

Princeton School Facilities Plan

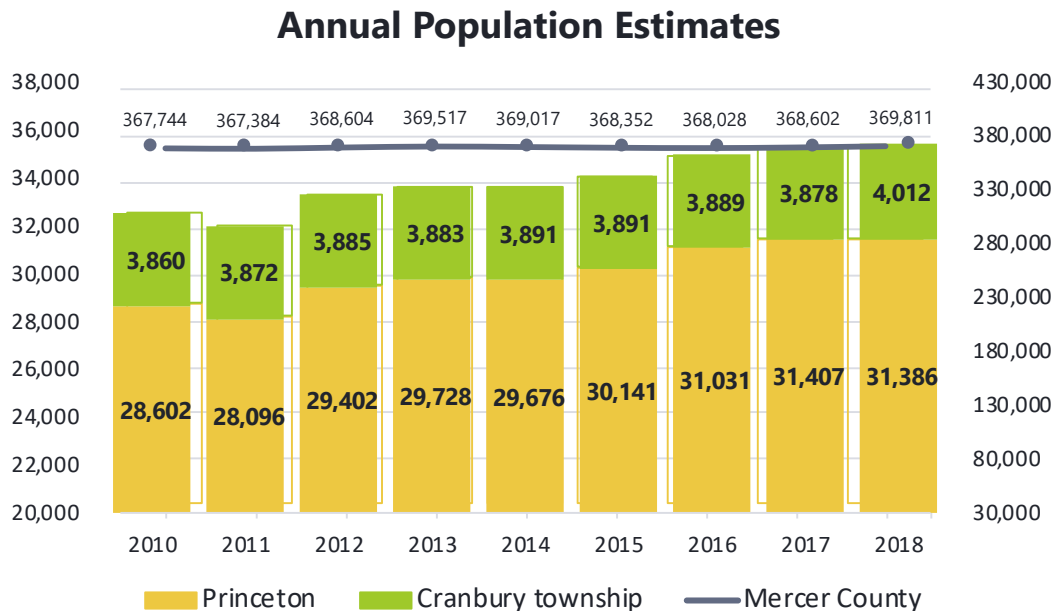
Revised Demographics & Enrollment Analyses

February 19, 2020



DEMOGRAPHICS, HOUSING AND ENROLLMENT

TOTAL POPULATION



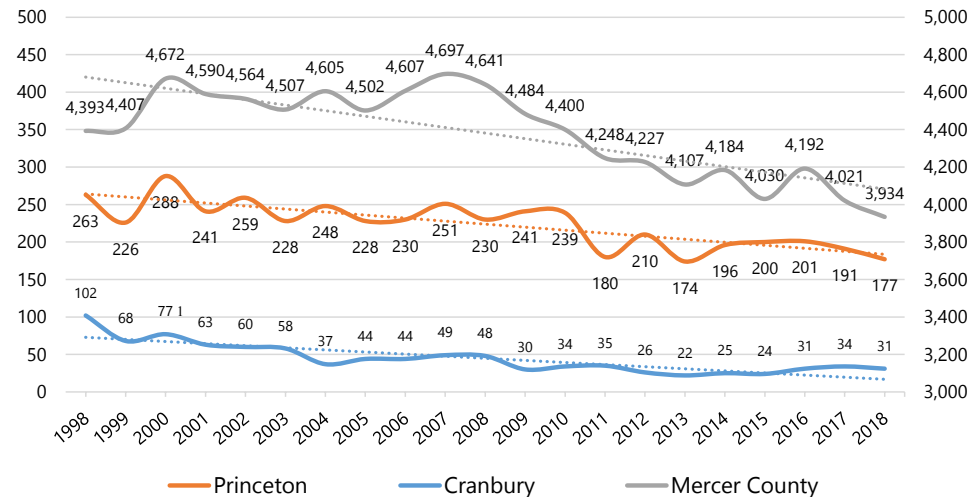
Source: NJ Department of Public Health Annual Population Estimates

- Estimated 9.7% population growth in Princeton since 2010
 - 5.8% since 2014
 - Steady growth from 2014 to 2017, levelling in 2018
- Cranbury population growth since 2010 estimated at 3.9%
 - 3.1% since 2014
- Compared to estimated 0.6% growth in Mercer County since 2010 – Princeton significantly outpacing County trends

BIRTHS

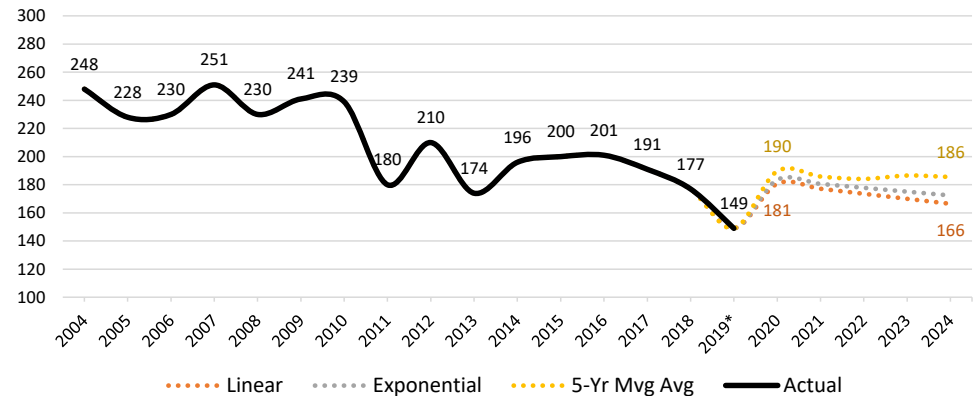
- 23% decrease in births from 2008 to 2018, despite total population growth since 2010
- Relatively stable births during most recent total population growth phase
- Cranbury elevated birth cohorts of 2005 – 2008 correspond with current and next three incoming 9th grade cohorts
- Jan – Nov 2019 birth data running lowest of recent history with an estimated 26% decrease since 2016
 - Discarded in projecting births due to anomalous and preliminary nature
- Mathematical models (linear, exponential and moving average trends) used to project range of births

Birth Trends



Source: NJ Dept. of Public Health

Princeton Actual and Projected Births



*2019 estimated based on Jan - Nov. reported births

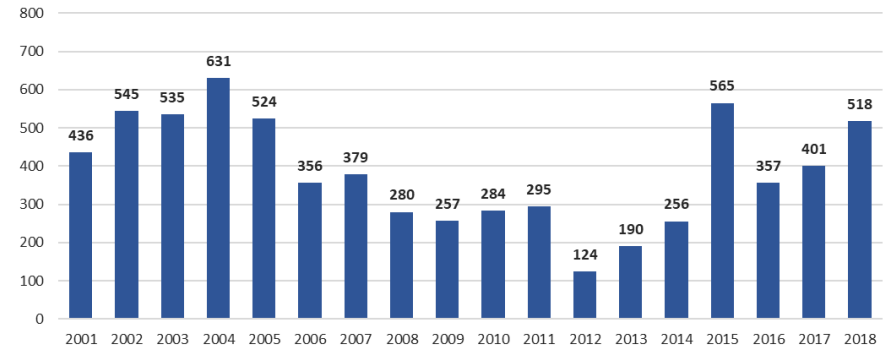
Source: NJ Dept. of Public Health

HOUSING SALES AND CONSTRUCTION

- Housing sales peaked in 2015 and again in 2018
- Averaging about 425 units annually since 2016
- Multi-family permitting peaked in 2013 and 2015, with subsequent peaks in occupancy occurring in 2015 and 2017
- Strong housing market trends from 2013 on

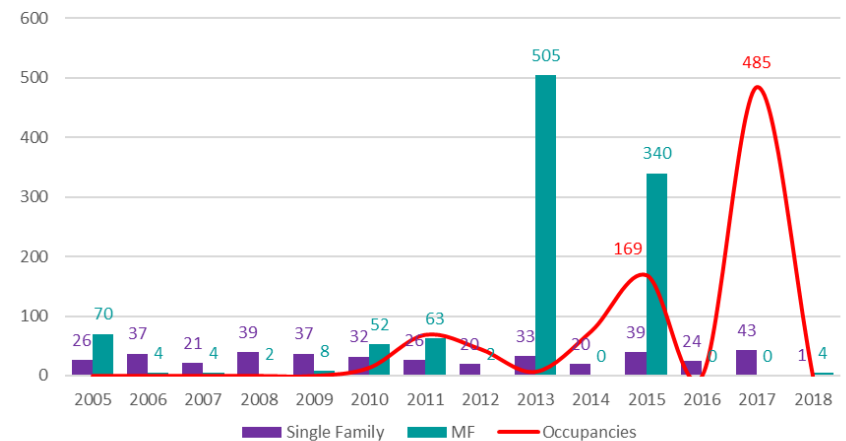
(Sundance Projections Report, 2019)

Princeton Residential Home Sales
2001-2018



Source: Preliminary Enrollment Projections Findings Report by Sundance Associates, Fall 2019 Update

Residential Permitting & Occupancies



Source: Preliminary Enrollment Projections Findings Report by Sundance Associates

