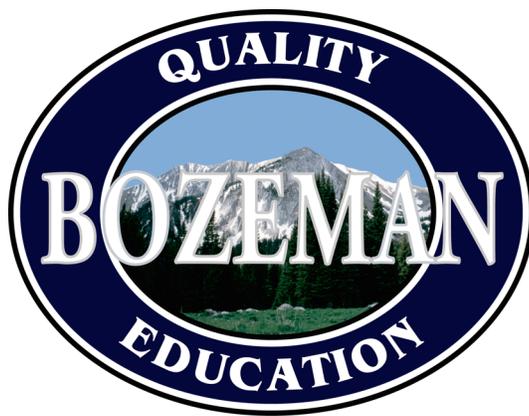


# **BOZEMAN SCHOOL DISTRICT FACILITIES MASTER PLAN**



**Prepared by:  
LONG RANGE FACILITIES  
PLANNING COMMITTEE  
JULY 2017**

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# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## EXECUTIVE SUMMARY CHANGES SINCE 2014

The following is a brief synopsis of the changes made to the 2014 Long Range Facilities Master Plan for this annual review.

### Charts and Table Updates:

- Enrollment Projections reflect the official October 2016 student numbers
- Student Capacity and Enrollment for each school reflect current enrollment, the expansion of Hawthorne Elementary School and Sacajawea Middle School are taken into account.
- Debt Limit and Bonding Capacity Tables for the Elementary and High School District represent the current status of bond initiatives and debt payments
- Undeveloped and Developed Property Inventory reflects the acquisition of Right-of-Way for the Rouse Avenue widening adjacent to Hawthorne Elementary.
- Appendix A was updated to show the new Attendance Boundaries for the Elementary and Middle Schools.
- Appendix B, Current Replacement Value, spreadsheet is current per the 2015 Facility Condition Inventory inspections.
- Appendix C is essentially unchanged.
- In all calculation descriptions for new construction, the price per square foot used includes the construction cost, as well as soft costs (design, furniture/equipment, curriculum materials, etc.)

## BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

Bozeman Public Schools (BPS) consists of the Bozeman Elementary District and the Bozeman High School District. The geographic areas are contained in Appendix A. Collectively, BPS operates 11 schools, as well as Administrative, Support Services and Bus Barn facilities.

Policy 9110 in the BPS Policy Manual requires that a facilities master plan be developed to cover a 10-year period and be reviewed annually to include at least the following:

1. A cost analysis of the financial ability of the district to implement its facilities program.
2. Existing and projected student enrollment figures.
3. An inventory of the district's undeveloped property and developed facilities, including an analysis of the number of students in each facility and whether the facility is over-or under-crowded.
4. An analysis of the appropriateness of the facilities to meet the needs of students, including their acceptability to students of both sexes and those with handicapping conditions.
5. Recommendations as to the sale or other disposition of district property not needed in the future.
6. Recommendations as to the acquisition, construction, or modification of new sites or facilities and how such shall better meet the needs of students and educational program.

### 2017 RECOMMENDATIONS SUMMARY

- **Recommendation:** Continue efforts at achieving maintenance and repair funding equivalent to 3% of CRV, concurrent with identification of requirements that are mutually supportive of funding requests.
- **Recommendation:** With respect to Middle School #3, monitor actual and projected PreK - 8 growth to determine when/if the addition of a third middle school.
- **Recommendation:** At an appropriate time, demolish 1218 Durston Road to eliminate potential liability issues associated with rental to private parties and prior to any future expensive repair requirements. Preliminary discussions concerning the need for District storage and disposal operations in conjunction with the Support Services Building may require the need for the demolition to occur. Currently, this residence is fully rented out with no lapse in tenants.
- **Recommendation:** Continue to evaluate student enrollment trends and area development and seek land acquisition/exchange opportunities for future school sites that complement existing schools and associated attendance boundaries. See the Developed and Undeveloped Property Inventory section below.
- **Recommendation:** In view of the potential use of the land adjacent to Meadowlark Elementary School for the second high school, BPS should monitor available properties to identify and purchase land for Middle School No. 3. See the Developed and Undeveloped Property Inventory section below.
- **Recommendation:** With respect to Morning Star and Emily Dickinson, evaluate the appropriateness, cost effectiveness and timing of adding two classrooms to each school as an interim solution until the approved funding and opening of Elementary School #9.
- **Recommendation:** Evaluate the continuing need for the Emerson parcel, including the potential complement to the East Willson disposal packaging. Subdividing the unused land at the bus barn, as well as the two parcels at Chief Joseph Middle School, and place the

## BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

properties for sale commensurate with market conditions. See the Developed and Undeveloped Property Inventory section below.

- **Recommendation:** In conjunction with the District Owned Property Options, continue to investigate the potential for District Assisted Staff-Housing.
- **Recommendation:** Continue further funding towards the Willson Building in an effort to modernize the function of the facility.
- **Recommendation:** Explore possible alternative funding options to renovate and modernize Whittier Elementary. The current structure dates back to the 1950's and is in need of major or total renovations in order to keep pace with the level of service that is provided at other elementary locations. It is also currently the only building within the District that is still utilizing a modular classroom.
- **Recommendation:** Monitor and evaluate enrollment at Irving Elementary to provide for sufficient and adequate classroom space. Montana State University's long-range master plan calls for additional Married and Family Student Housing, which may increase the student enrollment. Additionally, increased Special Education enrollment has caused the current SPED space to become undersized.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## Financial Ability to Meet Facility Needs

Current nationally recognized criteria for annual facilities maintenance are based on a percentage of Capital Replacement Value (CRV) for the facility assets of an educational enterprise. The LRFP Committee previously adopted an annual maintenance goal of 3% of CRV, which is a mid-range standard intended to produce a “Managed Care” level of facilities stewardship. This means the District would invest 3% of the current replacement costs of BPS facilities in annual maintenance (things like repairs, preventative maintenance, but not cleaning/grounds care, purchased utilities, insurance fees, furniture and equipment, etc.). As the physical plant assets increase in number, complexity and age, there is a growing need for additional maintenance funding, regardless of the standard of stewardship adopted. The ability to fund ongoing maintenance and repair needs ensures on-going facilities upkeep and will minimize deterioration of building systems and envelope, thus requiring significant investments in the future to “catch up” on building preservation. Funding levels (and requests) are aligned to provide a goal to achieve a high quality educational environment for all BPS facilities.

The CRV tabulation for the District is contained in Appendix B along with further information regarding maintenance levels. Based upon the goal of providing 3% of CRV as an annual maintenance/repair goal, the annual investment needed would be:

	<u>CRV</u>	<u>3% of CRV</u>
Elementary District	\$160,000,000	\$4,800,000
High School District	\$127,000,000	\$3,810,000

Ongoing facility maintenance and repairs are accomplished primarily through funding from the General Fund and Building Reserve Levies. BPS applies for various grant opportunities as they arise to supplement BPS funding, one example being the Montana Department of Transportation – Transportation Alternatives (Formally known as Safe Routes to Schools) Grants. In addition to cleaning and grounds maintenance, Custodial staff perform basic, routine maintenance on systems and equipment (belts, filters, lubrication, etc.). BPS does not employ specific maintenance staff, such as carpenters, electricians or plumbers, to accomplish more in-depth maintenance or repair projects, and contracts with outside companies for that work.

The General Fund Facilities budget competes with the Educational funding priorities of BPS; therefore it is constrained in significant funding. It does not approach the 3% of CRV funding levels. A modest amount is generally budgeted to accomplish preventative maintenance and purchase of custodial supplies. The estimated General Fund Expenditures attributed towards maintenance for FY 16/17 Facilities budget is summarized below:

Supplemental Funding through voter approved Building Reserve Levies is necessary to generate sufficient funding towards maintaining BPS Facilities. Current Levies are:

Elementary District

\$1,500,000/Year      Maintenance/Repairs      Expires 2018 (Approved 2012)

High School District

\$1,650,000/Year      Maintenance/Repairs      Expires 2022 (Approved 2016)

The current status of available maintenance/repair funds in contrast with the 3% funding goal would be:

	<u>Elementary District</u>	<u>High School District</u>
3% of CRV Annual Goal	\$4,800,000	\$3,810,000
General Fund Contribution	(\$1,079,537)	(\$ 833,925)
Current Building Reserve Levies	(\$1,500,000)	(\$1,650,000)

## BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

Annual Shortfall of 3% CRV Goal      \$2,220,463                              \$1,326,075

Concurrent with identifying funding based upon a percentage of facility valuation, there should be defined needs that justify funding requests. Annually, Facilities submits a Capital Project Program to the BPS Board identifying projects to be accomplished over the coming year. Identification of the projects is a compilation of site based discussions along with condition assessments completed by Facilities. In 2015, Facilities Condition Inspection (FCI) of all facilities was updated and combined with information derived from previous FCI reports (A 2006 & 2012 FCI and the Statewide 2008 FCI). A team comprised of Architectural and Engineering specialists (Electrical, Mechanical & Structural) surveyed all of the BPS's facilities to produce the new report. A summary of the deficiencies is listed in Appendix C. The FCI does not identify costs associated with upgrading systems or building areas to meet current codes or functional requirements. It also does not reflect upgrading systems or materials. It only identifies costs to repair or maintain the existing state of the facility. For example, for an older building that had 50 year old single pane windows, the FCI will identify costs to fix cracked glass or broken latches, but not the cost to replace windows with current code compliant, energy efficient ones. So while it does provide a baseline for comparison among BPS or other state schools, repair costs are not reflective of true renovation/upgrade budgets. On March 3, 2014, the Board approved the current year Capital Projects Allocation. A snapshot of available Building Reserve Funds follows.

	<u>Elementary District</u>	<u>High School District</u>
January 2017 Funds Available	\$ 3,482,904	\$ 5,105,733
<u>Capital Project Allocation</u>	<u>\$ 2,839,875</u>	<u>\$ 1,008,375</u>
Building Reserve Balance	\$ 643,029	\$ 4,097,358

In summary, there is a significant defined backlog of work that demonstrates a continued need for maintenance/repair funds from both the General Fund and Building Reserve Levies. BPS will need to balance maintenance and repair needs with other priorities to ensure adequate funding is provided to achieve an appropriate level of care for its facilities.

Elementary Bond Funds in the amount of \$21,500,000 were approved by the voters in November 2015, for the construction of the Hawthorne Elementary Expansion and the Sacajawea Middle School expansion. In May of 2017, voter approved a \$125,000,000 bond initiative for the construction of a second high school along with upgrades and enhancements to the existing Bozeman High.

While a significant backlog of work remains, the community has consistently been very supportive in to approve supplemental funding that has greatly aided BPS's facilities stewardship.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## Student Capacity and Enrollment

The table below summarizes the current district enrollment along with available classroom space at all schools.

