



Kane Mountain Trail Reroute Design and Layout – Work Plan

N.Y.S Department of Environmental Conservation
Division of Lands and Forests, Region 5

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Work Plan

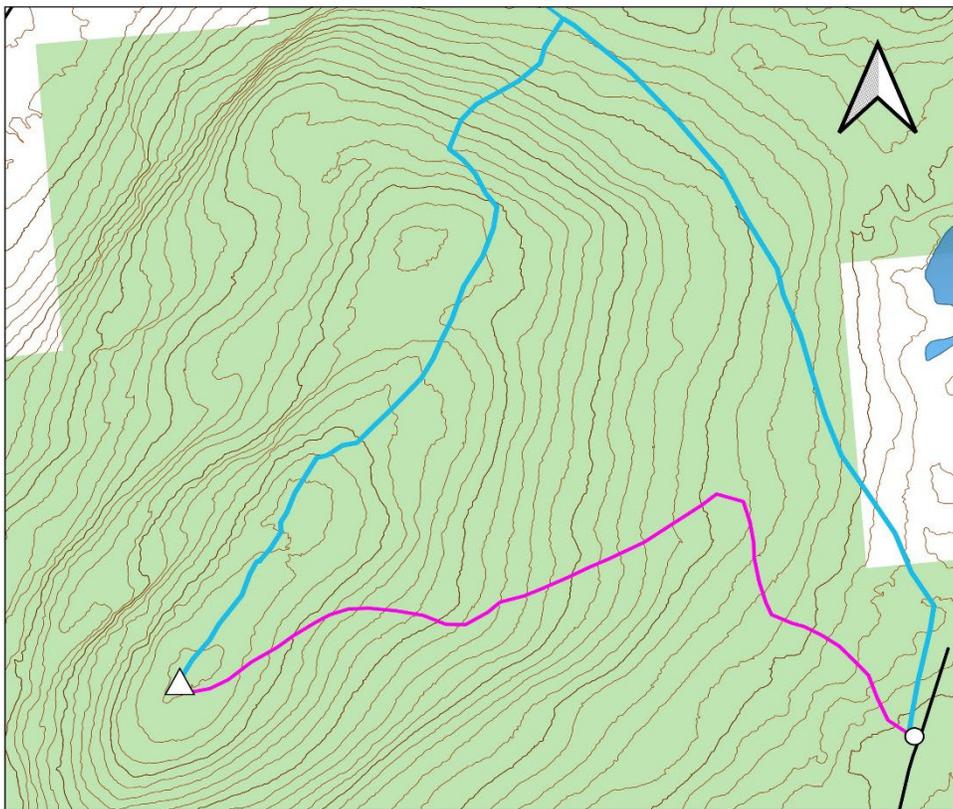
Project: Kane Mountain Trail Reroute Design and Layout

1. Description of Project Specifications

Existing Conditions: There are currently two hiking trails that lead to the summit of Kane Mountain, shown in the map below. At the summit, there is a restored fire tower that provides excellent views of the surrounding landscape. Both trails are popular with beginner to intermediate level hikers and have seen increased use due to the promotion of the Fulton Five Hiking Challenge and Fire Tower Challenge.

The East Trail is 0.8 miles long and follows an old jeep road/double track alignment to the summit. Over half of the East Trail follows the fall line with sustained grades exceeding 15%. The North Trail is 1.2 miles long and follows an old jeep road alignment that is littered with rocks and saturated soils for approximately the first half of the trail. This section of double track also crosses through private land. The North Trail then turns ninety degrees off the double track and follows the fall line with sustained grades of 20% to the summit ridge traverse. Both trails have an average width of eight feet, but in places have widened to 15-20 feet.

The existing trails were not designed or constructed using sustainable trail concepts and techniques. The combination of excessive grades, lack of maintenance, and increased use has led to significant impacts including erosion, trail widening, and saturated sections of trail. This work plan outlines the work required to establish a sustainable route to the summit of Kane Mountain. Once constructed, the proposed relocation will require minimal maintenance, blend in with the surrounding area, protect the natural environment, and accommodate a moderate to high level of visitation.



