

NEW ROCHELLE SCHOOL CAPACITY STUDY

FINAL REPORT

October 6th, 2015

WXY

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1/ Scope of Work Overview

Task 1/ Ten-Year Enrollment Projection

Task 2/ Demographic Analysis

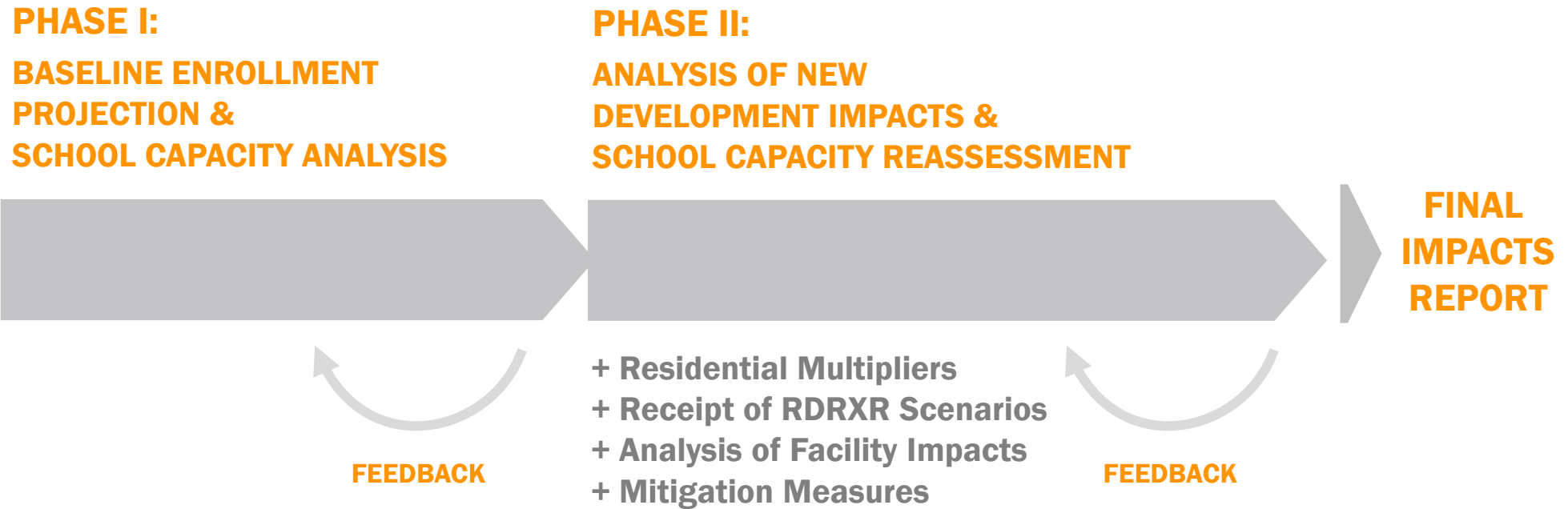
Task 3/ School Capacity Assessment

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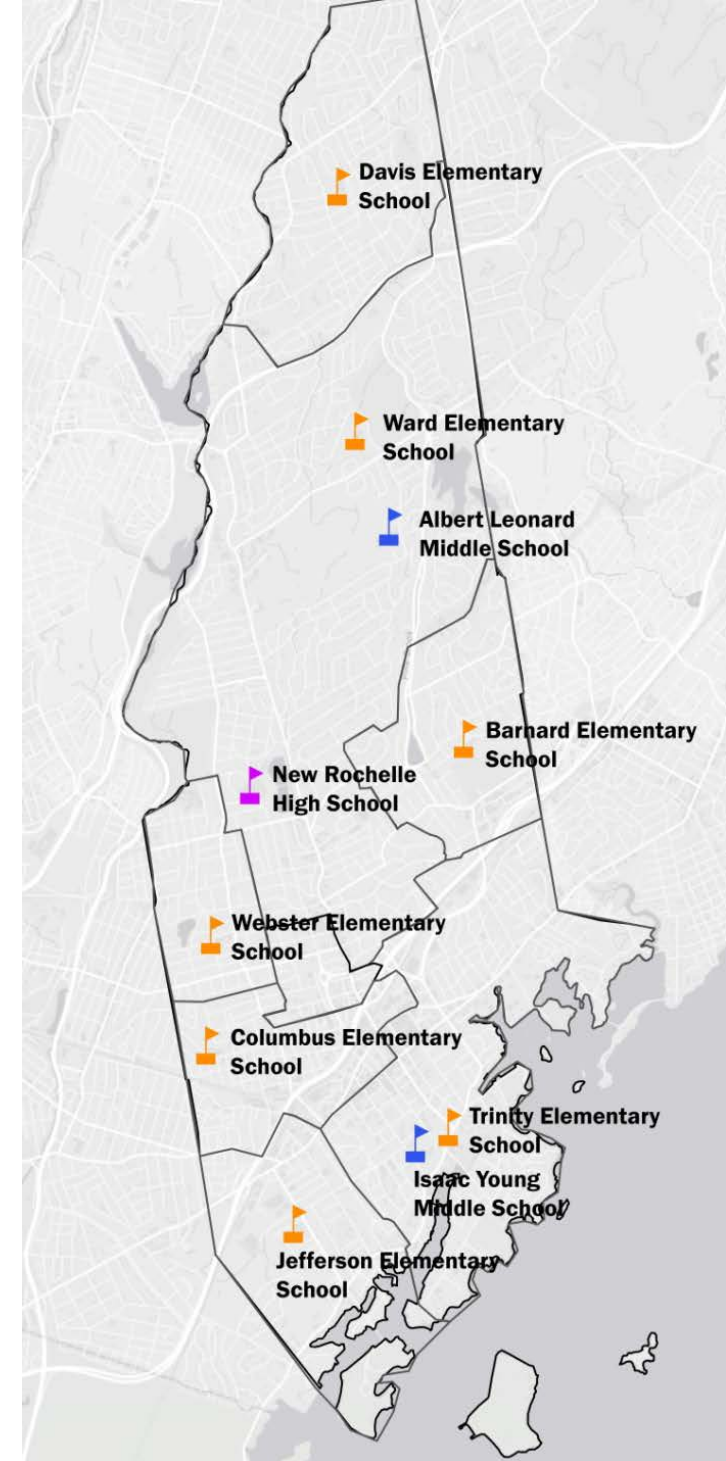
Scope of Work Overview (WXY Approach)



