Saint Paul Public Schools
A World of Opportunities

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Furniture & Moves ● Grounds ● Maintenance ● Facility Planning ● Capital Project Delivery

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ANNUAL USE AND UTILIZATION REPORT

School Year 2019-20

Introduction

To better understand how the facilities of Saint Paul Public Schools (SPPS) are being used during the school day, the Facility Planning team is responsible for creating an annual report which summarizes the use and utilization of each building. It should be noted that space use and utilization are being surveyed to better understand physical capacity and not staffing capacity. Additionally, Facility Planning recognizes that strategic decisions, programmatic change, school choice, transportation, the student placement process, among other things, can significantly influence enrollment at individual schools. While this report provides insight and analysis into broader district-wide trends, it is informational only and does not contain any recommendations for changes in building usage and/or programmatic adjustments.

SPPS Facilities

With 73 buildings and 7.7 million square feet of space, Saint Paul Public Schools are diverse in design and age. SPPS buildings span from the 1890's to today and the alignment between the physical structure and pedagogy at each school can vary significantly. A use and utilization survey is one foundational set of data that the District can use to understand that variance, and still apply a consistent approach to identify opportunities and challenges in the efficient use of our buildings.

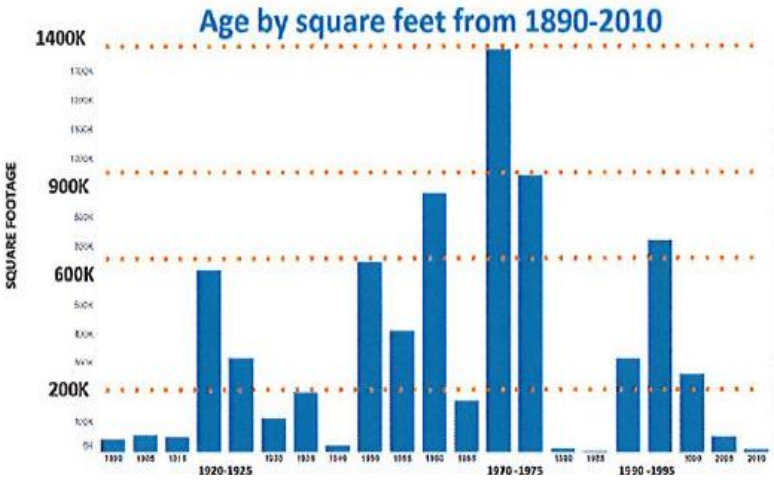


Figure 1: SPPS Portfolio Age

Process and Definitions

Facility Planning conducted the Annual Use and Utilization Survey once the official October 1st enrollment for School Year 2019-20 was finalized, with the assistance of many principals, clerks, custodial engineers, REA staff, and others. In its most basic form, the survey is an inventory of every space in the District and how it is used. Utilization is calculated using industry standards while applying a nuanced understanding of our program's specific needs and a keen focus on the standards of education specific to SPPS.

In elementary schools, the following rooms count toward capacity: computer labs and general instruction rooms larger than 599 SF. The reason computer labs were included involves the direction the District is moving regarding these spaces - essentially that schools are moving away from the need for dedicated hardwired labs. In elementary schools, enrichment spaces such as art classrooms and gymnasiums did not contribute toward capacity because students are assigned to a homeroom. In middle schools and high schools, all rooms larger than 599 SF count toward capacity. Below is a table with the scheduling factors used to determine the overall building capacity. Scheduling factors represent the percent a room is used that counts toward capacity.

Elementary Schools	**Scheduling Factor**
All Capacity-contributing Rooms	95%

Middle Schools and High Schools

General Instruction	75%
Art (some @ 15 students), Industrial Technology (some @ 15 students), Music, Gym (1 TS = 5000/SF), Labs, Dance Studios (@ 15 students)	69%
Weight Room (@ 15 students), Fitness Center, Auditorium, Flight Simulator (@ 15 students), Auto (@ 15 students)	29%
Multilingual Learning: Language Academy - Level I/II (req. self-contained classroom)	50%
Multilingual Learning: Immersion Track (req. 2 immersion classes per day)	50%
Special Education Federal Setting III (@12 students)	75%
Special Education Federal Setting II (@ 25 students) (a small room suffices, but not all schools have this available)	60%
Special Education Federal Setting I (@ 30 students) (a small room suffices, but not all schools have this available)	60%

Using the key metrics from this survey, use and utilization, in combination with data from other departments within the District, a broader picture is painted. See the definitions below to better comprehend the analysis that follows:

- **Design Enrollment:** This is the optimum enrollment for a building based on current programming, pedagogy, and strategic direction (such as class size targets). The Use and Utilization Survey process establishes this figure and utilizes it as "capacity" in common parlance.
- **Trend Line:** This is derived from the five-year average of enrollment to the previous year enrollment – and from this an enrollment trend line is extrapolated. This ratio includes students who continue and new students who enroll at each site, but does not take into consideration any factors that impact enrollment like student placement, transportation, programmatic change, etc. This metric is not conclusive, but a layer of information that creates questions best answered outside the scope of this report.
- **Low K / High K:** This is the ratio of students entering kindergarten to the birth rate.
- **Low Migration / High Migration:** This is the ratio of students coming into the District to students leaving the District.
- **Utilization**: A measure of how efficiently a space is being used for its intended purpose. This can be calculated on both an individual room level and an aggregate building level.

