

**Ausable River Association
The Nature Conservancy – Adirondack Chapter
U.S. Fish and Wildlife Service**

**Request for Qualifications for Construction Services:
Climate Ready Culvert Replacements on
Potash Brook at Ausable Drive and
Otis Brook at Jay Mountain Road in the Town of Jay**

Released May 11, 2020

Responses due May 27, 2020

Construction slated for July-August 2020

Project funding provided by:

*Ausable River Association (AsRA)
Lake Champlain Basin Program
New England Interstate Water Pollution Control Commission
NYS Department of Environmental Conservation, Water Quality Improvement Program
Patagonia, Inc.
The Nature Conservancy – Adirondack Chapter (TNC)
The Town of Jay, NY
U.S. Fish and Wildlife Service (FWS)*

1. Overview

These two culvert replacements projects are part of an initiative in the Ausable River watershed to improve stream connectivity, aquatic organism habitat, and community flood resilience, through the replacement and redesign of road-stream crossings. Passage from the main branches of the river to smaller, cooler upland tributaries is imperative for conserving wild fish populations in the Ausable watershed, but is often thwarted by aging, debris-laden, undersized, perched, or deeply scoured culverts that block fish movement. These same culverts pose significant challenges to transportation infrastructure and public safety. Undersized aging culverts are easily overwhelmed in storm events, can become blocked by debris, and can cause flooding of and damage to roadways and adjacent properties. Climate Ready Culverts reduce maintenance costs to towns and counties and increase public safety and flood resilience for communities. They also optimize stream health – allowing full restoration of stream form and function and benefiting native fish and an array of in and near stream wildlife.

Climate Ready Culverts are right-sized to handle a 100-year flood at 80% capacity – reducing flood risk, minimizing maintenance, prioritizing fish passage, and helping restore the stream's natural hydrology. Designs meet or exceed standards for best management practices for fish passage including use of open bottom structures with a minimum span of 1.25 times bankfull. AsRA, TNC, and the FWS have prioritized culverts in the Ausable watershed through intensive in-field surveys using the North Atlantic Aquatic Connectivity Collaborative methodology based on the degree of impairment to trout and aquatic organisms. In addition, AsRA and TNC work with local towns to assess and update the prioritization for replacements based on their infrastructure needs.

2. Project Descriptions

Potash Brook at Ausable Drive

Site Status and History:

The Ausable Drive crossing of the brook locally known as Potash Brook is located in the Town of Jay approximately 100 feet from the intersection with Almweg Street and 2000 feet from SR 86. This culvert was identified as a priority in the 2013 NY Rising Community Reconstruction Plan funded by the Governor's Office of Storm Recovery. The small brook is a direct tributary of the East Branch Ausable River and provides habitat for brook trout. The culvert currently offers no passability for aquatic organisms moving upstream. Ausable Drive is a primary artery for Ausable Acres and a critical alternative road to Route 9N between Ausable Forks and Jay when flooding compromises SR 9N. Since Irene, the 40" metal pipe under the road has been compromised and crushed requiring the Town to make spot repairs to the pavement each year due to the road caving in. Headwalls are compromised and a large scour pool exists below the culvert. The stream above and immediately below the culvert is an 'E' system stream: a low gradient meandering stream with a low width depth ratio. Sedimentation due to sand use on Ausable drive, poor flows through the upstream end of the culvert resulting in aggraded sediment and debris, and extensive erosion below the pipe culvert has impacts throughout the system, degrading water quality and aquatic habitat. Removal of the barrier will open 2.25 miles for native trout and other aquatic