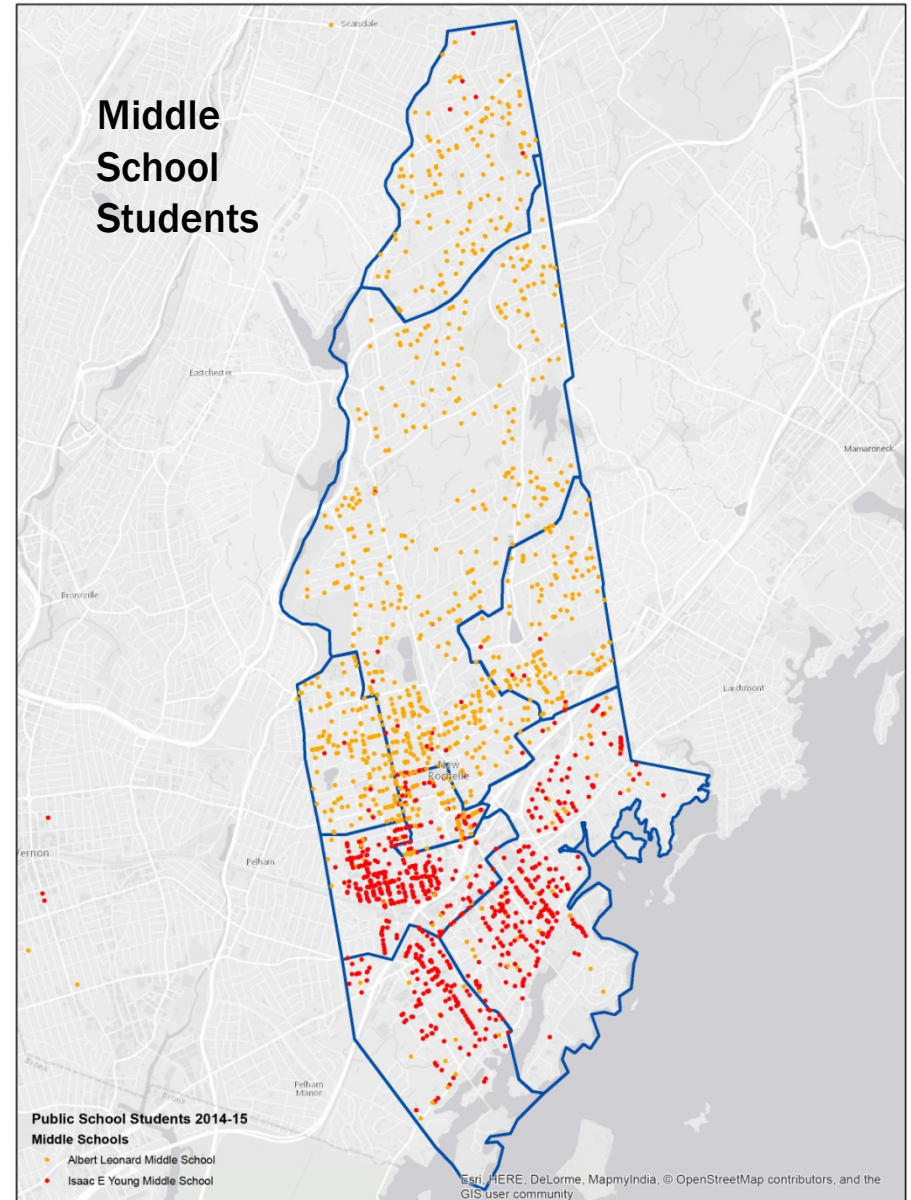
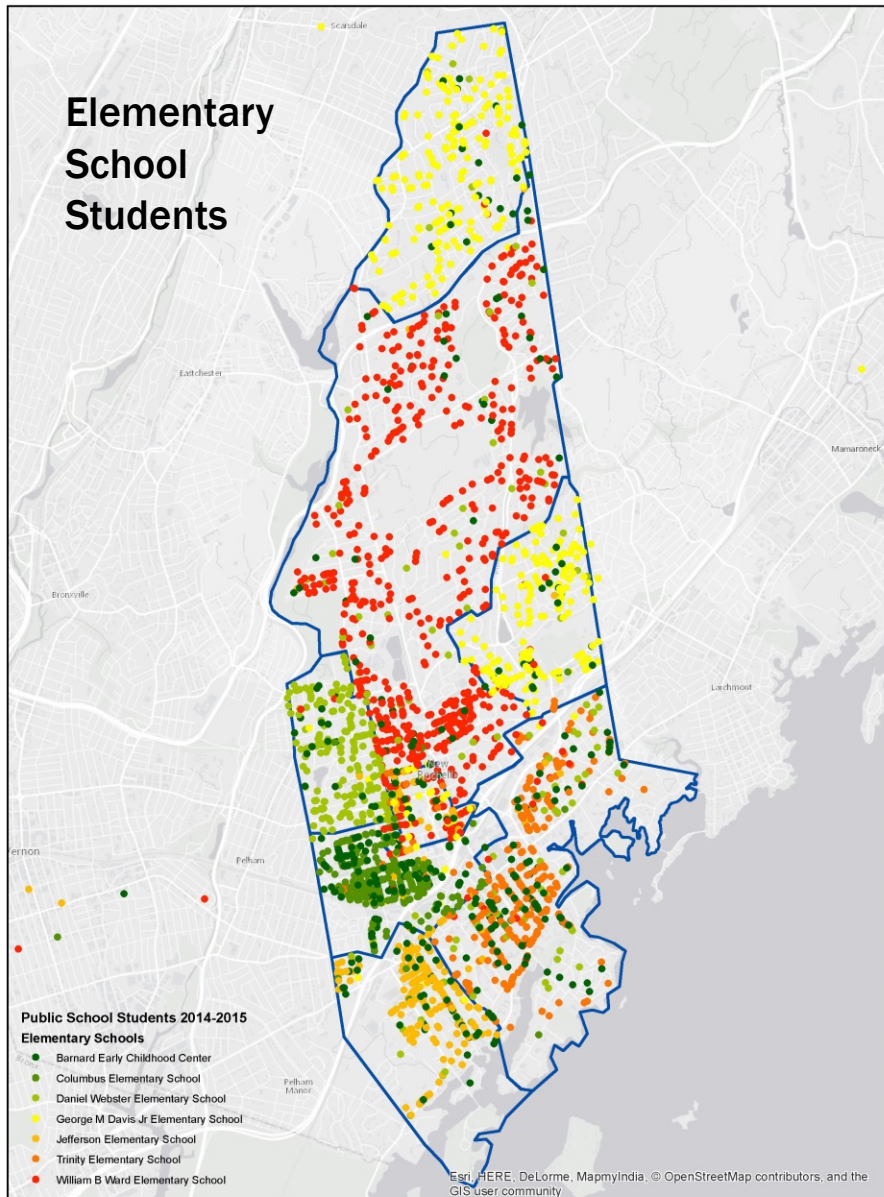
2/ Ten-Year Baseline Enrollment Projection

Enrollment Projection Methodology (Summary)

- Geocoded public school student data
- Excel-based 10 year enrollment projection model;
Carrying forward observed attrition and participation rates between 2010-2011 and 2014-2015, by school zone and grade
- Produced moderate, high and low baseline enrollment projections
- Final projection: “Natural Growth” + New Development (via multipliers)
- Assumes no change in patterns of enrollment



Geocoded Student Data



Inputs, Method & Outputs

- 2010-2014 student data geocoded to residence
- 2010 Census housing & population data by zone of residence
- Building permit activity 2010-2014
- K-8: Zone of residence grade progression model
- 9-12: Zone of residence grade/cohort progression model
- Moderate, high and low projections based upon variations in K household generation
- Produces a “First Tuesday in October” projection, by grade, by school, and by zone of residence
- Final projection = “natural growth moderate” + New Development (via multipliers)