<b>BOZEMAN SCHOOL DISTRICT #7 STUDENT ENROLLMENT VERSUS CAPACITY</b>									
<u>School</u>	<u>Oct-16 Enrollment</u>	<u>Classroom availability and usage</u>					<u>OPI Capacity</u>	<u>(Over)/under OPI Capacity</u>	
		<u>Total Available</u>	<u>Used for Music/Art</u>	<u>Used for Technology</u>	<u>Used for Special Ed</u>	<u>Used for Regular Ed</u>		<u>OPI Capacity</u>	<u>(Over)/ under Capacity</u>
Meadowlark Elementary	505	26	1	1	1	23	532	27	
Emily Dickinson Elementary	483	25	1	-	3	21	486	3	
Hawthorne Elementary	355	17	2	-	1	14	324	(31)	
Hyalite Elementary	458	27	1	1	2	23	532	74	
Irving Elementary	273	14	1	-	-	13	301	28	
Longfellow Elementary	322	15	1	-	-	14	324	2	
Morning Star Elementary	496	25	1	-	1	23	532	36	
Whittier Elementary	292	17	1	-	2	14	324	32	
PreK-5 Subtotal	2,679	140	8	1	9	122	3,357	173	80%
Chief Joseph Middle School	758	44	7	1	4	32	780	22	
Sacajawea Middle School	682	54	7	1	4	42	1,023	341	
6-8 Subtotal	1,440	98	14	2	8	74	1,803	363	80%
Bozeman High School	2,118	114	2	1	10	86	2,400	282	88%
<b>DISTRICT-WIDE TOTAL</b>	<b>6,237</b>	<b>352</b>	<b>24</b>	<b>4</b>	<b>27</b>	<b>282</b>	<b>7,560</b>	<b>818</b>	<b>83%</b>

**Capacity Assumptions:**

1. OPI capacities are calculated using State OPI accreditation standard.
2. The values were normalized to assume 23.15 students per elementary room and 24.38 students per middle school room.
3. Adequate food services are assumed.
4. Space should be provided for Administration, Library Instruction, Health Enhancement, Music Instruction, Technology Education and Custodial Services.
5. All full-size classrooms (as defined) are assumed to be used.
6. Full-time Kindergarten is assumed for all K-5 schools.
7. For K-5 schools, full-size music, art and tech-ed spaces are counted as "full-size" classroom resources.
8. Aid use is presumed where reasonable to utilize functional (grade-progression) capacity.
9. Note that spaces are of variable quality/size (i.e., not all equal).
10. Functional (grade-progression) estimates allow for present Spec-Ed room use in all buildings.

The three numbers to keep in mind for the following section are the Elementary School OPI Capacity of 3,357, the 6-8 OPI Capacity of 1,803 and the High School OPI capacity of 2,400. The following tables outline past enrollment compared with past and present enrollment forecasts. On each of the Enrollment Projection Charts the year the projected enrollment exceeds the OPI capacity for the Elementary Schools, Middle Schools and High School are annotated. Within a year or so of these dates, new facilities would need to be constructed to remain below OPI capacity recommendations.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

8/9/17

**Bozeman Public Schools**  
Enrollment Projections  
Cohort Survival Calculated over 3 Years  
October 1,

Grade	CSR	2007-2016										Projected Enrollment									
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
4-yr old K	-	-	-	-	-	-	-	-	-	21	31	36	36	36	36	36	36	36	36	36	36
5-yr old K	101.50%	420	439	451	433	501	458	528	520	504	521	530	542	537	565	573	582	591	600	609	618
1	101.66%	402	443	439	472	448	505	462	521	525	531	530	539	551	566	574	583	592	601	610	619
2	101.60%	376	394	426	462	468	439	526	463	528	542	539	538	548	560	575	583	592	601	611	620
3	101.82%	387	379	398	444	443	491	452	513	484	546	552	549	548	558	570	585	594	603	612	622
4	100.65%	366	398	383	416	442	457	481	445	532	483	550	556	553	552	562	574	589	598	607	616
5	99.93%	391	365	396	396	415	451	458	484	443	530	483	550	556	553	552	562	574	589	598	607
PreK-5 Total		2,342	2,418	2,493	2,623	2,717	2,801	2,907	2,946	3,037	3,184	3,220	3,310	3,349	3,390	3,442	3,505	3,568	3,628	3,683	3,738
6	102.57%	358	413	380	417	408	415	467	469	489	462	544	495	564	570	567	566	576	589	604	613
7	103.35%	384	360	403	392	410	420	426	493	490	489	477	562	512	583	589	586	585	595	609	624
8	98.91%	402	392	384	406	397	416	423	413	493	489	484	472	556	506	577	583	580	579	589	602
6-8 Total		1,144	1,165	1,167	1,215	1,215	1,251	1,316	1,375	1,472	1,440	1,505	1,529	1,632	1,659	1,733	1,735	1,741	1,763	1,802	1,839
PreK-8 Total		3,486	3,583	3,660	3,838	3,932	4,052	4,223	4,321	4,508	4,624	4,725	4,839	4,981	5,049	5,175	5,240	5,309	5,391	5,485	5,577
9	125.14%	501	485	467	495	506	530	556	543	526	590	612	606	591	696	633	722	730	726	725	737
10	97.59%	477	483	473	450	468	486	491	522	537	526	576	597	591	577	679	618	705	712	709	708
11	93.94%	463	439	454	443	448	457	467	449	496	512	494	541	561	555	542	638	581	662	669	666
12	98.13%	472	446	427	430	422	436	449	459	437	490	502	485	531	551	545	532	626	570	650	657
9-12 Total		1,913	1,853	1,821	1,818	1,844	1,909	1,963	1,973	1,996	2,118	2,184	2,229	2,274	2,379	2,399	2,510	2,642	2,670	2,753	2,768
PreK-12 Total		5,399	5,436	5,481	5,656	5,776	5,961	6,186	6,294	6,505	6,742	6,909	7,068	7,255	7,428	7,574	7,750	7,951	8,061	8,238	8,345
# Change		135	23	67	102	46	170	131	183	223	237	167	159	187	173	146	176	201	110	177	107
% Change		2.60%	0.43%	1.25%	2.01%	0.84%	3.09%	2.31%	3.15%	3.72%	3.64%	2.48%	2.30%	2.65%	2.38%	1.97%	2.32%	2.59%	1.38%	2.20%	1.30%

Avg. CSR 102.06%

- Elementary #9 - Using the 3 year CSR elementary enrollment is projected to exceed the OPI functional capacity by 33 studnets in 2020.
- Middle School #3 - Using the 3 year CSR Middle School enrollment is projected to exceed OPI functional capacity by 36 studnets in 2026.
- Using the 3 year CSR High School enrollment is expected to reach 2379 in 2020, which is when High School 2 is scheduled to open.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

8/9/17

**Bozeman Public Schools**  
Enrollment Projections  
Cohort Survival Calculated over 5 Years  
October 1,

Grade	CSR	2007-2016										Projected Enrollment														
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026					
4-yr old K	-	-	-	-	-	-	-	-	-	-	-	-	-	21	31	36	36	36	36	36	36	36	36	36	36	36
5-yr old K	101.50%	420	439	451	433	501	458	528	520	504	521	530	542	557	565	573	582	591	600	609	618					
1	101.33%	402	443	439	472	448	505	462	521	525	531	528	537	549	564	573	581	590	599	608	617					
2	101.39%	376	394	426	462	468	439	526	463	528	542	538	535	544	557	572	581	589	598	607	616					
3	102.67%	387	379	398	444	443	491	452	513	484	546	556	552	549	559	572	587	597	605	614	623					
4	100.61%	366	398	383	416	442	457	481	445	532	483	549	559	555	552	562	576	591	601	609	618					
5	100.41%	391	365	396	396	415	451	458	484	443	530	485	551	561	557	554	564	578	593	603	612					
PreK-5 Total		2,342	2,418	2,493	2,623	2,717	2,801	2,907	2,946	3,037	3,184	3,222	3,312	3,351	3,390	3,442	3,507	3,572	3,632	3,686	3,740					
6	102.25%	358	413	380	417	408	415	467	469	489	462	542	496	563	574	570	566	577	591	606	617					
7	103.13%	384	360	403	392	410	420	426	493	490	489	476	559	512	581	592	588	584	595	609	625					
8	99.78%	402	392	384	406	397	416	423	413	493	489	488	475	558	511	580	591	587	583	594	608					
6-8 Total		1,144	1,165	1,167	1,215	1,215	1,251	1,316	1,375	1,472	1,440	1,506	1,530	1,633	1,666	1,742	1,745	1,748	1,769	1,809	1,850					
PreK-8 Total		3,486	3,583	3,660	3,838	3,932	4,052	4,223	4,321	4,509	4,624	4,728	4,842	4,984	5,056	5,184	5,252	5,320	5,401	5,495	5,590					
9	128.51%	501	485	467	495	506	530	556	543	526	590	628	627	610	717	657	745	760	754	749	763					
10	96.29%	477	483	473	450	468	486	491	522	537	526	568	605	604	587	690	633	717	732	726	721					
11	95.11%	463	439	454	443	448	457	467	449	496	512	500	540	575	574	558	656	602	682	696	690					
12	98.00%	472	446	427	430	422	436	449	459	437	490	502	490	529	563	562	547	643	590	668	682					
9-12 Total		1,913	1,853	1,821	1,818	1,844	1,909	1,963	1,973	1,996	2,118	2,198	2,262	2,318	2,441	2,467	2,581	2,722	2,758	2,839	2,856					
PreK-12 Total		5,399	5,436	5,481	5,656	5,776	5,961	6,186	6,294	6,505	6,742	6,926	7,104	7,302	7,497	7,651	7,833	8,042	8,159	8,334	8,446					
# Change		37	45	175	120	185	225	108	211	237	184	178	198	195	154	182	209	117	175	112						
% Change		0.69%	0.83%	3.19%	2.12%	3.20%	3.77%	1.75%	3.35%	3.64%	2.73%	2.57%	2.79%	2.67%	2.05%	2.38%	2.67%	1.45%	2.14%	1.34%						

Avg. CSR 102.38%

- Elementary #9 - Using the 5 year CSR elementary enrollment is projected to exceed the OPI functional capacity by 33 studnets in 2020.
- Middle School #3 - Using the 5 year CSR Middle School enrollment is projected to exceed OPI functional capacity by 47 studnets in 2026.
- Using the 5 year CSR High School enrollment is expected to reach 2,441 in 2020, which is when High School 2 is scheduled to open.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

8/9/17

**Bozeman Public Schools**  
Enrollment Projections  
Cohort Survival Calculated over 10 Years  
October 1,

Grade	CSR	Historical Data										Projected Enrollment										
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
4-yr old K	-	-	-	-	-	-	-	-	-	-	21	31	36	36	36	36	36	36	36	36	36	36
5-yr old K	101.50%	394	420	439	451	433	501	458	528	520	504	521	530	542	557	565	573	582	591	600	609	618
1	102.23%	366	402	443	439	472	448	505	462	521	525	531	533	542	554	569	578	586	595	604	613	623
2	100.82%	382	376	394	426	462	468	439	526	463	528	542	535	537	546	559	574	583	591	600	609	618
3	101.66%	367	387	379	398	444	443	491	452	513	484	546	551	544	546	555	568	584	593	601	610	619
4	101.08%	372	366	398	383	416	442	457	481	445	532	483	552	557	550	552	561	574	590	599	607	617
5	100.95%	340	391	365	396	396	415	451	458	484	443	530	488	557	562	555	552	566	579	596	605	613
PreK-5 Total		2,221	2,342	2,418	2,493	2,623	2,717	2,801	2,907	2,946	3,037	3,184	3,225	3,315	3,351	3,391	3,447	3,511	3,575	3,636	3,689	3,744
6	103.46%	389	358	413	380	417	408	415	467	469	489	462	548	505	576	581	574	576	586	599	617	626
7	101.40%	397	384	360	403	392	410	420	426	493	490	489	468	556	512	584	589	582	584	594	607	626
8	101.10%	403	402	392	384	406	397	416	423	413	493	489	494	473	562	518	590	595	588	590	601	614
6-8 Total		1,189	1,144	1,165	1,167	1,215	1,215	1,251	1,316	1,375	1,472	1,440	1,510	1,534	1,650	1,683	1,753	1,758	1,783	1,825	1,866	
PreK-8 Total		3,410	3,486	3,583	3,660	3,838	3,932	4,052	4,223	4,321	4,509	4,624	4,735	4,849	5,001	5,074	5,200	5,264	5,333	5,419	5,514	5,610
9	126.02%	493	501	485	467	495	506	530	556	543	526	590	616	623	596	708	653	744	750	741	744	757
10	96.31%	499	477	483	473	450	468	486	491	522	537	526	568	593	600	574	682	629	717	722	714	717
11	94.76%	479	463	439	454	443	448	457	467	449	496	512	498	538	562	569	544	646	596	679	684	677
12	97.21%	455	472	446	422	430	422	436	449	459	437	490	498	484	523	546	553	529	628	579	660	665
9-12 Total		1,926	1,913	1,853	1,821	1,818	1,844	1,909	1,963	1,973	1,996	2,118	2,180	2,238	2,281	2,397	2,432	2,548	2,691	2,721	2,802	2,816
PreK-12 Total		5,336	5,399	5,436	5,481	5,656	5,776	5,961	6,186	6,294	6,505	6,742	6,915	7,087	7,282	7,471	7,632	7,812	8,024	8,140	8,316	8,426
# Change		63	37	45	175	120	185	225	108	211	237	173	172	195	189	161	180	212	116	176	110	
% Change		1.18%	0.69%	0.83%	3.19%	2.12%	3.20%	3.77%	1.75%	3.35%	3.64%	2.57%	2.49%	2.75%	2.60%	2.15%	2.36%	2.71%	1.45%	2.16%	1.32%	
Avg. CSR	102.19%																					

