Appendix I: Initial Environmental Site Assessment

for the

I-95 Access Improvements from Caton Avenue to Fort McHenry Tunnel – Environmental Assessment (EA) Baltimore City, Maryland

Prepared for:

Maryland Transportation Authority

dot DEPARTMENT OF TRANSPORTATION BALTIMORE CITY

and

U.S. Department of Transportation Federal Highway Administration

March 2018

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Initial Environmental Site Assessment

I-95 Access Improvements from Caton Avenue to the Fort McHenry Tunnel

Baltimore Maryland




November 2017 *(revised March 2018)*

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ACRONYMS AND ABBREVIATIONS

AAI	All Appropriate Inquiry
ACO	Administrative Consent Order
ASTs	Aboveground Storage Tanks
ASTM	American Society for Testing and Materials
BGE	Baltimore Gas & Electric
CEQ	Council on Environmental Quality
CESQ	Conditionally Exempt Small Quantity Generator
CFR	Code of Federal Regulations
COPR	Chromium Ore Processing Residue
CREC	Controlled Recognized Environmental Conditions
CSMP	Comprehensive Soil Management Plan
DOT	Department of Transportation
EDR	Environmental Data Resources, Inc.
ERNS	Emergency Response Notification System
ESA	Initial Environmental Site Assessment
FHWA	Federal Highway
GTA	Geotechnology Associates, Inc.
Honeywell	Honeywell International, Inc.
HREC	Historical Recognized Environmental Conditions
I-95	Interstate 95
Kg	Kilogram
LOD	Limit of Disturbance
LQG	Large Quantity Generator
LRP	Land Restoration Program
MDE	Maryland Department of the Environment
MDTA	Maryland Transportation Authority
NB	Northbound

NEPA	National Environmental Policy Act
NFRAP	No Further Remedial Action Planned
OCP	Oil Control Program
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated biphenyls
PCMD	Port Covington Master Developer
PIA	Public Information Act
PRB	Permeable Reactive Barrier
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Conditions
SB	Southbound
SEMS	Superfund Environmental Management System
SHWS	State Hazardous Waste Site
STV	STV Incorporated
SVOCs	Semi-Volatile Organic Compounds
Urban Green	Urban Green Environmental, LLC
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGS	United States Geological Society
UST	Underground Storage Tanks
VCP	Voluntary Cleanup Program
VOCs	Volatile Organic Compounds

SUMMARY

The Maryland Transportation Authority (MDTA) and the Baltimore City Department of Transportation (Baltimore City DOT), in coordination with the Federal Highway Administration (FHWA), studied several alternatives for improvements to Interstate 95 (I-95) ramps and other nearby transportation facilities to support ongoing and planned redevelopment of the Port Covington peninsula in south Baltimore, Maryland. These improvements are collectively known as the I-95 Access Improvements from Caton Avenue to the Fort McHenry Tunnel (I-95 Access Improvements).

The existing road and roadway capacity are not adequate to meet projected traffic demand, and there are limited multi-modal connections around and across I-95 in the vicinity of Port Covington. The purpose of the I-95 Access Improvements project is to accommodate forecasted increased transportation demand on I-95 and the surrounding transportation network by minimizing effects on mobility and safety, as well as enhancing multi-modal connections to the Port Covington peninsula.

An Environmental Assessment (EA) is being prepared by STV Incorporated (STV) to evaluate the potential impacts of the I-95 Access Improvements on the human, natural, and built environment in compliance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 [Code of Federal Regulations] CFR 1500-1508), FHWA's Environmental Impact and Related Procedures (23 CFR 771), and other federal, state and local requirements. MDTA and Baltimore City DOT are committed to achieving the transportation, economic and social goals outlined below in an environmentally sensitive manner.

To simplify a complex project, the improvements under consideration were broken down into seven elements and several options were developed for each element. The alternatives are described in Appendix A (NEPA Alternatives) of this document. As a result of this alternatives development process, a Recommended Preferred Alternative was developed and approved by MDTA and Baltimore City DOT. The Recommended Preferred Alternative (the focus of this investigation) consists of an approximate six-mile corridor located along I-95 in Baltimore, Maryland (here in referred to as the "Study Area"). The western Study Area boundary begins at the approximate intersection of Caton Avenue and I-95, and continues east along I-95 to the intersection of Andre Street and I-95, approximately 1,000 feet west of the Locust Point Terminal Corporation. The northern and southern boundaries of the Study Area are located on either side of I-95 and encompass I-95 as well as the streets and medians beneath the interstate.

Urban Green Environmental (Urban Green) has performed an Initial Environmental Site Assessment (ESA) of the Study Area as part of the EA.

This ESA was performed using the American Society for Testing and Materials (ASTM) E1527-13 standard as a guide and consisted of a review of current and historic activities and conditions of the Study Area, including a non-intrusive visual inspection of the Study Area, review of local, state, and federal regulatory database records, review of historical records, and a survey of the adjacent land uses. Limitations, exceptions to, or deletions from, this practice are described in Sections 1.3 and 1.4 of this report.

For the purpose of this assessment and based on correspondence and direction by the project team, only parcels or portions of parcels within the proposed construction limits of disturbance (LOD) of the Study Area were researched with regards to parcel ownership, historical use/operations, and regulatory case files. These parcel or portions of parcels are located within City of Baltimore Blocks 0812, 0828, 7427, 7612, 1053, 1040, 1028, 1036, 1045, 1950, 1958, 2059, and 2065A summary of each of these select Study Area parcels impacted by the proposed construction LOD is included in Table 1, the Study Area location is illustrated in Figure 1, and the proposed construction LOD is identified in Figures 2 through 4. The purpose of this ESA was to identify potential recognized environmental conditions (RECs), controlled RECs (CRECs) and historical RECs (HRECs) associated with those parcels located within the Study Area that are anticipated to be impacted by the proposed LOD. A REC is defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to release to the environment; 2) under conditions that indicative of a release to the environment; or 3) under conditions that pose a material threat of a release to the environment. CRECs are defined as recognized environmental conditions resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. HRECs are defined as a past release of any hazardous substances or petroleum products that have occurred in connection with a property and been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.

Parcels within the Study Area consist primarily of industrial and commercial facilities; some multi-family residential apartment buildings are located in the South Baltimore, Riverside, and Locust Point Industrial Area neighborhoods adjoining the Study Area to the north. In addition, properties located on the western portion of the Study Area between Russell Street and Bremen Street (south of I-95) consist primarily of unimproved wooded areas and unimproved land along the banks of the Gwynns Falls.

Parcels within the Study Area are serviced by municipal water and sewer provided by the City of Baltimore. Natural gas and electricity are provided by Baltimore Gas & Electric (BGE). With the exception of one small building (McComas Street Wastewater Pumping Station), one large warehouse distribution center (1915 Annapolis Road), and the Downtown Dog Resort and Spa facility, no other structures are located within the Study Area. Based on a review of historical records, the Study Area has been developed with the existing improvements since construction of I-

95 (commenced circa 1976) and the construction of the Fort McHenry Tunnel (completed in 1984). Details regarding historical use of the parcels located within the Study Area are provided in Table 1.

No visual evidence of stressed vegetation, surface staining, pits, ponds, or lagoons were observed in the exterior portions of the Study Area. Nuisance debris was observed along I-95 northbound (NB), I-95 southbound (SB), and throughout the Study Area, including along the banks of the Middle Branch of the Patapsco River and Gwynns Falls.

Several of the parcels located within the Study Area are identified on state or federal environmental database listings. Listings are based on a review of the environmental regulatory database report, Public Information Act (PIA) requests and a review of case files provided by the Maryland Department of the Environment (MDE), review of information published online with the MDE and researched databases with the United States Environmental Protection Agency (USEPA). A summary of the environmental database listings is included in Table 1.

Recognized Environmental Conditions

Urban Green Environmental performed an ESA of the Recommended Preferred Alternative I-95 Access Improvements Study Area using the ASTM E1527-13 standard as a guide. This assessment revealed evidence of the following *recognized environmental conditions in* connection with the Study Area:

- Based on the review of historical records and soil data within the Study Area, several portions consist of urban land. Urban land generally consists of material that has been reworked as part of redevelopment. As such, unregulated fill material may have been utilized in several areas throughout the Study Area to alter the grade or topographic elevation. Unregulated fill material may contain elevated concentrations of contaminants including, but not limited to, VOCs, semi-volatile organic compounds (SVOCs) including PAHs, petroleum hydrocarbons, and metals. Surficial impacts associated with the potential use of unregulated fill material throughout the Study Area constitutes a REC.

- Based on the review of historical records, the following parcels currently or historically contained railroad tracks associated with the Riverside Yard and/or Locust Point Yard: 18, 52, 56, 66, 67, 68, 75, and 76. Railroad ties were often treated with creosote to persevere the wood and extend the service life. Additionally, railroad tracks are often treated with pesticides and herbicides to prevent the growth of vegetation. The current and historical presence of the railroad tracks at the above listed parcels and the potential for surface and subsurface impacts associated with creosote, pesticides, and herbicides is considered a REC.

- Based on the review of historical records, parcel 56 has been utilized as a locomotive rail yard (Riverside Yard) for over 100 years. Historically, portions of the rail yard may have been located within the proposed construction LOD prior to the construction of I-95

including, but not limited to, the following: oil/water separator(s), locomotive support buildings, and three locomotive roundhouses (two near Key Highway and McCommas Street and the third near Johnson Street and East Wells Street). Potential subsurface impacts associated with locomotive maintenance constitutes a REC.

- Portions of parcel 75 and 76 are associated with the Gould Street Generating Station, which has been in operations for over 100 years. The Gould Street Generating Station was formerly operated as a coal fire power plant and was historically serviced by rail. The power plant currently operates on natural gas; however, the plant historically operated on coal as well as fuel oil. Potential surface and subsurface impacts associated with the use of fuel oil and coal at portions of these parcels is considered a REC.

- Review of historical fire insurance maps indicates that parcel 52 and 65 were utilized for automotive sales and service as well as "gasol" use. Additionally, during the site reconnaissance of the Study Area, Urban Green identified two fueling ASTs at Parcel 76. The fueling ASTs were located in an area with pervious surfaces. No evidence of staining was observed during the site reconnaissance; however, potential spill and overfills from the fueling ASTs would discharge directly to the ground surface. Surface and subsurface impacts associated with the use of petroleum products at these parcels constitutes a REC.

- Several adjoining properties are the subject of environmental remediation through various state programs (e.g., VCP, LRP, etc.). One noteworthy adjoining property (2000 Race Street Property) is identified in several regulatory listings, most notably the MDE SHWS. An ACO between the City of Baltimore, MDE, and Honeywell, is on file with the MDE for this property. Any future earth disturbances on this parcel must comply with the ACO. The presence of an ACO for known contamination associated with the property is considered a REC.

- Three parcels (Parcels 18, 75, and 76) are identified in the UST listings. Based on the findings of this assessment, there were no apparent releases associated with the USTs; however potential releases from spills, leaks, and overfills from the USTs is considered a REC.

Controlled Recognized Environmental Conditions

This assessment has revealed evidence of the following *CRECs* in connection with the Study Area:

1) On Blocks 2065/002 and 2034/007B, a containment remedy was completed as part of the MDE VCP and any future disturbances must comply with the respective Certificates of Completion. On Parcel 33, remediation and containment remedy was completed through the MDE LRP. Disturbances on Parcel 33 will require coordination, review and approval from the MDE, Honeywell, and the City of Baltimore. The above coordination on these three Study Area parcels may have implications for any future construction, including requirements for health and safety training for construction workers, materials

management and disposal plans; and requirements for environmental cap repair and monitoring. The conditions and controls associated with these parcel constitute a CREC.

2) Parcels 18, 21, 34, and 50 are included within the Port Covington CSMP on file with the MDE. Constituents of concern identified on these parcels include metals, PAHs, petroleum hydrocarbons, VOCs and/or hexavalent chromium. Earth disturbance associated with the proposed construction LOD at these parcels must be carried out in accordance with the conditions set forth in the CSMP. The conditions set forth in the CSMP constitutes a CREC.

