

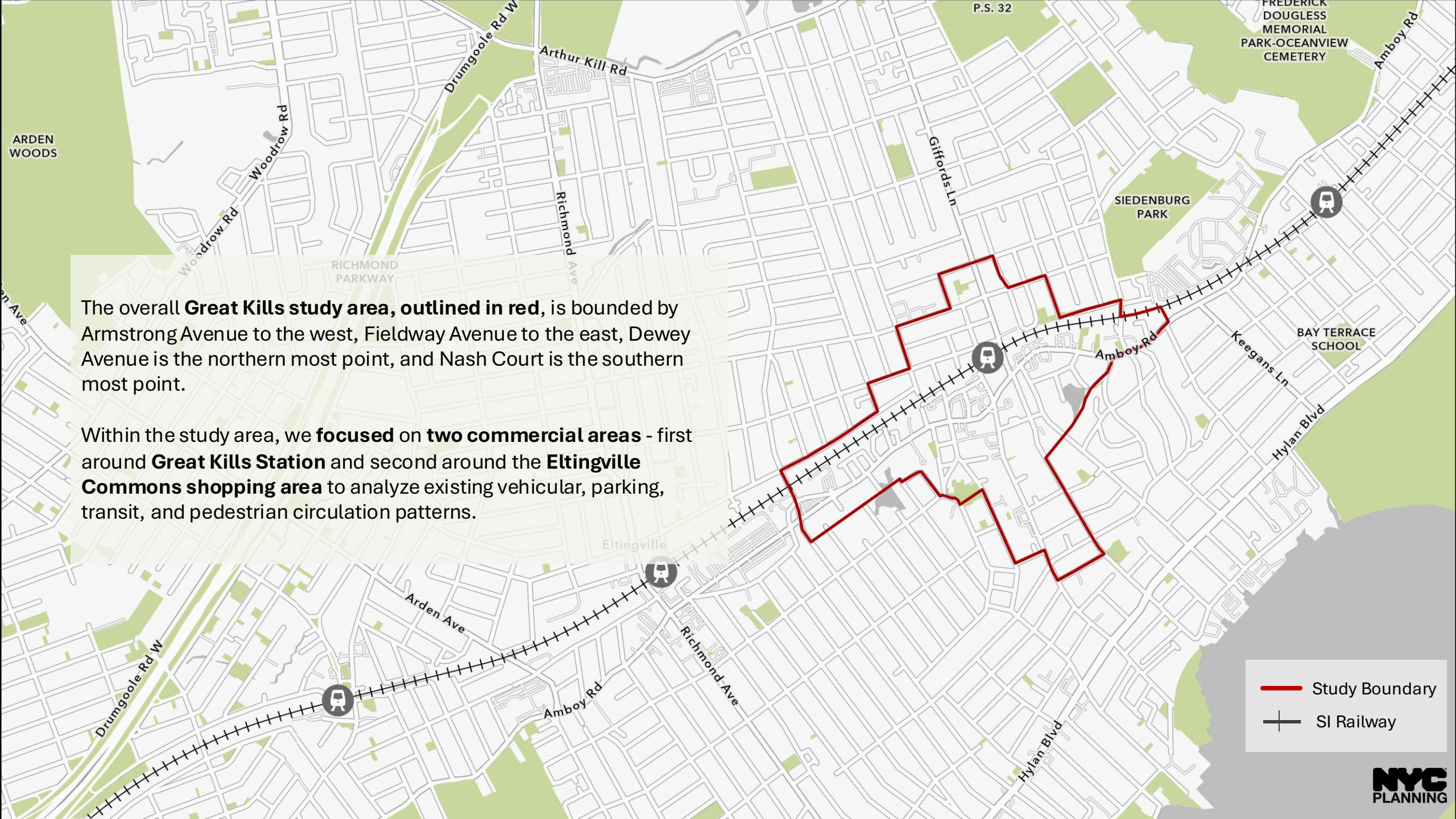
An aerial photograph of a suburban neighborhood, likely in Staten Island, New York. The image shows a dense grid of residential streets with houses, many of which have swimming pools. The houses are mostly single-story with various roof colors. There are green trees interspersed among the houses. A semi-transparent white rectangular box is overlaid in the center of the image, containing the title and subtitle text.

Great Kills - Transportation Study

NYC Department of City Planning, Staten Island Office

The overall **Great Kills study area**, outlined in red, is bounded by Armstrong Avenue to the west, Fieldway Avenue to the east, Dewey Avenue is the northern most point, and Nash Court is the southern most point.

Within the study area, we **focused on two commercial areas** - first around **Great Kills Station** and second around the **Eltingville Commons shopping area** to analyze existing vehicular, parking, transit, and pedestrian circulation patterns.



— Study Boundary
+ SI Railway

An aerial photograph of a suburban neighborhood, likely in the United States. The image shows a dense grid of streets and houses. Many houses have swimming pools, and there are green trees scattered throughout the landscape. The overall scene is a typical suburban residential area.

Why Great Kills?

Why Great Kills?

The Staten Island Office at DCP has closely monitored the opportunities and challenges in Great Kills through **over a decade of town center research** and visioning.

As a key hub on the South Shore, Great Kills holds potential not only for the local community but for the borough as a whole. The Staten Island Railway offers an **express connection to the Ferry Terminal**, significantly reducing commute times for residents. The neighborhood features a **fairly active commercial corridor** along Amboy Road, a major South Richmond arterial street, and some **pre-War buildings with modest densities** that support walkability.

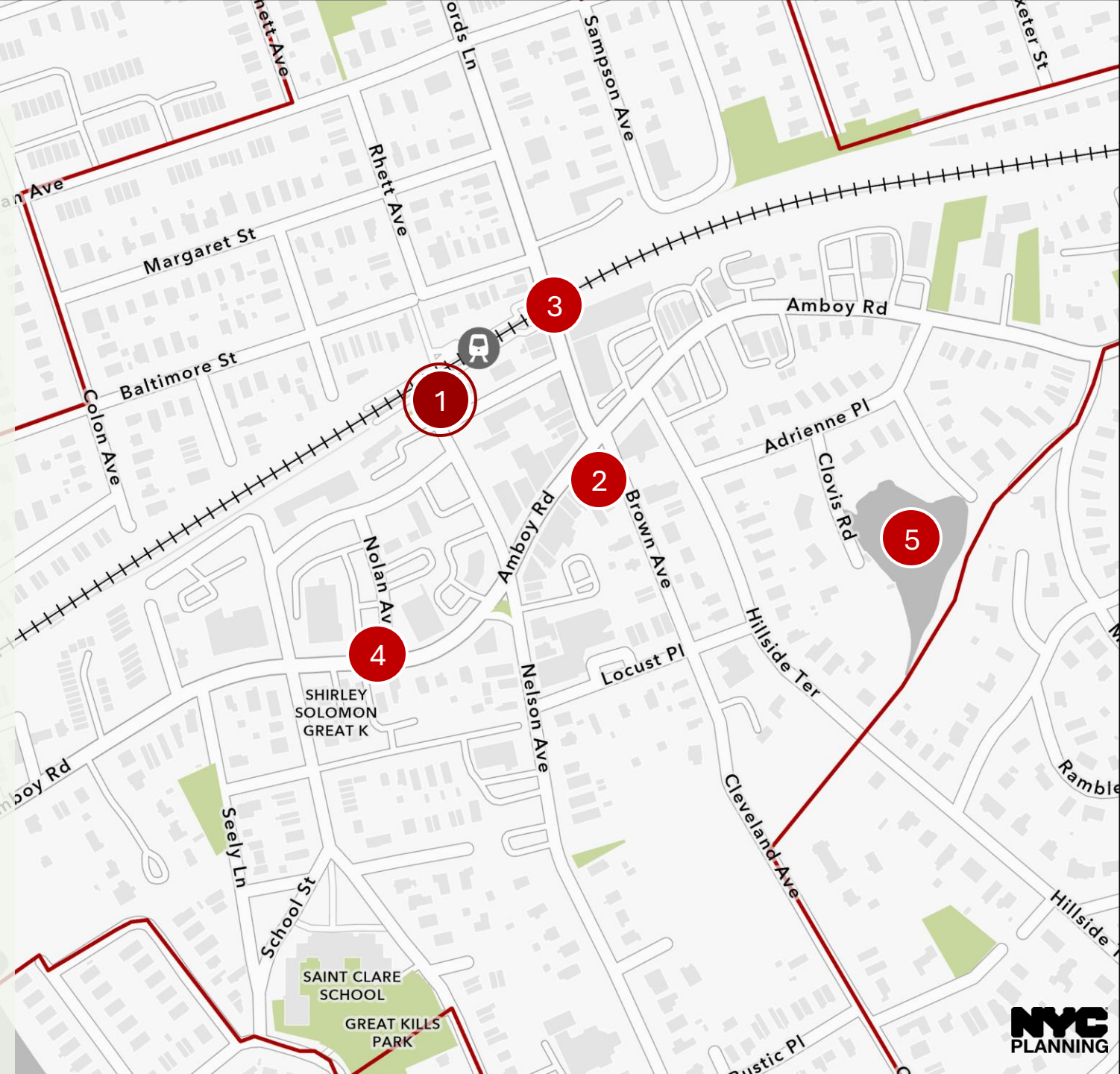
However, several challenges hinder its development as a successful Town Center. The **narrow and irregular street network** limit multi-modal transportation options, while **limited north/south connectivity** (with only three streets crossing the SIR tracks) restricts neighborhood access. Additionally, **pedestrian safety is a concern**, particularly around the SIR station, where riders must navigate an **unmarked parking lot and unsafe sidewalks** due to various curb cuts





Great Kills SIR Station

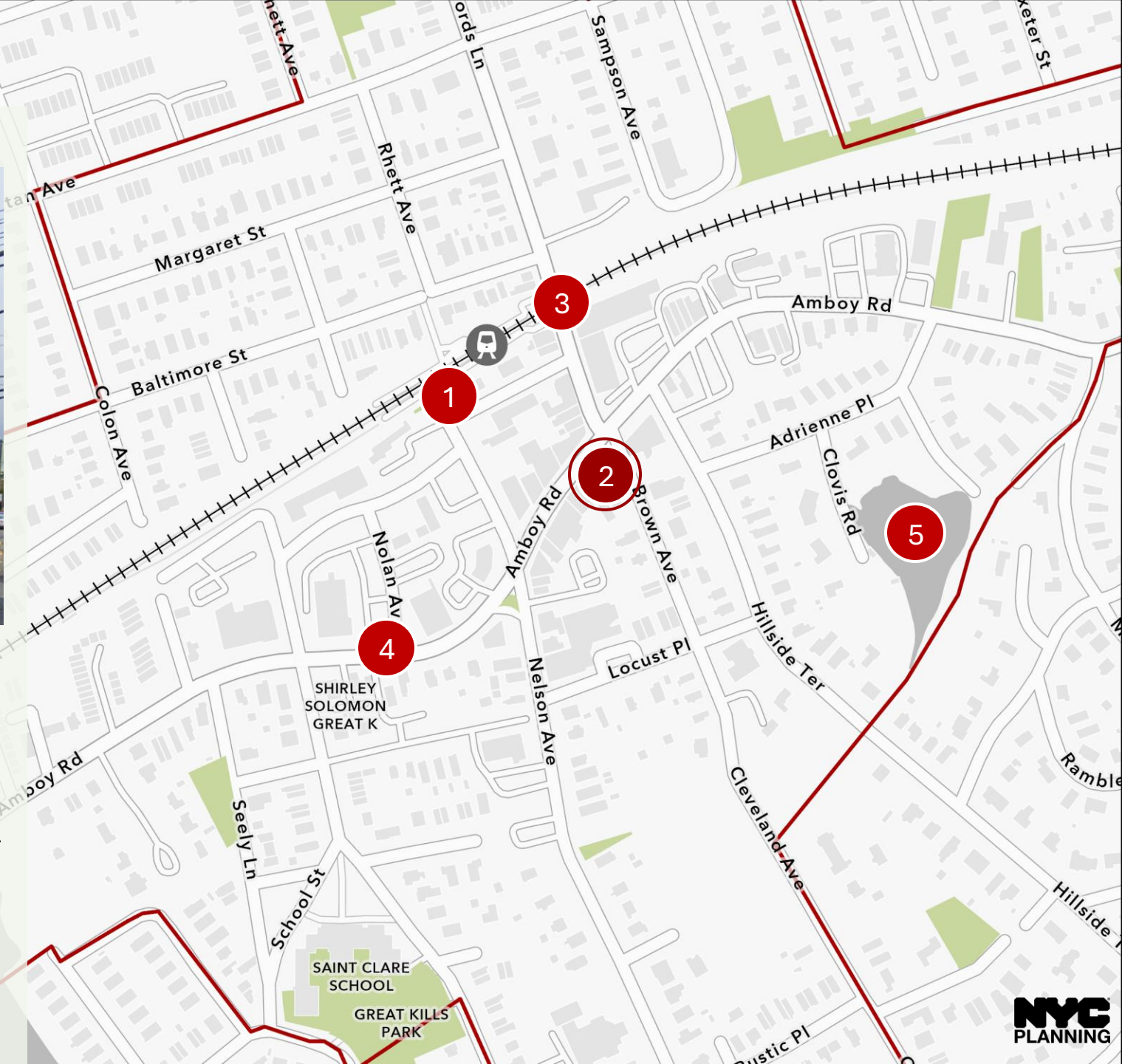
Located at Giffords Lane and Amboy Road, the Great Kills Station is both a local and an express train station on the Staten Island Rail (SIR) system. **SIR express train to and from the Staten Island Ferry Terminal at St. George is maintained during the morning and evening weekday rush hours which drastically shortens commute times** for residents in the neighborhood (MTA, n.d.)

