A. INTRODUCTION

This chapter presents the existing conditions and examines the Proposed Action's potential impacts on infrastructure, including water supply, wastewater, and energy supplies, and roadway and rail infrastructure, within the Fjord Trail North Corridor. This chapter characterizes existing infrastructure within the Fjord Trail North Corridor, assesses conditions in the future without the proposed Fjord Trail North, and assesses the potential for Fjord Trail North to affect infrastructure in the future. An evaluation of Fjord Trail South is provided in Chapter IV.M, "Infrastructure – Fjord Trail South."

B. EXISTING CONDITIONS

WATER SUPPLY, WASTEWATER, AND SEWERAGE

Existing water supply and sanitary sewage disposal infrastructure is not present within the limits of the Fjord Trail North Corridor. Municipal water and sewer service districts are provided in the City of Beacon proximate to the Fjord Trail North Corridor near Long Dock Park and Denning's Point. The City of Beacon Wastewater Treatment Facility is located on Dennings Avenue near the entrance to Denning's Point. Additional investigations would be completed as design advances for Fjord Trail North to assess the extent, condition, and capacity of existing municipal water supply and sanitary sewage disposal infrastructure along the Fjord Trail North Corridor, as needed.

There are no public restroom facilities currently located along the Fjord Trail North Corridor, including at existing parks (i.e., Long Dock Park, Denning's Point, and Madam Brett Park).

ELECTRICITY AND LIGHTING

Within the vicinity of the Fjord Trail North Corridor, existing electricity and lighting infrastructure generally consists of overhead power lines along area roadways to serve residences and other buildings. Within the Fjord Trail North Corridor, overhead power lines are located along Dennings Avenue and the Denning's Point Bridge, along NYS Route 9D, and also run in a clearing along the south side of Fishkill Creek. Electricity services in the vicinity of the Fjord Trail North Corridor are provided by Central Hudson Gas & Electric Corporation.

Photovoltaic solar panels are located at Long Dock Park that provide power to Scenic Hudson's River Center. A large solar farm is also located along Dennings Avenue adjacent to the Beacon Wastewater Treatment Facility, which serves the City.[1]

ROADS, RAIL, AND BRIDGES

The Fjord Trail North Corridor is largely undeveloped, with roadway infrastructure largely concentrated near its northern terminus in the City of Beacon (see **Figure III.M-1**). Existing

[1] https://beaconny.gov/wp-content/uploads/2019/09/BQ-Solar-Update-March-2018.pdf. Accessed July 19, 2024

11.19.24

Red Flynn Drive
Red Flynn Drive

Red Flynn Drive Bridge

Beekman Street

Beacon Station Road

Route 9D

NYS Route 9D Bridge over Dormant MNR Tracks

NYS Route 9D Bridge over Fishkill Creek

South Avenue

Denning's Point Road Bridge

N

0 2 MILES

Trail Corridor - Fjord Trail North
Study Area Roadways
Study Area Bridges
Study Area Tunnel

Study Area Roadways, Bridges, and Tunnels

HUDSON HIGHLANDS FJORD TRAIL

Figure III.M-1

roadway infrastructure in this area comprises local streets (Beekman Street, Long Dock Road, Red Flynn Drive, Beacon Station Road, South Avenue, and Dennings Avenue), which are two-way low-speed streets. The principal roadway along the Fjord Trail North Corridor is NYS Route 9D, a two-way, two-lane roadway that generally travels north-south and connects the City of Beacon with the Village of Cold Spring, as well as other points north and south. NYS Route 9D is a low-speed (30 mph) roadway through the City of Beacon and becomes a higher speed (45 mph and 55 mph) roadway as it continues south through less developed areas of the Town of Fishkill. Each of the study area roadways, and associated bridge and tunnel infrastructure, including the bridge at Denning's Point, are described in more detail in Chapter III.L, "Traffic and Transportation – Fjord Trail").

Railroad infrastructure, such as rail tracks, switches, ties, overhead bridges, culverts, and undergrade bridges, is present along the entire Fjord Trail North Corridor. The Metropolitan Transportation Authority's (MTA's) Metro-North Railroad (MNR) tracks travel along the Hudson River shoreline in this area. The tracks and associated infrastructure serve MNR's Hudson Line commuter service as well as Amtrak's intercity rail service and CSX freight service. Additionally, a single-track inactive rail line (the Beacon Line) travels on the west side of the MNR Hudson Line tracks near Denning's Point, along which is the Klara Sauer Trail, before curving inland and traveling on a bridge over the MNR tracks.

