NPS Form 10-900 OMB No. 1024-0018 (Expires 5/31/2012)

United States Department of the Interior
National Park Service

1036

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).

1. Name of Property

historic name BATES MILL HISTORIC DISTRICT

other names/site number Bates Division, Bates Manufacturing Company

2. Location

street & number Roughly bounded by Canal St., Chestnut St., Lincoln St., and Main St. N/A not for publication

city or town Lewiston N/A vicinity

state Maine code ME county Androscoggin code _____ zip code 04240

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this X nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property X meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___ national statewide X local

Signature of certifying official/Title SHPO Date 10/25/10

MAINE HISTORIC PRESERVATION COMMISSION
State or Federal agency/bureau or Tribal Government

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official Date

Title State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

✓ entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:) _____

Signature of the Keeper Date of Action 12.15.10

5. Classification

Ownership of Property
(Check as many boxes as apply.)

- [X] private
- [X] public - Local
- [ ] public – State
- [ ] public – Federal

Category of Property
(Check only one box.)

- [ ] building(s)
- [X] district
- [ ] site
- [ ] structure
- [ ] object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
13	2	buildings
		district
0	2	site
7	4	structure
1	0	object
21	8	**Total**

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing)

N/A

Number of contributing resources previously listed in the National Register

N/A

6. Function or Use

Historic Functions
(Enter categories from instructions.)

INDUSTRIAL / PROCESSING / EXTRACTION
/Manufacturing facility
/Industrial Storage
/Water works
/Energy Facility

Current Functions
(Enter categories from instructions.)

DOMESTIC / Multiple dwelling
COMMERCE/TRADE / Business
COMMERCE/TRADE / Financial Institution
COMMERCE/TRADE / Restaurant
TRANSPORTATION/ Road Relatedking
/ Parking garage
LANDSCAPE/ Plaza
WORK IN PROGRESS
VACANT/ Not in use

7. Description

Architectural Classification
(Enter categories from instructions.)

MID-19TH CENTURY / Italianate
MID-19TH CENTURY / Gothic Revival
MID-19TH CENTURY / Other: Brick mill building
MID-19TH CENTURY / Other: Canal
LATE VICTORIAN / Other: Brick mill building
MODERN MOVEMENT/

Materials
(Enter categories from instructions.)

foundation: STONE / GRANITE
BRICK
CONCRETE
walls: BRICK
CONCRETE
WOOD / Weatherboard

/Reinforced Concrete mill building	roof:	SYNTHETICS / RUBBER
MODERN MOVEMENT/ Other: Concrete bridge		ASPHALT
MODERN MOVEMENT/ Other Girder bridge	other:	

Narrative Description

(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

Summary Paragraph

The Bates Mill Historic District is a cohesive collection of well-preserved manufacturing buildings that comprises the former Bates Manufacturing Company. The mill complex is located east of the Androscoggin River in what is now the downtown of Lewiston, Maine. Prior to the development of the mill, beginning in 1850, Lewiston was a small rural community. The growth of Bates Manufacturing Company and related businesses was the single largest factor responsible for initiating the growth of the area into the third-largest city in the state. The approximately nine acre district is roughly bounded by Canal Street to the east; Chestnut Street to the south; the former Hines Alley and Mill #5 property line to the west; and Main Street and Mill #5 property line on the north. Portions of the Upper Canal and Cross-Canal #1 are included in the district for their essential role in the use of the water to generate power throughout the history of the Bates Manufacturing Company. The district boundary is irregular due to the canal system and the placement of Mill #5, the largest of the buildings, on a parcel across Cross Canal #1 from the rest of the mill complex. The district includes a total of twenty-nine resources including 13 contributing buildings, 2 non-contributing buildings, 7 contributing structures, 4 non-contributing structures, 1 contributing object, and 2 non-contributing sites. Contributing resources to the district include original nineteenth-century red brick mill buildings, the architecturally significant 1912 modern reinforced concrete mill building, a portion of the canal system that powered the mill, multiple historic bridges constructed of iron, steel, wood, or concrete, and the Bates Mill bell.

Narrative Description

The National Register district includes approximately nine acres of land with the remaining nineteenth and twentieth century buildings that comprised the Bates Manufacturing Company mill complex. A long, narrow parcel of land between the district and Lincoln Street to the west, outside the district boundaries, once contained tenement housing that has since been demolished for surface parking. Historic photographs and post cards show a park-like setting that once characterized the upper canal and frontage of the buildings on the east side of the boundary. Modern alterations to Canal Street, the expansion of the mill, and the addition of surface parking in front of the buildings has removed some of the trees and lawns that lined the canal and altered the once picturesque setting into a more urban industrial context.

The current configuration of the mill complex does not include all of the buildings and structures as it was fully developed by 1924. Within the last two decades, five of the main buildings have been demolished including the Executive Office Building, Mill #4 Bleachery, Mill #1 Storehouse, Mill #3 Annex, and Mill #8 Storehouse. Numerous smaller structures such as valve, gate, and pump houses have also been removed, as well as some of the earlier overhead connecting bridges between various mill buildings. More than 85% of the fully developed complex remains intact. The extant buildings on the site remain relatively unchanged since the 1920s, the period of the last major expansion campaign of the Bates Manufacturing Company. Nine of the contributing buildings are typical nineteenth-century red-brick mill buildings of slow-burning type construction. The exterior walls are load-bearing brick masonry and have openings punctuated with granite sills and lintels and brick arches. The foundations are generally granite and early twentieth century additions and alterations often incorporated concrete foundations. The roofs are mostly nearly flat low-pitch gables or low-sloping valley roofs, a late nineteenth century alteration since the original buildings had steeper gable roofs with dormers that were removed for fire precaution measures. Typical of slow-burning construction, the interior floor and roof framing is heavy timber. The floor girders are double timber beams and are spanned by thick wood floor planks. Thinner finish wood floor is laid on top of the heavy plank flooring. Vertical circulation is typically separated from the rest of the building with stair and elevator towers at the corners or ends of buildings.

The ancillary mill buildings were typically one-story wood-framed buildings that functioned as canal gate houses, hose houses, and storage for other equipment. Only one of the remaining contributing resources on the site is an example of this type of building throughout the mill complex.

The most architecturally significant building in the district is the twentieth century Weave Shed designed by architect Albert Kahn (1869-1942). Contrasting sharply with the earlier nineteenth century mill buildings, it dwarfs the others in size, and the use of reinforced concrete frame allowed for much larger areas of glass on the exterior of the building. The saw tooth monitor roof is another modern detail that differs from the typical earlier mill construction of the other buildings in the district. Even with modern materials, details, and construction methods, the Weave Shed is a compatible twentieth-century building that was intentionally designed to relate to the existing context of the mill. Period documentation indicates that the brick panels within the concrete frame were chosen to match the red-brick exteriors of the rest of the mill buildings and the repetitive rhythm of fenestration is a characteristic of New England mill architecture that ties the modernist Weave Shed to the earliest mill buildings on the site.

The non-contributing resources in the district are a combination of late twentieth century buildings, parking structures, plazas, and bridges. Additional alterations include the limited reconstruction of façades on some of the mill buildings that became exposed after the demolition of adjacent connecting buildings. Rehabilitation work began in 1996 and over the course of nearly fifteen years, the approach and quality of work has evolved. A Section 106 Review of the mill complex determined that the current alterations have had no adverse effects on the historic integrity of the site. For the most part, historic openings have been maintained and new windows installed that replicate the style of the original. Some of the earliest rehabilitation work incorporated more significant alterations to openings to reconstruct façades utilizing a more lenient approach to the alteration of openings and application of modern materials. However, this work has not substantially compromised the integrity of the building and is easily reversible. Over all, the rehabilitation work in the district maintains the historic character of the mill complex.

Inventory of District Resources

1. Mill #1, 1850-52. Contributing building. Alterations, ca. 1880, 1882, 1920, ca. 1970.

Mill #1 is a five-story rectangular brick building approximately 285 feet long and 100 feet wide. The first of the buildings to be constructed, it is located at the northeast corner of the portion of the complex south of the cross-canal and faces east on the main canal and Canal Street. The roof is a low-slope asphalt roof. Built as early slow-burning construction, the remaining original exterior walls are brick with engaged pilasters and the floors and roof are heavy timber frame. The foundation of the original portion of the building is granite. The foundation is concrete at the east side of the building which was expanded in the early twentieth century. A brick stair tower is centered on the rear of the building. The building has been enlarged and altered in multiple phases but still retains the historic character of the mill typical of the original buildings.

The east façade, erected in 1920, is constructed of reinforced concrete pilasters and beams. Only four stories are visible on this side because the grade has been raised to the elevation of the canal bank to create parking, burying the first story of this elevation. With an overall façade width of forty-two bays, the portion constructed in reinforced concrete is divided into three sections by bays that extend above the roof to form engaged pilasters with nine, twelve, and ten bays between them, respectively. Nearly every other bay is filled with concrete block added in the 1970s as an energy-saving measure. The remaining bays have a pair of nine-over-nine aluminum double-hung sash with nine-light transoms installed in 1994. Three of the first floor bays have been altered with aluminum storefront entrances. The northeast stair tower is two bays and has brick exterior walls with engaged brick pilasters. The last six bays on the north end are part of an addition to the mill that was constructed sometime between 1877 and 1900 and is set back from the plane of the 1920 façade. Six bays long and six bays deep, this section has a low-slope gable roof and brick engaged pilaster exterior walls. The north wall is angled to align with the cross-canal. A ca. 1877 illustration from a Barlow Insurance Survey shows a one-story building with shed roof at this location over the water power machinery for Mill #1.

The west elevation of Mill #1 is brick with engaged pilasters and represents the appearance of the original façade on the east as well. All masonry openings in the west and north elevations have rock-face granite sills and lintels. Approximately half of the openings are filled in with concrete block or covered with plywood. Windows are mostly twelve-over-twelve, with both aluminum replacement and historic sash extant. Above the fifth floor windows on the west elevation, the brick is corbelled two courses to create a continuous frieze and the eave has Italianate detailing with scrolled ends of the exposed wood rafter tails. Centered at the rear of Mill #1 is a stair tower with engaged brick pilasters, two bays wide and seven stories tall with a hipped asphalt roof. The upper two stories are shorter than the rest and have a single twelve-light sash in each bay. The demolition of Mill #4 exposed five end bays of the Mill #1 adjacent to Mill #1 Wing (7). On this side, all

but one window is boarded over or infilled with brick. The second and third floor openings have brick infill, and the fourth and fifth floor openings are covered with plywood. The exposed brick of the lower three floors is painted white and was once part of the interior of the bleachery.

The north elevation faces the cross-canal and has six bays. The openings all have rock-face granite lintels and sills. There is a combination of original wood and replacement aluminum twelve-over-twelve sash in the openings. The bridge connector from Mill #5 (13) intersects the fifth bay on the second and third floors. The granite foundation wall is exposed to the canal forming the south side of the channel. The dam of the cross-canal is located off the north side of the building.

Mill #1 has timber framing typical of early slow-burning mill construction. The double timber floor girders are supported by round timber columns with cast iron capitals and bearing plates. Wide wood plank flooring spans the girders and is topped with wood finish flooring. The interior plan of Mill #1 is open on all five floors. At the northeast corner, a portion of the first floor is raised approximately four feet for the length of 128 feet. The edge of the raised floor is aligned with the original location of the east façade of Mill #1. The raised floor area is one bay wide and has round wood columns placed at the edge of the floor in line with the original exterior wall. The raised floor is part of filtration plant which is visible from inside the mill but not from the exterior, as it is below grade. The filtration plant is separated from the raised floor of Mill #1 by exposed brick walls between concrete piers with fixed wood sash on concrete sills.

Mill #1 Wing (7) is accessible from the northwest end of the mill on the second, third, and fourth floors. The Connector Building (2) between Mills #1 and #2 is accessible from all levels. Two original bridges connected Mill #1 to Mill #3 (6) but both have been removed.

Mill #1 has sustained many alterations over time. When it was constructed in 1850-52, Mill #1 was a free standing structure. Attached at the northwest corner was the "picker house" or Mill #1 Wing (7), built concurrently with Mill #1. Mill #1 Storehouse was built a short time later and was attached to the wing. In 1882, the original gable roof was raised as a fire-proofing measure while also creating the fifth usable floor of the building. Originally only fifty-six feet deep, Mill #1 was expanded in 1920. The center stair tower was removed and the façade pushed forward towards the canal an additional thirty-eight feet. Prior to this time, in 1916, the Connector Building (2) between Mill #1 and Mill #2 (3) was constructed. Its center clock and bell tower were added ca. 1920. The filtration plant (20) was excavated and constructed in 1915. The mill's machine shop is largely intact in the first story of Mill #1, with tools and machinery dating from the nineteenth and twentieth centuries. On the second story of the ca. 1880 "annex" addition to the north end of the building, the mill's laboratory is largely intact. The disassembled pieces of the Colonial Revival style wood balcony that was located over the main entrance of the demolished Office Building is stored here as well.

2. Connector Building, 1916, Tower, ca. 1920. Contributing building.

The Connector Building was constructed to connect Mills #1(1) and #2 (3) in 1916. The connector was built in the location of the original boiler house. Infill between the two mills, the Connector is a five-story rectangular brick building with eleven-bay façade and center tower that rises two stories above the building. The tower and parapet were not added until 1920, after the Connector had been complete for several years. Like the east expansion of Mills #1 and #2, the foundation of the Connector is concrete. The interior framing and floor system are heavy timber. The roof is a low-slope asphalt roof. The façade faces east onto the upper canal and Canal Street. In contrast to the façades of Mills #1 and #2, the Connector is brick with engaged pilasters. At the center five bays, the parapet steps up to a triangular pediment with cast stone coping. Small recessed panels are located in the brick parapet above each bay. The clock is centered below the pediment and has a cast stone surround with keystones at each quadrant of the circle. On each side of the clock is a cast stone tablet with dates cast into them – 1852 for the founding of the mill and 1920 for the construction of the tower. The brick is crenellated below the top of the tower and there are three arched openings in each side of the tower with granite sills. The corners of the tower have brick buttresses. The open belfry once held the bell which is now located at the northeast corner of the mill complex. The new tower provided vertical circulation at the center of the long east-side facade.

All windows on the front and rear façades have granite lintels and sills. The east façade of the building appears as a four-story building because the first floor windows are now below grade due to changes in elevation of the grade between the building and the canal over time. The fourth floor windows of the east façade are fifteen-over-fifteen double-hung aluminum sash with fifteen-light transoms; the third floor windows are twenty-over-twenty aluminum double-hung sash; the second floor windows are twenty-over-fifteen aluminum double-hung sash except for the middle bay which is twelve-over-twelve; and the first floor (ground level on the east façade) has two twenty-over-fifteen aluminum double-hung sash and in two bays and one twelve-over-twelve window in the middle bays. The four bays on each end have been altered to create brick piers below the granite lintel with a new recessed aluminum storefront entrance. Originally, the first, second, and third stories had twenty-over-fifteen double hung windows, and fifteen-over-fifteen double-hung sash on the fourth floor.

Although the west elevation is continuous across Mill #1(1), the Connector, and Mill #2 (3), the Connector is evident by the change in materials (concrete to brick) and the variation of window height from the adjacent two buildings. On the west elevation, the first bay of the connector is wider than the rest. The following ten bays have twenty-over-fifteen double-hung sash on the second and third floors with fifteen-over-fifteen double-hung sash above on the fourth floor. These are a combination of historic and aluminum replacement sash. The first three and last three bays have been modified on the first floor by removing the sill and brick below the window to create brick piers. A new recessed aluminum storefront entrance has been added behind the piers at both ends of the connector.

The Connector is approximately 60 feet wide by 90 feet deep. The interior is in process of rehabilitation and will function as the main entrance to the mill complex from downtown. The middle three internal bays have been opened up from the first to second floors to create a new grand staircase. New two-story high metal columns have been added between the new stairs to support the third floor. The remaining original wood columns, beams, and ceiling are intact and have been stripped and refinished with a clear coat. The brick walls are exposed. On the north wall of the connector, the original window openings of Mill #1 (1) are visible, but were bricked in when the tower connector was constructed. An aluminum storefront wall is set back from the plane of the west wall of the building to create a protected entrance. New building systems including sprinklers and ductwork have been installed and left exposed to maintain the industrial character of the building.

3. Mill #2, 1854. Contributing building. Alterations, 1882, 1920, 1924, ca. 1970.

Mill #2 was constructed several years after Mill #1(1) but was essentially a replica of the former. Also fronting the upper canal, Mill #2 is situated at the southeast corner of the mill complex and the south side faces Chestnut Street. Five stories high with a combination of low-pitch gable and valley roof, the original exterior walls are brick and interior is heavy timber frame and floor system. Similar to Mill #1, the foundation is a combination of granite and concrete, the roof was raised in 1882, and the east façade was replaced when the mill was enlarged in 1920.

The east façade is constructed of reinforced concrete with engaged pilasters as seen in Mill #1(1), and is forty bays wide. Many of the openings were filled in with concrete block in the 1970s, some of which received replacement windows in 1994. Every other bay on the second, third, and fourth floors has a pair of aluminum nine-over-nine double-hung windows with nine-light transoms. At the southeast corner, the end bay (stair tower) is brick with plain engaged pilasters and projects beyond the plane of the façade. Each floor of the stair tower has a large opening with rock-face granite lintel and sill except for the first floor in which the sill has been removed and double aluminum storefront doors with transom have been installed in the masonry opening. The upper floors have aluminum storefront windows with the design of the frame mimicking the pair of windows and transoms in other bays on the façade. The second bay is also brick and has a single nine-over-nine aluminum double-hung window with nine-light transom in each masonry opening between the rock-face granite sill and lintel. The first floor opening has been altered with a steel lintel below the original granite, spanning a double aluminum storefront window, with brick infill below.

The south elevation is brick with engaged plain pilasters creating asymmetrical bays. From west to east, the first two bays have nearly square masonry openings with a pair of aluminum double-hung six-over-six windows on the second, third, fourth, and fifth floors. Partially below grade, openings in the first floor have a pair of six-light fixed aluminum windows. The third bay, centered between two pilasters, contains a pair of nine-over-nine sash with nine-light transoms in the opening on each floor. The last three bays are narrower than the center bay. On each floor, two of the openings have a single nine-over-nine double-hung sash with nine-light transom and an opening that is filled in with brick. All lintels and sills are rock-face granite.

The west elevation is similar to that of Mill #1(1), and also represents the appearance of the original east façade for Mill #2. Approximately every other bay is boarded over or has concrete block fill. Windows are either aluminum replacement or original wood twelve-over-twelve sash. The brick stair tower is roughly centered on the rear (west) of the building. At each floor of the original tower is a large bay with double fixed wood panels to resemble doors with upper glass light and three lower panels. The original brick crenellation still remains at the top of the stair tower. A brick six-story dust collector with engaged brick pilasters was added south of the tower by 1924 and rises just above the stair tower. Another four-story brick dust collector addition on the north end of the tower was added later in the twentieth century. The north side of the dust collector has large masonry openings spanned with steel lintels at each floor that were bricked in at a later date.

Mill #2 is connected to Mill #2 Wing (4) at the southwest corner of the building with the same configuration of Mill #1(1) and its wing (7) and storehouse. Mills #1 and #2 were joined in 1916 with the brick connector building (2) that remains today.

Typical of early slow-burning mill construction, the structural system is comprised of heavy timber posts and double beam timber floor girders with plank flooring over the girders and topped with hardwood finish flooring. In Mill #2, the columns

are round and have a cast iron capital with bearing plate. The layout is an open floor plan and is divided lengthwise into two large spaces on the third and fourth floors. The stair tower at the southeast corner of the building was constructed at the same the width of the mill was expanded easterly toward the canal. A nineteenth century cast iron spiral staircase remains in Mill #2, connecting the first and second stories. This is reportedly the last of a number of these staircases within the complex. Others have been disassembled and stored on-site.