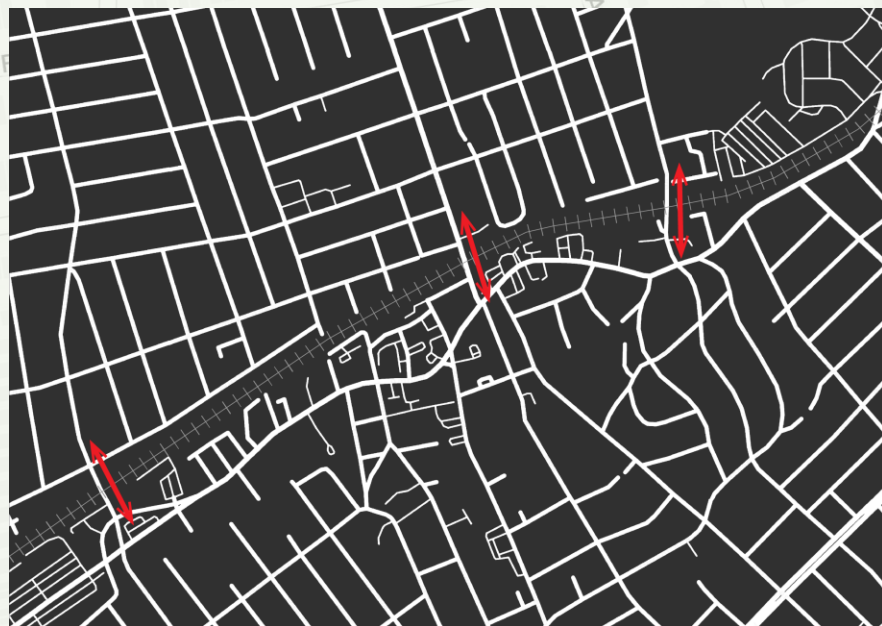




Modest Density

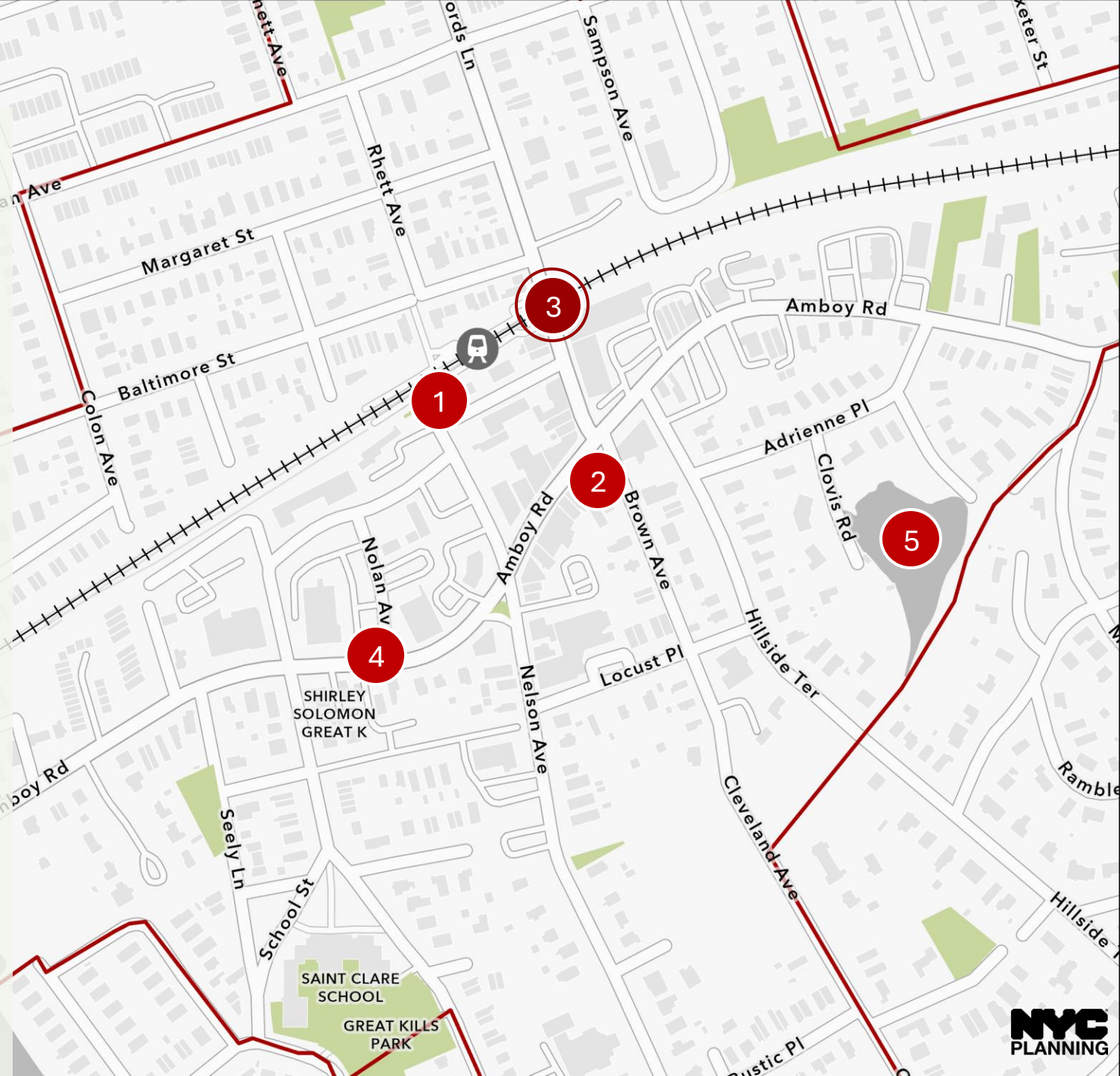
Along Amboy Road, there are a mix of pre-War buildings within **C4-1 zoning districts** and **C1-1 commercial overlays** which permit both residential and commercial use. While these mixed-use buildings create modest densities that support walkability, **development restrictions** have prevented this for some time.





North-South Connection

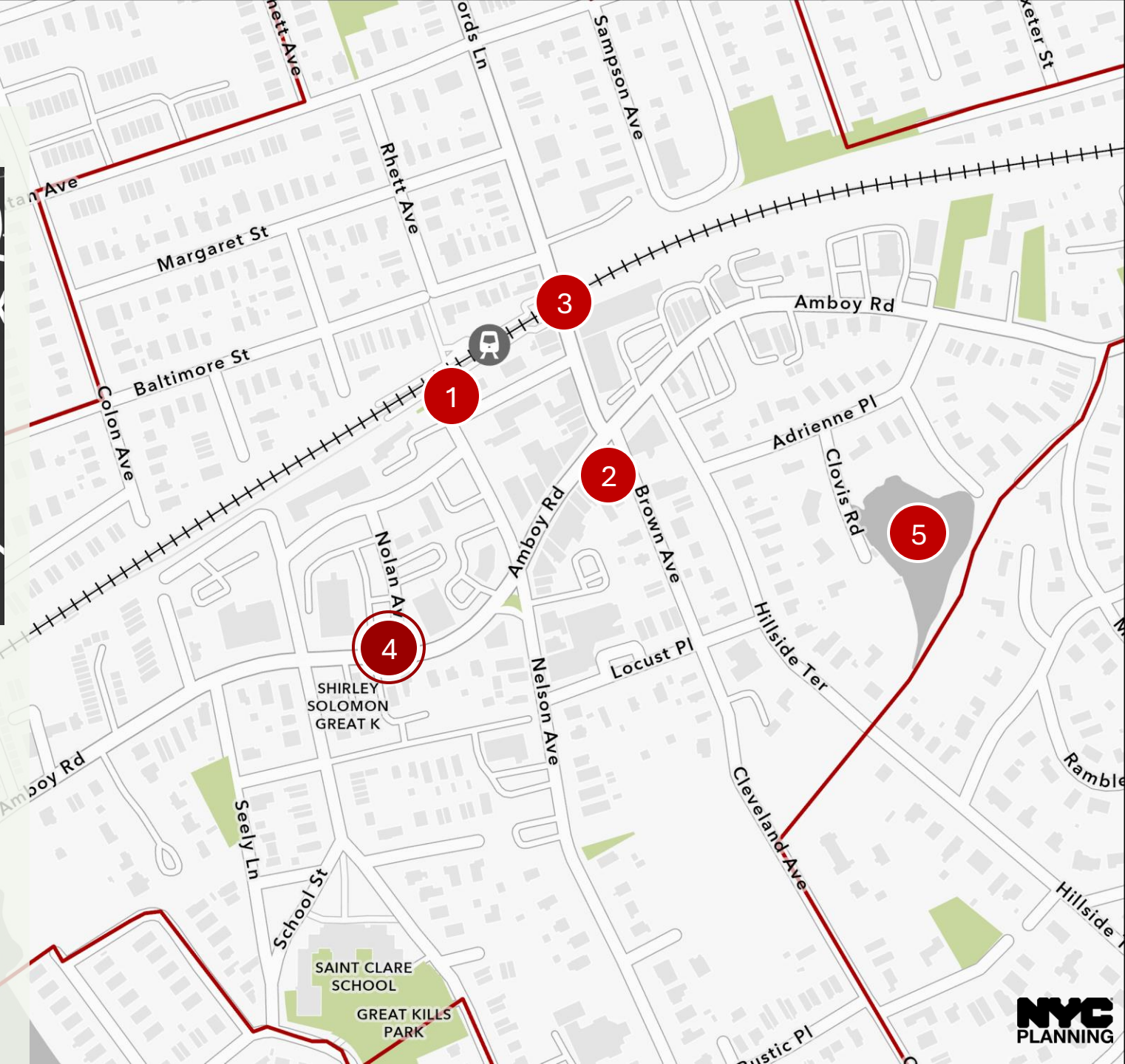
There is **limited** north/south **connectivity** with only **three streets crossing the SIR** - Armstrong Avenue, Giffords Lane, and Greaves Avenue. Each street is approximately one half-mile apart, **restricting access** to the surrounding Great Kills neighborhood.





Irregular Network

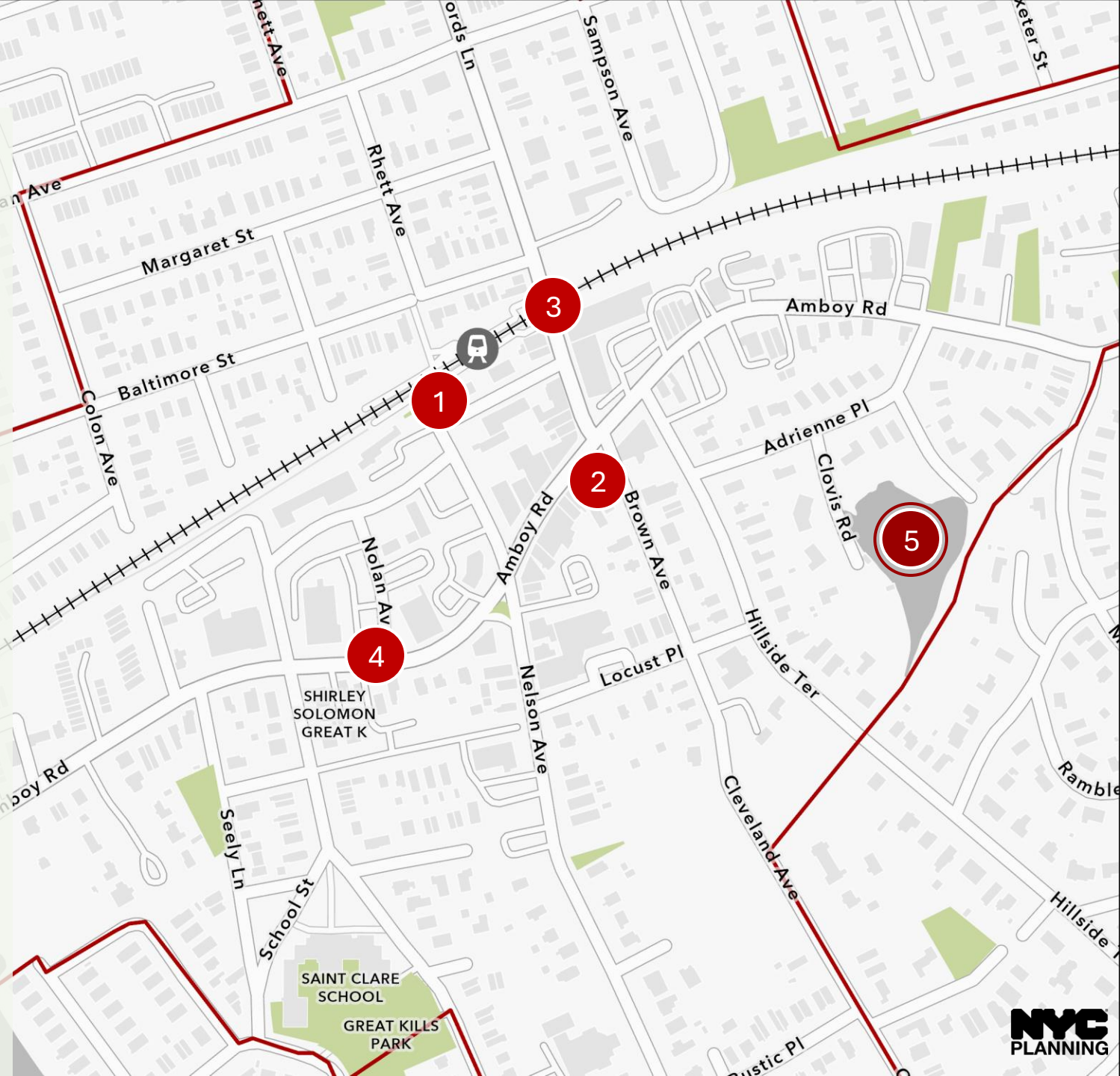
The **narrow and irregular streets** along Amboy Road and secondary roads connecting to Amboy Road **limit multi-modal transportation options**.





Wetlands

The Bluebelt system has been implemented throughout the wetlands in Great Kills. This complex system has a **variety of benefits**, including **reducing urban flooding**, enhancing **natural drainage** corridors to convey, store, and filter stormwater, **improving the health** of local waterways, and providing **diverse habitat** for wildlife (DEP, n.d.).



An aerial photograph of a residential neighborhood, likely in New York City, showing a dense grid of streets and houses. Many houses have swimming pools. A semi-transparent yellow rectangular box is centered over the image, containing the text "Historical Context".

Historical Context

Historical Context

In the 1960s, upon the opening of the **Verrazzano Narrows Bridge**, families flocked to Staten Island. Many were drawn to Great Kills due to the presence of the train station, which, at the time, created a **lively town center**. During its heyday, the corner of Amboy Road and Nelson Avenue had **many businesses and restaurants** which have come and gone; the business corridor was nicknamed "**The Village**" by locals.

The continued **suburbanization** of Staten Island **in the 1960s** led to streets being redesigned for vehicles, and town centers, such as Great Kills, were **replaced by parking lots and strip malls** (Staten Island Advance, 1962). In Great Kills, this meant that the **business corridor became less amenable to foot traffic**, as vehicular traffic increased over time. In areas where storefronts previously opened directly to the sidewalk, which created the feeling of “The Village” town center, large surface parking lots in present day ensure ample parking is available for errands, but **discourage activities like walking, window-shopping, and enjoying the neighborhood** (P. Gutis, 1986).





