Brownfield Cleanup Program Application

980 Ellicott Street Site
Buffalo, New York

March 2017 0378-016-002

Prepared For:

780 Ellicott Street, LLC

Prepared By:

2558 Hamburg Turnpike, Suite 300, Buffalo, New York 14218 | phone: (716) 856-0599 | fax: (716) 856-0583

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

BROWNFIELD CLEANUP PROGRAM (BCP) APPLICATION FORM

DEC requires an application to request major changes to the description of the property set forth in a Brownfield Cleanup Agreement, or "*BCA*" (e.g., adding a significant amount of new property, or adding property that could affect an eligibility determination due to contamination levels or intended land use). Such application must be submitted and processed in the same manner as the original application, including the required public comment period. **Is this an application to amend an existing BCA?**

☐ **Yes** ☑ **No** **If yes, provide existing site number:** _____

PART A (note: application is separated into Parts A and B for DEC review purposes) ***BCP App Rev 7***

Section I. Requestor Information - See Instructions for Further Guidance

DEC USE ONLY
BCP SITE #: _____

NAME 780 Ellicott Street, LLC

ADDRESS 333 Ganson Street

CITY/TOWN Buffalo ZIP CODE 14203

PHONE (716) 856-3333 | FAX NA | E-MAIL jmwilliams@oscinc.com

Is the requestor authorized to conduct business in New York State (NYS)? ☑ Yes ☐ No

- If the requestor is a Corporation, LLC, LLP or other entity requiring authorization from the NYS Department of State to conduct business in NYS, the requestor's name must appear, exactly as given above, in the NYS Department of State's Corporation & Business Entity Database. A print-out of entity information from the database must be submitted to the New York State Department of Environmental Conservation (DEC) with the application, to document that the requestor is authorized to do business in NYS.

See Attachment 1

Do all individuals that will be certifying documents meet the requirements detailed below? ☑ Yes ☐ No

- Individuals that will be certifying BCP documents, as well as their employers, meet the requirements of Section 1.5 of *DER-10: Technical Guidance for Site Investigation and Remediation* and Article 145 of New York State Education Law. **Documents that are not properly certified will be not approved under the BCP**.

Section II. Project Description

See Attachment 2

1. What stage is the project starting at? ☑ Investigation ☐ Remediation

2. If the project is starting at the remediation stage, a Remedial Investigation Report (RIR), Alternatives Analysis, and Remedial Work Plan must be attached (see *DER-10 / Technical Guidance for Site Investigation and Remediation* for further guidance).

3. If a final RIR is included, please verify it meets the requirements of Environmental Conservation Law (ECL) Article 27-1415(2): ☐ Yes ☐ No

4. Please attach a short description of the overall development project, including:

- the date that the remedial program is to start; and
- the date the Certificate of Completion is anticipated.

Section III. Property's Environmental History

All applications **must include** an Investigation Report (per ECL 27-1407(1)). The report must be sufficient to establish contamination of environmental media on the site above applicable Standards, Criteria and Guidance (SCGs) based on the reasonably anticipated use of the property.

To the extent that existing information/studies/reports are available to the requestor, please attach the following (**please submit the information requested in this section in electronic format only**):

1. **Reports:** an example of an Investigation Report is a Phase II Environmental Site Assessment report prepared in accordance with the latest American Society for Testing and Materials standard (ASTM E1903).

See Attachment 3

2. SAMPLING DATA: INDICATE KNOWN CONTAMINANTS AND THE MEDIA WHICH ARE KNOWN TO HAVE BEEN AFFECTED. LABORATORY REPORTS SHOULD BE REFERENCED AND COPIES INCLUDED.

Contaminant Category	Soil	Groundwater	Soil Gas
Petroleum	X	X	
Chlorinated Solvents			
Other VOCs			X
SVOCs	X	X	
Metals	X	X	
Pesticides			
PCBs			
Other*			

***Please describe:** _____

3. FOR EACH IMPACTED MEDIUM INDICATED ABOVE, INCLUDE A SITE DRAWING INDICATING:

- **SAMPLE LOCATION**
- **DATE OF SAMPLING EVENT**
- **KEY CONTAMINANTS AND CONCENTRATION DETECTED**
- **FOR SOIL, HIGHLIGHT IF ABOVE REASONABLY ANTICIPATED USE**
- **FOR GROUNDWATER, HIGHLIGHT EXCEEDANCES OF 6NYCRR PART 703.5**
- **FOR SOIL GAS/ SOIL VAPOR/ INDOOR AIR, HIGHLIGHT IF ABOVE MITIGATE LEVELS ON THE NEW YORK STATE DEPARTMENT OF HEALTH MATRIX**

THESE DRAWINGS ARE TO BE REPRESENTATIVE OF ALL DATA BEING RELIED UPON TO MAKE THE CASE THAT THE SITE IS IN NEED OF REMEDIATION UNDER THE BCP. DRAWINGS SHOULD NOT BE BIGGER THAN 11" X 17". THESE DRAWINGS SHOULD BE PREPARED IN ACCORDANCE WITH ANY GUIDANCE PROVIDED.

ARE THE REQUIRED MAPS INCLUDED WITH THE APPLICATION?* ☑ **Yes** ☐ **No**
(*answering No will result in an incomplete application)

See Figures 5A & 5B

4. INDICATE PAST LAND USES (CHECK ALL THAT APPLY):

☐ Coal Gas Manufacturing	☑ Manufacturing	☐ Agricultural Co-op	☐ Dry Cleaner
☐ Salvage Yard	☐ Bulk Plant	☐ Pipeline	☑ Service Station
☐ Landfill	☐ Tannery	☐ Electroplating	☐ Unknown

Other: wood preserving, auto repair, and coal storage

Section IV. Property Information - See Instructions for Further Guidance

PROPOSED SITE NAME 980 Ellicott Street Site

ADDRESS/LOCATION 980 Ellicott Street

CITY/TOWN Buffalo ZIP CODE 14209

MUNICIPALITY(IF MORE THAN ONE, LIST ALL): City of Buffalo

COUNTY Erie SITE SIZE (ACRES) 1.35

LATITUDE (degrees/minutes/seconds)						LONGITUDE (degrees/minutes/seconds)					
42	°	54	‘	17.39	“	78	°	51	‘	59.55	“

COMPLETE TAX MAP INFORMATION FOR ALL TAX PARCELS INCLUDED WITHIN THE PROPERTY BOUNDARIES. ATTACH REQUIRED MAPS PER THE APPLICATION INSTRUCTIONS. See Figure 7

Parcel Address	Section No.	Block No.	Lot No.	Acreage
980 Ellicott Street	100.63	3	37	1.35

1. Do the proposed site boundaries correspond to tax map metes and bounds? ☑ Yes ☐ No
   If no, please attach a metes and bounds description of the property.

2. Is the required property map attached to the application? See Figures 6, 7, & 8 ☑ Yes ☐ No
   (application will not be processed without map)

3. Is the property within a designated Environmental Zone (En-zone) pursuant to Tax Law 21(b)(6)?
   (See DEC's website for more information) Yes ☑ No ☐

   See Figure 9 If yes, identify census tract : 168

   Percentage of property in En-zone (check one): ☐ 0-49% ☐ 50-99% ☑ 100%

4. Is this application one of multiple applications for a large development project, where the development project spans more than 25 acres (see additional criteria in BCP application instructions)? ☐ Yes ☑ No

   If yes, identify name of properties (and site numbers if available) in related BCP applications:_____

5. Is the contamination from groundwater or soil vapor solely emanating from property other than the site subject to the present application? ☐ Yes ☑ No

6. Has the property previously been remediated pursuant to Titles 9, 13, or 14 of ECL Article 27, Title 5 of ECL Article 56, or Article 12 of Navigation Law? ☑ Yes ☐ No
   If yes, attach relevant supporting documentation. See Attachment 4

7. Are there any lands under water? ☐ Yes ☑ No
   If yes, these lands should be clearly delineated on the site map.

Section IV. Property Information (continued)

8. Are there any easements or existing rights of way that would preclude remediation in these areas? If yes, identify here and attach appropriate information. ☐ Yes ☑ No

Easement/Right-of-way Holder	Description

9. List of Permits issued by the DEC or USEPA Relating to the Proposed Site (type here or attach information)

Type	Issuing Agency	Description

10. Property Description and Environmental Assessment – **please refer to application instructions for the proper format of each narrative requested.** See Attachment 4
Are the Property Description and Environmental Assessment narratives included in the **prescribed format**? ☑ Yes ☐ No

11. For sites located within the five counties comprising New York City, is the requestor seeking a determination that the site is eligible for tangible property tax credits? If yes, requestor must answer questions on the supplement at the end of this form. ☐ Yes ☐ No

12. Is the Requestor now, or will the Requestor in the future, seek a determination that the property is Upside Down? ☐ Yes ☐ No

13. If you have answered *Yes* to Question 12, above, is an independent appraisal of the value of the property, as of the date of application, prepared under the hypothetical condition that the property is not contaminated, included with the application? ☐ Yes ☐ No

NOTE: If a tangible property tax credit determination is not being requested in the application to participate in the BCP, the applicant may seek this determination at any time before issuance of a certificate of completion by using the BCP Amendment Application, except for sites seeking eligibility under the underutilized category.

If any changes to Section IV are required prior to application approval, a new page, initialed by each requestor, must be submitted.

Initials of each Requestor: _____ _____ _____ _____ _____ _____

BCP application - PART B (note: application is separated into Parts A and B for DEC review purposes)

Section V. Additional Requestor Information See Instructions for Further Guidance	DEC USE ONLY BCP SITE NAME: _____ BCP SITE #:_____	
NAME OF REQUESTOR'S AUTHORIZED REPRESENTATIVE Jon Williams		
ADDRESS 333 Ganson Street		
CITY/TOWN Buffalo		ZIP CODE 14203
PHONE (716) 856-3333	FAX NA	E-MAIL jmwilliams@oscinc.com
NAME OF REQUESTOR'S CONSULTANT Benchmark Env. Eng. & Science, PLLC		
ADDRESS 2558 Hamburg Turnpike, Suite 300		
CITY/TOWN Buffalo		ZIP CODE 14218
PHONE (716) 856-0599	FAX (716) 856-0583	E-MAIL bhann@benchmarkturnkey.com
NAME OF REQUESTOR'S ATTORNEY David Flynn (Phillips Lytle, LLP)		
ADDRESS 125 Main Street		
CITY/TOWN Buffalo		ZIP CODE 14203
PHONE (716) 847-5473	FAX (716) 852-6100	E-MAIL dflynn@phillipslytle.com

Section VI. Current Property Owner/Operator Information – if not a Requestor		
CURRENT OWNER'S NAME 780 Ellicott Street, LLC		OWNERSHIP START DATE: 11/11/2016
ADDRESS 333 Ganson Street		
CITY/TOWN Buffalo		ZIP CODE 14203
PHONE (716) 856-3333	FAX NA	E-MAIL jmwilliams@oscinc.com
CURRENT OPERATOR'S NAME Site is Vacant (same as above)		
ADDRESS		
CITY/TOWN		ZIP CODE
PHONE	FAX	E-MAIL

IF REQUESTOR IS NOT THE CURRENT OWNER, DESCRIBE REQUESTOR'S RELATIONSHIP TO THE CURRENT OWNER, INCLUDING ANY RELATIONSHIP BETWEEN REQUESTOR'S CORPORATE MEMBERS AND THE CURRENT OWNER.
See Attachment 5
PROVIDE A LIST OF PREVIOUS PROPERTY OWNERS AND OPERATORS WITH NAMES, LAST KNOWN ADDRESSES AND TELEPHONE NUMBERS AS AN ATTACHMENT. DESCRIBE REQUESTOR'S RELATIONSHIP, TO EACH PREVIOUS OWNER AND OPERATOR, INCLUDING ANY RELATIONSHIP BETWEEN REQUESTOR'S CORPORATE MEMBERS AND PREVIOUS OWNER AND OPERATOR. IF NO RELATIONSHIP, PUT "NONE".

Section VII. Requestor Eligibility Information (Please refer to ECL § 27-1407)

If answering "yes" to any of the following questions, please provide an explanation as an attachment.

1. Are any enforcement actions pending against the requestor regarding this site? ☐ Yes ☑ No
2. Is the requestor subject to an existing order for the investigation, removal or remediation of contamination at the site? ☐ Yes ☑ No
3. Is the requestor subject to an outstanding claim by the Spill Fund for this site? Any questions regarding whether a party is subject to a spill claim should be discussed with the Spill Fund Administrator. ☐ Yes ☑ No

Section VII. Requestor Eligibility Information (continued)

4. Has the requestor been determined in an administrative, civil or criminal proceeding to be in violation of i) any provision of the ECL Article 27; ii) any order or determination; iii) any regulation implementing Title 14; or iv) any similar statute, regulation of the state or federal government? If so, provide an explanation on a separate attachment. ☐ Yes ☑ No
5. Has the requestor previously been denied entry to the BCP? If so, include information relative to the application, such as name, address, DEC assigned site number, the reason for denial, and other relevant information. ☐ Yes ☑ No
6. Has the requestor been found in a civil proceeding to have committed a negligent or intentionally tortious act involving the handling, storing, treating, disposing or transporting of contaminants? ☐ Yes ☑ No
7. Has the requestor been convicted of a criminal offense i) involving the handling, storing, treating, disposing or transporting of contaminants; or ii) that involves a violent felony, fraud, bribery, perjury, theft, or offense against public administration (as that term is used in Article 195 of the Penal Law) under federal law or the laws of any state? ☐ Yes ☑ No
8. Has the requestor knowingly falsified statements or concealed material facts in any matter within the jurisdiction of DEC, or submitted a false statement or made use of or made a false statement in connection with any document or application submitted to DEC? ☐ Yes ☑ No
9. Is the requestor an individual or entity of the type set forth in ECL 27-1407.9 (f) that committed an act or failed to act, and such act or failure to act could be the basis for denial of a BCP application? ☐ Yes ☑ No
10. Was the requestor's participation in any remedial program under DEC's oversight terminated by DEC or by a court for failure to substantially comply with an agreement or order? ☐ Yes ☑ No
11. Are there any unregistered bulk storage tanks on-site which require registration? ☐ Yes ☑ No

THE REQUESTOR MUST CERTIFY THAT HE/SHE IS EITHER A PARTICIPANT OR VOLUNTEER IN ACCORDANCE WITH ECL 27-1405 (1) BY CHECKING ONE OF THE BOXES BELOW:

☐ PARTICIPANT

A requestor who either 1) was the owner of the site at the time of the disposal of hazardous waste or discharge of petroleum or 2) is otherwise a person responsible for the contamination, unless the liability arises solely as a result of ownership, operation of, or involvement with the site subsequent to the disposal of hazardous waste or discharge of petroleum.

☑ VOLUNTEER

A requestor other than a participant, including a requestor whose liability arises solely as a result of ownership, operation of or involvement with the site subsequent to the disposal of hazardous waste or discharge of petroleum.

NOTE: By checking this box, a requestor whose liability arises solely as a result of ownership, operation of or involvement with the site certifies that he/she has exercised appropriate care with respect to the hazardous waste found at the facility by taking reasonable steps to: i) stop any continuing discharge; ii) prevent any threatened future release; iii) prevent or limit human, environmental, or natural resource exposure to any previously released hazardous waste.

If a requestor whose liability arises solely as a result of ownership, operation of or involvement with the site, submit a statement describing why you should be considered a volunteer – be specific as to the appropriate care taken.

See Attachment 6

Section VII. Requestor Eligibility Information (continued)

Requestor Relationship to Property (check one):
☐ Previous Owner ☑ Current Owner ☐ Potential /Future Purchaser ☐ Other_____

If requestor is not the current site owner, **proof of site access sufficient to complete the remediation must be submitted**. Proof must show that the requestor will have access to the property before signing the BCA and throughout the BCP project, including the ability to place an easement on the site Is this proof attached?

☐ Yes ☐ No

Note: a purchase contract does not suffice as proof of access.

Section VIII. Property Eligibility Information - See Instructions for Further Guidance

See Attachment 6

1. Is / was the property, or any portion of the property, listed on the National Priorities List?
   If yes, please provide relevant information as an attachment. ☐ Yes ☑ No
2. Is / was the property, or any portion of the property, listed on the NYS Registry of Inactive Hazardous Waste Disposal Sites pursuant to ECL 27-1305? ☑ Yes ☐ No
   If yes, please provide: Site # 915143 Class # 4
3. Is / was the property subject to a permit under ECL Article 27, Title 9, other than an Interim Status facility? ☐ Yes ☑ No
   If yes, please provide: Permit type:_____ EPA ID Number:_____
   Date permit issued:_____ Permit expiration date:_____
4. If the answer to question 2 or 3 above is yes, is the site owned by a volunteer as defined under ECL 27-1405(1)(b), or under contract to be transferred to a volunteer? Attach any information available to the requestor related to previous owners or operators of the facility or property and their financial viability, including any bankruptcy filing and corporate dissolution documentation. ☑ Yes ☐ No
5. Is the property subject to a cleanup order under Navigation Law Article 12 or ECL Article 17 Title 10?
   If yes, please provide: Order #_____ ☐ Yes ☑ No
6. Is the property subject to a state or federal enforcement action related to hazardous waste or petroleum?
   If yes, please provide explanation as an attachment. ☐ Yes ☑ No

Section IX. Contact List Information

See Attachment 7

To be considered complete, the application must include the Brownfield Site Contact List in accordance with *DER-23 / Citizen Participation Handbook for Remedial Programs*. Please attach, at a minimum, the names and addresses of the following:

1. The chief executive officer and planning board chairperson of each county, city, town and village in which the property is located.
2. Residents, owners, and occupants of the property and properties adjacent to the property.
3. Local news media from which the community typically obtains information.
4. The public water supplier which services the area in which the property is located.
5. Any person who has requested to be placed on the contact list.
6. The administrator of any school or day care facility located on or near the property.
7. The location of a document repository for the project (e.g., local library). In addition, attach a copy of an acknowledgement from the repository indicating that it agrees to act as the document repository for the property.
8. Any community board located in a city with a population of one million or more, if the proposed site is located within such community board's boundaries.

Section X. Land Use Factors

See Attachment 8

1. What is the current zoning for the site? What uses are allowed by the current zoning?
   ☐ Residential ☑ Commercial ☐ Industrial
   If zoning change is imminent, please provide documentation from the appropriate zoning authority.

2. Current Use: ☐ Residential ☐ Commercial ☐ Industrial ☑ Vacant ☐ Recreational (check all that apply)
   Attach a summary of current business operations or uses, with an emphasis on identifying possible contaminant source areas. If operations or uses have ceased, provide the date.

3. Reasonably anticipated use Post Remediation: ☐ Residential ☑ Commercial ☐ Industrial (check all that apply) **Attach a statement detailing the specific proposed use.**

   If residential, does it qualify as single family housing? ☐ Yes ☐ No

4. Do current historical and/or recent development patterns support the proposed use? ☑ Yes ☐ No

5. Is the proposed use consistent with applicable zoning laws/maps? Briefly explain below, or attach additional information and documentation if necessary. ☑ Yes ☐ No

   See Attachment 8

6. Is the proposed use consistent with applicable comprehensive community master plans, local waterfront revitalization plans, or other adopted land use plans? Briefly explain below, or attach additional information and documentation if necessary. ☑ Yes ☐ No

   See Attachment 8

XI. Statement of Certification and Signatures

(By requestor who is an individual)

If this application is approved, I acknowledge and agree to execute a Brownfield Cleanup Agreement (BCA) within 60 days of the date of DEC's approval letter. I hereby affirm that information provided on this form and its attachments is true and complete to the best of my knowledge and belief. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to section 210.45 of the Penal Law.

Date: _____ Signature: _____

Print Name: _____

(By a requestor other than an individual)

I hereby affirm that I am Managing Partner (title) of 780 Ellicott Street, LLC (entity); that I am authorized by that entity to make this application and execute the Brownfield Cleanup Agreement (BCA) and all subsequent amendments; that this application was prepared by me or under my supervision and direction. If this application is approved, I acknowledge and agree to execute a BCA within 60 days of the date of DEC's approval letter. I hereby affirm that information provided on this form and its attachments is true and complete to the best of my knowledge and belief. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Date: 4/3/2017 Signature: _____

Print Name: Jon M. Williams

SUBMITTAL INFORMATION:

- **Two (2)** copies, one paper copy with original signatures and one electronic copy in Portable Document Format (PDF), must be sent to:
    - Chief, Site Control Section
    - New York State Department of Environmental Conservation
    - Division of Environmental Remediation
    - 625 Broadway
    - Albany, NY 12233-7020

FOR DEC USE ONLY
BCP SITE T&A CODE: _____ **LEAD OFFICE:** _____

BCP Application Summary (for DEC use only)

Site Name: 980 Ellicott Street Site **Site Address:** 980 Ellicott Street
City: Buffalo **County:** Erie **Zip:** 14209

Tax Block & Lot
Section (if applicable): 100.63 **Block:** 3 **Lot:** 37

Requestor Name: 780 Ellicott Street, LLC **Requestor Address:** 333 Ganson Street
City: Buffalo **Zip:** 14203 **Email:** jmwilliams@oscinc.com

Requestor's Representative (for billing purposes)
Name: 780 Ellicott Street, LLC **Address:** 333 Ganson Street
City: Buffalo **Zip:** 14203 **Email:** jmwilliams@oscinc.com

Requestor's Attorney
Name: David Flynn (Phillips Lytle, LLP) **Address:** 125 Main Street
City: Buffalo **Zip:** 14203 **Email:** dflynn@phillipslytle.com

Requestor's Consultant
Name: Benchmark Env. Eng. & Science, PLLC **Address:** 2558 Hamburg Turnpike, Suite 300
City: Buffalo **Zip:** 14218 **Email:** bhann@benchmarkturnkey.com

Percentage of site within an En-Zone: ☐ **0%** ☐ **<50%** ☐ **50-99%** ☑ **100%**

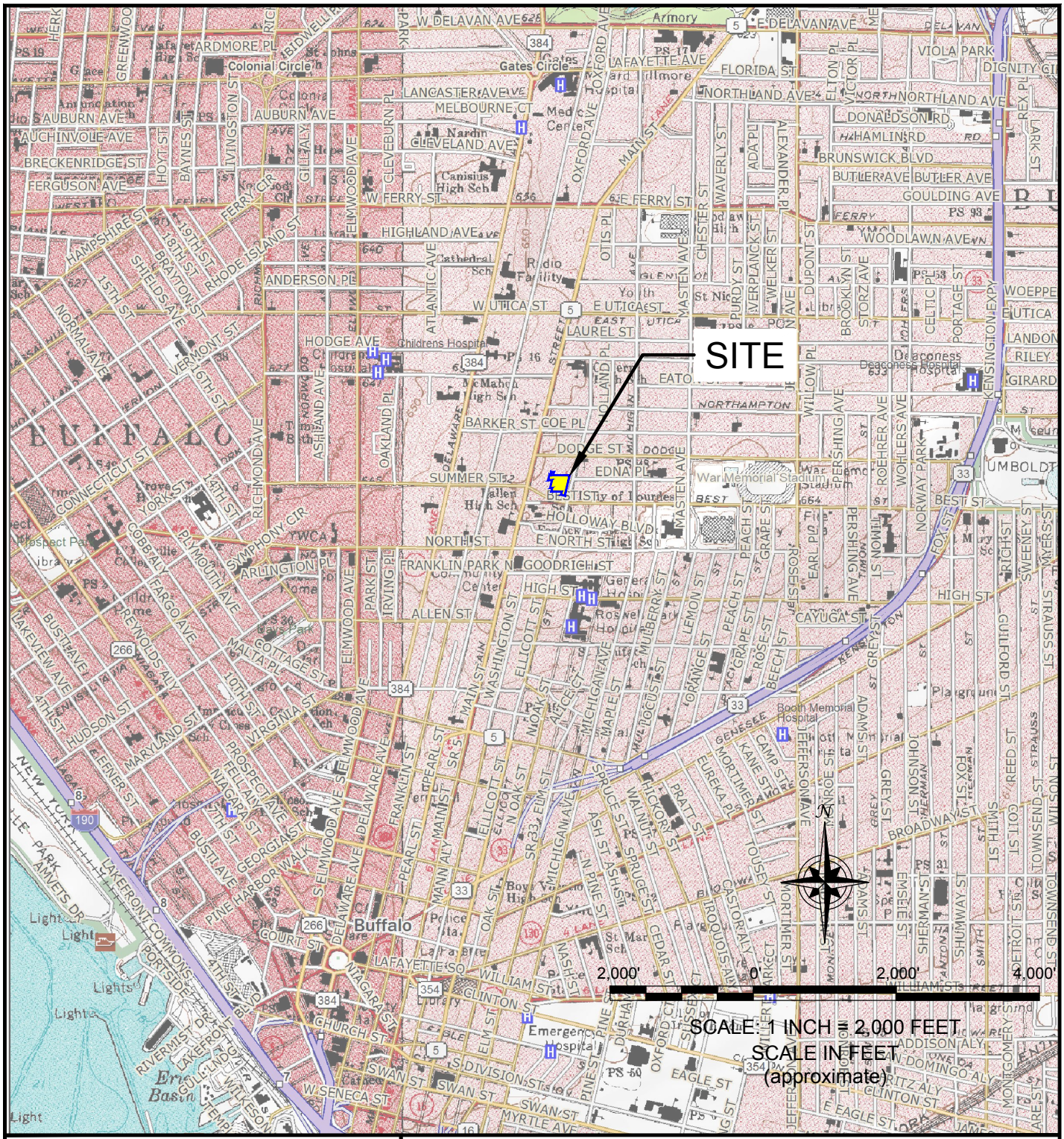
Requestor's Requested Status: ☑ **Volunteer** ☐ **Participant**

FIGURES

Figure	Description	Attachment Reference
Figure 1	Site Location and Vicinity Map	2, 4, 7
Figure 2	Site Plan	2, 3, 4, 7
Figure 3A	Proposed BCP Site	2, 3
Figure 3B	Investigation Locations	2, 3
Figure 3C	Remediation System Layout	2, 3
Figure 4	Preliminary Project Schedule	2
Figure 5A	Exceedances of CSCOs in Soil	3
Figure 5B	Exceedances of GWQSs in GW	3
Figure 6	Parcel Map or Report	4
Figure 7	Tax Map	4
Figure 8	Property Base Map (1,000' Setback)	4
Figure 9	En-Zone Map	4
Figure 10	Nearby Land-Use Map	4
Figure 11	Current Zoning Map	4
Figure 12	Adjacent Property Owners	4
Figure 13	Surficial Geology Map	4
Figure 14	USDA Soil Type Map	4
Figure 15	Bedrock Geology Map	4
Figure 16	Potential Environmental Justice Areas	8
Figure 17	Cultural Resources	8
Figure 18	Natural Resources Map	8
Figure 19	Wetland and Floodplain Map	8

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 1; Site Location & Vicinity Map.dwg

FIGURE 1



BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0378-016-002

DATE: FEBRUARY 2017

DRAFTED BY: CCB

SITE LOCATION & VICINITY MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

980 ELLICOTT STREET SITE
BUFFALO, NEW YORK

PREPARED FOR

780 ELLICOTT STREET, LLC

DATE: JANUARY 2017
DRAFTED BY: CCB

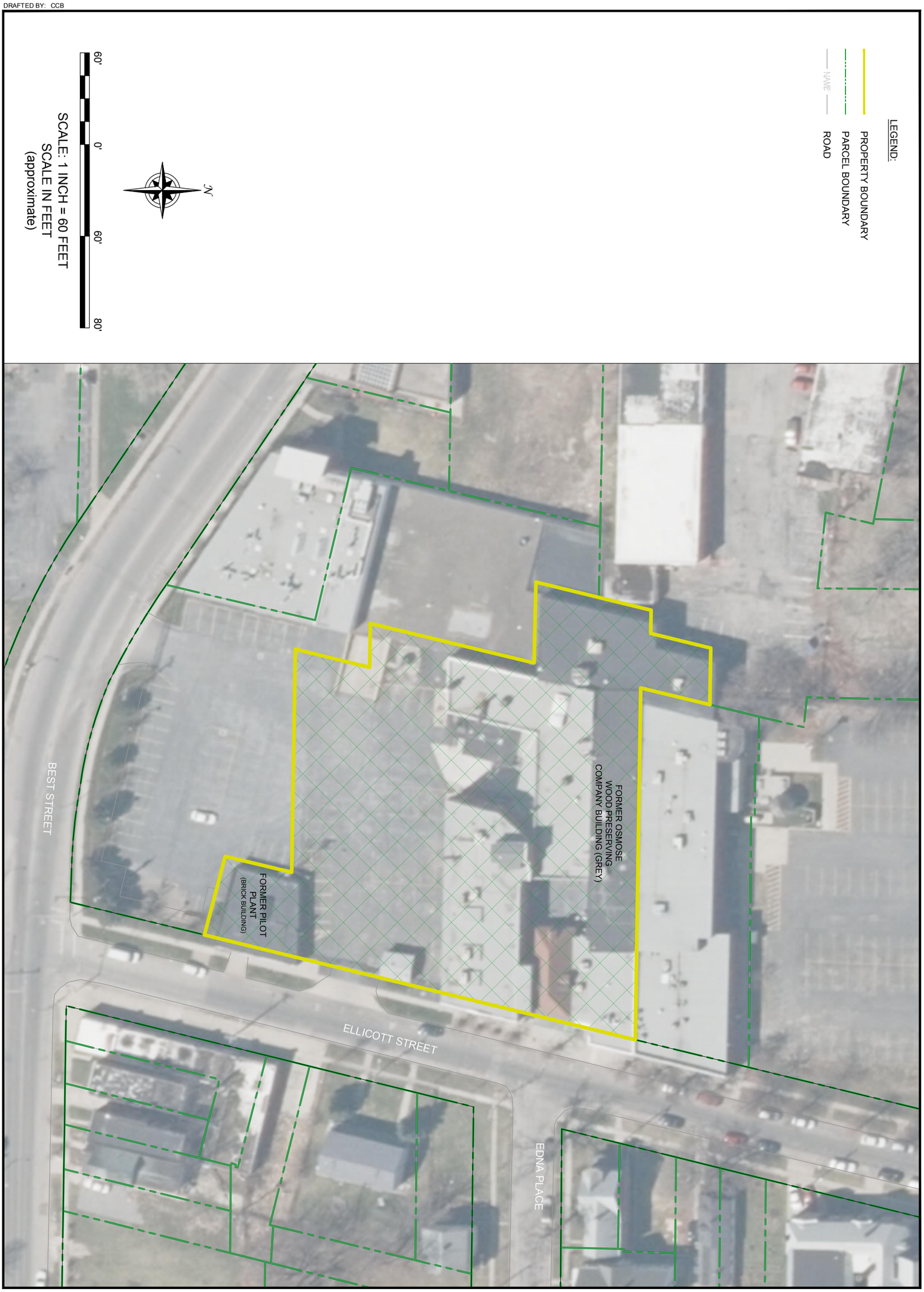


FIGURE 2

SITE PLAN (AERIAL)

