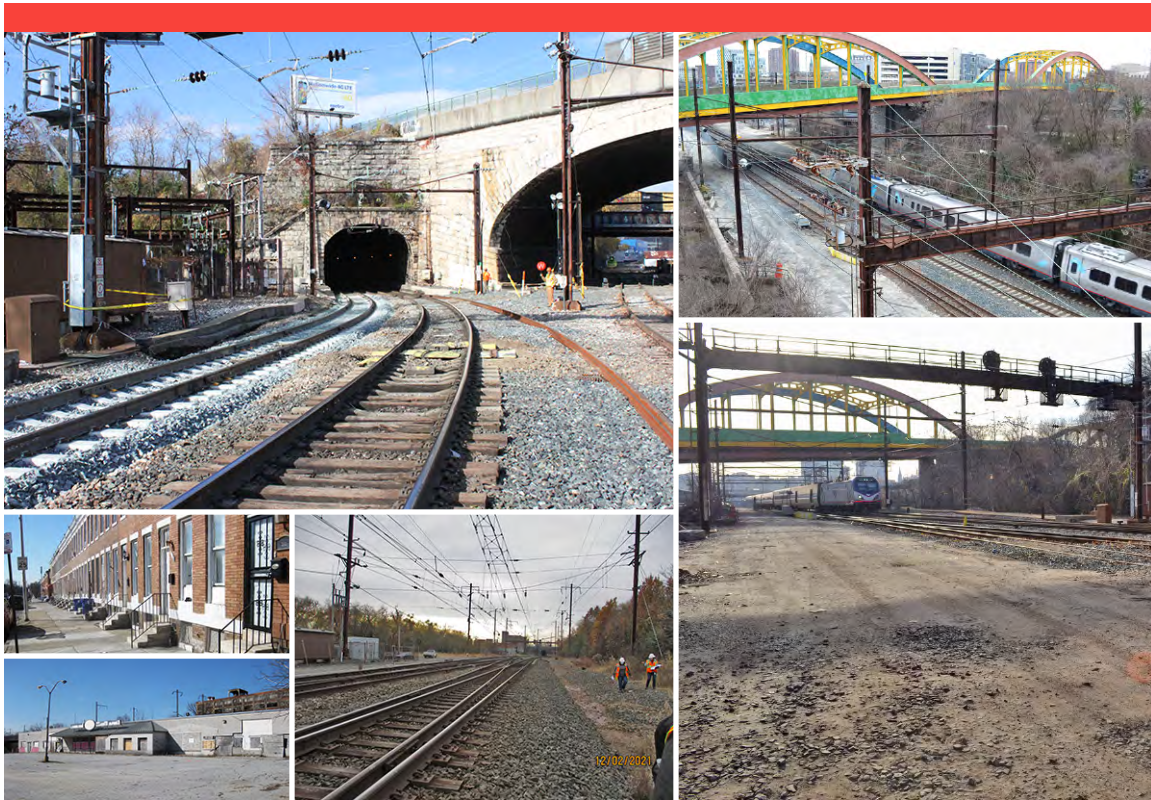


ADDENDUM 3: SUPPLEMENTAL PHASE IA ARCHAEOLOGICAL STUDY FREDERICK DOUGLASS TUNNEL PROGRAM NATIONAL ENVIRONMENTAL POLICY ACT REEVALUATION No. 5

Baltimore, Maryland



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March 7, 2025

ADDENDUM 3: SUPPLEMENTAL PHASE IA ARCHAEOLOGICAL STUDY

FREDERICK DOUGLASS TUNNEL PROGRAM NATIONAL ENVIRONMENTAL POLICY ACT REEVALUATION No. 5

Baltimore, Maryland

REPORT MAPPING AND TEXT REDACTED TO PROTECT
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March 7, 2025

EXECUTIVE SUMMARY

On behalf of the National Railroad Passenger Corporation (Amtrak), WSP USA Inc. (WSP) has prepared an addendum (Addendum 3) to the supplemental Phase IA archaeological study for the Frederick Douglass Tunnel Replacement Program (Program) in Baltimore, Maryland. This addendum has been prepared to assess the archaeological sensitivity of additional areas that have been added to the Program limits of disturbance (LOD) since the completion of the supplemental Phase IA archaeological study in 2023.

The Program will replace the 1.4-mile-long rail tunnel along the Northeast Corridor in Baltimore, which is owned by Amtrak and used for regional and Acela intercity passenger trains, Maryland Area Rail Commuter passenger trains, and Norfolk Southern Railway freight trains. The Program extends between and does not include Baltimore Pennsylvania Station (B-3727) and North Franklintown Road and consists of a tunnel extending along a gradual arc for approximately 2 miles.

The initial Phase IA archaeological study was completed in 2015; however, the Program designs had not been sufficiently developed at that time to establish an archaeological area of potential effects (APE-Archaeology). That study was therefore limited to the centerline of the alignments of each of the design alternatives. The 2015 Phase IA study concluded that although large portions of the alignment alternatives have been disturbed, there was the potential for the presence of both pre-Contact and post-Contact (historic) archaeological sites within the alignments of each of the build alternatives. The 2015 study recommended a supplemental Phase IA archaeological study once the Preferred Alternative was determined and the extent of anticipated ground-disturbing activities ascertained.

On behalf of Amtrak, WSP completed the supplemental Phase IA archaeological study to determine sensitivity for the presence of pre-Contact and post-Contact (historic) archaeological resources in the APE-Archaeology for the Program's Selected Alternative. This supplemental Phase IA archaeological study was submitted to the Maryland Historical Trust (MHT) and the consulting parties for review on October 19, 2023. In an email dated November 20, 2023, MHT concurred with the report's findings and recommendations.

Since the submission of the supplemental Phase IA archaeological study, Program designs have continued to advance, and certain new elements that require ground-disturbing activities extend outside the previously defined APE-Archaeology. To satisfy its responsibilities for the Program under Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations (36 Code of Federal Regulations Part 800), the Federal Railroad Administration (in consultation with the other signatories and consulting parties) executed a Programmatic Agreement (PA) on March 2, 2017: *Project Programmatic Agreement Among the Federal Railroad Administration, Maryland State Historic Preservation Officer, National Railroad Passenger Corporation, and Preservation Maryland Regarding the Baltimore & Potomac Tunnel Program, Baltimore City, Maryland*. As defined in the PA, project modifications with the potential to impact archaeological deposits must be assessed in accordance with the treatment measures in PA Stipulation VI.

National Environmental Policy Act Reevaluation No. 5 (Reevaluation No. 5) includes necessary construction activities in areas outside of the Selected Alternative LOD that was evaluated in the Final Environmental Impact Statement and Record of Decision. WSP completed this addendum to the supplemental Phase IA archaeological study to assess the archaeological sensitivity of the expanded APE-Archaeology (i.e., the additional areas where additional ground-disturbing activities are now proposed). The expanded APE-Archaeology discussed in this report consists of the following:

- South Portal Approach South of Gwynns Falls (Areas A1 and A2)
- South Portal Approach: Gwynns to Edmondson Avenue Bridge (Area B)

- South Portal Approach North of W Lafayette Avenue (Area C)
- Intermediate Ventilation Facility (IVF) Utilities (Area D)
- North Portal Approach: IVF (Area E1)
- North Portal Approach: Howard Street Utilities (Area E2)
- North Portal Approach: Penn Station Utilities (Areas E2 and E3)
- Pennsylvania Avenue Utilities (Area F)

WSP's review of available environmental and soil data, historical background research, and Geographic Information System topographical analysis indicate that the expanded APE-Archaeology has low sensitivity for pre-Contact and/or historic archaeological resources. Prior modification of the landscape within the expanded APE-Archaeology consisted of substantial ground disturbance associated with urban development, transportation improvements, and construction of buried utilities. As a result of the extent of this previous ground disturbance, there is a low potential for the presence of intact archaeological resources. WSP does not recommend any further archaeological survey for the expanded APE-Archaeology associated with Reevaluation No. 5.

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I. INTRODUCTION

A. PROJECT BACKGROUND

On behalf of the National Railroad Passenger Corporation (Amtrak), WSP USA Inc. (WSP) prepared an addendum (Addendum 3) to the supplemental Phase IA archaeological study for the Frederick Douglass Tunnel Replacement Program (Program) in Baltimore, Maryland. This addendum has been prepared to assess the archaeological sensitivity of additional areas that have been added to the Program limits of disturbance (LOD) since the completion of the supplemental Phase IA archaeological study in 2023.

The Program will replace the 1.4-mile-long rail tunnel along the Northeast Corridor in Baltimore, which is owned by Amtrak and used for regional and Acela intercity passenger trains, Maryland Area Rail Commuter (MARC) passenger trains, and Norfolk Southern Railway freight trains. The Program extends between and does not include Baltimore Pennsylvania Station (B-3727) and North Franklintown Road and consists of a tunnel extending along a gradual arc for approximately 2 miles.

In accordance with the National Environmental Policy Act (NEPA), the Federal Railroad Administration of the U.S. Department of Transportation (FRA), as the lead federal agency, issued a Draft Environmental Impact Statement (DEIS) in December 2015 that evaluated the environmental impacts of three build alternatives (Alternatives 3A, 3B, and 3C) in comparison with the No-Build Alternative. A Phase IA archaeological study for the Program's three build alternatives was completed in support of the DEIS (Shellenhamer and Kodlick 2015). The study found that areas with potential for both pre-Contact and post-Contact (historic) archaeological resources are present in the approximate alignments of each of the three alternatives, but designs were not sufficiently advanced at that time to establish an area of potential effects (APE) for archaeological survey or determine the Program's effects on archaeological resources.

FRA and the Maryland Department of Transportation identified Alternative 3B as the Preferred Alternative in the Final Environmental Impact Statement (FEIS) issued on November 25, 2016. FRA issued the Record of Decision (ROD) in March 2017, in which the Preferred Alternative was determined to be the Program's Selected Alternative. FRA found that the Preferred Alternative, including the preferred intermediate ventilation facility (IVF) site, best fulfills the purpose and need for the Program and balances impacts on the natural and human environment.

To satisfy its responsibilities for the Program under Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800), FRA, in consultation with the other signatories and consulting parties, executed a Programmatic Agreement (PA) on March 2, 2017: *Project Programmatic Agreement Among the Federal Railroad Administration, Maryland State Historic Preservation Officer, National Railroad Passenger Corporation, and Preservation Maryland Regarding the Baltimore & Potomac Tunnel Program, Baltimore City, Maryland*. This PA documents the detailed compliance process agreed upon by FRA, Amtrak, the Maryland Historical Trust (or MHT, which serves as the Maryland State Historic Preservation Office), and Preservation Maryland.

In accordance with Stipulations VI.B, VI.C.1, and VI.C.2 of the PA, Amtrak, in consultation with the signatories and other consulting parties, is required to identify and assess the Program's effects on historic properties. On behalf of Amtrak, WSP completed a supplemental Phase IA archaeological study to determine sensitivity for the presence of pre-Contact and post-Contact (historic) archaeological resources in the APE-Archaeology for the Program's Selected Alternative (Shellenhamer and Ward 2023). The APE-Archaeology was defined in this supplemental Phase IA archaeological study as approximately 150 acres comprising discontinuous areas of the APE, in which Program activities would include open-cut excavation, construction staging areas, temporary access roads, and utility and stormwater management sites (Shellenhamer and Ward 2023). The supplemental Phase IA study also included recommendations for

further survey to identify archaeological resources in the APE-Archaeology. This supplemental Phase IA archaeological study was submitted to the Maryland Historical Trust (MHT) and the consulting parties for review on October 19, 2023. In an email dated November 20, 2023, MHT concurred with the report's findings and recommendations.

Since the submission of the supplemental Phase IA archaeological study, Program designs have continued to advance, and certain new elements that require ground-disturbing activities extend outside the previously defined APE-Archaeology. Therefore, WSP has prepared three addendums for the supplemental Phase IA archaeological study to date. WSP completed these addendums to assess the archaeological sensitivity of expanded APE-Archaeology (i.e., areas that have been added to the Program LOD, where additional ground-disturbing activities have been proposed).

Addendum 1 concerned the construction of belowground utilities in the vicinity of the IVF, which were outside the Program's previously defined APE-Archaeology and identified as the expanded APE-Archaeology. The LOD were expanded in the vicinity of the IVF by approximately 2 acres along North Avenue, Jordan Street, and Ducatel Street. WSP determined that there is a low potential for the presence of intact archaeological resources in that area because of the extent of previous ground disturbance. WSP did not recommend any further archaeological survey for that expanded APE-Archaeology, which will not be discussed further in this present Addendum 3.

Addendum 2 focused on the construction of belowground utilities in the vicinity of the South Portal, also outside the Program's previously defined APE-Archaeology. This new area of LOD is associated with the required relocation of portions of a BGE Gas Line along segments of Wheeler, Warwick, and Whitmore avenues, required by the replacement of the Lafayette Avenue Bridge. In Addendum 2, the LOD was expanded in the vicinity of the proposed South Portal by approximately 7.5 acres along Wheeler, Warwick, and Whitmore avenues.

WSP's review of available environmental and soil data, historical background research, and Geographic Information System topographical analysis indicated that the expanded APE-Archaeology of Addendum 2 has a low sensitivity for pre-Contact and/or historic archaeological resources. Prior modification of the landscape within the expanded APE-Archaeology at the South Portal consisted of substantial ground disturbance associated with urban development, transportation improvements, and construction of buried utilities. As a result of the extent of this previous ground disturbance, there is a low potential for the presence of intact archaeological resources. WSP did not recommend any further archaeological survey for the expanded APE-Archaeology associated with the Lafayette Gas Line Relocation. On September 15, 2024, Amtrak submitted the Addendum 2 archaeological assessment for review by consulting parties, including federally recognized tribal entities. On September 24, MHT concurred with Amtrak's findings that no further archaeological survey is warranted for the expanded APE-Archaeology associated with the Lafayette Gas Line Relocation.

