Gleasondale Village

Revitalization Plan

Phase III **Conceptual Design Feasibility**







Prepared for the Town of Stow

Department of Landscape Architecture and Regional Planning and the Department of Architecture University of Massachusetts Amherst

Authors + Assistance

This report was conducted by the Center for Economic Development, in partnership with the Department of Landscape Architecture and Regional Planning and the Department of Architecture at the University of Massachusetts Amherst.

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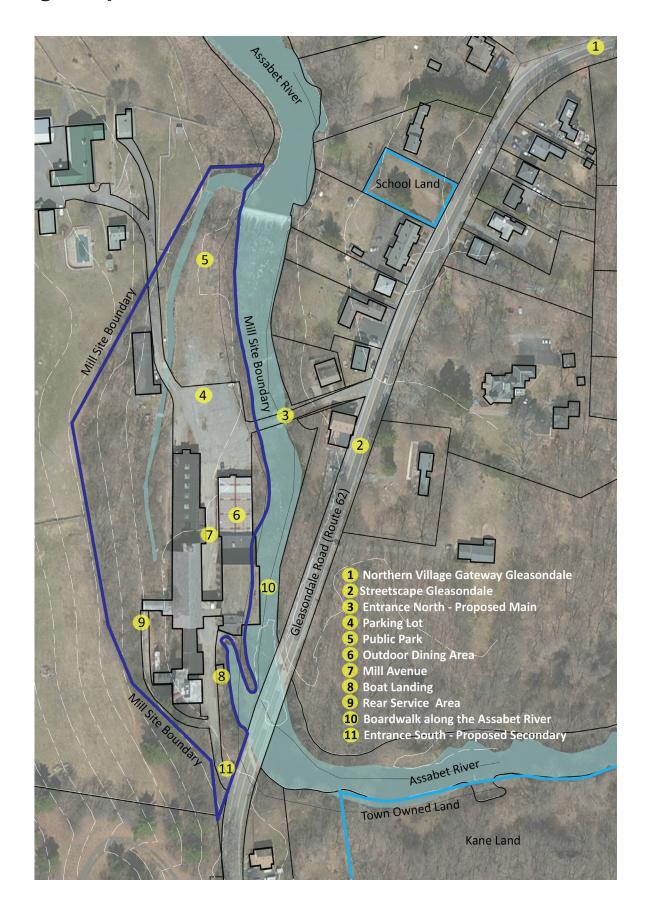
Executive Summary

In Spring of 2013, the Town of Stow and the Center for Economic Development (CED) at the University of Massachusetts Amherst began a multi-phase revitalization plan for Gleasondale Village. The purpose of Phase III is to present the Town of Stow with feasible conceptual designs of a revitalized Gleasondale Mill and Village. This report utilizes Phase I and Phase II as a foundation from which conceptual possibilities are explored and assessed. Rooted in community participation, these designs were refined through a comprehensive analysis of the site and a public participation process.

In April 2014, a community design charrette presented the opportunity for stakeholders to identify their design preferences for the mill, village streetscape, and potential new open space in the village. From the event, it is evident that stakeholders deeply value the historic and cultural aesthetic of the village. Moreover, there was general consensus regarding the desire for open space, affordable housing options, and infrastructure improvements in Gleasondale Village.

The finalized conceptual designs, showcased in this report, are intended to provide the Town of Stow with a firm understanding of the revitalization process. This encompasses the physical design possibilities in the mill, viable future uses, and recommended improvements to Gleasondale Village that can catalyze redevelopment. Our approach is twofold— the report portrays what a traditional developer would aspire to accomplish by redeveloping the site while also collecting and presenting the community's perspective and ambitions as they relate to the mill. Although the mill redevelopment will unfold due to a private developer, there are numerous design and planning actions the Town of Stow can endeavor on to lead this new chapter in Gleasondale.

Village Map + Site Elements



Design Charrette - Architecture

The first portion of the design charrette was dedicated to conversation regarding future uses of the mill, their architectural designs, and the potential implications for the community. Conversation was facilitated through groups of visuals, which are attached to the Appendix of this report. These visuals detailed the location of potential uses in the building, potential hotel and residential floorplans, and architectural perspectives capturing preliminary improvements. Multiple scenarios were presented to participants.

The dialogue enveloping the proposed use scenarios touched upon the operational impact of a boutique hotel, residential units, artisan, and retail space. A minority voiced support for a hotel, opposed by those who think it will be too disruptive. This is due to the transience that a hotel maintains; participants would prefer to see a more permenant population in Gleasondale Village. Furthermore, parking and traffic concerns would hamper the success of the hotel, according to stakeholders. Residential units, however, were well-received. Apartments, home ownership, and community investment were emphasized. Furthermore, residential units would further allow the town to meet its affordable housing goal. Of the two scenarios proposed, one illustrated the interior design of a typical market-rate one-bedroom unit and one illustrated an affordable two-bedroom micro unit.

Loft-style units were also suggested as a method of building upon the artisan foundation that currently sustains the mill. The 18 proposed residential units, loft, one, and two bedrooms, would increase traffic on an already daunting stretch of Route 62. Alleviating this impact, through traffic calming design and infrastructure, is imperative. Some participants also voiced the desire to convert the Fahey Building to assisted living for local seniors. Due to the site's adjacency to the river and flooding, there are legal restrictions to residential uses on the ground floor. In this space, participants suggested some sort of restaurant or café space. Outdoor seating, which was proposed, encountered a tepid response. If it is proposed, it must be adequately insulated to prevent noise pollution from bleeding over to abutting properties.

The Lazott Building's proposal includes space for artisan craftspeople, retail, and commercial possibilities. Participants positively reacted to a proposed mixed-use scenario. Live/Sell artisan spaces, specialty retail (butcher, florist) that caters to local residents, and a small restaurant were emphasized by participants. Additionally, participants advocated for a community space in the southern portion of the Lazott Building. This space could interact with the proposed boat portage or act as an independent space for indoor recreation, education, and creative exhibition. These uses increased traffic a moderate amount, participants stated.

Aesthetically, there was a consensus regarding preserving the historical characteristics of the mill. Participants voiced support for a rejuvenated design composed of a modern interpretation of the historic mill. The design variation must respect the mill's features according to the criteria set forth by the National Historic Register.

Design Charrette - Landscape Architecture

The section segment of the design charrette involved participants previewing preliminary designs for different landscape segments of the village. Each perspective was numbered with participants also possessing a numbered map of the village for spatial context. Open space, streetscape design, wayfinding, site design and entrances, and recreational outlets were all discussed.

Participants agreed that a dedicated recreation area for the village be delineated in the proposed plan. This envelops boat portage, outdoor exercise facilities, and a walking path that follows the perimeter of the site along the Assabet River. This path will be designed to connect to the proposed and existing trail system in Stow. Placement of the boat portage, either at its current proposed location or in northern open-space section of the site, overlooking the dam, must be decided on.

Conceptually, access to this recreation area via a pathway could include the proposed boardwalk, which participants received well but wondered about the feasibility. This area, from the Fahey Building to the dam, would be utilized for active recreation, outdoor classes, fishing, and bird watching. Secured furniture, such as picnic tables and benches, was also popular amongst participants

In the mill yard, an outdoor courtyard with pop-up markets, seating, and other outdoor installations was well-received as it is a "much needed community gathering space." This space must be designed to complement future businesses that are in the mill. Historic elements of this space, such as the stone walls, industrial signage, and other objects should be preserved and presented. Furthermore, adequate parking capacity is imperative. Some concern was expressed about the proximity of the parking lot to the river. While the site is grandfathered in under environmental law, a well-designed water infiltration system is necessary to effectively prevent polluted water from spilling into the Assabet River. Additionally, pervious pavement, native trees, and adequate lighting are necessary. This parking area may also be used by Gleasondale residents, via a permit process, for overnight parking as the revitalization of Rock Bottom Road's bridge will impact the parking capacity of the abutters.

Participants reached a consensus regarding the village's streetscape reflecting the historic character of the mill. This preservation will be evident in the two proposed village gateways, with appropriate signage and landscaping. The gateways, if possible, should be designed to slow traffic down upon entering the village. The linear streetscape, according to participants, would be best with sidewalks and lighting. Down lighting that is dark-sky compliant is necessary to respect the residents. A minority advocated for bike lanes. Furthermore, the placement of sidewalks must be done with resident privacy in mind.

Reopening the Rock Bottom bridge, which was controversial previously, was more warmly received during this workshop. There may be an adverse possession issue to examine, as that stretch of Rock Bottom Road is a private way which has not been operable for over a decade. The utilization of the bridge as an entrance must be designed with the pedestrian in mind, adequately lit, with large railing for safety. Gateway signage that subtly commands attention was agreed upon as a necessary component for wayfinding.





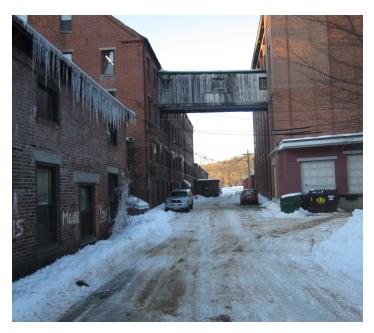
Currently, the Gleasondale Mill is experiencing vacancy that has led to its physical deterioration. A tremendous example of colonial-era architecture, the Gleasondale Mill is a hybrid. The Lazott Building, the first structure to be constructed in 1850, was designed in the Slater Mill style. This is juxtaposed by the Fahey Building, constructed in 1919, which alludes to the Lowell Mill style. The canal system, which historically provided power to the complex, flows under the Lazott Building and empties into the Assabet River. It is not currently used for hydroelectric generation

Both buildings, upon our analysis, appear to possess structural integrity. Portions of the facade, especially on the Fahey Building, are well-preserved. Conversely, there are two prefabricated metal buildings connected to the Fahey Building. While utilized for spatial capacity, the presence of these buildings undoubtedly detracts from the historical aesthetic of the complex.

The Lazott Building has seemingly aged, with its cupola in disrepair and under construction. Facing the mill courtyard, there are numerous capsules that interrupt the courtyard's linearity. These are currently used as entryways and storage spaces. On the backside of the Lazott Building, the original canal is still exposed. Over it, multiple wooden structures have been constructed. Used as loading bays, these structures converge with the service road that runs behind the Lazott Building.

The industrial make-up of the Gleasondale Mill is primarily light industrial. Artisan operations here dominate in both the Lazott and the Fahey Buildings. The mill is home to a myriad of small craft-speople who specialize in custom furniture design and creation. In both buildings, there is significant space dedicated to small studios. Furthermore, Scotia Woodworking in the Fahey Building produces exhibition cases and other wooden products for institutional customers. Additionally, there are a handful of other small businesses within the Lazott Building. These include a printer, a contractor, and a bookseller.

There is a high, unconfirmed rate of vacancy in both buildings. In the Fahey Building, there is a large swath of vacant office space, in addition to vacant crafts studios. The Lazott Building encompasses numerous vacant spaces in varying conditions. Without further tenants inhabiting the mill, revitalization will be impeded.



