

West Road (CR 71) Sidewalk Feasibility Study

Town of Pleasant Valley



Disclaimer

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Part One: Background

1. Introduction

In 2010, the Dutchess County Transportation Council (DCTC) completed a feasibility study for the installation of sidewalks along County Road (CR) 71, known locally as West Road. The Pleasant Valley Town Board had requested the study from the Dutchess County Department of Planning and Development, and DCTC staff, which is shared with the Planning Department, completed the study in coordination with staff from the County Department of Public Works. The DCTC is the designated Metropolitan Planning Organization for the Poughkeepsie-Newburgh NY-NJ Urbanized Area, and coordinates federal transportation planning requirements for Dutchess County.¹

This report is an update of that original study. The Pleasant Valley Town Supervisor requested the update in 2017, in response to changes in the Town's financial priorities, upcoming grant opportunities, and the expansion of a townhome community along the road. The goals of the update are to reassess conditions in the study area; update statistics, figures, and best practice information where appropriate; and refine the original report's conclusions.

The Town of Pleasant Valley is located in the central-western

portion of the county. The south-western quarter of the Town, where the study area is located, is within the county's federally-designated urbanized area. West Road connects NYS Route 115 (Salt Point Turnpike) to the west and US Route 44 to the east. Both Route 115 and Route 44 run diagonally from the southwest to the northeast (see Figure 1– Location Map).

The hamlet of Pleasant Valley straddles Route 44 and extends approximately between West Road to the southwest and Quaker Hill Road to the northeast. The hamlet has significant development in the form of small shopping centers, restaurants, government offices, places of worship, and local businesses. Route 44 is also known as Main Street within the hamlet.

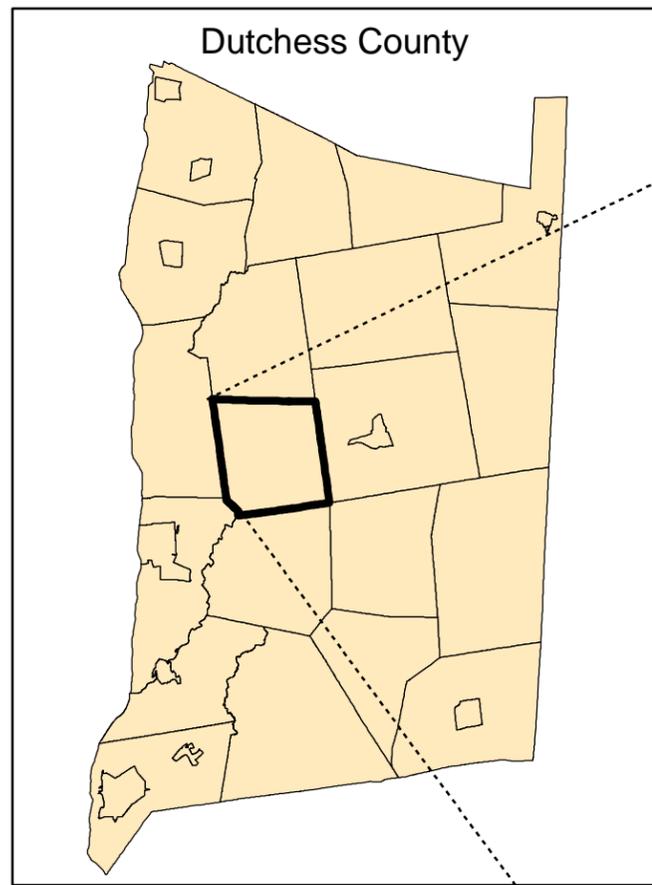
The Town saw substantial development and population growth through most of the 20th Century and into the 21st. US Census estimates show that this growth has slowed in recent years, but development has continued around the study area.

2. Local and Regional Guidance

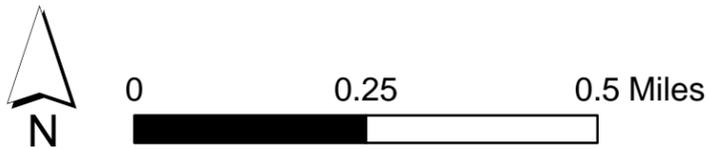
[Pleasant Valley Comprehensive Plan](#)

The Town adopted its current Comprehensive Plan in December 2009. Several sections of the plan support sidewalks. The plan's discussion of the Pleasant Valley hamlet on page 35 states: "The perceived boundaries of the Pleasant

¹ For more information on the DCTC, see <http://www.dutchessny.gov/dctc>

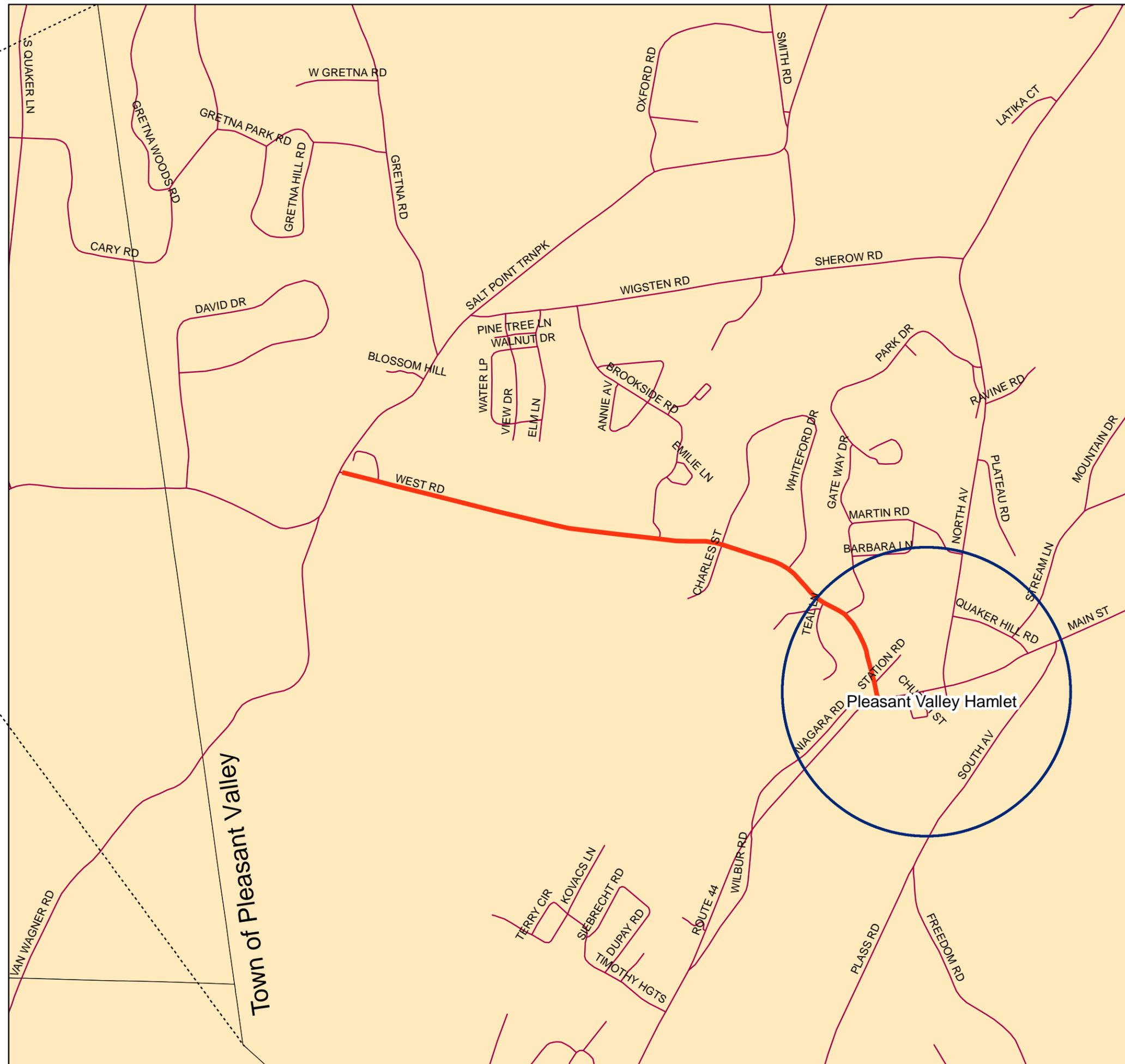


West Road (CR 71) Location Map Figure 1



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Valley hamlet are difficult to define due to creeping strip commercial areas extending out along Route 44, the angular road patterns, and the uneven patchwork of residential projects in the area. *In order to better connect the outlying sections of the hamlet, sidewalks should be extended on at least one side of West Road past the elementary school, on North Road to the apartments, and on South Road as any significant development occurs. Roadside shoulders could also be improved to encourage biking* [italics added].

The Pleasant Valley Hamlet Illustrative Sketch Plan, described on page 36 of the Comprehensive Plan, calls for “improved sidewalks with additional street trees,” though these improvements are shown primarily on Route 44 and North Avenue/Maggiacomo Lane. Recommended changes to the Route 44 streetscape described on page 36 include that “the existing sidewalks should be upgraded to include a buffer strip with street trees to make the pedestrian feel less vulnerable to passing cars...” The discussion of Hamlet Residential zoning district uses on page 39 of the Plan states that “Residential uses in this [Hamlet] category should be established next to the commercial core and connected to the hamlet by pedestrian and bicycle paths, in compact and well designed developments...” The Hamlet Residential District around the Pleasant Valley Hamlet extends along West Road from Route 44 to just before Charles Street on the south side of the road, and to the utility distribution line crossing on the north side.

² §79-34. See Town Code online at: <http://www.ecode360.com/?custId=PL0575>
³ §79-12

Pleasant Valley Town Code

Chapter 79 of the Pleasant Valley Town Code (Section 34, Streets and Sidewalks), states that developers “shall construct sidewalks on both sides of streets for commercial and industrial highways.”² Based on the criteria outlined in Chapter 79, Section 12, Determining Criteria, West Road appears to fit the definition of a Commercial/Industrial Highway.³ Section 34 outlines specifications for sidewalks, while Section 46 states that owners or occupants of lots adjacent to sidewalks are responsible for the removal of snow and ice from them.

Pleasant Valley Town Center Feasibility Analysis

The Town, with support from Dutchess County, commissioned a study of the Pleasant Valley hamlet area in 2016-2017. The study, conducted by the Pace University Land Use Law Center, examines current land use and regulations, and makes recommendations based on LEED-ND (Neighborhood Development) standards. Most of West Road falls within the Town Center as defined in the study. Recommendations include greater sidewalk connectivity between residential areas and the commercial activity along Route 44.

Walk Bike Dutchess (DCTC Pedestrian and Bicycle Plan)

The DCTC’s 2014 *Walk Bike Dutchess* plan strongly supports pedestrian and bicycling infrastructure near population centers. The plan specifically identifies the Pleasant Valley

Town Center as a “key destination for walking and bicycling.”⁴ Schools such as the West Road Intermediate School are also considered key destinations. Extension of pedestrian infrastructure along West Road is one of the plan’s six recommended projects for Pleasant Valley, and is listed as a medium-term project.⁵

Three other plan recommendations are in the immediate vicinity of West Road, including shoulder widening for bicycle safety and comfort on both Route 44 and Route 115, and Pleasant Valley Town Center sidewalk and shoulder improvements.

The plan also encourages towns to work with DCTC to develop their own bicycle and sidewalk plans and policies.⁶ The Town of Pleasant Valley has not developed such a plan, although the 2009 Comprehensive Plan includes recommendations related to pedestrian and bicycle facilities, as discussed above.

[Moving Dutchess 2 \(DCTC Metropolitan Transportation Plan\)](#) *Moving Dutchess 2*, the DCTC’s 2016 Metropolitan Transportation Plan, outlines several transportation priorities related to pedestrian and bicycle travel in Pleasant Valley.⁷ The recommendations are consistent with those listed in *Walk Bike Dutchess*, including a sidewalk/path on West Road. The

4 Pg. 214

5 See recommendation UT-7 on pg. 225

6 See Chapter 6, section F-2, page 280

7 See Chapter 6-4, pp. 263 and 268

8 Chapter 6-4, p. 262

plan also recommends working with NYSDOT to designate and sign Route 44 as a State Bicycle Route, which would likely result in more cyclists riding through the Pleasant Valley Town Center. In addition, the plan includes a long-term recommendation for the redesign of Route 44 in the Town Center into a boulevard, with intersection improvements (new signage, lane markings, and traffic calming) at West Road, CR 47 (South Ave.), and CR 72 (North Ave.), and improvements such as sidewalks to fill gaps, crosswalks, curb extensions, and street trees.⁸

Based on this review, Pleasant Valley’s Comprehensive Plan and Town Code support walking and bicycling facilities on West Road and in the Pleasant Valley hamlet generally, as do County transportation plans.

3. Study Area

West Road is 1.24 miles long and runs roughly east-west. The road is classified by the New York State Department of Transportation (NYSDOT) and the Dutchess County Department of Public Works (DCDPW) as an Urban Minor Arterial. NYSDOT uses a classification system to group roads

according to the character of the service they provide—namely, the type of traffic (e.g. local or long-distance) and the degree of access that the road provides to adjacent land.

Aside from interstates, there are three main classes: arterial, collector, and local. Of these three, arterial roads provide for travel at the greatest speed for the longest uninterrupted distance, with limited access to adjacent land. Arterials are classified as urban or rural depending on where the road is located, and principal or minor. Urban Principal Arterials (like Route 44 and Route 115) serve the major activity centers of a metropolitan area and the highest traffic volume corridors, while Urban Minor Arterials interconnect with the urban principal arterial system and serve trips of moderate length at somewhat lower speeds and with more access to adjacent land than principal arterials.

The designation of West Road as an Urban Minor Arterial also means that the road is part of the federal-aid system and eligible for federal funding. All interstates and all roadways except for Local roads and Rural Minor Collectors are eligible for federal-aid.

While the study area is the entire length of West Road, the area was split into three segments based upon their distinct characteristics (see Figure 2– Study Area):

1) Route 44 (Main Street) to Brookside Road (about 0.6 miles)

This segment has a high potential for pedestrian activity, with substantial housing, businesses, and proximity to the

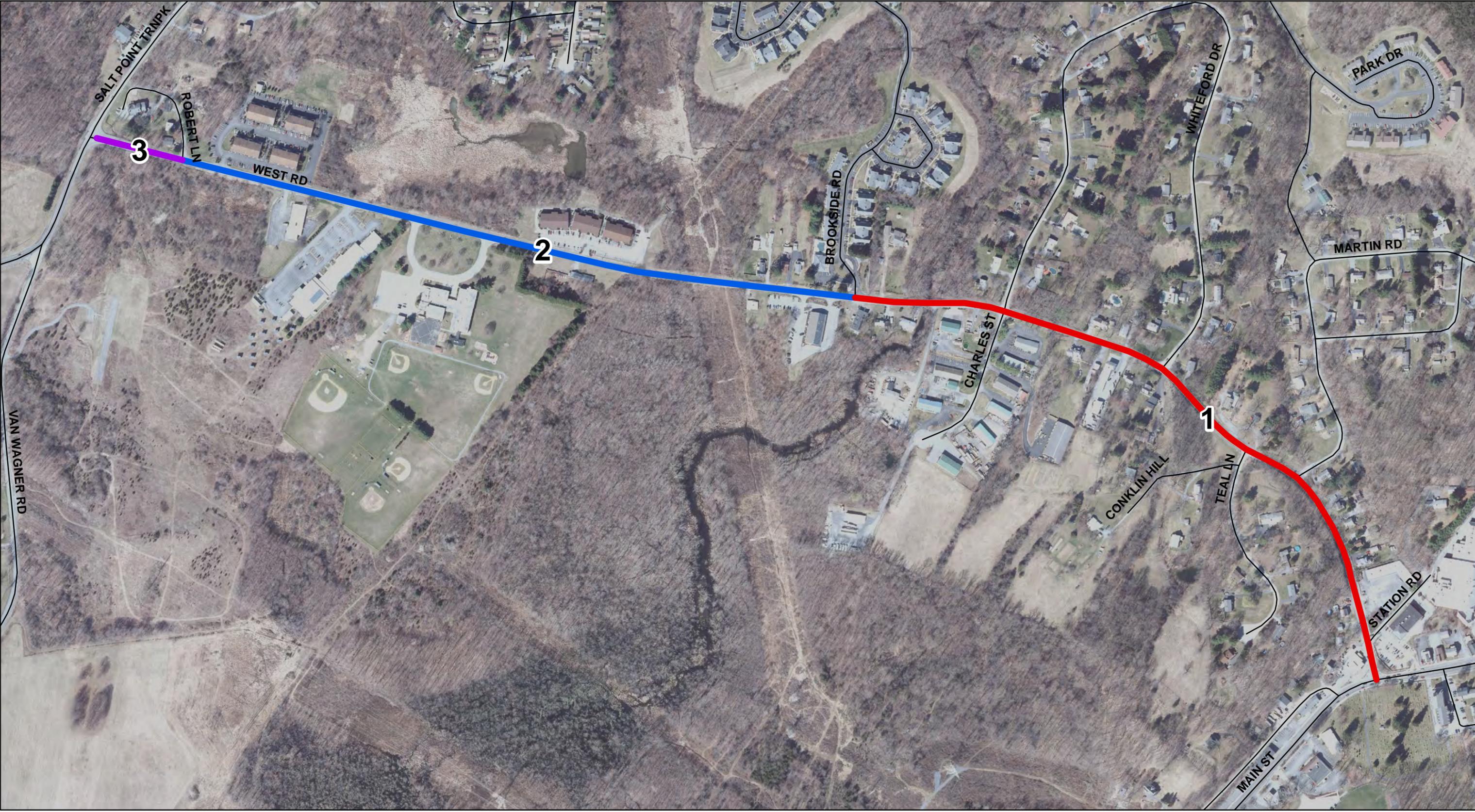
hamlet. It also has steep slopes, a narrow right-of-way, and curves that limit sight distance. This segment has a 35 mile per hour speed limit.