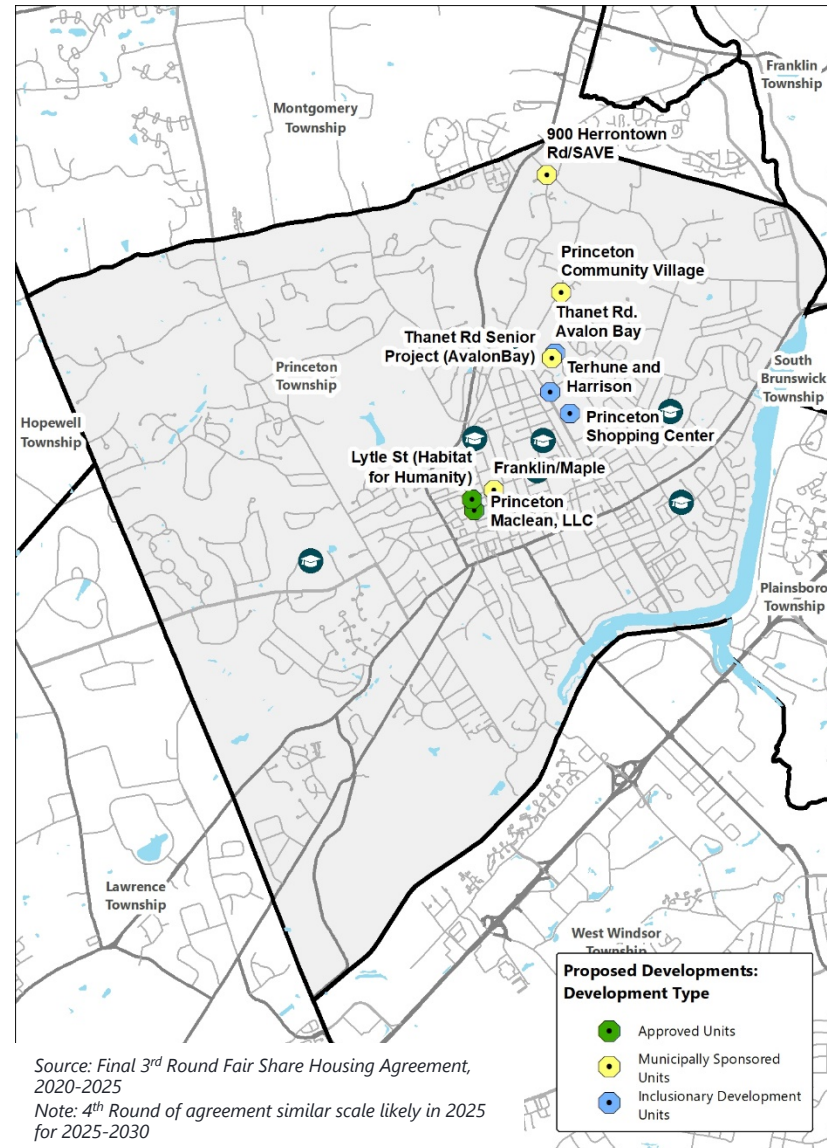
ANTICIPATED HOUSING

Development	Address	Type	Total Units	Affordable Units
Princeton Maclean, LLC	30 Maclean St	Family Rental	10	2
Lytle St (Habitat for Humanity)	31 Lytle St	Family Sale	2	2
Total Approved Units			12	4
Princeton Community Village	Karl Light Blvd	Family Rental	24	24
Fanklin Ave and Maple Terrace	Franklin Ave	Family Rental	80	80
RPM - 900 Herrontown Road (SAVE)	900 Herrontown Rd	Family Rental	64	64
Thanet Road Senior Project (AvalonBay)	100 Thanet Rd	Age Restricted Rental	80	80
Group Homes		Group Homes	16	16
Total Municipally Sponsored			264	264
Terhune and Harrison	351 Terhune Rd	Family Inclusionary	60	12
Princeton Shopping Center	301 North Harrison St	Family Inclusionary	200	44
Thanet Road (AvalonBay)	100-101 Thanet Rd	Family Rental	211	11
Herrontown Rd. S-2	Herrontown	Family Rental	94	19
Nassau St. Overlay	Nassau St.	Family Rental	52	10
Total Inclusionary Development			617	96
TOTAL:			893	364

Source: Final 3rd Round Fair Share Housing Agreement, 2020 - 2025, and Municipality of Princeton

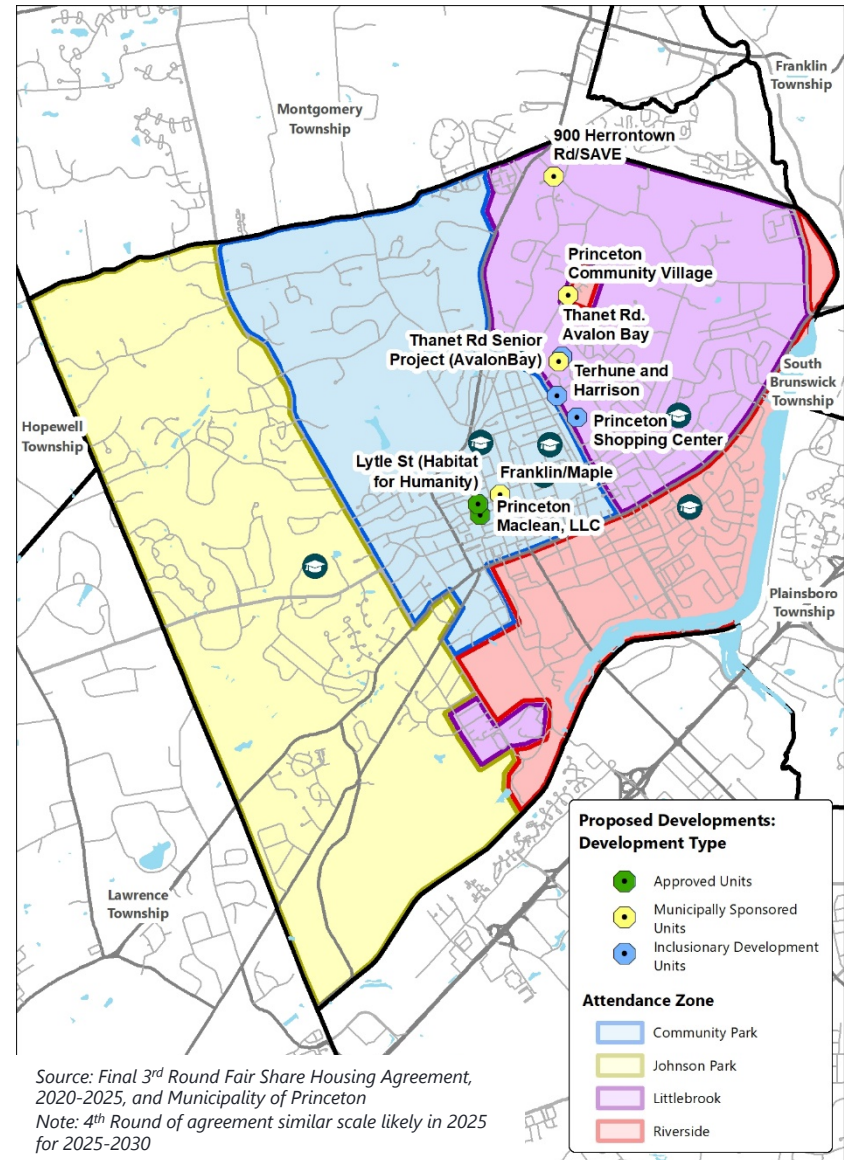
Note: 4th round agreement of similar scale likely in 2025 for 2025-30

- Final Fair Share Housing 3rd round agreement anticipates 881 units (excluding approved, but not yet constructed Princeton Maclean and Lytle Street developments) to be built over the next several years
 - About 40% of anticipated units will be affordable
 - At least 100 of the units not designed for families (age-restricted, group homes)
- 4th round agreement out to 2030 expected to be of similar scale as this 3rd round



ANTICIPATED HOUSING BY SCHOOL ZONE

- Five of the eight developments that would likely generate students are in Littlebrook's attendance area, the remaining three are in Community Park, and Riverside (Satellite Zone)
 - Approximately 645 units in Littlebrook
 - Approximately 90 units in Community Park
 - Approximately 40 units in Riverside
- Included in these projects are affordable housing units
 - About 150 units in Littlebrook
 - About 80 units in Community Park
 - About 25 units in Riverside



CRANBURY FAIR SHARE HOUSING

- Cranbury's approved 3rd round Fair Share Housing agreement is several years old
- Approved 3rd round agreement authorizes four projects:
 - Applewood Ct. (32 units, 100% affordable) – occupied in 2018
 - High Point (37 units still to build, 24 townhomes have already been built and occupied, inclusionary)
 - Ingerman (90 units, with 66 for seniors and/or special needs, 100% affordable)
 - Toll Bro.s (174 units, seniors, market rate)
- Projected impact of new public high school students generated by remaining 3rd round units to be built: 9 students total* out through 2025
- Cranbury will enter 4th round negotiations in 2025
 - Affordable housing obligations for 4th round negotiations likely to be 0 due to a surplus of credits from round 3

** Nassau Capital Advisors, LLC, February 2020*

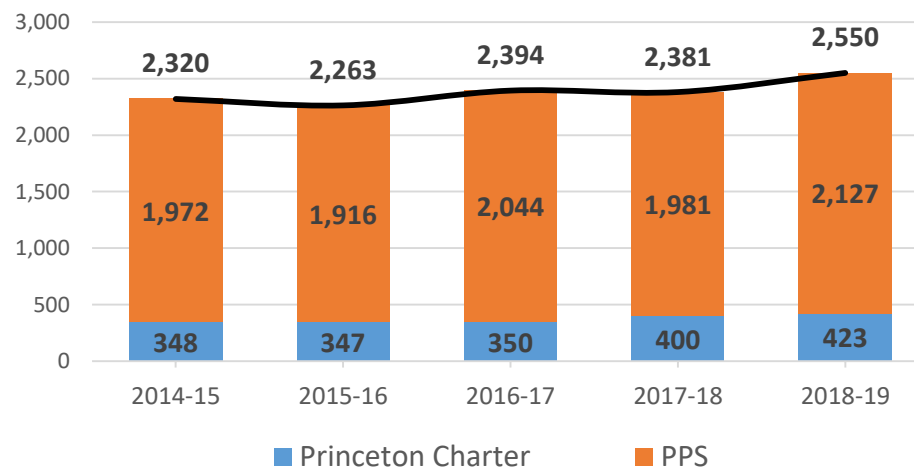
DEMOGRAPHICS AND HOUSING SUMMARY

- Strong population growth in Princeton since 2014 corresponds with strong housing market indicators
 - Permitting uptick beginning in 2013
 - Sales uptick beginning in 2015
- With anticipated housing development over the next several years, continued population increase in Princeton expected
- Cranbury housing development not anticipated to generate significant new enrollment due to senior focus and limited overall units

