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2023



# **Spackenkill Road (NY Route 113)**

## **Sidewalk Feasibility Study**

**DRAFT**

DUTCHESS COUNTY  
TRANSPORTATION COUNCIL

Better ways from here to there

## DISCLAIMER

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## Table of Contents

Purpose and Background .....	1
Existing Conditions.....	3
Crash Analysis .....	4
Stopping Sight Distance at Pedestrian Crossings.....	6
Walking and Bicycling Patterns.....	7
Traffic Signals .....	7
Public Outreach.....	8
Key Issues .....	8
Croft Rd .....	8
Wilbur Blvd.....	9
Friends School Ln .....	9
Bicycle Accommodations .....	9
School Zone Speed Limits .....	11
Sidewalk Maintenance.....	11
Findings and Recommendations.....	12
Funding Options.....	13
Conclusion.....	16

## Appendices

### Appendix A: Concept

- Sidewalk Installation Concept
- Cost Estimate
- Typical Section
- General Plans

### Appendix B: Roadway Sections

- Existing
- Sidewalk Installation Concept
- Sidewalk Installation with Bike Lane Concept

### Appendix C: Intersection Analyses

- Wilbur Blvd
- Croft Rd
- Friends School Ln

### Appendix D: Public Outreach

- Spackenkill High School Student Outreach Summary
- Online Survey Summary

### Appendix E: Count Data

- Traffic
- Intersection Turning Movements
- Pedestrian & Bicycle

## Purpose and Background

This study assesses the feasibility of installing sidewalks along Spackenkill Road (NYS Route 113) from Croft Road to just west of Cedar Avenue (CR 74 ) in the Town of Poughkeepsie, building upon the community’s long-voiced desire to improve walking conditions in this area. A previously programmed project by the New York State Department of Transportation (NYSDOT; PIN 880842<sup>1</sup>) would have added a new sidewalk on the south side of Spackenkill Rd from Oakwood Friends School to Hagan Dr but it was removed due to funding limitations. Since then, the Town of Poughkeepsie and the Dutchess County Transportation Council (DCTC) have received requests to re-evaluate this area due to poor walking conditions.

**FIGURE 1: NYS Route 113 (Spackenkill Rd) Sidewalk Feasibility Study Area**



This feasibility study considers the installation of sidewalks with curbing, ADA-compliant pedestrian curb ramps, high-visibility crosswalks, and pedestrian signal upgrades, as well as safety improvements at intersections within the study area (see Figure 1). It also considers the potential for drainage needs, utility relocations, and property impacts.

The study should be viewed as a first step towards achieving the Town’s goal to improve walking and bicycling throughout the Spackenkill area, including east towards Red Oaks Mill and north to the existing path on Wilbur Blvd and the Vassar Preserve off Boardman Rd/Zack’s Way. The analysis and recommendations in the study can help the Town and/or NYSDOT seek funding for a potential detailed design and construction project.

<sup>1</sup> Project identification number from the DCTC’s FFY 2008-2012 Transportation Improvement Program (TIP)

The installation of sidewalks along this corridor would provide several benefits for people walking and driving, and for the broader community:

- **Safety:** Sidewalks and high-visibility crosswalks significantly reduce the risk of pedestrian crashes. Sidewalks can decrease crashes involving people walking by 65% to 89%<sup>2</sup> and high-visibility crosswalks can reduce pedestrian injury crashes by up to 40%.<sup>3</sup> Providing sidewalks on both sides of the street can also significantly reduce mid-block crossing crashes. Roads without sidewalks are more than twice as likely to have pedestrian crashes compared to roads with sidewalks on both sides of the street.<sup>4</sup> For drivers, the presence of sidewalks visually narrows the street, encouraging slower speeds, leading to fewer and less severe crashes.
- **Access:** Sidewalks serve the needs of non-drivers including children, older adults, and people with disabilities, who typically rely more on walking and public transit. Sidewalks on this corridor would expand access to nearby schools, shopping areas, services, and bus service on Route 9.
- **Beautification:** Sidewalks enhance the aesthetics of the street, creating a more attractive and community-oriented environment. They can contribute to a greater sense of place and community identity by providing a visual signal to drivers to expect and be mindful of people walking.
- **Property values:** Walkability is strongly associated with higher housing values, reflecting consumer demand for neighborhoods with convenient and varied pedestrian-friendly amenities.<sup>5</sup>
- **Health and environmental benefits:** Sidewalks encourage walking, making it easier for people to meet daily exercise recommendations and improve their overall health. Providing comfortable walking facilities can also reduce the number of trips made by car, reducing emissions and improving air quality.<sup>6</sup>

This study begins with a description of existing conditions, followed by a crash analysis, sight distance analysis at major intersections, and pedestrian volume and signal timing observations. It also discusses public outreach efforts and concerns raised by residents about intersection operations, bicycle accommodations, and sidewalk maintenance. The report concludes with recommendations to improve safety and access in the study area.

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<sup>2</sup> <https://highways.dot.gov/safety/proven-safety-countermeasures/walkways>

<sup>3</sup> <https://highways.dot.gov/safety/proven-safety-countermeasures/crosswalk-visibility-enhancements>

<sup>4</sup> [https://safety.fhwa.dot.gov/ped\\_bike/tools\\_solve/walkways\\_brochure/walkways\\_brochure.pdf](https://safety.fhwa.dot.gov/ped_bike/tools_solve/walkways_brochure/walkways_brochure.pdf)

<sup>5</sup> <https://nacto.org/publication/urban-street-design-guide/street-design-elements/sidewalks/>

<sup>6</sup> [https://safety.fhwa.dot.gov/ped\\_bike/tools\\_solve/walkways\\_brochure/walkways\\_brochure.pdf](https://safety.fhwa.dot.gov/ped_bike/tools_solve/walkways_brochure/walkways_brochure.pdf)

## Existing Conditions

Spackenkill Rd is classified as an Urban Minor Arterial and is listed in the NYSDOT Truck Book as an access highway from US 9 to NY 376, meaning it must meet specific design criteria, including the accommodation of certain large trucks.<sup>7</sup> The existing facility meets these standards (minimum 11-foot travel lanes, 4-foot shoulders), with travel lanes varying from 11 to 12 feet and shoulder widths between 5 and 8 feet.<sup>8</sup> The corridor has one lane in each direction except for a section between Croft Rd and Wilbur Blvd, which has two westbound lanes and an eastbound left-turn lane at Wilbur Blvd. The Annual Average Daily Traffic (AADT) is approximately 13,000 vehicles, with 3.6% heavy truck traffic, and an 85<sup>th</sup> percentile speed of 45 mph (the posted speed limit is 40 mph).<sup>9</sup>

Fieldwork and a desktop review were conducted to determine the locations of utilities, landscape features, mailboxes, signage, driveways, drainage, available right-of-way, and other factors that could affect the feasibility of constructing sidewalks along the corridor. Table 1 summarizes some of these existing features. There are overhead utilities (e.g., electric, telephone, and cable) and underground utilities (e.g., fiber, gas, water, storm, and sanitary sewer), as well as fire hydrants on both sides of the road throughout the corridor. The study area is primarily residential in nature, with the typical mix of driveways, landscaping, mailboxes, and signage abutting the road, and several side streets that provide access to residential neighborhoods. The existing geography is relatively flat, with isolated sections that include rock outcrops and steep slopes. Storm sewers consist primarily of closed drainage located within the roadway. Right-of-way was verified against NYSDOT record plans; in general, there is less right-of-way available on the south side of the road than on the north.

**TABLE 1: Existing Features within Study Limits**

Feature	North Side	South Side
Abutting Parcels	34	28
Utility Poles	29	27
Driveways	22	23
Un-Signalized Intersections	4	4
Signalized Intersections	2	2



Overhead utilities

<sup>7</sup> [NYSDOT Truck Book](#) (2022)

<sup>8</sup> [NYSDOT Highway Design Manual](#) (Chapter 2; Exhibit 2-4a)

<sup>9</sup> Traffic data collected during May 2021 (see Appendix E); updated count data pending (September 2023)

There is an existing section of sidewalk on the north side of Spackenkill Rd between Route 9 and Croft Rd, and there are four signalized intersections (Croft Rd, Wilbur Blvd, Hagan Dr, and the high school entrance) and eight un-signalized intersections within the study area. At the Croft Rd intersection, there is a crosswalk on the western leg, a curb ramp on the northwest corner, and pedestrian push buttons at the crosswalk. However, the curb ramp is not ADA-compliant, and the crosswalk leads to a grass area on the south side of the road. The intersections at Wilbur Blvd and the high school entrance have no pedestrian accommodations. The Hagan Dr intersection has crosswalks on the western and southern legs, but no curb ramps or pedestrian signals. There are no pedestrian accommodations at the un-signalized intersections.



Croft Rd crosswalk



Wilbur Blvd intersection

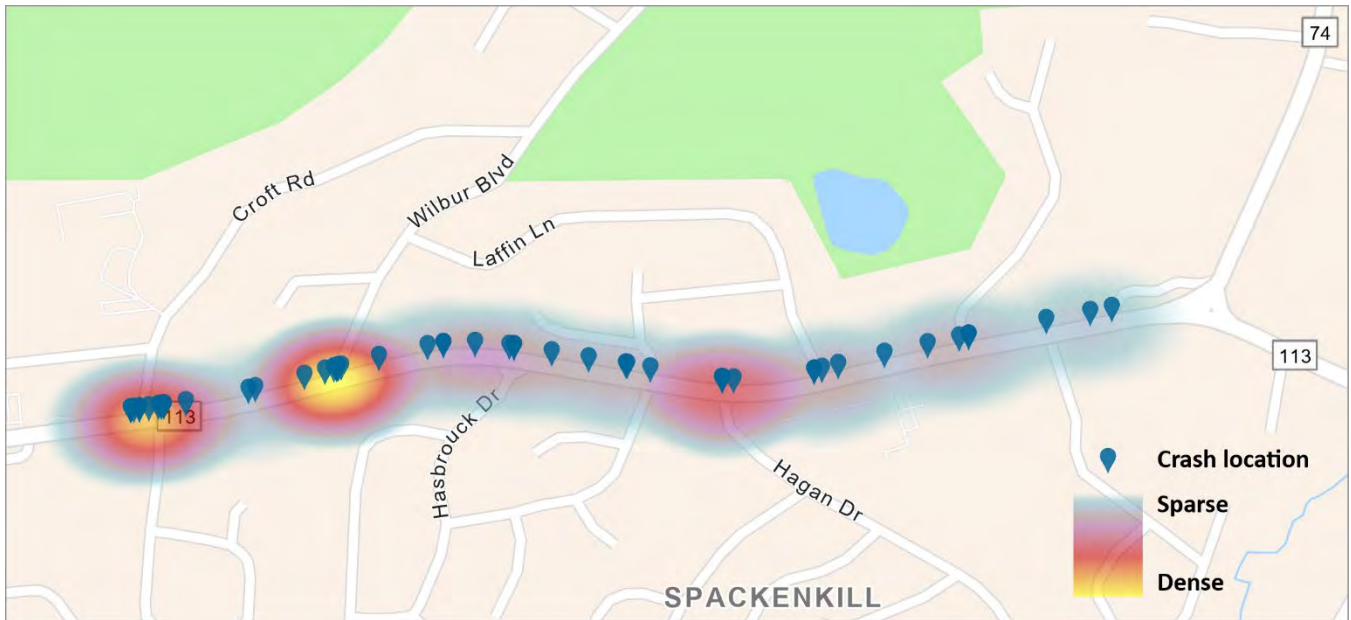
## Crash Analysis

We evaluated ten years of crash data (2013-2022) from NYSDOT's Crash Data Viewer to determine if there were any crashes that involved pedestrians or bicyclists.<sup>10</sup> Over the ten-year period, 122 total crashes occurred in the study area. There were no crashes involving pedestrians, but one crash in 2013 involved a bicyclist: the crash occurred near Wilbur Blvd, where a southbound right-turning vehicle struck a bicyclist who was crossing from the north to the south side of Spackenkill Rd, causing an injury.

To understand if there were any crash patterns or concentrations in the study area, we looked at the most recent five-year period (2018-2022). We found that significant portions of crashes occurred at three of the signalized intersections: Wilbur Blvd (23%, 16 crashes), Croft Rd/Flower Hill Rd (21%, 15 crashes), and Hagan Dr (14%, 10 crashes). Figure 2 shows where these crashes occurred, and Table 2 and Table 3 summarize the number of crashes, injuries, and crash types during this five-year period.

<sup>10</sup> NYSDOT's Crash Data Viewer contains data for crashes that were reported to the NYS Department of Motor Vehicles (DMV). Unreported crashes and "near misses" are not captured.

**FIGURE 2: Crash Map (2018-2022)**



**TABLE 2: Crash Summary (2018-2022)**

Year	Crashes	Injuries	Fatalities
2018	12	1	0
2019	16	5	0
2020	11	4	0
2021	20	12	0
2022	11	5	0
<b>Total</b>	<b>70</b>	<b>27</b>	<b>0</b>

**TABLE 3: Crash Type Summary (2018-2022)**

Crash Type	Crashes
Rear End	27
Right Angle	8
Overtaking	8
Collision with Animal	7
Other	7
Turning Movement	4
Collision with Fixed Object	4
Head On	3
Sideswipe	2
Pedestrian/Bicycle	0
<b>Total</b>	<b>70</b>

## Stopping Sight Distance at Pedestrian Crossings

Field observations identified concerns related to sight distance at some pedestrian crossings in the study area. Stopping sight distance (the distance required for a vehicle to stop before reaching a stationary object in its path<sup>11</sup>) was evaluated for pedestrian crossings at Croft Rd, Wilbur Blvd, and Hagan Dr. Table 4 summarizes the available stopping sight distance at each crossing compared to the recommended stopping sight distance. The evaluation found that stopping sight distance at the existing crosswalk at Croft Rd and at the eastern leg of the Wilbur Blvd intersection is sufficient for all directions.



Looking west towards Hagan Dr intersection

At Hagan Dr, a horizontal curve in the road partially obstructs the view of westbound drivers and could make it difficult to see people standing on the north side of Spackenkill Rd at the western leg (existing crosswalk) and at the eastern leg of the intersection. These locations do not meet the recommended minimum stopping sight distance for westbound traffic. However, because the Hagan Dr intersection is signalized and there is advance warning signage on the westbound approach to the signal, it is anticipated that the sight distance would not be a safety issue.

**TABLE 4: Stopping Sight Distance**

Intersection	Location	Stopping Sight Distance (ft) <sup>1</sup>			
		SSDN/EB	SSDS/EB	SSDN/WB	SSDS/WB
<b>Croft Rd</b>	Western leg (existing crosswalk)	>400	>400	>400	400
<b>Wilbur Blvd</b>	Eastern leg	>400	>400	>400	400
<b>Hagan Dr</b>	Western leg (existing crosswalk)	>400	>400	<b>300</b>	400
<b>Hagan Dr</b>	Eastern leg	>400	>400	<b>280</b>	350
<i>Recommended stopping sight distance (ft)<sup>2</sup></i>		330	330	330	330

<sup>1</sup> Stopping sight distance measured at a height of 3.5 feet on each side of the road for eastbound and westbound vehicles.

<sup>2</sup> Sight distance measurements are compared to AASHTO recommended distances for a 50-mph operating speed at Croft and Wilbur and 45-mph at Hagan for non-NHS roadway. This is based on 85<sup>th</sup> percentile speeds, rounded up.

<sup>11</sup> [NYS DOT Highway Design Manual](#) (Chapter 5; Section 5.7.2.1)

## Walking and Bicycling Patterns

Within the study area, students walk to and between schools, and residents walk to school events and to the high school track. Students living within one mile of Spackenkill High School, three-quarters of a mile from Todd Middle School, or a half mile from Hagan Elementary are not served by the school district's bus system and must walk to school or find other means of transport. However, the school district does provide transportation for students who would have to walk along Spackenkill Rd, because the road has been designated a hazardous zone for walking.

Automated 12-hour pedestrian and bicycle counts were conducted at key locations and are summarized in Table 5, with detailed and mapped data in Appendix E. The data showed people walking on both sides of Spackenkill Rd, with more use observed on the south side. Pedestrian counts were also conducted in-person during school arrival (6:30-7:30 am) on June 13, 2023 and dismissal (2:30-3:30 pm) on January 19, 2023 in the vicinity of the high school. During these times, students were observed crossing at both signalized intersections (Hagan Dr and the high school entrance) and walking across the grass in front of the high school.

**TABLE 5: 12-hr Pedestrian & Bicycle Counts (7am-7pm)**

Intersection/Screenline Location <sup>2</sup>	Thursday (10/13/22)		Saturday (10/15/22)	
	Pedestrians	Bikes	Pedestrians	Bikes
Spackenkill Rd & Croft Rd	47	6	14	24
Spackenkill Rd & Wilbur Blvd	24	10	13	16
Spackenkill Rd & Hagan Dr	58	12	13	6
Spackenkill Rd near Stuart Dr (screenline)	48	3	7	1

<sup>1</sup> Intersection counts include people crossing at each leg; screenline count includes only people walking along Spackenkill Rd.

## Traffic Signals

Traffic signal timing was observed at Croft Rd, Wilbur Blvd, Hagan Dr, and the high school entrance. Upon initial review, it appears that each of these signals can accommodate additional pedestrian phases. However, all signals would need to be analyzed further during project design to determine what timing changes would be needed.

The age of the existing traffic signal assemblies will also need to be considered during project design. Signals in the study area were installed in 1969 at Croft Rd, and 1989-90 for the remaining signalized intersections.<sup>12</sup> Due to the age and design of the existing signal assemblies, they may not be able to accommodate new signal heads or signage. For any intersection recommendations that involve changes to the approaching lanes, it is possible that the full traffic signal assembly may need to be replaced.

<sup>12</sup> [NYS GIS Clearinghouse](#), NYSDOT Traffic Signals, March 2023

## Public Outreach

Extensive outreach was conducted for this study to understand the needs and concerns of stakeholders. An Advisory Committee, including staff from the Town of Poughkeepsie, NYSDOT, and Dutchess County Planning Department, provided feedback to DCTC on interim and final products. Public outreach included a presentation to the Spackenkill Union Free School District (SUFSD) Board of Education (BOE), in-classroom discussion with Spackenkill High School students, door to door outreach on Spackenkill Rd, and a public online survey. News about the study and survey was shared by a local newspaper and radio station, posted on the [DCTC's website](#), and provided to local schools, the Spackenkill Parent Teacher Student Association (PTSA), and the Town's public information email list. Table 6 summarizes these outreach efforts. Appendix D contains detailed summaries of in-classroom outreach and the online survey.

**TABLE 6: Public Outreach Summary**

Stakeholder Group	Date
Advisory Committee Meeting 1	December 2022
Advisory Committee Meeting 2	March 2023
School District Meeting	April 2023
Town Representatives Meeting	May 2023
School Board Presentation	May 2023
In-class outreach at Spackenkill High School	May 2023
Online Survey	May-June 2023
Door-to-Door Outreach by Town Board member	June 2023
Advisory Committee Meeting 3	July 2023
NYSDOT Meeting	August 2023
Town Board Presentation	<i>October 2023</i>

## Key Issues

Our outreach efforts identified several concerns and issues that were further investigated:

### Croft Rd

The intersection of Croft Rd and Spackenkill Rd was evaluated due to traffic and safety concerns raised by the public. Vehicles waiting in the eastbound travel lane to turn left onto Croft Rd are reported to cause delays for eastbound through traffic, resulting in dangerous passing on the south side shoulder to avoid backups. If there were sidewalks on the south side of the intersection, it could improve safety by limiting this illegal passing movement.

We considered the possibility of adding a turn lane to accommodate left turns onto Croft Rd, but a review of peak hour traffic volumes and crash patterns indicates that a left-turn lane is not recommended because the location does not meet turning volume or signal warrants (see Appendix C for full assessment). If, however, a left turn lane at Croft Rd were warranted in the future, Spackenkill Rd would need to be widened by an additional 12 feet on the south side of the intersection. The tapered road widening would begin approximately 420 feet on the eastbound and westbound approaches to accommodate the lane shifts and would transition from 0 to 12 feet of widening while approaching the intersection; this would require two new right-of-way acquisitions from adjacent properties. In addition, new signal heads for the turn lane could necessitate a complete replacement of the existing signal assembly.

## Wilbur Blvd

The removal of the slip lane from Wilbur Blvd to westbound Spackenkill Rd was evaluated to improve crossing safety for pedestrians. Removing the slip lane and constant green arrow for right turns would allow people to safely cross Wilbur Blvd when vehicles are stopped. A preliminary level of service analysis showed that the intersection would operate well with a signalized right turn lane on Wilbur Blvd instead of a free flowing right turn, though drivers making right turns from Wilbur Blvd would experience some increased delay. This modification would require traffic signal upgrades and reconfiguring the two westbound lanes west of the signal. A full replacement of the existing signal assembly may also be needed, depending on its condition.



Westbound travel lanes, west of Wilbur Blvd

## Friends School Ln

Although not within the study area, a traffic signal warrant analysis was completed for the Spackenkill Rd/Friends School Ln intersection due to safety concerns for left turns out of Friends School Ln and the childcare center on the north side of the street. The evaluation determined that none of the five warrants for installing a traffic signal were met, based on the minimum criteria identified in the 2009 MUTCD (see Appendix C). Further evaluation would be needed to identify design improvements, which could include lane restriping on Spackenkill Rd.

## Bicycle Accommodations

Feedback from stakeholders pointed to the need to evaluate various bicycle accommodations, including bike lanes, buffered bike lanes, and shared use paths.

On Spackenkill Rd, a minimum bike lane width of five feet would be required, though additional width is preferred and would provide more comfort to cyclists and drivers.<sup>13</sup> Bike lanes must be marked according to the MUTCD,<sup>14</sup> but NYSDOT typically will not maintain such markings. As such, marked bike lanes would need to be maintained by the Town.

A buffered bike lane would include the standard five-foot bike lanes, with the addition of a hatched buffer to separate them from the travel lanes. A buffer provides extra protection to cyclists and makes the bike lane more comfortable for many riders. Per NYSDOT standards for this facility type, a minimum buffer of three feet is optimal, but could be modified depending on the context. We evaluated how this treatment would look within the study area alongside sidewalks (see cross-section in Appendix B). Adding a bike lane with a three-foot buffer would require 14 additional right-of-way takings. A bike lane with a varying buffer width (between 0-3 feet depending on available space) or no buffer would reduce the need for additional right-of-way.

NYSDOT standards include the use of wide shoulders as an alternative to marked bike lanes on this facility type. Consistent five-foot shoulders in the study area could accommodate bicyclists and reduce right-of-way needs while providing the opportunity for future dedicated bicycle infrastructure connections to a larger network.

A shared-use path was also considered but is not recommended due to the roadway context. There would be significant conflicts between two-way bicycle traffic and vehicles at the frequent driveways and intersections along the corridor. A path would also limit the potential for improved access since it would only be placed on one side of the road. It would also require additional right-of-way.

Bicycle infrastructure on Spackenkill Rd should be considered in the context of a larger plan. In particular, the Town's comprehensive plan recommends a "Town-wide bike plan that identifies rights of way throughout the Town that are appropriate for bicycle infrastructure".<sup>15</sup> Dedicated bicycle infrastructure should not be limited to the one-mile corridor considered in this study.



Existing wide shoulder on Spackenkill Rd

<sup>13</sup> [NYSDOT Highway Design Manual](#) (Chapter 2)

<sup>14</sup> [Manual on Uniform Traffic Control Devices \(MUTCD\)](#) (Chapter 9)

<sup>15</sup> [Town of Poughkeepsie Comprehensive Plan 2021](#) (p 102, Recommendation 5.1.1)

## School Zone Speed Limits

The implementation of a school speed limit in front of the high school was researched as a means to reduce speeds along the corridor and provide safer crossing opportunities for students. Based on NYSDOT's standards, a school speed limit zone is appropriate in areas where students walk or bike to school and there are no traffic control signals or other protected means for crossing the road;<sup>16</sup> a local example is along Hagan Dr in front of the elementary school. Although students walk along Spackenkill Rd to the high school, a school speed limit zone is not recommended because the school frontage is bookended by traffic signals at Hagan Dr and the high school entrance.

In place of a school speed limit, physical changes to the roadway (like the addition of sidewalks and intersection improvements) are effective at reducing speeds. As a supplement, the Town and school could work with NYSDOT to evaluate the effectiveness of existing school signage and determine if the addition of flashing beacons is desired.

## Sidewalk Maintenance

Currently, the Town of Poughkeepsie's code places the responsibility of sidewalk maintenance, including clearing snow and ice, on adjacent property owners.<sup>17</sup> Although this is common throughout Dutchess County, there are issues with this approach, and it has arisen as a key concern for residents on Spackenkill Rd, particularly older adults and people with disabilities. A potential solution could involve collaboration between the Town and the School District to establish a cost-sharing agreement for sidewalk maintenance, given the school's substantial property ownership along the corridor and the benefits of sidewalks to the school community. An alternative approach could be the creation of a sidewalk improvement district, where all properties in the area contribute to the cost of sidewalk maintenance, which the Town would manage, similar to existing lighting districts in the Town. For long-term maintenance, the Town could include sidewalk repairs in its capital planning, alleviating the burden on adjacent property owners.<sup>18</sup>



Existing sidewalk on Spackenkill Rd,  
west of study area

<sup>16</sup> [NYSDOT Traffic Safety and Mobility Instruction \(TSMI\) 17-05](#) (p 13)

<sup>17</sup> [Town of Poughkeepsie Code](#) (§ 174-2)

<sup>18</sup> [https://movingdutchessforward.com/wp-content/uploads/2021/04/DCTC\\_MovingDutchessForward\\_Advocate\\_Local-Actions\\_Sidewalk-Sidebar.pdf](https://movingdutchessforward.com/wp-content/uploads/2021/04/DCTC_MovingDutchessForward_Advocate_Local-Actions_Sidewalk-Sidebar.pdf)

## Findings and Recommendations

Based on our review of existing conditions and analysis of available data, we believe that it is feasible to install sidewalks on both sides of Spackenkill Rd within the study area. Feedback from the public and stakeholders largely supports sidewalks, given their ability to improve safety and access, though concerns about right-of-way needs, maintenance responsibilities, and traffic impacts could affect the final design if such a project were to move forward. In consideration of these findings, the recommended concept, shown in Appendix A, includes the following:

- **Install sidewalks** on the north side of Spackenkill Rd between Croft Rd and Old Spackenkill Rd and on the south side between Croft Rd and Old Farms Rd. Include sidewalk connections to Spackenkill High School. Sidewalks would be five feet wide with concrete curbing and a 0-to-10-foot maintenance strip. The varying maintenance strip width helps reduce the number of right-of-way acquisitions, utility relocations, and other property related impacts.
- **Provide consistent roadway widths** by restriping travel lanes to 11 feet and shoulders to five feet.
- **Install high-visibility crosswalks** with ADA-compliant curb ramps on all legs of signalized intersections and across all side streets to provide an accessible and safe walking environment.
- **Make pedestrian signal improvements** at Croft Rd, Wilbur Blvd, Hagan Dr, and the high school entrance. Pedestrian signal improvements would include new pedestrian push buttons and countdown timers. Detailed signal evaluations should be completed during the project's design phase.
- **Remove the free flow slip lane from Wilbur Blvd to Spackenkill Rd** and replace with a signalized right turn lane on Wilbur Blvd to allow for a crosswalk on the north leg, greatly improving pedestrian safety at this intersection.
- **Narrow the intersections at Hasbrouck Rd and Van Duzer Dr** to provide shorter crossing distances for pedestrians and reduce vehicle turning speeds.
- **Relocate utility poles and address existing feature conflicts** to accommodate the proposed sidewalk. Utility relocation should be done in coordination with Central Hudson. The removal or relocation of the existing guide rail near the high school track should be done in coordination with NYSDOT and the School District. In addition, mailboxes would need to be relocated, driveway entrances re-paved, and landscaping replaced due to construction impacts; these details would be evaluated during the project's design phase.
- **Evaluate the existing drainage system** for rehabilitation and/or replacement as needed. A detailed evaluation should be completed during the project's design phase.

