



Capital District Transportation Committee (CDTC)/ Capital District Regional Planning Commission (CDRPC) Technical Assistance Program

TECHNICAL MEMORANDUM

East Greenbush - Gilligan Road

Complete Streets Enhancements Feasibility Study Support FINAL 12/31/2020

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Background

The Town of East Greenbush has requested technical assistance to study the feasibility of complete streets enhancements on Gilligan Road. This feasibility study shall identify bicycle and pedestrian routing options that provide safe, separated, and supporting infrastructure in the Gilligan Road corridor. CDTC and CDRPC shall conduct an existing conditions assessment, identify complete streets options on Gilligan Road, and identify options for neighborhood connections and a public engagement process. The data and analysis will feed into a consultant led design effort to be undertaken by the Town.

The purpose of this technical memorandum is to compile an assessment of available traffic and existing conditions data, results from prior planning efforts, and recommendations for complete street and neighborhood connection options for Gilligan Road.

Study Area

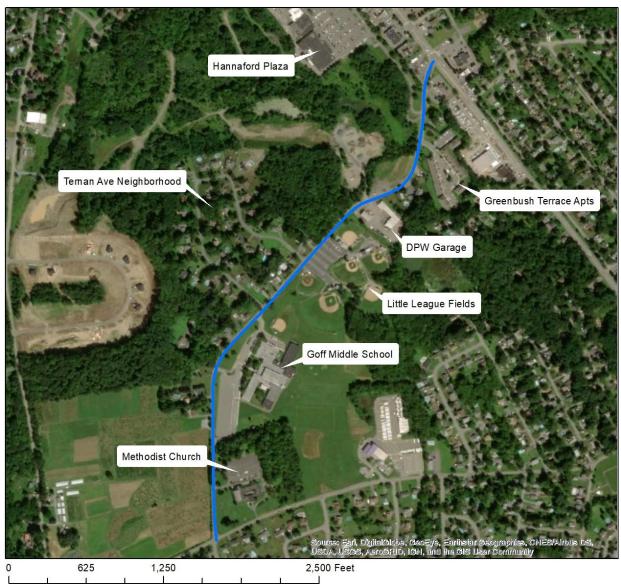
Gilligan Road is an approximately 4600 ft long (0.87 mile) local roadway that connects US-9 & 20 ("Columbia Turnpike") at its northern terminus to Hays Road at its southern terminus. The posted speed limit is 25 mph. The study area is comprised of Gilligan Road and nearby facilities including Goff Middle School, the Little League and Softball fields, the United Methodist Church, Greenbush Terrace Senior Apartments, the Ternan Avenue neighborhood, and the under-construction Albany-Hudson Electric Trail. Public right-of-way in the vicinity of Gilligan Road, such as sanitary sewer easements, are also part of the study area.



Gillilgan Road - Study Area



Gilligan Road Complete Streets Enhancements Feasibility Study Support



Prior Planning Efforts

East Greenbush Traffic Safety Committee (2005)

In the early-to-mid 2000s, the East Greenbush Traffic Safety was convened to review citizen complaints, planning studies, and to generate recommendations for improving safety. The committee was involved in examining issues relating to Gilligan Rd, including speed limits and school zones.

Town of East Greenbush: Land Use Plan and Zoning Study (2006)

In the Town's 2006 Land Use Plan, Gilligan Road is described as "a road used for local and regional connections". The plan notes that much of the town's land area used to be comprised of active farms, which are being converted to residential uses, and notes that one greenhouse/farm operation on Gilligan Road is close to expanding neighborhood development.

The Land Use Plan states that "... a new residential development is currently being proposed in the area behind Hannaford and connecting to Gilligan Road, as well as a senior housing development proposed on Gilligan Road near 9 & 20." As of 2020, the wooded area behind Hannaford remains undeveloped but the senior housing ("Greenbush Terrace") has been built with a full-access driveway 600 feet from 9 & 20.

During the Land Use Plan's public input phase, the intersection of 9 & 20 and Gilligan Road was noted as an area of safety concern. This intersection is also noted to be in the Central Marketplace development node, expected to be the area of "potentially the most intense development" on the 9 & 20 corridor.

Town of East Greenbush Amenities Plan (2017)

In the Sidewalks & Bike Lanes section of the Amenities Plan, one of the recommended actions is to create a sidewalk linking Goff Middle School to Columbia Turnpike and the Albany-Hudson Electric Trail. The plan notes that there is a short segment of existing sidewalk on Gilligan Road near 9 & 20 that could be extended to the Middle School and to surrounding neighborhoods.

Town of East Greenbush Complete Streets Implementation Workshop (2018)

In the Design Discussion portion of the workshop, the concept for a 10-foot sidepath along the eastern side of Gilligan Road was presented. The concept included a crosswalk at the unsignalized intersection of Gilligan and Ternan Ave, near the ballfields. It was noted that a separated sidepath is the preferred option given that likely users will be children.

Attendees noted that improvements "are desperately needed" along Gilligan Road. It was also noted that the sidepath alignment on the concept rendering is sometimes used for ballfield overflow car

parking, and that the proposed sidepath connection could extend to the Hannaford Plaza and soccer fields.

During the Design Discussion it was also noted that a student was hit by a car on Gilligan Road, and that one potential safety countermeasure could be the installation of a HAWK (High-Intensity Activated Walk) Beacon.



Above: Sidepath concept presented at the Complete Streets Workshop.