Natural Growth Assumptions

- The district will not become more or less attractive than it is now
- The public school participation rate will not change
- School assignment polices and patterns will not change
- Patterns of progression by grade, by zone, will not change
- Low projection: Kindergarten generation for 2015 repeats the lowest recent generation rate for each zone
- High projection: Kindergarten generation for 2015 repeats the highest recent generation rate for each zone
- Moderate projection: Kindergarten generation is like recent past for each zone

Summary of Findings: Natural Growth 2015-2025

- There has been 3% elementary school growth in recent years (2010-2014); High school and middle schools grew, but at a slower rate (2% and 0.8%) in recent years
- Elementary school enrollment is projected to stabilize at 1% growth for the next 5 years and no growth for the period 2019-2024
- High school and middle school is projected to grow 3.6% and 7.0% over the next 5 years: growth is due to students already in the system
- The rate of growth slows for the period 2019-2024, but both middle school and high school will continue to grow

Summary of Findings: Natural Growth 2015-2025

	Total Public School Students Added		
	Base case, Existing Housing Units Only!		
	2014-2019 students added	2019-2024 students added	2014-2024 students added
Elementary	63	-23	40
Middle	87	77	164
High School	242	54	296
Total	392	108	500

Detailed Findings: Elementary School

Elementary Enrollment 2010, 2014, 2019, 2024							
Base case, Existing Housing Units Only!							
Zone of Residence	Actual 2010	Actual 2014	Projected 2019	Projected 2024	Pct Chg	Pct Chg	Pct Chg
	K-5	K-5	K-5	K-5	2010-14	2014-2019	2014-2024
Barnard	359	396	401	405	10.3%	1.3%	2.3%
Columbus	920	1032	1076	1070	12.2%	4.3%	3.7%
Davis	286	295	300	296	3.1%	1.7%	0.3%
Jefferson	480	502	495	495	4.6%	-1.4%	-1.4%
Lincoln	411	419	381	381	1.9%	-9.1%	-9.1%
Trinity	918	995	1011	1010	8.4%	1.6%	1.5%
Ward	998	912	953	944	-8.6%	4.5%	3.5%
Webster	368	358	355	348	-2.7%	-0.8%	-2.8%
None	39	15	15	15	-61.5%	0.0%	0.0%
Total	4779	4924	4987	4964	3.0%	1.3%	0.8%

Detailed Findings: Middle School

Middle School Enrollment 2010, 2014, 2019, 2024								
Base case, Existing Housing Units Only!								
Zone of Residence	Actual 2010	Actual 2014	Projected 2019	Projected 2024	Pct Chg	Pct Chg	Pct Chg	
	6-8	6-8	6-8	6-8	2010-14	2014-2019	2014-2024	
Barnard	181	194	225	218	7.2%	16.0%	12.4%	
Columbus	438	428	490	522	-2.3%	14.5%	22.0%	
Davis	130	149	135	147	14.6%	-9.4%	-1.3%	
Jefferson	223	222	247	261	-0.4%	11.3%	17.6%	
Lincoln	182	225	218	197	23.6%	-3.1%	-12.4%	
Trinity	470	463	556	544	-1.5%	20.1%	17.5%	
Ward	502	502	432	479	0.0%	-13.9%	-4.6%	
Webster	233	196	163	175	-15.9%	-16.8%	-10.7%	
None	11	9	9	9	-18.2%	0.0%	0.0%	
Total	2370	2388	2475	2552	0.8%	3.6%	6.9%	

Detailed Findings: High School

High School Enrollment 2010, 2014, 2019, 2024							
Base case, Existing Housing Units Only!							
Zone of Residence	Actual 2010	Actual 2014	Projected 2019	Projected 2024	Pct Chg	Pct Chg	Pct Chg
	9-12	9-12	9-12	9-12	2010-14	2014-2019	2014-2024
Barnard	264	220	263	296	-16.7%	19.5%	34.5%
Columbus	570	670	712	776	17.5%	6.3%	15.8%
Davis	173	177	202	196	2.3%	14.1%	10.7%
Jefferson	347	346	408	404	-0.3%	17.9%	16.8%
Lincoln	317	282	336	300	-11.0%	19.1%	6.4%
Trinity	708	754	800	881	6.5%	6.1%	16.8%
Ward	662	671	662	627	1.4%	-1.3%	-6.6%
Webster	312	296	275	232	-5.1%	-7.1%	-21.6%
None	15	18	18	18	20.0%	0.0%	0.0%
Total	3368	3434	3676	3730	2.0%	7.0%	8.6%

Please see Technical Documentation Appendix I for full enrollment projection methodology description and Excel model

3/ School Capacity Analysis (Natural Growth)

School Capacity Analysis Methodology (Summary)

- WXY staff conducted school facility site visits; Tabulated room sizes, seats and usage for general, ancillary, and differentiated classrooms;
- Received classroom planning/seat usage reports and max class size policy
- 10-year baseline enrollment projection fed into “tipping point” capacity model by school and by grade
- Identified schools with grade-level capacity issues: specific grades near or at capacity, or over capacity (i.e. reaching a “tipping point”)
- Investigated classroom utilization for those schools, assessing recent alterations and opportunities for future classroom optimization
- Further analysis of exterior expansion opportunities and site constraints for schools identified

New Rochelle School Site Visits & Classroom Tabulation

- **WXY staff visited each of New Rochelle's Public Schools over two days during Spring Break, measuring room sizes, recording uses, and noting discrepancies**
- **Matching WXY site surveys to 2007 floor plans revealed multiple previous alterations to classroom spaces**
- **Results were tabulated and compared against stated school policy and NYS Building Aid Unit standards**

Future Capacity “Tipping Point” Model

- Considers moderate, high and low student baseline enrollment projections. Conclusions based on moderate.
- Number of classes based on School District’s Classroom Count Projection.
- Looks at required number of classrooms with max class size of 25 for K-5 and 30 for 6-12.
- Only considers general classrooms—e.g. English, Math, Science, etc.—and not specialty classrooms: Music, Gym, Lab, etc.
- Does not consider individual room square footages.

2022-23		K	1st	2nd	3rd	4th	5th	Total
	Regular Education Total	168	176	179	185	179	188	1075
	Total Student Projection	170	180	186	192	186	190	1104
SAMPLE	Number of Classes	7	7	8	8	8	8	46
	Max class size	25	25	25	25	25	25	-
	Students of Differentiated Classes	2	4	7	7	7	2	29
	Differentiated Classes			1	1		1	3
	All Classrooms Created	7	7	9	9	8	9	49
	Seats Remaining	7	-1	21	15	21	12	75

New Rochelle Schools “Tipping Point” Criteria

CRITERIA 1: In any given year, 3 or more grades that are over capacity in 1 or more classes (based on the 25 or 30 max seat cap per class).

CRITERIA 2: In any given year, 1 or more grades that would be required to accommodate *more than 1 extra student above the 25 or 30 max seat cap* for every class in the grade. [For example, if there are 5 classes for 3rd grade in 2020, and this grade is (-6) over capacity, then a tipping point has been reached. If there are 5 classes, and the grade is (-5) over capacity, a tipping point has not been reached.]

“CAPACITY CONSTRAINTS”: Any demand *over the class max seat cap* that does not cause/reach a “tipping point.” It is assumed that these constraints can be managed within existing facilities.