Building Status	% at Capacity
Underutilized	< 70%
Efficient	70% - 89%
Highly Efficient	90% - 105%
Overcrowded	>105%

Table 1: Building Efficiency Definitions

Analysis

For the analysis, the data were looked at in myriad ways. On the following pages are the key findings viewed by District area, school type, and building level. Please note that these analyses focus on traditional PreK-12 buildings and do not include Alternative Learning Centers, Special Education exclusive sites, and administrative campuses. Also, due to its recent creation and the decision to grow the program only one grade at a time, E-STEM Middle School is excluded, though you can see preliminary information about it in Exhibit A.

For the purposes of this report, the five-year average of enrollment compared to the previous year enrollment is used to understand basic enrollment trend information. While this information is used to present enrollment trend lines it should not be confused with true enrollment projections for a specific school or band of schools.

District Area

Generally speaking, enrollment and capacity are distributed similarly across the District, when rolled up to a District Area. The bar graph below compares enrollment to capacity (design enrollment) to the two-year trend line. Although there is capacity in each District Area, there are wider discrepancies when the data is viewed at both the school type and building level; see the following pages for details.

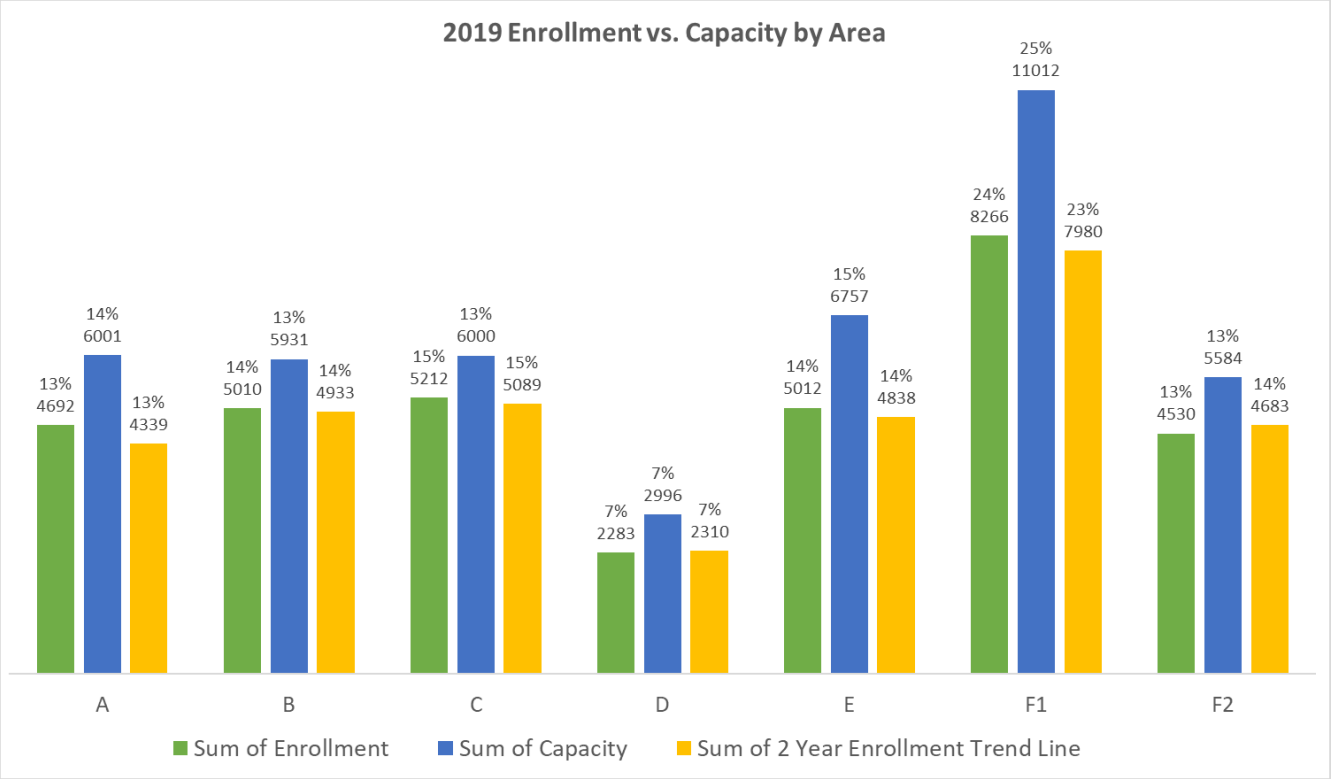


Figure 2: Enrollment, Capacity, and 2-Year Trend Lines - by Area

School Type

At the level of school type, the capacity begins to differentiate. The overall % at capacity increases in the District middle schools and again in the high schools which include the 6-12 schools. In plain language, the secondary schools are fuller than the elementary schools.

