

BEAVERKILL MASTER PLAN

ROSCOE, NEW YORK

W

OPEN SPACE INSTITUTE // ALLIANCE FOR NEW YORK STATE PARKS

CONCEPT REPORT
2016



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INSTITUTE

W Architecture and Landscape Architecture, LLC

This Concept Report was created for the Open Space Institute (OSI), acting through its Alliance for New York State Parks program and in close cooperation with the NYS Department of Environmental Conservation (DEC). The report has been prepared for the purposes of generating ideas and dialogue for improvements to the landscape and cultural interpretation at the greater Beaverkill landscape and the Beaverkill Covered Bridge Landing. The diagrams and drawings included herein are to be considered representational and illustrative and shall not be used for any purpose without the express written consent of the Open Space Institute.

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PROJECT BACKGROUND

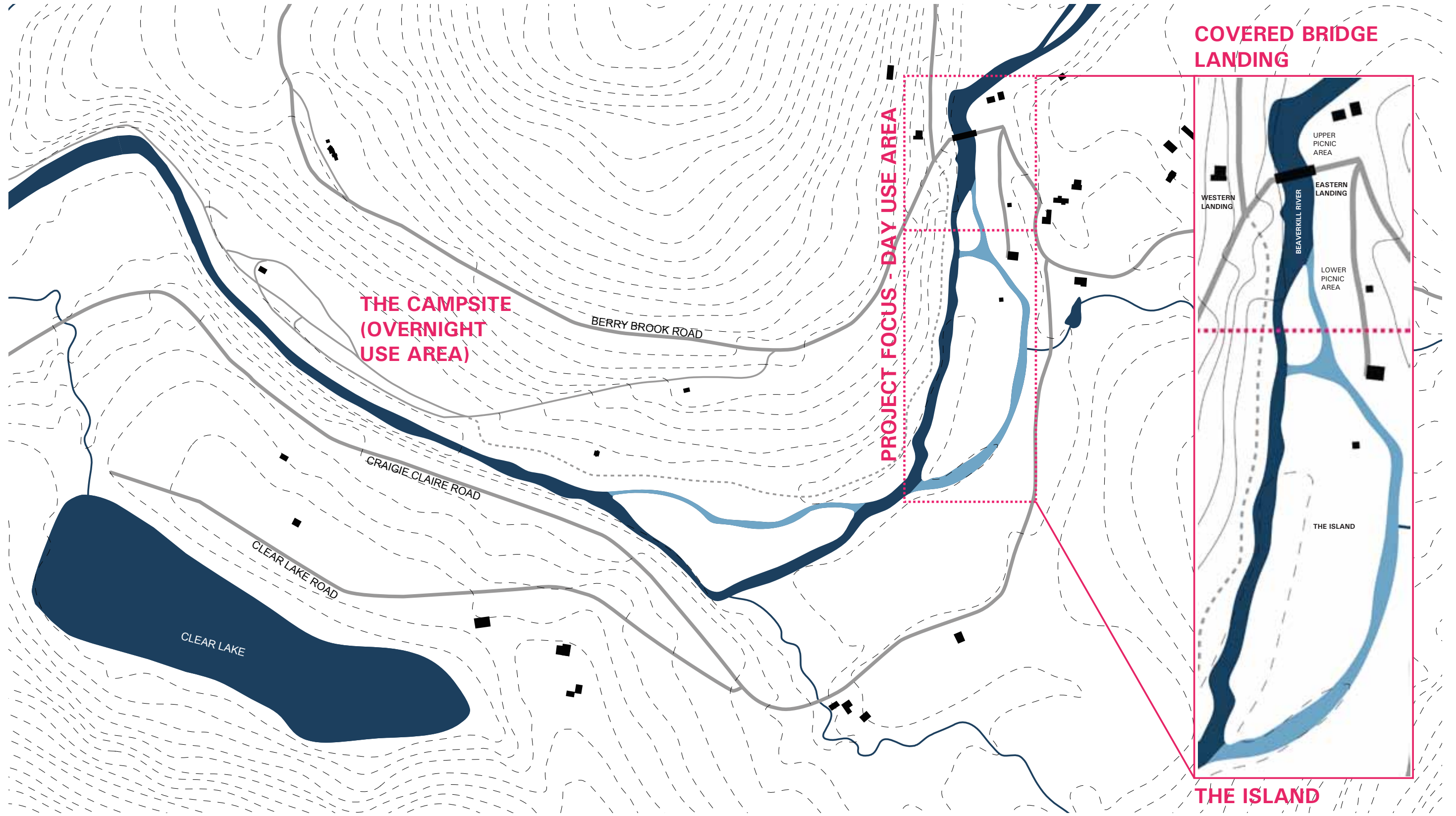


FOCUS AREA



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THE BEAVERKILL LANDSCAPE



PROJECT DESCRIPTION

The project focus area encompasses the day use areas at the covered bridge landing and the island. This picnic, fishing and swimming area features historic stone walls and wooden railings, a set of historic structures and bath-houses, and many signs of settlement history from the previous centuries. The Beaverkill Valley is a heralded trout fishing destination that has been delighting anglers since the 19th century. Since the 1970s the valley has been the focus of an enormously successful initiative by the Open Space Institute and its partners, including the Department of Environmental Conservation, to protect the valley and Beaverkill water quality from the impacts of inappropriate development.

New York State Department of Transportation, the New York State Department of Environmental Conservation, and private individuals are currently undertaking a major restoration of the Beaverkill Covered Bridge. Proposed work will include restoration of the Covered Bridge landing grounds. This report will address the history of the site; Covered Bridge abutments and approach; site circulation; and the day use area landscape. Additionally, this section will suggest local and regional trail connections as well as an interpretive landscape plan for the cultural and ecological history of this landscape.

The Covered Bridge Landing site is blessed to be at a focal point of the living water system of the Beaverkill River and the larger Delaware River Watershed. Management of the natural and historic resources of this stretch of the 44-mile long Beaverkill River can be improved in adjacent sites and can be a model for historic campgrounds and recreational fishing sites elsewhere in the state and country. The Beaverkill River can continue to serve cultural and ecological needs, and shall be the centerpiece of the of the cultural landscape conceptual master plan.

In close coordination with staff of the NYS Department of Environmental Conservation (DEC), the Open Space Institute (OSI), acting through its Alliance for New York State Parks program and local Beaverkill residents and stakeholders, W Architecture and Landscape Architecture has produced a report outlining ideas and proposals for improvements to the landscape site plan and interpretation of the cultural landscape at the Covered Bridge landing.

The report proposes:

1/ Conceptual historic restoration plans for the walls, railings and beachfront at the Covered Bridge landing (i.e., restoration not covered by the bridge project); and

2/ An interpretive and landscape architectural framework plan for the Covered Bridge landing and the island.

**The interpretation plan and landscape plan shall highlight four themes:
the industrial/commercial history of the Landing;
trout fishing on the Beaverkill;
the Civilian Conservation Corps;
and the conservation work of the Open Space Institute and its partners**

This concept report, design and cost estimate is intended to be a conceptual document that will help OSI and its partners generate stakeholder interest and spark implementation of the project. The ideas presented will inspire general improvements to the grounds based on stakeholder input gathered at the Beaverkill landscape and Covered Bridged Kickoff meeting in Roscoe, NY on May 26, 2015.

Another stakeholder meeting was held at the site on November 18, 2015. A draft report and conceptual plans were shared with stakeholders and discussed. A productive discussion led to refinement of ideas and suggestions for the Beaverkill landscape, which are shown in this final report. This report is intended to give impetus for improvements and encourage further development and implementation of a plan that is tailored to the site and provides a framework for the Beaverkill landscape in the future while honoring its layered history.



LANDING FOUNDATION STONES

PROJECT BACKGROUND

USER GROUPS

Two main user groups have been identified for the focus area. Any design or interpretive proposals in this report will address each user group's needs, including existing and proposed future uses and programming of the various aspects of the landscape. The user groups were defined in the 5/26/2015 meeting as:

- Day-use passive visitors

This group visits the focus area from nearby communities. Often, day-use visitors are Spanish-speaking, bring their own food into the covered bridge landing area and use the Beaverkill for swimming and surrounding day-use parking lot for barbecuing. They often fish with rod-and-reel. The day-use passive visitors pose the biggest challenge for trash management and stewardship of the landscape.

- Day-use active visitors - Fly-fishermen and women

This group visits from the region and beyond, coming for the high quality trout fishing in the Beaverkill. They seldom stay at the campsite. They use the day-use parking area as a launching pad to explore the Beaverkill and often fish within 1.5 miles to the south of the parking. They generally are good stewards of the landscape and water.

A third user group uses the Beaverkill campsite for overnight use:

- Campers (often from the NYC metropolitan region).

This group often visits the campsite for the weekend. They fish, but generally rod-and-reel fishing from the campsite north of the river. They shower in the washroom on the day-use side of the Beaverkill near the covered bridge.

STAKEHOLDER GOALS

In the 5/26/2015 kickoff meeting, general goals and objectives were discussed and a theme emerged as a desire among stakeholders to "not to expand the landscape study area but rather to improve it." There is also a desire to improve the ecological and aesthetic value of the Covered Bridge Landing with some simple moves to reorganize the circulation, improve the native ecological conditions, relocate existing facilities, improve walk-ability and better utilize and re-purpose existing structures. The NYS DEC and local stakeholders expressed a desire to better identify the historical and ecological narrative of the site, as all believe that the Beaverkill landscape has inherent value which might be better recognized by visitors from all of the state and region.

At the 11/18/2015 stakeholder meeting, W shared preliminary design plans and ideas for improving connectivity, ecological conditions, and historical narrative of the site. There is a desire to honor the historical layers of the site. A variety of strategies and treatments were discussed. Stakeholders were particularly interested in the western bridge abutment and the stone walls along the entry ramp to the bridge. Stakeholders were interested in long term visions for the area that are local and also set a precedent for all of Sullivan County and the region.

OPEN SPACE INSTITUTE LAND CONSERVATION EFFORTS

OSI has partnered in the protection of nearly 2.2 million acres in North America, from Alabama up the spine of the Appalachians to southeastern Canada. All of OSI's work is directed by a consistent strategy emphasizing permanent protection on a landscape-level scale. Each discrete transaction, whether buying a conservation easement on a family farm in the Hudson River Valley or helping fund the purchase of 100,000 acres in Maine, represents an effort to align the pieces of the landscape puzzle and prevent fragmentation.

OSI's land acquisition affiliate, the Open Space Conservancy (OSC) in cooperation with the Rockefeller Foundation and other stakeholders have protected more than 30,000 acres in the Catskills and 100,000 acres throughout New York state. OSI's first land acquisition activities took place in the Beaverkill Valley in the 1970s. The aim of the first land acquisition program was to control development on private land and maintain the area's rural character and protect its natural resources (www.osiny.com)

In the Beaverkill Valley, OSI has protected over 11,000 acres through conservation easements on private lands and over 7,500 acres through fee acquisitions and transferred nearly 5,000 acres to state ownership. OSI holds nearly 200 conservation easements in the valley, each tailored to the natural attributes of the specific property (www.osiny.com).

OSI created the Catskills Organizing Committee, which includes OSI, the Audubon Society and Trout Unlimited in 2002. This working group is studying four river systems that make up the Beaverkill-Willowemoc Watershed, which includes the Upper Beaverkill, the Willowemoc, the Little Beaverkill and the Lower Beaverkill. The group is working on identifying areas in need of natural resource protection and restoration in order to protect the region's viewsheds, fish habitats, and rural character (www.osiny.com).

As part of the Beaverkill interpretive landscape project, W will project ways in which OSI's conservation work can be identified and highlighted as a means to promote cultural landscape conservation and particularly stewardship of the important Beaverkill landscape.

OVERLEAF: KICKOFF MEETING IN JOHN ADAMS' BARN



02

HISTORY AND ANALYSIS

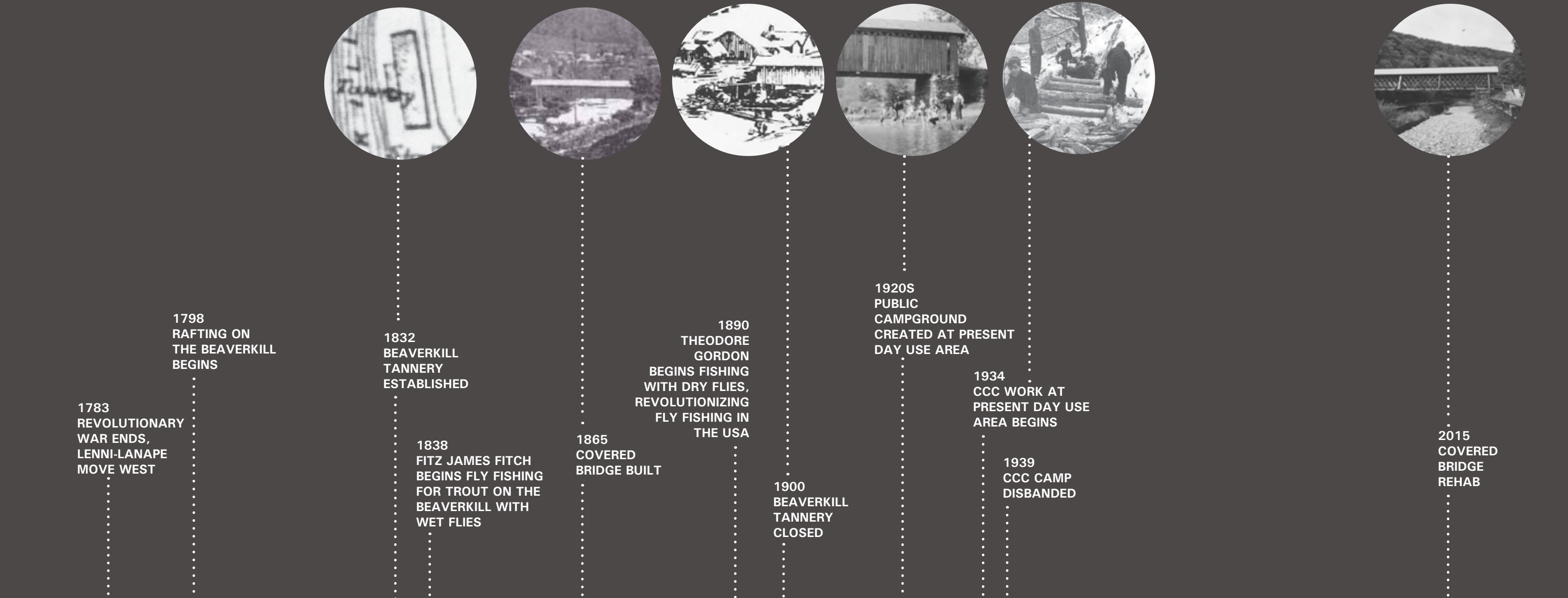


FISHING THEN



FISHING NOW

HISTORY AND ANALYSIS



1783
REVOLUTIONARY
WAR ENDS,
LENNI-LANAPE
MOVE WEST

1798
RAFTING ON
THE BEAVERKILL
BEGINS

1832
BEAVERKILL
TANNERY
ESTABLISHED

1838
FITZ JAMES FITCH
BEGINS FLY FISHING
FOR TROUT ON THE
BEAVERKILL WITH
WET FLIES

1865
COVERED
BRIDGE BUILT

1890
THEODORE
GORDON
BEGINS FISHING
WITH DRY FLIES,
REVOLUTIONIZING
FLY FISHING IN
THE USA

1900
BEAVERKILL
TANNERY
CLOSED

1920S
PUBLIC
CAMPGROUND
CREATED AT PRESENT
DAY USE AREA

1934
CCC WORK AT
PRESENT DAY USE
AREA BEGINS

1939
CCC CAMP
DISBANDED

2015
COVERED
BRIDGE
REHAB

1770

1780

1790

1800

1810

1820

1830

1840

1850

1860

1870

1880

1890

1900

1910

1920

1930

1940

1950

1960

1970

1980

1990

2000

2010

FUTURE?

LENNI-LANAPE
INHABIT THE
VALLEY

BEAVERKILL GROWS INTO A
HAMLET OF 100 PEOPLE WITH
A POST OFFICE AND SCHOOL

BEAVERKILL
HAMLET LOSES
POPULATION AS
TANNING
DECLINES

BEAVERKILL BECOMES VERY
POPULAR AS A RECREATION AREA
(FLY FISHING, DAY USE,
OVERNIGHT CAMPGROUND)

BEAVERKILL

The history of Beaverkill's development and the surrounding area of Sullivan County is well-documented in local history books, so this report will seek to highlight the main historical themes as they relate to the cultural landscape narrative and proposed design interventions.

The Beaverkill River is a tributary of the East Branch of the Delaware River, approximately 44 miles (71 km) long, in the U.S. State of New York. The kill drains a 300-square-mile (780 km²) area of the Catskill Mountains. The Beaverkill has long been recognized as a center for high-quality trout-fishing and has long been celebrated as one of the most famous trout streams in the United States. Its preservation helped establish many of the basic conservation principles of rivers in the United States.

As illustrated in the preceding photographs, the area has been home to fly fishing adventures, tourism and has always provided a legendary setting for the sport with nearly 2-miles of public fly fishing along this stretch of the river.

The Beaverkill provides some of the best fly fishing in the State. Trout-fishing has played an enormous role in the use of the Beaverkill landscape, the local economy and cultural identity of the area since the early 19th century.

Due to its popularity as a trout-fishing center and its natural beauty, Beaverkill became one of the first resort destinations in the United States. Subsequent depletion of the trout population by the mid-19th century led to one of the first river conservation efforts in the United States, in order to preserve the river and its formerly abundant and healthy trout population. Local fishermen have always relied on the Beaverkill because its cold springs and deep pools in the upper river keep the water at an even cold temperature, an ideal environment for trout.

COVERED BRIDGE

In the 1860s and 1870s, the small hamlet of Beaverkill had a population of roughly a hundred people, and included a school and a post office. The Beaverkill Covered Bridge, also known as Conklin Bridge was built in 1865, and was one of the first bridges over the Beaverkill River when the Catskill mountain area was still relatively unsettled (*World Guide to Covered Bridges*, 2009). The bridge is one of 29 historic covered bridges in the state. In 2007, it was listed on the National Register of Historic Places, one of only four covered bridges to be listed (Civilian Conservation Corps in New York, 2011).

The bridge was built by Thomas Davidson, Sr., a cabinet maker, lumberman, raftsman, storekeeper and landowner. Davidson owned land along the Beaverkill and the Waterbury farm. Davidson forbade his laborers to partake of any alcoholic drinks. As the workmen were laying the final stone abutment, they bought a five gallon jug of whiskey to celebrate. Davidson returned unexpectedly and the men hid the whiskey in the stone abutment, which was soon walled in. The jug of whiskey is still present in one of the bridge stone abutments. The bridge fell into disrepair and was set to be demolished in 1948 by the town of Rockland, but was saved by Frederick B. Rogers, who persuaded the town to furnish \$700 to restore the bridge. In 1961, Sullivan County took possession of the bridge (Tiffany 1976).

