

Scarsdale Strategic Mobility + Placemaking Plan

DATA ANALYSIS – APPENDIX

JUNE 2022



DATA ANALYSIS MEMORANDUM - APPENDIX

The Scarsdale Strategic Mobility + Placemaking Plan is a community-driven transportation planning effort to identify and address challenges and opportunities in the Village Center. The plan's goals are to increase pedestrian and cyclist safety, provide access for all users, improve traffic flow and circulation, activate public spaces, and incorporate sustainability. This Data Analysis Memo outlines the findings from the initial community and stakeholder feedback, review of relevant planning documents and traffic studies, the drone data collection, and crash data analysis.

Key findings include the following:

- **The desire for increased gathering spaces and vibrancy in the Village Center is well-documented in both previous and current planning efforts.** The Dine in the 'Dale tent was a successful proof of concept, and the demand for programming exceeds the tent's capacity.
- **Spencer Place, Harwood Court, and Boniface Circle all present significant opportunity for gathering spaces, programming, and placemaking.** Drone data analysis indicated that these streets serve more for parking than through travel, so partial or full street closures may help accommodate demand for programming.
- **Popham Road should be redesigned to establish better multimodal connectivity.** The westbound right turn lanes at East Parkway and Depot Place are underutilized and offer an opportunity for active transportation and improved traffic flow. Redesigning the street could increase lane widths in the eastbound direction approaching Chase Road, allow for increased sidewalk buffer/landscaping, and/or provide a protected bike lane connecting the Village Center core to the Bronx River Trailway.
- **Improving pedestrian and bicycle access to the Village Center is an important goal of the Village.** Increasing bicycle and pedestrian access for people of all abilities and ages, however, will require significant changes to the major corridors leading into the Village Center.

Based off this analysis, the three focus areas recommended for concept plans should include: Popham Road, Spencer Place, and Boniface Circle. Higher-level planning recommendations could be made on Fox Meadow Road, Crane Road, and Depot Place. The intersection of East Parkway and the Bronx River Parkway exit requires further study and should be done in coordination with Westchester County.

More details about the community and stakeholder feedback, previous planning efforts and traffic studies, and results from the drone data collection are summarized in the following sections.

Stakeholder & Community Engagement

Two outreach efforts have been held related to the Village Center: the walk audit on March 29, 2022 and Working Group Meeting #1 on April 4, 2022. Results are summarized below.

Village Center Walk Audit

The walk audit of the Village Center allowed members of the Village Board, Village staff, and other community leaders to share the challenges and opportunities related to the sidewalks and roadways in the Village Center. The audit began with a visioning exercise where participants shared their top priorities, which fell into four categories:

- Activated spaces for gathering for all ages
- Emphasis on sustainability
- Improving multimodal connectivity to parks and surrounding neighborhoods
- Improved safety and traffic circulation

Feedback was collected at each of the stopping points and is shared in the tables below.

Boniface Circle

Strengths	Weaknesses
<ul style="list-style-type: none"> • Heart-center • Prominence (physical & cognitive) • Movable seating • Offers shade • Holiday displays • Green / vegetation 	<ul style="list-style-type: none"> • Disconnected • Small • Poor vehicle circulation • War memorial hidden • Undefined purpose

Dine in the 'Dale Tent

Strengths	Challenges
<ul style="list-style-type: none"> • Community gathering space • Supported by businesses • Increased demand for programming • Created regional recognition • Destination 	<ul style="list-style-type: none"> • Can feel too enclosed • 12 parking spaces lost • Traffic circulation impacts • Not permanent • Not great in cold weather

Popham Road/Depot Place

Challenges	Opportunities
<ul style="list-style-type: none"> • High vehicle speeds • Confusing lane alignment • Bridge design • Lack of bike access • Lack of gateway infrastructure • Long wait time for pedestrians 	<ul style="list-style-type: none"> • Leading pedestrian intervals (LPIs) • Potential for road diet / lane adjustments • Intersections improvements needed: <ul style="list-style-type: none"> - Depot Place - East Parkway - Chase Road

Crane Road

Challenges	Opportunities
<ul style="list-style-type: none">• Intersection with East Parkway confusing• Turning from Fox Meadow Road is challenging	<ul style="list-style-type: none">• Trail entrance near the intersection with Chase Road• Sidewalk on south side of Crane Road• Could potentially make a one-way street to allow for safer bicycle and pedestrian access

Working Group Meeting #1

At the first Working Group meeting, a summary of the walk audit was shared. Walk audit participants and members of the community who were not in attendance noted the following, organized by placemaking and mobility comments.

