Westmass

Westmass Area Development Corporation

Remediation and Redevelopment of Brownfields Sites
at the Ludlow Mills Complex, Hampden County, Massachusetts

Submitted by Westmass Area Development Corporation, November 6, 2023

1. **Applicant Identification:**
   Westmass Area Development Corporation
   One Monarch Place, Suite 1120
   Springfield, MA 01144
   413-593-6421
   www.westmassdevelopment.com

2. **Funding Requested:**
   a. **Grant Type:** Multiple Site Cleanup
   b. **Federal Funds Requested:** **$1,000,000.00**

3. **Location:** Town of Ludlow, Hampden County, Massachusetts

4. **Property Site-Specific Information:**
   Site 1: Mill #11
   Ludlow Mills, Riverside Drive
   Ludlow, Massachusetts 01056
   Site 2: Mill #9
   Ludlow Mills, 100 State Street
   Ludlow, Massachusetts 01056
   Site 3: Warehouse #199
   Ludlow Mills, Riverside Drive
   Ludlow, Massachusetts 01056

5. **Contacts:**
   a. **Project Director:**
   Sarah la Cour, Vice President of Operations
   Westmass Area Development Corporation
   One Monarch Place, Suite 1120
   Springfield, Massachusetts 01144
   413-386-3124 (p)
   s.lacour@westmassdevelopment.com

   b. **Chief Executive:**
   Jeffrey Daley, President & CEO
   Westmass Area Development Corporation
   One Monarch Place, Suite 1120
   Springfield, Massachusetts 01144
   413-593-6421 (p)
   j.daley@westmassddevelopment.com

6. **Population:**
   Town of Ludlow: 21,002 (2020 Census)
   Census Tract 8104.03: 4,242 (2021 ACS)

7. Other Factors Checklist:

Other Factors	**Page #**
Community population is 10,000 or less.	N/A
The applicant is, or will assist, a federally recognized Indian tribe or United States territory.	N/A
The proposed brownfield(s) is impacted by mine-scarred land.	N/A
Secured firm leveraging commitment ties directly to the project and will facilitate completion of the project/reuse; secured resource is identified in the Narrative and substantiated in the attached documentation.	5
The proposed site(s) is adjacent to a body of water (i.e., the border of the proposed site(s) is contiguous or partially contiguous to the body of water or would be contiguous or partially contiguous with a body of water but for a street, road, or other public thoroughfare separating them).	3
The proposed site(s) is in a federally designated flood plain.	3
The reuse of the proposed cleanup site(s) will facilitate renewable energy from wind, solar, or geothermal energy.	4
The reuse of the proposed cleanup site(s) will incorporate energy efficiency measures.	4
The proposed project will improve local climate adaptation/mitigation capacity and resilience to protect residents and community investments.	5
The target area(s) is located within a community in which a coal-fired power plant has recently closed (2012 or later) or is closing.	N/A

Regarding the N/A items above, the Community contains a population greater than 10,000; Westmass Area Development Corporation is not, nor will assist, a federally recognized Indian tribe or US territory; the proposed brownfield sites are not impacted by mine-scarred land and the target area is not located within a community in which a coal-fired plant has recently closed.

8. Releasing Copies of Applications. Not applicable because this application does not contain confidential, privileged, or sensitive information.

Should you require further information, please do not hesitate to contact either Sarah la Cour or myself (contact information above).

Sincerely,

Jeffrey Daley

President/CEO

PROJECT AREA DESCRIPTION AND PLANS FOR REVITALIZATION

a. Target Area and Brownfields

i. Overview of Brownfield Challenges and Description of Target Area

Located in the Town of Ludlow in Western Massachusetts, the 630-acre, Ludlow Mill Village Target Area[1] has an over 100-year history of textile manufacturing that sustained the local livelihood but has more recently served as a reminder of lost jobs with vacant, decrepit buildings and crime and contamination. The Town suffers from a large number of brownfields and hazardous waste sites; which include 190 waste sites identified by MassDEP and 30 inactive RCRA sites identified by EnviroAtlas, in addition to known brownfields and the vast Ludlow Mill complex. Owned by Westmass Area Development Corporation (Westmass), since 2011, the Ludlow Mill Complex is located within the heart of the target area and within a federally designated **Opportunity Zone**. The Mill Complex once employed over 5,000 people to manufacture jute products and was one of the primary economic generators for the target area and broader region. It is now a haven for trespassers, crime and contamination threats to current occupants and the surrounding receptors in the target area. The neighborhood adjacent to the mills continues to experience extreme economic hardship, compared to the state, as well as a continued downward trend of economic and demographic indicators.[2] The cleanup of **Mill 11, Mill 9 and Warehouse 199** is a critical step in combating the brownfield challenges of the target area by eliminating the hazardous materials in these buildings and allowing for significant economic redevelopment, including affordable housing.

Description of the Proposed Brownfield Site(s)

The entire 30-building Ludlow Mills complex is approximately 52 acres and runs along almost 1.5 miles of the Chicopee River, located in a **FEMA Special Flood Hazard Area**[3]. Most of the mill buildings were constructed at the turn of the 20th century and include several 1 to 8 story, brick and masonry buildings containing approximately 1.2 million square feet (SF). The Mill Complex was historically utilized for various manufacturing operations but primarily textiles and jute. There are currently a mix of manufacturing and entrepreneurial tenants within the complex with businesses ranging from metal fabrication to brewing. Despite continuous clean-up activities, the Mill Complex still has several buildings that remain contaminated with asbestos, lead paint, PCBs and other hazardous materials. This includes the three sites identified in this request: **Mill 11** (**Site 1**) and **Mill 9 (Site 2)** where jute was processed and manufactured and **Warehouse 199 (Site 3)** where the jute and products were stored. All buildings are primarily vacant but secure.

Mill 11: Mill 11 is a 345,000 SF, five-story brick building completed in 1913. The building is currently vacant on the upper 4 floors but has a commercial tenant on the first floor. Asbestos-containing materials (ACM) have been identified in the caulk and glazing of 506 windows; 630 SF of flooring; 2,500 SF of joint compound and gypsum board and in small areas of pipe insulation and residual black tar. In addition, lead based paint has been identified on interior walls on flooring and PCBs were identified in industrial window caulk on the 5th floor.

Mill 9: Mill 9 is a 24,000 SF, two-story brick building, constructed with wood columns, built c.1905. The building was used to manufacture jute products and is currently vacant. ACM was detected in the exterior caulking of 130 windows; lead based paint was identified on window frames, metal doors and metal sprinkler pipes; and unsafe levels of toxigenic molds, including Aspergillus, Penicillin and Cladosporium, were found in the walls and wood columns.

Warehouse 199: Also built c.1905, building 199 is a 31,000 SF, four-story brick structure that shares a wall with Mill 9 on the first two floors. This building was used to store products and materials in association with Mill 9 and Mill 8, located just north. ACM have been identified in the caulking and glazing of 59 windows;

[1] Census Tract 8104.03

[2] EPA EJScreen: In comparison to State- Unemployment 91st percentile; Low Income 69th percentile; Limited English Speaking 92nd percentile; Less than a high school education 85th percentile.

[3] FEMA Flood Map Service Center, 2023.

lead based paint was found in metal doors and door frames and metal column anchors and baseboards; and PCBs were detected in a portion of exterior window glazing.

b. Revitalization of the Target Area

i. Reuse Strategy and Alignment with Revitalization Plans

The cleanup work proposed under this EPA grant is a critical part of the redevelopment of **Mills 9 & 11**, which are anticipated to leverage up to **$150 million** in future private investment. Throughout site remediation and redevelopment projects at the Mill Complex, the Town of Ludlow has been a fully supportive partner and continues their involvement. Prior to the purchase of the property by Westmass, the **Ludlow Town Master Plan**, prepared in 2009, identified redevelopment of the historic Ludlow Mills complex as a priority goal for economic development, housing, and land use. The Plan indicated that rezoning, and continued support for developer investment at the mills, was imperative to the local economy and future of the town. In 2012, the Ludlow Planning Board granted Westmass a Special Permit for the **Comprehensive Plan for the Ludlow Mills Preservation and Redevelopment Project** in accordance with the new **Mill Redevelopment District** within the Zoning Bylaw. The Comprehensive Planning process included significant public participation and that feedback was incorporated into the final Plan and floodplain specific redevelopment practices are being utilized due to the adjacency to the Chicopee River. In addition, in 2013, the Town approved a **Chapter 40R Smart Growth Overlay District Bylaw** and created a specific Ludlow Mills Mixed-Use Sub-district. This significant zoning change allowed residential uses in the formerly industrially zoned area and the Ludlow Mills Brownfields Redevelopment project has been identified as a regional "High Priority Project" by the **2019 Comprehensive Economic Strategy (CEDS)** prepared by the Pioneer Valley Planning Commission.

Mill 11: Mill 11 will be the largest single-building adaptive reuse project within the historic complex. Mixed-use redevelopment will result in significant new residential units as well as commercial space. Associated amenities and parking will incorporate low-impact development components, including green infrastructure as well as create recreational opportunities via connectivity with the adjacent town park and Riverwalk along the Chicopee River.

Mill 9: Adjacent to the iconic clocktower Mill 8, currently being redeveloped into 95 units of age-restricted, affordable housing, Mill 9 is poised for redevelopment into modern, accessible commercial space. This two-story building, with high ceilings and large windows, is ideal for office or educational purposes and has been proposed for use as a location for Head Start or satellite space for a local community college.

Warehouse 199: Demolition of #199 is necessary due to the ceilings being well below current code requirements, and uneven wooden floors and drains that keep the floors from directly attaching to the walls. These conditions make redevelopment of these buildings structurally and economically unfeasible. The site provides an area for handicapped accessible parking and access for Mill 9 redevelopment activities.

ii. Outcomes and Benefits of Reuse Strategy

Developer Reinvestment: The cleanup and reuse of the Ludlow Mills is projected to result in up to $150 million in private investment and increase the local annual tax revenue by $2 million. Job creation: Over 100 new jobs are expected to be part of the redevelopment of Mills 9 & 11, as well as the potential for over 150 new housing units in Mill 11. Improved health: Cleanup will remove the threat of hazardous friable ACM and Lead Paint issues for the seniors and children that reside in the target area as well as addressing toxic mold issues in those buildings. Sustainability and Green Energy: Westmass will strive to meet the standards of Enterprise Green Communities (EGC), an environmental certification program for affordable housing that includes milestones for water conservation, energy efficiency, healthy materials, and green operations and management. The cleanup of Mill 11 is essential to its adaptive reuse into age-restricted, affordable residential units. Also, the cleanup and subsequent demolition of Warehouse 199 allows for a new parking area which will incorporate low-impact development components, including green infrastructure, to efficiently manage stormwater. As an additional step toward climate resiliency, rooftop and parking solar installations will be considered as part of Mill 9 & 11

redevelopment along with other energy efficiency and climate mitigation measures that will address heat islands and improved air quality.

c. Strategy for Leveraging Resources

i. Resources Needed for Site Characterization

No further resources are needed for site characterization at this time. If additional resources are needed for assessment as the project progresses, Westmass will pursue funding through **MassDevelopment** or private funds as necessary.

ii. Resources Needed for Site Remediation

The funding being requested in this application is believed to be sufficient to complete the cleanup activities as described. If additional funds are needed, Westmass will pursue other avenues for funding including the **Massachusetts Brownfield Program** and the **Brownfields Redevelopment Fund** which provide technical assistance and financial incentives for cleanup and redevelopment of contaminated properties.

iii. Resources Needed for Site Reuse

For over a decade, Westmass has a proven track record of leveraging funds from a variety of sources for the assessment, cleanup and successful redevelopment of the historic Ludlow Mills. Since taking ownership of the Mills in 2012, Westmass has secured a variety of State and Federal funding for cleanup activities as well as significant private investment for redevelopment. **MassDevelopment FY23 Site Readiness** Funds were used for improved electrical systems and a **FY23 EPA Brownfields Cleanup Grant** for the 300s Warehouses and the former Locomotive building. Westmass lacks significant resources to commit to large-scale cleanup projects but uses funds as necessary to leverage additional funding to advance redevelopment efforts and will secure the funding package necessary for the successful redevelopment of **Mills 9 & 11**, once abated. Private investment opportunities will be pursued through advertising of building sites ready for redevelopment along with incentive programs including the Massachusetts **Brownfields Tax Credit Program**, **New Market Tax Credits** and **Historic Preservation Tax Incentives**. In addition, to further advance the mill complex's redevelopment, the Town of Ludlow has established a **District Improvement Financing (DIF)** district around the Mills to leverage future tax revenues for short-term infrastructure needs. Funds being utilized for infrastructure and redevelopment activities are identified below (See ATTACHMENT A).

Mill 11

Source	Purpose	Amount	Status
MA ARPA-DHCD	Mill 11 Roof Replacement	$1,000,000	Secured- Complete
US EPA Region 1	Mill 11(&9) Phase II Assessment	$20,000	Secured- Complete
US EPA Brownfields Cleanup	ACM Abatement of 300s Warehouse	$560,000	Secured- In progress

Mill 9

Source	Purpose	Amount	Status
MA ARPA- DEP	New Water & Sewer Infrastructure	$1,000,000	Secured- In progress
MassDevelopment Site Readiness Program	New Electrical Service for complex	$500,000	Secured- In progress
Westmass Area Development Corp	Mill 9 New Roof	$100,000	Secured - Pending

iv. Use of Existing Infrastructure

Redevelopment activities at and around these Brownfields sites within the Mill Complex will be critically supported by infrastructure upgrades, including new water and sewer and upgraded electrical systems, that are currently under construction. These improvements are funded as described above. Also, in 2012, the Town of

Ludlow completed extensive state-funded reconstruction of public water and sewer infrastructure and roadway pavement and sidewalk surfaces along State Street bordering Mill 11 and the Mill Complex. In 2019, the Town of Ludlow, in partnership with Westmass, received $6.6 million in grant funds from the MassWorks Infrastructure Program and the US Department of Commerce Economic Development Administration (EDA) to construct a 4,200 LF roadway and associated water and sewer infrastructure within the mill complex to advance revitalization efforts. Completed in October 2022, Riverside Drive is a public way and provides key frontage, access and infrastructure for continued redevelopment efforts. This road now provides direct, public access to Mill 9. The Ludlow Mills complex is served by Eversource Electric and Gas, Verizon, Charter Communications and the Springfield Water and Sewer Commission.

2. COMMUNITY NEED AND COMMUNITY ENGAGEMENT

a. Community Need

i. The Community's Need for Funding

The decades of underutilization of the Mill Complex have negatively affected the target area (8104.03) and CEJST identifies it as a disadvantaged community.[4] Following the closure of the Mill Complex in the mid-20th century and the subsequent loss of employment and tax revenues, the target area has become incredibly strained to maintain municipal services. The financial burden of such a large (and predominantly vacant) mill property continues to pose economic challenges to both Westmass and the Town of Ludlow. Combining the reduced tax revenue with the increased cost burden of necessary municipal services, the Town of Ludlow continues to struggle to make large financial investments in the target area. The median household income for the target area is just $51,886 compared to $72,563 in the Town of Ludlow and $94,488 in Massachusetts. The population of individuals over 62 (22%) is in the 77th percentile in MA and 15.9% of seniors over 65 are living below the poverty level.[5] The presence of hazardous materials on the sites further compounds the challenges to the adjacent low-income neighborhoods where the unemployment rate is in the 91st percentile and 59% of the residents are living in rental housing built prior to 1960. Owner-occupied housing in the target area is only 38%. The cleanup of Mill 11 will allow for significant redevelopment into much-needed affordable housing. The current waiting list for affordable units in the Mill 10 redevelopment at the Ludlow Mills is over 5 years, even with another 95 units in Mill 8 coming online in 2024. The redevelopment of Mill 9 is essential to the increased economic benefit of activated commercial space within the Mills and provides benefits to the residents of the area and broader community. The abatement and demolition of Warehouse 199 is critical to the successful reuse of Mill 9 and to the broader mill complex tenants and other area receptors.

ii. Threats to Sensitive Populations

(1) Health or Welfare of Sensitive Populations

Asbestos and other toxins such as lead paint and mold, present at these sites in the Ludlow Mills, represent a clear health risk to the children and seniors living in the mill complex and in the adjacent neighborhoods including the former mill village which is 64% low-income with a significant portion living below the poverty level. 16.6% of the population of the target area are children under 15 and 17.4% are seniors over the age of 65. Persons with disabilities in the target area are in the 91st percentile. Other disadvantaged populations include 92nd percentile of limited English speaking and 81st percentile of population with less than high school education compared to nationwide data.[6] In addition, 26.7% of the households in the target area are receiving SNAP compared to 11.6% Statewide.[7] Removal of the hazardous materials at these sites will mitigate a direct health threat to workers, the senior residents living on site, children in the surrounding residential neighborhoods, workers and patients at the Encompass Rehabilitation Hospital, patrons of the new Ludlow Senior Center on former mill property and those visiting the Riverwalk and working in the downtown area. The

[4] Energy costs are in the 90th percentile nationally as well as 89th percentile linguistic isolation and 91st percentile for traffic proximity and volume
[5] American Community Survey and 2020 Census data
[6] EPA EJScreen Data
[7] 2020 US Census data

successful redevelopment of the mill complex hinges on this grant that will allow for the cleanup of all hazardous materials that contribute to airborne toxins and air quality issues.

