

DECEMBER 21, 2023

Andover Conservation Commission
36 Bartlet Street
Andover, MA 01810

**RE: Notice of Intent Supplemental Filing
Haggetts Pond Rail Trail Improvements
Andover, MA**

Dear Members of the Andover Conservation Commission,

On behalf of the Town of Andover (the Applicant), BSC Group, Inc. (BSC, the Representative) is filing this Supplement for the Haggetts Pond Rail Trail Notice of Intent (NOI) that is currently under review by the Andover Conservation Commission and the Massachusetts Natural Heritage & Endangered Species Program (NHESP). The Project is being peer reviewed by LEC Environmental, Inc. (compliance with the Massachusetts Wetlands Protection Act and Andover Wetlands Protection By-law) and Horsely Whitten Group (Stormwater Report).


In response to the on-going review and public engagement process, several significant changes have been made to the proposed Project including:

- Reduction of proposed trail width to an 8-foot wide asphalt paved trail
- Elimination of proposed State jurisdictional wetland fill
- Modification of boardwalk section construction detail to eliminate direct ground contact in Local By-Law jurisdictional wetland
- Elimination of the proposed 2 space parking lot on the North side of Haggetts Pond Road.
- Reduction of proposed parking spaces and recommended parking control signage and enforcement
- Long-term management and proposed seasonal closure of sensitive wildlife habitats
- Revised Stormwater Report to address the changes above and MassDEP Comments.

We are presenting a narrative discussion of the proposed changes, along with revised project plans and accompanying stormwater report. We look forward to discussing the proposed modifications to the Project as discussed in the enclosed materials.

A copy of this supplemental filing has been submitted to DEP NERO and the NHESP. Abutters within 100-feet of the Project have been notified of the upcoming meeting scheduled for January 4, 2024. If you have any questions regarding the enclosed information, please contact me at (617) 896-4529. Thank you for your consideration in this matter.

Sincerely,
BSC Group, Inc.


Matt Burne
Senior Ecologist, PWS

Enclosed: Two copies of Supplemental Narrative, Plans, and Stormwater Report

Introduction

On behalf of the Town of Andover (the Applicant), BSC Group, Inc. (BSC, the Representative) is filing this Supplement for the Haggetts Pond Rail Trail Notice of Intent (NOI) currently under review by the Andover Conservation Commission and the Massachusetts Natural Heritage & Endangered Species Program (NHESP).

The project proposes to improve approximately 1.18 miles of an existing walking trail along a historic rail bed between Lowell Street and High Plain Road to an ADA-compliant, asphalt-paved surface trail. Additionally, the Town wishes to add a small accessible boardwalk spur for a lookout over Haggetts Pond. The project will include improvements to the existing parking areas on the south side of Haggetts Pond Road and the creation of additional parking at the northern end of the trail, at High Plain Road.

Based upon on-going review by the Andover Conservation Commission and the Massachusetts Natural Heritage & Endangered Species Program (NHESP) and a public engagement process, BSC is proposing a suite of modifications to the project as originally proposed in the Notice of Intent filed November 7, 2023, along with mitigation measures and long-term management commitments to reduce impacts of the project to the environment.

Proposed Project Modifications

Trail Width

DOT standards for shared-use, two-way travel under most conditions is a minimum of 10 feet wide (MassDOT design Guide Chapter 11.4.1.1 Path Width). Under most conditions, it is desired to increase the width of a shared use path to 12 feet, or even 14 ft to accommodate substantial use by bicycles, joggers, skaters and pedestrians. In certain instances, a reduced width of 8 feet may be acceptable where there are severe environmental, historical and/or structural constraints. Due to the environmentally sensitivity of this areas, the previously proposed trail of 8-ft pave with a 3-ft stabilized stone path has been reduced to an 8-foot paved trail surface only. One (1)-foot shoulders are required on both sides of the trail to stabilize the surface, which will consist of loam and seed.

As a result of public comments and discussions with the Andover Conservation Commission and NHESP, the proposed Haggetts Pond Rail Trail has been reduced to an 8-ft wide asphalt trail surface that will be protected by 1-ft loam-and-seed shoulders on each side.

