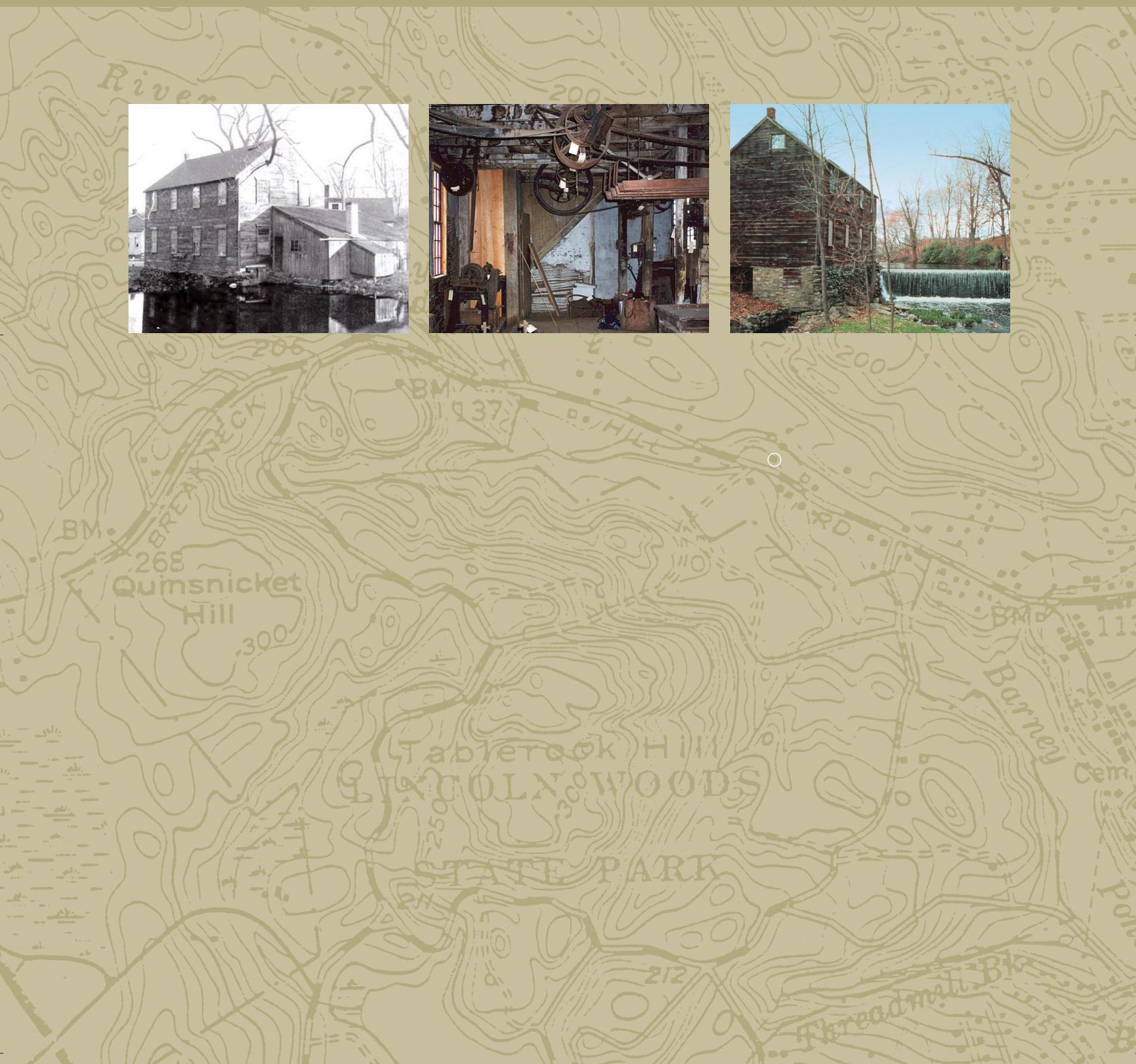
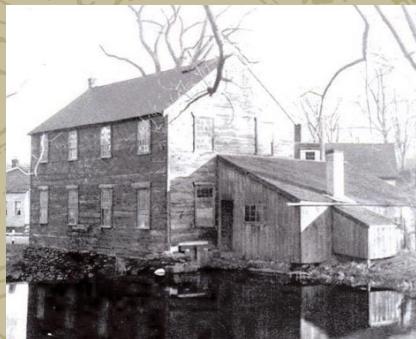


# Moffett Mill

INTERPRETIVE STRATEGIES & RECOMMENDATIONS





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## Moffett Mill Plan: Executive Summary

The purpose of the Interpretive Planning Exercise is to determine what we want the visitor to learn from the site experience and to propose a winning strategy for delivering it. The following document identifies six messages and a sequence of four successive interpretive methods to get the job done.



*Moffett Mill in the early 1900s when the lean-to blacksmith shop, on right, was still attached.*

### **Story Lines:**

- 1) The Moffett Mill is a unique survivor from the early 1800's and a rare glimpse of the beginnings of American industrial evolution. It's an important site for the Town of Lincoln, the Blackstone Valley, the State of Rhode Island, and the United States. Begun about 1810, Moffett Mill was a versatile, special order, job shop that made parts for ships, machines for the early textile industry, wagons, carriages, and sleighs for the local businesses (possibly the limestone industry) and neighborhood farmers. At one time its second floor housed a fleet of braiding machines to make shoe and corset laces. For most of its life it had a blacksmith shop attached to its main floor which could do work that required both woodworking and metal crafting skills.
- 2) One of the features that makes this structure significant is the preservation of most of its original machines and shop tools on the street level floor. It contains both wood and metal lathes, a table saw, and a drill press.
- 3) Moreover, the water driven system of belts, pulleys, line shafts, and wheels are in their original location, and the evolution of its power system from an early water wheel to a cast iron turbine, and to an electrical generator that was run by the water system is all available to be seen.
- 4) Ownership of the mill passed down through three or four generations of just two families: the Olneys and the Moffetts. Through their stewardship of the site, this unusual storehouse of industrial documentation has been saved for rising generations to enjoy and to learn about the critical middle stage from home industry to the large factory mill complexes like the nearby Lonsdale Company and the Sayles Finishing Company.

5) The present building was once the center of a cluster of little buildings which included an attached Blacksmith lean-to, a large, immediately adjacent, barn that was used to assemble the wagons and carriages, and the remains of a sawmill which was the first business on the site. Houses related to the Olney family are located



*Present day Hannaway  
Blacksmith Shop, on  
Great Road at Chase Farm.*

across Great Road, as is the remains of the probable grist mill mentioned in business records of the Olney and Moffett families. The Moffett home is preserved on the knoll arising on the north side of the mill pond.

6) The Mill was a crucial ingredient to the Great Road Historic District. It provided needed machines to nearby mills and fixed or fashioned numerous tools required by local farmers. Particularly, it appears to have been a service component to the Olney family's thread mill in what is now

Lincoln Woods State Park. That mill and its little complex of buildings was located near the dam of Olney Pond. Today, Moffett Mill is one of a half dozen sites in half a mile stretch of Great Road which comprise a well preserved scenic natural and built environment.