Historical Recognized Environmental Conditions

This assessment has revealed evidence of the following HRECs in connection with the Study Area. By definition, the following are not anticipated to require further evaluation; however, they have been called out for the purpose of awareness:

1) Three parcels (Parcels 18, 34, and 74) are identified for one or more case files with the MDE OCP. The cases associated with these parcels have been closed by the authority having jurisdiction; as such, the MDE OCP case listings are considered HRECs.

De Minimus Conditions

The additional findings noted below are not considered RECs at this time, but would rather be considered a *de minimus* condition where no additional investigation or action is currently warranted; however, preventive measures or future actions may be prudent as discussed below.

1) Regulated materials, including ASTs used for onsite consumptive use, transformers and gas cylinders, and nuisance debris were observed at the Study Area. Prior to any redevelopment, it is recommended that any inactive or discarded regulated materials and ASTs materials be removed in accordance with state and federal guidelines.

2) Four parcels (Parcels 18, 75, 76, and 87) are identified as generators of hazardous waste under the RCRA. No violations are reported for these parcels.

Data Gaps

Several data gaps were identified as part of this investigation including the restricted Study Area parcel access, absence of interviews/questionnaires from persons knowledgeable about parcels within the Study Area, and the absence of historical ownership information for the westernmost parcels in Blocks 0812, 1828/002b, 0828/001, 0828/002a, and Parcels 21, 50, 65, 66, 67, and 77. These parcels are currently owned by the Mayor and City Council of Baltimore, State of Maryland or CSX Transportation, Inc. Additional RECs or CRECs may exist as a result of these data gaps.

Opinions and Conclusions

Additional action and investigation, including the performance of a Phase II ESA, is recommended to further evaluate the above RECs.

A Phase II ESA should performed to evaluate the above referenced RECs and CRECs identified within the construction LOD. The Phase II ESA should focus on known parcel-specific contaminants of concern (e.g. metals and hexavalent chromium, PAHs, petroleum hydrocarbons), contaminants potentially present as a result of the historical parcel uses, such as polychlorinated biphenyls (PCBs), SVOCs including PAHs, VOCs, metals and petroleum hydrocarbons for the former railyard areas, petroleum-related compounds in the areas of the former USTs, and common urban contaminants (PAHs, metals) throughout all historically developed areas of the Study Area.

Modifications to the proposed construction LOD could significantly alter the findings of this assessment and require significant revisions to this report since only those parcels potentially impacted by the proposed construction LOD were evaluated as part of this assessment. Additionally, if the proposed construction LOD were shifted to encompass portions of adjoining properties subject to the VCP or other land restoration programs, earth disturbance activities would require significant coordination, review and approval from the MDE, as well as conformance to the requirements enumerated within the ACO, COC, or applicable documents. Compliance with these requirements may have numerous implications for any future construction on those particular sites, including, but not limited to, the following:

- Limitations on the ability to penetrate environmental caps;
- Requirements for health and safety training and certifications for construction workers;
- The need for feasibility studies for construction within the site boundaries;
- Materials management and disposal plans; and
- Requirements for ongoing environmental cap repair and monitoring.

Table 1 Study Area Parcel Environmental Summary

I-95 Access Improvements Project from Caton Avenue to Fort McHenry Tunnel Environmental Assessment Area
Baltimore Maryland, 21230
Port Covington Master Plan

Select Site Parcel	Property Address	Block / Lot	Current Owner	Site Parcel Approximate Acreage	Current Property Use and Improvements (July 2016/April 2017)	Historical Aerial Photograph and Topographic Map Review(1)	Historical Sanborn Atlas Review(1)	Environmental Records Review (MDE and Client Provided Reports) June to April 2017	Environmental Conditions Observed During Exterior Site Reconnaissance	Recognized Environmental Conditions (RECs)	Controlled RECs	Historic RECs	Associated Site Parcel Photographs
NA	NA	NA	NA	Unknown - no information available on SDAT	Undeveloped area between Bremen Street (west) and B&O Railroad (east)	1943 to 1971: Western portion of Site parcel appears improved with a building/parking lot; areas of trees appear less dense in 1940s and 1950s aerial photographs. 1938: Site parcel shown as unimproved and wooded.	No historic Sanborn atlas coverage available.	No regulatory database listings identified	None observed	None identified.	None identified.	None identified.	NA
91	NWS Paca Street NEC Gwynns Falls	0812 / 002	CSX Transportation, Inc.	1.91	Undeveloped, grass, shrub and tree-covered	1976 to Present: Existing I-95 SB/NB; undeveloped land. 1938 to 1971: Unimproved and wooded.	No historic Sanborn atlas coverage available.	No regulatory database listings identified	None observed	None identified.	None identified.	None identified.	1
90	1801 South Paca Street	0828 002B	State of Maryland	0.98	Undeveloped, grass, shrub and tree-covered	1976 to Present: Existing I-95 SB/NB; undeveloped land. 1938 to 1971: Unimproved and wooded.	No historic Sanborn atlas coverage available.	No regulatory database listings identified	None observed	None identified.	None identified.	None identified.	1
NA	No Address	0828 / 001	Mayor and City Council	1.90	Undeveloped, grass, shrub and tree-covered	1976 to Present: Existing I-95 SB/NB; undeveloped land. 1938 to 1971: Unimproved and wooded.	No historic Sanborn atlas coverage available.	No regulatory database listings identified	None observed	None identified.	None identified.	None identified.	2,3
89	NEW CSX RR R/W 4 S. Monroe Street	0828 / 009A	State of Maryland	1.34	Undeveloped, grass, shrub and tree-covered	1976 to Present: Existing I-95 SB/NB; undeveloped land. 1938 to 1971: Unimproved and wooded.	No historic Sanborn atlas coverage available.	No regulatory database listings identified	None observed	None identified.	None identified.	None identified.	NA
NA	No Address	0828 / 002A	Mayor and City Council	68.83	Undeveloped, grass, shrub and tree-covered; portions under	1976 to Present: Existing I-95 SB/NB; undeveloped land. 1938 to 1971: Unimproved and wooded.	No historic Sanborn atlas coverage available.	No regulatory database listings identified	None observed	None identified.	None identified.	None identified.	2,3
NA	1801 S. Monroe Street	0828 / 021	PATREC Land LLC	6.93	Patuxent Companies / Concrete and Asphalt	1994 to Present: existing asphalt/concrete facility; 1976 to Present: Existing I-95 SB/NB. 1963 to 1971: Several smaller roads appear present. Due to scale of photograph, specific Site parcel details not discernable. 1963: Site appears included within the limits of disturbance for the construction of 295. 1952 to 1957: Site parcel appears to be unimproved. Immediately adjoining parcel to the west is developed (appears commercial development). 1938 to 1943: Site and adjoining parcel to the west appear unimproved and undeveloped.	No historic Sanborn atlas coverage available.	FINDS/NPDES	None observed; Site access not provided.	Current and Historical Use (asphalt and concrete yard)	None identified.	None identified.	4
NA	1930 Annapolis Road	7427 / 001	Mayor and City Council	0.40	Gravel and grass covered area/undeveloped	1976 to Present: Existing I-95 SB/NB; undeveloped land. 1938 to 1971: Unimproved and wooded.	No historic Sanborn atlas coverage available.	No regulatory database listings identified	None observed	None identified.	None identified.	None identified.	5

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Port Covington Master Plan

Select Site Parcel	Property Address	Block / Lot	Current Owner	Site Parcel Approximate Acreage	Current Property Use and Improvements (July 2016/April 2017)	Historical Aerial Photograph and Topographic Map Review(1)	Historical Sanborn Atlas Review(1)	Environmental Records Review (MDE and Client Provided Reports) June to April 2017	Environmental Conditions Observed During Exterior Site Reconnaissance	Recognized Environmental Conditions (RECs)	Controlled RECs	Historic RECs	Associated Site Parcel Photographs
NA	1940 Annapolis Road	7427 / 001A	Linmothan Construction & Property Management	0.09	Gravel and grass covered area/undeveloped	1976 to Present: Existing I-95 SB/NB; undeveloped land. 1938 to 1971: Unimproved and wooded.	No historic Sanborn atlas coverage available.	No regulatory database listings identified	None observed	None identified.	None identified.	None identified.	5
87	1915 Annapolis Road	7612 / 013	Realty Associates Fund VIII L.P.	6.18	Howard Uniform Company / Warehouse and Distribution	1976 to Present: Existing I-95 SB/NB with materials storage beneath; existing warehouse distribution property. 1971: Existing warehouse distribution building. 1963: Site parcel appears to be under development. 1938 to 1957: Site parcel appears unimproved; however at least one road/path appears to traverse the Site. 1938 to 1971: Unimproved and wooded.	No historic Sanborn atlas coverage available.	RCRA CESQG	None observed; Site access not provided.	None identified; however facility is a RCRA CESQG and Site access was not provided.	None identified.	None identified.	6
77	1999 Kloman Street	7612 / 002	Mayor and City Council of Baltimore	6.04	Landscaped / Wooded Area	1976 to Present: Unimproved land along I-95 SB. Evidence of filling appears present during the construction of I-95 circa 1981. 1899 to 1970s: Unimproved land/wooded land.	Historical atlas coverage is not provided for the Site parcel area.	No regulatory database listings identified	None observed	None identified.	None identified.	None identified.	7,8
33	SS McComas Street, SEC Leadenhall Street	1049 / 001	Mayor and City Council	11.06	Swann Park	1905 to present: Recreational park since 1905.	1905 to present: Recreational park since 1905.	MDE LRP. The Swann Park Property contains environmental concerns primarily associated with arsenic and to a lesser degree lead and kepone in subsurface soil. Prior environmental data do not indicate that the soils, if disturbed and excavated, would be characterized as hazardous. Environmental investigations, remediation activities and monitoring have been performed at the parcel, primarily as a result of a 2007 order issued by the MDE and included the excavation of over 13,000 tons of arsenic contaminated soil, rerouting a storm drain, stabilizing a bulkhead wall, over excavation of utilities, and the placement of a robust geotextile fabric and MDE-certified clean fill cap across the entire Site parcel.		None identified; CRECs present on-Site.	Presence of impacted fill. Disturbances of the environmental cap will require coordination, review and approval from the MDE, Honeywell International, Inc., and the City of Baltimore.	None identified.	NA
34	200 W. McComas Street	1040 / 001	200 West McComas Street LLC	0.65	Downtown Dog Resort & Spa	1976 to Present: Existing I-95 NB; existing building appears present since 1960s 1899 to 1960s: Land along railroad right-of-way.	1914 to 1973: The portions of the Site parcel within the Site study area are part of the Allied Chemical General Chemical Division. Extensive buildings and chemical manufacturing are identified on the Site parcel. 1890 to 1901: The portions of the Site parcel within the Site study area are part of the Alonzo L. Thomsen Manufacturing Chemists.	State Listings: OCPCASES 03-1755BC3, 09-0077BC, UST Site Parcels 18, 21, 34, and 50 are included under the Port Covington Soil Management Plan	Four pole-mounted transformers and one pad-mounted transformer observed	None identified; CRECs present on-Site.	Historical Site parcel use (Allied Chemical General Chemical Division); environmental listings. Soil Management Plan approved by the MDE covers the Site parcel.	MDE OCPCASES (closed).	16,17
52	2001 Race Street	1028 / 007	State of Maryland c/o Redgway Properties, LLC	2.35	Rew Materials	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas 1899 to 1976: Railroad and railyards; McComas Street	1973: Due to poor quality, property information can not be determined. 1952 to 1950: The parcel is developed as an auto sales and service facility. 1901 to 1914: The property is developed with a single-story school building, and four residential dwellings. 1890: No improvements are shown on the Site parcel.	No regulatory database listings identified	Seven pole-mounted transformers and one pad-mounted transformer observed	Historical railroad; auto sales and service.	None identified.	None identified.	20 to 24
65	ES Race Street	1028 / 007A	Mayor and City Council of Baltimore	0.15	Landscaped / median	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas 1899 to 1976: Railroad and railyards; McComas Street	1973: Due to poor quality, property information can not be determined. 1952 to 1950: The parcel is shown as a dry color mixing facility; a building labelled gasol is identified on the northeast corner of the parcel in the 1950 atlas. 1901 to 1914: The Site parcel is shown as developed with a construction shed. 1890: No improvements are shown on the Site parcel.	No regulatory database listings identified	None observed	Historical railroad; former gasol building	None identified.	None identified.	30
55	2051 S. Hanover street	1036 / 012	Mayor and City Council of Baltimore	1.56	City storage and landscaped areas	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas 1899 to 1976: Railroad and railyards; McComas Street	1950s to 1970s: The Site parcel is shown as unimproved. 1901 to 1904: The Site parcel is shown as improved with residential dwellings and a church.	No regulatory database listings identified	None observed	Historical railroad.	None identified.	None identified.	25

