gross			15%	2,704	
Total BGSF for Housing				20,730	

Source: Wold-Justice Planners, January 2019

Additional Support Services Spaces:

If it is decided that the JDC will be a self-sufficient operation, completely separate from the adult jail, then fully operational food preparation and laundry services areas will be required. It is estimated that a new kitchen facility and a new laundry would require approximately 602,700 total square feet. This option would also require operational staff for the kitchen and laundry. Decisions that will impact these costs include hours of operation and whether the work will be completed by County staff or if the services will be contracted to an outside vendor.

Table JDC-14
Additional JDC Support Services Spaces

5.000 SUPPORT SERVICES					
	Space Designation	Space Standard SF	No. of Spaces	Total Sq. Ft.	COMMENTS
5.100 Food Services					
5.101	Kitchen Office	100	1	100	One room with a view of the food preparation area, three workstations plus file shelving one wall
5.102	General Cooler Room	120	1	120	For daily delivered fresh products
5.103	General Freezer Room	100	1	100	For incidental/Emergency products.
5.104	Bulk Dry Goods Store	160	1	160	Shelves and racks for dry and canned goods.
5.105	Preparation/Finishing Area	260	1	260	Cooking equipment, food preparation
5.106	Tray/Meal Delivery Cart Staging Area	120	1	120	Transport carts are loaded and staged for delivery.
5.107	Beverage Production Area	60	1	60	For bulk brewing of beverages and preparation of insulated containers.
5.108	Central Dishwashing	120	1	120	
5.109	Meal Tray Storage Area	100	1	100	For the storage of clean trays
5.110	Cart Wash Area	100	1	100	Adjacent to the dishwash area.
5.111	Washroom	60	2	120	Includes vestibule with lockers
5.112	Chemical Storage	60	1	60	As required for kitchen chemicals. Locate in close proximity to janitor closet
5.113	Janitor Closet	35	1	35	Mop sink.
Net SF				1,455	
Grossing Factor			20%	291	
Total DGSF				1,746	
5.200 Laundry Services					
5.201	Laundry Room	260	1	260	Industrial washer & dryer for institutional clothing, bedding, towels, and blankets and one small washer for contaminated items. Folding tables
5.202	Chemical Storage/Supplies/Janitor	80	1	80	
5.203	General Laundry Storage	120	1	120	
5.204	Inmate Washroom	52	1	52	
Net SF				512	
Grossing Factor			20%	102	
Total DGSF				614	
Total DGSF				2,360	
Building Gross			15%	354	
Total BGSF for Housing				2,714	

Source: Wold-Justice Planners, January 2019

Additional Juvenile Court Spaces:

Including a courtroom that is attached to the JDC will provide several benefits to operations and security. This addition will allow youth to go to court without having to leave the building. No longer will they have to be moved across the parking lot to the courthouse without the benefit of a secured exterior sallyport. This will increase access to the court as well as eliminating any security concerns of transporting the youth outside the building. The courtroom will be dedicated to juvenile cases and will have a family waiting area and judge’s chamber. It is estimated that a new courtroom and associated spaces will require approximately 3,421 total square feet. The proposed courtroom is a little larger, but comparable, to the current courtroom which is 1,024 square feet.

Table JDC-15
Additional JDC Support Services Spaces

6.000 COURT					
	Space Designation	Space Standard	No. of Spaces	Total Sq. Ft.	COMMENTS
6.100	Court				
6.101	Entry Vestibule	80	1	80	Weather vestibule
6.102	Lobby	400	1	400	Information kiosks, seating
6.103	Washrooms	60	2	120	Includes changing stations
6.104	Family Staging/ Waiting	20	24	480	Capacity for 24 people, seating
6.105	Courtroom	1,100	1	1,100	Bench, recorder, attorneys, family seating
6.106	Chambers	200	1	200	
				Net SF	2,380
				Grossing Factor 25%	595
				Total DGSF	2,975
				Total DGSF	2,975
				Building Gross 15%	446
				Total BGSF for Program Services	3,421

Source: Wold-Justice Planners, January 2019



Additional Space Summary for the JDC

The Scott County juvenile detention bedspace projections are influenced by a recent uptick in crimes committed by juveniles and the subsequent increase in juvenile detention at the JDC and out of county facilities. The recommended middle series juvenile bedspace need is 64 beds in 2037. To accommodate the projected juvenile bedspace need, an additional 48 beds will need to be added along with administrative, program and health services spaces. It is estimated that the additional space that would need to be added is approximately 31,890 square feet.



JDC Staffing

The Juvenile Detention Center has been experiencing some of the highest numbers of youth held in recent memory. The JDC is at or near capacity with several youth being housed in neighboring jurisdictions on a regular basis. The staffing complement in the JDC appears adequate for now, but if the capacity is increased, the staff must increase as well.

When planning for future needs, a staffing review and analysis should not be a one-time exercise. It should be revisited at each major step of the planning process. The staffing recommendations developed as a part of this Needs Assessment should be considered as the first step. They are based on current operations and practices, which should evolve as additional housing units are considered. A detailed profile of the youth population should be developed, an in-depth evaluation should be conducted of the job descriptions, duties, post orders for each area, and a master activity schedule should be developed for all regular activities to determine peak times for staff coverage. As the capacity increases, so does the opportunity to modify youth classifications, housing assignments, activities, and the numbers of staff required to effectively manage the revised operations. This level of detail was not a part of the preliminary staffing recommendations for the Needs Assessment, as many of these questions cannot be answered at this part of the planning process. However, it is recommended that each step is taken once a direction is taken on how the facility will move forward into the next 20 years.

Methodology

The process used for evaluating the staff needs was based on the *Staffing Analysis Workbook for Jails: Second Edition*, which was produced by the National Institute of Corrections, and is considered the "industry standard" process for determining appropriate staffing for local corrections.

In performing the assessment and in determining the level of staff needed to meet the current demands of the JDC the consultant focused on developing an enhanced understanding of the facility's history, requirements, current mission and operational practices. The methodology applied included the following:

Document Review - Preliminary work involved the gathering and review of documents from the County to gain an understanding of jail operations and staffing philosophy. Documents requested and reviewed included the following:

- Shift deployment rosters,
- Organizational chart,
- Post assignments,
- Activity schedules,
- Physical plant floor plans,
- Kitchen schedule,
- Staff time-off data for the last three fiscal years.
- Inmate count sheets,
- Inmate profile data
- Daily population summary reports,
- Bed-space utilization reports
- Iowa Juvenile Detention Standards
- Iowa Jail Standards; and
- American Correctional Association Core Jail Standards

On Site Analysis – the consultant conducted an on-site review during the month of October 2018 while collecting information for the jail and juvenile detention center Needs Assessment. All areas of the facility were visited for the Needs Assessment, and many of the staff were questioned while on their post regarding their scheduled activities, and the staff requirements for managing the population at their assigned areas.

Post Evaluation Criteria Employed - Evaluating post assignments and detention staff activity must consider not only the level of supervision the administration requires; but also, the workload the staff member must perform.

Staff Relief Calculations – As mentioned above, security posts must be staffed even when the scheduled staff calls in sick, takes vacation or is away on required training. Proper relief staff must be factored into the staffing compliment to provide coverage without having to rely solely on overtime staff which can be costly and cause staff burnout. Using these criteria, staffing needs were identified for the current operations.

Determining Proper Staffing Levels

The JDC houses the youth in two different living areas, with 16 single-occupancy rooms total. Both male and female youth are housed in the same areas where programs, classes and recreational activities take place. Staff are not assigned to fixed posts but rotate the supervision of the daily duties such as counts, clean up meal preparation and service, recreation and activities. At least one staff person must be on duty for every five youth that are being housed. So, when 16 youth are housed, there must be at least four staff present. Being adequately staffed means having the right number and type of staff, in the right places, at the right times, doing the right things.



Relief Calculations

Properly staffing a juvenile detention center involves much more than multiplying the number of posts to be covered by the number of shifts. Proper staffing is determined by having the right number and type of staff, in the right place, at the right time, doing the right things. A major part of determining proper staffing is the calculation of the relief factor to ensure proper coverage of the recommended security posts. Providing proper relief, or staff coverage, is critical in determining adequate staffing for detention operations. The translation of posts to FTE positions is made by applying an appropriate relief factor.

Due to longevity, differences in leave accrual and benefits, a separate relief factor is required for each rank and classification of staff that require relief coverage. This will ensure the most accurate projected of staff required. The consultant has calculated a proper relief factor for all positions that require relief.

Unlike most other government or justice functions detention facilities and jails are 24-hour round-the-clock 365 days-a-year operations that has substantial security and life safety requirements. The security-related positions or posts must be staffed even when the scheduled officer calls in sick, takes vacation or is away on required training.

The process used for conducting this staffing study and calculating a proper relief factor was based on the *Staffing Analysis Workbook for Jails: Second Edition*, produced by the National Institute of Corrections.

The following passage is an excerpt from the *Staffing Analysis Workbook for Jails: Second Edition*, 2003:

“Many staffing issues and problems jails face, such as high overtime costs, the inability to cover needed posts, or the inability to free staff from their posts for training can be attributed to inaccurate calculation of the actual number of hours staff is available to work in the jail. This critical step requires collecting and analyzing information that will provide an accurate depiction of the real number of staff hours that are available to be scheduled for each full-time position in the jail budget. It produces accurate net annual work hours (NAWH) for each position....

An accurate NAWH for each job classification requires information on all possible time-off categories. Different classifications of employees will have different NAWH, because of the amount of vacation time or training time that is allotted and used.”

It is important to point out that not every post or position requires relief. Relief is typically applied to security posts that must be staffed during certain shift work hours to maintain safe, critical operations. Typically, relief is not applied to civilian posts and positions. State standards require at least one staff be present for every 5 youth during the day. Therefore, the Counselor positions equate to the security posts used in this methodology.

To describe/recommend appropriate staffing for the JDC, a proper NAWH was calculated for the Counselor positions to determine the number of staff that must be employed to efficiently operate the facility, even when some staff are absent. Data was collected for all the time taken off by all employees in the last three fiscal years, from FY2016 through FY2018. While employees take time off for legitimate

reasons, essential positions must still be staffed to maintain the safety and security of the facilities. Therefore, the actual time off data is used to determine the proper amount of relief staff that must always be available to provide adequate coverage. The amounts of time taken off by category is the actual average of time taken by employee over the last three fiscal years.

With the calculation of a tailored NAWH, the relief factor can be derived by dividing the number of hours per year that a post must be staffed by the number of hours one officer is available to work in a year. Staffing requirements then are determined by multiplying each post by the required relief factor.

Proper relief factors will vary depending upon the type of post/position in which they are applied. For example, a post that is staffed for 40 hours each week will require less staff (and relief) than a post that is staffed 24/7. What is important when determining the required relief for a particular job classification is to factor an accurate NAWH.

Table JDC-17
Relief Factor Calculations

Relief Factor	JDC
Hours per year	8,760
Hours per year divided by NAWH	5.04
Relief Factor	1.26

Source: Justice Planners, November 2018

Table JDC-16
Net Annual Work Hours Calculations

Scott County JDC Net Annual Work Hours		JDC
1	Total hours contracted per employee per year.	2,080.00
2	Avg Bereavement hours taken per year.	2.58
3	Avg Comp-FML hours taken per year.	0.00
4	Avg Comp-Used hours taken per year.	51.07
5	Avg Floating Holiday-FML hours taken per year.	0.00
6	Avg Floating Holiday-Used hours taken per year.	15.62
7	Avg Holiday hours taken per year.	57.25
8	Avg Holiday-FML hours taken per year.	0.67
9	Avg Jury Duty hours taken per year.	0.18
10	Avg Military hours taken per year.	0.00
11	Avg Sick/Medical-FML hours taken per year.	49.61
12	Avg Sick/Medical-Used hours taken per year.	33.07
13	Avg Vacation/PTO-FML hours taken per year.	0.00
14	Avg Vacation/PTO-Used hours taken per year.	131.03
15	Avg Vacation/UPTO-FML hours taken per year.	0.00
16	Workers Comp	0.18
17	Total hours off per year (lines 2 thru 16).	341.26
18	Net Annual Work Hours (line 1 - line 17).	1,738.74

Source: Justice Planners, November 2018

The relief factor for the JDC staff is 1.26. For the staffing recommendations, relief factors have been appropriately applied in the recommended staffing calculations.



Current JDC Staffing

The JDC is currently staffed with a Director, two Shift Supervisors and 24 Youth Counselors. Iowa juvenile detention standards (*Title XII Licensing and Approved Standards, Chapter 105: Juvenile Detention and Shelter Care Homes*) require at least one staff member be present for every 5 youth during the times the youth are awake. With 16 beds, the JDC can meet this staffing ratio with their current staffing levels. There are currently no medical services staff assigned to the JDC. The nurses from the jail come to the JDC to see the youth, schedule appointments and distribute medications.

JDC Staff Findings & Recommendations

1. If the JDC decides to expand from 16 to 64 youth beds, the number of recommended Youth Counselors will need to be increased. A minimum of 13 counselors will be needed during waking hours. Staff on the evening shift can be reduced when the youth are sleeping.
2. As the JDC grows to more than 60 beds, the volume of youth and administrative activities will create the need for an Assistant Director.
3. The increase in administrative activities will also justify adding an Administrative Assistant position. This will allow the Director and Assistant Director to focus more on the operations of the JDC.
4. A Nurse should be added to the staffing complement of the JDC as the capacity of the facility is increased. Increasing from 16 to as many as 64 youth will justify the addition of a Nurse for 40 hours each week, rather than relying on the nurses from the adult jail.
5. Table JDC-18 shows the recommended JDC staff positions with relief calculations added.

Table JDC-18
Recommended JDC Staffing Detail

Scott County JDC - 64 Beds	Admin	Day	Evening	Night	Days/ Week	Hours/ Week	Coverage Hrs/Yr	Is Relief Needed	NAWH	Total FTEs	Rounded FTEs
Post/Position	M-F										
Director	1.00				5	40.00	2,085.60	No		1.00	
Subtotal Major	1.00					40.00	2,085.60			1.00	1
Assistant Director	1.00				5	40.00	2,085.60	No		1.00	
Subtotal Assistant Director	1.00					40.00	2,085.60			1.00	1
Shift Leader		1.00		1.00	5	42.00	2,189.88	No		2.00	
Subtotal Shift Leaders	0.00	1.00		1.00		42.00	2,189.88			2.00	2
Youth Counselor		13.00	13.00	9.00	7	1,960.00	102,194.40	Yes	1,738.74	58.77	
Court Monitor		1.00			5	40.00	2,085.60	Yes	1,738.74	1.20	
Subtotal Youth Counselors	0.00	14.00	13.00	9.00		2000.00	104280.00			59.97	60
Administrative Assistant	1.00				5	40.00	2,085.60	No		1.00	
Nurse	1.00				5	40.00	2,085.60	No		1.00	
Subtotal Non-Counselors	2.00	0.00	0.00	0.00		80.00	4,171.20			2.00	2
Total Staff Needed:										66	

6. Table JDC-19 shows the recommended JDC staff position summaries with relief calculations added.

Table JDC-19
Recommended JDC Staffing Summary

Scott County JDC - 64 Beds		Admin				Days/	Rounded
Post/Position	M-F	Day	Evening	Night	Week	FTEs	
Subtotal Director	1.00	0.00	0.00	0.00	5.00	1.00	
Subtotal Assistant Director	1.00	0.00	0.00	0.00	5.00	1.00	
Subtotal Shift Leaders	0.00	1.00	0.00	1.00	5.00	2.00	
Subtotal Youth Counselors	0.00	14.00	13.00	9.00	7.00	60.00	
Subtotal Non-Counselors	2.00	0.00	0.00	0.00	5.00	2.00	
Total Staff Needed:						66	

7. Not all new staff will be needed at one time. While the bedspace need of the JDC is expected to grow to 64 beds by 2037, they will not all come at once. After 2022, when the bedspace need is projected to be 34 beds, the growth will average 9.5 beds every 5 years. Therefore, the County should plan for staffing increases to keep pace with the growing numbers of youth to be detained, maintaining a 1:5 ratio of staff-to-youth during the day.
8. The bedspace need in 2030 will be approximately 50 beds. A first phase of construction could be to add three of the four projected Living Units and add the fourth Living Unit as a future phase. This would reduce the initial construction by approximately 5,000 square feet and reduce the initial staffing addition by 14 FTEs from 66 staff to 52 staff.

Table JDC-20
Initial Phase: JDC Space Summary

Component	Net Square Feet	Department Gross SF	Bldg Gross - 15%	Total BGSF
1.000 Staff Spaces	808.00	1,050.40	157.56	1,207.96
2.000 Health Services	625.00	875.00	131.25	1,006.25
3.000 Program Services	1,880.00	2,444.00	366.60	2,810.60
4.000 Living Units (3)	9,324.00	13,519.80	2,027.97	15,547.77
5.000 Support Services	1,967.00	2,360.40	354.06	2,714.46
6.000 Court	2,380.00	2,975.00	446.25	3,421.25
GRAND TOTALS	12,637.00	17,889.20	2,683.38	20,572.58

Table JDC-21
Initial Phase: JDC Staffing Summary

Scott County JDC - 48 Beds		Admin				Days/	Rounded
Post/Position	M-F	Day	Evening	Night	Week	FTEs	
Subtotal Director	1.00	0.00	0.00	0.00	5.00	1	
Subtotal Assistant Director	1.00	0.00	0.00	0.00	5.00	1	
Subtotal Shift Leaders	0.00	1.00	0.00	1.00	5.00	2	
Subtotal Youth Counselors	0.00	11.00	10.00	7.00	7.00	46	
Subtotal Non-Counselors	2.00	0.00	0.00	0.00	5.00	2	
Total Staff Needed:						52	



Projected salaries have been applied to the recommended staffing using multiple sources provided by County officials. For existing positions (posts) the average salaries were applied to each job classification based upon the *Position Budget Report for Budget Year 2020*. These amounts include the base wage, tax, benefit and workers' compensation.

The Phase One addition to the JDC involves building 48 beds of housing, which is the majority of the 2037 capacity of 64 youth. This will require increasing the number of Youth Counselors from 15 (currently) to 45. These additional staff positions have been added at Step 1 of the pay scale based upon the *Scott County Salary Rate Table for FY 2020* and escalated accordingly.

Table JDC-22
Recommended JDC 2022 Staffing & Salary Summary

Scott County JDC - 2022	Total	Rounded			
Post/Position	FTEs	FTEs	2022	2027	2031
Subtotal Director	1.00	1	\$ 153,621.14	\$ 171,698.93	\$ 187,681.23
Subtotal Assistant Director	1.00	1	\$ 117,173.18	\$ 130,961.85	\$ 143,152.21
Subtotal Shift Leaders	2.00	2	\$ 194,305.15	\$ 217,170.53	\$ 237,385.48
Subtotal Youth Counselors	45.34	45	\$ 3,122,412.11	\$ 3,563,477.44	\$ 3,918,499.34
Subtotal Non-Counselors	2.00	2	\$ 158,414.05	\$ 177,055.85	\$ 193,536.80
Total Staff Needed:		51	\$ 3,745,925.64	\$ 4,260,364.59	\$ 4,680,255.06

Source: Justice Planners, May 2019

The first phase of construction is estimated to provide adequate inmate housing until 2032. At this time the Phase Two expansion should come online to provide an additional housing unit that should provide enough housing through 2037. This housing unit will require an additional 15 Youth Counselor FTEs to provide for safe, secure operations. These additional positions have been added to the projected staffing and salaries beginning in 2032. They have been added at Step 1 of the pay scale based upon the Scott County Salary Rate Table for FY 2020 and escalated accordingly.

Table JDC-23
Recommended JDC 2032 Staffing & Salary Summary

Scott County JDC - 2032	Total	Rounded		
Post/Position	FTEs	FTEs	2032	2037
Subtotal Director	1.00	1	\$ 191,904.06	\$ 214,486.89
Subtotal Assistant Director	1.00	1	\$ 146,373.14	\$ 163,597.99
Subtotal Shift Leaders	2.00	2	\$ 242,726.66	\$ 271,290.17
Subtotal Youth Counselors	59.97	60	\$ 5,160,293.87	\$ 5,797,187.01
Subtotal Non-Counselors	2.00	2	\$ 197,891.37	\$ 221,178.77
Total Staff Needed:		66	\$ 5,939,189.09	\$ 6,667,740.83

Source: Justice Planners, May 2019



JDC Phased-Additional Capacity

The expansion, or replacement, of the JDC should occur in two phases. The first phase (Phase One) consists of constructing three living units plus administrative and support spaces. Barring delays in approvals and groundbreaking, the Phase One addition could be ready to open in 2022. If there are delays to this timeline, the staff salaries and estimated construction costs will have to be adjusted accordingly. When the JDC completes the initial phase of constructing additional capacity, there will (should) be a period of time when there are additional beds beyond the immediate need for Scott County. This is so the facility can “grow” into their new spaces until the time comes for the next phase of construction.

The projected bedspace need for the JDC in 2022 is 34 beds. If the County were to build to the 2032 need of 53 beds, then upon opening in/around 2022 there would be an additional 19 beds on average. This equates to one and one-half 12-bed living units that would initially be vacant. The County could choose to not open the one living unit initially, thereby not having to staff it. Or the County could choose to rent the additional 19 beds to other jurisdictions until the Scott County juvenile population increases.