**Interpretive Plan A.** Assuming that a visit inside the mill will not always be possible, the plan calls for two richly illustrated interpretive wayside panels to be installed on the site of the mill, one at the proposed footbridge, the other at the side of the building itself.

**Interpretive Plan B.** In hopes that a visit to the interior of the building may be possible from time to time, the plan calls for re-installing the shop floor with all its machines and tools in their appropriate position. The opportunities for achieving a compelling "immersion experience" into a distant, historical, setting and period are so strong here that the plan calls for not introducing an intrusion of modern museum exhibit techniques like electronic interactive displays, labels, text panels, exhibit cases, special lighting, or any other dramatic effects into the main floor. Rather the plan recommends simple stabilization of existing floors, walls, and ceiling, modest cleaning of machines and tools, re-attaching of all the belts and pulleys, and then simply relying on the story-telling skills of a well-trained docent to convey how a shop like this one functioned. A good guide manual explaining how all of the machines and power supply worked would have to be devised. On the

other hand, keeping the atmosphere as free of modern intrusions as possible would not prevent the guide from producing interpretive aids and “helps” from behind the scenes when presenting certain portions of the story. These could be diagrams and pictures, working models of mechanical devices, or objects useful in explaining the workings of the water power systems used here.



*Moffet Mill and waterfall. Water entered the building at pond level, turned the water wheel or its turbine successor and exited at the basement level back into the Moshassuck River.*

**Interpretive Plan C.** While the water power story can be illustrated on a wayside panel and explained by a guide on the shop room floor, ideally a visit to the lower level, entering from the outside would make for a richer experience.

**Interpretive Plan D.** Admittedly, while much will be achieved by seeing the inside of the shop and observing the water system in place, the absence of actual movement of machines, belts, wheels and turbine still leaves a lot to the imagination.

An animated video of all these functions would go a long way to making up for this deficiency. Since it would be a mistake to intrude this function into the historic space, the recommendation is offered to consider rebuilding a lean-to on the north side of the building where the original blacksmithing operation took place and to use this new space as a visitor orientation area with a flat screen video program.

**Costs:** (Estimates are based on recent comparable programs, but would vary depending on timeliness of action, market conditions, and possible donations of labor and materials.)

Plan A: \$12,000 – two outside, Wayside interpretive panels

Plan B: \$20,000 – Reinstall main floor machines and attach belts from power system

Plan C: \$7,000 – Make outside way to lower level; re-attach power system elements

Plan D: \$30,000 – Attach a scaled replica of original lean-to and house video program

## Chronology of the Site

**1810** The Arnold family was in the Quinsnicket/Great Road area of Old Smithfield following the King Philip's War of 1675-1676. The celebrated, massive stone-end house of Eleazar Arnold dates from the 1680's. There are several other buildings pertaining to the Arnold family still extant. Active adherents of the Quaker sect, the Saylesville Quaker Meeting House from 1704 is part of their neighborhood, sometimes referred to as "Arnoldia." The earliest record of the Moffett Mill site appears to be a land and building transfer from Job Arnold to Elisha and George Olney in 1810. The deed mentions a saw mill and dam.

**1810-1812** George Olney builds and installs the Machine Shop. What it looked like or what work it was actually performing is unclear at this point, although George

Olney was involved in two early textile mills that could have used its services: the thread mill at the dam in Lincoln Woods at Olney Pond and the mill at Old Ashton, Quinnville. At the latter one, however, there is documentation for the first machines there being built by Dexter Ballou.



*Original early metal lathe and related cutting tools.*

**1818** Elisha Olney transfers his half of the works that included: a saw-mill, machine shop, and saw mill house to his son, Granville Olney. There is speculation that the saw mill was a separate building from the machine shop. Ruins on the

river a few yards south east of the machine shop may be the saw mill. Presumably, George Olney still held his interest in the property. It is quite possible that George had a real need for a machine shop at what became the Moffett Mill. [Family records of the Olney family, now at the Rhode Island Historical Society Library, confirm work done for the thread mill, a relationship with the adjacent grist and saw mill, as well as jobs done for the Butterfly Factory of Stephen Smith and Captain Wilbur Kelly at Old Ashton].

**1838** Granville Olney transfers the machine shop and its land to his son, Elisha Olney (signed in 1838; not recorded in Smithfield town records until 1841). An 1846 law suit in the RI Supreme Court's Judicial Record Center, Court of Common Pleas, indicates that Granville Olney was behind in his rent to Anthony B. Arnold

of Providence for using the Olney Thread Mill in Lincoln Woods. Granville may have been putting all of his efforts into the Thread Mill. There is the suggestion in the description of the property that the Machine Shop was linked to the Thread Mill activity.

**1845 to 1850** the Machine Shop property leaves the Olney family and passes through the hands of Elisha Godfrey and Steven Clark. Ultimately, Clark sells it to Arnold Moffett of Attleboro, Massachusetts. Business day books owned presently by descendant, Arnold Moffett of Fiskeville offer insights into the work conducted at the Mill in the 1850's and 1860's.\*(more detail at end of chronology). There are entries for making household furniture like sofas, filing and setting saws, work on wagons and sleighs, making wooden boxes and running a braid factory. They also had an extensive grist mill operation with entries in the same day book as the machine shop. There is a Moshassuck Grist Mill on the Walling maps of 1851, 1855, and 1862. It was located just across the road at the head of the Machine Shop Pond. It appears that Arnold Moffett was running this business as well as the Shop

**1853** Late in the year, Grist Mill activity fills the pages of the day book. There is also a shift away from general job shop work and the making of wooden boxes becomes a primary focus.

**1857** Big shift in activity towards making braid, particularly laces, for customers like the Greene and Daniels Mill in Pawtucket, also a wholesale outlet in Philadelphia.

**1877** Property descends to Edmund Moffett. Edmund had sons, Edmund, Chester, and two daughters, Bertha and Ella. Ultimately, Chester Moffett owned the property, but there was little activity at the shop after the beginning of the 1900's.

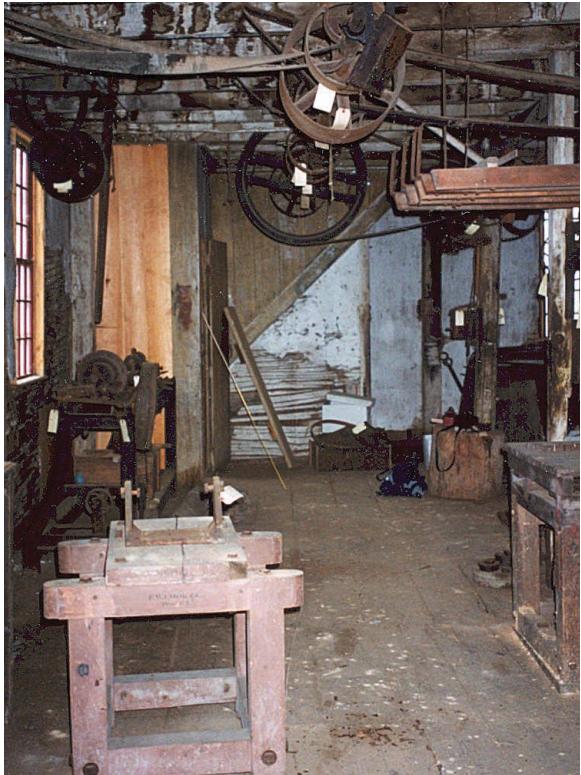
Family speculation is that George Moffett, Edmund's brother, the elder, was the active blacksmith at the Mill towards the end of the 19th century, and, when he went off on his own, the activity, which was then centered around wagon building, tailed off precipitously. Chet Moffett was a banker in Pawtucket with the Industrial National Bank. After his death, Ella Moffett Mowry lived in the house above the mill until the 1980's, when she went into a nursing home.

