AGENDA OF THE ECONOMIC DEVELOPMENT AUTHORITY

MONDAY, NOVEMBER 7, 2022, 5:00 PM
In person at City Hall, Room 604 - The Harry Maier Room.
Virtual attendance also available via Zoom.

A. Zoom Meeting Information.

1. This item contains Zoom information, instructions, and a link to the Virtual Comment Form.

B. Roll Call.

1. Members: Vacant - Chair, Tara Yang - Vice-Chair, Ald. Bill Morgan, John Calewarts, Glen Sherman, and Ace Champion

C. Approval of the Agenda.

1. Approval of the agenda for the November 7, 2022, meeting of the Economic Development Authority.

D. Approval of Minutes.

1. Approval of the minutes from the June 6, 2022, meeting of the Economic Development Authority.

E. Public Hearings.

1. Public Hearing on the draft EPA Brownfields Cleanup grant application and draft Analysis of Brownfield Cleanup Alternatives (ABCAs) for 402 and 420 S. Broadway, and 419 S. Maple Avenue.

F. Regular Business.

1. Consideration with possible action on draft EPA Brownfields Cleanup grant application and draft Analysis of Brownfield Cleanup Alternatives (ABCAs).

G. Informational.

1. Brownfields Programs Update.
2. Director's Report.
3. Date of next meeting: December 5, 2022

H. Adjournment.

1) THIS MEETING IS RECORDED: THE VIDEO OF THIS MEETING AND MINUTES ARE AVAILABLE ONLINE AT www.greenbaywi.gov
2) ACCESSIBILITY: Any person wishing to attend who requires special accommodation because of a disability, should contact the City Safety Manager at 920-448-3125 at least 48 hours before the scheduled meeting time so that arrangements can be made.
3) QUORUM: Please take notice that a majority or quorum of the Common Council will attend this Economic Development Authority meeting and will constitute a meeting of the Common Council for purposes of discussion and information gathering relative to this agenda.
4) REPRESENTATION: The party requesting the communication, or their representative, should be present at this meeting.

Virtual Meeting Instructions

Economic Development Authority

Zoom Meeting Information

Join Zoom Meeting

https://us02web.zoom.us/j/83574579318?pwd=TkVERjFsaElBN21WVURkcGo5bTlKdz09

Meeting ID: 835 7457 9318
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Find your local number: https://us02web.zoom.us/u/kPqStZxJD

Public Comments

If you wish to speak at this public meeting or leave a comment, please fill out the online Comment Form prior to the meeting.

Additional Information

1. Wisconsin Open Meetings Law still applies
    a. Persons interested in speaking to an item must state their name and address for the minutes.
    b. Committee/Commission/Board members will still follow *Roberts Rules of Order Newly Revised 12th edition*.
2. Please log into the Zoom meeting at least 10 minutes before the meeting begins to ensure a proper connection and that your technology is working.
    a. If you are a Board Member, please log into CivicClerk with a computer, laptop, or tablet device.
3. Once you are in the meeting please mute yourself.
    a. You may unmute yourself when you are called upon to speak.
4. Waiting room
    a. When you call in or connect via web or Zoom app, you will be placed in a "waiting room."
    b. The meeting host will then admit you to the meeting, and mute you upon entrance (you will still be able to hear and or otherwise observe the meeting).
5. Registering
    a. The host may ask you to register for the meeting. A registration link will be sent to you along with the invite. You'll receive another email confirming that you're registered for the meeting.
    b. If you're using a phone, your registration will be tied to an email.
6. Raising your hand
    a. Committee/Commission/Board members—you can either use CivicClerk and request to speak or you can also utilize the "raise your hand" tool in the Zoom platform (you'd need to use a computer or tablet) to let the host know you would like to speak. You can also un-mute yourself and start speaking.
    b. Persons with items on the agenda or other interested parties —you can also utilize the "raise your hand" tool on the Zoom platform via computer or mobile device. You will be allowed to speak once the committee, commission, or board has moved to "open the floor for interested parties to speak." Once discussion on your agenda item has concluded, the host will mute you, unless the committee opens the floor again.
7. What devices should I use?
    a. Smart phone (please see more detailed instructions on page 3)
    b. Land line
    c. Tablet— in advance of the meeting, please download the Zoom Meeting app by using either the Apple Store or the Play Store. You will be asked to input your name, to identify you for the meeting.
    d. Computer— you can access the meeting through a web browser by clicking on the meeting link, or through the Zoom Meeting app. If using the app, please download it in advance of the meeting. You will be asked to input your name, to identify yourself for the meeting.
    e. For tablet and computer users--if you download the app you may be asked to verify your email.

8. Zoom etiquette
    a. Muting yourself when you're not speaking will prevent your background noise from interfering with others' ability to listen to and participate in the meeting.
    b. If you're using a telephone, please identify yourself with your phone number and state your name and address before you speak. Zoom meeting hosts can see only your telephone number and will ask you to identify yourself.
9. Closed session
    a. Persons in the Zoom meeting will be put into a waiting room while the committee/commission/board meets in Closed Session. Participants will be admitted back into the Zoom meeting once the committee reconvenes in Open Session.
    b. Persons watching a Common Council meeting live on YouTube will see a gray screen with the City logo during closed session.
10. Persons interested in attending anonymously or listening to the meeting may call in by dialing *67 followed by the phone number in the Zoom Meeting Information box.

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1. Dial the phone number listed at the beginning of this document.
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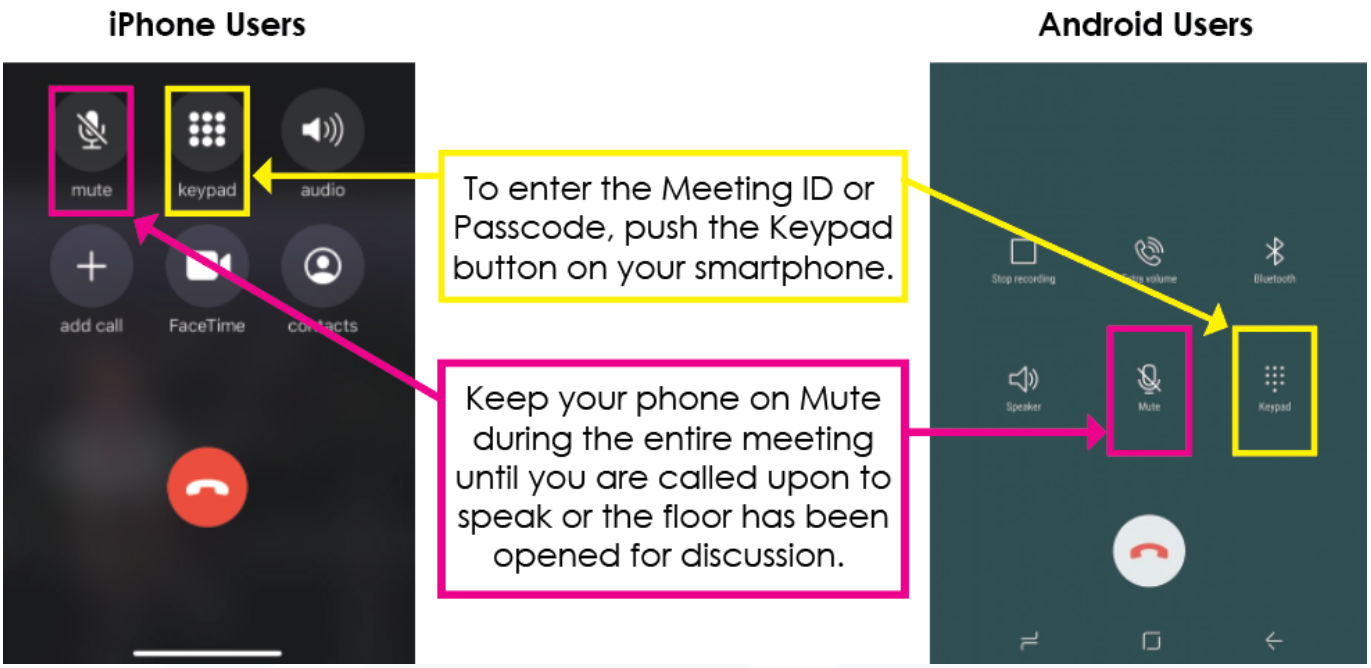
3. Once you are in the meeting, notify the meeting host that you are in and state your name.
4. If you do not wish to speak, please make sure your phone is on **Mute**
    a. If you're using a smartphone, look at your screen and click the Mute button



Report to the
Economic Development Authority of the City of Green Bay

MEETING DATE	PREPARED BY
November 7, 2022	Matt Buchanan, Staff

AGENDA ITEM # E.1

Public Hearing on the draft EPA Brownfields Cleanup grant application and draft Analysis of Brownfield Cleanup Alternatives (ABCAs) for 402 and 420 S. Broadway, and 419 S. Maple Avenue.

BACKGROUND

The public is invited to review and comment on the Green Bay Redevelopment Authority's draft EPA Brownfields Cleanup grant application and draft Analysis of Brownfield Cleanup Alternatives (ABCAs). If awarded, grant funds would assist in environmental cleanup activities at 402 and 420 S. Broadway, and 419 S. Maple Avenue, or the property commonly referred to as the former Badger Sheet Metal site. Starting on Friday, October 28, 2022, application materials were made available for public review at Green Bay City Hall, Room 608, 100 N. Jefferson Street, Green Bay WI 54301, and online at www.greenbaywi.gov/brownfields. Notification of the application and this public hearing were published in the *Green Bay Press Times* on October 28, 2022.

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

None

Report to the
Economic Development Authority of the City of Green Bay

MEETING DATE	PREPARED BY
November 7, 2022	Matt Buchanan, Staff

AGENDA ITEM # F.1

Consideration with possible action on draft EPA Brownfields Cleanup grant application and draft Analysis of Brownfield Cleanup Alternatives (ABCAs).

BACKGROUND

City staff is currently preparing an application for a Brownfields Cleanup Grant to help facilitate the remediation and redevelopment of the former Badger Sheet Metal site at 402 and 420 S. Broadway, and 419 S. Maple Avenue. The 4.54-acre property is impacted by a variety of contaminants in building materials, soil, and groundwater, which were caused by former industrial uses of the site, as well as from historic fill material placed on the site in the early 1900s.

Remedial action activities are warranted to facilitate redevelopment of the property, including:
- Building demolition including abatement of asbestos containing materials and/or lead-based paint;
- Excavation and landfill disposal of petroleum impacted soil;
- Excavation of impacted soil to construct the proposed greenway and restoration of a dry or wet basin that duplicates the footprint of a portion of the former slough to help manage regional flood events;
- Onsite management and/or landfill disposal of RCRA metal, PAH, and/or VOC impacted soils excavated during greenway construction; and
- Installation of imported soil and/or impermeable surface (i.e. asphalt, concrete and/or pavers) caps

After remediation, the site will be considered "shovel-ready" for redevelopment. City staff is currently negotiating terms of a development agreement with developer Impact Seven Inc. The developer has proposed constructing a $60 million mixed-income, multi-family development with 158 units and groundfloor commercial space along Broadway. The concept includes construction of a new public greenway which would provide a pedestrian connection through the site, connecting Seymour Park to the Shipyard. The greenway would follow the path of a former slough, and would serve as a green infrastructure corridor to collect runoff.