4. Mill #2 Wing, 1854. Alterations, 2006-07. Contributing building.

Mill #2 Wing, the "picker house", was constructed at the same time as Mill #2 (3) in 1854. The building is attached to the southwest corner of Mill #2 and the façade fronts Chestnut Street to the south. Mill #2 Wing is a four-story rectangular building with low-pitch gable roof and brick engaged pilaster exterior walls. The brick is corbelled to create a continuous frieze just below the roof and the exposed rafter tails are scrolled and capped with a wood cornice.

The south façade is twelve bays on the second, third, and fourth floors. All window openings have rock-face granite lintels and sills and replacement aluminum six-over-six sash. On the first floor, the first bay is a large brick arched opening, with granite keystone, that continues through the building to the mill yard behind Mill #2 (3), which is currently a plaza (28) with outdoor seating. Multi-light aluminum and glass storefront has been installed in the opening at both ends of the building. Other first floor bays are either aluminum replacement windows similar to the upper floors or window openings altered into new aluminum storefront entrances.

The north elevation has eight bays west of the stair tower and a single bay east of the tower. The majority of openings have six-over-six aluminum double-hung sash with rock-face granite lintels and sills. The brick tower near the northeast corner is five stories tall with a single arched opening that has been filled in with brick. Painted on the brick wall at the base of the tower is a sign that says, "DANGER SLOW BLOW HORN," retained from when the now demolished Mill #3 Annex formed a narrow alley between itself and Mill #2 (3) at this corner.

Modern alterations include the removal of the third, fourth, and fifth bays and engaged brick pilasters on the fourth floor. A pair of twenty-light fixed aluminum windows and modern brick infill are installed in the enlarged opening. The fourth bay on the second floor is an arched opening with lower head height than the rest of the windows on this floor which has been filled in with brick. The first floor arched opening was originally a narrow alley that connected Chestnut Street to the mill yard behind the building. When Mill #3 Annex was expanded to its final configuration prior to demolition, it obscured direct passage from the alley to the mill yard and created a narrow alley with two ninety-degree turns in a small space.

Mill #2 wing is approximately 60 feet wide by 100 feet long. The stair is located at the east end where it is attached to Mill #2 (3). The floor plan is open on all floors. The building has been renovated and currently the first floor contains a restaurant. Upper floors are office space.

5. Mill #2 Storehouse, 1854. Alterations, 2001-02, 2006-07. Contributing building.

Mill #2 Storehouse is a rectangular brick four-story building constructed in 1854 to store raw cotton. The building is located at the corner of Chestnut and Mill Streets and is attached to the west end of Mill #2 Wing (4). The roof is a low-pitch gable running north to south. Approximately 100 feet long by 50 feet wide, the exterior walls are engaged brick pilasters. The brick is corbelled to create a continuous frieze and cornice at the roof and the out-lookers are scrolled with an applied wood cornice.

The west façade is eleven bays wide. All window openings have rock-face granite sills and lintels and aluminum replacement six-over-six sash. The third and fourth floors have windows in each of the eleven bays, the second floor has ten windows, missing the middle bay, and the first floor has windows in the first four bays and the seventh and eighth bays. The fifth window bay on the first floor has been altered to create an aluminum storefront entrance with concrete landing and stairs with brick cheek wall. A flat metal awning over the new entrance is supported by steel channels and columns.

The south elevation faces Chestnut Street and is four bays and the second, third, and fourth floor window openings have granite lintels and sills. The first floor has three large cargo/loading dock openings spanned by steel lintels probably added in the late nineteenth or early twentieth century. The openings have been filled with aluminum storefront windows sitting on a concrete foundation wall.

The east elevation extends three bays beyond Mill #2 Wing (4). The windows are six-over-six aluminum replacement sash. At the first two floors, the outline of the end of the former Mill #3 Annex is visible on the brick exterior. Mill #3 Annex was demolished in 2001-02.

The most significant modern alteration to Mill #2 Storehouse is the reconstruction of the north elevation that occurred after the demolition of Mill #3 Annex. Built with brick and engaged pilasters, the elevation is divided into two sections with a narrower brick engaged pilaster with a single bay east of the pilaster, and four bays on the west side. All five bays on the second, third, and fourth floor have modern six-over-six aluminum double-hung sash. Four bays on the first floor have the same configuration and the other end bay is an aluminum storefront entrance with double doors, sidelights, and transom. All windows on this elevation have brick soldier course lintels and sloped soldier course sills that are flush with the plane of the wall. A thin, flat canopy supported by steel tees is mounted above the entrance.

The interior of Mill #2 Storehouse has been renovated and includes a restaurant on the first floor that continues into the first floor space of Mill #2 Wing (4). The renovated interior retains much of the original historic character of the mill by leaving brick walls and wood columns, beams, and ceilings exposed. The interior surfaces have been sandblasted to remove the paint and finished with a clear coat. Modern building systems including mechanical, electrical, and plumbing are exposed. Interior masonry openings have been retained and reused where possible. An original built-in weighing scale remains a fixture in the first floor restaurant.

6. Mill #3, 1863. Alterations, 1878, 1886, 1923, 2001-02. Contributing building.

Built in 1863, Mill #3 is parallel to Mills #1(1) and #2 (3), but fronts west onto Mill Street (originally the Androscoggin and Kennebec Railroad right of way). Mill #3 is approximately 367 feet long by 104 feet wide. The building is rectangular in plan with a side ell projecting an additional 30 feet. Mill #3 was also altered in phases and was originally about 370 feet long and only about 50 feet wide, half its current depth. Similar in construction to Mills #1(1) and #2 (3), the structure is exterior brick masonry with timber frame and floor system. The walls are engaged brick pilaster and the building has both concrete and granite foundation. Mill #3 is four stories and has a low-pitch gable asphalt roof. The mill originally operated as the woolen mill and after a fire in 1878, it functioned as a cotton mill.

The thirty-seven bay west façade fronts Mill Street, the original location of the railroad line. Each window opening has a brick soldier course header and rock-face granite sill. Each bay has a pair of aluminum replacement windows with six-over-six sash and six-light transom. Three bays on the first floor, nearly centered on the façade, have been modified into recessed door openings. A new concrete landing and stairs with brick cheek walls and black aluminum fencing has been constructed at this entrance. The elevation of the first floor is above the street level and reveals a concrete water table on this side of the building.

The south elevation was reconstructed after the demolition of Mill #3 Annex which originally connected Mill #3 and Mill #2 Storehouse (5). The new façade is nine bays wide with engaged brick pilaster dividing the elevation into three equal sections. All windows are six-over-six aluminum double-hung sash with brick soldier course lintels and granite sills. The fourth floor windows are set within a recessed brick panel that has a continuous brick solider course lintel and continuous granite stringcourse that forms the sills of the windows. The two center brick pilasters end at the granite stringcourse and supplemented with engaged faux columns painted black that are repeated between each bay on the fourth floor. A continuous brick soldier course is centered in the parapet and the corbelled brick cornice is capped with metal coping. The middle three bays on the first floor are recessed below a segmental arch to create the main entrance. The steel arch is supported by two columns set on concrete bases. The recessed entrance and stairs are concrete and an ADA ramp of the same material runs parallel to the building on the west end of the façade. The granite sill below the windows in the recessed entry continues on the interior return wall back to the plane of the façade and is broken only at the main entrance which is double aluminum storefront doors with multi-light sidelights and transom.

The north side of the building, also never originally exposed, is now visible since the demolition of Mill #1 Storehouse. The addition of a modern brick entry connected to Mill #3 and Mill #1 Wing (7) obscures the lower floors of the north elevation, but the original cornice line of the mill prior to the raising of the roof is evident on this side of the building. Multiple arched openings have been filled in with brick. The arched openings in the elevator tower have been filled with fixed panels that are made to look like four-panel doors.

Mill #3 was partially rebuilt after a fire in 1878, but it is unclear what changes if any were made to the building at that time. In 1886, the roof was raised like Mills #1(1) and #2 (3) adding the fourth usable floor to the mill which was originally three stories with gable roof and dormers. In 1923, during the mill expansion campaign that included the enlargement of Mills #1 and #2 and the construction of the Connector Building (2), Mill #3 was also enlarged in the easterly direction and nearly doubled in depth. Mill #3 Annex was constructed nearly twenty years after Mill #3. Mill #3 was essentially a free standing building except for the connection on the north side to Mill #1 Wing (7) and Storehouse. The demolition of Mill #3 Annex in 2001-02 had a significant impact on the exterior of Mill #3. The west section of #3 Annex was three stories and the east section only two stories, but both were consolidated as one building in 1923-24. When the annex was demolished, a low-

pitch gable roof line remained on the exterior wall in addition to the joist pockets and an assortment of altered openings between the two buildings. Alterations to the building over time made the original appearance of the free-standing elevation difficult to discern, and a new façade was necessary

The interior of the building has been renovated and is now used as offices for TD Bank. Because of the great length of the building, a fire wall was constructed near the center, dividing each floor into two large rectangular spaces. The original character of the space has been maintained by locating new stairs, elevator, and service core at the center of the building and providing open office space around the core. The exterior brick walls are exposed and the original wood columns, beams, and ceilings are also intact with a new clear coat finish. Modern building systems including lighting, mechanical systems, and sprinklers are suspended from the ceiling and left exposed to maintain the industrial character of the space. Structural reinforcement to beams was accomplished by bolting structural laminated wood to the sides of original beams as required rather than replace the beams in kind.

7. Mill #1 Wing, 1852. Alterations, 1866-67, 1915, 2005, 2008-09. Contributing building.

Mill #1 Wing, the "picker house", is the same construction and style as Mill #1 (1) and was built at the same time. The building is twelve bays long by six bays wide and is attached to Mil #1 near the northwest corner of the building. The wing was originally constructed as a three-story building which is evident on the west elevation by the corbelled brick cornice above the third floor windows. The fourth story was added in 1866-67 with a low-pitch gable roof running east to west. Mill #1 Wing was originally connected to Storehouse #1 which was demolished in 2005.

The north façade was originally exposed, but was incorporated into the expansion of Mill #4 in 1915. The expansion of Mill #4 enclosed the space between Mill #1 Wing and Storehouse and the original rectangular Mill #4 that fronted the cross-canal. To fill in the remaining triangular space between the two buildings, two-story concrete columns were added abutting the original exterior masonry wall of #1 Wing approximately every other bay which supported concrete beams at the head of second story windows of #1 Wing. The demolition of Mill #4 in 2005 restored the original character of this side of the building as well as the structural alterations required for the expansion of Mill #4. Above the fourth floor windows on the north elevation, brick dentils create a frieze below the eave line. Original second and third floor window openings have been filled in with brick. On the first floor, the end bay was originally a large arched opening that continued through the south side of the building to the mill yard between Mill #3 (6) and Mill #1 (1) (prior to the expansion of Mill #3). The arched opening has been modified to accommodate modern double doors. Most original twelve-over-twelve windows on the fourth floor remain intact but in poor condition. The exterior brick wall is painted white on the lower three floors where Mill #4 was removed. Six middle bays on the first floor have masonry openings, but most windows are missing.

The west elevation was not originally exposed, but was connected to the storehouse. The storehouse openings were smaller than the windows of other typical mill buildings and the alteration of these is evident from both the interior and exterior due to the diversity of brick patches and repointing with variations of mortar color. The elevation has six bays and currently has window openings on the second, third, and fourth floors with rock-face granite lintels and sills. All window openings are filled with wood panels. These are all new openings made after the demolition of the storehouse to create a more unified composition in keeping with the character of the other buildings and provide adequate-sized windows for future tenants in this space. The first two bays on the third floor were modified into a larger opening with steel lintel and brick infill was added when the storehouse was demolished.

Mill #1 Wing is approximately 100 feet long by 70 feet deep. The timber frame system consists of double timber floor girders supported by round wood columns with capitals and bearing plates. Wide plank wood flooring spanned the floor girders and was topped with finish wood floor boards. Currently under rehabilitation for use by a micro-brewery, the plaster finish that was added to the ceiling at an unknown date has been removed, restoring the original character of the building. Lines on the wood ceiling show where strapping was attached to support the lath on which the plaster was applied. The west wall shows altered openings into the Mill #1 Storehouse that have been filled in and modified. A massive lathe is currently in the first story of Mill #1 Wing, having been moved from the adjacent machine shop in the first story of Mill #1. This reportedly is (or was) the largest lathe in Maine.

A modern non-contributing addition to the building is the new loading dock and entrance at the southwest corner of Mill #1 Wing and the northwest corner of Mill #3 (6). Constructed in 2008-09, the modern entry pavilion is a three-bay one-story brick structure with flat roof fronting west onto Mill Street. Each bay is separated by engaged brick pilasters corbelled near the top to create the appearance of a capital. The height of the pilasters extends above the height of the parapet wall. The brick is set on a cast stone or concrete water table and the parapet is capped with cast stone coping. The end bays have large masonry openings with cast stone lintels and sills and are infilled with black aluminum picket fencing. The middle entrance bay is a wider arched opening supported by arched steel beams. The north elevation has the appearance of two elongated engaged brick pilasters with center recessed bay. This panel is accented with the scupper and an inset gutter

detail that channels the water to the ground without a standard downspout. Some plantings are located around the base of the structure and bollards protect the north elevation from the adjacent loading dock. The entry pavilion encloses new concrete stairs and ADA accessible ramp with pipe handrails providing access to Mill #3 (6) and Mill #1 Wing. On the interior, the walls are exposed brick and the floors are concrete. The metal decking and steel beams supporting the roof are exposed. Part of the addition includes the loading dock for Mill #1 Wing constructed at the first floor with three angled bays. The roof structure is a sloped flat metal roof supported by steel beams and columns. The fascia trim follows the profile of the low-pitch gable roof. This new addition is non-contributing to the district, but the detail of the construction and massing make it a compatible new addition to the district. The massing, materials, and functionality of the entry structure are in keeping with the historic character of the mill complex and do not detract from the significance or integrity of the district.

8. Gatehouse #1 Mill, ca. 1882. Alterations, ca. 1915. Contributing building.

The gatehouse at Mill #1 extension is a one-story rectangular wood building with hipped roof. Simplified Victorian Gothic Revival features details include the wood corner posts with angled bracing, ogee profile cornice, and small wood brackets below the eaves at the corners. The façade faces south and is two bays wide with one original six-over-six double-hung wood window and an entry door. The exterior is board and molded batten and the roof is finished with asphalt shingles. A wood platform-framed structure, the gatehouse sits above the canal on 6" x 8" timber sills which currently rest on steel girders supported by steel columns. The steel was likely installed when the filtration tanks (20) were excavated and constructed in front of Mill #1 (1). The east side of the structure has one bay, a single five-panel wood door. The north side is one bay, an original six-over-six double-hung window. A portion of a concrete catwalk remains on the north side as well as pipe railing on the north and east sides. The gatehouse contains three manually operated nineteenth century head gates, unaltered, that controlled the flow of water from the canal under Mill #1. This is the only remaining example of a number of small wood-framed buildings originally on the site.

9. Mill #6 Weave Mill, 1892. Alterations, 2003-06. Contributing building.

The Weave Mill was constructed in 1892 to house Jacquard looms and expand the manufacture of bedspreads. Mill #6 is located adjacent to the Boiler House (11), just south of Cross Canal #1, and the façade faces west toward Lincoln Street. The three-story building has an irregular rectangular mill plan with load-bearing exterior brick masonry walls and heavy timber construction. The roof is a low-pitch gable running north to south and is finished with asphalt. The cornice is Italianate in style with the ends of exposed timber purlins cut in the shape of a scroll between each bay. The foundation is rubble granite that is exposed on the north side at Cross Canal #1 and forms the east wall of the channel. A four-story brick tower is located at the southeast corner of the building.

The west façade is twenty-two bays wide. The second and third floor openings are tall and narrow with segmental arched tops with two courses of brick rowlock headers and rock-face granite sills. The windows are fifteen-over-fifteen aluminum clad double-hung sash with twelve-light rectangular transom and aluminum arched panel above. The first floor openings are primarily fifteen-over-fifteen aluminum clad double-hung sash. The end bay on the south side of the façade is an original arched door opening that has been filled with an eighteen-over-eighteen double-hung window and flush wooden panel below. Two adjacent window bays on this end of the building have been altered to become single aluminum storefront doors. A primary entrance has been created on the three center bays of the building. An aluminum storefront vestibule projects from the plane of the façade and is covered with a deep overhanging cornice covered with metal fascia. The cornice appears as if it is supported by two engaged round metal columns at the corners of the vestibule. The cornice covers the lower sash of five bays of the second floor. To continue the demarcation of the main entrance, three black hollow metal engaged columns are applied to the exterior brick wall between the center bays and are accented with "antique gold" colored bands representative of capitals and bases aligning with the horizontal mulls of the second and third story windows and the granite lintels of the third story. Above the roof is a projecting cornice with metal fascia over the center four bays that caps the representation of the modern main entrance. On the north and south ends of the façade, two smaller entrance canopies have been added similar in material to the main entrance, but on a smaller scale. The entry doors are placed in altered window openings and the top of the canopy which is shaped like an enlarged cornice site just below the granite lintels of the second floor. The canopies are supported by two steel columns wrapped with aluminum at the shaft. The decorative capitals and bases are also wrapped in aluminum but in contrasting "antique gold" color. The columns sit on round concrete bases on the sidewalk. The roofs of each of the three entrances are hipped and finished with standing seam metal panels. The underside of the canopies is exposed corrugated metal. The materials and construction of the new entrance are easily reversible and do not have a significant impact on the historic integrity of the building.

The north elevation has twelve bays. The second and third floors are twelve-over-twelve double-hung windows with rectangular twelve-light transoms and arched infill panel above. The first floor windows are twelve-over-twelve double-hung windows with arched infill panel above. The segmental brick arch and granite sill details on this elevation match the rest of the building. Small areas of brick repair and repointing are evident below the window sills. The arched tailrace outlet in the granite foundation has been filled in.

The south elevation has twelve bays on the first, second, and third floors identical in detail to the north elevation with the exception of the third bay on the first floor, which is an original small arched door opening with an eight-over-twelve double-hung window with infill panel below.

The east elevation has seventeen bays on the north side similar to the front facade. The tower, roughly square in plan, projects east from the southeast corner of the building. The north, south, and east sides of the tower each have a single large bay on the second and third floors. The tower bays are similar in detail to the rest of the building except for the greater width of the arched opening. In each of the south bays is a pair of nine-over-nine double-hung sash with rectangular nine-light transoms and arched infill panel above. In the third floor of the north side of the tower, the window configuration matches the bays of the south side. The tower has been reduced in height and capped with metal copping. Mechanical equipment is visible on the roof of the tower.

Mill #6 has been renovated for mixed-use and contains restaurants on the first floor and the upper two floors have been up-fitted and are ready for new tenants. As in other areas of the complex, the interior brick walls, wood columns, beams, floors, and ceilings have been sand-blasted to remove the paint. The original wood columns of the second floor extended down into the first floor and rested on the concrete piers. During rehabilitation, the second level was raised to increase the height of the first floor which was originally below grade on the west side of the building. The floor was cut into three sections, and all existing flooring and beams were raised. New steel beams were installed below the original wood girders. The process of moving the floor revealed a unique construction detail showing the dovetailing of the end of the wood girders into the brick masonry exterior walls. To maintain the open floor plan of each floor, new stairs and elevators have been located at the rear corners and front center of the building.