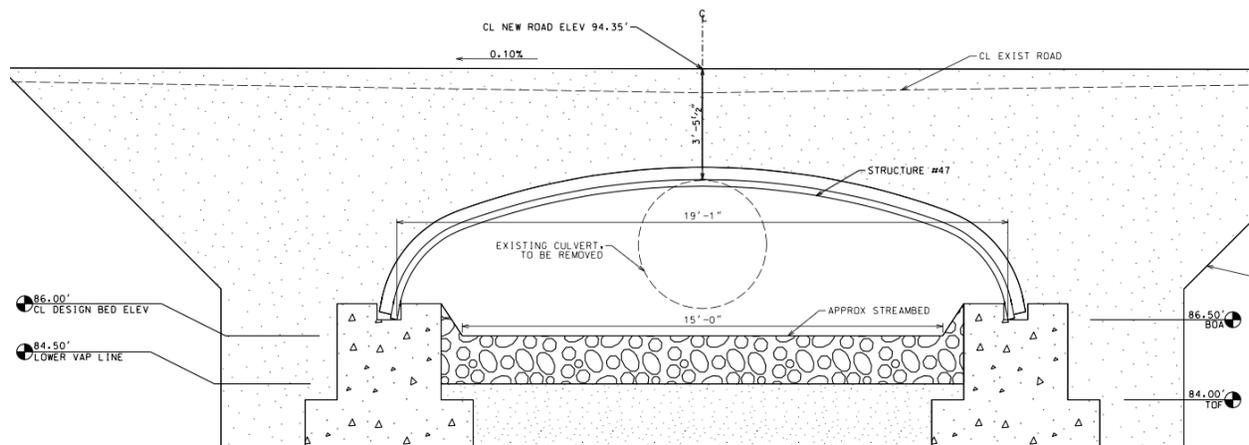
organisms. Adirondack Park Agency (APA) designated wetlands are present on the project site that minimally reduce access to some work areas.

Stream Characteristics – Construction Summary:

Stream surveys were conducted in April of 2018 by AsRA to characterize the dimension, profile, and hydraulics of Potash Brook. The tributary is a moderately sinuous, cobble and gravel stream that runs through mostly wooded areas with adjacent wetlands and cuts across Ausable Drive 3 times. APA staff flagged wetlands in 2019. Stable upstream segments of the stream manage sediment without aggradation and alternate between 1.9% slope and 0.96% slope. A small tributary enters the system in upstream of the culvert and an active wetland sits along bank right. The 200 – 300 feet above the culvert is dominated by fine sediments that have aggraded behind the undersized pipe. The road sits approximately 8 feet above the streambed, ample room for installation of an open-bottom arch culvert. The survey included over 750 feet of channel – approximately 50 channel widths – and found the following:

- Average channel slope over survey reach: 1.35% with variation in study reaches
- Average bankfull width: 13' above small stream confluence, 15' inclusive of confluence and allowing for addition wetland flows upstream of culvert
- Width/depth ratio: 8.6'

Project design followed standards set by the USFS Aquatic Organism Passage methodology, surveys were conducted following methodology elaborated by Rosgen in the 2014 River Stability Field Guide. Design streambed profile and slope for the installed structure will 1.02%. Grade controls will be established above and below the structure using natural materials (native cobble, boulder, and wood) per AsRA design. Northwoods Engineering has designated a 19' 1" ContechES open bottom aluminum arch. Pre-cast or poured concrete footers will be set at appropriate depth below streambed to avoid influence of scour.



Ausable River Association will oversee installation of the aluminum arch with support from FWS and with road management support from the Town of Jay DPW. The hired contractor will remove the current pipe, restore the streambed per AsRA design specifications, install footers and arch per designs by Northwoods Engineering and ContechES, backfill site, and build grade controls under the direction of AsRA. Town of Jay and will oversee road resurfacing. Contractor will work with on-site supervisors to ensure the integrity of APA designated wetland areas.

