

FOREST PRESERVE DETAILED PROJECT WORK PLAN

**Fiscal Year 2026
Project # CO-WP-420**

<u>Region</u> 3	<u>Project Title</u> Ashokan High Point Trail Re-Route
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<u>Project Type</u> New Construction	<u>Town(s)</u> Olive	<u>County</u> Ulster	<u>Management Unit</u> Sundown Wild Forest
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Description of Existing and Desired Condition(s) for Project

Existing Conditions

The Ashokan High Point Trail (elevation 3,086') is a moderately challenging multi-use loop trail located in the Southern Catskills in the Town of Olive. The existing 8.4-mile loop trail leads to the summit of Ashokan High Point Mountain which offers spectacular views of the Ashokan Reservoir. The loop trail is a legacy trail that was not designed or built with sustainability in mind. The trail is co-aligned with an old roadbed for the first 2 miles and in its current location, the trail crosses a perpetually wet area along one of the tributaries to the Kanape Brook. A bridge at a wide stream crossing location has failed, and currently hikers are forced to walk through water to continue along the trail. Higher on the mountain, the northern half of the loop trail is an example of a poorly designed and constructed trail and has significant erosion and drainage problems in places where the trail bed itself has become a deeply eroded streambed. The 2019 Sundown Wild Forest (SWF) Unit Management Plan (UMP) authorized a re-route of the current loop trail starting near the summit of the existing Ashokan High Point trail, which would then turn westerly back to a portion of the existing lower Ashokan High Point trail below several stream crossings (page 137,138). The re-route of the loop trail will require 2.2-miles of new trail construction. After this reroute is built, approximately 1.7-miles of the degraded and unsustainably aligned section of the original loop trail will be closed and naturalized using natural materials to discourage use and allow that area to return to a wild condition.

Desired Conditions

The desired condition for the Ashokan High Point Re-Route project is to improve visitor safety, protect wildlife and biodiversity, enhance public access and promote the enjoyment of the lands in SWF. Through the establishment of a sustainably designed and constructed hiking trail from the Kanape Brook stream corridor to the scenic vista on the summit of Ashokan High Point, this project will create a significant improvement to the enjoyment of the area by both present and future generations for years to come. The objective of this work plan is to re-route and realign the poorly designed and constructed section of the Ashokan High Point Trail following sustainable trail design and construction principles. The finished sustainably aligned trail will require minimal maintenance, blend into the surrounding area, protect the natural environment, and accommodate a moderate to high level of

public use. Visitors will have the opportunity to experience nature and beauty of the area with limited visual evidence of human influence on the environment or noise from motor vehicle traffic.

Description of Project Specifications

Two alternative trail routes were assessed as part of this project. Both routes stay within a 0.25-mile buffer of the conceptual route mapped in the UMP on page 138. Alternative 1 is referred to as the Lower, Sidehill Route and Alternative 2 is referred to as the Upper, Cliff and Ridge Route. DEC staff evaluated both routes with a professional trail consultant and determined the trail layout in Alternative 1 is preferred for the trail relocation. Alternative 1 has been laid out to minimize landscape disturbance and natural resource impacts to the greatest extent possible. The sustainably aligned trail avoids ledges, cliffs, and wet areas, and minimizes the amount of tree cutting needed for trail construction. 20 stone steps will be required to reduce the trail grade and constrict and define the trail corridor along a 40' section of trail along the beginning of the proposed re-route (see attached map). The stairs will be sourced from material on site and provide a stable vertical rise on the preferred route of the trail which will slow water runoff and retain soil.

Site constraints within the project area include hydric soils, challenging stream crossings near the western terminus, and a steep cliff band through the middle of the project area. To minimize construction costs, long-term maintenance, and potential environmental impacts, the stream crossings and wetlands were avoided by both alternative trail re-route locations. The passage through or around the cliff bands at about 1,900' to 2,200' feet and roughly 0.5 to 0.7 miles from the northwestern terminus became the dominant control points for both routes. Opportunities and desirable control points include well drained cross slopes on most of the southern and eastern slopes of Ashokan and several seasonal summer views along the northern ridge of Ashokan and the ridge's eastern slope. Seasonal views towards the Burroughs Range, South Mountain and towards the Ashokan reservoir are available on the northern ridge.

The trail corridor width of the new Ashokan High Point loop trail is expected to be generally 6' feet wide with some sections up to 8' in width where necessary for turns and sections of steeper cross slope. The trail tread width will range in width from 18"-36" inches.