- Elementary #9 - Using the 10 year CSR elementary enrollment is projected to exceed the OPI functional capacity by 34 students in 2020.
- Middle School #3 - Using the 10 year CSR Middle School enrollment is projected to exceed OPI functional capacity by 22 students in 2025.
- Using the 10 year CSR High School enrollment is expected to reach 2397 in 2020, which is when High School 2 is scheduled to open.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## Debt Limit and Bonding Capacity

**Bozeman Public Schools  
Debt Limit Analysis**

Year Ended	Estimated Tax Base	Estimated Debt Limit	New Issue	Elementary		Authorized Building Reserve	QZAB Bonds	Estimated Debt Margin
				Ending Bal Outstanding Bonds	Annual Payment			
2009	111,162,065	55,581,033	-	38,580,000	-	5,340,000	1,922,819	9,738,214
2010	117,329,369	58,664,685	-	36,425,000	-	-	1,584,178	20,655,507
2011	121,072,738	60,536,369	-	34,215,000	-	-	1,233,206	25,088,163
2012	122,688,282	61,344,141	-	31,920,000	-	-	869,451	28,554,690
2013	124,859,611	65,771,565	26,375,000	49,490,000	-	-	521,791	15,759,774
2014	128,394,150	69,895,920	-	52,555,000	-	-	271,791	17,069,129
2015	131,762,887	149,295,700	-	49,490,000	-	-	-	99,805,700
2016	127,702,815	151,568,800	21,500,000	68,125,000	-	-	-	83,443,800
2017	133,379,457	159,292,770	-	64,310,000	-	-	-	94,982,770
2018	151,994,908	166,941,000	-	59,360,000	4,950,000	-	-	107,581,000
2019 *	155,794,781	155,794,781	-	54,675,000	4,685,000	-	-	101,119,781
2020 *	159,689,650	159,689,650	-	50,450,000	4,225,000	-	-	109,239,650
2021 *	163,681,891	163,681,891	-	46,095,000	4,355,000	-	-	117,586,891
2022 *	167,773,939	167,773,939	-	42,665,000	3,430,000	-	-	125,108,939
2023 *	171,968,287	171,968,287	-	39,015,000	3,650,000	-	-	132,953,287
2024 *	176,267,494	176,267,494	-	34,285,000	4,730,000	-	-	141,982,494
2025 *	180,674,182	180,674,182	-	29,370,000	4,915,000	-	-	151,304,182
2026 *	185,191,036	185,191,036	-	24,275,000	5,095,000	-	-	160,916,036
2027 *	189,820,812	189,820,812	-	20,425,000	3,850,000	-	-	169,395,812
2028 *	194,566,333	194,566,333	-	16,415,000	4,010,000	-	-	178,151,333
2029 *	199,430,491	199,430,491	-	13,555,000	2,860,000	-	-	185,875,491
2030 *	204,416,253	204,416,253	-	10,585,000	2,970,000	-	-	193,831,253
2031 *	209,526,659	209,526,659	-	7,495,000	3,090,000	-	-	202,031,659
2032 *	214,764,826	214,764,826	-	4,310,000	3,185,000	-	-	210,454,826
2033 *	220,133,947	220,133,947	-	3,300,000	1,010,000	-	-	216,833,947
2034 *	225,637,295	225,637,295	-	2,240,000	1,060,000	-	-	223,397,295
2035 *	231,278,228	231,278,228	-	1,140,000	1,100,000	-	-	230,138,228
2036 *	237,060,183	237,060,183	-	-	1,140,000	-	-	237,060,183
2037 *	242,986,688	242,986,688	-	-	-	-	-	242,986,688

\* Assumes a 2.5% increase in the tax base per year. Building Reserve is excluded from the Debt Margin calculation as of October 1, 2009.

Changed by the Legislature in 2015, the current limit on debt was raised to 100% of the Estimated Tax Base. For example, in 2017 the Debt Limit is \$159,292,770. The District’s outstanding debt in 2017 is projected at \$64,310,000, which leaves \$94,982,770 of debt capacity. This is the amount the Elementary District could sell bonds for any new construction. Sufficient Debt Margin would be available for both the projected Elementary #9 and Middle School #3.

A new Elementary School #9, based upon projections, would not be needed until after 2020. The estimate for a new Elementary School would be approximately \$25,000,000. The combined estimate for both a new middle school and a new elementary school would be approximately \$60,000,000, so if a new Middle School was built, available Debt Margin to construct a new Elementary School would be available.

Other projects that could have an impact on available Debt Margin could involve the addition of 2 classrooms at each of Morning Star and Emily Dickinson. Their original designs allowed for expansion and it is estimated that each project would be about \$1,500,000.

Similar to the Elementary District discussion, the chart below shows the High School District’s Estimated Debt Margin.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## Bozeman Public Schools Debt Limit Analysis

High School								
Year Ended	Estimated Tax Base	Estimated Debt Limit	New Issue	Ending Bal Outstanding Debt	Annual Payment	Authorized Building Reserve	QZAB Bonds	Estimated Debt Margin
2009	130,543,804	65,271,902	-	36,790,000	-	180,000	-	28,301,902
2010	138,744,445	69,372,223	-	35,260,000	-	-	-	34,112,223
2011	143,508,070	71,754,035	-	33,670,000	-	-	-	38,084,035
2012	145,618,673	72,809,337	-	32,010,000	-	-	-	40,799,337
2013	148,311,838	74,155,919	-	58,550,000	-	-	-	15,605,919
2014	152,997,133	76,498,567	-	28,510,000	-	-	-	47,988,567
2015	157,393,739	157,753,400	-	26,220,000	-	-	-	131,533,400
2016	152,115,661	152,115,661	-	24,255,000	1,965,000	-	-	127,860,661
2017	159,327,210	177,962,400	-	22,165,000	2,090,000	-	-	155,797,400
2018	182,556,412	189,157,540	100,000,000	119,990,000	2,175,000	-	-	69,167,540
2019 *	187,120,322	187,120,322	-	114,255,000	5,735,000	-	-	72,865,322
2020 *	191,798,330	191,798,330	-	108,315,000	5,940,000	-	-	83,483,330
2021 *	196,593,289	196,593,289	-	102,170,000	6,145,000	-	-	94,423,289
2022 *	201,508,121	201,508,121	-	95,860,000	6,310,000	-	-	105,648,121
2023 *	206,545,824	206,545,824	-	89,270,000	6,590,000	-	-	117,275,824
2024 *	211,709,469	211,709,469	-	82,380,000	6,890,000	-	-	129,329,469
2025 *	217,002,206	217,002,206	-	75,185,000	7,195,000	-	-	141,817,206
2026 *	222,427,261	222,427,261	-	67,670,000	7,515,000	-	-	154,757,261
2027 *	227,987,943	227,987,943	-	62,715,000	4,955,000	-	-	165,272,943
2028 *	233,687,641	233,687,641	-	57,510,000	5,205,000	-	-	176,177,641
2029 *	239,529,832	239,529,832	-	52,080,000	5,430,000	-	-	187,449,832
2030 *	245,518,078	245,518,078	-	46,435,000	5,645,000	-	-	199,083,078
2031 *	251,656,030	251,656,030	-	40,555,000	5,880,000	-	-	211,101,030
2032 *	257,947,431	257,947,431	-	34,445,000	6,110,000	-	-	223,502,431
2033 *	264,396,117	264,396,117	-	28,090,000	6,355,000	-	-	236,306,117
2034 *	271,006,020	271,006,020	-	21,480,000	6,610,000	-	-	249,526,020
2035 *	277,781,170	277,781,170	-	14,600,000	6,880,000	-	-	263,181,170
2036 *	284,725,699	284,725,699	-	7,445,000	7,155,000	-	-	277,280,699
2037 *	291,843,842	291,843,842	-	-	7,445,000	-	-	291,843,842
2038 *	299,139,938	299,139,938	-	-	-	-	-	299,139,938

\* Assumes a 2% increase in the tax base per year. Loss of the Ophir tax base in 2008-09. Building Reserve is excluded from the Debt Margin calculation as of October 1, 2009.

A total of \$100,000,000 was sold to support the construction of the second high school as reflected in the 2018 Debt Limit Analysis. The authorization of this bond reduces the Available Debt to \$69,167,540. An additional \$25,000,000 will need to be sold to support the remainder of the proposed expansion work at the existing Bozeman High School.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## Developed and Undeveloped Property Inventory

DEVELOPED SITES BY OWNERSHIP (ACRES)					
Location	Both Districts	Elementary District	High School District	Jurisdiction	
				City	County
High School Complex - 205 North 11th Bozeman High School			27.080 3.980 3.020 1.907 11.230	X	
BHS - 1214 Durston Road	1.425				
BHS - 1218 Durston Road	1.910				
BHS - 1306 Durston Road	2.010				
BHS - 1406 Durston Road			4.907		
Support Services Building	7.853				
Willson School - 404 West Main St			2.486 0.116 0.118	X	
Bus Barn Site - 3425 North 27th Ave	5.0			X	
Chief Joseph Middle School - 4255 Kimberwicke St		26.990		X	
Sacajawea Middle School - 3525 South 3rd Ave		28.8		X	
Meadowlark Elementary - 4415 Durston Rd		10.0		X	
Emily Dickinson Elementary 2435 Annie St		9.643		X	
Hawthorne Elementary - 114 North Rouse Ave		2.535		X	
Hyalite Elementary - 3600 West Babcock St		10.947		X	
Irving Elementary - 611 South 8th Ave		1.833		X	
Longfellow Elementary - 516 South Tracey Ave		1.246 0.288 0.186		X	
Morning Star Elementary - 830 Arnold St		9.713		X	
Whittier Elementary - 511 North 5th Ave		1.668 0.725 0.350		X	
Sub Total	18.198	104.9	54.8		
UNDEVELOPED SITES BY OWNERSHIP (ACRES)					
North 27th Ave. (Bus Barn Site Balance)	12.679			X	
Kagy & Highland		9.150			X
Patterson Road			30.050		X
Emerson (Lawn Area)		0.870		X	
Durston Road/Cottonwood (Balance of Meadowlark Elementary Site)		32.935		X	
Cottonwood/Stucky			55.865		X
[ Projected Loss from MDT R/W Acquisition 2.610 acre]			1.470		
Chief Joseph Middle School (Two undeveloped lots)		1.000 1.000		X	
Cottonwood & Oak - Future HS#2			36.896		X
Sub Total	12.7	45.0	124.3		
Total	30.9	149.8	179.1		
Total District Acreage		359.8			

## BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

The above chart describes the current BPS property inventory. For the developed sites, the following are current or potential developments:

- BHS – Land Adjacent to Durston Road: Facilities for future Administrative/District Needs
- Emily Dickinson: Expand by 2 classrooms
- Morning Star Elementary: Expand by 2 classrooms
- Sacajawea Middle School: Construct Back Gym with additional classrooms (Construction is ongoing and will be completed by August 2017)
- Hawthorne Elementary School: Building Addition to replace portables/reconfiguration (Construction was completed in Summer 2017)
- Irving Elementary: Expand to accommodate SPED programs

Of the four smaller schools, Hawthorne, Irving and Whittier had mechanical and electrical upgrades that in some cases allowed for increased educational and/or administrative space. Longfellow had a similar expansion that was completed in 2014. Due to their small land areas, further expansion at the other small sites is complicated by the ratio of students and available property for outdoor education and play space.