BROWNFIELD CLEANUP PROGRAM APPLICATION

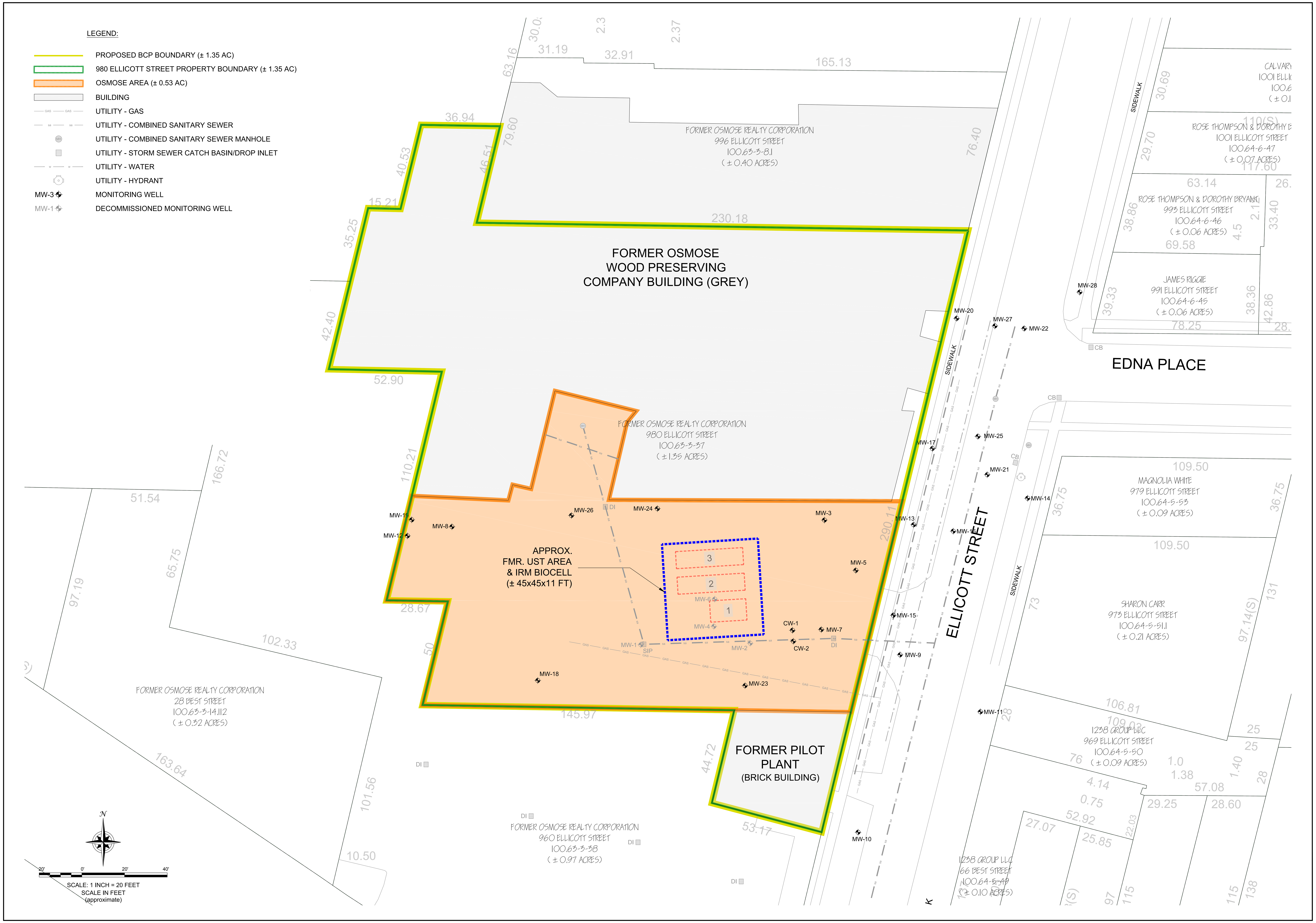
980 ELLICOTT STREET SITE
SITE PLAN (AERIAL)
BUFFALO, NEW YORK

PREPARED FOR

780 ELLICOTT STREET, LLC

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0378-016-002



LEGEND:
PROPOSED BCP BOUNDARY (± 1.35 AC)
980 ELLICOTT STREET PROPERTY BOUNDARY (± 1.35 AC)
OSMOSE AREA (± 0.53 AC)
BUILDING
UTILITY - GAS
UTILITY - COMBINED SANITARY SEWER
UTILITY - COMBINED SANITARY SEWER MANHOLE
UTILITY - STORM SEWER CATCH BASIN/DROP INLET
UTILITY - WATER
UTILITY - HYDRANT
MW-3 MONITORING WELL
MW-1 DECOMMISSIONED MONITORING WELL
FORMER OSMOSE WOOD PRESERVING COMPANY BUILDING (GREY)
FORMER OSMOSE REALTY CORPORATION
996 ELLICOTT STREET
100.63-3-8.1
(± 0.40 ACRES)
FORMER OSMOSE REALTY CORPORATION
980 ELLICOTT STREET
100.63-3-37
(± 1.35 ACRES)
APPROX. FMR. UST AREA & IRM BIOCELL (± 45x45x11 FT)
FORMER PILOT PLANT
(BRICK BUILDING)
FORMER OSMOSE REALTY CORPORATION
28 BEST STREET
100.63-3-14.112
(± 0.32 ACRES)
FORMER OSMOSE REALTY CORPORATION
960 ELLICOTT STREET
100.63-3-38
(± 0.97 ACRES)
ROSE THOMPSON & DOROTHY BRYANT
1001 ELLICOTT STREET
100.64-6-47
(± 0.07 ACRES)
ROSE THOMPSON & DOROTHY BRYANT
993 ELLICOTT STREET
100.64-6-46
(± 0.06 ACRES)
JAMES RIGGIE
991 ELLICOTT STREET
100.64-6-45
(± 0.06 ACRES)
MAGNOLIA WHITE
979 ELLICOTT STREET
100.64-5-53
(± 0.09 ACRES)
SHARON CARR
973 ELLICOTT STREET
100.64-5-51.1
(± 0.21 ACRES)
1258 GROUP LLC
969 ELLICOTT STREET
100.64-5-50
(± 0.09 ACRES)
1258 GROUP LLC
66 BEST STREET
100.64-5-49
(± 0.10 ACRES)
EDNA PLACE
ELLICOTT STREET
SIDEWALK
MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-24, MW-25, MW-26, MW-27, MW-28
CW-1, CW-2
SCALE: 1 INCH = 20 FEET
SCALE IN FEET
(approximate)

REVISIONS

NO.	BY	DATE	REMARKS

SEAL

DRAWN BY: BCH
DATE: MARCH 2017
CHECKED BY:
APPROVED BY:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

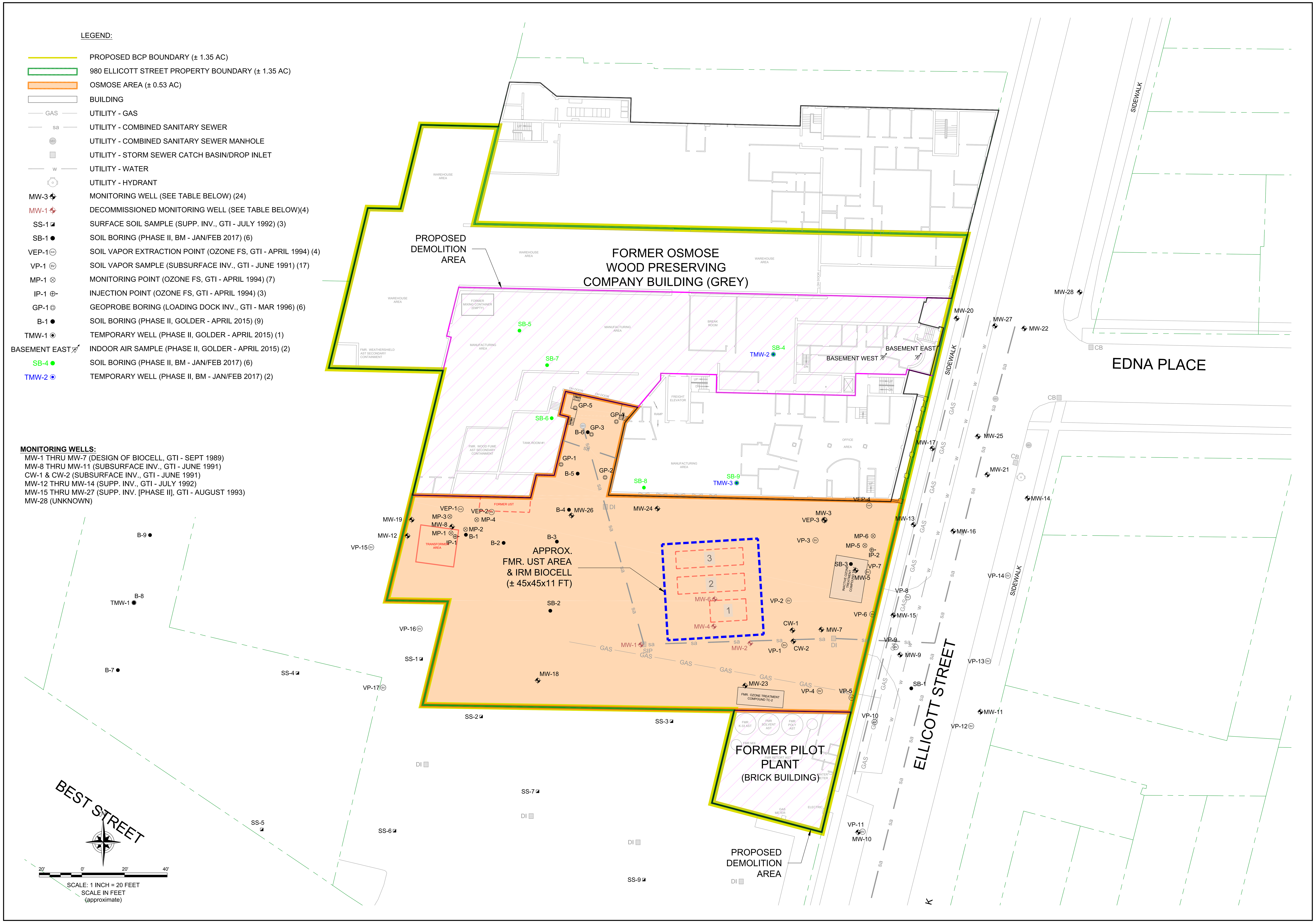
JOB NO.: 0378-016-002

PROPOSED BCP BOUNDARY

BROWNFIELD CLEANUP PROGRAM APPLICATION
980 ELLICOTT STREET SITE (915143)
BUFFALO, NEW YORK

PREPARED FOR
780 ELLICOTT STREET, LLC, BUFFALO, NEW YORK

FIGURE 3A



LEGEND:
PROPOSED BCP BOUNDARY (± 1.35 AC)
980 ELLICOTT STREET PROPERTY BOUNDARY (± 1.35 AC)
OSMOSE AREA (± 0.53 AC)
BUILDING
UTILITY - GAS
UTILITY - COMBINED SANITARY SEWER
UTILITY - COMBINED SANITARY SEWER MANHOLE
UTILITY - STORM SEWER CATCH BASIN/DROP INLET
UTILITY - WATER
UTILITY - HYDRANT
MW-3 MONITORING WELL (SEE TABLE BELOW) (24)
MW-1 DECOMMISSIONED MONITORING WELL (SEE TABLE BELOW)(4)
SS-1 SURFACE SOIL SAMPLE (SUPP. INV., GTI - JULY 1992) (3)
SB-1 SOIL BORING (PHASE II, BM - JAN/FEB 2017) (6)
VEP-1 SOIL VAPOR EXTRACTION POINT (OZONE FS, GTI - APRIL 1994) (4)
VP-1 SOIL VAPOR SAMPLE (SUBSURFACE INV., GTI - JUNE 1991) (17)
MP-1 MONITORING POINT (OZONE FS, GTI - APRIL 1994) (7)
IP-1 INJECTION POINT (OZONE FS, GTI - APRIL 1994) (3)
GP-1 GEOPROBE BORING (LOADING DOCK INV., GTI - MAR 1996) (6)
B-1 SOIL BORING (PHASE II, GOLDER - APRIL 2015) (9)
TMW-1 TEMPORARY WELL (PHASE II, GOLDER - APRIL 2015) (1)
BASEMENT EAST INDOOR AIR SAMPLE (PHASE II, GOLDER - APRIL 2015) (2)
SB-4 SOIL BORING (PHASE II, BM - JAN/FEB 2017) (6)
TMW-2 TEMPORARY WELL (PHASE II, BM - JAN/FEB 2017) (2)
MONITORING WELLS:
MW-1 THRU MW-7 (DESIGN OF BIOCELL, GTI - SEPT 1989)
MW-8 THRU MW-11 (SUBSURFACE INV., GTI - JUNE 1991)
CW-1 & CW-2 (SUBSURFACE INV., GTI - JUNE 1991)
MW-12 THRU MW-14 (SUPP. INV., GTI - JULY 1992)
MW-15 THRU MW-27 (SUPP. INV. [PHASE II], GTI - AUGUST 1993)
MW-28 (UNKNOWN)
PROPOSED DEMOLITION AREA
FORMER OSMOSE WOOD PRESERVING COMPANY BUILDING (GREY)
APPROX. FMR. UST AREA & IRM BIOCELL (± 45x45x11 FT)
FORMER PILOT PLANT (BRICK BUILDING)
PROPOSED DEMOLITION AREA
EDNA PLACE
ELLICOTT STREET
BEST STREET
SIDEWALK
BASEMENT EAST
BASEMENT WEST
SCALE: 1 INCH = 20 FEET
SCALE IN FEET (approximate)

REVISIONS

NO.	BY	DATE	REMARKS

SEAL

DRAWN BY: BCH
DATE: MARCH 2017
CHECKED BY:
APPROVED BY:

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INVESTIGATION LOCATIONS

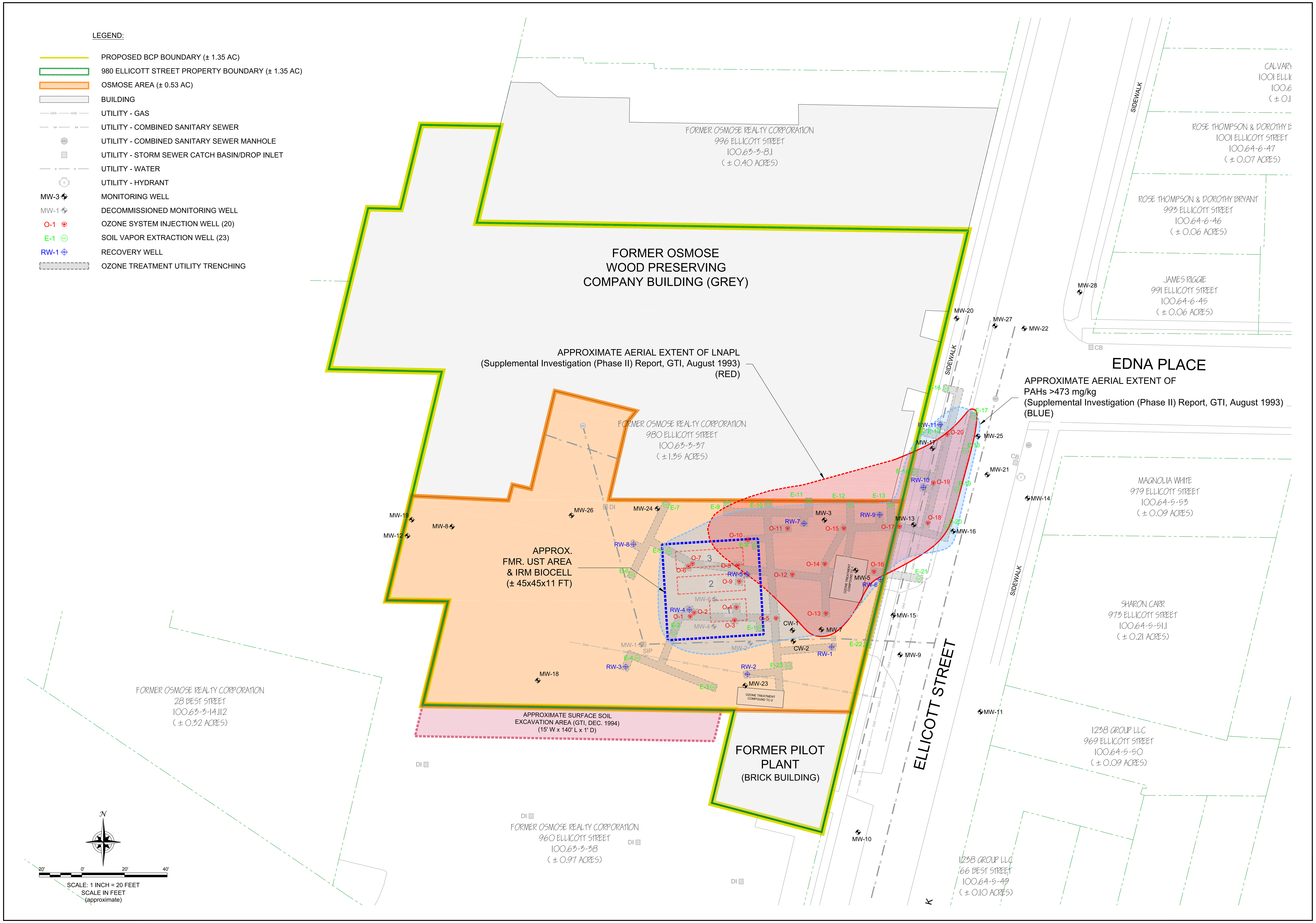
BROWNFIELD CLEANUP PROGRAM APPLICATION
980 ELLICOTT STREET SITE (915143)
BUFFALO, NEW YORK

PREPARED FOR
780 ELLICOTT STREET, LLC

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0378-017-002

FIGURE 3B


LEGEND:
PROPOSED BCP BOUNDARY (± 1.35 AC)
980 ELLICOTT STREET PROPERTY BOUNDARY (± 1.35 AC)
OSMOSE AREA (± 0.53 AC)
BUILDING
UTILITY - GAS
UTILITY - COMBINED SANITARY SEWER
UTILITY - COMBINED SANITARY SEWER MANHOLE
UTILITY - STORM SEWER CATCH BASIN/DROP INLET
UTILITY - WATER
UTILITY - HYDRANT
MW-3 MONITORING WELL
MW-1 DECOMMISSIONED MONITORING WELL
O-1 OZONE SYSTEM INJECTION WELL (20)
E-1 SOIL VAPOR EXTRACTION WELL (23)
RW-1 RECOVERY WELL
OZONE TREATMENT UTILITY TRENCHING
FORMER OSMOSE REALTY CORPORATION
996 ELLICOTT STREET
100.63-3-8.1
(± 0.40 ACRES)
FORMER OSMOSE
WOOD PRESERVING
COMPANY BUILDING (GREY)
APPROXIMATE AERIAL EXTENT OF LNAPL
(Supplemental Investigation (Phase II) Report, GTI, August 1993)
(RED)
FORMER OSMOSE REALTY CORPORATION
980 ELLICOTT STREET
100.63-3-37
(± 1.35 ACRES)
APPROX.
FMR. UST AREA
& IRM BIOCELL
(± 45x45x11 FT)
APPROXIMATE SURFACE SOIL
EXCAVATION AREA (GTI, DEC. 1994)
(15' W x 140' L x 1' D)
FORMER PILOT
PLANT
(BRICK BUILDING)
FORMER OSMOSE REALTY CORPORATION
28 BEST STREET
100.63-3-14.112
(± 0.32 ACRES)
FORMER OSMOSE REALTY CORPORATION
960 ELLICOTT STREET
100.63-3-38
(± 0.97 ACRES)
EDNA PLACE
APPROXIMATE AERIAL EXTENT OF
PAHs >473 mg/kg
(Supplemental Investigation (Phase II) Report, GTI, August 1993)
(BLUE)
ELLICOTT STREET
SIDEWALK
CALVARY
1001 ELLI
100.6
(± 0.1
ROSE THOMPSON & DOROTHY B
1001 ELLICOTT STREET
100.64-6-47
(± 0.07 ACRES)
ROSE THOMPSON & DOROTHY BRYANT
993 ELLICOTT STREET
100.64-6-46
(± 0.06 ACRES)
JAMES RIGGIE
991 ELLICOTT STREET
100.64-6-45
(± 0.06 ACRES)
MAGNOLIA WHITE
979 ELLICOTT STREET
100.64-5-53
(± 0.09 ACRES)
SHARON CARR
973 ELLICOTT STREET
100.64-5-51.1
(± 0.21 ACRES)
1238 GROUP LLC
969 ELLICOTT STREET
100.64-5-50
(± 0.09 ACRES)
1238 GROUP LLC
66 BEST STREET
100.64-5-49
(± 0.10 ACRES)
MW-1 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9 MW-10 MW-11 MW-12 MW-13 MW-14 MW-15 MW-16 MW-17 MW-18 MW-19 MW-20 MW-21 MW-22 MW-23 MW-24 MW-25 MW-26 MW-27 MW-28
RW-1 RW-2 RW-3 RW-4 RW-5 RW-6 RW-7 RW-8 RW-9 RW-10 RW-11
CW-1 CW-2
OZONE TREATMENT COMPOUND TC-2
SCALE: 1 INCH = 20 FEET
SCALE IN FEET
(approximate)
N

BENCHMARK
ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0378-016-002

REVISIONS

NO.	BY	DATE	REMARKS

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DATE: MARCH 2017
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REMEDIATION SYSTEM LAYOUT

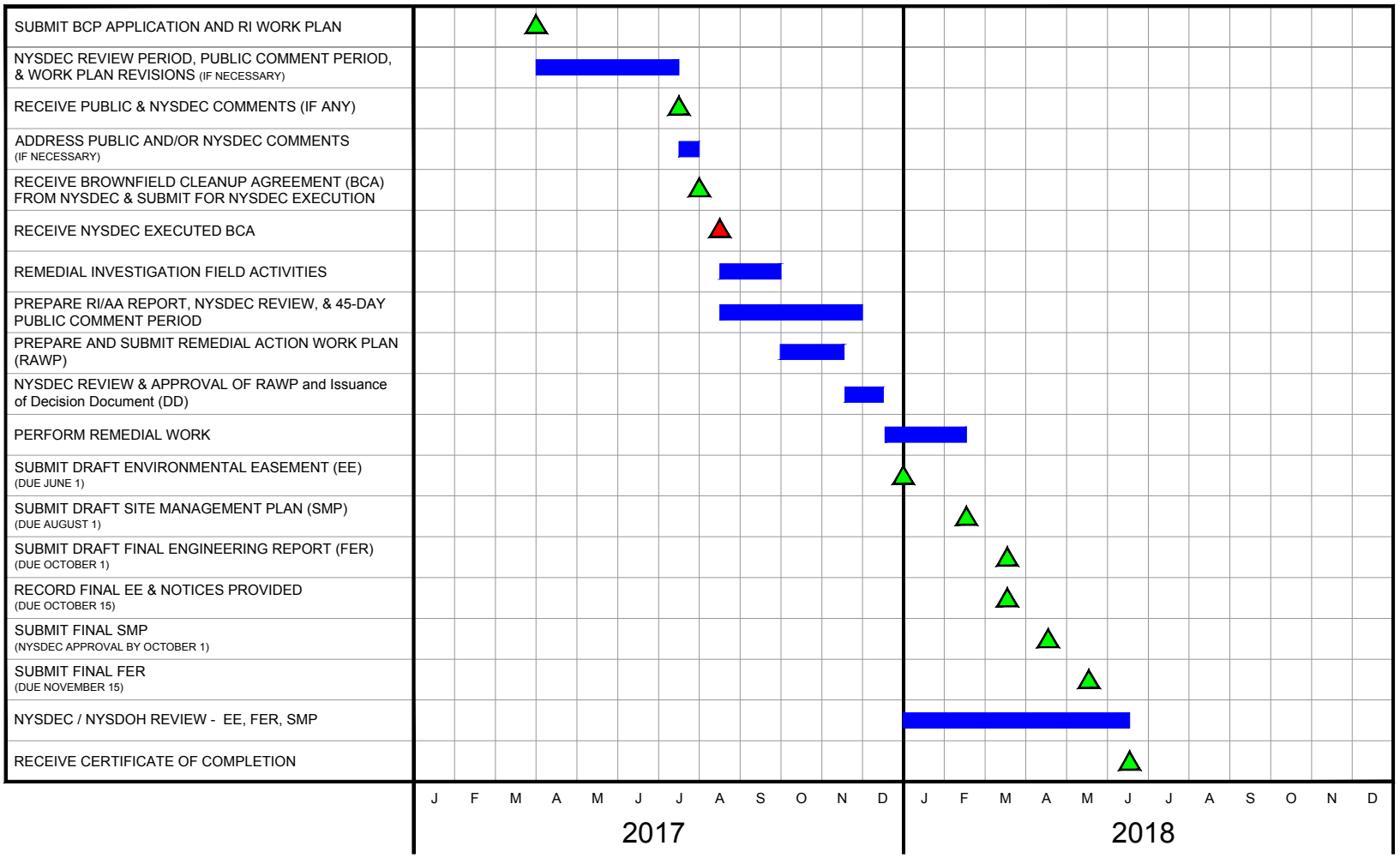
980 ELLICOTT STREET SITE (915143)
BUFFALO, NEW YORK

PREPARED FOR
780 ELLICOTT STREET, LLC, BUFFALO, NEW YORK

FIGURE 3C

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 4; Preliminary Project Schedule.dwg

PROJECT TASKS:



BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0378-017-002

DATE: MARCH 2017

DRAFTED BY: RFL

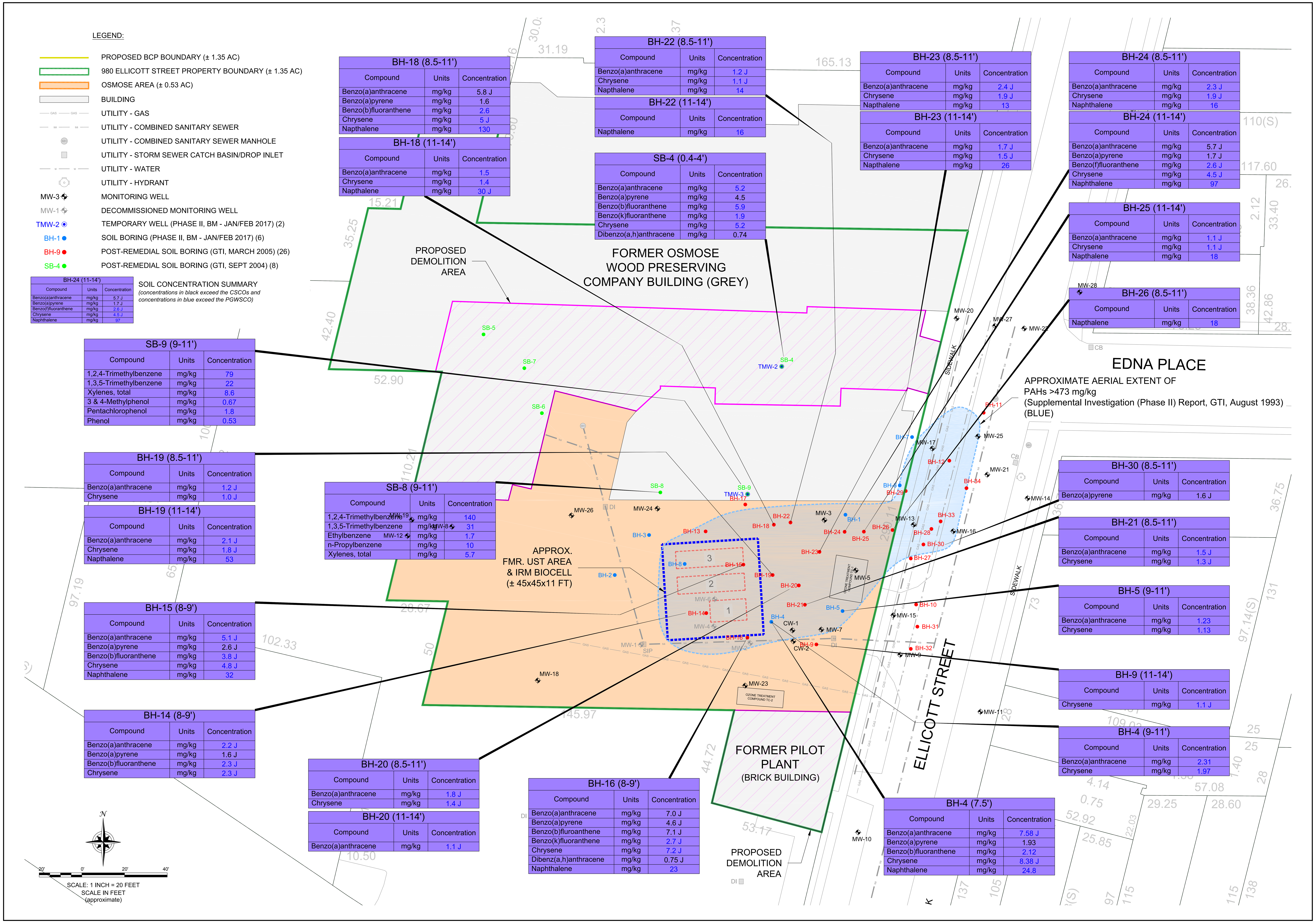
PRELIMINARY PROJECT SCHEDULE

BROWNFIELD CLEANUP PROGRAM APPLICATION

980 ELLICOTT STREET SITE
BUFFALO, NEW YORK

PREPARED FOR
780 ELLICOTT STREET, LLC

FIGURE 4



BH-18 (8.5-11')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	5.8 J
Benzo(a)pyrene	mg/kg	1.6
Benzo(b)fluoranthene	mg/kg	2.6
Chrysene	mg/kg	5 J
Napthalene	mg/kg	130

BH-18 (11-14')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	1.5
Chrysene	mg/kg	1.4
Napthalene	mg/kg	30 J

BH-22 (8.5-11')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	1.2 J
Chrysene	mg/kg	1.1 J
Napthalene	mg/kg	14

BH-22 (11-14')		
Compound	Units	Concentration
Napthalene	mg/kg	16

SB-4 (0.4-4')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	5.2
Benzo(a)pyrene	mg/kg	4.5
Benzo(b)fluoranthene	mg/kg	5.9
Benzo(k)fluoranthene	mg/kg	1.9
Chrysene	mg/kg	5.2
Dibenzo(a,h)anthracene	mg/kg	0.74

BH-23 (8.5-11')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	2.4 J
Chrysene	mg/kg	1.9 J
Napthalene	mg/kg	13

BH-23 (11-14')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	1.7 J
Chrysene	mg/kg	1.5 J
Napthalene	mg/kg	26

BH-24 (8.5-11')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	2.3 J
Chrysene	mg/kg	1.9 J
Naphthalene	mg/kg	16

BH-24 (11-14')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	5.7 J
Benzo(a)pyrene	mg/kg	1.7 J
Benzo(f)fluoranthene	mg/kg	2.6 J
Chrysene	mg/kg	4.5 J
Naphthalene	mg/kg	97

BH-25 (11-14')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	1.1 J
Chrysene	mg/kg	1.1 J
Napthalene	mg/kg	18

BH-26 (8.5-11')		
Compound	Units	Concentration
Napthalene	mg/kg	18

SB-9 (9-11')		
Compound	Units	Concentration
1,2,4-Trimethylbenzene	mg/kg	79
1,3,5-Trimethylbenzene	mg/kg	22
Xylenes, total	mg/kg	8.6
3 & 4-Methylphenol	mg/kg	0.67
Pentachlorophenol	mg/kg	1.8
Phenol	mg/kg	0.53

BH-19 (8.5-11')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	1.2 J
Chrysene	mg/kg	1.0 J

BH-19 (11-14')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	2.1 J
Chrysene	mg/kg	1.8 J
Napthalene	mg/kg	53

SB-8 (9-11')		
Compound	Units	Concentration
1,2,4-Trimethylbenzene	mg/kg	140
1,3,5-Trimethylbenzene	mg/kg	31
Ethylbenzene	mg/kg	1.7
n-Propylbenzene	mg/kg	10
Xylenes, total	mg/kg	5.7

BH-15 (8-9')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	5.1 J
Benzo(a)pyrene	mg/kg	2.6 J
Benzo(b)fluoranthene	mg/kg	3.8 J
Chrysene	mg/kg	4.8 J
Naphthalene	mg/kg	32

BH-14 (8-9')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	2.2 J
Benzo(a)pyrene	mg/kg	1.6 J
Benzo(b)fluoranthene	mg/kg	2.3 J
Chrysene	mg/kg	2.3 J

BH-20 (8.5-11')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	1.8 J
Chrysene	mg/kg	1.4 J

BH-20 (11-14')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	1.1 J

BH-16 (8-9')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	7.0 J
Benzo(a)pyrene	mg/kg	4.6 J
Benzo(b)fluroanthene	mg/kg	7.1 J
Benzo(k)fluoranthene	mg/kg	2.7 J
Chrysene	mg/kg	7.2 J
Dibenz(a,h)anthracene	mg/kg	0.75 J
Naphthalene	mg/kg	23

BH-30 (8.5-11')		
Compound	Units	Concentration
Benzo(a)pyrene	mg/kg	1.6 J

BH-21 (8.5-11')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	1.5 J
Chrysene	mg/kg	1.3 J

BH-5 (9-11')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	1.23
Chrysene	mg/kg	1.13

BH-9 (11-14')		
Compound	Units	Concentration
Chrysene	mg/kg	1.1 J

BH-4 (9-11')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	2.31
Chrysene	mg/kg	1.97