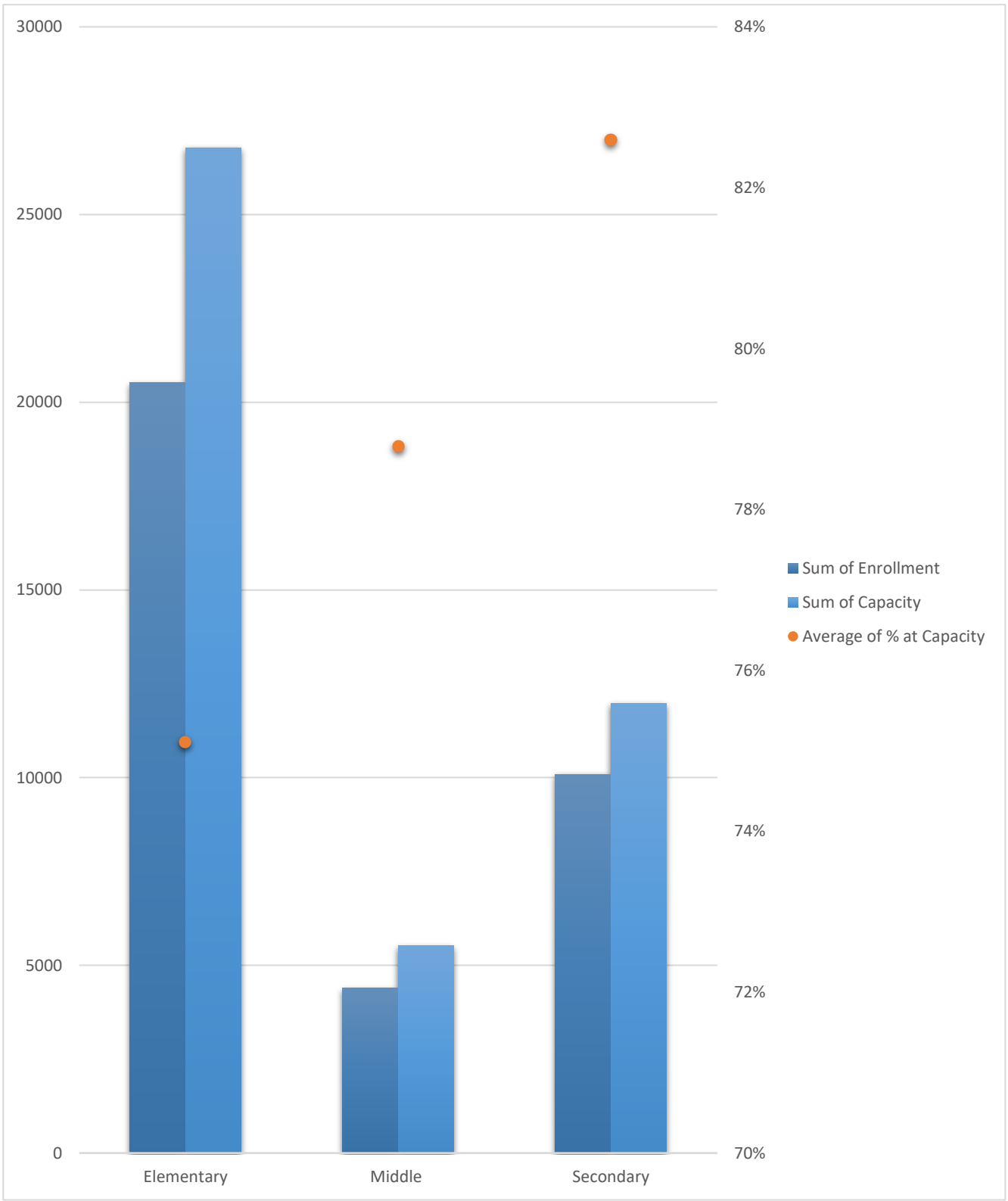


Figure 3: Enrollment, Capacity and % at Capacity - by Type

Building Level

At the building level, the data reveals that 21% of the buildings in the District are underutilized and 79% are efficient (16% highly efficient and 63% low efficient). The District has no overcrowded schools. Using the five year enrollment averages at each site revealed trends. Buildings fell into three primary groups: trending up, trending down, or flat. The flatness factor is in many cases engineered by student placement, transportation, programmatic changes, among other things and not school choice or program popularity alone. Again, this data is a snapshot in time, with many additional external factors at play.

