



Demographic Study

for the

Linden Public Schools

October 2023

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Executive Summary

Statistical Forecasting LLC (“Statistical Forecasting”) completed a demographic study update for the Linden Public Schools, projecting grade-by-grade enrollments from 2024-25 through 2028-29, a five-year period. The previous study was completed for the district in February 2020. In addition, the following tasks were completed:

- analyzed community population trends and age structure, demographic characteristics, birth counts, and fertility rates,
- examined historical enrollment trends districtwide, by grade configuration (PK-5, 6-8, and 9-12), and by school,
- determined historical birth counts for each elementary attendance area,
- computed student yields by housing type (e.g., one- to four-family homes, townhouses/condominiums, and apartments),
- researched new housing starts and the impact on the school district,
- compared building capacities to current and projected enrollments, and
- geocoded, or electronically “pin-mapped,” student addresses from the 2015-16 and 2022-23 school years to show the relative concentrations of where students live.

Community Overview

In the 2020 Census, the City of Linden (“Linden”) had 43,738 residents, which is a gain of 3,239 persons (+8.0%) from 2010. Forecasts prepared by the North Jersey Transportation Planning Authority project the population to be 50,438 in 2050, which would be a 15.3% increase from the 2020 Census and a gain of 6,700 persons.

Regarding race, Linden is a racially diverse community. Hispanics are the largest race in Linden, surpassing Whites in 2020. In the 2020 Census, Linden was 34.4% Hispanic as compared to 24.9% in 2010, which is a gain of 9.5 percentage points. Whites were the second-largest race at 31.4% in 2020, which is a loss of 13.3 percentage points from 2010 (44.7%). Blacks/African Americans (“Blacks”) were the third-largest race at 26.8% in 2020.

With respect to nativity, 33.3% of Linden residents are foreign-born, which is greater than that of New Jersey (22.9%). Haiti and Colombia are the largest sources of the city’s foreign-born population.

Historical Enrollment Trends

Historical enrollments (PK-12) were analyzed from 2014-15 through 2023-24, a ten-year period. Enrollments generally increased through 2019-20 before reversing trend. In 2020-21 and 2021-22, enrollments declined by 183 and 69.5 students, respectively, which is likely due to the coronavirus pandemic, before increasing in the past two years. In 2023-24, enrollment is 6,334.5, which is a gain of 307 students (+5.1%) from the 2014-15 enrollment of 6,027.5.

For grades PK-5, enrollments generally increased through 2018-19 before reversing trend. Enrollments declined in 2020-21 (-144) and 2021-22 (-98), which is likely due to the coronavirus pandemic, before rebounding in 2022-23 (+33) and 2023-24 (+165) as students returned to the school district. In 2023-24, enrollment is 3,048, which is slightly higher (+11) than the 2014-15 enrollment of 3,037.

For grades 6-8, enrollments increased through 2019-20 before stabilizing. Enrollment is 1,421 in 2023-24, which is a gain of 178 students from the 2014-15 enrollment of 1,243.

At Linden High School (grades 9-12), enrollments declined through 2017-18 before reversing trend. Since then, enrollments have been generally increasing. In 2023-24, enrollment is 1,865.5, which is a gain of 118 students from the 2014-15 enrollment of 1,747.5.

Kindergarten Replacements

Kindergarten replacements were analyzed to determine whether there was any relationship between overall enrollment change and kindergarten replacement, which is the numerical difference between the number of graduating 12th graders and the number of entering kindergarten students. In five of the last nine years, the district has experienced positive kindergarten replacement. Positive kindergarten replacement occurs when the number of kindergarten students entering the district is greater than the number of graduating twelfth grade students from the prior year. Conversely, negative kindergarten replacement occurs when the number of kindergarten students entering the district is less than the number of graduating twelfth grade students from the prior year. Positive kindergarten replacement has ranged from 7-39.5 students per year while negative kindergarten replacement has ranged from 2.5-51.5 students per year. As the magnitudes of the kindergarten replacements have been relatively small in most instances, this indicates that the incoming kindergarten classes and outgoing 12th grade classes are fairly similar in size.

Birth Counts

The number of births from 2008-2021 in Linden was used to project kindergarten enrollments five years later. The annual number of births in Linden was fairly stable from 2008-2019 before declining outside of the historical range in 2020 and 2021. In 2021, there were 425 births in the city, which are 33 fewer births than in 2008 (458).

When comparing birth counts in 2008 to those in 2021 at the elementary attendance area level, five of the eight attendance areas had fewer births in 2021 as compared to 2008, although several of the differences were very small. The School #6 attendance area had the largest decline (-12) in the birth count over this time period. On the flip side, the School #8 attendance area had the largest increase (+24) in the birth count over this time period.

Upon aggregating the number of births by elementary attendance area from 2008-2021, the School #2 attendance area had the greatest number of births (1,144) over this time period while the School #10 attendance area had the fewest (522).

Population Age Structure

Age-sex diagrams from the 2010 and 2020 Censuses were created for Linden to show the percentage of males and females in each age class. In 2010, the largest number of individuals was aged 45-49 for males and 50-54 for females. In communities with little inward or outward migration and low mortality, the largest cohort in subsequent years is typically the next oldest cohort as people advance in age. However, in 2020, the largest cohort was aged 30-34 for males and 55-59 for females. As the largest groups were not ten years older from the 2010 cohorts, migration is likely occurring in Linden. Over this time period, the greatest declines occurred in the 15-19 age group for males, which corresponds approximately with high school and college-aged individuals, and the 80-84 age group for females. The greatest gains occurred in the 65-69 age group for males and the 60-64 age group for females. If males and females are aggregated in each age class, there were gains in every age group from 55-59 to 75-79, indicating a “graying” of the overall population over this time period.

Potential New Housing

Regarding current and future residential development in Linden, there is the potential for 825 non age-restricted housing units, all of which will consist of multi-family units such as apartments or duplexes. Of the eight elementary attendance areas, the largest impact will be on School #8, which will contain nearly all (98%) of the new housing units.

Of the proposed developments, the largest is at the former United Lacquer warehouse site, which will consist of 402 non age-restricted apartment units. The project, which is under construction, will consist of a mix of one- and two-bedroom units. The second-largest project, known as the Clarke property, was recently approved and will consist of 334 non age-restricted apartment units with a mix of one and two bedrooms.

Most of the proposed residential development is part of the creation of a Transit Village or Transit-Oriented Development (“TOD”) on approximately 392 acres in the vicinity of the Linden Train Station. The TOD includes areas approximately within a half-mile radius of the train station and is bisected by Wood and Elizabeth Avenues. TODs that have been recently constructed in the city include Citizen Linden (234 1- and 2-BR apartment units), Meridia Lifestyles I (176 1- and 2-BR apartment units), Meridia Lifestyles II (145 1- and 2-BR apartment units), and citivillage @ st. georges ave (113 1- and 2-BR apartment units). Student yields in these developments have been very low, ranging from 0.021-0.040 public school students per unit.

An estimate was made of the number of public school children that could potentially come from the approved and proposed housing developments in Linden. A total of 32 public school children (K-5 = 18, 6-8 = 5, and 9-12 = 9) in grades K-12 are projected to be generated.

Student Yields

Student yields by length of ownership were determined for one- to four-family homes by joining the parcel-level property database of Linden with the 2022-23 student address database

provided by the school district. Excluding age-restricted housing units, condominiums, and townhouses, the overall student yield (K-12) for one- to four-family homes in Linden, where the majority of housing units were detached single-family homes or duplexes, was computed to be 0.691.

Student yields were also computed for townhouses and condominiums in Linden. A total of 45 children (K-12) were identified living in 580 units, which is an average student yield of 0.078. In general, student yields are very low. The largest student yields, in developments with at least 25 units, are in Park at Linden (0.148) and Parkline (0.074). The city's average student yield for townhouses and condominiums in 2022-23 is very similar to that of 2019-20 (0.067).

Finally, student yields were computed for apartment complexes in Linden. A total of 221 public school children (K-12) were identified living in 2,472 units, which is an average student yield of 0.089. The largest student yields, in developments with at least 25 units, are in Sunnyfield Garden (0.262) and Hilton Gardens (0.183). The city's average student yield for apartments in 2022-23 is much lower than that of 2019-20 (0.171), which is due to the low student yields in the recently-constructed apartment developments (e.g., Citizen Linden, Meridia Lifestyles II, citivillage @ st. georges ave, and 1700 S. Stiles Street).

Home Sales

Home sales in Linden were analyzed from 2001-2022. Data for 2023 were incomplete. After peaking at 872 sales in 2005, the number of sales declined to 414 in 2011 due to the housing market crash and banking crisis. During this period (2008-2012), the annual number of home sales was low, ranging from 414-505. Since then, home sales have rebounded. From 2013-2022, home sales have been generally increasing. In the last five years, the annual number of sales has ranged from 1,134-1,272, which is much greater than the number of sales that occurred before the housing market crash and banking crisis.

Enrollment Projections

Enrollments (PK-12) were calculated at the school level from 2024-25 through 2028-29, a five-year period. Enrollments are projected to decline throughout the projection period. In 2028-29, enrollment is projected to be 6,081, which would be a decline of 253.5 students from the 2023-24 enrollment of 6,334.5.

For the elementary grades (PK-5), enrollments are projected to be fairly stable for the next three years before declining in the last two years of the projection period. Enrollment is projected to be 2,974 in 2028-29, which would be a decline of 74 students from the 2023-24 enrollment of 3,048.

For the middle school grades (6-8), enrollments are projected to decline for the next three years before reversing trend. In 2028-29, enrollment is projected to be 1,338, which would be a decline of 83 students from the 2023-24 enrollment of 1,421.

Finally, for grades 9-12 at Linden High School, enrollments are projected to be fairly stable for the next four years before declining near the end of the projection period. In 2028-29, enrollment is projected to be 1,769, which would be a decline of 96.5 students from the 2023-24 enrollment of 1,865.5.

Enrollments were also computed for each elementary and middle school in the district. As these are smaller subgroups of the overall population as compared to using districtwide grade counts, the reliability of the school projections are lower than the overall districtwide projections. In general, the smaller the forecasted population, the higher the probability of error associated with the projection.

Building Capacities

The capacities of the schools in the district were compared to the current enrollments in 2023-24 and the enrollment projections in the 2028-29 school year. Using the building capacities from the district's Long Range Facilities Plan, the differences between capacity and current/projected number of students were computed. Positive values indicate available extra seating while negative values indicate inadequate seating (also known as "unhoused students"). It should be noted that the capacity values are not fixed and can change from year-to-year based on classroom usage. For instance, additional special education classes in a building would reduce the building's capacity. On the other hand, districts with unhoused students can accommodate these children by increasing class sizes, which in turn increases the school's capacity. As such, the capacity of a school is not a fixed value and can be changed depending on how the building is used.

In 2023-24, there is surplus seating in five elementary schools, with the largest being at School #2 and School #8 (+63). On the other hand, there are shortages of seating in the remaining three elementary schools, with the largest being at School #5 (-61). At the middle school level, surplus seating exists at both McManus (+44) and Soehl (+37). At Linden High School, there is currently a shortage of 26.5 seats.

By 2028-29, at the elementary level, five elementary schools are projected to have surplus seating, with the largest being at School #2 (+109). The remaining three elementary schools are projected to have a shortage in seating, with the largest being at School #5 (-58). At the middle school level, both McManus (+64) and Soehl (+100) are projected to have a greater number of surplus seats due to a projected decline in enrollment. Finally, Linden High School is now projected to have surplus seating (+70) due to a decline in enrollment in the school.

Mapping

Student addresses from the school district were geocoded or "pin-mapped" for 2015-16 and 2022-23 using mapping software. In 2015-16, the greatest number of children per census block was located in the northern section of the city in the School #1, #6, and #9 elementary attendance areas. In 2022-23, using the same scale, the greatest number of students was located in the central, northern, and northwestern sections of the city in each of the elementary attendance areas, with the exception of School #5. In comparing the figures over time, the number of students per census block has increased in Linden.

In an effort to control for the different census block sizes, the number of students in each census block was divided by the block's geographical area to determine the density of students (students per square mile). In 2015-16, the greatest student densities were located in the central and northern sections of the city in the School #2, #4, #5, and #9 elementary attendance areas. In 2022-23, the greatest student densities were also located in the central and northern sections of the city in each of the elementary attendance areas, with the exception of School #9 and #10. In comparing the figures over time, student densities have increased.

To see which sections of Linden have the most children per housing unit (student yield), the number of children per census block was divided by the number of housing units in each census block. In 2015-16, the greatest student yields were located in the central, northern, and northwestern sections of the city in each of the elementary attendance areas. In 2022-23, the greatest student yields were also located in the central, northern, and northwestern sections of the city in each of the elementary attendance areas. In comparing the figures over time, the number of students per housing unit has increased.

Final Thoughts

After increasing through 2019-20, enrollments (PK-12) declined in 2020-21 and 2021-22, which is likely due to the coronavirus pandemic. In the next five years, enrollments are projected to decline, which is primarily a result of a decline in the city's birth rate and smaller entering kindergarten cohorts since the pandemic. The projected enrollment decline is expected to occur fairly equally across each of the grade configurations. While there are a significant number of housing units (825) planned, the housing unit type and bedroom distributions are likely to lead to fewer public school students than may have been anticipated.

Introduction

Statistical Forecasting LLC (“Statistical Forecasting”) completed a demographic study update for the Linden Public Schools, projecting grade-by-grade enrollments from 2024-25 through 2028-29, a five-year period. The previous study was completed for the district in February 2020. In addition, the following tasks were completed:

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- researched new housing starts and the impact on the school district,
- compared building capacities to current and projected enrollments, and
- geocoded, or electronically “pin-mapped,” student addresses from the 2015-16 and 2022-23 school years to show the relative concentrations of where students live.

Enrollment Projections from February 2020 Report

In our previous demographic study completed in February 2020, enrollments were projected from 2020-21 through 2024-25, a five-year period. Table 1 compares the actual enrollments (PK-12) to the projected enrollments for the first four years of the projection period. The table shows the numerical differences and percent errors by year. Positive error rates indicate over-projections while negative error rates indicate under-projections.

Table 1
Comparison of Projected to Actual Enrollments (PK-12)
from February 2020 Report

Year	Actual	Projected	Difference	% Error
2020-21	6,024.5	6,341	+316.5	+5.3%
2021-22	5,955	6,442	+487	+8.2%
2022-23	6,006.5	6,498	+491.5	+8.2%
2023-24	6,334.5	6,541	+206.5	+3.3%

In our previous study, enrollments were projected to increase. In actuality, enrollments declined sharply in 2020-21 and to a lesser extent in 2021-22 before reversing trend in 2022-23. The sharp decline was likely due to the coronavirus pandemic, as parents sought alternative educational experiences for their children in the first two years of the pandemic (2020-21 and 2021-22), or may have had to relocate. As such, enrollments were overestimated in each year of the projection period. Error rates ranged from 3.3%-8.2%, which corresponds to a numerical difference range of 206.5-491.5 students.

In a survey by Schellenberg and Stephens of educational planners who complete enrollment projections, two-thirds believe that an error rate of 1% per year for the total enrollment is acceptable.¹ For a five-year projection, this would mean that a 5% error rate in the fifth year would be acceptable. The projections were outside this parameter in the first three years of the projection period and were within this parameter in the fourth year of the projection period.

Table 2 compares the actual enrollments to the projected enrollments for the first four years of the projection period for the elementary (PK-5), middle (6-8), and high (9-12) school grade configurations.

Table 2
Comparison of Projected to Actual Enrollments
by Grade Configuration from February 2020 Report

Year		Projected	Actual	Difference	% Error
2020-21	Elementary (PK-5)	3,164	2,948	+216	+7.3%
2021-22		3,158	2,850	+308	+10.8%
2022-23		3,167	2,883	+284	+9.9%
2023-24		3,181	3,048	+133	+4.4%
Year		Projected	Actual	Difference	% Error
2020-21	Middle (6-8)	1,398	1,378	+20	+1.5%
2021-22		1,463	1,386	+77	+5.6%
2022-23		1,456	1,348	+108	+8.0%
2023-24		1,475	1,421	+54	+3.8%
Year		Projected	Actual	Difference	% Error
2020-21	High (9-12)	1,779	1,698.5	+80.5	+4.7%
2021-22		1,821	1,719	+102	+5.9%
2022-23		1,875	1,775.5	+99.5	+5.6%
2023-24		1,885	1,865.5	+19.5	+1.0%

At the elementary level (PK-5), enrollments were overestimated in each year, as error rates ranged from 4.4%-10.8%. Expressed in numbers, the projections differed from actual enrollments by 133-308 students. Elementary enrollments were projected to be fairly stable throughout the projection period. Instead, enrollments declined in 2020-21 and 2021-22 before reversing trend. The overestimation is likely due to the coronavirus pandemic, as some parents were reluctant to send their child to school or may have sought private schools that had full in-person learning rather than hybrid or remote instruction. Upon further inspection, most of the

¹ Schellenberg, S. J., & Stephens, C. E. (1987). Enrollment projection: variations on a theme. Paper presented at the Annual Meeting of the American Educational Research Association, Washington D.C., (ERIC Document Reproduction Service No. ED 283 879)

error was due to over-projecting kindergarten in each year, whose error was compounded in the following years as the students moved through the system. Of the three grade configurations, the elementary grades had the greatest percent errors in each year of the projection period.

For the middle school level (grades 6-8), enrollments were also overestimated in each year of the projection period. Error rates ranged from 1.5%-8.0%, which corresponds to a numerical difference range of 20-108 students. Of the three grade configurations, the percent errors were lowest in the first two projection years for the middle school grades.

Finally, for grades 9-12 at Linden High School, enrollments were also overestimated in each year of the projection period. Error rates ranged from 1.0%-5.9%, which corresponds to a numerical difference range of 19.5-102 students. Of the three grade configurations, the percent errors were lowest in the last two projection years for the high school grades

At the school level, half of the survey respondents in the Schellenberg and Stephens survey believed an error rate of 3-5% in the first projection year was acceptable.² The elementary and middle school projections shown in Table 2 are not for an individual school, but are the aggregated enrollments of the individual schools in each grade configuration and therefore are not compared to the acceptable error rate. However, the high school error rate (Linden High School) was within the range of 3-5% of what educational planners deem acceptable.

The accuracy of the projections is contingent on the most recent historical trends continuing into the future. If there is a departure from these trends caused by, for example, migration or withdrawal of students due to the coronavirus pandemic, numerous new housing starts (or planned housing starts that do not occur), changes in school district policy, changes to immigration laws, an economic downturn, a change in the housing resale market, etc., the enrollment projections presented are less likely to be accurate in future years, as this analysis does not forecast future trends. Therefore, the projections need to be revised annually to detect potential reversals in enrollment trends. Changes in enrollment are dependent on several factors such as birth counts, migration of students into or out of the school district, the presence of charter schools, private schools, or parochial schools, and school district policy changes.

² *ibid.*

Population Trends in Linden

Located in Union County, the City of Linden (“Linden”) contains a land area of 10.68 square miles, with an additional 0.73 square miles of water area. In the 2020 Census, Linden had 43,738 residents, which is 4,095.3 persons per square mile. Historical and projected populations for Linden from 1940-2050 are shown in Table 3 and Figure 1.

From 1940-1970, Linden’s population steadily increased, with its greatest gain occurring in the 1950s (+30.3%). After declines in the 1970s and 1980s, the population reversed trend and has increased in the last three decades. In the most recent decade, there was a gain of 3,239 persons.

Table 3
Historical and Projected Populations for Linden
1940-2050

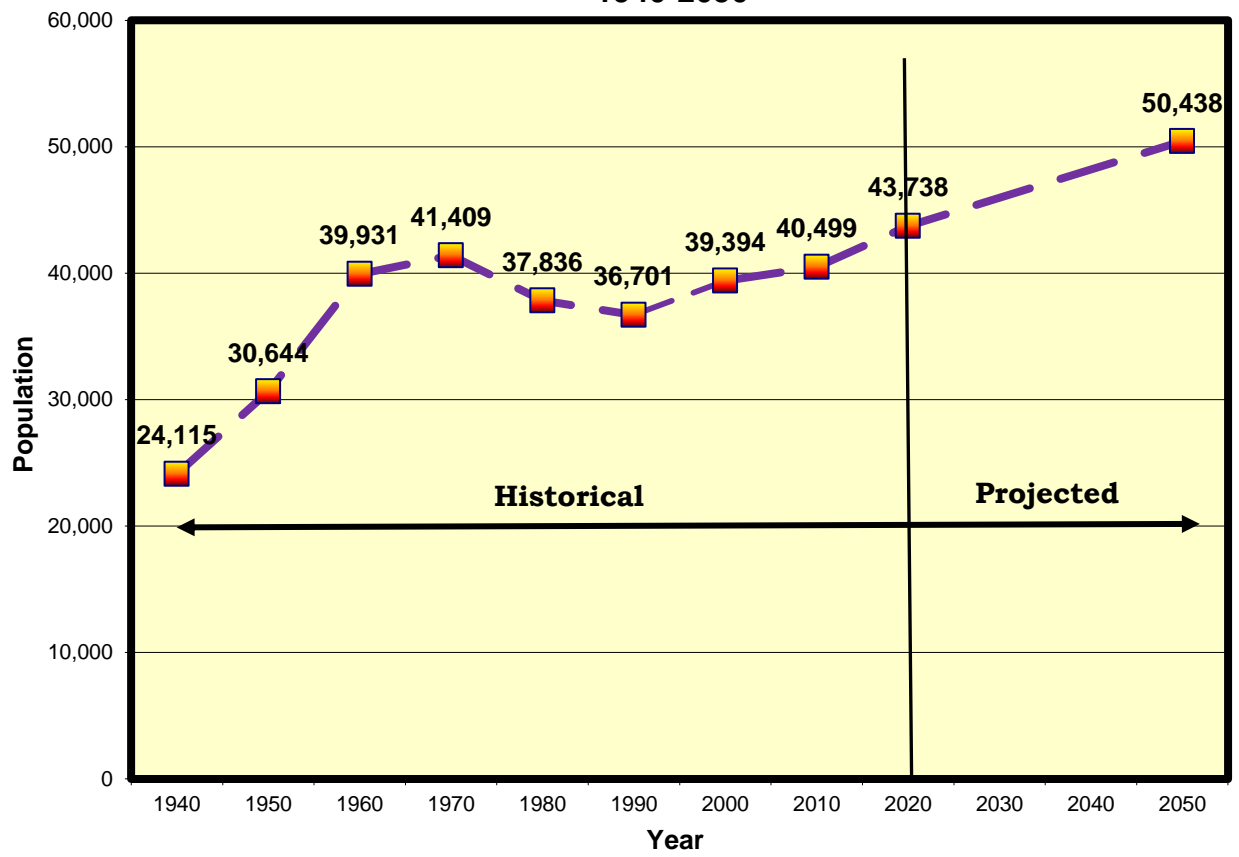
Year	Population	Percent Change
Historical¹		
1940	24,115	N/A
1950	30,644	+27.1%
1960	39,931	+30.3%
1970	41,409	+3.7%
1980	37,836	-8.6%
1990	36,701	-3.0%
2000	39,394	+7.3%
2010	40,499	+2.8%
2020	43,738	+8.0%
Projected²		
2050	50,438	+15.3%

Sources: ¹ United States Census Bureau

² North Jersey Transportation Planning Authority, Inc. (2021)

A population projection for 2050, which was prepared by the North Jersey Transportation Planning Authority (“NJTPA”), indicates that the population will continue to increase. However, as the projection was based off data from 2017, the NJTPA needs to revise its projections now that the 2020 Census results are available. As it currently stands, the forecast projects the population to be 50,438 in 2050, which would be a 15.3% increase from the 2020 Census and a gain of 6,700 persons.

Figure 1
Linden Historical and Projected Populations
1940-2050



Linden Demographic Profile

In Table 4, selected demographic characteristics of Linden are compared from the 2010 and 2020 Censuses and the 2007-2011 and 2017-2021 American Community Surveys (“ACS”). While some Census variables account for everyone in the population (e.g., age and race), other variables are collected from a sample (e.g., median household income, educational attainment, poverty status, etc.). The ACS replaced the long form of the Census, last administered in 2000 to approximately 16% of the population in the United States. For communities with fewer than 65,000 persons such as Linden, ACS data represent a sample collected over a five-year time period, where the estimates represent the average characteristics between January 2017 and December 2021, for example. This information does not represent a single point in time like the long form of earlier Censuses. The five-year ACS contains 1% annual samples from all households and persons from 2017 to 2021, resulting in a 5% sample of the population. Due to the small sample size, the sampling error is quite large, which increases the degree of uncertainty of the estimated values. Therefore, the forthcoming ACS data should be interpreted with caution.

Regarding race, Linden is a racially diverse community. Hispanics are the largest race in Linden, surpassing Whites in 2020. In the 2020 Census, Linden was 34.4% Hispanic as compared to 24.9% in 2010, which is a gain of 9.5 percentage points. Whites were the second-largest race at 31.4% in 2020, which is a loss of 13.3 percentage points from 2010 (44.7%). Blacks/African Americans (“Blacks”) were the third-largest race at 26.8% in 2020, which is an increase of 1.1 percentage points from 2010 (25.7%). Figures 2-4 show the Hispanic, White, and Black percentages by Census block group, which are the three largest races in Linden. In addition, the elementary attendance areas are shown to provide context of where the highest and lowest percentages are occurring. The Hispanic percentage is greatest in the central and northern sections of the city in the School #2, #4, and #6 elementary attendance areas. The White percentage is greatest primarily in the northern and northwestern sections of the city in the School #4, #9, and #10 elementary attendance areas. The Black percentage is greatest in the northern section of Linden in the School #4 elementary attendance area.

Regarding nativity, 33.3% of Linden residents were foreign-born in the 2017-2021 ACS as compared to 32.0% in the 2007-2011 ACS, which is a gain of 1.3 percentage points. As a point of comparison, New Jersey’s foreign-born resident percentage was 22.9% in the 2017-2021 ACS, which is lower than that of Linden. While not shown in the table, place of birth, which serves as a proxy for country of origin, indicates that Poland and Haiti were the largest sources of immigrants in the 2007-2011 ACS, accounting for 22.2% and 10.4%, respectively, of the foreign-born population. In the 2017-2021 ACS, Haiti is now the largest source (14.6%) of the foreign-born population while Colombia is now the second-largest source (12.0%). Figures 5 and 6 show the percentage of foreign-born persons and the percentage of persons speaking English less than “Very Well” in Linden by Census block group, which may potentially correlate with English as a New Language (“ENL”) students in need of English language instruction.

Table 4
Selected Demographic Characteristics of Linden

Race Origin¹	2007-2011 ACS 2010 Census	2017-2021 ACS 2020 Census
White	18,089 (44.7%)	13,744 (31.4%)
Black or African American	10,403 (25.7%)	11,722 (26.8%)
Hispanic or Latino	10,095 (24.9%)	15,055 (34.4%)
American Indian and Alaska Native	58 (0.1%)	33 (0.1%)
Asian	1,066 (2.6%)	1,484 (3.4%)
Native Hawaiian and Other Pacific Islander	8 (0.0%)	5 (0.0%)
Other Race	166 (0.4%)	541 (1.2%)
Two or more Races	614 (1.5%)	1,154 (2.6%)
Place of Birth		
Foreign-Born	32.0%	33.3%
Age		
Under 18	21.8%	21.1%
18-64	64.8%	64.3%
65 and over	13.4%	14.6%
Median age	38.8 years	39.4 years
Educational Attainment		
Bachelor's degree or higher	17.9%	23.3%
Graduate or professional degree	6.0%	7.9%
Income		
Median household income	\$58,603	\$80,200
Percentage of Persons in Poverty ages 5-17	12.1%	10.9%
Housing Units		
Total number	15,872	16,452
Occupied units	14,909 (93.9%)	15,609 (94.9%)
Owner-occupied units	8,495 (57.0%)	8,519 (54.6%)
Renter-occupied units	6,414 (43.0%)	7,090 (45.4%)
Median value of an owner-occupied unit	\$324,800	\$307,200
Average household size	2.70	2.79
Housing Type¹		
Total number	15,679	16,411
1-unit, attached or detached	7,787 (49.7%)	8,167 (49.8%)
Two units	3,962 (25.3%)	4,359 (26.6%)
Three or four units	1,331 (8.5%)	1,388 (8.5%)
Five to nine units	410 (2.6%)	441 (2.7%)
10 to 19 units	454 (2.9%)	378 (2.3%)
20 or more units	1,627 (10.4%)	1,624 (9.9%)
Mobile home, boat, RV, van, etc.	108 (0.7%)	54 (0.3%)

Sources: American Community Survey (2007-2011 and 2017-2021), United States Census (2010 and 2020)

Notes: ¹ Data may not sum to 100.0% due to rounding.

Cells shaded orange are from the decennial Census while cells shaded blue are from the American Community Survey.

The foreign-born percentage is greatest in the central, northern, and western sections of the city primarily in the School #1, #4, #8, and #10 elementary attendance areas. The percentage of persons speaking English less than “Very Well” is greatest in the central and western sections of the city in the School #2, #6, and #8 elementary attendance areas.

The median age in Linden has increased slightly from 38.8 years in 2010 to 39.4 years in 2020, which is similar to the median age in New Jersey (39.9 years). During the same time period, the percentage of people under the age of 18 years, which corresponds predominantly to school-age children, decreased slightly from 21.8% to 21.1%. Figure 7 shows the percentage of school-age children (5-17) in Linden by Census block group. The greatest percentages of school-age children are in the northern section of the city in the School #1 and #4 elementary attendance areas.

Regarding educational attainment for adults aged 25 and over, 23.3% of the population had a bachelor’s degree or higher in the 2017-2021 ACS as compared to 17.9% in the 2007-2011 ACS, which is a gain of 5.4 percentage points. Linden’s percentage of persons having a bachelor’s degree or higher is significantly lower than that of New Jersey (41.5%). Persons with graduate or professional degrees increased from 6.0% to 7.9% during this time period.