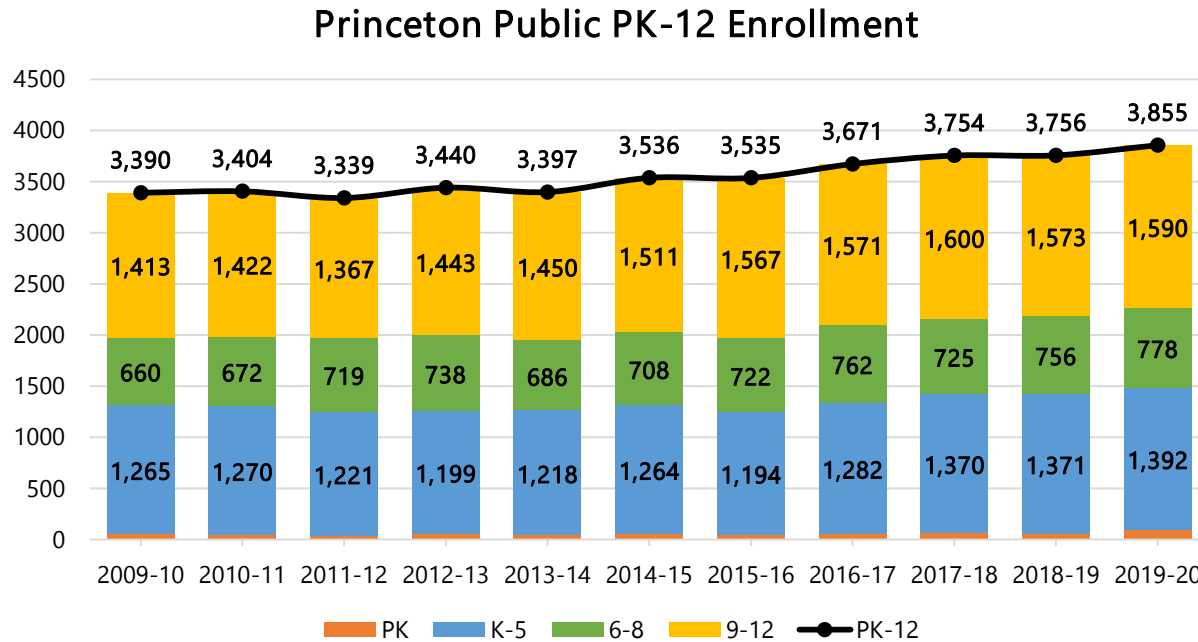
PRINCETON RESIDENT ENROLLMENT

- About 15% of Princeton resident students attend private schools
 - Highest rates in elementary and high school levels (*Sundance Report, 2019*)
- Princeton Charter School recently added seats in K – 2nd grades, increasing enrollment maximum to 424 per year
 - Princeton resident students traditionally comprise the vast majority of Princeton Charter enrollments (preferential admissions policy)
- K-8 enrollment of resident students in PPS and Princeton Charter School up 10% over the last four years
- Educational offerings in Town and region, as well as University and Institute for Advanced Study influence on population contribute to enrollment churn

K-8 Enroll PPS and Princeton Charter School



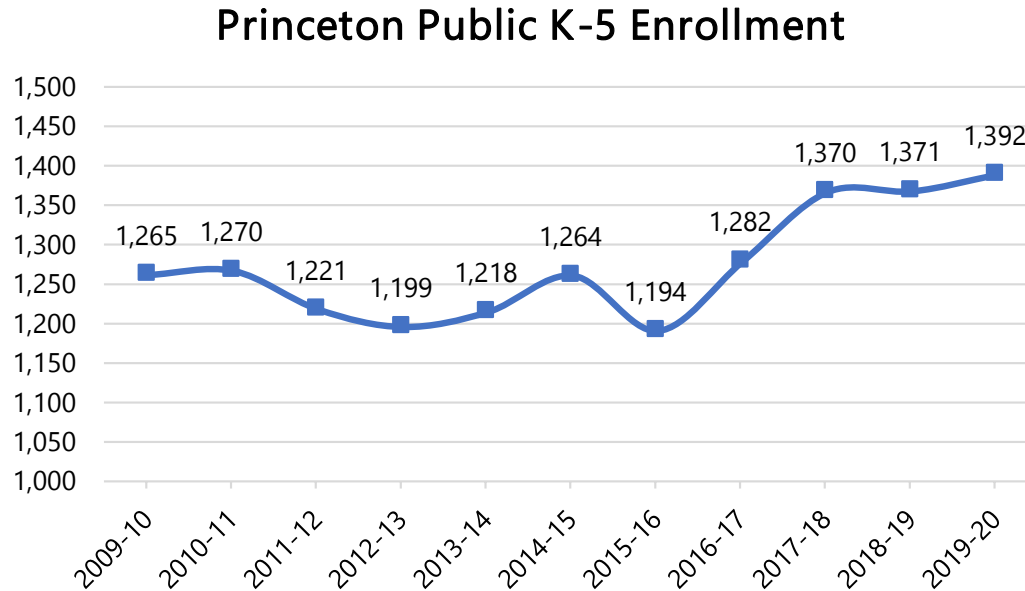
PRINCETON PUBLIC ENROLLMENT TRENDS



Source: Princeton Public Schools

- Over last decade, PK-12 enrollment has increased by 465 students or 14%
- Over the last four years, total PK-12 enrollment has increased 9% - corresponds to positive population and housing market indicators
- Increases felt across all grade groupings over the last decade
 - Elementary (K-5) enrollment has increased 10%
 - Middle School (6-8) enrollment has increased 18%
 - High School (9-12) enrollment has increased 13%