2) Brookside Road to Robert Lane (about 0.6 miles)

This segment is straighter and flatter, with a 45 mile per hour speed limit and a wider right-of-way. It has concentrated points of potential pedestrian activity at the West Road Intermediate School, two apartment complexes, and the future Redl Park. That activity is also likely to be focused around certain parts of the day, such as the end of the school day and the weekend.

3) Robert Lane to Route 115 (Salt Point Turnpike) (less than 0.1 mile).

This short segment has no substantial pedestrian destinations, and thus the least potential for pedestrian activity at this time. It also has steep slopes on the south side of the road, and a rock wall to the north.



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West Road (CR 71)
Study Area Segments
Figure 2

- 1. Main Street (Route 44) to Brookside Road
- 2. Brookside Road to Robert Lane
- 3. Robert Lane to Salt Point Turnpike (Route 115)

Part Two: Present Situation

4. Existing Conditions

In the original 2010 study, the existing conditions along the roadway and in the vicinity were determined based on field visits, discussions with and data from DCDPW, a meeting with the principal of the West Road Intermediate School, and available roadway, traffic and environmental data. For this revision, all data was updated, additional field visits were conducted to verify conditions, and further discussions were held with the Town, the school, and DCDPW. The primary changes noted were an increase in resident population in the study area vicinity, and a slight decrease in motor vehicle crashes. Roadway, right-of-way, utilities, traffic volume, and environmental conditions remain essentially the same as in the original study.

Roadway

West Road is striped with two lanes, one in each direction, except at its two ends, where it widens to three lanes to allow separate left and right turn lanes onto Route 115 and Route 44. The travel lanes are approximately 11 feet wide. From Route 115 to a point just west of Charles Street, the speed limit is 45 miles per hour; from that point to Route 44 it is 35 miles per hour. The shoulder width varies considerably along the road and between the north and south sides. Near Route 115, there are approximately five-foot paved shoulders on the south side of the road and approximately three-foot paved

shoulders on the north side. Just west of Robert Lane, there is a rock wall on the north side of the road approximately six feet from the edge of the travel lane. The shoulder narrows to approximately three feet on both sides of the road approaching the West Road Intermediate School. Shoulders narrow even further between the school and Route 44, though the north shoulder does widen as it enters the hamlet. At its intersection with Route 44, West Road curves south, and Route 44 runs roughly east-west.

Through a partnership with the Cornell Local Roads Program, DCDPW scores all county and local roads within county limits according to a Pavement Condition Index (PCI). The PCI measures the quality of road pavement, with scores ranging from 8 (a road that is beyond recognition) to 94 (a newly paved road). West Road was assessed in 2016, and received a PCI rating of 92.

Right-of-Way

West Road is a Dutchess County roadway. The County owns the land it currently uses for transportation purposes (including travel lanes, shoulders, ditches, snow storage, drainage, etc.). Any additional land would need to be acquired from adjoining property owners, unless a wider right-of-way was previously deeded over to the county. According to DCDPW, there may be some deeded right-of-way along West Road; a preliminary analysis and project definition would clarify the right-of-way situation. There are also utilities and other infrastructure within the right-of-way that must be accommodated. Additionally, the County holds several

permanent easements along the roadway, which are generally for drainage improvements.

Environmental Considerations

There are two DEC-regulated wetlands in the study area. One is located south of West Road between the school property and Charles Street, and extends south to Bower Road in the Town of Poughkeepsie. The other DEC wetland is located north of the road, and extends northeast to North Avenue at Wigsten Road. There are also several National Wetland Inventory (NWI) wetlands in the study area, generally overlapping and sometimes extending the DEC wetlands. Both DEC and NWI wetlands approach West Road between Whiteford Drive (west) and Brookside Road, and NWI wetlands also come close on the road's north side, east of the Country Commons Apartments.

There are a series of streams within the wetland areas; the largest (a branch of Great Spring Creek) runs north-south and crosses West Road between Whiteford Drive/Charles Street and Brookside Road. A pond is located about 280 feet north of West Road opposite the school. There are several culverts in the study area, running both along the side of the road and under the road. There is also a storm sewer along the road near the Pleasant Valley hamlet.

There are also several areas with steep slopes along the road. At the intersection with Route 115, there are slopes of about 15 percent on the south side of the road, with similar slopes on the south side at the utility line crossing west of Brookside

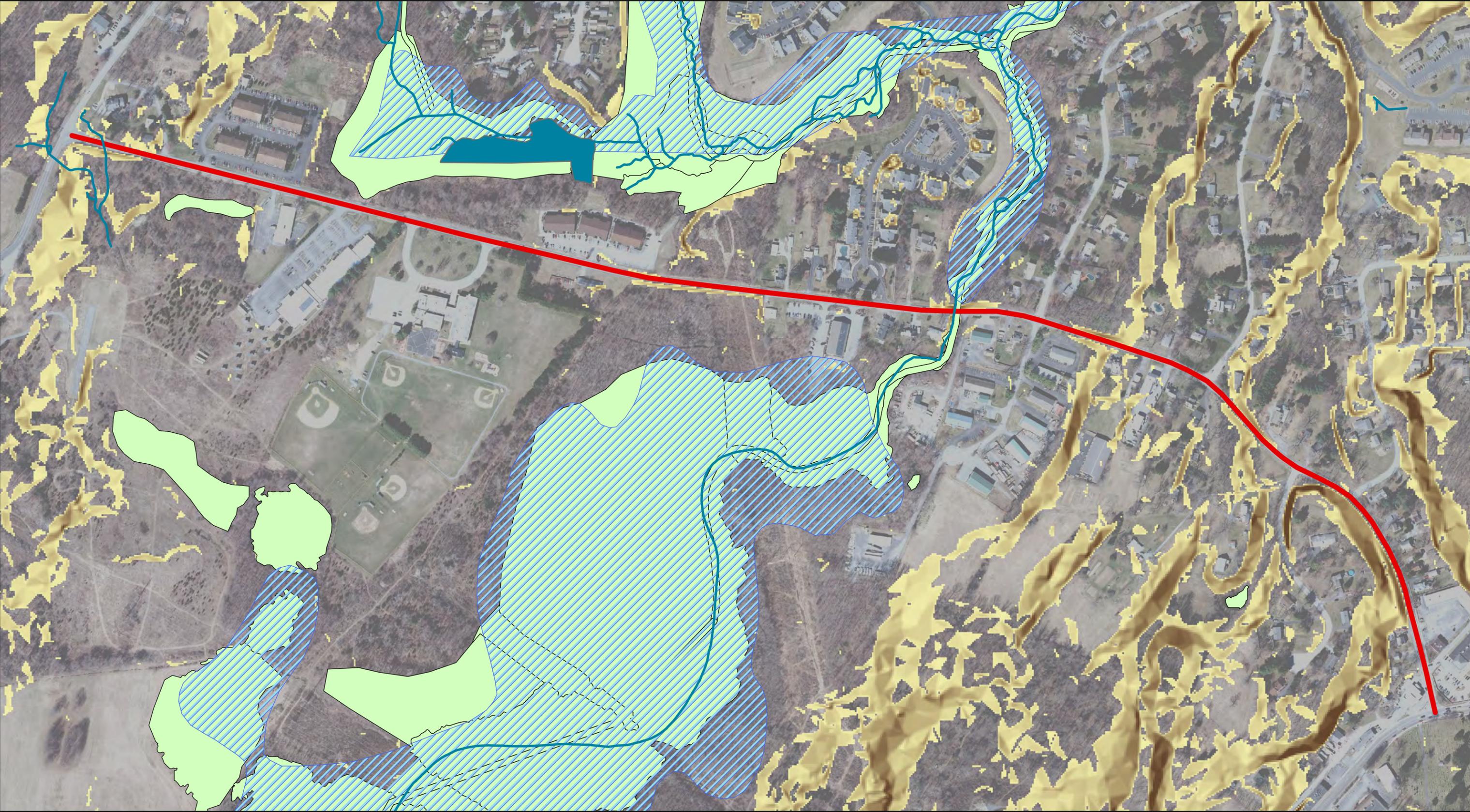


Image 1: Rocky slope near Route 44 intersection

Road. The most challenging slopes, however, are concentrated in Segment 1. Between Brookside Road and Route 44, there are slopes of between 15 and 25 percent on both sides of the road, with slopes greater than 25 percent along the southwestern road edge between Teal Lane and the intersection with Route 44 (see Figure 3– Environmental Conditions). From west to east, the roadway itself slopes downhill from the intersection with Route 115, rises uphill near Charles Street, and slopes steeply downhill again approaching Route 44.

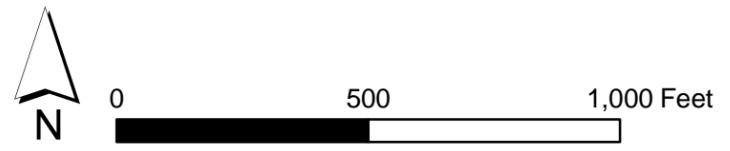
Utilities

There are many utility poles along West Road; these carry primary and secondary electric lines, in addition to telephone and other utilities. From Route 115 to Robert Lane, the poles



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**West Road (CR 71)
Environmental Constraints
Figure 3**

-  Waterbodies
-  DEC (State) Wetlands
-  NWI (Federal) Wetlands
-  High Steep Slopes
-  Low

run along the south side of the road. At Robert Lane, they cross over to the north side, where they continue until just east of Whiteford Drive, where they cross back to the south side of the road. The lines cross back to the north side again just east of Teal Lane. The lines end at Station Road, where they connect with utility lines running along Route 44. They are typically located approximately seven feet from the edge of the roadway. A sidewalk or path on West Road would likely require the relocation of a significant number of these poles.

Three transmission tower lines run roughly north-south through the study area between the apartments east of the school (Pleasant Valley Estates) and Brookside Road, in land owned by the Niagara-Mohawk Power Company. Central Hudson Gas & Electric Corporation owns several parcels adjacent to the electric lines on both the north and south sides of West Road.

Roadway Signage

As noted earlier, the posted speed limit on West Road is 45 miles per hour from Route 115 to just west of Charles Street, and 35 miles per hour from that point to the intersection with Route 44. There are two school crossing warning signs on West Road, approaching the school in each direction. No other school or pedestrian-related signage or markings were observed.

Traffic

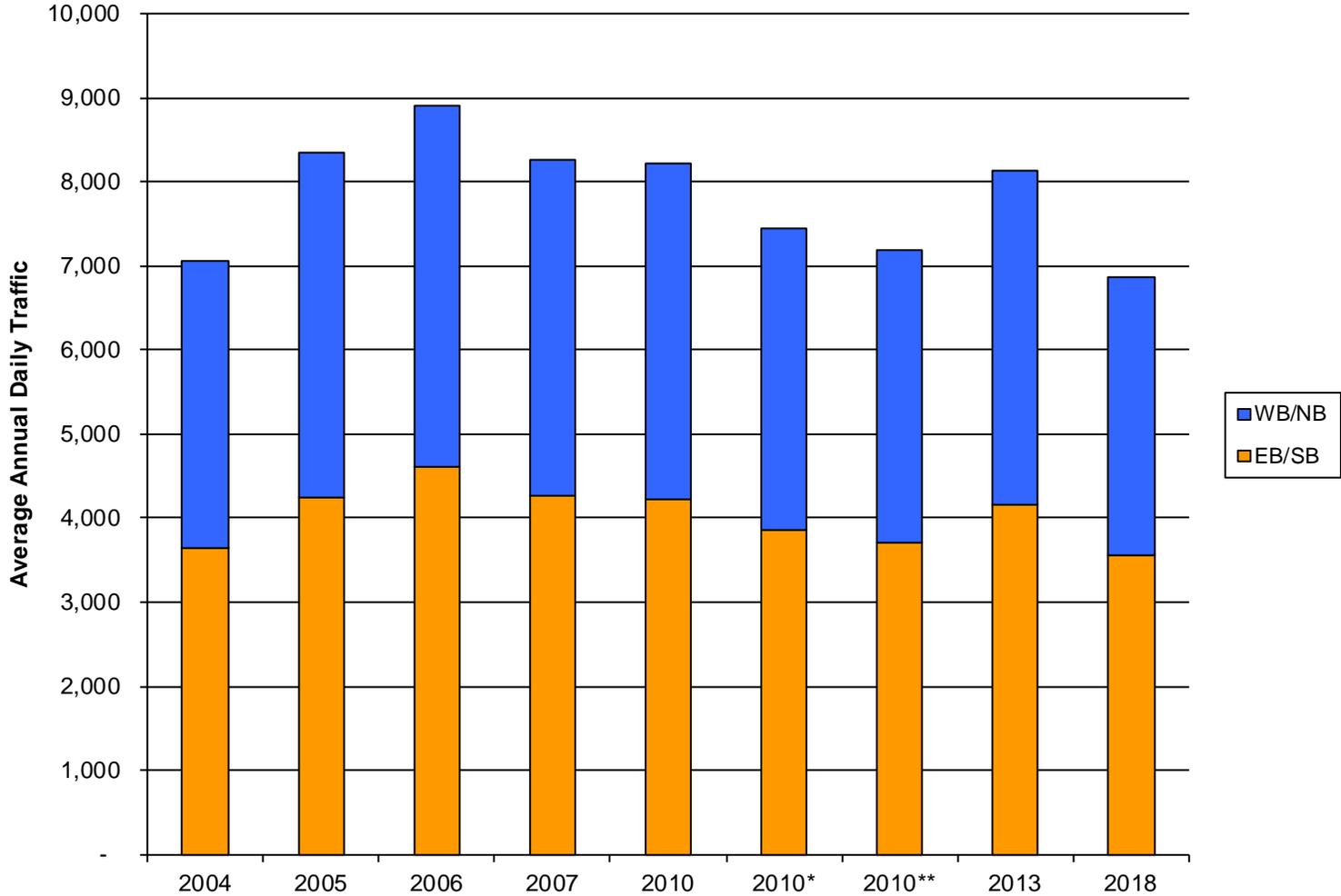
DCTC has regularly conducted traffic counts on West Road since 2001 (see Figure 4a—Traffic Volumes). The exact count



Image 2: School warning sign and pedestrian

location has varied depending on whether it was conducted by NYSDOT or Dutchess County (see Figure 4b—Traffic Count Locations). The last count took place in July of 2018 just west of Brookside Road, and showed an average daily volume of about 7,000 vehicles, evenly divided between westbound and eastbound traffic. This figure is similar to counts that were conducted on both sides of the West Road Intermediate School during the original study. Past counts conducted closer to Route 44 tended to be higher—closer to 8,000 vehicles. Traffic at all locations is typically greatest between 3:00 pm and 6:00 pm, with a morning peak between 8:00 am and 9:00 am. There is not a substantial directional difference during

Figure 4a - West Road Traffic Volumes



* Count conducted just east of West Road Intermediate School **Count conducted just west of West Road Intermediate School



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**West Road (CR 71)
Traffic Count Locations
Figure 4b**



*Numbers indicate AADT (Average Annual Daily Traffic) for the given count

either peak; about as many cars are traveling east as west.

Counts have been conducted within both the 35 and 45 mph sections of the road. The 2013 count, conducted just west of Teal Lane in the 35 mph zone, showed 85th percentile speeds (the speed that 85 percent of traffic is at or below) of about 47 mph eastbound and 44 mph westbound. For the 2018 count, which was in the 45 mph zone, the 85th percentile speed was about 48 mph eastbound and 49 mph westbound. Both counts showed that about 95 percent of vehicles on West Road are cars, pickup trucks, and vans. The remainder are primarily two-axle, six-wheeled trucks (generally delivery trucks).

As mentioned above, the DCTC conducted additional counts at two locations in 2010. The additional locations were in the 45 mph zone, on either side of the West Road Intermediate School. The 85th percentile speed for both was about 49 mph eastbound and 51 mph westbound. The downhill grade eastbound from Route 115 and westbound from Charles Street combined with the straight, flat segment near the school make this section of the road particularly likely for speeding. During the original 2010 study, the school's principal cited speeding as the most pressing issue related to West Road, and said that the school had requested that the Town pursue a school speed zone (see discussion below under *Current Policies*).

Appendix A includes the traffic volume, class, and speed data outlined in this section.

Crash Patterns

Staff analyzed crashes in the study area using data from the Accident Location Information System (ALIS), which combines NYS DMV and State Police reports. Crashes from the most recent five-year period with complete data (2012 through 2016) were analyzed. The ALIS data provides a summary of crashes along the roadway. A more detailed analysis using DMV crash reports would provide more information about individual crashes.

There were a total of 75 crashes over the five-year period, resulting in 32 injuries and no deaths. This includes crashes at West Road's intersections with Route 44 and Route 115; another 9 crashes occurred on smaller connecting roads near their intersection with West Road. This represents a decrease from the 2010 study, which noted 64 crashes over three years (2007-2009; 21.3 crashes per year compared to 15 crashes per year for 2012-2016). Based on the traffic volumes on West Road and the length of the road, the overall crash rate is 4.07 crashes per million vehicle miles (mvm). That compares to the statewide average crash rate of 2.23 crashes/mvm for similar road types (two-lane, undivided urban roads), and an average rate of 3.44 for all Dutchess County roads.

About 75% of crashes were with other motor vehicles. Most of the remainder were collisions with deer (6%) or fixed objects (17%: trees, sign posts, buildings/walls, etc.). There were no pedestrian or bicycle-related crashes over the five-year period. Crashes took place throughout the corridor, with high concentrations near the intersections with Route 44 and

Route 115, as well as between Brookside Road and the eastern terminus of Whiteford Drive, and slight concentrations near the intersections with Robert Lane and Martin Road. A little less than half of the crashes occurred at an intersection.