BH-4 (7.5')		
Compound	Units	Concentration
Benzo(a)anthracene	mg/kg	7.58 J
Benzo(a)pyrene	mg/kg	1.93
Benzo(b)fluoranthene	mg/kg	2.12
Chrysene	mg/kg	8.38 J
Naphthalene	mg/kg	24.8

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
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(716) 856-0599

JOB NO.: 0378-016-002

REVISIONS

NO.	BY	DATE	REMARKS

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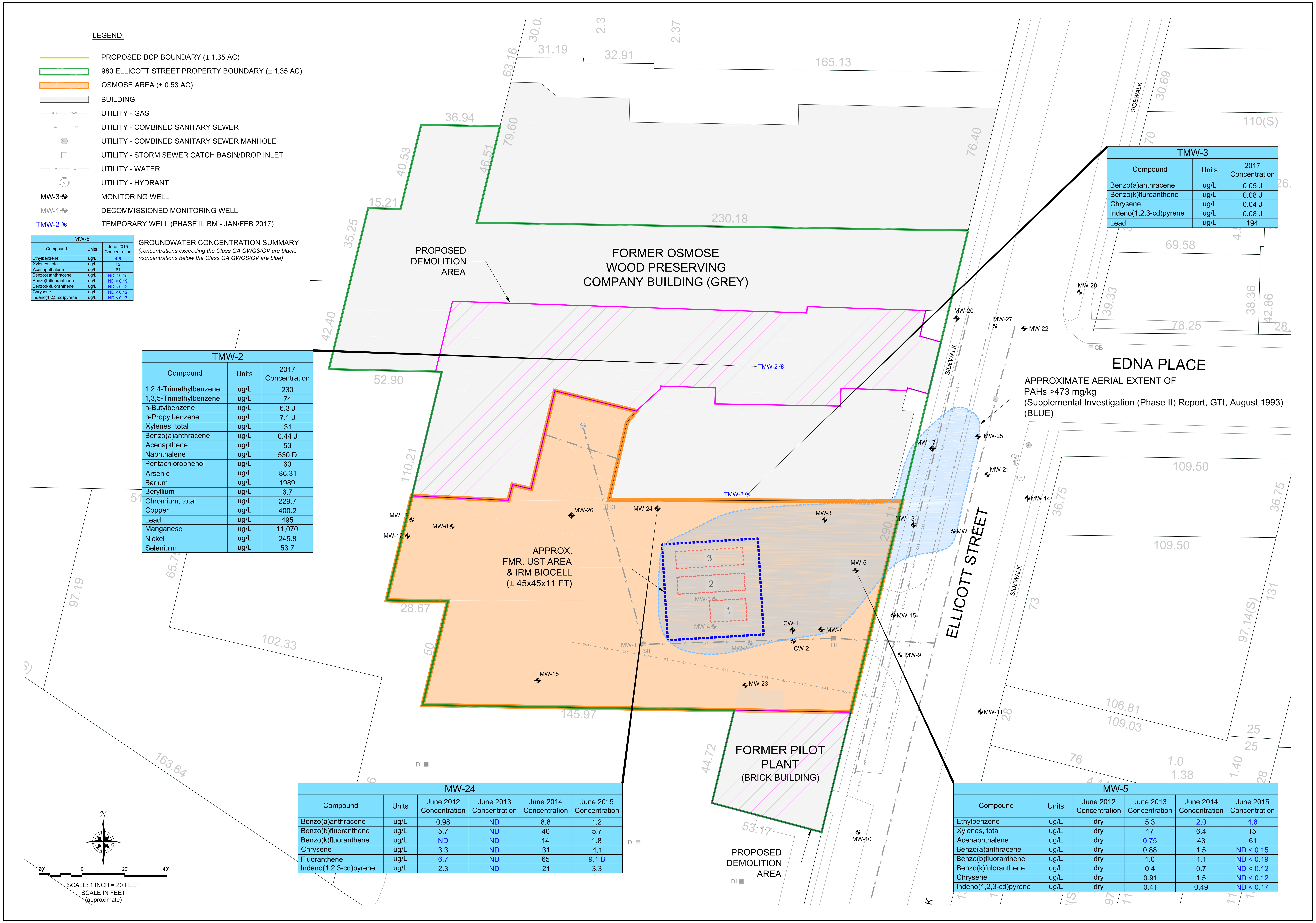
APPROVED BY:

EXCEEDANCES OF THE CSCOs IN SOIL

BROWNFIELD CLEANUP PROGRAM APPLICATION
980 ELLICOTT STREET SITE (915143)
BUFFALO, NEW YORK

PREPARED FOR
780 ELLICOTT STREET, LLC

FIGURE 5A



MW-5		
Compound	Units	June 2015 Concentration
Ethylbenzene	ug/L	4.6
Xylenes, total	ug/L	15
Acenaphthalene	ug/L	61
Benzo(a)anthracene	ug/L	ND < 0.15
Benzo(b)fluoranthene	ug/L	ND < 0.19
Benzo(k)fuloranthene	ug/L	ND < 0.12
Chrysene	ug/L	ND < 0.12
Indeno(1,2,3-cd)pyrene	ug/L	ND < 0.17

TMW-2		
Compound	Units	2017 Concentration
1,2,4-Trimethylbenzene	ug/L	230
1,3,5-Trimethylbenzene	ug/L	74
n-Butylbenzene	ug/L	6.3 J
n-Propylbenzene	ug/L	7.1 J
Xylenes, total	ug/L	31
Benzo(a)anthracene	ug/L	0.44 J
Acenapthene	ug/L	53
Naphthalene	ug/L	530 D
Pentachlorophenol	ug/L	60
Arsenic	ug/L	86.31
Barium	ug/L	1989
Beryllium	ug/L	6.7
Chromium, total	ug/L	229.7
Copper	ug/L	400.2
Lead	ug/L	495
Manganese	ug/L	11,070
Nickel	ug/L	245.8
Seleniuim	ug/L	53.7

TMW-3		
Compound	Units	2017 Concentration
Benzo(a)anthracene	ug/L	0.05 J
Benzo(k)fluroanthene	ug/L	0.08 J
Chrysene	ug/L	0.04 J
Indeno(1,2,3-cd)pyrene	ug/L	0.08 J
Lead	ug/L	194

MW-24					
Compound	Units	June 2012 Concentration	June 2013 Concentration	June 2014 Concentration	June 2015 Concentration
Benzo(a)anthracene	ug/L	0.98	ND	8.8	1.2
Benzo(b)fluoranthene	ug/L	5.7	ND	40	5.7
Benzo(k)fluoranthene	ug/L	ND	ND	14	1.8
Chrysene	ug/L	3.3	ND	31	4.1
Fluoranthene	ug/L	6.7	ND	65	9.1 B
Indeno(1,2,3-cd)pyrene	ug/L	2.3	ND	21	3.3

MW-5					
Compound	Units	June 2012 Concentration	June 2013 Concentration	June 2014 Concentration	June 2015 Concentration
Ethylbenzene	ug/L	dry	5.3	2.0	4.6
Xylenes, total	ug/L	dry	17	6.4	15
Acenaphthalene	ug/L	dry	0.75	43	61
Benzo(a)anthracene	ug/L	dry	0.88	1.5	ND < 0.15
Benzo(b)fluoranthene	ug/L	dry	1.0	1.1	ND < 0.19
Benzo(k)fuloranthene	ug/L	dry	0.4	0.7	ND < 0.12
Chrysene	ug/L	dry	0.91	1.5	ND < 0.12
Indeno(1,2,3-cd)pyrene	ug/L	dry	0.41	0.49	ND < 0.17

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
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JOB NO.: 0378-016-002

REVISIONS

NO.	BY	DATE	REMARKS

SEAL

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DATE: MARCH 2017
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APPROVED BY:

EXCEEDANCES OF THE GWQSs/GVs IN GROUNDWATER

BROWNFIELD CLEANUP PROGRAM APPLICATION
980 ELLICOTT STREET SITE (915143)
BUFFALO, NEW YORK

PREPARED FOR
780 ELLICOTT STREET, LLC

FIGURE 5B

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 6; Parcel Map.dwg

Erie County On-Line Mapping Application

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0378-016-002

DATE: FEBRUARY 2017

DRAFTED BY: CCB

PARCEL MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

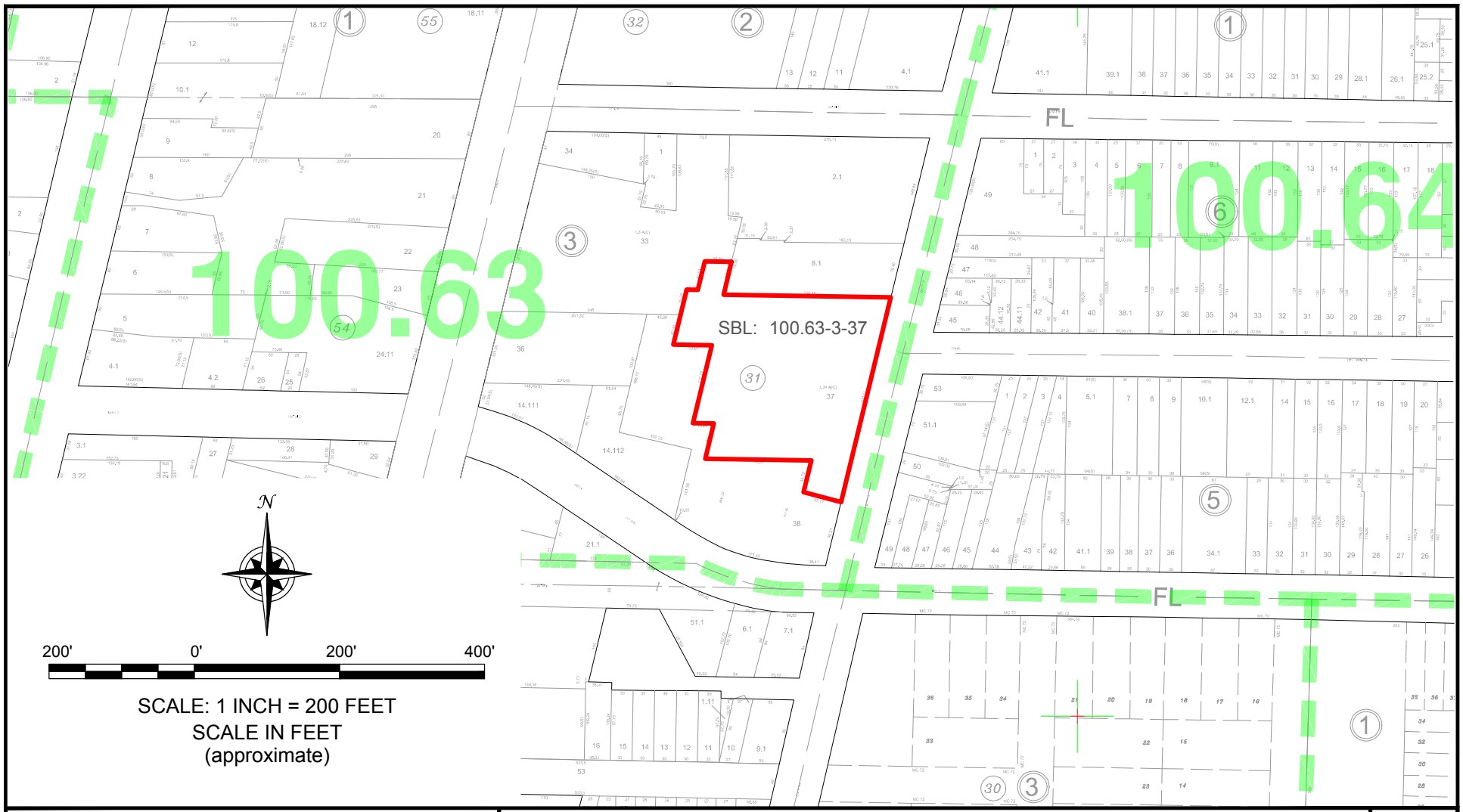
980 ELLICOTT STREET SITE
BUFFALO, NEW YORK

PREPARED FOR

780 ELLICOTT STREET, LLC

FIGURE 6

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 7; Tax Map.dwg



BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0378-016-002

DATE: FEBRUARY 2017

DRAFTED BY: CCB

TAX MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

980 ELLICOTT STREET SITE
BUFFALO, NEW YORK

PREPARED FOR

780 ELLICOTT STREET, LLC

FIGURE 7

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 8, Property Basemap (1000' Setback).dwg

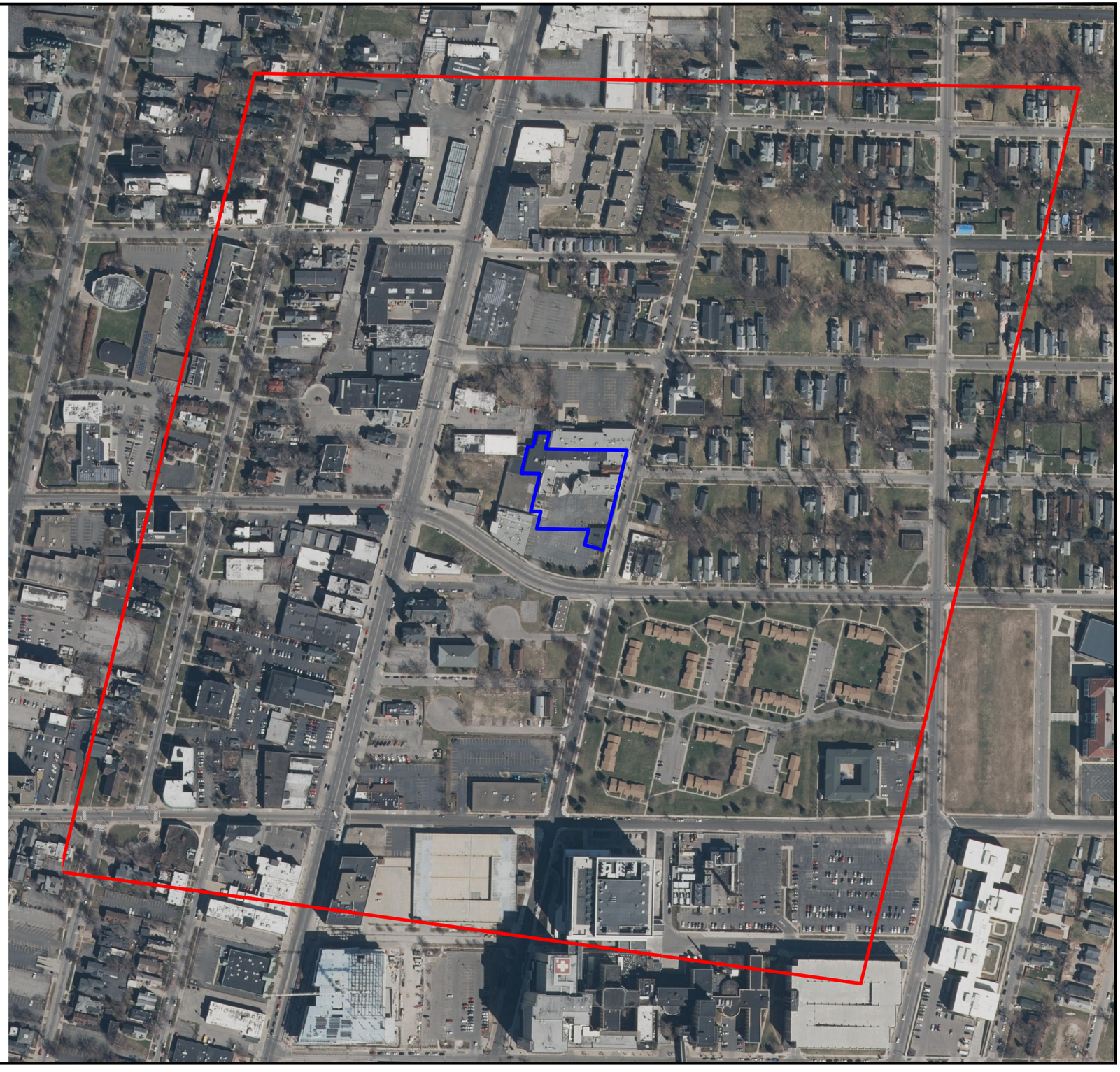
LEGEND:

BCP BOUNDARY

1000 FOOT SET BACK

NOTES:

1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
2. AERIAL IMAGE SOURCE: NYS GIS ORTHOIMAGERY.



N

300' 0' 300' 600'

SCALE: 1 INCH = 300 FEET
SCALE IN FEET
(approximate)

DATE: FEBRUARY 2017
DRAFTED BY: CCB

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0378-016-002

PROPERTY BASE MAP (1000' SET BACK)

BROWNFIELD CLEANUP PROGRAM APPLICATION

980 ELLICOTT STREET SITE
BUFFALO, NEW YORK

PREPARED FOR

780 ELLICOTT STREET, LLC

FIGURE 8

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 9; En-Zone Map.dwg

DATE: FEBRUARY 2017
DRAFTED BY: CCB

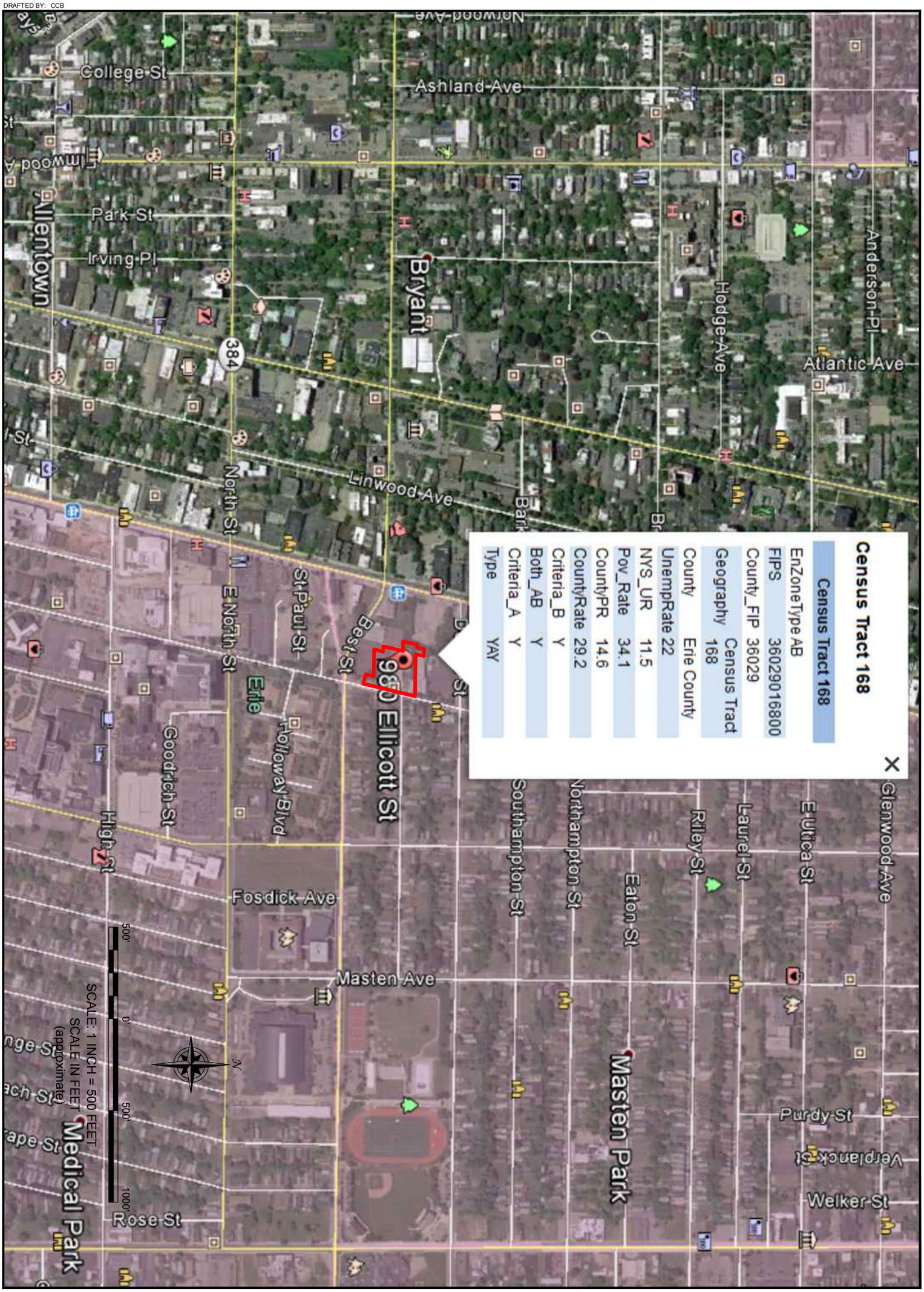


FIGURE 9

EN-ZONE MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

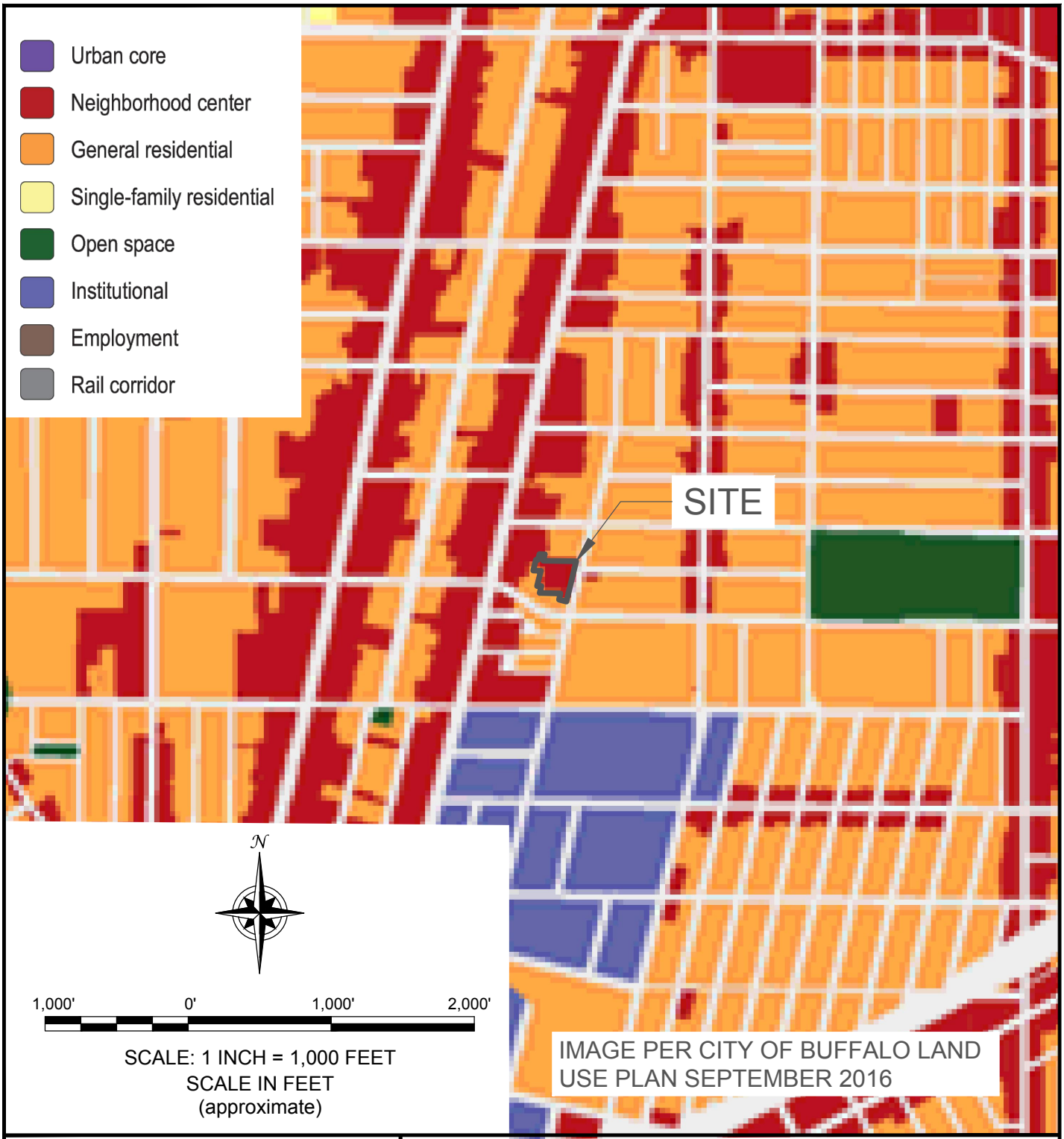
980 ELLICOTT STREET SITE
BUFFALO, NEW YORK
PREPARED FOR
780 ELLICOTT STREET, LLC

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0378-016-002

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 10; Nearby Land Use Map.dwg

FIGURE 10



BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0378-016-002

DATE: FEBRUARY 2017

DRAFTED BY: CCB

NEARBY LAND-USE MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

980 ELLICOTT STREET SITE
BUFFALO, NEW YORK

PREPARED FOR

780 ELLICOTT STREET, LLC

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 11; Current Zoning Map.dwg

FIGURE 11

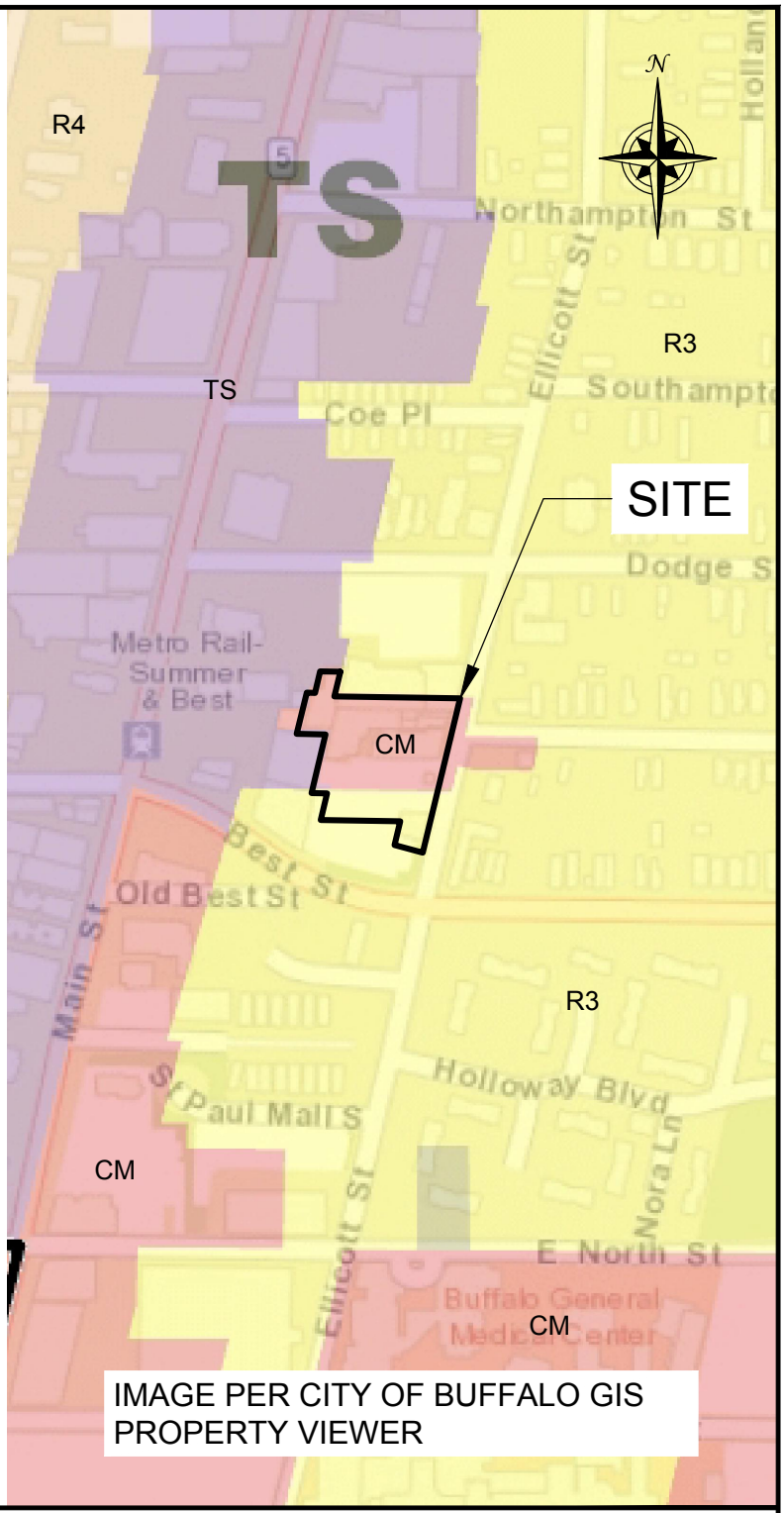
Legend

Zoning

- AD-Allen Street District
- C1-Neighborhood Business District
- C2-Community Business District
- C3-Central Business District
- CM-General Commercial District
- DO-Downtown Opportunity
- EB-Elmwood Business
- II-Institutional/Light Industrial
- KB-Kensington/Bailey
- M1-Light Industrial District
- M2-General Industrial District
- M3-Heavy Industrial District
- PB-Porter Business District
- R1-One Family District
- R2-Dwelling District
- R3-Dwelling District
- R4-Apartment District
- R5-Apartment Hotel District
- SS-Seneca Street
- TS-Transit Station

200' 0' 200' 400'

SCALE: 1 INCH = 200 FEET
SCALE IN FEET
(approximate)



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TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0378-016-002

DATE: FEBRUARY 2017

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CURRENT ZONING MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

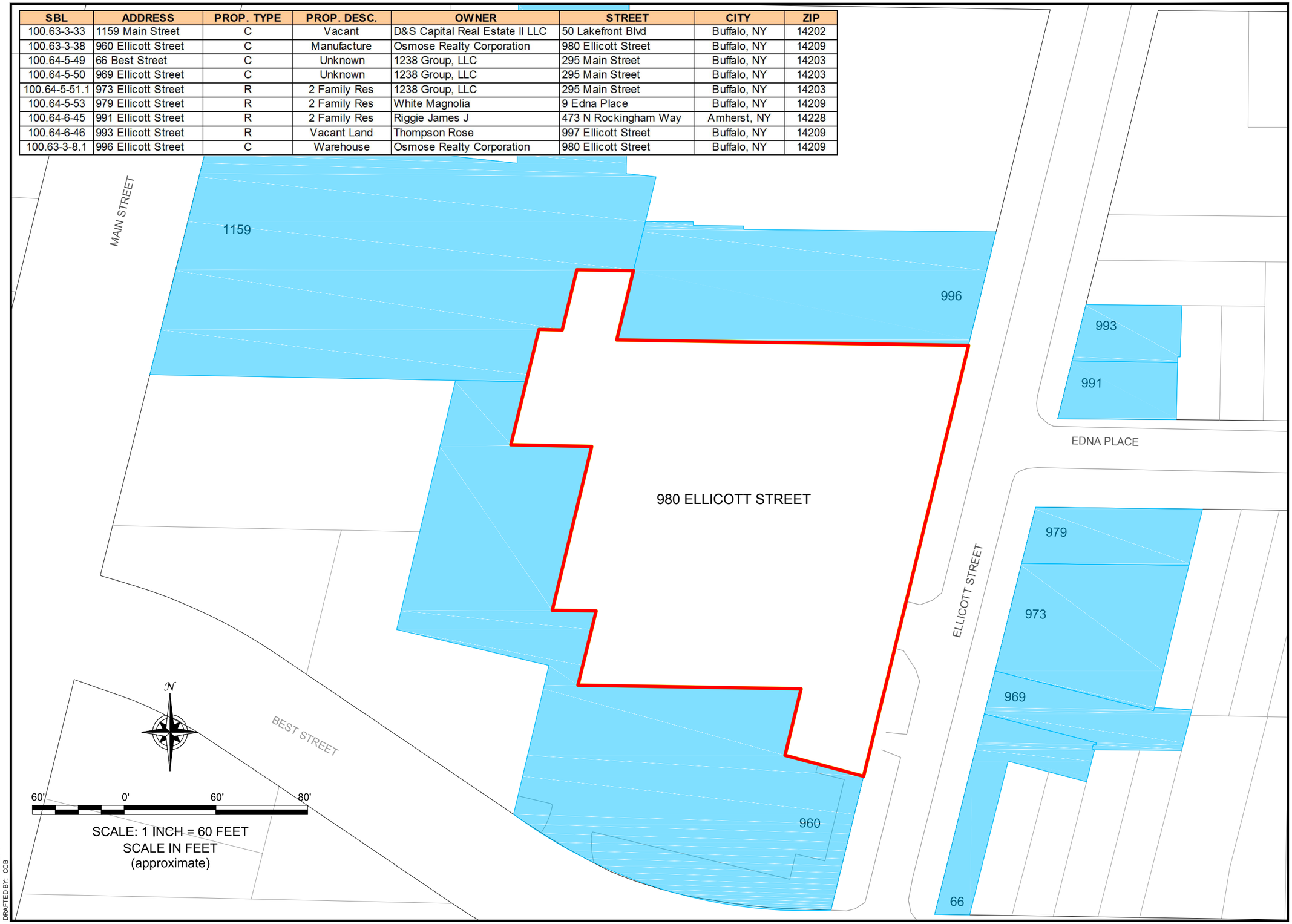
980 ELLICOTT STREET SITE
BUFFALO, NEW YORK