Placemaking Comments

- Chase Park is used for gathering and concerts. Younger families have asked for a playground in this park.
- Prior to COVID-19 the Village Center lacked parking, and this demand could return. Parking is needed for commuters and consumers alike.
- The Village Center recommendations should be appropriate for all ages (kids, teens, seniors).
- There is a need for flexible spaces – spaces that could be used for parking at times but could be adapted for other uses.
- The Dine in the 'Dale tent removed handicap spaces that need to be replaced.
- Scarsdale Avenue is a part of the Village Center and has restaurants and other destinations.
- The train platform could be an important connection between the east and west areas of the Village Center.
- Cobblestone walkways are difficult for mobility devices.
- A comfort station is needed at Chase Park, including a diaper changing station.

Mobility Comments

- Improved safety in the Village Center resonates; cars create challenges for pedestrian safety.
- Do not lose sight of the potential for biking to the Village Center; a lot of people do access the Village Center via car, however.
- Pedestrian signals should have audible signals for people with vision impairments.
- There is a desire to include Crane Road in the analysis.
- Fox Meadow Road needs a better pedestrian crossing.
- Consider crossing guards at intersections during morning or night.
- Jaywalking is common.
- Curbs do not give cars enough view of people.

Previous Planning Efforts

To maintain consistency with previous plans and to inform the Strategic Mobility + Placemaking plan, the study team reviewed previous planning documents pertaining to the Village Center. A variety of placemaking and mobility recommendations were noted in plans dating back to 2010. Key similarities across the plans are shown in the table below.

Description	Village Center Plan (2010)	Lake Bluff Case Study (2017)	Boniface Circle Report (2020)	Consumer Survey (2018)	Merchant Survey (2019)
Increase vibrancy through public art, concerts, and farmers markets					
Expand outdoor dining along Spencer Place, Christie Place, Scarsdale Avenue, Harwood Court, and/or Boniface Circle					
Create periodic car-free spaces on Boniface Circle and/or Harwood Court					
Make Village Center more pedestrian- and bike-friendly through traffic-calming infrastructure					
Increase number of gathering places, such as seating and performance spaces					
Improve landscaping and lighting in Chase Park, Boniface Circle, green spaces, and sidewalk spaces					

Additional details about the previous planning efforts and their relevance to the Strategic Mobility + Placemaking Plan are summarized below.

Village Center Component of the Village of Scarsdale Comprehensive Plan (2010)

In 2010, the Village of Scarsdale adopted the Update of the Village Center Component of the Village of Scarsdale Comprehensive Plan (“Village Center Plan”). The plan focused on ensuring a comprehensive development framework that would preserve, protect, and enhance the Village Center’s character, function, and value.

The plan addresses mobility from a development perspective. The plan makes broad Village Center-wide recommendations as well as ones targeted to three study area sites: Spencer Place-Christie Place, Freightway, and Scarsdale Avenue. While the plan focuses on land use, the mobility

recommendations offer suggestions for improving the Village Center, even if no further development occurred.

Framework

Residents reported that a lack of vibrancy undermines the Village Center's character. This is especially apparent in early mornings and late evenings, which were identified as particularly low activity periods. In response, the plan articulates a vision for a "vibrant and pedestrian friendly center, where a mixed-use environment is home to a diversity of businesses and pleasant gathering places where people of all ages interact." The plan identifies the need to increase the amount of people downtown, stating that, "More people means more demand for retail, dining, and cultural venues."

The plan recommends two primary strategies for achieving vibrancy: increasing the number of programmed events to attract visitors and increasing the number of people who live in the Village Center. Both have implications for the Strategic Mobility + Placemaking Plan. To accommodate events, the Village will need to plan for large influxes of people in the Village Center while an increased residential base will result in more daily activity.

The plan acknowledges this approach will exacerbate two hot-button issues that existed at the time: a perceived lack of parking and traffic congestion. It notes that, "Calls for reduced traffic congestion, increased walkability, and parking have been constants throughout the development of this plan and indeed have been abiding concerns for decades." Thus, many of the mobility recommendations in the plan focus on increasing active mobility in the area to reduce the reliance on automobiles.

Walkability & Traffic Calming

Goal 2 of the Village Center Plan is to, "Attend to traffic congestion, and enhance walkability and pedestrian safety and amenities. Maintain an acceptable level of parking availability." It calls for better walkways and signage, speed humps, and other traffic calming measures. The plan notes that conflicts between motorists and pedestrian is particularly high during prime lunch and shopping hours when there is less commuter traffic and more through traffic.

The plan identifies the intersections as areas of particular concern:

1. Popham Road bridge and the East Parkway / Scarsdale Avenue intersection
2. Crane Road exit off of the Bronx River Parkway

Pedestrian Connectivity

The plan cites several ways that pedestrian connectivity could be improved, including a mid-block connection between Spencer Place and Christie Place. This connection would be predicated on the redevelopment of that property, which was one of the "focus areas" of the study.

The plan also notes the importance of improving western Popham Road (presumably the stretch west of Chase Road). It notes that pedestrians are not buffered from the roadway by trees or plantings that there are few benches or places to rest. It recommends that the pleasant and safe character that exists at the core of the Village Center should be extended outward to these areas. It recommends adopting the same strategy that was used on East Parkway (and planned for lower Popham Road), which would include planting street trees and landscaping. Overall, the plan

recommends making the road, “seem less like highways and more like village streets, naturally slowing traffic speeds.”