The total estimated project cost is between \$5.7 and \$7.1 million. The high-end of this range is shown below (Table 7) and is consistent with NYSDOT estimates for similar projects. The range accounts for potential variation in final design and construction, including utility relocations, traffic signal replacements, and right-of-way needs. Utility costs vary depending on their location within the right-of-way (i.e., if within State right-of-way, the utility company may bear relocation costs). Three full traffic signal replacements are accounted for, but if retrofits are possible then the cost could be reduced. 16 right-of-way acquisitions are accounted for, but this number could be reduced to six by eliminating the sidewalk maintenance strip in areas where there is limited right-of-way. These would be either fee takings<sup>19</sup> or permanent easements.<sup>20</sup>

The detailed cost estimate, typical roadway section, and general plans with potential right-of-way impacts are in Appendix A.

**TABLE 7: Cost Estimate**

Item	Estimate
<b>Design Engineering (10%)</b>	\$500,000
<b>ROW Acquisition and Coordination</b>	\$160,000
<b>Utility Involvement (8%)</b>	\$400,000
<b>Construction</b>	\$5,000,000
<b>Construction Inspection (20%)</b>	\$1,000,000
<b>Total</b>	<b>\$7,060,000</b>

## Funding Options

There are a variety of potential funding sources for the recommendations in this study, though maximum award amounts may necessitate project phasing. Options include phasing in sections, such as from Old Spackenkill Rd to Van Duzer Dr (where there is currently more use) and then from Van Duzer to Croft Rd; or one side of the road then the other, such as the north side (where there is more right-of-way available) then the south side. Alternatively, a combination of these approaches may work best depending on available right-of-way and property owner support.

Other funding strategies include combining different sources; however, due to the scope and cost of this study's recommendations, federal funding is likely to be the primary source of funds. That and other key sources are listed below.

<sup>19</sup> Acquiring absolute right, title, or estate to a parcel of land for use by the state for purposes related to highways or other transportation related facilities.

<sup>20</sup> The acquisition of certain rights and interest to use or control a property for a designated purpose. In most cases, the property owner retains the use of the property for other functions which do not interfere with the purpose of the easement.

## Federal Transportation Funds

Most federal transportation funding comes from the multi-modal federal transportation law in effect at the time. To use federal transportation funding, a project must be consistent with an overall transportation plan, such as [Moving Dutchess Forward](#), and be added to the DCTC's [Transportation Improvement Program \(TIP\)](#). For more information, see the DCTC's webpage on [Federal Highway Funding](#) and the Federal Highway Administration's [Pedestrian and Bicycle Funding Opportunities](#) table. In particular, two federal highway programs could be used for the pedestrian and bicycle improvements recommended in this study:

- **Surface Transportation Block Grant Program (STBG):** These funds may be used for projects on any [federal-aid eligible](#) road, which includes Spackenkill Rd (NYS Route 113). Besides typical road and bridge repairs and construction work, this program can also support walking and bicycling improvements. A portion of each State's STBG funds must be used for the Transportation Alternatives Set-Aside (see below).
- **Transportation Alternatives Set-Aside:** This program, often referred to as TAP, specifically funds walking and bicycling infrastructure, safe routes to school projects, and trails, as well as related landscaping and other improvements on a public road. Eligible costs can include detailed design, right-of-way acquisition, and construction. Administrative and maintenance costs are not eligible under TAP.

Most federal programs are reimbursement programs, with the federal share making up 80 percent of the total project cost. If federal funds are used, the project sponsor is responsible for the required local match and any costs not covered by federal funds. The design and construction of pedestrian facilities could also be a stand-alone project or combined with another project done on the same road (e.g., road reconstruction). A large project could also be split into several smaller pieces with funding from different programs.

## State Funds

- The [New York State Department of Transportation \(NYSDOT\)](#) owns and maintains all State roads, including Spackenkill Road (NYS Route 113). NYSDOT is responsible for the road, as well as intersections along it. This includes maintaining signals, marking crosswalks, and installing signs. NYSDOT uses State and federal funds for its projects.
- **New York State's [Consolidated Funding Application \(CFA\)](#)** is an annual application for funding from various State agencies, including the Department of Environmental Conservation (DEC), Department of State (DOS), Empire State Development (ESD), Homes and Community Renewal (HCR), Parks, Recreation and Historic Preservation (OPRHP), and others. The funding programs and amounts vary by year. The CFA is intended to implement the economic development priorities and strategies developed by the [Regional Economic Development Councils](#), which for the Mid-Hudson, include promoting alternative transportation.

- New York State’s [Multi-Modal Program](#) provides reimbursement funding for capital projects related to five transportation modes: rail, port, ferry, airport, and State and local highways and bridges. Projects are nominated by the Governor or a State Legislator and must be approved by a State Committee and determined to be eligible by NYSDOT.
- The [State and Municipal Facilities Program \(SAM\)](#), administered by the State’s Dormitory Authority (DASNY), can fund sidewalks and other local infrastructure. Projects are nominated by a State Legislator.
- **Legislative Discretionary Funds:** State legislators typically have discretionary funds that can be used for local priority projects.

### Local Funds

Municipalities often find that it is less expensive to use local funds than federal sources. This is because federal funding typically requires higher-cost materials, lengthy review and right-of way processes, thorough construction inspection, and detailed grant reporting and administration. Although municipal resources are limited, local funds allow for more flexibility and a faster process. Local funding sources include the following:

- **General Fund/Discretionary Funds:** The Town will need to weigh each project against other local priorities.
- **CHIPS (Consolidated Local Street and Highway Improvement Program):** Municipalities receive annual CHIPS funding from NYSDOT based on their local roadway mileage. CHIPS funds can be used for construction and repair of streets and bridges, as well as sidewalks and traffic calming projects. Capital projects must be paid for by the municipality and then reimbursed by NYSDOT.
- **Local Bond:** The Town could issue a local bond to fund a package of improvements.
- **Sidewalk Improvement District:** Ithaca, NY funds sidewalk installation and maintenance through sidewalk improvement districts. The districts assess an annual maintenance fee on properties, based on the type of property, its size, and the amount of sidewalk work needed in the district. See [Ithaca’s Sidewalk Policy website](#) for more information. [Denver, CO](#) and [other locations](#) have implemented similar programs.

### Private Funds

- **Public-Private Partnerships:** This would involve working with a private entity, civic organization, or community group to implement a street improvement project.

- **Non-Profit Organizations:**
  - [AARP Community Challenge Grants](#) provide grants for quick actions that can improve walkability, bikeability, wayfinding, and access to transportation options.
  - [America Walks' Community Change Micro Grants](#) fund projects or programs to make walking safer, easier, and more fun. These grants have funded walking maps, public art, signage, crosswalks, events, educational materials, and more.
- **Foundation Grants:** Local foundations may have funding for walking and bicycling projects. Nationally, [Candid](#) has a database of grant-makers and grants, as well as other tools for grant-seekers.

## Conclusion

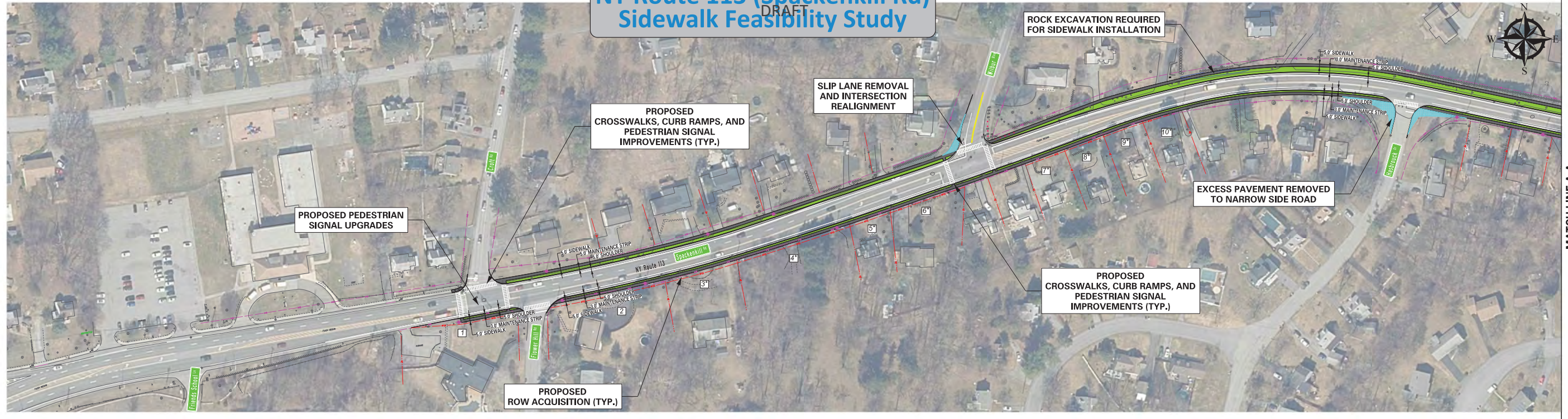
This study serves as a starting point for the Town to improve walkability on Spackenkill Rd. The challenges identified here should be addressed during project design, but from a transportation planning perspective, sidewalks are indeed feasible, and would result in a safer, more accessible community, while also creating a better sense of place.

## Appendix A

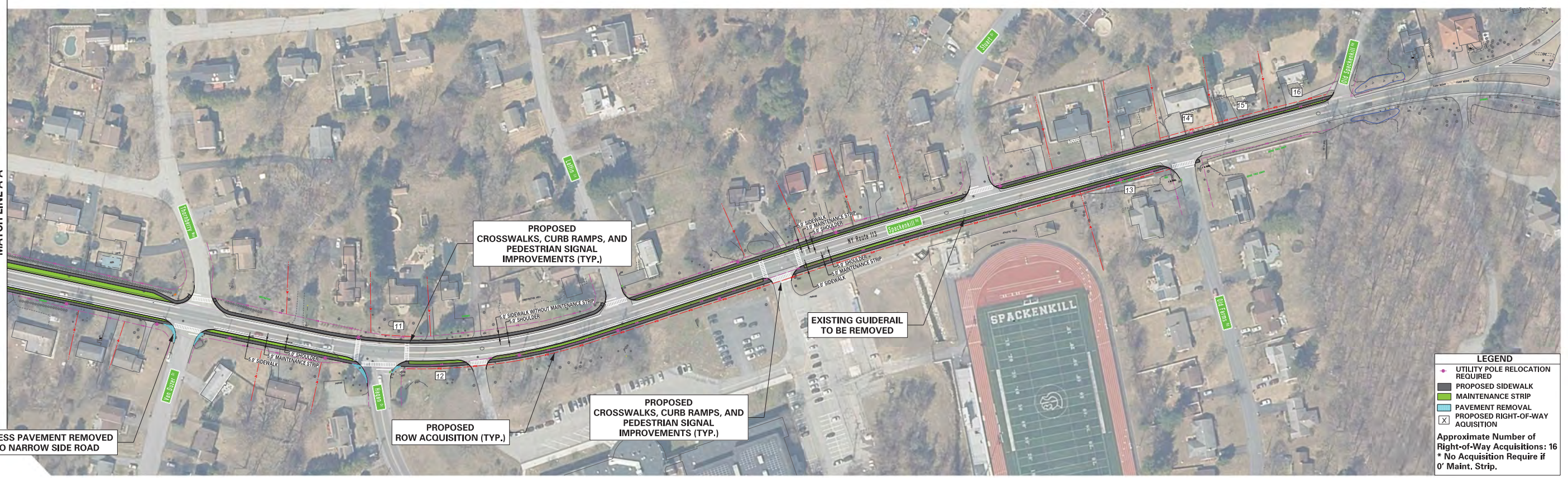
- Sidewalk Installation Concept
- Cost Estimate
- Typical Section
- General Plans

# NY Route 113 (Spackenkill Rd) Sidewalk Feasibility Study

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MATCH LINE A-A

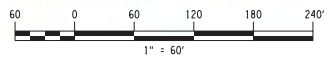


MATCH LINE A-A

**LEGEND**

- ◆ UTILITY POLE RELOCATION REQUIRED
- PROPOSED SIDEWALK
- MAINTENANCE STRIP
- PAVEMENT REMOVAL
- PROPOSED RIGHT-OF-WAY ACQUISITION

Approximate Number of Right-of-Way Acquisitions: 16  
 \* No Acquisition Require if 0' Maint. Strip.



## Spackenkill Road (NY Route 113) Sidewalk Feasibility Study: Cost Estimate

September 27, 2023

### Description:

Cost estimate for sidewalk installation from Croft Rd to Old Spackenkill Rd on north side and south side of roadway, including curb ramps, traffic signal upgrades for pedestrians, lane reduction to 11 feet, and slip lane removal at Wilbur Blvd.

Item Description	Units	Price	Quantity	Total
Unclassified Excavation And Disposal (Pavement)	CY	\$ 40.00	2841	\$ 113,640
Embankment In Place	CY	\$ 65.00	90	\$ 5,850
Full Depth Pavement And Subbase	SF	\$ 8.75	26310	\$ 230,213
Sidewalks	SF	\$ 21.00	41005	\$ 861,105
Concrete Curb	LF	\$ 61.00	8770	\$ 534,970
Driveway Reconstruction	EACH	\$ 5,000.00	40	\$ 200,000
Clearing And Grubbing	LS	\$ 5,000.00	1	\$ 5,000
Landscaping - Topsoil And Seed	LS	\$ 90,000.00	1	\$ 90,000
Signing And Striping	LS	\$ 28,800.00	1	\$ 28,800
Drainage Basins	EA	\$ 6,000.00	44	\$ 264,000
Drainage Pipe	LF	\$ 90.00	8770	\$ 789,300
Guiderail Removal	LS	\$ 2,500.00	1	\$ 2,500
Traffic Signal Replacements (Croft, Wilbur, Hagan) <sup>1</sup>	LS	\$ 175,000.00	3	\$ 525,000
Erosion Control - Silt Fence	LS	\$ 25,000.00	1	\$ 25,000
Work Zone Traffic Control	LS	8%	1	\$ 294,030
Survey And Stakeout	LS	4%	1	\$ 147,015
Mobilization	LS	4%	1	\$ 147,015
Contingency	LS	20%	1	\$ 735,076
<b>Construction Subtotal:</b>				<b>\$ 5,000,000</b>

Design Engineering (10%)	\$ 500,000
ROW Acquisition and Coordination <sup>2</sup>	\$ 160,000
Utility Involvement <sup>3</sup>	\$ 400,000
Construction	\$ 5,000,000
Construction Inspection (20%)	\$ 1,000,000

**Project Total: \$ 7,060,000**

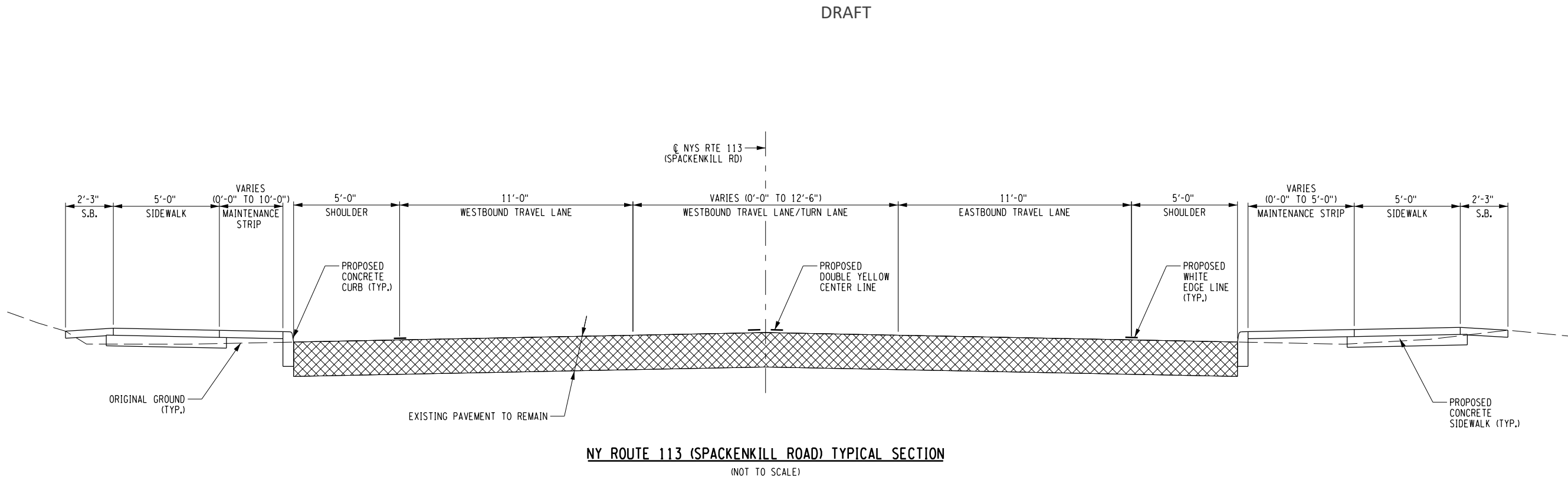
<sup>1</sup> Total cost reflects 3 full signal replacements. If signal upgrades/retrofits are feasible, lump sum estimate as low as \$30,000.

<sup>2</sup> Right-of-way (ROW) cost assumes 16 acquisitions estimated at \$10,000 each. ROW acquisitions could be reduced down to 6 (\$60,000) by eliminating the maintenance strip in some locations.

<sup>3</sup> Utility involvement cost reflects maximum estimate and may change depending on available ROW. Utilities located within State ROW may be relocated at the cost of the utility instead of the project sponsor.

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**NY ROUTE 113 (SPACKENKILL ROAD) TYPICAL SECTION**  
 (NOT TO SCALE)

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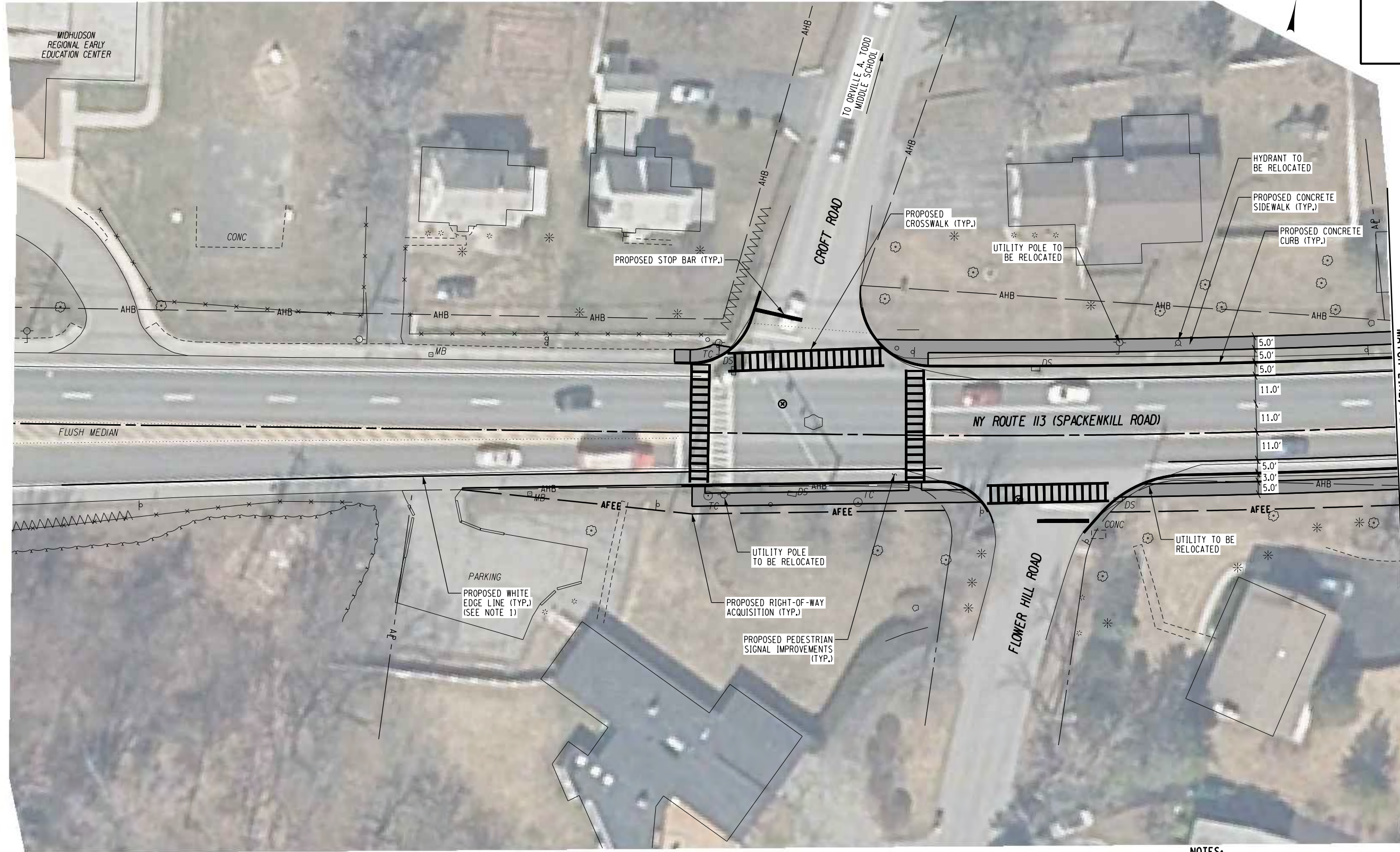
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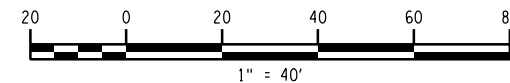
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**NOTES:**

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MATCH LINE, SEE DWG. GNP-02

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	<p>DATE: AUGUST 2023</p>	<p>CM No.: 122-359</p>	<p>SCALE: AS NOTED</p>	<p>DESIGNED: A.D.</p>	<p>DRAWN BY: K.H.D.</p>
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<p><b>GENERAL PLAN</b></p>					
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<p>SHEET NUMBER 2 of 10</p>					

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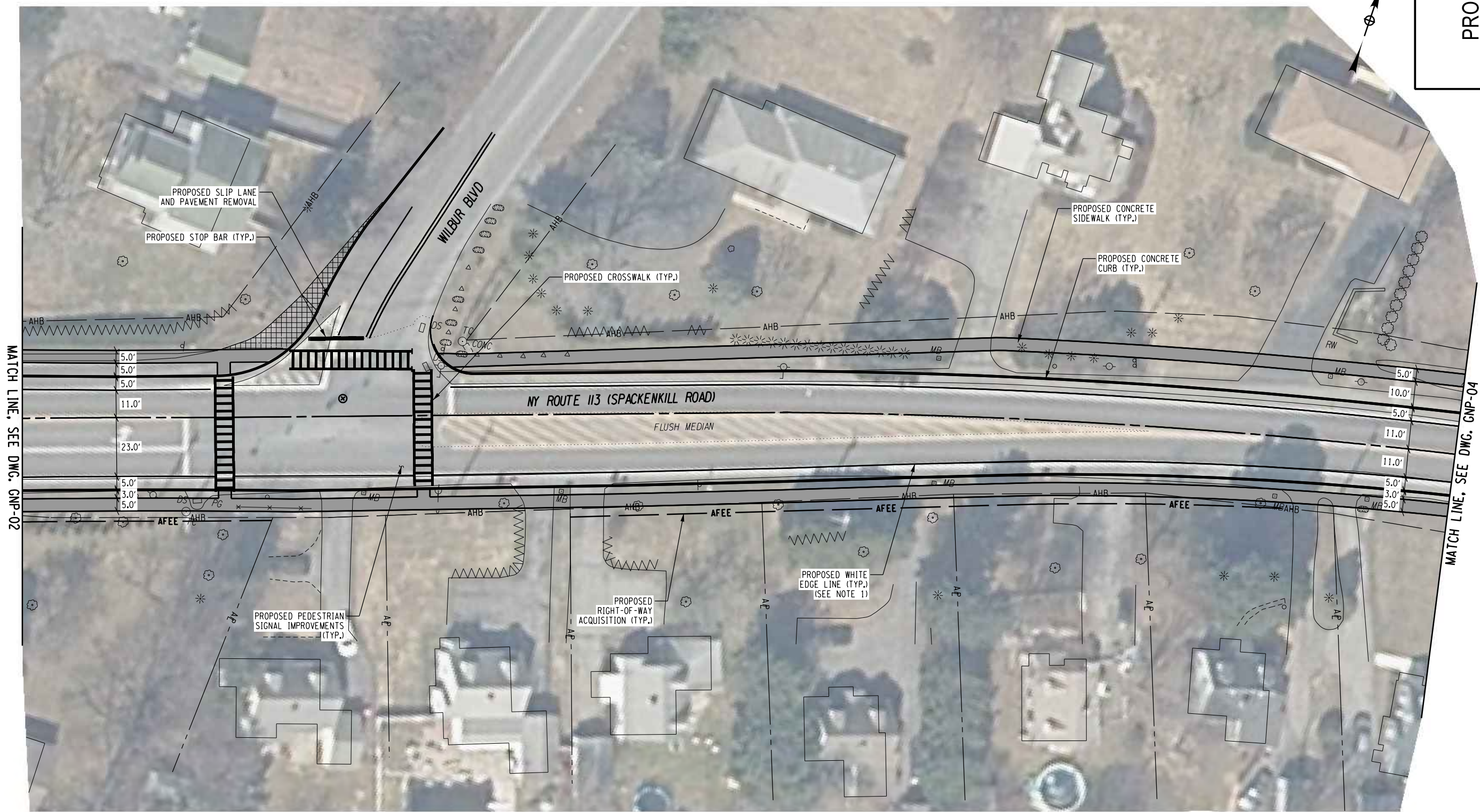
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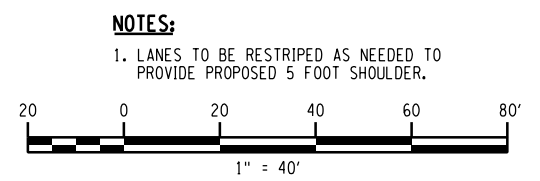
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MATCH LINE, SEE DWG. GNP-04