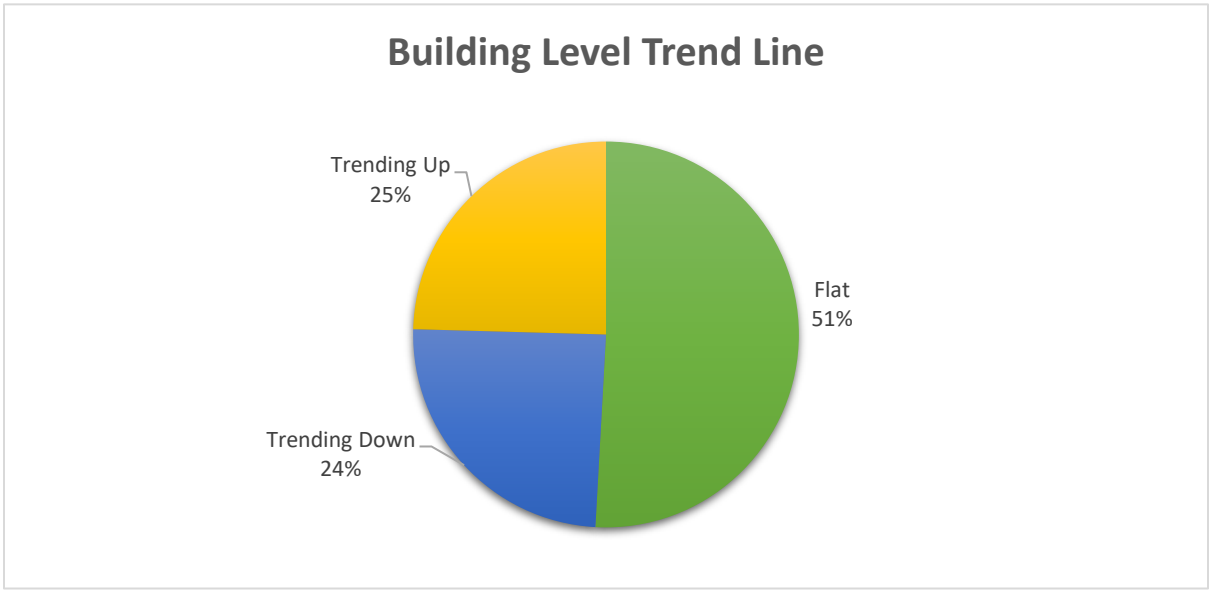


Figure 4a: Building Level Trend Line

The three primary groups above were then layered into the building level utilization to produce the twelve distinct groups below; the tables list which schools are in each group. The critical categories are underutilized buildings that are trending downward and highly-efficient buildings trending upward.

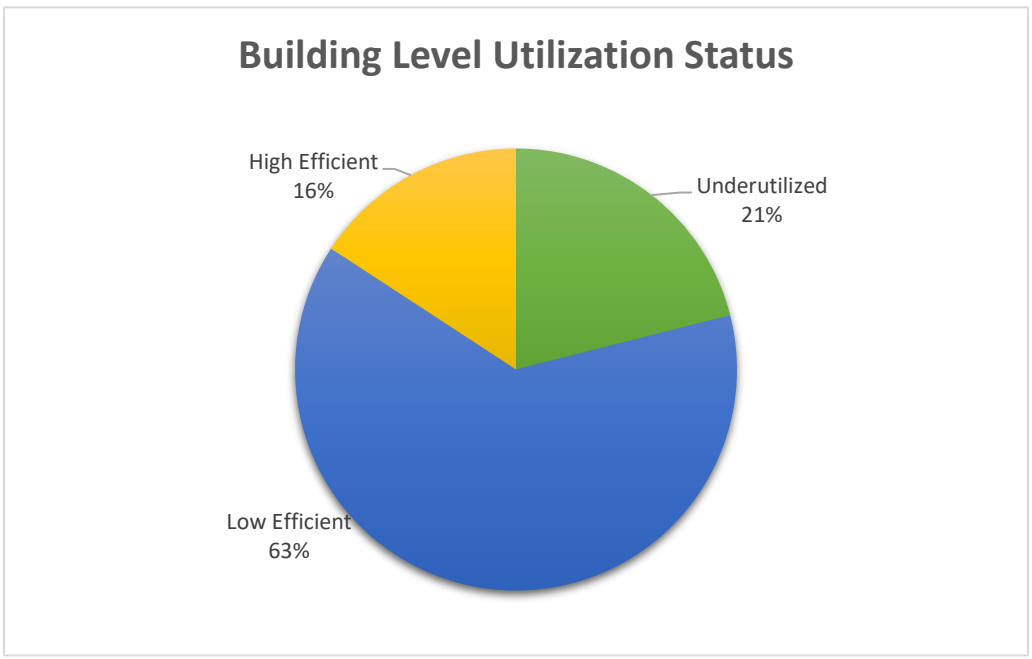


Figure 4b: Building Level Utilization

Underutilized		
Trending down	*Flat*	*Trending Up*
Elementary: Adams Cherokee Heights Dayton's Bluff L'Etoile du Nord French Immersion Upper Obama* Parkway*	Elementary: Creative Arts Hamline Highwood Hills Maxfield	Elementary: Galtier Riverview

Efficient		
Trending down	*Flat*	*Trending Up*
Elementary: Bruce Vento Como Elem. Crossroads Frost Lake Hazel Park Jackson John A Johnson The Heights	Elementary: AIM Chelsea Heights Eastern Heights EXPO Farnsworth Upper Highland Elem Horace Mann GAP Upper Groveland JJ Hill L'Etoile du Nord French Immersion Lower Phalen Lake Rondo SPMA Wellstone Middle: Battle Creek MS Secondary: Como HS Johnson HS Central HS	Elementary: GAP Lower Jie Ming* Nokomis South Mississippi Middle: Highland MS Murray MS OWL Ramsey MS Secondary: Highland HS

