3. MITIGATION

INTRODUCTION

The technical analyses presented in Chapter 2 of this environmental impact statement (EIS) describe the potential for significant adverse environmental impacts to result from the Proposed Action. Significant adverse impacts were identified with regard to community facilities and services (related exclusively to elementary schools), open space, historic and cultural resources (related exclusively to archaeological resources), transportation (related exclusively to traffic), and construction (related to construction era traffic) and a potential for a significant adverse impact was identified with respect to construction era noise. This chapter discusses measures that would be implemented to minimize or eliminate the identified and potential impacts.

The measures discussed below would fully mitigate the significant adverse impacts to elementary schools, traffic, and construction period traffic, but they would not completely mitigate all of the impacts to open space and archaeological resources or the potential impact to construction noise. The unmitigated impacts are discussed in Chapter 4, Unavoidable Adverse Impacts.

The mitigation measure proposed for the elementary school impact would alter the Proposed Project and thus the Reasonable Worst Case Development Scenario (RWCDS) presented in Chapter 1, Project Description. The discussion of elementary school mitigation therefore includes an assessment of whether the changes to the RWCDS needed to implement the mitigation would result in any additional significant adverse impacts, or exacerbate any of the previously identified significant adverse impacts, regarding the assessment categories addressed in Chapters 2.A through 2.S.

ELEMENTARY SCHOOLS

Impact

According to the CEQR Technical Manual, a significant adverse impact may result, warranting consideration of mitigation, if the proposed action would result in:

- A collective utilization rate within the sub-district study area of at least 105 percent; and
- An increase of 5 percent or more in the collective utilization rate between the future no-action and with-action conditions.

Chapter 2.C, Community Facilities and Services, concludes that the Proposed Action would have a significant adverse impact on the collective elementary school utilization rate in Sub-district 2 of Community School District (CSD) 12. Within Sub-district 2, the addition of the 1,028 public elementary school students generated by development under the RWCDS would exacerbate projected shortfalls in elementary school seats under future no-action conditions. In Sub-district 2, the shortfall would increase from 1,522 seats under future no-action conditions to 2,550 seats with the Proposed Action, and the schools' collective utilization rate would increase from 121 percent to 136 percent.

Proposed Mitigation Measures

According to the *CEQR Technical Manual*, possible measures to mitigate a significant impact that results in school overcrowding include: relocating administrative functions to another site, thereby freeing up space for classrooms; making space within the buildings associated with the Proposed Action or

elsewhere in the school study area available to the New York City Department of Education (DOE); and/or restructuring or reprogramming existing school space within a district. For very large residential projects, provision of new capacity, construction of a new school or an addition to an existing school may also be appropriate.

The mitigation measures discussed below have been formulated in coordination with the New York City School Construction Authority (SCA).

New Elementary School

To address the Proposed Action's significant adverse impact on elementary schools in Sub-district 2, the applicant will enter into an agreement with the SCA to provide the SCA with an option to acquire for one dollar a site for a new 88,860 square foot (sf) public elementary school serving grades pre-kindergarten through five. The site is located on the east side of Boone Avenue approximately 59 feet south of East 173rd Street, which is part of applicant-controlled Parcel 2.N. (See Figure 3-1.) The SCA and DOE would monitor school utilization rates as the Proposed Project and other projected developments on non-applicant-controlled sites are built to determine whether a new school is needed. If school utilization rates justify the construction of a new school, the SCA would exercise its option to acquire the school site and construct the school thereon. The SCA's option would extend until the later to occur of (i) September 30, 2015 and (ii) the point at which the applicant is ready to begin design of the rest of Parcel 2N which is projected to be the final site within the LSGD to be developed under the applicant's intended phasing plan. (See Expected Phasing of the Proposed Project in Chapter 1, Project Description.)

The school would be able to accommodate between 540 and 576 students. To be conservative, the lower number is assumed for purposes of this schools analysis, and the higher number is assumed for purposes of determining whether this change to the RWCDS would cause new significant adverse impacts, or alter previously identified significant adverse impacts, in other assessment categories.

By ceding this development site, the applicant would reduce the size of the Proposed Project by 53 residential units and eliminate the 11,888 sf child care center. The elimination of the residential units would reduce the Proposed Action's total public school generation to 1,007 elementary school students (from 1,028).

The applicant's Proposed Project would thus include 1,272 dwelling units, which would generate an estimated 496 public elementary school students, using the 0.39 students per household multiplier set forth in the CEQR Technical Manual. The Proposed Project would generate fewer elementary school students than the maximum that could be accommodated in the new school. The Proposed Project would thus completely mitigate its own elementary school impact and provide additional capacity for some students generated by projected development on non-applicant controlled parcels.

Figure 3-1: New School Location



The effect of the new school and the reduction in residential units on elementary school utilization rates in the sub-district study area is shown in Table 3-1.

Table 3-1: 2022 Future with Action Elementary School Enrollment, Capacity, and Utilization Comparison of No-School and With-School Scenarios

Study Area	Future No-Action Enrollment	Students Generated by Proposed Action Development	Total Future Enrollment	No-Action Target Capacity	New School Capacity	Total Future Capacity	Available Seats	Utilization Rate
Sub-district 2 with No School	8,645	1,028	9,673	7,123	0	7,123	-2,550	135.80%
Sub-district 2 With School	8,645	1,007	9,652	7,123	540	7,663	-1,989	126.00%

The proposed mitigation would reduce the projected utilization rate for elementary schools in Sub-district 2 in the future with the Proposed Action from 135.8 percent to 126.0 percent. In the future without the Proposed Action, a 1,522 seat shortfall would occur resulting in a 121.4 percent utilization rate. In the future with the Proposed Action, the mitigation would reduce the incremental increase in the utilization rate to 4.6 percent, which falls below the CEQR Technical Manual threshold of 5 percent for a significant adverse impact. Therefore, the new school would fully mitigate the significant adverse impact on elementary schools resulting from the Proposed Action.

Potential Impacts of the New School Mitigation

Changes to the RWCDS

The proposed schools mitigation would provide the SCA the ability to exercise an option to acquire for one dollar an applicant-controlled site within the proposed rezoning area on which the SCA would construct a new 88,680 sf public elementary school serving grades pre-kindergarten through 5 (the "New School Mitigation"). The site is located on the east side of Boone Avenue approximately 59 feet south of East 173rd Street (part of Parcel 2N). (See Figure 3-1 above.) If constructed, the school would replace Proposed Project Building 3C containing five- and seven-story wings with residential apartments above a ground floor child care center and retail space that would be built as part of the Proposed Project described in Chapter 1 and assessed in Chapter 2. By ceding this development site, the applicant would reduce the size of the Proposed Project by 53 residential units, including 27 units set aside for low and moderate income households, and eliminate an 11,888 sf child care center. The total number of action-generated housing units would drop from 2,635 to 2,582, and the number of subsidized units reserved for low and moderate income households would decline from 912 to 885.

The new school would be six stories (85 feet) tall and would accommodate up to 576 students, with a 58-person staff, assuming one staff position for every ten students. Also, the adjacent residential building at the southwest corner of Boone Avenue and East 173rd Street (Building 3B) would be nine stories tall with a seven-story street wall, as opposed to seven stories tall with a six-story street wall planned as part of the Proposed Project. The street walls of Buildings 3A and 3B would also increase along West Farms Road by one story each (to eight stories for Building 3A and seven stories for Building 3B), but rooftop heights of both buildings would remain the same.

Land Use, Zoning, and Public Policy

The New School Mitigation would introduce an additional land use to the Proposed Project, an elementary school. Public schools are common in the Crotona Park East and West Farms neighborhoods, including a high school located elsewhere in the proposed rezoning area and three other schools (one

elementary, one combining elementary and intermediate grades, and one for special education students) at locations bordering the proposed rezoning area. Schools are compatible with residential uses. The school would be a conforming use under the proposed zoning, and the building would comply with the waivers to be granted for height and setback and other bulk regulations under the LSGD special permit described in Chapter 1. The school use would be consistent with applicable public policies, including the 197-a plan for Community District 3 and the sustainability goals of PlaNYC. Accordingly, the New School Mitigation would not cause an adverse land use, zoning, or public policy impact.

Socioeconomic Conditions

Because the New School Mitigation would not change the projected development sites in the RWCDS, it would not change the number of directly displaced residents, businesses, or workers and would therefore not alter the assessment of direct residential or business displacement. The slight reductions (26 and 27 units respectively) in the numbers of both market rate housing units and housing units reserved for low and moderate income households would not be sufficient to alter the conclusions regarding the potential for indirect residential displacement in Chapter 2.B. Because the New School Mitigation would not affect the nature of the directly displaced businesses, would not increase the likelihood that the Proposed Action would lead to additional land use changes in nearby areas, and would not increase the amount of new commercial space, it would not alter the assessment of the potential for indirect business displacement. The New School Mitigation would also not alter the potential for an adverse impact on a particular industry. In summary, the socioeconomic conditions assessment presented in Chapter 2.B would remain valid if the SCA exercises its option to build a new school within the proposed rezoning area.

Community Facilities and Services

The effects of the proposed mitigation measures on elementary and intermediate schools in the relevant study areas are addressed in the analysis above, which show that the measures would fully mitigate the significant adverse impact to elementary schools in Sub-district 2 of CSD 12. The elimination of 53 residential units would slightly reduce the numbers of new library users and high school students from those anticipated under the Proposed Action, which were determined in Chapter 2.C to not be high enough to cause significant adverse library and high school impacts. Since the proposed child care slots in the proposed new facility have not been counted for purposes of the child care assessment, the elimination of the proposed child care center would not alter that assessment, except that the elimination of 27 low and moderate income units would reduce the anticipated action-generated demand for subsidized child care slots by four children (to 123 from 127). In summary, the New School Mitigation would not cause any significant adverse community facility impacts.

Open Space

The New School Mitigation would not change the open space inventory projected for the future with the Proposed Action. The school would have a rooftop recreational area, which would serve the students' outdoor open space needs. The elimination of 53 residential units would reduce the projected residential population by approximately 160 persons. Although 58 persons would work at the new school, the elimination of the proposed childcare facility and the reductions in the number of apartments (and thus building staff) would eliminate approximately 25 jobs, resulting in a net increase of approximately 33 workers. Since the numbers of residents and workers are added together for the purpose of computing the passive open space ratio for the nonresidential open space study area and only residents are considered for purposes of computing the open space ratio for the larger residential open space study area, the modification would reduce the number of potential open space users that the action would add to the open space study areas from what was assumed for purposes of the assessment in Chapter 2.D, Open Space. The New School Mitigation would therefore slightly reduce but not eliminate the significant adverse open space impact identified in Chapter 2.D.

Shadows

Shadow diagrams were prepared for the mornings during the four times of the year analyzed under CEQR, comparing the shadows cast by the Proposed Project and those cast by the project as modified to include the school (Figures 3-2A through 3-2D). Only the mornings are shown because that is when shadows would be cast towards the west. In the late afternoon, when shadows are cast eastward, shadows from the Boone Avenue sections of the building would be blocked by the taller building sections along West Farms Road. As can be seen, the shadows are virtually identical and do not reach any sensitive receptor. Accordingly, the New School Mitigation would not cause a significant adverse shadow impact.

Figure 3-2A

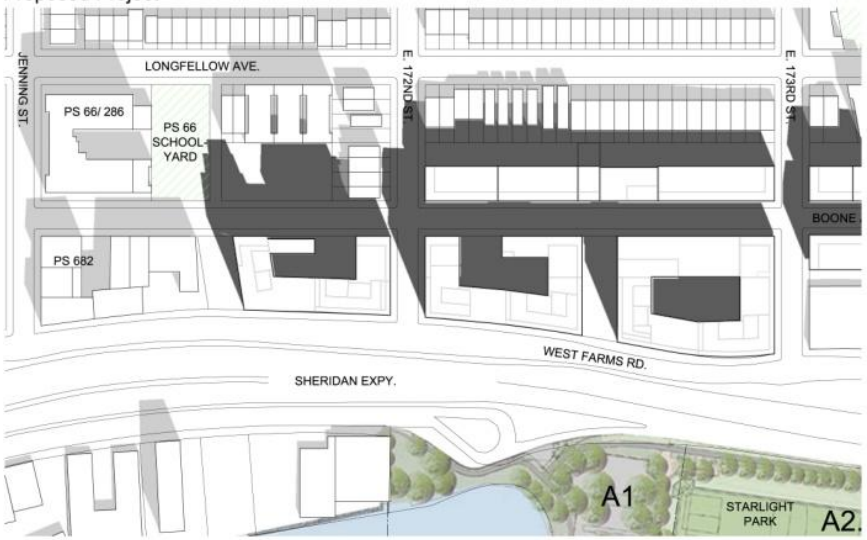
Shadow Study, March 21 / September 21 (Spring / Fall Equinox) - 8:30 AM



Figure 3-2B

Shadow Study, May 6 / August 6 - 7:19 AM

Proposed Project



Proposed Project with School Mitigation

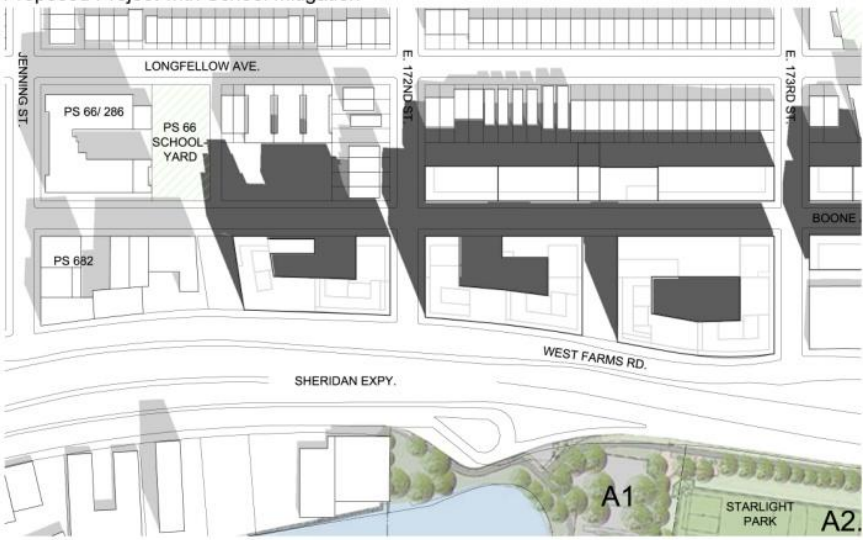


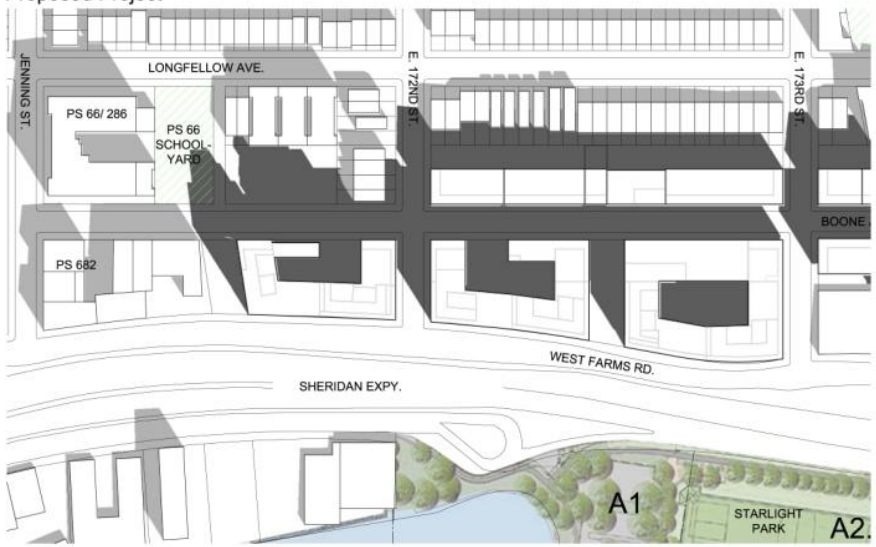




Figure 3-2C

Shadow Study, June 21 (Summer Solstice) - 7:00 AM

Proposed Project



Proposed Project with School Mitigation

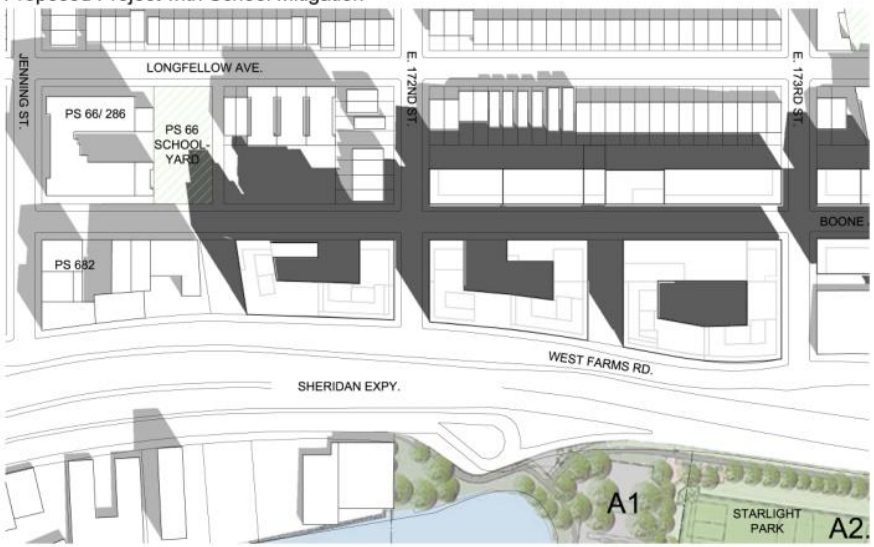


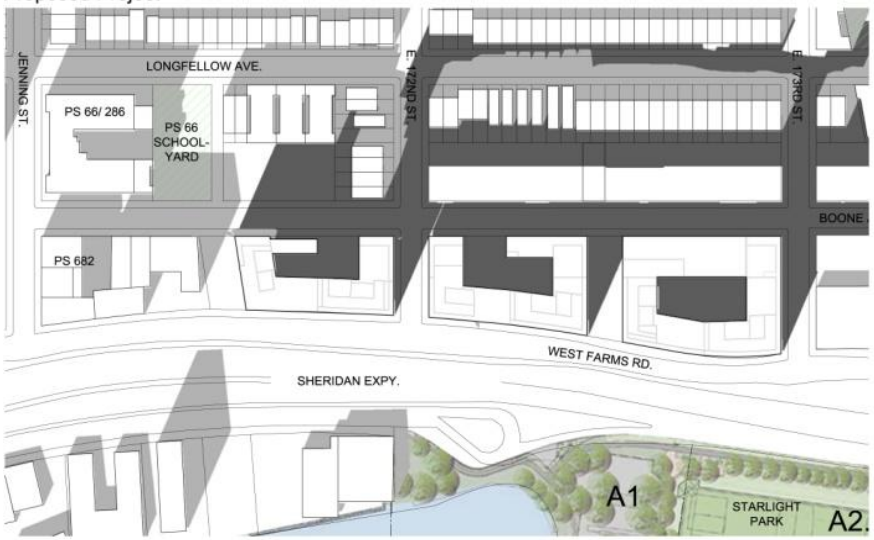




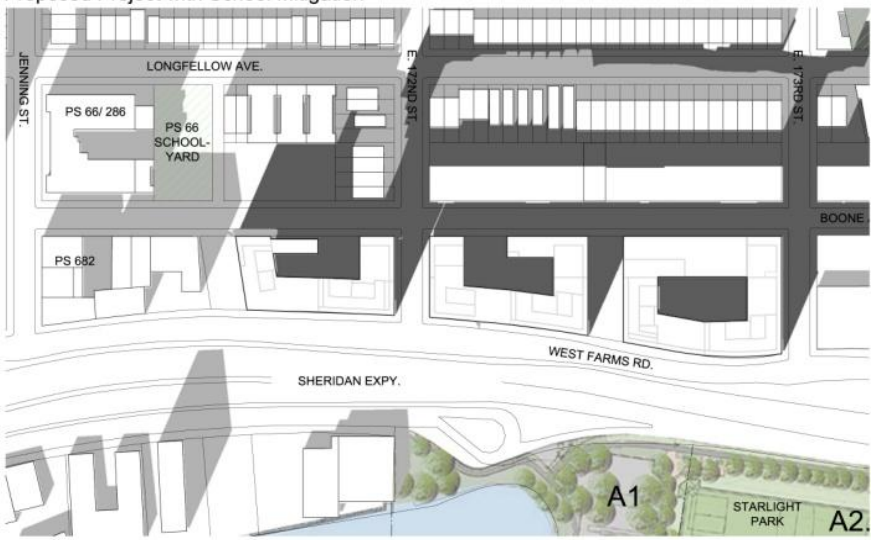
Figure 3-2D

Shadow Study, December 21 (Winter Solstice) - 8:45 AM

Proposed Project



Proposed Project with School Mitigation







Historic and Cultural Resources

As under the Proposed Action, the New School Mitigation would not cause any adverse impact on architectural resources because no such resources have been identified in or near the proposed rezoning area. Because the New School Mitigation would not change the projected development sites in the RWCDS or anticipated building footprints, it would not change the significant adverse impacts on archaeological resources or the ability to mitigate those impacts.

Urban Design and Visual Resources

The New School Mitigation would change only two aspects of the development scenario described and assessed in Chapter 2.G, Urban Design and Visual Resources: the height and use of the Boone Avenue wing of the Building 3 and the street wall heights of the building's West Farms Road wing.

Figures 3-3A and 3-3B depict the alternate massings of the development on the LSGD sites: one with the new school replacing Building 3C, and the other as contemplated for the Proposed Project in Chapter 1. Figures 3-3C and Figure 3-3D depict the alternate massings viewed from West Farms Road. Figures 3-3E and 3-3F show the alternate massings in plan.

If the elementary school is constructed, it would occupy the majority of Site 2N's frontage along Boone Avenue, extending from the mid-block open area to approximately 59 feet from the corner of East 173rd Street. The 6-story school would have 14-foot floor-to-floor heights and, in order to provide an efficient floor plate, would not set back, resulting in an 84-foot-high street wall along Boone Avenue. The remaining portion of Building 3 along Boone Avenue would have a 7-story base with eighth and ninth stories set back 15 feet from Boone Avenue and 8 feet from East 173rd Street. The building would retain the 7-story base along East 173rd Street but would step up after an 8-foot setback to 12 stories in the mid-block and 15 stories plus mechanical and elevator penthouses at West Farms Road. Along the mid-block of West Farms Road, the base would rise to 8 stories but the overall building height would step down to 11 stories. The 8-story base would wrap around the mid-block open area, while the overall building height would rise to 14 stories (plus mechanical and elevator penthouses).

In contrast, if the elementary school is not constructed, the northwest and southwest corners of Building 3 would have 6-story bases with seventh stories set back 15 feet from Boone Avenue and 8 feet from East 173rd Street and the mid-block open area, while the remainder of the Boone Avenue frontage would rise to 5 stories. In addition, the 7- and 8-story base on the remainder of the building would drop to 6 and 7 stories but the overall heights of the remainder of the building would remain the same.

Although the exercise of the school option would affect the base and building height along the east side of Boone Avenue and the base height along West Farms Road, all of the surrounding projected development would remain the same, and the changes would not be significant enough to alter the proposed scale of development at this location. Accordingly, the New School Mitigation would not alter the conclusion in Chapter 2.G that the Proposed Action would not have a significant adverse impact on urban design.

Under either scenario, the buildings along Boone Avenue between East 172nd and 173rd Streets would not be visible from any of the identified visual resources in the vicinity of the proposed rezoning area and would not block views to or from those resources. The identified visual resources are Starlight Park (upon its completion), the Bronx River, and Rock Garden Park. The taller building heights along the West Farms Road side of the block would eliminate direct sight lines between the Boone Avenue building wings and Starlight Park and the river. Because the terrain slopes upwards to the west of Boone Avenue, the six-story buildings along the east side of Longfellow Avenue would be at a higher elevation and would block views to and from Rock Garden Park. Accordingly, the New School Mitigation would not have a significant adverse impact on visual resources.

Figure 3-3A: Boone Avenue Massing Diagram - With New School Mitigation

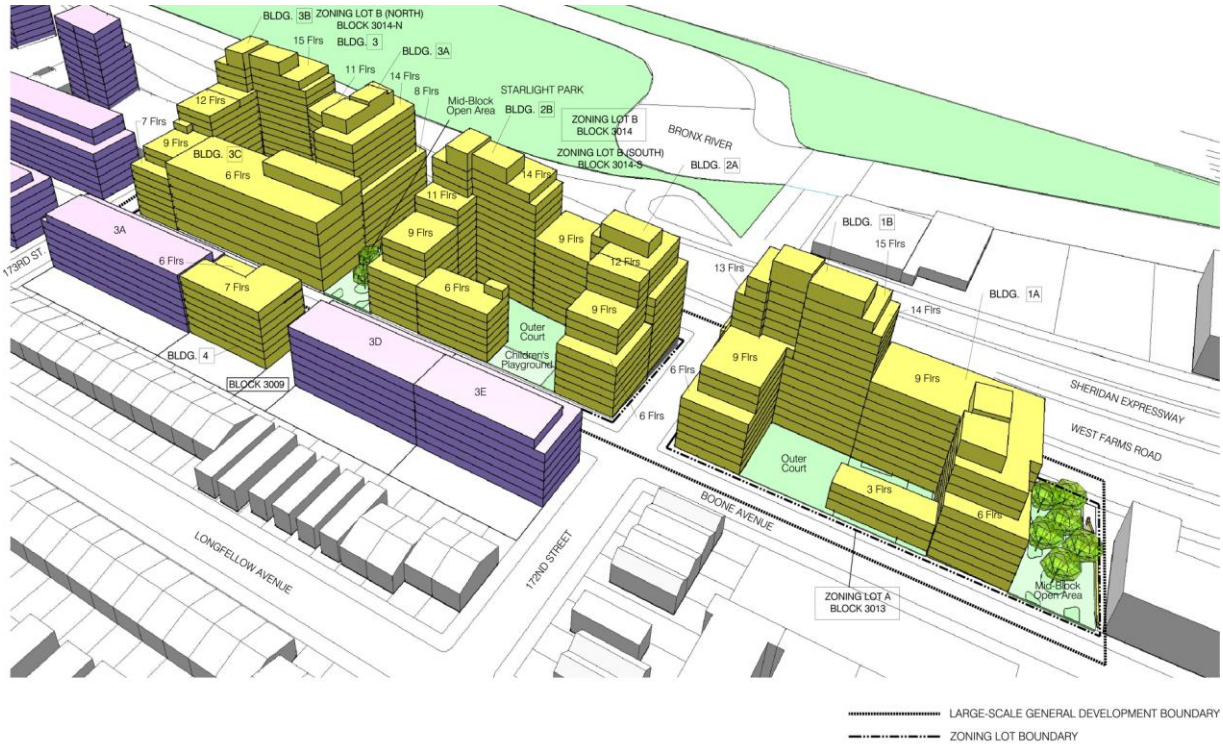


Figure 3-3B: Boone Avenue Massing Diagrams - Without New School Mitigation

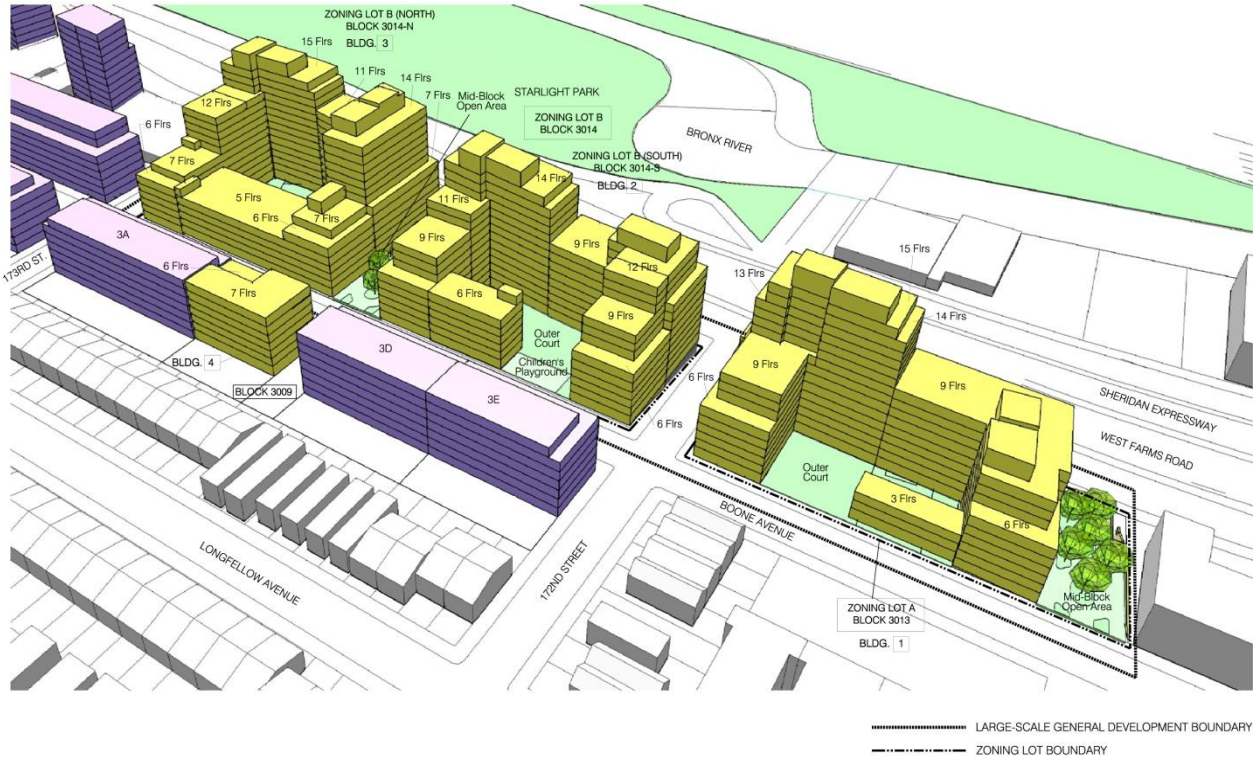


Figure 3-3C: West Farms Road Massing Diagram - With New School Mitigation



Figure 3-3D: West Farms Road Massing Diagram - Without New School Mitigation



Figure 3-3E Site Plan - With New School Mitigation

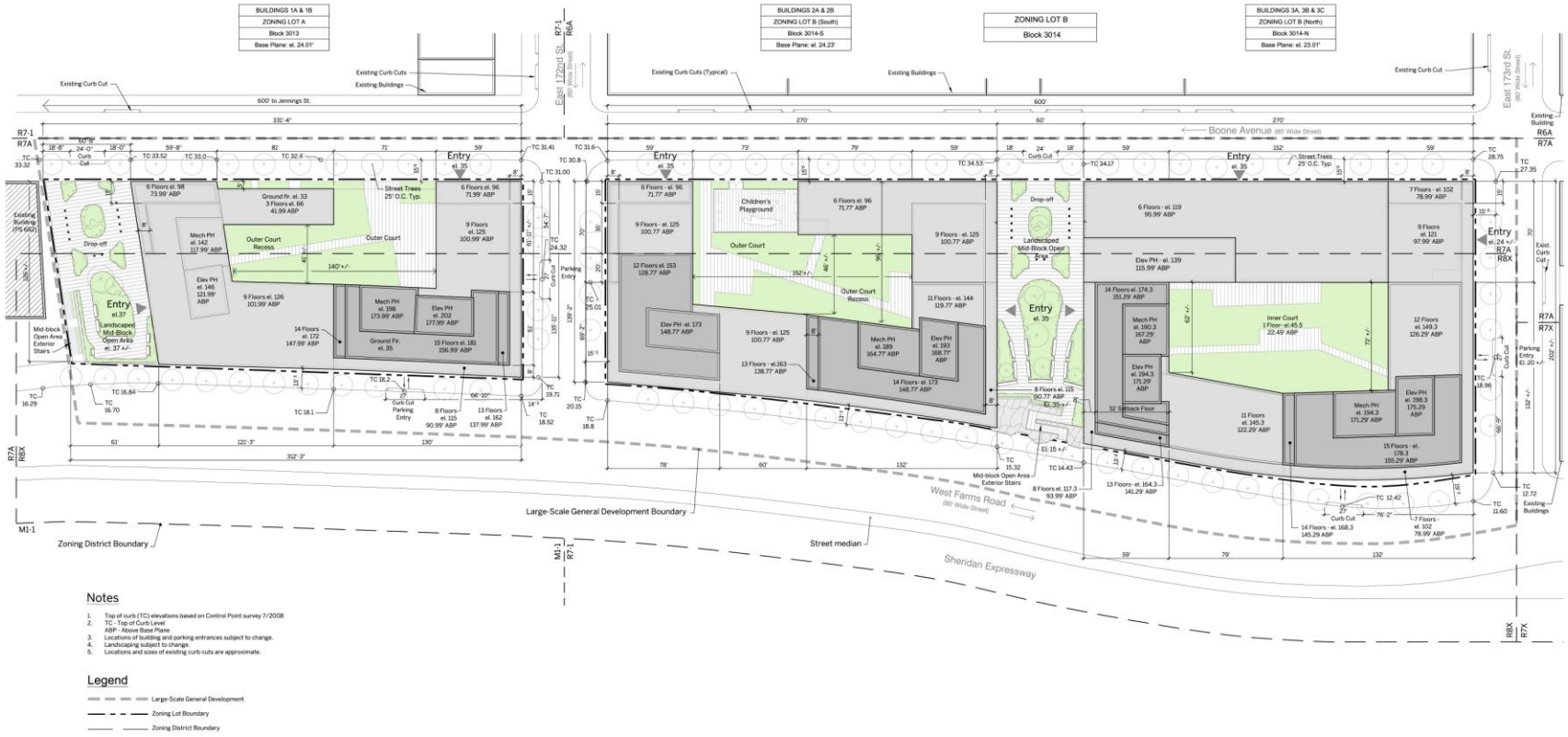
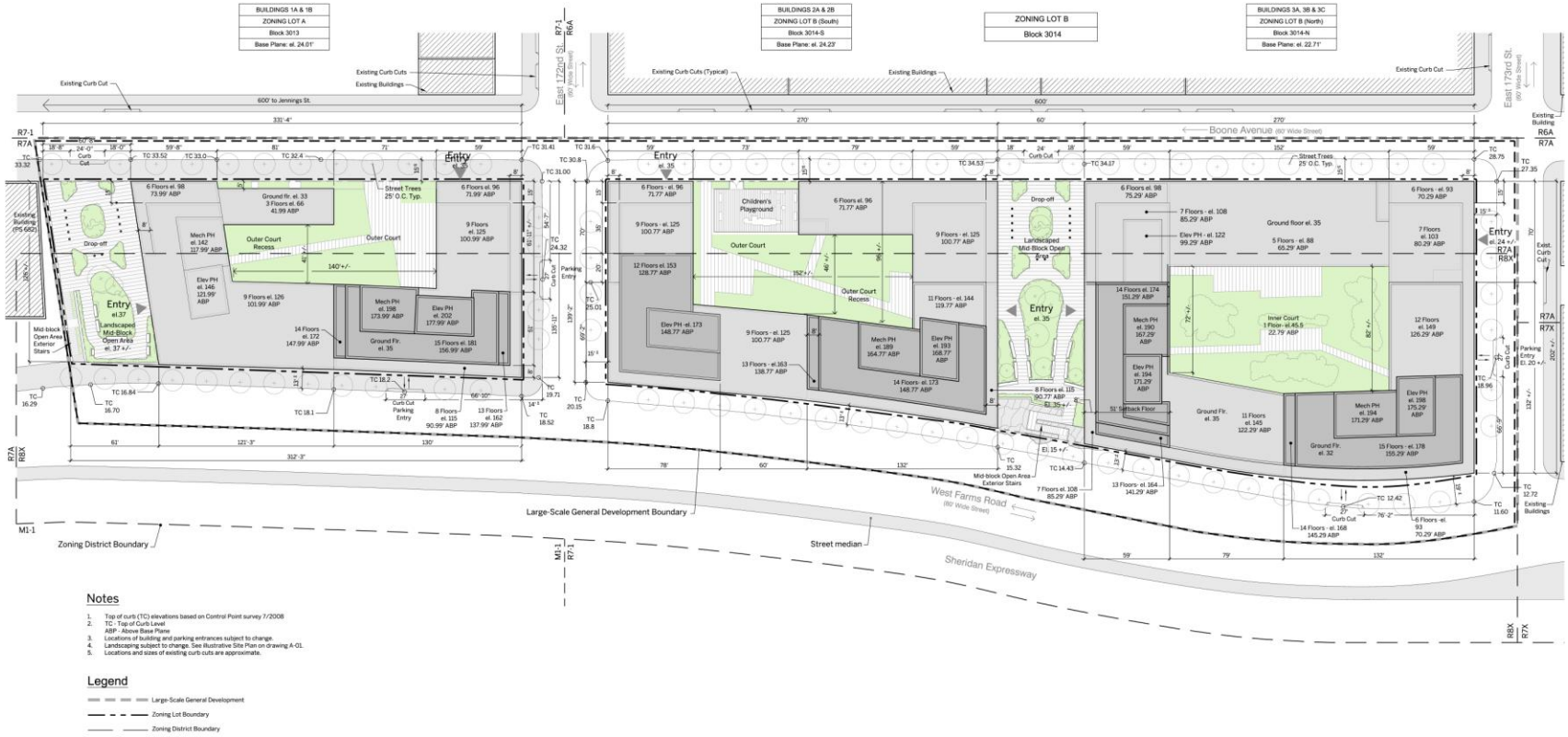


Figure 3-3F Site Plan - Without New School Mitigation



Natural Resources

The proposed rezoning area is substantially devoid of natural resources and contains no built resource that is known to contain or may be used as a habitat by a protected species. It is separated from the nearest important natural resources, the Bronx River and its adjacent wetlands, by a multilane, limited access highway, and in terms of sheer distance the proposed rezoning area is too far from the river for any likely indirect effects to occur as a result of redevelopment. Accordingly, the New School Mitigation would not result in a significant adverse impact to natural resources.

Hazardous Materials

Because the New School Mitigation would not change the projected development sites in the RWCDS, it would not change the potential for opening pathways to exposure to hazardous materials or the conclusions in Chapter 2.I, Hazardous Materials. The New School Mitigation would not cause a significant adverse impact related to hazardous materials. As reflected in the Letter of Intent, dated April 20, 2011, between the applicant and the SCA to memorialize their current mutual understanding regarding the proposed school mitigation, the applicant would be responsible for the testing for and remediation of any hazardous materials located on the Parcel 2N (excluding such materials considered typical for urban fill). This will be ensured through the LSGD Restrictive Declaration, which will also require that the applicant provide copies of all related documentation (e.g. sampling protocol, CHASP, RAP) to the SCA as they become available.

Water and Sewer Infrastructure

The total water demand of all uses within the proposed rezoning area, with the Proposed Action as modified to reflect the New School Mitigation, would be 1,015,768 gallons per day (gpd), as is shown in Table 3-2. This amount would be 3,132 gpd less than was calculated for the Proposed Action without the New School Mitigation (1,018,900, as shown in Table 3-3). The net change in water consumption within the proposed rezoning area relative to future no-action conditions would be an increase of 0.67 million gallons per day (mgd) as a result of the Proposed Action with or without the New School Mitigation. The increase would not be large enough to cause a significant adverse impact, as is concluded in Chapter 2.J. As Table 3-2 shows, total wastewater generation would be 947,744 gpd, which would be 12,161 gpd less than under the RWCDS assessed in Chapter 2.J (959,905 wpd, as shown in Table 3-3). Because effluent flow would decline relative to the RWCDS if the New School Mitigation is developed, the change would not alter the conclusion in Chapter 2.J that the Proposed Action would not have a significant adverse impact on the wastewater treatment system. Because the change would not alter the proposed building footprints or surface materials, it would not affect the volumes or locations of storm water runoff. Because the volume of storm water runoff into the combined sewer system would be the same as under the RWCDS and the volume of sanitary sewage would be less, total wet weather volumes added to the combined sewer system would decline as a result of the inclusion of the school. The New School Mitigation would not have a significant adverse impact on water and sewer infrastructure.

Table 3-2: 2022 Action Condition with School: Water Demand and Effluent Flow

Land Use	Rate[1]	Future Action Condition Summary		
		Quantity[7] (units)	Water/ Wastewater Generation (gpd)	Air Conditioning & Function (gpd)
Residential[2]	Domestic: 100 gpd/person (300 gpd/DU)	2,822 DU's	846,514 gpd	0 gpd
	Air Conditioning: 0 gpd/sf	0 sf		
Commercial/Office[3]	Domestic: 25 gpd/person (0.10 gpd/sf)	65,324 sf	6,532 gpd	11,105 gpd
	Air Conditioning: 0.17 gpd/sf			
Community Facility[4]	Domestic: 0.17 gpd/sf	1,875 sf	319 gpd	319 gpd
	Air Conditioning: 0.17 gpd/sf			
Industrial/Manufacturing[5]	Domestic: 1,000 gpd/ac (0.23 gpd/sf)	74,653 sf	17,170 gpd	12,691 gpd
	Air Conditioning: 0.17 gpd/sf			
Retail Stores	Domestic: 0.24 gpd/sf	131,869 sf	31,649 gpd	22,418 gpd
	Air Conditioning: 0.17 gpd/sf			
Hotel[6]	Domestic: 120 gpd/rm/occupant	0 rooms	0 gpd	0 gpd
	Function Space: 0.17 gpd/sf	0 sf		
	Air Conditioning: 0.17 gpd/sf	0 sf		
Schools	Domestic: 10 gpd/seat	1,076 seat	10,760 gpd	20,720 gpd
	Air Conditioning: 0.17 gpd/sf	121,882 sf		
Laundromat[4]	Domestic: 580 gpd/machine	60 machine	34,800 gpd	772 gpd
	Air Conditioning: 0.17 gpd/sf	4,539 sf		
Subtotals - Water Consumption			947,744 gpd	68,024 gpd
Subtotals - Wastewater Generation			947,744 gpd	
Total Water Consumption			**1,015,768 gpd**	
Total Wastewater Generation			**947,744 gpd**	

Notes:

1- Consumption rates obtained from CEQR Technical Manual unless otherwise indicated

2- Assumes 100 gpd/person (CEQR Manual). The ave. household size for the prop. rezoning area is 3.0 persons per DU (NYC Dept. of Planning). This equates to 300 gpd/DU.

3- Assumes 25 gpd/person and 250 sf of office space per person, which equates to 0.10 gpd/sf

4- Consumption rates obtained from NYSDEC Design Standards for Wastewater Treatment Works (1988), The retail rate for air conditioning water demand was applied.

5- Because the CEQR Technical Manual does not provide industrial water consumption rates, DEP factors were used in determining industrial water demand. These factors are contained in DEP's Draft Rules and Regulations Governing the Construction of Private Sewers and Drains. The floor area was multiplied by zoning district factors of 1.0 for Industrial/Manufacturing in MI-1 zoning districts and 2.0 for Industrial/Commercial in R7-1/C2-4 commercial overlay zoning districts. The retail rate for air conditioning water demand was applied.

6- Assumes 10% of total floor area is designated as function space

7- Includes offsite areas in Cumulative Study Area

gpd=gallons per day, mgd=millions of gallons per day, sf=square feet, occup=occupant

Table 3-3: 2022 Action Condition per the RWCDS: Water Demand and Effluent Flow

Land Use	Rate[1]	Future Action Condition Summary		
		Quantity[7] (units)	Water/ Wastewater Generation (gpd)	Air Conditioning & Function (gpd)
Residential[2]	Domestic: 100 gpd/person (300 gpd/DU)	2,875 DU's	862,414 gpd	0 gpd
	Air Conditioning: 0 gpd/sf	0 sf		
Commercial/Office[3]	Domestic: 25 gpd/person (0.10 gpd/sf)	65,324 sf	6,532 gpd	11,105 gpd
	Air Conditioning: 0.17 gpd/sf			
Community Facility[4]	Domestic: 0.17 gpd/sf	13,763 sf	2,340 gpd	2,340 gpd
	Air Conditioning: 0.17 gpd/sf			
Industrial/Manufacturing[5]	Domestic: 1,000 gpd/ac (0.23 gpd/sf)	74,653 sf	17,170 gpd	12,691 gpd
	Air Conditioning: 0.17 gpd/sf			
Retail Stores	Domestic: 0.24 gpd/sf	131,869 sf	31,649 gpd	22,418 gpd
	Air Conditioning: 0.17 gpd/sf			
Hotel[6]	Domestic: 120 gpd/rm/occupant	0 rooms	0 gpd	0 gpd
	Function Space: 0.17 gpd/sf	0 sf		
	Air Conditioning: 0.17 gpd/sf	0 sf		
Schools	Domestic: 10 gpd/seat	500 seat	5,000 gpd	9,670 gpd
	Air Conditioning: 0.17 gpd/sf	56,882 sf		
Laundromat[4]	Domestic: 580 gpd/machine	60 machine	34,800 gpd	772 gpd
	Air Conditioning: 0.17 gpd/sf	4,539 sf		
Subtotals - Water Consumption			959,905 gpd	58,995 gpd
Subtotals - Wastewater Generation			959,905 gpd	
Total Water Consumption			**1,018,900 gpd**	
Total Wastewater Generation			**959,905 gpd**	

Notes:

1- Consumption rates obtained from CEQR Technical Manual unless otherwise indicated

2- Assumes 100 gpd/person (CEQR Manual). The ave. household size for the prop. rezoning area is 3.0 persons per DU (NYC Dept. of Planning). This equates to 300 gpd/DU.