The success of the Jacquard looms first used in Mill #6 to make Bates bedspreads led to the construction of Weave Shed # 5 (13) in 1912-14 to expand bedspread manufacture.

10. Hose House #7, ca. 1920. Contributing building.

North of the tower of Mill #6 (9), at the first floor, is a one-story brick building with stepped roof that is three bays long. The roof is flat concrete on the upper two steps and asphalt on the lowest section. The east façade has three openings spanned with a deep concrete beam. There are two rectangular masonry openings with granite sills and lintels and replacement six-light aluminum windows in the north elevation. The hose house contains steam fire pumps, the original Worthington Underwood 2000 GPM, which were part of the Mill #6 fire suppression system.

11. Boiler House, 1914. Alterations, 1985. Contributing building.

The Boiler House, built in 1914, is a rectangular brick two-story building with a low-pitch asphalt gable roof that fronts west. The Boiler House is set back from Mill Street on the west side and is just south of Mill #6 (9) with a narrow passageway between the two buildings. The building is approximately 165 feet by 60 feet and has a granite foundation. On the east end of the roof is a half-story monitor 164 feet by 22 feet with brick-colored standing seam metal roof and siding added in 1985.

The west façade has twelve bays, six on each side of the boiler stack. Each bay on the first and second floors has a brick segmental arch header with three courses of rowlock headers and a granite sill. Within each bay are two segmental-arched six-light replacement windows separated with a vertical mullion. The boiler stack is set just inside the façade and has a diameter of 22 feet at the base and rises to above 250 feet in height. The west wall has a corbelled brick frieze band of four brick courses topped with a heavy ogee-profiled granite cornice.

The south elevation has one original large arched door opening with modern door infill and a modern door with steel lintel adjacent to the arched opening. The brick parapet on this side has either been increased in height or rebuilt. The brick has been patched and repointed in many locations of previous penetrations in this side of the building, many related to the 1985 co-generation facility that stood next to the Boiler House for fifteen years.

The east elevation has seven bays on the second floor with segmental arched brick openings and granite sills. The same replacement windows installed on the façade are also used on the rear elevation. The monitor is built above the corbelled brick cornice.

The north elevation has four bays on the first floor, one of which is a large arched opening with modern infill in the same location as the south elevation, and three small arched windows identical to the openings in the rest of the building. The north and south walls have a brick parapet that extends approximately two feet above the roof and is capped with granite coping.

This building replaced the original boiler plant which was located between Mills #1 (1) and #2 (3). The 1914 Boiler House contained two Babock and Wilcox coal-fired steam boilers when first constructed. Currently, the boiler can be fired by oil or natural gas. A massive cast-concrete structure inside the building may have supported asteam powered electrical generator at one time.

12. Storehouse #7, ca. 1879-80. Alterations, 1908, 1996. Contributing building.

Storehouse #7 is a four-story rectangular brick building with low-pitch gable asphalt roof running east to west. Due to a change in grade, the east elevation facing Mill Street is only three stories while the west elevation is four stories. The new south façade was created after the demolition of Storehouse #8 in 1996. Storehouse #7 is located west of Mill Street and Mill #3 (6). Designed with brick engaged pilasters, the building is ten bays wide and fifteen bays long equaling 100 feet by 120 feet. On the east and west ends of the building, the brick parapet steps up in two sections from each end and is capped with metal coping. The exposed principal rafters just below the roof on the north and south sides of the building are capped with metal coping and fascia.

The east, west, and north elevations have segmental arched window openings with rock-face granite sills and brick hoods. The west elevation has ten window bays on all four floors. The engaged brick pilasters run from the top of the first floor to the fourth floor. The first floor windows are shorter in height than the upper floors and the seventh bay is an historic large arched masonry opening with double arched metal doors. Replacement windows are rectangular aluminum double-hung sash with muntins between the glass and an arched infill panel above. The first floor windows are rectangular fixed casement windows with arched infill panels. The third bay of the second floor (first floor on this façade) on the east elevation appears to be an original loading dock opening with heavy rock-face granite surround. This has recently been filled in with aluminum storefront windows.

The north elevation is divided into fifteen bays with seven windows located in alternating bays beginning with the second from each end. The east elevation is similar to the west elevation except for a modern bridge connector to Mill #3 that is located at the sixth bay of the third floor.

Constructed as a free-standing cotton storehouse in 1879-80, it later became attached to the five-story Storehouse #8 added to the south in 1908. The ten bay façade originally fronted Hines Alley (no longer extant) to the west, but the south elevation became the main façade of the building with the demolition of Storehouse #8. This side of the building sustained minor alterations and the addition of modern materials to the exterior to create a monumental entrance and façade. The main entrance is marked by the application of an arch made of stucco-like panels applied over the middle five bays of the first three floors. Two of the original brick pilasters are left exposed within the arch and the end two are covered with the plaster-like finish. Recessed within the arch and between the pilasters are smaller square applied panels that are screwed into the masonry wall. A steel arched canopy supported by a truss and two free-standing columns projects over the center three bays of the first and second floors and creates a two-story porch to accommodate entrances from two levels of grade. The first floor entrance is at grade of the surface parking lot along Lincoln Street and the lower level of the adjacent parking garage. The second floor entrance is roughly at grade of Mill Street and the upper level of the parking garage. A concrete ramp leads form the sidewalk on Mill Street to the second story entrance and concrete stairs lead down to the entrance on the lower level. The granite retaining wall is exposed from the new stairs along the length of the parking garage. At both entrances, the center bay contains an aluminum storefront window and the adjacent bays on each side have a single aluminum storefront door with sidelight and transom. The steel structure and aluminum storefront is green and the concrete and stucco-like finish a natural white or off-white color. The thirteenth and fourteenth bays were altered to create a single larger bay with aluminum storefront windows at each floor. The windows have a deep applied stucco-like sill and applied aluminum arched hood. The former joist pockets of Storehouse #8 appear in the brick pilasters as receded rectangular brick panels. Storehouse #7 was the first rehabilitation undertaken by the current owners of the mill. Subsequent alterations are more sensitive to recreating and maintaining the historic character of the mill complex. The alterations to the south elevation of Storehouse #7 are reversible and do not compromise the integrity of the historic character of the building and mill complex.

With an open floor plan, each level is approximately 96 feet by 116 feet and just over 11,000 square feet in area. Modern alterations to the interior layout include the addition of an elevator, stair, and bathroom core at the center of the building at each floor surrounded by open office space maintaining the character of the original volume of space. Wood beams, columns, and brick walls are left exposed and new mechanical, electrical, and plumbing systems have been installed. Interestingly, the wiring and conduit is exposed in a raceway that mimics the equipment and tracks that were suspended from the ceilings in the mill when it was operational.

13. Mill #5 Weave Shed, 1912-14. Alterations 1995, 1998-99, 2001, 2006-07. Contributing building.
The largest of the buildings at Bates Mills, the two-story Weave Shed is approximately 350,000 square feet in area, and was designed to house the Jacquard looms for weaving the nationally renowned Bates bedspreads. Mill #5 is located along the upper canal, north of the cross-canal and remainder of the mill complex. Constructed in 1912-14 with a reinforced concrete frame, the exterior has full-height engaged pilasters with concrete beams at the second floor level. Within the exterior concrete frame is brick and glass block fill. Between the original window openings and concrete frame are original brick panels. Each bay has two large openings filled with glass block divided by a brick pier, neither of which is original to the building. Mill #5 has an irregular plan with the north side of the building angled to follow the line of Main Street. The roof has eighteen saw-tooth monitors with northern exposure which run the full width of the building. Membrane roofing is installed over the original concrete roof. The cornice is also made of concrete. The concrete foundation is exposed nearly a full story on the west side of the building.

The east façade is forty bays wide and fronts the upper canal. The first floor is only partially visible above grade because of the raised elevation of the canal. At the second floor, the majority of the bays contain two large openings filled with glass block and divided by brick piers. At the south end of the east façade is a concrete catwalk with steel pipe rails at the first floor in front of the water room where the water flows from the canal towards the turbines. Four arched industrial light fixtures line the catwalk and appear to be from the period of construction.

The west elevation has twenty-eight bays. Every other bay has two small louvers below the glass block fill. Due to the lower grade on this side of the building, more of the concrete foundation wall is visible than on other sides of the building.

The south elevation has nineteen bays and faces the cross-canal. A two-level enclosed bridge (22) connects Mill #1 (1) to the Weave Shed intersecting the eleventh bay on the south elevation of Mill #5. Pedestrian passage is on the second floor and mechanical connections are on the first. A concrete walkway is located at the first floor level on the exterior of the building running from the southeast corner west nearly the full width of the building. The walkway is lined with a non-historic black aluminum picket fence on the east side of overhead bridge. West of the overhead bridge, the concrete catwalk is supported by steel brackets and has pipe hand rails. Chain link fencing is installed over the catwalk to prevent outside access. A Colonial Revival style entrance, not original to the building, is located at the last bay of the first floor. It contains a single wood door with glass lights and lower wood panel and sidelights with two narrow panels. The entry appears to have been covered previously because the exposed wood header is not painted like the rest of the trim. The wood trim above the header is angled to create the shape of a pediment. Water runs below the building and bridge through the turbines on this side of the building and the concrete columns are visible that run from the bottom of the first floor to below the canal.

The north elevation has sixteen bays which are mostly brick except for the last 5 bays that have glass block fill and loading dock openings. Three original steel windows are intact on the first floor in the second to last bay. The last bay is the stair tower and has a recessed entrance with aluminum storefront doors and wood stairs leading to the interior landing.

Typical of Albert Kahn's design for industrial buildings, the interior has large open spaces with numerous large windows. The saw tooth monitors were originally designed to provide natural light and ventilation. The steel divided light monitor windows are still intact, but have been covered with either plywood or metal decking from the interior due to their poor condition. The monitor windows have a four-light operable sash for ventilation. The additional height in each bay created by the saw tooth roof was also required to accommodate the heads of the Jacquard looms. As many as three hundred looms were in operation at a time in Mill #5. The gantries supporting the head of each loom were removed beginning in 2004. The second floor is mostly open and is very light even though the monitors have been covered and the windows replaced with glass block on the exterior walls. The concrete and clay tile floor is mostly finished with hardwood and the boards have been replaced or have deep divots where the looms were originally located. Some areas have rectangular patches of concrete in the floor.

Throughout the building, the concrete floors were formed with clay tile as filler between reinforced concrete beams to reduce the weight of the concrete spanning each bay. This structure is clearly evident in several damaged areas of the ceiling throughout the building. Water damage has caused areas of the concrete ceilings and beams to spall, exposing

steel reinforcement. With 176,000 square feet per floor, the concrete floors were poured without expansion joints and have some deflection cracks.

The first floor is divided north to south. The west section is approximately 125 feet wide and includes the generator room on the south end of the building. The east side of the building is raised four feet and is approximately 200 feet wide. Two ramps lead from the lower floor area into the raised floor on the east side of the building. Between the two ramps is an elevator and stair that connects both levels of the first floor as well as the second floor. Additional stairs towers are located at each corner of the building with an elevator at the southwest corner. The stair tower walls are plaster on brick masonry. Steel windows with wired glass are still intact on interior walls of stair towers although some are covered with wood or painted. Rectangular areas of black and white basket weave floor tile remain in the southwest and northwest corners of the building, where the original employee restrooms were located.

The generator room, located along the south wall of the first floor, is approximately 50 feet wide by 100 feet long. The west wall of the room is all glass, with the original steel windows intact and the majority of lights painted or covered, above a low concrete wall approximately one-third to one-half the height of the room. Still in working condition, four dynamos are located along the east wall of the room. At the southeast corner of the building, the water way is located under the building and water from the canal flows west through penstocks, or pipes, to a series of turbines and then exits through draft tubes into the cross canal. The electricity from the generator is controlled through a system of switches located along the west wall of the generator room. When in use, the switches control distribution of the power throughout the mill complex. Most recently, the generators have only been used during periods of high water, especially in the spring. Bates Manufacturing Company engineers designed some of the equipment used in the generator room.

The most significant alteration to the character of the building is the installation of glass block and brick piers in place of the original steel-framed windows in the bays on all sides of the building, which occurred prior to 1950. Photographs printed in *The Story of Bates Manufacturing Company*, the centennial celebration publication, show that the windows were divided and filled with glass block by this time. Steel windows in the saw tooth monitors remain intact under exterior roof membrane and plywood and metal decking that has been applied from the interior. The second floor bays on the east, south, and west elevations, and the first floor bays on the south and west elevations had steel-framed windows with center pivot sash. The entire bay was fifty-four glass lights sitting on concrete sill with brick infill below to the concrete floor beam. On the first floor of the façade, the bays are shallower, but likely had similar steel windows. At the northwest corner of the building was the original triangular loading dock with flat roof supported by columns, angled so that the edge aligned with the plane of the west wall of the building. One side of the dock served the rail line and the other served trucks. Most of the bays on this elevation were originally brick walls without any openings because this portion of the wall originally backed up to a row of wood-framed commercial buildings fronting Main Street. The last five bays had a different glazing pattern than the other elevations because of the variation of bay width on the angled wall. In addition to a sizable collection of looms and other textile mill machinery that is stored on the south end of the second story of Mill #5 by Museum L/A, there are several partially disassembled looms remaining at the north end of the space.

Historic photographs also document the original roof design with brick block course, concrete pedestals aligned with engaged concrete pilasters below, and concrete coping above the cornice. Due to water penetration and damage, the roof membrane was replaced in 1995 and all roof surfaces and monitors were covered. The brick block course was likely removed at this time. Additional membrane roof work was conducted in 2006-07.

In 1998-99 structural upgrades to the building included the limited installation of steel beams below failing concrete beams. The sections of flat roof around the perimeter of the building were reinforced with steel beams and decking below the original roof structure in 2001.

The enclosed bridge connecting Mill #5 to the bleachery (Mill #4) was removed when Mill #4 was demolished. The bridge was originally located on the second floor between the second and third bays of the south elevation of Mill #5.

14. Mill #5 Security Office, ca. 1980s. Non-contributing building.

The security office is a rectangular wood-framed one-story building with hipped roof located over the cross-canal at the southeast corner of Mill #5. The concrete foundation is part of the penstock intake for Mill #5. The building has two bays with one-over-one double-hung windows. The exterior is clad with vinyl siding and the roof finished with asphalt shingles. The building does not contribute to the district because it was constructed after the period of significance, but it replicates the form and fenestration of the original security office and is compatible with the historic context and other ancillary mill buildings.

15. Cross-Canal #1 Gate house, recent construction. Non-contributing building.

The gate house is a rectangular wood-framed, single-bay, one-story building with gable roof. The exterior is vertical T1-11 siding and the roof has asphalt shingles. The south and west elevations have a single one-over-one window. A recent construction from either the late-twentieth or early-twenty-first century, the gate house is neither architecturally significant nor a contributing structure.

16. Canal System, 1850. Alterations, 1904. Contributing structure.

The portion of the canal system included within the district was the first portion of the system constructed, between 1850 and 1852, and initially served only the Bates Mill. As the system was extended and expanded, it ultimately served multiple mill complexes. The canal walls are built of dry-laid irregularly shaped granite with portions of the canal bottom and walls formed by the naturally occurring bedrock. It appears that stone blasted from the bedrock to create the channel was used to construct the walls in other areas. In 1904 the Upper Canal was widened to increase the water flow to the system. The Upper Canal is 64 feet wide and 14 feet deep and extends for nearly three-quarters of a mile on a roughly north-south axis. At the intersection of the Upper Canal and Cross Canal #1there is evidence of a temporary dam built to allow Mill #1 to begin operations while the remainder of the canal was being constructed in the 1850s. The remains of the temporary dam (only visible when the canal is drained) consist of a brick base and wall section with bits of the timber and plank from the dam surviving along the bottom and western side of the canal. The portion of the canal included in the district extends from the Main Street bridge to the Chestnut Street bridge. The canal banks are planted with grass and trees, as they have always been. Modern chain link fencing lines the canal along Canal Street and along the parking lot in front of Mill #1 (1), Mill #2 (3), and the Connector Building (2). Water intakes for the Bates Mill complex are located at the southeast corner of the #5 Weave Shed (13), beside Mill #1 Annex (1) at the cross canal dam, and next to the Chestnut Street bridge.

Cross Canal #1 runs westerly from the Upper Canal to the Androscoggin River. The portion of Cross Canal #1 that is included within the district extends from the Upper Canal to the Lincoln Street bridge. A waterfall with a dam atop it is at the head of the cross canal. The southern bank of the cross canal channel is formed by the foundations of the various Bates Mill buildings that line it, with sections of granite block wall between the buildings. Numerous arched and rectangular outfall openings are located in these foundations and stone walls, evidence of the waterpower system long used by the mills. Many of these have been in-filled with brick or block. Between Mill Street and the Mill #1 Wing (7) there is a section of modern block retaining wall atop the historic granite foundation of Mill #1 Storehouse (no longer extant). On the north bank of the canal, portions of the foundation of the 1902 electrical power plant are located just below the falls. Below that is the outflow from the electrical generating plant within #5 Weave Shed (13). The metal draft tubes from the turbines are visible under the building. The remainder of the north bank of the cross channel is a granite block wall.

17. Iron girder bridge, ca.1902. Contributing structure.

Centered on the Connector Building between Mills #1(1) and #2 (3), the narrow iron girder bridge spans the main canal at the axis of the original Executive Office Building (no longer extant). The bridge was constructed at approximately the same time as the addition of the second story to the office building in 1902. The bridge is a continuous span with pony plate girders supported by a granite foundation and is painted green. This bridge replaced an earlier wooden, rod and turnbuckle deck truss bridge. The iron girder bridge has not been significantly altered.

18. Concrete bridge, 1914. Alterations, 1993. Contributing structure.

At the southeast corner of Mill #5 (13) is a concrete bridge over the upper canal. The bridge was built in 1914 soon after completion of Mill #5. The bridge has a single span and is comprised of reinforced concrete deck girders with granite foundation. Large concrete piers with capitals and bases sit at each end of the bridge creating a threshold from the sidewalk to the bridge. Mounted on the inside of the piers on the Canal Street side are black aluminum picketed gates. The sides of the bridge are lined with a concrete railing that is divided into nine sections by square piers with pointed caps. The piers and rail are painted white. Although no longer extant, a similar concrete bridge was constructed at the same time from the southeast corner of Mill #5 over the Cross Canal #1. This bridge originally had metal pipe railing. Both bridges were originally used for vehicular access across the canal. Canal Street was raised at some point and is now several steps above the grade of the bridge deck. In 1993, the girders and railings received a new parge coat which obscured the original post and panel detail of the railings. Round, lighted globes previously were set atop the piers but have been removed in recent years. The concrete bridge replaced an earlier wooden arched bridge.

19. Steel pedestrian bridge, ca. 2005-06. Non-Contributing structure.

A modern pedestrian bridge in the form of a gently arched Howe truss spans the cross-canal at the same location as the earlier concrete bridge similar to the 1914 concrete bridge over the upper canal (18). South of Cross-Canal #1, the bridge is supported by a concrete foundation just beyond the wall of the canal. North of the canal, the bridge is supported on the concrete foundation of the Mill #5 Security Office (14) which is supported by concrete piers extending down to the bedrock of the canal. The surface of the bridge is composite decking planks spanning steel girders and beams.

