INVESTIGATION PHASE MEMORANDUM FOR CANAL DISTRICT MASTER PLAN

TURNERS FALLS, MA

FINAL REPORT: JULY 21, 2022

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2.0 EXECUTIVE SUMMARY

2.1 Project Introduction

The Canal District of Turners Falls, Massachusetts, was a part of a planned industrial mill town that was founded in the late 19th century. Situated along the Connecticut River, the site has waterpower from a bypass canal for industrial uses including a cutlery company, paper company, and co-generation power plant. The river powered six of these mills for over a century and continues to be a key hydropower generation facility in Massachusetts. See Image 2.1A for Study Area Map.

Within the last 80 years, however, the town has transitioned away from an industrial economy to a service economy, leaving much of the properties on the site underutilized or vacant. Many of the remaining mill buildings and utilities have degraded, due to lack of maintenance, into a state of distress. By 2014, the site had been designated as a "Slum and Blighted Area" by the Massachusetts Department of Housing and Economic Development. In addition, portions of the site contain construction debris and various other waste materials from previous demolition work. As the Canal District is a narrow island that sits in between the Connecticut River (to the north) and the hydro-power canal (to the south), the only access the site is by bridge. Most of the various pedestrian and vehicular bridges that connect downtown Turners Falls to the site are closed or have characteristics that severely limit their use.

It was determined by MassDevelopment and the Town of Montague that the Canal District presents an opportunity to reactivate the historic site and riverfront. The Canal District Master Plan study aims to provide options for future use of the Canal District in an effort to revitalize the site that would integrate with downtown Turners Falls and acknowledge the multiple industrial and cultural histories of the site. This investigation memorandum is intended to provide a brief summary of existing conditions of the Canal District of Turners Falls, Massachusetts. These findings will be used for the purpose of evaluating the current conditions and developing short-term to long-term recommendations for the site.

In March 2022, the design team began their investigations. The following sections consist of summaries of the team's findings during the investigation phase and an analysis of opportunities and constraints for the property in any future design work. The characteristics evaluated during the investigation phase include:

- Utilities and Infrastructure: Focusing on the conditions of existing roadways, bridges, parking, sewer, water, electric, and gas that would determine the feasibility of various potential uses on the site.
- Property and Easements: Focusing on a review of the property boundaries, easements, rights-of-ways that may impact redevelopment potential.
- Environmental: Review of environmental restrictions and hazardous materials.
- Building Assessments: Review of the existing buildings on the site to determine if the remaining portions of the buildings can be repurposed in future design work.
- Primary and Secondary Markets: Analysis to review the potential commercial and industrial reuses of the site.

The investigation of existing conditions described in this memorandum was prepared based on the following primary sources of information:

- Documents provided by MassDevelopment
- Documents provided by Montague Planning and Conservation Department
- Information provided during design team meetings on 03/15/2022, 04/22/2022, and 05/06/2022.
- Site visits by the design team on 3/24/2022 and 5/18/2022.

Note that detailed field testing, investigative demolition, and comprehensive surveys or structural assessments were not performed

2.2B Study Area Map

as part of this investigation and subsequent discussion is based only on the information and site visits noted previously.

2.2 Findings

The information collected for the Canal District has been consolidated and summarized in the following section, 3.0 – Key Observations. These findings assisted the design team in organizing a series of opportunities and constraints on the site in Section 4.0 that will be utilized in the following future Visioning Phase for the master plan.

With key observations of the existing conditions of the site and market, the team was able to consider future use groups that the district could attract. The five uses considered, based on the market analysis, were business, residential, assembly (community gathering), industrial/storage, and non-occupied. Each of these use groups have a series of requirements that are necessary to make them feasible on the island. In overlapping the use requirements and the existing site conditions, the design team was able to determine five zones on the site and the best use or action required for that zone.

The summary of those five zones can be viewed in Table 2.2A and can be visually referenced in Image 2.2B.

In addition to this memorandum of the Investigation Phase, the design team developed existing site plan drawings which can be viewed in Appendix B.

Zone	Description	Use Opportunities
Zone 1		
Northern-most point of 8 Canal Road	Direct access to riverfront.	Activated recreational zone.
Zone 2		
Southern portion of 8 Canal Road	Vacant lot with vegetation and remaining foundations with very restricted access.	Use as a naturalized zone. Potential for a quiet reflection space and place to display public art.
Zone 3		
20 Canal Road, Most of Strathmore Mill Complex	Former mill facility with limited access. Buildings in distress.	Could perform selective demolition and create a space for historic interpretation of Turners Falls.
Zone 4		
Building 11 of 20 Canal Road	Most feasible building for reuse/repurposing.	Could be used as an industry or storage use.
Zone 5		
11 Power Street	Most options for access (vehicular and public).	Space allocated for residential use.

2.2A Key Findings Table

2.2B Zone Key Plan

3.0 KEY OBSERVATIONS

3.1 Utilities and Infrastructure

Site Utilities

Utilities from the Power Street corridor service the 42 Canal Road site including water, sanitary sewer, gas, and overhead electric. Water, sanitary sewer, gas, and overhead power are connected to the Southworth paper mill at 36 Canal Road from Turners Falls Road.

There is an existing water distribution system, primarily for fire protection at the 20 Canal Road and 8 Canal Road sites however, it was abandoned several years ago. The existing sanitary sewer system that includes a pumphouse located between 36 Canal Road and 20 Canal Road also has been decommissioned for several years.

Except for 42 Canal Road and 36 Canal Road, there is no gas service to the remainder of the site. Telecommunication services essentially do not exist for the vacant buildings. The hydropower facility at 16 Canal Road is a limited hydroelectric power facility with service to an overhead electric service that spans the channel to a substation located on 2nd Street.

It is questionable whether the existing water and sanitary sewer infrastructure could be utilized for future development given their age and duration of abandonment. All existing site utilities would require extensive evaluation and testing in support of future development with respect to capacity and meeting building code requirements.

Infrastructure and Access

Pedestrian Access

Pedestrian access in the Canal District is primarily along the Canalside Rail Trail, which runs along the southern edge of the power canal on the former rail bed. The 3.7-mile trail runs through the entire Canal District and provides views to the project area looking across the canal. There is one pedestrian bridge crossing over the canal near Avenue A that is owned by First Light Power, which traverses the canal and provides riverfront access on the eastern edge of the island. Protective fencing and private ownership prohibit pedestrian access to the western portion of the island due to safety and liability concerns. There is no public pedestrian access to the island from Turners Falls Road. There is Pedestrian access to 11 Power Street by crossing over the Power Street bridge which does not have sidewalks or pedestrian separation from vehicular traffic. The 11th Street bridge, which is outside the project area, does have sidewalks and is a more indirect route to access the site.