Median household income increased from \$58,603 in the 2007-2011 ACS to \$80,200 in the 2017-2021 ACS, a gain of 36.9%. By comparison, median household income in New Jersey is \$89,703, which is \$9,500 higher than Linden’s. During this time period, the percentage of school-age children (5-17) that are in poverty decreased slightly from 12.1% to 10.9%. Figure 8 shows the percentage of persons living in poverty in Linden by Census block group. The percentage of persons living in poverty is greatest in the central and northern sections of the city in the School #4 and #8 elementary attendance areas.

Regarding housing, there were 16,452 housing units in Linden in 2020, which is a gain of 580 housing units (+3.7%) from 2010. Over this time period, the overall occupancy rate increased from 93.9% to 94.9% and the average household size increased from 2.70 to 2.79 persons. Renter-occupied units accounted for 45.4% of the occupied units in Linden in 2020, which is a gain of 2.4 percentage points from the 2010 percentage (43.0%). As a point of comparison, the percentage of renter-occupied units in Linden is greater than that of New Jersey (38.7%). Finally, the median home price of an owner-occupied unit in the 2017-2021 ACS was \$307,200, which is a 5.4% decline from the value reported in the 2007-2011 ACS (\$324,800).

With respect to housing type, nearly half (49.8%) of the homes in the 2017-2021 ACS were one-unit, either attached or detached, which is nearly unchanged from the 2007-2011 ACS percentage (49.7%). Homes with two units (duplexes) were the second-largest type of housing in the 2017-2021 ACS, consisting of 26.6% of the housing stock. In general, there has been little change in the housing distribution since the 2007-2011 ACS.

Figure 2
Linden Hispanic Percentage

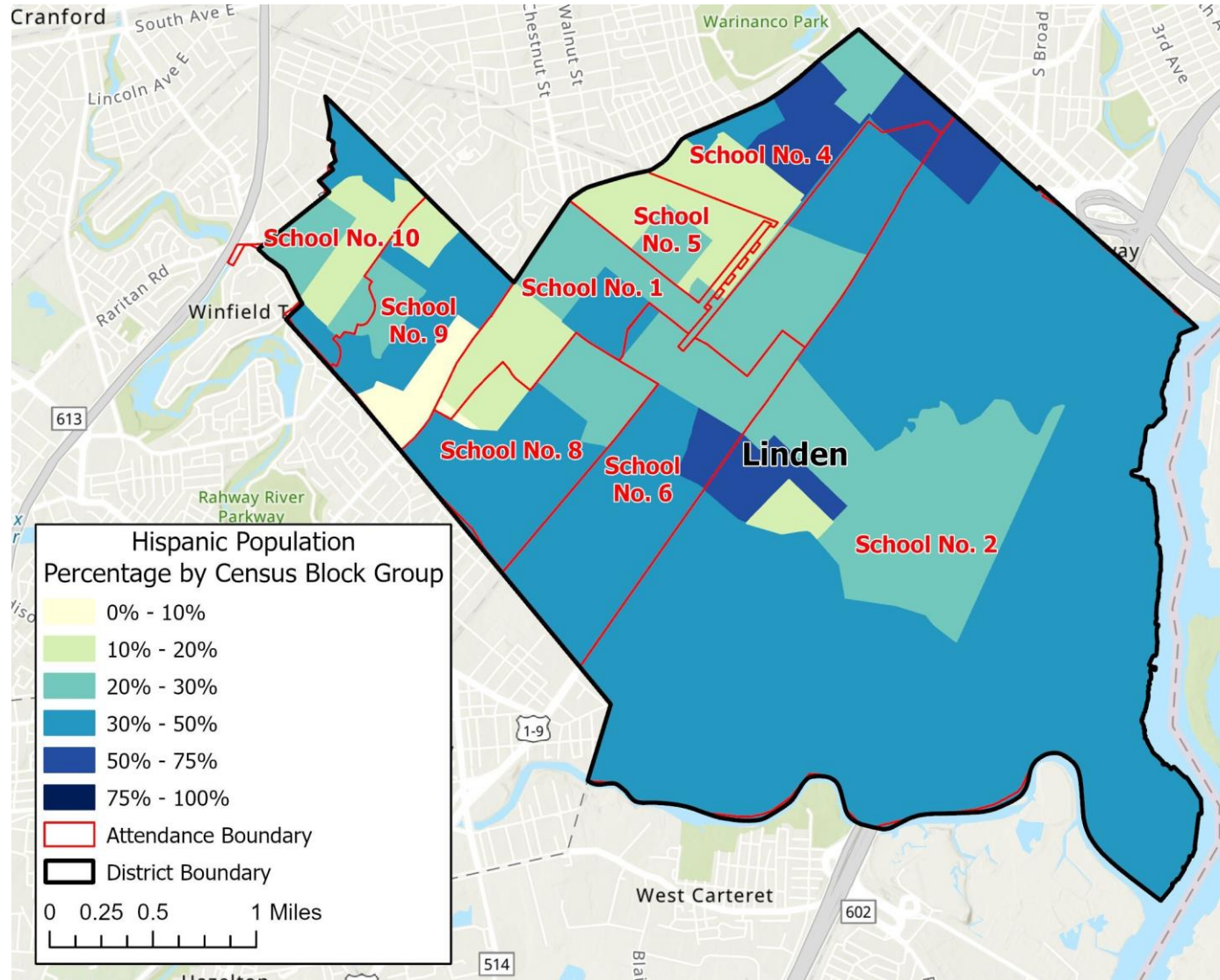


Figure 3
Linden White Percentage

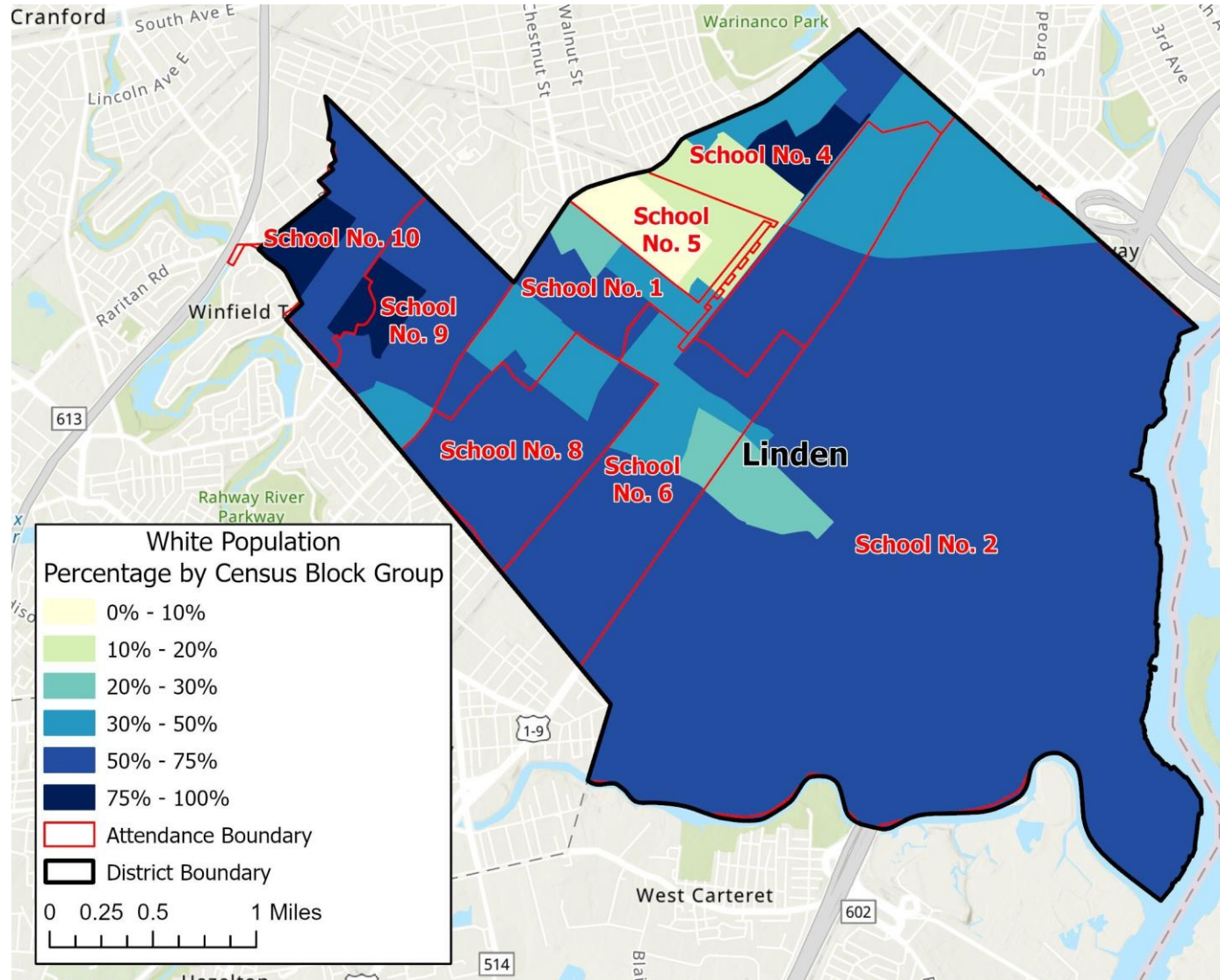


Figure 4
Linden Black Percentage

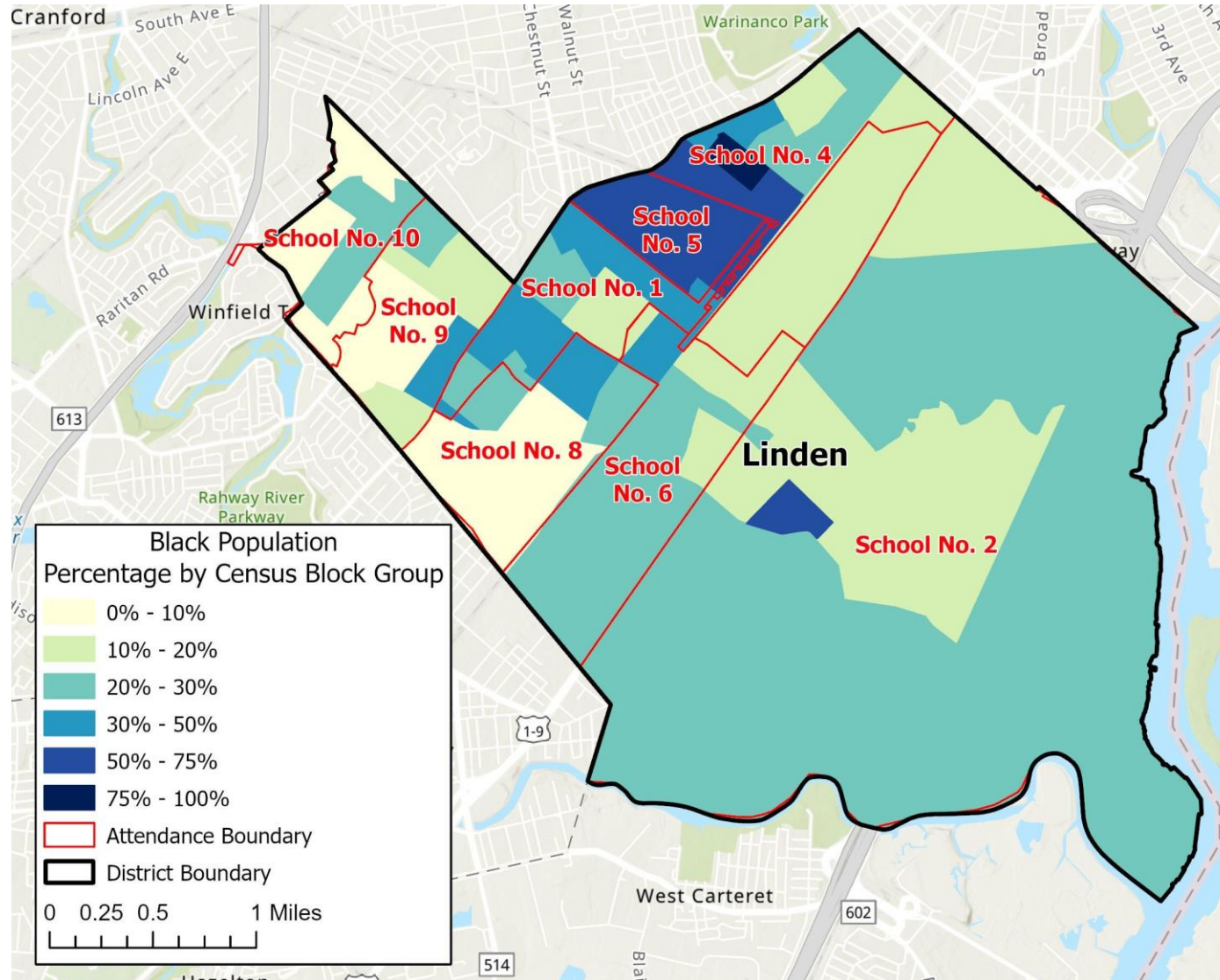


Figure 5
Linden Foreign-Born Percentage

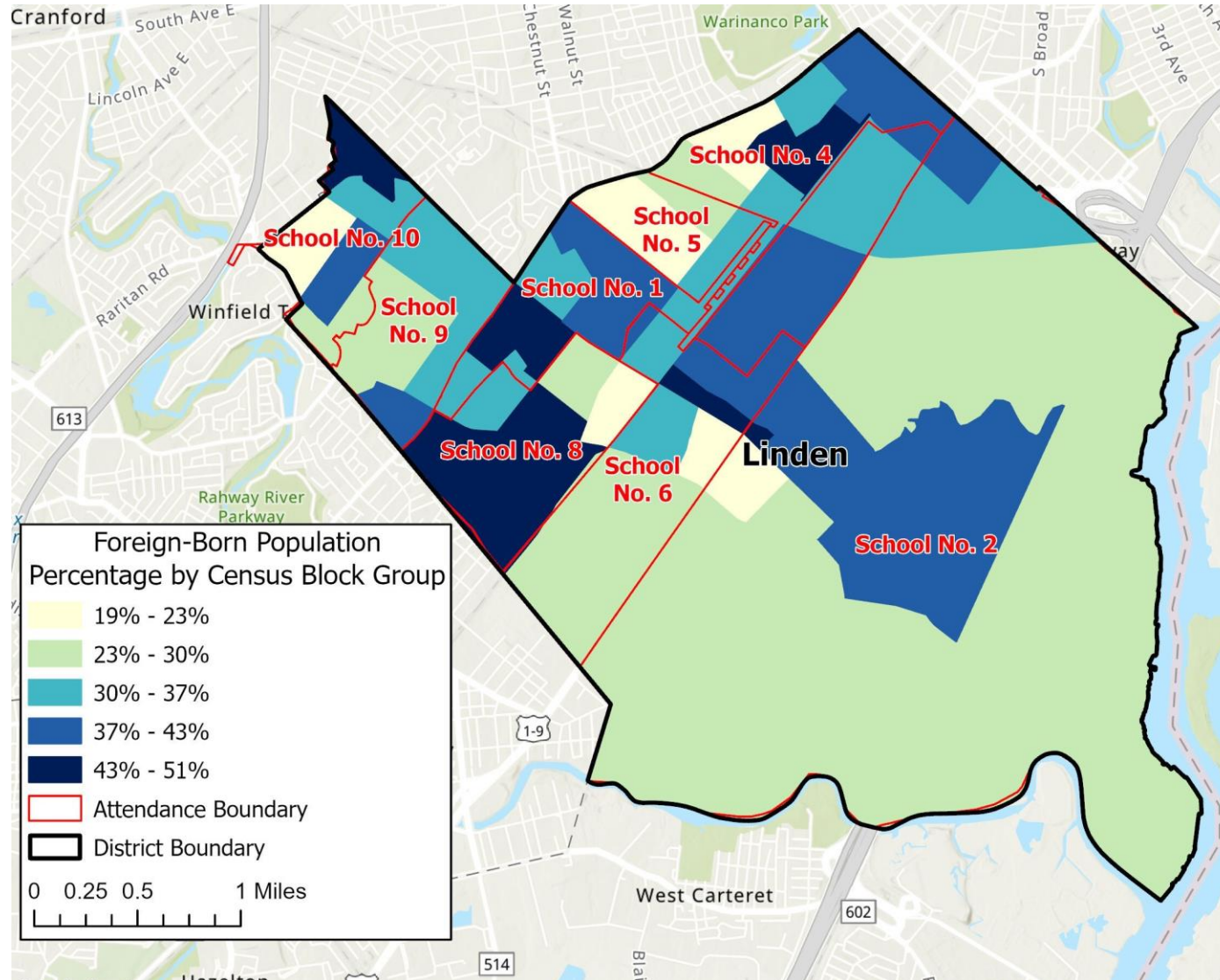


Figure 6
Linden Percentage of Persons Speaking English Less than "Very Well"

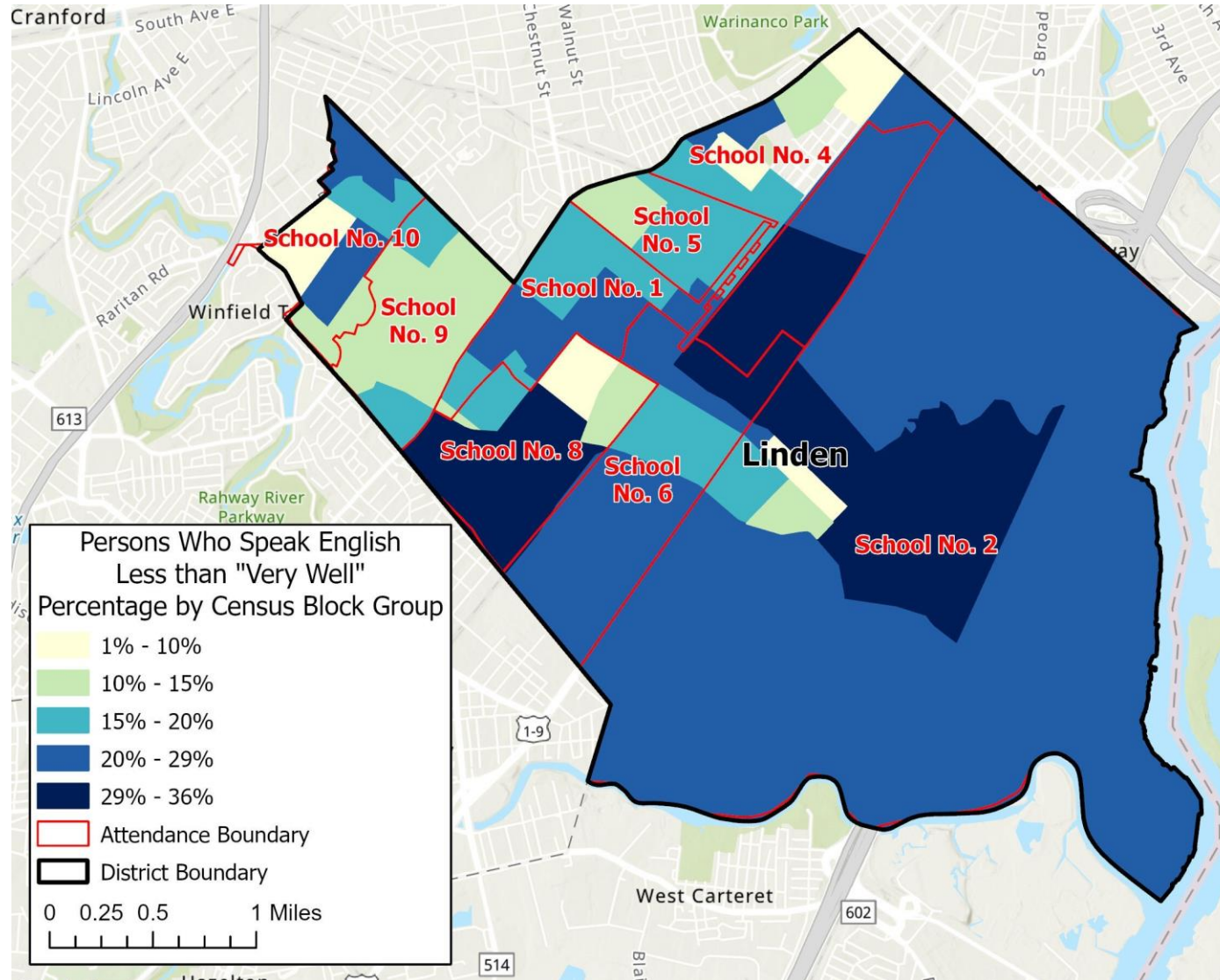


Figure 7
Linden School-Age Population (5-17) Percentage

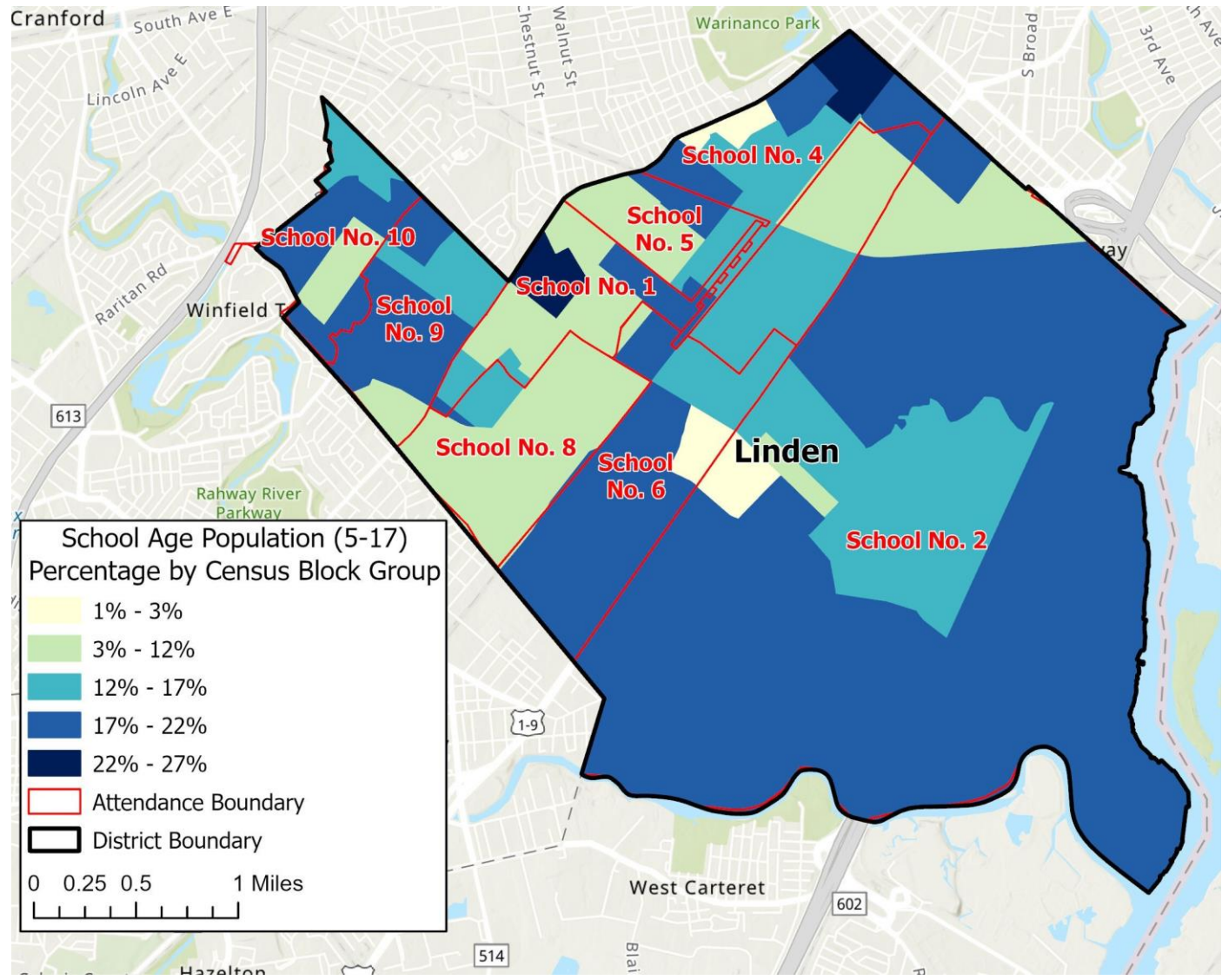
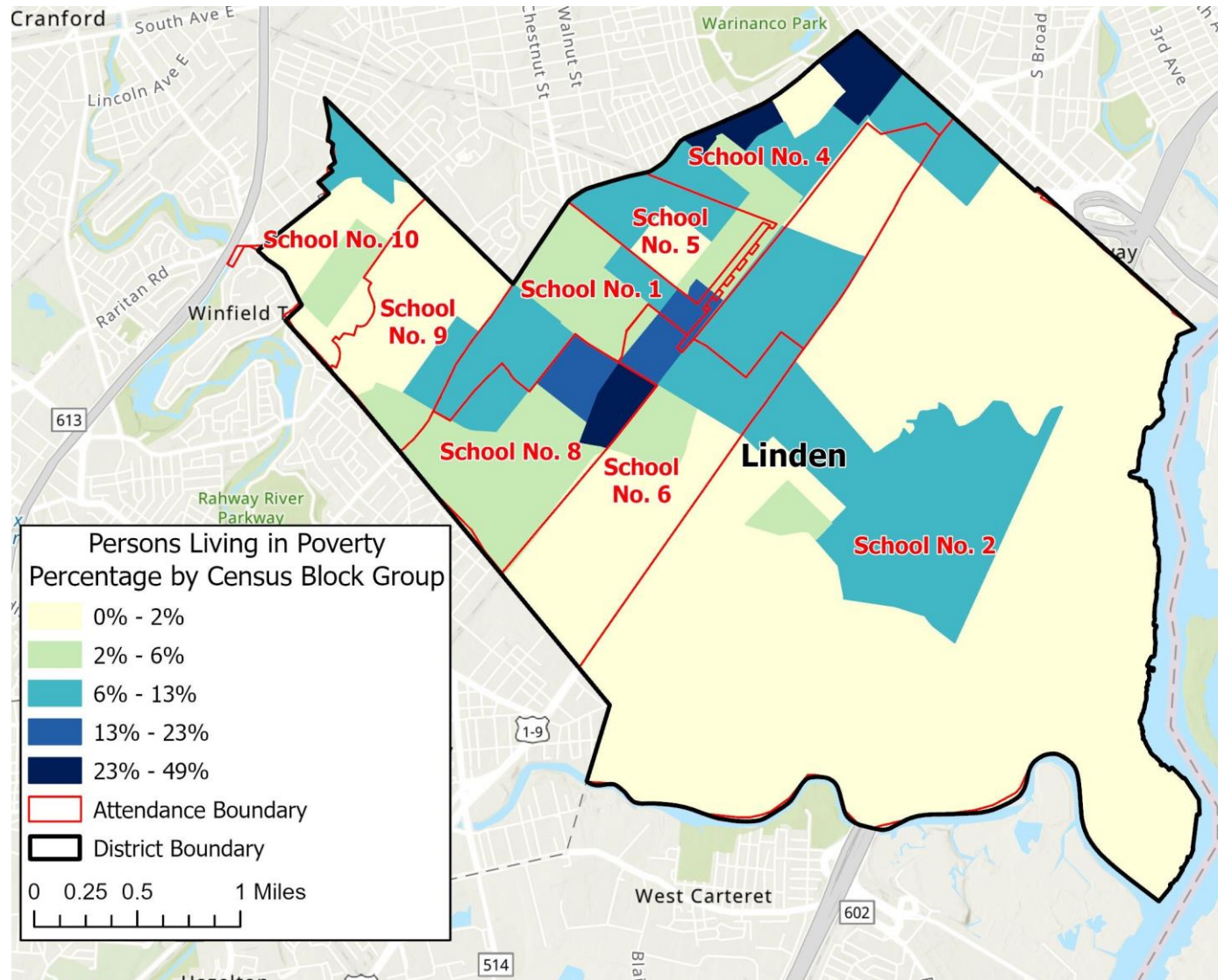


Figure 8
Linden Percentage of Persons Living in Poverty



District Overview

The Linden Public Schools has eleven schools that educate children in grades pre-kindergarten through twelve. In Figure 9, the location of each of the district's schools is shown with respect to the municipal boundaries. Figure 10 shows only the elementary schools and their respective attendance areas. Children in grades PK-5 attend one of eight (8) elementary schools: School #1, School #2, School #4, School #5, School #6, School #8, School #9, or School #10. Myles J. McManus Middle School ("McManus") and Joseph E. Soehl Middle School ("Soehl") educate children in grades 6-8 while Linden High School educates children in grades 9-12. It should be noted that an area west of Routes 1 and 9 is not contained within an attendance area, as it includes a large cemetery and commercial district.

According to the district's Long Range Facilities Plan ("LRFP"), total educational capacity in the district is 6,450 using District Practices methodology and 5,236 using Facilities Efficiency Standards ("FES") methodology. The District Practices methodology considers how a building is utilized by the school district and its targeted student-teacher ratios, while the FES methodology utilizes FES-recommended class sizes. Capacity using FES methodology is often lower, particularly for middle and high schools, than when using District Practices methodology. Since buildings cannot be 100% utilized, due in part to scheduling conflicts, most districts employ either an 85% or 90% utilization factor to determine school capacity. A comparison of each school's capacity to current and projected enrollments is provided later in the report.

In this study, historical enrollments from the New Jersey Department of Education ("NJDOE") New Jersey Standards Measurement and Resource for Teaching ("NJ SMART") database were used to project enrollments five years into the future using the Cohort-Survival Ratio method.

