

Update

**Inmate Population
Trends and Projections
for
Platte County
Missouri**

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Introduction

In 2018, Platte County contacted Bill Garnos to conduct an analysis of the County's inmate population trends, and to develop inmate population projections to assist the County with their assessment of different jail facility expansion options. The study, *Inmate Population Trends and Projections for Platte County, Missouri*, was completed in 2019 and presented to the Platte County Commission.

The Consultant — Bill Garnos is a nationally-recognized consultant specializing in the planning, design, and operation of jail facilities. He has directed or assisted with jail planning projects for more than 100 cities and counties in 27 states, including 27 counties in Missouri. Bill specializes in the development of jail needs assessment studies, regional jail feasibility studies, inmate population trends and projections, facility evaluations, alternatives to incarceration, operational cost studies, space programming, jail staffing plans, standards compliance, and the activation of new jail facilities and offender programs.

Bill currently works as an independent jail consultant. He previously served as the Senior Justice Planner at DLR Group, as the Senior Program Manager for the Justice Division at The Facility Group, as Vice President of CSG Consultants, and as the Senior Criminal Justice Planner for Correctional Services Group. Before becoming a jail consultant in 1989, Bill served on the Governor's staff in South Dakota through two administrations as the Executive Policy Analyst and Management Analyst for Corrections, then as the State Project Director for Corrections, and later as the Executive Assistant to the Secretary of the Department of Corrections.

Bill has a Bachelor of Science degree in Criminal Justice from the University of South Dakota, and has served on the Gladstone, Missouri City Council since 2011, including three terms as Mayor.

Report Organization

Section 1. Overview of the Previous Jail Population Study — Provides a review of the previous study, *Inmate Population Trends and Projections for Platte County, Missouri*, dated February 2019.

Section 2. Inmate Population Trends — Provides a review of three key metrics of the inmate population trends at the Platte County Detention Center, including:

- The number of jail bookings each month;
- The Average Daily Population (ADP) of inmates each month; and
- The high and low inmate population range each month.

Section 2 shows the data and trends identified in the 2019 study, which included monthly data for an 11-year period from 2008 – 2018, and then provides an update with data and trends from 2019 through March 2023.

Section 3. Inmate Population Projections — Provides a review of the inmate population projections and forecast of Platte County’s future jail capacity requirements from the 2019 study. The section includes:

- The historical and projected population of Platte County, updated to reflect the 2020 Census data and current county population projections from the Mid-America Regional Council (MARC);
- Inmate population projections for the next 20 years, based on current trends; and
- A forecast of jail capacity requirements (total jail beds needed), based on the inmate population projections.

Section 4. Conclusion — Summarizes the study’s overall findings and conclusions to support Platte County’s current jail planning process and decision-making.

The Introduction to the 2019 study included the following, which still applies to this Update.

This analysis of inmate trends and projections is not intended to provide all the answers to Platte County's on-going need for jail facilities. This study was conducted in a relatively short time frame, using available data and resources. It is, by necessity, the proverbial "30,000-foot view" of the County's inmate population trends. However, it is hoped that the information presented in this study will help to facilitate the development of more "data-driven" solutions to address and resolve the County's future facility needs.

The inmate population projections and the forecast of jail capacity requirements presented in this study also provide a framework for assessing the impact of different facility options for addressing the County's current and long-term jail needs.

The extensive data, trends, and issues included this study also present several opportunities for the County's further analysis — in terms of the County's on-going jail facility needs, for addressing the underlying factors driving those needs, and for identifying other emerging issues in the criminal justice system which could ultimately impact the County's future jail needs.

The criminal justice "system" is complex by its very nature and its competing internal goals. Any detailed analysis of the factors driving the County's need for more jail capacity is, inherently, also complex. This report does not attempt to answer the question "Why?" Why did these numbers go down? Why did they go up? What caused this spike in the numbers in that month? The reasons and factors behind these trends are difficult (or impossible) to identify or quantify, are often inter-connected, and beyond the constraints of this limited study — but, again, may provide opportunities for the County's further analysis.

It is important to keep in mind that "reasonable minds may differ" with regard to jail issues. Some may look at the data in this jail population study and conclude the County needs additional jail

capacity. Others may look at the same data and see “too many” inmates locked up, or inmates locked up for “too long.”

This study also does not include any assessment of the County’s current jail facility, or the existing building’s long-term viability to provide all, some, or most of the County’s jail capacity needs. Again, these are important issues, but go beyond the scope of this study.

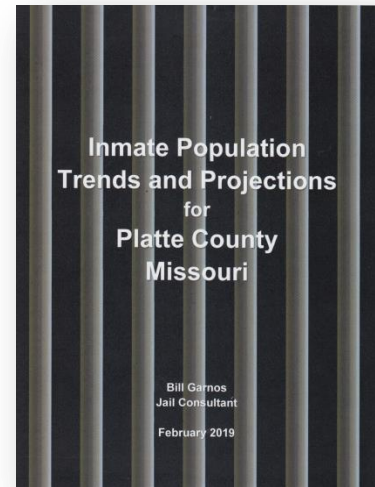
Platte County is currently in the process of making some important, multi-million dollar, facility planning decisions. Hopefully, the graphs, data, trend analysis, and other information in this report will aid the County in its efforts to make good decisions regarding the County’s current and future jail facility needs.¹

¹ *Inmate Population Trends and Projections for Platte County, Missouri*, February 2019, pages 3 – 4.

1. Overview of the 2019 Jail Population Study

The previous study, *Inmate Population Trends and Projections for Platte County, Missouri*, dated February 2019, included:

- A review of the County’s past jail studies;
- Criminal justice statistical indicators;
- A detailed analysis of the County’s inmate population trends;
- Inmate population projections and a forecast of jail capacity requirements; and
- A discussion regarding alternatives to incarceration.



The following is a brief overview of these areas in the 2019 study.

Review of Past Jail Studies — The 2019 study provided a review of three previous jail studies and reports involving the Platte County Detention Center, including the *Feasibility Study* by Goldman Group Architects (GGA), and the Platte County Jail Committee’s report from 2014.

Criminal Justice Statistical Indicators — The 2019 study reviewed trends in some of Platte County’s criminal justice statistics, including crime and arrest trends, and criminal case filing trends in Circuit Court, to provide some context and background for the County’s inmate population trends.

Inmate Population Trends — The 2019 study provided an inmate population profile, and examined inmate population trends at the Platte County Detention Center for an 11-year period from 2008 through 2018, including:

- The number of jail bookings each month;
- The Average Daily Population (ADP) of inmates each month; and
- The high and low inmate population range each month.

Inmate population data was broken out separately for:

- State inmates (inmates charged with state offenses);
- U.S. Immigration and Customs Enforcement (ICE) detainees; and
- Total inmates.

An examination was also made of the inmate population by gender, to separately analyze trends in the number of male and female inmates. The high and low inmate population range was also examined to determine how much the County's inmate population fluctuates each month, and to measure its routine monthly peaks.

Inmate Population Projections — The 2019 study provided inmate population projections for facility planning purposes, and a forecast of Platte County's future jail capacity requirements, including:

- The historical and projected population of Platte County;
- Inmate population projections for the next 20 years, based on current trends; and
- A forecast of jail capacity requirements (total jail beds needed), based on the inmate population projections.

Additional information was provided with regard to:

- Inmate population projections in general;
- Platte County's Rate of Incarceration (ROI);
- The Average Length of Stay (ALOS) at the Detention Center;
- The type of jail beds needed;
- Minimum jail standards; and
- The "capacity" of the existing Detention Center.

Alternatives to Incarceration — The 2019 study also discussed programs, policies, and "best practices" to divert offenders from jail, provide intermediate sanctions, and reduce the length of stay for jail inmates. Additional information was provided on recent efforts by Greene County (Springfield), Missouri to manage and control their inmate population growth.