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Baltimore Maryland, 21230
Port Covington Master Plan

Select Site Parcel	Property Address	Block / Lot	Current Owner	Site Parcel Approximate Acreage	Current Property Use and Improvements (July 2016/April 2017)	Historical Aerial Photograph and Topographic Map Review(1)	Historical Sanborn Atlas Review(1)	Environmental Records Review (MDE and Client Provided Reports) June to April 2017	Environmental Conditions Observed During Exterior Site Reconnaissance	Recognized Environmental Conditions (RECs)	Controlled RECs	Historic RECs	Associated Site Parcel Photographs
21	SS W. McComas Street	1053 / 008	Mayor and City Council of Baltimore	0.11	Median	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas 1899 to 1976: Railroad and railyards; McComas Street	1950s to 1970s: The Site parcel is shown as unimproved and/or traversed by a railroad right-of-way. 1901 to 1914: The Site parcel is shown as improved with residential dwellings; the eastern portion of the Site parcel is identified as the Union League Park in 1914.	Site Parcels 18, 21, 34, and 50 are included under the Port Covington Soil Management Plan	None observed	Historical railroad and railroad yards; state environmental listings.	Soil Management Plan approved by the MDE covers the Site parcel.	None identified.	15
50	N/A	1053 / NA	CSX Transportation, Inc. Tax Department	Unknown - no information available on SDAT	Railroad right of way	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas 1899 to 1976: Railroad and railyards; McComas Street	1950s to 1970s: The Site parcel is shown as unimproved and/or traversed by a railroad right-of-way. 1901 to 1914: The Site parcel is shown as improved with residential dwellings; the eastern portion of the Site parcel is identified as the Union League Park in 1914.	Site Parcels 18, 21, 34, and 50 are included under the Port Covington Soil Management Plan	None observed	Historical railroad.	Soil Management Plan approved by the MDE covers the Site parcel.	None identified.	19
18	300 E. Cromwell Street	1053 / 001	300 East Cromwell Street LLC	59.45	Baltimore Sun Property; portion within corridor study consists primarily of landscaped areas.	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas. Circa 1994, the existing Baltimore Sun facility constructed. 1899 to 1976: Railroad and railyards; McComas Street	1890 to 1970s: Site parcel within the study area is improved with McComas Street and the southern railroad right-of-ways.	State Listings: MDE LRP/VCP, UST, OCPCASES 04-0450BC3 (closed), AST Federal Listings: ERNS, RCRA-CESQG Site Parcels 18, 21, 34, and 50 are included under the Port Covington Soil Management Plan	None observed	Historical railroad and railroad yards; state environmental listings.	MDE LRP/VCP; containment remedy present. Soil Management Plan approved by the MDE covers the Site parcel.	MDE OCPCASES (closed).	9 to 14
66	NS. E. McComas Street	1045 / 001	Mayor and City Council of Baltimore	2.19	Road maintenance storage	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas 1899 to 1976: Railroad and railyards; McComas Street	1890 to 1970s: Site parcel within the study area is improved with McComas Street and the southern railroad right-of-ways.	No regulatory database listings identified	None observed	Historical railroad.	None identified.	None identified.	31 to 33
67	SS W. McComas Street	1950 / 001	Mayor and City Council of Baltimore	5.89	Maryland Transportation Authority storage	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas 1899 to 1976: Railroad and railyards; McComas Street	1890 to 1970s: Site parcel within the study area is improved with McComas Street and the surrounding railroad right-of-ways.	No regulatory database listings identified	One pad-mounted transformer, one dumpster, one abandoned 275-gallon AST	Historical railroad.	None identified.	None identified.	34 to 38
56	N/A	PSC0 / 010	CSX Transportation, Inc. Tax Department	Unknown - no information available on SDAT	Locus Point Rail Yard	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas 1899 to 1976: Railroad, railyards (Riverside Yard); McComas Street	1914 to 1970s: The Site parcel is shown as improved with McComas Street. 1902: The Site parcel is shown as improved with McComas Street. Ten residential dwellings are located along the eastern edge of the Site parcel.	No regulatory database listings identified	None observed	Historical railroad, including associated buildings.	None identified.	None identified.	26 to 29
75	1001 E. McComas Street	1958 / 001	Transoceanic Cable Ship Company	15.02	TE Connectivity Subcom; portion within corridor study consists primarily of landscaped areas.	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas 1899 to 1976: Railroad and railyards; McComas Street	1914 to 1970s: Site parcel within the study area is improved with railroad right-of-ways. Southern portions of the property, south of the study corridor are improved with the existing substation and railyards/buildings associated with the TE Connectivity Subcom facility.	Gould Street Power Plant 2105 Gould Street UST, RCRA LQG,	None observed	Historical Site use (power plant) and regulatory listings.	None identified.	None identified.	39 to 44
76	1800 Key Highway	2059 / 001	Mayor and City Council of Baltimore	1.54	McComas Street, McComas Wastewater Pumping Station, Wagman construction staging/storage	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas 1899 to 1976: Railroad and railyards; McComas Street	1976: Improved with one small one-story structure (in the location of the existing pumping station) identified as Growers Equipment. Railroad right-of ways are present along the north and south of the Site parcel. 1914 to 1950s: Railroad right-of-ways appear present along north and south portions of the Site parcel; Page Engineering, manufactures of gasoline engines is depicted in the 1914 atlas east of the Site Parcel along McComas Street (East Wells Street). The areas north of the study corridor are identified as the Riverside Yards of the B&O Railroad.	Former UST facility (McComas Street Pumping Station) TE Connectivity Subcom RCRA CESQG	Diesel Emergency Generator and two 500-gallon diesel ASTs Two pad-mounted transformers, two compressed-gas cylinders	Historical Site use and regulatory listings.	None identified.	None identified.	45 to 54
74	1101 E. McComas Street	1958 / 002	State of Maryland	41.13	Locust Point Marine Terminal	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas 1899 to 1976: Railroad and railyards; McComas Street	1890 to 1970s: Site parcel within the study area is improved with McComas Street and the surrounding railroad right-of-ways.	MDE OCP, UST Facility, CERCLIS NFRAP	Current marine terminal	Historical railroad	None identified.	MDE OCPCASES (closed); CERCLIS NFRAP.	NA
68	ES Key Highway	2065 / 001	CSX Transportation	7.60	CSX Railroad and grass	1976 to Present: Existing I-95 SB/NB; McComas Street, material storage areas 1899 to 1976: Railroad and railyards; McComas Street	1890 to 1970s: Site parcel within the study area is improved with McComas Street and the surrounding railroad right-of-ways.	No regulatory database listings identified	Current and historical railroad	Current and Historical Railroad	None identified.	None identified.	NA

Table 1 Study Area Parcel Environmental Summary

I-95 Access Improvements Project from Caton Avenue to Fort McHenry Tunnel Environmental Assessment Area
Baltimore Maryland, 21230
Port Covington Master Plan

Select Site Parcel	Property Address	Block / Lot	Current Owner	Site Parcel Approximate Acreage	Current Property Use and Improvements (July 2016/April 2017)	Historical Aerial Photograph and Topographic Map Review(1)	Historical Sanborn Atlas Review(1)	Environmental Records Review (MDE and Client Provided Reports) June to April 2017	Environmental Conditions Observed During Exterior Site Reconnaissance	Recognized Environmental Conditions (RECs)	Controlled RECs	Historic RECs	Associated Site Parcel Photographs
NA	1801 Key Highway	2065 / 002	CPC HT LLC	1.96	McHenry Row Mixed Use Development	Prior to 1876, the property was first developed with three structures, operating as OTT Mergenthaler & Co. Mechanical Engineer and Machinists. Between 1902 and 1914, the Site began operating as Chesapeake Paperboard Company, manufacturing paperboard and cardboard products from waste paper. Facility operations were discontinued in February of 2000. The property remained vacant until 2005 when Chesapeake Paperboard Centre, LLC purchased the property for future redevelopment. From 2006 to 2011, the property was redeveloped into the existing McHenry Row mixed use residential and retail development.		MDE VCP Environmental Containment Remedy	None observed	None identified.	Any future disturbances must be performed in accordance with the Certificate of Completion	None identified.	NA
NA	1620 Whetstone Way	2034 / 007B	CPC HT LLC	1.60	McHenry Row Mixed Use Development			MDE VCP Environmental Containment Remedy	None observed	None identified.	Any future disturbances must be performed in accordance with the Certificate of Completion	None identified.	NA
NA	No Address	2034 / 001	Fort Avenue Properties, LLC	NA	Western edge of Key Highway	1938 to Present: Unimproved land along the western edge of Key Highway.		No regulatory database listings identified	None observed	None identified.	None identified.	None identified.	NA

Notes and Superscripts

(1) Historical records description only refers to lands within the Site study corridor area.

Basemap Source: USGS 7.5 Minute Quadrangles, Baltimore East and Baltimore West, 2014

URBANGREEN ENVIRONMENTAL	STV Incorporated	Figure 1 Study Area Location Map I-95 Access Improvements from Caton Avenue to Fort McHenry Tunnel Environmental Assessment Area	Date: February 2018 Approximate Scale: NA	Figure: 1 Project Number: 188-001-16

Legend

Approximate Site boundary

Building footprint

No SDAT Identified Site Parcel

Western Avenue

I-95

Gwynns Falls

Unimproved

Parcel 91
Block 0812/002

Parcel 90
Block 0828/002B

Parcel 89
Block 0828/009A

Block 0828/001

Block 0828/002A

Decker Salvage
2200 Berlin Street
MDE OCPCASES

Wicomico Street

Railroad

Saint Paul

Monroe Street

Block 0828/021
1801 S. Monroe Street
Patuxent Companies
FINDS/NPDES

Block 7427/001

Block 7427/001A

Parcel 87
Block 7612/013
1915 Annapolis Road
Howard Uniform Company
RCRA-CESQG,

Parcel 77
Block 7612/002

Russell Street

Annapolis Road

Clare Street

Kloman Street

Westport Property
MDE LRP/VCP

Basemap Source: Baltimore CityView

STUDY AREA PARCELS - WEST

Parcel	Address	Block	Lot	Owner	Current Use
NA	NA	NA	NA	NA	Undeveloped area between Bremen Street (west) and B&O Railroad (east)
91	NWS Paca Street NEC Gwynns Falls	0812	002	CSX Transportation, Inc.	Undeveloped, grass, shrub and tree-covered
90	1801 South Paca Street	0828	002B	State of Maryland	Undeveloped, grass, shrub and tree-covered
NA	No Address	0828	001	Mayor and City Council	Undeveloped, grass, shrub and tree-covered
89	NEW CSX RR R/W 4 S. Monroe Street	0828	009A	State of Maryland	Undeveloped, grass, shrub and tree-covered
NA	No Address	0828	002A	Mayor and City Council	Undeveloped, grass, shrub and tree-covered
NA	1801 S. Monroe Street	0828	021	PATREC Land LLC	Patuxent Companies / Concrete and Asphalt
NA	1930 Annapolis Road	7427	001	Mayor and City Council	Gravel and grass covered area/undeveloped
NA	1940 Annapolis Road	7427	001A	Linmothan Construction & Property Management	Gravel and grass covered area/undeveloped
87	1915 Annapolis Road	7612	013	Realty Associates Fund VIII L.P.	Howard Uniform Company / Warehouse and Distribution
77	1999 Kloman Street	7612	002	Mayor and City Council	Materials storage (beneath I-95) / Gravel and grass covered area