The 98 foot long bridge uses an unusual modification of the lattice truss design. The lattice truss is distinguished

by diagonals connected to the lower chord by pins, which eliminates the need for vertical members. The modification that makes the Beaverkill bridge unique is additional diagonals at the ends, which distribute the load over a smaller area and eliminates the need for longer abutment seats of bolster beams (Civilian Conservation Corps in New York, 2011).

EARLY HISTORY

The first inhabitants of the Beaverkill valley were the Lenni-Lenape, a Native American tribe. They were river-oriented, and depended on agriculture, hunting, and fishing. The Lenni-Lenape lived in semipermanent villages along the lower, larger stream or river sections where travel by canoe was possible and fields could be cultivated in the floodplains. By 1783, the conclusion of the revolutionary war, most of the Lenni Lanape had migrated west (Van Put 2002).

RAFTING INDUSTRY

Pioneers began settling the valley in the late 1700s. The name 'Beaverkill' was derived from the numerous beaver colonies that settlers found along the headwaters of the river. Many of the early pioneers relied on rafting, the practice of transporting lumber from the Catskills downriver to Philadelphia on rafts constructed from logs or rough-sawn planks. A number of waterwheel-powered sawmills were built in the valley to serve the rafting industry and there were more than thirty mills located above the forks of the Beaverkill and Willowemoc. Nearly 80 percent of all rafts carried hemlock, the bulk of which was used for wharves and pilings along the Philadelphia riverfront. The number of rafts floating down the river increased steadily, peaking in the late 1870s or early 1880s. Railroads and the lack of salable hemlocks caused the decline of the rafting industry (Van Put 2002).



A RAFT WITH PASSENGERS

HISTORY AND ANALYSIS

TANNERY

In 1832, a tannery was established by Linus Babcock near the covered bridge. The industry was based on the high density of eastern hemlock trees in the area. The bark was stripped and then treated to supply tannin to make leather from hides. Huge numbers of hemlocks were harvested in the 1800s for tanneries and the saw mills that served the rafting industry (Whitney, 1990).

Hemlock is native to North America, forming dense stands up and down the eastern seaboard. It is often the dominant conifer along stream banks and the lower slopes of hillsides; and it was no different around the Beaverkill prior to the tanning industry heyday. In its native environment, Hemlock will grow in dense shade and is a major component of many forests, growing alongside maple, cherry, and white pine. It can be very slow growing, as in swamps, or grow rapidly in open areas with well-drained soil, where it often reaches heights of 70 to 100 feet. Hemlock trees can live for over 250 years, or in very rare cases, over 800 years.

The Eastern Hemlock was more plentiful in the Beaverkill Valley than in any other part of the state. The supply of the hemlock bark in Sullivan County and the Catskills at large seemed inexhaustible to early industrialists in the region. The Beaverkill River provided the much needed water for the tanning establishment on the site (www.livingstonmanor.net).

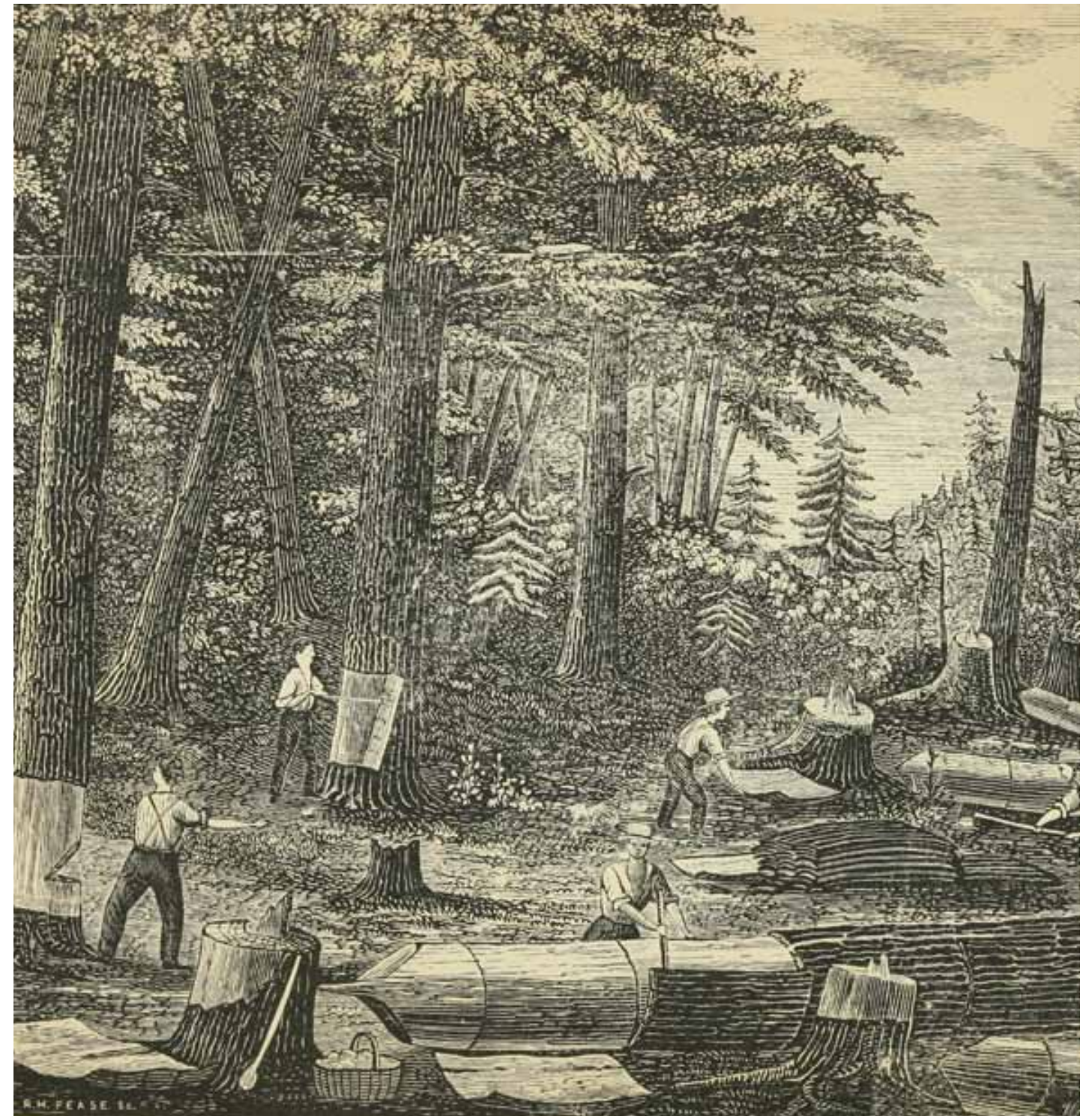
Early tanbark harvesters obtained Hemlock bark in two relatively straightforward ways. Some girdled trees in the spring when the bark was loose, or “slipping,” then returned later to harvest the loosened bark “on the stump” – an act that left gleaming, barkless trees beneath the dark Hemlock canopy. The more common method was to cut down the tree and then peel the bark off as far as practicable, cutting it into four-foot strips. The tree’s trunk was sometimes sawn into boards, but since hemlock is inferior to white pine for building purposes, most of it was left to rot in the forest. The bark was the only desired product for tanneries (Canham, 2011).

After the bark was removed, it was placed on the ground with the inner, or flesh, side facing up to hasten drying and prevent formation of mold. Bark was then stacked in large piles off the ground for further drying and to await transport to the tannery. Bark was heavy and bulky and had to be hand-loaded onto wagons or sleds pulled by horses to the tannery. In contrast, salted hides were lighter and easier to maneuver, so the hides were, in effect, brought to the hemlock, and tanneries were built close to hemlock stands (Canham, 2011).

At the tannery, conveniently sited on rivers or lakes, the bark was ground or shredded and placed in a series of hot-water filled tubs. Using a passive method, it took about four days for the tannins to leach out of the bark – steam infusions halved the time. The resulting tanning liquor was then circulated through the tanning vats in increasingly acidic solutions. Spent bark was dried and used for fuel to heat the vats.

One hundred years ago the Catskill region produced more tanned leather than any other area in the United States. The five counties of Delaware, Schoharie, Ulster, Orange and Sullivan accounted for nearly one-third of New York’s annual leather output in 1860, according to “Report of the Growth of Industry in New York State” ([livingstonmanor.net](http://www.livingstonmanor.net)). James Eldridge Quinlan wrote: “There’s an old saying, The Civil War was won with the boots tanned in Sullivan County.” (www.livingstonmanor.net)

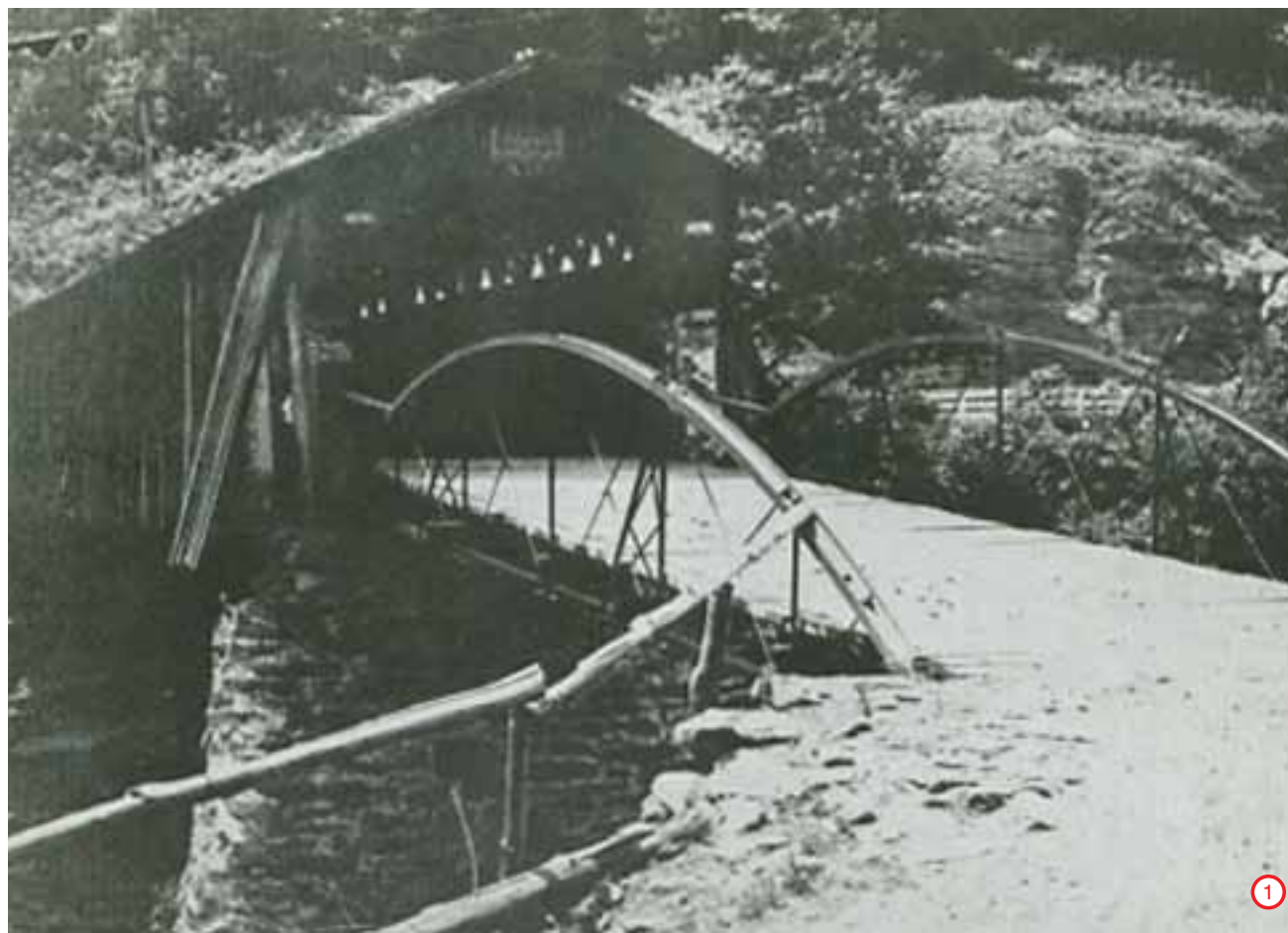
As the Beaverkill tannery flourished, a hamlet formed, and farms sprouted up on both sides of the river. The tannery reached its peak production in 1867, tanning up to 4 million sides that year. By 1970, William Ellsworth had partnered with Linus Babcock to run the tannery. In the late 1800s, hemlock forests in the area became depleted and a synthetic process for making tannin was developed. Around the same time, there was a national financial panic that followed the Civil War. By the turn of the century, the Beaverkill tannery had closed (Osborn, 1950).



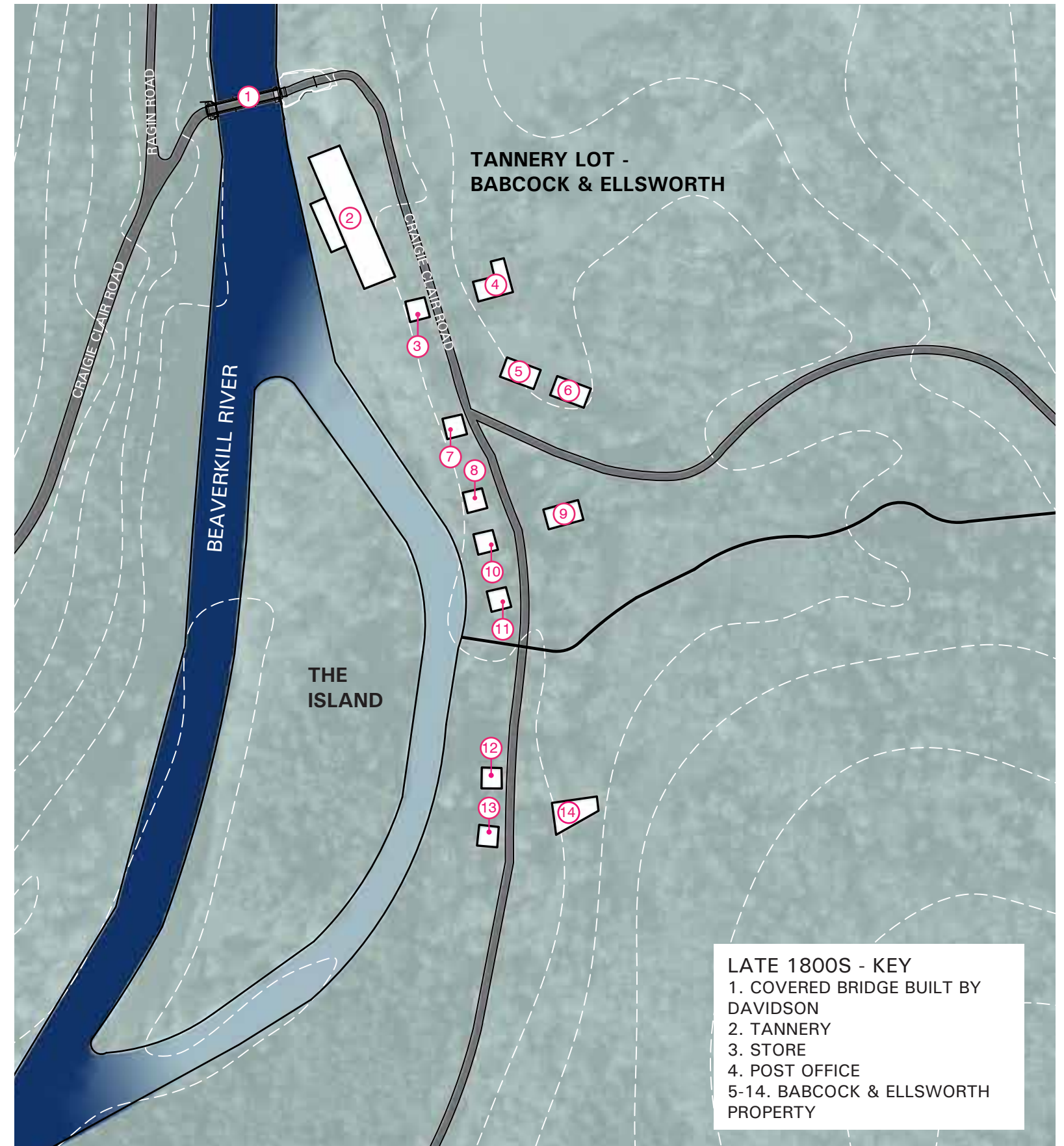
PEELING BARK FOR TANNING



THE BEAVERKILL RIVER (WITH DAM) AND COVERED BRIDGE IN 1883



HISTORIC PHOTO OF COVERED BRIDGE



SCALE 1" = 200'-0"

DAY USE AREA - LATE 1800S

HISTORY AND ANALYSIS

FLY FISHING

Heralded as the cradle of fly fishing in America, the Beaverkill is known all over the world, wherever men and women fly fish for trout. Even before sporting periodicals and angling books began recording the history of American fly fishing, the Beaverkill's fame was well established. Steeped in tradition and lore, the stream was the favorite of many of our earliest and most gifted anglers.

- *The Beaverkill: The History of a River and Its People, Ed Van Put*

One of the first pioneer fishermen to fish the Beaverkill was Fitz-James Fitch. Fitch first fished the Beaverkill for trout in 1838, and continued to journey to the river yearly to fish for the next twenty-one years. Fitch fished primarily with wet flies, and named the 'Beaverkill' fly, one of the first popular trout flies in America. He also invented the creel, a basket with a shoulder strap and waistband. Creels are used to carry a day's catch home (Van Put 2002).

A number of famous fishermen are connected with the region and include Theodore Gordon, Rube Cross, AE Hendrickson, and others. Theodore Gordon is often called the father of the American school of dry fly fishing after he imported English fly-fishing tackle and flies in 1890 and began to alter the English flies to precisely match the insects hatching in the Beaverkill. After a few decades of experimenting with dry flies, Gordon's unique style propelled the craft into an art form that influenced the region. Gordon and his followers were set apart from other fly fishermen in the United States and became known as the Catskill School of fly tiers (Van Put 2002).

Roy Steenrod, AE Hendrickson, and Rube Cross improved the sport and are considered important figures in the American fly fishing history. In 1916, Roy Steenrod first tied the Hendrickson fly along the Beaverkill, named after his fishing partner, AE Hendrickson. The Hendrickson fly imitated the way mayflies hold their wings together when at rest. The finish fibers were tied sparsely with the stiffest fibers possible. From April 2015 - May 2016, the Catskill Fly Fishing Center & Museum will host an exhibit celebrating the influence of the Hendrickson fly on dry fly fishing in the region (Weamer 2015).