Figure 9
School Locations – Linden Public Schools

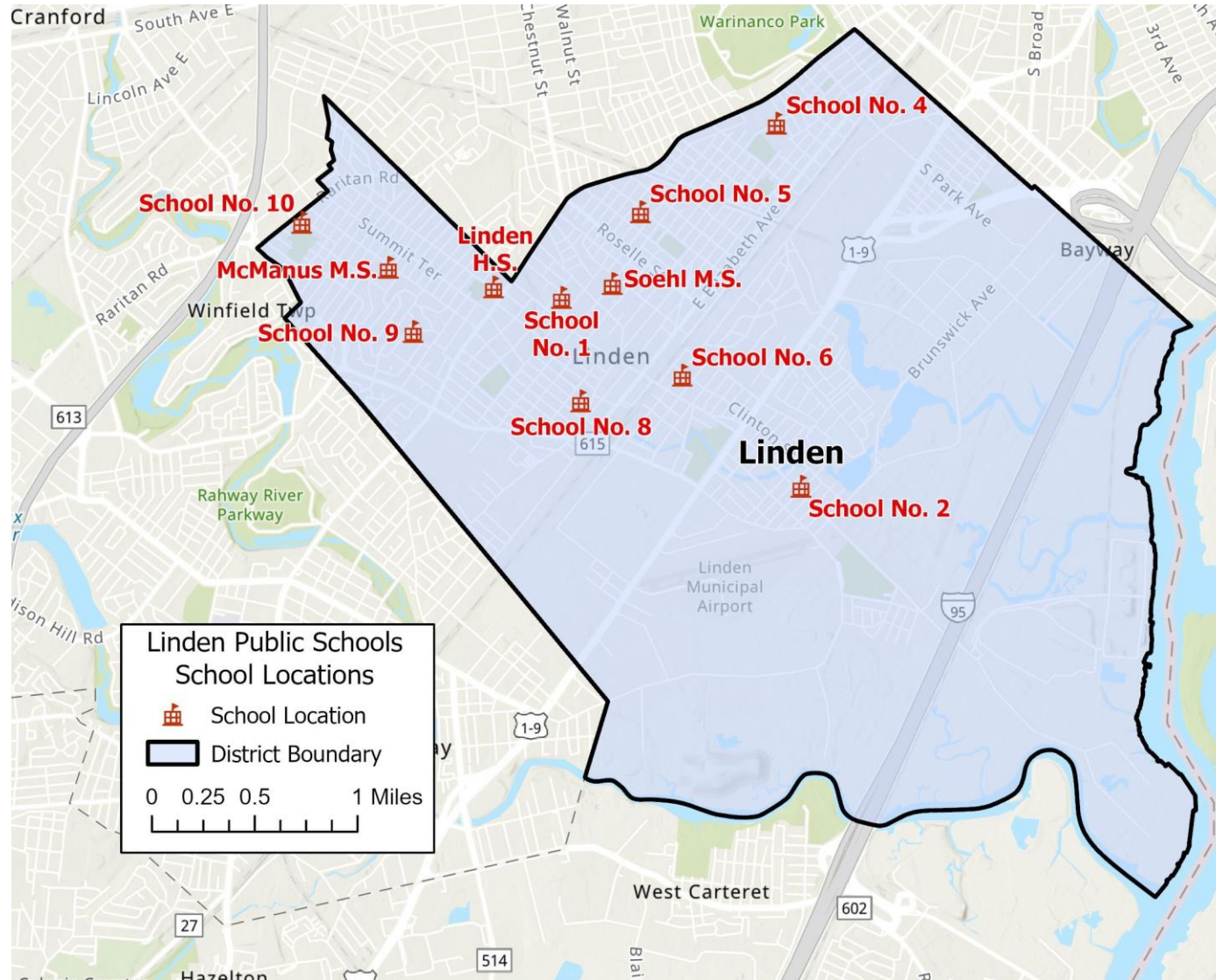
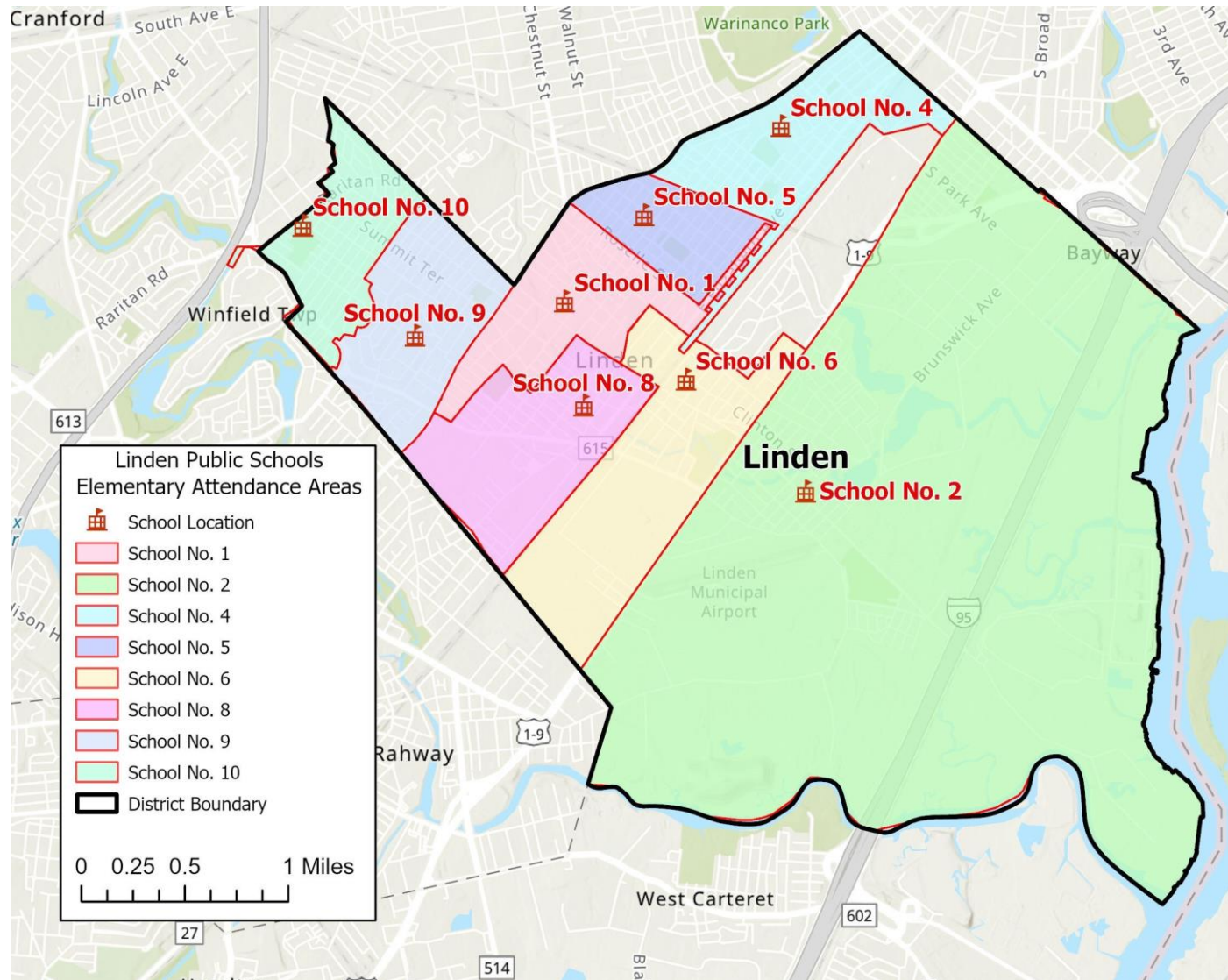


Figure 10
Elementary School Attendance Areas – Linden Public Schools



Explanation of the Cohort-Survival Ratio Method

In 1930, Dublin and Lodka provided an explicit age breakdown, which enabled analysts to follow each cohort through its life stages and apply appropriate birth and death rates for each generation. A descendant of this process is the Cohort-Survival Ratio (“CSR”) method, which is the NJDOE-approved methodology to project public school enrollments. In this method, a survival ratio is computed for each grade progression, which essentially compares the number of students in a particular grade to the number of students in the previous grade during the previous year. The survival ratio indicates whether the enrollment is stable, increasing, or decreasing. A survival ratio of 1.00 indicates stable enrollment, less than 1.00 indicates declining enrollment and outward migration, while greater than 1.00 indicates increasing enrollment and inward migration. If, for example, a school district had 100 fourth graders and the next year had 95 fifth graders, the survival ratio would be 0.95.

The CSR method assumes that what happened in the past will also happen in the future. The CSR method is most applicable for districts that have relatively stable trends without any major unpredictable fluctuations from year to year. In school districts encountering rapid growth or decline not experienced historically (a change in the historical trend), the CSR method must be modified and supplemented with additional information. In this study, survival ratios were calculated using historical data for birth to kindergarten, kindergarten to first grade, first grade to second grade, etc. Due to the fluctuation in survival ratios from year to year, it is appropriate to calculate an average survival ratio, which is then used to calculate grade-level enrollments five years into the future.

Historical Enrollment Trends

Historical enrollments (PK-12) for the Linden Public Schools from 2014-15 through 2023-24, a ten-year period, are shown in Figure 11 and Table 5. Enrollments generally increased through 2019-20 before reversing trend. In 2020-21 and 2021-22, enrollments declined by 183 and 69.5 students, respectively, which is likely due to the coronavirus pandemic, before increasing in the past two years. In 2023-24, enrollment is 6,334.5, which is a gain of 307 students (+5.1%) from the 2014-15 enrollment of 6,027.5.

Figure 11
Linden Public Schools Historical Enrollments
2014-15 to 2023-24

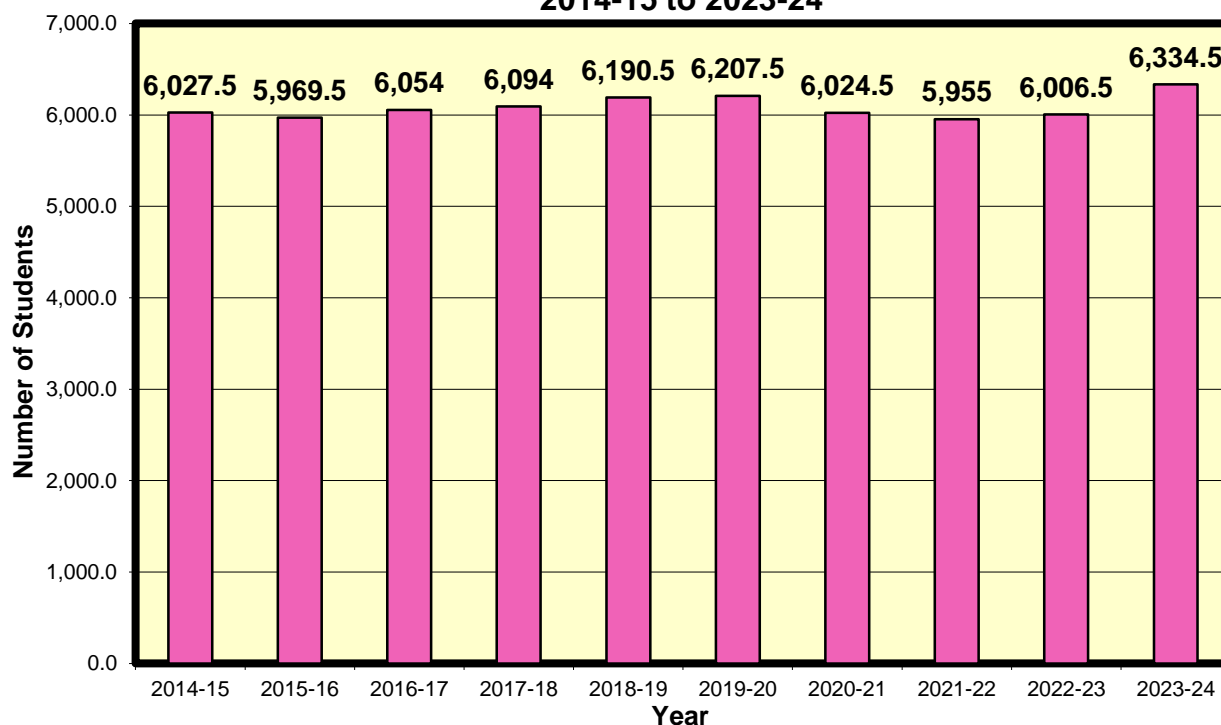


Table 6 shows computed grade-by-grade survival ratios from 2014-15 to 2023-24. In addition, the average, minimum, and maximum survival ratios are shown for the past ten years along with the five-year averages, which were used to project enrollments. The average survival ratios also indicate the net migration by grade, where values over 1.000 reflect net inward migration and values below 1.000 reflect net outward migration. Eight of the 13 average survival ratios in the five-year trend were below 1.000, indicating a slight net outward migration of students. In 2020-21, which represents the first year of the coronavirus pandemic, five survival ratios were the lowest value in the last decade and are bolded in the table. The decline in the ratios was likely due to the pandemic, as parents sought alternative educational experiences (private or parochial schools, homeschooling, etc.) for their children, or may have had to relocate. In comparing the five-year averages with the ten-year averages, the differences were very small, demonstrating the long-term stability of the survival ratios over the last decade.

Table 5
Linden Public Schools Historical Enrollments
2014-15 to 2023-24

Year ¹	PK ²	K	1	2	3	4	5	SE ³	PK-5 Total	6	7	8	SE ⁴	6-8 Total	9	10	11	12	SE ⁵	9-12 Total	PK-12 Total
2014-15	320	405	423	452	410	430	412	185	3,037	384	400	393	66	1,243	419	453	407	418.5	50	1,747.5	6,027.5
2015-16	321	416	389	422	441	403	444	190	3,026	404	382	399	72	1,257	386	422	443.5	393	42	1,686.5	5,969.5
2016-17	329	416	445	416	423	436	424	198	3,087	449	421	355	65	1,290	436	375	432	422	12	1,677	6,054
2017-18	383	438	418	441	400	432	430	176	3,118	417	450	426	67	1,360	354	452.5	376	406.5	27	1,616	6,094
2018-19	385	446	442	429	443	411	459	136	3,151	440	421	451	54	1,366	445	381	434	374	39.5	1,673.5	6,190.5
2019-20	311	386	449	434	428	458	436	190	3,092	463	422	442	61	1,388	444	428.5	413.5	416.5	25	1,727.5	6,207.5
2020-21	268	365	403	435	416	423	463	175	2,948	422	477	425	54	1,378	431	434	419.5	381.5	32.5	1,698.5	6,024.5
2021-22	366	366	374	374	420	407	408	135	2,850	453	407	468	58	1,386	422	429.5	409	411.5	47	1,719	5,955
2022-23	381	405	414	402	383	443	453	2	2,883	436	480	432	0	1,348	487	439.5	446	403	0	1,775.5	6,006.5
2023-24	415	410	427	452	397	383	448	116	3,048	452	437	474	58	1,421	435	493.5	439.5	437	60.5	1,865.5	6,334.5

Notes: ¹ Data were provided by the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the Linden Public Schools.

² Pre-kindergarten regular education enrollment

³ Self-contained special education enrollment/ungraded students at the elementary school level

⁴ Self-contained special education enrollment/ungraded students at the middle school level

⁵ Self-contained special education enrollment/ungraded students at the high school level

Table 6
Linden Public Schools Historical Survival Ratios
2014-15 to 2023-24

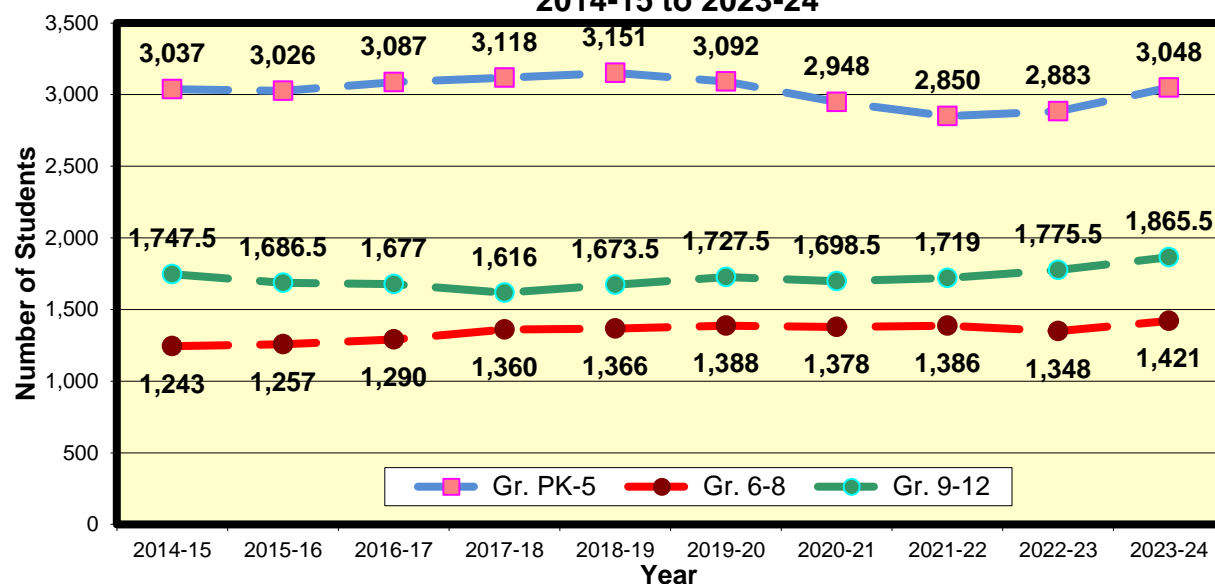
Progression Years	B-K	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12
2014-15 to 2015-16	0.8542	0.9605	0.9976	0.9757	0.9829	1.0326	0.9806	0.9948	0.9975	0.9822	1.0072	0.9790	0.9656
2015-16 to 2016-17	0.8795	1.0697	1.0694	1.0024	0.9887	1.0521	1.0113	1.0421	0.9293	1.0927	0.9715	1.0237	0.9515
2016-17 to 2017-18	0.9501	1.0048	0.9910	0.9615	1.0213	0.9862	0.9835	1.0022	1.0119	0.9972	1.0378	1.0027	0.9410
2017-18 to 2018-19	0.9139	1.0091	1.0263	1.0045	1.0275	1.0625	1.0233	1.0096	1.0022	1.0446	1.0763	0.9591	0.9947
2018-19 to 2019-20	0.8446	1.0067	0.9819	0.9977	1.0339	1.0608	1.0087	0.9591	1.0499	0.9845	0.9629	1.0853	0.9597
2019-20 to 2020-21	0.7717	1.0440	0.9688	0.9585	0.9883	1.0109	0.9679	1.0302	1.0071	0.9751	0.9775	0.9790	0.9226
2020-21 to 2021-22	0.8079	1.0247	0.9280	0.9655	0.9784	0.9645	0.9784	0.9645	0.9811	0.9929	0.9965	0.9424	0.9809
2021-22 to 2022-23	0.8544	1.1311	1.0749	1.0241	1.0548	1.1130	1.0686	1.0596	1.0614	1.0406	1.0415	1.0384	0.9853
2022-23 to 2023-24	0.9172	1.0543	1.0918	0.9876	1.0000	1.0113	0.9978	1.0023	0.9875	1.0069	1.0133	1.0000	0.9798
Maximum Ratio	0.9501	1.1311	1.0918	1.0241	1.0548	1.1130	1.0686	1.0596	1.0614	1.0927	1.0763	1.0853	0.9947
Minimum Ratio	0.7717	0.9605	0.9280	0.9585	0.9784	0.9645	0.9679	0.9591	0.9293	0.9751	0.9629	0.9424	0.9226
Avg. 5-Year Ratios	0.8392	1.0635	1.0159	0.9839	1.0054	1.0249	1.0032	1.0141	1.0093	1.0039	1.0072	0.9900	0.9672
Avg. 10-Year Ratios	0.8660	1.0339	1.0144	0.9864	1.0084	1.0327	1.0022	1.0072	1.0031	1.0130	1.0094	1.0011	0.9646
Diff. Between 5-Year and 10-Year Ratios	-0.0268	+0.0296	+0.0015	-0.0025	-0.0030	-0.0077	+0.0010	+0.0070	+0.0062	-0.0091	-0.0022	-0.0111	+0.0026

Note: Bolded values reflect survival ratios from 2019-20 to 2020-21, which represents the first year of the coronavirus pandemic.

Factors related to inward migration include families with school-age children purchasing an existing home or new housing unit, or renting an apartment. The reasons for families moving into a community vary. For instance, a family could move into Linden to be close to work, the presence of affordable housing, or to be near family members. Another plausible reason for inward migration is the reputation of the school district, as the appeal of a school district draws families into a community, resulting in the transfer of students into the district. On the flip side, outward migration is caused by families with children moving out of the community, perhaps due to difficulty in finding employment or affordable housing. Outward migration in the school district can also be caused by parents choosing to withdraw their children from public school to attend private, parochial, or charter schools, to be homeschooled, or to attend a different public school district. In the case of the Linden Public Schools, the reasons for migration are not explicitly known (such as for economic reasons or the appeal of the school district), as exit and entrance interviews would need to be conducted for all children leaving or entering the district.

Historical enrollments are also shown in Table 5 and Figure 12 by the district's current grade configuration (PK-5, 6-8, and 9-12). Self-contained special education/ungraded students were incorporated into the totals by grade configuration. For grades PK-5, enrollments generally increased through 2018-19 before reversing trend. Enrollments declined in 2020-21 (-144) and 2021-22 (-98), which is likely due to the coronavirus pandemic, before rebounding in 2022-23 (+33) and 2023-24 (+165) as students returned to the school district. In 2023-24, enrollment is 3,048, which is slightly higher (+11) than the 2014-15 enrollment of 3,037. For grades 6-8, enrollments increased through 2019-20 before stabilizing. Enrollment is 1,421 in 2023-24, which is a gain of 178 students from the 2014-15 enrollment of 1,243. At Linden High School (grades 9-12), enrollments declined through 2017-18 before reversing trend. Since then, enrollments have been generally increasing. In 2023-24, enrollment is 1,865.5, which is a gain of 118 students from the 2014-15 enrollment of 1,747.5.

Figure 12
Linden Public Schools
Historical Enrollments by Grade Configuration
2014-15 to 2023-24



Kindergarten Replacement

Kindergarten replacements were analyzed to determine whether there was any relationship between overall enrollment change and kindergarten replacement, which is the numerical difference between the number of graduating 12th graders and the number of entering kindergarten students. In five of the last nine years, the district has experienced positive kindergarten replacement. Positive kindergarten replacement occurs when the number of kindergarten students entering the district is greater than the number of graduating twelfth grade students from the prior year. Conversely, negative kindergarten replacement occurs when the number of kindergarten students entering the district is less than the number of graduating twelfth grade students from the prior year. As shown in Figure 13, positive kindergarten replacement has ranged from 7-39.5 students per year while negative kindergarten replacement has ranged from 2.5-51.5 students per year. As the magnitudes of the kindergarten replacements have been relatively small in most instances, this indicates that the incoming kindergarten classes and outgoing 12th grade classes are fairly similar in size. The change from positive to negative kindergarten replacement beginning in 2020-21 was due to the decreasing sizes of the entering kindergarten classes. In 2023-24, there was a gain of seven (7) students due to kindergarten replacement, as 403 twelfth graders graduated in 2022-23 and were replaced by 410 kindergarten students in 2023-24.

Figure 13
Linden Public Schools
Historical Kindergarten Replacement

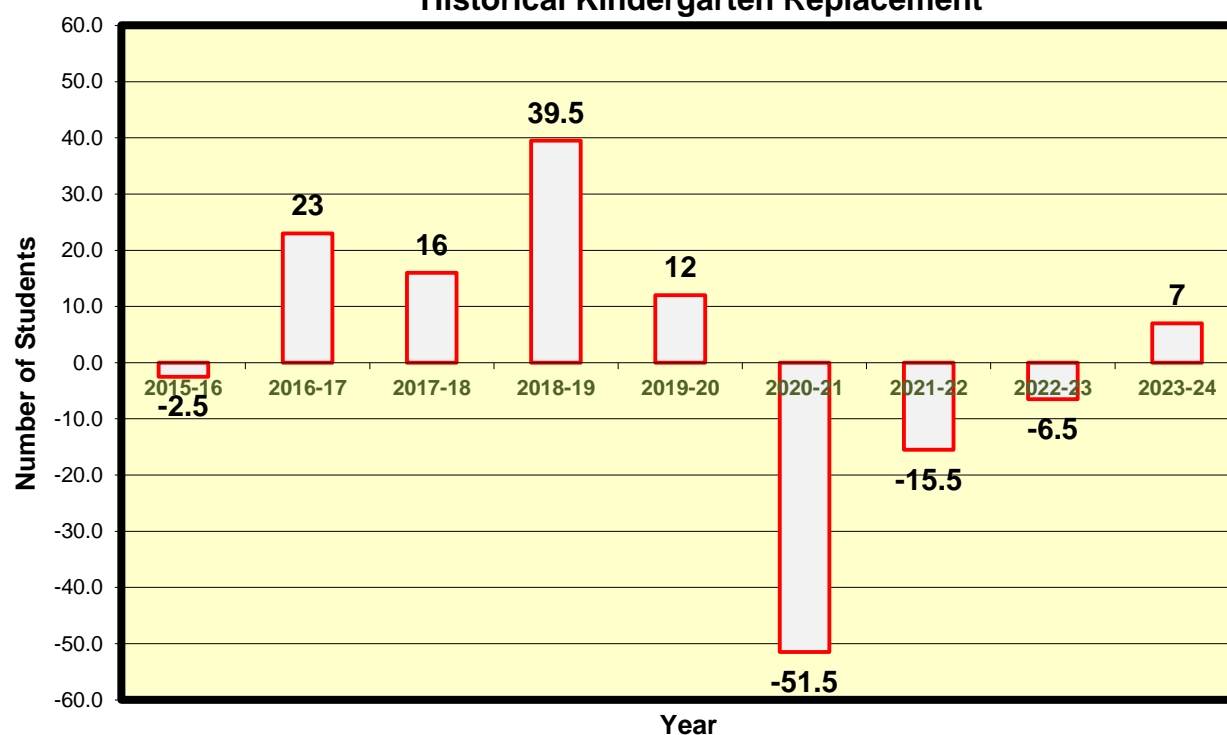
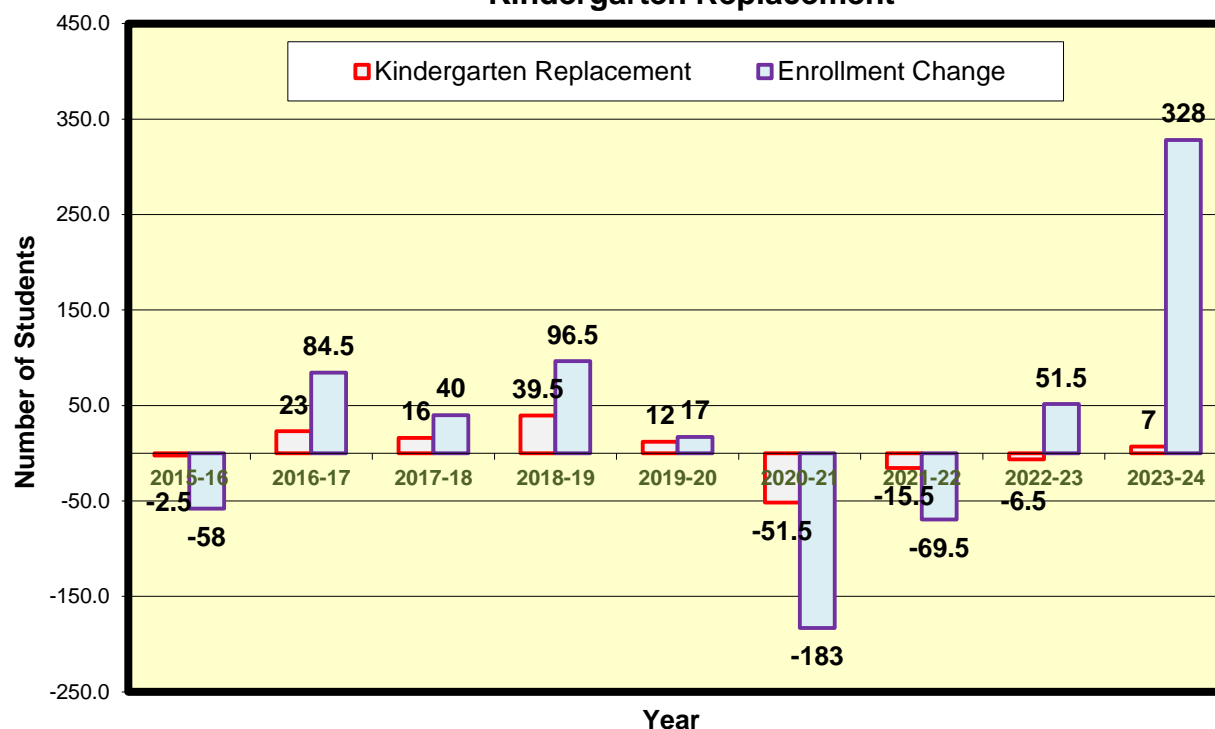


Figure 14 shows the annual change in total enrollment compared to kindergarten replacement. As the figure demonstrates, there appears to be a strong relationship, statistically speaking, between the overall change in enrollment and kindergarten replacement. Although this data represents a small sample, the correlation coefficient between the two variables was +0.627. Correlation coefficients measure the relationship or association between two variables; this does not imply that there is cause and effect between the two variables. Other variables, known as lurking variables, may have an effect on the true relationship between kindergarten replacement and total enrollment change. Negative correlation coefficients indicate that as one variable is increasing (decreasing), the other variable is decreasing (increasing). Positive correlation coefficients indicate that as one of the variables increases (decreases), the other variable increases (decreases) as well. The computed linear correlation coefficient is always between -1 and +1. Values near -1 or +1 indicate a strong linear relationship between the variables while values near zero indicate a weak linear relationship. Based on the correlation of +0.627, there appears to be a strong relationship between kindergarten replacement and enrollment change in the school district in the last nine years.