3- Assumes 25 gpd/person and 250 sf of office space per person, which equates to 0.10 gpd/sf

4- Consumption rates obtained from NYSDEC Design Standards for Wastewater Treatment Works (1988), The retail rate for air conditioning water demand was applied.

5- Because the CEQR Technical Manual does not provide industrial water consumption rates, DEP factors were used in determining industrial water demand. These factors are contained in DEP's Draft Rules and Regulations Governing the Construction of Private Sewers and Drains. The floor area was multiplied by zoning district factors of 1.0 for Industrial/Manufacturing in MI-1 zoning districts and 2.0 for Industrial/Commercial in R7-1/C2-4 commercial overlay zoning districts. The retail rate for air conditioning water demand was applied.

6- Assumes 10% of total floor area is designated as function space

7- Includes offsite areas in Cumulative Study Area

gpd=gallons per day, mgd=millions of gallons per day, sf=square feet, occup=occupant

Solid Waste and Sanitation Services

If the New School Mitigation is implemented, 53 dwelling units (45,359 sf) and the child care center (11,888 sf) would be removed from the Proposed Project, and a new 576 seat (88,860 sf) public elementary school would be built within the proposed rezoning area. The residential floor area would decrease from 2,745,527 sf to 2,700,168 sf and the community facility floor area would increase from 11,888 to 88,860 sf.

Table 3-4 shows the floor areas and projected solid waste generated, by use, for the projected development sites with the school in place, and Table 3-5 shows the projected solid waste generation under action conditions without the New School Mitigation. As shown in Table 3-4, the projected development, including the school, would generate 144,614 pounds of solid waste per week. Of this, 113,330 pounds per week would be carted away by the New York City Department of Sanitation (DSNY), and the commercially generated 31,284 pounds per week would be carted away by private carriers.

Table 3-4: Future Action Condition with School: Estimated Weekly Solid Waste Generation on Projected Development Parcels

Use	Unit	Multiplier (lbs per week per unit)	Generated (lbs per week)
Retail	396 employees	79	31,284
Residential	2,722 households	41	111,602
School	576 children	3	1,728
Total			**144,614**

Table 3-5: Future Action Condition per RWCDS: Estimated Weekly Solid Waste Generation on Projected Development Parcels

Use	Unit	Multiplier (lbs per week per unit)	Generated (lbs per week)
Retail	396 employees	79	31,284
Residential	2,777 households	41	113,857
Day Care	120 children	3	360
Total			**145,501**

As a comparison between the two tables shows, with the school in place, the solid waste generation of development within the proposed rezoning area would decrease by 887 pounds per week as compared with the RWCDS. Because the New School Mitigation would reduce the solid waste stream, it would not alter the conclusion of Chapter 2.K, Solid Waste and Sanitation Services, that there would be no significant adverse solid waste or sanitation impact.

Energy

If the New School Mitigation is developed, 53 dwelling units (45,359 sf) and the child care center (11,888 sf) would be removed from the Proposed Project, and a new 576 seat (88,860 sf) public elementary school would be built within the proposed rezoning area. The residential floor area would decrease from 2,745,527 sf to 2,700,168 sf and the community facility floor area would increase from 11,888 to 88,860 sf.

Table 3-6 shows the floor area, by use, for the projected development sites with the school in place. Table 3-7 provides the same information for the sites under the RWCDS. The estimated annual BTU usages of the proposed rezoning area with the school in place and under the RWCDS, calculated using Table 15-1 of the 2010 *CEQR Technical Manual*, are presented in Tables 3-8 and 3-9.

Table 3-6: Floor Area: Future Action Condition with School

	Floor Area (sf)			
	Commercial	**Industrial**	**Institutional**	**Large Residential**
Applicant Sites:				
LSGD Sites	18,493	0	88,860	821,155
Non-LSGD Sites	27,540	0	0	429,300
Subtotal, Applicant Sites	46,033	0	88,860	1,250,455
Non-Applicant Sites:	85,836	0	0	1,449,713
Grand Total, All Sites	131,869	0	88,860	2,700,168

Table 3-7: Floor Area: Future Action Condition per the RWCDS

	Floor Area (sf)			
	Commercial	**Industrial**	**Institutional**	**Large Residential**
Applicant Sites:				
LSGD Sites	18,493	0	11,888	866,514
Non-LSGD Sites	27,540	0	0	429,300
Subtotal, Applicant Sites	46,033	0	11,888	1,295,814
Non-Applicant Sites:	85,836	0	0	1,449,713
Grand Total, All Sites	131,869	0	11,888	2,745,527

Table 3-8: Annual Energy Consumption: Future Action Condition with School

	Estimated Annual BTU Usage				
	Commercial	**Industrial**	**Institutional**	**Large Residential**	**Total**
Applicant Sites:					
LSGD Sites	4,000,035,900	0	22,277,202,000	104,040,338,500	**130,317,576,400**
Non-LSGD Sites	5,956,902,000	0	0	54,392,310,000	**60,349,212,000**
Subtotal, Applicant Sites	9,956,937,900	0	22,277,202,000	158,432,648,500	**190,666,788,400**
Non-Applicant Sites:	18,566,326,800	0	0	183,678,662,440	**202,244,989,240**
Grand Total, All Sites	28,523,264,700	0	22,277,202,000	342,111,310,940	**392,911,777,640**

Table 3-9: Annual Energy Consumption: Future Action Condition per the RWCDS

	Estimated Annual BTU Usage				
	Commercial	**Industrial**	**Institutional**	**Residential**	**Total**
Applicant Sites:					
LSGD Sites	4,000,035,900	0	2,980,321,600	109,787,323,800	**116,767,681,300**
Non-LSGD Sites	5,956,902,000	0	0	54,392,310,000	**60,349,212,000**
Subtotal, Applicant Sites	9,956,937,900	0	2,980,321,600	164,179,633,800	**177,116,893,300**
Non-Applicant Sites:	18,566,326,800	0	0	183,678,662,440	**202,244,989,240**
Grand Total, All Sites	28,523,264,700	0	2,980,321,600	347,858,296,240	**379,361,882,540**

The change would result in an increase in energy use of 13.55 billion BTUs annually, or an increase of 3.6 percent over the RWCDS. In the context of the city's overall energy use, this amount would not be considered significant. The New School Mitigation would not alter the conclusion of Chapter 2.L, Energy, that there would be no significant adverse energy impact.

Transportation

Trip Generation and Assignment

The school day begins between 7:00 AM and 8:00 AM and ends between 3:30 PM and 4:00 PM. The morning travel period coincides with the AM peak hour that was analyzed for the traffic network; however, since the school day ends prior to the PM peak hour, the afternoon generated school trips were not applied to the 2022 PM Build traffic network. No trips to or from the school are anticipated during the midday peak traffic hour. Therefore, only morning school trip generation is considered here.

The trip generation and modal split for the staff and students at the new school were based on projected travel characteristics for a previously proposed school in Astoria, Queens, known as P.S. 234-Q. This school was chosen because the area in which it would be located has similar development characteristics (density, urban form, transit service, etc.) to the area in which the new school would be located.

For purposes of student trip generation, it was assumed that 90 percent would be local children living within the school catchment zone. The other 10 percent would be special education students, the same allocation that was made in the case of the Astoria school, and reflecting the DOE policy to integrate special education students within the larger student body. It was assumed these children would be bused to the school. For the 90 percent of trips related to local children, because of the school's proximity to the students' homes, and consistent with the Astoria school modal split, it was assumed that 80 percent would walk to school, 5 percent would travel on public buses, and 5 percent would be driven to school and dropped off by a parent on the way to work. Because this school would be for grades K-5, it was assumed that approximately 30 percent of parents would walk their (younger) children to school. These assumptions are shown in Table 3-10.

Table 3-10: 7:30-8:30 AM Student Trip Generation and Modal Split

Mode of Transportation	Mode Split	School Capacity	Total Trips	In/Out Split		Person Trips		Vehicle Occupancy	Vehicle Trips	
				In	Out	In	Out		In	Out
Walk	80%	560	448	130%	30%	582	134			
Auto	5%	560	28	100%	100%	28	28	1.1	25	25
School Bus	0%	560	0							
Special Ed Bus	10%	560	56	100%	100%	56	56	14	4	4
Transit-Bus	5%	560	28	100%	0%	28	0			
Transit-Subway	0%	560	0							
Total	100%	NA	560			694	218			

Notes: (1) 30% of students assumed to be walked to school by parents in the AM, therefore 130% used for trips in. These parents will then walk out from school after dropping student off, therefore 30% split out.
(2) Autos are drop off trips, therefore 1 trip in, 1 trip out.
(3) Special Ed Bus will drop off students; one trip in and one trip out
Special Ed bus assumed to carry an average of 14 students each, therefore 4 buses will be needed.
Special Ed Bus will use a PCE of 2.0.
(4) No midday trips are anticipated to be associated with students.

Staff trips are likely to come from much further away. Eighty percent were allocated to come by auto, 15 percent by subway via the West Farms Square station, and 5 percent by bus. The assumptions are shown in Table 3-11.

Table 3-11: 7:30-8:30 AM Staff Trip Generation and Mode Split

Mode of Transportation	Mode Split	School Staff	Total Trips	In/Out Split		Person Trips		Vehicle Occupancy	Vehicle Trips	
				In	Out	In	Out		In	Out
Walk	0%	56	0							
Auto	80%	56	45	100%	0%	45	0	1.1	41	0
Transit-Bus	5%	56	3	100%	0%	3	0			
Transit-Subway	15%	56	8	100%	0%	8	0			
Total	100%	NA	56			56	0			

Regarding auto trip assignments, inbound student dropoff trips were assigned to local streets, and outbound trips were assigned in the same way as residents traveling to work in the morning from the school location (where residential apartments would be built under the RWCDS). School staff was routed to and from the school using the same assumptions that have been made for trip assignments for other aspects of this project. The Census journey-to-work information was used to determine general routings. The information indicates that 43 percent would be trips from elsewhere in the borough, 54 percent would be out-of-county but in-state trips, and 3 percent would be from out of state. For staff members coming from elsewhere in the Bronx, 23 percent were assumed to be local trips and were routed to the area via West Farms Road, Westchester Avenue, Tremont Avenue, and Boston Road, and 20 percent were assumed to travel greater distances and were assigned via local access routes from the highway system. The inter-county trips were also assigned via local access routes from the highway system, with 25 percent coming from Manhattan, 19 percent from Brooklyn or Queens, and 10 percent from Westchester. The interstate trips were assumed to come from New Jersey and were routed via the Cross Bronx Expressway. For the 56 special education students who would be dropped off by buses, with four buses carrying an average of 14 students each, the vehicles were routed to the study area and the school from four different directions (north, south, east, and west) and were assumed to then loop around the block and leave the area from the directions they came. For analysis purposes, passenger car equivalence (PCE) of 2.0 was used for the buses.

Traffic

The vehicular trips generated by the school during the morning peak hour were combined with the action-generated trip layer developed in Chapter 2.M, Transportation, for the 2022 AM with-action traffic network. Since the number of dwelling units would drop slightly if the school is built, there would also be reductions during all three peak periods. There would be a net gain of vehicular trips during the AM peak hour, but total trips would decline slightly in the midday and PM peak periods. Table 3-12 compares total person trips generated by mode by the Proposed Action as described in the RWCDS and with the New School Mitigation, and Table 3-13 compares the vehicular trips generated. The additional truck trips shown during the AM peak hour in Table 3-13 are actually school bus trips.

Table 3-12: Comparison of Person Trips Generated by Mode for the Proposed Action with and without the New School

Peak Hour	Project Scenario	Mode					
		Auto	Bus	Subway	Walk/Other	Taxi	Total
Weekday AM	Proposed Action with School	509	488	819	1431	76	3323
	Proposed Action	421	466	829	718	76	2510
	Net Difference (w/ School-w/o School)	**88**	**22**	**-10**	**713**	**0**	**813**
Weekday MD	Proposed Action with School	194	550	534	3112	162	4552
	Proposed Action	200	554	542	3114	162	4572
	Net Difference (w/ School-w/o School)	**-6**	**-4**	**-8**	**-2**	**0**	**-20**
Weekday PM	Proposed Action with School	527	653	982	1873	138	4173
	Proposed Action	541	663	1001	1876	138	4219
	Net Difference (w/ School-w/o School)	**-14**	**-10**	**-19**	**-3**	**0**	**-46**

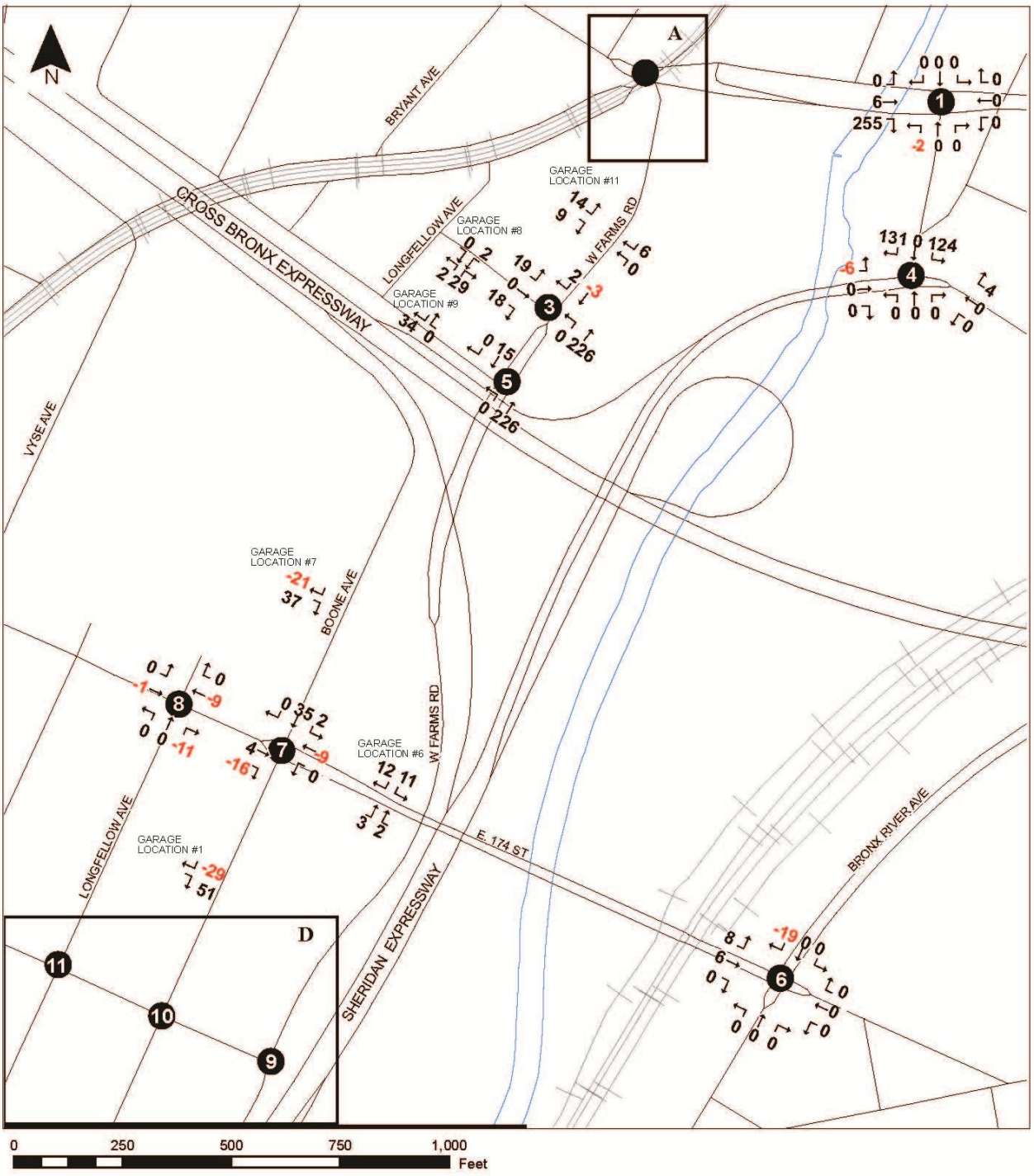
Table 3-13: Comparison of Vehicle Trips Generated by the Proposed Action with and without the School

Peak Hour	Project Alternatives	Mode			
		Auto	Taxi	Truck	Total
Weekday AM	Proposed Action with School	324	56	-8	372
	Proposed Action	242	56	-16	282
	Net Difference (w/ School-w/o School)	**82**	**0**	**8**	**90**
Weekday MD	Proposed Action with School	92	138	-10	220
	Proposed Action	96	138	-10	224
	Net Difference (w/ School-w/o School)	**-4**	**0**	**0**	**-4**
Weekday PM	Proposed Action with School	316	112	-26	402
	Proposed Action	326	112	-26	412
	Net Difference (w/ School-w/o School)	**-10**	**0**	**0**	**-10**

Under the Proposed Action with the New School Mitigation, the existing and no action traffic volumes and analysis would remain the same. The additional trip generation from the school was combined with the rest of the Proposed Action trip generation to determine additional traffic generated by the Proposed Action with School Scenario. Figures 3-4 through 3-6 show the traffic generated by the Proposed Action with School in the AM, midday and PM peak periods. These traffic volumes were then combined with 2022 No Action traffic networks found in Chapter 2.M, Transportation. Figures 3-7 through 3-9 show the 2022 Proposed Action with School Traffic Networks. These traffic volumes were used in the analysis in the proceeding sections.

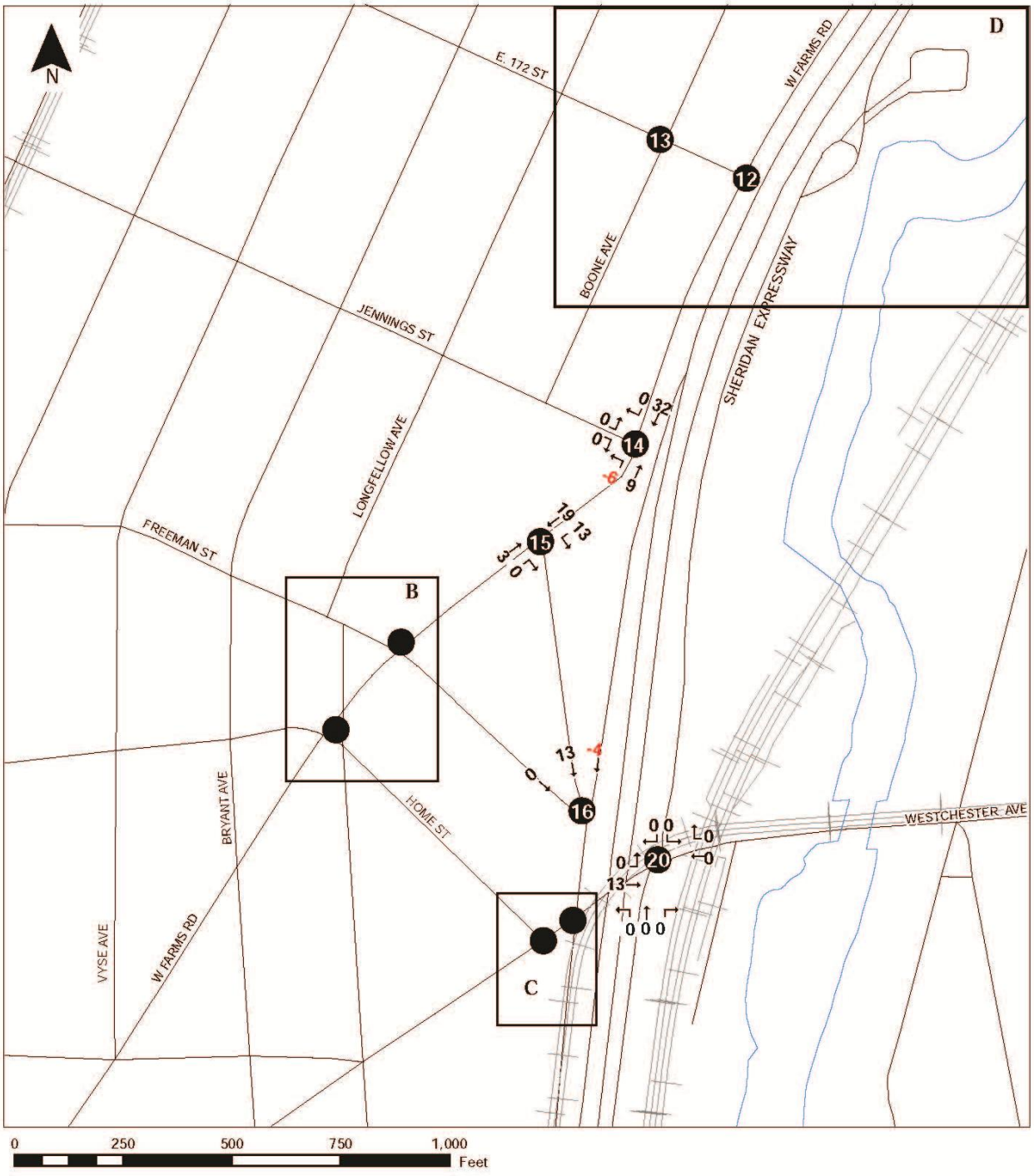
Figure 3-4: AM Project with School Mitigation Generated Vehicle Trips

Figure M-4a: AM Project With School Mitigation Generated Vehicle Trips (North)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

Bronx, New York



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

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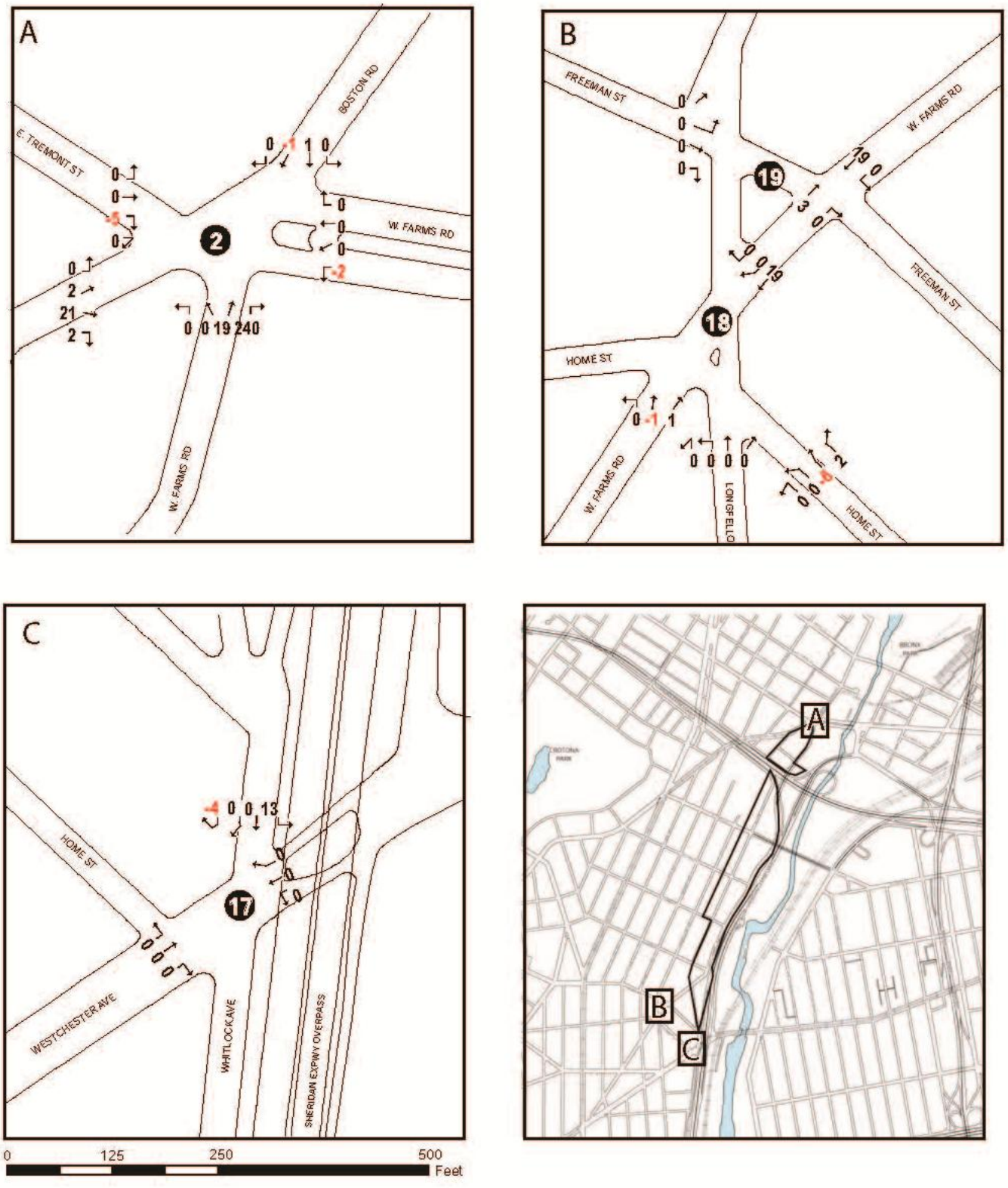
Figure M-4c: AM Project With School Mitigation Generated Vehicle Trips (Insets)



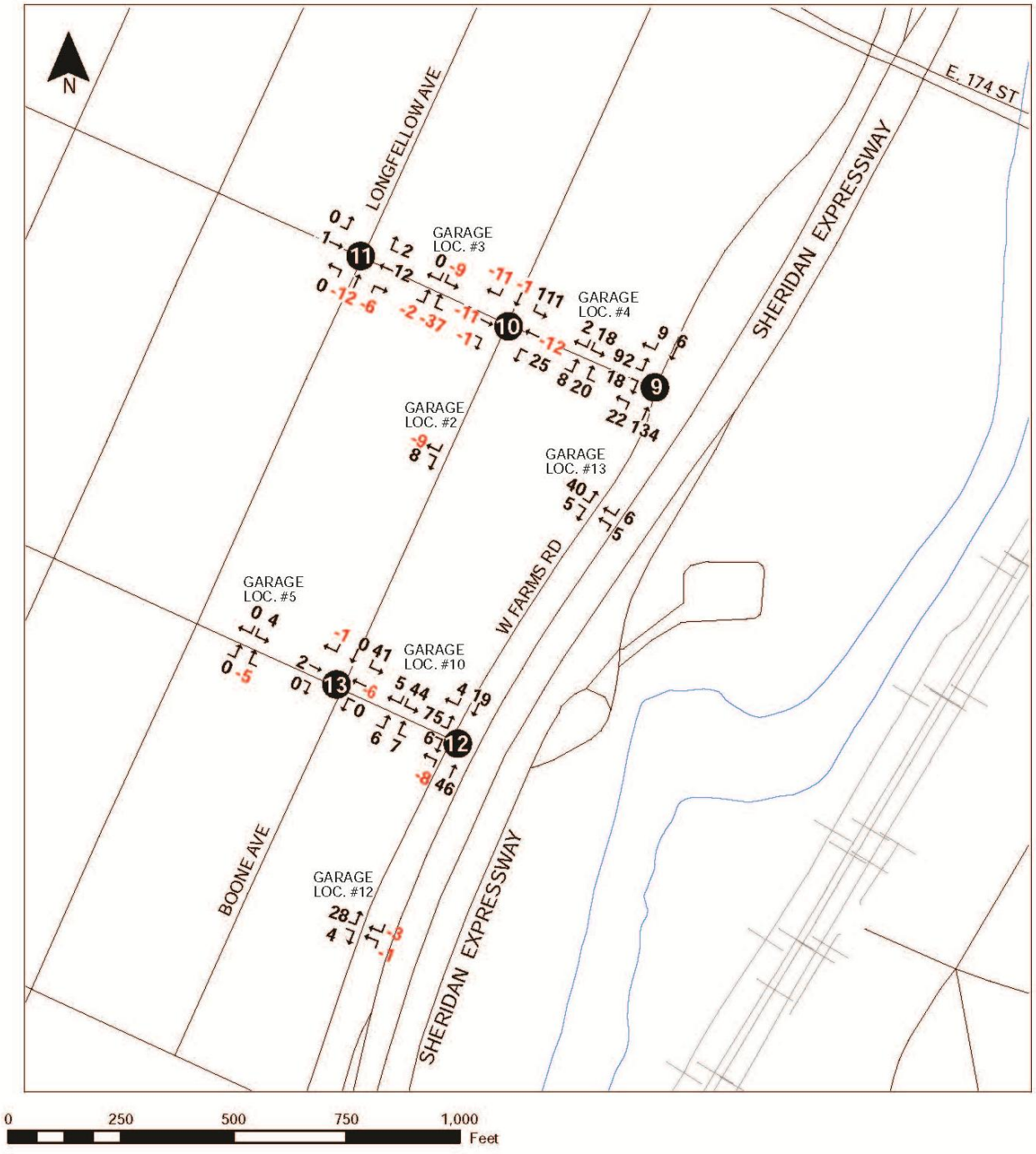
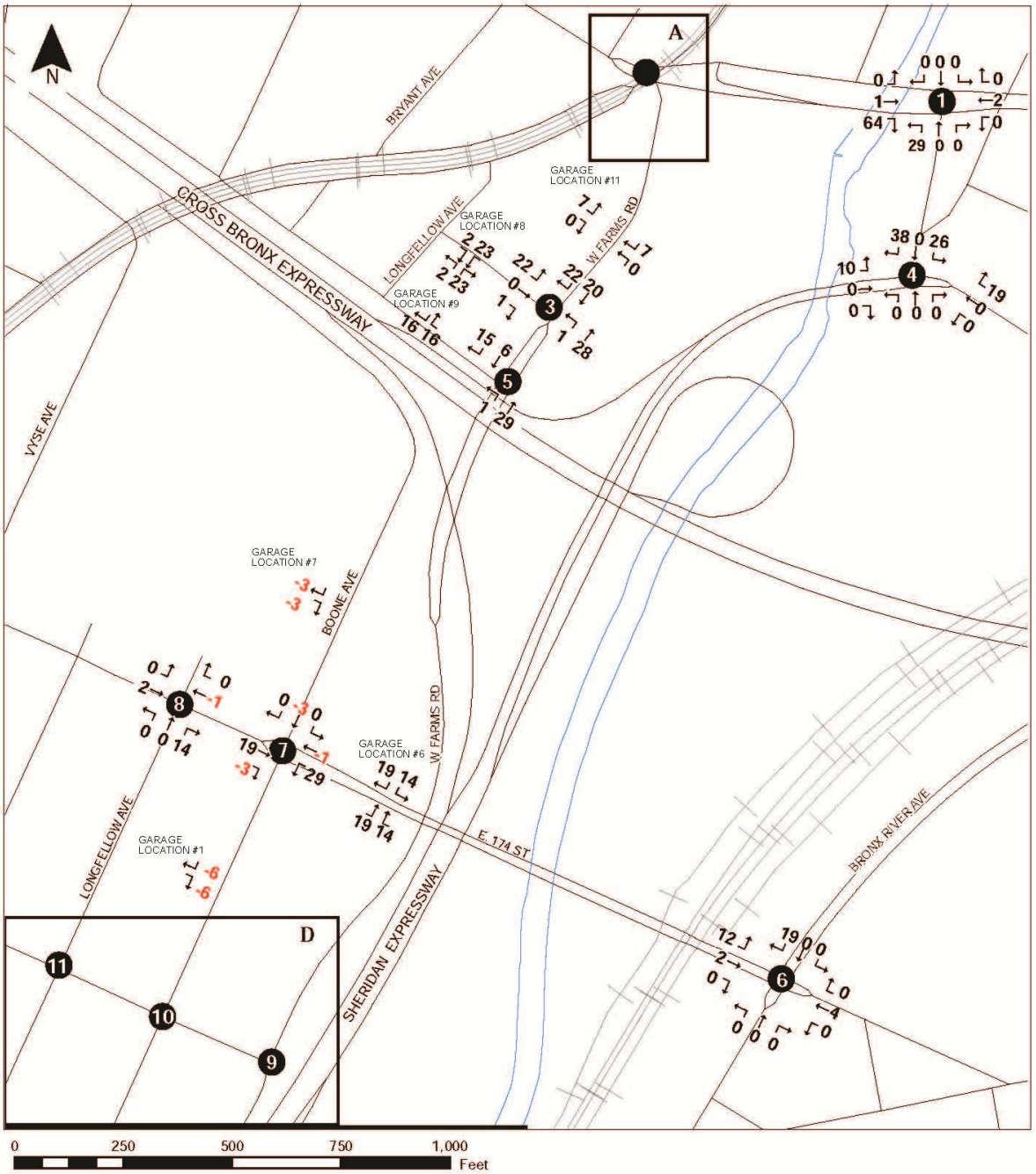

N
LONGFELLOW AVE
E. 174 ST
SHERIDAN EXPRESSWAY
W FARMS RD
BOONE AVE
SHERIDAN EXPRESSWAY
GARAGE LOC. #3
GARAGE LOC. #4
GARAGE LOC. #2
GARAGE LOC. #13
GARAGE LOC. #5
GARAGE LOC. #10
GARAGE LOC. #12
11
10
9
13
12
0 250 500 750 1,000
Feet

Figure 3-5: Midday Project with School Mitigation Generated Vehicle Trips

Figure M-5a: MD Project With School Mitigation Generated Vehicle Trips (North)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

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Figure M-5b: MD Project With School Mitigation Generated Vehicle Trips (South)

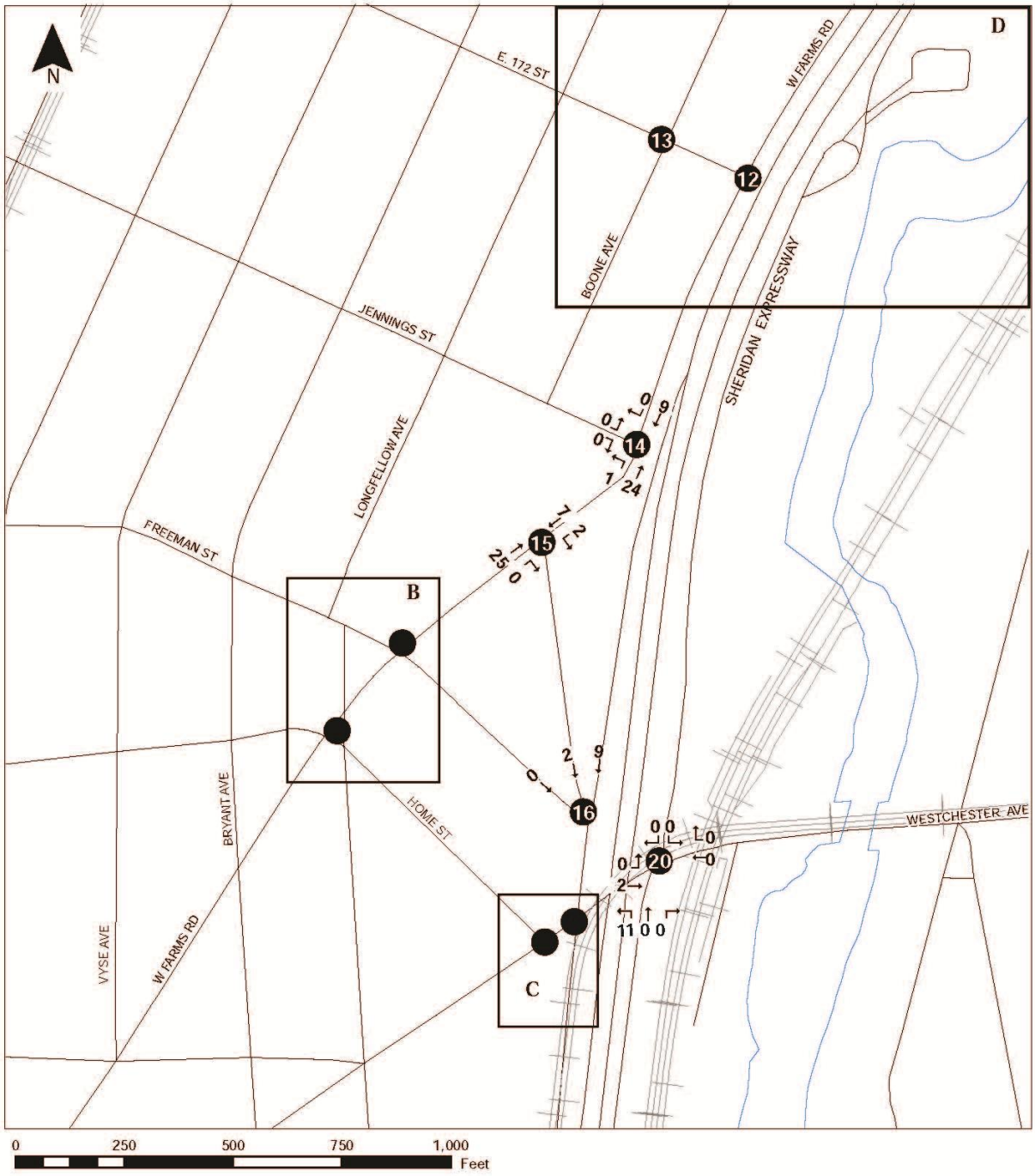

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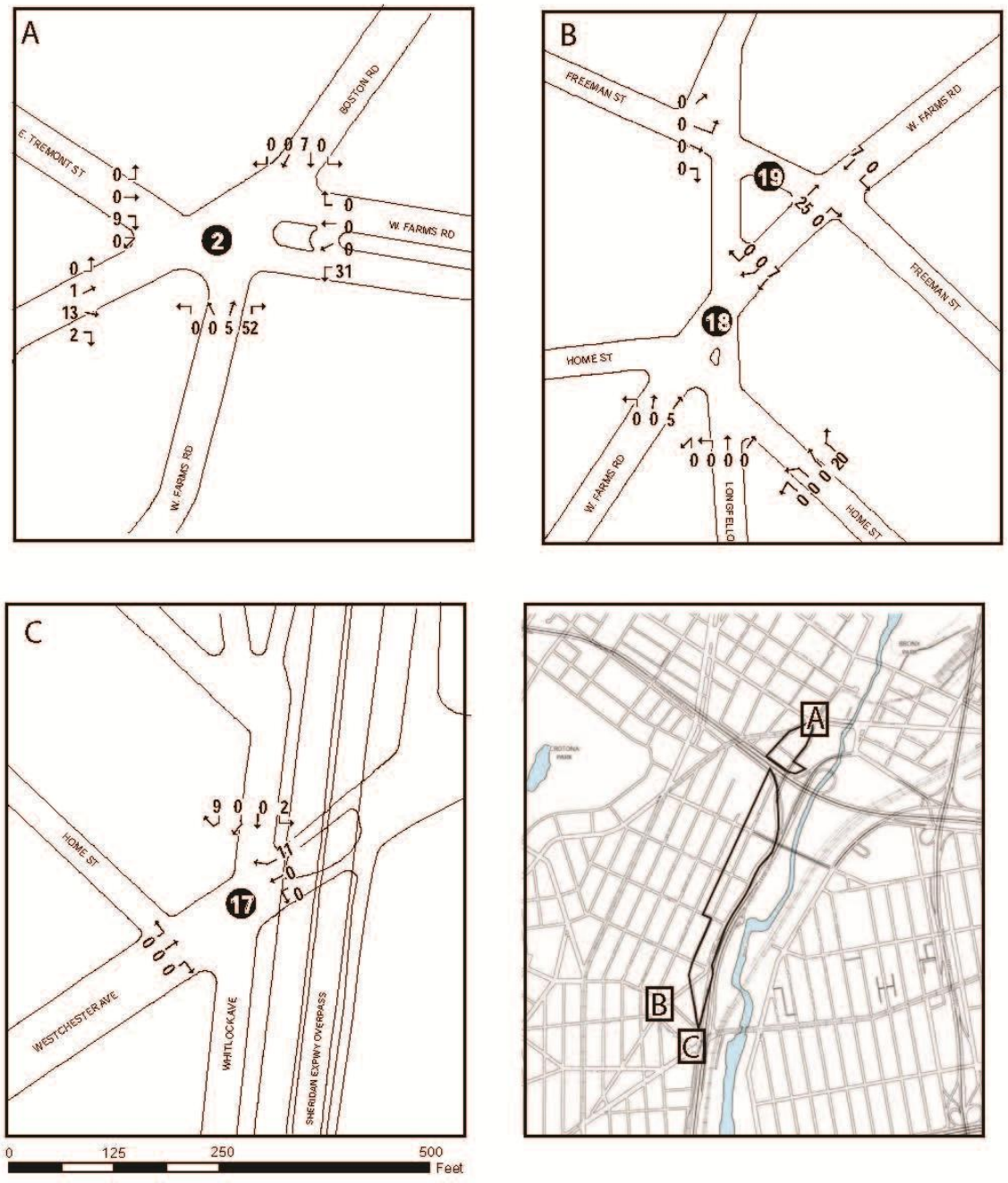
Figure M-5c: MD Project With School Mitigation Generated Vehicle Trips (Insets)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

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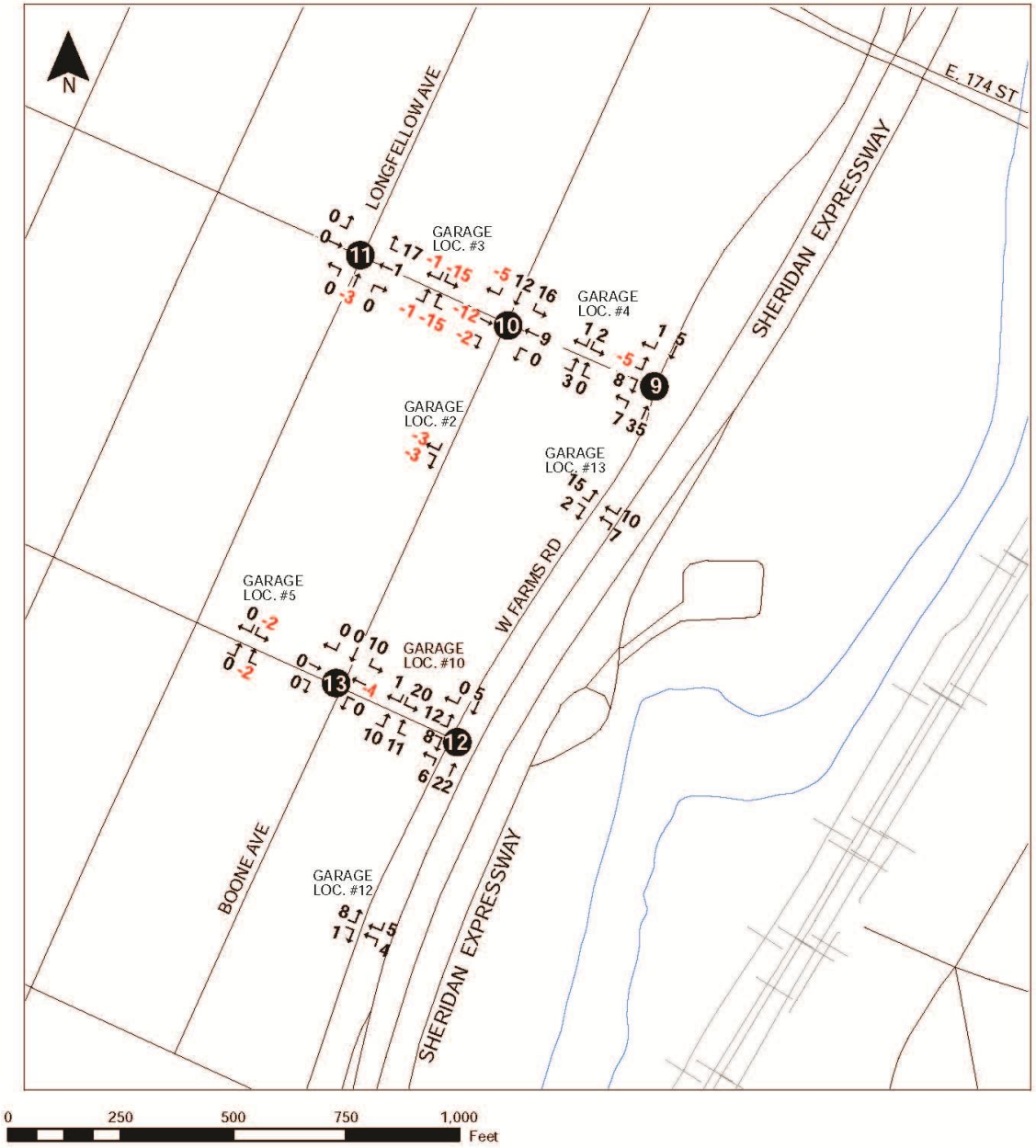
Figure M-5d: MD Project With School Mitigation Generated Vehicle Trips (North)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