20. Filtration Plant, 1915. Contributing structure.

The majority of the formed-concrete Bates Mill filtration plant, built in 1915, is located below grade in front of Mill #1 (1). A 40 foot by 150 foot portion of the structure projects into the first floor of the mill, which is below grade on the east side. The filtration plant is essentially a subterranean concrete box, approximately 70 feet wide by 150 feet long by 20 feet high, subdivided into three sections. The bottom section is the largest and is a 6 foot high "basement" below the filtration tanks. Within this space, large rectangular concrete piers support the filtration tanks above and the iron water supply pipe for the tanks runs in a concrete trough just below floor level. The supply pipe is approximately 28 inches in diameter. Large iron pipes (approx. 12 inches in diameter) come down from the filtration tanks above and sit on larger "bases" that have a series of 2-inch holes around their perimeter, some of which have iron plugs in them. It appears that the "basement" was a water reservoir, either for the filtered water coming down from the tanks above, or for the unfiltered water being drawn up into the tanks above. This "basement" projects into the first story of the mill and creates a platform 4 feet above the floor level. A steep set of wood stairs reaches the platform from the floor. Atop the platform, wood framed windows above brick panels are set between concrete piers, providing light to the filtration tank section. This section is supported by the piers in the "basement" and also projects out under the parking lot in front of the mill. An opening in the interior wall with windows provides access to another set of steep wood steps leading up to a wood walkway which runs on the tank side of the window wall. It is possible from here to look over the ends of the tanks and down into them. Piping and controls for the tanks are located at their ends along the walkway. The eight concrete filtration tanks are each approximately 12 feet by 30 feet and approximately 6 feet deep. A single 12 inch iron pipe spans each tank lengthwise along with two iron troughs set several feet higher. Sand and gravel is layered in the bottom of seven of the tanks. One tank has the sand and gravel partially removed and shows a series of parallel one-half or three-eighths inch copper tubes running the length of the tank. It appears that water entered the tank through the copper tubing, which likely has numerous pin holes to allow the water to escape, passed through the sand and gravel to be filtered and cleaned, and then exited the tank through the iron troughs near the top of the tank. A plank ceiling supported on wood beams covers the entire tank area and likely was the form for a concrete cap which supports the parking lot in front of Mill #1(1). At the north side of the tanks is the last section of the structure, a single concrete space approximately 20 feet wide by 30 feet long by 18 feet high. Another set of steep wood steps allows one to look down into this space from near the ceiling. It clearly was a reservoir, either for canal water waiting to be filtered, or for clean water after the filtration process was completed.

21. Cross-Canal #1 Dam, 1850. Contributing structure.

The dam is located in Cross-Canal #1 at the north side of Mill #1. The arched granite tailrace for Mill #1 is incorporated into the dam below the mill. The dam is composed of dressed granite and bedrock and has been modified with a poured concrete slab over the top. North of the dam, additional concrete walls were added to support concrete walkways providing access across the canal.

22. Mill #5 Bridge Connector, ca. 1912-14. Contributing structure.

The enclosed two-level bridge connecting Mills #1(1) and #5 (13) has a subdivided Warren truss structure. The east side is exposed revealing the steel frame. On the interior the frame is covered with horizontal wood planks. The bridge intersects Mill #1 at the fourth bay of the third floor of the annex or side ell. Pedestrian passage is on the second floor and mechanical connections are located on the first floor of the bridge.

23. Railroad bridge, 1928. Alterations, 2001. Contributing structure.

The railroad bridge is a single-span riveted steel plate girder deck truss that has cantilevered sidewalks. The steel girder bridge spans Cross-Canal #1 and was built by Bethlehem Steel Company in 1928. It is still intact and has been modified to accommodate vehicular traffic. The timber railroad ties are supported by steel girders bearing on the granite foundation of the canal wall. The railroad tracks were removed by 1996 and the bridge has been covered with asphalt, recently rebuilt in 2001. The original timber railroad ties are still visible from the side.

24. CMP Biomass energy plant oil tanks, ca. 1985. Alterations, 1990. Non-contributing structure.

In 1985, a wood-chip burning, steam and electricity generating plant was developed and two fuel oil storage tanks remain beside the Boiler House. The plant has been largely dismantled since its operations ceased in 1990. These features are the only remaining elements of the plant and are not historically or architecturally significant.

25. Mill #3 and Storehouse #7 Connector bridge, ca. 1999-2000. Non-contributing structure.

Constructed ca. 1999-2000, the enclosed overhead connector bridge is a non-contributing modern structure built at the approximate location of two earlier bridge connectors. The current bridge connector is three bays long with a pair of nine-over-nine aluminum double-hung windows in each bay separated by a faux engaged column. The bridge is clad in black metal paneling. The bridge connects from the sixth bay of the third floor in Storehouse #7 (12) to the second floor of Mill #3 (6).

26. Parking Garage, 2006. Non-contributing structure.

A two-level parking garage was constructed on the site of Storehouse #8 adjacent to Storehouse #7 (12). From Mill Street, it appears as surface level parking, but the lower level is accessed from Lincoln Street. The structure is a steel frame with the columns extending up above the ground surface to support black aluminum picket fencing around the perimeter. An arched steel beam marks the entrance of the top level of the parking garage from Mill Street.

27. Bell, 1867. Contributing object.

The bell was made by Henry N. Hooper & Co., a bell foundry in Boston, MA from 1830-68. The bronze bell is approximately four-and-a-half to five feet tall. Currently sitting in a cast iron cradle on the lawn in front of the northeast corner of Mill #1, the swinging bell was previously hung in the belfry of the 1920 Tower connector between Mills #1 and #2. Prior to the construction of tower, the bell hung in the front tower of Mill #1.

28. Plaza 1, ca. 2001. Non-contributing site.

After the demolition of Mill #3 Annex in 2001, a plaza was developed to introduce pedestrian-friendly green space into the mill complex. Between Mill #3 (6) and Storehouse #2 (5), a symmetrically designed plaza is centered on the stair tower of Mill #2 (3). At the center is circular water feature surrounded on the east side by low brick walls containing raised planting beds. To the north side of the water feature area is a rectangular lawn planted with small trees shading benches. Additional green space provided in the corner between Mill #2 (3) and Mill #2 Wing (4). Adjacent to the lawn and in front of the north side of Mill #2 Wing (4) is a plaza for outdoor seating from the restaurant. Concrete pavers connect the walkways, outdoor seating areas, and water feature. The late twentieth century plaza design is a non-contributing feature to the significance of the mill complex.

29. Plaza 2, ca. 2005-07. Non-contributing site.

West of Mill Street between the Boiler House (11) and Storehouse #7 (12) is a late-twentieth century site design with stairs and large round paved plazas with concrete retaining walls on each side of the stairs to mitigate the differential of grade at this location. The plaza and stairs connect the mill complex to the Lincoln Street parking lots.

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [X] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [X] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- [ ] A Owned by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [ ] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

Areas of Significance
(Enter categories from instructions.)

INDUSTRY
ARCHITECTURE
COMMUNITY PLANNING AND DEVELOPMENT

Period of Significance

1850-1960

Significant Dates

1850-1924

Significant Person
(Complete only if Criterion B is marked above.)

Cultural Affiliation

Architect/Builder

Kelsey, Albert (1811 – 1901)
Lockwood, Amos D. (1815-1884)
Brown, Josiah (1816-1875)
Coombs, George M. (1851-1909
Stevens. William H. (1818 – 1880)
Kahn, Albert (1869-1942)

Period of Significance (justification)

The period of significance begins in 1850, with the start of construction for the canal system to supply power to the mill complex, and ends in 1960 which is 50 years prior to the present and after original construction and significant renovations were completed by the Bates Mills company. This was also approximately the time when textile operations began to close down, although they continued textile manufacturing in parts of the complex until 2000.

Criteria Considerations (explanation, if necessary)

None.

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance and applicable criteria.)

The Bates Mill Historic District is a significant complex of industrial buildings dedicated to textile manufacturing situated within the mill-city of Lewiston Maine. The historic district, which contains 15 buildings, 11 structures, 1 object, and 2 sites and is eligible for listing in the National Register of Historic Places at the local level under Criterion A for its industrial significance, as a property associated with the production of cotton and wool textiles, and specialty cloths for over a century. The Historic District also achieves significance under criterion A for its associations with community planning and development as one of the first planned industrial facilities in a planned 'company' town, and later for providing employment to the French-Canadian immigrants who came to Lewiston specifically to work in the mills. As a complex that embodies the distinctive characteristics of slow burning construction, and that reflects the evolution of industrial architecture over a seventy-five year period, the Bates Mill Historic District also meets Criterion C for its architectural significance. Of particular distinction is the Modernist style Mill #5, designed by architect Albert Kahn in 1912, which was built utilizing the "Kahn Method" of reinforced concrete construction. The period of significance commences in 1850, with the construction of the canal to supply power to the mill, and ends in 1960, which is 50 years before the present and after the physical development of the complex was complete and operations of the mills began to close down. As a whole, the Bates Mills Historic District possesses integrity of location, design, materials, workmanship, feeling, setting, and association to the period of significance.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

Criterion A: Industry

The district is significant under Criterion A for its associations with the textile industry in Maine's first planned mill city. The Bates Mills complex was built by a group of Boston investors headed by industrialist Benjamin Bates. This same group, under Bates leadership, was also responsible for the construction of the canal system that eventually powered ten mill complexes in Lewiston (including two others subsequently built by Bates and his partners) and the planning and development of the city built to support the mills. As the first textile mill constructed in Lewiston, and the last major textile mill to close in New England, the complex reflects 150 years of adapting the landscape, buildings, products and manufacturing processes to changes in economic conditions, in technology, and in consumer preferences.

Under criterion A, the Bates Mill is significant in the area of industry as a major producer of fabrics for the military during several major wars. By having the foresight to stockpile quantities of cotton prior to the outbreak of the Civil War, the company was able to operate at near-capacity and supply the Union forces with tenting canvas and other essential materials throughout the war period. During World War II Bates produced large quantities of Army duck and herringbone twill for the armed services, as well as sheets and bedspreads for service hospitals.

The Bates Mill also had a significant role in advancing the technology of textile production through innovations in machinery, production techniques and material processing from early in its history. An excerpt a Bates history published by the company during its centennial year (1950) explores the range of products manufactured at the Bates Mill during the post-Civil War period:

> *At the Bates Division in Lewiston the first Marseilles quilt woven in this country was produced in 1871. The Company's first damasks went on Bates looms in 1877. The diversity of production and the number of new fabrics and methods introduced at this plant were a source of amazement to the townspeople. The Lewiston paper reported that "800 different styles are made by the Bates Corporation, of which 400 are constantly on the looms." Singled out for special comment were Mr Harris, the designer, who "habitually exercises his ingenuity and taste in developing new styles" at the rate of 100 per year, and Mr. Barker, the mill agent,*

whose invention of a machine "whereby the yarn is printed by machinery instead of by hand in a style and accuracy nowhere else equaled" made Bates ginghams an international success.

Other fabrics woven at Bates included such varied items as shoe cloth, toweling, cheviots, piques, lap robes, tape, horse covers, corset cloth, cotton blankets, checked tablecloths, curtain cloths, hammock cloths, awning cloths, seersuckers, shirtings, napkins, crochet quilts, and diapers. By 1880 Bates was making over ten million yards of cotton cloths a year, the woolen venture having been abandoned after a fire destroyed a part of the plant in 1878.

Several pieces of Bates mill machinery still in the complex or now in the Museum LA collection are marked with patent numbers held by the company or its employees. Annual industrial and/or textile manufacturing reports from the late nineteenth and twentieth centuries show that Bates regularly updated its machinery, continually taking advantage of improved technology. The centennial history tells of the company's successful efforts to develop color-fast "Turkey Red" dye for damask in the 1880s. Eventually the company established a laboratory to conduct research related to their products. In 1946 *Industrial Research Laboratories of the United* States, the bulletin of the National Research Council, reported that the Bates laboratory employed three chemists, three engineers, five technical personnel, and others under Director, William Watson. Their "Research Activities" were listed as "The improvement of processes in cotton manufacturing; the development of new end products; cotton and rayon; the use of plastics in conjunction with textiles; changing the characteristics of yarns and fibers." The company's switch from direct-shafted water power to electrical power generated by its own on-site hydro plant in 1902 was an advance so remarkable that the local newspaper devoted a two page spread to the new facility and its use in the mill.

The Bates Mill is also significant as America's best known producer of Jacquard woven bedspreads, and other fabrics woven on complex Jacquard head looms, which require specialized facilities and a highly competent workforce. The Jacquard process had been invented in France in 1801 and had been in use in the US since about 1820. It mechanized the laborious process of weaving very complex patterns in fabrics such as damask, brocade, and the matelasse coverlets, or bedspreads, which Bates became famous for. Bates utilized advancements in building technology to improve their manufacturing processes in numerous ways. This is most clearly seen in the use of cold-rolled structural steel beams to create tall, open, bays to accommodate Jacquard head looms in Mill #6 in 1892, and in the use of cutting-edge reinforced concrete technology to create even taller, more open, and better lit spaces for Jacquard weaving in #5 Weave Shed in 1912.

Among the Lewiston textile mills, Bates was unique in its focus on "high end" fabrics for most of its history while the others focused the majority of their production on products such as shoe-lining fabric, plain white cotton fabric, and seamless woven bags. Bates was the only mill in Lewiston to weave with colored yarn, allowing them to produce fabrics such as calico. For many years the Bates organization was the largest employer in the state of Maine, with mills in Augusta and Biddeford as well as three in Lewiston. By specializing in bedspreads and shifting a portion of their production capacity to new synthetic materials in the 1930s, the company was able to maintain their New England production while many other firms closed down or moved to the south for economic reasons. Bates Mills was among the very last of the major New England textile mills in operation when they finally shut down in the 2000.

Criterion A: Community Planning and Development

The Bates Mills complex is further significant under Criterion A for its associations with the development of Lewiston as a major New England industrial city during the century that commenced in 1850. The associated canal system, the only system in Maine using two connected parallel canals, created large mill lots along the river and dictated the street grid that extended through the planned city that developed to support the mills. As the first mill built to use the water power of the canal system, Bates provided the template for the mills that followed. Housing for Bates workers was constructed by the company near the mill, providing the model later followed by the other mills, and nearby Lisbon Street developed as the main commercial and retail center of Lewiston, within easy walking distance of the mills. Bates Mill utilized immigrant labor, initially Irish workers for its construction and, from the 1870s forward, French-Canadian workers for production – trends that had lasting, significant, impacts on the cultural makeup of Lewiston.

Lewiston was initially a small rural community on the east side of the Androscoggin River at the location of the Great Falls. The first European settler arrived in 1770 and Lewiston was incorporated as a town in 1795. It would be chartered as a city in 1861. The industrial potential of the falls attracted notice early on and a large saw mill was built at the falls by 1809. In 1836 the Great Androscoggin Falls Dam, Locks, and Canal Company was formed to develop the water power on a larger

scale. It appears that the new company accomplished little in terms of building the facilities named in its title, perhaps because easy and affordable transportation for raw materials and finished goods to and from Lewiston, as large scale industry would require, was not available. The Androscoggin was not navigable above the falls at Brunswick-Topsham (20 miles south of Lewiston) and the Androscoggin and Kennebec Railroad did not arrive in Lewiston until 1848. After the arrival of the railroad, the Great Androscoggin Falls Dam, Locks and Canal Co. was reorganized as the Lewiston Water Power Company. Boston investors, including Benjamin E. Bates, Thomas J. Hill, Alexander DeWitt, and George L. Ward bought a controlling interest in the company. The group saw the potential for Lewiston to become a second Lowell, MA -- a planned textile manufacturing city begun in the 1820s and by 1848 the largest industrial complex in America. They hired contractor/architect Albert Kelsey to be responsible for the construction and operation of a canal system and mills, and for the layout of the future city of Lewiston.

The canal system Kelsey designed for Lewiston is the only parallel industrial canal system in Maine. A dam at the head of the Great Falls directs water into the upper canal, which feeds mill sites on the river side of the canal, and into two cross canals which run to the river. A lower canal, parallel with the upper, extends from Cross Canal 1 toward Cross Canal 2 (stopping some distance short of Cross Canal 2). It feeds mills between it and the river and has its own cross canal outlet to the river. The canals were dug primarily by Irish immigrants, brought to Lewiston by the railroad. A history of the Bates Manufacturing Company, published by the company to celebrate its centennial in 1950, credits Benjamin Bates as the prime mover behind the canal system. It says:

> *"By the time Benjamin Bates arrived in Lewiston, in the company of Massachusetts Congressman Alexander DeWitt, mills were dotting the rivers of Massachusetts and Rhode Island. The Saco, Kennebec, and Androscoggin Rivers in Maine were each supplying the power for at least one cotton mill, although operations along the Androscoggin were of minor importance. Bates, thirty-nine, a former school teacher and cash boy in a Boston store, now a member of the respected Boston firm of Davis, Bates, and Turner, noted the natural fall of 50 feet in the Androscoggin River. His thoughts were not on the beauty of the falls, however, but of cotton weaving. He saw that a canal would be needed to harness the power efficiently, and he visualized not one mill, but a line of mills placed along its banks. The sleepy farming town of Lewiston had met its builder.*

Once completed, the canal system created sites for more than a dozen large mill complexes. Ten such complexes were eventually built while several other of the planned mills lots were subdivided for housing. Bates Mill was the first built and created the template followed by the others in the following decades. A temporary dam in the canal allowed the Bates Mill to begin operations while the Upper Canal was still being excavated to reach the other mill sites that would also face onto it. Early photos show a tree lined canal with fenced walkways along grass esplanades and pedestrian bridges with decorative latticework railings connecting the Bates mill to the mill-owned worker housing facing it across the canal. It is clear that the "Lowell model" of a planned mill community, where green space and decent living conditions for the workers were a priority, was followed in the original development of Lewiston.

The Bates' centennial history states, "*Workers from all parts of the state, attracted by the cash wages which, low as they seem now, were considerably higher than what they could expect to earn by work in the farm communities or by going into teaching, migrated to Lewiston.*" With other companies also building mills to take advantage of the canal system, Lewiston was experiencing a significant housing shortage and the small community was quickly growing to accommodate the new residents.

During the Financial Panic of 1857 the Lewiston Water Power Company was reorganized as the Franklin Company, with Bates and his associates still holding a controlling interest. The Franklin Company was largely responsible for the urban design of Lewiston, laying out the streets and donating land for the city hall, the park, the churches, and the library. Its Boston stockholders came regularly to Lewiston for board meetings at the company-owned DeWitt House hotel, looking onto the park and Lewiston City Hall. The hotel also housed the offices of the company,. The prominence of Benjamin Bates in all of these activities is memorialized in the naming of Bates Street, which runs on the east side of the park. Bates' generosity to the Maine State Seminary, a Free-Will Baptist institution in the city, resulted in that school being renamed Bates College.

The planned development of Lewiston was unlike the growth of Maine's other major textile mill communities, such as Saco, Biddeford, and Sanford, which developed without such an overall plan to organize the placement of mills owned by various companies, and their relationship to the street grid and public spaces of the city. Several paper mill companies

undertook planning of whole communities later in the 19th century, but among the textile mill cities, Lewiston is unique in Maine.

The population of Lewiston increased steadily with the development of the mills, rising from 1801 residents in 1840 to 7424 in 1860, the period of construction for the canals and earliest mills. The population continued to increase to 13,600 in 1870; 19,083 in 1880; 21,801 in 1890, 23,761 in 1900, 26,247 in 1910; and 31,791 in 1920. Lesser population increases continued until 1970 when it peaked at 41,799 (by 2000, it had decreased to 35,690). The period of greatest growth was between 1840 and 1880, as the mills were being built. The decade 1840 – 1850 saw a population increase of 99%, followed by increases of 107% and 83% in the two following decades. The percentage of the population that was employed at Bates Mill was 13% in 1860; 9% in 1870; 8% in 1900, 1905, and 1910; jumping to 14% in 1915 with the completion of #5 Weave Shed. As a percentage of all the employees of Lewiston's cotton mills, Bates employees accounted for 59% in 1860, 23% in 1870, 35% in 1905, 43% in 1910, and 57% in 1915. None of the other mills individually played such a large role in the economy of the city at any point in their history.