The anticipated cost for site remediation is $1,248,000, plus an additional $30,000 for grant administration and community outreach costs. If awarded, the Brownfield Cleanup Grant will provide $1,000,000 for eligible cleanup activities and a local match/cost-share is not required by EPA. City staff intend to apply for other grants to cover cleanup costs that exceed the Cleanup Grant funds. Funds from Tax Increment District (TID) #22 may also be considered to cover costs if necessary.

As the property owner, the Green Bay Redevelopment Authority (RDA) is required to serve as the official applicant for this grant opportunity; however, in it's capacity as the Brownfields Advisory Committee (BAC), the Economic Development Authority (EDA) shall advise City staff on matters pertaining to EPA-funded brownfields projects and applications for EPA brownfield grants. As such, staff seeks input on the draft application from EDA as well as the general public.

RECOMMENDATION

Direct staff to proceed with completing and submitting the EPA Brownfields Cleanup Grant application based on the input provided at the EDA meeting.

FISCAL IMPACT

The Brownfields Cleanup Grant application does not require a local match/cost share. If funded in full, the $1,000,000 grant is expected to cover approximately 78% of the estimated cleanup costs. Staff will seek other grants to cover the remaining 22% ($278,000) of costs for site remediation.

ATTACHMENTS

1. DRAFT FY2023_Green Bay RDA_Cleanup_Grant_Narrative 20221103
2. DRAFT ABCA for Badger Sheet Metal 20221103

1. PROJECT AREA DESCRIPTION & PLANS FOR REVITALIZATION:

1.a. Target Area & Brownfields:

1.a.i. Overview of Brownfield Challenges & Description of Target Area: The City of Green Bay (the City; population 107,395), is the third-largest municipality in Wisconsin and the flagship city of the larger Northeast Wisconsin (NEW North) region with a total population of 1.28 million people (U.S. Census, 2022) . Green Bay is located at the mouth of the Fox River at the Bay of Green Bay, and is at the epicenter of the world's largest concentration of pulp and paper mills (U.S. EPA, 2022). While industry brought prosperity to this region, it also resulted in significant soil, groundwater, and surface water contamination as indicated in its status as both a Superfund site (the "Fox River NRDA/PCB Releases") and one of the US Great Lakes Areas of Concern ("Lower Green Bay and Fox River AOC") (U.S. EPA, 2022). This is especially the case along Green Bay's near west-side neighborhoods (Census Tract 8), which is the Target Area of the planned cleanup activities.

The Target Area is located on the western shore of the Fox River across from Green Bay's downtown core. From the 1800s to the late 1970s the waterfront in the Target Area was thriving with river-dependent industrial businesses that provided good working-class jobs to residents who lived in the adjacent neighborhoods to the west. Similar to other "rust belt" cities in the Midwest over the past several decades, Green Bay has been forced to transform its manufacturing-based economy toward a services-based economy. This economic shift led to disinvestment in the Target Area's industrial facilities which eventually became antiquated and closed. As a result, many Target Area residents became unemployed, and the former industrial properties became blighted brownfield sites that continue to pose an environmental risk and block public access to the river. This disinvestment has spread to residential and commercial areas within the Target Area which is home to Green Bay's highest concentration of poverty (U.S. Census, 2022).

In 2020, the EPA, Wisconsin Department of Natural Resources (WDNR), and local agencies oversaw the completion of a $1.3 billion, 11-year cleanup project along the Fox River. As the health and safety of the river's water quality gradually improve, the demand for recreational activities on the water has substantially increased. Despite this environmental achievement, nearby brownfield properties draining to the river continue to hinder efforts to improve water quality. This is especially important to the Target Area's large Hmong refugee population who are subsistence fishers that value fishing as part of their cultural identity. Cleaning up the Target Area's brownfields, especially large properties like the former Badger Sheet Metal site (application project site), will allow the City and developers to facilitate reuse and neighborhood revitalization.

1.a.ii. Description of the Proposed Brownfield Site: The project will remediate what is known as the former Badger Sheet Metal site which is made up of 3 parcels totaling ±4.62-acres as described in Table A. The property lies west of South Broadway adjacent the Shipyard redevelopment site which received FY19 EPA cleanup grant funding. Specifically, the project includes conducting lead-based paint, asbestos, and restricted waste abatement, demolishing the blighted structures onsite, remediating contamination, and prepping the site for construction of a greenway and a 238-unit mixed-income housing development.

TABLE A – Property Details

Parcel #	Address	Acreage	Land Use	Existing Structures
3-572	402 S. Broadway	0.112	Barbershop (leased)	Brick commercial building
3-569	420 S. Broadway	2.195	Municipal storage	Metal warehouse (partial)
2-947	419 S. Maple St.	2.314	Municipal storage	Metal warehouse (partial)

Historic property records indicate that the property was primarily occupied by multiple residential homes with a former natural slough running through a large portion of the property from 1883 to 1907. The slough was filled sometime between 1907 and 1936 after which the southern portion of the property was used for industrial purposes which included a small tin shop, multiple warehouses, and at least four railroad spurs.

Between 1907 and 1936, a filling station was built onsite which remained in use until the mid to late 1960s. During this time, most of the site was occupied by Badger Sheet Metal Works which included large warehouses and shops until approximately 2010. After 2010 the warehouse building was sectioned off and rented to multiple small industrial and commercial tenants including two automotive repair shops, a crane company, and photo advertising company, until the City of Green Bay Redevelopment Authority (RDA) acquired the parcels in 2018.

The RDA's purpose of acquiring the parcels was to facilitate cleanup and reuse. Current structures onsite include a 42,000 square foot metal warehouse, and a 1,100 square foot brick commercial building. As an interim use, the City is currently using the metal warehouse building to store police evidence and equipment belonging the City's departments of Public Works, Fire, and Police. The brick commercial building is currently being leased to a local barbershop.

Environmental assessments conducted between 2018 and 2022 have identified the soil and groundwater contamination above Wisconsin Department of Natural Resources (WDNR) regulatory standard based on protection of groundwater and direct contact exposure. The contamination is also posing a vapor encroachment concern. Specifically, soil contamination containing polynuclear aromatic hydrocarbons (PAHs), Resource Conservation and Recovery Act (RCRA) metals, PCBs, and multiple volatile organic compounds (VOCs) including benzene and perchloroethylene (PCE) exceeding WDNR regulatory standards for groundwater protection and/or direct contact exposure. Arsenic, PAHs, and PVOCs remain in the groundwater in excess WDNR groundwater standards.

The contamination is believed to be primarily associated with historic urban fill utilized to fill in the former slough and a release of petroleum products on the eastern portion of the Property. which exceed regulatory thresholds. VOCs in groundwater are considered petroleum related compounds and correlate with areas of known soil impacted by the aforementioned petroleum release onsite.

In 2022, the City also assessed the existing structures onsite for asbestos, lead-based paint, and restricted waste. The assessment confirmed the presence of each hazard at multiple locations throughout both structures which will require proper abatement prior to their demolition.

The RDA requests $1,000,000 in funding assistance from the EPA to clean up the former Badger Sheet Metal site. As indicated by the Analysis of Brownfield Cleanup Alternatives (ABCAs) (Attachment A), the preferred Alternative 3 is estimated to cost $1,278,000. All cleanup costs exceeding the grant will be covered by the City's Tax Increment District (TID) #22. The City has approved a term sheet with a private developer (Impact Seven, Inc.) who intends to redevelop the site separately after the RDA completes the cleanup work to be funded by the grant.

1.b. Revitalization of the Target Area:

1.b.i. Reuse Strategy & Alignment with Revitalization Plans: As described in the attached ABCA, the reuse strategy of the Badger Sheet Metal site is part of a larger neighborhood revitalization effort that involves the cleanup and redevelopment of several area brownfield sites within Green Bay's Shipyard Corridor along South Broadway. The City/RDA developed this strategy using a variety of USEPA resources. The Shipyard Corridor has been identified as a target area in three of the City's last Communitywide Brownfields Assessment grants (FY13, FY17, and FY19). The FY19 grant funded a brownfields inventory of the entire Shipyard Corridor (113 parcels), with 47 being identified as a potential brownfield, including all parcels that makeup the former Badger Sheet Metal site.

The brownfield inventory was used to inform two USEPA-funded technical assistance grants that advance a reuse strategy for the Shipyard Corridor and the Badger site. The first was in March of 2020 with the Building Blocks for Neighborhood Revitalization Technical Assistance Grant. From this initiative, the City developed and adopted a list of implementation steps, including one to establish a long-term plan to reclaim, remediate, and redevelop the Badger Sheet Metal property (EPR, PC, 2020). That step was achieved in November 2020 after the City's adoption of the Shipyard Corridor Redevelopment Plan, which was prepared using the second USEPA technical assistance grant.

The Shipyard Corridor Redevelopment Plan which established a reuse strategy for priority brownfield sites, including Badger Sheet Metal (Stantec, 2020) (The Lakota Group, 2014). The plan establishes a clear vision for the Property that includes high density mixed-income housing over ground floor retail uses. The plan also envisions a greenway on the south end of the site that follows the path of a historic slough that was formerly on the property but was filled in the early 1900s. As a result, the area is prone to flooding. The greenway would incorporate green infrastructure to help alleviate flooding, while also providing a new pedestrian connection between the Seymour Park neighborhood to the City's planned Shipyard redevelopment located along the Fox River. The City has partnered with a private developer to implement the vision with the goal of starting redevelopment immediately after RDA completes the cleanup work to be funded by this USEPA grant request.

Planned Public improvements include:

- Brownfield Remediation – Previous industrial uses impacted the Property with significant levels of soil contamination. Starting in 2023, the City intends to begin demolition of the existing building structures and remediating contamination, with the assistance of state and federal grants when possible. This work will have a notable impact on the environment and residents' quality of life. It will reduce offsite migration of contaminants via airborne dust, stormwater, and groundwater migration, directly improving residents' health conditions, especially for the neighborhood's sensitive populations that makeup a significant proportion of area population.
- Green Infrastructure Corridor – A public greenway is planned along the path of a historical slough that once present at the property. This greenway would incorporate innovative green infrastructure for bioretention to improve stormwater runoff quality and help reduce flooding risks by providing temporary storage. The greenway would also offer an improved pedestrian connection between the Seymour Park neighborhood to the west and the Shipyard and Fox River to the east.

Private improvements (after USEPA grant closeout) include:

- Investments in Housing – In May 2022, the City approved a term sheet with Impact Seven that supports the construction of three four-story buildings consisting of 238 mixed-income apartments over ground-level structured parking and co-located businesses. The project also features a green roof courtyard over the parking structure. This $60± million development will help the community address its housing shortage by providing a mix of affordable, workforce, and market-rate units.
- Neighborhood Business Support – Impact Seven's project includes ground floor commercial space along Broadway and intends to fill those spaces with established neighborhood businesses currently operating on brownfield sites. Specifically, a local barber shop and the Green Bay Bicycle Collective have been offered space within the development for rates comparable to what they're currently paying.