2. Inmate Population Trends

At the time of the 2019 study, most of the inmates at the Platte County Detention Center were “state inmates,” in that they are charged with *state* offenses, but who are in the custody of the Platte County Sheriff. The Detention Center also housed a few “ICE detainees” for the U.S. Immigration and Customs Enforcement (ICE). The 2019 study analyzed these two inmate population groups separately, in order to focus on Platte County’s own incarceration needs, first and foremost.

The 2019 study examined the current inmate population trends separately for:

- State inmates;
- ICE detainees; and
- Total inmates (state inmates + ICE detainees).

For each of these inmate groups, a detailed analysis was made of (1) the number of jail bookings, and (2) the Average Daily Population (ADP), for each month from 2008 through 2018, to provide 11 years of data and trend analysis.

An examination was also made of the inmate population by gender, to separately analyze trends in the number of male and female inmates being held at the Detention Center. In addition, the high and low inmate population range was examined to determine how much the County’s inmate population fluctuates each month, and to measure its routine monthly peaks.

Distribution by Jurisdiction — At the time of the 2019 study, the inmate population at the Platte County Detention Center consisted of:

- State inmates (inmates charged with state offenses);
- Municipal inmates (inmates charged with municipal offenses);
- Courtesy holds (primarily one-for-one inmate swaps with other counties); and
- ICE detainees (inmates held for U.S. Immigration & Customs Enforcement).

A review of data for 2017 and 2018 showed that, on average, the inmate population at the Detention Center consisted of:

- 82 percent state inmates;
- 5 percent municipal inmates;
- 3 percent courtesy holds; and
- 10 percent ICE detainees.

ICE detainees are no longer held at the Detention Center. Most were out by March 2020 (at the beginning of the Covid pandemic). One or two other ICE detainees were out of the facility by the end of 2020.

A. Bookings

2019 Study

According to the 2019 study, the Platte County Detention Center had a total of:

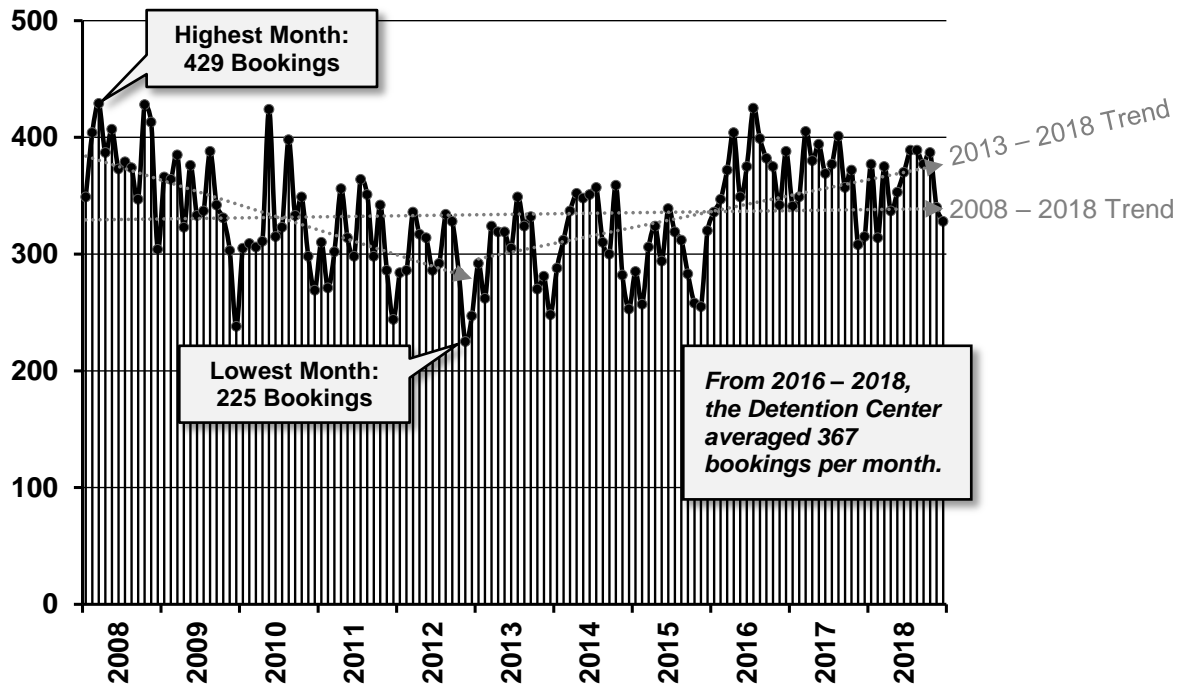
- 4,594 bookings in 2008;
- 4,086 bookings in 2009;
- 3,940 bookings in 2010;
- 3,736 bookings in 2011;
- 3,533 bookings in 2012;
- 3,625 bookings in 2013;
- 3,849 bookings in 2014;
- 3,552 bookings in 2015;
- 4,494 bookings in 2016;
- 4,368 bookings in 2017; and
- 4,336 bookings in 2018.

From 2016 to 2018, the Detention Center averaged 367 bookings each month.

Overall, from 2008 to 2018, the trend in the number of bookings each month remained fairly flat. The trend in total monthly bookings generally declined from 2008 to 2012, and then increased from 2013 to 2018.

The graph on the following page is from the 2019 study, and shows the number of bookings at the Detention Center for each month from 2008 to 2018.

Monthly Jail Bookings (2008 – 2018)



Update

The Platte County Detention Center had a total of:

- 4,378 bookings in 2019;
- 1,672 bookings in 2020;
- 2,311 bookings in 2021; and
- 2,756 bookings in 2022.

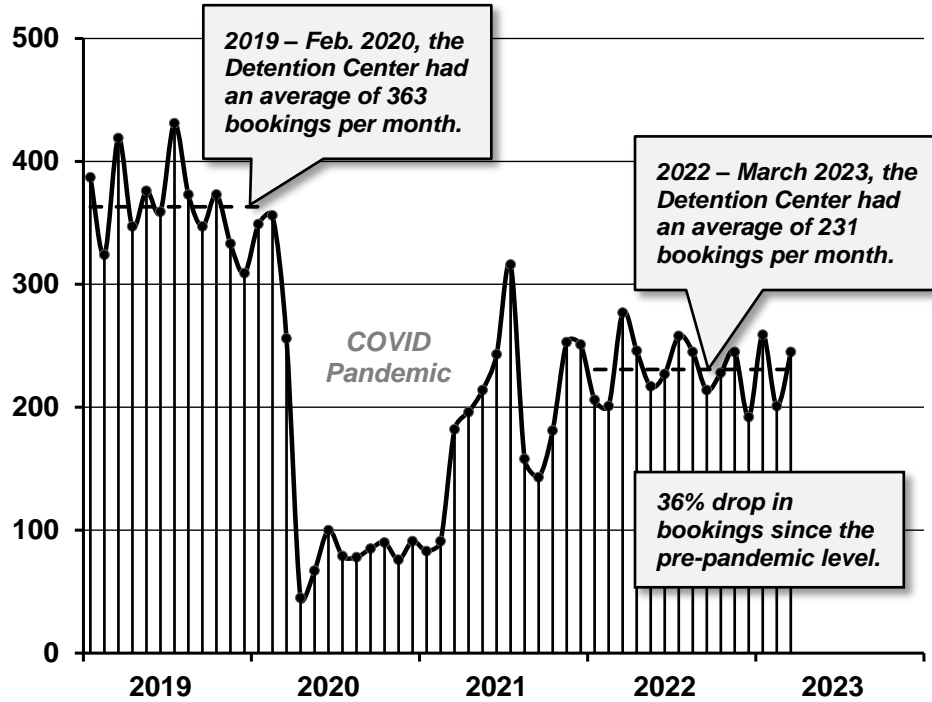
From 2019 to February 2020 (14-month period prior to the Covid pandemic), the Detention Center averaged 363 bookings each month. When the pandemic hit in March 2020, bookings at the Detention Center plummeted, to a low of only 45 bookings in April 2020. Only those charged with a Class A or B felony were admitted to the jail. From April through December of 2020, the Detention Center averaged only 79 bookings per month.

