BROWNFIELD REDEVELOPMENT AUTHORITY
September 26, 2024 Communication

To: BRA Members and Staff

From: Dan King – Community Development Director

Date: **September 19, 2024**

Subject: **Information regarding the September 26, 2024 meeting**

The Hastings City Council has delegated authority for the Brownfield Redevelopment Authority to conduct a public hearing regarding the 420 W. Mills, LLC Brownfield Plan Amendment for property located at 328 and 420 E. Mill Street. 420 E. Mills, LLC is proposing to construct three new three-story buildings that will contain approximately 165,640 sf of residential space and one commercial building for an approximately 15,080 sf community food and arts center. The residential buildings will contain approximately 135 units, including 36 one-bedroom units, 91 two-bedroom units, and 8 three-bedroom units. The project will also include a surface parking lot for use by the tenants and guests.

The property consists of two parcels between Mill Street and the Thornapple River just east of N Michigan Ave. The developer is seeking to utilize the new Housing TIF program and intends to designate twenty percent (20%) of the units (27 units) for tenants earning 100% area median income or less. The Project will facilitate the development of housing projected to be rented to households earning 80% and 100% or less of the area median income.

Total capital investment is estimated to be approximately $32.3 million and the project is expected to generate five (5) new full-time jobs. Construction of the project is expected to begin in the fourth quarter of 2024 and is expected to be completed within twenty-four (24) months.

Pending approval of the Brownfield Plan Amendment by the BRA, the Plan will be referred to the Hastings City Council with an approval recommendation.

You will also be asked to review for approval the Development and Reimbursement Agreement with 420 E. Mills, LLC, and Interlocal Revenue Sharing Agreement with the Downtown Development Authority.

City Attorney Jessica Wood will be in attendance to answer any specific questions. Information statements for both BRA 381 plans and the housing TIF component have been included in the agenda packet.

The meeting will be held in the Council Chambers at City Hall.

See you next Thursday!
Dan

HASTINGS BROWNFIELD DEVELOPMENT AUTHORITY
AGENDA
THURSDAY SEPTEMBER 26, 2024
MEETING AT CITY HALL

1. Call to Order/Roll Call. **(Meeting starts at 8:00 a.m.)**

2. Pledge of Allegiance

3. Approval/Additions/Deletions to Agenda

4. Public Hearing
    A. 420 E. Mills, LLC Brownfield Plan Amendment

5. New Business

    A. Development and Reimbursement Agreement – 420 E. Mills, LLC, and Hastings Brownfield Redevelopment Authority
    B. Interlocal Revenue Sharing Agreement with Hastings Downtown Development Authority and Hastings Brownfield Redevelopment Authority.

6. Open public discussion and comments

7. BRA Member Comments

8. Adjourn

CITY OF HASTINGS

NOTICE OF PUBLIC HEARING ON THE ADOPTION OF A BROWNFIELD PLAN AMENDMENT PURSUANT TO AND IN ACCORDANCE WITH ACT 381 OF THE PUBLIC ACTS OF THE STATE OF MICHIGAN OF 1996, AS AMENDED

NOTICE IS HEREBY GIVEN that the Hastings Brownfield Redevelopment Authority, as lawfully delegated by the Hastings City Council of the City of Hastings, Barry County Michigan will hold a public hearing on Thursday September 26, 2024 at 8:00 a.m. in the Council Chambers, Second Floor of City Hall located at 201 East State Street, Hastings, Michigan 49058 on the adoption of an amendment to the City's Brownfield Plan. The Brownfield Redevelopment Authority shall exercise its powers, pursuant to and in accordance with the provisions of the Brownfield Redevelopment Financing Act, being Act 381 of the Public Acts of the State of Michigan of 1996, as amended. The property proposed to be added by amendment to the Brownfield Plan is identified as:

Tax Parcel No: 55-001-001-02
Property Address: 328 E. Mill St., Hastings MI 49058

Tax Parcel No. 55-001-001-04
Property Address: 420 E. Mill St., Hastings, MI 49058

The proposed brownfield plan would allow 420 E. Mills, LLC to be reimbursed for eligible costs incurred to prepare the brownfield property for redevelopment. Eligible costs may include environmental and/or site preparation costs. The brownfield plan must first be approved by the Hastings City Council.

A description of the property along with any maps, plats, and a description of the Brownfield Plan and the proposed amendment are available for public inspection at the office of Dan King, Community Development Director 201 E. State Street, Hastings, Michigan 49058, dking@hastingsmi.gov or phone 269-945-2468.

All aspects of the Brownfield Plan amendment are open for discussion during the public hearing. The City will provide necessary aids and services to individuals with disabilities upon five days' notice to the Clerk of the City of Hastings. Individuals requiring these services should contact the Clerk of the City of Hastings at 269-945-2468, or via email at lperin@hastingsmi.gov.

Linda Perin
City Clerk

Please publish in the September 12, 2024 edition of the Hastings Banner.

Received by _____ on _____
as representative of the Hastings Banner.

CITY OF HASTINGS BROWNFIELD REDEVELOPMENT AUTHORITY

AMENDMENT TO THE BROWNFIELD PLAN

FOR

420 E. MILLS, LLC

DEVELOPMENT PROJECT

328 & 420 E. MILL ST
HASTINGS, MI 49058

Hastings Brownfield Redevelopment Authority
Contact: Dan King, Community Development Director / Zoning Administrator
Phone (269) 945-2468

Last Revision: August 6, 2024

Prepared with the assistance of:

Warner Norcross and Judd LLP
150 Ottawa Ave N.W., Suite 1500
Grand Rapids, Michigan 49503

Approved by the Brownfield Redevelopment Authority on _____

Approved by the City of Hastings City Council on _____

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I. Introduction

420 E. Mills, LLC ("***Developer***") intends to develop the vacant property located at 328 & 420 E. Mill Street, Hastings, MI 49058 (the "***Property***").

II. Proposed Development

Developer is proposing to construct three new three-story buildings that will contain approximately 165,640 sf of residential space and one commercial building for an approximately 15,080 sf community food and arts center (the "***Project***"). The residential buildings will contain approximately 135 units, including 36 one-bedroom units, 91 two-bedroom units, and 8 three-bedroom units. The Project will also include a surface parking lot for use by the tenants and guests.

The Property consists of two parcels and sits between Mill Street and the Thornapple River just east of N Michigan Ave. See Property Location and Site Maps attached as Exhibit A.

The Developer is seeking to utilize the new Housing TIF program and intends to designate twenty percent (20%) of the units (27 units) for tenants earning 100% area median income or less. The Project will facilitate the development of housing projected to be rented to households earning 80% and 100% or less of the area median income. The City of Hastings is projecting an increase in housing demand of at least 10% by 2032, as identified in the Barry County Housing Toolkit.[1]

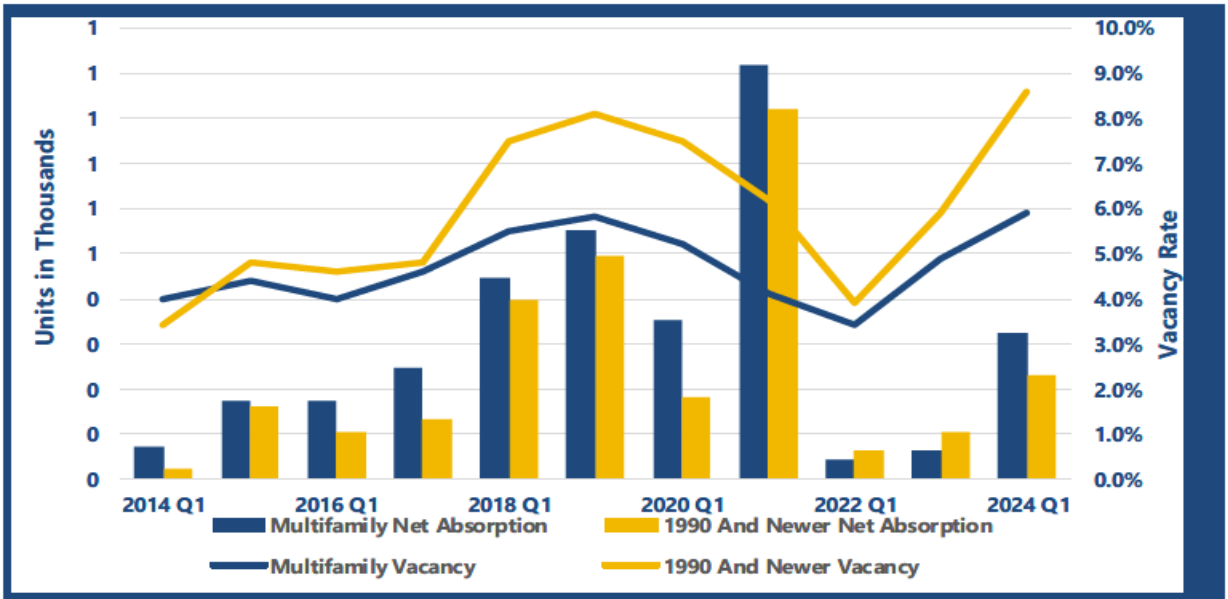
Total capital investment is estimated to be approximately $32.3 million and the Project is expected to generate five (5) new full time jobs. Construction of the Project is expected to begin in the fourth quarter of 2024 and is expected to be completed within twenty-four (24) months.

Development of the Property will generate substantial tax revenue for the taxing jurisdictions, create new job opportunities, stimulate additional investment in the surrounding area, and increase availability of housing in the community. For these reasons, this Plan Amendment constitutes a public purpose and meets all the criteria needed for approval by the City Council, as set forth in the Act.

Vacancy and Net Absorption Trends for the area are outlined below:

[1] Barry County Housing Toolkit (June 2023 – Page 18): https://www.barrycf.org/wp-content/uploads/2024/01/01_BC_Affordable-Housing_Booklet_FULL-compressed.pdf

KENT-ALLEGAN-BARRY COUNTY - VACANCY AND NET ABSORPTION TRENDS



Time Period	2024 Q1	1-Year	3-Year	5-Year	10-Year
Kent-Allegan-Barry County - Multifamily	5.9%	4.9%	4.1%	5.8%	4.0%
Avg. Annual Net Absorp. Units	-	*822*	*706*	*1.2K*	*963*
Avg. Annual Deliveries Units	-	*1.5K*	*1.1K*	*1.3K*	*1.1K*
Kent-Allegan-Barry County - 1990 And Newer	8.6%	5.9%	6.2%	8.1%	3.4%
Avg. Annual Net Absorp. Units	-	*762*	*862*	*1.2K*	*959*
Avg. Annual Deliveries Units	-	*2*	*1*	*1*	*1*

Source: CoStar Group, Inc.

III. Basis of Eligibility

A Phase II Environmental Site Assessment (ESA) for the parcel located at 420 E. Mill Street, dated October 13, 2020, identified contaminants above EGLE Part 201 Generic Cleanup Criteria (GCC) and groundwater surface water interface protection (GSIP) criteria. Specifically, the Property contains Tetrachloroethene (PCE), benzo(a)pyrene, fluoranthene, phenanthrene, arsenic, chromium, copper, lead, mercury, selenium, and zinc in the soil in concentrations exceeding the GCC and GSIP. Naphthalene, PCE, xylenes, 2-methylnaphthalene, phenanthrene, and mercury were also measured in the soil at concentrations exceeding EGLE's residential VIAP screening levels. Additionally, Trichloroethene (TCE), arsenic, copper, lead, and zinc were measured in groundwater (and, with respect to TCE, soil gas) at concentrations the GCC and VIAP screening levels.

Therefore, the 420 E. Mill Street parcel is considered an "eligible property" as defined in Act 381 of 1996, as amended, because the Property is classified as a "facility" under Part 201 of the Natural Resources and Environmental Protection Act, Act 451 P.A. 1994, as amended ("***NREPA***"). A summary of the environmental conditions is attached as Exhibit C. The parcel located at 328 E. Mills Street also contains certain exceedances but is eligible as adjacent or contiguous to the 420 E. Mill Street parcel and the development of

the parcel is estimated to increase the captured taxable value of that parcel.

The Property is also considered "Housing Property" under the Act.

IV. Required Elements of Brownfield Plan Amendment under Section 13(1) of the Act

a. A description of costs intended to be paid for with the tax increment revenues [MCL 125.2663(2)(a)].

Developer will seek tax increment financing ("***TIF***") from available local taxes, school operating taxes, and state education tax millage for eligible activities at the Property, including department specific activities, demolition, site preparation, housing development activities, including infrastructure improvements to support housing property, a 15% contingency, and brownfield and work plan preparation, development and implementation totaling $9,847,075. Reimbursements will be limited to the lesser of the total eligible activities or 25 years of TIF.

The Act authorizes the Authority to use taxes captured from eligible property to pay for reasonable and actual administrative and operating activities of the Authority or the City on behalf of the Authority. The Developer agrees that the Authority may use taxes captured from the Property to pay for the reasonable and actual costs of administrative and operating activities of the Authority not to exceed 5% of the capture per year.

Table 1 shows the estimated costs of the eligible activities for the Project that qualify for reimbursement from TIF.

Table 1 – Estimated Costs of EGLE Eligible Activities

Activity	***Cost Estimate***
Department Specific Activities	
1. Exempt Activities (Preapproved) - *Phase I, II and Baseline Environmental Assessments*	$30,000
Subtotal	***$30,000***
2. Contingency (15%)	$4,500
TOTAL EGLE COSTS	***$34,500***

Table 1 – Estimated Costs of MSHDA Eligible Activities	
Activity	***Cost Estimate***
1. Demolition (Preapproved)	$207,000
2. Site Preparation to Support Housing Development Activities – Mass Grading/Land Balancing – Engineered fill – Special Foundations – Aggregate Piers – Temporary construction facilities – Erosion control – Site design, geotechnical engineering, permits, and surveying	 $150,000 $70,000 $260,000 $10,000 $77,000 $73,000
3. Housing Development Activities – Potential Rent Loss (PRL)[2]	$8,109,900
4. Infrastructure Improvements to Support Housing Activities and Property - Stormwater Management System - Water and sewer utilities for community center - Sidewalks and pedestrian walkway/emergency access	 $260,500 $80,000 $267,000
Subtotal	***$9,564,400***
5. Contingency (15%) – excludes PRL	$218,175
6. Brownfield Plan/Work Plan Preparation, Development and Implementation	$30,000
TOTAL MSF COSTS	**$9,812,575**

b. A brief summary of the eligible activities that are proposed for each eligible property [MCL 125.2663(2)(b)].

"**Eligible Activities**" are defined in Act 381 of 1996, as amended (the "Act") as meaning one or more of the following: (i) department specific activities; (ii) relocation of public buildings or operations for economic development purposes; (iii) reasonable cost of environmental insurance; (iv) reasonable cost of developing, preparing and implementing brownfield plans, combined brownfield plans, and work plans; (v) demolition of structures that is not a response activity under Part 201 of NREPA; and (vi) lead, asbestos, or mold abatement. In addition, in qualified local governmental units such as the City of Hastings and for projects that include housing property located in a community that has identified a specific housing need and has absorption data or job growth data included in the brownfield plan, the Act includes the following additional activities under the definition of "eligible activities": (A) housing development activities; (B) infrastructure improvements that are necessary for housing property and support housing development activities; and (C) site preparation that is not a response activity and that supports housing development activities. The cost of eligible activities is estimated in the table above and includes the following:

[2] See Exhibit D for Potential Rent Loss

Department Specific Activities

1. Preapproved Environmental Assessment Activities. Baseline environmental assessment (BEA) activities were conducted on the Property, including a Phase I ESA, Phase II ESA, Due Care Plan, and BEA.

2. Contingency. A 15% contingency is included to address unexpected costs encountered during construction.

MSHDA Activities

1. Preapproved Demolition. Demolition activities are expected to include demolition of the existing commercial building and demolition of existing site improvements.

2. Site Preparation to Support Housing Development Activities. Site preparation activities are expected to include design and engineering associated with the eligible activities, mass grading/land balancing, excavation and backfill of engineered fill, special foundations (i.e. aggregate piers), temporary construction facilities, erosion control, site design, geotechnical engineering, permits, and surveying for eligible activities.

3. Housing Development Activities. To support the critical need for attainable housing in the City of Hastings, Developer intends to price 20% of the Project's residential units for income qualified households (i.e., those with an annual household income of not more than 80% and 100% AMI). Reimbursement to offset Developer's potential rent loss and cost associated with the development of those units is an eligible activity, as well as the cost of infrastructure (described below) to support the housing. The housing development activities were calculated using 120% AMI compared to Developers projected rents for Potential Rent Loss (PRL) and Total Housing Subsidy (THS) (see Exhibit D for calculation).

4. Infrastructure Improvements to Support Housing Activities and Property. Infrastructure improvements are expected to include the design and construction of a stormwater management system, water and sewer utilities, sidewalks, and pedestrian walkways/access.

5. Contingency (excludes PRL). A 15% contingency is included to address unexpected costs encountered during construction.

6. Brownfield Plan Preparation, Development, and Implementation. Costs incurred to prepare and develop this brownfield plan and proposed work plan, as required per Act 381 of 1996, as amended.

7. Authority Administrative and Operating Expenses. Administrative and operating costs incurred by the Authority or the City on behalf of the Authority in implementing this Plan Amendment.

c. An estimate of the captured taxable value and tax increment revenues for each year of the Plan from each parcel of eligible property and in the aggregate [MCL 125.2663(2)(c)].

An estimate of the real property tax capture for tax increment financing is attached as Exhibit E. The Plan Amendment intends to capture 80% of the captured taxable value with the remaining 20% passed through.

d. The method by which the costs of the Plan will be financed, including a description of any advances made or anticipated to be made for the costs of the Plan from the City [MCL 125.2663(2)(d)].

The cost of the eligible activities included in the Plan Amendment and related to the development will initially be paid for by Developer and it will seek reimbursement through available local and school tax increment revenues during the term of the Plan Amendment.

e. The maximum amount of the note or bonded indebted indebtedness to be incurred, if any [MCL 125.2663(2)(e)].

No bonds or notes will be issued for the Project.

f. The proposed beginning date and duration of capture of tax increment revenues, which shall not exceed the lesser of (1) the period required to pay for the eligible activities from tax increment revenues plus the period of capture authorized for the local site remediation revolving fund or (2) 30 years. [MCL 125.2663(2)(f) and MCLA 125.2663b(16)].

The duration of the Plan Amendment for the Project is estimated to be 31 years. It is estimated that development of the Property will be completed by 2026 and that it will take up to 25 years to recapture the Eligible Activities through tax increment revenues, plus up to five years of capture for the Local Brownfield Revolving Fund (the "***LBRF***"), if available. Therefore, the first year of tax increment capture will be 2025, to the extent available, and the Brownfield Plan Amendment will remain in place until Developer is fully reimbursed (lesser of full reimbursement or 25 years) and the Authority has completed capture for the LBRF capture, if available, subject to the maximum duration provided for in MCL 125.2663. The Plan Amendment intends to capture 80% of the captured taxable value with the remaining 20% passed through.

g. An estimate of the future tax revenues of all taxing jurisdictions in which the Property is located to be generated during the term of the Plan [MCLA 125.2663(2)(g)].

An estimate of real property tax capture is attached as Exhibit E. The Plan Amendment intends to capture 80% of the captured taxable value with the remaining 20% passed

through.

h. A legal description of each parcel of eligible property to which the Plan applies, a map showing the location and dimensions of each eligible property, a statement of the characteristics that qualify the property as eligible property, and a statement of whether personal property is included as a part of the eligible property [MCL 125.2663(2)(h)].

1. *Legal Description:* See Exhibit B.

2. *Location and Site Map*: See Exhibit A.

3. *Characteristics of Property:* The Property was formerly used for the following operations:

- *1884-1949* – James L. Wilkins sawmill in eastern portion.

- *1896* – Hastings Table Company west of the sawmill and railroad present. International Seal and Lock Company present on the western portion.

- *1900* – James L. Wilkins box factory replaced the sawmill.

- *1909* – Box factory no longer present and Seal and Lock Company was replaced with Consolidated Press and Tool Company until 1928 when it was again occupied by Seal and Lock Company. A dwelling was present in the northwestern portion and a second was present by 1916.

- *1949* – Table Company in the eastern portion was replaced by Royal Coach, which manufactured auto house trailers by 1949.

- *2018-2020* – Industrial building was no longer present on the western end and the Royal Coach building suffered a catastrophic fire in late 2020. The site has remained vacant since.

4. *Personal property*: All new personal property added to the Property is included as part of the "eligible property" to the extent it is taxable.

i. An estimate of the number of persons residing on each eligible property to which the Plan applies and the number of families or individuals to be displaced, if any [MCL 125.2663(2)(i)].

There are no persons currently residing on this Property and, therefore, no families or individuals will be displaced.

j. A plan for establishing priority for the relocation of persons displaced by implementation of the Plan, if applicable [MCL 125.2663(2)(j)].

There are no persons currently residing on the Property and, therefore, no families or individuals will be displaced.

k. Provision for the costs of relocating persons displaced by implementation of

the Plan, and financial assistance and reimbursement of expenses, if any [MCL 125.2663(2)(k)].

There are no persons currently residing on the Property and, therefore, no families or individuals will be displaced.

l. A strategy for compliance with the Michigan Relocation Assistance Act, if applicable [MCL 125.2663(2)(l)].

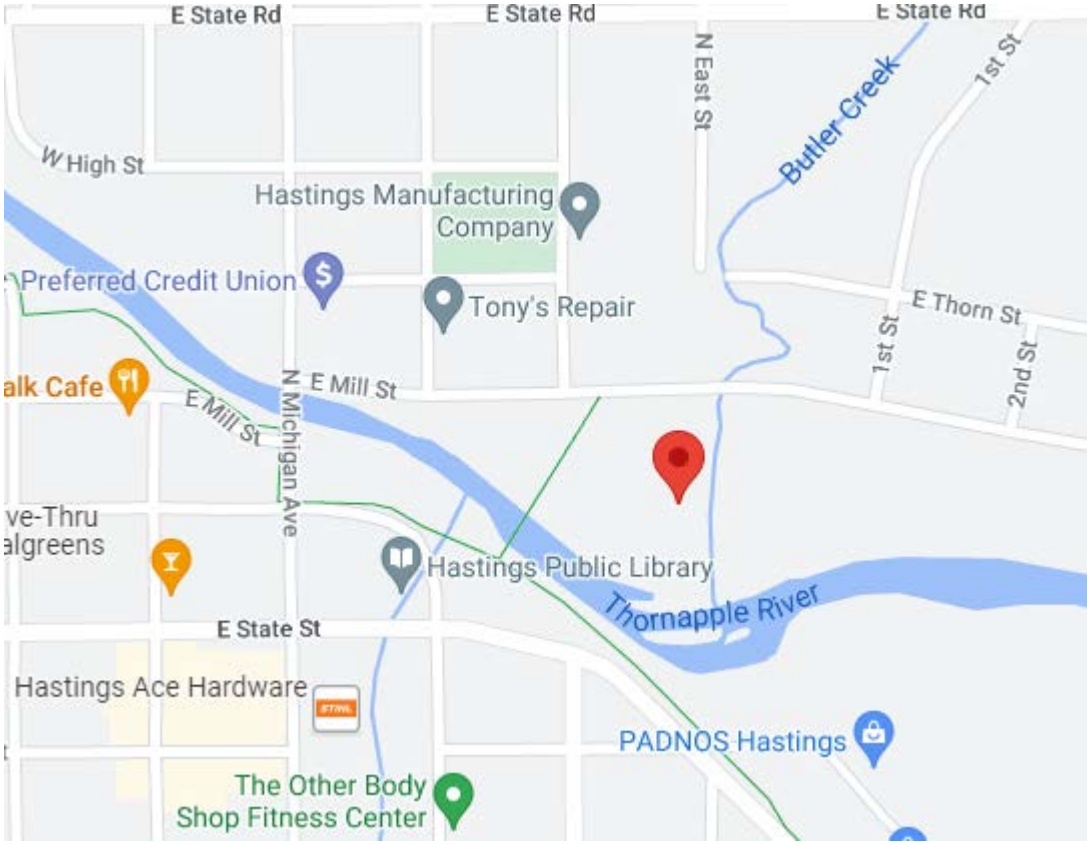
There are no persons currently residing on the Property and, therefore, no families or individuals will be displaced.

m. Other material that the Authority or the City Council considers pertinent [MCL 125.2663(2)(m)].

The Project will significantly improve the overall use of the Property by replacing a vacant property with new multistory residential and commercial spaces in the City. The Project will address the existing contamination at the site and bring new jobs and investment to the City. The Project includes total capital investment of approximately $32.3 million and will increase long term property tax and income tax revenues for the City and State of Michigan.