Wetland Fill at High Plain Road

A small area of proposed wetland fill at the north end of the trail has been eliminated. The initial proposal included a wetland fill of 365 square feet to provide a link from the proposed High Plain Road parking lot. This connection has been reconfigured to entirely avoid any wetland fill.

This project revision means that the Project as currently proposed does not directly impact Outstanding Resource Waters and will therefore not require an Individual Water Quality Certificate.

Spur Trail Wetland Impacts

The proposed spur trail does not cross a state-jurisdictional wetland resource. The wetland area that it crosses lacks a predominance of hydrophytic vegetation but has evidence of hydrology and hydric soils. It is a local-jurisdiction wetland only. Please see detailed response in Response to Written Comments, Department of Environmental Protection, below.

The spur trail boardwalk has been redesigned to avoid direct wetland fill. The portion of the boardwalk that is located within flagged local wetland will be supported on helical piles with the sill (bottom of the structure) set at 18" above the ground surface. This eliminates wetland fill associated with the spur trail.

The proposal includes a 2:1 impact mitigation area located east of the local-jurisdictional wetland to mitigate originally proposed alteration. The Applicant understands that the proposed mitigation area affects a sensitive area where Pink Lady Slippers have been observed. Please see our comments below relative to this plant. **To reduce potential impacts to lady slippers, we are recommending that the Commission waive the requirement under the by-law to replicate the area that the boardwalk will affect.**

Increased Traffic and Parking

The initial proposal included a total of thirty-five parking spaces distributed between a new parking lot at High Plain Road, a new, 2-car, accessible lot on the north side of Haggetts Pond Road and an improved parking lot on the south side of Haggetts Pond Road. Increased use of the Haggetts Pond Rail Trail resulting from initially proposed parking spaces was expressed as a significant concern by the NHESP during preliminary review of the project. In addition, the Conservation Commission and public expressed concerns about loss of mature trees that would be necessary to create the new accessible lot on the north side of Haggetts Pond Road.

The Applicant is proposing to reduce the number of parking spaces at the north end of the project by seven (7) and has eliminated the stand-alone accessible parking lot at Haggetts Pond Road. Two (2) accessible parking spaces have been incorporated into the parking improvements proposed on the south side of Haggetts Pond Road, located outside of jurisdictional wetland Buffer Zone on the Project site.

These modifications have resulted in the production of a total of 28 legal parking spaces. The Applicant proposes increased parking control signage and enforcement to control and limit street parking that will contribute to the overall maintenance of site usage, measured as legally parked vehicles, of approximately equal to current peak usage estimates.

Long-term Management of Open Field Habitats

Two large, open fields are currently maintained on parcels owned by the Andover Water Department and the Andover Conservation Commission. Fields are maintained annually by *ad hoc* management agreements. Trails currently exist along the south margin of both open field areas.

The Applicant proposes long-term management commitments to maintain open field conditions in these areas in the Operation & Maintenance Plan as revised herein. Locking access gates and post-and-rail fencing with time of year closure signage is proposed at junctions with the proposed rail trail to limit public access to these field habitats during ecologically sensitive seasons (April 1 through October 15).

Revised Project Impact Evaluation Table

The following table provides updated project impact data following revisions to the Project site plans.

Impact	100-ft BZ	Local 50-ft BZ	Bank	BVW	ORW	SWPZ	NHESP
New impervious surface (asphalt, gravel apron)	40,518 sf 9,626 sf	17,049 sf 11,391 sf	0-lf	26 sf 0 sf	98,305 sf 46,525 sf	63,271 sf 43,254 sf	55,683 sf 35,970 sf
<i>Mitigation for impacts associated with the increase in impervious surface will include stormwater management.</i>							
Other land alteration (grading, etc.)	7,990 sf	5,020 sf	0-lf	420 sf (local only)	31,390 sf	29,180 sf	30,730 sf
<i>Mitigation for impacts associated with other construction activities will include the use of sediment and erosion controls, site stabilization and restoration (including planting of trees and shrubs and seeding of wildflowers).</i>							

Response to Written Comments

Department of Environmental Protection

Notification of Wetlands Protection Act File Number

November 30, 2023

Unable to determine if performance standards are met. Although mitigation is provided for BVW fill, no alternatives analysis was submitted to show that BVW impacts have been avoided where possible and minimized where unavoidable.