Town of East Greenbush Complete Streets Policy (2019)

On November 20, 2019, the East Greenbush Town Board adopted "A Resolution Adopting a Complete Streets Policy for the Town of East Greenbush". The resolution references the Complete Streets Implementation Workshop conducted by CDTC in 2018. The resolution's stated purpose is "to recognize bicyclists and pedestrians as equally important as motorists in the planning and design of all new street construction and street reconstruction undertaken by the Town".

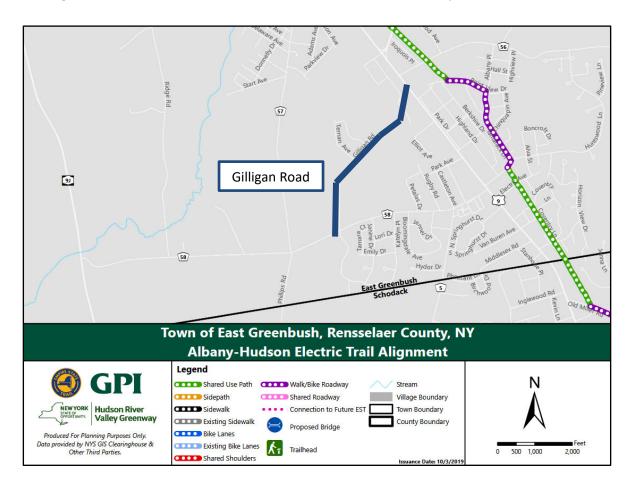
TIP Project: ADA Compliance on NY 4 and NY 9/20 (2019-2024)

In the current CDTC Transportation Improvement Program, a segment of 9 & 20 in the vicinity of Gilligan Road is programmed for federal funding to "upgrade pedestrian facilities to ADA Compliance, upgrade traffic signal at NY 9/20 and Elliot Road, & install safety features identified in PSAP." This project is programmed for \$2.232 million in Federal FY 2020.

Albany-Hudson Electric Trail

The Albany-Hudson Electric Trail (AHET) is part of the statewide Empire State Trail. The trail is being constructed by the Hudson River Valley Greenway, and a portion of the AHET passes through East Greenbush parallel to Columbia Turnpike. The AHET is being built on a historic electric trolley corridor, now owned by National Grid. The AHET passes within 900 feet of the northern terminus of Gilligan Road. The trail is expected to soon be open to the public.

There is an opportunity to connect the proposed Gilligan Road sidepath to the AHET. One potential connection could be made via Elliot Road, which intersects Columbia Turnpike 300 feet north of Gilligan. Connecting the proposed Gilligan Road sidepath to the AHET would improve non-motorized accessibility to Gilligan Road destinations from communities north of Columbia Turnpike.

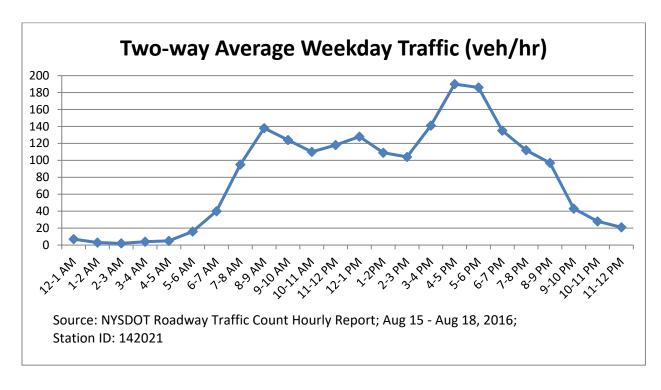


Existing Conditions

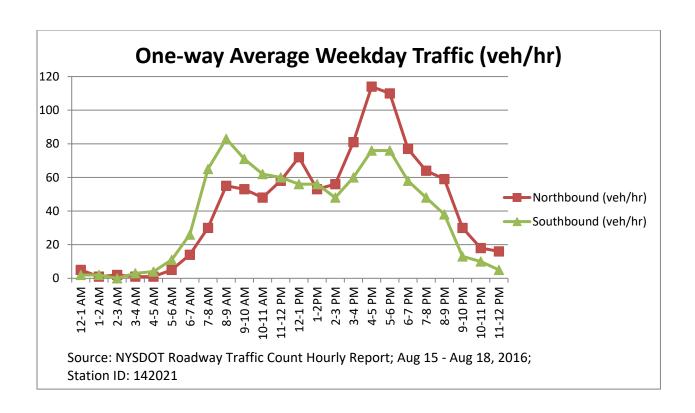
Vehicle movement

According to the NYS Traffic Data Viewer, average annual daily traffic on Gilligan Road was estimated to be 1,899 veh/day in 2016. There were an estimated 12 trailer trucks and 74 non-trailer trucks per day, giving a truck percentage of 4.58%.

The most recent traffic count available in the NYSDOT Traffic Data Viewer is a 64-hour count conducted in August of 2016. Two full days of traffic data were captured on Tuesday August 16th and Wednesday August 17th. The count was conducted 900 feet north of Hays Road. The average weekday traffic was 1,956 veh/day. With seasonal adjustment, the average annual daily traffic (AADT) was 1,796 veh/day.



Some directionality of traffic was observed, with southbound traffic being greater in the AM peak hour (8 AM to 9 AM) and northbound traffic being greater in the PM peak hour (4 PM to 5 PM). Traffic volume is low enough that Gilligan Road is not considered congested at any hour of the day. It is worth noting that this count would not include school traffic due to being conducted in mid-August. An earlier count conducted in May of 2013 reports a higher AADT of 2,411.