Kane Mountain Trails
Existing Trail Conditions

Legend

- Kane Parking
- Road/ Driveway
- North Trail
- East Trail
- Contours (20 ft.)
- Shaker Mountain Wild Forest

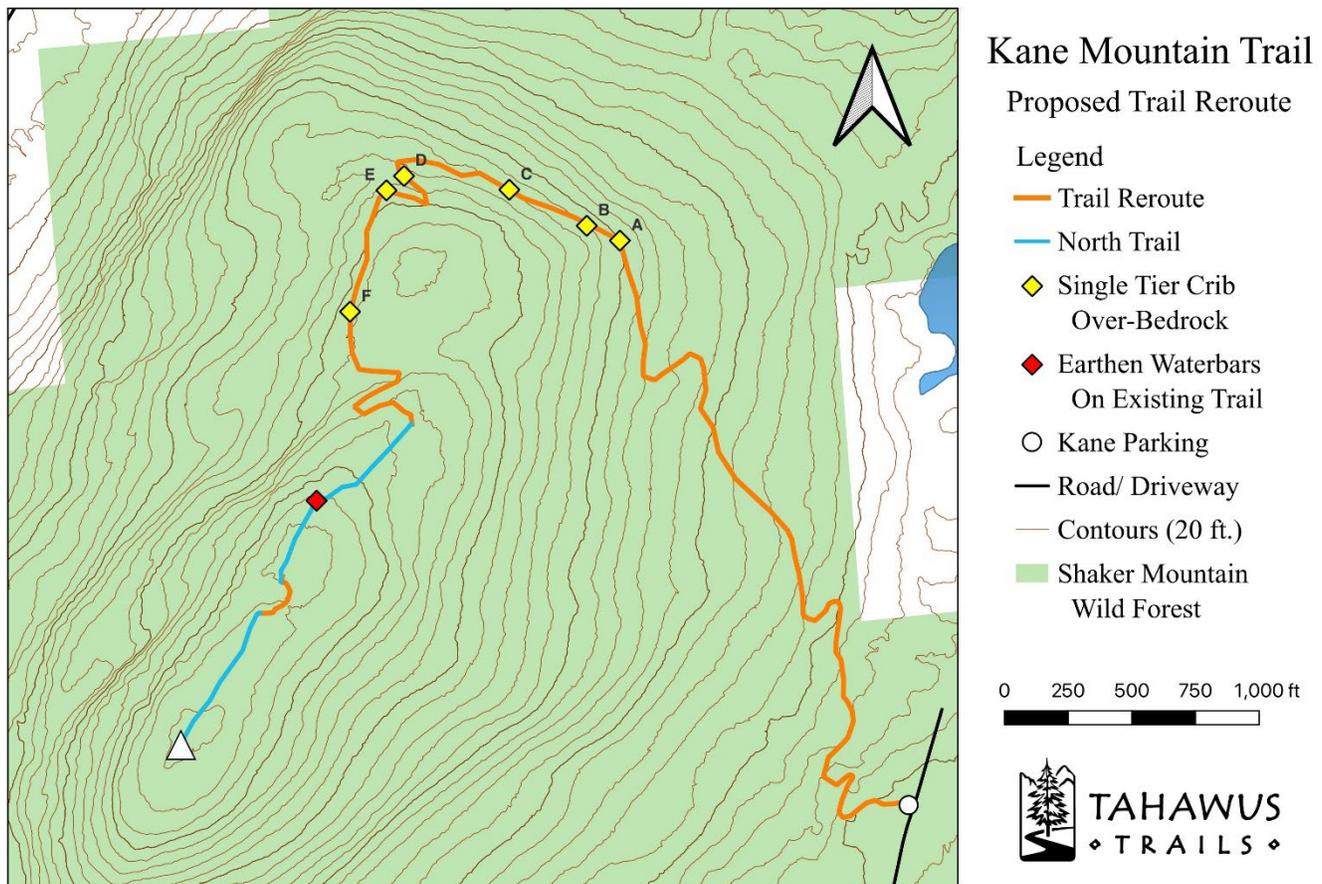
0 250 500 750 1,000 ft



TAHAWUS
TRAILS

Proposed Trail Reroute: The proposed relocation, as shown in the map below, would begin at the existing trailhead and parking area. The new trail alignment ascends gradually up the eastern and northern slopes of Kane Mountain and joins the existing North Trail on the summit ridge. There is also a proposed 230-foot realignment of the North Trail to avoid a low lying, wet section on the existing trail. The proposed reroute traverses primarily through mixed hardwood forest with many small diameter beech saplings, and small stands of red spruce on the summit ridge.