State-jurisdictional BVW fill proposed at the northern parking area has been eliminated. Impacts to this resource area have been avoided.

An additional direct wetland impact is shown in the original filing for the proposed spur trail board walk at (STA 33+20). The Andover Conservation Commission and its peer review consultant (LEC Environmental, Inc.) have conducted field review of the identified resource area and have determined that it is not state-jurisdictional Bordering Vegetated Wetland due to a lack of a dominant hydrophytic vegetation. This resource area is jurisdictional under the local by-law only. A Wetland Delineation Field Data Form is appended hereto in support of this determination.

The spur trail boardwalk will not impact state-jurisdictional BVW.

Narrative says culverts will be repaired or replaced in kind "as needed". If culverts replacement is intended to be approved under this NOI, plan details are required (none provided). Where a culvert conveys an intermittent or perennial stream, culvert replacement must meet stream crossing standards to the maximum extent practicable. Applicant must provide a discussion of site constraints in meeting the standards listed at 10.53(8)(b). Narrative says no impact to Bank or BVW from culvert replacements because they would be "in-kind" replacements, but no plan details were submitted to verify this statement. Without information to the contrary, MassDEP believes at least temporary impacts are likely. Impacts to resource areas from culvert replacements must be quantified, and details provided, including restoration of temporary impacts.

Applicant confirms that the Project will not include culvert replacement. All culverts have been inspected and will require only cleaning and regular maintenance, meeting performance standards at 310 CMR 10.53(3)(k).

Portions of parking lots, trail and Stormwater BMPs in proposed in a Zone A, and the entire project area in Critical Area. This should be acknowledged by the Applicant and the pollution prevention measures and stormwater controls adjusted accordingly. Project proposes to infiltrate stormwater, but no test pit data was submitted to confirm infiltration rates or the required 2' separation between the infiltration system and estimated seasonal high groundwater. Porous pavement is proposed for the High Plain Road parking lot but does not meet the required 100' setback from surface waters, which includes wetlands (see Vol. 2, Ch. 2 of the Stormwater Manual). A peer review of stormwater management is recommended.

The project Stormwater Management has been revised based on the plan modifications stated herein. Additionally, the use of porous pavement has been eliminated and the proposed Stormwater Management has been designed per the applicable requirements, including those for discharging to an Outstanding Resource Water. Test pit logs have been provided in the Stormwater Report to show the required 2-foot separation from seasonal high groundwater for infiltration BMPs.

The revised Stormwater Report is under peer review by Janet Bernardo, P.E., of Horsley Whitten Group.

Project proposes BVW fill in an ORW, which requires a 401 Water Quality Certification.

Fill within an ORW has been eliminated.

Comments from the General Public forwarded from the Andover Conservation Commission between November 19, 2023 and December 12, 2023.

BSC has not received direct written comments from the public but has been provided copies of email correspondence received by the Andover Conservation Commission throughout the public hearing process for this project. BSC cannot warrant that we have received every email comment that has been submitted, but herein we address the many concerns that have been raised in the comments we have received.

The majority of comments pertain to the selection of an asphalt surface for the trail. Concern has been raised over the cost of installation, cost of maintenance of an asphalt surface, heat island effects, carbon footprint, and potential impacts to public water supply from the asphalt surface and construction phase risks (i.e., heavy equipment spills).

The applicant has received feedback from officials at the Massachusetts Office on Disability, the New England ADA Center Institute for Human Centered Design, and DCR's own accessible trails architect which have guided our decision to select asphalt as the surface we can most consistently maintain to comply with the Americans with

Disabilities Act. Asphalt is also the best surface for the experience of persons with disabilities.

Costs associated with installation and maintenance are not subject to regulation for permitting under the Massachusetts Wetlands Protection Act and Andover Wetlands Protection By-law.