In 2020-21 and 2021-22, the district's losses due to kindergarten replacement were compounded by a net outward migration of students in the other grades (K to 1, 1 to 2, 2 to 3, etc.), which was likely related to the coronavirus pandemic as parents sought alternative educational experiences for their children, or may have had to relocate. However, due to students returning to the school district, the district's gains due to positive kindergarten replacement in 2023-24 were compounded by a net inward migration of students.

Figure 14
Comparison of PK-12 Enrollment Change and
Kindergarten Replacement



Birth Data

Birth data were needed to compute kindergarten enrollments, which were calculated as follows. Birth data, which are lagged five years behind their respective kindergarten classes, were used to calculate the survival ratio for each birth-to-kindergarten cohort. For instance, in 2018, there were 447 births in Linden. Five years later (the 2023-24 school year), 410 children enrolled in kindergarten, which is equal to a survival ratio of 0.917 from birth to kindergarten. Birth counts and birth-to-kindergarten survival ratios are displayed in Table 7. Values greater than 1.000 indicate that some children are born outside of a community's boundaries and are attending kindergarten in the school district five years later, i.e., an inward migration of children. This type of inward migration is typical in school districts with excellent reputations, because the appeal of a good school district draws families into the community. Inward migration is also seen in communities where there are a large number of new housing starts (or home resales), with families moving into the community having children of age to attend kindergarten. Birth-to-kindergarten survival ratios that are below 1.000 indicate that a number of children born within a community are not attending kindergarten in the school district five years later. This is common in communities where a high proportion of children attend private, parochial, charter, or out-of-district special education facilities, or where there is a net migration of families moving out of the community. It is also common in school districts that have a half-day kindergarten program where parents choose to send their child to a private full-day kindergarten for the first year.

Table 7
Birth Counts and Historical Birth-to-Kindergarten Survival Ratios
Linden Public Schools

Birth Year	Number of Births Linden¹	Kindergarten Students Five Years Later	Birth-to- Kindergarten Survival Ratio
2008	458	425	0.928
2009	455	405	0.890
2010	487	416	0.854
2011	473	416	0.879
2012	461	438	0.950
2013	488	446	0.914
2014	457	386	0.845
2015	473	365	0.772
2016	453	366	0.808
2017	474	405	0.854
2018	447	410	0.917
2019	461	N/A	N/A
2020	436	N/A	N/A
2021	425	N/A	N/A

Note: ¹ Birth data were provided by the New Jersey Center for Health Statistics.

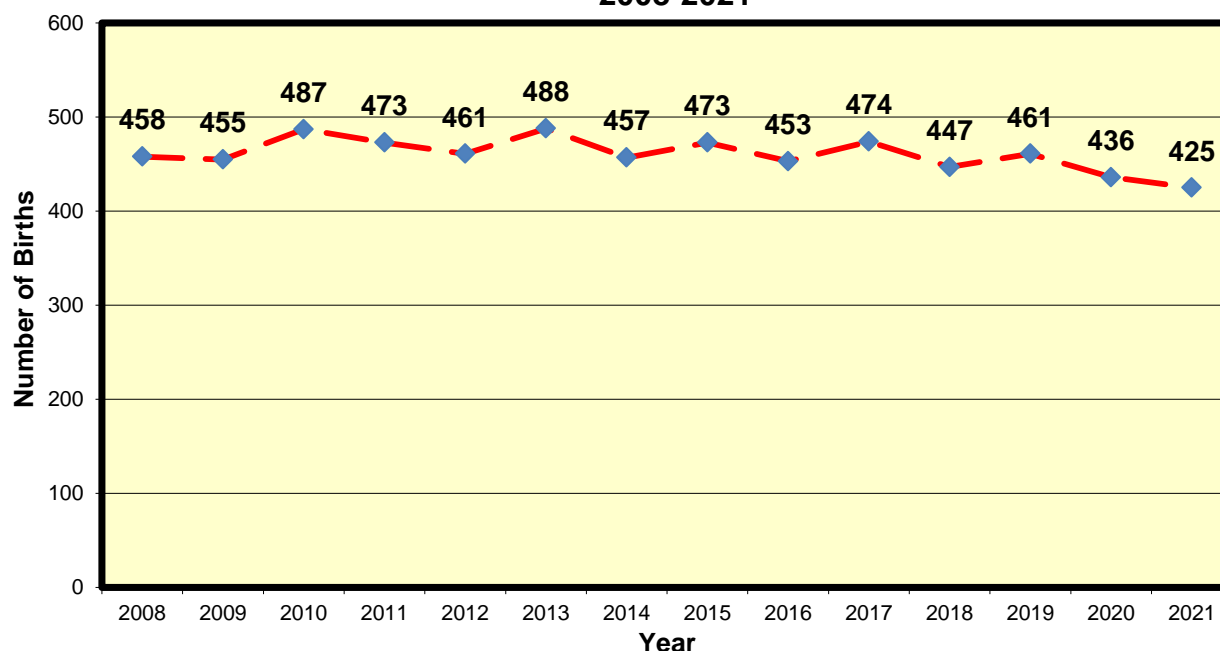
Birth-to-kindergarten survival ratios have been below 1.000 in each of the last 11 years and have been fairly consistent, ranging from 0.772-0.950. The low birth-to-kindergarten survival ratio in 2020-21 (0.772) was likely due to the coronavirus pandemic as parents sought alternative educational experiences for their children, or may have had to relocate. In the last five years, birth-to-kindergarten survival ratios have been slightly lower, ranging from 0.772-0.917 (average = 0.839), as compared to the six years prior when they ranged from 0.854-0.950 (average = 0.903). This may reflect that a greater number of families with children under the age of five are moving out of the community or that fewer parents are choosing to enroll their child in public school rather than private or parochial school.

As the birth-to-kindergarten survival ratios have been consistently below 1.000, this indicates that some children who were born in Linden have likely enrolled in private or parochial schools, or moved out before school age and are attending other public school districts for kindergarten, reflecting outward migration.

Geocoded birth data were provided by the New Jersey Center for Health Statistics (“NJCHS”) from 2008-2021 by assigning geographic coordinates to a birth mother based on her street address. Since the NJCHS did not have birth data for 2022 and 2023, an estimate was formulated by averaging historical births. Birth counts were needed for 2022 and 2023 since these cohorts will become the kindergarten classes of 2027 and 2028.

Figure 15 shows the annual number of births in Linden from 2008-2021. The annual number of births in Linden was fairly stable from 2008-2019 before declining outside of the historical range in 2020 and 2021. In 2021, there were 425 births in the city, which are 33 fewer births than in 2008 (458).

Figure 15
Linden Historical Birth Counts
2008-2021



Using mapping software, elementary school attendance area boundaries, and NJCHS birth data by Census block, the number of births from 2008-2021 was determined for each elementary school attendance area and is displayed in Table 8. In each year, some addresses of the mothers within Linden were unknown. The greatest number of unknown addresses occurred in 2008, accounting for 39 of the 458 births (8.5%) in that year. For the purpose of projecting enrollments, the unknown addresses were redistributed into the eight elementary attendance areas using proportional allocations of the births in each school attendance area with respect to the total number of births.

Table 8
Births by Elementary School Attendance Area
Linden Public Schools
2008-2021

Birth Year	School #1	School #2	School #4	School #5	School #6	School #8	School #9	School #10	Unknown
2008	57	76	66	47	50	36	55	32	39
2009	71	74	59	46	61	47	47	40	10
2010	62	76	64	50	62	46	58	51	18
2011	62	86	73	45	53	48	39	46	21
2012	51	83	67	46	59	39	60	35	21
2013	64	86	74	47	57	50	57	47	6
2014	70	84	53	44	44	69	52	35	6
2015	75	85	79	42	47	54	52	31	8
2016	64	84	73	46	47	60	40	34	5
2017	75	86	65	34	59	67	49	32	7
2018	51	76	70	38	50	56	64	39	3
2019	74	90	65	36	52	64	48	29	3
2020	55	93	72	33	40	51	57	32	3
2021	63	65	56	46	38	60	53	39	5
Total 2008-2021	894	1,144	936	600	719	747	731	522	
Difference 2008-2021	+6	-11	-10	-1	-12	+24	-2	+7	

For comparison purposes, Figures 16 and 17 show the number of births by elementary attendance area in 2008 and 2021 (using the same scale). It should be noted that an area in the center of Linden is not associated with an attendance zone, as it includes a large cemetery and commercial district. In both 2008 and 2021, the greatest number of births occurred in the School #2 attendance area. In 2008, the fewest number of births occurred in the School #10 attendance area while the School #6 attendance area had the fewest number of births in 2021.

Table 8 also shows the differences in the birth counts by attendance area when comparing birth counts in 2008 to 2021. Five of the eight attendance areas had fewer births in 2021 as compared to 2008, although several of the differences were very small. The School #6 attendance area had the largest decline (-12) in the birth count over this time period. On the flip side, the School #8 attendance area had the largest increase (+24) in the birth count over this time period.

Figure 18 shows the aggregated number of births by attendance area from 2008-2021. The School #2 attendance area had the greatest number of births (1,144) over this time period while the School #10 attendance area had the fewest (522).

In addition, as the elementary attendance areas in the school district are fairly large, it is sometimes difficult to determine the specific locations where birth counts are changing. As such, Figures 19 and 20 show the specific locations where births are occurring, as births by census block were mapped for 2008 and 2021. Census blocks are the smallest geographic unit in which data are collected by the Census Bureau. Blocks are typically bound by streets, roads, or bodies of water. For comparison purposes, the same scale was used for both maps, whereby dark blue reflects the greatest number of births in a census block. In 2008, the greatest number of births occurred in the northern and northwestern sections of Linden in the School #1, #6, #8, and #9 elementary attendance areas. In 2021, the greatest number of births also occurred in the northern and northwestern sections of the city in the School #1, #5, #6, and #9 elementary attendance areas in similar census blocks. In comparing the two figures, there are fewer blocks shaded aqua or blue in 2021 as compared to 2008, which would indicate a decline in the number of births in those census blocks.

Figure 21 shows the aggregated number of births by census block from 2008-2021. The greatest number of births, which is shaded dark blue, occurred in the northern and northwestern sections of Linden in the School #4, #6, #8, and #9 elementary attendance areas.

Regarding fertility rates, the rate in Linden is slightly lower than the rate in both Union County and New Jersey. According to the 2017-2021 ACS, the fertility rate of women aged 15 to 50 in Linden was 53 births per 1,000 women. In comparison, as reported by the NJCHS, the 2021 fertility rate in Union County was 60.0 births per 1,000 women (ages 15-44) and was 57.9 births per 1,000 women in New Jersey. However, it should be noted that while the municipal, county, and state data are all based on a sample, the Linden data has a margin of error that is much higher than the county and state data and may not reflect the community's "true" fertility rate.

Figure 16
Linden Births by Elementary Attendance Area
2008

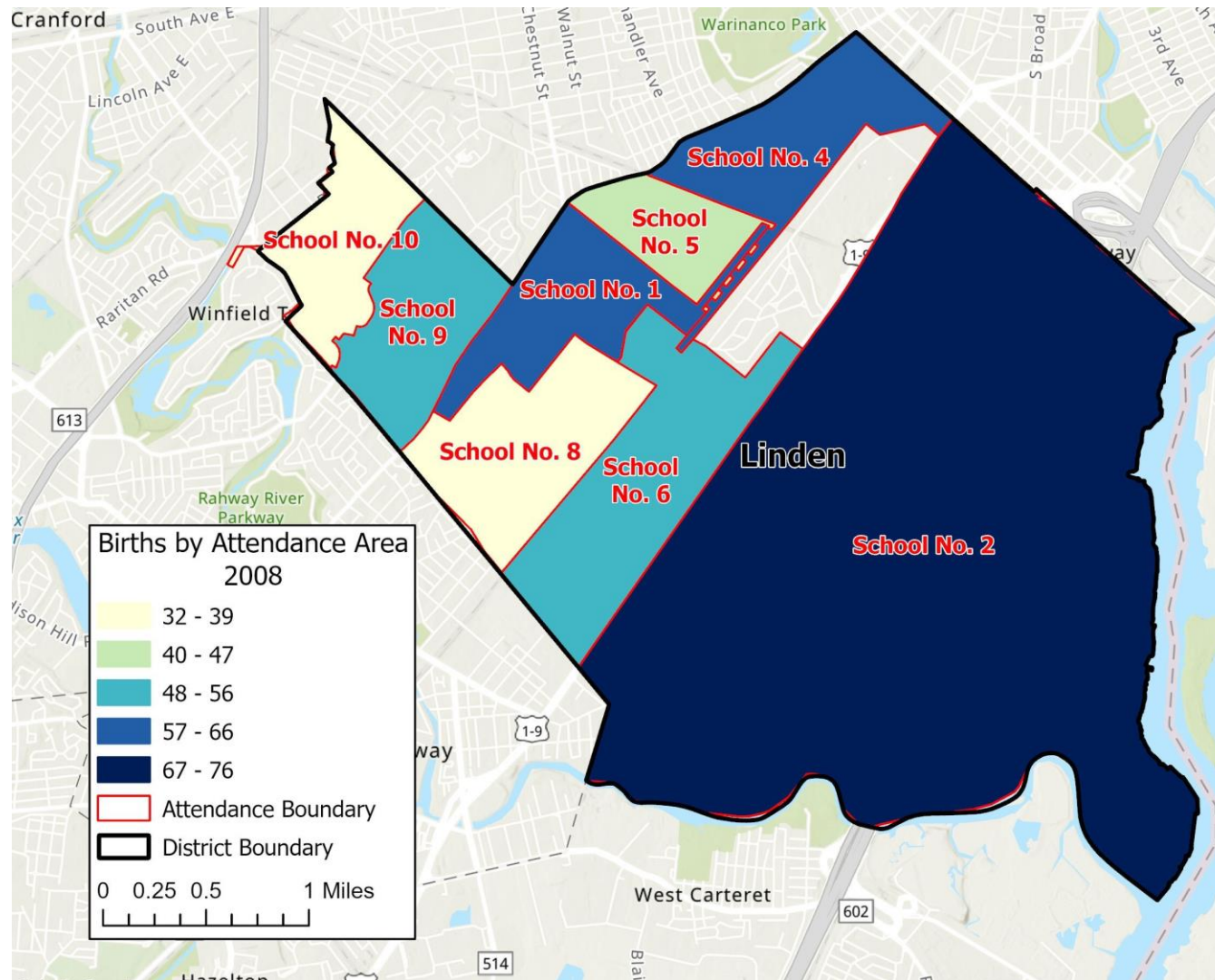


Figure 17
Linden Births by Elementary Attendance Area
2021

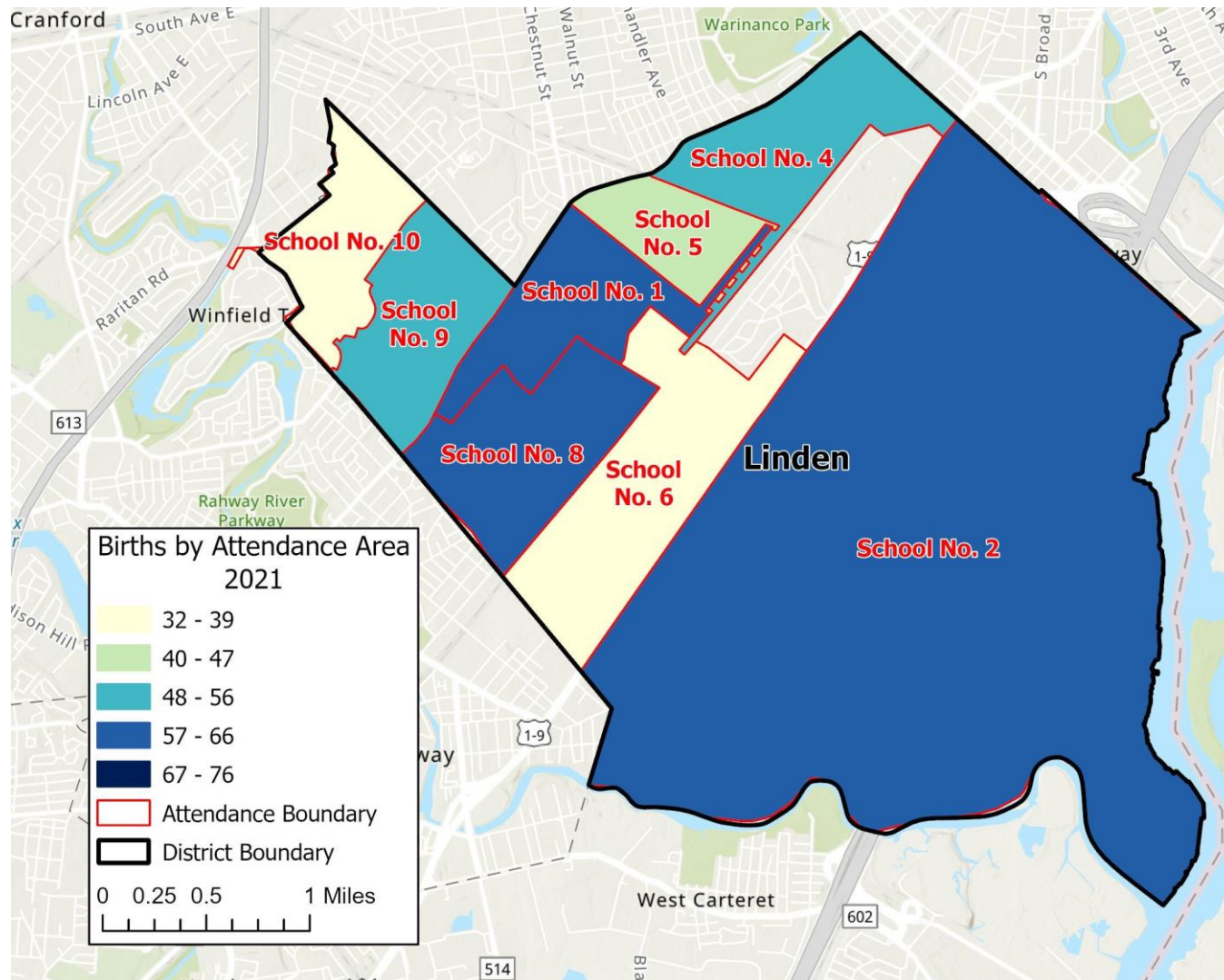


Figure 18
Linden Births by Elementary Attendance Area
2008-2021

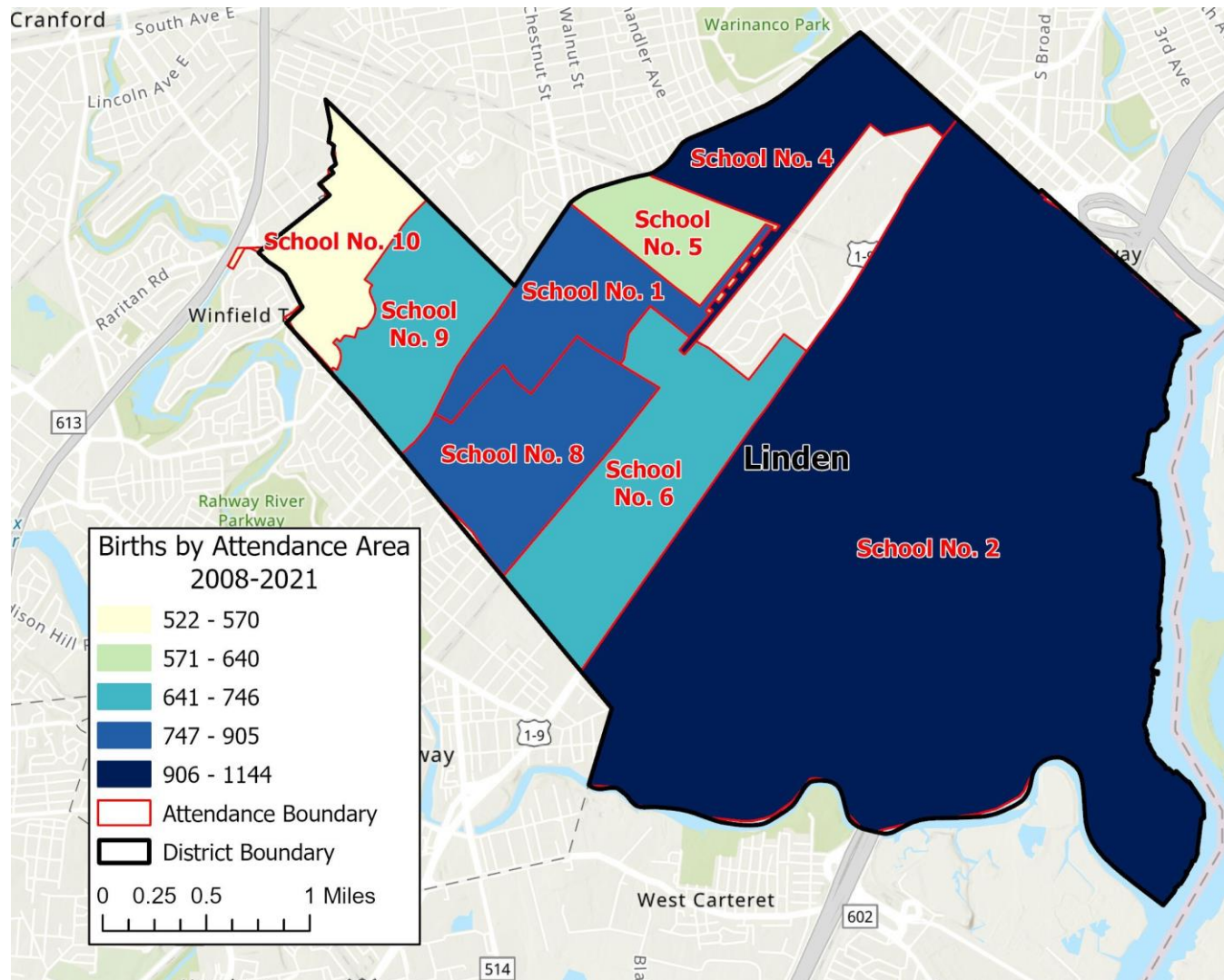


Figure 19
Linden Births by Census Block
2008

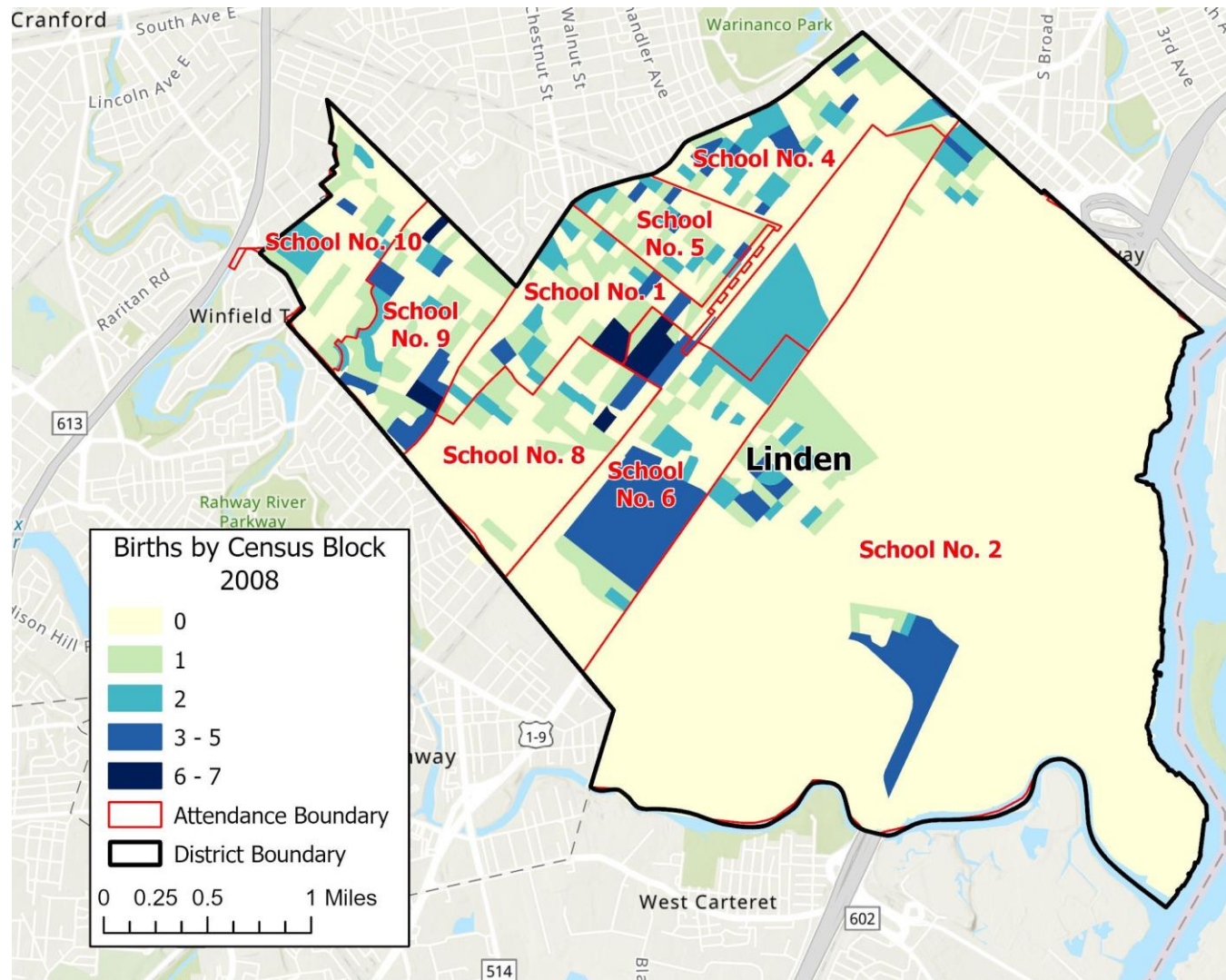


Figure 20
Linden Births by Census Block
2021

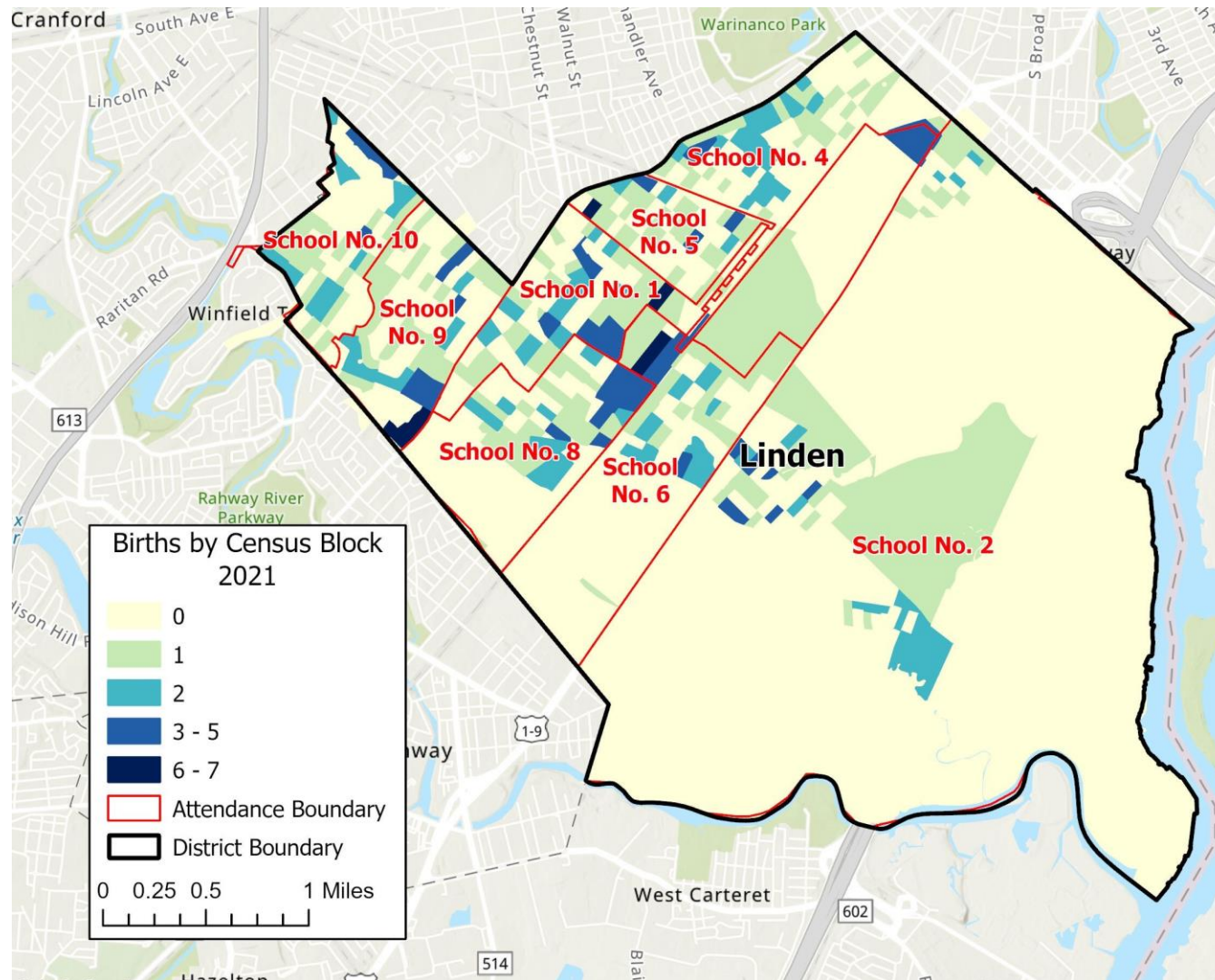
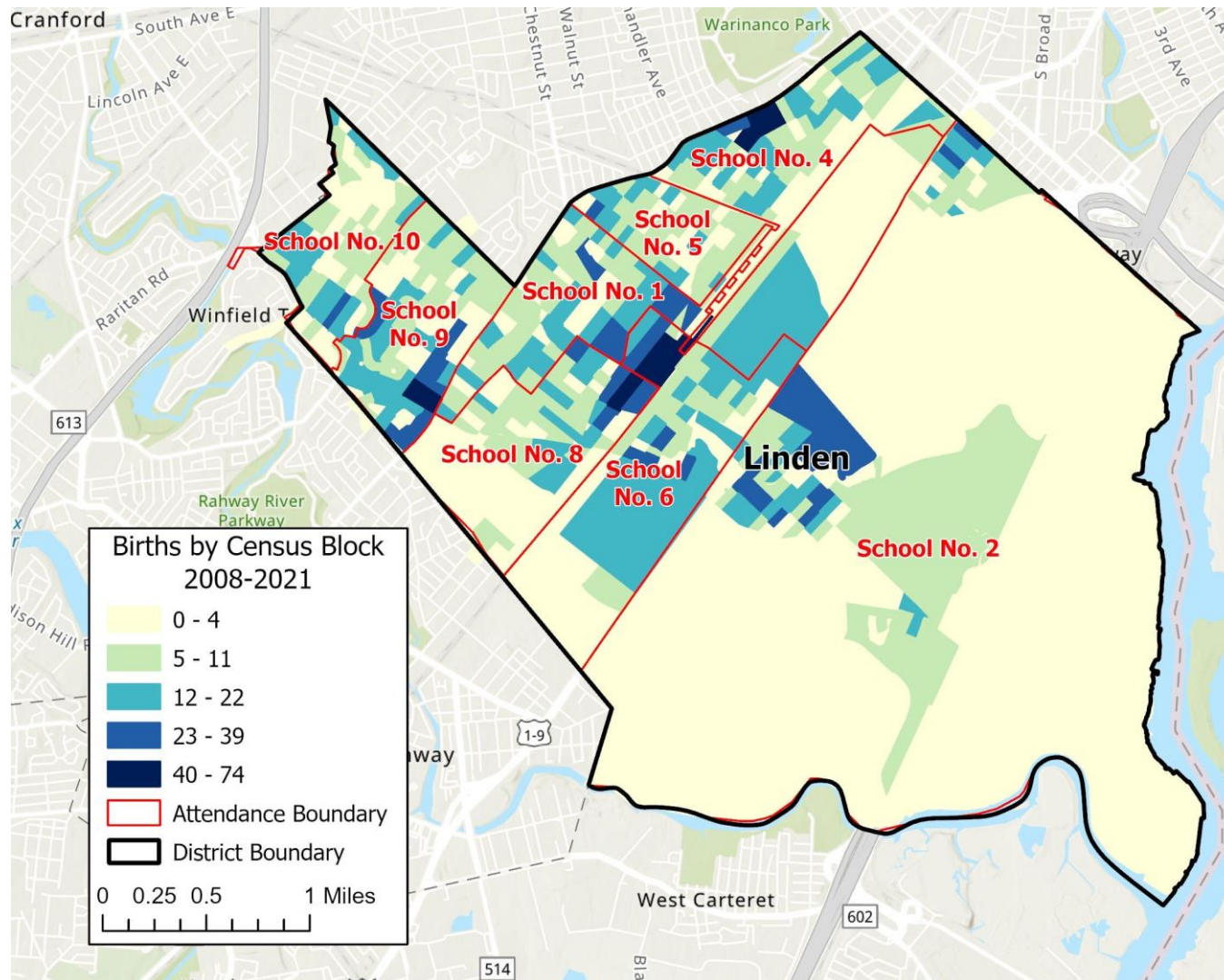