River access in the Canal District is limited to one location that is offered on First Light-owned property. To access this section of the river, there is a pedestrian bridge crossing the canal behind the Great Falls Discovery Center and the Canalside Rail Trail. This river access is just downstream from the fish ladder and looks upstream towards the Turners Falls Dam and across the river, including Peskeomskut Island, which is in the middle of the river. This public river access is the proposed site for future investment and improvements by First Light for a canoe and kayak launch.

Vehicular Access

Vehicular access throughout the Canal District is driven by private ownership and easements. Limited access is allowed along a 10-foot-wide easement that runs along the canal wall edge and the narrow road is confined by the historic mill buildings that define the other side of the roadway. This narrow band of road is representative of the time this area was developed and oriented around rail freight and pre-automobile. The existing easement is for industrial uses and does not allow for public access. It is too narrow for public vehicular access and would also create safety issues, combining vehicular and pedestrian movement together.

11 Power Street is accessible from the Power

Street bridge from Canal Street or the 11th Street bridge which is west of the site and connects to a small neighborhood with a handful of side streets that connect to 10th street, which becomes Power Street.

Emergency Access

Emergency access to the island is limited and a critical concern for any potential redevelopment and future uses in this area. The 10-foot-wide Canal Road easement is a narrow road with very limited space for larger vehicles to turn around. Deteriorating building and structural conditions of 20 and 8 Canal Street pose safety concerns and are fenced off and boarded up to prohibit any access to these areas. The First Light pedestrian bridge on the rear of the industrial island is rated for vehicular access, however due to the size of the bridge, the types of vehicles it could manage is limited. 11 Power Street is accessible for emergency vehicles from the Power Street bridge from Canal Street or the 11th Street Bridge.

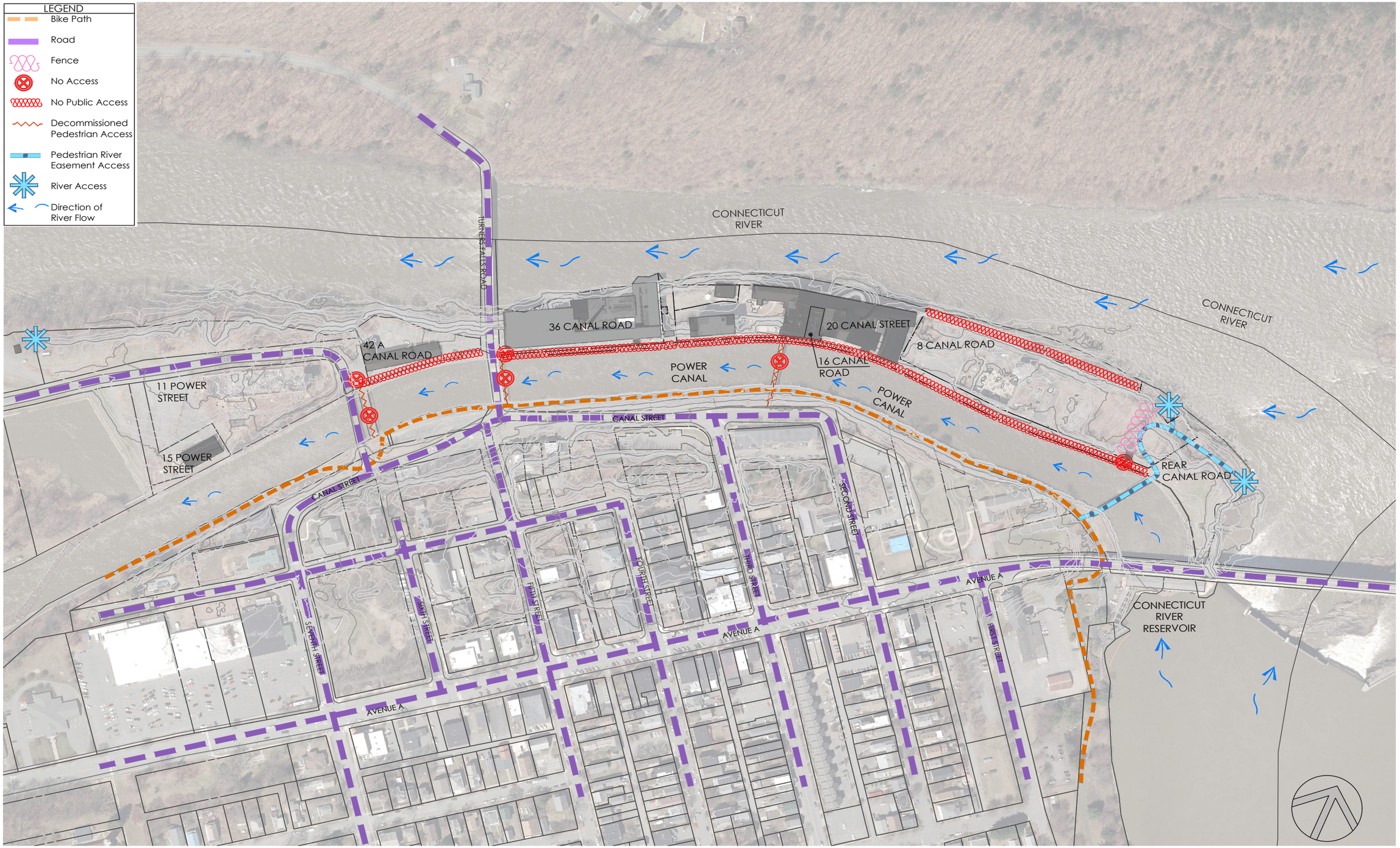
Bridges / Crossings

There are 8 bridges over the canal, 4 vehicular bridges, 3 pedestrian crossings, and an old railroad crossing. Turners Falls Road vehicular crossing is a temporary bridge that is currently proposed for replacement in the next few years. The Power Street Bridge is also a temporary bridge that is also proposed for replacement in the coming years. The former Power Street bridge remains in place and is fenced off for safety reasons. The 11th Street bridge is a vehicular bridge with sidewalks and is in good condition.

The First Light pedestrian bridge is located at the rear of Canal Street on the industrial island. This crossing is also rated for emergency vehicle access and is the only pedestrian access to the site. There is an elevated pedestrian crossing from 2nd Street to 20 Canal Road that is decommissioned and is slated for removal. The crossing is fenced off for safety concerns. The third pedestrian crossing runs adjacent to Turners Falls Road and is also closed and fenced off due to safety concerns and is slated for removal.

There is a railroad crossing between Power Street and 11th street that used to provide rail access to both sides of the canal. This crossing is also closed and no longer in use.