Asphalt paving has been shown to contribute to urban heat island (UHI) effects. However, tree shading has been demonstrated to provide mitigation for UHI heating (Cheela et al., 2021, Park et al., 2021). The proposed path will not eliminate the canopy over the Haggetts Pond Rail Trail or open the trail to significantly greater solar insolation than current conditions. Stormwater is being treated according to the Massachusetts Stormwater Standards which will prevent over-heated water from entering natural wetland systems in the vicinity of the trail.

Best practices for construction include precautions to reduce risks associated with heavy equipment. An Order of Conditions for the Project can include special conditions to provide additional protections for natural resources during the construction phase of the project.

Comments were received suggesting that maintenance of the trail will fall to volunteers and that maintaining a crushed stone path is easier for volunteers.

The Town is required to maintain the trail in compliance with applicable Federal and State Accessibility requirements. As such, the Town will be required to maintain the proposed trail according to the Operation and Maintenance (O&M) Plan included in the Project application to ensure compliance.

Many comments were received expressing concern over the width of the trail.

As discussed above in the Proposed Project Modifications section, the width of the trail has been significantly reduced to an overall width of eight (8) feet with one (1)-foot loam-and-seed shoulders.

Comments were received regarding tree loss due to path width.

The width of the proposed path has been reduced significantly relative to the initial proposal. The trail will avoid impacting mature trees to the greatest extent feasible, and roots of mature trees will be protected.

Comments were received regarding whether the Town has properly and thoroughly evaluated the best location for an ADA compliant trail and whether environmental impact studies have been conducted.

The Conservation Commission is responsible for determining whether a project as proposed is in compliance with the Massachusetts Wetlands Protection Act (M.G.L. c131 §40) and its regulations (310 CMR 10.00 *et seq.*) and the Town of Andover

Wetlands Protection By-Law (Article XIV) and its regulations. This question is outside of the Commission's purview.

Comments included expressions of concern over potential risk to the public water supply that paving may pose.

The Project has been designed such that the trail will shed runoff away from Haggett Pond through a 1-ft vegetative filter strip to help promote infiltration and treatment of the minimal runoff generated on the trail. Additionally, the Wetland Protection Act does not preclude the use of asphalt paving in and around wetlands or for runoff that discharges to an Outstanding Resource Water. Compliance with the Stormwater Standards ensures that a project meets the regulatory requirements for protection of sensitive resources such as wetlands and public water supplies.

Many comments were provided pertaining to wetland impacts generally, and native flora and fauna observations from the area over several years. BSC has received photographs of a Green Frog (*Lithobates clamitans*) and Wood Frog (*Lithobates sylvaticus*), two (2) Painted Turtles (*Chrysemys p. picta*), a caddisfly (Limnephilid) case, and many plants including Pink Lady Slippers (*Cypripedium acaule*), Ghost Pipes (*Monotropa uniflora*), Canada Mayflower (*Maianthemum canadense*), Cucumber Root (*Medeola virginiana*), Princess Pine (*Lycopodium obscurum*), and American Shinleaf (*Pyrola americana*), and two mushrooms, *Leccinum* spp (likely *scabrum*) and *Amanita flavoconia*.

In accordance with the requirements of the Wetlands Protection Act regulations and the Town of Andover Wetlands Protection By-Law regulations, wetland impacts have been avoided to the greatest extent possible, minimized and mitigated when impacts cannot be avoided. The Project is in compliance with the performance standards for work within the jurisdiction of the Andover Conservation Commission.

It is important to understand that the Wetlands Protection Act is not intended to protect wildlife, *per se* (see the Preface to the 1987 Regulatory Revisions, Section III.), but the wildlife habitat functional value of jurisdictional wetlands is protected. The Project has been revised to avoid direct alteration of wetlands, thereby protecting their wildlife habitat functional values. Revisions to the proposed spur trail have been made to reduce project impacts to the local-jurisdictional wetland at that location as discussed above, and the Applicant recommends a waiver of the requirement to replicate wetland at this location to further reduce impacts to buffer zone where sensitive species have been noted.