Scott County is currently paying \$150 - \$200 per day to house excess juveniles in other jurisdictions. Using this range of fees, the initial 19 additional beds could be rented for between \$999,000 and \$1,332,000 the first year (2019 dollars). As the Scott County need for juvenile beds grows over the next 10 years, the available number of beds for rent will reduce by approximately 2 beds each year. The dollar amounts shown in the table below are calculated with the assumption that the additional beds will reduce by one every 6 months. To meet the required ratio of one staff person for every 5 youth, additional Youth Counselors would be required to fully staff these rented bedspaces. The table below shows the additional Youth Counselors that would be required and their escalated salary costs.

Table JDC-24
Additional Bed Rental if Phased

JDC Year	Additional Beds	Per Diem*			Youth Counselor	Counselor Costs**
		\$150	\$175	\$200		
2022	19	\$ 999,000	\$ 1,165,500	\$ 1,332,000	18	\$ 1,492,269
2023	17	\$ 891,000	\$ 1,039,500	\$ 1,188,000	18	\$ 1,525,845
2024	15	\$ 783,000	\$ 913,500	\$ 1,044,000	13	\$ 1,126,794
2025	13	\$ 675,000	\$ 787,500	\$ 900,000	13	\$ 1,152,147
2026	11	\$ 567,000	\$ 661,500	\$ 756,000	13	\$ 1,178,070
2027	9	\$ 459,000	\$ 535,500	\$ 612,000	10	\$ 526,597
2028	7	\$ 351,000	\$ 409,500	\$ 468,000	10	\$ 947,446
2029	5	\$ 243,000	\$ 283,500	\$ 324,000	5	\$ 484,382
2030	3	\$ 135,000	\$ 157,500	\$ 180,000	5	\$ 495,280
2031	1	\$ 27,000	\$ 31,500	\$ 36,000	5	\$ 506,424
2032	0	\$ -	\$ -	\$ -	\$ -	\$ -

* per diem amounts are shown in 2019 dollars

** Counselor costs are escalated each year

Source: Justice Planners

Another option is, rather than phasing the construction, build to the full 2037 need of 64 beds. This will result in about 30 additional beds upon opening in/around 2022. Using the same ranges of fees, the County could see revenues between \$1,593,000 and \$2,124,000 if all 30 beds were rented to youth from other jurisdictions the first year (2019 dollars). As described above, one Youth Counselor will be needed for every 5 youth to fully staff these rented bedspaces. The table below shows the additional Youth Counselors that would be required and their escalated salary costs.

Table JDC-25
Additional Bed Rental for Full Buildout

JDC Year	Additional Beds	Per Diem			Youth Counselor	Counselor Costs**
		\$150	\$175	\$200		
2022	30	\$1,593,000	\$1,858,500	\$2,124,000	27	\$ 2,238,403
2023	28	\$1,485,000	\$1,732,500	\$1,980,000	27	\$ 2,288,767
2024	26	\$1,377,000	\$1,606,500	\$1,836,000	27	\$ 2,340,264
2025	24	\$1,269,000	\$1,480,500	\$1,692,000	22	\$ 1,949,787
2026	22	\$1,161,000	\$1,354,500	\$1,548,000	22	\$ 1,993,657
2027	20	\$1,053,000	\$1,228,500	\$1,404,000	22	\$ 2,038,514
2028	18	\$ 945,000	\$1,102,500	\$1,260,000	18	\$ 1,705,403
2029	16	\$ 837,000	\$ 976,500	\$1,116,000	18	\$ 1,743,774
2030	14	\$ 729,000	\$ 850,500	\$ 972,000	12	\$ 1,188,673
2031	12	\$ 621,000	\$ 724,500	\$ 828,000	12	\$ 1,215,418
2032	10	\$ 513,000	\$ 598,500	\$ 684,000	10	\$ 828,510
2033	8	\$ 405,000	\$ 472,500	\$ 540,000	10	\$ 847,151
2034	6	\$ 297,000	\$ 346,500	\$ 396,000	10	\$ 866,212
2035	4	\$ 189,000	\$ 220,500	\$ 252,000	5	\$ 553,563
2036	2	\$ 81,000	\$ 94,500	\$ 108,000	5	\$ 566,019
2037	0	\$ -	\$ -	\$ -	0	

* per diem amounts are shown in 2019 dollars

** Counselor costs are escalated each year

Source: Justice Planners

There are some serious considerations that must be taken into account before deciding to build the full 64 beds at once, or even renting an additional living unit if the JDC expansion/replacement is built in phases.

Gauging the Demand for Beds. Often times jurisdictions will overbuild their own need for bedspace with the assumption, or even verbal commitment, of renting beds. They later find out the demand was not as great as they thought and many beds (or entire living units) sit empty. It is always advisable to have a written commitment in place before getting into an “overbuilt” situation. This would not be nearly the fiscal concern if the JDC expansion/ replacement is built in phases. The biggest concern in that scenario would be whether to open and staff the additional living unit with vacant beds.

Upfront Construction Costs. The upfront project costs will be higher if the full facility is built-out all at once rather than phasing the construction. This will require an additional \$1 million+ to fund the project.



Diminishing Revenue. The maximum amount of revenue generated by renting bedspace will likely be in the first year or two, and it can be appealing to offset budget appropriations with this anticipated revenue stream. However, a jurisdiction must understand that as time progresses, their own need for bedspace will increase. This means the number of beds available to rent out will decrease, and so will the anticipated revenue. So as the revenue decreases annually, this “loss” must be replaced by the County for the JDC to maintain staffing and operations.

JAIL NEEDS ASSESSMENT

Executive Summary

The Scott County Jail has been experiencing growth in their inmate populations. Even though the County’s general population has been increasing each year, the number of people booked into the County Jail was slowly decreasing until 2018. The average number of inmates held has been increasing since 2012, which means the inmates are staying in jail longer. The jail is built to hold a maximum of 363 inmates but, due to separation requirements, is considered “full” when the inmate population reaches 80-85% of capacity (around 300 inmates). In 2018 the average daily population (ADP) was 342 inmates. This includes an average of 19 inmates that were housed at other agencies due to a lack of adequate space. The number of beds is not sufficient to house the ADP in the adult jail, nor does it have the right types of beds to manage the risks and needs of the current (and projected population).

County Trends

In the last decade, from 2008 through 2017, the general population in Scott County has grown from 164,437 to 172,509, a 4.9 percent increase. By the year 2037 this is expected to increase to 182,434 residents. And while the general population is increasing, the number of juveniles aged 15 to 19 is projected to decline steadily.

Figure COU-1
Historic and Projected Scott County Population

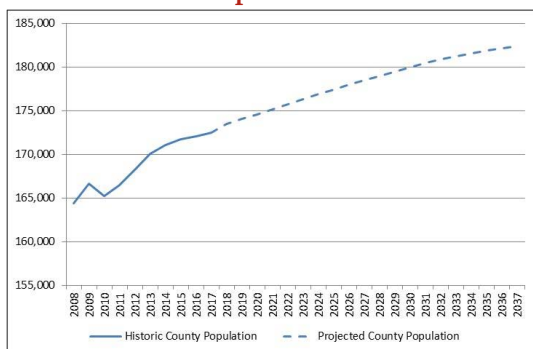
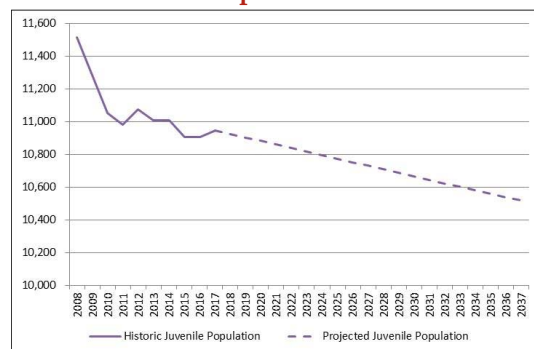


Figure COU-2
Historic and Projected Scott County Juvenile Population



The total number of reported criminal offenses have fluctuated over the last 10 years but were only about 10% higher in 2017 than in 2008. This rate has kept pace with the overall increase in the general population.

Jail Trends

The annual admissions to the jail decreased from 292 in 2008 to 263 in 2018, a decrease of 9.8 percent. This is somewhat surprising since the County’s general population is steadily increasing. The overall monthly average for admissions has been 21.5 for this same period.

Figure JAIL ES-1
Scott County: Historic Bookings

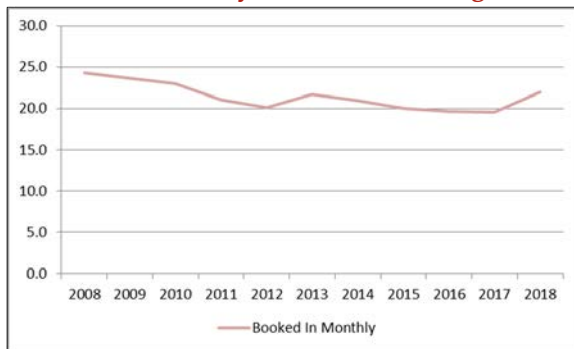
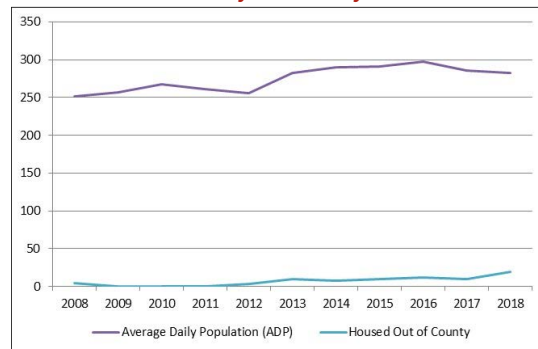


Figure JAIL ES-2
Scott County: ADP by Gender



The average daily population in the jail has risen from 252 in 2008 to a high of just over 300 in 2016. This does not include those inmates housed in other counties due to a lack of appropriate bedspaces. If all inmates were kept in the adult jail, the 2018 ADP would have been 342 inmates. As with the juvenile population in the Juvenile Detention Center (JDC), the adult inmates are staying longer which drives the demand for more beds. In 2009 the average length of stay (ALOS) for the adult inmate population was 9 days. It increased to a high of 11.4 days in 2016 before falling off to 10.4 days in 2018. This may not sound like a big increase, but the difference of 2.4 days for 300 inmates means an additional 720 jail days served each year.

Jail Projections

Baseline estimates of the jail population were generated in five-year increments using twelve projection models. Each model uses different independent variables and different statistical methods to analyze and project historic data. The 2018 annual average daily population served as the base year.

The recommended adult ADP, including those inmates housed out of county, is projected to be 425 in 2037. This will be an annual increase of 1.2 percent, a much slower rate than the projected juvenile ADP.

Figure JAIL ES-3
Scott County Jail ADP Projections

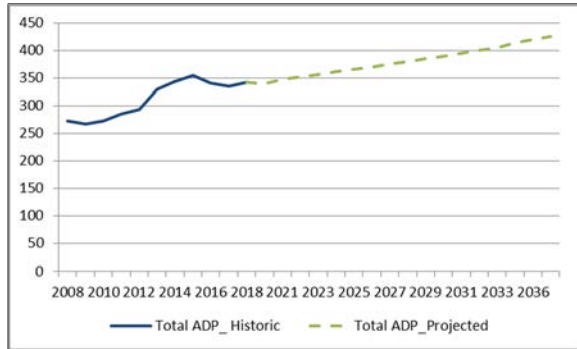
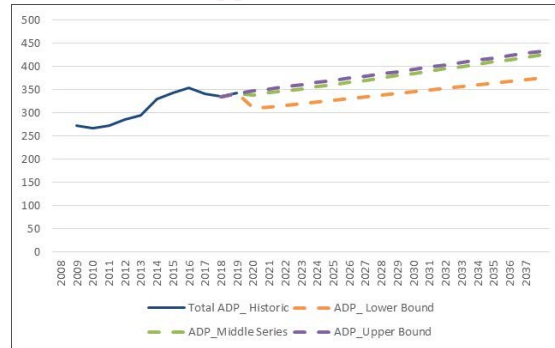


Figure JAIL ES-4
Jail ADP Projections: Lower, Middle and Upper Bounds



The same models used in the projected ADP are used for the lower and upper bound projections.

The lower bound ADP is projected to increase to 338 in 2027 and 375 in 2037, an increase of 12.1 percent. The upper bound ADP is projected to increase to 384 in 2027 and to 433 in 2037, an increase of 29.4 percent. The recommended middle series total ADP projection is closer to the upper bound, reflecting the historic growth of most indicators.

Jail Bedspace Needs

The peaking value of the Scott County Jail is calculated using monthly data from January 2008 to August 2018. The percentage difference from the highest months was compared to the annual ADP for each year to determine the peaking factor of 9.0 percent.

It is very difficult to ascertain a historic percentage for a classification factor, as systems do not retain classification data in an aggregate manner historically. As such, a 5 percent classification factor has been applied based on experience working with similar sized jails.

The peaking and classification factors are added together and then added to the projections to calculate the number of beds needed. The recommended total projected bedspace need for Scott County is 428 in 2027 and grows to 484 beds in 2037.

Table JAIL ES-1
Scott County Jail Bedspace Projections

Bedspace Projections	2017	2022	2027	2032	2037
Adult ADP - Projected	335	352	375	400	425
Peaking (9.0%)	30	32	34	36	38
Classification (5.0%)	17	18	19	20	21
Bedspace Needed - Projected	382	401	428	456	484

Proposed Jail Expansion

To increase the housing capacity of the jail to meet the projected 2037 need would require the addition of 120 inmate beds to the current facility. This could be accomplished by adding two housing units with capacities of 48 beds each and one housing unit of 24 beds. An assessment of all existing housing should be compared with the make-up of the inmate population to ensure that all inmates are properly placed according to their classification and levels of risks and needs. Some reconfiguration of the classification process, housing plan, and possibly the existing housing units themselves should be undertaken to ensure the most efficient and secure operations possible for Scott County.

Table JAIL ES-2
Adult Jail Expansion Space Requirement

Component		Net Square Feet	Department Gross SF	Bldg Gross - 15%	Total BGSF
1.100	Housing Control	135.00	209.25	31.39	240.64
1.200	24-Bed Housing Unit	3,626.00	5,620.30	843.05	6,463.35
1.300	48- Bed Housing Units (2)	10,344.00	16,033.20	2,404.98	18,438.18
GRAND TOTALS		14,105.00	21,862.75	3,279.41	25,142.16

As the new housing units may be located separate from the existing housing a Housing Control room has been included to maximize staff presence and security of the new spaces.

The smaller 24-bed Housing Unit may be appropriate for specialty groups of inmates such as those in need of protective custody, inmates with medical needs or mental illness, or others that should not be housed with the general inmate population. The two additional 48-bed Housing Units may house various groups of inmates based upon the objective classification system.

Staffing

The Scott County Jail is facing a shortage of staff and staff positions to provide safe and secure operations. With 59 full time equivalent (FTE) correctional officer positions, there is a question of whether this is an adequate number of staff. This is compounded by the inability to fill all the approved positions. As a part of the Needs Assessment process, the custody staffing is being reviewed to determine an appropriate level of staff needed to manage the current numbers and types of inmates housed.

Methodology

The process used for evaluating the staff needs was based on the *Staffing Analysis Workbook for Jails: Second Edition*, which was produced by the National Institute of Corrections, and is considered the “industry standard” process for determining appropriate staffing for local corrections. Completed tasks included document reviews, on-site analyses, evaluation of security post assignments, and staff relief calculations.

Relief Calculations

Properly staffing a jail involves much more than multiplying the number of posts to be covered by the number of shifts. Due to longevity, differences in leave accrual and benefits, a separate relief factor, known as Net Annual Work Hours (NAWH), was calculated for each rank and classification of staff that require relief coverage. This ensures the most accurate projected of staff required.

Table JAIL ES-3
Relief Factor Calculations

Relief Factor	Sergeant	Corrections Officer
Hours per year	8,760	8,760
Hours per year divided by NAWH	4.99	4.73
Relief Factor	1.25	1.18

Simply put, for the amount of time *actually taken* away from their post/position. For instance, 1.25 Sergeants are required for each Sergeant position, and 1.18 Corrections Officers for each Corrections Officer position.

Jail Staffing Findings Recommendations

1. The positions of Jail Administrator, Captain, Lieutenants and the Training and Program Sergeants appear to be reasonable and properly assigned.
2. The Shift Sergeant Posts should have relief staff factored into the staffing complement for times when these staff are away due to illness, vacation, etc. which will require 15 Shift Sergeants to provide full coverage.
3. The posts in the Booking area appear to be adequate, and no additional staffing is recommended.

4. The Female Housing Unit has one Correctional Officer assigned per team. It is recommended that two officers be assigned to this unit on day shift when inmates are most likely to be up and potentially out of their cells and during the evening shift until lockdown. This can likely be accomplished by scheduling a Correctional Officer on a swing (or 9am to 9pm) shift.
5. The Intake Housing Unit has one Correctional Officer assigned per team. Given there are 72 beds in six sub-housing units with various security levels, a second Correctional Officer is recommended during the day shift when inmates are most likely to be up and potentially out of their cells and during the evening shift until lockdown. This can likely be accomplished by scheduling a Correctional Officer on a swing (or 9am to 9pm) shift.
6. The Special Management Housing Unit also has one Correctional Officer assigned per team. Policy requires a second officer be present when an inmate door is opened/moved in this unit. This necessitates a second officer in this housing unit during the day shift when inmates are most likely to be up and potentially out of their cells and during the evening shift until lockdown. This can likely be accomplished by scheduling a Correctional Officer on a swing (or 9am to 9pm) shift.
7. A single officer in the General Population Housing Units (North and South) units appears to be adequate and no additional staffing is recommended.
8. There is a total of five Escort posts in the jail, but typically they are not all staffed. This may be reduced to four during the day and 2.5 at night.
9. Given that public visitation takes place in a non-secure area, the County may consider converting this to a civilian post.
10. As the inmate population grows, two additional Classification Specialists may need to be added. If alternative programs become more prevalent, an Alternative Sentence Specialist may need to be considered.
11. Based upon these observations, findings and recommendations the total staff required for safe and efficient jail operations is 107 FTEs. See Table ES-4 below.

Table JAIL ES-4
Recommended Jail Staffing Summary

Scott County Jail	Admin				Total	Rounded
Post/Position	M-F	Day	Night	NAWH	FTEs	FTEs
Subtotal Major	1.00	0.00	0.00	-	1.00	1
Subtotal Captain	1.00	0.00	0.00	-	1.00	1
Subtotal Lieutenants	0.00	1.00	1.00	-	2.00	2
Subtotal Sergeants	1.00	3.00	3.00	1,754.14	16.98	17
Subtotal Correctional Officers	0.00	17.33	13.00	1,852.80	70.46	70
Subtotal Non-Correctional Officer	12.00	2.00	2.00	-	16.00	16
Total Staff Needed:						107

12. If the County decides to add 120 beds to the capacity of the Jail, the recommendation is to add two 48-bed housing units and one 24-bed housing unit. The types and custody levels of the inmates that would be housed in these new units cannot be determined at this stage. For the purposes of this study the staff for these new areas are calculated at one officer per post, per shift. This would bring the total recommended number of Corrections Officers to 89 staff and adding two additional Classification Specialists will bring the total staffing complement to 128 for the County Jail. No additional supervisory or command staff would be recommended as a result of this expansion.

Table JAIL ES-5
Expanded Jail Staffing Summary

Expanded Scott County Jail	Admin				Total	Rounded
Post/Position	M-F	Day	Night	NAWH	FTEs	FTEs
Subtotal Major	1.00	0.00	0.00		1.00	1
Subtotal Captain	1.00	0.00	0.00		1.00	1
Subtotal Lieutenants	0.00	1.00	1.00		2.00	2
Subtotal Sergeants	1.00	3.00	3.00	1,754.14	16.98	17
Subtotal Correctional Officers	0.00	21.33	17.00	1,852.80	89.37	89
Subtotal Non-Correctional Officer	14.00	44.66	112.66		18.00	18
Total Staff Needed:						128

Jail Salaries and Benefits

To maintain the current operations without any additional housing, the recommendation is to add 11.46 additional Correctional Officers (rounded down to 11) to the existing 59 officers. These additional staff positions have been added at Step 1 of the pay scale based upon the *Scott County Salary Rate Table for FY 2020* and escalated accordingly. After applying a proper NAWH to the Shift Sergeants, 4.98 additional Sergeant positions (rounded to 5) have been added as well, bringing the total number of Sergeants to 17.

Table JAIL ES-6
Recommended Jail 2020 Staffing & Salary Summary

Scott County Jail - 2020	Total	Rounded	
Post/Position	FTEs	FTEs	2020
Subtotal Major	1.00	1	\$ 143,699.44
Subtotal Captain	1.00	1	\$ 140,791.24
Subtotal Lieutenants	2.00	2	\$ 223,599.60
Subtotal Sergeants	16.98	17	\$ 1,762,637.18
Subtotal Correctional Officers	70.46	70	\$ 5,901,786.80
Subtotal Non-Correctional Officer	18.00	18	\$ 1,362,752.64
Total Staff Needed:		109	\$ 9,316,506.27

Source: Justice Planners, May 2019

The estimated salaries and benefits of these additional staff total approximately \$1,227,086 in 2020 dollars.