In 1873 the Lewiston and Auburn Railroad opened, providing a connection with the Canadian owned Grand Trunk Railway. The Grand Trunk line ran from Quebec to Portland, ME and was of critical importance to both Maine and Canada, as it made Portland the primary port for Canada during the winter months when the St. Lawrence River was frozen over. The new depot in Lewiston, just west of the Bates complex, became the arrival point for thousands of French-Canadian immigrants who came to Lewiston in order to work in the mills. Up until this time, most mill workers in New England were largely of English or Irish heritage. The new Canadian immigrants changed the language and culture of both the mills they came to work in and the communities the mills were located in. The 1908 *Annual Report of the Bureau of Industry and Labor Statistics in Maine* contained a long article on the mills of Lewiston and their employees, and included ethnic breakdowns of the workforce at each mill. Bates workforce was 75% French-Canadian with the remaining 25% divided among "Irish, American, Scotch, Poles, Greeks, Russians, etc." The residential neighborhood west of the Bates complex became known as "Little Canada" and Lewiston developed a Franco-American culture that is prevalent still in the twenty-first century, as demonstrated by the more than 25% of residents who identified as French speaking on the 2000 US Census.

Criterion C: Architecture

The buildings in the Bates Mill complex represent several distinct periods of construction, several types or styles of construction, and several methods of construction which, taken together, provide an overview of mill evolution and technological advancement from 1850 to 1924. Additionally, #5 Weave Shed, built 1912-14, is a very significant example of Industrial Modernism designed by a master, architect Albert Kahn. With its reinforced concrete construction, huge expanses of steel-framed glazing, and distinctive saw tooth roof, the 340,000 square-foot two story building with its integrated four-dynamo electrical generating plant was a major departure from traditional mill architecture and introduced a new approach to building mills in Maine.

Substantial deposits of clay in Lewiston and across the river in Auburn made it possible for a number of brickyards to be established, which provided the principal building material for the mill complexes built in Lewiston. Most of the 19th century Bates buildings were built with load-bearing brick walls and timber internal framing and floors. "Slow burning" technologies were utilized in the construction of the Bates mills from the beginning. This approach to building mills involved the use of large, widely spaced, wood beams supported on heavy wood posts (usually solid round columns turned on a lathe and drilled through lengthwise to provide ventilation and prevent cracking) and 3 ½" - 4" thick splined flooring. A "wear layer" of 1" thick flooring was typically nailed to the top of the structural flooring. The underside of the structural flooring created the ceiling of the story below and the beams were left fully exposed. The avoidance of small-dimensioned structural elements, such as floor joists, and the absence of enclosed spaces in which fire might spread undetected (such as above a finished ceiling enclosing structural elements) had proven to be an effective means to avoid catastrophic fires. Large and solid wood structural elements were more likely to char to a certain depth and resist burning to collapse than smaller elements that would rapidly burn through and fail. Without enclosed joist or stud bays, fires could be quickly detected and more easily extinguished. The earliest buildings had gabled roofs with dormers in the attic story and isolated stair towers.

The background for this early fire resistant construction was well described by Christine Beard and Amy Cole Ives in the National Register nomination for the Biddeford – Saco Mills Historic District (2009):

> *... the physical construction of the ... mills differed from its predecessors, with slow-burning structures replacing the traditional joisted floors. Another innovation in fire prevention was the practice of constructing the picking rooms, where loose cotton could easily fuel flames, as free-standing structures rather than within the mill buildings. While some mill owners and managers were investing in fire safety improvements for their buildings, it was not the fire insurance industry that was promoting it. In fact, the underwriting practices of stock-held fire insurance companies at this time discouraged this type of investment because premium reductions were generally not offered for fire safety features added by textile manufacturing companies. The iniquity of this lack of discrimination led to the gradual establishment and growth of mutual fire insurance companies for factories in which the policy holders owned the insurance company and had a self-interest in keeping premiums down and claims to a minimum. The factory mutual's maintained their solvency by working cooperatively with each other and by only insuring well-built and well-managed mills. To that end they established construction and maintenance standards and enforced them with knowledgeable inspectors. The largest factory mutual company in the nineteenth century, the Boston Manufacturers Mutual Fire Insurance Company, played a significant role in developing and publishing fire safety standards for mill construction and maintenance. The basic elements of the standard for mill construction remained constant, until it was replaced by concrete construction in the1920s.*

It is probable that the first of the major alterations to the Bates buildings, made in the 1880s, were intended to address the developing standards of the mutual fire insurance companies -- by replacing the original gabled roofs with an additional story and nearly flat low gabled roofs on Mill #1 and Mill #2 in 1882. The stair towers on the front and rear facades of the mills were heightened, with the front towers extending a full story above the eaves and terminating in crenellations. The mill bell, which had been cast in Boston in 1867, was reinstalled in the top of the front tower on Mill #1. A row of rectangular glazed monitors or cupolas on top of the new roofs on Mill#1 and Mill #2 provided additional natural lighting to the top story. The elimination of steeply-pitched gabled roofs and their attics (which allowed fire to spread rapidly and unseen) became a priority for the mutual insurance companies in the 1880s. Unlike wool, which is resistant to burning, cotton is highly flammable and cotton dust is nearly explosive. With mills full of iron machinery operated by wooden shafts, leather belts, and iron pulleys, and the potential for heat build up at all those friction points, fire was a constant threat in these buildings. Slow burning construction, sprinkler systems, on-site firefighting equipment, and elimination of areas in which fire could spread unseen were the principal means of countering the risk.

Specialized Buildings

Several of the buildings in the Bates complex represented specialized building forms or construction methods at the time of construction. These were built to accommodate advances in technology of production equipment and processes used by the company or to take advantage of advances in building construction and electrical power generation technologies.

Mill #6

The bedspreads and other fabrics produced by Bates Mill resulted in several buildings with specialized architectural features. The looms required for Jacquard weaving in particular had a noticeable effect on several of the buildings. The very first buildings built for Jacquard weaving were of wood construction and were replaced by masonry buildings in the 1920s. There is little documentation for these buildings, but a photo of the interior of Mill #12 from 1895 (in the Bates centennial history) shows Jacquard looms in a room that appears to have had portions of the ceiling removed to accommodate the height of the Jacquard heads. The upper two floors of Mill #6 were built particularly tall to accommodate the Jacquard control heads and have larger than usual bays between the columns within the building for the looms. This was accomplished through the use of beams formed from two rolled steel [-shaped channels bolted back to back, supported on exceptionally tall wooden columns. This is one of the very few original uses of structural steel in the Bates Mill complex. Another interesting construction detail of Mill #6, discovered during renovations in recent years, is that the substantial wooden floor beams for the first story are splayed on the ends, creating a dovetail joint with the brick walls of the building. This would have been very effective in preventing the walls from spreading over time and "dropping" the ends of the beams, but was at odds with recommended "slow burning" construction practices, which specified angle-cut beam ends that could easily fall from their wall pockets if burned through, preventing structural damage to the brick walls during a fire. It seems the architect or engineer determined there was a greater threat of lateral wall movement from the vibrating machinery in the exceptionally tall spaces than of fire damage. The very tall upper stories of Mill #6 (and the early use of cold-rolled steel beams to make them possible) are the earliest surviving evidence of buildings built to accommodate specific processes or equipment in the complex. The success of the Jacquard woven bedspreads from Mill #6 would eventually lead to the construction of #5 Weave Shed to house many more of these looms.

#5 Weave Shed

Albert Kahn's #5 Weave Shed of 1912-14, built to house 300 Jacquard looms, was unlike anything built in Lewiston before. It utilized the Kahn Method of reinforced concrete construction to create exceptionally tall and wide bays on the weave floor, and filled the 4 acres of floor space with daylight through a saw-tooth monitor roof. It was a massive project that received a great deal of coverage in the local press. The Lewiston Evening Journal reported on August 7, 1912 that work on the weave shed was continuing at night under electric lights and, on August 17, published several large photographs of the construction progress under the headline "*How Work is Progressing on Weave Shed for Bates Mill in Lewiston.*" The accompanying article gave a description of the methods of construction being used:

> *"Lewiston has never seen such a building undertaking as is now being carried on west of the canal, where the Bates Manufacturing Co., is erecting an immense weave shed, which will employ over 2,000 hands.*
>
> *This work is being done by the most modern methods and the construction is unlike that of any other mill building now standing in the city. The site of the new building is almost a city by itself, with its numerous temporary offices, store houses, blacksmith shop, cement mixing devices, system of electric lighting, etc.*
>
> *The Weave shed will be the nearest to a fire-proof that has ever been built here. It will have sement [sic] posts, cement foundations, and cement walls, all re-inforced, while the outer walls will be faced with brick to correspond with the rest of the plant.*
>
> *For the past week, one of the cement mixing devices has been in operation on the upper section of the lot and from it the men have carried wheel barrows full of the cement to the moulds. A long stretch of the cast wall, next to the canal, was put in in only two days' time and illustrates what can be done with up-to-date methods. Later on greater progress will be made, for the tall distributing towers will be used.*
>
> *There are eight of these towers, the tallest being 130 feet high, located near the west side of the lot. Cement will be lifted up this wooden tower to the top, where it will be poured into iron troughs, which pass through towers of lesser height and finally into the moulds. In this manner, 30,000 yards of cement can be laid in a single day."*

On September 6, 1913 the Lewiston Daily Sun reported that "*Scores congregate daily to watch the work on the new weave shed of the Bates Manufacturing Company. The size of the building, said to be the largest concrete structure for textile work in New England, is not readily realized from the outside.*"

The "Kahn Method" of reinforced concrete construction, developed by architect Albert Kahn and his brother, engineer, Julius Kahn. Its development and history is well described on the website of the University of California, San Diego, where the George H. Scripps Memorial Marine Biological Laboratory (1910) was built using the method:

> *One important figure in the history of the Scripps Laboratory, Julius Kahn, probably never saw the building… Somehow the choice was made to use the "Kahn Method" of reinforced concrete construction, a technique now almost forgotten but which gave this building a high degree of strength against shear forces. Julius Kahn (1874–1942), civil engineer, manufacturer, and inventor, was born in Germany and raised in Detroit, Michigan; he received his education at the University of Michigan, from which he received a B.S. in Civil Engineering and the degree of Civil Engineer. After several years of work as an engineer for others, he returned to Detroit in 1901 and went into partnership with his older brother Albert Kahn, architect and one of the founders of modern architecture, who specialized in industrial buildings. The firm pioneered in reinforced-concrete design, and Julius Kahn quickly realized the deficiencies of the reinforcement systems then in use: failure of reinforced concrete by slippage of the steel in the concrete, by separation of the reinforced portion from the unreinforced concrete of the main portion of the beam, and by fracture of the beams in shear due to diagonal tension. He designed a new type of reinforcing bar — the Kahn Trussed Bar, which had shear members rigidly attached to the main reinforcing bar — which Albert Kahn tried out in the Agricultural Building of the University of Michigan, at Ann Arbor.*

Julius and Albert Kahn, and a few friends, incorporated the Trussed Concrete Steel Company in 1903, to produce and market the new construction method, with Julius Kahn as president and general manager. Other innovative steel reinforcement items followed the trussed rods in quick succession; according to Irwin, 37 patents, most of them basic, were issued to Julius Kahn between 1904 and 1914. Kahn and his firm did not content themselves with supplying materials for use in whatever design a local architect might choose and whatever installation method a contractor might use. Instead, they developed a complete construction method, carried out training programs for structural engineers, and issued booklets giving standards, calculation methods, specifications, and instructions for foremen.

The Kahn method became widely used within a short time following the company's establishment in 1903. Lewis Estes cites the use of the Kahn system in two buildings in the San Francisco area that had been built prior to the 1906 earthquake and did not collapse; he also cites buildings and bridges built prior to 1911 in Jamaica, Italy, Japan, and the Philippines...

One may wonder why a system of construction that became internationally used so rapidly has been all but forgotten. Reinforced concrete is an almost indispensable base for much modern architecture, yet the Encyclopedia of Modern Architecture, while mentioning Albert Kahn several times, discusses the esthetics of reinforced concrete construction at length and never mentions Julius Kahn, who made it possible and who held the patents: The Kahn system may have gone out of favor because of the relatively complex job of manufacturing the special shapes of his reinforcing bars, in comparison with the relatively simple ribbed bar now in common use. Improvements in welding technology may also have made it simpler to fabricate special reinforcing shapes on the job than to transport bulky special reinforcements long distances from the factory. It now seems that the system is generally forgotten except by restoration architects and engineers.

The Kahn system of reinforcement uses as its primary strength members Kahn Trussed Bars, which have a rectangular cross-section of the main bar, with flanges on two diagonally opposed corners. The flanges are sheared so that they can be bent upward, remaining attached to the main rod over a short interval. In the plans of Scripps Laboratory such bars two inches by 3/4 inch were called for in the beams and in the window lintels, and 1½ inch by ½ inch bars in the balcony, stairway, and the second floor. For the columns 3/4-inch "cup bars" were called for, wrapped in a 12-inch spiral with "no. 3 wire." The drawings showing the reinforcement of the interior walls have not been found. Test holes disclosed the presence of "rib metal," which is essentially a heavy-gauge expanded-steel lath in a rectangular pattern.

The steel-frame windows were probably also made by Trussed Concrete Steel Company. Kahn was also an inventor of steel-window systems, and the ones that were first installed in Scripps Laboratory resemble the ones commonly used in factories at the beginning of this century.

The "Kahn Method" was fully described and illustrated in the "*Kahn System Standards – A Hand Book on Reinforced Concrete*, published by the Trussed Concrete Steel Company (Kahn Building Products), Detroit, MI, 1908. A comparison of the exposed reinforcing bars in photos taken while #5 Weave Shed was under construction and the patented reinforcing bars illustrated in Kahn's book shows that the Kahn Method was used for the building.

Water Filtration Plant:

In 1915 a new underground water filtration plant was constructed between the front of Mill #1 and the upper canal, replacing a smaller filtration plant immediately in front of the original front wall of the mill. The filtration plant cleaned water from the canal for use in the textile manufacturing process. This unusual structure was built of concrete and projects a short distance into the first story of Mill #1 (which is below grade on the east side of the building). It is accessed from this space and is not visible from the exterior. In an era when cities routinely piped untreated sewage into rivers and upstream mills discharged their waste water into the same rivers, it is likely that the water flowing through the Lewiston canals was anything but clean. This specialized structure allowed that water to be filtered and cleaned for use by the mill.

Electrical Power Generation Facilities:

Bates was the first of the Lewiston mills to convert from direct water power to hydro-electrical power, in 1902.

Referring to the period just after the arrival of the new century in 1900, the centennial history says:

> *A wave of technological changes affected every phase of Bates operations during the period prior to World War I. Electric power to run plant machinery came in at the close of the century, as did the new automatic looms. Machine power was more and more replacing human muscles in man's battle for abundance. The canal, which had been described thirty years before as an "inexhaustible source of power," had to be widened in 1904 to keep the Bates, Hill, and Androscoggin machinery in action."*

As the penstocks and water wheels that had originally driven the shafts of the mills were converted to electrical generation, the first large electric motors were used to drive the same shafting system used by the earlier direct water power. A headline in the Lewiston Evening Journal on March 6, 1902 announced, "*ELECTRIC POWER ON AT BATES – The New Plant That Relieves Some of the Overburdened Water Wheels – A Unique Application*" The article opens with "*The Bates Manufacturing Co. of Lewiston has installed its new electric plant for power, and as a result, certain of the water wheels of mills No. 1 and 2 long overburdened, are now relieved.*" The article goes on to describe the new plant in some detail:

> *The new plant is located on the upper Cross canal. It is practically on the site of the old power of the R.C. Pingree Co. lumber yard, dispossessed by fire some years ago, and since then unused until now. When it became evident that the Bates Manufacturing Co. must relieve certain of its wheels which had been doing too much work, the problem of using this power was first considered. It is demonstrated that the loss by transmission of electric power for short distances is about 5 per cent. The loss by transmission of power by a shaft for this distance would be from 40 to 50 per cent, by friction and torsion, and hence, the solution was simple. An electric plant was accordingly installed working to perfection...*
>
> *The door of the little power house by the side of the canal opens upon a roomy floor lit by southern windows. In the far eastern end enters the great steel case or penstock leading from the upper level of the main canal...*
>
> *The water, at a 27-foot head, comes down from the upper level and discharges in the center of the circular 9 ½-foot penstock over two horizontal 33-inch Victor turbine wheels... When they were tested, upon completion of the plant, they produced, combined, on their specific trials 691 horse power, 695 horse power, and 701 horse power respectively.*
>
> *This power by direct connection is carried to the alternating current generator, a large and powerful machine installed by the General Electric Co. of Schenectady, N.Y. It revolves in a great circle like the fly-wheel of an engine, and at the time of our visit, was producing about 350 horse power, all of which is carried on three great cables to the mill on the opposite side and thence led to points of application in the various sections of the mill where the overhead motors apply to the shafting in a most direct and economical manner."*

Following a further detailed description of the equipment in the generating facility, the article describes the application of the electrical power in the mill buildings across the cross canal:

> *"From this point the Journal passed over into the mill where the power from this electric plant is applied. In every instance the motors were attached to the beams on the ceiling and bolted hence to the pulleys of the big main shaft. In each case were the usual devices and safeguards relative to the application of the power, and there have never since the plant was started the slightest hesitancy, the smallest delay, the least difficulty of any kind whatsoever of the application of power from this source."*

Finally, there is a description of the electric lighting plant for the mill, "*In another section of the mill we saw the electric-lighting plant operated from the power of the wheels and furnishing the thousands of lights to the mill. Everywhere is the incandescent*"

Over time, as electric motors became smaller, long runs of shafting were eliminated and individual motors were used to power one or two machines directly. In 1914 the facility described above was replaced by the new hydro-electric plant in #5 Weave Shed, which remains in operating condition and is described in Section 7 above.

Work of a Master

Six prominent architects or architect/engineers worked on the Bates Mill complex and canal system between 1850 and 1915. While for most of these men these commissions are representative examples from long careers either in the mill industry or in the Lewiston area, two of their number stand out, with their work at Bates representing the work of a master:

Albert H. Kelsey (1811-1901)

Albert H. Kelsey was born in Shirley, MA. At the age of fifteen, he was apprenticed to learn the trade of carpenter and builder. At the age of twenty-one, he went to Winchendon, MA to superintend the erection of a Methodist meeting-house, also of the Winchendon Hotel. In 1833, Kelsey moved to Northboro, MA as foreman for contractor John H. Wheeler. In 1834 he found employment with Boston builder Ezekiel Bates. Mr. Kelsey was next employed by the Boston & Worcester Railroad Company, in charge of the building department. He designed and constructed the first permanent passenger railway station in the United States, at the corner of Lincoln and Beach streets in Boston. For the next sixteen years he was engaged in the building construction business in Boston with Mr. Ezekiel Bates.

In 1850 Mr. Kelsey went to Lewiston, ME, in the employ of the Lewiston Water Power Company, and later became its agent and superintendent. The Lewiston *Journal* of March 4, 1901, called Mr. Kelsey "the father of Lewiston." He built, with a single exception, the mills and canals of Lewiston, "which grew like a magic city." He built Mills #1 and #2, with their wings and store houses, the original boiler house, and the office building at Bates. He laid out the streets and the park, erected dwellings, churches, the hotel and public buildings during the seven years he was superintendent of construction and civil engineer of the Lewiston Water Power Company. Mr. Kelsey was a director of the Lewiston Bank, of the Lewiston Water Power Company and of the Hill and Bates Mills.

