
Cass County

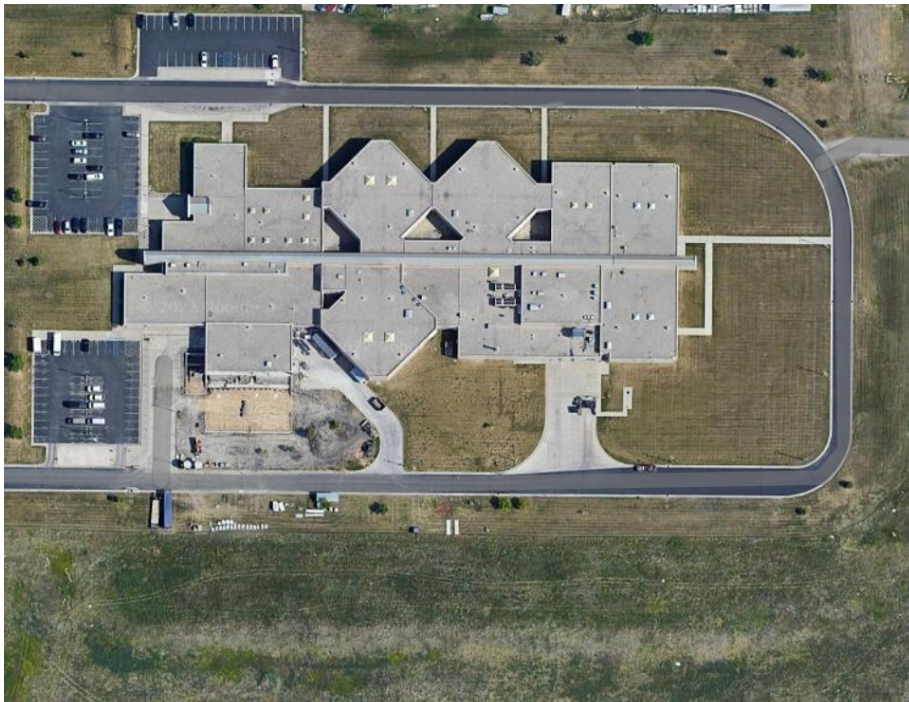
Population Forecast and Design Options for the Jail

Project #211100

Fargo, ND

Forecast and Design Report

July 8, 2022



KLEIN
MCCARTHY

ARCHITECTS

**Inmate Population
Trends and Projections
for
Cass County, North Dakota**

April 2022

**Bill Garnos
Jail Consultant**

Inmate Population Trends

Inmate Population Trends

- **Jail Admissions**
- **Average Daily Population (ADP)**
- **High / Low Inmate Population Range**
- **ADP by Jurisdiction**

Jail Admissions (2012 – 2021)

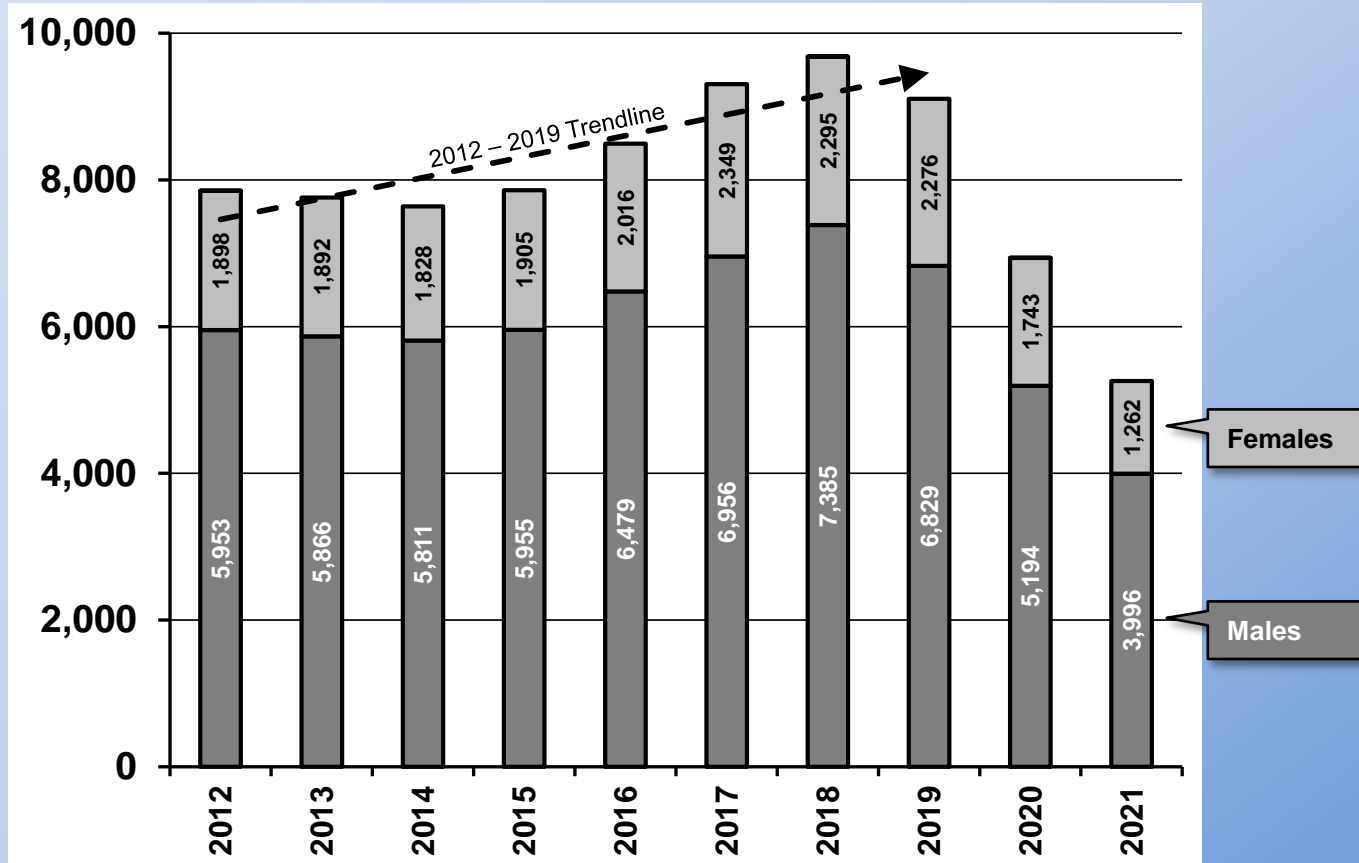
Total Annual Jail Admissions

Total Monthly Jail Admissions

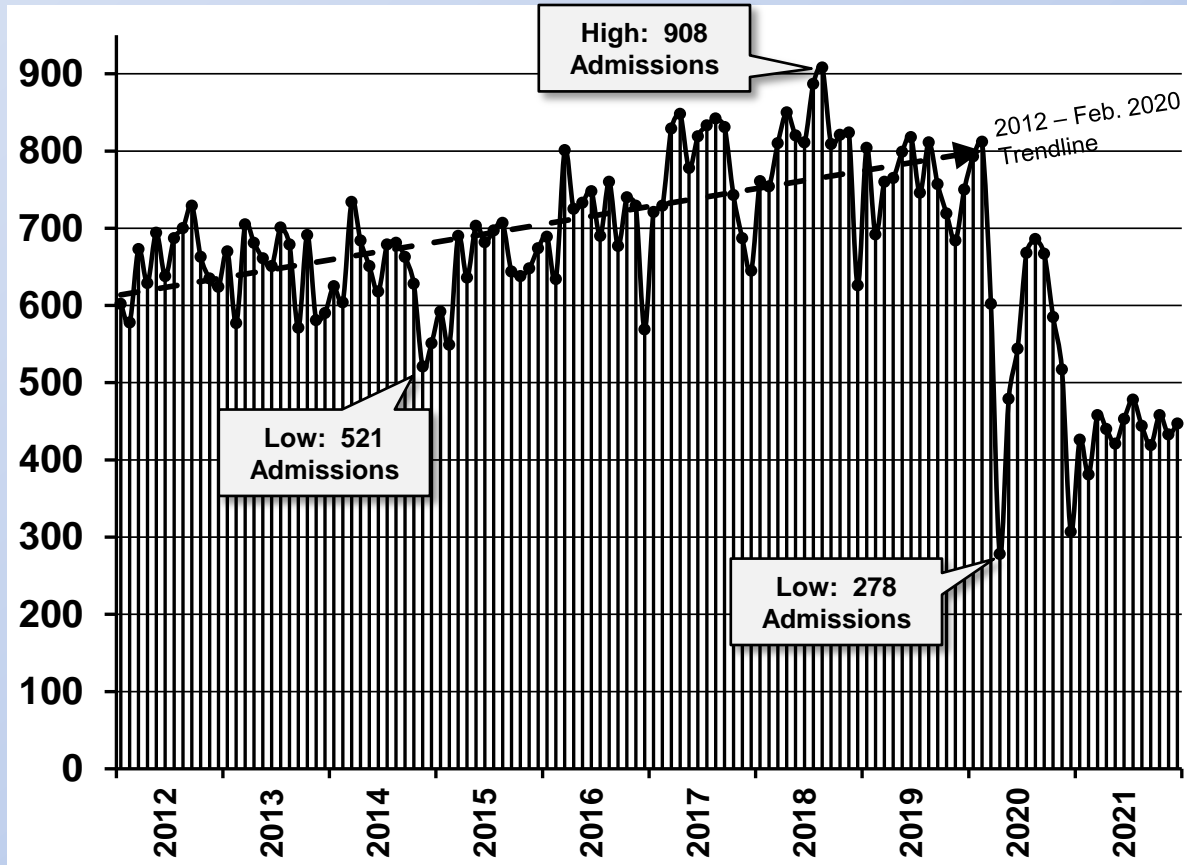
Monthly Jail Admissions:

- **Males**
- **Females**
- **Past Four Years**

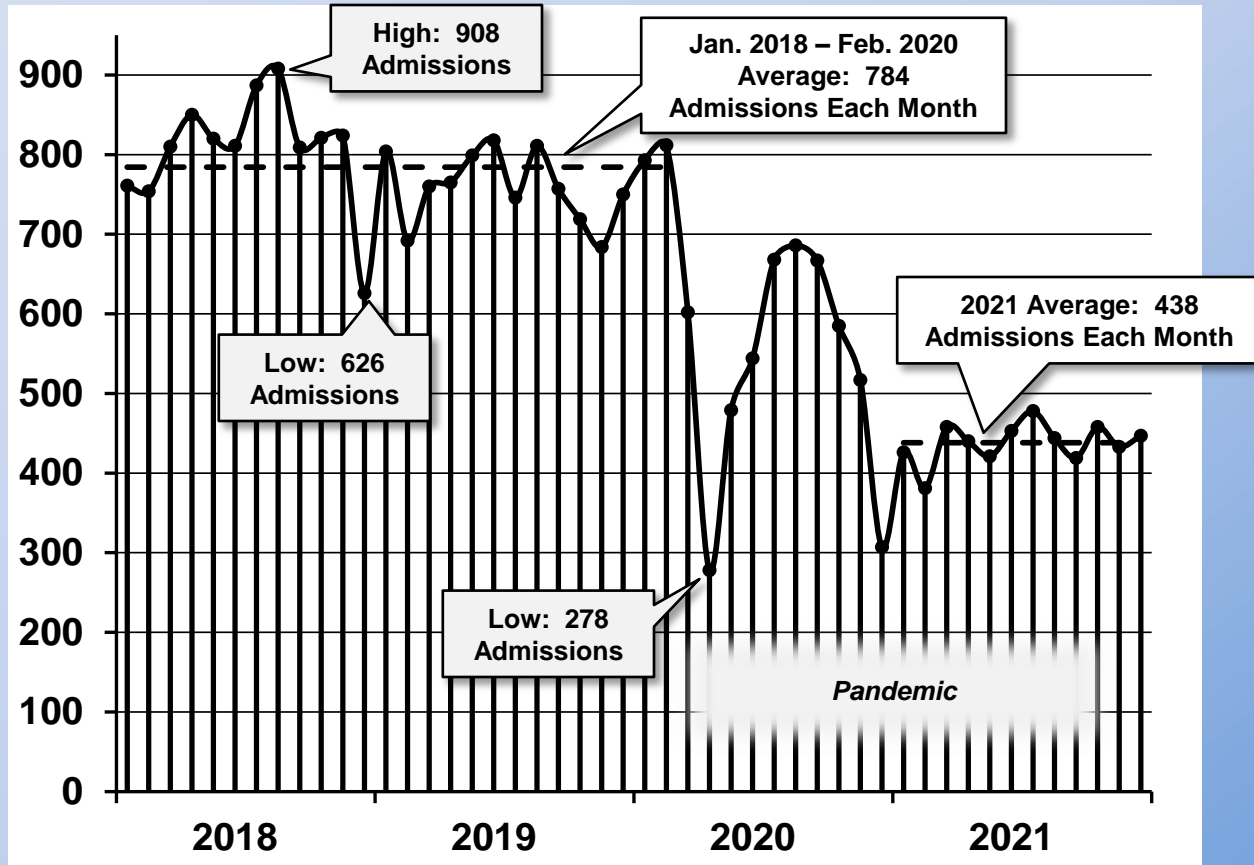
Total Annual Jail Admissions



Total Monthly Jail Admissions



Monthly Jail Admissions — Past 4 Years



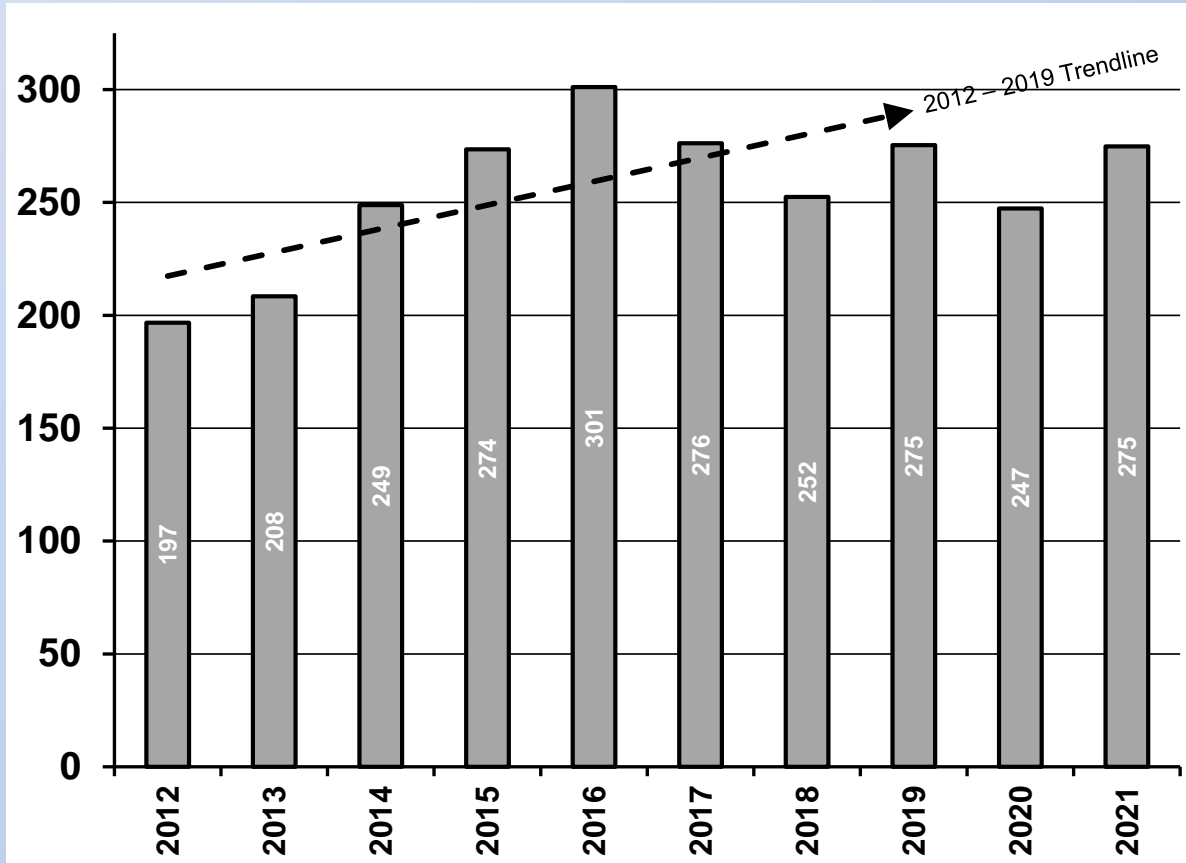
Average Daily Population (2012 – 2021)

Annual Average Daily Population (ADP)