Rube Cross is known for improving upon the Catskill style of dry fly more than any other individual. Cross claimed to have learned how to tie flies from Theodore Gordon. Cross was known as a perfectionist and tied flies with an exactness that few could duplicate. By 1938, Cross had moved to Beaverkill valley, tied flies for the Beaverkill Trout Club, and began writing articles and instructional books (Van Put 2002).

Both the upper and lower Beaverkill support wild brown trout. The Covered Bridge pool is a favorite of large brown trout on the upper Beaverkill. The upper section of the river supports a wild brook trout population that increases upstream towards the headwaters. Rainbow trout are also scattered throughout the watershed as a result of both natural reproduction and non-DEC stockings in private sections of the river. The DEC annually stocks over 18,000 brown trout in the Beaverkill and seasonal anadromous runs of American shad are reported in some years from the lower section (www.dec.ny.gov).

Brown Trout



Rainbow Trout



Brook Trout



TROUT FOUND IN THE BEAVERKILL



FITZ-JAMES FITCH, ONE OF BEAVERKILL'S FIRST FLY FISHERMEN, EARLY 1800S



FISHING NEAR THE COVERED BRIDGE, 1894

The waters of the Beaverkill are home to a varied array of insects. Throughout the fishing season there are profuse hatches of mayflies, caddisflies and stoneflies. The abundance of insects serves anglers by attracting fish. Most of the fish caught in the river average 8" to 14" but fish up to 18" are common.

The fly fishing season starts April 1st and lasts until November 30. The 10-week period after mid April is the busiest time for fly fishing. The flows and temperatures of the river are dependent upon rainfall. In normal years the fishing will slow during July and August unless regular rainfall occurs. The beginning of September usually brings rainfall that raises flows in the river, cooler nights, and active insects (Baxter House River Outfitters for Roscoe Chamber of Commerce).

'NO KILL' SECTIONS

There are two 'no kill' sections on the river that are open year round. The 'no kill' regulation has kept a lot of one and two-pound fish in the river. More than 1,500 anglers per mile are estimated to fish the no kill section every year. Ed Van Put, author of *The Beaverkill: The History of a River and its People*, says, "this river has never been more popular than it is today. You always want to remember one thing about the good old days - they never fished down here after the Fourth of July. By that time all the fish had been caught. That was it. Now, because the fish can be caught over and over again, they fish here all year long." Several years ago, the open season for trout was extended to the full year on the no kill sections of the river, and now anglers can even be found fishing in the middle of winter (Francis 2014).

By all accounts, no kill fishing has worked well for the Beaverkill. The catches per angler went up so dramatically after the new regulations took effect, the state tried not stocking the river for a year or two. After not restocking, the state realized that there is not enough natural reproduction to maintain the stream's carrying capacity. Regardless, the no kill sections generally have more fish and fishermen than any other parts of the river (Francis 2014).



THERE ARE TWO NO KILL SECTIONS ALONG THE BEAVERKILL



HENDRICKSON DRY FLY TIED BY RUBE CROSS

HISTORY AND ANALYSIS

CIVILIAN CONSERVATION CORPS

After the demise of the hemlock stands and tanning industry in the Beaverkill valley, year-round residents dwindled, but seasonal visitors began to discover the area. The rise of railroads and automobiles made visits to the Beaverkill area more accessible than it had been to previous generations of anglers and swimmers. The Beaverkill area was so heavily used in the early 1900s, litter and other overuse problems began to develop (Civilian Conservation Corps in New York, 2011).

In response, in the 1920s, the state turned the area on both sides of the covered bridge landing into a public campground; the second public campground in the Catskill Park after North-South Lake. The campground was where the day use area is today. The campground facilities were further developed by Civilian Conservation Corps workers in the late 1930s; it became the prototype for other state-owned campgrounds in and outside of the Catskills (Civilian Conservation Corps in New York, 2011).

The Civilian Conservation Corps (CCC), an initiative and agency founded by the United States under President Franklin Delano Roosevelt, was created to give unemployed young men training and pay for work on our nation's parks. The Beaverkill River was part of a state stream development program that started in 1934 and was intended to improve 187 miles of waterways on New York state lands, in reforestation areas, and streams where public fishing easements had been acquired. The CCC assisted the Conservation Department's Department of Fish & Game in building log bank cribbing, log deflectors, and channel blockers (Galusha 2008).

In 1931, the CCC camp consisted of ten fireplaces, a large camping area, and bathhouses near the covered bridge pool. During the next eight years, the CCC expanded the camp by building 30 individual campsites with fireplaces and tables, stone walls along the river's edge, two sets of bathhouses, a picnic area with 15 fireplaces and tables, a reservoir, and 3,000 feet of piping (Galusha, 2008). The CCC camp included land on both the east and west sides of the covered bridge. The CCC cabin office was on the west side of the river. When the CCC camp was disbanded in 1939, the cabin was moved through the covered bridge to the east side of the river, where it is today. In 1939, the land was a corner of the Ackerley Farm (Fischer, 1998-2012).

The CCC history should be revealed and highlighted in the Beaverkill landscape, as this was one of the most successful civic programs to put people back to work during the Great Depression. A remarkable vision by FDR, this should be explained to all visitors as a tangible civic action taken to improve the environment and lives of Americans, implemented by effective government.



COVERED BRIDGE LANDING IN 1930, BEFORE CCC EXPANDED AND DEVELOPED THE AREA



1939 GROUP PORTRAIT OF THE CCC SIDE CAMP CREW AT BEAVERKILL



TENTS AT THE BEAVERKILL CCC CAMPSITE



CCC MEMBERS BUILDING BEAVERKILL'S SIGNATURE STONE WALLS



STONE WALLS AND RAILINGS ON BOTH SIDES OF THE BRIDGE WERE BUILT BY THE CCC IN THE 1930S





1



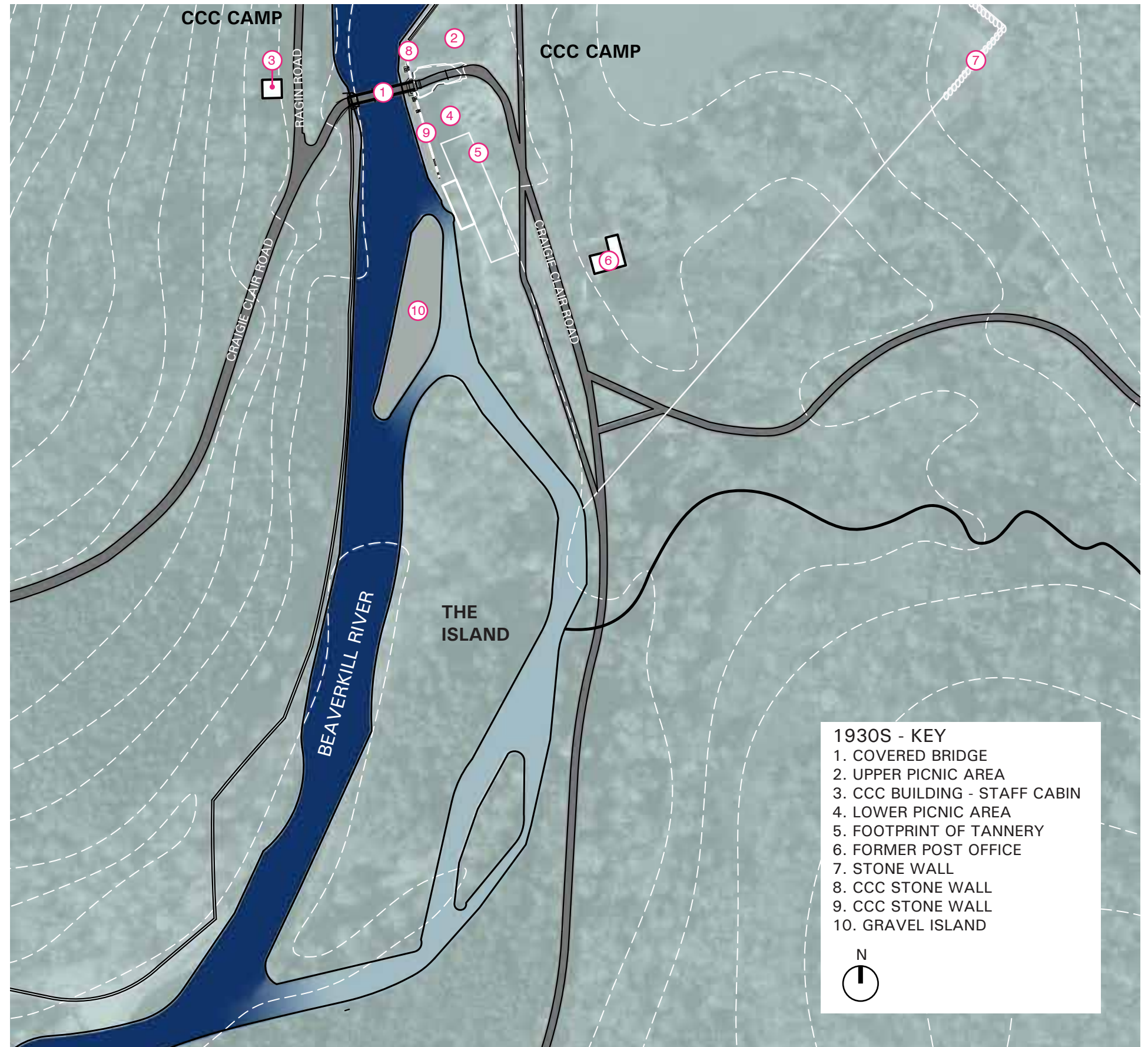
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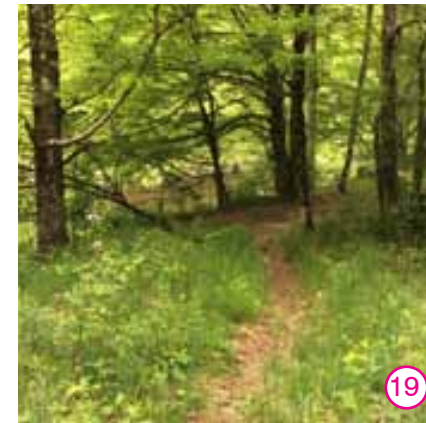
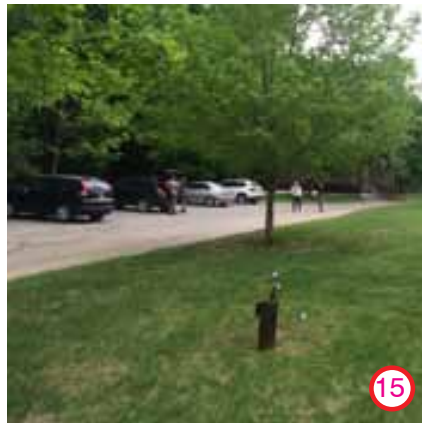
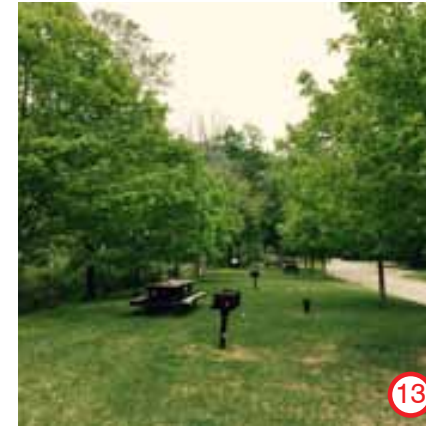
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SCALE 1" = 200'-0"

DAY USE AREA - 1930S

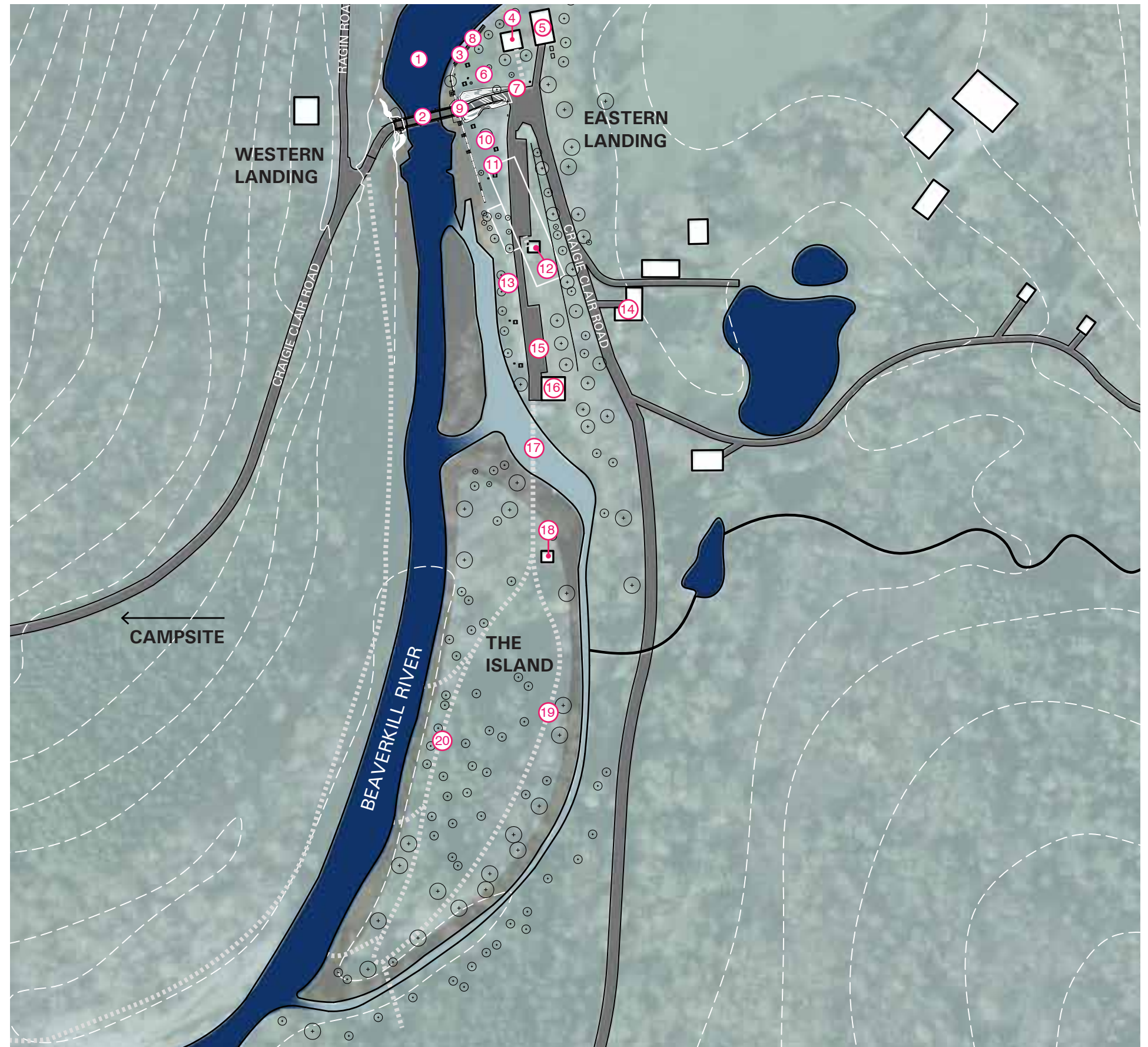
HISTORY AND ANALYSIS



*SEE PHOTOS AT LEFT ON P. 26

PRESENT - KEY

1. COVERED BRIDGE POOL
2. COVERED BRIDGE
3. CCC STONE WALLS
4. CCC CABIN (RELOCATED)
5. GARAGE
6. UPPER PICNIC AREA
7. CONCRETE TRAFFIC BARRIER
8. GABIONS
9. PEDESTRIAN CROSSING BELOW BRIDGE
10. LOWER PICNIC AREA
11. TANNERY FOOTPRINT
12. RESTROOM
13. PICNIC AREA
14. FORMER POST OFFICE
15. PARKING SPACES
16. WASHROOM
17. VEHICULAR STREAM CROSSING
18. RESTROOM
- 19-20. PEDESTRIAN TRAIL



SCALE 1" = 200'-0"

DAY USE AREA - PRESENT

HISTORY AND ANALYSIS

ECOLOGICAL ASSESSMENT

Today's gentle wooded landscape belies the frantic and long-term industry, which was present in the mid-19th century. This is a second growth landscape, not the original, hemlock – northern hardwood forest of the pre-settlement region. Across the river from the campsite, there is still a sizable population of hemlocks on the steep southern slope. However, by the covered bridge, the flat areas are missing this important species. The area which is now a plantation of red pines may have once been a large hemlock stand that was eliminated to supply the local tannery.

There is a steady change of vegetation near the covered bridge from the low elevation at the river's edge to the slopes. Near the river is a floodplain grassland zone of annual and perennial plants, mostly herbaceous. For example, adjacent to the parking area, there are Joe-pye weeds, goldenrods, dogbane, Carex sedges, roses, willows, St. John's wort, oxeye daisies, sensitive ferns, and members of the carrot family. This is a riot of color and insect activity; however, there is no clear walking trail here to encourage nature study or a relaxing stroll. This area is inundated during spring floods. At the edge of the river the geology is river-rounded stones and complex sentiments. There is much scour under the roots of trees next to the river; these will be undercut and will fail. The northern edge of the river is a typical zonation of sedges, dogbane, goldenrod, willows, and then a canopy layer of sycamores, red maple, and box elder.

Above the floodplain is a mosaic of small habitats. This southern side of the river above the floodplain has a large red pine population. The understory is very sparse, challenged by the shade and the heavy needle litter, but the more open sections have a large population of ferns. There is a footpath by the covered bridge that continues west towards the small rapids before one is across from the campsite. These areas have scattered invasive species of the region, including barberry, multiflora rose, Russian olive, stiltgrass, and privet. There is also a stand of mugwort, near the old restroom building. The most common and tallest invasive is the clonal Japanese knotwood, scattered throughout.

Slopes on the north side of the river near the covered bridge are steep and have areas of red pine populations and areas with a canopy of sugar maple, ash, ironwood, striped maple (moosewood), and some beech. The understory is sparse, but includes some native ferns, jack-in-the-pulpit, multiflora rose, garlic mustard, and barberry.

The south bank of the river above the floodplain is predominantly eastern hemlock with some ash and striped maple mixed in. The shaded understory contains ferns and a heavy moss community. Woodlands are a mixture of sugar maple, ash, and beech. The river's edge adjacent to the campsite is a narrow band of dogbane, Joe-pye weed, goldenrods, deer tongue grass, reed canary grass, and sedges. Scattered shrubs include elderberry, barberry, purple flowered raspberry, and Japanese knotweed. These are all typical of floodplain communities in the area. There are various desire lines from the campground through the herbaceous border to the river, used by fishermen and women and swimmers.