See Image 3.1A for a diagram depicting existing site access.



3.1A Existing Site Access Diagram

3.2 Property and Easement Rights

The site is within the Turners Falls Historic Canal district in the Village of Turners Falls in Montague, Massachusetts. The specific parcels in this study include 11 Power Street, and 8, 20, 36, and 42 Canal Street.

Property

The Canal District contains a number of properties that vary in ownership. Based on research of Montague Assessor's record information, property ownership of the project area parcels is as follows:

Address	Owner	Assessors Record #	Current Use
16 Canal Road	Turners Falls Hydro, LLC	Property ID: 02-0-1C	Small active hydropower facility
36 Canal Road	Milton Hilton, LLC	Property ID: 03-0-002	Portion of property planned for a cannabis grow facility. Opportunity for more uses within space.
42A Canal Road	Great Falls Realty Trust	Property ID: 03-01-086	Privately owned structure
15 Power Street	Power Street, LLC	Property ID: 03-0-089	Privately owned structure
8 Canal Road	Inhabitants of Montague	Property ID: 02-0-06	Old coal silo and conrete structure. Viable for some reuse, with stabilization needed to ensure safety.
20 Canal Road	Inhabitants of Montague	Property ID: 02-0-01	Former Strathmore Paper Mill building, very poor condition, unsafe and is currently boarded off and fenced off to prohibit access.
11 Power Street	Inhabitants of Montague	Property ID: 03-0-027	Former site of Griswold Mill slated for redevelopment as affordable housing.
Rear Canal Road	First Light MA Hydro, LLC	Property ID: 02-0-04	Canoe kayak launch, old cellar structures to be closed off from access.
Canal Road, Lot 05	Milton Hilton, LLC	Property ID: 02-0-05	Land adjacent to 15 Power Street zoned for industrial use.
Canal Road, Lot 07	Milton Hilton, LLC	Property ID: 02-0-07	Steel industrial, utilily building
Rear Canal Road	First Light MA Hydro, LLC	Property ID: 02-0-03	Land parcel along Connecticut Road, behind 8 Canal Road. River access
Rear Canal Road	Milton Hilton, LLC	Property ID: 02-0-1B	Water treatement plant on this land parcel

The privately owned properties on the site will play a major role in determining which areas will be available for future design work in addition to understanding physical and visual barriers. Properties owned by the town will be the focus for the design team in the Visioning Phase of the master plan, and their characteristics will determine all future use potential on each site.

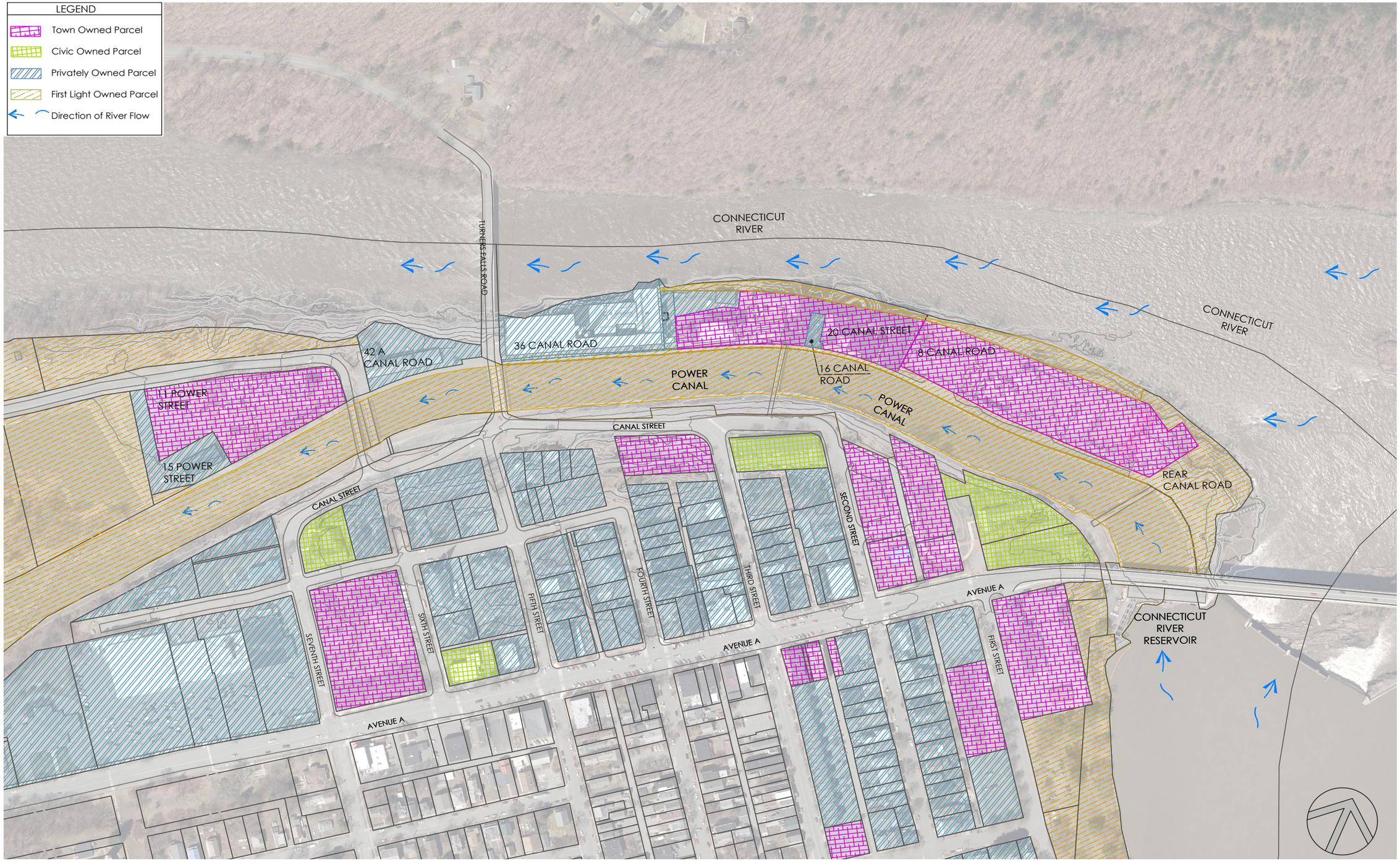
Easement Rights

The Canal District also has a variety of easements related to the canal and its infrastructure, many of which are remnants of the former mills' industrial energy needs that are no longer necessary. As stated in a previous section there is an access road and tunnel on the site that act as the two key easements on the site. The primary easement to note is the 10-foot-wide easement that runs along the northern canal wall edge that was once the Mill Owners' railroad track. There was a former railroad spur that ran the entire length of the complex along the canal wall. This easement provided access to the properties and are for industry uses. This easement does not currently allow for public

access to the sites.