Figure 21
Linden Births by Census Block
2008-2021



Population Age Structure

Figures 22 and 23 show the age pyramids of males and females in Linden from both the 2010 and 2020 Censuses. In 2010, the largest number of individuals was aged 45-49 for males and 50-54 for females. In communities with little inward or outward migration and low mortality, the largest cohort in subsequent years is typically the next oldest cohort as people advance in age. However, in 2020, the largest cohort was aged 30-34 for males and 55-59 for females. As the largest groups were not ten years older from the 2010 cohorts, migration is likely occurring in Linden. As shown in Table 9, the greatest declines (shaded red) over this time period, both in number and percentage points, occurred in the 15-19 age group for males, which corresponds approximately with high school and college-aged individuals, and the 80-84 age group for females. The greatest gains (shaded blue), both in number and percentage points, occurred in the 65-69 age group for males and the 60-64 age group for females. If males and females are aggregated in each age class, there were gains in every age group from 55-59 to 75-79, indicating a “graying” of the overall population over this time period.

Figure 22
Population Pyramid of Linden
2010 Census

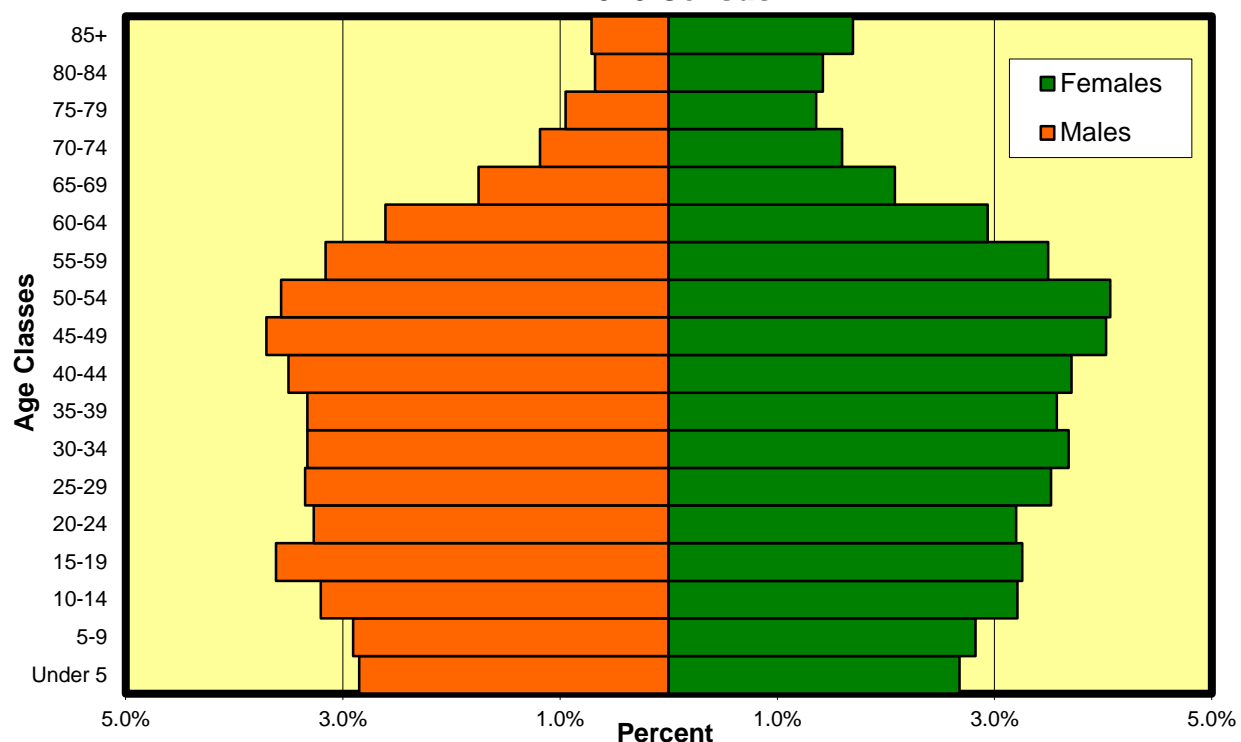


Figure 23
Population Pyramid of Linden
2020 Census

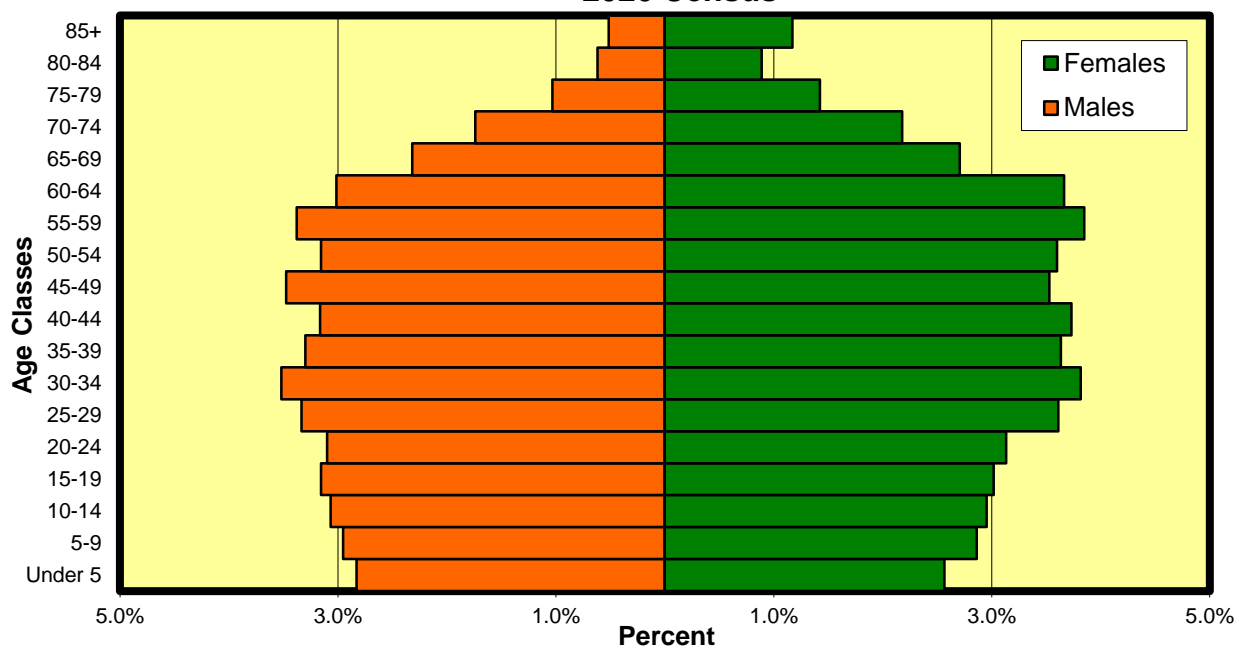


Table 9
Numerical and Percentage Point Changes of Males and Females in Linden
2010-2020

Age Group	Males		Females	
	Numerical Change	Percentage Point Change	Numerical Change	Percentage Point Change
Under 5	+83	0.0	+38	-0.1
5-9	+114	0.0	+108	0.0
10-14	+45	-0.1	-9	-0.3
15-19	-85	-0.5	+1	-0.2
20-24	+32	-0.2	+74	-0.1
25-29	+103	0.0	+153	+0.1
30-34	+191	+0.2	+178	+0.1
35-39	+95	0.0	+142	+0.1
40-44	-34	-0.3	+130	0.0
45-49	+20	-0.2	-87	-0.5
50-54	-66	-0.4	-73	-0.5
55-59	+198	+0.2	+268	+0.4
60-64	+263	+0.4	+413	+0.7
65-69	+305	+0.6	+341	+0.6
70-74	+281	+0.6	+307	+0.6
75-79	+68	+0.1	+72	+0.1
80-84	-5	-0.1	-187	-0.5
85+	-63	-0.2	-175	-0.5

Notes: Cells shaded blue reflect the greatest gains over the ten-year period.
Cells shaded red reflect the greatest losses over the ten-year period.

New Housing in Linden

Mr. Paul Ricci, PP, of Ricci Planning (Consultant to Linden), provided information regarding current and future residential development in the community. A list of approved and proposed developments, location, affected elementary school attendance areas, number of units, bedroom distribution, housing type, and project status is shown in Table 10, which is an update to the table shown in the February 2020 demographic study. Since the February 2020 report, four developments were completed (Citizen Linden, Meridia Lifestyles II, citivillage @ st. georges ave, and 1700 S. Stiles Street) and have been removed from the table. Changes to the status in a development since the last report have been bolded. Three (3) developments have been added to the table since the last study and are shaded blue. The table excludes new houses to be built on single in-fill lots, or the subdivision of existing lots, or homes that are built after the demolition of an existing older home. In the latter instance, there is no net gain in the number of housing units.

In total, there is the potential for 825 non age-restricted housing units, all of which will consist of multi-family units such as apartments or duplexes. Of the eight elementary attendance areas, the largest impact will be on School #8, which will contain nearly all (98%) of the new housing units. The location of each of the developments is shown in Figure 24.

Table 10
Approved and Proposed Residential Developments in Linden

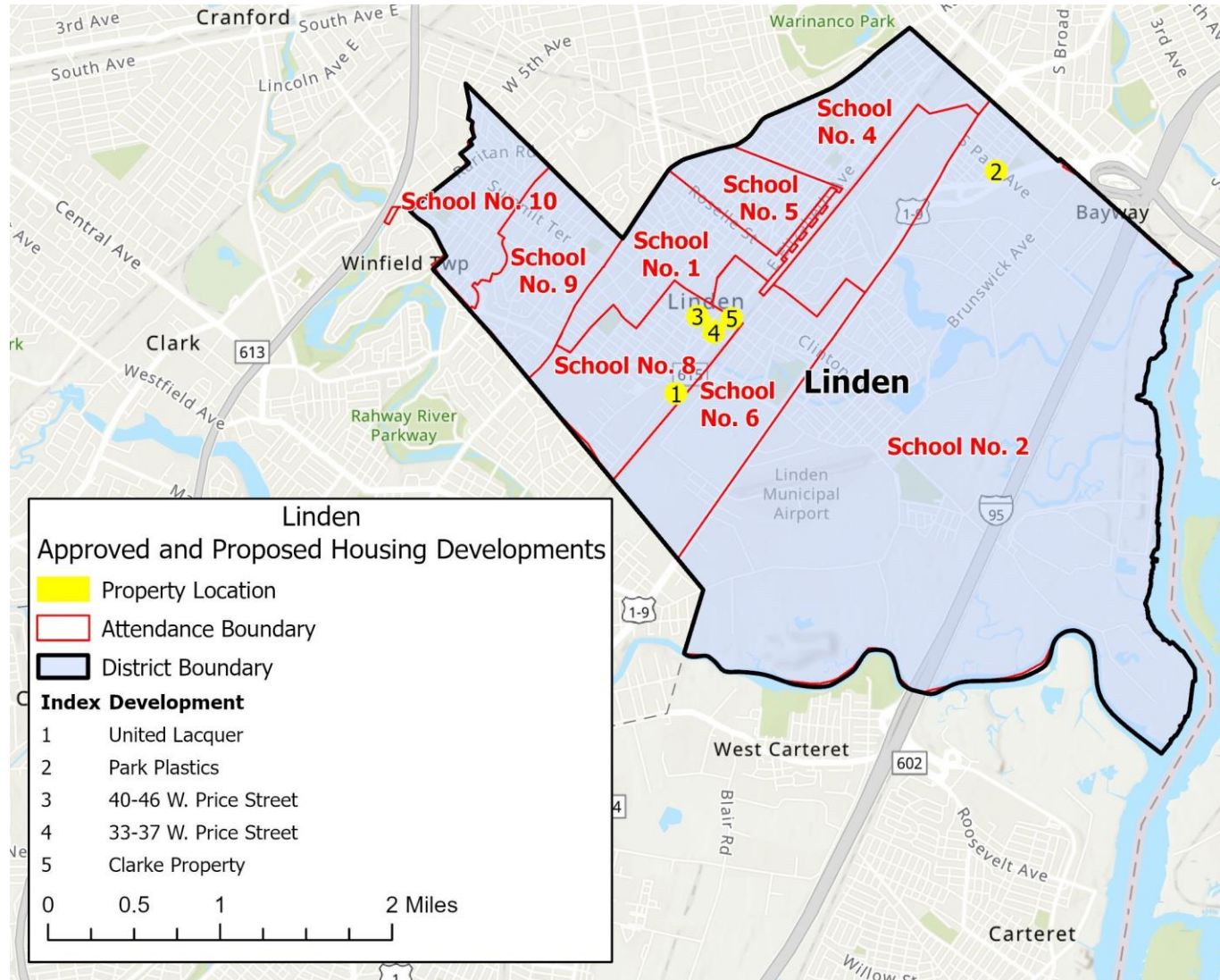
Development/ (Location)	Elementary Attendance Area	Number of Units	Bedroom Distribution	Housing Type	Notes/Status
United Lacquer (1001 W. Elizabeth Avenue)	School #8	402	148 1-BR 254 2-BR	Apartments (market-rate)	Under construction. Former United Lacquer warehouse. Will consist of a mix of commercial and residential.
Park Plastics (940 S. Park Avenue)	School #2	16	3-4 BR	Duplex	Located at former Park Plastics site. Has not been approved as it is being heard by the Planning Board.
40-46 W. Price Street	School #8	37	34 1-BR 3 2-BR	Apartments (market-rate)	Recently completed and in the process of leasing
33-37 W. Price Street	School #8	36	1-BR	Apartments (market-rate)	Recently completed and in the process of leasing
Clarke Property (N. Wood Avenue/ W. Elizabeth Avenue)	School #8	334	207 1-BR 127 2-BR	Apartments (market-rate)	Received Planning Board approval in June 2023
Total		825 Units			

Source: Ricci Planning

Notes: Blue-shaded developments are new from the February 2020 demographic study.

Bolded text reflects a change in status from the February 2020 demographic study.

Figure 24
Linden Approved and Proposed Housing Developments



Of the developments shown in the table, the largest is at the former United Lacquer warehouse site, which will consist of 402 non age-restricted apartment units. The project, which is under construction, will consist of a mix of one- and two-bedroom units. The second-largest project, known as the Clarke property, was recently approved and will consist of 334 non age-restricted apartment units with a mix of one and two bedrooms. Two smaller developments (40-46 W. Price Street and 33-37 W. Price Street) consisting of non age-restricted apartment units have been recently completed and are in the process of leasing.

With the exception of the Park Plastics development, most of the residential development is part of the creation of a Transit Village or Transit-Oriented Development (“TOD”) on approximately 392 acres in the vicinity of the Linden Train Station.³ The TOD includes areas approximately within a half-mile radius of the train station and is bisected by Wood and Elizabeth Avenues. While there are many non-residential components of the TOD, only new residential housing was analyzed and its potential impact on the school district.

TODs that have been recently constructed in Linden include Citizen Linden (234 1- and 2-BR apartment units), Meridia Lifestyles I (176 1- and 2-BR apartment units), Meridia Lifestyles II (145 1- and 2-BR apartment units), and citivillage @ st. georges ave (113 1- and 2-BR apartment units). Student yields in these developments have been very low, ranging from 0.021-0.040 public school students per unit.

Due to the approved and proposed development locations near the train station, there is likely to be minimal impact upon the district, as a TOD historically has fewer students than housing developments not located near mass transit. In a study by the Rutgers University Center for Urban Policy Research (“CUPR”),⁴ ten recently constructed TODs were analyzed to determine the number of public school children per housing unit. Nine of the ten developments had yields of 0.10 public school children or less for each housing unit. In the 2,183 units that were analyzed, there were a total of 47 public school children, which is a yield of 0.02 students per housing unit. The student yields cited by CUPR are consistent with the yields in the city’s recently-constructed TODs.

Student Yield Analysis of One- to Four-Family Homes

To determine the number of children per housing unit (student yield) in Linden, the city’s parcel-level MOD IV database was joined to the school district’s 2022-23 student database. Age-restricted housing units, condominiums, and townhouses were removed from the property database, whereby the majority of remaining homes were detached single-family or duplexes. A total of 4,999 children living in 9,611 one- to four-family homes were identified. The remaining children in the school district either live in apartments, townhouses/condominiums, or mixed-use units (commercial and residential properties) or do not live in Linden.

The simplest way to compute student yields is to divide the total number of students by the total number of homes. However, there are several drawbacks in computing yields in this fashion. First, the *type* of housing unit helps determine the magnitude of the student yield, as

³ Information was obtained from the *Transit Oriented Development Plan-Linden Station Area* by T&M Associates, June 2008.

⁴ Listokin, David, et al. (2006). *Who Lives in New Jersey Housing?*, Rutgers University Center for Urban Policy Research.

yields are typically greatest for detached single-family homes and smallest for multi-family homes such as apartments and townhouses/condominiums. A second drawback of this computation is that the student yield would include homes owned by all age segments of the population, such as empty-nesters and senior citizens, which would lower the overall student yield. Yields computed in this fashion are likely underestimating the future number of children in proposed developments or from home resales, where families with children are likely to be the buyers, particularly if the school district has an excellent reputation.

Instead, the length of ownership of the housing unit was considered, as student yields are typically highest from 0-10 years of ownership and are lowest at 20 or more years of ownership. As such, a unique student yield distribution by length of ownership was created for Linden. It also should be noted that the forthcoming student yield distribution is a snapshot in time. If the percentage of children in the population changes, or the demographics of the community change where ethnic groups of larger or smaller sizes enter, or if the school district's reputation changes and more or less children attend the district, student yields are likely to change as well.

To determine length of ownership, parcel-level records of all one- to four-family homes in Linden were obtained from the Monmouth County Tax Board⁵ MOD IV database. Besides the property address, other variables include block and lot, sale dates and prices, and in most instances, the year that the home was built. To compute student yields by length of ownership, it was necessary to know the year of the most recent sale, where reliable sales data in the database were available from 1974-2022,⁶ a 48-year period. Determining the most recent sale date was not always obvious. Some of the most recent sales had a sales price of \$1 or \$100. These "paper sales" were coded as a non-usable deed transaction and were excluded from the analysis. These transactions include sales between members of the immediate family, resulting in a change in title but often not a change of the occupant. If there were no secondary sale dates, the length of ownership exceeded 48 years but the exact number of years was unknown.

One of the limitations of the database was the lack of recorded sales prior to 1974. Since many of the homes (n = 1,944) have never been sold since 1974, the earliest sale date recorded, the length of ownership exceeded 48 years for these homes but the exact length of ownership was unknown. Linden also had homes constructed after 1974 that had never been sold. However, in these instances, the length of ownership could be computed by simply subtracting the year that the home was built from 2022.

Student Yields by Length of Ownership for One- to Four-Family Homes

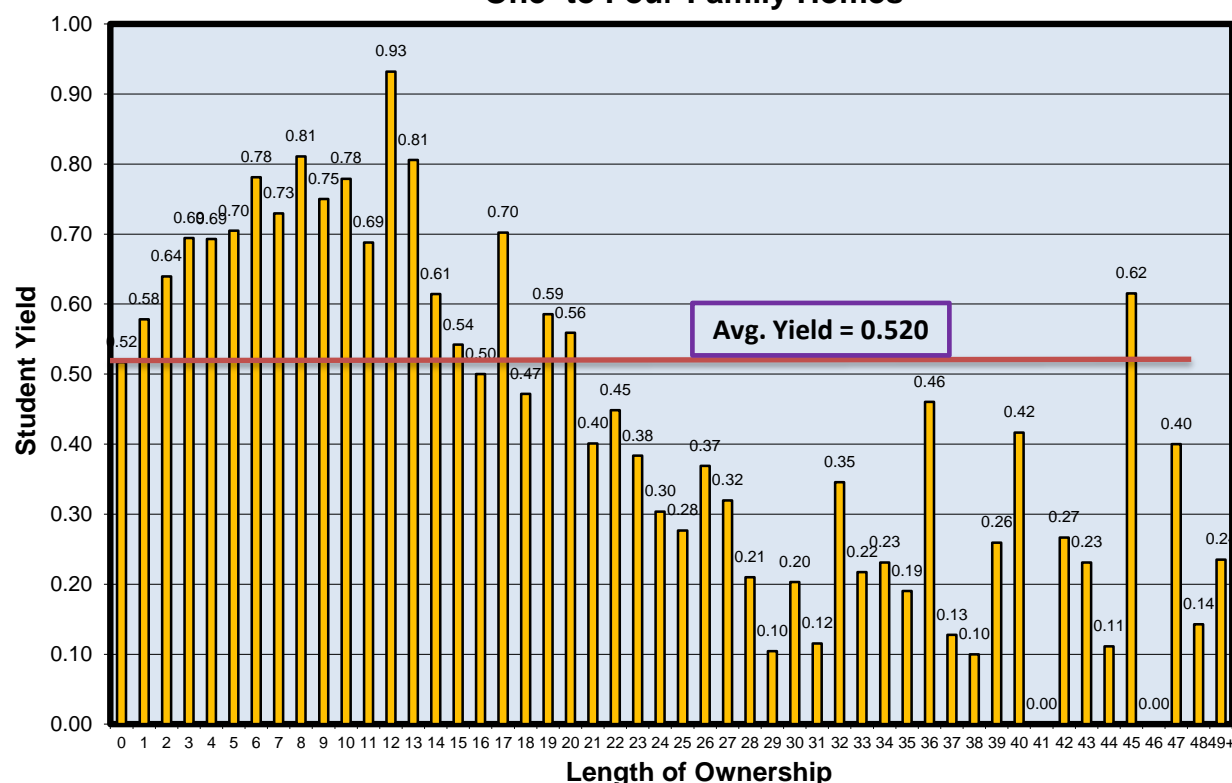
Student yields by length of ownership for one- to four-family homes was determined by joining Linden's parcel-level property database with 2022-23 student address data, which was provided by the school district. It is expected that longer-held homes will have fewer children, as they would have graduated from the district. Figure 25 shows that student yields increase with length of ownership, peaking at 0.93 children per housing unit with 12 years of ownership. Student yields then begin to decline as length of ownership increases. For homes with 25 or more years of ownership, most student yields were below 0.30. While it appears that student

⁵ The database provides information for all municipalities in the state.

⁶ Data for 2023 were incomplete and not used in the analysis.

yields are rising at longer lengths of ownership, 45 years of ownership for example, this is misleading since there are very few homes at this length of ownership and one or two additional students had a great impact on the student yield. Table 11 shows the student yields by length of ownership for the K-12 student population (public school students only).

Figure 25
Linden Student Yields by Length of Ownership
One- to Four-Family Homes



Since the length of ownership is a distribution, how can one determine what is the likely student yield in a home resale or newly constructed unit? Since the distribution is a snapshot in time, what is a reasonable student yield to use? Computing an average over the entire length of ownership underestimates the number of children, since there are so few children at longer lengths of ownership as children graduate from the school district. Unfortunately, there is no research-based metric to determine what part of the distribution should be used to estimate future schoolchildren. Instead, we propose computing an average using all of the years up to the peak student yield, which estimates the maximum impact before student yields begin to decline.

As discussed above, the average student yield computed from the entire housing stock, which is 0.520 children per home, likely underestimates the actual student yield when a family either moves into a new (or resale) one- to four-family home. If the average student yield is computed for the first 12 years of ownership when the peak student yield occurs, the yield increases to 0.691. This is likely a better estimate of the student yield of one- to four-family homes in Linden.

Table 11
Student Yields (PK-12) by Current Length of Ownership in Linden
One- to Four-Family Homes

Years of Ownership	Housing Units	2022-23 Students	Student Yield
0	298	154	0.52
1	593	343	0.58
2	599	383	0.64
3	455	316	0.69
4	485	336	0.69
5	457	322	0.70
6	407	318	0.78
7	314	229	0.73
8	238	193	0.81
9	196	147	0.75
10	190	148	0.78
11	157	108	0.69
12	147	137	0.93
13	206	166	0.81
14	166	102	0.61
15	155	84	0.54
16	200	100	0.50
17	198	139	0.70
18	212	100	0.47
19	193	113	0.59
20	204	114	0.56
21	192	77	0.40
22	165	74	0.45
23	120	46	0.38
24	112	34	0.30
25	112	31	0.28
26	84	31	0.37
27	97	31	0.32
28	62	13	0.21
29	67	7	0.10
30	64	13	0.20
31	52	6	0.12
32	55	19	0.35
33	46	10	0.22
34	52	12	0.23
35	63	12	0.19
36	76	35	0.46
37	47	6	0.13
38	20	2	0.10
39	27	7	0.26
40	12	5	0.42
41	6	0	0.00
42	15	4	0.27
43	13	3	0.23
44	9	1	0.11
45	13	8	0.62
46	4	0	0.00
47	5	2	0.40
48	7	1	0.14
49+	1944	457	0.24
Total	9,611	4,999	0.520

Student Yield Analysis for Townhouses and Condominiums

Student yields were also computed for townhouses and condominiums in Linden, which are shown for each development in Table 12. Counts of students are shown by grades K-5, 6-8, and 9-12, which is the school district's grade configuration. Unlike the prior analysis, lengths of ownership were not computed as there is a lot of variation of the student yields based on the development's bedroom distribution and whether it has child-friendly amenities, such as a playground or swimming pool. Through internet research, we were able to identify the approximate sales price, the year the development was built, bedroom distribution, and the number of units. Student yields are shown by housing development for 2022-23 and are compared to the student yields in 2019-20 as previously shown in the February 2020 demographic study. In general, student yields are very low. A total of 45 children (K-12) were identified living in 580 units, which is an average student yield of 0.078. The largest student yields, in developments with at least 25 units, are in Park at Linden (0.148) and Parkline (0.074). The city's average student yield for townhouses and condominiums in 2022-23 is very similar to that of 2019-20 (0.067).

