



ARCHITECTURE & ENGINEERING DIVISION

RUSS KATHERMAN
ADMINISTRATOR

406-444-3332
rkatherman@mt.gov
architecture.mt.gov

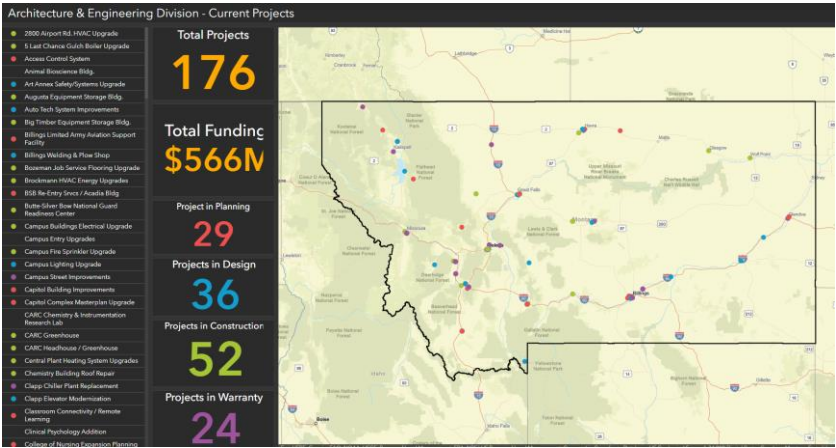
January 2023

INTERACTIVE MAPS & FCAs

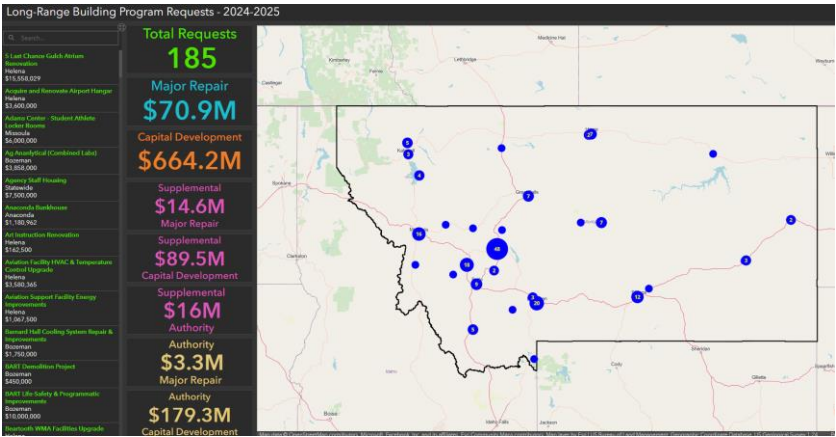


- Interactive Project Mapping @ architecture.mt.gov

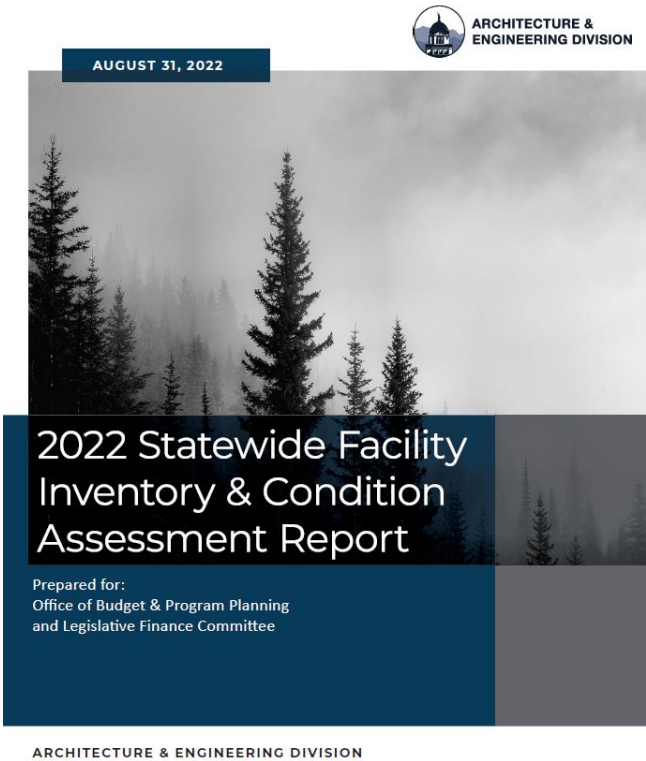
Active Projects



Proposed Projects



- Facility Condition Assessments



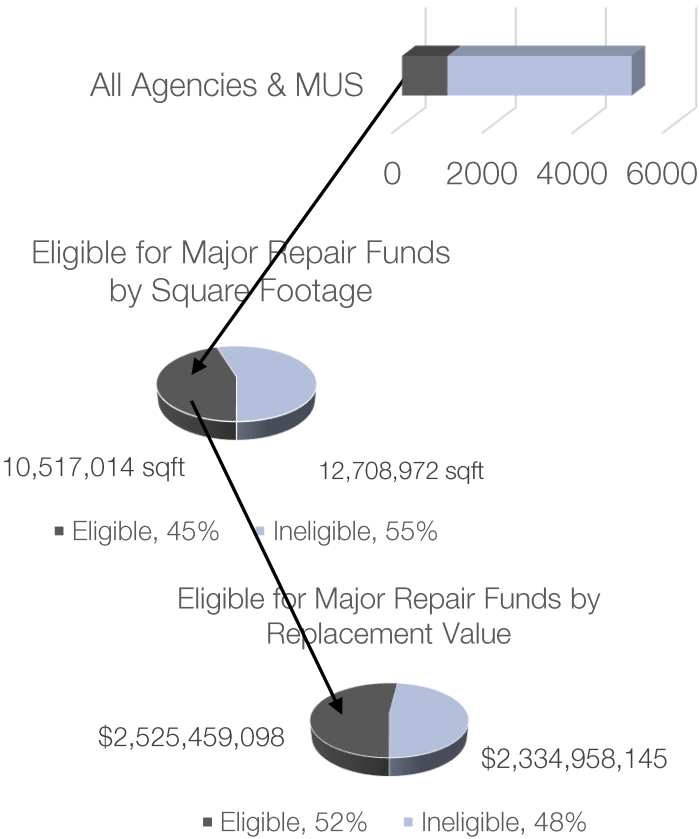
TOTAL STATEWIDE INVENTORY

	ALL BUILDINGS			MAJOR REPAIR ACCOUNT FUNDING LRBP-ELIGIBLE BUILDINGS			FACILITY ASSESSMENT REQUIRED BUILDINGS > \$150,000		
AGENCY	BLDGS	AREA	CRV	BLDGS	AREA	CRV	BLDGS	AREA	CRV
Montana School for the Deaf & Blind	14	165,423	\$26,175,778	14	165,243	\$26,175,778	9	164,537	\$26,152,692
Department of Administration	52	1,231,431	\$395,768,630	0			0		
Department of Agriculture	1	7,888	\$658,180	1	7,888	\$658,180	1	7,888	\$658,180
Department of Commerce	6	160,576	\$36,391,647	0			0		
Department of Corrections	138	1,164,289	\$247,246,806	94	930,716	\$225,541,711	53	880,229	\$223,592,811
Department of Environmental Quality	55	372,972	\$3,625,562	0			0		
Department of Fish, Wildlife & Parks	1,297	898,051	\$98,455,898	0			0		
Department of Justice	83	286,557	\$43,617,300	37	275,961	\$39,141,525	28	263,721	\$38,697,740