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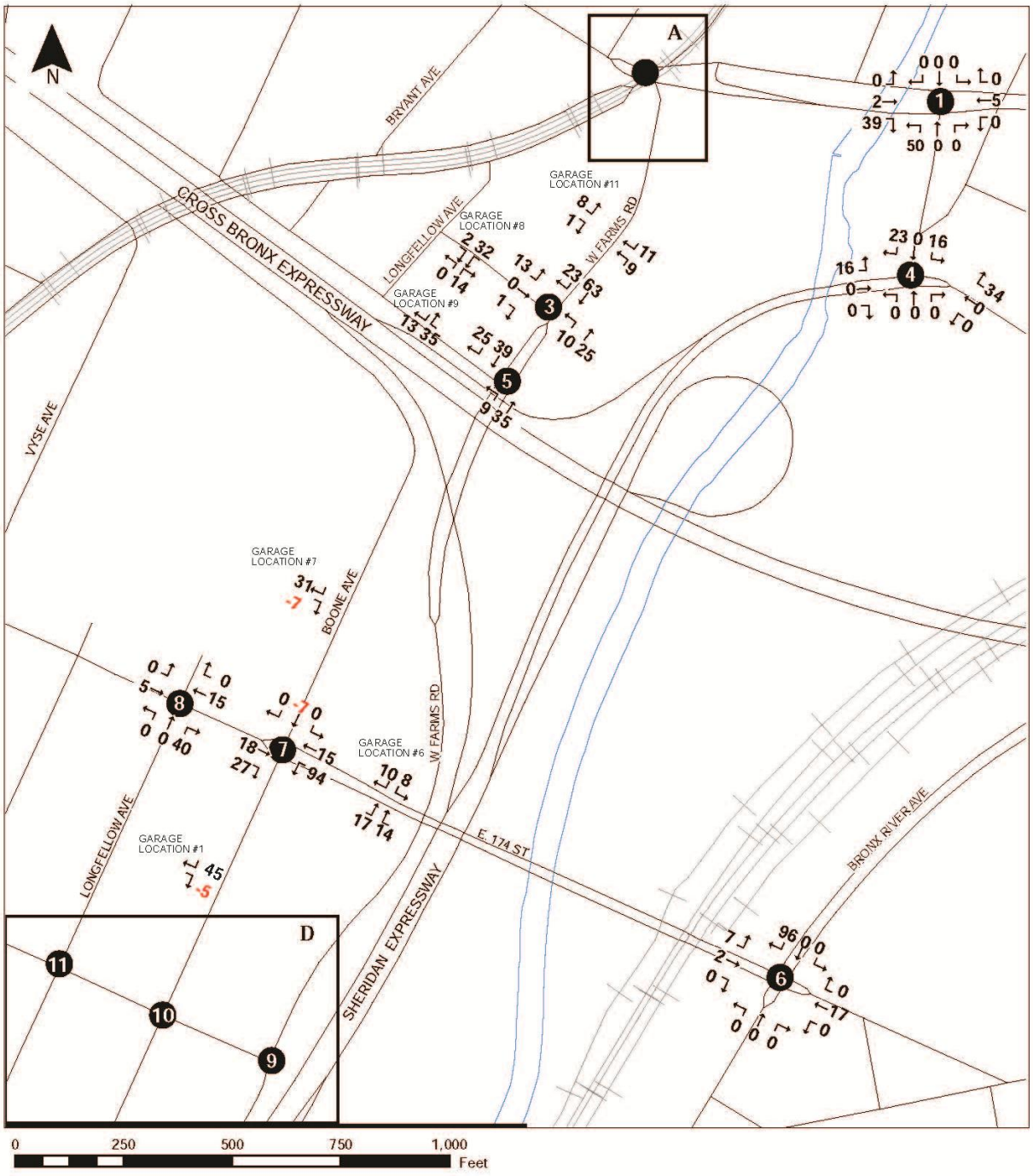
Figure 3-6: PM Project with School Mitigation Generated Vehicle Trips

Figure M-6a: PM Project With School Mitigation Generated Vehicle Trips (North)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

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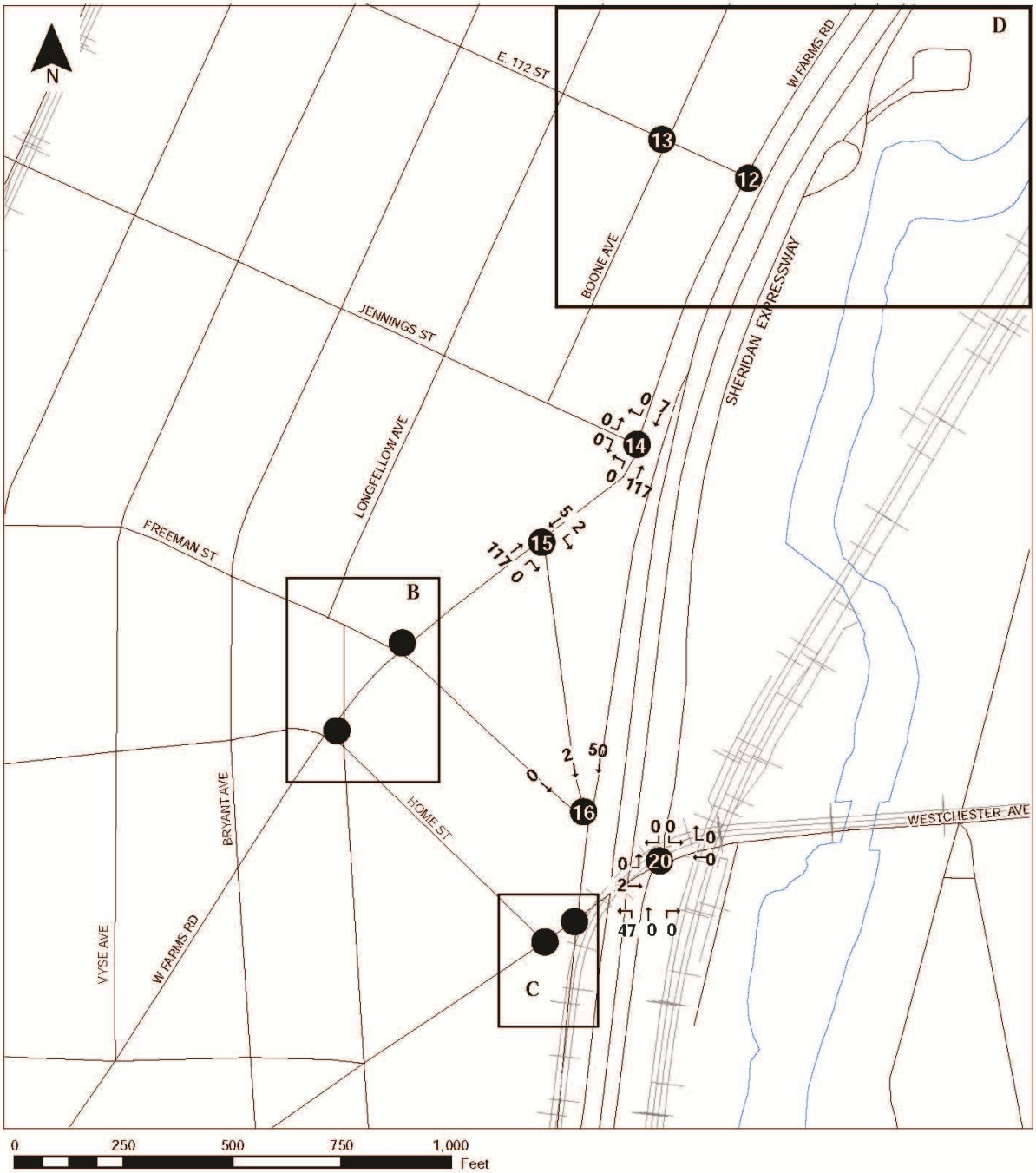
Figure M-6b: PM Project With School Mitigation Generated Vehicle Trips (South)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

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Figure M-6c: PM Project With School Mitigation Generated Vehicle Trips (Insets)

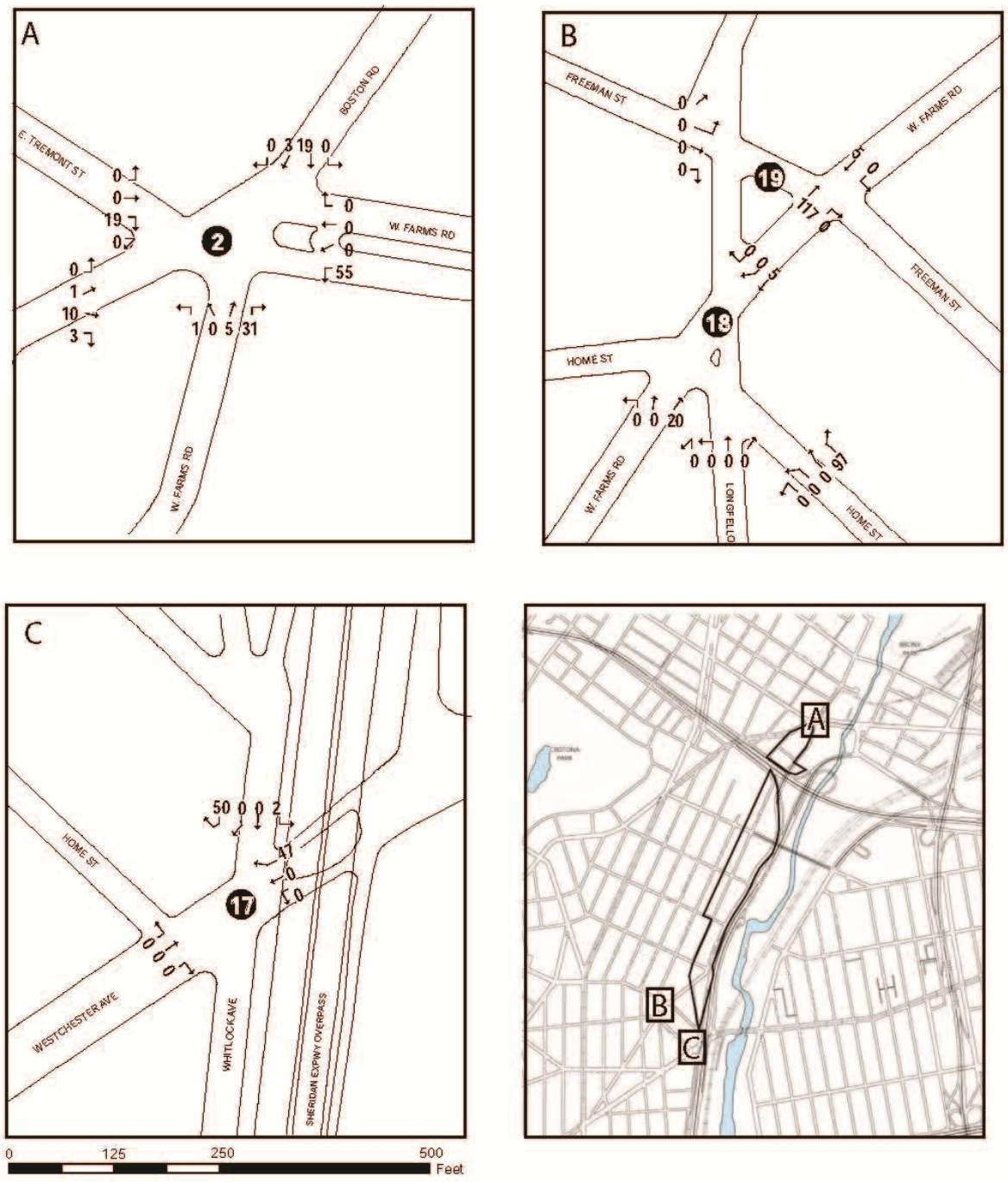
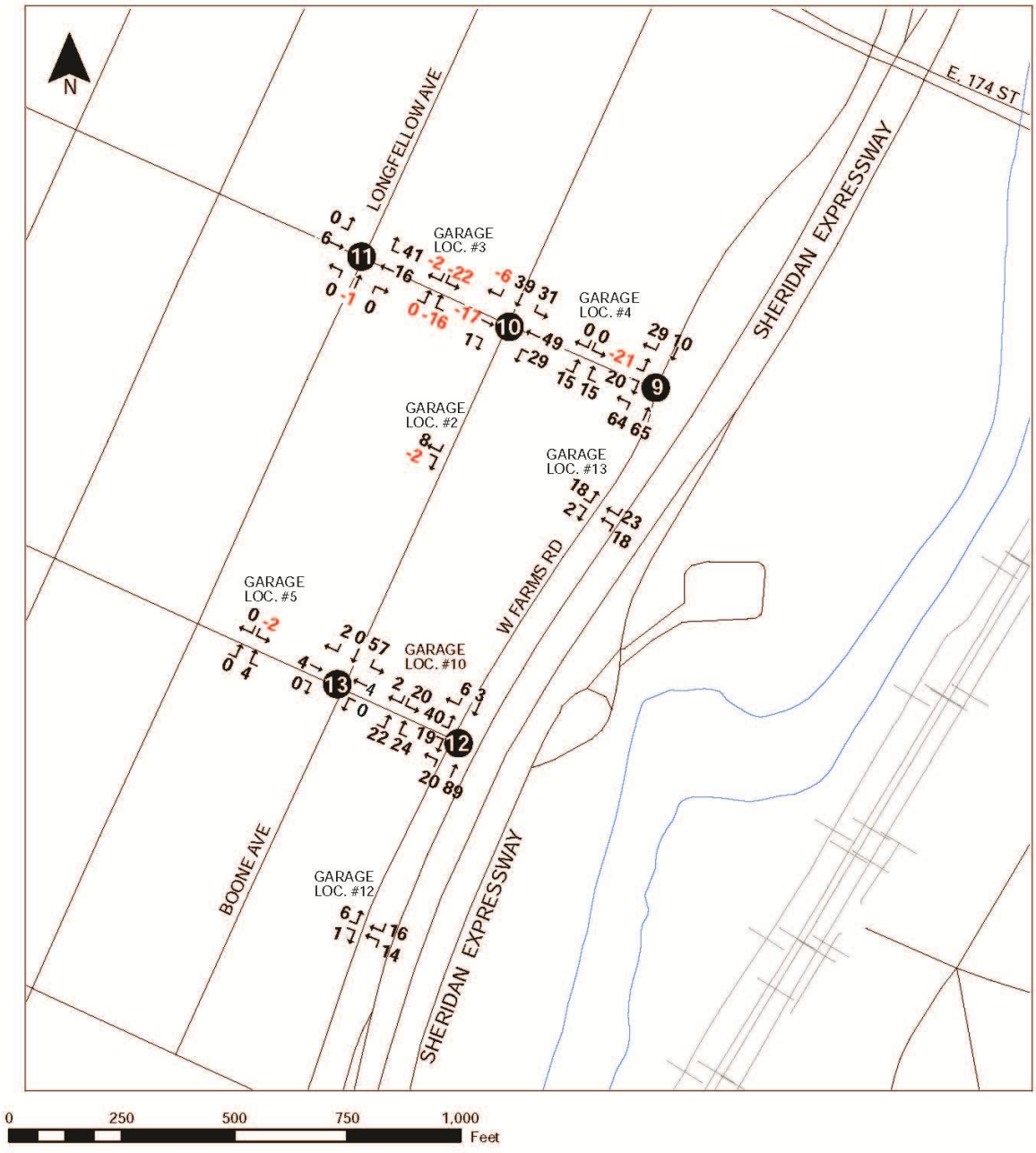


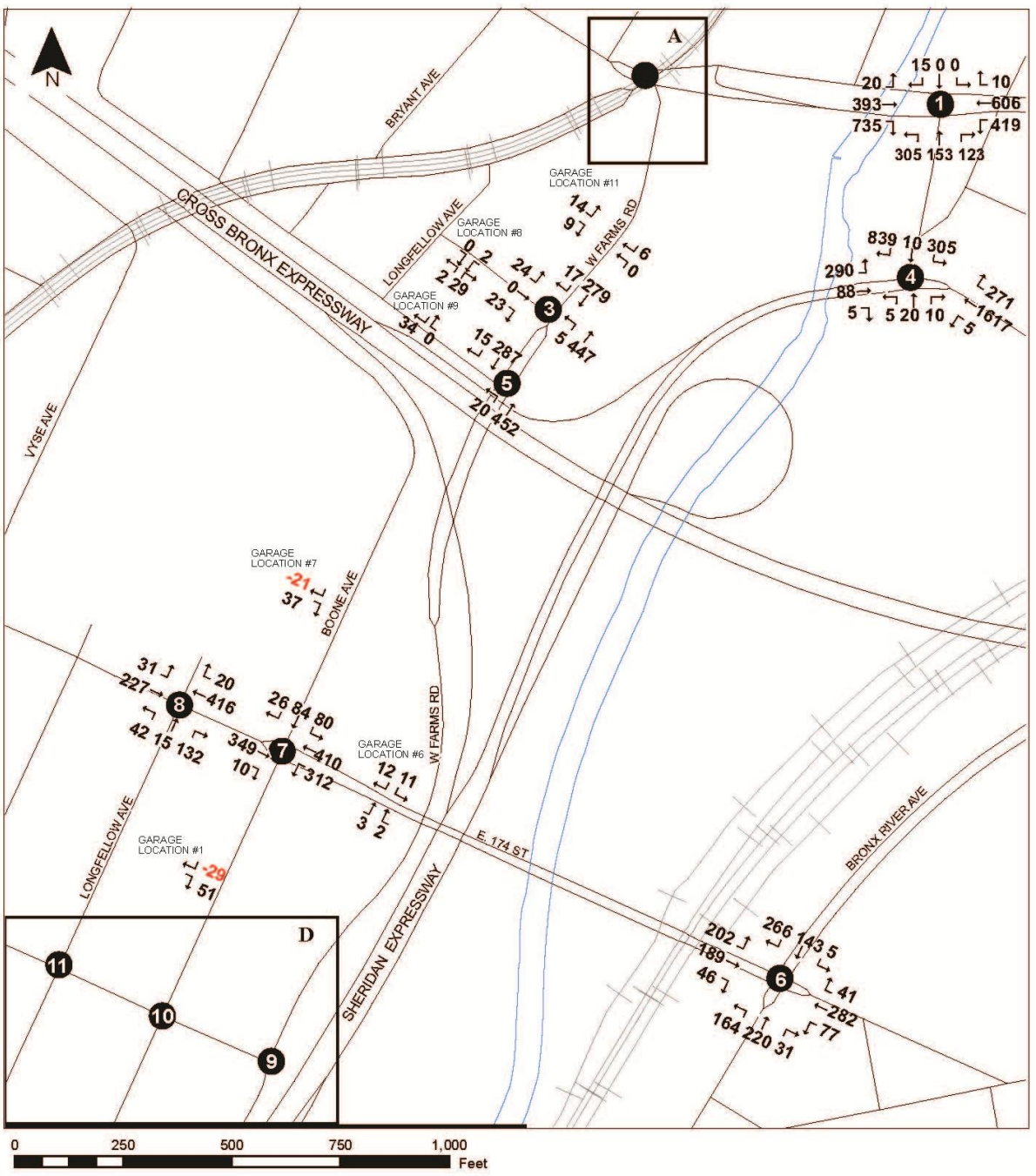
Figure M-6d: PM Project With School Mitigation Generated Vehicle Trips (North)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

Bronx, New York

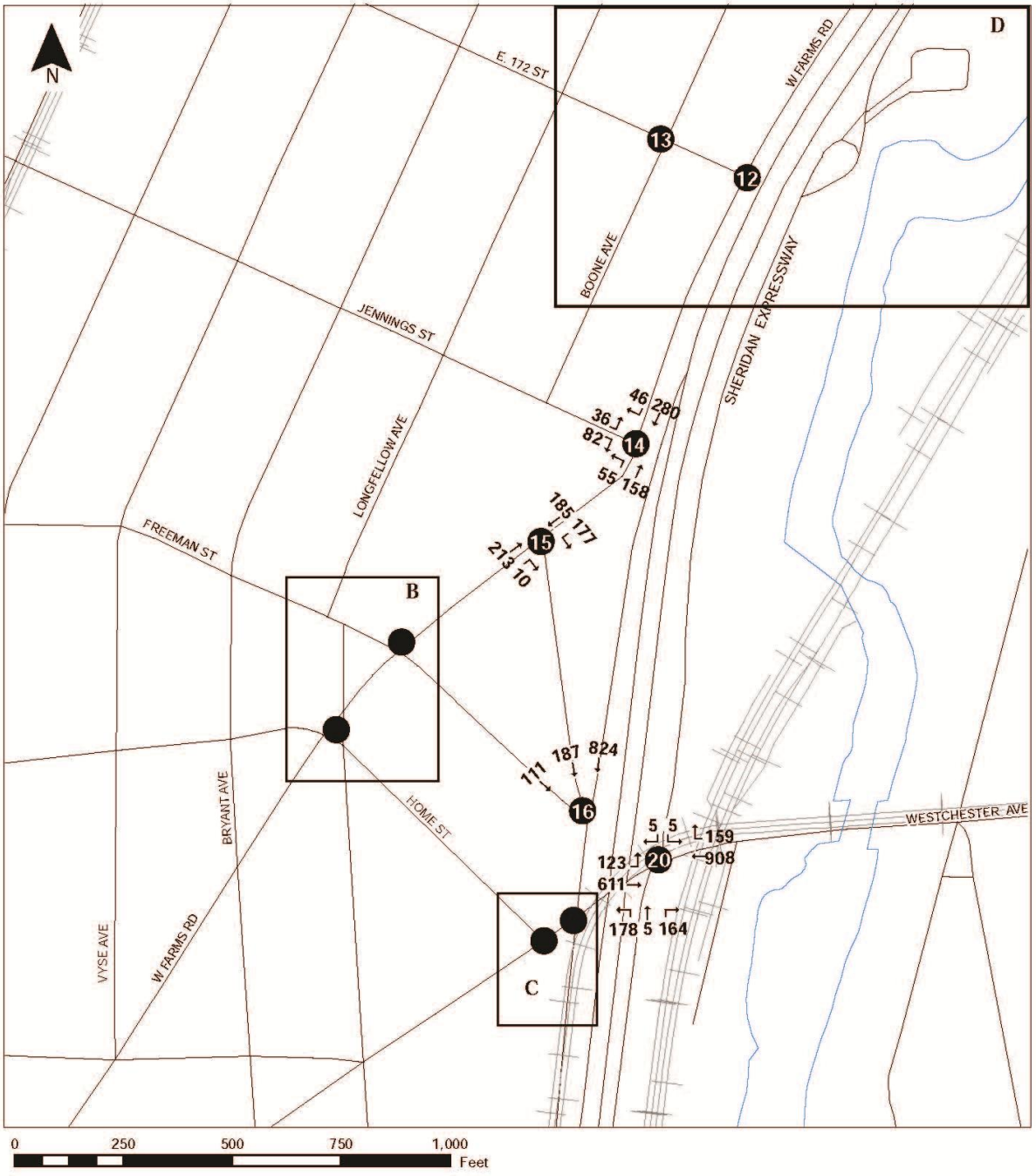
Figure 3-7: Proposed Action With School Mitigation AM Traffic Volume Network



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

Bronx, New York

Figure M-7b: Proposed Action With School Mitigation AM Traffic Volume Network (South)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

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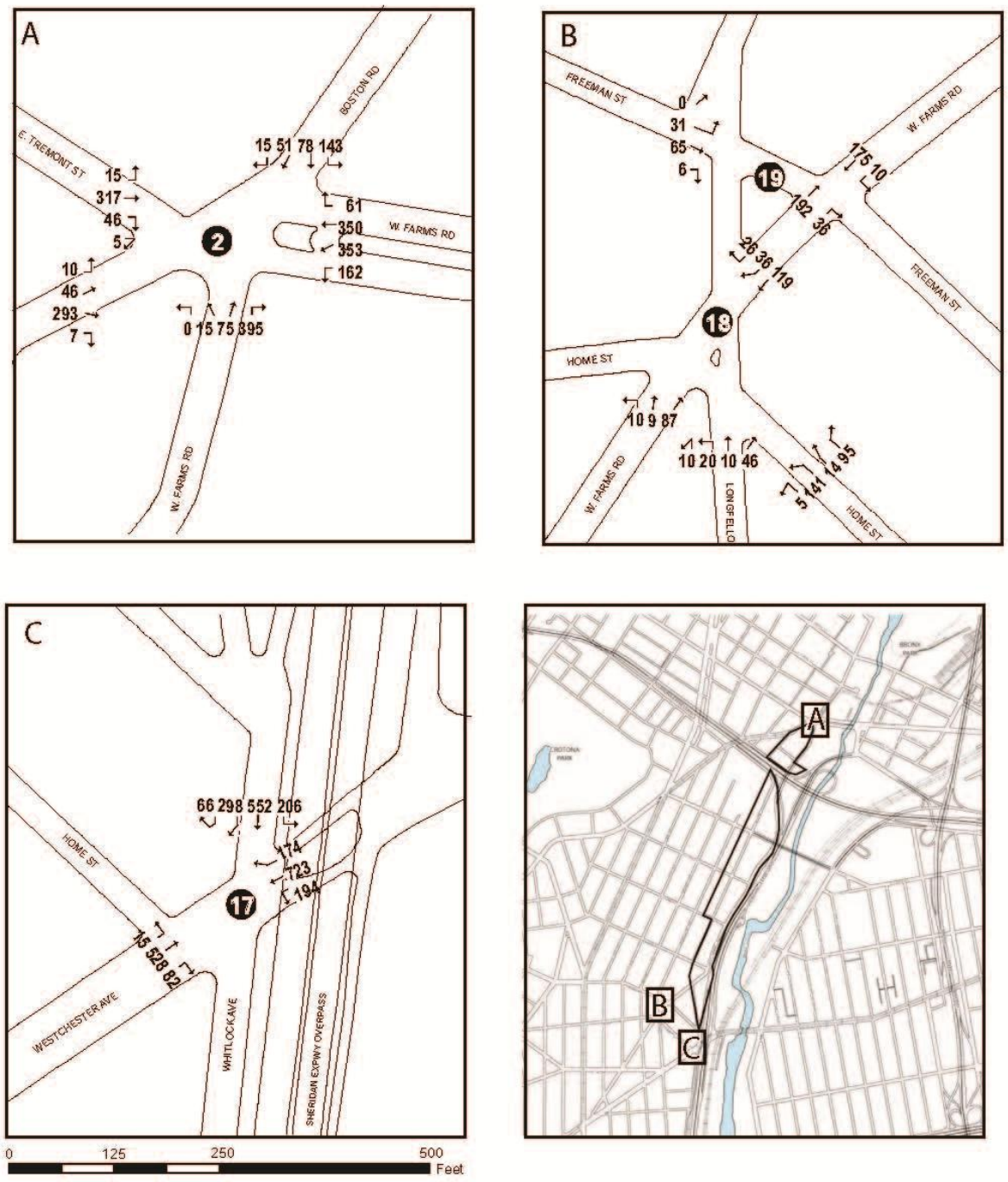
Figure M-7c: Proposed Action With School Mitigation AM Traffic Volume Network (Insets)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

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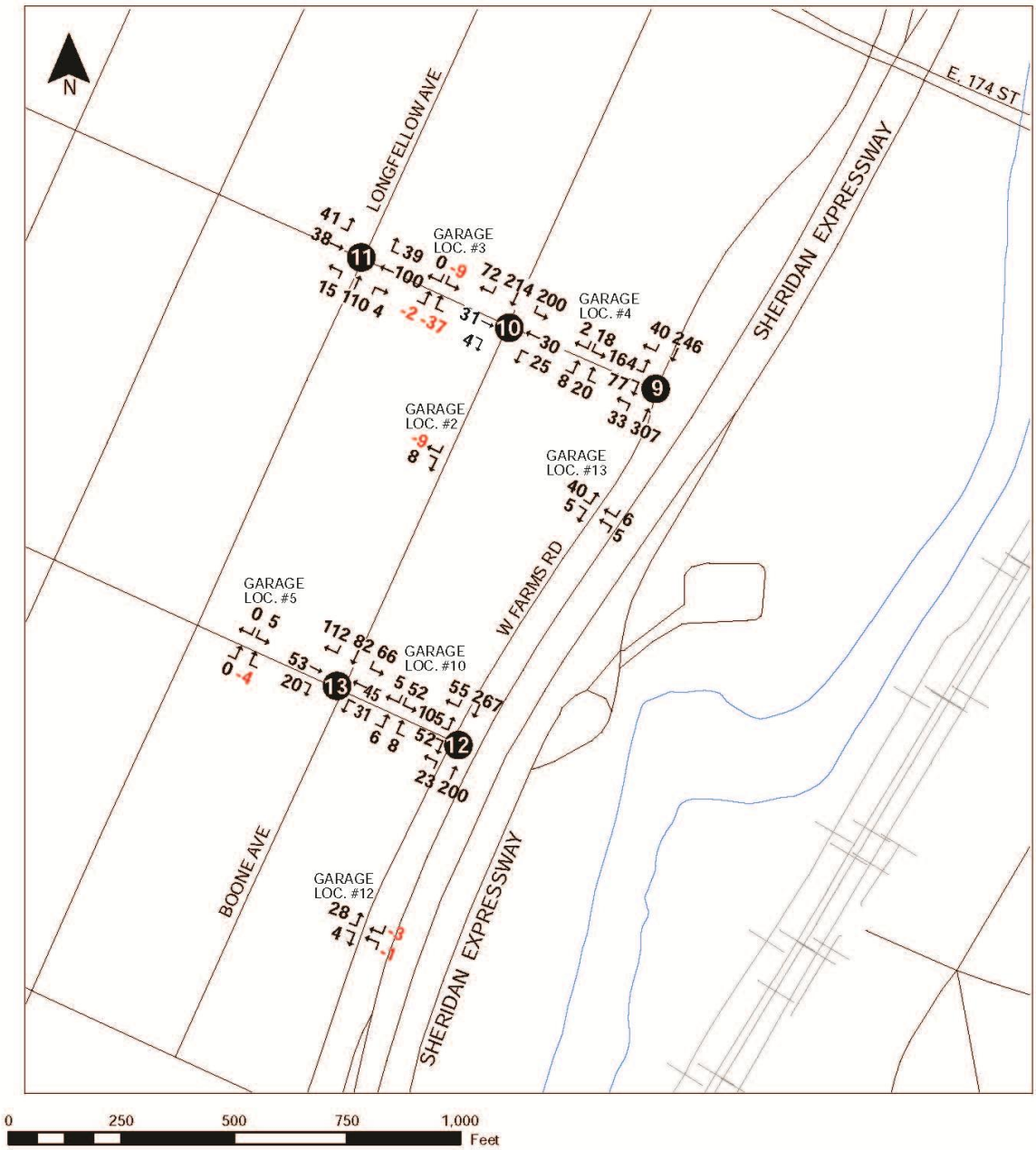
Figure M-7d: Proposed Action With School Mitigation AM Traffic Volume Network (North)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

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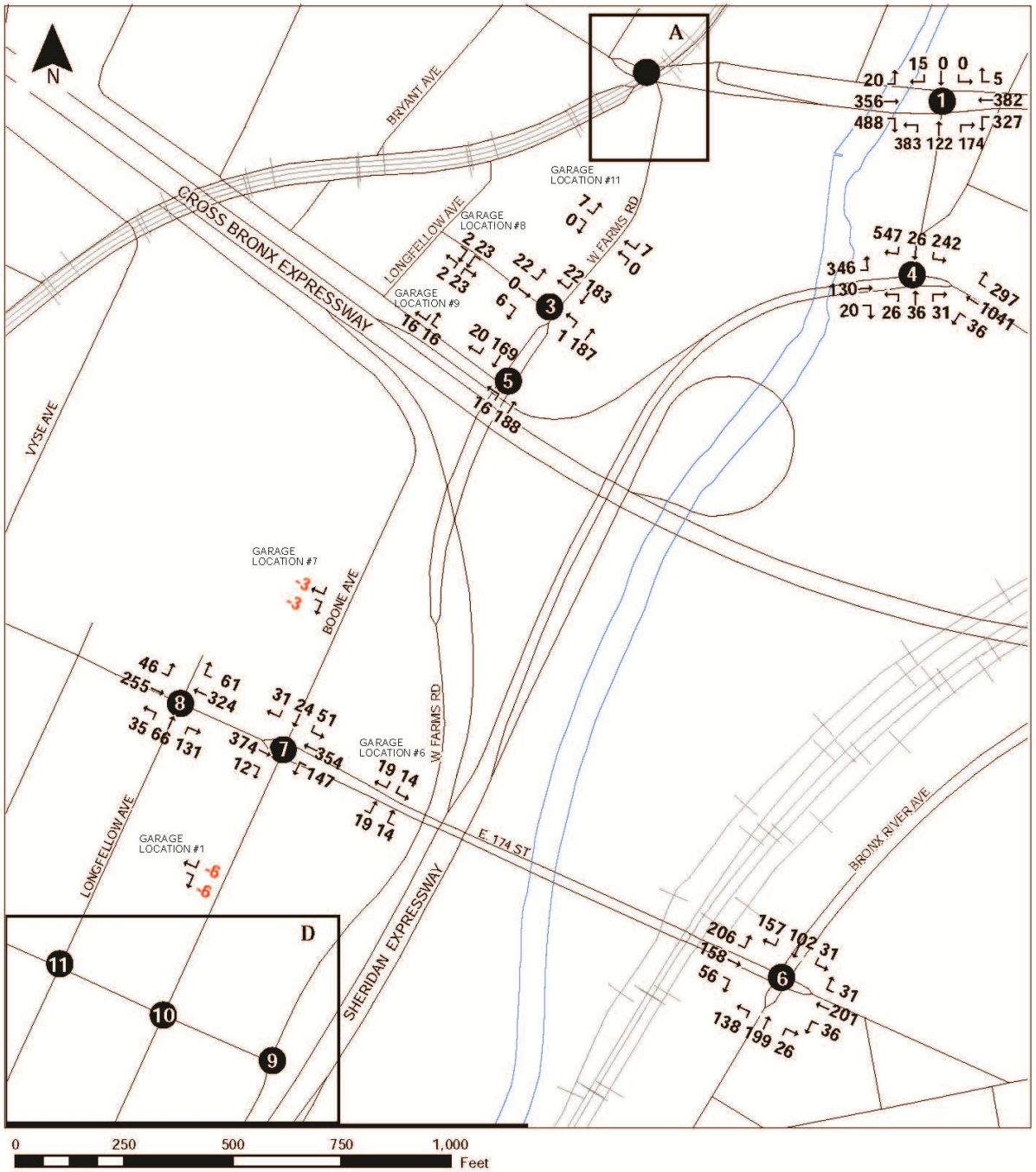
Figure 3-8: : Proposed Action With School Mitigation Midday Traffic Volume Network



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

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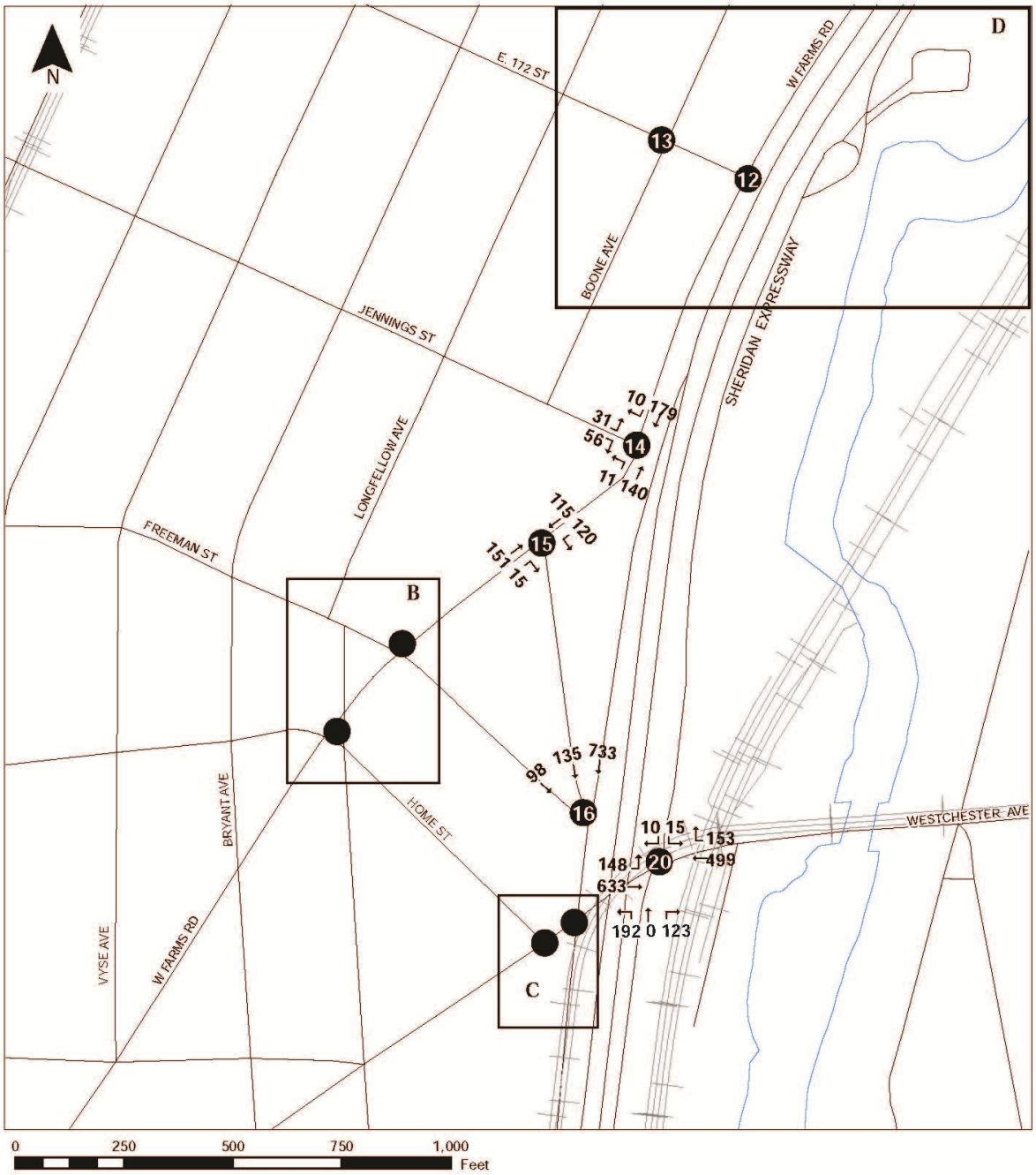
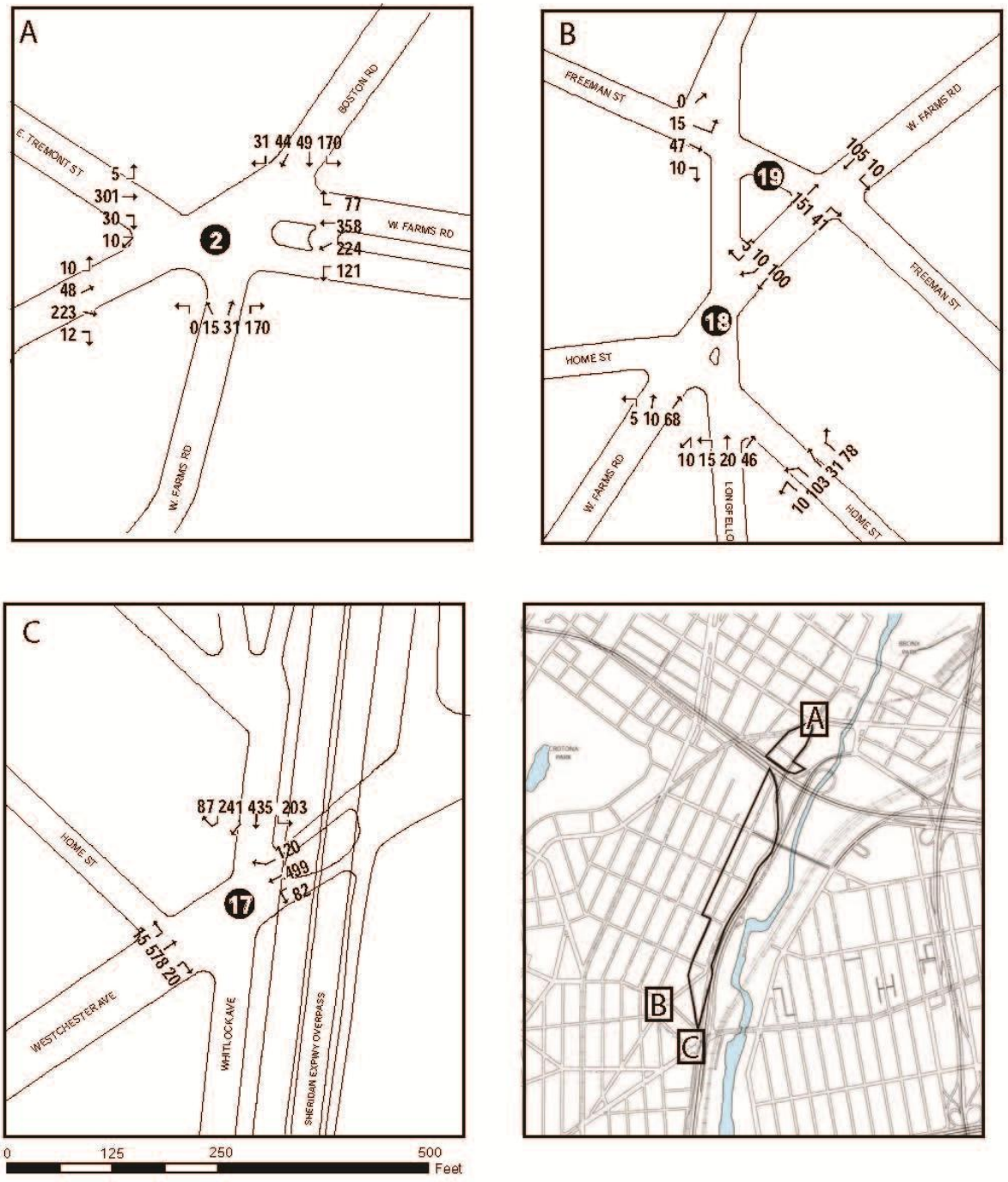
Figure M-8b: Proposed Action With School Mitigation MD Traffic Volume Network (South)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

Bronx, New York

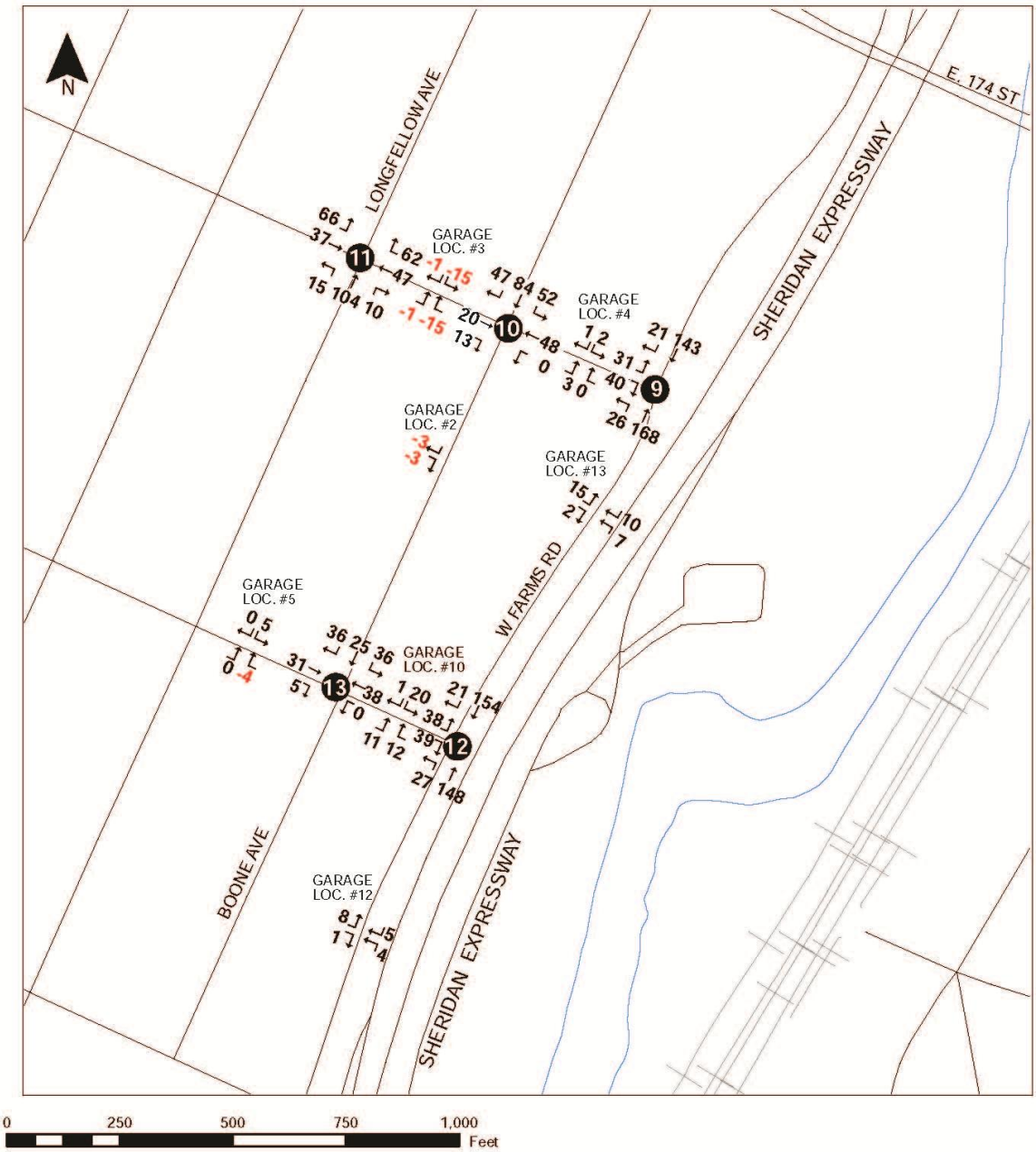
Figure M-8c: Proposed Action With School Mitigation MD Traffic Volume Network (Insets)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