This Addendum 3 addresses six project areas and includes a discussion of the scale of the new soil-disturbing activities with the potential to affect belowground archaeological resources. This archaeological assessment was conducted in compliance with Section VII of the PA, which requires that project modifications with the potential to impact archaeological deposits are assessed in accordance with PA Stipulation VI. Reevaluation No. 5 includes necessary construction activities in areas outside of the Selected Alternative LOD that was evaluated in the FEIS and ROD.

In this addendum to the supplemental Phase IA archaeological study, the LOD were expanded within the following six geographic areas (Figure 1):

- South Portal Approach South of Gwynns Falls (Areas A1 and A2)

- South Portal Approach: Gwynns Falls to Edmondson Avenue Bridge (Area B)
- South Portal Approach North of W Lafayette Avenue (Area C)
- Intermediate Ventilation Facility (IVF) Utilities (Area D)
- North Portal Approach (IVF [Area E1], Howard Street Utilities [Area E2], and Penn Station Utilities [Areas E2 and E3])
- Pennsylvania Avenue Utilities (Area F)

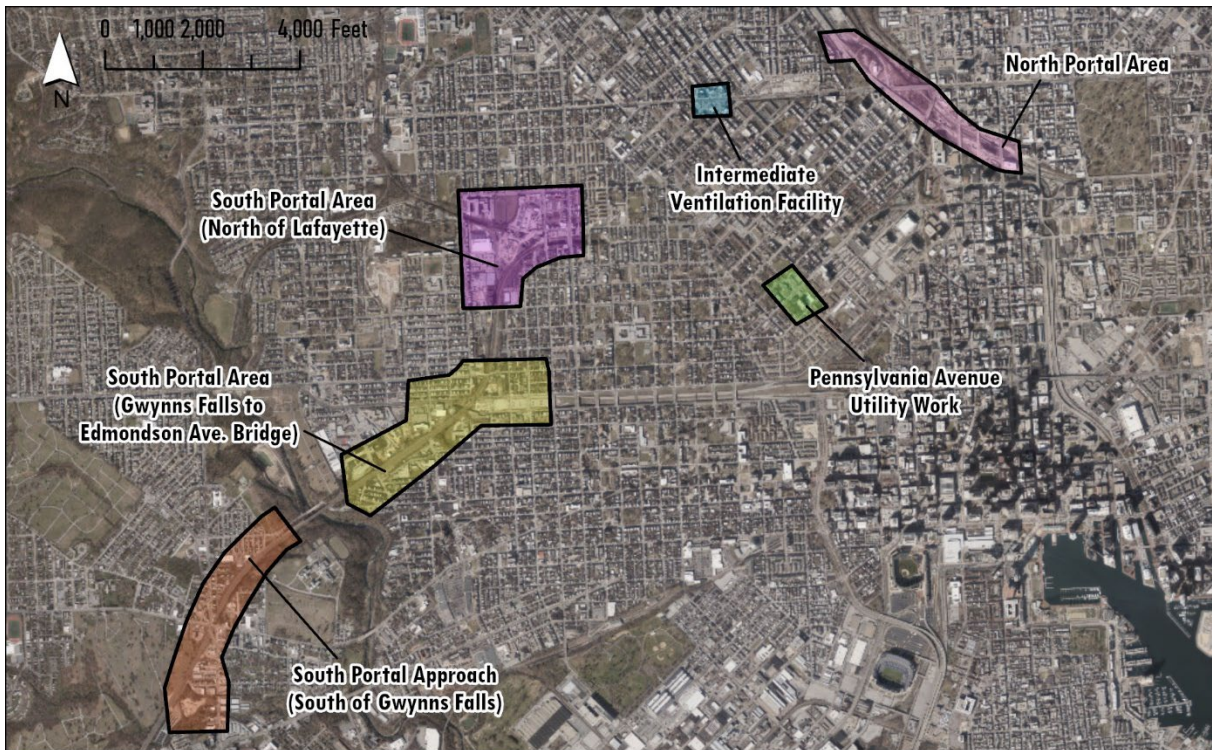


FIGURE 1. EXPANDED APE-ARCHAEOLOGY, REEVALUATION NO. 5, GENERAL AREAS

Forty-five properties (APE Properties) are associated with these six project areas (Table 1).

TABLE 1. PROJECT AREAS AND ASSOCIATED APE PROPERTIES

PROJECT AREA	MAP	APE Properties
South Portal Approach (South of Gwynns Falls)	A1	1, 2, 3, 4
South Portal Approach (South of Gwynns Falls)	A2	5, 6
South Portal Approach (Gwynns Falls to Edmondson Avenue Bridge)	B	7, 8, 9, 10, 11, 12, 13, 14
South Portal Approach (Gwynns Falls to Edmondson Avenue Bridge)	B	15, 16, 17, 18, 19, 20, 21, 22, 23
South Portal Approach (Gwynns Falls to Edmondson Avenue Bridge)	B	45
South Portal Approach (North of Lafayette)	C	24, 25, 26, 27
South Portal Approach (North of Lafayette)	C	28, 29, 30, 31, 32, 33, 34, 35
IVF Facility Utilities	D	36
North Portal Approach (IVF)	E1	37, 38
North Portal Approach (Howard Street Utilities)	E2	39, 40
North Portal Approach (Penn Station Utilities)	E3	41, 42, 43
Pennsylvania Avenue Utility Work	F	44

This report is divided into seven chapters. After this introduction, Chapter II describes the area's general environmental setting and Chapter III discusses previous archaeological studies and previously identified

historic architectural resources. Chapter IV explains the present study's methodology. Chapter V contains the results of the archaeological assessment of APE properties. Chapter VI summarizes the report and provides its conclusions, and Chapter VII lists the references cited. Six appendices follow the report: a table detailing the proposed work, potential impacts, and archaeological sensitivity (Appendix A), detailed maps of previously identified archaeological sites (Appendix B) and historic architectural resources (Appendix C), historic mapping (Appendix D), LiDAR mapping/shaded relief (Appendix E), and mapping of existing utilities (Appendix F).

B. PERSONNEL

The Principal Investigator for the addendum study was Henry Ward (Registered Professional Archaeologist [RPA] 12205) who served as Project Manager. Historical research and GIS mapping was carried out by Mr. Ward with support from GIS Specialist Ron Bruno. Mr. Ward prepared this document with assistance from Mr. Greg Katz (RPA 15888). Mr. Ward and Mr. Katz meet the standards set out in the Secretary of the Interior's Professional Qualification Standards for Archaeology (48 *Federal Register* 44738–44739, 36 CFR Part 61) (United States Department of the Interior 1983).

C. METHODOLOGY

This addendum to the supplemental Phase IA archaeological study serves to examine the expanded APE-Archaeology, which incorporates the expanded LOD that have been identified as the design of the Program has progressed. The study assesses sensitivity for the presence of pre-Contact and/or historic archaeological resources in the expanded APE-Archaeology and provides recommendations for further survey, if appropriate.

D. DOCUMENTARY RESEARCH

As part of the supplemental Phase IA archaeological study, research was conducted to establish pre-Contact and historic contexts for the APE-Archaeology and to determine the existence of any previously recorded archaeological sites or historic properties in or adjacent to the APE-Archaeology. Files available through MHT's Cultural Resource Information System (Medusa) were checked for the presence of recorded archaeological sites and historic properties within a 1.6-kilometer (1-mile) radius of the APE-Archaeology. Additional background research for this addendum consisted of a review of pertinent primary and secondary sources, including land records, historical maps and atlases, and local and county histories available online and at the Maryland State Archives in Annapolis. Previous survey reports for archaeological investigations conducted in or near the APE-Archaeology were also obtained from the MHT Library, including Shellenhamer and Kodlick (2015), Ward et al. (2006), and Ward et al. (2013). Additional archival research was carried out at the Library of Congress in Washington, DC, and the Sheridan Libraries at Johns Hopkins University in Baltimore. The review of historical maps was a key component of the analysis of historic archaeological potential.

This report does not include a historic context. The goal of this study was not to develop a historical and cultural synthesis of the APE-Archaeology but to provide an addendum planning document as the Program design advances. Refer to the historical synthesis of the entire Program in WSP's supplemental Phase IA archaeological study (Shellenhamer and Ward 2023).

E. GIS METHODS AND TOPOGRAPHIC ANALYSIS

In the 2023 supplemental Phase IA assessment, archaeologists recommended a Phase IB archaeological survey of a portion of the original APE-Archaeology in the South Portal area (Shellenhamer and Ward 2023). The area was assessed as having moderate to high sensitivity for the presence of deeply buried

archaeological resources. The area was largely rural in the years leading up to the early nineteenth century and became increasingly a patchwork of rural countryside and urban residential development (construction of rowhouses) in the second and third quarters of the nineteenth century (Shellenhamer and Ward 2023). During urban growth in the late nineteenth century and railroad construction, small steam valleys in this area were covered in fill and the surrounding landscape was leveled. Archaeological potential in these deeply buried areas ends circa 1900 as the filling and leveling of the landscape was completed.

Near-surface (current grade) archaeological potential was described as moderate for the area of the expanded APE-Archaeology for the Lafayette Gas Line Relocation east of the current railroad corridor. Although comparable geotechnical/archaeological data was not available for the expanded APE-Archaeology west of the railroad, there are some basic similarities in the topographic setting and historic land development. Archaeological potential in this area (at this near-surface grade) is principally for archaeological deposits in rear yards of houses (Shellenhamer and Ward 2023). Archaeological potential in these near-surface contexts continues into the middle of the twentieth century. The neighborhood known as Monroe Riggs in the past is known as the Midtown-Edmondson neighborhood today. Industrial development expanded in the 1870s and 1880s alongside railroad development and expansion of the road network.

The community had a sizeable African American population in the nineteenth century and has maintained this status into the present-day. In the nineteenth century, new and established African American families alike found themselves settling in a horseshoe pattern around the central city with “Old West Baltimore” forming the west side of this horseshoe. Segregation restricted the areas where they could settle to the blocks south of North Avenue, west of Pennsylvania Avenue, and east of Fulton Avenue. In the last quarter of the nineteenth century, German immigrants became a substantial part of the Monroe Riggs community. The neighborhood experienced a variety of changes over the course of the twentieth century. Information about these changes can be found in the supplemental Phase IA study (Shellenhamer and Ward 2023).

F. REVIEW OF GEOTECHNICAL DATA

As the expanded APE-Archaeology for the Lafayette Gas Line Relocation was only recently added to the Program, there is no Program-related geotechnical data in the direct vicinity of the area in question. Phase IB archaeological testing using geotechnical borings on the South Portal and Approach on the east side of the existing rail corridor was conducted as part of a prior evaluation. However, these borings are too far removed from the current expanded APE-Archaeology west of the railroad to provide more than general interpretations included in the discussion that follows.

II. GENERAL ENVIRONMENTAL SETTING

A. GENERAL PHYSIOGRAPHY AND GEOLOGY

As previously noted, the expanded APE-Archaeology associated with Reevaluation No. 5 includes areas of soil disturbance in several parts of Baltimore City (Areas A through F). However, all of the areas under consideration fall within the Piedmont Plateau Province, which is a geographic region of varied topography, ranging from lowlands to ridges of moderate altitude and relief. The province is underlain by metamorphic and igneous rocks that range from Precambrian to Paleozoic in age. These rocks have been sheared, fractured, and folded by tectonic activity. The Fall Line, which is where the Piedmont Plateau Province descends steeply to the Coastal Plain, runs along the boundary for the Maryland Archaeology Research Units 7 and 14 (Figure 2).

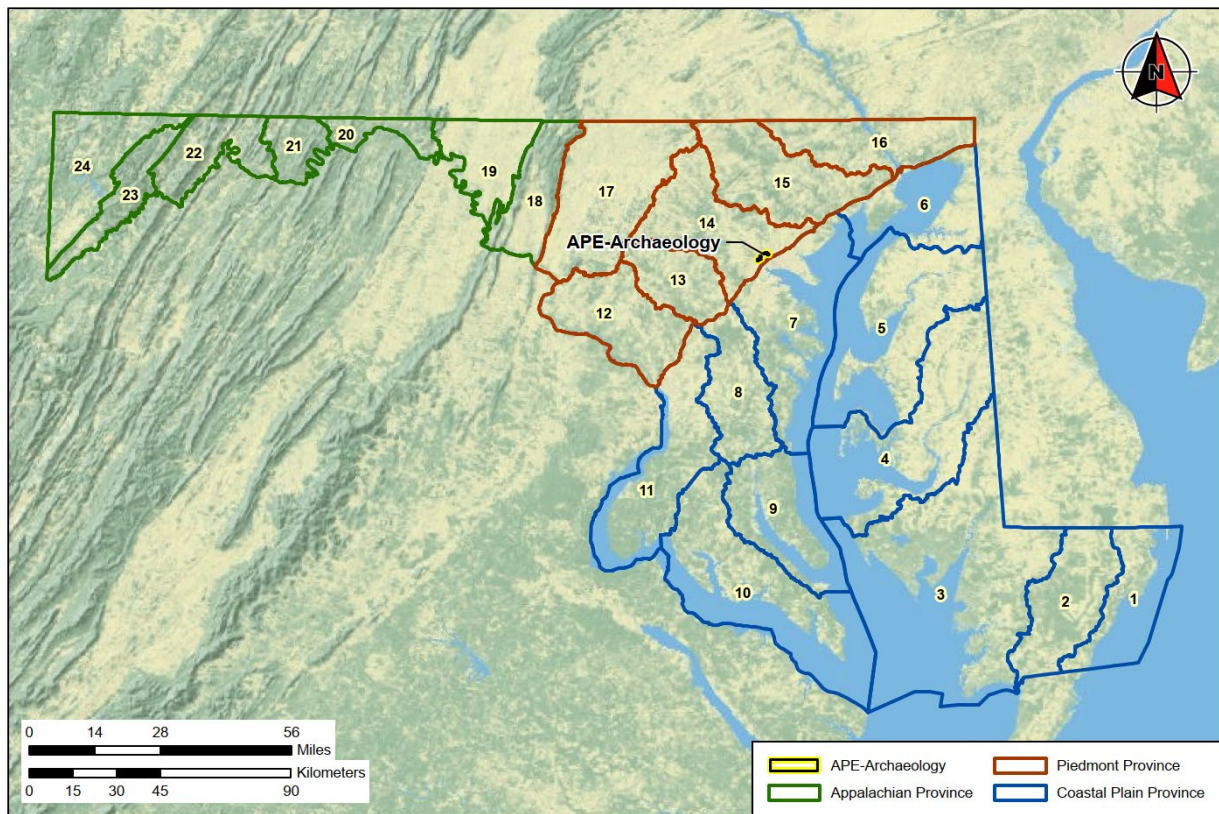


FIGURE 2. MARYLAND ARCHAEOLOGICAL RESEARCH UNITS (ESRI USA TOPO MAPS 2019; SHAFFER AND COLE 1994)

The expanded APE-Archaeology for Reevaluation No. 5 lies at the interface between the Potomac Group (Kp) to the north and James Run Gneiss formations to the south. The Potomac Group consists of inter-bedded quartzose gravels, argillaceous sands, and white, dark gray, and multicolored silts and clays. These deposits date to the Cretaceous era. Overall, the Potomac Group reaches a thickness of 0 to 240 meters (0 to 800 feet).