Consideration should be given to adding two classrooms each to Emily Dickinson and Morning Star Elementary schools to equal Hyalite and Meadowlark Elementary Schools. Elementary District's school attendance boundaries have been realigned due to the addition of Meadowlark and these additions will assist in providing additional functional usage consistent with the other schools and provide some geographic relief to the student enrollment at each school. Further analysis and investigation should be given to Irving relating to potential enrolment increase from MSU parents. There is also an added need to accommodate an increase in SPED students.

Sacajawea Middle School's expansion is nearing completion. This will put them on an equal footing with Chief Joseph Middle School. The cafeteria is used for physical education as well as 4 regular classrooms. Construction will allow regaining these 4 rooms back for regular classroom instruction. The expansion has been identified as a stopgap measure to the impending need for a third middle school. The relative cost of this project related to the potential increase in student classroom capacity was analyzed, and it was determined that the expansion provided the best-cost benefit vs. the construction of a third middle school.

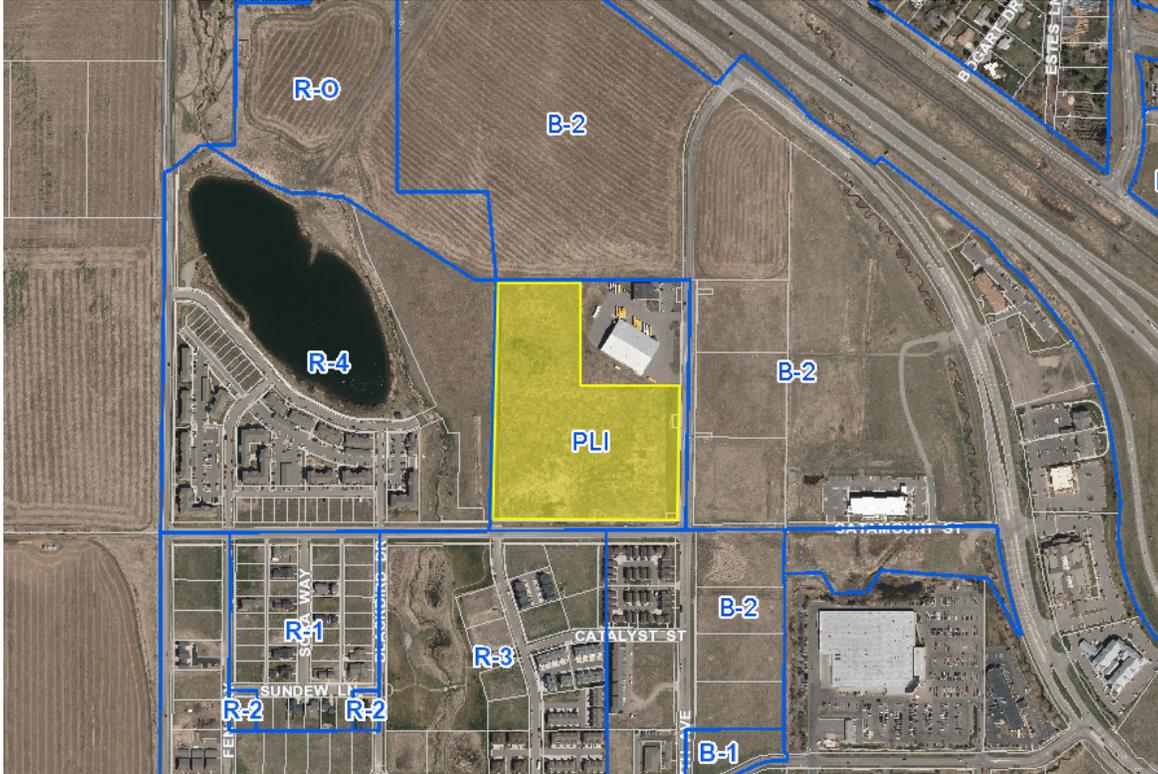
## BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

For the undeveloped sites, the following are the recommendations as developed by the Long Range Facilities Planning Committee:

Parcel: **North 27th Ave (Bus Barn Balance Site)**. 12.679 Acres.

Adjacent Zoning: R-4, R-O, B-2, R-3.

The undeveloped portion of the North 27<sup>th</sup> Avenue site was initially purchased as a potential elementary school site. Current development trends lend this location to being more in a commercial area.



### Weighted Recommendations:

1. Wait until future development to determine best use of this property.
2. Sell or trade this property for a more desirable elementary school location or to accomplish debt payment reduction.
3. Utilize for District Assisted Staff Housing incorporating mixed used development. Explore utilizing a public-private partnership development strategy.
4. Retain this property to be utilized as a future Elementary School Site.

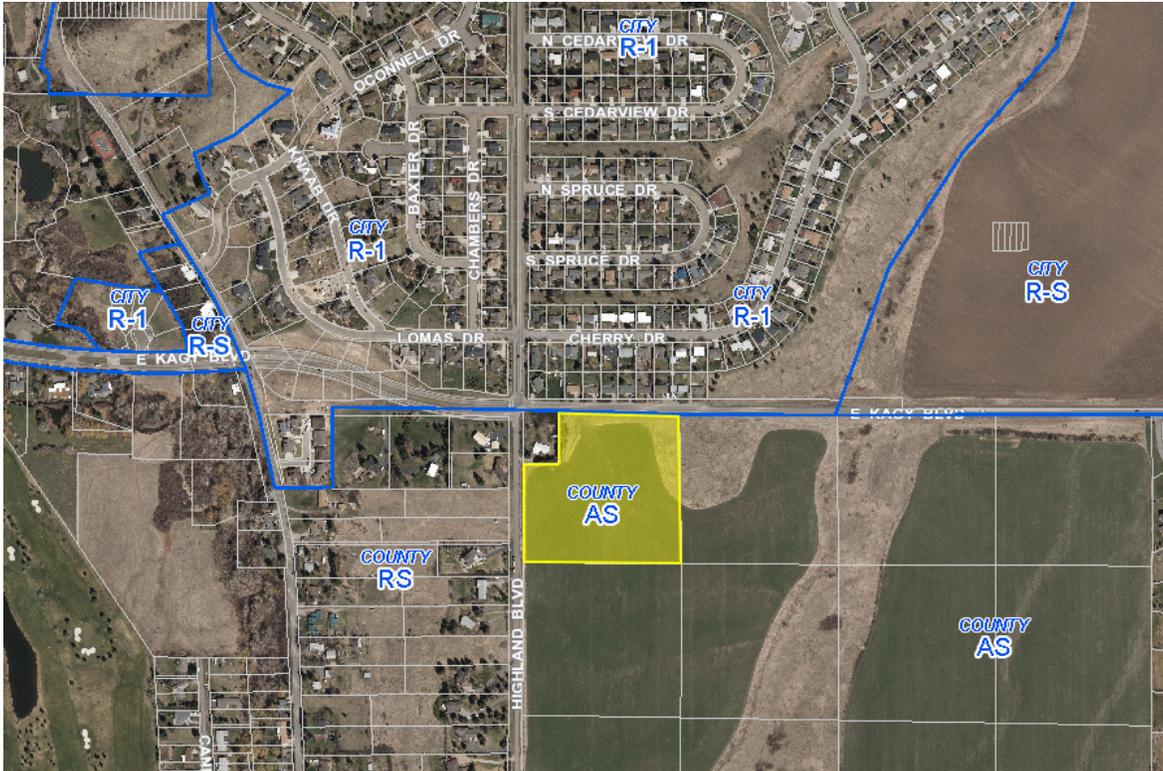
## BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

Parcel: **Kagy & Highland.** 9.150 Acres.

Property currently resides in the county. Deed restriction allows seller to repurchase property from District for original purchase price (\$38,000) if not used for a school by December 31, 2021.

Adjacent City Zoning (Directly to the North): R-1. Agricultural- Suburban County Zoning.

The property at Kagy and Highland was donated to the District in 1976 for “school purposes”. Should the property not be used as such, it would revert back to the original donor for the original valuation of the property. There is a time limit that has been extended several times for the Elementary District to use this property, with the current extension set to expire on December 31, 2021. This may or may not be an appropriate site for Elementary #9, but at this point it is difficult to forecast. This site should be kept in mind for any BPS needs or obtain future extensions on usage if agreeable to the original donors.



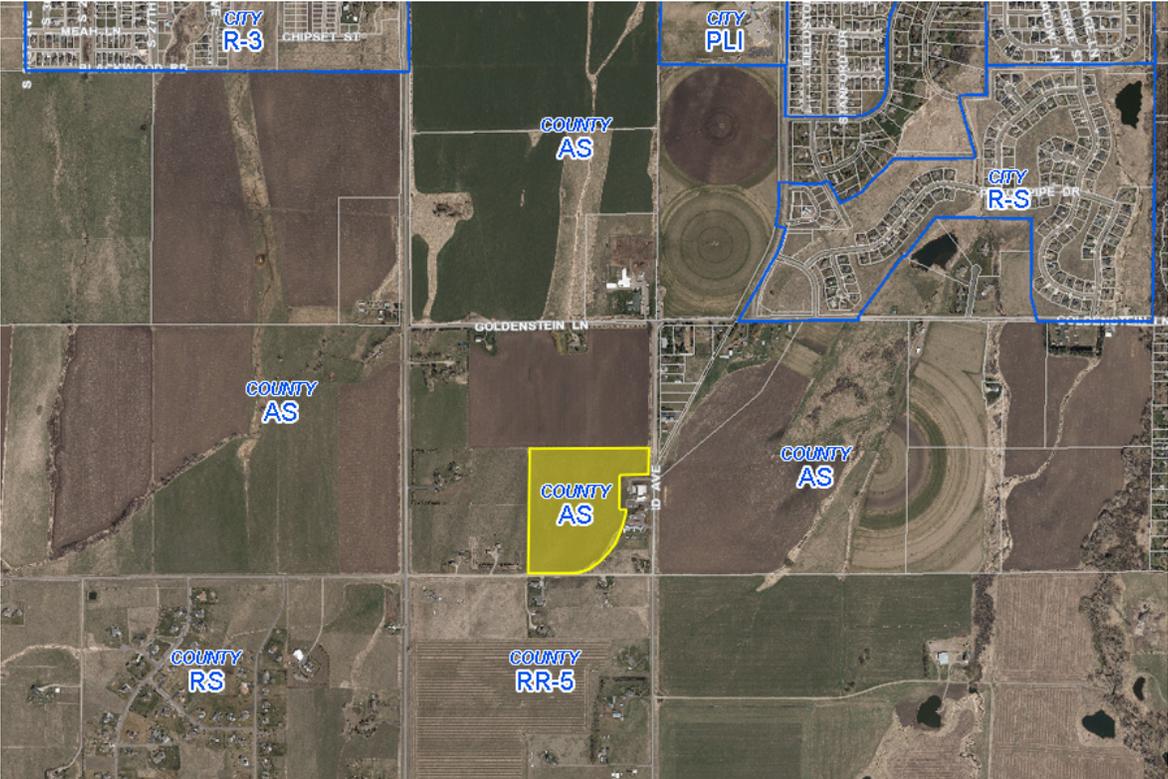
### Weighted Recommendations:

1. Work with original seller soon to extend the deed restriction and retain this parcel as a future elementary site.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

Parcel: **Patterson Road**. 30.05 Acres.  
Property currently resides within the County - Zoned Agricultural-Suburban.