Department of Labor & Industry	13	85,516	\$12,650,047	0			0		
Department of Military Affairs	76	710,528	\$137,202,444	50	626,432	\$130,039,378	33	621,904	\$129,828,151
Department of Natural Resources	179	303,581	\$39,843,399	148	246,395	\$22,650,245	37	158,958	\$18,949,475
Department of Revenue	1	108,258	\$8,674,248	0			0		
Department of Transportation	1,510	1,973,803	\$247,734,468	0			0		
Montana Heritage Commission	253	193,888	\$38,959,167	0			0		
Montana Historical Society	2	12,839	\$6,940,564	0			0		
Office of Public Instruction	31	27,312	\$757,411	31	27,312	\$757,411	0		
Public Health & Human Services	85	673,820	\$148,734,583	65	453,941	\$87,812,957	29	407,985	\$85,732,426
State Fund	1	117,203	\$35,576,757	0			0		
Montana State University	757	8,228,678	\$1,836,377,241	413	4,310,282	\$1,082,020,800	210	4,168,071	\$1,074,204,311
University of Montana	540	6,503,373	\$1,495,027,111	154	3,472,664	\$910,661,113	104	3,431,678	\$907,892,256
TOTALS:	5,094	23,225,986	\$4,860,417,243	1007	10,516,834	\$2,525,459,098	504	10,104,971	\$2,505,708,043

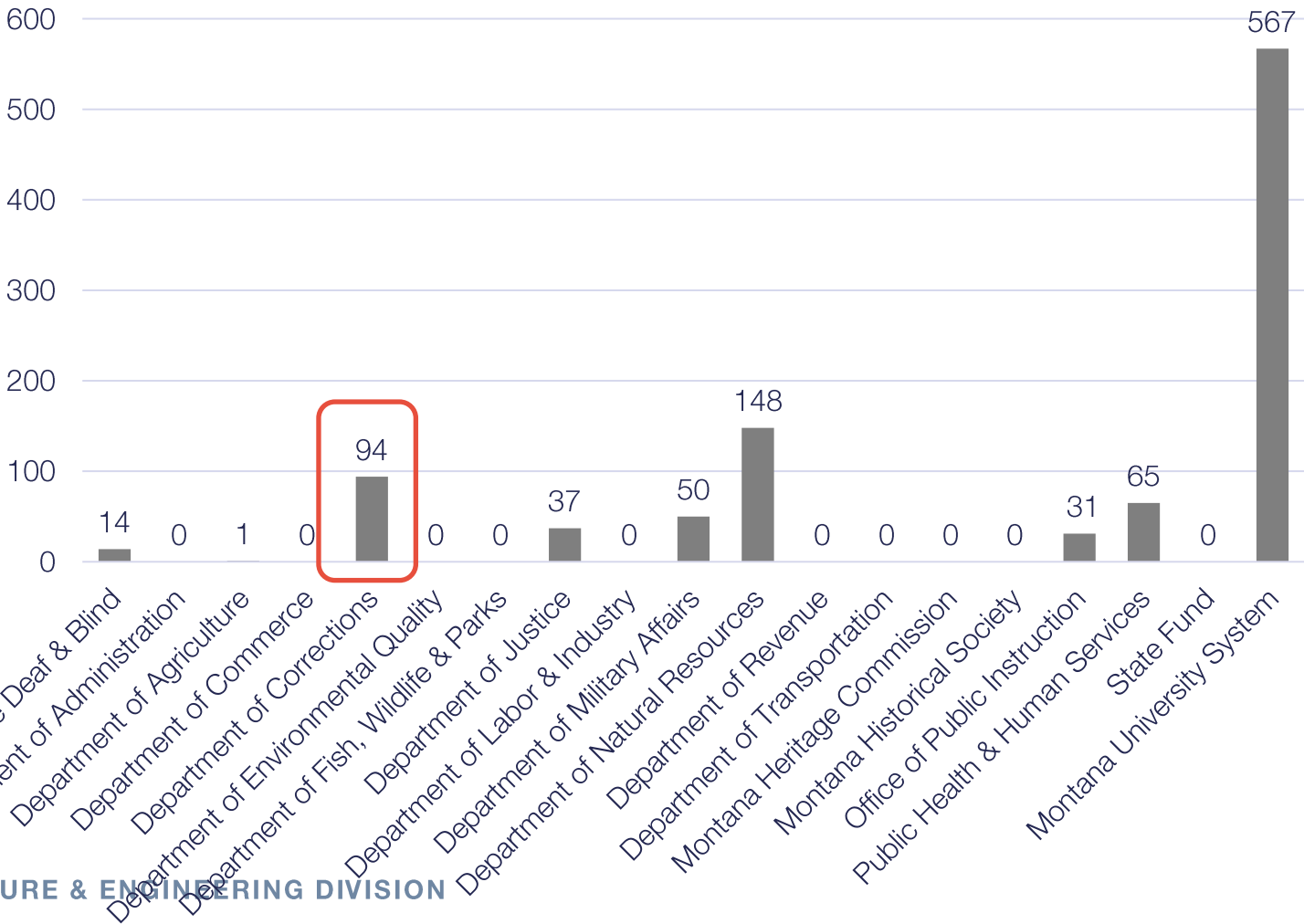


LRBP-Eligible Inventory for Major Repair \$

Total # of LRBP Funding
“Eligible” Buildings: 1,007

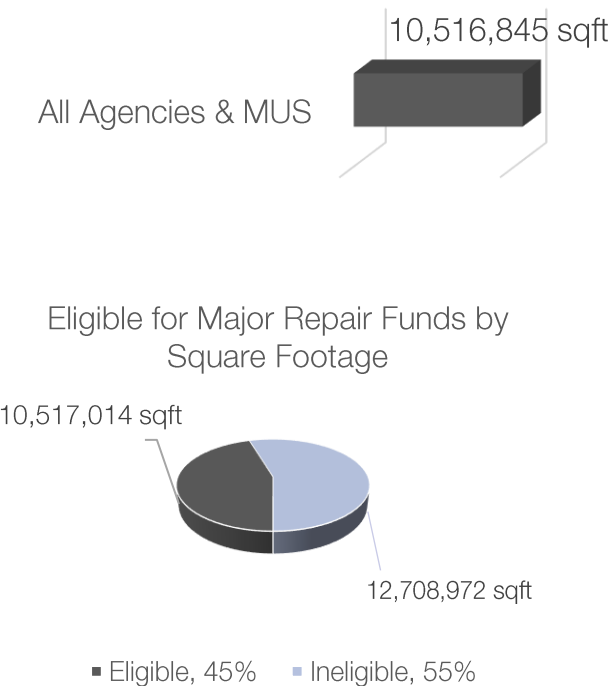


1,007 LRBP-Eligible Buildings by Agency:

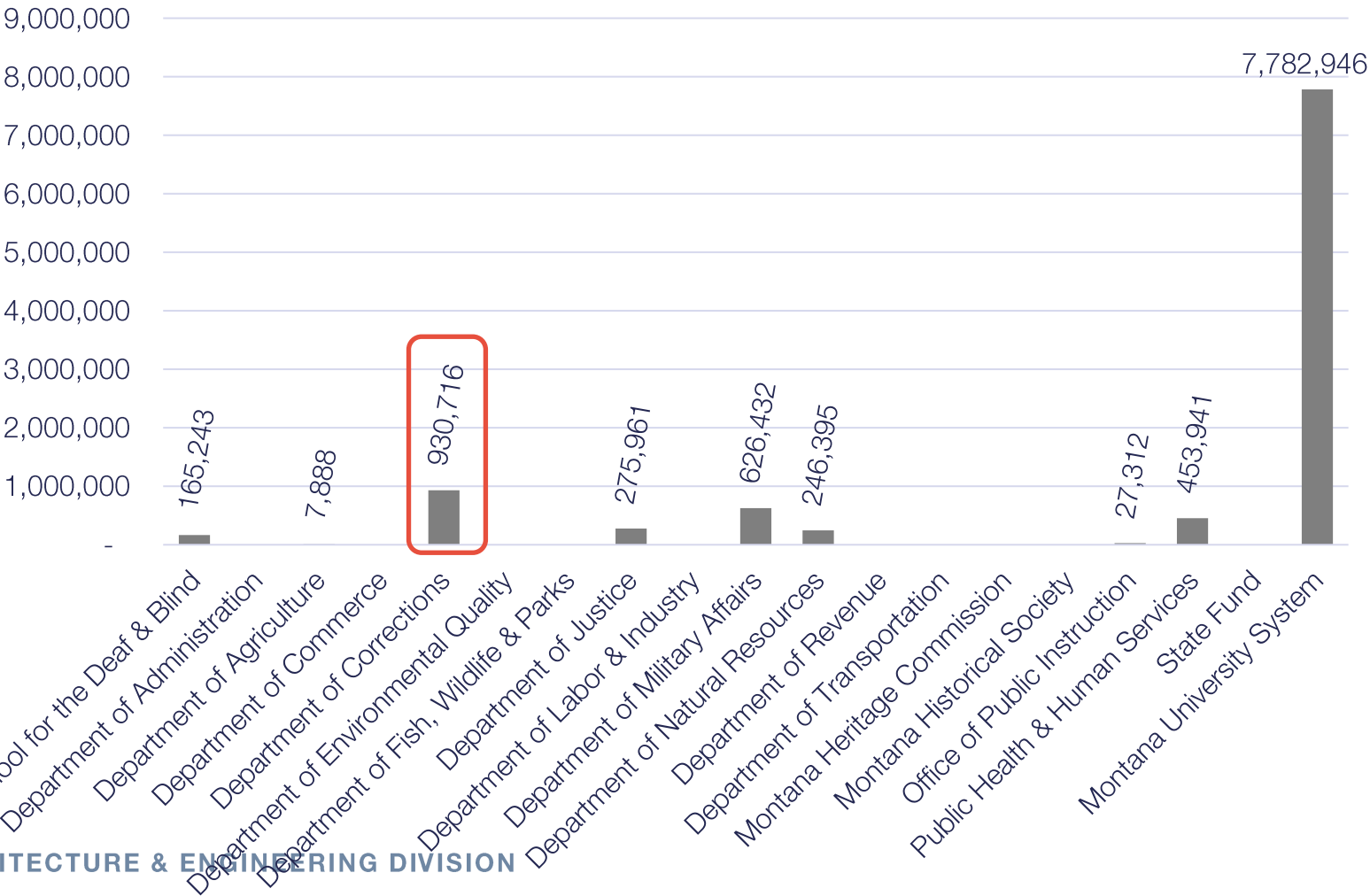


LRBP-Eligible Inventory for Major Repair \$

Square Feet of LRBP-Eligible Buildings:



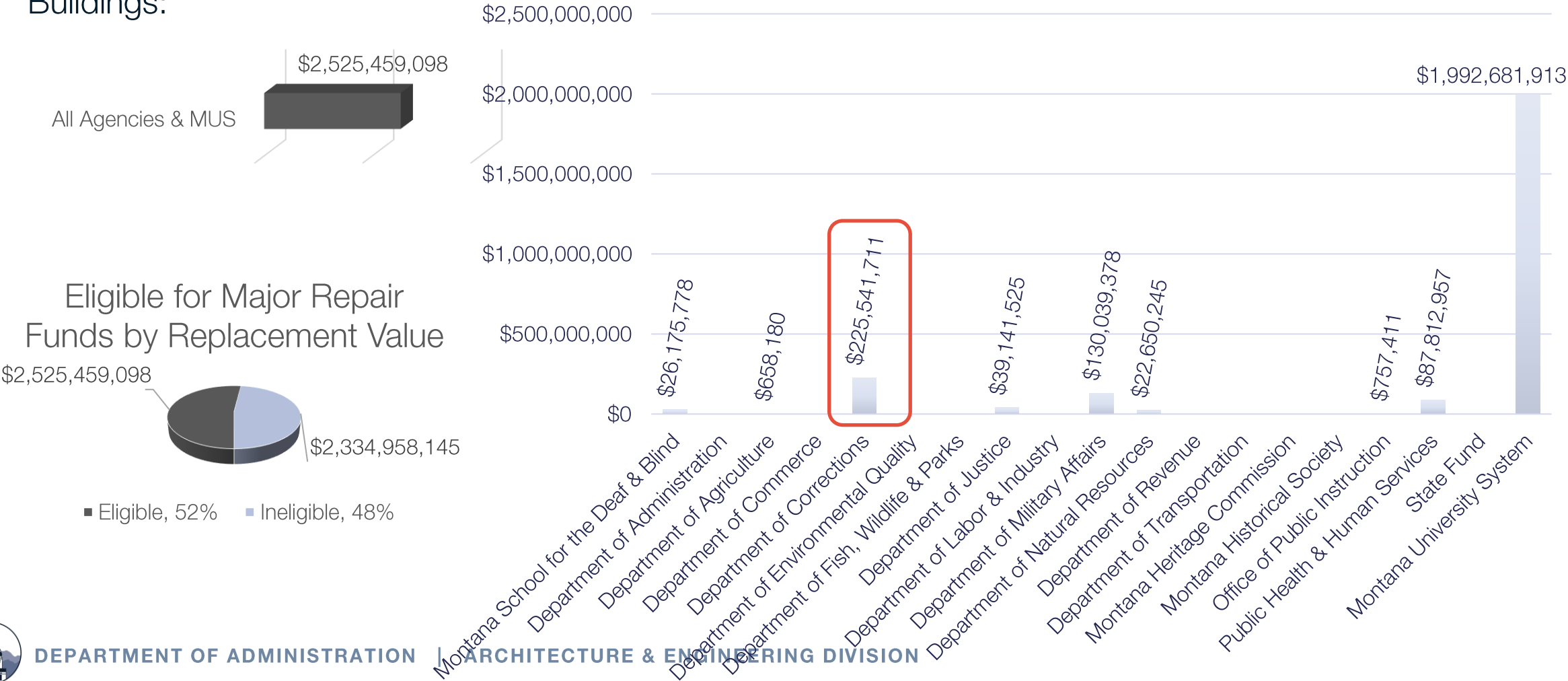
Sqft of LRBP-Eligible Buildings by Agency:



LRBP-Eligible Inventory for Major Repair \$

CRV of LRBP-Eligible Buildings:

CRV of LRBP-Eligible Buildings by Agency:



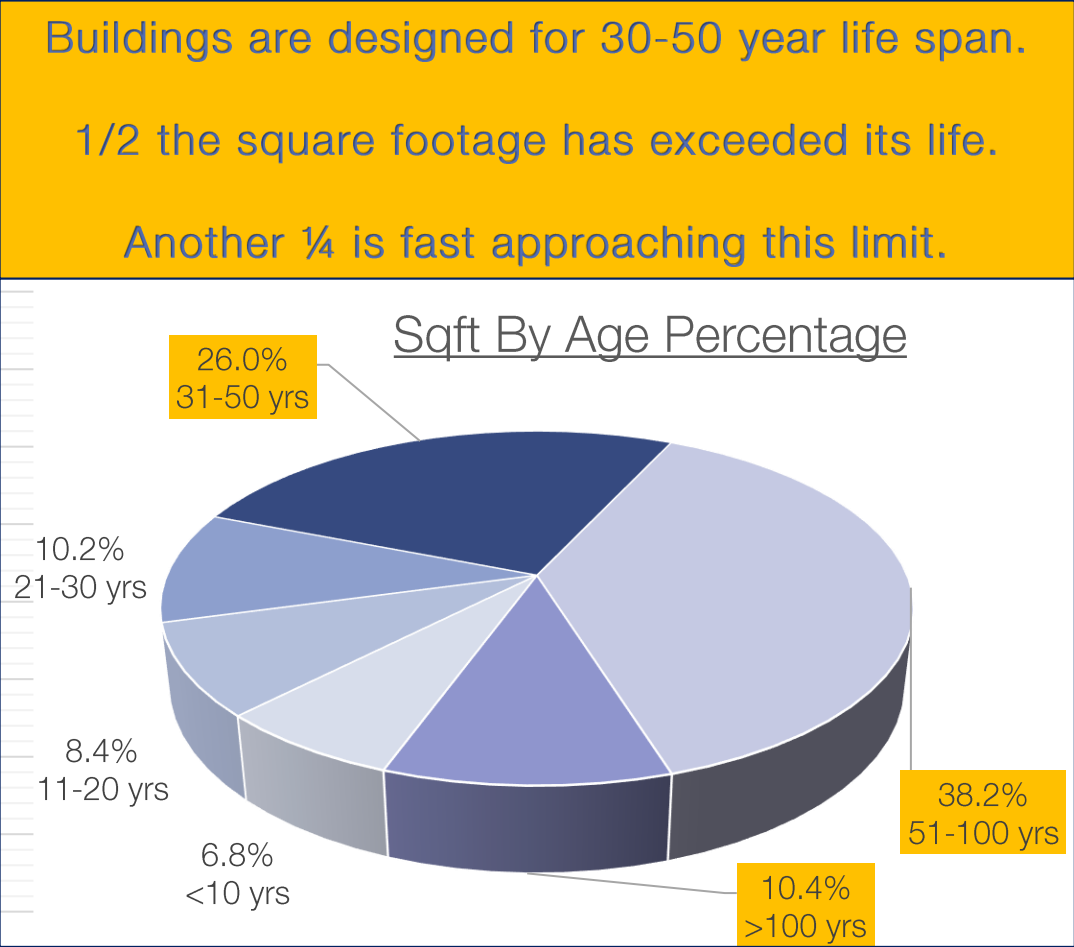
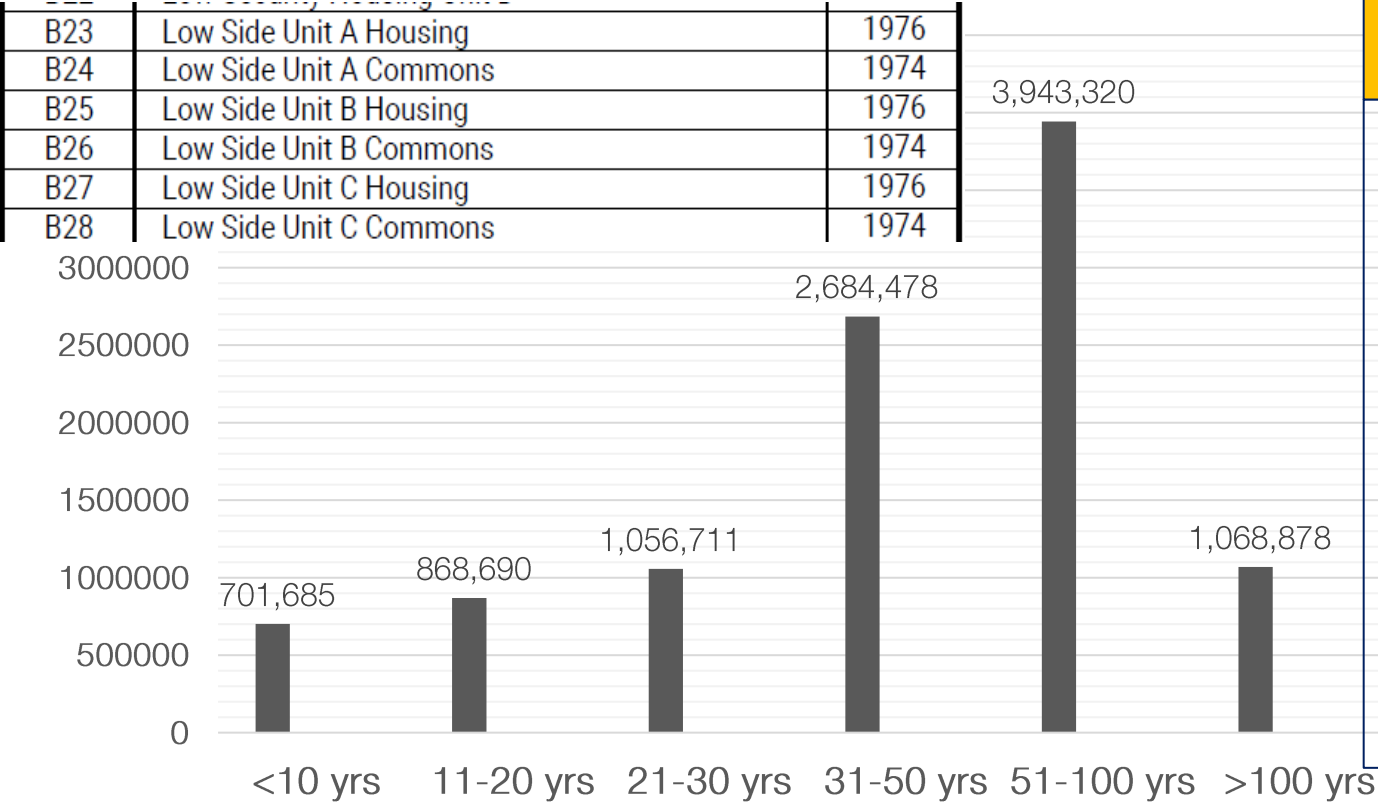
TOTAL STATEWIDE INVENTORY