(2) Greater Than Normal Incidence of Disease and Adverse Health Conditions

In 2022, Baystate Medical Center completed its Community Health Needs Assessment which included Ludlow in its service area. It found that the infant mortality rate in Hampden County was 30% higher than the State. In addition, air pollution impacts the morbidity of several chronic diseases that have a high prevalence in Hampden County, including asthma, cardiovascular disease and cancer, which recent studies have suggested is associated with poor air quality in the region. Hampden County was found to have a 22.9% increase in cancer among in the over 65 population and **mesotheliom**a, which is linked to asbestos exposure, is 100% more than expected in the community.[8] Additional health disparities in the target area include 93rd percentile nationwide for Asthma prevalence and 84th percentile in terms of **Heart Disease**[9], which can be exacerbated by asbestos exposure. In addition, the target area is 76th percentile for Lead Paint as compared to the State.[10] As windows and building elements at these sites continue to deteriorate, the emission of toxins related to asbestos and lead contamination could rise. Increased vandalism in the form of regularly broken windows, additionally increases the potential release of toxins into the air causing air-borne health risks. This grant will remove these contaminants, decreasing the exposure of the surrounding residents and mitigating associated health risks.

(3) Environmental Justice

a) Identification of Environmental Justice Issues- Located within Block Group 3, Census Tract 8104.03, the Ludlow Mills complex is identified as a Massachusetts **Environmental Justice Population** based on low-income characteristics according to 2020 data[11] as well as identifying as a disadvantaged population in CEJST due to high **Asthma** and **Low-Income** indicators. The once significant disinvestment in the target area, including the closure of the Mills several decades ago, has contributed to the ongoing issues of low property values and access to well-paying jobs with the target area being in the 89th percentile nationwide for unemployment as well as the 94th percentile for Limited English Speaking according to EJScreen. Broadband gaps are in the 91st percentile, limiting educational advances for families and work-from-home jobs. In addition, air pollution is shown to have a significant impact on Ludlow and across Hampden County due to a variety of mobile and point sources; EJScreen related indicators are extremely high (**Ozone** is 93rd percentile in the State). The target area is also in the 85th percentile for the **Lead Paint** Indicator nationwide. Collectively, these additional environmental burdens disproportionately impact the sensitive populations in our Target Area, creating EJ issues that will be addressed through this grant.

b) Advancing Environmental Justice- To promote and advance environmental justice, Westmass continues to attract investment into the historic mill property that includes anti-displacement strategies that will help stabilize the target area for current residents and the addition of affordable housing that includes minority populations. Since acquiring the property in 2011, Westmass has worked hard to attract women- and minority-based enterprises to the complex, promote the adaptive reuse of large mill buildings for age-restricted, affordable rental housing (Mills #8 and 10-over 170 units), and has increased recreational opportunities for nearby residents, in the form of a town park and heavily used public Riverwalk along the Chicopee River. By partnering with the Town and the implementation of its Hazard Mitigation Plan (2022), the cleanup will foster Westmass' continued investment in improved infrastructure to mitigate flooding. The target area population will also be served and supported by continued cleanup and redevelopment efforts through improved environmental quality and access to new jobs, services, transportation, and open space. Ongoing redevelopment efforts will continue to attract public and private reinvestment in housing, expanded broadband and improved health conditions.

[8] Mesothelioma for males and females Combined in Ludlow for 2011-2015. Mass. Dept. of Public Health.
[9] EPA EJScreen Data
[10] EPA 2017 Pollution Sources Data
[11] The identified EJ Population is 48% of the Massachusetts Median Income compared to the Town of Ludlow which is 85%

b. Community Engagement

i. Project Involvement and ii. Project Roles

Westmass is a community-based, business organization committed to improving the economy of the Pioneer Valley in Western Massachusetts. Together we work with many local community partners on the cleanup and redevelopment of the Ludlow Mills, including the following:

Project Partner	Point of contact	Specific Role in the Project
Town of Ludlow	**Marc Strange,** Town Administrator (413) 583-5600 ext. 1201	The project will work closely with the Town Building Inspector, Department of Public Works, the Historical Commission, Conservation Commission, Fire Department and Housing Authority.
Ludlow Council on Aging/ Ludlow Senior Center	**Jocelyn Zepke**, Director (413) 583-3564	The organizations assist with outreach to the elderly residents of the neighborhood.
MassHire Workforce Board	**David M. Cruise** (4130	MassHire assists with tracking the creation and retention of jobs.
Pioneer Valley Planning Commission (PVPC)	**Becky Basch** Senior Planner (413) 781-6045	PVPC is a provides regional social, economic, and health data and assists with monitoring the regional impacts of redevelopment.
Local Elected Officials	**Richard Neal** Congressman (413) 785-0325 **Jake Oliveira** State Senator (617) 722-1291 **Aaron Saunders** State Representative (617) 722-2320	Westmass is fortunate to have the continued support of our local elected officials. The Ludlow Mills project has received continuous broad support at the local, state and federal levels. Our consortium of elected officials are valuable advocates for Westmass' work and will continue to help identify funding sources to supplement all cleanup activities and marketing of these sites for redevelopment.

iii. Incorporating Community Input

Westmass will involve the community by: (1) preparing a plan to involve key stakeholders in cleanup activities where appropriate; (2) establishing an information repository at the Ludlow Mills with backup at the Corporate office in Springfield and on the westmassdevelopment.com website; (3) engaging the tenants and residents within the Ludlow Mills Complex, downtown Ludlow and the adjacent neighborhoods; (4) posting public notices in various locations, including online, to gather community input; (5) continue to meet with Town Boards and Commissions to provide updates and solicit feedback; and (6) holding a public meeting remotely to convey information and answering questions regarding all cleanup activities. All community participation methods are designed to ensure remote participation access and safe social distancing protocols. Throughout the process, input and comments will be gathered via a link on the website and through direct contact with Westmass personnel. We will publicize our intent to seek EPA Brownfields Cleanup funding at the Ludlow Mills in both the local newspaper and on its website. Upon award, Westmass will hold a post-award public meeting to solicit comments, distribute the cleanup plan and request input by businesses and residents as well as other stakeholders including the MADEP, MDOS, Ludlow Board of Health and Ludlow Building Commissioner. All comments and feedback gathered will be carefully considered and responded to by Westmass and the QEP and incorporated into the clean-up plan as appropriate.

3. TASK DESCRIPTIONS, COST ESTIMATES, AND MEASURING PROGRESS

a. Proposed Cleanup Plan

Grant funds are being requested for the cleanup of ACM and other hazardous materials within three specific sites within the complex, **Mill 11, Mill 9** and **Warehouse 199**, to further revitalization at these locations. As part of the overall **Comprehensive Plan for Preservation and Redevelopment** for the Ludlow Mills, the cleanup of these sites is integral to securing private investment for redevelopment. Cleanup for this project involves Westmass procuring a QEP and abatement contractor with the appropriate qualifications to prepare an Asbestos Removal Cleanup Plan including a Health & Safety Plan which will meet all EPA and MADEP requirements. An Asbestos Notification will be submitted to MADEP and we will apply for an Asbestos Blanket Notification Approval. The prepared Cleanup Plan will follow current EPA standards for a QAPP and a draft will be submitted to the EPA and the MADEP for review and approval. Copies of all documents will be placed in a Project Information Repository accessible to the Public. The state-licensed abatement contractor will remove all ACM and other hazardous materials, for disposal to a licensed receiving facility under a Mass. Asbestos Waste Shipping Record. Monitoring will be performed by a state-licensed asbestos inspector. Removal of **Warehouse 199** is consistent with the long-term vision for the Ludlow Mills and substantial redevelopment and adaptive reuse of **Mill 9**. Based on the Draft ABCA, the most effective method to eliminate risk at these sites is the complete removal and proper offsite disposal of all hazardous materials. This will eliminate exposure pathways during demolition and redevelopment work for current tenants and senior residents of the Mills, visitors and workers in downtown Ludlow, residents of the adjacent neighborhoods, and recreational users of the site. Westmass will advocate for asbestos site workers that have been trained through the state and EPA workforce and job training grants to support equitable workforce pathways.

b. Description of Tasks/Activities and Outputs

i. Project Implementation/ii. Anticipated Project Schedule/iii. Task/Activity Lead/ iv. Output

All activities described below are EPA funded.

Task 1: Cooperative Agreement Oversight	
i. Project Implementation	• Westmass will be responsible for overall project coordination and oversee the Cooperative Agreement with EPA and will conduct a competitive selection process, following public bidding rules, for the procurement of a Qualified Environmental Professional (QEP). • The QEP will prepare all cleanup plans; develop an EPA standard QAPP, abatement and post abatement demolition scope, prepare a Public Bid package, with specifications, and conduct the competitive Process for Abatement Contractor selection.
ii. Schedule	Cooperative Agreement Oversight will occur throughout the duration of the grant. Procurement of the QEP will be completed by 11/30/24 with a project kick off in January 2025. The Abatement Contractor will be competitively procured by 6/1/25.
iii. Task Lead	Sarah la Cour, Westmass Project Manager and QEP
iv. Outputs	Final executed Cooperative Agreement; Quality Assurance Project Plan (QAPP); procure QEP and Abatement Contractor; and prepare project progress reports submitted to ACRES database.
Task 2: Community Outreach & Engagement	
i. Project Implementation	• Westmass and the QEP will hold a pre-project public meeting to prepare the Community Involvement Plan and notify all appropriate parties of the scheduled cleanup. The QEP will conduct frequent visits, engage in public outreach with the businesses and residents at the Ludlow Mills and surrounding neighborhoods and finalize ABCA.

ii. Schedule	Pre-Project Public Meeting will be held in January 2025. Meetings with community and site stakeholders will be ongoing throughout the tenure of the grant.
iii. Task Lead	Sarah la Cour, Westmass Project Manager and QEP
iv. Outputs	Public meeting; Creation of a Community Involvement Plan and Final ABCAs.
Task 3: Site-Specific Activities	
i. Project Implementation	• The state-licensed abatement contractor will execute all cleanup activities; follow the approved plan; isolate where the asbestos removal is taking place; and provide all appropriate measures to prevent contamination of workers. All work will be completed in accordance with state and federal requirements. • Air quality monitoring on-site will be conducted during cleanup.
ii. Schedule	Cleanup will start by 6/30/25 and continue through to 4/30/27.
iii. Task Lead	Abatement Contractor with oversight and independent monitoring to be overseen by the QEP and Westmass Project & Construction Managers.
iv. Outputs	Full asbestos and hazardous materials abatement of the three sites.
Task 4: Oversee Site Cleanup	
i. Project Implementation	• Westmass will track and report the outputs and outcomes of the cleanup; the amount of private investment made in the site once the asbestos is removed; the amount of tax revenues raised because of the reuse; and the number of jobs created. All reporting will be made available on the EPA's ACRES database. • Cleanup Oversight will be performed by the QEP
ii. Schedule	Concurrent with Task 3 (6/30/25 - 4/30/27)
iii. Task Lead	Sarah la Cour, Westmass Project Manager and QEP
iv. Outputs	Completion Reports & other data submitted to ACRES database

c. Cost Estimates

i. Development of Cost Estimates/ ii. Application of Cost Estimates

Task 1: Cooperative Agreement Oversight:

Personnel: Project Manager at $100/hr@100 hours = **$10,000-** Prepare procurement documents and overall project coordination.

Qualified Environmental Professional (QEP) at $200/hr@80 hours = **$16,000** - Prepare asbestos removal plans, QAPP, and procurement of abatement contractor.

Task 2: Community Outreach & Engagement:

Personnel: Project Manager at $100/hr@90 hours = **$9,000**– Prepare public meetings, Community Involvement Plan, and engagement with the QEP and stakeholders at the project sites.

QEP: at $200/hr @70 hours = **$14,000** for regular site visits, public outreach, and the finalization of the two ABCAs with input from the public.

Task 3: Site-Specific Activities:

Personnel: Project Manager at $100 /hr@160 hours = **$16,000** Project oversight and coordination with project partners, businesses, and other affected stakeholders, as well as reporting on project activities.

QEP: at $200/hr@200 hours = **$40,000** - Oversight of all cleanup activities by the licensed abatement contractor include monitoring and reporting.

Abatement Contractor: Total contract of **$479,000**

Mill 11: $285,700 - ACM in glazing of 506 windows @$500 each = **$253,000**; Other Hazardous Materials including pipe insulation and joint compound = $32,700
Mill 9: $63,800 - ACM in the glazing of 118 windows @$500 each = **$59,000;** ACM in the glazing of 12 windows @$400 each = **$4,800**
Warehouse 199**:** ACM in the glazing of 59 windows @$500 each = **$29,500**
All Three Sites: **$100,000** - Industrial Hygiene Fee = **$60,000;** Lead Based Paint Abatement = **$10,000;** Mercury Components = **$7,500;** PCB Containing Materials = **$10,000;** Other Hazardous Materials = **$13,000**
Mill 9 Window Replacement: Mill 9 - Replace 60 windows openings @$6,200 each = **$372,000**

Task 4: Oversee Sight Cleanup:

Personnel: Project Manager at $100/hr @120 hours = **$12,000**-Tracking and reporting outputs and outcomes of all cleanup activities to EPA's ACRES database.
QEP: at $200/hr @160 hours = **$32,000** for the remainder of project oversight and closeout of cleanup activities.

Budget Categories		***Project Tasks ($)***				
		Task 1	***Task 2***	***Task 3***	***Task 4***	***Total***
Direct Costs	***Personnel***	*$10,000*	*$9,000*	*$16,000*	*$12,000*	*$47,000*
	Fringe Benefits	*$0*	*$0*	*$0*	*$0*	*$0*
	Travel	*$0*	*$0*	*$0*	*$0*	*$0*
	Equipment	*$0*	*$0*	*$0*	*$0*	*$0*
	Supplies	*$0*	*$0*	*$0*	*$0*	*$0*
	Contractual	*$16,000*	*$14,000*	*$40,000*	*$32,000*	*$102,000*
	Construction	*$0*	*$0*	*$851,000*	*$0*	*$851,000*
	Other	*$0*	*$0*	*$0*	*$0*	*$0*
Total Direct Costs		*$26,000*	*$23,000*	*$907,000*	*$44,000*	*$1,000,000*
Indirect Costs		*$0*	*$0*	*$0*	*$0*	*$0*
Total Federal Funding		*$26,000*	*$23,000*	*$907,000*	*$44,000*	*$1,000,000*
Total Budget		***$26,000***	***$23,000***	***$907,000***	***$44,000***	***$1,000,000***

d. Plan to Measure and Evaluate Environmental Progress and Results

Anticipated environmental results of the project include all three sites being free from hazardous materials, thereby supporting a cleaner, healthier environment within the target area. By cleaning **Warehouse 199** in preparation for demolition, Westmass is positioning Mill 9 for future redevelopment by remediating a deteriorating, hazardous building and cleaning **Mills 9 and 11** for adaptive reuse that contributes to the economic vitality of the target area. Replacement windows for Mill 9 will secure that building for reuse. Outside of the regular reporting, Westmass will comprehensively assess the costs and potential outcomes, including improved health statistics, of this Cleanup Plan. Progress toward achieving outcomes at the proposed sites will be tracked and evaluated by measurable indices including outreach associated with the Community Involvement Plan, investigating future, feasible adaptive reuse opportunities, a final inventory to identify all hazardous materials on the total floor areas, a cost estimate for the Cleanup Plan, and significant public input and reporting in ACRES throughout the project.

4. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE

a. Programmatic Capability

i. Organizational Structure/ ii. Description of Key Staff

Westmass has a long and successful history of utilizing federal and state grant funding to complete cleanup and redevelopment projects and the team has over 40 years collectively of experience in redevelopment, finance, and project management. The company has accounting and project management systems in place to track all

projects and will separately track all expenditures for the EPA cleanup grant. Westmass has experience with Requests for Proposals (RFP) to procure a QEP via a competitive procurement process in accordance federal regulations and will hire a state-licensed asbestos abatement contractor in accordance with local, state and federal regulations. **Sarah la Cour, VP of Operations**, will serve as the Project Manager for this cleanup grant. Sarah has over 25 years of experience as a project manager and is proficient in all aspects of project management and planning including knowledge of regulations related to development and permitting at the municipal, state, and federal levels. **Jeff LeSiege, VP of Facilities and Construction** will serve as Construction Manager for onsite coordinator of clean-up activities. Jeff has over 20 years of experience in construction supervision and general contracting. **Jeff Daley, President/CEO** will provide corporate oversight but will be funded by Westmass. Jeff has over 15 years of experience in real estate development, public-private partnership development, construction project development, and government relations. In the case of staff turnover, Westmass is confident that the necessary processes and protocols are in place for successful project oversight and accounting.

v. Acquiring Additional Resources

Westmass has a proven procurement process already in place that has been utilized on four previous rounds of EPA Brownfield Cleanup grants. Westmass will hire a QEP within the first quarter of this award. Procurement will include the preparation and distribution of a Request for Proposals (RFP), ranking of the proposal by Westmass staff, and interview with candidates as part of the hiring process. The QEP as well as licensed abatement contractor(s) will be procured following all state and federal procurement requirements.

b. Past Performance and Accomplishments

i. Currently Has or Previously Received an EPA Brownfields Grant

(1) Accomplishments

Westmass was awarded an **EPA FY23 Brownfields Cleanup Grant** to clean the 300s Warehouses and the former locomotive buildings that contain ACM in window glazings. Westmass also received an **EPA FY21 Brownfields Cleanup Grant** to clean several stockhouses and the former carpentry building that contained ACM in roofing materials and window glazing. These current remediation efforts will leverage over **$50 million** in private development in the form of increased marketability of the mill complex for residential and commercial space. The construction of the $28,500,000 LEED Gold Certified Encompass Rehabilitation Hospital at Ludlow Mills is a direct result of previous EPA funding for the **Phase I & II ESAs**. In addition, Westmass secured $1.5 million in grant funding for environmental remediation from the state of Massachusetts to remediate 43 areas of Recognized Environmental Concern (RECs) at the Ludlow Mills. In the **FY15 Brownfield Cleanup Grant** round, Westmass was awarded funds for the abatement and removal of asbestos in two connecting structures of Mill #10, which led to its redevelopment into 75 senior housing units. Cleanup efforts as part of the Ludlow Mills Preservation and Redevelopment project have so far generated approximately **$109,000,000** in private and **$24,000,000** in public investments. All grant funds through the FY21 grant were expended and project outputs and outcomes were accurately reported in the ACRES database.