The following Trail Layout and Design considerations were used to select the preferred route:

- Positive control points included the Kanape parking area and the Ashokan High Point scenic vista.
- Negative control points included ledges and cliffs, excessive side slopes on areas with thin soil, and areas with known occurrences of rare, threatened, or endangered (RT&E) species and/or critical habitats.
- Soil type and water drainage characteristics have been considered in layout and design - avoiding seeps and saturated wet soils where possible.
- Trail design and layout have followed sustainable design principles. The average running grade of the trail is 10%, with short sections not exceeding 15%, while optimizing contour curvilinear alignment. This layout favors full bench cut construction, integrated drainage and a durable tread that integrates well into the localized environment.
- The trail tread and corridor design include features and designs such as: downhill retention, hard drains, turnpiking, stone on stone steps, broad-based dips, 3-5% out slope of tread, and surfaced tread with mineral soils.
- The trail design will incorporate grade reversals, outsloped tread, and bench cuts.

- Climbing turns and switchbacks may be utilized but will be kept to a minimum where necessary.

Description of Measures Taken to Avoid, Mitigate and Minimize Impacts to Natural Resources

As described above, the trail layout for this project was designed to avoid drainages, seeps, steep slopes and poorly drained soils to the greatest extent possible. The trail tread will be sited to avoid the cutting of large trees and to maintain a sustainable grade using current Best Management Practices for trail construction.

A.) Trees to be Removed:

One of the main factors in the trail's final design was minimizing the number of trees that would need to be cut. Tree cutting will be kept to the minimum necessary to establish the trail corridor and will include routing the trail around large trees and concentrating on the removal of smaller understory trees blocking the route. Dense thickets of mountain laurel (*Kalmia latifolia*) dominate the understory in the lower half of the project area and along the trail corridor in many locations. These shrubs' evergreen leaves provide constant shade on the forest floor, which results in light levels that are too low for effective forest regeneration. The ground cover conditions in numerous locations will require minimal tree cutting because of the lack of forest regeneration in areas dominated by dense Mountain Laurel thickets.

A total of 203 trees have been tallied to be removed for the trail project. 75 of the trees are in the 1" to 2.9" Diameter at Breast Height (DBH) range, 83 are in the 3.0" and 4.9" DBH range, and 45 trees are between 5.0" and 12.9" in DBH range. See *Tree Tally* in Appendix for full count of trees.



Example of tree density in the project area



Example of Mountain Laurel dominated understory in project area

B.) Earthwork and disturbance

The extent of earthwork required for this project has been reduced to the greatest extent possible given wetland, endangered species and topographical constraints. The construction of new trails that don't rely on imported surface materials generally requires the removal of vegetation, organic litter, and organic soil to expose the underlying mineral soil which provides the most durable trail tread surfaces. In flat terrain, the removal of these materials and subsequent soil compaction can result in a concave tread that can collect and retain water, create muddiness and lead to trail widening. A preferred, more sustainable practice is to construct side-hill aligned trails on sloping terrain, with mineral soil removed and deposited downhill to create gently out-sloped or "benched" treads. In forested areas with steep slopes like the ones found within the project area, full bench cut trail construction yields the most sustainable results. Full bench trail construction makes a route more durable under high use, minimizes natural resource damage including long term loss of trees and adjacent vegetation, requires less maintenance and produces trail treads that are safe and pleasurable to, hike, ski, and snowshoe on.

One key advantage of side hill aligned, full bench cut trails is that these types of trails are highly effective in preventing trail tread creep, trail widening, and visitor created informal trails, all of which can adversely impact the ecological integrity of the surrounding forest. These types of trails utilize a visitor "containment" strategy that concentrates traffic on narrow, resistant treads designed to sustain long-term traffic and minimize natural resource impacts. Fully benched, side-hill aligned trails in sloping terrain can accommodate the intended types and amounts of use while minimizing vegetation and soil loss. In addition, trail sustainability is significantly enhanced on landform grades <10% so that the steep side slopes permanently compel the spatial concentration of traffic to a narrow tread while limiting opportunities for visitors to establish informal trails (Marion, 2022). In other words, fully benched, side-hill aligned trails with sufficiently steep side slopes resist widening and can facilitate tread drainage through periodic grade reversal, or well-maintained out slopes. The steep slopes found throughout the project area provide the ideal conditions for full-bench side hill aligned trail construction.