The overall aspect of the riverside vegetation is typical of the region - closed canopy mixed woodlands on the slopes and a dense herbaceous community on the lowest banks. The non-native species here are also typical of the whole region. None are particularly abundant except for Japanese knotweed. The human influence on the vegetation started with the harvesting of the eastern hemlock population, and then continued with the slow introduction of various European and Asian species. There was farming in the Catskill area but this does not seem to have affected the immediate landscape of the park.



EASTERN HEMLOCK STAND ON THE SOUTH SIDE OF THE BEAVERKILL

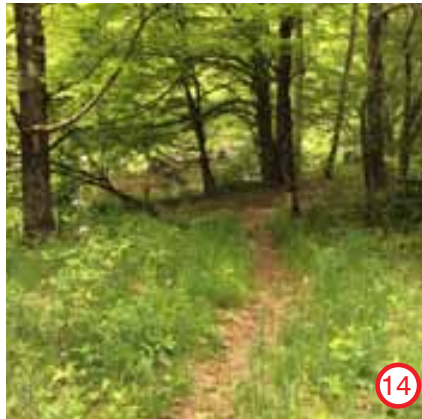
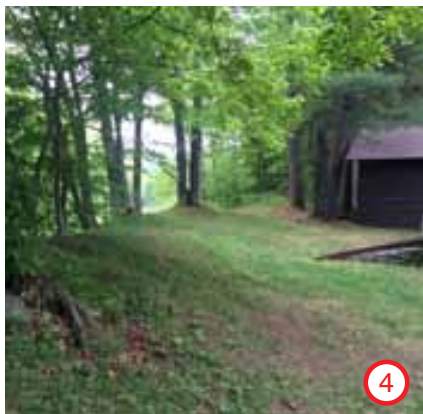
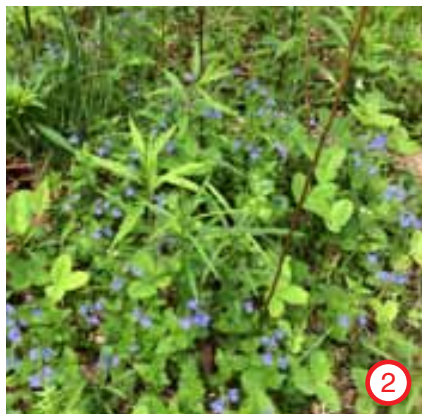


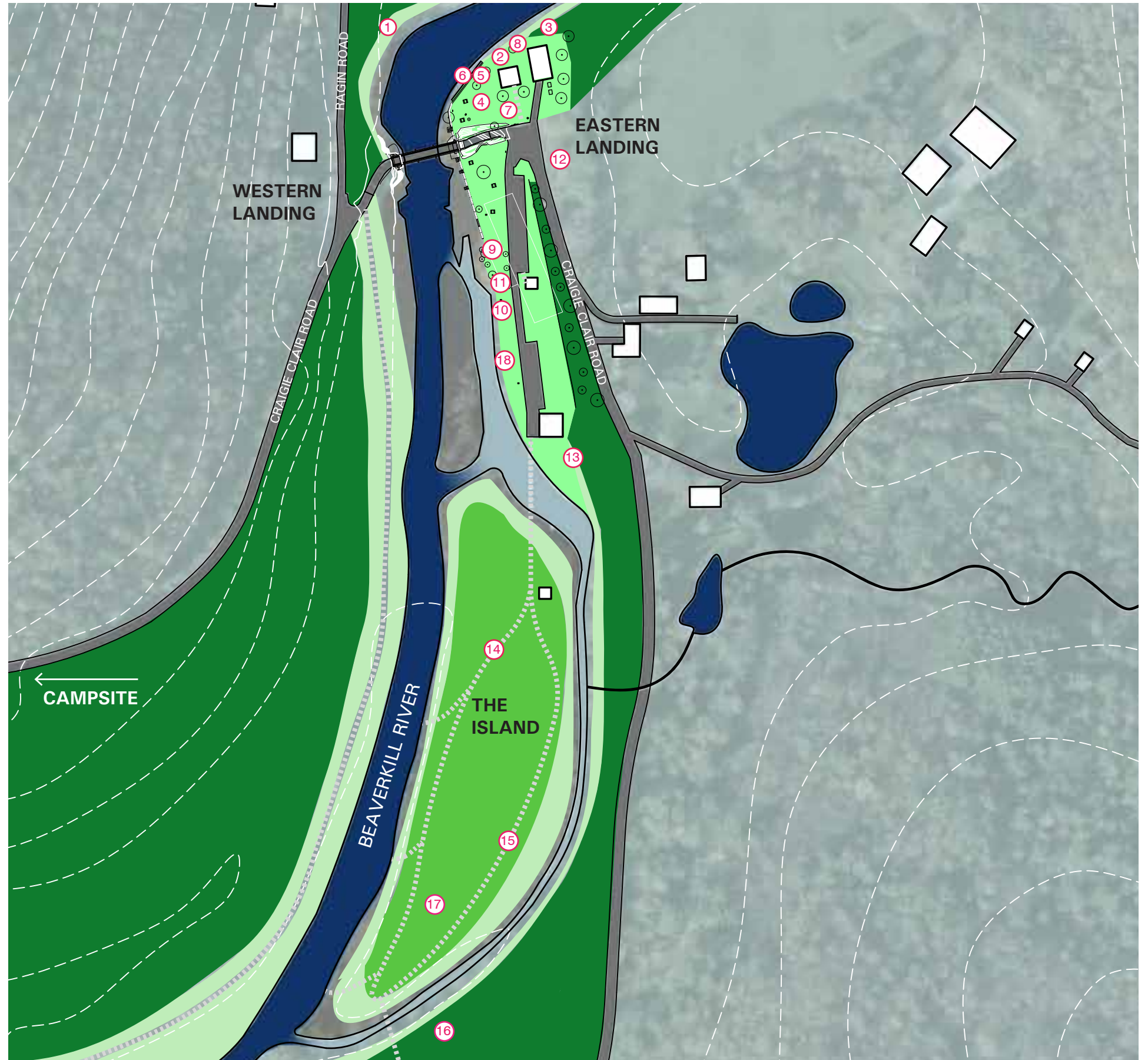
FLOOD PLAIN VEGETATION. ECOLOGICAL ZONATION ALONG RIVERBANK



INVASIVE SPECIES: JAPANESE KNOTWEED DOMINATES ALONG THE RIVERBANKS

HISTORY AND ANALYSIS





*SEE PHOTOS AT LEFT ON P. 30

ECOLOGICAL ASSESSMENT- KEY

- HEMLOCK-NORTHERN HARDWOOD FOREST
- RED PINE, MAPLE, AND FERN
- FLOODPLAIN GRASSLAND
- LAWN



SCALE 1" = 200'-0"

DAY USE AREA - ECOLOGICAL ASSESSMENT

HISTORY AND ANALYSIS

PRESENT CONDITION ASSESSMENT



WESTERN BRIDGE ABUTMENT

The western bridge abutment is concrete. The eastern bridge abutment is stone and is more consistent with the history of the bridge.



WOOD RAILS

The wood rails built by the CCC in the upper picnic area are in poor condition and are broken.



STONE WALL

The ground under the stone walls built by the CCC in the upper picnic area has eroded, causing large gaps.



PATHWAY UNDER BRIDGE

The pedestrian pathway under the eastern side of the bridge is very narrow, difficult to pass through, and is not ADA compliant. This limits connectivity between the upper and lower picnic areas.



VEGETATION

The vegetation along the riverbank is overgrown and includes invasive species. This limits views of the river from the picnic areas.



WASHROOM BUILDING

The washroom building does not suit the character of the site. The building has large areas of paving around it and a gate blocks access to the island.



CONCRETE BARRIER

The concrete barrier along Craigie Clair Road near the CCC cabin blocks pedestrian access.



HISTORIC STONE WALLS

There are stone walls underneath the grassy slopes on either side of the eastern bridge approach.



GAP IN STAIR TREADS

The stone stairs built by the CCC in the upper picnic area do not reach the beach.



WOOD RAIL MISSING, TREE STUMPS

In the lower picnic area, there is a wood rail missing and several tree stumps.



DEAD TREE

There is a dead tree in the lower picnic area.



ISLAND TRAIL

There is trail around the island, but it is not ADA accessible. There are also no benches or picnic tables on the island.

DESIGN OPPORTUNITIES

The Beaverkill landscape offers design opportunities that will improve the day use area for all users.

IMPROVE CONNECTIVITY AND ACCESSIBILITY

There are currently very few accessible pathways on the site; installing accessible paths would improve connectivity throughout the landing area. Widening the pathway under the bridge would connect the upper and lower picnic areas at the eastern landing. There should be an accessible path from the parking areas to the island and around the island.

INCREASE PICNIC AREAS

More picnic tables and grills could be added to the lower picnic area and island. This would encourage more day use and serve fly fishermen. The southernmost parking spaces in the lower picnic area could be shifted east to increase the riverfront area.

HIGHLIGHT HISTORY

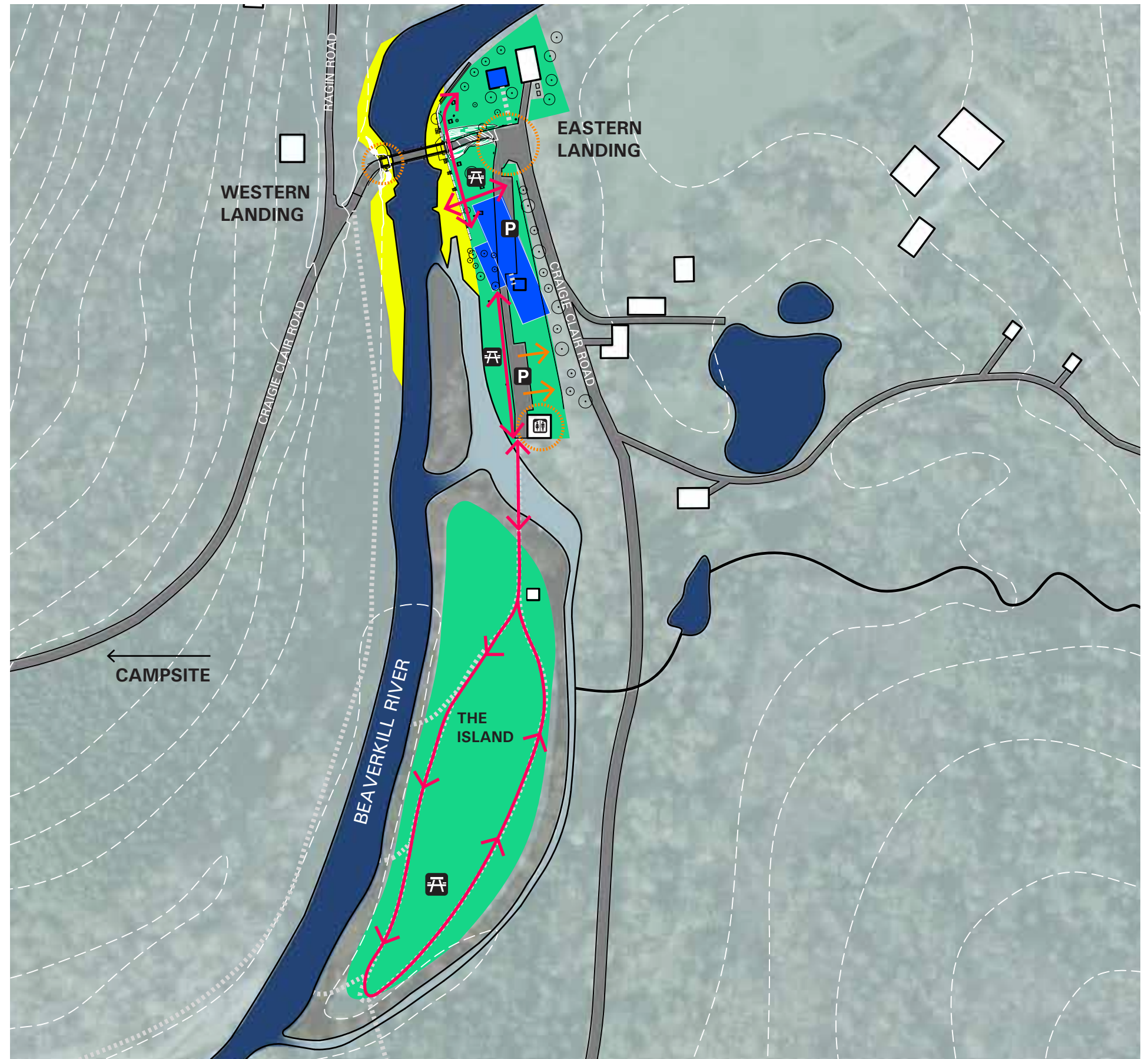
The layered history of Beaverkill offers the opportunity to educate visitors and honor the beginnings of the Beaverkill hamlet. The western bridge abutment, stone walls along the bridge approach road, and the tannery building footprint are three features that stakeholders would like to highlight.

REPAIRS / RESTORATION

Repair and restoration of existing elements will greatly improve the day use area. Page 32 outlines the present condition of these elements in the covered bridge landing area and on the island.

DESIGN OPPORTUNITIES - KEY

- HISTORIC BUILDING
 - BEACH
 - POTENTIAL NATIVE PLANTING
 - NEEDS IMPROVEMENTS
 - POTENTIAL ACCESSIBLE PEDESTRIAN CONNECTION
 - PARKING CAN BE SHIFTED TO INCREASE WATERFRONT AREA
 - TRAIL
 - PICNIC AREA
 - PARKING
 - WASHROOM
- N
↑



SCALE 1" = 200'-0"

DAY USE AREA - DESIGN OPPORTUNITIES

03

PROPOSED LANDSCAPE PLAN

PROPOSED LANDSCAPE PLAN



SEA RANCH, SONOMA, CA



PLANTING FRAMEWORK PRECEDENTS

The proposed plan includes a planting framework that can respond to the existing ecology of the site. The framework will recommend certain areas that can be planted with native plants and left as 'no mow' zones.

These two precedents, Sea Ranch and St. Patrick's Island, utilize a similar approach. Swaths of forest and meadow are left undisturbed, and other areas are planted with native plants. Areas that are planted will be low maintenance.



ST. PATRICK'S ISLAND, CALGARY, AB

PROPOSED LANDSCAPE PLAN



HIGHLIGHTING HISTORY PRECEDENTS

The Beaverkill landscape has a rich history, and there is an opportunity to highlight the imprints of the tannery, CCC, and fly fishing with subtle yet effective interventions. The historic tannery footprint can be accentuated in order to honor the beginnings of the Beaverkill hamlet.

The two precedents shown here, Central Park in St. Pere and Historic Duck Decoy Spread in the Netherlands, show subtle interventions that are successfully interwoven into public space.



CENTRAL PARK, SANT PERE, SWITZERLAND



HISTORIC DUCK DECOY SPREAD, THE NETHERLANDS

PROPOSED LANDSCAPE PLAN



PROPOSED DESIGN

The proposed improvements to the Beaverkill landscape include revealing the history of the site and the legacy of the CCC simply by restoring the work to its original condition and carefully planning landscape interventions, removing visual “distractions” and re-purposing existing buildings so that they might serve user groups more effectively.

The Beaverkill site already provides a beautiful setting. Any new design interventions shall focus on access, circulation, preservation, editing, interpretation, safety, and ways to improve land stewardship.

COVERED BRIDGE LANDING - DAY USE AREA

The challenge of the day-use area is to create an accessible area for the community and out-of-town visitors that can absorb intensive weekend use with picnicking, barbecuing, fishing and (un-sanctioned) swimming in the wonderful natural pools. One of the major challenges is to make this place seem more unique and fitting with the natural landscape, while accommodating existing and new crowds. Trash collection and stewardship is a major issue that should be tackled with improved signage and interpretation strategies. Of the design improvements, W suggests the following:

EASTERN LANDING

- 1/ Expose the stone retaining wall under the ramp to the bridge on both sides;
- 2/ Remove as much paving as possible, the pavement at the intersection of Campsite Road and Craigie Clair Road can be reduced in size;
- 3/ Implement native meadow species to replace pavement wherever possible and along Craigie Clair Road so that it is a more naturalistic landscape. Remove as much “mowed” turf grass as possible while still providing space for visitors to picnic comfortably;
- 4/ Provide river access from the parking area;
- 5/ Restore a wider access path under the covered bridge landing and approach ramp;
- 6/ Provide a pathway from north to south in the picnic area;
- 7/ Restore CCC railings, stone stairs and stone retaining walls along the river’s edge;
- 8/ Add fieldstone and rip rap (rounded) to eroded areas of the bank, particularly where visitors are walking along the now exposed banks;
- 9/ Utilize native tree species in order to capture the spirit of the native landscape;
- 10/ Highlight the old tannery location with a simple and tasteful architectural or art intervention;
- 11/ Create ecologically focused signage encouraging recycling trash and stewardship;
- 12/ Remove existing picnic tables and replace with locally made/community sponsored furniture;
- 13/ Replace washroom with outdoor showers and environmentally friendly toilet facilities;
- 14/ Utilize and restore the existing CCC cabin office for seasonal interpretive center;
- 15/ Add more benches to the picnic area along Craigie Clair Road and around the CCC cabin office / interpretive center;
- 16/ Remove concrete barrier and plant native shrubs and grasses;
- 17/ Install permeable paving in the parking area to reduce paving and improve stormwater management;
- 17/ Consider moving the road with parking further east, to expand the riverfront area. This would give more space

for picnic areas and pedestrians.

WESTERN LANDING

- 1/ Cover the concrete abutment with a stone face to match the south abutment;
- 2/ Install large stones upriver as “armoring” in order to provide a ledge for swimmers, protect the exposed edge and face of stone from flood water;
- 3/ Remove invasive species along river;
- 3/ Plant native plant species along river and around the covered bridge pool.