(2) Compliance with Grant Requirements

Westmass has successfully completed four EPA funded Brownfields Cleanup Grants (FY12, two in FY13, and FY15) which involve timely reporting compliant with the approved work plans, schedule, and executed terms and conditions. The US EPA awarded grant funds for these projects have been fully expended. All funds for the **FY21 Cleanup** grant have been expended and the project is expected to be closed out by the end of 2023. Westmass has a solid history of timely and acceptable quarterly reports and other grant deliverables as well as continuing to update the ACRES reporting database. In addition, Westmass entered into a Cooperative Agreement in August 2023 for an **EPA FY23 Brownfields Cleanup** Grant and has hired the QEP for the project in connection with our Region 1 Project Manager and Coordinator. Project completion will be before the end of the period of performance; no funds have been expended at this time.

Department of Housing and Community Development (DHCD)
Earmark – Statement of Work
Attachment A

Vendor/Grantee:	Westmass Area Development Corporation
State Fiscal Year:	FY2022 – FY2023
Legislative Language:	provided further, that not less than $2,000,000 shall be expended for the Westmass Area Development Corporation for redevelopment and expansion of properties for continued predeveloped expenses associated with additional growth opportunities of affordable housing at the Ludlow Mills

Briefly describe work to be completed:	• Re-roof (rip and replace) 73,450 sq. ft. of a roof on Mill #11 at the Ludlow Mills
	  ○ Cost is $1.05M
	• Prepare an onsite parking area for the build out of 95 housing units in Mill #8 at the Ludlow Mills
	  ○ Cost is $600,000
	• Relocate and replace Water & Sewer piping to support housing in Mill #8 at the Ludlow Mills – currently 2 other mill buildings water & sewer are piped through Mill #8 which will be sold for the development of housing.
	  ○ Cost is $75,000

ATTACHMENT A - SCOPE OF SERVICES AND ADDITIONAL TERMS AND CONDITIONS

INSTRUCTIONS: In order to ensure that the Department and the Contractor have a clear understanding of their respective responsibilities and performance expectations, the following attachment shall contain a specific detailed description of all obligations, responsibilities and additional terms and conditions between the Contractor and the Department which do not modify the Contract boilerplate language. *Attach as many additional pages as necessary.*

ARPA UNIQUE I.D. 10020.10145.750

Grant Description:

Line item 1599-2032 in Section 2A of Chapter 102 of the Acts of 2021 states, in part, "provided further, that not less than $1,000,000.00 shall be expended to the Westmass Area Development Corporation for new water and sewer infrastructure for the Ludlow Mills redevelopment located within an environmental community. In satisfaction of this provision, the Department of Environmental Protection ("DEP") hereby awards a grant of $1,000,000.00 to the Westmass Area Development Corporation for costs associated with the development of the new infrastructure.

This project includes the construction of approximately 1400 linear feet of new water and sanitary sewer infrastructure though the central core of the mill complex, with connections to the historic stock houses and other mill buildings. This new internal system will be connected to the new public water and sewer lines that were recently constructed as part of a new road built to the south of the mill complex. This new system would entirely replace the century-old lines.

Replacing antiquated and deteriorated water and sewer lines is beneficial to both the environment and public health. Old water lines can contain lead and asbestos as well as other toxins that can contaminate the water supply both for public use through domestic taps and by leaking into the ground water. Sewer systems past their useful life are also environmental and public health hazards due to the potential for overflows which can contaminate both ground and surface water. Replacing the ancient water and sewer lines in the core of the mill complex will reduce or eliminate these concerns by providing new, environmentally- friendly construction materials and best practice construction standards.

Design, engineering and the preparation of construction documents for the new water and sewer system at the Ludlow Mills is underway and should be complete by summer, 2022. A general contractor will be hired over the summer and construction is expected to begin by fall 2022. Construction is expected to be complete by spring, 2023.

Grant Terms:

Payments from DEP to the Westmass Area Development Corporation shall be solely on a cost reimbursement basis for costs incurred between the official start date of the contract and June 30,2024.

The Town shall submit all invoices for grant cost reimbursement on or before 08/01/2024. Such invoices must be accompanied by sufficient supporting documentation, including: contractor invoices and receipts; municipal receipts; canceled municipal checks or other appropriate evidence of payment.

DEP does not guarantee reimbursement of any cost outside the approved scope of the grant.

ATTACHMENT B - BUDGET AND APPROVED EXPENDITURES

{The Department and Contractor may complete this format or attach an approved alternative Budget format or invoice.}
Items identified below which are not part of the Contract should be left blank.
Attach as many additional copies of this format as necessary, Maximum obligation should appear as last entry.

Cost Category/Description	Unit Rate (per unit, hour, day)	Number of Units	Other Fees or Charges (specify)	TOTAL
Westmass Area Development Corporation/ Water and sewer infrastructure/ Ludlow Mills	NA	NA	NA	$1,000,000.00
SUBTOTAL (this page)				$1,000,000.00
MAXIMUM OBLIGATION				**$1,000,000.00**

99 High Street
Boston, MA 02110

Main: 617-330-2000
Fax: 617-330-2001

massdevelopment.com

VIA Electronic Mail [s.lacour@westmassdevelopment.com]

October 17, 2022

Sarah la Cour
Westmass Area Development Corporation
One Monarch Place, Suite 1350
Springfield, Massachusetts 01144

RE: Application: 00395

Dear Ms. la Cour:

Thank you for submitting this application to the FY2023 Community One Stop for Growth. The Executive Office of Housing and Economic Development (EOHED), Department of Housing and Community Development (DHCD), and Massachusetts Development Finance Agency (MassDevelopment) worked together to evaluate all eligible applications and recommended the most ready and highest-impact projects for a grant. This application from Westmass Area Development Corporation was reviewed by the program(s) that could best serve the project's funding needs.

On behalf of Governor Charlie Baker, Lt. Governor Karyn Polito and the Chair of our Board of Directors, Secretary Mike Kennealy, I am pleased to inform you that a grant in the amount of $500,000 from the Site Readiness Program has been approved to support your project.

The next step is to work with our staff to confirm the scope for your project and finalize a grant agreement. Please review the accompanying sample Grant Agreement carefully. The specifics of this document will be identified during the scoping process. Once agreed upon, Westmass Area Development Corporation and MassDevelopment will sign the agreement to effectuate the project scope, schedule, and budget. Please note, this grant is recoverable if the site, or any portion thereof, is sold, conveyed, gifted, demised, ground leased, otherwise transferred, or refinanced within thirty (30) years of the execution of the Agreement. Please see Section 2(f) of the Agreement for additional information.

If you have any questions do not hesitate to contact the Site Readiness Program Manager, Amanda Gregoire, at agregoire@massdevelopment.com or at (617) 947-6368.

Finally, please note that public announcement of this award is embargoed until the Administration has had the opportunity to formally announce it through a local event and/or media release. Please refrain from sharing or publicizing news about this award outside of your organization until it is officially announced.

Sincerely,

Dan Rivera
President and CEO

ATTACHMENT B: EPA24 Brownfield Cleanup Grant -Threshold Criteria Response

1. Applicant Eligibility

Westmass Area Development Corporation, (Westmass), the grant applicant, is a 501(c)(6) non-profit community development organization created by the Commonwealth of Massachusetts in 1960. Our mission is to promote, stimulate, develop, and advance the business prosperity and economic welfare of the western Massachusetts region and its citizens. As a non-profit economic development organization sanctioned by the Commonwealth, Westmass is eligible to receive EPA Brownfield Cleanup Grant Funding. (ATTACHMENT C)

2. Previously Awarded Cleanup Grants

The sites at the Ludlow Mills complex proposed for cleanup under this US EPA Brownfield Cleanup Grant application have not been the recipient of US EPA Cleanup Grant funds in the past. However, Westmass received five previous Brownfield Cleanup Grants for several other sites within the historic mill complex property that include mill buildings and associated infrastructure.
A detailed listing of sites included in previous grants is as follows:

- **A.** EPA FY12 Brownfields Cleanup grant funds were used to abate and remove hazardous materials, including asbestos, for the decommissioned central steam heating system at the mills specifically located in Mill buildings numbered 101-132 and the basement of Mill #8;
- **B.** EPA FY13 Brownfield Cleanup grant funds were used for the abatement and removal of hazardous materials, including asbestos, on two, multiple-unit Storehouse buildings numbered 286-291 & 292-296;
- **C.** EPA FY15 Brownfield Cleanup grant funds were used for the abatement and removal of hazardous materials, including asbestos, in two connecting structures between Mill #8 and Mill #10 and between Mill #10 and Mill #11.
- **D.** EPA FY21 Brownfields Cleanup grant funds were being used to abate and remove hazardous materials, including asbestos, in the roofing and floor and ceiling tiles in Stockhouse numbers 158/258, 160/260, 162/262, 164/264, 165/265, 167/267, and Mill building #44.
- **E.** EPA FY23 Brownfields Cleanup grant funds have been awarded to abate and remove hazardous materials, including asbestos, from Warehouse 300s Building and Mill buildings 46 and 58.

3. Expenditure of Existing Multipurpose Grant Funds

Westmass does not currently have a Multipurpose Grant.

4. Site Ownership

The Ludlow Mills complex was purchased by Westmass from Ludlow Industrial Realties, Inc. on August 24, 2011. At that time, the property was registered land in the Massachusetts Land Court, Hampden County Registry of Deeds, document #189050 in certificate #34897. The property is no longer registered land but is under a deed recorded on May 9, 2012, in Book 19251 Page 44. This ownership is the same for all sites under this application.

5. Basic Site Information

A. Site 1: Mill 11- located in the central portion of the mill complex along State Street between the 300s Warehouses and the Stockhouses.

Site 2: Mill 9- located in the western portion of the mill complex located south of Mill 8 and fronting along the newly constructed Riverside Drive.

Site 3: Warehouse 199- located adjacent to Mill 8 and Mill 9, in the western portion of the mill complex and fronting Riverside Drive.

B. Address: 100 State Street, Ludlow, MA 01056 (Hampden County)- for the entire mill complex.

C. Current Owner: Westmass Area Development Corporation.

6. Status and History of Contamination at the Site

A. Hazardous Substances: All three sites are impacted by Hazardous Substances.

B. Operational History and Current Use: The site has been used for various manufacturing operations over the past 150 years to create textiles and jute. The historic mill buildings remaining on the property were part of the Ludlow Mills jute manufacturing company that operated on the premises from the late 19th century until the middle of the 20th century. **Mills 9 and 11** were historically used to manufacture jute products that were then stored in the adjacent warehouses. Mill 9 is vacant and Mill 11 is vacant on all floors except the first floor. **Warehouse 199** was used to store the products manufactured in adjacent Mills 8 and 9. Redevelopment of the mill complex is a top priority for Westmass and is one of the largest mill redevelopment projects in New England. The mill complex is currently utilized by a mix of small light industrial companies, storage warehouse operations and brewery operations that lease space from Westmass. In addition, Mill 10 was adaptively reused into 75 age-restricted, affordable housing units and Mill 8 is currently under construction for an additional 95 units.

C. Known Environmental Concerns: Phase I and Phase II Environmental Site Assessments (ESA) were completed in 2009 and 2011 for the historic mill complex. Phase II ESA identified 18 locations of Recognized Environmental Concerns (REC's) within the historic mill complex. While the majority of these REC's were cleaned up under previous US EPA grants and a Massachusetts Office of Energy and Environmental Affairs remediation grant, environmental issues remain in the sites that are the subject of this US EPA Cleanup Grant application.

Hazardous substances in the **Mill 11** were identified in a 2023 Assessment Report prepared by KGSNE JV II, LLC include:

- ACM in window glazing, pipe insulation, tar sealer, transite power board and drainpipe, 9x9 floor tiles, joint compound, sink coating, linoleum flooring, expansion joint caulk and residual tar.
- Lead Based Paint (LBP) (i.e., lead at a concentration greater than 0.5% by weight) was found in/on green and gray metal doors, white and green brick walls, red metal sprinkler pipes and gray wood window systems.
- PCBs concentrations that exceed the TSCA 1 ppm cleanup standard were found in samples of gray/tan window caulk.

- Universal wastes that include fluorescent light tubes, fluorescent light ballasts, lead acid batteries, metal halide/HID light bulbs, mercury switches, fire extinguishers, and spare stock of Karnak flashing cement.

Hazardous substances in **Mill 9** identified in the 2023 Assessment Report prepared by KGSNE JV II, LLC and a 2018 Roof Assessment Report prepared by Nobis, include:

- ACM in window glazing and caulk and roof sealant and patching.
- Lead Based Paint on exterior green and white wood window frames, green metal door guards, red sprinkler pipes and white metal doors.

Hazardous substances in **Warehouse 199** identified in the 2023 Assessment Report prepared by KGSNE JV II, LLC and a 2018 Roof Assessment Report prepared by Nobis, include:

- ACM in window glazing and caulk and roof sealant and patching.
- LBP on green metal doors and frames, gray wood window systems, silver metal column anchors, gray metal base boards, and black and gray metal sliding barn doors.
- PCBs concentrations that exceed the TSCA 1 ppm cleanup standard were found in samples of gray exterior window glazing.

D. Extent of Contamination: The ACM and other hazardous materials that are the subject of the sites in this EPA Brownfield Cleanup Grant application are within the roofing materials, floor and ceiling tiles and window glazing and caulking.

- **Mill 11** – ACM was detected in the caulk and glazing of 506 windows; 2,500 SF of white joint compound and gypsum board; and 510 LF of black residual tar. In addition, ACM and other hazardous materials are contained in 30 SF of pipe insulation, 8 transite power boards, 400 SF of 9x9 floor tiles, 230 SF of linoleum floor sheeting and other incidental amounts of building products including 1 sink, 1 skylight, 8 LF of drainpipe.
- **Mill 9-** ACM was detected in the caulk and glazing of 130 windows.
- **Warehouse 199**- ACM was detected in the caulk and glazing of 59 windows.

7. Brownfields Site Definition

Westmass affirms the following:

A. The site is not listed or proposed for listing on the National Priorities List;
B. The site is not subject to unilateral administrative orders, court orders, administrative orders on consent, or judicial consent decrees issued to or entered into by parties under CERCLA;
C. The site is not subject to the jurisdiction, custody, or control of the United States government.

8. Environmental Assessment Required for Cleanup Grant Applications

A Phase II ESA, dated June 2011, was conducted by Advanced Environmental Solutions, Inc. (AES) for US EPA Region 1. The ESA involved on-site and records investigations as well as

soil and ground water sampling and analytical laboratory testing. A Remediation Plan (excluding asbestos contamination) meeting Massachusetts Contingency Plan cleanup requirements, was prepared by O'Reilly, Talbot and Okun Associates, Inc. (OTO) for the RECs identified in the Phase II report.

In June 2018, Nobis Engineering, Inc. prepared a Targeted Brownfields Assessment Report (EPA Task Order No. 0108-SI-BZ- 0010) to assess hazardous and/or regulated materials that would require abatement or special handling prior to building renovation or demolition.

In October 2023, KGSNE JV II, LLC prepared a targeted Brownfields Assessment Report (EPA CONTRACT NO. 68HE0122R0005) for **Mills 9, 11 and Warehouse 199** to assess hazardous and/or regulated materials that would require abatement or special handling prior to adaptive reuse.

9. Site Characterization

C. The sites are not eligible to be enrolled in the Massachusetts Contingency Plan Program (MA VCP) because they are contaminated with hazardous building materials that are excluded from program eligibility.

i. A letter from the Massachusetts Department of Environmental Protection (MA DEP) dated November 3, 2023, confirms that the sites are not eligible for the State's brownfield enrollment program. (ATTACHMENT D)
ii. Westmass has certified that there is a sufficient level of site characterization from the assessments that have been performed to date for the remediation work to begin.

10. Enforcement or Other Actions

There are no known enforcement actions associated with **Mill 9, Mill 11 or Warehouse 199.**

11. Sites Requiring a Property-Specific Determination

No property specific determination is required. Westmass affirms that these are not:

- Listed or proposed to be listed as a property subject to CERCLA;
- Subject to administrative or judicial orders or consent decrees issued by the US or Massachusetts under RCRA, FWPCA, TSCA or SDWA;
- Subject to RCRA corrective actions;
- Subject to RCRA closure or to closure requirements specified in a closure plan or permit; or
- Receiving clean up funding from the LUST program.

12. Threshold Criteria Related to CERCLA/Petroleum Liability

A. Property Ownership Eligibility: Hazardous Substance Sites
iii. Landowner Protections from CERCLA Liability

Westmass purchased the property after the completion of a AAI-ASTM Phase I ESA meeting All Appropriate Inquiry Standards and a ASTM Phase II ESA. Westmass did not contribute to and is not liable for any contamination on either of

the project sites.