Among the species documented by the public in the project review process, Pink lady slippers (*Cypripedium acaule*) may be the most well-known, if somewhat misunderstood. Pink lady slippers are not state listed, so are not protected by the Massachusetts Endangered Species Act (MESA). In a Boston Globe article about the flowers, Marion Larson of MA DFW was quoted as saying,

“Contrary to popular belief, pink lady’s slippers are not endangered, but there is a law in Massachusetts that limits picking them, said Larson.

Essentially, people may not pick or dig up pink lady's slippers from any public or private property unless they have written permission from the landowner, Larson said."

Don Lyman, Boston Globe, 5/20/21

Chapter 266 (Crimes against property) §116A (Protection of certain flowers) states: No person shall pull up or dig up the plant of a wild azalea, wild orchid or cardinal flower (*lobelia cardinalis*), or any part thereof, or injure any such plant or any part thereof except in so far as is reasonably necessary in procuring the flower therefrom, within the limits of any state highway or any other public way or place, or upon the land of another person without written authority from him, and no person shall buy or sell, or offer or expose for sale, any such flower, or the whole or any part of the plant thereof, knowing, or having reasonable cause to believe, that in procuring such flower or plant the foregoing provisions have been violated. Violation of any provision of this section shall be punished by a fine of not more than five dollars.

Pink lady slippers are protected from picking (or displacement in this case) without permission of the landowner, which is in this case the applicant.

As discussed above, the Applicant is recommending that the wetland replacement area currently proposed at the spur trail might be reduced or waived to avoid potentially affecting lady slippers in addition to reducing overall impacts to local-jurisdictional wetland on the project.

Concern was expressed over the effect of construction on Blanding's Turtle (*Emydoidea blandingii*), a state-listed rare turtle species.

The Project is undergoing a streamlined review by the Massachusetts Natural Heritage & Endangered Species Program under the Massachusetts Wetlands Protection Act for compliance with the rare species section of the regulations (310 CMR 10.59) and the Massachusetts Endangered Species Act regulations (321 CMR 10.00).

CONCLUSION

The Haggetts Pond Rail Trail project has been revised to reduce impacts to the natural environment in response to public comments and the review of the Andover Conservation Commission, its peer review consultants, and the Massachusetts Natural Heritage & Endangered Species Program. The Project will:

- Minimize disturbance by using an existing, abandoned railbed, and existing paved roadways.
- Eliminate direct wetland impacts within state jurisdiction and reduce impacts in local jurisdiction, reduce the proposed trail width, and reduce available parking.

- Avoid impacts to BVW by limiting work to the existing railbed for the proposed trail and limiting the parking areas.
- Use appropriate construction BMPs to protect resource areas from sedimentation and soil disturbance during construction.
- Enhance public access to the Haggetts Pond and provide sustainable transit options and recreational activities.

This Project will serve to enhance access and trail connectivity in the Haggetts Pond Conservation Area and other nearby conservation areas. As such, it is compatible with the public enjoyment and access of the area, and furthers a goal of protecting, enhancing, and increasing publicly owned open space and public access. Therefore, the Town of Andover (the Applicant), requests that the Andover Conservation Commission find this project in compliance with the interests identified in the Massachusetts Wetlands Protection Act and associated regulations, and the Andover By-law. The Applicant respectfully requests that the Commission issue an Order of Conditions, and a waiver for the setback requirements of the Andover By-law, allowing the Project to proceed as described in this supplemental filing for the Notice of Intent.

References

- Sankar Cheela, V.R., M. John, W. Biswas, and P. Sarker. 2021. Combating Urban Heat Island Effect – A Review of Reflective Pavements and Tree Shading Strategies. *Buildings*. 11(3), 93. <https://doi.org/10.3390/buildings11030093>
- Park Y., J-M. Guldmann, D. Liu. 2021. Impacts of tree and building shades on the urban heat island: Combining remote sensing, 3D digital city and spatial regression approaches. *Computers, Environment and Urban Systems* 88 (2021). <https://doi.org/10.1016/j.compenvurbsys.2021.101655>