PREPARED FOR

780 ELLICOTT STREET, LLC

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 12; Adjacent Property Owners.dwg

SBL	ADDRESS	PROP. TYPE	PROP. DESC.	OWNER	STREET	CITY	ZIP
100.63-3-33	1159 Main Street	C	Vacant	D&S Capital Real Estate II LLC	50 Lakefront Blvd	Buffalo, NY	14202
100.63-3-38	960 Ellicott Street	C	Manufacture	Osmose Realty Corporation	980 Ellicott Street	Buffalo, NY	14209
100.64-5-49	66 Best Street	C	Unknown	1238 Group, LLC	295 Main Street	Buffalo, NY	14203
100.64-5-50	969 Ellicott Street	C	Unknown	1238 Group, LLC	295 Main Street	Buffalo, NY	14203
100.64-5-51.1	973 Ellicott Street	R	2 Family Res	1238 Group, LLC	295 Main Street	Buffalo, NY	14203
100.64-5-53	979 Ellicott Street	R	2 Family Res	White Magnolia	9 Edna Place	Buffalo, NY	14209
100.64-6-45	991 Ellicott Street	R	2 Family Res	Riggie James J	473 N Rockingham Way	Amherst, NY	14228
100.64-6-46	993 Ellicott Street	R	Vacant Land	Thompson Rose	997 Ellicott Street	Buffalo, NY	14209
100.63-3-8.1	996 Ellicott Street	C	Warehouse	Osmose Realty Corporation	980 Ellicott Street	Buffalo, NY	14209



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JOB NO.: 0378-016-002

ADJACENT PROPERTY OWNERS
BROWNFIELD CLEANUP PROGRAM APPLICATION

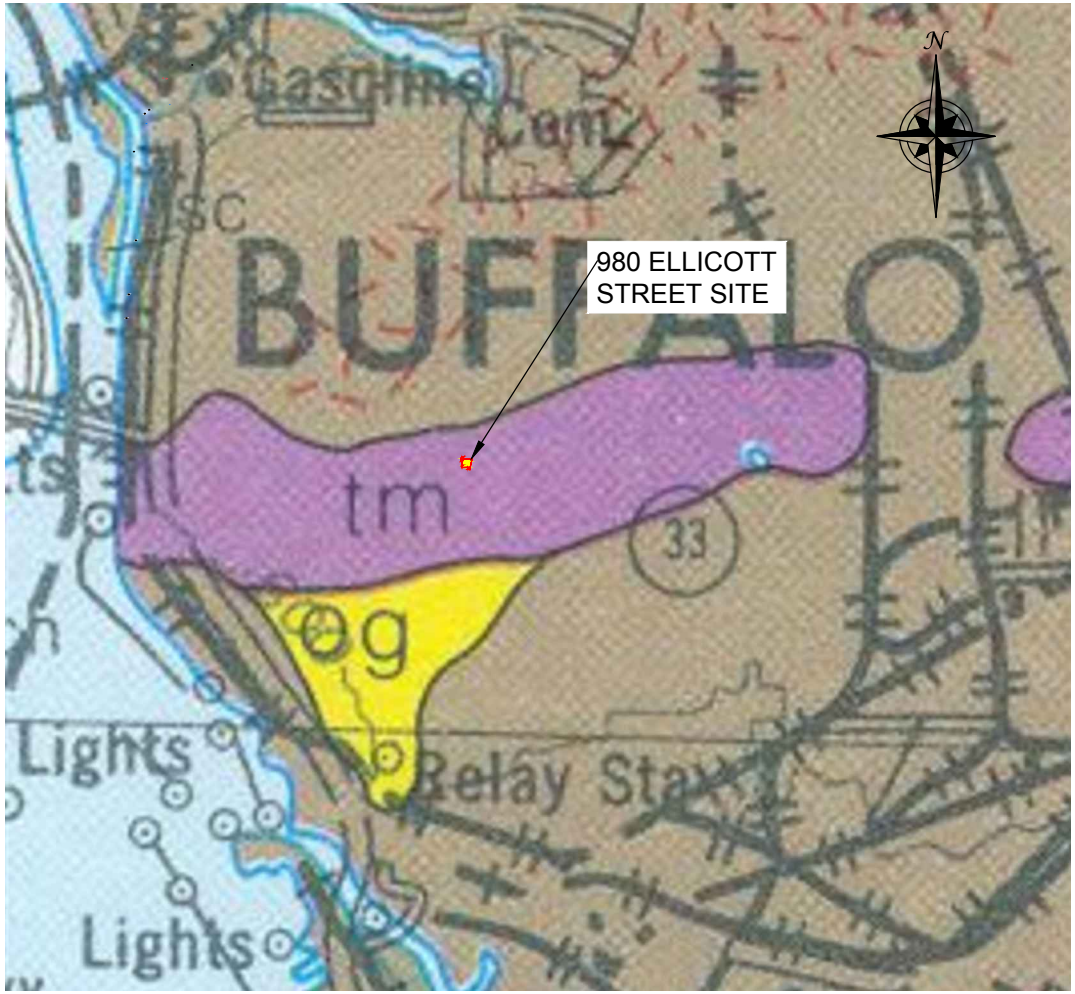
980 ELLICOTT STREET SITE
BUFFALO, NEW YORK
PREPARED FOR
780 ELLICOTT STREET, LLC

FIGURE 12

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 13; Surficial Geologic Map.dwg

5000' 0' 5000' 10000'

SCALE: 1 INCH = 5000 FEET
SCALE IN FEET
(approximate)



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PROJECT NO.: 0378-016-002

DATE: FEBRUARY 2017

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SURFICIAL GEOLOGIC MAP

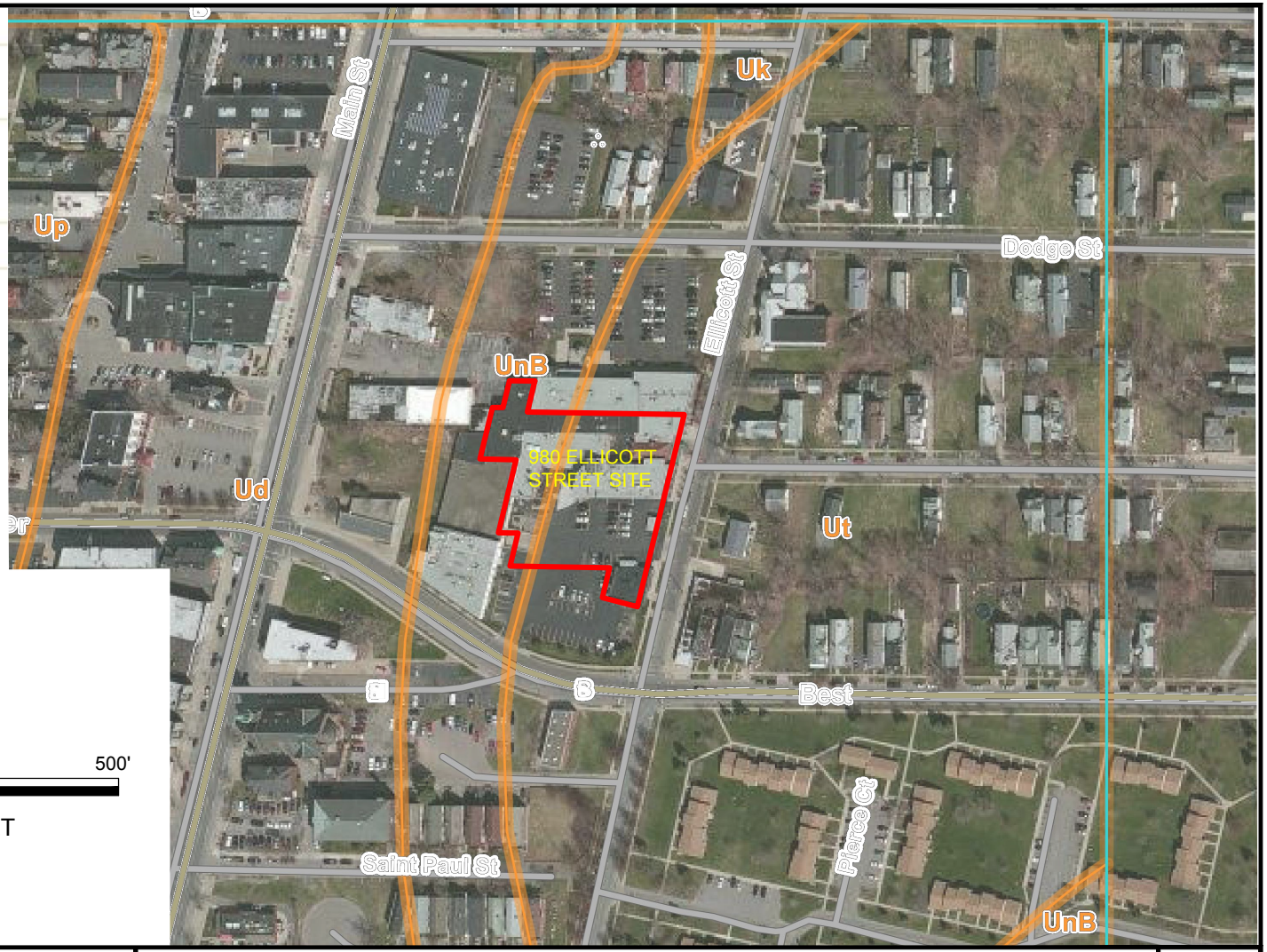
BROWNFIELD CLEANUP PROGRAM APPLICATION

980 ELLICOTT STREET SITE
BUFFALO, NEW YORK
PREPARED FOR
780 ELLICOTT STREET, LLC

FIGURE 13

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 14; USDA Soil Type Map.dwg

Ud	Urban land
Uk	Urban land-Claverack complex
UnB	Urban land-Colonie complex, 3 to 6 percent slopes
Up	Urban land-Galen complex
Ut	Urban land-Odessa complex, 0 to 3 percent slopes



N

250' 0' 250' 500'

SCALE: 1 INCH = 250 FEET
SCALE IN FEET
(approximate)

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TURNKEY ENVIRONMENTAL RESTORATION, LLC

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USDA SOIL TYPE MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

980 ELLICOTT STREET SITE
BUFFALO, NEW YORK

PREPARED FOR

780 ELLICOTT STREET, LLC

FIGURE 14

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 15; Bedrock Geology Map.dwg

LEGEND

NOTE: Where the uniformity of lithology and availability of pattern combinations permit, the dominant lithology of a mapping unit is symbolized as follows:

Cross-hatch patterns:
- rhombic grid—dolostones
- rectangular grid—limestones

Line patterns:
- straight—pelitic rocks, shales, shales interbedded with siltstones and sandstones

Stipple patterns:
- regular red—quartz sandstones and quartzites
- random red—non-marine sedimentary rocks

An irregular lower margin on the "color boxes" signifies that the unit has an unconformable relationship with subjacent units, however not necessarily with the next unit listed. Wavy lines signify parallel unconformities; sawtooth lines signify angular unconformities.

SONYEA GROUP
50-200 ft. (15-60 m.)

Ds — Cashaqua and Middlesex Shales.

GENESEE GROUP
10-150 ft. (3-45 m.)

Dg — West River Shale; Genundewa Limestone; Penn Yan and Geneseo Shales; North Evans Limestone.

HAMILTON GROUP
200-500 ft. (60-150 m.)

Dhmo — Moscow Formation—Windom and Kashong Shales, Menteth Limestone Members.

Dhld — Ludlowville Formation—Deep Run Shale, Tichenor Limestone, Wanakah and Ledyard Shales, Centerfield Limestone Members.

Dhsk — Skaneateles Formation—Levanna Shale, Stafford Limestone Members.

Dhmr — Marcellus Formation—Oatka Creek Shale Member.

ONONDAGA AND BOIS BLANC LIMESTONES
150 ft. (45 m.)

Dob — In New York: Onondaga Limestone—Seneca, Morehouse (cherty), and Clarence Limestone Members, Edgecliff cherty Limestone Member, local coral bioherms; Bois Blanc Limestone—sandy, thin, discontinuous.
In Ontario: Dundee Limestone; Lucas Formation—dolostone, limestone (Anderdon); Amherstburg Formation—limestone, dolostone, sandstone (Sylvania); Bois Blanc Formation—dolostone, limestone, sandstone (Springvale).

Do — Oriskany Sandstone.

AKRON DOLOSTONE AND SALINA GROUP
400-700 ft. (120-210 m.)

Sab — Akron Dolostone; Bertie Formation—dolostone, shale.

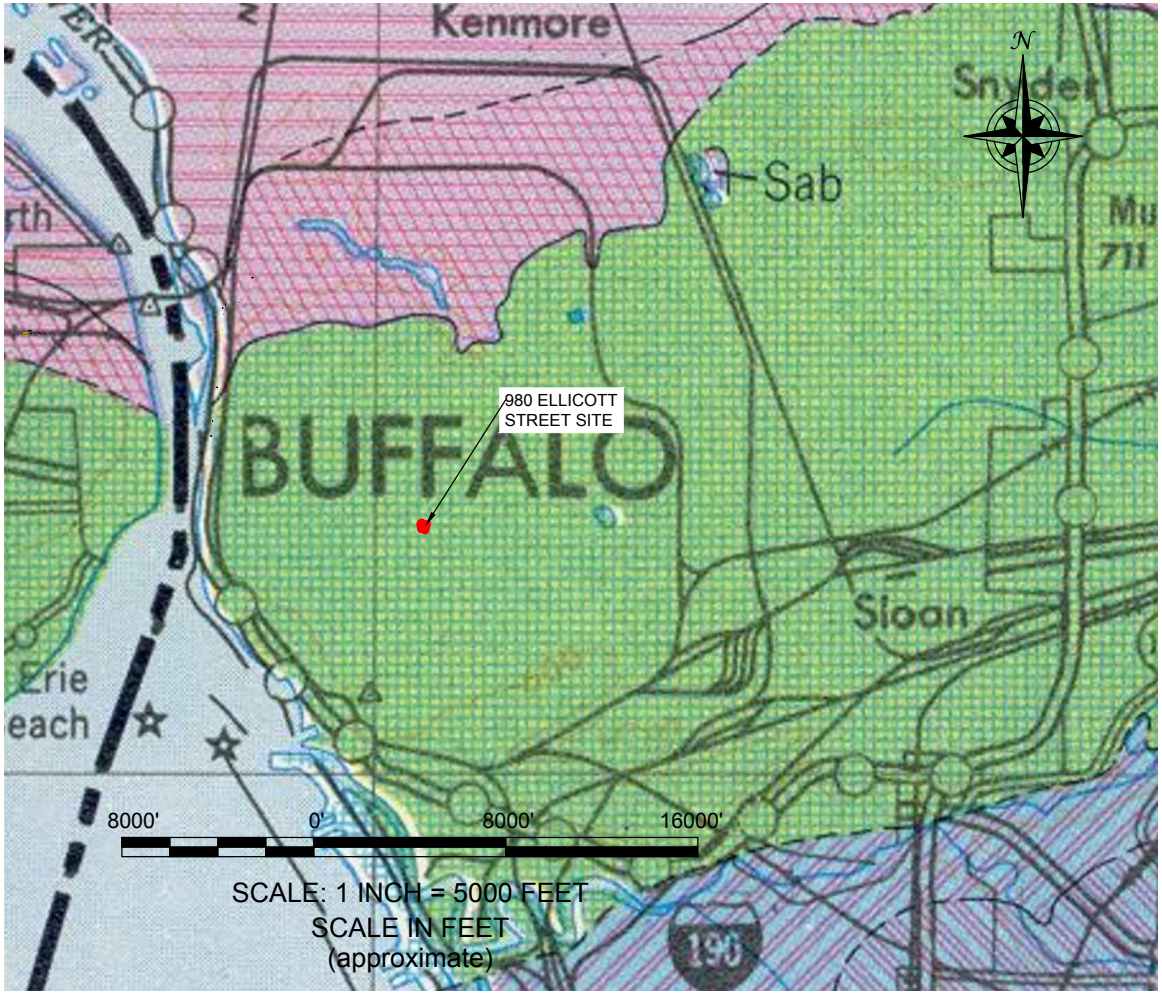
Scv — Camillus, Syracuse, and Vernon Formations—shale, dolostone, salt, and gypsum.

MAP SYMBOLS

Observed or approximately located contact

Conjectural contact; includes projections beneath extensive Quaternary cover and many contacts based on reconnaissance mapping.

Hypothetical contact; projection across unmapped area.



SOURCE: *Image digitized from the Geologic Map of New York, Niagara Sheet, Compiled and Edited by Lawrence V. Rickard and Donald W. Fisher, University of the State of New York, The Sta Education Department, March 1970.*

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PROJECT NO.: 0378-016-002

DATE: FEBRUARY 2017

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BEDROCK GEOLOGIC MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

980 ELLICOTT STREET SITE
BUFFALO, NEW YORK
PREPARED FOR
780 ELLICOTT STREET, LLC

FIGURE 15

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 16; Potential Environmental Justice Areas Map.dwg

Legend

- Potential EJ Areas
- County Boundary
- Waterbodies

For questions about this map contact:
New York State Department of
Environmental Conservation
Office of Environmental Justice
625 Broadway, 14th Floor
Albany, New York 12233-1500
(518) 402-8556
ej@gw.dec.state.ny.us

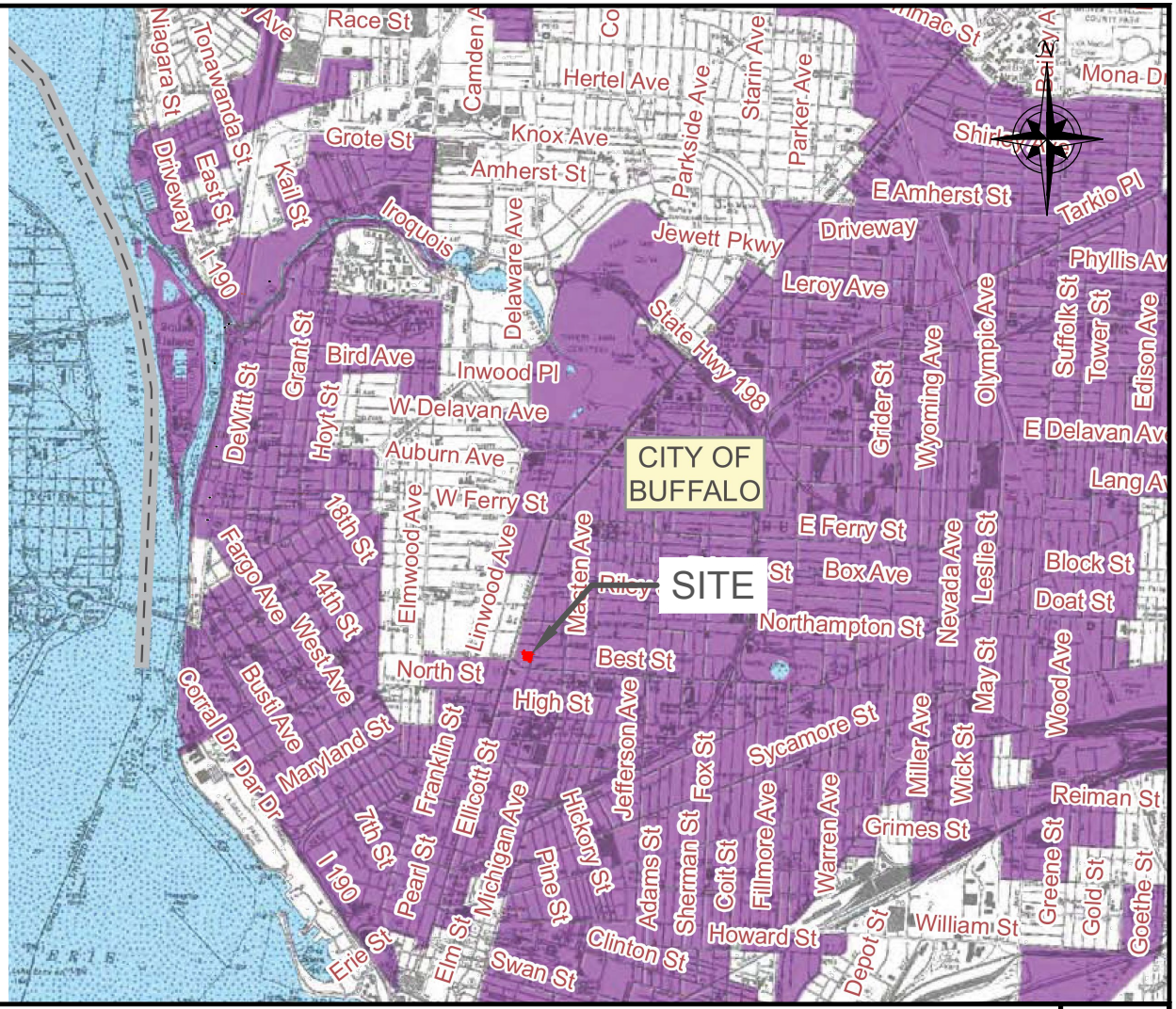
This computer representation has been compiled from supplied data or information that has not been verified by NYSDEC. The data is offered here as a general representation only and is not to be used for commercial purposes without verification by an independent professional qualified to verify such data or information.

NYSDEC does not guarantee the accuracy, completeness, or timeliness of the information shown and shall not be liable for any loss or injury resulting from reliance.

Data Source for Potential Environmental Justice Areas:
U.S. Census Bureau, 2000 U.S. Census

5,000' 0' 5,000' 10,000'

SCALE: 1 INCH = 10,000 FEET
SCALE IN FEET
(approximate)



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PROJECT NO.: 0378-016-002

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POTENTIAL ENVIRONMENTAL JUSTICE AREAS

BROWNFIELD CLEANUP PROGRAM APPLICATION

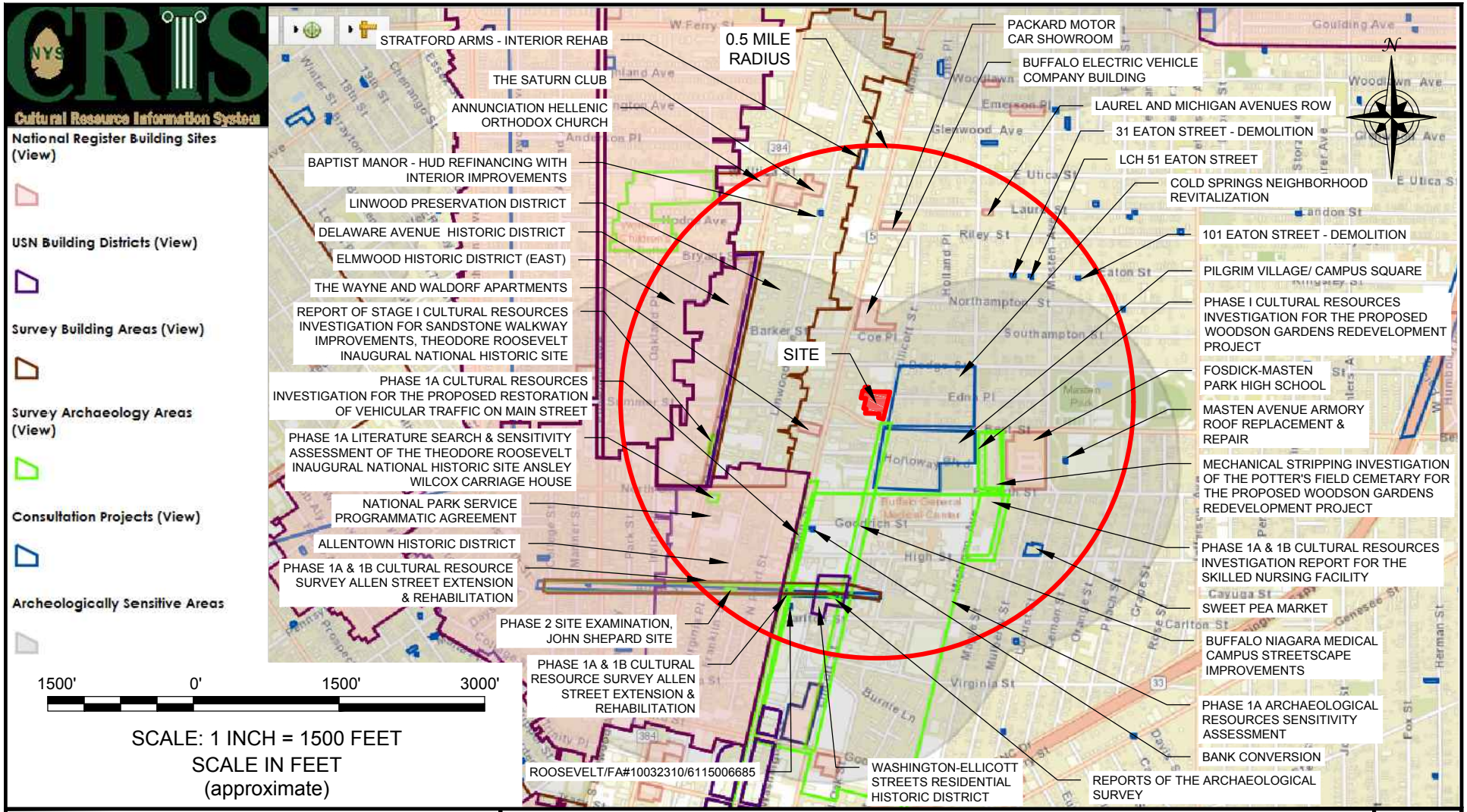
980 ELLICOTT STREET SITE
BUFFALO, NEW YORK

PREPARED FOR

780 ELLICOTT STREET, LLC

FIGURE 16

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 17; Cultural Resources Map.dwg



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PROJECT NO.: 0378-016-002

DATE: FEBRUARY 2017

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CULTURAL RESOURCES MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

980 ELLICOTT STREET SITE
BUFFALO, NEW YORK

PREPARED FOR

780 ELLICOTT STREET, LLC

FIGURE 17

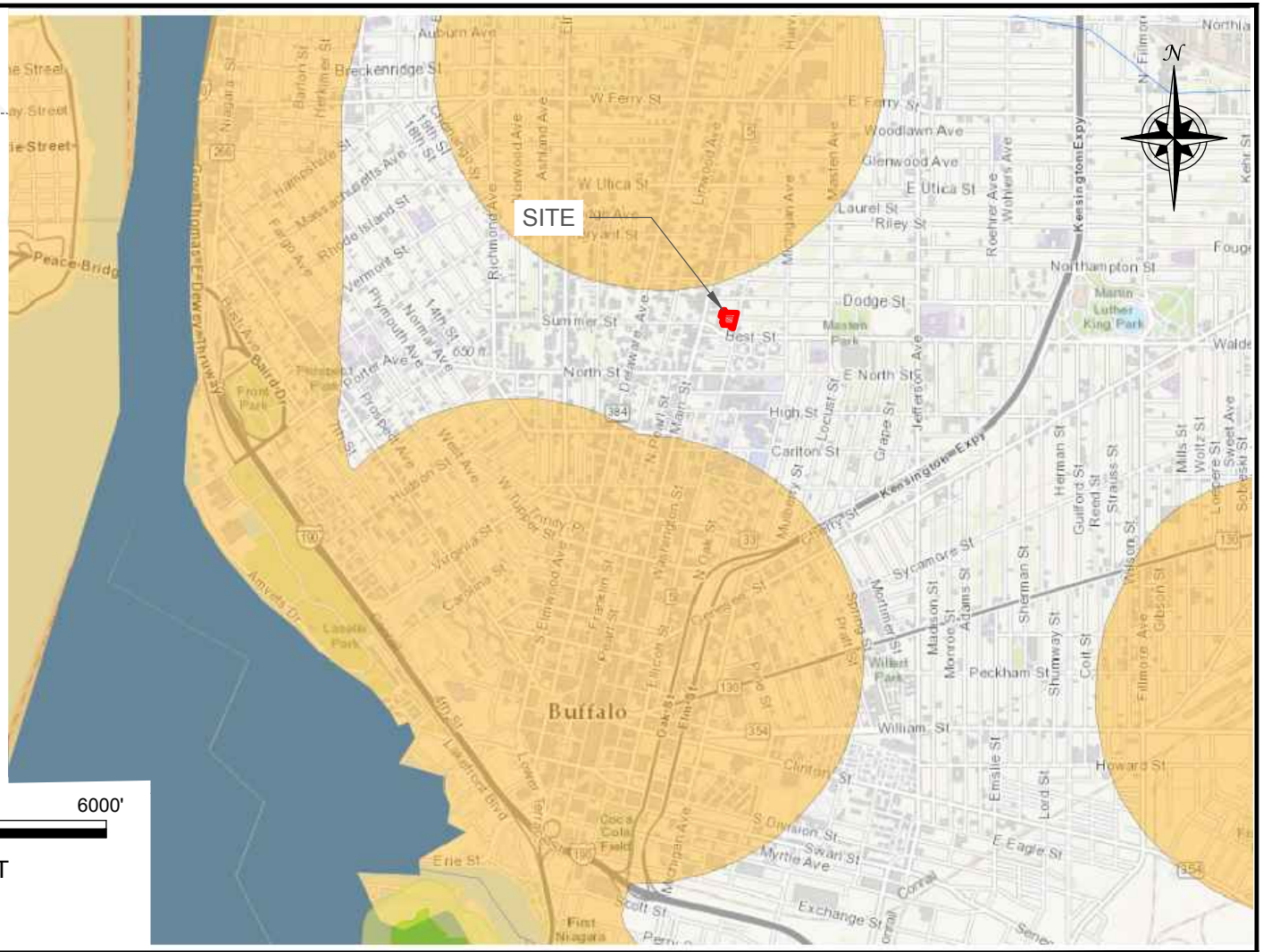
F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 18; Natural Resources Map.dwg

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Environmental Resource Mapper

Layers and Legend

- Unique Geological Features
- Waterbody Classifications for Rivers/Streams
- Waterbody Classifications for Lakes
- State Regulated Freshwater Wetlands
- State Regulated Wetland Checkzone
- Significant Natural Communities
- Natural Communities Near This Location
- Rare Plants and Rare Animals



3000' 0' 3000' 6000'

SCALE: 1 INCH = 3000 FEET
SCALE IN FEET
(approximate)

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TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0378-016-002