In 2021, jail intakes were expanded to include all felony classifications. Monthly bookings began to rebound but fluctuated dramatically, ranging from a low of 83 bookings in January, to a high of 316 bookings in July.

From 2022 to March 2023 (the most recent 15-month period), bookings at the Detention Center have somewhat stabilized, averaging 231 bookings per month — down 36 percent from the pre-pandemic level of 363 bookings per month.

The graph and table on the following page show the number of bookings at the Detention Center for each month since 2019.

Update — Monthly Jail Bookings (2019 – 2023)



Month	2019	2020	2021	2022	2023
January	387	349	83	206	259
February	324	356	91	201	201
March	419	256	182	277	245
April	347	45	196	246	
May	376	67	214	217	
June	359	100	243	227	
July	431	79	316	258	
August	373	78	158	245	
September	347	85	143	214	
October	373	90	181	228	
November	333	76	253	245	
December	309	91	251	192	
Monthly Average	365 Bookings	139 Bookings	193 Bookings	230 Bookings	235 Bookings
Annual Total	4,378 Bookings	1,672 Bookings	2,311 Bookings	2,756 Bookings	705 Bookings

B. Average Daily Population (ADP)

2019 Study

According to the 2019 study, the Platte County Detention Center held an ADP of:

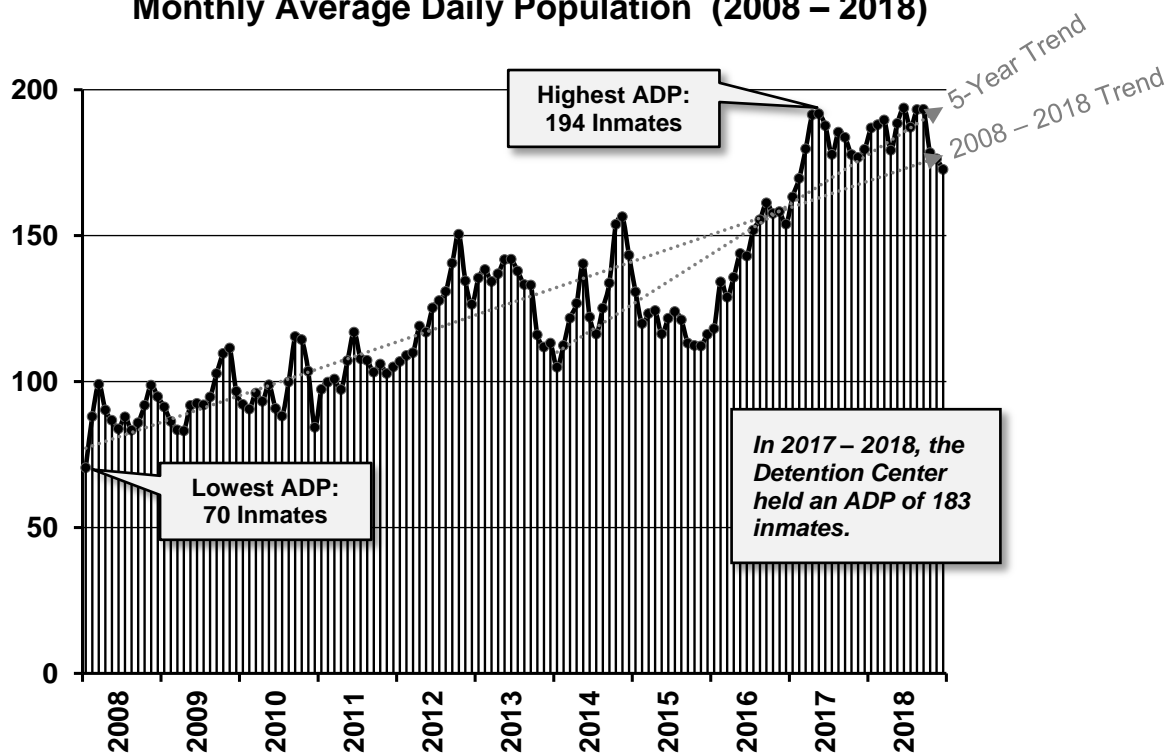
- 88 inmates in 2008;
- 95 inmates in 2009;
- 97 inmates in 2010;
- 104 inmates in 2011;
- 125 inmates in 2012;
- 131 inmates in 2013;
- 130 inmates in 2014;
- 120 inmates in 2015;
- 145 inmates in 2016;
- 180 inmates in 2017; and
- 186 inmates in 2018.

In 2017 and 2018, the Detention Center held an ADP of 183 inmates each month.

Overall, since 2008, the trend in the ADP each month has shown strong and steady growth. Over the past five years, the ADP has been increasing at an even greater rate.

The graph on the following page is from the 2019 study, and shows the ADP at the Detention Center for each month from 2008 to 2018.

Monthly Average Daily Population (2008 – 2018)



Update

The Platte County Detention Center held an ADP of:

- 172 inmates in 2019;
- 119 inmates in 2020;
- 172 inmates in 2021;
- 214 inmates in 2022; and
- 196 inmates during the first three months of 2023.

From 2019 to February 2020 (14-month period prior to the Covid pandemic), the Detention Center had an ADP of 171 inmates. When the pandemic hit in March 2020, the ADP at the Detention Center plummeted, to a low ADP of 101 inmates in May 2020. (Only those charged with a Class A or B felony were being admitted to the jail at that

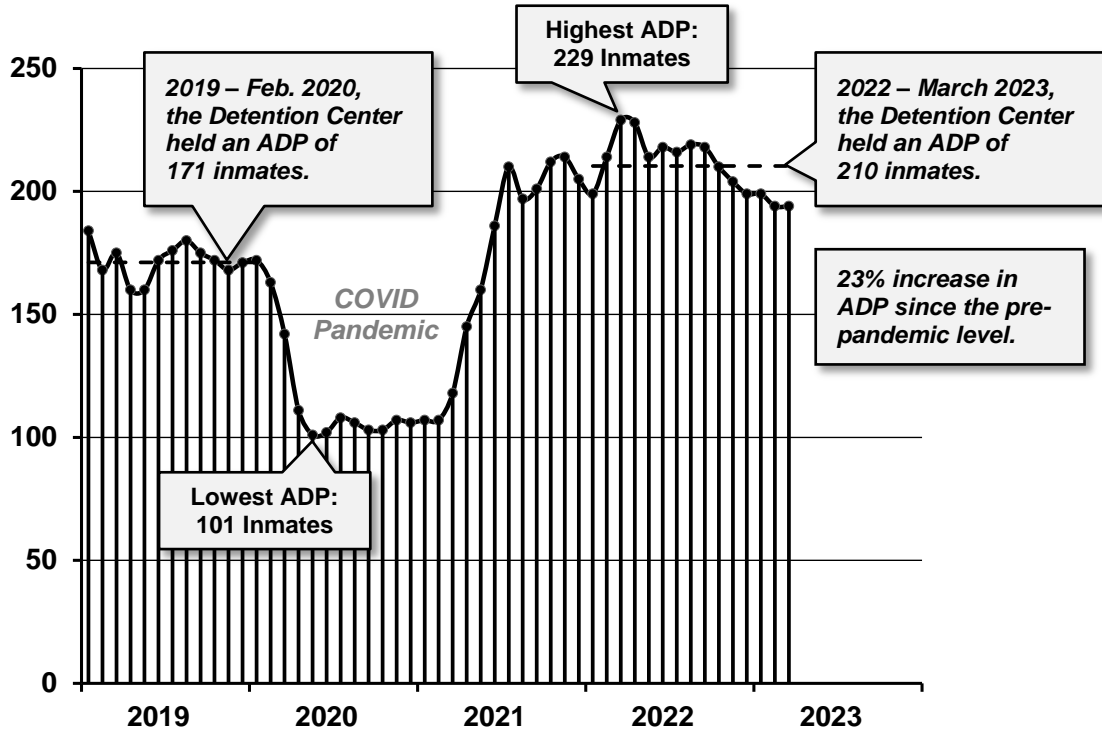
time.) From April through December of 2020, the Detention Center had an ADP of only 105 inmates.