New trail to be constructed is approximately 6,000 linear feet/1.1 mile. The new trail length from the parking area to the fire tower, combining the proposed reroute and the North Trail section on the summit ridge, is 1.4 miles.



Construction Specifications: The trail relocation will be constructed to meet the USFS Trail Design Parameters for a Class 3 non-wilderness trail, with an average trail width of 36” (24” minimum- 48” maximum). The trail tread will be native soils, with some onsite borrow materials where needed for stabilization and grading. The trail surface can be intermittently rough. Trail protrusions (stone) of 3” or less may be common, but not continuous. See attached typical drawings.

The sidehill contour trail alignment is designed to maintain running grades of 3-12%. Occasional short pitch maximum grades up to 25% are permissible to avoid or limit tree cutting, or other obstacles, and to establish grade reversals. Typical cross-slopes will be 5-10%, with maximum cross-slope of 15% where needed.

Trail corridor will be cleared to approximately 3-6' wide, and 7-8' tall. Narrower corridor permitted to limit tree clearing of large diameter (>3" DBH) trees.

Trail structures, including stone steps, should be minimum of 24" wide.

Construction techniques: The proposed trail relocation can be built using a variety of construction techniques typically employed in trail building including a combination of hand and mechanized equipment. A mini excavator and power wheelbarrow will be used to perform the trail excavations, create the trail tread, drainage features, and install single tier stone cribbing. Final trail grooming and tread shaping will be done by hand. The trail tread surface will be firm and stable with some variability.

Work Item	Description	Quantity
Tread work/ Sidehill Benching	Install sidehill bench (see typical drawings) and/or improve trail tread	6000 linear feet
Stone Cribbing	Single tier stone cribbing (see typical drawings) will be needed to build up the tread over exposed bedrock sections, A-F on the map above: A=10', B=20', C=10', D=65', E=20', F=35'	160 linear feet
Earthen Waterbars	Install drainage ditches on existing trail to divert water off the tread	3 ditches, 10 linear feet each

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

- Whenever possible, trail construction will be completed with minimizing tree cutting in mind, with health and quality of trees influencing cutting selection. The following tree cutting tally was completed of the estimated high-end number of trees to be cut along the corridor.

Species	1-3"	4"	6"	10"	12"	Grand Total	
American Beech	174	8	1		1	184	
Striped Maple	10	5				15	
Sugar Maple	6	1	1			8	
Red Maple				1		1	
Yellow Birch	1	1				2	
Red Spruce	39		6			45	
Total – All Species	230	15	8	1	1	255	

Photos below show typical mixed hardwood and red spruce forests along the proposed route.