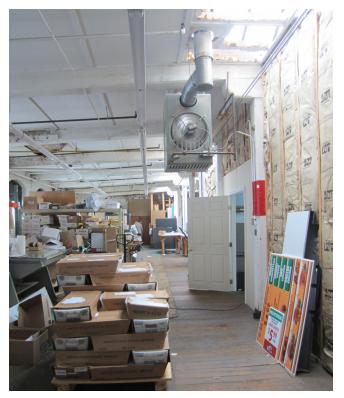


The landscape design of the site poses numerous predicaments for visitors. Visability is diminished due to the extensive tree cover during the summer months. This is compounded due to the mill sitting on a corner of Gleasondale Road that is below grade. The main entrance to the mill, currently in the southern part of the site, presents a safety hazard for visitors. A sharp corner, in addition to a slope into the site, is creates difficulty for visitors entering by vehicle. Additionally, there are no sidewalks for pedestrians and a lack of lighting.



A studio in the Fahey Building

The mill possesses numerous historical design elements that have fallen into disrepair. The lack of preservation has resulted in the closure of the main entrance, the Rock Bottom Rd. Bridge. The bridge unfolds into the parking area, an expansive canvas that encompasses the mill. Unevenly paved, the parking lot tapers off towards the northern section of the site that is adjacent to the dam. This area is not easily accessible. A visitor must transect the mill courtyard, a narrow passageway, to arrive at the parking area. The courtyard would be an inadequate pathway for vehicles if entering traffic at the mill increased; the narrowness and presence of pedestrians could present a safety hazard if arriving traffic increased.





The interior of a light-industrial space with original skylights in the northern segment of the Lazott Building





Fahey Building facade and the southern section, once a utility and generation area, of the Lazott Building

The site falls within an environmentally precarious area. Historically one of the most polluted rivers in New England, the Assabet River has recently undergone extensive remediation in an attempt to reverse the past century of ecological deterioration it faced from the many industrial sites along its banks. Currently, the Gleasondale Mill site does not have adequate water mitigation infrastructure. A lack of systems in place to filter stormwater run-off from the parking lot and vehicles exposes the Assabet River to contamination. The northern portion of the site does include green space that soaks up a small amount of run-off during storms. This is overwhelmed by the adjacent farm land that reveals a steep slope into the mill yard, compounding run-off volumes.



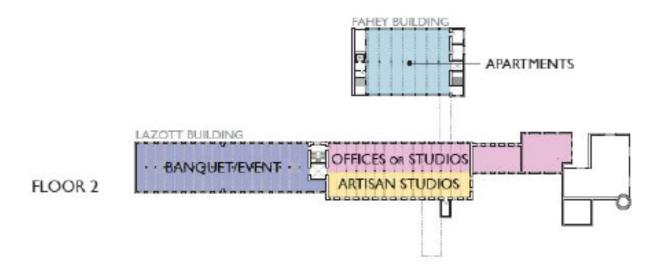
While the site envelops many beautiful elements of colonial New England and the surrounding environment, it is currently not used by visitors to enjoy these scenic offerings. The Assabet River, a recreation favorite amongst area residents, is supported by the mill site's dam. This creates a riverdepth that is ideal for boating and fishing that is not accessed by the mill site currently.

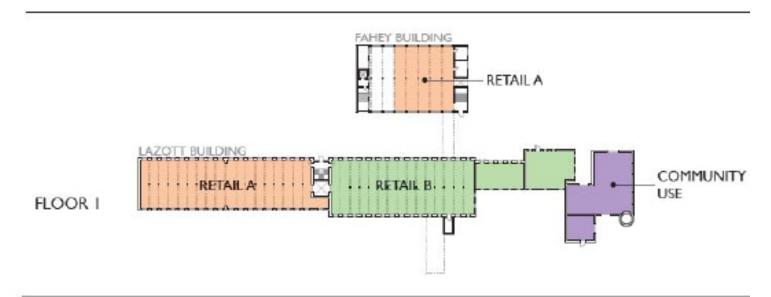


Parking Lot + Northern site canal and open space

Conceptual Design - Architecture + Future Uses

Our visioning process involving the Gleasondale Mill is anchored by stakeholder input. As residents of the Town of Stow, these community members are embedded in the daily life of the town. Through ongoing dialogue, which began during Phase I of this process, we asked stakeholders to envision what a vibrant mill village would consist of. Based on the Phase II and Phase III charrettes, in addition to our own analysis, we recommend the Town of Stow pursue a residential mixed-use revitalization for Gleasondale Village.



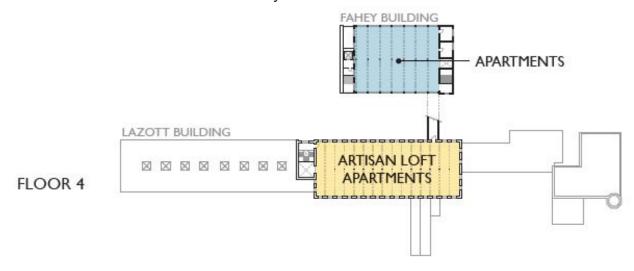


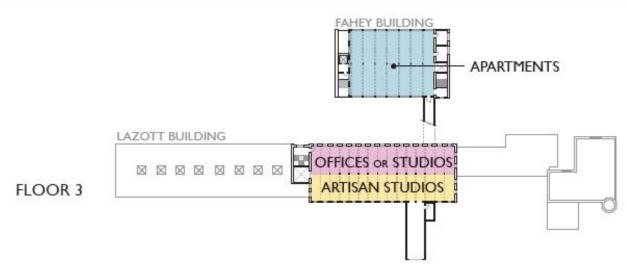
Artisan Studios: Studios may be live/work with a two-floor, duplex-style feasible

Conceptual Design - Architecture + Future Uses

Impacts based on stakeholder dialogue:

- Increased Traffic
- Possible increased rents for artisants
- Banquet space possibly too busy for neighborhood
- Condos vs. Apartments- home ownership and community investment
- Community Use- the southern section of the Lazott Building should incorporate educational and recreational uses for the community





Retail A: Restaurant, pub, and/or event space
Retail B: Specialty retail such as bakery, coffee shop, galleries, bookstore, and other assorted shops

Concerns regarding Retail A- overwhelming traffic potential, noise and light pollution

- Interest for live/work studios- increased community investment, low-traffic, respectful of village atmosphere
- Office space would require significant renovation

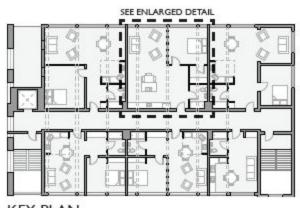
Fahey Building | Interior

Total Usable Area: 22153.00 sq. ft. Typical Usable Floor Area: 5468.90 sq.ft. Circulation Area per Floor: 1427.19 sq.ft.

Based on a site analysis and the Phase III Charette, we have illustrated below the architectural modifications that are both feasible and supported by stakeholders. These alterations enhance the mill's historic features, instead of overpowering them, while highlighting the mill as a landmark destination that enables the creation of a lively mixed-use neighborhood.

According to the 2014 FEMA Floodplain Maps, the Assabet River, a floodway, causes the Gleasondale Mill to fall within the area with a 1% annual probability of flooding— also known as the 100 year floor zone. Due to this designation, residential units on the first floor of the mill are prohibited. Insurance liability may also be higher for a future developer, although this may be lowered through the creation of infrastructure that can reduce potential water encroachment. A conceptual proposal for building uses is illustrated below. This is the result of the Phase III Charette's content, as well as an examination of the previous precedent studies and current real estate market.



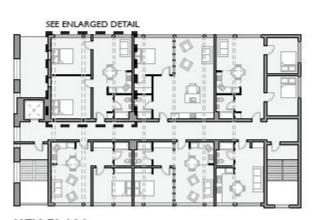


KEY PLAN FAHEY BUILDING

A typical unit-layout in the Fahey Building

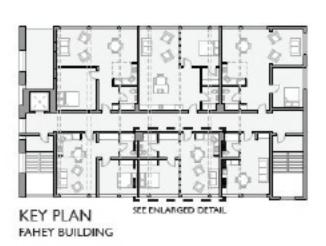


FAHEY BUILDING



KEY PLAN **FAHEY BUILDING**







EXISTING INTERIOR VIEW FAHEY BUILDING



PROPOSED INTERIOR VIEW OF APARTMENT FAHEY BUILDING

The Fahey Building, if converted to residential units, could comfortably fit 17 units; six units per floor, minus one unit where the causeway connects to the building. These units fit into the existing segments of the building and do not require the removal of essential support structures.

Units could be a mix of 2 and 1 bedroom apartments or loft-style living spaces. Based on the dimensions of the existing floorplan, 2 and 1 bedroom units could be up to 736 sq. ft. With the additional bedroom, the total floor area would remain the same, decreasing the size of each bedroom. This is a viable model for a micro-style residential building composed of affordably priced units for young professionals, empty-nesters, and other couples. One bedroom and loft-style units, between 550-736 sq. ft., would be viable market-rate units. With loft-style units of 550 sq. ft., each floor could

Without excessive alterations to the building, we believe that there would be no more than 17 of these units. Feasibly, a developer would seek to construct less in order to increase the square footage of each unit. These apartments may also be sold as condominiums. We recommend the Town of Stow examine the impacts, such as increased traffic and a fiscal strain, that this residential addition would present.

Furthermore, we find the creation of affordable units in this space, whether for families or seniors, feasible. These affordable units are depicted in the Two Bedroom Apartment-Style floorplan above. This residential concept has been successfully accomplished at many other mills. Please see the Appendix for case studies.

Lazott Building | Interior

The Lazott Building is comprised of three segments: 1.) the two-floor northern section that extends into the parking area. 2.) the four-floor central section on top of which the cupola sits, and 3.) the southern section, once home to the site's utility infrastructure, that sits underneath the smoke-stack.

Central Segment | 4 Floors + Attic

Total Usable Area (all floors)	26362.91	sq.ft
Typical Usable Floor Area (footprint)	6590.73	sq.ft
Circulation Area per Floor	1673.58	sq.ft

Northern Segment | 2 Floors

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Total Usable Area (all floors)	1978.00	sq.ft.
Typical Usable Floor Area (f	footprint)	989.00	sq.ft

Structure 2

Total Usable Area (all floors)	2886.00	sq.ft
Typical Usable Floor Area (footprint)	1443.00	sq.ft

Southern Segment (Utility Station| 1 Floor

Usable Floor Area 3135.00 sq.ft

The first floor of the northern and central segments, once redeveloped, will have one main building entrance surrounded by entrances to specific ground-level retail/commercial spaces. Ground-level retail, coterminous to the courtyard, will enliven the mill yard with pedestrian traffic. Based on community input, this space would benefit the community by providing specialty retail offerings and establishments where the neighborhood can gather, such as a coffee shop and bakery.

The northern segment of the Lazott Building, currently two stories, offers a prime location for an event space, additional studios, or office space. The spacious interior, amply illuminated by sunlight from the ceiling's skylights, lends itself to a use that benefits from an open floorplan.

Numerous artisan woodworkers and a printer currently inhabit the central segment of the building. Stakeholders emphasized preserving these current tenants when future scenarios were discussed.