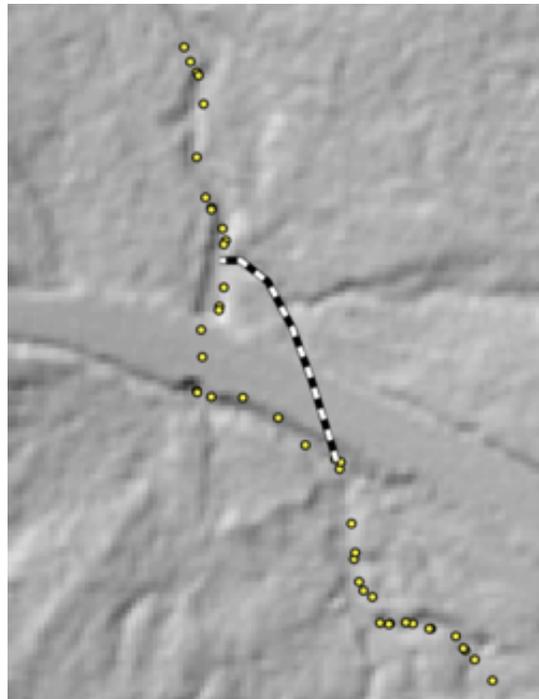
Otis Brook at Jay Mountain Road (known as Otis2)

Site Status and History:

The Otis2 culvert is located in the Town of Jay on Jay Mountain Road 500 feet east of its intersection with Glen Road. It was identified as a high priority for replacement scoring a 0.37 aquatic passability score, indicating the culvert is a significant barrier to fish passage according to NAACC protocols. The current culvert – a 48” metal pipe – is undersized and perched (see photo above at outlet). Extensive siltation is evident in the ~135’ above the culvert invert and erosion and scour evident downstream of the outlet. The existing road stream crossing provides poor management of flood flows which can overtop Jay Mountain Road in moderate to major flooding scenarios.

The primary cause of poor stream function at this site is due to the re-routing of the stream’s natural path. At some point in the past, the natural path of the stream was blocked and rerouted into a storm ditch along Jay Mountain Road. The stream used to cross under the road at a point approximately 120’ southeast of the current road-stream crossing. At this site, large boulders with fill are placed in the streambed to form a reinforced bank that forces Otis Brook to make a 90-degree turn (creating a deep scour hole at this bend) to run alongside the road. The manipulated reach running along the road is heavily silted with few geomorphic features and little evidence of the cobble substrate present in the reaches above and below it. As it comes up to the current culvert, the stream is again forced to make another 90 degree turn to enter the culvert. The typical scour hole with eroded banks formed by an undersized pipe is evident at the outlet.

The LIDAR hillshade image to the right shows the current stream path in yellow and the proposed (and former) channel as identified by AsRA and confirmed by a qualified fluvial geomorphologist and the US FWS. The road is the large band, the stream runs from the bottom to the top. Note that the restored path will connect the stream to a tributary just upstream of the current connection. Evidence in the field suggests this reconnection site is the former confluence of the two streams. When replaced, the Jay Mountain Road culvert will connect over five miles of cold-water habitat.