DATE: FEBRUARY 2017

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NATURAL RESOURCES MAP

BROWNFIELD CLEANUP PROGRAM APPLICATION

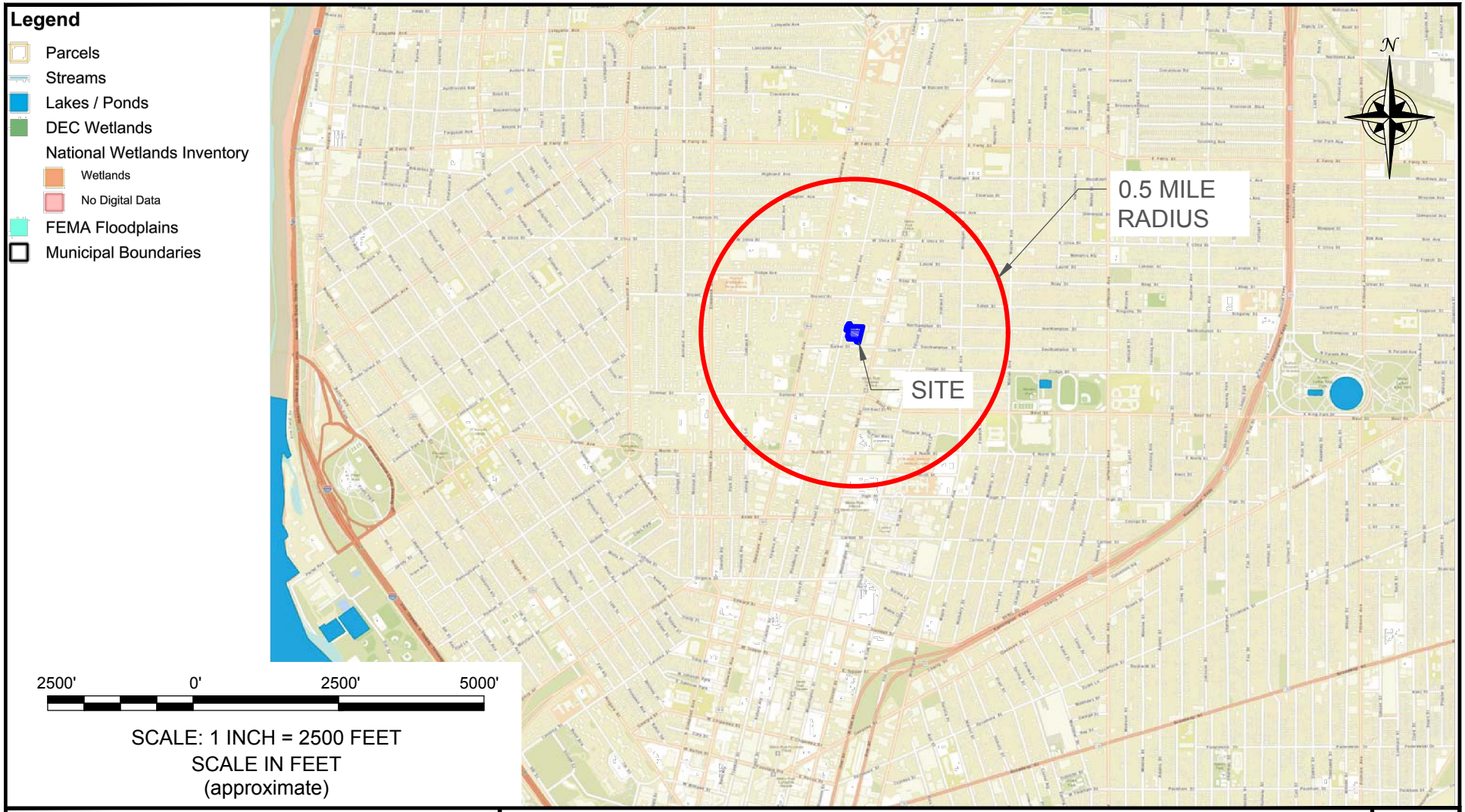
980 ELLICOTT STREET SITE
BUFFALO, NEW YORK

PREPARED FOR

780 ELLICOTT STREET, LLC

FIGURE 18

F:\CAD\Benchmark\780 Ellicott Street LLC\980 Ellicott Street\01 - BCP Application\Figure 19; Regional Wetlands and Floodplains.dwg



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TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0378-016-002

DATE: FEBRUARY 2017

DRAFTED BY: CCB

REGIONAL WETLANDS & FLOODPLAINS

BROWNFIELD CLEANUP PROGRAM APPLICATION

980 ELLICOTT STREET SITE
BUFFALO, NEW YORK

PREPARED FOR

780 ELLICOTT STREET, LLC

FIGURE 19

LIST OF ATTACHMENTS

Description	Section Reference
Attachment 1 – REQUESTER INFORMATION	
NYS DOS Corporation & Business Entity Database	I
Signature Authorization	
Attachment 2 – PROJECT DESCRIPTION	
Project Description	II
Attachment 3 – PROPERTY'S ENVIRONMENTAL HISTORY	
Environmental History	III
Previous Environmental Investigations (Provided Electronically)	
Attachment 4 - PROPERTY INFORMATION	
Parcel Description	IV
Previous Remediation	
Easements & Permits	
Property Description Narrative	
Attachment 5 – PROPERTY OWNER / OPERATOR INFORMATION	
Past Land Uses	VI
Previous / Current Property Owners / Operators	
Attachment 6 – REQUESTOR ELIGIBILITY	
Requestor as a Volunteer Information	VII
Property Eligibility Information	VIII
Eligibility Statement	
Attachment 7 – CONTACT LIST INFORMATION	
Site Contact List	IX
Adjacent Property Owners List	
Document Repository Confirmation	
Attachment 8 – LAND-USE FACTORS	
Site Summary	X
Adjacent Land Use, Development Patterns, & Zoning	
Natural & Cultural Resources	

ATTACHMENT 1

BCP APPLICATION – SECTION I

REQUESTER INFORMATION

780 ELLICOTT STREET, LLC MEMBERS

NYS DEPARTMENT OF STATE CORPORATION & BUSINESS ENTITY DATABASE

SIGNATURE RESOLUTION

ATTACHMENT 1

BCP Application - Section I

REQUESTER INFORMATION

980 Ellicott Street Site

SECTION I – REQUESTER INFORMATION

780 Ellicott Street Members

Mr. Jon Williams is the sole member of 780 Ellicott Street, LLC and has been authorized by the LLC to

NYS Department of State

Division of Corporations

Entity Information

The information contained in this database is current through November 14, 2016.

Selected Entity Name: 780 ELLICOTT STREET, LLC
Selected Entity Status Information

Current Entity Name:	780 ELLICOTT STREET, LLC
DOS ID #:	4918765
Initial DOS Filing Date:	MARCH 24, 2016
County:	ERIE
Jurisdiction:	NEW YORK
Entity Type:	DOMESTIC LIMITED LIABILITY COMPANY
Current Entity Status:	ACTIVE

Selected Entity Address Information

DOS Process (Address to which DOS will mail process if accepted on behalf of the entity)

C/O THE LIMITED LIABILITY COMPANY
333 GANSON STREET
BUFFALO, NEW YORK, 14203

Registered Agent

NONE

This office does not require or maintain information regarding the names and addresses of members or managers of nonprofessional limited liability companies. Professional limited liability companies must include the name(s) and address(es) of the original members, however this

information is not recorded and only available by
viewing the certificate.

***Stock Information**

# of Shares	Type of Stock	$ Value per Share
No Information Available		

*Stock information is applicable to domestic business corporations.

Name History

Filing Date	Name Type	Entity Name
MAR 24, 2016	Actual	780 ELLICOTT STREET, LLC

A **Fictitious** name must be used when the **Actual** name of a foreign entity is unavailable for use in New York State. The entity must use the fictitious name when conducting its activities or business in New York State.

NOTE: New York State does not issue organizational identification numbers.

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RESOLVED, that Jon M. Williams, Managing Member of 780 Ellicott Street, LLC (Company) be hereby authorized and empowered to sign a Brownfield Cleanup Agreement (BCA) for property referred to as the 980 Ellicott Street Site with New York State Department of Environmental Conservation (NYSDEC), in the name of and on behalf of this Company.

The undersigned hereby certify that he is the duly qualified Managing Member and custodian of the books and records of 780 Ellicott Street, LLC, a corporation duly formed pursuant to the laws of the State of New York, and that the foregoing is a true record of a resolution duly adopted by the Members at a meeting of 780 Ellicott Street, LLC and that said meeting was held in accordance with state law and the Bylaws of the above-named Corporation on March 1, 2017, and that said resolution is now in full force and effect without modification or rescission.

IN WITNESS WHEREOF, I have executed my name as Member of the above-named Company this 29th day of March, 2017.

(Signature)	Jon M. Williams (Print Name)	Managing Member (Title)
(Signature)	(Print Name)	Member (Title)
(Signature)	(Print Name)	Member (Title)
(Signature)	(Print Name)	Member (Title)

ACKNOWLEDGMENT

(STATE OF NEW YORK)

(COUNTY OF ERIE)

On the 29th day of March in the year 2017, before me, the undersigned, a Notary Public in and for said State, personally appeared Jon M. Williams, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon the behalf of which the individual(s) acted, executed the instrument.

Nancy L. Mazur
Notary Public

NANCY L. MAZUR
Notary Public, State of New York
Qualified in Erie County No. 1765930
My Commission Expires 11 30, 2017

ATTACHMENT 2

BCP APPLICATION – SECTION II

PROJECT DESCRIPTION

PROJECT DESCRIPTION

ATTACHMENT 2

BCP Application - Section II

PROJECT DESCRIPTION

980 Ellicott Street Site

SECTION II – PROJECT DESCRIPTION

Project Description & Schedule

The subject property (hereinafter, the "Project Site" or the "Site") subject to the BCP application is one parcel of approximately 1.35 acres, located in a highly developed mixed residential and commercial area of the City of Buffalo, Erie County, New York (see Figures 1 and 2). A portion of the proposed BCP Site is currently a Class 4 Inactive Hazardous Waste Disposal Site identified as the Former Osmose Superfund Site (#915143) (hereinafter, the "Osmose Area"). The Osmose Area is approximately 0.5 acres and is inclusive of the asphalt parking area only (see Figure 3A). Investigation (see Figure 3B) and remediation (see Figure 3C) of the Osmose Area was performed in accordance with a March 30, 1999 Order on Consent #B9-0314-90-01 and is discussed further in Attachment 3. Based on conversations with the NYSDEC, the Osmose Area will be included in the site-wide Remedial Investigation (and remediation, as necessary) to ensure compliance with the anticipated end-use redevelopment.

Upon successful acceptance into the BCP, the Applicant plans to demolish the central portion of the main building and rehabilitate the remaining existing structures to serve as commercial offices although final plans have not been confirmed. The Former Pilot Plant building (southeast corner) is also slated for demolition (see Figure 3B). The Applicant, upon acceptance into the BCP, is willing to complete the required investigation and remediation, and redevelop the contaminated Project Site, including the Osmose Area. The preliminary Site Redevelopment Plan estimates capital investments of approximately $4 to 7 MM to investigate, remediate, and redevelop the Site. A Preliminary Project Schedule is presented on Figure 4.

Planned reuse of the site as a commercial development is consistent with current and contemplated future zoning as an Employment Area presented in the City's Green Code.

ATTACHMENT 3

BCP APPLICATION – SECTION III

PROPERTY'S ENVIRONMENTAL HISTORY

ENVIRONMENTAL HISTORY

PREVIOUS ENVIRONMENTAL INVESTIGATIONS (*PROVIDED ELECTRONICALLY*)

ATTACHMENT 3

BCP Application – Section III

PROPERTY'S ENVIRONMENTAL HISTORY

980 Ellicott Street Site

SECTION III – ENVIRONMENTAL HISTORY

As stated in Attachment 2, the Site subject to the BCP application is one parcel of approximately 1.35 acres (herein, the "Site"). A portion of the proposed BCP Site is currently a Class 4 Inactive Hazardous Waste Disposal Site identified as the Former Osmose Superfund Site (#915143) (herein, the "Osmose Area"). The Osmose Area is approximately 0.5 acres and is inclusive of the asphalt parking area only (see Figure 3A).

The Site operated as a manufacturing facility from 1951 until May 2015. During that period, manufacturing at the Site included the formulation/production of a variety of preservatives used in treatment of lumber and wood products. According to a recent Phase I Environmental Site Assessment (Ref. 1), portions of the Site also historically included automotive repair facilities, coal storage, and residential buildings (see Attachment 5). This Attachment presents the NYSDEC Spills, environmental investigations, and remediation activities performed at the Site, including the Osmose Area. Soil and groundwater impacts reported in the Osmose Area of the Site have also been identified in other areas of the Site, outside the Osmose Area, during a 2017 Phase II Investigation. As such, post-remedial soil and groundwater impacts remaining at concentrations above the Commercial Soil Cleanup Objectives (CSCOs) are also discussed in this Attachment.

NYSDEC Spills

Six Historic Recognized Environmental Conditions (RECs) were identified in the Phase I for the Site. The RECs were associated with six separate spills identified in the NYS SPILLS and LTANKS database. Based on the database information, all six spills were remediated and classified as "closed" by the NYSDEC. The six NYSDEC Spill files associated with the Site include:

- Spill No. 8903194, dated June 26, 1989, involved three leaking underground storage tanks (USTs) (one 10,000-gallon UST and two 12,000-gallon USTs). The three USTs were removed and cleanup standards were met. The Spill was classified as "closed" by the NYSDEC on September 12, 1989.

- Spill No. 9505668, dated August 7, 1995, involved the release of No. 2 fuel oil caused by hose failure on a tanker truck in the parking lot area. Cleanup standards were met and the Spill was classified as "closed" by the NYSDEC on August 11, 1995.
- Spill No. 9608362, dated October 4, 1996, involved a leaking propane cylinder. Cleanup standards were met and the Spill was classified as "closed" by the NYSDEC on October 11, 1996.
- Spill No. 9975243, dated June 28, 1999, involved the presence of contaminated soil, discovered while removing an unregistered 4,000-gallon aboveground storage tank (AST). Soil was remediated to meet cleanup standards and the Spill was classified as "closed" by the NYSDEC on August 17, 1999.
- Spill No. 0750740, dated August 17, 2007, involved the release of an unknown material to a secondary containment system. The spilled material was removed and cleanup standards were met. The Spill was classified as "closed" by the NYSDEC on August 24, 2007.
- Spill No. 0750741, dated August 17, 2007, involved the release of a copper/naphthalene and No. 2 fuel oil mixture from a leaking 12,000-gallon AST within the AST tank room. Cleanup standards were met and the Spill was classified as "closed" by the NYSDEC on January 15, 2008.

Osmose Area Previous Investigations/Remedial Actions Summary

In **June 1989** as part of Osmose's Storage System Management (SSM) program, a remedial strategy was implemented to characterize potential site contamination associated with three (3) USTs located in the parking lot area south of the Site building (see Figure 3B): Tank No. 1 was approximately 10,000 gallons used to store mineral spirits and other hydrocarbons used in the manufacturing process (1984 to 1986), an isopropyl alcohol and diacetone mixture (1964 to 1984), and coal tar (pre-1964); Tank No. 2 was approximately 12,000 gallons used to store No. 2 fuel oil; and, Tank No. 3 was approximately 12,000 gallons used to store creosote (Ref. 2). Subsurface characterization included installation of seven shallow overburden monitoring wells (MW-1 through MW-7) in the vicinity of the USTs (see Figure 3B) and soil and groundwater sample collection. Impacts to soil and groundwater were detected, including the presence of light non-aqueous phase liquid (LNAPL) hydrocarbons, and elevated concentrations of semi-volatile compounds (SVOCs) and volatile organic

compounds (VOCs) in both the soils and groundwater (Ref. 2). Detected impacts and presence of LNAPL indicated there had been releases associated with the three (3) USTs.

In **August 1989**, the USTs were taken out of service, drained of their contents, and removed from the Site (Ref. 3). In **October 1989**, Osmose was notified by the NYSDEC that the Site would be included in the New York State Registry of Inactive Hazardous Waste Disposal Sites; classified as "2A" (defined as a site that has inadequate data to assess threats to the public health and environment) and assigned Site Number 915143. As such, an Administrative Order on Consent (#B9-0314-90-01) (Ref. 4) was issued on **February 20, 1990** with the following attachments:

- Interim Remedial Measure (IRM) Work Plan to bio-treat impacted soil from UST removal activities (Appendix A)
- Site Clean-up Levels (Appendix B)
- Site Investigation Work Plan (Appendix C)
- Modifications/Revisions (if any) (Appendix D)
- IRM Report (Appendix E)
- Site Report (Appendix F)

In **March 1990**, approximately 700 cubic yards (CYs) of impacted soil from the UST area was removed and temporarily staged off-site and south of the UST area (see Figure 3C) prior to on-Site Biocell treatment as an IRM. The tank excavation and Biocell IRM measured approximately 45 feet long by 45 feet wide by 11 feet deep. The Biocell IRM operated until 1996 and was not a successful remedy. Based on analytical results of a **June 1993** off-site supplemental surface soil investigation performed within the temporary staging area and at the request of the NYSDEC, a remedial excavation of approximately 15 to 18 feet wide, to a depth of six to twelve inches along the southern boundary fence, was performed in **November 1994**. Approximately 37 tons of soil was excavated and placed directly into trucks and hauled to an approved industrial landfill operated by BFI Waste Systems in Niagara Falls, New York.

ATTACHMENT 3

BCP Application – Section III

PROPERTY'S ENVIRONMENTAL HISTORY

980 Ellicott Street Site

In response to the February 1990 Order, Osmose prepared Work Plans and performed several investigations to: identify and delineate the extent of contamination in soil and groundwater at the Osmose facility, assess the potential risks to human health and the environment, and develop an appropriate remedial strategy to mitigate those impacts. Investigation findings were summarized in the following reports:

- Subsurface Investigation Report, June 1991 (Ref. 5) – work performed August and October 1990
- Supplemental Investigation Report, July 1992 (Ref. 6) – work performed March to April 1992
- Supplemental Investigation (Phase II) Report, August 1993 (Ref. 7) – work performed November/December 1992 and January/February/June 1993

Investigation details and findings of these three reports are summarized in the *Previous Investigation Findings* section later in this Attachment.

In **April 1994**, an Ozone Injection Feasibility Study report was submitted to the NYSDEC (Ref. 8), which recommended source removal, groundwater collection, in situ chemical treatment (ozone injection), and monitoring as the preferred remedial alternative. As a result of these investigations, a new Administrative Order on Consent (#B9-0314-90-01) (Ref. 9) was issued on **April 20, 1995** that re-classified the Site as a Class 2 (a significant threat to the public health or environment – action required) with the following attachments:

- Implement the NYSDEC-approved IRM Work Plan to upgrade the existing extraction and treatment system for contaminated groundwater and LNAPL in groundwater (Appendix A)
- Develop and perform the NYSDEC-approved Feasibility Study (Appendix B)
- Completed IRM Report (Appendix C)
- Completed Feasibility Study (Appendix D)

In **January 1997**, the NYSDEC issued a Record of Decision (ROD) approving the recommended remedial alternative. Based on results of the Site Investigation/Feasibility Study and the criteria identified for evaluation of alternatives, the NYSDEC selected a

remedy consisting of removal of LNAPL followed by ozone treatment of contaminated soils. The components of the remedy presented in the ROD included:

- Recovery of Light Non-Aqueous Phase Liquids (LNAPL)
- Incineration of LNAPL at an off-Site facility
- Treatment of impacted Site soils with in situ injection of ozone
- Monitoring of groundwater for compliance
- Monitoring of the sanitary sewer which is located off-site and beneath Ellicott Street
- Monitoring of ambient air during treatment activities
- A deed restriction for the property preventing contact with subsurface soils and residential development of the area left with residual contamination

In **September 1998**, a final Remedial Design Report (Ref. 11) was submitted to the NYSDEC for the design of a treatment system that would encapsulate all applicable standards, criteria, and appropriate environmental and public health guidance requirements identified in the ROD. The remedial design was approved by the NYSDEC and incorporated as part of a new Administrative Order on Consent (Index # B9-0314-90-01) dated **March 30, 1999** (Ref. 12) that included the following attachments:

- Map of the Site (Appendix A)
- ROD (Appendix B)
- NYSDEC-approved Remedial Design (Appendix C)

The goal of this Order was for Osmose to develop and implement an inactive hazardous waste disposal site remedial program for the Site in accordance with the ROD. Remedial construction was completed in **early 2000.** Operation of the ozone injection system, soil vapor extraction, and LNAPL groundwater collection/recovery system began in **late 2000**.

Semi-annual groundwater monitoring and reporting was conducted at the Site in accordance with requirements of the March 1999 Consent Order. The applicable soil and groundwater

standards and guidance were presented in the ROD: Tables 1 and 2 for Subsurface Soil and Groundwater compliance, respectively. Six monitoring wells were sampled for VOCs and SVOCs as specified in the ROD (MW-5, MW-11, MW-13, MW-17, MW-24, and MW-28, shown on Figure 3B).

To assess the effectiveness of the ozone injection and SVE treatment systems on the Osmose Area soils, two Supplemental Subsurface Soil Assessment drilling events were performed (Refs. 13 and 14). Twelve subsurface soil samples from eight borings were collected in **September 2004** and 77 subsurface soil samples from 26 borings were collected in **March 2005**. Collected samples were analyzed for PAHs (Method 8270). Laboratory analysis indicated that subsurface soil polycyclic aromatic hydrocarbon (PAH) concentrations were below the Selected Cleanup Level of 473 mg/kg for total PAHs as stated in the March 1999 Consent Order. Based on the results of these investigations, Osmose received approval from the NYSDEC in **July 2005** to shut down the ozone injection and soil vapor extraction systems as Site soil remediation was deemed to have been successfully achieved.

In **December 2008**, the NYSDEC approved the request to discontinue the operation of the oil/water separator associated with LNAPL collection. Collection and activated carbon treatment of Site groundwater continued.

On **August 26, 2015**, Osmose received approval from the NYSDEC, subject to certain conditions, for the shut down and decommissioning of the Site groundwater collection and treatment system. The conditional-approval by the Department includes Department review (and approval) of the following: the 2016 Periodic Review Report (PRR) and IC/EC Certification; post-shut down semi-annual groundwater monitoring and reporting for two years (2016 and 2017) whereby groundwater flow direction and LNAPL observations will be evaluated; and, submittal of a Site Management Plan (SMP). Osmose submitted a Draft SMP in **September 2015** and NYSDEC SMP comments were received **December 2015**. NYSDEC review and approval of the 2016 PRR and Final SMP including two of the four semi-annual groundwater monitoring events for 2017 are pending.

Osmose Area Previous Investigation Findings

A series of investigations and IRMs were performed in conjunction with, and following the discovery of, UST releases to characterize the nature and extent of contamination for the Osmose Area of the Site. In summary, previous investigations identified the presence of PAHs and VOCs as the Constituents of Primary Concern (COPCs) in soil/fill and groundwater within the southern parking lot area of the Site, and in the groundwater immediately east of and adjacent to the Site in the Ellicott Street right-of-way.

Pre-UST Removal Assessment – June to August 1989

From June 20-23, 1989, seven (7) monitoring wells (MW-1 thru MW-7) were installed to characterize the Site in and around the "to be removed" UST Area and to determine if any releases had occurred. Well construction details are presented below.

MONITORING WELL ID	SCREENED INTERVAL (fbgs)	Screen Length (feet)
MW-1	5.0 – 25.0	20.0
MW-2	5.0 – 25.0	20.0
MW-3	3.0 – 18.0	15.0
MW-4	2.0 – 12.0	10.0
MW-5	3.0 – 18.0	15.0
MW-6	2.0 – 12.0	10.0
MW-7	3.0 – 18.0	15.0

- During gauging and well development activities on August 14, 1989, phase separated product was detected in wells MW-3, MW-5, and MW-7 and reported to the NYSDEC. Each well was located downgradient of the UST Area.
- One soil sample representing the highest PID field scan from each monitoring well (MW-1 thru MW-7) was collected for Total Petroleum Hydrocarbon (TPH) analysis (USEPA Method 503D & E). Results indicate that petroleum hydrocarbons were present in all the soil samples in concentrations ranging from 0.2 to 4.8 mg/kg. Soil samples from MW-2 and MW-3 were shown to contain the highest concentrations of TPH, while MW-4 and MW-5 contained the lowest concentrations.
- One composite sample was collected from the three most impacted well borings (MW-2, MW-3, and MW-4) for VOCs (Method 5030/8240), SVOCs (Method

8270), PCBs and pesticides (Method 8080), and Priority Pollutant metals (ICP) analysis.

- Non-detectable concentrations were found for PCBs and pesticides (diluted by a factor of 5) and also for the volatile organics (no dilution) with the exception of low concentrations of toluene (0.0014 mg/kg), ethylbenzene (0.0012 mg/kg), total xylenes (0.014 mg/kg), and styrene (0.0061 mg/kg).
- SVOC results (diluted by a factor of 20) indicate that elevated concentrations of numerous polynuclear aromatics (PNAs) associated with brushing grade creosote were present in the soils: acenaphthene (380 mg/kg), dibenzofuran (210 mg/kg), fluorene (220 mg/kg), phenanthrene (380 mg/kg), anthracene (78 mg/kg), fluoranthene (150 mg/kg), pyrene (120 mg/kg), benzo(a)anthracene (35 mg/kg), chrysene (35 mg/kg), benzo(b)fluoranthene (18 mg/kg), benzo(k)fluoranthene (13 mg/kg), benzo(a)pyrene (14 mg/kg), naphthalene (590 mg/kg), 2-methylnaphthalene (630 mg/kg), and acenaphthylene (11 mg/kg).
- Pentachlorophenol was reported as non-detect at a method detection limit of 1.65 mg/kg.
- Laboratory results indicate that for all of the metals analyzed, elevated concentrations do not exist; antimony (<24 mg/kg), arsenic (1.9 mg/kg), beryllium (<1.0 mg/kg), cadmium (<1.2 mg/kg), chromium (6.7 mg/kg), copper (14 mg/kg), lead (24 mg/kg), mercury (<0.05 mg/kg), nickel (12 mg/kg), selenium (<1.0 mg/kg), silver (<1.0 mg/kg), thallium (<36 mg/kg), and zinc (74 mg/kg).

- One groundwater sample was collected from well MW-7 for VOC (Method 624) and SVOC (Method 8270) analysis.
  - Of the 32 volatile compounds analyzed, all were non-detectable with the exception of low concentrations of benzene, toluene, and total xylenes. This data correlates well with the volatiles analysis completed on the composited soil sample. It is worth noting that the water sample had to be diluted due to the presence of non-target compounds.
  - Sixty-eight semi-volatile compounds are analyzed for by EPA Method 625. Of these compounds, all were at non-detectable, or below detectable limits, with the exception of 2-Methylnapthalene which was present at 3.2

mg/kg. Here again, the water sample was diluted due to the presence of non-target compounds.

UST Removal Activities – August 1989

- Contaminated soils were observed from 3-4 fbgs down to water table
- Excavation measured approximately 45 feet long, 42 feet wide, and 11 feet deep
- Grossly impacted soil was excavated to the water table per DEC instructions, which was approximately 11 fbgs
- Approximately 700 CYs of grossly contaminated soil was removed and temporarily placed on and covered with poly sheeting and sampled
- Confirmation samples were collected beneath each end of each UST
- Biocell construction materials were used to backfill the excavation with an asphalt cover (see Biocell summary below)
- UST Summary
    - Tank #1 – southernmost UST (10,000 gallon) (10' D x 17' L)
    - Tank #2 – middle UST (12,000 gallon) (8' D x 31.5' L)
    - Tank #3 – northernmost UST (12,000 gallon) (8' D x 31.5' L)
- Monitoring wells MW-1, 2, 4, and 6 were decommissioned as a result of their proximity to the UST excavation

Bioremediation (Biocell) In-Situ Treatment IRM – March 1990

- The Biocell IRM (approximately 45x42x11 feet) was constructed to remediate approximately 700 CYs of excavated soil during removal of the decommissioned USTs
- Two layers of 30-mil and 40-mil HDPE liner
- Impacted soil placed in lifts of approximately 18-24 inches
- Perforated pipes installed between lifts for introduction of nutrients and air for the micro-organisms
- Biocell completed with a liner and paved over with asphalt
- Five sample boxes installed to collect soil samples from the Biocell to monitor progress

- Continuous air supplied using an air blower
- Performance determined by population increase of micro-organisms in the cell measured by an increase in carbon dioxide concentration in the effluent gases and testing of Biocell soil for contaminants of concern
- Routine monitoring conducted
- First two years showed a steady decrease in PAH concentrations
- After two years, a sudden increase in PAH concentrations was observed; suspected that Biocell liner had failed allowing chemicals to enter the cell
- Bioremediation continued until 1996. In 2000, remediation by ozonation was implemented

Subsurface Investigation Report – June 28, 1991

Subsurface Investigation elements included the following:

- ***Modified Soil Gas Survey (SGS)*** – On August 23-25, 1990, soil gas data was collected from 17 vapor extraction points (VP-1 through VP-17) located in the vicinity of the former tank pit area, along the boundaries of the Osmose property and in the right-of-ways bordering Ellicott Street. VPs were located along the upgradient (VP-15, VP-16, & VP-17) and downgradient (VP-5, VP-6, & VP-7) boundaries of the site. VPs were sampled from a depth of 3 fbgs using carbon tubes for BTEX and PAH laboratory analysis.
- ***Surface Soil Investigation*** - At each soil vapor extraction point, a grab sample of soil was obtained from the surface. Based on soil gas survey results, six surface soil samples were analyzed for Priority Pollutant Metals (PPM). Three (3) of these soil samples were analyzed from an area downgradient of the presumed source area (VP-5, 8 and 13) and three (3) soil samples were taken from areas upgradient from the presumed source area (VP-15, 16, and 17).
- ***Soil Borings/Monitoring Well Installation*** – Seven (7) soil borings were installed from October 1 through October 16, 1990. One (1) upgradient of the former tank pit (MW-8), three (3) downgradient of the former tank pit area (MW-9, MW-10, and MW-11), two (2) borings installed as a duster located immediately downgradient of the former tank pit area (CW-1 & CW-2), and one (1) soil boring within the bedding of an existing storm sewer line (SB-1).

- MW-8, 9, 10, and 11: installed into the sand and silt unit above a clay aquitard a minimum of 25 fbgs, below detectable soil impacts
- CW-1: installed above bedrock (63 fbgs)
- CW-2: installed in the upper clay unit
- SB-1: installed within sewer bedding beneath Ellicott Street

- ***Subsurface Soil Sampling*** – summary table below

Well Location	Sample Depth (feet)	ANALYSES		
		BTEX EPA 8020	PAH EPA 8310	PPM
MW-8	2.0 – 4.0	X	MW-8	2.0 – 4.0
	16.0 – 18.0	X		16.0 – 18.0
MW-9	4.0 – 6.0	X	MW-9	4.0 – 6.0
	10.0 – 12.0	X		10.0 – 12.0
	30.0 – 32.0	X		30.0 – 32.0
MW-10	6.0 – 8.0	X	MW-10	6.0 – 8.0
	10.0 – 12.0	X		10.0 – 12.0
MW-11	4.0 – 6.0	X	MW-11	4.0 – 6.0
	10.0 – 12.0	X		10.0 – 12.0
CW-1	6.0 – 8.0	X	CW-1	6.0 – 8.0
	8.0 – 10.0	X		8.0 – 10.0
	30.0 – 32.0	X		30.0 – 32.0
	62.0 – 64.0	X		62.0 – 64.0
CW-2	6.0 – 8.0	X	CW-2	6.0 – 8.0
SB-1	4.0 – 6.0	X	SB-1	4.0 – 6.0
VP-5	0.0 – 0.5		VP-5	0.0 – 0.5
VP-8	0.0 – 0.5		VP-8	0.0 – 0.5
VP-13	0.0 – 0.5		VP-13	0.0 – 0.5
VP-15	0.0 – 0.5		VP-15	0.0 – 0.5
VP-16	0.0 – 0.5		VP-16	0.0 – 0.5
VP-17	0.0 – 0.5		VP-17	0.0 – 0.5

- ***Monitoring Well Installation*** – each flush-mount well was constructed as 2-inch diameter fiberglass reinforced epoxy (FRE) well screen and riser (chemically resistant to former UST contents). Well construction details are summarized below:

MONITORING WELL ID	SCREENED INTERVAL (fbgs)	Screen Length (feet)
MW-8	16.0 – 21.0	5.0
MW-9	8.0 – 28.0	20.0
MW-10	11.0 – 25.0	14.0
MW-11	9.0 – 16.0	7.0
CW-1	57.0 – 62.0	5.0
CW-2	1.5 – 5.5	4.0

- ***Groundwater Sampling*** – two events were performed where all five wells were sampled.
  - November 9, 1990 for BTEX (EPA 602), PAHs (EPA 610), & hardness

- January 10-11, 1991 for VOCs (EPA 8020), PAHs (EPA 8310), Hardness, Halocarbons (EPA 8010), & Total Metals

- **Summary of Analytical Results:**
  - Modified soil gas survey techniques indicated laboratory measured non-detectable vapor concentrations existed both on- and off- site.
  - Inorganic compounds (metals) exist within typical published concentrations in surface and subsurface soils with the exception of zinc. In surface soils upgradient of the Osmose site, and lead, in surface soils at several upgradient (background) and on-site locations.
  - Analysis for semi-volatile organic compounds indicated polynuclear aromatic hydrocarbons (**PAHs**) were the predominant compounds detected in soil which were present at each Biocell and on-site (non-Biocell) locations. **Several PAHs in subsurface soil exceed the CSCOs (CW-1, CW-2, SB-1, MW-8, MW-9, MW-10, and MW-11).**
  - The mobility of PAHs in groundwater is low as reflected in the low solubility and high organic carbon/water partition coefficient (Koc) values. The organic carbon/water partition coefficient (Koc) indicates the tendency of a compound to adsorb onto organic particles in the soil. Log Koc values greater than zero indicate that a compound will reside in the soil at greater concentrations than in the groundwater. A good correlation between the relative complexity and the solubility and Koc values exists. As the complexity of the PAH compound increases, its Koc value increases and solubility decreases. Evaluation of these properties concludes that, with the exception of acenaphthene, the PAHs detected at this site were highly absorbed to soil and would only be soluble to low concentrations in the groundwater. This conceptual model correlates well with the distribution of PAHs found on site.
  - **Hydrocarbon compounds show a significant decrease in concentration with depth.** In well CW-1, a slight increase in total PAH was detected between 62 and 64 feet below grade. The highest concentrations of PAH compounds were located at or just below the groundwater surface (6' - 10' below grade) with the exception of the discrete area around monitor well MW-8 where the highest PAH concentrations were located at 2' - 4' below grade.
  - Dissolved phase BTEX (MW-9 and CW-1) and PAHs (MW-8, MW-10, MW-11, and CW-1) at concentrations exceeding GWQSs/GVs. Comparison of the

dissolved PAH concentrations to maximum solubility concentrations shows that **most of the PAH analyses are present at less than 5 % of saturation concentrations**. Anthracene, Benzo(b)fluoranthene, and Benzo(k)fluoranthene were present at 8%, 18% and 20% of their saturation concentrations, respectively, for the first sampling event. Benzo(g,h,i)perylene was present at 0.23 ug/L or 88% of saturation. **None of the PAH analyses detected in the second groundwater sampling event were detected above 5% of saturation concentrations.**

- Hardness ranged from 290 (MW-8) to 1,100 mg CaCO3/L (CW-1).
- No pesticides or PCBs were detected on- or off-site.
- **Separate phase hydrocarbons (LNAPL and DNAPL) were encountered in wells MW-3, MW-5, and MW-7.** Estimated volume of **LNAPL** was calculated to be between 75 and 150 gallons. Specific gravity of LNAPL was calculated to be 0.9474 and 0.9878 at wells MW-3 and MW-7, respectively. Volume and subsurface distribution of DNAPL could not be calculated. Insufficient data existed to accurately calculate the quantities (pounds/gallons) of PAHs adsorbed to the soils, however, a rough calculation indicated approximately 100-300 gallons could have existed within the soil matrix.