THE ISLAND AND ADJACENT RIVERBANK - DAY USE AREA

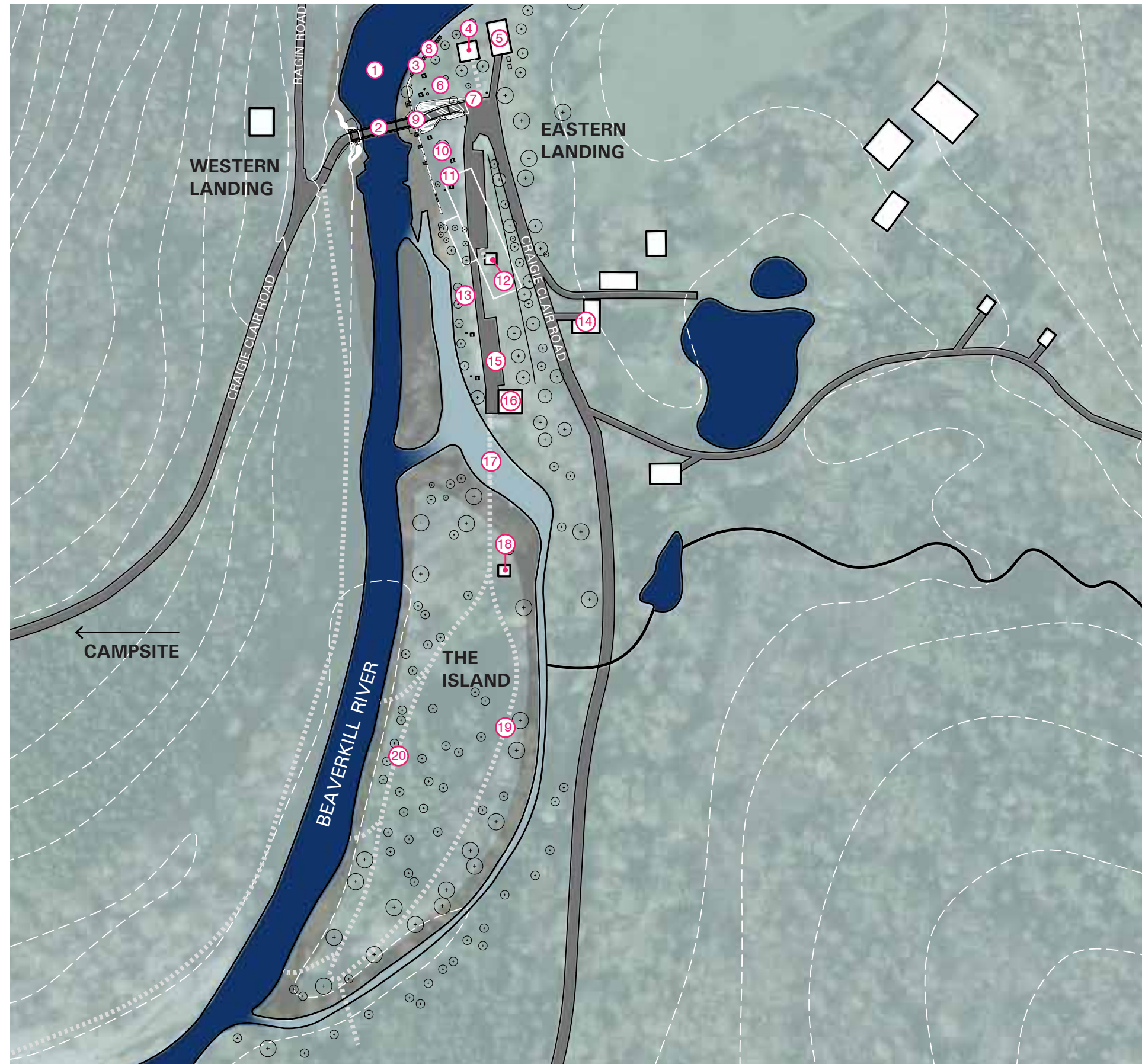
- 1/ Create better access on the island by installing small pedestrian bridge across the river;
- 2/ Remove deteriorated ‘gabion’ wall wire cages that have fallen into the river, designate this location as a local swimming hole, and make the swimming hole easily accessible to the camping ground from the historic trail;
- 3/ Install picnic tables in small clusters throughout different habitat areas on the island;
- 4/ Extend clearly signed trail / pathway from day-use area onto island;
- 5/ Consider designating some portions of the river ‘No Kill’ for catch-and-release fly fisherman. This is a guaranteed way to increase the number of visitors for catch-and-release fly fishing. Fish cleaning tables were discussed, but fly fishermen were concerned that this would encourage the killing of fish and the tables would be hard to clean and maintain. Therefore, fish cleaning tables are not recommended;
- 6/ Consider opening and re-purposing the cabin on the island for fishermen to use

CAMPSITE - OVERNIGHT USE AREA

The campsite, about half a mile west of the covered bridge, is a lovely area on the north side of the Beaverkill, providing campers an open space within the deciduous and red pine forest. W suggests several improvements that will help provide a more unique identity to the site and allow the visitors more convenient access to washrooms and other sites features.

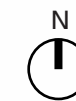
- 1/ Move the washroom from the day-use area to the campsite area. Utilize a stone and wood aesthetic for all buildings, to match the CCC improvements of the 1930s;
- 2/ Provide safer access to the river at specific access points. Call out those access points with lights and/or other simple signage features;
- 3/ Reduce the paving around the trash and recycling facility;
- 4/ Remove ornamental or invasive species that have been planted in the campsite grass areas. A more native landscape will help improve the identity of this place;
- 5/ Introduce low shrubs or native grasses between clusters of camping sites in the center of ring road, to enhance identity and privacy;
- 6/ Improve designation of individual camping sites;
- 7/ Employ interpretive strategy to allow visitors to understand the unique cultural landscape history of the site, inspiring better stewardship;
- 8/ Provide more hiking trails between the camping area and the day-use area. Improve the hiking/bike access from one side of the river to the other by implementing a small pedestrian bridge from the campground to the south side of the Beaverkill;
- 9/ Connect new hiking trails to the regional trail and bike network via signage or other interpretive strategies.

PROPOSED LANDSCAPE PLAN



PRESENT - KEY

1. COVERED BRIDGE POOL
2. COVERED BRIDGE
3. CCC STONE WALLS
4. CCC CABIN (RELOCATED)
5. GARAGE
6. UPPER PICNIC AREA
7. CONCRETE TRAFFIC BARRIER
8. GABIONS
9. PEDESTRIAN CROSSING BELOW BRIDGE
10. LOWER PICNIC AREA
11. TANNERY FOOTPRINT
12. RESTROOM
13. PICNIC AREA
14. FORMER POST OFFICE
15. PARKING SPACES
16. WASHROOM
17. VEHICULAR STREAM CROSSING
18. RESTROOM
- 19-20. PEDESTRIAN TRAIL



DAY USE AREA - EXISTING CONDITIONS

SCALE 1" = 200'-0"

PROPOSED LANDSCAPE PLAN

The Beaverkill landscape plan is intended to do the following:

IMPROVE CONNECTIVITY AND ACCESSIBILITY

The additional accessible pathways will allow for more connectivity throughout the landing area. The widened path under the covered bridge will allow for a better connection between the upper and lower picnic areas at the eastern landing. The pedestrian bridge to the island will allow access to the island when the ephemeral stream is flowing.

INCREASE PICNIC AREAS

Picnic tables are added to the lower picnic area. Picnic areas are created on the island. These picnic areas will serve passive day users and fly fishermen.

HIGHLIGHT HISTORY

Outlining the tannery footprint in stone will highlight the history of the landing area. Turning the CCC cabin into an interpretive center for the area will educate visitors. The hemlock grove will celebrate the native ecology of the site.

REPAIRS / RESTORATION

Repairing and restoring existing site elements will make the Beaverkill landscape a more attractive destination for all day use visitors.

LANDSCAPE PLAN - KEY

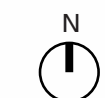
- 1. CCC CABIN / INTERPRETIVE CENTER
- 2. UPPER PICNIC AREA
- 3. WIDEN PATH UNDER BRIDGE
- 4. UPPER PICNIC AREA
- 5. HEMLOCK GROVE
- 6. TANNERY FOOTPRINT - OUTLINED IN STONE
- 7. WASHROOM BUILDING IMPROVED - MORE LANDSCAPE, LESS PAVEMENT
- 8. PEDESTRIAN BRIDGE
- 9. ACCESSIBLE PATH
- 10. PICNIC AREA
- 11. RESTROOM
- 12. PICNIC AREA
- 13. PICNIC AREA
- 14. PERMEABLE PAVING IN PARKING AREAS, PARKING MOVED TO EXPAND WATERFRONT AREA

..... UNPAVED PATH

 HERBACEOUS NATIVE PLANTS

 LAWN

 PROPOSED TREE



SCALE 1" = 200'-0"

DAY USE AREA - PROPOSED LANDSCAPE

PROPOSED LANDSCAPE PLAN

ECOLOGICAL RESTORATION PLAN

The upland habitat is part of the “hemlock-northern hardwood forest” formation in New York State, and the riverine section best fits the “floodplain grassland” typology (Edinger et al., 2014). Actions to increase historic plant biodiversity should concentrate on native species. A mixture of habitat types in the landscape increases the overall biodiversity and the public appeal. Certainly, restoration of a hemlock stand near the public parking area (on the north-facing side of the river) would have special ecological and historic value and appeal (Davis, 1996). W recommends planting a grid of hemlock trees that draws attention to the historic tannery footprint and shades new picnic tables. Native meadow and other herbaceous plantings could also be planted inside the footprint to delineate the former historic structure.

Suggested native plants for the Beaverkill landscape are shown on the next three pages. Tall trees can provide shade for picnic areas. W also recommends planting native species wherever pavement can be reduced and wherever invasive species are removed. Tall grasses or shrubs could be planted along Craigie Clair Road as a buffer for the picnic area. Beach plantings could increase the interest in the riverbank shoreline.

INVASIVE PLANT CONTROL

The major problem across the site is Japanese knotweed. The population of this species is scattered across several areas near the river. This is a clonal plant and many of the clumps probably represent one plant which is covering many square yards. The species can reach 3 yards in height and high densities smother many other species in the area, lowering local biodiversity. The species spreads by both seeds and fragments of the underground rhizome which can get carried by floodwaters. We have found specimens of this plant upstream of the covered bridge, so eradication of the species will require a larger effort that extends beyond the borders of the current project. Control of this plant is well known and almost always includes chemical control using glyphosate. At this site, the formulation approved for near waterways must be used. The references by Gover et al., 2005, and NRCS, 2007, are good summaries of effective control methods. A licensed local contractor should be retained and supervised to eliminate the species. After eradication, the cleared area should be replanted by a suite of native shrubs and herbaceous plants to help resist invasion. It must be emphasized that regular monitoring for re-invasion from upstream plant sources must be a continual obligation of the park administrators.

Removal of this species is a high priority for the ecological improvement of the site and the public experience.

Other invasive species are thinly scattered throughout the area. Some, such as knapweed, are established in the region and are not noxious pests in this setting. Others such as garlic mustard are sparse on the ground and may not be a long-term problem for the landscape’s health. We are much concerned about small clusters of Japanese stiltgrass found near footpaths. This annual grass is often spread by seeds on shoes and can sweep through forested sites such as this. In moist soils this species can grow to 3-4 feet tall and choke out all other herb species and seedlings of canopy trees. We encourage mechanical removal of these very small patches before they become very large patches. Removal before August will eliminate this year’s new crop of seeds. This treatment should begin immediately and be repeated each year until the local populations are eradicated.

There are scattered populations of the Asian wineberry, *Rubus phoenicolasius*. This berry species does well in the shade, more so than our native blackberries, and is regionally spreading. Encourage visitors to eat the fruit! This will cut down on seed availability. Again, occasional monitoring of wineberry patches and mechanical cutting of patches that are growing significantly should be considered by the maintenance managers.

PLANT HABITATS

HEMLOCK-NORTHERN HARDWOOD FOREST



FLOODPLAIN GRASSLAND / MEADOW



SUCCESSION IN THE HEMLOCK - NORTHERN HARDWOOD FOREST

Succession of the forest is the process of change in the species structure of an ecological community over time. The community begins with a few pioneering plants and animals and develops through increasing complexity until it becomes stable or self-perpetuating as a mature community.

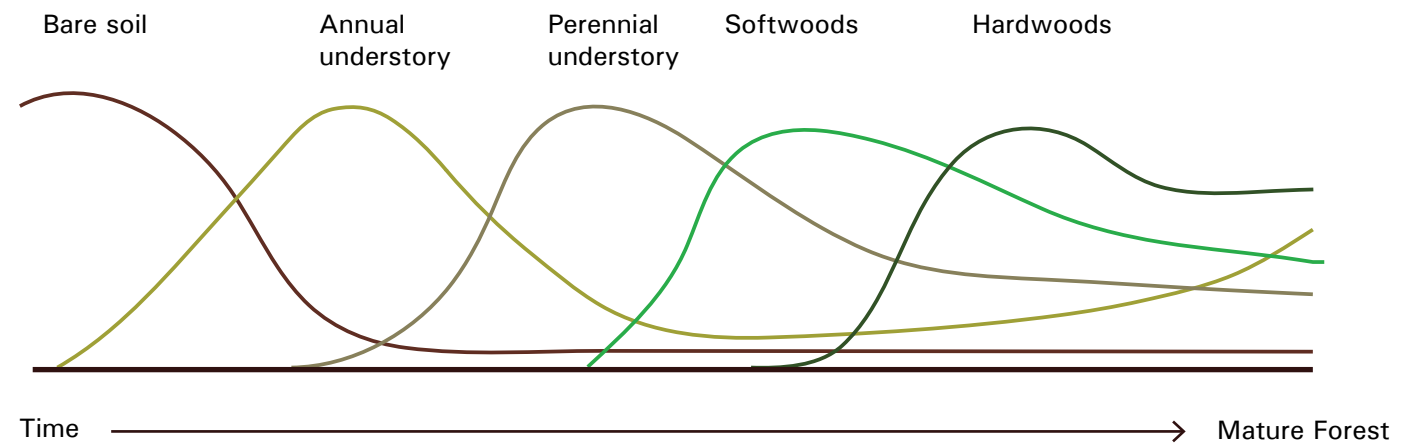
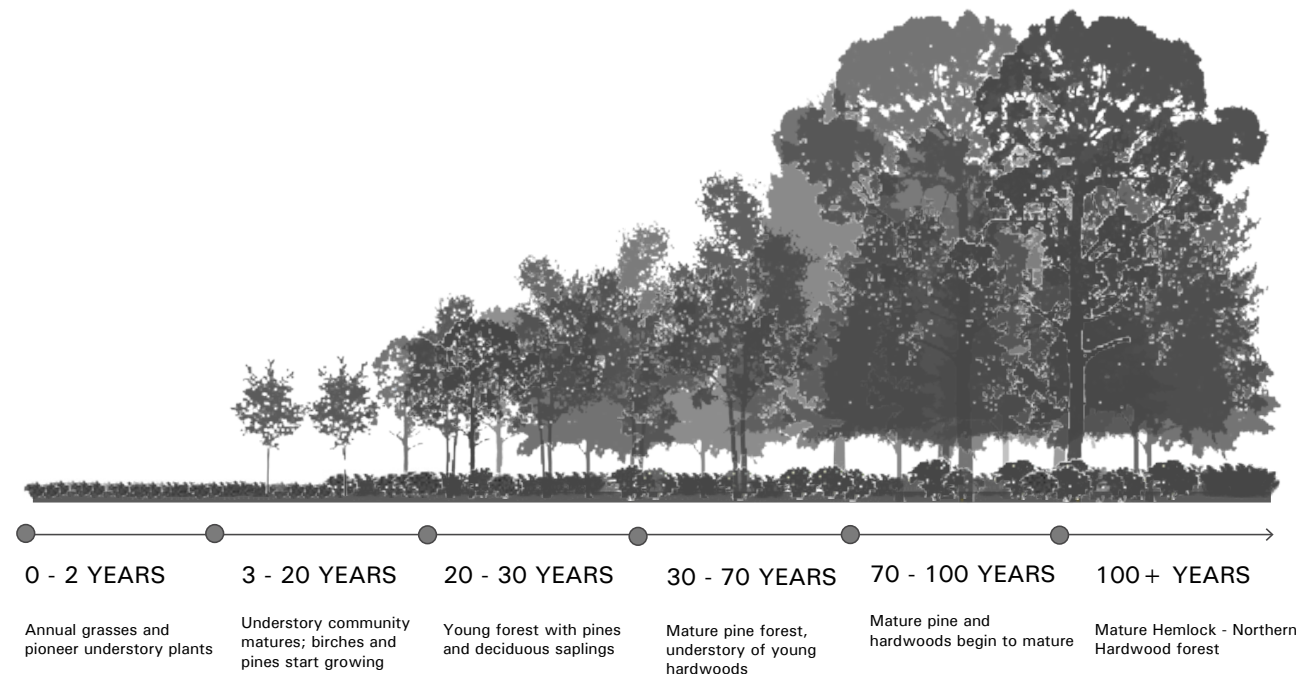
When left to grow naturally, ecological communities undergo more or less predictable changes following a disturbance or initial colonization of a new habitat. In general, communities in early succession will be dominated by fast-growing species. In the Hemlock - Northern Hardwood forest, birch, pine, and black cherry trees are pioneer species. These species produce great quantities of seed and can colonize large open areas. These plants are capable of germinating and growing in direct sunlight.

As succession proceeds, these species will be replaced by more competitive, slow-growing, and longer lived species. Oaks, hickory, hemlock, and beech trees are slow growing species in the Hemlock - Northern Hardwood forest. In general, when pioneers die, shade-tolerant species replace them. These species are capable of growing beneath the canopy. When these slow growing species are mature, the forest is said to have reached its maturity.

Succession stops when the stand has arrived at an equilibrium or relatively steady state within the physical and biotic environment. Barring major disturbances, it will persist indefinitely. If a catastrophe occurs, the opportunity for pioneer species opens up again.

The purpose of the proposed planting plan is to return the landscape to the original native forest type, the Hemlock - Northern Hardwood forest. The planting recommendations include some pioneer species as well as slow growing species. The proposed plan emphasizes planting hemlock trees of several sizes to replace all of the trees that were felled for tanning and rafting.

A mix of species and sizes from the transitional stages of forest growth (a "stand development") is proposed to jump-start the development of the native forest and replace the non-native and invasive species that were planted in the covered bridge area and island. Eventually, after the stand development is planted, the Hemlock - Northern Hardwood forest in the focus area will reach maturity on its own through natural succession processes.