Rear-end collisions were the most common crash type (34%), followed by “other” (33%). The remainder were right angle crashes, or took place during a turn. Rear end collisions are generally due to traffic signals and queues. About 41% of crashes occurred during non-ideal driving conditions (wet or icy road, rain/snow/ice, or at night). Common contributing factors included driving at an unsafe speed (21%), failure to yield right-of-way (19%), and following too closely (14%); (See Figure 5a– Crash Contributing Factors). The West Road Intermediate School Principal noted that sun glare is an issue near the school.

During the five year period, nearly 75% of crashes occurred in Segment 1 (Route 44 to Brookside Road), while 18 percent of crashes occurred in Segment 2 (between Brookside Road and Robert Lane) and eight percent occurred in the much shorter Segment 3 (Robert Lane to Route 115); (see Figure 5b– Crash Locations). Most crashes (83%) occurred on weekdays, with the highest percentage on Wednesdays (26%), followed by Tuesday (19%) and Friday (16%). Weekends had relatively few crashes. Crashes occurred throughout the day, with a slight peak during the morning rush hour (7:00 am - 9:00 am). Crashes were also not evenly distributed year-to-year: most (63%) occurred in 2013 and 2014.

Land Use

Land use along West Road is a mix of residential, commercial, and community facilities. The West Road Intermediate School is located on the south side of the road near Route 115. An office complex is located just west of the school, and a planned park (Redl Park) is located southwest of the office complex. Other offices are located near Charles Street, on the south side the road about halfway to Route 44. A variety of offices and retail uses are located in the hamlet at the intersection with Route 44.

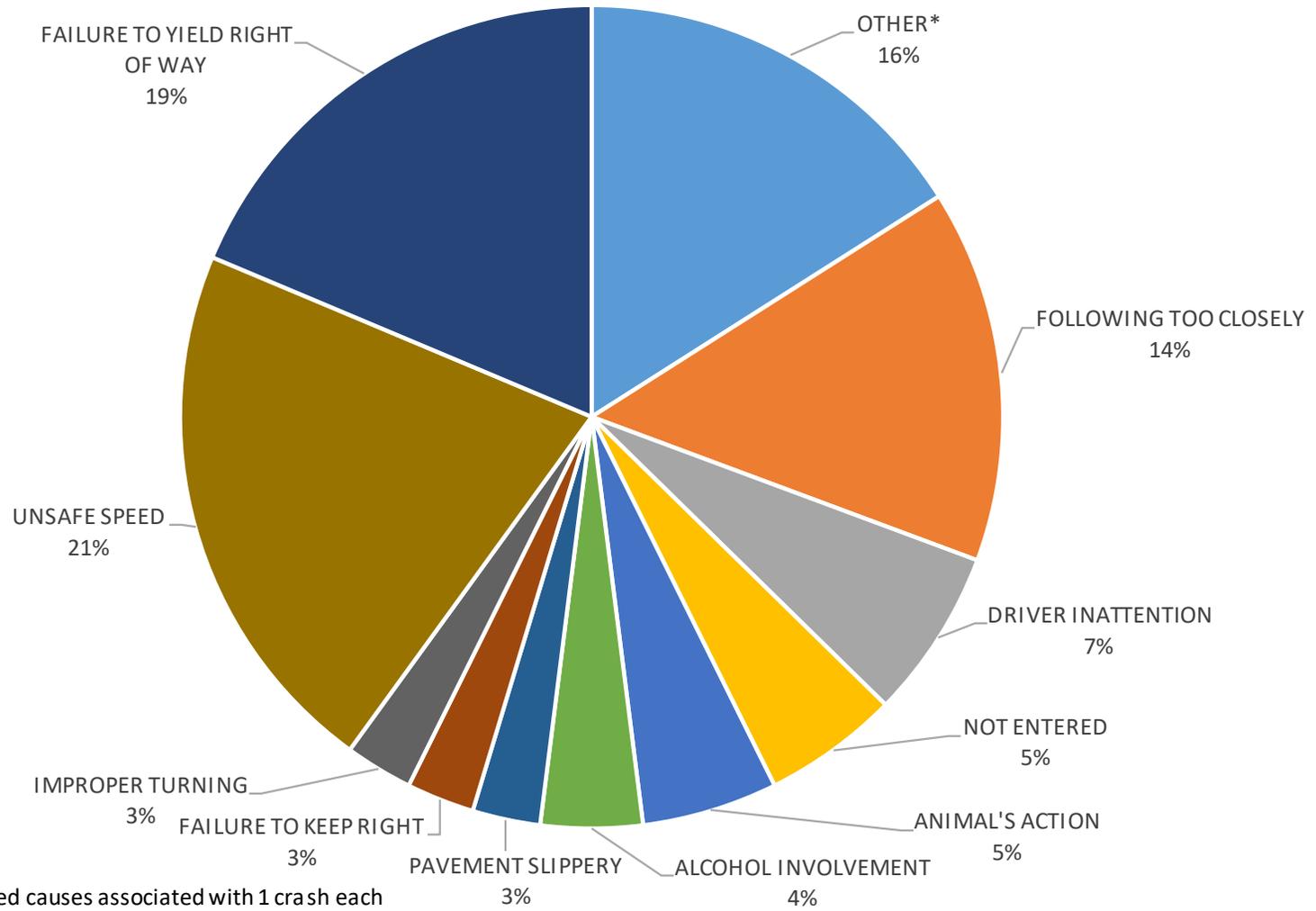
As noted above, the increase of residential units along the road in recent years is a major impetus for this study. Brookside Meadows, a townhome subdivision, has added about 100 units since the original study, bringing the total units in the subdivision to 302—with further expansion planned. These new homes join two existing apartment complexes near Route 115. According to the [2016 Dutchess County Rental Housing Survey](#), these three complexes total 410 units containing 678 bedrooms, all less than a mile from the Pleasant Valley hamlet. There are also approximately 128 single family homes along the corridor, mainly on the north side of the road, for which West Road could provide convenient access to the hamlet.

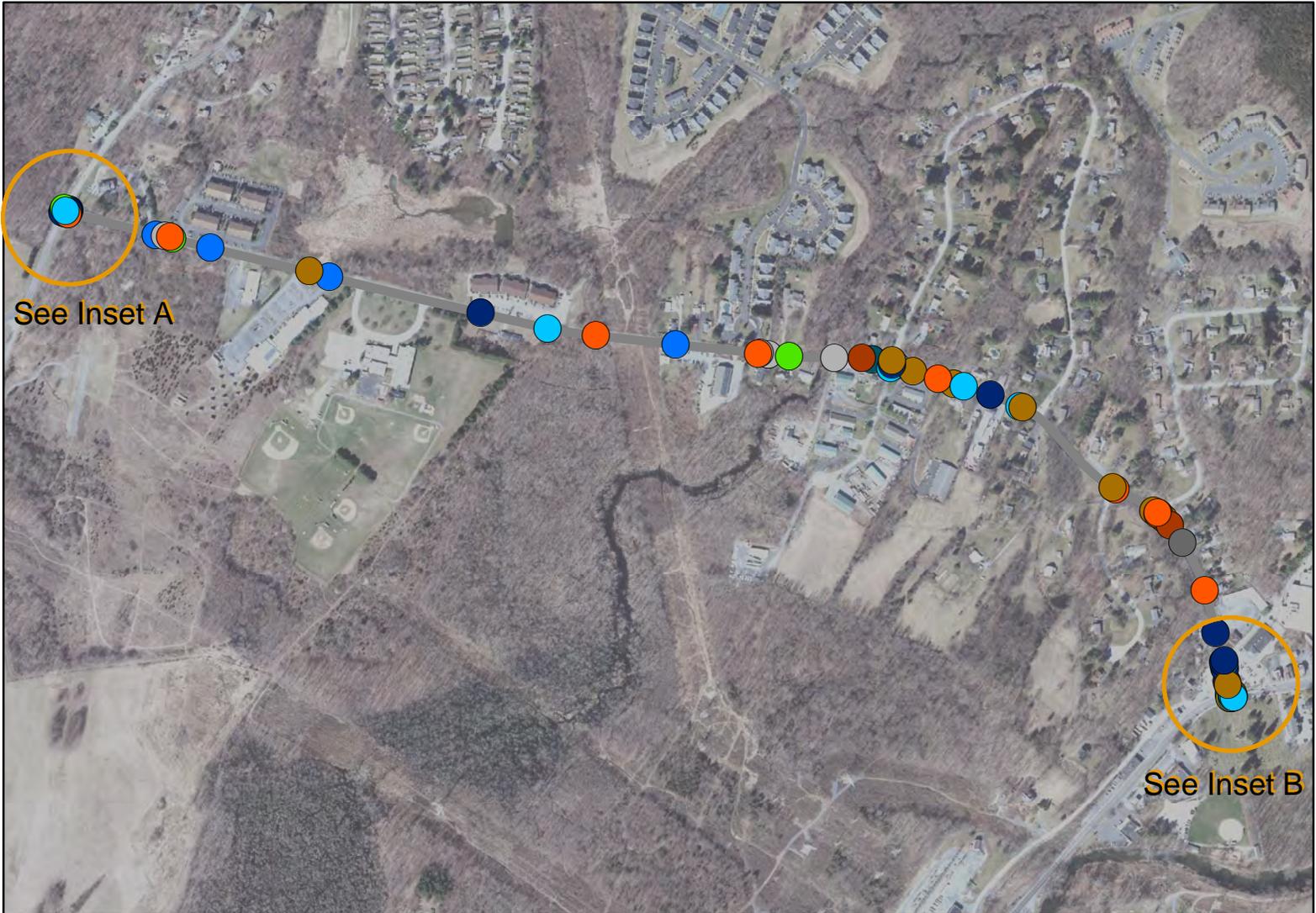
Walking & Bicycling

Current pedestrian activity in the area is concentrated along Route 44 (Main Street). Most walkers and bikers are going to or coming from key points like the shopping center, post

Figure 5a: CR 71 (West Road) Crashes by Contributing Factor (2012-2016)

n = 75





West Road Crash Locations, 2012-2016
Figure 5b

- | | |
|---|---|
| ● ALCOHOL INVOLVEMENT | ● NOT ENTERED |
| ● ANIMAL'S ACTION | ● OTHER |
| ● DRIVER INATTENTION | ● PAVEMENT SLIPPERY |
| ● FAILURE TO KEEP RIGHT | ● IMPROPER TURNING |
| ● FAILURE TO YIELD RIGHT OF WAY | ● UNSAFE SPEED |
| ● FOLLOWING TOO CLOSELY | |

0 500 1,000 Feet



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office, and library. Based on field observations and conversations with Town residents and officials, there are regularly people walking or biking along West Road, and the mix of land uses described above indicates that there is potential for more, if there were the infrastructure to support it. We can estimate this potential using maps, fieldwork, and geographic information system (GIS) data about likely pedestrian destinations.

A pedestrian destination is an activity center that people may walk from or to, such as a housing complex, library, school, post office, commercial center, or municipal office. Eight destinations were identified. They are listed below from west to east and identified by number on Figure 6– Pedestrian Destinations.

1. Future Redl Park
2. Country Commons (60 apartments and 20 condominiums)
3. Conklin office building (just east of the Redl Park site)
4. West Road Intermediate School and athletic fields (fields open to the public on evenings and weekends)
5. Pleasant Valley Estates (48 apartments)
6. Brookside Meadows (302 apartments and townhomes)
7. Charles Street area offices
8. Hamlet district, including ACME shopping center, post office, library, churches, Town offices, and local businesses

Based on GIS and local housing data, it is estimated that approximately 1,200 residents live within one-quarter mile of West Road in apartments, condominiums, and single-family

homes. Many of these residents could walk to and from the hamlet and the other destinations listed above if a system of sidewalks was provided. This includes West Road Intermediate School students who live along the corridor and could potentially walk to school if sidewalks were provided. Current school policies restrict walking (see discussion below under *Current Policies*), but Town officials noted that a few appear to still be walking along the road.

West Road Intermediate School

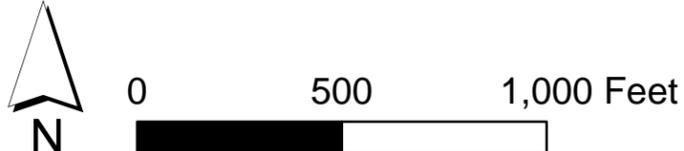
The West Road Intermediate School has around 50 staff and approximately 340-370 students in the 3rd through 5th grades. According to the principal, most students live east of the school near the Pleasant Valley hamlet. School hours are from 8:50 am to 3:20 pm. The school office opens at 7:30 am, and students are dropped off beginning at 8:30 am. School buses unload students in front of the school at 8:40 am. The school office closes at 4:00 pm.

The school has a loop driveway on West Road with a side parking lot used by parents and staff. The eastern end of the driveway is exit only; the western end accommodates two-way traffic. During drop-off and pick-up hours, only buses are allowed to use the eastern exit; cars enter and exit at the western end, using the parking lot to turn around. Both full-size buses and smaller buses drop students off and pick them up in front of the school. Three adults supervise the bus drop off/pick up activity. According to the principal, more students use the buses in the morning; in the evening, some students are picked up for after-school activities. The principal stated



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West Road (CR 71)
Pedestrian Destinations
Figure 6

 Pedestrian Destination

that buses have difficulty exiting the school driveway, particularly in the afternoon, due to traffic on West Road. The principal also noted that crashes and other incidents block traffic on the road because there are only two lanes and minimal shoulders.

The principal also noted that use of the school grounds is not limited to school hours; nearby residents regularly walk across West Road to use school athletic facilities on evenings and weekends.



Image 3: AM school buses, West Road Intermediate School

Sidewalks and Pedestrian Infrastructure

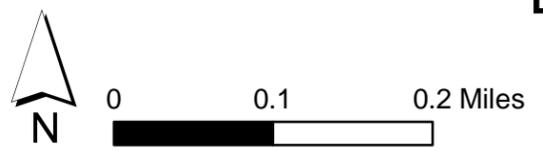
The sidewalk inventory (see Figure 7– Existing Sidewalks) is based on the Dutchess County Department of Planning & Development’s continually-updated GIS map of sidewalks, and verified by Google Maps’ aerial footage and Street View, as well as site visits. The Pleasant Valley hamlet has a fairly complete network of sidewalks. There are sidewalks on both sides of Route 44 within the hamlet and sidewalks into some of the major shopping centers along Route 44. CR 72 (North Avenue) has sidewalks on the east side from the hamlet to Ravine Road and the Bower Park entrance. On West Road, a sidewalk extends 400 feet from Route 44 on the northern/eastern side of the roadway and just a few feet from Route 44 on the southern/western side of the roadway. There are some sidewalks in the residential developments along West Road but there are no other major sidewalks in the study area.

There are two marked crosswalks within the study area, both at the CR 71/Route 44 intersection: one across West Road and one across the eastern leg of Route 44. Pedestrian signals and pushbuttons are provided only for the crosswalk across Route 44. NYSDOT has considered pedestrian improvements for this intersection, including better crosswalks, countdown timers, and curb ramps, under its, but the intersection is not part of the State’s 2017 Pedestrian Safety Action Plan, and it is uncertain if or when it would be included in another project. There are no other marked crosswalks or pedestrian crossing signals on West Road. Lighting along the road consists of highway-style lights; there is no pedestrian-scale lighting.



**Dutchess County
Transportation Council**

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. Map created May 2018.



West Road (CR 71) Area
Existing Sidewalks and Crosswalks
Figure 7

- Sidewalks
- + Crosswalks

Constraints

The West Road corridor has several significant constraints, including limited right-of-way, areas of steep slopes, nearby wetlands, curved segments with limited sight distance, and utilities along the roadway. These will increase costs for right-of-way acquisition, earthwork, utility relocation, and other non-construction items. The specific constraints vary in the three study area segments:

- Segment 1, between Route 44 (Main Street) and Brookside Road, is the most densely developed portion of CR 71 (West Road). It also has the most constrained right-of-way, with narrow shoulders, slopes, and curves. Construction on this segment would require significant earthwork.
- Segment 2, between Brookside Road and Robert Lane, is less densely developed than Segment 1, and is relatively straight and flat. There are utility poles along the north side of the road and wetland areas opposite and adjacent to the school that would increase the complexity and cost of a sidewalk project.
- Segment 3, between Robert Lane and Route 115, is sloped downhill from Route 115. The rock wall on the north side of the road at Robert Lane would make construction of a pedestrian facility in that location difficult, as would the slope south of the road.

9 See Section 8411 of the District's Policy Manual, available online at: http://policy.microscribepub.com/cgi-bin/om_isapi.dll?clientID=292284509&depth=2&infobase=arlington.nfo&record={E90}&softpage=PL_frame

5. Current Policies

Road Design and Maintenance

As County Road 71, West Road is maintained by DCDPW. DCDPW maintains the roadway pavement, shoulders, and drainage ditches, clears trees and brush, cuts grass, installs and repairs signs and signals, and removes snow and ice from the roadway. Per the Pleasant Valley Town Code, adjacent property owners are responsible for maintenance of their frontage, including snow removal from driveways, parking lots, and any sidewalks. In terms of roadway design, DCDPW follows the New York State Department of Transportation's (NYSDOT) roadway design guidelines, which are based on national standards.

Walking and Bicycling to School

The Arlington Central School District, which covers all of the study area and most of the Town, has several policies related to transportation. The District's School Bus Scheduling and Routing Policy stipulates that "No child in grades K-5 shall be required to walk more than ½ mile and no child in grades 6-12 shall be required to walk more than one mile to reach a bus stop. However, if a bus is unable to enter a street and turn around the child shall not walk more than two and three miles respectively."⁹ The School District's website reinforces this policy and addresses students walking to school, stating that "Board of Education policy stipulates that an elementary

school student can walk up to ½ mile to school or to a bus stop.”¹⁰ The website also notes that State regulations allow an elementary student to walk up to one mile.