**1880** An iron water turbine replaces the breast-style water wheel. There is a puzzling gap in the historical documentation here. There is some indication that the

Moffetts were getting out of the braiding business and thereby closing down one of their major activities. Some observers see this as an indicator that the mill was on its way to ceasing operation. If that were the case, then a significant step like upgrading the water power with the installation of a turbine would seem to contradict that finding. Another answer could be that, from then on, wagon building was the principal activity for the next twenty years. As was the case with many Great Road

businesses, farming and manufacturing always went hand in hand. In the case of the Moffett enterprises, as activity in the Machine Shop seemed to taper off, the family got seriously involved with bee keeping, not so much for the production of honey but for providing local dentists with quantities of beeswax with which to make molds for dentures and false teeth.

There is some evidence, however, that mechanical devices such as ice tilts, or tip-ups for ice fishermen were made in some quantity in the shop during the last years of its active life. The ice tilts were basically a flag, or semaphore that would flip up when a fish was on the line.



*View of machines and overhead line shafting, belts and pulleys.*

**1901** William Hannaway relocates the Blacksmith operation from the lean-to on the west side of the mill to a nearby carriage house.

**1983** Mill and homestead house bought from estate of Ella

Moffett Mowry by Mr. and Mrs. Edward Del Grande, who transferred the site to the Town of Lincoln in 1990.

**1991** National Park Service – Building Conservation Branch – studies. Preliminary history written by Doug Reynolds.

**1993** Roger Williams University preservation studies class works on the contents of the mill.

**1997** Collection inventoried.

**2000** Shell of building stabilized and restored under a T-21 grant from RIDOT Site plan for walkway and bridge developed.

2003 Cooperative Agreement between National Heritage Corridor and Town of Lincoln to produce an interpretive plan.

**\* Insight:**

The day books recently provided to the project by Arnold Moffett of Fiskeville, RI offer insights to a critical decade, or so, in the history of the Mill. Arnold Moffett acquired the Mill in 1850. The first day book for his ownership begins in January of 1853 and records a wide range of jobs which seem to confirm the continuation of what we believe the Olneys did at the Mill. Twenty-eight different accounts are recorded for the year. Among the tasks documented are saw sharpening, building and repair of furniture (there's reference to making a sofa, refinishing chairs) repairing farm equipment, wagons, and a wheelbarrow. A sleigh, a coffin, a saw horse are made; an axe is ground. During these entries, Mill work boards in great quantity are sold, indicating that the sawmill dating from the Olneys was still in operation. There's also a considerable business in selling farm products going on, too, such as the sale of eggs, turnips, hay.

In the fourth quarter of the year, 1853, however, entries for grinding corn begin to appear, suggesting that Moffett acquired the use of a grist mill, possibly the one immediately up the Moshassuck from the Machine Shop Pond. For the next four or five years the Grist Mill accounts represent nearly half of his activity. One major entry for 1853 supports the supposition that the Moffett Machine Shop was engaged in the making of textile machines. For Ellis Pitcher of Pawtucket, owner of the Pawtucket Manufacturing Company, located at the southwest abutment of the Pawtucket Falls, Moffett makes winders, pulleys, repairs a picker, works on a line shaft, helps to install a wheel, does something for a bearing, and makes a rack for draping yarn. For another customer he cuts a hole in a mill floor for belts to pass through. He fits a screw into a lard press, installs rockers and springs in a buggy, planes a set of sled shoes, and turns out wooden hub made of elm and oak.

While some of these kinds of jobs repeat in the day book of 1854, such as filing and setting saws, making hubs, working on wagons and sleighs, for the next three years the bulk of the work is divided between making thousands of wooden boxes a year and the running of the grist mill. To a lesser extent the saw mill keeps turning out boards for local companies, although Moffett seems to be buying box wood from others. Two employees figure prominently in these accounts, one is Samuel C. Clark

who is making boxes for Moffett. The other is Wheaton Polsey. Polsey may be related to Nelson Polsey of Ashton who sets up as a box maker in the nearby Manchester Print Works and later opens the Polsey Box Company in Pawtucket. It's possible; however, that Wheaton Polsey was actually running the Grist Mill for Moffett. In 1854 there are more than two thousand boxes made for David Rider (or Ryder) of Pawtucket. Rider was involved with one of the hair cloth companies.

Another major purchaser of Moffett's boxes was the Greene and Daniels' Mill

which bought various size boxes over the years. Blackington & Co. were also big customers. Another client in the textile field was J.A. Rhodes. James A. Rhodes may be related to Christopher and William Rhodes who briefly owned a mill in Albion in the mid-1830's.



*Built-in original wood turning lathe.*

Unfortunately the daybooks end around 1862. The next glimpse we have of the business is in the 1870's when there is some correspondence to Edmund Moffett offering to buy whatever braiding machines he has. This would seem to close

the chapter on shoe-lace making. The turbine, not an inexpensive improvement, however is installed in 1880, suggesting something was up, but it's not clear what. Then, there is the family tradition suggesting that wagon-making constituted the main focus for the next twenty years, or so, until the Shop closed in the early 1900's. This would coincide with the supposed role that George Moffett played as a master blacksmith during this time. In all the prior extant records the blacksmith activity is not specifically mentioned, although some of the work recorded needed blacksmith elements. If wagon-making became more important it would explain the prominent blacksmith lean-to which was an additional architectural element and also explain the proliferation of blacksmith tools still owned by the present-day Arnold Moffett.

Mr. Moffett also reports he has, in addition to the daybook records, a shop workbench and a grinding wheel that was once in the Mill. He thinks, also, that a couple of wagons and a sleigh made in the Mill survive. Mr. Moffett has in his possession a prototype of a calculating scale, presumably made in the shop near the end of its days.

Mr. Alfred Robertson of Lincoln has a rich treasure-trove of Olney family materials. It is particularly good for activities of Granville Olney. A few documents that appear

to pertain to the Machine Shop have come to light. One is a memo concerning setting up a mill for the Smith Manufacturing Company, which might be the Butterfly Factory; another is concerned with the casting of wood screws and the purchase of files. Another is for the making of cards, used in the combing of wool and cotton preparatory to spinning. The Robertson documentation is for the late teens and early 1820's. This is the material now at the Rhode Island Historical Society.