In 2021, the inmate population at the Detention Center began to rebound, increasing from an ADP of 107 inmates in January and February, to an ADP of 214 inmates in November.

From 2022 to March 2023 (the most recent 15-month period), the inmate population at the Detention Center has somewhat stabilized, at an ADP of 210 inmates — an increase of 23 percent from the pre-pandemic level of 171 inmates per month.

The graph and table on the following page show the ADP at the Detention Center for each month since 2019.

Update — Average Daily Population (2019 – 2023)

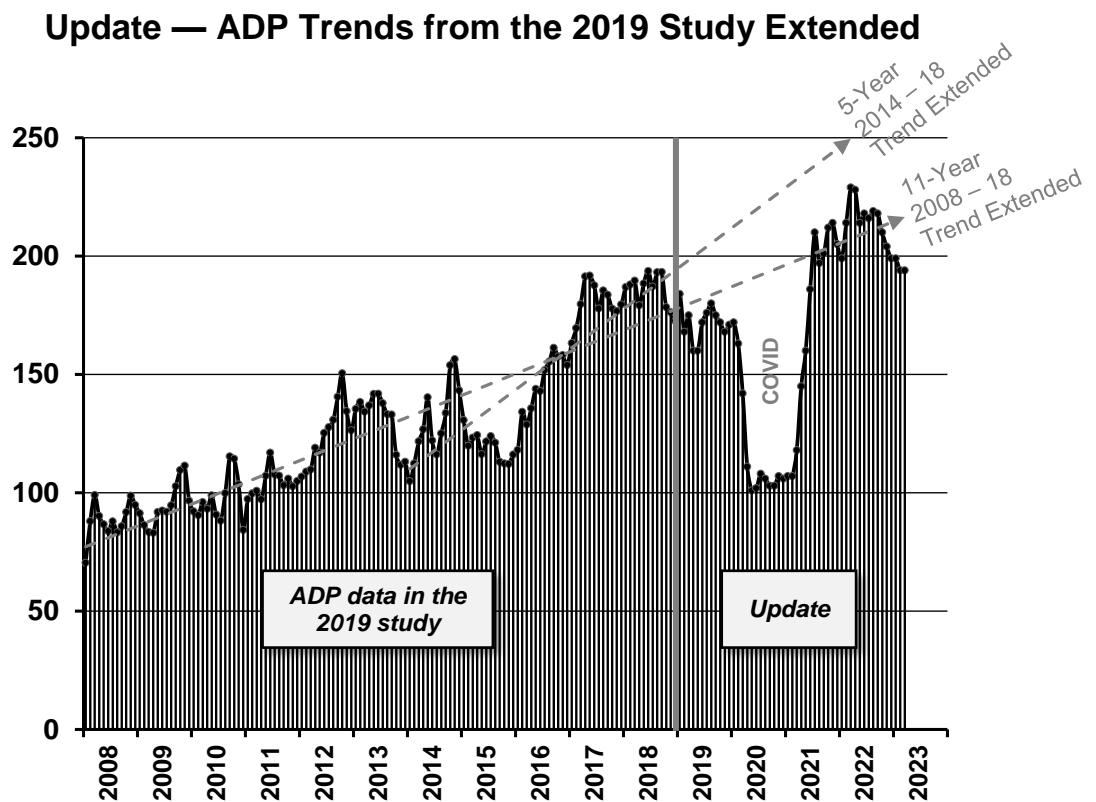


Month	2019	2020	2021	2022	2023
January	184	172	107	199	199
February	168	163	107	214	194
March	175	142	118	229	194
April	160	111	145	228	
May	160	101	160	214	
June	172	102	186	218	
July	176	108	210	216	
August	180	106	197	219	
September	175	103	201	218	
October	172	103	212	210	
November	168	107	214	204	
December	171	106	205	199	
Annual ADP	172 Inmates	119 Inmates	172 Inmates	214 Inmates	196 Inmates

The 2019 study identified two ADP trends. One was the 11-year ADP trend, based on the ADP of state inmates from 2008 to 2018. The other was the 5-year ADP trend, based on the ADP of state inmates from 2014 to 2018, which showed a steeper rate of growth.

Adding the additional ADP data from 2019 through March 2023, and extending the two ADP trendlines from the 2019 study, shows that the Detention Center’s inmate population over the past 15 months (2022 – March 2023) is consistent with the 11-year growth trend identified in the 2019 study — despite the massive drop in APD in 2020 and 2021 due to the Covid pandemic.

The following graph shows the Detention Center’s monthly ADP since 2008, and the extension of the 5-year and 11-year ADP trends from the 2019 study.



Out-of-County Boardings

Because of the growing inmate population, Platte County had to start boarding some of its inmates in other county jails, beginning in March 2022. Inmates have been boarded at the Buchanan County Jail in St. Joseph (31 miles away), and at the Clay County Detention Center in Liberty (25 miles away). However, because of its own inmate population demands, Clay County is no longer available for out-of-county boardings.

From March 2022 through January 2023, Platte County accumulated a total of 2,672 prisoner-days in out-of-county boardings. This equates to an ADP of approximately eight inmates being boarded out-of-county at any given time during this 11-month period. (Total Prisoner-Days ÷ # of Days in the Month = ADP.)

Update — Out-of-County Inmate Boardings

Month	Buchanan County	Clay County	Total Prisoner-Days	ADP Boarded Out
March 2022		126	126	4.1
April 2022	266	211	477	15.9
May 2022		34	34	1.1
June 2022			0	0.0
July 2022	194		194	6.3
August 2022	350		350	11.3
September 2022	448		448	14.9
October 2022	450		450	14.5
November 2022	303		303	10.1
December 2022	236		236	7.6
January 2023	54		54	1.7
11-Month Total	2,301 Prisoner-Days	371 Prisoner-Days	2,672 Prisoner-Days	7.9 Inmates

These out-of-county boardings cost Platte County a total of \$133,600, not including inmate transportation, staff time, etc.

C. High / Low Inmate Population Range

2019 Study

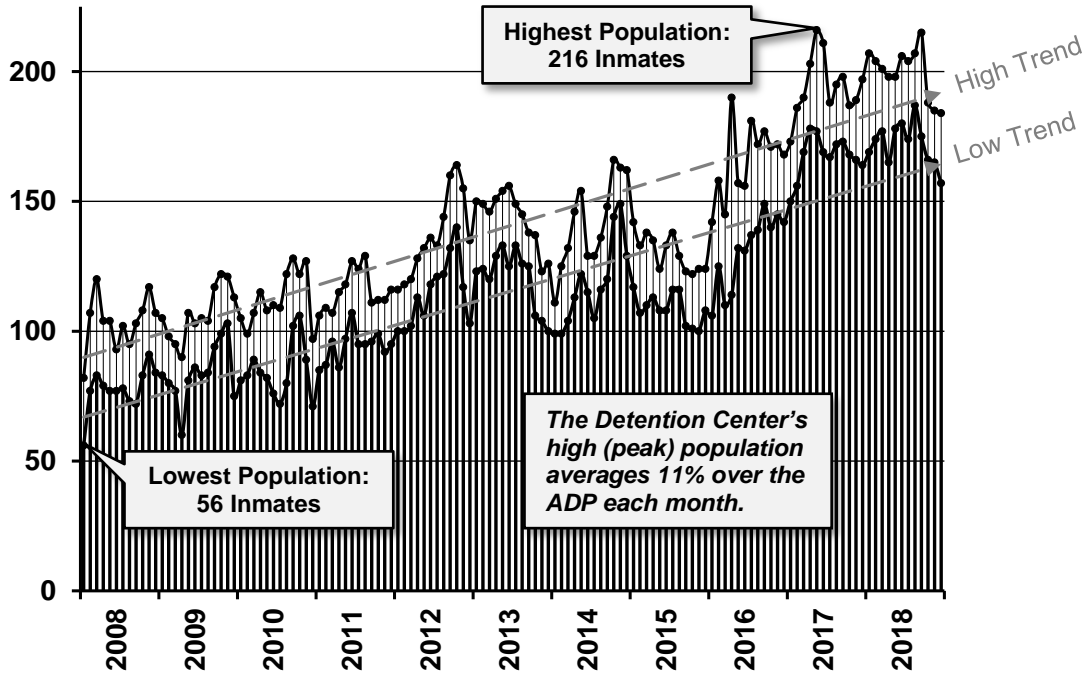
According to the 2019 study, the number of inmates at the Detention Center each day ranged from:

- 56 to 120 inmates in 2008;
- 60 to 122 inmates in 2009;
- 71 to 128 inmates in 2010;
- 85 to 129 inmates in 2011;
- 100 to 164 inmates in 2012;
- 100 to 156 inmates in 2013;
- 99 to 166 inmates in 2014;
- 100 to 142 inmates in 2015;
- 106 to 190 inmates in 2016;
- 150 to 216 inmates in 2017; and
- 157 to 215 inmates in 2018.

Peaking Factor — The 2019 study found that from 2008 to 2018, the highest (peak) population each month exceeded the ADP for that month by an average of 11 percent.

The graph on the following page is from the 2019 study, and shows the Detention Center's highest and lowest inmate population for each month from 2008 through 2018.

Monthly High / Low Inmate Population Range (2008 – 2018)



Update

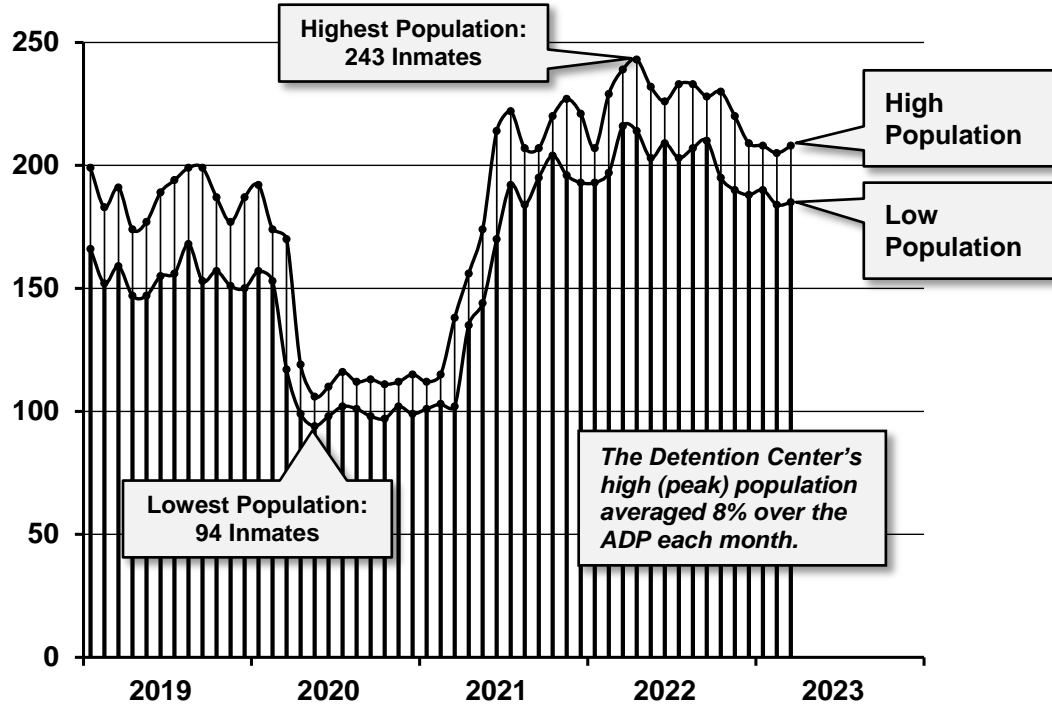
The number of inmates at the Detention Center each day ranged from:

- 147 to 199 inmates in 2019;
- 94 to 192 inmates in 2020;
- 101 to 227 inmates in 2021;
- 188 to 243 inmates in 2022; and
- 184 to 208 inmates during the first three months of 2023.

Peaking Factor — During this period, the highest (peak) population each month exceeded the ADP for that month by an average of 8 percent (as compared to 11 percent in the 2019 study, based on the inmate population from 2008 to 2018).

The graph and table on the following page shows the Detention Center's highest and lowest inmate population for each month since 2019.

Update — Monthly High / Low Inmate Population Range (2019 – 2023)



Month	2019	2020	2021	2022	2023
January	166 – 199	157 – 192	101 – 112	193 – 207	190 – 208
February	152 – 183	153 – 174	103 – 115	197 – 229	184 – 205
March	159 – 191	117 – 170	102 – 138	216 – 239	185 – 208
April	147 – 174	99 – 119	135 – 156	214 – 243	
May	147 – 177	94 – 106	144 – 174	203 – 232	
June	155 – 189	98 – 110	170 – 214	209 – 226	
July	156 – 194	102 – 116	192 – 222	203 – 233	
August	168 – 199	101 – 112	184 – 207	207 – 233	
September	153 – 199	98 – 113	195 – 207	210 – 228	
October	157 – 187	97 – 111	204 – 220	195 – 230	
November	151 – 177	102 – 112	196 – 227	190 – 220	
December	150 – 187	99 – 115	193 – 221	188 – 209	
Annual ADP	147 – 199 Inmates	94 – 192 Inmates	101 – 227 Inmates	188 – 243 Inmates	184 – 208 Inmates

4. Inmate Population Projections

The 2019 study provided inmate population projections and a forecast of Platte County's future jail capacity requirements, for facility planning purposes. The 2019 study included:

- The historical and projected population of Platte County;
- Inmate population projections for the next 20 years, based on current trends; and
- A forecast of jail capacity requirements (total jail beds needed), based on the inmate population projections.

This section provides a review of the data and methodologies used in the 2019 study, and presents updated data and results.

A. County Population

2019 Study

Historical County Population — At the time of the 2019 study, the population of Platte County had increased from 57,867 people in 1990; to 73,781 people in 2000; to 89,322 people in 2010. This represented an increase of more than 54 percent to Platte County's population over the preceding two decades (1990 Census to 2010 Census). The most recent population estimate for Platte County, at that time, was 101,187 people in 2017.

County Population Projections — At the time of the 2019 study, projections by the Mid-America Regional Council (MARC) estimated that Platte County's population will increase to 104,852 people in 2020; to 120,319 people in 2030; to 137,178 people in 2040. This represented a 30 percent increase to Platte County's population over the next two decades (2020 – 2040).

Update

Historical County Population — The population of Platte County has increased from:

- 73,774 people in 2000; to
- 89,322 people in 2010; to
- 104,959 people in 2020.

This represents an increase of more than 42 percent to Platte County's population over the past two decades (2000 Census to 2020 Census). The most recent population estimate for Platte County was 110,534 people in 2022.