Patterson Road site was originally 30 acres, but two acres was sold to the Sourdough Fire Department to assist in their site development, resulting in the property size being reduced to 28 acres. Future development in this area will dictate the future utilization of this site. Or it could be considered for trade and/or sale should market conditions warrant; even a sale to the Elementary District to satisfy a future elementary school should there be sufficient residential development in the area.



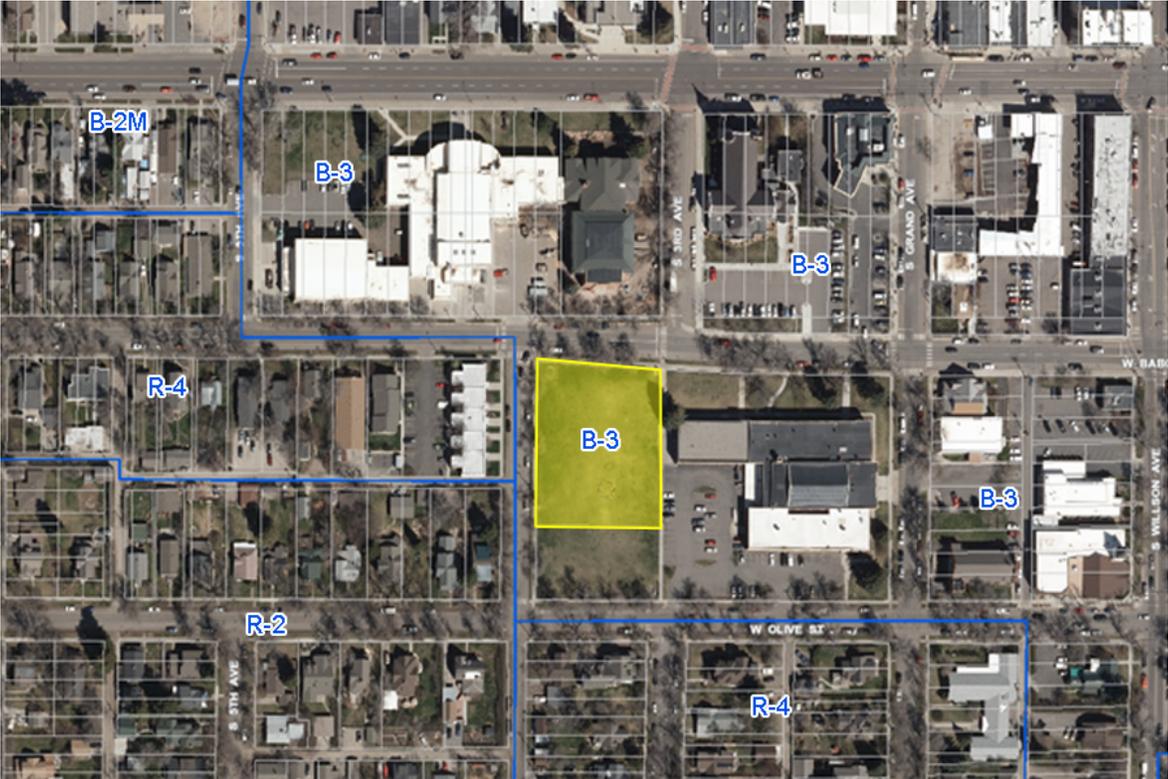
Weighted Recommendations:

1. Subdivide for sale (county subdivision laws apply), retaining 10 acres for a potential elementary school site. Use the proceeds to accomplish debt reduction or to acquire site with shorter term potential.
2. Sell outright and use proceeds or trade for site with shorter term potential.
3. Retain entire parcel for future needs.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

Parcel: **Emerson Lawn**. 0.870 Acres. Adjacent Zoning R-4, R-2, B3.

The lawn area at the Emerson site is residual property that was not sold when the Elementary District sold the Emerson Elementary School. The Willson custodian maintains this property (cleaning, grounds maintenance, etc.) and BPS requires facility use agreements for Emerson/community use. As Elementary District does not have an educational use for this property, consideration should be given to declaring it surplus and placing it up for sale.



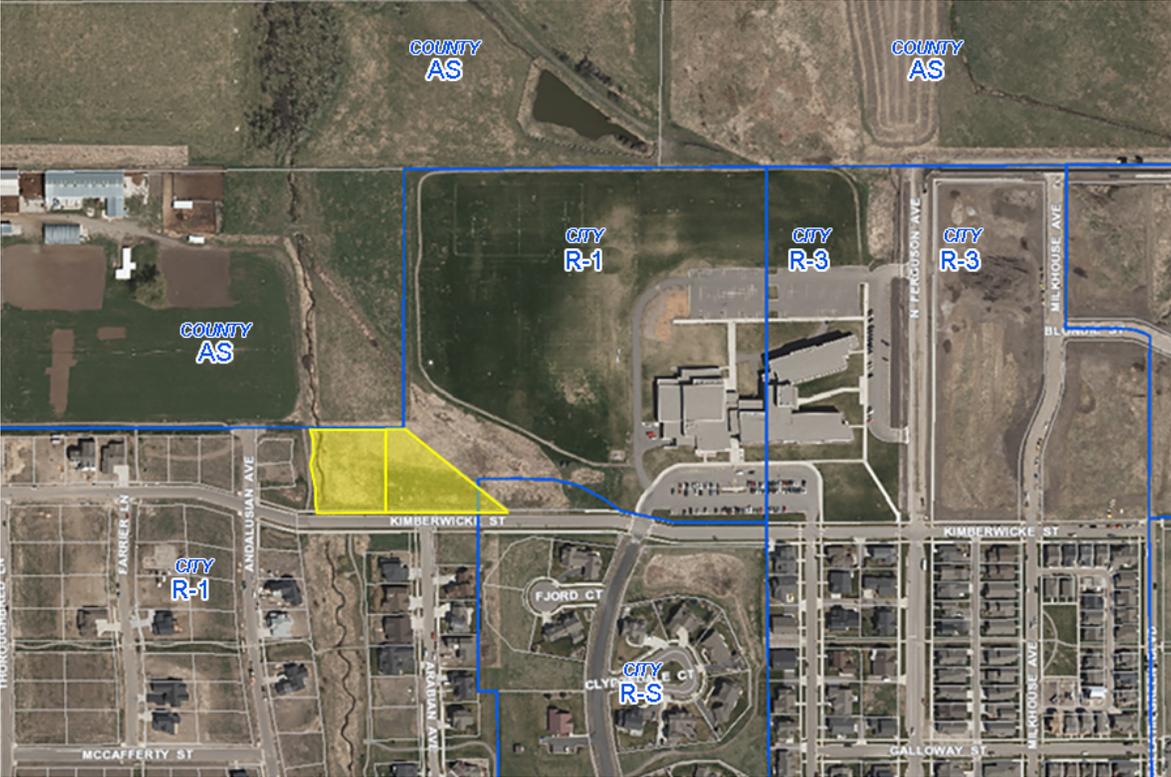
Weighted Recommendations:

1. Sell, lease, or trade parcel to acquire a suitable property for the future development of Elementary #9 or Middle School #3 or accomplish debt reduction. Appraised in 2017 for \$2,275,000.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

Parcel: **Chief Joseph Middle School (two undeveloped lots).** Two - 1.00 acre undeveloped parcels. Adjacent Zoning R-1, R-S.

When Chief Joseph Middle School was developed, two lots of an acre each were separately surveyed into parcels. Both are along Kimberwicke Street and back up to designated wetland space. It is not likely that these would be developed and they require continued grounds maintenance. Consideration should be given to monitoring the market to sell or trade these parcels to meet other Elementary District needs.



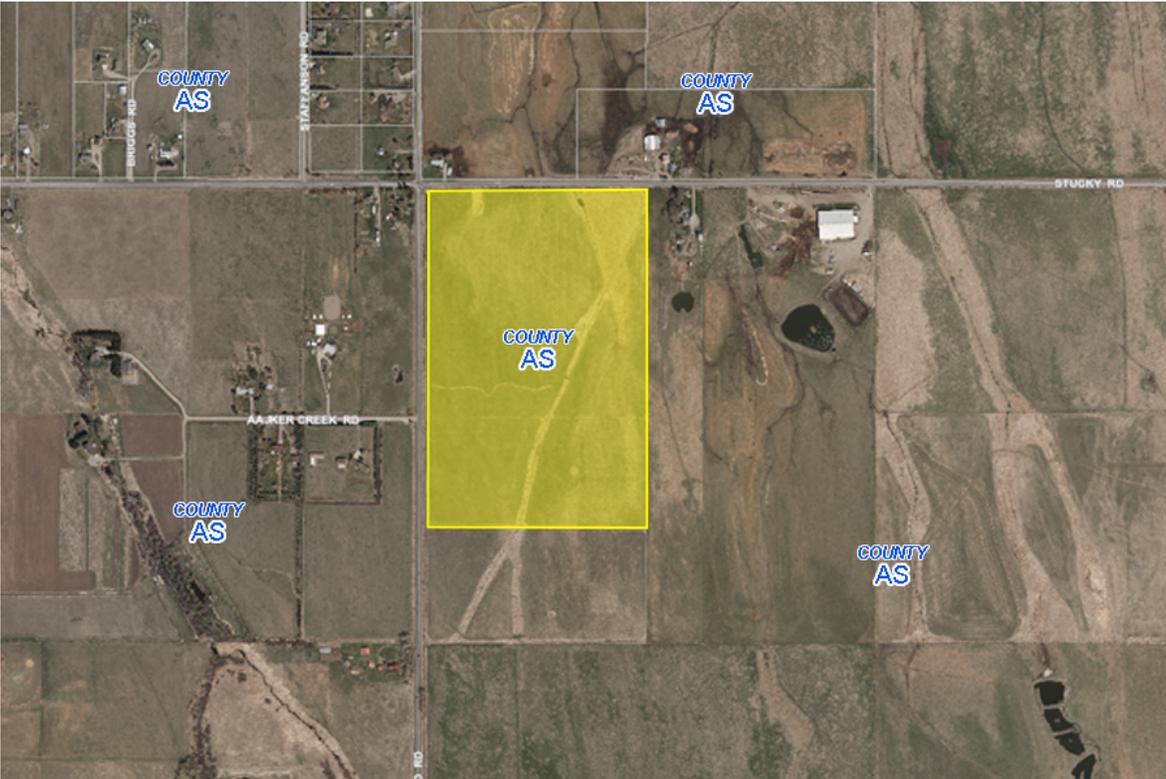
Weighted Recommendations:

- 1. Retain for future use.
- 2. Sell or trade property with funds being used to acquire a suitable property for Elementary #9 or to reduce elementary debt. Appraised in 2015 for \$115,000 each.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

Parcel: **Cottonwood/Stucky**. 57.335 Acres. Parcel currently resides entirely within the County. Zoned Agricultural-Suburban.