Highly Efficient		
Trending down	*Flat*	*Trending Up*
<u>Elementary:</u> Randolph Heights	<u>Elementary:</u> Farnsworth Lower Four Seasons <u>Secondary:</u> Harding HS Humboldt Washington Tech	<u>Elementary:</u> Battle Creek El Nokomis North St. Anthony Park
Highly Efficient		
Trending down	*Flat*	*Trending Up*
<u>Elementary:</u> Randolph Heights	<u>Elementary:</u> Farnsworth Lower Four Seasons <u>Secondary:</u> Harding HS Humboldt Washington Tech	<u>Elementary:</u> Battle Creek El Nokomis North St. Anthony Park

The next graph shows every school in the District plotted on four quadrants. The top two quadrants are schools trending upwards in terms of average continuation rate. The bottom two quadrants are schools trending downwards in terms of average enrollment over five years with the exception of the schools that fall in the pale orange band which are stable. The two quadrants to the left of the center orange line are underutilized. The two quadrants on the right side of the center orange line are efficient. The right half is further broken down, with low-efficient on the left of the dashed orange line and high-efficient on the right of the dashed orange line.

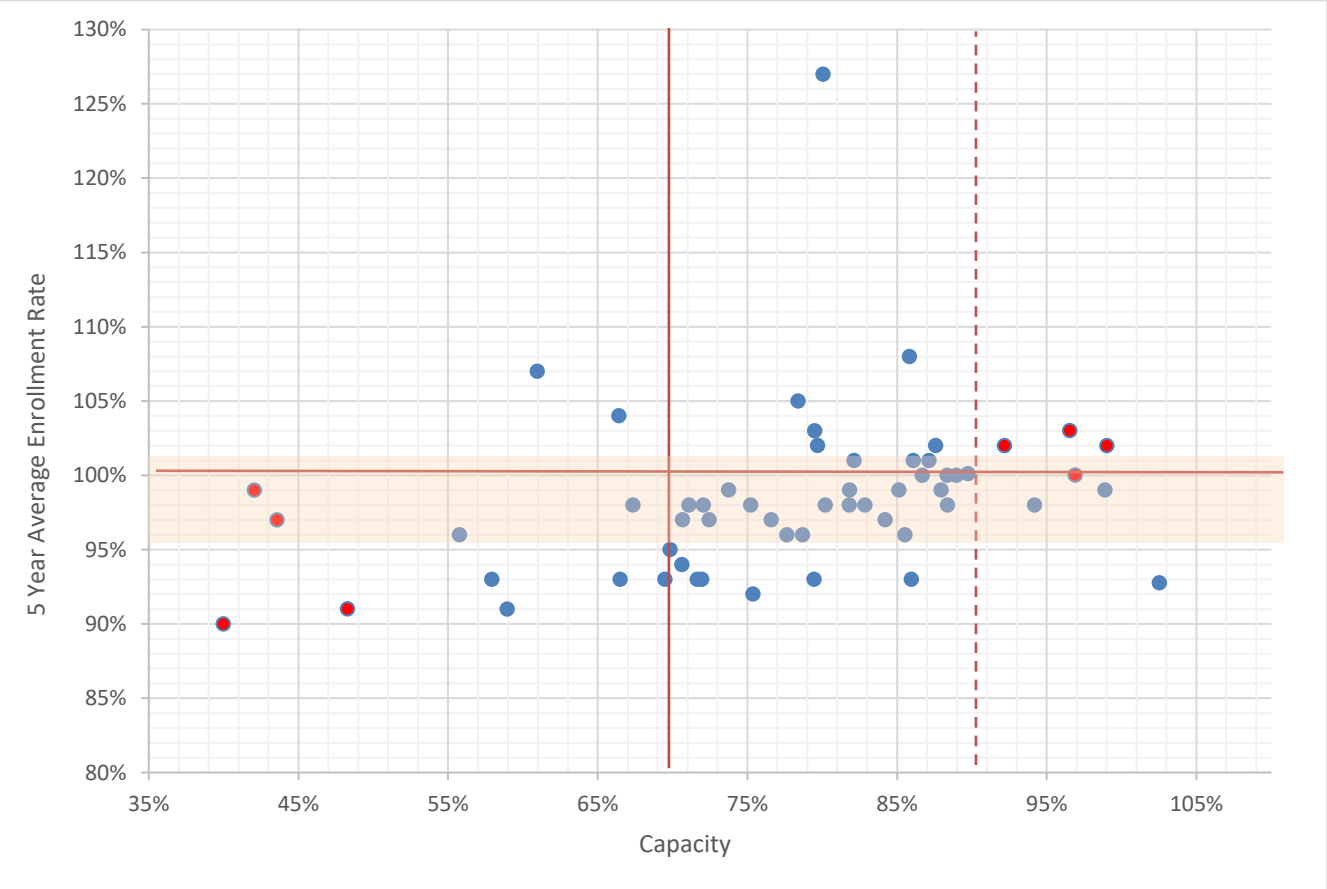


Figure 3: Capacity & 5-Year Average Enrollment Rate Quadrants

Although most of the schools are efficient, quite a few of them are also trending downwards. The red dots, indicated above in the lower left corner, are schools that are extremely underutilized with enrollment less than 100%, on average, for the past five years. The red dots in the upper right-hand corner are schools that are nearing capacity and growing. The outlier at the top of the graph is Jie Ming. This is an anomaly and does not have a 5-year average enrollment rate yet. Additionally, E-STEM, as a new program, is not included on this graph.