1) Bona Fide Prospective Purchaser Liability Protection

a. Information on the Property Acquisition

Westmass acquired the Ludlow Mills property, including the three grant project sites, from a private entity known as Ludlow Industrial Realties, Inc. on August 24, 2011. The premises were registered land in the Massachusetts Land Court. The sale was negotiated between the private parties which lead to Westmass acquiring fee simple title to the premises and being sole owner through a Massachusetts quitclaim deed at closing. Westmass and the former owner, Ludlow Realties, Inc. had no familial, contractual, corporate, or financial relationships prior to this acquisition. As part of Westmass' acquisition of the premises, Ludlow Realties, Inc. has provided Westmass with a mortgage on the property.

b. Pre-Purchase Inquiry

- AAI ASTM Phase I ESA, completed in August of 2011, was conducted by Advanced Environmental Solutions, Inc. (AES). This document was prepared for Westmass. That document updates an AAI ASTM Phase I ESA previously prepared for the US Environmental Protection Agency (US EPA) dated March 2009. In addition, AES prepared a Phase II ESA in June 2011. The Phase II ESA was prepared for US EPA Region 1 as well.
- The Phase I ESA activities were conducted in accordance with Code of Federal Regulation (40 CFR) part 312 for All Appropriate Inquires (AAI) and ASTM Standard Practice E1527-05 ("Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process").
- The Phase II ESA activities were conducted in accordance with ASTM Standard Practice E1903-97 ("*Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process")*.
- The Phase II completed in June 2011 as well as the Initial Phase I issued dated March 2009 was prepared for the US EPA Region 1 as part of an EPA Targeted Brownfield Technical Assessment.
- US EPA Region 1 provided significant technical assistance in support of Westmass' efforts. Information and findings contained in these technical reports greatly assisted the evaluation / decision process by Westmass to acquire the property and undertake the adaptive use and redevelopment of this regionally significant Brownfields site.
- Advanced Environmental Solutions, Inc. (AES) performed the Phase I and Phase II ESA's. AES is a qualified Environmental Engineering firm selected by US EPA Region 1. AES conducted the ESA's and prepared reports in accordance with the Massachusetts Contingency Plan and EPA requirements.
- The Original Phase I Environmental Site Assessment (ESA) dated March 2009 was updated in August 2011. This update occurred within 180 days prior to Westmass' acquisition of the property to qualify for the bona fide prospective purchaser provision.

c. Timing and/or Contribution toward Hazardous Substances Disposal

Westmass did not dispose of hazardous substances at the site before or after it acquired the property. Westmass purchased the property after a Phase I ESA meeting All Appropriate Inquiry Standards and a Phase II ESA were completed under the US Environmental Protection Agency (EPA) Targeted Brownfield Assessment Program (Funded by EPA Region 1). Westmass did not contribute to and is not liable for any contamination on either of these sites.

d. Post-Acquisition Uses

Westmass acquired the Ludlow Mills complex on August 24, 2011. At the time of acquisition, there were 37 tenants occupying approximately 500,000 square feet of building area. The uses range from a cellular tower to unheated storage, to machine shops, wood and metal working and distribution.

The 18 tenants and associated uses that are currently leasing space at Ludlow Mills from Westmass as of the date of this application, November 2023 are listed below:

Ludlow Mills - Businesses Active at the Mills, November 1, 2023

Company	**Business**
America's Box Choice	Packaging Materials
The Diesel Works	Metal Arts and Makerspace
Dustbusters	Duct Cleaning Service
Elite Metal Fabricators	Metal Fabrication
Emco Tool	Tool Manufacturing
Fernbro Enterprises	Restaurant Parking and Storage
Green Earth Roofing Solutions	Solar Installation
Hampden County Sheriff	Office/Storage
Heron Automation	Tool Manufacturing
Homeward Vets	Veterans Support Services
Molta Florist	Florist
New England Battery	Battery Sales and Servicing
Outlaw Logistics*	Logistics
PAW	Custom Woodworking
PWE Fabrications	Precision Metal
Roy Manufacturing	Precision Manufacturing
Site Acquisitions, Inc.	Cellular Tower
Winn Residential	Storage

*Outlaw Logistics currently leases the first floor of Mill 11. Mill 9 and Warehouse 199 are vacant.

e. Continuing Obligations

The specific and appropriate care that Westmass has exercised related to hazardous substances at Ludlow Mills includes:

- Westmass has been awarded EPA FY23 funds to abate and remove ACM and other hazardous materials from the 300s Warehouses and Mill buildings 46 & 58 (the former locomotive house and associated garage).
- With funds from a FY21 EPA Brownfields Cleanup grant, Westmass has abated and removed ACM in roofing materials, floor and ceiling tiles and window caulking in multiple stockhouses and the former carpentry building (#44).
- With Funds from the FY12 EPA Brownfield Cleanup grant, Westmass retained the services of Cardno/ATC, Inc., to conduct ACM assessments, assist Westmass with the public bid process as well as the oversight of the contracted Abatement work including Air Quality Monitoring.
- With funds from the EPA FY12 grant Westmass contracted with Abide, Inc for the abatement of the ACM for the decommissioned and demolition of the central steam heating system.
- With funds from the EPA FY13 grants, Westmass contracted with Tighe & Bond, Consultant Engineers for the Abatement and Demolition work on the Two Storehouse Buildings 286-291 & 292-296.
- Westmass retained the services of O'Reilly, Talbot, and Okun, Environmental Engineers, under the Mass EEOEA grant to advise the corporation on matters relating to hazardous substances at Ludlow Mills. Westmass has developed and undertaken a detailed Environmental Remediation Plan that has successfully accomplished the following:
- Formally reported known releases of hazardous materials to the Massachusetts Department of Environmental Protection, (MA DEP).
- Characterized the known releases for the purpose of developing a detailed response to the release and, in cooperation with MA DEP, developed extensive Environmental Remediation Plans.
- Carrying out mitigation measures for all releases of hazardous materials.
- Specific and appropriate care that Westmass has exercised to prevent any threatened future releases and or prevent or limit exposure to any previously released hazardous substance includes:
- Westmass has written new language for inclusion in all lease documents that notifies tenants of their responsibilities with respect to the use of hazardous materials. Westmass will inspect leased premises on a regular and ongoing basis to ensure that there are no new releases or potential releases of hazardous materials.
- Westmass entered into a consent agreement with the Massachusetts Department of Environmental Protection which required the conversion of the existing oil-fired heating system to natural gas and required the removal of existing fuel oil storage tanks and piping which was completed in April 2012.

Westmass is committed to:

- Complying with all land-use restrictions and institutional controls;
- Assisting and cooperating with those performing the cleanup and providing access to the property;

- Complying with all information requests and administrative subpoenas that have or may be issued in connection with the property; and
- Providing all legally required notices.

13. Cleanup Authority and Oversight Structure

A. Westmass will be responsible for oversight of the Hazardous Substance Removal and Remediation under this EPA FY24 Grant in collaboration with a Qualified Environmental Professional (QEP). Westmass will solicit and select a Qualified Environmental Professional (QEP) for Project Planning and Oversight through a public bid process which, while utilizing Federal Funding, will follow set procurement guidelines of existing Mass General Law regarding procurement (MGL 30 B) which is consistent with 40 CFR 31.36. as well as 2 CFR 200.317-200-327. The QEP will assist Westmass with the selection of a Licensed Abatement/Demolition Contactor / Inspection / Testing Firm as well as project management and reporting. Selections of these firms for the cleanup project will be based on both qualifications and costs.

B. Because Westmass is the property owner of the 100-acre Ludlow Mills complex that includes the areas adjacent to these three sites, it does not anticipate needing access to other adjacent properties to conduct the cleanup activity for these sites.

14. Community Notification

A. Presentation materials were prepared by Westmass personnel which addressed the Draft Analysis of Brownfield Cleanup Alternatives (ABCAs) (Attachments E, F & G) prepared for each site and summarized the sites and contamination issues, cleanup standards, proposed cleanup proposal, and applicable laws / regulations. These materials were also made available to the public for review and comments by request.

B. Westmass Area Development Corporation published a legal notice (Attachment H) in the Ludlow Register appearing in the newspaper's October 18th and October 25th, 2023 editions announcing that a public meeting was to be held.

C. The public meeting was held remotely on November 1, 2023, via Zoom and created an opportunity for Westmass to present the proposed cleanup and solicit public review and comments. No one from the public attended the meeting and no questions or requests for information were received prior to or at the meeting.
Comments received – None
Westmass response to comments – Not Applicable
Meeting Notes or Summary– Not Applicable

15. Contractors and Names Subrecipients

A. Contractors: Westmass has not procured any contractors.

B. Subrecipients: Westmass has not identified any specific subrecipients to conduct work related to this application.

ATTACHMENT C: EPA24 Westmass Non-profit Documentation

U. S. TREASURY DEPARTMENT
INTERNAL REVENUE SERVICE
WASHINGTON 25, D. C.

IN REPLY REFER TO
T:R:EO: 5
OFC

NOV 20 1961

Springfield Area Development Corporation
134 Chestnut Street
Springfield, Massachusetts

I. R. CODE
SECTION 501(c) (6)
ADDRESS INQUIRIES & FILE RETURNS WITH DISTRICT DIRECTOR OF INTERNAL REVENUE
Boston, Massachusetts
ACCOUNTING PERIOD ENDING
March 31

Gentlemen:

Based upon the evidence submitted, it is held that you are exempt from Federal income tax under the provisions of the Internal Revenue Code section indicated above. Any questions concerning taxes levied under other subtitles of the Code should be submitted to your District Director.

You are not required to file Federal income tax returns so long as you retain an exempt status, unless you are subject to the tax on unrelated business income imposed by section 511 of the Code and are required to file Form 990-T for the purpose of reporting unrelated business taxable income. Any changes in your character, purposes or method of operation should be reported immediately to your District Director for consideration of their effect upon your exempt status. You should also report any change in your name or address. You are required to file an information return, Form 990, annually, after the close of your annual accounting period, indicated above.

Your District Director is being advised of this action.

This ruling is made under section 501(c)(6), rather than section 501(c)(4) which is considered less applicable.

Very truly yours,

J. F. Worley

Chief, Exempt Organizations Branch

GPO 88 5288

205 F-3

The Commonwealth of Massachusetts

Department of the State Secretary

State House, Boston 02133

MICHAEL JOSEPH CONNOLLY
SECRETARY OF STATE

JUNE 11, 1981

TO WHOM IT MAY CONCERN:

I hereby certify that according to records in this office Springfield Area Development Corporation was incorporated by the provisions of Chapter 192 of the Acts of 1960 (Massachusetts Laws).

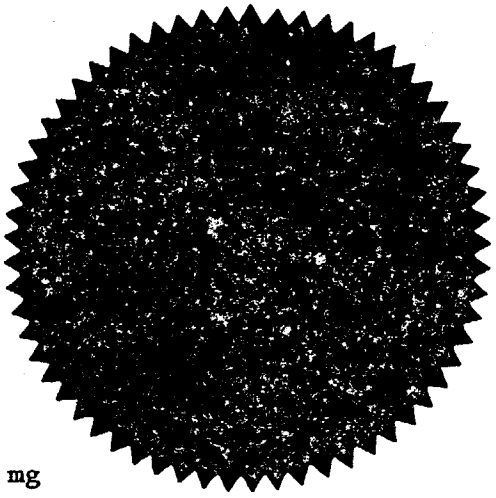
I also certify that the following Act relating to said corporation appears of record here:- Chapter 246 of the Acts of 1963.

I further certify that Articles of Amendment were filed in this office April 25, 1966.

I also certify that the name of the corporation was changed to Westmass Area Development Corporation by Articles of Amendment filed here June 5, 1981 (which Amendment includes an increase in the number of members of the Board of Directors to not more than 27 members, and that the duration of the corporation be increased to one hundred years.)

I further certify that no other Amendments or Acts relating to said corporation appear of record in this office and that said corporation still has legal existence.

IN TESTIMONY of which, I have hereunto affixed the Great Seal of the Commonwealth on the date first above written.



Michael Joseph Connolly

Secretary of State

mg

Form C.D. 504. 6M

ATTACHMENT D: EPA24 Westmass MA DEP Letter

MassDEP
Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs
Department of Environmental Protection
100 Cambridge Street Suite 900 Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

November 3, 2023 *Via Email*

Jeffrey Daley, President / CEO
Westmass Area Development Corporation
One Monarch Place, Suite 1350
Springfield, MA 01144

RE: STATE LETTER OF ACKNOWLEDGMENT
Westmass Area Development Corporation – Brownfields Cleanup Grant
Ludlow Mills, 100 State Street, Ludlow [unenrolled]

Dear Mr. Daley:

I am writing to support the application submitted by the Westmass Area Development Corporation under the Fiscal Year 2024 U.S. Environmental Protection Agency (EPA) Brownfield Cleanup Grant Program. We understand that the Westmass Area Development Corporation is proposing to undertake cleanup activities including the abatement and remediation of hazardous building materials at the subject property, specifically in the buildings identified as Mill 9, Mill 11 and Warehouse 199.

Based on information provided by the Westmass Area Development Corporation, the Development Corporation took ownership of the property in 2012, and the buildings and portion of property targeted for this Cleanup grant are not enrolled in the Massachusetts voluntary cleanup program. According to the Westmass Area Development Corporation, the level of assessment of hazardous building materials conducted to date is sufficient to design and initiate the proposed cleanup activities.

In Massachusetts, state and federal agencies have developed strong partnerships and work together to ensure that parties undertaking Brownfield projects have access to available resources and incentives. The Massachusetts Department of Environmental Protection (MassDEP), through our regional offices, provides technical support to Brownfield project proponents when regulatory issues arise. If this proposal is selected, MassDEP will work with our state and federal partners to support the Westmass Area Development Corporation to help make this project a success.

We greatly appreciate EPA's continued support of Brownfield efforts in Massachusetts.
Sincerely,

David Foss, CPG, LSP
Statewide Brownfields Coordinator, Bureau of Waste Site Cleanup

cc: Dorrie Paar, US EPA
Sarah la Cour, Westmass Area Development Corporation
Caprice Shaw, MassDEP Western Regional Office

ATTACHMENT E: Analysis of Brownfield Cleanup Alternatives (ABCA) - Preliminary Evaluation Asbestos Removal and Remediation

PROJECT: Mill 11 - Window Glazing, Pipe Insulation, Joint Compound & Flooring
Ludlow Mills Complex, 100 State Street, Ludlow, MA 01056

This Analysis of Brownfield's Cleanup Alternatives (ABCA) is intended to provide a cleanup project summary outline in support of a pending Grant Application to the FY 2024 US EPA Brownfield Cleanup program.

Release Tracking Number
The Massachusetts Department of Environmental Protection (MADEP) does not assign specific tracking numbers to asbestos abatement projects such as the one proposed for Ludlow Mills. Release Tracking Numbers (RTNs) however were issued related to the AAI- ASTM Phase I and Phase II Environmental Site Assessment Reports and several other sites at Ludlow Mills where contamination has been cleaned up with State Site Remediation Grant funds. That remediation work was completed in June of 2014.

Prepared by: Westmass Area Development Corporation, Owner of the Property
One Monarch Place, Suite 1120
Springfield, MA 01144
www.westmassdevelopment.com

I. INTRODUCTION & BACKGROUND

a. Site Location

The project is located at 100 State Street in Ludlow, Massachusetts within the historic Ludlow Mills Complex and specifically involves one large mill building known as **Mill 11** located in the central portion of the mill complex.

b. Previous Site Uses and any Previous Site Cleanup / Remediation

Previous Site Use(s):

The project area on the Chicopee River has been utilized by industry since the late eighteenth century. Between 1812 and 1844 the site supported operation of textile and cotton mills. Gun barrels were manufactured at the site of the current Mill No. 8 building from 1840 to 1846. Between 1846 and 1848 the building was used for the manufacturing of textile machinery. Starting in 1850, Jute products were produced on the property and the Ludlow Manufacturing Company was established in 1856, later named the Ludlow Mills Company. Jute manufacturing remained the primary activity on the site into the mid-20th century. A majority of the historic mill buildings, including **Mill 11,** remain from the early 20th century having been built starting in 1900 with significant mill expansion over time. The historic mill complex is approximately 52 acres in size and contains approximately 35 structures with a total floor space of approximately 770,000 square feet. Since the 1960s the complex has been a multi-tenant industrial park and contains a large number of commercial and industrial operations. Of the site's extant mill buildings, five are large multi-story structures (Mill #s 8, 9, 10 and 11, and the 300s Warehouse buildings along State Street). The additional buildings consist of a series of small (approximately 6,000-12,000 SF), single story, brick block stockhouses located along the Chicopee River in the south and eastern portion part of the site; the former locomotive building and associated maintenance building (Buildings 46/58) and the former carpentry building (#44). The Ludlow Mills complex is

included within the Ludlow Village National Historic District (LUD.F) and listed in the State and National Registers of Historic Places.

Previous Site Clean-up and Remediation:
Under the previous site ownership of Ludlow Industrial Realty Inc., a Phase 1 Environmental Site Assessment (ESA) was prepared in March 2009 by Advanced Environmental Solutions, Inc. (AES) for the US Environmental Protection Agency (EPA). That Phase 1 ESA was updated by AES in August 2011. In addition, AES prepared a Phase II ESA for the property between September 2010 and June 2011.

The Phase II Environmental Site Assessment (ESA), performed in 2010 and 2011, identified several Recognized Environmental Conditions (RECs). Subsequent environmental assessment activities including limited testing were conducted. The results were compiled in the Phase II ESA dated August 2011, in which 18 RECs existed. These RECs related to industrial use of the property and other subsequent tenants, the illegal disposal of materials, and the use of an up-gradient property as a gasoline station. The report indicated recommendations for additional assessment.