*View of “parts of the puzzle.”*

## Purpose of the Plan

The purpose of the interpretive plan for the Moffett Mill is to provide the Town of Lincoln with a set of feasible alternatives to carry out both its stewardship, or fiduciary, responsibilities to an historic property known as the Moffett Mill, and to use this property for the educational benefits of the citizens of the Town. The opportunity for enjoying the benefits of this site extends beyond the borders of the Town of Lincoln. Moffett Mill's story is important to the State of Rhode Island, the John H. Chafee Blackstone River Valley National Heritage Corridor, and our country as a whole, as evidenced by its place on the National Register of Historic Places.

While there are other historic industrial sites in Rhode Island where more significant inventions and operations occurred than those of this little machine shop on the Moshassuck River, there are hardly any with as much site, building, and contents intact as is present at the Moffett Mill. While its role as a machine building and repair shop was overtaken by larger operations nearby, the Moffett Mill is a rare survivor of a critical bygone age in the story of a process that made our country a world leader in the technology of manufacturing. It stands as a three-dimensional documentary legacy of the Blackstone Valley story. For all these reasons, interpreting this fragile survivor is a project worthy of some extended consideration. The purpose of this plan is to provide such a framework of discussion. It is beyond the scope of this plan to suggest an operating budget because such a recommendation depends on how many of the steps outlined here eventually are adopted.

However, if Moffett Mill is viewed as an integral part of the Great Road story and its six nearby attractions, the operation issue probably has a collaborative or synergistic solution.

## Discussion of Interpretive Strategies:

Ssimply by preserving the Moffett Mill as an authentic element of the cavalcade of charming buildings on the Great Road of Lincoln an important step has already been achieved. Without any further written, spoken, or visual communication it is already obvious to even the least informed by-passers that here is a building of considerable age. For some reason this building has been positioned to take advantage of an artificial waterfall. In addition, because of its location in the virtual middle of the Historic District, with a stream and other waterfalls nearby, most observers would conclude that it is a link in the chain of elements that contribute to the importance of the district. Its proximity to the road, the seasonally picturesque nature of the waterfall site, and the distinctive non-residential simple architecture all insure that it will be noticed. While it is certain to be seen, there is little chance that the people passing it in a car could possibly deduce its real function and, thereby, such a fleeting glimpse will serve only to stimulate curiosity about its function and significance.

Therefore, there needs to be some interpretive element, or elements, to satisfy that curiosity. The interesting regional map of historic and natural attractions distributed by the National Park Service is a start; the Great Road driving tour brochure of the Blackstone River Valley National Heritage Corridor is even better. A separate rack card, or site brochure, that could be found in other area historic sites would certainly help. However, there needs to be something at, or close to, the Moffett Mill in the form of a sign that directs the would-be visitor to the nearest, safest, place to pull over, or pull in, to find out more about this little building. The best solution to this next step of interpretation is the nearby parking facilities of the Hannaway Blacksmith Shop and the Chase Farm. Otherwise, connecting the dots for the potential visitor between the Mill and the more established adjacent sites would not be an easy job to accomplish, given the pace of traffic on Great Road and the sight lines for drivers. Sign and marker installations, however, have to be sensitive to the over all natural and built environment of Great Road. Great care needs to be exercised, but total transparency won't work either.

Once the visitor pulls off the road at Chase Farm, or Hannaway, the way to get to Moffett Mill has to be clear and unambiguous. Presently, the site plan calls for a walkway from the Chase Farm House along the south bank of the Moffett Mill

Pond, crossing the Moshassuck River by a pedestrian bridge at the head of the Pond. When the visitor reaches this half-way point, it would be logical to locate a Wayside interpretive panel that relates that the mill building at the dam was an early American machine shop which made and repaired items for mills and farms in the neighborhood. A map on the panel could easily depict the origins of the Moshassuck River and note the location of the factories along its route that could have availed themselves of the Moffett Mill's services. If it turns out, with further research, that the grist mill site immediately across the street was part of the Machine Shop operations under the Moffetts, then the location of this panel is even more propitious.

At the end of the path, adjacent to the mill structure itself, should be a second Wayside interpretive panel which explains the building's origins as a sawmill and blacksmith site developed by the numerous Arnold family of the Great Road neighborhood. The panel should explain the machine shop's transformation under the ownership of the Olney and Moffett families. Assuming that this panel may be as far as many visitors get, it is vital that it emphasize that the significance of the building surpasses its picturesque qualities by being one of the most intact early machine shops in the country. In addition, inside the building there are the remains of the improvements from water wheel to turbine to electric generator. To assist the visitor in grasping what they might not get to see in person (the interior view of the original machines and the belts and pulleys that operated them), good photos of the individual machines and a diagram, or photos, of their arrangement should be on the panel.

The outdoor visit of Moffett Mill as described above should be considered the most minimal level of interpretation. This is Plan A. For the casual visitor, with only a basic curiosity about the building, the panel may suffice. It may also work for most of the group tours that are visiting Moffett Mill along with the Blacksmith Shop, Hearthside, and Eleazar Arnold House and thus have only an hour, or less, to take in the entire Great Road District. The panels may also satisfy those who have come to Chase Farm for some other outdoor event for whom a few minutes of exploration may be all that they choose to allocate from their major destination.

However, a lot of people will not be satisfied to be brought merely to the exterior, only to learn that the essence of the building's significance is in the rare intact

assembly of industrial artifacts, inside. Therefore, opening the building's main shop floor on a regular basis is most desirable. Logically, this would be done in conjunction with at least one of the other sites, preferably the Hannaway Blacksmith Shop with which it has an historical as well as a thematic link. Since there is no responsible way to interpret the interior of the Shop Floor without the supervision of a knowledgeable guide or docent, the intrusion of interpretive signage, labels, cases, display lighting and other equipment normally employed by contemporary museums is both unnecessary and undesirable. They should be avoided. The verisimilitude, the appearance of something being true or accurate, is most likely to be achieved by not introducing any modern museum elements, or commonly used display techniques, but by utilizing the existing, original collections arrayed as closely as possible to their logical functional location. This is Plan B. The docent's description of what took place in this space for nearly a century could be supplemented by a printed floor diagram and teaching aids brought out from behind the scenes. A visit to this main floor would include a description of the water power system on the floor below and the braiding operation on the floor above which made shoe laces and corset laces. The interior stairways to the levels above and below are not conducive to taking the general public to these other parts of the building. Plan C deals with an alternative access to the lower level's water power apparatus.

If at all possible, the interpretive program as outlined above should be made available to the public at least 3 or 4 times a year if the true potential of this site is to be realized. Group tours and school groups would benefit if this schedule could be expanded on an appointment basis.