Collection of Historic Images of Great Kills



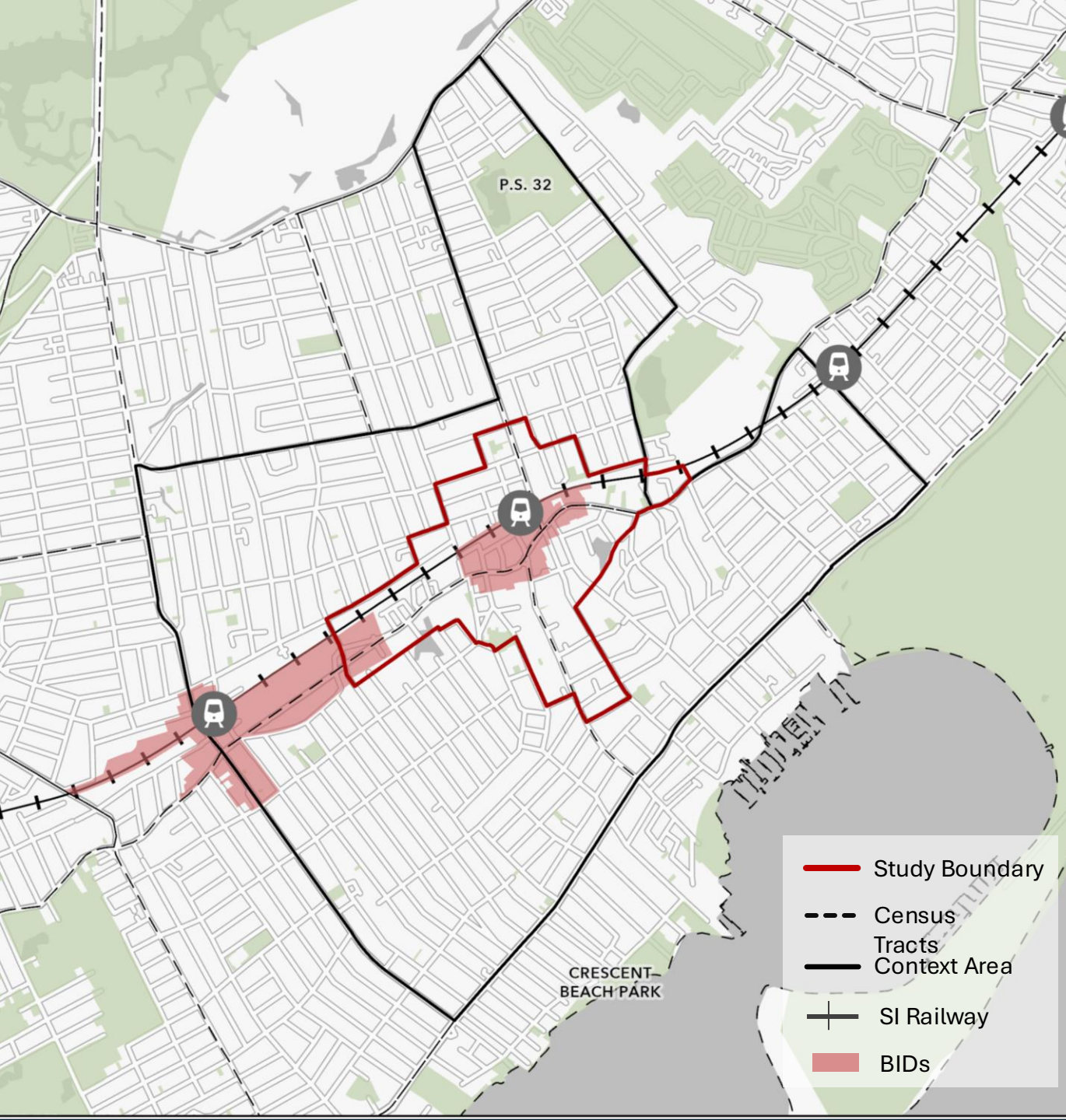
*Gifford's Lane as seen from Amboy Road
(Historic Image v/s Modern Day Image)*



*Gifford's Lane as seen from Amboy Road
(Historic Image v/s Modern Day Image)*

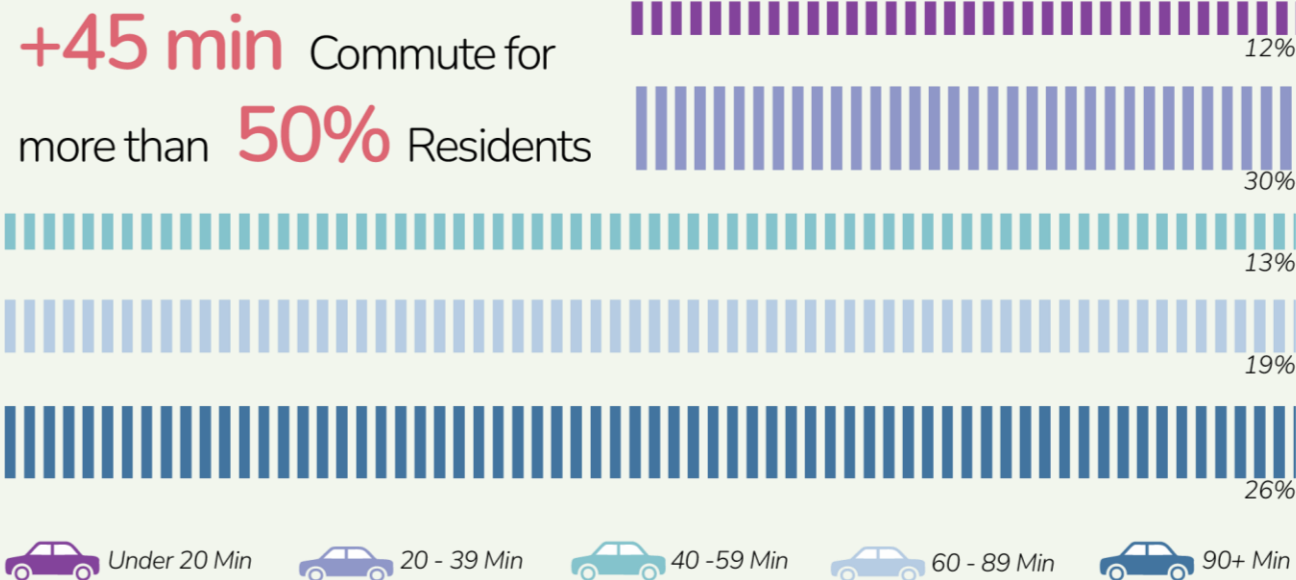
An aerial photograph of a suburban neighborhood. The image shows a dense grid of streets and houses. Many houses have swimming pools, which are visible as small blue patches. The streets are light-colored, and the houses are mostly single-story with various roof colors. There are some larger buildings and parking lots interspersed among the residential areas. The overall layout is a typical suburban grid pattern.

Key Takeaways



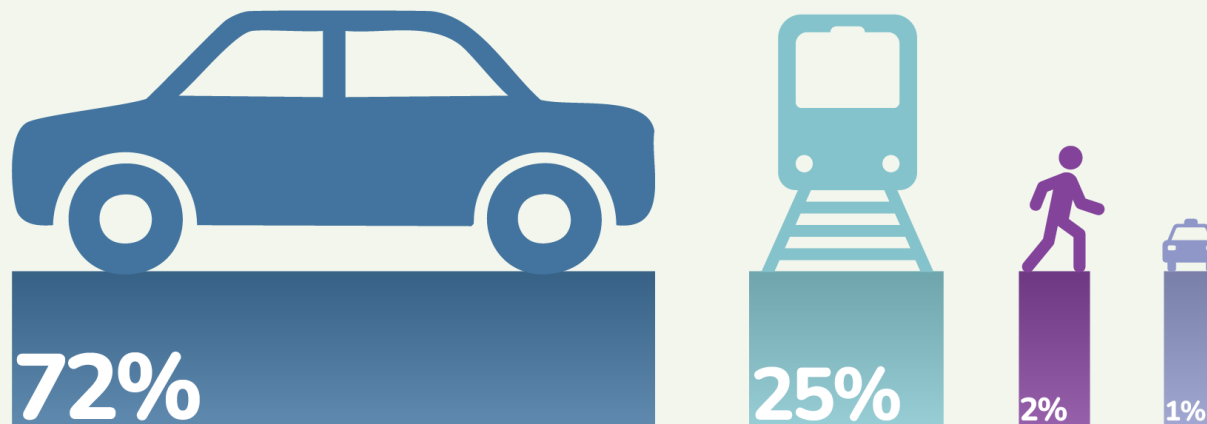
Context

For this study, DCP narrowed the project area and compiled data from the American Community Survey and Population Factfinder (2010-2020) from **four Census tracts** within the immediate vicinity of the Great Kills Train Station, encompassing the Eltingville-Annadale Commercial area - 146.04, 146.05, 132.03 and 156.01.



Commute Times

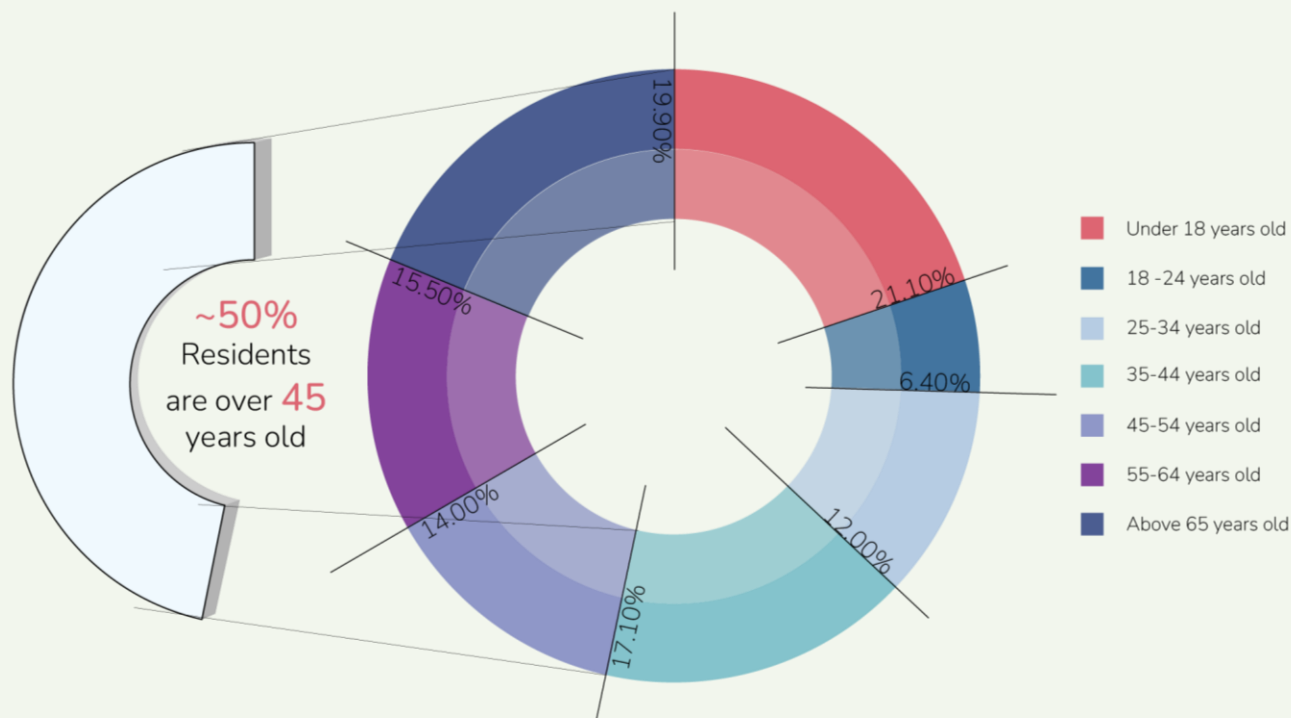
In Great Kills, commuting patterns reveal a **strong reliance on personal vehicles**, where approximately 56% of residents have a commute lasting 45 minutes or more, and the **average commute time is around one hour**.



Strong presence of Cars as primary mode of transportation

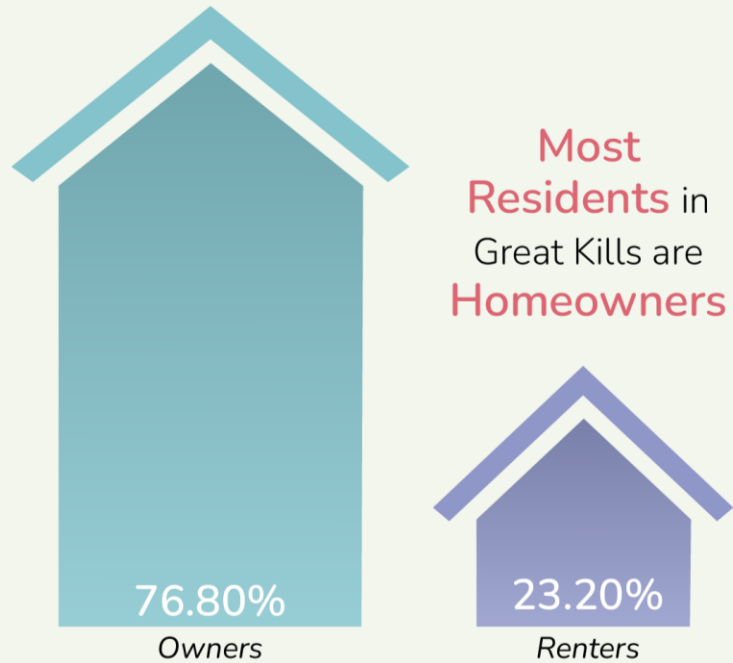
Commute Patterns

Additionally, **72% of residents use cars** as their primary mode of transportation. While public transportation options are available, such as the SIR, they may not fully meet the needs of all commuters which contributes to the high percentage of residents who drive (American Community Survey, n.d.).