Exhibit A

Property Location and Site Maps




E THORN ST
E MILL ST
55-001-001-02
ROYAL COACH ACQUISITIONS LLC
328 E MILL ST, HASTINGS
Acreage (Assessor): 1.950
Acreage (GIS): 2.15
Show Details
Fall Creek
E STATE ST
Thornapple River
BOLTWOOD ST

Exhibit B

Legal Description of the Eligible Property

Property Address: 420 E. Mill St, Hastings, MI 49058

Tax Parcel No.: 55-001-001-04

Legal Description:

Land in the City of Hastings, County of Barry, State of Michigan, described as follows:
ALL OF LOTS 322 THRU 328, LOTS 336 THRU 348, PART OF LOTS 329 AND 335, ALL OF THE BLANK LOTS LYING WEST OF LOT 348, SOUTH OF APPLE STREET AND NORTHERLY OF THE THORNAPPLE RIVER, AND PART OF VACATED HANOVER, EAST AND APPLE STREETS, ALL IN THE ORIGINAL PLAT OF THE VILLAGE (NOW CITY) OF HASTINGS, BARRY COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS : COMMENCING AT THE NORTH 1/ 4 POST OF SECTION 17, TOWN 3 NORTH, RANGE 8 WEST, HASTINGS TOWNSHIP, BARRY COUNTY, MICHIGAN; THENCE S00°15'25"W 1121.72 FEET ALONG THE NORTH-SOUTH 1/ 4 LINE OF SAID SECTION 17 TO THE SOUTH LINE OF PLATTED MILL STREET (SAID POINT LYING 1.39 FEET EAST OF AN IRON PIPE); THENCE S00 °15'25" W, 499.60 FEET ALONG SAID 1/ 4 LINE TO AN INTERMEDIATE TRAVERSE LINE OF THE NORTH BANK OF THE THORNAPPLE RIVER; THENCE S70°55'22"W, 268.20 FEET ALONG SAID INTERMEDIATE TRAVERSE LINE; THENCE N72°46'49"W, 215.56 FEET ALONG SAID INTERMEDIATE TRAVERSE LINE; THENCE N50°12'27"W, 358 .27 FEET TO THE END OF SAID INTERMEDIATE TRAVERSE LINE; THENCE N34 °44'13"E, 360 . 42 FEET TO SAID SOUTH LINE OF MILL STREET; THENCE S89°46'48"E, 531.53 FEET ALONG SAID SOUTH LINE TO THE POINT OF BEGINNING. INCLUDING ALL LAND LYING BETWEEN SAID INTERMEDIATE TRAVERSE LINE AND THE WATERS OF THE THORNAPPLE RIVER AS LIMITED BY THE SOUTHERLY EXTENSION OF THE SIDELINES. CONTAINING 7.71 ACRES OF LAND, MORE OR LESS, TO SAID INTERMEDIATE TRAVERSE LINE, PLUS AN UNDETERMINED AND VARIABLE AREA BETWEEN SAID TRAVERSE LINE AND THE WATERS OF THE THORNAPPLE RIVER. SPLIT FROM 001-001-01 ON 8/28/19

Property Address: 328 E. Mill St, Hastings, MI 49058

Tax Parcel No.: 55-001-001-02

Legal Description:

Land in the City of Hastings, County of Barry, State of Michigan, described as follows:
ALL OF LOTS 330, 332, 333, AND 334 AND PART OF LOTS 329, 331, AND 335 AND PART OF VACATED PLATTED HANOVER STREET, AND PART OF VACATED PLATTED BOLTWOOD STREET, ALL IN THE ORIGINAL PLAT OF THE VILLAGE (NOW CITY) OF HASTINGS, BARRY COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NORTH ¼ CORNER OF SECTION 17, TOWN 3 NORTH, RANGE 8 WEST: THENCE S00°15'23"W, 1121.83 FEET ALONG THE NORTH-SOUTH ¼ LINE OF SAID SECTION 17 TO THE SOUTH LINE OF PLATTED MILL STREET; THENCE ALONG SAID SOUTH LINE

N89°46'48"W, 534.08 FEET TO THE TRUE POINT OF BEGINNING; THENCE S34°44'13"W, 359.13 FEET TO AN INTERMEDIATE TRAVERSE LINE OF THE NORTH BAND OF THE THORNAPPLE RIVER; THENCE ALONG SAID TRAVERSE LINE N50°51'15"W, 331.34 FEET; THENCE CONTINUING ALONG SAID TRAVERSE LINE N68°47'24"W, 82.56 FEET TO THE END OF SAID INTERMEDIATE TRAVERSE LINE; THENCE ALONG THE WEST LINE OF VACATED BOLTWOOD STREET N00°19'59"E, 58.15 FEET TO SAID SOUTH LINE OF MILL STREET; THENCE ALONG SAID SOUTH LINE S89°46'48"E, 538.24 FEET TO THE POINT OF BEGINNING. INCLUDING LAND LYING BETWEEN SAID INTERMEDIATE TRAVERSE LINE AND THE WATERS OF THE THORNAPPLE RIVER, AS LIMITED BY THE SIDE LINES EXTENDED TO THE WATER EDGE. CONTAINING 1.95 ACRES OF LAND, MORE OR LESS, TO SAID INTERMEDIATE TRAVERSE LINE, PLUS AS UNDETERMINED AND VARIABLE AREA BETWEEN SAID TRAVERSE LINE AND THE WATERS OF THE THORNAPPLE RIVER.SPLIT/COMBINED ON 01/13/2017 FROM 55-001-001-00

Exhibit C

Documentation of Facility Status

Exhibit D

Potential Rent Loss

Potential Rent Loss Calculation

				Developer Rent	120% AMI	Potential Monthly Rent Loss	Annual		
1-bdr	7	1.0	660	$1,180	$ 2,185	$ 1,005	$ 84,420	80%	
2-bdr	19	2.0	950	$1,625	$ 2,622	$ 997	$ 227,316	100%	
3-bdr	1	2.0	1,250	$1,975	$ 3,030	$ 1,055	$ 12,660	100%	
	27						$ 324,396	$ 8,109,900	Total Potential Rent Loss - 25yrs

Site Preparation to Support Housing Development Activities - $640,000

Infrastructure Improvements to Support Housing Activities and Property - $607,500

Total Housing Subsidy - $9,357,400 (limited to 25yrs of reimbursement)

Exhibit E

TIF Table

PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

FORMER HMC ROYAL COACH SITE
420 EAST MILL STREET
HASTINGS, MICHIGAN 49058

EGLE Grant Tracking Code: 2019-1380
SME Project Number: 081604.00
October 13, 2020

SME

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APPENDIX E

1. INTRODUCTION

SME's environmental team prepared this report to document the results of a Phase II Environmental Site Assessment (ESA) of the Former Hastings Manufacturing Company (HMC) Royal Coach site, located at 420 East Mill Street (formerly a portion of the parcel known as 325 North Hanover Street), in Hastings, Barry County, Michigan, and is herein referred to as "the Property". Figure 1 is a scaled area map showing the location of the Property and surrounding areas.

The purpose of this Phase II ESA was to evaluate the recognized environmental conditions (RECs) identified in a recent Phase I ESA report completed by PM Environmental, Inc. (PME) and dated September 13, 2019. The Phase II ESA was intended assist the City of Hastings and a prospective purchaser with better understanding the current environmental conditions of the site. This will aid in determining the potential redevelopment restrictions/limitations and the necessary cleanup/response activities to facilitate a future site redevelopment.

We were retained by the City of Hastings to conduct this Phase II ESA as part of their Michigan Department of Environment, Great Lakes, and Energy (EGLE; formerly MDEQ) Brownfield Site Assessment Grant (Grant Tracking Code: 2019-1380, Location Code: 8G01). The assessment services were conducted in accordance with SME's Work Plan #1 (Rev 1.0), dated March 20, 2020, which was approved by EGLE on March 30, 2020.

2. PROPERTY INFORMATION AND HISTORY

At the time of PME's 2019 Phase I ESA, the Property was comprised of a 9.2-acre portion of a larger parcel of land developed with two vacant buildings: a three-story, approximately 116,100 square foot building (Royal Coach building; western building), and a two-story, approximately 17,500 square foot building (Warehouse #3; eastern building). The buildings on the Property were known by the common addresses of 420 and 498 East Mill Street. Other portions of the Property included paved and gravel drives and parking areas, open grass fields, and wooded areas. Property features are shown on Figure 2. The parent parcel has recently been divided and the Property is now known by the formal address of 420 East Mill Street (tax parcel ID# 55-001-001-04).

According to the 2019 PME Phase I ESA, the Property was developed prior to 1900 with portions of the current Royal Coach building. Various additions and demolitions to portions of the building occurred between 1900 and 1967. The central portion of the building was utilized for paint storage and as a paint booth in at least 1948, and potentially from at least 1929. Available records do not document when the paint booth and paint storage areas were removed. An outbuilding was present in the central portion from at least 1949 until between March 2018 and August 2019. The building was historically utilized as a paint and oil storage warehouse. A second outbuilding was present southeast of the Royal Coach building from at least 1900 until between 2018 and 2019, and was utilized as an oil warehouse. Former tramways were present on the central and southern portions of the property from at least 1900 until at least 1948. The Property was historically occupied by various manufacturing tenants (wooden box manufacturers, wooden table manufacturers, motorhome manufacturers, and a piston ring manufacturing company). After manufacturing operations ceased, HMC used the buildings for storage.

HMC operated industrial landfills on the southern and northeastern portions of the Property from at least 1955 through 1982, and reportedly placed foundry sand, metal debris, and concrete in the landfills during their operation. The landfills were closed and reportedly capped and covered with grass in 1982. Much of the existing historical environmental data for the site is well over years old, the data is sparse, and the impact was not well understood. Interested developers have expressed concern that the lack of data control and unknown conditions of the landfill are limiting factors in determining redevelopment costs. Additionally, EGLE had concerns that per- and polyfluouroalkyl substances (PFAS) may be migrating onto the Property, and to the Thornapple River, from the north-adjoining HMC manufacturing facility, and that methane could be present in soil gas from historical disposal in the landfill areas.

Subsequent to completion of SME's Phase II ESA, the Royal Coach building was destroyed by a fire on October 7, 2020. The majority of the structure is no longer present on the Property; however, building debris and the foundations and concrete floors remain.

3. SUMMARY OF PHASE I ENVIRONMENTAL SITE ASSESSMENT

PME conducted a Phase I Environmental Site Assessment (ESA) of the Property and prepared a Phase I ESA report dated September 13, 2019. The Phase I ESA was conducted according to the ASTM International (ASTM) Practice E 1527-13 and Michigan State Housing Development Authority (MSHDA) 2019 Environmental Review Requirements.

PME identified the following recognized environmental conditions (RECs) in connection with the Property:

- The documented presence of impacted soil and groundwater on the Property, and the potential for impacted soil gas (vapor encroachment) from the known impact. Subsurface investigations in 1989, 2005, and 2013 indicated the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals in the soil and groundwater.
- The potential for other impact in soil, groundwater, or soil gas (vapor encroachment) on the Property from unreported and/or undetected releases of hazardous substances and/or petroleum products associated with the following on-site sources:
    - Historical manufacturing operations throughout the Property, including a painting area in Warehouse #3.
    - The potential for placement of contaminated materials in the landfills. The northeastern and southern portions of the subject property were utilized for landfill operations from at least the 1950s to 1980s.
    - The potential for unidentified USTs associated with the shed building located southeast of the Warehouse #3 building.
    - The potential for releases of hazardous substances and/or petroleum products from historical fueling (see fuel dispenser building) and from paint and oil storage (see former oil warehouse/paint shed).
    - The potential for releases of hazardous substances and/or petroleum products to the subsurface from the historical use of drains in Warehouse #3 that may have not been connected to the sewer system.
    - The potential for environmental impact from releases of hydraulic oil that may contain PCBs from the hydraulic elevators in the northeast and southeast portions of the Warehouse #3 building.
    - The potential for a release of transformer oils that may contain PCBs from the leaking electrical transformer on the second floor of the Warehouse #3 building.
- The potential for migration of impacted groundwater and/or soil gas (vapor encroachment) onto the Property from reported, unreported and/or undetected releases of hazardous substances associated with the historical and current use of the north-adjoining site for automotive parts manufacturing, machining, and other heavy industrial manufacturing uses by Hastings Manufacturing Company, Viking/Tyden Corporation, International Lock and Seal, and Casite Corporation since the early-1900s.

4. PHASE II ENVIRONMENTAL SITE ASSESSMENT

The Phase II ESA was designed and conducted to further evaluate the RECs identified in PME's 2019 Phase I ESA summarized in Section 3, and to evaluate potential due care issues associated with redevelopment. The assessment included a geophysical survey to evaluate for potential USTs or other buried structures that could affect redevelopment, as well as collection of soil, groundwater, and soil gas samples to evaluate for potential contamination. This section includes a discussion of the geophysical survey, sampling locations and rationales, sample collection procedures, quality assurance/quality control (QA/QC), and chemical analyses.

4.1 GEOPHYSICAL SURVEY

WorkSmart, Inc. of Paw Paw, Michigan conducted a geophysical survey of the Property to evaluate for potential USTs or other anomalies that could affect redevelopment of the site. Their survey results are documented in their *Subsurface Imaging Report*, dated May 17, 2020, which is attached in Appendix A. WorkSmart identified several anomalies consistent with site utilities and identified two anomalies that were inconsistent with utilities. WorkSmart was unable to determine the nature of the two non-utility anomalies, but opined that the anomalies were also not consistent with underground storage tanks (USTs), citing the depths and lack of heavy metallic reflections. The unknown subsurface anomalies are shown on Figure 3.

4.2 SAMPLING LOCATIONS AND RATIONALES

On May 18 through 20, 2020, we advanced soil borings at 19 sampling locations (SB1 through SB19; Figure 3). Soil borings SB1 through SB17 were advanced from depths ranging from 8 feet below ground surface (bgs) to 19 feet bgs using truck-mounted, hydraulically-driven, direct-push sampling equipment. Soil borings SB18 and SB19 were advanced using a hand auger to depths of 1.5 feet bgs and 2.5 feet bgs, respectively.

On May 20 and June 2, 2020, we sampled surface soil (upper 6 inches to 1 foot) at 25 locations (SS1 through SS25; Figure 4). The surface soil samples were collected manually from the upper six-inches of soil using a decontaminated hand shovel because the locations were inaccessible to the direct-push sampling equipment.

We installed temporary groundwater monitoring wells at soil boring locations SB1, SB2, SB6, SB8, SB15, and SB17 (see Figure 5). The well screens were installed such that the screen intersected the depth where groundwater was encountered during drilling. On May 18 and 19, 2020, groundwater samples for chemical analysis were collected from each temporary monitoring well. On May 20, 2020, we also collected groundwater samples for chemical analysis from four pre-existing groundwater monitoring wells (MW10D, MW17 through MW19; see Figure 5). SME was unable to locate MW10S in the field; therefore, this existing well was not sampled.

On May 19, 2020, we installed Vapor Pins™ at nine locations in the building (SG1 through SG11; Figure 6). We also installed three deep soil gas monitoring probes on May 20, 2020 (SG12 through SG14; Figure 6). We subsequently collected soil gas samples for chemical analysis from both the sub-slab Vapor Pins™ and deep soil gas monitoring probes on June 1, 2020.

A summary of the rationale for each sampling location is provided in the table below.

SAMPLE ID	SAMPLE TARGET / RATIONALE
SB1	Evaluated soil and groundwater conditions in the area of the unidentified subsurface anomaly.
SB2, SB3, SB9 through SB12, SB16 through 19, MW17	Evaluated soil and/or groundwater conditions in the vicinity of the Royal Coach building.
SB4, SB13 through SB15, MW10D	Evaluated soil and/or groundwater conditions in the vicinity of Warehouse #3.
SB5, SB6, MW18	Evaluated soil and/or groundwater conditions in the vicinity of the former southern landfill area.
SB7, SB8, MW19	Evaluated soil and/or groundwater conditions in the vicinity of the former northern landfill area.
SS1 through SS25	Evaluated surface soil conditions on the Property for manufacturing debris (i.e., slag) potentially exposed at the surface.
SG1 through SG11	Evaluated soil vapors beneath the Royal Coach building slab to assess the potential for vapor intrusion into the current building and future buildings that may be constructed at the Property.
SG12 through SG14	Evaluated soil vapors within the subsurface to assess the potential for vapor intrusion into future buildings that may be constructed at the Property.

4.3 SAMPLE COLLECTION PROCEDURES

Detailed descriptions of our soil, groundwater, and soil gas sampling procedures are provided in Appendix B. We collected soil samples from each soil boring for classification, field screening, and/or laboratory analyses. We visually classified the soil samples in accordance with ASTM D2488, *Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)* and field screened the soil samples for the presence of ionizable VOCs using a calibrated 10.6 eV PID. At locations inaccessible to the direct-push equipment, we collected hand auger samples or surface soil samples for chemical analysis using a decontaminated hand auger or shovel. We measured depth to groundwater (Table 1) and collected groundwater samples from both existing monitoring wells and pre-packed, temporary monitoring wells installed at selected soil boring locations. After installation of soil vapor implants and Vapor Pins™, we also collected soil gas samples for VOCs using laboratory provided Bottle-Vac™ sample containers.

4.4 CHEMICAL ANALYSES

We submitted 43 soil samples, 10 groundwater samples, 14 soil gas samples, and 7 QC samples to Fibertec Environmental Services (Fibertec) of Holt, Michigan, for chemical analyses of one or more of the following: VOCs, polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), arsenic, barium, cadmium, chromium, hexavalent chromium, copper, lead (including total and fine and coarse soil fractions), mercury, selenium, silver, and/or zinc. We also submitted four groundwater samples from existing wells, and three associated QC samples, to Eurofins TestAmerica, Sacramento (TestAmerica) of West Sacramento, California, for chemical analysis of per- and polyfluoroalkyl substances (PFAS).

The specific analytes for each sample are presented in Table 2 (soil), Table 3 (groundwater), and Table 4 (soil gas). We selected the target analytes to be representative of, or indicator parameters for, the contaminants reasonably expected to be associated with the identified historical on-site and off-site

operations, and contaminants commonly present in urban fill material. The samples were analyzed using the reference methods listed below:

- VOCs – USEPA Method 8260 (soil and groundwater) and TO-15 (soil gas)
- PAHs – USEPA Method 827 (soil and groundwater)
- PCBs – USEPA Method 8082 (soil)
- Mercury – USEPA Methods 7471 (soil) and 7470 (groundwater)
- Hexavalent chromium – USEPA Method 7196A (soil and groundwater)
- Other metals – USEPA Method 6020 (soil and groundwater)
- PFAS – USEPA Method 537 modified (groundwater – existing monitoring wells only)

The laboratory analysis reports, complete list of specific analytical reference methods, reporting limits, and chain of custody documentation are included in Appendix C.

4.5 QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC)

We collected and analyzed three duplicate soil samples, two duplicate groundwater samples, one trip blank water sample, one field blank water sample, one equipment blank water sample, one duplicate soil gas sample, and one equipment blank soil gas sample to assist in evaluating the representativeness of our sampling. The analytical laboratories supplied properly preserved, pre-cleaned, containers for sample collection. After sample collections, the containerized samples were kept cool, i.e., kept on ice or refrigerated, (soil and groundwater samples) or were kept at ambient air temperature (soil gas samples) until delivery to the analytical laboratories. Our field staff followed chain-of-custody procedures to document the sample handling sequence. Field instrument calibration, sample handling and custody requirements, and QA procedures were in general accordance with our standard operating procedures.

Our field team members wore a new pair of disposable nitrile sampling gloves during collection of each soil, groundwater, and soil gas sample to minimize cross-contamination. Direct-push sampling equipment was decontaminated before each use with a high-pressure, hot water pressure washer. We decontaminated other soil sampling equipment before each use with a laboratory-grade detergent/distilled water solution wash followed by a distilled water rinse. We used pre-packed, new materials for temporary groundwater well construction and new polyethylene and silicone tubing for the groundwater purging and sampling. We used new Vapor Pins™; new 6-inch stainless steel implants; laboratory-provided, pre-cleaned flow regulators and Bottle Vac™ samplers; and new tubing for collection of each soil gas sample.

5. PHASE II ESA FINDINGS

We compiled and evaluated the results from our Phase II ESA to evaluate surface and subsurface conditions and identify environmental impact at concentrations greater than Part 201 generic residential cleanup criteria (Part 201 criteria).

5.1 SURFACE AND SUBSURFACE CONDITIONS

Descriptions of the soil conditions encountered at each of our sampling locations (SB1 through SB19 and SS1 through SS25) are documented on the soil boring logs (Appendix D). In general, the surface material in the developed portion of the Property consisted of asphalt, concrete, gravel, or grass. The surface material in the southern and eastern, undeveloped portions of the Property primarily consisted of topsoil with vegetation, topsoil without vegetation, foundry sand, or sand/silty sand. Sand fill, which at various locations contained foundry sand, slag, coal, cinders, ash, and other debris (metal, brick, plastic, glass, etc.), was generally present throughout the site and ranged from about 3.5 to over 16 feet thick. Fill thicknesses were greatest in the soil borings (SB5 through SB8) in the former industrial landfill areas shown on the site diagrams. Fine to coarse sand was generally present below the fill and extended to the maximum explored depths. Staining was observed from 2 to 3.5 feet bgs at soil boring SB14. No other odors, staining, or elevated (>1 part per million) PID measurements were noted when soil samples were field screened, and no elevated methane measurements were detected when the open boreholes were field screened for methane.

Groundwater measurements are shown on Table 1, and was measured between approximately 5 and 16 feet bgs in temporary and existing wells throughout the Property. The known regional groundwater flow in the area of the Property is to the south toward the Thornapple River. The on-site groundwater elevations suggest a general southerly groundwater flow direction; however, several of the measured elevations were anomalous and may be influenced by the historical on-site placement of fill in the landfills and other areas of the Property. No odors or sheens were present in purged groundwater during groundwater sample collection.

5.2 CHEMICAL ANALYSIS RESULTS

Results from the chemical analyses performed on soil, groundwater, and soil gas samples collected during our assessment are summarized in the following paragraphs and tabulated in Tables 2 through 4. Laboratory analysis reports and chain of custody documentation are included in Appendix C.

Although the Property was most recently occupied by nonresidential structures (prior to the October 2020 fire; Warehouse #3 remains), the proposed redevelopment plan includes the construction of residential structures. Therefore, as a conservative measure, we compared the results from chemical analyses of soil and groundwater samples to the Part 201 generic residential and nonresidential cleanup criteria (Part 201 criteria). Additionally, analytical results from chemical analyses of soil, groundwater, and soil gas samples were also compared to EGLE's May 14, 2020, Draft Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels to evaluate the potential for vapor intrusion into future residential structures.

5.2.1 ANALYSIS RESULTS – SOIL

Summaries of the CAS numbers, analytes, measured concentrations, soil sample locations, and Part 201 criteria and EGLE VIAP screening levels exceeded are provided in Table 2. Additional discussion is included in the Sections below.

5.2.1.1 SURFACE SOIL SAMPLES

Surface soil samples were analyzed for PAHs, arsenic, lead, and/or PCBs to evaluate near surface soil conditions and potential human direct contact exposure concerns. Arsenic and/or lead (total, as well as fine and/or coarse fractions) were measured at concentrations exceeding the Part 201 criteria in the surface soil samples collected from SS1 through SS3, SS5 through SS7, SS11, and SS18. The concentrations of these metals reported exceeded the residential and nonresidential Part 201 direct contact criteria, residential and nonresidential drinking water protection criteria, and/or groundwater surface water interface protection (GSIP) criteria. PAHs were measured at concentrations above the laboratory reporting limits (RLs), but below the Part 201 criteria and VI Screening Levels in several soil samples. No PCBs were measured at concentrations above laboratory RLs in any surface soil samples. Arsenic and lead concentrations present in surface soil samples at concentrations greater than the Part 201 residential direct contact criteria are depicted on Figure 4.

5.2.1.2 SUBSURFACE SOIL SAMPLES

Subsurface soil samples collected from borings were analyzed for VOCs, PAHs, PCBs, and/or various metals to evaluate soil conditions and potential human direct contact exposure concerns. Tetrachloroethene (PCE), benzo(a)pyrene, fluoranthene, phenanthrene, arsenic, chromium (total), copper, lead, mercury, selenium, and/or zinc were measured at concentrations exceeding the Part 201 criteria in the subsurface soil samples collected from SB2, SB4, SB7, SB8, SB10, SB12, SB13, SB15, and/or SB16. Additionally, naphthalene, PCE, xylenes, 2-methylnaphthalene, phenanthrene, and mercury were measured at concentrations exceeding EGLE's residential VIAP screening levels in the subsurface soil samples collected from SB2, SB4, SB7, and/or SB11 through SB16. No PCBs were measured at concentrations above the laboratory RLs in the subsurface soil samples analyzed. The concentrations of benzo(a)pyrene, arsenic, and lead reported exceeded the Part 201 residential direct contact criteria and are shown on Figure 3.

5.2.2 ANALYSIS RESULTS – GROUNDWATER

Groundwater samples collected from temporary and existing wells were analyzed for VOCs, PAHs, and various metals to evaluate groundwater conditions. Groundwater samples from existing wells were also analyzed for PFAS to evaluate potential migration of PFAS in groundwater from the north-adjoining Hastings Manufacturing Company facility site. Summaries of the CAS numbers, analytes, measured concentrations, groundwater sample locations, and Part 201 criteria and VIAP screening levels exceeded are provided in Table 3.

Trichloroethene (TCE), total arsenic, total copper, total lead, and/or zinc were measured in groundwater at concentrations above Part 201 criteria in SB6, SB8, SB15, MW10D, MW18, and MW19. Additionally, TCE was measured at concentrations exceeding EGLE's VIAP screening levels in the groundwater sample collected from MW18. The metals found in groundwater may be a result of sediment within the samples because metals were not measured above the laboratory RLs where filtered samples were also analyzed. No PAHs were measured above laboratory reporting limits in the groundwater samples analyzed as part of this assessment. Target analytes present in groundwater at concentrations greater than the Part 201 drinking water criteria are depicted on Figure 5; exceedances of the GSI criteria for metals are not shown on the drawing because they may not be representative of groundwater conditions.

Perfluorooctanesulfonamide (FOSA) was detected above laboratory RLs in the groundwater sample collected from monitoring well MW10D, and perfluorooctanesulfonic acid (PFOS) and perfluorobutanoic acid (PFBA) were both detected above laboratory RLs in the groundwater sample collected from pre-existing monitoring well MW18. No other PFAS compounds were measured above the laboratory reporting limits in the groundwater samples analyzed. No exceedances of the Part 201 criteria for PFAS compounds were noted in the groundwater samples analyzed.

5.2.3 ANALYSIS RESULTS – SOIL GAS

Summaries of the CAS numbers, analytes, measured concentrations, and soil gas sample locations are provided in Table 4. Target analytes present in soil gas at concentrations greater than the EGLE VIAP residential soil gas screening levels are depicted on Figure 6.

TCE was measured at concentrations exceeding the VIAP screening level in the soil gas samples collected from SG11 and SG12. TCE was also measured at concentrations below the EGLE residential VIAP screening level in the soil gas samples collected from SG1 through SG10. Several other VOCs were measured at concentrations above laboratory RLs (chloroform at SG11, dichlorodifluoromethane at SG6, PCE at SG14, and 1,1,1-trichloroethane at SG12), but below the VIAP screening levels.

5.2.4 DATA VERIFICATION/VALIDATION AND USABILITY

We evaluated the representativeness of the data collected during our subsurface assessment to determine if the data set was valid and of usable quality. The laboratory QC results are detailed in the laboratory analytical reports and case narratives included in Appendix C. In our opinion, the data set generated is of usable quality and meets the project-specific objective of determining the current environmental conditions of the Property and evaluating potential Due Care concerns for a future residential redevelopment of the Property.