B. SOILS

U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) soil mapping for Baltimore City places the expanded APE-Archaeology within the broad category of Urban Land–Udorthent Complex (Levin and Griffin 1998; USDA-NRCS 2021).

Urban Land–Udorthent Complex soils are in nearly level to moderately sloping areas of urban settings where more than 80 percent of the surface is covered by asphalt, concrete, buildings, or other impervious surfaces. This soil association represents approximately 20 percent of the land area in the city. Urban Land can be identified on all landscape positions of the Coastal Plain and the Piedmont Plateau and generally ranges from 2 to more than 1,000 acres in size. Typically, large areas are mostly composed of miscellaneous artificial fill. In some areas, several feet of fill have been placed over streams, swamps, floodplains, and tidal marshes and are usually completely covered by roads, buildings, or other structures.

C. HYDROLOGY

The expanded APE-Archaeology for Reevaluation No. 5 falls within two watersheds. In general, the APE areas to the south and west fall within the Gwynns Falls drainage, and those to the north and east fall within the Jone Falls drainage.

Until the mid-nineteenth century, Gwynn Run, a tributary of the Gwynns Falls, was located south of the APE-Archaeology. Two branches of Gwynn Run extended north from the approximate location of present-day West Lexington Street, flanking the expanded APE-Archaeology to both the east and the west. The major segments of the expanded APE-Archaeology along Wheeler, Warwick and Whitmore avenues would have been located on the original elevated landform between these two tributary streams. The minor gas line relocation areas to the south, along West Lexington Avenue and again at North Smallwood, would have been located much closer to the stream channels.

The Gwynns Falls stream is 40.1 kilometers (24.9 miles) in length (Parsons Brinckerhoff, Inc. 2013). Its headwaters originate near Reisterstown in Baltimore County and empties into the Middle Branch of the Patapsco River. The Patapsco River has a watershed of 1,760 square kilometers (679 square miles). The last 16 kilometers (10 miles) of the river is a tidal estuary inlet of Chesapeake Bay. The tidal area of the river is composed of the Northwest Harbor and Middle Branch of the Patapsco River (Versar, Inc. 2012).

The largest of the streams flowing into the Patapsco River is the Jones Falls. Two-thirds of its 64.37-square-kilometer (40-square-mile) watershed is north of the city in Baltimore County in an area characterized by low-density development and agricultural land. The stream is 29.0 kilometers (18.0 miles) in length (National Aquarium 2024). It flows aboveground through the county but is channelized through much of the city in either a concrete-lined streambed or in a tunnel. The stream enters a tunnel beneath the Jones Falls Expressway (I-83) at North Avenue and flows into the Inner Harbor area of the Patapsco River near the intersection of Pratt Street and President Street. In the eighteenth century this stream had large areas of wetlands along its lower reaches and a delta area at its mouth known as Harrison’s Marsh. The Jones Falls served as the boundary between Baltimore Town and Jones (or Old) Town in the second quarter of the eighteenth century (Olson 1980).

III. PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS AND HISTORIC PROPERTIES

A. PREVIOUS ARCHAEOLOGICAL STUDIES

Review of cultural resources survey data maintained by MHT on Medusa revealed the following 10 previous archaeological studies have been conducted within a 0.8-kilometer (0.5-mile) radius of the APE-Archaeology associated with Reevaluation No. 5 (see Appendix B; Table 2).

TABLE 2. PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS WITHIN 0.8-KILOMETER (0.5-MILE) RADIUS OF EXPANDED APE-ARCHAEOLOGY, REEVALUATION NO. 5

STUDY	NO.	AREA	REFERENCE
Phase I Reconnaissance Survey of the Archeological Resources in the Proposed I-595 Corridor Between I-95 and I-170, Baltimore City, Maryland	BC 6	A1/A2	Dinnel 1982
Preliminary Reconnaissance Survey of the Archaeological Resources in the Proposed I-70 Alignment Through Leakin and Gwynns Falls Park	BC 26	A1/A2	Harrison 1977
Phase I/Phase II Archeological Reconnaissance Survey for the Gwynns Falls Sewer Interceptor, Baltimore, Maryland	BC34C	A1/A2	Weber 1984b
Phase I Archeological Survey of the Proposed 3.03-mile Phase 2 Gwynn Fall's Pathway	BC 126	A1/A2	Hill 2000
Stage 1 Phase IB Archeology Technical Report, Red Line Light Rail Transit Project, City of Baltimore and Baltimore County, Maryland	BC 184	A2/B/F	Ward et al. 2013
Stage 1 Phase IB Archeology Interim Technical Report, Red Line Light Rail Transit Project, City of Baltimore, and Baltimore County, Maryland	BC 194	B	Ward et al. 2015
*Phase IA Archeological Study, B&P Tunnel Project, Baltimore, Maryland	BC 195	All	Shellenhamer and Kodlick 2015
*Supplemental Phase IA Archaeological Study Baltimore & Potomac Tunnel Replacement Program, Baltimore, Maryland	-	All	Shellenhamer and Ward 2023

*Note: No location data available on Medusa

An initial Phase IA archaeological study for the Program was completed in 2015 in support of the DEIS. At that time, several alignment alternatives were under consideration. As designs had not been sufficiently developed at the time of the Phase IA study, the APE at that time was limited to the centerline of the alignments of each of the design alternatives. Given their cumulative linear extent and the stage of the Program at the time of the survey, it was deemed prudent to conduct an archaeological assessment study to acquire a comprehensive understanding of the archaeological sensitivity of all the proposed alternatives. The high-level survey was also performed to provide information that could assist with planning activities. The Phase IA study concluded that although large portions of the alignment alternatives have been disturbed, potential remained for the presence of both pre-Contact and historic archaeological sites within the alignments of each of the build alternatives. The study recommended a supplemental Phase IA archaeological study to be conducted once the Preferred Alternative was determined and the extent of anticipated ground-disturbing activities ascertained.

In the 2023 supplemental Phase IA assessment for the Program, archaeologists recommended a Phase IB archaeological survey of a portion of the original APE-Archaeology in the South Portal area using

geotechnical soil borings and geoarchaeological analysis (Shellenhamer and Ward 2023). The area was assessed as having a moderate to high sensitivity for the presence of deeply buried pre-Contact and historic archaeological resources. During urban growth in the late nineteenth century and railroad construction, small steam valleys in this area were covered in fill and the surrounding landscape was leveled.

B. PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL SITES

According to the archaeological site files maintained by MHT, no previously recorded archaeological sites are situated within the expanded APE-Archaeology for Reevaluation No. 5. Eight sites are present within a 0.8-kilometer (0.5-mile) radius (see Appendix B; Table 3). Four of the sites date from the eighteenth to twentieth centuries. Three Mill (18BC35), [REDACTED] dates to the late eighteenth to early twentieth centuries. [REDACTED]

was a large brick structure associated with a charitable almshouse that operated during the late nineteenth to mid-twentieth centuries. The other two sites represent surface artifact scatters. Site Dinnel I (18BC36) contained a concentration of nineteenth- and twentieth-century artifacts potentially associated with a dump or former structure. None of the five recorded archaeological sites has been evaluated for their eligibility for listing in the National Register of Historic Places (NRHP).

TABLE 3. ARCHAEOLOGICAL SITES WITHIN 0.8-KILOMETER (0.5-MILE) RADIUS OF EXPANDED APE-ARCHAEOLOGY, REEVALUATION NO. 5

SITE NO. (AREA)	NAME	PERIOD	DESCRIPTION	NRHP STATUS
18BC35 (Area A1)	Three Mill	Late 18th to early 20th c.	Mill site	Unevaluated
18BC36 (Area A1)	Dinnel I	19th to 20th c.	Concentrated artifacts	Unevaluated
[REDACTED]				
18BC100 (Area E1)	Curved Dam	Late 18th to early 20th c.	Timanus mill site	Unevaluated
[REDACTED]				

C. PREVIOUSLY IDENTIFIED HISTORIC ARCHITECTURAL RESOURCES

WSP reviewed the Maryland Inventory of Historic Properties (MIHP) forms on file at MHT to identify previously recorded historic architectural resources that fall within or are directly adjacent to the expanded APE-Archaeology (see Appendix C; Table 4).

TABLE 4. HISTORIC ARCHITECTURAL RESOURCES, EXPANDED APE-ARCHAEOLOGY, REEVALUATION NO. 5

AREA	RESOURCE	DESCRIPTION	STATUS
A1	Philadelphia, Wilmington & Baltimore Railroad	Railroad alignment	NR/MIHP
A2	Frederick Road Bridge (BC9013)	Railroad bridge	MIHP
A2	Industrial Warehouse District	Cemetery	MIHP
A2	Philadelphia, Wilmington & Baltimore Railroad	Railroad alignment	NR/MIHP
B	Philadelphia, Wilmington & Baltimore Railroad	Railroad alignment	NR/MIHP
B	Philadelphia, Wilmington & Baltimore Railroad	Railroad alignment	NR/MIHP
B	American Ice Company	Ice factory	NR/MIHP
B	B&P Railroad West Mulberry Street Bridge	Railroad bridge	MIHP
B	Edmondson Avenue Historic District	Residential neighborhood	MIHP
B	Bon Secours Historic District	Residential neighborhood	MIHP
B	Midtown Edmondson Historic District	Residential neighborhood	MIHP

AREA	RESOURCE	DESCRIPTION	STATUS
B	Ward Baking Company	Commercial bakery	MIHP
B	Atlas Safe Deposit and Storage Comp. Ware. Complex	Safe deposit/storage warehouse	MIHP
C	Western Maryland Railroad (Owings Mills/Baltimore City Railroad Alignment)	Railroad alignment	MIHP
C	Edmondson Avenue Historic District	Residential neighborhood	MIHP
C	Carver Vocational Technical School	Public vocational school	MIHP
C:	Baltimore Car Wheel Works	Industrial site	MIHP
C	Sandtown-Winchester/Penn North Historic District	Residential neighborhood	MIHP
C	Old West Baltimore	Residential neighborhood	NR/MIHP
D	Reservoir Hill Historic District	Residential neighborhood	NR/MIHP
D	Bolton Hill Historic District	Residential neighborhood	NR/MIHP
D	Old West Baltimore Historic District	Residential neighborhood	NR/MIHP
E1	Philadelphia, Wilmington & Baltimore Railroad	Railroad alignment	NR/MIHP
E1	Reservoir Hill Historic District	Residential neighborhood	NR/MIHP
E2	Philadelphia, Wilmington & Baltimore Railroad	Railroad alignment	NR/MIHP
E2-E3	North Central Historic District	Residential/commercial neighborhood	MIHP
E2-E3	Union Railroad	Railroad alignment	MIHP
E2-E3	Pennsylvania Railroad Station	Railroad station complex	NR/MIHP
F	Old West Baltimore	Residential neighborhood	NR/MIHP
F	Pennsylvania Ave African Methodist Episcopal Zion Church	Church complex	MIHP

Note: Resources in **bold** type denote resources that fall within the expanded APE-Archaeology.

IV. STUDY METHODOLOGY

A. CARTOGRAPHIC REVIEW

WSP selected maps of Baltimore spanning the nineteenth and early twentieth centuries to understand the history of development in the area and to assess the APE's archaeological sensitivity. For the purposes of this study, the selected historical maps were imported and georeferenced into GIS. The locations of buildings, roads, and other improvements are approximate because historical maps are imprecise relative to modern coordinate systems; however, the historical information presented on the maps is useful in identifying the likelihood that historic archaeological resources may be present.

Maps consulted include those listed below, selected according to detail, estimated accuracy, compatibility with one another and modern landmarks, and relevance to the developmental history in the expanded APE-Archaeology. Appendix D includes full sets of historic mapping overlays depicting the APE.

- *Map of the City and County of Baltimore, Maryland Baltimore City Atlas* (Sidney 1857)
- *Approaches to Baltimore, Maryland* (1865)
- USGS (United States Geological Survey) topographic quadrangle, Baltimore (USGS 1894)
- *Atlas of the City of Baltimore, Maryland* (Topographical Survey Commission 1914)

B. SENSITIVITY ASSESSMENT

The archaeological sensitivity of an area is ranked as high, moderate, or low according to various environmental characteristics and documented factors. The environmental factors that contribute to pre-Contact archaeological sensitivity often also apply to early historic archaeological sensitivity.