This basic interpretive program could be expanded in the following ways (as represented in Plans C & D). An outdoor path with steps could be built on the east end of the building to take visitors through a large door to the lower level where the water power system is located and viewed. The system currently is in disconnected parts, but it could be reassembled and a rarely seen technology story could be presented, even if not run. A facsimile lean-to of the original blacksmith adjunct could be added to the west end of the building, not to replicate the blacksmith function, now depicted in actual operation down the road, but to create a space large enough to contain an animated video interpretation similar to the successful one at Kelly House. This video would achieve what is probably impossible to achieve any

other way which is an interactive depiction of the way the Moffett Mill worked, how it was powered and what products were made here. It is not recommended that the power system actually be made to operate the surviving machines. They couldn't take the stress. Biographical information about the Olneys and Moffetts would be presented as well as a graphical overview of the Great Road district. Lastly, it may be possible to locate some actual braiding machines, still in working order, so that visitors could have these hand operated machines demonstrated to them as part of their visit. There is considerable space at the east end of the Shop Floor where they could be set up. Their operation would introduce an authentic interactive into the space, possibly even provide a tangible souvenir of the visit in the form of a shoe lace. Also, a simulated, partially built, textile machine, or vehicle, would be another illustration of the work done on this floor. This minor deviation from presenting the shop as it was left would also solve the issue of not being able to take the public to the second floor of the building which is not recommended for a variety of safety code and handicap-accessibility issues.

If all, or most, of the steps suggested above for interpreting Moffett Mill could be carried out, the chief protocols and components of the generally accepted professional museum practices for interpreting historic sites would be met. The accuracy and conservation of a significant historic site would be achieved. Visitors would be hosted by a knowledgeable guide and they would have the opportunity to be immersed in a documented environment with real artifacts. They would encounter first hand an important legacy of our country's industrial development, made more significant by being a part of the Great Road Historic District and the larger National Heritage Corridor.

## Moffett Mill Thematic Possibilities

The thematic possibilities for interpreting the Moffett Mill are relatively numerous given the fact that this little shop was a versatile place of business that embraced activities like saw milling, blacksmithing, woodworking, box making, metal work, wagon and carriage building, braiding for shoe laces and corset laces, and wagons. It had customers who wanted critical parts made for boats, farmers who needed “edge” tools for cutting crops, and local textile mills that called for devices to spin, twist, weave and braid, as well as packing boxes for their products. Some of these were well known mill owners like Ellis Pitcher and the Green and Daniels Mill in Pawtucket and Captain Wilbur Kelly in Old Ashton, or the neighboring Butterfly Mill of Stephen Smith.

Further, there is the now emerging story that the Mill was never a ‘stand-alone’ enterprise. Under the management of the Olney’s it was part of the Thread Mill operation at Olney Pond in Lincoln Woods. At its own site it had a separate sawmill and blacksmith function, and, under the Moffetts, there was a related grist mill works, probably across the street. It shows on the maps as the “Moshassuck Mill.”

This is also the story of a thoroughfare neighborhood known as Quinsnicket in Old Smithfield. Along the Great Road came stage coaches, wagons groaning with loads of processed limestone, and a host of travelers. Adjacent, are the stories of the evolution of some of the major players in America’s textile company history, Slater, Brown and Ives, and the Sayles family. Not the least of the story possibilities is that of the Moshassuck River itself which started in the brooks and ponds of the west bank of its valley defined by the Louisquisset Turnpike and the quarries of the Harris and Dexter families, whose combined limestone mining business, now carried on by the Conklins is one of the oldest in the country. An important element in the tale is the related agricultural activities of the family: selling farm produce, milling corn, and bee keeping. Nor would the story line be complete without reference to both the Olney and Moffett families that kept this machine shop enterprise running for nearly a century but were also responsible to saving most of its key elements in place so that they might be understood and enjoyed by generations in the 21st century.

With all of these possibilities one might be tempted to allocate equal time to all of these. That would be a mistake. The most important single story is that this mill was a place of versatility, a job shop where almost anything that was needed could be built. It was the opposite of specialization in manufacturing. Although, in the mid 19th century, it focused for a time on saw mill operations, making boxes for the textile industry, and braiding shoe laces, these were relatively brief intervals of concentration and largely sequential, with its final concentration, apparently, the making and servicing of horse-drawn vehicles. Its significance is that this “document” is a legacy of a particular chapter in the history of American industry. It has been preserved for the study of later generations. Ironically, in the end, its loyalty to versatility was its downfall. Those enterprises that specialized were the ones that expanded and became more successful. Their success bred a degree of detail and production capacity that was beyond anything the Moffett Mill could achieve.

## Plan A: outdoor wayside panels.

Throughout the Blackstone Valley, the John H. Chafee Blackstone River Valley National Heritage Corridor has installed wayside interpretive panels to mark the location of, and explain the historical significance of, dozens of sites and structures. The advantage of these panels is, of course, that they are all weather, well written, and interestingly illustrated informative historic markers. They provide the crucial facts about a particular location. They certainly don't replace the more desirable human tour guide, or an electronic recording, but they offer a much more satisfactory communication than the older style historic marker that provided only a name and a date and verification that the visitor had indeed achieved the quest of encountering an historic site. The Waysides are durable, though not entirely vandal-proof, but they are recognizable interpretive features, part of a consistent design and system. They can be keyed to the related system of walking tour brochures developed and distributed by the Corridor throughout the Valley.

It is highly recommended that, if it is decided to employ wayside interpretive panels at Moffett Mill, they should be part of the Corridor's interpretive system, meeting the same interpretive standards of appearance and physical integrity. Because of the

distance from the proposed parking at Chase Farm to the Mill, and because of the complexity of the Mill story, it is recommended that at least two such panels be employed.

The most logical place for the first one of these to be located would be at the footbridge going over the Moshassuck River, about midway between the farmhouse and the Mill. This panel should introduce the over view of the Moshassuck from its headwaters to the Moffett Mill pond. This can be accomplished by an area map with Great Road historic sites located. The map should show the location of related places of importance such as the Valentine Whitman House, Northgate, Lime Rock Village, Kelly House, and the Quaker Meeting House as well as the other more immediate Great Road attractions. It should also denote the general location of the now disappeared Manchester Print Works and Thread Mill of Stump Hill in Lincoln Woods State Park. The panel should explain the origin and significance of Great Road, and lastly comment on the role of impounded reservoirs like the one immediately adjacent to the panel for making it possible for industrial operations like the Moffett Mill to run.

At the Moffett Mill building itself should be a second interpretive panel. Most important would be a diagram of the water power system and illustrations of the machinery inside the building, with examples of the variety and versatility of what was made there. The dates of the principal owners and its role as a documented phase in the machine-building heritage of the Blackstone Valley would be appropriate. It would probably be useful to have a site diagram showing the complex of buildings that was once here. Besides the Moffett Mill proper it would include the blacksmithing lean-to, the large barn to the southeast, and the possible site of the sawmill immediately downstream from the dam and tailrace.

In both instances, the use of more graphics and less text in the explanation is better. The estimated cost for designing and fabricating a panel in the Corridor system is \$6,000 a piece. Actual installation is not included in the price. Some additional directional signage would be required to direct visitors from Great Road to the site parking areas. A sign from the parking area to the path leading to the Mill may be necessary.

## Plan B – Moffett Mill

**B**y all accounts, from experts in the field of American industrial history, industrial archaeology, and material culture the signal importance of the Moffett Mill is its survival as a rare, largely intact, early American machine shop. It has its water power system in place, if not connected, and it has its primary woodworking and metal working machines inside the building. The existing location of the overhead pulleys and belts, the obvious connections to the waterpower system on the level below, and the scores of hand tools, equipment parts, and patterns all contribute to making this machine shop a rare gem of documentation.