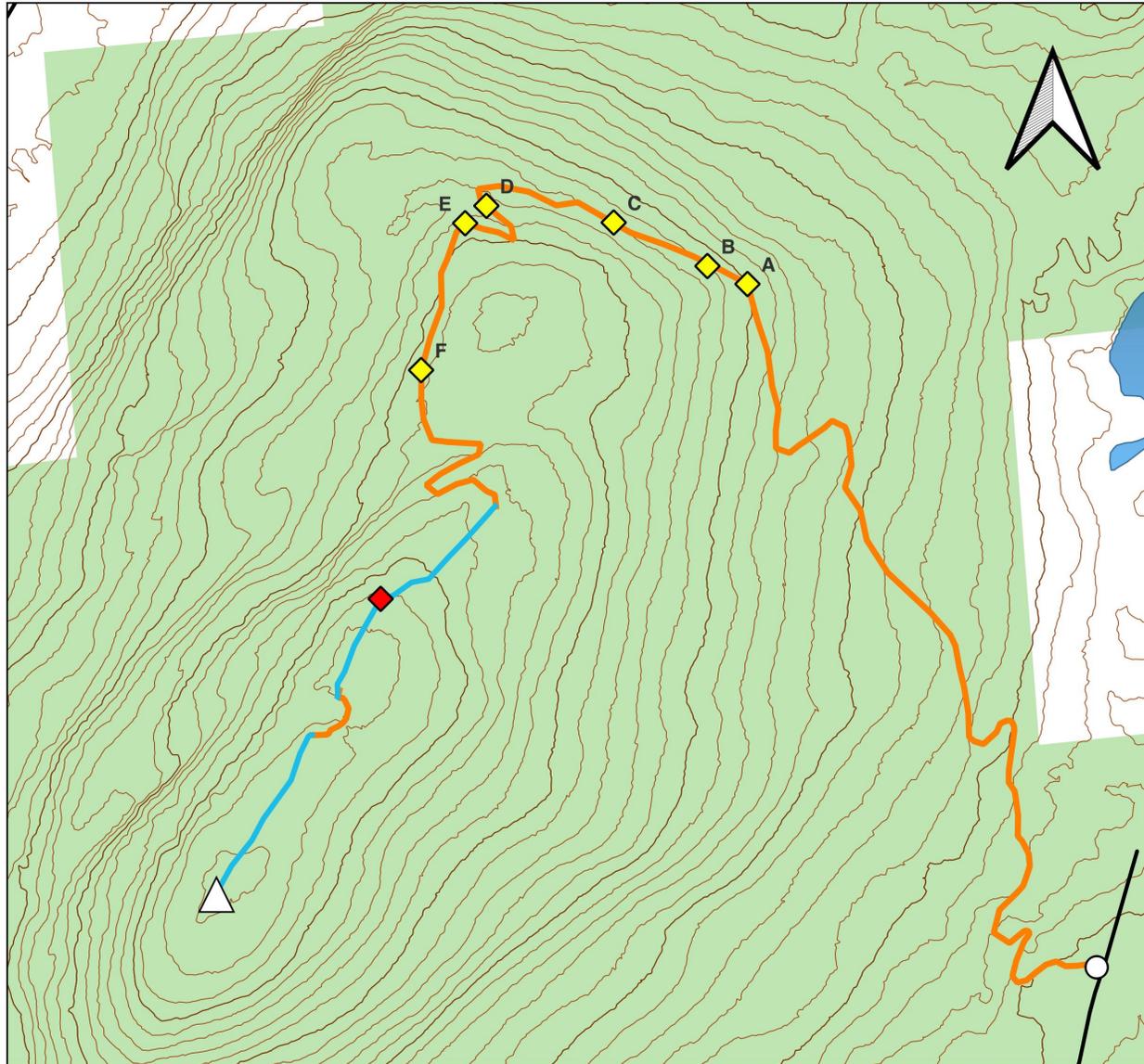


- **Earthwork and Disturbance:** The earthwork disturbances in the table below are based on an average 3' wide tread that is 6000 feet long. Anticipated work outside the trail tread includes the following: backslope of trail tread, downslope of trail tread, and borrow pits. Trail tread construction will be kept to a native soil treadway with sustainable grades and cross slopes as described above. The trail layout and design process avoided areas of wet or poorly drained soils where possible to mitigate erosion. Some excavation and grading of the hillside will be necessary to provide adequate trail surface along sidehills and to install drainage devices such as grade reversals. Trail tread will be native mineral soil, and no outside fill will be used in development of the trail. Installation of crowned tread will be needed in flat areas where trail out-slope alone would not be sufficient to shed water.

Work Item	Description	Quantity
Earthwork	Estimated area of disturbance.	0.41 acres
Earthwork	Area of disturbance outside final trail footprint (tread).	0.17 acres

- **How the project will avoid or minimize Impacts to Streams, Waterbodies, and Wetlands:** The proposed trail relocation avoids wetlands, streams and other waterbodies. During construction, when working near swales or other sensitive habitats identified by the DEC, silt fencing will be placed around limits of disturbance according to NYS Standards and Specifications for Erosion and Sediment Control. Following construction, all disturbed areas, including areas where silt

fence was installed, and areas where equipment entered the worksite, will be restored, debris will be cleared, and impacted areas will be graded, stabilized, seeded and mulched as needed. Throughout all phases of construction, both surface and ground water will be always controlled to limit erosion and siltation. Facilities within the unit will be monitored for natural resource degradation. If issues arise during construction warranting additional safeguards, appropriate measures will be taken to address specific areas of concern.