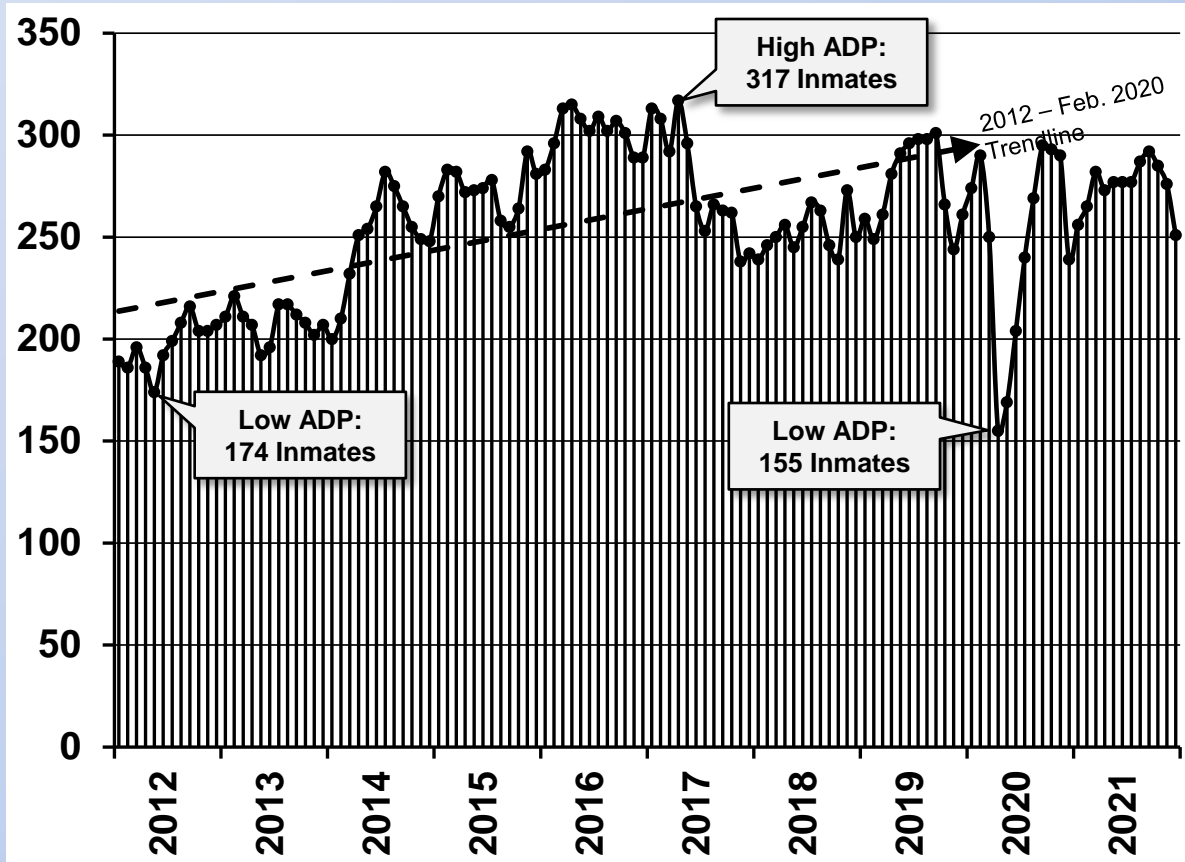
Monthly Average Daily Population

Average Daily Population — Past 4 Years

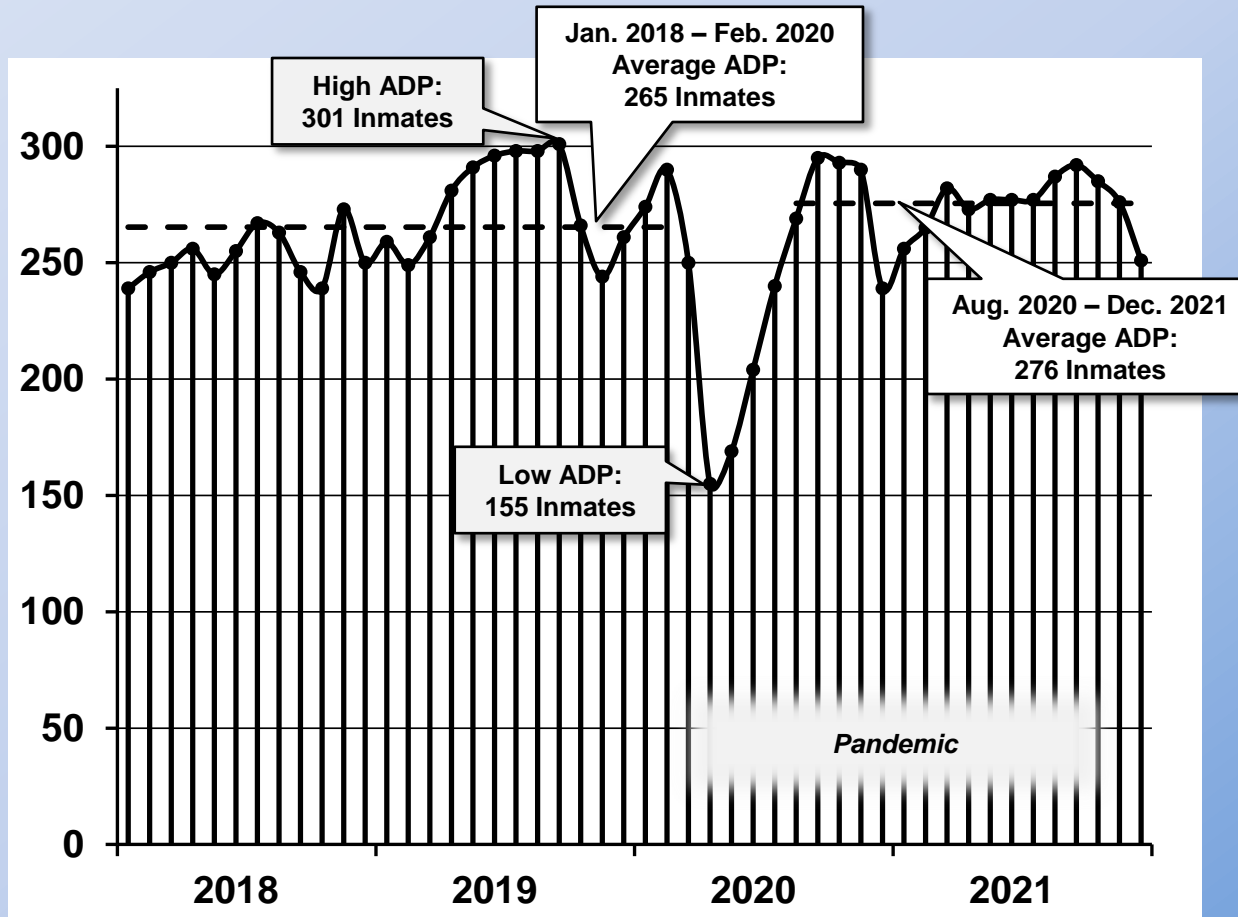
Annual ADP



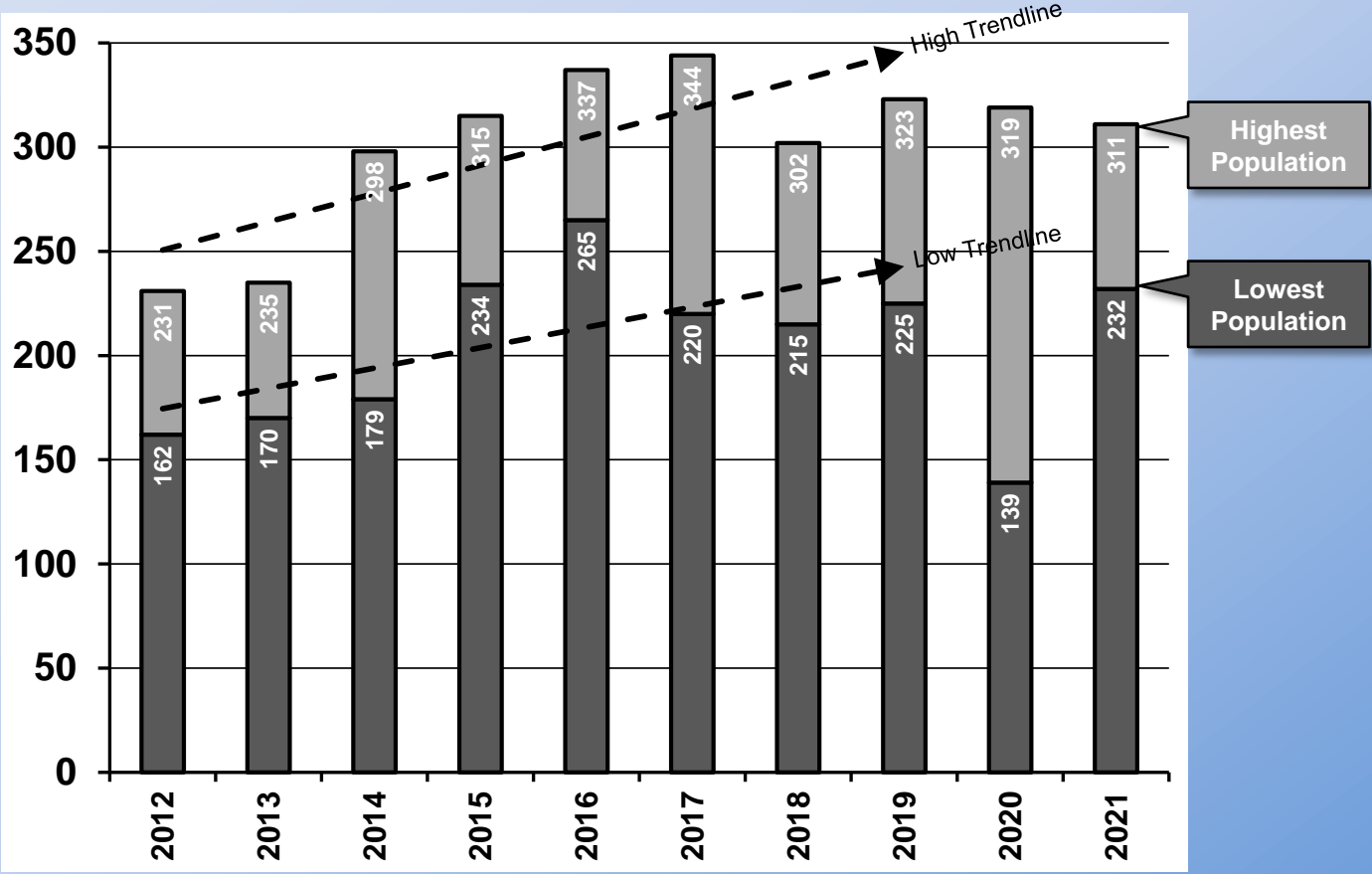
Monthly ADP



ADP — Past 4 Years



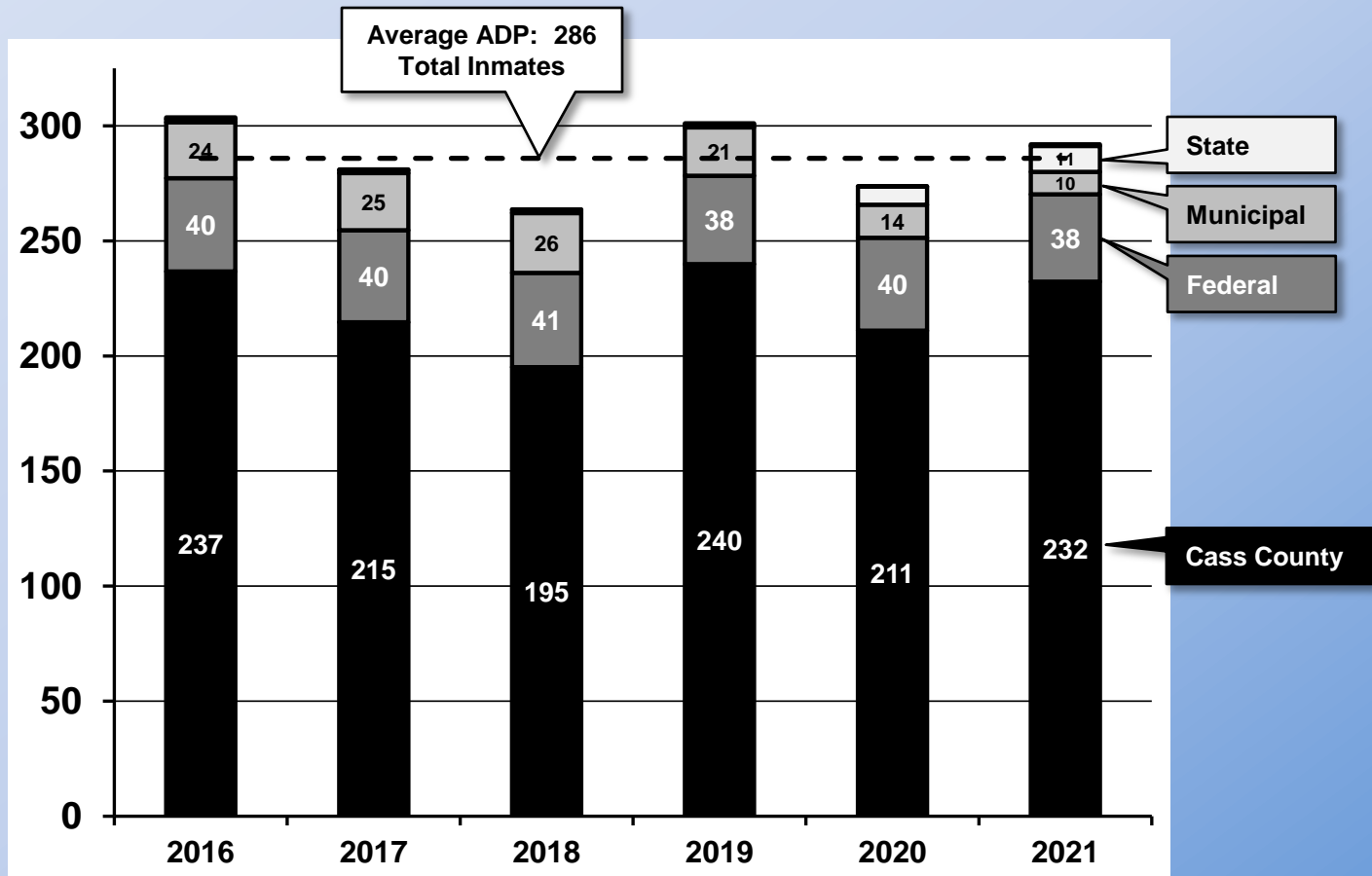
Annual High/Low Inmate Population Range



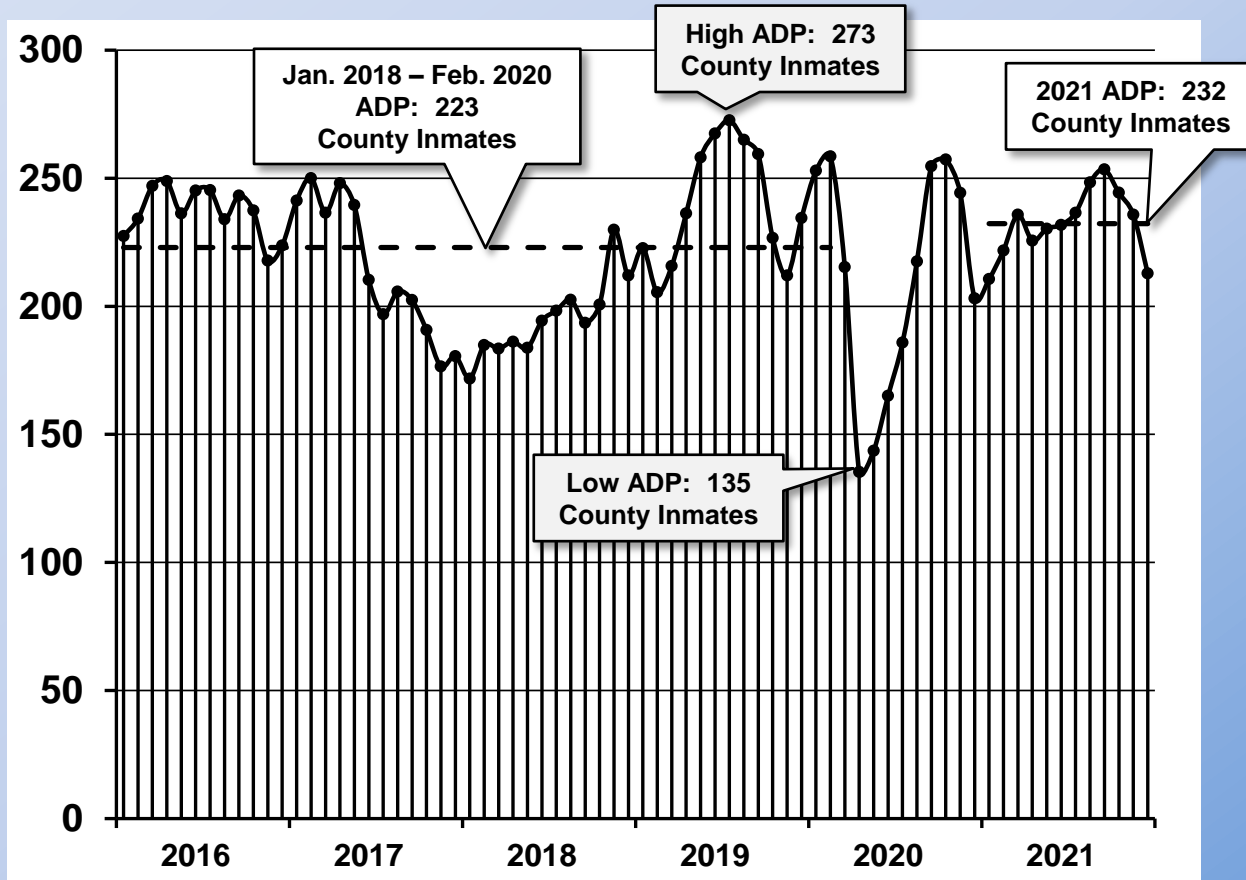
ADP by Jurisdiction (2016 – 2021)

- **Cass County Inmates**
- **Federal Inmates**
- **Municipal Inmates**
- **State Inmates**
- **Other Counties' Inmates**