Table JAIL ES-7
Additional Recommended Jail 2020 Staffing & Salary Summary

Scott County Jail - 2020	Total	Rounded	
<u>Additional Post/Position</u>	<u>FTEs</u>	<u>FTEs</u>	2020
Subtotal Sergeants	4.98	5	\$ 518,422.70
Subtotal Correctional Officers	11.46	11	\$ 708,663.01
Total Additional Staff Needed:		16	\$ 1,227,085.71

Source: Justice Planners, May 2019

The expansion of the capacity of the Jail will be accomplished in two phases. The first phase (Phase One) consists of constructing two additional housing units plus a Housing Control station. Barring delays in approvals and groundbreaking, the Phase One addition could be ready to open in 2022. If there are delays to this timeline, the staff salaries and estimated construction costs will have to be adjusted accordingly. With proper relief added, these new Housing and Housing Control posts should be staffed with a total of 15 additional Correctional Officer FTEs. Added to the 70 recommended Correctional Officers for current operations, the total recommended Correctional Officer positions is 85. These 15 positions have been added to the salary schedule in 2022 to coincide with the Phase One opening.

Table JAIL ES-8
Recommended Jail 2022 Staffing & Salary Summary

Scott County Jail - 2022	Total	Rounded			
<u>Post/Position</u>	<u>FTEs</u>	<u>FTEs</u>	2022	2027	2031
Subtotal Major	1.00	1	\$ 150,605.99	\$ 168,328.96	\$ 183,997.58
Subtotal Captain	1.00	1	\$ 147,558.02	\$ 164,922.31	\$ 180,273.82
Subtotal Lieutenants	2.00	2	\$ 234,346.36	\$ 261,923.69	\$ 286,304.42
Subtotal Sergeants	16.98	17	\$ 1,847,353.93	\$ 2,064,746.28	\$ 2,256,939.71
Subtotal Correctional Officers	84.65	85	\$ 5,301,806.94	\$ 5,925,711.35	\$ 6,477,296.23
Subtotal Non-Correctional Officer	18.00	18	\$ 1,428,249.94	\$ 1,596,323.10	\$ 1,744,914.15
Total Staff Needed:		124	\$10,858,534.49	\$12,389,066.87	\$13,542,282.33

Source: Justice Planners, May 2019



The Phase Two expansion should come online in 2032 to provide an additional housing unit that should provide enough housing through 2037. This housing unit will require an additional 4 Correctional Officer FTEs to provide for safe, secure operations. Four additional Correctional Officer positions have been added to the projected staffing and salaries beginning in 2032. They have been added at Step 1 of the pay scale based upon the Scott County Salary Rate Table for FY 2020 and escalated accordingly.

Table JAIL ES-9
Recommended Jail 2032-2037 Staffing & Salary Summary

Scott County Jail - 2032	Total	Rounded		
Post/Position	FTEs	FTEs	2032	2037
Subtotal Major	1.00	1	\$ 188,137.52	\$ 210,277.11
Subtotal Captain	1.00	1	\$ 184,329.98	\$ 206,021.51
Subtotal Lieutenants	2.00	2	\$ 292,746.27	\$ 327,195.98
Subtotal Sergeants	16.98	17	\$ 2,307,720.86	\$ 2,579,288.13
Subtotal Correctional Officers	89.37	89	\$ 6,623,035.39	\$ 7,402,418.92
Subtotal Non-Correctional Officer	18.00	18	\$ 1,784,174.72	\$ 1,994,132.28
Total Staff Needed:		128	\$13,846,983.68	\$15,476,464.78

Source: Justice Planners, May 2019

It is projected that in 2037 the jail will have 128 staff with salaries and benefits totaling \$15,476,465.

Jail Phased-ADDITIONAL CAPACITY

After the initial phase of construction, there will (should) be a period of time when there are additional beds beyond the immediate need for Scott County. This is so the facility can “grow” into their new spaces until the time comes for the next phase of construction.

The projected bedspace need for the Jail in 2022 is 401 beds. If the County were to build enough bedspaces to reach the 2032 need of 456 beds, then upon opening in/around 2022 there would be an additional 55 beds on average. The County could choose to rent the additional 55 beds to other jurisdictions until the Scott County inmate population increases.

Scott County is currently paying \$75 - \$80 per day to house excess inmates in other jurisdictions. Using this range of fees, the initial 55 additional beds could be rented for between \$1,505,625 and \$1,606,000 the first year (2019 dollars).

Table JAIL ES-10
Additional Bed Rental if Phased

Jail Year	Additional Beds	Per Diem*	
		\$75	\$80
2022	55	\$ 1,505,625	\$ 1,606,000
2023	50	\$ 1,355,063	\$ 1,445,400
2024	44	\$ 1,204,500	\$ 1,284,800
2025	39	\$ 1,053,938	\$ 1,124,200
2026	33	\$ 903,375	\$ 963,600
2027	28	\$ 752,813	\$ 803,000
2028	22	\$ 602,250	\$ 642,400
2029	17	\$ 451,688	\$ 481,800
2030	11	\$ 301,125	\$ 321,200
2031	6	\$ 150,563	\$ 160,600
2032	0	\$ -	\$ -

* amounts are shown in 2019 dollars

Source: Justice Planners

Another option is, rather than shelling the future housing need, build enough bedspaces to reach the full 2037 need of 484 beds. This will result in about 83 additional beds upon opening in/around 2022. Using the same ranges of fees, the County could see revenues between \$2,272,125 and \$2,423,600 if all 83 beds were rented to other jurisdictions the first year (2019 dollars).

Table JAIL ES-11
Additional Bed Rental for Full Buildout

Jail Year	Additional Beds	Per Diem	
		\$75	\$80
2022	83	\$2,272,125	\$2,423,600
2023	77	\$2,120,659	\$2,262,036
2024	72	\$1,969,193	\$2,100,473
2025	66	\$1,817,727	\$1,938,909
2026	61	\$1,666,262	\$1,777,346
2027	55	\$1,514,796	\$1,615,782
2028	50	\$1,363,330	\$1,454,218
2029	44	\$1,211,864	\$1,292,655
2030	39	\$1,060,398	\$1,131,091
2031	33	\$ 908,932	\$ 969,528
2032	28	\$ 757,466	\$ 807,964
2033	22	\$ 606,000	\$ 646,400
2034	17	\$ 454,535	\$ 484,837
2035	11	\$ 303,069	\$ 323,273
2036	6	\$ 151,603	\$ 161,710
2037	0	\$ -	\$ -

* amounts are shown in 2019 dollars
Source: Justice Planners

There are many considerations that must be taken into account before deciding to build to the full 2037 capacity at once, or even renting beds in an additional housing unit if the Jail expansion is built in phases. They include realistically gauging the demand for beds to avoid getting into an over built situation. Unused housing can be expensive to maintain without inmate use or expected revenue from other jurisdictions.

The upfront project costs will be significantly higher if the full facility is built-out all at once rather than phasing the construction. The total project costs would increase from \$14.5 million to approximately \$23.9 million to build the full expansion at one time.

The maximum amount of revenue generated by renting bedspace will likely be in the first year or two. However, as time progresses, a County’s own need for bedspace will increase. This means the number of beds available to rent out will decrease, and so will the anticipated revenue. So as the revenue decreases annually, this “loss” must be replaced by the County for the Jail to maintain staffing and operations.



Scott County has an ongoing agreement with federal law enforcement agencies to house federal inmates. For the last 5 years (2013 through 2018) Scott County has housed an average of 34.3 federal inmates per day. These include inmates from the US Marshals (30.5), the Federal Bureau of Prisons (3.8) and Immigration and Customs Enforcement (0.09). The County currently charges these agencies \$70 for every day a federal inmate is housed in the jail. If this trend continues of housing an average of 34.3 federal inmates daily, Scott County should expect annual revenues of \$876,649 (in 2019 dollars).

Table JAIL ES-12
Housing of Federal Inmates

Year	Avg Held	\$70/Day	Annually
2014	38.8		
2015	46.3		
2016	23.0		
2017	32.3		
2018*	31.2		
Avg	34.3	\$ 2,402	\$ 876,649

* 2018 numbers are through September

Source: Justice Planners

Note: As mentioned above Scott County has been housing federal inmates for many years, therefore this is estimated revenue they already receive. However, it gives a more accurate picture of the revenues recognized by the County when paired with the potential funding to be received through renting additional beds through the new construction.

Introduction

Scott County retained the team of Wold Architects and Engineers and Justice Planners in 2018 to conduct a comprehensive juvenile detention and adult jail needs assessment. The purpose of the study is to develop a plan that will establish current and future capacity requirements for both facilities over the next twenty years. The study includes separate bedspace projections for the juvenile detention center and the jail.

Internal and external factors contributing to the populations in these facilities were examined. Jails have little or no control over most factors influencing their populations. In reality, the practices of other components of the County's criminal justice system have the largest effect on these populations. This includes the speed of criminal case processing, county population trends and local crime rates. These external factors impact nearly every aspect of a jail's operation including staff workload, the number of staff needed, the capacity and type of offender housing required, and the level of offender services and programs needed. Therefore, an accurate assessment of practices within the entire County's criminal justice system was required to clearly project future needs and to develop a sound, rational proposal for key system stakeholders.

The Needs Assessment used data provided by the Scott County Jail from 2008 through 2018. As the majority of the data gathering occurred in the fall of 2018, some annual data was only available through 2017. Other information was able to be extrapolated for the remainder of 2018. Projections for average daily population and bedspace needs were calculated to the year 2037 for the purposes of effective and efficient jail planning.

Background

Scott County is part of the Quad Cities Metropolitan Statistical Area in the eastern part of the state of Iowa. It is situated in the southeastern section of Iowa, and has a total area of 468 square miles, a population of 172,509 as of 2017. It is bordered by Clinton, Cedar and Muscatine Counties in Iowa and Rock Island County, Illinois across the Mississippi River. There are 18 cities in Scott County, with the largest being the cities of Davenport (county seat), Bettendorf, Eldridge and Le Claire. In addition to the Scott County Sheriff's Office, there are 9 municipal police departments that commit arrestees to the Scott County Jail, 5 state agencies, 6 federal agencies, several private prisoner transportation and bonding companies, and the Canadian Pacific Railway. The most recent population count for Scott County was 172,509 in 2017.





The Scott County Jail first opened its current facility, with a capacity of 365, in 2008. The jail accommodates the 7th Judicial District with adult and juvenile incarceration. By state law, no one may be sentenced to a local jail for more than one year. Over the last several years, there have been many inmates regularly housed with other nearby jurisdictions due to a lack of adequate bedspace in both the adult jail and the JDC. From November 2017 through October 2018 there have been an average of 8.7 adult inmates housed in other counties due to a lack of bedspace, with 6.7 of these being females. These numbers have been increasing as of late. In the 6-month period from May through October 2018, 12.9 adult inmates were housed out in other counties. In the following 90 days (August through October 2018) an average of 17.5 inmates were housed out. Most of these inmates were female. There is limited space to house juveniles that are charged as adults, which is an increasing population. In the last year there have been an average of 7.9 of these youth that have been housed with other counties, and all of them have been male.

There are seven housing units in the jail. Five of these are intended to operate under a direct supervision philosophy, meaning an officer that has been trained in interpersonal communications and the principles and dynamics of direct supervision is stationed inside the housing unit. However, each of these housing units is subdivided into as many as six “sub-units” making it difficult for the single housing unit officer to manage and interact with the inmates in a true direct supervision manner.

Expectations

In October 2018 Scott County entered into a contract with the Consultants to begin the process of conducting a needs assessment for the County Jail and Juvenile Detention Center. A kick-off meeting for the Needs Assessment was held in the Scott County Courthouse on September 16, 2018 with members of the Core Planning Group (CPG). Those that attended the kick-off meeting are as follows:

<u>Name</u>	<u>Agency</u>
Sheriff Tim Lane	County Sheriff’s Office
Major Shawn Roth	County Sheriff’s Office
Major Bryce Schmidt	County Jail
Captain Stefanie Bush	County Jail
Jeremy Kaiser	Juvenile Detention Center
Mary Thee	Assistant County Administrator
David Farmer	Budget and Administrative Services
Tammy Speidel	Facility and Support Services
Alan Richardson	Justice Planners
Roger Schroepfer	Wold AE
Kirsta Ehmke	Wold AE



At the kick-off meeting the scope of work for this Needs Assessment was presented and discussed. The CPG discussed their needs and the desired outcomes and goals of the study. The primary points made during this discussion are as follows.

1. The purpose of detention is to reduce recidivism.
2. The County wants to plan for flexibility and expandability of the existing facilities. There is no intent to move the detention facilities away from the current downtown campus location.
3. There is a desire to house an increase in population while maintaining proper classification and separation of inmates.
4. There is a need of approximately twice the number of juvenile beds as exists today. There is a desire to house these detainees in County, since housing juveniles at off-site locations is expensive and an inefficient use of staff time. Housing juveniles in other counties also moves them further from their families and support systems which can be detrimental to their chances of success.
5. The jail should be configured to allow for the most efficient use of bedspace. The current configuration does not allow for full use of the facilities.
6. The female inmate population is growing and there should be a protocol for housing females off-site.
7. There is a need for dedicated mental health and medical housing.

On October 16-18, 2018 the Consultants interviewed staff from all departments in the Jail and JDC as well as representatives from the Board of Supervisors, local law enforcement, Human Resources, the County Attorney's Office, Public Defender's Office, the Judiciary, Court Administration, Specialty Courts, County Information Technology, the County Health Department, Mental Health, and Adult and Juvenile Probation to discuss their involvement with the County Jail and JDC and their priorities concerning potential facility additions.

Historic Data and Trends

A database was developed to support the analysis, profiling, and forecasting activities for the Scott County Jail and Juvenile Detention Center. This database included information on the inmate population and other components of the criminal justice system that can impact on the jail population levels. The database supports the multiple models considered for the jail average daily population (ADP) projections and subsequent bedspace need projection. Data was collected from the jail, juvenile detention center, US Census, and other relevant sources.

Historic and Projected County Population

Historic county population data for the study is from the US Census Bureau. County population projections are from Woods & Poole Economics, Incorporated. County population data is a key variable in jail population projections.

Table COU-1 presents the county population trends from 2008 to 2017. Scott County population has grown by 8,072 residents since 2008, an increase of 4.9 percent. The annual growth rate in Scott County from 2008 to 2017 was 0.5 percent.

Table COU-1
Scott County Historic Population

Year	County Population	Juvenile Pop (15-19)
2008	164,437	11,514
2009	166,650	11,286
2010	165,261	11,053
2011	166,521	10,981
2012	168,266	11,075
2013	170,071	11,009
2014	171,118	11,007
2015	171,724	10,907
2016	172,054	10,906
2017	172,509	10,948
Total # Change 2008-2017:		8,072
Total % Change 2008-2017:		4.9%
Compound Annual % Change:		0.5%

Source: US Census Bureau, October 2018

The juvenile population in Scott County have decreased since 2008. The juvenile population is identified as youth aged 15 to 19. The juvenile population in Scott County decreased 4.9 percent from 2008 to 2017, an annual decrease of 0.6 percent.

The population in Scott County is projected to increase from 2017 to 2037, however at a slower pace than the population increase from 2008 to 2017. The resident population in Scott County is projected to increase to 182,434 by the year 2037, an increase of 5.8 percent overall, or an average annual increase of 0.3 percent.

The juvenile population is projected to keep decreasing, to 10,518 in 2037. This is a decrease of 3.9 percent from 2017 to 2037. The annual percentage decrease for the juvenile population is 0.2 percent. Table COU-2 shows the projected total population and juvenile population in Scott County to 2037 in 5-year increments.

Table COU-2
Scott County Projected Population

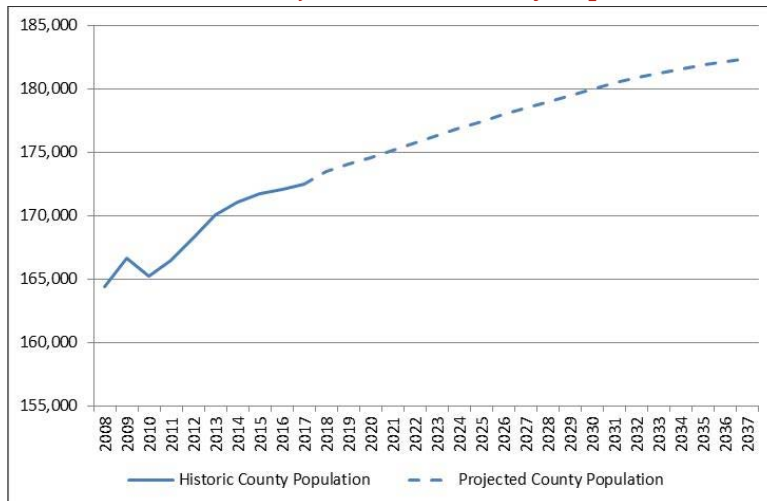
Year	Population	Juvenile Pop (15-19)
2017	172,509	10,948
2022	175,754	10,839
2027	178,500	10,731
2032	180,879	10,624
2037	182,434	10,518
Total # Change 2017-2037:		9,925 -430
Total % Change 2017-2037:		5.8% -3.9%
Compound Annual % Change:		0.3% -0.2%

Source: Woods & Poole Economics, Inc., 2018.

Note: Woods & Poole data are projections

Figure COU-1 illustrates the historic and projected population in Scott County.

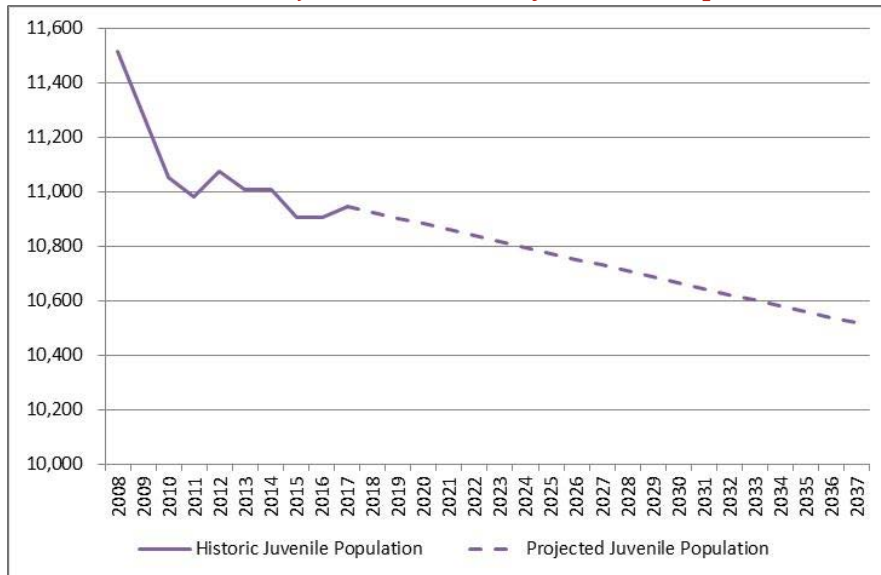
Figure COU-1
Historic and Projected Scott County Population



The total population continues an increasing arc to 2037, exceeding 180,000 residents by 2030.

The historic and projected juvenile population is shown in Figure COU-2. The historic decrease in juvenile population in Scott County is projected to continue through the time frame examined.

Figure COU-2
Historic and Projected Scott County Juvenile Population



Crime Data

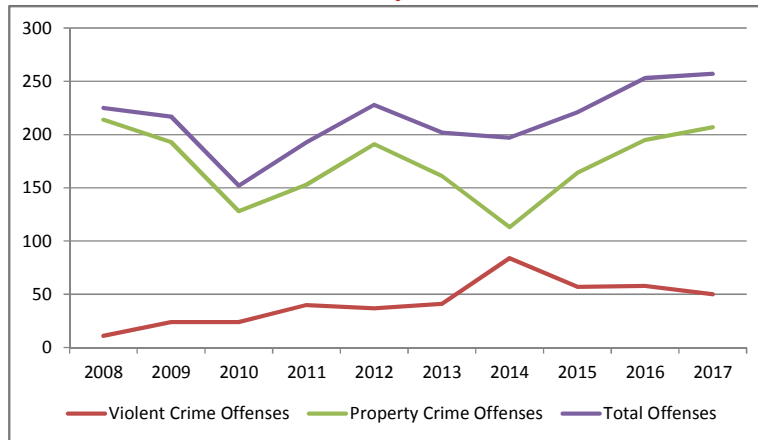
Historic annual offenses known to law enforcement are used in population projection modeling, tying the number of reported offenses to the average daily population (ADP) and the jail admissions (ADM) when the variables are correlated. Most often, annual reported offenses will correlate more directly with ADM, while the ADP of most jails often do not correlate with the number of annual offenses and arrests. ADP is more dependent on the number of bookings (not all arrests will result in a booking to the jail; some are cited and released or ordered to appear in court without being taken to jail).

Offenses known to Law Enforcement data comes from the FBI’s Uniform Crime Report, from 2008 to 2017. The offenses known to law enforcement are split into violent crimes and property crimes that has come to the attention of local law enforcement.