In general, analysis of pre-Contact site sensitivity for the Program considers landscape characteristics in or near the APE-Archaeology that are associated with documented pre-Contact sites in the region and locally. Variables can include topography, proximity to water and resource catchment areas over time, soil characteristics, proximity to documented Native American trails or other areas of local and regional communication and exchange (e.g., navigable waterways), presence of natural landscape features (e.g., prominent ridges or hilltops), and proximity to lithic or clay source areas.

High-sensitivity zones for pre-Contact archaeological resources include level to gently sloping, well-drained, upland areas within 500 feet of surface water or wetlands and areas within 500 feet of previously recorded archaeological sites. Moderate-sensitivity zones for pre-Contact archaeological resources are generally more than 500 feet from a freshwater source and characterized by moderately sloping topography and/or somewhat poorly drained soils. Poorly drained soils and steeply sloping topography are negatively correlated with pre-Contact habitation and indicate low sensitivity for pre-Contact archaeological resources. Previous ground disturbance, such as that related to construction, ground clearing, and grading, also lowers the sensitivity for archaeological resources.

Historic site sensitivity depends on the relationship of the APE-Archaeology to local community development over time; historic transportation routes (e.g., roads, railroads, canals, or rivers); the documentary record of residential, commercial, and institutional buildings; and the proximity to target historic resource areas (e.g., fall lines on rivers and streams where mills were established, or quarry locations). Historic archaeological sensitivity is ranked as high in areas near the location of documented historic development and within 300 feet of early transportation routes and as low in areas with little record of historic land development. The presence of standing historic structures indicates a high probability for associated historic archaeological sites. Information obtained from cartographic evidence also contributes to assessments of historic archaeological sensitivity.

V. ARCHAEOLOGICAL ASSESSMENT OF APE PROPERTIES

A. SOUTH PORTAL APPROACH: SOUTH OF GWYNNNS FALLS (APE PROPERTIES 1–6) AND GWYNNNS FALLS TO EDMONDSON AVENUE BRIDGE (APE PROPERTIES 7–23)

1. *Proposed Work*

Several construction projects are proposed within the South Portal area with temporary or low risk to archaeological sites.

a. *Utility Work (APE Properties 2–4)*

Work planned for APE Properties 2 through 4 consists of permanent underground improvements to utilities with temporary surface impacts during construction. As part of the upgrade to the tracks, the project needs to bring signal communications and power from the existing signal boxes throughout the length of the project. The conduits will be run in a duct bank in or immediately adjacent to the existing roadbed. The utility work would consist of permanent underground improvements to utilities with temporary surface impacts during construction. These areas are shown in Figure 3.

The portion of the expanded APE-Archaeology along the South Portal Approach South of Gwynns Falls was relatively sparse development prior to the mid-nineteenth century. This area was characterized by scattered residences and small farms clustered along Old Frederick Road as it extended west into the county. Mapping from 1865 (see Appendix D2) shows the development of two major features in the area Mount Olivett Cemetery east of the eventual railroad alignment, and substantial House of Refuge to the northeast. This map does not show any significant structures falling within the expanded APE-Archaeology in this area, although several local roads in addition to Old Frederick Road cross the alignment. The Baltimore & Potomac Railroad alignment was constructed crossing the area and is shown on the 1894 USGS Baltimore quadrangle (see Appendix D3).

b. *Construction Staging Area (APE Property 1)*

One property, located at 700 S Caton Street (APE Property 1), will be used as a staging and storage yard (see Figure 3). This site is adjacent to the rail right-of-way (ROW) and the proposed utility work. The site currently has industrial use, and the existing dirt surface would be used for the storage of construction equipment and materials. Any impacts on the site would be temporary.

c. *Milling and Paving (APE Properties 5 and 6)*

Northeast of Gwynns Falls, portions of W Franklinton Road and W Lexington Road are included in the proposed LOD expansion. Heavy equipment and vehicles will be using these roadways for access to nearby construction activities and laydown areas. As such, these roadway portions are included in the proposed LOD expansion to allow for resurfacing any roadway areas that are affected through their use throughout construction. These areas are shown in Figure 4.

Early mapping shows this portion as sparsely settled prior to the mid-nineteenth century and characterized by scattered dwelling along major roadways. The evolution of the roads can be seen on the 1857 Sidney map and the 1865 Bache map (see Appendices D1 and D2). The USGS 1894 map shows the development of Baltimore & Potomac Railroad crossing where the two roads intersect (see Appendix D3).



FIGURE 3. EXPANDED APE-ARCHAEOLOGY, REEVALUATION NO. 5 (AREA A1: EXPANDED APE AREAS 1-4)

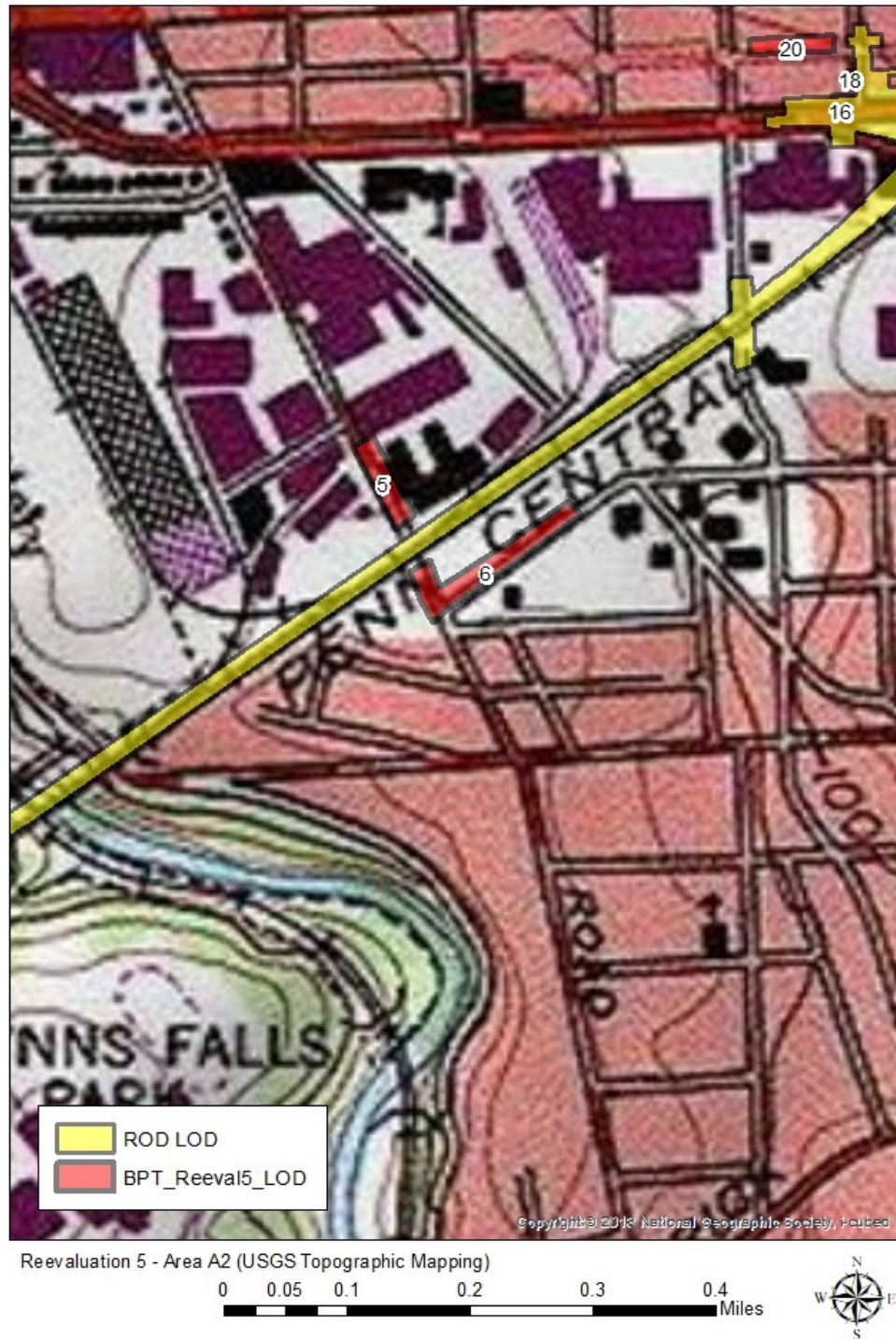


FIGURE 4. EXPANDED APE-ARCHAEOLOGY, REEVALUATION NO. 5 (MAP AREA A1: APE AREAS 5 AND 6)

d. MARC Station Construction (APE Properties 7–12)

At the existing West Baltimore MARC Station, there is an Americans with Disabilities Act (ADA)-compliant parking area with a bus loop with several stops located between W Franklin Street to the north, N Smallwood Street to the east, Mulberry Street to the south, and the rail ROW to the west. There are also several blocks east of that location, bound by W Franklin Street to the north and W Mulberry Street to the south, that are used for parking at the station. The proposed LOD expansion includes some of these parking areas for construction activities related to the West Baltimore MARC Station improvements. At the current site of the ADA-compliant spaces and bus loop, the proposed LOD expansion would include construction activities for station improvements. At the block immediately to the east, between N Smallwood Street and N Pulaski Street, the proposed LOD expansion includes a reconfiguration of the parking lot to accommodate the relocation of the ADA-compliant spaces and a temporary bus loop. The parking area immediately to the east, between N Pulaski Street and N Payson Street, would be used for construction laydown and as parking areas for workers during construction. All these areas are shown in Figure 5.

The expanded APE-Archaeology is on the east side of the Amtrak and consists of the current MARC train station (see Figure 5). The area of archaeological sensitivity, located within the Midtown-Edmondson neighborhood, was considered to have low to moderate potential for pre-Contact resources because of the extent of industrial development that has taken place within its bounds (Shellenhamer and Ward 2023). The potential for historic resources, however, was considered moderate to high.

Early mapping indicates the area was once part of the “Calverton” Estate, the summer home of banker Dennis Smith. Calverton was built outside of the city in 1815 and did not become part of the city until about 1888 (Arnold 1978). Calverton was purchased by the city in 1820 for use as an almshouse (1820–1866). This building (and a later 1874 replacement) was also used as the Hebrew Orphan Asylum from 1872 to 1923, the West Baltimore General Hospital from 1923 to 1945, and the Lutheran Hospital of Maryland from 1945 to 1989 (Pousson 2011).

Early development in and around the area consisted primarily of saw and grist mills along Gwynns Run, which flows through the sensitive area. Mills began to appear along the Gwynns Falls as early as 1719 (Dinnel 1982). There was also a stone quarry on the Calverton property at the time of its sale in 1866 (Scharf 1881). Early transportation through the area was over the Calverton Turnpike (chartered 1816) or the Potomac and Baltimore Railroad (chartered 1858), which later became part of the Pennsylvania Railroad (Scharf 1881). Although there was industrial buildup along Gwynns Falls, the ridge areas above the falls remained relatively undeveloped throughout the nineteenth century. In 1897 most of the MARC Station environs was occupied by either the Calverton Stock Yards (later the Union Stock Yards) or the estates of Arunah S. Abell and Charles Shipley. Only a few frame buildings had been built along West Franklin Street. Twenty-one years later, less than a handful of frame buildings had been added to the tract (Duncan 1897). These areas were occupied by the stock yards (until 1967) and light industry into the modern era (Belfoure 2019).

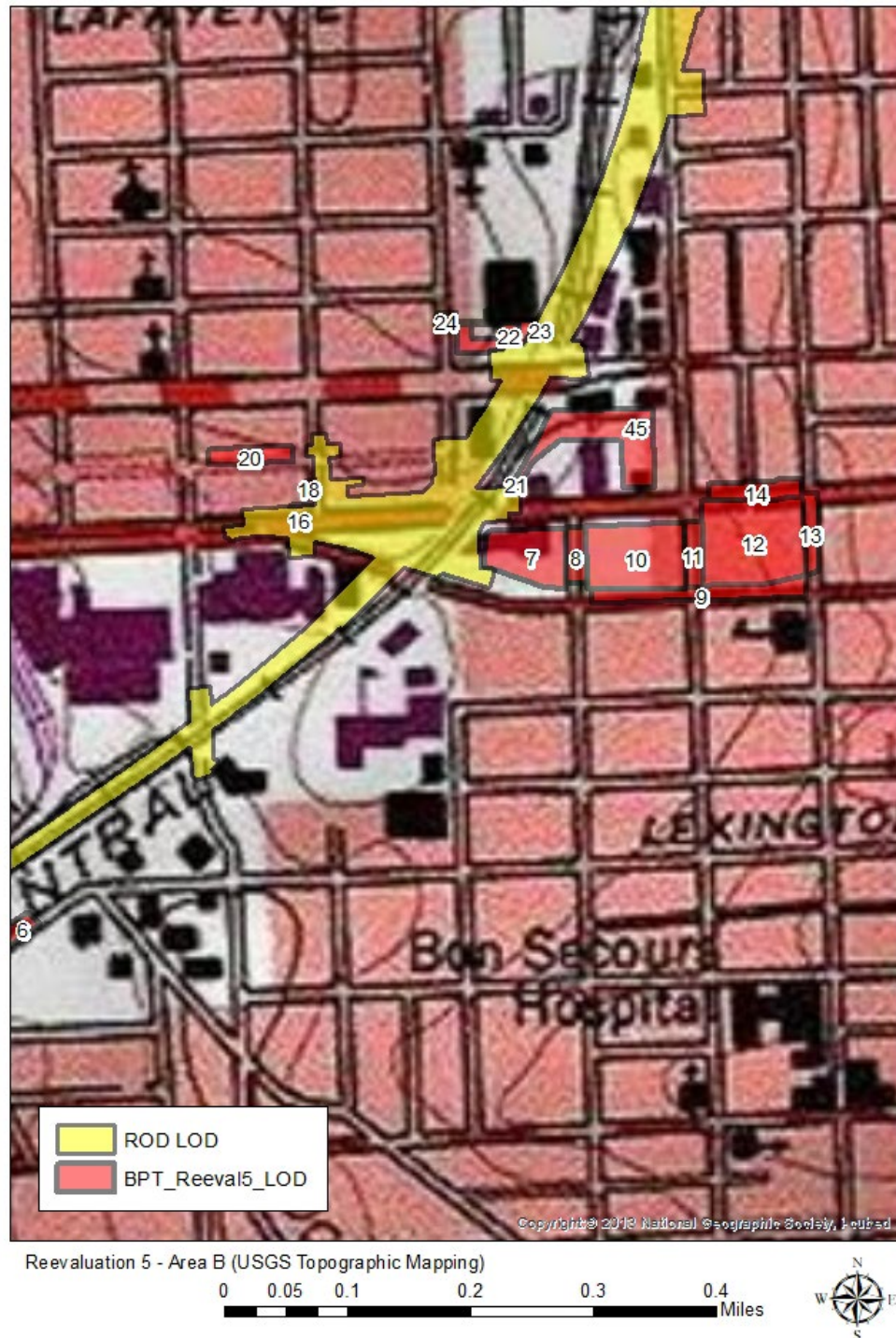


FIGURE 5. EXPANDED APE-ARCHAEOLOGY, REEVALUATION NO. 5 (MAP AREA B: APE AREAS 7–23 AND 45)

e. Laretta Avenue Utility Work (APE Property 19)