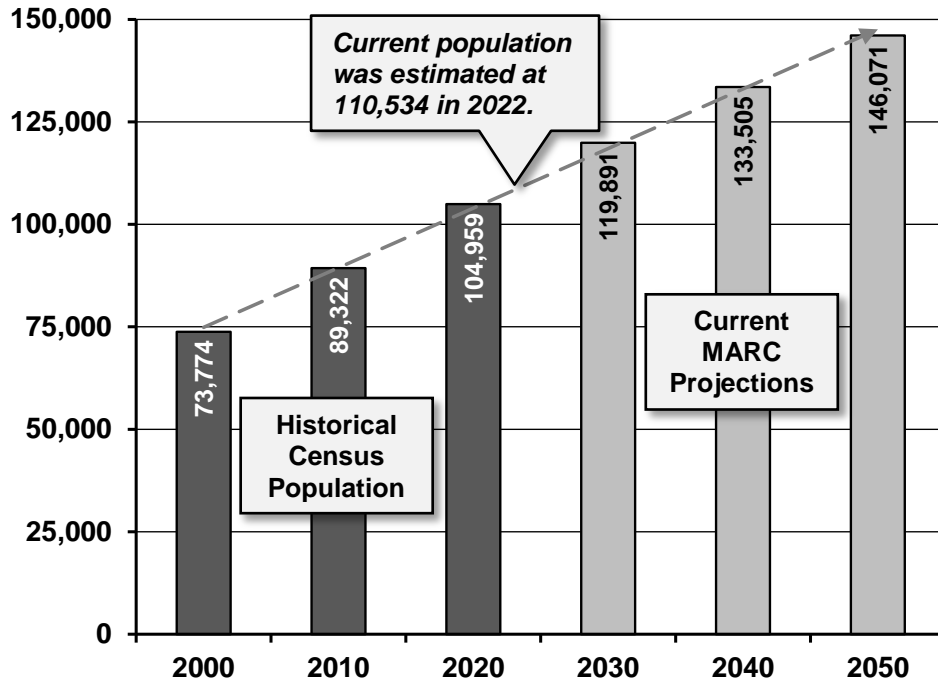
County Population Projections — MARC's current projections estimate that Platte County's population will increase to:

- 119,891 people in 2030; to
- 133,505 people in 2040; to
- 146,071 people in 2050.

This represents a 27 percent increase to Platte County's population over the next two decades (2020 – 2040), and a 39 percent increase over the next 30 years (2020 – 2050).

The graph and table on the following page show the historical population of Platte County for 2000 through 2020, and MARC's current population projections through 2050.

Update — Historical and Projected Population of Platte County



Year	U.S. Census	MARC Projections used in the 2019 Study	Current MARC Projections
2000	73,774		
2010	89,322		
2020	104,959	104,852	
2030		120,319	119,891
2040		137,178	133,505
2050			146,071

Sources: Historical population is from the U.S. Census Bureau. Population estimate for 2022 is from *Annual Estimates of the Resident Population for Counties in Missouri: April 1, 2020 to July 1, 2022* by the U.S. Census Bureau. Current projections by the Mid-America Regional Council (MARC) are from *Updated KC MPO Area Population, Household and Employment Forecasts*, approved April 2020.

B. Inmate Population Projections

2019 Study

In the 2019 study, a number of different forecasting methodologies were applied to Platte County's inmate population trends to estimate the County's future jail population.

Projections were developed using models based on:

- *Average Daily Population (ADP) Trends* — Projections based on linear trendlines through the Detention Center's ADP of state inmates;
- *Rate of Incarceration (ROI)* — Projections based on the correlation between the number of state inmates and the County's population, applied to the County's population projections; and
- *Average Length of Stay (ALOS)* — Projections based on the ALOS, applied to the projected number of inmate bookings.

Nine different forecasting models were applied to Platte County's historical inmate population trends. In each model, only the state (and municipal) inmates were included in the County's historical inmate population data. ICE detainees were not included in the historical data on which the projections were based.

The following is a list and general description of the models that were adapted, tested, and applied to the County's state inmate population trends.

Average Daily Population (ADP) Trend Projections

- *Model 1A. 11-Year ADP Trend Projections* — Projections based on the ADP trend of state inmates from 2008 through 2018 (132 months of data).
- *Model 1B. 5-Year ADP Trend Projections* — Projections based on the ADP trend of state inmates from 2014 through 2018 (60 months of data).
- *Model 1C. 3-Year ADP Trend Projections* — Projections based on the ADP trend of state inmates from 2016 through 2018 (36 months of data).

Rate of Incarceration (ROI) Projections

- *Model 2A. 11-Year Average ROI Projections* — Projections based on the average annual ROI in Platte County over the past 11 years (2008 – 2018), applied to the County’s population projections.
- *Model 2B. 5-Year Average ROI Projections* — Projections based on the average annual ROI in Platte County over the past 5 years (2014 – 2018), applied to the County’s population projections.
- *Model 2C. ROI Trend Projections* — Projections based on the increasing trend in the annual ROI in Platte County over the past 11 years (2008 – 2018), applied to the County’s population projections.

Average Length of Stay (ALOS) Projections

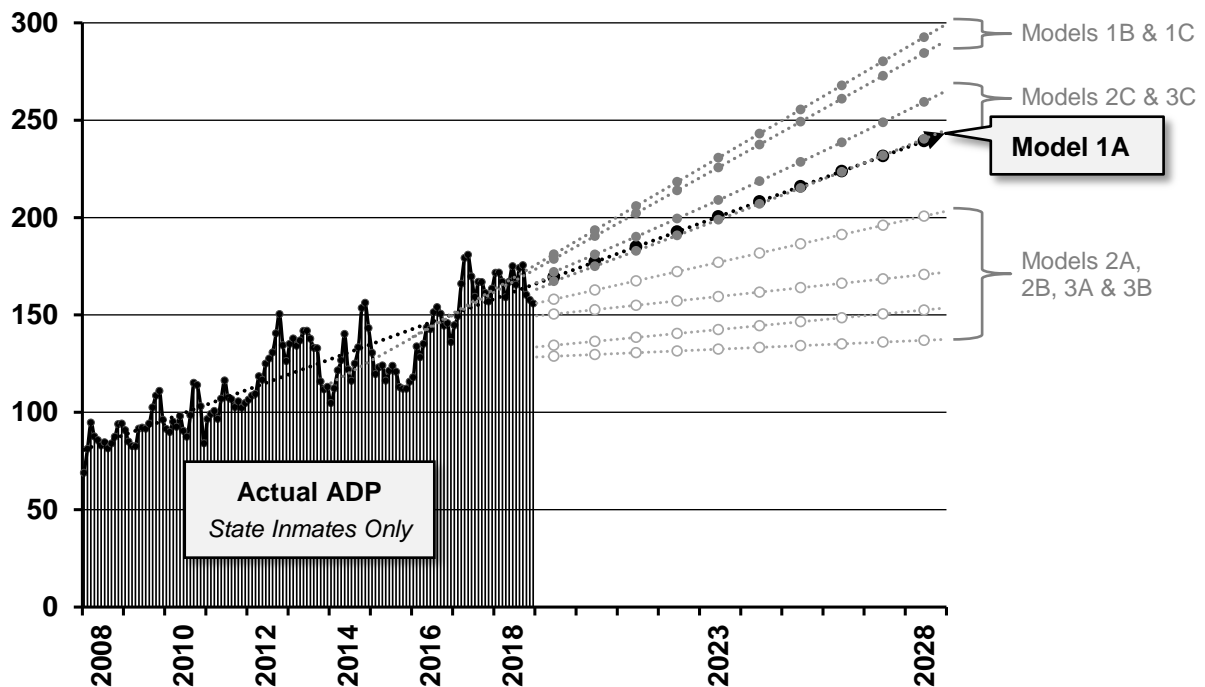
- *Model 3A. 11-Year ALOS Projections* — Projections based on the ALOS at the Detention Center over the past 11 years (2008 – 2018), applied to the County’s trend in bookings during that period.
- *Model 3B. 5-Year ALOS Projections* — Projections based on the ALOS at the Detention Center over the past 5 years (2014 – 2018), applied to the County’s trend in bookings during that period.
- *Model 3C. ALOS Trend Projections* — Projections based on the increasing trend in the annual ALOS at the Detention Center over the past 11 years (2008 – 2018), applied to the County’s trend in bookings during that period.