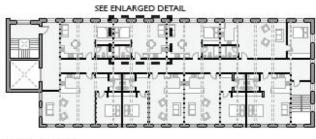
The upper-floors of the Lazott Building, once refurbrished, are ideal light industrial space for craftspeople and artists. This sentiment was echoed from conversations with stakeholders and current tenants. Numerous artisans currently inhabit the mill and lead healthy businesses that enjoy the plentiful space and affordable rents the mill offers. Preserving this space and affordability for artists is paramount, as these businesses are often the first to be displaced during the revitalization process. Efforts led by the Town of Stow, in conjunction with existing tenants, should engage the future mill developer in order to negotiate on these tenants' behalf. The Town of Stow may offer a developer an incentive in return for preserving these spaces.

Additionally, some artisans may benefit from live-work studios, a convenient use that allows the artisan to truly invest in the community. As depicted in the floorplan below, the conversion of the top floor to a live-work studio is feasible. These may be one floor units, or may include duplex-style lofts with individual staircases to the second floor, currently the attic, of each unit. Furthermore, preservation of these artisan uses while offering a residential option will allow for a prosperous retail environment. Artisans who inhabit the live-work space may also choose to operate galleries within the complex.

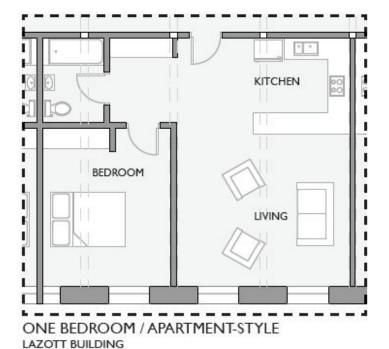
The southern segment of the Lazott Building, the former utility area, provides an open industrial setting. At 3135 sq. ft., this space is comparatively smaller, but offers higher ceilings than present in the remainder of the building. Residents argue that this would best suit the community if it pertained to recreation, education, performance arts, or other nonprofit activities. The location, beside the current southern entrance to the complex, allows this facility to utilize the southern entrance with five to ten parking spaces situated along the driveway. If boat portage materializes below the dam, this community facility may choose to be used for recreational purposes.

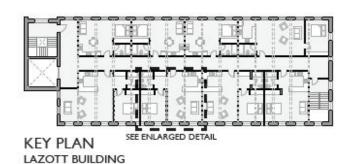
A rendition of how the live/work units may be designed on the fourth floor can be found on the next page. It is also possible that a developer would seek to convert the second and third floor to live/work units. Conversely, the open design of the existing floorplan of these floors allows for customizable artist, commercial, or light industrial space.





KEY PLAN LAZOTT BUILDING





Conceptual Design - Exterior Facade

Fahey Building

Rehabilitation of the Fahey Building would require extensive façade improvements, alterations to some existing window frames, and the enhancement of other historical features such as entryways. Once the prefabricated buildings are removed, a spacious outdoor area unfolds, lending itself to an ideal location for an outdoor patio or seating area. Based on community input and an analysis of Stow's restaurant market, a small restaurant with outdoor seating would enliven the mill yet remain respectful of the neighborhood. This location would also be the site of a second entrance into the building. Our conceptual proposal sets forth a modernist reinterpretation of the classic mill architecture— exposed metal and brick frames a glass entryway. This design provides an opportunity to create geometric patterns out of the pieces of glass, or maintain it as one expansive window that douses the interior with natural lighting.

In addition to the restaurant and lobby area, the ground floor of the Fahey Building may also contain retail establishments that empty out into the mill avenue, encouraging residents and visitors to spend time in the site's public space.

Lazott Building

Exterior revisions will commence with refurbishment of the building's historic façade. The window frames, skylights, cupola, and architectural trim on the Lazott Building are in need of restoration. To augment the mill's historic character, façade improvements should be reverent of and allude to Gleasondale's industrial heritage. The existing brick capsules, which serve as entry-ways and were constructed in recent times, are in disrepair and should be removed. If an entryway structure is desired, a vestibule encased in glass may be added if permitted under future historic guidelines. Enhancing the skylights, with a new exterior frame and meticulously constructed interior trim, would create an architectural centerpiece for the revitalized building.

The backside of the building, bordered by a service driveway, should include an updated service entrance. Currently a wooden structure that horizontally converges with the building, an updated service passage should be contextually appropriate with the renovated building.

Illustrations on the adjacent page portray both of the structures once work is completed. Some details are omitted, such as window frames, as there are a myriad of possibilities. These renditions intend to show what is conceptually possible architecturally while preserving the historic qualities of the building.

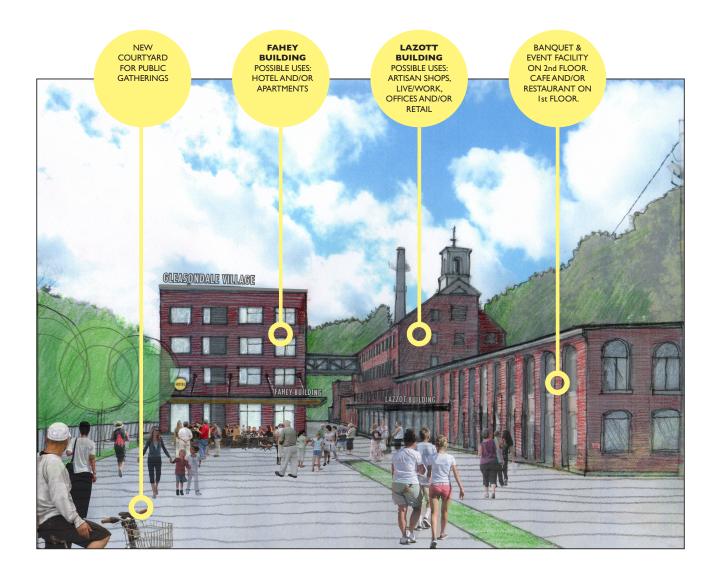
Future construction of the mill must be done in accordance with the American Disability Act. The pedestrian pathways are designed to be suitable and accessible for all. The entrances to both buildings require little modification as they are currently at-grade and accessible.

The Lazott Building currently encompasses a freight elevator which could be converted for tenants and visitors. The Fahey Building, however, does not have an existing elevator. Under Massachusetts' building code, residential developments exceeding four floors require an elevator that is handicap accessible. While the Fahey Building would fall beneath this threshold, it may benefit from the inclusion of such infrastructure.

Conceptual Design - Exterior Facade



EXISTING EXTERIOR VIEW OF FAHEY & LAZOTT BUILDINGS



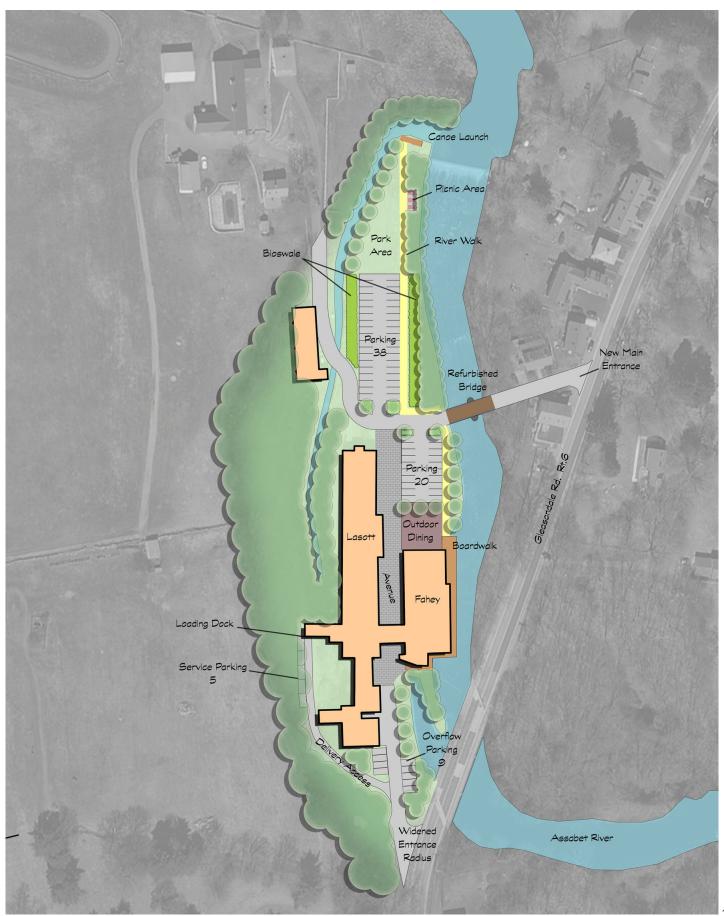
Conceptual Design - Exterior Facade



EXISTING EXTERIOR VIEW OF BRIDGE BETWEEN FAHEY & LAZOTT BUILDINGS



Conceptual Design - Site Master Plan



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Parking

We recommend the existing parking area only be minimally expanded due to the negative environmental impact it could pose for the Assabet River and local ecological makeup. Under current zoning, each residential unit requires two parking spaces, each 200sf of retail space requires one parking space, and every 800sf of industrial space requires one parking space. The notion of a mixed use village is often juxtaposed by parking. Traditionally, mixed use developments aspire to decrease the dependency on vehicles by locating amenities within walking distance.

Our proposed parking area, as shown on the Site Plan, includes 72 parking spaces. The space utilized includes the existing parking lot, as well as additional space next to the Fahey Building that will materialize with the removal of the prefabricated buildings. Zoning modifications, under the Gleasondale Village Overlay District, are recommended. The live-work units viable in the Lazott Building will house practicing professionals who, unlike families, often do not require two vehicles. Furthermore, the residential units within the Fahey Building will contain a number of one bedroom units, decreasing the amount of parking necessary.

The parking requirements for the industrial areas are adequate. Conversely, the number of parking spaces per retail square footage should be contingent upon the specific retail uses in the mill, as parking needs will vary. We recommend the Town of Stow explore decreasing the number of required spaces for residential and retail uses within Gleasondale Mill. Feasibly, the parking lot may be expanded to accommodate the number of spaces required under the current zoning bylaws, but due to the detriment to the environment, we recommend against this.

The future parking area should include adequate green infrastructure, such as bioswales and trees, to mitigate stormwater run-off. Implementing this infrastructure would ensure run-off experiences a filtration process, ridding it of harmful pollutants, prior to entering the groundwater and Assabet River. A comprehensive site plan outlining the various design elements is located on the previous page.

Mill Avenue + Patio

The current courtyard, renamed the Mill Avenue in this design, offers a pedestrian-only area framed by the historic mill buildings. To capitalize on this area, the conceptual design includes out-door seating, adequate lighting fixtures, planters with vegetation and flowers, and an area for outdoor retail. We envision this area used for pop-up or seasonal markets that complement the region's agricultural industry. Public art displays, such as refurbished pieces of industrial machinery and statues, may also be placed here. The causeway, extending over the avenue, is a prime location for display-

ing art.



Southern view of the mill avenue with outdoor market, causeway, lighting, seating, and planters

We recommend the future owner close this area off from vehicular traffic encourages pedestrian use. The courtyard should be paved with a pervious surface to absorb stormwater run-off that will flow from the sloped southern entrance. Planters with flowers and the use of vegetative strips are two options for water mitigation that would further benefit the site ecologically. These additions also colorfully contribute to the atmosphere of the courtyard for visitors. Overall, ensuring a safe and welcoming environment for pedestrians will allow ground floor and outdoor retail to prosper.