Bicycle Connectivity

The Village Center Plan notes that the Bronx River Reservation and bicycle path are often overlooked as a part of Scarsdale. The Bronx River and linear bicycle path stretch through southern Westchester County and form an important green link between communities from Valhalla to the northern Bronx. The southbound (western side) of the railroad station is directly connected to the park already. However, it notes there are several opportunities to better link the park to the Village Center, including:

1. Improved landscaping and streetscape along Popham Road, which would draw people downhill to the River;
2. Improved signage, from the Village Center, the train station, and from Garth Road, which would direct people to the Park and River; and
3. New connection from the Merchant’s Lot and East Parkway area, probably via a new Crane Road bridge, to provide an additional access point.

Social Spaces & Streetscaping

The Plan emphasizes importance of the Village Center as a social meeting place that is enhanced by its streetscape. It notes the bluestone sidewalks, trees, benches, and outdoor dining options along Spencer Place, Christie Place, and Scarsdale Avenue as contributing to the social and aesthetic environment. Nonetheless, the plan identifies several needs including more benches and more bicycle parking.

Greenspaces

The plan also noted the importance of greenspaces that provide visual interest and a calming atmosphere to the hustle and bustle of the business district. It noted that improved greenspace and park connections will reinforce the village-in-a-park character and bring residents and workers closer to the charm and natural beauty of the Village Center.

The Village Center Plan notes the importance of Chase Park. It is a visible, widely used resource and the plan recommends that it continue to be a focal point for the Village Center and a site for community events.

Activation

The Village Center Plan notes that sidewalk cafes are an excellent and comparatively easy way of “increasing” the availability of dining options. It notes that sidewalk cafes are naturally places to “meet and greet,” and to “see and be seen.” In this way they enhance street life and vibrancy.

The plan, however, identifies several obstacles to wider adoption of sidewalk café dining. First, the sidewalk café regulations may place a burden on owners who lack uniform or well-designed café tables and planter boxers or lack the space to store these items when the café is not in operation. Second, the plan notes that narrow sidewalks may limit locations which would feasibly accommodate them while maintaining a safe and accessible pedestrian realm.



To address this, the Plan recommends periodic closings of streets like Boniface Circle and Harwood Court, which offer the potential of a very European style outdoor court experience and encouraging outdoor dining or markets. These might be regular happenings, say each Friday evening in the summer, or they may be themed events like a small-scale “Taste of Scarsdale” event or a weekly farmers market.

Takeaways

- Efforts to draw people to the downtown for events should focus attention on times of the day and week when there are fewer people in the area. During these “off peak” times, there will be both roadway and parking capacity, which should both extend the time when the area feels vibrant while not exacerbating an issue that has consistently been cited by participants in previous planning work.
- Popham Road from Depot Place to Chase Road is a critical connection that has a substantial impact on the walkability of the community. The Strategic Mobility + Placemaking Plan should consider examining improved pedestrian and bicycle connections along this stretch of road. Not only would this establish a strong connection between two parts of the Village Center but would also create a mobility framework that could guide redevelopment of the Freightway site, if that were to occur.

Report of the Downtown Revitalization Committee on A Case Study of Lake Bluff, Illinois -- Bringing the Community Together (2017)

The Downtown Revitalization Committee of the Scarsdale Forum was created in November 2016 to determine how best to revitalize the Village Center, which at that time was experiencing an abnormally high commercial vacancy rate (approximately 15% by most estimates) and a perceived overall deterioration of the downtown area.

The committee studied issues and wrote reports with input from major stakeholders. The committee collected information about the revitalization of the downtown of Lake Bluff, Illinois, a small village that had many characteristics similar to those of Scarsdale. The report identified the following lessons that Scarsdale might learn from Lake Bluff:

1. Build an attractive gazebo or covered area in Chase Park, creating a rain-protected space for performers during concerts, events and the like. The covered area should have electricity for equipment, so that it might be lit at night, and create a safe and festive ambiance. Park lighting should be attractive and consistent with the downtown lighting scheme. Consider up-lighting to feature trees, plants, or sculpture.
2. The Scarsdale’s war memorial might be more logically located in Chase Park (perhaps the northeast corner), with permanent benches, a garden, and a large open area to allow for parades and ceremonies to honor our war heroes. Otherwise, the unused northeast section might become a specimen and/or sculpture garden.
3. Make Boniface Circle a pedestrian zone at night, with a welcoming open plaza, fountain, sculpture, seating, cafes, etc. reminiscent of European city squares. This enhances community, creates a natural gathering place, and works with the Chase Park space during large events such as concerts, parades, the Scarsdale Concours and the like.