Historical traffic

Earlier traffic counts are available through the NYS Traffic Data Viewer on Gilligan Road for the years 2013, 2010, and 2004. The three earlier counts were conducted while school was in session, and report higher AADT. The 2004 count may have captured special event traffic as well, as there are high volumes in evening hours not observed in the other counts.

Count Year	Two-way AADT	
2004 (October)	3,342	
2010 (September)	1,974	
2013 (May)	2,411	
2016 (August)	1,796	

NYSDOT Roadway Inventory System

According to the NYSDOT Roadway Inventory System (RIS), Gilligan Road is classified as an Urban Collector/Major Collector (Functional Class 17), and is a Federal-aid Eligible Local Road. Gilligan Road is not a part of the National Highway System (NHS). The speed limit is 25 mph for the entire length of the roadway. The AADT reported in RIS is 2,009 – consistent with the counts obtained from the Traffic Data Viewer.

Pavement condition

As part of CDTC's Pavement Condition Assessment program, the condition of Gilligan Road was assessed by CDTC staff in 2019. As Gilligan Road is a Non-State Federal Aid road, the pavement condition is rated every other year. Gilligan Road was last paved in 2018. In 2019, the condition was rated an "8" out of 10 using the NYSDOT Windshield Survey methodology. This score indicates that there are only infrequent pavement distresses, which are minor in severity.

Study Area Intersections

<u>US-9 & 20 ("Columbia Turnpike")</u> and Gilligan Road: the only signalized intersection in the study area. This intersection is four-legged, with the east approach serving the KeyBank driveway and the west approach serving Gilligan Road. At the intersection, Columbia Turnpike has two through lanes and a left turn lane in each direction. Crosswalks are present on three approaches, adjoining to curb ramps that are in poor condition. The crosswalks have been re-striped recently, and the crosswalk on Gilligan Road is not present in imagery from September 2019. Pedestrian pushbuttons and signal heads are present. Sidewalk connectivity in the vicinity of the intersection is poor, with sidewalk only present on the KeyBank frontage and on the east side of Gilligan. There is no street lighting present. This intersection may be subject to improvements as part of the ongoing ADA Compliance TIP project.



Above: aerial of US-9 & 20 and Gilligan Road (left) and street view facing northbound (right)



Below: crosswalk on Gilligan Road approach

<u>Gilligan Road and Hannaford Plaza side entrance</u>: this unsignalized intersection provides access to the Hannaford Plaza via a pair of median-separated driveways that adjoin Gilligan Road at a slight skew. There is a left-turn only sign facing the Hannaford driveway – a non-standard turn restriction as traffic on Gilligan is two-way. No crosswalks are present and there is a 150-foot gap in sidewalk connectivity. Two street lights are present. Guardrail is present on the driveway approaches. On the east side of Gilligan, there is a drain on the shoulder near the utility pole.



Above: aerial of Gilligan Road and Hannaford Plaza (left) and street view facing northbound (right)

Below: utility poles and drainage features across from the Hannaford Plaza driveway may constrain sidepath alignment.



<u>Gilligan Road and Ternan Ave (north intersection)</u>: Ternan Ave is a U-shaped residential roadway that intersects Gilligan Road at two spots. This intersection is directly across from the baseball and softball fields. There is a stop-sign and a School Zone 15 mph sign facing Ternan, and no stop control on Gilligan. There are no sidewalks or crosswalks present. Street lighting is present on utility poles approximately 100 feet north and south of the intersection. In the sidepath concept presented at the 2018 Complete Streets Workshop, the sidepath was striped through the existing parking lot.



Above: aerial of Gilligan Road and Ternan Ave (left) and street view facing north(right)

<u>Gilligan Road and Ternan Ave (south intersection)</u>: the southern intersection with Ternan is 500 feet from the northern intersection. There is a stop-sign and a School Zone 15 mph sign facing Ternan, and no stop control on Gilligan. No sidewalks or crosswalks are present. There are utility poles near the shoulders on both sides. There is a street light on the west side utility pole. This intersection is 100 feet from Goff Middle School's northern driveway.



Above: aerial of Gilligan Road and Ternan Ave (left) and street view facing north (right)

<u>Gilligan Road and Hays Road</u>: This four-legged intersection is the southern terminus of Gilligan Road. Across from the Gilligan Road approach is the housing development 'Kriss Krossing'. This intersection has two-way stop control on Gilligan and Kriss Krossing. There are no sidewalks or crosswalks present. There is a street light on the northeast utility pole.



Above: aerial of Gilligan Road and Hays Road (left) and street view facing south (right)

Pedestrian & Bicycle Movement

On most of Gilligan Road, sidewalks are not present. Travel lane width appears to be 10 feet for the entire corridor with no paved shoulders. Bicyclists must ride in the travel lane, and pedestrians must walk in the travel lane or off the roadway.

Table 1 - Sidewalk and shoulder presence

Segment	Sidewalk	Shoulder width
US 9 & 20 to Hannaford Driveway (325')	Yes – east side, separated from road	None – asphalt gutter, no curb
Near Hannaford Driveway (150')	None	None – asphalt gutter continues 75'
Hannaford Dr. to Greenbush Terrace (125')	Yes – east side, separated from road	None
Greenbush Terrace to Hays Road (4000')	None	None



Above: typical roadway section with 10 ft. travel lanes and no shoulders

Trip Generation

The map below depicts local neighborhoods that may contribute to non-motorized trip generation and usage of the Gilligan Road sidepath. The Ternan Ave neighborhood across from Goff Middle School has 40 housing units. Park Ave and the adjoining streets (Mountain View, Castleton, Rugby, and Petalas) form a neighborhood with 105 housing units. Bloomingdale Ave has approximately 100 homes, while Kriss Krossing and the neighborhood south of Hays has 135 homes.