The vacant 2<sup>nd</sup> High School property at Cottonwood/Stucky is not currently needed as a second high school site was selected adjacent to Meadowlark Elementary. Current development trends and projections do not foresee significant private development in the area that would install upgraded utility systems (namely sewer) to support the school development.



Weighted Recommendations:

1. Retain this property for the possible development of HS#3, MS#3 and/or Future Elem.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## Facility Appropriateness to Meet Student Needs

Facility maintenance, repair and new construction are completed in a manner that considers gender, special needs and ADA compliance. For example, renovations to restrooms are consistent between girls/boys, women/men staff, ADA considerations and quality of materials. New construction projects are compliant with current codes regarding the same. Facility requirements for special needs students are completed as issues arise. Overall decisions are made considering impacts/improvements to the student/staff educational environment as a first priority.

The Facilities Department seeks information to identify deficiencies to develop an implementation plan for needed corrections. For example, updates to the Asbestos Hazard Emergency Response Act (AHERA) documents that monitor asbestos location/condition in schools, completion of Lead Base Paint inventories for older schools, Integrated Pest Management (IPM) programs to reduce/eliminate pesticide application in/around schools, participation with the Federal Environmental Protection Agency "Tools for Schools" to gain recommendations related to measures to improve indoor air quality, cooperating with Department of Labor assist visits to identify workplace hazards, work towards standardizing environmentally friendly cleaning products, periodic inspections of school facilities by outside consultants that address building, roof and asphalt conditions and development of an annual Capital Project Program for repairs all contribute towards efforts directed at improving the educational environment for staff and students.

## Facilities Staffing

The Facilities Department is staffed with the following positions:

- Director of Facilities/Owner's Construction Representative
- Facilities Project Manager
- Building Systems Energy Manager
- Custodial and Grounds Supervisor
- Secretary/Bookkeeper

Supplementing the above are the custodians at each of the schools. The custodial staff has a dual role in that they report to the school principals with respect to interior cleaning/grounds care and to Facilities with respect to building maintenance responsibilities. The current staffing at each school is:

○ Bozeman High School	5.0 FTE Daytime, 11.25 FTE Evening, 1 FTE Events
○ Chief Joseph Middle School	2 FTE Daytime, 3.5 FTE Evening
○ Sacajawea Middle School	2 FTE Daytime, 3.5 FTE Evening
○ Emily Dickinson Elementary School	1 FTE Daytime, 1.5 FTE Evening
○ Hawthorne Elementary School	1 FTE Daytime, 0.5 FTE Evening
○ Hyalite Elementary School	1 FTE Daytime, 1.5 FTE Evening
○ Irving Elementary School	1 FTE Daytime, 0.5 FTE Evening
○ Meadowlark Elementary School	1 FTE Daytime, 1.5 FTE Evening
○ Morning Star Elementary School	1 FTE Daytime, 1.5 FTE Evening
○ Whittier Elementary School	1 FTE Daytime, 0.5 FTE Evening
○ Willson School Building	1 FTE Daytime, 1.5 FTE Evening
○ Support Services Building	0 FTE Daytime, 0.75 FTE Evening
○ Roving Custodians	5 FTE – Variable schedule
○ Substitute Custodians	0 FTE – On Call Substitutes

The main office staff orchestrates the efforts of the Department in overseeing all maintenance, repair and new construction work. The District does not have a maintenance staff of carpenters, plumbers, electricians, etc. and contracts out all repairs & maintenance, except that which is within the capabilities and time constraints of custodial staff. Most schools have limited custodial staffs during the day with the bulk of custodians working in the evening where the majority of cleaning, etc. is accomplished to ready the school for the next day.

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

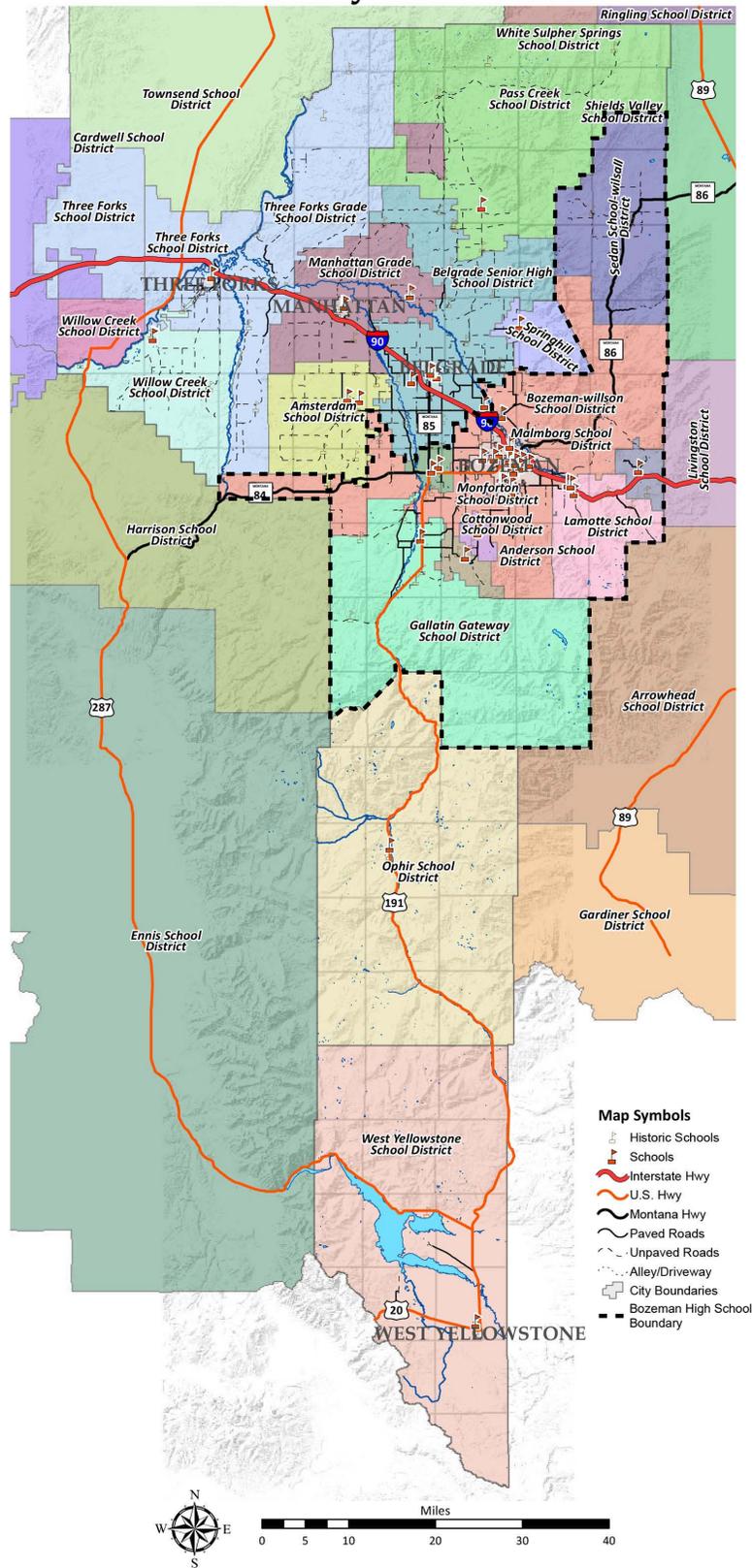
## APPENDICIES

- A Elementary, Middle and High School District Boundaries
- B Current Replacement Value (CRV) Tabulations And Information
- C Facilities Condition Inventory (FCI) Summary

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## High School District Boundary

### Gallatin County School Districts



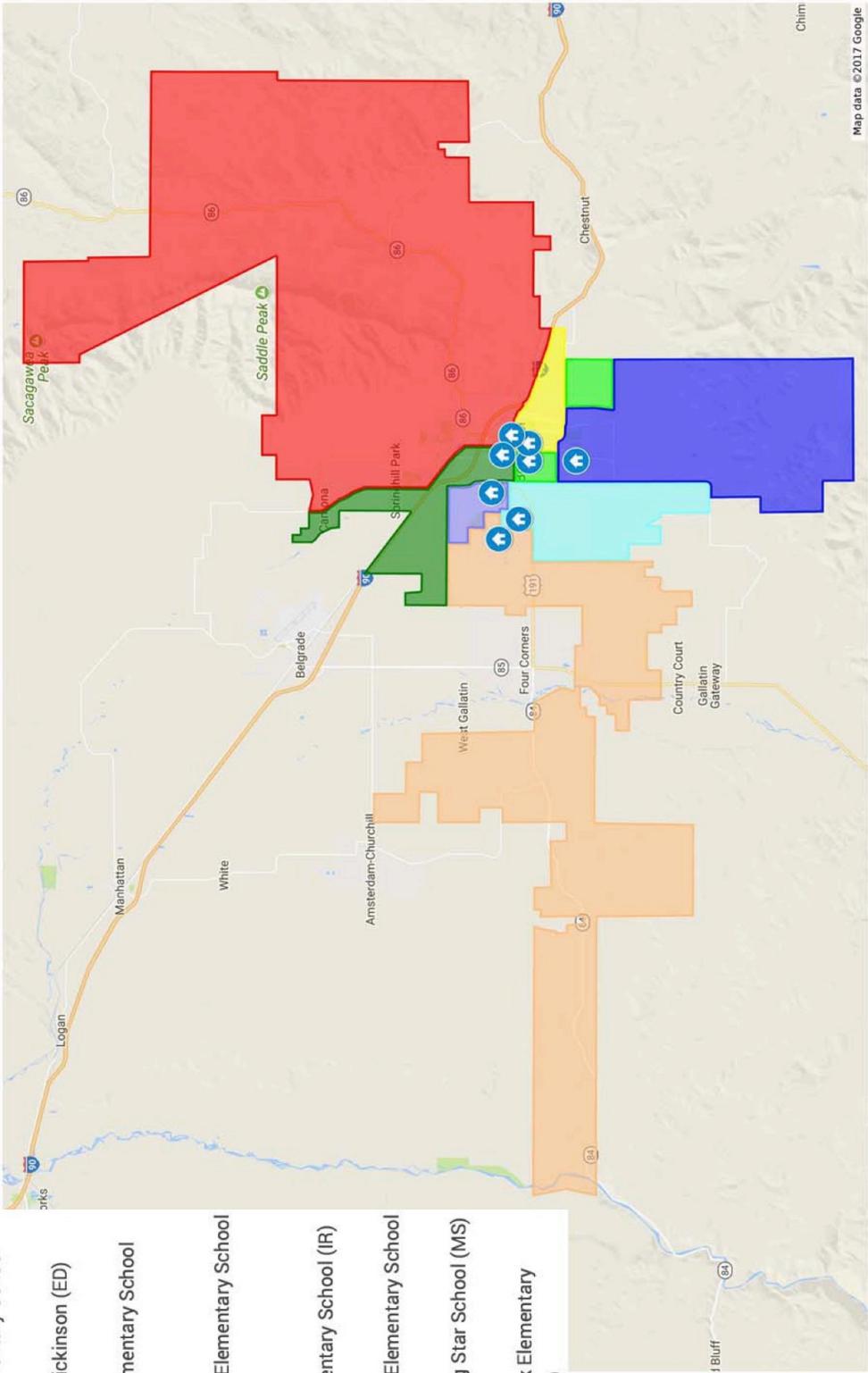
# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## Elementary District Boundary