Violent crime offenses in Scott County has increased from 11 in 2008 to 50 in 2017, an increase of 354.5 percent. This increase in violent crime offenses is opposite of the nation-wide trend. The number of violent crime offenses peaked in 2014 at 84. The property crime offenses declined by 3.3 percent from 2008 to 2017, dropping from 214 to 207. The average number of annual property crimes in Scott County from 2008 to 2017 was 172.

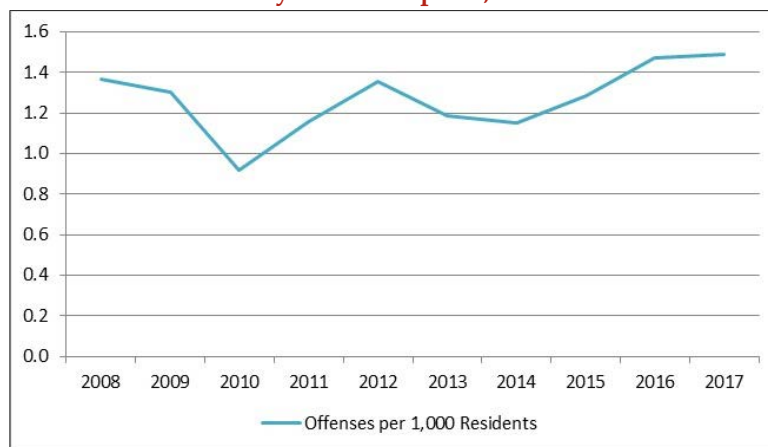
Summing the violent and property crime offenses known to law enforcement in Scott County shows an increase in total offenses from 225 in 2008 to 257 in 2018, an increase of 14.2 percent, see Figure COU-3.

Figure COU-3
Scott County Offenses



The offenses known to law enforcement rate per 1,000 Scott County residents increased from 1.4 in 2008 to 1.5 in 2018, an increase of 8.9 percent. Figure COU-4 shows the historic offenses known to law enforcement per 1,000 residents in Scott County from 2008 to 2017.

Figure COU-4
Scott County Offenses per 1,000 Residents



The total offenses known to law enforcement in Scott County is used in the jail population projections. The offenses are set against the corresponding ADP by year, and that rate is applied to projected offenses in the county.

Historic Jail Data

Jail Bookings:

Historic jail admissions (ADM) annual data was provided by the Scott County Sheriff’s Office. The data was shown as a monthly average, which was transformed to an annual total for the analysis. The annual ADM has decreased from 292 to 263, a decrease of 9.8 percent from 2008 to 2017. The peak annual ADM occurred in the first year. Overall the monthly average for ADM ranges from 19.6 to 24.3, reference Table JAIL-1.

Table JAIL-1
Scott County: Historic Bookings

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	# Change	% Change	CAGR	Average
Scott County Population	164,437	166,650	165,261	166,521	168,266	170,071	171,118	171,724	172,054	172,509	173,484	9,047	5.5%	0.5%	169,281
Booked In Monthly	24.3	23.7	23.0	21.0	20.1	21.7	21.0	20.0	19.7	19.6	21.9	-2	-9.8%	-1.0%	21
Booked In Annually	291.8	283.9	275.8	252.2	241.1	260.3	251.7	240.4	235.8	234.8	263.3	-28	-9.8%	-1.0%	257
Bookings per 1,000 Population	1.8	1.7	1.7	1.5	1.4	1.5	1.5	1.4	1.4	1.4	1.5	0	-14.5%	-1.5%	2

Source: US Census Bureau, Scott County Sheriff’s Office, October 2018.

Figure JAIL-1 illustrates the annual ADM and highlights the peak in 2008 and subsequent decrease over time. The figure shows a recent uptick in jail bookings in 2017.

Figure JAIL-1
Scott County: Historic Bookings

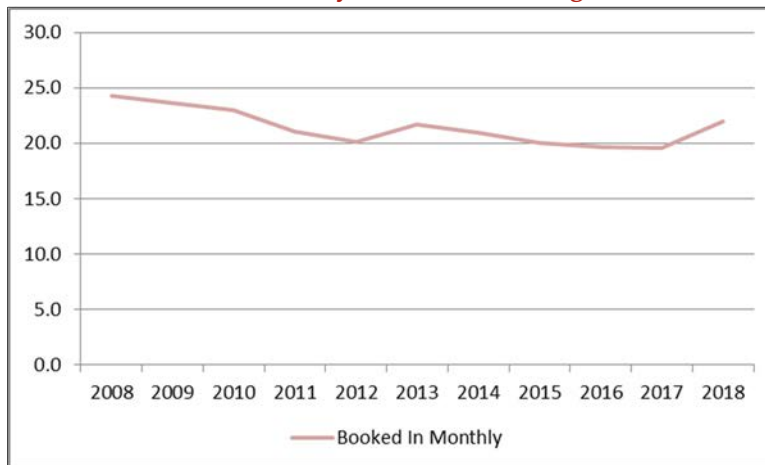
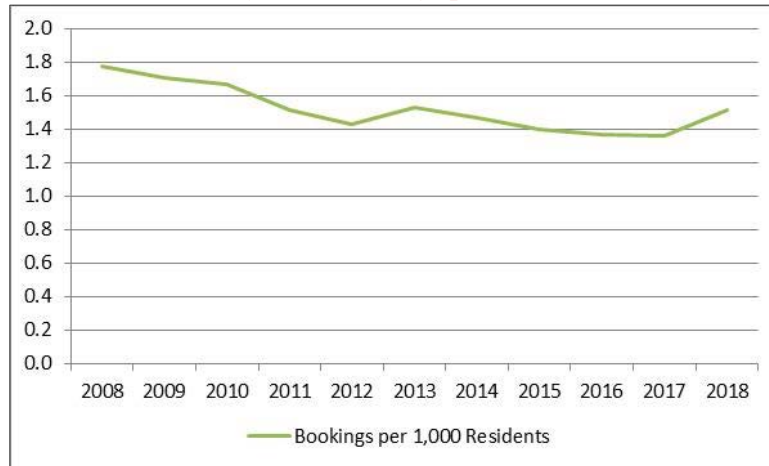


Figure JAIL-2 shows the annual jail bookings per 1,000 Scott County residents from 2008 to 2017. The number of bookings per 1,000 residents has decreased 14.5 percent, from 1.8 jail bookings per 1,000 residents to 1.5 jail booking per 1,000 residents.

Figure JAIL-2
Scott County Jail Bookings per 1,000 Residents



The bookings per 1,000 residents as well as the overall annual number of jail bookings is used in the projection models.

Jail Average Daily Population:

The historic annual ADP from 2008 to 2018 is the average daily number of inmates held in the Scott County jail facilities. The Scott County ADP is calculated by the number of average inmates in the Scott County jail, plus the average daily number of inmates that are housed in detention facilities outside of Scott County.

In the Scott County jail, the annual ADP has increased from 252 in 2008 to 283 in 2018, an increase of 12.3 percent. The average for annual ADP in the Scott County Jail is 275. The highest annual ADP was in 2016 at 298. The number of inmates housed out of county was five in 2008 and zero for the next three years. The number of inmates housed out of county has steadily increased since 2012, growing from three to 19 in 2018. There has been a 320.6 increase of inmates housed out of county.

Summing the ADP for the Scott County jail and the ADP of inmates housed out of county results in the total ADP for Scott County. The total ADP is used for the projections modelling, while the ADP in the Scott County jail is used as an alternative model. The total ADP in Scott County has increased from 272 in 2008 to 342 in 2018, an increase of 25.5 percent, see Table JAIL-2.

Table JAIL-2
Scott County Historic Jail ADP

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	# Change	% Change	CAGR	Average
Scott County Population	164,437	166,650	165,261	166,521	168,266	170,071	171,118	171,724	172,054	172,509	173,484	9,047	5.5%	0.5%	169,281
Average Daily Population (ADP)	252	257	268	261	256	283	290	291	298	286	283	31	12.3%	1.2%	275
Housed Out of County	5	0	0	0	3	9	8	9	12	10	19	15	320.6%	15.4%	7
TOTAL Average Daily Population (ADP)	272	267	273	286	294	330	343	354	340	335	342	70	25.5%	2.3%	312
IR per 1,000 residents	1.7	1.6	1.7	1.7	1.7	1.9	2.0	2.1	2.0	1.9	2.0	0.3	19.0%	1.8%	1.8

Source: US Census Bureau, Scott County Sheriff's Office, October 2018.

The highest monthly ADP for each year is compared to each year's average annual ADP to calculate the peaking value. This factor is used to account for periodic spikes in the inmate population throughout the years. The peaking value will be used to determine the bedspace need from the projected ADP later in the report.

The incarceration rate (IR) measures the ADP in relation to the resident population. The IR in Scott County has increased 19.0 percent from 2008 to 2018. The average IR is 1.8 inmates per 1,000 residents. The IR in 2018 was 2.0, slightly below the peak IR in 2015 at 2.1 inmates per 1,000 residents.

Figure JAIL-3 shows the annual ADP for the Scott County jail and the ADP of inmates held out of county from 2008 to 2018.

Figure JAIL-3
Scott County: In House and Out of County Jail ADP

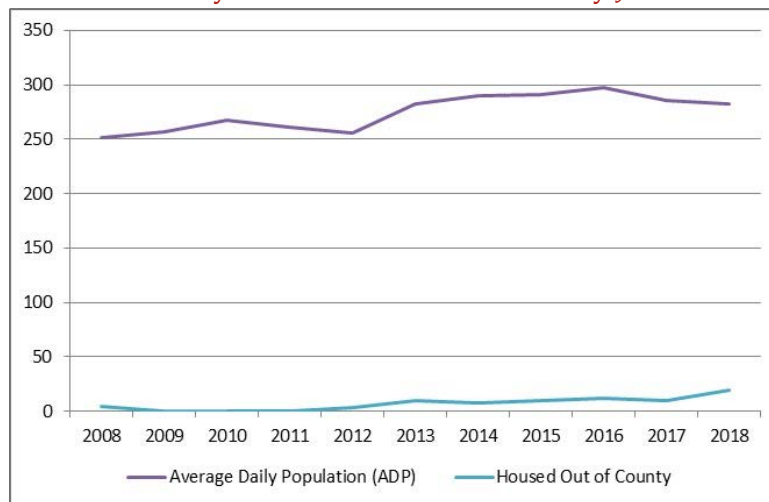
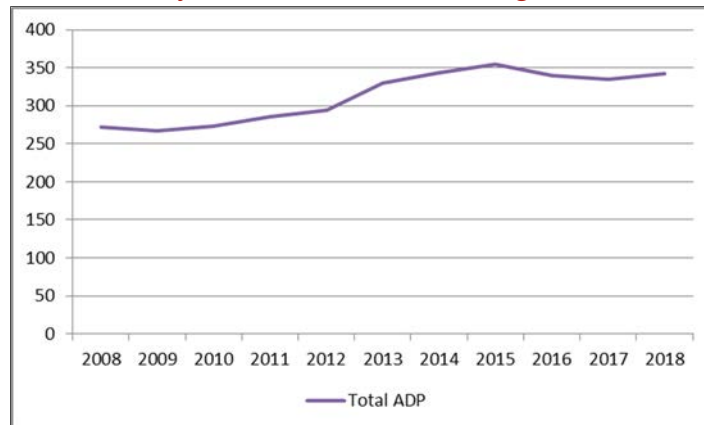


Figure JAIL-4 shows the total ADP from 2008 to 2018.

Figure JAIL-4
Scott County Total Jail ADP (Including House Outs)



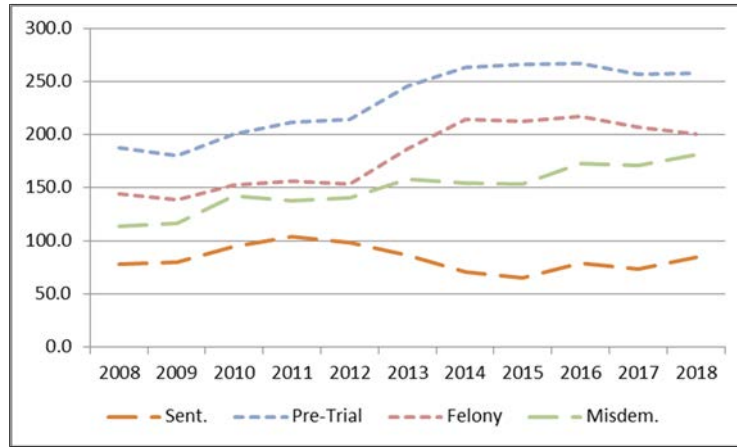
The low, average and high peaking values are used in bedspace need projections. The lowest peaking was 2.7 percent, which will be used in the lower bound bedspace need projections. The average peaking value was 9.0 percent and is used in the recommended projection. The highest peaking year was 17.6 percent which will be used in the upper bound bedspace projections.

Figure JAIL-5 shows the type on inmate held in Scott County and out of county from 2008 to 2018. The pretrial population is the largest segment of population in Scott County, growing from 187 in 2008 to 258 in 2018, an increase of 37.7 percent. The sentenced inmate population increased as well, by 7.8 percent. The sentenced population grew from 78 to 84.

The inmates with felony charges outpace the number of inmates held on misdemeanor charges throughout the data set. The inmates with felony charges increased from 144 to 200, an increase of 39.2 percent. The inmates with misdemeanor charges increased at a faster pace than the felons, increasing by 59.1 percent. The misdemeanor population increased from 114 in 2008 to 181 in 2018.



Figure JAIL-5
Scott County Total Jail ADP by Type



The historic number of inmates by gender is illustrated in Figure JAIL-6. The number of males in the system increased from 242 to 262, an increase of 8.3 percent. The peak number of males in the system total was 278 in 2016, and the average number of males in the system was 257. The number of females increased at a slower pace than the males, increasing 4.9 percent. The female inmate population was 47 in 2008 and 49 in 2018. The average annual number of females in the Scott County system was 43.

Figure JAIL 6
Scott County Jail ADP by Gender

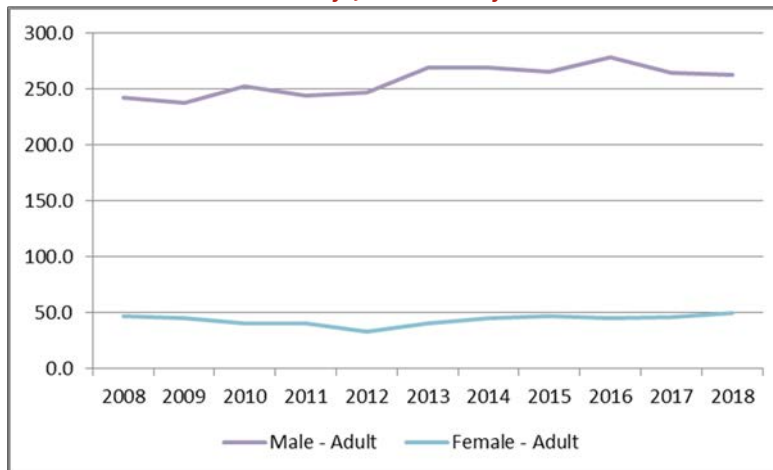
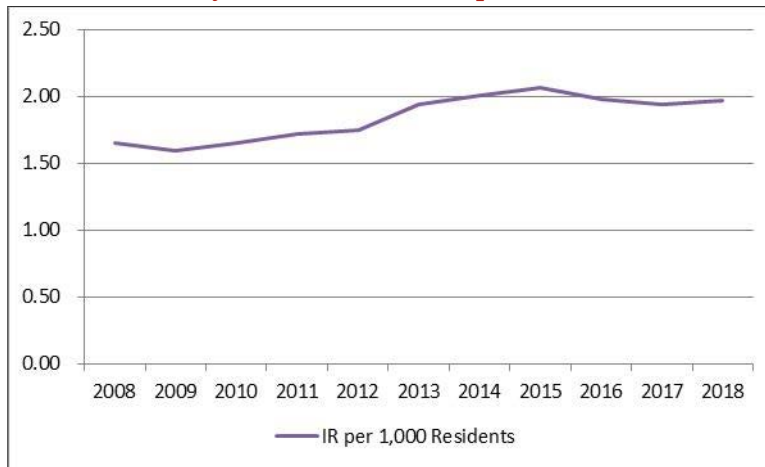


Figure JAIL-7 shows the annual IR per 1,000 residents from 2008 to 2018. The IR peaked in 2015 at 2.1. The lowest IR was in 2008 at 1.6.



Figure JAIL-7
Scott County Incarceration Rate per 1,000 Residents



Jail Average Length of Stay (ALOS):

The annual average length of stay (ALOS) of inmates in the system was provided by the Scott County Sheriff’s Office as a monthly figure. This monthly ALOS was converted to annual ALOS. This ALOS shows how many days the average inmate spent in jail. ALOS has a significant effect on jail populations, with higher ALOS often resulting in higher ADP and bedspace need.

The annual ALOS has increased 12.9 percent from 2008 to 2018, from 9.2 days to 10.4 days. The highest ALOS was in 2016 at 11.4 days. The recent upswing in ALOS is causing higher ADPs because the annual bookings have lowered. In conclusion, fewer inmates are being booked in the jail but are staying longer.

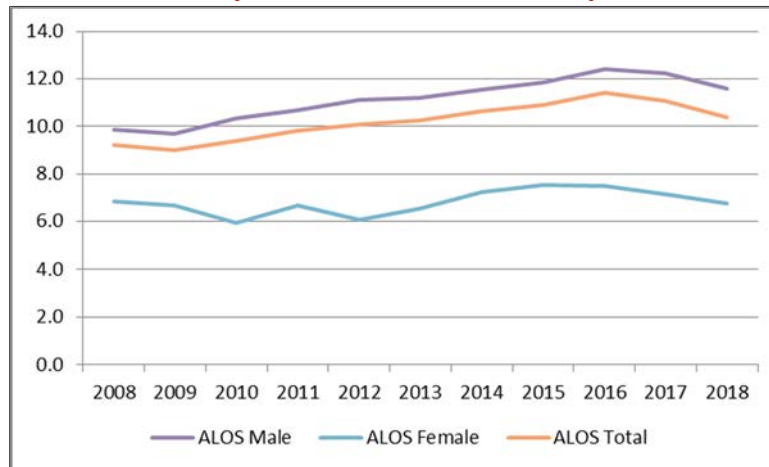
Table JAIL-3
Scott County Total Jail Historic ALOS

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	# Change	% Change	CAGR	Average
ALOS Male	9.9	9.7	10.3	10.7	11.1	11.2	11.5	11.9	12.4	12.2	11.6	1.7	17.3%	1.6%	11.1
ALOS Female	6.9	6.7	5.9	6.7	6.1	6.6	7.2	7.5	7.5	7.1	6.8	-0.1	-1.4%	-0.1%	6.8
ALOS Total	9.2	9.0	9.4	9.8	10.1	10.3	10.6	10.9	11.4	11.1	10.4	1.2	12.9%	1.2%	10.2

Source: US Census Bureau, Scott County Sheriff’s Office, October 2018.

The male inmate ALOS has increased from 9.9 days to 11.6 days from 2008 to 2018, an increase of 17.3 percent. The female inmate ALOS has remained relatively flat, decreasing from 6.9 days to 6.8 days. The average male inmate ALOS was 11.1 days, while the average female inmate was 6.8 days. Figure JAIL-8 plots the annual ALOS in Scott County, by gender.

Figure JAIL-8
Scott County Annual Total Jail ALOS by Gender



The average ALOS is used in the inmate and bedspace projections, modelled with a projected number of bookings.

Projections Overview

Baseline estimates of the jail population was generated in five-year increments. The estimates model the historical patterns and project those trends out to the planning horizon. The baseline estimates model growth scenarios based on various assumptions about changes in jail bookings and ALOS.

The next step of this task was to transform the baseline estimates into a forecast of the future inmate population. This conversion process involved modifying the baseline estimates to account for policy and programmatic impacts.

The consensus forecast reflects the County’s fiscal conditions as demands for correctional and other criminal justice services are balanced with other County public service obligations.

The development of the Needs Assessment projection model centered around twelve forecast models to the year 2037. The primary factors used for the models were the annual average inmate counts and population projections for Scott County.

A total of twelve projection models using different independent variables and different statistical methods were used to analyze and project historic data. The 2018 annual average daily population served as the base year.

Statistical Models Employed

The following is a description of each forecast model considered for Scott County inmate population projections:

Model 1 - Historic Trend Percentage Change calculates the total percentage change from the beginning point to the end point of the historic data series. The annual percentage increase rate used in the model was applied to the base year 2018 and subsequent years to calculate future average daily counts.

Model 2 – Historic Compound Annual Growth Rate (CAGR) uses the historic annual growth rates to determine a percentage of growth. Often used in financial forecasting, the CAGR is applied to the projection end date of Fiscal Year 2037.

Model 3 – Mean Deviation compares the peak year population to the average from the historic data. The models are standardized by dividing the number of years observed. The mean deviation model shows the high points in most models as it is projected forward.

Model 4 - Bookings/Average Length of Stay uses historic bookings to project bookings to the year 2037. The existing, average, high and low average length of stay in days is calculated using historic data and applied to the projected bookings to determine a projected institutional count.