On his return to Boston, he re-entered his former business as a contractor. In 1876, he took charge of the civil engineering and construction of the new State's Prison at Concord, and in 1880-81, erected a new cotton mill in the city of Waterville, ME for Amos D. Lockwood. He was the superintendent of extensive additions to the Massachusetts State House in Boston. Projects he superintended during the last sixty-six years of his life reach from Maine to Missouri and from Georgia, to New Brunswick, Canada.

In a memoriam published by the Masonic Order after his death it noted, "*Albert H. Kelsey thus carved his way through life, without influential friends or prestige, and simply by sheer hard work, indomitable perseverance, unfailing pluck and good nature elevated himself to the front rank of mechanical engineers, so that he ranked second to none in the United States as an expert authority in reference to the construction of cotton mills and hydraulic engineering.*"

Albert Kahn (1869-1942)

According to an article in *The Brickbuilder* magazine, published in May, 1915, Kahn was born in Germany in 1869 and immigrated to America at the age of 12. He started his architectural training in the office of John Scott & Co., in Detroit, and later with the office of Mason & Rice, where he remained for fourteen years. In 1895 Kahn formed a partnership with two other draftsmen from the same firm. Several years later one partner had become a professor at Cornell and the other had died, leaving Kahn to continue the business alone. By 1912 he had established an international reputation with his work designing reinforced concrete plants for the automobile industry in the mid-west, beginning in 1905. His first building in this style and material is described in *The Texture of Industry, an Archaeological View of the Industrialization of North America*:

> *In 1905, after building nine conventional factories for the Packard Motor Company, he [Kahn] and his brother designed Building 10 with a reinforced-concrete frame that pushes the limits of functional, minimalist design. It was the first multistory automobile factory to be constructed with this structural material. The narrow framing members in the outer walls of Building 10 form an open grid that seems almost too delicate to have survived the weight and vibration of more than half a century of automobile manufacturing. In a pattern repeated in factories for many other industries, large windows and thin brick spandrel walls fill the spaces between verticals and horizontals of concrete.*

This is an apt description of the exterior walls of #5 Weave Shed. A subsequent chapter describes Kahn's further development of one-story factories in 1918 for the Ford Motor Company at River Rouge, south of Detroit, MI, and says:

> *Albert Kahn already had experience in single-story industrial construction before his firm designed a series of great factories for Ford at "the Rouge." In 1906, Kahn and the New England mill-engineering firm of Lockwood, Greene and Company had designed a plant, primarily of single-story form, for the George N. Pierce Company of Buffalo, New York, which was soon to be well known for its Pierce Arrow automobiles. It seems likely that Lockwood, Greene shared with Kahn the fruits of its wide experience in textile-mill architecture; the similarity between their single-story weave sheds (with saw-tooth roofs) and buildings in the Pierce complex is striking.*

The United Shoe Machinery Corporation factory in Beverly, MA, built in 1903-06 by Ernest Ransome, is credited as the first use of reinforced concrete for an industrial building in the US. The formation of the Trussed Steel Concrete Co. by the Kahn brothers in 1903, patents issued to the company beginning in 1904, and Kahn's use of reinforced concrete for buildings at the University of Michigan in Ann Arbor in 1904 show that they were likely working on a parallel track with Ransome, and seeking to create a superior method of reinforced concrete construction.

Kahn became recognized as one of America's leading architects for modern industrial buildings and eventually achieved an international reputation, influencing many European designers. In 1929 he was asked to design a factory in the USSR and eventually designed and built hundreds of factories in that nation. Kahn worked as an architect for 57 years, dying in 1942.

The other four architects who did work at the Bates Mill complex are:

Amos D. Lockwood (1815-1884)

Amos D. Lockwood was born in 1815 in Pawtucket, RI and went to work in a store associated with a cotton mill at the age of 16 and soon was working in the mill itself. Within several years he was working as an assistant supervisor of the Almy, Brown, and Slater Mills in Slaterville, RI. William Almy and Moses Brown had established the first textile mill in American in 1793. Brown had married Lockwood's grandmother, providing the young man with an important connection in the field. Lockwood continued to advance under others until 1843, when he formed his own company with several partners and leased the mill he'd been managing. In 1851 they purchased a controlling interesting in another mill and, several years later, built a new mill to enlarge the facilities. These early experiences provided Lockwood with a practical education in the developing field of mechanical engineering for textile mills, which was to become his focus in later years.

In 1853, Lockwood was hired to make improvements to the Pacific Mills in Lawrence, MA, then the largest mill complex in the country, owned by a group of Boston industrialists and entrepreneurs who were involved in many other New England mills. This connection probably led to Lockwood being hired as mill engineer for the Franklin Company in Lewiston in 1858. Two years later he became Agent for the company. In that capacity he was responsible for the construction of Bates Mill #3 in 1863, with drawings by Josiah Brown, also an employee of the Franklin Company. During his time as Agent of the Franklin Co., Lockwood also oversaw the construction of the Androscoggin Mill, Lewiston's downtown park, and the enlargement of the DeWitt Hotel. He also served as a President of the First National Bank of Lewiston and of the Maine Central Railroad.

After leaving the Franklin Company in 1871, Lockwood founded A. D. Lockwood & Company, a mill-engineering consulting and investment firm. The firm was involved in the development of the textile industry in the south and in the mid-1870s the firm built the Lockwood Mills in Waterville, ME. In 1879, Stephen Greene came to work for the firm as a draftsman and in 1882 a new partnership, Lockwood, Greene & Company was established to provide "Carefully prepared plans, specifications and estimates furnished for the construction, equipment, and organization of new mills and the revision and improvement of old." Amos D. Lockwood died in 1884. His firm continues operating, as Lockwood-Greene Engineers, Inc., in the 21st century.

Josiah Brown (1816-1875)

Josiah Brown was born in 1816 in Smithfield, RI, son a Baptist minister. He may be the Josiah Brown who is listed as a carpenter in a published report on the building of new Mariner's House in Boston in 1846, designed by Gridley F. Bryant. Brown appears in the 1853 and 1856 Massachusetts Register as an architect living in Fall River. In 1855 he laid out the

Oak Grove Cemetery in Fall River, designed in the garden cemetery style. Beginning with the Union Mill Co. in 1859, Brown is credited as architect on a number of mills in Fall River, including the Robeson Mills in 1862 and the Border City Mills in 1872. In 1863, he was the architect (under Amos D. Lockwood) for Bates Mill #3 in Lewiston, ME. In 1864 he is listed as a Commissioner on the Troy and Greenfield Railroad and also served as consulting engineer on the Hoosac Tunnel project for the same railroad, investigating the use of steam pumps in the tunnel bore. He was principal assistant engineer for the Providence, RI, Water Commission until leaving the position In October of 1869. In 1870 he is listed as a member of the New England Cotton Manufacturer's Association. Amos D. Lockwood was that organization's Vice-President that year. In 1871 he was the principal organizer of the Montaup Mills in Fall River, established to manufacture seamless bags (in 1860 he had been the architect for the Androscoggin Mill in Lewiston (again under Amos D. Lockwood), which also specialized in seamless bags). Following Brown's death in 1875, William T. Henry (MIT, class of 1870) continued his business as a mill engineer in Fall River.

William H. Stevens (1818-1880)

William H. Stevens is another architect who worked for the Franklin Company under Amos D. Lockwood and was involved in a variety of projects in Lewiston and Auburn. He was born in West Gardiner, ME, in 1818 and was a carpenter before moving to Lewiston in 1848. He was still listed as a "house carpenter" in the 1860 US Census and was hired as a builder by the Franklin Company in 1864. In 1865 "Mr. W. H. Stevens of Lewiston prepared the plans of the building and had general superintendence of the work..." for the new Worumbo Mill in Lisbon Falls. Amos D. Lockwood, Agent of the Franklin Company and Stevens' supervisor, was a director of the Worumbo Mill Corporation. In addition to mill projects, Stevens also designed the Bates Street School, the Lincoln Boarding House and alterations to the DeWitt Hotel, and other projects while still employed by the Franklin Company. In 1870 Stevens served a one year term as Mayor of Lewiston and opened his private practice as an architect. Before partnering with Portland architect Francis A. Fassett in the firm Fassett & Stevens, in 1873, Stevens designed several major buildings including the Roak Block in Auburn, the Bonnallie Block in Lewiston, and the Farwell Mills in Lisbon. Stevens & Fassett were responsible for more than a dozen projects between 1873 and 1875, including schools, mills, commercial blocks, houses, a church and a bridge. For the last five years of his life, Stevens was partnered with Lewiston architect George M. Coombs, as Stevens & Coombs. Like many of the architects and engineers who worked on the mills of Lewiston, Stevens had acquired a deep knowledge of hydraulic engineering. This experience was used in several projects by Stevens & Coombs, including work for the Lewiston water works system, and bleacheries in Lewiston and Lawrence, MA. The #7 Storehouse at Bates Mill must have been one of Steven's last projects in 1879 or 1880. Stevens died in August of 1880.

George M. Coombs (1851-1909)

George M. Coombs was born in Brunswick, ME in 1851. By the age of 21 he was living in Lewiston and working for architect Charles F. Douglas, possibly after having worked as a carpenter. Douglas had arrived in Lewiston the previous year and had already designed two of the city's largest and most architecturally ornamental textile mills, the Continental and the Barker, as well as two shoe mills. Douglas also is credited with numerous residences, several commercial blocks, and a firehouse before relocating to Philadelphia in 1874. Coombs then established a partnership with Charles H. Kimball of Portland, which lasted for only a year before Kimball's early death. In 1875, Coombs went into partnership with William H. Stevens, whose partnership with Francis Fassett of Portland had ended the year before. During the five remaining years of Steven's life, they worked together on the commercial Goff Block, a new firestation, and numerous residences, in addition the work for the Lewiston water works system, and bleacheries in Lewiston and Lawrence, MA mentioned above under William Stevens. The #7 Storehouse at Bates Mill, built in 1879 or 1880, was likely one of their last projects together before Stevens' death in 1880. Coombs continued working in Lewiston under his own name and in 1881 designed the Mill #3 Annex and the Mill #4 Bleachery for Bates Mill. His earlier work on bleacheries with Stevens probably provided him with the expertise to undertake this job. Coombs did not partner with another architect until 1896 and designed many buildings during the years his firm was under his own name along. He worked in both the Romanesque and the "Free Classic" styles popular in the final quarter of the nineteenth century, as well as the Colonial Revival style just beginning to become popular. Buildings from this period include the Dominican Block, Provost Block, Sands Building, and several schools in Lewiston; the Music Hall Block in Farmington; the Franklin County Courthouse and Piscataquis County Courthouse; and the Mechanics Savings Bank in Auburn. In 1896, Coombs entered into partnership with Eugene J. Gibbs and Harry C. Wilkinson, both of whom had trained in Coombs' office. During this period the firm was responsible for Peck's Department Store in Lewiston, additions and alterations to Hiram Ricker's hotels at Poland Spring and Rockland, and private residences. Wilkinson departed for a position in the office of the Supervising Architect of the Treasury Department, in Washington, DC in 1899 and the firm was renamed Coombs and Gibbs. The firm continued to design notable buildings for the remaining ten years of Coombs' life, including the second story addition and Colonial Revival remodeling of the Bates Mill Office Building in 1902. By the time of Coombs' death in early 1909 both of his sons, Harry S.

and Fred Coombs, were working in the firm and continued the firm in their father's place. Gibbs departed the following year and Fred Coombs set up on his own in 1913. Harry Coombs made Alonzo J. Harriman a partner in 1928. Following Harry Coombs' death in 1939, Harriman dropped the Coombs name from the firm, which exists today as Harriman Associates.

Developmental history/additional historic context information (if appropriate)

The mill buildings of the Bates Mill complex were built following the "Waltham System" of mill construction developed in New England in the early 19th century. That approach to mill construction was well described by Christine Beard and Amy Cole Ives in the National Register nomination form for the Biddeford – Saco Mills Historic District (2008) as follows:

> *History of the Waltham System and Development of the Factory Mutual Fire Insurance Companies*
>
> *The early development of the textile industry in America is generally credited to Samuel Slater, who successfully established a Rhode Island spinning mill in 1793 following the traditional English system under which he received his training. Slater's mill made thread, which was then sent out to be woven on small looms worked by hand in the homes of the weavers. The Rhode Island system of cotton manufacturing following Slater's model was "characterized by small mills owned by individuals or partnerships, the employment for labor of whole families, and payment in script to be used in trade at mill - owner's stores."*
> *In 1814 a number of men from Boston, including Francis Cabot Lowell and Nathan Appleton, set up a cotton mill in Waltham, Massachusetts that was fundamentally different from the English mills or those previously built following the Rhode Island system in terms of ownership, manufacturing process, and employment. The Waltham manufacturers were the first in this country to set up a cotton mill in which all phases of production "from the opening of the cotton bale to the finished cloth - were done under one roof." They also introduced the corporate form of business organization and, in a startling innovation for that period, paid their employees' wages in cash. During a visit to England, Lowell and Appleton had been appalled by what they saw as the dependent "factory populations" and, upon setting up the Waltham mill, instead took advantage of a different labor pool, the New England farm girl who worked for the mill independent of her family, living in company provided boarding houses, returning to the farm, when production at the mill slowed down until she was needed again. Investment for Waltham system mills was generated primarily in Boston, but development of these mills was north and west of Boston and included mills in Massachusetts (Lowell, Lawrence, Chicopee), New Hampshire (Great Falls, Manchester) and Maine (Biddeford-Saco and Lewiston).*

Bates Mill Construction Chronology

Bates' Mill #1 was begun in 1850 and put into operation in 1852. The building had apparently been completed for some time when operations began, waiting for completion of the first portion of the upper canal to supply water power to the machinery. It was designed by Albert H. Kelsey and David Whitman and built by contractor Thomas D. Thorne. These would be the architects and contractor for all of the pre-Civil War buildings of the Bates Mill complex. As with the canals, Irish immigrants provided much of the labor for construction. A 70' x 100' wing was built at the northwest corner as the Picker House for the mill and was also completed in 1852. The picker house was where the cotton bales were broken open, releasing clouds of highly flammable cotton fibers into the air. Having this operation in a wing, separated from the main mill building by metal-clad doors, was a fire safety measure. In its first year of operation, the mill employed 200 workers with a monthly payroll of $3,900.

The following year, stock was sold to build a second mill and in 1854 Mill #2 was completed. The new mill was nearly identical to the first, including an attached 60' x 90' Picker House, and located 60' to the south of Mill #1. With both mills completed, Bates had 36,000 spindles in operation. These first mills were powered entirely by direct water power drawn from the canal through large iron penstocks. The water passed through water wheels which turned vertical shafts that extended through all stories of the buildings and, in turn, turned horizontal shafts that extended the length of the buildings. The water passed through tailraces below the waterwheels, to be drained into Cross Canal #1. Leather belts connected the individual machines and looms of the mill to the horizontal shafts and transferred the power from the water wheel to the machinery. A coal fired boiler house was built between the two mill buildings to supply steam for heat and hot water for

the textile manufacturing and finishing process. A new one-story brick office building, centered in front of the two mill buildings, was also constructed in 1854. Additionally, this was the year in which the upper canal was extended to the south and the Hill Mill (also owned by Benjamin Bates and partners) was built on the mill lot across Chestnut Street from the Bates Mill. In 1855 the company built brick tenement houses on Canal Street facing the mill to house workers and the canal was extended further south.

In 1857, the 50' x 100' Mill #1 Storehouse was built, in spite of a panic in the textile industry caused by increased imports of English yard goods. The *Lewiston Falls Journal* reported in that year *"The Bates Mill is one of the largest and most admirably fitted in New England. It runs 36,000 spindles, employing 1000 hands, turning out 5,700,000 yards of the best quality of cotton goods of the best texture and most beautiful style."* Already winning prizes at fairs in Massachusetts and Maine for "best pantaloon stuffs" and "best plain and fancy cottons," Bates Mill wove their first bedspread in 1858 to help diversify their product line.

Construction activity appears to have largely stopped during the early years of the Civil War. Because Bates had stockpiled cotton prior to the outbreak of the war (unlike many mills in southern New England), they were able take advantage of government contracts to supply textiles to the army, particularly with cotton duck for tenting. By 1862 cotton was selling for 40 cents per pound and many mills were idle for scarcity of it while Bates was running at three-quarters capacity on the cotton they'd purchased for 12 cents a pound before the war began. With the price of cotton at 60 cents per pound Bates began construction of a new 55' x 370' mill (#3) to produce woolens in 1863. Mill #3 was designed by Amos D. Lockwood and Josiah Brown. A 50' x 90' Store House for Mill #2, attached to the Mill # 2 Picker House, was also built in 1863. Cotton prices were at 70 cents per pound at the beginning of 1864 and at $1.10 by the end of the year. By War's end in 1865 it had reached as high as $1.90 per pound, quickly falling to 45 cents per pound after the end of the war. It was down to 25 cents per pound by 1867.

It seems that little new construction was undertaken in the immediate post-war years, at least not of any substantial masonry buildings. An 1886 Sanborn Insurance maps shows a line of wood-framed mill and shop buildings between Mills #1 & #2 and Mill #3 and its annex, but no documentation has been located to date these buildings. It is possible that some of them might date from this period. They were all removed in the early 20th century for additions to Mill #3 and its annex. In 1866 an additional story was added to the Mill #1 Store House and the roof altered to a low-pitched gable and the same was done to the Mill #2 Store House the following year. Many mills idled by the limited cotton supply during the war years must have restarted after the war and it is likely that there was no need for additional capacity at the Bates Mill for some time. The immediate post-war period was followed by the severe national recession of 1873-75

Mill #3 was rebuilt after a July 1878 fire, beginning of a period of significant alterations and new construction at the Bates complex. It was also the end of production of wool fabrics by Bates, as Mill #3 was converted to cotton production after the fire. In 1881 both the 45' x 170' Mill #3 Annex (demolished in 2001, after partial roof collapse in 1997) and the 50' x 150' Mill #4 (demolished 2005) were constructed. Both buildings were designed by architect George M. Coombs and built by Messrs. Waterhouse & Libby. Although now known as the "Bleachery" and used for the bleaching of cotton fabric until nearly the end of textile production at the mill, the 1897 Sanborn map labels Mill #4 as "Quilt Mill", with drying and weaving on both floors. It is clear it was first used for textile weaving and drying and later converted to bleaching. This mill originally had a continuous glazed monitor on its roof, the only one at the complex. The Mill #3 Annex was built for quilt (bedspread) manufacturing and weaving. The 16' x 32' wood-framed Gothic Revival style water gate control house at the northeast corner of Mill #1 was also built c. 1881. It was probably also at about this time that the Mill #1 annex addition was built on the north end of the building, where a single-story shed-roofed addition had previously covered the penstocks and waterwheels for Mill #1. The annex addition was not shown in an 1877 illustration and plan, but appears by 1884.

The 100' x 120' #7 Store House, designed by the Lewiston architectural firm of Stevens & Coombs, c.1880, was the first substantial Bates Mill building built across the Maine Central RR (originally the Androscoggin and Kennebec RR) tracks that divided the site from north to south. #7 Store House has Italianate style brick hoodmolds over its windows, one of the very few architectural details in the complex that can be associated with a particular style. East of the new store house was a block containing sixteen two to three-and-a-half story tenements and a barn or stable. A large tenement facing onto Chestnut Street had a synagogue on the second story. All of these would be demolished for the construction of #8 Store House in the early twentieth century. The 90' x 170' Mill #6, designed by Boston architect William H.H. Whiting, was built in 1892 specifically for Jacquard head looms. The third story on Mill #4 was also added in 1892. The 1950 Bates centennial history states that during the 1880s and 90s, *"production was largely on four types of fabric... ginghams, seersuckers, damasks, and quilts."* It goes on to note that, *"These four were to dominate the sales picture for half a century – quilts, or bedspreads, remaining the largest product of that plant to this day."* This would remain true until the end of production, fifty years after 1950.