Age Group Composition

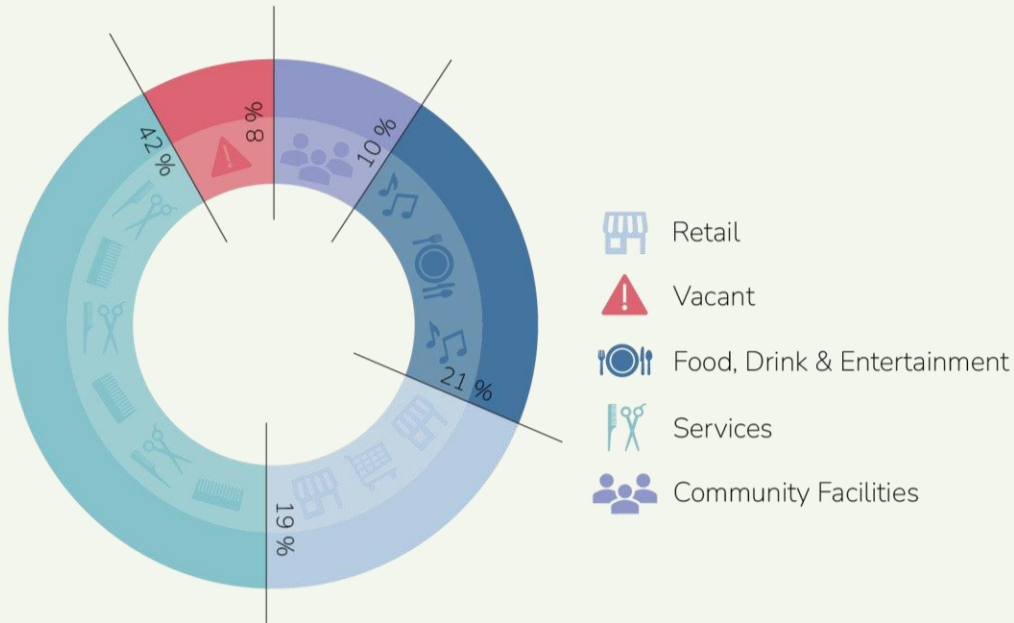
Overall, the population within the study area is **slightly older** compared to the rest of Staten Island, and it has been aging over the past decade. In **2000**, the **65+ population was 13%** compared to **20.0% in 2020**, resulting in a 54% increase. Additionally, from 2000 to 2023, the number of retirees receiving social security increased from 30% to 42%.



Housing Stock

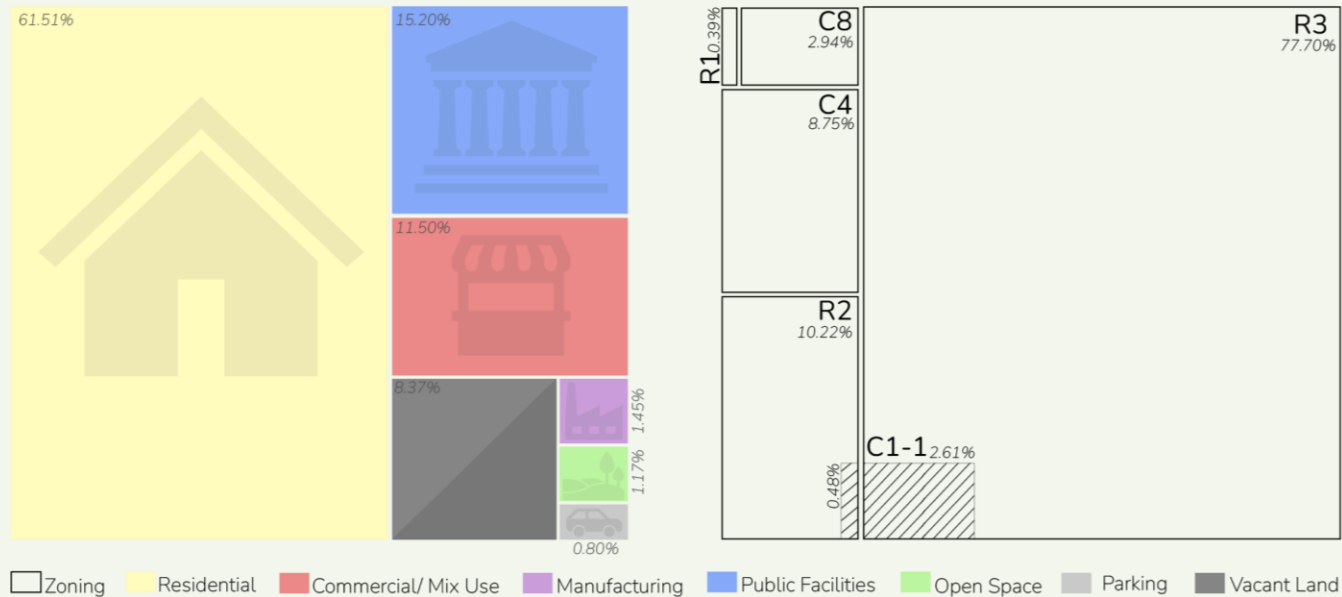
Within the study area, **77% of residents are homeowners** while 23% are renters which is the complete opposite compared to the rest of New York City where 70% of New Yorkers rent and **30% of New Yorkers own**.

113 Storefronts
9 Vacant (8%)
SI (8%) | NYC (9%)



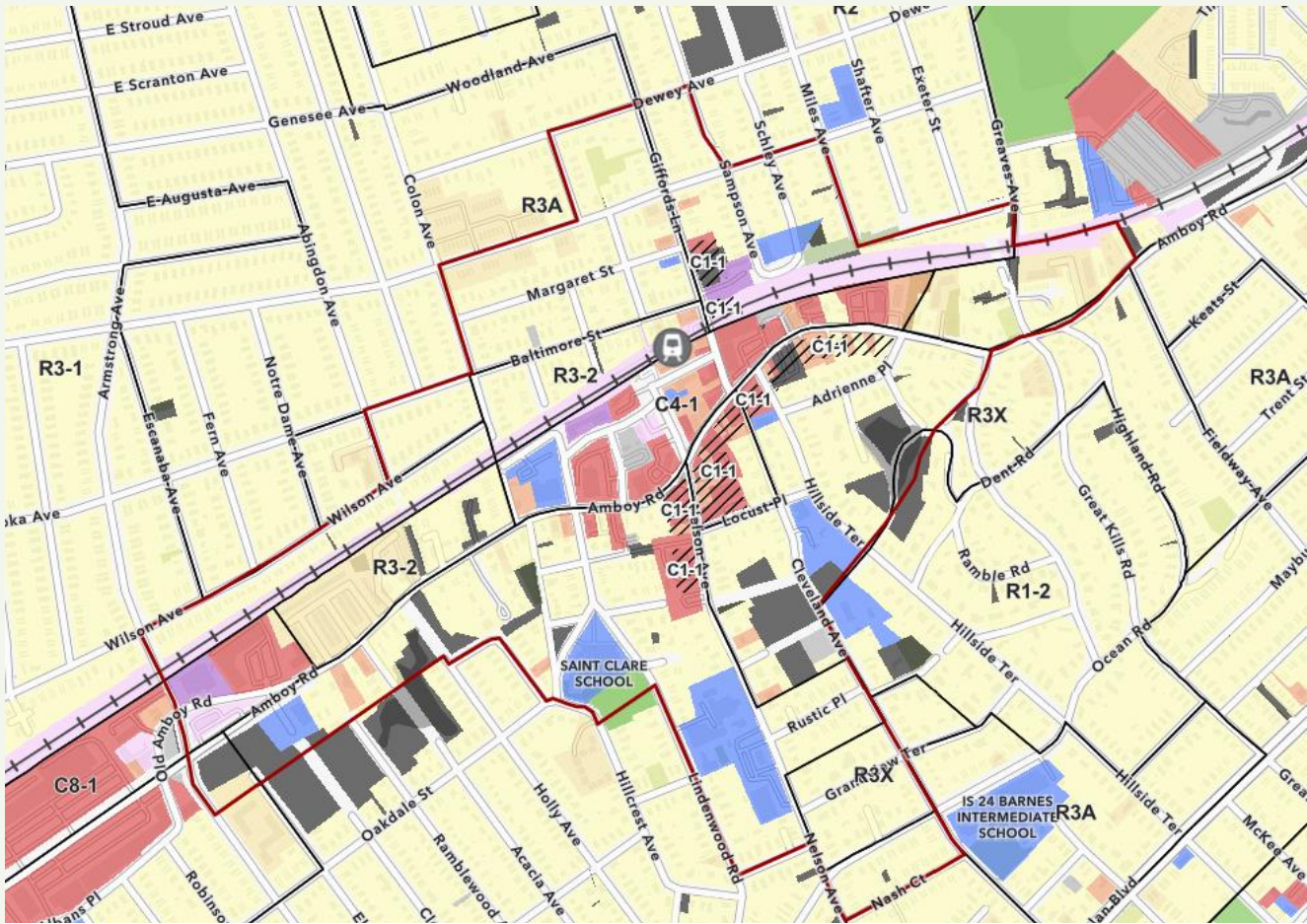
Storefront Composition

The study area includes **113 storefronts**, 9 of which were **vacant (8%)** as of 2024 which is consistent with the rest of the Borough (8%). Of the nine vacancies, three spaces have been vacant for over a year: 61 Giffords Lane, 35 Giffords Glen, and 10 Brown Ave. The predominant local business within the study area are **Service businesses (42%)** which is much higher than the Citywide rate (28%), and about two-fifths of the businesses in the study area are either **Food/Drink/Entertainment (21%)** or **Retail (19%)**.



Zoning & Land Use

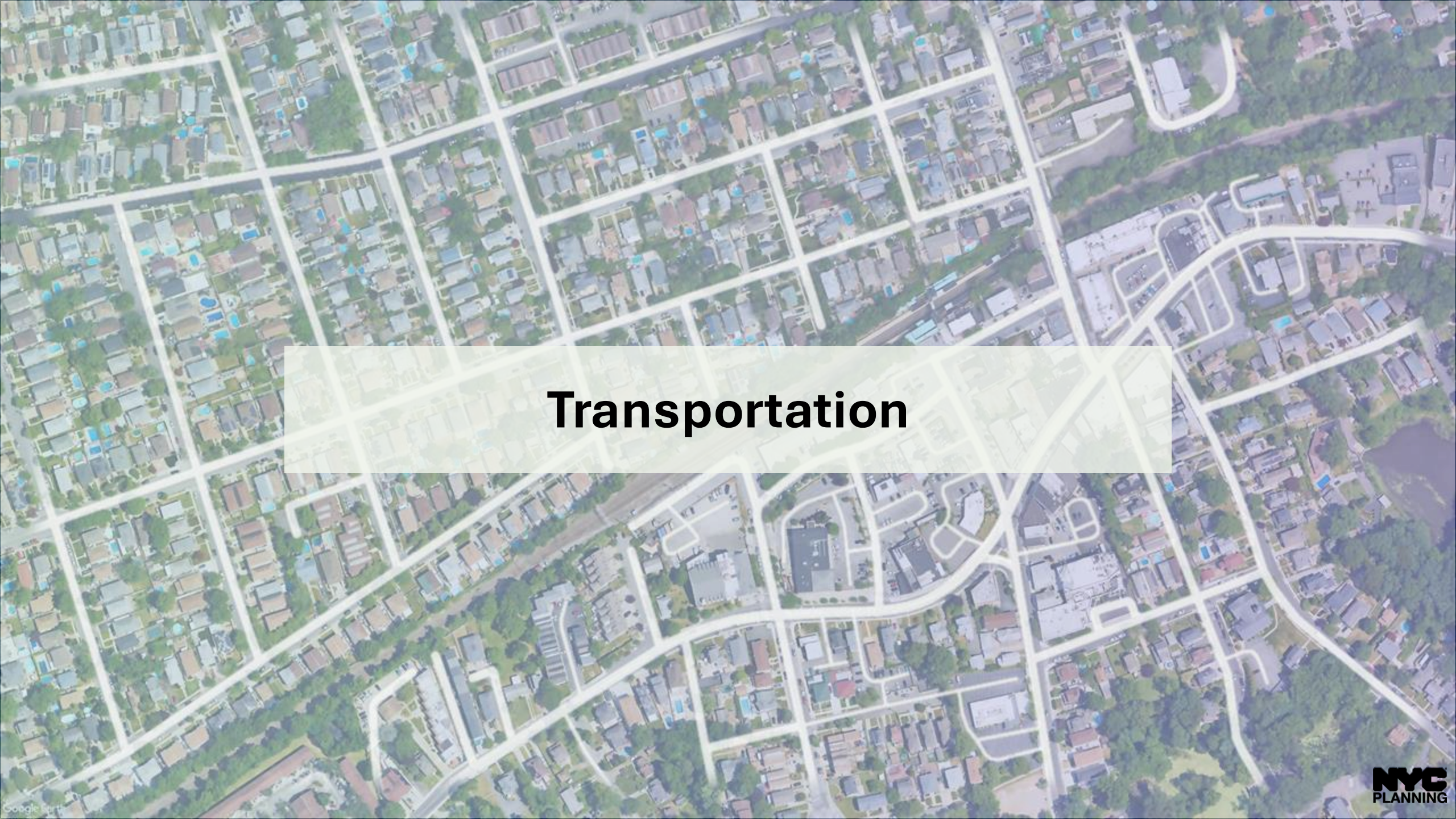
The majority of the land use within **the study area is low-density residential** (61.5%) with a mix of public facilities (15.2%) and commercial uses (11.5%) immediately surrounding the SIR station. It is also important to note that while DCP data for Primary Land Use and Tax lot Output (PLUTO) indicates more vacant land (8.3%) than usable open space (1.7%), many of the aforementioned **recreational wetlands are categorized as vacant land**.



The Great Kills study area contains a mixture of **several residential districts** which are varied, from R3-2, R3A, R3X to R2 with C1-1 commercial overlays. These residential districts allow for a **variety of low-density housing types**, which include low-rise attached houses, small multifamily apartment houses, single-family detached houses, and detached and semi-detached one- and two-family residences.

Surrounded by a sea of varied residential districts, the **C4-1 district is at the center** of the greater Great Kills neighborhood, encompassing the SIR station and boundaries of the South Shore Business Improvement District (BID). C4-1 districts are **very dynamic by allowing both commercial uses and residential uses** with residential equivalent of an R6 zoning district where building heights are **typically no taller than five stories**.

There is **one C8-1 district** in the western portion of the study area which allows for both regional commercial and light manufacturing uses.

An aerial photograph of a suburban neighborhood. The image shows a dense grid of streets and houses. Many houses have swimming pools, which appear as small blue rectangles. The streets are light-colored, and the houses are mostly single-story with various roof colors. There are some larger buildings and parking lots interspersed among the residential areas. A semi-transparent yellow rectangle is overlaid in the center of the image, containing the word "Transportation" in bold black text.

Transportation

Transportation

DCP released a Request for Proposal (RFP) in September 2024 soliciting a **consultant to conduct traffic data collection** within the study area. The contract was awarded to Simco Engineering, D.P.C. (the consultant') in October 2024. DCP in coordination with the consultant collected all necessary data for the study area in November 2024.

Existing traffic volumes were **collected on weekday morning, midday, evening, and Saturday hours**. For each signalized intersection, the signal timing, cycle length, and phasing were obtained from NYC Department of Transportation (DOT).

The consultant collected two main types of data: **(1) Vehicular traffic counts**; and **(2) Pedestrian counts** consisting of bi-directional pedestrian crosswalk, sidewalks and corners.