Mill Avenue + Patio

The removal of the prefabricated metal structures attached to the Fahey Building will unveil additional space, topographically flat, that connects to the mill avenue. In a scenario involving restaurant, cafe, or retail operations, this newborn space should respond to these uses. A patio, appended to the northern facade of the building, would offer a novel destination for visitors. This space could be composed of outdoor seating, planters with flowers, and pervious pavement. Additionally, this perspective features a boardwalk that is elevated above the river on the left. This boardwalk could connect into the proposed Riverwalk.



Mill Avenue and patio dining area with lighting, planters, bioswale, and new Lazott and Fahey building entrances - looking south from the parking lot

Dialogue with multiple stakeholders has highlighted the community's desire for a "neighborhood meeting space." This outdoor space, along with the interior use, accomplishes this. Residents at the charrette expressed concern regarding noise pollution emanating from the patio. While this is justified, the small size of the patio, coupled with the distance from residential properties, would not act as a disturbance. Any minimal noise may also be mitigated using vegetative buffers.

Riverwalk + Open Space

Conceptually, capitalizing on pedestrian accessibility is imperative to fostering a lively environment where visitors explore beyond just a specific shop or office. The design and construction of a pathway along the perimeter of the site, overlooking the Assabet River, would transform this portion of the village into an unparalleled outdoor gathering area. The proposed Riverwalk would connect the new entrance to Mill Yard Park, patio, and parking area. The Riverwalk could be further supplemented with the creation of a boardwalk above the river that is attached to the eastern facade of the Fahey Building. With this two-phase design, pedestrian traffic would circulate fluidly between opposite ends of the site; the Riverwalk would act as an alternative path to the Mill Avenue.



Proposed Riverwalk, through northern park area, overlooking dam and portage area

With ground floor retail and a restaurant use in the Fahey Building, the boardwalk portion of the Riverwalk would expand the outdoor seating area by offering additional capacity if necessary. The neighborhood response to this boardwalk has been tepid. Some residents believe only the pedestrian path would suffice. Other stakeholders believe the unique construction requirements of the boardwalk, which cannot impede the Assabet River due to floodplain regulations, would prevent its creation. As with the patio area, there is also concern over the lack of insulation from sound pollution.

Dimensionally, the Riverwalk proposed is 10' wide and stretches the entire length of the site. Seating areas, lighting, picnic benches, and exercise facilities were popular infrastructure additions, according to residents. The landscape buffer between the Riverwalk and river should be maintained properly, without disturbing the site's ecology, to enhance the views of the river. Furthermore, pervious pavement should be used along this path. The Riverwalk offers an additional public destination that would solidify the Gleasondale Mill as a destination with a vibrant yet serene atmosphere for visitors.

In addition to the proposed formation of the Riverwalk, the northern section of the site, next to the canal and dam, possesses latent potential as open space. This area, at first glance, could be approached as an expanded parking lot in the future. Conceptually, this is the ideal location for a small park that responds to the environmental assets of the site. Linked by the pedestrian pathway, this area of open space would overlook the dam and provide a seating area for visitors. Moreover, stakeholders expressed support for incorporating recreational elements, such as outdoor exercise equipment, playing lawns, and landscape architectural features into the park design. When completed, this open space would simultaneously act as a segment of green infrastructure by filtering excess storm water runoff from the parking lot while offering a recreational amenity to the village.

The location of a boat portage, for those wishing to canoe or kayak on the Assabet River, would be viable in the northern corner of this open space near where the canal and river converge. The placement of this portage above the dam, based on our assessment, would be beneficial as the river's water levels are often depleted below the dam during the summer months. This would ensure year-round recreational access in a usable section of the river. A small storage structure for public recreation would also be viable in this area and was expressly supported by stakeholders.

Site Hydrology

Due to the ecological sensitivity of the village and mill site, modifications to the area's land-scape architecture is necessary to maximize water mitigation efficacy. The mill site, blanketed by impervious pavement, currently lacks adequate water mitigation infrastructure. It is imperative that run-off from the parking lot, combined with run-off from the slope of the Perkin's Farm, be filtered to ensure the health of the Assabet River. There are existing environmental regulations, federal and state, that regulate the proximity of a parking area to a body of water. The Gleasondale Mill site is "grandfathered" in under these regulations as the site was constructed prior to their creation.

Topography

The Gleasondale Mill possesses a unique topography that creates a challenge to water mitigation. The southern entrance's slope into the Mill Avenue and the slope of the Perkin's Farm funnel run-off into the site. The Mill Avenue and parking areas, as well as the proposed open space, are flat and adjacent to the river.

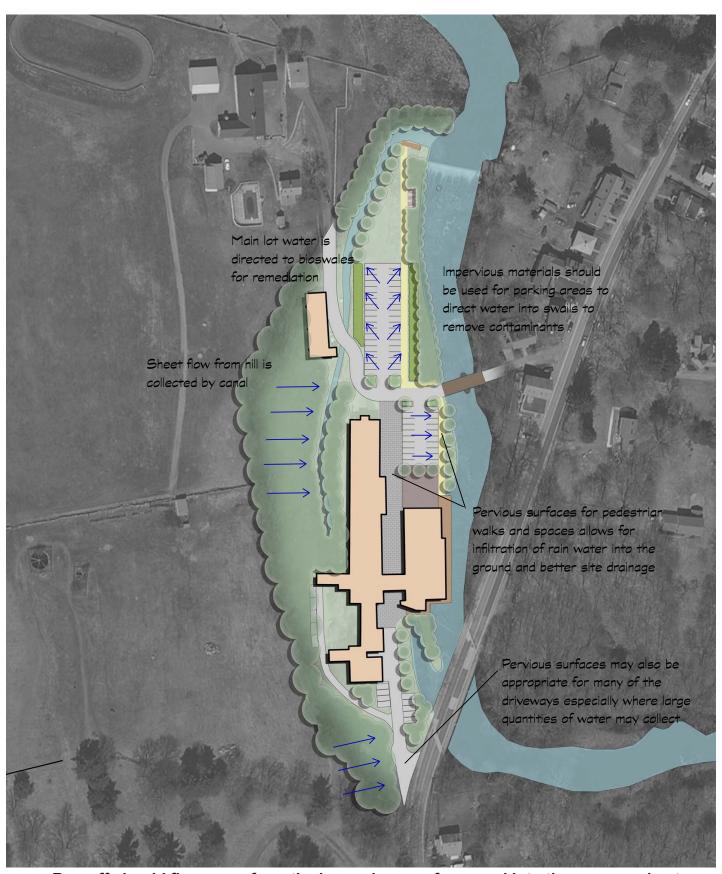
Green Infrastructure

First, water circulation would be most effective if the canal remained exposed through the site. This canal acts as a buffer against run-off from the Perkin's Farm, preventing it from reaching the parking area and becoming contaminated from vehicles. This buffer may be diminished or removed if a developer chooses to further expand the parking area.

We recommend all paved surfaces on the site, with the exception of the parking lot, utilize a pervious pavement. This would benefit the Mill Avenue, especially due to the slope presented at the southern entrance. The patio area and pedestrian pathway should also be composed of a pervious surface. The addition of planters with vegetation throughout the Mill Avenue, patio, and pathway would further combat run-off.

The parking area poses a significant environmental health predicament if proper water filtration infrastructure is not used. We recommend the utilization of bioswales throughout the parking area as opposed to traditional medians. If properly engineered, bioswales are effective at capturing and filtering run-off. These bioswales may connect to the existing open space north of the parking area. This green space, along with the green perimeter and pedestrian pathway, will be effective at preventing run-off from spilling into the Assabet River.

Ideally, the green infrastructure should be strategically placed to circulate water away from the river before it is filtered. As shown on the following plan, water should flow away from the impervious surfaces on the site, such as the parking lot, and into the green spaces. Pervious surfaces, such as the mill avenue, are useful for absorbing and filtering run-off, but green spaces are the most effective. This infrastructure is designed to filter run-off throughout multiple layers of sediment. Enveloping the parking area with a "green perimeter," while simultaneously utilizing the recommended green infrastructure, will drastically decrease the amount of untreated water that endangers the environment.



Run-off should flow away from the impervious surfaces and into the green perimeter

Existing Conditions

The streetscape of Gleasondale Road, of a two-lane stretch of state highway Route 62, is currently composed with utility poles, street lights, and a small stretch of sidewalk along the bridge over the Assabet River. The linearity results in abutting properties, as pictured below, have varying setbacks from the road. Setbacks are utilized as parking areas for some residential units that do not have the parking capacity for multiple vehicles in their driveway. Additionally, there is land along the right of way that is sectioned off by physical barriers (stone wall). Rock Bottom Road, a privately held right of way, reveals the entrance of the mill yard and is impeded by an out-of-service bridge. This road, in addition to the town-owned School Yard parcel, has been used by residents as overflow parking.

The village, like many of the quintessentially rural roads in the town, is narrowly composed with curves in some areas. Due to this, on-street parking is not feasible within the village. Furthermore, The Town of Stow has crafted its parking regulations to discourage on-street parking due to traffic congestion, noise, and light pollution. There is a need within the village for additional off-street parking capacity.



Gleasondale Road's streetscape, looking south

The absence of sidewalks in the village, along with sparse lighting, has created an inhospitable atmosphere for pedestrians. One traveling by foot along the shoulder of the road will be immediately exposed to the dangers of passing vehicles, many of which disobey posted speed limits, as there is no defined pathway for pedestrians. The need for walkability resonates lucidly— the majority of stakeholders who attended the Phase III Charrette echoed the need for sidewalks as a necessary infrastructure improvement for revitalization. The desire to partake in other recreational activities, such as bicycling in the village, was also voiced.

In Gleasondale, it is evident that walkability is further diminished by vehicles that routinely exceed the 30mph designated speed limit of the road. A reinvigorated mill and village requires an environment that encourages neighbors and visitors to traverse the village by foot. For this to materialize, marked pedestrian pathways, sidewalks, and methods to slow traffic are needed. This presents a predicament, as some parcel owners do not wish to forfeit their invaluable setback space.



Gleasondale Road's streetscape, looking north

Parking + Rockbottom Road Bridge

Rockbottom Road, a privately held right of way, reveals the entrance of the mill yard and is impeded by an out-of-service bridge. This road, in addition to the town-owned School Yard parcel, has been used by residents as overflow parking. The village, like many of the quintessentially rural roads in the town, is narrowly composed with curves in some areas. Due to this, on-street parking is not feasible within the village. Furthermore, The Town of Stow has crafted its parking regulations to discourage on-street parking due to traffic congestion, noise, and light pollution. There is a need within the village for additional off-street parking capacity.



The closed Rockbottom Rd. Bridge, formerly the Gleasondale Mill's main entrance

Water Mitigation

The Gleasondale streetscape encompasses unevenly distributed spaces of grass and vegetation. Parcels adjacent to the Assabet River have minimal green space abutting the right of way, much of which has been covered by impervious pavement for a parking area. Parcels located across the road from the river, which are generally more spacious with adequate parking space, contain more generous setbacks with a vegetative buffer. This disparity results in water run-off being primarily channeled into existing drainage basins, which are dated and do not provide the filtration or regeneration mechanisms that counter polluted run-off with efficacy.