Gillilgan Road - Trip Generators



Gilligan Road Complete Streets Enhancements Feasibility Study Support



Fencing and other barriers

In some portions of the corridor, obstacles including fencing, guardrail, and drainage features are present that may impact sidepath alignment:

Hannaford Plaza entrance – guardrail and sections of concrete curb are present. There appears to be a drain next to the north entrance road as well.



Above: view of Hannaford Plaza entrance facing north. Below: view facing south.



DPW Garage – near the East Greenbush DPW Garage, chain link fencing is close to the roadway on the east side.



Above: DPW Garage fencing

Ball fields – just to the south of the DPW Garage, guardrail is present on the east side of the roadway. There is a steep embankment between the roadway edge and the outfield fence.



Above: guard rail just north of the ball fields parking area

Safety

CDTC conducted an analysis of the most recent available 5-year period of crash data for Gilligan Road, including crashes that occurred at the intersection with Columbia Turnpike. Crash data was pulled for a 5-year period from 2014 to 2019 using the NYSDOT Accident Location Information System.

During this period, 19 crashes were reported. Of these:

- 10 crashes occurred at the intersection with Columbia Turnpike (US-9 & 20)
- 3 crashes occurred in the vicinity of the Hannaford Plaza driveways
- 1 crash occurred on the horizontal curve south of Greenbush Terrace
- 1 crash occurred at the southern intersection of Gilligan and Ternan
- 4 crashes occurred in the vicinity of Hays Road

The map on the following page displays crash locations along Gilligan Road.

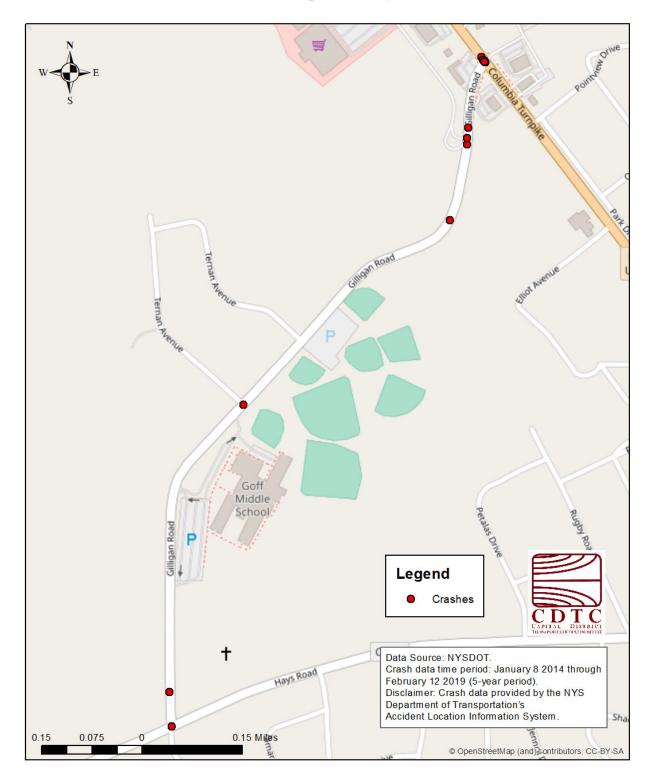
Of the 19 crashes that occurred, 15 were crashes between motor vehicles. Three were collisions with deer, and the remaining crash was reported to be a collision with a snow embankment. There were no crashes involving bicyclists or pedestrians during the 5-year period examined.

The table below summarizes the collisions by type.

Type of collision	Number
Left turn (against other car)	1
Left turn (with other car)	1
Rear end	6
Right angle	3
Right turn (with other car)	1
Other	5
Unknown	2
Grand Total	19

Prior to the five-year analysis period there was a pedestrian-involved collision on Gilligan Road. On October 26, 2004, a student crossing Gilligan Road was struck by a vehicle while crossing near the southern intersection with Ternan Ave. The student was reported to be injured. The student was crossing near the Goff Middle School exit driveway. This incident demonstrates the need to safely accommodate pedestrians on the corridor and to provide connections to nearby neighborhoods for all roadway users.

Crash Locations - Gilligan Road, East Greenbush



Complete Streets and Neighborhood Connections Concepts

Potential Alignments

Following discussions with Town of East Greenbush staff, several constraints to sidepath alignment were identified:

- The Town desires the first phase of sidepath implementation to be a segment connecting Goff Middle School to the Little League fields to the north. This sidepath would fall on the east side of Gilligan Road and would be approximately 900 feet in length. This segment would pass through the parking area near the ball fields, and would require delineation between the trail and the parking area. Connection to the Ternan Ave neighborhood, also part of the first phase, would be made by enhancing crosswalk treatments, such as striping and flashing beacons.
- The Town wishes to minimize the impact of the sidepath on DPW Garage operations, and for the sidepath to eventually connect to destinations west of Gilligan Road including Hannaford Plaza and the 580 Columbia Turnpike Planned Development District (PDD), consisting of 275 apartments and approximately 22,000 sq. ft. of commercial space. For these reasons, the sidepath is expected to cross to the west side of Gilligan. As there are no signalized or stop-controlled intersections on Gilligan, a mid-block trail crossing will need to be installed.
- The mid-block trail crossing would best be located at the north end of the Little League parking lot, so as to avoid the steep gradient and guardrail on the east side of Gilligan, and to avoid the residential parcels on the west side of Gilligan.
- The Town provided sewer district utility basemaps and identified a 20-foot sewer easement that may potentially be used for future trail connections. The easement could be used to provide connections to Parkview Ave to the west and Park Ave to the east.
- As part of the 580 Columbia Turnpike Planned Development District, a portion of trail will be constructed on the southern edge of the PDD boundary. This portion of trail could be connected to Gilligan Road as part of a future phase.