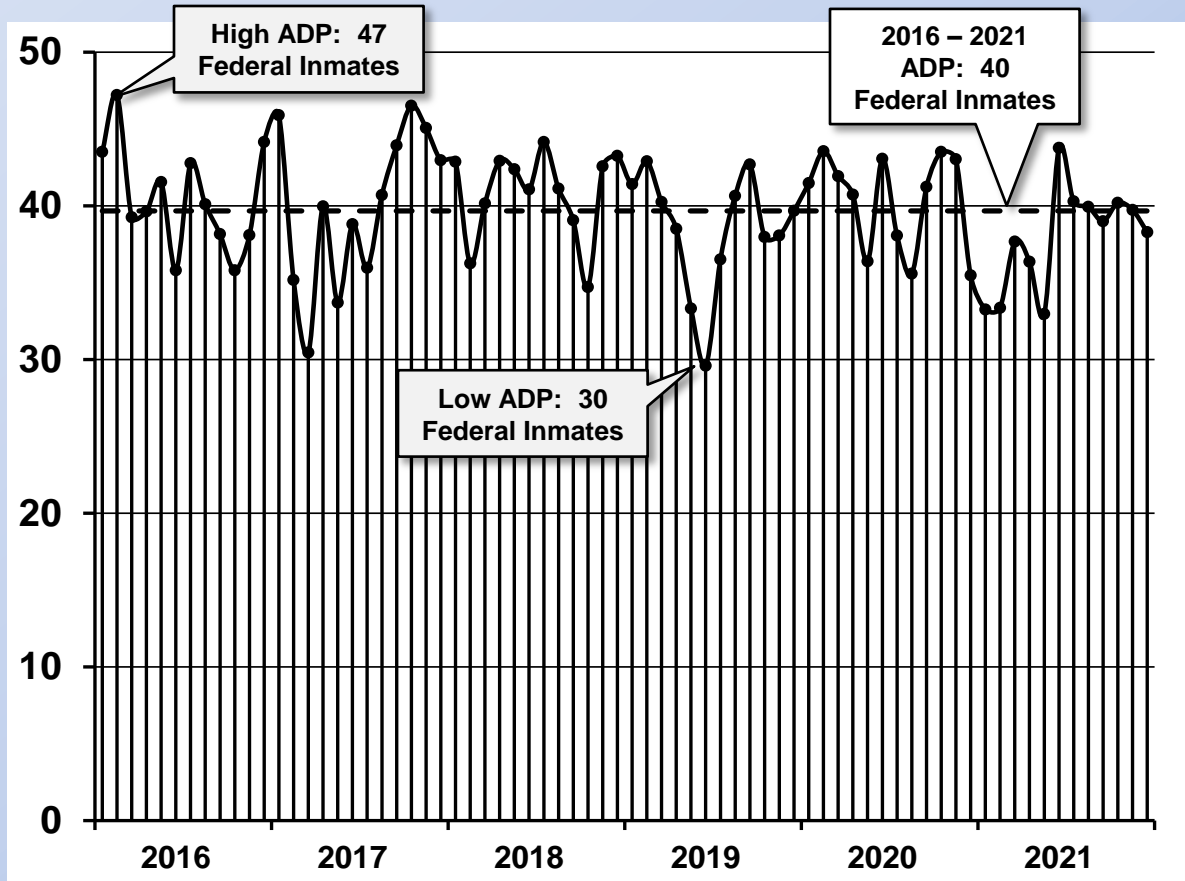
Annual ADP by Jurisdiction



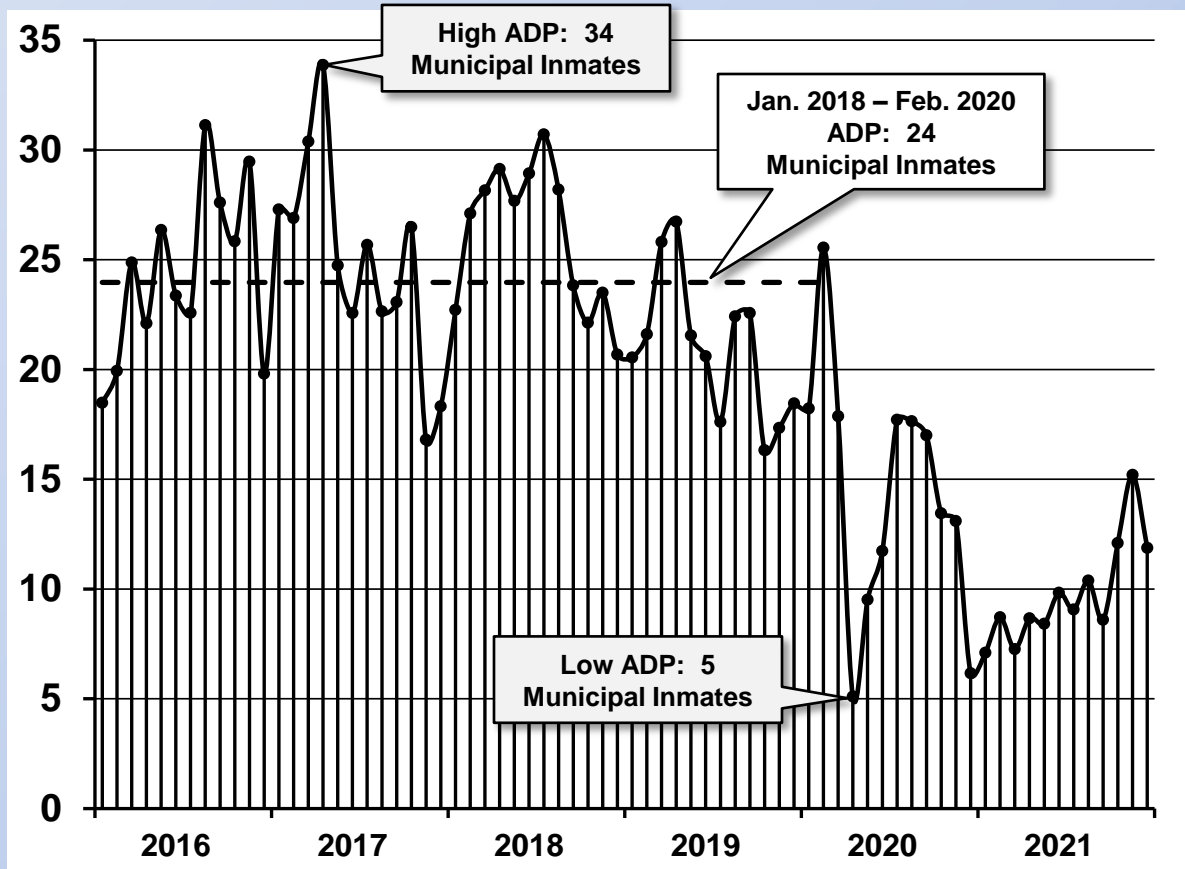
ADP — Cass County Inmates



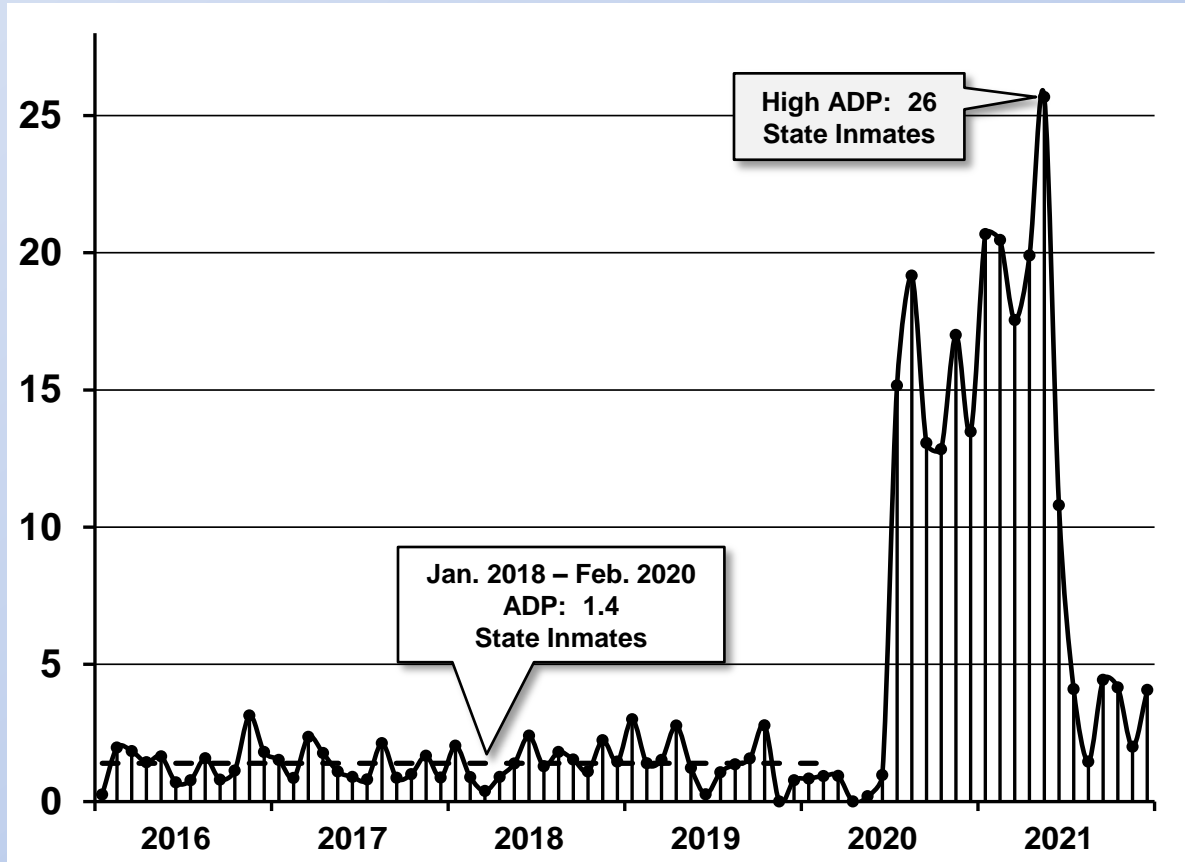
ADP — Federal Inmates



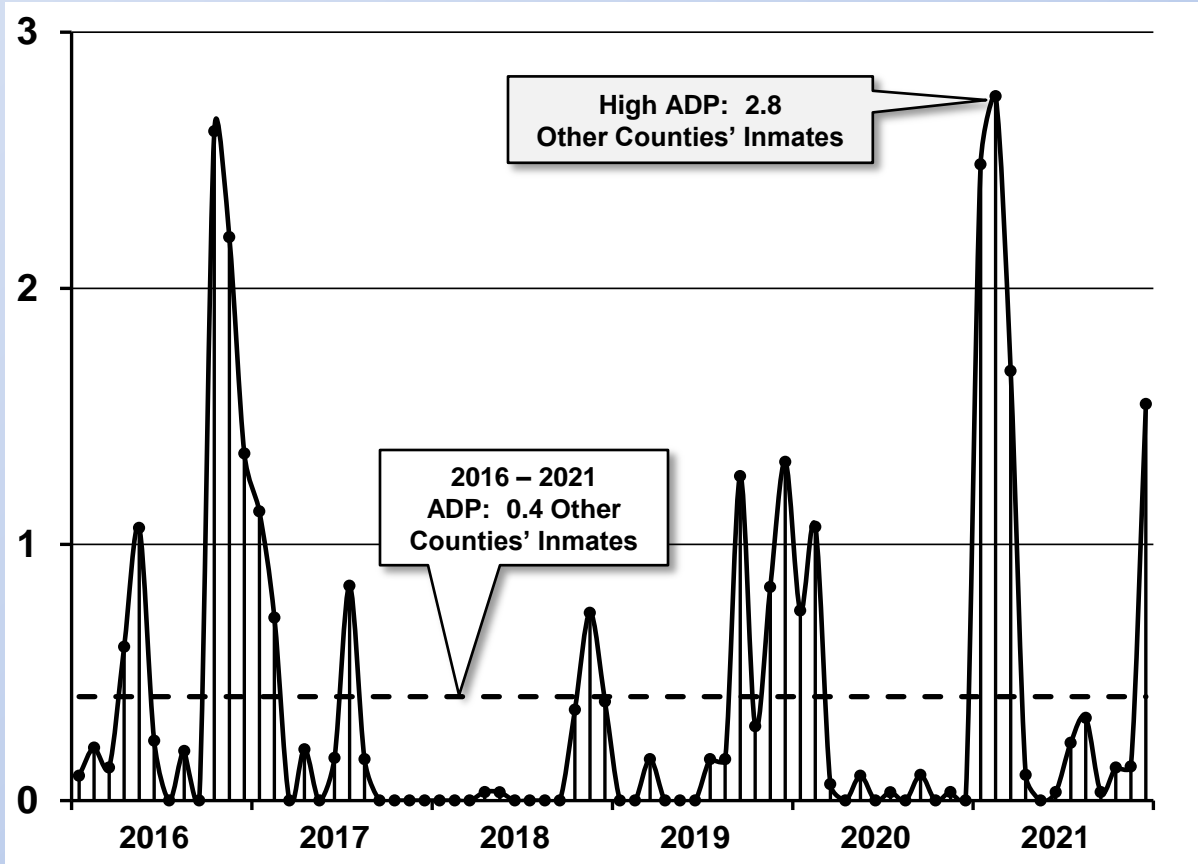
ADP — Municipal Inmates



ADP — State Inmates



ADP — Other Counties' Inmates

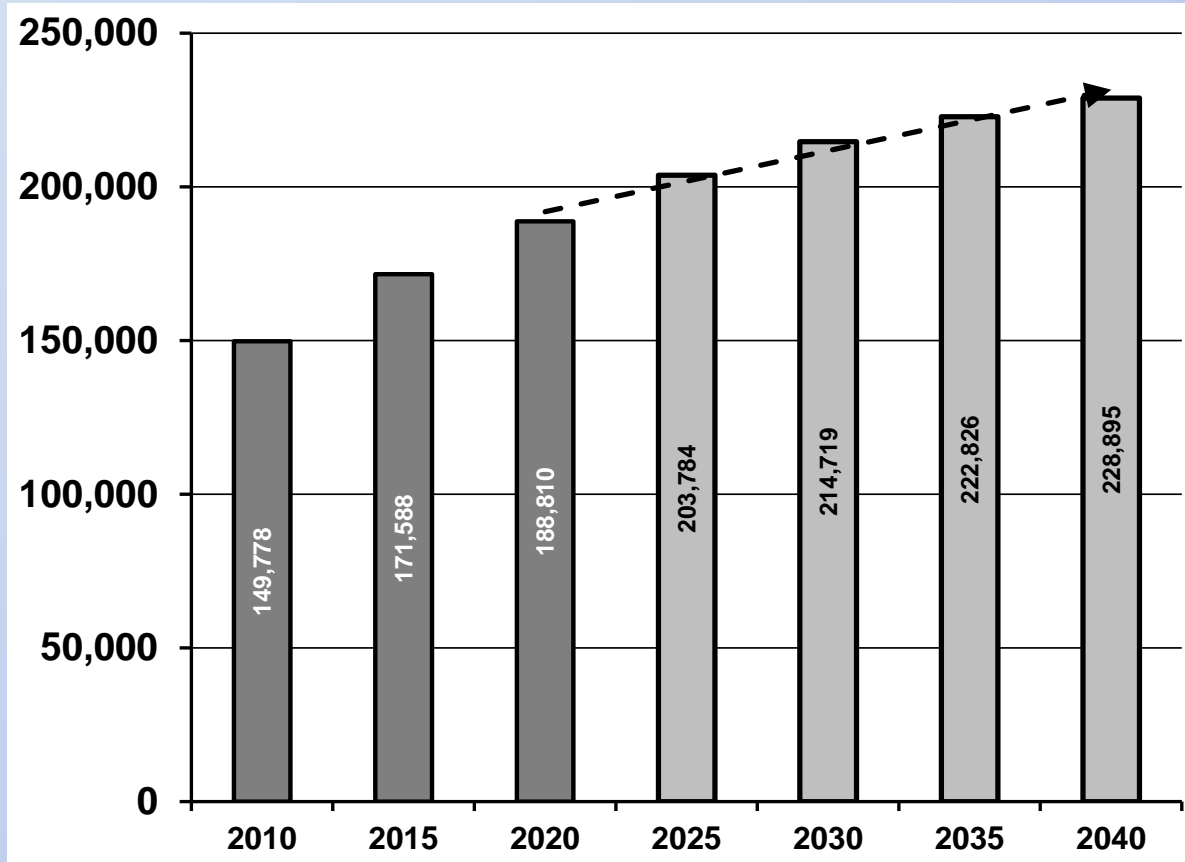


Inmate Population Projections

Inmate Population Projections

- **County Population Projections**
- **Inmate Population Projections**
- **Forecast of Jail Capacity Requirements**

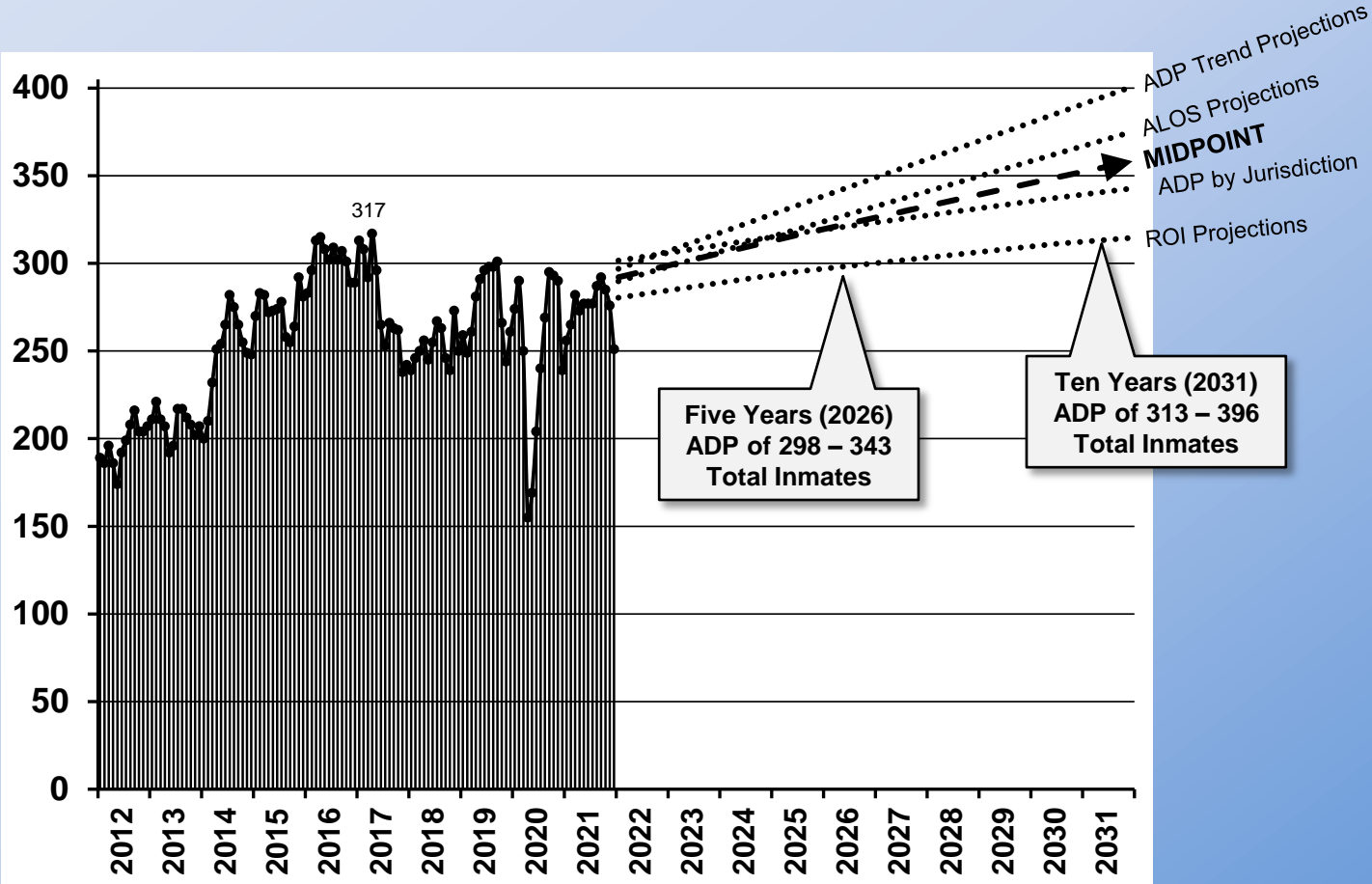
Cass County Population



Inmate Population Projections