Natural Growth: School Capacity Conclusions

Elementary Schools (25 seat max per classroom)

Davis and Trinity Elementary hit a “tipping point” in the natural growth projection scenario, each requiring 1 additional classroom beyond currently available configurations. Ward and Webster are at capacity, but do not reach a tipping point. Barnard, Jefferson and Columbus Elementary schools have some additional capacity.

Middle Schools (30 seat max per classroom)

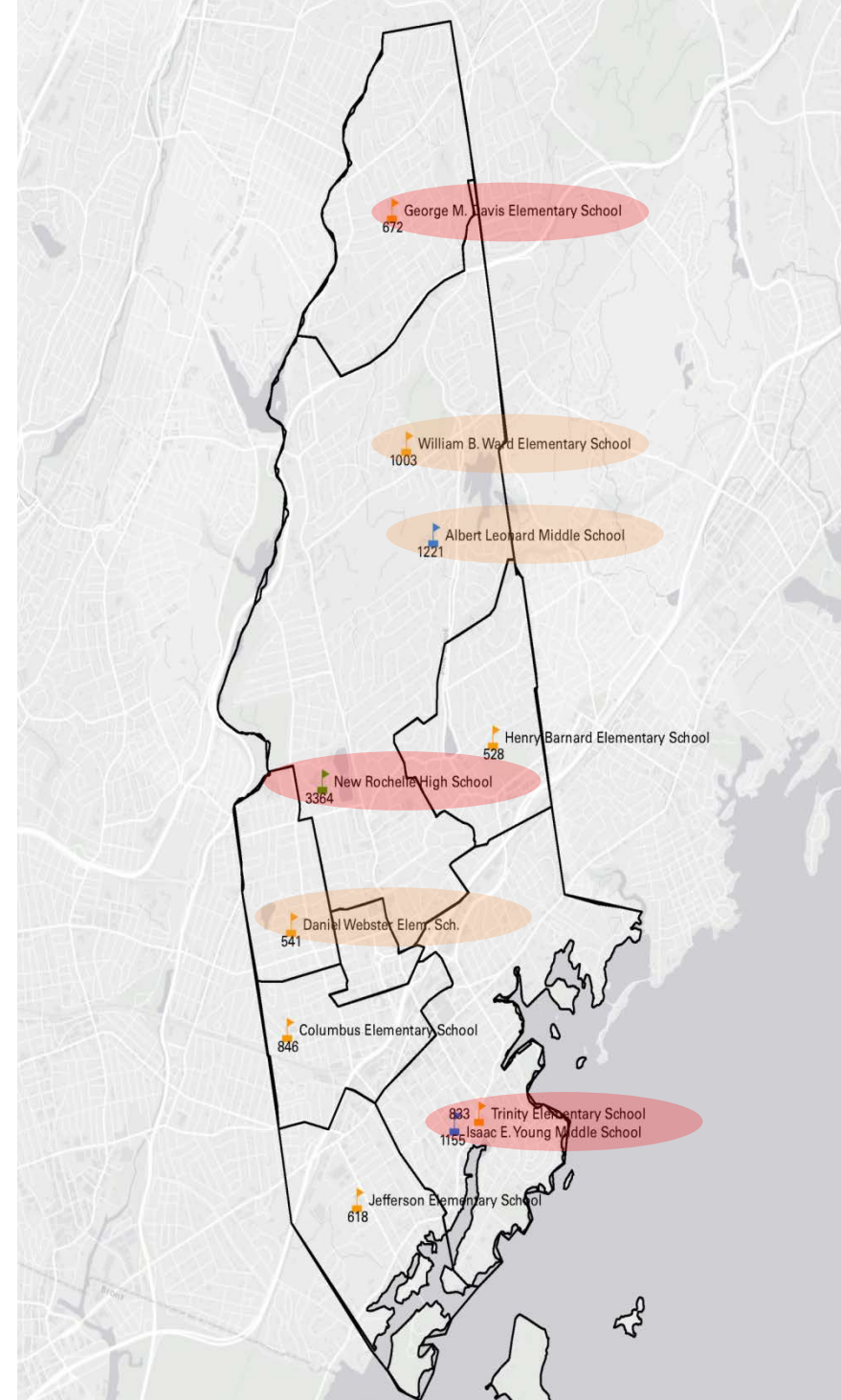
No tipping points are reached. Albert Leonard Middle School has capacity constraints in 2021, but future baseline enrollment can be managed in current school facilities.

High School (30 seat max per classroom)

New Rochelle High School reaches a tipping point in 2020, requiring 1-3 additional classrooms.

Natural Growth Summary

- **Davis Elementary, Trinity Elementary and the New Rochelle High School** will reach a tipping point within the next 10 years, before the impact of new development.
- Capacity constraints are seen at **Ward and Webster Elementary**, but a tipping point is not reached.
- Capacity constraints are seen at **Albert Leonard** beginning in 2021, but a tipping point is not reached. **Isaac Young** has additional capacity, though it may to accommodate additional SPED classrooms.
- Changes to districting policy could address capacity issues.



Please see the Technical Documentation Appendix III for the full School Capacity Excel Model, including tipping point analyses for each school, under the natural growth and new development scenarios.

See Technical Documentation Appendix I for the full enrollment projection model and methodology description.

4/ Residential Multipliers & RDRXR Scenarios

Final Residential Demographic Multipliers

New Rochelle Public School Student Generation Rates for Apartment (or multi-family) Buildings

Public School Students per 100 Occupied Housing Units by Unit Type
PUMS-Based; Buildings with 10+ units and incomes \$50K+ and/or rent \$1,200+;
Built since 2000

Suburban NYC (Westchester, Rockland, Nassau, Fairfield, Hudson and Bergen counties)

				<u>Public School</u>
	<u>K-5</u>	<u>Middle</u>	<u>HS</u>	<u>Student Total</u>
Studio	0.00	0.00	0.00	0.00
1BR	0.61	0.29	0.47	1.36
2BR	9.16	2.53	2.38	14.07
3BR	13.88	2.12	5.35	21.33

Overall Methodology

Census-Based Public Use Microdata Sample (PUMS) data was used to create multipliers that are carefully customized to the New Rochelle development context. Multipliers are customized to New Rochelle by using:

- Targeted PUMS query tailored to present day New Rochelle demographics and future downtown development product
- Latest 2010 PUMS data (Rutgers multipliers are based on 2000 PUMS)
- Query adjusted to match REAL public school student generation rates by apartment type, as observed in three New Rochelle developments:
 - La Rochelle (Rental units)
 - Halstead (Rental units)
 - Trump Plaza (Condo sales)

Overall Methodology

PUMS was queried to select households:

- In a multi-family unit in a building with 10 or more units
- In a building that has been built since the year 2000
- In suburban NYC (Westchester, Rockland, or Suffolk Counties, NY; Fairfield County, CT; or Hudson or Bergen Counties, NJ)
- Occupied by a household that earns more than \$50,000 a year, and/or pays rent of \$1,200 a month or more
- Then, calculate the number of children these household have, by age, and number of BRs and adjust for children that do not attend public school

PUMS rates compared to New Rochelle observed data

Actual public school students generated in New Rochelle by year:

		2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Halstead	40 Memorial Hwy	64	67	75	70	64
Trump Plaza	175 Huguenot	7	7	7	9	14
La Rochelle	255 Huguenot	39	38	37	37	43

Above converted into rates for these buildings:

New Rochelle Observed Public School Students per 100 Occupied Housing Units				
	<u>K-5</u>	<u>Middle</u>	<u>HS</u>	<u>Public School Student Total</u>
Studio	0.00	0.38	0.77	1.15
1BR	2.25	1.50	1.38	5.13
2BR	6.41	1.57	4.71	12.69
3BR	8.04	2.49	4.16	14.69

Actual public school student yields in New Rochelle

By sample building and school level

	Total Unit					2010-2011	Pre K	Elementary	Middle	High
	Count	Studio	1 BDR	2 BDR	3 BDR					
Halstead (Avalon c	588	90	208	162	128	64	4	27	16	17
Trump Plaza	194	0	66	102	26	7	3	1	1	2
La Rochelle (Avalo	412	0	206	181	25	39	0	12	11	13
	Total Unit Cour					2011-2012	Pre K	Elementary	Middle	High
	Count	Studio	1 BDR	2 BDR	3 BDR					
Halstead (Avalon c	588	90	208	162	128	67	2	26	16	23
Trump Plaza	194	0	66	102	26	7	0	5	0	2
La Rochelle (Avalo	412	0	206	181	25	38	2	20	6	10
	Total Unit Cour					2012-2013	Pre K	Elementary	Middle	High
	Count	Studio	1 BDR	2 BDR	3 BDR					
Halstead (Avalon c	588	90	208	162	128	75	9	19	15	32
Trump Plaza	194	0	66	102	26	7	2	3	0	2
La Rochelle (Avalo	412	0	206	181	25	37	6	12	10	9
	Total Unit Cour					2013-2014	Pre K	Elementary	Middle	High
	Count	Studio	1 BDR	2 BDR	3 BDR					
Halstead (Avalon c	588	90	208	162	128	70	8	25	8	29
Trump Plaza	194	0	66	102	26	9	3	5	0	1
La Rochelle (Avalo	412	0	206	181	25	37	5	15	8	9
	Total Unit Cour					2014-2015	Pre K	Elementary	Middle	High
	Count	Studio	1 BDR	2 BDR	3 BDR					
Halstead (Avalon c	588	90	208	162	128	64	0	31	7	26
Trump Plaza	194	0	66	102	26	14	4	7	1	2
La Rochelle (Avalo	412	0	206	181	25	43	1	23	6	13

PUMS vs. New Rochelle “Observed” Student Yields

Students generated PUMS				Students generated New Rochelle Observed (averaged)					
	K-5	Middle	HS	Units		K-5	Middle	HS	
Studio	0	0	0	140	Studio	0	1	1	
1BR	2	1	2	430	1BR	9	6	6	
2BR	35	10	9	411	2BR	25	6	18	
3BR	25	4	10	194	3BR	15	5	8	
Total	62	15	21	1175	Total	48	17	32	
Total Public School Students PUMS:				98	Total Public School Students Observed:				97

Final Residential Multipliers (PUMS) Compared to Rutgers NYS and New Rochelle “Observed” Data

Public School Age Students per 100 Occupied Housing Units by Unit Type					
	New Rochelle PUMS	New Rochelle “Observed”	Rutgers NY State (Rent)	Rutgers NY State (Own)	Rutgers TOD
<i>Public School Student Generation Rate</i>					
Studio	0	1.15	0	0	2
1BR	1.36	5.13	7.00	10.00	
2BR	14.07	12.69	16.00	5.00	
3BR	21.33	14.69	63.00	49.00	

Final Residential Demographic Multipliers (RECAP)

New Rochelle Public School Student Generation Rates for Apartment (or multi-family) Buildings

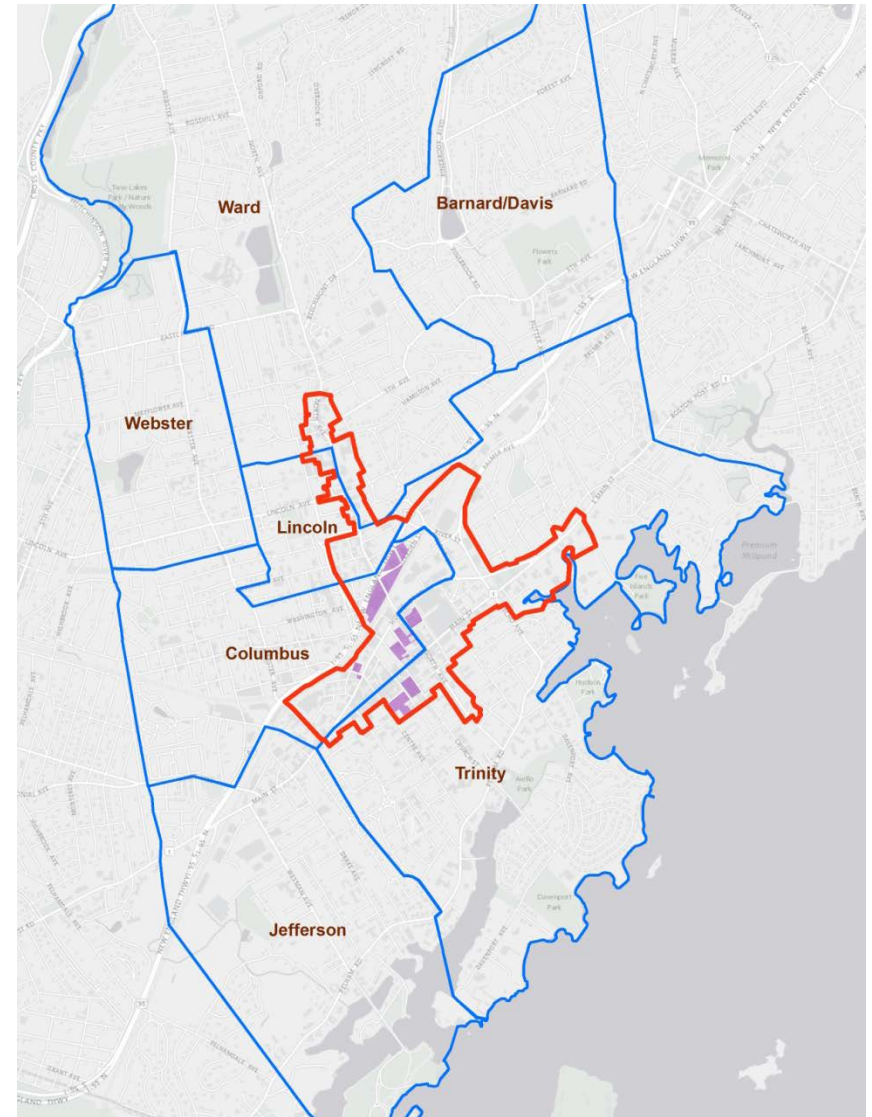
Public School Students per 100 Occupied Housing Units by Unit Type
PUMS-Based; Buildings with 10+ units and incomes \$50K+ and/or rent \$1,200+;
Built since 2000