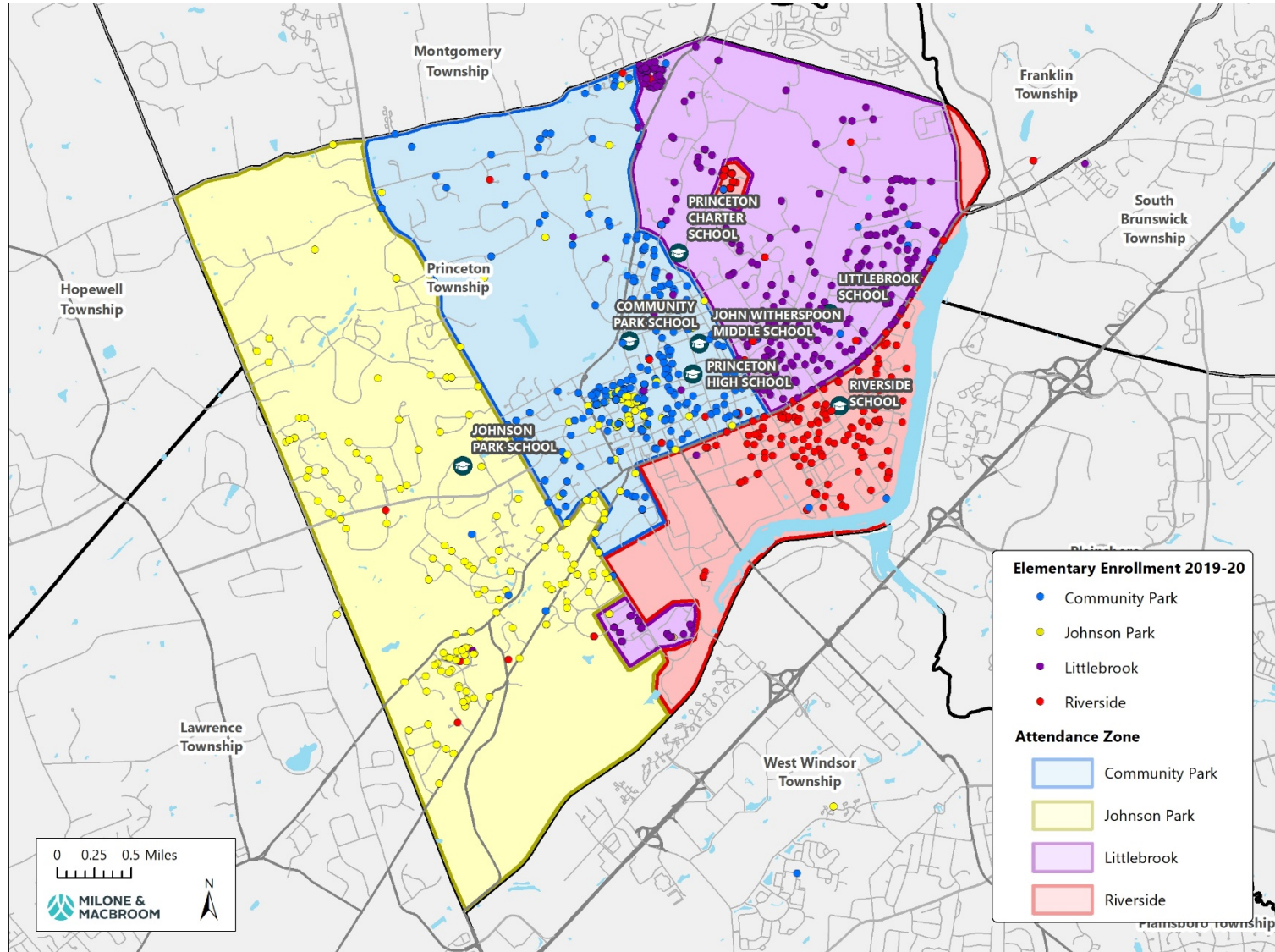
PRINCETON PUBLIC ENROLLMENT TRENDS



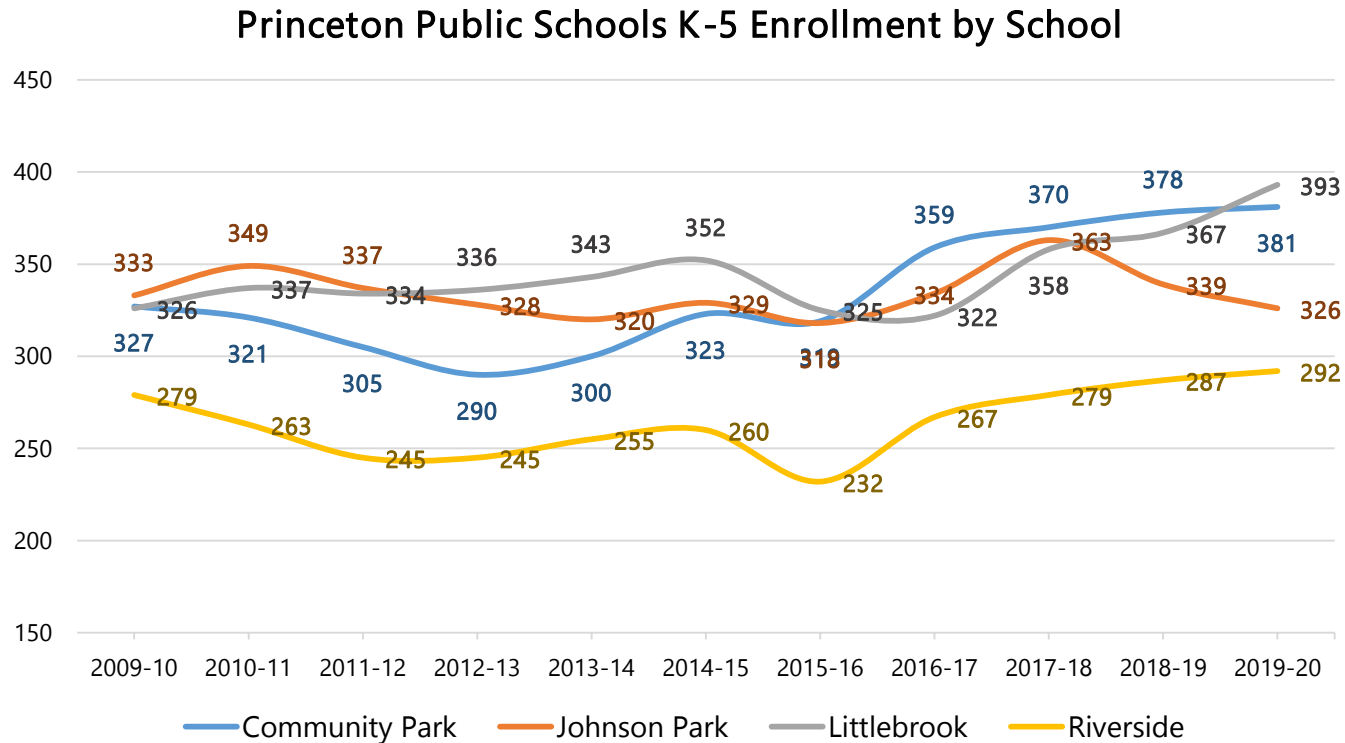
Source: Princeton Public Schools

- Elementary enrollment has increased by 127 students over the last decade
- Since 2015-16, however, K-5 enrollment has increased by 198 students or 17%
- 2019-20 K-5 enrollment of 1,392 is highest of the last decade

PRINCETON PUBLIC ENROLLMENT TRENDS



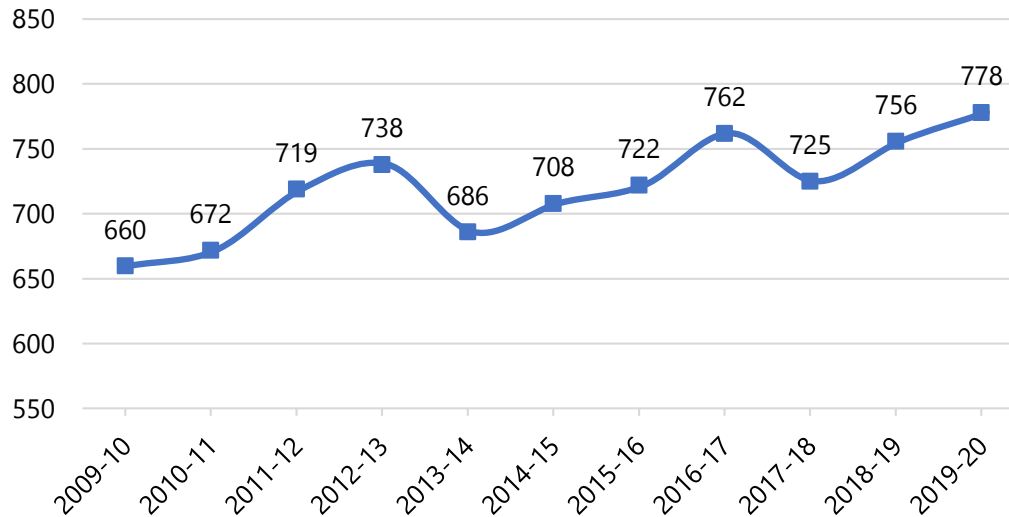
PRINCETON PUBLIC ENROLLMENT TRENDS



- Only Johnson Park has experienced any decline in enrollment over the last four years, though it is up slightly (<1%) from 2015-16
- Community Park has increased 19% since 2015-16
- Littlebrook has increased 21% over last four years
- Riverside has increased 26% since 2015-16

PRINCETON PUBLIC ENROLLMENT TRENDS

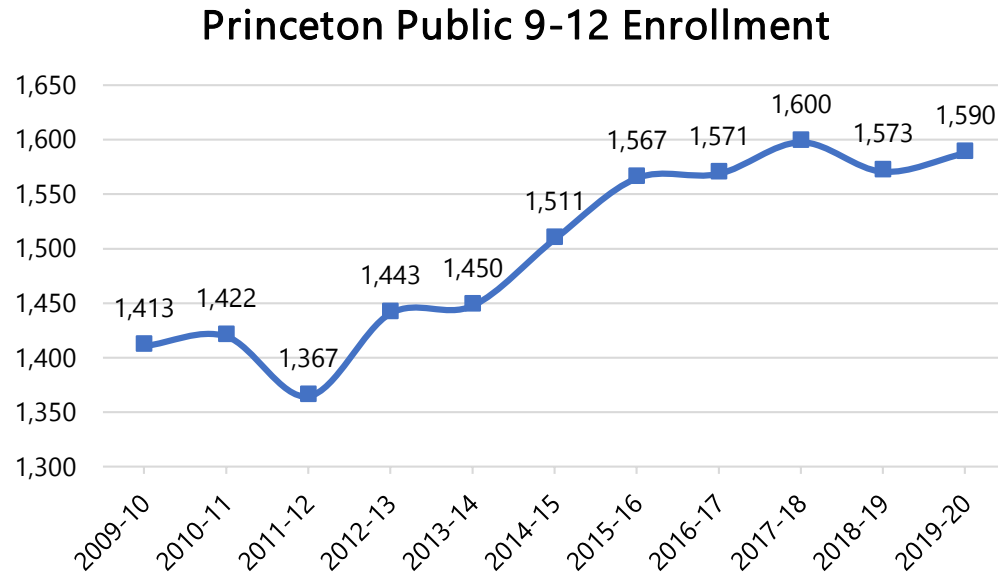
Princeton Public 6-8 Enrollment



Source: Princeton Public Schools

- Middle school enrollment has increased by 118 students over the last decade
- Since 2015-16, middle school enrollment has increased by 8%
- 2019-20 enrollment is the highest of the last decade
- General increasing trend since 2013-14, despite dip in 2017-18 with the matriculation of an unusually large 8th grade to high school level

PRINCETON PUBLIC ENROLLMENT TRENDS

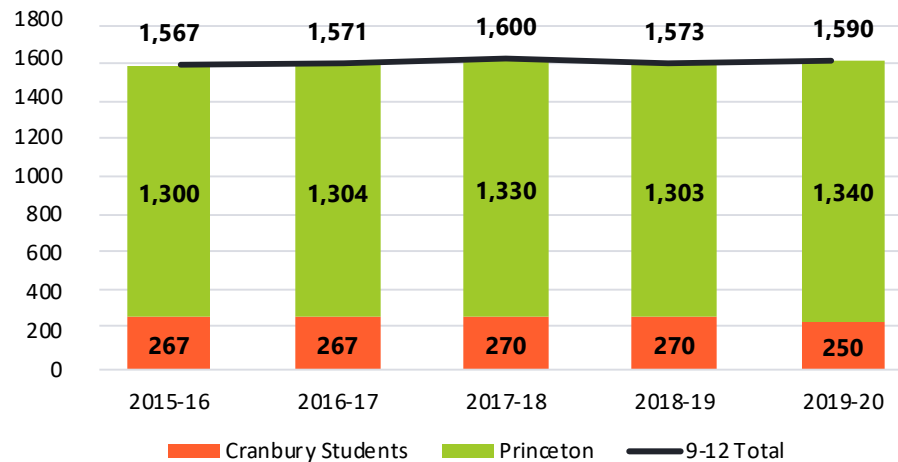


Source: Princeton Public Schools

- PHS enrollment has increased by 177 students or 13% over the last decade
- Only 1.5% growth over the last four years
- Most recent peak enrollment occurred in 2017-18
- Unusually small cohort currently in 12th grade has affected last three years' total enrollments