Because of this unusual opportunity to have the public step into this historical immersion experience, it would be a mistake to subject the space to intrusions of the usual museum furniture and apparatus. It is the recommendation of this report, therefore that the contents be reassembled as faithfully as possible without identification labels, text panels, gallery lighting, or exhibit cases. With the exception of the educational strategy as outlined below which would bring in some partially assembled machines, the best approach would be to show the building as it is, a place of mixed-use manufacture that's been closed for over a century, with its components in place, pretty much as it was left.

Whatever concessions that have to be made for following code regulations for fire safety and places of public assembly should be done with the utmost subtlety. If additional light is necessary, five or six electrified kerosene style lanterns could be employed. There is probably no compelling reason to introduce any plumbing into the building, therefore no heating system is required to prevent pipes from freezing. Since it is unlikely the building will be used in the coldest season, at most, modest electric heaters, installed inconspicuously, could take the chill off the building for visitors if deemed necessary. Therefore, the introduction of utilities into the building need not go much beyond the intrusion alarm system that's already installed. There are already two means of egress: the presently used front door and another large doorway at the mid-point of the shop floor.

There are now places where the plaster has fallen away and the lath is exposed. These should be simply stabilized and not restored. The present debris of decay

from powder post beetles can be vacuumed away and the floors swept. The equipment could be wiped down and the tools wiped off, but beyond that there should not be an effort to sanitize or polish up the space. The collection of tools and artifacts should be put out where and how they were used. Because the contents of the room, so far as is now known, are not individually unique, or valuable, they can be fastened down at their station so as not to invite their "shop lifting," but they need not be conserved nor protected by cases, velvet ropes, or other barriers. The impact of this place on the visitor would be the truthfulness of its presentation without any attempt to remove or cover up the "stains of antiquity." It was never a tidy place. It should be treated in the same manner as that of the Hannaway Blacksmith shop with which it has a shared history.

Upon entering the building the visitor should have the water power system and its evolution from water wheel to turbine to electric generator explained to them. The docent needs to explain how the fall of water was captured to turn wheels and how a system of beveled gears transferred this energy to revolving shafts upon which wheels and pulleys connected by belts to the machinery made the machines run. Besides pointing out the obvious connections, it would probably be useful at this point for the guide to produce, from behind the scenes, diagrams, pictures, or little working models of the power system. How the power was controlled, or regulated would also be part of this story. Therefore, the flyball governor from the Moffett Mill, now reposing at the Slater Mill in Pawtucket ought to be returned to its original location. Its rarity and uniqueness, notwithstanding, it belongs back in the Mill. It can be re-installed in such a way as to afford it protection.

The location of the lathes along the walls and the table saw, generator, and stove in the center of the room should remain where they are. There is a five to six foot-wide visitor path available down the room and back. There is barrier free access to a four-foot wide door which could be made available for handicapped access with the addition of a small ramp outside.

This minimal approach to interior restoration, and the avoiding of all modern museum techniques of labels and explanation panels, does put a significant burden on the guide or guides that escort visitors inside the building. As suggested by the staff of the Corridor Commission, this disadvantage could be overcome by having available to the guide a series of maps, drawings, reproductions of documents, and

working models of things that could aid visitors in their understanding of what went on here. These items need not be immediately visible to the visitor so as not to spoil the atmosphere of the site, but could be brought out from behind the scenes at various intervals in the tour. For a site that is mostly a wood working and metal working shop of the 19th century, the need for these interpretive helps is almost unavoidable. Without a knowledgeable guide, the average visitor would be at a loss to understand the importance and function of these old machines. They are attached to horizontal ceiling shafts with belts and pulleys. There is a helter skelter of old hand tools, an array of patterns, and piles of various kinds of board and metal stock scattered around this old building. The first hand explanation by the guide or docent could be augmented by the teaching aids and a printed floor plan hand-out or brochure with keyed locations of the machinery and their respective functions explained on the reverse side. Portable recording devices with ear phones would be another enhancement. A good guide training manual is a must.

There is one other deviation from the strategy of showing the main shop floor exactly as is which might be worth considering. An educational component could be introduced without doing violence to the existing historic array of the machine shop's contents. At present the major elements of lathes, table saw, drill press, overhead belts and pulleys, and electric generator fill in the first three of four bays that divide the shop into equal sections. The last bay, or section, extends across the entire east end of the shop with only a free-standing stove in the center of the room and a shelf, or workbench, under one window. This part of the floor is now empty; even if Arnold Moffett's workbench and grindstone is added, the space would not be filled up. If it is decided that an additional educational element is desirable, one interpretive strategy would be to introduce one or two partially assembled small textile machines here, or a partially built wagon. Other parts to these devises could be laid out nearby, and plans or assembly instructions for these machines or wagon could be tacked up on the wall above.

The point of this additional material would be to assist the docent in conveying the idea that what happened in this shop was the making of "kits of parts." Here on these lathes, drill press, and table saw were made the mortised frameworks of small spinning and weaving machines. Here, on these lathes were turned the spindles and bobbins. Beveled wooden gears and wheels and pulleys were fashioned here. Wheel hubs and spokes for wagons were also made. Metal parts could also be produced. At

the completion of work here was a one-by-one “erector set” of pieces that all went together to produce the means of production for the half dozen or so mills within a mile or two of the shop. The “mixed use” nature of the building might be more easily understood if there were one or two partially built items available to see and a knowledgeable guide who could describe the fashioning of the “kit” parts and help the visitor comprehend how they all went together.

It is here that the docent can explain that the Moffett Mill shop is part of the larger story of making machines in the Blackstone Valley that goes back to the Jenckes family of iron workers at Pawtucket Falls, the inventive tradition of the Wilkinsons, countless itinerant mechanics and the larger machine builders like the James Brown Company in Pawtucket, the Whitin Machine Works of Whitinsville, Draper Looms of Hopedale, and Crompton and Knowles in Worcester. The tradition of taking on whatever was needed was carried down to modern times by companies like the Taft-Pierce Company of Woonsocket that made everything from some of the earliest voting machines, key parts for 20mm anti-aircraft cannons that served Liberty Ships in World War II, to the first Lockheed jet engine parts.

A visit to the site with a guided tour of the main shop floor would take about 30 to 45 minutes. The interior space could accommodate up to 40(50 maximum) people at a time; half that number would be ideal. This approach to interpretation assumes that none of the machinery would be operated, but the existing belts should be attached to pulleys and machines, and, where necessary new, but used, belting should be added so that the power transmission system is complete and comprehensible.

During its exterior stabilization and repair the small contents of the Mill were boxed up and removed for safe-keeping. While reinstalling them would have to be supervised by a knowledgeable curator, there is good graphic evidence as to their place on the shop floor. A two-hour video made by the National Park Service Building Conservation Branch would be helpful, and there is additional still photographic evidence of the main floor as it was found.