PROPOSED LANDSCAPE PLAN

STAND DEVELOPMENT PLANT SCHEDULE					
TREES					
TREE TYPE	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE AT PLANTING	REMARKS
Evergreen	Tsuga canadensis	Eastern Hemlock	25	Mix of 3-4' and 6-7' tall	Very shade tolerant and slow growing, gets stressed in sun
	White Pine	White Pine	12	3 - 4'	Fast growing, well - drained soil in full sun, Pioneer species
Deciduous	Acer pennsylvanicum	Striped Maple	12	1" caliper	Shade tolerant
	Acer rubrum	Red Maple	14	1" caliper	Very adaptable, can tolerate poor soils, full sun to part shade
	Acer saccharum	Sugar Maple	14	Mix of 1" and 3" caliper	Long lived, shade tolerant
	Betula alleghaniensis	Yellow Birch	12	Mix of 1" and 3" caliper	Pioneer species, full sun to part shade
	Betula lenta	Black Birch	12	Mix of 1" and 3" caliper	Pioneer species, full sun
	Carya ovata	Shagbark Hickory	12	1" caliper	Long lived, shade tolerant
	Cornus florida	Flowering Dogwood	10	1" caliper	Spring flowers, shade tolerant
	Fagus grandifolia	American Beech	12	1" caliper	Slow growing, shade tolerant
	Hamamelis virginiana	Witch Hazel	12	1" caliper	Fall flowers, shade tolerant
	Liriodendron tulipifera	Tulip Poplar	10	1" caliper	Fast growing, very tall when full grown, full sun to part shade
	Platanus occidentalis	Sycamore	14	Mix of 1" and 3" caliper	Fast growing, well - drained soil in full sun
	Prunus serotina	Black Cherry	8	1" caliper	Pioneer species, will colonize quickly, full sun to part shade
	Quercus rubra	Red Oak	14	Mix of 1" and 3" caliper	Long lived, well - drained soil in full sun
	Tilia americana	American Linden	12	1" caliper	Drought tolerant, full sun to part shade
SHRUBS					
SHRUB TYPE	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
Evergreen	Kalmia latifolia	Mountain Laurel	40	1 gal.	Part shade, moist soil
Deciduous	Lindera benzoin	Spicebush	20	1 gal.	Well drained soil, full sun to part shade
	Vaccinium angustifolium	Lowbush Blueberry	30	1 gal.	Can tolerate poor soils, will colonize quickly
	Vaccinium corymbosum	Highbush Blueberry	30	1 gal.	Full sun to part shade
	Viburnum acerifolium	Maple Leaved Viburnum	10	1 gal.	Full sun to part shade
	Viburnum prunifolium	Blackhaw Viburnum	20	1 gal.	Full sun to part shade
HERBACEOUS					
HERBACEOUS TYPE	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
Perennials	Anemone quiquefolia	Wood Anemone	200 sf	Plugs	
	Arisaema triphyllum	Jack-in-the-Pulpit	200 sf	Plugs	
	Aster divaricatus	White Wood Aster	200 sf	Plugs	
	Carex pennsylvanica	Pennsylvania Sedge	14,000 sf	Mix of plugs and seed	
	Dryopteris spp.	Woodferns	10,000 sf	Plugs	
	Erythronium americana	Trout Lily	200 sf	Plugs	
	Geranium maculata	Wild Geranium	200 sf	Plugs	
	Maianthemum racemosa	False Solomon's Seal	200 sf	Plugs	
	Polygonatum odoratum	Solomon's Seal	200 sf	Plugs	
	Podophyllum spp.	Mayapple	200 sf	Plugs	
	Polystichum aristichoides	Christmas Fern	3,000 sf	Plugs	
	Solidago caesia	Woodland Goldenrods	8,200 sf	Plugs	
	Thelypteris noveboracensis	New York Fern	3,000 sf	Plugs	

STAND DEVELOPMENT PLANTING PLAN

The stand development planting plan is intended to include some pioneer species and some slower growing species to implement an ecological landscape at a transitional stage of succession. The mix of perennials, softwoods, and hardwoods should undergo succession processes naturally, eventually maturing into a Hemlock - Northern Hardwood forest.

The planting plan is a framework rather than a detailed plan. It is recommended that invasive species, especially the Japanese Knotweed, are removed before planting the new species. We recommend planting most of the trees in small sizes (1" caliper for deciduous and 3-4' for evergreen) to reduce overall cost. Some larger sizes (3" caliper for deciduous and 6 - 7' for evergreen) should be planted in key areas. Plantings on the island and around the tannery footprint should include larger hemlock trees.

The stand development planting plan includes suggestions for quantities of each species, but these guidelines are flexible. The quantities for each species can be altered, depending on maintenance requirements and desired aesthetic effect.

Ultimately, the Hemlock - Northern Hardwood forest will recall the ecology of the landscape that was present before the tanneries felled many of the hemlocks in the area and non-native tree species were planted. The forest will take 60 - 100 years to reach maturity, and implementing this strategic stand development planting plan will lay the foundation for this to occur.



STAND DEVELOPMENT PLANTING PLAN - KEY

- TREES
- SHRUBS
- HERBACEOUS



SCALE 1" = 200'-0"

DAY USE AREA - STAND DEVELOPMENT PLANTING PLAN

PROPOSED LANDSCAPE PLAN

● SPRING FLOWER COLOR
● FALL LEAF COLOR

PLANT SPECIES

TREES



● SPRING
● FALL

Acer pennsylvanicum
Striped Maple



● SPRING
● FALL

Acer rubrum
Red Maple



● SPRING
● FALL

Acer saccharum
Sugar Maple



● SPRING
● FALL

Betula alleghaniensis
Yellow Birch



● SPRING
● FALL

Betula lenta
Black Birch



● SPRING
● FALL

Carya ovata
Shagbark Hickory



○ SPRING
● FALL

Cornus florida
Flowering Dogwood



● SPRING
● FALL

Fagus grandifolia
American Beech



● SPRING
● FALL

Hamamelis virginiana
Witch Hazel



● SPRING
● FALL

Liriodendron tulipifera
Tulip Poplar



● SPRING
● FALL

Platanus occidentalis
Sycamore



● EVERGREEN

Pinus strobus
White Pine



○ SPRING
● FALL

Prunus serotina
Black Cherry



● SPRING
● FALL

Quercus rubra
Red Oak



○ SPRING
● FALL

Tilia americana
American Linden



● EVERGREEN

Tsuga canadensis
Eastern Hemlock

SHRUBS



● SPRING
● EVERGREEN

Kalmia latifolia
Mountain Laurel



● SPRING
● FALL

Lindera benzoin
Spicebush



○ SPRING
● FALL

Vaccinium angustifolium
Lowbush Blueberry



○ SPRING
● FALL

Vaccinium corymbosum
Highbush Blueberry



○ SPRING
● FALL

Viburnum acerifolium
Maple Leaved Viburnum



○ SPRING
● FALL

Viburnum prunifolium
Blackhaw Viburnum

HERBACEOUS



○ SPRING

Anemone quinquefolia
Wood Anemone



● SPRING

Arisaema triphyllum
Jack-in-the-Pulpit



○ SPRING

Aster divaricatus
White Wood Aster



● EVERGREEN

Carex pennsylvanica
Pennsylvania Sedge



● SPRING

Dryopteris spp.
Woodferns



● SPRING

Erythronium americana
Trout Lily



● SPRING

Geranium maculata
Wild Geranium



○ SPRING

Maianthemum racemosa
False Solomon's Seal



○ SPRING

Polygonatum odoratum
Solomon's Seal



○ SPRING

Podophyllum spp.
Mayapple



● EVERGREEN

Polystichum aristichoides
Christmas Fern



● SPRING

Solidago caesia
Woodland Goldenrods



● SPRING

Thelypteris noveboracensis
New York Fern



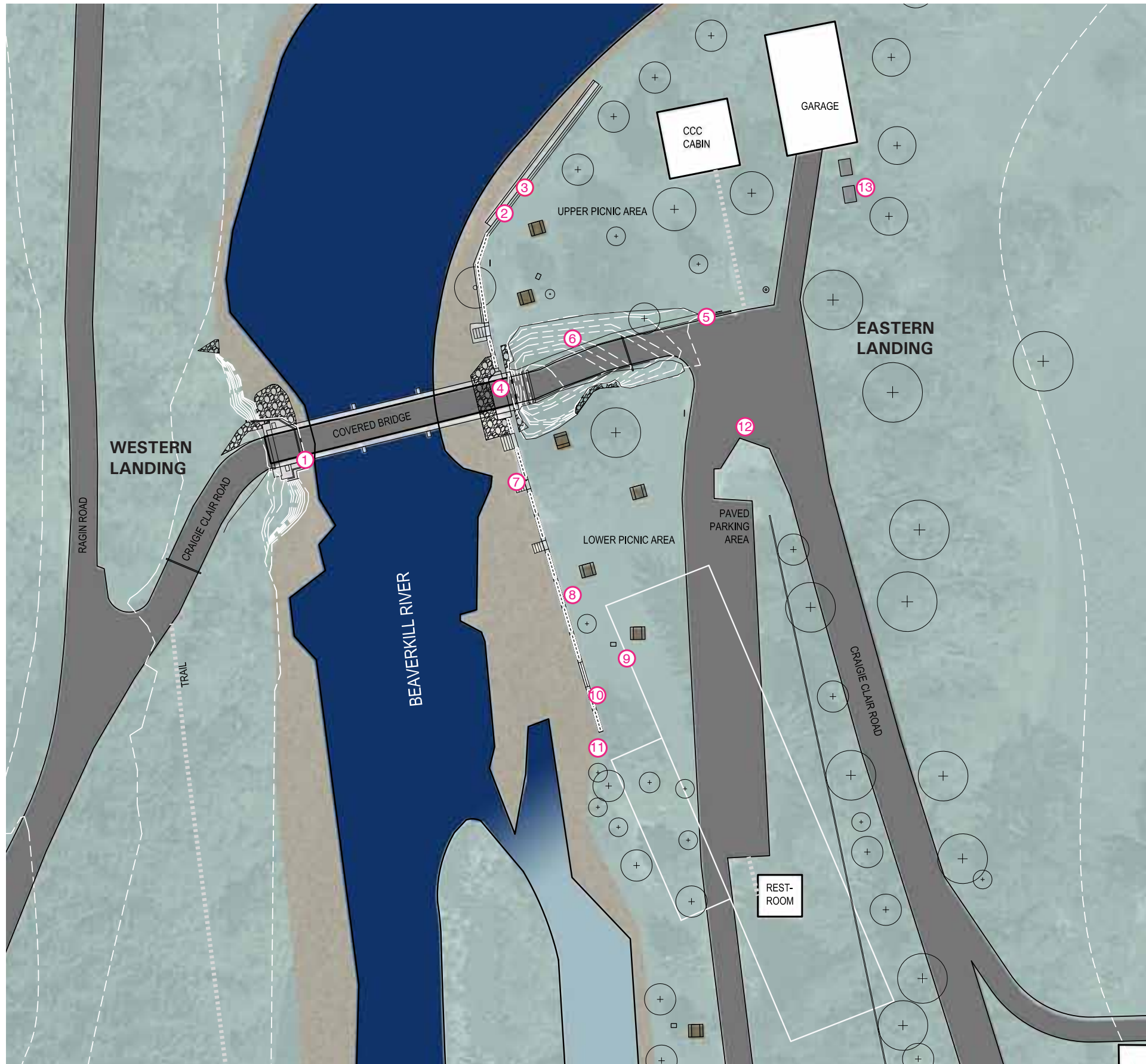
● SPRING

Viola sororia
Violet

PLANT SPECIES

All plant species recommended are native to the area. The plant palette shown on pages 46 - 47 includes a seasonal color guide. Seasonal color should be taken into consideration when planning plantings for the area. A mix of evergreen and deciduous trees and year round color is desirable for the focus area.

PROPOSED LANDSCAPE PLAN



COVERED BRIDGE LANDING - EXISTING CONDITIONS

SCALE 1" = 50'-0"

EXISTING CONDITIONS - KEY

1. WESTERN BRIDGE ABUTMENT DOES NOT MATCH OTHER ABUTMENT
2. WOOD RAIL FALLEN
3. GABIONS NEED REPAIR
4. PATH UNDER BRIDGE TOO NARROW
5. CONCRETE TRAFFIC BARRIER BLOCKS ACCESS
6. GRASSY SLOPES HIDE HISTORIC STONE WALLS
7. BOTTOM STEP DOES NOT REACH BEACH
8. DEAD TREE AND STUMP NEED REMOVAL
9. TANNERY FOOTPRINT NOT CURRENTLY VISIBLE OR MARKED IN ANY WAY
10. WOOD RAIL MISSING
11. INVASIVE PLANTS AND OVERGROWN VEGETATION
12. EXCESSIVE PAVING
13. TRASH BINS VISIBLE

 EXISTING TREE

 PICNIC TABLE



COVERED BRIDGE LANDING ENLARGED PLAN

This enlarged plan focuses on the covered bridge landing in the day use area, and demonstrates the following:

IMPROVED CONNECTIVITY AND ACCESSIBILITY

An accessible path along the CCC walls and widened pathway under the bridge allows for better access along the riverfront and better connectivity between the upper and lower picnic areas.

INCREASED PICNIC AREAS

Picnic tables are added to the lower picnic area and a shaded area within the tannery footprint. A few picnic tables are added to the upper picnic area in strategic locations so as not to interfere with ball playing.

HIGHLIGHT HISTORY

Outlining the tannery footprint in stone will highlight the history of the landing area. Turning the CCC cabin into an interpretive center for the area will educate visitors. The interpretive center could include information on the tannery, the CCC, and fly fishing. The hemlock grove will celebrate the native ecology of the region.

REPAIRS / RESTORATION

Repairing and restoring existing site elements will make the Beaverkill landscape a more attractive destination for all day use visitors. Repairs and restoration of the CCC built features is a priority.

PROPOSED LANDSCAPE PLAN - KEY

- 1. WESTERN BRIDGE ABUTMENT CLAD WITH STONE
- 2. ADDITIONAL STAIRS DOWN TO RIVER ADDED
- 3. WOOD RAIL AND GABIONS REPAIRED
- 4. ACCESSIBLE PATH
- 5. PATH UNDER BRIDGE WIDENED
- 6. STONE WALLS EXPOSED
- 7. PAVING REDUCED
- 8. HEMLOCK GROVE PICNIC AREA
- 9. DEAD TREE AND STUMP REMOVED
- 10. WOOD RAIL REPAIRED
- 11. INVASIVE AND OVERGROWN VEGETATION REMOVED
- 12. TANNERY FOOTPRINT OUTLINED IN STONE
- 13. SHRUB / HERBACEOUS PLANTING
- 14. BENCHES ADDED TO RIVERFRONT
- 15. CONCRETE BARRIER REMOVED
- 16. PERMEABLE PAVERS INSTALLED IN PARKING AREA
- 17. PLANTING BUFFER HIDES TRASH BINS FROM VIEW

 EXISTING TREE

 PROPOSED TREE

 BENCH

 PICNIC TABLE

 HERBACEOUS NATIVE PLANTING

 LAWN



SCALE 1" = 50'-0"

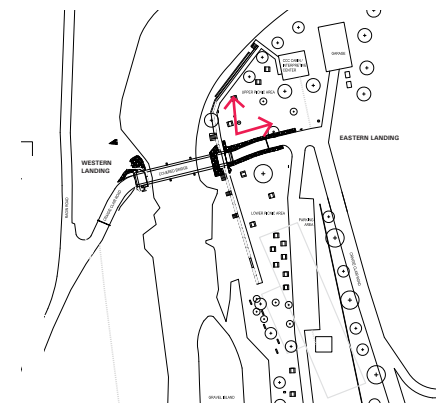
COVERED BRIDGE LANDING - PROPOSED LANDSCAPE



PROPOSED LANDSCAPE PLAN



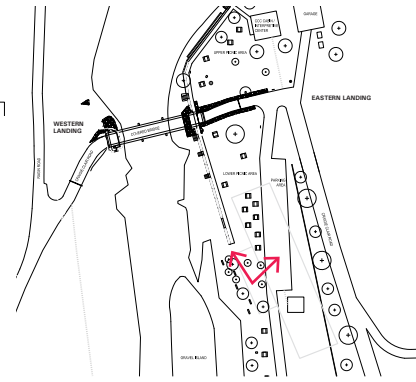
COVERED BRIDGE LANDING - UPPER PICNIC AREA RENDERING



KEY



COVERED BRIDGE LANDING - LOWER PICNIC AREA RENDERING



KEY

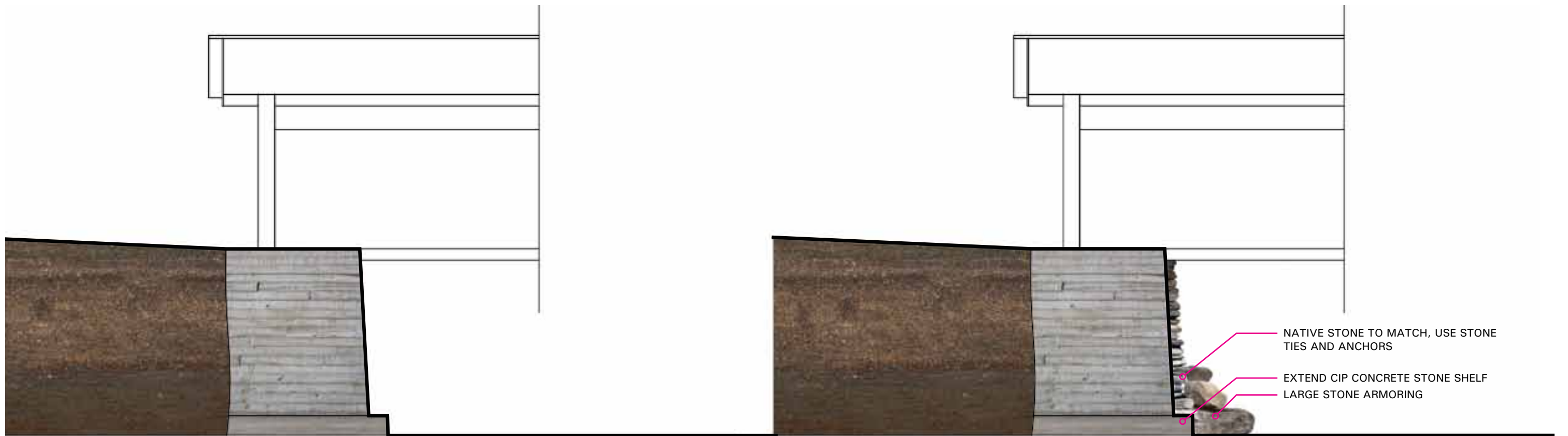


PROPOSED LANDSCAPE PLAN



EXISTING WESTERN ABUTMENT - ELEVATION

PROPOSED WESTERN ABUTMENT - ELEVATION



EXISTING WESTERN ABUTMENT - CROSS SECTION

PROPOSED WESTERN ABUTMENT - CROSS SECTION



WASHROOM BUILDING RECOMMENDATIONS

PROPOSED LANDSCAPE PLAN



CCC INTERPRETIVE CENTER PRECEDENT, LACEY KEOSQUQUA, IA



CCC INTERPRETIVE CENTER PRECEDENT, DECEPTION PASS, WA

PROPOSED LANDSCAPE PLAN



EXISTING SIGNAGE

CULTURAL LANDSCAPE INTERPRETATION STRATEGY

The Covered Bridge Landing at Beaverkill, nestled within the Valley of the Beaverkill landscape, is a contemporary national treasure that sits atop many layers of historic transformation and change. An intrinsic understanding of the stories, histories, and lives that have influenced the river and its surrounding landscape over many generations are key to the successful interpretation, use and management of the Beaverkill site into the future. The interpretation plan and landscape plan shall highlight the four themes of: the industrial/commercial history of the Landing; trout fishing on the Beaverkill; the Civilian Conservation Corps; and the conservation work of the Open Space Institute and its partners. The design of a successful cultural landscape interpretation strategy will attract a healthy number of visitors, while mitigating and minimizing their impact on the environment.

The definition of a cultural landscape as U.S. National Park Service US Department of the Interior is; “a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.”