The proposed LOD expansion includes a portion of Laretta Avenue between N Warwick Avenue and Wheeler Avenue. The work would include utility work under the roadway, specifically on the gas line, to ensure that properties along Franklin Street will not have their gas service interrupted during construction of the Project. This proposed work is depicted in Figure 5. Mapping of existing underground utilities shows existing sanitary sewer and storm drains running under Laretta Avenue (see Appendix F.). Visual inspection also confirmed the presence of both gas lines and electrical conduits. This area's cartographic review is covered in the MARC Station discussion in Section V.A.1.d. of this report.

f. Temporary Commercial Property Impacts (APE Properties 22 and 23)

Construction of the new Edmondson Avenue Bridge will cause temporary impacts on the following commercial properties:

- 2200 Edmondson Avenue
- 2205 W Lanvale Street

At 2200 Edmondson Avenue, the parking areas on the property would be temporarily affected, but the Sudsville Laundry building would not be affected. The Program will maintain some parking and access to the building during the duration of construction. Furthermore, front access to 2205 W Lanvale Street would not be available because of the extension of the new bridge. Therefore, the building frontage will be reconfigured. Otherwise, access to the site would not be needed because the property is currently vacant. Amtrak would not acquire these properties through the Program construction. This area's cartographic review is covered in the MARC Station discussion in Section V.A.1.d of this report.

The proposed LOD expansion at the South Portal area includes temporary impacts at N Bentalou Street and the alley north of Sudsville Laundry on Edmondson Avenue to accommodate construction of the Edmondson Avenue Bridge. Work in this area includes milling and paving, as well as roadway improvements to the sidewalks and curbs. Any temporary effect caused by construction will be restored to the original condition.

g. Residential Impacts on W Franklin Street (APE Properties 15–19)

Several properties along W Franklin Street and Wheeler Avenue will experience additional permanent impacts to the front steps because of the new lowered profile of Franklin Street and Wheeler Avenue. The properties include the following:

- 2400 W Franklin Street
- 2402 W Franklin Street
- 2404 W Franklin Street
- 2406 W Franklin Street

At these properties, the front steps would be reconfigured to accommodate ingress and egress to the residences. The property at 2400 W Franklin Street would also experience temporary impacts along the side yard near Wheeler Avenue. Portions of the parcels at 2400 W Franklin Street and 2401 Laretta Avenue, which are adjacent to the alley entrance at Wheeler Avenue behind the residences of W. Franklin Street and Laretta Avenue, would also be temporarily impacted. These areas are shown in Figure 5.

The area was largely rural in the years leading up to the early nineteenth century and became increasingly a patchwork of rural countryside and urban residential development (construction of rowhouses) in the

second and third quarters of the nineteenth century (Shellenhamer and Ward 2023). Archaeological potential in these deeply buried areas ends circa 1900 as the filling and leveling of the landscape was completed.

Near-surface (current grade) archaeological potential was described as moderate for the area of the expanded APE-Archaeology east of the current railroad corridor. Although comparable geotechnical/archaeological data was not available for the expanded APE-Archaeology west of the railroad, there are some basic similarities in the topographic setting and historic land development. Archaeological potential in this area (at this near-surface grade) is principally for archaeological deposits in rear yards of houses (Shellenhamer and Ward 2023). Archaeological potential in these near-surface contexts continues into the middle of the twentieth century. The neighborhood was known as Monroe Riggs in the past and now includes the Midtown-Edmondson, Evergreen Lawn, and Rosemont Homeowners/Tenets neighborhoods. Industrial development expanded in the 1870s and 1880s alongside railroad development and expansion of the road network.

h. Access Road and Construction Staging Area (APE Property 21)

A permanent access road will be constructed north of W Franklin Street, partially on the existing rail ROW and partially on the American Ice Company property at 2100 W Franklin Street. The road will allow Amtrak and fire and life safety to access the South Approach. A new underground storm sewer system will also be installed at this location. The storm sewer is needed to take water from the West Baltimore MARC Station to existing city storm sewers on W Franklin Street. The waterline will be constructed under the permanent access road to limit the need for additional property at this location.

2100 W Franklin Street will also be used as a construction staging area. The American Ice Company building on that property is a contributing element of the NRHP-eligible Midtown-Edmondson Historic District and is individually listed in the NRHP. However, only the building is listed in the NRHP. The surrounding property that was historically associated with the company is not listed in the NRHP and is not considered contributing to the historic district.

i. Temporary Pedestrian Bridge (APE Property 24)

Amtrak proposes to build a temporary pedestrian bridge to maintain connectivity during the reconstruction of the Edmondson Avenue Bridge. The Edmondson Avenue Bridge would need to be closed to pedestrian traffic during construction. The temporary bridge would minimize impacts on pedestrian travel along Edmondson Avenue. The temporary bridge is proposed directly north of Edmondson Avenue and would connect to the sidewalks along Edmondson Avenue on either side of the Northeast Corridor.

The temporary pedestrian footprint would be completely within the previously approved LOD and would not require any other additional LOD expansions. However, construction of this bridge would require additional areas for construction-related activities and access, including temporary impacts on commercial properties at 2200 Edmondson Avenue and 2205 W Lanvale Street. At 2200 Edmondson Avenue, the parking areas on the property would be temporarily impacted but the Sudsville Laundry building would not be affected. The Program will maintain access to the building and parking during construction (to the extent practicable) and would not displace the Sudsville Laundry business. The LOD shown in the ROD would cut off access to the building currently used for storage at 2140 Edmondson Avenue/2205 W Lanvale Street from Edmondson Avenue, and the building frontage will be reconfigured in coordination with the property owners. Amtrak would not acquire these properties through the Program construction.

2. *Assessment*

This portion of the expanded APE-Archaeology falls within the Gwynns Fall Drainage, and the predominant soil association in the area is the Urban Lands–Udorthent Soils Complex. Urban Land Association soils are in nearly level to moderately sloping areas of urban settings where more than 80 percent of the surface is covered by asphalt, concrete, buildings, or other impervious surfaces.

There are no previously identified archaeological sites that fall within this area of expanded APE-Archaeology. Area A2, which includes APE Properties 5 and 6, represents a new area of expanded APE that was not included in the supplemental Phase IA report (Shellenhamer and Ward 2022).

All these sites represent areas of significant prior disturbance. The construction staging area, milling and paving (APE Properties 1, 13, and 14), and MARC station construction (APE Properties 7–12) will all be done with minimal soil disturbance. All work will be done on the existing exposed dirt surface. The utility work at APE Properties 2 through 4 and Lauretta Avenue will occur in areas with extensive prior disturbance and any archaeological resources are no longer present. Disturbance from existing rail utilities and drainage features would have resulted in sufficient prior disturbance to have destroyed any intact archaeological resources that may have existed railbed and directly adjacent areas of ROW.

Although the front steps at W Franklin Avenue (APE Properties 15–18) will be permanently altered because of the new, lowered profile of Wheeler Street and Franklin Avenue, there is a low risk of archaeological material in the area. Except for limited impacts on the side yard, backyard, and alley at 2000 W Franklin Street and the backyard of 2401 Lauretta Avenue, soil disturbance will occur in the front yard areas of these rowhouses, which are considered to have low archaeological potential. The side yard, backyard, and alley of these properties would have undergone prior disturbance associated with an existing sanitary sewer line. The access road (APE Property 21) area was previously studied and found to have a low potential for the presence of archaeological materials. Finally, the pedestrian bridge (APE Properties 22–23) is already included within the previously approved LOD and was found to have low potential for archaeological materials.

3. *Conclusion and Recommendations*

Two main factors contribute to the assessment that this area has low potential for the presence of archaeological materials: first, several activities are to be conducted at the surface and not disturb soils below (such as the construction staging area at APE Property 1 and the milling and paving work at APE Properties 2 through 4), and second, previous disturbance in all areas where work will be conducted.

B. SOUTH PORTAL NORTH OF LAFAYETTE AVENUE

1. *Proposed Construction Staging and Utility Work (APE Properties 25–35)*

There are several large parcels that would be temporarily affected and used for construction staging and laydown areas north of the South Portal and near other large laydown areas that were proposed in Reevaluation No. 4, as shown in Figure 6. These parcels include the following:

- 2201 Winchester Street
- 2200 Winchester Street
- 1909 Presstman Street
- 1921 Presstman Street
- 1300 N Monroe Street
- 1318 N Monroe Street

- 1400 N Monroe Street
- 1410 N Monroe Street

All these sites have a current, existing industrial use. The sites would be used for storage of construction equipment and materials and impacts on the sites would be temporary. For the sites along Presstman Street and N. Monroe Street, the Program will coordinate with property owners to ensure the current business is not disrupted by the Program's use of the property. If project needs result in a disruption of business operations, the Program will find a suitable off-site temporary or permanent property for the relocation of the business as a final mitigation measure.

1817 Laurens Street would be used for construction staging and laydown areas, with no ground-disturbing activities. This reevaluation proposes that the site still be used for construction staging and laydown areas but also includes the installation of water and sewer utilities to accommodate construction trailers that will be located at the site during construction.

2. *Proposed Shaft Relocation and Rail Access (APE Property 27)*

The proposed LOD expansion in Reevaluation No. 4 included several large parcels currently operating as a concrete plant (P. Flanigan and Sons). These parcels are north and northwest of the current railroad tracks, west of N Monroe Street, and east of N Bentalou Street. Although Reevaluation No. 4 proposed these parcels to be used for laydown areas and tunnel construction with a permanent underground ROW required for the tunnel alignment underneath the properties, Amtrak has identified a new, additional need for these properties. Reevaluation No. 5 includes a 106-foot diameter shaft connecting the surface level to the underground tunnel that would be constructed within the concrete plant property for the purpose of removing muck and spoils resulting from tunnel construction for all areas north of this location. This shaft was previously located at the South Portal, adjacent to homes and residences along Payson Street. The proposed relocation of the shaft is included in Reevaluation No. 4 LOD. Relocation of the shaft to this new location would allow the construction activities associated with removing muck and spoils from the South Portal (approximately 50 feet from residences along Payson Street) to within a site already being used for industrial purposes. At the shaft's new location, the removal of muck/spoils would occur at a much further distance from the closest residences and sensitive receptors (approximately 500 to 1,000 feet away). Locating this work on an already industrial site will also reduce temporary noise and vibration impacts associated with the construction of the shaft and removal of the muck/spoils. Instead of completing this work immediately adjacent and within a residential community, the proposed change would move the work to an area already experiencing similar levels of noise and vibration to what is expected for this work. Further, this change would remove construction impacts from the Midtown-Edmondson neighborhood and put them within an area that has an existing industrial use. Associated with this change, a modification to an existing stormwater/sewer utility (commonly referred to as "Peck's Branch") would be necessary. The relocated sewer line would also be constructed within the existing LOD footprint at the concrete plant, so no additional LOD would be required for the change. This clarification on the use of the property is the only change identified in Reevaluation No. 5; the LOD in this area otherwise remains consistent with Reevaluation No. 4. Amtrak will continue to coordinate the use of this property with the current owner. As stated in Reevaluation No. 4, Amtrak's contractor's use of this property would be contingent on not affecting the existing business and would be consistent with the current industrial land use at this location.

This area has also been identified as providing a potential benefit as it could allow for the transportation of spoils/muck from the excavation of the tunnels to be shipped off-site using the existing CSX Transportation line instead of using only the roadway network and heavy trucks to move the spoils. The proposed LOD expansion includes the rail ROW west of North Monroe Street and between Penn Central and Western Maryland railroads. The railway may be used to haul muck off-site using the existing CSX spur at this site.

Permanent impacts or changes to the property are not proposed. Additional coordination with CSX will be required. Overall, the proposed change will result in less impact on the Midtown-Edmondson neighborhood, move temporary impacts further away from existing homes and residences, and place construction activities on an existing industrial site that is already producing similar impacts during daily operations. If the CSX rail line is used for muck/spoils removal, truck traffic in surrounding neighborhoods associated with the project would likely be reduced. Finally, this change would result in a construction benefit including time and cost savings associated with the work. The new location is of low archaeological sensitivity, as the land has prior disturbance.

3. Assessment

This portion of the expanded APE-Archaeology falls within the Gwynns Fall Drainage, and the predominant soil association in the area is the Urban Lands–Udorthent Soils Complex. The area is part of the primarily residential Edmondson Avenue Historic District, which includes the neighborhoods of Evergreen Lawn, Bridgeview/Greenlawn, Rosemont Homeowners/Tenants, and sections of Midtown-Edmondson. The earliest developments in the area date to the 1880s and 1890s with the construction of rowhouses and duplexes. The area continued to be expanded upon in the 1920s to 1950s by real estate developers encouraged by the development of street cars in the city. By the 1950s the neighborhood became predominantly African American. The archaeological sensitivity of the area is considered low because of the prior disturbance of industrial development.