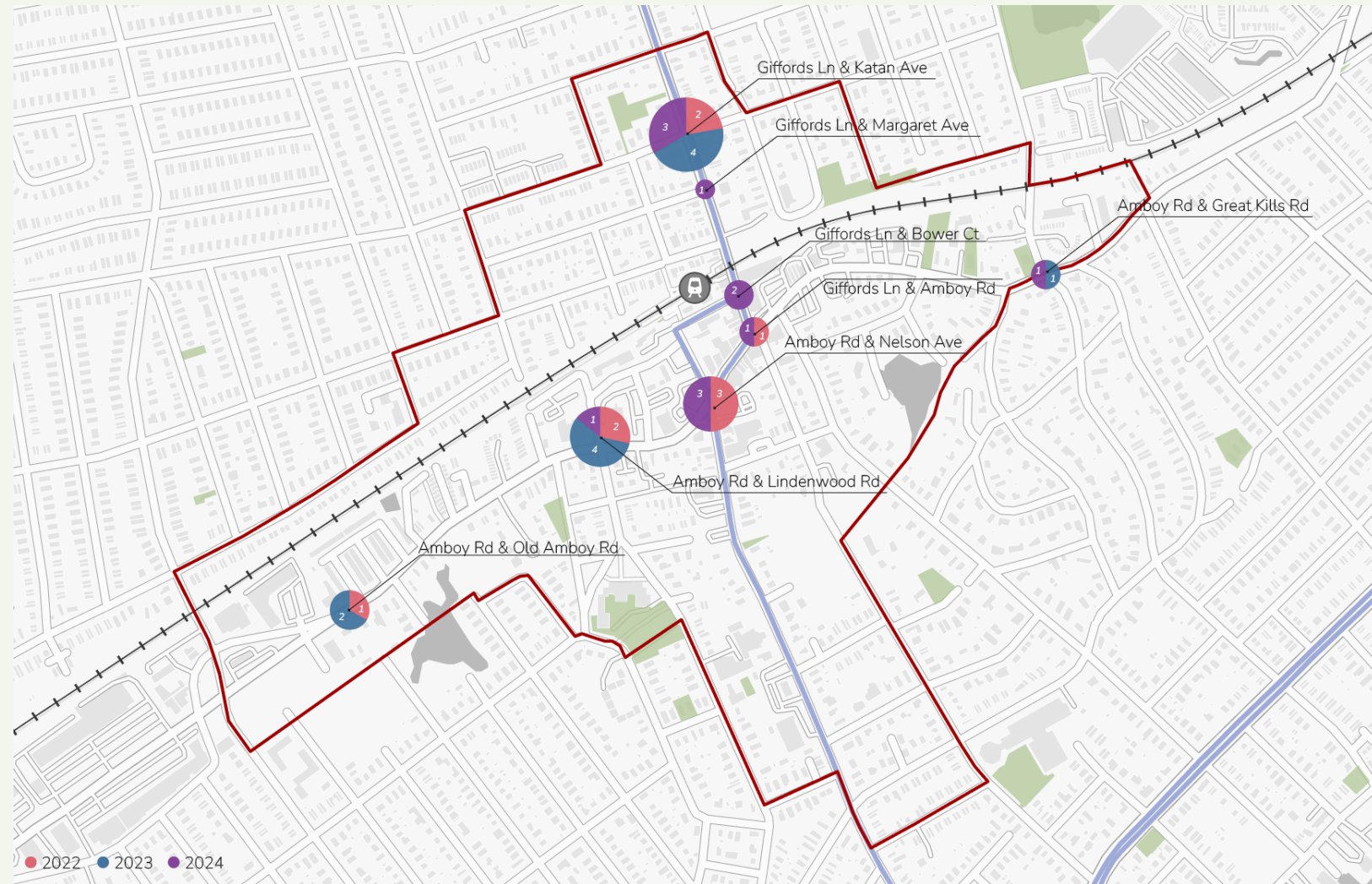
In addition to traffic data collected by the consultant, SIO also coordinated with the Metropolitan Transportation Authority (**MTA**) to analyze **ridership data** for the SIR and local bus network.



Traffic Collision Overview

There were **32 total collisions** within the study area from 2022 through 2024. **Two locations had four (4) collisions each in 2023** which are the highest of any intersection in the study area - Amboy Road at Lindenwood Road, and Giffords Lane at Katan Avenue.

According to the pedestrian data, **between 2022 and 2024**, there were **two pedestrian collisions at three distinct intersections**, once a year. There were **no fatalities** from any of the pedestrian-related collisions.

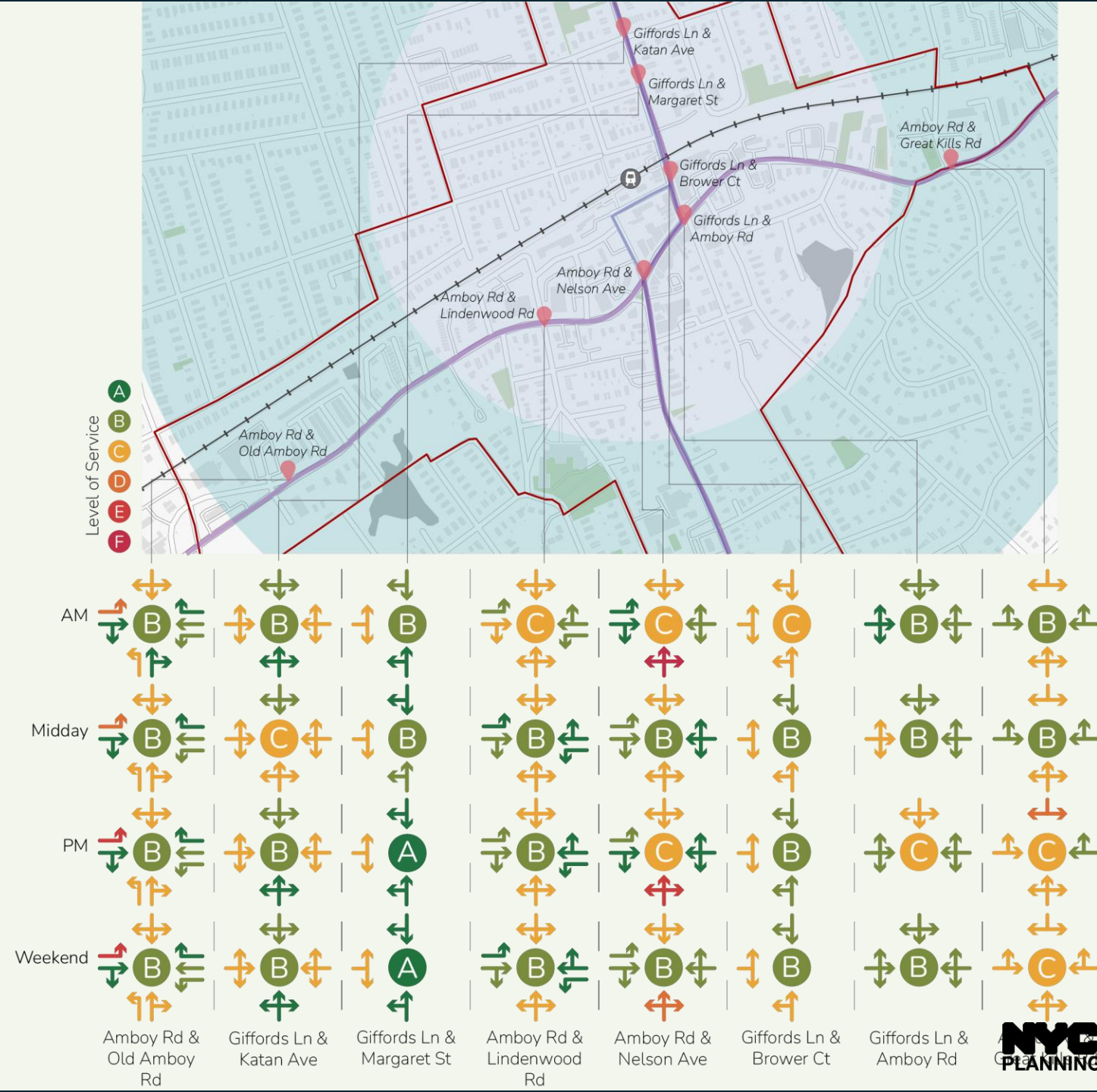


Vehicular Level of Service

The operation of signalized intersections within the study area was analyzed using the Synchro 11 software, currently used by NYCDOT for network analysis. These procedures evaluate **signalized intersections** for average delay per vehicle and **level of service (LOS)** with LOS A categorized as the best and LOS F as the worst.

The capacity analysis suggests that **most intersection approaches operate acceptably**, at LOS C or better, for all peak hours. However, **specific areas resulted in poor LOS** as indicated in the following diagram to the right (scroll down).

The LOS summary sheets, which document the existing signal timing, phasing, allowed traffic movements, traffic volumes, peak hour factors, percent of heavy vehicles, LOS by approach, and LOS for the entire intersection, are on file at the NYCDCP.



Morning Peak Hour

- The eastbound Amboy Road **left-turn approach** movement at Old Amboy Road/ Cloverdale Avenue operates at **LOS D** with a delay of 40.9 seconds per vehicle.
- The northbound Nelson Avenue **left-thru-right approach** movement at Amboy Road operates at **LOS F** with a delay of 113 seconds per vehicle.

Midday Peak Hour

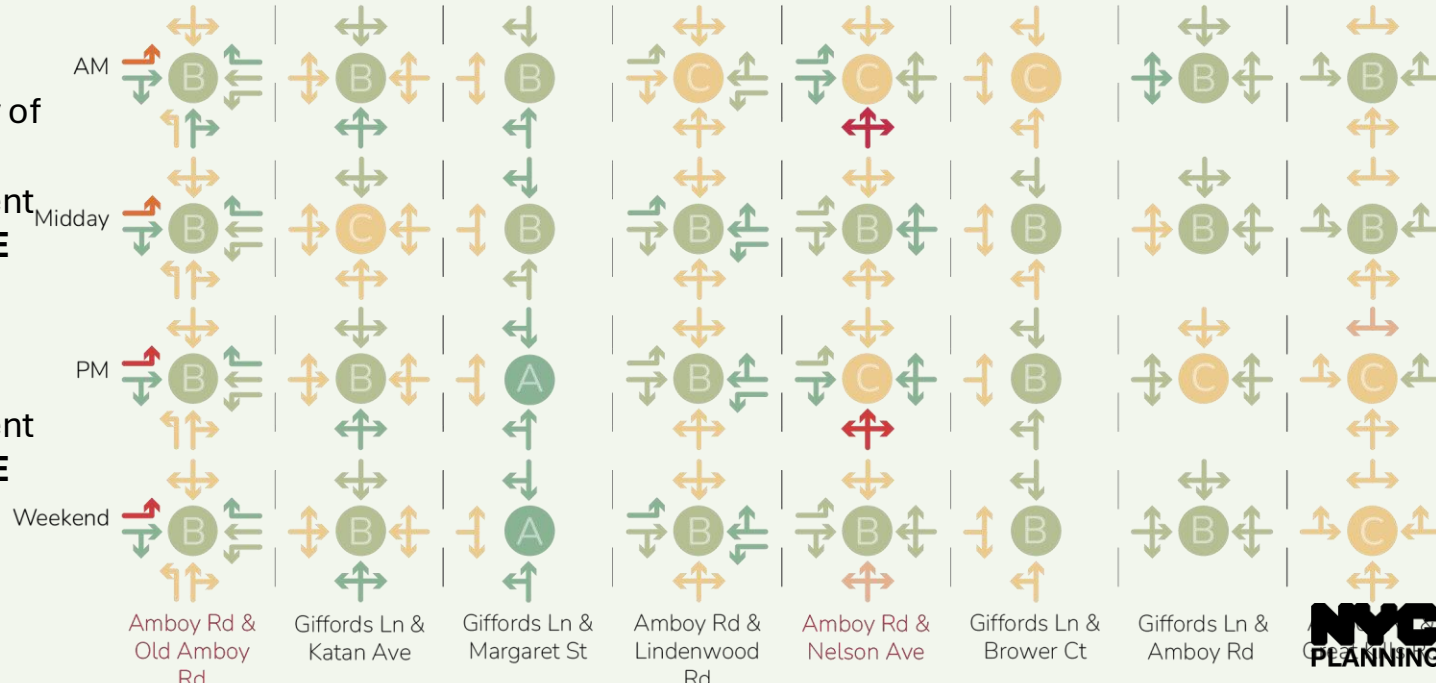
- The eastbound Amboy Road **left-turn approach** movement at Old Amboy Road/ Cloverdale Avenue operates at **LOS D** with a delay of 54.6 seconds per vehicle.

Evening Peak Hour

- The northbound Nelson Avenue **left-thru-right approach** movement at Amboy Road operates at **LOS E** with a delay of 64.1 seconds per vehicle.
- The eastbound Amboy Road **left-turn approach** movement at Old Amboy Road/ Cloverdale Avenue operates at **LOS E** with a delay of 57.7 seconds per vehicle.

Weekend Peak Hour

- The eastbound Amboy Road **left-turn approach** movement at Old Amboy Road/ Cloverdale Avenue operates at **LOS E** with a delay of 60.7 seconds per vehicle.