The District had a policy on Student Bicycle Use stating that “Students are permitted to ride bicycles to school. During the school day bicycles may be used on school grounds only for direct transportation between home, school, and work. Bicycles must be parked and locked in the designated rack areas.”¹¹ This policy was archived by the district in March of 2017, and a search of the online policy manual and Board of Education minutes showed no replacement. According to the District Clerk, this can happen if the Board feels that a policy no longer applies. Removal of the bicycling policy without a replacement means that it is no longer regulated at the district level.

According to the West Road Intermediate School Principal, students are not allowed to walk to this particular school unless accompanied by an adult, due to safety concerns, and the school currently provides bus transportation for all students. No bicycle racks were observed on the school property. While walking to the school may be restricted, it appears that students are interested in walking. The Principal noted that the school has a Walking Club with approximately 100 student members who walk on the school track two

¹⁰ See Frequently Asked Questions related to bus routes and bus stops, at: http://www.arlingtonschools.org/pages/arlington_schools/Departments/Transportation/FAQs

¹¹ See Section 5453 in the archives section of the [District’s Policy Manual](#)

mornings a week and snowshoe in the winter.

School Speed Limits

The Town and West Road Intermediate School Principal have expressed interest in implementing a school speed zone along West Road. Lowering a speed limit on a County Road requires a Town Board resolution requesting the change. The resolution is forwarded to DCDPW’s Engineering Division for a recommendation, and then forwarded to NYSDOT, which conducts an investigation and makes a final determination. Chapter 7 of the [New York State Manual on Uniform Traffic Control Devices \(MUTCD\) Supplement](#) includes a discussion of school speed limits.

The Town adopted a resolution in 2003 requesting a 25 mile per hour speed zone in front of the West Road Intermediate School. The request was forwarded to DCDPW, which supported the request and forwarded it to NYSDOT. A letter to DCTC from NYSDOT on August 4, 2010 stated that NYSDOT completed an investigation of a school speed zone on West Road and found that “in the absence of walking children, this location fails to meet the criteria for establishing a school speed zone.” Town officials also noted that NYSDOT indicated to them that the lack of a sidewalk was a barrier to speed reduction.

Based on a discussion with staff from NYSDOT's Region 8 Traffic Safety and Mobility Group, NYSDOT would likely support a school speed zone if a sidewalk or path were installed, the school did not bus all students, and children were walking or biking to school.¹² Adding a sidewalk or path along West Road, along with adjustments to the school's busing and walking policies, would thus assist in advocating for a school speed limit.

6. Recent and Planned Projects

As discussed above, since the completion of the original study, the Brookside Meadows housing complex grew from 200 to 302 units. Most of these have two bedrooms, adding approximately 200 residents to the study area.

The Town has a long-held goal of developing a 29-acre site just east of the intersection of West Road and Route 115 as a recreational amenity. Known as Redl Park, the project was first proposed circa 2006, and was included in the Town's 2011 Recreation Master Plan. The project continues to move forward, with recent plans calling for an amphitheater, playground, pavilion, and trail network, among other amenities. Primary vehicle access is proposed from Van Wagner Road, but a pedestrian link from West Road would be logical if pedestrian infrastructure was provided along the road.

In 1994, DCDPW proposed a project to reconstruct a portion of West Road between Route 44 and 350 feet west of Whiteford Drive (a total length of 2,880 feet). The project was intended to improve sight distance and pavement conditions only and did not include sidewalks. However, the project, along with several others, was removed from DCTC's Transportation Improvement Program (TIP) during the 2011-2015 cycle, due to financial constraints. According to DCDPW staff, a new project with an updated scope could be added back onto the TIP for construction if federal funding becomes available, but would need to be weighed against other County-wide priorities. DCDPW staff stated that a project would be more likely to get onto the TIP if the Town was the project sponsor.

The Town is also completing a Town-wide water supply study. The study is in final review and should be completed in summer 2018. If water service is planned, it would likely involve road work on West Road. This could provide an opportunity to coordinate the construction of water infrastructure with pedestrian improvements.

¹² Guidance on school speed zones can be found in the [New York State supplement to the Manual on Uniform Traffic Control Devices](#), section 7B.15. Staff from NYSDOT's Region 8 Traffic Safety and Mobility Group indicated that they would be happy to discuss school speed zone options with the Town.

Part Three: Options and Recommendations

7. Options and Strategies

There are three basic options for providing walking and biking access along a roadway like West Road: a shared-use path, sidewalks, or shoulder improvements. The benefits and drawbacks of these options are outlined below. This section also addresses crosswalks, signage, roadway markings, and speed reduction strategies.

According to the DCDPW Engineering Division, the ideal section for this type of road (Urban Minor Arterial) would include two eleven-foot lanes with four- to six-foot shoulders, curbs, a three- to five-foot landscaped buffer and a five-foot sidewalk on each side. This would require a minimum right-of-way width of 50 to 54 feet, plus any room needed for utilities. This “ideal” section is modified based on the characteristics of an individual road and the surrounding context.

Shared-Use Path

A shared-use path provides access for walkers, bicyclists, and other human-powered travelers (e.g. those using skateboards, rollerblades, and scooters). A shared-use path along a roadway is known as a “sidepath.” Sidepaths may be installed

on both sides of a roadway but are often installed on only one side. Per AASHTO’s Guide for the Development of Bicycle Facilities, 2012, sidepaths must be set back from the edge of the road by at least five feet with a buffer (landscaped area, drainage swale, or other) or barrier between the path and the edge of the pavement.¹³ Because these paths are not immediately adjacent to the road, they do not require a curb. However, they must be accessible per Americans with Disabilities Act (ADA) standards.¹⁴ The AASHTO guide also outlines surface, slope, grade and width requirements for paths.

Paths serve two-way travel, as it is generally impractical to enforce one-way travel on a path. A wide path may be striped with a center line to separate each direction of travel, but this is generally not necessary except on very crowded paths. The recommended minimum width for a two-way shared-use path ranges from 10 to 12 feet, depending on the volume and mix of users expected and the available right-of-way.

The benefits of a shared-use path are that it serves many types of users and is often perceived as safer than a sidewalk, due to its separation from the roadway. However, paths with multiple intersections or driveways can be unsafe for bicyclists, as drivers exiting a driveway or intersecting road

13 See the AASHTO Guide for the Development of Bicycle Facilities, 2012, available online at https://nacto.org/wp-content/uploads/2015/04/AASHTO_Bicycle-Facilities-Guide_2012-toc.pdf.

14 For more information about accessible shared-use paths, see FHWA’s Designing Sidewalks and Trails for Access, Chapter 14- Shared Use Path Design: https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/sidewalk2/sidewalks214.cfm

generally do not expect (and do not look for) bicyclists riding in the opposite direction of traffic. In addition, a path on only one side of the road does not provide access for people coming or going to locations on the other side. Shared-use paths typically work best when they are in their own right-of-way (such as along a former rail line) and have fewer than five intersections per mile.¹⁵

A shared use path would be very difficult for most of West Road. The current travel lanes are approximately 11 feet wide with shoulders which vary in width from one foot or less to five feet. In order to create room for a path along one side of the road, additional right-of-way would have to be acquired, and existing utility poles may have to be relocated. In planning the right-of-way, wetland areas and areas with steep slopes would need to be avoided as much as possible. In addition, there are approximately 23 intersections and driveways along each side of West Road, including the endpoints. A shared-use path would have to be designed very carefully to reduce conflicts with vehicles at these points, particularly for bicyclists, but also for pedestrians.

Sidewalk

A sidewalk provides access primarily for pedestrians, although bicyclists and other human-powered travelers often use them. Some jurisdictions, though not the Town of Pleasant Valley,

have ordinances barring bicyclists from sidewalks, but this is difficult to enforce. Ideally, sidewalks should be installed on both sides of a road wherever possible to provide access to multiple destinations. The Pleasant Valley Town Code recognizes this, stating that developers “shall construct sidewalks on both sides of streets for commercial and industrial highways” (see Chapter 79-34).

Sidewalks are installed along the edge of a roadway, ideally but not always with a buffer. NYSDOT guidelines recommend a minimum five-foot wide sidewalk with a four- to six-foot wide landscaped buffer between the sidewalk and the roadway.¹⁶ A five-foot wide sidewalk allows pedestrians to travel comfortably side-by-side, and provides adequate space to maneuver a wheelchair or stroller. A wider sidewalk may be appropriate based on the expected level of use. A wider buffer increases comfort for people walking, particularly along high-speed or busy roads, and could provide room for utilities or other objects. Current DCDPW-Engineering Division guidelines require utility poles to be located 10 feet from the edge of the travel lane in most instances. NYSDOT policies require constructing a curb where a sidewalk is provided. This entails additional construction and maintenance costs. Sidewalks must also meet ADA guidelines, and ADA-compliant curb

¹⁵ See Walk Bike Dutchess, page 42

¹⁶ See NYSDOT Highway Design Manual, Chapter 18.6: Pedestrian Facility Design, available online at https://www.nysdot.gov/divisions/engineering/design/dqab/hdm/hdm-repository/chapt_18.pdf

ramps are necessary at all intersections and driveways.¹⁷

Compared to a shared-use path, a sidewalk would require less right-of-way if it were installed on only one side of the road, and more if installed on both sides, assuming a buffer is included. A well-designed sidewalk with an adequate buffer between it and the roadway can be just as safe as a path. However, a sidewalk would have less capacity than a path and is typically not intended for use by bicyclists.

To provide room for a sidewalk on West Road, additional right-of-way would have to be acquired and existing utility poles may have to be relocated. Wetland areas and steep slopes would need to be avoided as much as possible.

Shoulder Improvements

In areas where sidewalks or paths are not feasible, roadway shoulders can provide for limited walking and bicycling access. Shoulders provide little protection from adjacent vehicle traffic, but are relatively inexpensive and require less right-of-way than a sidewalk or path. Pedestrians are required by State law to walk in the opposite direction of traffic when practicable to maximize their visibility of and by drivers.¹⁸ Shoulders are also used by bicyclists (traveling in the same direction as cars) when the shoulder is smoothly paved and

wide enough for bicycle use (ideally four feet or wider). Shoulders designed for pedestrian use must meet ADA guidance, including for cross slope.

As described above, the shoulder width along West Road varies considerably. If a sidewalk or path is not feasible in the short-term, an interim improvement could include widening the shoulders along both sides of the road to at least four feet or along one side of the road to at least five feet, per NYSDOT Highway Design Manual guidance.¹⁹ However, this improvement would most likely not be sufficient for parents to feel safe allowing their children to walk along the road. In addition, it could require rock cutting on the south/west side of the road between Station Road and Martin Road, and may entail right-of-way acquisition and utility pole relocation.

Crosswalks

In addition to a path, sidewalk, or improved shoulder, marked crosswalks should be considered on West Road to improve access to and from the pedestrian destinations described under *Existing Conditions*. Crosswalks alert drivers to locations where pedestrians may cross and encourage pedestrians to cross in a consistent location. Crosswalks may be located at an intersection or a mid-block location. Crosswalks may be marked with standard striping, but NYSDOT, DCDPW and DCTC

¹⁷ See <https://www.access-board.gov/attachments/article/743/nprm.pdf>

¹⁸ New York State Vehicle and Traffic Law, Article 27, Section 1156.

¹⁹ See NYSDOT Highway Design Manual, Chapter 18.6.2, online at https://www.nysdot.gov/divisions/engineering/design/dqab/hdm/hdm-repository/chapt_18.pdf

Figure 8- Crosswalk Striping

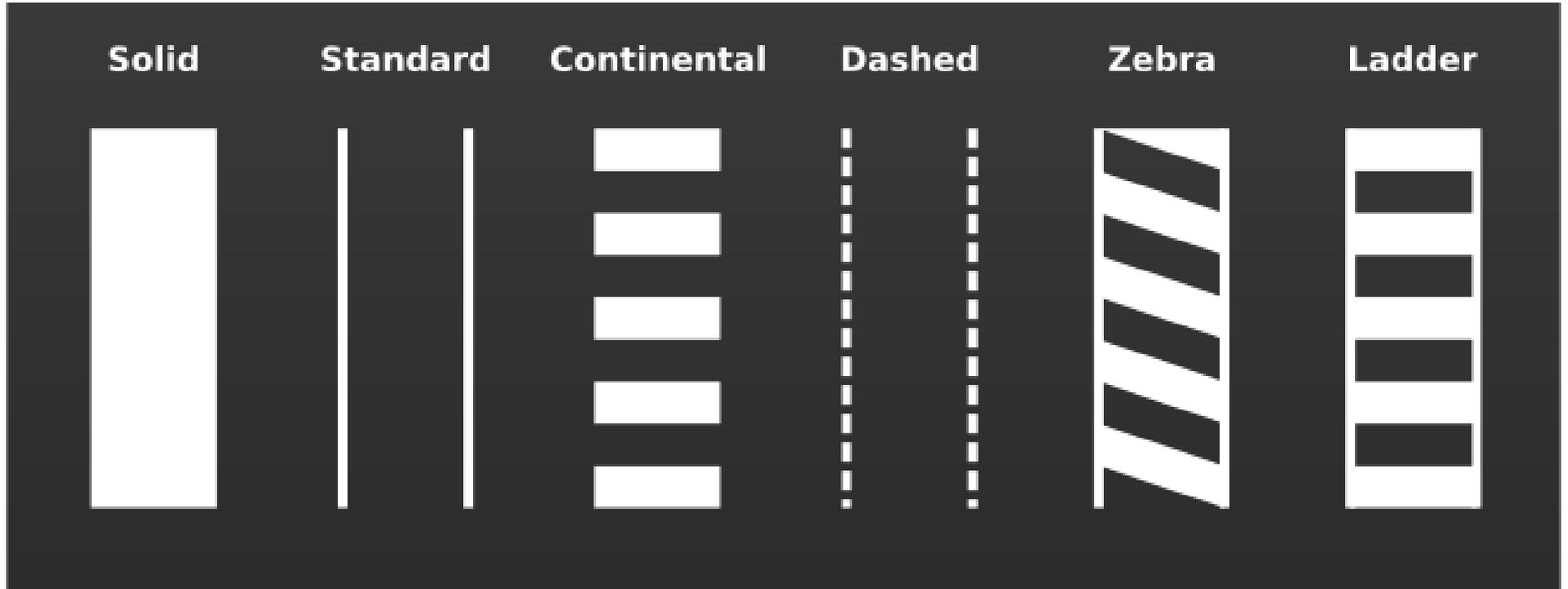


Figure 1: <https://www.sfbetterstreets.org/find-project-types/pedestrian-safety-and-traffic-calming/crosswalks/>

guidance highly recommend a high-visibility pattern such as type LS, also known as “ladder” striping (see Figure 8– Crosswalk Striping).²⁰

Raised crosswalks are sometimes used to reduce vehicle speeds at crosswalks. However, these are most effective at locations with consistent pedestrian activity, so that drivers see people crossing and understand why it is important to reduce their speed. At locations such as schools, with short periods of pedestrian activity, drivers are less likely to slow down because most of the time there are no pedestrians present. This reduces the effectiveness of a raised crosswalk.

The location of any crosswalk should be determined by balancing convenience for people walking (if it is not convenient, it will not be used) with visibility to drivers, who must be able to see pedestrians in time to slow down and yield. A safety analysis would be needed to determine viable crosswalk locations.

At school-area crossings, adult crossing guards should be present to help children cross and to ensure that drivers yield to people in the crosswalk, as required by State law.²¹ Crossing guards are required in New York State in areas where a school speed limit is established and students must cross a road to get to the school (see *School Speed Limits* section above).