There is an approximately 12-foot-wide easement in a tunnel through the basement of the building located at 36 Canal Road. The entrance of the tunnel is at the southeastern corner of the building by Turners Falls Road and exits the building at its northeastern corner.

These easements will play a significant role in how the design team can imagine future use of the district regarding access. See Image 3.2A for a diagram depicting existing property ownership and easements.



3.2A Existing Property and Easement Diagram

3.3 Environmental

Natural and Ecological Context

The Connecticut River defines the western edge of the project area. The river's presence has defined this area and has been used to harness energy that allowed for the industrial development of the area and is still utilized to generate power. The river is in a valley with steep slopes on both sides. Topography from the river to the downtown area changes significantly, with typically 40 feet of grade change between Avenue A and Canal Road. East of Avenue A the River is dammed and creates a large reservoir that is controlled to feed the canal and generate power. River flows below the dam fluctuate and at times the river's width is narrower than its natural conditions would be, exposing bedrock, as well as drier than it would otherwise be during regular unrestricted flows. Even with these impediments, the river is still a dynamic system that provides habitat and is a natural resource that is protected by environmental regulations. Natural Heritage has defined the river and its banks as a place that is inhabited by rare and endangered species and needs additional review to ensure any projects do not harm or limit the area these known species need to survive. Vegetation is typical of riverine conditions and consists of riparian forest and wetland species on the islands within the river and its banks. Overall, vegetation includes large canopy shade trees and understory vegetation, and areas that are beginning to naturalize are a mix of native and opportunistic invasive species.

Hydropower defines the area, from the Turners Falls Dam to the power canal and associated canal reservoirs downstream. The dams restrict river flows downstream to provide adequate flow through the canal for power generation. There are active and historic power intakes and outfalls that run through the buildings. Some are no longer in use, and others need further investigation to understand what infrastructure remains in place. Within the project area there is a standalone hydropower facility at 16 Canal Road. 20 Canal Road also has intake that runs underneath the building and drains into the river. See Image 3.3A for a diagram depicting existing natural resource conditions.

Environmental Protection

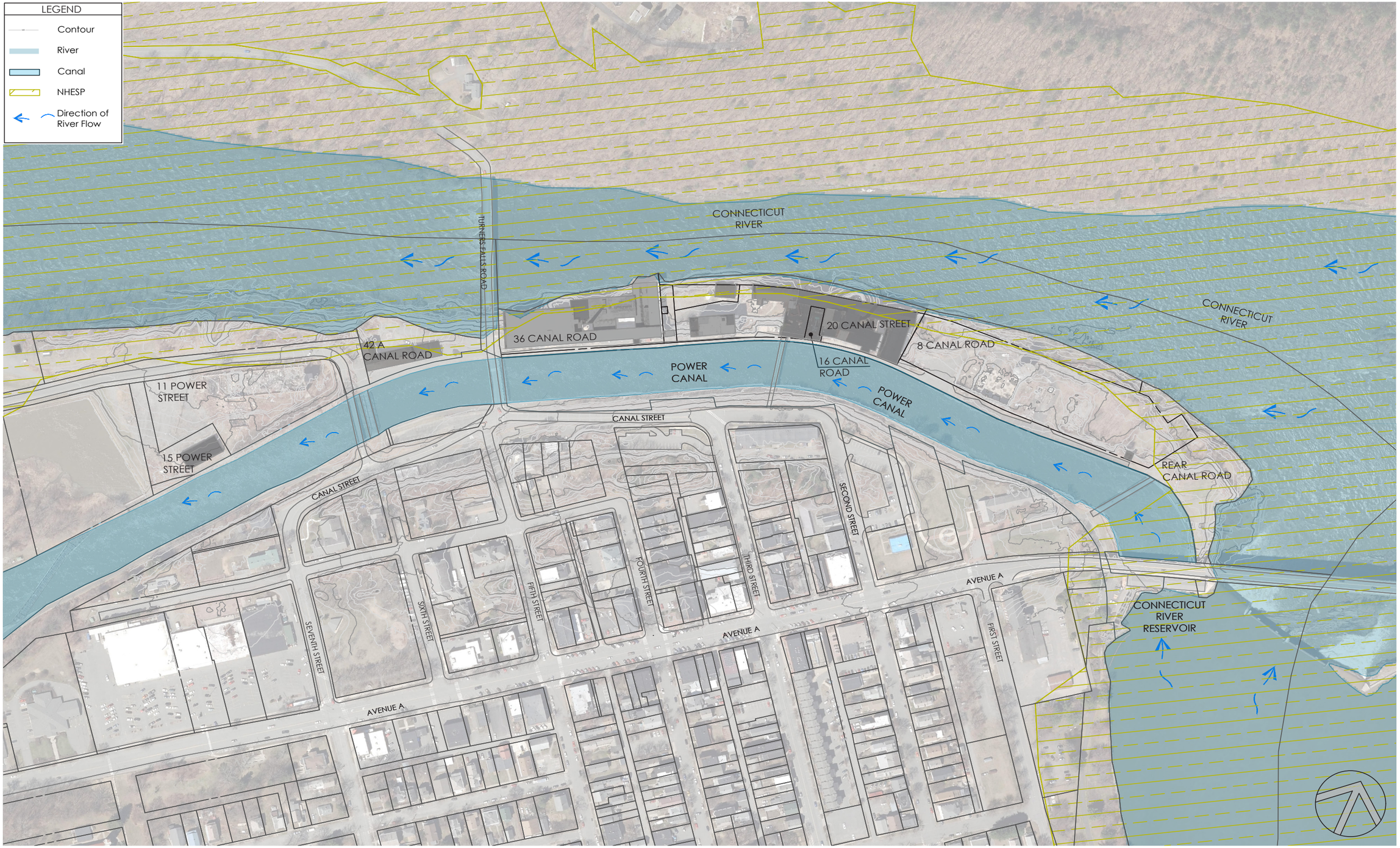
The project site runs along the easternly bank of the Connecticut River and therefore, virtually the entire project area is within the Massachusetts Wetlands Protection Act (WPA) 200-foot Riverfront Protection area. As such, any future development of the site would necessitate regulatory review under the WPA pursuant to 310 CMR 10.00.

Based on Massachusetts Information Geographic System (MassGIS) data layer information, the westerly fringes of the project area are within mapped Natural Heritage and Endangered Species Program (NHESP) Priority Habitats of Rare Species and Estimated Habitats of Rare Wildlife. Future development of the site will require NHESP review for potential impacts or takes of rare species and wildlife.