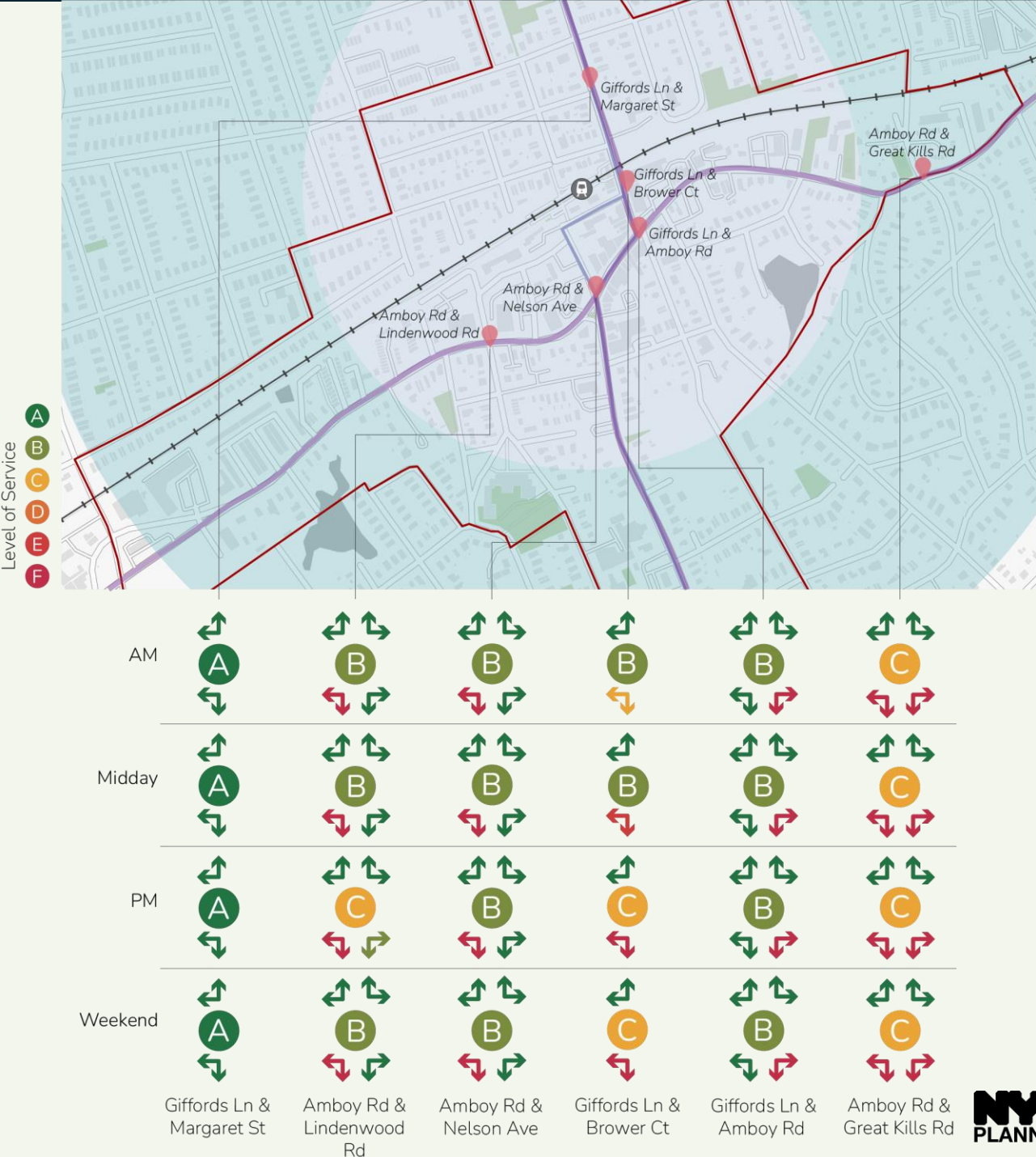


Pedestrian Level of Service

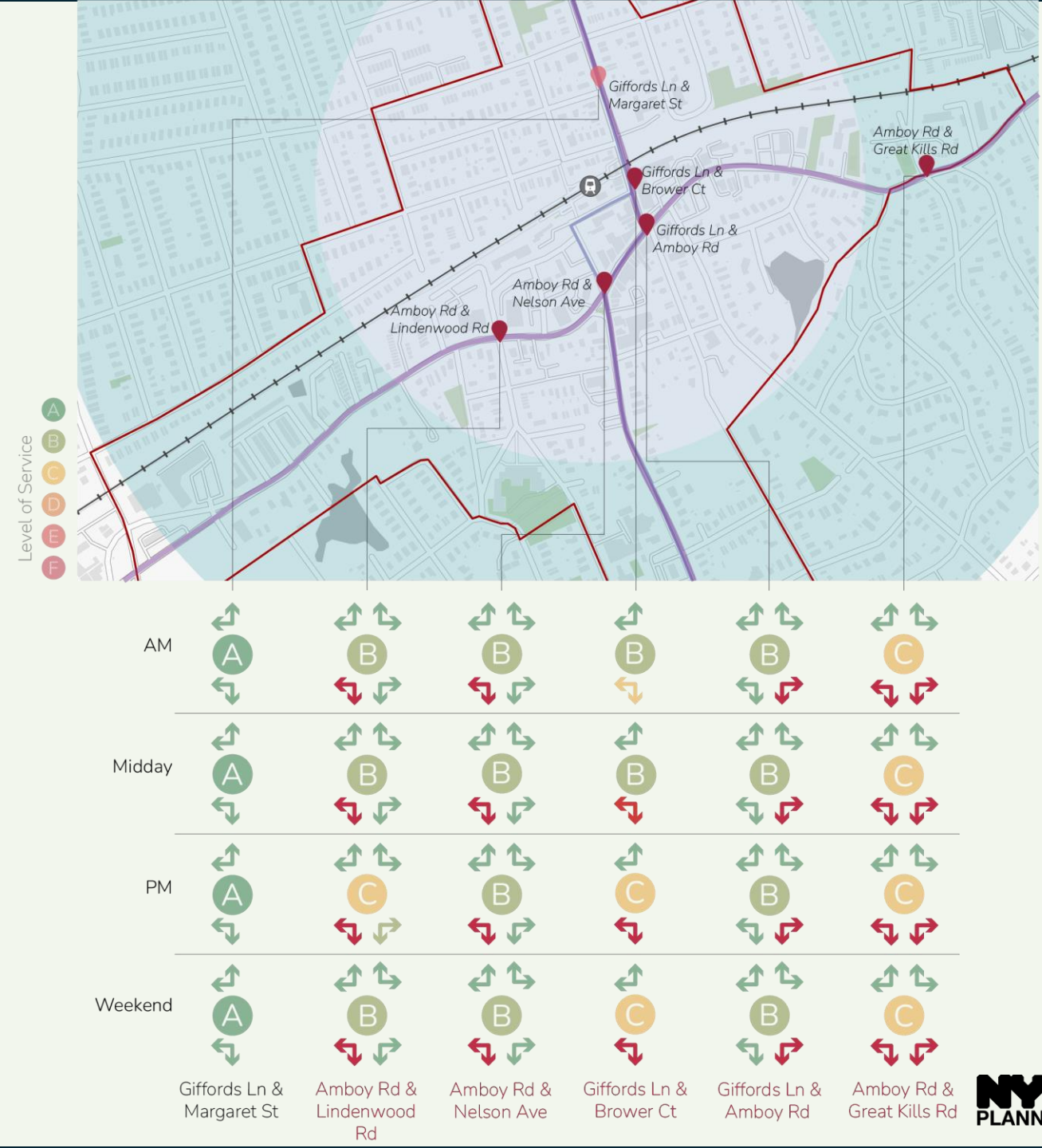
The pedestrian LOS, which is measured by the pedestrian flow rate per foot of width per minute (PFM), was analyzed to identify the **quality of pedestrian movement** and comfort and is defined by a density-comfort relationship. All pedestrian analysis were conducted for the average pedestrian flow conditions during a full peak hour and were recorded in 15-minute increments.

While the **sidewalk and crosswalks analysis** revealed that most intersections operate at a **comfortable LOS**, the **street corner** analyses revealed that certain intersections operate at **LOS E or worse**, as indicated in the following diagram to the right (*scroll down*).

The LOS summary sheets, which document the existing signal timing, phasing, allowed traffic movements, traffic volumes, peak hour factors, percent of heavy vehicles, LOS by approach, and LOS for the entire intersection, are on file at the NYCDCP.



- The southwest corner at **Amboy Road at Lindenwood Road** operates at **LOS F** during all peak periods.
- The southwest corner at **Amboy Road at Nelson Avenue** operates at **LOS F** during all peak periods.
- The southwest corner at **Gifford's Lane at Brower Court** operates at **LOS E** during the midday peak hour and at **LOS F** during both evening and Saturday peak hours.
- The southeast corner at **Giffords Lane and Amboy Road** operates at **LOS F** during all peak periods.
- Both the southeast corner and southwest corner at **Amboy Road at Great Kills Road** operate at **LOS F** during all peak periods.

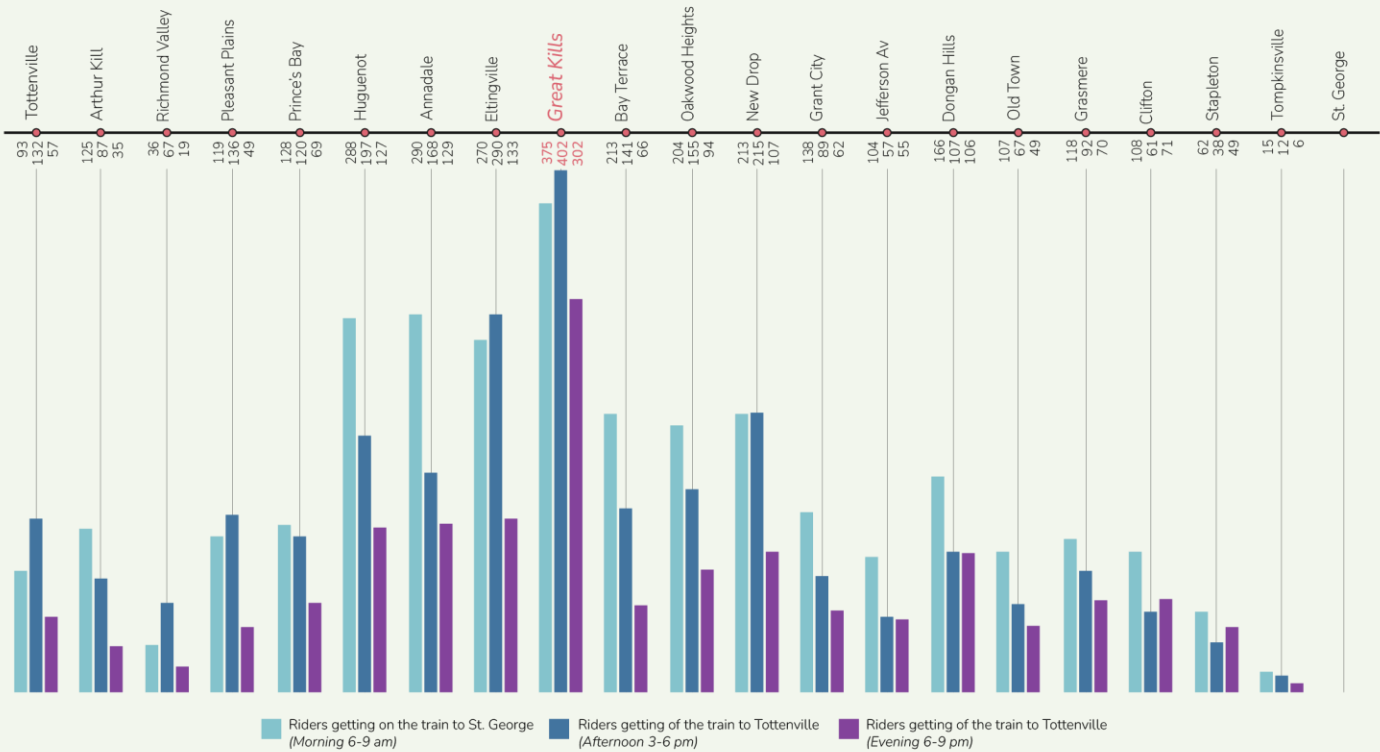


Staten Island Railway - Station Ridership

The Great Kills station has the **highest ridership of any SIR station** during both the morning and evening rush hour.

In the morning, 375 riders get on the northbound train to St. George most of which are headed to the Staten Island Ferry Terminal. By comparison the second busiest station is Annadale with 290 riders, and on average each SIR station has 159 northbound riders during the morning rush hour.

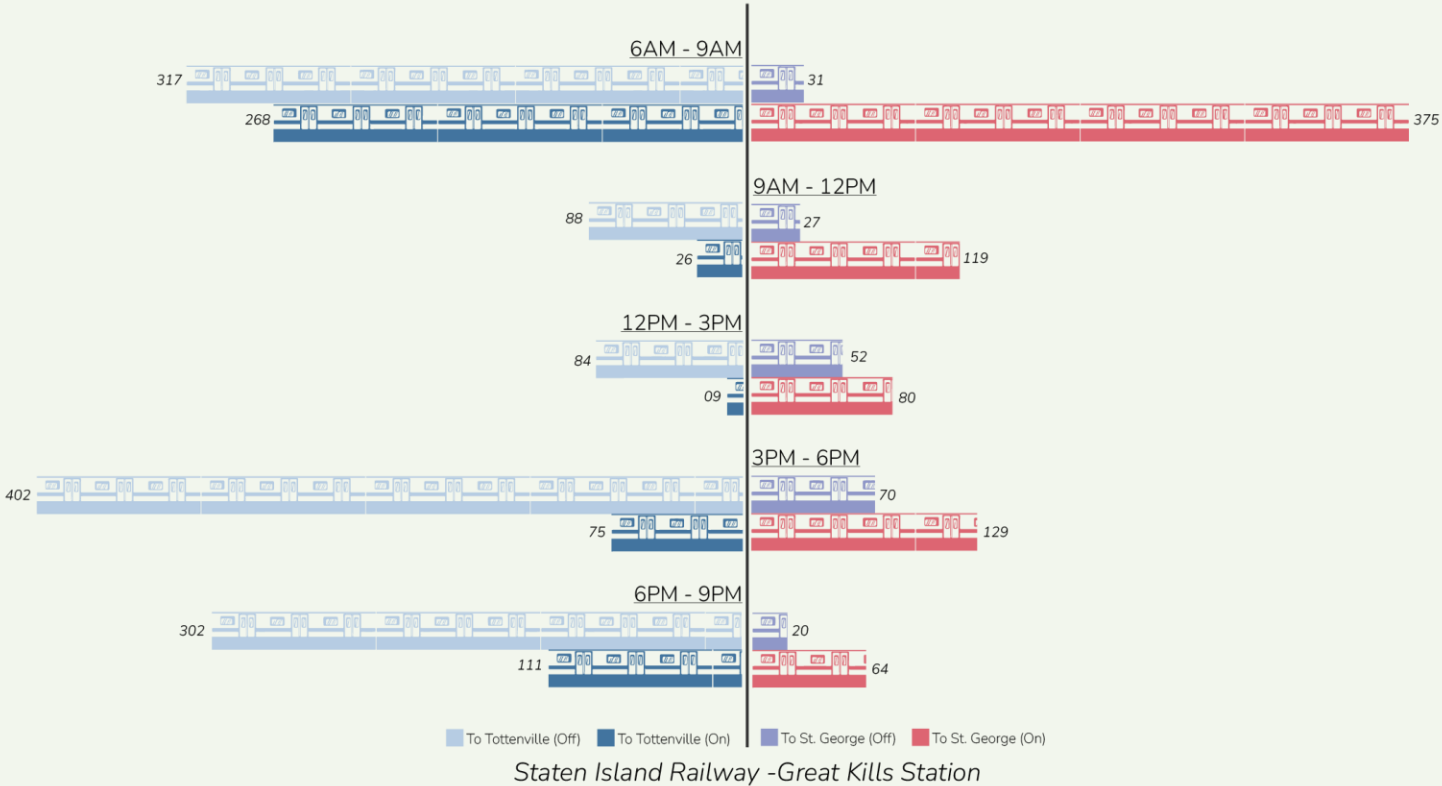
In the evening, 302 riders get off the southbound train to Tottenville. Although the SIR transitions from express service to local service at 8pm, ridership to Great Kills is still much greater than any other station during this time period. By comparison the second busiest station is Eltingville with 133 riders, and on average each SIR station has 83 riders getting off during the evening rush hour.