Model 5- Part One Offenses/Average Daily Population uses historic reported type one offenses to project average daily population to the year 2037. The existing, average, high and low average part one offense rates are calculated using historic data.

Model 6 – Ratio to Scott County Population Percentage Change uses the percentage change in the incarceration rate per 1,000 residents in Scott County. The percentage change is applied to the baseline incarceration rate and extended to the fiscal year 2037. The resulting incarceration rate is multiplied by the projected Scott County population projection to yield an annual average daily population.

Model 7 – Incarceration Rate to Scott County Population determines the incarceration rate per County population. The existing, average, high and low incarceration rates are applied to the projected Scott County population projections to the year 2037.

Model 8 - Linear Regression determines a best fit line considering the historic inmate count over time. This best fit line is extended to fiscal year 2037.

Model 9 – Multiple Regressions: County Population determines a best fit line considering the historic inmate counts over time and county population. This best fit line is extended to fiscal year 2037.

Model 10 – Multiple Regressions: County Population and Bookings determines a best fit line considering the historic inmate counts over time, county population and total annual bookings. This best fit line is extended to fiscal year 2037.

Model 11– Box-Jenkins ARIMA uses an Autoregressive Integrated Moving Average technique. This model is used typically for accurate short-term projections of data that shows predictable repetitive cycles and patterns. The Box Jenkins model uses historic annual data from 2008 to 2018.

Model 12 – Exponential Smoothing ARIMA identifies levels and trends by smoothing the latest data points to decrease irregularity and adds a seasonality factor. The seasonal indexes are obtained by smoothing seasonal patterns in the historic data. Exponential Smoothing is an alternate ARIMA model. The exponential smoothing model gives older data progressively-less weight while new data is weighted more. The Exponential Smoothing model uses historic annual data from 2008 to 2018.

Models determined to have appropriate statistical reliability and significance were weighted equally to determine forecast figures. For the ARIMA models, the r-squared values below 0.8 were not used in the final average. R-squared shows the amount of explained variance in the statistical model. There are no concrete levels for acceptable r-squared.

All statistically significant models were selected and averaged. Each model presents a differing snap shot to the future that is beneficial to the final projection. While one must recognize that all have limitations and precautions in the forecasting model, the averaging of multiple models dampens the extremes and finds some model agreement necessary for long-range projections.

Adult Jail Projections

The adult jail ADP projections employ eight models of the twelve considered. The only models excluded from the projection model were ARIMA models and the linear regression. The eight models used were given equal weight. Projections are presented in five-year increments to the year 2037.

The recommended total ADP, including the out of county inmates, is projected to increase to 425 by 2037, an increase of 26.9 percent. This is an annual increase of 1.2 percent. The recommended ADP projection increases the IR per 1,000 residents to 2.3 IR per 1,000 residents in 2037, reference Table JAIL-4.

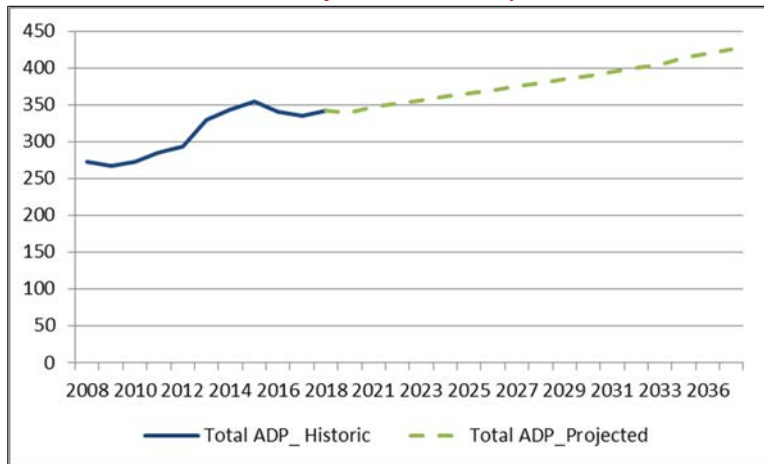
Table JAIL-4
Scott County Jail ADP Projections

ADP Total Projections	2017	2022	2027	2032	2037	# Change	% Change	CAGR	Average
Scott Population	172,509	175,754	178,500	180,879	182,434	9,925	5.8%	0.3%	178,189
Adult ADP - Projected	335	352	375	400	425	90	26.9%	1.2%	377
IR per 1,000 Population	1.9	2.0	2.1	2.2	2.3	0.4	20.0%	0.9%	2.1

Source: Justice Planners, January 2019.

Figure JAIL-9 plots the historic total ADP and the recommended total ADP for Scott County. The consistent historic increases in the jail ADP and the out of county ADP continues through the forecast horizon, with a projected ADP of 375 in 2027, growing to 400 in 2032 and 425 in 2037.

Figure JAIL-9
Scott County Jail ADP Projections



The recommended ADP and jail bedspace projections are based on status quo conditions moving forward in time. The need to develop alternate scenarios and disaggregated projections was a priority of Scott County and the next section explores multiple scenarios and projections.

The lower and upper bounds for the recommended ADP and jail bedspace projections are calculated. The lower bound and upper bounds of the projected ADP are provided in Table JAIL-5. The same models used in the projected ADP are used for the lower and upper bound projections. The lower ratios and lower confidence intervals of the regression models yield the lower bounds, while the higher ratios and upper confidence intervals of the regression models yield the upper bounds.

The lower bound ADP is projected to increase to 338 in 2027 and 375 in 2037, an increase of 12.1 percent. The upper bound ADP is projected to increase to 384 in 2027 and to 433 in 2037, an increase of 29.4 percent. The recommended middle series total ADP projection is closer to the upper bound, reflecting the historic growth of most indicators.

The range between lower and upper bound ADP projections in 2037 is 58. This is referred to as the cone of confidence of the projections.

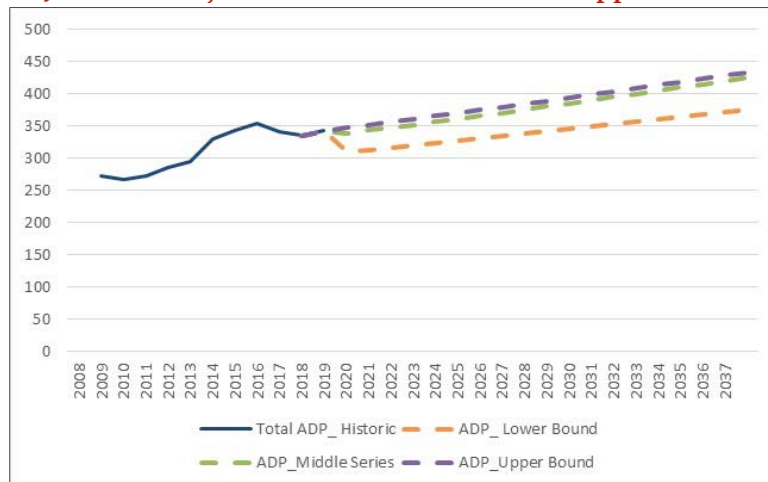
Table JAIL-5
Scott County Jail ADP Projections: Lower Bound, Middle Series and Upper Bound

ADP (Low, Mid, Upper)	2017	2022	2027	2032	2037	# Change	% Change	CAGR	Average
ADP - Lower Bound	335	320	338	357	375	41	12.1%	0.6%	342
ADP - Middle Series	335	352	375	400	425	90	26.9%	1.2%	377
ADP - Upper Bound	335	361	384	408	433	98	29.4%	1.3%	384
Difference Upper - Low	-	41	46	51	58				

Source: Justice Planners, November 2018.

Figure JAIL-10 illustrates the difference in the lower and upper bounds ADP projections. The historic annual ADP is increasing, and the recommended lower bound and upper bounds ADP projections continue the increase at varying degrees. The recommended middle series is closely aligned with the upper bound total ADP projection.

Figure JAIL-10
Jail ADP Projections: Lower, Middle and Upper Bound



Jail Bedspace Needs

The peaking value of the Scott County jail is calculated using monthly data from January 2008 to August 2018. The percentage difference from the highest months was compared to the annual ADP for each year to determine the peaking factor of 9.0 percent for Scott County.

There needs to be enough flexibility in the type of beds at any given time to provide appropriate separations between the classification levels of inmates. It is very difficult or impossible to ascertain a historic percentage for a classification factor, as systems do not retain classification data in an aggregate manner historically. As such, a 5 percent classification factor has been applied based on experience working with similar sized jails.

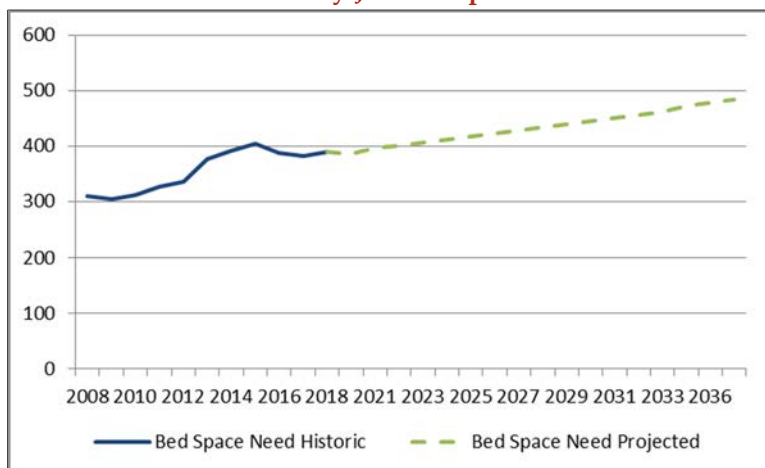
The peaking and classification factors are added together and then added to the projections to calculate the number of beds needed. As detailed in Table JAIL-6, and graphed in Figure JAIL-11, the recommended total projected bedspace need for Scott County is 428 in 2027 and grows to 484 beds in 2037.

Table JAIL-6
Scott County Jail Bedspace Projections

Bedspace Projections	2017	2022	2027	2032	2037	# Change	% Change	CAGR	Average
Adult ADP - Projected	335	352	375	400	425	90	26.9%	1.2%	377
Peaking (9.0%)	30	32	34	36	38	8	26.9%	1.2%	34
Classification (5.0%)	17	18	19	20	21	5	26.9%	1.2%	19
Bedspace Needed - Projected	382	401	428	456	484	103	26.9%	1.2%	429

Source: Justice Planners, January 2019.

Figure JAIL-11
Scott County Jail Bedspace Need



Converting the lower and upper bound ADP to projected jail bedspace need is the same process as the recommended jail bedspace need showed in the previous section. The only difference is that the peaking values are set to the lowest annual peaking percentage for the lower bound at 2.7 percent, and the highest annual peaking percentage for the upper bound at 17.6 percent.

The lower bound bedspace need grows from 364 beds in 2027 to 404 beds in 2037, an increase of 44 beds. This is a 12.1 percent increase in needed jail beds, reference Table JAIL-7.

Table JAIL-7
Jail Bedspace Need Projections: Lower, Middle and Upper Bound

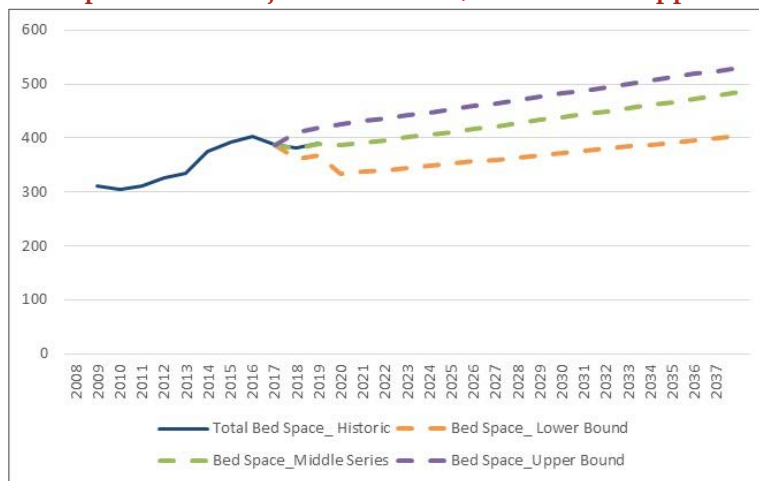
Bedspace (Low, Mid, Upper)	2017	2022	2027	2032	2037	# Change	% Change	CAGR	Average
Bedspace - Lower Bound (Peaking 2.7%)	361	345	364	384	404	44	12.1%	0.6%	368
Bedspace - Projected (Peaking 9.0%)	382	401	428	456	484	103	26.9%	1.2%	429
Bedspace - Upper Bound (Peaking 17.6%)	410	442	470	500	531	121	29.4%	1.3%	471
Bedspace Difference Upper -Low	50	98	106	116	127				

Source: Justice Planners, November 2018.

The upper bound bedspace need grows from 470 beds in 2027 to 531 beds in 2037, an increase of 98 beds. This is a 29.4 percent increase in needed jail beds.

Figure JAIL-12 illustrates the historic jail bedspace need for Scott County along with the lower bounds, recommended middle series, and upper bounds jail bedspace projections. The range in bedspace need in 2037 between the lower bound projection and upper bound projection is 127 beds.

Figure JAIL-12
Jail Bedspace Need Projections: Lower, Middle and Upper Bound



Alternative Projections: Jail Bedspace Needs

Based on the consensus forecast of future inmate population levels, the number and type of bedspaces will be projected. Using data from previous tasks, a preliminary classification of the future inmate population will be developed to reflect appropriate custody levels and the functional requirements of the correctional system. This preliminary classification will be used to estimate the various types of bedspaces, and housing configurations required for the projected population. Based on the historical analysis, the bedspace projections will be adjusted to account for any seasonality and peaking patterns in the inmate population.

For alternative projections, three separate inmate populations were projected, using the total bedspace need as the baseline. The historic number of sentenced and pretrial populations were shown in Figure JAIL-10, with the sentenced population increasing by 7.8 percent and the pretrial population increasing by 37.7 percent.

Table JAIL-8 shows the projected pretrial and sentenced populations for the total Scott County bedspace need. By 2037 the pretrial bedspace need increases to 409, while the sentenced inmate population decreases to 75 beds. The percentage increase of the pretrial population out paces the sentenced population from past trends.

Table JAIL-8
Scott County Jail Bedspace Projections: Pretrial and Sentenced

Bed Space Need by Pretrial/Sentenced	2017	2022	2027	2032	2037	# Change	% Change	CAGR	Average
Bedspace - Sentenced	89	87	84	80	75	-14	-15.5%	-0.8%	84
Bedspace - Pretrial	293	314	343	375	409	116	39.8%	1.7%	346
Bedspace - Projected	382	401	428	456	484	103	26.9%	1.2%	429

Source: Justice Planners, January 2019.

Disaggregate bedspace need projections by gender are based on the recommended middle series jail bedspace need from Table JAIL-9, with percentage of females in the jail applied. The gender data was obtained from monthly population reports from January 2008 to August 2018.

The annual bedspace need for females in the Scott County jail grows from 52 to 62, an increase of 19.9 percent from the current bedspace need. The average bedspace need for females in the Scott County Jail ranges is 59 beds, reference Table JAIL-9.

Table JAIL-9
Scott County Jail Bedspace Projections: Gender

Bed Space Need by Gender	2017	2022	2027	2032	2037	# Change	% Change	CAGR	Average
Bedspace - Male	330	344	369	395	422	92	28.0%	1.2%	371
Bedspace - Female	52	57	59	61	62	10	19.9%	0.9%	59
Bedspace - Projected	382	401	428	456	484	103	26.9%	1.2%	429

Source: Justice Planners, January 2019.

The male bedspace need grows faster than the female bedspace need for the total Scott County inmate population. The male bedspace need grows from 330 in 2017 to 422 in 2037, an increase of 28 percent.

The projected bedspace need by classification is based on historic, daily data from January 1, 2016, through December 1, 2018. The recommended bedspace need projections serve as the basis for the disaggregated projections, with average classification breakdowns extended to 2037.

Table JAIL-10 presents the breakdown by classification in detail, with the number of maximum-security beds in 2037 at 73 beds, or 15 percent of the total beds. The number of medium-security beds in 2037 is 242 (or 50% of the total beds) while the number of minimum-security beds account for 25% of the total bedspace with 121 beds. Inmates with medical and mental health issues were identified by the County as a specialty group that required dedicated housing. Therefore, 10 percent of the projected bedspaces (48 beds) have been planned for this purpose.

Table JAIL-10
Scott County Jail Bedspace Projections: Security Level

Bedspace Projections (2008-18 Dataset)	2017	2022	2027	2032	2037
Bedspace Needed - Projected	382	401	428	456	484
Maximum Security Beds - (15%)	57	60	64	68	73
Medium Security Beds - (50%)	191	200.5	214	228	242
Minimum Security Beds - (25%)	96	100	107	114	121
Medical/ SMI - (10%)	38	40	43	46	48

Source: Justice Planners, January 2019

Proposed Jail Expansion

To increase the housing capacity of the adult jail to meet the projected 2037 need would require the addition of 120 inmate beds. This could be accomplished by adding two housing units with capacities of 48 beds each and one housing unit of 24 beds. The types of inmates that would be housed in these units cannot be decided at this time. An assessment of all existing housing should be compared with the make-up of the inmate population to ensure that all inmates are properly placed according to their classification and levels of risks and needs. Some reconfiguration of the classification process, housing plan, and possibly the existing housing units themselves should be undertaken to ensure the most efficient and secure operations possible for Scott County. The total amount of space to accommodate this expansion is estimated to be approximately 25,143 square feet.

Table JAIL-11
Additional Jail Expansion Space Requirements

Component	Net Square Feet	Department Gross SF	Bldg Gross - 15%	Total BGSE
1.100 Housing Control	135.00	209.25	31.39	240.64
1.200 24-Bed Housing Unit	3,626.00	5,620.30	843.05	6,463.35
1.300 48- Bed Housing Units (2)	10,344.00	16,033.20	2,404.98	18,438.18
GRAND TOTALS	14,105.00	21,862.75	3,279.41	25,142.16

Source: Wold-Justice Planners, January 2019

The tables below show the spaces that should be included in both the 48-bed and 24-bed housing units. As these housing units may be located separate from the existing housing (i.e. the current parking lot), a Housing Control room has been included to maximize staff presence and security of the new spaces.

Table JAIL-12
Additional Jail Housing Control Spaces

ADULT JAIL PROPOSED HOUSING					
	Space Designation	Space Standard	No. of Spaces	Total Sq. Ft.	COMMENTS
1.100	Housing Control				
1.101	Housing Control Sallyport	64	1	64	Interlocked doors, secure entry to Housing Control
1.102	Housing Control	120	1	120	Controls inner door of the secure vestibule serving the housing pods, controls cell doors and lighting, raised control room. Flooring must accommodate electronics, workstation
1.103	Staff Washroom	52	2	104	Access from Housing Control
1.104	Equipment Storage	100	1	100	Shelving
1.105	Janitor's Closet	35	1	35	Utility sink and shelving
Net SF				135	
Grossing Factor			55%	74	
Total DGSF				209	

The smaller 24-bed Housing Unit may be appropriate for specialty groups of inmates such as those in need of protective custody, inmates with medical needs or mental illness, or others that should not be housed with the general inmate population.

Table JAIL-13
Additional 24-Bed Housing Spaces

ADULT JAIL PROPOSED HOUSING						
	Space Designation	Space Standard	No. of Spaces	Total Sq. Ft.	COMMENTS	
1.200 24-Bed Housing Unit						
1.201	Dayroom Sallyport	100	1	100	Interlocking doors.	
1.202	Triage Room	80	1	80	Access from sallyport, operable window into dayroom for med pass, secure storage, triage room	
1.203	Dayroom	35	24	840	With natural light	
1.204	Officer's Workstation	64	1	64	Open workstation	
1.205	Inmate Cell - Single Occupancy	80	24	1,920	Bunk beds , 2 wall-mounted writing surfaces with seats, ss combo toilet/lav	
1.206	Interview Room	60	1	60	View panels in door, accessible from security vestibule only	
1.207	Multipurpose/Program Room	15	12	180	visible from dayroom, shelves on wall for library books	
1.208	Video Visitation Booth	12	2	24		
1.209	Showers (ADA)	55	2	110	Observable; ADA; dayroom level; semi-enclosed stalls	
1.210	Handwash Station	10	1	10		
1.211	Dayroom sink	15	1	15	Cabinet and sink with hot water	
1.212	Inmate Telephone	4	2	8		
1.213	Storage Room	80	1	80	Secured access	
1.214	Inmate Toilet (ADA)	50	2	100		
1.215	Janitor's Closet	35	1	35	Utility sink	
1.216	<i>Outdoor Recreation Courtyard</i>	750	1	750	<i>Adjacent to and visible from dayroom</i>	
				Net SF	3,626	Outdoor courtyard not included in total
				Grossing Factor 55%	1,994	
				Total DGSF	5,620	

The two additional 48-bed Housing Units may house various groups of inmates based upon the objective classification system.