CRANBURY STUDENTS AT PHS

Princeton Public High School



- Send-receive agreement in place since 1988 has been extended to 2030
 - Termination requires approval of NJ Commissioner of Education
 - Cranbury pays tuition at a tuition cost per pupil rate – about \$4.75 million in revenues that go towards direct and indirect operating costs
 - Cranbury tuition represented 6% of operating budget revenues in 2017-18
- High school enrollment from Cranbury relatively stable over the last five years
 - Large cohort that entered in 2015-16 and matriculated out this year largely accounts for decline this year
 - 15.7% of total high school enrollment this year – down from previous years
- Anticipating decline in Cranbury enrollment over the next few years

CRANBURY STUDENTS AT PHS

School Year	Births	Cranbury Public Schools Enrollment										Cranbury Students at PHS				Un-graded	CPS	PHS	Total
		PK	K	1	2	3	4	5	6	7	8	9	10	11	12		PK-8 Total	9-12 Total	
2015-16	34	11	31	37	56	41	39	61	68	69	76	80	69	62	56	3	489	267	759
2016-17	35	15	40	32	41	58	42	43	60	67	64	60	80	67	60	4	462	267	733
2017-18	26	13	35	47	41	43	63	47	46	62	68	65	61	79	65	4	465	270	739
2018-19	22	19	29	41	55	42	51	68	52	53	66	65	64	61	80		476	270	746
2019-20	25	19	40	36	44	62	47	50	70	55	56	61	67	61	61		479	250	729

Sources: NJ DOE, Cranbury School, Princeton Public Schools

- Using 4-year average cohort-survival ratios and annual births, project Cranbury enrollment at PHS to decrease 11% out five years before returning to current levels in 2028-29

School Year	Births	Cranbury Public Schools Enrollment										Cranbury Students at PHS				CPS	PHS
		PK	K	1	2	3	4	5	6	7	8	9	10	11	12	PK-8 Total	9-12 Total
2019-20	25	19	40	36	44	62	47	50	70	55	56	61	67	61	61	479	250
2020-21	24	19	32	46	42	47	68	50	52	74	56	52	61	66	60	487	239
2021-22	31	19	42	37	54	44	51	73	53	55	75	51	52	60	65	504	228
2022-23	34	19	46	48	43	57	49	55	77	56	56	69	52	51	59	506	231
2023-24	31	19	42	53	56	46	63	52	58	81	57	52	70	51	50	526	223
2024-25	32	19	43	48	61	59	51	67	55	61	82	52	52	68	50	547	223
2025-26	32	19	44	50	56	65	66	54	70	58	62	76	53	51	67	544	247
2026-27	32	19	43	50	58	59	72	70	57	74	59	57	77	51	50	561	235
2027-28	32	19	43	50	58	61	66	77	73	60	75	54	58	75	51	583	237
2028-29	32	19	43	50	57	62	68	70	81	78	61	69	54	56	74	589	254
2029-30	32	19	43	50	58	61	68	72	73	85	79	56	70	53	56	609	235

PPS ENROLLMENT HISTORY DETAIL

School Year	Births 5-Years Previous	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	K-12 Total	PK-12 Total	K-5 Total	6-8 Total	9-12 Total
2009-10	248	195	242	184	201	233	210	208	236	216	353	365	344	351	52	3,338	3,390	1,265	660	1,413
2010-11	228	197	205	248	165	217	238	221	213	238	354	366	358	344	40	3,364	3,404	1,270	672	1,422
2011-12	230	182	202	216	230	161	230	251	238	230	319	347	343	358	32	3,307	3,339	1,221	719	1,367
2012-13	251	191	184	198	209	240	177	231	265	242	375	368	353	347	60	3,380	3,440	1,199	738	1,443
2013-14	230	198	181	194	197	210	238	180	231	275	379	376	360	335	43	3,354	3,397	1,218	686	1,450
2014-15	241	208	211	212	197	199	237	247	208	253	404	379	375	353	53	3,483	3,536	1,264	708	1,511
2015-16	239	195	207	211	195	189	197	243	260	219	400	415	383	369	52	3,483	3,535	1,194	722	1,567
2016-17	180	215	220	223	207	222	195	224	257	281	358	411	421	381	56	3,615	3,671	1,282	762	1,571
2017-18	210	214	230	235	223	237	231	219	246	260	413	365	407	415	59	3,695	3,754	1,370	725	1,600
2018-19	174	198	230	231	223	242	247	261	231	264	387	428	349	409	56	3,700	3,756	1,371	756	1,573
2019-20	196	197	208	248	239	237	263	262	270	246	390	422	421	357	95	3,760	3,855	1,392	778	1,590

Source: Princeton Public Schools

- Current 8th and 12th grade cohorts have been smaller throughout their matriculation, despite consistent in-migration
- Larger cohorts that entered in 2016-17 and 2017-18 are 40-50 students greater per grade at the elementary level than just 5 – 6 years ago
- Grade by grade enrollment history used to calculate cohort-survival ratios

COHORT SURVIVAL AND ESTIMATE OF MIGRATION

Kindergarten through 12th Grade Persistency Ratios by School Year 2010-11 to 2019-20														
Year	B-K	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	Est. of Migration
2010-11	0.8640	1.0513	1.0248	0.8967	1.0796	1.0215	1.0524	1.0240	1.0085	1.6389	1.0368	0.9808	1.0000	1.7%
2011-12	0.7913	1.0254	1.0537	0.9274	0.9758	1.0599	1.0546	1.0769	1.0798	1.3403	0.9802	0.9372	1.0000	3.3%
2012-13	0.7610	1.0110	0.9802	0.9676	1.0435	1.0994	1.0043	1.0558	1.0168	1.6304	1.1536	1.0173	1.0117	2.2%
2013-14	0.8609	0.9476	1.0543	0.9949	1.0048	0.9917	1.0169	1.0000	1.0377	1.5661	1.0027	0.9783	0.9490	1.4%
2014-15	0.8631	1.0657	1.1713	1.0155	1.0102	1.1286	1.0378	1.1556	1.0952	1.4691	1.0000	0.9973	0.9806	8.5%
2015-16	0.8159	0.9952	1.0000	0.9198	0.9594	0.9899	1.0253	1.0526	1.0529	1.5810	1.0272	1.0106	0.9840	0.2%
2016-17	1.1944	1.1282	1.0773	0.9810	1.1385	1.0317	1.1371	1.0576	1.0808	1.6347	1.0275	1.0145	0.9948	7.1%
2017-18	1.0190	1.0698	1.0682	1.0000	1.1449	1.0405	1.1231	1.0982	1.0117	1.4698	1.0196	0.9903	0.9857	6.7%
2018-19	1.1379	1.0748	1.0043	0.9489	1.0852	1.0422	1.1299	1.0548	1.0732	1.4885	1.0363	0.9562	1.0049	4.8%
2019-20	1.0051	1.0505	1.0783	1.0346	1.0628	1.0868	1.0607	1.0345	1.0649	1.4773	1.0904	0.9836	1.0229	6.0%
7-YR Avg	0.9852	1.0474	1.0648	0.9850	1.0580	1.0445	1.0758	1.0648	1.0595	1.5266	1.0291	0.9901	0.9888	
6-YR Avg	1.0059	1.0640	1.0666	0.9833	1.0668	1.0533	1.0856	1.0755	1.0631	1.5201	1.0335	0.9921	0.9955	
5-YR Avg	1.0345	1.0637	1.0456	0.9769	1.0782	1.0382	1.0952	1.0595	1.0567	1.5302	1.0402	0.9910	0.9985	
4-YR Avg	1.0891	1.0808	1.0570	0.9912	1.1078	1.0503	1.1127	1.0613	1.0576	1.5175	1.0435	0.9861	1.0021	
3-YR Avg	1.0540	1.0650	1.0503	0.9945	1.0976	1.0565	1.1046	1.0625	1.0499	1.4785	1.0488	0.9767	1.0045	
3-YR Wgt Avg	1.0517	1.0618	1.0519	1.0003	1.0839	1.0642	1.0942	1.0519	1.0588	1.4797	1.0606	0.9756	1.0107	

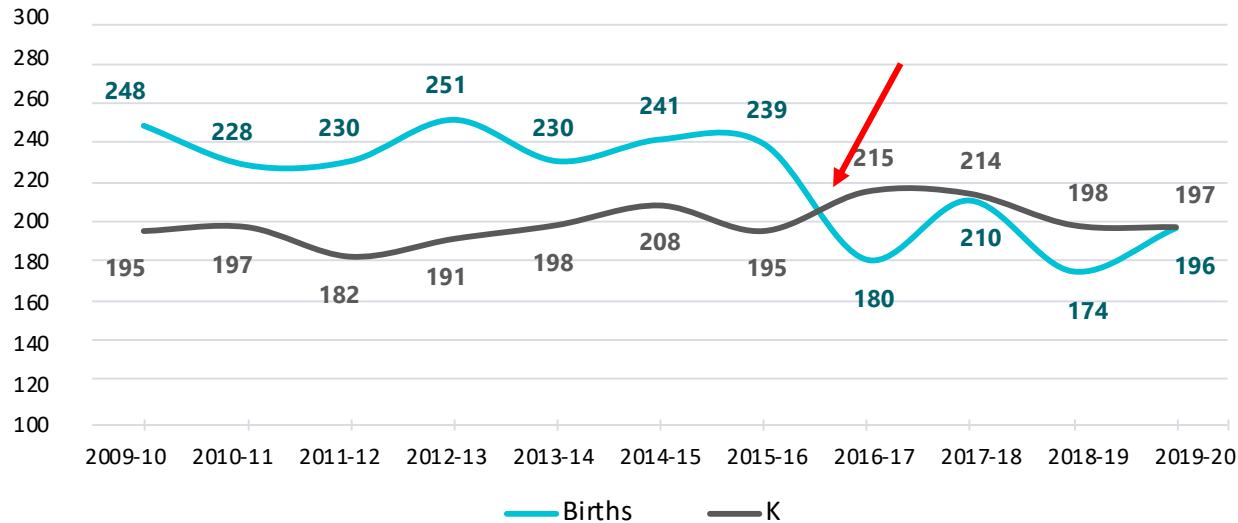
Source: Princeton Public Schools, MMI Projections Methods