Bronx, New York

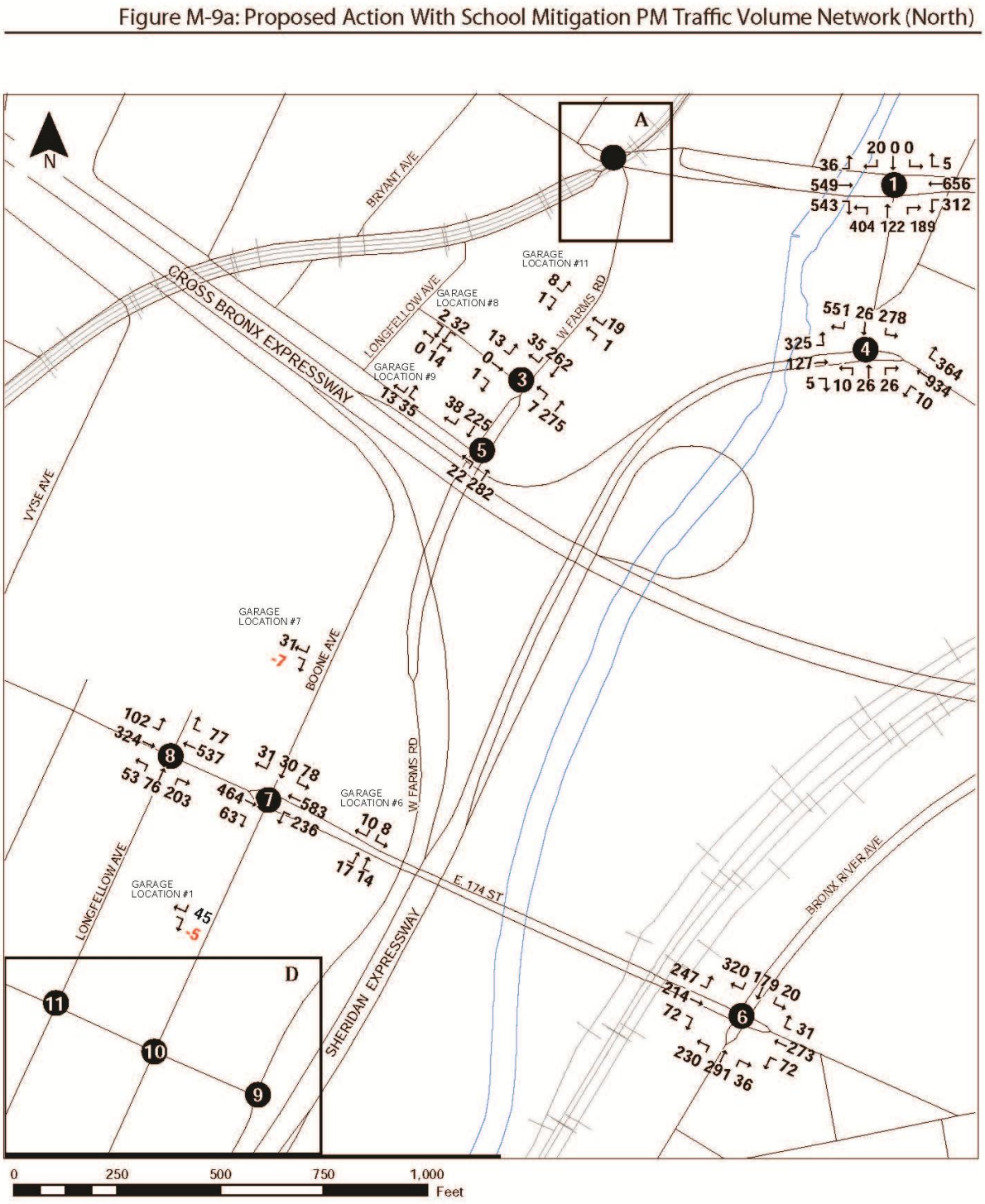
Figure M-8d: Proposed Action With School Mitigation MD Traffic Volume Network (North)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

Bronx, New York

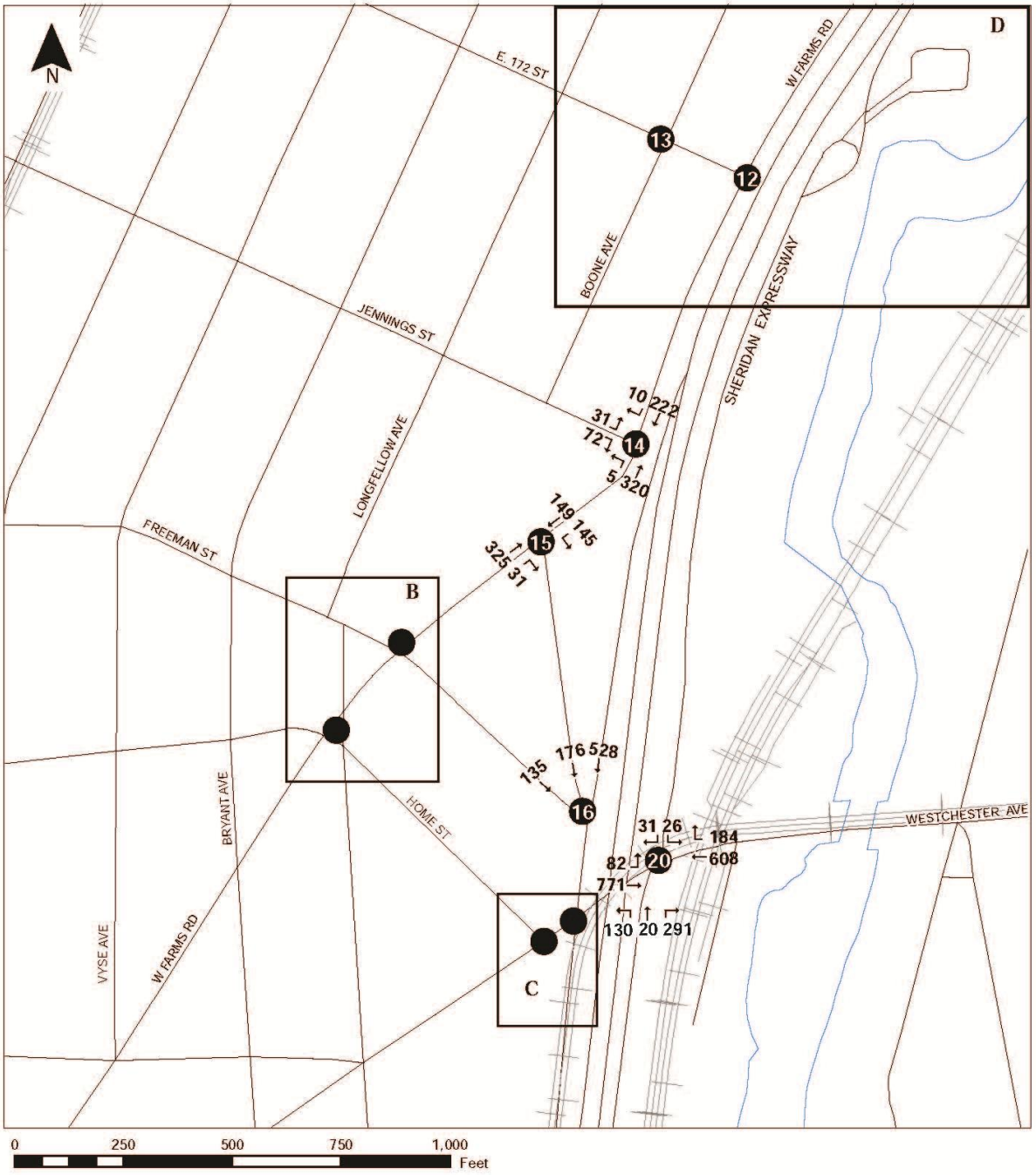
Figure 3-9: Proposed Action With School Mitigation PM Traffic Volume Network



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

Bronx, New York

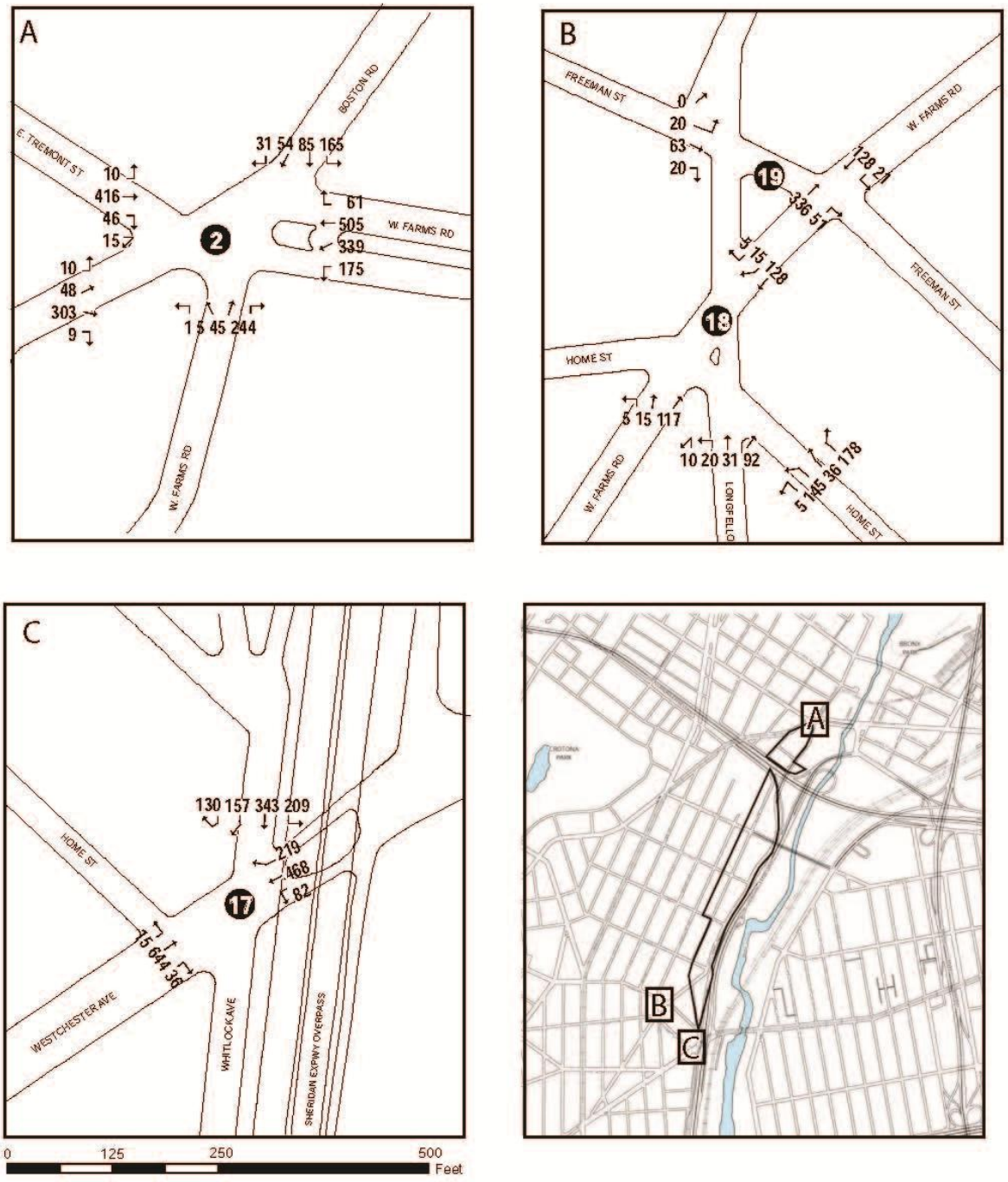
Figure M-9b: Proposed Action With School Mitigation PM Traffic Volume Network (South)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

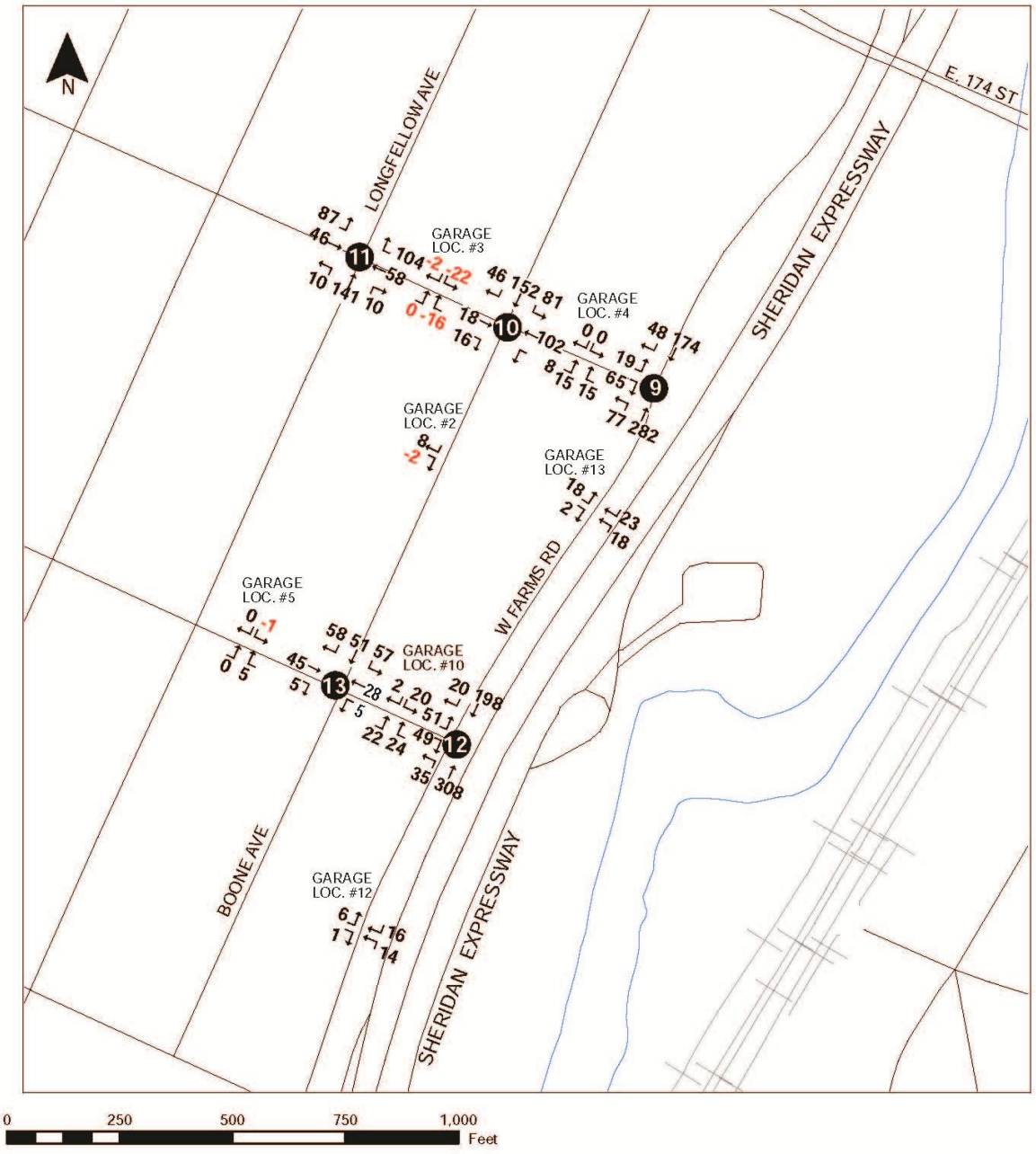
Bronx, New York

Figure M-9c: Proposed Action With School Mitigation PM Traffic Volume Network (Insets)



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

Bronx, New York



CROTONA PARK EAST / WEST FARMS ZONING MAP AMENDMENT

Bronx, New York

Tables 3-14 through 3-19 compare the level of service (LOS) and delays for the 2022 with-action condition with and without the New School Mitigation. Impacts are highlighted for both the RWCDS and New School Mitigation scenarios. In the midday and PM peak periods, traffic is nearly the same in both scenarios and no new impacts are expected. However, in the AM peak period there are two new impacts.

For signalized intersections, while some movements would experience slightly worse delays, no new impacts are expected. Since the school would be located in an area of intersections that are currently unsignalized, the New School Mitigation would result in significant adverse traffic impacts at two unsignalized intersections where significant impacts were not predicted in Chapter 2.M. At Boone Avenue and East 173rd Street, the westbound approach on East 173rd Street would increase from a delay of 18.8 seconds (LOS B) under no-action conditions to 36.9 seconds (LOS E) under with-action conditions with the school. At West Farms Road at East 172nd Street the eastbound approach on East 172nd Street would increase from a delay of 16.3 seconds (LOS C) to 36.7 seconds (LOS E).

Table 3-14: Level of Service Table Comparing No-Action, Proposed Action, and New School Mitigation, Signalized Intersections, AM Peak Period

Int#	Intersection Name	Direction	Lane Group	AM											
				No Build				Build				Build with School			
				Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
1	East Tremont Ave at East 177th Street	Overall		2025		33.1	C	2044		33.3	C	2044		33.3	C
		Eastbound	LT	407	0.42	29.0	C	413	0.42	29.1	C	413	0.42	29.1	C
		Westbound	DefL	419	0.85	46.6	D	419	0.85	47.5	D	419	0.85	47.5	D
			TR	616	0.79	29.3	C	616	0.79	29.3	C	616	0.79	29.3	C
		Northbound	L	307	0.56	33.3	C	305	0.55	33.2	C	305	0.55	33.2	C
			T	153	0.26	27.0	C	153	0.26	27.0	C	153	0.26	27.0	C
			R	123	0.26	27.1	C	123	0.26	27.1	C	123	0.26	27.1	C
		Southbound	R	15	0.02	23.6	C	15	0.02	29.1	C	15	0.02	29.1	C
2	West Farms Road at Boston Rd, East Tremont Ave (1,5)	Overall		2160		267.3	F	2441		274.3	F	2437		273.0	F
		Eastbound	LTR	388	0.74	50.7	D	383	0.73	50.0	D	383	0.73	50.0	D
		Westbound	LTR	928	1.71	372.1	F	926	1.71	370.1	F	926	1.71	370.1	F
		Northbound(6)	LTR	226	0.82	64.9	E	485	1.72	384.9	F	485	1.71	381.5	F
		NE-Bound	T	331	1.22	175.9	F	363	1.34	224.3	F	356	1.32	216.4	F
		Southbound	Def L	143	1.30	233.9	F	143	2.52	778.1	F	143	2.52	778.1	F
			TR	144	1.08	130.5	F	141	1.06	125.1	F	144	1.08	130.5	F
4	East 177th Street at Sheridan Expressway (6)	Overall		3212		75.0	E	3471		106.0	F	3465		104.9	F
		Eastbound	L	296	0.90	76.2	E	290	0.89	73.6	E	290	0.89	73.6	E
			T	93	0.08	5.0	A	93	0.08	5.0	A	93	0.08	5.0	A
		Westbound	R	1622	1.14	99.8	F	1622	1.14	99.8	F	1622	1.14	99.8	F
			T	267	0.42	21.4	C	271	0.43	21.5	C	271	0.43	21.5	C
		Northbound	LTR	35	0.26	44.6	D	35	0.47	55.1	E	35	0.47	55.1	E
		Southbound	LT	191	1.06	126.6	F	318	1.77	415.1	F	315	1.75	407.0	F
			R	708	0.72	34.1	C	842	0.86	41.4	D	839	0.86	41.2	D
6	Bronx River Ave at East 174th Street	Overall		1671		39.5	D	1645		41.4	D	1666		41.6	D
		Eastbound	LTR	423	1.08	95.3	F	436	1.10	101.8	F	437	1.11	102.6	F
		Westbound	LT	359	0.80	39.8	D	356	0.78	38.0	D	359	0.79	38.6	D
			R	41	0.21	22.4	C	41	0.21	22.1	C	41	0.21	22.1	C
		Northbound	L	164	0.52	18.5	B	164	0.49	16.9	B	164	0.50	17.3	B
			TR	251	0.46	14.6	B	251	0.45	14.3	B	251	0.45	14.3	B
		Southbound	LTR	433	0.41	13.1	B	397	0.37	12.5	B	414	0.38	12.6	B
7	Boone Ave at East 174th Street	Overall		1255		25.3	C	1250		22.5	C	1271		25.2	C
		Eastbound	TR	371	0.49	10.4	B	358	0.46	9.7	A	359	0.46	9.7	A
		Westbound	DefL	312	0.96	51.5	D	292	0.88	35.2	D	312	0.94	45.3	D
			LT	419	0.50	10.4	B	410	0.48	10.0	A	410	0.48	10.0	A
		Southbound	LTR	153	0.67	41.0	D	190	0.77	46.8	D	190	0.77	46.8	D
8	Longfellow Ave at East 174th Street	Overall		904		37.9	D	882		34.2	C	883		35.0	D
		Eastbound	LT	259	0.35	8.3	A	258	0.34	8.0	A	258	0.34	8.0	A
		Westbound	TR	445	0.56	11.1	B	436	0.54	10.5	B	436	0.54	10.5	B
		Northbound	LTR	200	1.09	116.3	F	188	1.06	106.9	F	189	1.06	109.4	F
17	Westchester Ave at Sheridan Expressway Service Road, Whitlock Avenue	Overall		2814		42.3	D	2808		41.4	D	2823		42.3	D
		Eastbound	TR	610	0.71	29.8	C	610	0.71	29.8	C	610	0.71	29.8	C
		Westbound	LT	1091	1.06	62.8	E	1083	1.05	60.8	E	1091	1.06	62.8	E
		Southbound	LTR	1113	0.75	28.1	C	1115	0.75	28.1	C	1122	0.76	28.2	C
18	West Farms Road at Home Street, Longfellow Ave (2)	Overall		613		19.3	B	610		18.9	B	628		18.9	B
		NW-Bound	LTR	259	1.04	98.6	F	240	0.94	72.7	E	255	0.99	83.3	F
		Northbound	LTR	86	0.46	36.6	D	86	0.45	36.0	D	86	0.45	36.0	D
		NE-Bound	LT	106	0.19	13.2	B	103	0.19	13.0	B	106	0.19	13.0	B
		SW-Bound	RT	162	0.26	13.9	B	181	0.28	13.9	B	181	0.28	13.9	B
19	West Farms Road at Freeman Street	Overall		493		13.2	B	497		13.5	B	515		13.5	B
		Eastbound	LTR	102	0.32	25.9	C	102	0.32	26.4	C	102	0.32	26.4	C
		Northbound	LT	225	0.31	9.9	A	210	0.29	10.0	A	228	0.31	10.2	B
		Southbound	TR	166	0.26	9.4	A	185	0.29	9.9	A	185	0.29	9.9	A
20	Westchester Ave at Sheridan Expressway Service Road and Northbound Off-Ramp	Overall		1986		52.4	D	1991		52.2	D	1999		52.3	D
		Eastbound	DefL (3)	123	0.41	20.6	C	123	0.41	20.6	C	123	0.41	20.6	C
			LT	598	0.63	17.8	B	611	0.65	18.1	B	611	0.65	18.1	B
		Westbound	T	908	1.08	82.9	F	908	1.08	82.9	F	908	1.08	82.9	F
		Northbound	LTR	347	0.73	33.3	C	339	0.72	32.7	C	347	0.73	33.3	C
		Southbound	LR	10	0.04	19.2	B	10	0.04	19.2	B	10	0.04	19.2	B

Note: (1) Boston Road approaches the intersection in the northeast bound and southbound direction. East Tremont Avenue approaches the intersection in the eastbound and westbound direction. West Farms Road approaches the intersection in the northbound direction

(2) Home Street approaches the intersection ins the northwest bound direction. Longfellow Avenue approaches the intersection in the northbound direction. West Farms Road approaches the intersection in the northeast bound and southwest bound directions.

(3) Defacto left turn only exists in AM peak period.

(4) Left turns are shared with lane group above, volumes listed are only right turn vehicles.

(5) To mitigate a left turn only lane was added westbound on East Tremont Avenue and a right turn only lane was added northbound on West Farms Rd, creating new lane groups

(6) To mitigate, a left turn only lane was added southbound on East 177th Street and right turn only lane was striped northbound exiting the Bus Depot, creating new lane groups

Shaded Lane Groups Represent Impacts

Table 3-15: Level of Service Table Comparing No-Action, Proposed Action, and New School Mitigation, Signalized Intersections, Midday Peak Period

Int#	Intersection Name	Direction	Lane Group	MD											
				No Build				Build				Build with School			
				Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
1	East Tremont Ave at East 177th Street	Overall		1737		24.4	C	1784		25.5	C	1784		25.5	C
		Eastbound	LT	375	0.47	25.4	C	376	0.47	25.4	C	376	0.47	25.4	C
		Westbound	DefL	327	0.58	21.9	C	327	0.58	22.0	C	327	0.58	22.0	C
			TR	385	0.46	13.7	B	387	0.47	13.7	B	387	0.47	13.7	B
		Northbound	L	354	0.71	33.8	C	383	0.76	36.7	D	383	0.76	36.7	D
			T	122	0.24	22.7	C	122	0.24	22.7	C	122	0.24	22.7	C
			R	174	0.65	32.5	C	174	0.65	32.5	C	174	0.65	32.5	C
		Southbound	R	15	0.02	20.2	C	15	0.02	20.2	C	15	0.02	20.2	C
2	West Farms Road at Boston Rd, East Tremont Ave (1,5)	Overall		1809		168.1	F	1931		186.4	F	1929		186.4	F
		Eastbound	LTR	337	0.59	35.7	D	346	0.61	36.3	D	346	0.61	36.3	D
		Westbound	LTR	749	1.47	254.8	F	780	1.53	282.9	F	780	1.53	282.9	F
		Northbound(6)	LTR	159	0.49	38.4	D	218	0.67	43.9	D	216	0.66	43.6	D
		NE-Bound	T	277	0.97	78.5	E	293	1.03	93.7	F	293	1.03	93.7	F
		Southbound	Def L	170	1.29	206.5	F	170	1.46	281.2	F	170	1.45	276.7	F
			TR	117	0.70	51.4	D	124	0.73	54.0	D	124	0.73	54.0	D
4	East 177th Street at Sheridan Expressway (6)	Overall		2685		53.4	D	2780		66.5	E	2778		65.9	E
		Eastbound	L	336	0.98	87.9	F	346	1.01	95.4	F	346	1.01	95.4	F
			T	150	0.14	5.3	A	150	0.14	5.3	A	150	0.14	5.3	A
		Westbound	R	1077	0.83	34.4	C	1077	0.83	34.4	C	1077	0.83	34.4	C
			T	278	0.49	25.2	C	297	0.52	26.0	C	297	0.52	26.0	C
		Northbound	LTR	93	1.15	179.2	F	93	1.52	334.1	F	93	1.50	326.2	F
		Southbound	LT	242	1.13	140.0	F	269	1.25	187.3	F	268	1.24	184.6	F
			R	509	0.53	26.1	C	548	0.57	27.0	C	547	0.56	27.0	C
6	Bronx River Ave at East 174th Street	Overall		1304		38.5	D	1342		40.5	D	1341		40.5	D
		Eastbound	LTR	406	1.08	97.0	F	420	1.10	104.5	F	420	1.10	104.5	F
		Westbound	LT	233	0.55	28.4	C	237	0.55	28.0	C	237	0.55	28.0	C
			R	31	0.15	21.5	C	31	0.15	21.2	C	31	0.15	21.2	C
		Northbound	L	138	0.39	14.5	B	138	0.39	14.4	B	138	0.39	14.4	B
			TR	225	0.36	13.1	B	225	0.35	12.8	B	225	0.35	12.8	B
		Southbound	LTR	271	0.29	11.8	B	291	0.30	11.8	B	290	0.30	11.8	B
7	Boone Ave at East 174th Street	Overall		952		12.3	B	994		12.1	B	993		12.1	B
		Eastbound	TR	370	0.48	10.2	B	386	0.50	10.2	B	386	0.50	10.2	B
		Westbound	DefL	118	0.31	9.2	A	148	0.40	10.5	B	147	0.40	10.5	B
			LT	355	0.42	9.3	A	354	0.42	9.1	A	354	0.42	9.1	A
		Southbound	LTR	109	0.38	31.8	C	106	0.37	31.1	C	106	0.37	31.1	C
8	Longfellow Ave at East 174th Street	Overall		903		28.5	C	918		37.1	D	918		37.1	D
		Eastbound	LT	299	0.45	9.7	A	301	0.45	9.4	A	301	0.45	9.4	A
		Westbound	TR	386	0.46	9.5	A	385	0.45	9.2	A	385	0.45	9.2	A
		Northbound	LTR	218	0.98	84.1	F	232	1.08	114.3	F	232	1.08	114.3	F
17	Westchester Ave at Sheridan Expressway Service Road, Whitlock Avenue	Overall		2243		22.9	C	2266		23.0	C	2265		23.0	C
		Eastbound	TR	598	0.62	27.1	C	598	0.62	27.1	C	598	0.62	27.1	C
		Westbound	LT	690	0.57	16.4	B	701	0.58	16.6	B	701	0.58	16.6	B
		Southbound	LTR	955	0.61	24.8	C	967	0.62	24.9	C	966	0.62	24.9	C
18	West Farms Road at Home Street, Longfellow Ave (2)	Overall		479		26.4	C	512		25.3	C	511		25.3	C
		NW-Bound	LTR	202	0.97	85.3	F	223	1.03	100.7	F	222	1.03	98.8	F
		Northbound	LTR	91	0.66	45.9	D	91	0.65	44.6	D	91	0.65	44.6	D
		NE-Bound	LT	78	0.13	12.6	B	83	0.13	12.4	B	83	0.13	12.4	B
		SW-Bound	RT	108	0.14	12.7	B	115	0.15	12.5	B	115	0.15	12.5	B
19	West Farms Road at Freeman Street	Overall		347		12.3	B	380		12.5	B	379		12.5	B
		Eastbound	LTR	72	0.21	24.2	C	72	0.21	24.6	C	72	0.21	24.6	C
		Northbound	LT	167	0.24	9.2	A	193	0.28	9.8	A	192	0.27	9.8	A
		Southbound	TR	108	0.12	8.2	A	115	0.13	8.5	A	115	0.13	8.5	A
20	Westchester Ave at Sheridan Expressway Service Road and Northbound Off-Ramp	Overall		1607		20.8	C	1620		21.0	C	1620		21.0	C
		Eastbound	DefL (3)												
			LT	779	0.56	15.3	B	781	0.56	15.3	B	781	0.56	15.3	B
		Westbound	T	499	0.47	25.1	C	499	0.47	25.1	C	499	0.47	25.1	C
		Northbound	LTR	304	0.61	28.5	C	315	0.64	29.2	C	315	0.64	29.2	C
		Southbound	LR	25	0.11	20.0	C	25	0.11	20.0	C	25	0.11	20.0	C

Note: (1) Boston Road approaches the intersection in the northeast bound and southbound direction. East Tremont Avenue approaches the intersection in the eastbound and westbound direction. West Farms Road approaches the intersection in the northbound direction

(2) Home Street approaches the intersection ins the northwest bound direction. Longfellow Avenue approaches the intersection in the northbound direction. West Farms Road approaches the intersection in the northeast bound and southwest bound directions.

(3) Defacto left turn only exists in AM peak period.

(4) Left turns are shared with lane group above, volumes listed are only right turn vehicles.

(5) To mitigate a left turn only lane was added westbound on East Tremont Avenue and a right turn only lane was added northbound on West Farms Rd, creating new lane groups

(6) To mitigate, a left turn only lane was added southbound on East 177th Street and right turn only lane was striped northbound exiting the Bus Depot, creating new lane groups

Shaded Lane Groups Represent Impacts

Table 3-16: Level of Service Table Comparing No-Action, Proposed Action, and New School Mitigation, Signalized Intersections, PM Peak Period

Int#	Intersection Name	Direction	Lane Group	PM											
				No Build				Build				Build with School			
				Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
1	East Tremont Ave at East 177th Street	Overall		2217		31.2	C	2293		33.8	C	2293		33.8	C
		Eastbound	LT	583	0.53	27.9	C	585	0.53	28.0	C	585	0.53	28.0	C
		Westbound	DefL	312	0.68	35.5	D	312	0.68	35.6	D	312	0.68	35.6	D
			TR	657	0.75	23.8	C	661	0.75	24.0	C	661	0.75	24.0	C
		Northbound	L	353	0.77	45.7	D	404	0.88	55.7	E	404	0.88	55.7	E
			T	123	0.23	29.8	C	122	0.23	29.8	C	122	0.23	29.8	C
			R	189	0.43	33.9	C	189	0.43	33.9	C	189	0.43	33.9	C
		Southbound	R	20	0.02	26.9	C	20	0.02	26.9	C	20	0.02	26.9	C
2	West Farms Road at Boston Rd, East Tremont Ave (1,5)	Overall		2421		211.0	F	2569		242.6	F	2567		242.6	F
		Eastbound	LTR	468	0.78	51.5	D	487	0.82	53.8	D	487	0.82	53.8	D
		Westbound	LTR	1025	1.52	287.4	F	1080	1.63	335.0	F	1080	1.63	335.0	F
		Northbound(6)	LTR	259	0.72	56.2	E	297	0.83	64.1	E	295	0.82	63.7	E
		NE-Bound	T	355	1.21	164.7	F	370	1.26	186.6	F	370	1.26	186.6	F
		Southbound	Def L	165	1.08	139.2	F	165	1.08	137.2	F	165	1.08	137.2	F
			TR	149	0.86	77.5	E	170	0.98	101.4	F	170	0.98	101.4	F
4	East 177th Street at Sheridan Expressway (6)	Overall		2593		44.4	D	2684		47.9	D	2682		47.8	D
		Eastbound	L	309	0.77	54.5	D	325	0.81	57.7	E	325	0.81	57.7	E
			T	132	0.12	5.2	A	132	0.12	5.2	A	132	0.12	5.2	A
		Westbound	R	944	0.84	37.5	D	944	0.84	37.5	D	944	0.84	37.5	D
			T	330	0.62	31.5	C	364	0.68	33.9	C	364	0.68	33.9	C
		Northbound	LTR	62	0.45	52.0	D	62	0.49	54.6	D	62	0.49	54.4	D
		Southbound	LT	288	1.12	138.0	F	305	1.18	161.5	F	304	1.18	160.2	F
			R	528	0.50	23.2	C	552	0.53	23.6	C	551	0.53	23.6	C
6	Bronx River Ave at East 174th Street	Overall		1865		44.0	D	1988		45.2	D	1985		45.1	D
		Eastbound	LTR	525	1.08	93.6	F	533	1.08	93.4	F	533	1.08	93.4	F
		Westbound	LT	329	0.92	54.2	D	345	0.93	56.5	E	345	0.93	56.5	E
			R	31	0.11	21.0	C	31	0.11	20.7	C	31	0.11	20.7	C
		Northbound	L	230	0.79	30.4	C	230	0.89	43.0	D	230	0.88	42.2	D
			TR	327	0.47	14.8	B	327	0.47	14.5	B	327	0.47	14.5	B
		Southbound	LTR	423	0.34	12.3	B	522	0.41	12.9	B	519	0.41	12.9	B
7	Boone Ave at East 174th Street	Overall		1340		14.7	B	1488		18.2	B	1485		18.0	B
		Eastbound	TR	483	0.56	11.4	B	527	0.62	12.3	B	527	0.62	12.3	B
		Westbound	DefL	143	0.48	12.5	B	239	0.85	33.1	C	236	0.84	32.1	C
			LT	568	0.60	12.0	B	583	0.61	12.0	B	583	0.61	12.0	B
		Southbound	LTR	146	0.53	35.1	D	139	0.49	33.8	C	139	0.49	33.8	C
8	Longfellow Ave at East 174th Street	Overall		1313		43.3	D	1372		67.6	E	1372		67.6	E
		Eastbound	LT	421	0.81	23.1	C	426	0.82	23.2	C	426	0.82	23.2	C
		Westbound	TR	599	0.67	13.4	B	614	0.68	13.4	B	614	0.68	13.4	B
		Northbound	LTR	293	1.12	117.7	F	332	1.32	197.7	F	332	1.32	197.7	F
17	Westchester Ave at Sheridan Expressway Service Road, Whitlock Avenue	Overall		2189		22.4	C	2291		22.7	C	2288		22.6	C
		Eastbound	TR	680	0.69	28.7	C	680	0.69	28.7	C	680	0.69	28.7	C
		Westbound	LT	722	0.52	15.4	B	770	0.55	15.9	B	769	0.55	15.9	B
		Southbound	LTR	787	0.50	23.1	C	841	0.54	23.6	C	839	0.54	23.6	C
18	West Farms Road at Home Street, Longfellow Ave (2)	Overall		682		55.8	E	806		50.7	D	802		50.8	D
		NW-Bound	LTR	267	1.18	150.1	F	367	1.66	351.4	F	364	1.64	345.3	F
		Northbound	LTR	153	1.08	116.8	F	153	1.06	109.1	F	153	1.06	109.1	F
		NE-Bound	LT	118	0.22	13.5	B	137	0.25	13.6	B	137	0.25	13.6	B
		SW-Bound	RT	144	0.23	13.5	B	149	0.24	13.4	B	148	0.23	13.3	B
19	West Farms Road at Freeman Street	Overall		519		14.4	B	643		16.3	B	639		16.2	B
		Eastbound	LTR	103	0.39	27.2	C	103	0.40	27.7	C	103	0.40	27.7	C
		Northbound	LT	271	0.43	11.4	B	390	0.62	15.3	B	387	0.62	15.1	B
		Southbound	TR	145	0.21	8.9	A	150	0.22	9.3	A	149	0.22	9.3	A
20	Westchester Ave at Sheridan Expressway Service Road and Northbound Off-Ramp	Overall		1910		23.7	C	1960		25.6	C	1959		25.6	C
		Eastbound	DefL (3)												
			LT	851	0.57	15.5	B	853	0.57	15.5	B	853	0.57	15.5	B
		Westbound	T	608	0.58	26.9	C	608	0.58	26.9	C	608	0.58	26.9	C
		Northbound	LTR	394	0.78	35.8	D	442	0.87	42.7	D	441	0.87	42.5	D
		Southbound	LR	57	0.18	21.1	C	57	0.18	21.0	C	57	0.18	21.0	C

Note: (1) Boston Road approaches the intersection in the northeast bound and southbound direction. East Tremont Avenue approaches the intersection in the eastbound and westbound direction. West Farms Road approaches the intersection in the northbound direction

(2) Home Street approaches the intersection ins the northwest bound direction. Longfellow Avenue approaches the intersection in the northbound direction. West Farms Road approaches the intersection in the northeast bound and southwest bound directions.

(3) Defacto left turn only exists in AM peak period.

(4) Left turns are shared with lane group above, volumes listed are only right turn vehicles.

(5) To mitigate a left turn only lane was added westbound on East Tremont Avenue and a right turn only lane was added northbound on West Farms Rd, creating new lane groups

(6) To mitigate, a left turn only lane was added southbound on East 177th Street and right turn only lane was striped northbound exiting the Bus Depot, creating new lane groups

Shaded Lane Groups Represent Impacts

Table 3-17: Level of Service Table Comparing No-Action, Proposed Action, and New School Mitigation, Unsignalized Intersections, AM Peak Period

Intersection Name	Direction	Lane Group	AM Peak Period											
			No Build				Build				Build with School			
			Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
West Farms Road at Rodman Place	Overall		533	--	--	--	760	--	--	--	795	--	--	--
	Eastbound	LR	10	0.05	14.3	B	39	0.33	24.9	C	47	0.34	21.7	C
	Northbound	LT	226	0.01	8.5	A	436	0.01	8.4	A	452	0.01	8.5	A
	Southbound (3)	TR	297	--	--	--	285	--	--	--	296	--	--	--
West Farms Road at Cross Bronx Expressway North Service Rd	Overall		533	--	--	--	731	--	--	--	774	--	--	--
	Northbound	LT	246	0.02	8.6	A	456	0.02	8.5	A	472	0.02	8.6	A
	Southbound (3)	TR	287	--	--	--	275	--	--	--	302	--	--	--
West Farms Road at East 173rd Street	Overall		586	--	--	--	803	--	--	--	867	--	--	--
	Eastbound (1)	RL	131	0.49	27.9	D	239	1.10	129.4	F	241	1.36	236.6	F
	Northbound	TL	184	0.03	9.4	A	305	0.04	9.4	A	340	0.10	9.8	A
	Southbound (3)	RT	271	--	--	--	259	--	--	--	286	--	--	--
Boone Ave at East 173rd Street	Overall		476	--	--	--	526	--	--	--	576	--	--	--
	Eastbound	TR	47	0.16	16.4	C	32	0.15	20.8	C	35	0.18	22.9	C
	Westbound (1)	LT	42	0.18	18.8	C	28	0.18	25.4	D	55	0.38	36.9	E
	Southbound	LTR	387	0.07	7.6	A	466	0.15	7.9	A	486	0.17	7.9	A
Longfellow Ave at East 173rd Street	Overall		350	--	--	--	341	--	--	--	347	--	--	--
	Eastbound	TL	78	0.04	7.9	A	76	0.05	8.0	A	79	0.05	8.0	A
	Westbound (3)	RT	125	--	--	--	137	--	--	--	139	--	--	--
	Northbound	LTR	147	0.38	16.9	C	128	0.34	16.6	C	129	0.35	16.8	C
West Farms Road at East 172nd Street	Overall		560	--	--	--	666	--	--	--	702	--	--	--
	Eastbound	RL	76	0.30	16.3	C	140	0.64	28.8	D	157	0.74	36.7	E
	Northbound	TL	185	0.04	8.7	A	205	0.03	8.8	A	223	0.03	8.8	A
	Southbound (3)	RT	299	--	--	--	321	--	--	--	322	--	--	--
Boone Ave at East 172nd Street	Overall		373	--	--	--	382	--	--	--	409	--	--	--
	Eastbound (3)	TR	71	--	--	--	73	--	--	--	73	--	--	--
	Westbound	LT	82	0.04	7.8	A	74	0.04	7.8	A	76	0.04	7.8	A
	Southbound	LTR	220	0.54	17.9	C	235	0.57	18.8	C	260	0.64	21.2	C
West Farms Road at Jennings Street	Overall		622	--	--	--	639	--	--	--	657	--	--	--
	Eastbound	LR	118	0.40	17.9	C	118	0.41	18.7	C	118	0.42	18.9	C
	Northbound	LT	210	0.07	8.8	A	195	0.07	8.9	A	213	0.07	8.9	A
	Southbound (3)	TR	294	--	--	--	326	--	--	--	326	--	--	--
West Farms Road at Boone Ave	Overall		550	--	--	--	567	--	--	--	585	--	--	--
	Northbound (3)	TR	220	--	--	--	205	--	--	--	223	--	--	--
	Southbound	LT	330	0.32	12.6	B	362	0.36	13.0	B	362	0.36	13.0	B
Boone Ave at Freeman Street, Sheridan Expressway Ramp	Overall		1113	--	--	--	1114	--	--	--	1122	--	--	--
	Eastbound	T	111	0.19	11.7	B	111	0.20	11.9	B	111	0.20	11.9	B
	Westbound	T	174	0.57	20.0	C	187	0.59	20.6	C	187	0.59	20.8	C
	Southbound (3)	T	828	--	--	--	816	--	--	--	824	--	--	--

Notes: (1) Significant Impact in AM Peak Period and PM Peak Period.
(2) Significant Impact in only the AM Peak Period.
(3) No conflicting movents.