Table JAIL-14
Additional 48-Bed Housing Spaces

ADULT JAIL PROPOSED HOUSING						
	Space Designation	Space Standard	No. of Spaces	Total Sq. Ft.	COMMENTS	
1.300	48-Bed Housing Unit					
1.301	Dayroom Sallyport	100	1	100	Interlocking doors	
1.302	Triage Room	80	1	80	Access from sallyport, operable window into dayroom for med pass, secure storage, triage room	
1.303	Dayroom	35	48	1,680	With natural light	
1.304	Officer's Workstation	64	1	64	Open workstation	
1.305	Inmate Cell - Double Occupancy	100	24	2,400	Bunk beds , 2 wall-mounted writing surfaces with seats, ss combo toilet/lav	
1.306	Interview Room	80	1	80	View panels in door, accessible from security vestibule only	
1.307	Multipurpose/Program Room	15	16	240	visible from dayroom, shelves on wall for library books	
1.308	Video Visitation Booth	12	4	48		
1.309	Showers (ADA)	55	4	220	Observable; ADA; dayroom level; semi-enclosed stalls	
1.310	Handwash Station	10	1	10		
1.311	Dayroom sink	15	1	15	Cabinet and sink with hot water	
1.312	Inmate Telephone	4	5	20		
1.313	Storage Room	80	1	80	Secured access	
1.314	Inmate Toilet (ADA)	50	2	100		
1.315	Janitor's Closet	35	1	35	Utility sink	
1.316	<i>Outdoor Recreation Courtyard</i>	<i>750</i>	<i>1</i>	<i>750</i>	<i>Adjacent to and visible from dayroom</i>	
				Net SF	5,172	Outdoor courtyard not included in total
Grossing Factor				55%	2,845	
				DGSF	8,017	
Number of Housing Units =				2	16,033	
				Total DGSF	21,863	
Building Gross				15%	3,279	
Total BGSF for Housing					25,142	

Source: Wold-Justice Planners, January 2019

Additional Space Summary for the Jail

The jail projections follow consistent increases in the jail population and the county overall population. The recommended, middle series bedspace need for Scott County in 20 years is projected to be 484 beds. This is the status quo projection with no changes in policy, law or alternatives to incarceration programs factored in. To accommodate the projected jail bedspace need, an additional 120 beds will need to be added along with Housing Control spaces. It is estimated that the additional space required for this 120-bed addition to the jail is 25,142 square feet.

Jail Staffing

In addition to the challenges of a growing inmate population, the Scott County Jail is facing a shortage of staff and staff positions to provide safe and secure operations. The County has approved 59 full time equivalent (FTE) correctional officer positions for the jail. There is a question of whether this is an adequate number of FTEs, and this is compounded by the inability to fill all the approved positions. As a part of the Needs Assessment process, the custody staffing is being reviewed to determine an appropriate level of staff needed to manage the current numbers and types of inmates housed.

When planning for future needs, a staffing review and analysis should not be a one-time exercise. It should be revisited at each major step of the planning process. The staffing recommendations developed as a part of this Needs Assessment should be considered as the first step. They are based on current operations and practices, which should evolve as additional housing units are considered. A detailed profile of the inmate population should be developed, an in-depth evaluation should be conducted of the job descriptions, duties, post orders for each area, and a master activity schedule should be developed for all regular activities to determine peak times for staff coverage. As the capacity increases, so does the opportunity to modify inmate classifications, housing assignments, activities, and the numbers of staff required to effectively manage the revised operations. This level of detail was not a part of the preliminary staffing recommendations for the Needs Assessment, as many of these questions cannot be answered at this part of the planning process. However, it is recommended that each step is taken once a direction is taken on how the facility will move forward into the next 20 years.

Methodology

The process used for evaluating the staff needs was based on the *Staffing Analysis Workbook for Jails: Second Edition*, which was produced by the National Institute of Corrections, and is considered the "industry standard" process for determining appropriate staffing for local corrections.

In performing the assessment and in determining the level of staff needed to meet the current demands of the jail the consultant focused on developing an enhanced understanding of the facility's history, requirements, current mission and operational practices. The methodology applied included the following:

Document Review - Preliminary work involved the gathering and review of documents from the County to gain an understanding of jail operations and staffing philosophy. Documents requested and reviewed included the following:

- Shift deployment rosters,
- Organizational chart,
- Post assignments,
- Activity schedules,
- Physical plant floor plans,
- Kitchen schedule,
- Staff time-off data for the last three fiscal years,
- Inmate count sheets,
- Inmate profile data
- Daily population summary reports,
- Bed-space utilization reports
- Iowa Juvenile Detention Standards
- Iowa Jail Standards; and
- American Correctional Association Core Jail Standards

On Site Analysis – the consultant conducted an on-site review during the month of October 2018 while collecting information for the jail and juvenile detention center Needs Assessment. All areas of the facility were visited for the Needs Assessment, and many of the staff were questioned while on their post regarding their scheduled activities, and the staff requirements for managing the population at their assigned areas.

Post Evaluation Criteria Employed - Evaluating post assignments and detention staff activity must consider not only the level of supervision the jail administration requires; but also, the workload the staff member must perform.

Staff Relief Calculations – As mentioned above, security posts in the jail must be staffed even when the scheduled officer calls in sick, takes vacation or is away on required training. Proper relief staff must be factored into the staffing compliment to provide coverage without having to rely solely on overtime staff which can be costly and cause staff burnout. Using these criteria, staffing needs were identified for the current operations.

Determining Proper Staffing Levels

The Scott County Jail houses multiple types and categories of inmates including sentenced and pretrial, misdemeanants and felons, males and females, and criminal charges, adults and juveniles charged as adults, inmates classified to one of nine different custody levels, and those with various degrees of medical and mental health issues. Staff must be trained and prepared to effectively supervise and manage inmates in each and every category and status. Being adequately staffed means having the right number and type of staff, in the right places, at the right times, doing the right things. This will look different in direct supervision facilities than in indirect supervision jails.

During the on-site visit and tours staff stated that the Scott County Jail was a direct supervision facility. The Iowa Jail Inspection Standards define a direct supervision jails as, *“a style of jail construction designed to facilitate direct contact between officers and prisoners. The officer is stationed inside the housing unit. Evaluation and classification of prisoners are ongoing and continuous functions of a direct supervision jail and are based on close contact with prisoners.”*²

Iowa Jail Inspection Standards define direct supervision by the design of the facility. The National Institute of Corrections (NIC) takes this description a step further. NIC describes the concept of direct supervision as follows.

“Direct supervision combines two key elements—the physical design of a jail and an inmate management strategy—to significantly reduce the problem inmate behavior commonly seen in jails. Direct supervision jails focus on actively managing inmate behavior to produce a jail that is safe and secure for inmates, staff, and visitors.

Staff interact continuously with inmates in the housing units, actively supervising them to identify problems in their early stages. They use basic management techniques to prevent negative behavior and encourage positive behavior. Staff assume control of the jail and establish a professional supervisory relationship with inmates. There are no barriers separating staff and inmates in the housing units.

*The physical design of the jail supports the management of inmate behavior by reducing physical barriers that impede staff/inmate interaction, by ensuring there are clear sightlines into all areas of the housing units, and by incorporating design elements, fixtures, and furnishings that promote positive inmate behavior.”*³

The physical design of some housing units in Scott County impede staff interaction with inmates. An example is in the Special Management Unit where physical separations create six smaller housing units within a housing unit. This makes it virtually impossible for a single housing unit officer to interact with one inmate while simultaneously monitoring the activities in the remainder of the unit.

² TITLE IV JAIL INSPECTION STANDARDS CHAPTER 50 JAIL FACILITIES

201—50.1(356,356A) Definitions. that portion of the facility used to confine prisoners.

³ <https://nicic.gov/direct-supervision-jails>

The Iowa Jail Inspection Standards define qualifications of jail and detention staff and requires twenty-four-hour supervision of all prisoners and be available on a 24-hour basis to respond to an emergency. They state there may be contact of different classifications of prisoners (with some exceptions) in a common activity area only while the prisoners are under continuous direct supervision. And Section 50.25(2) states there shall be separate and distinct staff persons in the jail at all times to provide central control or lock doors into or out of the housing unit, provide direct supervision of prisoners in the housing unit, and provide emergency backup to the supervision officer as a priority of assigned duties. So, while the standards address some of the qualifications, duties and expectations of staff, they do not address the number of staff required.

Relief Calculations

Properly staffing a jail involves much more than multiplying the number of posts to be covered by the number of shifts. Proper staffing is determined by having the right number and type of staff, in the right place, at the right time, doing the right things. A major part of determining proper staffing is the calculation of the relief factor to ensure proper coverage of the recommended security posts. Providing proper relief, or staff coverage, is critical in determining adequate staffing for jail and correctional operations. The translation of posts to FTE positions is made by applying an appropriate relief factor.

Due to longevity, differences in leave accrual and benefits, a separate relief factor is required for each rank and classification of staff that require relief coverage. This will ensure the most accurate projected of staff required. The consultant has calculated a proper relief factor for all positions that require relief.

Unlike most other government or justice functions detention facilities and jails are 24-hour round-the-clock 365 days-a-year operations that has substantial security and life safety requirements. The security-related positions or posts must be staffed even when the scheduled officer calls in sick, takes vacation or is away on required training.

The process used for conducting this staffing study and calculating a proper relief factor was based on the *Staffing Analysis Workbook for Jails: Second Edition*, produced by the National Institute of Corrections.

The following passage is an excerpt from the *Staffing Analysis Workbook for Jails: Second Edition*, 2003:

“Many staffing issues and problems jails face, such as high overtime costs, the inability to cover needed posts, or the inability to free staff from their posts for training can be attributed to inaccurate calculation of the actual number of hours staff is available to work in the jail. This critical step requires collecting and analyzing information that will provide an accurate depiction of the real number of staff hours that are available to be scheduled for each full-time position in the jail budget. It produces accurate net annual work hours (NAWH) for each position....”

An accurate NAWH for each job classification requires information on all possible time-off categories. Different classifications of employees will have different NAWH, because of the amount of vacation time or training time that is allotted and used.”

It is important to point out that not every post or position requires relief. Relief is typically applied to security posts that must be staffed during certain shift work hours to maintain safe, critical operations. Typically, relief is not applied to civilian posts and positions.

To describe/recommend appropriate staffing for the County Jail, a proper NAWH was calculated for each security job classification to determine the number of staff that must be employed to efficiently fill all security posts, even when some staff are absent. Data was collected for all the time taken off by all employees in the last three fiscal years, from FY2016 through FY2018. While employees take time off for legitimate reasons, security posts must still be staffed to maintain the safety and security of the facilities. Therefore, the actual time off data is used to determine the proper amount of relief staff that must be available to provide adequate coverage at all times. The amounts of time taken off by category is the actual average of time taken by employee over the last three fiscal years.

With the calculation of a tailored NAWH, the relief factor can be derived by dividing the number of hours per year that a post must be staffed by the number of hours one officer is available to work in a year. Staffing requirements then are determined by multiplying each post by the required relief factor. Proper relief factors will vary depending upon the type of post/position in which they are applied. For example, a post that is staffed for 40 hours each week will require less staff (and relief) than a post that is staffed 24/7. What is important when determining the required relief for a particular job classification is to factor an accurate NAWH.

Table JAIL-15
Net Annual Work Hours Calculations

Scott County Jail Net Annual Work Hours		Sergeant	Corrections Officer
1	Total hours contracted per employee per year.	2,184.00	2,184.00
2	Avg Bereavement hours taken per year.	4.28	5.71
3	Avg Comp-FML hours taken per year.	6.36	2.84
4	Avg Comp-Used hours taken per year.	64.57	54.67
5	Avg Floating Holiday-FML hours taken per year.	0.51	0.41
6	Avg Floating Holiday-Used hours taken per year.	16.13	9.21
7	Avg Holiday hours taken per year.	65.74	64.68
8	Avg Holiday-FML hours taken per year.	0.70	0.74
9	Avg Jury Duty hours taken per year.	0.09	0.27
10	Avg Military hours taken per year.	0.00	1.90
11	Avg Sick/Medical-FML hours taken per year.	45.87	27.92
12	Avg Sick/Medical-Used hours taken per year.	49.66	3.55
13	Avg Vacation/PTO-FML hours taken per year.	3.76	15.09
14	Avg Vacation/PTO-Used hours taken per year.	171.38	103.17
15	Avg Vacation/UPTO-FML hours taken per year.	0.00	40.58
16	Workers Comp	0.80	0.43
17	Total hours off per year (lines 2 thru 16).	429.86	331.20
18	Net Annual Work Hours (line 1 - line 17).	1,754.14	1,852.80

The relief factor for the Corrections Officers is 1.18, while the relief factor for Sergeants is 1.25. For the staffing recommendations, relief factors for each position category shown in Table JAIL-16 have been appropriately applied in the recommended staffing calculations.

Table JAIL-16
Relief Factor Calculations

Relief Factor	Sergeant	Corrections Officer
Hours per year	8,760	8,760
Hours per year divided by NAWH	4.99	4.73
Relief Factor	1.25	1.18

Source: Justice Planners, November 2018

Current Jail Staffing

The jail has one Jail Administrator and one Captain, which serves as an assistant administrator. Both of these staff can flex their hours and are scheduled for an “administrative” schedule Monday through Friday. These positions do not require relief coverage.

There is one Shift Commander (Lieutenant) over both day teams, and another Shift Commander over both night teams. These Lieutenants can work flexible hours and work approximately 40 hours each week. These positions do not require relief coverage.

There is one Training Sergeant and one Program Sergeant that are each assigned to an “administrative” schedule Monday through Friday. These positions do not require relief. There are three Shift Sergeants assigned to each team. They include one Booking Sergeant and two Housing Sergeants. These posts do require relief coverage.

Each team has four Correctional Officer posts at Booking. They include Booking, Booking/ Release, ID and a Booking Escort. Each of these posts are typically staffed on each team, and they each require relief coverage.

Each team has one Correctional Officer post in Central Control that is always staffed. This post requires relief coverage.

There are five housing unit posts on each team that has one Correctional Officer assigned to each unit. These includes Female Housing, General Population North, General Population South, Intake Housing and Special Management. Each of these posts are staffed on each team, and they each require relief coverage. Two other housing units (Flex Housing and the Dormitory) do not have Correctional Officer staff assigned as a full-time post. They are supervised intermittently.

There is one Correctional Officer post dedicated to Visitation activities on the A and B teams, and this post requires relief coverage. This post is not staffed on the night (C & D) teams.

Five Correctional Officer posts are assigned to each team for Escorts. One of these is dedicated to Booking Escorts (mentioned above), one is dedicated to Female Housing, while the other three escort inmates and

professional visitors/workers throughout the facility. The Booking Escort and Female Housing posts are typically staffed on each team. However, only one or two of the other Escort posts are typically filled depending upon staff availability. These Escort posts require relief coverage.

There are several non-Correctional Officer positions within the jail. These include Corrections Custodial Officers, Classification Specialists, Program Services Coordinators, Court Compliance Officers, Alternative a Sentence Coordinator, the Corrections Food Service Supervisor and four Corrections Food Service Officers. These positions do not require relief coverage.

Jail Staff Findings Recommendations

1. The positions of Jail Administrator, Captain, Lieutenants and the Training and Program Sergeants appear to be reasonable and properly assigned.
2. The Shift Sergeant Posts should have relief staff factored into the staffing complement for times when these staff are away due to illness, vacation, etc. The relief factor for the Sergeants is higher than the Correctional Officers as the Sergeants are taking an average of 430 hours off each year for various reasons compared to 331 hours for Correctional Officers. This will require 15 Shift Sergeants to provide full coverage. An option would be to have the other two Shift Sergeants on the team assume additional duties when one Sergeant is away. This may be sufficient in the short-term but should not be a long-term remedy.
3. The posts in the Booking area appear to be adequate, and no additional staffing is recommended.
4. The Female Housing Unit has one Correctional Officer assigned per team. It is recommended that two officers be assigned to this unit on days and during the evenings until lockdown. This necessitates a second officer in this housing unit during the day shift when inmates are most likely to be up and potentially out of their cells and during the evening shift until lockdown. This can likely be accomplished by scheduling a Correctional Officer on a swing (or 9am to 9pm) shift. This is the only housing unit for females, housing inmates of a custody levels, risks and needs. Like the Special Management Housing Unit, the Female Housing Unit is divided into multiple sub-housing units that can often be difficult for a single officer to manage on their own.

5. The Intake Housing Unit has one Correctional Officer assigned per team. Similar to the Special Management Housing Unit, this housing unit is also divided into six different sub-housing units. The two larger subunits have a total of 48 beds dedicated to newly booked inmates (Intake). The remaining 24 beds house inmates with medical issues, inmates with serious mental illnesses (SMIs), and inmates being housed on Protective Custody status. The security levels of these inmates range from low minimum to high medium custody. If this housing unit was dedicated to inmates on Intake status, one officer on each team may be enough. However, given there are 72 beds in six sub-housing units with various security levels, a second Correctional Officer is recommended during the day and during the evening until lock down. After lockdown a single officer should be enough. This can likely be accomplished by scheduling a Correctional Officer on a swing (or 9am to 9pm) shift.
6. The Special Management Housing Unit also has one Correctional Officer assigned per team. The unit has 76 beds that are divided into six individual sub-housing units. All 76 beds are classified as maximum-security. Twenty-four of these are also listed as housing SMI inmates as well as medical and disciplinary issues. By policy a second officer must be present when an inmate door is opened and/or one of these inmates is moved. This necessitates a second officer in this housing unit during the day shift when inmates are most likely to be up and potentially out of their cells and during the evening shift until lockdown. This can likely be accomplished by scheduling a Correctional Officer on a swing (or 9am to 9pm) shift.
7. The General Population Housing Units (North and South) each have one Correctional Officer assigned per team. These units each have 64 beds that house minimum and medium-custody general population inmates. A single officer in each of these units appears to be adequate and no additional staffing is recommended.
8. There is a total of five Escort posts in the jail, but typically they are not all staffed. The Booking Escort may assist in other areas when not busy at Booking. The Female Housing Escort, similarly, may be able to help in other areas at times. The other three Escort officer posts may be able to be reduced to two during the day given the size of the inmate population. This could be further reduced to one Escort officer after lockdown.
9. There is a Visitation post on each of the A & B teams. Family visitation takes place Monday through Friday from 7:30 am to 4:30 pm, and weekends and holidays from 8:00 am through 11:30 am. Staff reported that the visitation area is rarely full, with many of the visitation stations vacant on most days. Given that this takes place in a non-secure area, the County may consider converting this to a civilian post.
10. The non-Correctional Officer positions appear to be adequately staffed. However, as the inmate population grows, additional Classification Specialists may need to be added, as best-practices recommend one Classification Specialist for every 125 inmates. If alternative programs become more prevalent, an Alternative Sentence Specialist may need to be considered.

11. Based upon these observations, findings and recommendations the total staff required for safe and efficient jail operations of the current jail is 107 FTEs. This is an increase of the current Correctional Officer FTEs from 59 to 70 staff, and an increase in Sergeants from 12 to 17. See Table JAIL-17 below.

Table JAIL-17
Recommended Jails Staffing Detail

Scott County Jail	Admin	Day	Night	Days/Week	Hours/Week	Coverage	Is Relief Needed	NAWH	Total FTEs	Rounded FTEs
Post/Position	M-F					Hrs/Yr				
Jail Administrator	1.00			5	40.00	2,085.60	No		1.00	
Subtotal Major	1.00				40.00	2,085.60			1.00	1
Captain	1.00			5	40.00	2,085.60	No		1.00	
Subtotal Captain	1.00				40.00	2,085.60			1.00	1
Shift Commander		1.00	1.00	5	42.00	2,189.88	No		2.00	
Subtotal Lieutenants	0.00	1.00	1.00		42.00	2,189.88			2.00	2
Training Sergeant	1.00			5	40.00	2,085.60	No		1.00	
Program Sergeant	1.00			5	40.00	2,085.60	No		1.00	
Shift Sergeant		3.00	3.00	7	504.00	26,278.56	Yes	1,754.14	14.98	
Subtotal Sergeants	1.00	3.00	3.00		584.00	30,449.76			16.98	17
Booking		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Identification		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Booking/Release		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Booking Escort		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Female Housing		2.00	1.50	7	294.00	15,329.16	Yes	1,852.80	8.27	
Female Housing Escort		1.00	0.00	7	84.00	4,379.76	Yes	1,852.80	2.36	
General Population - North		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
General Population - South		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Intake Housing		2.00	1.50	7	294.00	15,329.16	Yes	1,852.80	8.27	
Special Management		2.00	1.50	7	294.00	15,329.16	Yes	1,852.80	8.27	
Housing Escort		2.00	1.50	7	294.00	15,329.16	Yes	1,852.80	8.27	
Central Control		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Visitation Officer		1.00	0.00	5	60.00	3,128.40	Yes	1,852.80	1.69	
Visitation Officer		0.33	0.00	2	7.92	412.95	Yes	1,852.80	0.22	
Subtotal Correctional Officers	0.00	17.33	13.00		2,503.92	130,554.39			70.46	70
Jail Custodian	4.00	34.66	26.00	5	2,586.40	134,854.90	No		4.00	
Classification Specialist	2.00		60.66	5	2,506.40	130,683.70	No		2.00	
Program Services Coordinator	2.00			5	80.00	4,171.20	No		2.00	
Court Compliance Officer	2.00			5	80.00	4,171.20	No		2.00	
Alternative Sentence Coordinator	1.00			5	40.00	2,085.60	No		1.00	
Food Service Manager	1.00			5	40.00	2,085.60	No		1.00	
Cook		2.00	2.00	7	160.00	8,342.40	No		4.00	
Subtotal Non-Correctional Officer	12.00	36.66	88.66		5,492.80	286,394.59			16.00	16
Total Staff Needed:									107	

12. Table JAIL-18 shows a summary of the recommended staffing posts and FTEs by category with relief calculations applied for the adult jail.