- ***Rate of Incarceration (ROI)*** — Projections based on the correlation between the number of inmates and the County's population, applied to the County's population projections.
- ***ADP by Jurisdiction*** — Projections based on two models for Cass County inmates, with an allowance for federal, municipal, state, and other counties' inmates based on their historical usage.
- ***Average Length of Stay (ALOS)*** — Projections based on the ALOS from 2012 – 2019, applied to the trend in total admissions from that period, applied from 2022 onward.
- ***Average Daily Population (ADP)*** — Projections based on the ADP trend from 2012 – 2019, applied from 2022 onward.

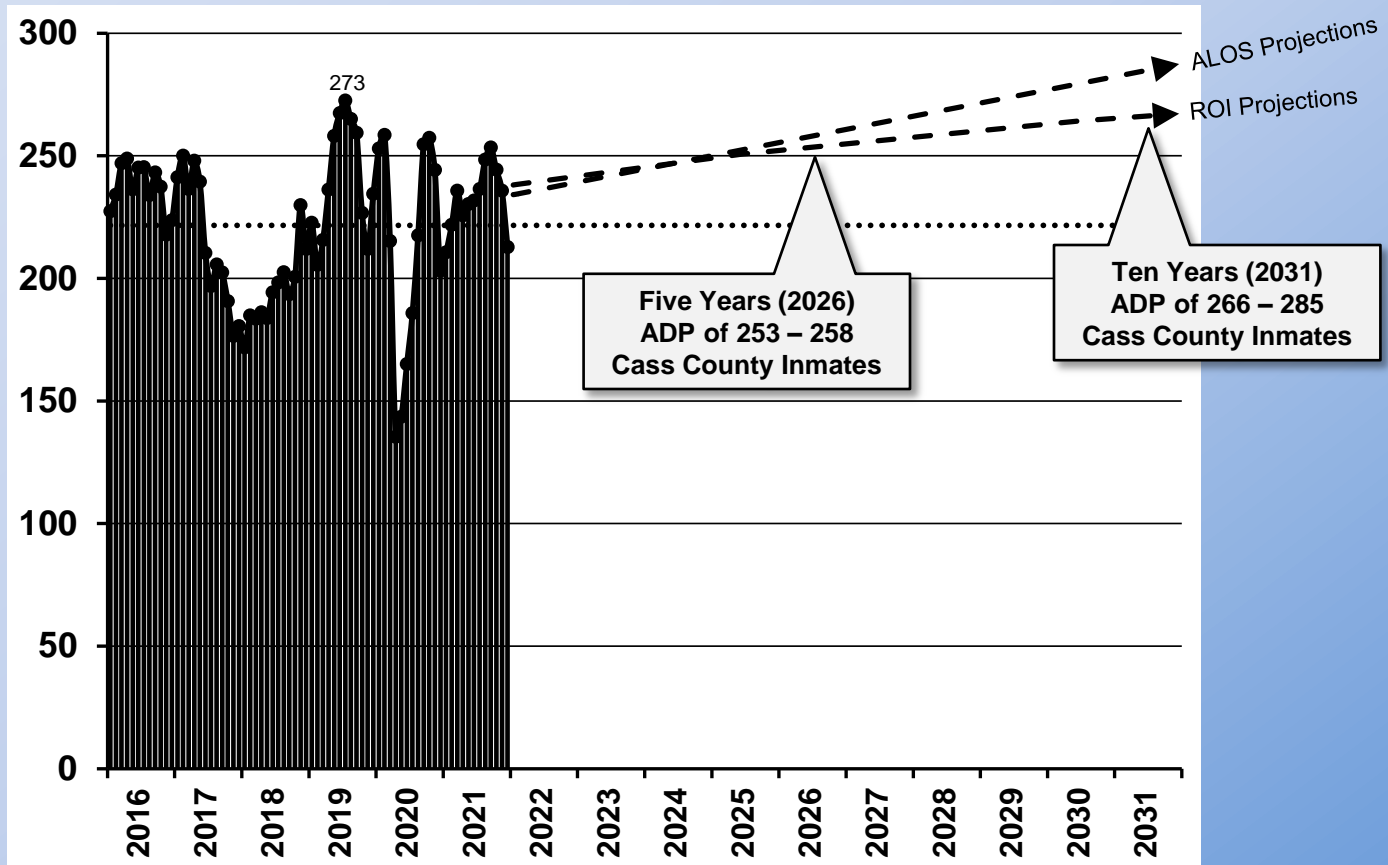
Inmate Population Projections (Total ADP)



Inmate Population Projections (Total ADP)