Known releases at the Ludlow Mills property identified in the Phase I and Phase II ESAs include releases of polychlorinated biphenyl (PCB) from transformers, #6 fuel oil from the use and storage of heating oil, and diesel fuel from a delivery truck. Releases of PCBs were concentrated around electrical substations to the north of Mill building 10 and on the bank of the Chicopee River. Contaminated soil that was accessible at the time was removed from these areas, however, residual contamination remained underneath the substations and an Activity and Use Limitation (AUL) is in place in order to limit exposure should the contaminated soil be disturbed. The AUL was terminated in 2014. Historically, several releases of fuel oil were reported near stockhouse #205, which served as the Boiler Building, as a result of filling operations of the two 15,000-gallon fuel oil underground storage tanks (USTs) used for fuel oil storage. Soil in the immediate area around the tanks was excavated and impacted water in storm drains was cleaned up. The two USTs were removed in April 2012.

Westmass and its consultant at that time, O'Reilly, Talbot and Okun Associates, Inc. (OTO), developed a Remediation Plan, (excluding asbestos) for implementation. The estimated cost of implementation of the Remediation Plan for the Recognized Environmental Concerns identified in the Phase I and II reports was estimated to be $1,500,000. Funding was secured from the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) through a $1,500,000 grant awarded to Westmass for site remediation of the Ludlow Mills property. Westmass actively implemented the Remediation Plan and finalized this remediation work in June of 2014.

c. Site Assessment Findings – Hazardous Materials

In October 2023, KGSNE JV II, LLC completed a Final Targeted Brownfields Assessment Report for EPA Region 1 to determine other sources of asbestos contamination. Westmass analyzed the Report for **Mill 11** and found confirmation of ACM in window glazing, door caulk, flooring and other adhesives and insulation.

Mill 11 is a 345,000 SF, five-story brick building completed in 1913. The building is currently vacant on the upper 4 floors but has a commercial tenant on the first floor.

Asbestos-containing materials (ACM) have been identified in the caulk and glazing of 506 windows; 630 SF of flooring; 2,500 SF of joint compound and gypsum board and in small areas of pipe insulation and residual black tar. In addition, lead based paint has been identified on interior walls and flooring and PCBs were identified in industrial window caulk on the 5th floor.

d. <u>Project Goal</u>

The Ludlow Mills Preservation and Redevelopment Project continues to reverse years of neglect at the mill complex and will continue to spur local and regional economic activity and job creation. By remediating numerous environmental hazards & asbestos contamination, the project will protect sensitive environmental resources and provide the community with public access to the Chicopee River for passive recreation.

Redevelopment and revitalization of the Ludlow Mills complex is a regionally significant economic development project and has been cited within the 2019 Annual Comprehensive Economic Development Strategy (CEDS) report of the Pioneer Valley Plan for Progress, as a regional "High Priority Project". The intent is to serve areas meeting US Economic Development Administration Economic Distress Criteria according to the Pioneer Valley Planning Commission.

Westmass plans to redevelop the complex with green technologies including solar and low impact development storm water (LID) systems. The overall project embraces sustainable development principles and seeks to meet USGBC LEED quality standards for new construction at the site. The project's primary focus will be on commercial and industrial development but with a number of residential housing units created in the larger mill buildings (including **Mill 11**) where possible.

Westmass has been successful in obtaining assistance and cooperation from several sources at the Federal, State and Local levels as well as private utilities for redevelopment efforts. The direct involvement and support from the start of this regionally significant project by federal and state officials, numerous elected officials and the community of Ludlow have been instrumental. Westmass is committed to seeing that the Ludlow Mills once again becomes a major contributor to the economic prosperity of the region.

To date, the Ludlow Mills Preservation and Redevelopment Project has achieved numerous milestones highlighted below:

- In 2023 Winn Development, utilizing Historic Tax Credits as part of the financing package, purchased Mill 8 for adaptive reuse into 95 units of Senior Independent Living. Construction has started and completion is anticipated in summer 2024.
- In 2023, the EPA awarded Westmass a $740,000 Brownfields Cleanup Grant for the abatement of ACM in the 300s Warehouses and Mill buildings 46 and 58.
- In 2022, Westmass was awarded two grants from MassDevelopment through the Massachusetts Community One Stop for Growth Program. $500,000 was awarded for Electrical upgrades and $500,000 was awarded for new roofs.
- In 2021, Westmass received two grants from MassDevelopment through the Massachusetts Community One Stop for Growth Program. $650,000 was received from the Site Readiness Program to fund the design and engineering of infrastructure improvements within the mill complex and $250,000 was received from the Underutilized Properties Program to fund capital

improvements on several stockhouse buildings.

- In 2021, Westmass also received an EPA Brownfields Cleanup Grant to remediate ACM in the roofing of several historic stockhouses as well as the former Carpentry Building.
- With a $7 million investment, the Town of Ludlow is completed a new Ludlow Senior Center State Street on mill land formerly owned by Westmass on State Street.
- In 2019, the Town of Ludlow, in partnership with Westmass, received $6.6 million in grant funds from the MassWorks Infrastructure Program and the US Department of Commerce Economic Development Administration to construct a 4,200 linear foot roadway and associated infrastructure within the mill complex to advance revitalization efforts.
- Westmass has received $2 million of private financing for project development from a consortium of regional lenders.
- Westmass has received approval of the delineation of wetlands and riverfront area under the Massachusetts Wetlands Protection Act from the Ludlow Conservation Commission.
- Westmass secured State permitting from MEPA for the Final Environmental Impact Report in September 2017 with the issuance of a Certificate of the Secretary of Energy and Environmental Affairs.
- With input from Westmass, the Town of Ludlow voted to change the zoning for the site from Industrial A to Mill Redevelopment District, to allow mixed use development. In addition, the Town created a Smart Growth Overlay District, Ludlow Mills Sub-District.
- The Town of Ludlow received $3.7 million in funding for the reconstruction of State Street and First Avenue, replacement of water lines, and installation of streetscape improvements and a sewer pump station.
- In 2017 Winn Development, utilizing Historic Tax Credits as part of the financing package, completed a $24 million, adaptive reuse of Mill #10 to provide 55 units of Senior Independent Living.
- The $27 Million dollar HealthSouth Rehabilitation Hospital Project (Private) was completed in November 2013 and achieved LEED HC Gold certification.
- Westmass received a $1.5 million grant from the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) for environmental remediation work (excluding asbestos) at Ludlow Mills.
- Westmass was awarded a total of $400,000 with two separate FY13 US EPA Brownfield Cleanup Grants for the Phase II portion of the Ludlow Mills Asbestos Abatement and Removal involving ACM abatement and demolition of Storehouse building 286-291 and Storehouse building 292-296.
- In 2012, Columbia Gas invested in excess of $600,000 to complete construction of a new intermediate pressure natural gas line along the length of State Street.
- Westmass was awarded a $200,000 FY12 US EPA Brownfield Cleanup Grant for the Phase I portion of the Ludlow Mills Asbestos Abatement and Removal involving ACM Pipe Wrap on existing abandoned steam piping in mill buildings #s8 and 11 and the #300s warehouse buildings.
- Westmass Area Development Corporation purchased the property on August 24, 2011.
- Between 2009 and 2011, the Project received $231,000 in funding from the U.S. Environmental Protection Agency for environmental site assessment.

II. APPLICABLE REGULATIONS AND CLEANUP STANDARDS

Cleanup Oversight Responsibility – Westmass Area Development Corporation will be responsible for oversight of the Asbestos and other Hazardous Materials Removal and Remediation. In a public bid process following set procurement guidelines, Westmass will solicit and select a Qualified Environmental Professional (QEP) for project planning, oversight and assistance with the selection of a Licensed Abatement Contactor with a Licensed Inspection / Testing Firm. Selections will be based both on qualifications and costs.

a. Cleanup Standards for Major Contaminants

Laws and regulations are applicable to the removal and disposal of Asbestos and other hazardous materials as Hazardous Waste. These standards are in place to prevent it from becoming airborne and harmful to workers or the public. Regulations include Federal laws and worker protection standards from exposures, address transportation of asbestos waste, and limit air pollutants under National Emissions Standards for Hazardous Air Pollutants.

Massachusetts Laws and Regulations require notification and work practices to avoid fiber release for asbestos handling, removal, storage, transport, and disposal. Regulation also requires inspection of demolition/renovation and manufacturing operations and special waste landfilling of asbestos and asbestos-containing material.

b. Laws and Regulations Applicable to the Cleanup

Federal Regulations

- Federal Small Business R
- Brownfields Revitalization Act
- Davis / Bacon Act
- OSHA: Regulations: 29 CFR Parts 1910 & 1926.
- DOT: Title 49, section 173.1090.
- EPA: (NESHAP)**:** 40 CFR Part 61 Subpart M.
- Emergency Response Act (AHERA) 40 CFR Part 763
- Toxic Substances Control Act (TSCA).

Massachusetts Regulations

- 310 CMR 7.00: AIR POLLUTION CONTROL specifically section 7.09: Dust, Odor, Construction and Demolition,
- Regulations: 310 CMR 4.00 (Air quality notification approval timelines and fees), 7.00, 7.09(5), 7.15 (Air quality asbestos regulation) and 310 CMR 19.061 (disposal requirements) and 310 CMR 16.00 (landfill siting; asphalt-brick-concrete recycling).
- Massachusetts Department of Environmental Protection and its Bureau of Waste Site Cleanup (DEP-BWSC), regulates cleanup of hazardous materials. Material containing asbestos must be reported if released to the environment or if it poses a threat of release, Regulations: 310 CMR 40.0000.
- The Massachusetts Department of Public Health's (DPH) State Sanitary code requires that property owners must maintain asbestos in good repair. Any repair and removal of asbestos must be done in accordance with all DEP and DPH asbestos regulations, Regulations: 105 CMR 410.353 (Sanitary Code) 105 CMR

670 (Community Right-to-Know).

- Mass Department of Occupational Safety (DOS) prescribes training, certification and/or licensing requirements for persons and firms engaged in asbestos work, inspections, monitoring, laboratories and training providers. DOS also prescribes project notification and work practice requirements for asbestos work.

Local Regulation and Project Coordination

Westmass, along with its Licensed Abatement Contactor and Licensed Inspection / Testing Firm, will coordinate with the Ludlow Building Commissioner and the Ludlow Board of Health as applicable for this cleanup. Westmass, and its contractors, will obtain required sign offs and will take all cautions practicable to prevent any condition that may affect the health or safety of the public or occupants of Ludlow Mills.

Other applicable regulations include Federal, state, and local laws regarding procurement of contractors conducting the cleanup will be followed. In addition, all appropriate permits will be acquired prior to the work commencing such as Dig Safe, Transport and other Asbestos MADEP Asbestos Abatement Notification filings.

III. EVALUATION OF CLEANUP ALTERNATIVES

a. Cleanup Alternatives Considered

To address contamination at the Site, three different alternatives were considered as follows:

- Alternative #1: No Action,
- Alternative #2: Repair, Encapsulation and Ongoing Maintenance, and
- Alternative #3: Removal and Offsite Disposal.

b. Effectiveness, Implementability & Cost of Cleanup Alternatives

Effectiveness

Alternative #1: No Action: This Alternative is not an effective option in controlling or preventing the exposure of persons or the environment to contamination at the site. No Action is included in this evaluation in order to compare and contrast any significant reduction in site risk to other remedial actions to.

The No Action Alternative would severely restrict the ability of Westmass to move forward with the adaptive reuse of some mill buildings as well the demolition of buildings impeding other significant redevelopment projects. As outlined previously there has been significant investment to date from both public and private funding for the Ludlow Mills project which would be significantly impacted and stranded.

The No Action Alternative does not meet the goal of the redevelopment of the Ludlow Mills because adaptive reuse of the buildings or removal of unusable or unstable buildings cannot occur unless the asbestos is removed.

Alternative #2: Repair, Encapsulation, Operation and Maintenance (O&M): Repair and encapsulation could be an effective way to prevent persons from coming into direct contact with asbestos in the Mill Area if the encapsulation is maintained. However, encapsulation is not an effective means to control other exposures, such as direct contact risks for occupants of the site over time as well as workers performing the adaptive reuse

work planned to revitalize Ludlow Mills. Repair and encapsulation limits the reuse options to those without occupied space such as storage and is not a viable option when demolition of the building is necessary.

Asbestos encapsulation is the process of using a product that either coats or creates a membrane to prevent the asbestos fibers from getting into the air or penetrates the asbestos containing material binding the components together. Asbestos encapsulation can also be done by sealing off any areas containing asbestos with an air proof barrier. In some cases asbestos encapsulation can be used in order to avoid the high cost of asbestos removal. Asbestos encapsulation is a cheaper option, and is safe as long as the area does not need to be disturbed.

During repair and encapsulation the Abatement contractor will isolate the portion of the building where repair and encapsulation is taking place most likely with sheets of plastic, and provide self-contained showers and throwaway protective suits to prevent contamination of the workers. All tools and materials used must be sufficiently cleaned and all waste containing asbestos generated by the project such the protective suits will be bagged in plastic, and properly disposed of.

The Environmental Protection Agency does not recommend asbestos encapsulation where the asbestos is more than one inch thick, water damaged, has poor cohesive strength or where the asbestos is accessible to the people who are using the building. In these instances, it is better to remove the asbestos to minimize the risk to the occupants of the building.

Alternative #2 would severely restrict the ability of Westmass to move forward with the redevelopment of Ludlow Mills and specifically the demolition of the 300 Series Warehouse.

Alternative #3: Removal and Offsite Disposal: Removal and offsite disposal is the most effective way to eliminate risk to humans and the environment at the site, since ACM and other hazardous materials contamination will be removed and the exposure pathways will no longer exist. All asbestos-containing and hazardous materials are totally removed from Mill 11 which will facilitate redevelopment activities. No further monitoring or maintenance of the asbestos-containing materials is needed.

The Abatement contractor will isolate and remove the portion of the buildings where the asbestos removal is taking place with sheets of plastic and provide self-contained showers and throwaway protective suits to prevent contamination of the workers. All asbestos-containing materials will be bagged in plastic, and proper disposal arranged.

An important aspect of asbestos-removal is air quality monitoring by an inspector who will be at the site throughout the abatement work. The selected firm monitoring the project will be completely independent from the contractor performing the work to provide oversight. This independent firm will set up an air monitoring station to ensure that the concentrations of asbestos fibers both inside and outside the work area do not increase beyond standards required by MA DEP.

The Environmental Protection Agency recommends asbestos removal as the best method to minimize the risk to workers or the occupants of the building the public and visitors to

the Ludlow Mills complex.

Implementability
Alternative #1: No Action: No Action is a simple alternative to implement since no actions need to be undertaken by the owner.

Alternative #2: Repair, Encapsulation, Operation and Maintenance (O&M): These actions require significant effort and expense to implement given the extent of asbestos contamination in the windows in Mill 11. Repair and encapsulation will require access to all outside and confined spaces that were identified to have asbestos contamination. Testing will be required when the work is being performed. In addition, this alternative may require the long-term installation and monitoring of air quality monitoring stations. Because the site is active with diverse tenants and leasing space and adaptive reuse being planned for the structures throughout the mills, ongoing air sampling equipment, monitoring and maintenance of the encapsulation would require periodic testing and reporting. Because of these reasons this alternative is considered very difficult to implement over the long term.

Alternative #3: Removal and Offsite Disposal: Removal and offsite disposal is moderately difficult to implement. Coordination and testing will be required during cleanup activities (e.g., site control and air handling enclosures, dust suppression and monitoring). A minor increase in traffic will result from additional trucks transporting materials offsite. Testing will be required when the abatement work is being performed however long-term monitoring and maintenance will not be required after offsite disposal. By taking advantage of the asbestos removal, alternative the hazardous materials can be removed intact, placed in bags, sealed, transported and disposed of offsite. An opportunity currently exists within Mill 11 as the building is vacant except for the first floor so remediation work can be performed efficiently.

One significant advantage of the Ludlow Mills Asbestos Removal and Offsite Disposal Alternative for Mill 11 is that it is essentially a separate structure that can be abated and demolished in a controlled operation. The result of the cleanup and potential demolition would be advantageous to the overall Ludlow Mills Preservation and Redevelopment project and consistent with the approved Ludlow Mills Master Plan, approved Local Comprehensive Plan and Massachusetts Environmental Policy Act (MEPA) permitting.

Cost
Alternative #1: No Action: No direct costs are associated with the "No Action" alternative.

Alternative #2: Repair, Encapsulation, Operation and Maintenance (O&M): Direct costs would be incurred from relocation of business or uses of the buildings being remediated. No new use is projected for these buildings if the asbestos was abated via encapsulation in Alternative #2. An extensive Operation and Maintenance Plan and associated costs will be required. Major private investment and public funding for adaptive reuse and redevelopment, which are enabling other Mill buildings to be revitalized, would not be leveraged if the asbestos contamination remains in place. In addition, asbestos encapsulation typically just defers the time when the asbestos will

need to be removed. All future renovations to an area which has asbestos encapsulation will require the removal of the asbestos, adding that cost to the planned renovation.

Alternative #3: Removal and Offsite Disposal: The estimated cost is approximately $260,200 for remediation and removal of the ACM in the windows, door caulk and adhesive and insulation and other hazardous materials. Some costs may be offset by salvaged materials and recycling.

Recommended Cleanup Alternative

The recommended cleanup alternative is **Alternative #3: Removal with Offsite Disposal.**

Alternative#1: No Action

The No Action alternative cannot be recommended since it does not effectively address public health risks posed by the Hazardous Materials when the site is redeveloped. In addition, this alternative does not allow the achievement of the project goal of reuse, redevelopment and job creation. Extensive redevelopment of the historic mill and the adaptive reuse of several historic buildings could not occur.