Hazardous Materials

The district, with its long history of industrial use, has consequently contained environmental contaminants. In 2020, a site wide abatement of hazardous materials / universal waste for the Strathmore Mill (20 Canal Road) was completed by Tighe & Bond and Air Quality Experts, Inc. The work completed in this project passed post-abatement visual inspection and air sample testing for asbestos. The remediation project also included the collection and disposal of other universal wastes such as containerized oils, light tubes, ballasts, and mercury sources.

There remain other portions of the canal district that have not seen such abatement project and also contain remnants of building and industrial material for structures that are no longer standing. It is recommended that environmental studies and abatement assessments for other portions of the site be required before any future work.



3.3A Existing Natural Resources Diagram

3.4 Building Assessment

As stated previously, the design team investigated the condition of both the site and its buildings, specifically the Strathmore Mill Complex, to determine whether the structures would be able to be restored and repurposed in any future work. The evaluation of the Strathmore Mill was based on previous studies, the team's experience with similar structures, photographic records, and visual observations done during site visits. Site observations were confined to select locations of the property due to access and safety concerns, and therefore this evaluation is not considered a comprehensive survey.

The Strathmore Mill Complex is located at 20 Canal Road. The facility of ten buildings, most of which are interconnected, were primarily constructed in the late 19th century to house a paper mill company, and ran until 1994. The mill has had several owners during its lifetime, but most of the property is now unoccupied. The remaining use is a hydroelectric generating plant in Building 9 owned and operated by a private company. These brick masonry buildings range in height from four to six stories and have a floor area of approximately 245,000 square feet.

A general evaluation of each building was undertaken, noting the general conditions of the major structural elements. These components include:

- Building Envelope: roofs,exterior walls, windows, and foundations
- Building Systems: electricity, plumbing, mechanical, and fire protection
- Framing Integrity
- Floors

Note that not all portions of the buildings were observed due to the safety of the team.

Buildings 1-8 at the facility generally appear to be in poor condition and can be considered in a failing state. Building 9 is privately owned, and was in accessible for observation. Building 11 appears to be in fair condition. For further description of the conditon and next steps of each building on the Strathmore Mill Complex, see Table 3.4A.

Typical problems for all the buildings include extensive mortar decay in brickwork, cracks and openings on various floors, failed masonry window arches, moss growing on the exterior walls and foundations depicting water infiltration, deterioration of wood ceilings, dated and depleted membrane roofing systems, cracks along the envelope, and portions of the brickwork in a crumbled state leaving the interior exposed to outside elements. Buildings 1, 2, and 11 also exhibit signs of fire damage as a consequence of Building 10 burning down in 2007 due to arson.

In previous studies conducted in 2005 and 2008, the buildings were evaluated to be in fair to poor condition which depicted select areas of deterioration, with signs of water infiltration throughout. Tighe and Bond's structural analysis within the 2005 study noted specific problem areas, and provided schematic-level demoltion plans for portions of the mill complex. These demolition plans focused on removing portions buildings 5, 6, and 8 and providing a new retaining wall. It is important to note that this plan was completed before the fire that destroyed building 10 and consequently left portions of the complex with damage and exposure that it did not previously have. With the 2014 designation of the site as blighted by the Massachusetts Department of Housing and Community Development (DHCD), it is clear that the building envelopes are exhibiting an escalation of deterioration due to lack of maintenance and disinvestment. These exterior walls are the primary, structural elements for these load bearing, brick masonry buildings as they maintain the integrity of the interior wood framing, floor systems and roof systems. As the envelope appears to be in a state of disrepair for large portions of the site, it is unlikely that reuse of the whole property is possible. Building 11 appears to be in the best position for renovation and reuse as its envelope appears to have maintained structural integrity

Building Number	Condition	Next Step	Notes
1	Poor	Partial / Full Demolition	Five story, brick masonry building. Severe mortar and brick deterioration due to water infiltration at river-facing side. Cracks within floor assembly. Failing vaulting and window arches.
2	Poor	Partial / Full Demolition	Five story, brick masonry building. Severe mortar and brick deterioration due to water infiltration at river-facing side. Fifth level floor and framing depicting fire damage. General floor damage and collapsing.
3	Poor	Partial / Full Demolition	Five story, brick masonry building. Severe mortar and brick deterioration due to water infiltration at river-facing side. Deterioration of wood ceiling due to moisture. Roof beams showing signs of water damage.
4	Poor	Partial / Full Demolition	Four story, brick masonry building. Mortar joints deteriorated and soft in many locations throughout building.
5	Poor	Partial / Full Demolition	Five story, brick masonry building. Mortar joints deteriorated and soft in many locations throughout building. Aged roof assembly.
6	Poor	Partial / Full Demolition	Four story, brick masonry building. Mortar joints deteriorated and soft in many locations throughout building. Failing roof assembly.
7	Poor	Partial / Full Demolition	Four story, brick masonry building. Deteriorated mortar joints and portions of brick from exterior walls were missing/ displaced. Failing roof assembly.
8	Poor	Partial / Full Demolition	Two story, brick masonry building. Mortar joints deteriorated and soft in many locations throughout building. Wood flooring is warped and showing water damage. Steel cables supporting second level installed to prevent the columns shifting. Aged roof assembly. Remainder of smoke stack that was partially demolished down the second level is deteriorated. Outer wythe of brick masonry is falling out. Partially inaccessible.
9	Unknown, Exterior Appears Stable	Assessment & Stabilization	Four story, brick masonry building. Currently houses Eagle Creek Hydro Plant. Not observed during site visit.

3.4A Strathmore Mill Complex Building Matrix

that is not as apparent at other buildings on the site. Previous to any work being completed at this property, the design team recommends that a comprehensive, structural survey of the building be performed by a structural engineer to determine which portions of the facility are safe for reuse or stabilization. See Appendix C for Existing Conditions Photos of the Strathmore Mill Complex.