²⁰ Also see Walk Bike Dutchess design guidelines: <http://www.co.dutchess.ny.us/CountyGov/Departments/TransportationCouncil/bppchapterthree.pdf>

²¹ New York State Vehicle and Traffic Law, Article 27, Section 1151; available online at <http://public.leginfo.state.ny.us/lawssrch.cgi?NVLWO>

The [Manual on Uniform Traffic Control Devices \(MUTCD\)](#) and the New York State supplement to the MUTCD outline standards and guidance for roadway signs, markings, signals and other devices. Part 7 of the MUTCD describes traffic controls for school areas, including the following section related to crosswalks:

Section 7C.02, Crosswalk Markings:

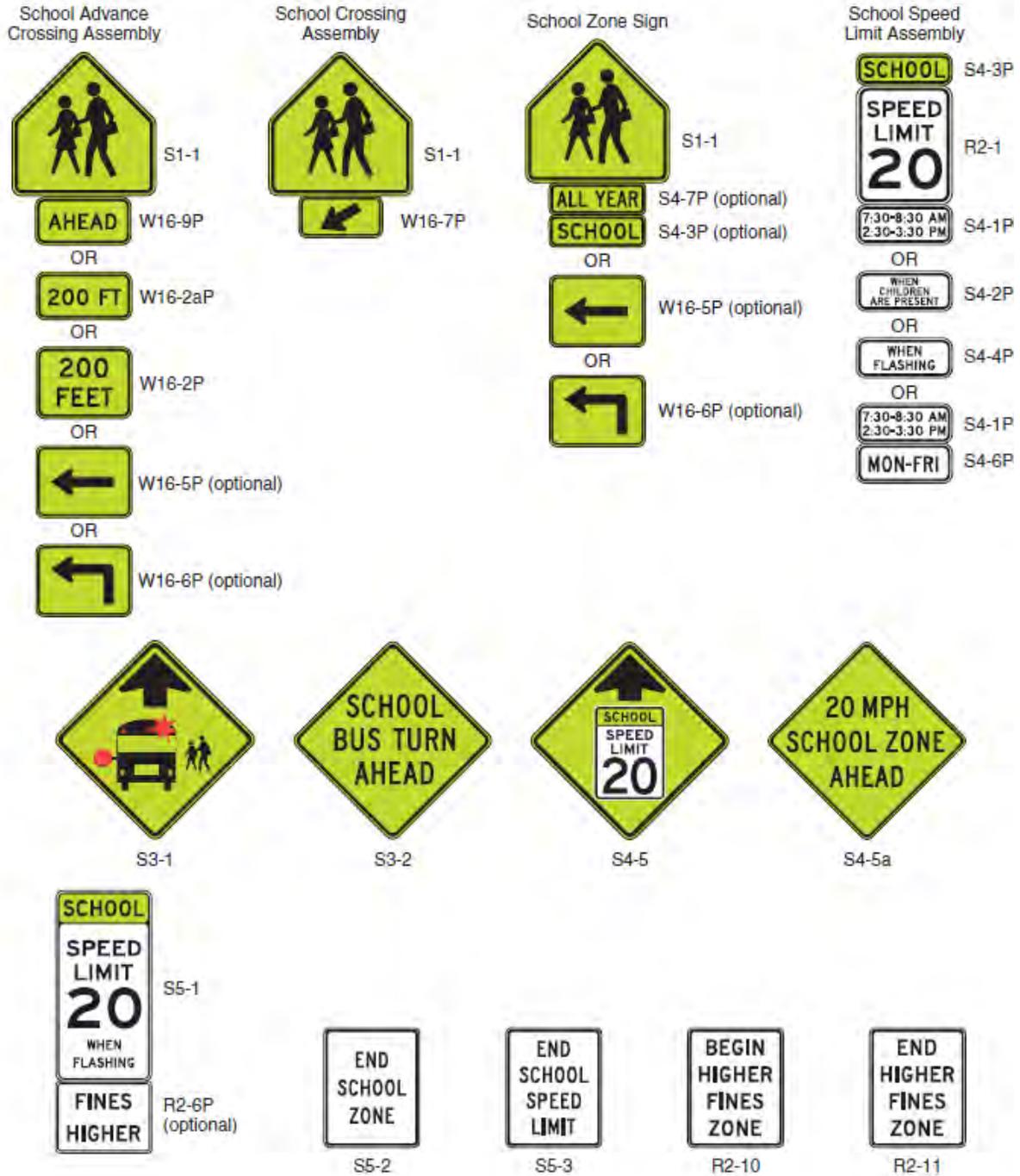
Crosswalks should be marked at all intersections on established routes to school where there is substantial conflict between motorists, bicyclists, and pedestrian movements, where students are encouraged to cross between intersections, where students would not otherwise recognize the proper place to cross, or where motorists or bicyclists might not expect students to cross.

Signage and Striping

Supporting signage and roadway markings are often used to alert drivers that they are approaching a crosswalk or pedestrian area, particularly near schools and other locations with many walkers and bicyclists. According to the MUTCD, warning signs should be installed for all marked school crosswalks at non-intersection (mid-block) locations.

School area signs are outlined in Section 7 of the MUTCD and shown on Figure 9– School Area Signs. These include the

Figure 9 - School Area Signs



Source: 2009 MUTCD (2012 Update), Figure 7B-1

school advance crossing, school crossing, and school zone signs. In-street signs are also an option to encourage drivers to yield at crosswalks, but these generally function best on slow-speed roads in areas with many pedestrians, and are prone to damage by vehicles. The MUTCD includes guidance on the placement and design of school-area signs.

A pedestrian crossing sign with a flashing light or “beacon” has been shown to increase driver yielding at crosswalks at unsignalized locations (see Figure 10– Rectangular Rapid Flashing Beacon).²² These signals can be activated by the person crossing, left on continuously, or activated during certain hours, depending on circumstances. Another option is a “pedestrian hybrid beacon” or “HAWK” signal. This is a pedestrian-actuated signal: when the person crossing pushes the pushbutton, drivers see a flashing yellow, then a steady yellow, and then a red light, during which pedestrians are given a signal to walk. During the “flashing don’t walk” phase, drivers see a flashing red light, meaning they must stop first and only proceed if the crosswalk is clear. When not activated by a pedestrian, the signal is dark (see Figure 11– Pedestrian Hybrid Beacon). This is described in Section 4F of the MUTCD.

Speed Reduction Strategies

A critical element of pedestrian safety is reducing vehicle speeds so that people feel safe walking along the roadway. Based on discussions with the West Road Intermediate School Principal during the original 2010 study, speeds on West Road

are perceived to be too high. In addition to establishing a school speed zone (discussed above under *Current Policies*), there are several strategies for reducing speeds.

It is important to recognize that lowering a speed limit by itself is unlikely to reduce speeding. Drivers generally base their speed on what feels comfortable or safe given the design of the road. The width of the lanes, horizontal and vertical curvature, shoulder width, presence of street trees, sidewalks, and other features affect speeds much more than speed limit signs. A wide, straight, open road will have higher speeds than a narrow, curving road or an urban road with sidewalks, street trees and buildings close to the street. Therefore, reducing speeds requires changing the road’s characteristics to change drivers’ perception of a safe speed. For West Road, adding sidewalks, trees or other landscaping could help create a slower-speed environment.

Another element to speed reduction is education. Signs that alert drivers to the presence of a school area, warn them of an approaching crosswalk, and remind them of their legal responsibility to yield to pedestrians can help create awareness about pedestrian safety and encourage slower speeds. There are also speed limit signs—either permanent or temporary moveable speed trailers—that show drivers their current speed so they can clearly see if they are exceeding the limit (see Figure 12– Radar-Based Speed Limit Signs). Similar signs have been used locally on US Route 9G near the Violet

²² See https://mutcd.fhwa.dot.gov/resources/interim_approval/ia21/index.htm

Figure 10- Rectangular Rapid Flashing Beacon (with School Crossing Sign)



Figure 1: <https://www.ny.gov/pedestrian-safety/pedestrian-safety-and-projects>

Figure 11- Pedestrian Hybrid Beacon



Source: <https://ardc.org/ruralwalking/#1497648953171-49435277-354c>

DRIVERS...		PEDESTRIANS...	
...will see this	...will do this	...will see this	...will do this
	Proceed with Caution		Push the Button to Cross
	Slow Down (Pedestrians have activated the push button)		Wait
	Prepare to Stop		Continue to Wait
	STOP! (Pedestrians in Crosswalk)		Start Crossing
	STOP! Proceed with Caution if Clear		Continue Crossing
	Proceed if Clear		Push the Button to Cross

Source: <https://ci.billings.mt.us/2028/HAWK-Signals>

Figure 12- Radar-Based Speed Limit Signs



Source: <http://www.lightcastinternational.com/wp-content/uploads/2015/09/Radar-speed-sign-9.11.jpg>



Source: <http://www.informationdisplay.com/httpdocs/solar-powered-radar-speed-signs.php>

Avenue Elementary School, and the Dutchess County Sheriff's office owns a moveable speed trailer. Presentations, written materials, and other outreach can also be used to educate drivers about the dangers of speeding.

A final aspect of speed reduction is enforcement. While physical changes to the road naturally enforce slower speeds, a police presence can help, particularly when the road design itself does not adequately reduce speeds. Police can be effective at enforcing special conditions, such as a school speed limit during specific hours. A publicized "wave" of concentrated enforcement often gets public attention and can be effective if repeated or supplemented by regular patrols. If desired, the Town could work with the County Sheriff on speed enforcement strategies for West Road.

Pedestrian Amenities

A walkable environment involves more than providing a sidewalk or path— it requires creating a place where people feel comfortable and safe walking. Pedestrian-scale lighting along the route adds to pedestrians' sense of security. Street trees provide shade, which increases pedestrians' comfort, and have also been shown to help slow traffic. Other amenities such as benches, landscaping and trash cans are also important in creating a welcoming place to walk. Most importantly, land use and development patterns should support walking by providing many destinations easily accessible by foot. The Dutchess County Planning Department's [Greenway Guides on Walkable Communities, Lighting, and Street Trees](#) provide specific guidance.

8. Recommendations

There are key pedestrian destinations on both sides of West Road. The north side has substantially more housing than the south side, including three multi-family residential complexes with a total of 410 units and a number of single-family homes. However, the south side has the West Road Intermediate School (with 400 students), the school's playing fields, some commercial activity, and the future Redl Park. A complete pedestrian network with sidewalks or paths on both sides of the road connected by multiple crosswalks would provide the highest level of access for walking. Our recommendations, however, must balance that ideal with the constraints of right-of-way, slopes and wetlands, utilities, and cost.

Different treatments are likely appropriate for different segments of the road. Recommendations for each of the three study area segments are discussed below. A detailed engineering analysis will be necessary to verify the appropriate treatment, preferred alignment, best crosswalk locations, and total cost. Ultimately, the Town must determine its vision for the roadway and how a project on West Road fits within its other priorities.

Segment 1: Route 44 to Brookside Road

Segment 1 is likely to have the highest amount of continuous pedestrian activity, given its proximity to the hamlet and the number of housing units on this part of the road. However, this segment also has the most severe constraints, including steep slopes, limited right-of-way, curves, and limited visibility

due to road curvature. Given these constraints, a shared use path is likely infeasible on this segment. Shoulder improvements, while potentially useful for bicyclists, are not recommended for walking given the visibility issues. **A sidewalk, which provides more safety than shoulders and requires less right-of-way than a path, would be the most appropriate treatment on this segment.** Depending on right-of-way and funding availability, shoulder widening for bicycles should also be explored.

A 400-foot long sidewalk currently exists along the north-east side of West Road between Route 44 and the commercial buildings. This should be extended past Martin Road, Whiteford Drive (east and west), and Brookside Road to connect a large number of residents to the hamlet. Doing so will likely require right-of-way acquisition from the adjacent



Image 4: Bridge/culvert extension needed to cross creek

property owners and relocation of utility poles. The existing sidewalk on the south-west side of the road at Route 44 could possibly be extended as well, but would require extensive rock cutting, right-of-way acquisition, and utility pole relocation, making it likely impractical. A sidewalk on either side of the road would likely require a pedestrian bridge, or a substantial culvert extension, to cross the creek between Whiteford Drive and Brookside Road.

Crosswalks should be marked to provide access to the sidewalk from pedestrian destinations. A crosswalk at Charles Street would provide access between the offices and a sidewalk on the north side of West Road, enabling workers to walk between the hamlet and the offices, while at the West Road/Route 44 intersection, a third high-visibility crosswalk could be considered across the western leg (eastbound approach). However, this would have to be coordinated with NYSDOT, which controls the intersection. Pedestrian signals and push buttons should be provided for all crossings at the intersection.

Segment 2: Brookside Road to Robert Lane

Segment 2 has several pedestrian destinations, but activity is likely more concentrated at specific times of day compared to Segment 1. School-related activity peaks around 8:30 am and 3:00 pm, while the school playfields and planned park will be busiest in the afternoon, evening, and on weekends. This segment of West Road is relatively flat and straight, with less limited right-of-way than Segment 1, though there are several culverts and other drainage facilities. While shoulder

improvements may be feasible, they are unlikely to provide sufficient safety for parents to feel comfortable letting their children walk to school.

Sidewalks on both sides of the road would provide the highest level of pedestrian access, but we recommend focusing on the north side of the road. All three multi-family residential buildings on West Road are located on the north side of the road, and there are four intersections or driveways on the north side of this segment (excluding the two endpoints), compared to eight intersections or driveways on the south side. The north side also has more room available and a flatter grade than the south side. The north side does have many more utility poles than the south side, and these may have to be relocated, but for part of this segment it may be possible to locate a sidewalk or path behind the poles. While a detailed engineering analysis will be necessary, **we recommend installing a sidewalk (or path, where appropriate), along the north side of the road for the length of this segment. We also recommend a sidewalk on the south side between the West Road Intermediate School and the Redl Park site, in coordination with the development of the park.** Finally, we recommend that shoulders be widened, as feasible and in coordination with other road work, to accommodate bicycles.

Crosswalks should be marked to connect the pedestrian destinations on both sides of the road. A crosswalk should be provided between the Country Commons apartments and the future park site, as well as between the housing on the north side of the road and the school. The Town should work with

the West Road Intermediate School Principal, Arlington Central School District staff, and DCDPW to confirm the best location for the school crossing. Our initial recommendation is to place the crosswalk at the west end of the school's loop driveway—while the west driveway does have two-way traffic (the east driveway is exit only), the grade of the road at the west end makes walkers more visible than they would be to the east. A west-end crosswalk would also entail fewer conflicts with buses, since the buses exit at the east end. Signage, striping, and lighting should also be considered to draw attention to the crosswalk, as described above under *Options and Strategies*.

There is an existing sidewalk along the east side of the school driveway. This should be extended to connect to any future crosswalk and sidewalk or path. A sidewalk or path from West Road into Redl Park should also be incorporated into any future park plans. Finally, the Town should ensure that the facility planned for this segment connects to the facility planned for Segment 1, even if they are not constructed at the same time.

Segment 3: Robert Lane to Route 115

Segment 3 is the shortest segment of the three and has the least potential for pedestrian activity. It would be best to continue the facility type that is selected for Segment 2 to provide continuity for pedestrians, but the stone wall on the north side of the road just west of Robert Lane, along with the slope, would make a sidewalk or path on that side more expensive. The shoulders on the north side are moderately

wide, but given the significant grade of the road (sloping steeply down from west to east), a wider buffer would be preferred. Shoulder improvements would likely not provide enough separation from traffic for pedestrians to feel safe. The south side of the road has more room available for a sidewalk or path, but there are several utility poles that would have to be relocated, along with a guide rail and steep slopes. **We recommend that the Town consider a sidewalk along this segment in coordination with the development of any future pedestrian destinations.**

9. Generalized Costs

Unit Costs

The costs outlined below are unit prices or estimates provided by DCDPW unless otherwise noted. They are intended to be used for planning purposes only. A more precise cost estimate should be developed once the project scope is defined.

Item	Unit	Unit Cost	Notes
<i>Sidewalk/Path Related Construction Costs</i>			
Clearing & Grubbing	Lump Sum (LS)	\$40,000 for 5' one-side sidewalk; \$60,000 for two-side 5' sidewalk; \$65,000 for 10' one-side path	For entire length of road
Excavation & Disposal	Cubic Yard (CY)	\$46	Estimated 1,800 CY for one 5' sidewalk
Embankment in Place	CY	\$42	Estimated 2,200 CY for one 5' sidewalk
Sub-Base	CY	\$45	Estimated 550 CY per 5' facility
Sawcut Concrete/Asphalt	Linear Foot (LF)	\$5.00	Estimated 7,100 LF for one-side facility
Remove/Reset Existing Stone Wall	LF	\$120	Estimated 200 LF (at Robert Lane and near 20 West Road)

Item	Unit	Unit Cost	Notes
Retaining Wall	Square Foot (SF)	\$50	Estimated 1,200 SF for one-side facility
Reinforced Concrete Sidewalk or Path	SF	\$15	Estimated 29,540 SF per 5' facility
Sidewalk/Path Ramps (new or retrofitted)	Each	\$2,000	Estimated 44 ramps on north side of road; 48 on south side
Driveways (remove, restore or replace)	Each	\$1,800	Estimated 16 on north side of road; 22 on south side
Concrete Curb	LF	\$16	Estimated 6,000 LF for one-side facility
Drainage Pipes & Catch Basins	LS	\$225,000 for one-side facility; \$450,000 for two-side facility	
Landscaped Buffer (5 feet wide)	SF	\$3.50	Estimated 29,540 SF per 5' facility
Existing Drainage Pipe Extension	LS	\$35,000 for 5' one-side sidewalk; \$70,000 for two-side 5' sidewalk; \$40,000 for 10' one-side path	Located west of West Road Intermediate School
Pedestrian Bridge	LS	\$210,000 (or \$420,000 for culvert extension on both sides of road)	Across creek near Charles Street
Guide Rail (for bridge & drop-offs)	LF	\$55	Estimated 500 LF for one-side facility
Paved Shoulder (6 feet wide)	SF	\$12.00	Estimated 34,850 SF for one side of road; 69,700 SF for both sides of road
Crosswalks & Pavement Markings	LS	\$35,000 for 5' one-side sidewalk; \$70,000 for two-side 5' sidewalk; \$45,000 for 10' one-side path	
Signage	Each	\$550	Estimated 20 signs for one 5' sidewalk

Item	Unit	Unit Cost	Notes
<i>Pedestrian Amenities</i>			
Street Trees	Each	\$600	Estimated 60 trees per side of street
Pedestrian-Scale Lighting	Each	\$4,500	Estimated 30 lights per side of street
<i>Signals</i>			
Pedestrian Signals and Push Buttons	LS	\$45,000	Modify existing signals at intersection with US 44
Hybrid Pedestrian Beacon (HAWK)	LS	\$55,000	
<i>Maintenance</i>			
Lighting and Snow Removal	Annual	\$25,000 if sidewalk on one side; \$50,000 if sidewalk on both sides	Includes 4 months of snow removal
<i>Additional Construction-Related Costs</i>			
Maintenance and Protection of Traffic	Percentage	4% of subtotal cost	
Construction Staking	Percentage	1% of subtotal cost	
Mobilization	Percentage	4% of subtotal cost	
Engineering	Percentage	12% of subtotal cost	
Contingency	Percentage	10% of subtotal cost	

Comparative Costs

Based on the unit costs above, the following estimates were developed for comparison purposes. Each assumes a facility along the entire length of West Road – approximately 6,000 feet. The sidewalk and path estimates include drainage, a landscaped buffer, six foot shoulder, curb (for sidewalk only), ramps, crosswalks, and signage, as well as maintenance and

protection of traffic, staking, mobilization, engineering, and contingency. The estimates do not include right-of-way acquisition, utility relocation, or earthwork costs outside of the sidewalk or path area, nor do they include pedestrian amenities or ongoing maintenance.