Kane Mountain Trail

Proposed Trail Reroute

Legend

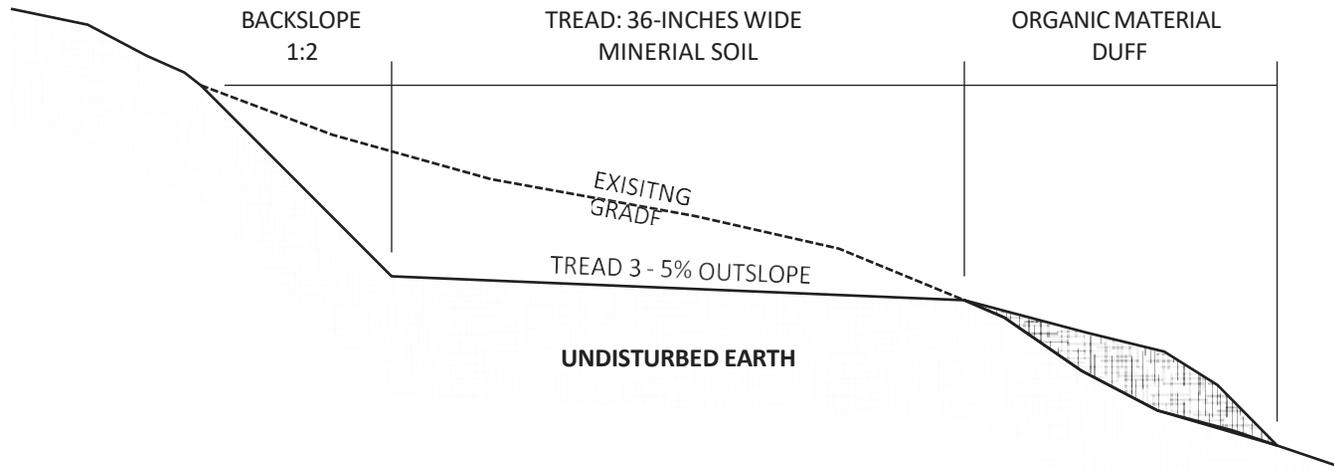
- Trail Reroute
- North Trail
- ◆ Single Tier Crib
Over-Bedrock
- ◆ Earthen Waterbars
On Existing Trail
- Kane Parking
- Road/ Driveway
- Contours (20 ft.)
- Shaker Mountain
Wild Forest

0 250 500 750 1,000 ft



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◆ TRAILS ◆

**NATURAL SUFACE SIDEHILL
CROSS SECTION VIEW**

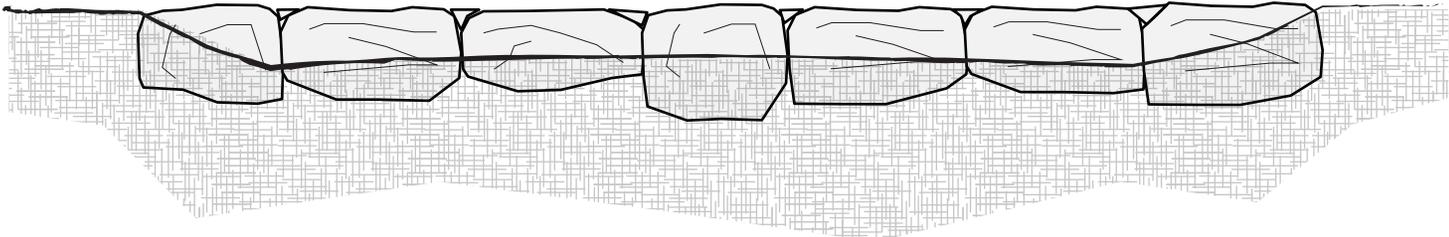




CLEARING WIDTH IS 36- 60" WIDE
CLEARING HEIGHT IS 96" TALL

ALL BRANCHES WILL BE SAWN FLUSH WITH TRUNK OF TREE
PER BEST PRUNING PRACTICES.

**CRIB WALL
PLAN VIEW**



**CRIB WALL
CROSS SECTION VIEW**