Alternative #2: Encapsulation, Repair and Maintenance

The encapsulation, repair and maintenance alternative cannot be recommended since it does not address site risks posed by the hazardous materials. Although Alternative #2 is less expensive than removal and offsite disposal, it would require ongoing costs potentially including air monitoring and maintenance. Using asbestos encapsulation also only defers the time when the asbestos will need to be removed. Any proposed renovations for adaptive reuse and redevelopment to buildings or areas containing asbestos after encapsulation will require the removal of the asbestos, adding to the cost of renovation for the adaptive reuse or demolition planned. This makes Alterative #2 more difficult to implement than Alternative #3. In addition, this alternative does not enable the achievement of the project goals.

Alternative #3: Removal and Remediation with Offsite Disposal

This Alternative would achieve a permanent solution of preventing exposure by removing contamination at the site. Removal of the asbestos and other hazardous materials from the windows and interior spaces in Mill 11 will enable the adaptive reuse redevelopment program at the Mills to proceed. Costs of ACM removal will not be included piece meal as buildings are rehabilitated and there may be cost savings from bidding a larger project. The removal and remediation with offsite disposal of asbestos and other hazardous materials is an eligible cleanup cost under the EPA grant.

Alternative #3 protects public health to the greatest extent and has the benefit of achieving the desired results for the long-term benefits of the project. For these reasons, Westmass has selected **Alternative #3: Removal and Remediation with Offsite Disposa**l and complete cleanup as the preferred Alternative and will be submitting this Alternative as a Grant Application to the FY 2023 US EPA Brownfield Cleanup program.

Sources:

Final Targeted Brownfields Assessment Report, KGSNE JV II, LLC, October 2023. Prepared for EPA Region 1.

ATTACHMENT F: Analysis of Brownfield Cleanup Alternatives (ABCA) - Preliminary Evaluation Asbestos Removal and Remediation

PROJECT: Mill 9 - Window Glazing and Caulking
Ludlow Mills Complex, 100 State Street, Ludlow, MA 01056

This Analysis of Brownfield's Cleanup Alternatives (ABCA) is intended to provide a cleanup project summary outline in support of a pending Grant Application to the FY 2024 US EPA Brownfield Cleanup program.

Release Tracking Number
The Massachusetts Department of Environmental Protection (MADEP) does not assign specific tracking numbers to asbestos abatement projects such as the one proposed for Ludlow Mills. Release Tracking Numbers (RTNs) however were issued related to the AAI- ASTM Phase I and Phase II Environmental Site Assessment Reports and several other sites at Ludlow Mills where contamination has been cleaned up with State Site Remediation Grant funds. That remediation work was completed in June of 2014.

Prepared by: Westmass Area Development Corporation, Owner of the Property
One Monarch Place, Suite 1120
Springfield, MA 01144
www.westmassdevelopment.com

I. INTRODUCTION & BACKGROUND

a. Site Location

The project is located at 100 State Street in Ludlow, Massachusetts within the historic Ludlow Mills Complex and specifically involves one large mill building known as **Mill 9** located in the central portion of the mill complex.

b. Previous Site Uses and any Previous Site Cleanup / Remediation

Previous Site Use(s):
The project area on the Chicopee River has been utilized by industry since the late eighteenth century. Between 1812 and 1844 the site supported operation of textile and cotton mills. Gun barrels were manufactured at the site of the current Mill No. 8 building from 1840 to 1846. Between 1846 and 1848 the building was used for the manufacturing of textile machinery. Starting in 1850, Jute products were produced on the property and the Ludlow Manufacturing Company was established in 1856, later named the Ludlow Mills Company.

Jute manufacturing remained the primary activity on the site into the mid-20th century. A majority of the historic mill buildings, including **Mill 9,** remain from the early 20th century having been built starting in 1900 with significant mill expansion over time. The historic mill complex is approximately 52 acres in size and contains approximately 35 structures with a total floor space of approximately 770,000 square feet. Since the 1960's the complex has been a multi-tenant industrial park and contains a large number of commercial and industrial operations. Of the site's extant mill buildings, five are large multi-story structures (Mill #s 8, **9**, 10 and 11, and the 300s Warehouse buildings along State Street). The additional buildings consist of a series of small (approximately 6,000-12,000 SF), single story, brick block stockhouses located along the Chicopee River in the south and eastern

portion part of the site; the former locomotive building and associated maintenance building (Buildings 46/58) and the former carpentry building (44). The Ludlow Mills complex is included within the Ludlow Village National Historic District (LUD.F) and listed in the State and National Registers of Historic Places.

Previous Site Clean-up and Remediation:
Under the previous site ownership of Ludlow Industrial Realty Inc., a Phase 1 Environmental Site Assessment (ESA) was prepared in March 2009 by Advanced Environmental Solutions, Inc. (AES) for the US Environmental Protection Agency (EPA). That Phase 1 ESA was updated by AES in August 2011. In addition, AES prepared a Phase II ESA for the property between September 2010 and June 2011.

The Phase II Environmental Site Assessment (ESA), performed in 2010 and 2011, identified several Recognized Environmental Conditions (RECs). Subsequent environmental assessment activities including limited testing were conducted. The results were compiled in the Phase II ESA dated August 2011, in which 18 RECs existed. These RECs related to industrial use of the property and other subsequent tenants, the illegal disposal of materials, and the use of an up-gradient property as a gasoline station. The report provided recommendations for additional assessment.

Known releases at the Ludlow Mills property identified in the Phase I and Phase II ESAs include releases of polychlorinated biphenyl (PCB) from transformers, #6 fuel oil from the use and storage of heating oil, and diesel fuel from a delivery truck. Releases of PCBs were concentrated around electrical substations to the north of Mill building 10 and on the bank of the Chicopee River. Contaminated soil that was accessible at the time was removed from these areas, however, residual contamination remained underneath the substations and an Activity and Use Limitation (AUL) is in place in order to limit exposure should the contaminated soil be disturbed. The AUL was terminated in 2014. Historically, several releases of fuel oil were reported near stockhouse #205, which served as the Boiler Building, as a result of filling operations of the two 15,000-gallon fuel oil underground storage tanks (USTs) used for fuel oil storage. Soil in the immediate area around the tanks was excavated and impacted water in storm drains was cleaned up. The two USTs were removed in April 2012.

Westmass and its consultant at that time, O'Reilly, Talbot and Okun Associates, Inc. (OTO), developed a Remediation Plan, (excluding asbestos) for implementation. The estimated cost of implementation of the Remediation Plan for the Recognized Environmental Concerns identified in the Phase I and II reports was estimated to be $1,500,000. Funding was secured from the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) through a $1,500,000 grant awarded to Westmass for site remediation of the Ludlow Mills property. Westmass actively implemented the Remediation Plan and finalized this remediation work in June of 2014.

c. Site Assessment Findings – Hazardous Materials

In October 2023, KGSNE JV II, LLC completed a Final Targeted Brownfields Assessment Report for EPA Region 1 to determine other sources of asbestos contamination. Westmass analyzed the Report for **Mill 9** and found confirmation of ACM in window glazing and caulking and lead based paint.

Mill 9 is a 24,000 SF, two-story brick building, constructed with wood beams and columns, built c.1905. The building was used to manufacture jute products and is currently vacant. ACM was detected in the exterior caulking of 130 windows and lead based paint was identified on window frames, metal doors and metal sprinkler pipes.

d. <u>Project Goal</u>

The Ludlow Mills Preservation and Redevelopment Project continues to reverse years of neglect at the mill complex and will continue to spur local and regional economic activity and job creation. By remediating numerous environmental hazards & asbestos contamination, the project will protect sensitive environmental resources and provide the community with public access to the Chicopee River for passive recreation.

Redevelopment and revitalization of the Ludlow Mills complex is a regionally significant economic development project and has been cited within the 2019 Annual Comprehensive Economic Development Strategy (CEDS) report of the Pioneer Valley Plan for Progress, as a regional "High Priority Project". The intent is to serve areas meeting US Economic Development Administration Economic Distress Criteria according to the Pioneer Valley Planning Commission.

Westmass plans to redevelop the complex with green technologies including solar and low impact development storm water (LID) systems. The overall project embraces sustainable development principles and seeks to meet USGBC LEED quality standards for new construction at the site. The project's primary focus will be on commercial and industrial development but with some residential housing units created in the larger mill buildings (including **Mill 9**) where possible.

Westmass has been successful in obtaining assistance and cooperation from several sources at the Federal, State and Local levels as well as private utilities for redevelopment efforts. The direct involvement and support from the start of this regionally significant project by federal and state officials, numerous elected officials and the community of Ludlow have been instrumental. Westmass is committed to seeing that the Ludlow Mills once again becomes a major contributor to the economic prosperity of the region.

To date, the Ludlow Mills Preservation and Redevelopment Project has achieved numerous milestones highlighted below:

- In 2023 Winn Development, utilizing Historic Tax Credits as part of the financing package, purchased Mill 8 to adaptive reuse into 95 units of Senior Independent Living. Construction has started and completion is anticipated in Summer 2024.
- In 2023, the EPA awarded Westmass a $740,000 Brownfields Cleanup Grant for the abatement of ACM in the 300s Warehouses and Mill buildings 46 and 58.
- In 2022, Westmass was awarded two grants from MassDevelopment through the Massachusetts Community One Stop for Growth Program. $500,000 was awarded for Electrical upgrades and $500,000 was awarded for new roofs.
- In 2021, Westmass received two grants from MassDevelopment through the Massachusetts Community One Stop for Growth Program. $650,000 was received from the Site Readiness Program to fund the design and engineering of infrastructure improvements within the mill complex and $250,000 was received from the Underutilized Properties Program to fund capital improvements on several stockhouse buildings.

- In 2021, Westmass also received an EPA Brownfields Cleanup Grant to remediate ACM in the roofing of several historic stockhouses as well as the former Carpentry Building.
- With a $7 million investment, the Town of Ludlow is completed a new Ludlow Senior Center State Street on mill land formerly owned by Westmass on State Street.
- In 2019, the Town of Ludlow, in partnership with Westmass, received $6.6 million in grant funds from the MassWorks Infrastructure Program and the US Department of Commerce Economic Development Administration to construct a 4,200 linear foot roadway and associated infrastructure within the mill complex to advance revitalization efforts.
- Westmass has received $2 million of private financing for project development from a consortium of regional lenders.
- Westmass has received approval of the delineation of wetlands and riverfront area under the Massachusetts Wetlands Protection Act from the Ludlow Conservation Commission.
- Westmass secured State permitting from MEPA for the Final Environmental Impact Report in September 2017 with the issuance of a Certificate of the Secretary of Energy and Environmental Affairs.
- With input from Westmass, the Town of Ludlow voted to change the zoning for the site from Industrial A to Mill Redevelopment District, to allow mixed use development. In addition, the Town created a Smart Growth Overlay District, Ludlow Mills Sub-District.
- The Town of Ludlow received $3.7 million in funding for the reconstruction of State Street and First Avenue, replacement of water lines, and installation of streetscape improvements and a sewer pump station.
- In 2017 Winn Development, utilizing Historic Tax Credits as part of the financing package, completed a $24 million, adaptive reuse of Mill #10 to provide 55 units of Senior Independent Living.
- The $27 Million dollar HealthSouth Rehabilitation Hospital Project (Private) was completed in November 2013 and achieved LEED HC Gold certification.
- Westmass received a $1.5 million grant from the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) for environmental remediation work (excluding asbestos) at Ludlow Mills.
- Westmass was awarded a total of $400,000 with two separate FY13 US EPA Brownfield Cleanup Grants for the Phase II portion of the Ludlow Mills Asbestos Abatement and Removal involving ACM abatement and demolition of Storehouse building 286-291 and Storehouse building 292-296.
- In 2012, Columbia Gas invested in excess of $600,000 to complete construction of a new intermediate pressure natural gas line along the length of State Street.
- Westmass was awarded a $200,000 FY12 US EPA Brownfield Cleanup Grant for the Phase I portion of the Ludlow Mills Asbestos Abatement and Removal involving ACM Pipe Wrap on existing abandoned steam piping in mill buildings #s8 and 11 and the #300s warehouse buildings.
- Westmass Area Development Corporation purchased the property on August 24, 2011.
- Between 2009 and 2011, the Project received $231,000 in funding from the U.S. Environmental Protection Agency for environmental site assessment.

II. APPLICABLE REGULATIONS AND CLEANUP STANDARDS

Cleanup Oversight Responsibility – Westmass Area Development Corporation will be responsible for oversight of the Asbestos and other Hazardous Materials Removal and Remediation. In a public bid process following set procurement guidelines, Westmass will solicit and select a Qualified Environmental Professional (QEP) for project planning, oversight and assistance with the selection of a Licensed Abatement Contactor with a Licensed Inspection / Testing Firm. Selections will be based both on qualifications and costs.

a. Cleanup Standards for Major Contaminants

Laws and regulations are applicable to the removal and disposal of Asbestos and other hazardous materials as Hazardous Waste. These standards are in place to prevent it from becoming airborne and harmful to workers or the public. Regulations include Federal laws and worker protection standards from exposures, address transportation of asbestos waste, and limit air pollutants under National Emissions Standards for Hazardous Air Pollutants.

Massachusetts Laws and Regulations require notification and work practices to avoid fiber release for asbestos handling, removal, storage, transport, and disposal. Regulation also requires inspection of demolition/renovation and manufacturing operations and special waste landfilling of asbestos and asbestos-containing material.

b. Laws and Regulations Applicable to the Cleanup

Federal Regulations

- Brownfields Revitalization Act
- Davis / Bacon Act
- OSHA: Regulations: 29 CFR Parts 1910 & 1926.
- DOT: Title 49, section 173.1090.
- EPA: (NESHAP)**:** 40 CFR Part 61 Subpart M.
- Emergency Response Act (AHERA) 40 CFR Part 763
- Toxic Substances Control Act (TSCA).

Massachusetts Regulations

- 310 CMR 7.00: AIR POLLUTION CONTROL specifically section 7.09: Dust, Odor, Construction and Demolition,
- Regulations: 310 CMR 4.00 (Air quality notification approval timelines and fees), 7.00, 7.09(5), 7.15 (Air quality asbestos regulation) and 310 CMR 19.061 (disposal requirements) and 310 CMR 16.00 (landfill siting; asphalt-brick-concrete recycling).
- Massachusetts Department of Environmental Protection and its Bureau of Waste Site Cleanup (DEP-BWSC), regulates cleanup of hazardous materials. Material containing asbestos must be reported if released to the environment or if it poses a threat of release, Regulations: 310 CMR 40.0000.
- The Massachusetts Department of Public Health's (DPH) State Sanitary code requires that property owners must maintain asbestos in good repair. Any repair and removal of asbestos must be done in accordance with all DEP and DPH asbestos regulations, Regulations: 105 CMR 410.353 (Sanitary Code) 105 CMR 670 (Community Right-to-Know).

- Mass Department of Occupational Safety (DOS) prescribes training, certification and/or licensing requirements for persons and firms engaged in asbestos work, inspections, monitoring, laboratories and training providers. DOS also prescribes project notification and work practice requirements for asbestos work.

Local Regulation and Project Coordination
Westmass, along with its Licensed Abatement Contactor and Licensed Inspection / Testing Firm, will coordinate with the Ludlow Building Commissioner and the Ludlow Board of Health as applicable for this cleanup. Westmass, and its contractors, will obtain required sign offs and will take all cautions practicable to prevent any condition that may affect the health or safety of the public or occupants of Ludlow Mills.

Other applicable regulations include Federal, state, and local laws regarding procurement of contractors conducting the cleanup will be followed. In addition, all appropriate permits will be acquired prior to the work commencing such as Dig Safe, Transport and other Asbestos MADEP Asbestos Abatement Notification filings.

III. EVALUATION OF CLEANUP ALTERNATIVES

a. Cleanup Alternatives Considered

To address contamination at the Site, three different alternatives were considered as follows:

- Alternative #1: No Action,
- Alternative #2: Repair, Encapsulation and Ongoing Maintenance, and
- Alternative #3: Removal and Offsite Disposal.

b. Effectiveness, Implementability & Cost of Cleanup Alternatives

Effectiveness

Alternative #1: No Action: This Alternative is not an effective option in controlling or preventing the exposure of persons or the environment to contamination at the site. No Action is included in this evaluation in order to compare and contrast any significant reduction in site risk to other remedial actions to.

The No Action Alternative would severely restrict the ability of Westmass to move forward with the adaptive reuse of some mill buildings as well the demolition of buildings impeding other significant redevelopment projects. As outlined previously there has been significant investment to date from both public and private funding for the Ludlow Mills project which would be significantly impacted and stranded.

The No Action Alternative does not meet the goal of the redevelopment of the Ludlow Mills because adaptive reuse of the buildings or removal of unusable or unstable buildings cannot occur unless the asbestos is removed.

Alternative #2: Repair, Encapsulation, Operation and Maintenance (O&M): Repair and encapsulation could be an effective way to prevent persons from coming into direct contact with asbestos in the Mill Area if the encapsulation is maintained. However, encapsulation is not an effective means to control other exposures, such as direct contact risks for occupants of the site over time as well as workers performing the adaptive reuse

work planned to revitalize Ludlow Mills. Repair and encapsulation limits the reuse options to those without occupied space such as storage and is not a viable option when demolition of the building is necessary.