6. SUMMARY

SME conducted the Phase II ESA described herein to evaluate the current environmental conditions of the Property and to evaluate potential Due Care issues associated with a planned residential redevelopment of the Site. The results of our Phase II ESA demonstrate the presence of multiple contaminants at concentrations exceeding the Part 201 generic residential cleanup criteria (Part 201 criteria) and/or EGLE's Volatilization to Indoor Air Pathway (VIAP) screening levels. A summary of our significant findings is below:

6.1 SOIL CONDITIONS

- The site is underlain by 3.5 feet to over 16 feet of sand fill. The sandy fill material was at least 15 feet in thickness and contained significant amounts of debris (foundry sand, slag, coal, cinders, ash, metal, brick, concrete, plastic) in the borings advanced in the two former industrial landfill areas located west and east of Butler Creek. Fill in other areas of the Property ranged in thickness from about 3.5 feet to around 10 feet of sandy fill material containing varying amounts of foundry sand, brick, coal, cinders, slag, and ash.
- Two unidentified subsurface geophysical anomalies are located east and south of the former Royal Coach building and should be further evaluated.
- Soil is impacted with PCE, PAHs, and various metals at concentrations exceeding the Part 201 criteria.
    - The concentrations of naphthalene, PCE, xylenes, 2-methylnaphthalene, phenanthrene, and mercury exceeded the VIAP residential screening levels in soil at various locations on the Property.
    - The concentrations of arsenic, lead, and benzo(a)pyrene exceeded the Part 201 residential direct contact criteria in several locations on the Property.

6.2 GROUNDWATER CONDITIONS

- Groundwater is impacted with TCE and various metals; however, the reported metals concentrations may be indicative of suspended sediment in the groundwater.
- The concentration of TCE in groundwater near MW18 exceeded the VIAP residential screening levels.
- No PFAS or PAH compounds were measured above the Part 201 criteria in the groundwater samples analyzed.

6.3 SOIL GAS CONDITIONS

- TCE was measured at concentrations above the laboratory RL in 12 of the 14 soil gas sample locations and a concentrations exceeding the VAIP residential screening levels in soil gas SG11 in the basement of the former Royal Coach building, and in SG12 in the proposed footprint of a new building. Several other VOCs were measured above the reporting limits, but below the VIAP screening levels. Mercury and PAHs were not analyzed in soil gas as part of this assessment, though exceedances of the VIAP screening levels for soil were noted for mercury and PAHs at several locations.

6.4 GENERAL OBSERVATIONS AND RECOMMENDATIONS

- We understand the Warehouse #3 building and the remaining portion of the former Royal Coach building are planned for removal. The vapor intrusion (VI) pathway for VOCs, PAHs, and mercury should be further evaluated prior to constructing new buildings on the Property or VI mitigation systems should be planned for new buildings in lieu of further evaluation.
- Near surface soil with exceedances of the direct contact criteria for benzo(a)pyrene, arsenic, and lead is predominantly located along the exposed soil bank of the Thornapple River and Butler Creek. Future redevelopment activities will need to consider placement of a hard (e.g., pavements) or soft (e.g., clean soil or landscape materials) cap on soils along the river and creek banks, and likely in other areas upon redevelopment.
- The geophysical anomalies south and east of the former Royal Coach building should be further evaluated to better understand the nature of those anomalies.
- Some of the Property is fenced; however, the site fencing should be completed around the Property during the period prior to, and during, redevelopment to mitigate potential direct contact exposures with soil or physical hazards (e.g., metal exposed at the surface, unsafe buildings) on the Property.
- The October 2020 fire that destroyed the Royal Coach building may have affected the concentrations of contaminants in soil, groundwater, and soil gas in the area of the Property near, and hydraulically downgradient of, the former building. The impact of the fire on subsurface conditions should be further evaluated prior to redevelopment.

6.5 EGLE-REQUIRED CONCEPTUAL REMEDIATION ESTIMATE

For purposes of estimating possible remediation costs during redevelopment, as required by the EGLE Site Assessment Grant, SME utilized a redevelopment scenario provided by a potential developer in 2020. The buildings included in the development plan are shown on Figure 2 and include three new, residential apartment/townhome structures with 8,000 square foot footprints, and reuse of a portion of the former Royal Coach building for apartments. Since the Royal Coach building was destroyed in a recent fire, we have assumed a residential apartment building of similar planned 15,000 square foot footprint to what the developed had planned to keep may be constructed in its place in the future.

The remediation needed to reuse the Property for residential purposes includes measures to mitigate the direct contact pathway and the VI pathway. The Property and new buildings will be connected to municipal water; therefore, exposure to groundwater is not a concern and no new wells or other uses of groundwater on the site will be allowed. To mitigate potential direct contact exposures and the potential for VI in new residential buildings, pavements or planned buildings will be used as a hard cap in some areas, and unpaved areas or areas without buildings will be covered with a soft cap. Vapor mitigation systems will also be assumed for all new buildings.

The conceptual, anticipated remediation/mitigation costs related to redevelopment include:

- Vapor mitigation systems for 40,000 square feet of building footprints at an average of $5 per square foot for design ($200,000).
- Fencing the area east of Butler Creek to prevent unauthorized access. 1,700 linear feet of chain link fencing at an average cost of $10-$15 per linear foot ($17,000 - $25,500).
- Installation of geotextile fabric, six inches of topsoil, and seed on about 2.5 acres of the Property west of Butler Creek, and along the west bank of Butler Creek and the north bank of the Thornapple River, where buildings and pavements will not be present. Placement of 109,000 square feet (2.5 acres) of demarcation barrier and six inches of topsoil (~2,000 cubic yards), and seed (109,000 square feet).

- ~$35,000 for demarcation barrier fabric and placement
- ~$15/cubic yard for topsoil and placement ($30,000)
- ~$15,000 for seeding

The estimate noted above is provided for conceptual planning purposes. Actual costs should be vetted prior to plan implementation in accordance with the redevelopment plans.

7. GENERAL NOTES

In the process of obtaining information for preparation of this Phase II ESA report, we followed procedures that represent current reasonable and accepted environmental practices and principles, in a manner consistent with the level of care and skill ordinarily exercised by members of this profession. The goal of this Phase II ESA was to evaluate the current environmental conditions of the Property with respect to Part 201. We conducted the Phase II ESA activities upon which this report is based, and cannot guarantee all potential contaminants have been identified. Undetected contamination resulting from historical activities, off-site sources, or the October 2020 fire on the Property may be present on the Property.

The environmental professionals responsible for the conduct of this Phase II ESA are listed below. Their resumes are included in Appendix E.

Report prepared by:

Mitchell D. Cline, LPG
Senior Staff Geologist

Casey E. Smith, CPG
Senior Project Geologist

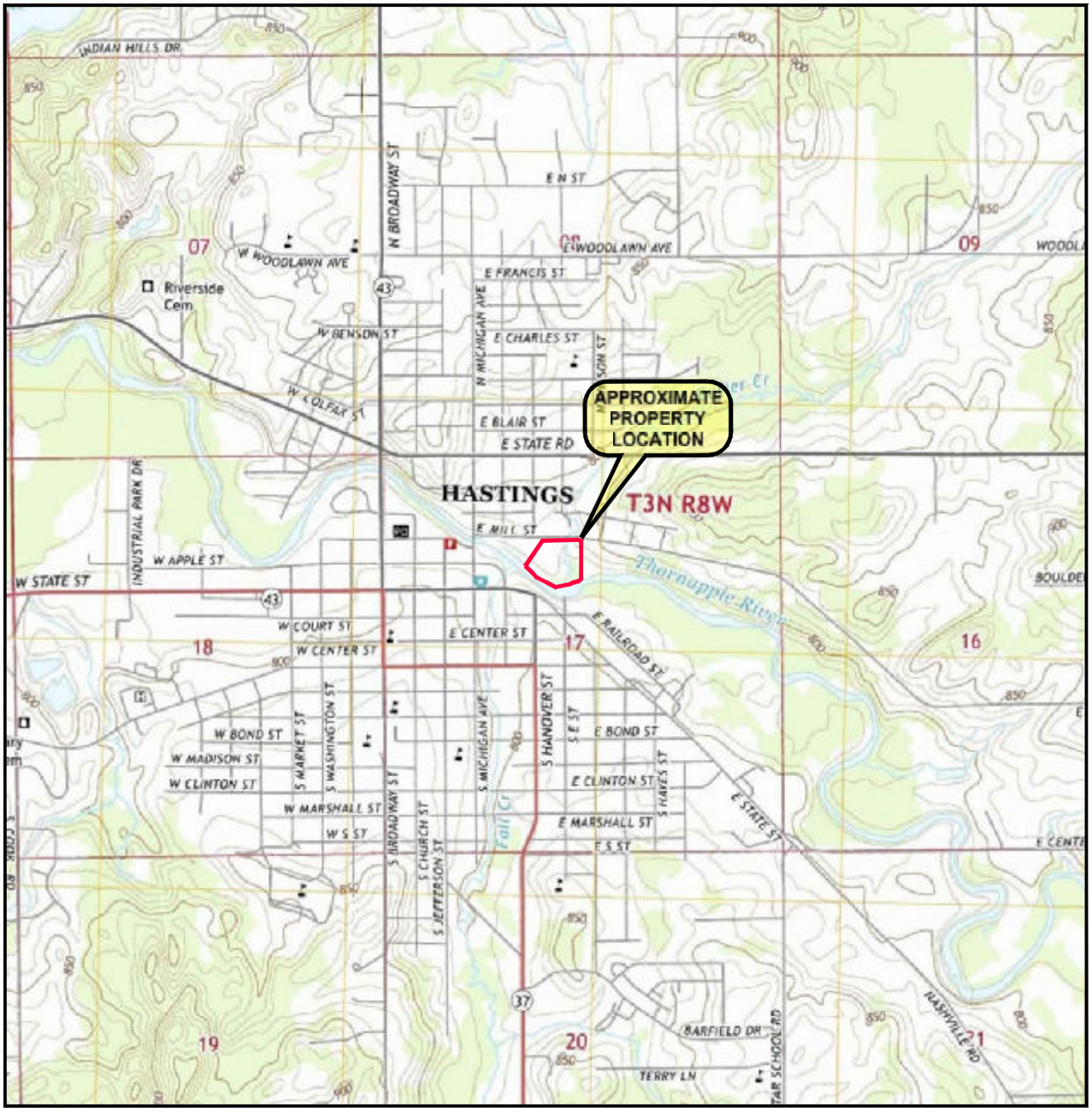
Report reviewed by:

Mark J. Quimby
Senior Consultant

8. REFERENCES

1. **Part 201, "Environmental Remediation", of 1994 PA 451, as amended, the Natural Resources and Environmental Protection Act.**
2. **Part 201 Generic Residential Cleanup Criteria and Screening Levels** Promulgated Cleanup Criteria, R 299.44, R 299.46, and R 299.49, December 30, 2013 (GSI Criteria Updated June 25, 2018).
3. **EGLE's Draft Volatilization to Indoor Air Pathway Screening Levels**, May 14, 2020.
4. PM Environmental, Inc., **Phase I Environmental Site Assessment, 420 and 490 East Mill Street, Hastings, Michigan,** September 13, 2019.
5. SME, **Phase I Environmental Site Assessment, Hastings Manufacturing Company Royal Coach Site – Portion of 325 North Hanover Street, Hastings, Michigan**, June 26, 2018.
6. SME, **EGLE Grant Work Plan #1 Revision 1.0 Former HMC Royal Coach Site**, dated March 20, 2020.

FIGURES



Base map obtained from EDR®

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SCALE: 1" = 2000'

USGS QUADRANGLE(s) REFERENCED

HASTINGS (MI) 2014

No.	Revision Date		
		Date	10-12-2020
		Drawn By	JAB
		Designed By	CES
		Scale	1" = 2000'
		Project	081604.00.001

PROPERTY LOCATION MAP
FORMER HMC ROYAL COACH SITE
420 EAST MILL STREET
HASTINGS, MICHIGAN

SME
www.sme-usa.com

Figure No. 1

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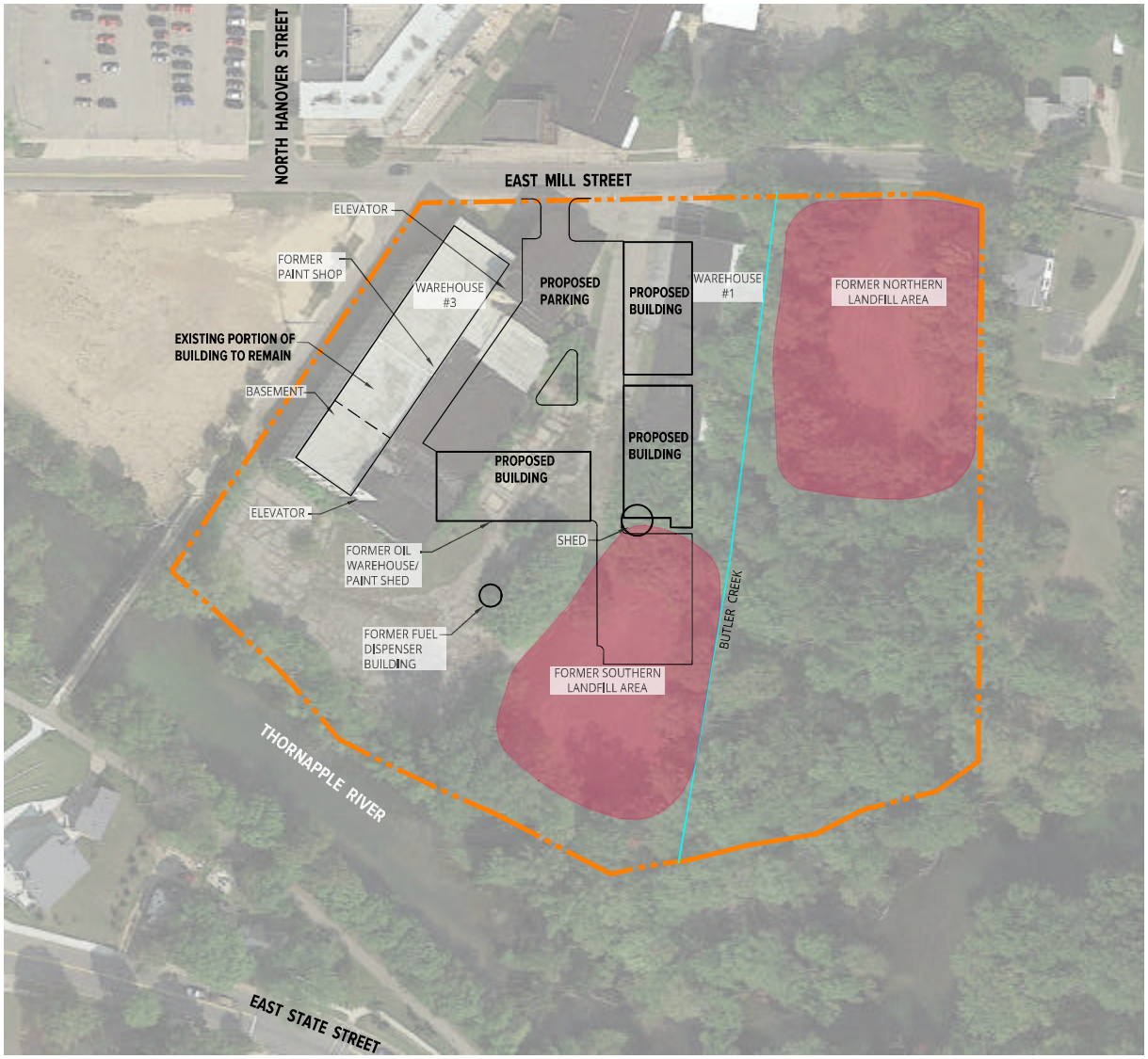

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LEGEND

APPROXIMATE PROPERTY BOUNDARY

NOTE:
BASE DRAWING INFORMATION TAKEN FROM GOOGLE EARTH PRO WITH IMAGE DATE 9-10-2017 AND A DRAWING TITLED "SITE LAYOUT PLAN" (SHEET C-205) PREPARED BY NEDERVELD.

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Project
FORMER HMC ROYAL COACH SITE SOUTHERN PORTION OF 325 NORTH HANOVER STREET

Project Location
HASTINGS, MICHIGAN

Sheet Name
PROPERTY FEATURES DIAGRAM

No.	Revision Date

Date 10-12-2020
CADD JAB
Designer CES/MDC
Scale AS NOTED
Project 081604.00.001
Figure No. 2

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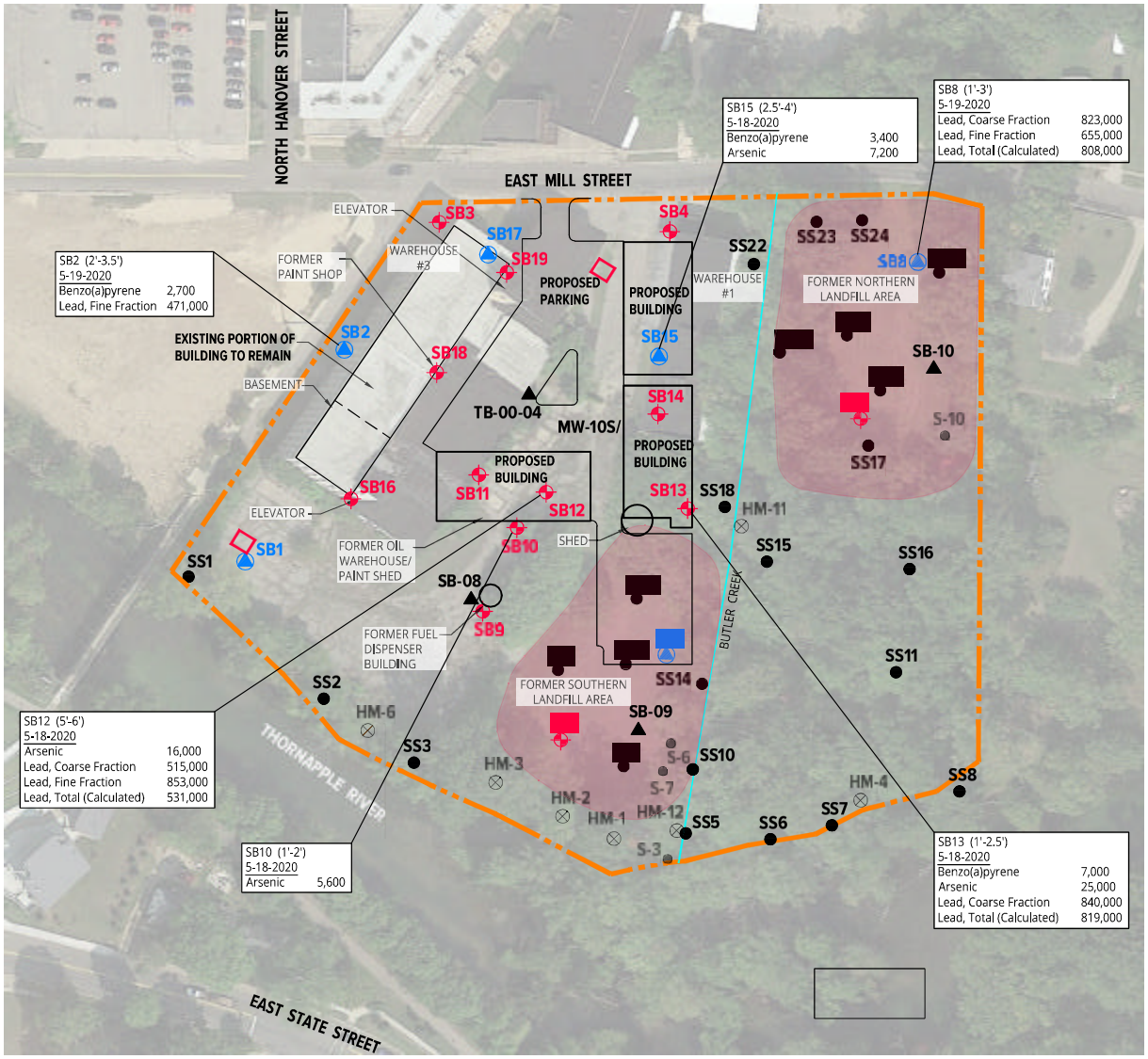

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LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- SOIL SAMPLE LOCATION (1989)
- SOIL AND/OR GROUNDWATER SAMPLE LOCATION (1995)
- SURFACE SOIL SAMPLE LOCATION
- SOIL BORING LOCATION
- SOIL BORING LOCATION WITH TEMPORARY MONITORING WELL
- UNKNOWN SUBSURFACE ANOMALY

NOTES:

1. BASE DRAWING INFORMATION TAKEN FROM GOOGLE EARTH PRO WITH IMAGE DATE 9-10-2017 AND A DRAWING TITLED "SITE LAYOUT PLAN" (SHEET C-205) PREPARED BY NEDERVELD.
2. CONCENTRATIONS ARE SHOWN IN MICROGRAMS PER KILOGRAM (µg/kg) AND EXCEED ONE OR MORE PART 201 GENERIC RESIDENTIAL DIRECT CONTACT SCREENING LEVELS.
3. SAMPLING LOCATIONS IN GRAY TEXT ARE HISTORICAL AND NO LONGER IDENTIFIABLE AT THE PROPERTY.

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Project

FORMER HMC ROYAL COACH SITE SOUTHERN PORTION OF 325 NORTH HANOVER STREET

Project Location

HASTINGS, MICHIGAN

Sheet Name

SOIL BORING SAMPLING LOCATIONS AND ANALYTICAL RESULTS

No.	Revision Date

Date	10-12-2020
CADD	JAB
Designer	CES/MDC
Scale	AS NOTED
Project	081604.00.001
Figure No.	3

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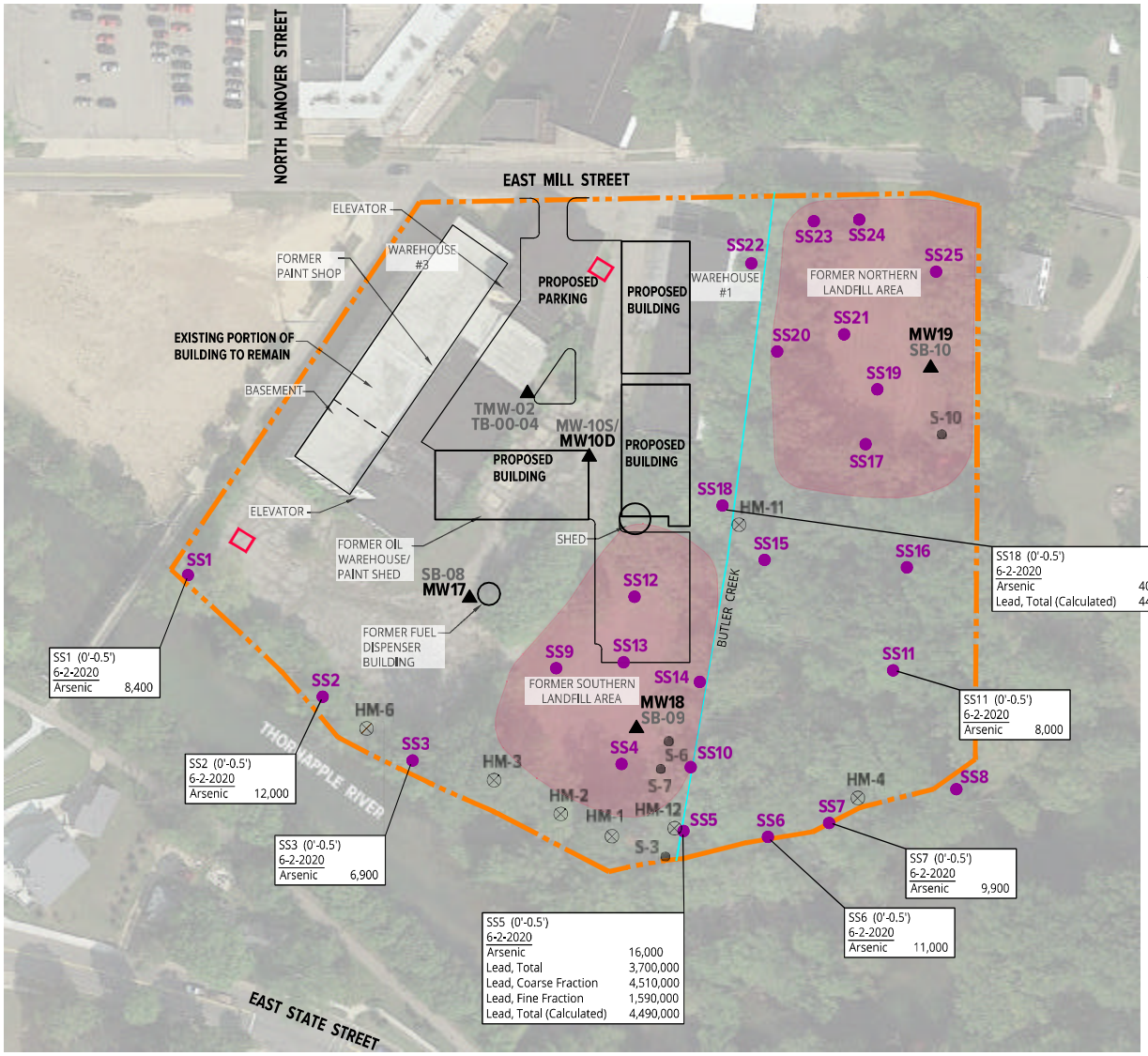

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GRAPHIC SCALE: 1" = 100'

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- SOIL SAMPLE LOCATION (1989)
- SOIL AND/OR GROUNDWATER SAMPLE LOCATION (1995)
- SOIL AND/OR GROUNDWATER SAMPLE LOCATION (2000/2013)
- SURFACE SOIL SAMPLE LOCATION
- UNKNOWN SUBSURFACE ANOMALY

NOTES:

1. BASE DRAWING INFORMATION TAKEN FROM GOOGLE EARTH PRO WITH IMAGE DATE 9-10-2017 AND A DRAWING TITLED "SITE LAYOUT PLAN" (SHEET C-205) PREPARED BY NEDERVELD.
2. CONCENTRATIONS ARE SHOWN IN MICROGRAMS PER KILOGRAM (µg/kg) AND EXCEED ONE OR MORE PART 201 GENERIC RESIDENTIAL DIRECT CONTACT SCREENING LEVELS.
3. SAMPLING LOCATIONS IN GRAY TEXT ARE HISTORICAL AND NO LONGER IDENTIFIABLE AT THE PROPERTY.