### Bozeman School District Elementary School Boundaries

Legend

-  Hyalite Elementary School (HY)
-  Emily Dickinson (ED)
-  Whittier Elementary School (WH)
-  Hawthorne Elementary School (HA)
-  Irving Elementary School (IR)
-  Longfellow Elementary School (LO)
-  Morning Star School (MS)
-  Meadowlark Elementary School (ML)



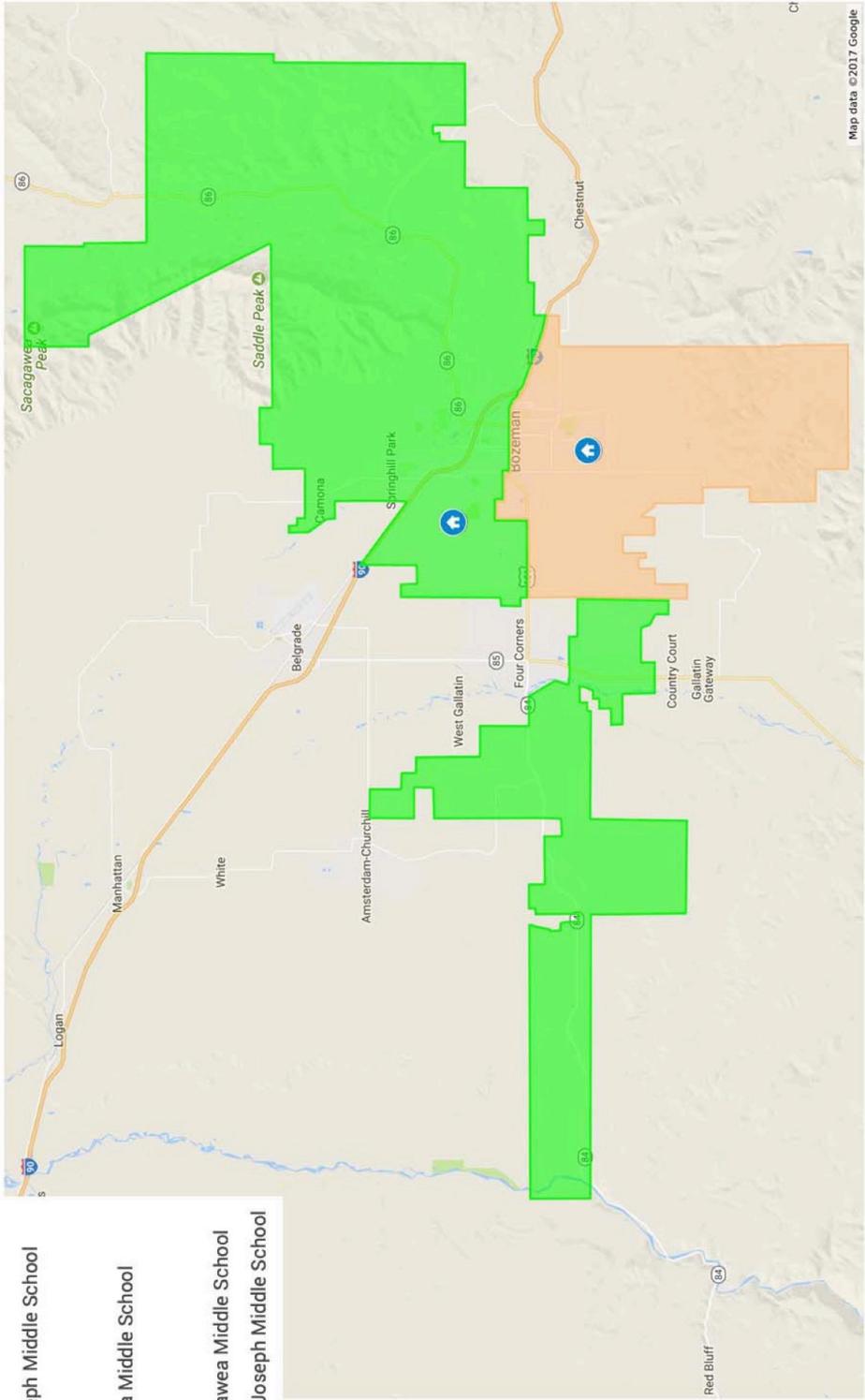
# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## Middle School District Boundary

### Bozeman School District Middle School Boundaries

Legend

-  Chief Joseph Middle School (CJMS)
-  Sacajawea Middle School (SMS)
-  Sacajawea Middle School
-  Chief Joseph Middle School



# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## Current Replacement Value (CRV) Tabulation

CRV Valuation Schedule from 2015 FCI					
Physical	Total Building	[-----Current Replacement Value -----]			
Building	Area, FT2	Elementary District	High School District	Total	
High School	442,369		\$ 111,871,801		
Batting Cages	200		\$ 34,364		
HS Custodial Garage	1,650		\$ 430,155		
Football Storage	190		\$ 32,646		
Irrigation Pump House	100		\$ 9,634		
Concessions	1,780		\$ 821,844		
Tennis Storage	500		\$ 85,910		
Track& Field Storage	200		\$ 34,364		
HS Total:	446,989			\$ 113,320,718	
Willson	84,900	\$ 9,027,417	\$ 9,027,417	\$ 18,054,834	
Support Services (Includes Additions)	15,060	\$ 2,643,633	\$ 2,643,633	\$ 5,287,265	
Bus Maintenance	6,540	\$ 775,971	\$ 775,971	\$ 1,551,942	
Bus Storage	31,080	\$ 1,800,154	\$ 1,800,154	\$ 3,600,307	
Chief Joseph MS	135,000	\$ 29,643,300		\$ 29,643,300	
Meadowlark Elem					
Meadowlark Pump House					
Meadowlark Total:	72,000	\$ 16,538,401		\$ 16,538,401	
Emily Dickinson Elem					
Emily Pump house					
Emily Total:	62,000	\$ 14,385,860		\$ 14,385,860	
Hawthorne Elem					
Hawthorne Kiln Bldg					
Hawthorne Portable					
Hawthorne Total:	34,000	\$ 8,134,160		\$ 8,134,160	
Irving Elem					
Irving Storage Shed					
Irving Total:	30,500	\$ 7,296,820		\$ 7,296,820	
Hyalite Elem					
Hyalite Pump house					
Hyalite Total:	62,000	\$ 14,385,860		\$ 14,385,860	
Longfellow Elem	37,500	\$ 8,971,500		\$ 8,971,500	
Morning Star Elem					
M'Star Pump house					
Morning Star Total:	62,000	\$ 14,385,860		\$ 14,385,860	

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## Current Replacement Value (CRV) Tabulation

Sacajawea MS					
Sacajawea Pump house					
Sacajawea Total:		105,000	\$ 23,368,800		\$ 23,368,800
Whittier Elem					
Whittier Storage Shed					
Whittier Portable					
Whittier Total:		34,500	\$ 8,704,005		\$ 8,704,005
1218 Durston House Rental					
		2,012		\$ 301,800	\$ 301,800
<b>TOTALS:</b>		1,221,081	\$ 160,061,740	\$ 127,869,692	\$ 287,931,432
		Rounded	\$ 160,000,000	\$ 127,000,000	
		CRV	3%	\$ 4,800,000	\$ 3,810,000
		General Fund Maintenance		\$ 1,079,537	\$ 833,925
		3% of CRV Maintenance Shc		\$ 3,720,463	\$ 2,976,075
			Elementary	High School	

### Maintenance of Buildings 3% of Current Replacement Value

In 1990, there was formed the “Committee on Advanced Maintenance Concepts for Buildings”, Building Research Board, Commission on Engineering and Technical Systems, National Research Council. A report was issued that addressed “The Maintenance and Repair Component of the Cost of Ownership”. Select sections are quoted below from this report. This report is also used as a basis by most federal agencies.

“Building owners and those elected and appointed officials who represent the owners of public buildings should recognize explicitly the full cost of ownership to which they are committed by virtue of ownership. Components of this cost are the routine expenditures for needed maintenance, repairs, and planned replacement.”

“Typical maintenance expenditure per square foot is frequently used as a yardstick for determining what an appropriate level of M&R budgeting should be, but such a measure is insufficiently sensitive to either external financial conditions or building characteristics. The relationship is better stated in terms of an annual percentage of the inventory’s current replacement value”

“Based on experience and judgment, the committee proposes that the appropriate level of M&R spending should be, on average, in the range of 2 to 4 percent of current replacement value of the inventory. The specific percentage for any inventory will depend on such factors as the age of the buildings in the inventory, the type of construction (permanent vs. temporary), the level of use of the buildings, the structure of the maintenance organization, and the climate.”

“This 2 to 4 percent range is most valid as a budget guide for a large inventory of buildings and over time periods of several years. A small town or school district may find that a severe winter or an older building nearing the time that a

## BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

substantial renovation is warranted, temporarily raises the annual M&R costs above this normal range. Such a jurisdiction may also find that past decisions to reduce construction expenditures now have, as a consequence, higher M&R costs.”

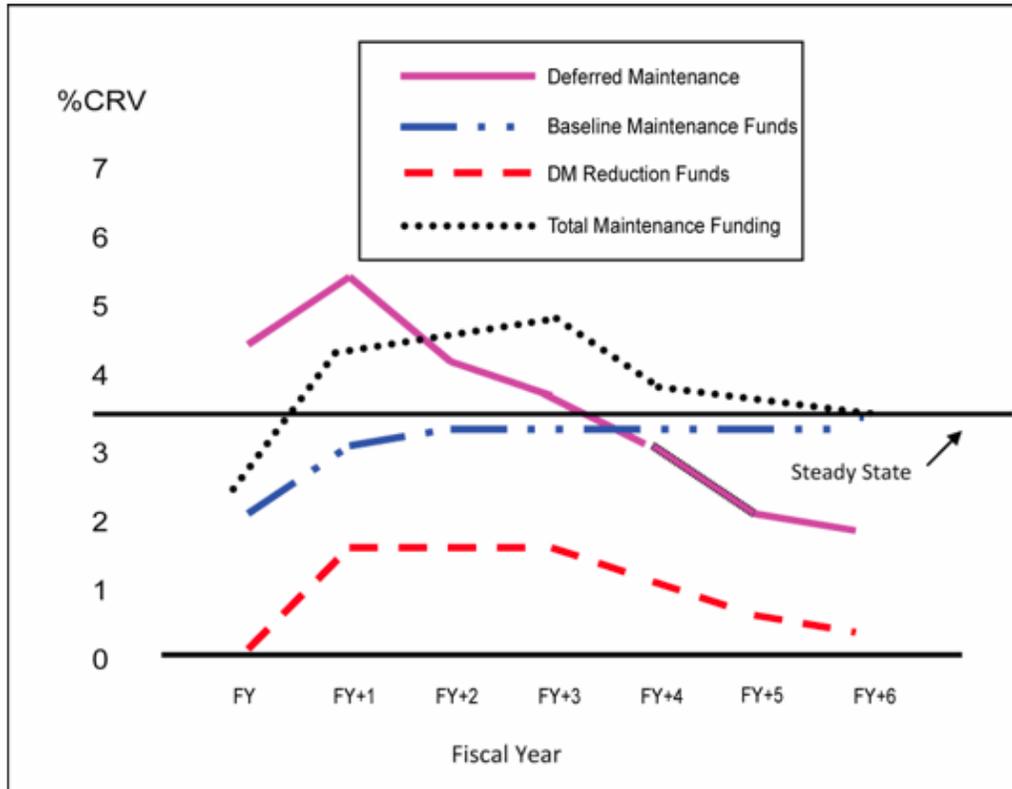
“If an inventory of buildings receives an adequate level of M&R funding, a steady-state situation should exist wherein the inventory would remain in a service condition that would neither decline nor improve and the backlog of deferred maintenance would not develop.