Due the adjacency of the Assabet River, a historically contaminated river which is undergoing a rigorous clean-up process, the challenge of mitigating stormwater run-off is paramount. Run-off that is not consciously filtered through green infrastructure will flow, untreated, into a traditional drainage basin and be discharged into the surrounding environment.

Wayfinding

Wayfinding is often defined as a spatial solution to a problem one usually does not contemplate; how do you know where you are? Wayfinding devices assist people with navigation from place to place. They can be distinct signage, an architectural style, a striking landmark— anything that is simultaneously unique while informative.

Upon entering in Gleasondale Village, one is immediately acquainted with the mill, the mill housing, and the particular architectural style that envelops the neighborhood. Not all visitors are versed on New England mill towns, though. In this case, signage that apprises the beginning and end of the village is absent; one could travel down Gleasondale Road and unknowingly bypass a destination they are searching for. At the first charrette during Phase II, residents were prompted to circumscribe a boundary for the village on a map— the answers varied, yet their reasoning was similar. The historic aesthetic of the village, one of its defining characteristics, informs people that they are in Gleasondale but there are no set boundaries, and therefore no signage beyond the historic plaques present on certain village homes. Presently, there are no design guidelines for the village thus risking the corrosion of the village's aesthetic, something that may further compound the way-finding predicament. Wayfinding devices that enhance the historic character of the village would richly complement the future Gleasondale Mill following redevelopment.



Existing northern gateway to Gleasondale Village, looking south on Gleasondale Road

For healthy and comprehensive revitalization, we recommend the following streetscape improvements which can catalyze the redevelopment process. Implementing these recommendations may be done independently by the Town of Stow prior to redevelopment activity occurring at the mill. Implementation can also be undertaken through a partnership between the Town of Stow and any future development entity, public or private. A partnership of this kind would ensure balanced improvements that are cohesive with any alterations made to the mill and mill site.

Rock Bottom Road Bridge

The feasible uses proposed within this report require a second point of egress to the mill. The bridge on Rock Bottom Road historically offered a second entrance, unfolding into the mill yard and parking area. Stakeholder sentiment regarding the reopening of this bridge has fluctuated throughout our planning process. Those who own abutting parcels on Rock Bottom Road resist the reopening as it would increase traffic and eradicate their overflow parking areas. To achieve proper traffic circulation, accommodate emergency vehicles, and allow the mill to prosper, we recommend the reopening of this bridge. Without this entrance, the mill's visibility to vehicles would be drastically decreased, leaving only the southern entrance and signage to instruct visitors into the mill yard. Moreover, with increased traffic for the mill projected, the southern entrance poses a safety concern due to its sharp curvature and incline. We are confident that a low-impact solution, as portrayed below, would viably satisfy the visibility and accessibility needs of future tenants while respecting abutters. Additionally, the bridge would provide a clear linkage to from Gleasondale Village and feasible public spaces in the mill site, allowing pedestrians and vehicles to circulate smoothly.

Currently, there are remnants of infrastructure in place from the previous bridge, a one-lane crossing over the Assabet River. The current structure needs to be assessed by a civil engineer and requires communication with the Army Corp of Engineers given the Assabet River is classified as a navigable waterway. Construction of a new bridge will require the Town of Stow and their partners to obtain a permit from the Army Corp of Engineers.

We are confident that a one-lane entrance would satisfy the feasible future uses of the mill. The bridge and Rock Bottom Road should include visible signage that is harmoniously designed in the aesthetic of the village. This signage is essential for wayfinding purposes. Additionally, sidewalks or marked pedestrian pathways should be present on one side of the bridge. We recommend this be complimented with low-impact lighting that allows for safe passage while respecting neighboring properties' concern regarding light pollution.



A rehabilitated Rockbottom Road bridge, main entrance looking into the mill yard

This infrastructure improvement will require the Town of Stow to engage abutting parcels on Rock Bottom Road, a private way. Each parcel owns up to the "center line" of Rock Bottom Road, according to stakeholder input from parcel owners. Ownership of the bridge, possessed by the Town of Stow, was disputed at the Phase III Charrette. The issue of "adverse possession," a method of acquiring real property after a statutory period has passed, is one plausible method of disputing ownership claims to this piece of infrastructure. The issue centered on the length of time the bridge has been out of service for and ownership claims following that period of time. In Massachusetts, the statutory length prior to the commencement of the adverse possession process is 20 years.

Ryan v. Stavros, 348 Mass. 251 (1964). "Title by adverse possession can be acquired only by proof of nonpermissive use which is actual, open, notorious, exclusive, and adverse for twenty years."

According to town officials, the bridge has been out of service "for about a decade," although no documented evidence of a specific date was uncovered prior to this report being published. Given that length of time is shorter than Massachusetts' statutory limit, we do not find any legal issue.

Street Design

A village with safe routes of travel for all populations is necessary to facilitate revitalization. Additionally, infrastructure and design improvements will greatly benefit this process.

Currently, Gleasondale Road (Route 62) is within the jurisdiction of MassDOT who have set forth an amended version of street design guidelines that were originally authored by the Federal Highway Administration. The Manual on Uniform Traffic Control Devices (2009) regulates the physical characteristics of roads, their use, and related infrastructure. The endeavor of revitalization will require the Town of Stow to consult MassDOT on planned street design improvements on Gleasondale Road. The recommendations below satisfy all Massachusetts regulatory policy regarding design, use, and infrastructure. Implementing any recommendations is advised to be done uniformly throughout the village in order to maintain cohesiveness.

Lane Width and Sidewalks

Lane widths of 10' are standard for a thorough-fare such as Gleasondale Road, according to the urban design guidelines set forth by NATCO (National Association of City Transportation Officials). MassDOT has recently endorsed these guidelines. The Town of Stow, on the date of this report's publication, is seeking a traffic engineering firm to analyze the current traffic pattern and volume in Gleasondale. The completion of this study will provide town officials with the necessary data for planning for the operational capacity needed for future redevelopment

We recommend the construction of sidewalks along Gleasondale and Rock Bottom Road in order for pedestrians to travel safely by foot. It is advised for the Town of Stow to plan and implement sidewalks with the higher than anticipated capacity, as certain uses within the mill, such as specialty retail, may lead to higher pedestrian volumes. Sidewalks with a raised curb of at least 0.5' that are 5' in width would be appropriate to accommodate the uses outlined in this report. Sidewalks should stretch throughout the duration of the village and connect to the mill site's southern egress, as well as the Rock Bottom Road Bridge following rehabilitation

Our analysis and stakeholder input has indicated that the lack of available public land adjacent to these rights-of-way will require the Town of Stow to attain easements from the abutting parcels. At the Phase III Charrette, some stakeholders were tepid regarding these easements. The Town of Stow may wish to construct segments of sidewalks across the rights-of-way connected by a cross-walk. While a continuous and uninterrupted stretch of sidewalk through the village would be safest, diminishing the number of pedestrians crossing Gleasondale Road, the Town of Stow may be unable to acquire the necessary easements. We urge the Town of Stow to balance the interests of abutting parcels with the need for sidewalks.

Bicycle Lanes

Bicycle lanes were discussed with some popularity during the Phase III Charrette. The expressed desire for bike lanes along Gleasondale Road resonate clearly, as depicted in the streetscape proposal. Because of the limited space and narrow nature of Gleasondale Road, we recommend further exploration of this issue following the conclusion of the village's traffic study.



Looking north on Gleasondale Road with sidewalks, period-appropriate lighting, raised crosswalks, and signage for the Gleasondale Mill. Note: Utility poles may be placed below-grade

Traffic Calming

Vehicles exceeding the 30 mph posted speed limit along Gleasondale Road has been an ongoing issue, according to conversations with multiple stakeholder groups and town officials. At face value, this presents an imminent safety issue for pedestrians and residents who live in the village. From a wider scope, these speed violations can also seriously impede revitalization efforts by preventing pedestrian travel to and from a redeveloped mill yard.

The implementation of complete streets, defined as passageways that are safe for all mechanisms of travel, is one of the most direct and effective ways the Town of Stow can invest capital to foster the development of a lively village that is anchored by a successful mill. The Town of Stow will have to converse with MassDOT, who possesses jurisdictional authority over the road, in order to plan and construct traffic calming measures. While these will increase walkability and safety, they will also slow traffic to allow for drivers to visually and audibly absorb the village as they pass.

We advise the Town of Stow to explore the utilization of the following traffic calming devices:

Speed Humps: Raised concrete or asphalt devices that are 3-4" in height. These devices are less-intensive than traditional speed bumps, yet are advised for use only on low volume roads. The placement of a speed hump before and after a rehabilitated Rock Bottom Bridge would ensure that traffic used the egress at a speed safe for pedestrians and other vehicles.



A speed hump in a residential setting Source: NATCO.org

Speed Table: Mid-block traffic calming devices raised 3-3.5" in height. While they may be constructed with traditional pavement, a texturally different surface is recommended, such as brick, to further slow vehicular traffic. Vertically, a speed table is greater in length than a speed hump. Speed tables are effective traffic calming devices for thoroughfares with speed limits of 23-40mph. Furthermore, speed tables may also be designed as a raised crosswalk and accommodate sidewalk curb extensions.

Raised Crosswalks: Raised crosswalks are similar to a speed table in height, but may not extend the same length of road. With a clearly marked pedestrian path, they enable safe passage across the right-of-way while physically slowing traffic. Raised crosswalks may also be accompanied by signage small light fixtures that illuminate with a button for pedestrians. This illumination announces pedestrian passage to vehicles, enhancing safety, especially in the evening. Although they calm traffic well, they are less effective than speed humps, due to their shorter height.



Raised crosswalk with curb extensions



Raised crosswalk with painted markings

Southern (Current) Mill Entrance

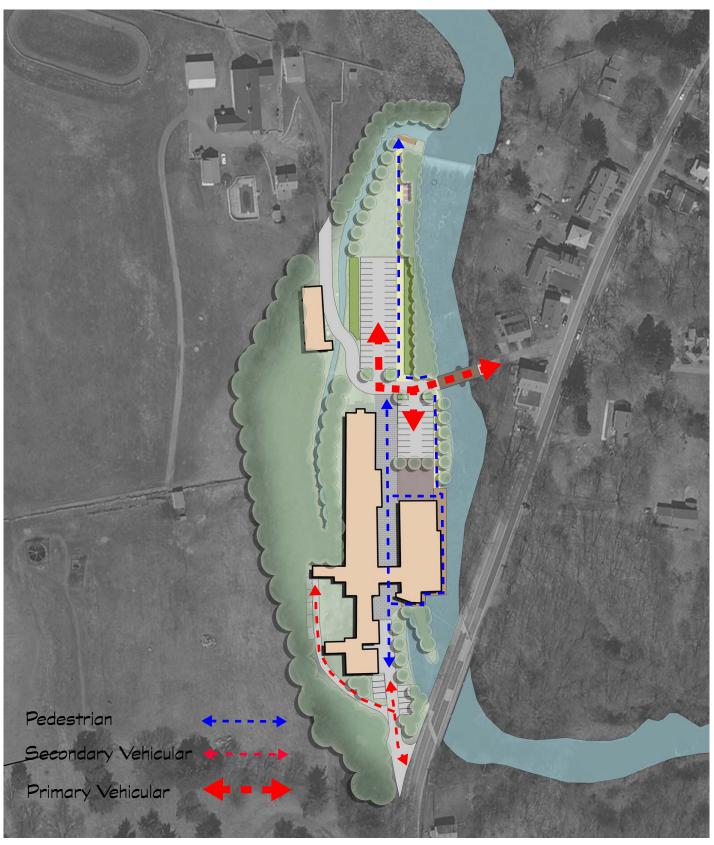
A revitalized mill requires two points of egress. Currently, only the southern entrance to the mill is accessible to vehicles and pedestrians. This entrance is at an angle and incline uncomfortable for entering vehicles. As portrayed in the site plan, the entrance may be rounded out to lessen the angle. This would require an easement from the adjacent parcel owner, the Perkins family. Unfortunately, given the lack of available space, proximity to the Gleasondale Road bridge, and topography, it is unfeasible to substantially straighten the entrance without a rigorous engineering and excavation process which would bode costly for a future developer.