	ALL BUILDINGS			MAJOR REPAIR ACCOUNT FUNDING LRBP-ELIGIBLE BUILDINGS			FACILITY ASSESSMENT REQUIRED BUILDINGS > \$150,000		
AGENCY	BLDGS	AREA	CRV	BLDGS	AREA	CRV	BLDGS	AREA	CRV
Montana School for the Deaf & Blind	14	165,423	\$26,175,778	14	165,243	\$26,175,778	9	164,537	\$26,152,692
Department of Administration	52	1,231,431	\$395,768,630	0			0		
Department of Agriculture	1	7,888	\$658,180	1	7,888	\$658,180	1	7,888	\$658,180
Department of Commerce	6	160,576	\$36,391,647	0			0		
Department of Corrections	138	1,164,289	\$247,246,806	94	930,716	\$225,541,711	53	880,229	\$223,592,811
Department of Environmental Quality	55	372,972	\$3,625,562	0			0		
Department of Fish, Wildlife & Parks	1,297	898,051	\$98,455,898	0			0		
Department of Justice	83	286,557	\$43,617,300	37	275,961	\$39,141,525	28	263,721	\$38,697,740
Department of Labor & Industry	13	85,516	\$12,650,047	0			0		
Department of Military Affairs	76	710,528	\$137,202,444	50	626,432	\$130,039,378	33	621,904	\$129,828,151
Department of Natural Resources	179	303,581	\$39,843,399	148	246,395	\$22,650,245	37	158,958	\$18,949,475
Department of Revenue	1	108,258	\$8,674,248	0			0		
Department of Transportation	1,510	1,973,803	\$247,734,468	0			0		
Montana Heritage Commission	253	193,888	\$38,959,167	0			0		
Montana Historical Society	2	12,839	\$6,940,564	0			0		
Office of Public Instruction	31	27,312	\$757,411	31	27,312	\$757,411	0		
Public Health & Human Services	85	673,820	\$148,734,583	65	453,941	\$87,812,957	29	407,985	\$85,732,426
State Fund	1	117,203	\$35,576,757	0			0		
Montana State University	757	8,228,678	\$1,836,377,241	413	4,310,282	\$1,082,020,800	210	4,168,071	\$1,074,204,311
University of Montana	540	6,503,373	\$1,495,027,111	154	3,472,664	\$910,661,113	104	3,431,678	\$907,892,256
TOTALS:	5,094	23,225,986	\$4,860,417,243	1007	10,516,834	\$2,525,459,098	504	10,104,971	\$2,505,708,043



Aging 504 FCA MR LRBP-Eligible Inventory:

Age of the 504 FCA-required
10.1M Sqft




FCA & the Long-Range Building Program

- Facility Condition Assessments, 17-7-202 MCA

ARCHITECTURE & ENGINEERING DIVISION

AUGUST 31, 2022



2022 Statewide Facility Inventory & Condition Assessment Report

Prepared for:
Office of Budget & Program Planning
and Legislative Finance Committee

ARCHITECTURE & ENGINEERING DIVISION

Available @
architecture.mt.gov

TOTAL INVENTORY	LRBP-ELIGIBLE INVENTORY	REQUIRED ASSESSMENT INVENTORY
5,094	1,007	504
STATE-OWNED BUILDINGS	LRBP-ELIGIBLE BUILDINGS	BUILDINGS REQUIRING ASSESSMENTS
An increase of 144 buildings (2.84%) since 2020*	A decrease of 14 buildings (1.37%) since 2020*	An increase of 8 buildings (1.6%) since 2020
23,225,986	10,517,014	10,104,971
TOTAL AREA (SQ FT)	LRBP-ELIGIBLE AREA (SQ FT)	AREA REQUIRING ASSESSMENTS (SQ FT)
An increase of 567,010 square feet (2.44%) since 2020	A increase of 54,216 square feet (0.5%) since 2020	An increase of 135,847 square feet (1.34%) since 2020
\$4,860,417,243	\$2,525,459,098	\$2,505,708,043
TOTAL REPLACEMENT VAULE	LRBP-ELIGIBLE REPLACEMENT VALUE	ASSESSMENT REPLACEMENT VALUE
An increase of \$645,347,122 (13.28%) since 2020	An increase of \$296,066,321 (11.72%) since 2020	An increase of \$297,099,782 (11.86%) since 2020

Major Repair Minimum Funding
\$30,305,509

Total Deferred Mainteneace Backlog
\$1,473,603,270

Number of Buildings Requiring Assessments:
504

Number of Buildings Assessed:
299

Area of Buildings Requiring Assessments:
10,104,971 SQ FT

Area Assessed:
7,115,906 SQ FT

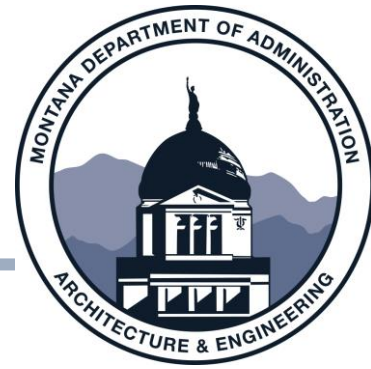
Deferred Maintenance is a debt/liability that accumulates over time due to a lack of regular and timely funding of major repairs, replacements, upgrades or renovations.