Table JAIL-18
Recommended Jail Staffing Summary

Scott County Jail		Admin			Rounded
Post/Position	M-F	Day	Night	FTEs	
Subtotal Major	1.00	0.00	0.00	1	
Subtotal Captain	1.00	0.00	0.00	1	
Subtotal Lieutenants	0.00	1.00	1.00	2	
Subtotal Sergeants	1.00	3.00	3.00	17	
Subtotal Correctional Officers	0.00	17.33	13.00	70	
Subtotal Non-Correctional Officer	12.00	2.00	2.00	16	
Total Staff Needed:				107	

13. If the County decides to add 120 beds to the capacity of the Jail, the recommendation is to add two 48-bed housing units and one 24-bed housing unit. The types and custody levels of the inmates that would be housed in these new units cannot be determined at this stage. For the purposes of this study the staff for these new areas are calculated at one officer per post, per shift. This would bring the total recommended number of Corrections Officers to 89 staff. Adding two additional Classification Specialists will bring the total staffing complement to 128 for the County Jail. No additional supervisory or command staff would be recommended as a result of this expansion.

Table JAIL-19
Recommended Jail Staffing Summary

Expanded - Scott County Jail	Admin	Day	Night	Days/Week	Hours/Week	Coverage Hrs/Yr	Is Relief Needed	NAWH	Total FTEs	Rounded FTEs
Jail Administrator	1.00			5	40.00	2,085.60	No		1.00	
Subtotal Major	1.00				40.00	2,085.60			1.00	1
Captain	1.00			5	40.00	2,085.60	No		1.00	
Subtotal Captain	1.00				40.00	2,085.60			1.00	1
Shift Commander		1.00	1.00	5	42.00	2,189.88	No		2.00	
Subtotal Lieutenants	0.00	1.00	1.00		42.00	2,189.88			2.00	2
Training Sergeant	1.00			5	40.00	2,085.60	No		1.00	
Program Sergeant	1.00			5	40.00	2,085.60	No		1.00	
Shift Sergeant		3.00	3.00	7	504.00	26,278.56	Yes	1,754.14	14.98	
Subtotal Sergeants	1.00	3.00	3.00		584.00	30,449.76			16.98	17
Booking		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Identification		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Booking/Release		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Booking Escort		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Female Housing		2.00	1.50	7	294.00	15,329.16	Yes	1,852.80	8.27	
Female Housing Escort		1.00	0.00	7	84.00	4,379.76	Yes	1,852.80	2.36	
General Population - North		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
General Population - South		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Intake Housing		2.00	1.50	7	294.00	15,329.16	Yes	1,852.80	8.27	
Special Management		2.00	1.50	7	294.00	15,329.16	Yes	1,852.80	8.27	
Housing Control		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
New 48 Bed Housing Unit		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
New 48 Bed Housing Unit		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
New 24 Bed Housing Unit		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Housing Escort		2.00	1.50	7	294.00	15,329.16	Yes	1,852.80	8.27	
Central Control		1.00	1.00	7	168.00	8,759.52	Yes	1,852.80	4.73	
Visitation Officer		1.00	0.00	5	60.00	3,128.40	Yes	1,852.80	1.69	
Visitation Officer		0.33	0.00	2	7.92	412.95	Yes	1,852.80	0.22	
Subtotal Correctional Officers	0.00	21.33	17.00		3,175.92	165,592.47			89.37	89
Jail Custodian	4.00	42.66	34.00	5	3,226.40	168,224.50	No		4.00	
Classification Specialist	4.00		76.66	5	3,226.40	168,224.50	No		4.00	
Program Services Coordinator	2.00			5	80.00	4,171.20	No		2.00	
Court Compliance Officer	2.00			5	80.00	4,171.20	No		2.00	
Alternative Sentence Coordinator	1.00			5	40.00	2,085.60	No		1.00	
Food Service Manager	1.00			5	40.00	2,085.60	No		1.00	
Cook		2.00	2.00	7	160.00	8,342.40	No		4.00	
Subtotal Non-Correctional Officer	14.00	44.66	112.66		6,852.80	357,304.99			18.00	18
Total Staff Needed:									128	

Projected salaries have been applied to the recommended staffing using multiple sources provided by County officials. For existing positions (posts) the average salaries were applied to each job classification based upon the *Position Budget Report for Budget Year 2020*. These amounts include the base wage, tax, benefit and workers' compensation. To maintain the current operations without any additional housing, the recommendation is to add 11.46 additional Correctional Officers (rounded down to 11) to the existing 59 officers. These additional staff positions have been added at Step 1 of the pay scale based upon the *Scott County Salary Rate Table for FY 2020* and escalated accordingly. An additional 4.98 (rounded up to 5) Sergeants have also been added to the existing 12 Sergeants that are a result of applying the appropriate NAWH to the Shift Sergeant positions.

Table JAIL-20
Recommended Jail 2020 Staffing & Salary Summary

Scott County Jail - 2020	Total	Rounded	
Post/Position	FTEs	FTEs	2020
Subtotal Major	1.00	1	\$ 143,699.44
Subtotal Captain	1.00	1	\$ 140,791.24
Subtotal Lieutenants	2.00	2	\$ 223,599.60
Subtotal Sergeants	16.98	17	\$ 1,762,637.18
Subtotal Correctional Officers	70.46	70	\$ 5,901,786.80
Subtotal Non-Correctional Officer	18.00	18	\$ 1,362,752.64
Total Staff Needed:		109	\$ 9,316,506.27

Source: Justice Planners, May 2019

The estimated salaries and benefits of these additional staff total approximately \$1,227,086 in 2020 dollars.

Table JAIL-21
Additional Recommended Jail 2020 Staffing & Salary Summary

Scott County Jail - 2020	Total	Rounded	
Additional Post/Position	FTEs	FTEs	2020
Subtotal Sergeants	4.98	5	\$ 518,422.70
Subtotal Correctional Officers	11.46	11	\$ 708,663.01
Total Additional Staff Needed:		16	\$ 1,227,085.71

Source: Justice Planners, May 2019

The expansion of the capacity of the Jail will be accomplished in two phases. The first phase (Phase One) consists of constructing two additional housing units plus a Housing Control station. Barring delays in approvals and groundbreaking, the Phase One addition could be ready to open in 2022. If there are delays to this timeline, the staff salaries and estimated construction costs will have to be adjusted accordingly. With proper relief added, these new Housing and Housing Control posts should be staffed with a total of 15 additional Correctional Officer FTEs. Added to the 70 recommended Correctional Officers for current operations, the total recommended Correctional Officer positions is 85. These 15 positions have been added to the salary schedule in 2022 to coincide with the Phase One opening.

Table JAIL-22
Recommended Jail 2022 Staffing & Salary Summary

Scott County Jail - 2022	Total	Rounded			
Post/Position	FTEs	FTEs	2022	2027	2031
Subtotal Major	1.00	1	\$ 150,605.99	\$ 168,328.96	\$ 183,997.58
Subtotal Captain	1.00	1	\$ 147,558.02	\$ 164,922.31	\$ 180,273.82
Subtotal Lieutenants	2.00	2	\$ 234,346.36	\$ 261,923.69	\$ 286,304.42
Subtotal Sergeants	16.98	17	\$ 1,847,353.93	\$ 2,064,746.28	\$ 2,256,939.71
Subtotal Correctional Officers	84.65	85	\$ 5,301,806.94	\$ 5,925,711.35	\$ 6,477,296.23
Subtotal Non-Correctional Officer	18.00	18	\$ 1,428,249.94	\$ 1,596,323.10	\$ 1,744,914.15
Total Staff Needed:		124	\$10,858,534.49	\$12,389,066.87	\$13,542,282.33

Source: Justice Planners, May 2019

The Phase One expansion is estimated to provide adequate inmate housing until 2032. At this time the Phase Two expansion should come online to provide an additional housing unit that should provide enough housing through 2037. This housing unit will require an additional 4 Correctional Officer FTEs to provide for safe, secure operations. Four additional Correctional Officer positions have been added to the projected staffing and salaries beginning in 2032. They have been added at Step 1 of the pay scale based upon the Scott County Salary Rate Table for FY 2020 and escalated accordingly.

Table JAIL-23
Recommended Jail 2032-2037 Staffing & Salary Summary

Scott County Jail - 2032	Total	Rounded		
Post/Position	FTEs	FTEs	2032	2037
Subtotal Major	1.00	1	\$ 188,137.52	\$ 210,277.11
Subtotal Captain	1.00	1	\$ 184,329.98	\$ 206,021.51
Subtotal Lieutenants	2.00	2	\$ 292,746.27	\$ 327,195.98
Subtotal Sergeants	16.98	17	\$ 2,307,720.86	\$ 2,579,288.13
Subtotal Correctional Officers	89.37	89	\$ 6,623,035.39	\$ 7,402,418.92
Subtotal Non-Correctional Officer	18.00	18	\$ 1,784,174.72	\$ 1,994,132.28
Total Staff Needed:		124	\$13,846,983.68	\$15,476,464.78

Source: Justice Planners, May 2019

It is projected that in 2037 the jail will have 124 staff with salaries and benefits totaling \$15,476,465.



Jail Phased-ADDITIONAL CAPACITY

When the Jail completes the initial phase of constructing additional capacity, there will (should) be a period of time when there are additional beds beyond the immediate need for Scott County. This is so the facility can “grow” into their new spaces until the time comes for the next phase of construction.

The projected bedspace need for the Jail in 2022 is 401 beds. If the County were to build enough bedspaces to reach the 2032 need of 456 beds, then upon opening in/around 2022 there would be an additional 55 beds on average. Depending upon the design, this equates to one or two housing units that would initially be vacant. The County could choose to not open these units initially, thereby not having to staff them. Or the County could choose to rent the additional 55 beds to other jurisdictions until the Scott County inmate population increases.

Scott County is currently paying \$75 - \$80 per day to house excess inmates in other jurisdictions. Using this range of fees, the initial 55 additional beds could be rented for between \$1,505,625 and \$1,606,000 the first year (2019 dollars). As the Scott County need for inmate beds grows over the next 10 years, the available number of beds for rent will reduce by approximately 5.5 beds each year. The dollar amounts shown in the table below are calculated with the assumption that the additional beds will reduce by 5.5 each year.

Table JAIL-24
Additional Bed Rental if Phased

Jail Year	Additional Beds	Per Diem*	
		\$75	\$80
2022	55	\$ 1,505,625	\$ 1,606,000
2023	50	\$ 1,355,063	\$ 1,445,400
2024	44	\$ 1,204,500	\$ 1,284,800
2025	39	\$ 1,053,938	\$ 1,124,200
2026	33	\$ 903,375	\$ 963,600
2027	28	\$ 752,813	\$ 803,000
2028	22	\$ 602,250	\$ 642,400
2029	17	\$ 451,688	\$ 481,800
2030	11	\$ 301,125	\$ 321,200
2031	6	\$ 150,563	\$ 160,600
2032	0	\$ -	\$ -

* amounts are shown in 2019 dollars

Source: Justice Planners

Another option is, rather than shelling the future housing need, build enough bedspaces to reach the full 2037 need of 484 beds. This will result in about 83 additional beds upon opening in/around 2022. Using the same ranges of fees, the County could see revenues between \$2,272,125 and \$2,423,600 if all 83 beds were rented to other jurisdictions the first year (2019 dollars).

Table JAIL-25
Additional Bed Rental for Full Buildout

Jail Year	Additional Beds	Per Diem	
		\$75	\$80
2022	83	\$2,272,125	\$2,423,600
2023	77	\$2,120,659	\$2,262,036
2024	72	\$1,969,193	\$2,100,473
2025	66	\$1,817,727	\$1,938,909
2026	61	\$1,666,262	\$1,777,346
2027	55	\$1,514,796	\$1,615,782
2028	50	\$1,363,330	\$1,454,218
2029	44	\$1,211,864	\$1,292,655
2030	39	\$1,060,398	\$1,131,091
2031	33	\$ 908,932	\$ 969,528
2032	28	\$ 757,466	\$ 807,964
2033	22	\$ 606,000	\$ 646,400
2034	17	\$ 454,535	\$ 484,837
2035	11	\$ 303,069	\$ 323,273
2036	6	\$ 151,603	\$ 161,710
2037	0	\$ -	\$ -

* amounts are shown in 2019 dollars

Source: Justice Planners

There are some serious considerations that must be taken into account before deciding to build to the full 2037 capacity at once, or even renting beds in an additional housing unit if the Jail expansion is built in phases.

Gauging the Demand for Beds. Often times jurisdictions will overbuild their own need for bedspace with the assumption, or even verbal commitment, of renting beds. They later find out the demand was not as great as they thought and many beds (or entire living units) sit empty. It is always advisable to have a written commitment in place before getting into an “overbuilt” situation. This would not be nearly the fiscal concern if the Jail expansion is built in phases.

Upfront Construction Costs. The upfront project costs will be significantly higher if the full facility is built-out all at once rather than phasing the construction. The total project costs would increase from \$14.5 million to approximately \$23.9 million to build the full expansion at one time.

Diminishing Revenue. The maximum amount of revenue generated by renting bedspace will likely be in the first year or two, and it can be appealing to offset budget appropriations with this anticipated revenue stream. However, a jurisdiction must understand that as time progresses, their own need for bedspace will increase. This means the number of beds available to rent out will decrease, and so will the anticipated revenue. So as the revenue decreases annually, this “loss” must be replaced by the County for the Jail to maintain staffing and operations.

Scott County has an ongoing agreement with federal law enforcement agencies to house federal inmates. For the last 5 years (2013 through 2018) Scott County has housed an average of 34.3 federal inmates per day. These include inmates from the US Marshals (30.5), the Federal Bureau of Prisons (3.8) and Immigration and Customs Enforcement (0.09). The County currently charges these agencies \$70 for every day a federal inmate is housed in the jail. If this trend continues of housing an average of 34.3 federal inmates daily, Scott County should expect annual revenues of \$876,649 (in 2019 dollars).

Table JAIL-26
Housing of Federal Inmates

Year	Avg Held	\$70/Day	Annually
2014	38.8		
2015	46.3		
2016	23.0		
2017	32.3		
2018*	31.2		
Avg	34.3	\$ 2,402	\$ 876,649

* 2018 numbers are through September

Source: Justice Planners

Note: As mentioned above Scott County has been housing federal inmates for many years, therefore this is estimated revenue they already receive. However, it gives a more accurate picture of the revenues recognized by the County when paired with the potential funding to be received through renting additional beds through the new construction.

SITE/BUILDING OPTIONS

Although comprehensive in space analysis, the recommendations in this final plan are intended to be flexible and allow for the introduction of new ideas and technologies into building projects as future planning begins. The recommendations listed below identify the most pressing JDC and Jail needs as determined during the planning process.

Each of the options was evaluated by the Core Planning Group on their ability to address the needs of the Department over both the short and long term. The options were also evaluated based on their cost to implement, efficiency of operation, and time in which they could be completed or phased into completion. Throughout the study, drawing concepts and organizational ideas were presented and refined with County input given in order to define the best possible solution.

Juvenile Detention Center:

The current Juvenile Detention Center occupies approximately 11,500 SF, but requires an additional 32,000 SF to accommodate the beds and support staff required to meet the needs of the study. It was determined that the greatest need for the County is to expand the JDC capabilities to meet the bedspace needs for 2027 of 43 beds at a minimum. In the process of designing the additional or new space, it is recommended to shell out (build out the exterior shell only) the additional area needed for the full study build-out capacity of 64 beds by the year 2037.

Jail:

The current Jail needs will require approximately an additional 25,200 SF to accommodate an additional 120 beds. The recommendation to realize the additional bed space would be to expand the Jail to accommodate 72 beds by 2027, while shelling out the space for the additional 48 beds to meet the needs for the full study build-out by the year 2037. Although the need for the Jail expansion is real, it was determined that there could be immediate short term solutions to help reduce the congestion felt within the existing facility due to the growing needs of special management.

Existing Building/Site Electrical Requirements:

Site:

- Electrical power utilities (Midamerican) do not appear to conflict with the proposed addition footprints.
- One portion of the County-owned fiber loop appears to conflict with both proposed addition footprints. The project should include a budget to relocate the affected section.

Juvenile Detention Center:

- The electrical service is a 208V 800A switchboard of recent vintage fed from a utility transformer on the east side of the facility. The switchboard is not in an easily accessible location. An addition may require the service be upsized and/or relocated.
- The generator is a 35kW interior natural gas unit. It can likely handle emergency lighting associated with the proposed addition. A second life transfer switch would be required to provide separate life safety loads.

Jail:

- The electrical service to the jail was installed as part of the 2006 jail addition. It is a 3000A 480V switchboard located on the north side of the building. The switchboard has capacity for expansion and there is physical space adjacent to it to tap off a new disconnect if needed.
- Emergency power is fed from two paralleled exterior generators. The generators have adequate capacity to handle building expansion loads. The generators feed paralleling equipment which in turn feeds at least five transfer switches. The transfer switches feed various portions of the building but do not appear to have "life safety" loads (such as emergency lighting) separated from "legally-required" loads. This separation is required by code so new construction likely requires at least one new transfer switch to be installed.

Existing Building/Site Mechanical Requirements:

Site:

- Existing natural gas, sanitary sewer, and storm sewer branch mains are routed north-south along the west side of the Jail. It is likely any new construction in this area will be impacted by the location of these utilities. The extent of impact cannot be determined until a design is determined and a survey is completed. It is possible the utilities can remain in place, but budgets should reflect relocating these pipes until a more cost effective solution can be determined.

Juvenile Detention Center:

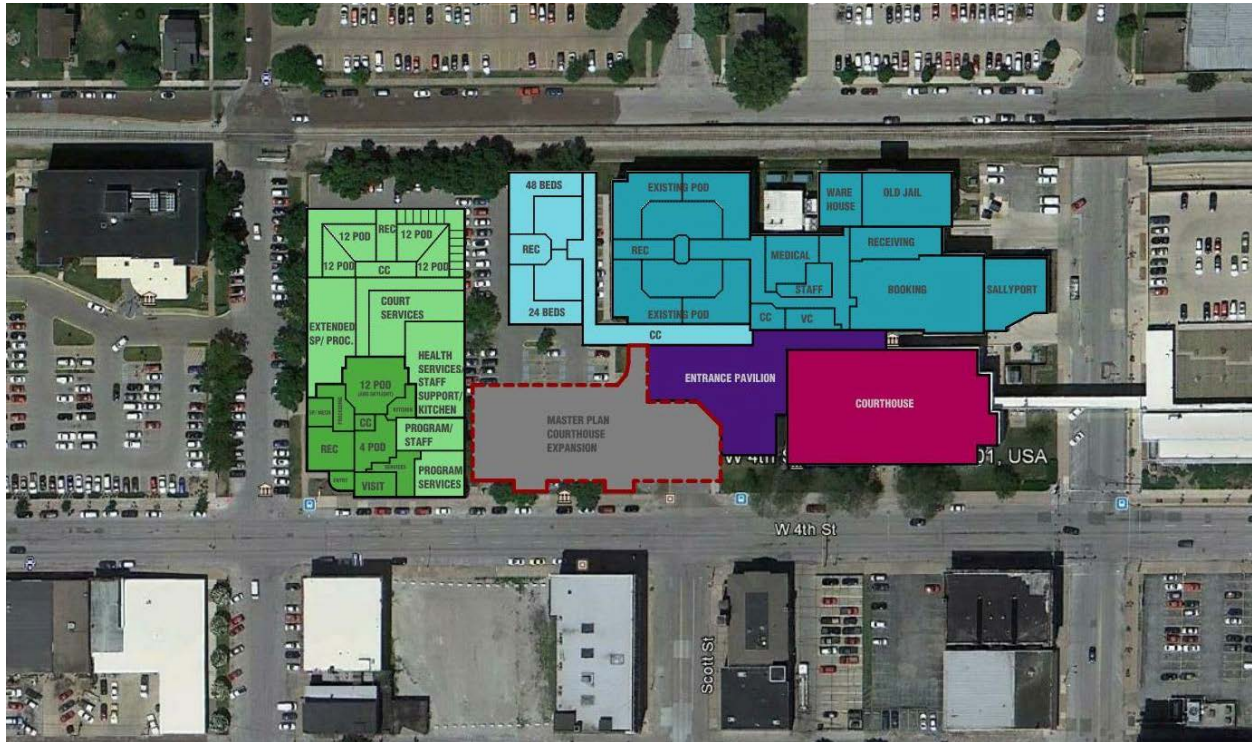
- The existing wet-pipe fire suppression system should be extended into any addition as a separate zone from the existing service. Specialized spaces may require different fire suppression systems locally, which will be determined at a later date.
- It is likely any addition to the JDC facility will require a larger, or separate, domestic water service to accommodate the increase in plumbing fixtures. Similarly, new sanitary and storm sewer building mains will be necessary, with connections to the utility mains in Western Avenue and/or 4th Street.
- The rooftop units serving the existing JDC were recently replaced and should remain in use, with duct modifications as necessary to serve the existing spaces. New rooftop units and/or indoor air handling units should be provided for any addition to the building. A high efficiency central heating plant should also be considered as part of any addition, to allow for improved zoning and temperature control throughout the building. The natural gas service to the building will need to be upsized to accommodate the additional load.