In certain locations along the trail, the trail corridor will be wider in areas on steeper cross slopes to accommodate for the upslope grading of the tread bench. The elimination or reduction of side slope bench cuts will be done where soil conditions are deemed suitable. Crowning of the trail tread will likely be minimal but will be utilized on occasion in areas where the trail route is not conducive to shedding water through outsloping or other techniques. If the removed duff is significant enough to create a trench that will lead to saturation or erosion, there will be crowned tread construction. This will be needed primarily near the northwestern start of the new trail, near the lower intersection with the existing trail.

To manage water, grading techniques will be used to facilitate natural drainage without water bars. Grade reversals, dip drains, and trail alignments that facilitate drainage and tread stability will be utilized whenever possible. Areas of wet or poorly drained soils will be avoided to mitigate erosion. Earthwork will be necessary to provide adequate trail in-slope and out slope gradient along sidehills and to install water control devices such as drainage dips. Wherever possible, care will be taken to construct a finished trail that has a naturalistic, wild character as opposed to a geometric character. This will be accomplished by naturalizing the upslope area of full benches or adding stones strategically to create a more natural character to any graded trail sections.

C.) Impacts to Streams, Waterbodies and Wetlands:

Trail construction will not take place within wetland areas. Silt fencing will be placed around limits of disturbance during construction when working near stream channels or swales as per NYS Standards and Specifications for Erosion and Sediment Control. Any areas where ditching will be crossed by machinery or vehicles will be restored to operational condition. Surface and ground water will be controlled during all phases of construction to prevent erosion and siltation both on site and to off-site locations. Facilities within the unit will be monitored for any natural resource degradation that could occur during trail construction.

D.) Identification of Rare, Threatened or Endangered Species:

There are no known occurrences of Rare, Threatened or Endangered Species that will be affected by this project.

Analysis of Project Location and Design Alternatives

Alternative 1: Lower, Sidehill Route (Preferred Alternative): Construct a sustainably aligned, multi-use trail that will enhance recreation opportunities for hikers, bikers, cross-country skiers and snowshoers to the summit of Ashokan High Point. This trail route option will follow the natural contours of the terrain as much as possible and has been laid out to minimize tree cutting and rock removal. Additionally, this trail route completely avoids having to construct a trail adjacent to a series of cliff bands that would present public safety concerns in winter months when trail conditions can be covered in snow and ice.

Alternative 2: The Upper, "Cliff and Ridge" alternative identified a route through a series of cliff bands that is feasible but will require more intensive technical construction techniques and would be more costly to construct. The "Cliff and Ridge" trail option would be near cliff edges which could potentially result in public safety concerns during the winter months when the trail could be covered in snow and ice. For these reasons, alternative 2 was not selected as the preferred alternative.

Alternative 3: (No Action Alternative): No action will continue the natural resource degradation and the use of a poorly designed and constructed section of the Ashokan High Point loop. DEC aims to provide sustainably built trail infrastructure that minimizes maintenance requirements, reduces impacts to natural resources and enhances the quality of visitor experiences and for these reasons, the "No Action Alternative" was not selected as the Preferred Alternative for this project.

Description of Use of Motorized Equipment and/or Motor Vehicles (if any)

Trail crews will perform work with a combination of hand and mechanized equipment. A powered wheelbarrow and a mini excavator will be used to perform the rough trail excavations and to set the treadway and water control features for increased sustainability in the finished trail. Final shaping will be performed with hand tools. Excavation into the trail bed will be conducted only when necessary to remove protruding roots and rocks when they pose a safety hazard to users of the trail. Any excavation into the trail bed to remove protruding roots or rocks that cause a hole will be filled with a combination of mineral soil/aggregate mix and compacted.

Trail construction will require the use of motorized equipment to carry in materials and tools in excess of 40 pounds and to aid in the efficiency of trail construction. Small, tracked mini excavators and walk-

behind wheelbarrows will be utilized throughout the trail construction process. A Conceptual Use Plan for Administrative Access by Motor Vehicles in Wild Forest Areas (CP-17) has been prepared for this project. Access for motorized equipment will be facilitated via existing trails and roadways. Equipment operators will conduct their work in optimal environmental conditions and in a manner that will not contribute to any potential degradation of the wild forest setting. All work will be done with appropriate DEC oversight.

Description of Applicable Standards for Accessibility by People with Disabilities

The Ashokan High Point Trail is not an accessible trail, nor would it be practical due to terrain. This relocated trail segment will be constructed with similar techniques to the existing trail.