Solutions:

- Continue funding Major Repairs at a substantial level over time; and,
- Fund major renovations and new Capital Development projects on a consistent basis



2022 National Perspectives on Inflation:



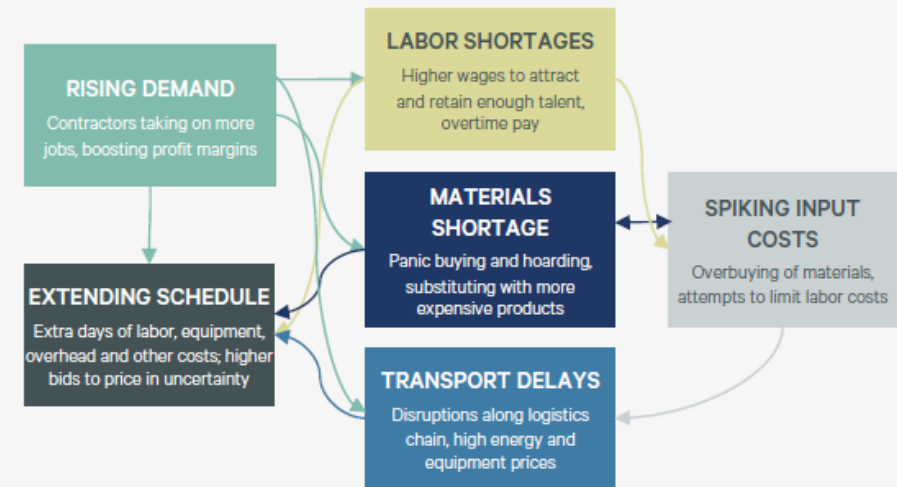
AGC Construction Inflation Alert, December 2022

“In any case, the cost of construction materials and labor does not generally move in sync with the overall economy.

In short, owners should not assume that delaying projects will enable them to avoid volatility and disruptions in construction costs, delivery times, and labor supply, even if the economy slows significantly.”

CBRE Research, July 2022

FIGURE 1: Pandemic impacts on interconnected cost drivers

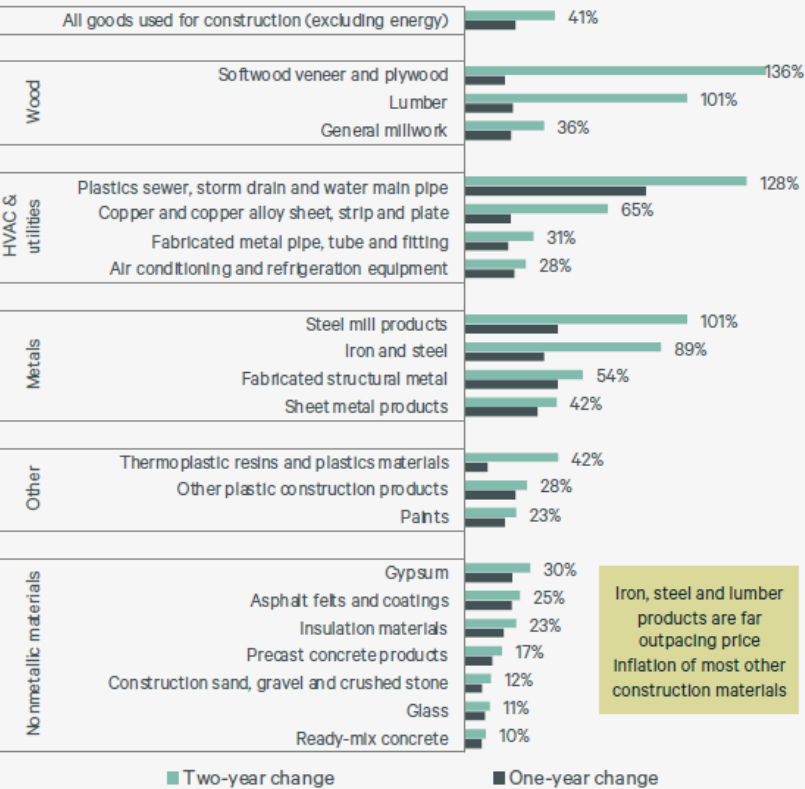


Source: CBRE Strategic Investment Consulting, April 2022.



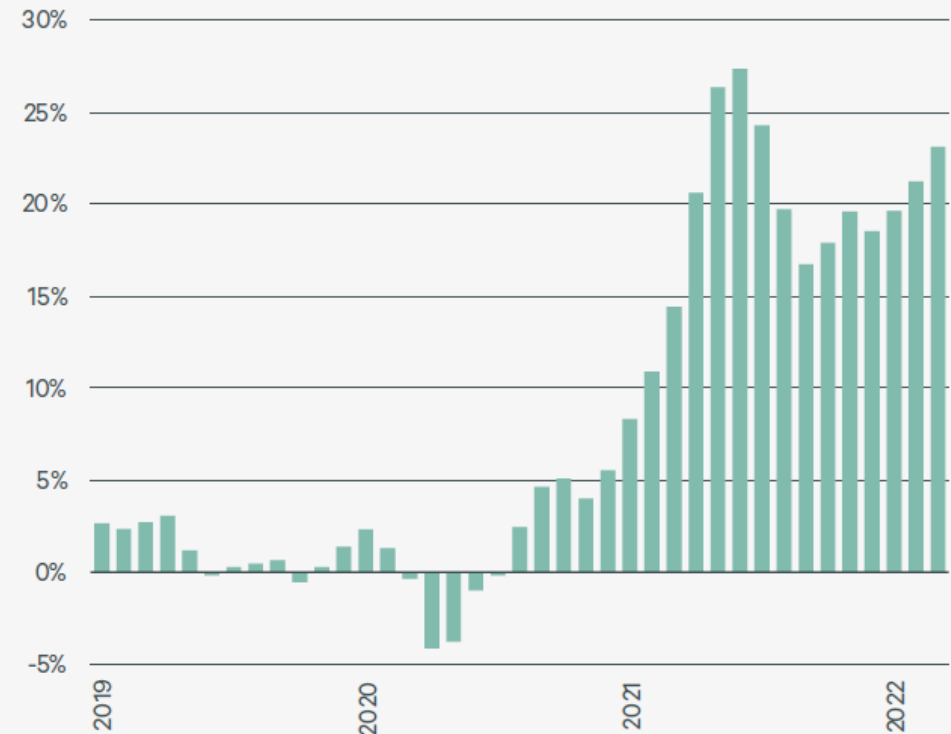
Materials Escalation

FIGURE 37: Price inflation for select construction commodities, March 2020-March 2022



Source: U.S. Bureau of Labor Statistics, CBRE Strategic Investment Consulting April 2022.