- **Recommendations:** Based upon the combined results of the Subsurface Investigation and the Risk Assessment, the following site remedial actions were proposed:
  - **Biocell Soils:** Operation of the Biocell until total PAH concentrations in soils are at, or below 473 mg/kg (Human Health Risk Assessment target).
  - **Off-site soils:** No remedial action.
  - **Groundwater:** No remedial action; quarterly monitoring. Installation of 1 overburden monitor well to monitor upgradient water quality and provide additional soils information in the area west of MW-8.
  - **On-site Soils:** Installation of one shallow boring to confirm the disassociation of PAHs found at shallow depths at an upgradient location of the site (MW-8), with the former tank pit area; delineation and investigation of potential remedial options.
  - **Separate Phase:** Recovery of intermittent product layers; installation of one monitor well to delineate downgradient extent.

Supplemental Investigation Report – July 28, 1992

Supplemental Investigation elements included the following:

- **Soil Borings/Monitoring Well Installation** – Four (4) soil borings were installed from March 17-20, 1992. Three (3) borings were completed as monitoring wells; one upgradient (MW-12) and two off-site on the east side of Ellicott Street (MW-13 and MW-14). The fourth boring (SB-2) was advanced to delineate the extent of near-surface adsorbed-phase PAHs previously detected in the vicinity of well MW-8.
    - MW-12 was installed as close to the western property boundary as possible to delineate the upgradient extent of adsorbed PAHs in the vicinity of upgradient well MW-8 and to document upgradient groundwater-quality. The Niagara Frontier Transit Authority (NFTA), owner of the adjacent parcel to the west of the Osmose Site, refused access which precluded installation at the intended upgradient location. Well MW-12 was installed to 20 fbgs within the same geologic formation of adjacent well MW-8.
    - MW-13 was located in the sidewalk along the west side of Ellicott Street in order to help delineate the downgradient extent of the separate-phase plume to a depth of 14 fbgs. Depth to water gauging of nearby well MW-3 was used so that 1 to 4 feet of well screen were always above the water table.
    - MW-14 was installed in the right-of-way on the east side of Ellicott Street, approximately 80 feet north of MW-11. This deep monitoring well penetrated the unconsolidated overburden to the top of bedrock approximately 63 fbgs. MW-14 was screened to sample groundwater immediately above the bedrock.
    - SB-2 was advanced using telescoping augers to prevent smearing of impacts above 5 fbgs and through the confining clay layer to a target depth of 14 fbgs.
- **Subsurface Soil Sampling** – From each boring, samples from above and below the water table that yielded the highest PID readings were submitted for laboratory analysis per the summary table below:

Well Location	Sample Depth	ANALYSES	
		VOCs EPA 8020	PAHs EPA 8310
SB-2	2 – 4 feet	X	X
	8 – 10 feet	X	X
MW-12	6 – 8 feet	X	X
	18 – 20 feet	X	X
MW-13	6 – 8 feet	X	X
	8 – 10 feet	X	X
MW-14	10 – 12 feet	X	X
	61 – 63 feet	X	X

SS-1	0.25 – 0.5 feet		X
SS-2	0.25 – 0.5 feet		X
SS-3	0.25 – 0.5 feet		X

- **Surface Soil Investigation** - During closure of the three USTs in August 1989, soils containing elevated concentrations of hydrocarbons were staged on polyethylene sheeting, awaiting NYSDEC approval of an IRM. The soils were covered with polyethylene sheets to prevent erosion and transport of contaminants by wind or rain. In order to verify/determine that off-site migration of hydrocarbons did not occur, three surface grab samples were collected from the adjoining properties to the south and west of the Osmose Site. The samples were taken within the vacant lots, approximately eight feet beyond the fence marking the Osmose property line. Sample depth and analysis are presented in the previous table.
- **Monitoring Well Installation** – each flush-mount well was constructed as 2-inch diameter FRE well screen and riser (chemically resistant to former UST contents). Screened intervals are summarized below:

MONITORING WELL ID	SCREENED INTERVAL (fbgs)	Screen Length (feet)
MW-12	10.0 – 20.0	10.0
MW-13	4.0 – 14.0	10.0
MW-14	57.0 – 62.0	5.0

- **Groundwater Sampling** – Newly installed monitoring wells were left undisturbed for one week following development to allow water table equilibration. Groundwater samples were collected from existing FRE wells (MW-8, MW-9, MW-10, MW-11, and CW-1) and newly installed wells (MW-12, MW-13, and MW-14) on April 2, 1992. Samples were analyzed for VOCs (EPA 8020) and PAHs (EPA 8310).
- **Groundwater Elevation Survey** – depth to water data converted to groundwater elevations to develop isopotential maps (November 1990 and January 1991). The groundwater gradient in the shallow overburden wells was towards the east approximately 0.3 to 0.4%. The gradient is towards the east due to the local influence of a small broad V-shaped knoll, just to the west of the site. The monitor well data suggests that the small knoll and associated glacial stratification in the subsurface is exerting hydraulic controls on the groundwater gradient at the site.
- **Summary of Analytical Results:**

- No VOCs were detected in groundwater from upgradient wells MW-8 and MW-12, crossgradient well MW-10, or downgradient well MW-12. VOCs, however, the following compounds were detected in downgradient groundwater exceeding the GWQSs/GVs including:
  - Benzene (GWQS = 1 ug/L): MW-9 (170 ug/L), MW-13 (120 ug/L), MW-14 (1.28 ug/L), and CW-1 (21 ug/L)
  - Toluene (GWQS = 5 ug/L): MW-9 (150 ug/L) and MW-13 (300 ug/L)
  - Ethylbenzene (GWQS = 5 ug/L): MW-9 (33 ug/L), and MW-13 (90 ug/L)
  - Total Xylenes (GWQS = 5 ug/L): MW-9 (180 ug/L), MW-13 (1100 ug/L), and CW-1 (9.3 ug/L)
  - Chlorobenzene (GWQS = 5 ug/L): MW-13 (790 ug/L)
  - 1,2-Dichlorobenzene (GWQS = 3 ug/L): MW-9 (22 ug/L) and CW-1 (13 ug/L)
  - 1,4-Dichlorobenzene (GWQS = 3 ug/L): MW-13 (36 ug/L)
- BTEX results of this sampling event showed a good comparison to the two previous sampling events performed in November 1990 and January 1991 for MW-8 through MW-11 and CW-1. Monitoring wells MW-8, MW-10, and MW-11 continued to show non-detectable concentrations of BTEX compounds; CW-1 (deep well) showed decreased concentration; and MW-9 increased. The reduction in BTEX concentrations in CW-1 (immediately downgradient of the former UST excavation) may be attributed to the elimination of the presumed source area.
- Chlorinated compounds reported in wells MW-9 and CW-1 during this sampling event were not detected in either previous sampling event (November 1990 and January 1991). No historical data exists for newly installed well MW-13; however, analysis of soil samples collected at MW-13 indicated that no chlorinated compounds were present. Chlorobenzene and dichlorobenzene have log Koc values of 1.68 or greater. Therefore, one would expect these compounds to be present in the soil at concentrations at least fifty times greater than in the groundwater, which is not the case at well MW-13 as previously stated.
- Dissolved PAHs were detected in the groundwater during this sampling event at 7 of the 8 monitoring wells. Wells MW-10, MW-11, and MW-12 possessed

total dissolved PAH concentrations below 1 ppb (ND, 0.11 ppb, and 0.055 ppb, respectively). Wells MW-8 and MW-14 (deep well) also reported low concentrations to total dissolved PAHs (1.49 ppb and 0.76 ppb, respectively). The highest concentration of dissolved PAHs were reported at well MW-9 (70.1 ppb), CW-1 (284.1 ppb), and MW-13 (9,477.3 ppb).

- Although the more complex PAHs (C18-C22) were more pervasive in the groundwater, the lower complexity PAHs (C10-C16) were present in much higher concentrations. This is attributed to the lower complexity PAHs possessing higher solubility and lower Koc values (refer to Subsurface Investigation Report summary in the previous section). Naphthalene and methylnaphthalene accounted for approximately 77 percent of the total volume of dissolved PAHs detected on site.
- A comparison of the GWQSs/GVs with the results of the most recent sampling event (April 1992) can be summarized as follows:
  - Shallow upgradient groundwater quality exceeded GVs for chrysene (MW-8) and indeno(1,2,3-cd)pyrene (MW-8 and MW-12). Indeno(1,2,3-cd)pyrene also exceeded the GV at on-site and downgradient wells (MW-9 and MW-11) at similar concentrations.
  - Groundwater samples from shallow overburden well MW-9 and deep overburden well MW-14 exceeded the GV for indeno(1,2,3-cd)pyrene. In addition well MW-9 exceeded the GV for Naphthalene.
  - Groundwater samples collected from deep overburden cluster well, CW-1 exceeded the GVs for 6 PAH analytes.
  - Groundwater samples from shallow overburden well MW-13 exceeded guidance values for 10 GVs and one GWQS.
  - Low level blank contamination was identified for four PAHs. As such, the equally low concentration detections for benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, and benzo(a)pyrene were qualified and their results are considered invalid. One possible exception is well MW-10; concentrations for these compounds were detected at similar concentrations during the January 1991 sampling event.
- A comparison between the historical groundwater quality data (January 1991) and most recent data (April 1992) reveals the following apparent trends:

- An increase in the concentration of high complexity PAHs occurred in MW-8, MW-9, MW-11, and CW-1 (if potentially invalid data is considered).
- Dissolved PAH concentrations increased in four of the five monitoring wells (MW-8, MW-9, MW-11, and CW-1).
- Monitoring well MW-10 showed little variation in PAH distribution or dissolved concentration.

- **Summary Discussion:** The objectives of the Supplemental Investigation to address recommendations based on the results of the Subsurface Investigation (including additional NYSDEC comments) include the following with an explanation of how they were addressed:
  - **Documentation of upgradient (off-site) groundwater quality.** Laboratory data collected from well MW-12, located at the upgradient property boundary (see Figure 3B), indicates the following:
    - Low concentrations of six dissolved complex PAHs exist at the upgradient property boundary of the Osmose facility (including the potentially invalid data). This would imply that these dissolved concentrations are representative of regional groundwater quality in the upper portion of the unconfined aquifer. This is supported by the groundwater sampling results from the furthest downgradient (off-site) monitoring well, MW-14. Groundwater samples from MW-14 showed that the same six PAH analytes were present at similar concentrations.
    - Groundwater samples from upgradient well MW-12 did not contain any BTEX analytes. Upgradient well MW-8, similarly, did not contain any BTEX analytes. These results are assumed to be indicative of upgradient groundwater quality.
  - **Delineation of the extent of impacted soils in the MW-8 area (see Figure 3B).**
    - The initial Subsurface Investigation detected a concentration of 500 mg/kg total PAHs at well MW-6 at a depth of 2 to 4 fbgs. Well MW-12 and soil boring SB-2 were advanced to define the extent of the shallow contamination in this area. Since much lower adsorbed PAH concentrations were detected at well MW-12 and boring SB-2, it appears that the areal extent of this zone is localized to well MW-8. A

coal bin was historically located in the vicinity of well MW-8 and may have been the source of this near-surface impact.

- During the Supplemental Investigation, total PAH concentrations above 473 mg/kg were detected at well MW-13 at 8 to 10 fbgs (1,010 mg/kg). As well MW-13 is downgradient from the presumed source area, it is possible that a contiguous zone of soils above 473 mg/kg extends back to the former UST Area.
- Estimated volume of soil in the MW-8 and MW-13 areas which contain concentrations of PAHs above the proposed 473 mg/kg remediation level are approximately 85 and 367 CYs, respectively, for a total of 452 CYs.
- Using a conservative average concentration of 500 mg/kg total PAHs in the vicinity of well MW-8 vicinity (conservative estimate), approximately 130 pounds of adsorbed PAHs are present. In the vicinity of well MW-13 area, assuming an equally conservative average total PAH concentration of 1,000 mg/kg, approximately 1,100 pounds of adsorbed PAHs exist.

- **Delineation of the extent of separate phase (SP) product which exists.**
  - LNAPL and DNAPL have been historically detected on site in wells MW-3, MW-5, and MW-7. On June 24, 1992 during a routine gauging event, LNAPL was again discovered in wells MW-3, MW-5, and MW-7, as well as then newly installed well MW-13.
  - Manual gauging and bailing twice per week recovered approximately 120 gallons of LNAPL, well within the estimated volume of 75 to 150 gallons calculated in the Subsurface Investigation Report.
  - Separate phase petroleum has not been detected in downgradient, off-site wells MW-9, MW-10, MW-11, or MW-14. The existence of LNAPL in off-site well MW-13 and not in nearby off-site well MW-9 may be attributed to preferential pathways from former building foundations and utility conduits as evidenced by a slightly altered shallow groundwater flow direction around off-site well MW-9.
  - Off-site impact delineation (LNAPL or dissolved phase) is not a requirement of the BCP.

- **Investigation of downgradient "deep" groundwater quality (groundwater just above bedrock).**
  - Analytical results from off-site, downgradient deep well MW-14 did not identify any BTEX compounds above GWQSs and the only PAHs detected were the same analytes detected in upgradient well MW-12 at similar concentrations.
  - Analytical results from deep cluster well CW-1 indicate BTEX analytes are present; however, only benzene exceeds groundwater standards. BTEX concentrations have also decreased since the last sampling event. Fifteen PAHs were detected at similar or increased concentrations as compared to the previous sampling events.
- **Investigation of surface soils which are located proximate to the paved area which was temporarily used to stage impacted soils.**
  - Although PAHs were detected in all 3 surface soil locations, reported concentrations were below the proposed 473 mg/kg remediation target.
  - PAH concentrations in surface soil samples were believed to be the result of two brush fires which occurred in 1991. Dissimilar PAH profiles between surface soil and stockpiled UST Area soil samples (more versus lower complex PAHs, respectively) as well as reported brush fires which are known to produce complex PAHs (similar to the complexity reported for surface soil samples) support this observation.
  - In addition, historical use of adjoining properties for industrial purposes are likely to have produced PAH residuals in soil, including: a carriage works southwest of the Site, automotive repair shops along Ellicott Street south to Best Street, sheet metal works (Circa 1930 to 1940), and a plumbing supplier (Circa 1950).

- **Recommendations & Conclusions:** Based upon the combined results of the Subsurface Investigation, the Risk Assessment, and the Supplemental Investigation, the following site remedial actions were proposed:
  - **On-Site Soils:** Based upon available data approximately 500 CYs of soils exist at the Osmose Site which possessed adsorbed concentrations of PAHs above the proposed acceptable soil concentration of 473 mg/kg. Remediation or removal of these soils was recommended.

- **On- and Off-site Groundwater:** Risk assessment calculations based upon the recent groundwater quality data addressed potential risks associated with exposure to dissolved PAHs in on- and off-site groundwater. The total carcinogenic and non-carcinogenic risk estimates were below the proposed criterion for acceptable risk. Therefore, no remedial action for on- and off-site groundwater was proposed.
- **Separate Phase Hydrocarbons:** The continued presence of separate phase LNAPL in MW-3, MW-5, and MW-7, and the recent occurrence of LNAPL in MW-13 requires remediation. In addition, delineation of the extent of the separate phase plume was recommended.

- **Remedial Alternatives Screening:** Seven remedial alternatives were evaluated against the seven EPA and NYSDEC criteria including: SVE, Ozonation, In-Situ Bioremediation, and Excavation/Incineration for the adsorbed phase and a Separate-Phase Pumping System, Total Fluids Pumping System, and Thermal Enhanced Separate-Phase Recovery System for the separate-phase. Ozonation with a Separate-Phase Pumping System are the preferred remedial alternatives which will still require additional separate-phase plume delineation.

Supplemental Investigation (Phase II) Report – August 27, 1993

Supplemental Investigation (Phase II) elements included the following:

- **Soil Borings/Monitoring Well Installation** – Thirteen (13) soil borings were installed during two drilling events; one performed in November/December 1992 and the second performed in February 1993 following a review of the first event. Each boring was completed as a monitoring well (MW-15 thru MW-27) as described below:
  - Three in the entrance gate area (MW-15, MW-16, and MW-17);
  - Two deep overburden wells in the western portion of the Site (MW-18 and MW-19);
  - One along east side of Osmose Facility (MW-20);
  - Four along the Ellicott Street sewer line (MW-21, MW-22, MW-25, and MW-27);
  - One north of the Pilot Plant building (MW-23); and
  - Two in the vicinity of the former UST product lines (MW-24 and MW-26).

- **Subsurface Soil Sampling** – From each boring, samples from above and below the water table that yielded the highest PID readings were submitted for laboratory analysis per the summary table below:

Well Location	Sample Depth (feet)	Analyses	
		VOCs EPA 8020	PAHs EPA 8310
MW-15	6 – 8	X	X
	8 – 10	X	X
	18 – 20	X	X
MW-16	6 – 7	X	X
	7 – 8	X	X
	18 – 20	X	X
MW-17	2 – 4	X	X
	8 – 10	X	X
	18 – 20	X	X
MW-18	2 – 4	X	X
	39 – 41	X	X
	57 – 58	X	X
MW-19	2 – 4	X	X
	54 – 55	X	X
MW-20	6 – 7	X	X
	7 – 8	X	X
	18 – 20	X	X
MW-21	6 – 7	X	X
	7 – 8	X	X
	18 – 20	X	X
MW-22	4 – 6	X	X
	10 – 12	X	X
	23 – 25	X	X
MW-23	6 – 8	X	X
	16 – 18	X	X
	18 – 20	X	X
MW-24	8 – 10	X	X
	10 – 12	X	X
	18 – 20	X	X
MW-25	None	None	None
MW-26	8 – 10	X	X
	10 – 12	X	X
	18 – 20	X	X
MW-27	7 - 8	X	X
S-4	0.25 – 0.5		X
S-5	0.25 – 0.5		X
S-6	0.25 – 0.5		X
S-7	0.25 – 0.5		X
S-8	0.25 – 0.5		X
S-9	0.25 – 0.5		X

- **Surface Soil Investigation** - During closure of the three USTs in August 1989, soils containing elevated concentrations of hydrocarbons were staged on and covered with polyethylene sheeting to prevent erosion and transport of contaminants by wind or rain. In order to verify/determine that off-site migration of hydrocarbons did not

occur, three surface grab samples (S-1, S-2, and S-3) were collected during the Supplemental Investigation from the adjoining properties to the south and west of the Osmose Site. Based on the PAH concentrations detected in those samples, it was determined that six additional surface soil samples (S-4 thru S-9) would be collected to: define the areas of past brush fires, and determine if a lateral PAH concentration gradient existed in surface soils.

The surface soil samples were collected within the adjacent vacant lot on June 29, 1993, at various distances from the Osmose fence/property line, at approximately 3 to 6 inches below grade.

- **Monitoring Well Installation** – each flush-mount well was constructed as 2-inch diameter FRE well screen and riser (chemically resistant to former UST contents). Well construction details are summarized below:

MONITORING WELL ID	SCREENED INTERVAL (fbgs)	Screen Length (feet)
MW-15	5.5 – 15.5	10.0
MW-16	5.5 – 15.5	10.0
MW-17	5.0 – 15.0	10.0
MW-18	53.0 – 58.0	5.0
MW-19	49.0 – 54.0	5.0
MW-20	5.5 – 15.5	10.0
MW-21	5.5 – 15.5	10.0
MW-22	3.5 – 15.0	12.0
MW-23	3.5 – 15.0	12.0
MW-24	3.5 – 15.0	12.0
MW-25	4.0 – 9.0	5.0
MW-26	3.5 – 15.0	12.0
MW-27	4.0 – 9.0	5.0

- **Shallow Groundwater Sampling** – Newly installed monitoring wells were left undisturbed for one week following development to allow water table equilibration. Groundwater samples were collected from existing on-site FRE wells (MW-8, MW-9, MW-10, MW-11, and MW-12) and newly installed wells (MW-15, MW-17, MW-20, and MW-21) on December 18, 1992. Newly installed wells MW-22, MW-23, MW-24, and MW-26 were sampled on March 10, 1993. Wells MW-25 and MW-27 were not sampled due to the presence of LNAPL. Samples were analyzed for VOCs (EPA 8020) and PAHs (EPA 8310).
- **Deep Groundwater Sampling** – Two rounds of groundwater samples were collected from the deep wells on-site. Three of the four deep wells (CW-1, MW-14, and MW-19) were sampled on December 18, 1992; well MW-18 was not sampled due

to an apparent sheen. Deep wells MW-18 and MW-19 were sampled on February 18, 1993.

- **LNAPL & DNAPL Gauging** – Gauging of all FRE monitoring wells for the presence of LNAPL was performed on December 17, 1992 and March 10, 1993. Three PVC monitoring wells (MW-3, MW-5, and MW-7) were monitored for LNAPL periodically throughout this period. LNAPL was detected in wells MW-3, MW-7, MW-13, MW-16, and MW-25 at thicknesses ranging from <0.01 feet (MW-16 and MW-25) to 0.15 feet (MW-13). Product thickness measurements in wells MW-3 or MW-7 was precluded by the presence of passive LNAPL recovery units. During gauging events and whenever LNAPL was detected, product was bailed and stored in DOT approved 55-gallon drums for disposal by Osmose.
- **Municipal Sewer System Sampling** – In January 1993, two water samples were collected from the combined sewer beneath Ellicott Street, one upstream (Ellicott and Best Streets) and one directly in front of the Osmose Facility (Ellicott Street and Edna Place). Both samples were analyzed for PAHs (Method 8310).
- **Summary of Analytical Results:**
    - **Hydrocarbon Mass Estimate** – A hydrocarbon mass calculation was performed utilizing all historic data collected to date for the Osmose facility. The following conclusions emerged from this estimate:
        - Between 550 and 900 gallons (about 4,400 to 7,200 pounds) of hydrocarbons remained in the subsurface beneath the Osmose facility (NAPL, volatile and semi-volatile adsorbed compounds and dissolved compounds).
        - The hydrocarbon mass was primarily the liquid-phase portion (about 55 percent of the total).
        - Adsorbed-phase hydrocarbons comprise about 44 percent of the total. Adsorbed-phase hydrocarbons in the saturated zone account for approximately 38 percent of the total, while adsorbed-phase hydrocarbons in the unsaturated zone account for around 6 percent.
        - Dissolved-phase hydrocarbons comprise a negligible mass (less than one percent of the total).
        - VOCs comprise less than 1 percent of the total hydrocarbons on site.

- Approximately 95 percent of the total hydrocarbon mass was accounted for by PAH compounds located between 6 and 12 feet below grade in the entrance gate area.

- **Delineation of LNAPL** – The LNAPL plume extends from the vicinity of the suspected release (former UST pit area and transfer lines) east past the entrance gate area to the sewer line under Ellicott Street where it extends north to the vicinity of well MW-25. Gauging of wells MW-21 and MW-22 indicates the sewer line was a barrier to further plume migration to the east. Soil borings along the sewer line indicate that the sewer line is not bedded with a permeable material. The potential for LNAPL migration north (downslope) along the sewer line is limited by the lack of a more permeable material around the sewer encasement. Sampling of the sewer indicated that LNAPL is not infiltrating into the line and migrating preferentially within the sewer. Mass balance calculations estimate that 300-500 gallons of LNAPL still existed in the subsurface. As of the 1993 Phase II report, a total of approximately 450 gallons of product had been removed by manual bailing and passive skimmers deployed in monitoring wells MW-3 and MW-7.

  The presence of LNAPL under the Osmose office building had not been confirmed. Neither monitoring wells MW-17 or MW-24 have shown any LNAPL during gauging events. Soil samples collected from MW-24 showed only low concentrations (3.8-7.8 mg/kg) of PAHs, however, MW-17 possessed adsorbed PAH concentrations as high as 390 mg/kg indicating that the extent of LNAPL is not far from the well. With this information, it is not believed that the extent of LNAPL under the Osmose building, if present, is extensive. An aquifer pump test has been conducted during a parallel scope of work (associated with the ozone pilot test). The result of the pump test (reported in the pilot test report) defined aquifer drawn down characteristics which indicated if recovery of LNAPL would be possible under the building.

- **Soils above 473 mg/kg PAHs** – A June 1991 Human Health Risk Assessment (HHRA), performed for the Osmose facility, identified a proposed closure limit of 473 mg/kg for adsorbed PAHs in soils via dermal contact and incidental ingestion exposure pathways. Dust inhalation and groundwater exposure were not considered viable exposure pathways. The areal extent of adsorbed PAHs above 473 mg/kg has been defined, and corresponds closely to the extent of LNAPL. The vertical distribution of soils above 473 mg/kg is primarily in the interval 7 to 10 feet below grade, which is at the top of the water table just below the clay layer.

The estimated volume of soils above 473 mg/kg PAHs was adjusted from the number presented in the Supplemental Assessment Report based on the additional information gathered during the Phase II Investigation. The vertical extent had been narrowed to 3 feet, while the horizontal extent had been increased to over 700 square yards. These numbers yielded an estimated volume of **approximately 720 cubic yards of soils above the 473 mg/kg PAH level in 1993**.

- **Soils above 10 mg/kg VOCs** – The June 1991 HHRA also identified a proposed closure limit of 10 mg/kg for adsorbed volatile compounds in soils. Total adsorbed volatiles had been less than 10 mg/kg at all locations sampled to date. Volatile compounds represent less than one percent of the total adsorbed hydrocarbons on site.
- **Shallow Groundwater Quality** – The groundwater for the shallow portion of the overburden aquifer has been confirmed by the installation of additional monitoring wells. The gradient was generally toward the east at approximately 0.6%. The extent of the shallow dissolved hydrocarbon plume, which has been defined in terms of both BTEX and PAHs, is centered in the Ellicott Street entrance gate area immediately down gradient of the former tank pit. Migration to the east appears to have been limited by the sewer line beneath Ellicott Street. When compared to historical groundwater sampling data from monitoring wells MW-8, MW-9, MW-10, MW-11, and MW-12 (January, 1991 and April, 1992 sampling events), dissolved PAH concentrations did not significantly changed over time (within the range of sampling variability).
- **Deep Groundwater Quality** – The extent of the deep groundwater VOC plume was centered under the south parking lot of the Osmose facility. NYSDEC groundwater standards were exceeded at only one site location: cluster well CW-1 (benzene). Concentrations were below groundwater standards at monitoring wells MW-14 (east of Ellicott Street), MW-18 (along the southern edge of the Osmose property), and MW-19 (along the western edge of the Osmose property).
- The extent of the deep groundwater PAH plume was centered under the south parking lot of the Osmose facility. NYSDEC groundwater standards were exceeded only on site at two locations: cluster well CW-1 (acenaphthene, benzo(a)pyrene); and monitoring well MW-18 (benzo(a)pyrene). Concentrations were below groundwater standards at monitoring wells MW-14 (east of Ellicott Street) and MW-19 (along the western edge of the Osmose property).

- **Extent of DNAPL** – No DNAPL had been detected to date at the bedrock surface. In relation to the slope of the bedrock surface, two of the four deep monitoring wells on site are positioned upslope from the source area (MW-18 and MW-1 9), one is under the source area (CW-1), and one is cross/downslope of the source area (MW-14).
- **PAHs in Surface Soils** – Surface soil samples from the adjacent NFTA property to the south and west of the Osmose facility were below 473 mg/kg total PAHs, the proposed risk-derived limit. PAH concentrations in surface soils fluctuated, however; the higher concentrations in surface soils correlated well with areas that were previously identified with brush fires. In addition, the predominance of highly complex PAHs indicated that the source of PAHs was brush fires or anthropogenic sources and not from the Osmose facility activities. Literature indicates that the PAH concentrations detected have been in the range typical for surface soils in an urban/industrial setting.
- **Municipal Sewer Impacts** – Upgradient and downgradient sampling of the sewer line beneath Ellicott Street indicated an increase in dissolved PAHs from 20 to 1,400 ug/L. The lighter, less complex PAHs were present in the highest concentrations, although an increase in PAH analytes was observed with the exception of acenaphthylene.

  The BSA sets a limit of 4,260 ug/L total dissolved PAHs for a permitted discharge. Based upon this information, and the dissolved concentrations in the sewer line, it is not believed that potential infiltration of impacted groundwater poses an imminent danger to the BSA treatment system. Additionally, given the inherent variability associated with collecting grab samples from municipal sewer lines, and only one sampling event from which to base conclusions, the increase is not statistically significant.

- **Interim Remedial Measures (IRMs):** The following IRMs were proposed:
  - **On-site Soils** – Based upon available 1993 data, approximately 720 CYs of soils existed at the Osmose Site which possess adsorbed concentrations of PAHs above the proposed limit of 473 mg/kg. As recommended in the Supplemental Investigation Report, remediation or removal of these soils was required. Results from the ozone pilot test was required prior to presentation of a final strategy to address the 720 CYs of impacted soils.
  - **Liquid Phase Hydrocarbons** – The areal extent of LNAPL at the Osmose Site has been defined. Manual bailing and passive skimmers collected approximately 450 gallons of separate phase liquids. Mass balance calculations

indicated approximately 300 to 400 gallons of product remained in the environment at that time. As part of the ozone pilot test, groundwater was to be pumped from six recovery wells to create an unsaturated zone below the "impermeable" clay layer in the study area. Any LNAPL which enters the wells would be removed via a total fluids pump. The pilot test was designed to determine the effects of ozone injection on the LNAPL.

- **On- and Off-Site Groundwater** – NYS GWQSs/GVs were exceeded at several on- and off-site monitoring locations. Risk assessment calculations submitted with the 1991 Subsurface Investigation and 1992 Supplemental Investigation Reports addressed potential risks associated with exposure to groundwater. The total carcinogenic and non-carcinogenic risk estimates were below the proposed criteria for acceptable risk. The effects of ozone sparging on dissolved PAH concentrations was assessed during the pilot test.
- **Remedial Pilot Testing** – In order to determine the appropriate remedial action for the Osmose Site, applicable technologies were screened for technical effectiveness, feasibility, advantages, disadvantages, and costs. The results of the screening, presented in the 1991 Supplemental Investigation Report, indicated ozone injection as the preferred remedy. An Ozone Pilot Test Work Plan (September 25, 1992) was prepared and submitted to the NYSDEC, the objectives of which were to monitor the effects of ozone injection into the subsurface on:
  - Adsorbed PAHs and VOCs in the unsaturated zone,
  - Adsorbed PAHs and VOCs in the saturated zone,
  - Dissolved PAHs and VOCs, and
  - Separate phase product (LNAPL).