4. Define the Scarsdale brand and promote its integrated use. Encourage stores to adopt common, attractive fronts to create a unified look (drawing on the Tudor heritage, and featuring similarly colored awnings, etc.).
5. Create an inventory of appropriate local and charitable organizations and reactivate the Chamber of Commerce that would like to sponsor or participate in park events, display appropriate exhibits in empty storefronts, or be part of a Village events calendar.
6. Bring to the downtown ever-changing events, concerts, and the like on a frequent basis. Find ways to keep the momentum going during winter.

Report of the Downtown Revitalization Committee on The Revitalization of Boniface Circle in the Village Center (2020)

The report of the of the Downtown Revitalization Committee focuses on the revitalization of Boniface Circle as an important step in improving the appearance and utilization of the Village's open spaces. This work builds on the 2017 Report which recommended making Boniface Circle a pedestrian zone at night, with a welcoming open plaza, fountain, sculpture, seating, cafes, etc. reminiscent of European city squares. This enhances community, creates a natural gathering place, and works with the Chase Park Space during large events.

The Committee's vision for Boniface Circle also included:

- Cafés, wine bars or beer pubs in the empty retail spaces in the Harwood Building.
- Conversion of the parapet on the second floor of the Harwood Building into an outdoor dining terrace, overlooking Boniface Circle and Chase Park.
- The conversion of the central areas for concerts, sculptures and other visual arts, craft fairs and similar purposes.

It is noteworthy that the Committee identified Boniface Circle as the nexus for open space "connectivity" within the Village – the hub for integrating the green space in the "greater downtown" area of the Village Center – comprising the Freightway Site, Boniface Circle and Chase Park. Public open green space in the Village Center is at a premium, for the most part limited to the station side of Popham Road. Ensuring the connectivity of all areas of the wider Village Center is essential to creating an integrated community hub that brings people together in their shared experience as Scarsdalian and increases the vibrancy of the Village Center.

The Consumer Survey Concerning Scarsdale Village Center (2018)

The Consumer Survey Concerning Scarsdale Village Center (Consumer Survey) was used to define the combination of uses that best reflect the community's preferences, captures market opportunities, builds on local assets, and strengthens the community's identity. The goal was to create market-based recommendations. In general, the Survey re-enforces the Comprehensive Plan's goal of extending the hours and diversity of activities in the Village, which will have an impact on the mobility network. Specifically, two of the recommendations that came out of the survey are relevant to the Strategic Mobility Plan:

- Provide space for entertainment and cultural event programming.

- Improve parks and other green spaces in the Village Center to create more welcoming, usable community spaces.

In addition, several findings from the survey are also relevant:

- The highest concentration of visitors to the Village Center lives within walking distance (less than a mile) of the Village Center.
- Casual dining ranks as the top factor that respondents indicate would increase visits to the Village Center. Adding a wine bar or brew pub scored highest for entertainment option
- The most negative responses were expressed for the parking experience. Reducing negative perceptions about parking is critical.

The Merchant Survey Concerning Scarsdale Village Center (2019)

The Merchant survey featured a six-page questionnaire delivered in person to Village Center merchants and some merchants located in the nearby Garth Road and Scarsdale Avenue business district. Responses were collected over a six-month period in 2018 from 78 of the targeted 120 businesses. The following conclusions are relevant to the Strategic Mobility + Placemaking Plan:

- Improve the Downtown infrastructure and landscaping in Chase Park, Boniface Circle, greenspaces, and sidewalk spaces, in anticipation of greater pedestrian traffic, extended evening hours, and weekend use of downtown services.

Traffic Studies

In addition to previous planning documents, the project team reviewed the following traffic studies:

- Traffic Study; Popham Road at Chase Road and Overhill Road, 1995
- Popham Road/Village Center Pedestrian Safety Analysis, 2005
- Traffic Assessment, Safety and Improvement in the Village of Scarsdale, Report of the Municipal Services Committee, 2015
- Village Center Enforcement / West Quaker Ridge, Scarsdale Police Department Memorandum, 2016
- Traffic and Pedestrian Summary Report of Popham Road/Chase Road/Overhill Road/ Crane Road/Fox Meadow Road/West Quaker Ridge Area, 2016
- Pavement Management Study, 2017
- Road Resurfacing Program, 2018

The key findings are organized by location below.