Item	Estimated Cost	Notes
<i>5 foot wide sidewalk - one side of the road</i>		
Sidewalk-related construction costs	\$2,080,000 (or approximately \$347/linear foot)	
Additional construction-related costs	\$645,000 (or approximately \$107/linear foot)	
Total	\$2,725,000 (or approximately \$454/linear foot)	Similar projects in the Towns of Red Hook and Hyde Park ranged from about \$160/LF (using CDBG funds) to about \$600/LF (using federal TAP funds)
<i>5 foot wide sidewalk - both sides of the road</i>		
Sidewalk-related construction costs	\$4,254,000 (or approximately \$354/linear foot)	Includes excavation of rocks on southwest side of road near Route 44 (estimated at \$215/CY or \$150,000 total) and culvert extension on both sides of road
Additional construction-related costs	\$1,319,000 (or approximately \$110/linear foot)	
Total	\$5,573,000 (or approximately \$464/linear foot)	
<i>10 foot wide path - one side of the road</i>		
Path-related construction costs	\$2,710,000 (or approximately \$451/linear foot)	
Additional construction-related costs	\$840,000 (or approximately \$140/linear foot)	
Total	\$3,550,000 (or approximately \$592/linear foot)	

Right-of-Way

Based on the existing conditions described earlier in this report, there are likely to be substantial right-of-way acquisition, utility relocation, and earthwork costs that cannot be estimated without a detailed engineering analysis. Relocating utilities that are currently within the public right-of-way to outside of the public right-of-way (onto private property) will also entail substantial costs. If the utilities can be moved within the public right-of-way, this will reduce the cost. These factors should be considered when evaluating the feasibility of any option.

10. Funding Mechanisms

There are a variety of funding sources available for pedestrian projects, ranging from local municipal funds to federal transportation funds. These are described below.

Local Funds

We understand that local resources are extremely limited. However, 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 much faster process. Local funding sources include the following:

- *General Fund/Discretionary Funds*: Local general funds may be the most flexible funding source; however they are also the most limited. The Town would have to weigh the project against other local priorities.
- *CHIPS (Consolidated Local Street and Highway Improvement Program)*: The Town receives CHIPS funding annually from NYSDOT based on its 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.
- *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.
- *Local Bond*: Town residents could be asked to approve a local bond to fund the project. However, given the status of other projects such as the Town Hall relocation and Redl Park, it may be difficult, at least in the short term, to gain voter approval for bond financing.

Private Funds

- *Development Condition of Approval:* While substantial development is unlikely in this corridor in the near future, a condition of approval on proposed development projects could be implemented in case anything is proposed. Prospective developers would have to construct or provide funding for construction of pedestrian infrastructure as part of their project. The Town Code already requires developers to construct sidewalks on both sides of the road, but it appears that this has not been enforced. The Town should enforce this requirement and could include additional conditions requiring construction of, or funding for, signage, crosswalks, lighting, landscaping, and pedestrian amenities.
- *Public-Private Partnerships:* Examples include working with adjacent property owners to fund a portion of sidewalk or other improvements; funding benches through the sale of advertising space; or creating an ‘adopt a street’ or similar maintenance program.
- *Foundation Grants:* Foundations may have funding for pedestrian and/or school-related projects. The Foundation Center website has a national database of grant-makers and grants, as well as other tools for grant-seekers; see <http://foundationcenter.org>.

County & State Funds

- *Community Development Block Grants (CDBG):* These are federal funds from the U.S. Department of Housing and

Urban Development that are administered by the Dutchess County [Department of Planning and Development’s Community Development and Housing Division](#). Eligible activities include infrastructure improvements (such as sidewalk construction, roadwork, and drainage) in areas defined as low and moderate income, or projects to remove barriers to access. CDBG could fund construction and engineering work, but not an engineering study or administrative costs. CDBG funds can typically be used as a match for other federal funding. The south side of West Road abuts a low- or moderate-income Census block group, qualifying it for CDBG funds. The Town would need to conduct an income survey to determine eligibility for a project on the north side of the road. CDBG applications are typically issued in July and due in October.

- The [County Department of Public Works \(DCDPW\)](#) owns and maintains all County roads, including West Road. DCDPW receives CHIPS and County funds, and can use bonds or apply for state or federal funding for larger projects. DCDPW typically does not build or maintain sidewalks, but would be a partner for any project related to a County road.
- *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 particular 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. For Pleasant Valley, potential funding programs could include Climate Smart Communities (DEC), which can fund pedestrian and bicycle transportation projects; and the Local Waterfront Revitalization Program (Wappinger Creek is a designated inland waterway, though Pleasant Valley would first need to pass their own LWRP document), among others.

- This project would be eligible for New York State's [Multi-Modal Program](#) which provides reimbursement funding for capital projects related to five specific modes: rail, port, ferry, airport, and State and local highways and bridges. Sidewalks can be eligible if they are seen to benefit the roadway (i.e. if they alleviate safety issues). 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](#), administered by the State's Dorm Authority, 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.

Federal Funds

Most federal transportation funding comes from the multi-modal federal transportation law in effect at the time; the current law is the *Fixing America's Surface Transportation Act* (FAST Act), which was enacted in 2015. To use federal transportation funding, a project must be consistent with an overall transportation plan, such as [Moving Dutchess 2](#), and be added to the DCTC's [Transportation Improvement Program \(TIP\)](#). For more information, see the DCTC's webpage on [Federal Highway Funding](#).

Federal transportation funding programs that could be used for pedestrian improvements include the following:

- *Transportation Alternatives (TAP)/Surface Transportation Block Grant (STBG) Program Set-aside*: This program funds walking and bicycling infrastructure, safe routes to school projects, and trails, as well as landscaping and other projects. Eligible costs include studies, design, construction, and right-of-way incidentals and acquisition. Administrative and maintenance costs are not eligible. The Town applied for this grant in 2016 to construct a sidewalk on West Road, but was not awarded funding. Solicitation typically occurs every two years.

- **National Highway Performance Program (NHPP):** These funds may be used for projects, including walking and bicycling facilities, on roads on the National Highway System (NHS). In the study area, the NHS includes Route 44 (Main Street). Were NYSDOT to plan a reconstruction project on this section of Route 44—using this or any other funding source—the Town could request that pedestrian improvements to the intersection with West Road be incorporated.
- **Congestion Mitigation Air Quality Program (CMAQ):** While Dutchess County is now in attainment for National Ambient Air Quality Standards, past calls for projects under CMAQ have included a provision allowing former nonattainment areas to access the funding. The NYSDOT expects this to also be the case during future calls. If available, CMAQ funds may be used for the construction of pedestrian walkways as well as non-construction projects (such as brochures, public service announcements, and route maps) to promote walking and bicycling. These projects must be primarily for transportation rather than recreation, and applicants must demonstrate that the project has an impact on improving existing congestion or air quality. More information is available on [FHWA's CMAQ webpage](#).
- **Surface Transportation Block Grant Program (STBG):** These funds may be used for projects on any [federal-aid eligible](#) road, which includes West Road. Projects can include walking and bicycling facilities, as well as non-construction

projects related to safety (such as brochures, public service announcements, and route maps).

Most federal programs are reimbursement programs, and the federal share of the costs is generally 80 percent. If these funds are used, the project sponsor is responsible for the required local match and any costs that are not covered by federal funds. The design and construction of pedestrian facilities could be funded by any of the sources, and could be a stand-alone project or combined with a roadway project. A large project could also be split into several smaller pieces with funding from different programs.

Local Sidewalk Project Examples

While Pleasant Valley has some previous experience using outside funding to construct sidewalks (the Town received a CDBG grant in 2010 for the sidewalk on North Avenue), the following pedestrian projects from other areas in the county could also serve as useful models.

- **Town of Hyde Park:** The Town of Hyde Park, based on recommendations in DCTC's 2013 Town Center Pedestrian Study, applied for and received two TAP grants for sidewalks along Route 9 in the Town Center, totaling \$1,769,600. Construction on the first phase was completed in 2017, with the second phase scheduled for 2019. The Town also received a \$147,000 CDBG grant in 2013 for sidewalk construction along East Market Street.
- **Village and Town of Red Hook:** The Village and Town of

Red Hook have received funding for several sidewalk projects over the last ten years. In 2008, the Town received \$150,000 in CDBG funds to install approximately 1,300 feet of new sidewalks along Route 9 in the Town Center. In 2009, the Town and Village received \$230,000 in CDBG funds for a sidewalk extension project on Linden Avenue. In 2010, the Village received approximately \$220,000 in STBG and CDBG grants to construct about 2,100 feet of sidewalks on Park Avenue, Firehouse Lane, and West Market Street (Route 199) and to install new crosswalks and curb ramps. In 2014, the Town received a \$561,000 TAP grant for a sidewalk extension along Route 9, which was constructed in 2018.

- Village of Pawling: The Village has received multiple rounds of CDBG funding for sidewalks, including \$200,000 in 2018 for sidewalk repair and extension along West Main Street to Edward R. Murrow Park, \$150,000 in 2016 to improve pedestrian connections to Lakeside Park, and \$150,000 in 2007 to install approximately 1,600 feet of sidewalks along East Main Street to connect South Street to the Village's existing sidewalk system.
- Town of Amenia: The Town received a \$480,000 TEP grant (a precursor to TAP) to extend the Harlem Valley Rail Trail 0.6 miles south from the Wassaic Metro-North Station to the Hamlet of Wassaic. The Town also received a Hudson River Greenway grant of \$10,000 to assist with consultant design services. Construction of the trail is expected by 2019.

11. Summary

The study area has significant pedestrian destinations that justify consideration of walking facilities. These include three multi-family residential complexes and a number of single-family homes, the West Road Intermediate School and playing fields, the potential future Redl Park, and the Pleasant Valley hamlet. A complete pedestrian network with sidewalks or paths on both sides of the road connected by multiple crosswalks would provide the highest level of pedestrian access. However, given the constraints of right-of-way, slopes, wetlands, and utilities, as well as limited resources, our recommendations (shown in Figure 13) are as follows:

1. Continue the existing sidewalk along the north side of the road between Route 44 and Brookside Road, with a crosswalk at Charles Street.
2. Construct a sidewalk or path on the north side of the road between Brookside Road and Robert Lane, with a crosswalk at the West Road Intermediate School.
3. Construct a sidewalk along the south side of the road between the West Road Intermediate School and Redl Park, in coordination with the park's development. Consider an additional crosswalk between the Country Commons Apartments and the park entrance.
4. Construct a sidewalk on the north side of the road between Robert Lane and Route 115, as needed based on any future development.
5. Mark crosswalks on any side streets that intersect with the

new sidewalks.

A detailed engineering analysis will be necessary to verify these findings and determine the appropriate facility design and costs.

If the Town decides to move forward, the following next steps should be considered:

- Adopt this study as an official municipal document. According to the Town Clerk, it appears that the original 2010 study was never officially adopted by the Town. In our experience, plans such as this are most effective when officially adopted. That formal mark of municipal approval can also strengthen grant applications.
- Consider regulatory measures that encourage pedestrian infrastructure improvements, as discussed in section 10. These include enforcement of the existing Town Code requirement for sidewalk construction, creation of a Sidewalk Improvement District, and incorporation of development conditions of approval.
- Develop a speed limit enforcement plan and other speed-reduction policies as needed, in coordination with the County Sheriff and State Police.
- Discuss the options and strategies outlined in this report and determine priorities, in consultation with DCDPW.
- Complete an engineering analysis and preliminary right-of-way needs assessment to determine the conceptual facility type, alignment, and right-of-way needed. DCDPW could assist the Town with a preliminary analysis to define

the project and its potential design/construction costs.

- Develop a project scope, including necessary elements such as signage, crosswalks and other striping, utility work, project limits, phasing, and cost estimates. The scope should not preclude future pedestrian access along the entire road.
- Create a list of priority projects based on the scope. The projects could be phased over a period of several years.
- Identify appropriate project sponsors.
- Identify and pursue funding sources for implementation.
- Coordinate project(s) with future DCDPW projects, NYSDOT projects, Redl Park construction, or water service-related roadwork, if possible.
- In coordination with DCDPW, NYSDOT, and the Arlington Central School District, pursue a school speed zone, after the installation of a pedestrian facility and possible revision of the West Road Intermediate School's busing and walking policies.



West Road (CR 71)
 Recommendations
 Figure 13

Proposed Sidewalks

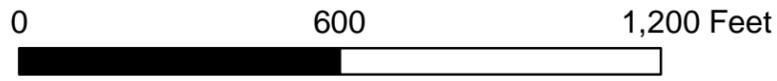
- Short Term
- Medium Term/Concurrent with Redl Park Development
- Long Term, If Needed

Proposed Crosswalks

- Crossing West Road
- Crossing Side Street
- West Road (CR 71)

**Dutchess County
 Transportation Council**

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. Map created May 2018.



Appendix A

West Road (CR 71) 2018 & 2013 Traffic Data

New York State Department of Transportation Traffic Count Hourly Report

ROAD #:	CR CR71	ROAD NAME: WEST RD	FROM: NY 115	TO: US 44	COUNTY: Dutchess
DIRECTION:	Westbound	FACTOR GROUP: 30	REC. SERIAL #: JS15	FUNC. CLASS: 16	TOWN:
STATE DIR CODE: 7		WK OF YR: 30	PLACEMENT: 505' W OF BROOKSIDE RD	NHS: no	LION#:
DATE OF COUNT: 07/24/2018			@ REF MARKER:	JURIS: Village	BIN:
NOTES LANE 1: WB Travel Lane			ADDL DATA: Class Speed	CC Str:	RR CROSSING:
			COUNT TYPE: AXLE PAIRS	BATCH ID: DOT-R08C30aTST5195HPMS	SAMPLE:
COUNT TAKEN BY:	ORG CODE: TST	INITIALS: JTB	PROCESSED BY:	ORG CODE: DOT	INITIALS: HK

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH	DAILY HIGH HOUR						
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12									
1	S																																	
2	M																																	
3	T																																	
4	W																																	
5	T																																	
6	F																																	
7	S																																	
8	S																																	
9	M																																	
10	T																																	
11	W																																	
12	T																																	
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16	M																																	
17	T																																	
18	W																																	
19	T																																	
20	F																																	
21	S																																	
22	S																																	
23	M																																	
24	T																																	
25	W	17	12	3	4	11	33	94	259	243	211	185	188	238	225	245	274	335	319	284	182	172	99	78	38									
26	T	16	4	3	3	11	29	119	240	253	238	194	202	205	214	248	279	312	358	270	192	163	108	61	42	3764	358	17						
27	F	32	12	6	9	11	35	100	220	213	186	183	182	218	216																			
28	S																																	
29	S																																	
30	M																																	
31	T																																	

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)

	22	9	4	5	11	32	104	240	236	214	184	190	213	218	242	267	310	322	274	183	159	96	71	36	ADT	3642
DAYS Counted	HOURS Counted		WEEKDAYS Counted		WEEKDAY Hours		AVERAGE WEEKDAY High Hour		AVERAGE WEEKDAY % of day		Axle Adj. Factor	Seasonal/Weekday Adjustment Factor		ESTIMATED												
4	77		4		75		322		9%		1.000	1.101		AADT 3308												

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

ROAD #: CR CR71
COUNTY NAME: Dutchess
REGION CODE: 8
FROM: NY 115
TO: US 44
REF-MARKER:
END MILEPOINT: 0124
FUNC-CLASS: 16
STATION NO: 8481
COUNT TAKEN BY: ORG CODE: TST INITIALS: JTB
PROCESSED BY: ORG CODE: DOT INITIALS: HK

ROAD NAME: WEST RD

YEAR: 2018
MONTH: July

STATION: 828481

NO. OF LANES: 2
HPMS NO:
LION#:

DIRECTION	East	West	TOTAL
NUMBER OF VEHICLES	3909	3638	7547
NUMBER OF AXLES	7897	7329	15227
% HEAVY VEHICLES (F4-F13)	3.68%	4.29%	3.98%
% TRUCKS AND BUSES (F3-F13)	18.39%	19.74%	19.04%
AXLE CORRECTION FACTOR	0.99	0.99	0.99