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Project

FORMER HMC ROYAL COACH SITE SOUTHERN PORTION OF 325 NORTH HANOVER STREET

Project Location

HASTINGS, MICHIGAN

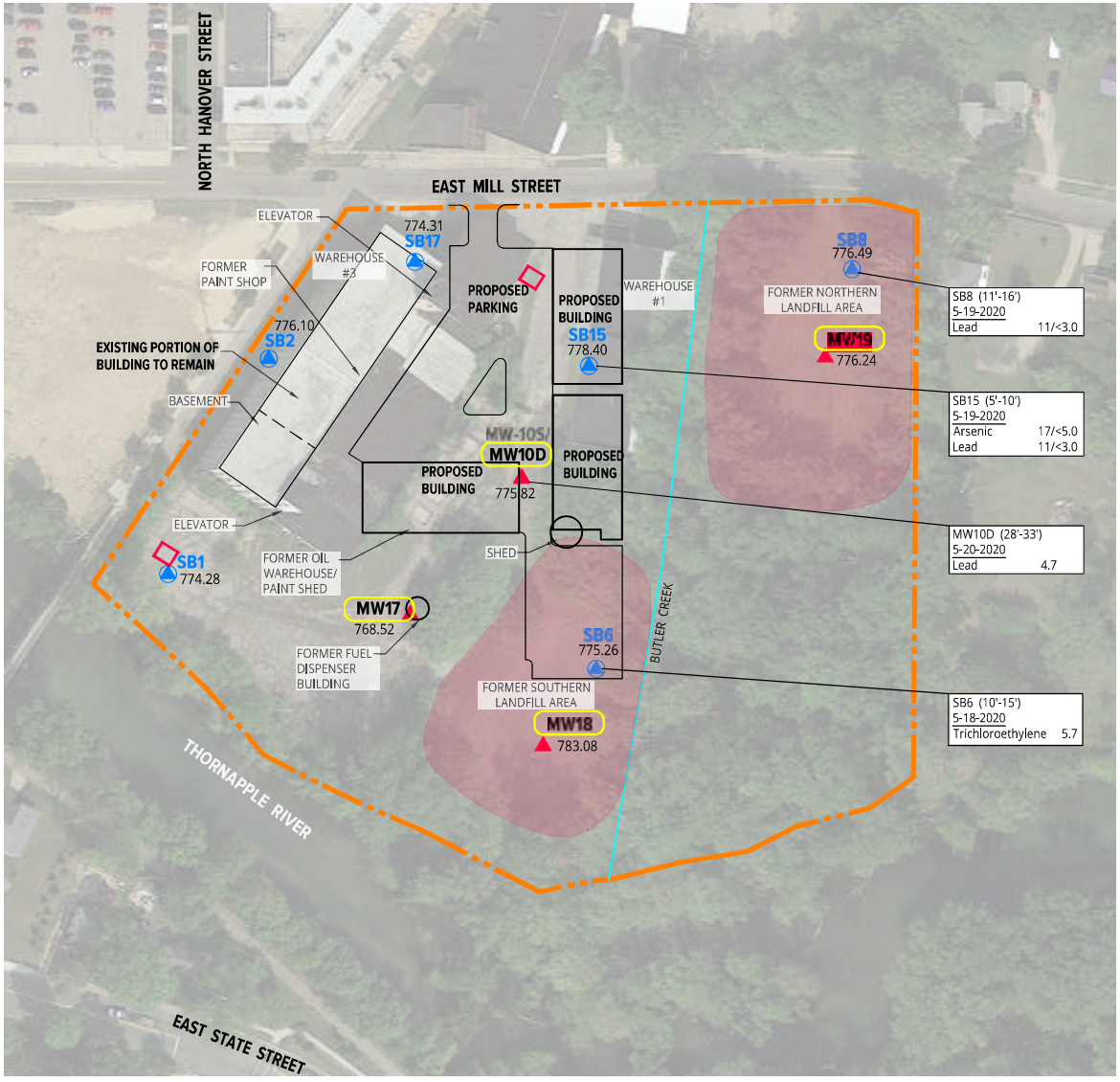
Sheet Name

SURFACE SOIL SAMPLE LOCATIONS AND ANALYTICAL RESULTS

No.	Revision Date

Date	10-12-2020
CADD	JAB
Designer	CES/MDC
Scale	AS NOTED
Project	081604.00.001
Figure No.	4

PLOT DATE: Oct 13, 2020 - 9:51am - julie.blake \\Sme-inc\prj\WIP\081604.00\CAD\DWGS\Env\081604.00.001\rev4\081604.00.001-AH-SSsample.dwg



N
W E
S

0' 100' 200'

GRAPHIC SCALE: 1" = 100'

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- SOIL AND/OR GROUNDWATER SAMPLE LOCATION (2000/2013)
- SOIL BORING LOCATION WITH TEMPORARY MONITORING WELL
- EXISTING WELL SAMPLE LOCATION
- UNKNOWN SUBSURFACE ANOMALY

NOTES:

1. BASE DRAWING INFORMATION TAKEN FROM GOOGLE EARTH PRO WITH IMAGE DATE 9-10-2017 AND A DRAWING TITLED "SITE LAYOUT PLAN" (SHEET C-205) PREPARED BY NEDERVELD.
2. CONCENTRATIONS ARE SHOWN IN MICROGRAMS PER LITER (µg/L) AND EXCEED PART 201 GENERIC RESIDENTIAL DRINKING WATER SCREENING LEVELS.
3. SAMPLING LOCATIONS IN GRAY TEXT ARE HISTORICAL AND NO LONGER IDENTIFIABLE AT THE PROPERTY.

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Project
FORMER HMC ROYAL COACH SITE SOUTHERN PORTION OF 325 NORTH HANOVER STREET

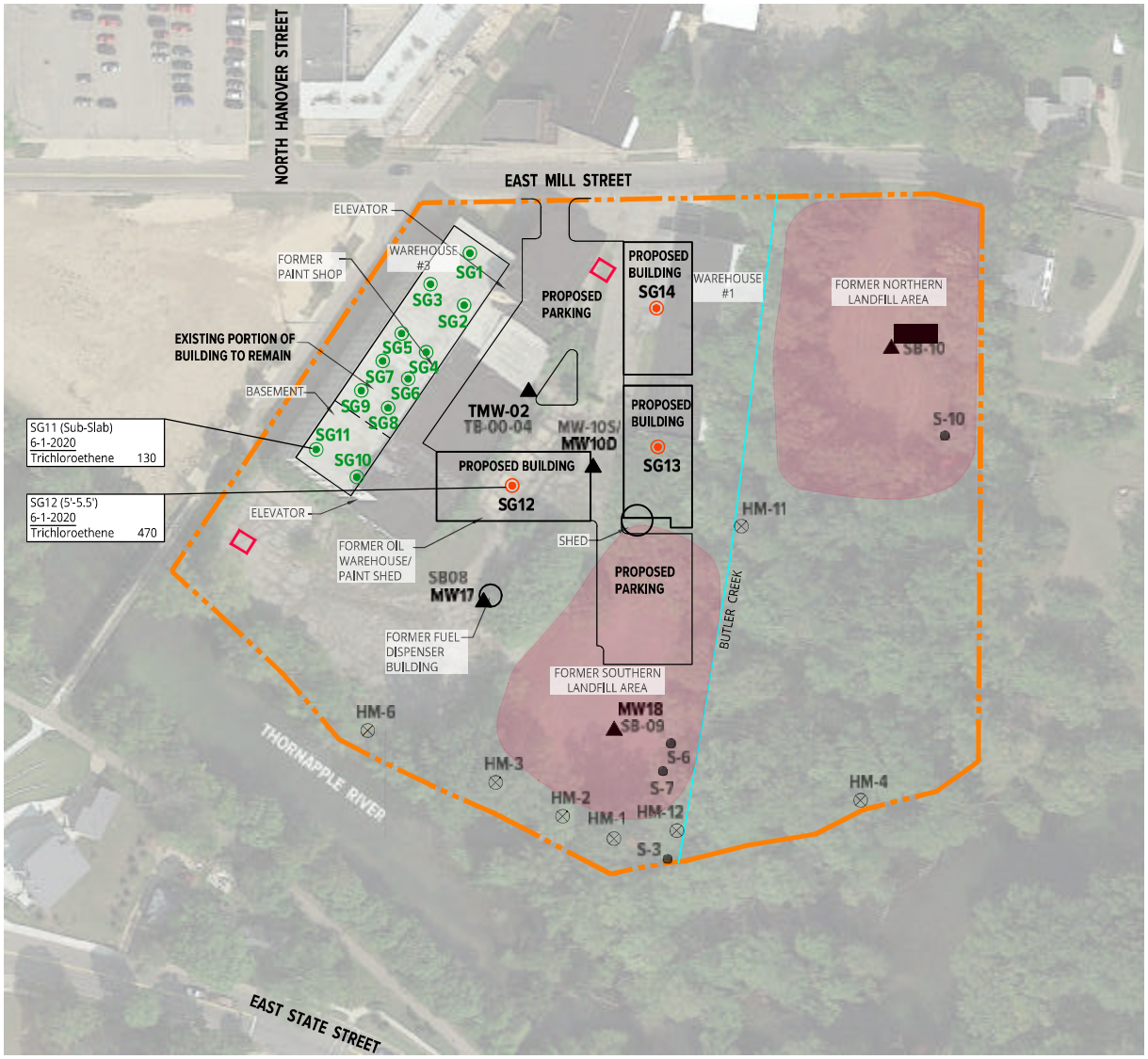
Project Location
HASTINGS, MICHIGAN

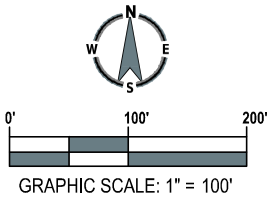
Sheet Name
GROUNDWATER SAMPLING LOCATIONS, POTENTIOMETRIC SURFACE AND ANALYTICAL RESULTS

No.	Revision Date

Date 10-12-2020
CADD JAB
Designer CES/MDC
Scale AS NOTED
Project 081604.00.001
Figure No. 5

PLOT DATE: Oct 13, 2020 - 10:01am - julie.blake \\Sme-inc\prj\WIP\081604.00\CAD\DWGS\Env\081604.00.001rev4\081604.00.001-AN-GW.dwg





LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- SOIL SAMPLE LOCATION (1989)
- SOIL AND/OR GROUNDWATER SAMPLE LOCATION (1995)
- SOIL AND/OR GROUNDWATER SAMPLE LOCATION (2000/2013)
- SUB-SLAB SOIL GAS SAMPLE LOCATION
- DEEP (5') SOIL GAS SAMPLE LOCATION
- UNKNOWN SUBSURFACE ANOMALY

NOTES:

1. BASE DRAWING INFORMATION TAKEN FROM GOOGLE EARTH PRO WITH IMAGE DATE 9-10-2017 AND A DRAWING TITLED "SITE LAYOUT PLAN" (SHEET C-205) PREPARED BY NEDERVELD.
2. CONCENTRATIONS ARE SHOWN IN MICROGRAMS PER CUBIC METER (µg/m³) AND EXCEED PART 201 GENERIC RESIDENTIAL VOLATILIZATION TO INDOOR AIR PATHWAY SCREENING LEVELS.
3. SAMPLING LOCATIONS IN GRAY TEXT ARE HISTORICAL AND NO LONGER IDENTIFIABLE AT THE PROPERTY.

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Project
FORMER HMC ROYAL COACH SITE SOUTHERN PORTION OF 325 NORTH HANOVER STREET

Project Location
HASTINGS, MICHIGAN

Sheet Name
SOIL GAS SAMPLE LOCATIONS AND ANALYTICAL RESULTS

No.	Revision Date

Date 10-12-2020
CADD JAB
Designer CES/MDC
Scale AS NOTED
Project 081604.00.001
Figure No. 6

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TABLES

TABLE 1
2020 GROUNDWATER ELEVATION SUMMARY
FORMER HMC ROYAL COACH
HASTINGS, MICHIGAN
SME Project No. 081604.00.001

Well ID	Screened Interval (ft. below ground)	Ground Surface Elevation (elev. ft.)	Top of Casing Elevation (elev. ft.)	Depth to Groundwater (ft.) June 2, 2020	Groundwater Elevation (ft.) June 2, 2020
MW10D	28 - 33	787.4	787.22	11.40	775.82
MW17	9 - 14	781.1	781.58	13.06	768.52
MW18	12 - 17	788.3	788.30	5.22	783.08
MW19	14 - 19	792.6	792.14	15.90	776.24
SB1	2.5 - 7.5	781.8	784.00	9.72	774.28
SB2	8 - 13	788.8	790.88	14.78	776.10
SB6	10 - 15	788.1	788.37	13.11	775.26
SB8	11 - 16	791.5	792.55	16.06	776.49
SB15	5 - 10	787.7	788.40	10.00	778.40
SB17	6 - 11	787.8	789.31	15.00	774.31

Notes:
1. Top of Casing elevation were measured using a Leica GPS.
2. MW10D, MW17 through MW19 were installed by Stantec in 2013.
3. Temporary wells SB1, SB2, SB6, SB8, SB15 and SB17 were installed by SME in 2020.

TABLE 2
SUMMARY OF ANALYSIS RESULTS - SOIL
FORMER HMC ROYAL COACH
HASTINGS, MICHIGAN
SME Project No. 081604.00.001

CONSTITUENT	CHEMICAL ABSTRACT SERVICE NUMBER	STATEWIDE DEFAULT BACKGROUND LEVELS	Part 201 Generic Cleanup Criteria					EGLE Volatilization to Indoor Air Pathway (VIAP)	CHEMICAL ANALYSIS RESULTS Sample Identification Depth (feet) Date Collected						
			Residential Drinking Water Protection Criteria	Nonresidential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Residential Direct Contact Criteria	Nonresidential Direct Contact Criteria	Residential Soil	SB1	SB2	SB3	SB4	SB5	SB6	SB7
									2'-3.5'	2'-3.5'	2'-3'	1' - 2'	1' - 2.5'	1.5' - 3'	4' - 5.5'
									5/19/2020	5/19/2020	5/19/2020	05/18/20	05/18/20	05/18/20	5/19/2020
VOCs															
Naphthalene	91-20-3	NA	35,000	100,000	730	16,000,000	52,000,000	67	<330	<330	<330	<330	<330	<330	<330
Tetrachloroethylene	127-18-4	NA	100	100	1,200	200,000	930,000	6.2	<61	<67	<54	<67	<59	<60	**130**
Toluene	108-88-3	NA	16,000	16,000	5,400	50,000,000	160,000,000	3,700	<61	<67	<54	<67	<59	<60	<61
Xylenes	1330-20-7	NA	5,600	5,600	980	410,000,000	1,000,000,000	280	<150	**550**	<150	<150	<150	<150	<150
Other Aanlyzed VOCs	CS	NA	CS	CS	CS	CS	CS	CS	<RL	<RL	<RL	<RL	<RL	<RL	<RL
SVOCs, PAHs															
Acenaphthene	83-32-9	NA	300,000	880,000	8,700	41,000,000	130,000,000	250,000	<330	**640**	<330	<330	<330	<330	<330
Acenaphthylene	208-96-8	NA	5,900	17,000	ID	1,600,000	5,200,000	ID	<330	<330	<330	<330	<330	<330	<330
Anthracene	120-12-7	NA	41,000	41,000	ID	230,000,000	730,000,000	13,000,000	<330	**1,800**	<330	**640**	<330	<330	<330
Benzo(a)anthracene	56-55-3	NA	NLL	NLL	NLL	20,000	80,000	160,000	**340**	**2,900**	<330	**2,000**	<330	<330	<330
Benzo(a)pyrene	50-32-8	NA	NLL	NLL	NLL	2,000	8,000	NA	<330	**2,700**	<330	**1,500**	<330	<330	<330
Benzo(b)fluoranthene	205-99-2	NA	NLL	NLL	NLL	20,000	80,000	NA	**500**	**3,600**	<330	**2,800**	<330	<330	<330
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	NLL	2,500,000	7,000,000	NA	<330	**1,700**	<330	**450**	<330	<330	<330
Benzo(k)fluoranthene	207-08-9	NA	NLL	NLL	NLL	200,000	800,000	NA	<330	**1,500**	<330	**920**	<330	<330	<330
Chrysene	218-01-9	NA	NLL	NLL	NLL	2,000,000	8,000,000	NA	<330	**3,100**	<330	**2,400**	<330	<330	<330
Dibenzo(a,h)anthracene	53-70-3	NA	NLL	NLL	NLL	2,000	8,000	NA	<330	**360**	<330	<330	<330	<330	<330
Fluoranthene	206-44-0	NA	730,000	730,000	5,500	46,000,000	130,000,000	NA	**540**	**7,400**	<330	**5,000**	<330	<330	<330
Fluorene	86-73-7	NA	390,000	890,000	5,300	27,000,000	87,000,000	470,000	<330	**660**	<330	<330	<330	<330	<330
Indeno(1,2,3-cd)pyrene	193-39-5	NA	NLL	NLL	NLL	20,000	80,000	NA	<330	**1,600**	<330	**670**	<330	<330	<330
2-Methylnaphthalene	91-57-6	NA	57,000	170,000	4,200	8,100,000	26,000,000	1,700	<330	**410**	<330	**380**	<330	<330	<330
Phenanthrene	85-01-8	NA	56,000	160,000	2,100	1,600,000	5,200,000	1,700	**370**	**6,800**	<330	**3,700**	<330	<330	<330
Pyrene	129-00-0	NA	480,000	480,000	ID	29,000,000	84,000,000	25,000,000	**470**	**6,900**	<330	**4,100**	<330	<330	<330
PCBs															
PCB, Aroclor 1254	11097-69-1	NA	NA	NA	NA	NA	NA	ID	NE	NE	NE	<110	<100	**660**	<360
Total PCBs	1336-36-3	NA	NLL	NLL	NLL	4,000	16,000	ID	NE	NE	NE	<110	<100	**660**	<360
Metals															
Arsenic	7440-38-2	5,800	*5,800*	*5,800*	*5,800*	7,600	37,000	NA	**1,700**	**4,400**	**1,400**	**4,500**	**940**	**770**	**3,000**
Barium	7440-39-3	75,000	1,300,000	1,300,000	440,000 *	37,000,000	130,000,000	NA	**81,000**	**94,000**	**5,300**	**65,000**	**50,000**	**17,000**	**15,000**
Cadmium	7440-43-9	1,200	6,000	6,000	3,600 *	550,000	2,100,000	NA	**190**	**1,100**	<50	**480**	<50	<50	**59**
Chromium, Total**	7440-47-3	18,000 (total)	30,000	30,000	*180,000*	2,500,000	9,200,000	NA	**3,900**	**17,000**	**5,300**	**21,000**	**26,000**	**7,400**	**13,000**
Chromium VI	18540-29-9	NA	30,000	30,000	3,300	2,500,000	9,200,000	NA	NE	NE	NE	<2,300	<440	<430	<440
Copper	7440-50-8	32,000	5,800,000	5,800,000	75,000 *	20,000,000	73,000,000	NA	**57,000**	**83,000**	**4,000**	**39,000**	**6,300**	**4,400**	**8,500**
Lead, Total	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	**16,000**	**350,000**	**1,700**	**86,000**	**2,500**	**7,200**	**21,000**
Lead, Coarse Fraction	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	**148,000**	NE	**90,000**	NE	NE	NE
Lead, Fine Fraction	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	**471,000**	NE	**346,000**	NE	NE	NE
Lead, Total (Calculated)	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	**155,000**	NE	**102,000**	NE	NE	NE
Mercury	7439-97-6	130	1,700	1,700	*130*	160,000	580,000	22	<50	**57**	<50	**130**	<50	<50	<50
Nickel	7440-02-0	20,000	100,000	100,000	76,000 *	40,000,000	150,000,000	NA	**3,600**	**9,300**	**4,800**	**7,600**	**5,000**	**2,200**	**4,700**
Selenium	7782-49-2	410	4,000	4,000	*410*	2,600,000	9,600,000	NA	<200	**300**	<200	**500**	<200	<200	<200
Silver	7440-22-4	1,000	4,500	13,000	*1,000*	2,500,000	9,000,000	NA	<100	<100	<100	<100	<100	<100	<100
Zinc	7440-66-6	47,000	2,400,000	5,000,000	170,000	170,000,000	630,000,000	NA	**77,000**	**220,000**	**8,400**	**100,000**	**10,000**	**8,200**	**18,000**

Notes:
1. Concentrations reported in micrograms per kilogram (µg/kg).
2. Analytical results compared to the December 30, 2013 Promulgated Cleanup Criteria, Residential and/or Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels (GSI Protection Criteria Updated June 25, 2018); and EGLE's May 14, 2020, Draft Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels.
3. Results exceeding one or more Part 201 criteria are shaded orange, as are the criteria exceeded. Results exceeding only EGLE Volatilization to Indoor Air Pathway criteria are shaded yellow, as are the criteria.
4. Refer to the analytical report for the full list of analytes.
5. CS - Criterion is specific to individual constituent.
6. <RL - Analytical result was below laboratory reporting limit.
7. ID - Insufficient data to develop criteria.
8. NA - Not applicable.
9. NE - Not evaluated.
10. NLV - Not likely to volatilize.
11. NLL - Not likely to leach.
12. * = GSI Protection was calculated for the indicated metals using the EGLE spreadsheet for calculating GSI. A default water hardness value of 150 mg/kg as CaCO3 was used to calculate GSI. Results are presented for surface water receiving bodies not protected as a drinking water source.
13. *Italicized* - the respective criterion was below the Statewide Default Background Level (SDBL) and therefore the value defaulted to the SDBL value.
14. ** - Total chromium results compared to trivalent chromium criteria because hexavalent chromium was analyzed and not measured above the laboratory reporting limit in the soil sample that had the highest concentration.
15. Concentrations were also compared to, and found to be below, the ambient and indoor air criteria and the soil saturation concentration screening levels.

TABLE 2
SUMMARY OF ANALYSIS RESULTS - SOIL
FORMER HMC ROYAL COACH
HASTINGS, MICHIGAN
SME Project No. 081604.00.001

CONSTITUENT	CHEMICAL ABSTRACT SERVICE NUMBER	STATEWIDE DEFAULT BACKGROUND LEVELS	Part 201 Generic Cleanup Criteria					EGLE Volatilization to Indoor Air Pathway (VIAP)	CHEMICAL ANALYSIS RESULTS Sample Identification Depth (feet) Date Collected						
			Residential Drinking Water Protection Criteria	Nonresidential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Residential Direct Contact Criteria	Nonresidential Direct Contact Criteria	Residential Soil	SB8	Duplicate Soil	SB9	SB10	SB11	SB12	SB13
									1' - 3'	SB8 (1'-3')	1' - 2'	1' - 2'	1' - 2'	5' - 6'	1' - 2.5'
									5/19/2020	5/19/2020	5/19/2020	05/18/20	05/18/20	05/18/20	05/18/20
VOCs															
Naphthalene	91-20-3	NA	35,000	100,000	730	16,000,000	52,000,000	67	<330	<330	<330	<330	<330	<330	<330
Tetrachloroethylene	127-18-4	NA	100	100	1,200	200,000	930,000	6.2	<60	<63	<67	<71	<60	<79	<68
Toluene	108-88-3	NA	16,000	16,000	5,400	50,000,000	160,000,000	3,700	<60	<63	<67	<71	<60	**190**	<68
Xylenes	1330-20-7	NA	5,600	5,600	980	410,000,000	1,000,000,000	280	<150	<150	<150	<150	<150	**290**	<150
Other Aanlyzed VOCs	CS	NA	CS	CS	CS	CS	CS	CS	<RL	<RL	<RL	<RL	<RL	<RL	<RL
SVOCs, PAHs															
Acenaphthene	83-32-9	NA	300,000	880,000	8,700	41,000,000	130,000,000	250,000	<330	<330	<330	<330	<330	<330	**1,300**
Acenaphthylene	208-96-8	NA	5,900	17,000	ID	1,600,000	5,200,000	ID	<330	<330	<330	<330	<330	<330	**1,100**
Anthracene	120-12-7	NA	41,000	41,000	ID	230,000,000	730,000,000	13,000,000	<330	<330	<330	<330	<330	<330	**3,700**
Benzo(a)anthracene	56-55-3	NA	NLL	NLL	NLL	20,000	80,000	160,000	**690**	**670**	<330	<330	<330	<330	**7,200**
Benzo(a)pyrene	50-32-8	NA	NLL	NLL	NLL	2,000	8,000	NA	**1,100**	**1,000**	<330	<330	<330	<330	**7,000**
Benzo(b)fluoranthene	205-99-2	NA	NLL	NLL	NLL	20,000	80,000	NA	**1,800**	**1,700**	<330	<330	**330**	<330	**10,000**
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	NLL	2,500,000	7,000,000	NA	**1,400**	**1,300**	<330	<330	<330	<330	**2,700**
Benzo(k)fluoranthene	207-08-9	NA	NLL	NLL	NLL	200,000	800,000	NA	**530**	**580**	<330	<330	<330	<330	**3,000**
Chrysene	218-01-9	NA	NLL	NLL	NLL	2,000,000	8,000,000	NA	**710**	**650**	<330	<330	<330	<330	**7,100**
Dibenzo(a,h)anthracene	53-70-3	NA	NLL	NLL	NLL	2,000	8,000	NA	<330	<330	<330	<330	<330	<330	**680**
Fluoranthene	206-44-0	NA	730,000	730,000	5,500	46,000,000	130,000,000	NA	**650**	**620**	<330	<330	<330	<330	**18,000**
Fluorene	86-73-7	NA	390,000	890,000	5,300	27,000,000	87,000,000	470,000	<330	<330	<330	<330	<330	<330	**1,900**
Indeno(1,2,3-cd)pyrene	193-39-5	NA	NLL	NLL	NLL	20,000	80,000	NA	**1,200**	**1,200**	<330	<330	<330	<330	**3,300**
2-Methylnaphthalene	91-57-6	NA	57,000	170,000	4,200	8,100,000	26,000,000	1,700	<330	<330	<330	<330	<330	**1,800**	**1,000**
Phenanthrene	85-01-8	NA	56,000	160,000	2,100	1,600,000	5,200,000	1,700	<330	<330	<330	<330	<330	**430**	**17,000**
Pyrene	129-00-0	NA	480,000	480,000	ID	29,000,000	84,000,000	25,000,000	**690**	**620**	<330	<330	<330	<330	**17,000**
PCBs															
PCB, Aroclor 1254	11097-69-1	NA	NA	NA	NA	NA	NA	ID	<100	<100	<100	<100	NE	NE	<100
Total PCBs	1336-36-3	NA	NLL	NLL	NLL	4,000	16,000	ID	<100	<100	<100	<100	NE	NE	<100
Metals															
Arsenic	7440-38-2	5,800	*5,800*	*5,800*	*5,800*	7,600	37,000	NA	**5,000**	**4,500**	NE	**5,600**	**3,700**	**16,000**	**25,000**
Barium	7440-39-3	75,000	1,300,000	1,300,000	440,000 *	37,000,000	130,000,000	NA	**28,000**	**26,000**	NE	**56,000**	**38,000**	**180,000**	**46,000**
Cadmium	7440-43-9	1,200	6,000	6,000	3,600 *	550,000	2,100,000	NA	**950**	**1,100**	NE	**1,500**	**1,200**	**610**	**700**
Chromium, Total**	7440-47-3	18,000 (total)	30,000	30,000	*180,000*	2,500,000	9,200,000	NA	**9,500**	**7,700**	NE	**37,000**	**8,900**	**11,000**	**20,000**
Chromium VI	18540-29-9	NA	30,000	30,000	3,300	2,500,000	9,200,000	NA	<450	<440	NE	<2,300	NE	NE	<2,400
Copper	7440-50-8	32,000	5,800,000	5,800,000	75,000 *	20,000,000	73,000,000	NA	**1,600,000**	**1,900,000**	NE	**44,000**	**15,000**	**75,000**	**16,000**
Lead, Total	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	**210,000**	**260,000**	**16,000**	**250,000**	**18,000**	**130,000**	**230,000**
Lead, Coarse Fraction	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	**823,000**	**69,300**	NE	**133,000**	NE	**515,000**	**840,000**
Lead, Fine Fraction	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	**655,000**	**56,000**	NE	**247,000**	NE	**853,000**	**356,000**
Lead, Total (Calculated)	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	**808,000**	**69,000**	NE	**134,000**	NE	**531,000**	**819,000**
Mercury	7439-97-6	130	1,700	1,700	*130*	160,000	580,000	22	<50	<50	NE	<50	**56**	<50	**190**
Nickel	7440-02-0	20,000	100,000	100,000	76,000 *	40,000,000	150,000,000	NA	**21,000**	**22,000**	NE	**10,000**	**7,000**	**27,000**	**7,500**
Selenium	7782-49-2	410	4,000	4,000	*410*	2,600,000	9,600,000	NA	**250**	**220**	NE	**330**	<200	**1,900**	**310**
Silver	7440-22-4	1,000	4,500	13,000	*1,000*	2,500,000	9,000,000	NA	**470**	**510**	NE	<100	<100	**120**	<100
Zinc	7440-66-6	47,000	2,400,000	5,000,000	170,000	170,000,000	630,000,000	NA	**620,000**	**760,000**	NE	**290,000**	**140,000**	**190,000**	**210,000**

Notes:
1. Concentrations reported in micrograms per kilogram (µg/kg).
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7. ID - Insufficient data to develop criteria.
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9. NE - Not evaluated.
10. NLV - Not likely to volatilize.
11. NLL - Not likely to leach.
12. * = GSI Protection was calculated for the indicated metals using the EGLE spreadsheet for calculating GSI. A default water hardness value of 150 mg/kg as CaCO3 was used to calculate GSI. Results are presented for surface water receiving bodies not protected as a drinking water source.
13. *Italicized* - the respective criterion was below the Statewide Default Background Level (SDBL) and therefore the value defaulted to the SDBL value.
14. ** - Total chromium results compared to trivalent chromium criteria because hexavalent chromium was analyzed and not measured above the laboratory reporting limit in the soil sample that had the highest concentration.
15. Concentrations were also compared to, and found to be below, the ambient and indoor air criteria and the soil saturation concentration screening levels.