<p>NY ROUTE 113 (SPACKENKILL ROAD) SIDEWALK FEASIBILITY STUDY DUTCHESS COUNTY, NEW YORK</p>	<p>GENERAL PLAN</p>	<p>DATE: AUGUST 2023   CM No.: 122-359   SCALE: AS NOTED   DESIGNED: A.D.   DRAWN BY: K.H.D.   CHECKED: C.G.</p>	<p>PREPARED FOR: DUTCHESS COUNTY TRANSPORTATION CONCIL 85 CIVIC CENTER PLAZA, SUITE 107 POUGHKEEPSIE, NY 12601</p>	<table border="1"> <thead> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	REVISION	DATE	BY																																				
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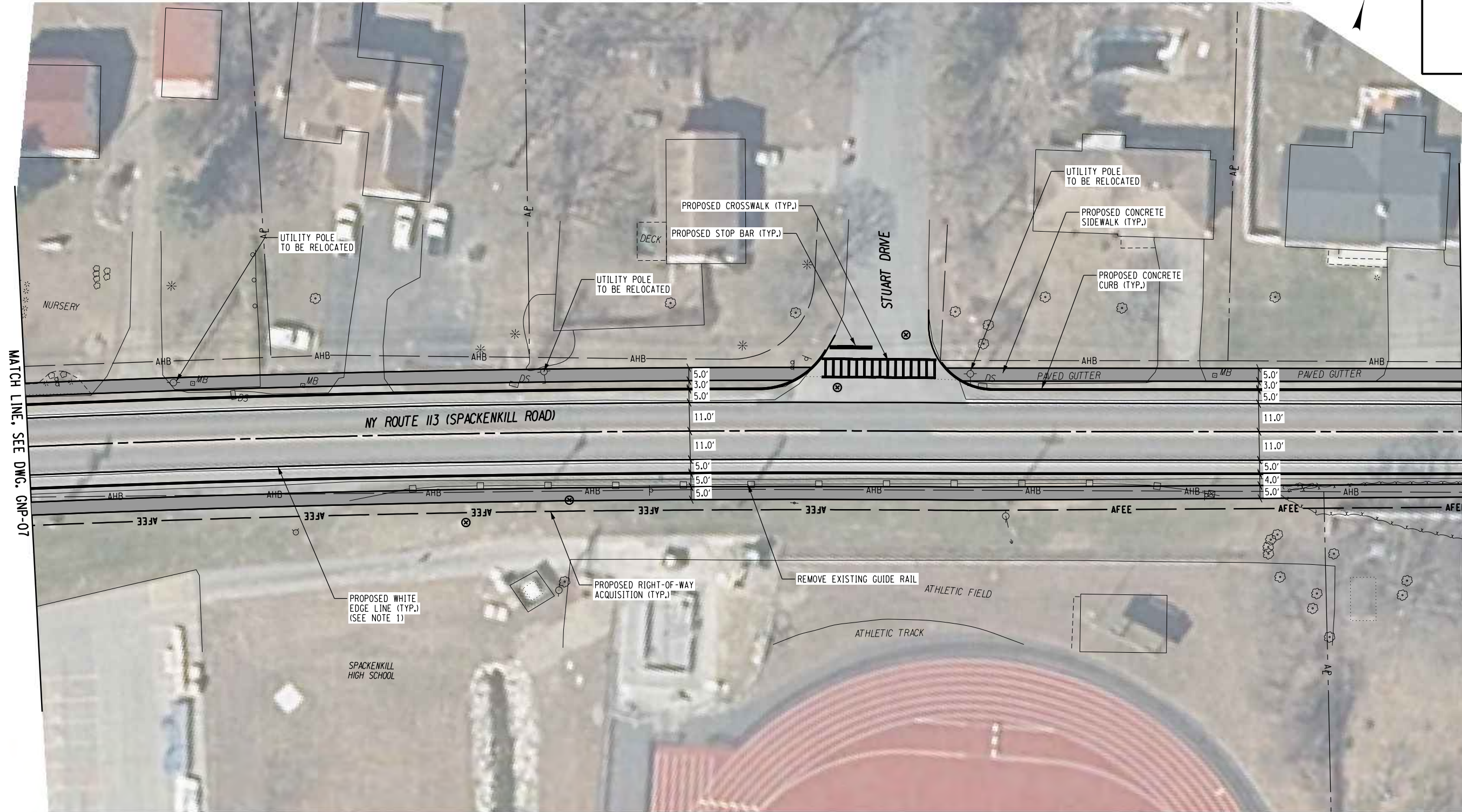
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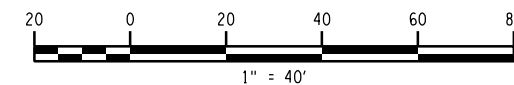
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85 CIVIC CENTER PLAZA, SUITE 107  
POUGHKEEPSIE, NY 12601

NY ROUTE 113 (SPACKENKILL ROAD)  
SIDEWALK FEASIBILITY STUDY  
DUTCHESS COUNTY, NEW YORK

GENERAL PLAN

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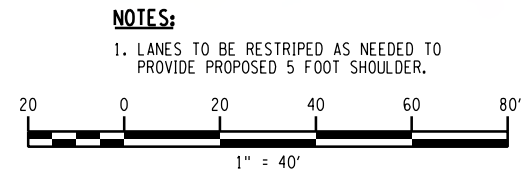
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 Poughkeepsie, NY 12601

DESIGNED: A.D. DRAWN BY: K.H.D. CHECKED: C.G.  
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NY ROUTE 113 (SPACKENKILL ROAD) SIDEWALK FEASIBILITY STUDY  
 DUTCHESS COUNTY, NEW YORK

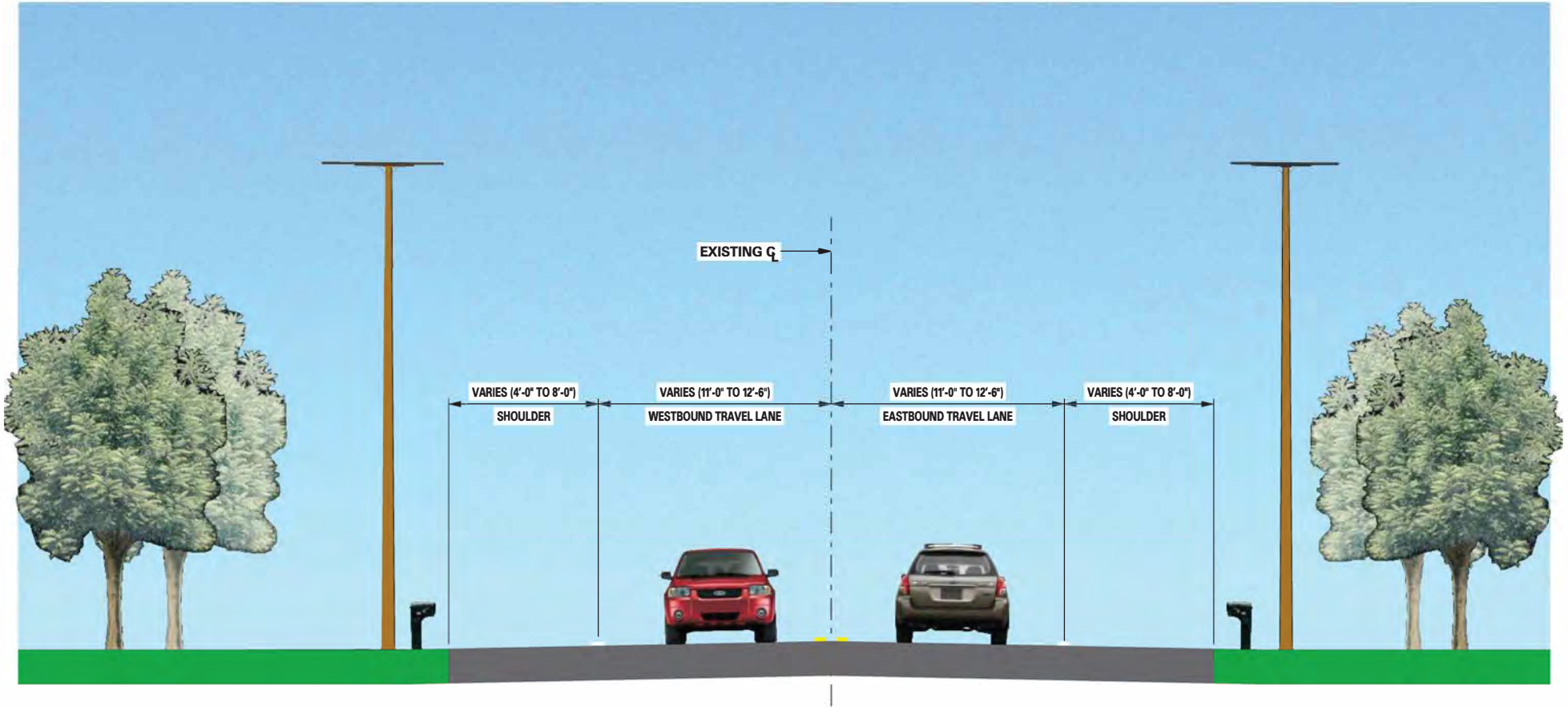
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DATE: 1/12/2022

## Appendix B

- Roadway Sections:
  - Existing
  - Sidewalk Installation Concept
  - Sidewalk Installation with Bike Lane Concept

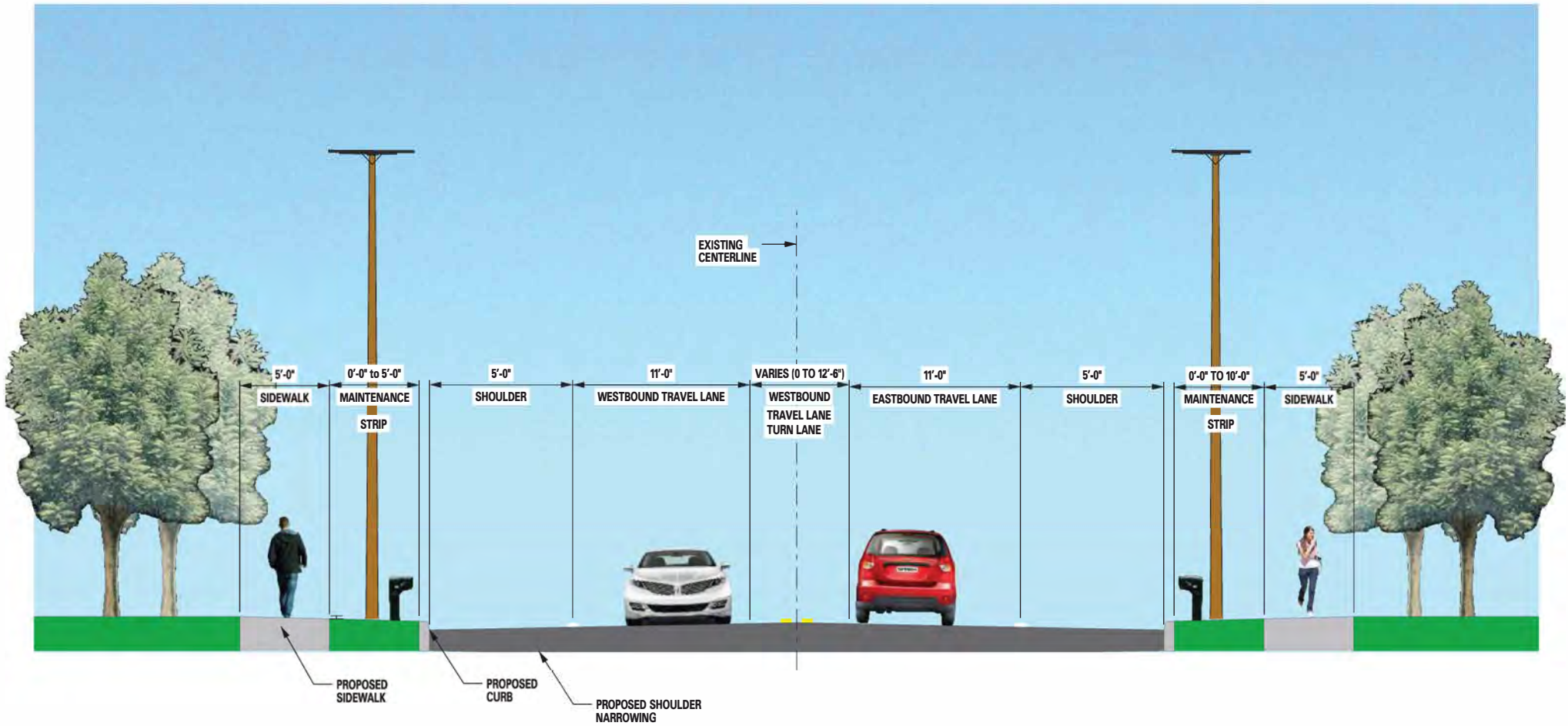
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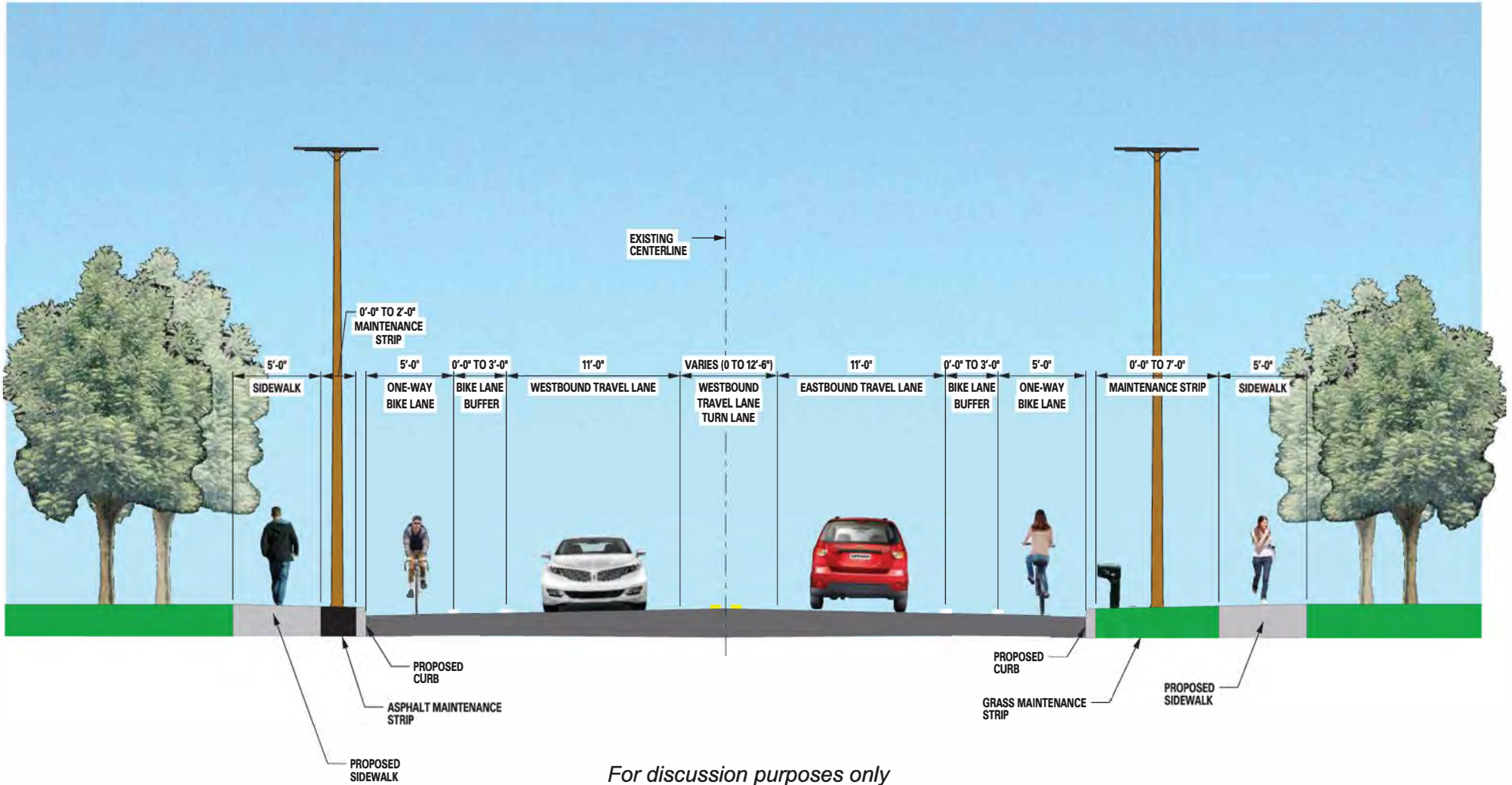
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## Appendix C

- Intersection Analyses:
  - Wilbur Blvd
  - Croft Rd
  - Friends School Ln

NY Route 113/Wilbur Boulevard Slip Lane and Right-Turn Lane Review

Level of Service Summary

Intersection	Control	2023 Existing	ETC (2025)			ETC+10 (2035)		
			Existing Geometry	No SB RTL, No WB Slip Lane	Signalized SB RTL w/ No WB Slip Lane	Existing Geometry	No SB RTL, No WB Slip Lane	Signalized SB RTL w/ No WB Slip Lane
NY Route 113/Wilbur Boulevard								
		S	AM Peak Hour					
NY Route 113 EB	L	A (6.2)	A (6.6)	B (19.8)	B (16.6)	A (9.0)	C (33.9)	C (25.9)
	T	A (2.0)	A (2.1)	A (8.3)	A (6.8)	A (2.2)	A (9.5)	A (7.7)
NY Route 113 WB	TR	A (9.4)	A (9.8)	C (31.1)	C (25.1)	B (11.6)	<b>F (64.2)</b>	D (45.3)
Wilbur Boulevard SB	L	D (44.9)	D (45.0)	--	C (29.7)	D (45.2)	--	C (27.3)
	R	Free	Free	--	C (31.7)	Free	--	C (31.0)
	[LR]	--	--	D (50.8)	--	--	<b>E (59.0)</b>	--
Overall		A (8.1)	A (8.4)	C (28.9)	C (21.5)		D (48.4)	C (32.4)
NY Route 113/Wilbur Boulevard								
		S	PM Peak Hour					
NY Route 113 EB	L	A (5.1)	A (5.4)	B (15.2)	B (12.1)	A (7.2)	C (23.7)	B (16.4)
	T	A (3.6)	A (3.7)	B (12.8)	A (9.7)	A (4.4)	B (16.7)	B (12.2)
NY Route 113 WB	TR	A (8.5)	A (8.9)	C (22.6)	B (18.0)	B (10.3)	C (31.0)	C (23.1)
Wilbur Boulevard SB	L	D (47.3)	D (47.6)	--	C (32.6)	D (47.8)	--	C (30.5)
	R	Free	Free	--	C (29.8)	Free	--	C (27.1)
	[LR]	--	--	D (52.4)	--	--	D (53.4)	--
Overall		A (6.8)	A (7.1)	C (22.1)	B (15.7)	A (8.2)	C (27.6)	B (18.4)

RTL = Right turn lane  
 S = Signalized intersection  
 EB, WB, NB, SB = Eastbound, Westbound, Northbound, and Southbound intersection approaches  
 L, T, R = Left-turn, Through, and/or Right-turn movements, [LR] = Change in Traffic Movement  
 X (Y.Y) = Level of service (Average delay in seconds per vehicle)

The assessment of the NY Route 113/Wilbur Blvd intersection indicates that the complete removal of the southbound right-turn lane at Wilbur Blvd would cause some movements to operate at LOS E/F during the AM peak hour under ETC+10 traffic volume conditions. The westbound free-flow slip lane on NY Route 113 can be removed; however, a short southbound right-turn lane on Wilbur Blvd should be maintained in order to provide adequate operations at the intersection during peak hours.

With the removal of the slip lane and addition of a signalized right turn lane, the traffic signal timing should be updated to include a southbound right-turn overlap phase with the protected eastbound left-turn phase, and vehicle detection should be provided on the southbound right-turn lane. In addition, the single westbound lane on NY Route 113 from the Wilbur Blvd intersection should flare back out to provide two westbound lanes prior to the Croft Rd intersection.

## NY Route 113/Croft Road – Left-Turn Lane Review

### Background

#### *From AASHTO 2018*

Site-specific conditions need to be evaluated to determine the economic feasibility of adding a turn lane. Physical constraints along the roadside, particularly in urban areas, may make the addition of a turn lane impractical.

The HCM indicates that exclusive left-turn lanes at signalized intersections should be installed as follows:

- Exclusive left-turn lanes should be provided where exclusive left-turn signal phasing is provided;
- Exclusive left-turn lanes should be considered where left-turn volumes exceed 100 veh/h (left-turn lanes may be provided for lower volumes as well based on the roadway agency's assessment of the need, the state of local practice, or both); and
- Double left-turn lanes should be considered where left-turn volumes exceed 300 veh/h.

Local conditions and the cost of right-of-way often influence the type of intersection selected as well as many of the design details. Limited sight distance, for example, may make it desirable to control traffic by yield signs, stop signs, or traffic signals when the traffic densities are less than those ordinarily considered appropriate for such control. The alignment and grade of the intersecting roads and the angle of intersection may make it advisable to channelize or use auxiliary pavement areas, regardless of the traffic densities. In general, traffic service, roadway design designation, physical conditions, and cost of right-of-way are considered jointly in choosing the type of intersection.

#### *From NCHRP Report 279*

Signalized capacity analysis procedures should be used to determine lane arrangements. Because of the many variables involved, it is not feasible to develop guidelines for all conditions. However, the following general "rules of thumb" are useful in evaluating left-turn lane needs at specific locations.

Separate treatment of left turns will be required if:

- (1) left-turn design volume exceeds 20 percent of total approach volumes; or
- (2) left-turn design volume exceeds 100 vehicles per hour in peak periods.

This usually means either separate turning lanes, separate phases for left turns, or both.

### Assessment

A review of peak hour traffic volumes at the NY Route 113/Croft Road intersection indicates that the eastbound left-turn movement does not meet the volume-based guidelines for the installation of a left-turn lane. In addition, a protected left-turn phase is only provided during morning and afternoon school peak periods currently to help facilitate the movement of vehicles to and from the school; however, it is noted that this intersection would continue to operate adequately if the left-turn phase was not provided during these conditions. This suggests that the signal phasing guideline is not met.

A review of crashes at this intersection indicates that of the 13 total crashes experienced at this intersection over the last four years, there were six (6) rear-end crashes, two (2) right-angle crashes, three (3) overtaking collisions, and a couple of collisions with either a fixed object or an animal. The types of crashes and their descriptions did not indicate a predominant issue at this intersection with the eastbound left-turn movement.

The review of these guidelines suggests that a left-turn lane is not required at the NY Route 113/Croft Road intersection.

# MEMORANDUM

DRAFT



ENGINEERS  
PLANNERS  
SURVEYORS

Date: March 6, 2023

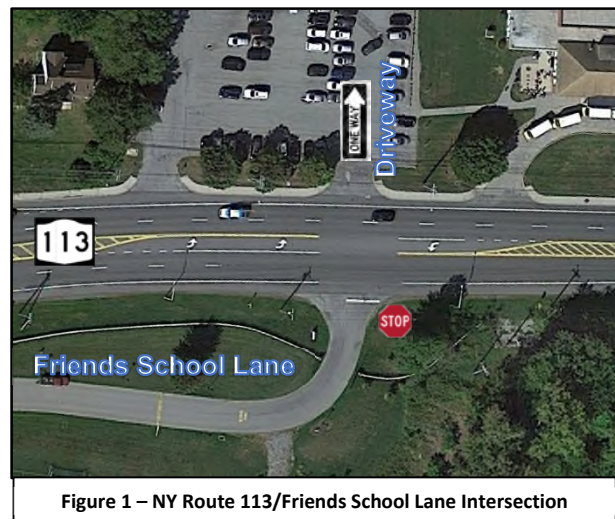
To: File

From: Mark Nadolny

Project: NY Route 113/Friends School Lane Intersection Evaluation, Hamlet of Spackenkill, Town of Poughkeepsie, Dutchess County, New York

Re: Traffic Signal Warrant Evaluation

The NY Route 113/Friends School Lane intersection located in the Hamlet of Spackenkill was reviewed to determine if existing conditions meet traffic signal warrants provided in the *2009 Manual of Uniform Traffic Control Devices* (National MUTCD), published by the Federal Highway Administration (FHWA) for the installation of a traffic signal. The study area is shown on Figure 1. This assessment includes a review of existing conditions such as traffic volumes, vehicle speeds, crashes, and the physical characteristics of the intersection. The following summarizes the traffic signal warrant assessment.



## 1.0 Existing Conditions

### Study Area Intersection

The NY Route 113/Friends School Lane intersection is a four-leg intersection controlled by a stop sign on the northbound Friends School Lane approach which provides access to the *Oakwood Friends School*. The north leg of the intersection is a one-way entering access driveway provided for the *Mid-Hudson Regional Early Education Center*. The northbound approach provides a single lane for shared travel movements while the eastbound and westbound NY Route 113 approaches provide an exclusive left-turn lane and two through lanes with shared right-turn movements. A sidewalk is provided on the north side of NY Route 113. The posted speed limit on NY Route 113 is 40-mph while the posted speed limit on Friends School Lane is 15-mph.

### Data Collection

Turning movement counts (TMCs) were conducted at the study area intersection on Tuesday, January 24, 2023 from 6:00 a.m. to 7:00 p.m. to correspond with the peak operational times of local schools and with peak commuter time periods. The observed peak hours generally occurred between 7:30 and 8:30 a.m. during the morning peak period and between 4:30 to 5:30 p.m. during the afternoon peak period.

In addition, traffic volume and travel speed data were collected by the New York State Department of Transportation (NYSDOT) on NY Route 113 in October 2016. NY Route 113 serves approximately 20,390 vehicles per day (vpd) in the project corridor and the 85<sup>th</sup> percentile operating speed was measured to be approximately 45-mph. The detailed traffic volume and speed data is included under Attachment A.

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## 2.0 Signal Warrant Evaluation

### Description of Signal Warrants

The existing traffic conditions and physical characteristics of the intersection were compared to signal warrant criteria contained in the National MUTCD published by FHWA to determine if existing traffic conditions would warrant the installation of a traffic signal. The National MUTCD specifies the minimum criteria that must be met in order for a traffic signal to be justified. The satisfaction of a signal warrant in itself is not necessarily justification for a traffic signal. Other engineering and operational factors must be considered. The National MUTCD contains eight warrants, five of which were applicable and evaluated in detail:

- Warrant 1 – Eight-Hour Vehicular Volume - This warrant is satisfied if for any eight hours of an average day the traffic volumes for Condition A or Condition B specified in Table 4C-1 of the National MUTCD are met for the main arterial and the higher volume side road approach to the intersection.
- Warrant 2 – Four-Hour Vehicular Volume - This warrant is met when for any four hours of an average day, points plotted on the graph presented on Figure 4C-2 of the National MUTCD fall above the appropriate curve.
- Warrant 3 – Peak Hour - This warrant is met when for any one hour of an average day, points plotted on the graph presented on Figure 4C-4 of the National MUTCD fall above the appropriate curve.
- Warrant 4 – Pedestrian Volume - The Pedestrian Volume warrant is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street. This warrant is used when for any four hours of an average day, points plotted on the graph presented on Figure 4C-8 of the National MUTCD fall above the appropriate curve.
- Warrant 7 – Crash Experience - The Crash Experience warrant is intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal. This warrant is used when five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage exceeding the applicable requirements for a reportable crash. In addition, for each of any eight hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Conditions A or B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant.

### Detailed Signal Warrant Analysis

- Warrants 1, 2, and 3 – Table 1 (Existing 2023 Traffic Conditions) summarizes the analysis of Warrants 1, 2, and 3 based on the traffic volume data collected by CM. A check mark under the “Signal Warrants Met?” column indicates that the criteria are satisfied for that hour. The detailed evaluation for Warrants 1, 2, and 3 is included under Attachment B.

**Table 1 – Summary of Signal Warrant Analysis – Existing (2023) Traffic Volume Conditions**

Time Begin (1-hour period)	Existing Volumes <sup>1</sup>			Signal Warrants Met?			
	NY Route 113 EB/WB	Driveway SB	Friends School Lane NB	#1		#2	#3
				Cond. A	Cond. B		
6:00 AM	527	0	2	No	No	No	No
7:00 AM	1,399	0	9	No	No	No	No
8:00 AM	1,492	0	19	No	No	No	No
9:00 AM	1,036	0	4	No	No	No	No
10:00 AM	1,103	0	5	No	No	No	No
11:00 AM	1,190	2	5	No	No	No	No
12:00 PM	1,298	1	4	No	No	No	No
1:00 PM	1,266	0	1	No	No	No	No
2:00 PM	1,447	0	3	No	No	No	No
3:00 PM	1,642	0	18	No	No	No	No
4:00 PM	1,778	0	17	No	No	No	No
5:00 PM	1,895	0	16	No	No	No	No
6:00 PM	1,250	0	23	No	No	No	No
Required Volumes	Two Lane Major Street			420	630	See Figure 4C-2	See Figure 4C-4
	One Lane Minor Street			105	53		
Overall Warrant Met?				No	No	No	No

<sup>1</sup> Volumes at the NY Route 113/Friends School Lane/Driveway intersection per Tri-State TMC data.