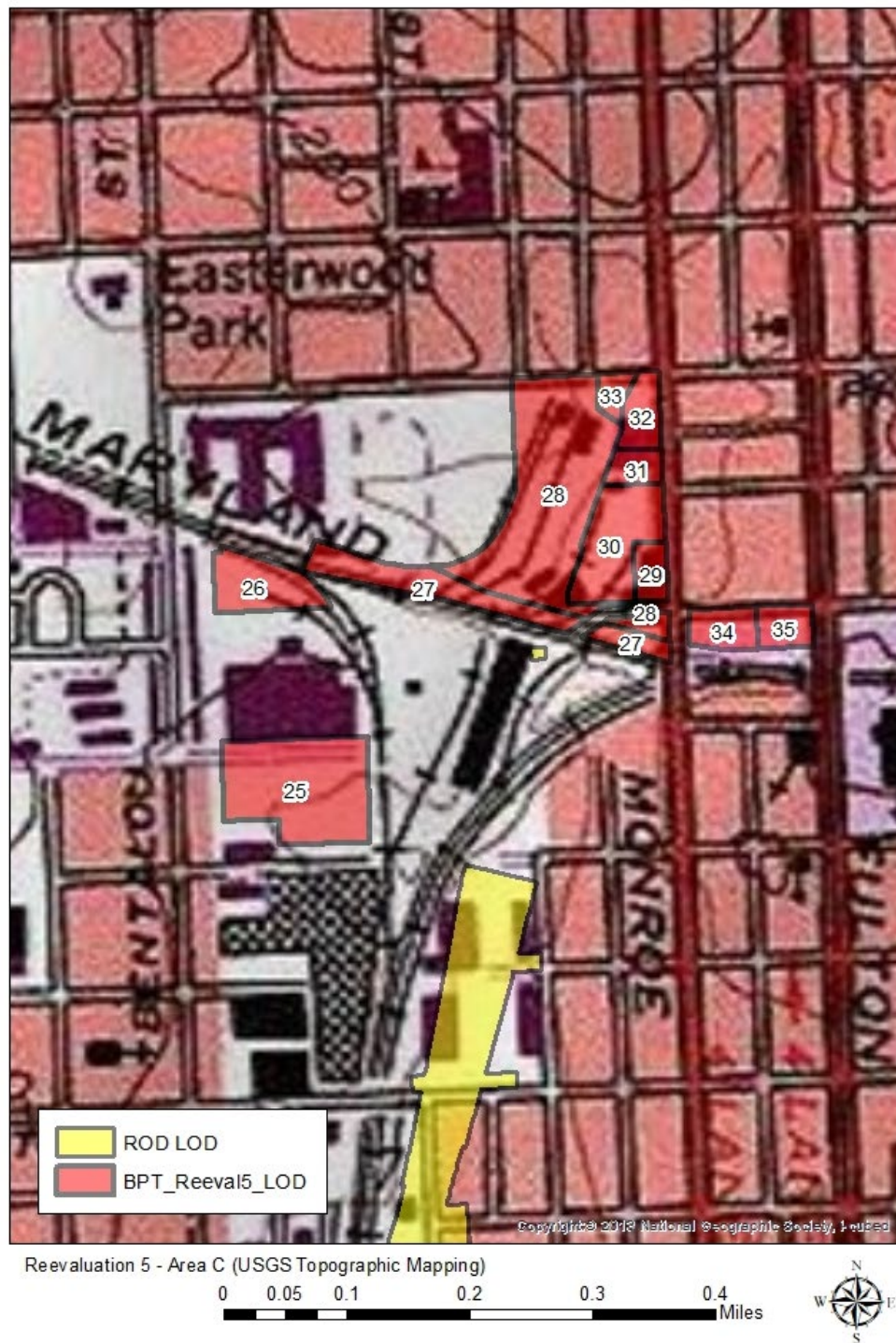


FIGURE 6. EXPANDED APE-ARCHAEOLOGY, REEVALUATION NO. 5 (MAP AREA C: APE AREAS 24-35)

4. *Conclusion and Recommendations*

The area of expanded LOD is to provide additional laydown and construction staging using the existing exposed and paved surfaces. As this use would not result in additional soil disturbance beyond what has already occurred in the development of the existing staging area, the archaeological sensitivity of the construction staging and laydown areas would be considered low, and no additional archaeological investigations are warranted or recommended. At 1817 Laurens Street, temporary water and sewer lines would be installed to provide service to construction trailers. Given the existing use for heavy equipment parking, no additional soil disturbance to the general area is anticipated and therefore there would be no impact on potential archaeological resources. The limited linear trenching needed to install the construction trailer water and sewer lines will only extend between 2 and 3 feet below the surface, within soils previously disturbed. Consequently, the archaeological potential in the area would be considered low and no additional archaeological investigations are warranted or recommended.

C. INTERMEDIATE VENTILATION FACILITY UTILITIES

1. *Proposed Work*

Near the IVF, a gas line will be installed within the existing Baltimore City Department of Transportation (DOT) ROW at the intersection of Madison Avenue, Gold Street, and W North Avenue, as shown in Figure 7. The intersection will be restored to its existing condition once construction is complete. The activities may result in sidewalk disturbance around the intersection, but the sidewalks will also be returned to their existing condition upon completion of the utility work.

2. *Assessment*

The investigation area for the utility work west of the IVF is within Maryland Archeological Research Unit 14: Patapsco-Back-Middle Drainage. The investigation area is located at the Fall Zone between two physiographic provinces, the Piedmont Plateau Province and Atlantic Coastal Plain Province. The Piedmont Plateau Province is an area of varied topography, ranging from lowlands to ridges of moderate altitude and relief. The province is underlain by metamorphic and igneous rocks that range from Precambrian to Paleozoic in age. These rocks have been sheared, fractured, and folded by tectonic activity. This portion of the expanded APE-Archaeology falls within the Gwynns Fall Drainage. USDA-NRCS (2021) soil mapping places the investigation area within Urban Land Association soils. Urban Land Association soils are in nearly level to moderately sloping areas of urban settings where more than 80 percent of the surface is covered by asphalt, concrete, buildings, or other impervious surfaces.

The landscape surrounding the investigation area was rural farmland in the years leading into the nineteenth century. This area, north and west of downtown Baltimore, became a patchwork of urban development and rural countryside in the nineteenth century and remained a patchwork into the latter part of the century. While growth of the city expanded quickly in some parts north and west of the downtown during the late nineteenth century, many of the original grand homes and spacious estates remained part of the landscape of west Baltimore until the end of the nineteenth century. Some of these grand homes and spacious estates were associated with Thomas Edmondson, Jr., Edward Patterson, Dr. Thomas Bond, and others. For most of the nineteenth century, from 1818 to 1888, North Avenue (located a short distance south of the investigation area) served as the northern boundary of Baltimore City.



FIGURE 7. EXPANDED APE-ARCHAEOLOGY, REEVALUATION NO. 5 (MAP AREA D: APE AREA 36)

Beginning in 1868, many Euro-American residents from Baltimore's business and professional classes built large, stately three-story townhouses along Madison Avenue, McCulloh Street, and Druid Hill Avenue, as well as farther east and north in what is today known as the Bolton Hill and Reservoir Hill neighborhoods (all east of Pennsylvania Avenue). Horse-drawn omnibus lines, which were the predecessors

to streetcars, began operating in Baltimore in 1859 and spurred development in areas further from downtown. The omnibus lines expanded rapidly, and in 1860 an omnibus line ran along Madison Avenue connecting this area to the center of the city. In the same year, the City of Baltimore established Druid Hill Park on one of the former estates north and west of the city, adding to the attractiveness of living there. This area also offered proximity to shops and entertainment along Pennsylvania Avenue, and proximity to Lafayette Market. By the 1870s, the area west of Pennsylvania Avenue saw the construction of more modest two-story rowhouses (compared to the three-story rowhouses east of Pennsylvania Avenue). Intense development took place in an area bounded by Fulton Street to the west, Pennsylvania Avenue to the east, North Avenue to the north, and Patterson Avenue (present-day Laurens Street) to the south. Unlike the homes east of Pennsylvania Avenue, these rowhouses were intended for the expanding white working class as well as for Baltimore's growing population of European immigrants (Shoken 2004a). German immigrants were initially the largest ethnic group in this growing community.

A growing African American population also settled in this area, living close to their white neighbors. African Americans and poorer immigrant families commonly resided in alley housing behind their Euro-American neighbors. As Baltimore's African American population continued to expand during the 1880s and 1890s, a substantial African American community began to develop and spread along these alley streets. Over time, numerous African American residents of the neighborhood established local businesses, founded churches, and enrolled children in schools. As this area prospered in the last quarter of the nineteenth century, the racial and ethnic composition continued to be in flux. Baltimore expanded its streetcar system farther from downtown and created new residential communities in the northern part of the city. Many wealthier white residents left the areas that became known as Bolton Hill and Reservoir Hill for other neighborhoods, or they left the city altogether for newly developing suburbs. By the first decade of the twentieth century, the majority of what once was a racially mixed population had become a predominantly African American neighborhood, especially in the areas near Pennsylvania Avenue, which now forms the Old West Baltimore Historic District. The white populations in the neighborhoods that became Bolton Hill and Reservoir Hill included significant numbers of Jewish residents.

The area that became the Reservoir Hill neighborhood began its transition from rural estates to a more urban development in the 1860s and 1870s. The Hopkins (1876) map of the area shows sparse development on the blocks surrounding the investigation area, and no buildings standing in the investigation area. A single wood-frame building stood near the corner of Eutaw Street (present-day Eutaw Place) and North Avenue with several other buildings located to the north of the investigation area. The property formerly owned by Callow is shown as belonging to George W. Gail on this atlas map. By the end of the nineteenth century, all the major German Jewish synagogues had moved from their original locations in downtown and east Baltimore to Reservoir Hill, bound by Lanvale Street and McCulloh Street and Park Avenue and North Avenue (Shoken 2004b). The Jewish residents who moved into Reservoir Hill at the turn of the twentieth century were part of Baltimore's established German Jewish community that was originally located in parts of east Baltimore and downtown. The neighborhood became one of Baltimore's largest and affluent predominantly Jewish neighborhoods of the late nineteenth and early twentieth centuries.



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As the expanded APE-Archaeology of the IVF Utilities is located directly to the west of the IVF, the environmental setting, historic development and archaeological potential of the area should be generally similar. However, the proposed work in this location (Area D: APE Property 36) represents limited excavation within the existing roadway, in soils which have been significantly disturbed by the development of Madison Avenue, Gold Street, and W North Avenue and multiple underground existing utilities.

3. *Conclusion and Recommendations*

As noted in this report section, proposed work in this area includes gas line installation for uninterrupted utility access during construction. The work will all occur within the heavily developed roadway, which already includes multiple existing utility conduits and piping. Existing digital utility mapping records an existing sanitary sewer, a storm drain, and BGE gas lines all running under the portion of North Avenue and crossing street to be affected by the proposed utility work (see Appendix F). As the work will occur within the already-disturbed roadway, the archaeological sensitivity in the area would be considered low, and no additional archaeological investigations are warranted or recommended.

D. NORTH PORTAL INTERMEDIATE VENTILATION FACILITIES, HOWARD STREET UTILITIES, AND PENN STATION UTILITIES (APE PROPERTIES 37–43)

1. *Proposed Work (APE Properties 37 and 38)*

The proposed LOD expansion includes milling and overlay of existing pavement on and under I-83 for the construction of the North Ventilation Facility. The proposed activity will take place within the existing DOT ROW at the on-ramp of the Jones Falls Expressway. This minor LOD expansion is a result of updated erosion and sediment control design as the project has advanced into final design. Additional milling and paving are anticipated here because of the design refinements at the North Ventilation Facility (Figure 8).

2. *Assessment*

There are no previously recorded archaeological sites within this area of expanded APE-Archaeology. The North Portal area was assessed as part of the supplemental Phase IA archaeological study (Shellenhamer and Ward 2023). This portion of the expanded APE-Archaeology falls within the Jones Falls Fall Drainage, and the predominant soil association in the area is the Urban Lands–Udorthent Soils Complex.



FIGURE 8. EXPANDED APE-ARCHAEOLOGY, REEVALUATION NO. 5 (MAP AREA E1: APE AREAS 37 AND 38)

The North Portal and Approach was significantly developed by the mid-nineteenth century. According to the 1865 Bache map, Falls Road was formally established along the east bank of the Jones Falls (see Appendix D2). Portions of the road and the Jones Falls extend through the APE-Archaeology. Several buildings are also depicted within the APE-Archaeology, including several mill buildings and an associated

mill race located at the eastern terminus. The Mount Royal Reservoir, constructed in 1862, is also depicted on the map in the vicinity of the North Portal. Additional buildings (representing additional mills or houses) are present within the APE-Archaeology at the location of the IVF. By 1865 the cart road (present-day Bloom Street) depicted east of the ventilation facility on earlier maps had been straightened and partially bisects that portion of the APE-Archaeology.

The supplemental Phase IA archaeological study (Shellenhamer and Ward 2023) included a GIS-based cut/fill topographic modeling. The model at the North Portal and Approach suggests a varying elevation change in portions of the APE-Archaeology after 1897. Below West Trenton Street, the model suggests that the modern elevation is between 3 and 16 feet lower than in 1897. Above W Trenton Street, the model also suggests that grading occurred on the eastern side of the APE-Archaeology and that filling occurred west of the Jones Falls after 1897.

3. *Conclusion and Recommendations*

The proposed work in this new area of LOD would be limited to milling and resurfacing existing road paving on and under I-83 for the construction of the North Ventilation Facility. However, as modification and the overlay enhancement to existing roadway paving will not result in additional soil disturbance, the area has low archaeological sensitivity and no anticipated effects on archaeological resources. WSP does not recommend any additional investigations.