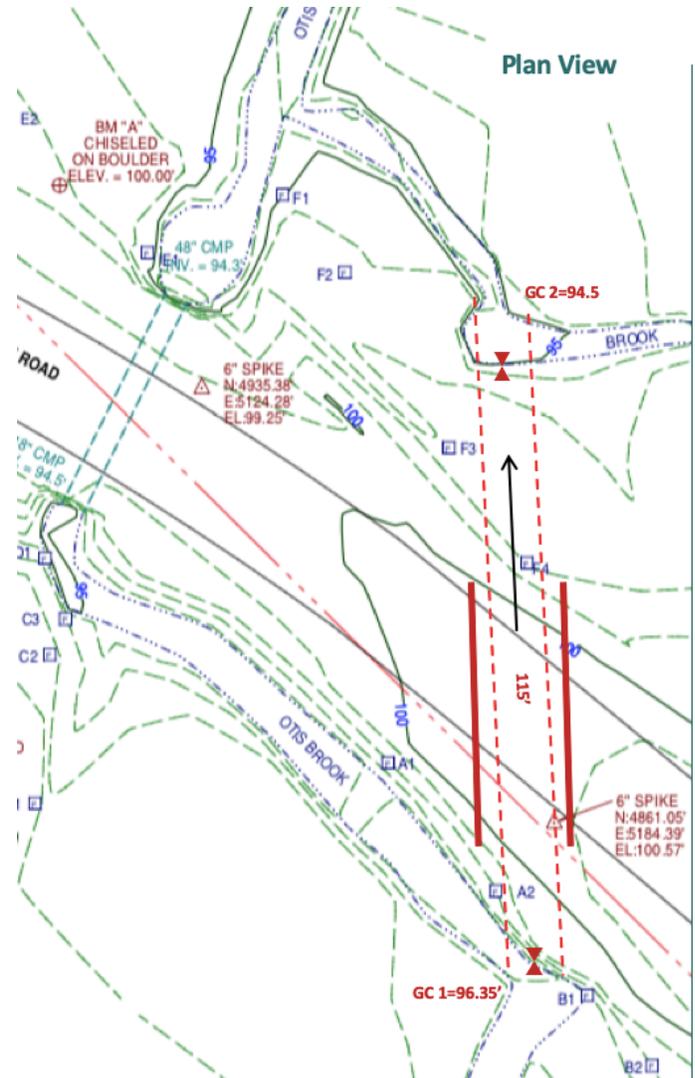


Stream Characteristics – Construction Summary:

Stream surveys were conducted in October of 2018 and March 2020 by AsRA to characterize the dimension, profile, and hydraulics of Otis Brook above and below this crossing. Surveys included over 750 feet of channel and included the existing and planned channels. Otis Brook in this survey reach is a moderately sinuous cobble dominant stream. 500’ to 2000’ above the proposed new crossing, the brook runs through a dense, low slope, wooded wetland. In the 500’ just above, stream bed slope increases

incrementally. Stable upstream segments of the stream manage sediment without aggradation and alternate between 1.5% and 2.5% slope. The average slope over the survey reach is 1.7% Design slope for the restored streambed through the culvert is 1.6% with a bankfull width of 11.9'.

The design for the restored path of Otis Brook directly connects the two areas where boulders were placed to cut the stream off some years ago (plan view image right). Grade controls will be established above and below the structure per the AsRA design (GC 1 & 2 noted in image at approximate locations) using natural materials (native cobble, boulder, and wood) to discourage headcutting and ensure slope is maintained over time. A channel plug of natural materials (e.g. root wads and native river gravel/fines) will be used at the site of the upstream grade control to create a left bank at bankfull height. This will allow higher flows to move into and recharge the abandoned channel along the road maintaining it as a vernal pool wetland. A similar plug will be used downstream at the outlet of the new Otis Brook just below the old scour hole which will be partially filled but maintained as an overflow wetland. Several APA designated wetlands surround the site. Contractor will work with on-site supervisors to ensure the integrity of APA designated wetland areas.



A ContechES open bottom aluminum arch at a minimum of 15' width will be installed at an angle per designs by North Woods Engineering to accommodate the stream's natural path. Poured or cast concrete footers will be set at appropriate depth per designs by ContechES to avoid influence of scour. Project design follows standards set by the US Forest Service Aquatic Organism Passage methodology. Surveys were conducted following methodology elaborated by Rosgen in the 2014 River Stability Field Guide. Design is approved by Carl Schwartz of the FWS.

Ausable River Association will oversee installation of the aluminum arch with support from FWS and with road management support from the Town of Jay DPW. The hired contractor will excavate the new channel, restore the streambed per AsRA design specifications, install footers and arch, and backfill site per designs by Northwoods Engineering and ContechES, build grade controls under the direction of AsRA, and remove the old culvert backfilling the site per Town of Jay specifications. Town of Jay and will oversee road resurfacing.

3. Scope of Work

Objective: removal of existing undersized culverts and construction of two (2) engineered aluminum arch culverts – one on Potash Brook at Ausable Drive and one on Otis Brook at Jay Mountain Road. Work includes pre-cast or poured in place footers at appropriate elevations, and reconstruction of a natural streambed including grade controls.