Additional Analysis

Hazel Reinhardt, an independent demography consultant, produced two enrollment projection reports for the District–the first in 2015 and the most recent in 2017. Circling back to previous analysis with fresh data is important because it helps us verify the continued validity of said analysis. Facility Planning also used census metrics to compare capacity and parcel units.

Facility Planning looked at Hazel Reinhardt's enrollment projections data from her 2017 report in conjunction with actual enrollment data and building capacity over the last four years. Reinhardt used a high-low range in her projections. The graph below shows where actual enrollment fell in comparison. Additionally, to achieve an apples-to-apples comparison with these projections, capacity calculations and enrollment figures factor out non-projected uses (e.g. Pre-Kindergarten, ALCs, etc.), so the aggregate capacity will not match figures from elsewhere in this report.

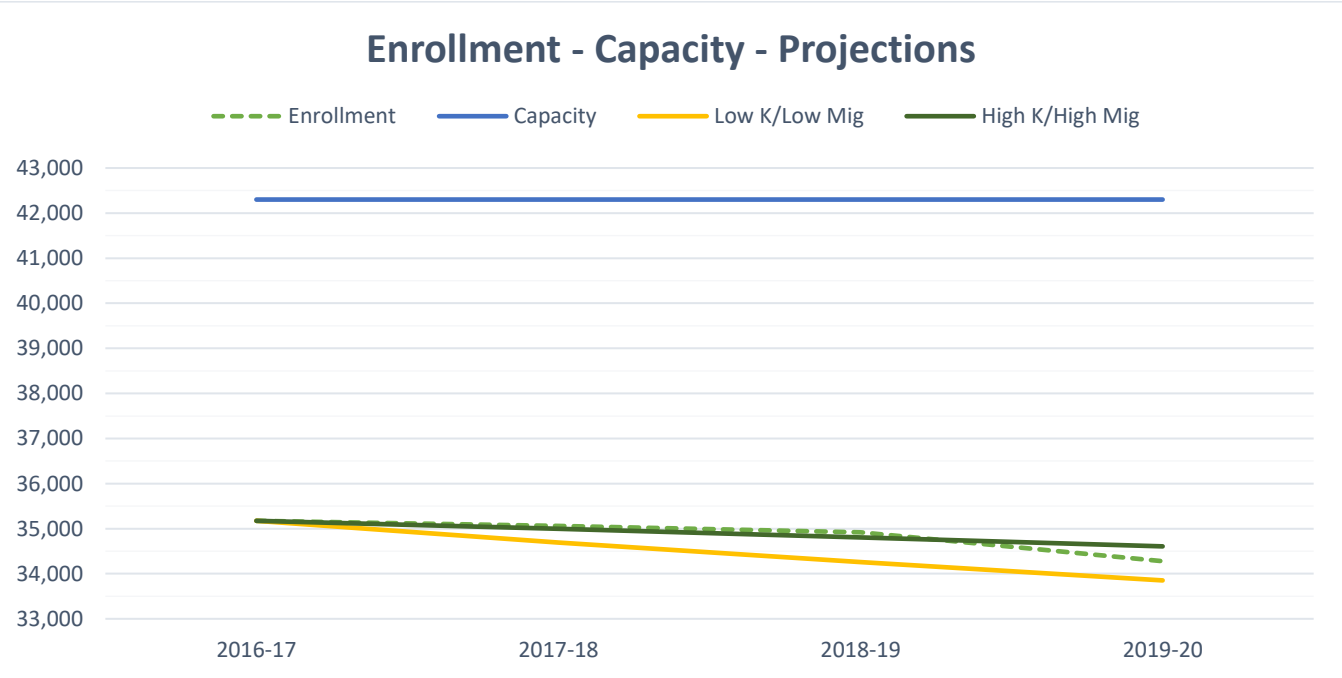
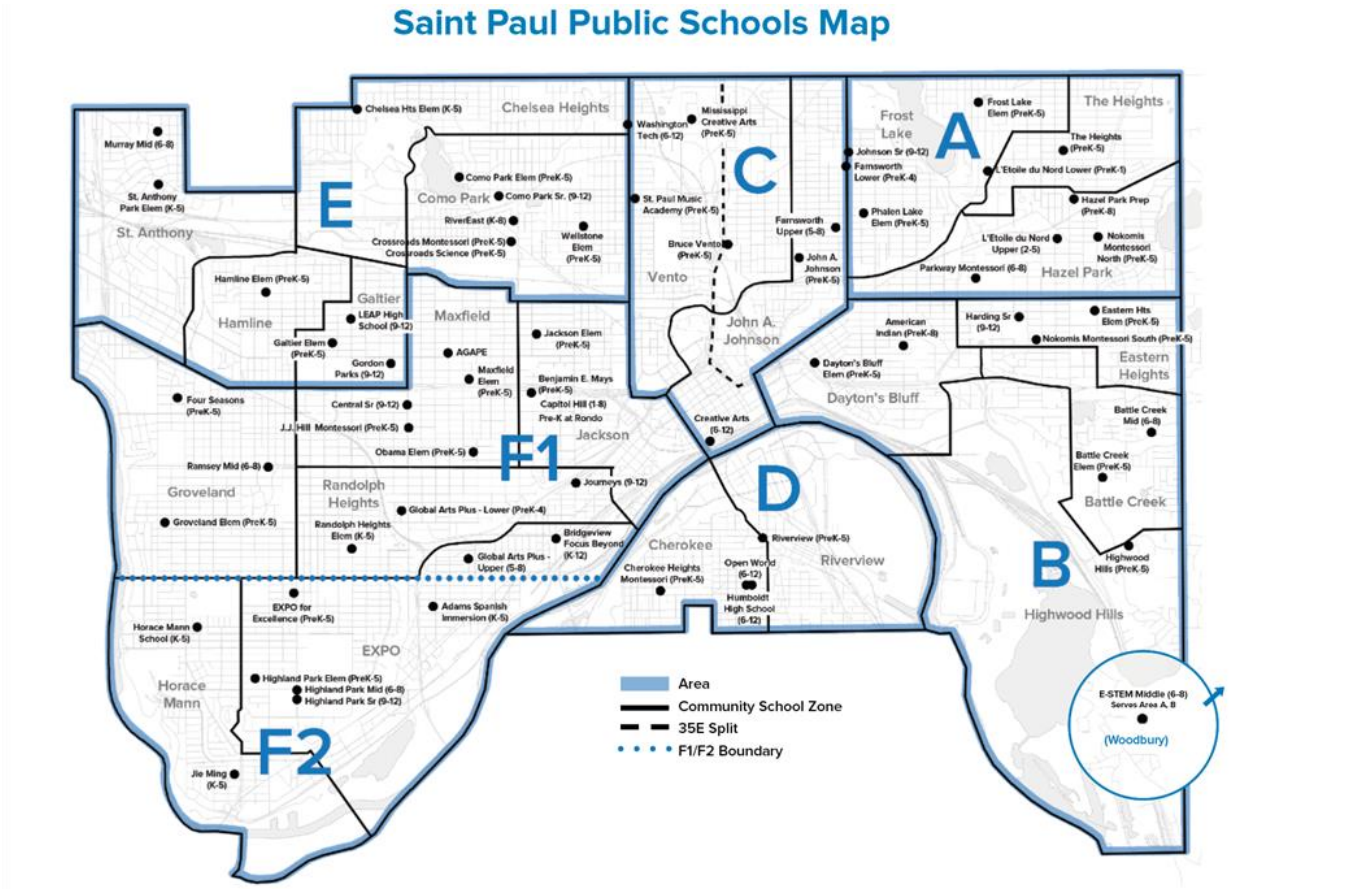