The use of two points of egress to the mill site accommodates the uses in the mill while enabling efficient traffic circulation. Following the conclusion of the village's traffic and streetscape study, the town will present a comprehensive understanding of the circulation needs. Under existing conditions, utilizing two points of egress with traffic calming efforts exerted along Gleasondale Road would allow for safe passage without traffic congestion. A diagram of future circulation patterns from the mill can be found on the next page.

Considering the loss of parking faced by some parcels in the village, coupled with stakeholder concerns of parking that were echoed at the Phase III Charrette, we advise the Town of Stow to seek a partnership with the mill developer to alleviate this issue. This can be done simply by allowing residents to park in the mill yard lot at varying times of day, contingent upon the number of residents seeking space. To accomplish this in an organized fashion, the Town of Stow may wish to implement a Gleasondale Village permit-parking system given the limited size of the parking area.

Water management

With the village's adjacency to the Assabet River, the revitalization process presents an opportune time for the Town of Stow to lead in the installation of green infrastructure. These additions to the streetscape are essential to preserving an ecologically intact river. The clean-up efforts that are underway in the Assabet River's watershed are unprecedented— the river was one of the most contaminated in Massachusetts. We urge the Town of Stow, parallel to their current environmental planning endeavors, to invest in green infrastructure in Gleasondale Village. While not an insignificant investment, the effect of these devices on stormwater run-off is crucial for the environmental health of the river.



Vehicular and pedestrian circulation routes from the mill site into Gleasondale Village

Wayfinding

The entrance to Gleasondale Village should be cohesive with the historic aesthetic of the village, yet striking and vibrant. Upon arriving to the village, Gleasondale Village signage should greet visitors at the two village entrances along Gleasondale Road where the road splits. Designed to slow approaching vehicles, one gateway in the northern section of the village and one in the southern section of the village are recommended.

These signs should be engineered to withstand the physical stress that winter elements and snow removal services may inflict. We recommend they be placed in a vividly landscaped area with vegetation, flowers, and other plants that will perennially bloom. Attention must be paid to the high sodium levels present along the road from snow removal— designing the village gateways with salt-resistant plants, such as vegetation found in coastal areas, is a method around this. The sign and landscaped median area may be designed by a collective of residents, area trade students, and/or landscape architects.



Northern village gateway looking south on Gleasondale Road with sidewalks, periodappropriate lighting, signage, and landscape design that alludes to a colonial aesthetic

Timeline:

90 Days:

- Draft RFP for Gleasondale Traffic/Streetscape study
- Investigate Massworks Infrastructure Program funding opportunities for bridge and other infrastructure
- Seek of bridge on Transportation Improvement Program (TIP)

6 Months to One Year

- Traffic/Streetscape study commences
- · RFP/community design competition for village gateway design
- Begin planning for town-owned parcels

One to 5 Years

- Ongoing consultations with MassDOT/TIP regarding bridge
- Consult MassDOT on jurisdictional matters pertaining to Route 62 improvements
- Explore stormwater mitigation infrastructure and costs
- Explore historic preservation funding for infrastructure use through Massachusetts' Historic Commission for village historic structures

5 years

- Ongoing streetscape improvements underway
- Commencement of bridge rehabilitation

Conceptual Design - Municipally-Owned Parcels

School Yard and Kane Well Parcels

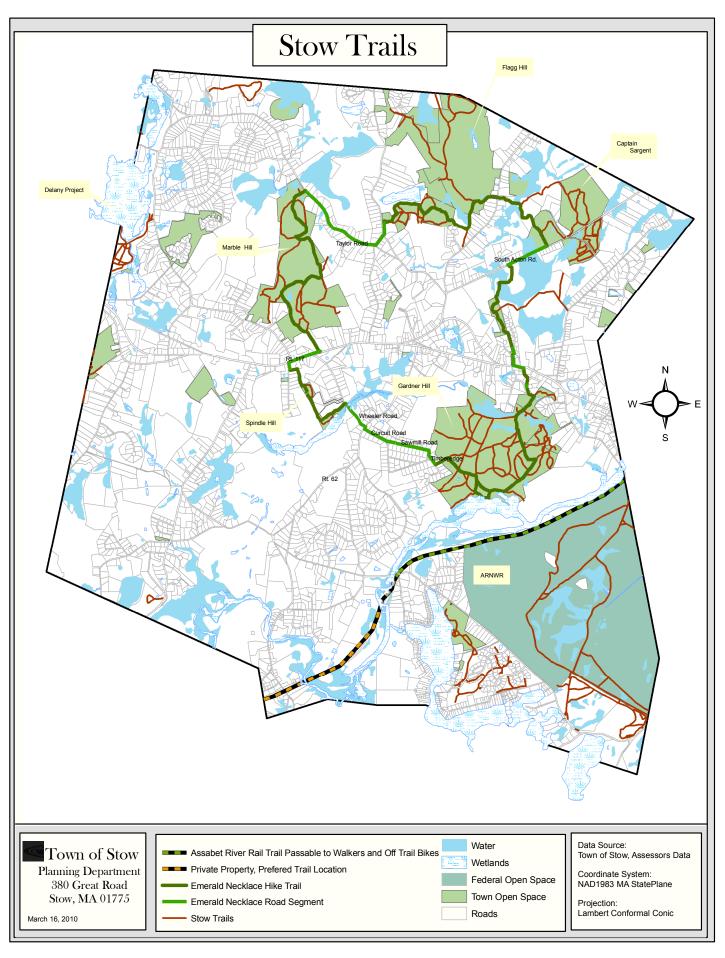
An optional exit questionnaire was provided at the Phase III Charrette. With 30 stakeholders choosing to respond to a diverse selection of questions, a comprehensive sample regarding their future ambitions for Gleasondale Village was provided. (Note: a summary of the raw data can be found in the appendix). As part of the revitalization process, the Town of Stow has identified two municipally-owned parcels, the Schoolyard Lot and the Kane Lot, which are under-utilized and could be used to benefit the community. These two pieces of land were also prevailing topics of conversation at the Phase III Charrette.

In the northern area of the village, the Schoolyard Lot is a miniature parcel along the Assabet River, abutted by two private residential parcels. Currently, there is no official use designated for this land. Village residents frequently use the land as a parking area to accommodate guests. Dialogue with stakeholders, coupled with the respondents' commentary on the exit questionnaire, allowed residents to extrapolate future uses of this site.

An invaluable parcel for some village residents, the Schoolyard Lot was regularly referenced as a parking area for the village. Moreover, many stakeholders alluded to the current landscape of the parcel, which is not environmentally designed. With this input, we recommend the parcel be continually used to alleviate the village's parking capacity issue. According to stakeholder input and our analysis, the conversion of a portion of the lot to a public park space would benefit the village. A playground, seating area, and playing lawns were referenced in the exit questionnaire. Ecologically, the parcel would benefit from the installation of native plant species which would add atmosphere to this open space while benefiting the surrounding environment.

The Kane Lot, a 29-acre parcel purchased recently by the Town of Stow for the well-water it contains, was referenced as the site for future public water well and wastewater treatment facilities by both town officials and residents. This will require an analysis of current water capacity, as well as an environmental buffer as a mechanism of protection. The size of this buffer, a conservation restriction, is a function of the size and volume of the well. To prevent contamination of sediment that could affect the groundwater, we recommend this parcel as the location for a recreational trail. Additionally, walking trails across this land were also popular ideas amongst charrette participants. Primarily, participants use the current open space for walking, running, boating, biking, crosses country skiing, and bird watching.

Currently, participants utilize the Marble Hill, Trace Road, Town Forest, and Rail Trail conservation areas for these activities. Designing a trail network across the Kane Lot that emphasizes connectivity to these lands is necessary. As illustrated on the following page, establishing a linkage with the Rail Trail is a pragmatic first-step in enhancing the Town of Stow's trail network.



Implementation - Preservation

The redevelopment of the Gleasondale Mill may be undertaken by a private real estate entity or by a public community development corporation. In either of these scenarios, the Town of Stow can play an essential role through crafting appropriate zoning bylaws and ensuring the historic and agricultural integrity of Gleasondale Village is maintained.

Historic Preservation

The era from which the Gleasondale Mill draws its heritage was a richly articulated and innovative time in the United States. A microchosm of industrial history, the mill anchored a vibrant community which was served by the Central Massachusetts Railroad Company, and then the Boston and Maine Railroad. Originally a textile manufacturing facility owned by Benjamin Gleason and Samuel Dale, the site has evolved since construction of the structure currently known as the Lazott Building commenced in 1850. Throughout the remainder of the century, the Lazott Building was renovated and expanded to accommodate industrial capacity issues. In 1919, the Fahey Building was constructed. More recently, the prefabricated metal structures connected to the Fahey Building were installed. The original dam and canal, once a source for hydroelectric generation, remain unutilized on the property. The compelling heritage of the mill, in addition to the housing created parallel to its development, warrant historic preservation.

These efforts can be spearheaded by the Town of Stow, the village's neighborhood committee, and the current owners. The site, though, is currently disqualified from eligibility on the National Historic Registry due to contemporary modifications made— the prefabricated structures. We recommend the Town of Stow and other interested parties to contact the National Park Service in regards to preservation efforts. Eligibility may be feasible if these current structures are removed and the historic architectural elements of the mill, such as original window design and façade detail, are refurbished. This restoration would need to be completed by the future developer of the mill and encouraged by the Town of Stow. The strength of the Town of Stow leading these efforts is twofold. Gleasondale Village's landmark will be ensured protection if placed on the registry. Also, a future developer would qualify for Historic Tax Credits if this was done, a compelling and persuasive financial benefit that may foster more interest in redeveloping the mill. Through the current program, a developer will qualify for a 20% federal tax deduction on income producing buildings if they undertake rehabilitation. If left undone, the mill structure will not be protected and may be subject to renovation during redevelopment that does not preserve its historical architectural aesthetic.