Great Kills - Station Ridership

If we zoom-in to the Great Kills station, it is not surprising to see the highest amount of ridership during the **morning and afternoon/evening rush hour** going to and from the ferry terminal.

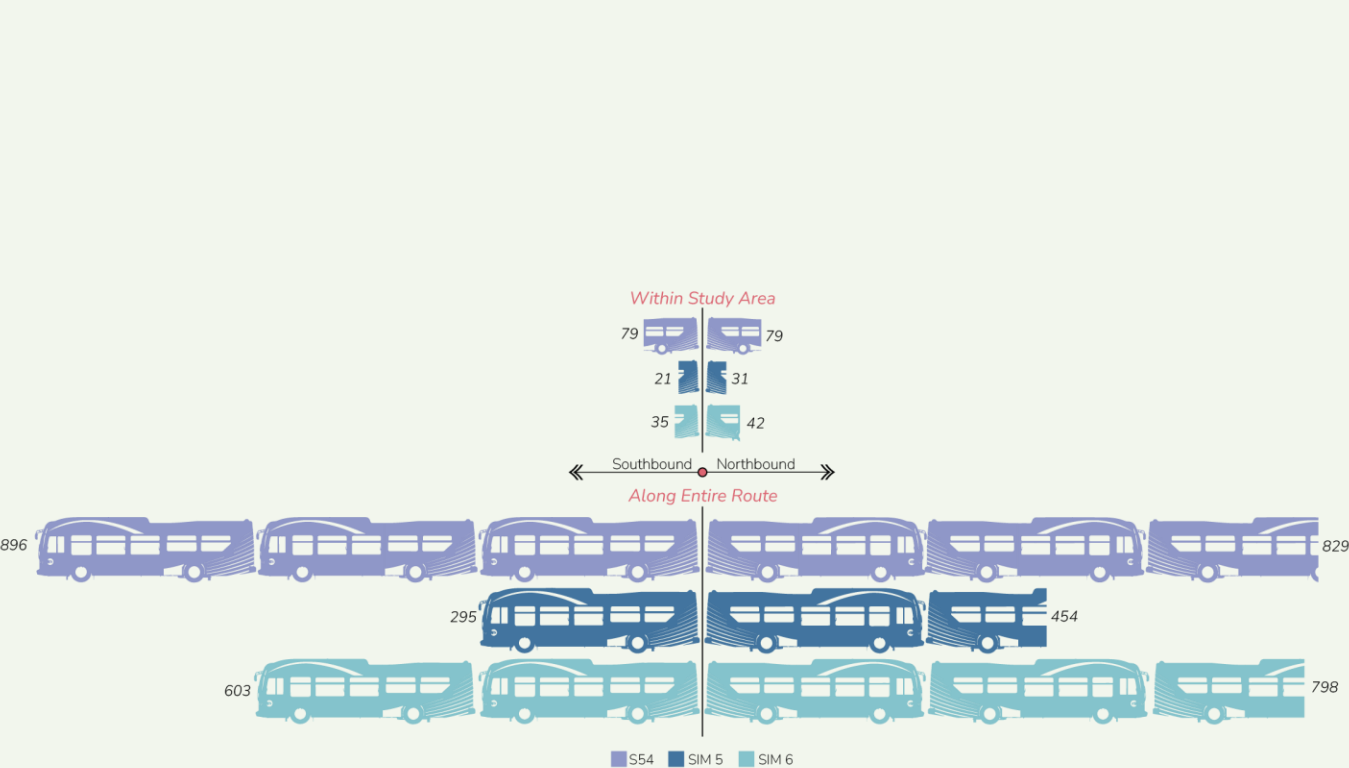
However, it is important to note that during the morning rush hour 317 riders get off the southbound train, and 268 riders get on the southbound train, indicating that **the Great Kills station is more than simply a park and ride** for commuters going to the ferry. While the data is inconclusive, we can assume that the riders getting on and off the southbound train during the morning rush hour are **employees and students, going to either work and school**, both within the study area and greater south shore neighborhood, respectively.



Great Kills - Bus Ridership

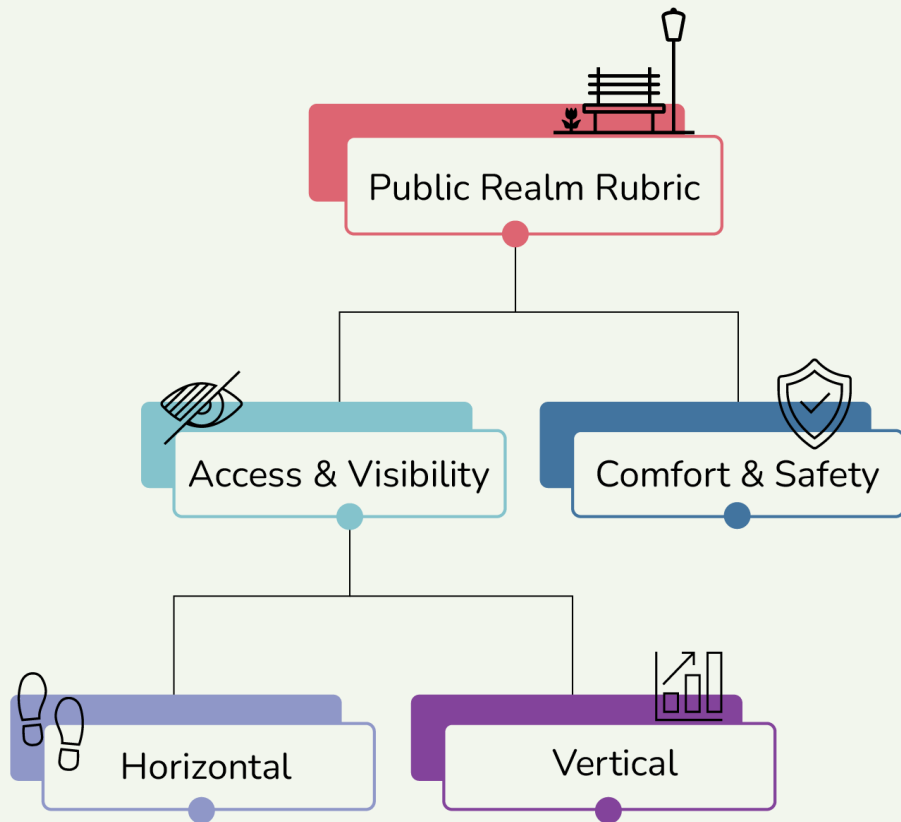
Great Kills is served by **3 bus lines** - the S54 local bus (only local bus in the study area), and the SIM5 and SIM6 express buses which provide access to Manhattan during the morning peak hours. SIM5 provides access to/from Lower Manhattan, while SIM6 provides service to/from Midtown Manhattan. **All three bus lines run on weekdays only;** there is no weekend service.

The MTA provided ridership data from a four-day period from May 24-23 and October 22-23, 2024. SIO analyzed ridership numbers from **six bus stops** within the study area: Nelson Avenue/Monticello Terrace (S54); Nelson Avenue/Hillcrest Street (S54; SIM5 and SIM6); Nelson Avenue/Belden St (S54); Nelson Avenue/Amboy Road (S54, SIM5, SIM6), Giffords Lane/Baltimore St (S54); and Giffords Lane/Katan Avenue (S54).



An aerial photograph of a suburban neighborhood, likely in the United States. The image shows a dense grid of streets and residential lots. Most houses have light-colored roofs, and many have swimming pools visible in their backyards. The streets are paved and well-maintained. In the center of the image, there is a semi-transparent yellow rectangular box containing the text "Public Realm Rubric".

Public Realm Rubric

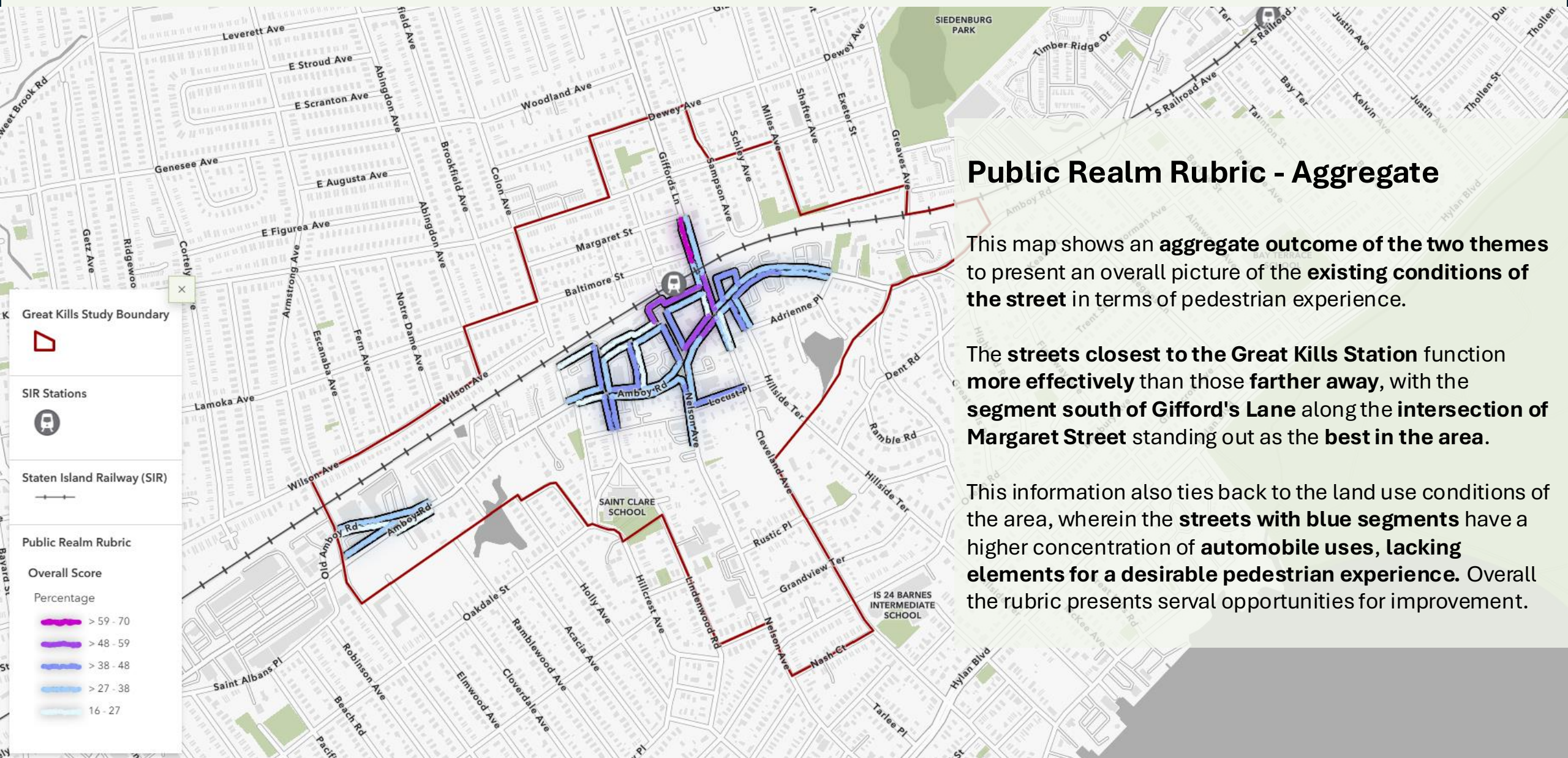


Public Realm Rubric is a toolkit designed to **quantify and score elements of built environment**, specifically the urban fabric of a neighborhood or area. Since individual experiences in the built environment can be very subjective, this toolkit establishes **two main overarching themes** and then assigns a set of criteria to specific elements found in the built environment. Each of the elements receives a score determined by a set of definitions in order to **quantify the presence, quality, and function of each element** experienced by the user. *For detailed methodology, refer to the report attached at the end of this story map.*

The two overarching themes and sub-themes include:

(1) The concept of "**access and visibility**" refers to a **person's walking experience** and is further **separated into vertical aspects** that **a person observes** while in motion and **horizontal elements** that we **physically engage with** when walking along the sidewalk.

(2) Comfort & Safety focuses more on **how safe and comfortable** a person's **experience of the space** is by cataloguing elements like seating space, streetlights, trees and so forth.

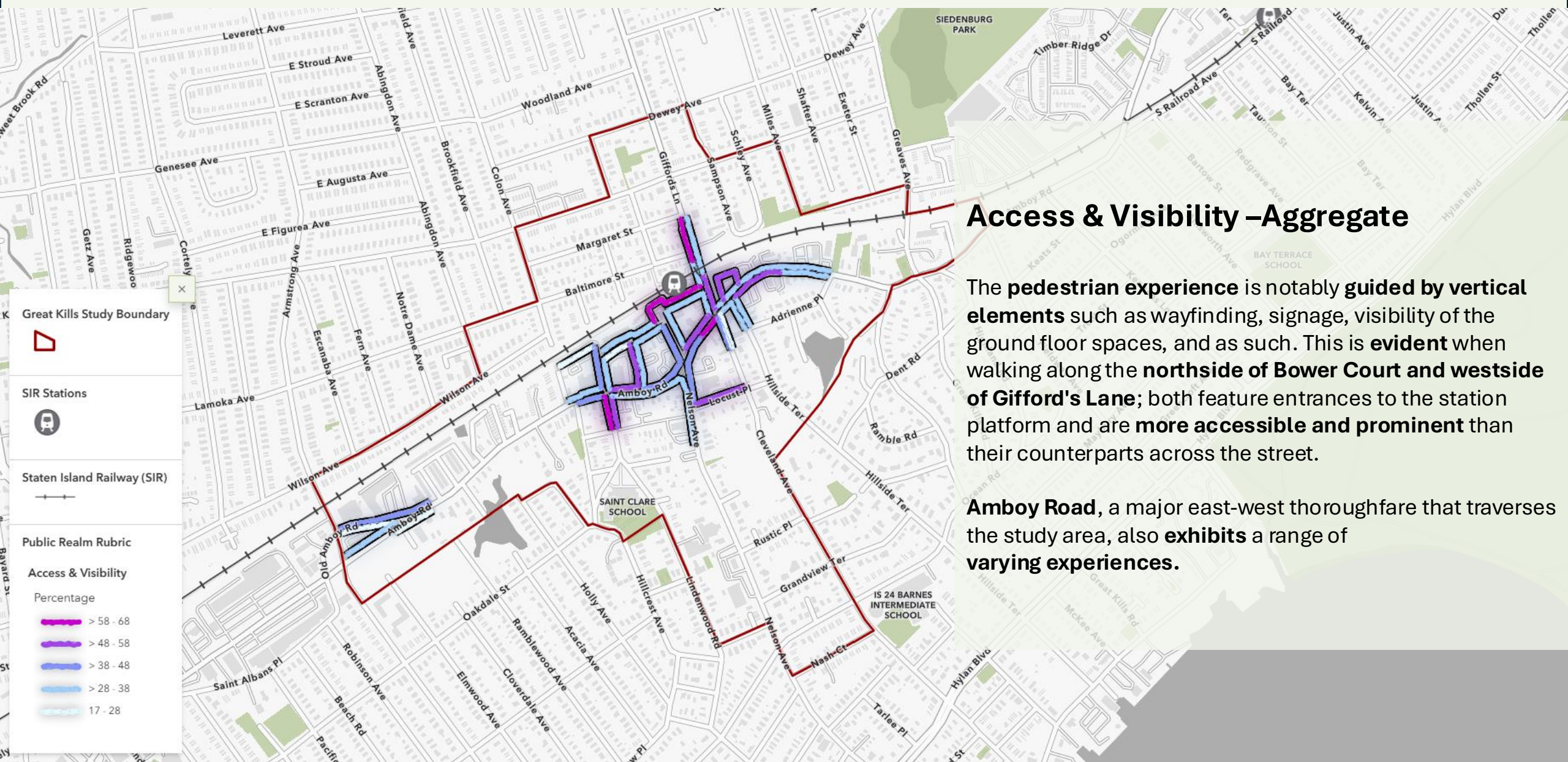


Public Realm Rubric - Aggregate

This map shows an **aggregate outcome** of the two themes to present an overall picture of the **existing conditions of the street** in terms of pedestrian experience.