The specific reuse plans for the Badger site described above directly align/implement the two aforementioned USEPA-funded plans (2020 Building Blocks Neighborhood Revitalization Strategies Report and 2020 Shipyard Corridor Redevelopment Plan), as well as the City's 2014 Downtown AuthentiCity Plan where the site is specifically identified (pages 20 and 52) as representing "a future potential for mixed-use, residential, cultural campus, and/or recreation redevelopment" (The Lakota Group, 2014). The project also implements the City's Comprehensive Plan for future downtown land uses (cite source), as well as the City's current Parks, Recreation, and Open Space Plan that identifies a future public greenway through the Badger site (cite source).

1.b.ii. Outcomes and Benefits of Reuse Strategy: If awarded, this grant will allow for the abatement of lead-based paint, asbestos, and restricted waste; the demolition of blighted structures; and the remediation of soil and groundwater contamination at the former Badger Sheet Metal site. These cleanup activities will also allow for the subsequent construction of a public greenway and $60± million redevelopment project proposed by Impact Seven Inc., a non-profit, affordable and workforce housing developer.

The public greenway is planned along the path of a historical slough that once flowed through the property. This greenway would incorporate innovative green infrastructure for bioretention to improve stormwater runoff quality and help reduce flooding risks by providing temporary storage. The greenway would also offer a pedestrian connection between the Seymour Park neighborhood to the west and the public Shipyard redevelopment and Fox River to the east.

As further described in Section II.A.2, residents of the neighborhood are significantly more likely to fall into sensitive population categories. According to USEPA's 2021 Social Vulnerability Report, the most severe impacts of climate change fall disproportionately upon underserved communities who are least able to prepare for, and recover from, heat waves, poor air quality, flooding, and other impacts. The degree to which four socially vulnerable populations— defined based on income, educational attainment, race and ethnicity, and age—may be more exposed to the highest impacts of climate change. EPA's analysis indicates that racial and ethnic minority communities are particularly vulnerable to the greatest impacts of climate change (U.S. EPA, 2021).

Using the U.S. EPA's Environmental Justice Screening and Mapping Tool (version 2.1), the population within one mile of the project site is in the 77th percentile nationally for low incomes, 71st percentile nationally for education less than a high school degree, and 62nd percentile nationally for being linguistically isolated. This one-mile area's population is also significantly more racially and ethnically diverse (56% people of color) in comparison to the the City average (31%) and State average (19%) (US EPA Environmental Justice, 2022). Therefore, the runoff collected by the new greenway will help make the neighborhood more resilient to flooding/climate change impacts and will provide residents with active transportation options that connect to public recreational facilities, natural resource amenities, and jobs along Broadway.

Impact Seven's private redevelopment that is planned after site cleanup includes the construction of three four-story buildings consisting of 238 mixed-income apartments over ground-level structured parking and co-located businesses. The project also features a green roof courtyard over the parking structure. This $53± million development will help the community address its housing shortage by providing a mix of affordable units (below 80% area median income) and workforce units (between 80% and 120% area median income). The redevelopment is expected to increase property values on the site by $18 million to $20 million, yielding an estimated $450,000 in local property taxes annually, enabling greater public investments in neighborhood infrastructure, amenities, and services.

Impact Seven Inc. also plans to provide 10,100 square feet of ground floor commercial space along Broadway. The developer has offered to provide 2,800 square feet to the barbershop business currently operating on the Badger Sheet Metal site, at a rental rate comparable their current rate with RDA. They are also in negotiations to lease 4,500 square feet to the Green Bay Bicycle Collective, a local non-profit organization located in the Shipyard Corridor. Another 2,800 square feet of commercial space will be made available for lease to another business that has yet to be identified.

Therefore, reuse strategy will result in clear outcomes and benefits that stimulate economic development through increases in property values, the creation of new affordable and workforce housing, and the retention and creation of temporary and permanent jobs. The community will also benefit from a new public greenway that will make the neighborhood more resilient to flooding, as well as more physically connected to jobs, services, and amenities on Broadway and at the Shipyard.

The proposed redevelopment will also incorporate building materials and design measures to maximize energy efficiency. Impact Seven Inc only develops properties it intends to own and maintain for years to come. They, therefore, have a vested interest in utilizing building methods and materials that create a building that is energy efficient and will withstand the test of time.

1.c. Strategy for Leveraging Resources

1.c.i. Resources Needed for Site Characterization: Should additional resources be needed for further

site characterization the RDA may rely on several funding sources as further described under Table B below. These include bonded funds readily available from the established TIF District (TID #22) where the Badger Sheet Metal site is located. If necessary, the City may also rely on its Tax Increment District Affordable Housing (TIDAH) fund, which are locally collected, readily available funds meant to cover costs that support affordable housing projects. Ideally, the City/RDA will rely on USEPA's FY23 Assessment Grant funds, which the City is applying for concurrently with this Cleanup Grant application. Other potential resources include the Wisconsin Department of Natural Resources' Assessment Monies (WAM) program, the brownfields grant program through Wisconsin Economic Development Corporation (WEDC), or USEPA's Targeted Brownfields Assessment (TBA) program.

1.c.ii. Resources Needed for Site Remediation: As further described in Table B below, the City/RDA have identified several potential resources to leverage USEPA Cleanup Grant funds and complete the remediation activities described under Alternative 3 of the attached ABCA. The RDA may rely on readily available bonded funds from the established TIF District where the Badger Sheet Metal site is located. If necessary, the City may also rely on its Tax Increment District Affordable Housing (TIDAH) fund, which are locally collected, readily available funds meant to cover costs that advance affordable housing projects. As of the timing of this application, the City has access to $X in TIF District and TIDAH funds that are readily accessible and authorized for use for remediation activities at the Badger Sheet Metal site.

During the construction of the future private redevelopment, Impact Seven Inc will incur additional remediation costs that will be separate from this grant and beyond the activities described in the ABCA. The City/RDA and Impact Seven have developed a remedial action plan which estimates $X in additional remediation costs. Impact Seven, Inc intends to apply for a $250,000 Brownfields grant from WEDC, and a $400,000 loan through the City's USEPA-funded Brownfields Revolving Loan Fund (RLF) program. Applications for these funding programs have not yet been submitted but securing USEPA brownfield cleanup funds will significantly strengthen the RDA's and/or developer's ability to leverage additional grants.

The developer's future remediation costs may also be covered by their own cash contribution to the project, and through their anticipated TIF incentive from the City of Green Bay. In May of 2022, the City of Green Bay and RDA approved a term sheet with Impact Seven Inc detailing terms of a future development agreement for the Badger Sheet Metal site. The term sheet specifies that the City is prepared to commit 70% of new tax increment generated from the redevelopment toward certain eligible costs incurred by the developer, including expenses for remediation. To document the City and RDA's financial commitment, the approved term sheet and meeting minutes have been included in the application packet.

1.c.iii. Resources Needed for Site Reuse: The City, RDA, and private developer have identified several funding sources for reuse activities which will occur after the RDA completes the grant-funded remediation and transfers ownership of the property to Impact Seven. These funding sources are further detailed in Table B below.

To complete green infrastructure improvements for the proposed greenway, the City/RDA intend to apply for grants through the Fund for Lake Michigan program and USEPA's Great Lakes Restoration Initiative (GLRI). Public investments infrastructure and greenways are also eligible uses for the City's readily available bonded funds held by TID #22.

Impact Seven's current proforma includes several funding sources to cover the estimated $60 million redevelopment cost for their 158-unit, mixed-use project. Beyond conventional financing

($X) and their own private investment ($X), Impact Seven expects to utilize the City's TID #22 funds. The approved term sheet specifies that the City is prepared to commit 70% of new tax increment generated from the redevelopment toward certain eligible costs the developer incurs, including construction of their mixed-use buildings. This incentive is expected to yield $X in property tax reimbursements to Impact Seven through 20XX.

Beyond TIF assistance, Impact Seven intends to apply for other City-controlled funds dedicated to affordable housing. These include the City's locally controlled TIDAH funds, the City's allocation of federal HOME funds, and the City's allocation of federal ARPA funds. In 2022, the Green Bay Common Council authorized $1.5 million of ARPA be dedicated to affordable housing projects. As of this application, none of those funds have been committed to specific projects. City staff are currently coordinating with Impact Seven to determine the total amount of City assistance required and the most appropriate source.

Impact Seven is also considering other resources to fund their affordable housing project, including affordable housing vouchers through Brown County, and potentially tax credits through Wisconsin Housing and Economic Development Authority (WHEDA). Applications for these funding programs have not yet been submitted but securing USEPA brownfield cleanup funds will significantly strengthen the developer's ability to leverage additional grants.

TABLE B - Resources Needed for Site Characterization, Remediation, and Reuse

Name of Resource	Is the Resource for (1.c.i.) Assessment, (1.c.ii.) Remediation, or (1.c.iii.) Reuse Activities?	Is the Resource Secured or Unsecured?	Additional Detailed or Information About the Resource
Add rows as needed			

1.c.iv. Use of Existing Infrastructure: The Badger Sheet Metal project is an urban infill project that will use the existing infrastructure systems for transportation (roads, sidewalks, bike lanes, and transit), water, sewer, gas, and telecommunication. Certain roads and bike/pedestrian amenities within the project area will be enhanced to better accommodate the greater intensity of new land uses. These enhancements will be funded by a combination of sources, including the City's public works budget, Community Development Block Grant Funds, and/or TIF funds. The City is coordinating with the WEDC and Wisconsin Department of Transportation to identify potential grants for these transportation improvements. EPA cleanup funds would assist in leveraging these additional grant dollars.

2. COMMUNITY NEED AND COMMUNITY ENGAGEMENT

2.a. Community Need

2.a.i. The Community's Need for Funding: Blight and environmental contamination has suppressed investment in the Shipyard Corridor for over 45+ years, which has led to degraded housing and limited access to quality jobs. The City's 2018 Shipyard Investment Strategy Report revealed that property values in the Target Area are depressed at 65% lower than the overall City, and 2/3rds of buildings are in need of exterior repair (cite Source). According to Census data, 46% of residents within the Target Area Census Tract live below the poverty line, as indicated in Table C below (U.S. Census, 2022). The City and RDA have been unable to attract developers to invest in cleanup and redevelopment of the area, so we made the initial investment by developing public recreational amenities at the adjacent Shipyard site to the east of Badger Sheet Metal. The Shipyard promises to be a prominent destination within the upper Midwest. Once a center for rail and water transport of raw materials, the now vacated brownfield is being dramatically transformed into a destination of recreation and tourism. With USEPA's assistance (FY19 Brownfields Cleanup Grant and FY22 GLRI grant), Phase 1 of the Shipyard redevelopment is

currently underway with the construction of waterfront improvements and is anticipated to be complete by the end of 2023.

By spearheading the investment in Shipyard, the City and RDA have been able to attract a partner, Impact Seven, to redevelop the adjacent Badger Sheet Metal property. Yet this private development is contingent upon the City/RDA first demolishing blighted structures and remediating contamination. Therefore, the RDA requires the assistance of EPA to address the contamination and remediate the site to catalyze future redevelopment in this low-income area.

2.a.ii. Threats to Sensitive Populations

2.a.ii(1): Health or Welfare of Sensitive Populations: As shown in Table C below, the Badger Sheet Metal project will remediate multiple contaminants from soil and groundwater that are known to cause serious health issues to people who are exposed. According to the Centers for Disease Control, these contaminants can enter the air, water, and land from wind-blown dust and may get into water from runoff and leaching.