YELLOW HIGHLIGHTED CELLS REPRESENT IMPACT DURING PEAK PERIOD

ORANGE HIGHLIGHTED CELLS REPRESENT IMPACT IN OTHER PEAK PERIOD

Table 3-18: Level of Service Table Comparing No-Action, Proposed Action, and New School Mitigation, Unsignalized Intersections, Midday Peak Period

Intersection Name	Direction	Lane Group	MD Peak Period											
			No Build				Build				Build with School			
			Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
West Farms Road at Rodman Place	Overall		327	--	--	--	423	--	--	--	421	--	--	--
	Eastbound	LR	5	0.02	10.5	B	28	0.12	13.5	B	28	0.12	13.5	B
	Northbound	LT	159	0.00	8.0	A	190	0.00	8.1	A	188	0.00	8.1	A
	Southbound (3)	TR	163	--	--	--	205	--	--	--	205	--	--	--
West Farms Road at Cross Bronx Expressway North Service Rd	Overall		342	--	--	--	395	--	--	--	393	--	--	--
	Northbound	LT	174	0.03	8.1	A	206	0.03	8.2	A	204	0.03	8.2	A
	Southbound (3)	TR	168	--	--	--	189	--	--	--	189	--	--	--
West Farms Road at East 173rd Street	Overall		378	--	--	--	431	--	--	--	429	--	--	--
	Eastbound (1)	RL	68	0.22	16.7	C	71	0.24	17.3	C	71	0.24	17.2	C
	Northbound	TL	152	0.03	8.8	A	196	0.04	8.8	A	194	0.04	8.8	A
	Southbound (3)	RT	158	--	--	--	164	--	--	--	164	--	--	--
Boone Ave at East 173rd Street	Overall		246	--	--	--	265	--	--	--	264	--	--	--
	Eastbound	TR	47	0.12	11.9	B	33	0.09	12.0	B	33	0.09	11.9	B
	Westbound (1)	LT	39	0.12	13.2	B	48	0.17	14.5	B	48	0.17	14.5	B
	Southbound	LTR	160	0.04	7.5	A	184	0.05	7.6	A	183	0.05	7.6	A
Longfellow Ave at East 173rd Street	Overall		326	--	--	--	341	--	--	--	341	--	--	--
	Eastbound	TL	103	0.06	7.9	A	103	0.06	8.0	A	103	0.06	8.0	A
	Westbound (3)	RT	91	--	--	--	109	--	--	--	109	--	--	--
	Northbound	LTR	132	0.36	17.3	C	129	0.37	17.8	C	129	0.37	17.8	C
West Farms Road at East 172nd Street	Overall		374	--	--	--	430	--	--	--	427	--	--	--
	Eastbound	RL	57	0.14	12.5	B	79	0.20	13.8	B	77	0.20	13.6	B
	Northbound	TL	147	0.02	8.1	A	176	0.03	8.2	A	175	0.03	8.1	A
	Southbound (3)	RT	170	--	--	--	175	--	--	--	175	--	--	--
Boone Ave at East 172nd Street	Overall		165	--	--	--	172	--	--	--	171	--	--	--
	Eastbound (3)	TR	36	--	--	--	36	--	--	--	36	--	--	--
	Westbound	LT	42	0.00	7.6	A	38	0.00	7.6	A	38	0.00	7.6	A
	Southbound	LTR	87	0.20	11.5	B	98	0.22	11.6	B	97	0.22	11.6	B
West Farms Road at Jennings Street	Overall		393	--	--	--	428	--	--	--	427	--	--	--
	Eastbound	LR	87	0.20	12.6	B	87	0.20	13.0	B	87	0.20	13.0	B
	Northbound	LT	126	0.01	8.0	A	152	0.01	8.0	A	151	0.01	8.0	A
	Southbound (3)	TR	180	--	--	--	189	--	--	--	189	--	--	--
West Farms Road at Boone Ave	Overall		367	--	--	--	402	--	--	--	401	--	--	--
	Northbound (3)	TR	141	--	--	--	167	--	--	--	166	--	--	--
	Southbound	LT	226	0.19	11.3	B	235	0.20	11.4	B	235	0.20	11.4	B
Boone Ave at Freeman Street, Sheridan Expressway Ramp	Overall		955	--	--	--	967	--	--	--	966	--	--	--
	Eastbound	T	98	0.16	11.2	B	98	0.16	11.2	B	98	0.16	11.2	B
	Westbound	T	133	0.45	16.3	C	135	0.46	16.5	C	135	0.46	16.5	C
	Southbound (3)	T	724	--	--	--	734	--	--	--	733	--	--	--

Notes: (1) Significant Impact in AM Peak Period and PM Peak Period.
(2) Significant Impact in only the AM Peak Period.
(3) No conflicting movents.
YELLOW HIGHLIGHTED CELLS REPRESENT IMPACT DURING PEAK PERIOD
ORANGE HIGHLIGHTED CELLS REPRESENT IMPACT IN OTHER PEAK PERIOD

Table 3-19: Level of Service Table Comparing No-Action, Proposed Action, and New School Mitigation, Unsignalized Intersections, PM Peak Period

Intersection Name	Direction	Lane Group	PM Peak Period											
			No Build				Build				Build with School			
			Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
West Farms Road at Rodman Place	Overall		483	--	--	--	595	--	--	--	593	--	--	--
	Eastbound	LR	0	--	--	--	14	0.09	17.4	C	14	0.09	17.4	C
	Northbound	LT	264	0.01	8.2	A	284	0.01	8.5	A	282	0.01	8.5	A
	Southbound (3)	TR	219	--	--	--	297	--	--	--	297	--	--	--
West Farms Road at Cross Bronx Expressway North Service Rd	Overall		498	--	--	--	569	--	--	--	567	--	--	--
	Northbound	LT	284	0.02	8.3	A	306	0.03	8.5	A	304	0.03	8.5	A
	Southbound (3)	TR	214	--	--	--	263	--	--	--	263	--	--	--
West Farms Road at East 173rd Street	Overall		550	--	--	--	667	--	--	--	665	--	--	--
	Eastbound (1)	RL	88	0.64	35.5	E	84	0.67	40.0	E	84	0.67	40.0	E
	Northbound	TL	256	0.03	9.0	A	361	0.15	9.7	A	359	0.15	9.7	A
	Southbound (3)	RT	206	--	--	--	222	--	--	--	222	--	--	--
Boone Ave at East 173rd Street	Overall		326	--	--	--	426	--	--	--	423	--	--	--
	Eastbound	TR	52	0.14	12.6	B	34	0.11	12.7	B	34	0.11	12.7	B
	Westbound (1)	LT	58	0.20	15.1	C	110	0.45	22.6	C	110	0.44	22.3	C
	Southbound	LTR	216	0.05	7.6	A	282	0.07	7.6	A	279	0.07	7.6	A
Longfellow Ave at East 173rd Street	Overall		397	--	--	--	456	--	--	--	456	--	--	--
	Eastbound	TL	129	0.10	8.1	A	133	0.11	8.3	A	133	0.11	8.3	A
	Westbound (3)	RT	105	--	--	--	162	--	--	--	162	--	--	--
	Northbound	LTR	163	0.54	24.9	C	161	0.59	29.6	D	161	0.59	29.6	D
West Farms Road at East 172nd Street	Overall		513	--	--	--	667	--	--	--	661	--	--	--
	Eastbound	RL	67	0.19	14.4	B	103	0.33	18.2	C	100	0.32	17.9	C
	Northbound	TL	235	0.02	8.2	A	346	0.04	8.3	A	343	0.04	8.3	A
	Southbound (3)	RT	211	--	--	--	218	--	--	--	218	--	--	--
Boone Ave at East 172nd Street	Overall		210	--	--	--	253	--	--	--	249	--	--	--
	Eastbound (3)	TR	46	--	--	--	51	0.00	0.0	0	50	0.00	0.0	0
	Westbound	LT	31	0.01	7.6	A	33	0.01	7.6	A	33	0.01	7.6	A
	Southbound	LTR	133	0.26	12.0	B	169	0.35	13.0	B	166	0.34	12.9	B
West Farms Road at Jennings Street	Overall		538	--	--	--	664	--	--	--	660	--	--	--
	Eastbound	LR	103	0.25	14.3	B	103	0.28	15.7	C	103	0.28	15.6	C
	Northbound	LT	209	0.01	8.2	A	328	0.01	8.2	A	325	0.01	8.2	A
	Southbound (3)	TR	226	--	--	--	233	--	--	--	232	--	--	--
West Farms Road at Boone Ave	Overall		528	--	--	--	654	--	--	--	650	--	--	--
	Northbound(3)	TR	240	--	--	--	359	--	--	--	356	--	--	--
	Southbound	LT	288	0.25	11.7	B	295	0.25	11.8	B	294	0.25	11.8	B
Boone Ave at Freeman Street, Sheridan Expressway Ramp	Overall		787	--	--	--	841	--	--	--	839	--	--	--
	Eastbound	T	135	0.24	12.2	B	135	0.25	12.2	B	135	0.25	12.2	B
	Westbound	T	174	0.52	16.5	C	176	0.55	17.7	C	176	0.55	17.6	C
	Southbound (3)	T	478	--	--	--	530	--	--	--	528	--	--	--

Notes: (1) Significant Impact in AM Peak Period and PM Peak Period.
(2) Significant Impact in only the AM Peak Period.
(3) No conflicting movents.
YELLOW HIGHLIGHTED CELLS REPRESENT IMPACT DURING PEAK PERIOD
ORANGE HIGHLIGHTED CELLS REPRESENT IMPACT IN OTHER PEAK PERIOD

Tables 3-20 through 3-25 compare levels of service and delays for 2022 without the Proposed Action, 2022 with the action and the school but without traffic mitigation, and 2022 with the action and the school and also with traffic mitigation measures, including adjustments to some of the mitigation measures proposed for action conditions without the school and two additional mitigation measures for the two unsignalized intersections where the New School Mitigation would cause significant traffic impacts. The list of proposed traffic mitigation measures, a revision of the list of measures previously submitted to the New York City Department of

Transportation (NYCDOT) to address the significant adverse traffic impacts under the RWCDS, is presented for the three peak periods in Tables 3-26 through 3-28.

For the two additional unsignalized intersections, all-way stop controlled intersections are proposed. The two intersections are at:

- East 173rd Street at Boone Avenue; and
- East 172nd Street at West Farms Road.

The rest of the mitigations proposed for this scenario are the same as those proposed later in this chapter for the Proposed Action without the New School Mitigation, with the exception of the following location where adjustments have been made to the signal timing changes that were originally proposed:

- In the Midday peak period at the intersection of East Tremont Avenue, Boston Road, and West Farms Road, only one second is proposed to be transferred from the East Tremont Avenue eastbound phase to the northeast-bound Boston Road phase.

The proposed mitigation measures, if implemented, would fully mitigate all affected traffic movements at all intersections. The new and revised proposed traffic mitigation measures will be submitted to NYCDOT for the agency's review between the draft and final stages of this EIS. If NYCDOT decides not to implement the proposed measures, then the significant adverse impacts resulting from the New School Mitigation would remain, as is discussed in Chapter 4, Unavoidable Adverse Impacts.

Table 3-20: LOS Table for Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, Signalized Intersections, AM Peak Period

				AM											
				No Build				Build				Build with Mitigations			
Int#	Intersection Name	Direction	Lane Group	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
1	East Tremont Ave at East 177th Street	Overall		2025		33.1	C	2044		33.3	C	2044		33.2	C
		Eastbound	LT	407	0.42	29.0	C	413	0.42	29.1	C	413	0.42	29.1	C
		Westbound	DefL	419	0.85	46.6	D	419	0.85	47.5	D	419	0.85	47.5	D
			TR	616	0.79	29.3	C	616	0.79	29.3	C	616	0.79	29.3	C
		Northbound	L	307	0.56	33.3	C	305	0.55	33.2	C	305	0.55	33.2	C
			T	153	0.26	27.0	C	153	0.26	27.0	C	153	0.26	27.0	C
			R	123	0.26	27.1	C	123	0.26	27.1	C	123	0.26	27.1	C
		Southbound	R	15	0.02	23.6	C	15	0.02	29.1	C	15	0.02	29.1	C
2	West Farms Road at Boston Rd, East Tremont Ave [1,5]	Overall		2160		267.3	F	2437		273.0	F	2437		173.1	F
		Eastbound	LTR	388	0.74	50.7	D	383	0.73	50.0	D	383	0.79	54.8	D
		Westbound	L									162	0.70	55.3	E
			TR	928	1.71	372.1	F	926	1.71	370.1	F	764	1.46	263.4	F
		Northbound[6]	LTR	226	0.82	64.9	E	485	1.71	381.5	F	90	0.76	68.3	E
			R									395	0.84	45.9	D
		NE-Bound	T	331	1.22	175.9	F	356	1.32	216.4	F	356	1.17	151.7	F
		Southbound	Def L	143	1.30	233.9	F	143	2.52	778.1	F	143	0.84	81.2	F
			TR	144	1.08	130.5	F	144	1.08	130.5	F	144	0.99	101.6	F
4	East 177th Street at Sheridan Expressway [6]	Overall		3212	1.07	75.0	E	3465		104.9	F	3465		74.4	E
		Eastbound	L	296	0.90	76.2	E	290	0.89	73.6	E	290	0.89	73.6	E
			T	93	0.08	5.0	A	93	0.08	5.0	A	93	0.08	5.0	A
		Westbound	R	1622	1.14	99.8	F	1622	1.14	99.8	F	1622	1.14	99.8	F
			T	267	0.42	21.4	C	271	0.43	21.5	C	271	0.43	21.5	C
		Northbound	LT	35	0.26	44.6	D	35	0.47	55.1	E	25	0.16	42.4	D
			R									10	0.07	41.0	D
		Southbound	L									305	0.97	103.0	F
			LT	191	1.06	126.6	F	315	1.75	407.0	F	10	0.88	86.1	F
			R	708	0.72	34.1	C	839	0.86	41.2	D	839	0.89	44.2	D
6	Bronx River Ave at East 174th Street	Overall		1671		39.5	D	1666		41.6	D	1666		38.2	D
		Eastbound	LTR	423	1.08	95.3	F	437	1.11	102.6	F	437	1.07	89.8	F
		Westbound	LT	359	0.80	39.8	D	359	0.79	38.6	D	359	0.77	36.1	D
			R	41	0.21	22.4	C	41	0.21	22.1	C	41	0.20	21.3	C
		Northbound	L	164	0.52	18.5	B	164	0.50	17.3	B	164	0.51	18.3	B
			TR	251	0.46	14.6	B	251	0.45	14.3	B	251	0.46	15.1	B
		Southbound	LTR	433	0.41	13.1	B	414	0.38	12.6	B	414	0.39	13.3	B
7	Boone Ave at East 174th Street	Overall		1255		25.3	C	1271		25.2	C	1271		26.5	C
		Eastbound	TR	371	0.49	10.4	B	359	0.46	9.7	A	359	0.47	10.3	B
		Westbound	DefL	312	0.96	51.5	D	312	0.94	45.3	D	312	0.96	51.8	D
			LT	419	0.50	10.4	B	410	0.48	10.0	A	410	0.49	10.6	B
		Southbound	LTR	153	0.67	41.0	D	190	0.77	46.8	D	190	0.74	43.1	D
8	Longfellow Ave at East 174th Street	Overall		904		37.9	D	883		35.0	D	883		35.0	D
		Eastbound	LT	259	0.35	8.3	A	258	0.34	8.0	A	258	0.34	8.0	A
		Westbound	TR	445	0.56	11.1	B	436	0.54	10.5	B	436	0.54	10.5	B
		Northbound	LTR	200	1.09	116.3	F	189	1.06	109.4	F	189	1.06	109.4	F
17	Westchester Ave at Sheridan Expressway Service Road, Whitlock Avenue	Overall		2814		42.3	D	2823		42.3	D	2823		42.3	D
		Eastbound	TR	610	0.71	29.8	C	610	0.71	29.8	C	610	0.71	29.8	C
		Westbound	LT	1091	1.06	62.8	E	1091	1.06	62.8	E	1091	1.06	62.8	E
		Southbound	LTR	1113	0.75	28.1	C	1122	0.76	28.2	C	1122	0.76	28.2	C
18	West Farms Road at Home Street, Longfellow Ave [2]	Overall		613		19.3	B	628		18.9	B	628		18.9	B
		NW-Bound	LTR	259	1.04	98.6	F	255	0.99	83.3	F	255	0.99	83.3	F
		Northbound	LTR	86	0.46	36.6	D	86	0.45	36.0	D	86	0.45	36.0	D
		NE-Bound	LT	106	0.19	13.2	B	106	0.19	13.0	B	106	0.19	13.0	B
		SW-Bound	RT	162	0.26	13.9	B	181	0.28	13.9	B	181	0.28	13.9	B
19	West Farms Road at Freeman Street	Overall		493		13.2	B	515		13.5	B	515		13.5	B
		Eastbound	LTR	102	0.32	25.9	C	102	0.32	26.4	C	102	0.32	26.4	C
		Northbound	LT	225	0.31	9.9	A	228	0.31	10.2	B	228	0.31	10.2	B
		Southbound	TR	166	0.26	9.4	A	185	0.29	9.9	A	185	0.29	9.9	A
20	Westchester Ave at Sheridan Expressway Service Road and Northbound Off-Ramp	Overall		1986		52.4	D	1999		52.3	D	1999		52.3	D
		Eastbound	DefL [3]	123	0.41	20.6	C	123	0.41	20.6	C	123	0.41	20.6	C
			LT	598	0.63	17.8	B	611	0.65	18.1	B	611	0.65	18.1	B
		Westbound	T	908	1.08	82.9	F	908	1.08	82.9	F	908	1.08	82.9	F
		Northbound	LTR	347	0.73	33.3	C	347	0.73	33.3	C	347	0.73	33.3	C
		Southbound	LR	10	0.04	19.2	B	10	0.04	19.2	B	10	0.04	19.2	B

Note: (1) Boston Road approaches the intersection in the northeast bound and southbound direction. East Tremont Avenue approaches the intersection in the eastbound and westbound direction. West Farms Road approaches the intersection in the northbound direction

(2) Home Street approaches the intersection ins the northwest bound direction. Longfellow Avenue approaches the intersection in the northbound direction. West Farms Road approaches the intersection in the northeast bound and southwest bound directions.

(3) Defacto left turn only exists in AM peak period.

(4) Left turns are shared with lane group above, volumes listed are only right turn vehicles.

(5) To mitigate a left turn only lane was added westbound on East Tremont Avenue and a right turn only lane was added northbound on West Farms Rd, creating new lane groups

(6) To mitigate, a left turn only lane was added southbound on East 177th Street and right turn only lane was striped northbound exiting the Bus Depot, creating new lane groups

Highlighted Lane Groups Represent Impacts

Table 3-21: LOS Table for Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, Signalized Intersections, Midday Peak Period

Int#	Intersection Name	Direction	Lane Group	MD											
				No Build				Build				Build with Mitigations			
				Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
1	East Tremont Ave at East 177th Street	Overall		1737		24.4	C	1784		25.5	C	1784		25.5	C
		Eastbound	LT	375	0.47	25.4	C	376	0.47	25.4	C	376	0.47	25.4	C
		Westbound	DefL	327	0.58	21.9	C	327	0.58	22.0	C	327	0.58	22.0	C
			TR	385	0.46	13.7	B	387	0.47	13.7	B	387	0.47	13.7	B
		Northbound	L	354	0.71	33.8	C	383	0.76	36.7	D	383	0.76	36.7	D
			T	122	0.24	22.7	C	122	0.24	22.7	C	122	0.24	22.7	C
			R	174	0.65	32.5	C	174	0.65	32.5	C	174	0.65	32.5	C
		Southbound	R	15	0.02	20.2	C	15	0.02	20.2	C	15	0.02	20.2	C
2	West Farms Road at Boston Rd, East Tremont Ave (1,5)	Overall		1809		168.1	F	1929		186.4	F	1929		119.5	F
		Eastbound	LTR	337	0.59	35.7	D	346	0.61	36.3	D	346	0.65	38.1	D
		Westbound	L									121	0.42	34.5	C
			TR	749	1.47	254.8	F	780	1.53	282.9	F	659	1.31	185.5	F
		Northbound(6)	LTR	159	0.49	38.4	D	216	0.66	43.6	D	46	0.26	35.6	D
			R									170	0.41	23.2	C
		NE-Bound	T	277	0.97	78.5	E	293	1.03	93.7	F	293	0.97	77.7	E
		Southbound	Def L	170	1.29	206.5	F	170	1.45	276.7	F	170	1.15	149.2	F
			TR	117	0.70	51.4	D	124	0.73	54.0	D	124	0.73	54.0	D
4	East 177th Street at Sheridan Expressway (6)	Overall		2685		53.4	D	2778		65.9	E	2778		41.2	D
		Eastbound	L	336	0.98	87.9	F	346	1.01	95.4	F	346	0.97	85.0	F
			T	150	0.14	5.3	A	150	0.14	5.3	A	150	0.14	5.3	A
		Westbound	R	1077	0.83	34.4	C	1077	0.83	34.4	C	1077	0.85	36.1	D
			T	278	0.49	25.2	C	297	0.52	26.0	C	297	0.53	26.9	C
		Northbound	LT	93	1.15	179.2	F	93	1.50	326.2	F	62	0.25	44.3	D
			R									31	0.23	43.7	D
		Southbound	L									242	0.86	82.1	F
			LT	242	1.13	140.0	F	268	1.24	184.6	F	26	0.67	57.7	E
			R	509	0.53	26.1	C	547	0.56	27.0	C	547	0.57	26.6	C
6	Bronx River Ave at East 174th Street	Overall		1304		38.5	D	1341		40.5	D	1341		37.2	D
		Eastbound	LTR	406	1.08	97.0	F	420	1.10	104.5	F	420	1.07	91.9	F
		Westbound	LT	233	0.55	28.4	C	237	0.55	28.0	C	237	0.53	26.8	C
			R	31	0.15	21.5	C	31	0.15	21.2	C	31	0.14	20.5	C
		Northbound	L	138	0.39	14.5	B	138	0.39	14.4	B	138	0.40	15.1	B
			TR	225	0.36	13.1	B	225	0.35	12.8	B	225	0.36	13.5	B
		Southbound	LTR	271	0.29	11.8	B	290	0.30	11.8	B	290	0.31	12.4	B
7	Boone Ave at East 174th Street	Overall		952		12.3	B	993		12.1	B	993		12.1	B
		Eastbound	TR	370	0.48	10.2	B	386	0.50	10.2	B	386	0.50	10.2	B
		Westbound	DefL	118	0.31	9.2	A	147	0.40	10.5	B	147	0.40	10.5	B
			LT	355	0.42	9.3	A	354	0.42	9.1	A	354	0.42	9.1	A
		Southbound	LTR	109	0.38	31.8	C	106	0.37	31.1	C	106	0.37	31.1	C
8	Longfellow Ave at East 174th Street	Overall		903		28.5	C	918		37.1	D	918		29.2	C
		Eastbound	LT	299	0.45	9.7	A	301	0.45	9.4	A	301	0.47	10.7	B
		Westbound	TR	386	0.46	9.5	A	385	0.45	9.2	A	385	0.47	10.4	B
		Northbound	LTR	218	0.98	84.1	F	232	1.08	114.3	F	232	0.98	81.1	F
17	Westchester Ave at Sheridan Expressway Service Road, Whitlock Avenue	Overall		2243		22.9	C	2265		23.0	C	2265		23.0	C
		Eastbound	TR	598	0.62	27.1	C	598	0.62	27.1	C	598	0.62	27.1	C
		Westbound	LT	690	0.57	16.4	B	701	0.58	16.6	B	701	0.58	16.6	B
		Southbound	LTR	955	0.61	24.8	C	966	0.62	24.9	C	966	0.62	24.9	C
18	West Farms Road at Home Street, Longfellow Ave (2)	Overall		479		26.4	C	511		25.3	C	511		25.6	C
		NW-Bound	LTR	202	0.97	85.3	F	222	1.03	98.8	F	222	0.93	72.5	E
		Northbound	LTR	91	0.66	45.9	D	91	0.65	44.6	D	91	0.65	44.6	D
		NE-Bound	LT	78	0.13	12.6	B	83	0.13	12.4	B	83	0.14	13.0	B
		SW-Bound	RT	108	0.14	12.7	B	115	0.15	12.5	B	115	0.15	13.1	B
19	West Farms Road at Freeman Street	Overall		347		12.3	B	379		12.5	B	379		12.5	B
		Eastbound	LTR	72	0.21	24.2	C	72	0.21	24.6	C	72	0.21	24.6	C
		Northbound	LT	167	0.24	9.2	A	192	0.27	9.8	A	192	0.27	9.8	A
		Southbound	TR	108	0.12	8.2	A	115	0.13	8.5	A	115	0.13	8.5	A
20	Westchester Ave at Sheridan Expressway Service Road and Northbound Off-Ramp	Overall		1607		20.8	C	1620		21.0	C	1620		21.0	C
		Eastbound	DefL (3)												
			LT	779	0.56	15.3	B	781	0.56	15.3	B	781	0.56	15.3	B
		Westbound	T	499	0.47	25.1	C	499	0.47	25.1	C	499	0.47	25.1	C
		Northbound	LTR	304	0.61	28.5	C	315	0.64	29.2	C	315	0.64	29.2	C
		Southbound	LR	25	0.11	20.0	C	25	0.11	20.0	C	25	0.11	20.0	C

Note: (1) Boston Road approaches the intersection in the northeast bound and southbound direction. East Tremont Avenue approaches the intersection in the eastbound and westbound direction. West Farms Road approaches the intersection in the northbound direction

(2) Home Street approaches the intersection ins the northwest bound direction. Longfellow Avenue approaches the intersection in the northbound direction. West Farms Road approaches the intersection in the northeast bound and southwest bound directions.

(3) Defacto left turn only exists in AM peak period.

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(5) To mitigate a left turn only lane was added westbound on East Tremont Avenue and a right turn only lane was added northbound on West Farms Rd, creating new lane groups

(6) To mitigate, a left turn only lane was added southbound on East 177th Street and right turn only lane was striped northbound exiting the Bus Depot, creating new lane groups

Highlighted Lane Groups Represent Impacts

Table 3-22: LOS Table for Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, Signalized Intersections, PM Peak Period

				PM											
				No Build				Build				Build with Mitigations			
Int#	Intersection Name	Direction	Lane Group	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
1	East Tremont Ave at East 177th Street	Overall		2217		31.2	C	2293		33.8	C	2293		33.8	C
		Eastbound	LT	583	0.53	27.9	C	585	0.53	28.0	C	585	0.56	29.7	C
		Westbound	DefL	312	0.68	35.5	D	312	0.68	35.6	D	312	0.70	38.3	D
			TR	657	0.75	23.8	C	661	0.75	24.0	C	661	0.77	26.3	C
		Northbound	L	353	0.77	45.7	D	404	0.88	55.7	E	404	0.84	49.4	D
			T	123	0.23	29.8	C	122	0.23	29.8	C	122	0.22	28.3	C
			R	189	0.43	33.9	C	189	0.43	33.9	C	189	0.41	32.0	C
		Southbound	R	20	0.02	26.9	C	20	0.02	26.9	C	20	0.02	25.6	C
2	West Farms Road at Boston Rd, East Tremont Ave (1,5)	Overall		2421		211.0	F	2567		242.6	F	2567		178.7	F
		Eastbound	LTR	468	0.78	51.5	D	487	0.82	53.8	D	487	0.82	53.8	D
		Westbound	L									175	0.71	55.5	E
			TR	1025	1.52	287.4	F	1080	1.63	335.0	F	905	1.47	265.5	F
		Northbound(6)	LTR	259	0.72	56.2	E	295	0.82	63.7	E	51	0.23	42.0	D
			R									244	0.59	32.5	C
		NE-Bound	T	355	1.21	164.7	F	370	1.26	186.6	F	370	1.21	164.7	F
		Southbound	Def L	165	1.08	139.2	F	165	1.08	137.2	F				
			TR	149	0.86	77.5	E	170	0.98	101.4	F	335	1.00	90.6	F
4	East 177th Street at Sheridan Expressway (6)	Overall		2593		44.4	D	2682		47.8	D	2682		37.5	D
		Eastbound	L	309	0.77	54.5	D	325	0.81	57.7	E	325	0.81	57.7	E
			T	132	0.12	5.2	A	132	0.12	5.2	A	132	0.12	5.2	A
		Westbound	R	944	0.84	37.5	D	944	0.84	37.5	D	944	0.84	37.5	D
			T	330	0.62	31.5	C	364	0.68	33.9	C	364	0.68	33.9	C
		Northbound	LT	62	0.45	52.0	D	62	0.49	54.4	D	36	0.16	42.4	D
			R									26	0.11	41.7	D
		Southbound	L									278	0.77	69.7	E
			LT	288	1.12	138.0	F	304	1.18	160.2	F	26	0.61	54.3	D
			R	528	0.50	23.2	C	551	0.53	23.6	C	551	0.55	24.1	C
6	Bronx River Ave at East 174th Street	Overall		1865		44.0	D	1985		45.1	D	1985		45.1	D
		Eastbound	LTR	525	1.08	93.6	F	533	1.08	93.4	F	533	1.08	93.4	F
		Westbound	LT	329	0.92	54.2	D	345	0.93	56.5	E	345	0.93	56.5	E
			R	31	0.11	21.0	C	31	0.11	20.7	C	31	0.11	20.7	C
		Northbound	L	230	0.79	30.4	C	230	0.88	42.2	D	230	0.88	42.2	D
			TR	327	0.47	14.8	B	327	0.47	14.5	B	327	0.47	14.5	B
		Southbound	LTR	423	0.34	12.3	B	519	0.41	12.9	B	519	0.41	12.9	B
7	Boone Ave at East 174th Street	Overall		1340		14.7	B	1485		18.0	B	1485		18.0	B
		Eastbound	TR	483	0.56	11.4	B	527	0.62	12.3	B	527	0.62	12.3	B
		Westbound	DefL	143	0.48	12.5	B	236	0.84	32.1	C	236	0.84	32.1	C
			LT	568	0.60	12.0	B	583	0.61	12.0	B	583	0.61	12.0	B
		Southbound	LTR	146	0.53	35.1	D	139	0.49	33.8	C	139	0.49	33.8	C
8	Longfellow Ave at East 174th Street	Overall		1313		43.3	D	1372		67.6	E	1372		48.9	D
		Eastbound	LT	421	0.81	23.1	C	426	0.82	23.2	C	426	0.93	40.9	D
		Westbound	TR	599	0.67	13.4	B	614	0.68	13.4	B	614	0.73	17.4	B
		Northbound	LTR	293	1.12	117.7	F	332	1.32	197.7	F	332	1.09	104.7	F
17	Westchester Ave at Sheridan Expressway Service Road, Whitlock Avenue	Overall		2189		22.4	C	2288		22.6	C	2288		22.6	C
		Eastbound	TR	680	0.69	28.7	C	680	0.69	28.7	C	680	0.69	28.7	C
		Westbound	LT	722	0.52	15.4	B	769	0.55	15.9	B	769	0.55	15.9	B
		Southbound	LTR	787	0.50	23.1	C	839	0.54	23.6	C	839	0.54	23.6	C
18	West Farms Road at Home Street, Longfellow Ave (2)	Overall		682		55.8	E	802		50.8	D	802		52.3	D
		NW-Bound	LTR	267	1.18	150.1	F	364	1.64	345.3	F	364	1.12	120.1	F
		Northbound	LTR	153	1.08	116.8	F	153	1.06	109.1	F	153	1.06	109.1	F
		NE-Bound	LT	118	0.22	13.5	B	137	0.25	13.6	B	137	0.27	16.2	B
		SW-Bound	RT	144	0.23	13.5	B	148	0.23	13.3	B	148	0.26	15.8	B
19	West Farms Road at Freeman Street	Overall		519		14.4	B	639		16.2	B	639		16.2	B
		Eastbound	LTR	103	0.39	27.2	C	103	0.40	27.7	C	103	0.40	27.7	C
		Northbound	LT	271	0.43	11.4	B	387	0.62	15.1	B	387	0.62	15.1	B
		Southbound	TR	145	0.21	8.9	A	149	0.22	9.3	A	149	0.22	9.3	A
20	Westchester Ave at Sheridan Expressway Service Road and Northbound Off-Ramp	Overall		1910		23.7	C	1959		25.6	C	1959		25.6	C
		Eastbound	DefL (3)												
			LT	851	0.57	15.5	B	853	0.57	15.5	B	853	0.57	15.5	B
		Westbound	T	608	0.58	26.9	C	608	0.58	26.9	C	608	0.58	26.9	C
		Northbound	LTR	394	0.78	35.8	D	441	0.87	42.5	D	441	0.87	42.5	D
		Southbound	LR	57	0.18	21.1	C	57	0.18	21.0	C	57	0.18	21.0	C

Note: (1) Boston Road approaches the intersection in the northeast bound and southbound direction. East Tremont Avenue approaches the intersection in the eastbound and westbound direction. West Farms Road approaches the intersection in the northbound direction

(2) Home Street approaches the intersection ins the northwest bound direction. Longfellow Avenue approaches the intersection in the northbound direction. West Farms Road approaches the intersection in the northeast bound and southwest bound directions.

(3) Defacto left turn only exists in AM peak period.

(4) Left turns are shared with lane group above, volumes listed are only right turn vehicles.

(5) To mitigate a left turn only lane was added westbound on East Tremont Avenue and a right turn only lane was added northbound on West Farms Rd, creating new lane groups

(6) To mitigate, a left turn only lane was added southbound on East 177th Street and right turn only lane was striped northbound exiting the Bus Depot, creating new lane groups

Highlighted Lane Groups Represent Impacts

Table 3-23: LOS Table for Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, Unsignalized Intersections, AM Peak Period

Int #	Intersection Name	Direction	Lane Group	AM Peak Period											
				No Build				Build				Build with Mitigations			
				Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
3	West Farms Road at Rodman Place	Overall		533	--	--	--	795	--	--	--	795	--	--	--
		Eastbound	LR	10	0.05	14.3	B	47	0.34	21.7	C	47	0.34	21.7	C
		Northbound	LT	226	0.01	8.5	A	452	0.01	8.5	A	452	0.01	8.5	A
		Southbound (3)	TR	297	--	--	--	296	--	--	--	296	--	--	--
5	West Farms Road at Cross Bronx Expressway North Service Rd	Overall		533	--	--	--	774	--	--	--	774	--	--	--
		Northbound	LT	246	0.02	8.6	A	472	0.02	8.6	A	472	0.02	8.6	A
		Southbound (3)	TR	287	--	--	--	302	--	--	--	302	--	--	0
9	West Farms Road at East 173rd Street	Overall		586	--	--	--	867	--	--	--	900	--	--	--
		Eastbound (1)	RL	131	0.49	27.9	D	241	1.36	236.6	F	241	0.44	13.3	B
		Northbound	TL	184	0.03	9.4	A	340	0.10	9.8	A	340	0.59	15.9	C
		Southbound (3)	RT	271	--	--	--	286	--	--	--	286	0.52	14.1	B
10	Boone Ave at East 173rd Street	Overall		476	--	--	--	576	--	--	--	576	--	--	--
		Eastbound	TR	47	0.16	16.4	C	35	0.18	22.9	C	35	0.06	8.7	A
		Westbound (1)	LT	42	0.18	18.8	C	55	0.38	36.9	E	55	0.10	9.1	A
		Southbound	LTR	387	0.07	7.6	A	486	0.17	7.9	A	486	0.68	15.8	C
11	Longfellow Ave at East 173rd Street	Overall		350	--	--	--	347	--	--	--	347	--	--	--
		Eastbound	TL	78	0.04	7.9	A	79	0.05	8.0	A	79	0.05	8.0	A
		Westbound (3)	RT	125	--	--	--	139	--	--	--	139	--	--	--
		Northbound (2)	LTR	147	0.38	16.9	C	129	0.35	16.8	C	129	0.35	16.8	C
12	West Farms Road at East 172nd Street	Overall		560	--	--	--	702	--	--	--	702	--	--	--
		Eastbound (2)	RL	76	0.30	16.3	C	157	0.74	36.7	E	157	0.44	12.9	B
		Northbound	TL	185	0.04	8.7	A	223	0.03	8.8	A	223	0.35	11.4	B
		Southbound (3)	RT	299	--	--	--	322	--	--	--	322	0.57	14.6	B
13	Boone Ave at East 172nd Street	Overall		373	--	--	--	409	--	--	--	409	--	--	--
		Eastbound (3)	TR	71	--	--	--	73	--	--	--	73	--	--	--
		Westbound	LT	82	0.04	7.8	A	76	0.04	7.8	A	76	0.04	7.8	A
		Southbound	LTR	220	0.54	17.9	C	260	0.64	21.2	C	260	0.64	21.2	C
14	West Farms Road at Jennings Street	Overall		622	--	--	--	657	--	--	--	657	--	--	--
		Eastbound	LR	118	0.40	17.9	C	118	0.42	18.9	C	118	0.42	18.9	C
		Northbound	LT	210	0.07	8.8	A	213	0.07	8.9	A	213	0.07	8.9	A
		Southbound (3)	TR	294	--	--	--	326	--	--	--	326	--	--	--
15	West Farms Road at Boone Ave	Overall		550	--	--	--	585	--	--	--	585	--	--	--
		Northbound(3)	TR	220	--	--	--	223	--	--	--	223	--	--	--
		Southbound	LT	330	0.32	12.6	B	362	0.36	13.0	B	362	0.36	13.0	B
16	Boone Ave at Freeman Street, Sheridan Expressway Ramp	Overall		1113	--	--	--	1122	--	--	--	1122	--	--	--
		Eastbound	T	111	0.19	11.7	B	111	0.20	11.9	B	111	0.20	11.9	B
		Westbound	T	174	0.57	20.0	C	187	0.59	20.8	C	187	0.59	20.8	C
		Southbound (3)	T	828	--	--	--	824	--	--	--	824	--	--	--

Notes:

(1) Significant Impact in AM Peak Period and PM Peak Period.

(2) Significant Impact in only the AM Peak Period.

(3) No conflicting movents.

YELLOW HIGHLIGHTED CELLS REPRESENT IMPACT DURING PEAK PERIOD

ORANGE HIGHLIGHTED CELLS REPRESENT IMPACT IN OTHER PEAK PERIOD

Table 3-24: LOS Table for Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, Unsignalized Intersections, Midday Peak Period

Int #	Intersection Name	Direction	Lane Group	MD Peak Period											
				No Build				Build				Build with Mitigations			
				Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
3	West Farms Road at Rodman Place	Overall		327	--	--	--	421	--	--	--	421	--	--	--
		Eastbound	LR	5	0.02	10.5	B	28	0.12	13.5	B	28	0.12	13.5	B
		Northbound	LT	159	0.00	8.0	A	188	0.00	8.1	A	188	0.00	8.1	A
		Southbound (3)	TR	163	--	--	--	205	--	--	--	205	--	--	--
5	West Farms Road at Cross Bronx Expressway North Service Rd	Overall		342	--	--	--	393	--	--	--	393	--	--	--
		Northbound	LT	174	0.03	8.1	A	204	0.03	8.2	A	204	0.03	8.2	A
		Southbound (3)	TR	168	--	--	--	189	--	--	--	189	--	--	--
9	West Farms Road at East 173rd Street	Overall		378	--	--	--	429	--	--	--	455	--	--	--
		Eastbound (1)	RL	68	0.22	16.7	C	71	0.24	17.2	C	71	0.12	8.2	A
		Northbound	TL	152	0.03	8.8	A	194	0.04	8.8	A	194	0.26	9.0	A
		Southbound (3)	RT	158	--	--	--	164	--	--	--	164	0.22	8.6	A
10	Boone Ave at East 173rd Street	Overall		246	--	--	--	264	--	--	--	264	--	--	--
		Eastbound	TR	47	0.12	11.9	B	33	0.09	11.9	B	33	0.06	7.7	A
		Westbound (1)	LT	39	0.12	13.2	B	48	0.17	14.5	B	48	0.10	8.1	A
		Southbound	LTR	160	0.04	7.5	A	183	0.05	7.6	A	183	0.28	8.8	A
11	Longfellow Ave at East 173rd Street	Overall		326	--	--	--	341	--	--	--	341	--	--	--
		Eastbound	TL	103	0.06	7.9	A	103	0.06	8.0	A	103	0.06	8.0	A
		Westbound (3)	RT	91	--	--	--	109	--	--	--	109	--	--	--
		Northbound (2)	LTR	132	0.36	17.3	C	129	0.37	17.8	C	129	0.37	17.8	C
12	West Farms Road at East 172nd Street	Overall		374	--	--	--	427	--	--	--	427	--	--	--
		Eastbound (2)	RL	57	0.14	12.5	B	77	0.20	13.6	B	77	0.13	8.5	A
		Northbound	TL	147	0.02	8.1	A	175	0.03	8.1	A	175	0.26	9.2	A
		Southbound (3)	RT	170	--	--	--	175	--	--	--	175	0.26	9.0	A
13	Boone Ave at East 172nd Street	Overall		165	--	--	--	171	--	--	--	171	--	--	--
		Eastbound (3)	TR	36	--	--	--	36	--	--	--	36	--	--	--
		Westbound	LT	42	0.00	7.6	A	38	0.00	7.6	A	38	0.00	7.6	A
		Southbound	LTR	87	0.20	11.5	B	97	0.22	11.6	B	97	0.22	11.6	B
14	West Farms Road at Jennings Street	Overall		393	--	--	--	427	--	--	--	427	--	--	--
		Eastbound	LR	87	0.20	12.6	B	87	0.20	13.0	B	87	0.20	13.0	B
		Northbound	LT	126	0.01	8.0	A	151	0.01	8.0	A	151	0.01	8.0	A
		Southbound (3)	TR	180	--	--	--	189	--	--	--	189	--	--	--
15	West Farms Road at Boone Ave	Overall		367	--	--	--	401	--	--	--	401	--	--	--
		Northbound(3)	TR	141	--	--	--	166	--	--	--	166	--	--	--
		Southbound	LT	226	0.19	11.3	B	235	0.20	11.4	B	235	0.20	11.4	B
16	Boone Ave at Freeman Street, Sheridan Expressway Ramp	Overall		955	--	--	--	966	--	--	--	966	--	--	--
		Eastbound	T	98	0.16	11.2	B	98	0.16	11.2	B	98	0.16	11.2	B
		Westbound	T	133	0.45	16.3	C	135	0.46	16.5	C	135	0.46	16.5	C
		Southbound (3)	T	724	--	--	--	733	--	--	--	733	--	--	--

Notes:

(1) Significant Impact in AM Peak Period and PM Peak Period.

(2) Significant Impact in only the AM Peak Period.

(3) No conflicting movents.

YELLOW HIGHLIGHTED CELLS REPRESENT IMPACT DURING PEAK PERIOD

ORANGE HIGHLIGHTED CELLS REPRESENT IMPACT IN OTHER PEAK PERIOD

Table 3-25: : LOS Table for Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, Unsignalized Intersections, PM Peak Period

Int #	Intersection Name	Direction	Lane Group	PM Peak Period											
				No Build				Build				Build with Mitigations			
				Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
3	West Farms Road at Rodman Place	Overall		483	--	--	--	593	--	--	--	582	--	--	--
		Eastbound	LR	0	--	--	--	14	0.09	17.4	C	14	0.09	17.4	C
		Northbound	LT	264	0.01	8.2	A	282	0.01	8.5	A	282	0.01	8.5	A
		Southbound (3)	TR	219	--	--	--	297	--	--	--	297	--	--	--
5	West Farms Road at Cross Bronx Expressway North Service Rd	Overall		498	--	--	--	567	--	--	--	556	--	--	--
		Northbound	LT	284	0.02	8.3	A	304	0.03	8.5	A	304	0.03	8.5	A
		Southbound (3)	TR	214	--	--	--	263	--	--	--	263	--	--	0
9	West Farms Road at East 173rd Street	Overall		550	--	--	--	665	--	--	--	656	--	--	--
		Eastbound (1)	RL	88	0.64	35.5	E	84	0.67	40.0	E	84	0.29	10.9	B
		Northbound	TL	256	0.03	9.0	A	359	0.15	9.7	A	359	0.72	20.0	C
		Southbound (3)	RT	206	--	--	--	222	--	--	--	222	0.43	11.9	B
10	Boone Ave at East 173rd Street	Overall		326	--	--	--	423	--	--	--	406	--	--	--
		Eastbound	TR	52	0.14	12.6	B	34	0.11	12.7	B	34	0.06	8.1	A
		Westbound (1)	LT	58	0.20	15.1	C	110	0.44	22.3	C	110	0.24	9.4	A
		Southbound	LTR	216	0.05	7.6	A	279	0.07	7.6	A	279	0.41	10.6	B
11	Longfellow Ave at East 173rd Street	Overall		397	--	--	--	456	--	--	--	446	--	--	--
		Eastbound	TL	129	0.10	8.1	A	133	0.11	8.3	A	133	0.11	8.3	A
		Westbound (3)	RT	105	--	--	--	162	--	--	--	162	--	--	--
		Northbound (2)	LTR	163	0.54	24.9	C	161	0.59	29.6	D	161	0.59	29.6	D
12	West Farms Road at East 172nd Street	Overall		513	--	--	--	661	--	--	--	652	--	--	--
		Eastbound (2)	RL	67	0.19	14.4	B	100	0.32	17.9	C	100	0.19	9.6	A
		Northbound	TL	235	0.02	8.2	A	343	0.04	8.3	A	343	0.49	12.2	B
		Southbound (3)	RT	211	--	--	--	218	--	--	--	218	0.38	10.6	B
13	Boone Ave at East 172nd Street	Overall		210	--	--	--	249	--	--	--	238	--	--	--
		Eastbound (3)	TR	46	--	--	--	50	0.00	0.0	0	50	--	--	--
		Westbound	LT	31	0.01	7.6	A	33	0.01	7.6	A	33	0.01	7.6	A
		Southbound	LTR	133	0.26	12.0	B	166	0.34	12.9	B	166	0.34	12.9	B
14	West Farms Road at Jennings Street	Overall		538	--	--	--	660	--	--	--	653	--	--	--
		Eastbound	LR	103	0.25	14.3	B	103	0.28	15.6	C	103	0.28	15.6	C
		Northbound	LT	209	0.01	8.2	A	325	0.01	8.2	A	325	0.01	8.2	A
		Southbound (3)	TR	226	--	--	--	232	--	--	--	232	--	--	--
15	West Farms Road at Boone Ave	Overall		528	--	--	--	650	--	--	--	643	--	--	--
		Northbound(3)	TR	240	--	--	--	356	--	--	--	356	--	--	--
		Southbound	LT	288	0.25	11.7	B	294	0.25	11.8	B	294	0.25	11.8	B
16	Boone Ave at Freeman Street, Sheridan Expressway Ramp	Overall		787	--	--	--	839	--	--	--	835	--	--	--
		Eastbound	T	135	0.24	12.2	B	135	0.25	12.2	B	135	0.25	12.2	B
		Westbound	T	174	0.52	16.5	C	176	0.55	17.6	C	176	0.55	17.6	C
		Southbound (3)	T	478	--	--	--	528	--	--	--	528	--	--	--

Notes:

(1) Significant Impact in AM Peak Period and PM Peak Period.