2015 Phase II Environmental Site Assessment

In April 2015, Golder Associates conducted a Phase II Environmental Site Assessment (ESA) (Ref. 15) on five contiguous parcels: 980 Ellicott Street (1.35 acres), 960 Ellicott Street (0.79 acres), 996 Ellicott Street (0.42 acres), 31 Dodge Street (0.95 acres), 28 Best Street (0.32 acres) and, 1145 Main Street (0.46 acres). Investigation locations on each parcel for this Phase II are presented on Figure 3B, however only the results pertaining to the 980 Ellicott Street parcel are discussed below.

The Phase II ESA targeted the area adjacent to the No. 2 fuel oil UST and Tank Room 1 (housing No. 2 fuel oil and copper naphthenate ASTs) as well as the 980 Ellicott Street office building basement. The Phase II ESA consisted of the following:

- The subsurface soil sampling program consisted of six (6) direct-push soil boring sample locations in the Tank Room 1 /Fuel Oil UST Area (B-1 through B-6). Two soil samples were collected from each boring (one shallow and one just above the water table) were analyzed for TPH diesel range organics (DRO) (Method 8015), naphthalene (Method 8270), and total copper (Method 6010). Due to the nature of the stored contents of the UST and ASTs, naphthalene and copper were selected as impact indicator compounds.
- Indoor air samples were collected to characterize the ambient air quality within the basement via two ambient air sampling Summa canisters staged for 24 hours along the eastern outer wall of the basement (within a crawl space opening in the east wall) and near the west end of the basement close to the stairs leading to the first floor. Indoor air samples, BASEMENT-EAST and BASEMENT-WEST, were analyzed for TO-15 VOCs. Prior to initiating indoor air sample collection, a pre-survey inspection was performed. This portion of the on-site building is slated to be demolished as part of the planned BCP redevelopment project.

The 2015 Phase II ESA findings are summarized below.

- Naphthalene was only detected in soil sample B-6 (12.5-14 fbgs) at a concentration of 1.1 mg/kg which is below the CSCO of 500 mg/kg.
- Copper was detected in each soil sample ranging in concentration from 7.7 (B-6, 12.5-14') to 24 mg/kg (B-3, 4-6') which was below the CSCO of 270 mg/kg.
- TPH-DRO was detected in each soil sample ranging in concentration from 3.81 (B-2, 6-8') to 2,800 mg/kg (B-6, 2-4'). A CSCO is not available for TPH-DRO comparison.
- Twelve VOCs were detected in the indoor air samples at concentrations below the USEPA mean concentrations, with one exception. The carbon tetrachloride concentrations of 0.667 (BASEMENT-EAST) and 0.623 ug/m^3 (BASEMENT-WEST) exceeded the then USEPA Analyte Concentration Indoors Arithmetic Mean of 0.5 ug/m^3. The current USEPA arithmetic mean is 0.93 ug/m^3.

2017 Phase II Investigation Findings

ATTACHMENT 3

BCP Application – Section III

PROPERTY'S ENVIRONMENTAL HISTORY

980 Ellicott Street Site

In January and February 2017, Benchmark Environmental Engineering & Science, PLLC in association with TurnKey Environmental Restoration, LLC (Benchmark TurnKey) performed a Phase II Investigation at the Site (Ref. 16). The investigation was performed based on Site observations, data collected during previous investigation and remedial actions (Refs. 2, 3, 5, 6, 7, and 8), as well as the August 2016 Phase I Environmental Site Assessment (Ref. 1) to determine if the historic practices at the Site had impacted portions of the Site and to allow adequate evaluation of the Site for possible entry of the property into the New York State Brownfield Cleanup Program (BCP).

The Phase II included the advancement of six direct-push borings (SB-6 through SB-9). Two borings, SB-4 and SB-9 were converted into temporary monitoring wells (TMW-2 and TMW-3). Due to the limited nature of this investigation, one subsurface soil sample each was collected from borings SB-4, SB-6, SB-7, SB-8, and SB-9 and one groundwater sample each was collected from temporary wells TMW-2 and TMW-3. Soil and groundwater samples were submitted for Part 375 List VOC (Method 8260), SVOC (Method 8270), and total metal (Method 6010/7471) analysis in accordance with USEPA SW-846 methodology.

The following conclusions and recommendations are based on the results of the Phase II Investigation:

- Field evidence of environmental impacts as evidenced by elevated PID readings and odors identified in SB-8 and SB-9 located beneath the former Osmose building. PID readings up to 778 ppm and olfactory indicators were identified in SB-8 from approximately 2 to 15 feet below ground surface (fbgs). PID readings up to 745 ppm and olfactory indicators were identified in SB-9 from approximately 6 to 14 fbgs.
- Concentrations of VOCs, SVOCs, and/or metals in soil were detected above USCOs, RRSCOs, CSCOs and/or PGWSCOs from the soil sample locations analyzed beneath the former Osmose building. Compounds identified are consistent with historical use of the property as a wood preserving/treatment and petroleum storage facility and the previous investigation results.

- Concentrations of VOCs, SVOCs, and metals in groundwater were detected above GWQSs/GVs from the groundwater sample locations analyzed beneath the former Osmose building, indicating that compounds in the soil are potentially impacting Site groundwater.
- Further delineation of soil and groundwater impacts is warranted to determine the extent of impacts on-Site and to evaluate potential Site actions.
- VOC detections in soil and groundwater indicate a soil vapor intrusion (SVI) study is warranted to assess whether subsurface impacts have impacted subslab vapor and/or indoor air within the former Osmose building(s) (Ref. 6). Based on the SVI study, a subslab depressurization (SSD) system may be recommended to protect the building and future occupants.

Osmose Area Remedial Actions

The Site was remediated in accordance with a combination of voluntary (i.e., initial UST removals) and NYSDEC-approved IRMs, Work Plans, and the ROD. The following is a summary of the Remedial Actions performed at the Site:

- **1990** – Bioremediation of approximately 700 cubic yards of soil was initiated in an on-Site Biocell. This treatment was not successful and ultimately discontinued in favor of ozone injection and SVE implemented as part of the ROD in 1999.
- **1999/2000** – Ozone injection and SVE systems selected as part of the approved ROD are installed and operated to address SVOC and VOC soil impacts on the Site. Equipment associated with the SVE system and the groundwater recovery & treatment systems were located in treatment compound TC-1 (see Figure 3B). Equipment associated with the ozone sparge system were located in one treatment compound TC-2. These systems achieved ROD remedial goals and were shut down in 2005.
    - Ozone Injection / SVE Treatment System consisted of three primary systems: (1) Groundwater dewatering and treatment; (2) SVE and off-gas treatment; and, (3) Ozone generation and injection. Ozone sparge wells, SVE wells, groundwater recovery wells, and utility trenches are shown on Figure 3C.
        - **Ozone sparge/SVE System** consisted of 23 SVE wells (E-1 thru E-23) and 20 ozone injection wells (O-1 thru O-20). Four ozone sparge wells and 4 SVE wells were located within the former Biocell.

- **Groundwater Dewatering System** consisted of eleven, 6-inch groundwater recovery wells designed to create a dewatered zone below the existing clay layer (RW-1 through RW-11). Potentially unreacted ozone was collected from this dewatered zone. Treated groundwater was discharged to the combined sewer system via BSA Permit 97-02-TP002.
- **Groundwater Treatment System** consisted of an oil/water separator, 500-gallon equalization tank, a bag filter, and three Liquid-Phase Granular Activated Carbon (LGAC) adsorbers (tag #s GC-1, GC-2, and GC-3) in series. Recovered LNAPL was separated from the groundwater, which was subsequently treated via LGAC prior to discharge.

- **2000** – As part of the remedial design, the on-Site LNAPL removal system was upgraded in the fall of 2000 to add additional pumping wells, install submersible total fluids recovery pumps, and install a new oil/water separator to remove the LNAPL from the extracted fluid. In December 2008, approval was received from the NYSDEC to discontinue the oil/water separation component of the system after the ongoing routine monitoring program had documented that no detectable amount of LNAPL was being recovered.
- **2005** – NYSDEC approved a request to discontinue ozonation on July 6, 2005, however Osmose was required to continue operation and monitoring activities related to the groundwater pump and treat system per their Operation and Maintenance Manual (OMM) dated April 28, 2000 until remaining groundwater contamination was no longer migrating from the Site without the benefit of engineered controls.
- **2008** – In December 2008, NYSDEC issued approval to discontinue the operation of the oil/water separator.
- **2015** – In October of 2015, remedial activities were completed at the Site when the NYSDEC issued a conditional approval to cease operation of the groundwater extraction and treatment system (Ref. 17). The conditional-approval by the Department to shut down the groundwater and treatment system included Department review (and approval) of the following: the next scheduled Periodic Review Report (PRR) and IC/EC Certification; post-shut down semi-annual groundwater monitoring and reporting for two years whereby groundwater flow direction and LNAPL observations will be evaluated; and, the Site Management Plan.

NYSDEC approval of the 2016 PRR and SMP and two of the four semi-annual groundwater monitoring events for 2017 are pending.

- **2017** – The Superfund portion of the Site (i.e., Osmose Area) will be investigated along with the rest of the Project Site in accordance with the "to be submitted" Remedial Investigation Work Plan. Remediation of the Project Site, including the Former Osmose Superfund portion, will be conducted in accordance with the commercial end-use of the property, as necessary.

Osmose Area Removal of Contaminated Materials

In addition to the three USTs, approximately 37 tons of contaminated soil/fill was excavated and removed from a strip along the southern border of the Osmose Site identified in the Remedial Investigation (see Figure 3C). The excavated area measured approximately 15 feet to 18 feet wide to a depth of six to twelve inches along the length of the excavation. Confirmation sample results indicate that concentrations of PAHs in the soil fell below the ROD action levels. Backfilling of the excavated strip was completed with clean fill and reseeded, following confirmation of end point sample results by the NYSDEC.

Osmose Area Remaining Contamination

Remaining soil and groundwater contamination at the Site is presented in Figures 5A and 5B and summarized by environmental media in the following sections.

Site Soils

After completion of the IRMs and the Remedy contained in the ROD, there were no areas of the Site where the concentrations of remaining contamination in the subgrade soils exceeded the ROD "Selected Cleanup Levels" (SCLs) for SVOCs (total PAHs, carcinogenic PAHS and benzo(a)pyrene) and total VOCs (benzene, toluene and xylenes). However, there are several soil exceedances above the CSCOs that are presented on Figure 5A.

Site Groundwater

Groundwater data from the most recent monitoring events indicates several exceedances of either the NYSDEC Class "GA" Groundwater Quality Standards and Guidance Values (GWQS/GVs) or ROD constituent-specific groundwater quality Remediation Goals based

on NYSDEC's Technical and Operation Guidance Series for Ambient Water Quality Standards And Guidance Values and Groundwater Effluent Limitations [TOGs 1.1.1, June, 1998]. Specifically, VOCs ethylbenzene and xylenes along with several PAHs have been detected over the last four OMM groundwater monitoring events. In addition, several VOCs, PAHs, and metals were detected at concentrations above their respective GWQSs/GVs in Site groundwater during the recent 2017 Phase II Investigation. Exceedances of the GWQSs/GVs were significantly higher in the sample from temporary well TMW-3 compared to the sample from temporary well TMW-2. Exceedances to the GWQSs/GVs are presented on Figure 5B.

Summary

As indicated, soil and groundwater contamination remains above SCOs for the planned reuse across the Site and further investigation and remediation appears warranted.

References

The following documents are referenced throughout this Attachment and are provided electronically on a CD.

1. C&S Engineers, Inc., *Phase I Environmental Site Assessment for Former Osmose Facility*, City of Buffalo, Erie County, New York. Prepared for 780 Ellicott Street, LLC. August 2016
2. Groundwater Technology, Inc., *Design of Biocell for In-Situ Bioremediation of Soils for Osmose Wood Preserving, Inc., Buffalo, New York*. Prepared for Osmose Wood Preserving, Inc. September 5, 1989.
3. Groundwater Technology, Inc. *Tank Closure Certification Report for Osmose Wood Preserving, Inc., 980 Ellicott Street, Buffalo, New York*. Prepared for Osmose Wood Preserving, Inc. April 13, 1990.
4. NYSDEC Administrative Order on Consent #B9-0314-90-01, between New York State Department of Environmental Conservation and Osmose Wood Preserving, Inc., February 20, 1990.
5. Groundwater Technology, Inc., *Subsurface Investigation Report for Osmose Wood Preserving, Inc., 980 Ellicott Street, Buffalo, NY*. Prepared for Osmose Wood Preserving, Inc. June 28, 1991.

6. Groundwater Technology, Inc., *Supplemental Investigation Report for Osmose Wood Preserving, Inc., Buffalo, NY, NYSDEC Spill #915143*. Prepared for Osmose Wood Preserving, Inc. July 28, 1992.

7. Groundwater Technology, Inc., *Supplemental Investigation (Phase II) Report for Osmose Wood Preserving, Inc., Buffalo, New York, NYSDEC Spill #915143*. Prepared for Osmose Wood Preserving, Inc. August 31, 1993.

8. Groundwater Technology, Inc., *Ozone Injection Feasibility Study Report for Osmose Wood Preserving, Inc., 980 Ellicott Street, Buffalo, New York*. Prepared for Osmose Wood Preserving, Inc. April 5, 1994.

9. NYSDEC Administrative Order on Consent #B9-0314-90-01, between New York State Department of Environmental Conservation and Osmose Wood Preserving, Inc., April 20, 1995.

10. NYSDEC Record of Decision (ROD) for Osmose Wood Preserving, Inc., Buffalo, Erie County, Site Number 915143. January 1997.

11. Groundwater Technology, Inc., *Final Remedial Design Ozone Sparge System for Osmose, Inc., Buffalo, New York, NYSDEC Site No. 915143*. Prepared for Osmose, Inc. September 23, 1998.

12. NYSDEC Administrative Order on Consent #B9-0314-90-01, between New York State Department of Environmental Conservation and Osmose, Inc., March 30, 1999.

13. Conestoga-Rovers & Associates, *Semi-Annual Subsurface Soil Sampling Progress Report No. 1 for Osmose, Inc., 980 Ellicott Street, Buffalo, New York*. Prepared for Osmose, Inc. January 5, 2005.

14. Conestoga-Rovers & Associates, *Semi-Annual Subsurface Soil Sampling Progress Report No. 2 for Osmose, Inc., 980 Ellicott Street, Buffalo, New York*. Prepared for Osmose, Inc. June 10, 2005.

15. Golder Associates, *Phase II Environmental Site Assessment for Osmose Realty Corp Site, Buffalo, New York*. Prepared for Hodgson Russ LLP. April 2015.

16. Benchmark Environmental Engineering & Science, PLLC in association with TurnKey Environmental Restoration, LLC, *Phase II Investigation Report for 980 Ellicott Street, Buffalo, New York*. March 2017.

17. NYSDEC Response and Comment Letter for *Request for Shutdown/Decommissioning of Groundwater Collection & Treatment System for Osmose Wood Preserving, Buffalo, Erie County, Site No. 915143*. August 26, 2015.

ATTACHMENT 3

BCP Application – Section III

PROPERTY'S ENVIRONMENTAL HISTORY

980 Ellicott Street Site

PREVIOUS ENVIRONMENTAL INVESTIGATIONS (CD)

ATTACHMENT 4

BCP APPLICATION – SECTION IV

PROPERTY INFORMATION

PARCEL DESCRIPTION

PREVIOUS REMEDIATION

EASEMENTS & PERMITS

PROPERTY DESCRIPTION NARRATIVE

ATTACHMENT 4

BCP Application – Section IV

PROPERTY INFORMATION

980 Ellicott Street Site

SECTION IV – QUESTIONS 1-4

Parcel Description

The subject property (hereinafter, the "Project Site" or the "Site") subject to the BCP application is one parcel approximately 1.35 acres, located in a highly developed mixed residential and commercial area of the City of Buffalo, Erie County, New York (see Figures 1 and 2), and is further identified as:

- **980 Ellicott Street, S.B.L. # 100.63-3-37, 1.35 acres**

The Erie County Real Property parcel boundaries are presented on Figure 6 and a formal tax map of the Site is provided as Figure 7.

The Site is located in the City of Buffalo, and is bound by commercial properties to the north, south, and west, and Ellicott Street to the east. Beyond the streets, the Site is bounded by mixed-use to the north, south, and west (residential and commercial) and residential to the east (see Figure 8).

The Site is located in US Census Tract 168 and is a NYS designated environmental zone (or EN-Zone) Type A and B (see Figure 9), which is indicative of the economic conditions of the surrounding area. Type A EN-Zones include a poverty rate of at least 20% and unemployment of at 125% of the State average and Type B EN-Zones include a poverty rate of at least double the Erie County poverty rate.

SECTION IV – QUESTION 6

Previous Remediation

A portion of the Site is currently a Class 4 Inactive Hazardous Waste Disposal Site identified as the Osmose Superfund Site (#915143). This portion of the Site is approximately 0.5 acres and is inclusive of the asphalt parking area only as defined by the Record of Decision (January 1997) (see Figure 2). Investigation and remediation of the Superfund portion of the

ATTACHMENT 4

BCP Application – Section IV

PROPERTY INFORMATION

980 Ellicott Street Site

Site was performed pursuant to Article 27, Title 13 of the Environmental Conservation Law of the State of New York (ECL) and in accordance with a March 30, 1999 Order on Consent #B9-0314-90-01. The Order required (1) the development of a Site Map, (2) Record of Decision (ROD) (January 1997), and (3) Remedial Design Report (January 1999 Final Remedy Design Report and January 2000 Final As-Built Report). Once the Order obligations are met and assuming no other outstanding issues remain, the Order will be vacated and the current Declaration of Covenants and Restrictions will be terminated.

Three former underground storage tanks (USTs) in the fenced parking lot were historically used to store creosote, #2 fuel oil, poly-aromatic hydrocarbons, and other chemicals which were found to have been released during a scheduled tank closure in August 1989. Since then, Institutional and Engineering Controls (IC/ECs) have been in place. After tank removal, an Interim Remedial Measure (IRM) biocell and soil ventilation system was installed in March 1990, which was not successful. The biocell system was terminated in 1996. After the completion of in-situ ozone injection feasibility studies from 1993 to 1995, the DEC issued the ROD in January 1997. The ROD remedy began in late 2000 which involved pumping light non-aqueous phase liquid (LNAPL) followed by ozone sparge/soil vapor extraction. The ozone treatment system was successful in achieving soil cleanup levels and was terminated with NYSDEC-approval in July 2005. In December 2008, NYSDEC issued an approval to discontinue the operation of the oil/water separator. In October of 2015, the NYSDEC issued a conditional approval to cease operation of the groundwater extraction and treatment system.

The conditional-approval by the Department to shut down the groundwater and treatment system included Department review (and approval) of the following: the next scheduled Periodic Review Report (PRR) and IC/EC Certification; post-shut down semi-annual groundwater monitoring and reporting for two years whereby groundwater flow direction and LNAPL observations will be evaluated; and, the Site Management Plan. NYSDEC approval of the 2016 PRR and SMP and two of the four semi-annual groundwater monitoring events for 2017 are pending.

Additional details regarding previous remediation conducted at the Site are included in Attachment 3.

The Superfund portion of the Site will be investigated along with the rest of the Project Site in accordance with the "to be submitted" Remedial Investigation Work Plan. Remediation of the Project Site, including the Former Osmose Superfund portion, will be conducted in accordance with the commercial end-use of the property, as necessary.

SECTION IV – QUESTIONS 8 AND 9

Easements and Permits

Utilities are located in the right-of-ways along Ellicott Street. The Site is supplied with municipal sanitary sewer, electric, natural gas, and public water.

The Site is a registered Petroleum Bulk Storage (PBS) facility (Site No. 9-014583) with five reported tanks. Three underground storage tanks (USTs), including one 10,000 gallon tank (Tank No. 1) and two 12,000 gallon tanks (Tank Nos. 2 & 3), were removed in August 1989. Two tanks, including one 12,000 gallon UST (Tank No. 4) and one 12,000 gallon AST (Tank No. 5), are currently classified as active, but are no longer used. Tanks No. 4 and 5 had been reportedly been cleaned by Op-Tech as a condition of Osmoses' departure from the facility.

The Site is also a registered Chemical Bulk Storage (CBS) facility (Site No. 9-000268) with four reported tanks: one 12,000 gallon UST (Tank No. 4) closed in October 1998; one 12,000 gallon UST (Tank No. 4-A) closed and converted to a non-regulated use in October 2003; one 12,000 gallon AST (Tank No. 6) closed in September 2007; and, one AST (Tank No. 6-A) closed in October 1998.

There were 10 ASTs observed during the Phase I site reconnaissance that were not listed on the facilities PBS or CBS registrations. The tanks were reportedly cleaned by Op-Tech following Osmoses' departure from the facility. These ASTs are summarized in the table below:

ATTACHMENT 4
BCP Application – Section IV
PROPERTY INFORMATION
980 Ellicott Street Site

TYPE	PRODUCT	CAPACITY (GAL)	LOCATION
AST	Woodfume	2700	Manufacturing Area
AST	Woodfume	2700	Manufacturing Area
AST	Weathershield	6500	Warehouse Area
AST	Water Repellent NW-C	5700	Tank Room #2
AST	Water Repellent NW-C	5700	Tank Room #2
AST	N/A	N/A	Tank Room #1
AST	N/A	N/A	Tank Room #1
AST	Paraffin Wax	6800	Tank Room #2
AST	Mineral Oil (Kendex 100)	N/A	Tank Room #2
AST	Hyprene 100	9500	Tank Room #2

Based on review of the NYSDEC Spill Incidents database, six spills have been reported for the Site: Spill No. 8903194, Spill No. 9505668, Spill No. 9608362, Spill No. 9975243, Spill No. 0750740, and Spill No. 0750741. All six spills have been classified as "closed" by the NYSDEC. Further detail regarding each spill incident is included in Attachment 3 of this BCP Application.

Based on review of the on-line NYSDEC Environmental Site Database and the Phase I ESA, prepared by C&S Engineers, the Site is listed in the SHWS database as a Class 4 Inactive Hazardous Waste Disposal Site No. 915143 as part of the State Superfund Program. Only a Volunteer (future purchaser) can enter a Class 4 Inactive Hazardous Waste Site into the BCP. Cleanup must be to a level greater than the cleanup (i.e., if industrial cleanup, then a commercial cleanup is required, and so on).

The Site is currently under Order on Consent (Index #B9-0314-90-01) with Institutional Controls including a deed restriction (April 22, 1999 Amended Declaration of Covenants and Restrictions), groundwater use restriction (and monitoring), land use restriction, site monitoring plan, annual reporting (i.e., Periodic Review Reports), and an operation and maintenance plan. No Engineering Controls are planned.

The property **may not be used** for a higher level of use, such as restricted residential use without additional remediation and amendment or termination of the Consent Order, as approved by the NYSDEC.

ATTACHMENT 4

BCP Application – Section IV

PROPERTY INFORMATION

980 Ellicott Street Site

Based on review of the on-line United States Environmental Protection Agency (USEPA) Enforcement and Compliance History Online (ECHO) database the following regulatory identifiers have been issued for the Site (EPA Registry ID No. 110000326932):

- Clean Air Act (CAA) – Operating Air Synthetic Minor Emissions (NY0000009140200410)
- RCRA-LQG (EPA ID: NYD002112944)
- NY SHWS (Site Code: 56635) – Site is properly closed – requires continued management.
- NY LTANKS
    - Spill No. 8903194 (Site ID 114685)
    - Spill No. 9975243 (Site ID 114688)
- NY CBS/UST/AST (ID/Status: 9-000268)
- NY ENG Controls/ NY INST Control (Site Code: 56635)
- NY Spills
    - Spill No. 0750740 (Site ID 386213)
    - Spill No. 0750741 (Site ID 386215)
    - Spill No. 9608362 (Site ID 114686)
    - Spill No. 9505668 (Site ID 114687)
- SSTS
    - Registration No. 003008NY001
    - Registration No. 075341NY001
- US AIRS (EPA Plant ID No. 110000326932)
- NY MANIFEST (EPA ID: NYD002112944)
- NY RGA HWS (Facility ID: 915143)
- TSCA
- NY AST (Facility ID: 9-014583)
- TRIS (TRIS ID: 14209SMSWD980EL)
- RCRA NonGen / NLR (EPA ID: NYR000045112)
- FINDS (Registry ID: 110004537494)
- ECHO
- EDR Hist Auto
- NY MANIFEST (EPA ID: NYR000045112)
- NJ MANIFEST (EPA ID: NYD002112944)
- FINDS (Registry ID: 110000326932)

ATTACHMENT 4

BCP Application – Section IV

PROPERTY INFORMATION

980 Ellicott Street Site

SECTION IV – QUESTION 10

Property Description Narrative

Location

The 980 Ellicott Street Site is located in a highly developed mixed residential and commercial area of the City of Buffalo, Erie County, New York (see Figure 1). The Site is located on Ellicott Street midway between Dodge Street (north) and Best Street (south) (see Figure 2). The Niagara River is approximately 1.8 miles west of the Site.

Site Features

The Site itself is currently a vacant facility composed of multiple structures and asphalt parking areas.

Current Zoning and Land Use

The Site is currently vacant and zoned commercial and residential; more specifically, CM – General Commercial District and R3 – Dwelling District, according to the City of Buffalo GIS Property Viewer. Current zoning for the surrounding parcels similarly includes CM-General Commercial District, R3 – Dwelling District, and TS – Transit Station (see Figure 11). Adjacent property owners are identified on Figure 12. According to the City of Buffalo Land Use Plan (September 2016), the current land-use of the Site and properties west of the Site are designated as a Neighborhood Center, with primarily General Residential properties to the north, south, and east (see Figure 11). According to the September 2016 City of Buffalo Land Use Plan, Neighborhood Center land-use areas can be described as mixed-use commercial areas at a neighborhood scale, and Urban Core land-use areas are described as high intensity areas in terms of uses, building heights, and scale. The planned future mixed use commercial designation of the Site is consistent with City zoning.

Past Use of the Site

The Site is part of a greater complex formerly owned and operated by Osmose Wood Preserving, Inc., which manufactured a variety of preservatives used in the treatment of lumber and wood products since 1951. As early as 1910, the property was developed with

residential and automotive facilities. From at least 1910 to 1950, several automotive repair shops were listed on Ellicott Street located between the northern end of the subject property and Best Street. Additional operations, either on or bordering the Site, included a florist (1930-1940), a sheet metal works operation (1930s), a plumbing supplier (1946), a letter service company (1950-1960), and residential properties (up to 1970).

Geography/Topography

The Site is located within the Erie-Ontario lake plain physiographic province, which is typified by little topographic relief and gentle slope toward Lake Erie, except in the immediate vicinity of major drainage ways (USDA, 1986). The Site is topographically flat at an approximate elevation of 641 feet above mean sea level. The surface of the Site is primarily hardscape with multiple structures and asphalt parking areas. The regional gradient would be expected to flow towards Lake Erie and the Niagara River (west of the site).

Geology and Hydrogeology

The Site is located within the Erie-Ontario lake plain physiographic province, which is typified by little topographic relief and gentle slope toward Lake Erie, except in the immediate vicinity of major drainage ways. The surficial geology of the Lake Erie Plain consists of a thin glacial till (if present), glaciolacustrine deposits, recent alluvium, and the soils derived from these deposits. Based on the New York State Surficial Geologic Map of New York[1] (see Figure 13), surficial soil at the Site is described as a till moraine. However, due to a heavy urbanization and industrial past, surface soils within the City of Buffalo are characterized as urban land (Ud) with level to gently sloping land in which 80 percent or more of the soil surface is covered by asphalt, concrete, buildings, or other impervious structures, typical of an urban environment.

The U.S. Department of Agriculture (USDA) Soil Conservation Service soil survey map of Erie County indicates that approximately one-third of the Site consists of urban land Colonie

[1] Surficial Geologic Map of New York, Niagara Sheet, Compiled and edited by Donald H. Cadwell, University of the State of New York, The State Education Department, 1988.

complex (UnB) soils and approximately two-thirds of the Site consists of urban land Odessa complex (Ut) soils. The urban land Colonie complex (UnB) material is characterized by areas of urban land with a slope ranging from 3 to 6 percent. The urban land Odessa complex (Ut) material is characterized by areas of urban land with a slope ranging from 0 to 3 percent. Figure 14 presents the USDA soil type map for the Site.

Currently, the majority of the Site is covered by hardscape with multiple structures and asphalt parking areas. The site is underlain by approximately 63 feet of unconsolidated clay, silt, sand, and gravel deposits which overlie the Onondaga Limestone. These deposits are fairly typical of glacial deposits of the area, and exhibit varied permeability. The area of highest relative permeability is the fill material (located in the upper few feet of section) and the native sand and gravel deposits. A clay and silt horizon, with an upper boundary located approximately 5 feet below grade, presented the least permeable zone observed. This clay and silt unit, composed primarily of extremely low permeability glacial lake deposits, was encountered in all borings drilled and ranged in thickness from approximately 7 to 12 feet. The glacial lake deposits became coarser-grained glacial outwash deposits at approximately 10 to 18 feet below grade. Drill cuttings from boring MW-14 indicated that stratified glacial outwash deposits are present throughout the remainder of the overburden to the total depth of 63 feet. These deposits consist of interlayered silts, sands, and gravels of relatively high permeability.

Bedrock was encountered at 63 feet below grade at both wells CW-1 and MW-14, indicating that the bedrock surface mirrors the land surface, dipping gently toward the east at approximately 0.7%. The top of bedrock in the vicinity of the Osmose Site, therefore, appears to dip locally in the opposite direction from the regional bedrock surface (probably a slight undulation).

Based on the New York State Geologic Map of New York[2], the Site is situated over the Onondaga Formation of the Middle Devonian Series. The Onondaga Formation is comprised of varying texture bedrock from coarse to very finely crystalline with a dark gray to tan color and chert and fossils within. The Onondaga has an approximated thickness of 110 to 160 feet. Structurally, the bedrock formations strike in an east-west direction and exhibit a regional dip that approximates 40 feet per mile (3 to 5 degrees) toward the south and southwest. An intersecting, orthogonal pattern of fractures and joint sets are common throughout the bedrock strata. The depth to and type of bedrock below the Site has not been determined. Figure 15 presents the bedrock geology map for the Site.

The Site is located in the Erie-Niagara River Basin. In the Erie-Niagara Basin, the major areas of groundwater are within coarser overburden deposits and limestone and shale bedrock. The regional gradient would be expected to flow towards Lake Erie and the Niagara River (west of the site). Based on review of previous environmental reports, monitoring well data suggest that the small knoll and associated glacial stratification in the subsurface are also exerting hydraulic control over Site groundwater flow in the upper portion of the overburden aquifer. The water table in the vicinity of Ellicott Street appears to be locally affected by the storm sewer system and/or other subsurface artifacts. Local groundwater flow, however, may also be influenced by subsurface features, such as excavations, utilities, and localized fill-conditions.

The hydrogeologic evaluation indicates a complex aquifer system exists beneath the Site. Groundwater levels in the upper portion of the overburden aquifer range from 5 to 10 fbgs whereas groundwater in the deep portion of the overburden aquifer range from 20.50 fbgs (MW-14) to 26.68 fbgs (CW-1). Variances between depth to shallow and deep groundwater indicate a steep downward vertical gradient exists within this unit. Deep groundwater elevations also indicate a significant horizontal gradient toward the west (more consistent with regional groundwater) exceeding 5 feet from well MW-14 to CW-1 compared to an

[2] Geologic Map of New York, Niagara Sheet, Compiled and Edited by Lawrence V. Rickard and Donald W. Fisher, University of the State of New York, The State Education Department, March 1970.

easterly direction in the shallow overburden. This evaluation indicates that shallow and deep overburden groundwater differ significantly in both direction and gradient. Bedrock mirrors the land surface by dipping gently toward the east as previously discussed.

Environmental Assessment

A series of investigations and IRMs were performed in conjunction with, and following the discovery of, the leaking USTs to characterize the nature and extent of contamination for the Osmose Area of the Site. A summary of Osmose Area soil and groundwater conditions for some of the key investigations performed is presented in Attachment 3.