TABLE C - Identified Contaminants and Health Impacts

Contaminant at One or more parcels	Identified in soil	Identified in groundwater	Potential Health Impacts
PAHs	X	X	Cancers, damage to kidney and liver
RCRA Metals	X	X	Cancers, infertility, damage to brain, lungs, kidneys, and nervous system
VOCs	X	X	Cancers, blood disorders, anemia, immune system deficiency

Source: U.S. Centers for Disease Control

Those at greatest risk of exposure are the sensitive populations who live alongside these properties that have grown accustomed to their presence and may not view them as dangerous. As shown in the Table E below, the area is home to the City's highest concentration of people living below the poverty line (46.2%) and a high concentration of racial/ethnic diversity, with roughly 43.5% being members of a racial or ethnic minority. Significant population groups within the neighborhoods include Blacks/African Americans (18.1%), Hispanics/Latinos (10.3%) and Asians (5.5%), which primarily include the neighborhood's large Hmong refugee population.

Lower literacy rates, lower income, and concentration in urban centers have made these sensitive populations more susceptible to the health and economic impacts of brownfields. In addition, a significant percentage of the Hmong who immigrated to the US were farmers and subsistence hunter/gatherers. The Hmong are also some of the region's most avid urban farmers and tend to cultivate small urban plots that have been cleared from intensively developed older urban neighborhoods. Many of these "SPIN" (Small Plot Intensive) farms occur on abandoned lots often without the permission of the owner or any environmental oversight. The cultural tendency toward "growing their own" makes the Hmong susceptible to environmental hazards via their consumption of home-grown food in potentially tainted soil.

TABLE D - Sensitive Populations

Demographic Indicators	**CT 8 Target Area**	**Green Bay**	**Brown County**	**State of WI**	**U.S.**
Poverty rate	**46.2%**	17.2%	11.3%	12.3%	14.6 %
Minority population	**43.5%**	28.9%	18.4%	18.2%	38.5%
Asian population	5.5%	4.5%	3.6%	3.1%	6.3%
Black/African American	**18.1**	6.2%	3.7%	7.4%	13.9%
Hispanic population	10.3%	14.4%	8.3%	6.6%	17.6%

English not spoken at home	17.3%	17%	10.6%	8.7%	21.3%
Per capita income	**$14,689**	$24,660	$29,874	$30,557	$31,177
Median household income	**$21,979**	$43,063	$56,775	$56,759	$57,652
Median home value	**$80,000**	$128,000	$163,200	$169,300	$193,500
Age: Under 5 Years	5.5%	7.8%	6.6%	5.9%	6.2%
Age: 5 to 9 Years	**12.5%**	6.6%	6.9%	6.3%	6.4%

Source: (U.S. Census, 2022).

2.a.ii(2) Greater Than Normal Incidence of Disease and Adverse Health Conditions: The best local health data offering information on the incidence of disease is only available at the county-scale. Brown County Health Department (BCHD) data from 2015 indicated that the County has higher asthma rates (40.4 ER visits per 10,000 residents) than the State (37.1 ER visits per 10,000) and that lung cancer is prevalent with 61.1 cases per 10,000 people compared to the national average of 56.3. In 2015, lung cancer caused more deaths (92) than any other type of cancer in the County. The most relevant health data that is localized to the Target Area comes from the EPA's Environmental Justice Screening and Mapping Tool, provided in Table F below. This data demonstrates significantly higher risks several serious health conditions in the Target Area compared to the State of Wisconsin and the U.S., based on environmental health indicators. Proximity to contaminated sites and hazardous waste is also significantly higher in the Target Area.

TABLE E: Environmental Health Indicators

Environmental Health Indicators	Census Tract 8 (Target Area)	
	Percentile in State	Percentile in U.S.
Air Toxics Cancer Risk	73	**<50th**
Respiratory Hazard Index	81	**50-60th**
Traffic Proximity and Volume: High traffic volumes can result in worse air quality (volume/distance to roadway).	96	**91**
Lead Paint Indicator	85	**89**
Superfund Proximity: Superfund sites are especially contaminated sites that the USEPA has set aside special funding to clean. (sites/distance)	93	**92**
Hazardous Waste Proximity	92	**91**
Proximity to Risk Management Plan (RMP) Facilities: (sites/distance)	**87**	**98**

Source: (US EPA Environmental Justice, 2022)

Reproductive health in the City has also been compromised, potentially due to exposure to brownfields. In 2015, BCHD reported that 10.1% of births are pre-term and 6.4% of newborn babies have low birth weights. In addition, babies born to Asian mothers are disproportionately susceptible to low birth weights (10.1%). According to the 2015 Wisconsin Department of Health and Family Services (WDHFS) data, Infant Mortality Rates for children with Hispanic mothers or of other ethnicity living in the City (47.6 per 1,000 live births) significantly exceed those for the State (5.7 deaths per 1,000 live births) (Source). To address these jarring health indicators it is critical that the City work to reduce exposure to contaminated sites and promote redevelopment of viable businesses that provide employment opportunities with health care benefits particularly targeted for the City's minorities.

Furthermore, during 2001-2016, a total of 132 children with lead poisoning (blood levels of lead greater than or equal to five micrograms per deciliter) were recorded by the State of Wisconsin Department of Health and Family Services within the Target Area. The effects of lead poisoning are additive, and the additional environmental sources of lead associated with brownfield sites in these areas represents an acute threat for children already having elevated blood levels of lead. The blight associated with brownfields contributes to the low value of homes in the target areas, which in turn, reduces the incentive for owners to invest in renovations that could reduce exposure risks.

The EPA grant will assist the RDA in remediating 4.62-acres brownfields contaminated with substances

known to cause the health issues (cancers, fertility issues, respiratory issues) reported in the area. This cleanup effort should help improve health conditions, especially for the Target Area's sensitive populations which makeup a considerable proportion of area residents, and who may struggle to pay for healthcare.

2.a.ii(3)Promoting Environmental Justice: The disinvestment in the Target Area since the 1970s has led to widespread blight, low quality housing, and a lack of quality jobs. As indicated in Table E above, the Target Area now has Green Bay's highest concentration of poverty. According to Census data, 46% of residents live below the poverty line, and the area's median household income ($21,979) is just over half of the City's (43,063) and just over one-third of the country's median household income ($57,652). As indicated in Table F above, these residents are disproportionately impacted by the negative environmental health conditions caused by the area's brownfields. Remediation and redevelopment of the Badger Sheet Metal site will reduce the threat of direct contact with contaminants at the Site, as well as potential offsite migration of contaminants via airborne dust, stormwater and/or groundwater migration. If awarded, this grant would allow for the remediation of ±4.62 acres contaminated land. This will directly improve health conditions, especially for the Target Areas' sensitive populations (Table D) which makeup a considerable proportion of area residents, and who may struggle to pay for healthcare.

2.b. Community Engagement:
2.b.i. Project Involvement:
2.b.ii. Project Roles:

TABLE F: Community Partners

Partner Name	Point of contact	Specific Role in the project
On Broadway, Inc./Broadway Business Improvement District	Brian Johnson, Director Brian@OnBroadway.org 920.437.2531	Business community outreach. Assist in site design, cleanup, and future programming.
Green Bay Neighborhood Leadership Council	Will Peters, Neighborhood Specialist WillPe@greenbaywi.gov 920.448.3150	Area resident outreach and assist in develop Public Participation Plan. Assist in site design, cleanup and future programming.
Seymour Park Neighborhood Association	Miriah Kelley, President Miriah.kelley@gmail.com 920.309.1549	Area resident outreach and providing input for site design and programming.
Impact Seven Inc	Carol Keen	Developer

2.b.iii. Incorporating Community Input: The RDA has worked extensively, and will continue to work closely with our community partner organizations (Table F) to reach individuals and families most affected by the project to share information and gain input that will guide decisions. The City's vision for revitalizing the Shipyard Corridor and preparing reuse plans for the Badger Sheet Metal site were established through substantive input from stakeholders gathered through one of most comprehensive public engagement effort the City has coordinated in recent years. In close coordination with the Seymour Park Neighborhood Association and the Broadway Business Improvement District (BID), the City has held three public open house meetings in the Shipyard Corridor (over 300 attendees) and four focus group/stakeholder discussions (over 75 attendees). One of the public meetings and two of the stakeholder discussions were held in partnership with the USEPA, as part of two technical assistance grants (Building Blocks for neighborhood revitalization strategic plan in March 2020 and the Shipyard Corridor Redevelopment Plan in November 2020).

Furthermore, the RDA has held three public meetings on Impact Seven's specific redevelopment proposal since May of 2021. RDA plans to hold at least one additional meeting in the coming months to

consider a final development agreement and receive additional community input on the redevelopment plans, site design, and programming.

The RDA and City's community engagement efforts will continue after design is complete and remediation and redevelopment are underway. The City of Green Bay Economic Development Authority (EDA) currently serves as the City's Brownfields Advisory Committee (BAC), providing guidance for the implementation of EPA Brownfields Assessment Grant funds. The BAC will continue to serve in this capacity with the implementation of cleanup funds. The BAC holds monthly public meetings where brownfield activities are regularly reported by staff, public input is sought, and direction is provided by the BAC. These meetings are held in a hybrid virtual/in-person format to maximize public participation.

3. TASK DESCRIPTIONS, COST ESTIMATES, AND MEASURING PROGRESS

3.a. Proposed Cleanup Plan: As shown in the Analysis of Brownfield Cleanup Alternatives (ABCAs) (Attachment A), the preferred Alternative 3 proposes onsite management and capping of RCRA metal, PAH, and VOC impacted soil generated during construction of the proposed green infrastructure corridor and petroleum release area. Alternative 3 also describes excess impacted soil, especially soils exhibiting petroleum odors will be transported offsite for landfill disposal. The proposed cleanup plan includes the installations and maintenance of engineering and institutional controls to prevent exposure to residual contaminants. Engineered controls will consist of clean soil caps that will consist of impermeable surfaces (i.e. asphalt and concrete) or a minimum 18-inches of clean soil in landscaped areas. Additional groundwater monitoring and completion of the hardscape engineered barriers/caps outside of the future greenway is beyond the scope of this proposed cleanup but will likely include Property amenities (e.g., buildings, parking lots, sidewalks, etc.) to be completed directly by the developer. The approach is expected to perform satisfactorily so long as monitoring and maintenance of the engineered barrier is conducted.

Maintenance of the engineered barrier and restriction of groundwater consumption at the Site will be accomplished through an institutional control (i.e. no further remediation Letter (NFR) letter). This approach is considered the most reliable and feasible to implement of the alternatives presented in the ABCA for the Property.