Table 1 indicate traffic volumes over the course of a typical day at the study intersection are not high enough under existing traffic volume conditions to meet the minimum traffic signal criteria for Warrants 1, 2, and 3.

- Warrant 4 – Pedestrians were observed during turning movement counts. Table 2 summarizes the analysis of Warrant 4 using this data. A check mark under the “Signal Warrant #4 Met?” column indicates that the criteria are satisfied for that hour.

**Table 2 – Summary of Signal Warrant 4 Analysis**

Time Begin (1-hour period)	Existing Traffic Volume on NY Route 113 <sup>1</sup>	Existing Pedestrian Volume Crossing NY Route 113 <sup>1</sup>	Signal Warrant #4 Met?
6:00 AM	527	0	No
7:00AM	1,399	0	No
8:00 AM	1,492	0	No
9:00 AM	1,036	0	No
10:00 AM	1,103	0	No
11:00 AM	1,190	0	No
12:00 PM	1,298	0	No
1:00 PM	1,266	0	No
2:00 PM	1,447	0	No
3:00 PM	1,642	0	No
4:00 PM	1,778	0	No
5:00 PM	1,895	0	No
6:00 PM	1,250	0	No
Required Volumes	Two Lane Major Street – Vehicles		See Figure 4C-8
	Crossing Major Street – Pedestrians		
Overall Warrant Met?			No

<sup>1</sup> Traffic volumes on NY Route 113 and pedestrian volumes crossing NY Route 113 per the Tri-State intersection turn movement count data.

Table 2 indicates existing pedestrian volumes observed at the study intersection during the 13 peak hours in the middle of the day are not high enough to meet the minimum traffic signal criteria for Warrant 4. The existing observed pedestrian volumes at the intersection fell well short of the minimum 93 pedestrian threshold associated with mainline traffic volumes during these peak periods. It is not anticipated that this intersection experiences heavy pedestrian usage during the remaining hours of the day or that future pedestrian usage will increase to levels that would warrant the installation of a traffic signal; therefore, Warrant 4 is not satisfied under these conditions.

- Warrant 7 – Table 3 summarizes crash data provided by NYSDOT for nine complete years (2014 through 2022). A check mark under the “Signal Warrant #7 Met?” column would indicate that the warrant is met.

**Table 3 – Summary of Signal Warrant 7 Analysis**

NY Route 113/ Friends School Lane/ Driveway Intersection	Collision Severity			Collision Type				Signal Warrant #7 Met?
	Property Damage	Injury	Fatal	Right Angle	Left-Turn	Head On	Embankment	
2014	0	0	0	0	0	0	0	No
2015	0	0	0	0	0	0	0	No
2016	0	0	0	0	0	0	0	No
2017	0	0	0	0	0	0	0	No
2018	0	0	0	0	0	0	0	No
2019	0	1	0	0	0	0	1	No
2020	0	0	0	0	0	0	0	No
2021	0	0	0	0	0	0	0	No
2022	0	0	0	0	0	0	0	No
<b>Required Volumes</b>	<b>Two-Lane Major Street One-Lane Minor Street</b>							<b>See Table 4C-1</b>
<b>Overall Warrant Met?</b>								<b>No</b>

Table 3 indicates that the number of crashes experienced at this intersection each year from 2014 to 2022 does not meet the minimum of five accidents required for the warrant. This indicates that Warrant 7 is not satisfied under these conditions.

### 3.0 Conclusion

A review of the signal warrant criteria contained in the 2009 National MUTCD indicates that none of the five warrants investigated met the minimum criteria for the installation of a traffic signal at the NY Route 113/Friends School Lane/Driveway intersection; therefore, a traffic signal is not recommended at this location.

N:\Projects\2022\122-359 DCTC - Spackenkill Sidewalk\Working\Traffic\Signal Warrant\20230306\_traffic signal warrant memo\_122359.docx

DRAFT

Attachment A  
Automatic Traffic Recorder Data and  
Turning Movement Counts

NY Route 113/Friends School Lane Intersection Evaluation  
Hamlet of Spackenkill, Town of Poughkeepsie, New York

DRAFT

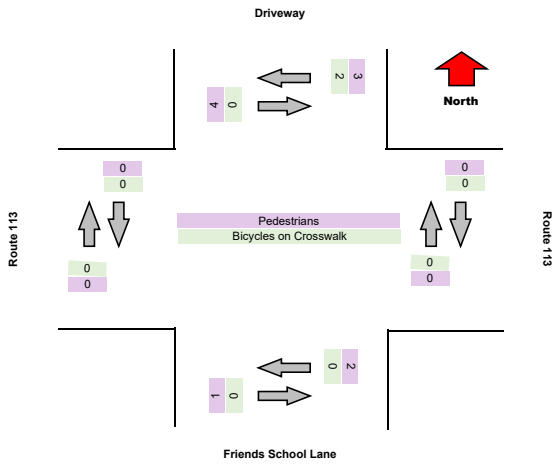
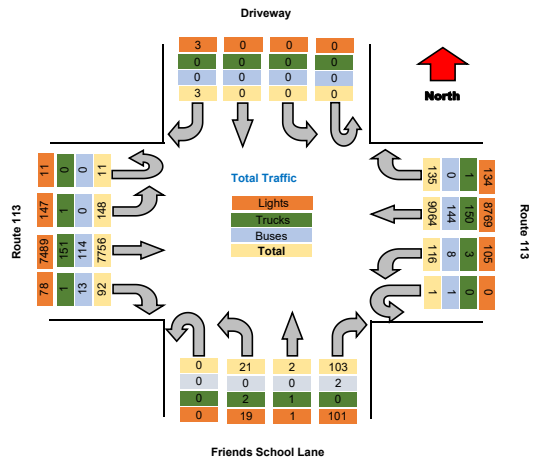
Project	Creighton Manning
Project Code	11221
Site Name	Route 113 & Friends School
Legs and Movements	All Processed Legs & Mov
Bin Size	15 minutes
Survey Date	2023-01-24, Tuesday
Location	Route 113 & Friends School
Latitude and Longitude	41.658578, -73.925888

	Start	End	PHF
AM Peak	2023-01-24 07:30:00	2023-01-24 08:30:00	0.922
PM Peak	2023-01-24 16:30:00	2023-01-24 17:30:00	0.938

### Turning Movement Data

Leg Direction	Driveway								Route 113								Friends School Lane								Route 113								Total		
	Southbound				Westbound				Northbound				Eastbound				Northbound				Eastbound														
Start Time	Right	Thru	Left	U-Turn	App Total	Peak CV	Peak CV%	Right	Thru	Left	U-Turn	App Total	Peak CV	Peak CV%	Right	Thru	Left	U-Turn	App Total	Peak CV	Peak CV%	Right	Thru	Left	U-Turn	App Total	Peak CV	Peak CV%	Right	Thru	Left	U-Turn	App Total	Peak CV	Peak CV%
6:00:00	0	0	0	0	0	0	0	0	47	0	0	47	0	0	1	0	0	0	2	0	0	0	26	0	0	26	0	0	0	0	26	0	0	75	
6:15:00	0	0	0	0	0	0	0	0	79	0	0	79	0	0	0	0	0	0	0	0	0	0	35	0	0	35	0	0	0	0	35	0	0	110	
6:30:00	0	0	0	0	0	0	0	0	94	1	0	95	0	0	0	0	0	0	0	0	0	1	42	0	0	43	0	0	0	0	43	0	0	138	
6:45:00	0	0	0	0	0	0	0	0	144	0	0	144	0	0	0	0	0	0	0	0	0	0	60	2	0	62	0	0	0	0	62	0	0	206	
Hourly Total	0	0	0	0	0	0	0	0	364	1	0	365	0	0	1	0	0	0	2	0	0	1	156	2	0	158	0	0	0	0	158	0	0	529	
7:00:00	0	0	0	0	0	0	0	2	143	0	0	145	0	0	0	0	0	0	0	0	1	0	73	3	0	76	0	0	0	0	76	0	0	221	
7:15:00	0	0	0	0	0	0	0	4	178	2	0	184	0	0	0	0	0	0	0	0	0	0	138	3	0	141	0	0	0	0	141	0	0	325	
7:30:00	0	0	0	0	0	0	0	2	252	5	0	259	0	0	4	0	1	0	5	0	0	4	151	5	0	160	0	0	0	0	160	0	0	424	
7:45:00	0	0	0	0	0	0	0	2	282	12	0	290	0	0	4	0	0	0	4	0	0	2	131	3	0	136	0	0	0	0	136	0	0	438	
Hourly Total	0	0	0	0	0	0	0	12	856	19	0	886	0	0	8	0	1	0	9	0	1	6	493	14	0	513	0	0	0	0	513	0	0	1408	
8:00:00	0	0	0	0	0	0	0	10	233	6	0	249	0	0	4	0	2	0	6	0	0	8	101	8	0	117	0	0	0	0	117	0	0	372	
8:15:00	0	0	0	0	0	0	0	24	231	11	0	266	0	0	5	0	1	0	6	0	0	14	86	10	0	110	0	0	0	0	110	0	0	382	
8:30:00	0	0	0	0	0	0	0	10	271	1	0	282	0	0	4	0	1	0	5	0	0	2	119	9	0	130	0	0	0	0	130	0	0	417	
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10:30:00	0	0	0	0	0	0	0	0	168	2	0	170	0	0	1	0	0	0	1	0	0	0	93	2	0	95	0	0	0	0	95	0	0	266	
10:45:00	0	0	0	0	0	0	0	1	161	0	1	163	0	0	2	0	0	0	2	0	0	0	120	4	1	125	0	0	0	0	125	0	0	290	
Hourly Total	0	0	0	0	0	0	0	4	685	4	1	694	0	0	4	0	1	0	5	0	0	0	400	7	2	409	0	0	0	0	409	0	0	1188	
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11:30:00	0	0	0	0	0	0	0	0	163	3	0	166	0	0	2	0	0	0	2	0	0	0	133	1	0	134	0	0	0	0	134	0	0	302	
11:45:00	0	0	0	0	0	0	0	4	184	1	0	189	0	0	2	0	0	0	2	0	0	1	117	3	0	121	0	0	0	0	121	0	0	312	
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12:00:00	1	0	0	0	1	1	0	1	162	2	0	165	0	0	1	0	0	0	1	0	0	0	163	4	0	167	0	0	0	0	167	0	0	334	
12:15:00	0	0	0	0	0	0	0	0	155	0	0	155	0	0	1	0	0	0	1	0	0	1	166	1	0	168	0	0	0	0	168	0	0	324	
12:30:00	0	0	0	0	0	1	0	1	170	0	0	171	0	0	1	0	0	0	1	0	0	0	159	3	0	162	0	0	0	0	162	0	0	334	
12:45:00	0	0	0	0	0	0	0	0	172	1	0	173	0	0	0	0	1	0	1	0	0	0	134	3	0	137	0	0	0	0	137	0	0	311	
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15:15:00	0	0	0	0	0	0	0	1	182	6	0	189	0	0	1	0	0	0	2	0	0	7	215	1	0	223	0	0	0	0	223	0	0	414	
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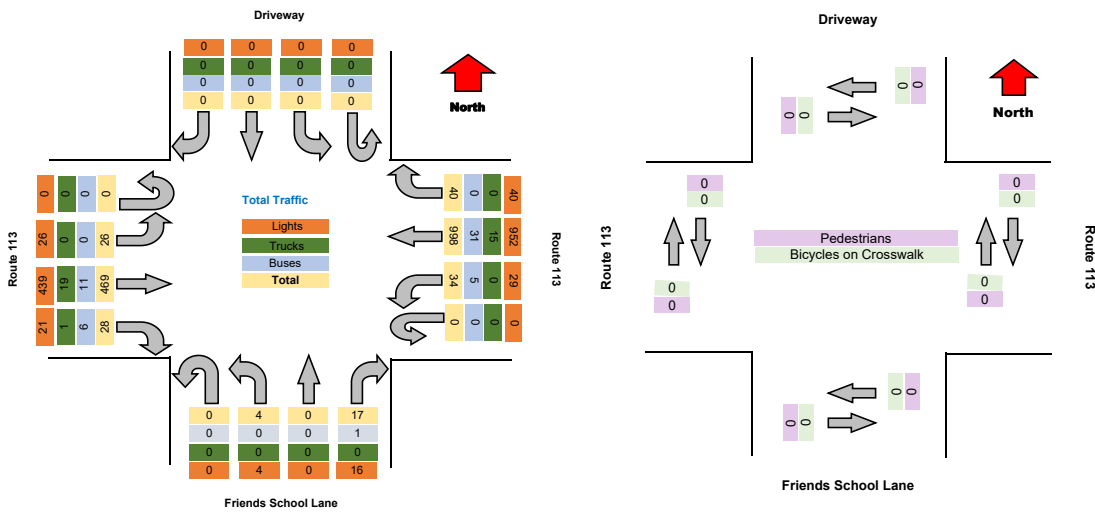
Turning Movement Data Plot



Turning Movement Peak Hour Data (AM)

7:30:00

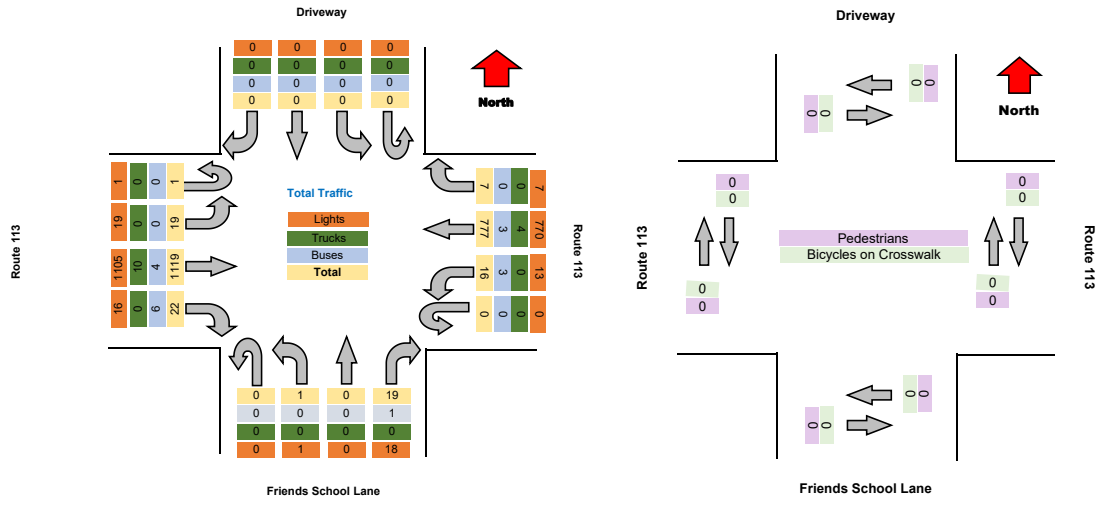
Leg	Driveway										Route 113										Friends School Lane										Route 113										Total
	Southbound					Westbound					Northbound					Eastbound																									
Start Time	Right	Thru	Left	U-Turn	App Total	Right	Thru	Left	U-Turn	App Total	Right	Thru	Left	U-Turn	App Total	Right	Thru	Left	U-Turn	App Total																					
7:30:00	0	0	0	0	0	2	252	5	0	259	4	0	1	0	5	4	151	5	0	160																					
7:45:00	0	0	0	0	0	4	282	12	0	298	4	0	0	0	4	2	131	3	0	136																					
8:00:00	0	0	0	0	0	10	233	6	0	249	4	0	2	0	6	8	101	8	0	117																					
8:15:00	0	0	0	0	0	25	231	11	0	255	5	0	1	0	6	14	26	10	0	40																					
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>968</b>	<b>34</b>	<b>0</b>	<b>1022</b>	<b>17</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>21</b>	<b>28</b>	<b>469</b>	<b>26</b>	<b>0</b>	<b>523</b>																					
% Approach	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.0%	3.1%	93.1%	3.2%	0.0%	0.0%	81.0%	0.0%	19.0%	0.0%	0.0%	5.4%	89.7%	5.0%	0.0%	0.0%																					
% Total	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	61.8%	2.1%	0.0%	66.3%	1.1%	0.0%	2.2%	0.0%	1.3%	1.7%	29.0%	1.6%	0.0%	32.4%																					
PHF	0.000	0.000	0.000	0.000	0.000	0.417	0.885	0.708	0.000	0.899	0.850	0.000	0.500	0.000	0.875	0.500	0.778	0.650	0.000	0.817																					
Lights	0	0	0	0	0	40	952	29	0	1021	16	0	4	0	20	21	439	26	0	486																					
% Lights	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	95.2%	85.3%	0.0%	95.2%	94.1%	0.0%	100.0%	0.0%	95.2%	75.0%	93.6%	100.0%	0.0%	92.9%																					
Trucks	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	1	19	0	0	20																					
% Trucks	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	4.1%	0.0%	0.0%	3.8%																					
Buses	0	0	0	0	0	0	31	5	0	36	1	0	0	0	1	6	11	0	0	17																					
% Buses	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	14.7%	0.0%	0.0%	5.9%	0.0%	0.0%	0.0%	0.0%	21.4%	2.3%	0.0%	0.0%	0.0%																					
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																					
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%																					
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																					
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%																					



Turning Movement Peak Hour Data (PM)

16:30:00

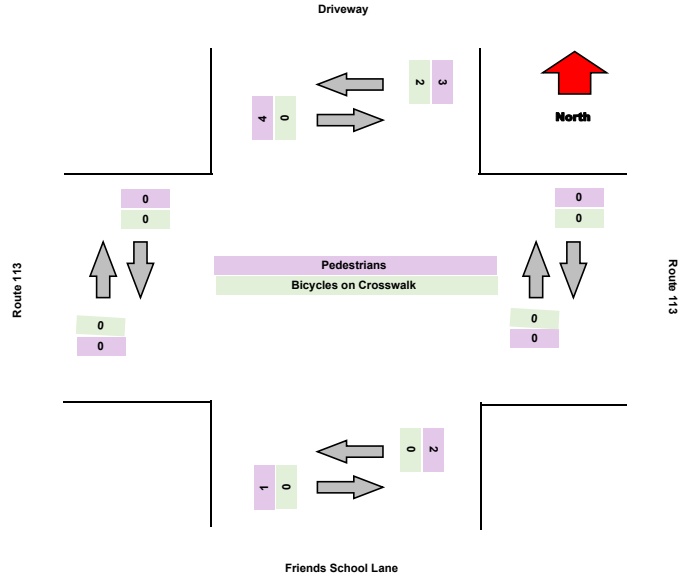
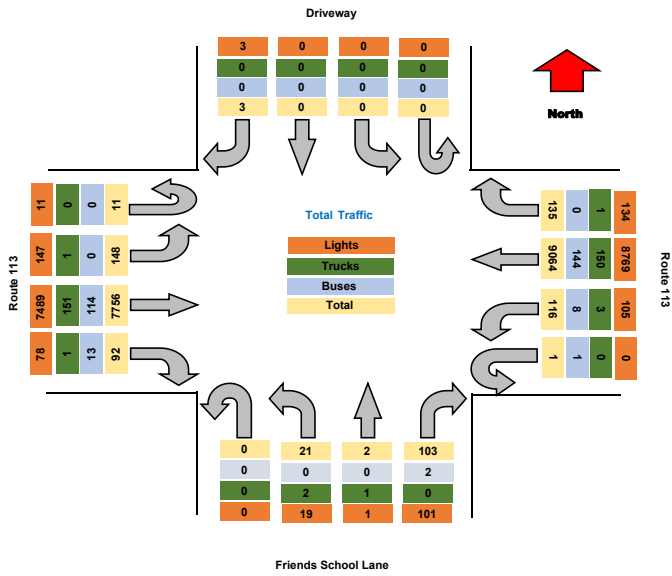
Leg Direction	Driveway										Route 113						Friends School Lane						Route 113						Total
	Southbound										Westbound						Northbound						Eastbound						
	Right	Thru	Left	U-Turn	App Total	Peak CV	Peak CV%	Right	Thru	Left	U-Turn	App Total	Peak CV	Peak CV%	Right	Thru	Left	U-Turn	App Total	Peak CV	Peak CV%	Right	Thru	Left	U-Turn	App Total	Peak CV	Peak CV%	
16:30:00	0	0	0	0	0	0	0	1	190	3	0	194	0	0	1	0	0	0	1	0	0	5	261	5	0	271	0	0	466
16:45:00	0	0	0	0	0	0	0	0	202	5	0	207	0	0	8	0	1	0	9	0	0	9	250	6	0	265	0	0	481
17:00:00	0	0	0	0	0	0	0	4	187	4	0	195	0	0	8	0	0	0	8	0	0	5	294	3	1	303	0	0	606
17:15:00	0	0	0	0	0	0	0	7	198	4	0	204	0	0	2	0	0	0	2	0	0	3	211	5	0	222	0	0	628
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>777</b>	<b>16</b>	<b>0</b>	<b>800</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>1119</b>	<b>19</b>	<b>1</b>	<b>1161</b>	<b>0</b>	<b>0</b>	<b>1981</b>
% Approach	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.0%	0.0%	0.0%	0.9%	97.1%	2.0%	0.0%	0.0%	0.0%	0.0%	95.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	1.9%	96.4%	1.8%	0.1%	0.0%	0.0%	0.0%	
% Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	39.2%	0.8%	0.0%	40.4%	0.0%	0.0%	1.0%	0.0%	0.1%	0.0%	1.0%	0.0%	0.0%	1.1%	56.5%	1.0%	0.1%	68.6%	0.0%	0.0%	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.438	0.982	0.800	0.000	0.966	0.000	0.000	0.594	0.000	0.250	0.000	0.556	0.000	0.000	0.611	0.891	0.792	0.250	0.901	0.000	0.000	0.938
Lights	0	0	0	0	0	0	0	7	770	13	0	790	0	0	18	0	1	0	19	0	0	16	1105	19	1	1141	0	0	1960
% Lights	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	99.1%	81.3%	0.0%	98.8%	0.0%	0.0%	82.7%	0.0%	100.0%	0.0%	95.0%	0.0%	0.0%	72.7%	99.7%	100.0%	100.0%	98.3%	0.0%	0.0%	98.2%
Trucks	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	14
% Trucks	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.9%	0.0%	0.0%	0.7%
Trucks	0	0	0	0	0	0	0	0	3	3	0	6	0	0	1	0	0	0	1	0	0	6	4	0	0	10	0	0	17
% Buses	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	18.8%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	27.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.9%	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



Turning Movement Data

Leg	Driveway										Route 113						Friends School Lane						Route 113						Total												
	Southbound					Westbound					Northbound						Eastbound																								
Direction	Right	Thru	Left	U-Turn	App Total	Peds	CW	Peds	CW	Right	Thru	Left	U-Turn	App Total	Peds	CW	Peds	CW	Right	Thru	Left	U-Turn	App Total	Peds	CW	Peds	CW														
6:00:00	0	0	0	0	0	0	0	0	0	0	0	47	0	0	47	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	26	0	0	26	0	0	0	0	0	75
6:15:00	0	0	0	0	0	0	0	0	0	0	0	79	0	0	79	0	0	0	0	0	0	0	0	0	0	0	31	0	0	31	0	0	0	0	0	0	0	0	0	0	110
6:30:00	0	0	0	0	0	0	0	0	0	0	0	94	1	0	95	0	0	0	0	0	0	0	0	0	0	0	42	0	0	43	0	0	0	0	0	138					
6:45:00	0	0	0	0	0	0	0	0	0	0	0	144	0	0	144	0	0	0	0	0	0	0	0	0	0	0	60	2	0	62	0	0	0	0	0	206					
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	364	1	0	365	0	0	0	0	0	1	1	0	0	2	0	1	159	2	0	162	0	0	0	0	0	529				
7:00:00	0	0	0	0	0	0	0	0	0	0	2	143	0	0	145	0	0	0	0	0	0	0	0	0	0	0	73	3	0	76	0	0	0	0	0	221					
7:15:00	0	0	0	0	0	0	0	0	0	0	4	178	2	0	184	0	0	0	0	0	0	0	0	0	0	0	138	3	0	141	0	0	0	0	0	325					
7:30:00	0	0	0	0	0	0	0	0	0	0	2	252	5	0	259	0	0	0	0	0	4	0	1	0	5	0	4	151	5	0	160	0	0	0	0	0	424				
7:45:00	0	0	0	0	0	0	0	0	0	0	4	292	12	0	299	0	0	0	0	0	4	0	0	0	4	0	2	131	3	0	136	0	0	0	0	0	438				
Hourly Total	0	0	0	0	0	0	0	0	0	0	12	855	19	0	886	0	0	0	0	0	8	0	1	0	9	0	6	493	14	0	513	0	0	0	0	0	1408				
8:00:00	0	0	0	0	0	0	0	0	0	0	10	233	6	0	249	0	0	0	0	0	4	0	2	0	6	0	8	101	8	0	117	0	0	0	0	0	372				
8:15:00	0	0	0	0	0	0	0	0	0	0	24	231	11	0	266	0	0	0	0	0	5	0	1	0	6	0	14	86	10	0	110	0	0	0	0	0	382				
8:30:00	0	0	0	0	0	0	0	0	0	0	10	271	1	0	282	0	0	0	0	0	4	0	1	0	5	0	2	119	9	0	130	0	0	0	0	0	417				
8:45:00	0	0	0	0	0	0	0	0	0	0	11	210	5	0	226	0	0	0	0	0	0	1	1	0	2	0	1	101	10	0	112	0	0	0	0	0	340				
Hourly Total	0	0	0	0	0	0	0	0	0	0	55	945	23	0	1023	0	0	0	0	0	13	1	5	0	19	0	25	407	37	0	469	0	0	0	0	0	1511				
9:00:00	0	0	0	0	0	0	0	0	0	0	9	180	3	0	192	0	0	0	0	0	2	0	1	0	3	0	1	80	2	0	83	0	0	0	0	0	278				
9:15:00	0	0	0	0	0	0	0	0	0	0	4	171	0	0	175	0	0	0	0	0	0	0	0	0	0	0	1	78	1	0	80	0	0	0	0	0	255				
9:30:00	0	0	0	0	0	0	0	0	0	0	2	189	0	0	191	0	0	0	0	0	0	0	0	0	0	0	0	73	2	0	75	0	0	0	0	0	266				
9:45:00	0	0	0	0	0	0	0	0	0	0	3	187	0	0	170	0	0	0	0	0	1	0	0	0	1	0	1	69	0	0	70	0	0	0	0	0	241				
Hourly Total	0	0	0	0	0	0	0	0	0	0	18	707	3	0	728	0	0	0	0	0	3	0	1	0	4	0	3	300	5	0	308	0	0	0	0	0	1040				
10:00:00	0	0	0	0	0	0	0	0	0	0	0	174	1	0	175	0	0	0	0	0	1	0	1	0	1	0	0	89	0	0	89	0	0	0	0	0	265				
10:15:00	0	0	0	0	0	0	0	0	0	0	3	182	1	0	186	0	0	0	0	0	1	1	0	0	1	0	0	98	1	1	100	0	0	0	0	0	287				
10:30:00	0	0	0	0	0	0	0	0	0	0	0	168	2	0	170	0	0	0	0	0	1	0	0	0	1	0	0	93	2	0	95	0	0	0	0	0	266				
10:45:00	0	0	0	0	0	0	0	0	0	0	1	161	0	1	163	0	0	0	0	0	2	0	0	0	2	0	0	120	4	1	125	0	0	0	0	0	290				
Hourly Total	0	0	0	0	0	0	0	0	0	0	4	685	4	1	694	0	0	0	0	0	4	0	1	0	5	0	0	400	7	2	409	0	0	0	0	0	1108				
11:00:00	2	0	0	0	2	0	0	0	0	0	1	162	0	0	163	0	0	0	0	0	1	0	0	0	1	0	0	120	2	0	122	0	0	0	0	0	288				
11:15:00	0	0	0	0	0	0	0	0	0	0	0	152	2	0	154	0	0	0	0	0	0	0	0	0	0	0	2	138	1	0	141	0	0	0	0	0	295				
11:30:00	0	0	0	0	0	0	0	0	0	0	0	163	3	0	166	0	0	0	0	0	2	0	0	0	2	0	0	133	1	0	134	0	0	0	0	0	302				
11:45:00	0	0	0	0	0	0	0	0	0	0	4	184	1	0	189	0	0	0	0	0	2	0	0	0	2	0	0	1	117	3	0	121	0	0	0	0	0	312			
Hourly Total	2	0	0	0	2	0	0	0	0	0	5	661	6	0	672	0	0	0	0	0	5	0	0	0	5	0	3	508	7	0	518	0	0	0	0	0	1197				
12:00:00	1	0	0	0	1	1	0	0	0	0	1	162	2	0	165	0	0	0	0	0	1	0	0	0	1	0	0	163	4	0	167	0	0	0	0	0	334				
12:15:00	0	0	0	0	0	0	0	0	0	0	0	155	0	0	155	0	0	0	0	0	1	0	0	0	1	0	0	166	1	0	168	0	0	0	0	0	324				
12:30:00	0	0	0	0	0	0	0	0	0	0	1	170	0	0	171	0	0	0	0	0	1	0	0	0	1	0	0	159	3	0	162	0	0	0	0	0	334				
12:45:00	0	0	0	0	0	0	0	0	0	0	0	172	1	0	173	0	0	0	0	0	0	0	1	0	1	0	0	134	3	0	137	0	0	0	0	0	311				
Hourly Total	1	0	0	0	1	2	0	0	0	0	2	659	3	0	664	0	0	0	0	0	3	0	1	0	4	0	0	1	622	11	1	634	0	0	0	0	0	1303			
13:00:00	0	0	0	0	0	0	0	0	0	0	0	155	3	0	158	0	0	0	0	0	0	0	0	0	0	0	0	168	1	1	171	0	0	0	0	0	329				
13:15:00	0	0	0	0	0	0	0	0	0	0	0	153	1	0	154	0	0	0	0	0	0	0	0	0	0	0	0	148	1	0	149	0	0	0	0	0	303				
13:30:00	0	0	0	0	0	1	1	0	0	0	1	148	2	0	151	0	0	0	0	0	0	0	1	0	1	0	1	153	3	1	158	0	0	0	0	0	310				
13:45:00	0	0	0	0	0	0	0	0	0	0	6	172	1	0	179	0	0	0	0	0	0	0	0	0	0	0	1	140	5	0	146	0	0	0	0	0	325				
Hourly Total	0	0	0	0	0	1	1	0	0	0	7	628	7	0	642	0	0	0	0	0	0	0	1	0	1	0	1	3	609	10	2	624	0	0	0	0	0	1267			
14:00:00	0	0	0	0	0	0	0	0	0	0	0	157	0	0	157	0	0	0	0	0	0	0	0	0	0	0	0	151	2	1	154	0	0	0	0	0	311				
14:15:00	0	0	0	0	0	0	0	0	0	0	3	153	1	0	157	0	0	0	0	0	1	1	0	0	1	0	0	161	4	1	167	0	0	0	0	0	325				
14:30:00	0	0	0	0	0	0	0	0	0	0	5	196	0	0	201	0	0	0	0	0	1	0	0	0	1	0	0	181	4	0	185	0	0	0	0	0	387				
14:45:00	0	0	0	0	0	1	0	0	0	0	4	191	0	0	195	0	0	0	0	0	1	0	0	0	1	0	0	3	217	11	0	231	0	0	0	0	0	427			
Hourly Total	0	0	0	0	0	1	2	0	0	0	12	697	1	0	710	0	0	0	0	0	3	0	0	0	3	0	0	4	710	21	2	737	0	0	0	0	0	1450			
15:00:00	0	0	0	0	0	0	0	0	0</																																