The following Recognized Environmental Conditions (RECs) are associated with the Site:

- An adjacent former gas station located at 1159 Main Street, formerly known as Buffalo's Tourist Lodge, is considered a REC due to the potential for impacts to the environment.
- Evidence of apparent spills and leaks from ASTs in the interior of the Site.
- Existing soil and groundwater contamination

One Controlled REC was identified for No. 2 fuel oil and creosote contamination found in 1989 during UST removal activities. Six Historic RECs were identified for the Site associated with the six spills identified and in the NYS SPILLS and LTANKS database; however, all spills have been remediated and classified as "closed" by the NYSDEC.

Other issues that are not RECs, but may represent health or environmental issues impacting the Site and/or property value include suspected asbestos containing materials (ACMs), historic PCB-containing light ballasts and/or transformers, and lead paint due mainly to the age of the on-site abandoned building.

Based on review of previous reports, elevated levels of petroleum-VOCs, SVOCs (primarily PAHs), and heavy metals were detected in on-site soil/fill exceeding Part 375 Commercial Soil Cleanup Objectives (CSCOs) and Protection of Groundwater Soil Cleanup Objectives (PGWSCOs). A similar group of contaminants were also identified in on-site groundwater

exceeding NYSDEC Groundwater Quality Standards and Guidance Values (GWQSs/GVs). Below is a summary of maximum concentrations remaining at the Site for soil and groundwater:

COMPOUND	CSCO	PGWSCO	GWQS/GV	Matrix	MAX. CONCENTRATION ABOVE CSCO (mg/kg), PGWSCO (mg/kg), OR GWQS (ug/L)
Ethylbenzene	390	1	--	Soil	1.7
n-Propylbenzene	500	3.9	--	Soil	10
Xylenes	500	1.6	--	Soil	8.6
1,2,4-Trimethylbenzene	190	3.6	--	Soil	140
1,3,5-Trimethylbenzene	190	8.4	--	Soil	31
3- & 4-Methylphenol	500	0.33	--	Soil	0.67
Benzo(a)anthracene	5.6	1	--	Soil	7.58 J
Benzo(a)pyrene	1	22	--	Soil	4.5
Benzo(b)fluoranthene	5.6	1.7	--	Soil	7.1 J
Benzo(k)fluoranthene	56	1.7	--	Soil	2.7 J
Chrysene	56	1	--	Soil	8.38 J
Dibenz(a,h)anthracene	0.56	1,000	--	Soil	0.75 J
Naphthalene	500	12	--	Soil	130
Pentachlorophenol	6.7	0.8	--	Soil	1.8
Phenol	500	0.33	--	Soil	0.53
Ethylbenzene	--	--	5	Groundwater	5.3
n-Butylbenzene	--	--	5	Groundwater	6.3 J
n-Propylbenzene	--	--	5	Groundwater	7.1 J
Xylenes	--	--	5	Groundwater	61
1,2,4-Trimethylbenzene	--	--	5	Groundwater	230
1,3,5-Trimethylbenzene	--	--	5	Groundwater	74
Acenaphthene	--	--	20*	Groundwater	53
Benzo(a)anthracene	--	--	0.002*	Groundwater	8.8
Benzo(b)fluoranthene	--	--	0.002*	Groundwater	40
Benzo(k)fluoranthene	--	--	0.002*	Groundwater	0.7
Chrysene	--	--	0.002*	Groundwater	31
Fluoranthene	--	--	50*	Groundwater	65
Indeno(1,2,3-cd)pyrene	--	--	0.002*	Groundwater	21
Naphthalene	--	--	10*	Groundwater	530 D
Pentachlorophenol	--	--	1	Groundwater	60
Arsenic	--	--	25	Groundwater	86.31
Barium	--	--	1,000	Groundwater	1989
Beryllium	--	--	3*	Groundwater	6.7
Chromium, total	--	--	50	Groundwater	229.7
Copper	--	--	200	Groundwater	400.2
Lead	--	--	25	Groundwater	495
Manganese	--	--	300*	Groundwater	11,070
Nickel	--	--	100	Groundwater	245.8
Selenium	--	--	10	Groundwater	53.7

* = Class GA Groundwater Quality Guidance Value

ATTACHMENT 4

BCP Application – Section IV

PROPERTY INFORMATION

980 Ellicott Street Site

As clearly evidenced by the known contamination associated with the historic Site use, and the known contamination identified on-Site, as well as the potential for additional impacts associated with historic on-Site operations, environmental contamination at the Site complicates use and future redevelopment/reuse of the Project Site. Additional details regarding the findings of the previous investigation are presented in Attachment 3.

ATTACHMENT 5

BCP APPLICATION – SECTION VI

PROPERTY OWNER / OPERATOR INFORMATION

PAST LAND USES

PREVIOUS / CURRENT PROPERTY OWNERS / OPERATORS

ATTACHMENT 5

BCP Application – Section VI

PROPERTY OWNER / OPERATOR INFORMATION

980 Ellicott Street Site

SECTION VI – PREVIOUS USES & OWNERS/OPERATORS

Past Land Uses

In August 2016, C&S Engineers, Inc. completed a Phase I ESA for the 980 Ellicott Street Site, as part of the greater Former Osmose Facility. Historic maps, historic aerial photographs, municipal records, city directories, and/or other reasonably obtainable documents were used by C&S Engineers to determine the historical use of the Site. The Phase I reported the following regarding, only, 980 Ellicott Street Site history:

- As early as 1889, the Site was developed with primarily residential properties with some commercial facilities based on review of historic Sanborn maps, aerial photographs, and topographic maps.
- From at least 1930 to present, the Site has been utilized by several automotive repair shops, manufacturing facilities, and warehouses based on review of Sanborn maps and city directories.
- Osmose began operations as a realty corporation and a wood preserving company on-Site in 1951.

Previous/Current Property Owners/Operators

According to the Phase I ESA, from about 1889 to the 1920s, the Site-use was primarily residential with some commercial facilities. From at least the 1930's to present the Site has been utilized by several automotive repair shops, manufacturing facilities, and warehouses. The Site is currently vacant.

The following table lists the current and previous property owners/operators:

Owner/Operator	Date(s)	Relationship to Applicant	Last Known Address & Phone Number
Current Owner/Operator			
780 Ellicott Street, LLC Member(s): Jon Williams	11/11/2016 – current	Same	current

ATTACHMENT 5

BCP Application – Section VI

PROPERTY OWNER / OPERATOR INFORMATION

980 Ellicott Street Site

Previous Owners/Operators			
Daugherty Gerald L. Timber Specialties Limited	2013 – 11/11/2016	None	980 Ellicott Street Phone: unknown
Osmose Holdings Inc. (lumber treating)	2008 - 2013	None	980 Ellicott Street Phone: unknown
Osmose (lacquers varnishes) Pole Sprayers of Canada Limited (wood preserving) Timber Specialties Limited (chemical products)	2001 - 2008	None	980 Ellicott Street Phone: unknown
Osmose Wood Preserving (paints allied product)	1998 – 2001	None	980 Ellicott Street Phone: unknown
Osmose Realty Corporation Osmose Wood Preserving Company of America Inc. Pole Sprayers Inc. (contractors) Timber Specialties Limited	1985 - 1998	None	980 Ellicott Street Phone: unknown
Osmose Realty Corporation Osmose Wood Preserving Company of America Inc. Pole Sprayers Inc. (contractors) Animal Repellants Inc.	1970 - 1985	None	980 Ellicott Street Phone: unknown
Osmose Realty Corporation Pole Sprayers Inc. (contractors) Osmose Wood Preserving Company of America Inc.	1960 - 1970	None	980 Ellicott Street Phone: unknown
RW Maintenance Corporation Tree Care Inc. Osmose Wood Preserving Company of America Inc.	1955 - 1960	None	980-986 Ellicott Street Phone: unknown
Engineers Specialties (Division of Universal Engraving & Color Plate Company Inc.)	1950 - 1955	None	980-986 Ellicott Street Phone: unknown
Amphibian Car Corporation (auto boat manufactures)	1946 - 1950	None	980-986 Ellicott Street Phone: unknown
Brunn & Company Inc. (auto body manufactures)	1930 - 1946	None	980-986 Ellicott Street Phone: unknown

ATTACHMENT 6

BCP APPLICATION – SECTIONS VII & VIII

REQUESTOR ELIGIBILITY

REQUESTOR AS A VOLUNTEER
PROPERTY ELIGIBILITY INFORMATION
ELIGIBILITY STATEMENT

ATTACHMENT 6

BCP Application - Sections VII & VIII

REQUESTOR ELIGIBILITY

980 Ellicott Street Site

SECTION VII – REQUESTOR ELIGIBILITY INFORMATION

The Requestor as a Volunteer

A BCP applicant may be either a "Participant" or a "Volunteer."

A "Participant" is an applicant who either (i) was the owner of the site at the time of the disposal or discharge of contaminants; or (ii) is otherwise responsible according to applicable principles of statutory or common law liability, unless such person's liability arises solely as a result of such person's ownership or operation of or involvement with the site subsequent to the disposal or discharge. NY ECL 27-1405(1)(a). This definition is repeated verbatim at 6NYCRR 375-3.2(b)(1) and is paraphrased in the Brownfield Cleanup Program Guide at Section 2.4(1)(A).

A "Volunteer" is an applicant other than a participant, including a person whose liability arises solely as a result of such person's ownership or operation of or involvement with the site subsequent to the disposal or discharge of contaminants provided that such person exercises appropriate care with respect to the contamination. NY ECL 27-1405(1)(b). This definition is repeated verbatim at 6 NYCRR 375-3.2(b)(2) and is paraphrased in the Brownfield Cleanup Program Guide at Section 2.4(1)(B).

Since the Applicant became involved with the property after the disposal or discharge of contaminants, and has exercised appropriate care with respect to the contamination, it is entitled to Volunteer status under NY ECL27-1405(1)(b).

SECTION VIII – PROPERTY ELIGIBILITY INFORMATION

Property Eligibility Information

The Site meets the definition of a "Brownfield site" as set forth in New York State Environmental Conservation Law (the "ECL"), which defines a "Brownfield site" as "any real property where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria or guidance adopted by the Department that are applicable based on the reasonably anticipated use of the property, in accordance with applicable regulations."

ATTACHMENT 6

BCP Application - Sections VII & VIII

REQUESTOR ELIGIBILITY

980 Ellicott Street Site

The Site meets BCP eligibility criteria based on the following (also refer to Figure 5):

(A) Site groundwater has been impacted by contaminants exceeding Class GA GWQSs/GVs.

(B) Site soil exceeds the designated end-use cleanup criteria (i.e., CSCOs).

(C) Two (2) tanks are present on-site: an approximate 12,000 gallon underground storage tank (UST) located in the northwest corner of the parking lot and an approximate 12,000 gallon aboveground storage tank (AST). Both tanks formerly contained No. 2 Fuel Oil until 2011.

(D) Elevated concentrations of a VOC are present in basement indoor air.

(E) Except for the Superfund portion of the Site, the remaining proposed BCP Site has not previously been subject to cleanup activities by or under a State or Federal program.

(F) Historic operation of the Site as a manufacturing facility for a variety of preservatives used in the treatment of lumber and wood products since 1951 has resulted in environmental contamination.

(G) The Former Pilot Plant building, located in the southeastern portion of the site (see Figure 2), was identified as a former Welding and Metal School that contained an auto repair shop and coal storage from approximately 1930 to 1951.

(H) Previous investigations indicate the presence of a former gasoline station located on the adjacent property, 1159 Main Street, known as the Buffalo Tourist Lodge in 1925.

In addition, approximately 0.85-acres of the proposed 1.35-acre BCP Site, less the former Osmose Superfund Area (0.5 acres), has not previously been subject to cleanup activities by or under a State or Federal program.

ELIGIBILITY STATEMENT

Based on the foregoing and as further set forth in this BCP application, the Site qualifies as a Brownfield Site eligible for participation in the BCP, with the Applicant as a Volunteer, because there is confirmed contamination at the Site, which is complicating the redevelopment and re-use of the Site.

ATTACHMENT 7

BCP APPLICATION – SECTION IX

CONTACT LIST INFORMATION

SITE CONTACT LIST

ADJACENT PROPERTY OWNERS LIST

DOCUMENT REPOSITORY CONFIRMATION

ATTACHMENT 7

BCP Application – Section IX

CONTACT LIST INFORMATION

980 Ellicott Street Site

SITE CONTACT LIST

The following is the contact list for the subject property. Each contact will be sent fact sheets throughout the project's duration.

Erie County Contacts:

Honorable Mark Poloncarz
Erie County Executive
95 Franklin Street
Buffalo, NY 14202

Erie County Legislator Barbara Miller-Williams
District 1
427 William Street
Buffalo, NY 14204

Commissioner Thomas R. Hersey, Jr.
Erie Co. Environment & Planning
95 Franklin Street
Buffalo, NY 14202

Mr. Paul Kranz
Associate Engineer
Erie Co. Environment & Plan.
95 Franklin Street
Buffalo, NY 14202

Ms. Karen M. McCarthy
Erie County Legislature Clerk
25 Delaware Avenue
Buffalo, NY 14202

Ms. Bonnie Lawrence
Deputy Commissioner
Erie Co. Environment & Planning
95 Franklin Street
Buffalo, NY 14202

Commissioner Gale Burstein, MD
Erie County Health Department
95 Franklin Street, Room 931
Buffalo, NY 14202

Erie County Local Emergency
45 Elm Street
Buffalo, NY 14203

David Stebbins
ECIDA
95 Perry Street, Suite 403
Buffalo, NY 14203

Christopher Pawenski
Erie County DEP
95 Franklin St.
Buffalo, NY 14202

ATTACHMENT 7

BCP Application – Section IX

CONTACT LIST INFORMATION

980 Ellicott Street Site

City of Buffalo Contacts:

Byron Brown, Mayor
City of Buffalo
65 Niagara Sq
Buffalo, NY 14219

David A. Franczyk, Councilman
City of Buffalo
1315 City Hall
Buffalo, NY 14219

James K. Morrell, Chairman
City of Buffalo
Planning Board
901 City Hall
Buffalo, NY 14219

Supplier of Potable Water:

Erie County Water Authority
295 Main Street #350
Buffalo, NY 14203

Local News Media:

Buffalo News
ATTN: Ms. Aaron Besecker
1 News Plaza
Buffalo, NY 14240

WGRZ TV - Ch. 2
ATTN: Ms. Maria Sisti
259 Delaware Avenue
Buffalo, NY 14202

WIVB - Ch. 4
ATTN: Ms. Lisa Fullone
2077 Elmwood Avenue
Buffalo, NY 14207

WKBW News Channel 7
ATTN: Ms. Melanie Pritchard
7 Broadcast Plaza
Buffalo, NY 14202

Alternate Press
ATTN: Mr. Joe Schmidbauer
P.O. Box 729, Washington Station
Buffalo, NY 14205

Business First
ATTN: Anne Marie Franczyk
465 Main Street
Buffalo, NY 14203-1793

ATTACHMENT 7

BCP Application – Section IX

CONTACT LIST INFORMATION

980 Ellicott Street Site

WBEN News Radio 930
Entercom Radio of Buffalo
500 Corporate Pkwy
Suite 200
Buffalo, NY 14226

WNED, Environmental News Desk
ATTN: Mr. Michael Desmond
P.O. Box 1263, Horizons Plaza
Buffalo, NY 14240

Nearby Schools:

Dr. Hank Stopinski, Principal
Health Sciences Charter School
1140 Ellicott Street
Buffalo, NY 14209

Mr. JohnAshwood
Oracle Charter School
888 Delaware Avenue
Buffalo, NY 14209

Laura Collins, Principal
Stanley G Falk School
848 Delaware Avenue
Buffalo, NY 14209

William A. Kresse, Ph.D., Principal
City Honors School
186 E North Street
Buffalo, NY 14204

Cynthia Lynn-Garbe
Westminster Early Childhood Programs
724 Delaware Avenue
Buffalo, NY 14209

William Boatwright, Principal
Stanley Makowski Early Childhood Center
1095 Jefferson Avenue
Buffalo, NY 14208

Nearby Day Care Centers:

Journey's Child Enrichment Center
1000 Main Street
Buffalo, NY 14202

Laura Collins, Principal
Conners Children's Center
848 Delaware Avenue
Buffalo, NY 14209

Barbara Stone Reden
Director of Early Childhood Services
Jewish Community Center of Greater
787 Delaware Avenue
Buffalo, NY 14209

ATTACHMENT 7

BCP Application – Section IX

CONTACT LIST INFORMATION

980 Ellicott Street Site

Other Interested Parties:

WNY Director
Citizens Environmental Coalition
543 Franklin Street
Buffalo, NY 14202-1109

Document Repository:

Mary Jean Jakubowski
Deputy Director
Buffalo & Erie County Public Library
1 Lafayette Square
Buffalo, NY 14203

DOCUMENT REPOSITORY

The Document Repository for this Site will be the Buffalo & Erie County Public Library – Central/Downtown Location. The letter to and reply from the Buffalo & Erie County Public Library requesting and confirming, respectively, their agreement to act as the document repository for the planned BCP project is attached. Documents relating to the Site will be made available at the Document Repository for public review upon request.

ATTACHMENT 7

BCP Application - Section IX
Adjacent Property Owners List

980 Ellicott Street Site

Adjacent Property Address			Mailing Address
No.	Street	Property Use	
1159	Main Street	Commercial (Vacant)	D&S Capital Real Estate II LLC 50 Lakefront Blvd Buffalo, NY 14202
1159	Main Street	Commercial (Vacant)	Occupant 1159 Main Street Buffalo, NY 14209
960	Ellicott Street	Commercial (Manufacture)	Osmose Realty Corporation 980 Ellicott Street Buffalo, NY 14209
960	Ellicott Street	Commercial (Manufacture)	Occupant 960 Ellicott Street Buffalo, NY 14209
66	Best Street	Unknown	1238 Group, LLC 295 Main Street Buffalo, NY 14203
66	Best Street	Unknown	Occupant 66 Best Street Buffalo, NY 14209
969	Ellicott Street	Unknown	1238 Group, LLC 295 Main Street Buffalo, NY 14203
969	Ellicott Street	Unknown	Occupant 99 Ellicott Street Buffalo, NY 14209
973	Ellicott Street	Residential (2 Family)	1238 Group, LLC 295 Main Street Buffalo, NY 14203
973	Ellicott Street	Residential (2 Family)	Occupant 973 Ellicott Street Buffalo, NY 14209
979	Ellicott Street	Residential (2 Family)	White Magnolia 9 Edna Buffalo, NY 14209
979	Ellicott Street	Residential (2 Family)	Occupant 979 Ellicott Street Buffalo, NY 14209
991	Ellicott Street	Residential (2 Family)	Riggie James J 473 N Rockingham Way Amherst, NY 14228

ATTACHMENT 7

BCP Application - Section IX
Adjacent Property Owners List

980 Ellicott Street Site

Adjacent Property Address			Mailing Address
No.	**Street**	**Property Use**	
991	Ellicott Street	Residential (2 Family)	Occupant 991 Ellicott Street Buffalo, NY 14209
993	Ellicott Street	Residential (Vacant Land)	Thompson Rose 997 Ellicott Street Buffalo, NY 14209
993	Ellicott Street	Residential (Vacant Land)	Occupant 993 Ellicott Street Buffalo, NY 14209
996	Ellicott Street	Commercial (Warehouse)	Osmose Realty Corporation 980 Ellicott Street Buffalo, NY 14209
996	Ellicott Street	Commercial (Warehouse)	Occupant 996 Ellicott Street Buffalo, NY 14209

January 17, 2017

Mary Jean Jakubowski
Director
Buffalo & Erie County Public Library
1 Lafayette Square
Buffalo, NY 14203

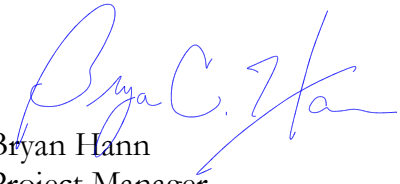
Re: Document Repository for Brownfield Cleanup Program
980 Ellicott Street Site
Buffalo, New York

Dear Ms. Jakubowski:

Per my discussion with your librarian, April Tompkins, thank you for agreeing to the Buffalo & Erie County Public Library acting as the document repository for the above-referenced Site. In the future, we will be sending various documents relating to the Site that should be made available for public review upon request.

Please contact if you have questions or require additional information.

Sincerely,
Benchmark Environmental Engineering & Science, PLLC



Bryan Hann
Project Manager

cc: File: 0378-016-002

Caroline C. Bukowski

From: April Tompkins <tompkinsa@buffalolib.org>
Sent: Tuesday, January 17, 2017 10:13 AM
To: Caroline C. Bukowski
Subject: Document Repository - Permission Request

Good morning Caroline,

Per our conversation and your request, this is to inform you that the Buffalo and Erie County Public Library will be the repository for document(s) submitted by your company for the Brownfield Cleanup Program pertaining to **"980 Ellicott Street Site - City of Buffalo, County of Erie, New York."** Document(s) will be made available for public review at the Niagara Branch Library. ***Also, this serves as permission to submit any additional updates pertaining to the above document and all other future documents.*** We will be the repository for **all** documents your company needs to be made available to the public. **You/your company are free to bring or send your documents to the Central Library without additional permission for each individual document.**

We prefer that you do not take documents to individual libraries. Please bring or send your document(s) to the Central Library and we will process according to our procedure and distribute to the location of your choice.

Please keep the following in mind:

- Documents (including updates) for public review should be sent or brought in person to the Central Library to the attention of Carol Batt, of whom I assist. Documents sent via e-mail will not be accepted. The mailing address is:

  Attention: Carol Ann Batt
  Chief Operating Officer
  Buffalo and Erie County Public Library
  1 Lafayette Square
  Buffalo, NY 14203

- Documents for the Central/Downtown library are made available on the first floor in the Information Services Department within a day or so after receipt. If received Friday afternoon, they go out the following Monday (excluding holidays).

- If you would like the document(s) distributed at libraries other than Central, you will need to send or give us the appropriate quantity of copies with labels regarding their destinations. We will distribution accordingly. We do not make copies for distribution.

- You have the choice regarding the format (hard copy and / or disk) you wish to submit. If the document is very large, part in hard copy and part on disk is acceptable. If submitting in both formats, please be sure that they are titled/labeled accordingly. Although CD-ROMs cannot be used on public library computers, patrons may bring their personal laptop and view the disc in-house. If optional, an alternative is the availability to go online using a provided link for patrons to read/review/print. Patrons are not allowed to take original repository documents out of the Library.

If you still have any questions/concerns, please feel free to contact me by replying to this e-mail or by phone at 716-858-7129. Thank you.

Regards,
April
The Buffalo & Erie County Public Library System has more than 2.6 million materials available for borrowing including books, eBooks, DVDs, music and more. Free library card applications can be downloaded and taken to any of the 37- local public libraries for processing. A valid form of identification and proof of address is necessary. For more information call 716-858-8900 or visit http://www.BuffaloLib.org. Follow the library on Facebook https://www.facebook.com/buffalolibrary.central?ref=ts , Twitter http://twitter.com/buffalolibrary , Pinterest http://www.buffalolib.org/sites/default/files/images/pinterest.png , Instagram http://instagram.com/buffalolibrary and Flickr http://www.buffalolib.org/sites/default/files/images/flickr.png

ATTACHMENT 8

BCP APPLICATION – SECTION X

LAND-USE FACTORS

PROPOSED USE

SITE SUMMARY

ADJACENT LAND-USE, DEVELOPMENT, & ZONING

NATURAL & CULTURAL RESOURCES

ATTACHEMENT 8

BCP Application – Section X

LAND USE FACTORS

980 Ellicott Street Site

SECTION X – LAND-USE FACTORS

Proposed Use

Upon successful acceptance into the BCP, the Applicant plans to demolish the central portion of the main building and rehabilitate the remaining existing structures to serve as **commercial offices** although final plans have not been confirmed. The preliminary Site Redevelopment Plan estimates **capital investments of approximately $4 to 7 MM** to investigate, remediate, and redevelop the Site.

Site Summary

The following provides a brief summary of the Site:

- The Site was purchased by 780 Ellicott Street, LLC on November 11, 2016 and has been vacant since that time.
- The Site is located in a highly developed mixed residential and commercial area of the City of Buffalo, Erie County, New York.
- The Site is **currently a vacant** facility composed of multiple structures and asphalt parking areas.
- The planned future **commercial** use of the Site is consistent with the local zoning plan and proposed land-use plan (see Attachment 4).
- In accordance with §27-1415(3)(p), the Site is located within a NYSDEC Potential Environmental Justice (EJ) Area (see Figure 16). However, EJ concerns are not applicable to this project as the proposed use is not expected to cause or increase a disproportionate burden on the community in which the site is located.
- A portion of the Site (approximately 0.5 acres) is listed in the State Hazardous Waste Sites (SHWS) database as a Class 4 Inactive Hazardous Waste Disposal Site No. 915143. This portion of the Site is currently under Order on Consent (Index #B9-0314-90-01) March 20, 1999 with a deed restriction, groundwater use restriction, land use restriction, site monitoring plan, and an operation and maintenance plan.
- Population in Erie county has increased by 3,538 (0.4%) over the period of April 2010 to July 2015 (per US Census Bureau).

- The Site has access to municipal utilities including: natural-gas, municipal sewer, electric, and public water.
- The Site is not located within a 500-year flood zone.

Adjacent Land Use, Development Patterns, & Zoning

The Site is located in a highly developed residential and commercial area of the City of Buffalo, Erie County, New York. The Site sits on Ellicott Street midway between Dodge Street (north) and Best Street (south) with commercial properties to the north, south, and west, and residential properties to the east.

The Green Code is a place-based development strategy that builds on the City of Buffalo's award-winning comprehensive plan, Queen City in the 21st Century[1]. The Comprehensive Plan set the agenda for the city's future by outlining four fundamental principles: fix the basics; build on assets; implement smart growth; and embrace sustainability. The Green Code follows up on this effort by translating the Comprehensive Plan's principles into a Land Use Plan[2] that will guide the city's physical development over the next 20 years. The Land Use Plan is further informed by specific plans for the waterfront and brownfield areas. The culmination of the Green Code is an update of the city's 60-year old zoning code with a new form-based code that will implement these plans. The Green Code also reforms the city's outdated set of Urban Renewal Plans (URPs) by incorporating their relevant provisions into the new code and creating one citywide URP for the city's Homestead Program.

The Site is currently vacant and zoned commercial, based on review of the City of Buffalo GIS Property Viewer. Current zoning surrounding the Site includes residential, commercial, and transit station properties. According to the City of Buffalo Land Use Plan, the current land-use of the Site and properties west of the Site are designated as a Neighborhood Center, with primarily General Residential properties to the north, south, and east. The proposed

[1] Queen City in the 21st Century. Buffalo's Comprehensive Plan. Adopted February 7, 2006.
[2] City of Buffalo Land Use Plan. October 2015.

land-use classifies the Site and properties to the south and west as part of the Urban Core, and properties to the north and east as General Residential. Adjacent property owners are presented in Attachment 7.

Natural and Cultural Resources

- Per the New York State Historical Preservation Office the Site lies within an area considered archaeologically sensitive (see Figure 17). In addition, the following sites listed on the National Register of Historic Places exist within a 0.5 mile radius of the Site:

  1. National Register Building Listings
     - Elmwood Historic District (East) (NR No. 15NR00088)
     - Delaware Avenue Historic District (NR No. 90NR01208)
     - Annunciation Hellenic Orthodox Church (NR No. 02NR04945)
     - Allentown Historic District (NR No. 11NR06249)
     - The Saturn Club (NR No. 04NR05413)
     - The Wayne and Waldorf Apartments (NR No. 14NR06575)
     - Buffalo Electric Vehicle Company Building (NR No. 04NR05412)
     - Packard Motor Car Showroom (NR No. 06NR05562)
     - Laurel and Michigan Avenues Row (NR No. 90NR01214)
     - Fosdick-Masten Park High School (NR No. 90NR01227)
  2. Building Surveys
     - Linwood Preservation District (Survey No. 88SD00008)
     - Phase 1A & 1B Cultural Resource Survey Allen Street Extension & Rehabilitation, City of Buffalo, Erie County, New York PIN 5757.95 (Survey No. 16SR00242).
  3. Building Districts
     - Elmwood Historic District (East) (USN No. 02910.027800) – Listed
     - Delaware Avenue Historic District (USN No. 02940.027679) – Listed

- Allentown Historic District (USN No. 02940.027686) – Listed
- Washington-Ellicott Streets Residential Historic District (USN No. 02940.027966) – Eligible

4. Archaeology Surveys

- Report of the Stage I Cultural Resources Investigation for sandstone walkway improvements, Theodore Roosevelt Inaugural National Historic Site (Survey No. 00SR50725).
- Phase 1A Literature Search & Sensitivity Assessment of the Theodore Roosevelt Inaugural National Historic Site Ansley Wilcox Carriage House (Survey No. 04SR54936).
- Phase 1A & 1B Cultural Resource Survey Allen Street Extension & Rehabilitation (Survey No. 16SR00243).
- Phase 1A Archaeological Resources Sensitivity Assessment, University at Buffalo's Comprehensive Physical Plan: North, South, and Downtown Campus (Survey No. 12SR61834).
- Phase 2 Site Examination, John Shepard Site (A02940.027958, UB 4436) Reports of the Archaeological Survey, Volume 48, Number 8 (Survey No. 16SR00490).
- Phase 1A Cultural Resources Investigation for the Proposed Restoration of Vehicular Traffic on Main Street (Survey No. 03SR56677).
- Reports of the Archaeological Survey Vol. 48, No. 7 PIN 5757.14 John Deters Site (A02940.027957, UB 4435) (Survey No. 16SR00437).
- Buffalo Niagara Medical Campus Streetscape Improvements—Phase I: Ellicott Street, Goodell Street to Best Street, City of Buffalo, Erie County, New York (PIN 5757.47 and 5757.59) (Survey No. 08SR58552).
- Phase I Cultural Resources Investigation for the Proposed Woodson Gardens Redevelopment Project, City of Buffalo, Erie County, New York (Survey No. 11SR60617).

- Phase 1A and Phase 1B Cultural Resources Investigation Report for the Skilled Nursing Facility, Buffalo General Hospital, City of Buffalo, Erie County, New York (Survey No. 09SR59816).
- Mechanical Stripping Investigation of the Potter's Field Cemetery for the Proposed Woodson Gardens Redevelopment Project, City of Buffalo, Erie County, New York (Survey No. 11SR61007).

5. Consultation Projects

- Stratford Arms - Interior Rehab of 41 apartments (Project No. 15PR05862). Status – Closed.
- Baptist Manor: HUD refinancing with interior improvements (Project No. 15PR07087). Status – Open.
- 31 Eaton Street: Demolition (Project No. 16PR02694). Status – Closed.
- LCH 51 Eaton Street (Project No. 15PR02543). Status – Closed.
- 101 Eaton Street: Demolition (Project No. 16PR02693). Status – Closed.
- Cold Springs Neighborhood Revitalization: Proposed Infill Housing/Community Center on Vacant Lots (Project No. 15PR07021). Location Description: Scattered site bordered by Dodge Street, Michigan Avenue, Best Street, and Ellicott Street. Status – Open.
- Pilgrim Village/Campus Square (Project No. 16PR03508). Location Description: The City Block of Best Street, Michigan Avenue, East North Street, and Ellicott Street. Status – Closed.
- Masten Avenue Armory: Roof Replacement & Repair/Masonry Repair (Project No. 15PR07158). Status – Closed.
- National Park Service Programmatic Agreement – Theodore Roosevelt Inaugural National Historic Site (Project No. 15PR01929). Status – Open.
- Bank Conversion (Project No. 15PR06667). Status – Closed.
- Sweet Pea Market (Project No. 16PR02258). Status – Closed.

- Allen Street Extension & Rehabilitation PIN 5757.95 (Project No. 16PR01071). Location Description: Construction Phase 1: The Buffalo Niagara Medical Campus pathway (Allen Street Extension) section: Between N Oak Street and Washington Street – 0.15 miles Construction Phase 2: The Allen Street Rehabilitation section: Between Main Street and Wadsworth Street – 0.50 miles. Status – Re-opened.
- Roosevelt/FA#10032310/6115006685 (Project No. 16PR00533). Status – Closed.

- According to the NYSDEC's Environmental Resource Mapper (ERM) there are no important plant habitats, and endangered species listed for the area encompassing the Site (see Figure 18).
- There are no State wetlands or floodplains located on Site (see Figure 18). The nearest NYSDEC regulated freshwater wetland (BU-3) is located approximately 2.2 miles to the southwest of the site (see Figure 19).