Figure 4: Year-to-Year Actual Enrollment, Projected Enrollment, and Capacity

In a broader context, comparing SPPS building capacity to housing patterns provides an interesting analysis of alignment between strategic planning areas. Naturally, the strategic choices of community and magnet school programming, as well as transportation options for families, has great impact on the value of this information. Housing unit quantities are provided by the City of St. Paul and show the total number of units regardless of if they are occupied. This analysis does not disaggregate housing by type which also has a significant impact on the understanding of where school-age children may live. Overall, there is general parity between strategic plan areas, with only areas D and E (see map below) being more than 1 standard deviation from average, but tracking this data over time as the city develops along transit corridors and key parcels (e.g. Ford Plant, Hillcrest Golf Course development, etc.) will be valuable.



Area	Building Capacity	Housing Units	Student Seats / Housing Unit
A	6,001	14,423	0.416
B	5,931	14,487	0.409
C	6,000	17,953	0.334
D	2,996	6,075	0.493
E	6,757	25,083	0.269
F1	11,012	36,297	0.303
F2	5,584	16,428	0.339

Table 2: Student Seats per Housing Units

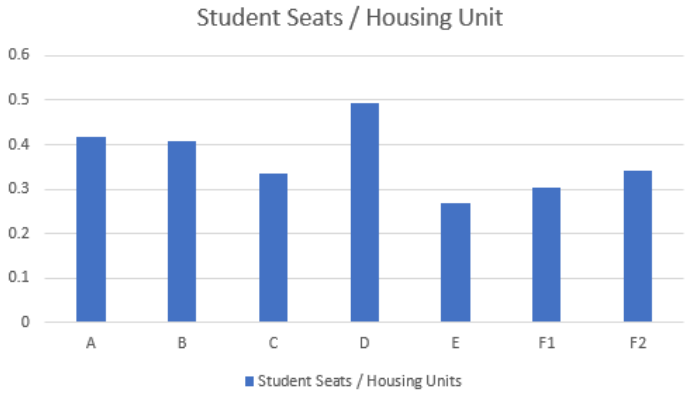


Figure 5: Student Seats per Housing Units per Area

Conclusion

The information presented in this report is a snapshot in time in terms of the utilization of the buildings of Saint Paul Public Schools. There are multitude ways this data can be engaged with to form a basis for strategic decision making. The hope is that by publishing this report annually, a deeper understanding will be gained with how various decisions impact our buildings.