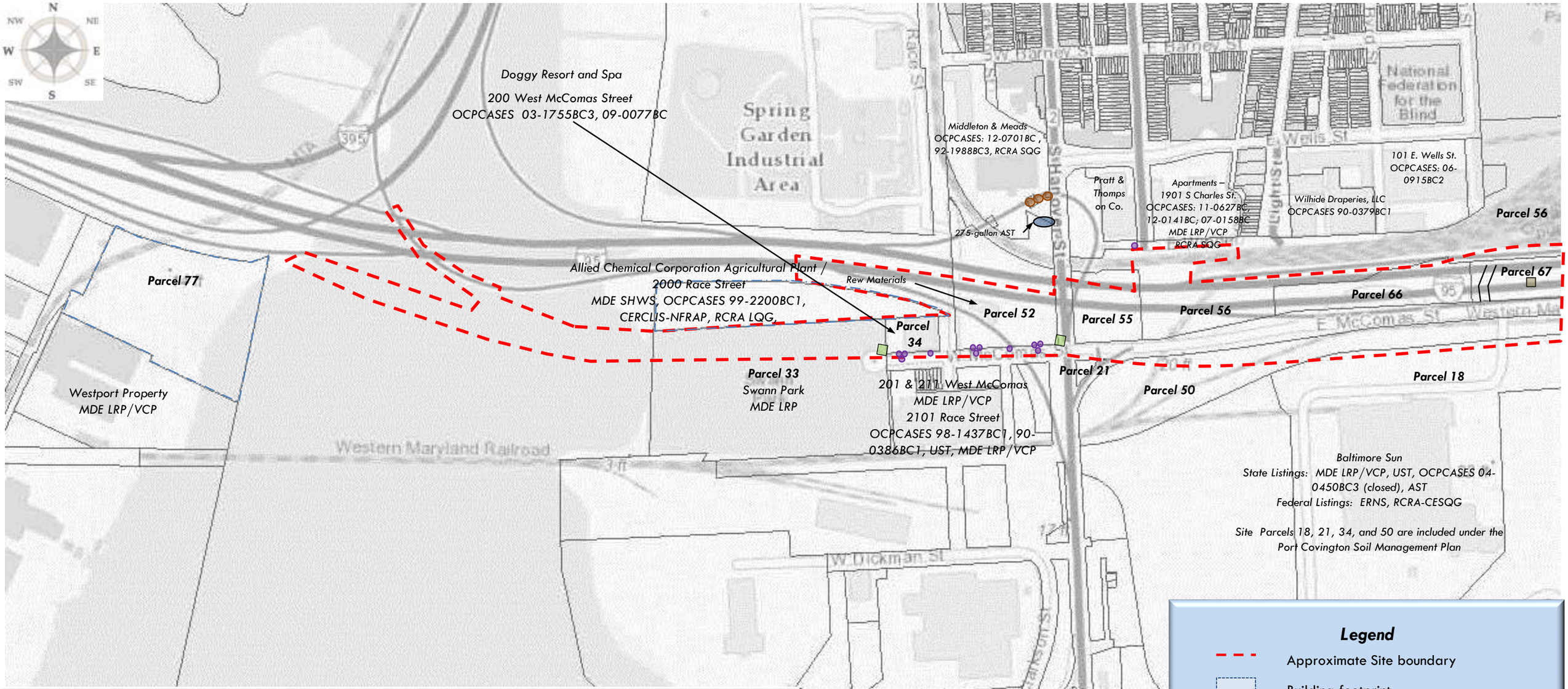
URBANGREEN ENVIRONMENTAL

STV Incorporated

FIGURE 2 STUDY AREA PARCELS - WEST

I-95 Access Improvements from Caton Avenue to Fort McHenry Tunnel
Environmental Assessment Area

Date: February 2018	Figure: 2
Approximate Scale: NA	Project Number: 188-001-16



STUDY AREA PARCELS – CENTER

Parcel	Address	Block	Lot	Owner	Current Use
33	SS McComas Street, SEC Leadenhall Street	1049	001	Mayor and City Council	Swann Park
34	200 W. McComas Street	1040	001/002	200 West McComas Street, LLC	Doggy Resort and Spa
52	2001 Race Street	1028	007	State of Maryland c/o Redgway Properties LLC	Raw Materials
65	ES Race Street	1028	007A	Mayor and City Council	Median and wooded area
55	2051 S. Hanover Street	1036	012	Mayor and City Council	Grassy area and city storage
21	SS W. McComas Street	1053	008	Mayor and City Council	Median
50	N/A	1053	NA	CSX Transportation, Inc. Tax Department	Locus Point Yard
18	300 East Cromwell Street	1053	001	300 E. Cromwell Street, LLC	Grass-Portion of Baltimore Sun
66	NS E. McComas Street	1045	001	Mayor and City Council	Road maintenance storage
67	SS W. McComas Street	1950	001	State of Maryland	Maryland Transportation Authority storage

Parcel 77 is described on Figure 2; Parcel 56 is described on Figure 4.

Basemap Source: Baltimore CityView

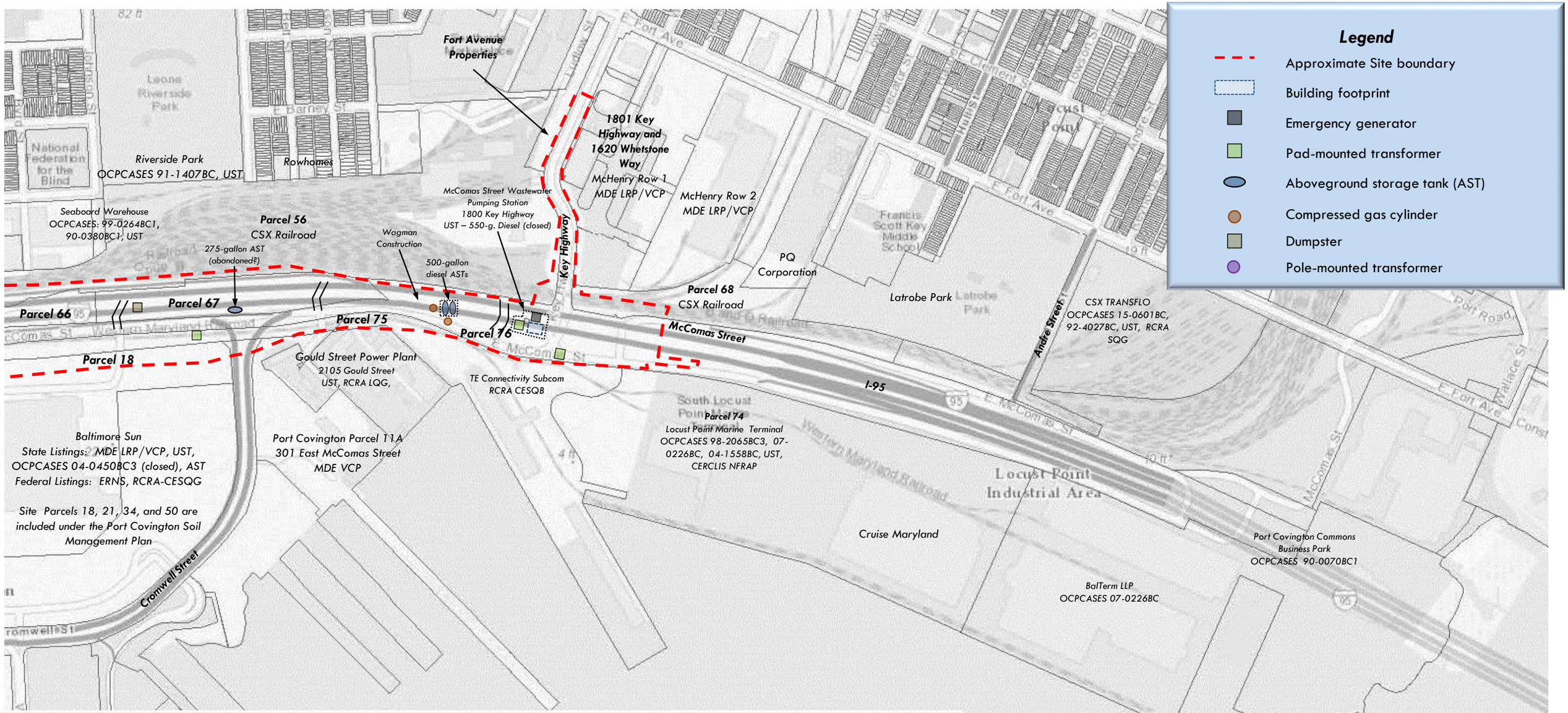
URBANGREEN ENVIRONMENTAL

STV Incorporated

FIGURE 3 STUDY AREA PARCELS - CENTER

I-95 Access Improvements from Caton Avenue to Fort McHenry Tunnel
Environmental Assessment Area

Date: February 2018	Figure: 3
Approximate Scale: NA	Project Number: 188-001-16



STUDY AREA PARCELS – EAST

Parcel	Address	Block	Lot	Owner	Current Use
56	N/A	PSC0	10	CSX Transportation, Inc.	CSX Railroad
75	1001 E. McComas Street	1958	001	Transoceanic Cable Shipping Co.	Grass – portion of TE Connectivity Subcom
76	1800 Key Highway	2059	001	Mayor and City Council of Baltimore	McComas Street McComas Wastewater pumping station Wagman Construction staging/storage
74	1101 E. McComas Street	1958	002	State of Maryland	Locust Point Marine Terminal
68	ES Key Highway	2065	001	CSX Transportation, Inc.	CSX Railroad
NA	1801 Key Highway	2065	002	CPC HT LLC	McHenry Row 1
NA	1620 Whetstone Way	2034	007B	CPC HT LLC	McHenry Row 1
NA	No Address	2034	001	Fort Avenue Properties, LLC	Western edge of Key Highway

Parcels 18, 66, and 67 are described on Figure 3.

Basemap Source: Baltimore CityView

URBANGREEN ENVIRONMENTAL

STV Incorporated

Figure 4 STUDY AREA PARCELS - EAST

I-95 Access Improvements from Caton Avenue to Fort McHenry Tunnel
Environmental Assessment Area

Date: February 2018	Figure: 4
Approximate Scale: NA	Project Number: 188-001-16

1.0 INTRODUCTION

1.1 Purpose

Urban Green Environmental, LLC (Urban Green) has completed an initial Environmental Site Assessment (ESA) Report of the I-95 Access Improvements Project from Caton Avenue to Fort McHenry Tunnel Environmental Assessment Area located along Interstate 95 (I-95) in Baltimore, Maryland. The I-95 Access Improvements Project consists of an approximate six-mile corridor located along I-95 in Baltimore, Maryland (herein referred to as the "Study Area"). The proposed construction limits of disturbance (LOD) associated with the I-95 Access Improvements Project impact several parcels located within the Study Area. A summary of each of these select Study Area parcels impacted by the proposed construction LOD is included in Table 1, the Study Area location is illustrated in Figure 1, and the proposed construction LOD is identified in Figures 2 through 4. The purpose of this ESA was to identify potential recognized environmental conditions (RECs) associated with those parcels located within the Study Area that are anticipated to be impacted by the proposed LOD.

1.2 Detailed Scope of Services

This ESA was conducted in general conformance with the scope of work and limitations defined in Urban Green's proposal executed in May 2016, and using the American Society for Testing and Materials (ASTM) standard E1527-13, "Environmental Site Assessments: Phase I Environmental Site Assessment Process" and the United States Environmental Protection Agency All Appropriate Inquiries (AAI Rule) 40 Code of Federal Regulations (CFR) Part 312 dated November 1, 2013 as guides. This ESA consisted of a corridor study that included several non-contiguous parcels; as such, certain aspects of the ASTM standard as they pertain to single properties or contiguous parcels may not apply to this investigation (refer to Section 1.4).