Asbestos encapsulation is the process of using a product that either coats or creates a membrane to prevent the asbestos fibers from getting into the air or penetrates the asbestos containing material binding the components together. Asbestos encapsulation can also be done by sealing off any areas containing asbestos with an air proof barrier. In some cases asbestos encapsulation can be used in order to avoid the high cost of asbestos removal. Asbestos encapsulation is a cheaper option and is safe as long as the area does not need to be disturbed.

During repair and encapsulation, the Abatement contractor will isolate the portion of the building where repair and encapsulation is taking place most likely with sheets of plastic and provide self-contained showers and throwaway protective suits to prevent contamination of the workers. All tools and materials used must be sufficiently cleaned and all waste containing asbestos generated by the project, such the protective suits, will be bagged in plastic, and properly disposed of.

The Environmental Protection Agency does not recommend asbestos encapsulation where the asbestos is more than one inch thick, water damaged, has poor cohesive strength or where the asbestos is accessible to the people who are using the building. In these instances, it is better to remove the asbestos to minimize the risk to the occupants of the building.

Alternative #2 would severely restrict the ability of Westmass to move forward with the redevelopment of Ludlow Mills and specifically the demolition of the 300 Series Warehouse.

Alternative #3: Removal and Offsite Disposal: Removal and offsite disposal is the most effective way to eliminate risk to humans and the environment at the site, since ACM and other hazardous materials contamination will be removed and the exposure pathways will no longer exist. All asbestos-containing and hazardous materials are totally removed from **Mill 9** which will facilitate redevelopment activities. No further monitoring or maintenance of the asbestos-containing materials is needed.

The Abatement contractor will isolate and remove the portion of the buildings where the asbestos removal is taking place with sheets of plastic and provide self-contained showers and throwaway protective suits to prevent contamination of the workers. All asbestos-containing materials will be bagged in plastic, and proper disposal arranged.

An important aspect of asbestos-removal is air quality monitoring by an inspector who will be at the site throughout the abatement work. The selected firm monitoring the project will be completely independent from the contractor performing the work to provide oversight. This independent firm will set up an air monitoring station to ensure that the concentrations of asbestos fibers both inside and outside the work area do not increase beyond standards required by MA DEP.

The Environmental Protection Agency recommends asbestos removal as the best method to minimize the risk to workers or the occupants of the building, the public and visitors to

the Ludlow Mills complex.

Implementability
Alternative #1: No Action: No Action is a simple alternative to implement since no actions need to be undertaken by the owner.

Alternative #2: Repair, Encapsulation, Operation and Maintenance (O&M): These actions require significant effort and expense to implement given the extent of asbestos contamination in the windows in **Mill 9**. Repair and encapsulation will require access to all outside and confined spaces that were identified to have asbestos contamination. Testing will be required when the work is being performed. In addition, this alternative may require the long-term installation and monitoring of air quality monitoring stations. Because the site is active with diverse tenants and leasing space and adaptive reuse being planned for the structures throughout the mills, ongoing air sampling equipment, monitoring and maintenance of the encapsulation would require periodic testing and reporting. Because of these reasons this alternative is considered very difficult to implement over the long term.

Alternative #3: Removal and Offsite Disposal: Removal and offsite disposal is moderately difficult to implement. Coordination and testing will be required during cleanup activities (e.g., site control and air handling enclosures, dust suppression and monitoring). A minor increase in traffic will result from additional trucks transporting materials offsite. Testing will be required when the abatement work is being performed, however long-term monitoring and maintenance will not be required after offsite disposal. By taking advantage of the asbestos removal, alternative the hazardous materials can be removed intact, placed in bags, sealed, transported and disposed of offsite. An opportunity currently exists within **Mill 9** as the building is vacant so remediation work can be performed efficiently.

One significant advantage of the Ludlow Mills Asbestos Removal and Offsite Disposal Alternative for **Mill 9** is that it is essentially a separate structure that can be abated and demolished in a controlled operation. The result of the cleanup and potential demolition would be advantageous to the overall Ludlow Mills Preservation and Redevelopment project and consistent with the approved Ludlow Mills Master Plan, approved Local Comprehensive Plan and Massachusetts Environmental Policy Act (MEPA) permitting.

Cost
Alternative #1: No Action: No direct costs are associated with the "No Action" alternative.

Alternative #2: Repair, Encapsulation, Operation and Maintenance (O&M): Direct costs would be incurred from relocation of business or uses of the buildings being remediated. No new use is projected for these buildings if the asbestos was abated via encapsulation in Alternative #2. An extensive Operation and Maintenance Plan and associated costs will be required. Major private investment and public funding for adaptive reuse and redevelopment, which are enabling other Mill buildings to be revitalized, would not be leveraged if the asbestos contamination remains in place. In addition, asbestos encapsulation typically just defers the time when the asbestos will

need to be removed. All future renovations to an area which has asbestos encapsulation will require the removal of the asbestos, adding that cost to the planned renovation.

Alternative #3: Removal and Offsite Disposal: The estimated cost is approximately $53,700 for remediation and removal of the ACM in the glazing and caulking and other hazardous materials. Some costs may be offset by salvaged materials and recycling.

Recommended Cleanup Alternative

The recommended cleanup alternative is **Alternative #3: Removal with Offsite Disposal.**

Alternative#1: No Action

The No Action alternative cannot be recommended since it does not effectively address public health risks posed by Hazardous Materials when the site is redeveloped. In addition, this alternative does not allow the achievement of the project goal of reuse, redevelopment and job creation. Extensive redevelopment of the historic mill and the adaptive reuse of several historic buildings could not occur.

Alternative #2: Encapsulation, Repair and Maintenance

The encapsulation, repair and maintenance alternative cannot be recommended since it does not address site risks posed by the hazardous materials. Although Alternative #2 is less expensive than removal and offsite disposal, it would require ongoing costs potentially including air monitoring and maintenance. Using asbestos encapsulation also only defers the time when the asbestos will need to be removed. Any proposed renovations for adaptive reuse and redevelopment to buildings or areas containing asbestos after encapsulation will require the removal of the asbestos, adding to the cost of renovation for the adaptive reuse or demolition planned. This makes Alterative #2 more difficult to implement than Alternative #3. In addition, this alternative does not enable the achievement of the project goals.

Alternative #3: Removal and Remediation with Offsite Disposal

This Alternative would achieve a permanent solution of preventing exposure by removing contamination at the site. Removal of the asbestos and other hazardous materials from the windows and interior spaces in **Mill 9** will enable the adaptive reuse redevelopment program at the Mills to proceed. Costs of ACM removal will not be included piece meal as buildings are rehabilitated and there may be cost savings from bidding a larger project. The removal and remediation with offsite disposal of asbestos and other hazardous materials is an eligible cleanup cost under the EPA grant.

Alternative #3 protects public health to the greatest extent and has the benefit of achieving the desired results for the long-term benefits of the project. For these reasons, Westmass has selected **Alternative #3: Removal and Remediation with Offsite Disposa**l and complete cleanup as the preferred Alternative and will be submitting this Alternative as a Grant Application to the FY 2023 US EPA Brownfield Cleanup program.

Sources:

Final Targeted Brownfields Assessment Report, KGSNE JV II, LLC, October 2023. Prepared for EPA Region 1.

ATTACHMENT G: Analysis of Brownfield Cleanup Alternatives (ABCA) - Preliminary Evaluation Asbestos Removal and Remediation

PROJECT: Warehouse 199 - Window Glazing and Caulking
Ludlow Mills Complex, 100 State Street, Ludlow, MA 01056

This Analysis of Brownfield's Cleanup Alternatives (ABCA) is intended to provide a cleanup project summary outline in support of a pending Grant Application to the FY 2024 US EPA Brownfield Cleanup program.

Release Tracking Number
The Massachusetts Department of Environmental Protection (MADEP) does not assign specific tracking numbers to asbestos abatement projects such as the one proposed for Ludlow Mills. Release Tracking Numbers (RTNs) however were issued related to the AAI- ASTM Phase I and Phase II Environmental Site Assessment Reports and several other sites at Ludlow Mills where contamination has been cleaned up with State Site Remediation Grant funds. That remediation work was completed in June of 2014.

Prepared by: Westmass Area Development Corporation, Owner of the Property
One Monarch Place, Suite 1120
Springfield, MA 01144
www.westmassdevelopment.com

I. INTRODUCTION & BACKGROUND

a. Site Location

The project is located at 100 State Street in Ludlow, Massachusetts within the historic Ludlow Mills Complex and specifically involves one large mill building known as **Warehouse 199**, located in the central portion of the mill complex.

b. Previous Site Uses and any Previous Site Cleanup / Remediation

Previous Site Use(s):

The project area on the Chicopee River has been utilized by industry since the late eighteenth century. Between 1812 and 1844 the site supported operation of textile and cotton mills. Gun barrels were manufactured at the site of the current Mill No. 8 building from 1840 to 1846. Between 1846 and 1848 the building was used for the manufacturing of textile machinery. Starting in 1850, Jute products were produced on the property and the Ludlow Manufacturing Company was established in 1856, later named the Ludlow Mills Company. Jute manufacturing remained the primary activity on the site into the mid-20th century. A majority of the historic mill buildings, including **Warehouse 199,** remain from the early 20th century having been built starting in 1900 with significant mill expansion over time. The historic mill complex is approximately 52 acres in size and contains approximately 35 structures with a total floor space of approximately 770,000 square feet. Since the 1960s the complex has been a multi-tenant industrial park and contains a large number of commercial and industrial operations. Of the site's extant mill buildings, five are large multi-story structures (Mill #s 8, 9, 10 and 11, the 300s Warehouse along State Street and **Warehouse 199** in the central portion of the site). The additional buildings consist of a series of small (approximately 6,000-12,000 SF), single story, brick block stockhouses located along the Chicopee River in the south and eastern portion part of the site; the former

locomotive building and associated maintenance building (Buildings 46/58) and the former carpentry building (44). The Ludlow Mills complex is included within the Ludlow Village National Historic District (LUD.F) and listed in the State and National Registers of Historic Places.

Previous Site Clean-up and Remediation:
Under the previous site ownership of Ludlow Industrial Realty Inc., a Phase 1 Environmental Site Assessment (ESA) was prepared in March 2009 by Advanced Environmental Solutions, Inc. (AES) for the US Environmental Protection Agency (EPA). That Phase 1 ESA was updated by AES in August 2011. In addition, AES prepared a Phase II ESA for the property between September 2010 and June 2011.

The Phase II Environmental Site Assessment (ESA), performed in 2010 and 2011, identified several Recognized Environmental Conditions (RECs). Subsequent environmental assessment activities including limited testing were conducted. The results were compiled in the Phase II ESA dated August 2011, in which 18 RECs existed. These RECs related to industrial use of the property and other subsequent tenants, the illegal disposal of materials, and the use of an up-gradient property as a gasoline station. The report provided recommendations for additional assessment.

Known releases at the Ludlow Mills property identified in the Phase I and Phase II ESAs include releases of polychlorinated biphenyl (PCB) from transformers, #6 fuel oil from the use and storage of heating oil, and diesel fuel from a delivery truck. Releases of PCBs were concentrated around electrical substations to the north of Mill building 10 and on the bank of the Chicopee River. Contaminated soil that was accessible at the time was removed from these areas, however, residual contamination remained underneath the substations and an Activity and Use Limitation (AUL) is in place in order to limit exposure should the contaminated soil be disturbed. The AUL was terminated in 2014. Historically, several releases of fuel oil were reported near stockhouse #205, which served as the Boiler Building, as a result of filling operations of the two 15,000-gallon fuel oil underground storage tanks (USTs) used for fuel oil storage. Soil in the immediate area around the tanks was excavated and impacted water in storm drains was cleaned up. The two USTs were removed in April 2012.

Westmass and its consultant at that time, O'Reilly, Talbot and Okun Associates, Inc. (OTO), developed a Remediation Plan, (excluding asbestos) for implementation. The estimated cost of implementation of the Remediation Plan for the Recognized Environmental Concerns identified in the Phase I and II reports was estimated to be $1,500,000. Funding was secured from the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) through a $1,500,000 grant awarded to Westmass for site remediation of the Ludlow Mills property. Westmass actively implemented the Remediation Plan and finalized this remediation work in June of 2014.

c. Site Assessment Findings – Hazardous Materials

In October 2023, KGSNE JV II, LLC completed a Final Targeted Brownfields Assessment Report for EPA Region 1 to determine other sources of asbestos contamination. Westmass analyzed the Report for **Warehouse 199** and found confirmation of ACM in window glazing and caulking.

Built c.1905, **Warehouse 199** is a 31,000 SF, four-story brick structure that shares a wall with Mill 9 on the first two floors. This building was used to store products and materials in association with Mill 9 and Mill 8, located just north. ACM have been identified in the caulking and glazing of 59 windows and lead based paint was found in metal doors and door frames and metal column anchors and baseboards.

d. <u>Project Goal</u>

The Ludlow Mills Preservation and Redevelopment Project continues to reverse years of neglect at the mill complex and will continue to spur local and regional economic activity and job creation. By remediating numerous environmental hazards & asbestos contamination, the project will protect sensitive environmental resources and provide the community with public access to the Chicopee River for passive recreation.

Redevelopment and revitalization of the Ludlow Mills complex is a regionally significant economic development project and has been cited within the 2019 Annual Comprehensive Economic Development Strategy (CEDS) report of the Pioneer Valley Plan for Progress, as a regional "High Priority Project". The intent is to serve areas meeting US Economic Development Administration Economic Distress Criteria according to the Pioneer Valley Planning Commission.

Westmass plans to redevelop the complex with green technologies including solar and low impact development storm water (LID) systems. The overall project embraces sustainable development principles and seeks to meet USGBC LEED quality standards for new construction at the site. The project's primary focus will be on commercial and industrial development but with some residential housing units created in the larger mill buildings where possible. **Warehouse 199** is planned for demolition, once cleaned, because of structural issues that do not meet current building codes.

Westmass has been successful in obtaining assistance and cooperation from several sources at the Federal, State and Local levels as well as private utilities for redevelopment efforts. The direct involvement and support from the start of this regionally significant project by federal and state officials, numerous elected officials and the community of Ludlow have been instrumental. Westmass is committed to seeing that the Ludlow Mills once again becomes a major contributor to the economic prosperity of the region.

To date, the Ludlow Mills Preservation and Redevelopment Project has achieved numerous milestones highlighted below:

- In 2023 Winn Development, utilizing Historic Tax Credits as part of the financing package, purchased Mill 8 to adaptive reuse into 95 units of Senior Independent Living. Construction has started and completion is anticipated in Summer 2024.
- In 2023, the EPA awarded Westmass a $740,000 Brownfields Cleanup Grant for the abatement of ACM in the 300s Warehouses and Mill buildings 46 and 58.
- In 2022, Westmass was awarded two grants from MassDevelopment through the Massachusetts Community One Stop for Growth Program. $500,000 was awarded for Electrical upgrades and $500,000 was awarded for new roofs.
- In 2021, Westmass received two grants from MassDevelopment through the Massachusetts Community One Stop for Growth Program. $650,000 was received from the Site Readiness Program to fund the design and engineering of infrastructure improvements within the mill complex and $250,000 was

received from the Underutilized Properties Program to fund capital improvements on several stockhouse buildings.

- In 2021, Westmass also received an EPA Brownfields Cleanup Grant to remediate ACM in the roofing of several historic stockhouses as well as the former Carpentry Building.
- With a $7 million investment, the Town of Ludlow is completed a new Ludlow Senior Center State Street on mill land formerly owned by Westmass on State Street.
- In 2019, the Town of Ludlow, in partnership with Westmass, received $6.6 million in grant funds from the MassWorks Infrastructure Program and the US Department of Commerce Economic Development Administration to construct a 4,200 linear foot roadway and associated infrastructure within the mill complex to advance revitalization efforts.
- Westmass has received $2 million of private financing for project development from a consortium of regional lenders.
- Westmass has received approval of the delineation of wetlands and riverfront area under the Massachusetts Wetlands Protection Act from the Ludlow Conservation Commission.
- Westmass secured State permitting from MEPA for the Final Environmental Impact Report in September 2017 with the issuance of a Certificate of the Secretary of Energy and Environmental Affairs.
- With input from Westmass, the Town of Ludlow voted to change the zoning for the site from Industrial A to Mill Redevelopment District, to allow mixed use development. In addition, the Town created a Smart Growth Overlay District, Ludlow Mills Sub-District.
- The Town of Ludlow received $3.7 million in funding for the reconstruction of State Street and First Avenue, replacement of water lines, and installation of streetscape improvements and a sewer pump station.
- In 2017 Winn Development, utilizing Historic Tax Credits as part of the financing package, completed a $24 million, adaptive reuse of Mill #10 to provide 55 units of Senior Independent Living.
- The $27 Million dollar HealthSouth Rehabilitation Hospital Project (Private) was completed in November 2013 and achieved LEED HC Gold certification.
- Westmass received a $1.5 million grant from the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) for environmental remediation work (excluding asbestos) at Ludlow Mills.
- Westmass was awarded a total of $400,000 with two separate FY13 US EPA Brownfield Cleanup Grants for the Phase II portion of the Ludlow Mills Asbestos Abatement and Removal involving ACM abatement and demolition of Storehouse building 286-291 and Storehouse building 292-296.
- In 2012, Columbia Gas invested in excess of $600,000 to complete construction of a new intermediate pressure natural gas line along the length of State Street.
- Westmass was awarded a $200,000 FY12 US EPA Brownfield Cleanup Grant for the Phase I portion of the Ludlow Mills Asbestos Abatement and Removal involving ACM Pipe Wrap on existing abandoned steam piping in mill buildings #s8 and 11 and the #300s warehouse buildings.
- Westmass Area Development Corporation purchased the property on August 24, 2011.
- Between 2009 and 2011, the Project received $231,000 in funding from the U.S. Environmental Protection Agency for environmental site assessment.