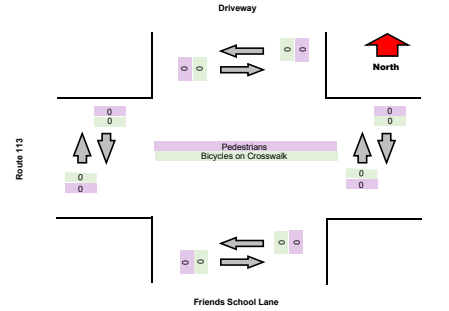
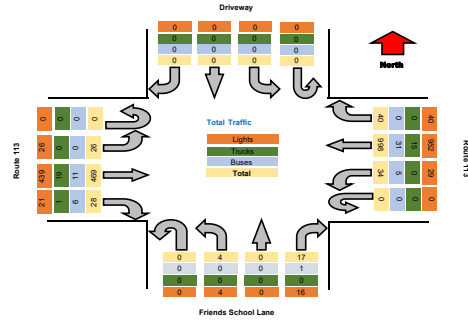
Turning Movement Data Plot



**Turning Movement Peak Hour Data (AM)**

7:30:00

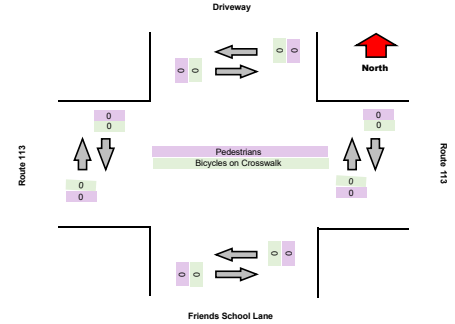
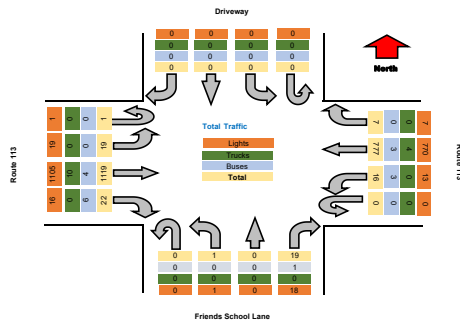
Leg Direction	Driveway							Route 113 Westbound							Friends School Lane Northbound							Route 113 Eastbound							Total
	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	
7:30:00	0	0	0	0	0	0	0	2	252	5	0	259	0	0	4	0	1	0	5	0	0	4	151	5	0	160	0	0	424
7:45:00	0	0	0	0	0	0	0	4	282	12	0	298	0	0	4	0	0	0	4	0	0	2	131	3	0	136	0	0	438
8:00:00	0	0	0	0	0	0	0	10	233	6	0	249	0	0	4	0	2	0	6	0	0	8	101	8	0	117	0	0	372
8:15:00	0	0	0	0	0	0	0	24	231	11	0	266	0	0	5	0	1	0	6	0	0	14	86	10	0	110	0	0	382
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>998</b>	<b>34</b>	<b>0</b>	<b>1072</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>469</b>	<b>26</b>	<b>0</b>	<b>523</b>	<b>0</b>	<b>0</b>	<b>1616</b>
% Approach	#DIV/O!	#DIV/O!	#DIV/O!	#DIV/O!	0.0%	0.0%	0.0%	3.7%	93.1%	3.2%	0.0%	0.0%	0.0%	0.0%	81.0%	0.0%	19.0%	0.0%	0.0%	0.0%	0.0%	5.4%	89.7%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	61.8%	2.1%	0.0%	66.3%	0.0%	0.0%	1.1%	0.0%	2.2%	0.0%	1.3%	0.0%	0.0%	1.7%	29.0%	1.6%	0.0%	32.4%	0.0%	0.0%	0.0%
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.885	0.708	0.000	0.899	0.000	0.000	0.850	0.000	0.500	0.000	0.875	0.000	0.000	0.500	0.776	0.650	0.000	0.817	0.000	0.000	0.922
Lights	0	0	0	0	0	0	0	40	852	29	0	1021	0	0	16	0	4	0	20	0	0	21	439	26	0	486	0	0	1527
% Lights	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	95.4%	85.3%	0.0%	95.2%	0.0%	0.0%	94.1%	0.0%	100.0%	0.0%	95.2%	0.0%	0.0%	75.0%	93.6%	100.0%	0.0%	92.9%	0.0%	0.0%	94.5%
Trucks	0	0	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	0	0	1	19	0	0	20	0	0	35
% Trucks	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	4.1%	0.0%	0.0%	3.8%	0.0%	0.0%	2.2%
Buses	0	0	0	0	0	0	0	0	31	5	0	36	0	0	1	0	0	0	1	0	0	6	11	0	0	17	0	0	54
% Buses	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	14.7%	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.4%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



**Turning Movement Peak Hour Data (PM)**

16:30:00

Leg Direction	Driveway							Route 113							Friends School Lane							Route 113							Total
	Southbound							Westbound							Northbound							Eastbound							
Start Time	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Total
16:30:00	0	0	0	0	0	0	0	1	190	3	0	194	0	0	1	0	0	0	1	0	0	5	261	5	0	271	0	0	466
16:45:00	0	0	0	0	0	0	0	0	202	5	0	207	0	0	8	0	1	0	9	0	0	9	250	6	0	265	0	0	481
17:00:00	0	0	0	0	0	0	0	4	187	4	0	195	0	0	8	0	0	0	8	0	0	5	294	3	1	303	0	0	506
17:15:00	0	0	0	0	0	0	0	2	198	4	0	204	0	0	2	0	0	0	2	0	0	3	314	5	0	322	0	0	528
<b>Grand Total</b>	0	0	0	0	0	0	0	7	777	16	0	800	0	0	19	0	1	0	20	0	0	22	1119	19	1	1161	0	0	1981
<b>% Approach</b>	#DIV/O!	#DIV/O!	#DIV/O!	#DIV/O!	0.0%	0.0%	0.0%	0.9%	97.1%	2.0%	0.0%	0.0%	0.0%	0.0%	95.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	1.9%	96.4%	1.6%	0.1%	0.0%	0.0%	0.0%	
<b>% Total</b>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	39.2%	0.8%	0.0%	40.4%	0.0%	0.0%	1.0%	0.0%	0.1%	0.0%	1.0%	0.0%	0.0%	1.1%	56.5%	1.0%	0.1%	58.6%	0.0%	0.0%	
<b>PHF</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.438	0.962	0.800	0.000	0.966	0.000	0.000	0.594	0.000	0.250	0.000	0.558	0.000	0.000	0.611	0.891	0.792	0.250	0.901	0.000	0.000	0.938
<b>Lights</b>	0	0	0	0	0	0	0	7	770	13	0	790	0	0	18	0	1	0	19	0	0	16	1105	19	1	1141	0	0	1950
<b>% Lights</b>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	99.1%	81.3%	0.0%	98.8%	0.0%	0.0%	94.7%	0.0%	100.0%	0.0%	95.0%	0.0%	0.0%	72.7%	98.7%	100.0%	100.0%	98.3%	0.0%	0.0%	98.4%
<b>Trucks</b>	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	14
<b>% Trucks</b>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.9%	0.0%	0.0%	0.7%
<b>Buses</b>	0	0	0	0	0	0	0	0	3	3	0	6	0	0	1	0	0	0	1	0	0	6	4	0	0	10	0	0	17
<b>% Buses</b>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	18.8%	0.0%	0.0%	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	27.3%	0.4%	0.0%	0.0%	0.9%	0.0%	0.0%	0.9%
<b>Pedestrians</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>% Pedestrians</b>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Bicycles on Crosswalk</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>% Bicycles on Crosswalk</b>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



DRAFT

Volume		Speed	
Station: 820055,2016,Combined Total		Station: 820055, 2016, Combined Total	
COUNT_ID	820055_10182016	COUNT_ID	820055_10182016
REGION	8	REGION	8
REGION_CODE	8	REGION_CODE	8
COUNTY_CODE	2	COUNTY_CODE	2
STATION	55	STATION	55
RCSTA	820055	RCSTA	820055
FUNCTIONAL_CLASS	16	FUNCTIONAL_CLASS	16
FACTOR_GROUP	30	FACTOR_GROUP	30
LATITUDE	41.65895	LATITUDE	41.65895
LONGITUDE	-73.92293	LONGITUDE	-73.92293
SPECIFIC_RECORDER_PLACEMENT	177' E of Fowler Hill Rd	SPECIFIC_RECORDER_PLACEMENT	177' E of Fowler Hill Rd
CHANNEL_NOTES		CHANNEL_NOTES	
DATA_TYPE	Volume Statistics	DATA_TYPE	Speed Statistics
VEHICLE_AXLE_CODE	1	SPEED_LIMIT	45
YEAR	2016	YEAR_	2016
MONTH	10	MONTH_	10
DAY_OF_FIRST_DATA	18	DAY_OF_FIRST_DATA	18
FEDERAL_DIRECTION	Combined Total	FEDERAL_DIRECTION	Combined Total
FULL_COUNT	Y	FULL_COUNT	Y
AVG_WKDAY_INTERVAL_1	80	AVG_WKDAY_BIN_1	1019
AVG_WKDAY_INTERVAL_2	50	AVG_WKDAY_BIN_2	953
AVG_WKDAY_INTERVAL_3	34	AVG_WKDAY_BIN_3	1581
AVG_WKDAY_INTERVAL_4	26	AVG_WKDAY_BIN_4	3485
AVG_WKDAY_INTERVAL_5	74	AVG_WKDAY_BIN_5	5719
AVG_WKDAY_INTERVAL_6	257	AVG_WKDAY_BIN_6	5841
AVG_WKDAY_INTERVAL_7	639	AVG_WKDAY_BIN_7	2627
AVG_WKDAY_INTERVAL_8	1478	AVG_WKDAY_BIN_8	563
AVG_WKDAY_INTERVAL_9	1657	AVG_WKDAY_BIN_9	90
AVG_WKDAY_INTERVAL_10	1159	AVG_WKDAY_BIN_10	12
AVG_WKDAY_INTERVAL_11	1088	AVG_WKDAY_BIN_11	3
AVG_WKDAY_INTERVAL_12	1189	AVG_WKDAY_BIN_12	0
AVG_WKDAY_INTERVAL_13	1392	AVG_WKDAY_BIN_13	0
AVG_WKDAY_INTERVAL_14	1346	AVG_WKDAY_BIN_14	0
AVG_WKDAY_INTERVAL_15	1576	AVG_WKDAY_BIN_15	2
AVG_WKDAY_INTERVAL_16	1708	AVG_WKDAY_UNCLASSIFIED	
AVG_WKDAY_INTERVAL_17	1826	AVG_WKDAY_TOTALS	21895
AVG_WKDAY_INTERVAL_18	1964	AVG_SPEED	34
AVG_WKDAY_INTERVAL_19	1588	FIFTYTH_PERCENTILE_SPEED	39
AVG_WKDAY_INTERVAL_20	1055	EIGHTYFIVETH_PERCENTILE_SPEED	45
AVG_WKDAY_INTERVAL_21	764	PERCENTILE_EXCEEDING_55	0
AVG_WKDAY_INTERVAL_22	498	PERCENTILE_EXCEEDING_65	0
AVG_WKDAY_INTERVAL_23	304	FLAG_FIELD	
AVG_WKDAY_INTERVAL_24	149	BATCH_ID	210664
AVG_WKDAY_DAILY_TRAFFIC	21901		
SEASONAL_FACTOR	1.074		
AXLE_FACTOR	1		
AADT	20392		
HIGH_HOUR_VALUE	1964		
HIGH_HOUR_INTERVAL	18		
K_FACTOR	9		
D_FACTOR	58		
FLAG_FIELD			
BATCH_ID	210871		

DRAFT

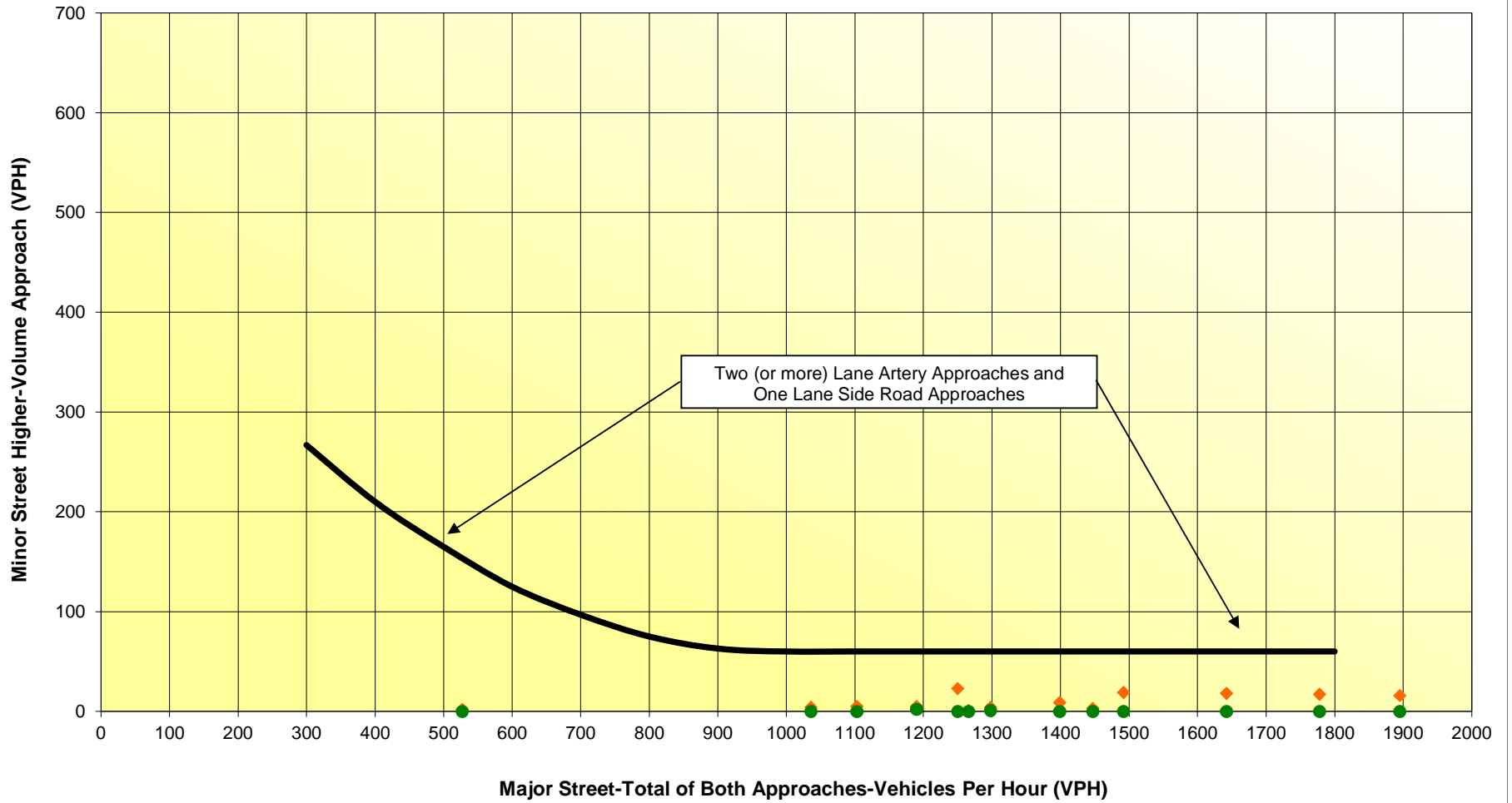
Attachment B  
Traffic Signal Warrants

NY Route 113/Friends School Lane Intersection Evaluation  
Hamlet of Spackenkill, Town of Poughkeepsie, New York

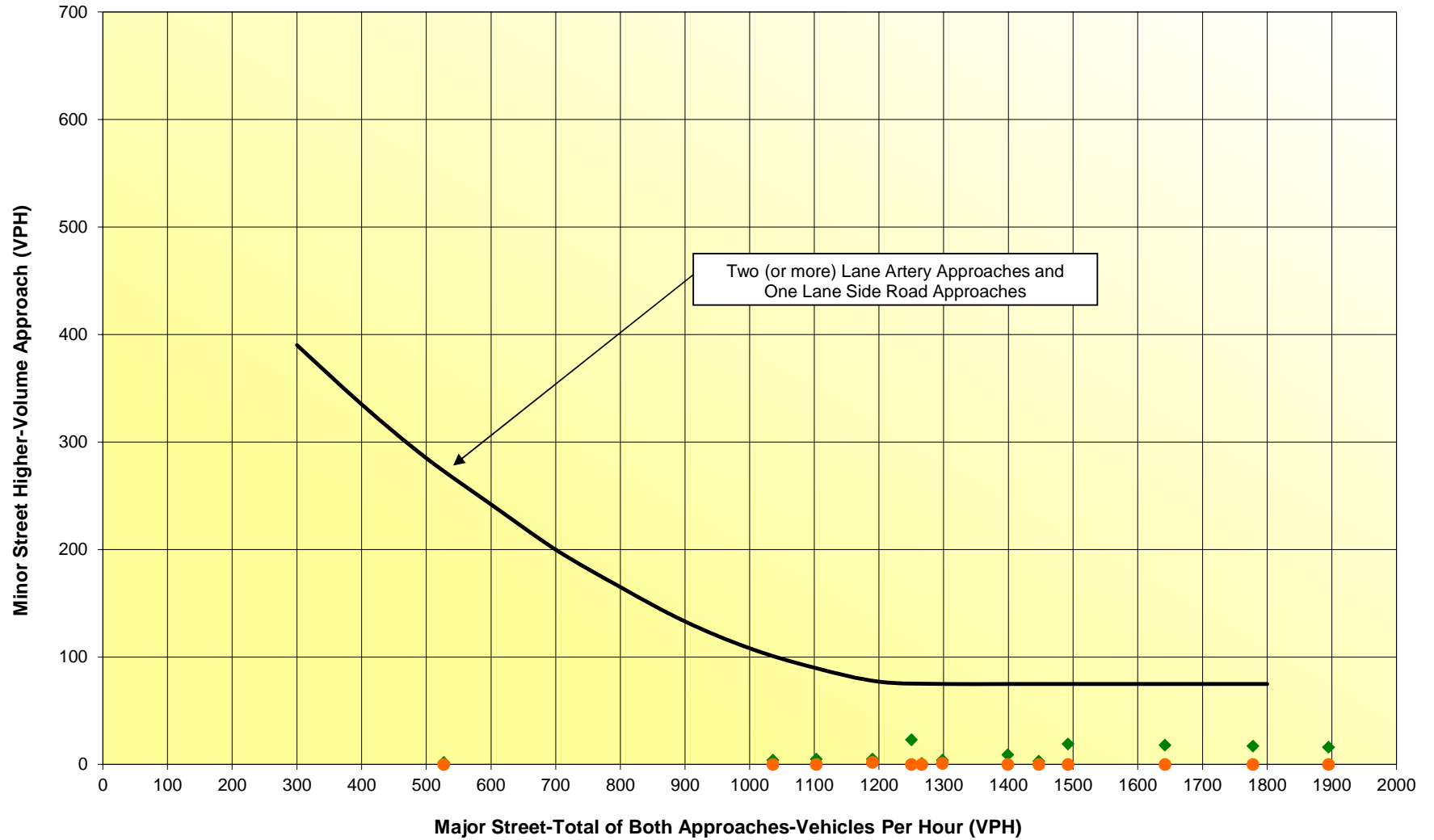
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**Figure 4C-2**  
**Reduced Four-Hour Vehicular Volume Warrant**  
Source: Federal MUTCD  
NY Route 133/Friends School Lane Intersection - Existing Volumes



**Figure 4C-4**  
**Reduced Peak Hour Volume Warrant**  
Source: Federal MUTCD  
NY Route 133/Friends School Lane Intersection - Existing Volumes



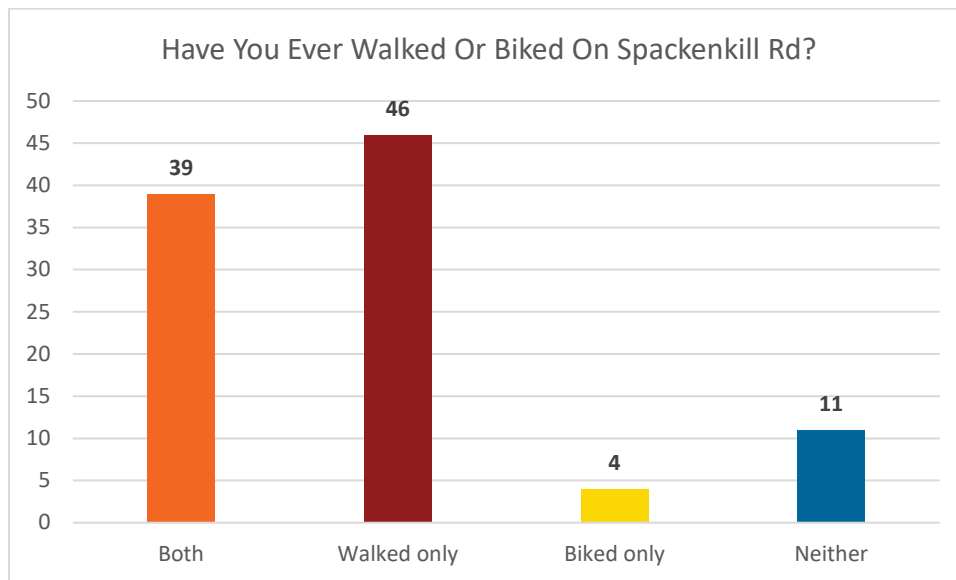
## Appendix D

- Public Outreach:
  - Spackenkill High School Student Outreach Summary
  - Online Survey Summary

## Spackenkill High School Student Outreach Summary

We had the opportunity to engage with students of Spackenkill High School (SHS) and introduce them to the Spackenkill Rd Sidewalk Feasibility Study, conducting in-person sessions during several Government & Economic classes on May 19, 2023. We held four sessions, attended by over 100 students from six classes. During these sessions, students discussed their use of Spackenkill Rd, including whether they have walked or biked along the road and the specific destinations they frequented. We also asked them about the potential benefits and challenges of adding sidewalks along Spackenkill Rd. Students participated by sharing their thoughts and opinions through in-class discussions and live survey responses (hosted through Slido); teachers also reserved class time during the following week for students to participate in the study’s online public survey. Key themes and quotes from our in-class discussions are summarized below.

We began class with a poll to understand if students had ever walked or biked along Spackenkill Rd. Overall, we found that most students had walk or biked on Spackenkill Rd, reinforcing the need to accommodate this type of transportation. The poll results are shown below:



We discussed the various destinations that students walked or biked to. They shared that walking routes commonly included traveling between the high school and middle school, accessing the high school track from their homes, visiting friends' houses, and accessing businesses along Route 9. As for biking, students said they mostly biked for recreational purposes and to visit friends. However, students expressed concerns about safety. In particular, they cited concerns about drivers exceeding speed limits, making hazardous turns, and entering the road shoulder to overtake other vehicles, which made them apprehensive to walk or bike along the road. Additionally, the lack of marked crosswalks was identified as a concern.

When asked about the potential **benefits** of adding sidewalks along Spackenkill Rd, students focused on the following:

1. **Enhanced safety:** Students noted that sidewalks enhance pedestrian safety by providing a separate walking space, protected from traffic. This is especially important in low light and at night. Sidewalks could also reduce crashes by promoting better driving behavior: if drivers are more conscious of pedestrians they would drive at slower speeds, improving road safety.
2. **Improved mobility:** Sidewalks facilitate travel for students between schools, sports activities, and other destinations. Sidewalks also allow individuals without cars or drivers' licenses to access destinations in the area.
3. **Congestion & environmental benefits:** Sidewalks can help reduce our reliance on vehicles. More people are likely to choose walking as a travel mode if there is a safe and accessible sidewalk. This could reduce congestion, including during the busy school drop-off in the morning. Encouraging walking and biking also reduces carbon emissions, promoting a more sustainable community.
4. **Community aesthetics, connectivity, & economic boost:** Sidewalks enhance the appearance of the road, making it feel more welcoming and community oriented. They encourage exercise, promoting a healthier lifestyle, and foster community connectivity by making it safe and easy for people to walk. Additionally, sidewalks can contribute to economic growth by attracting more activity, visitors, and potential customers to businesses within walking distance.