Citations: Marion, Jeffrey. (2022) "Trail Sustainability: A State-of Knowledge Review of Trail Impacts. Influential Factors, Sustainability Ratings, and Planning and Management Guidance". U.S. Geological Survey

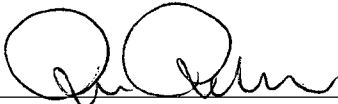
Other Relevant Considerations

Prepared by (Name & Title): Pine Roehrs, EPS, NR 2
Phone: 845-256-3075

Date: 1/29/2026

Approvals:

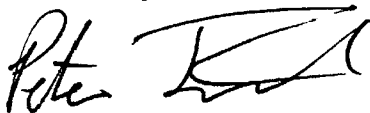
Comments:



Regional Program Manager
Date: 1/29/2026



Regional Director
Date: 4/15/2026



On Behalf of the Division Director
Date: 4/9/2026

New York State Department of Environmental Conservation

REGULATORY CLEARANCE CHECKLIST – STATE LANDS and CONSERVATION EASEMENT PROJECTS

PROGRAM	PERMIT	REQUIRED		SECURED BY	COMMENTS
		YES	NO	(NAME)	
Air Resources	Restricted Burning	<input type="checkbox"/>	<input type="checkbox"/>		
Mineral Resources	Mining	<input type="checkbox"/>	<input type="checkbox"/>		
Materials Management	Solid Waste Mgt. Fac.	<input type="checkbox"/>	<input type="checkbox"/>		
Water	Dam Safety Review	<input type="checkbox"/>	<input type="checkbox"/>		
	Const. in Flood Hazard	<input type="checkbox"/>	<input type="checkbox"/>		
	Public Water Supply	<input type="checkbox"/>	<input type="checkbox"/>		
	SPDES	<input type="checkbox"/>	<input type="checkbox"/>		
Spills Management	Petro. Bulk Storage	<input type="checkbox"/>	<input type="checkbox"/>		
Lands and Forests	Unit Management Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Pine Roehrs	
	Tree Cutting	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Ian Thompson	
	Protected Native Plants	<input type="checkbox"/>	<input type="checkbox"/>		
	Historic Preservation	<input type="checkbox"/>	<input type="checkbox"/>		
Fish and Wildlife	Freshwater Wetlands	<input type="checkbox"/>	<input type="checkbox"/>		
	Wild Scenic & Rec. River	<input type="checkbox"/>	<input type="checkbox"/>		
Compliance Services	Other Protection of Waters	<input type="checkbox"/>	<input type="checkbox"/>		
	EAF	<input type="checkbox"/>	<input type="checkbox"/>		
	Negative Declaration	<input type="checkbox"/>	<input type="checkbox"/>		
	Env. Impact Statement	<input type="checkbox"/>	<input type="checkbox"/>		
	Water Quality Cert.	<input type="checkbox"/>	<input type="checkbox"/>		
DEC (other)	CP-17	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Pine Roehrs	
	Commissioner (aircraft, motorized equipment)	<input type="checkbox"/>	<input type="checkbox"/>		
	Flight Request	<input type="checkbox"/>	<input type="checkbox"/>		
	Contract Clearance Sh.	<input type="checkbox"/>	<input type="checkbox"/>		
	DOB Exemption	<input type="checkbox"/>	<input type="checkbox"/>		
Other Agencies	APA MOU	<input type="checkbox"/>	<input type="checkbox"/>		
	APA Wetlands Permit	<input type="checkbox"/>	<input type="checkbox"/>		
	Corps. of Engineers	<input type="checkbox"/>	<input type="checkbox"/>		
	Building Permits	<input type="checkbox"/>	<input type="checkbox"/>		
	Local Permits	<input type="checkbox"/>	<input type="checkbox"/>		
	Easements	<input type="checkbox"/>	<input type="checkbox"/>		
	Highway Enter DOT	<input type="checkbox"/>	<input type="checkbox"/>		
Wastewater Disposal	<input type="checkbox"/>	<input type="checkbox"/>			