On December 11th, 2020, a stakeholder workshop was held virtually and was attended by East Greenbush staff, CDTC, CDRPC, GPI, East Greenbush Department of Public Works, Police, Recreation Department, East Greenbush Central School District, Little League, and the Town Board. CDTC presented the draft Complete Streets Enhancements Feasibility report. Feedback was received from local stakeholders on a number of subjects:

- Regarding connecting to Hays Road south of Goff Middle School, a number of stakeholders agreed
 that connecting via church ROW is preferable due to concerns about safety or mischief if the
 sidepath was built close to the school. Additionally, there are drainage issues on the school ROW
 alternative alignment.
- The portion of sidepath along the Goff Middle School parking lot will need to be placed close to the road to avoid steep grades. A grassy median separation may not fit; treatments for reduced

roadway separation (discussed later in this report) may need to be used. A project next year will reconfigure the parking area to allow more room for student drop-offs, and may impact sidepath alignment.

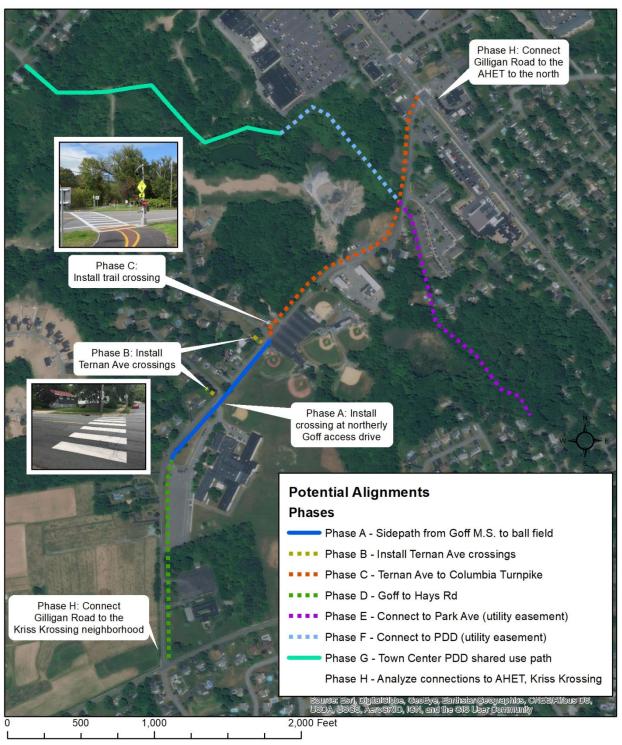
- Attendees noted that losing parking spaces at the Little League fields is an issue, and that parking
 reduction would need to be kept to a minimum. However, the sidepath would fit even if only the
 first row of parking is removed. An additional impact to parking is that connections between aisles
 will need to be provided in order to reduce entry/exit conflict points.
- On the northern end of Gilligan Road, issues were noted relating to the configuration of the Hannaford driveway. This intersection would likely be completely re-worked if sidepath were implemented during a future phase in order to remove the turn restriction.
- GPI noted that trail treatments such as signals and RRFBs have been installed on the Albany-Hudson Electric trail, and could be considered for use on Gilligan Road. Examples of crossing treatments can be seen on the AHET at US-4 and Elliot Road.

The map on the following page displays the candidate alignment that has been identified following discussions with Town staff, along with opportunity alignments that may potentially be used to provide trail connections to nearby neighborhoods.

Gilligan Road - Potential Trail Alignments



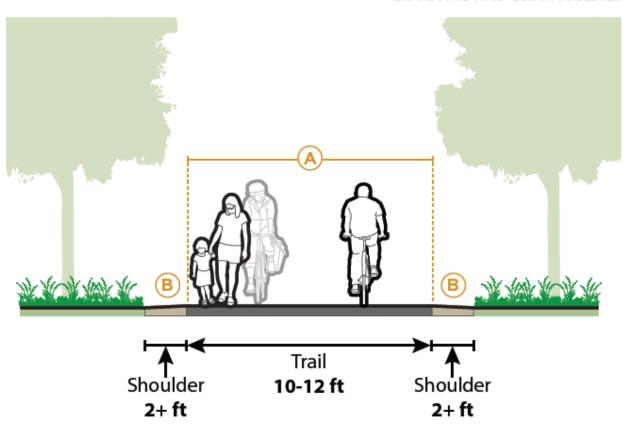
Gilligan Road Complete Streets Enhancements Feasibility Study Support



Recommendations: Sidepath Design

Shared use paths provide bicyclists and pedestrians with a safe, dedicated travel area separated from motorized traffic. Construction of a shared use sidepath along Gilligan Road would provide opportunity for recreational travel while safely accommodating non-motorized travel to Goff Middle School and the Little League Fields.