Popham Road at Chase Road

- A 1995 traffic study evaluating this intersection recommended that the southwest corner radius be reduced and recommended that a traffic island present at that time on the northeast corner be removed among other recommendations. These changes were subsequently completed.
- A 2005 report evaluated pedestrian safety at Popham Road and Chase Road. The report offered a potential solution to eliminate the crossing of Popham Road east of Chase Road due to glare issues from the building at 50 Popham Road. This change was rejected due to the volume of pedestrians crossing the road here. A recommendation to install flexible bollards to enforce the right-turn only lane from Popham Road to Chase Road was completed due to the finding that some drivers would proceed in this lane to turn right onto East Parkway and would cause driver confusion.
- A 2015 report by the Municipal Services Committee found that drivers in the right-turn only lane from Popham Road to Chase Road frequently failed to stop for a red light and posed safety concerns for pedestrians crossing Popham Road on the crosswalk east of Chase Road. Additionally, this report found that there is particularly poor visibility for pedestrians in this crosswalk for left-turning vehicles from Chase Road to Popham Road eastbound.
- A 2016 report considered a total of 17 potential interventions to alleviate safety concerns at the intersection, with a total of nine of these interventions being recommended. Among those interventions recommended with many of these interventions implemented include:
 - Extending the flashing “Don’t Walk” time
 - Enhancing the visibility of the crosswalk with additional pavement markings
 - Adding an additional signal head for westbound vehicles at the stop bar
 - Installation of additional street lighting

- Additional “Turning Vehicles Yield to Pedestrian” and “No Turn on Red” signage
- Installing a leading pedestrian interval (LPI)
- Among recommendations in the 2016 report that were not recommended, include:
 - The elimination of right-turn lanes. While not recommended, this intervention noted that “it would not have a significant impact on the delays experienced.” Traffic analysis was performed to confirm that there would be similar levels of traffic delay.
 - Raised crosswalks and embedded flashing lights.
 - An exclusive pedestrian phase was not recommended due to the substantial increase in vehicular delay and remaining questions as to whether pedestrians would wait for their own exclusive phase.
 - Rectangular rapid flashing beacons (RRFB)
 - Bump outs



Popham Road between East Parkway and Depot Place/Garth Road

- The bridge was reconstructed circa 2012 when it was widened from three lanes to five lanes.
- A 2015 report found that Popham Road gridlocks on a regular basis, with westbound traffic a particular concern. Gridlock was noted as far east as Autenrieth Road.
- A 2015 report found that left turns are particularly challenging at the intersection of Popham Road and East Parkway. This challenge is presented by poor visibility of eastbound through vehicles due to limited sight distance presented by a crest curve on the bridge. Turns into East Parkway are challenged by traffic on this roadway and vehicles backing out of East Parkway parking spots.
- A 2015 report found inconsistent “No Turn on Red” signage placement and compliance through the area.
- A 2015 report found challenges crossing Popham Road on the crosswalk east of Garth Road. This crossing is made difficult from low yielding rates from left turning traffic from Depot Place and right turning traffic from Garth Road. The report suggested that the median on Popham Road could be redesigned to better provide pedestrian refuge for pedestrians crossing Popham Road.

East Parkway

- A 2015 report found that East Parkway operates with challenges due to commuter traffic on East Parkway at the Metro North Train Station. Pickups from the train station cause drivers to queue up at the curb and cause congestion to Christie Place, Popham Road, and to the Bronx River Parkway exits. It was found that this pattern should be mitigated in the future.

Chase Road

- A 2015 report found that speeding is a top concern on this roadway, and that crossing the roadway can be challenging, in spite of the fact that there is a density of destinations in on Chase Road.

Christie Place

- A 2015 report suggested that additional traffic calming and an additional pedestrian crossing should be considered on Christie Place.

Crane Road

- A 2015 report highlighted that a sidewalk gap between Chase Road and Woodland Place is particularly problematic. Furthermore, the report highlighted that additional crossings are necessary west of Woodland Place. To better accommodate pedestrians, the report recommended that the speed limit be reduced to 25 mph.
- The 2015 noted difficulties at Fox Meadow Road due to limited sight distances with oncoming vehicles.
- A 2016 report found that sightlines from both Fox Meadow Road and Stonehouse Road are inadequate compared to recommended sight distances. The sight distance from Fox Meadow Road was found to be only 131 feet compared to the 335 feet necessary.

- A 2016 report recommended that sight lines be improved with the removal of vegetation on the north side of Crane Road between Fox Meadow Road and Stonehouse Road. Additionally, the 2016 report suggested additional signage. Speed humps, stop signs, and eliminating left-turns out of the side streets were not recommended.

Drone Data Collection Findings

Drone video of the Scarsdale Village Center was collected on Thursday, March 10th, 2022 to assist in the understanding of traffic patterns in the Village Center. Drone video spanned approximately from the intersection of Crane Road and Chase Road to the intersection of Popham Road and Garth Road. This extent covered the entirety of the study area including all intersections on East Parkway and the intersection of Popham Road at Chase Road, East Parkway, and Garth Road. Drone video was recorded for approximately a one-hour period between 3:49 PM and 4:49 PM. This period was selected based on qualitative conversations indicating it is one of the busier time periods in the Village Center. Drone collection was conducted without the presence of the Dine in the 'Dale tent that is temporarily set up on Spencer Place during warmer months.

The drone video was subsequently processed to obtain individual tracks for vehicles, pedestrians, and bicyclists. This data was utilized to understand travel patterns of these users through the study area. Figure 1 below shows all tracks recorded in the study area. Vehicle tracks are shown in red while pedestrian and bicycle tracks are shown in blue. Figure 2 shows vehicle tracks by speed through the study area, with tracks in blue and green representing speeds less than 30 mph, while tracks in yellow and red represent vehicle speeds up to 40 mph or higher.