BATCH ID: DOT-R08C30aTST5195

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	15	1	0	0	0	0	0	0	0	0	0	16
	2:00	0	8	1	0	0	0	0	0	0	0	0	0	9
	3:00	0	3	1	0	0	0	0	0	0	0	0	0	4
	4:00	0	7	0	0	0	0	0	0	0	0	0	0	7
	5:00	0	18	7	0	1	0	0	0	0	0	0	0	26
	6:00	0	56	16	0	2	0	0	0	0	0	0	0	74
	7:00	0	145	38	1	4	0	0	0	0	0	0	0	188
	8:00	0	220	37	1	3	0	1	0	2	0	0	0	264
	9:00	1	228	45	2	9	1	1	2	1	0	0	0	290
	10:00	0	200	35	3	6	1	0	1	0	0	0	0	246
DIRECTION	11:00	1	155	32	1	7	1	2	2	1	1	0	0	203
East	12:00	0	189	42	1	8	1	0	1	0	0	0	0	242
	13:00	0	208	36	2	7	0	0	2	0	0	0	0	255
	14:00	0	185	27	1	5	2	0	3	1	1	0	0	225
	15:00	0	197	34	2	9	1	1	2	0	0	0	0	246
	16:00	0	244	48	1	3	1	0	0	0	0	0	0	297
	17:00	0	241	39	0	11	0	0	1	1	0	0	0	293
	18:00	1	283	41	0	6	0	0	0	0	0	0	0	331
	19:00	1	193	36	1	4	0	0	1	0	0	0	0	236
	20:00	1	133	20	0	3	0	0	0	0	0	0	0	157
	21:00	0	106	17	0	1	0	0	1	0	0	0	0	125
	22:00	0	74	8	0	1	0	0	0	0	0	0	0	83
	23:00	0	51	10	0	0	0	0	0	0	0	0	0	61
	24:00	0	26	4	0	1	0	0	0	0	0	0	0	31
TOTAL VEHICLES	5	3185	575	16	91	8	5	15	5	4	0	0	0	3909
TOTAL AXLES	10	6370	1150	40	182	24	20	52	25	24	0	0	0	7897
ENDING HOUR	1:00	0	18	3	0	1	0	0	0	0	0	0	0	22
	2:00	0	7	2	0	1	0	0	0	0	0	0	0	10
	3:00	0	4	0	0	0	0	0	0	0	0	0	0	4
	4:00	0	4	1	0	0	0	0	0	0	0	0	0	5
	5:00	0	8	1	0	1	0	0	0	0	0	0	0	10
	6:00	0	21	8	0	3	1	0	0	0	0	0	0	33
	7:00	0	78	23	1	3	0	0	0	0	0	0	0	105
	8:00	1	190	37	1	7	2	0	1	0	0	0	0	239
	9:00	0	185	37	1	9	1	1	2	0	0	0	0	236
	10:00	0	164	35	3	9	0	0	1	0	0	0	0	212
DIRECTION	11:00	0	133	36	2	8	2	0	2	1	0	0	0	184
West	12:00	0	145	32	2	8	2	0	1	0	0	0	0	190
	13:00	1	169	33	1	9	1	0	1	0	0	0	0	215
	14:00	1	172	34	2	7	0	0	1	0	0	0	0	217
	15:00	0	194	35	1	9	0	0	1	1	0	0	0	241
	16:00	1	210	45	2	8	1	0	1	0	0	0	0	268
	17:00	0	255	42	0	8	0	0	1	2	0	0	0	308
	18:00	1	265	49	0	5	0	0	1	0	0	0	0	321
	19:00	0	228	39	1	5	0	0	0	0	0	0	0	273
	20:00	1	152	25	0	4	0	0	1	0	0	0	0	183
	21:00	0	135	22	0	2	0	0	0	0	0	0	0	159
	22:00	0	80	14	0	1	0	0	0	0	0	0	0	95
	23:00	0	66	5	0	1	0	0	0	0	0	0	0	72
	24:00	0	31	4	0	1	0	0	0	0	0	0	0	36
TOTAL VEHICLES	6	2914	562	17	110	10	1	14	4	0	0	0	0	3638
TOTAL AXLES	12	5828	1124	42	220	30	4	49	20	0	0	0	0	7329
GRAND TOTAL VEHICLES	11	6099	1137	33	201	18	6	29	9	4	0	0	0	7547
GRAND TOTAL AXLES	22	12198	2274	82	402	54	24	102	45	24	0	0	0	15226

VEHICLE CLASSIFICATION CODES:

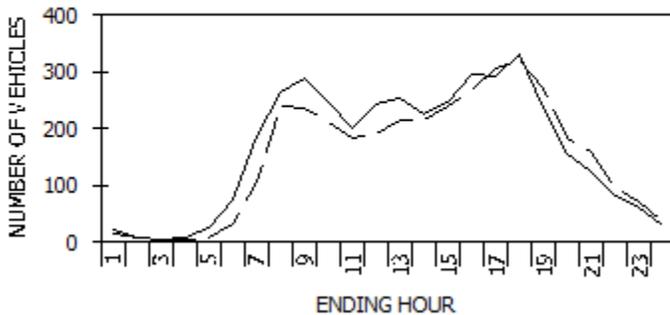
- F1. Motorcycles
- F2. Autos*
- F3. 2 Axle, 4-Tire Pickups, Vans, Motorhomes*
- F4. Buses
- F5. 2 Axle, 6-Tire Single Unit Trucks
- F6. 3 Axle Single Unit Trucks
- F7. 4 or More Axle Single Unit Trucks
- F8. 4 or Less Axle Vehicles, One Unit is a Truck
- F9. 5 Axle Double Unit Vehicles, One Unit is 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	331	A.M.	9	526
West	18	321	P.M.	18	652

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

Station: 828481
Road #: CR CR71 Road name: WEST RD
From: NY 115
To: US 44
Direction: East

Start date: Tue 07/24/2018 09:00
End date: Fri 07/27/2018 14:45
County: Dutchess
Town:
Speed limit: 45
LION#:

Count duration: 78 hours
Functional class: 16
Factor group: 30
Batch ID: DOT-R08C30aTST5195
Count taken by: Org: TST Init: JTB
Processed by: Org: DOT Init: HK

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	1	5	6	4	1	0	0	0	0	0	29.4	5.9	0.0	0.0	0.0	41.6	42.1	48.1	17
2:00	0	0	0	0	3	4	2	1	0	0	0	0	0	30.0	10.0	0.0	0.0	0.0	42.5	42.6	48.8	10
3:00	0	0	0	0	1	1	1	0	0	0	0	0	0	33.3	0.0	0.0	0.0	0.0	42.1	42.6	47.8	3
4:00	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
5:00	0	0	0	2	6	9	7	2	1	0	0	0	0	37.0	11.1	3.7	0.0	0.0	42.4	43.1	49.3	27
6:00	0	0	1	3	9	32	23	7	2	0	0	0	0	41.6	11.7	2.6	0.0	0.0	43.4	44.0	49.5	77
7:00	0	0	0	6	28	73	63	15	3	0	0	0	0	43.1	9.6	1.6	0.0	0.0	43.6	44.2	49.2	188
8:00	0	1	2	16	54	115	64	11	1	0	0	0	0	28.8	4.5	0.4	0.0	0.0	41.7	42.6	47.9	264
9:00	1	1	2	14	74	128	60	9	1	0	0	0	0	24.1	3.4	0.3	0.0	0.0	41.1	42.1	47.3	290
10:00	0	0	1	14	65	108	46	11	1	0	0	0	0	23.6	4.9	0.4	0.0	0.0	41.4	42.0	47.3	246
11:00	0	0	2	12	50	84	43	9	1	0	0	0	0	26.4	5.0	0.5	0.0	0.0	41.5	42.2	47.7	201
12:00	0	0	4	11	63	100	54	9	1	0	0	0	0	26.4	4.1	0.4	0.0	0.0	41.4	42.2	47.6	242
13:00	0	2	3	16	60	106	56	14	2	0	0	0	0	27.8	6.2	0.8	0.0	0.0	41.3	42.3	48.0	259
14:00	0	0	2	12	58	92	51	8	1	0	0	0	0	26.8	4.0	0.4	0.0	0.0	41.5	42.2	47.6	224
15:00	1	1	2	11	60	106	56	9	2	0	0	0	0	27.0	4.4	0.8	0.0	0.0	41.3	42.4	47.7	248
16:00	0	0	1	7	50	139	83	17	1	1	0	0	0	34.1	6.4	0.7	0.3	0.0	43.0	43.3	48.5	299
17:00	0	0	1	12	54	121	89	15	2	0	0	0	0	36.1	5.8	0.7	0.0	0.0	42.7	43.4	48.5	294
18:00	0	0	0	5	62	143	101	17	2	0	0	0	0	36.4	5.8	0.6	0.0	0.0	43.1	43.5	48.5	330
19:00	1	0	1	10	44	91	71	16	1	1	0	0	0	37.7	7.6	0.8	0.4	0.0	42.4	43.5	48.8	236
20:00	0	0	1	6	29	75	38	7	2	0	0	0	0	29.7	5.7	1.3	0.0	0.0	42.4	42.9	48.1	158
21:00	0	0	1	8	34	50	28	4	1	0	0	0	0	26.2	4.0	0.8	0.0	0.0	41.3	42.0	47.6	126
22:00	0	0	1	7	28	33	12	2	0	0	0	0	0	16.9	2.4	0.0	0.0	0.0	40.2	40.9	45.7	83
23:00	0	0	1	6	21	23	9	2	1	0	0	0	0	19.0	4.8	1.6	0.0	0.0	40.2	40.8	46.5	63
24:00	0	0	0	3	8	12	6	2	0	0	0	0	0	25.8	6.5	0.0	0.0	0.0	41.2	41.9	47.8	31
Avg. Daily Total	3	5	26	183	868	1654	969	189	26	2	0	0	0	30.2	5.5	0.7	0.1	0.0	41.9	42.7	48.1	3925
Percent	0.1%	0.1%	0.7%	4.7%	22.1%	42.1%	24.7%	4.8%	0.7%	0.1%	0.0%	0.0%	0.0%									
Cum. Percent	0.1%	0.2%	0.9%	5.5%	27.6%	69.8%	94.5%	99.3%	99.9%	100.0%	100.0%	100.0%	100.0%									
Average hour	0	0	1	8	36	69	40	8	1	0	0	0	0									164

TRAFFIC FLOW BY DIRECTION

	Avg. Speed	50th% Speed	85th% Speed
East	41.9	42.7	48.1
West	43.7	44.3	49.3

Peak Hour Data					
Direction	Hour	Count	2-way A.M.	Hour	Count
East	18	330		9	526
West	18	322		18	652



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

Station: 828481
Road #: CR CR71 Road name: WEST RD
From: NY 115
To: US 44
Direction: West

Start date: Tue 07/24/2018 09:00
End date: Fri 07/27/2018 14:45
County: Dutchess
Town:
Speed limit: 45
LION#:

Count duration: 78 hours
Functional class: 16
Factor group: 30
Batch ID: DOT-R08C30aTST5195
Count taken by: Org: TST Init: JTB
Processed by: Org: DOT Init: HK

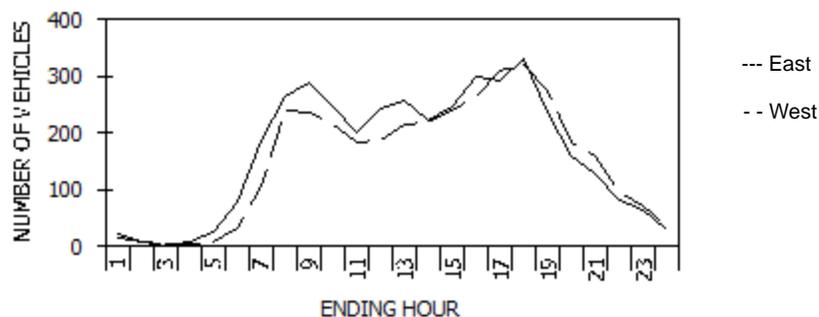
Speeds, mph

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	3	9	7	1	0	0	0	0	0	36.4	4.5	0.0	0.0	0.0	42.3	43.4	48.4	22
2:00	0	0	0	1	1	5	2	0	0	0	0	0	0	22.2	0.0	0.0	0.0	0.0	41.4	42.6	46.7	9
3:00	0	0	0	1	1	2	1	0	0	0	0	0	0	20.0	0.0	0.0	0.0	0.0	39.8	41.3	46.3	5
4:00	0	0	0	0	2	2	1	1	0	0	0	0	0	33.3	16.7	0.0	0.0	0.0	42.7	42.6	50.6	6
5:00	0	0	0	0	3	6	1	0	0	0	0	0	0	10.0	0.0	0.0	0.0	0.0	41.3	41.7	44.6	10
6:00	0	0	0	0	5	11	12	3	1	0	0	0	0	50.0	12.5	3.1	0.0	0.0	44.5	45.0	49.7	32
7:00	0	0	0	2	8	36	40	16	2	1	0	0	0	56.2	18.1	2.9	1.0	0.0	45.3	45.9	51.1	105
8:00	0	0	0	3	29	95	88	21	3	0	0	0	0	46.9	10.0	1.3	0.0	0.0	44.2	44.7	49.4	239
9:00	0	0	1	8	32	97	78	18	2	0	0	0	0	41.5	8.5	0.8	0.0	0.0	43.4	44.0	49.1	236
10:00	0	0	1	2	32	86	70	20	3	0	0	0	0	43.5	10.7	1.4	0.0	0.0	43.8	44.2	49.4	214
11:00	0	0	0	6	30	72	54	19	2	0	0	0	0	41.0	11.5	1.1	0.0	0.0	43.4	43.9	49.5	183
12:00	0	0	1	4	26	78	64	14	2	0	0	0	0	42.3	8.5	1.1	0.0	0.0	43.6	44.1	49.1	189
13:00	0	1	1	5	25	76	79	24	3	0	0	0	0	49.5	12.6	1.4	0.0	0.0	44.0	45.0	49.7	214
14:00	0	0	2	9	36	84	66	16	4	1	0	0	0	39.9	9.6	2.3	0.5	0.0	43.0	43.7	49.2	218
15:00	0	0	2	7	42	99	77	12	1	0	0	0	0	37.5	5.4	0.4	0.0	0.0	42.8	43.5	48.6	240
16:00	0	1	0	4	32	98	100	26	4	0	0	0	0	49.1	11.3	1.5	0.0	0.0	44.2	44.9	49.6	265
17:00	0	0	0	6	32	120	118	31	2	0	0	0	0	48.9	10.7	0.6	0.0	0.0	44.3	44.9	49.5	309
18:00	0	0	2	5	32	127	114	35	7	0	0	0	0	48.4	13.0	2.2	0.0	0.0	44.4	44.9	49.8	322
19:00	0	0	0	5	34	112	103	18	2	0	0	0	0	44.9	7.3	0.7	0.0	0.0	43.9	44.4	49.0	274
20:00	0	0	0	3	17	78	65	18	2	0	0	0	0	46.4	10.9	1.1	0.0	0.0	44.3	44.6	49.5	183
21:00	0	0	2	5	28	63	47	9	3	1	0	0	0	38.0	8.2	2.5	0.6	0.0	42.9	43.5	48.9	158
22:00	0	0	1	3	20	44	24	2	1	0	0	0	0	28.4	3.2	1.1	0.0	0.0	42.1	42.7	47.7	95
23:00	0	0	0	6	23	26	12	3	1	0	0	0	0	22.5	5.6	1.4	0.0	0.0	40.9	41.3	47.3	71
24:00	0	0	0	1	11	12	11	3	0	0	0	0	0	36.8	7.9	0.0	0.0	0.0	42.4	43.0	48.8	38
Avg. Daily Total	0	2	13	88	504	1438	1234	310	45	3	0	0	0	43.8	9.8	1.3	0.1	0.0	43.7	44.3	49.3	3637
Percent	0.0%	0.1%	0.4%	2.4%	13.9%	39.5%	33.9%	8.5%	1.2%	0.1%	0.0%	0.0%	0.0%									
Cum. Percent	0.0%	0.1%	0.4%	2.8%	16.7%	56.2%	90.2%	98.7%	99.9%	100.0%	100.0%	100.0%	100.0%									
Average hour	0	0	1	4	21	60	51	13	2	0	0	0	0									152

TRAFFIC FLOW BY DIRECTION

	Avg. Speed	50th% Speed	85th% Speed
East	41.9	42.7	48.1
West	43.7	44.3	49.3

Peak Hour Data					
Direction	Hour	Count	2-way A.M.	Hour	Count
East	18	330		9	526
West	18	322		18	652



Poughkeepsie-Dutchess County Transportation Council Traffic Count Hourly Report

ROAD #: CR CR71	ROAD NAME: WEST RD	FROM: NY 115	TO: US 44	COUNTY: Dutchess
DIRECTION: Northbound	FACTOR GROUP: 30	REC. SERIAL #: 0092	FUNC. CLASS: 16	TOWN: PLEASANT VALLEY
STATE DIR CODE: 1	WK OF YR: 20	PLACEMENT: 0.25 MI N OF US 44	NHS: no	LION#:
DATE OF COUNT: 05/13/2013		@ REF MARKER:	JURIS: Village	BIN:
NOTES LANE 1: NB TRAVEL LANE		ADDL DATA:	CC Str:	RR CROSSING:
		COUNT TYPE: VEHICLES	BATCH ID: MPD-Tri-State Files	HPMS SAMPLE:
COUNT TAKEN BY: ---	ORG CODE: TST	INITIALS: ---	PROCESSED BY: ---	ORG CODE: MPD
			INITIALS: ED	

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M																											
7	T																											
8	W																											
9	T																											
10	F																											
11	S																											
12	S																											
13	M																											
14	T	20	14	10	4	13	37	124	266	311	186	170	236	285	232	289	320	357	379	286	194	178	115	49	41	4326	454	17
15	W	28	14	5	3	12	34	106	268	312	202	177	217	231	268	275	324	350	419	332	233	216	129	78	38	4271	419	17
16	T	23	16	13	5	11	41	123	273	320	213	205	234	261	294	278	325	383	518	282	254	204	154	79	46	4555	518	17
17	F	26	10	13	10	19	32	125	214																			
18	S																											
19	S																											
20	M																											
21	T																											
22	W																											
23	T																											
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											
31	F																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)														ADT										
24	14	10	6	14	36	120	255	314	200	180	231	252	257	283	326	371	442	299	236	198	128	70	43	4309
<u>DAYS Counted</u>	<u>HOURS Counted</u>	<u>WEEKDAYS Counted</u>	<u>WEEKDAY Hours</u>	<u>AVERAGE WEEKDAY</u>		<u>Axle Adj. Factor</u>		<u>Seasonal/Weekday Adjustment Factor</u>		ESTIMATED (one way)														
4	95	4	95	442	10%	1.000	1.086	AADT 3968																

Poughkeepsie-Dutchess County Transportation Council Traffic Count Hourly Report

ROAD #: CR CR71	ROAD NAME: WEST RD	FROM: NY 115	TO: US 44	COUNTY: Dutchess	
DIRECTION: Southbound	FACTOR GROUP: 30	REC. SERIAL #: 0092	FUNC. CLASS: 16	TOWN: PLEASANT VALLEY	
STATE DIR CODE: 2	WK OF YR: 20	PLACEMENT: 0.25 MI N OF US 44	NHS: no	LION#:	
DATE OF COUNT: 05/13/2013		@ REF MARKER:	JURIS: Village	BIN:	
NOTES LANE 1: SB TRAVEL LANE		ADDL DATA:	CC Stn:	RR CROSSING:	
		COUNT TYPE: VEHICLES	BATCH ID: MPD-Tri-State Files	HPMS SAMPLE:	
COUNT TAKEN BY:	ORG CODE: TST	INITIALS: ---	PROCESSED BY:	ORG CODE: MPD	INITIALS: ED