3.b. Description of Tasks/Activities & Outputs:
3.b.i. Project Implementation:
3.b.ii. Anticipated Project Schedule:
3.b.iii. Task/Activity Lead:
3.b.iv. Outputs:

Task 1: Grant Administration
i. Project Implementation: Procure QEP; Prepare quarterly reports; Annual financial reports; MBE/WBE Reports; Update ACRES; Grant closeout report.
ii. Anticipated Project Schedule: QEP procured by the time the Cooperative Agreement is issued (October 1, 2023). Quarterly progress reports will be January, April, June, and October 30th of each year with the first due on January 30, 2024. Annual DBE reports will be submitted by October 30th of each year with the first due in 2024. Grant closeout report expected to be completed for no later than October 30, 2027.
iii. Task/Activity Lead: The RDA Project Manager (PM) Matt Buchanan will oversee management of the Cooperative Agreement and serve as a liaison with EPA Region 5. Mr. Buchanan with assistance from the QEP will be responsible for assuring compliance with all grant requirements.
iv. Output: Administrative records; QEP procurement documentation; Quarterly reports (16); annual financial reports (3); MBE/WBE reports (3); Grant closeout report (1)
Task 2: Cleanup Activities
i. Project Implementation: Adapt existing QAPP for use on the project; Develop waste profiles; Prepare RAP/MMP for reuse of materials onsite; Develop bid spec; retain remedial contractor(s); Implement cleanup plan described in Section 3.a.; Prepare construction documentation report; and develop institutional controls. Non-

EPA grant resources to be utilized include City approved funds from TID #22 to supplement cleanup after grant funding is exhausted (~ $105,000).
ii. Anticipated Project Schedule: Prepare QAPP, SSSAP, and develop waste profiles (Q1-Q3 FY2024); Prepare RAP/MMP for WDNR approval (Q3-Q4 FY2024); Prepare bid specs and retain remedial contractor(s) (Q1-Q3 FY2025); Implement cleanup plan (Q4 2025 – Q1 FY2027); Prepare documentation report and develop institutional controls (Q2-Q3 FY2027).
iii. Task/Activity Lead: RDA PM along with the QEP with input from WDNR and USEPA project managers.
iv. Output: QAPP (1); SSSAP (s); Waste Profile(s); RAP/MMP (1); Bid documents; Construction Documentation Report; Institutional controls
Task 3: Community Outreach
i. Project Implementation: Prepare and implement a Site-Specific CIP. Activities will likely include hosting public meetings/forums to discuss site cleanup and redevelopment plans; development and distribution of marketing and informational materials, and joint outreach and education efforts with community partner organizations.
ii. Anticipated Project Schedule: For the purposes of this grant, scheduled outreach activities will begin as early as Q1 FY2024 and will end with completion of construction by Q1 FY2027.
iii. Task/Activity Lead: RDA PM and BAC with input from the QEP.
iv. Output: (1) CIP; Deliverables for meetings (8); Sign-in sheets; Handouts; and Factsheets

3.b. Description of Tasks/Activities and Outputs: Task 1 – Grant Administration): City staff will oversee management of the Cooperative Agreement. The City's brownfields project manager will serve as a liaison with EPA Region 5 and be responsible for assuring compliance with grant requirements.

Task 2 – Remediation Activities: The draft ABCAs for the Site and will be submitted to the WDNR for review during the first half of 2023. Following execution of the cooperative agreement, the City/RDA will prepare final ABCAs and a detailed RAP and specifications. The final ABCAs and RAP will be submitted to USEPA and WDNR for review and approval. Cleanup activities will include procuring a Qualified Environmental Professional (QEP), submitting and obtaining approval of Quality Assurance Project Plan, health and safety plan and site preparation, site capping, groundwater monitoring, and engineering. These activities will be overseen by a QEP and are anticipated to start in July 2023 and be completed by December 2024. Following completion, the QEP will prepare a report documenting the remedial action activities and request WDNR case closure. City staff will oversee the entire cleanup process through site closure.

The total project cost is estimated to be $1,278,000 for cleanup activities. The RDA seeks $1,000,000 in USEPA assistance. The cost share total to be provided by the RDA/City includes $248,000 which may be covered by other grants (yet to be secured) or either the City's readily available bonded funds in TID #22 or secured TIDAH funds.

Task 3 – Community Outreach: The City of Green Bay will lead in overseeing community outreach efforts. A Public Participation Plan will be drafted to guide engagement efforts during cleanup and construction. For the purposes of this grant, scheduled outreach activities will begin as early as June 2023 and will end with completion of remediation activities by December 2023. Outreach efforts will include additional public meetings and forums, development and distribution of marketing and informational materials, and joint outreach and education efforts with community partner organizations.

3.c. Cost Estimates:

Table H: Grant Funding

Budget Categories	Project Tasks

		Task 1 Grant Administration	Task 2 Cleanup Activities	Task 3 Community Outreach	Total
Direct Costs	Travel	$0	$0	$6,000	$6,000
	Equipment	$0	$0	$0	$0
	Supplies	$0	$0	$2,000	$2,000
	Contractual	$10,000	$970,000	$12,000	$992,000
Total Direct Costs		$10,000	$970,000	$20,000	$1,000,000
Indirect Costs		$0	$0	$0	$0
Total Federal Funding (not to exceed $1,000,000)		$10,000	$970,000	$20,000	$1,000,000
Cost share		$0	$278,000	$0	$278,000
Total Budget		$10,000	$1,248,000	$20,000	$1,278,000

Task 1 – Grant Administration ($10,000): The City estimates $10,000 (100 @$100/hour) will be needed for QEP to assist with reporting requirements. Outputs will include: Quarterly progress reports (16); annual DBE reports (4); final closeout report (1); and ACRES updates (as needed).

Task 2 – Cleanup Activities ($970,000): This budget includes all contractual costs for remediation activities and oversight developed as part of the City's EPA cleanup grant with a detailed breakdown included in the attached ABCAs (Attachment A). Cleanup contractor costs include prevailing wages under the Davis-Bacon Act. The cost share of $104,350 will be paid by the RDA through TID funds. Outputs will include: Final ACBAs; Final RAP/MMP; Final QAPP; Contractor RFPs and bid results; Contractor Pre-Work Submittals; and a Remedial Action Documentation Report.

Task 3 – Community Outreach ($20,000): The budget includes $12,000 (120@ $100/hour) in contractual services to assist in facilitating community outreach efforts. In addition, $6,000 in travel costs ($1,500/person/conference) is budgeted for two City staff members to attend two National Brownfields conferences (or alternative relevant conferences) The budget also includes $2,000 for supplies including $500 for printing and $1,500 for mailing expenses associated with public notices. Additional City staff time for public outreach efforts will not be reimbursed by the grant. Outputs will include: Outreach meetings (4 total) with notices, agendas, presentations, sign-in sheets, and meeting notes; and Outreach materials (fact sheets; results summary sheets; website updates w/ all materials prepared in both Spanish and English).

3.d. Measuring Environmental Results: Project outcomes include improved health and welfare in the Target Area, the creation of public greenway, development of the $60 million mixed-use redevelopment by Impact Seven, and the promotion of further community revitalization.

Specifically, the RDA will measure the following:

Environmental Cleanup Results: The anticipated short-term cleanup results or outcomes for the project will include: 1) the quantity and mass of contaminated soil, and associated mass of individual contaminants of concern remediated, 2) the land area made safe for non-industrial/commercial use through installation of engineered caps.

Redevelopment Outcomes: The eventual long-term redevelopment outcomes that will be tracked, measured, and evaluated will include: 1) acres of land for which environmental issues have been resolved and made available for reuse, 2) dollars of public and private funding leveraged. Jobs created, and local neighborhood jobs created. All outputs and outcomes completed during and after the three-year grant period will be reported/updated in the ACRES database system.

4. PROGRAMMATIC CAPABILITY & PAST PERFORMANCE:

4.a. Programmatic Capability:

4.a.i. Organizational Structure:

As the site's property owner, the City of Green Bay Redevelopment Authority (RDA) is serving as the official applicant. The RDA is a sub-entity operating under the City of Green Bay. The RDA is a Mayor-appointed Board, staffed by City employees within the Department of Community and Economic Development. Additionally, the City of Green Bay Economic Development Authority (EDA) currently serves as the City's Brownfields Advisory Committee (BAC), providing guidance for the implementation of EPA Brownfields Assessment Grant funds. The BAC will continue to serve in this capacity with the implementation of cleanup funds. The BAC holds monthly public meetings where brownfield activities are regularly reported by staff, public input is sought, and direction is provided by the BAC.

The project will be managed by the City's Community & Economic Development Department with support from the Department of Public Works; Parks, Recreation and Forestry Department; and the City's Finance Department.

4.a.ii. Description of Key Staff: This grant will be administered and financially managed by the City's Economic Development Specialist, Matt Buchanan. Mr. Buchanan will oversee implementation of all grant activities, including tracking, reporting, and coordinating with the USEPA and the Qualified Environmental Professional. Mr. Buchanan will serve as the USEPA's primary point of contact in implementation of the Cleanup grant award. Mr. Buchanan has managed U.S. EPA brownfield grants for nearly six years, including the City's FY17 and FY19 Communitywide Brownfield Assessment Grants, a FY19 Cleanup Grant, and a FY20 Brownfields RLF Grant. Matt Buchanan is a certified Planner (AICP) with the American Planning Association. He's earned a Master's degree in urban planning and a Bachelor's degree in geography and political science.

To assure project continuity and leadership, Mr. Buchanan's work will be overseen by Mr. Neil Stechschulte, the City's Development Director. Mr. Stechschulte has over 20 years of experience in urban development, including oversight of brownfield redevelopment projects and projects that incorporate green infrastructure. The team may also draw on the skills of additional staff, including three City Planners, one Urban Design and GIS Specialist, two Community Development Specialists, a Real Estate Specialist, one Department Manager, and four assistants. The City's Public Works Director, Utilities Manager, Parks Director, and Parks Planner, and Finance Director are also available to assist with project implementation and grant administration.

4.a.iii. Acquiring Additional Resources: The City/RDA procures hundreds of thousands of dollars in professional engineering and environmental services on an annual basis and has the ability to acquire any additional expertise or resources necessary to implement the USEPA Cleanup Grant and to successfully complete the project. The City/RDA will retain an environmental consultant per the requirements of 2 CFR 200.317 - 200.326 to assist with cleanup tasks. If needed, additional contractors can be procured following similar procurement methods.

4.b. Past Performance & Accomplishments:

4.b.i. Currently Has or Previously Received an EPA Brownfields Grant:

This grant will be administered by City of Green Bay employees that have managed four USEPA Brownfields grants within the past five years. Detailed explanations of these grants are provided below.

BF 00E02894 (FY20): $800,000 US EPA Brownfields Revolving Loan Fund Grant. The City was recently awarded an RLF grant. In this first year of the grant period, the City has successfully procured a qualified environmental professional, drafted and approved new policies/procedures and grant application forms, and developed program marketing materials. The City officially launched the new program in the Summer of 2021 and is currently meeting with potential

borrowers and sub-grantees. These outputs are accurately reflected in ACRES, which should also demonstrate that the City adequately completed all reporting requirements on time. The grant's workplan is expected to be successfully implemented with grant closeout anticipated by the end of the grant period.

BF 00E02716 (FY19): $500,000 US EPA Brownfield Cleanup Grant for the Shipyard site. The grant has leveraged $1 million in state brownfields cleanup grants. Those state grants have been used to fund the installation of a clean soil cap in 2020. EPA Cleanup Grant funds will be used to install hard surface capping costs in 2022. The grants are expected to leverage $21 million more dollars in private investment in redevelopment (Merge Urban Development mixed-use workforce housing project). These outputs are accurately reflected in ACRES, which should also demonstrate that the City adequately completed all reporting requirements on time. The grant's workplan is expected to be successfully implemented with grant closeout anticipated by the end of 2023. A one-year grant period extension was requested due to impacts of the COVID-19 pandemic and has been approved.