4. *Proposed Work (APE Properties 39–43)*

The proposed LOD expansion includes the intersection of Reservoir Street and Mount Royal Terrace. At this intersection, the proposed work includes permanent underground improvements to install a new 10-inch valve for the existing waterline located under Reservoir Street. The utility work is needed to maintain flows to the existing fire hydrant in the area. The roadway would experience temporary surface impacts and would be returned to its existing condition upon completion of the utility work (Figure 9).

The Amtrak ROW east of the North Portal area would also undergo permanent underground utility improvements. This utility work consists of the construction of new signal communications and power in a duct bank along the existing railroad bed. As part of the upgrade to the tracks, the project needs to bring signal communications and power from the existing signal boxes at Charles Interlocking throughout the length of the project. The conduits will be run in a duct bank in or immediately adjacent to the existing roadbed. Utility improvements would occur within the existing ROW on the north and south side of the track near N Howard Street, north of the track near Maryland Avenue, north of the track at Saint Paul Street and N Calvert Street, and at Penn Station. Temporary surface impacts are also anticipated with this underground work.

The proposed LOD expansion includes the building at 1800 Falls Road. This building is not historic and is located within the rail ROW. It is currently used by Amtrak. Under this project change, the building would be demolished for construction activities and utility work within the rail ROW (see Figure 9).



FIGURE 9. EXPANDED APE-ARCHAEOLOGY, REEVALUATION NO. 5 (MAP AREAS E2–E3: APE AREAS 39–44)

5. Assessment

There are no previously recorded archaeological sites within this area of expanded APE-Archaeology. The North Portal Approach was included in Addendum 1 of the supplemental Phase IA study (Shellenhamer and Ward 2023). This portion of the expanded APE-Archaeology falls within the Jones Falls Drainage, and

the predominant soil association in the area is the Urban Lands–Udorthent Soils Complex. The area surrounding the North Portal Approach contains Baltimore Penn Station, which was constructed in 1911, and sections of the Penn Central Railroad and Metropolitan Transit Authority. The areas have been disturbed by prior construction of the station and rails and possess low archaeological sensitivity.

6. *Conclusion and Recommendations*

As noted in this report section, work in the North Portal Approach area includes a waterline valve for uninterrupted utility access during construction. The work will all occur within the heavily developed roadway, which already includes multiple existing utility conduits and piping. The demolition of the Amtrak building will allow for construction activities and utility work adjacent to the railroad tracks. In addition to prior disturbance related to the construction of the heavily modified railbed, additional disturbance from existing rail utilities and drainage features would have resulted in sufficient prior disturbance to have destroyed any intact archaeological resources that may have existed railbed and directly adjacent areas of ROW. Existing digital utility mapping records an existing sanitary sewer, storm drain, and BGE gas lines all running under the portion of Reservoir Street and Mount Royal Terrace to be affected by the proposed utility work (see Appendix F). As the work will occur within the already-disturbed roadway, the archaeological potential in the area would be considered low, and no additional archaeological investigations are warranted or recommended.

E. PENNSYLVANIA AVENUE UTILITIES (APE PROPERTY 44)

1. *Proposed Work*

Along Pennsylvania Avenue, the proposed LOD includes temporary impacts at its intersection with Dolphin Street. This includes utility work within the Baltimore City Department of Transportation ROW and would not result in any physical impacts to properties within the vicinity. Amtrak would return the roadway to equal or improved condition upon completion of the utility work.

2. *Assessment*

There are no previously recorded archaeological sites within this area of the expanded APE-Archaeology. The expanded APE-Archaeology associated with the proposed utility work at Pennsylvania Avenue was not included in any prior archaeological assessment for the Program. This portion of the APE falls within the Jones Falls drainage and the predominant soil association in the area is the Urban Lands–Sassafras Complex with 0 to 8 percent slopes (Udorthent Soils Association). The neighborhood surrounding the intersection between Pennsylvania Avenue and Dolphin Street is part of the Old West Baltimore Historic District. Old West Baltimore was established as an African American historic district in the 1890s and comprises 175 city blocks and five neighborhoods: Harlem Park, Upton, Sandtown, Druid Heights, and Madison Park. Pennsylvania Avenue is the main street of the district. African Americans began to settle the area primarily around Druid Hill Avenue, and established social institutions, businesses, and churches in the neighborhood throughout the twentieth century. The neighborhood served as a major hub for commerce and social life for the community.

3. *Conclusion and Recommendations*

The utility work at the intersection of Pennsylvania Avenue and Dolphin Street will all occur within the heavily developed roadway intersection, which already included multiple existing utility conduits and piping. Although existing utility mapping was not available for this area, visual examination confirmed the presence of both sanitary sewer and storm drain running along both Pennsylvania Avenue and Dolphin Street to be affected by the proposed utility work. As the work will occur within the already-disturbed roadway, the archaeological potential in the area would be considered low, and no additional archaeological investigations are warranted or recommended.

VI. SUMMARY AND CONCLUSIONS

This addendum has been prepared by WSP on behalf of Amtrak to supplement the Phase IA archaeological study for the Frederick Douglass Tunnel Replacement Program in Baltimore, Maryland. This addendum has been prepared to assess the archaeological sensitivity of additional areas that have been added to the Program LOD since the completion of the supplemental Phase IA archaeological study in 2023.

WSP's review of available environmental and soil data, historical background research, and Geographic Information System topographical analysis indicate that the expanded APE-Archaeology has low sensitivity for pre-Contact and/or historic archaeological resources. Prior modification of the landscape within the expanded APE-Archaeology consisted of substantial ground disturbance associated with urban development, transportation improvements, and construction of buried utilities. As a result of the extent of this previous ground disturbance, there is a low potential for the presence of intact archaeological resources. WSP does not recommend any further archaeological survey for the expanded APE-Archaeology associated with Reevaluation No. 5.

VII. BIBLIOGRAPHY AND REFERENCES CITED

- Arnold, Joseph L. 1978. Suburban Growth and Municipal Annexation in Baltimore, 1745–1918. *Maryland Historical Magazine* 72(2):109–128.
- Bache, C.M. 1865. *Approaches to Baltimore, Maryland*. United States Coast Survey, Baltimore. On file, Historical Map and Chart Collection, <https://www.historicalcharts.noaa.gov/image.php?filename=3026-00-1865>.
- Baltimore City. 2004. Shaded Relief. ArcGIS map server accessed January 4, 2024 via ArcGIS Pro 3.2, https://lidar.geodata.md.gov/imap/rest/services/BaltimoreCity/MD_baltimorecity_shadedRelief_RGB/ImageServer.
- Baltimore City Department of Public Works. 2012a. Geographic Information System Data (201278_M-BP-Exiting-C-UT-Storm Drainage). Baltimore, Maryland.
- Baltimore City Department of Public Works. 2012b. Geographic Information System Data (201278_M-BP-Exiting-C-UT-Water Sanitary Other). Baltimore City Department of Public Works, Baltimore, Maryland.
- Belfoure, Charles. 2019. A Place Where Children Grow Up and Stay. *Baltimore Sun*, January 30.
- Dinnel, Katherine J. 1982. *A Phase I Reconnaissance Survey of the Archeological Resources in the Proposed I-595 Corridor Between I-95 and I-170, Baltimore City, Maryland*. Prepared for the City of Baltimore, Department of Public Works by the Division of Archeology, Maryland Geological Survey, Baltimore.
- Duncan, Frank K. 1897. *Atlas of the City of Baltimore, MD*. On file, Sheridan Libraries, Johns Hopkins University, Baltimore. <http://jhir.library.jhu.edu/handle/1774.2/36509>.
- Environmental Systems Research Institute, Inc. [Esri]. 2019. *USA Topo Maps*. ArcGIS map server accessed January 2024 via ArcPro 3.1, http://services.arcgisonline.com/arcgis/rest/services/USA_Topo_Maps/MapServer.
- Harrison, Deborah W. 1977. *Preliminary Site Examination of Three Sites in the City Boulevard Corridor*. Prepared by the Baltimore Center for Urban Archaeology, Baltimore.
- Hopkins, G.M. 1876. *City Atlas of Baltimore Maryland and Environs*. On file, Sheridan Libraries, Johns Hopkins University, Baltimore. <http://jhir.library.jhu.edu/handle/1774.2/32648>.
- Levin, Maxine J. and Thomas M. Griffin. 1998. Soil survey of City of Baltimore, Maryland. United States Department of Agriculture-Natural Resources Conservation Service, Washington, DC, in cooperation with City of Baltimore and Maryland Agricultural Experiment Station.
- National Aquarium. 2024. *Keeping Up with the Jones Falls*. Accessed October 15, 2024, <https://aqua.org/stories/2024-08-27-keeping-up-with-the-jones-falls>.
- Olson, Sheri. 1980. *Baltimore: The Building of an American City*. Johns Hopkins University Press, Baltimore.
- Parsons Brinckerhoff, Inc. 2013. *Middle Gwynn Falls, Small Watershed Action Plan, Volume I*. Prepared for the Baltimore County Department of Environmental Protection and Sustainability.

- Pousson, Eli. 2011. National Register Nomination Form: The Hebrew Orphan Asylum. On file, Maryland Historical Trust, Crownsville, Maryland.
- Scharf, J. Thomas. 1881. History of Baltimore City and County, from the Earliest Period to the Present Day: Including Biographical Sketches of their Representative Men. L. H. Everts, Philadelphia. Available online at <https://lccn.loc.gov/rc01003473>.
- Shaffer, Gary and Elizabeth Cole. 1994. Standards and Guidelines for Archeological Investigations in Maryland. Maryland Historical Trust Technical Report Number 2. Maryland Historical Trust, Department of Housing and Community Development, Crownsville.
- Shellenhamer, Jason, and James Kodlick. 2015. *Phase IA Archeological Study, B&P Tunnel Project, Baltimore, Maryland*. Prepared for the Federal Railroad Administration by Rummel, Klepper & Kahl, LLP, Baltimore.
- Shellenhamer, Jason, and Henry Ward. 2023. *Supplemental Phase IA Archaeological Study Baltimore & Potomac Tunnel Replacement Program, Baltimore, Maryland*. Prepared for Amtrak by WSP USA Inc., Baltimore.
- Shoken, Fred B. 2004a. National Register of Historic Places Nomination Form, Old West Baltimore Historic District. United States Department of the Interior, National Park Service, Washington, DC. On file, Maryland Historical Trust, Crownsville.
- Shoken, Fred B. 2004b. National Register of Historic Places Nomination Form, Reservoir Hill Historic District. United States Department of the Interior, National Park Service, Washington, DC. On file, Maryland Historical Trust, Crownsville.
- Sidney, J.C. 1857. *Map of the City and County of Baltimore, Maryland*. Robert Taylor, Baltimore. On file, Historic Map Works Rare Historic Maps Collection, <https://historicmapworks.com/Map/US/504017/Baltimore+County+1857+Wall+Map+with+Inserts+44x53/>.
- Topographical Survey Commission. 1914. *Atlas of the City of Baltimore, Maryland*. On file, Sheridan Libraries, Johns Hopkins University, Baltimore, <http://jhir.library.jhu.edu/handle/1774.2/33744>.
- United States Department of Agriculture-Natural Resources Conservation Service [USDA-NRCS]. 2021. Baltimore County, Maryland. Web Soil Survey, Soil Survey Geographic (SSURGO) Database. USDA-NRCS, Washington, DC. Accessed May 2023, <https://websoilsurvey.sc.egov.usda.gov>.
- United States Department of the Interior. 1983. Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines. *Federal Register*, Part IV, 48(2):44716-44742. Annotated version showing later technical and officially adopted revisions available from the National Park Service's preservation laws, regulations, and standards webpage, https://archives.federalregister.gov/issue_slice/1983/9/29/44695-44744.pdf#page=22.
- United States Geological Survey [USGS]. 1894. *Baltimore, Maryland*. USGS, Washington, DC. Accessed November 2024, <https://ngmdb.usgs.gov/topoview/viewer>.
- Versar, Inc. 2012. *Lower Patapsco River Small Watershed Action Plan, Volumes I and II*. Prepared for the Baltimore County Department of Environmental Protection and Sustainability by Versar, Inc., with Coastal Resources, Inc. and McCormick Taylor, Inc. Accessed September 3, 2024, <https://www.baltimorecountymd.gov/files/Documents/Environment/Watersheds/lowerpatapscosw/apvol2.pdf>.

- Ward, Henry, Scott Emory, Esther Doyle Read, and Robert Wanner. 2013. *Stage 1 Phase IB Archeology Technical Report, Red Line Light Rail Transit Project, City of Baltimore and Baltimore County, Maryland*. Prepared for the Maryland Transit Administration by PB Americas, Inc. and Rummel, Klepper & Kahl, LLP, Baltimore.
- Ward, Henry, Scott Emory, Esther Doyle Read, and Robert Wanner. 2015. *Stage 1 Phase IB Archeology Interim Report, Baltimore Red Line Light Rail Project, City of Baltimore and Baltimore County, Maryland*. Prepared for the Maryland Transit Administration by PB Americas, Inc. and Rummel, Klepper & Kahl, LLP, Baltimore.
- Ward, Henry, Barbara Silber, Ester Doyle Read, and Kate Farnham. 2006. *Phase IA Archeological Assessment Technical Report, Red Line Corridor Transit Study, Baltimore City and Baltimore County, Maryland*. Prepared for U.S. Department of Transportation Federal Transit Administration by Maryland Transit Administration, Baltimore.
- Weber, Carmen A. 1984a. *Orchard Street Church Archeological Monitoring*. Prepared by the Baltimore Center for Urban Archaeology, Baltimore.
- Weber, Carmen A. 1984b. *Phase I/Phase II Archeological Reconnaissance Survey for the Gwynns Falls Sewer Interceptor, Baltimore, Maryland*. Prepared by the Baltimore Center for Urban Archaeology, Baltimore.