Student Yield Analysis for Apartments

Student yields were also computed for apartment complexes in Linden as shown in Table 13. Counts of students are shown by grades K-5, 6-8, and 9-12, which is the school district's grade configuration. The table is not an all-inclusive list of all apartment units, as it only includes large apartment complexes. The list does not include small multi-family buildings with fewer than five units or mixed-use properties with apartments above retail space. Through internet research (if data were available), we were able to identify the rental price, the year the development was built, bedroom distribution, and the number of units. Student yields are shown by housing development for 2022-23 and are compared to the student yields in 2019-20 as previously shown in the February 2020 demographic study. A total of 221 public school children (K-12) were identified living in 2,472 units, which is an average student yield of 0.089. The largest student yields, in developments with at least 25 units, are in Sunnyfield Garden (0.262) and Hilton Gardens (0.183). The city's average student yield for apartments in 2022-23 is much lower than that of 2019-20 (0.171), which is due to the low student yields in the recently-constructed apartment developments (e.g., Citizen Linden, Meridia Lifestyles II, citivillage @ st. georges ave, and 1700 S. Stiles Street).

Table 12
Linden Student Yields (PK-12) for Townhouses/Condominiums

Development/ Property Address	Price (\$)¹	Bed- rooms	Year Built	Number of Units²	PK-5 Students	6-8 Students	9-12 Students	PK-12 Students³	2019-20 Student Yield	2022-23 Student Yield
Del Barton Manor	225,000 +/-	1-2 BR	1978	18	0	0	1	1	0.000	0.056
Florence Manor	200,000-220,000	2-BR	1987	12	1	0	0	1	0.250	0.083
Kingman Arms	150,000-210,000	0-1 BR	1974, 1988	24	0	0	0	0	0.083	0.000
Landmark	200,000-310,000	1-2 BR	1984, 1998	135	2	1	2	5	0.103	0.037
Linden Gardens	325,000 +/-	2-BR	1987	8	0	0	0	0	0.250	0.000
Linden Towers	160,000-220,000	1-2 BR	1998	149	5	0	3	8	0.013	0.054
Lisa Court	355,000 +/-	1-2 BR	1980	8	0	0	0	0	0.250	0.000
Olivia Commons	485,000 +/-	3-BR	2008	4	0	2	1	3	0.400	0.750
Park at Linden	250,000-320,000	1-2 BR	2009	27	3	1	0	4	0.074	0.148
Parkline	185,000-350,000	1-2 BR	2015	95	3	1	3	7	0.042	0.074
Sedoma	260,000-345,000	1-2 BR	2013	6	5	1	1	7	0.167	1.167
Theresa (The)	200,000 +/-	0-1 BR	1998	18	0	0	0	0	0.056	0.000
Woodhaven Manor	215,000 +/-	1-BR	1987	8	2	0	1	3	0.500	0.375
19-21 E. Linden Avenue	250,000-380,000	0-2 BR	1987	6	0	0	0	0	0.333	0.000
25 E. 10th Street	600,000 +/-	3-BR	2023	4	0	0	1	1	N/A⁴	0.250
29 E. Price Street	355,000 +/-	2-BR	2010-2011	6	0	0	0	0	0.000	0.000
35 E. Price Street	195,000 +/-	1-BR	1984	12	0	0	0	0	0.000	0.000
209-211 S. Stiles Street	280,000 +/-	2-BR	2007	6	0	2	0	2	0.000	0.333
300 W. Munsell Avenue	200,000-240,000	1-2 BR	1998	23	1	0	0	1	0.000	0.043
516 N. Wood Avenue	425,000 +/-	2-3 BR	2005	7	1	0	0	1	0.000	0.143
2001-2007 Klem Avenue (odds)	325,000 +/-	3-BR	2020	4	0	0	1	1	N/A⁴	0.250
Total				580	23	8	14	45	0.067	0.078

Notes: ¹ Sale price information was obtained from www.njcondos.net or public sale records.

² As derived from the Linden property database

³ Based on 2022-23 enrollments in the Linden Public Schools

⁴ Development did not exist in 2020.

Table 13
Linden Student Yields (PK-12) for Apartments

Development (Property Address)	Rent (\$)¹	Year Built	Bedrooms	Number of Units	K-5 Students	6-8 Students	9-12 Students	K-12 Students²	2019-20 Student Yield	2022-23 Student Yield
Avon Apartments (115 E. Elizabeth Avenue)	N/A	1976	N/A	12	0	0	0	0	0.000	0.000
Bedford Apartments (231 E. Elizabeth Avenue)	1,575 +	1987	1-2 BR	24	0	0	3	3	0.167	0.125
Benedict Apartments (1000 Mopsick Avenue)	N/A	1968	N/A	19	1	0	1	2	0.105	0.105
Brookside Apartments (322 W. Elizabeth Avenue)	N/A	1965	N/A	14	2	0	0	2	0.357	0.143
Brookside Gardens (1350 S. Wood Avenue)	N/A	1967	1-2 BR	66	1	0	2	3	0.106	0.045
Cambridge Apartments (121 E. Elizabeth Avenue)	N/A	1976	N/A	12	0	0	0	0	0.000	0.000
Chandler Avenue Apartments Building #1 (1013 Chandler Avenue)	1,700 +	1930	1-2 BR	11	3	0	0	3	0.545	0.273
Chandler Avenue Apartments Building #2 (1017 Chandler Avenue)	1,700 +	1930	1-2 BR	14	0	0	1	1	0.500	0.071
citivillage @ st. georges ave (1120 & 1140 E. St. Georges Avenue)	1,725-2,495	2020	1-2 BR	113	2	0	2	4	N/A³	0.035
Citizen Linden (307 W. Elizabeth Avenue)	2,263-2,855	2021	1-2 BR	234	4	1	1	6	N/A³	0.026
Elizabet Apartments (219 E. Elizabeth Avenue)	N/A	1972	N/A	23	2	0	1	3	0.261	0.130
Franciszka Gardens (107 E. Curtis Street)	1,375 +	1997	1-2 BR	21	0	0	1	1	0.200	0.048
Hilton Gardens (35 E. Elizabeth Avenue)	N/A	2000	N/A	60	8	1	2	11	0.150	0.183
Hollywood Terrace (1124 Hollywood Road)	1,795-1,895	1943	2-BR	102	5	2	4	11	0.176	0.108
Hussa Apartments (535 Hussa Street)	N/A	1965	N/A	12	2	0	0	2	0.083	0.167
Lindcrest (1116 N. Stiles Street)	1,939-2,368	1936	1-2 BR	284	6	4	8	18	0.165	0.063

Linden Apartments (401 Roselle Street)	N/A	2004	1-2 BR	48	5	0	3	8	0.104	0.167
Linden Court Manor (208 E. Elizabeth Avenue)	1,100-1,850	1974	0-2 BR	77	4	3	1	8	0.182	0.104
Meridia Lifestyles (103 S. Wood Avenue)	1,950-2,355	2016	1-2 BR	176	5	0	2	7	0.073	0.040
Meridia Lifestyles II (100 S. Wood Avenue)	1,895-2,995	2021	1-2 BR	145	2	0	1	3	N/A³	0.021
Mularz Tavern (513 E. Elizabeth Avenue)	N/A	1959	N/A	8	0	0	1	1	0.500	0.125
NorthWood Manor (510 N. Wood Avenue)	N/A	1940	0-1 BR	10	0	0	1	1	0.100	0.100
Park Edge (530 S. Wood Avenue)	2,200 +/-	1974	N/A	19	0	0	0	0	0.000	0.000
Pen Apartments (1102-1106 W. St. Georges Avenue)	N/A	1979	N/A	64	4	1	3	8	0.141	0.125
Rosalia Manor (100 W. Elizabeth Avenue)	1,750-2,780	1998	1-2 BR	30	0	1	0	1	0.100	0.033
Rose Apts. (1411-1415 Harding Avenue)	N/A	1977	N/A	9	0	0	0	0	0.000	0.000
Royal Court (101 E. Blancke Street)	N/A	1965	1-2 BR	24	1	0	1	2	0.292	0.083
Simone Apartments (1307-1311 Harding Avenue)	N/A	1973	N/A	14	0	0	0	0	0.071	0.000
Sunnyfield Garden (343 Academy Terrace)	1,900-2,400	1947	1-2 BR	42	7	4	0	11	0.075	0.262
Westwood Apartments (25 W. Price Street)	N/A	1998	N/A	33	1	0	1	2	0.091	0.061
Wood Arms (30 E. Elm Street)	1,485-1,925	1951	0-2 BR	42	3	0	3	6	0.452	0.143
3 Cedar Avenue	N/A	1920	N/A	10	0	1	0	1	0.000	0.100
18-20 E. Price Street	N/A	1930	N/A	18	4	0	0	4	0.118	0.222
26 E. 15th Street	N/A	1970	N/A	6	1	0	0	1	0.667	0.167
38 E. Elm Street	2,100 +/-	1997	N/A	12	0	0	0	0	0.000	0.000
38 W. Elizabeth Avenue	N/A	1970	N/A	6	1	0	0	1	0.000	0.167
120 E. Price Street	2,000 +/-	1970	1-BR	12	0	0	0	0	0.083	0.000
127 E. 10th Street	N/A	1965	N/A	8	1	0	0	1	0.250	0.125
200 E. Price Street	N/A	1930	N/A	13	1	0	3	4	0.462	0.308
200 First Avenue	N/A	1979	N/A	5	0	0	0	0	0.000	0.000
200 W. Elizabeth Avenue	N/A	1964	0-2 BR	14	0	0	0	0	0.071	0.000
204 E. Price Street	N/A	1930	N/A	12	0	0	0	0	0.167	0.000

210 Walter Street	N/A	1970	1-2 BR	6	0	0	0	0	0.167	0.000
220 W. Morris Avenue	2,100 +/-	1990	N/A	8	1	0	0	1	0.000	0.125
221-225 Coolidge Street	2,800 +/-	2008	1-2 BR	9	2	0	1	3	0.333	0.333
222 W. Morris Avenue	N/A	1968	N/A	6	0	0	0	0	0.000	0.000
226 Maple Avenue	N/A	1980	N/A	5	0	0	0	0	0.000	0.000
249 W. Linden Avenue	2,500 +/-	1935	1-2 BR	8	0	0	0	0	0.125	0.000
308 W. Morris Avenue	2,000 +/-	1998	2-BR	9	0	0	0	0	0.000	0.000
415 E. Elm Street	N/A	1929	N/A	8	1	0	1	2	0.000	0.250
425 W. Price Street	N/A	1978	N/A	18	0	2	0	2	0.056	0.111
501 W. Elm Street	N/A	1906	N/A	6	0	0	0	0	0.000	0.000
511/599 W. Price Street	N/A	1920	1-2 BR	6	1	0	0	1	1.167	0.167
533 E. Elizabeth Avenue	N/A	1998	N/A	9	0	0	0	0	0.250	0.000
534-538 E. Price Street	N/A	1962	N/A	8	0	0	0	0	0.000	0.000
546 E. Blancke Street	1,900 +/-	1930	1-2 BR	10	1	0	1	2	0.300	0.200
551-557 Cleveland Avenue	N/A	1960	N/A	8	3	0	1	4	0.125	0.500
600-618 Ziegler Avenue	N/A	1965	N/A	18	0	0	0	0	0.000	0.000
611 W. Blancke Street	N/A	1940	N/A	8	0	0	0	0	0.000	0.000
615 Chandler Avenue	N/A	1920	N/A	6	0	0	1	1	0.167	0.167
700 Washington Avenue	N/A	1920	N/A	12	1	0	1	2	0.167	0.167
701 Worth Avenue	N/A	1974	N/A	7	0	0	4	4	0.429	0.571
717 Washington Avenue	N/A	1972	N/A	35	0	0	2	2	0.143	0.057
818 Allen Street	N/A	1950	N/A	6	1	0	0	1	0.333	0.167
836-840 Jackson Avenue	1,550 +	1921	1-2 BR	12	2	0	1	3	0.167	0.250
902 Peter Street	2,100 +/-	1970	N/A	6	0	0	0	0	0.167	0.000
903 Chandler Avenue	2,000 +/-	1921	1-2 BR	6	1	0	0	1	0.167	0.167
924 Worth Avenue	2,000 +/-	1974	1-2 BR	11	0	0	0	0	0.091	0.000
1000 Allen Street	N/A	1968	1-2 BR	5	0	0	1	1	N/A⁴	0.200
1003 S. Wood Avenue	1,700 +	2018	1-BR	34	1	0	0	1	N/A⁴	0.029
1020 W. Elizabeth Avenue	1,900-2,200	2003	1-2 BR	21	0	0	0	0	0.048	0.000
1025 W. Blancke Street	1,450-2,500	1998	1-2 BR	22	0	0	0	0	0.048	0.000
1030 Charles Street	N/A	1921	N/A	8	2	0	0	2	0.375	0.250
1031 Charles Street	N/A	1931	2-BR	8	0	0	2	2	0.625	0.250
104 Luttgén Place	N/A	2010	1-2 BR	8	2	0	0	2	0.375	0.250
107 E. Price Street	N/A	1960	N/A	18	1	0	1	2	0.222	0.111
1105 Charles Street	1,800-2,000	1927	2-3 BR	12	5	1	3	9	0.917	0.750
1108 Charles Street	1,600 +	1931	1-2 BR	21	0	1	1	2	0.286	0.095
1110 S. Wood Avenue	N/A	1930	2-4 BR	12	2	0	2	4	0.500	0.333

1129 Purdue Place	N/A	1971	1-2 BR	6	0	0	0	0	0.000	0.000
1133-1137 Purdue Place	N/A	1965	1-2 BR	6	2	0	0	2	0.000	0.333
1200 W. St. Georges Avenue	2,400 +/-	2020	2-BR	8	1	0	0	1	N/A³	0.125
1301 Roselle Street	N/A	1998 & 2022	2-BR	12	1	0	0	1	0.333	0.083
1310 Harding Avenue	N/A	1971	1-2 BR	15	0	0	1	1	0.000	0.067
1420 S. Wood Avenue	2,000 +/-	1928	N/A	16	0	1	2	3	0.250	0.188
1500 S. Wood Avenue	N/A	1975	1-2 BR	6	0	0	1	1	0.333	0.167
1517 S. Wood Avenue	N/A	1935	1-2 BR	5	1	0	0	1	0.200	0.200
1609 S. Wood Avenue	N/A	1930	1-2 BR	5	1	0	1	2	0.800	0.400
1700 S. Stiles Street	2,300 +/-	2022	2-BR	27	2	0	0	2	N/A³	0.074
1709 S. Wood Avenue	1,100 +	1924	1-2 BR	7	1	0	0	1	0.714	0.143
1731 S. Wood Avenue	1,400 +/-	1920	1-2 BR	5	2	1	3	6	0.800	1.200
1805 Clinton Street	N/A	1966	N/A	6	2	0	0	2	0.333	0.333
1820 Klem Avenue	N/A	1998	N/A	15	1	0	0	1	0.067	0.067
1901 E. Elizabeth Avenue	N/A	1983	N/A	10	0	0	0	0	0.000	0.000
1908 S. Wood Avenue	N/A	1928	N/A	8	2	0	0	2	0.750	0.250
2126 E. Edgar Road	N/A	1946	1-BR	6	0	0	0	0	0.500	0.000
2500 E. Linden Avenue/ 301 Ashton Avenue	N/A	1998	N/A	5	0	1	0	1	0.400	0.200
2528/764 Brunswick Avenue	N/A	1998	N/A	6	0	0	0	0	0.000	0.000
Total				2,472	119	25	77	221	0.171	0.089

Notes: ¹ As derived from internet research

² Based on 2022-23 enrollments in the Linden Public Schools

³ Development did not exist in 2020.

⁴ Development was not listed in prior report.

Table 14 summarizes the student yields for townhouses/condominiums and apartments for the K-5, 6-8, and 9-12 grade configurations. Student yields are greatest for grades K-5 in each housing type, which is not unexpected since there are six grades. The overall student yield for apartments is slightly higher than that of townhouses/condominiums.

Table 14
Student Yields by Housing Type in Linden

Housing Type	K-5 Student Yield	6-8 Student Yield	9-12 Student Yield	K-12 Student Yield¹
Townhouse/ Condominium	0.040	0.014	0.024	0.078
Apartment	0.048	0.010	0.031	0.089

Note: ¹ Student yields are based on 2022-23 enrollments in the Linden Public Schools.

Estimate of Public School Children from New Housing

An estimate was made of the number of public school children that could potentially come from the approved and proposed housing developments in Linden. To project the number of public school children from the new housing units, several additional assumptions were made:

1. All market-rate apartment units with 1-2 bedrooms in United Lacquer, 40-46 W. Price Street, and the Clarke Property were assumed to have the average Linden student yield multiplier from Citizen Linden, Meridia Lifestyles II, and citivillage @ st. georges ave: 0.026.
2. All duplex units in Park Plastics were assumed to have the average Linden student yield multiplier for one- to four-family homes: 0.691.
3. All market-rate 1-bedroom apartment units in 33-37 W. Price Street were assumed to have the average Linden student yield multiplier for 1-bedroom apartments: 0.019.
4. The full build-out and occupation of 33-37 W. Price Street and 40-46 W. Price Street, which are completed and in the process of leasing, would be completed in the 2023-24 school year.
5. The full build-out and occupation of the Clarke Property and United Lacquer would be completed over a two-year period (2024-25 and 2025-26).
6. The full build-out and occupation of Park Plastics, which has not been approved, would be completed in the 2025-26 school year.

In total, 32 public school children (K-5 = 18, 6-8 = 5, and 9-12 = 9) in grades K-12 are projected according to the following distribution:

- United Lacquer – 10 (6 K-5, 1 6-8, 3 9-12)
- Park Plastics – 11 (5 K-5, 3 6-8, 3 9-12)
- 40-46 W. Price Street – 1 (1 K-5, 0 6-8, 0 9-12)
- 33-37 W. Price Street – 1 (1 K-5, 0 6-8, 0 9-12)
- Clarke Property – 9 (5 K-5, 1 6-8, 3 9-12)

Historical Residential Construction

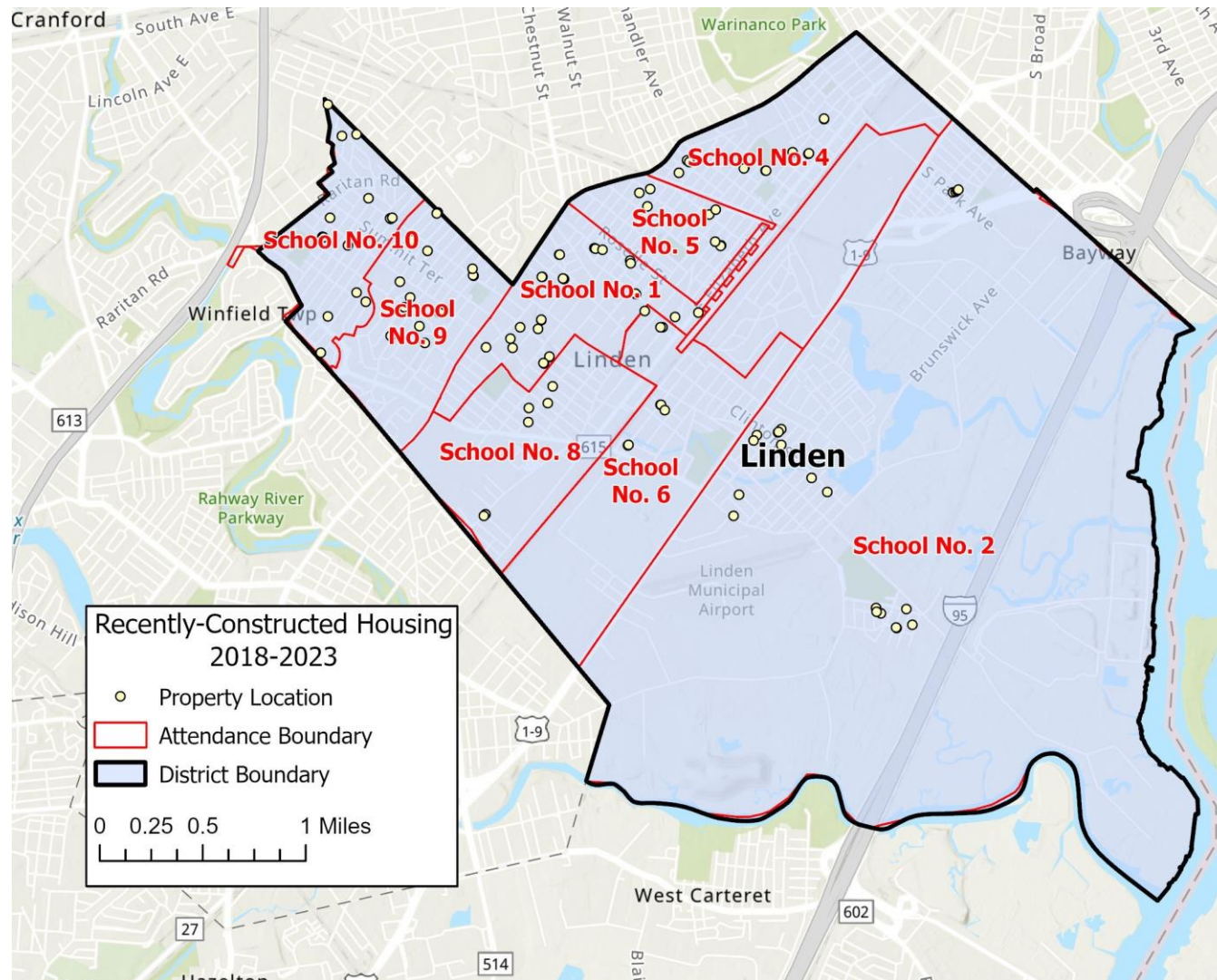
With respect to historical new construction, the number of housing units constructed in Linden from 2018-2023 is shown by elementary attendance area in Table 15. Figure 26 shows the location of each recently-constructed housing unit. A total of 684 housing units were built over this time period, with the greatest number (243) occurring in the School #8 attendance area. Of the units constructed in the School #8 attendance area, 234 were apartment units in Citizen Linden (2021). Of the units constructed in the School #6 attendance area, 145 were apartment units in Meridia Lifestyles II (2021). In the School #4 attendance area, 113 were apartment units in citivillage @ st. georges ave (2020). Through internet research, it appears that most of the remaining homes constructed have been limited to building a new home after the demolition of an existing older home (“knockdown”) or constructing new houses on single in-fill lots. While not shown in the table, 65 single-family or two-family housing units were demolished during the same time period as reported by the New Jersey Department of Community Affairs, which results in a net gain of 619 non age-restricted housing units since 2018.

Table 15
Number of New Housing Units by Elementary Attendance Area
2018-2023

Year	School #1	School #2	School #4	School #5	School #6	School #8	School #9	School #10	Total ¹
2018	1	34	1	0	3	1	0	1	41
2019	6	8	4	1	2	0	0	1	22
2020	3	8	125	1	3	4	3	1	148
2021	6	1	0	1	145	236	2	4	395
2022	11	30	2	4	0	0	5	6	58
2023	1	7	1	2	0	2	4	3	20
Total	28	88	133	9	153	243	14	16	684

Note: ¹As derived from the Linden property database

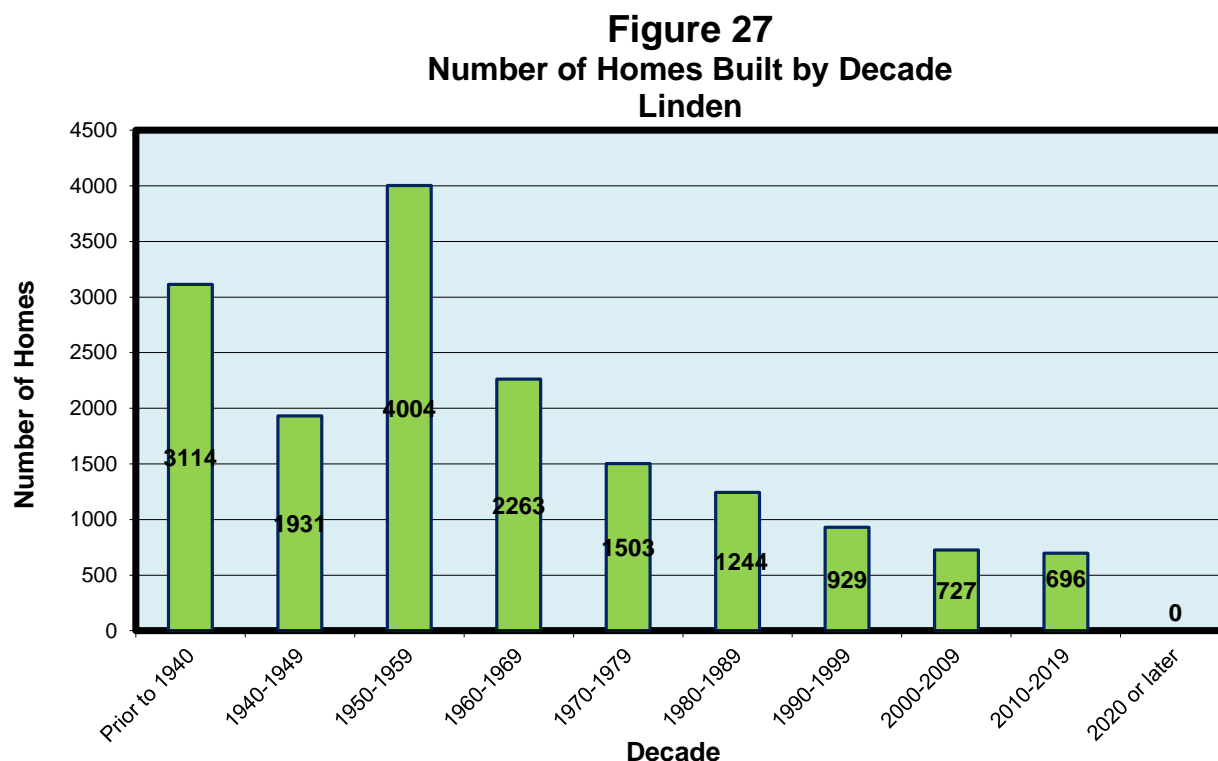
Figure 26
Linden Recently-Constructed Housing by Elementary Attendance Area
2018-2023



When determining the impact of future new housing, it should be clearly stated that enrollment projections utilize cohort survival ratios that do take into account prior new home construction growth. Children who move into new homes during the historical period are captured by the survival ratios, as these ratios will be used to project future enrollments. Therefore, it is not appropriate to add all of the new children generated from future housing units without considering the historical period, as double counting would occur, since the survival ratios have already increased due to the new children. The baseline enrollment projections should only be adjusted if the projected housing growth is significantly greater than prior housing growth. From 2018-2023, there was a net gain of 619 non age-restricted housing units in Linden. With respect to future construction, there is the potential for 825 non age-restricted housing units, which would be greater than the number built since 2018. Therefore, the baseline enrollment projections were subsequently modified to account for additional children from the new housing developments. The modifications occurred in the attendance areas where the new housing is being constructed. **The modification to the enrollment projections assumes that all potential developments listed in Table 10 will be built and occupied in the next five years.**

Distribution of Homes by Decade Built

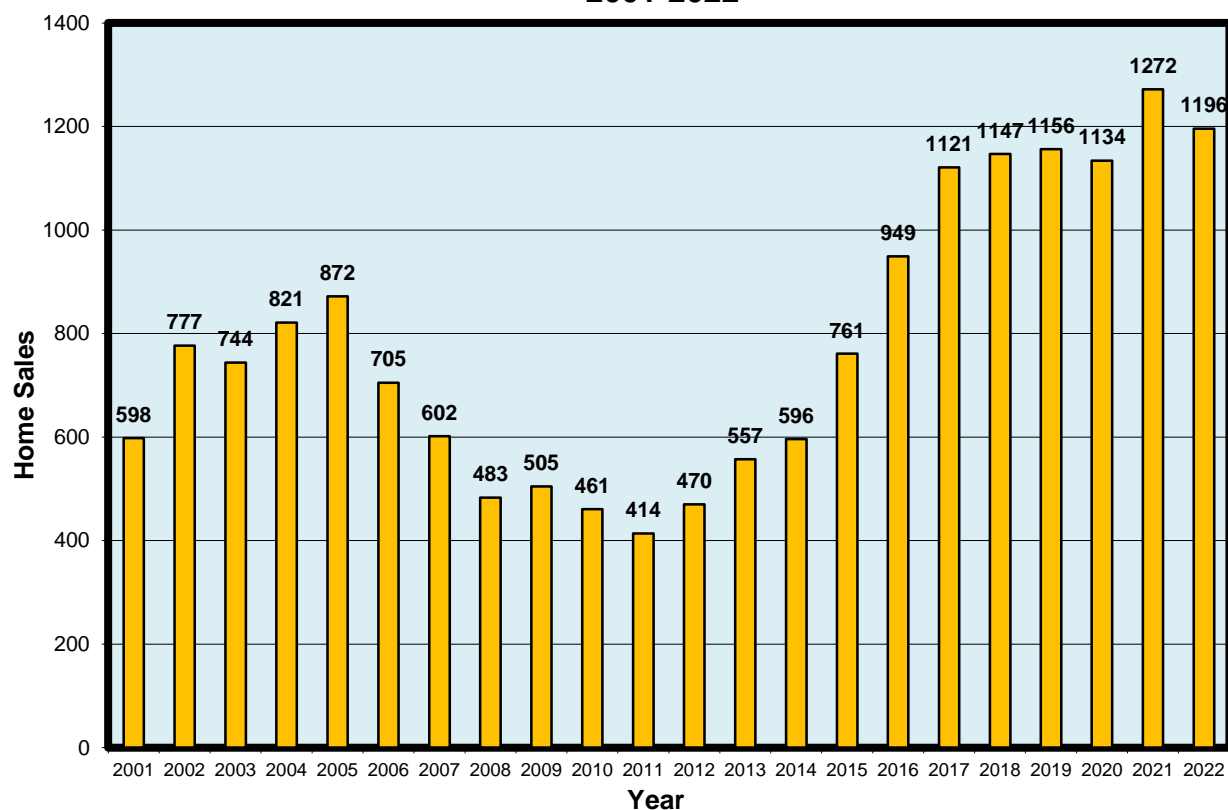
Figure 27 shows the number of homes built by decade in Linden as provided by the 2017-2021 ACS. As shown in the figure, Linden has an older housing stock, as more than three-quarters (78%) of the homes were built before 1980. After peaking in the 1950s, the number of homes built per decade has been steadily declining. Of the decades shown, the greatest number of homes was built in the 1950s, which is 24% of the housing stock and corresponds to the sizeable population gain in Linden (+30.3%) shown previously in Table 3.