This assessment was performed by, and under the supervision of, an Environmental Professional (as defined in AAI Rule). The goal of the processes established by the ASTM Standard is to identify *recognized environmental conditions* (RECs), including *controlled recognized environmental conditions* (CRECs) and *historical recognized environmental conditions* (HRECs) in connection with a property and to satisfy appropriate environmental due diligence. A REC is defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to release to the environment; 2) under conditions that indicative of a release to the environment; or 3) under conditions that pose a material threat of a release to the environment. CRECs are defined as recognized environmental conditions resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. HRECs are defined as a past release of any hazardous substances or petroleum products that have occurred in connection with a property and been addressed to the satisfaction of the applicable regulatory authority or meeting

unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The terms are not intended to include *de minimus* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

This ESA consisted of a non-intrusive visual inspection of the property, survey of adjacent land uses, and review of available records pertaining to the current and historic activities and conditions along the Study Area. Please note that interviews were not conducted as part of this ESA; no knowledgeable Study Area personnel were provided to Urban Green to interview with regards to the historical use and regulatory history of the Study Area.

1.2.1 Study Area Reconnaissance

The reconnaissance of the Study Area consisted of a multi-day non-intrusive visual inspection including a review of the following: operations, hazardous materials and petroleum products handling, storage, and disposal practices, waste management practices, and evidence of hazardous material and petroleum product releases (e.g., stained soil or stressed vegetation). Containerized hazardous substances or petroleum products in quantities greater than or equal to 5-gallons or materials present within the accessible areas of the Study Area were noted, including those which are unidentified. In addition, the current and past uses of the Study Area were observed and noted. Further, as directed by the Client, the Study Area reconnaissance for the elevated portions of I-95 were conducted via vehicle/windshield survey and the portion of the Study Area from the west of Bremen Street to the Caton Avenue access ramp was conducted solely via windshield survey.

1.2.2 Records Review

The purpose of the records review is to obtain and review records that will help identify RECs in connection with the Study Area. Records reviewed as part of this investigation included the following:

- *Standard Environmental Record Sources* (environmental database report), obtained via Environmental Data Resources, Inc. (EDR).
- *Physical Setting Sources*, including the current United States Geological Survey (USGS) 7.5-Minute Quadrangle topographic map and available geologic and hydrogeologic information for the Study Area.
- *Historical Use Information*, including, as applicable, aerial photographs, historical atlases (Sanborn fire insurance atlases), property tax files, recorded land title records, local street directories, building department records, and zoning/land use records.

In addition, Urban Green submitted a Public Information Act (PIA) requests to the Maryland Department of the Environment (MDE) and researched relevant United States Environmental Protection Agency (USEPA) databases in an attempt to obtain information indicating the presence of any RECs in connection with the Study Area. Online information was obtained from USEPA databases; furthermore, files were obtained for commercial and industrial facilities along the Study

Area with the MDE. Case file information obtained from the MDE is included in Section 5 and Appendix E of this report.

A complete listing of record sources reviewed as part of this assessment is provided in Section 7 of this report. Section 7 also includes sources researched which resulted in no findings.

1.2.3 User-Provided Information

The ASTM Standard E1527-13 defines several tasks to be performed by the User/Client (STV Incorporated) in order to assist the environmental professional in identifying RECs in connection with the Study Area. These tasks include a.) review of the Title and Judicial Records for environmental liens or activity and use limitations, b.) communication to the environmental professional of any specialized knowledge, actual knowledge, or experience that is material to RECs at the property, c.) explanation for a lower purchase price (in comparison to the fair market value), and d.) commonly known or reasonable ascertainable community information, or other obvious information, that is material to RECs at the Study Area. Under the AAI Standard, the above tasks are required by a potential purchaser to qualify for the landowner liability protections. Further, if applicable, in accordance with the ASTM E1527-13, the User/Client must comply with activity and use limitations, to maintain the landowner liability protections.

The above information was requested by Urban Green of the User/Client to assist in preparing this report. The Client provided environmental assessment information and reports for several properties located along the southern boundary of the Study Area; select User/Client provided information is included in Appendix D. No knowledgeable persons were identified to Urban Green to interview with regards to environmental liens or activity and use limitations, specialized knowledge, actual knowledge, or experience that is material to RECs at the Study Area.

1.3 Significant Assumptions

The findings of this assessment are based solely on the data provided and reviewed as part of this investigation, including observations and conditions that existed at the time of the Study Area reconnaissance performed by Urban Green on July 11, 2016, July 19, 2016, July 21, 2016, and April 4, 2017. Information provided by third parties is assumed to be accurate and complete.

Controlled substances are not included within the scope of this standard. Further, the scope of this assessment did not address requirements of any state or local laws or of any federal laws other than the all appropriate inquiry provisions of the Landowner Liability Protections. Non-scope items that are beyond the scope of the ASTM E1527-13 practice and therefore were not addressed as part of this report include, but are not limited to: Asbestos-Containing Materials; Radon; Lead-Based Paint; Mold; Lead in Drinking Water; Wetlands; Regulatory Compliance; Cultural and Historical Resources; Industrial Hygiene; Health and Safety; Ecological Resources; Endangered Species; Indoor Air Quality; Biological Agents, and High Voltage Power Lines. This list is not

intended to be all-inclusive and no implication is intended regarding the importance of inquiry into non-scope considerations.

As defined by ASTM Standard E1527-13, a data gap is a lack of or inability to obtain information required by the practice, despite good faith efforts by the environmental professional. Data gaps can be significant or insignificant based on the manner in which they occur. A data gap is only significant if other information and/or professional experience raise reasonable concern involving the data gap, which would then warrant comment. Data gaps identified as part of this investigation include the restricted access to parcels located within the Study Area, the absence of interviews and/or questionnaires from persons knowledgeable about parcels located within the Study Area and the absence of historical ownership information for the westernmost parcels in Blocks 0812, 1828/002b, 0828/001, 0828/002a, and Parcels 21, 50, 65, 66, 67, and 77. These parcels are currently owned by the Mayor and City Council of Baltimore, State of Maryland or CSX Transportation, Inc. The identified data gaps are discussed in detail in Section 6 of this report.

1.4 Limitations, Exceptions, Deviations and Special Terms and Conditions

For the purposes of this assessment and based on correspondence and direction by the project team, only those parcels within the Study Area that may be impacted by the proposed LOD between I-95, just north of Bremen Street and the intersection of I-95 and Andre Street were researched with regards to parcel ownership, historic use/operations, and regulatory case files. Furthermore, only those parcels or portions of parcels within the construction limit of disturbance were visually inspected as part of the Study Area reconnaissance. This represents a deviation from the ASTM E1527-13, EPA AAI rule, and the standard Phase I ESA scope of work (Appendix F).

No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost.

Urban Green does not warrant that there are no toxic or hazardous materials or contamination, nor does Urban Green accept any liability if such are found at some future time, or could have been found if sampling or additional studies were conducted. Urban Green does not assume responsibility for other environmental issues that may be associated with the Study Area.

In view of the rapidly changing status of environmental laws, regulations, and guidelines, Urban Green cannot be responsible for changes in laws, regulations, or guidelines, which occur after the study has been completed and which may affect the Study Area. In addition, modifications to the Study Area could significantly alter the findings of this assessment and require significant revisions to this report since only those parcels included within the Study Area were evaluated as part of this assessment.

1.5 User Reliance

This report was prepared for STV Incorporated (STV) by Urban Green and is based in part on third party information not within the control of STV or Urban Green. While it is believed that the third party information contained herein will be reliable under the conditions and subject to the limitations set forth herein, neither STV nor Urban Green guarantee the accuracy thereof. This report has been completed solely for the use of STV and is being provided as a confidential document. Any transfer of this report to third parties is the sole responsibility of STV.

2.0 STUDY AREA DESCRIPTION

2.1 Location and Legal Description

The Study Area consists of an approximate six-mile corridor located along I-95 in Baltimore, Maryland. The western boundary begins at the intersection Caton Avenue and I-95, and continues east along I-95 to the intersection of Andre Street and I-95, approximately 1,000 feet west of the Locus Point Terminal Corporation. The northern and southern boundaries are located on either side of I-95 and encompass I-95 as well as the streets and medians that are beneath the interstate.

The Study Area encompasses select parcels and portions of select parcels located within the proposed construction LOD including portions of City of Baltimore Blocks 0812, 0828, 7427, 7612, 1053, 1040, 1028, 1036, 1045, 1950, 1958, 2059, and 2065. A summary of the property ownership for each of these select Study Area parcels impacted by the proposed construction LOD is included in Table 1.

The Study Area location is illustrated in Figure 1. Tax plats, illustrating the approximate boundary of the select Study Area parcels impacted by the proposed construction LOD are included in Appendix C.

2.2 Study Area and Vicinity General Characteristics

The Study Area spans six City of Baltimore neighborhoods including (west to east) Morrell Park, Carroll-Camden Industrial Area, Westport, Spring Garden Industrial Area, Port Covington and Locust Point Industrial Area (Figure 1).

2.3 Current Use and Description of Study Area Improvements

The Study Area consists primarily of the roadways and right-of-ways located along I-95. Three buildings are located within the proposed construction LOD. Several additional parcels that either adjoin the Study Area or are partially encompassed by the Study Area are improved with buildings; however, these buildings are located outside the proposed construction LOD as depicted in Figures 2 through 4. For the purpose of completeness, Urban Green performed visual inspections of the improvements located outside or partially encompassed by the LOD. Specifically, Parcel 76 is improved with the McComas Street Wastewater Pumping Station; Parcel 87 is improved with a large warehouse distribution center (1915 Annapolis Road, Howard Uniform); Parcel 34 is improved with the Downtown Dog Resort and Spa, and Parcel 52 is improved with a warehouse structure (Rew Materials at 2001 Race Street). Study Area parcels that are improved with buildings located outside the proposed construction LOD include Parcel 18 (Baltimore Sun at 300 East Cromwell Street),), and Parcel 75 (Gould Street Power Plant and TE Connectivity Subcom property).

The Study Area and surrounding properties are serviced by municipal water and sewer provided by the City of Baltimore. Natural gas and electricity are provided by Baltimore Gas & Electric (BGE).

Urban Green conducted a well search for potable water supply wells located within half-mile of the Study Area. EDR Geocheck Physical Setting Source Summary was researched as part of the well survey. The EDR Geocheck Physical Setting Source included all potable and non-potable water supply wells registered within a one half-mile radius of the Study Area (based on latitude and longitude). To evaluate potential potable water supply wells, well information was sorted based on use. Specifically, domestic wells, designated as "DW," were separated from the well information provided (water use types for wells located closest to the study area included geothermal wells, designated as "G" and test-observation-monitoring wells, designated as "T". No domestic wells are identified as situated within a half-mile radius of the Study Area. A complete listing of all potable wells within a half mile radius can be found in the EDR report (Appendix E).

2.4 Current Use of the Adjoining Properties

Adjoining properties to the north and south consist primarily of industrial and commercial facilities; however, some multi-family residential apartment buildings are located in the South Baltimore, Riverside, and Locust Point Industrial Area neighborhoods (north of the Study Area). Further, unimproved wooded areas/unimproved land are present between Gwynns Falls and I-95 (southbound).

2.5 Environmental Setting

2.5.1 Topography

According to the USGS topographic map of Baltimore (2014), Study Area elevation ranges from approximately 150 feet above mean sea level (intersection of I-95 and Caton Avenue) to 11 feet above mean sea level (intersection of I-95 and Andre Street). Along the banks of the Middle Branch of the Patapsco River (central portion of the Study Area) elevations are at mean sea level. In general, the Study Area slope is towards the bisecting surface water bodies (Middle Branch of the Patapsco River and Gwynn Falls). Overland stormwater flow appears to be directed to municipal storm water catch basins located throughout the study area. Study Area topography is also illustrated in Figure 1.