It would be much safer to walk or bike along Spackenkill Rd, and it would make people feel safer. Cars will be driving slower, so there is a less chance of having an accident.

People without cars or licenses in the area can walk down to the plaza.

More walking will allow for less cars which will create fewer emissions.

Attracts more activity, mobility, way more welcoming.

When asked about the potential **challenges** of adding sidewalks along Spackenkill Rd, students discussed the following:

1. **Cost and timing:** One of the primary challenges pointed out by students is the cost of constructing and maintaining sidewalks, and potential increases in property taxes to fund their construction. Students also pointed out that it could take a long time for such a project to be implemented. (We discussed that a sidewalk project like this would most likely be funded by a grant, though the Town's code does require that property owners maintain the sidewalks.)

How long it will take to get the sidewalks in place, and the cost of the project.

2. **Traffic disruptions:** Students thought that the addition of sidewalks might lead to more traffic on the road. Additionally, they wondered if drivers' impatience and the narrower lanes could lead to an increase in crashes, particularly at intersections. (We discussed that narrower lanes typically lead to fewer and less severe crashes because speeds tend to be lower. There could be additional delay at traffic signals due to added pedestrian phases or changes in intersection geometry, though some changes have the potential to improve traffic operations. Any changes to signals and geometry would have to be further evaluated to ensure acceptable traffic operations.)
3. **Opposition from property owners:** Students stated that some property owners along Spackenkill Rd might resist the idea of sidewalks near their homes. Disputes over property lines and potential land acquisitions could arise. There could be concerns about the long-term maintenance of sidewalks and who would be responsible for them. If sidewalks are not well maintained, they could detract from neighborhood aesthetics.
4. **Construction impacts:** The construction process could cause traffic congestion and inconvenience for drivers, and homeowners may have concerns about construction noise. During construction, there could be concerns about safety and accessibility for pedestrians, particularly students walking to and from school.

It will make the driving space narrower for drivers.

Community members who own property might not want to have sidewalks, and maintaining the sidewalks would also be required.

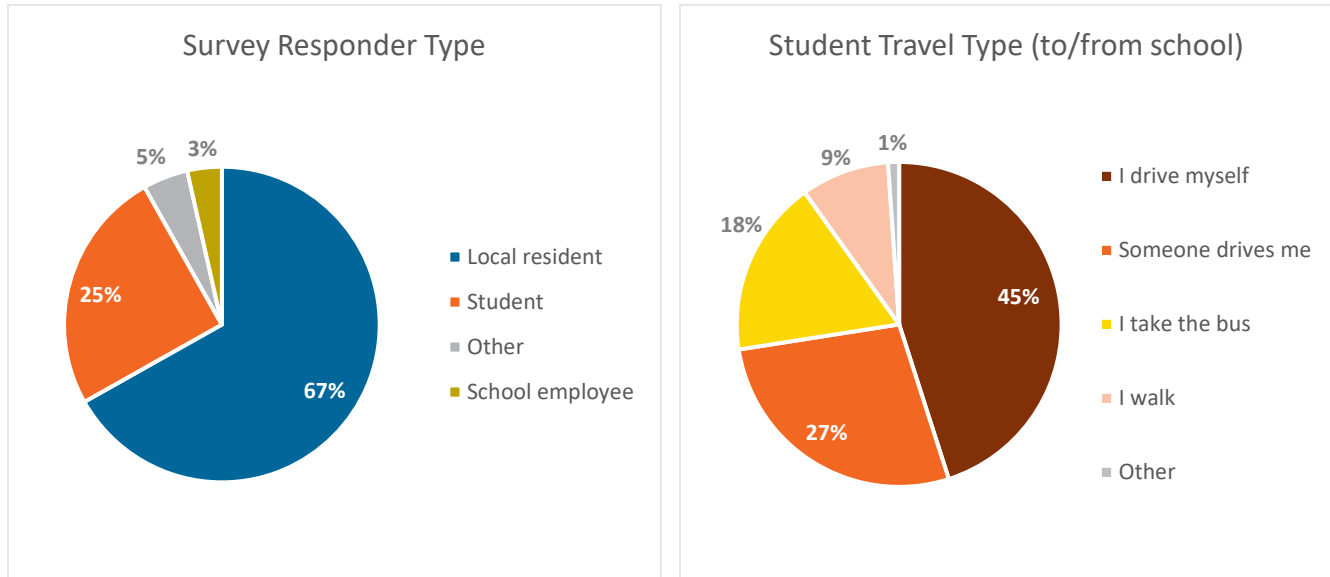
Traffic may increase during the months of construction. While the sidewalks are being created, how will people walk to and from school?

In summary, students pointed out that adding sidewalks on Spackenkill Rd offers a wide range of benefits, including increased safety, improved mobility, environmental sustainability, enhanced community connections, and local economic benefits. Students also identified some important challenges of adding sidewalks on Spackenkill Rd, including cost, traffic disruptions, community opposition, construction impacts, safety and access during construction, limited space and property encroachment, long construction timelines, maintenance concerns, and potential impacts on traffic.

These sessions helped us hear perspectives from the youth population, a group that is often left out of the transportation planning process. In turn, we shed light on the workings of local government and how a sidewalk project could impact them.

## Online Survey Summary

We hosted an online survey to understand residents’ current use of Spackenkill Road and to gather feedback on the need for walking and bicycling infrastructure. The results are summarized below and will help inform the Spackenkill Rd Sidewalk Feasibility Study. Individual responses were shared with the Town of Poughkeepsie to help inform their decision making.



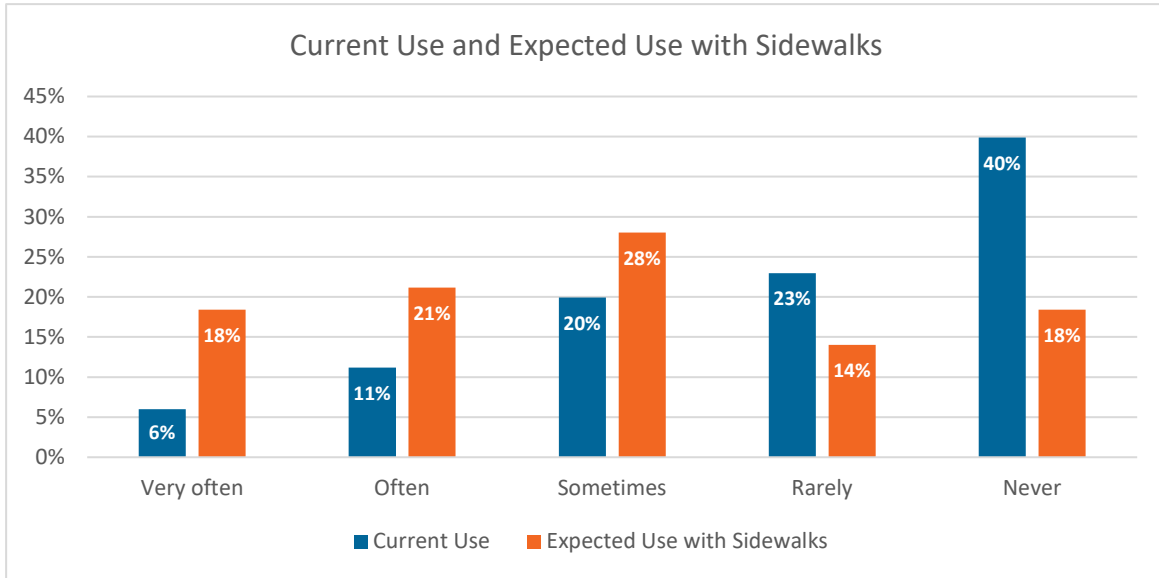
The survey was open from May 19 – July 3, 2023 through the ArcGIS Survey123 platform. It was posted on DCTC’s website and the Spackenkill Union Free School District’s website and newsletter, and shared with local schools and the PTA and to the broader community via the Town’s public information email list, a local newspaper, and a local radio station. In addition, a Town Council member conducted door-to-door outreach and distributed flyers to homes along the study area.

In total, we received 368 responses from the community. Over 65 percent of respondents identified as residents, 25 percent as students, 5 percent as other, and 3 percent as school employees. Most or all the student responses are assumed to be seniors from Spackenkill High School with whom we conducted in-class outreach and who had class time to respond to the survey. Of the 91 students that responded, 9 percent reported that they walk to school and 18 percent take the bus. Most other students (72 percent) either drive to school or are driven by someone else.

## Walking

*How often do you walk on Spackenkill Rd?*

*If there were sidewalks, how often do you think you would walk on Spackenkill Rd?*



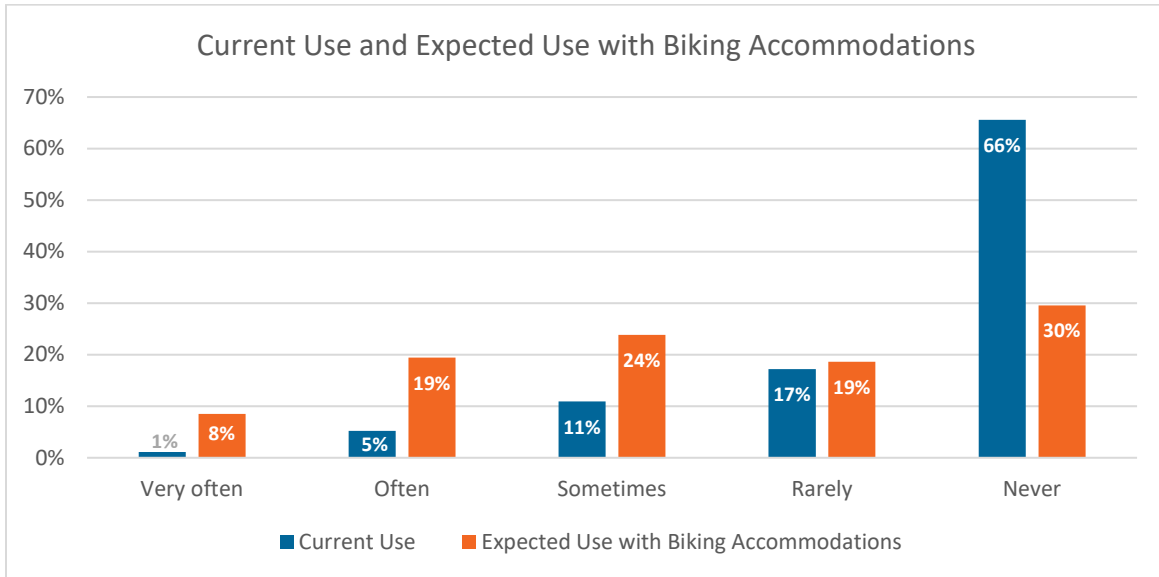
We asked how frequently the community currently walks on Spackenkill Rd, and how their use would change if there were sidewalks. Current walking on Spackenkill Rd varies, with a significant portion (63 percent) reporting that they rarely or never walk. However, if sidewalks were provided, a majority (68 percent) predicted they would walk sometimes, often, or very often.

Reasons for currently walking include exercise, school-related activities, park visits, socializing, shopping, and leisure. Safety concerns, such as the lack of sidewalks, heavy traffic, and a perceived dangerous environment, deter people from walking. Even if there were sidewalks, some individuals cited traffic volume and concerns about traffic conflicts, personal transportation preferences, the absence of relevant destinations, and alternative locations for leisure walking as reasons for not choosing to walk on Spackenkill Rd.

## Bicycling

*How often do you bike on Spackenkill Rd?*

*If Spackenkill Rd was designed differently to better accommodate bikes, how often do you think you would bike on Spackenkill Rd?*

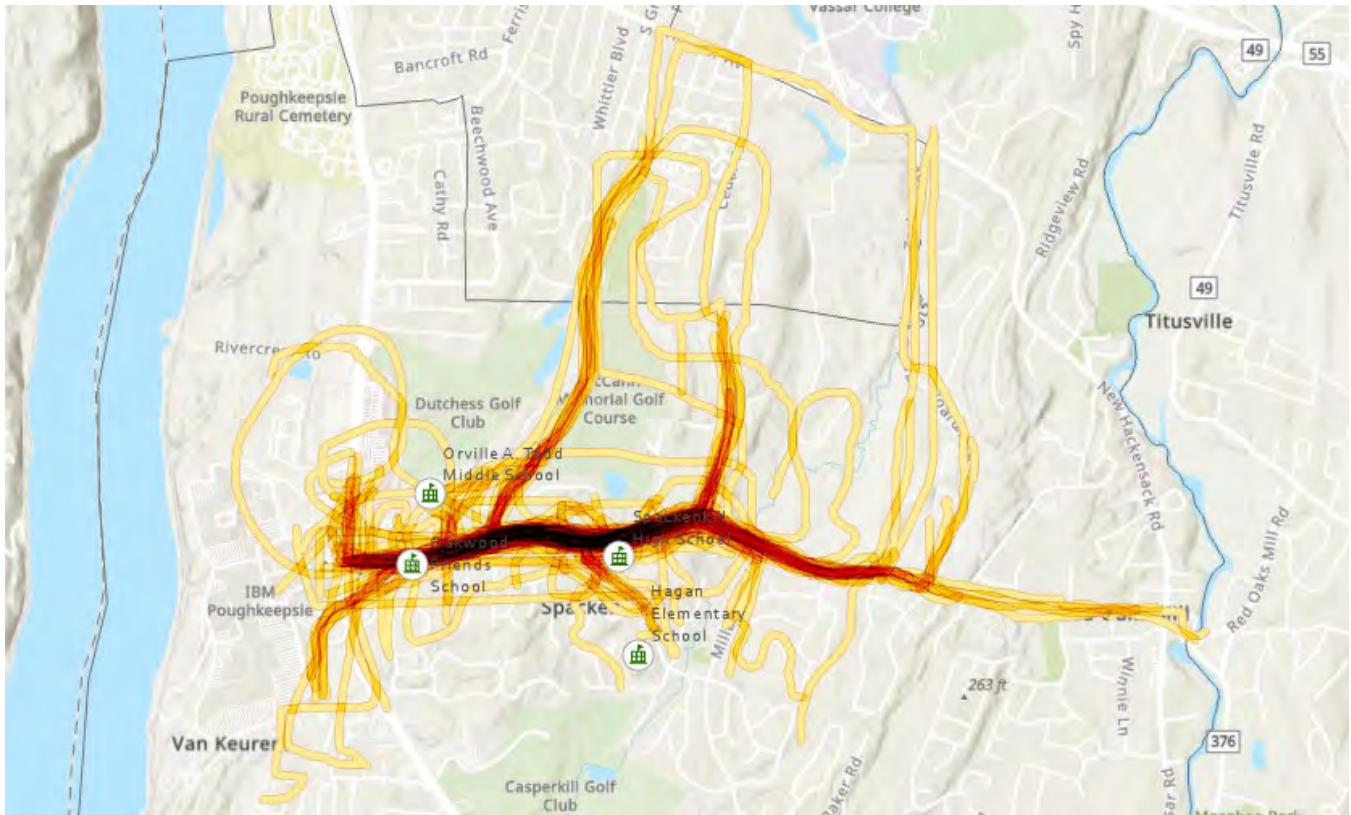


When it comes to bicycling on Spackenkill Rd, a small percentage of respondents currently bike sometimes, often, or very often (17 percent), while the majority rarely or never bike (83 percent). However, if bicycling accommodations were available, a slight majority (52 percent) predicted they would bike sometimes, often, or very often.

Current bicyclists ride on Spackenkill Rd for exercise, to access jobs and school, and for recreation. Safety concerns, lack of infrastructure, personal preferences, alternate transportation options, and distance to destinations were the main reasons cited for not biking on Spackenkill Rd. Even with bicycle accommodations, some respondents expressed a lack of interest or desire to bike due to personal preferences and safety concerns.

## Destinations

*Where would you walk or bike?*



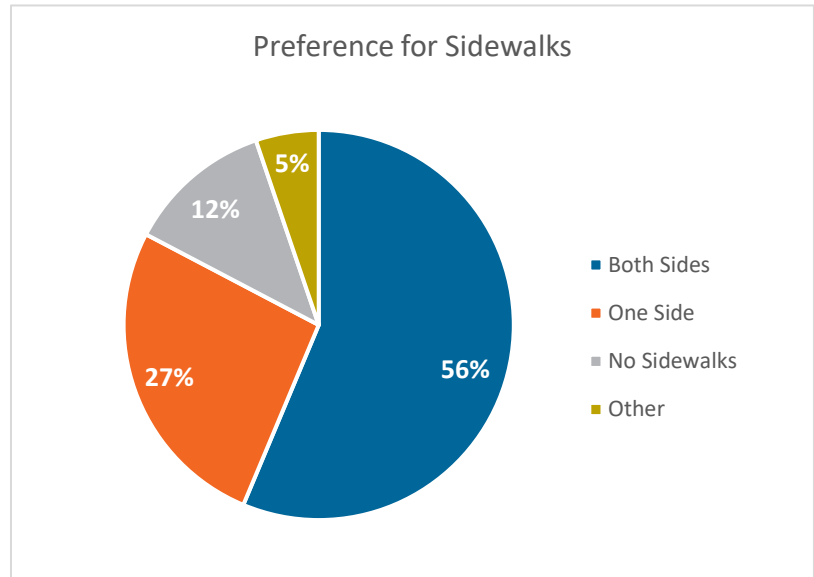
We asked the community to use a mapping tool to draw where they would walk or bike and describe the different routes they would use and destinations they would go to. Those results are shown on the map above, with darker areas showing the most common routes. Based on the mapping responses, there is a strong desire for walking and biking between Croft Rd and Cedar Ave (the focus area of this study), but people are also interested in destinations along and across Route 9, as well as connections along Wilbur Blvd, Hagan Dr, and Cedar Ave. There was also interest in destinations further east along Spackenkill Rd, including up Boardman Rd and out to Red Oaks Mill, especially for people who bike.

Specific destinations mentioned included schools and parks in the area, the high school track and tennis courts, the Boardman library, trails at Vassar Farms and the Wilbur Blvd path, and businesses along Route 9. Some people said that although they would not walk along Spackenkill Rd, they felt strongly that there should be safe options for people that do walk, including children who walk to and from school and around Hagan Dr.

## Preference for Sidewalks

Which statement do you most agree with?

- Sidewalks should be installed on **both sides** of Spackenkill Rd between Croft Rd (near middle school) and Cedar Ave (near high school)
- Sidewalks should be installed on **one side** of Spackenkill Rd between Croft Rd (near middle school) and Cedar Ave (near high school)
- Sidewalks **should not be installed** on Spackenkill Rd
- **Other** (please explain)



More than 80 percent of respondents supported the installation of sidewalks on Spackenkill Rd in some form, with a majority (56 percent) preferring sidewalks on both sides of the road. Safety was the primary reason cited, as sidewalks would provide a safe space for pedestrians, particularly students. Some respondents noted that sidewalks would encourage walking and biking, increase accessibility to schools and local businesses, and create a more connected community. Respondents that preferred sidewalks on one side only highlighted the cost and space-saving benefits, including leaving room for other improvements like bicycle accommodations.

Of the 5 percent “Other” responses, nearly all supported sidewalks in some form, but many emphasized the importance of considering all travel modes and a concern that sidewalks alone would not address the needs of bicyclists. Others suggested switching the sidewalk from one side of the road to the other depending on available space and crossing opportunities. Some concerns were raised about the limited study area and the need to expand safe connections through the entire community or to higher priority areas first.

Of the 12 percent of respondents (44 total) who preferred no sidewalks on Spackenkill Rd, many questioned the need for sidewalks, suggesting it would be a waste of resources or detract from the aesthetics of the area. They also pointed to concerns about maintenance responsibilities and legal liability, and the Town's ability to maintain other existing infrastructure. Overall, while there is strong support for sidewalks on Spackenkill Rd, there are differing opinions on the best approach and some concerns about maintenance and cost.

## Appendix E

- Count Data:
  - Traffic
  - Intersection Turning Movements
  - Pedestrian & Bicycle





New York State Department of Transportation  
Classification Count Average Weekday Data Report

DRAFT

ROUTE #: NY 113  
COUNTY NAME: Dutchess  
REGION CODE: 8  
FROM: WILBUR BLVD  
TO: CEDAR AVE CR 74  
REF-MARKER:  
END MILEPOINT: 0139  
FUNC-CLASS: 16  
STATION NO: 0054  
COUNT TAKEN BY:  
PROCESSED BY:

ROAD NAME: SPACKENKILL RD

NO. OF LANES: 2

YEAR: 2021  
MONTH: May

STATION: 820054

DIRECTION	East	West	TOTAL
NUMBER OF VEHICLES	6794	7369	14163
NUMBER OF AXLES	13696	14854	28550
% HEAVY VEHICLES (F4-F13)	3.65%	3.56%	3.60%
% TRUCKS AND BUSES (F3-F13)	14.06%	15.96%	15.05%
AXLE CORRECTION FACTOR	0.99	0.99	0.99

BATCH ID: DOT-R08C19eNDS5363

VEHICLE CLASS	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	TOTAL
NO. OF AXLES	2	2	2	2.5	2	3	4	3.5	5	6	5	6		8.75
ENDING HOUR														
1:00	0	31	2	0	0	0	0	0	0	0	0	0	0	33
2:00	0	14	1	0	0	0	0	0	0	0	0	0	0	15
3:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
4:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:00	0	7	3	0	0	0	0	0	0	0	0	0	0	10
6:00	0	25	4	0	2	0	0	0	0	0	0	0	0	31
7:00	0	80	22	0	4	1	0	1	0	0	0	0	0	108
8:00	0	256	38	10	10	2	0	0	0	0	0	0	0	316
9:00	1	340	53	12	15	2	0	1	0	0	0	0	0	424
10:00	0	215	45	4	10	3	0	2	2	0	0	0	0	281
DIRECTION														
11:00	0	240	40	2	7	4	0	3	1	0	0	0	0	297
East														
12:00	0	281	44	1	8	2	0	0	0	0	0	0	0	336
13:00	0	376	42	3	12	1	0	1	2	0	0	0	0	437
14:00	1	378	46	5	10	3	0	1	1	0	0	0	0	445
15:00	1	404	53	3	11	5	0	1	0	0	0	0	0	478
16:00	2	522	65	12	10	8	0	2	1	0	0	0	0	622
17:00	1	530	64	1	9	5	0	1	0	0	0	0	0	611
18:00	1	660	62	1	8	0	0	0	1	0	0	0	0	733
19:00	1	472	43	0	4	0	0	0	0	0	0	0	0	520
20:00	0	371	32	1	6	0	0	0	0	0	0	0	0	410
21:00	0	287	26	1	3	0	0	0	0	0	0	0	0	317
22:00	1	172	14	0	3	0	0	0	0	0	0	0	0	190
23:00	1	105	4	0	3	0	0	0	0	0	0	0	0	113
24:00	0	50	4	0	0	0	0	0	0	0	0	0	0	54
TOTAL VEHICLES	10	5829	707	56	135	36	0	13	8	0	0	0	0	6794
TOTAL AXLES	20	11658	1414	140	270	108	0	46	40	0	0	0	0	13696
ENDING HOUR														
1:00	0	12	4	0	0	0	0	0	0	0	0	0	0	16
2:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
3:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9
4:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
5:00	0	16	4	0	1	0	0	0	0	0	0	0	0	21
6:00	0	39	10	0	1	1	0	0	0	0	0	0	0	51
7:00	0	135	32	3	5	2	0	0	0	0	0	0	0	177
8:00	0	382	76	8	9	1	0	3	0	0	0	0	0	479
9:00	1	566	92	14	18	2	0	2	2	0	0	0	0	697
10:00	0	401	59	1	12	2	0	0	0	0	0	0	0	475
11:00	0	363	57	2	10	4	0	2	2	0	0	0	0	440
DIRECTION														
West														
12:00	1	383	55	2	8	2	0	0	1	0	0	0	0	452
13:00	0	398	62	2	8	1	0	1	3	0	0	0	0	475
14:00	1	438	60	11	14	2	0	1	1	0	0	0	0	528
15:00	0	464	73	3	14	4	0	2	2	0	0	0	0	562
16:00	1	537	75	8	16	4	0	2	1	0	0	0	0	644
17:00	1	450	63	1	7	2	0	1	0	0	0	0	0	525
18:00	1	497	57	0	10	0	0	2	0	0	0	0	0	567
19:00	1	373	43	0	6	0	0	1	0	0	0	0	0	424
20:00	1	285	35	0	6	0	0	0	0	0	0	0	0	327
21:00	0	188	27	0	3	0	0	0	0	0	0	0	0	218
22:00	0	134	17	0	2	0	0	0	0	0	0	0	0	153
23:00	1	66	6	0	0	0	0	0	0	0	0	0	0	73
24:00	0	38	3	0	1	0	0	0	0	0	0	0	0	42
TOTAL VEHICLES	9	6184	914	55	151	27	0	17	12	0	0	0	0	7369
TOTAL AXLES	18	12368	1828	138	302	81	0	60	60	0	0	0	0	14854
GRAND TOTAL VEHICLES	19	12013	1621	111	286	63	0	30	20	0	0	0	0	14163
GRAND TOTAL AXLES	38	24026	3242	278	572	189	0	105	100	0	0	0	0	28550

VEHICLE CLASSIFICATION CODES:

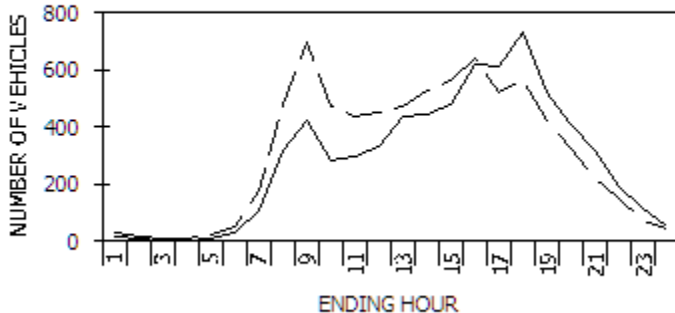
- F1. Motorcycles
- F2. Autos\*
- F3. 2 Axle, 4-Tire Pickups, Vans, Motorhomes\*
- F4. Buses
- F5. 2 Axle, 6-Tire Single Unit Trucks
- F6. 3 Axle Single Unit Trucks
- F7. 4 or More Axle Single Unit Trucks
- F8. 4 or Less Axle Vehicles, One Unit is a Truck
- F9. 5 Axle Double Unit Vehicles, One Unit is a Truck
- F10. 6 or More Double Unit Vehicles, One Unit is a Truck
- F11. 5 or Less Axle Multi-Unit Trucks
- F12. 6 Axle Multi-Unit Trucks
- F13. 7 or More Axle Multi-Unit Trucks

\* INCLUDING THOSE HAULING TRAILERS

FUNCTIONAL CLASS CODES:

- | RURAL | URBAN | SYSTEM                        |
|-------|-------|-------------------------------|
| 01    | 11    | PRINCIPAL ARTERIAL-INTERSTATE |
| 02    | 12    | PRINCIPAL ARTERIAL-EXPRESSWAY |
| 02    | 14    | PRINCIPAL ARTERIAL-OTHER      |
| 06    | 16    | MINOR ARTERIAL                |
| 07    | 17    | MAJOR COLLECTOR               |
| 08    | 17    | MINOR COLLECTOR               |
| 09    | 19    | LOCAL SYSTEM                  |