BF 00E02715 (FY19): $300,000 US EPA Community-wide Assessment grant for three Target Areas, one of which centers on the Badger Sheet Metal site. The grant was fully expended within the three-year grant period. Most of these funds were spent on sites associated with the Shipyard Corridor. This grant is expected to leverage over $75 million in private investment for redevelopment. The grant funded the assessment of seven sites so far, four of which have immediate plans for cleanup and redevelopment. These outputs are accurately reflected in ACRES, which should also demonstrate that the City has adequately completed all reporting requirements on time.

BF 00E02279 (FY17): $300,000 US EPA Community-wide Assessment Grant - This grant focused on assessing properties within three Target Areas, one of which centered around the Shipyard site. The grant was fully expended after the first two years of implementation. Most of these funds were spent on sites associated with the Shipyard redevelopment. This grant has leveraged $1.5 million in state and federal grants for brownfield cleanup and is expected to soon leverage $68.3 million more in private investment for redevelopment. The grant funded the assessment of 14 sites, three of which have been cleaned up/redeveloped, and seven of which are either in the process of being remediated or plans for remediation are in development. These outputs are accurately reflected in ACRES, which should also demonstrate that the City adequately completed all reporting requirements on time. The grant's workplan was successfully implemented and the grant was closed out by the end of the grant period.

4.b.i.(1) Accomplishments:
NARRATIVE

4.b.i.(2) Compliance with Grant Requirements:
The City has received four USEPA Brownfields grants since 2017. All quarterly performance reports, technical reporting and ACRES reporting were acceptable to USEPA and submitted on time. Terms and conditions of all grants have been met. The FY19 Cleanup grant was approved for a one-year extension which occurred due to impacts from the COVID-19 pandemic. Remediation activities for the cleanup grant are currently underway and are expected to be complete by September 2023.

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ANALYSIS OF BROWNFIELD CLEANUP ALTERNATIVES

Former Badger Sheet Metal Site
Green Bay, Wisconsin

402 & 420 South Broadway; 419 S Maple Avenue

BRRTS ID: 02-05-584381 (Open ERP)
03-05-001367 (Closed LUST)

ACRES ID: 236196

Evan J. Weber
Environmental Scientist

Lynelle P. Caine
Sr. Brownfields Project Manager

Stu J. Gross, PG
Sr. Brownfields Project Manager

Stantec

September 30, 2022
Project Number 193707526

CERTIFICATIONS
ANALYSIS OF BROWNFIELD CLEANUP ALTERNATIVES
FORMER BADGER SHEET METAL SITE
GREEN BAY, WISCONSIN

"I, Stuart J. Gross, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wisconsin Administrative Code (WAC)."

_____ September 30, 2022

Stu J. Gross, PG No. 1201-13 Date

"I, Hiedi A. Waller, PE, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

_____ September 30, 2022

Hiedi A. Waller, PE Date

GENERAL INFORMATION

FACILITY:	Former Badger Sheet Metal Site Green Bay, Wisconsin
PARCEL IDs	3-572, 3-569, 2-947
SIZE:	4.54-acres
USEPA ACRES ID:	236196
WDNR BRRTS NO.:	Badger Sheet Metal Inc - 03-05-001367 (Closed LUST) Badger Sheet Metal Inc (Former) – LGU – 02-05-584381 (Open ERP)
PROPERTY LOCATION:	SW 1/4 of the NW 1/4 of Section 36, Township 24 North, Range 20 East, Brown County, Wisconsin
PROPERTY OWNER:	Redevelopment Authority of the City of Green Bay City of Green Bay 100 North Jefferson Street Green Bay, WI 54301
Contact:	Mr. Matthew Buchanan Economic Development Specialist City of Green Bay 100 North Jefferson Street Green Bay, WI 54301 Phone: (920) 448-3396 Email: Matthew.buchanan@greenbaywi.gov
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1.0 EXECUTIVE SUMMARY

Stantec Consulting Services Inc. (Stantec) completed this Analysis of Brownfields Cleanup Alternatives (ABCA) on behalf of the City of Green Bay (hereinafter referred to as the City) and the Redevelopment Authority of the City of Green Bay (RDA) for the redevelopment of three parcels situated at 402 and 420 South Broadway and 419 South Maple Avenue in the City of Green Bay, Wisconsin (herein referred to as the "the Property"). The parcels make up what is known as the former Badger Sheet Metal redevelopment site which is bound by Arndt Street to the north, South Broadway to the east, South Maple Avenue to the west, and Wisconsin Central Limited railroad tracks to the south. This ABCA was prepared utilizing the framework provided in ch. NR 722 Wisconsin Administrative Code (WAC) (NR 722) for a Remedial Action Options Report (RAOR).

The Property, depicted on **Figure 1** is situated within the City of Green Bay, Wisconsin and is currently zoned for mixed-use allowing both commercial and residential use. In total, the Property occupies approximately 4.5-acres west of the Fox River between South Broadway to the East, Arndt Street north, South Maple Avenue West, and Wisconsin Central Limited Railroad tracks to the south. The parcel at 419 South Maple Avenue (Parcel #2-947), accounts for roughly 2.3-acres of the Property and contains one single-story building totaling approximately 2,300 square feet. The parcel at 420 South Broadway (Parcel #3-569) totals approximately 2.2-acres and is occupied by an approximately 39,000 square foot single-story building. Both structures are connected and designed primarily as metal sided warehouses. 402 South Broadway (Parcel 3-572) totals approximately 0.112-acres and contains one small, 1100 square foot commercial building. The layout of the Property parcels is depicted on **Figure 2**. The United States Environmental Protection Agency (USEPA) Assessment, Cleanup and Redevelopment Exchange System (ACRES) identification number associated with this Property is 236196.

As documented in previous environmental assessments conducted by Stantec between 2018 and 2022, residual soil and groundwater impacts associated with prior commercial/industrial use and placement of historic fill are present and will complicate redevelopment, as summarized below.

Soil - Soil contaminants, primarily polynuclear aromatic hydrocarbons (PAHs) and Resource Conservation and Recovery Act (RCRA) metals, are widespread across the Property at concentrations in excess of residual contaminant levels (RCLs) based on protection of groundwater and direct contact exposure. Multiple volatile organic compounds (VOCs) including benzene and perchloroethylene (PCE) were identified within soil on the approximate southern half of the Property exceeding respective ch. NR 720 WAC (NR 720) groundwater pathway RCLs. Benzene in one boring (B15) exceeded the non-industrial direct contact RCL. While no individual detections of polychlorinated bi-phenyl (PCB) compounds exceeded regulatory thresholds, two samples exceeded the groundwater pathway RCL for total PCBs.

Groundwater - Groundwater sampling results indicate that soil containing RCRA metals, PAHs, and PCBs in excess of RCLs based on groundwater protection are not having a significant adverse impact on groundwater quality. Arsenic was the only metal detected exceeding the ch. NR 140 WAC (NR 140) enforcement standard (ES) at one sampled location. Various PAHs have been identified in groundwater from three wells exceeding the NR 140 ESs but are relatively stable or decreasing. Petroleum VOCs identified in groundwater are limited to two wells (TW15 & TW16) near a former automotive maintenance shop and appear to be decreasing. To support case closure of the open Bureau of Remediation and Redevelopment Tracking System (BRRTS) case associated with the Property, a minimum of two additional rounds of groundwater monitoring from select wells for PAHs, arsenic, and/or petroleum volatile organic compounds (PVOCs) will likely be needed to document that contaminant concentrations in groundwater are stable or decreasing.

Vapor - The current use of the buildings was first evaluated to determine the potential exposure risk. It is our understanding the existing buildings are primarily used for storage with minimal day to day occupancy except for the barber shop on the northeast corner of the Property. This current barbershop is not considered to be at risk of vapor migration because of its distance from the areas of known VOC impacts. Given the extremely limited day to day occupancy of the other buildings, vapor intrusion does not currently appear to pose a concern.

Vapor intrusion concerns will be further addressed as part of the planned future use of the Property due to soil and/or groundwater with residual VOC impacts onsite which may extend beneath areas of

proposed redevelopment. Depending on final reuse plans and building alignments, residual VOC impacts could pose a threat to indoor air quality due to vapor intrusion.

Asbestos, Lead-Based Paint, and Restricted Waste – Assessment activities identified asbestos containing materials (ACMs), lead based paint (LBP), and regulated waste (RW) at multiple locations throughout the property buildings at 402 and 420 South Broadway. The identified wastes will require abatement or proper handling and disposal prior to building demolition.

Remedial action activities are warranted to facilitate redevelopment at the Property. Based on the evaluation described herein, the selected remedial approach proposed to be funded under the FY2023 USEPA Brownfield Cleanup Grant includes:

- Building demolition including abatement of asbestos containing materials and/or lead based paint;
- Excavation and landfill disposal of petroleum impacted soil;
- Excavation of impacted soil to construct the proposed greenway and restoration of a dry or wet basin that duplicates the footprint of a portion of the former slough to help manage regional flood events;
- Onsite management and/or landfill disposal of RCRA metal, PAH, and/or VOC impacted soils excavated during greenway construction. Note all VOC impacted soil would need to be managed through off-site landfill disposal; and
- Installation of imported soil and/or impermeable surface (i.e. asphalt, concrete and/or pavers) caps associated with greenway construction.

Additional remedial activities which will not utilize potential FY2023 USEPA Brownfield Cleanup Grant funds and therefore not evaluated in this ABCA are likely to include:

- Excavation, reuse, and/or disposal of impacted materials to facilitate the proposed private mixed-use development north of the greenway;
- Installation of engineered caps consisting of imported soil or impermeable surfaces (i.e., turf, asphalt, concrete and/or buildings) as a part of the proposed private mixed-use development north of the greenway;
- Installation of clay plugs in new utility trenches to minimize preferred contaminant migration pathways;
- Installation of building control technologies (BCTs) in newly constructed buildings north of the greenway;
- Post-construction sub-slab vapor sampling in newly constructed buildings north of the greenway;
- Groundwater monitoring as needed following soil excavation; and
- Establishing additional institutional controls/continuing obligations and maintenance plans to provide for long-term operation of BCTs.

2.0 BACKGROUND INFORMATION

Stantec completed this ABCA on behalf of the City and the RDA for the Property utilizing the framework provided in NR 722 for a RAOR. The Property consists of all portions of three contiguous parcels of land owned by the RDA totaling approximately 4.54 acres in a former commercial and industrial portion of the City. The location of the Property is illustrated on **Figure 1** and in further detail on **Figure 2**. The table below summarizes the parcel identification numbers and addresses which compose the Property. The table also corresponds the Wisconsin Department of Natural Resources (WDNR) BRRTS case numbers and existing USEPA ACRES identification number associated with the combined parcel.

402 South Broadway	420 South Broadway	419 South Maple Avenue
Parcel #3-572	Parcel #3-569	Parcel #2-947
BRRTS ID: 02-05584381 (Open ERP)	BRRTS ID: 03-05-001367 (Closed LUST)	BRRTS ID: 02-05584381 (Open ERP)
ACRES ID: 236196		

The redevelopment will compliment work already occurring within the City's Downtown South Broadway corridor which includes the Shipyard Redevelopment Site, a 12.5 acre vacant former industrial coal yard being developed for mix-use redevelopment and public greenspace along the Fox River. The Shipyard is currently under construction utilizing awarded USEPA cleanup grant funds to aid project completion.