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
1	W																											
2	T																											
3	F																											
4	S																											
5	S																											
6	M																											
7	T																											
8	W																											
9	T																											
10	F																											
11	S																											
12	S																											
13	M																											
14	T	16	9	4	11	20	90	240	344	326	244	213	277	235	206	273	352	333	374	211	171	170	83	58	32			
15	W	17	8	10	10	28	96	218	317	373	215	215	271	230	228	280	374	366	375	333	209	181	90	61	30	4518	375	17
16	T	20	9	8	12	27	100	225	390	364	245	237	260	257	245	323	395	344	354	296	299	211	103	60	48	4832	395	15
17	F	17	8	8	9	30	83	234	241																			
18	S																											
19	S																											
20	M																											
21	T																											
22	W																											
23	T																											
24	F																											
25	S																											
26	S																											
27	M																											
28	T																											
29	W																											
30	T																											
31	F																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)															ADT									
18	8	8	10	26	92	229	323	354	235	221	272	241	228	286	373	346	364	288	221	178	96	61	36	4514
<u>DAYS Counted</u>	<u>HOURS Counted</u>	<u>WEEKDAYS Counted</u>	<u>WEEKDAY Hours</u>	<u>AVERAGE WEEKDAY</u>		<u>Axle Adj. Factor</u>	<u>Seasonal/Weekday Adjustment Factor</u>	ESTIMATED (one way)					AADT 4157											
4	95	4	95	373	8%	1.000	1.086																	

Poughkeepsie-Dutchess County Transportation Council
Classification Count Average Weekday Data Report

ROAD #: CR CR71
COUNTY NAME: Dutchess
REGION CODE: 8
FROM: NY 115
TO: US 44
REF-MARKER:
END MILEPOINT:
FUNC-CLASS: 16
STATION NO: 8481
COUNT TAKEN BY: ORG CODE: TST INITIALS: ---
PROCESSED BY: ORG CODE: MPD INITIALS: ED

ROAD NAME: WEST RD

YEAR: 2013
MONTH: May

STATION: 828481

NO. OF LANES: 2
HPMS NO:
LION#:

DIRECTION	North	South	TOTAL
NUMBER OF VEHICLES	4300	4505	8805
NUMBER OF AXLES	8662	9106	17767
% HEAVY VEHICLES (F4-F13)	3.56%	5.66%	4.63%
% TRUCKS AND BUSES (F3-F13)	17.33%	23.86%	20.67%
AXLE CORRECTION FACTOR	0.99	0.99	0.99

BATCH ID: MPD-Tri-State Files

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	23	1	0	0	0	0	0	0	0	0	0	24
	2:00	0	12	1	0	0	0	0	0	0	0	0	0	13
	3:00	0	10	0	0	0	0	0	0	0	0	0	0	10
	4:00	0	4	2	0	0	0	0	0	0	0	0	0	6
	5:00	0	10	3	0	0	0	0	0	0	0	0	0	13
	6:00	1	24	9	0	1	0	0	0	0	0	0	0	35
	7:00	1	83	30	4	2	0	0	0	0	0	0	0	120
	8:00	0	199	48	2	4	0	2	0	0	0	0	0	255
	9:00	1	248	44	11	8	2	0	1	0	0	0	0	315
	10:00	0	158	31	2	6	1	0	1	0	0	0	0	200
DIRECTION	11:00	1	137	31	1	8	2	0	1	0	0	0	0	181
North	12:00	0	182	30	6	8	2	0	1	0	0	0	0	229
	13:00	1	197	38	4	6	2	0	2	0	0	0	0	250
	14:00	2	200	44	2	7	1	0	1	0	0	0	0	257
	15:00	1	219	40	8	10	2	0	2	0	0	0	0	282
	16:00	2	262	50	5	6	0	0	0	1	0	0	0	326
	17:00	1	312	53	1	4	0	0	0	0	0	0	0	371
	18:00	2	392	45	0	1	1	0	1	0	0	0	0	442
	19:00	2	262	29	0	4	0	0	1	0	0	0	0	298
	20:00	2	207	24	0	2	0	0	0	0	0	0	0	235
	21:00	0	177	19	0	2	0	0	0	0	0	0	0	198
	22:00	0	115	12	0	0	0	0	0	0	0	0	0	127
	23:00	1	64	5	0	0	0	0	0	0	0	0	0	70
	24:00	0	40	3	0	0	0	0	0	0	0	0	0	43
TOTAL VEHICLES	18	3537	592	46	79	13	0	13	2	0	0	0	0	4300
TOTAL AXLES	36	7074	1184	115	158	39	0	46	10	0	0	0	0	8662
ENDING HOUR	1:00	0	14	3	0	0	0	0	0	0	0	0	0	17
	2:00	0	8	1	0	0	0	0	0	0	0	0	0	9
	3:00	0	5	2	0	0	0	0	0	0	0	0	0	7
	4:00	0	8	2	0	0	0	0	0	0	0	0	0	10
	5:00	0	22	4	0	0	0	0	0	0	0	0	0	26
	6:00	1	69	18	0	3	0	0	0	0	0	0	0	91
	7:00	2	168	48	2	8	2	0	0	0	0	0	0	230
	8:00	2	244	57	3	13	0	0	2	1	0	0	0	323
	9:00	1	244	63	16	24	1	1	4	0	1	0	0	355
	10:00	0	176	44	1	12	0	0	1	0	0	0	0	234
DIRECTION	11:00	1	154	50	1	12	2	0	1	0	1	0	0	222
South	12:00	1	199	47	5	14	1	0	1	1	2	0	0	271
	13:00	1	172	50	5	12	0	0	0	1	0	0	0	241
	14:00	2	169	42	2	10	0	0	1	1	0	0	0	227
	15:00	2	210	52	6	14	0	0	1	0	1	0	0	286
	16:00	1	284	62	12	10	0	0	2	1	0	0	0	372
	17:00	2	265	67	2	9	0	0	0	0	0	0	0	345
	18:00	2	286	69	0	6	0	0	0	0	0	0	0	363
	19:00	2	230	46	1	8	0	0	1	0	0	0	0	288
	20:00	1	178	37	0	4	0	0	0	0	0	0	0	220
	21:00	0	145	30	0	3	0	0	0	0	0	0	0	178
	22:00	1	79	12	0	2	0	0	0	0	0	0	0	94
	23:00	0	50	9	0	1	0	0	0	0	0	0	0	60
	24:00	0	29	5	0	2	0	0	0	0	0	0	0	36
TOTAL VEHICLES	22	3408	820	56	167	6	1	14	5	6	0	0	0	4505
TOTAL AXLES	44	6816	1640	140	334	18	4	49	25	36	0	0	0	9106
GRAND TOTAL VEHICLES	40	6945	1412	102	246	19	1	27	7	6	0	0	0	8805
GRAND TOTAL AXLES	80	13890	2824	255	492	57	4	94	35	36	0	0	0	17768

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



--- North - - - South

PEAK HOUR DATA

DIRECTION	HOUR	COUNT	2-WAY	HOUR	COUNT
North	18	442	A.M.	9	670
South	16	372	P.M.	18	805

**Poughkeepsie-Dutchess County Transportation Council
Speed Count Average Weekday Report**

Station: 828481
Road #: CR CR71 Road name: WEST RD
From: NY 115
To: US 44
Direction: North

Start date: Mon 05/13/2013 09:00
End date: Fri 05/17/2013 07:45
County: Dutchess
Town: PLEASANT VALLEY
Speed limit: 35
LION#:

Count duration: 95 hours
Functional class: 16
Factor group: 30
Batch ID: MPD-Tri-State Files
Count taken by: Org: TST Init: ---
Processed by: Org: MPD Init: ED

Counts have been summarized into NYSDOT EI standard bins

Hour	Speeds, mph															% Exc	Avg	50th%	85th%	Total				
	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											
1:00	0	0	1	4	8	8	3	0	0	0	0	0	0	12.5	0.0	0.0	0.0	0.0	38.5	39.4	44.7	24		
2:00	0	0	0	3	4	4	1	0	0	0	0	0	0	8.3	0.0	0.0	0.0	0.0	38.2	38.8	44.0	12		
3:00	1	0	0	2	4	3	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	31.9	37.6	42.6	10		
4:00	0	0	0	2	2	1	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	36.1	36.3	41.3	5		
5:00	0	0	0	4	4	4	1	0	0	0	0	0	0	7.7	0.0	0.0	0.0	0.0	37.7	38.2	43.9	13		
6:00	0	0	1	3	12	16	4	0	0	0	0	0	0	11.1	0.0	0.0	0.0	0.0	39.6	40.7	44.6	36		
7:00	0	2	3	13	35	48	17	2	0	0	0	0	0	15.8	1.7	0.0	0.0	0.0	39.3	40.8	45.3	120		
8:00	0	0	4	25	108	96	20	1	0	0	0	0	0	8.3	0.4	0.0	0.0	0.0	39.1	39.6	44.2	254		
9:00	0	0	5	37	138	109	24	2	0	0	0	0	0	8.3	0.6	0.0	0.0	0.0	38.8	39.2	44.1	315		
10:00	0	0	2	27	93	66	10	0	0	0	0	0	0	5.1	0.0	0.0	0.0	0.0	38.5	38.8	43.6	198		
11:00	0	1	5	25	81	56	12	0	0	0	0	0	0	6.7	0.0	0.0	0.0	0.0	38.1	38.7	43.7	180		
12:00	0	1	3	28	110	75	14	1	0	0	0	0	0	6.5	0.4	0.0	0.0	0.0	38.5	38.9	43.7	232		
13:00	1	0	5	44	110	76	13	2	0	0	0	0	0	6.0	0.8	0.0	0.0	0.0	37.8	38.5	43.6	251		
14:00	0	0	6	34	125	77	14	1	0	0	0	0	0	5.8	0.4	0.0	0.0	0.0	38.2	38.6	43.5	257		
15:00	2	4	9	39	127	89	12	1	0	0	0	0	0	4.6	0.4	0.0	0.0	0.0	37.2	38.5	43.4	283		
16:00	0	1	10	50	139	106	18	2	0	0	0	0	0	6.1	0.6	0.0	0.0	0.0	38.1	38.7	43.7	326		
17:00	0	0	3	32	153	148	32	2	0	0	0	0	0	9.2	0.5	0.0	0.0	0.0	39.5	40.0	44.3	370		
18:00	0	0	6	51	202	154	26	3	0	0	0	0	0	6.6	0.7	0.0	0.0	0.0	38.8	39.1	43.8	442		
19:00	0	0	4	25	128	116	22	3	0	0	0	0	0	8.4	1.0	0.0	0.0	0.0	39.3	39.7	44.2	298		
20:00	0	0	4	22	103	87	18	2	0	0	0	0	0	8.5	0.8	0.0	0.0	0.0	39.1	39.5	44.2	236		
21:00	0	0	3	25	98	58	12	2	0	0	0	0	0	7.1	1.0	0.0	0.0	0.0	38.5	38.7	43.7	198		
22:00	0	0	3	23	60	33	7	0	0	0	0	0	0	5.6	0.0	0.0	0.0	0.0	37.7	38.1	43.2	126		
23:00	0	0	2	10	31	21	4	1	1	0	0	0	0	8.6	2.9	1.4	0.0	0.0	38.4	38.8	44.0	70		
24:00	0	0	1	4	16	14	6	1	0	0	0	0	0	16.7	2.4	0.0	0.0	0.0	39.6	40.0	45.6	42		
Avg. Daily Total	4	9	80	532	1891	1465	290	26	1	0	0	0	0	7.4	0.6	0.0	0.0	0.0	38.5	39.1	43.9	4298		
Percent	0.1%	0.2%	1.9%	12.4%	44.0%	34.1%	6.7%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%											
Cum. Percent	0.1%	0.3%	2.2%	14.5%	58.5%	92.6%	99.4%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%											
Average hour	0	0	3	22	79	61	12	1	0	0	0	0	0									179		

TRAFFIC FLOW BY DIRECTION

	Avg. Speed	50th% Speed	85th% Speed
North	38.5	39.1	43.9
South	40.7	41.8	46.6

Peak Hour Data					
Direction	Hour	Count	2-way A.M.	Hour	Count
North	18	442		9	668
South	16	372		18	806



**Poughkeepsie-Dutchess County Transportation Council
Speed Count Average Weekday Report**

Station: 828481
Road #: CR CR71 Road name: WEST RD
From: NY 115
To: US 44
Direction: South

Start date: Mon 05/13/2013 09:00
End date: Fri 05/17/2013 07:45
County: Dutchess
Town: PLEASANT VALLEY
Speed limit: 35
LION#:

Count duration: 95 hours
Functional class: 16
Factor group: 30
Batch ID: MPD-Tri-State Files
Count taken by: Org: TST Init: ---
Processed by: Org: MPD Init: ED

Counts have been summarized into NYSDOT EI standard bins

Hour	Speeds, mph														% Exc	Avg	50th%	85th%	Total				
	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										
1:00	0	0	0	0	2	6	7	1	1	0	0	0	0	52.9	11.8	5.9	0.0	0.0	44.9	45.4	49.7	17	
2:00	0	0	0	0	2	4	2	0	0	0	0	0	0	25.0	0.0	0.0	0.0	0.0	42.2	42.6	47.0	8	
3:00	0	0	0	1	2	2	2	1	0	0	0	0	0	37.5	12.5	0.0	0.0	0.0	41.6	42.6	49.6	8	
4:00	0	0	0	0	2	4	2	1	1	0	0	0	0	40.0	20.0	10.0	0.0	0.0	44.2	43.8	52.6	10	
5:00	0	0	0	2	6	9	8	2	0	0	0	0	0	37.0	7.4	0.0	0.0	0.0	42.2	43.1	48.8	27	
6:00	0	0	0	0	13	43	25	10	1	0	0	0	0	39.1	12.0	1.1	0.0	0.0	44.0	43.9	49.5	92	
7:00	0	2	2	6	39	105	61	12	1	0	0	0	0	32.5	5.7	0.4	0.0	0.0	42.3	43.1	48.3	228	
8:00	0	0	0	11	62	165	75	9	0	0	0	0	0	26.1	2.8	0.0	0.0	0.0	42.2	42.7	47.4	322	
9:00	3	4	7	21	100	159	54	5	0	0	0	0	0	16.7	1.4	0.0	0.0	0.0	39.5	41.4	45.6	353	
10:00	0	0	2	11	66	109	41	6	1	0	0	0	0	20.3	3.0	0.4	0.0	0.0	41.2	41.8	46.6	236	
11:00	0	1	2	11	70	99	31	5	1	0	0	0	0	16.8	2.7	0.5	0.0	0.0	40.6	41.4	45.7	220	
12:00	0	0	0	17	88	126	34	6	0	0	0	0	0	14.8	2.2	0.0	0.0	0.0	40.7	41.3	45.0	271	
13:00	1	0	1	14	86	103	33	3	0	0	0	0	0	14.9	1.2	0.0	0.0	0.0	40.1	40.9	45.0	241	
14:00	0	0	1	14	80	92	36	5	0	0	0	0	0	18.0	2.2	0.0	0.0	0.0	40.6	41.1	46.0	228	
15:00	1	2	5	20	86	123	42	7	0	0	0	0	0	17.1	2.4	0.0	0.0	0.0	39.9	41.2	45.8	286	
16:00	14	4	10	27	106	169	38	4	0	0	0	0	0	11.3	1.1	0.0	0.0	0.0	36.8	40.8	44.6	372	
17:00	0	1	2	10	94	166	65	7	1	0	0	0	0	21.1	2.3	0.3	0.0	0.0	41.4	42.0	46.7	346	
18:00	1	1	1	8	91	178	74	10	0	0	0	0	0	23.1	2.7	0.0	0.0	0.0	41.5	42.3	47.0	364	
19:00	0	0	2	12	68	147	51	7	0	0	0	0	0	20.2	2.4	0.0	0.0	0.0	41.5	42.1	46.5	287	
20:00	0	0	0	9	70	99	35	7	0	0	0	0	0	19.1	3.2	0.0	0.0	0.0	41.2	41.6	46.3	220	
21:00	0	0	2	9	52	88	24	3	0	0	0	0	0	15.2	1.7	0.0	0.0	0.0	40.7	41.5	45.1	178	
22:00	0	0	0	3	25	46	18	2	0	0	0	0	0	21.3	2.1	0.0	0.0	0.0	41.6	42.1	46.7	94	
23:00	0	0	0	3	9	28	17	4	0	0	0	0	0	34.4	6.6	0.0	0.0	0.0	42.8	43.4	48.5	61	
24:00	0	0	0	0	9	14	9	3	0	0	0	0	0	34.3	8.6	0.0	0.0	0.0	42.9	43.1	48.8	35	
Avg. Daily Total	20	15	37	209	1228	2084	784	120	7	0	0	0	0	20.2	2.8	0.2	0.0	0.0	40.7	41.8	46.6	4504	
Percent	0.4%	0.3%	0.8%	4.6%	27.3%	46.3%	17.4%	2.7%	0.2%	0.0%	0.0%	0.0%	0.0%										
Cum. Percent	0.4%	0.8%	1.6%	6.2%	33.5%	79.8%	97.2%	99.8%	100.0%	100.0%	100.0%	100.0%	100.0%										
Average hour	1	1	2	9	51	87	33	5	0	0	0	0	0									188	

TRAFFIC FLOW BY DIRECTION

	Avg. Speed	50th% Speed	85th% Speed
North	38.5	39.1	43.9
South	40.7	41.8	46.6

Peak Hour Data					
Direction	Hour	Count	2-way A.M.	Hour	Count
North	18	442		9	668
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