The results of Model 1A (the 11-Year ADP Trend Projections) were recommended as the baseline inmate population projections, for facility planning purposes. This model estimated that Platte County will have an annual ADP of:

- 201 inmates in five years (2023); and
- 239 inmates in ten years (2028).
- 278 inmates in 15 years (2033); and
- 317 inmates in 20 years (2038).

The graph on the following page shows the state inmate population from 2008 through 2018, and the results of the nine projection models from the 2019 study.

Inmate Population Projection Models from the 2019 Study



The 2019 study made a number of important points to be kept in mind regarding inmate population projections in general.

First, inmate population projections are not the same as jail capacity requirements. As discussed in the following section, the facility needs more jail beds than the average projected inmate population in order to accommodate routine fluctuations (peaks) in the facility's population, and for inmate classification and management purposes (to separate and segregate different types of inmates).

Second, the County's actual inmate population constantly fluctuates (zigzags) above and below the trendline. Therefore, for facility planning purposes, the County should use the inmate population projections to look at where the current trends are leading in five to ten years (instead of in the next year or two).

In the development of inmate population projections, analogies can be drawn with the “spaghetti” models used to graphically show the projected path of a hurricane on a weather map. Several different models are used. Each is a legitimate, tested forecasting model, but each model is driven by different key factors, and their own assumptions regarding the impact of those factors on the projected path of the hurricane. Typically, several models all point in the same general direction, so their results are combined to estimate the hurricane’s most likely path. These spaghetti models also typically show the projected path along a “cone of uncertainty” which gets broader the further out in the future.

Third, a note of caution must be made when using historical data to predict the future. Many counties have underestimated their true jail needs by relying on past inmate population trends. Arrest decisions, prosecution policies, and sentencing practices all have an impact on the size of the County’s inmate population. As new and additional jail beds become available, these policies and practices can change, resulting in even greater demands for jail capacity.

Finally, it is important to view inmate population projections within an appropriate context. The projections are based on the Detention Center’s actual inmate population trends since 2008. At any given time during this period, the Detention Center’s actual inmate population has been the result of a unique combination of factors within the criminal justice system that affect (1) jail admissions, (2) jail releases, and (3) the length of stay in jail — all of which have been impacted, to some extent, by the combined efforts of law enforcement, prosecution, and the courts.

The inmate population projection trendlines in the preceding graph should not be viewed as hard, straight, and unwavering lines. They are simply a graphic illustration of where the inmate population is heading, given the County’s current trends, for facility planning purposes. There are a variety of forces that are pushing the line up (or pushing up the rate of growth), and at the same time, there are forces pushing down on the line (or holding down the rate of growth).

Any significant change in this balance will have an impact on the County's future jail needs.

Obviously, inmate population projections are not an exact science. There are a multitude of ever-changing variables, both tangible and intangible, that can directly impact the size of Platte County's jail population. The County's growing and changing population, public attitudes toward crime, changes in criminal penalties, law enforcement practices, sentencing policies, and crime rates will all have a direct impact on the County's future jail population and its need for additional jail capacity. Nonetheless, it is believed that the inmate population projections presented here provide reasonable parameters for facility planning purposes.²

The 2019 study also determined that:

- The Rate of Incarceration (ROI) is increasing in Platte County; and
- The Average Length of Stay (ALOS) is increasing at the Detention Center.

Both of these trends have significant implications on Platte County's future inmate population — and jail capacity needs — and were discussed in greater detail in the 2019 study.

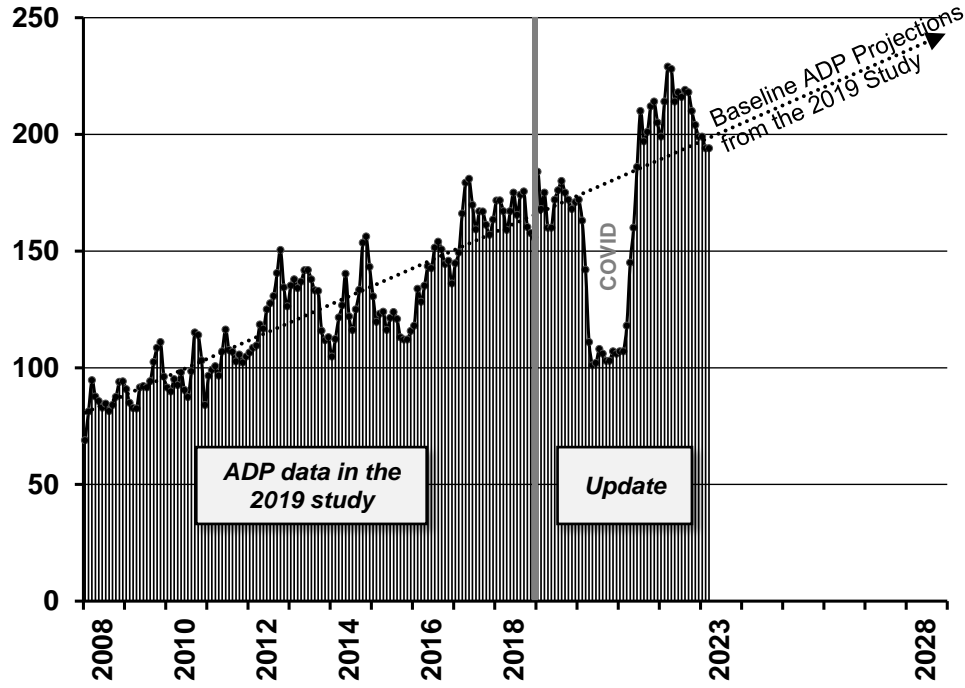
Update

As previously mentioned, the 2019 study recommended using the results of the 11-year ADP trend projections (Model 1A) as the baseline inmate population projections, for facility planning purposes. Adding the additional ADP data from 2019 through March 2023 shows that the Detention Center's inmate population over the past 15 months is consistent with the baseline ADP projections from the 2019 study — despite the massive drop in APD in 2020 and 2021 due to the Covid pandemic.

The graph and table on the following page shows the Detention Center's monthly ADP since 2008, and the baseline ADP projections from the 2019 study.

² *Inmate Population Trends and Projections*, February 2019, pages 66 – 67. (Emphasis added.)

ADP Tracking with Inmate Projections from the 2019 Study



Forecast Year	Year	Baseline ADP Projections from the 2019 Study	Actual ADP
1	2019	169	172
2	2020	177	119
3	2021	185	172
4	2022	193	214
5	2023	201	196*
6	2024	208	
7	2025	216	
8	2026	224	
9	2027	232	
10	2028	239	

* January – March.

C. Forecast of Jail Capacity Requirements

The 2019 study then estimated the total amount of jail capacity (jail beds) needed to support the projected inmate population, taking into consideration a peaking factor and a classification factor (or “management” factor).

Peaking Factor — The purpose of the peaking factor is to accommodate the routine fluctuations that typically occur to the facility population each month. As part of the 2019 study, the highest (peak) inmate population each month was examined from 2008 to 2018 (132 months). During this period, the highest inmate population each month exceeded the ADP for that month by an average of 11.3 percent.

Classification Factor — There must be sufficient jail capacity for inmate classification and management purposes to separate and segregate different types of inmates. Additional capacity is needed to provide enough jail beds to allow for the separation of inmates by gender (males and females), to separate inmates by custody classification (minimum, medium, or maximum security), and to allow further segregation for administrative and disciplinary purposes. Additional capacity may also be needed for special management purposes, such as an infirmary, suicide-prevention cell(s), etc.