PROPOSED INTERPRETIVE STRATEGY

The design of a successful cultural landscape interpretation strategy will attract a healthy number of visitors, while mitigating and minimizing their impact on the environment. The Beaverkill strategy should be focused on supporting the users of the site and their terrestrial/aquatic recreational activities, such as camping, picnicking, nature-walking, hiking, cycling, swimming, rod-and-reel fishing and fly-fishing. The interpretive strategies success rests upon several key factors, which are; the creation of a fulfilling recreational experience, cost effectiveness, safety, legibility, experiential qualities, educational strategy, and retaining the sense of history and culture for the community and visitors. But first and foremost the ambition of the interpretive strategy should be directed towards the visitors have a good experience to which they will return.

THE NARRATIVES

The Four Narratives of the Beaverkill region that have been identified will offer visitor’s unique experiences of the surrounding ecosystems, landscapes and their accompanying socio-ecological environments. By reinvigorating long forgotten trails, uncovering overgrown or abandoned pathways and reinterpreting points of interest along existing roads, pathways and trails, the character of Beaverkill will come alive. The themes that have been earlier identified could be further simplified when companioned with particular themes and are assigned dominant biotopes that explore characteristic local landscapes.

The following is an example of the narrative and their associated themes and biotopes.

1/ The industrial/commercial history of the Landing;

Historical Narrative: This narrative could explore the historical aspects of the site, focusing upon the evolution of the site from an indian fortress, to the springing up of hamlets such as Turnwood, Beaverkill, Berry Brook and

Craig-E-Claire due to the Eastern hemlock bark providing essential tannic acid. The walks through the forest could explain the extraction process.

Biotope: This narrative could focus upon the Eastern Hemlock forests surrounding the site and include a rediscovery of some of the old Indian trails, the Logging trails and focus on the old tannery site located at the Day Uses Area.

2/ Trout fishing on the Beaverkill;

Ecological Narrative: This narrative could explore the ecological aspects of the site, focusing on the river and its identification as one of the best fly-fishing locations in the world, the natural ecological diversity that exists based on the topography where every foot of river is bedded to great depths with rocks of all sizes, colors and shapes.

Biotope: This narrative could focus upon the river and the stretch of water and river banks adjacent at the Covered Bridge, stretch of river along the Beaverkill camping grounds, the Island and the crossings at the River Ford and the road and views along the road from the Iron Bridge to the Campsite.

3/ The Civilian Conservation Corps;

Cultural Narrative: This narrative could explore the cultural aspects of the site, as one of the largest of the Catskill public campsites, locate on the stream of the same name constructed by the CCC (Civilian Conservation Corps).

Biotope: This narrative could focus upon the campsite and the day use area, giving a distinctively architectural/infrastructural interpretation about the construction of the site and the culture of the CCC.

4/ The conservation work of the Open Space Institute and its partners;

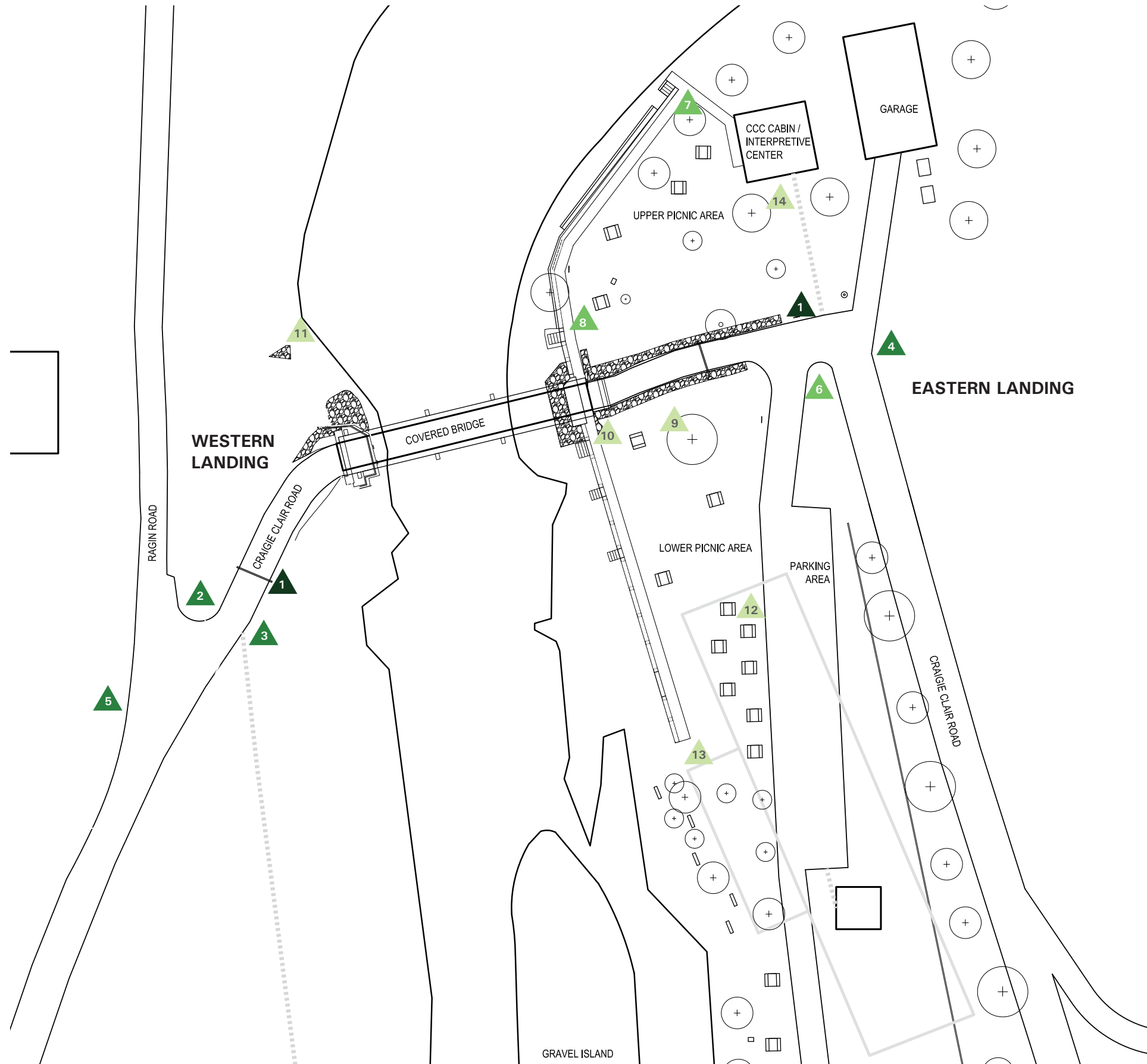
Environmental Narrative: This narrative could explore the environmental aspects of the site, focus upon the river broader regional landscape and adjacent properties. Local roads, which were once Indian trails could be identified and connectivity to existing bike trails could be explored. The system of hiking trails and log lean-to shelters described in Recreation Circular 9 “Catskills Trails”, a historical document described in the ‘Stories of Beaverkill’ and developed by the Conservation Dept.

Biotope: This narrative could focus upon the river broader regional landscape and adjacent properties with its system of hiking trails and log lean-to shelters.





TRADITIONAL ANALOG INTERPRETIVE STRATEGY

The current interpretive strategy and overall visitor experience to the Beaverkill landscape and Covered Bridge Landing could be greatly improved with upgrades to existing physical signage. These improvements would be directed towards creating uniquely signage strategy composed of a suite of characteristic typologies; such as Gateways, Maps, Directions, Information, and Interpretation. The Gateways, being the first impression for a visitor should be distinctive and closely connected with Visitor Center’s. Interpretive Maps and Directional signage should aim to initially improve legibility and strengthen connections between the two distinct locations, while also assist visitors driving to the campgrounds from the town of Roscoe and between the Campsite and the Covered Bridge Landing. In addition, the current physical map should be replaced by a physical brochure that offers directional information, behavioral protocols, a brief history of the site and explains the possible regional and local trails that

PROPOSED LANDSCAPE PLAN



INTERPRETIVE SIGNAGE - KEY

-  **GATEWAY & MAP:**
 - 1. GATEWAY SIGN AND ACCOMPANYING MAP SIMILAR TO SIGN AT CAMPSITE
-  **DIRECTIONAL:**
 - 2. TO CAMPSITE ALONG BERRY BROOK ROAD
 - 3. TO RESTORED TRAIL ALONG HISTORIC ROAD TO CAMPSITE
 - 4. TO LIVINGSTON MANOR ALONG CRAIGIE CLAIR ROAD
 - 5. TO ROSCOE ALONG BERRY BROOK ROAD
-  **INFORMATIONAL:**
 - 6. DAY USE AREA OPENING AND CLOSING TIMES, SEASONAL INFORMATION ON FLY FISHING
 - 7. COVERED BRIDGE POOL
 - 8. FLY FISHING
-  **INTERPRETIVE:**
 - 9. COVERED BRIDGE - UNIQUE TRUSS CONSTRUCTION
 - 10. OLD BEAVERKILL TRAIL
 - 11. COVERED BRIDGE POOL
 - 12. OLD TANNERY AND HEMLOCK FORESTS
 - 13. FLY FISHING ACROSS FROM ISLAND

SCALE 1" = 50'-0"

COVERED BRIDGE LANDING - INTERPRETIVE SIGNAGE PLAN

can be explored. Information Signage should highlight distinctive points of interest at the sites and where necessary advise of safe behaviors. Interpretive signage could be themed to represent four unique narratives and/or biotopes, which would simplify the visitor's understanding of the interpretive strategy and the site.

DIGITAL INTERPRETIVE STRATEGY

While digital connectivity is presently unreliable and difficult to access at the Beaverkill site, the introduction of an app that works off-network and that is based on geo-located points of interest, would be an invaluable interpretive tool. The digital strategy could be standalone or intuitively accompany the analog signage strategy, offering a new, interesting and replicable model for curating cultural landscape experiences in the region. The basis of the platform would be a dynamic, digital mapping tool that would allow a user to choose from one of 4 self-guided Interpretive Trails that convey the site's history; the industrial/commercial history of the Landing; trout fishing on the Beaverkill; the Civilian Conservation Corps; and the conservation work of the Open Space Institute and its partners. Analog signs placed at Points of Interest along the Interpretive Trails could be geo-tagged, meaning the signs could trigger pushed content to your smartphone that would offer both information and navigational prompts. Content for the app could be easily developed from the existing stories that have been collected in the compendium of books, titled 'Stories of the Beaverkill, in addition to collecting and curation of information from Fly-fishermen and the histories of the Open Space Institute.

The app, available for Android and iOS could be available as a free download with static content and in-app purchasing from dynamic content that would include audio. The app would display location-based information and enables social interaction with other visitors. Pushed content about nearby points of interest (POI) could include images, video, audio, safety tips, behavioral protocols, open/closing times, navigation continuation prompts, related websites, and a themed route filter which curates the themed experience of the individual user from all possible POI, as well as announcements of important events and useful local knowledge. This digital strategy could be engaged and interconnected with the new NYS DEC Maurice B. Hinchey Catskill Interpretive Center as a "jumping-off" point for exploring Beaverkill and the Catskills at large.

SELF-GUIDING WITH PROMPTS

The analog signage strategy would push content, in 2 forms; continuation prompts to assist basic navigation and information on POI's. To trigger pushed information, signage would be geo-fenced within a range of 20-50 feet depending on the distance from the road.

1/ Continuation Prompts for navigation

After a route or destination is set, signage would be geo-fenced to trigger continuation prompts indicating the next navigation instruction.

2/ Information Signage / Gateways & Maps / Interpretation Signage for POI's

Along a route, POI's would be shown and POI information pages would be triggered when users are within a specified distance from signage.

SIGNAGE STORIES

Gateways & Maps:

- A/ Introduce Gateway signage and accompanying map as seen at the Beaverkills Overnight Campground -
- Highlight the overall history of the site and the preservation of the region due to its proximity to New York as mountain resort and local campground.

Interpretive:

B/ The industrial/commercial history of the Landing;

Interpretive signage on Covered Bridge

- Highlight the unique construction for the 18th century bridge and it's place as one of few remaining covered bridges in New York.

Interpretive signage on Old Tannery and Hemlock Forests

- Highlight the establishment of the Tannery in the 18th century and its siting in proximity to an abundant source of the Eastern Hemlocks of which the bark was used in the tanning process.
- Explanation of the tanning process, including the Eastern Hemlock forests, the mill and the river

C/ Significance as one of the founding campgrounds in the Catskills region

- Highlight the significance of the area as the second public campground in the Catskills region
- Highlight the construction of the campground for the recreational Fly-fishermen

D/ Trout fishing on the Beaverkill;

Interpretive signage on covered bridge pool

- Highlight the deep, natural pool historically used for bathing
- Highlight the pool as a daily swimming and bathing pool used by the resort goers and the location of the two bath houses once sited up on the rock ledge on the far side of the pool.

Interpretive signage on Fly-fishing across from Gravel Island

- Highlight the Beaverkill as one of the most noted Fly-fishing trout streams of the east.
- Summer resort and golfcourse on the river Flats of the Beaverkill.

E/ The Civilian Conservation Corps;

CCC Interpretive Signage at the Main Cabin/Interpretive Center

- Highlight the history of the CCC in the 1930's

Interpretive Signage of the CCC campground

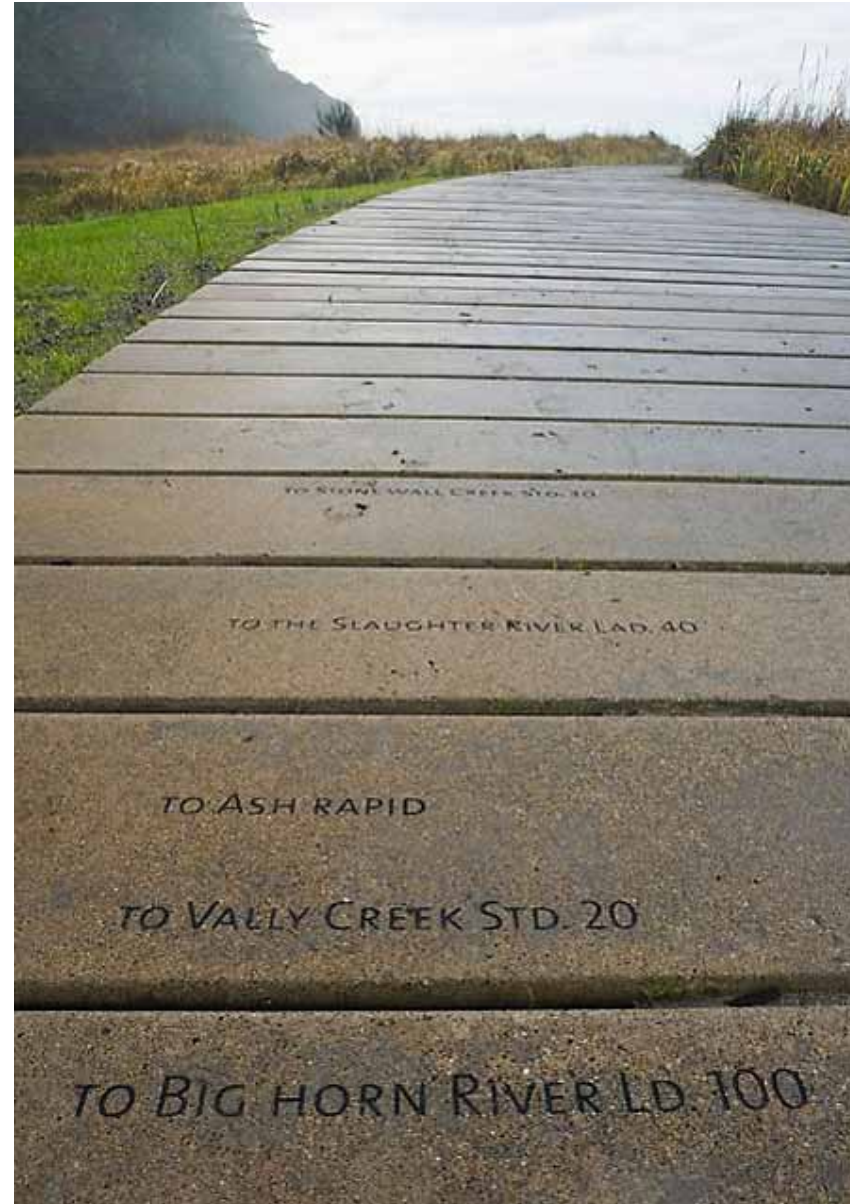
- Highlight the construction of the lower campgrounds by the CCC

F/ The conservation work of the Open Space Institute and its partners;

Interpretive signage on Old Beaverkill Trail -

- Highlight the geographic significance of the mountain trough of the Beaverkill River as a boundary frontier of warring tribes.
- Highlight the capture and death of the two historical Indian scouts John H. Osterhout and Silas Bowker
- Highlight the nearby Indian burial mounds
- Historic wildlife of the area including wildcats, coyotes, bears and wild turkeys
- Historic significance of Beech Hill Road, Mary Smith Road and Berry Brook Road as old Indian trails

PROPOSED LANDSCAPE PLAN



PROPOSED NEW INTERPRETIVE SIGNAGE AS SURFACES AND SIGNS: STORYTELLING TEXT IN PAVING, FACADE TREATMENT SIGNAGE AND FREESTANDING SIGNAGE



EXAMPLES OF GATEWAY SIGNAGE AND MAPPING

PROPOSED LANDSCAPE PLAN

EXAMPLES OF INTERPRETIVE SIGNAGE COVERING THE FOUR THEMATIC TOPICS OF THE INTERPRETIVE STRATEGY

1/ The industrial/commercial history of the Landing;

Tanneries

During the peeling season, an army of men stayed in the forest, near the hemlocks, living in temporary log houses and crude shanties. One, who became a bark peeler at the age of thirteen described his first experience in such a shelter:

One of them, about 16 by 20 feet, I was in. There were two beds, a fireplace, a small stove, some benches and a table in the one room downstairs. Above there was a loft where the men slept on the floor. There was a ladder alongside the chimney leading up stairs, and right under that ladder there was a big black bear chained. I tell you, my eyes stuck right out when I seen that bear, for I had come down from Prattsville, where there was a village. There was an old a woman cooking and smoking a pope over the kettles. In that house lived the owner and his wife, six children, four workmen, the bear and a couple of dogs.

~ The Beaverkill: The history of a River and Its People by Ed Van Put

2/ Trout fishing on the Beaverkill;

The River

Quite frequently, as the river runs down the valley, an exposed section of bedrock forms the bank or bottom of the stream. These solid rock surfaces direct the water's cutting force, continually sweeping out the sand and gravel, and maintaining the deeper pools of the upper river.

These cool glens are just one of the features that inspired fishermen of the mid-nineteenth century to call the Beaverkill a "good place for trout fishing." Trout love the river's cold, clear springs and feeder streams, shaded archways of evergreens and hardwoods, water that rarely rises above 70 degrees, beds of clean gravel and sand for spawning, and organic matter on which feed the insects on which feed the trout. Add an angler and the food chain is complete.