Home Sales

In Figure 28, the number of annual home sales in Linden is shown from 2001-2022. Data for 2023 were incomplete. The information was retrieved from the Monmouth County Tax Board database, which possesses tax records and home sales for all municipalities in the state. “Paper sales” were once again excluded from the totals. After peaking at 872 sales in 2005, the number of sales declined to 414 in 2011 due to the housing market crash and banking crisis. During this period (2008-2012), the annual number of home sales was low, ranging from 414-505. Since then, home sales have rebounded. From 2013-2022, home sales have been generally increasing. In the last five years, the annual number of sales has ranged from 1,134-1,272, which is much greater than the number of sales that occurred before the housing market crash and banking crisis.

Figure 28
Linden Home Sales
2001-2022



Enrollment Projections

Enrollments were calculated at the school level from 2024-25 through 2028-29, a five-year period, using cohort-survival ratios based on the last five years of historical enrollment data. As these are smaller subgroups of the overall population as compared to using districtwide grade counts, the reliability of the school projections are lower than the overall districtwide projections. In general, the smaller the forecasted population, the higher the probability of error associated with the projection. Projected enrollments were also adjusted for the proposed new housing developments in the affected attendance areas.

With respect to grade-level pre-kindergarten students, enrollment in each school was projected by computing an average based on historical data from the last 2-3 years and using this value throughout the five-year projection period. In the last two years, pre-kindergarten enrollments in the district have ranged from 381-415 students per year. It was estimated that there would be 398 students in the program annually in the future.

On September 10, 2010, former New Jersey Governor Chris Christie signed into law the Interdistrict School Choice Program (“Choice”), which took effect in the 2011-12 school year. This enables students the choice in attending a school outside their district of residence if the selected school is participating in the Choice program. The Choice district sets the number of openings per grade level. The Linden Public Schools does not participate in the program and therefore has no impact on the enrollment projections.

As part of the School Funding Reform Act of 2008 (“SFRA”), all school districts in New Jersey are to provide expanded Abbott-quality pre-school programs for at-risk 3- and 4-year olds as outlined in N.J.A.C. 6A:13A. The State of New Jersey intends to provide aid for the full-day program based on projected enrollment. School districts categorized as District Factor Group⁷ (“DFG”) A, B, and CD with a concentration of at-risk pupils equal to or greater than 40 percent, must offer a pre-school program to all pre-school aged children regardless of income, known as “Universal” pre-school. For all other school districts, a pre-school program must be offered only to at-risk children, known as “Targeted” preschool. School districts may educate the pre-school children in-district, by outside providers, or through Head Start programs. School districts were required to offer these programs to at least 90% of the eligible pre-school children by 2013-14.

Due to budgetary constraints, the NJDOE postponed the roll-out of the program, which was scheduled for the 2009-10 school year. According to a recent conversation with a representative from the NJDOE Division of Early Childhood Education, there are no plans in the imminent future by the State Legislature to fund the program, which would prevent school districts from implementing the program. The pre-school program would have been rolled out over a five-year period according to the following schedule:

- At least 20% of the eligible pre-school universe in Year 1
- At least 35% of the universe in Year 2
- At least 50% of the universe in Year 3

⁷ Introduced by the New Jersey Department of Education in 1975, it provides a system of ranking school districts in the state by their socio-economic status. While the system is no longer used, the number of pre-kindergarten students was determined by the former DFG rankings.

- At least 65% of the universe in Year 4
- At least 90% of the universe in Year 5

The universe of pre-school children in “Universal” districts is computed by multiplying the 1st grade enrollment in 2007-08 by two. The universe of pre-school children in “Targeted” districts is computed by multiplying the 1st grade enrollment in 2007-08 by two and then multiplying by the percentage of students having free or reduced lunch in the district. The Linden Public Schools is a “Universal” district since its DFG is “B”. In Table 16, the number of total eligible pre-school students is provided with the estimated five-year rollout. As the table shows, there is the potential for 746 pre-kindergarten students as a result of the SFRA. Since it is unclear if and when the program will be funded and subsequently mandated, the forthcoming enrollment projections do not include additional pre-kindergarten students from the SFRA.

Table 16
Estimated Number of Eligible Pre-School Students
as Per School Funding Reform Act of 2008

DFG (2000)	Total eligible	Year 1	Year 2	Year 3	Year 4	Year 5
B	746	149	261	373	485	671

Source: New Jersey Department of Education, Division of Early Childhood Education

In a different pre-school initiative, the administration of Governor Phil Murphy announced the availability of Preschool Education Expansion Aid (“PEEA”) in 2018. In September 2018, the first round of funding (\$20.6 million) was publicized, where 31 districts received aid to expand their pre-kindergarten programs. A second round of funding was announced in January 2019, providing 33 additional school districts with roughly \$27 million in funding. The second round targeted districts whose free and reduced lunch percentage was above 20% and who have not previously received State preschool aid. Additional rounds of funding have occurred annually to assist school districts. Some districts that were eligible to apply for PEEA would fall under the “Universal” category under SFRA while others would be considered “Targeted” districts. However, the main difference with this expansion aid is that districts under SFRA were restricted to serve low-income children where now districts can educate all pre-school age children through PEEA. It appears that the Murphy administration may be moving towards a pre-school program for all children, rather than just for those who are low-income.

The Linden Public Schools recently received a PEEA grant to expand its pre-kindergarten program. According to the school district's administration, there is the potential for an additional 315 pre-kindergarten students by the end of the projection period. Some of these children would likely be educated by outside providers (such as Head Start). The school district is also considering renting additional space or expanding its current buildings to educate more of the children in-district. As the following projections only include pre-kindergarten students educated in-district, and it is unclear whether all or some of the additional students will be educated in-district, they are not shown in the forthcoming tables.

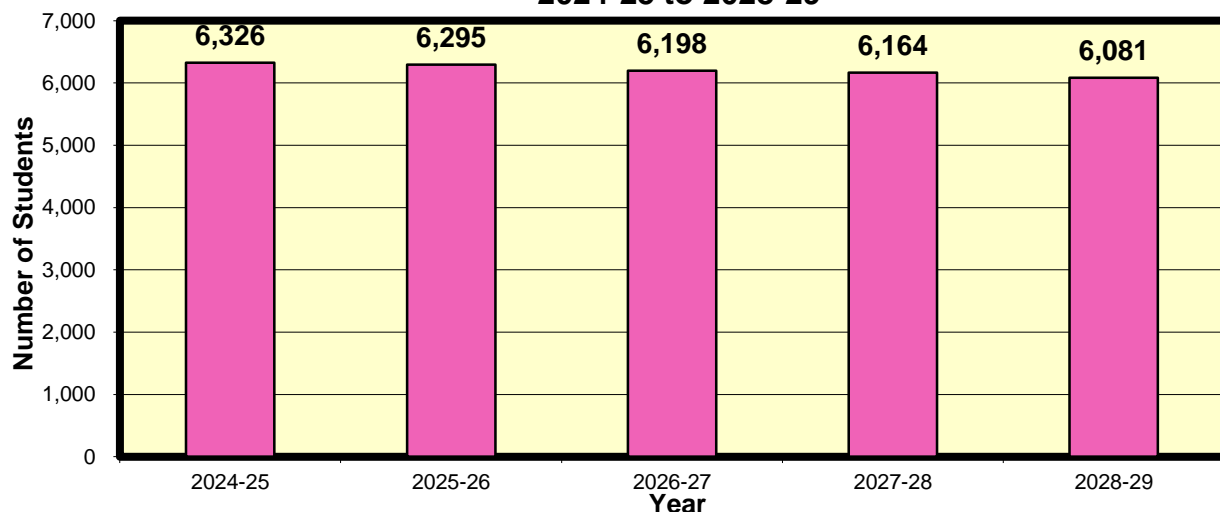
Projected enrollments (PK-12) follow in Table 17 and Figure 29. Enrollments are projected to decline throughout the projection period. In 2028-29, enrollment is projected to be 6,081, which would be a decline of 253.5 students from the 2023-24 enrollment of 6,334.5.

Table 17
Linden Public Schools Projected Enrollments
2024-25 to 2028-29

Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	SE ¹	Total
2024-25	426	403	425	427	449	404	388	446	448	442	475	436	490	426	241	6,326
2025-26	426	386	416	424	426	455	409	390	443	453	443	477	433	476	238	6,295
2026-27	426	375	399	414	423	432	461	409	387	448	453	444	473	420	234	6,198
2027-28	426	394	387	396	412	429	436	457	406	391	448	454	440	458	230	6,164
2028-29	426	391	406	388	394	417	433	420	453	410	391	449	450	426	227	6,081

Note: ¹Self-contained special education enrollment/ungraded students

Figure 29
Linden Public Schools Projected Enrollments
2024-25 to 2028-29



Projected Enrollments by Grade Configuration

In Table 18, projected enrollments are shown by grade configuration (PK-5, 6-8, and 9-12) in the Linden Public Schools. Ungraded special education students were reassigned into each of the grade configurations.

For the elementary grades (PK-5), enrollments are projected to be fairly stable for the next three years before declining in the last two years of the projection period. Enrollment is projected to be 2,974 in 2028-29, which would be a decline of 74 students from the 2023-24 enrollment of 3,048.

For the middle school grades (6-8), enrollments are projected to decline for the next three years before reversing trend. In 2028-29, enrollment is projected to be 1,338, which would be a decline of 83 students from the 2023-24 enrollment of 1,421.

Finally, for grades 9-12 at Linden High School, enrollments are projected to be fairly stable for the next four years before declining near the end of the projection period. In 2028-29, enrollment is projected to be 1,769, which would be a decline of 96.5 students from the 2023-24 enrollment of 1,865.5.

Table 18
Projected Enrollments for Grades PK-5, 6-8, and 9-12
2024-25 to 2028-29

Historical	PK-5	6-8	9-12
2023-24	3,048	1,421	1,865.5
Projected	PK-5	6-8	9-12
2024-25	3,050	1,393	1,883
2025-26	3,069	1,341	1,885
2026-27	3,055	1,298	1,845
2027-28	3,001	1,308	1,855
2028-29	2,974	1,338	1,769
5-year Change	-74	-83	-96.5

Projections by School

School #1

Historical enrollments for School #1 from 2014-15 to 2023-24, and projected enrollments from 2024-25 to 2028-29, are shown in Table 19. Enrollments generally increased through 2017-18 before reversing trend. Enrollment is 392 in 2023-24, which is a decline of 52 students from the 2014-15 enrollment of 444. Enrollment is projected to decline throughout the projection period. In 2028-29, enrollment is projected to be 349, which would be a decline of 43 students from the 2023-24 enrollment.

Table 19
Historical and Projected Enrollments of School #1

Year	PK	K	1	2	3	4	5	SE ²	Total
Historical¹									
2014-15	31	54	52	64	53	42	50	98	444
2015-16	30	47	54	53	56	56	48	80	424
2016-17	31	50	57	55	52	53	69	83	450
2017-18	34	49	58	58	58	60	59	84	460
2018-19	32	54	53	53	56	60	58	65	431
2019-20	34	51	60	54	54	58	67	61	439
2020-21	27	52	49	62	52	60	58	60	420
2021-22	33	43	49	43	56	55	58	55	392
2022-23	33	55	56	55	41	65	68	1	374
2023-24	28	40	52	58	54	39	61	60	392
CSR 5-Yr. Ratios		0.7121 ³	1.0240	0.9609	0.9626	1.0598	1.0125	0.1699 ⁴	
Projected									
2024-25	31	53	41	50	56	57	39	56	383
2025-26	31	39	54	39	48	59	58	56	384
2026-27	31	46	40	52	38	51	60	54	372
2027-28	31	46	47	38	50	40	52	52	356
2028-29	31	44	47	45	37	53	41	51	349

Notes: ¹ Data were provided by the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the Linden Public Schools.

² Self-contained special education enrollment/ungraded students

³ Birth-to-kindergarten survival ratio based on birth data five years prior using the last four years of historical data

⁴ Average proportion of self-contained special education/ungraded students with respect to PK-5 subtotals

School #2

Historical enrollments for School #2 from 2014-15 to 2023-24, and projected enrollments from 2024-25 to 2028-29, are shown in Table 20. In general, enrollments increased through 2019-20 before reversing trend. However, enrollments have reversed trend again and have increased in the last two years, which is mostly due to the expansion of the existing pre-kindergarten program. In 2023-24, enrollment is 637, which is a gain of 55 students from the 2014-15 enrollment of 582. Enrollments are projected to increase in 2023-24 before reversing trend. In 2028-29, enrollment is projected to be 591, which would be a decline of 46 students from the 2023-24 enrollment.

Table 20
Historical and Projected Enrollments of School #2

Year	PK	K	1	2	3	4	5	SE ²	Total
Historical¹									
2014-15	46	76	78	67	87	84	62	82	582
2015-16	46	84	73	77	71	76	82	83	592
2016-17	48	92	89	94	78	78	81	89	649
2017-18	76	93	84	89	90	75	76	62	645
2018-19	86	81	84	85	97	94	82	29	638
2019-20	42	79	95	75	84	103	97	84	659
2020-21	46	67	78	86	71	73	104	68	593
2021-22	89	69	56	78	77	67	76	43	555
2022-23	99	72	89	72	89	80	82	1	584
2023-24	116	82	84	95	69	89	78	24	637
CSR 5-Yr. Ratios		0.9354 ³	0.9748	0.9525	0.9800	0.9798	1.0440	0.0616 ⁴	
Projected									
2024-25	116	85	80	80	93	68	93	38	653
2025-26	116	88	83	76	78	91	71	37	640
2026-27	116	62	86	79	74	76	95	36	624
2027-28	116	78	60	82	77	73	79	35	600
2028-29	116	77	76	57	80	75	76	34	591

Notes: ¹ Data were provided by the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the Linden Public Schools.

² Self-contained special education enrollment/ungraded students

³ Birth-to-kindergarten survival ratio based on birth data five years prior using the last three years of historical data with outlier survival ratio from 2020-21 removed

⁴ Average proportion of self-contained special education/ungraded students with respect to PK-5 subtotals based on the last two years of historical data

School #4

Historical enrollments for School #4 from 2014-15 to 2023-24, and projected enrollments from 2024-25 to 2028-29, are shown in Table 21. Enrollments have been fairly stable in the last decade, ranging from 379-442. In 2023-24, enrollment is 442, which is higher (+34) than the 2014-15 enrollment of 408. Enrollments are projected to be fairly stable throughout the projection period, ranging from 455-469. In 2028-29, enrollment is projected to be 459, which would be slightly higher (+17) than the 2023-24 enrollment.

Table 21
Historical and Projected Enrollments of School #4

Year	PK	K	1	2	3	4	5	SE ²	Total
Historical¹									
2014-15	46	56	73	61	49	67	56	0	408
2015-16	45	50	53	71	63	51	73	0	406
2016-17	46	52	47	54	75	56	49	0	379
2017-18	47	65	52	55	53	77	57	0	406
2018-19	43	71	69	64	53	56	79	0	435
2019-20	43	58	63	73	62	60	66	0	425
2020-21	35	61	65	59	74	64	67	0	425
2021-22	47	64	61	61	61	70	55	0	419
2022-23	50	66	66	60	57	66	72	0	437
2023-24	44	70	73	68	64	63	60	0	442
CSR 5-Yr. Ratios		0.9743 ³	1.0645	0.9722	1.0122	1.0414	0.9784	0.0000 ⁴	
Projected									
2024-25	47	64	75	71	69	67	62	0	455
2025-26	47	71	68	73	72	72	66	0	469
2026-27	47	56	76	66	74	75	70	0	464
2027-28	47	65	60	74	67	77	73	0	463
2028-29	47	65	69	58	75	70	75	0	459

Notes: ¹ Data were provided by the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the Linden Public Schools.

² Self-contained special education enrollment/ungraded students

³ Birth-to-kindergarten survival ratio based on birth data five years prior with outlier survival ratio from 2020-21 removed

⁴ Average proportion of self-contained special education/ungraded students with respect to PK-5 subtotals

School #5

Historical enrollments for School #5 from 2014-15 to 2023-24, and projected enrollments from 2024-25 to 2028-29, are shown in Table 22. Since 2014-15, enrollments have been fairly stable, ranging from 275-339. In 2023-24, enrollment is 339, which is slightly higher (+10) than the 2014-15 enrollment of 329. Enrollments are projected to decline through 2025-26 before stabilizing. In 2028-29, enrollment is projected to be 336, which would be slightly lower (-3) than the 2023-24 enrollment.

Table 22
Historical and Projected Enrollments of School #5

Year	PK	K	1	2	3	4	5	SE ²	Total
Historical¹									
2014-15	57	35	47	52	38	53	47	0	329
2015-16	54	46	31	48	48	39	49	1	316
2016-17	54	46	47	33	46	50	41	0	317
2017-18	49	47	42	49	30	49	51	2	319
2018-19	51	44	50	38	45	32	53	2	315
2019-20	60	40	43	50	36	40	36	1	306
2020-21	43	29	37	46	40	39	41	0	275
2021-22	53	37	35	33	45	38	44	1	286
2022-23	50	40	42	35	36	46	41	0	290
2023-24	81	45	42	49	30	40	49	3	339
CSR 5-Yr. Ratios		1.0438 ³	1.0040 ⁴	1.0321	0.9684 ⁵	1.0417	1.0743	0.0031 ⁶	
Projected									
2024-25	81	38	45	43	47	31	43	1	329
2025-26	81	34	38	46	42	49	33	1	324
2026-27	81	48	34	39	45	44	53	1	345
2027-28	81	40	48	35	38	47	47	1	337
2028-29	81	40	40	50	34	40	50	1	336

Notes: ¹ Data were provided by the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the Linden Public Schools.

² Self-contained special education enrollment/ungraded students

³ Birth-to-kindergarten survival ratio based on birth data five years prior using the last three years of historical data

⁴ Outlier survival ratios from 2021-22 and 2022-23 were not used in the computation of the average ratio.

⁵ Outlier survival ratio from 2020-21 was not used in the computation of the average ratio.

⁶ Average proportion of self-contained special education/ungraded students with respect to PK-5 subtotals

School #6

Historical enrollments for School #6 from 2014-15 to 2023-24, and projected enrollments from 2024-25 to 2028-29, are shown in Table 23. Enrollments were fairly stable from 2014-15 through 2018-19 before declining in 2019-20. Since then, enrollments have been fairly stable. In 2023-24, enrollment is 331, which is slightly lower (-14) than the 2014-15 enrollment of 345. Enrollment is projected to decline throughout the projection period. In 2028-29, enrollment is projected to be 290, which would be a decline of 41 students from the 2023-24 enrollment.

Table 23
Historical and Projected Enrollments of School #6

Year	PK	K	1	2	3	4	5	SE ²	Total
Historical¹									
2014-15	47	49	47	69	52	43	37	1	345
2015-16	41	53	45	43	62	54	44	1	343
2016-17	45	48	60	49	45	59	56	2	364
2017-18	65	60	44	55	40	40	52	0	356
2018-19	62	53	60	49	58	39	48	1	370
2019-20	39	41	53	54	45	55	42	0	329
2020-21	29	48	41	51	56	45	54	0	324
2021-22	44	41	52	36	52	59	43	1	328
2022-23	35	50	39	57	40	51	60	0	332
2023-24	28	46	54	46	59	43	54	1	331
CSR 5-Yr. Ratios		0.8692 ³	1.0286	1.0290	1.0507	1.0273	1.0033	0.0012 ⁴	
Projected									
2024-25	36	45	47	56	48	61	43	0	336
2025-26	36	35	46	48	59	49	61	0	334
2026-27	36	33	36	47	50	61	49	0	312
2027-28	36	39	34	37	49	51	61	0	307
2028-29	36	39	40	35	39	50	51	0	290

Notes: ¹ Data were provided by the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the Linden Public Schools.

² Self-contained special education enrollment/ungraded students

³ Birth-to-kindergarten survival ratio based on birth data five years prior using the last three years of historical data

⁴ Average proportion of self-contained special education/ungraded students with respect to PK-5 subtotals

School #8

Historical enrollments for School #8 from 2014-15 to 2023-24, and projected enrollments from 2024-25 to 2028-29, are shown in Table 24. Enrollments increased through 2018-19 before reversing trend. Enrollments then declined through 2022-23 before reversing trend again. Enrollment is 328 in 2023-24, which is a gain of 40 students from the 2014-15 enrollment of 288. Enrollments are projected to slowly increase throughout the projection period. In 2028-29, enrollment is projected to be 364, which would be a gain of 36 students from the 2023-24 enrollment.

Table 24
Historical and Projected Enrollments of School #8

Year	PK	K	1	2	3	4	5	SE ²	Total
Historical¹									
2014-15	14	45	43	41	51	38	55	1	288
2015-16	31	36	44	48	41	48	40	24	312
2016-17	29	41	41	45	47	40	46	23	312
2017-18	31	43	44	48	44	50	40	27	327
2018-19	34	47	41	48	51	39	56	32	348
2019-20	30	37	52	40	54	58	38	34	343
2020-21	25	41	43	48	38	54	55	37	341
2021-22	31	39	52	43	48	34	52	22	321
2022-23	34	47	39	50	42	48	40	0	300
2023-24	31	48	42	46	48	41	57	15	328
CSR 5-Yr. Ratios		0.7646 ³	1.0738 ⁴	1.0593 ⁵	1.0413 ⁵	0.9796	1.0014	0.0608 ⁶	
Projected									
2024-25	32	50	53	45	49	47	41	19	336
2025-26	32	40	54	57	47	49	48	19	346
2026-27	32	48	43	57	59	46	49	20	354
2027-28	32	47	51	45	59	58	46	20	358
2028-29	32	45	50	54	47	58	58	20	364

Notes: ¹ Data were provided by the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the Linden Public Schools.

² Self-contained special education enrollment/ungraded students

³ Birth-to-kindergarten survival ratio based on birth data five years prior using the last three years of historical data with outlier survival ratio from 2021-22 removed

⁴ Outlier survival ratios from 2021-22 was not used in the computation of the average ratio.

⁵ Outlier survival ratio from 2020-21 was not used in the computation of the average ratio.

⁶ Average proportion of self-contained special education/ungraded students with respect to PK-5 subtotals based on the last two years of historical data

School #9

Historical enrollments for School #9 from 2014-15 to 2023-24, and projected enrollments from 2024-25 to 2028-29, are shown in Table 25. In general, enrollments have been declining over the last decade. In 2023-24, enrollment is 309, which is a decline of 52 students from the 2014-15 enrollment of 361. Enrollments are projected to slowly increase throughout the projection period. In 2028-29, enrollment is projected to be 338, which would be a gain of 29 students from the 2023-24 enrollment.

Table 25
Historical and Projected Enrollments of School #9

Year	PK	K	1	2	3	4	5	SE ²	Total
Historical¹									
2014-15	32	47	54	55	46	69	56	2	361
2015-16	29	59	47	53	56	44	70	1	359
2016-17	47	39	64	43	49	54	43	1	340
2017-18	48	51	47	54	44	48	51	1	344
2018-19	46	53	51	44	49	49	49	3	344
2019-20	37	52	48	51	46	49	48	2	333
2020-21	40	39	60	46	51	42	47	2	327
2021-22	43	43	40	53	46	50	39	1	315
2022-23	46	39	46	43	48	50	52	0	324
2023-24	44	38	46	52	42	38	49	0	309
CSR 5-Yr. Ratios		0.8669 ³	1.1072	1.0118	0.9706	0.9648 ⁴	0.9769	0.0031 ⁵	
Projected									
2024-25	44	42	42	47	50	41	37	1	304
2025-26	44	50	47	42	46	48	40	1	318
2026-27	44	47	55	48	41	44	47	1	327
2027-28	44	48	52	56	47	40	43	1	331
2028-29	44	49	53	53	54	45	39	1	338

Notes: ¹ Data were provided by the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the Linden Public Schools.

² Self-contained special education enrollment/ungraded students

³ Birth-to-kindergarten survival ratio based on birth data five years prior with outlier survival ratio from 2020-21 removed

⁴ Outlier survival ratio from 2020-21 was not used in the computation of the average ratio.

⁵ Average proportion of self-contained special education/ungraded students with respect to PK-5 subtotals

School #10

Historical enrollments for School #10 from 2014-15 to 2023-24, and projected enrollments from 2024-25 to 2028-29, are shown in Table 26. Enrollments were fairly stable through 2018-19 before slowly declining. However, enrollments reversed trend in the current year, gaining 28 students. In 2023-24, enrollment is 270, which is slightly lower (-10) than the 2014-15 enrollment of 280. Enrollments are projected to be fairly stable before declining near the end of the projection period. In 2028-29, enrollment is projected to be 247, which would be a decline of 23 students from the 2023-24 enrollment.

Table 26
Historical and Projected Enrollments of School #10

Year	PK	K	1	2	3	4	5	SE ²	Total
Historical¹									
2014-15	47	43	29	43	34	34	49	1	280
2015-16	45	41	42	29	44	35	38	0	274
2016-17	29	48	40	43	31	46	39	0	276
2017-18	33	30	47	33	41	33	44	0	261
2018-19	31	43	34	48	34	42	34	4	270
2019-20	26	28	35	37	47	35	42	8	258
2020-21	23	28	30	37	34	46	37	8	243
2021-22	26	30	29	27	35	34	41	12	234
2022-23	34	36	37	30	30	37	38	0	242
2023-24	43	41	34	38	31	30	40	13	270
CSR 5-Yr. Ratios		0.9047 ³	1.0136	1.0167	0.9772 ⁴	1.0296 ⁴	0.9947	0.0523 ⁵	
Projected									
2024-25	39	26	42	35	37	32	30	13	254
2025-26	39	29	26	43	34	38	32	13	254
2026-27	39	35	29	26	42	35	38	13	257
2027-28	39	31	35	29	25	43	35	12	249
2028-29	39	32	31	36	28	26	43	12	247

Notes: ¹ Data were provided by the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the Linden Public Schools.

² Self-contained special education enrollment/ungraded students

³ Birth-to-kindergarten survival ratio based on birth data five years prior

⁴ Outlier survival ratio from 2020-21 was not used in the computation of the average ratio.

⁵ Average proportion of self-contained special education/ungraded students with respect to PK-5 subtotals based on the last two years of historical data

Myles J. McManus Middle School

Historical enrollments for McManus from 2014-15 to 2023-24, and projected enrollments from 2024-25 to 2028-29, are shown in Table 27. McManus receives all children from School #8, #9, and #10, and some students from School #1, #2, and #4. Since 2015-16, enrollments have been fairly stable, ranging from 677-718. In 2023-24, enrollment is 686, which is higher (+73) than the 2014-15 enrollment of 613. Enrollments are projected to decline for the next three years before reversing trend. In 2028-29, enrollment is projected to be 666, which would be a decline of 20 students from the 2023-24 enrollment.

Table 27
Historical and Projected Enrollments of McManus Middle School

Year	6	7	8	SE ²	Total
Historical¹					
2014-15	193	216	174	30	613
2015-16	227	194	222	42	685
2016-17	243	235	178	41	697
2017-18	195	240	241	42	718
2018-19	220	196	244	27	687
2019-20	228	203	213	33	677
2020-21	216	237	207	33	693
2021-22	224	209	233	41	707
2022-23	221	242	223	0	686
2023-24	209	210	226	41	686
CSR 5-Yr. Ratios	0.4922 ³	0.9837	1.0266	0.0535 ⁴	
Projected					
2024-25	220	206	216	34	676
2025-26	192	217	212	33	654
2026-27	202	189	223	33	647
2027-28	225	199	194	33	651
2028-29	207	221	204	34	666

Notes: ¹ Data were provided by the New Jersey Department of Education

(<http://www.nj.gov/education/data/enr/>) and the Linden Public Schools.

² Self-contained special education enrollment/ungraded students

³ Average proportion of 6th grade students with respect to district totals

⁴ Average proportion of self-contained special education/ungraded students with respect to 6-8 subtotals

Joseph E. Soehl Middle School

Historical enrollments for Soehl from 2014-15 to 2023-24, and projected enrollments from 2024-25 to 2028-29, are shown in Table 28. Soehl receives all children from School #5 and #6, and some students from School #1, #2, and #4. Enrollments generally increased through 2019-20 before reversing trend. However, enrollments reversed trend again in the current year, gaining 73 students. Enrollment is 735 in 2023-24, which is a gain of 105 students from the 2014-15 enrollment of 630. Enrollments are projected to decline for the next three years before reversing trend. In 2028-29, enrollment is projected to be 672, which would be a decline of 63 students from the 2023-24 enrollment.

Table 28
Historical and Projected Enrollments of Soehl Middle School

Year	6	7	8	SE ²	Total
Historical¹					
2014-15	191	184	219	36	630
2015-16	177	188	177	30	572
2016-17	206	186	177	24	593
2017-18	222	210	185	25	642
2018-19	220	225	207	27	679
2019-20	235	219	229	28	711
2020-21	206	240	218	21	685
2021-22	229	198	235	17	679
2022-23	215	238	209	0	662
2023-24	243	227	248	17	735
CSR 5-Yr. Ratios	0.5078 ³	0.9979	0.9945	0.0327 ⁴	
Projected					
2024-25	226	242	226	23	717
2025-26	198	226	241	22	687
2026-27	207	198	225	21	651
2027-28	232	207	197	21	657
2028-29	213	232	206	21	672

Notes: ¹ Data were provided by the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the Linden Public Schools.