Design guidance for shared use paths is provided by resources such as the Empire State Trail Design Guide. Per the Empire State Trail Design Guide, standard shared use path width is 12 feet, which is sufficient to enable a bicyclist to pass another path user going the same direction while another path user is approaching from the opposite direction. Path width of 10 feet is adequate for low to moderate use. Shoulders with width of 2 feet or greater should be provided on both sides, with an additional 2 feet or more of lateral clearance free of signage, vegetation, or other obstacles. The NACTO Urban Bikeways Design Guide and AASHTO Guide to the Development of Bicycle Facilities recommend a minimum 10-foot width for shared use paths.



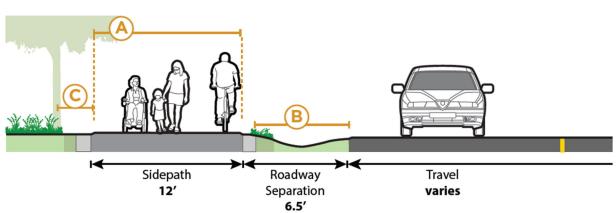
EMPIRE STATE TRAIL - DESIGN GUIDELINES

Above: Standard shared use path section. Source: Empire State Trail Design Guide, p. 5-14

To ensure the accessibility of shared use paths to users of all ages and abilities, the Empire State Trail Design Guide recommends surfacing the path with asphalt, concrete, or other hard surfaces, and

periodically maintaining the surface to ensure smoothness and stability. The path running slope is recommended to be less than 5% - however, in portions of the proposed alignment, running slope exceeds 5%. North of the DPW Garage, Gilligan Road has a maximum slope of approximately 7 to 8%. North of the Greenbush Terrace entrance, Gilligan Road again has a slope of approximately 7 to 8%. The design guide states that when the shared use path is contained within a street or highway border, its grade shall not exceed the general grade established for the adjacent street or highway. The design guide also recommends that the path cross slope not exceed 2%. To further improve accessibility, rest areas or widened areas of trail may be provided every 300 feet.

Per the Empire State Trail Design Guide, the preferred minimum roadway separation width is 6.5 feet.



EMPIRE STATE TRAIL - DESIGN GUIDELINES

Above: Recommended roadway separation width

In constrained conditions where 6.5 feet of grassy median or similar separation cannot be provided, sidepath may be accommodated at roadway grade with the use of a marked buffer area or physical barrier. A local example of an at-grade shared use sidepath can be found on the South End Connector trail in Albany. The path is separated from the roadway using bollards in a 5-foot striped median.



Above: South End Connector, Albany

Between Goff Middle School and the Little League Fields, the proposed alignment crosses through a parking area. The sidepath concept proposed at the 2018 Complete Streets Workshop shows the path striped through the parking area. It is recommended that the path be delineated from the parking area as clearly as possible so that drivers have the expectation that bicyclists and pedestrians may be present, and to prevent vehicles from driving on the path when searching for parking. If possible, a physical barrier such as a curb or median should be provided to separate the sidepath from the roadway and parking area.

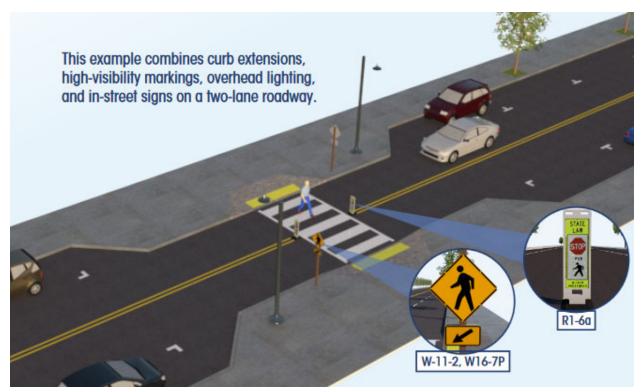


Above: Sidepath concept presented at the 2018 Complete Streets Workshop.

Recommendations: Sidepath Crossing

The proposed sidepath alignment contains a crossing just south of the DPW garage. To improve the safety of the crossing, the appropriate safety countermeasures should be used. According to FHWA's Safe Transportation for Every Pedestrian (STEP) guidance, the following design elements should be considered for the proposed mid-block crossing:

- High-visibility crosswalk markings According to FHWA, high-visibility crosswalks are preferred
 over parallel line crosswalks and should be provided at all established midblock pedestrian
 crossings.
- In-street signage These signs serve to remind road users of laws regarding right-of-way; per FHWA, they may be appropriate on 2-lane or 3-lane roads where speed limits are 30 mph or less, such as Gilligan Road. FHWA suggests that in-street signage has been observed to increase vehicle yielding rates (near 75 percent) and decrease vehicle speeds.



Above: Crosswalk Visibility Enhancements. Source: FHWA Safe Transportation for Every Pedestrian.

Advance yield or stop sign and markings – The stop bar or yield markings (sometimes referred to as
 "sharks teeth") are placed 20 to 50 feet in advance of a marked crosswalk to indicate where vehicles
 are required to stop or yield in compliance with the accompanying "STOP Here for Pedestrians" or
 "YIELD Here to Pedestrians" sign. FHWA suggests they are associated with a 25% reduction in
 pedestrian crashes.