Farmland Preservation

Currently, the farmland owned by the Perkins family is zoned "industrial" under the Town of Stow's existing by-laws. Hypothetically, this land could be developed as industrial land, or by-passed through Chapter 40B. It is imperative that the town act, parallel to implementing zoning alterations for Gleasondale Village, to preserve this land. Long-term, this may be done through Chapter 61B if the Town of Stow chooses the path of acquistion. If it remains privately held, it may be eligible for farmland preservation status and funding under the U.S. Department of Agriculture or through Massachusetts' Agricultural Preservation Restriction Program. Efforts should begin as soon as possible to safeguard this invaluable landscape from future development.

Implementation - Preservation

Neighborhood Conservation District

The creation of a mixed-use zoning district, in which development will unfold under the auspices of the Town of Stow's Planning Board, would allow for the integration of compatible uses in Gleasondale Village. The Gleasondale Mill, once retrofitted by a developer, will continuously anchor the historic village. From stakeholder input, site analysis, and an assessment of future development patterns, the historic character of the mill and village is lucid. Maintaining the aesthetic of the built environment in Gleasondale Village is essential to ensuring future development will not be languid and detrimental. This imminent need of physical preservation was juxtaposed by stakeholders' tepid response regarding design guidelines for the village. We recommend the Town of Stow establish a Neighborhood Conservation District, a balanced compromise between all present interests in the village.

While historic districts consist of ordinances, both local and federal, that regulation the physical alteration of properties uniformly, a neighborhood conservation district is not as imposing. A neighborhood conservation district is a collection of distinctive historical buildings that are recognized due to their architectural nature. Instead of federal regulation, the Town of Stow will maintain autonomy in tailoring design recommendations for the village's preservation. Unlike historic districts, these recommendations are administered by a local commission who is responsible for approving construction and demolition permits. There is no regulatory bylaw; the commission's purpose is to engage residents and educate those regarding historic elements prior to construction. In our experience, while there are no legal mechanisms in place for regulation, the majority of stakeholder properties contribute to the preservation efforts. This can be due to community/social pressure, a deep investment in the neighborhood, or incentives provided on behalf of the town, such as an annual weekend dedicated to village upkeep and maintenance.

The specific design recommendations may be best agreed upon through dialogue with Gleasondale Village's neighborhood committee. These often reflect important architectural elements, such as lighting, fences, and building facades. Preserving the ensemble of buildings within the village signify the importance of Gleasondale Village's heritage and should be guided by stakeholder input. Spatially, the district should have the same boundaries as the proposed Gleasondale Village Overlay District.

Timeline

90 Days

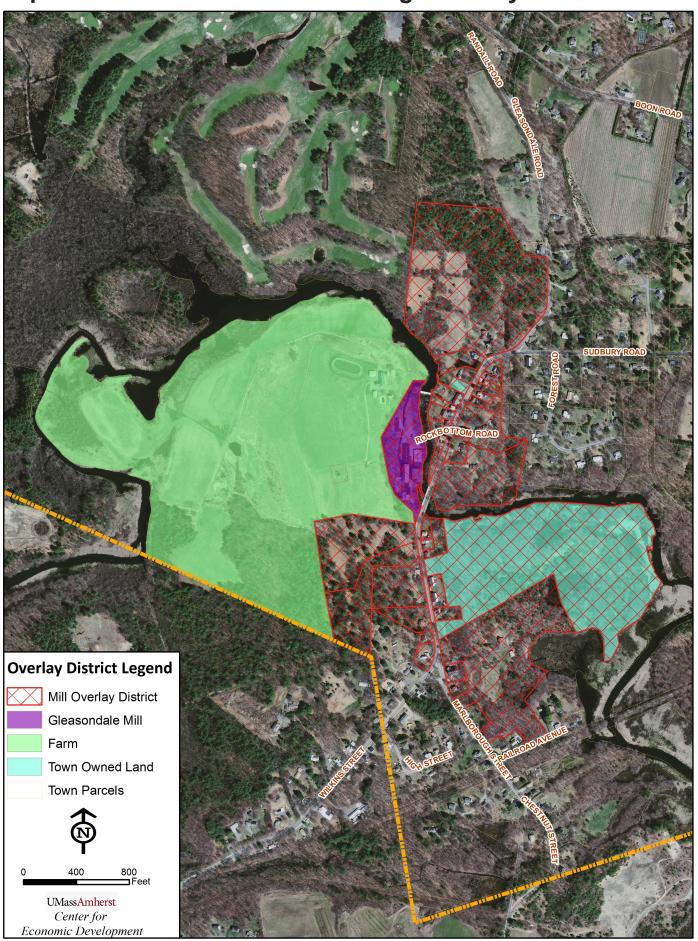
Gleasondale neighborhood committee to begin drafting plan for NCD Delegation of responsibilities amongst committee

1 year

Draft and finalized design standards presented to the Town of Stow for review

One year +

Implementation of design standards following consensus



The revitalization of mill villages often requires revisions to the existing zoning bylaws in order to facilitate redevelopment. This is done through the implementation of an overlay district, which "overlays" flexible zoning bylaws over existing ones as a method of integrating a multitude of uses. A thoughtfully crafted overlay district reveals an opportunity for the town to shape redevelopment. The Gleasondale Overlay District would

- 1.) Facilitate mixed-use redevelopment of the mill and future integration of uses in the village if so desired.
- 2.) Act as a vehicle for the preservation of the historic village aesthetic through Site Plan and Special Permit Review.
- 3.) Help create a walkable village with pedestrian-oriented passageways while encouraging independent vehicular circulation patterns that enhance the use of the mill while respecting the village.
- 4.) Delineate public open space for recreation, conservation, and other community use while incentivizing property owners to invest in these areas.
- 5.) Thoughtfully review development to ensure the parking needs of the village and mill are adequate

Please see the adjacent page for a map delineating the boundaries of the district.

Applicability

Traditional zoning was historically implemented to prevent the integration of uses that posed a public risk. Crafted during an era of industrial accidents and contamination, progress in building and industrial technology has led to the dissipation of many, but not all, of these risks for the public. New England mill villages are inherently designed for mixed-use activity, as they historically concentrated amenities, dwellings, and production facilities in a self-sustaining village. To revitalize villages such as Gleasondale, the implementation of an overlay district that facilitates mixed-use redevelopment is fundamental to the creation of neighborhood vitality

Administration

The overlay district, by law, must be drafted and amended through the normal municipal legislative process. Once an amendment, the Planning Department and, ultimately, the Planning Board will be responsible for administration, enforcement, review, and appeals.

Permitted Uses

Based upon our assessment, it is evident that the Town of Stow aspires to strike a balance between future development and the preservation of rural character. As a result of this assessment,we recommend that the following uses be assessed by the Town of Stow.

The town may wish to lessen the number of uses by-right, instead opting for the Special Permit Review process. This process, according to the Town of Stow's Zoning Bylaws grants the town authority to examine development proposals based upon a multitude of criteria that relate to quality of life, design, and bylaw adherence. Experience suggests that the Special Permit Review process may deter certain developers. With that in mind, the transparency of the process is imperative. We recommend the criteria the review is based on be clarified and visible for future interested parties.

Uses By-Right

Nonprofit/Educational Institutions/Research Facilities Religious Institution Agricultural Open Space / Recreation Single-Family Residential Owner-Occupied Multi-Family Residential

Uses By Special Permit Review

Professional Offices
Artist/Crafts Studios
Live/Work/Sell Studios
Medical Offices / Research Laboratories
Assisted Living / Nursing / End-of-life Care Facilities
Hospitality / Hotel
Bed and Breakfast
Boutique Hotel

Specialty Retail: Butcher, Wine Shop, Pharmacy, Bakery Retail Shopping: Crafts, Furniture Store, Clothing Shop Service Industry and Event-Based: Restaurant, Banquet

Space, Bar Light Industrial Warehousing

Low-Impact Manufacturing (not considered hazardous)

Logistics and Distribution

Data and Computational Processing

Energy

Retail

Hydroelectric Generation

Passive Solar

Accessory Uses

Home Occupation Residential Parking Garage (detached) Home Daycare Wireless / Utility Use

The town may wish to lessen the number of uses by-right, instead opting for the Special Permit Review process. This process, according to the Town of Stow's Zoning Bylaws (9.2.6) grants the town authority to examine development proposals based upon a multitude of criteria that relate to quality of life, design, and bylaw adherence. Experience suggests that the Special Permit Review process may deter certain developers. With that in mind, the transparency of the process is imperative. We recommend the criteria the review is based on be clarified and visible for future interested parties.

Comprehensive Plan Review

A formal comprehensive review process is recommended as part of the Special Permit Review process. We recommend that proposed development be accompanied by a comprehensive plan that details the following to ensure the impacts are lucid and fully understood by the community.

- 1.) Analysis of existing site and buildings as it relates to their condition, uses, environmental state (soil, groundwater), utility connections, parking capacity, and existing traffic circulation patterns. We recommend that this report be utilized to satisfy these criteria.
- 2.) A written and graphic narrative that illustrates proposed redevelopment of:
- o Existing Buildings
- o Future Buildings (including Historic Preservation)
- o Proposed Uses and their Density
- o Parking Capacity
- o Internal and External Traffic Circulation
- o Traffic Impact
- o Pedestrian Pathways
- o Pedestrian Circulation
- o Proposed Utility Needs (Water, Sewer, Electrical, Communications, Stormwater Management, Solar/Hydroelectric)
- o Proposed Landscape Design
- Proposed Public Open Space
- Wetlands and River Protection (in accordance with MEPA)
- o Impacts on Public Services and Property Taxes
- o Impacts on Historic Preservation

Site Plan Review

We recommend no changes to the current Site Plan Review process that occurs prior to the granting of a Building Permit.

Parking

Future residential units in the Gleasondale Mill will cater to a diverse variety of people— young professionals, empty-nesters, artisans, and other couples. As with many mill redevelopment outcomes, the number of families that would inhabit these units is generally low. Additionally, many of the light-industrial and retail spaces will consist of businesses that experience moderate traffic. Artist studios attract less traffic than office space, for example. According to the proposed uses in this report, we recommend the Town of Stow explore decreasing the number of required parking spaces under the current zoning. Residential units, which currently require two spaces, could be decreased. Similarly, the number of parking spaces allocated for future light-industrial, commercial, and retail uses should be contingent upon the specific use of the space. Expanding the existing parking lot, which would be necessary under existing zoning, would be extremely detrimental to the precarious environment that encapsulates Gleasondale Village. Accommodating vehicles with the existing space offered by the site, with the introduction of updated green infrastructure, should be the objective.

Conclusion

At the Phase III charrette, residents remarked on the revitalization of Gleasondale Village as a daunting task, filled with complexitiesm, that will require a long-term investment in the neighborhood. The Town of Stow has already made commendable progress through this three-phase project and through the upcoming Gleasondale Village Traffic/Streetscape Study. Dialogue with the current mill owners, which has been sporadic until recently, must occur with great frequency and pertain to an agreeable timeframe, redevelopment scenarios, and potential developers. While the permitting process is lengthy, it is the development process that presents the most uncertainty due to the fluidity of the real estate market. Through implementing zoning changes, engaging potential developers in dialogue regarding the proposals setforth by the community, as outlined in this report, the process will unfold naturally.