TABLE 2
SUMMARY OF ANALYSIS RESULTS - SOIL
FORMER HMC ROYAL COACH
HASTINGS, MICHIGAN
SME Project No. 081604.00.001

CONSTITUENT	CHEMICAL ABSTRACT SERVICE NUMBER	STATEWIDE DEFAULT BACKGROUND LEVELS	Part 201 Generic Cleanup Criteria					EGLE Volatilization to Indoor Air Pathway (VIAP)	CHEMICAL ANALYSIS RESULTS Sample Identification Depth (feet) Date Collected						
			Residential Drinking Water Protection Criteria	Nonresidential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Residential Direct Contact Criteria	Nonresidential Direct Contact Criteria	Residential Soil	SB14	SB15	SB16	SB18	SB19	SS1	SS2
									2' - 3.5'	2.5' - 4'	2'-3.5'	0.5'-1.5'	1.5'-2.5'	0' - 0.5'	0' - 0.5'
									05/18/20	05/18/20	5/19/2020	05/20/20	05/20/20	06/02/20	06/02/20
VOCs															
Naphthalene	91-20-3	NA	35,000	100,000	730	16,000,000	52,000,000	67	**490**	<330	<330	<330	<330	NE	NE
Tetrachloroethylene	127-18-4	NA	100	100	1,200	200,000	930,000	6.2	<60	<75	<62	<52	<53	NE	NE
Toluene	108-88-3	NA	16,000	16,000	5,400	50,000,000	160,000,000	3,700	**64**	<75	**83**	<52	<53	NE	NE
Xylenes	1330-20-7	NA	5,600	5,600	980	410,000,000	1,000,000,000	280	**210**	<150	<150	<150	<150	NE	NE
Other Aanlyzed VOCs	CS	NA	CS	CS	CS	CS	CS	CS	<RL	<RL	<RL	<RL	<RL	NE	NE
SVOCs, PAHs															
Acenaphthene	83-32-9	NA	300,000	880,000	8,700	41,000,000	130,000,000	250,000	<330	**460**	<330	<330	<330	<330	<330
Acenaphthylene	208-96-8	NA	5,900	17,000	ID	1,600,000	5,200,000	ID	<330	<330	**850**	<330	<330	<330	<330
Anthracene	120-12-7	NA	41,000	41,000	ID	230,000,000	730,000,000	13,000,000	<330	**1,600**	**1,200**	<330	<330	<330	<330
Benzo(a)anthracene	56-55-3	NA	NLL	NLL	NLL	20,000	80,000	160,000	<330	**3,700**	**6,300**	<330	<330	**750**	**690**
Benzo(a)pyrene	50-32-8	NA	NLL	NLL	NLL	2,000	8,000	NA	<330	**3,400**	**5,500**	<330	<330	**500**	**830**
Benzo(b)fluoranthene	205-99-2	NA	NLL	NLL	NLL	20,000	80,000	NA	<330	**5,100**	**7,900**	<330	<330	**1,000**	**1,300**
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	NLL	2,500,000	7,000,000	NA	<330	**1,800**	**5,300**	<330	<330	**340**	**620**
Benzo(k)fluoranthene	207-08-9	NA	NLL	NLL	NLL	200,000	800,000	NA	<330	**2,000**	**2,800**	<330	<330	<330	**360**
Chrysene	218-01-9	NA	NLL	NLL	NLL	2,000,000	8,000,000	NA	<330	**3,800**	**5,500**	<330	<330	**600**	**530**
Dibenzo(a,h)anthracene	53-70-3	NA	NLL	NLL	NLL	2,000	8,000	NA	<330	**480**	**1,200**	<330	<330	<330	<330
Fluoranthene	206-44-0	NA	730,000	730,000	5,500	46,000,000	130,000,000	NA	<330	**10,000**	**11,000**	<330	<330	**1,500**	**1,100**
Fluorene	86-73-7	NA	390,000	890,000	5,300	27,000,000	87,000,000	470,000	<330	**540**	**500**	<330	<330	<330	<330
Indeno(1,2,3-cd)pyrene	193-39-5	NA	NLL	NLL	NLL	20,000	80,000	NA	<330	**2,100**	**4,800**	<330	<330	**370**	**600**
2-Methylnaphthalene	91-57-6	NA	57,000	170,000	4,200	8,100,000	26,000,000	1,700	<330	<330	<330	<330	<330	<330	<330
Phenanthrene	85-01-8	NA	56,000	160,000	2,100	1,600,000	5,200,000	1,700	<330	**7,000**	**4,500**	<330	<330	**740**	**340**
Pyrene	129-00-0	NA	480,000	480,000	ID	29,000,000	84,000,000	25,000,000	<330	**7,800**	**9,600**	<330	<330	**1,100**	**970**
PCBs															
PCB, Aroclor 1254	11097-69-1	NA	NA	NA	NA	NA	NA	ID	<100	NE	<100	NE	<100	NE	NE
Total PCBs	1336-36-3	NA	NLL	NLL	NLL	4,000	16,000	ID	<100	NE	<100	NE	<100	NE	NE
Metals															
Arsenic	7440-38-2	5,800	*5,800*	*5,800*	*5,800*	7,600	37,000	NA	**3,300**	**7,200**	NE	**3,900**	NE	**8,400**	**12,000**
Barium	7440-39-3	75,000	1,300,000	1,300,000	440,000 *	37,000,000	130,000,000	NA	**17,000**	**46,000**	NE	**31,000**	NE	NE	NE
Cadmium	7440-43-9	1,200	6,000	6,000	3,600 *	550,000	2,100,000	NA	**56**	**640**	NE	**76**	NE	NE	NE
Chromium, Total**	7440-47-3	18,000 (total)	30,000	30,000	*180,000*	2,500,000	9,200,000	NA	**8,500**	**12,000**	NE	**6,400**	NE	NE	NE
Chromium VI	18540-29-9	NA	30,000	30,000	3,300	2,500,000	9,200,000	NA	NE	NE	NE	NE	NE	NE	NE
Copper	7440-50-8	32,000	5,800,000	5,800,000	75,000 *	20,000,000	73,000,000	NA	**8,500**	**48,000**	NE	**29,000**	NE	NE	NE
Lead, Total	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	**4,200**	**120,000**	NE	**15,000**	NE	**59,000**	**39,000**
Lead, Coarse Fraction	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	**10,100**	NE	NE	NE	NE	NE
Lead, Fine Fraction	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	**151,000**	NE	NE	NE	NE	NE
Lead, Total (Calculated)	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	**11,400**	NE	NE	NE	NE	NE
Mercury	7439-97-6	130	1,700	1,700	*130*	160,000	580,000	22	<50	<50	NE	<50	NE	NE	NE
Nickel	7440-02-0	20,000	100,000	100,000	76,000 *	40,000,000	150,000,000	NA	**6,700**	**12,000**	NE	**12,000**	NE	NE	NE
Selenium	7782-49-2	410	4,000	4,000	*410*	2,600,000	9,600,000	NA	<200	**310**	NE	<200	NE	NE	NE
Silver	7440-22-4	1,000	4,500	13,000	*1,000*	2,500,000	9,000,000	NA	<100	<100	NE	<100	NE	NE	NE
Zinc	7440-66-6	47,000	2,400,000	5,000,000	170,000	170,000,000	630,000,000	NA	**17,000**	**120,000**	NE	**17,000**	NE	NE	NE

Notes:
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			Residential Drinking Water Protection Criteria	Nonresidential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Residential Direct Contact Criteria	Nonresidential Direct Contact Criteria	Residential Soil	SS3	SS4	SS5	SS6	SS7	SS8	SS9	SS10
									0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'
									06/02/20	05/20/20	06/02/20	06/02/20	06/02/20	06/02/20	05/20/20	05/20/20
VOCs																
Naphthalene	91-20-3	NA	35,000	100,000	730	16,000,000	52,000,000	67	NE	NE	NE	NE	NE	NE	NE	NE
Tetrachloroethylene	127-18-4	NA	100	100	1,200	200,000	930,000	6.2	NE	NE	NE	NE	NE	NE	NE	NE
Toluene	108-88-3	NA	16,000	16,000	5,400	50,000,000	160,000,000	3,700	NE	NE	NE	NE	NE	NE	NE	NE
Xylenes	1330-20-7	NA	5,600	5,600	980	410,000,000	1,000,000,000	280	NE	NE	NE	NE	NE	NE	NE	NE
Other Aanlyzed VOCs	CS	NA	CS	CS	CS	CS	CS	CS	NE	NE	NE	NE	NE	NE	NE	NE
SVOCs, PAHs																
Acenaphthene	83-32-9	NA	300,000	880,000	8,700	41,000,000	130,000,000	250,000	<330	<330	<330	<330	<330	<330	<330	<330
Acenaphthylene	208-96-8	NA	5,900	17,000	ID	1,600,000	5,200,000	ID	<330	<330	<330	<330	<330	<330	<330	<330
Anthracene	120-12-7	NA	41,000	41,000	ID	230,000,000	730,000,000	13,000,000	<330	<330	<330	<330	<330	<330	<330	<330
Benzo(a)anthracene	56-55-3	NA	NLL	NLL	NLL	20,000	80,000	160,000	<350	<330	<330	**570**	<330	<330	<330	**1,200**
Benzo(a)pyrene	50-32-8	NA	NLL	NLL	NLL	2,000	8,000	NA	<330	<330	<330	**500**	<330	<330	<330	**840**
Benzo(b)fluoranthene	205-99-2	NA	NLL	NLL	NLL	20,000	80,000	NA	**460**	<330	<330	**950**	<330	<330	<330	**1,500**
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	NLL	2,500,000	7,000,000	NA	<330	<330	<330	<330	<330	<330	<330	**590**
Benzo(k)fluoranthene	207-08-9	NA	NLL	NLL	NLL	200,000	800,000	NA	<330	<330	<330	<330	<330	<330	<330	**500**
Chrysene	218-01-9	NA	NLL	NLL	NLL	2,000,000	8,000,000	NA	<330	<330	<330	**580**	<330	<330	<330	**1,100**
Dibenzo(a,h)anthracene	53-70-3	NA	NLL	NLL	NLL	2,000	8,000	NA	<330	<330	<330	<330	<330	<330	<330	<330
Fluoranthene	206-44-0	NA	730,000	730,000	5,500	46,000,000	130,000,000	NA	<330	<330	<330	**1,200**	<330	<330	<330	**2,600**
Fluorene	86-73-7	NA	390,000	890,000	5,300	27,000,000	87,000,000	470,000	<330	<330	<330	<330	<330	<330	<330	<330
Indeno(1,2,3-cd)pyrene	193-39-5	NA	NLL	NLL	NLL	20,000	80,000	NA	<330	<330	<330	**330**	<330	<330	<330	**640**
2-Methylnaphthalene	91-57-6	NA	57,000	170,000	4,200	8,100,000	26,000,000	1,700	<330	<330	<330	<330	<330	<330	<330	<330
Phenanthrene	85-01-8	NA	56,000	160,000	2,100	1,600,000	5,200,000	1,700	<330	<330	<330	**470**	<330	<330	<330	**1,300**
Pyrene	129-00-0	NA	480,000	480,000	ID	29,000,000	84,000,000	25,000,000	<330	<330	<330	**900**	<330	<330	<330	**2,100**
PCBs																
PCB, Aroclor 1254	11097-69-1	NA	NA	NA	NA	NA	NA	ID		NE	NE	NE	NE	NE	**110**	**160**
Total PCBs	1336-36-3	NA	NLL	NLL	NLL	4,000	16,000	ID	<100	NE	NE	NE	NE	NE	**110**	**160**
Metals																
Arsenic	7440-38-2	5,800	*5,800*	*5,800*	*5,800*	7,600	37,000	NA	**6,900**	**860**	**16,000**	**11,000**	**9,900**	**4,100**	**2,100**	**1,700**
Barium	7440-39-3	75,000	1,300,000	1,300,000	440,000 *	37,000,000	130,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Cadmium	7440-43-9	1,200	6,000	6,000	3,600 *	550,000	2,100,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Chromium, Total**	7440-47-3	18,000 (total)	30,000	30,000	*180,000*	2,500,000	9,200,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Chromium VI	18540-29-9	NA	30,000	30,000	3,300	2,500,000	9,200,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Copper	7440-50-8	32,000	5,800,000	5,800,000	75,000 *	20,000,000	73,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Lead, Total	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	**46,000**	**4,300**	**3,700,000**	**11,000**	**9,900**	**4,100**	**24,000**	**25,000**
Lead, Coarse Fraction	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	NE	**4,510,000**	NE	NE	NE	NE	NE
Lead, Fine Fraction	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	NE	**1,590,000**	NE	NE	NE	NE	NE
Lead, Total (Calculated)	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	NE	**4,490,000**	NE	NE	NE	NE	NE
Mercury	7439-97-6	130	1,700	1,700	*130*	160,000	580,000	22	NE	NE	NE	NE	NE	NE	NE	NE
Nickel	7440-02-0	20,000	100,000	100,000	76,000 *	40,000,000	150,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Selenium	7782-49-2	410	4,000	4,000	*410*	2,600,000	9,600,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Silver	7440-22-4	1,000	4,500	13,000	*1,000*	2,500,000	9,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Zinc	7440-66-6	47,000	2,400,000	5,000,000	170,000	170,000,000	630,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE

Notes:
1. Concentrations reported in micrograms per kilogram (µg/kg).
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			Residential Drinking Water Protection Criteria	Nonresidential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Residential Direct Contact Criteria	Nonresidential Direct Contact Criteria	Residential Soil	SS11	SS12	SS13	SS14	SS15	SS16	SS17	SS18
									0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'
									06/02/20	05/20/20	05/20/20	05/20/20	06/02/20	06/02/20	05/20/20	06/02/20
VOCs																
Naphthalene	91-20-3	NA	35,000	100,000	730	16,000,000	52,000,000	67	NE	NE	NE	NE	NE	NE	NE	NE
Tetrachloroethylene	127-18-4	NA	100	100	1,200	200,000	930,000	6.2	NE	NE	NE	NE	NE	NE	NE	NE
Toluene	108-88-3	NA	16,000	16,000	5,400	50,000,000	160,000,000	3,700	NE	NE	NE	NE	NE	NE	NE	NE
Xylenes	1330-20-7	NA	5,600	5,600	980	410,000,000	1,000,000,000	280	NE	NE	NE	NE	NE	NE	NE	NE
Other Aanlyzed VOCs	CS	NA	CS	CS	CS	CS	CS	CS	NE	NE	NE	NE	NE	NE	NE	NE
SVOCs, PAHs																
Acenaphthene	83-32-9	NA	300,000	880,000	8,700	41,000,000	130,000,000	250,000	<330	<330	<330	<330	<330	<330	<330	<330
Acenaphthylene	208-96-8	NA	5,900	17,000	ID	1,600,000	5,200,000	ID	<330	<330	<330	<330	<330	<330	<330	<330
Anthracene	120-12-7	NA	41,000	41,000	ID	230,000,000	730,000,000	13,000,000	<330	<330	<330	<330	<330	<330	<330	<330
Benzo(a)anthracene	56-55-3	NA	NLL	NLL	NLL	20,000	80,000	160,000	<330	**770**	**360**	<330	<330	<330	<330	<330
Benzo(a)pyrene	50-32-8	NA	NLL	NLL	NLL	2,000	8,000	NA	<330	**740**	**400**	<330	<330	<330	<330	<330
Benzo(b)fluoranthene	205-99-2	NA	NLL	NLL	NLL	20,000	80,000	NA	<330	**1,300**	**660**	<330	**530**	<330	<330	**560**
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	NLL	2,500,000	7,000,000	NA	<330	**470**	<330	<330	<330	<330	<330	<330
Benzo(k)fluoranthene	207-08-9	NA	NLL	NLL	NLL	200,000	800,000	NA	<330	**360**	<330	<330	<330	<330	<330	<330
Chrysene	218-01-9	NA	NLL	NLL	NLL	2,000,000	8,000,000	NA	<330	**700**	**390**	<330	**340**	<330	<330	<330
Dibenzo(a,h)anthracene	53-70-3	NA	NLL	NLL	NLL	2,000	8,000	NA	<330	<330	<330	<330	<330	<330	<330	<330
Fluoranthene	206-44-0	NA	730,000	730,000	5,500	46,000,000	130,000,000	NA	<330	**1,800**	**800**	<330	**810**	<330	<330	**620**
Fluorene	86-73-7	NA	390,000	890,000	5,300	27,000,000	87,000,000	470,000	<330	<330	<330	<330	<330	<330	<330	<330
Indeno(1,2,3-cd)pyrene	193-39-5	NA	NLL	NLL	NLL	20,000	80,000	NA	<330	**520**	<330	<330	<330	<330	<330	<330
2-Methylnaphthalene	91-57-6	NA	57,000	170,000	4,200	8,100,000	26,000,000	1,700	<330	<330	<330	<330	<330	<330	<330	<330
Phenanthrene	85-01-8	NA	56,000	160,000	2,100	1,600,000	5,200,000	1,700	<330	**770**	**380**	<330	<330	<330	<330	<330
Pyrene	129-00-0	NA	480,000	480,000	ID	29,000,000	84,000,000	25,000,000	<330	**1,400**	**620**	<330	**640**	<330	<330	**480**
PCBs																
PCB, Aroclor 1254	11097-69-1	NA	NA	NA	NA	NA	NA	ID	<120	NE	NE	NE	NE	NE	<100	<100
Total PCBs	1336-36-3	NA	NLL	NLL	NLL	4,000	16,000	ID	<120	NE	NE	NE	NE	NE	<100	<100
Metals																
Arsenic	7440-38-2	5,800	*5,800*	*5,800*	*5,800*	7,600	37,000	NA	**8,000**	**4,600**	**4,200**	**3,100**	**4,300**	**5,100**	**4,300**	**40,000**
Barium	7440-39-3	75,000	1,300,000	1,300,000	440,000 *	37,000,000	130,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Cadmium	7440-43-9	1,200	6,000	6,000	3,600 *	550,000	2,100,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Chromium, Total**	7440-47-3	18,000 (total)	30,000	30,000	*180,000*	2,500,000	9,200,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Chromium VI	18540-29-9	NA	30,000	3,300	2,500,000	30,000	9,200,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Copper	7440-50-8	32,000	5,800,000	5,800,000	75,000 *	20,000,000	73,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Lead, Total	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	**39,000**	**7,500**	**62,000**	**14,000**	**33,000**	**24,000**	**7,200**	**270,000**
Lead, Coarse Fraction	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	NE	NE	NE	NE	NE	NE	**272,000**
Lead, Fine Fraction	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	NE	NE	NE	NE	NE	NE	**263,000**
Lead, Total (Calculated)	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	NE	NE	NE	NE	NE	NE	**441,000**
Mercury	7439-97-6	130	1,700	1,700	*130*	160,000	580,000	22	NE	NE	NE	NE	NE	NE	NE	NE
Nickel	7440-02-0	20,000	100,000	100,000	76,000 *	40,000,000	150,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Selenium	7782-49-2	410	4,000	4,000	*410*	2,600,000	9,600,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Silver	7440-22-4	1,000	4,500	13,000	*1,000*	2,500,000	9,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE
Zinc	7440-66-6	47,000	2,400,000	5,000,000	170,000	170,000,000	630,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE

Notes:
1. Concentrations reported in micrograms per kilogram (µg/kg).
2. Analytical results compared to the December 30, 2013 Promulgated Cleanup Criteria, Residential and/or Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels (GSI Protection Criteria Updated June 25, 2018); and EGLE's May 14, 2020, Draft Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels.
3. Results exceeding one or more criteria are shaded, as are the criteria exceeded.
4. Refer to the analytical report for the full list of analytes.
5. CS - Criterion is specific to individual constituent.
6. <RL - Analytical result was below laboratory reporting limit.
7. ID - Insufficient data to develop criteria.
8. NA - Not applicable.
9. NE - Not evaluated.
10. NLV - Not likely to volatilize.
11. NLL - Not likely to leach.
12. * = GSI Protection was calculated for the indicated metals using the EGLE spreadsheet for calculating GSI. A default water hardness value of 150 mg/kg as CaCO3 was used to calculate GSI. Results are presented for surface water receiving bodies not protected as a drinking water source.
13. *Italicized* - the respective criterion was below the Statewide Default Background Level (SDBL) and therefore the value defaulted to the SDBL value.
14. ** - Total chromium results compared to trivalent chromium criteria because hexavalent chromium was analyzed and not measured above the laboratory reporting limit in the soil sample that had the highest concentration.
15. Concentrations were also compared to, and found to be below, the ambient and indoor air criteria and the soil saturation concentration screening levels.