If restoration of this space is kept to a minimum as recommended in this report, expenses would include debris removal, vacuuming, stabilizing of the edges of exposed interior walls, building a handicapped ramp to the four foot wide door way,

re-installing the small artifacts, connecting belts to machines, and obtaining stove pipe for the free standing stove. Unless there are structural issues and code issues for a place of public assembly that were not dealt with in the recent rehabilitation of the building, the reinstallation of the collections and the interpretive strategy outlined here should not cost more than \$10,000 to \$12,000 to accomplish. If the educational strategy of bringing in partially built machines or a wagon is also adopted, or if it is decided to make a mechanical miniature model of the water power system, these elements could add another \$3,000 to \$4,000 to the program, (including some diagrams or drawings).

Some museums have chosen to create a recorded tour using earphones and a transmitter base unit. The advantage of this is that every visitor gets the same information without variation. You can also introduce the background sounds of working machinery and the voices of people supposedly working in the shop. In order to get such a production right without making it sound contrived or corny you have to have a good production company. The script writing and production costs would be between \$10,000 and \$15,000 for this, depending on its length and dramatic values. The ear-phones and player are probably another \$8,000 to \$10,000. In the end, you would still need a knowledgeable guide to answer questions arising from the audio presentation. Maintaining the equipment could be a long term headache, but the suggestion is offered as a way of considering all options. Leaving the acoustical tour out of the interpretive budget as offered above, but with including a guide training manual (\$2500 to \$3,000), and a supply of printed floor plans or handouts, the total cost of Plan B amounts to \$20,000.

## Plan C – Lower Level Water Power System

Plan C alternative is proposed as an “addition” to the combination of outdoor interpretive panels and the first floor “immersion” experience. A number of industrial history experts believe that the Moffett Mill water power system, which is exposed in the lowest “basement” level of the Mill, is well worth showing off. First of all, though it is currently disconnected, all the pieces to make it whole are still present on the site. Secondly, the system is a good example of an adaptation from a traditional breast wheel water wheel to a cast iron water turbine to yet another power system, a direct current electrical generator, which was also run off of the

water and put into use just before the Mill was finally closed. Most of these details cannot now be seen from the outside or inside from above. While a viewing panel, like a window in the floor above, is potentially one way to expose a view of the water system below, the teaching value of this approach is probably not worth either the expense or the disruption of the original flooring of the building that would be required. Such a viewing window now exists at the Slater Mill. It provides visitors a way to peer at the water power system on the floor below, but the staff at Slater has mixed feelings about its usefulness. Better results are achieved by actually visiting the great wheel in the basement of the Wilkinson Mill, next door.

In order to get into the basement level there are two points of access. One is a set of cellar stairs inside the mill, off of the main shop floor. These are very steep and would not be very satisfactory. A better route would be from the outside, walking eastwardly across the front of the building and down a slope at the far end. A flight of steps would have to be built here, but there is a large door opening which could accommodate visitors once they reached the level of the tail race. Inside this level is a dirt floor and the exposed equipment. The remains of a waterwheel, the late 19th century turbine is here along with shafting and gears and the openings to the floor above through which the belting arose to engage the ceiling system which powered all the machinery of the mill.

To offer this experience to the public, a flight of steps would have to be installed. Gravel or stone would have to be spread on the floor, and the power system would have to be re-connected. Overhead lighting would have to be installed, but a few incandescent bulbs would be sufficient. All in all, this alternative “add-on” should be feasible for \$7,000, or less.

## Plan D – An Interpretive Video

In its first season of operation, one of the most successful interpretive elements at the Captain Wilbur Kelly House in the Blackstone River Park was an animated video showing how locks functioned on the Blackstone Canal. This is a museum site devoted to presenting the story of transportation history, of the overlapping and intersecting modes of travel from Indian trails to turnpikes, canal, railroad, interstate highway, and bike path.

The essential story of Moffett Mill is really the story of movement and motion. It is

the story of harnessing water power at a man-made water fall and using this energy to run a platoon of various machines. To tell that story without harnessing that water again and running those machines requires a good storyteller and relies on the imagination of the visitor to put these stone-still artifacts back into motion. A video, like the one at Kelly House could perform that function.

The first obstacle to overcome in achieving this end would be to create a place to show the video on site. To install a video presentation in the main shop floor would jeopardize, or spoil, the effect of the historical setting. While the second floor of the mill is otherwise unused in the current plan, it can't be made handicapped accessible and it may not really be safe as a place of assembly. Ideally, the logical place to introduce the water power story and the vision of machines in motion would be before the visitor enters the building and the shop floor. One way this could be accomplished would be to restore the lean-to or a reasonable facsimile of it, on the west side of the building and to use this space to show the video.

The original lean-to footprint was 18 X 22 feet. That would probably be too tight a fit now that the highway is closer to the building than before. Something proportionally smaller could work, however. Something on the order of 12 X 14 would probably suffice. The lean-to would not need to be anything more elaborate than an oversized tool shed. It would have to be secured and alarmed. The A/V equipment would be a thin screened DVD unit such as is installed at Kelly House. The lean-to would mimic the original profile of the blacksmith attachment.

The cost of this Plan D would be up to \$7,000 for the building, \$20,000 for the video, and \$3,000 for the equipment, or a total expense of \$30,000.

## Collateral Interpretive Material:

a) **Guide Manual:** If the decision is made to go ahead and open the main shop floor to the public, the immediate impact of the exhibition on the visitor will largely be the surprise and excitement of being inside a visually interesting and unusual space. However, the long term impact will rest on the skills and the story telling talent of the interpretive guide. It is important that this person, or, more likely, persons be equipped with a guiding manual that is replete with the story-lines of the site as well as with suggestions about what makes a good tour. They will need to understand how these primitive woodworking and metal working machines worked, what parts they were capable of crafting, and how things were assembled. They will

have to know and explain how the machines were harnessed to the power system and actually run. Docents or guides not only have to tell a good story that is factual and truthful as far as can be determined, but they also need to know basic techniques of how to handle group tours for the safety of both the visitor and the site's collection. A good manual that is site specific can provide for these needs. The Kelly House manual devised by Ranger Suzanne Buchanan of the Corridor Commission is a good model. The volunteers in parks program of the Commission also provides good training programs for teaching guiding skills.

- b) Rack Cards and Brochures** about Blackstone Valley sites are distributed by the Corridor to hundreds of locations frequented by visitors: other museums, gift stores, and visitor information centers. Brochures are also used by the tourism councils and chambers of commerce at trade show booths and are mailed out in response to inquiries. The Town of Lincoln will need to decide whether it wants separate materials for each of its sites or a combination of all the local attractions. One solution is to devise separate rack cards for each attraction, but to combine them all in a master Great Road attractions brochure.
- c) Floor plans and activity aids.** Unlike the rack cards and brochures that are sent to other sites to attract people to Moffett Mill, at the Mill and Blacksmith Shop, for that matter, there needs to be helpful handouts like floor plans which inform the viewer what they are looking at and how things work, a diagrammatic flow-chart, for example of how the water wheel conveys power and energy to the belts and pulleys that are attached to each machine. Other materials that could be used for specialized school groups like shop classes or vocational school classes might show the evolution of certain kinds of machines or tools. Educational check-lists and questionnaires are devices for extending the visits from the site back into the classroom.
- d) If it were possible to acquire one or more of the hand-operated braiding machines it would be possible for the visitor to see how shoe laces were made. They could operate the machine for themselves and take home a souvenir.**