In 1902 the Lewiston architectural firm of Coombs and Gibbs added the second story and hipped roof to the 1852 Executive Office Building (demolished 2008), resulting in a Colonial Revival style building. The mill's laboratory was housed in the new second story for a time, before moving to the Mill #1 Annex. South of #7 Store House, #8 Store House was built in 1908, replacing the block of small scale residential structures that had previously stood there. Like Mill #1 Store House, the new store house was built with stories under 7' tall. These spaces were just tall enough for a standard bale of cotton. This characteristic has made these buildings difficult to adapt for new uses and #8 Store House was demolished in 1996 for this reason.

In 1912, the Modernist style #5 Weave Shed designed by architect Albert Kahn – a two-story 350,000 square-foot reinforced concrete building with a saw-tooth roof covering more than four acres – dramatically changed the Bates Mill complex. The mill site across Cross Canal #1, to the north of the existing Bates complex, had remained largely vacant until this time, except for several small buildings. An 1884 map shows a planning mill on the site, probably a rough wood structure. It had been owned by the R.C. Pingree Lumber Company and burned some years before 1902 when the new electrical generating plant was built on the site of its water power plant. In a photo taken from a tower in Auburn c. 1900, the site is almost completely vacant except for two wood framed buildings along the upper canal and what appear to be several baseball diamonds. Bates did provide recreational activities for its employees, including baseball teams, and perhaps they played here.

On October 17, 1911, the Lewiston Daily Sun reported that Bates Manufacturing Company intended *"to erect a new mill on the old Pingree lot, so called, in the early spring."* The article stated that, *"All of the owners of buildings on the land, now owned by the Bates Mfg. Co., have been notified to vacate the premises immediately."* It noted that Bates had bought the land *"some time ago,"* that old stables had already been removed, and that buildings remaining on the land included a naptha cleaning house, a store house, and a building owned by the Union Water Power Co. The article also noted that a "private way" crossing the lot on the line of Ash Street was likely to be eliminated by the new building. An item in the October 11 edition of the same paper had mentioned that, *"A crew of men began work, Thursday, tearing down the wooden building owned by the Union Water Power Co., situated on the land of the Bates Manufacturing Co."* The 1902 Bates electrical generating plant, located immediately beside Cross Canal #1, was not demolished until the power plant in the new Weave Shed was operational. Construction photos show it squeezed between the new building and the canal and fragments of its foundation remain there today. The Christian Science Monitor (on January 17, 1912) and the Wall Street Journal (on January 18, 1912) both reported on Bates plans to build a new mill to double manufacturing capacity in January of 1912. Apparently the Lewiston Merchants' Association proposed extending Ash Street across the lot in the weeks following, potentially interfering with Bates' plans. An article in the Lewiston Evening Journal on January 27, 1912 reported, *"Merchants' Association Drop Ash St. Extension – Decide That It Is Not Practical or Feasible to Press It and Will So Advise City."* On February 6, 1912, the same paper reported that the Lewiston Board of Trade had voted that they did also not approve of extending Ash Street across the site. It noted, *"That they favor the erection of the proposed additions to the Bates Manufacturing company's plant, rather than the extension of Ash Street to Lincoln, was the sentiment of the members of the Lewiston board of trade in attendance.... It was voted that it was the sense of the board that the mill is of more importance to the city than the street. Thus the board of trade endorses the position taken by the Lewiston Merchants' Association."* The Lewiston Daily Sun reported on anticipated building activity for the year on April 18, 1912, in an article headlined *"1912 Building Outlook Spells Prosperity for Twin Cities."* In the article it was stated that, *"The new weave shed to be erected by the Bates Manufacturing Company on the Old Pingree lot, is probably the most important of the building enterprises to be begun in Lewiston. While the exact date when ground will be broken is unknown, the lot has been cleared of buildings and is ready for the excavators. The new building will mean the employ of hundreds of additional hands."* In a similar article in the April 25th edition of the Lewiston Evening Journal, it was stated that, *"The Bates expects to employ, in a short time, over 2,000 more people."*

On June 28th 1912, the Lewiston Evening Journal reported on the front page that "WORK BEGINS ON NEW BATES MILL." The Lewiston Evening Journal on July 26th published an item noting that:

> *"Owners of property on Main Street, Lewiston, between the canal bridge and the lower Maine Central depot are lamenting the fact that they do not own an alley or right of way in the rear of their buildings, for the new weave shed of the Bates mill will reach the rear end of most of the stores. Some of the real estate owners have spoken to the fire commissioners and other city officials pointing out the difficulty in fighting fires in the wooden structures, should a blaze break out. The new addition to the Bates, however, will be of brick and concrete and there will be little probability of fire from this building."*

Regular news stories on the progress of the project appeared in the Lewiston newspapers throughout 1912, 1913, and 1914 (some of which are quoted in the section on Albert Kahn above).

The Lewiston Saturday Journal reported on April 18, 1914 that the hydro-electric plant in the new weave shed would be placed in partial operation in the following month with full operation expected to follow *"a very short time later."* More than a year later, on May 10, 1915, the Lewiston Evening Journal reported, *"New machinery is daily being installed in the new Bates weave shed. This great plant will soon be in operation, one of the most up-to-date weaving plants in the United States."* On May 25th, the same paper reported, *"William C. Scott, overseer of the weave room at the Farwell mills at Lisbon, has resigned to become superintendent of weaving in the new weaving shed at the Bates mill."* No newspaper account of the actual start of weaving in the new building was located, perhaps because the escalating conflict in Europe pushed the story out of the news.

In 1914 a new Boiler House with a 250' tall smokestack was built between #7 Store House and Mill #3. It contained two coal fired boilers to provide steam for heating and processing in the complex. A coal pile with rail trestle for unloading coal stood between the Boiler House and #7 Store House. In the next year the space between the Mill #1 Wing and Mill #4 was filled in and connected to Mill #4. Construction photos of this project are labeled "new bleachery", confirms this as the point at which (the expanded) Mill #4 became the Bleachery. The new filtration plant followed in 1915 and was clearly built in preparation for the addition to the front of Mill #1 that was to follow five years later (the old filtration plant stood where that addition would be built). About this time the rear tower on Mill #1 was extended two stories above the roof line and it acquired the shallow hipped roof it retains today. In 1916 the site of the original boiler house was filled by a new brick building that connected Mill #1 and Mill #2, projecting 40' beyond their front facades, nearly reaching the back of the Executive Office Building. Construction photos show the foundation for the tower being built at the same time as the rest of the building's foundation, but other photos show the building as originally completed in 1916 without the tower rising above the roof line. Also in 1916, a rectangular three story "Waste House", (demolished before 1992) approximately 20' x 60' was built in front of the new Boiler House, connected to the Mill #6 tower by a short third story pedestrian bridge.

Following an interruption in construction activity during World War I, the east facades of Mill #1 and Mill #2 were removed and both buildings were extended 40' (two internal bays) toward the upper canal in 1920. These new facades were in line with the façade of the Connecting Building between the two mills, built in 1916, and were constructed of reinforced concrete piers with cast concrete panels below large paired windows filling between the piers. Brick stair towers were added at the south end of Mill #2 and at the north end of Mill #1 resulting in a continuous façade 670' long. This concrete façade was relieved of monotony by the use of brick for the stair towers at the ends and for the central Connecting Building. The tall brick tower on the Connecting Building was apparently added at the same time or shortly after, along with the clock in the raised parapet. The tower provides a strong vertical element at the center of the long façade. The extension of the buildings to the east eliminated the sloping grade that had allowed light into the first story on the east side of the original buildings. A continuous light well was built along the new façade (except where the filtration plant prevented it) to provide natural lighting into the first story of the expanded mills. This well was later filled to provide parking in front of the building. The final project in this program of modernization was to extend Mill #3 and the Mill #3 Annex towards Mill #1 and Mill #2 in 1923-24, replacing a line of smaller wood-framed buildings in the yard between the rows of connected masonry buildings. Unlike the similar extensions to Mill #1 and Mill #2, these new facades, which were not visible to the public, were constructed of brick. The entire program of alterations and new construction, from building of the #5 Weave Shed beginning in 1912 and the new Boiler House in 1914, through the new filtration plant, renovated Mill #4/Bleachery, new Connector Building, to the expansion of Mill #1, Mill #2, Mill #3, and Mill #3 Annex by 1924, appears to have been planned from the outset to transform the original 1850s mill buildings into a modern facility. An article in the Lewiston Evening Journal edition of April 18, 1914 documents this intent.

> *Without attempting to get into the details of the proposition it can be said that when the improvements now planned at this plant are completed it will mean, practically, the rebuilding of the entire present plant. The big weave shed, construction of which was begun in 1912, will be ready for use sometime during the coming fall or winter. Part of the new power plant will be in use within the next four weeks, the whole of it a very short time later. Immediately following the placing in operation of this power producing equipment, the present wheel houses will be abandoned and their equipment removed. This will be followed by rebuilding the present steam plant of the mill, after which will come the erection of a new carding mill, 900 feet long and five stories high. This will be located on the site of the present Bates Block, Canal Street, and will extend from Ash to Chestnut streets, arching over Pine. Raw material for use in this plant will be conveyed by automatic carriers from store houses along the railroad track.*

When the carding mill is completed the present old mills will be rebuilt and enlarged, as will the store houses and other buildings. When these changes have been completed it will be a continuous forward movement for the product of the mill, from the time the raw cotton leaves the store houses, until it arrives back there in finished material ready for shipment. This will be a great savings in time, which means decrease in cost of production and increased output, for today there is much retracing of route by the goods made in the process of manufacture...

It is estimated that nearly fifteen years will be required to complete these improvements."

Although the rebuilding and renovations that followed over the next decade did not follow this plan exactly (the massive new carding mill proposed to be built across Canal Street was never built), it largely describes the work that followed on the existing mill site.

The building activity at Bates Mill from the time of #5 Weave Shed's construction in 1912 was undertaken during a period of increasing competition from southern mills and represented a strong commitment by Bates to remain in Lewiston at a time when many New England mills were moving their production south. With the development of the electric motor, the abundant water power of New England was no longer necessary for the operation of mills and inexpensive labor, proximity to cotton farms, and reduced heating costs in the south were a great temptation to resist. Very little additional building activity was undertaken between 1924 and the end of production in 2000. Authors Robert B. Gordon and Patrick M. Malone state in their book *The Texture of Industry, an Archaeological View of the Industrialization of North America* that "Most historic industrial plants have been extensively altered, enlarged, and repaired over time. Expansion or replacement of individual buildings, construction of multiple additions, and linking of structures with connecting buildings or with bridges were normal paths of development." The Bates Mill complex falls squarely within this development pattern.

A highly detailed plan of the Bates Mill complex from the Associated Mutual Insurance Companies, dated June 1924, shows the complex in its fully developed state. Notes on the plan indicate that 35% of the complex is "tile between reinforced concrete beams, and reinforced concrete" (#5 Weave Shed), 64% is "slowburning" construction (19th century brick mill and store house buildings), and 1% is joisted (probably the office building). Power for the mill is shown as 12% steam and 88% water, with electrical transmission at 550v and 220v. 2240 employees operated and maintained 104,036 spindles, 1700 plain looms, 1000 Dobby looms, and 700 Jacquard looms.

The only wood buildings shown remaining on the property in the plan are several small gate houses to control the flow of water through the mills, elevated bridges between buildings (which had iron frames), and a loading dock along the railroad siding beside #8 Store House. All of the wood framed mill buildings that appear between Mills #1 and #2 and Mill #3 in earlier photos have been replaced with the masonry additions to Mill #3 and Mill#3 Annex. The double-tracked Maine Central rail line through the complex (now Mill Street) has a double-ended siding along the Mill #3 Annex and a double spur with a switchback trestle for unloading coal in front of, and south of, the Boiler House. Bridges across the Upper Canal and Cross Canal are shown in the same locations currently occupied by the existing bridges. A pedestrian bridge connecting Mill #6 to the north bank of Cross Canal #1 is no longer extant. Mill # 6 is identified as "No. 6 Machine Shop" on the plan. The machine shop at the end of Bates operations was located in the lowest level of Mill #1.

The expansion of Mill #3 and its Annex marked the physical apex of the Bates Mill. The completion of the decade-long program of expansion and renovation coincided with the textile depression of the early 1920s. The Bates centennial history notes that *"In every twenty-year period since 1840 the number of spindles in American plants had doubled. Between 1900 and 1925, 19,000,000 spindles were added to existing capacity, doubling it again. This, plus the newly adopted practice of night and day operation, resulted in an overproduction problem for the industry."* It goes on to say that *"By 1930, 5,000,000 spindles had been scrapped in New England, with another 9,000,000 destined to go in the ensuing years."*

In 1928 the Bates company's Androscoggin Mill in Lewiston was on the verge of liquidation. Walter S. Wyman, president of the Central Maine Power Company, recognized that the failure of Maine's mills would be disastrous for the state (and for his company) and undertook the organization of a rescue plan. Wyman was instrumental in the organization of New England Industries, Inc., a part of the Insull network of public-utility holding companies (which also had an ownership stake in Central Maine Power Co.). The new corporation acquired numerous vacant and idle mill properties in Maine. Samuel Insull and his associates would later be at the center of a national political controversy over the control of utility companies by the "Power Trusts," as is detailed in *The Lengthened Shadow of a Maine Man*, a biography of newspaperman Guy Gannet, who also was involved with Insull and Central Maine Power Co. However, during the 1920s and 30s, Wyman,

Insull and their associates were saviors to Maine's textile industry. With the resources of New England Industries Inc. backing the mill, Bates Mill survived the depression.

In 1940 Bates introduced their "George Washington's Choice" bedspread, which was to remain popular with consumers for decades to come. Ten years after its introduction, the Bates centennial history states that, *"demand has outstripped production ever since the bedspread was introduced."* During World War II Bates produced large amounts of Army duck and herringbone twill for the armed services, as well as sheets and bedspreads for service hospitals. Following the war ownership and management of the Bates Manufacturing Company underwent numerous changes, stabilizing in the mid-1940s with the Bates, Hill, and Androscoggin divisions (mills) in Lewiston, the York Division in Saco, and the Edwards Division in Augusta consolidated under Robert Braun, Chairman of the Board, and Herman D. Ruhm, Jr., President. In 1945 the Textile Workers of America organized in Lewiston, bringing unionization to Bates employees.

Through the second half of the twentieth century Bates continued to specialize in bedspread production while also introducing innovative new products, such as Sanforized flannel in 1948 which was a huge success for sleepwear and men's sports shirts. Labor troubles became increasingly common though the early 1950s as the union and management struggled over contracts. A controlling interest in the company was acquired by Consolidated Textile Co. in 1955 and the Maine Legislature introduced two bills designed to prevent the company from being relocated to the south, as threatened by the Lester Martin, President of Consolidated Textile. Martin decided to keep the mills in Maine after a meeting with Governor Edmund Muskie. Labor conflicts and changes in ownership, and management, continued until Bates Fabric employees took over ownership of the company through an employee stock ownership trust in 1979. In 1992 the City of Lewiston took ownership of the company after Bates failed to pay $800,000 in personal and real estate taxes, and began planning for the redevelopment of the property, which is ongoing. Textile production continued under City ownership until 2000, when it finally ceased. The final years of production took place only in the #5 Weave Shed.

The redevelopment process at the complex is now in its second decade and a number of buildings have been sold by the City of Lewiston and rehabilitated for new uses, as detailed in the inventory. The rehabilitation has been largely sensitive to the historic character of the complex while recognizing that professional offices, restaurants, and other current uses require amenities not usually associated with industrial uses. This is noticeable primarily in the development of the two landscape plazas and the new parking structure. The need for more recognizable entrances to the redeveloped buildings is the other area where apparent changes have been made (with increasing sensitivity as the redevelopment process has continued). The most recent rehabilitation project, providing a new entrance to the north end of Mill #3 and to the Mill #1 Store House, along with a new loading dock for the store house, has been very sensitively handled. Through the redevelopment process, the property has been subdivided into eight separate parcels (one parcel has a parking structure on it that is owned separately from the land beneath it). The canal system is under separate ownership as well.

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Previous documentation on file (NPS):

___ preliminary determination of individual listing (36 CFR 67 has been requested)
___ previously listed in the National Register
___ previously determined eligible by the National Register
___ designated a National Historic Landmark
___ recorded by Historic American Buildings Survey #_____
___ recorded by Historic American Engineering Record #_____
___ recorded by Historic American Landscape Survey #_____

Primary location of additional data:

_X_ State Historic Preservation Office
___ Other State agency
___ Federal agency
___ Local government
___ University
_X_ Other
Name of repository: See Bibliography.

Historic Resources Survey Number (if assigned): _____

10. Geographical Data

Acreage of Property 9
(Do not include previously listed resource acreage.)

UTM References
(Place additional UTM references on a continuation sheet.)

	Zone	Easting	Northing
1	19	402417	4883279
2	19	402448	4883010
3	19	402617	4882608
4	19	402427	4882528
5	19	402241	4882962
6	19	402307	4883007
7	19	402300	4883173

Verbal Boundary Description (Describe the boundaries of the property.)

Beginning at the intersection of Main Street and Canal Street, the boundary runs southerly along the west side of Canal Street, east of the upper canal, to the corner of Chestnut Street. It then runs westerly along Chestnut Street to the southwest corner of the Bates Mill parking structure, and then northerly along the historic line of Himes Alley, passing along the westerly sides of the parking structure, #7 Store House, the Boiler House, and Mill #6 to the line of the #1 Cross Canal, thence westerly along the south side of the cross canal to the Lincoln Street bridge, northerly along the east side of the bridge and thence easterly along the north side of the cross canal to the southwest corner of Mill #5 at Mill Street. The boundary turns northerly and continues along the western side of Mill #5 to Main Street and then follows around the Mill #5 parking area (site of the original loading dock) and northeasterly along the north end of Mill #5 to the Upper Canal, turning northerly along the canal to Main Street and then easterly along the Main Street bridge to the starting point. The boundaries include the following parcels on the City assessor's maps: 207-145, 208-157, 208-83, 208-159, 208-160, 208-55; and portions of the following parcels: 208-56, 208-82; and the portions of the Upper Canal and #1 Cross Canal bounded by Main, Canal, Chestnut, and Lincoln streets. Please refer to "District Sketch Map" for precise boundaries of the district.

Boundary Justification (Explain why the boundaries were selected.)

The boundaries of the Bates Mill Historic District include most of the land historically associated with the Bates Mill manufacturing complex and the portion of the canal system essential to its operation. The portion of the historic Bates Mill property east of Canal Street has not been included due to the complete loss to demolition of the mill-built housing on that property. Properties along Lincoln Street now combined with certain parcels of the historic Bates Mill property have been excluded, using the historic right of way of Himes Alley (no longer extant) as the boundary line. Historically, this was the boundary of the mill property.

11. Form Prepared By

name/title Scott Hanson and Melanie Smith
organization Sutherland Conservation & Consulting date July, 2010
street & number 295 Water Street telephone (207) 620-6291
city or town Augusta state ME zip code 04330
e-mail scotthanson@sutherlandcc.net

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** (7.5 or 15 minute series) indicating the property's location.

  A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.

- **Continuation Sheets**

- **Additional items:** (Check with the SHPO or FPO for any additional items.)