Suburban NYC (Westchester, Rockland, Nassau, Fairfield, Hudson and Bergen counties)

				<u>Public School</u>
	<u>K-5</u>	<u>Middle</u>	<u>HS</u>	<u>Student Total</u>
Studio	0.00	0.00	0.00	0.00
1BR	0.61	0.29	0.47	1.36
2BR	9.16	2.53	2.38	14.07
3BR	13.88	2.12	5.35	21.33

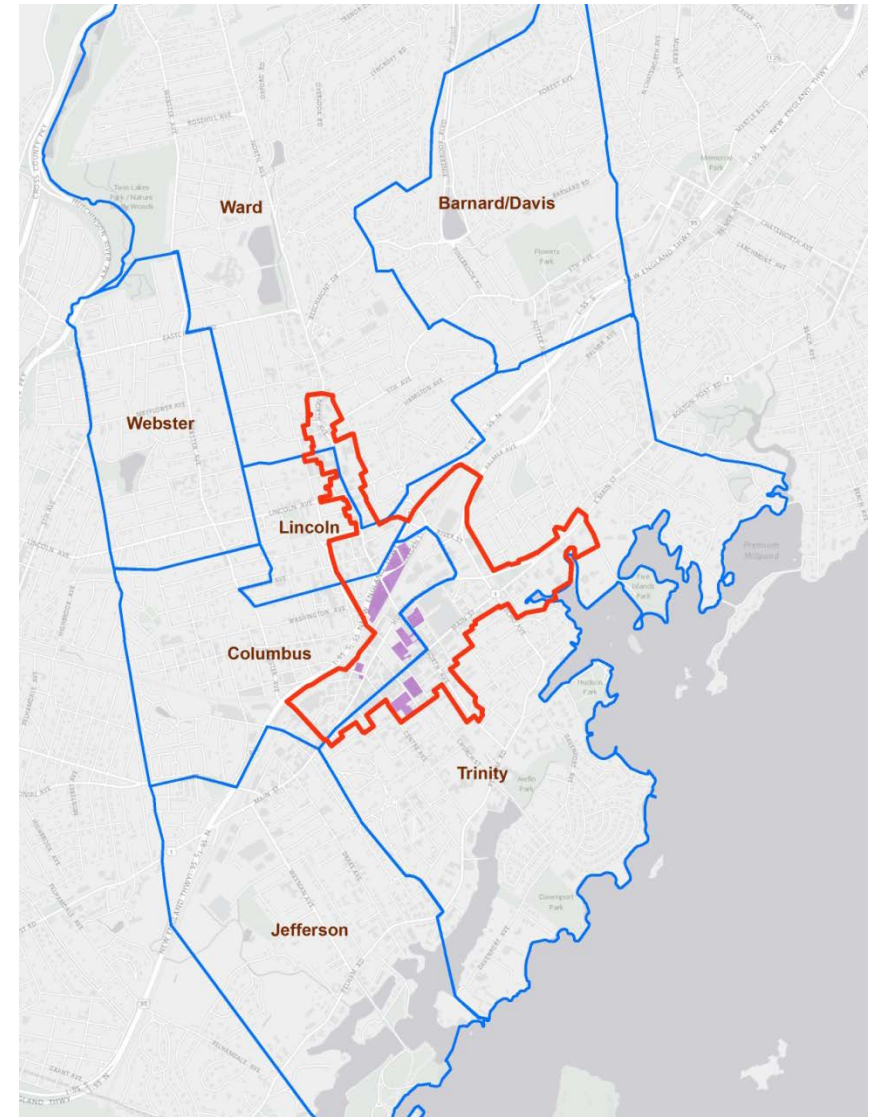
Implications of New Development

- The new downtown development zone will intersect the Trinity, Columbus, Ward and Lincoln school zones, with units concentrated in Trinity and Columbus.
- The impacts of the RDRXR scenario are broken down by school zone on slide 35.



Implications of New Development

- To estimate placement for new Lincoln zone elementary students, we used student choice patterns from the 2014-15 school year :
 - 28.9% attend Ward
 - 24.2% attend Davis
 - 22.4% attend Jefferson
 - 10.9% attend Trinity
 - 7.6% attend Barnard
 - 3.8% attend Columbus
 - 2.2% attend Webster



RDRXR Final Development Scenario

RDRXR Final Scenarios								
Total Units	5,500	5,500	0		Units per district			
Type	% of units	# of units	Multiplier	# Students	Lincoln	Ward	Columbus	Trinity
Studio	20%	1,120	0	0	80	40	650	350
1BD	50%	2,730	0	38	120	20	1,590	1,000
2BD	20%	1,080	0	152	60	30	640	350
3BD	10%	570	0	121	80	20	320	150
Totals				312	340	110	3,200	1,850

- The unit breakdown is classified so that a 1 bedroom apartment + den is considered a 2 bedroom, and a 2 bedroom + den is considered a 3 bedroom.
- Unit type breakdown is consistent across school zones
- New units are concentrated in the Columbus and Trinity zones

RDRXR Final Development Scenario

The final development scenario from RDRXR is reproduced on the next slide, with the New Rochelle PUMS-based multipliers applied and the resulting student generation numbers summarized by school zone. The final student generation numbers include a basic application of the multipliers to the unit breakdown (in black), as well as a +20% scenario (Reasonable Worst-Case Development Scenario), to account for potential variations in student generation.

The +20% student generation scenario (in yellow) is the basis of our detailed school facility impacts analysis. The four school zones included in this analysis (Lincoln, Ward, Columbus and Trinity) represent the four zones that will be affected by the downtown development rezoning district.

Projected Students from New Development

RDRXR Scenarios by School Zone (with +/- 20% scenarios)		New Rochelle PUMS-Based Multipliers				Students Generated by School Zone and Level (with +20% Reasonable Worst-Case Development Scenario)									
									+ 20%			-20%			
Unit Type	Lincoln	K-5	Middle	HS	Total	Lincoln	K-5	Middle	HS	K-5	Middle	HS	K-5	Middle	HS
<i>Studio</i>	80	0.00	0.00	0.00	0.00		0	0	0	0	0	0	0	0	0
<i>1 BD</i>	120	0.01	0.00	0.00	0.01		1	0	1	1	0	1	1	0	0
<i>2 BD</i>	60	0.09	0.03	0.02	0.14		5	2	1	7	2	2	4	1	1
<i>3 BD</i>	80	0.14	0.02	0.05	0.21	27	11	2	4	13	2	5	9	1	3
SUM	340					Total	17	4	6	21	4	8	14	3	5
Unit Type	Ward	K-5	Middle	HS	Total	Ward	K-5	Middle	HS	K-5	Middle	HS	K-5	Middle	HS
<i>Studio</i>	40	0.00	0.00	0.00	0.00		0	0	0	0	0	0	0	0	0
<i>1 BD</i>	20	0.01	0.00	0.00	0.01		0	0	0	0	0	0	0	0	0
<i>2 BD</i>	30	0.09	0.03	0.02	0.14		3	1	1	3	1	1	2	1	1
<i>3 BD</i>	20	0.14	0.02	0.05	0.21	9	3	0	1	3	1	1	2	0	1
SUM	110					Total	6	1	2	7	1	2	5	1	2
Unit Type	Columbus	K-5	Middle	HS	Total	Columbus	K-5	Middle	HS	K-5	Middle	HS	K-5	Middle	HS
<i>Studio</i>	650	0.00	0.00	0.00	0.00		0	0	0	0	0	0	0	0	0
<i>1 BD</i>	1590	0.01	0.00	0.00	0.01		10	5	7	12	6	9	8	4	6
<i>2 BD</i>	640	0.09	0.03	0.02	0.14		59	16	15	70	19	18	47	13	12
<i>3 BD</i>	320	0.14	0.02	0.05	0.21	180	44	7	17	53	8	21	36	5	14
SUM	3200					Total	113	28	40	135	33	48	90	22	32
Unit Type	Trinity	K-5	Middle	HS	Total	Trinity	K-5	Middle	HS	K-5	Middle	HS	K-5	Middle	HS
<i>Studio</i>	350	0.00	0.00	0.00	0.00		0	0	0	0	0	0	0	0	0
<i>1 BD</i>	1000	0.01	0.00	0.00	0.01		6	3	5	7	3	6	5	2	4
<i>2 BD</i>	350	0.09	0.03	0.02	0.14		32	9	8	38	11	10	26	7	7
<i>3 BD</i>	150	0.14	0.02	0.05	0.21	95	21	3	8	25	4	10	17	3	6
SUM	1850					Total	59	15	21	71	18	25	47	12	17