TRAFFIC FLOW BY DIRECTION



--- East                      - - - West

PEAK HOUR DATA

DIRECTION	HOUR	COUNT	2-WAY	HOUR	COUNT
East	18	733	A.M.	9	1121
West	9	697	P.M.	18	1300

SOURCE: NYSDOT DATA SERVICES BUREAU

DRAFT

**New York State Department of Transportation  
Speed Count Average Weekday Report**

Station: 820054  
Route #: NY 113 Road name: SPACKENKILL RD  
From: WILBUR BLVD  
To: CEDAR AVE CR 74  
Direction: East

Start date: Tue 05/04/2021 00:00  
End date: Fri 05/07/2021 21:45  
County: Dutchess  
Town:  
Speed limit: 45  
LION#:

Count duration: 94 hours  
Functional class: 16  
Factor group: 30  
Batch ID: DOT-R08C19eNDS5363  
Count taken by: Org: NDS Init: DG  
Processed by: Org: DOT Init: CXW

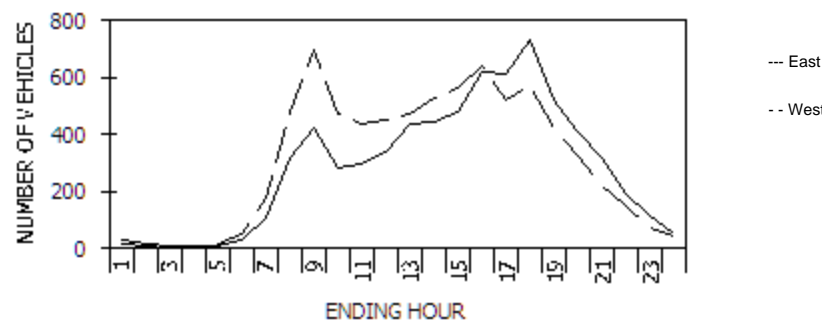
**Speeds, mph**

Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-70.0	70.1-75.0	75.1-95.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	0	0	0	2	8	12	8	2	0	0	0	0	0	31.3	6.3	0.0	0.0	0.0	41.9	42.6	48.3	32
2:00	0	0	0	1	4	6	2	2	0	0	0	0	0	26.7	13.3	0.0	0.0	0.0	41.8	42.1	49.4	15
3:00	0	0	0	1	2	3	2	1	0	0	0	0	0	33.3	11.1	0.0	0.0	0.0	41.7	42.6	49.2	9
4:00	0	0	0	0	2	1	1	1	0	0	0	0	0	40.0	20.0	0.0	0.0	0.0	42.7	42.6	51.3	5
5:00	0	0	0	0	2	3	4	1	0	0	0	0	0	50.0	10.0	0.0	0.0	0.0	44.0	45.0	49.4	10
6:00	0	0	0	0	7	14	6	3	1	0	0	0	0	32.3	12.9	3.2	0.0	0.0	43.2	43.1	49.5	31
7:00	0	0	0	7	26	46	23	5	1	0	0	0	0	26.9	5.6	0.9	0.0	0.0	41.7	42.3	47.8	108
8:00	10	9	19	46	97	101	30	4	0	0	0	0	0	10.8	1.3	0.0	0.0	0.0	35.4	38.9	44.4	316
9:00	14	15	28	84	148	110	24	2	1	0	0	0	0	6.3	0.7	0.2	0.0	0.0	34.3	37.5	43.4	426
10:00	0	2	12	36	109	89	30	4	0	0	0	0	0	12.1	1.4	0.0	0.0	0.0	38.4	39.2	44.6	282
11:00	2	4	11	48	104	95	29	4	0	0	0	0	0	11.1	1.3	0.0	0.0	0.0	37.6	39.1	44.4	297
12:00	1	1	8	54	128	112	31	3	0	0	0	0	0	10.1	0.9	0.0	0.0	0.0	38.3	39.2	44.3	338
13:00	7	10	34	78	170	112	25	2	1	0	0	0	0	6.4	0.7	0.2	0.0	0.0	35.5	37.7	43.4	439
14:00	10	10	34	96	162	111	20	3	0	0	0	0	0	5.2	0.7	0.0	0.0	0.0	34.9	37.3	43.1	446
15:00	13	22	49	92	170	106	24	4	0	0	0	0	0	5.8	0.8	0.0	0.0	0.0	33.9	36.9	43.0	480
16:00	56	65	94	166	159	70	10	2	0	0	0	0	0	1.9	0.3	0.0	0.0	0.0	28.6	32.9	39.7	622
17:00	30	38	58	138	193	122	29	2	0	0	0	0	0	5.1	0.3	0.0	0.0	0.0	32.2	36.1	42.6	610
18:00	65	68	99	157	199	120	22	3	0	0	0	0	0	3.4	0.4	0.0	0.0	0.0	29.3	34.3	41.5	733
19:00	19	20	40	84	177	150	28	2	1	0	0	0	0	6.0	0.6	0.2	0.0	0.0	34.2	37.8	43.5	521
20:00	6	8	19	66	144	131	33	3	1	0	0	0	0	9.0	1.0	0.2	0.0	0.0	36.6	38.7	44.1	411
21:00	0	2	14	46	114	106	32	4	1	0	0	0	0	11.6	1.6	0.3	0.0	0.0	38.4	39.3	44.5	319
22:00	0	1	4	24	64	71	20	5	1	0	0	0	0	13.7	3.2	0.5	0.0	0.0	39.3	40.2	44.9	190
23:00	0	0	1	6	30	49	21	4	2	0	0	0	0	23.9	5.3	1.8	0.0	0.0	41.4	42.0	47.4	113
24:00	0	0	1	4	13	21	9	6	0	0	0	0	0	27.8	11.1	0.0	0.0	0.0	41.4	42.2	48.9	54
Avg. Daily Total	233	275	525	1236	2232	1761	463	72	10	0	0	0	0	8.0	1.2	0.1	0.0	0.0	34.2	37.6	43.7	6807
Percent	3.4%	4.0%	7.7%	18.2%	32.8%	25.9%	6.8%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%									
Cum. Percent	3.4%	7.5%	15.2%	33.3%	66.1%	92.0%	98.8%	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%									
Average hour	10	11	22	52	93	73	19	3	0	0	0	0	0									284

**TRAFFIC FLOW BY DIRECTION**

	Avg. Speed	50th% Speed	85th% Speed
East	34.2	37.6	43.7
West	39.7	40.5	45.6

Peak Hour Data					
Direction	Hour	Count	2-way A.M. P.M.	Hour	Count
East	18	733		9	1122
West	9	696		18	1301



**New York State Department of Transportation  
Speed Count Average Weekday Report**

Station: 820054  
Route #: NY 113 Road name: SPACKENKILL RD  
From: WILBUR BLVD  
To: CEDAR AVE CR 74  
Direction: West

Start date: Tue 05/04/2021 00:00  
End date: Fri 05/07/2021 21:45  
County: Dutchess  
Town:  
Speed limit: 45  
LION#:

Count duration: 94 hours  
Functional class: 16  
Factor group: 30  
Batch ID: DOT-R08C19eNDS5363  
Count taken by: Org: NDS Init: DG  
Processed by: Org: DOT Init: CXW

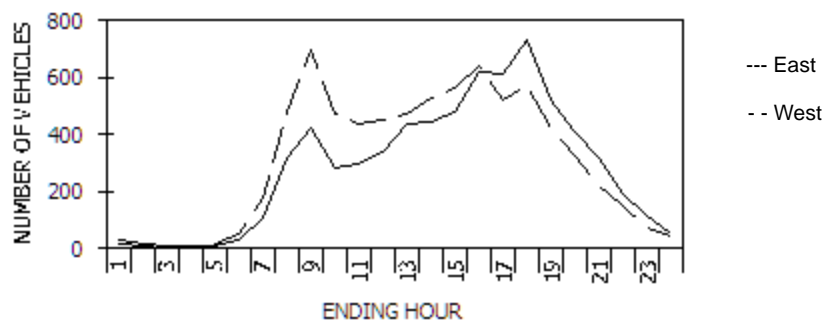
**Speeds, mph**

Hour	0.0-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40.1-45.0	45.1-50.0	50.1-55.0	55.1-60.0	60.1-65.0	65.1-70.0	70.1-75.0	75.1-95.0	% Exc 45.0	% Exc 50.0	% Exc 55.0	% Exc 60.0	% Exc 65.0	Avg	50th%	85th%	Total
1:00	0	0	0	2	2	4	5	1	0	0	1	0	0	46.7	13.3	6.7	6.7	6.7	43.1	44.4	49.8	15
2:00	0	0	0	1	0	3	3	0	0	0	0	0	0	42.9	0.0	0.0	0.0	0.0	42.5	44.2	48.3	7
3:00	0	0	0	0	1	4	2	1	0	0	0	0	0	37.5	12.5	0.0	0.0	0.0	44.0	43.8	49.6	8
4:00	0	0	0	1	0	4	2	1	0	0	0	0	0	37.5	12.5	0.0	0.0	0.0	43.0	43.8	49.6	8
5:00	0	0	0	0	4	7	6	2	1	0	0	0	0	45.0	15.0	5.0	0.0	0.0	44.1	44.3	50.0	20
6:00	0	0	2	1	6	18	14	7	2	0	0	0	0	46.0	18.0	4.0	0.0	0.0	43.5	44.5	51.1	50
7:00	0	0	2	5	31	56	59	22	2	0	0	0	0	46.9	13.6	1.1	0.0	0.0	43.5	44.6	49.8	177
8:00	0	1	3	44	156	185	76	13	1	0	0	0	0	18.8	2.9	0.2	0.0	0.0	40.3	41.0	46.2	479
9:00	0	1	18	85	264	244	73	10	1	0	0	0	0	12.1	1.6	0.1	0.0	0.0	39.0	39.7	44.6	696
10:00	0	1	6	42	153	182	79	10	1	0	0	0	0	19.0	2.3	0.2	0.0	0.0	40.2	41.0	46.2	474
11:00	0	0	8	43	148	175	60	7	0	0	0	0	0	15.2	1.6	0.0	0.0	0.0	39.8	40.7	45.1	441
12:00	0	1	9	47	142	180	64	9	1	0	0	0	0	16.3	2.2	0.2	0.0	0.0	39.8	40.8	45.5	453
13:00	0	0	5	45	176	180	60	8	1	0	0	0	0	14.5	1.9	0.2	0.0	0.0	39.8	40.4	45.0	475
14:00	0	1	9	61	221	185	44	7	0	0	0	0	0	9.7	1.3	0.0	0.0	0.0	39.0	39.4	44.3	528
15:00	0	0	12	84	200	199	55	11	1	0	0	0	0	11.9	2.1	0.2	0.0	0.0	39.0	39.7	44.6	562
16:00	6	4	27	118	276	174	34	3	2	0	0	0	0	6.1	0.8	0.3	0.0	0.0	36.8	38.1	43.4	644
17:00	0	2	2	39	159	226	82	13	1	0	0	0	0	18.3	2.7	0.2	0.0	0.0	40.6	41.4	46.1	524
18:00	0	1	7	72	205	204	71	6	2	0	0	0	0	13.9	1.4	0.4	0.0	0.0	39.4	40.0	44.9	568
19:00	0	1	2	21	130	177	76	14	1	0	0	0	0	21.6	3.6	0.2	0.0	0.0	41.1	41.7	46.9	422
20:00	0	0	6	30	96	135	53	7	1	0	0	0	0	18.6	2.4	0.3	0.0	0.0	40.3	41.2	46.2	328
21:00	0	0	3	15	66	89	38	5	1	1	0	0	0	20.6	3.2	0.9	0.5	0.0	40.7	41.5	46.7	218
22:00	0	0	1	10	41	62	30	7	1	0	0	0	0	25.0	5.3	0.7	0.0	0.0	41.3	42.0	47.6	152
23:00	0	0	1	3	16	29	17	5	2	0	0	0	0	32.9	9.6	2.7	0.0	0.0	42.3	42.9	48.9	73
24:00	0	0	0	1	7	20	10	3	1	0	0	0	0	33.3	9.5	2.4	0.0	0.0	43.2	43.3	48.9	42
Avg. Daily Total	6	13	123	770	2500	2742	1013	172	23	1	1	0	0	16.4	2.7	0.3	0.0	0.0	39.7	40.5	45.6	7364
Percent	0.1%	0.2%	1.7%	10.5%	33.9%	37.2%	13.8%	2.3%	0.3%	0.0%	0.0%	0.0%	0.0%									
Cum. Percent	0.1%	0.3%	1.9%	12.4%	46.3%	83.6%	97.3%	99.7%	100.0%	100.0%	100.0%	100.0%	100.0%									
Average hour	0	1	5	32	104	114	42	7	1	0	0	0	0									307

**TRAFFIC FLOW BY DIRECTION**

	Avg. Speed	50th% Speed	85th% Speed
East	34.2	37.6	43.7
West	39.7	40.5	45.6

Peak Hour Data					
Direction	Hour	Count	2-way A.M.	Hour	Count
East	18	733		9	1122
West	9	696		18	1301



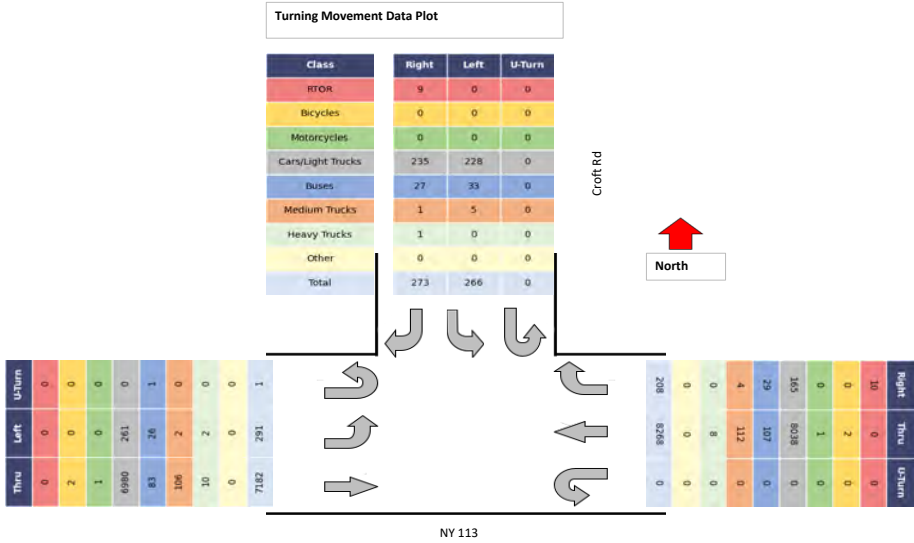


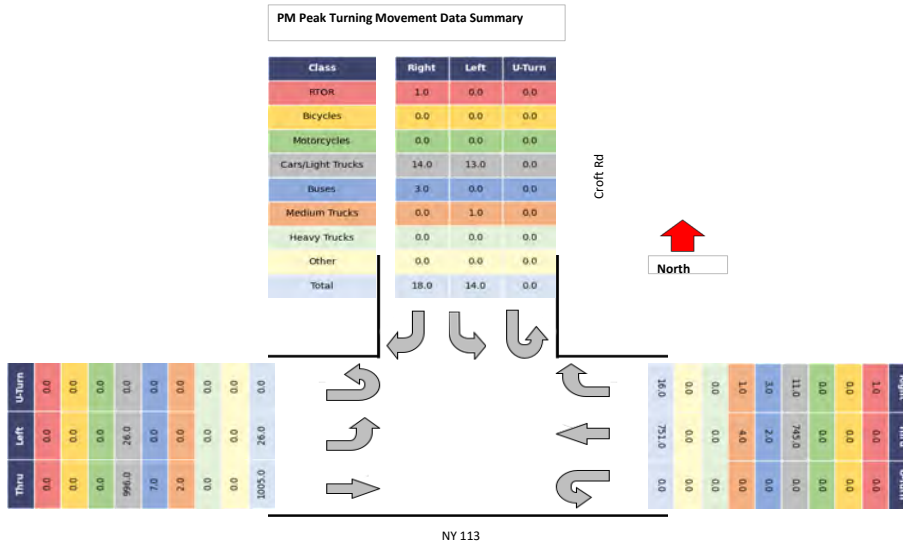
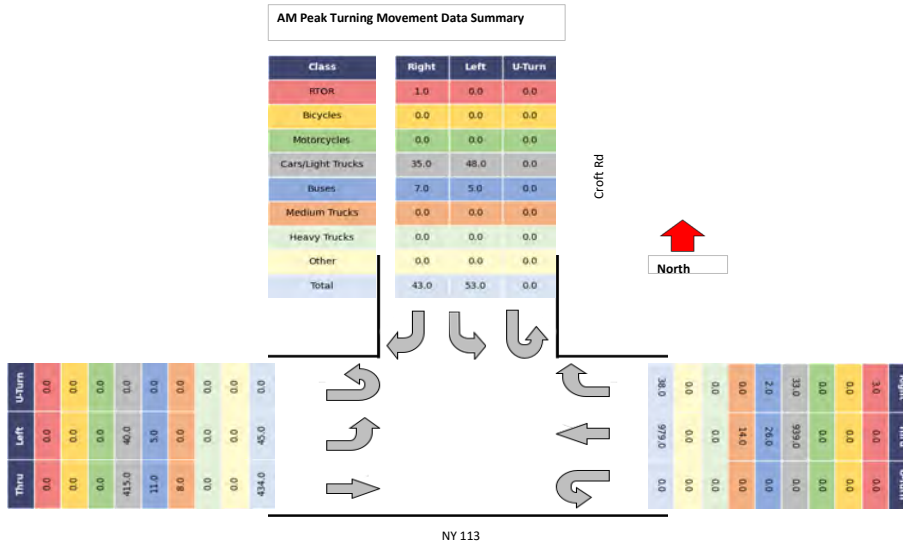
**SUMMARY**

Project	DCTC
Project Code	WW42
Site Name	BIKEPEDC04a
Leas and Movements	All Processed Leas & Movements
Bin Size	15.0
Start Time	07:00
End Time	18:45
Location	NY 113 and Croft Rd
Latitude and Longitude	41.65882927005452, -73.9239460658827



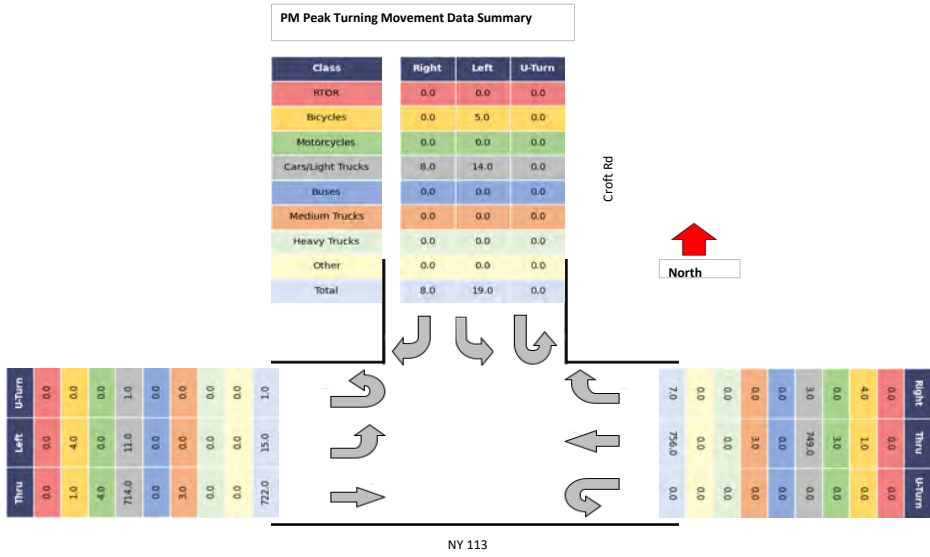
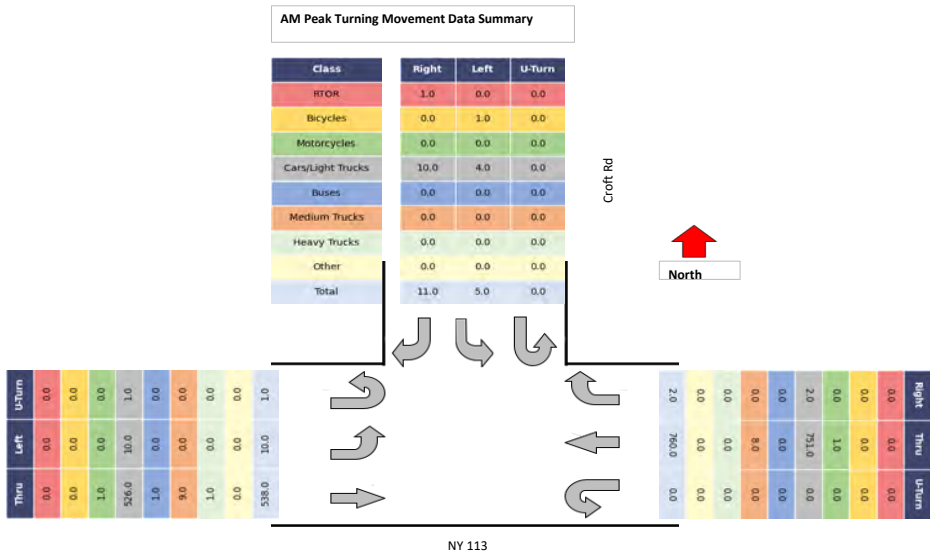
	Start	End	PHF
AM Peak	2022-10-13 07:30:00	2022-10-13 08:30:00	0.93
PM Peak	2022-10-13 16:30:00	2022-10-13 17:30:00	0.95







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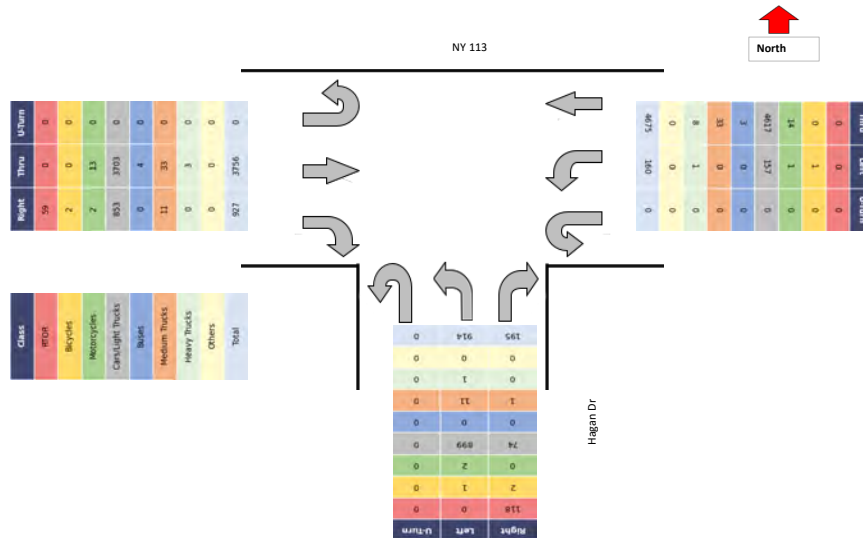
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SUMMARY	
Project	DCTC
Project Code	WW42
Site Name	BIKEPEDC01a
Leas and Movements	All Processed Leas & Movements
Bin Size	15.0
Start Time	07:00
End Time	18:45
Location	NY 113 and Hagan Dr
Latitude and Longitude	41.659346995227146, -73.9146516274128

	Start	End	PHF
AM Peak	2022-10-15 10:30:00	2022-10-15 11:30:00	0.96
PM Peak	2022-10-15 14:15:00	2022-10-15 15:15:00	0.97

Turning Movement Data Plot









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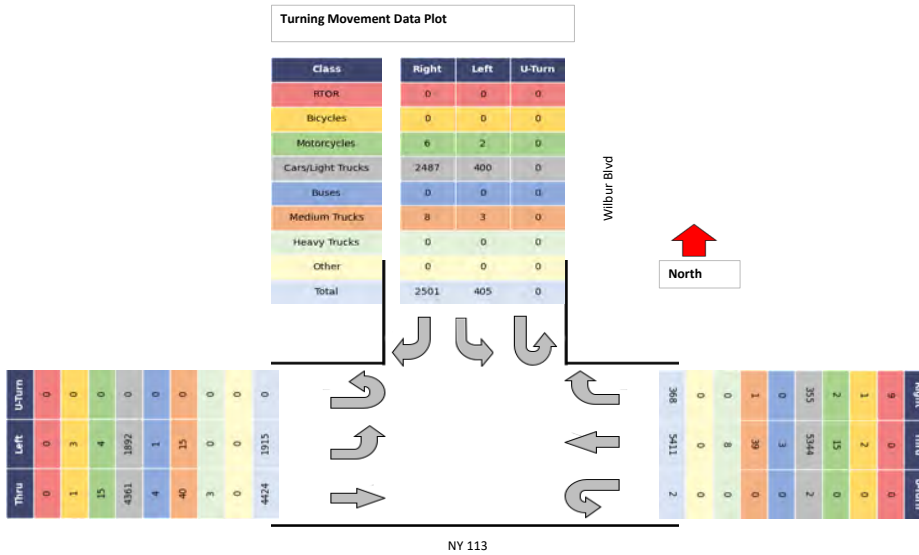


SUMMARY

Project	DCTC
Project Code	WW42
Site Name	BIKEPEDC02a
Leas and Movements	All Processed Leas & Movements
Bin Size	15.0
Start Time	07:00
End Time	18:45
Location	NY 113 and Wilbur Blvd
Latitude and Longitude	41.65947765306973, -73.92076647025654



	Start	End	PHF
AM Peak	2022-10-15 11:00:00	2022-10-15 12:00:00	0.98
PM Peak	2022-10-15 14:15:00	2022-10-15 15:15:00	0.96





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Dutchess County Transportation Council

<b>Year</b>	2022	<b>Survey Dates</b>		<b>High Temp</b>	<b>Low Temp</b>	<b>Weather</b>
<b>Month</b>	October	<b>Thursday</b>	13-Oct	73	46	Cloudy
<b>Count Type</b>	Video	<b>Saturday</b>	15-Oct	70	39	Partly Cloudy
<b>Duration</b>	2-Day/24-Hour					
<b>Location Type</b>	Intersection					
<b>Municipality</b>	T/Poughkeepsie					
<b>Location</b>	Spackenkill Rd and Croft Rd					
<b>Location Description</b>	89' E/O Flower Hill Rd					
<b>Site ID, Address, or Station #</b>	BIKEPEDC04a					
<b>GPS Latitude</b>	41.65898005					
<b>GPS Longitude</b>	-73.92351326					
<b>Week</b>	10/10/2022					

	Data summary - all movements					
	2 hr*			12 hr**		
	Ped	Bike	Total	Ped	Bike	Total
<b>Thursday</b>	10	1	11	47	6	53
<b>Saturday</b>	1	1	2	14	24	38