<<End of Report>>

Exhibit A: Building Use and Utilization Summary

School / Building	Grade Served	Area	Enrollment	Design Enrollment ("Capacity")	% at Capacity	5-Year Average Enrollment	2-Year Enrollment Trend Line
Adams	K-5	F2	544	818	67%	93%	471
American Indian Magnet	PK-8	B	638	722	88%	98%	613
Battle Creek Elementary	PK-5	B	537	551	97%	103%	570
Battle Creek Middle	6-8	B	750	849	88%	100%	750
Bruce F. Vento Elementary	PK-5	C	486	696	70%	95%	439
Central High School	9-12	F1	1866	2153	87%	100%	1866
Chelsea Heights Elementary	K-5	E	413	549	75%	98%	397
Cherokee Heights Elementary	PK-5	D	226	468	48%	91%	187
Como Park Elementary	PK-5	E	461	624	74%	93%	399
Como Park High School.	9-12	E	1158	1512	77%	97%	1090
Creative Arts Secondary	6-12	F1	425	631	67%	98%	408
Crossroads Elementary	PK-5	E	560	743	75%	92%	474
Dayton's Bluff Elementary	PK-5	B	300	518	58%	93%	259
Eastern Heights Elementary	PK-5	B	357	424	84%	97%	336
E-STEM Middle School	6-8	A/B	182	600	30%	n/a	n/a
EXPO Elementary	PK-5	F2	658	773	85%	99%	645
Farnsworth Lower	PK-4	C	501	532	94%	98%	481
Farnsworth Upper	5-8	C	603	837	72%	98%	579
Four Seasons	PK-5	F1	448	498	90%	100%	448
Frost Lake Elementary	PK-5	A	535	740	72%	98%	514
Galtier Elementary	PK-5	E	242	397	61%	107%	277
Global Arts Plus Lower	PK-4	F1	430	501	86%	108%	502
Global Arts Plus Upper	5-8	F1	497	674	74%	99%	487
Groveland Park Elementary	PK-5	F1	413	532	78%	96%	381
Hamline Elementary	PK-5	E	286	680	42%	99%	280
Harding High School.	9-12	B	1877	1898	99%	99%	1840
Hazel Park Prep	PK-8	A	544	633	86%	93%	471
Highland Park Elementary	PK-5	F2	402	555	72%	97%	378
Highland Park High School.	9-12	F2	1307	1350	97%	101%	1333
Highland Park Middle School	6-8	F2	841	977	86%	101%	858
Highwood Hills Elementary	PK-5	B	261	599	44%	97%	246
Horace Mann Elementary	K-5	F2	405	495	82%	99%	397
Humboldt High School.	6-12	D	1163	1296	90%	100%	1165
J.J. Hill Elementary	PK-5	F1	454	555	82%	98%	436
Jackson Elementary	PK-5	F1	334	473	71%	94%	295
Jie Ming Mandarin (@ Homecroft)	K-5	F2	373	466	80%	127%	602
John A Johnson Elementary	PK-5	C	317	399	79%	93%	274

School / Building	Grade Served	Area	Enrollment	Design Enrollment ("Capacity")	% at Capacity	5-Year Average Enrollment	2-Year Enrollment Trend Line
Johnson High School	9-12	A	1243	1550	80%	98%	1194
L'Etoile du Nord Lower	PK-1	A	214	272	79%	96%	197
L'Etoile du Nord Upper	2-5	A	280	475	59%	91%	232
Maxfield Elementary	PK-5	F1	295	529	56%	96%	272
Mississippi Elementary	PK-5	C	571	652	88%	102%	594
Murray Middle School	6-8	E	757	950	80%	102%	788
Nokomis North	PK-5	A	410	414	99%	102%	427
Nokomis South	PK-5	B	290	370	78%	105%	320
Obama	PK-5	F1	350	875	40%	90%	284
Open World Learning	6-12	D	461	580	79%	103%	489
Parkway Middle School	6-8	A	353	508	69%	93%	305
Phalen Lake Elementary	PK-5	A	662	774	86%	96%	610
Ramsey Middle School	6-8	F1	593	722	82%	101%	605
Randolph Heights Elementary	K-5	F1	447	436	103%	93%	385
Riverview	PK-5	D	433	652	66%	104%	468
Rondo Education Center	PK-5 ; 1-8	F1	1719	2433	71%	97%	1617
Saint Paul Music Academy	PK-5	C	598	680	88%	99%	586
St. Anthony Park Elementary	K-5	E	555	602	92%	102%	577
The Heights Elementary	PK-5	A	455	635	72%	93%	394
Washington Technology	6-12	C	2136	2204	97%	100%	2136
Wellstone	PK-5	E	580	700	83%	98%	557