1 Building 3 Deteriorated Brick and Mortar

2 Building 1 Failing Window Arches

3 Building Exterior Wall's Outer Wythe Falling Out of Base

4 Building 11 Addition Collapsed Roof

5 Building 2 Deteriorated Exterior Brick Wall System

6 Building 1 Collapsed Floor System

7 Building 5 Exterior Brick Failure

8 Building 7 & 8 Deteriorated Exterior Walls

9 Building 1 Failing Window Arches and Elevator Shaft

10 Building 6 Crumbling Brick and Utilities

11 Building 2 Deteriorated Exterior Brick Wall System at River-side

12 Building 3 Failing Vault

13 Building 2 Collapsed Ceiling

14 Building 1 Wall of Elevator Shaft Separating

15 Building 11 Failing Ceiling and Deteriorated Interior Finishes

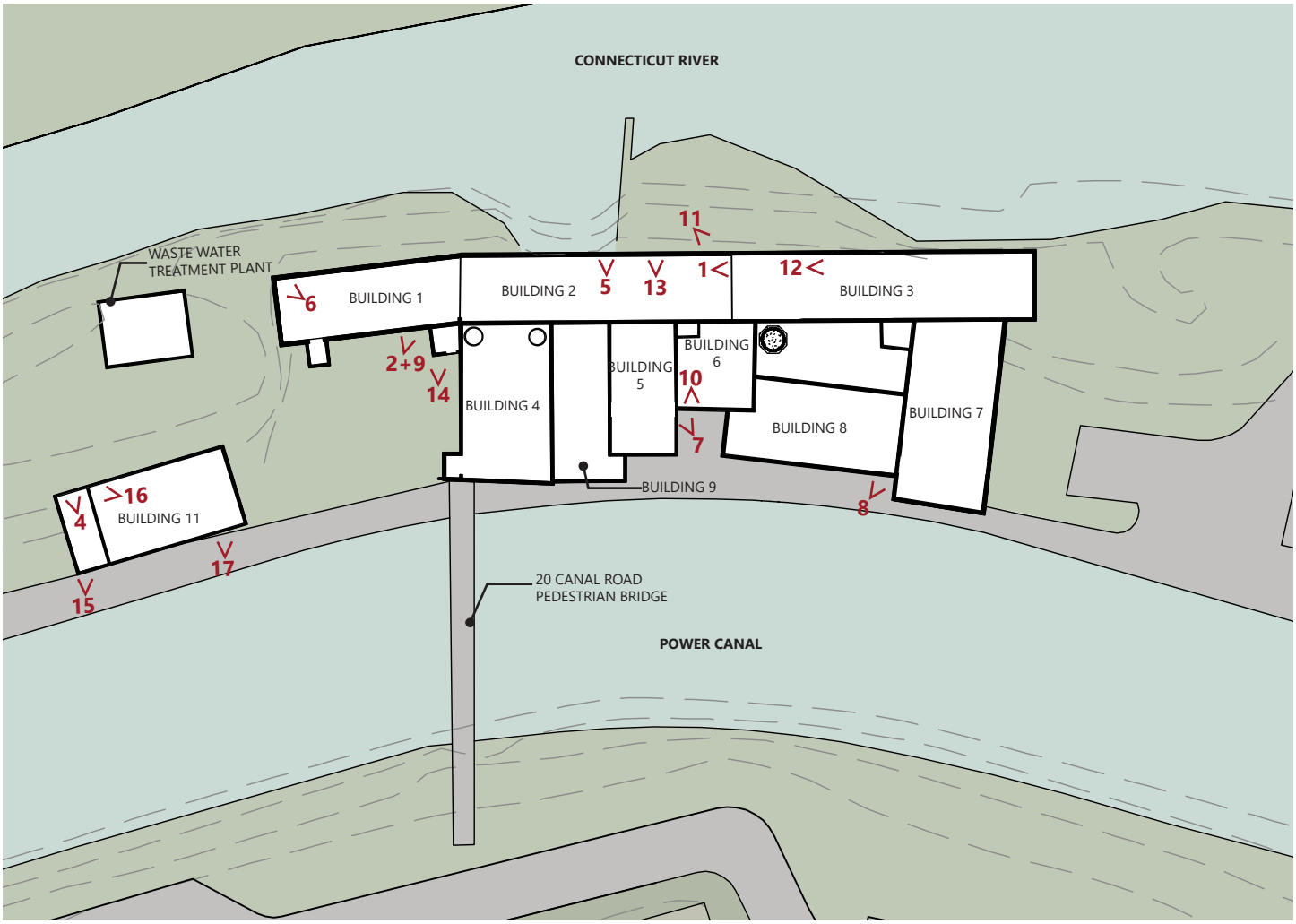
16 Building 11 Floor Assembly Failing at Corners

17 Building 11 Loading Dock

It is important to note also that accessibility and general egress issues were considered in the assessment. Basic access to the site is fairly limited. The narrow, 10-foot easement that runs along the northern edge of the island is only permitted for industrial use. Public access is not provided through this easement, and therefore it is likely any potential future use will be limited due to the access restrictions. The pedestrian footbridge that stretches from downtown Turners Falls (in between Second and Third Street) and abuts the fourth level of Building 4 is closed and no longer available for public use. The bridge provided utility connections across the canal to the mill buildings from the downtown area. Those utilities have also been disconnected as part of the bridge's abandonment. The buildings would also require significant upgrades to meet current code to make the building fit for occupancy. ADA Accessibility standards were not implemented until the late 20th century and the facility currently does not comply to its requirements.

All building systems were disconnected and non-functional with the possible exception of a building fire alarm system. Due to the deterioration of the buildings in general, reuse of the utilities on site is likely not feasible. New connections and system replacement would likely be required for any future occupied use.

See Image 3.4B for Existing Building Locations at the Strathmore Mill Complex.



3.4B Strathmore Mill Facility Key Plan (Zone 3 and 4)

4.0 OPPORTUNITIES AND CONSTRAINTS

4.1 Market Study

As part of the Investigation Phase for the Turners Falls Canal District Master Plan, Camoin Associates conducted a market analysis to draw preliminary conclusions about existing and potential demand in the Town of Montague and surrounding region. This analysis includes the following items:

- Demographic Profile
- Economic Profile
- Residential Market
- Retail/Commercial Market
- Industrial Market

This full report describing these findings can be found in Appendix A of this memorandum.

Through data review of the market analysis, public surveys and discussions with local stakeholders, the need and desire for additional residential space stands out as one of the foremost priorities for any future Canal District development. Affordability is an issue with nearly half of all households spending over 30% of their income on housing. The need for new residential construction is underscored by the vintage of the existing building stock where median age has reached 70 years. The specific type of new housing is less defined. Redevelopment of the existing mills may lend itself to artist or craft work/loft space – possibly including a gallery. This would certainly address the expressed goal of maintaining the unique character within the community. Addressing the issue of affordability, however, shifts the focus to workforce housing. Although local rental rates register substantially below the statewide average, the same is true for incomes. Creation of new reasonably priced units on the site would in turn facilitate the ability of people to live in the community where they work. Alternatively, the area has also demonstrated the marketability of for-sale multifamily condominiums. This type of development would likely prove to be the most easily financed.