² Self-contained special education enrollment/ungraded students

³ Average proportion of 6th grade students with respect to district totals

⁴ Average proportion of self-contained special education/ungraded students with respect to 6-8 subtotals

Linden High School

Historical enrollments for Linden High School from 2014-15 to 2023-24, and projected enrollments from 2024-25 to 2028-29, are shown in Table 29. Enrollments declined through 2017-18 before reversing trend. Since then, enrollments have been generally increasing. In 2023-24, enrollment is 1,865.5, which is a gain of 118 students from the 2014-15 enrollment of 1,747.5. Enrollments are projected to be fairly stable for the next four years before declining near the end of the projection period. In 2028-29, enrollment is projected to be 1,769, which would be a decline of 96.5 students from the 2023-24 enrollment of 1,865.5.

Table 29
Historical and Projected Enrollments of Linden High School

Year	9	10	11	12	SE ²	Total
Historical¹						
2014-15	419	453	407	418.5	50	1,747.5
2015-16	386	422	443.5	393	42	1,686.5
2016-17	436	375	432	422	12	1,677
2017-18	354	452.5	376	406.5	27	1,616
2018-19	445	381	434	374	39.5	1,673.5
2019-20	444	428.5	413.5	416.5	25	1,727.5
2020-21	431	434	419.5	381.5	32.5	1,698.5
2021-22	422	429.5	409	411.5	47	1,719
2022-23	487	439.5	446	403	0	1,775.5
2023-24	435	493.5	439.5	437	60.5	1,865.5
CSR 5-Yr. Ratios	0.9993 ³	1.0033	0.9915	0.9691 ⁴	0.0308 ⁵	
Projected						
2024-25	475	436	490	426	56	1,883
2025-26	443	477	433	476	56	1,885
2026-27	453	444	473	420	55	1,845
2027-28	448	454	440	458	55	1,855
2028-29	391	449	450	426	53	1,769

Notes: ¹ Data were provided by the New Jersey Department of Education (<http://www.nj.gov/education/data/enr/>) and the Linden Public Schools.

² Self-contained special education enrollment/ungraded students

³ Grade 8-9 ratio is based on aggregated 8th grade enrollments of feeder middle schools.

⁴ Outlier survival ratio from 2020-21 was not used in the computation of the average ratio.

⁵ Average proportion of self-contained special education/ungraded students with respect to 9-12 subtotals based on the last two years of historical data

Capacity Analysis

Table 30 shows the educational capacities of the school buildings in the Linden Public Schools in comparison to both the current enrollments in 2023-24 and the enrollment projections in the 2028-29 school year. Using the building capacities from the district's LRFP, the differences between capacity and current/projected number of students were computed. Positive values indicate available extra seating while negative values indicate inadequate seating (also known as "unhoused students"). It should be noted that the capacity values are not fixed and can change from year-to-year based on classroom usage. For instance, additional special education classes in a building would reduce the building's capacity. On the other hand, districts with unhoused students can accommodate these children by increasing class sizes, which in turn increases the school's capacity. As such, the capacity of a school is not a fixed value and can be changed depending on how the building is used.

In 2023-24, there is surplus seating in five elementary schools, with the largest being at School #2 and School #8 (+63). On the other hand, there are shortages of seating in the remaining three elementary schools, with the largest being at School #5 (-61). At the middle school level, surplus seating exists at both McManus (+44) and Soehl (+37). At Linden High School, there is currently a shortage of 26.5 seats.

By 2028-29, at the elementary level, five elementary schools are projected to have surplus seating, with the largest being at School #2 (+109). The remaining three elementary schools are projected to have a shortage in seating, with the largest being at School #5 (-58). At the middle school level, both McManus (+64) and Soehl (+100) are projected to have a greater number of surplus seats due to a projected decline in enrollment. Finally, Linden High School is now projected to have surplus seating (+70) due to a decline in enrollment in the school.

Table 30
Capacity Analysis
Linden Public Schools

School	Capacity ^{1,2}	Current Enrollment 2023-24	Difference	Projected Enrollment 2028-29	Difference
School #1 (PK-5)	427	392	+35	349	+78
School #2 (PK-5)	700	637	+63	591	+109
School #4 (PK-5)	473	442	+31	459	+14
School #5 (PK-5)	278	339	-61	336	-58
School #6 (PK-5)	301	331	-30	290	+11
School #8 (PK-5)	391	328	+63	364	+27
School #9 (PK-5)	317	309	+8	338	-21
School #10 (PK-5)	222	270	-48	247	-25
McManus M.S. (6-8)	730	686	+44	666	+64
Soehl M.S. (6-8)	772	735	+37	672	+100
Linden H.S. (9-12)	1,839	1,865.5	-26.5	1,769	+70

Notes: ¹ District Practices capacity from the Linden Public Schools LRFP (2020)

² As the capacities were last calculated in 2020, the actual capacities of the buildings in 2022-23 may have changed if the buildings' instructional spaces are being used differently than when the capacities were computed.

Geocoding and Mapping

Student addresses from the school district were geocoded or “pin-mapped” for 2015-16 and 2022-23 for comparison purposes. Figures 30 and 31 show the residential locations of all students (PK-12) in 2015-16 and 2022-23, respectively, with respect to the elementary attendance areas and the municipal boundaries.

In order to show relative concentrations of where students live, student counts were aggregated by census block, which are small geographical areas derived from census tracts as created by the United States Census Bureau. Figures 32 and 33 show the number of students per census block in 2015-16 and 2022-23, respectively. Since all census blocks are not the same size, the greatest number of students are typically located in the largest census blocks. The greatest number of children per census block (colored magenta) in 2015-16 was located in the northern section of the city in the School #1, #6, and #9 elementary attendance areas. In 2022-23, using the same scale, the greatest number of students was located in the central, northern, and northwestern sections of the city in each of the elementary attendance areas, with the exception of School #5. In comparing the figures over time, there is a greater number of census blocks shaded magenta in 2022-23, indicating the number of students per census block has increased in Linden.

Figures 34 and 35 show the density of students in square miles by census block. In an effort to control for the different census block sizes, the number of students in each census block was divided by the block’s geographical area to determine the density of students (students per square mile). This was completed for both 2015-16 and 2022-23 using the same scale. In 2015-16, the greatest student densities, which are shaded dark green, were located in the central and northern sections of the city in the School #2, #4, #5, and #9 elementary attendance areas. In 2022-23, the greatest student densities were also located in the central and northern sections of the city in each of the elementary attendance areas, with the exception of School #9 and #10. In comparing the figures over time, there are more census blocks shaded dark green, indicating that the student densities have increased.

To see which sections of Linden have the most children per housing unit (student yield), the number of children per census block was divided by the number of housing units in each census block as shown in Figures 36 and 37. This was completed for both 2015-16 and 2022-23 using the same scale. In 2015-16, the greatest student yields, which are shaded dark purple, were located in the central, northern, and northwestern sections of the city in each of the elementary attendance areas. In 2022-23, the greatest student yields were also located in the central, northern, and northwestern sections of the city in each of the elementary attendance areas. In comparing the figures over time, there is a greater number of census blocks shaded purple or dark purple throughout the city, indicating that the number of students per housing unit has increased.

Figure 30
Linden Public Schools – PK-12 Students
2015-16

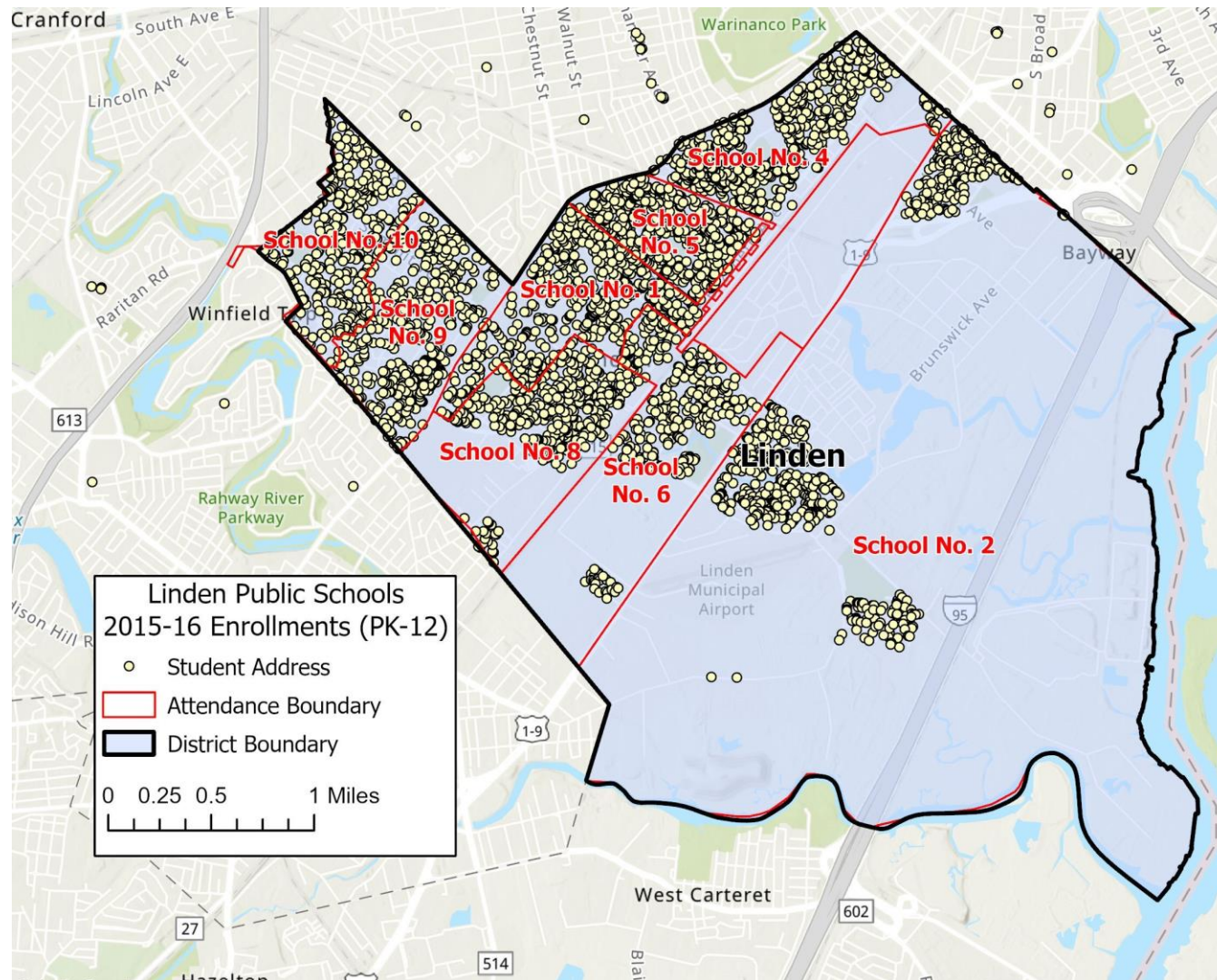


Figure 31
Linden Public Schools – PK-12 Students
2022-23

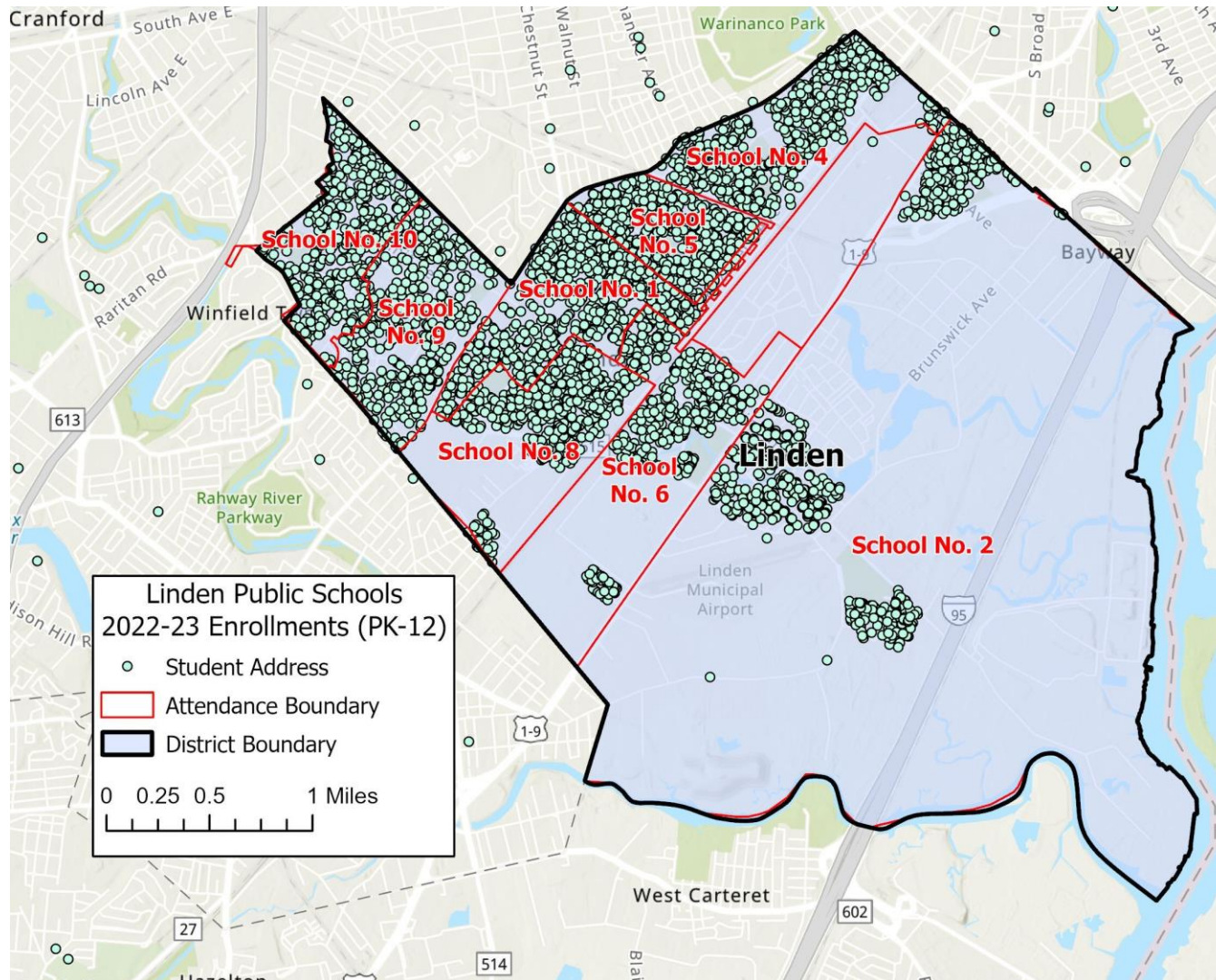


Figure 32
Linden Public Schools Enrollment (PK-12) by Census Block
2015-16

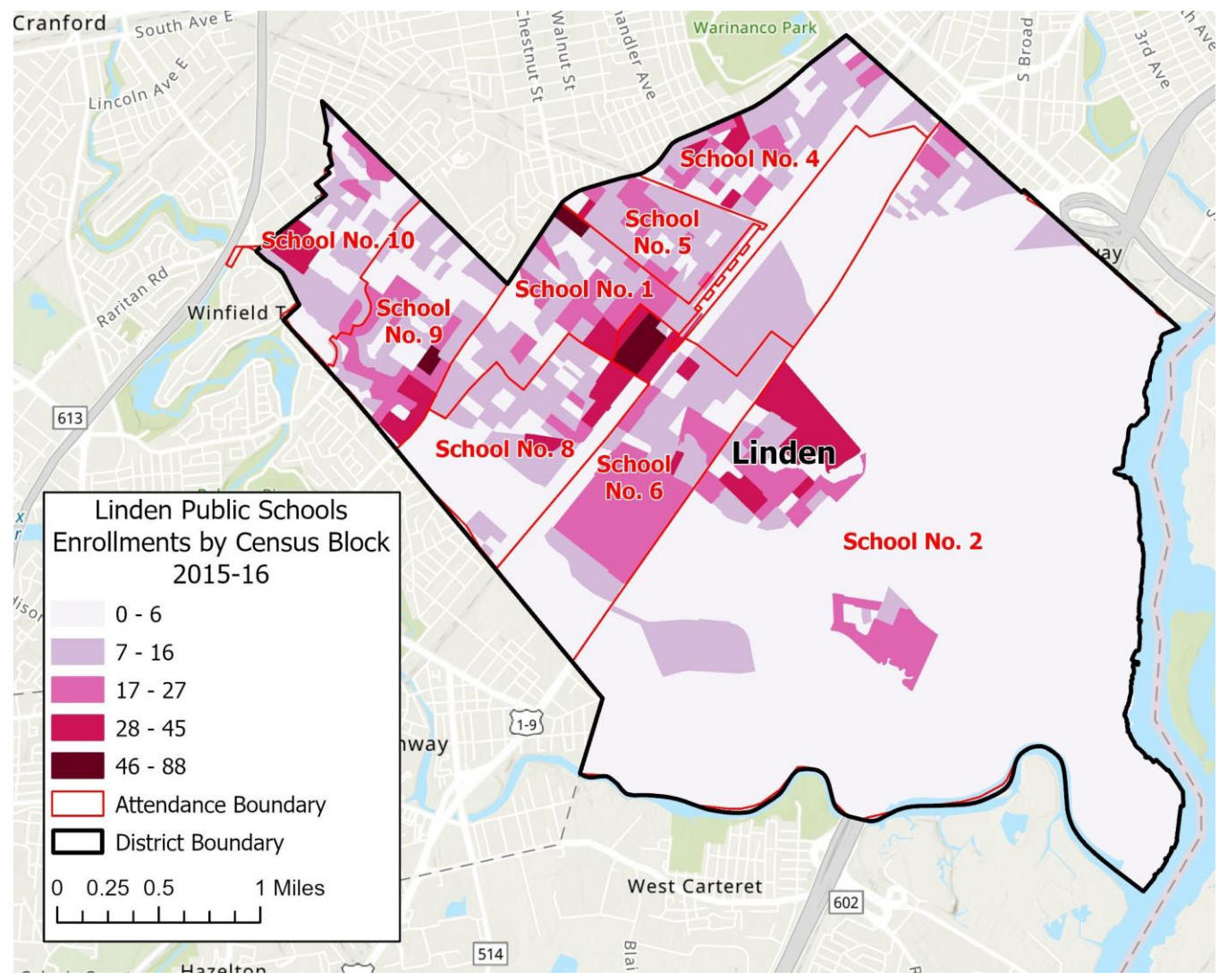


Figure 33
Linden Public Schools Enrollment (PK-12) by Census Block
2022-23

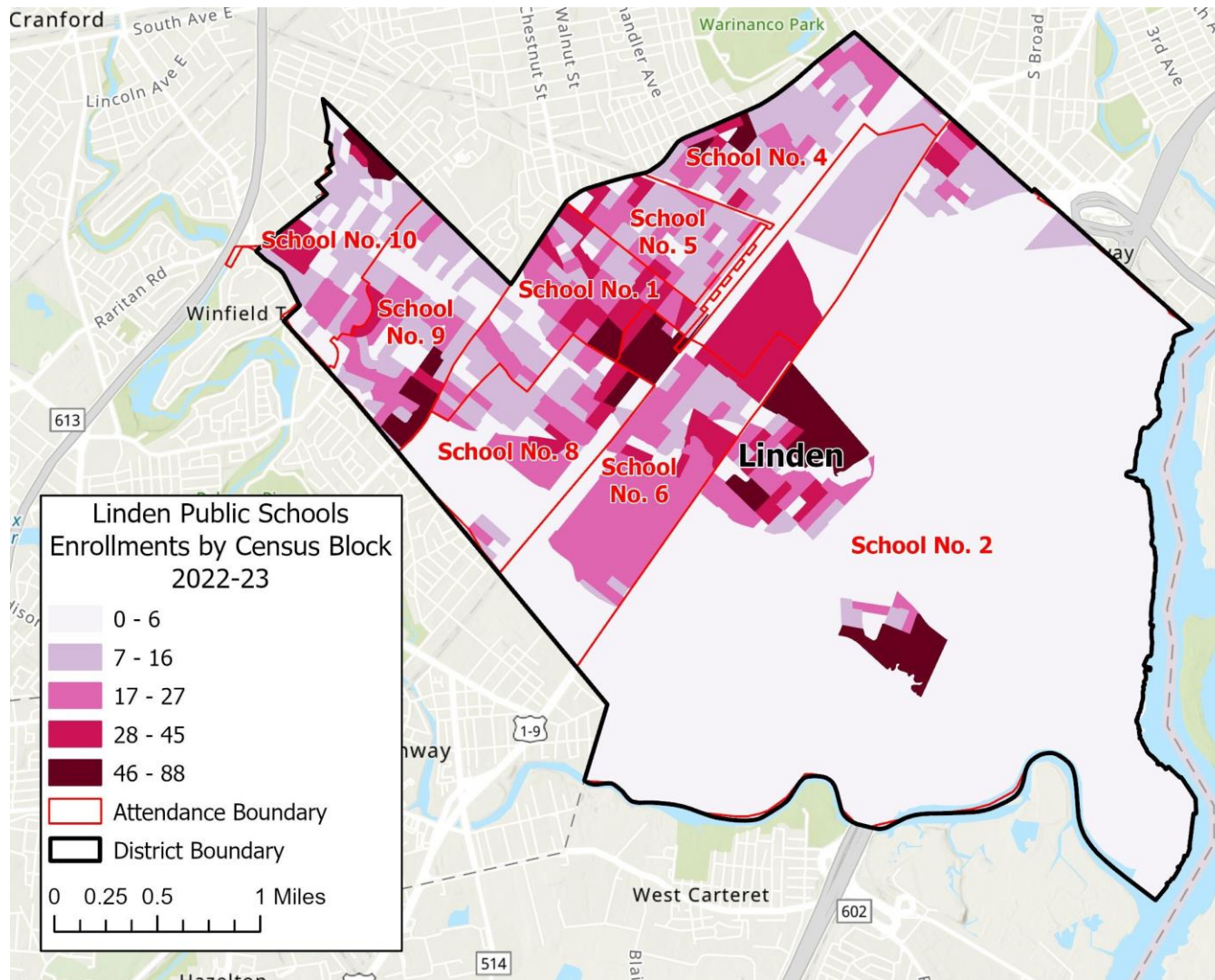


Figure 34
Linden Public Schools Student Density (PK-12) by Census Block
2015-16

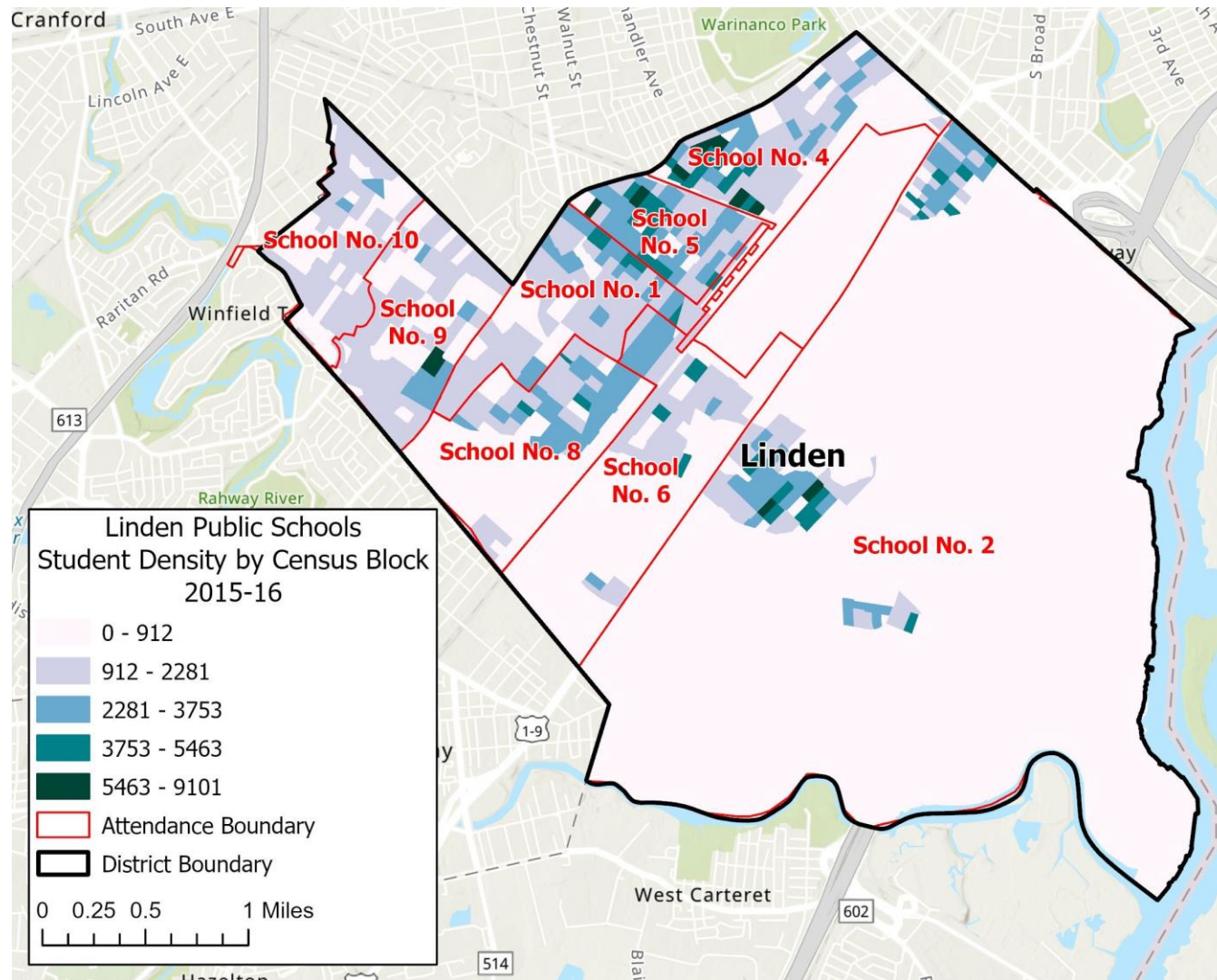


Figure 35
Linden Public Schools Student Density (PK-12) by Census Block
2022-23

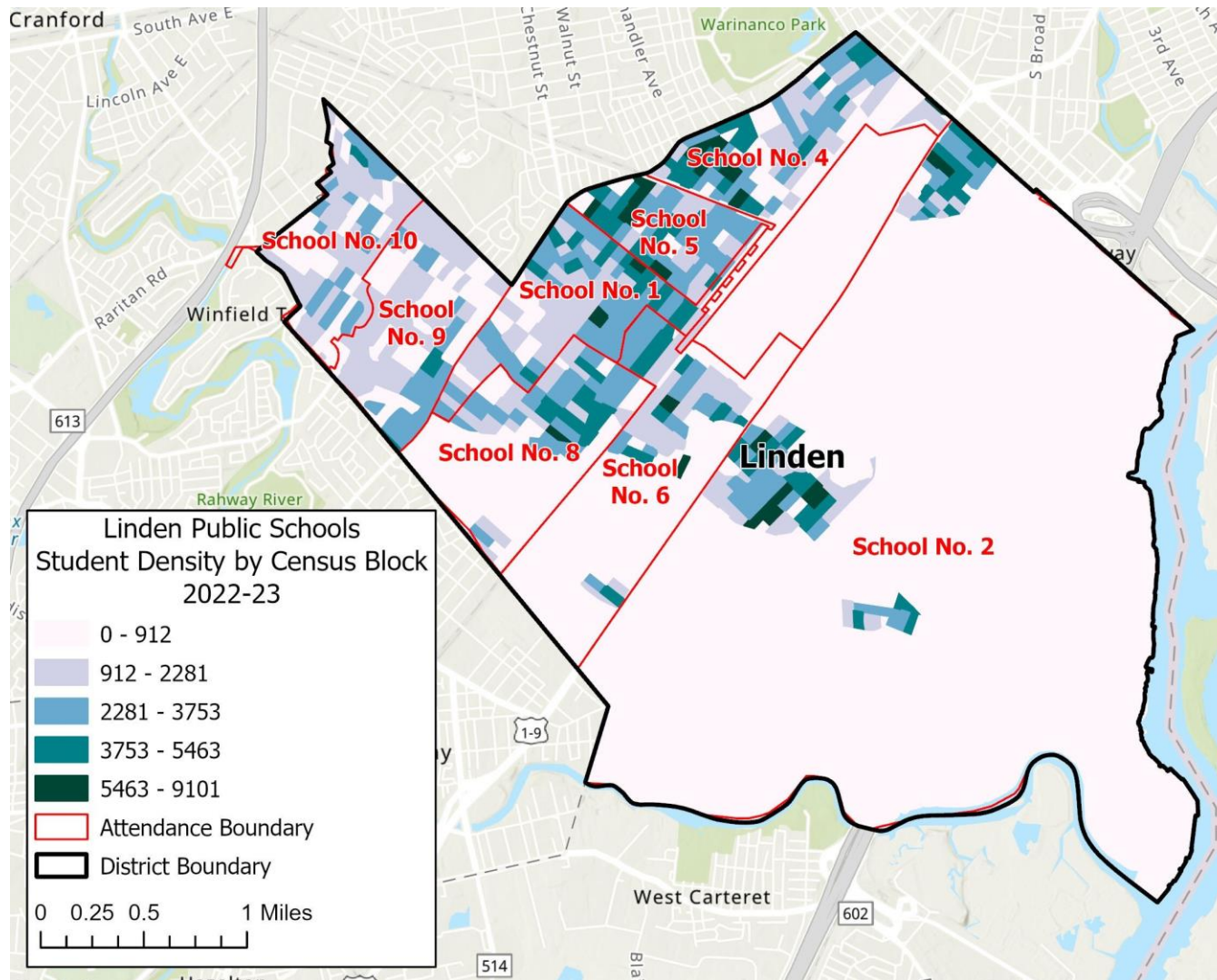


Figure 37
Linden Public Schools Student Yield (PK-12) by Census Block
2022-23