The **streets closest to the Great Kills Station** function **more effectively** than those **farther away**, with the **segment south of Gifford's Lane** along the **intersection of Margaret Street** standing out as the **best in the area**.

This information also ties back to the land use conditions of the area, wherein the **streets with blue segments** have a higher concentration of **automobile uses**, **lacking elements for a desirable pedestrian experience**. Overall the rubric presents several opportunities for improvement.





Comfort & Safety –Aggregate

The theme of **access & visibility** displays a range of **experiences**, from positive to negative. **Comfort & safety** tend to be **less favorable**, suggesting that the segments **lack in elements** which guides the safety & comfort of the pedestrian experience.

There are **fewer elements present** on **streets farther from the primary commercial areas**, suggesting that a person walking down these streets would have a **less pleasant experience** than on streets closer the station, which offer a friendlier ambience. The sections along the **Old Amboy and Amboy Road** in the west end of the study boundary perform **significantly worse**, in part because **almost all of the elements** under comfort and safety are **lacking**.



Horizontal Element – Crosswalks

This map demonstrates that the majority of the **crosswalks assessed** in DCP's inventory, particularly those near the station, are **in good condition** and provide a safe way to cross streets. Conversely, areas along **Amboy Road and Old Amboy Road** are devoid of safe crosswalks and **perform unfavorably** in the Crosswalks element. The **area in front of the station entrance at the intersection of Bower Court and Nelson Avenue** is another significant node that **lacks a suitable crossing**.



Comfort & Safety Element - Street Trees

Trees play a significant role in shaping the streets for a pedestrian experience. This map shows where **trees were present along the streets analyzed** in DCP's inventory. Segments that are represented in just a black outline do not have any trees, making those areas less desirable. Unlike the previous maps, **streets further away from the station have more trees** than the area in its immediate vicinity. Many segments along **Amboy Road lack street trees altogether**, as well as along Gifford's Lane.

An aerial photograph of a residential neighborhood, likely in New York City, showing a dense grid of streets and houses. Many houses have blue swimming pools in their backyards. A semi-transparent yellow rectangle is overlaid in the center of the image, containing the text "Development Potential".

Development Potential

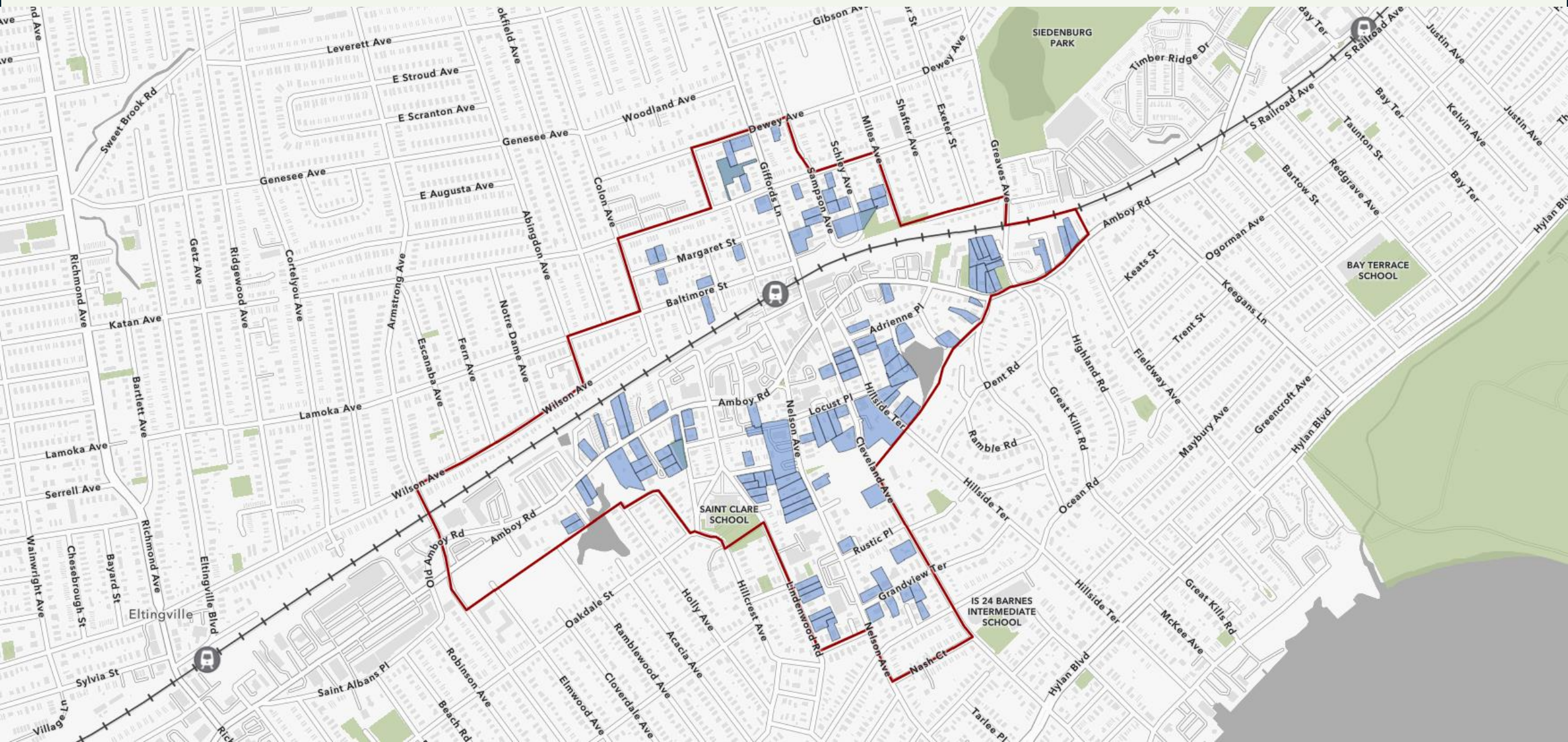
Development Potential

Although this transportation report is primarily focused on public transportation, street networks, and the public realm, recent changes to the NYC Zoning Resolution (ZR) have had significant impact on **land use and zoning within the study area** which could affect transportation. Specifically, City of Yes for Housing Opportunity (COYHO) was adopted by the New York City Council on December 5th, 2024 – a zoning text amendment that proposed ‘a little more housing in every neighborhood’ by removing impediments to residential development across the City.

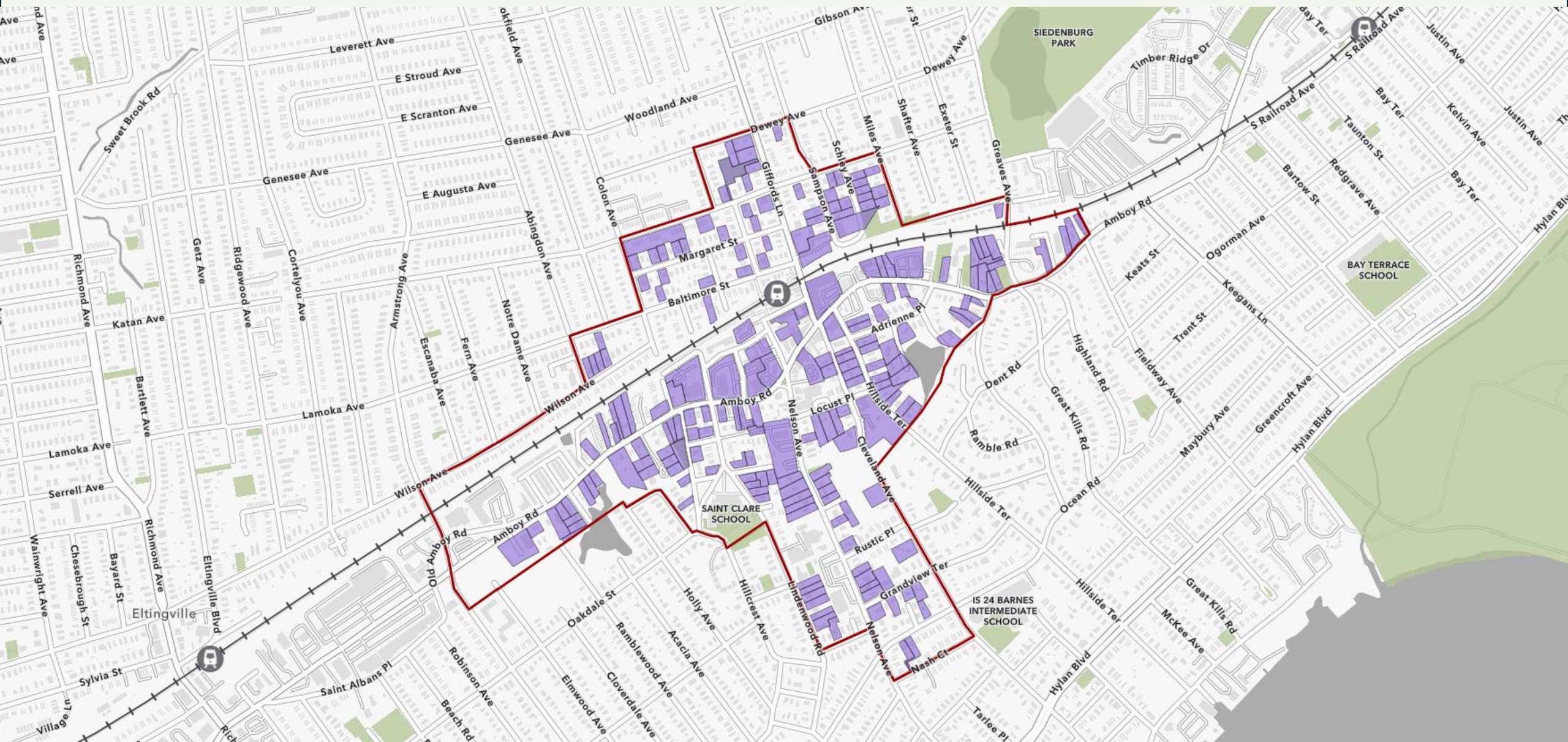
COYHO provides additional height and floor area bonuses for '**transit-oriented development**' (**TOD**) which is defined as any zoning lot on a block within a half-mile of a train station which meets certain criteria - the zoning lot must be at least 5,000 square feet in size and be located either on a wide street, or on the short end of a block. There are several zoning lots in the Great Kills neighborhood which meet these criteria and can now potentially add more residential units within walking distance to the SIR.

Additionally, the regulations pre-COYHO restricted residential development within C4-1 zoning districts by requiring a special permit per ZR Section 74-121 for any residential use on a zoning lot greater than 20,000 square feet. As shown in the zoning and land use section above, a majority of the area surrounding the Great Kill SIR station is designated as a C4-1 zoning district and several of the properties in the study area have been subject to these restrictions for decades. However, ZR Section 32-122 was amended to remove this restriction on zoning lot size and **allow residential development as-of-right within most C4-1 districts** (there is still a restriction for zoning lots within a C4-1 district that occupies at least four acres of a zoning block, yet this condition does not exist within the study area).

Taking into account both the TOD bonuses and amendment to ZR Section 32-122, the amount of **potential development sites within the study area increased** from 115 zoning lots pre-COYHO to 206 zoning lots post-COYHO (*use the slider in the image below to see the comparison*).



Pre-CHO Development Potential



Post-CHO Development Potential

An aerial photograph of a suburban neighborhood. The image shows a dense grid of streets and houses. Many houses have swimming pools, which appear as small blue rectangles. The houses are mostly single-story with brown or grey roofs. There are green trees scattered throughout the neighborhood. A semi-transparent yellow rectangle is overlaid in the center of the image, containing the word "Conclusion" in bold black text.

Conclusion

ASSETS to utilize

- 1) The **SIR express train** from the Great Kills Station is the most valuable transportation asset in the study area; potential for increased service and station improvements should be further evaluated.
- 2) The LOS analysis revealed that there is **minimal congestion and traffic incidents** within the study area, compared to the rest of the Borough/City; infrastructure improvements could occur without having a negative impact on traffic.
- 3) The existing pre-war buildings provide **neighborhood character** and the small block sizes surrounding the SIR station resemble the **historic town center** of the area.
- 4) There are several **recreational assets**, such as City-owned public facilities and the Bluebelt system, which should be retained and maintained to support the local community.



OPPORTUNITIES *for improvement*

- 1) The street network should be improved to **enhance mobility and public space** within the study area to provide multi-modality such as adequate bus, bike, or pedestrian infrastructure as well as better pedestrian connections.
- 2) Investments should be made in public transportation to **increase transit ridership** such as improvements to the Great Kills SIR station and supporting the local bus network with either a re-route of city bus service or a circulator shuttle bus operated by the local South Shore BID.
- 3) Improvements to pedestrian infrastructure and public transportation would increase foot traffic to **support small businesses**, but more opportunities could be explored to increase economic development either through zoning changes or financial incentives.
- 4) The existing zoning within the study area could be evaluated to **support neighborhood growth** and create transit-oriented developments which utilize the SIR station and reinforce the historic town center of Great Kills.

Questions ?



*Scan the code to access the **Great Kills Transportation Story Map!***