As for commercial development, surveys reveal a desire for additional retail space and that need is born out in analyzing local spending patterns. Most notable is the area's ability to support new dining capacity which would serve as a market driven opportunity while also facilitating connections within the community. Also showing potential are personal services such as hair and nail salons and dry cleaners. Development of office or flex space has the potential to serve as an incubator for new businesses. Adding shared use maker-space or a commercial kitchen has also been shown to promote entrepreneurial start-up companies in their early days.

For the northern area of the Canal District which faces significant constraints to vehicular access, a separate commercial application may be the installation of a battery energy storage facility. The dam, along the canal, produces a steady flow of electric power for First Light Energy who operates and maintains this generating capacity. Utility-scale electric storage is charged when consumers and business require less power but can then be drawn from during times of peak demand.

Less commercially driven, community-oriented uses which would be welcome include childcare, parkland, development of a historical interpretive center, outdoor perform space, and/or river access.

Aside from the physical and site-specific limitations found within the Canal District, broader economic and demographics constraints play a role in the viability of any proposed redevelopment. The town, along with the larger region, has seen declining population and stagnant levels of employment. Income growth fall well short of the statewide pace and the community is aging. Market oriented responses to the redevelopment on the island will need to remain cognizant of these challenges. Addressing community driven needs could also require public sector support and the securing of financing.

4.2 Future Use Considerations

Based on the potential use options provided by the market analysis, the design team examined a few basic use groups and the requirements they would need to make that use feasible. The five uses explored were business, residential, assembly, industrial/storage, and non-occupied which ranged from most restrictive to least. The requirements outlined in Image 4.2A ultimately aided the team in determining how the site's various conditions would provide opportunities or create limitations for different uses.

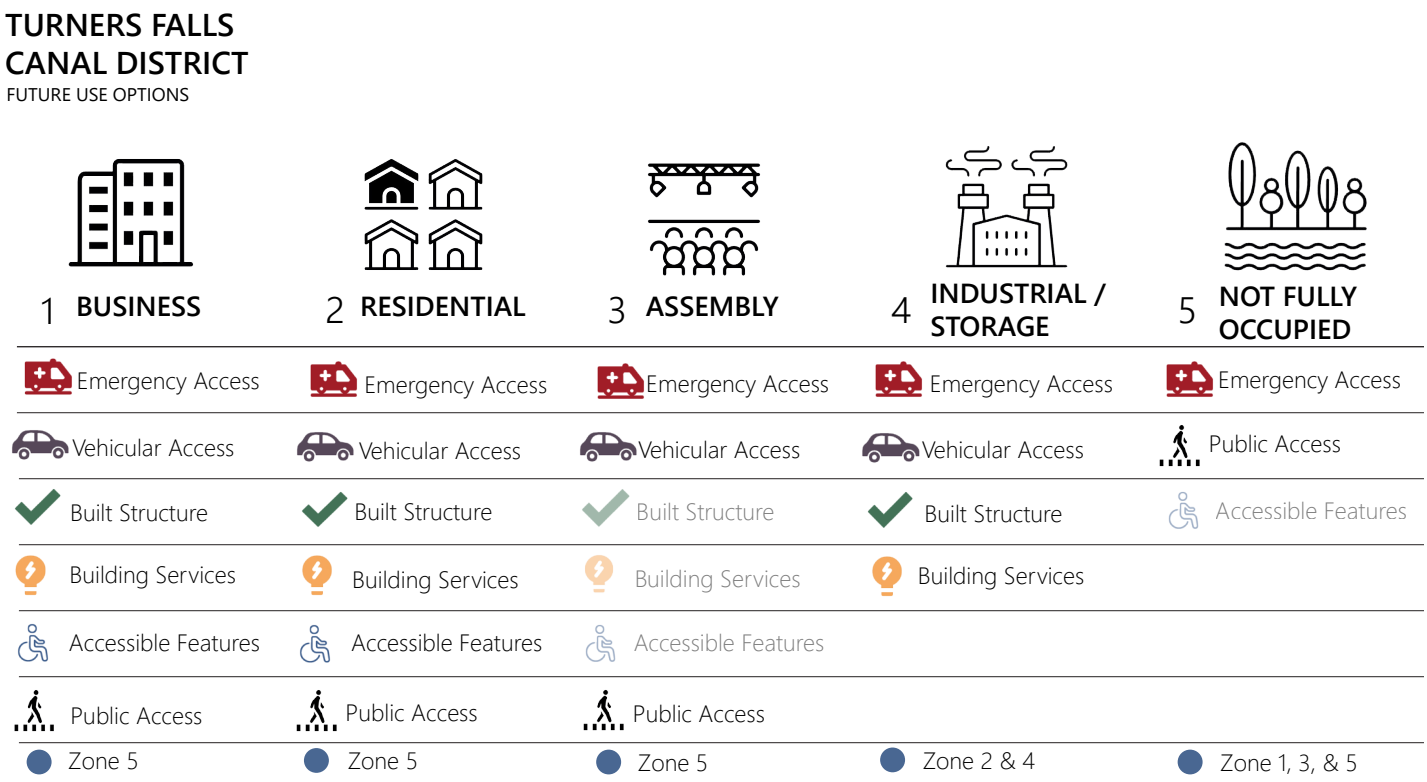
As the design team began moving towards the Visioning Phase of the Master Plan, a series of opportunities and constraints based on the existing conditions of the site and with the requirements of various use options was determined. The characteristics of the site that were considered included:

- Vehicular Access
- Public Access
- Water Access
- Existing Building Conditions
- Existing Site Conditions
- Views

These characteristics aided the team in designating five different zones on the Canal District and the most likely use for that zone. These zones can be viewed on Image 4.2B and will described in the following paragrahs.

Zone 1

Located at the most northern portion of the site (also part of 8 Canal Road), Zone 1 provides the greatest opportunity for water access. This area already has public river access, and has proposed improvements by First Light for a canoe and kayak launch. In addition, because it has the only remaining pedestrian footbridge (First Light pedestrian bridge), it will likely act as the entry point for pedestrians for the remainder of the site. The location of this zone will provide users the opportunity to access



4.2A Use Characteristics Diagram

views looking upstream towards the Turners Falls Dam and Peskeomskut Island. This zone, consequently, may become a very activated area for recreational use.

Zone 2

Located adjacent to Zone 1 (and is the remaing portion of 8 Canal Road) is the area of the site that has very few remaining buildings. There are however ruins from a pre-existing coal power plant and the silo. Zone 2 has utility fee simple ownerships on both sides of the waterfronts that restrict public, vehicle, and emergency access. Due to this condition, this area is limited to uses that would likely not require typical access. This zone has a significant grade change, and it is important to note that providing an accessible route would be difficult and costly. In addition, the remaining ruins would need to be safely secured. As much of this zone is already in a condition where occupied development would be challenging, it has the potential to become a naturalized area. This more naturalized area could utilize the existing ruins and silo as well as the remaining area within this zone to depict public art. Zone 2 likely will be a less active space, with the opportunity to provide a quiet place for reflection or ceremony and an additional walking path along the Canalside Rail Trail that would be available to users at their own risk.