Forecast Year	Year	ROI Projections	ADP by Jurisdiction	MIDPOINT	ALOS Projections	ADP Trend Projections
1	2022	282	304	295	293	301
2	2023	287	308	302	302	312
3	2024	291	313	309	311	322
4	2025	295	317	316	319	333
5	2026	298	321	323	328	343
6	2027	302	325	329	336	354
7	2028	305	329	336	345	364
8	2029	308	333	342	354	375
9	2030	311	337	349	362	385
10	2031	313	341	355	371	396

Inmate Population Projections for Cass County Inmates



ADP Projections (and Allowances) by Jurisdiction

Forecast Year	Year	Cass County Inmates	Federal Inmates	Municipal	State	Other Counties	Total ADP
1	2022	238	40	24	1.4	0.4	304
2	2023	243	40	24	1.4	0.4	308
3	2024	247	40	24	1.4	0.4	313
4	2025	252	40	24	1.4	0.4	317
5	2026	256	40	24	1.4	0.4	321
6	2027	260	40	24	1.4	0.4	325
7	2028	264	40	24	1.4	0.4	329
8	2029	268	40	24	1.4	0.4	333
9	2030	272	40	24	1.4	0.4	337
10	2031	276	40	24	1.4	0.4	341
11	2032	279	40	24	1.4	0.4	345
12	2033	283	40	24	1.4	0.4	348
13	2034	287	40	24	1.4	0.4	352
14	2035	290	40	24	1.4	0.4	356
15	2036	294	40	24	1.4	0.4	359
16	2037	297	40	24	1.4	0.4	363
17	2038	301	40	24	1.4	0.4	366
18	2039	304	40	24	1.4	0.4	369
19	2040	307	40	24	1.4	0.4	373
20	2041	311	40	24	1.4	0.4	376

Forecast of Jail Capacity Requirements

Forecast Year	Year	MIDPOINT ADP Projections	Total Beds Needed 8% Peaking + 10% Mgmt./Class. Factor	Total Beds Needed 80% Rule
1	2022	295	351	369
2	2023	302	359	378
3	2024	309	367	386
4	2025	316	375	395
5	2026	323	383	403
6	2027	329	391	412
7	2028	336	399	420
8	2029	342	407	428
9	2030	349	415	436
10	2031	355	422	444
11	2032	361	429	452
12	2033	368	437	460
13	2034	374	444	468
14	2035	380	452	475
15	2036	386	459	483
16	2037	392	466	491
17	2038	399	473	498
18	2039	405	481	506
19	2040	411	488	513
20	2041	419	498	524



Inmates



Beds



Beds

**Inmate Population Trends and Projections
for Cass County, North Dakota**

Forecast of Jail Capacity Requirements

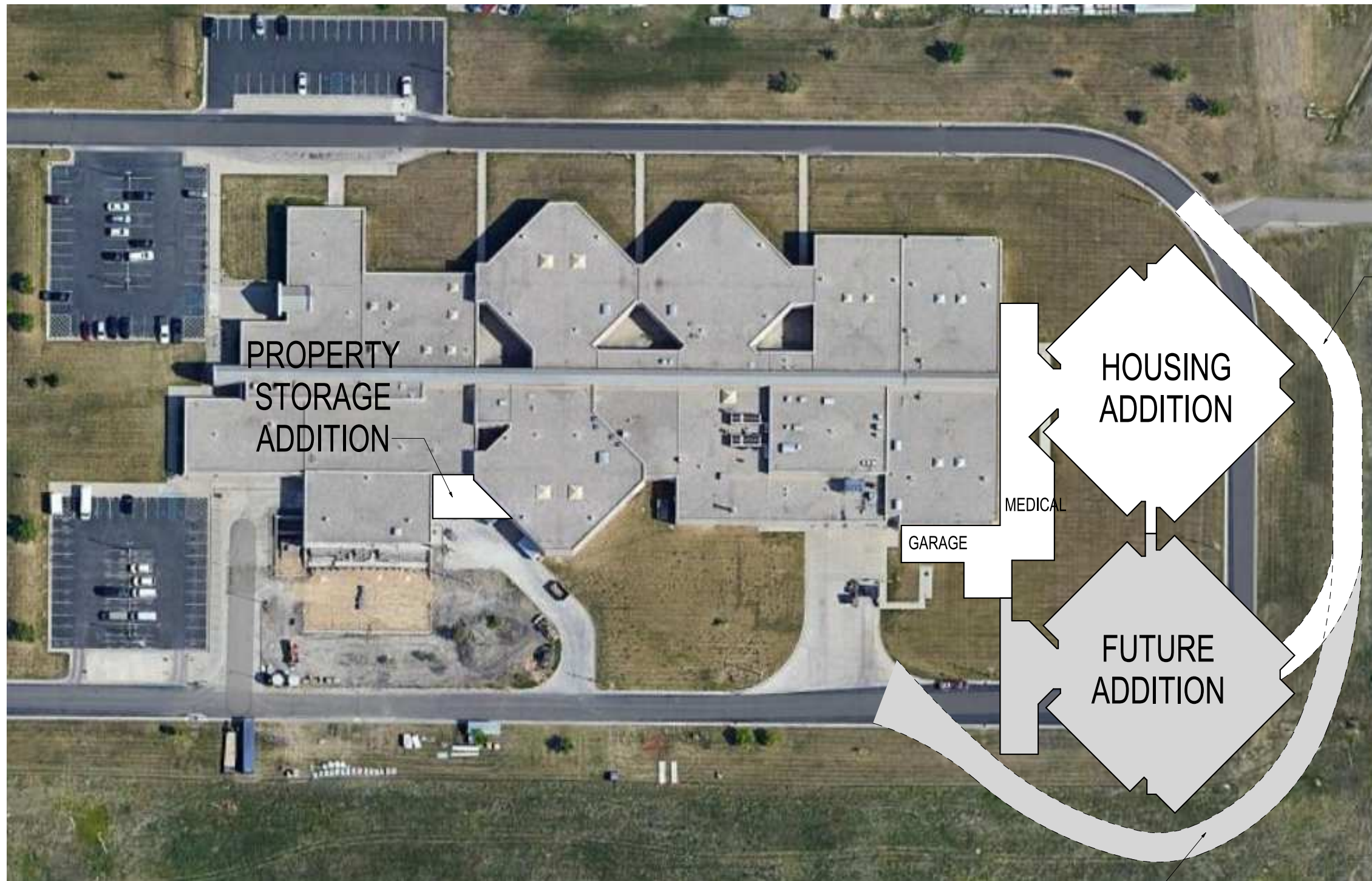
Includes Cass County, Federal, Municipal, State, and Other Counties' inmates

Forecast Year	Year	MIDPOINT ADP Projections	Total Beds Needed 8% Peaking + 10% Mgmt./Class. Factor	Total Beds Needed 80% Rule
1	2022	295	351	369
2	2023	302	359	378
3	2024	309	367	386
4	2025	316	375	395
5	2026	323	383	403
6	2027	329	391	412
7	2028	336	399	420
8	2029	342	407	428
9	2030	349	415	436
10	2031	355	422	444
11	2032	361	429	452
12	2033	368	437	460
13	2034	374	444	468
14	2035	380	452	475
15	2036	386	459	483
16	2037	392	466	491
17	2038	399	473	498
18	2039	405	481	506
19	2040	411	488	513
20	2041	419	498	524



Current Jail = 358 Beds
Housing Expansion 96 Beds = 444 Beds
Housing Expansion Double Bunked 48 Beds = 492 Beds





Consultants

Civil
Civil Firm - Name
Civil Firm - Address Line 1
Civil Firm - Address Line 2
office: Civil Firm - Office Number

Structural
Structural Firm - Name
Structural Firm - Address Line 1
Structural Firm - Address Line 2
office: Structural Firm - Office Number

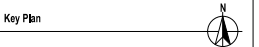
Mechanical, Electrical & Security Electronics
MEP Firm - Name
MEP Firm - Address Line 1
MEP Firm - Address Line 2
office: MEP Firm - Office Number

HOUSING OPTIONS

July 8, 2022

Item	Description	Date

This sheet may be a Reduced Copy. This drawing is to scale if bar below is 1" long.



RELOCATED
ROAD
(FUTURE)

RELOCATED
ROAD

CASS COUNTY

POPULATION FORECAST

PROJECT ADDRESS
CITY, STATE, ZIP

Architect's Project #: 2111

Consultants

Civil
Civil Firm - Name
Civil Firm - Address Line 1
Civil Firm - Address Line 2
office: Civil Firm - Office Number

Structural
Structural Firm - Name
Structural Firm - Address Line 1
Structural Firm - Address Line 2
office: Structural Firm - Office Number

Mechanical, Electrical & Security Electronics
MEP Firm - Name
MEP Firm - Address Line 1
MEP Firm - Address Line 2
office: MEP Firm - Office Number

HOUSING OPTIONS

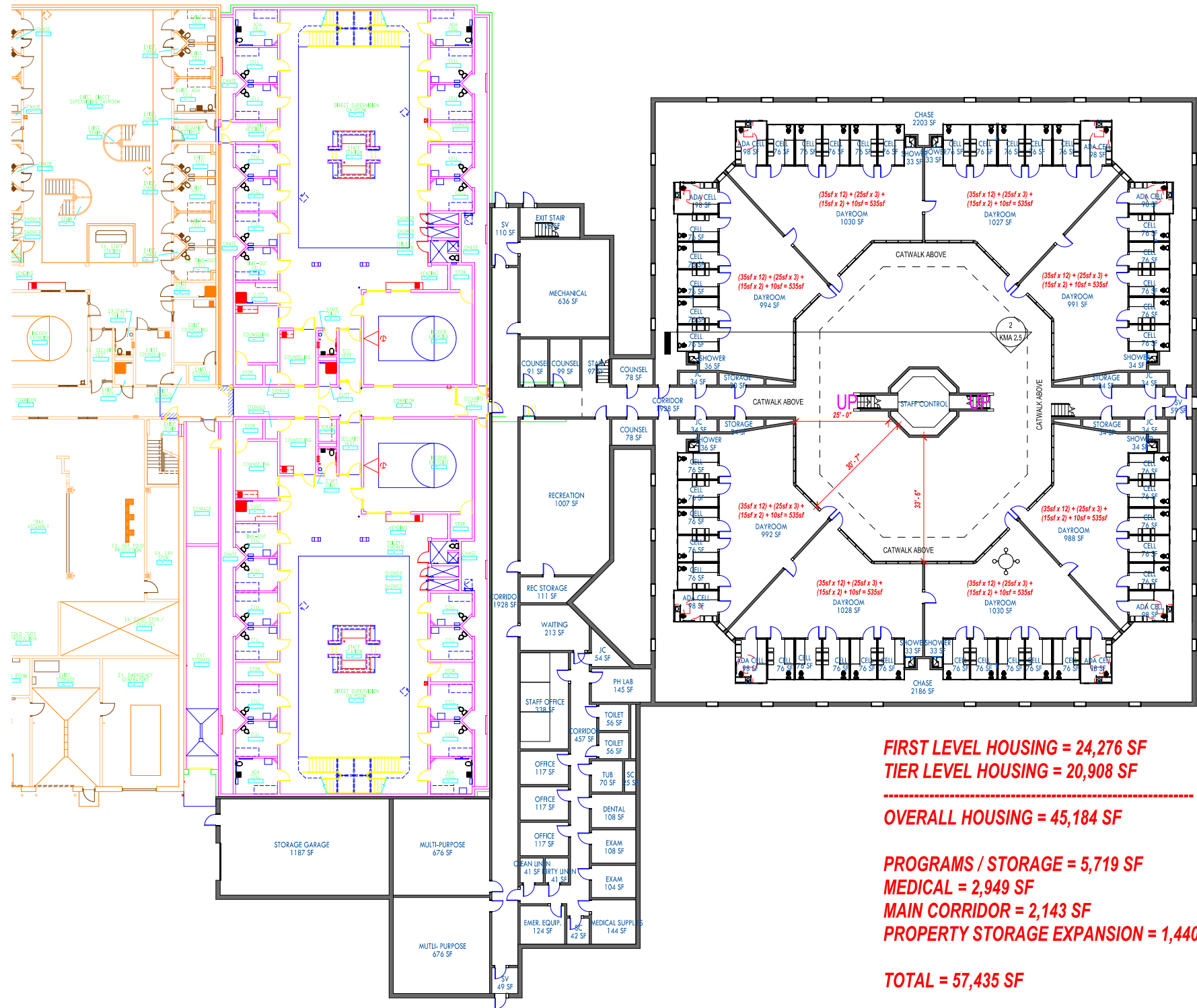
July 8, 2022

Item	Description	Date

This sheet may be a Reduced Copy. This drawing is to scale if bar below is 1" long.