Figure 1 Tracks of Vehicles (Red) and Pedestrians (Blue) as Captured by Drone Video

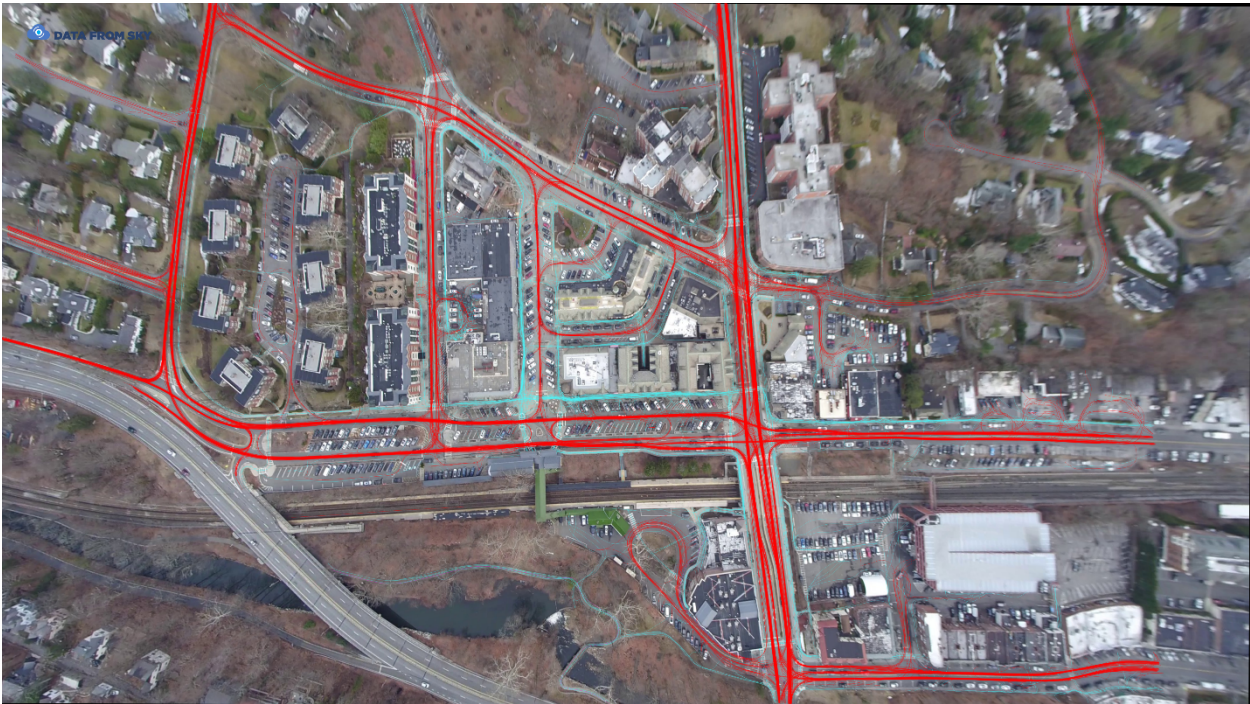
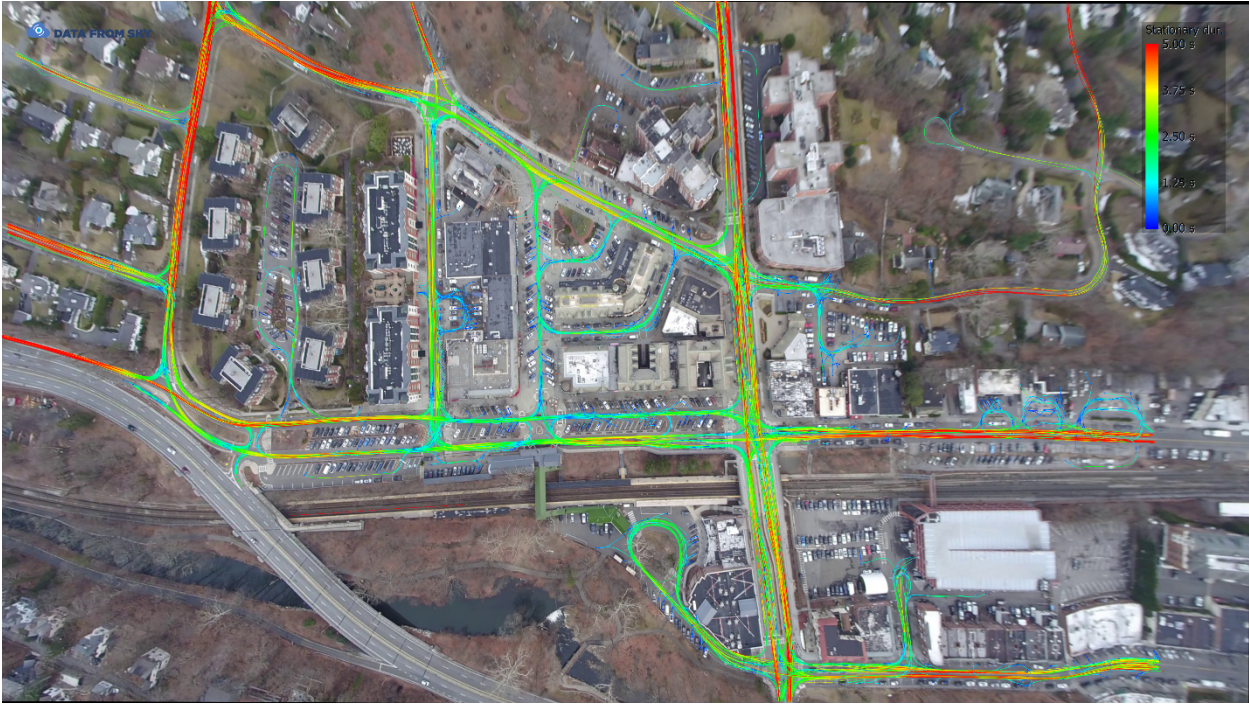