Zone 3

Zone 3 contains 20 Canal Road (or the Strathmore Mill Complex). As stated in Section 3.4 – Building Assessment, due to the lack of structural integrity of the buildings, it is unlikely that the existing buildings can be reused and repurposed for occupancy. The complex is in a state of disrepair that would be unsuitable for standard renovation. There is a great opportunity, however, after the buildings are assessed by a structural engineer for selective demolition and restabilization of small portions to occur. These fragments along with creative design work could provide the district with a site that interprets the historic use of the island. Providing a space to acknowledge the history of the town and the island was a critical request from the inhabitants of Turners Falls, and this zone provides space to interpret and experience the site. A key consideration for this opportunity would mean understanding how the demolition of the buildings would affect the intake and outfalls of the canal. In addition, there is still restricted public access on the canal side and no pedestrian connection at this zone, meaning that users of this area would be required to access the island at Zone 1 and walk through Zone 2 to access it. It is also critical to note that this zone also contains 16 Canal Road (or the Eagle Creek Hydro Plant) which will remain on the site. Any future work on the Strathmore Mill Complex will require careful consideration to maintain stabilization of the hydro plant. This plant provides another opportunity for this interpretation site by allowing visitors to view from the exterior how a hydropower plant runs.

Zone 4

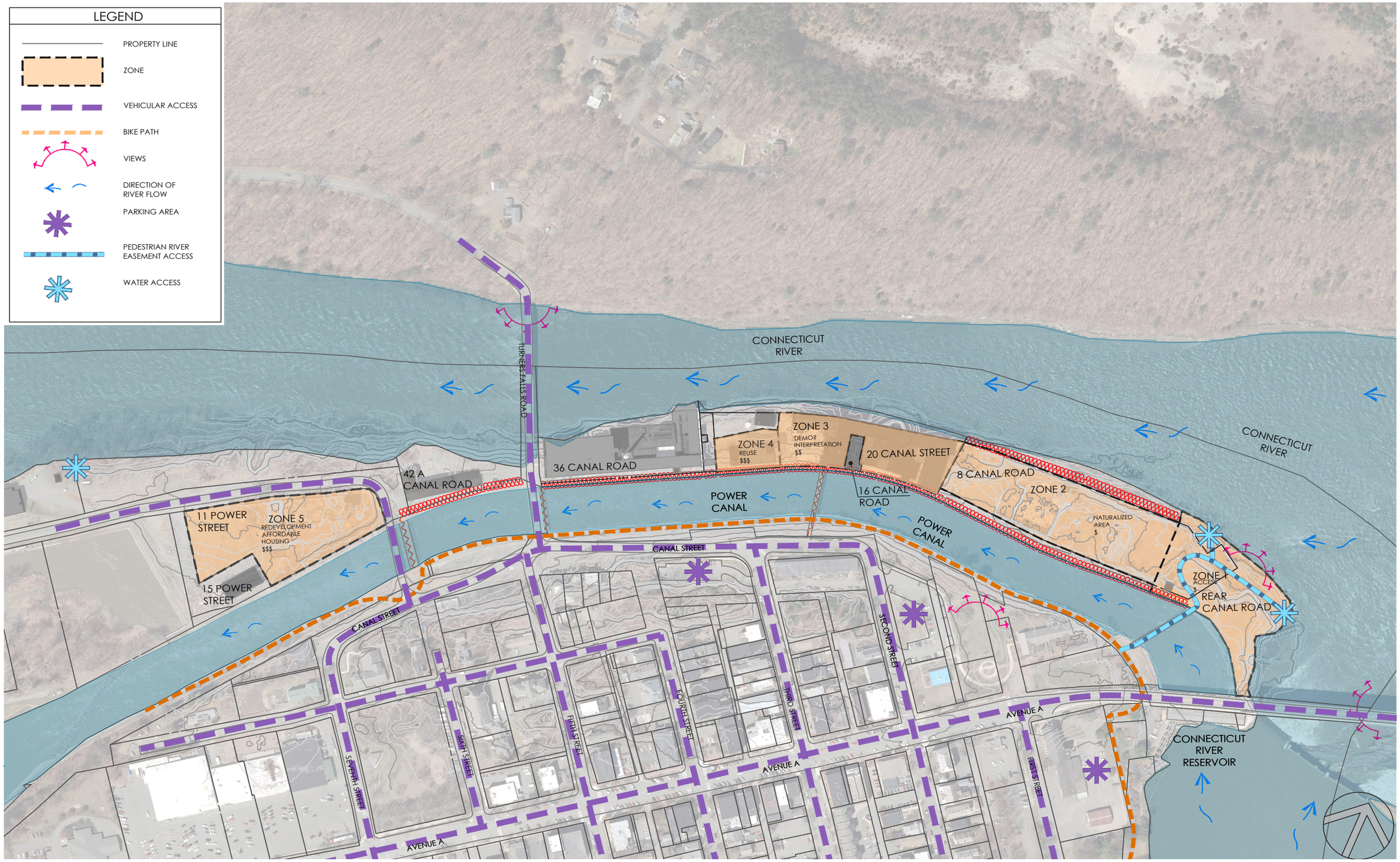
This zone contains the only building that the team considers feasible for reuse. This is Building 11 of the Strathmore Mill Complex. Access is still limited at this location, but if the building is considered for uses that allow for access of the 10-foot fee simple ownership off the canal wall, it is possible to get adequate access. There is also a possibility to have limited access to the site by way of the Southworth tunnel easement. While Building 11 shows the highest possibility of reuse, it is critical to note that the building will require significant work to the building envelope and structure as well as to make updates to address building and accessibility codes. Utilities would also need to be reconnected at this site.

Zone 5

Zone 5 which contains 11 Power Street poses the greatest opportunity for redevelopment into residential use. The property was a former mill site that was cleaned up by the EPA in 2021, giving this site the best opporunity for housing development. Directly to the north of the site, there is the 6t Street Bridge. This bridge is slated to be replaced by MassDOT in

a 2027 project, which can provide direct access to this portion of the island. Easements that would make public access challenging do not reach this area of the site giving the zone plenty of access opportunities. Based on the market study, providing more housing is a critical need for this area of Turners Falls. The zone currently does not have water or sewer service and would need to be connected this new use. Another physical constraint for this zone is by a subsurface tile drain system that drains the adjacent power canal.

4.2B Zone Key Plan



4.2B Opportunities and Contraints Diagram