(2) Significant Impact in only the AM Peak Period.

(3) No conflicting movents.

YELLOW HIGHLIGHTED CELLS REPRESENT IMPACT DURING PEAK PERIOD

ORANGE HIGHLIGHTED CELLS REPRESENT IMPACT IN OTHER PEAK PERIOD

Table 3-26: Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, AM Peak Period

Intersection	2022 Future with the Proposed Actions	2022 Future with the Proposed Actions and Mitigation	Signal Timing Changes Proposed
East Tremont @ Boston Road and West Farms Road	NB on West Farms Road: Approach: 2 LTR lanes, 10' each WB on East Tremont Ave: Approach: 2 LTR lanes, 11' each 1 bus lane, 10' 1 bike lane, 5' WB LTR G=29 EBT LTR G=27 NB(West Farms) LTR / SB(Boston) LTR G=22 NEB LTR (Boston) G=22	NB on West Farms Road: Add Rt Turn lane through restriping Approach: 1 LT (10'), 1 Rt turn lanes (10') WB on East Tremont Ave: Remove proposed bus lane, shift bike to curb Approach: 2 TR lanes, 10' 6" each 1 LT lane, 10' 1 bike lane, 5' WB LTR / NB R G= 26(no Southern ped phase) EB LTR G=25 NB(West Farms) LTR / SB(Boston) LTR G=24 NEB LTR (Boston) G=25	WB LTR / NB R G= -3 sec EB LTR G= -2 secs NB LTR / SB LTR G= +2 secs NEB LTR G= +3 secs
East 177th Street @ Sheridan Expressway Ramp	SB on East 177th Street: Approach: 2 Rt turn lanes, 11' each 1 LT lane, 11' NB out of Bus Depot: Approach: 1 LTR lane (not striped), 25' space	SB on East 177th Street: Cut into curb on west side of street to add lane Approach: 2 Rt turn lanes, 10' each 1 LT lane, 10' 1 Left turn only lane, 10' NB out of Bus Depot: Stripe bus depot exit for right turn lane Approach: 1 LT lane, 12' 1 Right turn only, 12'	
Bronx River Avenue @ East 174th Street	EB LTR / WB LTR G=31 Y=3 R=2 NB LTR / SB LTW G=49 Y=3 R=2	EB LTR / WB LTR G=32 Y=3 R=2 NB LTR / SB LTW G=48 Y=3 R=2	EB LTR / WB LTR G= +1 sec NB LTR / SB LTW G= -1 sec
Boone Avenue @ East 174th Street	EB LTR / WB LTR G=58 Y=3 R=2 SB LTW G=22 Y=3 R=2	EB LTR / WB LTR G=57 Y=3 R=2 SB LTR G=23 Y=3 R=2	EB LTR / WB LTR G= -1 sec SB LTW G= +1 sec
West Farms Road at East 173rd Street**	Two Way Stop Controlled Intersection West Farms Road is major street	All Way stop controlled intersection	
Boone Avenue at East 173rd Street***	Two Way Stop Controlled Intersection West Farms Road is major street	All Way stop controlled intersection	
West Farms Road at East 172nd Street***	Two Way Stop Controlled Intersection West Farms Road is major street	All Way stop controlled intersection	

** Mitigated for AM and PM Peak Period
*** Mitigated for AM Peak Period

Table 3-27: Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, Midday Peak Period

Intersection	2022 Future with the Proposed Actions	2022 Future with the Proposed Actions and Mitigation	Signal Timing Changes Proposed
East Tremont @ Boston Road and West Farms Road	NB on West Farms Road: Approach: 2 LTR lanes, 10' each WB on East Tremont Ave: Approach: 2 LTR lanes, 11' each 1 bus lane, 10' 1 bike lane, 5' WB LTR G=19 EBT LTR G=19 NB(West Farms) LTR / SB(Boston) LTR G=15 NEB LTR (Boston) G=17	NB on West Farms Road: Add Rt Turn lane through restriping Approach: 1 LT (10'), 1 Rt turn lanes (10') WB on East Tremont Ave: Remove proposed bus lane, shift bike to curb Approach: 2 TR lanes, 10' 6" each 1 LT lane, 10' 1 bike lane, 5' WB LTR / NB R G= 19 (no Southern ped phase) EB LTR G=18 NB(West Farms) LTR / SB(Boston) LTR G=15 NEB LTR (Boston) G=18	WB LTR / NB R G= NC EB LTR G= -1 secs NB LTR / SB LTR G=NC NEB LTR G= +1 secs
East 177th Street @ Sheridan Expressway Ramp	SB on East 177th Street: Approach: 2 Rt turn lanes, 11' each 1 LT lane, 11' NB out of Bus Depot: Approach: 1 LTR lane (not striped), 25' space EB LTR / SB R G=26 EB TR / WB LTR G=55 NB LTR / SB LTR G=22	SB on East 177th Street: Cut into curb on west side of street to add lane Approach: 2 Rt turn lanes, 10' each 1 LT lane, 10' 1 Left turn only lane, 10' NB out of Bus Depot: Stripe bus depot exit for right turn lane Approach: 1 LT lane, 12' 1 Right turn only, 12' EB LTR / SB R G=27 EB TR / WB LTR G=54 NB LTR / SB LTR G=22	EB LTR / SB R G= +1 sec EB TR / WB LTR G= -1 sec NB LTR / SB LTR G= NC
Bronx River Avenue @ East 174th Street	EB LTR / WB LTR G=31 Y=3 R=2 NB LTR / SB LTW G=49 Y=3 R=2	EB LTR / WB LTR G=32 Y=3 R=2 NB LTR / SB LTW G=48 Y=3 R=2	EB LTR / WB LTR G= +1 sec NB LTR / SB LTW G= -1 sec
Longfellow Avenue @ East 174th Street	EB LTR / WB LTR G=59 Y=3 R=2 NB LTR G=21 Y=3 R=2	EB LTR / WB LTR G=57 Y=3 R=2 NB LTR G=23 Y=3 R=2	EB LTR / WB LTR G= -2 secs NB LTR G = +2 secs
West Farms Road at Home Street, Longfellow Avenue	NWB (Home Street) LTR G=10 Y=3 R=2 NB (Longfellow Ave) LTR G=20 Y=3 R=2 NEB LT / SWB TR (West Farms Rd) G=45 Y=3 R=2	NWB (Home Street) LTR G=11 Y=3 R=2 NB (Longfellow Ave) LTR G=20 Y=3 R=2 NEB LT / SWB TR (West Farms Rd) G=44 Y=3 R=2	NWB LTR G=+1 sec NB LTR G= NC NEB LT / SWB TR G= -1 sec
West Farms Road at East 173rd Street**	Two Way Stop Controlled Intersection West Farms Road is major street	All Way stop controlled intersection	
Boone Avenue at East 173rd Street***	Two Way Stop Controlled Intersection West Farms Road is major street	All Way stop controlled intersection	
West Farms Road at East 172nd Street***	Two Way Stop Controlled Intersection West Farms Road is major street	All Way stop controlled intersection	

** Mitigated for AM and PM Peak Period
*** Mitigated for AM Peak Period

Table 3-28: Proposed Traffic Mitigation Measures for the New School Mitigation Scenario, PM Peak Period

Intersection	2022 Future with the Proposed Actions	2022 Future with the Proposed Actions and Mitigation	Signal Timing Changes Proposed
East 177th Street @ Sheridan Expressway Ramp	EB TR / WB LTR G=50 WB LTR G=15 NB LTR / SB LTR G=40	EB TR / WB LTR G=48 WB LTR G=15 NB LTR / SB LTR G=42	EB TR / WB LTR G= -2 secs WB LTR G = NC NB LTR / SB LTR G =+2 secs
East Tremont @ Boston Road and West Farms Road	NB on West Farms Road: Approach: 2 LTR lanes, 10' each WB on East Tremont Ave: Approach: 2 LTR lanes, 11' each 1 bus lane, 10' 1 bike lane, 5' WB LTR G=29 EBT LTR G=27 NB(West Farms) LTR / SB(Boston) LTR G=22 NEB LTR (Boston) G=22	NB on West Farms Road: Add Rt Turn lane through restriping Approach: 1 LT (10'), 1 Rt turn lanes (10') WB on East Tremont Ave: Remove proposed bus lane, shift bike to curb Approach: 2 TR lanes, 10' 6" each 1 LT lane, 10' 1 bike lane, 5' WB LTR / NB R G= 26(no Southern ped phase) EB LTR G=27 NB(West Farms) LTR / SB(Boston) LTR G=24 NEB LTR (Boston) G=23	WB LTR / NB R G= -3 sec EB LTR G= NC NB LTR / SB LTR G= +2 secs NEB LTR G= +1 sec
East 177th Street @ Sheridan Expressway Ramp	SB on East 177th Street: Approach: 2 Rt turn lanes, 11' each 1 LT lane, 11' NB out of Bus Depot: Approach: 1 LTR lane (not striped), 25' space	SB on East 177th Street: Cut into curb on west side of street to add lane Approach: 2 Rt turn lanes, 10' each 1 LT lane, 10' 1 Left turn only lane, 10' NB out of Bus Depot: Stripe bus depot exit for right turn lane Approach: 1 LT lane, 12' 1 Right turn only, 12'	
Longfellow Avenue @ East 174th Street	EB LTR / WB LTR G=59 Y=3 R=2 NB LTR G=21 Y=3 R=2	EB LTR / WB LTR G=55 Y=3 R=2 NB LTR G=25 Y=3 R=2	EB LTR / WB LTR G= -4 secs NB LTR G = +4 secs
West Farms Road at Home Street, Longfellow Avenue	NWB (Home Street) LTR G=10 Y=3 R=2 NB (Longfellow Ave) LTR G=20 Y=3 R=2 NEB LT / SWB TR G=45 Y=3 R=2 (West Farms Rd)	NWB (Home Street) LTR G=14 Y=3 R=2 NB (Longfellow Ave) LTR G=20 Y=3 R=2 NEB LT / SWB TR G=41 Y=3 R=2 (West Farms Rd)	NWB LTR G= +4 secs NB LTR G= NC NEB LT / SWB TR G= -4 secs
West Farms Road at East 173rd Street	Two Way Stop Controlled Intersection West Farms Road is major street	All Way stop controlled intersection	
Boone Avenue at East 173rd Street***	Two Way Stop Controlled Intersection West Farms Road is major street	All Way stop controlled intersection	
West Farms Road at East 172nd Street***	Two Way Stop Controlled Intersection West Farms Road is major street	All Way stop controlled intersection	

** Mitigated for AM and PM Peak Period
*** Mitigated for AM Peak Period

Transit

As is shown in Table 3-12 above, the New School Mitigation would result in decreases in subway trips relative to the RWCDS during all three peak periods. The New School Mitigation would result an increase of 22 bus trips during the AM peak hour and decreases during the other two peak periods. The additional bus trips in the morning would increase the total action-generated rider increase during that peak hour from 466 to 488, a 5 percent increase. The *CEQR Technical Manual* threshold for a bus line analysis is an increase of at least 50 passengers to any one bus line during a single peak hour, and the analysis in Chapter 2.M, Transportation, concluded that the Proposed Action would not add 50 passengers to any line. The 5 percent increase caused by the construction of the school would not alter this conclusion. The New School Mitigation would not cause a significant adverse transit impact.

Pedestrians

As is shown in Table 3-12 above, the New School Mitigation would result in small decreases in pedestrian trips relative to the RWCDS during the midday and PM peak periods but would add 713 pedestrian trips during the AM peak hour. Walking trips to school were assumed to come from the surrounding areas, 20% of trips originated from the north, 20% originated from the south, 20% originated from the east of the school, and 40% originated west of the school. The additional pedestrian trips due to the school construction were applied to the sidewalks, corners and crosswalks of the previously projected pedestrian network. As discussed above, these trips would only occur during the AM peak period. Because there are actually less pedestrian trips in the midday and PM peak periods in the school scenario than the baseline proposed action and no impacts are expected in the baseline proposed action condition, further analysis on midday and PM peak periods is not necessary.

Table 3-29 below shows the level of service tables for corners and crosswalks. All studied corners and crosswalks will still operate at LOS C or better and no significant impacts are expected.

Table 3-29: 2022 Proposed Action with School Corner and Crosswalk LOS Tables

Location	Element		AM		
			New Build 15-Minute Volume	SFP	LOS
174th St and Southern Blvd / Boston Rd	Crosswalk	North	205	74.1	A
		Northeast	205	77.5	A
		East	97	45.2	B
174th St and Hoe Ave	Crosswalk	North	260	81.4	A
		South	224	75.9	A
174th St and Vyse Ave	Crosswalk	North	265	33.9	C
		South	205	38.6	C
174th St and Bryant Ave	Crosswalk	North	102	127.4	A
		South	170	76.6	A
174th St and Longfellow Ave	Crosswalk	North	117	162.1	A
		South	178	108.8	A
174th St and Boone Ave	Crosswalk	North	92	187.7	A
		South	120	161.7	A
	Corner	Southwest	272	63.3	A
		Northwest	170	92.3	A
173rd St and Boone Ave	Crosswalk	East	163	191.2	A
		West	92	347.5	A
172nd St and Boone Ave	Crosswalk	East	100	285.6	A
		West	49	573.6	A
E Tremont Ave and Boston Rd / W Farms Rd	Crosswalk	North	67	259.0	A
		East - North	389	54.6	B
		East - South	389	53.7	B
		Southeast	259	88.8	A
		Southwest	280	41.1	B
		West	169	89.5	A
Rodman Pl and W Farms Rd	Corner	Northwest	156	45.4	B
	Crosswalk	West	97	327.4	A

As described in Chapter 2.M, Transportation, sidewalks were studied under platoon flow conditions. Table 3-30 below shows the level of service tables for sidewalks within the study area during the AM peak period. With the proposed school, all studied sidewalks, corners and crosswalks will still operate at LOS C or better and no significant impacts are expected.

Table 3-30: 2022 Proposed Action with School Sidewalk LOS Tables

Location	Sidewalk	Width (feet)	Effective Width (feet)	15-Minute Volume	PFM	Platoon Flow LOS
AM						
West Farms Rd between Rodman Pl and East Tremont Ave	West	12.7	11.7	155	0.9	B
	East	14.4	13.4	31	0.2	A
174th St between Boston Rd and Hoe Ave	North	14.0	13.0	308	1.6	B
	South	14.0	13.0	264	1.4	B
174th St between Hoe Ave and Vyse Ave	North	11.6	10.6	259	1.6	B
	South	11.6	10.6	215	1.4	B
174th St between Vyse Ave and Bryant Ave	North	11.3	10.3	271	1.8	B
	South	11.5	10.5	209	1.3	B
174th St between Bryant Ave and Longfellow Ave	North	9.9	8.9	103	0.8	B
	South	9.9	8.9	175	1.3	B
174th St between Longfellow Ave and Boone Ave	North	9.8	8.8	127	1.0	B
	South	6.7	5.7	196	2.3	B
Boone Ave between 174th St and 173rd St	West	13.7	12.7	155	0.8	B
	East	14.6	13.6	162	0.8	B
Boone Ave between 173rd St and 172nd St	West	6.8	5.8	63	0.7	B
	East	13.8	12.8	246	1.3	B
Boone Ave between 172nd St and 171st St	West	12.4	11.4	55	0.3	A
	East	12.1	11.1	91	0.6	B

Parking

As is shown in Table 3-11 above, school employees would drive an estimated 41 cars to the proposed rezoning area on mornings when school is in session. This would not affect the overnight parking demand but would increase the midday demand by 41 vehicles. The analysis in Chapter 2.M shows that only 67 percent of available study area parking spaces would be occupied during the midday period, with approximately 1,500 unused spaces to accommodate additional demand. The 41 additional vehicles could be accommodated without causing a significant adverse parking impact.

Safety

Accident information was requested for all intersections in the study area for a three year period from 2006 – 2009. The full findings for all intersections in the study area are presented in Chapter 2.M, Transportation. For the purpose of school safety, the intersections directly surrounding the school which would have student pedestrian volumes are summarized in Table 3-31 and Table 3-32 below.

Table 3-31: Reportable Accidents Occurring at Intersections near Proposed School

Intersection		2006 - 2009 Overall Accidents		
Main Street	Cross Street	Reportable Accidents	Fatalities	Injuries
Boone	E 172nd	1	0	1
E 173rd	Boone	9	0	12
E 173rd	Bryant	3	0	2
E 173rd	Longfellow	7	0	6
E 173rd	West Farms	7	0	11
E 174th	Boone	1	0	3
E 174th	Longfellow	5	0	4
West Farms	E 172nd	2	0	2
West Farms	Jennings	2	0	1
West Farms	Longfellow	4	0	2
West Farms	Rodman Place	1	0	1
	Total	**276**	**1**	**353**

Table 3-32: Pedestrian and Bicycle Accidents Occurring at Intersections near Proposed School

Intersection		Pedestrian and Bicycle Accidents by Year											
		Pedestrian				Bicycle				Total			
Main Street	Cross Street	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
Boone	E 172nd	0	0	0	0	0	0	0	0	0	0	0	0
E 173rd	Boone	0	0	0	0	0	0	0	0	0	0	0	0
E 173rd	Bryant	1	0	1	0	0	0	0	0	1	0	1	0
E 173rd	Longfellow	1	1	0	0	0	0	0	0	1	1	0	0
E 173rd	West Farms	0	0	0	0	0	0	0	0	0	0	0	0
E 174th	Boone	0	0	1	0	0	0	0	0	0	0	1	0
E 174th	Longfellow	2	0	0	0	0	0	0	0	2	0	0	0
West Farms	E 172nd	0	0	0	0	1	0	0	0	1	0	0	0
West Farms	Jennings	0	0	0	0	0	0	0	0	0	0	0	0
West Farms	Longfellow	0	0	0	0	0	0	0	0	0	0	0	0
West Farms	Rodmand Place	0	0	0	0	0	0	0	0	0	0	0	0
	Total	**12**	**12**	**21**	**7**	**3**	**2**	**2**	**4**	**15**	**14**	**23**	**11**

The three nearest intersections to school have had a number of accidents between 2006 and 2009. These intersections are East 173rd Street at Longfellow Avenue, East 173rd Street at Boone Avenue, and East 173rd Street at West Farms Road.

East 173rd Street at Longfellow Avenue

East 173rd Street at Longfellow Avenue is located a block and a half west of the entrance to school. East 173rd Street is a two way street that runs east-west. It acts as the major street in this

intersection and has no stop sign. Longfellow Avenue runs one way in the northbound direction and is stop controlled. Between 2006 and 2009 there were 7 reportable accidents at this intersection resulting in 6 injuries. Only two of these accidents involved pedestrians, one in 2006 and one in 2007. Low numbers of pedestrians associated with the school are expected to cross this intersection so an impact on pedestrian safety is not expected.

East 173rd Street at Boone Avenue

East 173rd Street at Boone Avenue is located a half block west of the entrance to school. East 173rd Street is a two way street that runs east-west. It acts as the minor street in this intersection is stop controlled. Boone Avenue runs one way in the southbound direction and is not stop controlled. Between 2006 and 2009 there were 9 reportable accidents at this intersection resulting in 12 injuries. However, none of these accidents involved pedestrians. Due to its proximity to school, a large number of pedestrians are expected to use the crosswalks at this intersection. Over 250 pedestrians in the AM peak hour will cross the east crosswalk, 50 will cross the west crosswalk, and about 100 will use the north and south crosswalks. Because of the large increase in numbers of pedestrians crossing at this intersection, a pedestrian safety impact could occur here. Southbound traffic on Boone Avenue poses a significant safety hazard because it does not stop. Making this intersection an all-way stop would significantly increase pedestrian safety at this intersection. In addition, signage is recommended along both Boone Avenue and East 173rd Street to alert motorists of the nearby school and to remind them to yield to pedestrians in the crosswalk. These measures would fully mitigate the pedestrian safety impact.

East 173rd Street at West Farms Road

East 173rd Street at West Farms Road is located a half block east of the entrance to school. East 173rd Street is a two way street that intersects West Farms Road in the eastbound direction to form a T-intersection. It acts as the minor street in this intersection is stop controlled. West Farms Road runs two ways in the north-south direction and is not stop controlled. Between 2006 and 2009 there were 7 reportable accidents at this intersection resulting in 11 injuries. However, none of these accidents involved pedestrians. Although it is close to the school, only pedestrians originating in the northern study area are expected to use this intersection. No pedestrians are expected to have to cross West Farms Road, only the crosswalk across East 173rd Street should receive use. Signage along West Farms Road reminding motorists to yield to pedestrians crossing East 173rd Street in the crosswalk would help to alleviate any safety impact.

Air Quality

Mobile Sources

In comparison to No Action Conditions, the New School Mitigation would reduce the number of truck trips during all peak periods as is the case for the Proposed Action. During the peak AM period, it would add 2 to 5 school buses and increase the number of autos at selected intersections. Table 3-33 shows the traffic increments that would be added by this alternative.

Only the peak AM period would result in an increment of 170 autos at an intersection. As described for the Proposed Action, non-signalized intersections are not modeled. Based on the increments and overall intersection volumes, which are similar to those for the baseline alternative, the intersections selected for modeling are the same ones that were modeled for the Proposed Action.

Table 3-33: Traffic Volume Increments for CO Screen, New School Mitigation

ID	Intersections	Auto Trips Added			Truck Trips Added			Bus Trips Added			Total Trips Added		
		AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	East Tremont Ave at East 177th St.	282	114	121	-11	-9	-12	-	-	-	260	96	97
2	West Farms Rd. at Boston Rd, E. Tremont Ave, Dawson Rd	300	141	173	-14	-10	-14	2	-	-	274	121	145
3	West Farms Rd. at Rodman Place	287	114	134	-14	-10	-12	2	-	-	261	94	110
4	East 177th St. at Sheridan Expressway Ramp	278	105	117	-12	-8	-13	-	-	-	254	89	91
5	West Farms Rd. at Cross Bronx Expr Service Rd	266	79	93	-14	-14	-12	2	-	-	240	51	69
6	Bronx River Ave at East 174th St.	-2	49	132	-5	-6	-7	2	-	-	-10	37	118
7	Boone Ave at East 174th St.	36	62	163	-12	-9	-11	2	-	-	14	44	141
8	Longfellow Ave at East 174th St.	-13	24	65	-6	-5	-5	1	-	-	-24	14	55
9	West Farms Rd. at East 173rd St.	300	83	144	-14	-16	-14	5	-	-	277	51	116
10	Boone Ave at East 173rd St.	124	54	119	-18	-20	-14	4	-	-	92	14	91
11	Longfellow Ave at East 173rd St.	-3	30	67	-5	-7	-7	2	-	-	-11	16	53
12	West Farms Rd. at East 172nd St.	145	71	168	-4	-11	-11	5	-	-	142	49	146
13	Boone Ave at East 172nd St.	46	22	50	-6	-9	-7	4	-	-	38	4	36
14	West Farms Rd. at Jennings St.	30	45	133	-3	-8	-6	2	-	-	26	29	121
15	West Farms Rd. at Boone Ave	45	47	136	-5	-9	-8	2	-	-	37	29	120
16	Boone Ave at Freeman St., Sheridan Expressway Ramp	14	19	56	-3	-4	-3	-	-	-	8	11	50
17	Westchester Ave at Boone St., Home St.	15	37	105	-5	-7	-5	-	-	-	5	23	95
18	West Farms Rd. at Home St., Longfellow Ave	25	44	135	-6	-8	-8	2	-	-	15	28	119
19	West Farms Rd. at Freeman St.	21	44	133	-4	-8	-7	2	-	-	15	28	119
20	Westchester Ave. at Sheridan Expressway Ramp	15	21	52	-3	-4	-3	-	-	-	9	13	46

Note: Entries in bold type exceed 170-vehicle threshold screen
Source: Stantec Consulting, April 24, 2010

CO modeling for the New School Mitigation followed the same procedures that were described previously under Action Conditions. Table 3-34 shows the CO concentrations for the New School Mitigation for the two intersections that were analyzed for the peak AM period. For the intersection of Boston Road / West Farms Road / East Tremont Avenue, the worst case CO concentration is 2.2 ppm for the one-hour period or 1.5 ppm for the 8-hour period. This occurred at on the westbound East Tremont Avenue lanes 80 feet east of the intersection. The total CO concentration of 4.0 ppm is within the NAAQS of 9 ppm for the 8-hour period. No exceedances of the NYC *de minimis* values would occur.

For the intersection of E. 177th Street and the Sheridan Expressway Ramp, the 1-hour modeled CO concentration of 2.8 ppm is equivalent to an 8-hour concentration of 2.2 ppm and a total concentration of 4.7 ppm. This is within the NAAQS and NYC *de minimis* criteria.

Table 3-34: Eight-Hour Mobile Source CO Concentrations (ppm), New School Mitigation

2022 No Action Conditions		**2022 Action Conditions**		**Difference (Action-No Action)**
Receptor for Boston/West Farms Road: R27, 100 ft. east of intersection on WB lanes		Receptor for Boston/West Farms Road: R27, 80 ft. east of intersection on WB lanes		
Wind angle	111°	Wind angle	118°	
Modeled CO	1.5	Modeled CO	1.5	
Background CO	2.5	Background CO	2.5	
Total CO	4.0	Total CO	4.0	0.0 ppm
Receptor for E.177th St/Sheridan Expressway Ramp: R18, 40 ft. north of intersection on SB lanes		Receptor for E.177th St/Sheridan Expressway Ramp: R18, 100 ft. north of intersection on SB lanes		
Wind angle	111°	Wind angle		
Modeled CO	1.8	Modeled CO	1.9	
Background CO	2.5	Background CO	2.5	
Total CO	4.3	Total CO	4.4	0.1 ppm

Source: Sandstone Environmental Associates, Inc.

For PM2.5 for the New School Mitigation, the volumes and HDDV equivalents are similar to those for the baseline Action alternative, and the same intersection was modeled. Tables 3-35 and 3-36 show the results of the PM10 and PM2.5 modeling for the New School Mitigation. No violations of the NAAQS or NYCDEP interim guidelines are projected.

Table 3-35: New School Mitigation, PM10 Concentrations (ug/m3)

Location	24-Hour PM_{10} ($\mu g/m^3$)		
	No Action	Action	Difference
E. 174th Street / Boone Avenue	74.8	77.2	2.4
Note: National Ambient Air Quality Standards – 24-hour, 150 $\mu g/m^3$.			

Source: Sandstone Environmental Associates, Inc.

Table 3-36: New School Mitigation, PM2.5 Concentrations (ug/m3)

Location	24-Hour $PM_{2.5}$ ($\mu g/m^3$)			Annual $PM_{2.5}$ ($\mu g/m^3$)		
	No Action	Action	Difference	No Action	Action	Difference
E. 174th Street/Boone Avenue	2.8	3.6	0.8	0.6	0.7	0.1
Note: $PM_{2.5}$ interim guidance criteria – 24-hour average, 2 ug/m^3 (5 ug/m^3 not-to-exceed value); annual, 0.3 $\mu g/m^3$						

Source: Sandstone Environmental Associates, Inc.

Stationary HVAC Sources

The New School Mitigation would affect the size, use, and design of only Building 3, which as proposed would be divided into three sections, served by three separate heating, ventilation, and air conditioning (HVAC) systems under the Proposed Project. (See Figures 3-10A and 3-10B.) The exhaust from each HVAC system would be vented separately, from an exhaust stack on top of the mechanical penthouse on the roof of that building segment. This assessment refers to the sections as Buildings 3A, 3B, and 3C. Building 3A is the southeastern portion of Building 3, fronting on West Farms Road and the mid-block open space (shown in blue on Figure 3-10). If a school is built on Site 2.N, Building 3A's street wall would rise an additional story before setting back from the street line than it would under the Proposed Project, adding 1,994 sf of floor area that would be heated and cooled by the HVAC system, and thus slightly increasing the volume of exhaust that would be emitted. Building 3A's rooftop and stack heights would be unchanged. Building 3B is the northern portion of Building 3, occupying the northern part of the frontage along West Farms Road and the entire 173rd Street frontage (shown in yellow on Figure 3-10). Its street wall would also be raised by a story, and the segment at the corner of 173rd Street and Boone Avenue would contain nine stories rather than the proposed seven. These changes would add 8,986 sf of floor area. Because its exhaust stack would be on top of the higher West Farms Road part of the building, its elevation would not change. Building 3C is the southwestern portion of Building 3, extending southward along Boone Avenue from Building 3B to the mid-block open space (shown in orange on Figure 3-10). If the SCA exercises its option, Building 3A would be replaced by a separate six-story school building. The school rather than a predominantly residential, predominantly five-story building segment would occupy the same

footprint as the proposed Building 3C. Its gross floor area (including below grade space) would increase from 77,270 sf under the Proposed Project to 95,727 sf. Also, the school's floor to ceiling heights would be greater than a residential building's, so that its sixth floor roof would be level with the roof line of the adjacent nine-story portion of Building 3B, at a height of 84 feet. The height of the mechanical penthouse roof, atop which the exhaust stack would be located, would be 116 feet, rather than 99 feet as under the Proposed Project.

Figure 3-10A: Buildings 3A, 3B and 3C with the School

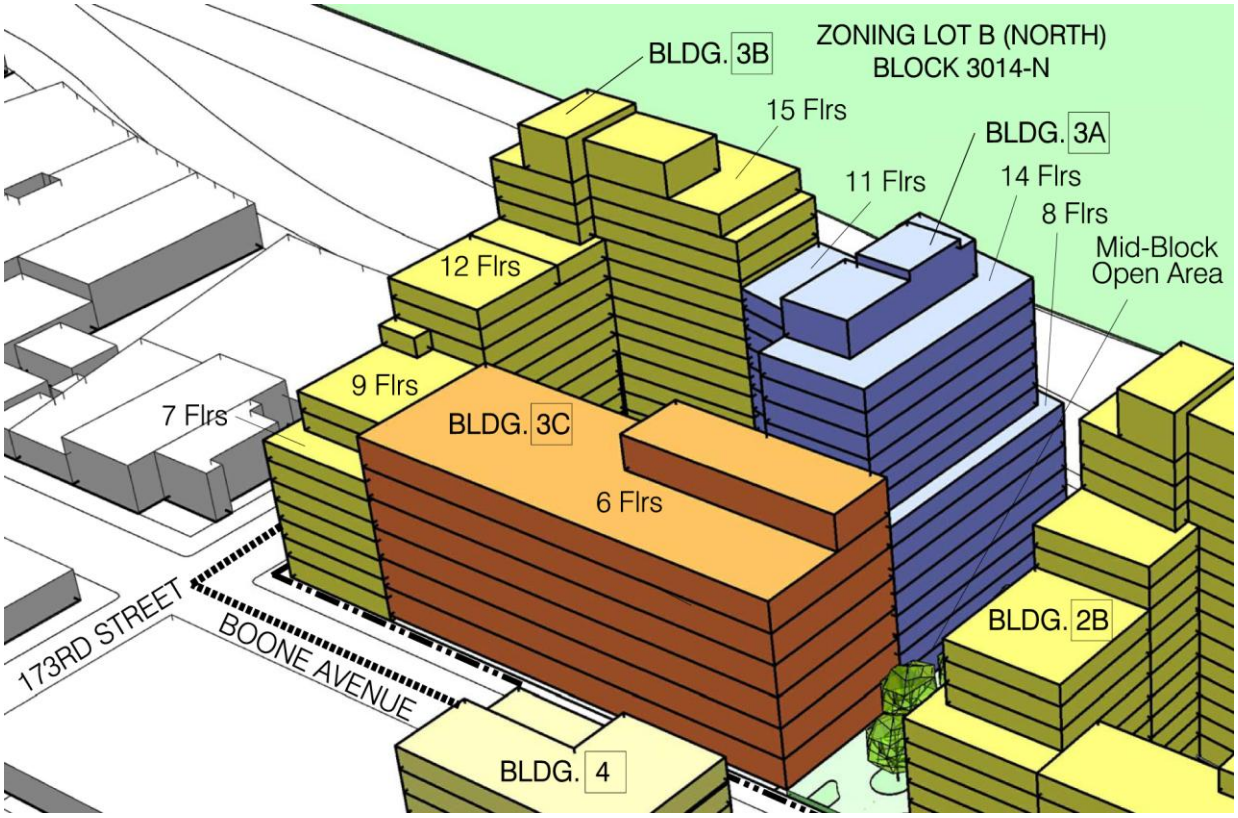
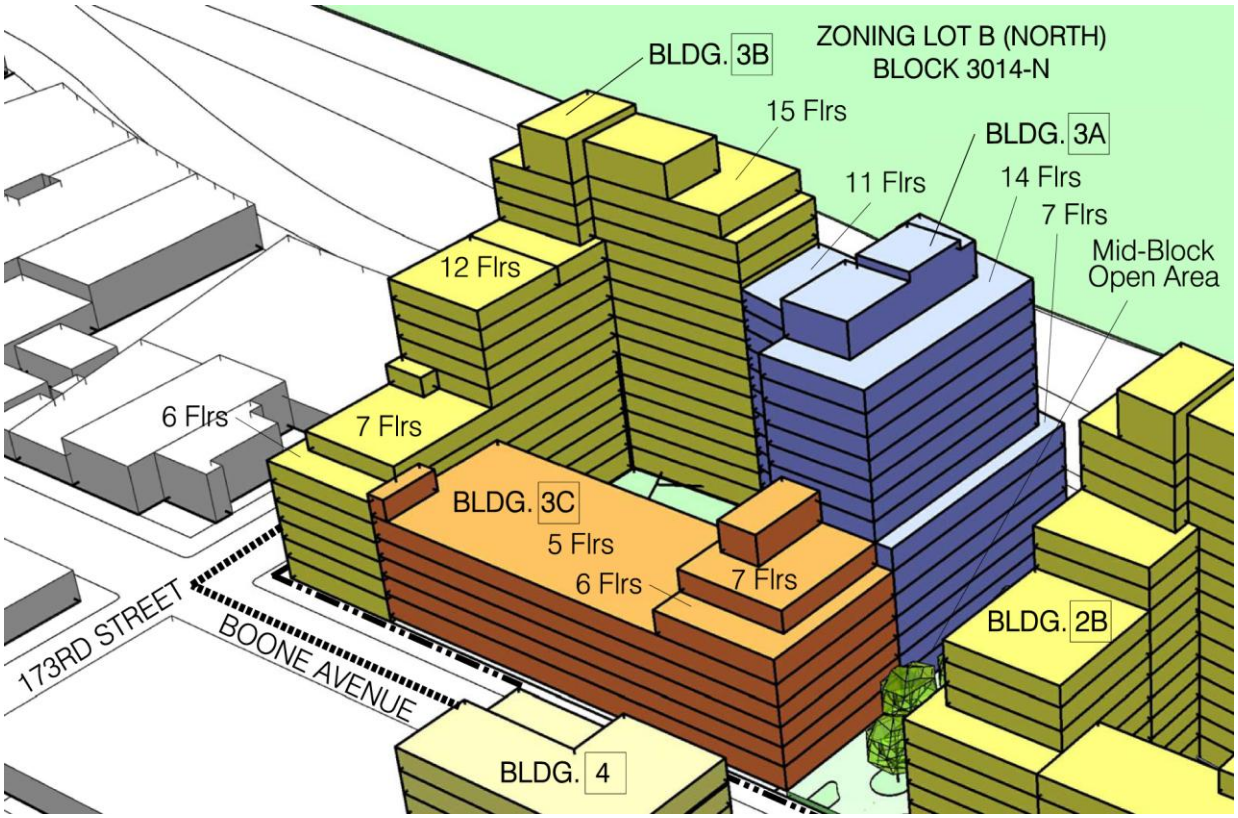


Figure 3-10B: Buildings 3A, 3B and 3C without the School



A screening analysis was performed to determine whether the HVAC system exhaust from any building or building segment constructed on Site 2N would adversely affect residents or students in another building or building segment. Buildings 3A and 3B would be 14 and 15 stories tall along West Farms Road, so their exhaust stacks would be at considerably higher elevations (174 feet in the case of Building 3A) than the school and its rooftop recreational area (84 feet). Exhaust from Buildings 3A and 3B would not adversely affect the school. Similarly, the level Building 3B's highest residential story would be 148 feet, approximately 25 feet below the plume line from Building 3A's exhaust stack, so further analysis of a possible impact from Building 3A on Building 3B is not warranted. Building 3A would be one story shorter than Building 3B, so further analysis is not needed to conclude that Building 3B's exhaust would not adversely affect Building 3A.

Because the school's exhaust stack would be at a lower elevation than the upper residential floors of Buildings 3A and 3B, and because its floor area would be greater than that of the proposed Building 3C, AERMOD was to used to model the potential for the school's exhaust to have an adverse air quality impact on receptor points on Buildings 3A and 3B. Modeling was also performed for receptor points on the school's own rooftop play area. The AERMOD analysis revealed that the maximum concentration of nitrous oxide (NO_x) from the school's stack at any receptor point would be 7.9 $\mu g/m^3$, registered on an 11th floor window of the west wall of Building 3A. Coupled with the background NO_x concentration of 50 $\mu g/m^3$, the concentration at the receptor location would not exceed the National Ambient Air Quality Standards (NAAQS) threshold of 100 $\mu g/m^3$.

Locations of exhaust stacks and their heights for the LSGD, with or without the New School Mitigation in place, would be prescribed through the LSGD restrictive declaration. Therefore, no significant adverse impacts from Stationary HVAC Sources are anticipated from the development of the New School Mitigation.

Greenhouse Gas Emissions

Summary of Greenhouse Gas Emissions on All Development Sites

This analysis calculates the total estimated greenhouse gas (GHG) emissions for the development resulting from the Proposed Action if the new school is built, before comparing the results with those for development under the RWCDS. Whereas Chapter 2.O, Greenhouse Gas Emissions, performs calculations for the LSGD sites, development on other applicant-controlled sites, and development on non-applicant-controlled sites, this analysis also performs calculations for the school, separating it from the applicant's development on the LSGD. Thus, Table 3-37 presents a summary of all operational, mobile source, and construction emissions that would result from the New School Mitigation, showing separately the GHG emissions generated by the LSGD sites, applicant-controlled non-LSGD sites, non-applicant sites, and the school site.

Table 3-37: Future Action Conditions Per School Mitigation Scenario: GHG Emission Summary

Emission Source	Applicant LSGD Sites	Applicant Non-LSGD Sites	Applicant Development All Sites	Non-Applicant Development Sites	School	Total (All Development Sites)
GHG Emissions, in metric tons						
Operational[1]	5,586	3,089	8,675	10,363	1,015	20,052
Mobile Source[1]	11,033	6,755	17,788	22,489	331	40,608
Construction[2]	41,257	20,299	61,556	68,012	2,793	132,361
Total	57,875	30,143	88,018	100,864	4,139	193,021

1. Annual emissions
2. Total emissions for entire construction period

The annual projected total for operational and mobile source GHG gases on all applicant-controlled development sites is 26,462 metric tons of GHG emissions. Construction on the applicant-controlled development sites would result in an estimated 61,556 metric tons of net embodied carbon dioxide equivalent over the entire construction period (with 41,257 metric tons attributed to the LSGD sites and 20,299 metric tons attributed to the applicant's non-LSGD sites). It should be noted that by far, the most prevalent material that will be used in the construction of the projected dwelling units is concrete, and that 90 percent of the embedded carbon dioxide equivalent in concrete comes from the cement portion of the mixture. For applicant-controlled development sites, research will be conducted into the use of low carbon and carbon neutral concrete.

The annual projected total for operational and mobile source GHG emissions on the non-applicant development sites is 32,852 metric tons of GHG emissions. Construction on the development sites not controlled by the project applicant would result in an estimated 68,012 metric tons of net embodied carbon dioxide equivalent over the entire construction period.

The annual projected total for operational and mobile source GHG emissions for the school is 1,346 metric tons of GHG emissions. Construction of the school would result in an estimated 2,793 metric tons of net embodied carbon dioxide equivalent over the entire construction period.

Construction on all development sites within the rezoning area under the New School Mitigation scenario would result in an estimated 132,361 metric tons of net embodied carbon dioxide equivalent over the entire construction period. Annually, the new uses (including the school) would result in approximately 20,052 metric tons of GHG emissions from their operations and 40,608 metric tons of GHG emissions from mobile sources, for an annual total of 60,660 metric tons of GHG emissions, or about 0.1 percent of the city's annual total of 49.3 million metric tons. Tables 3-38 through 3-41 show how each emission type was derived.

Greenhouse Gas Emissions from Building Operations

Table 3-38 shows the annual operational GHG emissions under the New School Mitigation scenario. The applicant-controlled development sites would generate approximately 8,675 metric tons of GHG emissions annually from building operations (5,586 metric tons from the LSGD sites and 3,089 metric tons from the applicant's non-LSGD sites) The non-applicant sites would generate approximately 10,363 metric tons of GHG emissions annually from building operations. The school would generate approximately 1,015 metric tons of GHG emissions annually from building operations.

Table 3-38: School Mitigation: Annual Operational GHG Emissions and Carbon Intensity

Building Type	Carbon Dioxide Equivalent / sq. ft (kg)	Floor Area (sq. ft)	GHG emissions (kg)
Applicant LSGD Sites			
Commercial	9.43	18,493	174,389
Institutional	11.42	0	0
Large Residential	6.59	821,155	5,411,411
LSGD Annual Operational GHG Emissions (kg)			5,585,800
Applicant Non-LSGD Sites			
Commercial	9.43	27,540	259,702
Institutional	11.42	0	0
Large Residential	6.59	429,300	2,829,087
Applicant Non-LSGD Annual Operational GHG Emissions (kg)			3,088,789
All Applicant Sites Annual Operational GHG Emissions (kg)			**8,674,590**
Non-Applicant Development Sites			
Commercial	9.43	85,836	809,433
Institutional	11.42	0	0
Large Residential	6.59	1,449,713	9,553,609
Non-Applicant Annual Operational GHG Emissions (kg)			10,363,042
School Site			
Commercial	9.43	0	0
Institutional	11.42	88,860	1,014,781
Large Residential	6.59	0	0
School Operational GHG Emissions (kg)			1,014,781
Total Annual Operational GHG Emissions from All Development Sites (kg)			**20,052,413**

GHG Emissions from Mobile Sources

Table 3-39 shows estimated vehicle miles traveled (VMTs) by vehicle type and roadway type for the applicant's development sites, for the non-applicant sites, and for the school. The VMT data was entered into a mobile GHG emissions calculator (included with the CEQR Technical Manual) that was used to obtain the total estimated mobile source GHG emissions attributable to the School Mitigation scenario. The results of this calculation are presented below in Table 3-40, which shows separately the GHG emissions generated by the LSGD sites, applicant-controlled non-LSGD sites, non-applicant sites, and the school.