C. FUTURE WITHOUT THE PROPOSED ACTION

Under the future condition without the development of the proposed Fjord Trail North, any requirement to provide utilities in support of ongoing and future development in the area would be accommodated by either existing or new water, wastewater, electric and roadway infrastructure dependent upon the requirements of any approved projects in the area and as would be supplied by the appropriate service provider.

As part of a separate action by HHFT, Inc. that is undergoing SEQR review by the Town of Fishkill, HHFT, Inc. is planning improvements at Dutchess Manor, which it owns, that would include a restroom building along the Fjord Trail North Corridor. While these improvements are separate from the Proposed Action, the restroom building would be available to future Fjord Trail users.

The Breakneck Connector and Bridge Project (BNCB), just south of the Fjord Trail North Corridor, will include new restroom buildings for visitors to the Hudson Highlands State Park Preserve (HHSPP), relocation of existing overhead power lines from the west side of NYS Route 9D to the east side, and several improvements along NYS Route 9D to address existing vehicular and pedestrian safety issues, including the following:

- Creating an off-road, shared-use path connection between the MNR Breakneck Ridge train stop and the Breakneck Ridge Trailhead area to keep pedestrians separated from NYS Route 9D.
- Formalizing parking lots and demarcating on-street parking and emergency vehicle staging along NYS Route 9D in the half-mile section north of the Breakneck tunnel and eliminating nose-in and other unsafe parking conditions.
- Reducing the speed limit on NYS Route 9D from 55 mph to 40 mph and adding pedestrian crossings and other features to improve safety.

MNR's Beacon Line, an existing railbanked (inactive) elevated rail line owned by MNR, is currently the subject of a feasibility study by the Dutchess County Transportation Council (DCTC) for a rail trail between the City of Beacon and Hopewell Junction in the Town of East Fishkill,

which includes the rail bridge between Denning's Point and Madam Brett Park within the Fjord Trail North Corridor.[2] At this time, funding has not been identified for this rail trail beyond the feasibility study and the timeline of this potential project is not known.

At Denning's Point, OPRHP plans to cleanup an existing vacant steel structure on the site south of the entrance and install photovoltaic solar panels.

Based on the relatively high number of vehicle crashes with animals along NYS Route 9D in this area, NYSDOT has indicated that it may consider evaluating the NYS Route 9D corridor for placement of animal crossing warning signs.

NYSDOT is planning another roadway infrastructure improvement just south of the Fjord Trail North Corridor near the BNCB. The existing lighting system in the NYS Route 9D Breakneck Tunnel at the Town of Philipstown/Town of Fishkill border is planned to be replaced. This project will replace the existing lighting system and will make repairs to the tunnel only to accommodate the installation of a replacement light system. Coordination will be necessary with Central Hudson Gas & Electric to mitigate a transmission line within the existing drainage system. This project is scheduled for completion in the summer of 2025.[3]

D. FUTURE WITH THE PROPOSED ACTION

WATER SUPPLY, WASTEWATER, AND SEWERAGE

As part of the proposed Fjord Trail North, water and wastewater services would be required for the proposed restroom buildings and the proposed maintenance facility.

Restroom buildings are planned along the proposed Fjord Trail North Corridor at three locations: Long Dock Park, Denning's Point, and The Notch. Each restroom location is anticipated to have six to eight toilets, as shown in **Table III.M-1**. The proposed maintenance facility would be constructed on the property of the Beacon Transfer Station at 90 Dennings Avenue in Beacon.

Table III.M-1
Proposed Restroom Buildings

Location	Number of Toilets
Long Dock Park	6-8
Denning's Point	6-8
Notch	6-8

Further investigation will be conducted as design advances to determine availability of water and sewer services for restroom buildings. At this time, it is expected that the Long Dock Park restroom buildings could potentially connect to municipal water supply and sanitary sewers in the City of Beacon, as would the proposed maintenance facility. Connections to municipal services in these locations would be along developed corridors and would not be expected to result in substantial additional ground disturbance. Approval and coordination with the City of Beacon and utility service providers would be completed as part of the final design process. Where public sewer and water connections for restroom buildings is deemed infeasible, or if HHFT, Inc.

[2] https://www.beaconhopewellrailtrail.com. Accessed April 24, 2024.

[3] https://www.dot.ny.gov/portal/pls/portal/MEXIS_APP.DYN_PROJECT_DETAILS.show?p_arg_names=p_pin&p_arg_values=881488. Accessed February 23, 2024.

identifies a preference, the restroom buildings would utilize composting toilets with hand sanitizer dispensers.