- Improved nighttime lighting Consideration should be given to placing lights in advance of midblock and intersection crosswalks on both approaches to illuminate the front of the pedestrian and avoid creating a silhouette. Per FHWA, proper lighting may reduce pedestrian injury crashes by 23%.
- Rectangular Rapid Flashing Beacons (RRFB) RRFBS are pedestrian-actuated conspicuity
 enhancements used in combination with a pedestrian, school, or trail crossing warning sign to
 improve safety at uncontrolled, marked crosswalks. The device includes two rectangular shaped
 yellow indications, each with an LED-array-based light source, that flash with high frequency when
 activated.
- **Pedestrian Hybrid Beacon (PHB)** also referred to as a HAWK signal, a PHB consists of two red lenses above a single yellow lens. Unlike a traffic signal, the PHB rests in dark until a pedestrian activates it via pushbutton or other form of detection.

An example of a local trail crossing that incorporates many of the FHWA-recommended design elements is the Mohawk Hudson Bike Trail crossing pictured below. This crossing features high-visibility crosswalk enhancements and a pedestrian-actuated flashing signal head.



Above: Mohawk Hudson Bike Trail crossing



Above: Mohawk Hudson Bike Trail crossing

Another crossing on the Mohawk Hudson Bike Trail (at Aqueduct Road in Niskayuna) features RRFBs:



Left: Mohawk Hudson Bike Trail crossing of Aqueduct Road. Right: close-up of RRFB.

Another local example of a trail crossing is the Railroad Run Trail crossing with NY-50 near Saratoga Springs. This crossing features a full signal which rests on green until actuated by a crossing pedestrian. The trail has bollards to prevent unauthorized vehicle entry. A signalized crossing is also present on the AHET crossing of US-4 in East Greenbush.



Above: Railroad Run Trail crossing NY-50, Saratoga Springs

Supplemental Mapping

On the following pages, maps are provided for:

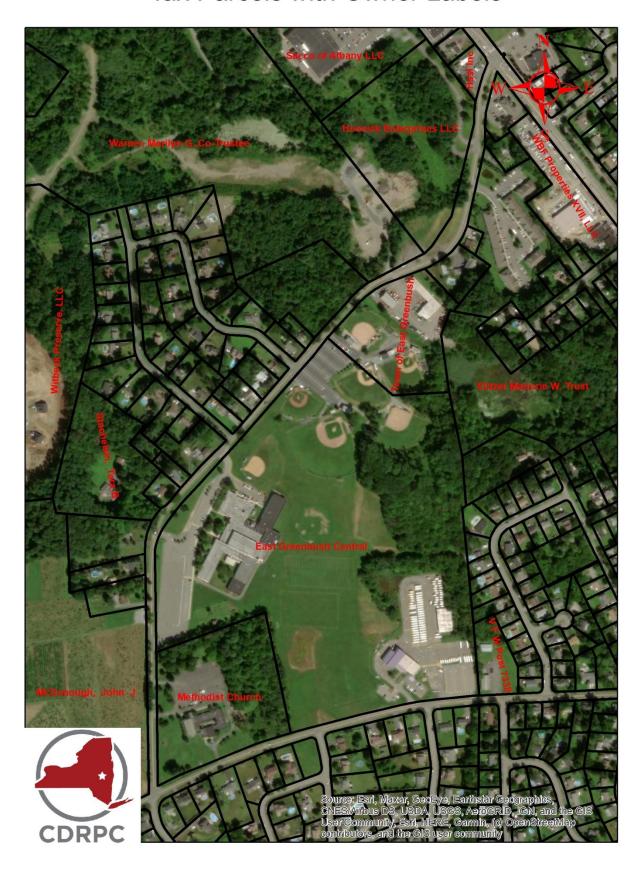
- Tax parcels with owner labels
- Soil types
- Topography 2' contours
- Topography 10' contours

Right-of-way

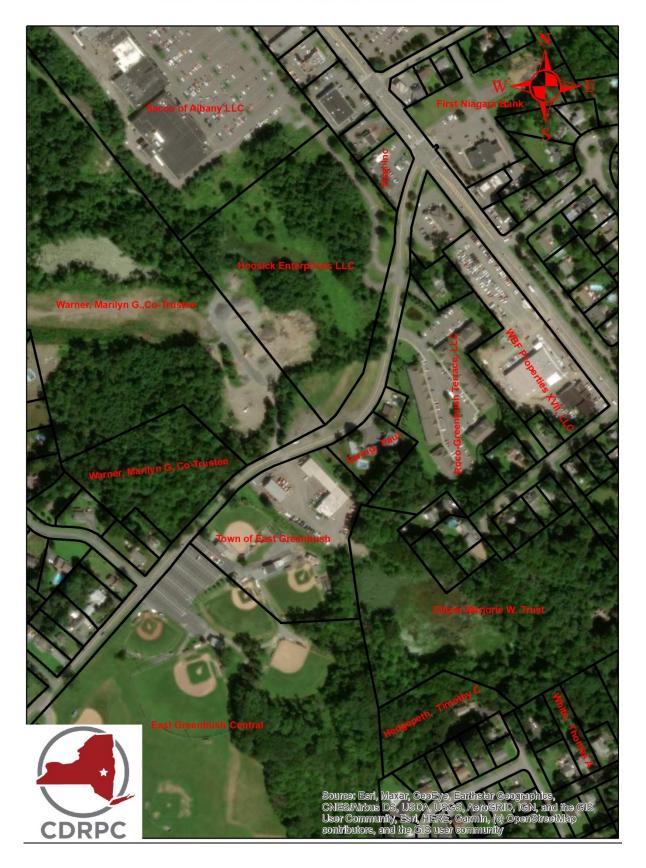
The maps on the following two pages depict parcel boundaries on Gilligan Road. Large parcels are labeled by owner. On the east side of Gilligan Road, East Greenbush Central Schools and the Town of East Greenbush own two large parcels containing Goff Middle School, Little League fields, and the DPW Garage.