The nearest surface water body, the Middle Branch of the Patapsco River, is located within and bisects the Study Area, under the elevated portion of I-95. Gwynns Falls borders the Study Area to the south and bisects the western portions of the Study Area.

2.5.2 Lithology / Hydrogeology

According to the United States Department of Agriculture (USDA) Soil Conservation Service STATSGO Soil Map data, soils throughout the Study Area are classified as urban land with variable

soils, udorthents gravely sandy loam, udorthents sandy loam, and Beltsville loam. Depth to groundwater is anticipated to vary with the elevation.

Based on a review of the USGS topographic map, groundwater is anticipated to flow towards the surrounding and bisecting surface water bodies (Middle Branch of the Patapsco River, Gwynns Falls).

2.5.3 Wetlands and Flood Plains

According to the EDR database report, portions of the Study Area are located within a designated wetland and the 100-and 500-year flood zone; specifically, areas surrounding the Middle Branch of the Patapsco River as well as lower elevation areas on the southeastern portion of the Study Area. Please note that it is the understanding of Urban Green, that natural resources within the Study Area are being evaluated in greater detail within the natural resources technical report section of the National Environmental Policy Act (NEPA) study.

3.0 STUDY AREA RECONNAISSANCE

A site reconnaissance of the Study Area was conducted by Ms. Katherine Christensen and Ms. Rachel Taylor of Urban Green on July 11, 2016, July 19, 2016, and July 21, 2016 and by Ms. Denise A. Sullivan, P.E. and Ms. Rachel Taylor on April 4, 2017. At the time of the initial visit, the temperature was approximately 80°F with sunny skies. Urban Green was unaccompanied during the site reconnaissance. Areas accessed included all exterior areas of the construction LOD and the LOD boundaries. At the time of the reconnaissance, Urban Green was not provided access to the McComas Street Wastewater Pumping Station Building located on Parcel 76 (locked), Parcels 34, 87 and Block 0828/021 (no contact was provided for access). Further, as directed by the Client, the Study Area reconnaissance for the elevated portions of I-95 were conducted via vehicle/windshield survey and the portion of the Study Area west of Bremen Street to the Caton Avenue access ramp was conducted solely via windshield survey.

Within the central and eastern portions of the proposed construction LOD, on-site operations appear to consist primarily of construction material and road maintenance storage. Within the western portions of the proposed construction LOD, on-site operations appear limited to warehousing/distribution (Parcel 87) and asphalt/concrete facility (Block 0828 / 021).

Photographs illustrating the Study Area observations are presented in Appendix B. Site plans are presented as Figures 2 through 4. In addition, a summary of each parcel use and operations (limited to the parcels encompassed or partially encompassed by the proposed construction LOD) is included in Table 1.

3.1 Interior Observations

The Study Area reconnaissance consisted solely of exterior observations, no interior observations were made. As such, the following interior observations could not made as part of this ESA:

- Heating and cooling,
- Stains or corrosion; and
- Drains and sumps.

3.2 Exterior Observations

3.2.1 Pits, Ponds, Lagoons, Surface Staining, Stressed Vegetation, and Solid Waste

No visual evidence of stressed vegetation, surface staining, pits, ponds, or lagoons were observed in the Study Area. Nuisance debris was observed within the Study Area along I-95 northbound (NB), I-95 southbound (SB), and several parcels located within the Study Area, including along the banks of the Middle Branch of the Patapsco River and Gwynns Falls. Areas of significant accumulation of solid waste (primarily municipal waste), was noted along the banks of the Middle Branch of the Patapsco River and Gwynns Falls.

3.2.2 Water, Sewerage, Stormwater, and Wastewater

The Study Area parcels are serviced by municipal water and sewer provided by the City of Baltimore. Overland stormwater flow appears to be directed to municipal storm water catch basins located throughout the proposed construction LOD that are presumed to discharge to the Middle Branch of the Patapsco River.

3.3 Hazardous Substances, Petroleum Products, Storage Tanks and Drums

No visual evidence of underground storage tanks (USTs) such as vent or fill piping entering the ground surface was observed during the Study Area reconnaissance. However, several parcels within the Study Area were identified in the UST and historical UST listings with the MDE. Please refer to Section 5.2 for additional information regarding the historical USTs for the parcels.

Three aboveground storage tanks (ASTs) were observed within the proposed construction LOD on Parcels 67 and 76. None of the observed ASTs appeared to be provided with secondary containment.

- On Parcel 67, one approximate 275-gallon AST was observed and appeared to have been abandoned and was not in use. No visual evidence of a release, such as staining or a petroleum odor was observed on the ground surface underlying the AST.

- On Parcel 76, two approximate 500-gallon ASTs were observed. The ASTs appeared to store diesel fuel and gasoline for fueling. No visual evidence of a release, such as staining or a petroleum odor was observed on the ground surface underlying the ASTs.

3.4 Odors and Pools of Liquid

No evidence of pools of liquid or odors associated with chemical releases was observed at the time of the Study Area reconnaissance.

3.5 Waste Generation

Wastes generated as part of the property operations appeared to primarily consist of solid waste generated during daily operations. No visual evidence of chemical usage, or chemical waste streams were observed during the Study Area reconnaissance.

3.6 Polychlorinated Biphenyls

Five pad-mounted transformers were observed within the Study Area, along East McComas Street on or adjacent to Parcels 34, 52, 67 and 76. Eleven pole-mounted transformers were also observed along Parcels 34 and 52 along West McComas Street. The observed transformers were identified as owned and operated by BGE. No visual evidence of a release, such as oily staining, was observed on

the concrete pads underlying the pad-mounted transformers or on the poles of the pole-mounted transformers. A request for polychlorinated biphenyl (PCB) content information has been submitted to BGE. A response is currently pending.

3.7 Adjacent Property Use

The Study Area spans six City of Baltimore neighborhoods including (west to east) Morrell Park, Carroll-Camden Industrial Area, Westport, Spring Garden Industrial Area, Port Covington and Locust Point Industrial Area.

Adjacent properties were observed from the proposed construction LOD boundary lines to assess potential migration of environmental concerns onto the Study Area from off-site sources. No visual signs of off-site contaminations migrating onto the Study Area were observed during the reconnaissance.

4.0 HISTORICAL RECORDS REVIEW

Based on a review of aerial photographs, atlases, topographic maps, and municipal records, the Study Area was developed with the existing I-95 highway, material storage areas, and railroad right-of-ways when construction of I-95 commenced circa 1976. I-95 was completed by 1984 with the construction of the Fort McHenry Tunnel.

Prior to 1976, the Study Area (east of Hanover Street) appears to have consisted of an extensive railroad yard (associated with the Locust Point Marine Terminal/Yard, Riverside Yard, and Port Covington Yard) since at least 1899. West of Hanover Street to the Middle Branch of the Patapsco River, the Study Area appears to have consisted of developed lands along the existing and expanded railroad right-of-ways. From the Middle Branch of the Patapsco River to Breman Street, the Study Area appears to have consisted of undeveloped land with the exception of Parcel 87, which is improved with a warehouse distribution facility (Howard Uniform Company) and Parcel Block 0828/021, which is improved with Patuxent Companies asphalt and concrete. It is noteworthy, that Parcel 34 was part of a larger facility operated as the Allied Chemical, Chemical Manufacturing Division, Parcel 52 was historically operated as an automotive sales and service facility, Parcel 65 was historically improved with a building identified with a "gasol" use, and Parcels 75 and 76 have historically been operated as a power plant.

The following sections provide additional details regarding historical information reviewed for the parcels impacted or partially impacted by the proposed construction LOD; additional historical information is also provided in Table 1.

4.1 Property Tax Files and Ownership Information

Parcels included within the proposed construction LOD include properties adjoining the I-95 corridor along City of Baltimore Blocks 0812, 0828, 7427, 7612, 1053, 1040, 1028, 1036, 1045, 1950, 1958, 2059, and 2065. A summary of the property ownership for each of the select parcels located within the proposed construction LOD is included in Table 2; copies of tax maps and the Maryland Department of Assessments and Taxation information for each parcel is included in Appendix C. No historical ownership information was available online for the westernmost parcels in Blocks 0812, 1828/002b, 0828/001, 0828/002a, and Parcels 21, 50, 65, 66, 67, and 77. These parcels are currently owned by the Mayor and City Council of Baltimore, State of Maryland or CSX Transportation, Inc.

Table 2 Select Study Area Parcel Ownership Information

Block/Parcel	Libre; Folio	Grantor	Grantee	Transfer Date
Block 0828 / 021	07365; 00040	JRS Transportation	PATREC Land, LLC	May 29, 1998
Block 7427 / 001	07324; 00076	JRS Transportation	Mayor and City Council	April 30, 1998
Block 7427/001A	07211; 00656	JRS Transportation	Linmothan Construction & Property Management, Inc.	January 9, 2006
Parcel 87	100092; 00517	Annapolis Road Partnership	Realty Associates Fund VIII L.P.	February 25, 1998
Parcel 18	01187; 00303	MD-Sun Park, LLC	300 E. Cromwell Street, LLC	December 23, 2014
	15365; 00438	Tribune Company	MD-Sun Park, LLC	June 26, 2013
	10685; 00521	TMCT, LLC	Tribune Company	May 12, 2008
Parcel 34	17999; 00481	Barry Glazer	200 West McComas Street, LLC	April 4, 2016
	04006; 00015	Ambrose Houldings, Inc.	Barry Glazer	July 8, 2003
	03500; 00051	Marine Wholesalers, Inc.	Ambrose Houldings, Inc.	December 28, 1992
Parcel 52	00000; 00000	Mayor and City Council	Mayor and City Council	May 1, 1996
	05597; 00157	Mayor and City Council	State of Maryland	June 4, 1996
Parcel 55	00000; 00000	State of Maryland	Mayor and City Council	June 4, 1996
	00000; 00000	Mayor and City Council	State of Maryland	June 4, 1996

4.2 Aerial Photographs

Aerial photographs of the Study Area dated 1943 through 2011 were obtained from EDR, Google Earth Pro, and prior environmental reports provided by the Client as part of adjoining property environmental site assessments. A summary of the aerial photograph review is presented in Table 1. Copies of the EDR provided aerial photographs are included in Appendix C.

4.3 Historical Atlases

Historical atlases dated, 1979, 1974, 1973, 1971, 1952, 1951, 1950, 1914, 1902, 1901, and 1890 were obtained from EDR as part of this investigation. A summary of the historical atlas review is presented in Table 1. Copies of the historical atlases obtained from EDR are included in Appendix C.

4.4 Historical Topographic Maps

Historical topographic maps dated 1899 to 2014 were obtained from prior environmental reports provided by the Client as part of adjoining property environmental site assessments. A summary of the aerial photograph review is presented in Table 1.

4.5 Prior Environmental Reports and Investigations

Urban Green was provided with a copy of a *Phase I and Phase II Environmental Site Assessment, Baltimore Sun, 300 East Cromwell Street, Baltimore City, Maryland* prepared by GeoTechnology Associates (GTA) and dated September 2015. Information within the report supported the MDE Voluntary Cleanup Program (VCP) application for this property and is discussed in further detail in Section 5.2. A partial copy of the report is included in Appendix D.

5.0 ENVIRONMENTAL RECORDS REVIEW

5.1 Local Government Records

Several Study Area parcels impacted by the proposed construction LOD were identified on state or federal database listings. Listings identified are based on a review of the environmental regulatory database report, PIA requests and file reviews performed at the MDE, review of information published online with the MDE and researched databases with the USEPA. A summary of the environmental database listings is included in Table 1.

5.2 Standard State Environmental Record Sources

Specific State published databases were reviewed as part of this investigation within designated search radii. In addition, supplemental databases were also provided for the Study Area by the database provider, EDR. These supplemental databases included local database listings (i.e. brownfields, solid waste disposal sites, and land records). As part of this report, the additional supplemental databases were also reviewed for the Study Area parcels impacted by the proposed construction LOD. Reports containing the database information were prepared by EDR and are included as Appendix E. Lastly, and as noted above, the MDE Land Restoration Program (LRP) (online and via PIA requests) was inquired with regards to additional case files that may be available for Study Area parcels. Results of this additional inquiry identified that four Study Area parcels are included within the MDE-approved Comprehensive Soil Management Plan (CSMP) for the Port Covington Area.