Figure 2 Vehicle Tracks by Speed as Captured by Drone Video



Key takeaways from the drone data collected include:

- Key pedestrian travel corridors include a) along East Parkway and Scarsdale Avenue, b) on Spencer Place between the Scarsdale Train Station and Chase Road, and c) using pedestrian passageways in buildings between East Building to Harwood Court and Boniface Circle.
- Traffic on Spencer Place, Boniface Circle, and Harwood Court is predominantly drivers looking for parking or picking up/dropping off passengers. Of the estimated 115 vehicles entering Spencer Place or Boniface Circle, only 29% of vehicles continue to East Parkway.
- Parking turnover on Spencer Place, Boniface Circle, and Harwood Court is estimated 61 vehicles per hour in these key parking areas.
- Only about one third of traffic on Popham Road consists of through traffic both entering and exiting on Popham Road. Approximately 50% of traffic on Popham Road exiting to the west enters Popham Road from Garth Road, Depot Place, East Parkway, Scarsdale Avenue, Overhill Road, or Chase Road.
- Westbound traffic on Popham Road represents the heaviest traffic flow in the study area. This queue storage of westbound traffic on Popham Road at East Parkway is regularly filled with turning traffic from Chase Road.
- Westbound right-turn lanes on Popham Road are lightly used at the intersection of Chase Road, East Parkway, and Depot Place. Each of these movements serve less than 40 vehicles per hour in the afternoon peak hour observed. This finding suggests that this space can potentially be reallocated for pedestrian, bicycle, or landscaping use.
- Speeds in the study area were measured highest outside the core of the study area. This includes areas on Crane Road, Popham Road east of Chase Road, and Scarsdale Avenue south of Popham Road.

Crash History

The Scarsdale Police Department provided five years of data between 2015 and 2019. The project team analyzed this crash data to further understand the existing conditions, which will ultimately help identify appropriate infrastructure. A total of 442 crashes occurred in this five-year period. The heat map below shows the locations of the top crash locations, and the table below it provides the full list.

Popham Road and East Parkway have the six highest crash locations, with the Popham Road/East Parkway intersection being the highest crash location in the study area.