\* Weekday is 4-6pm, weekend is 12-2pm

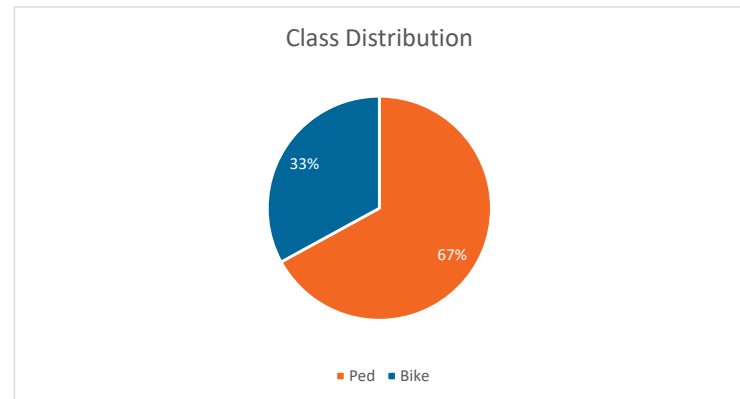
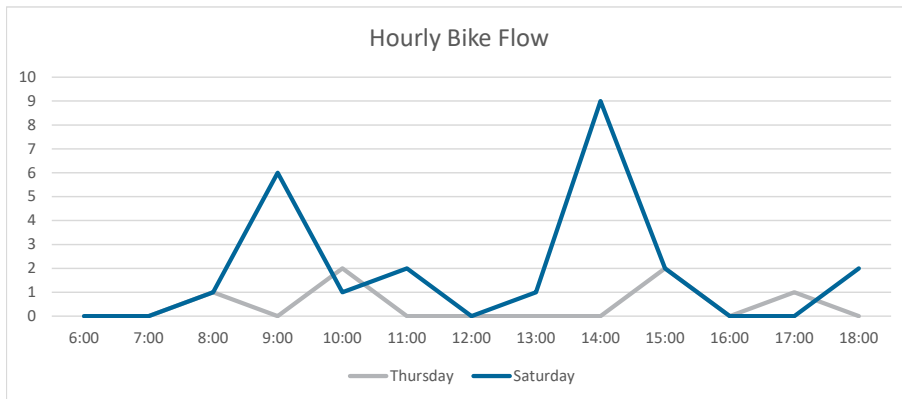
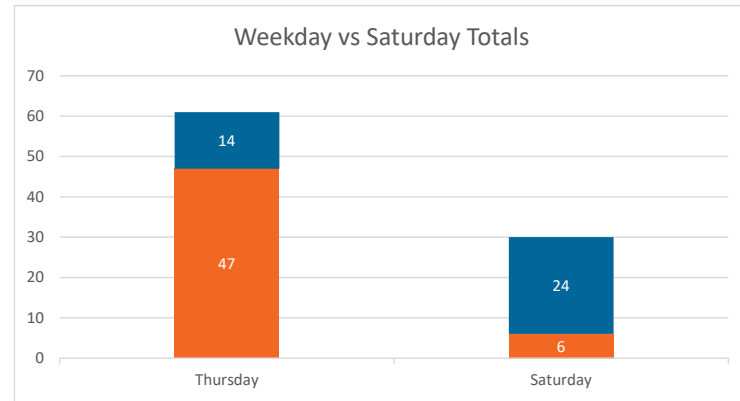
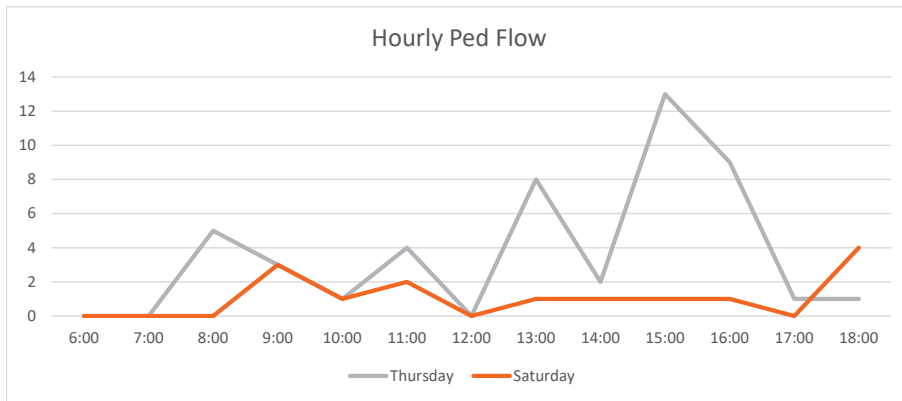
\*\*7am-7pm

2-Day/24-Hour Total	
Class	Total
<b>Ped</b>	61
<b>Bike</b>	30
<b>Total</b>	91

	Intersection leg (for ped counts only)				
	South	East	North	West	Total
<b>Thursday</b>	23	2	7	15	47
<b>Saturday</b>	8	0	2	4	14
<b>2-Day Total</b>	<b>31</b>	<b>2</b>	<b>9</b>	<b>19</b>	<b>61</b>

Dutchess County Transportation Council

<b>Year</b>	2022
<b>Month</b>	October
<b>Count Type</b>	Video
<b>Duration</b>	2-Day/24-Hour
<b>Location Type</b>	Intersection
<b>Municipality</b>	T/Poughkeepsie
<b>Location</b>	Spackenkill Rd and Croft Rd
<b>Location Description</b>	89' E/O Flower Hill Rd
<b>Site ID, Address, or Station #</b>	BIKEPEDC04a
<b>GPS Latitude</b>	41.65898005
<b>GPS Longitude</b>	-73.92351326
<b>Week</b>	10/10/2022



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Dutchess County Transportation Council

<b>Year</b>	2022	<b>Survey Dates</b>		<b>High Temp</b>	<b>Low Temp</b>	<b>Weather</b>
<b>Month</b>	October	<b>Thursday</b>	13-Oct	73	46	Cloudy
<b>Count Type</b>	Video	<b>Saturday</b>	15-Oct	70	39	Partly Cloudy
<b>Duration</b>	2-Day/24-Hour					
<b>Location Type</b>	Intersection					
<b>Municipality</b>	T/Poughkeepsie					
<b>Location</b>	Spackenkill Rd and Hagan Dr					
<b>Location Description</b>	69' E/O Hagan Dr					
<b>Site ID, Address, or Station #</b>	BIKEPEDC01a					
<b>GPS Latitude</b>	41.65923073					
<b>GPS Longitude</b>	-73.91416277					
<b>Week</b>	10/10/2022					

	Data summary - all movements					
	2 hr*			12 hr**		
	Ped	Bike	Total	Ped	Bike	Total
<b>Thursday</b>	11	10	21	58	12	70
<b>Saturday</b>	2	1	3	13	6	19

\* Weekday is 4-6pm, weekend is 12-2pm

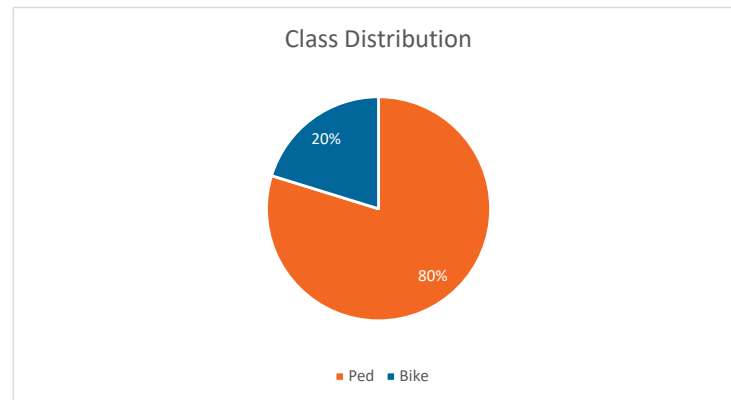
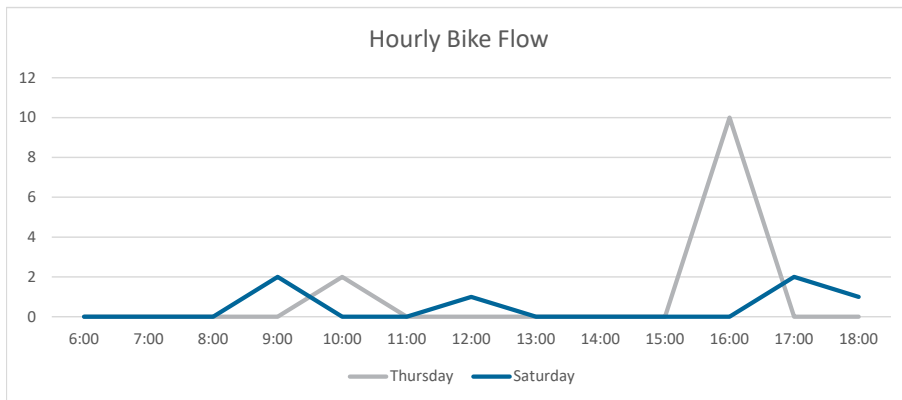
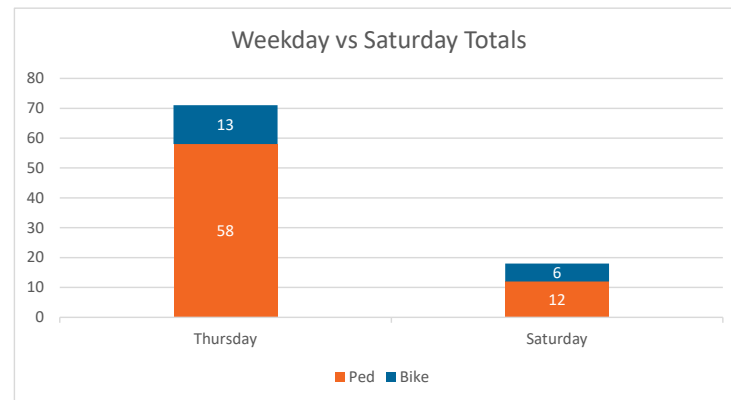
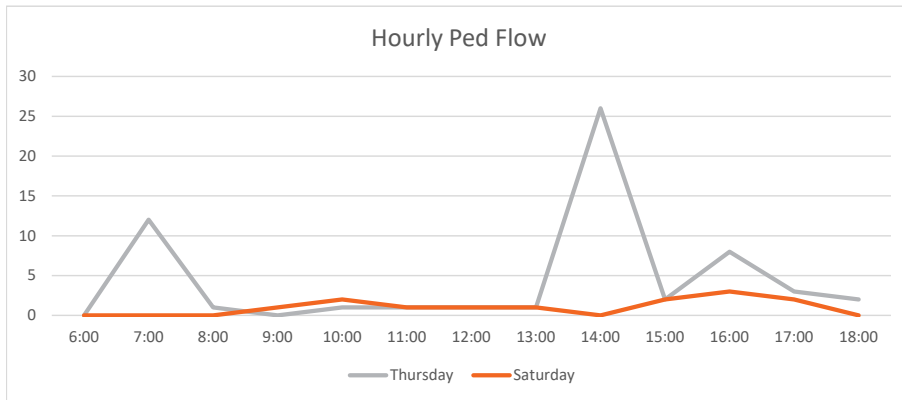
\*\*7am-7pm

2-Day/24-Hour Total	
Class	Total
<b>Ped</b>	71
<b>Bike</b>	18
<b>Total</b>	89

	Intersection leg (for ped counts only)				
	South	East	North	West	Total
<b>Thursday</b>	40	1	11	6	58
<b>Saturday</b>	8	0	5	0	13
<b>2-Day Total</b>	<b>48</b>	<b>1</b>	<b>16</b>	<b>6</b>	<b>71</b>

Dutchess County Transportation Council

<b>Year</b>	2022
<b>Month</b>	October
<b>Count Type</b>	Video
<b>Duration</b>	2-Day/24-Hour
<b>Location Type</b>	Intersection
<b>Municipality</b>	T/Poughkeepsie
<b>Location</b>	Spackenkill Rd and Hagan Dr
<b>Location Description</b>	69' E/O Hagan Dr
<b>Site ID, Address, or Station #</b>	BIKEPEDC01a
<b>GPS Latitude</b>	41.65923073
<b>GPS Longitude</b>	-73.91416277
<b>Week</b>	10/10/2022



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Dutchess County Transportation Council

<b>Year</b>	2022	<b>Survey Dates</b>		<b>High Temp</b>	<b>Low Temp</b>	<b>Weather</b>
<b>Month</b>	October	<b>Thursday</b>	13-Oct	73	46	Cloudy
<b>Count Type</b>	Video	<b>Saturday</b>	15-Oct	70	39	Partly Cloudy
<b>Duration</b>	2-Day/24-Hour					
<b>Location Type</b>	Intersection					
<b>Municipality</b>	T/Poughkeepsie					
<b>Location</b>	NY 113 and Wilbur Blvd					
<b>Location Description</b>	158' E/O Wilbur Blvd					
<b>Site ID, Address, or Station #</b>	BIKEPEDC02a					
<b>GPS Latitude</b>	41.65973051					
<b>GPS Longitude</b>	-73.92011983					
<b>Week</b>	10/10/2022					

	Data summary - all movements					
	2 hr*			12 hr**		
	Ped	Bike	Total	Ped	Bike	Total
<b>Thursday</b>	5	3	8	24	10	34
<b>Saturday</b>	3	1	4	13	16	29

\* Weekday is 4-6pm, weekend is 12-2pm

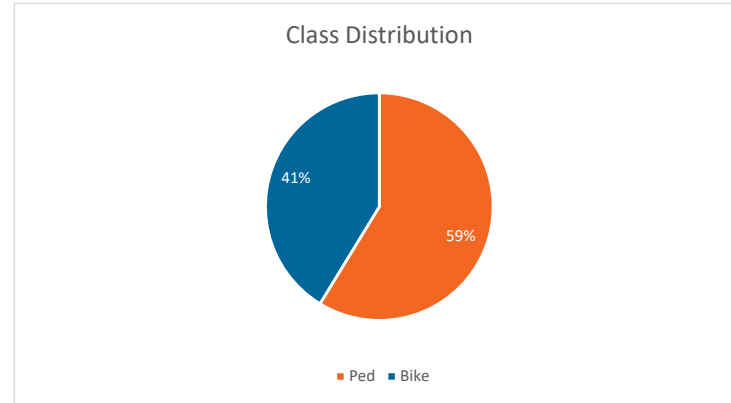
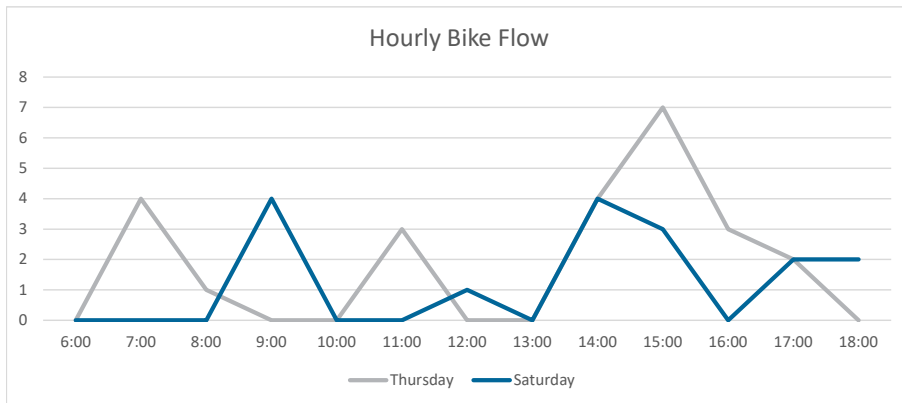
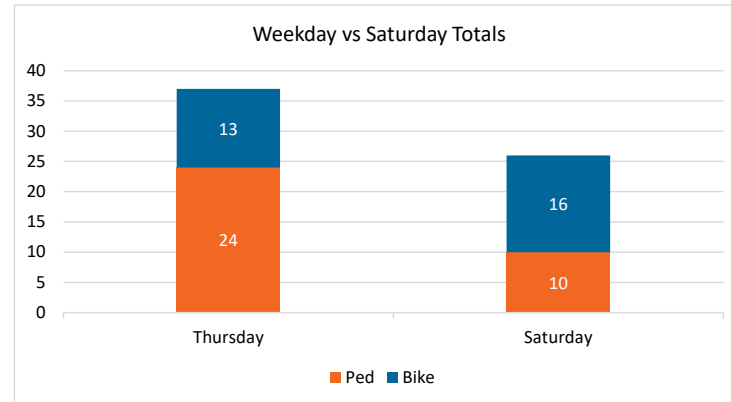
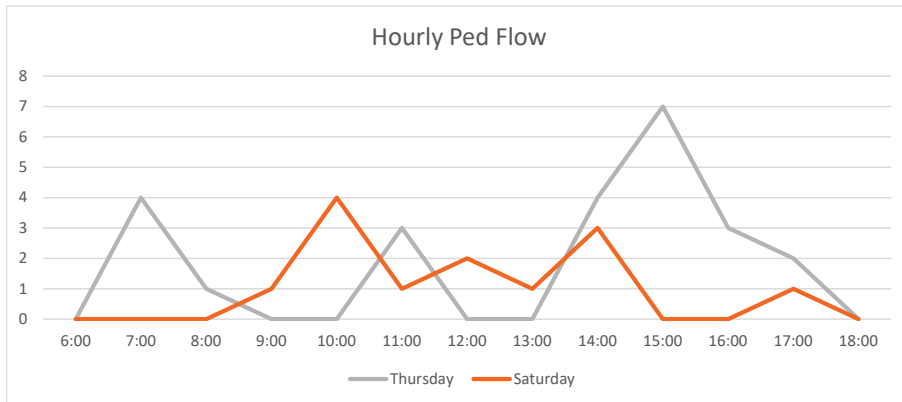
\*\*7am-7pm

2-Day/24-Hour Total	
Class	Total
<b>Ped</b>	37
<b>Bike</b>	26
<b>Total</b>	63

	Intersection leg (for ped counts only)				
	South	East	North	West	Total
<b>Thursday</b>	15	0	7	2	24
<b>Saturday</b>	10	1	2	0	13
<b>2-Day Total</b>	25	1	9	2	37

Dutchess County Transportation Council

<b>Year</b>	2022
<b>Month</b>	October
<b>Count Type</b>	Video
<b>Duration</b>	2-Day/24-Hour
<b>Location Type</b>	Intersection
<b>Municipality</b>	T/Poughkeepsie
<b>Location</b>	NY 113 and Wilbur Blvd
<b>Location Description</b>	158' E/O Wilbur Blvd
<b>Site ID, Address, or Station #</b>	BIKEPEDC02a
<b>GPS Latitude</b>	41.65973051
<b>GPS Longitude</b>	-73.92011983
<b>Week</b>	10/10/2022



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Dutchess County Transportation Council

Year	2022	Survey Dates		High Temp	Low Temp	Weather
Month	October	Thursday	13-Oct	73	46	Cloudy
Count Type	Video	Saturday	15-Oct	70	39	Partly Cloudy
Duration	2-Day/24-Hour					
Location Type	Screenline (on-road)					
Municipality	T/Poughkeepsie					
Location	NY 113 near Stuart Dr					
Location Description	161' W/O Stuart Dr					
Site ID, Address, or Station #	BIKEPEDC03a					
GPS Latitude	41.65986575					
GPS Longitude	-73.91081943					
Week	10/10/2022					

Data summary - all movements						
	2 hr*			12 hr**		
	Ped	Bike	Total	Ped	Bike	Total
Thursday	7	0	7	48	3	51
Saturday	1	0	1	7	1	8

\* Weekday is 4-6pm, weekend is 12-2pm

\*\*7am-7pm

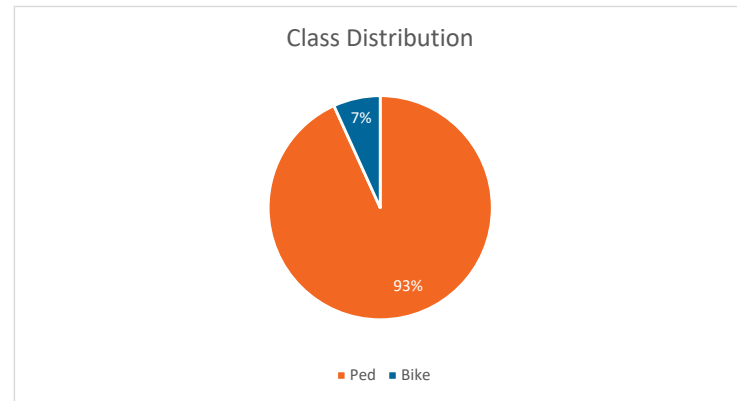
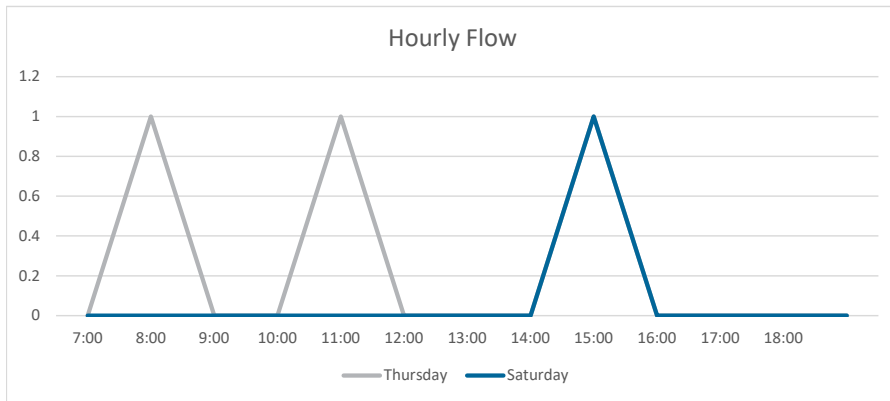
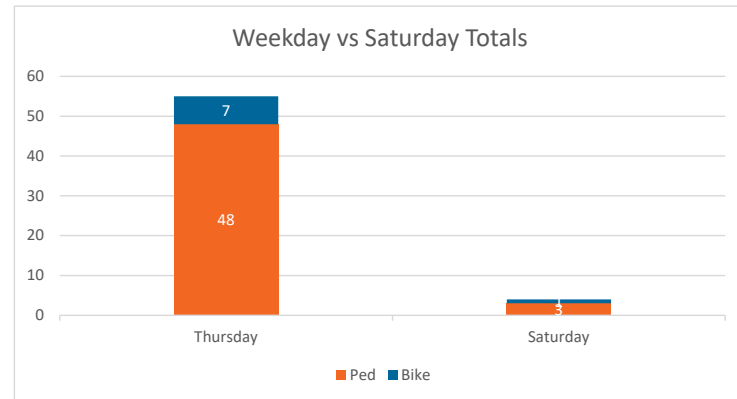
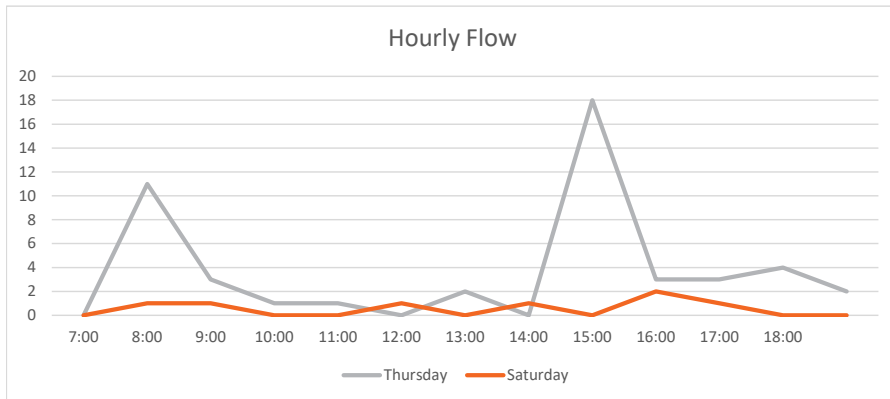
2-Day/24-Hour Total	
Class	Total
Ped	55
Bike	4
Total	59

Travel Direction - Peds			
	East	West	Total
Thursday	17	31	48
Saturday	2	5	7
2-Day Total	19	36	55

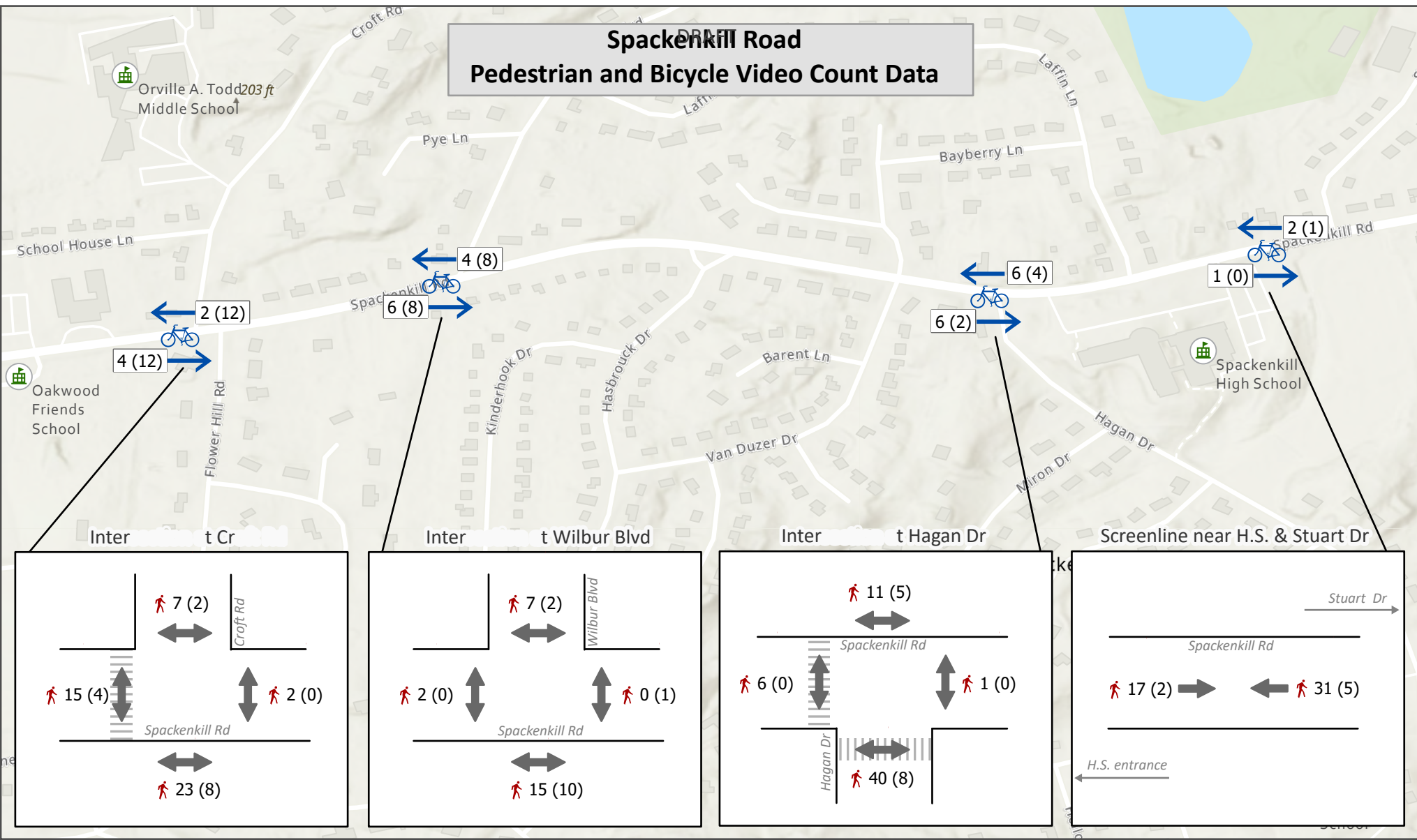
Travel Direction - Bikes		
East	West	Total
2	1	3
1	0	1
3	1	4

Dutchess County Transportation Council

<b>Year</b>	2022
<b>Month</b>	October
<b>Count Type</b>	Video
<b>Duration</b>	2-Day/24-Hour
<b>Location Type</b>	Screenline (on-road)
<b>Municipality</b>	T/Poughkeepsie
<b>Location</b>	NY 113 near Stuart Dr
<b>Location Description</b>	161' W/O Stuart Dr
<b>Site ID, Address, or Station #</b>	BIKEPEDC03a
<b>GPS Latitude</b>	41.65986575
<b>GPS Longitude</b>	-73.91081943
<b>Week</b>	10/10/2022



# Spackenkill Road Pedestrian and Bicycle Video Count Data



- XX (XX) Weekday (Saturday)  
7am-7pm video-based count
- Bicycle Count
- Pedestrian Count
- Exis osswalk
- School



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This map is intended for planning purposes only. The DCTC shall not be held liable for any misuse or misrepresentation of this information. Map contents and data are subject to change. Source: Dutchess County GIS, 2023; Count data collected October 13 and 15, 2022.