This report is intended to present viable possibilities for the site in order for the Town of Stow to plan for and mitigate the implications that will resonate from a future Gleasondale Mill. The possible uses outlined and their impacts should be analyzed closely. Moreover, the conceptual design for public spaces on the site and in the village were strongly supported by stakeholders and should be highlighted to the future mill developer. Certainly, if action is not taken, the deteriorating conditions will become exponentially worse. This process, a truly long-term envisioning process, presents an opportunity for town officials, community members, and future developers to craft the village they wish to endow to subsequent generations.

Whitin Mill | Northbridge, Massachusetts | Alternatives Unlimited Inc.

History

The Whitin Mill is located in Northbridge, Massachusetts, part of the Blackstone River Valley National Heritage Corridor, a region with a rich industrial history and well-preserved architectural vernacular commonly associated with 19th century mills. The Whitin Machine Works, known as "The Shop" in town, was a textile mill that operated until the 1980s, meeting a fate familiar to area textile companies. At its peak the Whitin Machine Works employed 5,600 people and the Whitin family was ingrained in the community, which can still be seen to this day. The last of what was Whitin Machine Works was sold in 1990 to the owner of Abbot machine in New Hampshire.

In 1997 Alternative Unlimited, an organization set up to help disadvantaged and handicapped individuals moved into the old Whitin Machine Works complex and announced plans for a \$5.4 million renovation project of the 36,570 square foot facility. Total investment capital eventually neared \$10 million.

Current Use

A multi-phase redevelopment project is currently underway to refurbish the Whitin Mill as a lively mixed-used destination. Once completed, the complex will house a community center, restaurant and bar, small theatre, and residential units with numerous affordable options. The project will be anchored by the operations of Alternatives Unlimited Inc., a service organization for people with disabilities. The mill's infrastructure has also been retrofitted to generate hydroelectricity from the Mumford River.

Partnerships

Alternatives Unlimited Inc. was able to leverage affordable housing grants from the Community Development Assistance Corporation in addition to the private capital they raised. These grants were supplemented with funding the Massachusetts Clean Energy Center's Renewable Energy Trust Fund, which provided \$344,000 in funding towards improvements of the hydropower turbine and \$74,348 in funding towards installation of photovoltaic panels and geothermal wells.

Planning + Design

The one acre mixed-use site serves as a well-pronounced example of clean, yet progressive, site design. Facilitated through mixed-use zoning, the 36,570 sq. ft. building is encompassed by three parking areas that efficiently utilize the small site. Adequate tree cover and planting strips provide an ecological barrier from the elements. Infrastructure to mitigate water run-off from the parking areas is included to prevent contamination of the Mumford River.

The site also includes public spaces— a courtyard with seating, new sidewalks, and pedestrian pathways throughout the campus that connect to a public boardwalk. The boardwalk, which connects to a bridge over the Mumford River, offers a serenely scenic destination for the public to enjoy while serving as a shortcut out of the complex. This small pathway has informed the Gleasondale Mill site proposal by showcasing an accessible, yet secluded, public space that respects the sensitivity of the area while capitalizing on unparalleled views of the Mumford River.

Planning + Design

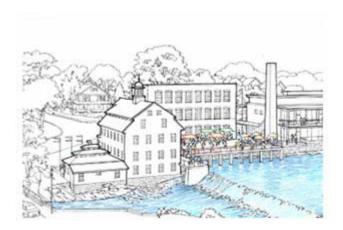
The energy infrastructure underway is equally impressive. The spillway was raised an additional 30" to improve the heaviness of the drop of water. Using a new turbine, the complex is able to provide 50 Kilowatts of electricity which is sold back to the region to help reduce the area's use of fossil fuel energy. Photovoltaic panels were installed on the roof of the building to provide further electricity with excess relayed to the market. Geothermal infrastructure is also underway, although it is more capital intenseive than other renewable sources. Overall, these green energy measures allow for the Whitin Mill complex to meet the majority of its energy needs while decreasing operating expenses.

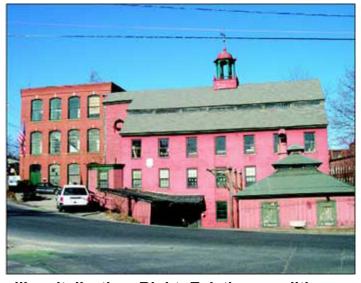
While the Mumford River is larger than the Assabet River, Whitin Mill's energy infrastructure serves as a precedent as it seeks to "mix-and-match" renewable sources to meet and exceed the energy needs of the facility. The Gleasondale Mill's dam is recommended as a source of hydroelectricity—requiring an additional assessment by an environmental engineer. Additionally, photovoltaic panels, which can be situated on the Gleasondale Mill, can capture additional energy. Funding, as referenced, is readily available for these infrastructure additions.

Sources

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Left: Architectural rendition of proposed mill revitalization. Right: Existing conditions

The Lower Mills Industrial District | Dorchester, MA | Winn Development & Keen Development

On the National Historic Register



The revitalized Baker Chocolate Factory

History

The Baker Chocolate Factory, a 14 acre mill complex adjacent to the Neponset River, is a residential and commercial adaptive reuse project located in the historic Lower Mills neighborhood of Dorchester. Comprised of numerous Romanesque and Georgian Revival buildings of varying sizes, the mill contained the production facilities of the Baker Chocolate Factory and were constructed between 1872 and 1919. The late 1970s revealed a rigorous planning process, orchestrated by the Boston Redevelopment Authority, to revitalize the neighborhood. In 1983, Winn Development broke ground on a multi-phase redevelopment process that commenced in 2012.

Current Use

Converted from the industrial remnants of the mill, residential apartments, condominiums, artist lofts, and commercial spaces emerged onto the local market. In addition to the market rate residential units, there is an inventory of affordable condominiums owned by private management companies as well as the Boston Housing Authority. This inventory ensures access to home ownership for area residents through negotiated rents based on a resident's income. Parking for all units is satisfied in lots situated behind the buildings, or through Boston's permit parking system. Moreover, hydroelectric generation occurs with water from the Neponset River.

Partnerships

Spearheaded by the Boston Redevelopment Authority, The Lower Mills Industrial District's master planning and architectural design was completed by the Architectural Team, a local design firm notable for their extensive work with historic preservation and the planning and design of affordable housing. Winn Development privately financed the project. Winn Development and the Keen Development Corporation privately financed a portion of the effort, which was catalyzed through local and state tax incentives, such as Historic Tax Credits.

Planning + Design

Currently, the district is zoned for mixed use and a designated historic district. Additionally, there is ongoing municipal dialogue embodying the proposal of urban design guidelines for the neighborhood. Although the revitalization project stretched decades due to budget cuts and the sheer size of the mills, the redevelopment is an exemplary model of the public-private partnerships necessary for Gleasondale. Moreover, the emphasis on architectural restoration, home ownership, and affordable housing offer a precedent for the Gleasondale Mill. A formation of a historic or conservation district can assist in the facilitation of redevelopment through funding, cultural capital, and regional support. Cohesion is attained through the district through signage and delineated pedestrian pathways that lead from the river to shops and residences. Along these thoroughfares are numerous public spaces, such as patio areas and seating that overlooks the Neponset River. This is all complimented with environmentally conscious design that conserves energy. Ecologically, the Neponset River is preserved through conscious landscape design that channels and filters water run-off from the outdoor communal areas.



View of the district and Neponset River



Interior view of a residential unit at the Baker Chocolate Factory

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Eastworks | Easthampton, MA | 500,000 s.f. | Eastworks LLC.



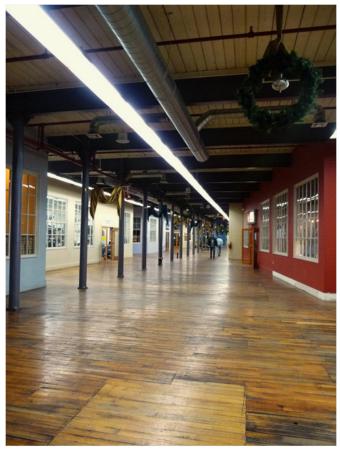
Facade of the Eastworks Mill from the parking lot

History

Located in Easthampton on the Lower Mill Pond, Eastworks was formerly home to the West Boylston Company, a local textile company that inhabited numerous mills along the Connecticut River. The mill was sold to Stanley Home Products in the early 1920s. Endearingly referred to as Stanhome by locals, the mill encapsulated the design, engineering, and manufacturing of home care products. In 1997, the landmark property was purchased by a local developer who oversaw the multi-phase conversion to a lively mixed use community. Currently, artist and crafts studios, performance spaces, and residential units are contained within the mill.

Current Use

Spaciously partitioned into units with high ceilings and abundant light, Eastworks is favored by the professional creative community of artists and craftspeople in western Massachusetts. These studios are complimented by residential live/work spaces, communal areas, and performance rooms for musicians. Additionally, the first floor of the mill is home to traditional retail, such as a specialty market and restaurant, as well as a division of the Registry of Motor Vehicles.



Interior view of the circulation corridor with original flooring

Partnerships

While Eastworks was developed by a private developer, its success is arguably due to a rigorous planning initiative on behalf of the City of Easthampton and the Pioneer Valley Planning Commission. Municipally, Easthampton crafted an overlay district that enabled the redevelopment of Eastworks and other local mills through balanced mixed-use zoning.

Moreover, the Pioneer Valley Planning Commission, in partnership with the City of Easthampton, has undertaken numerous cultural resource planning activities intended to conceptually and structurally ensure a rich creative heritage continues to foster in the region. Cultural resource mapping, programs for creative entrepreneurship, and the formation of private-public partnerships have been undertaken. The Easthampton Cultural Council, the city's vehicle for planning and promoting the local creative economy, has facilitated events with Eastworks and other local partners, such as the monthly Easthampton Art Walk

Potential tenants can easily access information on studio space, the regional economy, and amenities offered by the town. These partnerships, anchored by ongoing dialogue between all parties, are underscored by the accessibility and affordability that continue to prevail at Eastworks.



Interior of a duplex-style residential unit with exposed industrial design elements

Planning + Design

While Eastworks is incomparable in size, we recommend pursuing a similar aesthetic and use scenario in the Gleasondale Mill. As part of the adaptive reuse project, various industrial pieces from the era of Stanhome were repurposed and presented as architectural detail. Examples of this include the original countertops used by Stanhome's research division and vintage advertising media which now adorn the complex. Most importantly, the modernist aesthetic of exposed brick, plumbing, and industrial lighting illustrate the mill's history of manufacturing and production. Similarly, many of the Gleasondale Mill's original architectural features, such as the Lazott Building's skylights and the original stairwell in the Fahey Building remain and are in adequate condition. Rehabilitation of these features, accompanied by a refurbished industrial façade, would simultaneously breathe life into the mill while maintaining its quaint character.

Future development in Gleasondale Village should mirror, but not outright imitate, the character of the mill. Besides aesthetics, this is necessary to ensure that future development does not overwhelm and muddle the character of the village. This can be accomplished through our recommendation of a neighborhood conservation district, which will be elaborated on in this report.

Sources

Eastworks, Mill History and About us, http://www.eastworks.com.