Estimation of Migration calculated analyzing grades 1-7 vs. grades 2-8 in the subsequent year

- Cohort survival ratios determine growth or loss in a class/ grade as it progresses through school system
- High 8th – 9th ratio due to Princeton Charter School and Cranbury students
- Generally consistent growth in cohorts over the last four years – including marked change in Birth-K ratios beginning in 2015-16; six-year average cohort survival ratios is standard for NJ
- Relatively consistent in-migration over the last four years, averaging about 6% in-migration to elementary and middle grades per year

BIRTHS AND KINDERGARTEN ENROLLMENT

**Princeton Kindergarten Enrollment
and Births Five Years Previous**



- Significant shift in Birth – Kindergarten cohort-survival ratios occurred between 2015-16 and 2016-17
 - Previously, PPS saw about 80 – 85 % of a birth cohort enter Kindergarten five years later
 - Most recent years, PPS enrolls more students in Kindergarten than were present in the birth cohort five years previous
- Moreover, the trend in kindergarten enrollment is not as responsive to trends in birth cohorts as in the past, as is apparent in graph above for years 2016-17 on
 - In-migration of families influencing enrollment trends more so than birth trends

NEW TO DISTRICT STUDENTS

New to District Students by Grade Level (1-12)

Grade Level	2016-17	2017-18	2018-19	2019-20	Total	4-Year % Change
Elementary	199	206	200	201	806	1%
Middle	122	128	133	110	493	-10%
High	171	185	178	207	741	21%
Total	492	519	511	518	2,040	5%

Source: Princeton Public Schools

- MMI analysis comparing student IDs from one year to next – any ID not present in prior year considered new to district
 - PK and K excluded
 - Cranbury entering 9th graders excluded
- Highly consistent numbers for elementary
- Relatively consistent middle and high school, although 2019-20 saw an increase in new high schoolers and decrease in new middle schoolers
- Identified about 25-30 new to district students from 2019-20 whose student IDs were present in earlier years (actually students returning to district, rather than “new”)

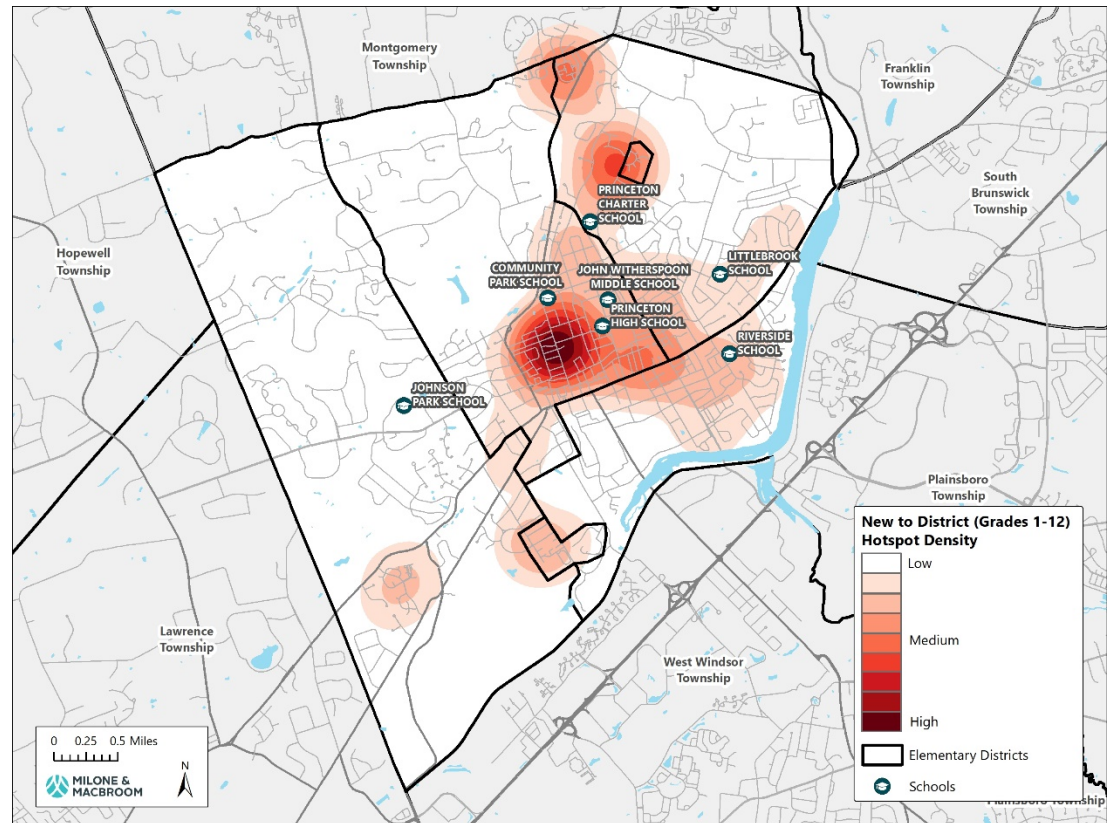
NEW TO DISTRICT STUDENTS

- Community Park and Littlebrook attendance areas have had the most “new to district students”, 67% of all new students since 2016-17
- Johnson Park attendance area had the largest decline in annual new to district students over the four-year period; however, still 60 new students this year
- Churn of students due to University and Institute for Advanced Studies influence apparent with highlighted geographies in Johnson Park and Riverside areas

New to District Students by Attendance Zone (1-12)

Row Labels	2016-17	2017-18	2018-19	2019-20	Total	4 Year % Change
Community Park	200	198	211	189	798	-6%
Johnson Park	92	92	77	60	321	-35%
Littlebrook	114	163	145	165	587	45%
Riverside	70	49	59	85	263	21%
Out of Town	16	17	19	19	71	19%
Total	492	519	511	518	2,040	5%

Source: Princeton Public Schools



STUDENT CHURN

K-11 Students Not Returning to District

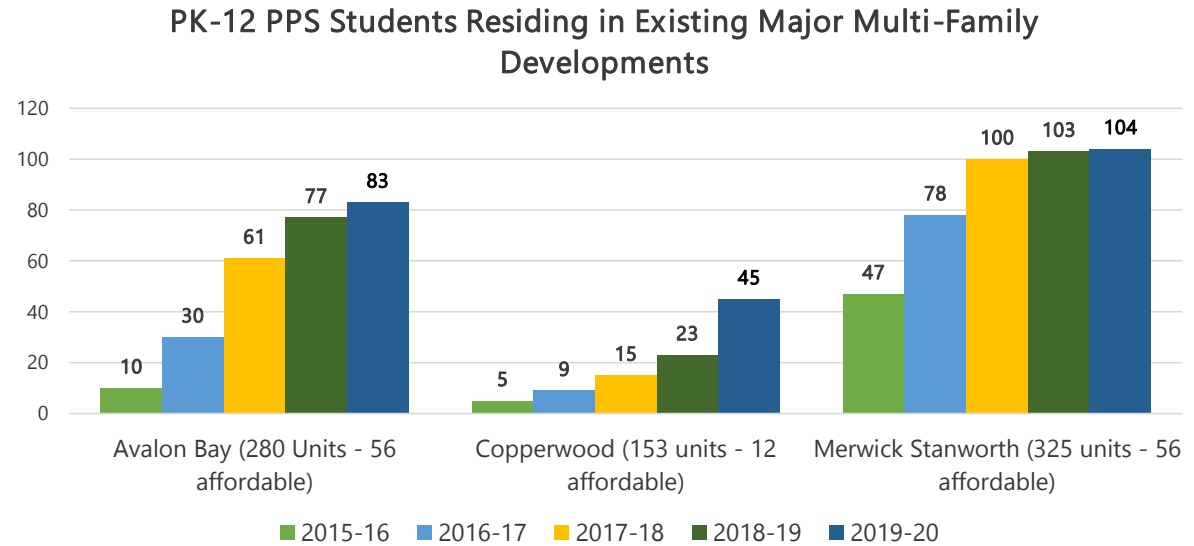
2016-17 to 2017-18	2017-18 to 2018-19	2018-19 to 2019-20
338	362	313

Source: Princeton Public Schools

- Analyzed student IDs for those that did not return from one year to the next
- PreK and 12th grade excluded
- While the District has gained about 500 new to district students each of the last three years, it has also lost about 335 per year
 - Significant churn within system
 - Competing educational offerings (other public and private schools)
 - University and Institute for Advanced Studies influence – more transient population

STUDENTS FROM RECENTLY BUILT MULTI-FAMILY

- Existing multi-family developments comparable to some of the anticipated development
- Of the 200 – 230 students in these developments over the past two years:
 - 52% PK-5
 - 22% middle schoolers
 - 26% high schoolers



- Over the last two years, 24% of students residing in these developments were identified as new to district (student IDs not in PPS system the year before)
 - 30% at Avalon
 - 50% at Copperwood
 - 12% at Merwick Stanworth
- These developments have contributed to elevated cohort survival rates over the last four years, however, Merwick-Stanworth has been stable the last three years, and Avalon growth significantly slowed this year

ENROLLMENT GROWTH

- Unable to obtain a good land use data set; however, identified numerous multi-family developments of various vintages throughout Princeton:

Apartments near Morse Ln	Govenors Lane Condos	Princeton Community Village
Avalon Bay	Griggs Farm	Redding Circle - PHA
Benjamin Rush Condos	Hageman Homes - PHA	Residences at Palmer Square
Brickhouse Road Condos	Karin Court (Lawrence Apts)	Stanworth
Campbell Woods	Lakeside Apartments	Von Nuemann Apartments
Copperwood Apartments	Lawrence Apartments	Wilkinson Way Condos
East Merwick	Maidenhead	