Table 3-39: School Mitigation: Estimated Annual VMTs

	Cars			Taxis			Trucks		
	Local	Arterial	Highway	Local	Arterial	Highway	Local	Arterial	Highway
	VMTs	VMTs	VMTs	VMTs	VMTs	VMTs	VMTs	VMTs	VMTs
Applicant LSGD Sites									
Weekday residential	586,151	1,201,611	1,142,995	26,336	53,989	51,356	100,102	205,209	195,198
Weekend residential	139,370	285,708	271,771	6,262	12,837	12,211	13,347	27,361	26,026
Retail weekday	14,826	30,393	28,910	13,178	27,016	25,698	12,825	26,291	25,009
Retail weekend	35,293	72,350	68,821	31,371	64,311	61,174	1,466	3,005	2,858
Childcare	0	0	0	0	0	0	0	0	0
Applicant LSGD Subtotal	**775,640**	**1,590,061**	**1,512,497**	**77,148**	**158,153**	**150,438**	**127,739**	**261,866**	**249,092**
Applicant Non-LSGD Sites									
Weekday residential	299,341	613,649	583,715	13,450	27,572	26,227	51,121	104,798	99,686
Weekend residential	71,175	145,908	138,790	3,198	6,556	6,236	6,816	13,973	13,291
Retail weekday	22,079	45,261	43,054	19,626	40,232	38,270	19,099	39,153	37,243
Retail weekend	46,718	95,773	91,101	46,718	95,773	91,101	2,183	4,475	4,256
Childcare	0	0	0	0	0	0	0	0	0
Applicant Non-LSGD Subtotal	**439,313**	**900,591**	**856,660**	**82,991**	**170,132**	**161,833**	**79,219**	**162,398**	**154,476**
All Non-Applicant Subtotal	**1,214,952**	**2,490,652**	**2,369,157**	**160,139**	**328,286**	**312,272**	**206,958**	**424,264**	**403,568**
Non-Applicant Development Sites									
Weekday residential	1,009,406	2,069,282	1,968,341	45,353	92,975	88,439	172,384	353,388	336,149
Weekend residential	240,007	492,015	468,014	10,784	22,107	21,028	22,985	47,118	44,820
Retail weekday	68,814	141,070	134,188	61,168	125,395	119,278	59,527	122,031	116,078
Retail weekend	163,812	335,814	319,433	145,611	298,502	283,941	6,803	13,946	13,266
Childcare	0	0	0	0	0	0	0	0	0
Non-Applicant Subtotal	**1,482,039**	**3,038,181**	**2,889,977**	**262,916**	**538,978**	**512,686**	**261,699**	**536,483**	**510,314**
School Site									
School Staff	25,023	51,297	48,795	0	0	0	0	0	0
School Student	3,706	7,598	7,227	0	0	0	2,912	5,970	5,678
School Subtotal	**28,729**	**58,894**	**56,022**	**0**	**0**	**0**	**2,912**	**5,970**	**5,678**
Total - All Development Sites	**2,725,721**	**5,587,727**	**5,315,155**	**423,056**	**867,264**	**824,958**	**471,569**	**966,717**	**919,560**

Table 3-40: School Mitigation: Estimated Annual Mobile Source GHG Emissions*

	Car (Emissions in Metric Tons)	Taxi (Emissions in Metric Tons)	Truck (Emissions in Metric Tons)	Total (Emissions in Metric Tons)
Applicant LSGD Sites				
Local	1,768.40	157.96	1,051.47	2,977.83
Arterial	2,833.16	252.21	1,759.01	4,844.38
Int/Exp	1,903.29	166.53	1,140.64	3,210.46
Applicant LSGD Subtotal	6,504.85	576.70	3,951.12	11,032.67
Applicant Non-LSGD Sites				
Local	1,001.60	169.93	652.08	1,823.61
Arterial	1,604.67	271.32	1,090.87	2,966.86
Int/Exp	1,078.00	179.14	707.38	1,964.52
Applicant Non-LSGD Subtotal	3,684.27	620.39	2,450.33	6,754.99
All Non-Applicant Subtotal	**10,189.12**	**1,197.09**	**6,401.45**	**17,787.66**
Non-Applicant Development Sites				
Local	3,378.94	538.33	2,154.14	6,071.41
Arterial	5,413.41	859.53	3,603.69	9,876.63
Int/Exp	3,636.67	567.51	2,336.83	6,541.01
Subtotal	12,429.02	1,965.37	8,094.66	22,489.05
School Site				
Local	65.50	0.00	23.97	89.47
Arterial	104.94	0.00	40.10	145.04
Int/Exp	70.50	0.00	26.00	96.50
Subtotal	240.94	0.00	90.07	331.01
RWCDS Grand Total	**22,618.14**	**3,162.46**	**14,496.11**	**40,276.71**

*Calculated based on projected annual Vehicle Miles Traveled (VMT); see previous Table

As shown, the applicant-controlled development sites would generate approximately 17,788 metric tons of GHG emissions annually from mobile sources (11,033 metric tons from the applicant's LSGD sites and 6,755 from the applicant's non-LSGD sites). The non-applicant development sites would generate approximately 22,489 metric tons of GHG emissions annually from mobile sources. The school would generate approximately 331 metric tons of GHG emissions annually from mobile sources.

GHG Emissions from the Construction Process

Because of the magnitude of the development under the Proposed Action with or without the New School Mitigation, a rough estimate was prepared of the greenhouse gases which would be released during the construction process. This estimate was made using the Construction Carbon Calculator, Version 0.03.5, as developed by BuildCarbonNeutral.Org.

Table 3-41 shows the inputs and results of the Construction Carbon Calculator. As shown, the Construction Carbon Calculator resulted in 61,556 metric tons of carbon dioxide equivalent for the applicant-controlled LSGD sites, 20,299 metric tons of carbon dioxide equivalent for the applicant-controlled non-LSGD sites, 68,012 metric tons of carbon dioxide equivalent for the development sites not controlled by the applicant, and 2,793 for the School. Thus, the construction process would result in about 132,361 metric tons of carbon dioxide equivalent over the full, 10-year construction period.

Table 3-41: New School Mitigation: Construction Carbon Calculator Input and Results

	Applicant LSGD Sites	Applicant Non-LSGD Sites	Non-Applicant Development Sites	School Site	Subtotal: Applicant Sites	Total: All Development Sites
Total Square Feet[1]	928,507	456,840	1,535,549	88,860	1,385,347	3,009,756
Stories Above Grade[2]	10	10	7	6	N/A	N/A
Stories Below Grade	1	1	1	1	N/A	N/A
System Type	concrete	concrete	concrete	steel	N/A	N/A
Ecoregion	Eastern Temperate Forests	Eastern Temperate Forests	Eastern Temperate Forests	Eastern Temperate Forests	N/A	N/A
Existing Vegetation Type	Previously Developed	Previously Developed	Previously Developed	Previously Developed	N/A	N/A
Installed Vegetation Type	Shrubland	Shrubland	Shrubland	Shrubland	N/A	N/A
Landscape Disturbed (sf)	0	0	0	0	0	0
Landscape Installed[3] (sf)	39,811	19,650	97,039	0	59,461	156,500
Approximate net embodied CO2 (metric tons)	41,257	20,299	68,012	2,793	61,556	132,361

Source: buildcarbonneutral.com Construction Carbon Calculator formula version 0.03.5

Notes: 1: From RWCDS, total building floor area

2: Derived assuming average of 70 percent lot coverage as footprint

3: On Development Sites other than the School: Equals 30 percent of lot area

Comparison of School Mitigation Scenario with the RWCDS

Table 3-42 presents the projected quantities of GHG emissions that would be generated by the Proposed Action under the RWCDS. As shown, annually, the Proposed Action would result in approximately 19,472 metric tons of GHG emissions from building operations and 41,123 metric tons of GHG emissions from mobile sources, for an annual total of 60,595 metric tons of GHG emissions, or about 0.1 percent of the city's annual total of 49.3 million metric tons. Construction on the applicant-controlled development sites would result in an estimated 60,116 metric tons of net embodied carbon dioxide equivalent over the entire construction period (with 39,817 metric tons attributed to the LSGD sites and 20,299 metric tons attributed to the applicant's non-LSGD sites). Construction resulting from the Proposed Action would result in an estimated 128,128 metric tons of net embodied carbon dioxide equivalent over the entire construction period.

Table 3-42: Future Action Conditions per RWCDS: GHG Emission Summary

Emission Source	Applicant LSGD Sites	Applicant Non-LSGD Sites	Applicant Development (All Sites)	Non-Applicant Development Sites	Total - All Development Sites
Operational[1]	6,020	3,089	9,109	10,363	**19,472**
Mobile Source[1]	11,879	6,755	18,634	22,489	**41,123**
Construction[2]	39,817	20,299	60,116	68,012	**128,128**
Total	57,716	30,143	87,859	100,864	**188,723**

1. Annual Emissions
2. Total emissions for entire construction period

Table 3-43 compares the total GHG emissions resulting from the RWCDS with those from the New School Mitigation scenario. Because no changes are made to the applicant's non-LSGD sites and the non-applicant development sites, they show a net change of zero in all areas.

On the applicant's sites, annual operational GHG emissions would decrease by 435 metric tons and annual mobile source emissions would decrease by 846 metric tons. Annually, the school would generate 1,015 metric tons of GHG emissions from its operations and 331 metric tons from mobile sources. Thus, operational GHG emissions would increase by 580 metric tons per year and mobile source GHG emissions would decrease by 515 metric tons per year. Annual project-wide GHG emissions would increase by 65 metric tons per year as a result of the New School Mitigation.

Under the New School Mitigation, GHG emissions relating to construction activities on the applicant-controlled sites would increase by 1,440 metric tons. School construction would generate another 2,793 metric tons of GHG emissions, for a net increase of 4,223 metric tons over the entire construction period.

Table 3-43: Total GHG Emissions: New School Mitigation Compared with RWCDS

Emission Source	Applicant LSGD Sites	Applicant Non-LSGD Sites	Applicant Development All Sites	Non-Applicant Development Sites	School	Total (All Development Sites)
GHG Emissions, in metric tons						
Operational[1]	-435	0	-435	0	1,015	580
Mobile Source[1]	-846	0	-846	0	331	-515
Construction[2]	1,440	0	1,440	0	2,793	4,233
Total	159	0	159	0	4,139	4,298

1. Annual emissions
2. Total emissions for entire construction period

This minor change in Proposed Action-generated GHG emissions is too small to affect the conclusions of Chapter 2.O, Greenhouse Gas Emissions, and the New School Mitigation would not result in any changes to the GHG reduction measures that the Applicant intends to include as part of the Proposed Project. As under the RWCDS, the development associated with the New School Mitigation could be subject to changes in the New York City Building Code that are currently being considered to require greater energy efficiency and to further the goals of PlaNYC. These could include energy efficiency requirements, specifications regarding cement, and other issues influencing GHG emissions. The New School Mitigation is consistent with the City's citywide GHG and climate change goals. The New School Mitigation would not alter the conclusion of Chapter 2.O, Greenhouse Gas Emissions, that there would be no significant adverse GHG emission or climate change impacts.

Noise

Mobile Source Noise

As is shown in Table 3-13 above, the New School Mitigation would result in a net increase of 90 vehicular trips relative to the Proposed Action during the AM peak traffic period, consisting of a net increase of 82 automobile trips and the addition of 8 bus trips, and would result in small decreases during the midday and PM peak hours. For noise calculation purposes, not all

vehicular trips are equal, since some types of vehicles (such as truck and busses) produce more noise than others (such as passenger cars). Mobile source noise calculations are therefore performed using the number of passenger car equivalents (PCEs) rather than the number of vehicles. Each school bus is equal to 18 PCEs.

The Proposed Action, with or without the New School Mitigation, would substantially reduce the number of truck trips and increase the number of passenger cars traveling through each studied intersection, and each medium truck equals 13 PCEs. The reduced number of trucks would greatly outweigh the increase of two to five school busses at any intersection. In this case, therefore, a comparison in the number of vehicles is more conservative than a comparison in the number of PCEs.

A doubling of the number of PCEs at any intersection would be required to raise noise levels by 3 decibels (dBA), which is the minimum change in noise levels that most people can detect. A 3 dBA increase is therefore the threshold for a significant adverse noise impact.

Table 3-44 compares the number of vehicles traveling through each studied intersection under future no-action conditions and in the future with the Proposed Action as modified to include the New School Mitigation. As the table shows, the number would not double at any intersection, and would thus not raise noise levels by 3 dBA or more.

Table 3-45 compares noise levels under future no-action conditions and in the future with the Proposed Action as modified to include the New School Mitigation at the 13 noise monitoring locations that were analyzed in Chapter 2.P, Noise. As the table shows, noise levels would be substantially the same or slightly lower as a result of the action, including the New School Mitigation, and would be significantly lower than under no-action conditions at one location, the intersection of Boone Avenue and East 173rd Street.

The New School Mitigation would not cause any significant adverse mobile source noise impacts.

Table 3-44: Comparison of Vehicular Volumes, No-Action and New School Mitigation Conditions

Intersection List	No-Action			Action with School			Incremental Increase		
	AM	MD	PM	AM	MD	PM	AM	MD	PM
East Tremont Ave at East 177th St.	2,520	2,191	2,741	2,780	2,287	2,838	260	96	97
West Farms Road at Boston Rd, East Tremont Ave, Dawson Rd	2,160	1,811	2,421	2,434	1,932	2,566	274	121	145
West Farms Road at Rodman Place	533	327	483	794	421	593	261	94	110
E. 177th St. @ E. 177th St.	3,212	2,687	2,593	3,466	2,776	2,684	254	89	91
West Farms Road at Cross Bronx Expressway North Service Rd	533	342	498	773	393	567	240	51	69
Bronx River Ave at East 174th St.	1,671	1,301	1,865	1,661	1,338	1,983	(10)	37	118
Boone Ave at East 174th St.	1,255	952	1,340	1,269	996	1,481	14	44	141
Longfellow Ave at East 174th St.	904	903	1,313	880	917	1,368	(24)	14	55
West Farms Road at East 173rd St.	586	378	550	863	429	666	277	51	116
Boone Ave at East 173rd St.	476	246	326	568	260	417	92	14	91
Longfellow Ave at East 173rd St.	350	326	1,197	339	342	1,250	(11)	16	53
West Farms Road at East 172nd St.	560	374	543	702	423	689	142	49	146
Boone Ave at East 172nd St.	373	165	210	411	169	246	38	4	36
West Farms Road at Jennings St.	443	296	439	469	325	560	26	29	121
West Farms Road at Boone Ave	550	367	528	587	396	648	37	29	120
Boone Ave at Freeman St., Sheridan Expressway Ramp	1,113	955	787	1,121	966	837	8	11	50
Westchester Ave at Boone St., Home St.	2,829	2,258	2,224	2,834	2,281	2,319	5	23	95
West Farms Road at Home St., Longfellow Ave	613	480	682	628	508	801	15	28	119
West Farms Road at Freeman St.	495	347	519	510	375	638	15	28	119
Westchester Ave. at Sheridan Expressway Ramp/Edgewater Rd.	2,145	1,760	2,094	2,154	1,773	2,140	9	13	46

Table 3-45: Comparison of Noise Levels, No-Action and New School Mitigation Conditions

Site	Period	No Action		New School Mitigation		Project Increment
		L_{eq}	L_{10}	L_{eq}	L_{10}	
Boone Ave. & E. 174th St.	AM	71.2	73.6	71.1	73.5	-0.1
	MD	75.1	72.6	75	72.5	-0.1
	PM	71.2	73.4	71.2	73.4	0.1
W. Farms Rd. & E. 174th St.	AM	72.8	75	72.9	75.1	0.1
	MD	73.1	75	73.2	75.1	0
	PM	74.6	76.7	74.7	76.8	0.1
Boone Ave. & E. 173rd St.	AM	69.6	71.3	69.6	71.3	0
	MD	66.4	67.6	63.3	64.5	-3.1
	PM	67.4	69.1	67.3	69	-0.1
W. Farms Rd. & E. 173rd St.	AM	75.6	75.4	76.1	75.9	0.5
	MD	73.6	76.3	73.2	75.9	-0.3
	PM	72.6	74.7	72.4	74.5	-0.2
Boone Ave. & E. 172nd St.	AM	72.4	74.1	72.5	74.2	0.1
	MD	68.7	70.9	68.4	70.6	-0.3
	PM	68.6	69.3	68.3	69	-0.3
W. Farms Rd. & E. 172nd St.	AM	74.5	76.3	74.9	76.7	0.4
	MD	74.6	76.1	74.4	75.9	-0.1
	PM	73.2	74.7	73.3	74.8	0.1
Boone Ave. & E. 176th St. Service Rd	AM	70.1	72.3	70.1	72.3	0
	MD	70.8	71.6	70.5	71.3	-0.3
	PM	67	69.6	66.3	68.9	-0.7
W. Farms Rd & Rodman Pl.	AM	68.5	71.7	68.9	72.1	0.4
	MD	68.8	71.8	68.7	71.7	-0.1
	PM	65.6	68.9	65.4	68.7	-0.1
W. Farms Rd. / Boston Rd.	AM	81.1	86.1	81.1	86.1	0
	MD	80.4	84.6	80.4	84.6	0
	PM	81.2	85.8	81.2	85.8	0
Boone Ave. / Whitlock Ave.	AM	70.4	73.3	70.4	73.3	0
	MD	71	73.7	71	73.7	0
	PM	70.8	74.4	70.8	74.4	0
W. Farms Sq. / E. Tremont Ave. station NB platform	AM	76.1	78.1	76.1	78.1	0
	MD	76.1	78.7	76.1	78.7	0
	PM	74.3	78	74.3	78	0
Longfellow Ave. / Cr. Bronx Expwy.	AM	76.2	78.1	76.3	78.2	0.1
	MD	74.9	75.8	74.9	75.8	0
	PM	69.3	72	69.3	72	0
West Farms Rd. / Cr. Bronx Expwy	AM	70.8	73.2	70.9	73.3	0.1
	MD	70.8	73.3	70.8	73.3	0
	PM	69.4	72.2	69.4	72.2	0

Stationary Source Noise

The New School Mitigation would introduce one new stationary noise source not included in the RWCDS: the rooftop recreation area on top of the school. It would abut windows in a portion of the adjacent residential building. For the windows adjacent to the rooftop recreation area and in the same apartment lines on the floor immediately above it, the addition of 75.0 dBA from the recreation area to the peak traffic noise along this block of Boone Avenue (during the AM peak hour), would result in an L_{eq} of 76.9 dBA and an L_{10} of 79.6 dBA. That would place the windows in the Marginally Unacceptable IV category, requiring 35 dBA of window/wall attenuation on these first two affected floors. A lesser level of attenuation may be appropriate for higher floors. Under the RWCDS the affected windows would be in the Marginally Unacceptable II category, requiring 31 dBA of attenuation. The New School Mitigation would therefore require a change to the terms of the restrictive declaration for this site, changing the minimum required window/wall noise attenuation from 31 dBA to 35 dBA. That level of attenuation would be sufficient to ensure acceptable indoor noise levels within the residential apartments affected by the noise from the rooftop recreation area. The New School Mitigation would not result in a significant adverse stationary source noise impact.

Public Health

Compared with the assessments of the Proposed Action in Chapter 2.Q, the New School Mitigation would not cause any new unmitigated significant adverse impact in other CEQR analysis areas, such as air quality, water quality, hazardous materials, or noise, and would not exacerbate any identified unmitigated impact. The development of the New School Mitigation would therefore not cause a significant adverse impact to public health.

Neighborhood Character

The New School Mitigation would be compatible with the area's neighborhood character, as described in Chapter 2.R. Public schools are common in the Crotona Park East and West Farms neighborhoods, including a high school located elsewhere in the proposed rezoning area and three other schools (one elementary, one combining elementary and middle school grades, and one for special education students) at locations bordering the proposed rezoning area. The New School Mitigation would not cause a significant adverse impact to neighborhood character.

Construction

The substitution of the new elementary school for a portion of one of the proposed buildings within the Proposed Project and the associated changes in the design of the remainder of the building proposed for that site (Site 2N) would add 29,437 sf of additional floor area. That would represent an 8 percent increase in the floor area constructed on Site 2N, which Table S-2 in Chapter 2.S, Construction Impacts, shows as 360,000 sf. It would represent a 2 percent increase in the 1,353,735 sf Proposed Project and a one percent increase in the 2,711, 173 sf of anticipated new development as a result of the Proposed Action. The change would not substantially increase the anticipated construction activities above the levels analyzed in Chapter 2.S. Furthermore, the methodology in Chapter 2.S projected the number of construction workers, hours of work, and truck trips per day and the amounts and kinds of construction equipment that would be used on the basis not of the precise square footage for each building, but rather by using the same estimate for each building within one of several ranges of square footage. The New School Mitigation would not change the range that was used for Building 3. Therefore, so long as construction of the school would occur at approximately the same time as construction of the remainder of Building 3, the New School Mitigation would not change any of the conclusions in Chapter 2.S. The agreement between the applicant and the SCA requires that construction of the

school would occur at approximately the same time as that of the applicant's building on the site, so the New School Mitigation would not alter the phasing analysis in Chapter 2.S. For purposes of the potential for construction impacts, the SCA's exercise of its option to construct the school would not alter the assessment described in Chapter 2.S.

OPEN SPACE

Impact

The Proposed Action would have a positive direct effect on open space resources by adding three new publicly accessible open spaces: the tot lot on Boone Avenue north of 172nd Street and the two landscaped mid-block open areas connecting Boone Avenue and West Farms Road on the blocks between Jennings Street and 172nd Street and between 172nd and 173rd Streets. Nevertheless, the Proposed Action would have an adverse indirect effect by adding population and thus increasing the demand for open space in the area. As is discussed in Chapter 2.D, Open Space, the overall open space ratios for the residential study area would decrease from 0.74 acres per thousand persons under no-action conditions to 0.69 acres per thousand persons as the result of the Proposed Action, a reduction of 6.6 percent. The active open space ratio in the residential study area would drop from 0.25 to 0.24 acres per thousand users, or a 7.0 percent drop. The passive open space ratio for combined residents and non-residents would drop from 0.49 to 0.45, a 6.4 percent drop. Given the size of the decreases in the active and passive open space ratios, the Proposed Action would result in a significant adverse open space impact in the residential study area.

Proposed Mitigation Measures

According to the *CEQR Technical Manual*, some ways in which open space impacts may be mitigated are as follows:

- Create, on-site, new public open space of the type needed to serve the proposed population and to offset the proposed project's impact on existing open space in the study area.
- Create new public open space elsewhere in the study area of a type needed to serve the needs of the added population.
- Improve existing open spaces in the study area to increase their utility, safety, and capacity to meet identified needs in the study area. The creation or enhancement of active open space facilities may be achieved by adding field lighting to allow for extended hours of play, the rehabilitation of an existing field with synthetic turf treatment to allow for expanded use, or adding playground equipment to an underutilized passive area within a park. DPR should be consulted for consideration of any of these possibilities or for any additional means to improve the active components of an existing park.
- The provision of maintenance equipment, such as a power washer or off-road vehicle, to enable increased park usage within an existing park or recreation center.

- Mitigation for the alienation or conversion of public parkland typically involves the acquisition of re-placement parkland of equal or greater size and value servicing the same community of users.
- Capital improvements to a poorly maintained open space may increase its usefulness and mitigate a significant impact.
- Implement missing segments of the City's greenway network to enable safe, non-motorized access to existing open space resources within the study area or a nearby major recreational facility.

Mitigation measures for the significant adverse impact that would be caused by the Proposed Action will be explored by the lead agency in consultation with the New York City Department of Parks and Recreation (DPR) between the draft and final stages of this EIS. If no suitable, implementable measures that would fully mitigate the significant adverse open space impact are identified, then the significant adverse impact would remain, as is discussed in Chapter 4, Unavoidable Adverse Impacts.

ARCHAEOLOGICAL RESOURCES

Impact

The Proposed Action would result in ground disturbance on 49 tax lots, consisting of the 15 lots on which the applicant intends to construct the Proposed Project and the 34 other lots that are within the other projected development sites identified in the RWCDS. As is discussed in Chapter .2F, Historic and Cultural Resources, a Phase 1A Documentary Study was performed, which concluded that 8 of the current (i.e., "modern") tax lots (which include 14 historical lots) may contain subsurface archaeological artifacts. These lots may contain burial remains from two cemeteries that were formerly located on the lots, burial vaults associated with a church that once occupied one of the lots, and filled former privy, well, or cesspool shafts in which artifacts may have been deposited as part of the fill. Unless in-ground testing is done and any identified artifacts are recovered prior to excavation, the redevelopment of these sites could result in the disturbance and destruction of archaeological resources, which would constitute a significant adverse impact.

Four of the modern lots (10 of the historical lots) are under the control of the project applicant. To the extent possible, the applicant has redesigned the building program of the Proposed Project to minimize disturbance of sensitive areas, and the applicant will enter into a restrictive declaration to follow a testing and recovery protocol that has been reviewed and approved by the New York City Landmarks Preservation Commission (LPC) and the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP). The protocol is appended to this EIS as Appendix 9. If the Proposed Action is approved, the protocol will be implemented in coordination with the LPC. This component of the Proposed Action would avoid any impact on archaeological resources on applicant-controlled sites.

The other four lots, two of which may contain human remains from a former cemetery and two of which may contain former privies (shafts) in which artifacts may have subsequently been

disposed, are not under the applicant's control. The Proposed Action would cause a significant adverse impact to archaeological resources on these lots.

Proposed Mitigation Measures

According to the *CEQR Technical Manual*, a significant adverse impact on archaeological resources can generally be avoided either through redesign of the project to avoid ground disturbance in archaeologically sensitive areas or through a program of in-ground investigation to determine whether resources are actually present and recovery of any significant resources prior to excavation and redevelopment.

No mechanism is available to ensure that the redevelopment of thes four archaeologically sensitive non-applicant-controlled sites would not result in unavoidable adverse impacts to archaeological resources. Their redevelopment would therefore result in unmitigated significant adverse impacts to archaeological resources, as is discussed further in Chapter 4, Unavoidable Adverse Impacts.

TRAFFIC

Impacts

As discussed in Chapter 2.M, Transportation, in the absence of signal timing changes or other measures, the Proposed Action would result in significant adverse impacts at eight study area intersections during one or more analyzed peak hours (weekday AM, weekday midday, and weekday PM), with significant adverse impacts at five intersections during the AM and midday peak hours and six intersections during the PM peak hour. The intersections, listed by peak hour, are as follows:

AM Peak Period:

- East Tremont Avenue at Boston Road and West Farms Road
- East 177th Street at the Sheridan Expressway On/Off-Ramp
- East 174th Street at Bronx River Avenue
- East 174th Street at Boone Avenue
- East 173rd Street at West Farms Road

MD Peak Period:

- East Tremont Avenue at Boston Road and West Farms Road
- East 177th Street at the Sheridan Expressway On/Off-Ramp
- East 174th Street at Bronx River Avenue
- East 174th Street at Longfellow Avenue
- West Farms Road at Home Street and Longfellow Avenue

PM Peak Period:

- East Tremont Avenue at East 177th Street and Devoe Avenue

- East Tremont Avenue at Boston Road and West Farms Road
- East 177th Street at the Sheridan Expressway On/Off-Ramp
- East 174th Street at Longfellow Avenue
- West Farms Road at Home Street and Longfellow Avenue
- East 173rd Street at West Farms Road

Proposed Mitigation Measures

Overview

To alleviate these impacts, the feasibility of implementing mitigation measures was explored. The mitigation analysis results, recommendations and the time schedule which the proposed mitigation measures should be implemented are discussed below.

According to the *CEQR Technical Manual*, a significant traffic impact can be considered fully mitigated if the degradation in the level of service under the action-with-mitigation condition compared with the no-action condition is no longer deemed significant based on the impact criteria described in the *CEQR Technical Manual*. The mitigation measures described below would all exceed this basic requirement and would fully restore operating conditions to at least the level they would be under future no-action conditions.

The mitigation measures discussed below, if implemented, would fully mitigate all affected traffic movements at all intersections. With the traffic mitigation measures that NYCDOT has already agreed to implement, all significant adverse traffic impacts would be fully mitigated, with the exception of those at three intersections (East Tremont Avenue, Boston Road, and West Farms Road; East 177th Street and the Sheridan Expressway on/off ramps; and East 173rd Street and West Farms Road) during the AM peak hour, one intersection during the morning peak hour (East 173rd Street and West Farms Road), and two intersections (East Tremont Avenue, Boston Road, and West Farms Road; and East 173rd Street and West Farms Road) during the PM peak hour. Proposed mitigation measures for those three intersections are still being reviewed by NYCDOT. If NYCDOT decides not to implement the proposed measures at these intersections, then the significant adverse impacts would remain, as is discussed in Chapter 4, Unavoidable Adverse Impacts.

The approved mitigation measures mostly involve small adjustments to signal timing at signalized intersections. At the West Farms Square intersection of East Tremont Avenue, Boston Road, and West Farms Road, the approved measures also include restriping of the northbound approach on West Farms Road to create a right turn only lane.

Mitigation measures under review involve different changes. At West 173rd Street and West Farms Road, which is the only unsignalized intersection at which a significant adverse impact would occur, the proposal is to make the intersection all-way stop controlled. At the West Farms Square intersection of East Tremont Avenue, Boston Road, and West Farms Road, the proposal is to add a westbound left turning lane, to move a bike lane, and to eliminate a proposed bus lane. At East 177th Street and the Sheridan Expressway on/off ramps, the proposal is to cut in the curb on the northeast corner of the intersection to provide an additional lane on the southbound approach on East 177th Street.

The operational changes proposed for each intersection are summarized in Tables 3-46 through 3-48. Tables 3-49 through 3-54 present the results of the level of service analysis with the proposed

mitigation measures, comparing the results with those for the future no-action condition and the unmitigated with-action condition. Each impacted intersection is discussed below.

East Tremont Avenue at East 177th Street and Devoe Avenue

This intersection consists of the two-way (east-west) East Tremont Avenue, the partially two-way (north-south) Devoe Avenue, and two-way East 177th Street. North of East Tremont Avenue, Devoe Avenue runs both north and south, while south of East Tremont Avenue, Devoe Avenue only runs north. East 177th Street only runs south of East Tremont Avenue. The northbound approach on Devoe Avenue would be impacted in the PM peak period. As shown in Table 3-48, the proposed mitigation would shift two seconds from the east-west phase on East Tremont Avenue and add them to the north-south phase on Devoe Avenue. Table 3-51 demonstrates that the proposed mitigation would reduce the Devoe Avenue northbound left turn delay to 49.4 seconds (LOS D) compared with the no-action delay of 45.7 seconds (LOS D). With the proposed mitigation measures the impacts at this intersection would be fully mitigated.

East Tremont Avenue at Boston Road and West Farms Road

This intersection consists of the two-way (east-west) East Tremont Avenue, the two-way (northeast-south) Boston Road, and the two-way (north-south) West Farms Road. The westbound approach on East Tremont Avenue would be impacted in the midday and PM peak periods. The northbound approach on West Farms Road would be impacted in the AM and PM peak periods. The northeast-bound approach on Boston Road would be impacted in the AM, midday, and PM peak periods. The southbound de facto left turn on Boston Road would be impacted in the AM, midday and PM peak periods. As Tables 3-46 through 3-48 indicate, the northbound approach on West Farms Road is proposed to be restriped from its current two unstriped, effective 10' wide lanes to one 10' wide left/through lane and one 10' wide right turn only lane. Along with signal timing adjustments, this would fully mitigate the impact during the midday peak period. However, these currently accepted mitigations would only partially mitigate the AM and PM peak periods.

NYCDOT is currently reviewing additional mitigation measures that consist of removing the proposed bus lane in the westbound direction on East Tremont Avenue and restriping the westbound approach to include one 10' wide left turn only lane and two 10.5' wide through/right lanes. Existing conditions today have three travel lanes on the westbound approach on East Tremont Avenue. However, a proposed project that was incorporated into the no-action condition limited the westbound approach on East Tremont Avenue to two travel lanes and one bus lane. If this restriping is accepted by NYCDOT, the following signal timing adjustments will be made to fully mitigate the intersection.

As shown in Table 3-46, in the AM peak period, the southern pedestrian phase across West Farms Road will be removed during the East Tremont Avenue westbound phase to allow northbound West Farms Road right turns to also take place. The westbound East Tremont Avenue and northbound West Farms Road phase will reduce three seconds from 29 seconds to 26 seconds. The eastbound East Tremont Avenue phase will reduce two seconds from 27 seconds to 25 seconds. The northbound West Farms Road and southbound Boston Road phase will increase two seconds from 22 seconds to 24 seconds. The northeast-bound Boston Road phase will increase three seconds from 22 seconds to 25 seconds. The northbound approach on West Farms creates a second lane group with the restriping for the addition of the right hand turning lane. As shown in Table 3-50, the northbound approach lane group has a delay of 50.3 seconds (LOS D) compared to the no action delay of 64.9 seconds (LOS E). The northeast bound approach would be reduced to a 159.8 second delay (LOS F) compared to the no action delay of 175.9 seconds

(LOS F). The southbound approach on Boston Road de facto left is reduced to a delay of 82.1 seconds (LOS F) compared a delay of 233.9 seconds (LOS F) in the no action scenario.

As shown in Table 3-47, in the midday peak period, the southern pedestrian phase across West Farms Road will be removed during the East Tremont Avenue westbound phase to allow northbound West Farms Road right turns to also take place. The westbound East Tremont Avenue and northbound West Farms Road phase will increase one second from 19 seconds to 20 seconds. The eastbound East Tremont Avenue phase will reduce by three seconds from 19 seconds to 16 seconds. The northbound West Farms Road and southbound Boston Road phase will have no change and remain at 15 seconds. The northeast-bound Boston Road phase will increase two seconds from 17 seconds to 19 seconds. The westbound approach on East Tremont Avenue through/right turn approach is reduced to 156.6 seconds (LOS F) from 254.8 seconds (LOS F) in the no action. The northeast bound approach on Boston Road is reduced to 65.3 seconds (LOS E) compared to the no action condition of a delay of 78.5 seconds (LOS E). The southbound approach on Boston Road de facto is reduced to 149.2 seconds (LOS F) compared to the no-action condition of a delay of 206.5 seconds (LOS F).

As shown in Table 3-48, in the PM peak period, the southern pedestrian phase across West Farms Road will be removed during the East Tremont Avenue westbound phase to allow northbound West Farms Road right turns to also take place. The westbound East Tremont Avenue and northbound West Farms Road phase will reduce three seconds from 29 seconds to 26 seconds. The eastbound East Tremont Avenue phase will have no change and remain at 27 seconds. The northbound West Farms Road and southbound Boston Road phase will increase two seconds from 22 seconds to 24 seconds. The northeast-bound Boston Road phase will increase one second from 22 seconds to 23 seconds. The westbound approach on East Tremont Avenue through/right turn approach is reduced to 265.5 seconds (LOS F) from 287.4 seconds (LOS F) in the no action. The northbound approach on West Farms creates a second lane group with the restriping for the addition of the right hand turning lane. As shown in Table 3-52, the right turn only lane group has a delay of 32.6 seconds (LOS C) and the LT lane group has a delay of 42.0 seconds (LOS D) compared to the no action delay of 56.2 seconds (LOS E). The northeast bound approach on Boston Road is reduced to 133.8 seconds (LOS F) compared to the no-action condition of a delay of 164.7 seconds (LOS F). The southbound approach on Boston Road is reduced to 90.6 seconds (LOS F) compared to the no action condition of a delay of 109.9 seconds (LOS F).

With the proposed mitigation measures the impacts at this intersection would be fully mitigated.

East 177th Street at Sheridan Expressway On/Off-Ramp and Bus Depot Entrance/Exit

This intersection consists of four different approaches. The eastbound approach is an on/off ramp to the Sheridan and Cross-Bronx Expressways. The southbound and westbound approach is East 177th Street, a two-way connector. The northbound approach is the entrance and exit to a bus depot. The eastbound left turn lane exiting the Sheridan Expressway has an impact in the midday time period. The northbound exit from the bus depot has impacts in the AM and midday peak periods. The southbound left turns have impacts in the AM, midday, and PM peak periods. By simply adjusting signal timings, the midday peak period could be mitigated. However, under the currently accept mitigations, this would only partially mitigated the AM and PM peak periods.

NYCDOT is currently reviewing additional mitigation measures that would consist of cutting in the curb on the northeast corner of the intersection to provide an additional lane on the southbound approach on East 177th Street. A proposed project would incorporate a pedestrian walkway and bikeway along this corridor. This would narrow the lane widths and make

mitigations more difficult. The proposed geometry of the southern approach includes two 11' right turn only lanes and one 11' left/through lane. Proposed geometry would consist of two 10' right turn only lanes, one 10' left/through lane, and one 10' left turn only lane. In addition, the northbound bus depot exit which is currently not striped, is proposed to be striped as a 12' right turn only lane and a 12' left/through lane.

As shown in Table 3-49, only the proposed geometry changes would be needed for mitigation in the AM peak period. With the proposed mitigations, the northbound exit from the bus depot would reduce in delay to 42.4 seconds (LOS D) for the left/through lane and 41.0 seconds (LOS D) of delay for the right turn only lane in comparison to 44.6 seconds (LOS D) of delay in the no action condition. The southbound approach on East 177th street would reduce in delay to 105.3 seconds (LOS F) for the left turn only lane and 87.9 seconds (LOS F) for the left/through lane in comparison to 126.6 seconds (LOS F) of delay in the no-action condition.

As shown in Table 3-47, in addition to the geometry changes, it is proposed to shift one second from the eastbound through/right and westbound left/through/right phase to the eastbound left/through/right with southbound right turn phase during the midday peak period. According to Table 3-51, the eastbound left turn lane would reduce to a delay of 85.0 seconds (LOS F) compared to the no action delay of 87.9 seconds (LOS F). With the proposed mitigations, the northbound exit from the bus depot would reduce in delay to 44.3 seconds (LOS D) for the left/through lane and 43.7 seconds (LOS D) of delay for the right turn only lane in comparison to 179.2 seconds (LOS F) of delay in the no action condition. The southbound approach on East 177th street would reduce in delay to 82.8 seconds (LOS E) for the left turn only lane and 57.9 seconds (LOS E) for the left/through lane in comparison to 140.0 seconds (LOS F) of delay in the no-action condition.

As shown in Table 3-48, only the proposed geometry changes would be needed for mitigation in the PM peak period. According to Table 3-51, the southbound approach on East 177th street would reduce in delay to 69.7 seconds (LOS E) for the left turn only lane and 54.5 seconds (LOS D) for the left/through lane in comparison to 138.0 seconds (LOS F) of delay in the no-action condition.

With the proposed mitigation measures the impacts at this intersection would be fully mitigated.

Bronx River Avenue at East 174th Street

The intersection consists of the two-way (east-west) East 174th Street and the two-way (north-south) Bronx River Avenue. The eastbound approach on East 174th Street would be impacted in the AM and midday peak periods. During both the AM and midday peak periods, as shown in Table 3-46 and table 3-48, the proposed mitigation would shift one second of green time from the current north-south phase to the east-west phase. As shown in Table 3-50, the eastbound approach delay in the AM peak period would be reduced to 89.2 seconds (LOS F) compared to 95.3 seconds (LOS F) under the no-action condition. Table 3-50 demonstrates the eastbound approach delay in the midday peak period would be reduced to 91.9 seconds (LOS F) compared to 97.0 seconds (LOS F) under the no action condition. With the proposed mitigation measures the impacts at this intersection would be fully mitigated.

Boone Avenue at East 174th Street

The intersection consists of the two-way (east-west) East 174th Street and the one-way (south) Boone Avenue. The southbound approach on Boone Avenue would be impacted in the AM peak period. As shown in Table 3-46, the proposed mitigation would shift one second of green time from the current east-west phase to the southbound phase. As shown in Table 3-549, the southbound approach delay in the AM peak period would be reduced to 43.1 seconds (LOS D)

compared to 41.0 seconds (LOS D) under the no-action condition. With the proposed mitigation measures the impacts at this intersection would be fully mitigated.

Longfellow Avenue at East 174th Street

The intersection consists of the two-way (east-west) East 174th Street and the one-way (north) Longfellow Avenue. The northbound approach on Longfellow Avenue would be impacted in the midday and PM peak periods. As shown in Table 3-47, in the midday peak period the proposed mitigation would shift two seconds of green time from the current east-west phase to the northbound phase. During the PM peak period, as Table 3-49 indicates, the proposed mitigation would shift four seconds of green time from the current east-west phase to the northbound phase. The northbound approach delay in the midday peak period would be reduced to 81.1 seconds (LOS F) compared to 84.1 seconds (LOS F) under the no-action condition and would be reduced to 104.7 seconds (LOS F) compared to 117.7 seconds (LOS F) under the no-action condition in PM peak period as shown in Tables 3-51 and 3-52 respectively. With the proposed mitigation measures the impacts at this intersection would be fully mitigated.

West Farms Road at Home Street and Longfellow Avenue

The intersection consists of the two-way (northeast-southwest) West Farms Road, the one way (northwest-bound) Home Street, and the one way (northbound) Longfellow Avenue. The northwest-bound approach on Home Street would be impacted in the midday and PM peak periods. As shown in Table 3-47, in the midday peak period the proposed mitigation would shift one second of green time from the current northeast-southwest (West Farms Road) phase to the northwest-bound phase (Home Street). During the PM peak period, as seen in Table 3-48, the proposed mitigation would shift four seconds of green time from the current northeast-southwest (West Farms Road) phase to the northwest-bound phase (Home Street). The northwest-bound approach delay on Home Street in the midday peak period would be reduced to 73.0 seconds (LOS E) compared to 85.3 seconds (LOS F) under the no-action condition and would be reduced to 123.5 seconds (LOS F) compared to 150.1 seconds (LOS F) under the no-action condition in PM peak period as shown in Tables 3-50 and 3-51, respectively. With the proposed mitigation measures the impacts at this intersection would be fully mitigated.

West Farms Road at East 173rd Street

The intersection consists of the two-way (north-south) West Farms Road and the two-way (east-west) East 173rd Street. The intersection is a three-way unsignalized intersection. West Farms Road is the major street that has free approaches northbound and southbound directions. East 173rd Street is the minor street with only one approach in the eastbound direction and is stop controlled. The eastbound approach on East 173rd Street would be impacted in the AM and PM peak periods. As shown in Tables 3-46 and 3-48, the proposed mitigation would be to add stop signs to the north and south West Farms Road approaches to make this an all-way stop controlled intersection. Table 3-52 indicates that the delay in the AM peak period would be reduced to 12.7 seconds (LOS B) compared to the 27.9 seconds (LOS D) under the no-action condition. Table 3-54 indicates that the delay in the PM peak period would be reduced to 10.9 seconds (LOS B) compared to the 35.5 seconds (LOS E) under the no-action condition. With the proposed mitigation measures the impacts at this intersection would be fully mitigated. However, NYCDOT has not yet approved this mitigation measure for this intersection. In the event that approval is not forthcoming between the Draft and Final EIS, this impact would be considered as an unavoidable adverse impact (see Chapter 4, Unavoidable Adverse Impacts).

Implementation Schedule

Based on the analysis conducted under the No-Significant Impact Alternative (See Chapter 5, Alternatives), after the first 317 residential units of the Proposed Action (i.e., equivalent to 12 percent of the RWCDS) would generate enough net vehicular traffic that would result in significant traffic impact. As discussed in Chapter 1, Project Description, the applicant intends to first build on Site 1 and Site 9. These development sites, under the RWCDS, would have 237 and 194 dwelling units, respectively. Therefore, the proposed traffic mitigation measures should be implemented before the second development site (be it Site 1 or Site 9) is occupied.