TABLE 2
SUMMARY OF ANALYSIS RESULTS - SOIL
FORMER HMC ROYAL COACH
HASTINGS, MICHIGAN
SME Project No. 081604.00.001

CONSTITUENT	CHEMICAL ABSTRACT SERVICE NUMBER	STATEWIDE DEFAULT BACKGROUND LEVELS	Part 201 Generic Cleanup Criteria					EGLE Volatilization to Indoor Air Pathway (VIAP)	CHEMICAL ANALYSIS RESULTS Sample Identification Depth (feet) Date Collected								
			Residential Drinking Water Protection Criteria	Nonresidential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Residential Direct Contact Criteria	Nonresidential Direct Contact Criteria	Residential Soil	SS19	SS20	SS21	SS22	SS23	SS24	Duplicate	SS25	Duplicate SS
									0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'	0' - 0.5'	SS24 (0'-0.5')	0' - 0.5'	(0' - 0.5')
									05/20/20	06/02/20	05/20/20	06/02/20	05/20/20	05/20/20	05/20/20	05/20/20	05/20/20
VOCs																	
Naphthalene	91-20-3	NA	35,000	100,000	730	16,000,000	52,000,000	67	NE	NE	NE	NE	NE	NE	NE	NE	NE
Tetrachloroethylene	127-18-4	NA	100	100	1,200	200,000	930,000	6.2	NE	NE	NE	NE	NE	NE	NE	NE	NE
Toluene	108-88-3	NA	16,000	16,000	5,400	50,000,000	160,000,000	3,700	NE	NE	NE	NE	NE	NE	NE	NE	NE
Xylenes	1330-20-7	NA	5,600	5,600	980	410,000,000	1,000,000,000	280	NE	NE	NE	NE	NE	NE	NE	NE	NE
Other Aanlyzed VOCs	CS	NA	CS	CS	CS	CS	CS	CS	NE	NE	NE	NE	NE	NE	NE	NE	NE
SVOCs, PAHs																	
Acenaphthene	83-32-9	NA	300,000	880,000	8,700	41,000,000	130,000,000	250,000	<330	<330	<330	<330	<330	<330	<330	<330	<330
Acenaphthylene	208-96-8	NA	5,900	17,000	ID	1,600,000	5,200,000	ID	<330	<330	<330	<330	<330	<330	<330	<330	<330
Anthracene	120-12-7	NA	41,000	41,000	ID	230,000,000	730,000,000	13,000,000	<330	<330	<330	<330	<330	<330	<330	<330	<330
Benzo(a)anthracene	56-55-3	NA	NLL	NLL	NLL	20,000	80,000	160,000	<330	<330	<330	<330	<330	**490**	**640**	<330	**640**
Benzo(a)pyrene	50-32-8	NA	NLL	NLL	NLL	2,000	8,000	NA	<330	<330	<330	<330	<330	**520**	**570**	<330	**570**
Benzo(b)fluoranthene	205-99-2	NA	NLL	NLL	NLL	20,000	80,000	NA	<330	**340**	<330	<330	<330	**820**	**900**	<330	**900**
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	NLL	2,500,000	7,000,000	NA	<330	<330	<330	<330	<330	**350**	<330	<330	<330
Benzo(k)fluoranthene	207-08-9	NA	NLL	NLL	NLL	200,000	800,000	NA	<330	<330	<330	<330	<330	<330	<330	<330	<330
Chrysene	218-01-9	NA	NLL	NLL	NLL	2,000,000	8,000,000	NA	<330	<330	<330	<330	<330	**410**	**510**	<330	**510**
Dibenzo(a,h)anthracene	53-70-3	NA	NLL	NLL	NLL	2,000	8,000	NA	<330	<330	<330	<330	<330	<330	<330	<330	<330
Fluoranthene	206-44-0	NA	730,000	730,000	5,500	46,000,000	130,000,000	NA	<330	**400**	<330	<330	<330	**880**	**1,100**	<330	**1,100**
Fluorene	86-73-7	NA	390,000	890,000	5,300	27,000,000	87,000,000	470,000	<330	<330	<330	<330	<330	<330	<330	<330	<330
Indeno(1,2,3-cd)pyrene	193-39-5	NA	NLL	NLL	NLL	20,000	80,000	NA	<330	<330	<330	<330	<330	**350**	**350**	<330	**350**
2-Methylnaphthalene	91-57-6	NA	57,000	170,000	4,200	8,100,000	26,000,000	1,700	<330	<330	<330	<330	<330	<330	<330	<330	<330
Phenanthrene	85-01-8	NA	56,000	160,000	2,100	1,600,000	5,200,000	1,700	<330	<330	<330	<330	<330	<330	**520**	<330	**520**
Pyrene	129-00-0	NA	480,000	480,000	ID	29,000,000	84,000,000	25,000,000	<330	**330**	<330	<330	<330	**750**	**960**	<330	**960**
PCBs																	
PCB, Aroclor 1254	11097-69-1	NA	NA	NA	NA	NA	NA	ID	NE	<100	<100	NE	NE	NE	NE	NE	NE
Total PCBs	1336-36-3	NA	NLL	NLL	NLL	4,000	16,000	ID	NE	<100	<100	NE	NE	NE	NE	NE	NE
Metals																	
Arsenic	7440-38-2	5,800	*5,800*	*5,800*	*5,800*	7,600	37,000	NA	**4,900**	**3,800**	**3,600**	**3,000**	**3,800**	**3,400**	**3,600**	**3,900**	**3,600**
Barium	7440-39-3	75,000	1,300,000	1,300,000	440,000 *	37,000,000	130,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE
Cadmium	7440-43-9	1,200	6,000	6,000	3,600 *	550,000	2,100,000	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE
Chromium, Total**	7440-47-3	18,000 (total)	30,000	30,000	*180,000*	2,500,000	9,200,000	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE
Chromium VI	18540-29-9	NA	30,000	3,300	2,500,000	30,000	9,200,000	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE
Copper	7440-50-8	32,000	5,800,000	5,800,000	75,000 *	20,000,000	73,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE
Lead, Total	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	**6,900**	**26,000**	**6,300**	**15,000**	**6,300**	**50,000**	**88,000**	**59,000**	**88,000**
Lead, Coarse Fraction	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE
Lead, Fine Fraction	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE
Lead, Total (Calculated)	7439-92-1	21,000	700,000	700,000	5,100,000 *	400,000	900,000	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE
Mercury	7439-97-6	130	1,700	1,700	*130*	160,000	580,000	22	NE	NE	NE	NE	NE	NE	NE	NE	NE
Nickel	7440-02-0	20,000	100,000	100,000	76,000 *	40,000,000	150,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE
Selenium	7782-49-2	410	4,000	4,000	*410*	2,600,000	9,600,000	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE
Silver	7440-22-4	1,000	4,500	13,000	*1,000*	2,500,000	9,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE
Zinc	7440-66-6	47,000	2,400,000	5,000,000	170,000	170,000,000	630,000,000	NA	NE	NE	NE	NE	NE	NE	NE	NE	NE

Notes:
1. Concentrations reported in micrograms per kilogram (µg/kg).
2. Analytical results compared to the December 30, 2013 Promulgated Cleanup Criteria, Residential and/or Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels (GSI Protection Criteria Updated June 25, 2018); and EGLE's May 14, 2020, Draft Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels.
3. Results exceeding one or more criteria are shaded, as are the criteria exceeded.
4. Refer to the analytical report for the full list of analytes.
5. CS - Criterion is specific to individual constituent.
6. <RL - Analytical result was below laboratory reporting limit.
7. ID - Insufficient data to develop criteria.
8. NA - Not applicable.
9. NE - Not evaluated.
10. NLV - Not likely to volatilize.
11. NLL - Not likely to leach.
12. * = GSI Protection was calculated for the indicated metals using the EGLE spreadsheet for calculating GSI. A default water hardness value of 150 mg/kg as $CaCO_3$ was used to calculate GSI. Results are presented for surface water receiving bodies not protected as a drinking water source.
13. *Italicized* - the respective criterion was below the Statewide Default Background Level (SDBL) and therefore the value defaulted to the SDBL value.
14. ** - Total chromium results compared to trivalent chromium criteria because hexavalent chromium was analyzed and not measured above the laboratory reporting limit in the soil sample that had the highest concentration.
15. Concentrations were also compared to, and found to be below, the ambient and indoor air criteria and the soil saturation concentration screening levels.

TABLE 3
SUMMARY OF ANALYSIS RESULTS - GROUNDWATER
FORMER HMC ROYAL COACH SITE
HASTINGS, MICHIGAN
SME PROJECT NO. 081604.00.001

CONSTITUENT	CHEMICAL ABSTRACT SERVICE NUMBER	Part 201 Generic Cleanup Criteria			EGLE Volatilization to Indoor Air Pathway (VIAP) Screening Levels	CHEMICAL ANALYTICAL RESULTS Sample Identification Screened Interval (depth in feet) Date Collected							
		Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Not in Contact Criteria (GWNIC)	SB1	Duplicate	SB2	SB6	SB8	SB15	SB17	MW10D
						2.5' - 7.5'	SB1 (2.5'-7.5')	8' - 13'	10' - 15'	11' - 16'	5' - 10'	6' - 11'	28' - 33'
						05/19/20	05/19/20	05/19/20	05/18/20	05/19/20	05/18/20	05/19/20	05/20/20
VOCs													
cis-1,2-Dichloroethylene	156-59-2	70	70	620	95	<1.0	<1.0	<1.0	**2.6**	<1.0	<1.0	<1.0	<1.0
Toluene	108-88-3	790	790	270	41,000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.4**	<1.0
1,1,1-Trichloroethane	71-55-6	200	200	89	14,000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene	79-01-6	5	5	200	10	**1.2**	**1.2**	<1.0	**5.7**	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	75-01-4	2	2	13	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Other Analyzed VOCs	CS	CS	CS	CS	CS	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
PAHs													
All Analyzed PAHs	129-00-0	140	140	ID	NA	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Per- and Polyfluoroalkyl Substances (PFAS)													
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.07	0.07	0.012	NA	NE	NE	NE	NE	NE	NE	NE	<0.0017
Perfluorobutanoic acid (PFBA)	375-22-4	NA	NA	NA	NA	NE	NE	NE	NE	NE	NE	NE	<0.0017
Perfluorooctanesulfonamide (FOSA)	754-91-6	NA	NA	NA	NA	NE	NE	NE	NE	NE	NE	NE	**0.0027**
Other Analyzed PFAS	CS	CS	CS	CS	NA	NE	NE	NE	NE	NE	NE	NE	<RL
Metals													
Arsenic	7440-38-2	10.0	10.0	10	NA	<5.0	<5.0	<5.0	<5.0	<5.0	**17 / <5.0**	<5.0	<5.0
Barium	7440-39-3	2,000	2,000	670 *	NA	**130**	**130**	<100	<100	<100	**240**	<100	<100
Cadmium	7440-43-9	5	5	3.0 *	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium, Total	7440-47-3	100	100	100	NA	<10	<10	<10	<10	<10	**19 / <10**	<10	<10
Chromium VI	18540-29-9	100	100	11	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Copper	7440-50-8	1,000	1,000	13 *	NA	<4.0	**4.2**	<4.0	<4.0	**67 / 5.0**	**30 / <4.0**	<4.0	**5.9**
Lead	7439-92-1	4.0	4.0	29 *	NA	<3.0	<3.0	<3.0	<3.0	**11 / <3.0**	**25 / <3.0**	<3.0	**4.7**
Mercury	7439-97-6	2.0	2.0	0	2.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Nickel	7440-02-0	100	100	73 *	NA	<20	<20	<20	<20	<20	<20	<20	<20
Selenium	7782-49-2	50	50	5	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Silver	7440-22-4	34	98	0.2	NA	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Zinc	7440-66-6	2,400	5,000	170 *	NA	<50	<50	<50	<50	**51**	**69**	<50	**620**

Notes:
1. Concentrations reported in micrograms per liter (µg/L).
2. Analytical results compared to the December 30, 2013 Promulgated Cleanup Criteria, Residential and/or Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels (GSI Protection Criteria Updated June 25, 2018); and EGLE's May 14, 2020, Draft Residential Volatilization Volatilization to Indoor Air Pathway (VIAP) Screening Levels.
3. Results exceeding one or more Part 201 criteria are shaded orange, as are the criteria exceeded. Results exceeding only EGLE Volatilization to Indoor Air Pathway criteria are shaded yellow, as are the criteria.
4. Refer to the analytical report for the full list of analytes.
5. CS - Criterion is specific to individual constituent.
6. <RL - Analytical result was below laboratory reporting limit.
7. NE - Not evaluated.
8. NA - Not available.
9. ID - Insufficient data to develop criterion.
10. NLV - Not likely to volatilize under most soil conditions.
11. * = GSI Protection was calculated for the indicated metals using the MDEQ spreadsheet for calculating GSI. A default water hardness value of 150 mg/kg as $CaCO_3$ was used to calculate GSI. Results are presented for surface water receiving bodies not protected as a drinking water source.
12. **Total chromium concentrations were compared to the trivalent chromium criteria because hexavalent chromium was analyzed in one or more samples, and was found to be below laboratory reporting limit.
13. Concentrations were also compared to, and found to be below, the groundwater volatilization to indoor air inhalation criteria and the flammability and explosivity screening levels.
14. For metals reported with two values "X/X", the first value is the unfiltered (total) sample result and the second value is the filtered (dissolved) sample result.

TABLE 3
SUMMARY OF ANALYSIS RESULTS - GROUNDWATER
FORMER HMC ROYAL COACH SITE
HASTINGS, MICHIGAN
SME PROJECT NO. 081604.00.001
PAGE 2 OF 2

CONSTITUENT	CHEMICAL ABSTRACT SERVICE NUMBER	Part 201 Generic Cleanup Criteria			EGLE Volatilization to Indoor Air Pathway (VIAP) Screening Levels	CHEMICAL ANALYTICAL RESULTS Sample Identification Screened Interval (depth in feet) Date Collected						
		Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Groundwater Not in Contact Criteria (GWNIC)	MW17	Duplicate	MW18	MW19	Field Blank	Equipment Blank	Trip Blank
						9' - 16'	MW17 (9'-16')	12' - 17'	14' - 19'	Quality Control	Quality Control	Quality Control
						05/20/20	05/20/20	05/20/20	05/20/20	05/20/20	05/20/20	---
VOCs												
cis-1,2-Dichloroethylene	156-59-2	70	70	620	95	<1.0	NE	**7.7**	<1.0	NE	NE	<1.0
Toluene	108-88-3	790	790	270	41,000	<1.0	NE	<1.0	<1.0	NE	NE	<1.0
1,1,1-Trichloroethane	71-55-6	200	200	89	14,000	<1.0	NE	**1.8**	<1.0	NE	NE	<1.0
Trichloroethylene	79-01-6	5	5	200	10	<1.0	NE	**33**	<1.0	NE	NE	<1.0
Vinyl chloride	75-01-4	2	2	13	2.1	<1.0	NE	**1.6**	<1.0	NE	NE	<1.0
Other Analyzed VOCs	CS	CS	CS	CS	CS	<RL	NE	<RL	<RL	NE	NE	<RL
PAHs												
All Analyzed PAHs	129-00-0	140	140	ID	NA	<RL	NE	<RL	<RL	NE	NE	NE
Per- and Polyfluoroalkyl Substances (PFAS)												
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.07	0.07	0.012	NA	<0.0019	<0.0018	**0.0037**	<0.018	<0.002	<0.0019	NE
Perfluorobutanoic acid (PFBA)	375-22-4	NA	NA	NA	NA	<0.0019	<0.0018	**0.0026**	<0.018	<0.002	<0.0019	NE
Perfluorooctanesulfonamide (FOSA)	754-91-6	NA	NA	NA	NA	<0.0019	<0.0018	<0.0021	<0.018	<0.002	<0.0019	NE
Other Analyzed PFAS	CS	CS	CS	CS	NA	<RL	<RL	<RL	<RL	<RL	<RL	NE
Metals												
Arsenic	7440-38-2	10	10	10	NA	<5.0	NE	<5.0	<5.0	NE	NE	NE
Barium	7440-39-3	2,000	2,000	670 *	NA	<100	NE	**170**	**180**	NE	NE	NE
Cadmium	7440-43-9	5	5	3.0 *	NA	<1.0	NE	<1.0	<1.0	NE	NE	NE
Chromium, Total	7440-47-3	100	100	100	NA	<10	NE	<10	<10	NE	NE	NE
Chromium VI	18540-29-9	100	100	11	NA	<5.0	NE	<5.0	<5.0	NE	NE	NE
Copper	7440-50-8	1,000	1,000	13 *	NA	<4.0	NE	<4.0	**14**	NE	NE	NE
Lead	7439-92-1	4.0	4.0	29 *	NA	<3.0	NE	<3.0	<3.0	NE	NE	NE
Mercury	7439-97-6	2.0	2.0	0.0013	2.5	<0.20	NE	<0.20	<0.20	NE	NE	NE
Nickel	7440-02-0	100	100	73 *	NA	<20	NE	<20	<20	NE	NE	NE
Selenium	7782-49-2	50	50	5	NA	<5.0	NE	<5.0	<5.0	NE	NE	NE
Silver	7440-22-4	34	98	0.2	NA	<0.20	NE	<0.20	<0.20	NE	NE	NE
Zinc	7440-66-6	2,400	5,000	170 *	NA	<50	NE	<50	**120**	NE	NE	NE

Notes:
1. Concentrations reported in micrograms per liter (µg/L).
2. Analytical results compared to the December 30, 2013 Promulgated Cleanup Criteria, Residential and/or Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels (GSI Protection Criteria Updated June 25, 2018); and EGLE's May 14, 2020, Draft Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels.
3. Results exceeding one or more Part 201 criteria are shaded orange, as are the criteria exceeded. Results exceeding only EGLE Volatilization to Indoor Air Pathway criteria are shaded yellow, as are the criteria.
4. Refer to the analytical report for the full list of analytes.
5. CS - Criterion is specific to individual constituent.
6. <RL - Analytical result was below laboratory reporting limit.
7. NE - Not evaluated.
8. NA - Not available.
9. ID - Insufficient data to develop criterion.
10. NLV - Not likely to volatilize under most soil conditions.
11. * = GSI Protection was calculated for the indicated metals using the MDEQ spreadsheet for calculating GSI. A default water hardness value of 150 mg/kg as $CaCO_3$ was used to calculate GSI. Results are presented for surface water receiving bodies not protected as a drinking water source.
12. **Total chromium concentrations were compared to the trivalent chromium criteria because hexavalent chromium was analyzed in one or more samples, and was found to be below laboratory reporting limit.
13. Concentrations were also compared to, and found to be below, the groundwater volatilization to indoor air inhalation criteria and the flammability and explosivity screening levels.
14. For metals reported with two values "X/X", the first value is the unfiltered (total) sample result and the second value is the filtered (dissolved) sample result.

TABLE 4
SUMMARY OF ANALYSIS RESULTS - SOIL GAS
FORMER HMC ROYAL COACH
HASTINGS, MICHIGAN
SME Project No. 081604.00.001
PAGE 1 OF 1

Constituent	Chemical Abstract Service Number	Volatiliztion to Indoor Air Pathway (VIAP) Screening Levels		Chemical Analytical Results Sample Identification Depth (feet) Date Collected															
				SG1	SG2	SG3	SG4	SG5	SG6	SG7	SG8	SG9	SG10	SG11	SG12	SG13	SG14	DUPLICATE	EQUIPMENT BLANK
		Residential	Nonresidential	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	Sub-Slab	5-5.5	5-5.5	5-5.5	SG4	---
				6/1/2020	6/1/2020	6/1/2020	6/1/2020	6/1/2020	6/1/2020	6/1/2020	6/1/2020	6/1/2020	6/1/2020	6/1/2020	6/1/2020	6/1/2020	6/1/2020	6/1/2020	6/1/2020
VOCs (TO-15)		µg/m³	µg/m³																
Benzene	71-43-2	110	260	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	**20**
Chloroform	67-66-3	37	87	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	**7.0**	<5.9	<5.9	<5.9	<5.9	<5.9
Dichlorodifluoromethane	75-71-8	11,000	17,000	<4.1	<4.1	<4.1	<4.1	<4.1	**71**	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1
Tetrachloroethene	127-18-4	1,400	1,400	<41	<41	<41	<41	<41	<41	<41	<41	<41	<41	<41	<41	<41	**72**	<41	<41
1,1,1-Trichloroethane	71-55-6	170,000	230,000	<33	<33	<33	<33	<33	<33	<33	<33	<33	<33	<33	**140**	<33	<33	<33	<33
Trichloroethene	79-01-6	67	67	**33**	**15**	**13**	**22**	**12**	**30**	**23**	**13**	**48**	**25**	**130**	**470**	<1.6	<1.6	**22**	<1.6
Other Analyzed VOCs	CS	CS	CS	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL

Notes:

1. Concentrations reported in micrograms per cubic meter (µg/m^3).
2. Analytical results were compared EGLE's May 14, 2020, Draft Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels.
3. Results exceeding one or more criteria are shaded, as are the criteria exceeded.
4. Refer to the analytical report for the full list of analytes.
5. CS - Criterion is specific to individual constituent.
6. <RL - Analytical result was below laboratory reporting limit.

MICHIGAN BROWNFIELD REDEVELOPMENT PROGRAM

Act 381 Brownfield Tax Increment Financing

Tax Increment Financing (TIF) is a powerful funding tool that can help cover additional costs associated with redeveloping a brownfield property. The premise of brownfield TIF is simple:

- When a vacant, blighted, contaminated, or otherwise challenged property is redeveloped it becomes more valuable.
- The increase in value results in an increase in property taxes paid to the municipality, school district, or other taxing authorities for that property.
- The additional tax paid due to the increased property value is referred to as the increment.
- The increment is "captured" by the taxing authority and used to reimburse the developer for the cost of addressing brownfield conditions on the property during construction.
- The brownfield activities eligible for reimbursement are defined in the Brownfield Redevelopment Financing Act (Act 381). They require local and sometimes state approval.
- Once the developer has been reimbursed for the approved eligible brownfield activities on a project, the taxing authority begins retaining all taxes collected for the property, fully realizing the increase in tax revenue from the development.

LOCAL APPROVAL

All projects seeking to use Act 381 TIF must prepare a Brownfield Plan for the project. The plan must identify the brownfield activities to be performed as well as the estimated taxes to be generated and captured. The plan must be approved by the local unit of government and the local Brownfield Redevelopment Authority (BRA). Public hearings and notifications are required as part of this process.

STATE APPROVAL

Projects seeking to capture state education and school operating taxes must submit an Act 381 Work Plan to the appropriate state agency for approval. The Act 381 Work Plan must include a copy of the locally approved Brownfield Plan. Environmental activities typically associated with known or suspected soil and groundwater contamination require review and approval by the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Non-environmental brownfield activities including demolition, site work, and infrastructure are reviewed by the Michigan Economic Development Corporation (MEDC).

ELIGIBLE ACTIVITIES

Activities reviewed by EGLE can be divided into two categories:

1. Activities that require approval to use state taxes **before** they take place, including:
    - Due Care Activities
        - Documentation of due care compliance
        - Activities performed to make the property safe for its intended use, such as removing contaminated soil or installing vapor mitigation systems or exposure barriers
    - Response Activities
        - Remediation Activities
        - Demolition; lead, mold, and asbestos abatement under some circumstances
        - And many more (refer to the Act 381 Work Plan Guidance for additional eligible environmental activities)
2. Exempt activities that can take place **prior** to or without approval to use state taxes, including:
    - Phase I and Phase II Environmental Site Assessments and Baseline Environmental Assessments (BEAs)
    - Asbestos, mold, and lead surveys; hazardous materials and pre-demolition surveys
    - Due care investigations, planning, and reporting

Reach out to your local EGLE Brownfield Coordinator to discuss a specific project.

USING TIF WITH OTHER EGLE BROWNFIELD INCENTIVES

EGLE Brownfield Loans are often used in conjunction with Brownfield TIF. EGLE loans can provide the capital often needed on the front end of development projects. The loans provide a 5-year payment-free and interest-free grace period to help with the back end of a project. The 5-year window is typically sufficient time to complete the development and generate a tax increment large enough to cover the amount of the loan payment.

EGLE Brownfield Grants can be used with Brownfield TIF. However, grant-funded activities must be clearly identified and separated from activities that will utilize Brownfield TIF to ensure the developer is not being reimbursed for costs that were paid for with the EGLE grant.

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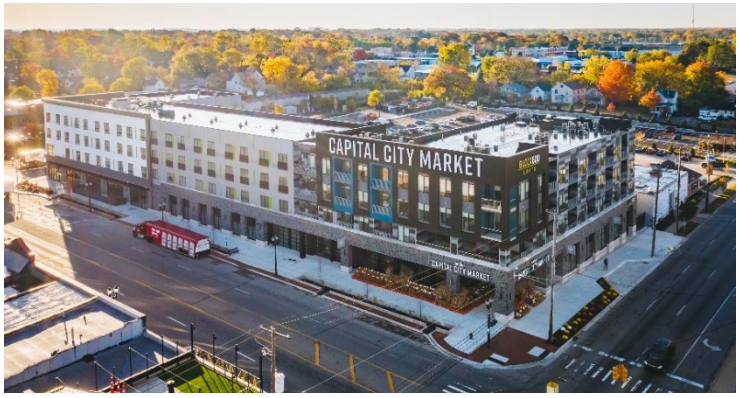

MSHDA Housing Tax Increment Financing
Program Statement

September 29, 2023

I. Overview of the Brownfield Redevelopment Financing Act and Public Act 90 of 2023

The Brownfield Redevelopment Financing Act of 1996, MCL 125.2651 et. seq., as amended (the "Brownfield Act"), authorizes municipalities to create local brownfield redevelopment authorities (each a "BRA") to facilitate the implementation of brownfield plans to promote the revitalization, redevelopment, and reuse of brownfield properties, which include, but are not limited to, previously developed, tax reverted, blighted, or functionally obsolete properties. The Brownfield Act permits the use of tax increment financing ("TIF") as a funding tool to help cover the additional costs associated with redeveloping a brownfield property. The taxable value of brownfield property is often very low, and the property taxes generated therefrom may be correspondingly very low. When an improved brownfield redevelopment has increased property value and generates new tax revenue, the increased revenue can be captured by a local BRA and be used to either repay TIF bonds or reimburse the developer for the eligible costs associated with redeveloping the property.

On July 19, 2023, Public Act 90 of 2023 ("PA 90") became effective and amended the Brownfield Act to include certain housing development activities as eligible activities. Prior to PA 90, TIF was only available to property owners who coordinated with local BRAs and (a) the Department of Environment, Great Lakes, and Energy ("EGLE") for certain environmental cleanup activities, and (b) the Michigan Strategic Fund ("MSF") for certain business development and community development activities. Pursuant to PA 90, brownfield work plans and combined brownfield plans that involve the use of taxes levied for school operating purposes and that request reimbursement for housing development activities for affordable and/or subsidized housing must be reviewed by the Michigan State Housing Development Authority ("MSHDA").

This Housing Tax Increment Financing Program Statement ("Program Statement") is intended to provide the guidelines for submission to and review by MSHDA of work plans and combined brownfield plans relating to housing development activities. MSHDA will accept on an on-going basis work plans and combined brownfield plans submitted pursuant to this Program Statement and the Brownfield Act requirements and process. However, note that this Program Statement and its timing and requirements apply only to the implementation of PA 90 by MSHDA and that applications for MSHDA loans, grants, or other benefits that a developer may wish to use in connection with housing development activities undertaken pursuant to this Program Statement would need to be applied for separately under applicable MSHDA program specific guidelines.

See Addendum I for additional definitions used by MSHDA in this Program Statement. All statutory references used herein refer to the Brownfield Act, as amended by PA 90, unless otherwise specified.

II. Types of Brownfield Plans and Work Plans

a. A brownfield plan is the comprehensive description of the brownfield property and the plan for redevelopment. At minimum, a brownfield plan must include maps showing the location and dimensions of each eligible property, statements of the characteristics that qualify each property as eligible property, and a statement of whether personal property is included as part of the eligible property. Pursuant to Section 13(2) of the Brownfield Act, a brownfield plan may apply to 1 or more parcels of eligible property whether or not those parcels of eligible property are contiguous. A brownfield plan may also be amended to apply to additional parcels of eligible property. Pursuant to the requirements of Section 14, a brownfield plan is either approved, rejected, or approved with modification by resolution of the municipality or BRA. MSHDA does not review or approve brownfield plans except "work plans" and "combined brownfield plans" as described below.

b. Work plans are plans that describe each individual activity to be conducted to complete eligible activities and the associated costs of each individual activity. One brownfield plan or transformational brownfield plan may include more than one work plan (e.g. one work plan for affordable housing and another for environmental cleanup activities). Pursuant to PA 90, MSHDA will review work plans for affordable and/or subsidized housing for projects that request reimbursement for eligible housing development activities. These work plans may be created under either a brownfield plan or a transformational brownfield plan.

c. Combined brownfield plans are brownfield plans and work plans drafted as one item that is inclusive of all the information necessary to submit the plan to MSHDA pursuant to Section 15(20) of the Brownfield Act and as set forth below in this Program Statement.

d. Transformational brownfield plans are for large scale projects that will have a transformational impact on local economic development and community revitalization based on the extent of brownfield redevelopment and growth in population, commercial activity, and employment that will result from the plan. To be designated a transformational brownfield plan, a transformational brownfield plan must be for mixed-use development unless waived by the MSF and must be expected to result in certain levels of capital investment. Transformational brownfield plans may include numerous work plans.