- Compared trends in enrollment residing in these identified multi-family developments to the remainder of enrollment (assumed to be primarily living in single-family units, but also includes students from out of district)
- Also compared enrollment in these identified multi-family developments to enrollment in multi-family developments **excluding** the recently built significant projects shown on previous slide
- Calculated estimate of migration based on 1st – 7th grade cohorts compared to subsequent 2nd – 8th grade cohorts on all of these subsets of enrollment

ENROLLMENT GROWTH

3.4% total enrollment growth from single-family housing since 2015-16

PK-12 PPS Enrollment from Assumed Single-Family Housing																
Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	Est. of Migration
2015-16	37	153	170	165	163	156	164	215	210	173	333	347	321	308	2,915	
2016-17	31	168	173	182	159	182	164	179	215	225	289	340	351	318	2,976	5.1%
2017-18	33	166	174	184	174	174	185	175	197	214	340	293	338	342	2,989	3.9%
2018-19	41	149	177	177	172	187	179	205	179	206	333	351	282	338	2,976	3.3%
2019-20	65	154	157	183	177	181	206	187	215	186	311	360	344	287	3,013	4.6%
4-Yr Avg CSR		0.6663	1.0716	1.0463	0.9636	1.0845	1.0495	1.0778	1.0430	1.0379	1.5619	1.0371	0.9870	0.9957		

35.8% total enrollment growth from multi-family housing since 2015-16

PK-12 PPS Enrollment from All Identified Multi-Family Housing																
Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	Est. of Migration
2015-16	15	42	37	46	32	33	33	28	50	46	67	68	62	61	620	
2016-17	25	47	47	41	48	40	31	45	42	56	69	71	70	63	695	17.0%
2017-18	26	48	56	51	49	63	46	44	49	46	73	72	69	73	765	18.4%
2018-19	15	49	53	54	51	55	68	56	52	58	54	77	67	71	780	10.1%
2019-20	30	43	51	65	60	56	56	75	55	60	77	62	77	70	842	9.8%
4-Yr Avg CSR		0.1956	1.1139	1.0960	1.0874	1.1957	1.0467	1.2758	1.1882	1.1382	1.3263	1.0765	0.9829	1.0332		

8.4% total enrollment growth in older multi-family housing since 2015-16

PK-12 PPS Enrollment from Identified Multi-Family EXCLUDING Avalon, Copperwood, Merwick - Stanworth																
Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	Est. of Migration
2015-16	11	36	31	36	26	29	30	26	46	41	62	67	59	58	558	
2016-17	19	30	36	31	35	30	27	37	36	49	57	62	68	61	578	9.4%
2017-18	17	30	36	39	35	43	30	34	40	36	63	60	58	68	589	10.8%
2018-19	11	29	37	33	41	37	46	40	40	45	40	61	58	59	577	9.7%
2019-20	18	30	33	46	36	41	41	49	41	45	57	45	61	62	605	9.1%
4-Yr Avg CSR		0.1245	1.1428	1.0608	1.0609	1.1099	1.0272	1.2228	1.1668	1.0788	1.2634	1.0365	0.9793	1.0300		

ENROLLMENT GROWTH

- While Avalon, Copperwood and Merwick-Stanworth have contributed to higher cohort-survival ratios over the last four years, they are not solely responsible for enrollment growth
- Enrollment growth in single-family and **other** multi-family housing developments has also been strong over the last four years at more than 3% and 8% respectively
- Consistent in-migration rates of 9 – 10% annually in multi-family developments *excluding* Avalon, Copperwood and Merwick-Stanworth
- Average in-migration rate of more than 4% in single-family units
- Shift in Birth – Kindergarten survival ratio over the last four years supporting significant uptick in family in-migration
- Positive enrollment trends of last four years correspond with positive population and housing indicators, and speak to turnover in existing housing as well as new construction

PROJECTIONS PRIMER

Cohort Survival Method

- Based on Cohort Survival Methodology - standard method for enrollment projections
- The Cohort Survival Methodology relies on **observed data from the recent past in order to predict the near future**
- Methodology works well for stable populations, including communities that are growing or declining at a steady rate
- Based on cohort “survival” as a grade matriculates
 - Survival rates account for the various external factors affecting enrollments, including housing characteristics, residential development, economic conditions, student transfers in and out of the system, and student mobility
- Changes in population, housing stock and tenure, and economic conditions help explain persistency ratios
- Changes in programming (e.g. dual language immersion program expansion) affect persistency ratios of individual schools

PROJECTIONS MODELS

- NJ standard is to use six-year average of cohort-survival ratios
 - Sundance has prepared standard cohort-survival model that adds assumed new students from “above average” housing permitting (Alt. A) – exception made for Birth-K ratio (3-year average used)
 - Sundance Alt. D also uses standard six-year ratios to project “natural” growth from housing that excludes 3 recent multi-family developments, and then adds projected continued growth at those developments and assumed Fair Share Housing units
- MMI using more recent cohort-survival ratios than standard 6-year averages to capture strong trends over the last four years in housing market, demographics and enrollment
 - Given extent of commitment for Fair Share Housing and permitting and design progress on identified 4th round projects (Avalon Thanet Rd. public hearings underway for 200+ units), expect continued multi-family housing development in short and long-term
 - Copperwood development still ramping up enrollment
 - “Natural” growth trends (excluding Avalon, Cooperwood and Merwick-Stanworth) of the last four and three years are strong
 - Kindergarten enrollment has become less responsive to birth trends – indicating strength of in-migration influence

PROJECTIONS PRIMER

Models

- Three projections models prepared to provide a range to benchmark against
 - Low model assumes lowest of most recent trends persist (5-year trend), low birth projections and 75% Fair Share Housing unit occupancy/ student generation by 2027
 - Medium model assumes most recent trends persist (3-year weighted trend), medium birth projections and 90% of Fair Share Housing unit occupancy/ student generation by 2027
 - High model assumes highest of most recent trends persist (3-year trend), high birth projections and 100% Fair Share Housing unit occupancy/ student generation by 2027
- Student multipliers provided by Nassau Capital Advisors, based on Econsult Solutions, Inc. data, were phased into baseline projections

Assumptions

- PK increases to and remains at 100 students
- No changes to PPS programming or availability of private and other public school seats in region
- Phased construction of Fair Share Housing units through 2027 based on current property dispositions/ zoning and funding status

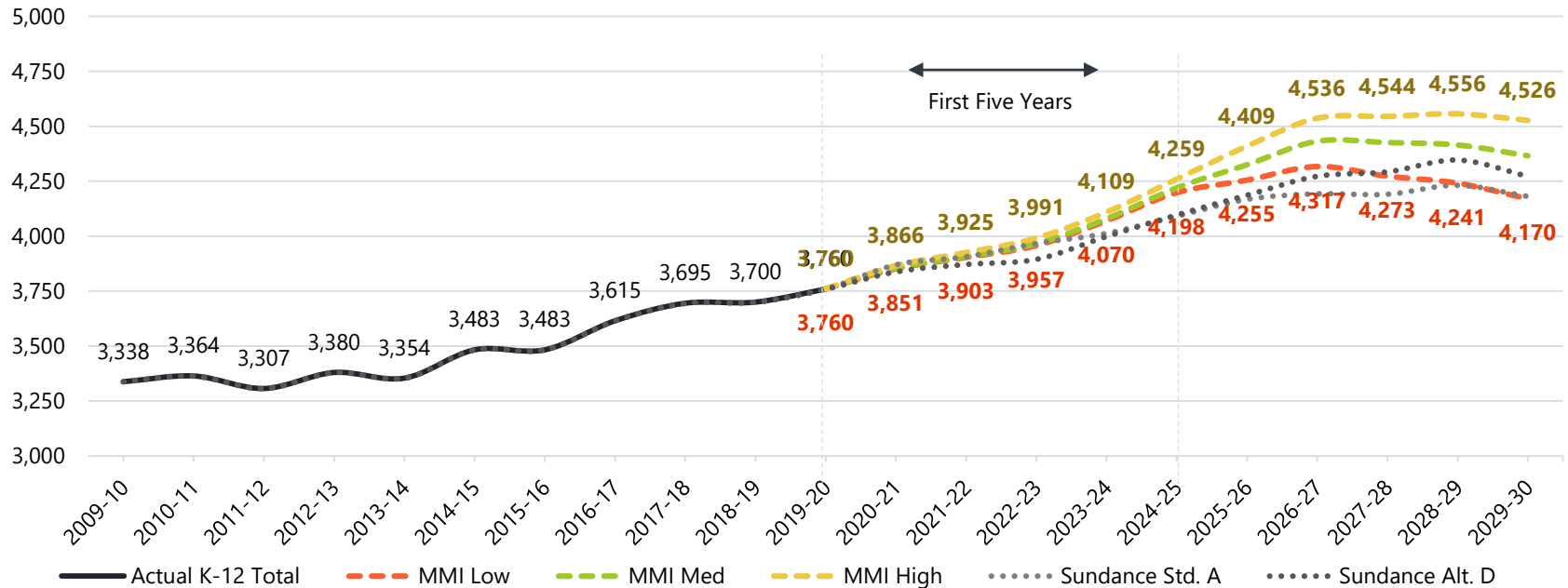
Not Included

- Assumptions on 4th round Fair Share Housing obligations, changes in zoning enabling greater residential density, or changes at local institutions impacting local housing