2.1 HISTORIC PROPERTY USE/OCCUPANCY

From at least 1883 to 1907, the Property was primarily occupied by multiple residential homes with a former slough running through a substantial portion of the Property connecting to the Fox River to the east. The slough was filled sometime between 1907 and 1936 after which the southern portion of the Property was used for industrial purposes including a small tin shop, multiple warehouses, and at least four railroad spurs. Between 1907 and 1936, a filling station was situated at 402 South Broadway which remained in use until the mid to late 1960s. 402 South Broadway hosted numerous small commercial businesses and is currently home to a barber shop. The remainder of the Property was occupied by Badger Sheet Metal Works which included large warehouses and shops until approximately 2010. The Property buildings were later sectioned off and rented out to multiple small industrial and commercial business tenants including two automotive repair shops, a crane company, and a photo advertising business.

Current Ownership and Use of the Former Badger Sheet Metal Site

A Phase I ESA which describes the Property was completed by Stantec per the All-Appropriate Inquiries rule detailed in 40 CFR §312.21 utilizing ASTM E1527-13 on behalf of the current owner (CDA) on February 26, 2018. A Phase II ESA of the Property was then completed by Stantec on June 8, 2018. Following the due diligence, the RDA acquired the Property on August 19, 2018, for the purpose of blight elimination and subsequently received a Local Governmental Unit (LGU) Environmental Liability Exemption from WDNR per ch. 292.11(9) WAC under WDNR BRRTS Case Number 02-05-584381.

Since taking ownership, the RDA has maintained compliance with the LGU exemption required continuing obligations and no records have been identified indicating the RDA is considered potentially liable or known to be affiliated with any other person that is potentially liable for contamination at the Property. The proposed redevelopment for the Property is provided in **Appendix A** and includes mixed commercial/residential and greenspace reuse.

2.2 ENVIRONMENTAL SITE INVESTIGATIONS

2018 Phase I ESA - Stantec completed a Phase I ESA at the Property during February 2018 (Stantec, 2018a) and identified the following recognized environmental conditions (RECs) in connection with the Property:

- The historic use of the Property for sheet metal manufacturing, warehousing, automotive repair, and painting;

- The historic transfer and storage of bulk petroleum products on the Property along with the potential presence of unabandoned underground storage tanks associated with the former filling and service station and sheet metal manufacturing facilities;
- Potential undocumented contamination from a release of paint and solvents during a 2016 fire on the Property;
- The historic presence of rail-road spurs on the Property and use of a railway immediately adjacent to the Property; and
- The presence of fill from an unknown source at the Property. Fill is well documented in this part of the City and has been found to contain PAHs and metals. Additional investigation is warranted to evaluate if potential industrial fill has impacted soil and groundwater at the Site.

Full findings and opinions of the Phase I ESA can be found in the assessment report dated February 26, 2018.

Phase II ESA and Site Investigations - Stantec completed multiple Site assessments/investigations at the Property using funds from two hazardous substance and petroleum brownfield assessment grants awarded to the City by the USEPA in FY2017 under Cooperative Agreement Number BF 00E02279-0 and in FY2019 under Cooperative Agreement Number BF 00E02715-0. Soil and groundwater sample locations performed at the Property are illustrated on **Figure 3** and **Figure 4**, respectively. Results from the Stantec 2018 through 2022 assessments are summarized below and impacts delineated on **Figures 5** - **8**.

Soil - Data collected during the SI and previous assessment activities indicates that soil contaminants, primarily PAHs and RCRA metals, are widespread across the Property at concentrations in excess of NR 720 RCLs based on protection of groundwater and direct contact exposure. Multiple VOCs including benzene and PCE were identified within soil on the approximate southern half of the Property where the slough is proposed to be reconstructed which exceed respective NR 720 groundwater pathway RCLs. Benzene in one boring (B15) exceeded the non-industrial direct contact RCL and is associated with a release of petroleum products identified at the Property. While no individual detections of PCB compounds exceeded regulatory thresholds, two samples exceeded the groundwater pathway RCL for total PCBs.

- The greatest impact to soil quality is the sitewide historic fill containing elevated levels of PAHs and various RCRA metals including arsenic and lead. Due to the large quantity of historic fill materials present across the Property, historic fill will require proper management and/or reuse onsite. Sitewide engineered barriers/caps will need to be constructed to prevent direct contact with residual soil impacts. The engineered barriers will be maintained with a continuing obligation/institutional control.
- VOC impacts to soil appear attributable to a historic release of petroleum on the southeastern portion of the Property and sporadic locations likely associated with historic fill. Based on future development plans, VOC impacted soil will require excavation and disposal to prevent the potential for vapor intrusion and soil acting as a continuing source of groundwater contamination. Sporadic detections of VOCs detected on the southern part of the Property will be excavated as a part of the slough reconstruction and prevent contaminant migration into future surface water.

Groundwater - Sampling results of the SI and previous assessments indicate that soil containing RCRA metals, PAHs, and PCBs in excess of RCLs based on groundwater protection are not having a significant adverse impact on groundwater quality. Arsenic in MW18 was the only metal detected exceeding the NR 140 ES. Various PAHs have been identified in groundwater from three wells exceeding the NR 140 ESs but are relatively stable or decreasing. Petroleum VOCs identified in groundwater are limited to two wells (TW15 & TW16) near a former automotive maintenance shop and appear to be decreasing. The estimated extent of groundwater contamination is provided on **Figure 9**.

Vapor Intrusion - The current use of the buildings was evaluated to determine the potential exposure risk. It is understood the existing buildings are primarily used for storage with minimal day to day occupancy except for the barber shop on the northeast corner of the Property. This barbershop is not considered to be a risk to vapor migration because of its distance from the areas of known VOC impacts. Given the extremely limited day to day occupancy of the other buildings, vapor intrusion does not currently appear to pose a concern. Vapor intrusion concerns will be further addressed as part of the planned future use of the Property. If soil and/or groundwater VOC impacts are not fully addressed as part of this cleanup, a BCT may be required in new public and private building construction projects.

Pre-Demolition Assessment: Asbestos, Lead-Based Paint, and Restricted Waste: A pre-demolition assessment of ACM, LBP, and RW materials at 402 and 420 South Broadway in December 2021. Per the assessment results, ACM, LBP, and RW were identified at multiple locations throughout the property buildings at the Site. The identified wastes will require abatement or proper handling and disposal prior to building demolition

3.0 REMEDIAL ACTION OPTIONS EVALUATION

3.1 PROPOSED PROPERTY REDEVELOPMENT

The redevelopment of the Badger Sheet Metal site is part of a larger neighborhood revitalization effort that involves the cleanup and redevelopment of several area brownfield sites, including the Shipyard and C. Reiss coal pile properties along South Broadway in the City's Downtown Broadway District. In early 2021, the City of Green Bay approved a Brownfield Redevelopment Plan for the Shipyard Corridor, including the Badger Sheet Metal property. The plan was made possible through a technical assistance grant from the USEPA, and it establishes a clear vision for the Property that includes high density housing over ground floor retail uses. The plan also envisions a greenway on the south end of the site that follows the path of a historic slough that was formerly on the property but was filled in the early 1900s. As a result, the area is prone to flooding. The greenway would incorporate green infrastructure to help alleviate flooding, while also providing a new pedestrian connection between the local Seymour Park neighborhood, the City's planned Shipyard redevelopment, and ultimately the Fox River. The City has partnered with a private developer to implement the vision with the goal of starting redevelopment in 2023.

Planned Public improvements include:

- Brownfield Remediation – Previous industrial uses impacted the Property with significant levels of soil contamination. Starting in 2023, the City intends to begin demolition of the existing building structures and remediating contamination, with the assistance of state and federal grants when possible. This work will have a notable impact on the environment and residents' quality of life. It will reduce offsite migration of contaminants via airborne dust, stormwater, and groundwater migration, directly improving residents' health conditions, especially for the neighborhood's sensitive populations that makeup a significant proportion of area population.
- Green Infrastructure Corridor – A public greenway is planned along the path of a historical slough that once present at the property. This greenway would incorporate innovative green infrastructure to help alleviate flooding issues that have frequently impacted the area. The greenway would also offer an improved pedestrian connection between the Seymour Park neighborhood to the west and the Shipyard and Fox River to the east.

Private improvements include:

- Investments in Housing – In May 2021, the City approved a Planning Option with Impact Seven that supports the construction of three four-story buildings consisting of 238 apartments over ground-level structured parking and co-located businesses. The project also features a green roof courtyard over the parking structure. This $53 million development will help the community address its housing shortage by directly reducing demand on middle-income units and indirectly reducing demand on low-income units.
- Neighborhood Business Support – Impact Seven's project includes ground floor commercial space along Broadway and intends to fill those spaces with established neighborhood businesses currently operating on brownfield sites. Specifically, a local barber shop and the Green Bay Bicycle Collective have been offered space within the development for rates comparable to what they're currently paying.

3.2 CLEANUP STANDARDS AND APPLICABLE LAWS

Although the City has an LGU exemption granted under ch. 292.11(9) WAC, remedial activities proposed under this ABCA will be completed per the requirements of ch. NR 700 WAC. The WDNR will provide regulatory oversight of the project, including reviewing/approving plans and reports described in Section 4 of this ABCA.

Cleanup soil quality standards are established in NR 720 and groundwater quality standards are established in NR 140 . Criteria for beneficial reuse of soil/fill at the Property are established under ch. NR 718 WAC. Toxicity

thresholds specified in 40 CFR 261 will be used to determine proper waste/material management. Impacted soil/fill generated during excavation will be managed per ch. NR 600 WAC and ch. NR 500 WAC.

3.3 REMEDIAL ACTION OPTIONS EVALUATION

Based on impacts identified to date, remedial action activities are warranted to facilitate redevelopment at the Property described in Section 3.1. An evaluation of three remedial options to be funded under a proposed FY2023 USEPA Brownfield Cleanup Grant was conducted utilizing criteria presented in ch. NR 722.07(4) WAC and ch. NR 722.09(2m) WAC to address legacy environmental impacts to facilitate redevelopment for non-industrial purposes. Additional remedial activities not being funded under a future FY2023 USEPA Brownfield Cleanup Grant (and therefore not evaluated in detail in this ABCA) are summarized in Section 4.8. As summarized on **Table 1**, the remedial options evaluated under this ABCA for possible funding under a future FY2023 USEPA Brownfield Cleanup Grant included the following:

1. Natural Attenuation (no action).
2. Raze existing buildings including abatement/proper handling of asbestos containing materials (ACMs), lead based paint (LBP), and regulated waste (RW); excavate all PVOCs impacted near the former automotive repair shop; excavate all impacted soils in the proposed greenway and transport offsite for disposal at a licensed solid waste landfill; backfill with clean fill materials to final grade.
3. Raze existing buildings including abatement/proper handling of ACM, LBP, and RW; excavate VOC impacted soil providing an ongoing source to groundwater contamination with off-site landfill disposal; limited excavation of soil with RCRA metals, PAH and/or PCB impacts with on-site management and installation of engineered caps and off-site disposal of excess material; followed by establishing institutional controls to manage residual soil and/or groundwater impacts.