The data source is the 2019 Rensselaer County Tax Parcel dataset provided by the New York State GIS Clearinghouse.

Tax Parcels with Owner Labels



Tax Parcels with Owner Labels

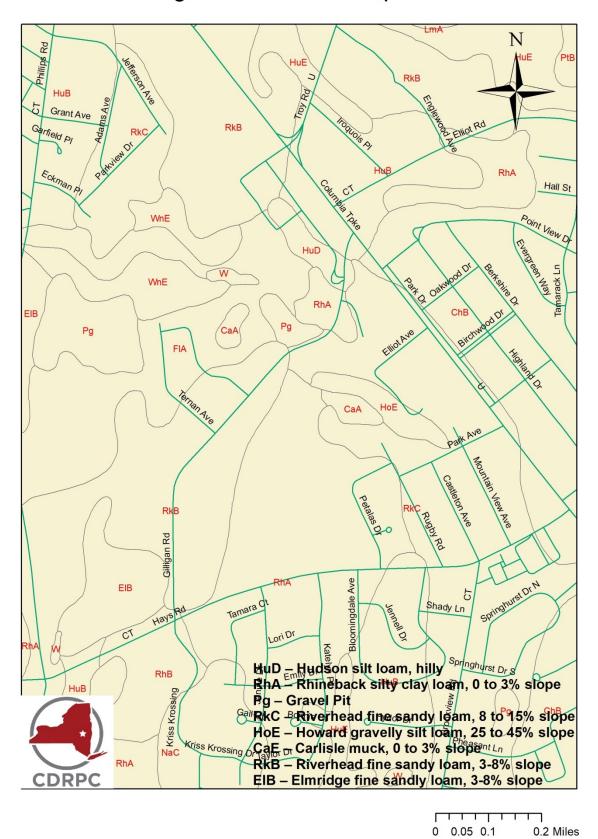


Soil types

The map on the following page depicts soil types in the vicinity of Gilligan Road. The following soil types are present on the proposed sidepath alignment:

- **RkB Riverhead fine sandy loam, 3-8% slope** (southern portion of corridor; Methodist Church to DPW garage)
- **Pg Gravel Pit** (across from the DPW Garage)
- RhA Rhineback silty clay loam, 0 to 3% slope (short section north of gravel pit)
- **HuD Hudson silt loam, hilly** (short section around the Hannaford Plaza entrance)
- HuB Hudson silt loan, 3-8% slope (north section of corridor near Columbia Turnpike)

Gilligan Road Soil Composition

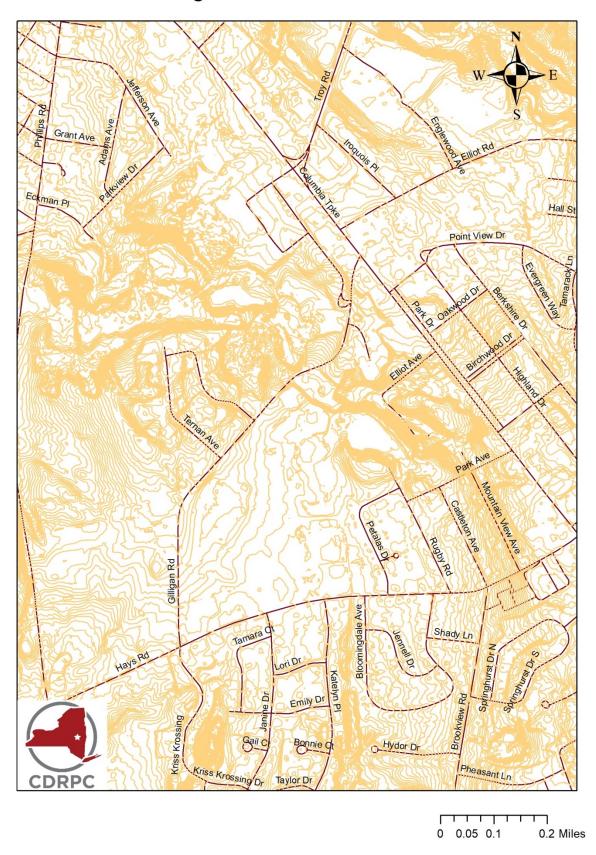


Topography

The following maps depict topography along Gilligan Road at the 2-foot and 10-foot resolution. The steepest grade present on the corridor is the slope just north of the DPW garage. The elevation near the DPW garage is approximately 270 feet. Gilligan Road slopes downward to a minimum elevation of approximately 240 feet near Greenbush Terrace Apartments with a negative grade of 7 to 8%. Gilligan Road then slopes upward toward Columbia Turnpike with a grade of 7 to 8%.

The data source is the New York State 2-ft Contours elevation dataset on the New York State GIS Clearinghouse. Per the GIS Clearinghouse: "The 2-ft Rensselaer County contours were created using the NYSGPO Columbia/Rensselaer 2015, FEMA Hudson Hoosic 2012 and NYSGPO Rensselaer Hoosic River 2010 LIDAR collections. They include the overlap of the 2008 Capital District LIDAR collection".

Gilligan Road 2ft Contours



Gilligan Road 10ft Contours