Table 3-46: Proposed Traffic Mitigation Measures – AM Peak Period

Intersection	2022 Future with the Proposed Actions	2022 Future with the Proposed Actions and Mitigation	Signal Timing Changes Proposed
East Tremont @ Boston Road and West Farms Road	NB on West Farms Road: Approach: 2 LTR lanes, 10' each WB on East Tremont Ave: Approach: 2 LTR lanes, 11' each 1 bus lane, 10' 1 bike lane, 5' WB LTR G=29 EBT LTR G=27 NB(West Farms) LTR / SB(Boston) LTR G=22 NEB LTR (Boston) G=22	NB on West Farms Road: Add Rt Turn lane through restriping Approach: 1 LT (10'), 1 Rt turn lanes (10') WB on East Tremont Ave: Remove proposed bus lane, shift bike to curb Approach: 2 TR lanes, 10' 6" each 1 LT lane, 10' 1 bike lane, 5' WB LTR / NB R G= 26(no Southern ped phase) EB LTR G=25 NB(West Farms) LTR / SB(Boston) LTR G=24 NEB LTR (Boston) G=25	WB LTR / NB R G= -3 sec EB LTR G= -2 secs NB LTR / SB LTR G= +2 secs NEB LTR G= +3 secs
East 177th Street @ Sheridan Expressway Ramp	SB on East 177th Street: Approach: 2 Rt turn lanes, 11' each 1 LT lane, 11' NB out of Bus Depot: Approach: 1 LTR lane (not striped), 25' space	SB on East 177th Street: Cut into curb on west side of street to add lane Approach: 2 Rt turn lanes, 10' each 1 LT lane, 10' 1 Left turn only lane, 10' NB out of Bus Depot: Stripe bus depot exit for right turn lane Approach: 1 LT lane, 12' 1 Right turn only, 12'	
Bronx River Avenue @ East 174th Street	EB LTR / WB LTR G=31 Y=3 R=2 NB LTR / SB LTW G=49 Y=3 R=2	EB LTR / WB LTR G=32 Y=3 R=2 NB LTR / SB LTW G=48 Y=3 R=2	EB LTR / WB LTR G= +1 sec NB LTR / SB LTW G= -1 sec
Boone Avenue @ East 174th Street	EB LTR / WB LTR G=58 Y=3 R=2 SB LTW G=22 Y=3 R=2	EB LTR / WB LTR G=57 Y=3 R=2 SB LTR G=23 Y=3 R=2	EB LTR / WB LTR G= -1 sec SB LTW G= +1 sec
West Farms Road at East 173rd Street	Two Way Stop Controlled Intersection West Farms Road is major street	All Way stop controlled intersection	

Table 3-47: Proposed Traffic Mitigation Measures – Midday Peak Period

Intersection	2022 Future with the Proposed Actions	2022 Future with the Proposed Actions and Mitigation	Signal Timing Changes Proposed
East Tremont @ Boston Road and West Farms Road	NB on West Farms Road: Approach: 2 LTR lanes, 10' each WB on East Tremont Ave: Approach: 2 LTR lanes, 11' each 1 bus lane, 10' 1 bike lane, 5' WB LTR G=19 EBT LTR G=19 NB(West Farms) LTR / SB(Boston) LTR G=15 NEB LTR (Boston) G=17	NB on West Farms Road: Add Rt Turn lane through restriping Approach: 1 LT (10'), 1 Rt turn lanes (10') WB on East Tremont Ave: Remove proposed bus lane, shift bike to curb Approach: 2 TR lanes, 10' 6" each 1 LT lane, 10' 1 bike lane, 5' WB LTR / NB R G= 20 (no Southern ped phase) EB LTR G=16 NB(West Farms) LTR / SB(Boston) LTR G=15 NEB LTR (Boston) G=19	WB LTR / NB R G= +1 sec EB LTR G= -3 secs NB LTR / SB LTR G=NC NEB LTR G= +2 secs
East 177th Street @ Sheridan Expressway Ramp	SB on East 177th Street: Approach: 2 Rt turn lanes, 11' each 1 LT lane, 11' NB out of Bus Depot: Approach: 1 LTR lane (not striped), 25' space EB LTR / SB R G=26 EB TR / WB LTR G=55 NB LTR / SB LTR G=22	SB on East 177th Street: Cut into curb on west side of street to add lane Approach: 2 Rt turn lanes, 10' each 1 LT lane, 10' 1 Left turn only lane, 10' NB out of Bus Depot: Stripe bus depot exit for right turn lane Approach: 1 LT lane, 12' 1 Right turn only, 12' EB LTR / SB R G=27 EB TR / WB LTR G=54 NB LTR / SB LTR G=22	EB LTR / SB R G= +1 sec EB TR / WB LTR G= -1 sec NB LTR / SB LTR G= NC
Bronx River Avenue @ East 174th Street	EB LTR / WB LTR G=31 Y=3 R=2 NB LTR / SB LTW G=49 Y=3 R=2	EB LTR / WB LTR G=32 Y=3 R=2 NB LTR / SB LTW G=48 Y=3 R=2	EB LTR / WB LTR G= +1 sec NB LTR / SB LTW G= -1 sec
Longfellow Avenue @ East 174th Street	EB LTR / WB LTR G=59 Y=3 R=2 NB LTR G=21 Y=3 R=2	EB LTR / WB LTR G=57 Y=3 R=2 NB LTR G=23 Y=3 R=2	EB LTR / WB LTR G= -2 secs NB LTR G = +2 secs
West Farms Road at Home Street, Longfellow Avenue	NWB (Home Street) LTR G=10 Y=3 R=2 NB (Longfellow Ave) LTR G=20 Y=3 R=2 NEB LT / SWB TR G=45 Y=3 R=2 (West Farms Rd)	NWB (Home Street) LTR G=11 Y=3 R=2 NB (Longfellow Ave) LTR G=20 Y=3 R=2 NEB LT / SWB TR G=44 Y=3 R=2 (West Farms Rd)	NWB LTR G=+1 sec NB LTR G= NC NEB LT / SWB TR G= -1 sec
West Farms Road at East 173rd Street**	Two Way Stop Controlled Intersection West Farms Road is major street	All Way stop controlled intersection	

** Mitigated in AM Peak Period

Table 3-48: Proposed Traffic Mitigation Measures – PM Peak Period

Intersection	2022 Future with the Proposed Actions	2022 Future with the Proposed Actions and Mitigation	Signal Timing Changes Proposed
East 177th Street @ East Tremont Avenue	EB TR / WB LTR G=50 WB LTR G=15 NB LTR / SB LTR G=40	EB TR / WB LTR G=48 WB LTR G=15 NB LTR / SB LTR G=42	EB TR / WB LTR G= -2 secs WB LTR G = NC NB LTR / SB LTR G =+2 secs
East Tremont @ Boston Road and West Farms Road	NB on West Farms Road: Approach: 2 LTR lanes, 10' each WB on East Tremont Ave: Approach: 2 LTR lanes, 11' each 1 bus lane, 10' 1 bike lane, 5' WB LTR G=29 EBT LTR G=27 NB(West Farms) LTR / SB(Boston) LTR G=22 NEB LTR (Boston) G=22	NB on West Farms Road: Add Rt Turn lane through restriping Approach: 1 LT (10'), 1 Rt turn lanes (10') WB on East Tremont Ave: Remove proposed bus lane, shift bike to curb Approach: 2 TR lanes, 10' 6" each 1 LT lane, 10' 1 bike lane, 5' WB LTR / NB R G= 26(no Southern ped phase) EB LTR G=27 NB(West Farms) LTR / SB(Boston) LTR G=24 NEB LTR (Boston) G=23	WB LTR / NB R G= -3 sec EB LTR G= NC NB LTR / SB LTR G= +2 secs NEB LTR G= +1 sec
East 177th Street @ Sheridan Expressway Ramp	SB on East 177th Street: Approach: 2 Rt turn lanes, 11' each 1 LT lane, 11' NB out of Bus Depot: Approach: 1 LTR lane (not striped), 25' space	SB on East 177th Street: Cut into curb on west side of street to add lane Approach: 2 Rt turn lanes, 10' each 1 LT lane, 10' 1 Left turn only lane, 10' NB out of Bus Depot: Stripe bus depot exit for right turn lane Approach: 1 LT lane, 12' 1 Right turn only, 12'	
Longfellow Avenue @ East 174th Street	EB LTR / WB LTR G=59 Y=3 R=2 NB LTR G=21 Y=3 R=2	EB LTR / WB LTR G=55 Y=3 R=2 NB LTR G=25 Y=3 R=2	EB LTR / WB LTR G= -4 secs NB LTR G = +4 secs
West Farms Road at Home Street, Longfellow Avenue	NWB (Home Street) LTR G=10 Y=3 R=2 NB (Longfellow Ave) LTR G=20 Y=3 R=2 NEB LT / SWB TR G=45 Y=3 R=2 (West Farms Rd)	NWB (Home Street) LTR G=14 Y=3 R=2 NB (Longfellow Ave) LTR G=20 Y=3 R=2 NEB LT / SWB TR G=41 Y=3 R=2 (West Farms Rd)	NWB LTR G= +4 secs NB LTR G= NC NEB LT / SWB TR G= -4 secs
West Farms Road at East 173rd Street	Two Way Stop Controlled Intersection West Farms Road is major street	All Way stop controlled intersection	

Table 3-49: Level of Service Table for Proposed Traffic Mitigation Measures Signalized Intersections – AM Peak Period

Int#	Intersection Name	Direction	Lane Group	AM											
				No Build				Build				Build with Mitigations			
				Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
1	East Tremont Ave at East 177th Street	Overall		2025		33.1	C	2044		33.3	C	2044		33.2	C
		Eastbound	LT	407	0.42	29.0	C	413	0.42	29.1	C	413	0.42	29.1	C
		Westbound	DefL	419	0.85	46.6	D	419	0.85	47.5	D	419	0.85	47.5	D
			TR	616	0.79	29.3	C	616	0.79	29.3	C	616	0.79	29.3	C
		Northbound	L	307	0.56	33.3	C	305	0.55	33.2	C	305	0.55	33.2	C
			T	153	0.26	27.0	C	153	0.26	27.0	C	153	0.26	27.0	C
			R	123	0.26	27.1	C	123	0.26	27.1	C	123	0.26	27.1	C
		Southbound	R	15	0.02	23.6	C	15	0.02	29.1	C	15	0.02	29.1	C
2	West Farms Road at Boston Rd, East Tremont Ave (1,5)	Overall		2160		267.3	F	2441		274.3	F	2441		174.9	F
		Eastbound	LTR	388	0.74	50.7	D	383	0.73	50.0	D	383	0.79	54.8	D
		Westbound	L									162	0.73	57.4	E
			TR	928	1.71	372.1	F	926	1.71	370.1	F	764	1.46	263.4	F
		Northbound(6)	LTR	226	0.82	64.9	E	485	1.72	384.9	F	91	0.78	70.4	E
			R									394	0.84	45.7	D
		NE-Bound	T	331	1.22	175.9	F	363	1.34	224.3	F	363	1.19	159.8	F
		Southbound	Def L	143	1.30	233.9	F	143	2.52	778.1	F	143	0.84	82.1	F
			TR	144	1.08	130.5	F	141	1.06	125.1	F	141	0.97	97.7	F
4	East 177th Street at Sheridan Expressway (6)	Overall		3212		75.0	E	3471		106.0	F	3471		74.7	E
		Eastbound	L	296	0.90	76.2	E	290	0.89	73.6	E	290	0.89	73.6	E
			T	93	0.08	5.0	A	93	0.08	5.0	A	93	0.08	5.0	A
		Westbound	R	1622	1.14	99.8	F	1622	1.14	99.8	F	1622	1.14	99.8	F
			T	267	0.42	21.4	C	271	0.43	21.5	C	271	0.43	21.5	C
		Northbound	LT	35	0.26	44.6	D	35	0.47	55.1	E	25	0.16	42.4	D
			R									10	0.07	41.0	D
		Southbound	L									308	0.98	105.3	F
			LT	191	1.06	126.6	F	318	1.77	415.1	F	10	0.89	87.9	F
			R	708	0.72	34.1	C	842	0.86	41.4	D	842	0.89	44.5	D
6	Bronx River Ave at East 174th Street	Overall		1671		39.5	D	1645		41.4	D	1645		38.1	D
		Eastbound	LTR	423	1.08	95.3	F	436	1.10	101.8	F	436	1.07	89.2	F
		Westbound	LT	359	0.80	39.8	D	356	0.78	38.0	D	356	0.76	35.6	D
			R	41	0.21	22.4	C	41	0.21	22.1	C	41	0.20	21.3	C
		Northbound	L	164	0.52	18.5	B	164	0.49	16.9	B	164	0.51	18.2	B
			TR	251	0.46	14.6	B	251	0.45	14.3	B	251	0.46	15.1	B
		Southbound	LTR	433	0.41	13.1	B	397	0.37	12.5	B	397	0.37	13.1	B
7	Boone Ave at East 174th Street	Overall		1255		25.3	C	1250		22.5	C	1250		23.3	C
		Eastbound	TR	371	0.49	10.4	B	358	0.46	9.7	A	358	0.47	10.3	B
		Westbound	DefL	312	0.96	51.5	D	292	0.88	35.2	D	292	0.90	39.8	D
			LT	419	0.50	10.4	B	410	0.48	10.0	A	410	0.49	10.6	B
		Southbound	LTR	153	0.67	41.0	D	190	0.77	46.8	D	190	0.74	43.1	D
8	Longfellow Ave at East 174th Street	Overall		904		37.9	D	882		34.2	C	882		34.2	C
		Eastbound	LT	259	0.35	8.3	A	258	0.34	8.0	A	258	0.34	8.0	A
		Westbound	TR	445	0.56	11.1	B	436	0.54	10.5	B	436	0.54	10.5	B
		Northbound	LTR	200	1.09	116.3	F	188	1.06	106.9	F	188	1.06	106.9	F
17	Westchester Ave at Sheridan Expressway Service Road, Whitlock Avenue	Overall		2814		42.3	D	2808		41.4	D	2808		41.4	D
		Eastbound	TR	610	0.71	29.8	C	610	0.71	29.8	C	610	0.71	29.8	C
		Westbound	LT	1091	1.06	62.8	E	1083	1.05	60.8	E	1083	1.05	60.8	E
		Southbound	LTR	1113	0.75	28.1	C	1115	0.75	28.1	C	1115	0.75	28.1	C
18	West Farms Road at Home Street, Longfellow Ave (2)	Overall		613		19.3	B	610		18.9	B	610		18.9	B
		NW-Bound	LTR	259	1.04	98.6	F	240	0.94	72.7	E	240	0.94	72.7	E
		Northbound	LTR	86	0.46	36.6	D	86	0.45	36.0	D	86	0.45	36.0	D
		NE-Bound	LT	106	0.19	13.2	B	103	0.19	13.0	B	103	0.19	13.0	B
		SW-Bound	RT	162	0.26	13.9	B	181	0.28	13.9	B	181	0.28	13.9	B
19	West Farms Road at Freeman Street	Overall		493		13.2	B	497		13.5	B	497		13.5	B
		Eastbound	LTR	102	0.32	25.9	C	102	0.32	26.4	C	102	0.32	26.4	C
		Northbound	LT	225	0.31	9.9	A	210	0.29	10.0	A	210	0.29	10.0	A
		Southbound	TR	166	0.26	9.4	A	185	0.29	9.9	A	185	0.29	9.9	A
20	Westchester Ave at Sheridan Expressway Service Road and Northbound Off-Ramp	Overall		1986		52.4	D	1991		52.2	D	1991		52.2	D
		Eastbound	DefL (3)	123	0.41	20.6	C	123	0.41	20.6	C	123	0.41	20.6	C
			LT	598	0.63	17.8	B	611	0.65	18.1	B	611	0.65	18.1	B
		Westbound	T	908	1.08	82.9	F	908	1.08	82.9	F	908	1.08	82.9	F
		Northbound	LTR	347	0.73	33.3	C	339	0.72	32.7	C	339	0.72	32.7	C
		Southbound	LR	10	0.04	19.2	B	10	0.04	19.2	B	10	0.04	19.2	B

Note: (1) Boston Road approaches the intersection in the northeast bound and southbound direction. East Tremont Avenue approaches the intersection in the eastbound and westbound direction. West Farms Road approaches the intersection in the northbound direction

(2) Home Street approaches the intersection ins the northwest bound direction. Longfellow Avenue approaches the intersection in the northbound direction. West Farms Road approaches the intersection in the northeast bound and southwest bound directions.

(3) Defacto left turn only exists in AM peak period.

(4) Left turns are shared with lane group above, volumes listed are only right turn vehicles.

(5) To mitigate a left turn only lane was added westbound on East Tremont Avenue and a right turn only lane was added northbound on West Farms Rd, creating new lane groups

(6) To mitigate, a left turn only lane was added southbound on East 177th Street and right turn only lane was striped northbound exiting the Bus Depot, creating new lane groups

Highlighted Lane Groups Represent Impacts

Table 3-50: Level of Service Table for Proposed Traffic Mitigation Measures Signalized Intersections – MD Peak Period

Int#	Intersection Name	Direction	Lane Group	MD											
				No Build				Build				Build with Mitigations			
				Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
1	East Tremont Ave at East 177th Street	Overall		1737		24.4	C	1784		25.5	C	1784		25.5	C
		Eastbound	LT	375	0.47	25.4	C	376	0.47	25.4	C	376	0.47	25.4	C
		Westbound	DefL	327	0.58	21.9	C	327	0.58	22.0	C	327	0.58	22.0	C
			TR	385	0.46	13.7	B	387	0.47	13.7	B	387	0.47	13.7	B
		Northbound	L	354	0.71	33.8	C	383	0.76	36.7	D	383	0.76	36.7	D
			T	122	0.24	22.7	C	122	0.24	22.7	C	122	0.24	22.7	C
			R	174	0.65	32.5	C	174	0.65	32.5	C	174	0.65	32.5	C
		Southbound	R	15	0.02	20.2	C	15	0.02	20.2	C	15	0.02	20.2	C
2	West Farms Road at Boston Rd, East Tremont Ave (1,5)	Overall		1809		168.1	F	1931		186.4	F	1931		104.4	F
		Eastbound	LTR	337	0.59	35.7	D	346	0.61	36.3	D	346	0.73	43.0	D
		Westbound	L									121	0.41	33.6	C
			TR	749	1.47	254.8	F	780	1.53	282.9	F	659	1.24	156.6	F
		Northbound(6)	LTR	159	0.49	38.4	D	218	0.67	43.9	D	46	0.26	35.6	D
			R									172	0.40	22.4	C
		NE-Bound	T	277	0.97	78.5	E	293	1.03	93.7	F	293	0.92	65.3	E
		Southbound	Def L	170	1.29	206.5	F	170	1.46	281.2	F	170	1.15	149.2	F
			TR	117	0.70	51.4	D	124	0.73	54.0	D	124	0.73	54.0	D
4	East 177th Street at Sheridan Expressway (6)	Overall		2685		53.4	D	2780		66.5	E	2780		41.3	D
		Eastbound	L	336	0.98	87.9	F	346	1.01	95.4	F	346	0.97	85.0	F
			T	150	0.14	5.3	A	150	0.14	5.3	A	150	0.14	5.3	A
		Westbound	R	1077	0.83	34.4	C	1077	0.83	34.4	C	1077	0.85	36.1	D
			T	278	0.49	25.2	C	297	0.52	26.0	C	297	0.53	26.9	C
		Northbound	LT	93	1.15	179.2	F	93	1.52	334.1	F	62	0.25	44.3	D
			R									31	0.23	43.7	D
		Southbound	L									243	0.86	82.8	F
			LT	242	1.13	140.0	F	269	1.25	187.3	F	26	0.68	57.9	E
			R	509	0.53	26.1	C	548	0.57	27.0	C	548	0.57	26.6	C
6	Bronx River Ave at East 174th Street	Overall		1304		38.5	D	1342		40.5	D	1342		37.2	D
		Eastbound	LTR	406	1.08	97.0	F	420	1.10	104.5	F	420	1.07	91.9	F
		Westbound	LT	233	0.55	28.4	C	237	0.55	28.0	C	237	0.53	26.8	C
			R	31	0.15	21.5	C	31	0.15	21.2	C	31	0.14	20.5	C
		Northbound	L	138	0.39	14.5	B	138	0.39	14.4	B	138	0.41	15.3	B
			TR	225	0.36	13.1	B	225	0.35	12.8	B	225	0.36	13.5	B
		Southbound	LTR	271	0.29	11.8	B	291	0.30	11.8	B	291	0.31	12.4	B
7	Boone Ave at East 174th Street	Overall		952		12.3	B	994		12.1	B	994		12.1	B
		Eastbound	TR	370	0.48	10.2	B	386	0.50	10.2	B	386	0.50	10.2	B
		Westbound	DefL	118	0.31	9.2	A	148	0.40	10.5	B	148	0.40	10.5	B
			LT	355	0.42	9.3	A	354	0.42	9.1	A	354	0.42	9.1	A
		Southbound	LTR	109	0.38	31.8	C	106	0.37	31.1	C	106	0.37	31.1	C
8	Longfellow Ave at East 174th Street	Overall		903		28.5	C	918		37.1	D	918		29.2	C
		Eastbound	LT	299	0.45	9.7	A	301	0.45	9.4	A	301	0.47	10.7	B
		Westbound	TR	386	0.46	9.5	A	385	0.45	9.2	A	385	0.47	10.4	B
		Northbound	LTR	218	0.98	84.1	F	232	1.08	114.3	F	232	0.98	81.1	F
17	Westchester Ave at Sheridan Expressway Service Road, Whitlock Avenue	Overall		2243		22.9	C	2266		23.0	C	2266		23.0	C
		Eastbound	TR	598	0.62	27.1	C	598	0.62	27.1	C	598	0.62	27.1	C
		Westbound	LT	690	0.57	16.4	B	701	0.58	16.6	B	701	0.58	16.6	B
		Southbound	LTR	955	0.61	24.8	C	967	0.62	24.9	C	967	0.62	24.9	C
18	West Farms Road at Home Street, Longfellow Ave (2)	Overall		479		26.4	C	512		25.3	C	512		25.6	C
		NW-Bound	LTR	202	0.97	85.3	F	223	1.03	100.7	F	223	0.93	73.0	E
		Northbound	LTR	91	0.66	45.9	D	91	0.65	44.6	D	91	0.65	44.6	D
		NE-Bound	LT	78	0.13	12.6	B	83	0.13	12.4	B	83	0.14	13.0	B
		SW-Bound	RT	108	0.14	12.7	B	115	0.15	12.5	B	115	0.15	13.1	B
19	West Farms Road at Freeman Street	Overall		347		12.3	B	380		12.5	B	380		12.5	B
		Eastbound	LTR	72	0.21	24.2	C	72	0.21	24.6	C	72	0.21	24.6	C
		Northbound	LT	167	0.24	9.2	A	193	0.28	9.8	A	193	0.28	9.8	A
		Southbound	TR	108	0.12	8.2	A	115	0.13	8.5	A	115	0.13	8.5	A
20	Westchester Ave at Sheridan Expressway Service Road and Northbound Off-Ramp	Overall		1607		20.8	C	1620		21.0	C	1620		21.0	C
		Eastbound	DefL (3)												
			LT	779	0.56	15.3	B	781	0.56	15.3	B	781	0.56	15.3	B
		Westbound	T	499	0.47	25.1	C	499	0.47	25.1	C	499	0.47	25.1	C
		Northbound	LTR	304	0.61	28.5	C	315	0.64	29.2	C	315	0.64	29.2	C
		Southbound	LR	25	0.11	20.0	C	25	0.11	20.0	C	25	0.11	20.0	C

Note: (1) Boston Road approaches the intersection in the northeast bound and southbound direction. East Tremont Avenue approaches the intersection in the eastbound and westbound direction. West Farms Road approaches the intersection in the northbound direction

(2) Home Street approaches the intersection ins the northwest bound direction. Longfellow Avenue approaches the intersection in the northbound direction. West Farms Road approaches the intersection in the northeast bound and southwest bound directions.

(3) Defacto left turn only exists in AM peak period.

(4) Left turns are shared with lane group above, volumes listed are only right turn vehicles.

(5) To mitigate a left turn only lane was added westbound on East Tremont Avenue and a right turn only lane was added northbound on West Farms Rd, creating new lane groups

(6) To mitigate, a left turn only lane was added southbound on East 177th Street and right turn only lane was striped northbound exiting the Bus Depot, creating new lane groups

Highlighted Lane Groups Represent Impacts

Table 3-51: Level of Service Table for Proposed Traffic Mitigation Measures Signalized Intersections – PM Peak Period

				PM											
				No Build				Build				Build with Mitigations			
Int#	Intersection Name	Direction	Lane Group	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
1	East Tremont Ave at East 177th Street	Overall		2217		31.2	C	2293		33.8	C	2293		33.8	C
		Eastbound	LT	583	0.53	27.9	C	585	0.53	28.0	C	585	0.56	29.7	C
		Westbound	DefL	312	0.68	35.5	D	312	0.68	35.6	D	312	0.70	38.3	D
			TR	657	0.75	23.8	C	661	0.75	24.0	C	661	0.77	26.3	C
		Northbound	L	353	0.77	45.7	D	404	0.88	55.7	E	404	0.84	49.4	D
			T	123	0.23	29.8	C	122	0.23	29.8	C	122	0.22	28.3	C
			R	189	0.43	33.9	C	189	0.43	33.9	C	189	0.41	32.0	C
		Southbound	R	20	0.02	26.9	C	20	0.02	26.9	C	20	0.02	25.6	C
2	West Farms Road at Boston Rd, East Tremont Ave (1,5)	Overall		2421		211.0	F	2569		242.6	F	2569		194.3	F
		Eastbound	LTR	468	0.78	51.5	D	487	0.82	53.8	D	487	0.82	53.8	D
		Westbound	L									175	0.71	55.5	E
			TR	1025	1.52	287.4	F	1080	1.63	335.0	F	905	1.47	265.5	F
		Northbound(6)	LTR	259	0.72	56.2	E	297	0.83	64.1	E	51	0.26	42.0	D
			R									246	0.59	32.6	C
		NE-Bound	T	355	1.21	164.7	F	370	1.26	186.6	F	370	1.13	133.8	F
		Southbound	Def L	165	1.08	139.2	F	165	1.08	137.2	F				
			TR	149	0.86	77.5	E	170	0.98	101.4	F	335	1.00	90.6	F
4	East 177th Street at Sheridan Expressway (6)	Overall		2593		44.4	D	2684		47.9	D	2684		37.5	D
		Eastbound	L	309	0.77	54.5	D	325	0.81	57.7	E	325	0.81	57.7	E
			T	132	0.12	5.2	A	132	0.12	5.2	A	132	0.12	5.2	A
		Westbound	R	944	0.84	37.5	D	944	0.84	37.5	D	944	0.84	37.5	D
			T	330	0.62	31.5	C	364	0.68	33.9	C	364	0.68	33.9	C
		Northbound	LT	62	0.45	52.0	D	62	0.49	54.6	D	36	0.16	42.4	D
			R									26	0.11	41.7	D
		Southbound	L									279	0.77	69.7	E
			LT	288	1.12	138.0	F	305	1.18	161.5	F	26	0.61	54.5	D
			R	528	0.50	23.2	C	552	0.53	23.6	C	552	0.55	24.1	C
6	Bronx River Ave at East 174th Street	Overall		1865		44.0	D	1988		45.2	D	1988		45.2	D
		Eastbound	LTR	525	1.08	93.6	F	533	1.08	93.4	F	533	1.08	93.4	F
		Westbound	LT	329	0.92	54.2	D	345	0.93	56.5	E	345	0.93	56.5	E
			R	31	0.11	21.0	C	31	0.11	20.7	C	31	0.11	20.7	C
		Northbound	L	230	0.79	30.4	C	230	0.89	43.0	D	230	0.89	43.0	D
			TR	327	0.47	14.8	B	327	0.47	14.5	B	327	0.47	14.5	B
		Southbound	LTR	423	0.34	12.3	B	522	0.41	12.9	B	522	0.41	12.9	B
7	Boone Ave at East 174th Street	Overall		1340		14.7	B	1488		18.2	B	1488		18.2	B
		Eastbound	TR	483	0.56	11.4	B	527	0.62	12.3	B	527	0.62	12.3	B
		Westbound	DefL	143	0.48	12.5	B	239	0.85	33.1	C	239	0.85	33.1	C
			LT	568	0.60	12.0	B	583	0.61	12.0	B	583	0.61	12.0	B
		Southbound	LTR	146	0.53	35.1	D	139	0.49	33.8	C	139	0.49	33.8	C
8	Longfellow Ave at East 174th Street	Overall		1313		43.3	D	1372		67.6	E	1372		48.9	D
		Eastbound	LT	421	0.81	23.1	C	426	0.82	23.2	C	426	0.93	40.9	D
		Westbound	TR	599	0.67	13.4	B	614	0.68	13.4	B	614	0.73	17.4	B
		Northbound	LTR	293	1.12	117.7	F	332	1.32	197.7	F	332	1.09	104.7	F
17	Westchester Ave at Sheridan Expressway Service Road, Whitlock Avenue	Overall		2189		22.4	C	2291		22.7	C	2291		22.7	C
		Eastbound	TR	680	0.69	28.7	C	680	0.69	28.7	C	680	0.69	28.7	C
		Westbound	LT	722	0.52	15.4	B	770	0.55	15.9	B	770	0.55	15.9	B
		Southbound	LTR	787	0.50	23.1	C	841	0.54	23.6	C	841	0.54	23.6	C
18	West Farms Road at Home Street, Longfellow Ave (2)	Overall		682		55.8	E	806		50.7	D	806		52.2	D
		NW-Bound	LTR	267	1.18	150.1	F	367	1.66	351.4	F	367	1.13	123.5	F
		Northbound	LTR	153	1.08	116.8	F	153	1.06	109.1	F	153	1.06	109.1	F
		NE-Bound	LT	118	0.22	13.5	B	137	0.25	13.6	B	137	0.27	16.2	B
		SW-Bound	RT	144	0.23	13.5	B	149	0.24	13.4	B	149	0.26	15.9	B
19	West Farms Road at Freeman Street	Overall		519		14.4	B	643		16.3	B	643		16.3	B
		Eastbound	LTR	103	0.39	27.2	C	103	0.40	27.7	C	103	0.40	27.7	C
		Northbound	LT	271	0.43	11.4	B	390	0.62	15.3	B	390	0.62	15.3	B
		Southbound	TR	145	0.21	8.9	A	150	0.22	9.3	A	150	0.22	9.3	A
20	Westchester Ave at Sheridan Expressway Service Road and Northbound Off-Ramp	Overall		1910		23.7	C	1960		25.6	C	1960		25.6	C
		Eastbound	DefL (3)												
			LT	851	0.57	15.5	B	853	0.57	15.5	B	853	0.57	15.5	B
		Westbound	T	608	0.58	26.9	C	608	0.58	26.9	C	608	0.58	26.9	C
		Northbound	LTR	394	0.78	35.8	D	442	0.87	42.7	D	442	0.87	42.7	D
		Southbound	LR	57	0.18	21.1	C	57	0.18	21.0	C	57	0.18	21.0	C

Note: (1) Boston Road approaches the intersection in the northeast bound and southbound direction. East Tremont Avenue approaches the intersection in the eastbound and westbound direction. West Farms Road approaches the intersection in the northbound direction

(2) Home Street approaches the intersection ins the northwest bound direction. Longfellow Avenue approaches the intersection in the northbound direction. West Farms Road approaches the intersection in the northeast bound and southwest bound directions.

(3) Defacto left turn only exists in AM peak period.

(4) Left turns are shared with lane group above, volumes listed are only right turn vehicles.

(5) To mitigate a left turn only lane was added westbound on East Tremont Avenue and a right turn only lane was added northbound on West Farms Rd, creating new lane groups

(6) To mitigate, a left turn only lane was added southbound on East 177th Street and right turn only lane was striped northbound exiting the Bus Depot, creating new lane groups

Highlighted Lane Groups Represent Impacts

Table 3-52: Level of Service Table for Proposed Traffic Mitigation Measures Unsignalized Intersections – AM Peak Period

Int #	Intersection Name	Direction	Lane Group	AM Peak Period											
				No Build				Build				Build with Mitigations			
				Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
3	West Farms Road at Rodman Place	Overall		533	--	--	--	760	--	--	--	760	--	--	--
		Eastbound	LR	10	0.05	14.3	B	39	0.33	24.9	C	39	0.33	24.9	C
		Northbound	LT	226	0.01	8.5	A	436	0.01	8.4	A	436	0.01	8.4	A
		Southbound (3)	TR	297	--	--	--	285	--	--	--	285	--	--	--
5	West Farms Road at Cross Bronx Expressway North Service Rd	Overall		533	--	--	--	731	--	--	--	731	--	--	--
		Northbound	LT	246	0.02	8.6	A	456	0.02	8.5	A	456	0.02	8.5	A
		Southbound (3)	TR	287	--	--	--	275	--	--	--	275	--	--	--
9	West Farms Road at East 173rd Street	Overall		586	--	--	--	803	--	--	--	803	--	--	--
		Eastbound (1)	RL	131	0.49	27.9	D	239	1.10	129.4	F	239	0.42	12.7	B
		Northbound	TL	184	0.03	9.4	A	305	0.04	9.4	A	305	0.51	13.5	B
		Southbound (3)	RT	271	--	--	--	259	--	--	--	259	0.47	12.9	B
10	Boone Ave at East 173rd Street	Overall		476	--	--	--	526	--	--	--	526	--	--	--
		Eastbound	TR	47	0.16	16.4	C	32	0.15	20.8	C	32	0.15	20.8	C
		Westbound (1)	LT	42	0.18	18.8	C	28	0.18	25.4	D	28	0.18	25.4	D
		Southbound	LTR	387	0.07	7.6	A	466	0.15	7.9	A	466	0.15	7.9	A
11	Longfellow Ave at East 173rd Street	Overall		350	--	--	--	341	--	--	--	341	--	--	--
		Eastbound	TL	78	0.04	7.9	A	76	0.05	8.0	A	76	0.05	8.0	A
		Westbound (3)	RT	125	--	--	--	137	--	--	--	137	--	--	--
		Northbound	LTR	147	0.38	16.9	C	128	0.34	16.6	C	128	0.34	16.6	C
12	West Farms Road at East 172nd Street	Overall		560	--	--	--	666	--	--	--	666	--	--	--
		Eastbound	RL	76	0.30	16.3	C	140	0.64	28.8	D	140	0.64	28.8	D
		Northbound	TL	185	0.04	8.7	A	205	0.03	8.8	A	205	0.03	8.8	A
		Southbound (3)	RT	299	--	--	--	321	--	--	--	321	--	--	--
13	Boone Ave at East 172nd Street	Overall		373	--	--	--	382	--	--	--	382	--	--	--
		Eastbound (3)	TR	71	--	--	--	73	--	--	--	73	--	--	--
		Westbound	LT	82	0.04	7.8	A	74	0.04	7.8	A	74	0.04	7.8	A
		Southbound	LTR	220	0.54	17.9	C	235	0.57	18.8	C	235	0.57	18.8	C
14	West Farms Road at Jennings Street	Overall		622	--	--	--	639	--	--	--	639	--	--	--
		Eastbound	LR	118	0.40	17.9	C	118	0.41	18.7	C	118	0.41	18.7	C
		Northbound	LT	210	0.07	8.8	A	195	0.07	8.9	A	195	0.07	8.9	A
		Southbound (3)	TR	294	--	--	--	326	--	--	--	326	--	--	--
15	West Farms Road at Boone Ave	Overall		550	--	--	--	567	--	--	--	567	--	--	--
		Northbound (3)	TR	220	--	--	--	205	--	--	--	205	--	--	--
		Southbound	LT	330	0.32	12.6	B	362	0.36	13.0	B	362	0.36	13.0	B
16	Boone Ave at Freeman Street, Sheridan Expressway Ramp	Overall		1113	--	--	--	1114	--	--	--	1114	--	--	--
		Eastbound	T	111	0.19	11.7	B	111	0.20	11.9	B	111	0.20	11.9	B
		Westbound	T	174	0.57	20.0	C	187	0.59	20.6	C	187	0.59	20.6	C
		Southbound (3)	T	828	--	--	--	816	--	--	--	816	--	--	--

Notes:

(1) Significant Impact in AM Peak Period and PM Peak Period.

(2) Significant Impact in only the AM Peak Period.

(3) No conflicting movents.

YELLOW HIGHLIGHTED CELLS REPRESENT IMPACT DURING PEAK PERIOD

ORANGE HIGHLIGHTED CELLS REPRESENT IMPACT IN OTHER PEAK PERIOD

Table 3-53: Level of Service Table for Proposed Traffic Mitigation Measures Unsignalized Intersections – Midday Peak Period

Int #	Intersection Name	Direction	Lane Group	MD Peak Period											
				No Build				Build				Build with Mitigations			
				Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
3	West Farms Road at Rodman Place	Overall		327	--	--	--	423	--	--	--	423	--	--	--
		Eastbound	LR	5	0.02	10.5	B	28	0.12	13.5	B	28	0.12	13.5	B
		Northbound	LT	159	0.00	8.0	A	190	0.00	8.1	A	190	0.00	8.1	A
		Southbound (3)	TR	163	--	--	--	205	--	--	--	205	--	--	--
5	West Farms Road at Cross Bronx Expressway North Service Rd	Overall		342	--	--	--	395	--	--	--	395	--	--	--
		Northbound	LT	174	0.03	8.1	A	206	0.03	8.2	A	206	0.03	8.2	A
		Southbound (3)	TR	168	--	--	--	189	--	--	--	189	--	--	--
9	West Farms Road at East 173rd Street	Overall		378	--	--	--	431	--	--	--	431	--	--	--
		Eastbound (1)	RL	68	0.22	16.7	C	71	0.24	17.3	C	71	0.12	8.2	A
		Northbound	TL	152	0.03	8.8	A	196	0.04	8.8	A	196	0.26	8.9	A
		Southbound (3)	RT	158	--	--	--	164	--	--	--	164	0.22	8.6	A
10	Boone Ave at East 173rd Street	Overall		246	--	--	--	265	--	--	--	265	--	--	--
		Eastbound	TR	47	0.12	11.9	B	33	0.09	12.0	B	33	0.09	12.0	B
		Westbound (1)	LT	39	0.12	13.2	B	48	0.17	14.5	B	48	0.17	14.5	B
		Southbound	LTR	160	0.04	7.5	A	184	0.05	7.6	A	184	0.05	7.6	A
11	Longfellow Ave at East 173rd Street	Overall		326	--	--	--	341	--	--	--	341	--	--	--
		Eastbound	TL	103	0.06	7.9	A	103	0.06	8.0	A	103	0.06	8.0	A
		Westbound (3)	RT	91	--	--	--	109	--	--	--	109	--	--	--
		Northbound	LTR	132	0.36	17.3	C	129	0.37	17.8	C	129	0.37	17.8	C
12	West Farms Road at East 172nd Street	Overall		374	--	--	--	430	--	--	--	430	--	--	--
		Eastbound	RL	57	0.14	12.5	B	79	0.20	13.8	B	79	0.20	13.8	B
		Northbound	TL	147	0.02	8.1	A	176	0.03	8.2	A	176	0.03	8.2	A
		Southbound (3)	RT	170	--	--	--	175	--	--	--	175	--	--	--
13	Boone Ave at East 172nd Street	Overall		165	--	--	--	172	--	--	--	172	--	--	--
		Eastbound (3)	TR	36	--	--	--	36	--	--	--	36	--	--	--
		Westbound	LT	42	0.00	7.6	A	38	0.00	7.6	A	38	0.00	7.6	A
		Southbound	LTR	87	0.20	11.5	B	98	0.22	11.6	B	98	0.22	11.6	B
14	West Farms Road at Jennings Street	Overall		393	--	--	--	428	--	--	--	428	--	--	--
		Eastbound	LR	87	0.20	12.6	B	87	0.20	13.0	B	87	0.20	13.0	B
		Northbound	LT	126	0.01	8.0	A	152	0.01	8.0	A	152	0.01	8.0	A
		Southbound (3)	TR	180	--	--	--	189	--	--	--	189	--	--	--
15	West Farms Road at Boone Ave	Overall		367	--	--	--	402	--	--	--	402	--	--	--
		Northbound(3)	TR	141	--	--	--	167	--	--	--	167	--	--	--
		Southbound	LT	226	0.19	11.3	B	235	0.20	11.4	B	235	0.20	11.4	B
16	Boone Ave at Freeman Street, Sheridan Expressway Ramp	Overall		955	--	--	--	967	--	--	--	967	--	--	--
		Eastbound	T	98	0.16	11.2	B	98	0.16	11.2	B	98	0.16	11.2	B
		Westbound	T	133	0.45	16.3	C	135	0.46	16.5	C	135	0.46	16.5	C
		Southbound (3)	T	724	--	--	--	734	--	--	--	734	--	--	--

Notes:

(1) Significant Impact in AM Peak Period and PM Peak Period.

(2) Significant Impact in only the AM Peak Period.

(3) No conflicting movents.

YELLOW HIGHLIGHTED CELLS REPRESENT IMPACT DURING PEAK PERIOD

ORANGE HIGHLIGHTED CELLS REPRESENT IMPACT IN OTHER PEAK PERIOD

Table 3-54: Level of Service Table for Proposed Traffic Mitigation Measures Unsignalized Intersections – PM Peak Period

Int #	Intersection Name	Direction	Lane Group	PM Peak Period											
				No Build				Build				Build with Mitigations			
				Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS	Volume	v/c ratio	Delay (sec)	LOS
3	West Farms Road at Rodman Place	Overall		483	--	--	--	595	--	--	--	595	--	--	--
		Eastbound	LR	0	--	--	--	14	0.09	17.4	C	14	0.09	17.4	C
		Northbound	LT	264	0.01	8.2	A	284	0.01	8.5	A	284	0.01	8.5	A
		Southbound (3)	TR	219	--	--	--	297	--	--	--	297	--	--	--
5	West Farms Road at Cross Bronx Expressway North Service Rd	Overall		498	--	--	--	569	--	--	--	569	--	--	--
		Northbound	LT	284	0.02	8.3	A	306	0.03	8.5	A	306	0.03	8.5	A
		Southbound (3)	TR	214	--	--	--	263	--	--	--	263	--	--	--
9	West Farms Road at East 173rd Street	Overall		550	--	--	--	667	--	--	--	667	--	--	--
		Eastbound (1)	RL	88	0.64	35.5	E	84	0.67	40.0	E	84	0.29	10.9	B
		Northbound	TL	256	0.03	9.0	A	361	0.15	9.7	A	361	0.71	19.3	C
		Southbound (3)	RT	206	--	--	--	222	--	--	--	222	0.43	12.0	B
10	Boone Ave at East 173rd Street	Overall		326	--	--	--	426	--	--	--	426	--	--	--
		Eastbound	TR	52	0.14	12.6	B	34	0.11	12.7	B	34	0.11	12.7	B
		Westbound (1)	LT	58	0.20	15.1	C	110	0.45	22.6	C	110	0.45	22.6	C
		Southbound	LTR	216	0.05	7.6	A	282	0.07	7.6	A	282	0.07	7.6	A
11	Longfellow Ave at East 173rd Street	Overall		397	--	--	--	456	--	--	--	456	--	--	--
		Eastbound	TL	129	0.10	8.1	A	133	0.11	8.3	A	133	0.11	8.3	A
		Westbound (3)	RT	105	--	--	--	162	--	--	--	162	--	--	--
		Northbound	LTR	163	0.54	24.9	C	161	0.59	29.6	D	161	0.59	29.6	D
12	West Farms Road at East 172nd Street	Overall		513	--	--	--	667	--	--	--	667	--	--	--
		Eastbound	RL	67	0.19	14.4	B	103	0.33	18.2	C	103	0.33	18.2	C
		Northbound	TL	235	0.02	8.2	A	346	0.04	8.3	A	346	0.04	8.3	A
		Southbound (3)	RT	211	--	--	--	218	--	--	--	218	--	--	--
13	Boone Ave at East 172nd Street	Overall		210	--	--	--	253	--	--	--	253	--	--	--
		Eastbound (3)	TR	46	--	--	--	51	0.00	0.0	0	51	0.00	0.0	0
		Westbound	LT	31	0.01	7.6	A	33	0.01	7.6	A	33	0.01	7.6	A
		Southbound	LTR	133	0.26	12.0	B	169	0.35	13.0	B	169	0.35	13.0	B
14	West Farms Road at Jennings Street	Overall		538	--	--	--	664	--	--	--	664	--	--	--
		Eastbound	LR	103	0.25	14.3	B	103	0.28	15.7	C	103	0.28	15.7	C
		Northbound	LT	209	0.01	8.2	A	328	0.01	8.2	A	328	0.01	8.2	A
		Southbound (3)	TR	226	--	--	--	233	--	--	--	233	--	--	--
15	West Farms Road at Boone Ave	Overall		528	--	--	--	654	--	--	--	654	--	--	--
		Northbound(3)	TR	240	--	--	--	359	--	--	--	359	--	--	--
		Southbound	LT	288	0.25	11.7	B	295	0.25	11.8	B	295	0.25	11.8	B
16	Boone Ave at Freeman Street, Sheridan Expressway Ramp	Overall		787	--	--	--	841	--	--	--	841	--	--	--
		Eastbound	T	135	0.24	12.2	B	135	0.25	12.2	B	135	0.25	12.2	B
		Westbound	T	174	0.52	16.5	C	176	0.55	17.7	C	176	0.55	17.7	C
		Southbound (3)	T	478	--	--	--	530	--	--	--	530	--	--	--

Notes:

(1) Significant Impact in AM Peak Period and PM Peak Period.

(2) Significant Impact in only the AM Peak Period.

(3) No conflicting movents.

YELLOW HIGHLIGHTED CELLS REPRESENT IMPACT DURING PEAK PERIOD

ORANGE HIGHLIGHTED CELLS REPRESENT IMPACT IN OTHER PEAK PERIOD

CONSTRUCTION

Impacts

Traffic

The construction preliminary traffic analysis in Chapter 2.S, Construction Impacts, concluded that there would potentially be significant adverse impacts during construction at four study area intersections. The intersections are as follows:

1. Intersection 18 West Farms Road/Home Street
2. Intersection 21 Bronx Park Avenue/East 177th Street
3. Intersection 9 West Farms Road/East 173rd Street
4. Intersection 10 Boone Avenue/East 173rd Street

A detailed construction traffic analysis will be preformed between the Draft and Final EIS to specifically quantify the construction traffic impacts as well as determine appropriate mitigation measures to mitigate those impacts.

Noise

As described in Chapter 2.S, even though no long-term construction noise impacts are expected to occur as a result of the Proposed Action, there are shorter periods during which very high increases in construction noise (e.g., in excess of 15 dBA) would occur. This would affect the rear facades of existing residential buildings fronting on the east side of Longfellow Avenue between East 173rd and East 174th Streets, where increases of up to 19.9 dBA are predicted. The high noise levels would be generated by construction activities on sites that are not under control of the applicant. Therefore, the Proposed Action has the potential to result in a significant adverse impact related to construction noise.

Proposed Mitigation Measures

Traffic

Potential mitigation measures that would mitigate construction traffic impacts include signal timing changes, installation of all way stop signs, and/or possibly temporary restriping. In the event these or other possible mitigation measures do not fully mitigate the impacts, they would be considered as unavoidable significant adverse impacts (see Chapter 4, Unavoidable Adverse Impacts).

Noise

According to the CEQR Technical Manual, mitigation for construction noise impacts may include noise barriers, use of low noise emission equipment, locating stationary equipment as far as feasible away from receptors, enclosing areas, limiting the duration of activities, specifying quiet equipment, scheduling of activities to minimize impacts (either time of day or seasonal considerations), and locating noisy equipment near natural or existing barriers that would shield sensitive receptors.

Further analysis of construction noise affecting the receptors along Longfellow Avenue, and consideration of potential mitigation measures to reduce the severity and duration of the noise from on-site equipment, will be carried out between the Draft and Final EIS. If the further analysis confirms that a significant adverse construction noise impact would occur, and if no suitable, implementable measures that would successfully mitigate the significant adverse impact are identified, then the Proposed Action would cause an unmitigated significant adverse construction noise impact, as is discussed in Chapter 4, Unavoidable Adverse Impacts.