Key Plan



- NOTE:
- SQUARE FOOTAGE DOES NOT INCLUDE 2-STORY VOLUMES.
 - TIERED LEVEL TO ALL OF HOUSING ACCOUNTED FOR IN SQUARE FOOTAGE.



CASS COUNTY

POPULATION FORECAST

PROJECT ADDRESS
CITY, STATE, ZIP

Architect's Project #: 2111

Consultants

Civil
Civil Firm - Name
Civil Firm - Address Line 1
Civil Firm - Address Line 2
office: Civil Firm - Office Number

Structural
Structural Firm - Name
Structural Firm - Address Line 1
Structural Firm - Address Line 2
office: Structural Firm - Office Number

Mechanical, Electrical & Security Electronics
MEP Firm - Name
MEP Firm - Address Line 1
MEP Firm - Address Line 2
office: MEP Firm - Office Number

HOUSING OPTIONS

July 8, 2022

Item	Description	Date

This sheet may be a Reduced Copy. This drawing is to scale if bar below is 1" long.



Key Plan



RELOCATED
ROAD
(FUTURE)

RELOCATED
ROAD

CASS COUNTY

POPULATION FORECAST

PROJECT ADDRESS
CITY, STATE, ZIP

Architect's Project #: 2111

Consultants

Civil

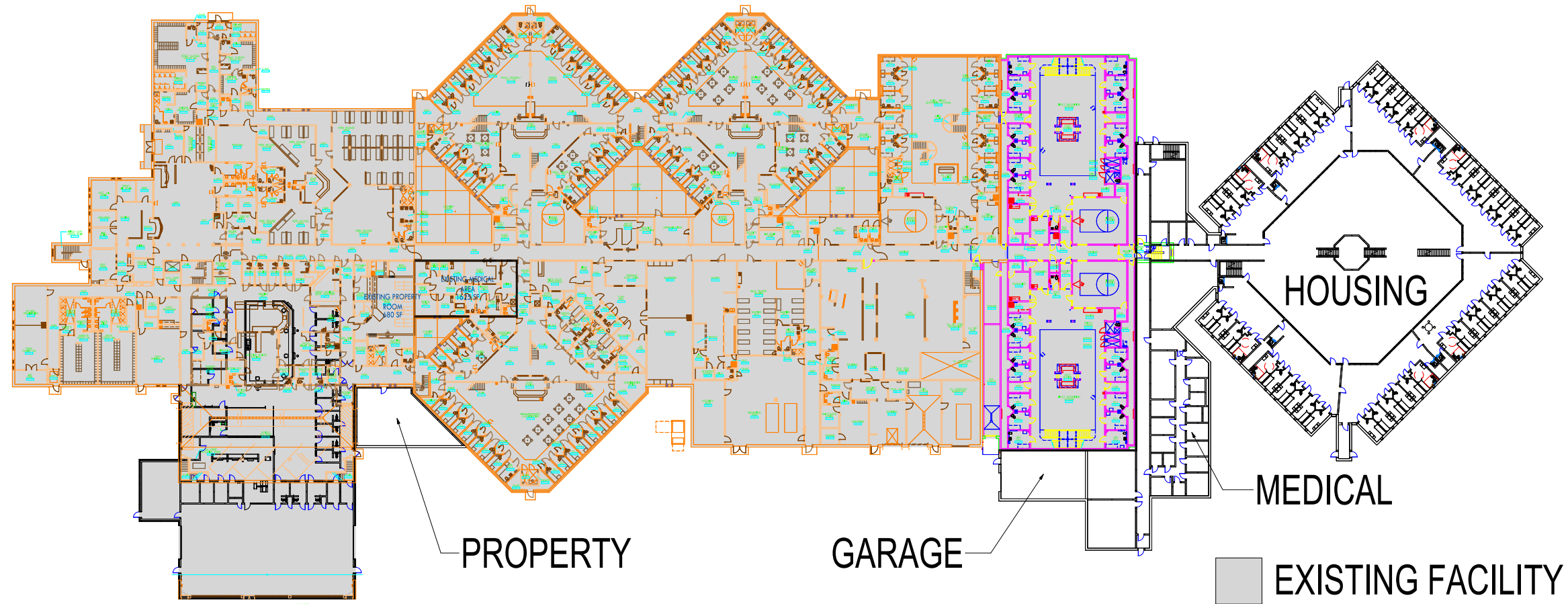
Civil Firm - Name
Civil Firm - Address Line 1
Civil Firm - Address Line 2
office: Civil Firm - Office Number

Structural

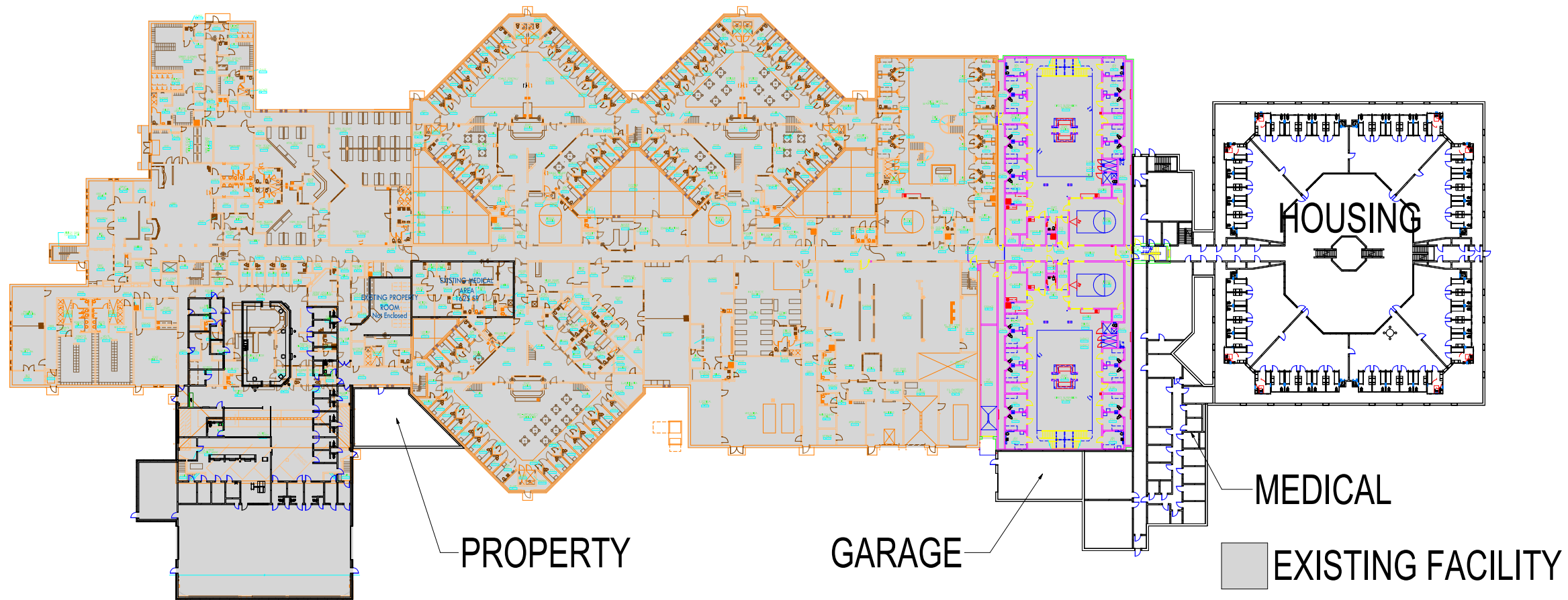
Structural Firm - Name
Structural Firm - Address Line 1
Structural Firm - Address Line 2
office: Structural Firm - Office Number

Mechanical, Electrical & Security Electronics

MEP Firm - Name
MEP Firm - Address Line 1
MEP Firm - Address Line 2
office: MEP Firm - Office Number



1 FIRST LEVEL - OVERALL PLAN - OPTION 2
SCALE: 1/32" = 1'-0"



2 FIRST LEVEL - OVERALL PLAN - OPTION 4
SCALE:

HOUSING OPTIONS

July 8, 2022

Item	Description	Date

This sheet may be a Reduced Copy. This drawing is to scale if bar below is 1" long.



Key Plan



OVERALL FLOOR PLANS

KMA 2.4

CASS COUNTY

POPULATION FORECAST

PROJECT ADDRESS
CITY, STATE, ZIP

Architect's Project #: 2111

Consultants

Civil

Civil Firm - Name
Civil Firm - Address Line 1
Civil Firm - Address Line 2
office: Civil Firm - Office Number

Structural

Structural Firm - Name
Structural Firm - Address Line 1
Structural Firm - Address Line 2
office: Structural Firm - Office Number

Mechanical, Electrical & Security Electronics

MEP Firm - Name
MEP Firm - Address Line 1
MEP Firm - Address Line 2
office: MEP Firm - Office Number

HOUSING OPTIONS

July 8, 2022

Item	Description	Date

This sheet may be a Reduced Copy. This drawing is to scale if bar below is 1" long.