Photographs:

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

Name of Property: Bates Mill

City or Vicinity: Lewiston

County: Androscoggin **State:** Maine

Photographer: Scott Hanson, Sutherland Conservation & Consulting

Date Photographed: June-July 2010

Description of Photograph(s) and number:

1 of 53: Looking south along east front of Bates Mill complex with Upper Canal at left and Cross Canal #1 at right. From left to right, the buildings are: brick buildings of the Hill Mill complex across Chestnut Street (outside district boundaries), Bates Mill #2, Connector Building, and Mill #1 and annex.

2 of 53: Looking south along Upper Canal and east façade of #5 Weave Shed looking toward Mills #1 & 2 and the Connector Building.

3 of 53: Looking northwest at the intersection of the Upper Canal and Cross Canal #1. Mill #1 is at left and #5 Weave Shed at right. Also shown, from left to right in front of the larger buildings, are Gate House #1, Cross Canal #1 Gate House, Mill #5 Security House, modern pedestrian bridge (over cross canal) and historic concrete bridge over the Upper Canal.

4 of 53: Looking southeast at intersection of Lincoln Street and Railroad Alley. Buildings from left to right: corner of #5 Weave Shed, Mill #1 annex, Mill #1 Wing, Mill #6, Boiler House, #7 Storehouse.

5 of 53 Looking southwest at east façade of Mill #1 and annex. Upper Canal in foreground with Connector Building and Mill #2 at left. The Filtration Plant is located below grade in front of the right half of Mill #1.

6 of 53: Looking north along alley between Mill #1, Connector Building, and Mill #2 (all on right) and Mill #3 (on left), showing west façade and stair tower of Mill #1 in distance. The original facades of Mills #1 & 2 originally matched these facades.

7 of 53: Interior looking southeast, Mill #1 third story. This is typical of unaltered interiors in Mill #1, Mill #2, and the Connector Building.

8 of 53: Interior looking north, Mill #1 third story, showing interior window wall between stairwell and mill space. This is a typical treatment on all stories.

9 of 53: Looking west at east façade of Connector Building from Canal Street. Iron Girder Bridge and Upper Canal in foreground.

10 of 53 Interior looking west at new entrance to Connector Building. Bottom of new staircase is at right.

11 of 53: Looking northwest from Chestnut Street bridge at east façade of Mill #2 with Connector Building and Mill #1 at right. Iron beams along canal edge once supported the Gate House for the water intake for Mill #2.

12 of 53: Looking east at west façade and stair tower of Mill #2 and Plaza 1. The original east facade matched this façade in appearance and materials. Brick dust collectors are located on either side of the stair tower. New façade and entrance to Mill #3 at left.

13 of 53: Interior looking southeast, Mill #2 first story. Block filled window openings are now below grade, as the light wells were filled to create parking along east façade of building. This is typical of the first story in Mill #1 and Connector Building also. The junction between the beams and ceiling of the original 1852 building and the 1920 addition is visible above the near row of columns.

14 of 53: Looking north at south facades of Mill #2 Storehouse and Wing, Chestnut Street in foreground. Storehouse is left of the arch, which was originally open to allow access to the mill yard. Mill #2 is at far right.

15 of 53: Interior looking east, Mill #2 Wing, second story. Typical interior that has been rehabbed but not yet leased, similar spaces exist in Mill #2 Storehouse, Mill #3, and Mill #6.

16 of 53: Looking northeast at Mill #2 Storehouse, Mill #2 Wing and Mill #2 at right. New south façade of Mill #3 is in distance at left. Intersection of Chestnut Street and Mill Street in foreground. A corner of the parking structure on the site of #8 Storehouse is at left.

17 of 53: Interior looking east, restaurant in the first story of Mill #2 Wing and Storehouse.

18 of 53: Looking northeast at west façade of Mill #3 from Plaza 2. Mill # 6 and fuel oil tanks are at left.

19 of 53: Looking southeast at Mill #3 with new entrance addition and loading dock in foreground. Hose House #9 is at extreme right abutting the Mill #6 tower. New connecting bridge between Mill #3 and #7 Storehouse in distance.

20 of 53: Interior looking southeast, Mill #3 south end entrance lobby.

21 of 53: Interior looking north, Mill #3 third story. Typical rehabilitated office space. Similar spaces exist in Mill #6 and #7 Storehouse.

22 of 53: Looking southeast at, from left to right, Cross Canal #1, Cross Canal Dam, Connector Bridge between #5 Weave Shed and Mill #1 annex, the annex, and Mill #1 Wing. Numerous outflows from the Mill #1 and Mill #2 water power systems are visible in stone canal wall. Foundation fragments from 1902 electrical generation plant are at left.

23 of 53: Interior looking northwest, Mill #1 Wing first story. Rehabilitation work underway for new brewery tenant.

24 of 53: Interior looking southeast, Mill #1 Wing second story. Typical pre-rehab space.

25 of 53: Looking northwest at Gate House #1. Water intake for Mill #1 is below building.

26 of 53: Looking east at west façade of Mill #6. Intersection of Lincoln and Cross streets in foreground. Tall windows on second and third stories indicate the tall ceilings required for Jacquard looms.

27 of 53: Looking southwest at east façade of Mill #6. Mill Street is on the roadbed of the Maine Central RR line that passed through the mill complex.

28 of 53: Interior looking north, Mill #6 third story. Rolled steel beams support roof in exceptionally high room built to accommodate Jacquard looms. New elevator shaft and stairwell at left.

29 of 53: Interior looking east, Mill #6 first story. Space rehabilitated for Coffee shop.

30 of 53: Looking northeast at Boiler House. Mill #6 at left and Mill #3 at right.

31 of 53: Looking southeast at #7 Storehouse.

32 of 53: Looking northeast at #7 Storehouse and parking structure on site of #8 Storehouse.

33 of 53: Looking northwest along east façade of #5 Weave Shed, upper Canal in foreground. Water intake for hydro-electric plant at left. Concrete Bridge at extreme left.

34 of 53: Looking southeast from Main Street at north and west façade of #5 Weave Shed. Original steel window sash remain in one opening near corner on west façade, where the loading dock was located. SCC, July 2010.

35 of 53: Looking northeast along west façade of #5 Weave Shed.

36 of 53: Looking northeast at south façade of #5 Weave Shed and Cross Canal #1 Dam from Mill Street bridge (former RR bridge). Outflow for hydro-electric plant is visible under weave shed. Location of former overhead pedestrian bridge between weave shed and Mill #4 (demolished) is visible on second story. Portion of foundation of 1920 electrical generating plant is visible between #5 Weave Shed and Dam.

37 of 53: Interior looking north, #5 Weave Shed second story. View shows saw tooth roof structure and location of monitor windows covered in plywood and other materials. Repaired section of flat roof at right.

38 of 53: Interior looking west, #5 Weave Shed second story. View shows saw tooth roof structure which provided room for tall heads on Jacquard looms.

39 of 53: Interior looking north, #5 Weave Shed first story hydro-electric plant. View shows water powered electrical dynamos on right and interior window wall (with painted glass) on left.

40 of 53: Looking north at upper section of Cross Canal #1. Metal screens for Mill #1 water intake are in foreground. Dam is at left with Cross Canal #1 Dam Gate House at left center. Modern pedestrian bridge and #5 Weave Shed Security House are at right.

41 of 53: Looking east at Cross Canal #1 middle section between Mill Street and Dam.

42 of 53: Looking east at Cross Canal #1 section between Lincoln Street and Mill Street. #5 Weave Shed on left and Mill #6 on right. Former railroad bridge now used for Mill Street also shown.

43 of 53: Looking northwest at Iron Girder Bridge over Upper Canal from Canal Street.

44 of 53: Looking west across Concrete Bridge from Canal Street. White Security House at end of bridge on left.

45 of 53: Interior looking northeast at Filtration Plant, Mill #1 first floor. View from machine shop toward platform created by Filtration Plant "basement" and interior windows between machine shop and Filtration Plant.

46 of 53: Interior looking southeast, "basement" of Filtration Plant.

47 of 53: Interior looking southeast along walkway in front of tanks in Filtration Plant. Controls for tanks are mounted on fronts of each tank.

48 of 53: Detail, view into filtration tank showing copper tubing buried in sand and grave with 12" pipe at center and drain trough at right.

49 of 53: Looking southwest at Fuel Oil Tanks remaining from 1980s co-generation plant. SCC, July 2010.

50 of 53: Looking west at Parking Structure on site of #8 Storehouse, south of #7 Storehouse (at right) and west of Mill Street (in foreground).

51 on 53: Looking north at Bates Mill Bell. SCC, July 2010.

52 of 53: Looking southwest at Plaza 1. Mill #2 Wing and Storehouse in distance. Plaza 1 can also be seen in Photo 12. SCC, July 2010.

53 of 53: Looking east at stairs to Plaza 2 from parking lot west of district. Upper portion of plaza is shown in Photo 18. SCC, June 2010.

BATES MILL HISTORIC DISTRICT
Name of Property

ANDROSCOGGIN COUNTY, MAINE
County and State

Property Owner: (Complete this item at the request of the SHPO or FPO.)

name _____

street & number _____ telephone _____

city or town _____ state _____ zip code _____

Bates Mills, Lewiston, Maine
Building Inventory Key and
District Boundry

PLAN NORTH

- 100' -
- 50' -
- 200' -
- 300' -

Lincoln Street

Mill Street

Chestnut Street

Cross Canal #1

Upper Canal

Upper Canal

Canal Street

DISTRICT BOUNDRY

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Bates Mills, Lewiston, Maine
Photo Key and District Boundry

PLAN NORTH

- 100' -
- 50' -
- 200' -
- 300' -

Lincoln Street
Mill Street
Chestnut Street
Cross Canal #1
Upper Canal
Upper Canal
Canal Street

PISTRICT BOUNDRY

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Bates Mill Historic District

MULTIPLE NAME:

STATE & COUNTY: MAINE, Androscoggin

DATE RECEIVED: 10/29/10 DATE OF PENDING LIST: 11/30/10
DATE OF 16TH DAY: 12/15/10 DATE OF 45TH DAY: 12/14/10
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 10001036

REASONS FOR REVIEW:

APPEAL:	N	DATA PROBLEM:	N	LANDSCAPE:	N	LESS THAN 50 YEARS:	N
OTHER:	N	PDIL:	N	PERIOD:	N	PROGRAM UNAPPROVED:	N
REQUEST:	N	SAMPLE:	N	SLR DRAFT:	N	NATIONAL:	N

COMMENT WAIVER: N

✓ ACCEPT ___ RETURN ___ REJECT 12.15.10 DATE

ABSTRACT/SUMMARY COMMENTS:

Entered in
The National Register
of
Historic Places

RECOM./CRITERIA_____

REVIEWER_____ DISCIPLINE_____

TELEPHONE_____ DATE_____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.

BATES MILL H.D.; ANROSCOGGIN CO., ME

BATES MILL H.D.; ANDROSCOGGIN CO., ME

BATES MILL H.D.; ANDROSCOGGIN CO., ME

BATES MILL H.D.; ANDROSCOGGIN CO., ME

1 OF 53

BATES MILL H.D.; ANDROSCOGGIN CO., ME.

5 OF 53

BATES MILL H.D.; ANDROSCOGGIN CO., ME 60F53

BATES MILL H.D.; ANDROSCOGGIN CO., ME

7 OF 53

BATES MILL H.D.; ANDROSCOGGIN CO., ME

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BATES MILL H.D.; ANDROSCOGGIN CO., ME

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BATES MILL H.D.; ANDROSCOGGIN CO., ME

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15 OF 53

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16 OF 53

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BATES MILL H.D.; ANDROSCOGGIN CO., ME

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30 OF 53

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31 OF 53

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BATES MILL H.D.; ANDROSCOGGIN CO., ME

35 OF 53

BATES MILL H. D.; ANDROSCOGGIN CO., ME

BATES MILL H.D.; ANDROSCOGGIN CO., ME

BATES MILL H.D.; ANDROSCOGGIN CO., ME

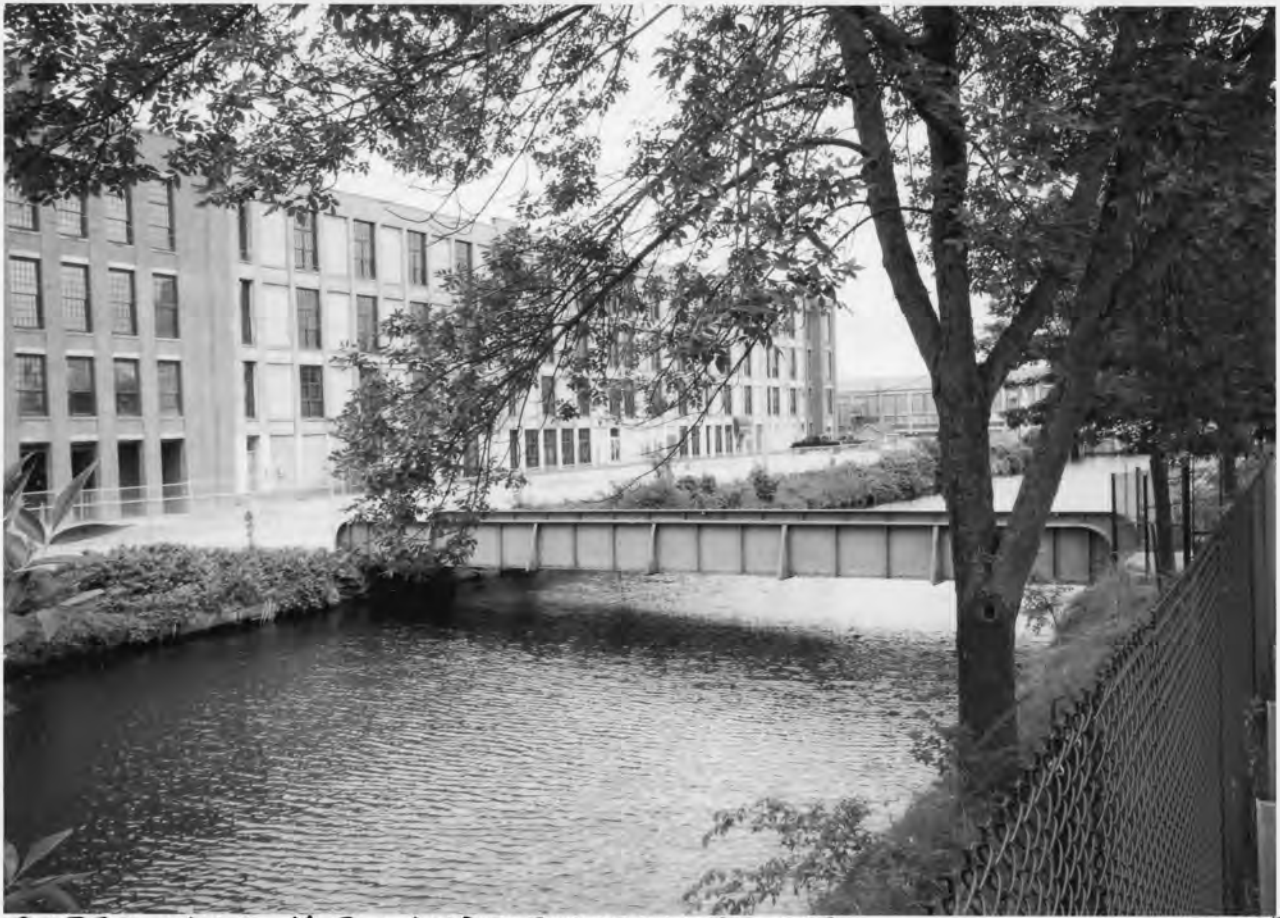
BATES MILL H.D.; ANDROSCOGGIN CO., ME

BATES MILL H.D.; ANDROSCOGGIN CO., ME

40 OF 53

BATES MILL H.D.; ANDROSCOGGIN CO., ME 41 OF 53

BATES MILL H.D.; ANDROSCOGGIN CO., ME



BATES MILL H.D.; ANDROSCOGGIN CO., ME

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BATES MILL H.D.; ANDROSCOGGIN CO., ME

BATES MILL H.D.; ANDROSCOGGIN CO., ME

BATES MILL H.D.; ANDROSCOGGIN CO., ME 46 OF 53

BATES MILL H.D.; ANDROSCOGGIN CO., ME

47 OF 53

BATES MILL H.D.; ANDROSCOGGIN CO., ME

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BATES MILL H.D.; ANDROSCOGGIN CO., ME

BATES MILL H.D.; ANDROSCOGGIN CO., ME

50 OF 53

BATES MILL H-D.; ANDROSCOGGIN CO., ME

BATES MILL H.D. ; ANDROSCOGGIN CO., ME

BATES MILL H.D.; ANDROSCOGGIN CO., ME

53 OF 53

BATES MILL H.D
ANDROSCOGGIN COUNTY
MAINE
UTM's:
① 19/402417/4883279
② 19/402448/4883010
③ 19/402617/4882608
④ 19/402407/4882528
⑤ 19/402241/4882962
⑥ 19/402307/4883007
⑦ 19/402300/4883173

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LEWISTON QUADRANGLE
MAINE—ANDROSCOGGIN CO
7.5 MINUTE SERIES (TOPOGRAPHIC)
SW/4 LEWISTON 15' QUADRANGLE

6972 II NE (LAKE AUBURN WEST)
6972 II NE (MONMOUTH)
LIVERMORE FALLS 29 MI. TURNER 10 MI.
AUGUSTA 27 MI. GREENE 6 MI.
6972 II NW (LAKE AUBURN EAST)
SABATTUS 1.2 MI. GARDINER 21 MI.
GORHAM 30 MI. DANVILLE 2.9 MI.
17 MI. TO INTERCHANGE 14 AUGUSTA 2.3 MI.
6972 III SE (MINOT)
(LISBON FALLS NORTH) 6972 II SE
PORTLAND 28 MI. 1 MI. TO INTERCHANGE 12
LISBON 1.9 MI. BRUNSWICK 13 MI.
(GRAY) 6971 IV NE
NORTH POWNAL 4 MI.
(NORTH POWNAL) 6971 I NW
DURHAM 2 MI. FREEPORT 9 MI.
(LISBON FALLS SOUTH) 6971 I NE

70°15′ 44°07′30″ 4886 000mN 4885 4884 4883 4882 4881 4880 4879 4878 4877 4876 4875 4874 4873 44°00′
480 000 FEET 430 000 FEET
4801 000mE 4802 4803 12′30″ 4804 4806 10′ 4807 4808 4809 510 000 FEET
70°07′30″ 44°07′30″ 470 000 FEET 44°00′
5′ 2′30″

Mapped, edited, and published by the Geological Survey

Control by USGS, NOS/NOAA, and Maine Geodetic Survey

Topography by photogrammetric methods from aerial photographs taken 1973. Field checked 1975. Map edited 1979

Projection and 10,000-foot grid ticks: Maine coordinate system, west zone (transverse Mercator)
1000-meter Universal Transverse Mercator grid, zone 19
1927 North American Datum
To place on the predicted North American Datum 1983 move the projection lines 4 meters south and 42 meters west as shown by dashed corner ticks

Red tint indicates areas in which only landmark buildings are shown

MN GN 17° 302 MILS 0°50′ 15 MILS
UTM GRID AND 1979 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000
1 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER
CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY
DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

MAINE
QUADRANGLE LOCATION

ROAD CLASSIFICATION
Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, hard or improved surface
Unimproved road
Interstate Route U. S. Route State Route

LEWISTON, MAINE
SW/4 LEWISTON 15' QUADRANGLE
44070-A2-TF-024
1979
DMA 6972 II SW—SERIES V811

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1989