5/ School Facility Analysis (After New Development)

New Development Impacts Analysis

The following analysis was conducted by applying New Rochelle's residential multipliers to the total units projected in RXRDR's development scenario, broken down by school zone geography and segmented by elementary, middle and high school student multipliers.

At this time, the phasing strategy for new development is not known. The impact to school facilities is therefore based on an assumption that all units in the RDRXR development scenario will come online by the last year of our ten-year baseline enrollment projection, 2025. This calculation produces a reasonable worst case scenario for public school system impacts, although the timeline of impacts is likely condensed.

New students projected from new development (elementary, middle and high school) are added to the school capacity model that corresponds to their projected zone of residence, in order to analyze individual school capacities in concert with the grade-level natural growth enrollment projections for 2025.

New Development / Public School Facility Impacts (Summary)

Our analysis shows that future public elementary school enrollment growth can be absorbed at Columbus and Ward, as well as the Lincoln zone feeder elementary schools. However, Trinity Elementary will face significant capacity issues, compounded by new development.

Public middle school enrollment growth can be absorbed at both Albert Leonard and Isaac Young. Albert Leonard will experience capacity constraints in the next decade, but these constraints are attributed to natural growth.

The New Rochelle High School will face significant capacity issues in the next decade, compounded by new development. The six schools in this analysis represent those schools with students assigned from the four school zones that will be affected by the downtown rezoning area (Lincoln, Ward, Columbus and Trinity).

NOTE: ANALYSIS ONLY INCLUDES SCHOOLS/ZONES DIRECTLY AFFECTED BY THE REZONING

New Development / Public School Facility Impacts

TRINITY ELEMENTARY

- Our capacity model shows that Trinity will receive 59-71 additional students with new Trinity zone development, and 3-4 students from Lincoln zone development.
- Trinity will be 49 seats (3 classrooms) over capacity total, with approximately 66% attributable to new development.
- Approximately 1 new classroom is needed with natural growth, 2 additional classrooms are needed with new development (3 total).
- Mitigation measures include: Expansion at Trinity; New school construction; Targeted redistricting to redistribute seats between Trinity and the adjacent elementary school zones.

NOTE: ANALYSIS ONLY INCLUDES SCHOOLS DIRECTLY AFFECTED BY THE REZONING

New Development / Public School Facility Impacts

COLUMBUS ELEMENTARY

- Columbus Elementary will receive 113-135 additional students with new development, and 1-2 students from Lincoln zone development.
- Columbus Elementary does not reach a tipping point before 2025, but the classrooms will be filled to capacity after new development.

NOTE: ANALYSIS ONLY INCLUDES SCHOOLS DIRECTLY AFFECTED BY THE REZONING

New Development / Public School Facility Impacts

WARD ELEMENTARY

- Ward Elementary will receive 6-7 additional students with new development, and 5 students from Lincoln zone development.
- Ward does not reach a tipping point before 2025, but classrooms will be near capacity after new development and natural enrollment growth.

NOTE: ANALYSIS ONLY INCLUDES SCHOOLS DIRECTLY AFFECTED BY THE REZONING

New Development / Public School Facility Impacts

ALBERT LEONARD MIDDLE SCHOOL

- Albert Leonard will receive 1-2 additional students with new development.
- The baseline (natural growth) projection shows that Albert Leonard will reach its outer capacity by 2025. However, future capacity issues are not triggered by new development.

NOTE: ANALYSIS ONLY INCLUDES SCHOOLS DIRECTLY AFFECTED BY THE REZONING

New Development / Public School Facility Impacts

ISAAC YOUNG MIDDLE SCHOOL

- Isaac Young will receive 45-53 additional students with new development.
- Even with new development and natural enrollment growth, Isaac Young has significant remaining capacity in 2025.

NOTE: ANALYSIS ONLY INCLUDES SCHOOLS DIRECTLY AFFECTED BY THE REZONING

New Development / Public School Facility Impacts

NEW ROCHELLE HIGH SCHOOL

- New Rochelle High School will receive 69-83 new students with new development.
- New Rochelle High School will be 163 seats (4-5 classrooms) over capacity total, with approximately 50% attributable to new development.
- Mitigation measures include: Expansion at New Rochelle High School; New high school construction.

NOTE: ANALYSIS ONLY INCLUDES SCHOOLS DIRECTLY AFFECTED BY THE REZONING

Four Responses to School Capacity Issues

Capacity issues at Trinity and New Rochelle High School can be addressed with different capital investment strategies, and/or changes to the current school districting policy.

Four primary mitigation options (summary):

- 1) *Reconfigure*** existing classroom space
- 2) *Expand*** existing facilities
- 3) *Construct*** new school
- 4) *Change*** assignment policy

Please see the Technical Documentation Appendix III for the full School Capacity Excel Model, including tipping point analyses for each school, for both the natural growth and new development scenarios.

6/ Mitigation Measures & Cost Assessment

Mitigation Measures

- One mitigation option is needed to address capacity issues at Trinity Elementary, and a second option is needed to address capacity issues at New Rochelle High School.
- A Plan-Based Method or an Incremental Expansion Method can be used to assess future mitigation fee costs.
- Existing schools may require expansions to accommodate evolving pedagogical goals (computer labs, additional play space, etc.), to be funded by the School District separately.
- Changes to the elementary school assignment policy could effectively address all future capacity issues at Trinity Elementary, although concrete policy recommendations are outside the scope of this study.

School Facility Impacts (RECAP)

Trinity Elementary

- Our capacity model shows that Trinity will receive **59-71** additional students with new Trinity zone development, and **3-4** students from Lincoln zone development.
- Trinity will be **49 seats (3 classrooms)** over capacity total, with approximately **66%** attributable to new development.
- Approximately **1** new classroom is needed with natural growth, **2** additional classrooms are needed with new development (**3 total**).
- Mitigation measures include: Expansion at Trinity; New school construction; Targeted redistricting to redistribute seats between Trinity and the adjacent elementary school zones.