Multiple partners are involved in the construction of the culverts, all under the supervision of the US Fish & Wildlife Service. AsRA serves as project manager coordinating planning, construction, budgets, and overseeing permitting. The Town of Jay Highway Department will provide pre- and post-construction labor/assistance and some materials. Other key partners include The Nature Conservancy.

Work required includes:

- Contractor will assist in pre-construction planning, working with AsRA and Town of Jay to prep both sites for construction and stage materials.
- Contractor will identify and order certain major materials (e.g. rebar, concrete, supplies for footer forms etc.) for construction and timely delivery working with AsRA and TNC on tax-exempt purchasing and billing.
- Contractor will supply labor, non-major materials, and equipment to assist in the following:
 - Delivery and management of materials, including but not limited to aluminum arch, reinforcing steel, rock, and concrete
 - Digging, stabilization, and management of construction pits to appropriate safety standards and removal of old pipe culverts
 - Dewatering of site and appropriate silt, sediment, and water management per discussion with project manager
 - Prep for and construction of concrete footers to ContechES/CBC specifications and to meet North Woods Engineering design elevations as provided by AsRA
 - Construction of streambed and grade controls per US FWS and AsRA
 - Assembly of aluminum arch per specifications of Contech ES
 - Backfilling of culvert site per specifications of Contech ES
- Contractor will follow North Woods Engineering Plans and ContechES/CBC Engineering guidelines and requirements.
- Contractor will prioritize, to the degree possible, the safety and water quality of the stream, its bed, banks and adjacent habitat, and its aquatic wildlife, consulting with AsRA, US FWS, and permit authorities when necessary.

Town of Jay will post road signage; will provide additional trucking/hauling of materials (depending on advance notice and availability); and will rebuild and resurface road to appropriate elevation per engineering design. Town of Jay will donate gasoline used, labor employed, and materials used to resurface road.

4. Submittal Content – Qualifications

Respondents/Contractor shall submit information that addresses the following. Please answer each point fully but brevity is appreciated.

- i. Respondent’s legal structure, areas of expertise, length of time in business, number of employees and contact information for the person authorized to contractually obligate the Respondent.
- ii. Staffing Plan. Respondent’s capacity to provide services in the required timeframe, and key personnel to provide services and the proposed staffing plan.
- iii. Identify any Subconsultants, including a summary of their experience and technical skills.
- iv. Contractor shall describe relevant experience with natural stream restoration - preferably projects overseen or designed by the US Fish and Wildlife Service and or the Ausable River Association or similar.
- v. Contractor shall indicate whether they have experience with and capacity to do precision stone placement work efficiently.
- vi. Contractor shall indicate their availability to schedule work for July and August 2020 in consultation with project manager. Each project will require an average of 3 weeks of work.

6. RFQ Response Deadline and Selection Process

Responses to this RFQ are due by close of business Wednesday May 27th.

Statements of Qualifications should be sent by electronic mail, as a PDF file, to Kelley Tucker at ktucker@ausableriver.org with “Climate Ready Culvert SOQ” in the subject line. Questions about the project should be emailed with a phone contact for quick response.

The Ausable River Association reserves the right to:

- i. Accept or reject any or all submissions
- ii. Request qualified respondents to consider contracting only for certain elements of the project
- iii. Waive or modify minor irregularities in the proposals received
- iv. Negotiate with respondents, within the proposal requirements, to best serve the interests of the project partners
- v. Amend specifications after their release, with due notice to all respondents to modify their submission to reflect those amendments
- vi. Consider every offer or response as firm and not revocable for a period of 30 days unless offer is withdrawn in writing
- vii. Award a contract for any or all parts of a proposal.

Responses may be shared with the US Fish and Wildlife Service, The Nature Conservancy, and the Town of Jay. The selected contractor will be notified on or before Friday June 5th. Bids will be evaluated in general conformance, at minimum, with the following criteria: cost, experience, MWBE participation, ability to complete the work in accordance with the project schedule, and proximity to construction site.