~ The Lure of the Beaverkill by Austin M. Francis

4/ The conservation work of the Open Space Institute;

Trails

Beaverkill was named after the beavers that were in abundance there. Before the settlers came to the Town of Rockland, the Indians had their own method of tanning hides. The Indians would scrape off all the flesh from the hide and then bury the hide in the ground. This method was used to take off all the hair. After this process the hide was sprinkled with rotten wood and left to cure.

The first settler in the Town of Rockland found Iroquois Indians to the north. Algonquin Indians to the South and the Lenni Lenapes located here. The pioneers had trails instead of roads. The biggest trail was the Sun Trail. It ran from the Hudson River to the East Branch of the Delaware River.

In 1815, John Hunter hired Abel Sprague (born in Lew Beach in 1766 and died in 1842 at Lew Beach) to cut the trail out and build a road. Other trails were: Berry Brook Trail, Beaverkill Trail, Mary Smith Trail, and Cross Mountain Trail. These trails enabled the settlers to develop areas of Beaverkill.

~ The History of Livingston Manor by Bill Merritt

3/ The Civilian Conservation Corps;

The Civilian Conservation Corps

The CCC era was a bustling one for Beaverkill. The camp was run in high military fashion with the workers living in tents at the lower campground and much organized activity attended by bugle calls that echoed through the whole valley in the mornings and the evenings. The photograph shows a CCC construction crew working on the signature stone walls at the Beaverkill campground.

~ Another Day, Another Dollar by Diane Galusha and Stories of the Beaverkill by Friends of the Beaverkill Community



An example of dates and events to be included on an Interpretive Timeline as follows;

- 1708 Hardenbergh Patent was granted covering most of the Catskills.
- 1775 Robert Livingston, then principal proprietor of the Hardenbergh Patent died. His eldest son, Chancellor Robert R. Livingston, inherited the land.
- 1789 Jehiel Stewart is reputed to be first settler in Rockland.
“... He travelled down the Beaverkill, crossing and recrossing it twenty-five times before he reached the Big Flats, where he had concluded to settle. He had to cut his way through with an ax, and transported his furniture and family on ox-sleds.”
- 1798 Town of Neversink formed from Rochester, Ulster County on March 16, 1798. It contained what later would become the Town of Rockland.
“After the Revolutionary war, if any Indians remained in the county, their wigwams were in Rockland. The great abundance of wild animals as well as fish, and the warm and sheltered river-bottoms where the squaws raised maize and other cereals known to Indian agriculture, rendered it fit for the subsistence of the red man, and he abandoned it with reluctance. In its natural state it was a savage paradise, and not until Rockland was surrounded by white settlements, did the Lenape hunters abandon it.”
- 1798 The lumber trade began in the town.
- 1809 Town of Rockland formed from Town of Neversink on March 29, 1809. “It is a rough, wild region, very hilly and mostly covered with forests. Its principal streams are the Beaver Kil and Williwemack Creek... Lumbering, farming and tanning are the principal pursuits of the people.
- 1819 Washington Irving writes a humorous account of a fishing expedition in the Catskills titled “The Angler” and published in The Sketch Book of Geoffrey Crayon, Gent. in 1819.
- 1838 The American Turf Register and Sporting Magazine praises fishing in the area.
“The Williewemauk, Calikoon and Beaverkill are three of the finest trout streams in the country; they are comparatively unknown to city anglers and are less fisher than any others of like pretension within our knowledge.”
- 1860 Naturalist John Burroughs made his first fishing trip to the Neversink and Beaverkill. Hiking in over Big Indian mountain, he found “a mountain brook born of innumerable ice-cold springs, with fish as black as the stream and very wild.”
- 1865 Beaverkill Covered Bridge constructed, probably by carpenter John Davidson of Shin Creek.
- 1869 Westfield Flats contained 28 houses
- 1872 Beaver Kill (P.O.) contains a school, a tannery (which employs fifteen persons and consumes 2,000 cords of bark and tans 20,000 sides of leather annually), a blacksmith shop and about 100 inhabitants.
- 1873 Salmo Fontinalis, founded on Beaverkill, first fishing club in the Catskills.
- 1875 Rainbow trout stocked in Catskill rivers.
- 1880 First wood acid factories opened on Catskill rivers; production of wood alcohol, acetate and charcoal peaked during World War I.
- 1883 Balsam Lake Club founded at headwaters of Beaverkill.

- 1886 Brown trout introduced in Catskill rivers.
- 1887 Jay Davidson opened Trout Valley Farm in Beaverkill as fishing hotel; operated from 1922 to 1963 by Fred Banks.
- 1892 The Fish and Game Protective Association of Sullivan County, New York formed by Theodore Gordon and others to provide wardens on the Neversink, Willowemoc and Beaverkill to help enforce state game laws and stop predatory fishing practices.
- 1895 Fly Fishers Club of Brooklyn, incorporated by a group of brewers, establish headquarters in Ben Hardenburg’s log cabin on the Beaverkill.
- 1895 Catskills’ first fish hatchery opened on Beaverkill two miles upstream from Junction Pool; it was shut down in 1901 because of insufficient year-round supply of cool water.
- 1900 Beaverkill Fishing Association established on Beaverkill south of Lew Beach; became Beaverkill Trout Club in 1910.
- 1908 William Keener caught an 8.5-pound brook trout in The Punchbowl, near Roscoe. The catch still holds the state record.
- 1908 Highway leading through lower Beaverkill valley designated Rt. 4 by NYS legislature. It was part of the Liberty Highway, an assembled “auto trail” connecting New York City and Cleveland, Ohio.
- 1915 Ashokan reservoir completed, damming the Esopus Creek; the first NYC reservoir in the Catskill watershed.
- 1918 Roy Steenrod encountered a large hatch of mayflies while fishing on the Lower Beaverkill and created an artificial fly to match it. Named the Hendrickson, for his fishing companion, A.E. Hendrickson, it became the most popular brown trout lure in the country.
- 1936 Construction of Beaverkill state campground begun by workers in the Civilian Conservation Corps.
- 1936 Construction of Beaverkill state campground begun by workers in the Civilian Conservation Corps.
- 1965 First no-kill section designated on Beaverkill; later extended and carried over to Willowemoc, creating a 6.24 mile no-kill zone in the Roscoe area.
- 1976 Catskill Waters, a special interest group, succeeded in getting state legislation passed giving control to the State Department of Environmental Conservation over water releases from New York City reservoirs.
- 1981 Catskill Fly Fishing Center founded.
- 2000 The 2000 U.S. Census enumerated 597 people, 261 households, and 157 families residing in the hamlet of Roscoe.
- 2010 Roscoe’s population was recorded as 541 a loss of 56 persons since 2000.

Source: Lower Beaverkill Valley Historic Resource Survey Report

04

STAKEHOLDER ENGAGEMENT

STAKEHOLDER ENGAGEMENT



SUMMER SWIMMERS IN THE BEAVERKILL SWIMMING HOLE



TEAM SITE WALK WITH THE DEC, OSI AND STAKEHOLDERS

COMMUNITY AND STAKEHOLDER ENGAGEMENT

One of the great treasures of the Beaverkill landscape and Covered Bridge Landing is that there is an active and informed community who cares deeply about the history and future of the Beaverkill Valley. The success of any interpretive and design proposal for the Beaverkill landscape and Covered Bridge Landing will be built on the foundation of deep roots and intelligent narratives from the Beaverkill community. This project is fortunate to have the support of the NYS DEC and OSI, as well as influential stakeholders who can advocate for action to improve the public amenities, recreational features as well as helping promote the uniqueness of this cultural landscape within the heart of the Catskill region.

The project began on May 26, 2015 with a kickoff meeting in Roscoe, New York at the home of John Adams. Local stakeholders, as follows, were in attendance:

John Adams (OSI, NRDC, Catskill Mountain Keeper -Host); Patricia Adams (Host, Author); Ramsay Adams (Catskill Mountain Keeper); Bert Darrow (TG Fly Fishing); Kathy Moser (NYC DEC); Erik Kulleseid (OSI); Peter Malik (TNC); Bill Rudge (NYS DEC); Tom Burnham (TCFD); Jen Garofalini (OSI); Judith Katz Teitler; Petr Malik (TNC); Walter Teitler; Eric Hamerstrom; Roger Lawrence; Audrey Forrer; Steve Forrer; Barbara Wilks (W); Martin Barry (W); Julia Watson (Studio REDE)

Another stakeholder meeting was held on November 18, 2015. The design team presented preliminary research and plans to local stakeholders. This meeting was also held in John Adams' house, and the following people were in attendance:

John Adams (OSI, NRDC, Catskill Mountain Keeper -Host); Patricia Adams (Host, Author); Ramsay Adams; Bert Darrow (TG Fly Fishing); Erik Kulleseid (OSI); Eileen Larrabee (OSI); Bob Anderberg (OSI); Peter Karis (OSI); Brenda DiCintio (OSI); Tom Gravel (OSI); Martin Brand (NYS DEC); Peter Malik (TNC); Bill Rudge (NYS DEC); Tom Burnham (TCFD); Jen Garofalini (OSI); Peter Malik (TNC); Julia Watson (Studio REDE); Julia Howe (W); Steven Handel (Green Shield Ecology)

Using input derived from the May 26, 2015 and November 18, 2015 meetings, the design team has worked independently with feedback from OSI to review the landscape inventory along with doing a basic ecological assessment, cultural history analysis, defining the landscape narrative and developing site planning concepts directly based on input from the community stakeholder meetings.

This report can be used as a resource that provides a vision for the future of the Beaverkill landscape. It is intended to provide a framework, not construction plans. This report should guide any future improvements that stakeholders and agencies plan for the focus area landscape.

“We don’t need to expand the campground but rather improve it...the campground and surrounding area is a little run down, needs improvements, but doesn’t need/want to have a lot of bells and whistles, or get too big/popular that the character changes.” <John Adams>

“Beaverkill is a special project for DEC because they have very engaged local stakeholders.” <Bill Rudge>

“DEC Natural Resources has a desire to improve the quality of Beaverkill Campground and to highlight the historic features.”
<Kathy Moser>

STAKEHOLDER ENGAGEMENT



ONE OF THE BEST, SECLUDED SWIMMING HOLES, PER STAKEHOLDER COMMENTS



TADPOLES NEAR NEAR THE SWIMMING HOLE



BEAVERKILL COMMUNITY ON INSTAGRAM



BEAVERKILL COMMUNITY ON INSTAGRAM

05

COST ESTIMATE

COST ESTIMATE

CONCEPTUAL COST ESTIMATE

The conceptual cost estimate includes all proposed improvements for the landscape focus area. The estimate is based on the proposed plan of the landing area and the interpretive strategy. This includes removals, repairs, restoration, new site furnishings, new plantings, new signage, and larger interventions such as cladding the western abutment of the covered bridge, improvements for the washroom (adding planting and removing paving around the building), and a new interpretive center in the historic CCC building.

Some items in the cost estimate are indicated by a cost range. Depending on the level of intervention or renovation desired, the price or total cost may be lower or higher than shown here. Price ranges are shown for the interpretive center and new meadow / perennial species. The interpretive center could be as simple as adding signs, repairing the cabin, and opening it to the public or a complete renovation that showcases historic features. Planting new meadow or perennial species can range from seeding an area and designating it as a 'no mow' zone to planting plugs by hand.

ADD ALTERNATES

There are two add alternates included in the estimate. Alternate #1 includes improvements for the island, and includes adding a pedestrian bridge to the island, an accessible path around the island, new picnic areas, plantings for the stand development, and signage. The island work could happen either before or after the covered bridge area work.

Alternate #2 includes improvements for the campsite. Demolition of the washroom near the island is included under this alternate because many campers take showers in the washroom. There is a desire by some stakeholders to eventually remove the washroom building and build showers by the campsite. This add alternate also includes some general improvements to the campsite area, such as adding planting, signage, and new hiking trails.

CONCLUSION

The final all-inclusive conceptual cost estimate is intended to provide practical guidance for moving forward with the improvements of the overall Beaverkill Landscape. These items can be mixed and matched or phased as desired. The framework plan should be used as a guide to moving forward, and can be used to inspire, inform and to assist in raising funds. Final cost estimates may vary from the conceptual estimate as additional information becomes available.

COST ESTIMATE VJ ASSOCIATES, 01.13.16

ITEM NO.	ITEM DESCRIPTION	UNIT	PRICE	QTY	AMOUNT	TOTAL COST
REMOVALS FOR SITE IMPROVEMENT						
1	REMOVE CONCRETE BARRIER	EA	300	1	300	\$300.00
2	REMOVE ASPHALT PAVING	SF	2	5,000	10000	\$10,000.00
REPAIR OR EXPOSE HISTORIC FEATURES						
3	REMOVE FILL UNDER BRIDGE TO WIDEN PATH	CF	5	1,000	5000	\$5,000.00
4	REMOVE FILL TO EXPOSE WALL ALONG BRIDGE RAMP	CF	10	9,000	90000	\$90,000.00
5	REPAIR FALLEN WOOD RAILS	EA	500	3	1500	\$1,500.00
6	REPAIR GABIONS	CF	200	100	20000	\$20,000.00
7	REPAIR EXISTING STAIRCASES	EA	1000	4	4000	\$4,000.00
8	ADD RIP RAP UNDER STONE WALLS	CF	25	500	12500	\$12,500.00
9	ADD STONE STAIRS TO EXISTING STAIRCASES	LF	50	20	1000	\$1,000.00
ENHANCE HISTORIC FEATURES						
10	NEW PICNIC TABLES	EA	1000	15	15000	\$15,000.00
11	NEW INTERPRETIVE CENTER IN EXISTING BUILDING	SF	4 - 300	1130	5,000 - 339,000	\$5,000 - \$339,000
12	CLAD WEST LANDING ABUTMENT WITH FIELDSTONE	SF	100	600	60000	\$60,000.00
NEW SITE ELEMENTS AND FURNISHINGS						
13	NEW BENCHES	EA	500	5	2500	\$2,500.00
14	NEW GRAVEL PATH	SF	30	2,000	60000	\$60,000.00
15	GRAVEL FOR PICNIC AREA	SF	10	2,500	25000	\$25,000.00
16	NEW STONE STAIRCASE, 5 STEPS	LF	1500	20	30000	\$30,000.00
17	NEW STONE CURB FOR TANNERY FOOTPRINT	CF	20	700	14000	\$14,000.00
18	NEW SIGNAGE	EA	500	15	7500	\$7,500.00
19	NEW TRASH CANS	EA	200	20	4000	\$4,000.00
ECOLOGICAL PLAN / PLANTING						
20	REMOVE INVASIVE UNDERSTORY PLANTS	SF	2	20,000	40000	\$40,000.00
21	NEW TREES 6-7' EVERGREEN OR 3" CALIPER DECIDUOUS	EA	800	20	16000	\$16,000.00
22	NEW TREES 3-4' EVERGREEN OR 1" CALIPER DECIDUOUS	EA	150	75	11250	\$11,250.00
23	NEW SHRUBS	EA	60	50	3000	\$3,000.00
24	NEW MEADOW / PERENNIAL SPECIES	SF	0.5 - 8	40,000	20,000 - 320,000	\$20,000 - \$320,000
25	RESEED LAWN	SF	2	15,000	30000	\$30,000.00

	subtotal		\$487,550 - \$1,121,550
GENERAL CONDITIONS	15%		\$73,133 - \$168,232
	subtotal		\$560,683 - \$1,289,782
OVERHEAD AND PROFIT	10%		\$56,068 - \$128,978
	subtotal		\$616,751 - \$1,418,760
DESIGN CONTINGENCY	30%		\$185,025 - \$425,628
	subtotal		\$801,776 - \$1,844,388
ESCALATION	6%		\$48,107 - \$110,663

Note: All tree and shrub planting prices include excavating pits and backfilling soil

ADD ALTERNATE#1 - THE ISLAND

ITEM NO.	ITEM DESCRIPTION	UNIT	PRICE	QTY	AMOUNT	TOTAL COST
1	NEW PEDESTRIAN BRIDGE TO ISLAND	EA	250,000	1	250000	\$250,000.00
2	REMOVE INVASIVE UNDERSTORY PLANTS	SF	2	5,000	10000	\$10,000.00
3	REPAIR GABIONS BY SWIMMING HOLE NEAR ISLAND	CF	200	100	20000	\$20,000.00
4	NEW PICNIC TABLES	EA	10	10	100	\$100.00
14	NEW DECOMPOSED GRANITE PATH	SF	30	5,000	150000	\$150,000.00
5	NEW TREES 6-7' EVERGREEN OR 3" CALIPER DECIDUOUS	EA	800	20	16000	\$16,000.00
6	NEW TREES 3-4' EVERGREEN OR 1" CALIPER DECIDUOUS	EA	150	85	12750	\$12,750.00
7	NEW SHRUBS	EA	60	100	6000	\$6,000.00
8	NEW MEADOW / PERENNIAL SPECIES	SF	0.5 - 4	40,000	20,000 - 160,000	\$20,000 - \$160,000
9	SIGNAGE	EA	5	5	25	\$25.00

				subtotal		\$334,875 - 474,875
	GENERAL CONDITIONS				15%	\$50,231 - 71,231
				subtotal		\$385,106 - 546,106
	OVERHEAD AND PROFIT				10%	\$38,510 - 54,611
				subtotal		\$423,616 - 600,717
	DESIGN CONTINGENCY				30%	\$127,085 - 180,215
				subtotal		\$550,701 - 780,932
	ESCALATION				6%	\$33,043 - 46,856

ADD ALTERNATE#2 - THE CAMPSITE

1	DEMO WASHROOM BUILDING	SF	5	1720	8600	\$8,600.00
2	NEW EXTERIOR SHOWERS	EA	1500	4	6000	\$6,000.00
3	REMOVE ASPHALT PAVING	SF	2	8,000	16000	\$16,000.00
4	REMOVE INVASIVE UNDERSTORY PLANTS	SF	2	20,000	40000	\$40,000.00
5	NEW SHRUBS (INCL. SOIL, EXCAVATING PITS)	EA	50	50	2500	\$2,500.00
6	NEW MEADOW / PERENNIAL SPECIES	SF	5	30,000	150000	\$150,000.00
7	SIGNAGE	EA	500	20	10000	\$10,000.00
8	NEW HIKING TRAILS	LF	10	3,000	30000	\$30,000.00

				subtotal		\$263,100
	GENERAL CONDITIONS				15%	\$39,465
				subtotal		\$302,565
	OVERHEAD AND PROFIT				10%	\$30,256.50
				subtotal		\$332,821.50
	DESIGN CONTINGENCY				30%	\$99,846.45
				subtotal		\$432,667.95
	ESCALATION				6%	\$25,960.08

Note: General conditions include site super, shop drawings, clean up, close out, site control, as-built drawings, misc. additional soft costs



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