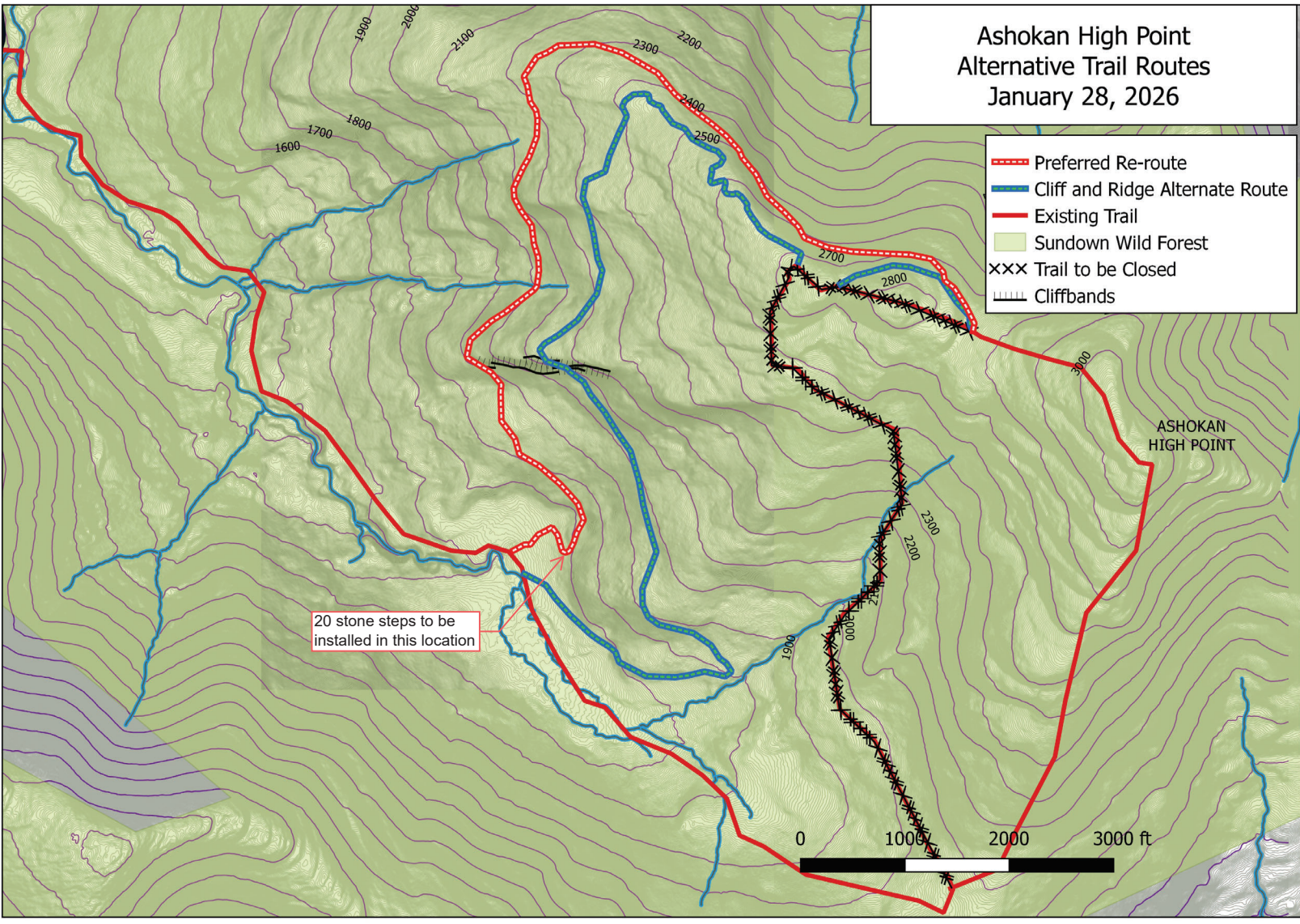
Ashokan High Point Alternative Trail Routes January 28, 2026

- Preferred Re-route
- Cliff and Ridge Alternate Route
- Existing Trail
- Sundown Wild Forest
- xxx Trail to be Closed
- ▬▬▬ Cliffbands

20 stone steps to be installed in this location



ASHOKAN
HIGH POINT



APPENDIX A
FOREST PRESERVE WORK PLAN TREE TALLY

Project Name: Ashokan High Point Trail
 State Land Unit: Sundown Wild Forest
 County: Ulster
 Date Tallied: October 27, 2025
 Tallied By: Eddie Walsh, Tahawus
 Trails and Ian Thomson NYSDEC

Town: Olive

Species	Diameter															Total
	1 to 3	4	6	8	10	12	14	16	18	20	22	24	26	28	30	
All Species	75															75
Red Maple		19	6	2												27
Striped Maple		21	4													25
American Beech		31	9		1	2										43
Red Oak		3	2	1	1											7
White Birch		1	1													2
Yellow Birch		2	3			1										5
Poplar		7	1	2		1										11
Black Birch		1														1
Snag, Dead Yellow Birch				1												1
Snag, Dead Poplar			1	1												2
Dead Striped Maple		1		1												2
Snag, Dead Red Maple						1										1
Total	75	86	27	8	2	5										203

Note: 1"- 3" size class are trees from 1.0" to 2.9" DBH. 4" size class are trees from 3.0" to 4.9". 6" size class are trees from 5.0" to 6.9".