## Audience Potential and its Development

There is a “Great Road” audience and it can be measured by looking at the existing attendance for Hearthside, the Blacksmith Shop, and the Eleazar Arnold House. Last year, in its first season, the Captain Wilbur Kelly House on the bikeway in Quinnville had 5500 visitors. It was open nearly every day from mid April through the 31st of October. Most of its visitors came to the site for some other reason and visited the house incidental to their main purpose which was using the bikeway. The potential for Great Road is considerable, but is dependent on finding a way to offer the attractions on a more frequent and reliable basis. When sites are open only a handful of occasions each year, you practically have to invent from scratch a new audience for each event. Having four or five sites open simultaneously is obviously the way to create a destination worthy of a family’s weekend time. However staffing the sites on every weekend during the warm months from Memorial Day to Labor Day, for example, is a great organizational challenge because it’s difficult to recruit the sizable pool of volunteers that would be required to provide the guides. You are asking for volunteers for time just when they, themselves, are likely to have their own leisure activities. Therefore you need about a 7 to 1 ratio of people to call upon (7 possibilities for every 1 that will actually be available).

One way to ease into the challenge would be to start with one weekend a month during the warm months of the year, or to function around established holidays like Memorial Day, the 4th of July, or Labor Day. Having the sites open a couple of hours before the concerts at Chase Farm might also be a way of ensuring attendance for a specific time. Scheduled motor coach tours from the Blackstone Valley Tourism Council would be another way to achieve time-certain visits. In any event, Moffett Mill should be packaged with the Blacksmith Shop, Hearthside and the Eleazar Arnold House. As much as possible they should all be offered to the public at the same times and events.

There are some specialized audiences in addition for Moffett Mill. Moffett Mill should be yoked with Slater Mill Historic Site for groups interested in industrial history, and historic preservation studies classes from programs at Brown and Roger Williams University. There may be some possible links with industrial arts high school programs and with Davies Vocational School.

On a busy day it is possible to pulse groups of 25 to 35 people through Moffett Mill's main shop floor in 20 minutes, or roughly 90 people an hour at peak capacity. If the video component is added, or if there is any demonstration of machinery like a braiding machine, the dwell time would be more like 45 minutes per group. It would take more like 2hrs to process 90 people. With a volume like this, groups would ideally be split in half with one docent conducting a discussion outside while another was in the building. While it might be possible to have as many as 50 people in the building at any one time, it would degrade the quality of the presentation to do so. Groups of 18 to 20 people are about the ideal size for a guide to handle easily.

## Summary of alternate plans: Recommendations

The alternate interpretive plans outlined in this report are not so much alternative as they are sequential. This report has been prepared with the understanding that all of the ideas discussed here may not be affordable. Depending on the number of citizens who will avail themselves of the interpretive experience in any given year, some of the suggestions might not survive certain standards of cost/benefit scrutiny. Therefore the plans have been placed in an ascending and escalating order. If it is possible to do only one thing to explain the importance of Moffett Mill, then the most cost-effective strategy is to make a path way to it from the Chase Farm, bridge the stream and provide a way to get close to the building. Two well done interpretive wayside panels can go a long way to notifying the visitor about the significance of the site.

A much more satisfying way to explain the site, however, is to be able to admit the visitor to the inside of the building, particularly the main shop floor. With a minimum of expense in the direction of interior decorating, the principal function and importance of the site can be depicted by cleaning up the machines and re-installing the original artifacts in a reasonable approximation to how they were actually used. In the company of a well-versed guide, someone could have a very satisfactory and informative experience.

This report, therefore, strongly recommends that Plans A and B should be carried out. The cost of these combined plans would be \$32,000.

This core recommendation could be further enhanced by providing access to the water power system on the lower level. It is estimated this could be done for an additional \$7,000. Finally, an orientation video and a place to show it (putting up a replica of the original lean-to) prices out at \$30,000. I don't recommend the acoustical guided tour.

Since the questions of plans for Great Road as a larger visitor attraction are beyond the scope of this study, it is difficult to project visitor attendance and identify the visitor break points where the additions of Plans C and D are justifiable. However, they would certainly enhance the experience greatly. They would probably not be worth the expense, though, if the site were to be opened only a handful of times each season.

## Sources of additional Funding:

**H**aving been invited to suggest sources of funding and, at the risk of stating the obvious, the report offers the following suggestions.

**Federal Sources:** Federal Highway "enhancement" grants; Corridor grants (perhaps in the areas of wayside panels, and guide manual and training). Save America's Treasures Program.

**State Source:** Historic Preservation Bond Issue grants; a second round will be decided this year. RI General Assembly Legislative grants.

**Foundations:** Champlin Foundations, RI Foundation, June Rockwell Levy Foundation

## Bibliography: Note on sources.

**T**he sources that were essential to this study have been included as Appendices "a" through "e". However, additional research expanded on this reservoir of information. Original map collections were examined at the Library of the Rhode Island Historical Society and the Rhode Island State Archives in Providence. The principal search was for Great Road and Moshassuck River details. Also, at the Rhode Island Historical Society, photo research was done on the Lincoln Woods Olney Thread Mill village. Manuscript collections were also examined there: Olney

Family Papers, Lime Rock Company, Lonsdale Company, and Sayles Finishing Company Papers. Deed records at the Central Falls Town Hall were examined again for the early history of Smithfield. The Rhode Island Supreme Court Judicial Records Center had pertinent case files in the Court of Common Pleas records. Olney family materials of Alfred Robertson were very helpful. Day books and ledgers of Moffett Mill owned by Arnold Moffett of Fiskeville, Rhode Island were of great use. The Lincoln Public Library Great Road photos and the Lloyd Crowley Collection of Moffett Mill materials were instructive. Of additional help in making sense of the way the building “worked” were large record photographs and a video narrated by Matt Roth from a 1991 site study by Historical Resources Associates.

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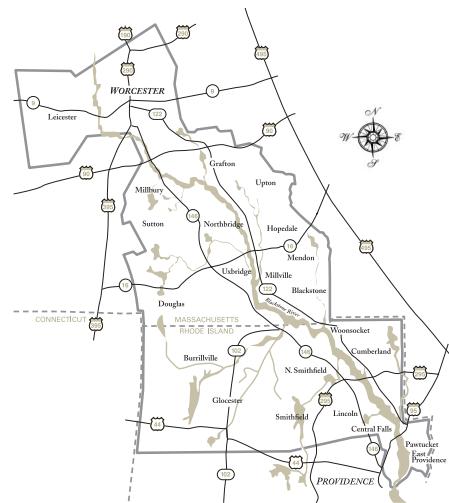
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## BLACKSTONE RIVER VALLEY NATIONAL HERITAGE CORRIDOR

The American Industrial Revolution began in the Blackstone River Valley. It changed the landscape of the Valley and transformed life in America. Recognizing its significance, Congress established the Blackstone River Valley National Heritage Corridor Commission to assist in protecting and celebrating the Birthplace of the American Industrial Revolution.



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