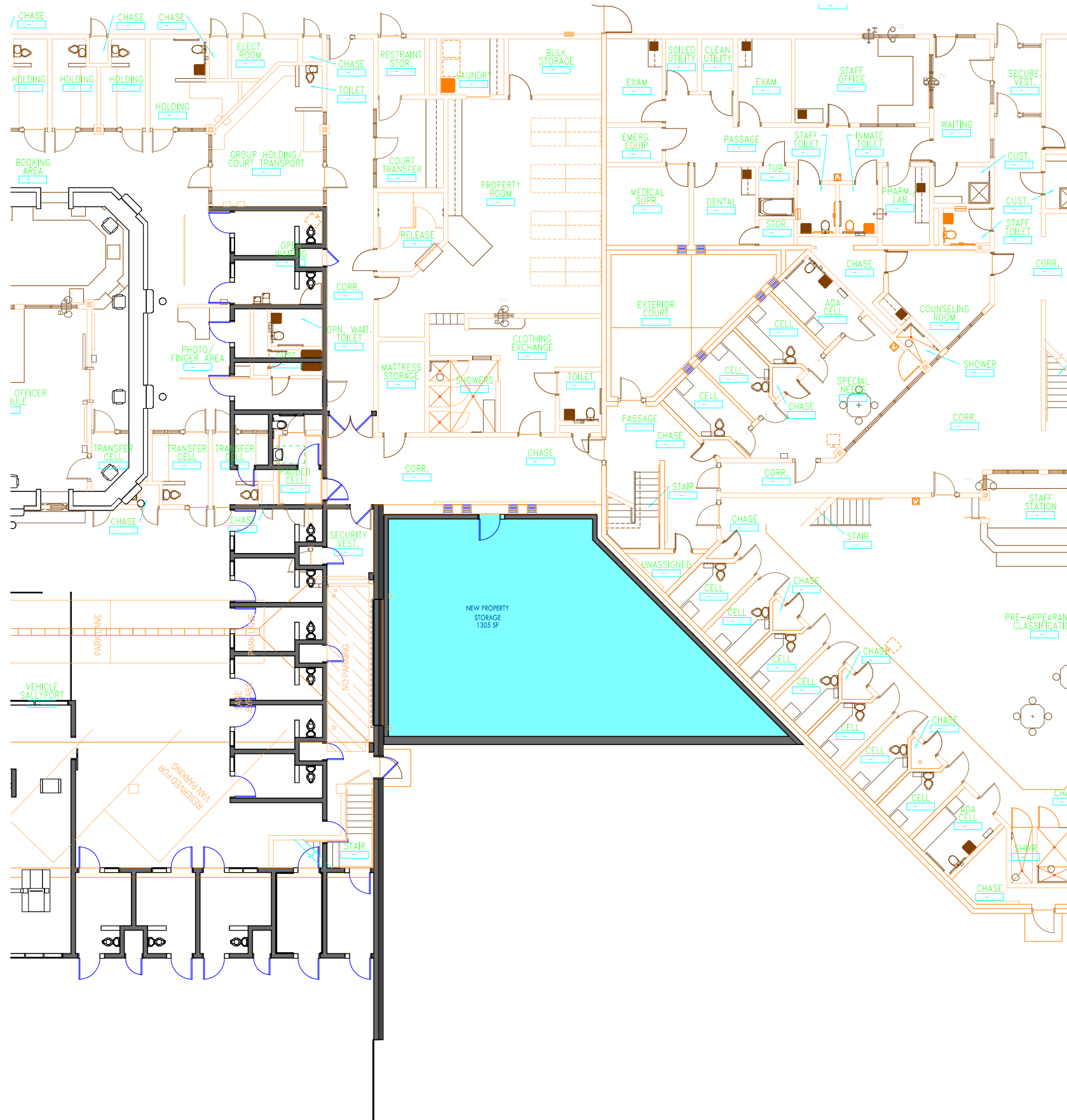


Key Plan

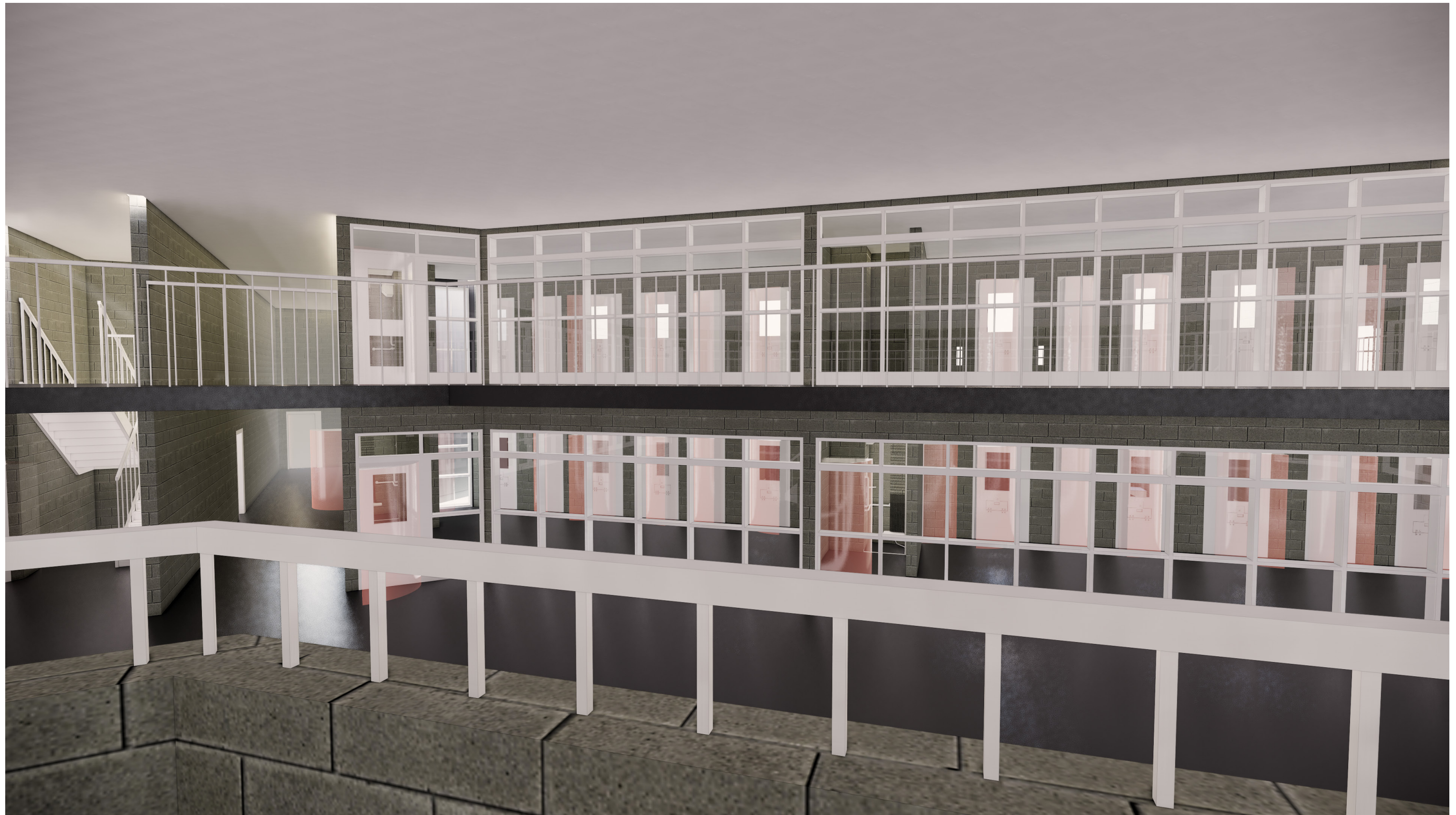


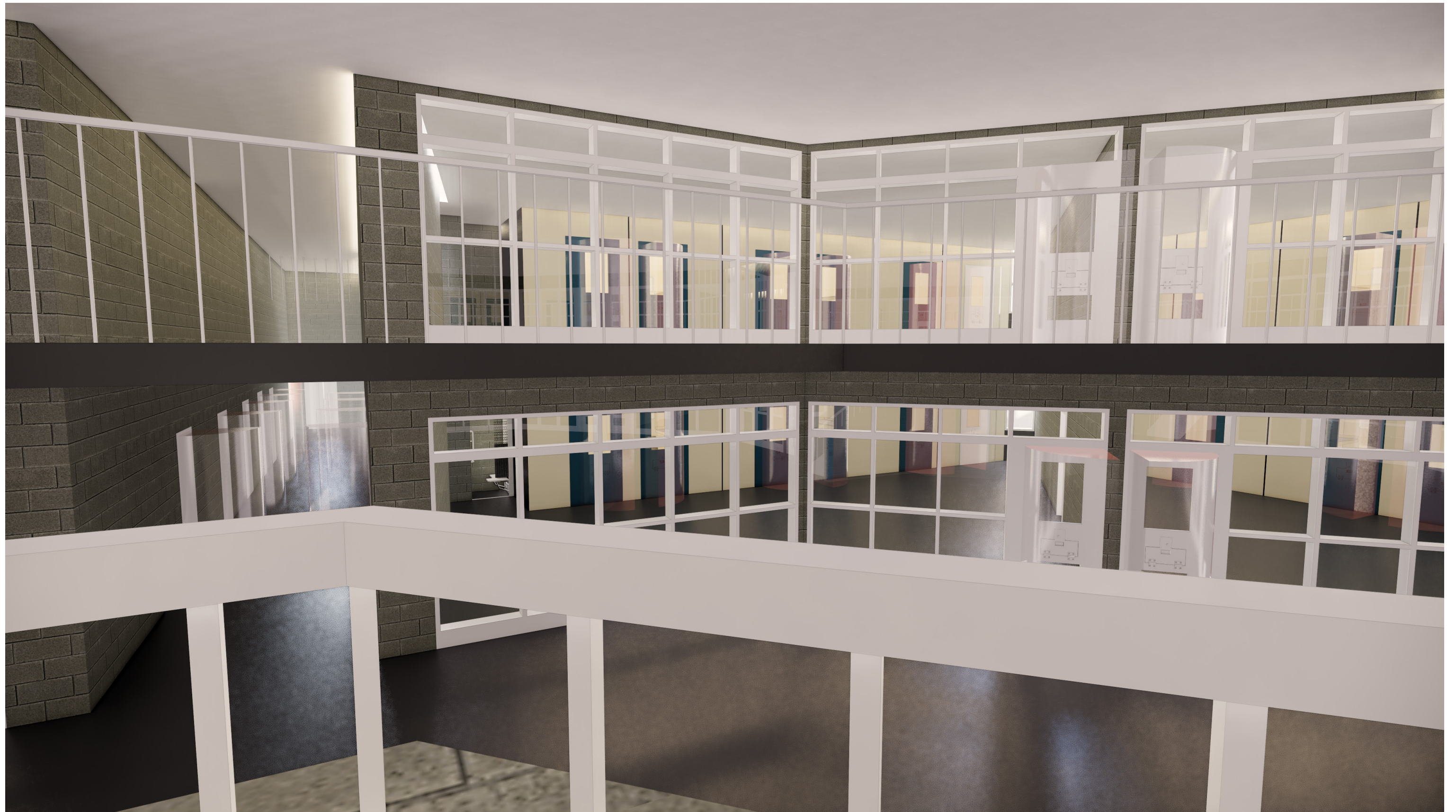
**PROPERTY STORAGE
EXPANSION**

KMA 1.7



1 PROPERTY STORAGE
SCALE:





Project: Cass County Jail Expansion

Location: Fargo, ND

Date: 6/28/2022



Description	Option 2 OoC Estimate - 06/28/22			Option 4 OoC Estimate - 06/28/22			Remarks
	SF/Mo	Unit Cost	Total	SF/Mo	Unit Cost	Total	
Building Construction Costs							
Housing and Support	48,829	\$575	\$28,054,726	54,404	\$564	\$30,704,691	
Medical New	2,949	\$359	\$1,057,918	2,902	\$359	\$1,041,072	
Property Storage Expansion	1,440	\$253	\$364,213	1,440	\$253	\$364,218	
Building Construction Totals	53,218	\$554	\$29,476,857	58,746	\$547	\$32,109,981	
Permits, Bonds, Insurance, & Fee							
Insurance & Bonds	-	-	Included Above	-	-	Included Above	
Subcontractor Risk Insurance	-	-		-	-		
Building Permits	-	-		-	-		
CM Preconstruction	-	-		-	-		
CM Fee	-	-		-	-		
Escalation	-	3.00%	\$993,600	-	3.00%	\$1,082,359	Assume construction start of spring 23
Design Contingency	-	5.00%	\$1,656,000	-	5.00%	\$1,803,932	
Construction Contingency	-	3.00%	\$993,600	-	3.00%	\$1,082,359	
Total Permits, Bonds, Insurance, & Fee	-	-	\$3,643,200	-	-	\$3,968,650	
Accepted VE & Alternate Items - See Details Below			\$0			\$0	Includes all Permits, Bonds, Insurance, & Fee
Total Construction Budget	54,843	\$604	\$33,120,057	60,371	\$598	\$36,078,631	



Cass County Jail
Project No. 211100
SOFT COSTS BREAKDOWN - ESTIMATED TOTAL PROJECT COSTS
July 8, 2022

ITEM	BASIS	OPTION 2 COST	OPTION 4 COST	
1	Guaranteed Maximum Price (GMP)	GMP by Construction Engineers	\$ 33,120,057	\$ 36,078,631
3	Total Guaranteed Maximum Price	Construction Engineers Estimate	\$ 33,120,057	\$ 36,078,631
5	A/E Fees	7% of Total GMP	\$ 2,346,404	\$ 2,553,504
6	A/E Reimbursable Expenses	Lump Sum - estimated	\$ 80,000	\$ 80,000
			\$ -	\$ -
8	Surveys	Estimate	\$ 25,000	\$ 25,000
9	Geotechnical	Estimate	\$ 20,000	\$ 20,000
10	Construction Advertisement	Included in GMP	\$ -	\$ -
11	Building Permit & Admin. Costs	Included in GMP	\$ -	\$ -
12	Loose Furnishings & Equipment	Lump Sum	\$ 150,000	\$ 150,000
14	Subtotal		\$ 35,741,461	\$ 38,907,135
16	Owner's Builders Risk Insurance	Included in GMP	\$ -	\$ -
	Owner's Third Party Special			
17	Inspections	Lump Sum	\$ 50,000	\$ 50,000
18	Owner's Project Contingency	Included in GMP	\$ -	\$ -
19	City/County Utility Extension	Not required	\$ -	\$ -
21	TOTAL ESTIMATED PROJECT COST	GMP + 8% Soft Cost	\$ 35,791,461	\$ 38,957,135