Estimated potential water demand and associated sanitary sewage generation for the proposed restroom buildings in the event that they are connected to municipal services is presented in **Table III.M-2**. The average daily water demand and sewage that would be generated by restroom buildings based on total toilet count prorated accordingly is presented in **Table III.M-3**. Potential water and wastewater demand for the proposed maintenance facility is presented in **Table III.M-4**. For the restroom buildings, it should be noted that these calculations represent weekend days when visitation would be higher, but weekday use would be anticipated to be much lower.

In the case of composting toilets, water would be supplied from wells and no sanitary services (e.g. septic systems) would be required. Wastewater would be stored in liquid end tanks that would be pumped out by a service company. The water demand to operate the composting system would be substantially less than traditional toilets and could be served by a lower capacity water well. The estimated water demand per composting toilet would be less than 20 gallons per day.

Table III.M-2
Water Demand / Sewage Generation

	Daily Visitation[1]	Average Daily Water Demand / Sewage Generation per Visitor[2]	Total Average Daily Water Demand / Sewage Generation for Proposed Action
	4,100	5 GPD[3]	20,500 GPD[3]

Notes:
[1] Daily visitation based on Table III.L-8 from Chapter III.L, "Traffic and Transportation – Fjord Trail."
[2] Average Daily Demand based on the NYS Design Standards for Intermediate Sized Wastewater Treatment Systems, Table B-3, utilizing hydraulic loading rates for "Campground Day Use."
[3] GPD – Gallons per Day

Table III.M-3
Potential Water Demand for Restroom Buildings on Municipal Services

Location	Average Water Demand / Sewage Generation
Representative Restroom Building	3,479 GPD

Table III.M-4
Maintenance Facility Water Demand / Sewage Generation

Use	Unit	Average Daily Water Demand / Sewage Generation	Total Average Daily Water Demand / Sewage Generation
Office	1,100 sf	0.1 GPD / sf	110 gallons
Workshop	20 employees	15 GPD / employee	300 gallons
Total			410 gallons

Note: GPD = gallons per day
Source: NYS Design Standards for Intermediate Sized Wastewater Treatment Systems (March 2014)

ELECTRICITY AND LIGHTING

Electricity would be required for lighting at the restroom buildings and Main Trail entry points at Long Dock Park, Denning's Point, and The Notch; for lighting at the proposed parking areas at The Notch and Wade's Hill Lot; and to provide power to the proposed maintenance facility. Lighting would be minimized to the extent practicable and incorporated where needed for safety

and security purposes. Any new lighting associated with Fjord Trail North would be dark sky compliant and would generally be down-facing to minimize light pollution.

Overhead service lines are available near each proposed entry location to Fjord Trail North and electric connections may be pulled from the overhead wires with underground conduits running beneath the proposed trail bed, as needed, to service electrical equipment. Sufficient capacity is anticipated to be available to supply the restroom buildings, maintenance facility, parking lots, and Main Trail entry points. HHFT, Inc. would coordinate with the local electric service provider for each connection as design of Fjord Trail North advances to ensure sufficient electric supply can be provided. HHFT, Inc. may also explore solar powered lighting at each location.

ROADS, RAIL, AND BRIDGES

The proposed Fjord Trail North would not require any substantial modifications or improvements to existing roads or bridges. New access points would be required along NYS Route 9D for the entrances to the proposed Notch parking area and the proposed Wade's Hill Lot. The need for traffic signals at these entrances would be determined as design advances, in coordination with NYSDOT. Additionally, Fjord Trail North would include installation of a new pedestrian and bicycle bridge across Fishkill Creek. Coordination with all appropriate parties would be undertaken as design advances.

Fjord Trail North would be located at least 50 feet from the right-of-way of the active MNR Hudson Line tracks, except where it is proposed to travel over the Hudson Line tracks via MNR's existing railbanked (inactive) Beacon Line between Denning's Point and Madam Brett Park. A portion of the Beacon Line railbed is currently used by MNR for storage and staging of materials and equipment. Use of the Beacon Line railbed for Fjord Trail North would require further coordination and approval from MNR and potentially other relevant parties, pending the results of the ongoing rail trail feasibility study noted above. Where construction activities would need to travel over MNR tracks, existing crossings would need to have an engineering and load bearing report prepared to determine if construction materials and equipment can traverse those crossings in order to be considered for use (including the existing bridge at Denning's Point). HHFT, Inc. will continue to coordinate with MNR as design advances to minimize the potential for impacts to MNR and disruption to MNR service. Fjord Trail North is not anticipated to affect MNR infrastructure along the active Hudson Line tracks.

E. CONCLUSION

No significant adverse impacts related to infrastructure and utilities would be anticipated to result from construction of the Fjord Trail North. As such, mitigation is not proposed. ✷