Jail:

- The existing central heating and chilled water plants should provide heating and chilled water to any proposed addition. Additional boilers, chillers, and/or pumps may be necessary, depending on the extent of any work. It's possible a separate central heating/cooling plant may be more cost effective, depending on final design.
- New indoor air handling units will be provided for any building additions, with individual units serving each inmate housing pod.

Option #1 – Separate JDC and Jail buildings located on the Downtown Campus Site

Option #1 looks to keep both facilities located at the Courthouse campus yet keep both facilities independent of each other.



Juvenile Detention Center:

Addition of four (4) stacked living units and programmed support spaces to the north of the existing building. Minimum of one (1) living unit to be shelled for future build-out phase. Renovations required in the vacated P&D/open areas on the east of the existing building. Full extent of renovations needed in the existing detention center dependent on final design decisions, but the ideal design would work to minimize renovations in that area.

Jail:

Addition of two-story, stacked, living unit accommodating 72 beds on the first floor, with the second floor being shelled for future build-out phase. Addition requires new building link through the current courtyard between the Jail and Courthouse Entrance Pavilion.



Advantages:

1. Both facilities retain the current proximities to other County Departments.
2. Reuse of existing areas of the JDC.
3. Construction for the new areas of both buildings can be completed with minor disruptions to the existing facilities. No need to find additional housing for inmates during construction.

Disadvantages:

1. JDC requires expansion of separate kitchen and laundry facilities; requiring additional staff position.
2. Loss of over 100 parking spaces.
3. Site grading may require difficult ramping requirements at the JDC addition.
4. The Jail maxes out their expansion potential with 120 beds (unless all living units are designed to be 48 beds with a total max capacity of (192). This does max out the capacity for additional support spaces.
5. Limits ability for JDC to reorganize public and staff access to building.
6. Compromises required for available outdoor space for inmates.

Option #1 – JDC Addition/Renovations Budget Estimate

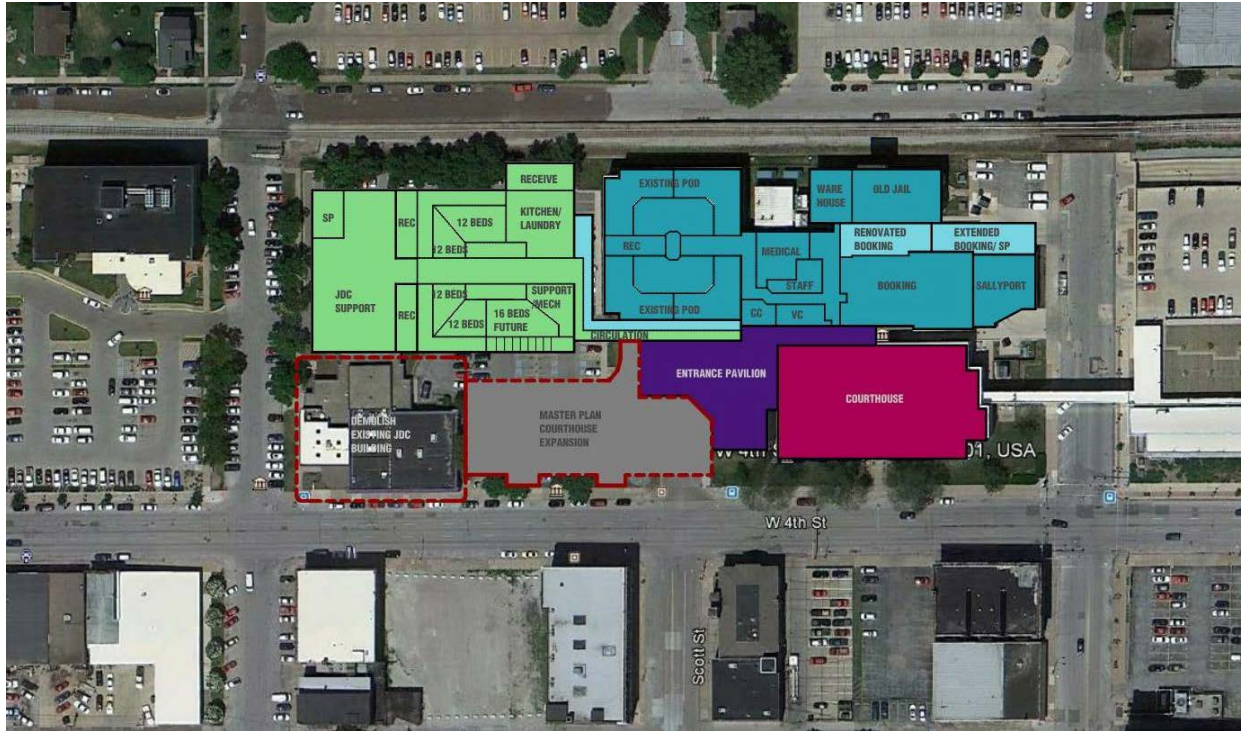
Addition (full build-out)	23,150 SF x \$425 = \$ 9,838,750
Addition (shelled space)	2,840 SF x \$175 = \$ 497,000
Renovations	4,200 SF x \$350 = \$ 1,470,000
Additional Site Work/Grading	= \$ 750,000
	Total Construction Cost = \$12,555,750
	Project Cost Multiplier _____ x 1.3
Total Project Costs	= \$16,322,475

Option #1 – Jail Addition Budget Estimate

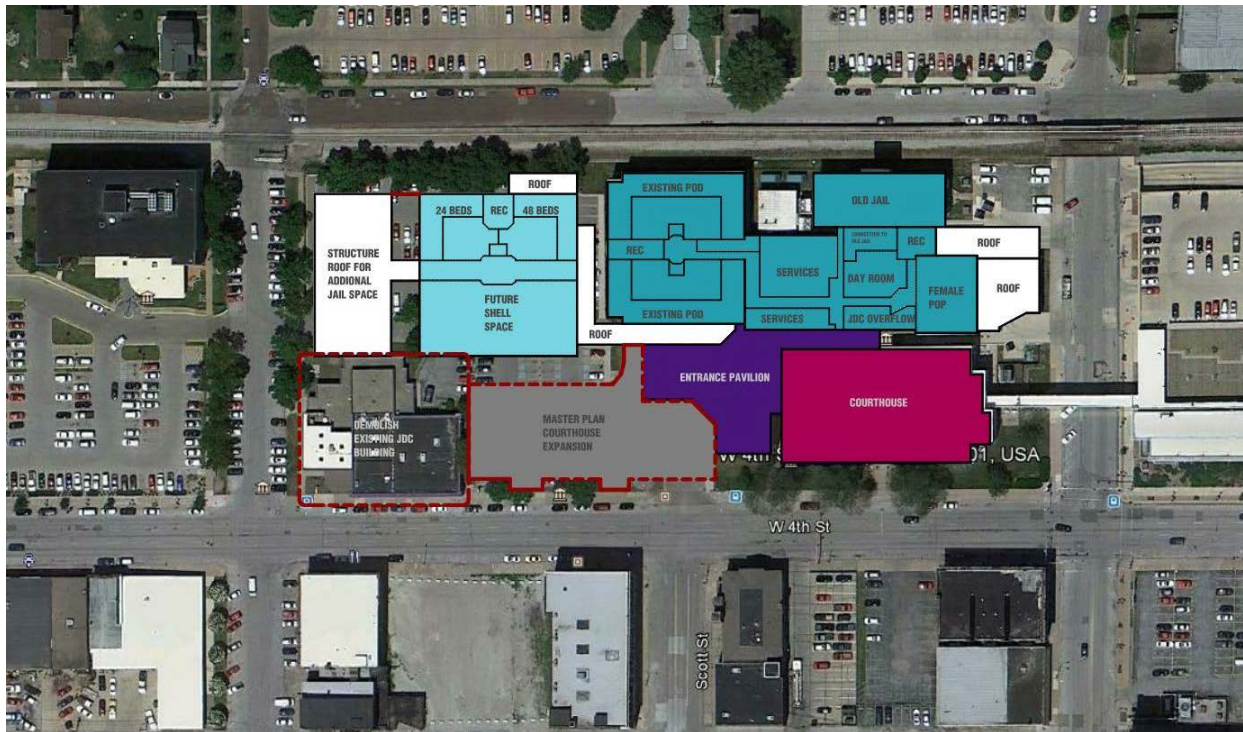
Addition (full build-out)	16,265 SF x \$425 = \$ 6,912,625
Addition (shelled space)	12,725 SF x \$175 = \$ 2,226,875
Fiber Relocate	= \$ 35,000
	Total Construction Cost = \$ 9,147,500
	Project Cost Multiplier _____ x 1.3
Total Project Costs	= \$11,926,850
Total Option #1 Project Costs	= \$28,249,325

Option #2 – Combined JDC and Jail buildings located on the Downtown Campus Site

Option #2 looks to combine both facilities while still located on the Downtown Courthouse Campus.



MAIN LEVEL



UPPER LEVEL

Juvenile Detention Center:

All new JDC spaces as shared addition to the existing Jail. Four (4) of the stacked living units to be built-out with a minimum of one (1) living unit shelled for future construction. The existing JDC building would be demolished for parking or future space needs for the JDC or Courthouse.

Jail:

Addition of stacked living unit accommodating 72 beds on the second floor of the jail additional above the JDC. The south half of the second floor being shelled for future build-out phase. Addition requires new building link through the current courtyard between the Jail and Courthouse Entrance Pavilion. Renovations in the Jail to improve on Booking functions and the relocation of receiving in the addition.

Advantages:

1. Both facilities retain the current proximities to other County Departments.
2. Space made available in the Jail to renovate/expand Booking.
3. Construction for the new areas of both buildings can be completed with minor disruptions to the existing facilities except for the Booking area. No need to find additional housing for inmates during construction.
4. JDC and Jail to share kitchen and laundry facilities.
5. Minor expansion space available for the JDC with demolition of the current facility.

Disadvantages:

1. Loss of over 100 parking spaces.
2. The Jail maxes out their expansion potential with 120 beds (unless all living units are designed to be 48 beds with a total max capacity of (192). This does max out the capacity for additional support spaces unless located as a second floor over the JDC support areas.
3. Possible issue in providing true sight/sound separation between juvenile and adult inmates (sound transfer between floors).



Option #2 – JDC Addition Budget Estimate

Addition (full build-out)	41,910 SF x \$425= \$17,811,750	
Addition (shelled space)	3,300 SF x \$175 = \$ 577,500	
Fiber Relocation	= \$ 35,000	
	Total Construction Cost = \$18,424,250	
	Project Cost Multiplier	<u> </u> x 1.3
Total Project Costs		= \$23,951,525

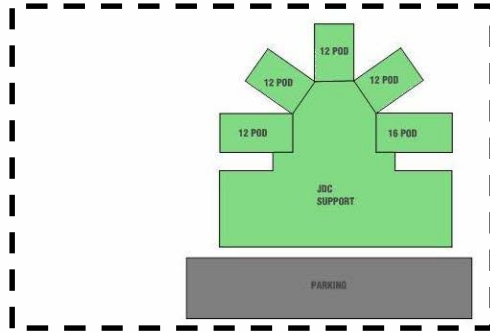
Option #2 – Jail Addition/Renovations Budget Estimate

Addition (full build-out)	13,600 SF x \$425= \$ 5,780,000	
Addition (shelled space)	11,200 SF x \$175= \$ 1,960,000	
Booking Addition	2,800 SF x \$425 = \$ 1,190,000	
Booking Renovations	2,650 SF x \$350 = \$ 927,500	
	Total Construction Cost = \$ 9,857,500	
	Project Cost Multiplier	<u> </u> x 1.3
Total Project Costs		= \$12,814,750
Total Option 2 Project Costs		= \$36,766,275

Option #3 – Addition to Jail on Downtown Courthouse Campus; Relocate the JDC to new facility on new site. Option #3 looks to completely relocate the JDC to a separate site to allow for maximum future jail expansion.



Note: Location of New JDC is not determined. The JDC plan is shown to scale as it relates to the existing site.



JDC – NEW BUILDING NEW SITE



JAIL ADDITION – SHOWING MAX FOOTPRINT POTENTIAL



Juvenile Detention Center:

Full JDC programmatic needs to be accommodated in a new building on a new site. Four (4) of the living units to be built-out with a minimum of one (1) living unit shelled for future construction. The existing JDC building would remain for the County to repurpose as they deem appropriate to their needs.

Jail:

Jail expansion is open to provide more or less construction as the need adjusts. To accommodate the study projections, an addition of a stacked living unit accommodating 72 beds would be built to the west with a building link through the current courtyard between the Jail and Courthouse Entrance Pavilion. Additional space could be shelled out for future construction, as the County requires.

Advantages:

1. Jail expansion potential extends beyond 2037 study.
2. Construction for the Jail building can be completed with minor disruptions to the existing facilities. Construction for the new JDC would require no disruptions to the existing facility. No need to find additional housing for inmates during construction.
3. Expansion potential for the JDC can be planned into the design depending on the size of the site.

Disadvantages:

1. JDC loses proximity to the Courthouse.
2. Cost of land purchase for the JDC.
3. Lose of parking spaces dependent on extent of Jail additions completed.

Option #3 – JDC Addition Budget Estimate

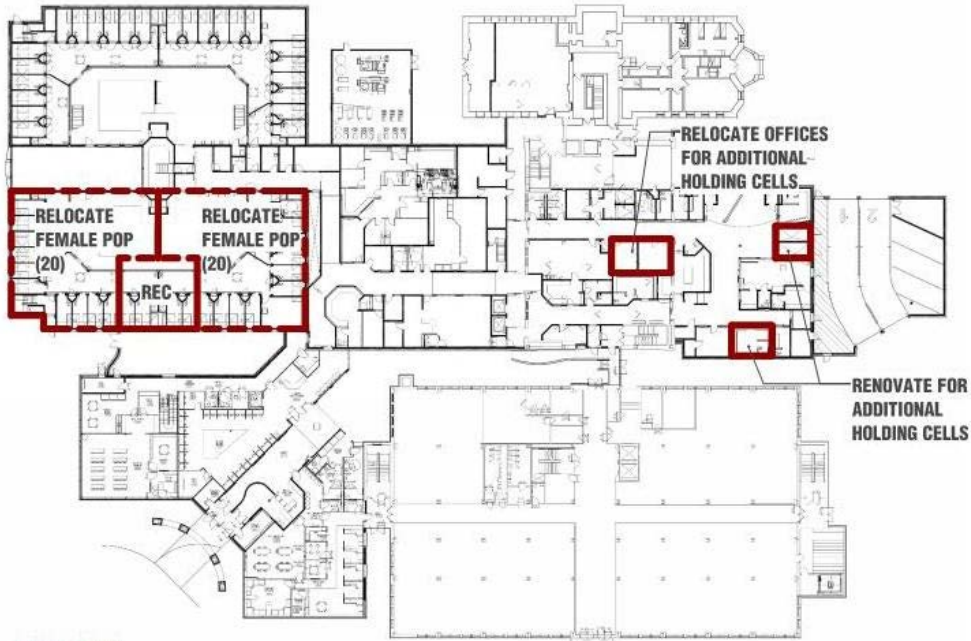
Addition (full build-out)	40,190 SF x \$425=	\$17,080,750
Addition (shelled space)	3,200 SF x \$175 = \$	560,000
New Parking	75 spots x 3,750	= \$ 281,250
	Total Construction Cost = \$17,922,000	
	Project Cost Multiplier	_____ x 1.3
	Total Project Costs	= \$23,298,600

Option #3 – Jail Addition/Renovations Budget Estimate

Addition (full build-out)	14,350 SF x \$425= \$	6,098,750
Addition (shelled space)	28,900 SF x \$175= \$	5,057,500
Fiber Relocation		= \$ 35,000
	Total Construction Cost = \$11,191,250	
	Project Cost Multiplier	_____ x 1.3
	Total Project Costs	= \$14,548,625
	Total Option 3 Project Costs = \$37,847,255	

Option #3A and #3B – Short Term Renovations at the Jail

Option #3A looked at swapping the location of the female population with the location of Jail special management and renovating areas of booking to provide additional holding cells.



MAIL LEVEL



UPPER LEVEL

Advantages:

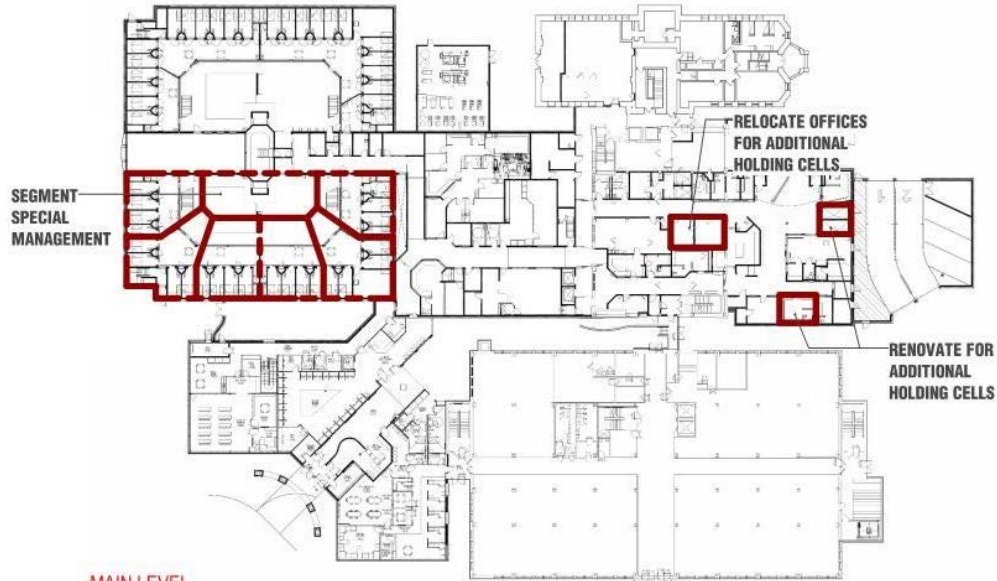


1. Female population bed count is increased.

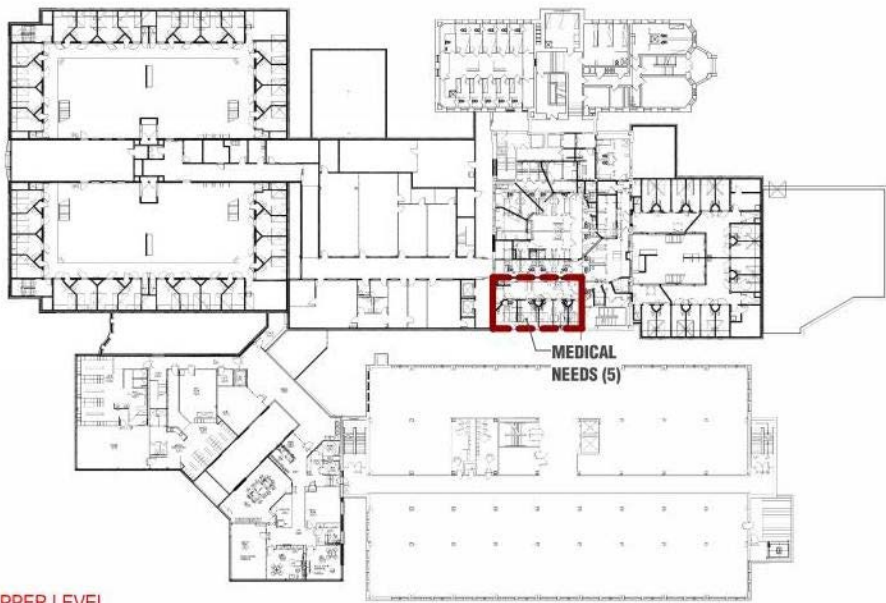
Disadvantages:

1. Special Management bed count is reduced.
2. Extensive renovations are required to provide additional toilet facilities within the divided Special Management area.

Option #3B looked at swapping the location of the female population with the location of Jail special management and renovating areas of booking to provide additional holding cells.



MAIN LEVEL
MAIL LEVEL



UPPER LEVEL



Advantages:

1. Special Management bed count can be increased by changing out single bunks cells to double bunk cells.
2. Additional separation walls at Special Management will allow for better use of the available space.

Disadvantages:

1. Extensive renovations are required to provide additional toilet facilities within the divided Special Management area.

Option #3A and #3B – Jail Renovations Budget Estimate

Relocate Female Population/ Renovate Special Management	12,500 SF x \$350 = \$ 4,375,000	
Additional Holding Cells	1,360 SF x \$350	= \$ 476,000
Office Relocation	625 SF x \$350	= \$ 218,750
	Total Construction Cost	= \$ 5,069,750
	Project Cost Multiplier	<u> x 1.3</u>
	Total Project Costs	= \$ 6,590,675
	Total Option 3A/3B Project Costs	= \$ 6,590,675