School Facility Impacts (RECAP)

New Rochelle High School

- New Rochelle High School will receive 69-83 new students with new development.
- New Rochelle High School will be 163 seats (4-5 classrooms) over capacity total, with approximately 50% attributable to new development.
- Mitigation measures include: Expansion at New Rochelle High School; New high school construction.

School-Specific Mitigation Options

1. Trinity Elementary

- **Option 1A:** Existing School Expansion
- **Option 1B:** New Elementary School Construction
- **Option 1C:** Targeted re-districting for Trinity zone

2. New Rochelle High School

- **Option 2A:** Existing School Expansion
- **Option 2B:** New High School Construction

Mitigation Cost Assessment Methods

Plan-Based Method (PBM)

- Commonly used for public facilities that have adopted plans or engineering studies to guide capital improvements.
- Total cost of new facility space is divided by the total number of students the facility space can serve to calculate *a cost per unit of demand*, multiplied by the amount of demand (students generated) per apartment unit.
- Performs best within a 3-5 year planning horizon
- May generate greater mitigation fees than Incremental Expansion Method.

Incremental Expansion Method (IEM)

- Most commonly used for school capital improvements because it provides the greatest flexibility for planning and implementation, especially when future demand is uncertain or when development horizons will exceed 5 years.
- Not dependent on “Tipping Point” analysis.
- A “per student” cost is established for each type of school, facility based on the School District’s current “Level of Service” (LOS). Typical metrics for LOS include acreage per student or square footage per student, and are based on district averages. The District’s unique LOS cost per student is multiplied by the amount of demand (students generated) per apartment unit.

1. TRINITY ELEMENTARY: Mitigation Options

Option 1A: Expansion at Trinity – PBM or IEM

WXY's research and analysis suggests that further expansion of Trinity Elementary will be challenging due to site conditions and the limited space to meet parking and open space requirements. Despite these challenges, potential expansion opportunities do exist. The cost of expansion of two classrooms would be fully borne by the new development, due to the tipping point that is reached in this scenario. Any additional classroom space costs would be borne by the school district.

1. TRINITY ELEMENTARY: Mitigation Options

Option 1B: New Elementary School – PBM or IEM

In the Plan-Based Method, the new development cost will be based on a per capita cost for the projected number of "new development" Trinity students (73 students), with the School District responsible for the remaining per capita costs based on the total number of seats in new school. In the Incremental Expansion Method, new development cost will also be based on a per capita cost for the projected number of "new development" Trinity students, based on the district average "Level of Service" (LOS).

1. TRINITY ELEMENTARY: Mitigation Options

Option 1B: New Elementary School – PBM or IEM

1B.i) Alternate Building Renovation

Depending on School District preference for school capacities and differing upgrade requirements, other buildings in the study area may be renovated for use as a new school.

1B.ii) New Construction on Alternate Site

As above, depending on School District preference for school capacities and differing upgrade requirements, other site may be examined for the construction of a new school.

1. TRINITY ELEMENTARY: Mitigation Options

Option 1C: Redistricting School Zones – IEM

The elementary school attendance zones in New Rochelle have been in place since the 1960s and were a part of a court ordered desegregation plan that allowed students in the Lincoln district to attend the school of their choice. Other communities, like Boston which also had 1960-70s era court-ordered school assignment plans, have been allowed to redistrict their communities to reflect the realities of changing enrollment patterns. Redefining elementary school zones could allow increased elementary school enrollment to be accommodated within the District's existing facilities, or at least delay the need for expansion for a number of years. Redistricting could be targeted, focusing on two or more elementary school zones, or it could be done district-wide.

1. TRINITY ELEMENTARY: Mitigation Options

Option 1C: Redistricting School Zones – IEM

1C.i) Focused Redistricting: Trinity and Adjacent Elementary School Zones

School capacity modeling suggests that Jefferson Elementary may be able to accommodate all of the students generated by new development that would be assigned to Trinity. Assigning those new students to Jefferson would require a change in the Trinity/Jefferson school district boundaries, but would relieve capacity problems at Trinity.

1C.ii) System-Wide Assignment Policy Change

Rather than a targeted policy change, a system-wide change to assignment policy would allow for a better match between school capacity and demand.

2. NEW ROCHELLE HIGH SCHOOL: Mitigation Options

Option 2A: Expansion at NRHS – PBM or IEM

The High School has undergone several expansions over the years, and our inspection suggests that there are no easy opportunities for further expansion. Additionally, the school is already very large, and an increased size may bring both operational difficulties and community opposition. If an expansion opportunity was identified and accepted, 50% of the cost would be borne by the new development in the Plan-Based Method. In the Incremental Expansion Method, new development cost will be based on a per capita cost for the projected number of "new development" high school students (83 students), based on the district average "Level of Service" (LOS).

2. NEW ROCHELLE HIGH SCHOOL: Mitigation Options

Option 2B: New High School– PBM or IEM

In the Plan-Based Method, the new development cost will be based on a per capita cost for the projected number of "new development" high school students (83 students), with the School District responsible for the remaining per capita costs based on the total number of seats in new school. In the Incremental Expansion Method, new development cost will also be based on a per capita cost for the projected number of "new development" high school students (83 students), based on the district average "Level of Service" (LOS).

2. NEW ROCHELLE HIGH SCHOOL: Mitigation Options

Option 2B: New High School Construction Considerations

It may be a challenge to integrate a new High School into the existing school system given the existing school's size and the question of who would get to attend the new school. A new school with a different programmatic or other thematic focus is a more likely option. A K-12 specialty school may serve as a mitigation for Trinity as well.

However, a new development mitigation fee or exaction cannot be used for specialty programming, and must be for level-of-service equivalent to the status quo. An existing building in the study area (to be acquired through lease or sale) may be a good option for such a school. However, given the diverse requirements for high school facilities, new construction may be a better and ultimately more cost-effective alternative.

Additional Information Required for Assessment

Plan-Based Method (PBM)

- Site and structural survey
- Expansion or new school construction cost estimate from School District and approved by School Board
- If school has a specialization that requires enhanced facility requirements (e.g. technology labs for STEM), new development would only be responsible for the equivalent "standard" school expansion or new build costs

Incremental Expansion Method (IEM)

- Average construction costs for public elementary, middle and high school facilities in New Rochelle (district averages)
- Total square footage per student and classroom square footage per student for each school level, calculated from facility floor plans and enrollment numbers, or provided by School District
- If school has a specialization that requires enhanced facility requirements (e.g. technology labs for STEM), new development would only be responsible for the equivalent "standard" classrooms based on past district averages

Mitigation Cost Assessment

- Any fee assessment will require additional information from the School District and School Board, including either a cost estimate for the construction of a new school facility or school expansion, or school construction costs per square foot for a typical elementary, middle and high school in New Rochelle.
- WXY recommends the Incremental Expansion Method approach, so as to minimize risks to the School District if demand does not meet expectations, and in case plans for a new public facility are not confirmed within the next 3-5 years. In this case, the mitigation fees collected can be disbursed at the School District's discretion for any required capital improvements.