5.2.1 Port Covington Comprehensive Soil Management Plan

Based on a review of the CSMP prepared by GTA and dated April 2016, Parcels 18, 21, 34, and 50 are included within the boundaries of the Port Covington area of Baltimore, Maryland. The report identifies that the Port Covington Master Developer (PCMD) has proposed to cooperatively oversee the environmental management of soils impacted with contaminants typical of urban fill conditions within the defined development plan and allow for the redistribution of soil among the properties. The CSMP has been reviewed and approved by the MDE. The parcels within the defined development plan were identified to have been used for similar purposes and served as a large intermodal facility including railroad loading operations, storage, maintenance and repairs and other machine-based operations. Similar levels of metals, polycyclic aromatic hydrocarbons (PAHs), petroleum hydrocarbons, and volatile organic compounds (VOCs) were identified on the properties. The CSMP identifies various scenarios for the characterization, screening and relocation of soils (on-site and off-site) as well as contingencies for stormwater management, groundwater dewatering, and environmental monitoring.

5.2.2 State Environmental Database Findings and MDE Case Files – Study Area

With regards to state environmental database findings and MDE case files – one parcel encompassed by the proposed construction LOD (Parcel 33) is identified in the MDE LRP listing, three parcels (Parcel 18, Block 2065/002 and Block 2034/007B) are identified in the MDE VCP, three parcels (Parcels 18, 75, and 76) are identified in the UST listings, and three Study Area parcels (18, 34, and 74) are identified for one or more case files with the MDE Oil Control Program (OCP). A summary of the state environmental agency database findings is provided below. Additional information regarding the parcels encompassed by the proposed LOD within the state environmental database listings is included in Appendix E.

- *Parcel 33 (Swann Park, MDE LRP):* Available regulatory database records and information obtained from the MDE indicate that this facility is listed in the MDE LRP. The approximate 11.06 acre Swann Park parcel is located within the central portion of the Study Area. This parcel has been owned and operated by the Mayor and City of Baltimore as a recreational park since 1905. The park was closed in 2007 after soil sampling showed elevated levels of arsenic caused by historical releases from the Allied Chemical Race Street plant. Prior environmental reports indicate that the park was constructed partially on fill materials. Based on review of select environmental documents, the Swann Park parcel contains environmental concerns primarily associated with arsenic and to a lesser degree lead and kepone in subsurface soil. Prior environmental data do not indicate that the soils, if disturbed and excavated, would be characterized as hazardous.

  Environmental investigations, remediation activities and monitoring were primarily performed as a result of a 2007 order issued by the MDE to Baltimore City and Honeywell to investigate the potential for pesticide related chemicals (arsenic and lead) to be present on the property. As a result, a comprehensive investigation and remediation were performed and included the excavation of over 13,000 tons of arsenic contaminated soil, rerouting a storm drain, stabilizing a bulkhead wall, over-excavation of utilities, and the placement of a robust geotextile fabric and MDE-certified clean fill cap across the entire site. Following remedial activities at the site, the park was reopened in 2010. Environmental and liability considerations should be further evaluated regarding any future disturbances of the Swann Park parcel and environmental cap. Disturbances of the environmental cap will require coordination, review and approval from the MDE, Honeywell International, Inc., and the City of Baltimore. This coordination may have implications for any future construction on the site, including requirements for health and safety training, materials management and disposal plans; and requirements for environmental cap repair and monitoring. Copies of select documents pertaining to the Swann Park parcel, including the 2007 MDE Order and 2008 remedial action completion report are included in Appendix E.

- *Parcel 18 (Baltimore Sun Property [300 East Cromwell Street] MDE VCP, UST, AST and OCPCASES 04-0450BC3):* Available regulatory database records indicate that this facility is

listed in the MDE VCP for an application that was submitted in 2015 and withdrawn in 2016. According to information on-file with the MDE VCP, results of the prior environmental investigations have identified concentrations of metals, PAHs, and petroleum-related impacts in soil at the parcel.

Available regulatory database and MDE records also indicate that Parcel 18 is listed in the UST database/historic UST database with two 10,000-gallon gasoline USTs and one 10,000-gallon diesel UST that were located on the southwestern portion of the property (and not within the corridor study area). One case file was opened in August 2003 and was issued closure by the MDE OCP in August 2004

Copies of the client-provided 2015 Phase I and Phase II ESA and MDE Factsheet for the Baltimore Sun Property are included in Appendices D and E, respectively.

- *Parcel 34 (Atlantic Steamers Supply Company/Struever Bros. Eccles & Rouse [200 West McComas Street] MDE VCP, UST, OCPCASES 03-1755BC3 and 09-0077BC):* Available information from the MDE LRP indicates that this facility is listed in the MDE VCP for an application that was submitted in 2016 and was issued a No Further Requirements Determination (NFRD) in 2017. Refer to Section 5.2.1 for additional information regarding the incorporated of this property within the PCMD CSMP.

  Regulatory records further indicate that this facility (Parcel 34) is listed in the UST database findings for two removed USTs and with two case files with the MDE OCP that have been issued closure. One case file, associated with a heating oil UST, was opened in May 2003 and was issued closure in June 2003; the second case file was opened in July 2008 and was issued closure by the MDE OCP in September 2008.

- *Parcel 74 (South Locust Point Marine Terminal OCPCASES 98-2065BC3, 07-0226BC, and 04-1558BC):* Available regulatory database and environmental records indicate that this facility is listed with three case files with the MDE OCP which have been issued closure. A copy of the MDE factsheet for this facility is included in Appendix E.

- *Parcel 75 (Gould Street Power Plant [2105 Gould Street]):* Available regulatory database records indicate that there are three gasoline USTs, ranging in size from 265- to 550-gallons. Each UST is identified as permanently out of use.

- *Parcel 76 (1800 Key Highway [Former UST Facility McComas Street Pumping Station]):* Available regulatory database records indicate that the McComas Street Pumping Station is identified as having a 550-gallon diesel UST which was installed in 1985 and is identified as permanently out of use.

- *Block 2065/002 and 2034/007B (Former Chesapeake Paperboard Property and Chesapeake Paperboard Parcel 2 [1215 East Fort Avenue]):* Available regulatory database and environmental records indicate that this facility is listed with the MDE VCP and LRP. Historic records also indicate that this facility is listed with the MDE OCPCASES, and historic USTs. An environmental containment remedy is present at the parcel. A copy of the MDE factsheet for this facility is included in Appendix E.

5.2.3 State Environmental Database Findings and MDE Case Files – Adjoining Properties

Former Allied Chemical Corporation Agricultural Plant / 2000 Race Street MDE State Hazardous Waste Site (SHWS) and OCPCASES 99-2200BC1: The approximate 3.39 acre Race Street property is located central portion of the Study Area and adjoins Parcel 33 (Swann Park) to the north. This property is also located immediately east of the Middle Branch of the Patapsco River. Based on review of select environmental documents, the 2000 Race Street Site parcel contains environmental concerns due to the presence of chromium ore processing residue (COPR), and herbicide and pesticide wastes. These wastes are potentially characterized as hazardous. Environmental investigations, remediation activities and monitoring are ongoing as part of an Administrative Consent Order (ACO) between the City of Baltimore, Honeywell International Inc. (Honeywell) and the MDE. The environmental cap on this property consists of a multi-layered engineered cap of clay and asphalt to limit exposure to contamination and to limit infiltration of water into soil. The permit for the cap was issued in 1980 as an interim remedy. Most recent remediation appears to be pilot testing for a permeable reactive barrier (PRB) to be installed to contain a groundwater-borne hexavalent chromium and arsenic seep along western perimeter.

AlliedSignal (Allied Chemical) owned and operated the property from the 1930s through 1976 as an agricultural chemical production and re-packaging facility. In 1958, 200 tons of COPR from the Allied Chemical Baltimore Works facility in Inner Harbor East was placed as fill at the 2000 Race Street parcel. The 2000 Race Street parcel was also used to dispose of herbicide and pesticide wastes from the on-Site agricultural chemical plant. Wastes were placed up to 20 feet below the surface and spread across most of the property. The City of Baltimore purchased the property in 1977 when I-95 was extended through the area. To facilitate the highway construction, the buildings on the property were decontaminated, demolished and buried in place. A multi-layered engineered cap (clay and asphalt cap) was placed on the parcel to limit exposure to contamination and limit the infiltration of water into the underlying contaminated soils.

Currently, the City of Baltimore owns the parcel and the property is secured by a perimeter fence. In 2007, an ACO was signed by the City of Baltimore, Honeywell International Inc. and the MDE. A copy of the ACO is attached (Appendix E) and includes timelines that obligate Honeywell and the City of Baltimore, with regulatory oversight from MDE to perform the following:

- Monthly visual inspections of the engineered cap system, site security measures, shoreline protection, drainage structures, and outlets, channels, and monitoring devices;

- Monthly environmental monitoring including a visual inspection of the site perimeter, shoreline, and storm drain outlets for erosion, seeps, surface discoloration or other evidence of potential releases of materials from the site;
- Monthly site status calls with the MDE;
- Quarterly progress reporting to the MDE;
- Quarterly inclinometer/SAA readings; and
- Periodic maintenance activities such as vegetation control, repair of site security features, and repair of settlement areas, cracks, and holes in the cap system.

The ACO also reportedly requires that the structural integrity of the I-95 bridge be maintained during implementation of interim and final remedial measures.

During 2016, the quarterly progress reports noted that MDTA bridge maintenance work, an Interim Remedial Measure Treatability Evaluation and a Remedial Conceptual Evaluation were ongoing. The Interim Remedial Measures Assessment was performed to evaluate a proposed remedial system (PRB) to address a groundwater borne-hexavalent chromium and arsenic seep along the western perimeter of the Site.

A copy of a select figures from the April 2016 *Interim Remedial Measures Pilot Test Addendum, Race Street Site, Baltimore, Maryland* prepared by CH2M Hill Engineers, Inc. are also attached (Appendix E). The figures include cross sections illustrating the locations of the buried wastes and COPR at the Site parcel as well as the extent of the existing environmental cap. Lastly, a copy of an April 3, 2017 letter to the City of Baltimore is attached (Appendix E). The April 2017 letter includes figures which illustrate the proposed locations of the PRB construction staging and work area.

In addition to the above several additional adjoining and surrounding properties are identified on the state environmental database findings. Additional information regarding the surrounding property environmental database findings is included in Appendix E.

5.3 Standard Federal Environmental Record Sources – Study Area

In accordance with the ASTM standard, specific Federal published databases were reviewed as part of this investigation within designated search radii. As noted in Section 5.2, supplemental federal databases were also provided for the Study Area by the database provider, EDR. These supplemental databases included additional federal database listings (i.e. FUDS, DOT, PCB database listings). As part of this report, the additional supplemental databases were reviewed for the Study Area addresses. A report containing the database information was prepared by EDR and is provided in Appendix E.

With regards to federal environmental database findings – one Parcel (18) is identified in the Emergency Response Notification System (ERNS), and four Parcels (18, 75, 76 and 87) are identified as a generator of hazardous waste under the Resource Conservation and Recovery Act (RCRA).

- *Parcel 18 (Baltimore Sun Property [300 East Cromwell Street] RCRA CESQG, ERNS):* The 300 East Cromwell Street Site Parcel is identified in the ERNS database for a release of unknown causes from two emergency generators in 2006. The release area was reportedly secured and impacted soil was removed. This facility is also identified on the RCRA-GEN database as a conditionally exempt small quantity generator (CESQG) of ignitable and corrosive waste which means less than 100 kilograms (kg) of hazardous waste is generated per month. No violations are listed for the property in the database report.

- *Parcel 87 (Polk Audio Inc. [1915 Annapolis Road] RCRA CESQG):* The Polk Audio Inc. property is identified on the RCRA-GEN database as a CESQG of waste. No violations are listed for the property in the database report.