FIGURE 35: Producer Price Index: inputs to construction, year-over-year change



Note: Latest data as of March 2022.
Source: Bureau of Labor Statistics, Producer Price Index, CBRE Strategic Investment Consulting, April 2022.

Supply Chain & Delays Escalation



FIGURE 15: Typical lead times for key materials

+40 weeks

Roofing insulation

Lead times for roofing insulation (along with other roofing materials), are currently among the longest in the entire construction industry.

+36 weeks

HVAC equipment

Lockdowns in China have significantly reduced manufacturing output for HVAC equipment, while hot weather continues to boost demand. Semiconductor shortages are also contributing to delays.

+18 weeks

Wood doors & frames

Shutdowns and strained labor pools in manufacturing and shipping have lead to a major backlog in the supply of wood doors, as well as hardware and hollow metal door frames.

Material	Current lead time	Two-year change
Paint	2-3 weeks	+200%
Steel beams & decking	10-14 weeks	+75%
Drywall & metal studs	14-16 weeks	+600%
Lighting & controls	14-20 weeks	+100%
Wood doors & frames	18-20 weeks	+233%
Open web joists	18-30 weeks	+125%
Aluminum storefront glazing	16-32 weeks	+300%
Appliances	20-30 weeks	+400%
Electrical panels	30-40 weeks	+433%
Roofing membranes	35-45 weeks	+800%
HVAC equipment	36-50 weeks	+250%
Roofing insulation	40-50 weeks	+667%

Note: Lead times reflect aggregated information from multiple major general contracting firms and are current as of April-May 2022.
Source: CBRE Econometric Advisors, CBRE Strategic Investment Consulting, April 2022.



Labor Escalation

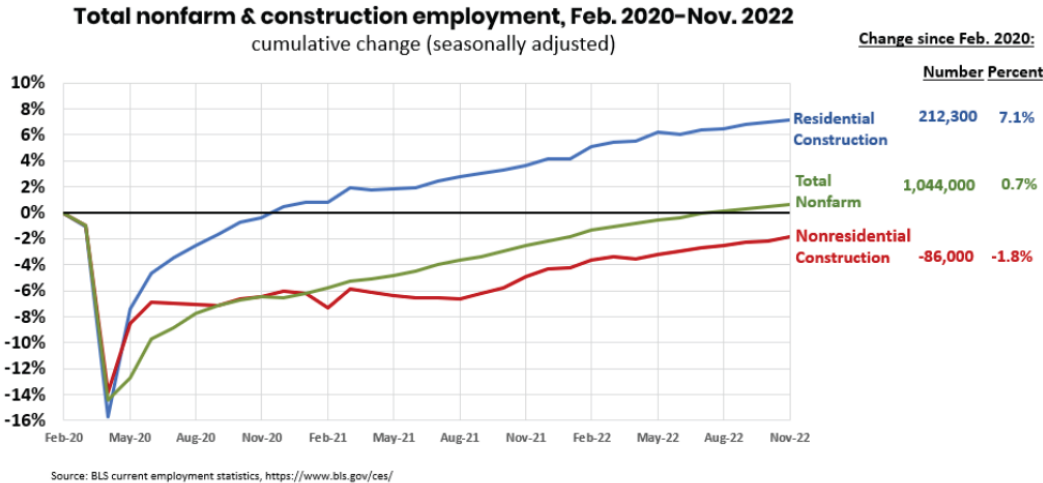
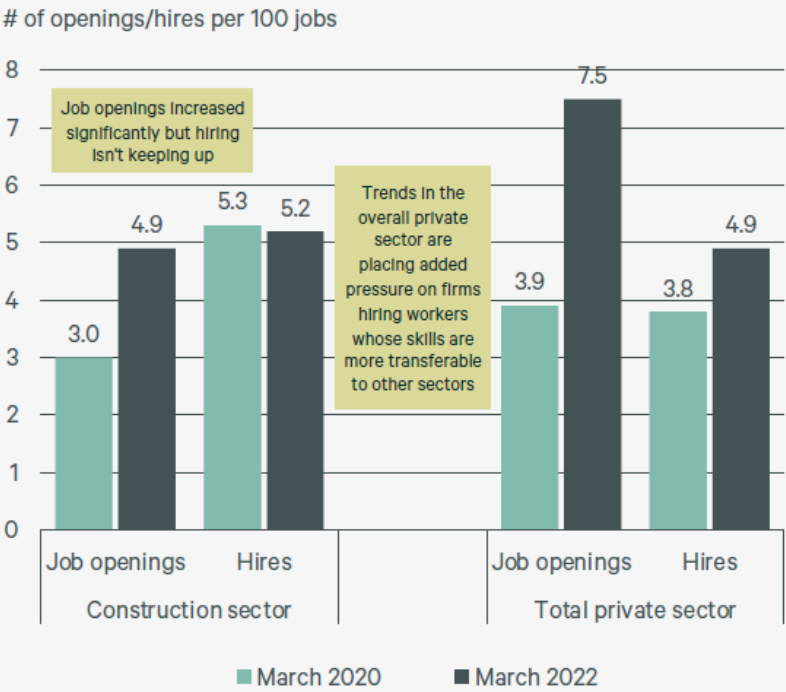


FIGURE 25: Job opening and hiring rates, construction sector vs. total private employment

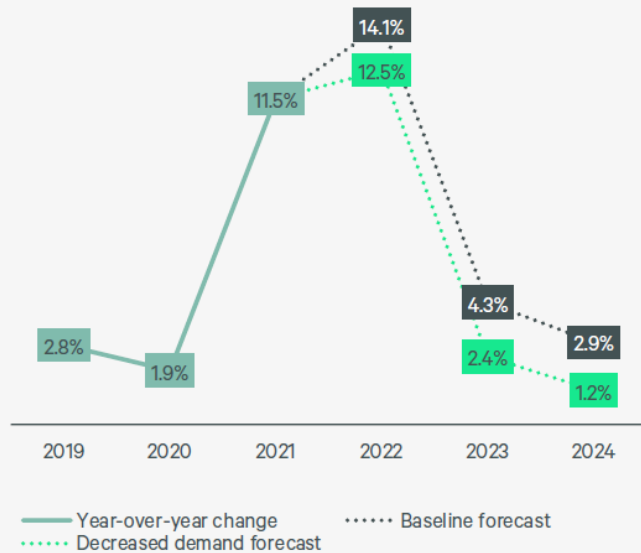


Note: Job opening and hiring rates are calculated by dividing the number of job openings (or hires) by the sum of employment plus job openings (or hires) then multiplying by 100.
Source: Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS), April 2022.