   The MSF is the state agency responsible for overall review of transformational brownfield plans. However, for transformational brownfield plans that include affordable and/or subsidized housing work plans, MSHDA is responsible for reviewing the work plans that relate to housing development activities. Pursuant to Section 13b(4)(b) and Section 15(10)(a), a BRA must submit a transformational brownfield plan when submitting for MSHDA review a work plan created as part of an overall transformational brownfield plan.

III. Eligible Property for MSHDA Review

Under PA 90, Section 13b(4)(b), MSHDA is charged with the responsibility of reviewing work

plans or combined brownfield plans relating to eligible housing development activities for “for sale” or rental housing properties that are reserved to serve households earning not more than 120% of area median income and/or subsidized properties.

Pursuant to Section 2(p)(ii), “eligible property” includes housing property for which eligible activities are identified under a brownfield plan, including personal property located on the property, to the extent included in the brownfield plan.

Pursuant to Section 2(y) “housing property” is further defined to mean 1 or more of the following:

a. A property on which 1 or more units of residential housing are proposed to be constructed, rehabilitated, or otherwise designed to be used as a dwelling.

b. One or more units of residential housing proposed to be constructed or rehabilitated and located in a mixed-use project.

IV. Types of Permitted Housing Development Activities

Pursuant to Section 2(x) of the Brownfield Act, “housing development activities” means 1 or more of the following:

a. Reimbursement provided to owners of rental housing units for qualified rehabilitation, which under Section 2(vv) is defined as “rehabilitation of existing structures that is necessary to make a housing unit suitable for sale to an income qualified purchaser household or rent to an income qualified renting household. Qualified rehabilitation also includes proposed rehabilitation that will bring the structure into conformance with minimum local building code standards for occupancy or improve the livability of the units while meeting minimum local building code standards. In this subsection, “existing structures” includes any structure designed to be used as a dwelling.”

b. Costs for infrastructure available for public use and safety improvements necessary for a housing project.

c. Costs of demolition and renovation of existing buildings and site preparation, to the extent necessary to accommodate an income qualified purchaser household or income qualified renting household.

d. Temporary household relocation costs for an income qualified household for a period not to exceed 1 year.

e. Acquisition cost for blighted or obsolete rental units, to the extent the acquisition would promote rehabilitation or adaptive reuse of the blighted or obsolete rental unit to accommodate an income qualified purchaser household or income qualified renting household.

f. Reimbursement provided to a developer to fill a financing gap associated with the development of housing units priced for income qualified households and to assist with costs related to infrastructure improvements and site preparation that are not a response activity and that are necessary for new housing development for income qualified households on eligible property.

V. Additional Eligible Activities

Pursuant to Section 2(o)(i) of the Brownfield Act, for all eligible properties, including housing properties, eligible activities may include any of the following:

a. Reasonable costs of environmental insurance.

b. Reasonable costs incurred to develop and prepare brownfield plans, combined brownfield plans, or work plans for the eligible property, including legal and consulting fees that are not in the ordinary course of acquiring and developing real estate.

c. Reasonable costs of brownfield plan and work plan implementation, including, but not limited to, tracking and reporting of data and plan compliance, including costs to implement, monitor, and maintain compliance with the income and price monitoring responsibilities associated with housing development activities.

d. Demolition of structures or site improvements that are not a response activity, including removal of manufactured debris composed of discarded, unused, or unusable manufactured by-products left on the site by a previous owner.

e. Lead, asbestos, or mold abatement.

f. Pursuant to Section 2(o)(ii), for housing property located in a community that has identified a specific housing need included in the brownfield plan, eligible activities may include:

    1. Infrastructure improvements that are necessary for housing property and supports housing development activities.

    2. Site preparation that is not a response activity and that supports housing development activities.

VI. Local Brownfield Plan Approval Process

Prior to submitting a work plan or combined brownfield plan to MSHDA, the local governing body or BRA is required to (i) hold a public hearing on the brownfield plan and (ii) determine that the plan constitutes a public purpose.

The hearing criteria include the following:

a. Notice of the time and place of the hearing, including:

    1. A description of the property to which the plan applies in relation to existing or proposed highways, streets, streams, or otherwise; and

    2. A statement that maps, plats, and a description of the brownfield plan are available for public inspection at a place designated in the notice and that all aspects of the brownfield plan are open for discussion at the public hearing; and

    3. Any other information that the governing body considers appropriate.

b. Preservation of a record of the public hearing, including all data presented at the hearing.

c. Not less than 10 days before the hearing on the brownfield plan, the governing body shall provide notice of the hearing to the taxing jurisdictions and to MSHDA, or its designee, if the brownfield plan involves the use of taxes levied for school operating purposes to pay for eligible housing development activities subject to 13b(4)(b).

d. Not less than 10 days after notice of the proposed brownfield plan is provided to the taxing jurisdictions, the governing body shall determine whether the plan constitutes a public purpose. If the governing body determines that the plan does not constitute a public purpose, the governing body shall reject the plan. If the governing body determines that the plan constitutes a public purpose, the governing body may then approve or reject the plan, or approve it with modification, by resolution.

Per Section 15(20), instead of seeking approval of a work plan under section 13b(4)(b), a BRA may seek approval of a combined brownfield plan. If the combined brownfield plan involves the use of taxes levied for school operating purposes to pay for eligible housing development activities that require approval by MSHDA under section 13b(4)(b), not less than 30-days before the BRA holds a public hearing on the combined brownfield plan, the BRA must provide MSHDA written notice that the BRA will be seeking approval of a combined brownfield plan instead of a work plan.

VII. Combined Brownfield Plan or Work Plan Submittal Process

Submissions to MSHDA of work plans under Section 13b(4)(b) or combined brownfield plans under Section 15(20) are required to, at a minimum, include the following:

a. A written letter from the submitting BRA requesting formal approval and indicating that (i) the notices and formal hearing have been completed per the Brownfield Act, (ii) the BRA has approved the brownfield plan and determined that the plan constitutes a public purpose, and (iii) only for transformational brownfield plans, the required financial review has been completed.

b. For each required submission item under Section 15(10), the BRA must provide a separate tab labeled according to the enumeration below in subsection VIII(d)(1)-(8) of this Program Statement.

VIII. Threshold Submission Requirements for Work Plans and Combined Brownfield Plans

Prior to evaluation of a submitted work plan or combined brownfield plan, MSHDA staff must confirm the following threshold requirements have been met:

a. Does the brownfield plan include the use of taxes levied for school operating purposes? If so, is the work plan or combined brownfield plan requesting reimbursement for housing development activities? Will the housing property for which housing development activities are identified under the work plan or combined brownfield plan be sold or rented at other than a market rate or be subsidized?

    1. If no to any of these questions, MSHDA has no statutory authority to review the work plan and it must be returned to the submitting BRA.

    2. If yes to all these questions, continue the review of threshold questions.

b. Who submitted the plan?

    1. A work plan submitted under Section 15(10), or a combined brownfield plan submitted under Section 15(20)(b), must be submitted to MSHDA by the BRA.

    2. Any work plan or combined brownfield plan not submitted by the BRA, or another duly authorized municipal designee, will be automatically denied and returned to the submitting party.

c. Per Section 15(11), the BRA must complete all required financial analyses prior to submitting to MSHDA a work plan completed as part of a transformational brownfield plan. Any work plan or combined brownfield plan completed as part of a transformational brownfield plan submitted without a BRA completed financial analysis will be denied.

d. Per Section 15(10), the BRA must submit all the following for each eligible property:

    1. A copy of the brownfield plan or the transformational brownfield plan.

    2. Current ownership information for each eligible property and a summary of available information on proposed future ownership, including the amount of any delinquent taxes, interest, and penalties that may be due.

    3. A summary of available information on the historical and current use of each eligible

property.

4. Existing and proposed future zoning for each eligible property.

5. A summary of the proposed redevelopment and future use for each eligible property.

6. A separate work plan, or part of a work plan, for each eligible activity described in section 13b(4) to be undertaken.

7. A copy of the development agreement or reimbursement agreement between the municipality or BRA and an owner or developer of eligible property required under section 13b(4), which must per Section 13b(4)(b) stipulate price and monitoring for residential units, and in addition must include but is not limited to a detailed summary of any and all ownership interests, monetary considerations, fees, revenue and cost sharing, charges, or other financial arrangements or other consideration between the parties.

8. For work plans that include housing development activities, a summary of proposed income and price monitoring responsibilities and related expenses.

If the BRA fails to submit any of the foregoing items, MSHDA will deny the work plan or combined brownfield plan for incompleteness.

e. The eligible activities to be conducted and described in Section 13b(4) must be consistent with the combined brownfield plan or work plan submitted by the BRA to MSHDA.

   If the eligible activities to be conducted and described in the combined brownfield plan or work plan submitted by the BRA to MSHDA are not consistent with Section 13b(4)(b) eligible housing development activities, MSHDA will deny the work plan or combined work plan for inconsistency.

IX. Work Plan and Combined Brownfield Plan Review Criteria

If a work plan or combined brownfield plan satisfies the threshold requirements described above, MSHDA will review the plan using the statutory criteria listed below and the related programmatic parameters included in Addendum II, “Work Plan or Combined Brownfield Plan Review Criteria: Programmatic Parameters.” If a plan seeks a waiver from a parameter included in Addendum II, MSHDA staff will present the waiver request to the MSHDA Board for consideration.

a. Per Sections 15(12) and 15(20)(g), MSHDA must consider the following criteria to the extent reasonably applicable to the type of activities proposed in a work plan or combined brownfield plan when approving or denying the plan:

   1. Whether the individual activities included in the work plan are sufficient to complete

the eligible activity.

2. Whether each individual activity included in the work plan is required to complete the eligible activity.
3. Whether the cost for each individual activity is reasonable.
4. The overall benefit to the public.
5. The extent of reuse of vacant buildings and redevelopment of blighted property.
6. Creation of jobs.
7. Whether the eligible property is in an area of high unemployment.
8. The level and extent of contamination alleviated by or in connection with the eligible activities.
9. The level of private sector contribution.
10. If the developer or projected occupant of the new development is moving from another location in this state, whether the move will create a brownfield.
11. Whether the project of the developer, landowner, or corporate entity that is included in the work plan is financially and economically sound.
12. Other state and local incentives available to the developer, landowner, or corporate entity for the project of the developer, landowner, or corporate entity that is included in the work plan.
13. MSHDA will also consider all of the following for proposed housing development activities:

    i. Alignment with the statewide housing plan developed.
    ii. The capacity of the entity or agency that is monitoring price and income, and the duration of the monitoring.
    iii. Whether the project will support housing at price points that align with the local workforce.
    iv. If the property will be deed restricted to regulate short-term rentals or otherwise ensure long-term local housing needs.
    v. As determined by MSHDA utilizing the formula found in Schedule A, Potential Rent Loss (PRL) Gap Cap & Total Housing Subsidy (THS) Calculations will be used to establish the reasonableness of certain housing activities for which tax capture is planned.

X. Written Response to Work Plan or Combined Brownfield Plan Submission

a. Work Plan Response:

1. Within 60 days following receipt of a BRA written request for approval of a work plan, per Section 15(11), MSHDA must provide one of the following written responses to the requesting BRA:

    i. An unconditional approval that includes an enumeration of eligible activities and a maximum allowable capture amount.

    ii. A conditional approval that delineates specific necessary modifications to the work plan, including, but not limited to, individual activities to be added to or deleted from the work plan and revision of costs.

    iii. A denial and a letter stating with specificity the reason for the denial. If MSHDA denies a work plan under this subsection, the BRA may subsequently resubmit the work plan.

2. Per Section 15(13), if MSHDA fails to provide a written response within 60 days following receipt of a request for approval of a work plan under Section 13b(4)(b) or 90 days for a work plan under a transformation brownfield plan, then the eligible activities are considered approved, and the BRA may proceed with the eligible activities as outlined in the work plan as submitted.

3. Per Section 15(14), MSHDA's approval of a work plan is final and is not subject to reconsideration or appeal.

b. Combined Brownfield Plan Response:

1. Within 60 days following receipt of a BRA written request for approval of a combined brownfield plan, MSHDA must, per Section 15(20)(d), provide one of the following written responses to the requesting BRA:

    i. An unconditional approval that includes an enumeration of eligible activities and a maximum allowable capture amount.

    ii. A conditional approval that delineates specific necessary modifications to the combined brownfield plan, including, but not limited to, individual activities to be added to or deleted from the combined brownfield plan and revision of costs.

    iii. A denial and a letter stating with specificity the reason for the denial. If

MSHDA denies a combined brownfield plan under this subsection, the BRA may subsequently resubmit the combined brownfield plan for review.

2. Per Section 15(20)(i), if MSHDA fails to provide a written response under Section 15(20)(d) within 60 days after receipt of a complete combined brownfield plan or 90 days for a combined plan submitted as part of a transformational plan, then the eligible activities are considered approved as submitted.

3. Per Section 15(20)(j), MSHDA's approval of a combined brownfield plan is final and is not subject to reconsideration nor appeal.

c. MSHDA staff will provide a comprehensive review of each submitted work plan and combined brownfield plan and make staff recommendations for approval, conditional approval, or denial. Pursuant to MSHDA Board authority under Section 125.1421(6) of the State Housing Development Authority Act of 1966, Act 346 (the "MSHDA Act"), the MSHDA Board may delegate to one or more executive-level staff the power to provide administrative approvals, conditional approvals, or denials of work plans and combined brownfield plans based on the statutory and programmatic criteria set forth herein and based on the Brownfield Act, as amended.

d. If MSHDA issues a written conditional approval of a combined brownfield plan to a requesting BRA, pursuant to Section 15(20)(h), the BRA may administratively approve any modifications required by the written response without following the notice and approval process required by Section 14(6) unless the modifications add one or more parcels of eligible property or increase the maximum amount of tax increment revenue in the case of a transformational brownfield plan, construction period tax capture revenues, withholding tax capture revenues, income tax capture revenues, and sales and use tax capture revenues approved for the project.

XI. Reporting Requirements

a. Quarterly Reporting

1. MSHDA staff will report to the MSHDA Board on a quarterly basis all work plans and combined brownfield plans approved by MSHDA. That report will include, at a minimum, the following:

i. Total number of projects approved.
ii. Types of projects approved (rental or for sale).
iii. Total number of units approved and units by reserved AMI.
iv. Number of projects with subsidies, such as project-based vouchers.
v. Number of projects designated to serve elderly or special needs populations.
vi. Number of units designated to serve the elderly or special needs populations.

2. Pursuant to Section 16(5)(c), MSHDA will on a quarterly basis post on its website the name, location, and amount of tax increment revenues, including taxes levied for school operating purposes, for each project approved by MSHDA under the Brownfield Act during the immediately preceding quarter.

b. Annual Reporting to MSHDA from Brownfield Authorities

1. Section 16 requires the local BRA to submit annually to MSHDA a financial report on the status of the activities of the BRA for each calendar year. The report must include all of the following:

   i. The total amount of local taxes that are approved for capture and the total amount of taxes levied for school operating purposes that are approved for capture for each parcel included in a brownfield plan.

   ii. The amount and purpose of expenditures of tax increment revenues.

   The amount and source of tax increment revenues received for each active brownfield plan, including the amount of tax increment revenues captured in the most recent tax year and the cumulative amount of tax increment revenues captured for each brownfield plan.

   iii. The initial taxable value of all eligible property subject to each brownfield plan.

   iv. The captured taxable value realized by the BRA for each eligible property subject to the brownfield plan.

   v. The amount of actual capital investment made for each project.

   vi. The amount of tax increment revenues attributable to taxes levied for school operating purposes used for activities described in Section 13b(6)(c), Section 2(o)(i)(F) and (G), and Section 2(o)(iii)(B) and (C).

   vii. The number of residential units constructed or rehabilitated for each project.

   viii. The amount, by square foot, of new or rehabilitated residential, retail, commercial, or industrial space for each project.

   ix. The number of new jobs created at the project.

   x. The number of housing units produced.

   xi. The number of income qualified purchaser households served.

   xii. The number of income qualified renting households assisted.

xiii. For the initial reporting period, the prices at which the housing units were sold or rented.

xiv. Racial and socioeconomic data on the individuals purchasing or renting the housing units, or, if this data is not available, racial, and socioeconomic data on the census tract in which the housing units are located.

c. Annual Report to Legislature Members

Pursuant to Section 16(4), MSHDA will collect the reports described above, compile a combined report that includes the use of local taxes, taxes levied for school operating purposes, and the state brownfield redevelopment fund, based on the information contained in those reports and any additional information considered necessary, and submit annually a report based on that information to each member of the Legislature.

This program may, with MSHDA Board approval, be amended from time to time in order to more effectively and efficiently carryout activities within it or to maintain compliance with amendments to the Brownfield Act, or the MSHDA Act. For the most recent program updates, please visit MSHDA's Housing Tax Increment Financing (TIF) program webpage at: https://www.michigan.gov/mshda/developers/tax-increment-financing-tif

Addendum I
MSHDA Housing Tax Increment Financing Program Definitions

1.“Blighted,” per Section 2(c), means property that meets any of the following criteria as determined by the local municipality:

i. Has been declared a public nuisance in accordance with a local housing, building, plumbing, fire, or other related code or ordinance.
ii. Is an attractive nuisance to children because of physical condition, use, or occupancy. Is a fire hazard or is otherwise dangerous to the safety of persons or property.
iii. Has had the utilities, plumbing, heating, or sewerage permanently disconnected, destroyed, removed, or rendered ineffective so that the property is unfit for its intended use.
iv. Is previously developed or tax reverted property owned by a municipality or by this state. The sale, lease, or transfer of previously developed or tax reverted property by a municipality or this state after the property’s inclusion in a brownfield plan does not result in the loss to the property of the status as blighted property for purposes of this act.
v. Is property owned by or under the control of a land bank fast track authority, whether or not located within a qualified local governmental unit. Property included within a brownfield plan before the date it meets the requirements of this subdivision to be eligible property is considered to become eligible property as of the date the property is determined to have been or becomes qualified as, or is combined with, other eligible property. The sale, lease, or transfer of the property by a land bank fast track authority after the property’s inclusion in a brownfield plan does not result in the loss to the property of the status as blighted property for purposes of this act.
vi. Has substantial buried subsurface demolition debris present so that the property is unfit for its intended use.

2. “Brownfield plan,” per Section 2(e), means a plan that meets the requirements of Sections 13 and 13b of the Brownfield Act and is adopted under Section 14.

3. “Combined brownfield plan,” per Section 2(h), means a brownfield plan that includes the information necessary to submit the plan to EGLE, MSHDA, or the MSF under Section 15(20) of the Brownfield Act. “Department” and “Department activities," per Section 2(j) and (k), means EGLE and the environmental investigations and response activities carried out pursuant to its statutory authority.

4. "Eligible activities" or "eligible activity", per Section 2(o), means 1 or more of the following:

i. For all eligible properties, eligible activities include all of the following:

i. Reasonable costs of environmental insurance.

ii. Reasonable costs incurred to develop and prepare brownfield plans,

combined brownfield plans, or work plans for the eligible property, including legal and consulting fees that are not in the ordinary course of acquiring and developing real estate.

iii. Reasonable costs of brownfield plan and work plan implementation, including, but not limited to, tracking and reporting of data and plan compliance, including costs to implement, monitor, and maintain compliance with the income and price monitoring responsibilities associated with housing development activities.

iv. Demolition of structures or site improvements that is are not a response activity, including removal of manufactured debris composed of discarded, unused, or unusable manufactured by-products left on the site by a previous owner.

v. Lead, asbestos, or mold abatement.

ii. For housing property located in a community that has identified a specific housing need and has absorption data or job growth data included in the brownfield plan, eligible activities include all of the following:

i. Infrastructure improvements that are necessary for housing property and support housing development activities.

ii. Site preparation that is not a response activity and that supports housing development activities.

5. "Eligible property," per Section 2(p)(ii) and for MSHDA's analysis, means housing property for which eligible activities are identified under a brownfield plan, including personal property located on the property, to the extent included in the brownfield plan.

6. "Functionally obsolete," per Section 2(u), means that the property is unable to be used to adequately perform the function for which it was intended due to a substantial loss in value resulting from factors such as overcapacity, changes in technology, deficiencies or super adequacies in design, or other similar factors that affect the property itself or the property's relationship with other surrounding property.

7. "Housing development activities," per Section 2(x), means 1 or more of the following:

i. Reimbursement provided to owners of rental housing units for qualified rehabilitation.
ii. Costs for infrastructure available for public use and safety improvements necessary for a housing project.

iii. Costs of demolition and renovation of existing buildings and site preparation, to the extent necessary to accommodate an income qualified purchaser household or income qualified renting household.
iv. Temporary household relocation costs for an income qualified household for a period not to exceed 1 year.
v. Acquisition cost for blighted or obsolete rental units, to the extent the acquisition would promote rehabilitation or adaptive reuse of the blighted or obsolete rental unit to accommodate an income qualified purchaser household or income qualified renting household.
vi. Reimbursement provided to a developer to fill a financing gap associated with the development of housing units priced for income qualified households and to assist with costs related to infrastructure improvements and site preparation that are not a response activity and that are necessary for new housing development for income qualified households on eligible property.

8. "Housing property," per Section 2(y), means 1 or more of the following:

    i. A property on which 1 or more units of residential housing are proposed to be constructed, rehabilitated, or otherwise designed to be used as a dwelling.
    ii. One or more units of residential housing proposed to be constructed or rehabilitated and located in a mixed-use project.

9. "Income qualified household," per Section 2(z), means a person, a family, or unrelated persons living together, whose annual household income is not more than 120% of the area median income.

10. "Area median income" means the median income for the area as determined under Section 8 of the United States Housing Act of 1937, 42 USC 1437f, adjusted for family size.

11. "Household income" means all income received by all individuals who are not less than 24 years of age when the household income is determined and who reside in a household while members of the household.

12. “Income qualified purchaser household," per Section 2(aa), means a purchaser who is, or who is a member of, an income qualified household.

13. "Income qualified renting household," per Section 2(bb), means a renter who is, or who is a member of, an income qualified household.

14. "Qualified rehabilitation," per Section 2(vv), means rehabilitation of existing structures that is necessary to make a housing unit suitable for sale to an income qualified purchaser household or rent to an income qualified renting household. Qualified rehabilitation also

includes proposed rehabilitation that will bring the structure into conformance with minimum local building code standards for occupancy or improve the livability of the units while meeting minimum local building code standards. As used in this subsection, "existing structures" includes any structure designed to be used as a dwelling.

15. “Subsidized,” for purposes of MSHDA’s analysis under PA 90 of 2023 means:

    i. Property that receives a federal, state, local, or tribal benefit that encourages low or moderate-income housing development, which will be defined as being affordable to persons at 120% AMI or lower; and,
    ii. That benefit accrues to the property owner; and,
    iii. By nature of the benefit the property is subject to a use restriction as to rents and occupant income.

16. “Tax increment revenues” per Section 2(eee), means the amount of ad valorem property taxes and specific taxes attributable to the application of the levy of all taxing jurisdictions on the captured taxable value of each parcel of eligible property subject to a brownfield plan and personal property located on that property, regardless of whether those taxes began to be levied after the brownfield plan was adopted. Tax increment revenues also include the amount of any payment in lieu of taxes under Section 15a(3) of the MSHDA Act, MCL 125.1415a, paid on an eligible property subject to a brownfield plan, less the amount of property taxes levied on the eligible property subject to the brownfield plan for the year the eligible property became subject to the brownfield plan. Tax increment revenues do not include any of the following:

    i. Ad valorem property taxes specifically levied for the payment of principal of and interest on either obligations approved by the electors or obligations pledging the unlimited taxing power of the local governmental unit, and specific taxes attributable to those ad valorem property taxes.

    ii. For tax increment revenues attributable to eligible property, the amount of ad valorem property taxes or specific taxes captured by a downtown development authority under Part 2 of the Recodified Tax Increment Financing Act, 2018 PA 57, MCL 125.4201 to 125.4230, tax increment finance authority under Part 3 of the Recodified Tax Increment Financing Act, 2018 PA 57, MCL 125.4301 to 125.4329, corridor improvement authority under Part 6 of the Recodified Tax Increment Financing Act, 2018 PA 57, MCL 125.4602 to 125.4629, or local development finance authority under Part 4 of the Recodified Tax Increment Financing Act, 2018 PA 57, MCL 125.4401 to 125.4420, if those taxes were captured by these other authorities on the date that eligible property became subject to a brownfield plan under the Brownfield Act, unless these other authorities agree to forgo or transfer their taxes in support of the brownfield plan.

iii. Ad valorem property taxes levied under 1 or more of the following or specific taxes attributable to those ad valorem property taxes

i. The Zoological Authorities Act, 2008 PA 49, MCL 123.1161 to 123.1183.
ii. The Art Institute Authorities Act, 2010 PA 296, MCL 123.1201 to 123.1229.

17. "Taxes levied for school operating purposes", per Section 2(ggg), means all of the following:
    i. The taxes levied by a local school district for operating purposes.
    ii. The taxes levied under the State Education Tax Act, 1993 PA 331, MCL 211.901 to 211.906.
    iii. That portion of specific taxes attributable to taxes described under subparagraphs (i) and (ii).

18. "Transformational brownfield plan", per Section 2(hhh), means a brownfield plan that meets the requirements of Section 13c and is adopted under Section 14a of the Brownfield Act and, as designated by resolution of the local municipality governing body and approved by the MSF, will have a transformational impact on local economic development and community revitalization based on the extent of brownfield redevelopment and growth in population, commercial activity, and employment that will result from the plan. To be designated a transformational brownfield plan, a transformational brownfield plan must be for mixed-use development unless waived by the MSF as provided under Section 14a(26) of the Brownfield Act and is expected to result in specific levels of capital investment as defined by the Brownfield Act.