- *Parcel 74 (South Locust Point Marine Terminal SEMS-Archive, RCRA LQG):* This facility is identified on the RCRA-GEN database as a large-quantity generator (LQG) of which means more than 1,000 kg of hazardous waste is generated per month. Further, this facility is also identified in the Superfund Environmental Management System (SEMS) as an Archive facility, indicating that No Further Remedial Action Planned (NFRAP) and that the property has been archived. Refer to the factsheet included in Appendix E for additional information regarding the historical investigations and remediation performed at this facility.

- *Parcel 75 (Baltimore Gas & Electric [2105 Gould Street] RCRA LQG):* The Baltimore Gas & Electric property is identified on the RCRA-GEN database as a LQG. No violations are listed for the property in the database report.

- *Parcel 76 (TE Subcom [1001 McComas Street] RCRA CESQG):* The TE Subcom parcel appears to be located along Parcel 76. This facility is identified on the RCRA-GEN database as a CESQG. No violations are listed for the property in the database report.

- *Block 2065/002 and 2034/007B (Former Chesapeake Paperboard Property and Chesapeake Paperboard Parcel 2 [1215 East Fort Avenue]):* The former Chesapeake Paperboard Property is identified on the RCRA-GEN database as a CESQG. No violations are listed for the property in the database report.

5.3.1 Standard Federal Environmental Record Sources – Adjoining Properties

Former Allied Chemical Corporation Agricultural Plant / 2000 Race Street SEMS-NFRAP, RCRA LQG: This facility is identified on the RCRA-GEN database as a LQG. Further, this facility is also identified in the SEMS as a NFRAP. Refer to Section 5.2.3 for additional information regarding the historical investigations and remediation performed at this facility.

6.0 FINDINGS, OPINIONS, AND CONCLUSIONS

6.1 Findings

The Study Area consists of an approximate six-mile corridor located along I-95 in Baltimore, Maryland. The western Study Area boundary begins at the approximate intersection of Caton Avenue and I-95, and continues east along I-95 to the intersection of Andre Street and I-95, approximately 1,000 feet west of the Locust Point Terminal Corporation. The northern and southern boundaries of the Study Area are located on either side of I-95 and encompass I-95 as well as the streets and medians beneath the interstate. The Study Area encompasses select parcels and portions of select parcels located within the proposed construction LOD. These parcel or portions of parcels are located within City of Baltimore Blocks 0812, 0828, 7427, 7612, 1053, 1040, 1028, 1036, 1045, 1950, 1958, 2059, and 2065. A summary of the ownership for the Study Area parcels is included in Table 1.

Parcels within the Study Area consist primarily of industrial and commercial facilities; some multi-family residential apartment buildings are located in the South Baltimore, Riverside, and Locust Point Industrial Area neighborhoods adjoining the Study Area to the north. In addition, properties located on the western portion of the Study Area between Russell Street and Bremen Street (south of I-95) consist primarily of unimproved wooded areas and unimproved land along the banks of the Gwynns Falls.

Parcels within the Study Area are serviced by municipal water and sewer which is provided by the City of Baltimore. Natural gas and electricity are provided by BGE. With the exception of one small building (McComas Street Wastewater Pumping Station), one large warehouse distribution center (1915 Annapolis Road), and the Downtown Dog Resort and Spa facility, no structures are located within the Study Area.

Based on a review of historical records, the Study Area was developed with the existing I-95 highway, material storage areas, and railroad right-of-ways when construction of I-95 commenced circa 1976. I-95 was completed by 1984 with the construction of the Fort McHenry Tunnel. Study Area parcel histories are also provided in Table 1.

No visual evidence of stressed vegetation, surface staining, pits, ponds, or lagoons were observed in the exterior portions of the Study Area. Nuisance debris was observed along I-95 NB, I-95 SB, and throughout the study area, including along the banks of the Middle Branch of the Patapsco River and Gwynns Falls. Minor areas of significant accumulation of solid waste (primarily trash), was noted along the banks of the Middle Branch of the Patapsco River and Gwynns Falls.

Several of the Study Area parcels and adjoining properties are identified on state or federal environmental database listings. Listings are based on a review of the environmental regulatory database report, PIA requests and a review of case files provided by the MDE, review of information

published online with the MDE and researched databases with the USEPA. A summary of the environmental database listings is included in Table 1.

Urban Green Environmental performed an ESA of the Study Area using the ASTM E1527-13 standard as a guide. The following RECs, CRECs, and HRECs were identified as part of this assessment.

6.2.1 Recognized Environmental Conditions

This assessment has revealed evidence of the following *RECs* in connection with the Study Area:

1) Based on the review of historical records and soil data within the Study Area, several portions consist of urban land. Urban land generally consists of material that has been reworked as part of redevelopment. As such, unregulated fill material may have been utilized in several areas throughout the Study Area to alter the grade or topographic elevation. Unregulated fill material may contain elevated concentrations of contaminants including, but not limited to, VOCs, semi-volatile organic compounds (SVOCs) including PAHs, petroleum hydrocarbons, and metals. Surficial impacts associated with the potential use of unregulated fill material throughout the Study Area constitutes a REC.

2) Based on the review of historical records, the following parcels currently or historically contained railroad tracks associated with the Riverside Yard and/or Locust Point Yard: 18, 52, 56, 66, 67, 68, 75, and 76. Railroad ties were often treated with creosote to persevere the wood and extend the service life. Additionally, railroad tracks are often treated with pesticides and herbicides to prevent the growth of vegetation. The current and historical presence of the railroad tracks at the above listed parcels and the potential for surface and subsurface impacts associated with creosote, pesticides, and herbicides is considered a REC.

3) Based on the review of historical records, parcel 56 has been utilized as a locomotive rail yard (Riverside Yard) for over 100 years. Historically, portions of the rail yard may have been located within the proposed construction LOD prior to the construction of I-95 including, but not limited to, the following: oil/water separator(s), locomotive support buildings, and three locomotive roundhouses (two near Key Highway and McCommas Street and the third near Johnson Street and East Wells Street). Potential subsurface impacts associated with locomotive maintenance constitutes a REC.

4) Portions of parcel 75 and 76 are associated with the Gould Street Generating Station, which has been in operations for over 100 years. The Gould Street Generating Station was formerly operated as a coal fire power plant and was historically serviced by rail. The power plant currently operates on natural gas; however, the plant historically operated on coal as well as fuel oil. Potential surface and subsurface impacts associated with the use of fuel oil and coal at portions of these parcels is considered a REC.

5) Review of historical fire insurance maps indicates that parcel 52 and 65 were utilized for automotive sales and service as well as "gasol" use. Additionally, during the site reconnaissance of the Study Area, Urban Green identified two fueling ASTs at Parcel 76. The fueling ASTs were located in an area with pervious surfaces. No evidence of staining was observed during the site reconnaissance; however, potential spill and overfills from the fueling ASTs would discharge directly to the ground surface. Surface and subsurface impacts associated with the use of petroleum products at these parcels constitutes a REC.

6) Several adjoining properties are the subject of environmental remediation through various state programs (e.g., VCP, LRP, etc.). One noteworthy adjoining property (2000 Race Street Property) is identified in several regulatory listings, most notably the MDE SHWS. An ACO between the City of Baltimore, MDE, and Honeywell, is on file with the MDE for this property. Any future earth disturbances on this parcel must comply with the ACO. The presence of an ACO for known contamination associated with the property is considered a REC.

7) Three parcels (Parcels 18, 75, and 76) are identified in the UST listings. Based on the findings of this assessment, there were no apparent releases associated with the USTs; however potential releases from spills, leaks, and overfills from the USTs is considered a REC.

6.2.2 Controlled Recognized Environmental Conditions

This assessment has revealed evidence of the following *CRECs* in connection with the Study Area:

3) On Blocks 2065/002 and 2034/007B, a containment remedy was completed as part of the MDE VCP and any future disturbances must comply with the respective Certificates of Completion. On Parcel 33, remediation and containment remedy was completed through the MDE LRP. Disturbances on Parcel 33 will require coordination, review and approval from the MDE, Honeywell, and the City of Baltimore. The above coordination on these three Study Area parcels may have implications for any future construction, including requirements for health and safety training for construction workers, materials management and disposal plans; and requirements for environmental cap repair and monitoring. The conditions and controls associated with these parcel constitute a CREC.

4) Parcels 18, 21, 34, and 50 are included within the Port Covington CSMP on file with the MDE. Constituents of concern identified on these parcels include metals, PAHs, petroleum hydrocarbons, VOCs and/or hexavalent chromium. Earth disturbance associated with the proposed construction LOD at these parcels must be carried out in accordance with the conditions set forth in the CSMP. The conditions set forth in the CSMP constitutes a CREC.

6.2.3 Historical Recognized Environmental Conditions

This assessment has revealed evidence of the following HRECs in connection with the Study Area.

By definition, the following are not anticipated to require further evaluation; however, they have been called out for the purpose of awareness:

2) Three parcels (Parcels 18, 34, and 74) are identified for one or more case files with the MDE OCP. The cases associated with these parcels have been closed by the authority having jurisdiction; as such, the MDE OCP case listings are considered HRECs.

6.2.4 De Minimus Conditions

The additional findings noted below are not considered RECs at this time, but would rather be considered a *de minimus* condition where no additional investigation or action is currently warranted; however, preventive measures or future actions may be prudent as discussed below.

3) Regulated materials, including ASTs used for onsite consumptive use, transformers and gas cylinders, and nuisance debris were observed at the Study Area. Prior to any redevelopment, it is recommended that the materials be removed in accordance with state and federal guidelines.

4) Four parcels (Parcels 18, 75, 76, and 87) are identified as generators of hazardous waste under the RCRA. No violations are reported for these parcels.

6.3 Data Gaps

Several data gaps were identified as part of this investigation including the restricted Study Area parcel access, absence of interviews/questionnaires from persons knowledgeable about parcels within the Study Area, and the absence of historical ownership information for the westernmost parcels in Blocks 0812, 1828/002b, 0828/001, 0828/002a, and Parcels 21, 50, 65, 66, 67, and 77. These parcels are currently owned by the Mayor and City Council of Baltimore, State of Maryland or CSX Transportation, Inc. Additional RECs or CRECs may exist as a result of these data gaps.

6.4 Opinions and Conclusions

Additional action and investigation, including the performance of a Phase II ESA, is recommended to further evaluate the above RECs.

A Phase II ESA should performed to evaluate the above referenced RECs and CRECs identified within the construction LOD. The Phase II ESA should focus on known parcel-specific contaminants of concern (e.g. metals and hexavalent chromium, PAHs, petroleum hydrocarbons), contaminants potentially present as a result of the historical parcel uses, such as polychlorinated biphenyls (PCBs), SVOCs including PAHs, VOCs, metals and petroleum hydrocarbons for the former railyard areas, petroleum-related compounds in the areas of the former USTs, and common urban contaminants (PAHs, metals) throughout all historically developed areas of the Study Area.

Modifications to the proposed construction LOD could significantly alter the findings of this assessment and require significant revisions to this report since only those parcels potentially impacted by the proposed construction LOD were evaluated as part of this assessment. Additionally, if the proposed construction LOD were shifted to encompass portions of adjoining properties subject to the VCP or other land restoration programs, earth disturbance activities would require significant coordination, review and approval from the MDE, as well as conformance to the requirements enumerated within the ACO, COC, or applicable documents. Compliance with these requirements may have numerous implications for any future construction on those particular sites, including, but not limited to, the following:

- Limitations on the ability to penetrate environmental caps;
- Requirements for health and safety training and certifications for construction workers;
- The need for feasibility studies for construction within the site boundaries;
- Materials management and disposal plans; and
- Requirements for ongoing environmental cap repair and monitoring.

7.0 REFERENCES

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8.0 SIGNATURE OF THE ENVIRONMENTAL PROFESSIONAL

8.1 Signature

I declare that, to the best of my professional knowledge and belief, I meet the definition of an Environmental Professional as defined in §312.10 of 40 CFR 312" and have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Denise A. Sullivan, P.E.
Principal

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