II. APPLICABLE REGULATIONS AND CLEANUP STANDARDS

Cleanup Oversight Responsibility – Westmass Area Development Corporation will be responsible for oversight of the Asbestos and other Hazardous Materials Removal and Remediation. In a public bid process following set procurement guidelines, Westmass will solicit and select a Qualified Environmental Professional (QEP) for project planning, oversight and assistance with the selection of a Licensed Abatement Contactor with a Licensed Inspection / Testing Firm. Selections will be based both on qualifications and costs.

a. Cleanup Standards for Major Contaminants

Laws and regulations are applicable to the removal and disposal of Asbestos and other hazardous materials as Hazardous Waste. These standards are in place to prevent it from becoming airborne and harmful to workers or the public. Regulations include Federal laws and worker protection standards from exposures, address transportation of asbestos waste, and limit air pollutants under National Emissions Standards for Hazardous Air Pollutants.

Massachusetts Laws and Regulations require notification and work practices to avoid fiber release for asbestos handling, removal, storage, transport, and disposal. Regulation also requires inspection of demolition/renovation and manufacturing operations and special waste landfilling of asbestos and asbestos-containing material.

b. Laws and Regulations Applicable to the Cleanup

Federal Regulations

- Brownfields Revitalization Act
- Davis / Bacon Act
- OSHA: Regulations: 29 CFR Parts 1910 & 1926.
- DOT: Title 49, section 173.1090.
- EPA: (NESHAP)**:** 40 CFR Part 61 Subpart M.
- Emergency Response Act (AHERA) 40 CFR Part 763
- Toxic Substances Control Act (TSCA).

Massachusetts Regulations

- 310 CMR 7.00: AIR POLLUTION CONTROL specifically section 7.09: Dust, Odor, Construction and Demolition,
- Regulations: 310 CMR 4.00 (Air quality notification approval timelines and fees), 7.00, 7.09(5), 7.15 (Air quality asbestos regulation) and 310 CMR 19.061 (disposal requirements) and 310 CMR 16.00 (landfill siting; asphalt-brick-concrete recycling).
- Massachusetts Department of Environmental Protection and its Bureau of Waste Site Cleanup (DEP-BWSC), regulates cleanup of hazardous materials. Material containing asbestos must be reported if released to the environment or if it poses a threat of release, Regulations: 310 CMR 40.0000.
- The Massachusetts Department of Public Health's (DPH) State Sanitary code requires that property owners must maintain asbestos in good repair. Any repair and removal of asbestos must be done in accordance with all DEP and DPH

asbestos regulations, Regulations: 105 CMR 410.353 (Sanitary Code) 105 CMR 670 (Community Right-to-Know).

- Mass Department of Occupational Safety (DOS) prescribes training, certification and/or licensing requirements for persons and firms engaged in asbestos work, inspections, monitoring, laboratories and training providers. DOS also prescribes project notification and work practice requirements for asbestos work.

Local Regulation and Project Coordination

Westmass, along with its Licensed Abatement Contactor and Licensed Inspection / Testing Firm, will coordinate with the Ludlow Building Commissioner and the Ludlow Board of Health as applicable for this cleanup. Westmass, and its contractors, will obtain required sign offs and will take all cautions practicable to prevent any condition that may affect the health or safety of the public or occupants of Ludlow Mills.

Other applicable regulations include Federal, state, and local laws regarding procurement of contractors conducting the cleanup will be followed. In addition, all appropriate permits will be acquired prior to the work commencing such as Dig Safe, Transport and other Asbestos MADEP Asbestos Abatement Notification filings.

III. EVALUATION OF CLEANUP ALTERNATIVES

a. Cleanup Alternatives Considered

To address contamination at the Site, three different alternatives were considered as follows:

- Alternative #1: No Action,
- Alternative #2: Repair, Encapsulation and Ongoing Maintenance, and
- Alternative #3: Removal and Offsite Disposal.

b. Effectiveness, Implementability & Cost of Cleanup Alternatives

Effectiveness

Alternative #1: No Action: This Alternative is not an effective option in controlling or preventing the exposure of persons or the environment to contamination at the site. No Action is included in this evaluation in order to compare and contrast any significant reduction in site risk to other remedial actions to.

The No Action Alternative would severely restrict the ability of Westmass to move forward with the adaptive reuse of some mill buildings including the demolition of buildings impeding other significant redevelopment projects, such as **Warehouse 199**. As outlined previously there has been significant investment to date from both public and private funding for the Ludlow Mills project which would be significantly impacted and stranded.

The No Action Alternative does not meet the goal of the redevelopment of the Ludlow Mills because adaptive reuse of the buildings or removal of unusable or unstable buildings cannot occur unless the asbestos is removed.

Alternative #2: Repair, Encapsulation, Operation and Maintenance (O&M): Repair and encapsulation could be an effective way to prevent persons from coming into direct

contact with asbestos in the Mill Area if the encapsulation is maintained. However, encapsulation is not an effective means to control other exposures, such as direct contact risks for occupants of the site over time as well as workers performing the adaptive reuse work planned to revitalize Ludlow Mills. Repair and encapsulation limits the reuse options to those without occupied space such as storage and is not a viable option when demolition of the building is necessary.

Asbestos encapsulation is the process of using a product that either coats or creates a membrane to prevent the asbestos fibers from getting into the air or penetrates the asbestos containing material binding the components together. Asbestos encapsulation can also be done by sealing off any areas containing asbestos with an air proof barrier. In some cases, asbestos encapsulation can be used to avoid the high cost of asbestos removal. Asbestos encapsulation is a cheaper option and is safe as long as the area does not need to be disturbed.

During repair and encapsulation, the Abatement contractor will isolate the portion of the building where repair and encapsulation is taking place most likely with sheets of plastic and provide self-contained showers and throwaway protective suits to prevent contamination of the workers. All tools and materials used must be sufficiently cleaned and all waste containing asbestos generated by the project, such the protective suits, will be bagged in plastic, and properly disposed of.

The Environmental Protection Agency does not recommend asbestos encapsulation where the asbestos is more than one inch thick, water damaged, has poor cohesive strength or where the asbestos is accessible to the people who are using the building. In these instances, it is better to remove the asbestos to minimize the risk to the occupants of the building.

Alternative #2 would severely restrict the ability of Westmass to move forward with the redevelopment of Ludlow Mills and specifically the demolition of the 300 Series Warehouse.

Alternative #3: Removal and Offsite Disposal: Removal and offsite disposal is the most effective way to eliminate risk to humans and the environment at the site, since ACM and other hazardous materials contamination will be removed, and the exposure pathways will no longer exist. All asbestos-containing and hazardous materials are totally removed from **Warehouse 199** in preparation for demolition, which will facilitate redevelopment activities. No further monitoring or maintenance of the asbestos-containing materials is needed.

The Abatement contractor will isolate and remove the portion of the buildings where the asbestos removal is taking place with sheets of plastic and provide self-contained showers and throwaway protective suits to prevent contamination of the workers. All asbestos-containing materials will be bagged in plastic, and proper disposal arranged.

An important aspect of asbestos-removal is air quality monitoring by an inspector who will be at the site throughout the abatement work. The selected firm monitoring the project will be completely independent from the contractor performing the work to provide oversight. This independent firm will set up an air monitoring station to ensure that the concentrations of asbestos fibers both inside and outside the work area do not

increase beyond standards required by MA DEP.

The Environmental Protection Agency recommends asbestos removal as the best method to minimize the risk to workers or the occupants of the building, the public and visitors to the Ludlow Mills complex.

Implementability

Alternative #1: No Action: No Action is a simple alternative to implement since no actions need to be undertaken by the owner.

Alternative #2: Repair, Encapsulation, Operation and Maintenance (O&M): These actions require significant effort and expense to implement given the extent of asbestos contamination in the windows in **Warehouse 199**. Repair and encapsulation will require access to all outside and confined spaces that were identified to have asbestos contamination. Testing will be required when the work is being performed. In addition, this alternative may require the long-term installation and monitoring of air quality monitoring stations. Because the site is active with diverse tenants and leasing space and adaptive reuse being planned for the structures throughout the mills, ongoing air sampling equipment, monitoring and maintenance of the encapsulation would require periodic testing and reporting. Because of these reasons this alternative is considered very difficult to implement over the long term.

Alternative #3: Removal and Offsite Disposal: Removal and offsite disposal is moderately difficult to implement. Coordination and testing will be required during cleanup activities (e.g., site control and air handling enclosures, dust suppression and monitoring). A minor increase in traffic will result from additional trucks transporting materials offsite. Testing will be required when the abatement work is being performed, however long-term monitoring and maintenance will not be required after offsite disposal. By taking advantage of the asbestos removal alternative the hazardous materials can be removed intact, placed in bags, sealed, transported and disposed of offsite. An opportunity currently exists within **Warehouse 199** as the building is vacant so remediation work can be performed efficiently.

The result of the cleanup and potential demolition would be advantageous to the overall Ludlow Mills Preservation and Redevelopment project and consistent with the approved Ludlow Mills Master Plan, approved Local Comprehensive Plan and Massachusetts Environmental Policy Act (MEPA) permitting.

Cost

Alternative #1: No Action: No direct costs are associated with the "No Action" alternative.

Alternative #2: Repair, Encapsulation, Operation and Maintenance (O&M): Direct costs would be incurred from relocation of business or uses of the buildings being remediated. No new use is projected for these buildings if the asbestos was abated via encapsulation in Alternative #2. An extensive Operation and Maintenance Plan and associated costs will be required. Major private investment and public funding for adaptive reuse and redevelopment, which are enabling other Mill buildings to be revitalized, would not be leveraged if the asbestos contamination remains in place. In

addition, asbestos encapsulation typically just defers the time when the asbestos will need to be removed. All future renovations to an area which has asbestos encapsulation will require the removal of the asbestos, adding that cost to the planned renovation.

Alternative #3: Removal and Offsite Disposal: The estimated cost is approximately $53,700 for remediation and removal of the ACM in the glazing and caulking and other hazardous materials. Some costs may be offset by salvaged materials and recycling.

Recommended Cleanup Alternative

The recommended cleanup alternative is **Alternative #3: Removal with Offsite Disposal.**

Alternative#1: No Action

The No Action alternative cannot be recommended since it does not effectively address public health risks posed by Hazardous Materials when the site is redeveloped. In addition, this alternative does not allow the achievement of the project goal of reuse, redevelopment and job creation. Extensive redevelopment of the historic mill and the adaptive reuse of several historic buildings could not occur.

Alternative #2: Encapsulation, Repair and Maintenance

The encapsulation, repair and maintenance alternative cannot be recommended since it does not address site risks posed by the hazardous materials. Although Alternative #2 is less expensive than removal and offsite disposal, it would require ongoing costs potentially including air monitoring and maintenance. Using asbestos encapsulation also only defers the time when the asbestos will need to be removed. Any proposed renovations for adaptive reuse and redevelopment to buildings or areas containing asbestos after encapsulation will require the removal of the asbestos, adding to the cost of renovation for the adaptive reuse or demolition planned. This makes Alterative #2 more difficult to implement than Alternative #3. In addition, this alternative does not enable the achievement of the project goals.

Alternative #3: Removal and Remediation with Offsite Disposal

This Alternative would achieve a permanent solution of preventing exposure by removing contamination at the site. Removal of the asbestos and other hazardous materials from the windows in **Warehouse 199** will allow for demolition and enable the adaptive reuse redevelopment program at the remainder of the Mills to proceed. Costs of ACM removal will not be included piece meal as buildings are rehabilitated and there may be cost savings from bidding a larger project. The removal and remediation with offsite disposal of asbestos and other hazardous materials is an eligible cleanup cost under the EPA grant.

Alternative #3 protects public health to the greatest extent and has the benefit of achieving the desired results for the long-term benefits of the project. For these reasons, Westmass has selected **Alternative #3: Removal and Remediation with Offsite Disposa**l and complete cleanup as the preferred Alternative and will be submitting this Alternative as a Grant Application to the FY 2023 US EPA Brownfield Cleanup program.

Sources:

Final Targeted Brownfields Assessment Report, KGSNE JV II, LLC, October 2023. Prepared for EPA Region 1.

ATTACHMENT H: FY24 Brownfield Cleanup Grant -Public Meeting

PUBLIC NOTIC

LUDLOW PLANNING BOARD LEGAL NOTICE SPECIAL PERMIT / HOME OCCUPATION

The Ludlow Planning Board will hold a public hearing in Ludlow Town Hall, Selectmen's Conference Room on **Thursday, October 26, 2023 at 7:00 p.m.** on the application of Heather Chateauneuf of **89 Grimard Street** Ludlow, MA (Assessors' Map 1C, Parcel 134) for: **mental health counseling via telehealth**.

If for any reason this hearing is cancelled, it will be rescheduled to Thursday, November 9, 2023.

Raymond Phoenix
Chairman

10/11, 10/18/2023

LUDLOW PLANNING BOARD LEGAL NOTICE SITE PLAN

The Ludlow Planning Board will hold a public hearing in Ludlow Town Hall, Selectmen's Conference Room on **Thursday, October 26, 2023 at 7:10 p.m.** on the application of Jeremy Valentin for the property located at **346-348 West Avenue, Ludlow, MA (Assessors' Map 12C, Parcel 158)** for the purpose of: **update site plan for change in business use**.

If for any reason this hearing is cancelled, it will be rescheduled to Thursday, November 9, 2023.

Raymond Phoenix
Chairman

10/11, 10/18/2023

Notice of Public Meeting
EPA Brownfields Cleanup Grant Application for ACM and Hazardous Materials Removal / Remediation
Ludlow Mills, Ludlow, Massachusetts
Applicant: Westmass Area Development Corporation

Westmass Area Development Corporation (Westmass) is applying for a FY2024 US EPA Brownfield Cleanup Grant for Asbestos and Hazardous Materials Abatement at two sites at the Ludlow Mills. A Public Meeting to solicit and accept public input, as well as review the proposed cleanup project and grant application, is scheduled to be held remotely **via Zoom** at **4:00 PM on Wednesday, November 1, 2023**.

Anyone wishing to participate shall, as soon as reasonably possible prior to the meeting, provide notice to Sarah la Cour, VP of Operations at (413)386-3124 Monday-Friday 8:30AM to 4:30AM or by email at s.lacour@westmassdevelopment.com. Those giving such notice will be provided a link to the meeting. At the start of the meeting, the Westmass representative shall announce those persons participating remotely and the information will be recorded in the meeting minutes. Anyone from the public is invited and welcome to attend. In addition to the draft grant application, a draft Analysis of Brownfields Cleanup Alternatives (ABCA) for each site will be available, by request, for review and comment.

Westmass will accept comments on the US EPA FY2024 Brownfield Cleanup Grant application and proposed cleanup project prior to the scheduled submittal of the grant application on November 13, 2023. Comments should be submitted in writing to Sarah la Cour, Westmass Area Development Corporation, One Monarch Place, Suite 1120, Springfield, MA 01144 or via email at the address above.

10/18, 10/25/2023

NOTICES

Date: October 17, 2023
Rosemary A. Saccomani
Register of Probate

10/25/2023

Notice of Public Meeting
EPA Brownfields Cleanup Grant Application for ACM and Hazardous Materials Removal / Remediation
Ludlow Mills, Ludlow, Massachusetts
Applicant: Westmass Area Development Corporation

Westmass Area Development Corporation (Westmass) is applying for a FY2024 US EPA Brownfield Cleanup Grant for Asbestos and Hazardous Materials Abatement at two sites at the Ludlow Mills. A Public Meeting to solicit and accept public input, as well as review the proposed cleanup project and grant application, is scheduled to be held remotely **via Zoom** at **4:00 PM on Wednesday, November 1, 2023**.

Anyone wishing to participate shall, as soon as reasonably possible prior to the meeting, provide notice to Sarah la Cour, VP of Operations at (413)386-3124 Monday-Friday 8:30AM to 4:30AM or by email at s.lacour@westmassdevelopment.com. Those giving such notice will be provided a link to the meeting. At the start of the meeting, the Westmass representative shall announce those persons participating remotely and the information will be recorded in the meeting minutes. Anyone from the public is invited and welcome to attend. In addition to the draft grant application, a draft Analysis of Brownfields Cleanup Alternatives (ABCA) for each site will be available, by request, for review and comment.

Westmass will accept comments on the US EPA FY2024 Brownfield Cleanup Grant application and proposed cleanup project prior to the scheduled submittal of the grant application on November 13, 2023. Comments should be submitted in writing to Sarah la Cour, Westmass Area Development Corporation, One Monarch Place, Suite 1120, Springfield, MA 01144 or via email at the address above.

10/18, 10/25/2023

See More Legals on Page 15

EPA Brownfield Cleanup Grant Application FY24
Westmass Area Development Corporation
Public Meeting

To present and discuss Westmass' application to the EPA for funding for the cleanup of three sites at the Ludlow Mills: Mill 11, Mill 9 and Warehouse 199

November 1, 2023
Via Zoom

MINUTES

The public meeting was opened via Zoom at 3:59 pm on Wednesday, November 1, 2023, by Sarah la Cour, VP of Operations for Westmass Area Development Corp.

The meeting was publicized in the Ludlow Register on October 18 & 25, 2023.

No requests for information, or the meeting link, were received from the public via email prior to the meeting. No one from the public was in attendance at the meeting.

The Zoom meeting closed at 4:10 pm.