The “85 Percent Rule” — For facility planning purposes, many consultants and Departments of Corrections across the country recommend using the “85 percent rule” to estimate the amount of jail capacity needed to routinely accommodate a jail’s inmate population. That is, a jail should be considered “full” when 85 percent of its beds are occupied. This formula typically allows for sufficient additional capacity to accommodate routine peaks in the inmate population, and to provide for the separation of males and females, and to further separate inmates with different security requirements. When the occupancy level *exceeds* 85 percent of capacity, it becomes progressively more difficult to accommodate the routine peaks in the inmate population, and to properly place inmates into an appropriate housing area consistent with their classification and behavior.

This “85 percent rule” was discussed in detail in the 2019 study, as this had been an issue in Platte County’s previous jail study in 2014. Although frequently used by jail planners and architects, the “85 percent rule” is not an “industry standard,” as it had been described. It is really more of a “rule of thumb” for facility planning purposes.

The “85 percent rule” can be a difficult planning concept to understand. To illustrate, the 2019 study pointed to a recent “snapshot” of the inmate population at the Detention

Center. The Detention Center has 180 beds. On January 22, 2019, the facility held 171 inmates — of which 23 inmates were sleeping on the floor on temporary beds (“boats”), due to unused jail beds in the female sections (that could not be used to house males), and to keep other male inmates separated.

Total Jail Beds Needed — Using the “85 percent rule,” the 2019 study estimated that Platte County will need a total of:

- 236 jail beds in five years (2023), to support an ADP of 201 inmates; and
- 282 jail beds in ten years (2028), to support an ADP of 239 inmates.
- 327 jail beds in 15 years (2033), to support an ADP of 278 inmates; and
- 373 jail beds in 20 years (2038), to support an ADP of 317 inmates.

Jail Capacity Requirements from the 2019 Study

Forecast Year	Year	Baseline ADP Projections	85% Rule	Total Jail Beds Needed
1	2019	169	30	199
2	2020	177	31	208
3	2021	185	33	218
4	2022	193	34	227
5	2023	201	35	236
6	2024	208	37	245
7	2025	216	38	254
8	2026	224	39	263
9	2027	232	41	272
10	2028	239	42	282
11	2029	247	44	291
12	2030	255	45	300
13	2031	263	46	309
14	2032	270	48	318
15	2033	278	49	327
16	2034	286	50	336
17	2035	294	52	345
18	2036	301	53	355
19	2037	309	55	364
20	2038	317	56	373

“Capacity” of the Platte County Detention Center — The Platte County Detention Center is currently considered a 180-bed jail facility. The Detention Center was originally designed as a 154-bed jail facility (“design capacity”). In 2015, additional bunks were added to the existing cells, increasing the jail’s capacity to its current “capacity” of 180 beds.

Current “Capacity” of the Platte County Detention Center

Housing Unit	Gender	Cells	Beds	
			Design Capacity	Current Capacity
Dayroom A	Females	9	16	22
Dayroom B	Females	11	23	24
Dayroom C	Males	11	21	24
Dayroom D	Males	10	10	20
Dayroom E	Males	11	23	24
Dayroom F	Males	11	23	24
Dayroom G	Males	11	23	24
Trusties	Males	1	12	12
Holding Cells		4*	3	6
Total		79 Cells	154 Beds	180 Beds

* One holding cell (1H) is a safety cell, and has no bunk (bed).

Inmate Housing Shortfall — For planning purposes, the capacity of the Detention Center was then subtracted from the total number of jail beds needed, to estimate the amount of *additional* jail capacity that is needed (assuming the continued operation of the existing jail facility.)

The 2019 study recommended that, for the purpose of this planning exercise, the capacity of the existing jail should be considered as 151 beds. That is the jail’s original design capacity of 154 beds, *minus* the three beds that were counted in the holding cells, and which should not be counted as part of the jail’s “capacity” as a general population housing assignment.

Given minimum square footage standards for inmate housing areas, dayrooms, and exercise areas, and other minimum environmental requirements, the current Detention Center, at 180 beds, is absolutely “maxed out” in all these areas, and has been operating at inmate levels well beyond that.

Subtracting the 151 beds in the existing jail from the total number of jail beds needed, the 2019 study estimated that Platte County will have an inmate housing “shortfall” of:

- 85 jail beds in five years (2023);
- 131 jail beds in ten years (2028);
- 176 jail beds in 15 years (2033); and
- 222 jail beds in 20 years (2038).

Type of Jail Beds Needed — In the forecast of jail capacity requirements, consideration also has to be given to the *type* of jail beds needed by the County. Today, county jails have to accommodate:

- More high-risk offenders, with greater security requirements;
- More inmates with long lengths of stay;
- More inmates with medical and mental health issues; and
- More inmates with special needs, or who require special management.

Jail housing is further complicated by the growing need to keep other certain inmates (or groups of inmates) separate.

The type of jail beds that a county has in its jail has a significant impact on that facility’s ability to house inmates in an appropriate housing unit, consistent with their custody level and security requirements. Therefore, in addition to the *number* of jail beds that Platte County needs in the future, it will be just as important to make good decisions regarding the *type* of jail beds — and the distribution between single cells, double cells, and dormitory housing — to be included in any new facility or jail expansion.

4. Conclusion

The 2019 study concluded as follows, and still applies:

For facility planning purposes, a number of different, commonly-used forecasting methodologies were applied to Platte County's inmate population trends in order to estimate the County's future jail population. These included inmate population projections based on linear ADP trends, the County's Rate of Incarceration (ROI), and Average Length of Stay (ALOS). Baseline ADP projections were then developed for estimating the County's future inmate population.

For facility planning purposes, the "85 percent rule" was applied to the baseline ADP projections to estimate the total amount of jail capacity (jail beds) needed to accommodate routine fluctuations in the County's inmate population, and to provide sufficient capacity for the proper separation and segregation of different types of inmates.

Using this methodology, it is estimated that Platte County will need a total of:

- *Five Years (2023) — 236 jail beds, to support an ADP of 201 inmates;*
- *Ten Years (2028) — 282 jail beds, to support an ADP of 238 inmates;*
- *15 Years (2033) — 327 jail beds, to support an ADP of 278 inmates; and*
- *20 Years (2038) — 373 jail beds, to support an ADP of 317 inmates.*

Part of the purpose of this study is to help Platte County assess the viability and cost effectiveness of different jail facility expansion options. Subtracting 151 beds in the existing jail from the total number of jail beds needed, it is estimated that Platte County will have an inmate housing "shortfall" of:

- *85 jail beds in five years (2023);*
- *131 jail beds in ten years (2028);*
- *176 jail beds in 15 years (2033); and*

- 222 jail beds in 20 years (2038).

The jail population projections presented in this report provide reasonable parameters for facility planning purposes, and are based on an objective assessment of the County's actual jail population trends since 2008. However, for the County's jail population to increase to these levels, there will have to be a commensurate increase in law enforcement, prosecution, and judicial resources in Platte County, beyond their current levels, to support and sustain a jail population of that size.

It is important that Platte County continues to try to identify, quantify, and address the factors that are driving the County's jail population growth. Further investigation of these and other issues — and their potential impact on the jail population — may help the County in its efforts to manage and control its future facility needs.

Platte County is currently in the process of making some important, multi-million dollar, facility planning decisions. The goal of this study was to establish some reasonable jail capacity estimates for facility planning purposes. Ultimately, the County will need to decide how large any jail expansion or new jail facility should be — given all the historical data, emerging issues, and current projections. Hopefully, the graphs, data, trend analysis, and other information in this report will aid the County in its efforts to make good decisions about how to address the County's growing jail population, and the appropriate size for any jail expansion or new jail facility.³

³ *Inmate Population Trends and Projections*, February 2019, pages 91 – 92. (Emphasis added.)