In general, each remedial option is considered technically feasible; however, the short-term and long-term effectiveness of each remedial option's capability to be protective of public health, safety, or welfare or the environment, a reasonable alternative, resilient in addressing potential adverse impacts caused by extreme weather events, and the cost associated with each approach varies greatly.

Alternative 1 - Although the cost to implement remedial Alternative 1 is the least of the three options, constituents associated with residual impacts are considered reluctant to naturally attenuate. The overall magnitude, mobility, and toxicity of impacts would not decrease and Property restoration will not occur within a reasonable timeframe. Following redevelopment, impacts would be near sensitive receptors and impacts could be mobilized during extreme weather events. Therefore, Remedial Alternative 1 is not considered a prudent approach.

Alternative 2 - Excavation and offsite disposal of impacted soils proposed in Alternative 2 will be effective in long-term elimination of the mobility, toxicity, and magnitude of residual soil impacts and would not be impacted by extreme weather events. However, the cost for Alternative 2 is excessive (estimated $2.3 million [MM]). Further, Alternative 2 will require hauling a considerable volume of soil for landfill disposal (estimated 18,500 cubic yards) and require an extraordinary volume of clean fill to be imported to the Property just to bring the Property back to current grade. Therefore, Alternative 2 is not considered a sustainable option.

Alternative 3 - Under Remedial Alternative 3, approximately 9,225 cubic yards of VOC, RCRA metal, PAH and/or PCB-impacted soil will be excavated and disposed of at a licensed solid waste landfill or reused as appropriate on-site. Clean fill would then be imported to achieve the desired grade of the Property and cap the remaining contamination remaining. Capping the Site with 18 inches of clean soil and/or impermeable surface (i.e.. biking/pedestrian path) will result in creating an engineered barrier suitable to prevent direct contact with residual soil impacts while mitigating the risk for potential adverse impacts caused by extreme weather events (such as mobilization of impacts during flood events). Additional groundwater monitoring and completion of the hardscape engineered barriers/caps outside of the future greenway is beyond the scope of this proposed cleanup but will likely include Property amenities (e.g., buildings, parking lots, sidewalks, etc.) to be completed directly by the developer.

Remedial Alternative 3 will cost-effectively provide for long-term reduction in the mobility, toxicity, and magnitude of existing impacts. Institutional controls will provide for long-term maintenance of the engineered barrier and will prevent groundwater consumption. Remedial Alternative 3 is considered the most reasonable and cost-effective approach to facilitate proposed redevelopment. Remedial Alternative 3 is the selected

remedial alternative based on its short-term and long-term effectiveness, ability to be implemented within the proposed development, restoration time frame, economic feasibility, and sustainability.

4.0 SELECTED REMEDIAL ACTION OPTION

4.1 SELECTED REMEDIAL ACTION OPTION TO BE FUNDED UNDER A FY2023 USEPA BROWNFIELD CLEANUP GRANT

The selected remedial action option to be funded under a future FY2023 USEPA Brownfield Cleanup Grant includes up to five elements described below:

Raze Site Buildings - The existing buildings are blighted and underutilized and will be demolished as part of this task. ACM, LBP, and RW will be abated as needed prior to demolition and/or properly managed during the demolition work. Removal of the buildings will also allow for access to petroleum impacted soil underlying the southernmost building and further assessment of underlying soil as needed in the future.

Excavation and Landfill Disposal of VOC impacted Soil –As part of this task VOC impacted soil acting as a continuing source of groundwater impacts will be excavated and hauled off-site for disposal at a solid waste facility. Select soil with perceived petroleum impacts may be placed on the landfill bio-pile to allow natural attenuation of residual petroleum impacts and beneficial reuse. Any VOC impacted soil identified within the footprint of the proposed greenway would be removed and transported for landfill disposal to address potential surface water impacts to restored dry/wet basin constructed within the footprint of a portion of the former slough. Prior to the start of excavation activities, **r**epresentative samples of soil targeted for offsite disposal will be collected and submitted to an analytical laboratory for waste characterization. Based on the results of the sampling, one or more waste profiles will be established with a licensed solid waste landfill one for the VOC impacted soil and another for the remainder of the material.

Excavation and Offsite/Onsite Disposal of PAH, RCRA Metal and PCB Impacted Soil and Installation of Caps To facilitate the construction of the greenway, surficial soil will be excavated to allow for the placement of an engineered cap (i.e., asphalt bike path/pedestrian trail and/or 18 inches of clean soil cap). Soil will also be excavated in the greenway to create a depression, mimicking the flow path of the former slough, that will serve as a means to help reduce flooding risks by providing temporary storage, improve stormwater runoff quality, and enhance the aesthetics of the greenway. It is anticipated the depression would extend east to west for the length of the property and be excavated to approximately 7 feet below grade (fbg) to allow the installation of a 2 foot clay liner on the base and sides. All excavated soil containing PAHs, RCRA metals, and/or PCBs would first be reused on-site and capped with an engineered barrier with excess material disposed of off-site. A Material Management Plan (MMP) will be completed and submitted to WDNR for approval for managing PAH, RCRA metal, and PCB impacted soils on-site. The MMP will describe the soils targeted for reuse on-site with an engineered barrier (e.g., quality, placement location, placement depth, etc.) and outline contingency plans for managing fluids (e.g., infiltrated groundwater, stormwater, etc.) and/or other materials encountered during construction.

Remedial Action/Post Construction Documentation Report and Establishing Institutional Controls - A documentation report will be prepared following the excavation and offsite disposal of impacted soils and construction of the engineered barriers. Following construction of the engineered barrier, a request for closure for the greenway area will be prepared and the Site listed on the WDNR GIS Registry. The listing will serve as a continuing obligation/institutional control to restrict groundwater consumption and restrict disturbance of the engineered barrier. The GIS Registry will provide for notification of residual impacts to soil and groundwater and will include an annual engineered barrier maintenance plan.

Engineering, Permitting, Program Management, and Community Outreach - Engineering and design services, procurement of necessary permits to design the greenway, permit and complete the proposed cleanup activities, onsite oversight of contractor work, and cooperative agreement/grant management (including project progress reporting to USEPA), and community outreach activities will be performed.

4.2 SCHEDULE

A proposed schedule for the implementation of Remedial Alternative 3 is presented on the table below.

Schedule for Remedial Alternative 3

Task #	Task Description	Weeks to Complete
1	Raze Buildings and ACM, LBP, RW Abatement/Disposal	4 - 8 Weeks, Depending on Construction Schedule
2	Excavation and Landfill Disposal of VOC Impacted Soil	6 - 16 Weeks, Depending on Construction Schedule
3	Excavation and Offsite/Onsite Disposal of PAH, RCRA Metal and PCB Impacted Soil and Installation of Caps	6 - 16 Weeks, Depending on Construction Schedule, and Consecutively with Task 2.
4	Remedial Action/Post Construction Report and Establishing Institutional Controls	2–4 Weeks
5	Engineering, Permitting and Program Management, and Community Outreach	Duration of Remedial Alternative 3 (Anticipated to be 3-8 Months)

4.3 ESTIMATED COST

The FY2023 USEPA Brownfield Cleanup Grant will provide $1,000,000 for eligible cleanup activities Per USEPA FY2023 guidelines, the grantee is no longer required to provide a match. A preliminary estimate of the total cost for implementation of Remedial Alternative 3 ($1M USEPA grant) is presented on the table below.

Cost Estimate for Remedial Alternative 3

Task #	Item	Estimated or Assumed Value
1	Raze Buildings and ACM, LBP, RW Abatement/Disposal	$275,000
2	Excavation and Landfill Disposal of VOC Impacted Soil	$390,000
3	Excavation and Offsite/Onsite Disposal of PAH, RCRA Metal and PCB Impacted Soil and Installation of Caps	$480,000
4	Remedial Action/Post Construction Report and Establishing Institutional Controls	$15,000
5	Engineering, Permitting and Program Management, and Community Outreach	$88,000
	Total Remedial Cost	$1,248,000

4.4 RESTORATION TIME FRAME

As described in Section 4.2, implementation of Remedial Alternative 3 is anticipated to take 5-8 months to complete, pending the construction schedule and contractor availability. Long-term maintenance may include annual inspections of the engineered barrier.

4.5 PERFORMANCE MEASURES

Confirmation samples will be collected from the areas where VOC impacted soil is removed to document the source soil has been adequately removed. Confirmation of cap installation and cap thickness in landscaped areas will be completed. Post-construction monitoring will be performed outside the scope of this work to document the impacts on source soil removal on groundwater quality.

4.6 TREATMENT RESIDUALS

No additional treatment of residuals is anticipated as part of the proposed work.

4.7 SUSTAINABLE REMEDIAL ACTION CONSIDERATIONS

The described remedial approach relies on utilizing an engineered barrier with minimal soil excavation and on-site reuse of impacted soil where feasible. This approach minimizes transporting soil for offsite disposal in a landfill. Petroleum soils that are removed from the Property may be added to a bio-pile at the solid waste

landfill to facilitate natural attenuation of residual impacts. Low sulfur diesel can be used, and a no-idle policy will reduce the carbon footprint. The south end of the Property will be restored to a greenway which includes a public pedestrian walkway/bike path and restoration of a dry or wet basin that duplicates the footprint of a portion of the former slough to help manage regional flood events. The entire greenway will provide a means of green infrastructure within a highly developed area of the City.

4.8 ADDITIONAL REMEDIAL ACTIONS

This ABCA evaluated a set of remedial actions to be funded under a potential future FY2023 USEPA Brownfield Cleanup Grant to address residual soil and groundwater impacts at the former Badger Sheet Metal site. Additional remedial actions to be discussed in a RAP not described in this ABCA could, if required by WDNR, include:

- Excavation, reuse, and/or disposal of impacted materials to facilitate the proposed private mixed-use development north of the greenway;
- Installation of engineered caps consisting of imported soil or impermeable surfaces (i.e., turf, asphalt, concrete and/or buildings) as a part of the proposed private mixed-use development north of the greenway;
- Installation of clay plugs in new utility trenches to minimize preferred contaminant migration pathways;
- Installation of BCTs in newly constructed buildings north of the greenway;
- Post-construction sub-slab vapor sampling in newly constructed buildings north of the greenway;
- Groundwater monitoring as needed following soil excavation; and
- Establishing additional institutional controls/continuing obligations and maintenance plans to provide for long-term operation of BCTs.

5.0 REFERENCES

Stantec, 2019, 10th Street Railroad Property, Green Bay, Wisconsin, Phase I Environmental Site Assessment, March 21, 2019.

Stantec, 2018a, Phase I Environmental Site Assessment, 402 & 420 South Broadway; 419 South Maple Avenue; Green Bay, Wisconsin, February 26, 2018.

Stantec, 2018b, Phase II Environmental Site Assessment, Badger Capital Investment Properties, 402 & 420 South Broadway; 419 South Maple Avenue, Green Bay, Wisconsin, June 8, 2018.

Stantec, 2021, NR716 Limited Site Investigation, Badger Sheet Metal Parcels, 420 South Broadway & 419 South Maple Avenue, Green Bay, Wisconsin, March 3, 2021.

Stantec, 2022, Site Investigation & Proposed Remedial Action Plan; Badger Sheet Metal Parcels, 402 & 420 South Broadway; 419 South Maple Avenue, Green Bay, Wisconsin, September 30, 2022.

APPENDIX A

FIGURES

TABLE