But, the LRBP is strategically positioned



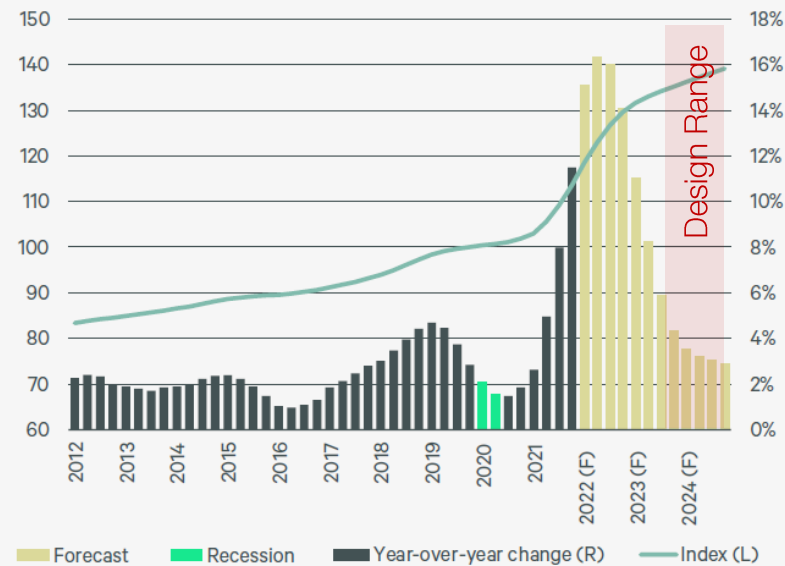
FIGURE 3: CBRE Construction Cost Index, recent trend and forecast scenarios



Source: CBRE Econometric Advisors, CBRE Strategic Investment Consulting, April 2022.

FIGURE 44: Historical CBRE Construction Cost Index performance, baseline scenario

Index (Q4 2019=100)



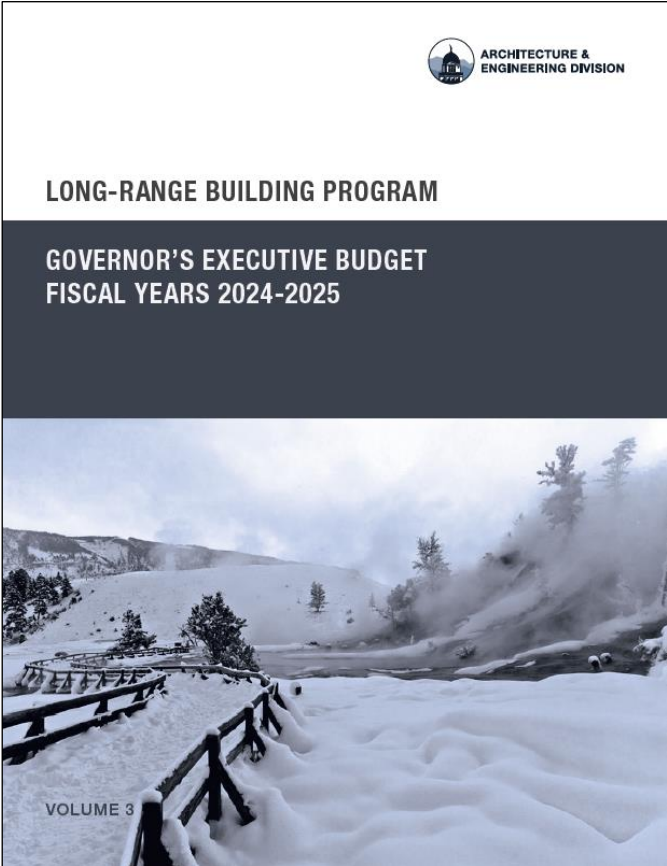
Source: CBRE Econometric Advisors, CBRE Strategic Investment Consulting, April 2022.

Appropriating the Governor's proposed LRBP now successfully positions LRBP projects to take advantage forecasted improvements in construction pricing.



Back To The Final LRBP Product!

LRBP Book is also available @ architecture.mt.gov



LONG-RANGE BUILDING PROGRAM

11

SUMMARY OF RECOMMENDED PROJECTS
STATEWIDE BY AGENCY 2024-2025

Agency	Major Repair	Capital Development	State Special	Federal Special	Authority Only	Total
ADMINISTRATION	100,374,487	5,908,145	3,221,021		5,000,000	114,503,653
CORRECTIONS	9,400,000	176,350,000			1,390,000	187,140,000
ENVIRONMENTAL QUALITY					3,700,000	3,700,000
FISH, WILDLIFE & PARKS			81,191,334	23,735,142	6,333,234	111,259,710
JUSTICE	3,015,000					3,015,000
LABOR & INDUSTRY	1,000,000	5,767,880				6,767,880
LIVESTOCK		2,200,000				2,200,000
MILITARY AFFAIRS	2,588,970	31,524,741		35,840,315		69,754,026
NATURAL RESOURCES & CONSERVATION	1,402,524	8,338,186				9,740,710
PUBLIC HEALTH & HUMAN SERVICES	4,325,000	134,873,000	9,907,039			149,105,039
REVENUE			14,315,750			14,315,750
SCHOOL FOR THE DEAF & BLIND	1,480,491					1,480,491
TRANSPORTATION		9,000,000	37,100,000	250,000		46,350,000
UNIVERSITY SYSTEM	42,605,470	125,762,050			232,695,000	401,062,520
TOTALS	166,191,942	499,724,002	145,735,144	59,625,457	249,118,234	1,120,394,779



Breakdown of “Consultant Services”:

- Architects
- Civil Engineering
- Land Surveying
- Structural Engineering
- Mechanical Engineering
- Electrical Engineering
- Data/IT Networks
- Fire Protection
- Geotechnical
- Commissioning
- Hazardous Materials
- Energy Analysis
- Specialties:
 - Audio/Visual
 - Laboratories
 - Correctional / Security
 - Landscape
 - Sustainability



How Our Presentations Are Formatted:

- MR & CD INFLATION/ESCALATION
- MAJOR REPAIR
- CAPITAL DEVELOPMENT
- Review of the Department Master Plan



From A&E's Perspective, MSP for example:

A “City”

- Roughly the same population as Deer Lodge
- 24-7-365, all services
- Owns/operates all the utilities, systems, and functions





HB 5 & the Department of Corrections' Project Proposals