DISTRICTWIDE PROJECTIONS

Princeton K-12 Enrollment

Actual and Projected

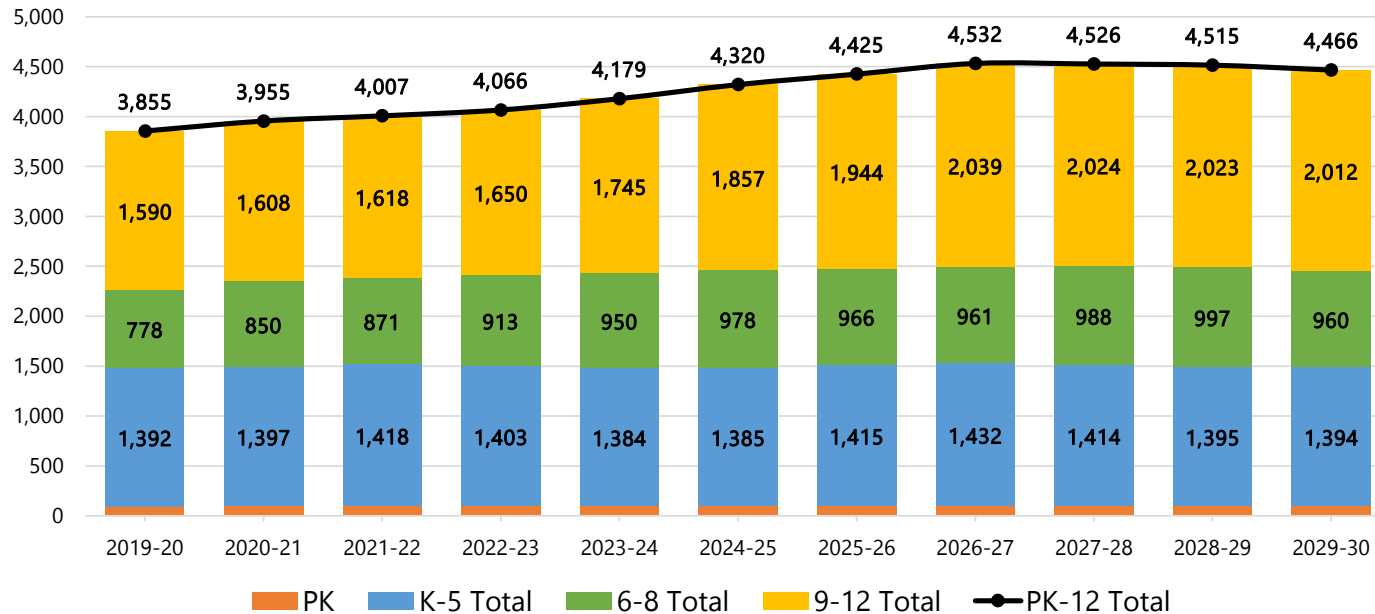


Note: Does not incorporate student multipliers for anticipated 4th round Fair Share Housing agreement

- Greatest confidence in first five years due to known enrollments and birth data
- General agreement with previously prepared projections from Sundance for growth trend to continue over the next seven years
- MMI projects K-12 to grow between 11.6% and 13.3% out five years, and between 11 and 20% out ten years
- Recommend using the **MMI medium projection** model for long range planning purposes; however range of models provide benchmarks as deeper planning work progresses

DISTRICTWIDE PROJECTIONS

Princeton Public Projected PK-12 Enrollment
Medium Model

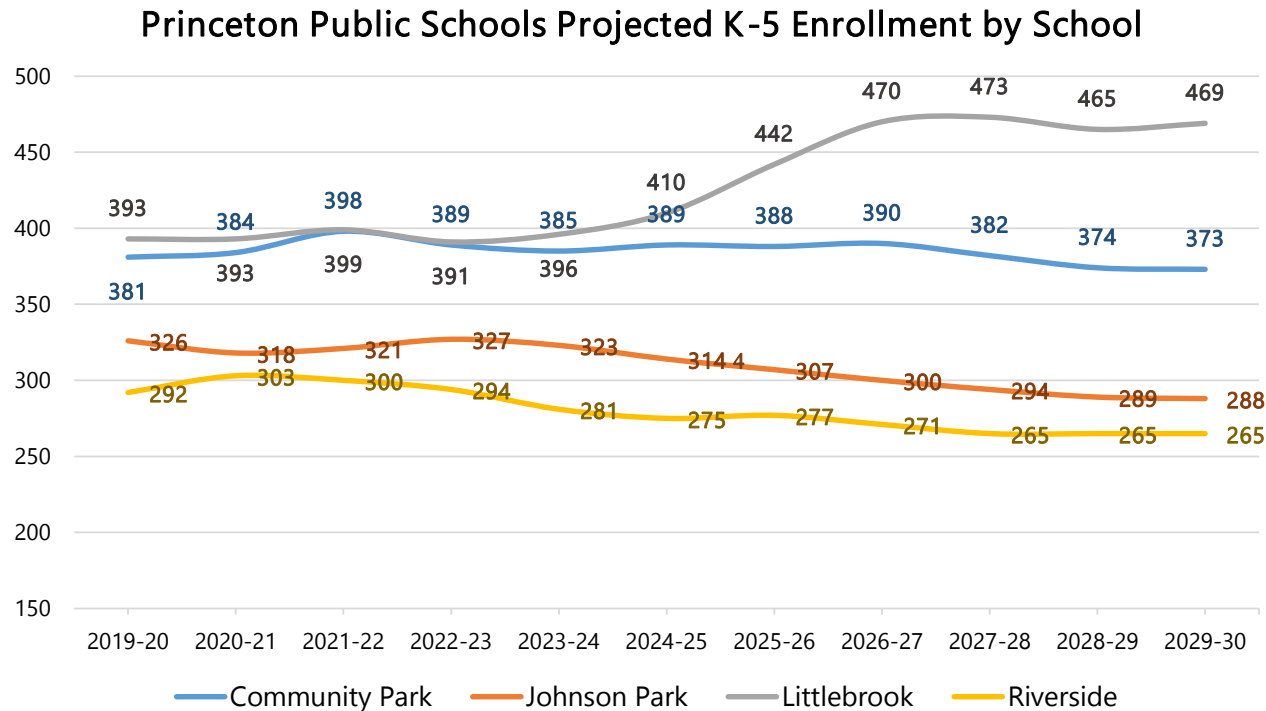


- Medium model best fits current data (incorporates recent occupancy ramp up of multi-family developments and assumes significant build out and occupancy of Fair Share Housing units)
- Projects 12% growth out five years with continued growth out seven years before flattening off to a total of 16% increase out ten years
- Most of that growth is felt in the middle and high school levels, due to some larger cohorts that have recently entered the system, and assumed continued in-migration

DETAILED DISTRICTWIDE MEDIUM PROJECTIONS

School Year	Births 5-Years Previous	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	K-12 Total	PK-12 Total	K-5 Total	6-8 Total	9-12 Total
2019-20	196	197	208	248	239	237	263	262	270	246	390	422	421	357	95	3,760	3,855	1,392	778	1,590
2020-21	200	210	209	219	248	259	252	288	276	286	364	409	412	423	100	3,855	3,955	1,397	850	1,608
2021-22	201	211	223	220	219	269	276	276	303	292	423	382	399	414	100	3,907	4,007	1,418	871	1,618
2022-23	191	201	224	235	220	237	286	302	290	321	432	444	373	401	100	3,966	4,066	1,403	913	1,650
2023-24	177	190	217	240	239	242	256	317	322	311	477	455	436	377	100	4,079	4,179	1,384	950	1,745
2024-25	149	168	208	234	246	266	263	288	342	348	461	505	449	442	100	4,220	4,320	1,385	978	1,857
2025-26	183	208	184	223	240	273	287	294	308	364	508	487	496	453	100	4,325	4,425	1,415	966	1,944
2026-27	181	213	228	199	231	266	295	319	314	328	527	535	478	499	100	4,432	4,532	1,432	961	2,039
2027-28	178	211	227	240	202	250	284	321	336	331	468	554	524	478	100	4,426	4,526	1,414	988	2,024
2028-29	175	208	225	239	242	217	264	306	338	353	469	490	541	523	100	4,415	4,515	1,395	997	2,023
2029-30	172	207	222	236	240	259	230	283	323	354	502	491	479	540	100	4,366	4,466	1,394	960	2,012

ELEMENTARY (K-5) MEDIUM PROJECTIONS



- Assumes no changes to current attendance zones or current program offerings
- Due to the location of many Fair Share Housing units, Littlebrook projected to experience significant growth in the latter half of the projection horizon
- Does not account for 100 PK students
- District intends to send IAS students to Johnson Park (instead of Littlebrook, where they have traditionally gone) beginning next year – about 20 K-5 students

DISTRICTWIDE LOW AND HIGH PROJECTIONS

Low

School Year	K-12 Total	PK-12 Total	K-5 Total	6-8 Total	9-12 Total
2019-20	3,760	3,855	1,392	778	1,590
2020-21	3,851	3,951	1,380	851	1,620
2021-22	3,903	4,003	1,389	868	1,646
2022-23	3,957	4,057	1,364	901	1,692
2023-24	4,070	4,170	1,344	921	1,805
2024-25	4,198	4,298	1,343	941	1,914
2025-26	4,255	4,355	1,351	917	1,987
2026-27	4,317	4,417	1,357	903	2,057
2027-28	4,273	4,373	1,334	924	2,015
2028-29	4,241	4,341	1,308	928	2,005
2029-30	4,170	4,270	1,300	896	1,974

High

School Year	K-12 Total	PK-12 Total	K-5 Total	6-8 Total	9-12 Total
2019-20	3,760	3,855	1,392	778	1,590
2020-21	3,866	3,966	1,398	852	1,616
2021-22	3,925	4,025	1,423	877	1,625
2022-23	3,991	4,091	1,407	923	1,661
2023-24	4,109	4,209	1,389	961	1,759
2024-25	4,259	4,359	1,393	990	1,876
2025-26	4,409	4,509	1,442	986	1,981
2026-27	4,536	4,636	1,469	983	2,084
2027-28	4,544	4,644	1,458	1,017	2,069
2028-29	4,556	4,656	1,452	1,026	2,078
2029-30	4,526	4,626	1,467	989	2,070