19. "Work plan", per Section 2(mmm), means a plan that describes each individual activity to be conducted to complete eligible activities and the associated costs of each individual activity.

Addendum II
Work Plan or Combined Brownfield Plan Review Criteria: Programmatic Parameters

BROWNFIELD WORK PLAN OR COMBINED BROWNFIELD PLAN REVIEW
PROGRAMMATIC PARAMETERS

1. Threshold Submission Requirements:

i. Does the brownfield plan include the use of taxes levied for school operating purposes? If so, is the work plan or combined brownfield plan requesting reimbursement for housing development activities? Is at least some portion of the housing to be developed subsidized or to be sold or rented to households at or below 120% AMI? ___YES___NO

a. If no to any of these questions, STOP AND DENY:
MSHDA has no statutory authority to review the plan, and it must be returned to the submitting BRA.

ii. Was the plan submitted by the local BRA or duly authorized municipal designee? ___YES___NO

a. If no, STOP AND DENY:
A work plan submitted under Section 15(10), or a combined brownfield plan submitted under Section 15(20)(b), must be submitted to MSHDA by the local BRA.
b. Return to the submitting party.

iii. Is the work plan part of a transformational brownfield plan?

____YES___NO

a. If yes, pursuant to Section 15(11) the BRA must complete all required financial analyses prior to submitting a work plan to MSHDA.
Was the required financial analysis completed by the BRA? ___YES__NO

b. If no, STOP AND DENY.
c. Return to the submitting BRA.

iv. Did the BRA submit for each eligible property pursuant to Section 15(10) the following items?

a. A copy of the brownfield plan or the transformational brownfield plan.
___YES___NO

b. Current ownership information for each eligible property and a summary of available information on proposed future ownership, including the amount of any delinquent taxes, interest, and penalties that may be due. ___YES___NO

c. A summary of available information on the historical and current use of each eligible property. ___YES___NO

d. Existing and proposed future zoning for each eligible property. ___YES___NO

e. A summary of the proposed redevelopment and future use for each eligible property. ___YES___NO

f. A separate work plan, or part of a work plan, for each eligible activity described in Section 13b(4) to be undertaken. ___YES___NO

g. A copy of the development agreement or reimbursement agreement between the municipality or authority and an owner or developer of eligible property required under Section 13b(4), which must stipulate price and monitoring for residential units, and include a detailed summary of any and all ownership interests, monetary considerations, fees, revenue and cost sharing, charges, or other financial arrangements or other consideration between the parties. ___YES___NO

h. For work plans that include housing development activities, a summary of proposed income and price monitoring responsibilities and related expenses. ___YES___NO

1. If not all of the items listed in iv.(a)-(h) were included, which item(s) is/are missing?

   _____

2. If no, STOP AND DENY the work plan or combined brownfield plan for incompleteness. List missing items in the response letter to the submitting BRA.

v. Are the eligible activities in the combined brownfield plan or work plan submitted by the BRA consistent with the eligible activities described in Section 13b(4)? ___YES ___NO

a. If no, which eligible activities are inconsistent
   1.
   2.
   3.

b. If no, STOP AND DENY the work plan or combined brownfield plan for inconsistency.

2. Housing Work Plan and Combined Brownfield Plan Review Criteria:

i. Does the development agreement or reimbursement agreement between the municipality or BRA and an owner or developer of eligible property stipulate price and income monitoring for residential units? ___YES ___NO

a. If no, DENY the work plan or combined brownfield plan for lack of development agreement or reimbursement agreement that stipulates price and income monitoring for residential units and continue review of additional criteria.

ii. The following criteria will be considered to the extent reasonably applicable to the type of activities proposed as part of the submitted work plan or combined brownfield plan when approving or denying a work plan or combined brownfield plan:

a. Are the individual activities included in the work plan or combined brownfield plan sufficient to complete the proposed eligible housing development activity?

1. Rehabilitation and new construction projects must submit a copy of a purchase agreement and Development Cost Budget.

Was a copy of a purchase agreement provided and are all Development Cost Budget items listed within the work plan or combined brownfield plan? _YES_NO

b. If no, explain what is missing and what needs to be done to achieve completion of the proposed eligible housing development activity:

_____

_____

c. If no, add the items that are missing or that need to be done to the terms of a conditional approval.

iii. Is each individual activity included in the work plan or combined brownfield plan required to complete the eligible housing development activity? ___YES ___NO

a. In order for individual activities to be deemed to be required to complete the eligible housing development activity, they must be limited to those items detailed in the Development Cost Budget. All other activities will be deemed not required to complete the eligible housing development activity.

b. If no, explain what is not required to be done to complete the eligible housing development activity:

_____
_____

c. If no, add to the terms of a conditional approval a listing of the items to be removed as not required to complete the eligible housing development activity.

iv. Is the cost for the eligible housing development activity reasonable?

a. Utilize the Potential Rent Loss (PRL) Gap Cap & Total Housing Subsidy (THS) Calculations worksheet to determine reasonableness of gap funds needed to develop affordable housing versus market rate housing. A copy of the completed worksheet must be attached to this document.
___YES ___NO

Total Tax Increment Capture _____
Calculated Housing Gap Cap _____
Calculated Remaining Tax Capture _____

v. Is there an overall benefit to the public? ___YES ___NO

a. To be of a public benefit, the proposed housing development must meet one of the following:

1. Satisfies a housing need determined by a current local housing needs assessment (no more than 3 years old), which is provided to MSHDA.

2. Satisfies a housing need for the area as determined by a current housing market study.

3. Satisfies a housing need identified in the Michigan Statewide Housing Plan found on MSHDA's website.

4. Satisfies a housing need identified in a regional housing study.

b. If no, explain why the proposed housing development provides no overall benefit to the public.

_____

_____

c. If there is no overall benefit to the public, the project is denied as lacking public benefit.

vi. Is there reuse of vacant buildings and redevelopment of blighted property?
___YES ___NO

This item is only applicable to work plans or combined brownfield plans specifically identifying the redevelopment of "blighted" property as defined in PA 90. For all other work plans or combined brownfield plans, this item is not applicable.

a. If yes:

1. Is the vacant building being torn down or repurposed?

_____

2. If the property is blighted, under what definition found in Section 2(c) is the property considered blighted?

_____

_____

3. If blighted, is the acquisition cost to promote rehabilitation or adaptive reuse of the blighted or obsolete rental unit included in eligible activities? ___Yes ___No
Amount of acquisition cost_____.

b. Explain as applicable in the recommendation summary:

1. The proposed reuse of or demolition of vacant buildings_____

2. Method used to determine that the property is blighted. A letter from the local municipality is acceptable.

_____

3. Is acquisition cost of blighted or obsolete property included as an eligible activity? ___Yes ___No

If no, add as conditional requirement that the cost be added or that the developer provide written confirmation that it was not omitted in error.

4. Is the property properly zoned, or must it be rezoned?

   _____

   If it must be rezoned before the housing development can commence, add the requirement that the property must be properly zoned to the conditional approval.

vii. Are new jobs being created?

This item is not applicable to affordable or subsidized housing work plans or combined brownfield plans.

viii. Is the eligible housing development in an area of high unemployment?

This item is not applicable to affordable or subsidized housing work plans or combined brownfield plans.

ix. What is the level and extent of contamination alleviated by or in connection with the eligible activities?

a. A proposed housing development work plan most include an environmental review that meets MSHDA's Environmental Review Requirements found on MSHDA's website.

1. If the environmental review discloses that the proposed housing development site has environmental contamination, did EGLE provide clearance for residential development? __YES __NO

2. If not cleared as evidenced by documentation from EGLE for residential development, the work plan or combined brownfield plan will be conditionally approved subject to EGLE clearance of the site for residential development.

x. What is the level of private sector contribution, including but not limited to private placement loans and developer contributions?

This item is provided for documentation only and is not used as a

factor to determine approval or denial of the work plan or combined brownfield plan.

a. Add to the project summary the level of private sector contribution, including but not limited to private placement loans and developer contributions.

xi. Is the projected occupant of the new development moving from another location in this state and will the move create a brownfield?

This item is not applicable to affordable or subsidized housing work plans or combined brownfield plans.

xii. Is the developer, landowner, or corporate entity that is included in the work plan or combined brownfield plan financially and economically unsound as determined by a review of the following requirements?
___YES ___NO

1. Is in default or in material non-compliance with the LIHTC or any other MSHDA program; or
2. Has outstanding flags in HUD's national 2530 National Participation system; or
3. Has been debarred or suspended from any MSHDA, HUD, or Rural Housing programs; or
4. Has outstanding tax liens; or
5. Does not have liquid assets at least equal to 3% of the proposed project housing development eligible activity costs.

a. Deny if the developer, landowner, or corporate entity that is included in the work plan or combined brownfield plan is deemed financially and economically unsound based on the above criteria.

xiii. Are there other state and local incentives or subsidies available to the developer, landowner, or corporate entity for the housing development project that are included in the work plan or combined brownfield plan? ___YES ___NO

a. What are the sources, uses and amounts of the other state and local incentives or subsidies provided? _____
Provide in the project recommendation summary.

b. Are the other state and local incentives or subsidies firm commitments or contingent on some event? _____
Explain in the project recommendation summary.

c. Do the other state and local incentives or subsidies permit the housing development to serve lower income households, seniors, homeless, persons with disabilities or other at-risk populations as may be deemed locally necessary based on housing reports or market studies?

_____

Explain in the project recommendation summary.

d. If the other state and local incentives or subsidies are required for financial viability and are there are not firm commitments, the housing development work plan or combined brownfield plan will be conditionally approved until the firm commitments are provided. Otherwise note the various incentives and subsidies in the recommendation summary and mark for approval.

xiv. Does the proposed housing development align with the statewide housing plan? ___YES ___NO

a. If no, what are the stated reasons for deviation? Does the local municipality support the proposed housing development activity as may be evidenced by a PILOT resolution or providing other development incentives? How did the developer determine that this housing need existed (e.g. local market study, community development plans, local needs analysis)?

b. Deny if the work plan or combined brownfield plan is not aligned with the statewide housing plan and documented support for deviation from the statewide housing plan and/or community support for the proposed housing development is not provided.

c. Approve if the work plan or combined brownfield plan is aligned with the statewide housing plan or documented support for deviation from the statewide housing plan and/or community support for the proposed housing development is provided.

d. Explain how the project is aligned with the statewide housing plan or how the documentation provided supports a deviation from the statewide housing plan in the project recommendation summary.

xv. Does the entity or agency monitoring price and income have the capacity to provide such monitoring, evidenced by experience providing such monitoring services based on the following criteria? ___YES ___NO

a. How many years of experience does the monitoring entity or agency have in Michigan? _____

b. An entity with limited experience and capacity monitoring price and income is defined as:

    1. An organization that has less than three years of price and income monitoring experience in programs such as Section 8, LIHTC, or HOME; or

c. Explain in the project recommendation summary whether the entity or agency has limited, or sufficient monitoring experience based on the above criteria.

    1. If the entity or agency has limited experience, grant a conditional approval based on either: (a) changing the monitoring entity or agency to one with sufficient experience in monitoring price and income for affordable housing; or (b) partnering with a sufficiently experienced monitoring agency; or (c) receiving two hours or more of training with MSHDA staff on income monitoring processes and procedures.

    2. What is the duration of the price and income monitoring?
    _____

    For-sale housing is to be monitored for price and household income through the first sale. Rental properties are to be monitored for a period not less than the expiration of projected tax increment capture but may be longer depending on other programmatic requirements.

    3. If the proposed price and income monitoring duration does not meet the above, recommend a conditional approval to require changes to the duration of the price and income monitoring.

xvi. Does the proposed housing development project support housing at price points that align with the local workforce based on localized area income and community data provided? Explain in the recommendation summary how the housing development price points either align or do not align with the local workforce income and community data.
___YES ___NO

a. Deny if the housing development project does not support housing at price points that align with the local workforce based on information provided by the BRA to MSHDA.

b. Approve if the housing development project supports housing at price points that align with the local workforce based on information provided by the BRA to MSHDA.

xvii. Is the proposed housing development to be income restricted for a period not less than the period of tax capture by providing deed restrictions to ensure the development meets long-term local housing needs? ___YES ___NO

a. If yes, do the terms of the draft deed restrictions match the proposed AMI levels to be served at the proposed housing development?
___YES ___NO

1. If no to either, set as a conditional approval item that the developer agrees to deed restrict the property for affordable housing dedicated to serve AMI levels as detailed in the project proposal for a period not less than the proposed tax capture.

2. If yes to both, approve and note in the approval letter the deed restricted AMI level(s) and duration of deed restriction.

Schedule A
Potential Rent Loss (PRL) Gap Cap
&
Total Housing Subsidy (THS) Calculations

Potential Rent Loss (PRL) Gap Cap & Total Housing Subsidy (THS) Calculations

For Multi-Family Developments, MSHDA will undertake the following steps to calculate the Potential Rent Loss (PRL) Gap Cap and the Total Housing Subsidy (THS) for every application received. The PRL Gap Cap and the THS will be utilized to establish the reasonableness of certain housing activities for which tax capture is being planned.

Step 1: **Establish the Control Rent (CR) for the project.**

Utilizing the appropriate Fair Market Rent (FMR) for each county and for the appropriate rate for each bedroom size as published by the U.S. Department of Housing & Urban Development (HUD), the following calculation will be made:

(FMR/40) x 100 = Control Rent (CR)

Note: This formula corrects for HUD publishing FMR as 40% of area rents.

Step 2: **Determine the difference between the Control Rent (CR) and the targeted Project Rent (PR).**

Utilizing the Project Rent (PR) targeted by the development team for each project, the following calculation will be made:

Control Rent (CR) – Project Rent (PR) = Potential Rent Loss (PRL)

Note: There may be multiple PRLs calculated for each project due to the fact the rents vary by bedroom size and most projects have a mix of bedroom sizes.

Step 3: Determine the PRL Gap Cap.

Utilizing the number of total units in a project that will have the appropriate income targets and the number of years of TIF Capture requested, both of which will be submitted by the development team for each project, the following calculation will be made:

Potential Rent Loss (PRL) x 12 months x No. of Units x No. of Years = PRL Gap Cap

Note: There may be multiple PRL Gap Caps calculated for each project due to the fact the rents vary by bedroom size and most projects have a mix of bedroom sizes.

Step 4: Add all Potential Rent Loss (PRL) Gap Cap calculations to establish the Total Housing Subsidy (THS).

After calculating PRL Gap Cap for each bedroom type in the proposed development project, the following calculation will be made:

PRL Gap Cap 1-Bedroom + PRL Gap Cap 2-Bedroom + PRL Gap Cap 3-Bedroom

= Total Housing Subsidy (THS)

Step 5: Review of Total Housing Subsidy (THS) for reasonableness among all other activities allowed under Public Act 90 of 2023.

A. MSHDA will deduct the THS from the total Housing Tax Increment Financing (HTIF) request and will review for overall reasonableness.

Note: THS should not exceed the total HTIF request as this may indicate instability in the overall project pro forma. Conversely, an insignificant overall THS may indicate a project that is not targeting appropriate income levels. Reasonableness will be determined based on this review in conjunction with any narrative information that is submitted by the development team.

B. The utilization of the remainder of the HTIF request will also be reviewed for reasonableness under the guidance established under Public Act 90 of 2023.

For Single-Family For-Sale projects, MSHDA will undertake similar steps to calculate the Potential Development Loss (PDL) Gap Cap and the Total Housing Subsidy (THS) for every application received. The PDL Gap Cap and the THS will be utilized to establish the reasonableness of certain housing activities for which tax capture is being planned. Calculations assume an Area Median Income (AMI) at targeted for 1 person per bedroom for 1- and 2-bedrooms homes and 1.5 persons per bedroom for 3+ bedroom homes and assumes a 15% downpayment. Monthly housing payments including the costs of principal + interest, insurance, taxes, PMI at no more than 30% of the household gross annual income. The calculation uses the current market average interest rate and developer provided projected insurance, taxes, and PMI costs.

MULTI-FAMILY EXAMPLE
Potential Rent Loss (PRL) Gap Cap &
Total Housing Subsidy (THS) Calculations

A developer has received approval from the Oceana County Brownfield Redevelopment Authority (BRA) to utilize the tax capture allowed under Public Act 90 of 2023 for a 40-unit multi-family workforce housing project which contains 20 one-bedroom apartments with 60% AMI target rents and 20 two-bedroom apartments with 80% AMI target rents. The BRA has approved a $2,225,000 Housing TIF tax capture that is collected over 25 years.

Step 1: **Establish the Control Rent (CR) for the project.**

Monthly FMR for a one-bedroom apartment in Oceana County is $635 and for a two-bedroom apartment it is $836.

1 Bedroom Control Rent = (($635/40) x 100) = **$1,587.50**

2 Bedroom Control Rent = (($836/40) x 100) = **$2,090.00**

Step 2: Establish the Potential Rent Loss (PRL) for the project.

Project Rents are established for the development and are subtracted from the Control Rents

1 Bedroom PRL = ($1,587.50 – $852.00) = **$735.50**

2 Bedroom PRL = ($2,090.00 – $1,364.00) = **$726.00**

Step 3: Determine the PRL Gap Cap.

PRLs are multiplied be the number of units and the number of years of approved TIF Tax capture.

1 Bedroom PRL GAP CAP = ($735.50 x 12 x 20 x 25) = **$4,413,000.00**

2 Bedroom PRL GAP CAP = ($726.00 x 12 x 20 x 25) = **$4,356,000.00**

Step 4: Add all Potential Rent Loss (PRL) Gap Cap calculations to establish the Total Housing Subsidy.

All bedroom PRL GAP CAP amounts are totaled to determine the Total Housing Subsidy (THS).

THS = ($4,413,000.00 + $4,356,000.00) = **$8,769,000.00**

<u>Step 5</u>: Review of Total Housing Subsidy (THS) for reasonableness among all other activities allowed under Public Act 90 of 2023.

The Oceana County BRA approved a Housing TIF Capture of $2,225,000.00 and this amount will be reviewed for reasonable and appropriate expenditures including the THS under the guidance established under Public Act 90 of 2023.

($2,225,000.00 - $8,769,000.00) = **$<u>(6,544,000.00)</u>**

In this example, the HTIF Capture is significantly less than the THS. This large difference is a function of the AMI used for single family for sale housing example. Single family for sale housing is believed to typically not be sold to households much lower than 100% AMI. Lower skewing may require downpayment assistance or other stabilizing measures.

AN ILLUSTRATION IS ATTACHED.

Housing TIF Financing Gap Cap Calculation - Multifamily Rental

Oceana County WFH Project: 40 Total Units/Leases (20 1-Bedroom @ 60% AMI / 20 2-Bedroom @80% AMI)

FORMULA	Location	Type	FMR/MR Rent	Control Rent	-	Proj. Rent	=	PRL	x	No. of Units	x	No. of Months	x	No. of Years	=	PRL GAP CAP	Per Unit
FMR	Oceana Co.	1 Bedroom	$ 635.00	$ 1,587.50	-	$ 852.00	=	$ 735.50		20		12		25		$ 4,413,000.00	$ 220,650.00
FMR	Oceana Co.	2 Bedroom	$ 836.00	$ 2,090.00	-	$ 1,364.00	=	$ 726.00		20		12		25		$ 4,356,000.00	$ 217,800.00
								TOTAL Housing Subsidy		40						$ 8,769,000.00	$ 219,225.00
								Approved BRA TIF Request		40						$ 2,225,000.00	$ 55,625.00
																$ (6,544,000.00)	$ (163,600.00)

Other Housing Activities Allowed Under Public Act 90 of 2023:

Developer may utilize the remainder (if any) of the TIF capture for the following HOUSING RELATED items:

1. Site Preparation/Demolition
2. Infrastructure Development
3. Relocations Expenses
4. Plus Other Housing TIF Related Expenses

SINGLE-FAMILY EXAMPLE
Potential Development Loss (PDL) Gap Cap & Total Housing Subsidy (THS) Calculations

A developer has received approval from the Lake County Brownfield Redevelopment Authority (BRA) to utilize the tax capture allowed under Public Act 90 of 2023 for a 10-unit single-family "for sale" workforce housing project which contains 10 three-bedroom homes with two (2) 100% AMI target prices and eight (8) three-bedroom homes with 120% AMI target prices. The developer reports that the cost to build all ten houses is $300 per square foot with each house being 1300 square feet in total. The BRA has approved a $1,450,000 Housing TIF tax capture that is collected over 28 years.

Step 1: **Establish the Affordable Mortgage for the project.**

Establishment of the affordable mortgage in Lake County is based on the three-bedroom Area Median Income (AMI) at targeted incomes for a family of four and assumes a 15% downpayment. This includes the costs of principal + interest, insurance, taxes, PMI. The calculation uses a 7.53% interest rate (current market average). These mortgages provide a monthly payment that below 30% of household income.

3 Bedroom House @ 100 AMI = **$249,000.00**

3 Bedroom House @ 120 AMI = **$293,500.00**

Step 2: Establish the Potential Development Loss (PDL) for the project.

The Affordable Mortgage is subtracted from the actual Development Cost which is collected from information provided by the applicant/developer.

3 Bedroom House @ 100 AMI = $390,000.00 - $249,000.00 = **$141,000.00**

3 Bedroom House @ 120 AMI = $390,000.00 - $293,500.00 = **$96,500.00**

Step 3: Determine the PRL Gap Cap.

PDLs are multiplied be the number of units.

3 Bedroom House @ 100 AMI = $141,000.00 x [2 = **$282,000.00]**

3 Bedroom House @ 120 AMI = $96,500.00 x [8 = **$772,000.00]**

Step 4: Add all Potential Development Loss (PDL) Gap Cap calculations to establish the Total Housing Subsidy.

All target income PDL GAP CAP amounts are totaled to determine the Total Housing Subsidy (THS).

THS = ($282,000.00 + $772,000.00) = **$1,054,000.00**

<u>Step 5</u>: Review of Total Housing Subsidy (THS) for reasonableness among all other activities allowed under Public Act 90 of 2023.

The Lake County BRA approved a Housing TIF Capture of $1,450,000.00 and this amount will be reviewed for reasonable and appropriate expenditures including the THS under the guidance established under Public Act 90 of 2023.

($1,450,000.00 - $1,054,000.00) = **$<u>396,000.00</u>**

In this example, the HTIF Capture exceeds the THS. The utilization of the remainder of the HTIF request will also be reviewed for reasonableness under the guidance established under Public Act 90 of 2023. Reasonableness will be determined based on this review in conjunction with any narrative information that is submitted by the development team.

AN ILLUSTRATION IS ATTACHED.

Housing TIF Financing Gap Cap Calculation - For Sale Homeownership

Rural For-Sale Project: 10 Single-Family Homes (For-Sale Home Ownership Units with 2 @ 100% AMI & 8 @120% AMI)

FORMULA	Location	Type	Affordable Mortgage*	Development Cost**	-	Affordable Mortgage	=	PDL	x	No. of Units	x	PDL GAP CAP
Income	Lake Co.	For Sale (100%)	$ 249,000.00	$ 390,000.00	-	$ 249,000.00	=	$ 141,000.00		2		$ 282,000.00
Income	Lake Co.	For Sale (120%)	$ 293,500.00	$ 390,000.00	-	$ 293,500.00	=	$ 96,500.00		8		$ 772,000.00
								TOTAL Housing Subsidy		10		$ 1,054,000.00
								Other Housing Activities Allowed Under Public Act 90 of 2023:				$ 396,000.00
								Approved BRA TIF Request		10		$ 1,450,000.00

PDL = Potential Development Loss

Affordable Mortgage =
* Mortgage Limit assumes a 15% down payment plus all other normal monthly fees associated with home ownership for a family of four.

Development Cost =
** $300 per sq. ft. building costs (for a 3 bedroom home) - information provided through application. This includes 10% developer fee/profit.

Developer may utilize the remainder of the TIF capture for the following HOUSING RELATED items:

1. Site Preparation/Demolition
2. Infrastructure Development
3. Relocations Expenses
4. Plus Other Housing TIF Related Expenses

ADOPTED

MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY RESOLUTION

AUTHORIZING HOUSING TAX INCREMENT FINANCING PROGRAM

September 29, 2023

WHEREAS, pursuant to Section 13b(4)(b) of the Brownfield Redevelopment Authority Act, Act 381, Public Acts of Michigan, 1996, as amended (the "Act"), if a brownfield work plan or combined brownfield plan involves the use of taxes levied for school operating purposes and is requesting reimbursement for housing development activities, the work plan or combined brownfield plan must be approved by the Michigan State Housing Development Authority (the "Authority"), unless all the housing property identified within the plan will be sold or rented at market rate and will not be subsidized; and

WHEREAS the Act imposes duties and responsibilities on the Authority including the review of work plans and combined brownfield plans; and

WHEREAS, to enable the Authority to carry out the duties and responsibilities assigned to it under the Act, the Executive Director has recommended that the Authority (a) authorize the establishment and implementation of a housing tax increment financing program (the "Housing Tax Increment Financing Program") pursuant to the Act and (b) pursuant to State Housing Development Authority Act of 1966, Act 346 of 1966, Section 125.1421(6), delegate to selected Authorized Officers the authority to approve work plans or combined brownfield plans based on program parameters contained in the attached program statement (the "Program Statement"), and to perform any and all actions necessary to carry out the responsibilities and obligations of the Authority under the Act; and

WHEREAS, the Authority concurs in the recommendation of the Executive Director.

NOW, THEREFORE, Be It Resolved by the Michigan State Housing Development Authority as follows:

1. The Housing Tax Increment Financing Program as described in the accompanying memorandum and Program Statement of even date is hereby authorized and approved.

2. The Executive Director, the Chief Housing Investment Officer, the Director of Legal Affairs, or anyone acting in those capacities respectively (each an "Authorized Officer"), are each granted the authority to approve work plans or combined brownfield plans and perform any and all actions necessary to carry out the responsibilities and obligations of the Authority as described in the accompanying memorandum and Program Statement attached hereto and as set forth in the Act.

3. All work plans and/or combined brownfield plans that request a waiver from the Program Statement Addendum II Brownfield Work Plan or Combined Brownfield Plan Review Programmatic Parameters must be brought before the Authority for consideration.

4. All work plans and combined brownfield plans approved by an Authorized Officer shall be quarterly reported to the Authority.