However, if a backlog exists, it is unlikely to be reduced by expenditures limited to the 2 to 4 percent level. Further deterioration will occur if the backlog is not reduced, and the ultimate cost of correcting the deficiencies will increase. The Committee proposes that a second element of the total M&R budget must be recognized – funds required to reduce the backlog. The total budget then includes the routine M&R components, which are a continuing part of the cost of ownership, and the backlog reduction component, which is determined by the physical condition of the property.

Assessing the size of the backlog that develops when M&R are neglected requires a condition assessment.”

“If a substantial backlog has develop, several years of effort may be required to eliminate it. An appropriate M&R budget should be established to reduce the backlog as quickly as possible, which requires that repair spending must be adequate to outpace the backlog growth that occurs as a cumulative result of past neglect. No generally valid rules of thumb can be recommended for this determination.”

The following graph is from a NASA publication (**NPR 8831.2E**) in 2008 and demonstrates the relationship between deferred maintenance backlog, preventative maintenance and funding.



## BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

This is a sample graph. It shows that total maintenance funding (black dotted line) increases above a 3.5% annual maintenance funding level (3.5% of CRV) in order to reduce the deferred maintenance backlog (the pink line). The total maintenance funding (black dotted) is comprised of the 3.5% funding plus the Deferred Maintenance Reduction Funds (red dashed line). Once the deferred maintenance backlog is reduced to an acceptable level, then the out year funding is steady state at the 3.5% funding level. The point being, that without supplemental funding beyond a steady state % of CRV preventative maintenance funding, the deferred maintenance backlog will not decrease and will most likely increase.

The District's Long Range Strategic Plan recognizes the importance of sufficient funding to maintain facilities by having an annual funding goal of 3% of Current Replacement Value for the High School and Elementary Districts. To achieve this goal requires the cooperation of the community to approve building reserve levies, concurrent with the District's prudent balance of the general fund between education and facilities funding levels. The 3% level of funding places the District in the "yellow" areas on the below spreadsheets. The descriptions that equate to the categories of service are in some cases are not flattering in terms of expectations. For example, under the row heading of Customer Satisfaction and Managed Care column heading, the perception of the customer is coined as "Lack of pride in physical environment". This is not a level of service the District would have as a "goal" just due to the funding levels. But, with reduced funding levels that will not even meet the 3% CRV goals, these types of perceptions could become reality.

<b>APPA's Level of Service</b>	<b>Maintenance</b>	<b>Custodial</b>	<b>Grounds</b>
1	Showpiece Facility	Orderly Spotlessness	State-of-the-Art
2	Comprehensive Stewardship	Orderly Tidiness	High Level
3	Manage Care	Casual Inattention	Moderate Level
4	Reactive Management	Moderate Dinginess	Moderately Low-Level
5	Crisis Response	Unkempt Neglect	Minimal Level
APPA - Association of Physical Plant Administrators - now "Association of Higher Educational Facilities Officers" but acronym is the same.			
	Due to funding constraints - General area School District resides, also corresponds to % CRV goals		

## BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

### Goals – Desired Level of Service

Description	Showpiece Facility	Comprehensive Stewardship	Managed Care	Reactive Management
<b>Customer Service &amp; Response Time</b>	Able to respond to virtually any service, immediate response	Response to most service needs, typically in a week.	Services available only by reducing maintenance, response times of one month or less.	Services available only by reducing maintenance, response times of one year or less.
<b>Customer Satisfaction</b>	Proud of facilities, have a high level of trust for the facilities organization.	Satisfied with facilities related services, usually complimentary of facilities staff.	Basic level of facilities care. Able to perform mission duties. Lack of pride in physical environment.	Generally critical of cost, responsiveness, and quality of facilities services.
<b>PM vs. CM</b>	100%	75 - 100%	50 - 75%	25 - 50%
<b>Maintenance Mix</b>	All PM is scheduled & performed on time. Emergencies (e.g. power outages) are infrequent and handled efficiently.	A well-developed PM program: PM done less than defined schedule. Occasional emergency caused by pump failures, etc.	Reactive maintenance high due to systems failing. High number of emergencies causes reports to upper management.	Worn-out systems require staff to be scheduled to react to failure. PM work consists of simple tasks done inconsistently.
<b>Aesthetics, Interior</b>	Like-new finishes.	Clean/crisp finishes.	Average finishes.	Dingy finishes
<b>Aesthetics, Exterior</b>	Windows, doors, trim, exterior walls are like new.	Watertight, good appearance of exterior.	Minor leaks and blemishes, average exterior appearance.	Somewhat drafty and leaky, rough-looking exterior.
<b>Aesthetics, Lighting</b>	Bright and clean, attractive lighting	Bright and clean, attractive lighting	Small percentage of lights out, generally well lit and clean.	Numerous lights out, missing diffusers, secondary areas dark.
<b>Service Efficiency</b>	Maintenance activities appear highly organized and focused. Service and maintenance calls are responded to immediately.	Maintenance activities appear organized with direction. Service and maintenance calls are responded to in a timely manner.	Maintenance activities appear to be somewhat organized, but remain people-dependent. Service/maintenance calls are sporadic, w/out apparent cause.	Maintenance activities are somewhat chaotic and people dependent. Service/maintenance calls are typically not responded to in a timely manner.
<b>Building Systems' Reliability</b>	Breakdown maintenance is rare and limited to vandalism and abuse repairs	Breakdown maintenance is limited to systems components short of MTBF (mean time between failure).	Building and systems components periodically or often fail.	Systems unreliable. Constant need for repair. Backlog repair exceeds resources.
<b>Operating Budget as % of CRV</b>	>4.0	3.5 - 4.0	3.0 - 3.5	2.5 - 3.0

# BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

## 2015 Facilities Condition Inspection (FCI) Summary

<b>Funding Sources</b> <input checked="" type="checkbox"/> Auxiliary (A) <input checked="" type="checkbox"/> Federal (F) <input checked="" type="checkbox"/> Non-State (N) <input checked="" type="checkbox"/> Private (P) <input checked="" type="checkbox"/> State (S)	<b>Bozeman School District - Facilities Condition Inventory</b> <b>Building Summary</b> Replacement Cost <b>\$305,361,263</b> <i>(Replacement cost includes buildings without deficiencies)</i> Renewal Cost <b>\$22,546,745</b> Deficiency Ratio <b>7.4%</b>	<b>Def. Categories</b> <input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input checked="" type="checkbox"/> 4 <input checked="" type="checkbox"/> 5 <input checked="" type="checkbox"/> 6 <input type="checkbox"/> 7
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Bldg #	Building Name	Gross Area (bldgs w/deficiencies)	Cost/SF	Replacement Cost	Renewal Cost	Def. Ratio
<b>Site: Bozeman</b>						
		<b>Replacement Total</b>	<b>\$305,361,263</b>	<i>(Includes buildings without deficiencies)</i>		<b>Total</b>
				<b>\$37,824,708</b>	<b>\$6,122,699</b>	<b>7.4%</b>
<b>Funding Source: Auxiliary</b>						
		<b>Total</b>	<b>176,580</b>	<b>Avg \$214.21</b>	<b>Total</b>	<b>16.2%</b>
	12	Bus Maintenance Facility	6,540	\$237.30	\$1,551,942	\$108,624
	13	Bus Storage Facility	31,080	\$115.84	\$3,600,307	\$249,989
	14	East Willson	39,000	\$239.24	\$9,330,360	\$2,459,118
	17	Support Services	15,060	\$351.08	\$5,287,265	\$479,738
	3	Willson School	84,900	\$212.66	\$18,054,834	\$2,825,230
<b>Funding Source: Non-State</b>						
		<b>Total</b>	<b>634,419</b>	<b>Avg \$229.89</b>	<b>Total</b>	<b>8.2%</b>
	2	Chief Joseph Middle School	135,000	\$219.58	\$29,643,300	\$2,397,870
	10	Emily Dickinson School	62,000	\$232.03	\$14,385,860	\$659,092
	8	Hawthorne School	34,000	\$239.24	\$8,134,160	\$1,457,728
	16	Hyalite Elementary	62,000	\$232.03	\$14,385,860	\$361,444
	6	Irving School	30,500	\$239.24	\$7,296,820	\$982,788
	5	Longfellow School	37,500	\$239.24	\$8,971,500	\$812,845
	40	Meadowlark Elementary	71,719	\$230.60	\$16,538,401	\$324,516
	38	Morning Star Pumphouse	100	\$97.72	\$9,772	\$70
	9	Morningstar School	62,000	\$232.03	\$14,385,860	\$909,640
	11	Sacajawea Middle School	105,000	\$222.56	\$23,368,800	\$2,287,509
	37	Sacajawea Pumphouse	100	\$97.72	\$9,772	\$291
	7	Whittier	34,500	\$252.29	\$8,704,005	\$1,711,154
<b>Funding Source: State</b>						
		<b>Total</b>	<b>262,917</b>	<b>Avg \$462.86</b>	<b>Total</b>	<b>3.7%</b>
	18	BHS - A-Wing	15,030	\$282.66	\$4,248,380	\$213,235
	41	BHS - Batting Cages and Stor	200	\$171.82	\$34,364	\$232

8/7/2017

Building Summary  
All Funding Sources  
Deficiency Categories 1-6

FCI Version: 1.1.9  
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## BOZEMAN SCHOOL DISTRICT FACILITY MASTER PLAN

<i>Bldg #</i>	<i>Building Name</i>	<i>Gross Area (bldgs w/deficiencies)</i>	<i>Cost/SF</i>	<i>Replacement Cost</i>	<i>Renewal Cost</i>	<i>Def. Ratio</i>
19	BHS - B-Wing	14,590	\$282.66	\$4,124,009	\$308,888	7.5%
31	BHS - Custodial Garage	1,650	\$260.70	\$430,155	\$12,577	2.9%
20	BHS - C-Wing	17,710	\$282.66	\$5,005,909	\$660,831	13.2%
43	BHS - Dugouts	200	\$171.82	\$34,364	\$406	1.2%
21	BHS - D-Wing	11,815	\$282.66	\$3,339,628	\$233,937	7.0%
22	BHS - E-Wing	13,475	\$282.66	\$3,808,844	\$266,273	7.0%
42	BHS - Football Storage Shed	190	\$171.82	\$32,646	\$28	0.1%
23	BHS - F-Wing	22,040	\$270.98	\$5,972,399	\$612,744	10.3%
34	BHS - Grounds (civil)	500	\$170.18	\$85,090	\$328	0.4%
24	BHS - G-Wing	68,880	\$228.93	\$15,768,698	\$920,639	5.8%
25	BHS - H-Wing	34,870	\$252.29	\$8,797,352	\$319,210	3.6%
32	BHS - Irrigation Pumphouse	100	\$96.34	\$9,634	\$407	4.2%
26	BHS - J-Wing	32,590	\$252.29	\$8,222,131	\$569,853	6.9%
47	BHS - Kiln and Art Stor	612	\$171.82	\$105,154	\$317	0.3%
27	BHS - M-Wing	11,660	\$282.66	\$3,295,816	\$138,699	4.2%
44	BHS - North Bleachers	4,325	\$367.99	\$1,591,557	\$18,523	1.2%
45	BHS - South Bleachers	10,000	\$367.99	\$3,679,900	\$135,240	3.7%
33	BHS - Stadium Concessions	1,780	\$461.71	\$821,844	\$105,762	12.9%
30	BHS - Tennis Shed/Courts	500	\$171.82	\$85,910	\$26	0.0%
29	BHS - Track/Field Sheds	200	\$171.82	\$34,364	\$944	2.7%