Figure 3 Map of Crash Locations in the Study Area

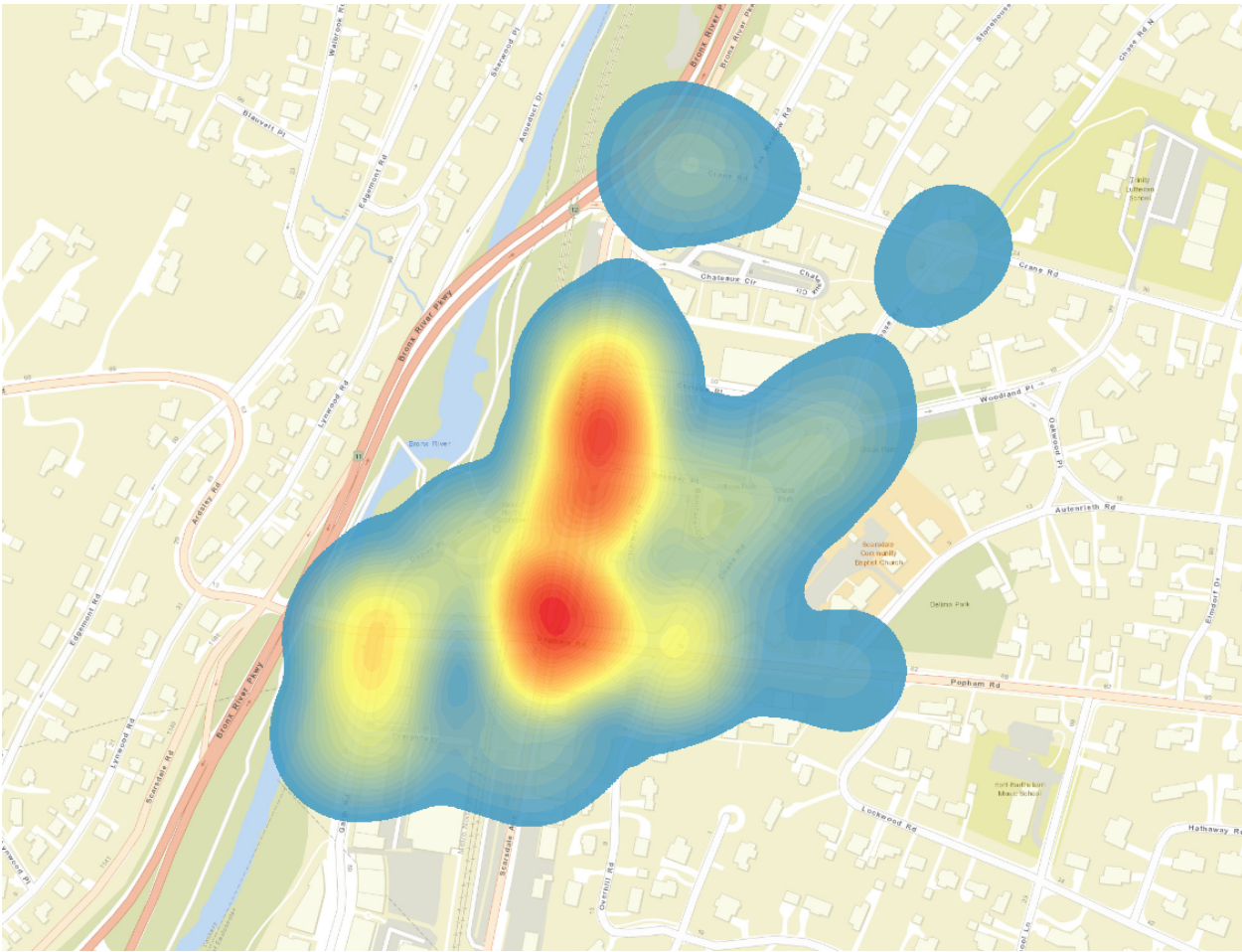


Table 1 **Crash Counts in the Study Area, 2015-2019**

Location	Number of Crashes
Popham Road / East Parkway / Scarsdale Avenue	60
East Parkway / Spencer Place	52
East Parkway / Christie Place	43
Popham Road / Garth Road / Depot Place	40
East Parkway between Spencer Place and Popham Road	35
Popham Road / Chase Road / Overhill Road	28
Depot Place	28
Garth Road	26
Spencer Place / Harwood Court	13
Scarsdale Avenue	13
East Parkway / Bronx River Parkway Northbound	12
Popham Road between Chase Road and Autenrieth	10
Spencer Place / Boniface Circle	9
Chase Road / Christie Place	9
Chase Road / Boniface Circle	9
Chase Road between Spencer Place and Christie Place	8
Freightway	7
Harwood Court	5
Chase Road / Spencer Place	5
Chase Road / Harwood Court	5
Chase Road / Crane Road	5
East Parkway between Christie Place and Bronx River Parkway	4
Crane Road / Fox Meadow Road	4
Boniface Circle	3
Overhill Road	3
Chase Road between Christie Place and Crane Road	2
Christie Place between East Parkway and Chase Road	2
East Parkway between Christie Place and Spencer Place	1
East Parkway / Bronx River Parkway Exit	1
<i>TOTAL</i>	<i>442</i>

CONCLUSION

The analysis conducted to date provides an overview of the existing conditions as documented by previous planning efforts, the stakeholder and community engagement, and traffic data. Additionally, this analysis helped the project team assess roads that are best suited as focus areas, for which concept plans and sketch-level renderings will be developed:

- **Popham Road between Chase Road and Depot Place** needs a redesign based off the currently underutilized westbound right turn lanes. Moreover, this segment contains three of the highest crash locations in the study area and is a perceived barrier to connecting the various parts of the Village Center.
- **Spencer Place** has received considerable attention from stakeholders in previous planning efforts. Given the recent success of the Dine in the 'Dale tent, now is the time to continue to build momentum and find how the space can be transitioned to a more permanent solution.
- **Boniface Circle** is a small street that can have a big impact on the community. As the “heart center” of the Village, it is a prime location for expanding the programming the community has requested.

Other corridors will not be excluded from further analysis. Higher-level planning recommendations could be made on other roadways, including Fox Meadow Road, Crane Road, and Depot Place. The intersection of East Parkway and the Bronx River Parkway exit requires further study in coordination with Westchester County, but feedback and observations at this location can still be documented as part of this study.