APPENDIX A. PROJECT DETAILS: EXPANDED APE ARCHAEOLOGY FOR NEPA REEVALUATION NO. 5

ID	FULL ADDRESS	AREA MAP	APE IMPACT	ARCHAEOLOGICAL SENSITIVITY	EXISTING USE	PROPOSED USE
1	700 S CATON AVE	A1	Staging area in existing material storage area north of Caton Ave	* Moderate - Staging/Laydown in existing staging area	Industrial	Temporary impacts for access including construction staging and laydown areas. No impacts proposed to Gwynns Falls are proposed. No land use changes
2	Amtrak ROW	A1	Permanent utility impacts within rail ROW along slip track connection main line. Then in ROW to Frederick Ave. Bridge	* Low for Utilities in rail ROW	Rail ROW	Permanent underground improvements for utilities within the rail ROW. Temporary surface impacts during construction.
3	Amtrak ROW	A1	Permanent utility impacts within rail ROW at Frederick Ave bridge	* Low for Utilities in rail ROW	Rail ROW	Permanent underground improvements for utilities within the rail ROW. Temporary surface impacts during construction.
4	Amtrak ROW	A1	Permanent utility impacts within rail ROW	* Low for Utilities in rail ROW * Moderate for area along track	Rail ROW	Permanent utility impacts within rail ROW. Includes main line north of from Frederick Ave. Bridge. LOD north of track more limited but butts up against industrial/residential. LOD south of track is somewhat more extensive and parallels a stream tributary of Gwynns Falls.
5	DOT ROW	A2	Curb cuts on N. Franklinton Rd for contractor access and may need repairs after contractor is finished in this area	* Low - Paving impacts in road ROW	DOT ROW	Temporary impacts for accessing the site during construction. The proposed work will likely include curb cuts for contractor access and may need repairs after contractor is finished in this area.
6	DOT ROW	A2	Curb cuts on W. Lexington St for contractor access and may need repairs after contractor is finished in this area	* Low - Paving impacts in road ROW	DOT ROW	Temporary impacts for accessing the site during construction. The proposed work will likely include curb cuts for contractor access and may need repairs after contractor is finished in this area.
7	MTA Parking Lot A	B	Temporary impacts to Lot A	Low - Laydown/Staging in Parking Area	MTA Parking Lot at West Baltimore MARC	Temporary impacts to Lot A during construction of the West Baltimore MARC Station. Needed due to the complexity of the construction of the new MARC station.
8	DOT ROW	B	Temporary impacts in Lot B (Buis Loop)	Covered by Lafayette Gas	DOT ROW	Temporary impacts for the creation of a temporary bus loop in Lot B.

ID	FULL ADDRESS	AREA MAP	APE IMPACT	ARCHAEOLOGICAL SENSITIVITY	EXISTING USE	PROPOSED USE
9	DOT ROW	B	Temporary impacts in Lot B (Buis Loop)	* Low - Paving impacts in road ROW	DOT ROW	Temporary impacts during construction for access and the creation of a new bus loop in MTA Lot B. Damages to the roadway will be repaired by the contractor.
10	MTA Parking Lot B	B	Temporary impacts in Lot A & B (Buis Loop)	* Low - Laydown/Staging in Parking Area	MTA Parking Lot at West Baltimore MARC	Temporary impacts to Lot B during construction for a replacement bus loop during the construction of the MARC station. Due to construction needs at Lot A, MTA has agreed to allow the project to move the bus loop from Lot A to Lot B during construction.
11	DOT ROW	B	Temporary impacts in Lot B (Buis Loop)	* Low - Limited impacts in road ROW	DOT ROW	Temporary impacts during construction for access and the creation of a new bus loop in MTA Lot B. Damages to the roadway will be prepared by the contractor.
12	MTA Parking Lot C	B	Temporary impacts in Lot B (Craft Parking)	* Low - Laydown/Staging in Parking Area	MTA Parking Lot at West Baltimore MARC	Temporary impacts for craft parking.
13	DOT ROW	B	Milling/overlay of existing pavement for NVF	* Low - Paving impacts in road ROW	DOT ROW	Milling and overlay of existing pavement on/under I-83 for the construction of the NVF.
14	DOT ROW	B	Milling/overlay of existing pavement for NVF	* Low - Paving impacts in road ROW	DOT ROW	Milling and overlay of existing pavement on/under I-83 for the construction of the NVF.
15	2406 W FRANKLIN ST	B	Reconfiguring front stairs for new lower profile on Franklin Street	* Low - Impacts to Rowhouse Front Yard	Residential	Reconfiguring of the stairs at the houses on Franklin Street to accommodate ingress/egress from the residences with the new lowered profile of Franklin Street.
16	2404 W FRANKLIN ST	B	Reconfiguring front stairs for new lower profile on Franklin Street	* Low - Impacts to Rowhouse Front Yard	Residential	Reconfiguring of the stairs at the houses on Franklin Street to accommodate ingress/egress from the residences with the new lowered profile of Franklin Street.
17	2402 W FRANKLIN ST	B	Reconfiguring front stairs - side yard for new lower profile on Franklin Street	* Moderate - Impacts to Side Yard/Alley	Residential	Reconfiguring of the stairs at the houses on Franklin Street to accommodate ingress/egress from the residences with the new lowered profile of Franklin Street.
18	2400 W FRANKLIN ST	B	Reconfiguring back yard for new lower profile on Franklin Street	* Moderate - Impacts to Side Yard/Alley	Residential	Reconfiguring of the stairs at the houses on Franklin Street to accommodate ingress/egress from the residences. Temporary impacts to the side yard for the lowering of Wheeler Ave; lowering of the alley behind the house and installation of curb

ID	FULL ADDRESS	AREA MAP	APE IMPACT	ARCHAEOLOGICAL SENSITIVITY	EXISTING USE	PROPOSED USE
19	2401 LAURETTA AVE	B	Reconfiguring back alley for new lower profile on Franklin Street	* Moderate - Impacts to Alley	Residential	Lowering of the alley behind the house and installation of curb to connect to lowered Wheeler Ave
20	DOT ROW	B	Underground improvements for installation of a gas line under Laurretta Ave	* Low - Utility Impacts in Road ROW (Existing Water/Sewer)	DOT ROW	Permanent underground improvements for installation of a gas line connections to homes on Franklin St. Temporary surface impacts during construction. Area will be restored to existing condition after construction.
21	2100 W FRANKLIN ST	B	Permanent access road and underground storm sewer	* Low for construction in rail ROW	Industrial	Permanent access road for Amtrak and fire and life safety to permanently access the Southern Approach; installation of underground storm sewer to take water from the site of the West Baltimore MARC Station and into city infrastructure.
22	2200 EDMONDSON AVE	B	Temporary impacts during new bridge construction	* Moderate - Impacts to existing parking lots	Commercial	Temporary impacts during construction to facilitate the construction of the new bridge and to ensure that the property has adequate parking and access throughout. No permanent impacts are anticipated to the building nor is a relocation required.
23	2205 W LANVALE ST	B	Temporary impacts during new bridge construction	* Moderate - Impacts to existing parking lots	Commercial	The new longer Edmondson Ave Bridge will cut off the front access to the former business. Frontage will be reconfigured. Temporary impacts during construction for the new bridge.
24	DOT ROW	C	Temporary impacts during new bridge construction	* Low - Paving impacts in road ROW	DOT ROW	Temporary impacts during construction to allow for the work to facilitate the Edmondson Ave Bridge Replacement. Work here will be to restore any temporary construction impacts to the original condition, which may include milling, paving, sidewalk, and curb.
25	2201 WINCHESTER ST	C	Temporary impacts staging and laydown (existing industrial parking)	* Low - Laydown/Staging in Existing Parking Area	Industrial	Temporary impacts for access including construction staging and laydown areas.
26	2200 WINCHESTER ST	C	Temporary impacts staging and laydown (existing industrial parking)	* Low - Laydown/Staging in Existing Parking Area	Industrial	Temporary impacts for access including construction staging and laydown areas.
27	Rail ROW	C	Potential use to haul muck using the existing CSX Spur	* Low for temporary impacts in rail ROW	Rail ROW	Potential project use to haul muck off-site using the existing CSX Spur. No permanent impacts or changes to the property are proposed.

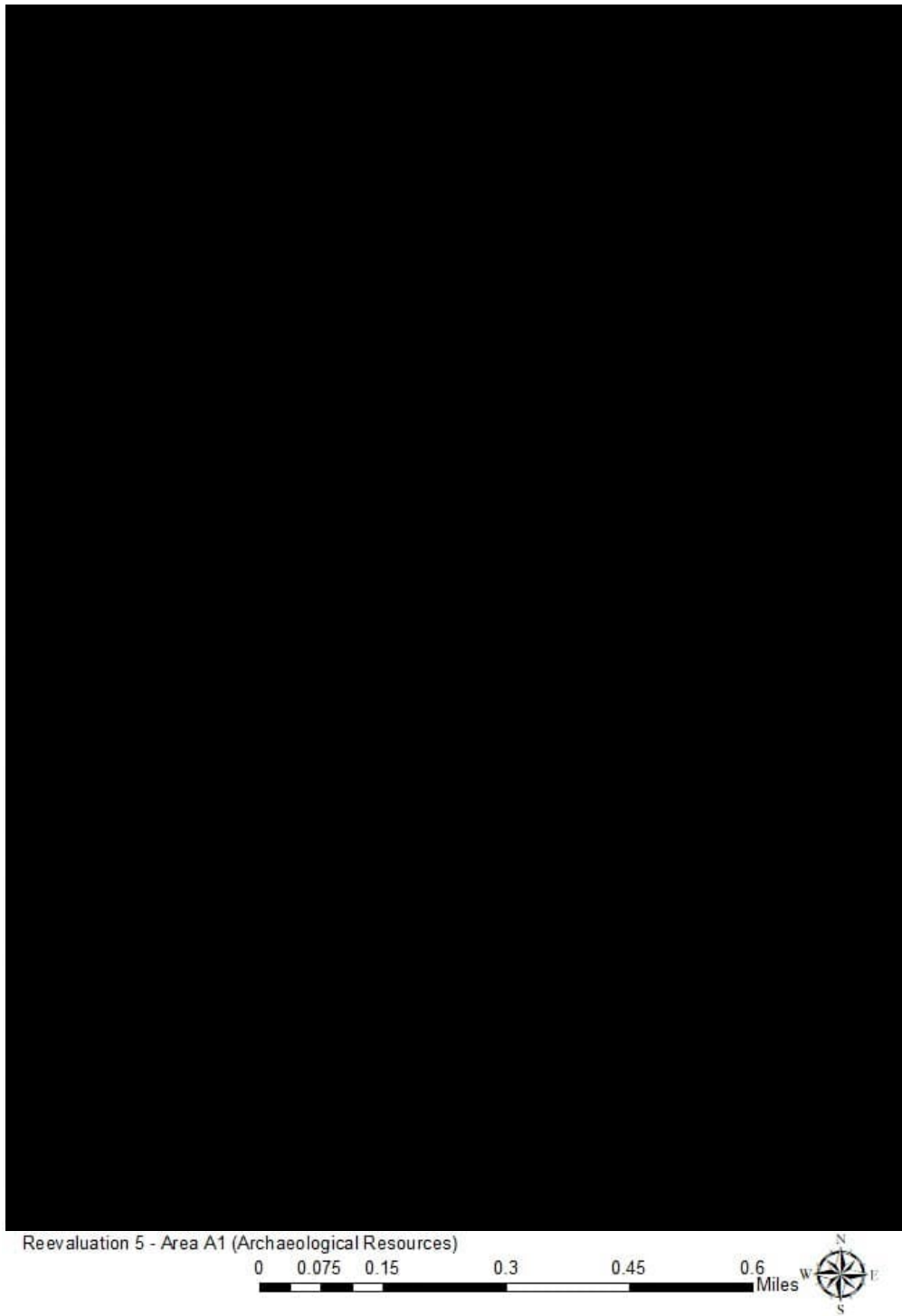
ID	FULL ADDRESS	AREA MAP	APE IMPACT	ARCHAEOLOGICAL SENSITIVITY	EXISTING USE	PROPOSED USE
28	1921 PRESSTMAN ST	C	Temporary impacts staging and laydown (existing materials storage)	* Low - Laydown/Staging in Existing Materials Storage Yard	Industrial	Temporary impacts for access including construction staging and laydown areas. Project will work with property owner to either reconfigure the site to not impact operations or find a suitable off-site area for temporary or permanent relocation of business.
29	1300 N MONROE ST	C	Temporary impacts staging and laydown (existing materials storage)	* Low - Laydown/Staging in Existing Materials Storage Yard	Industrial	Temporary impacts for access including construction staging and laydown areas. Project will work with property owner to either reconfigure the site to not impact operations or find a suitable off-site area for temporary or permanent relocation of business.
30	1318 N MONROE ST	C	Temporary impacts staging and laydown (existing materials storage)	* Low - Laydown/Staging in Existing Materials Storage Yard	Industrial	Temporary impacts for access including construction staging and laydown areas. Project will work with property owner to either reconfigure the site to not impact operations or find a suitable off-site area for temporary or permanent relocation of business.
31	1400 N MONROE ST	C	Temporary impacts staging and laydown (existing materials storage)	* Low - Laydown/Staging in Existing Materials Storage Yard	Industrial	Temporary impacts for access including construction staging and laydown areas. Project will work with property owner to either reconfigure the site to not impact operations or find a suitable off-site area for temporary or permanent relocation of business.
32	1410 N MONROE ST	C	Temporary impacts staging and laydown (existing materials storage)	* Low - Laydown/Staging in Existing Materials Storage Yard	Industrial	Temporary impacts for access including construction staging and laydown areas. Project will work with property owner to either reconfigure the site to not impact operations or find a suitable off-site area for temporary or permanent relocation of business.
33	1909 PRESSTMAN ST	C	Temporary impacts staging and laydown (existing industrial parking)	* Low - Laydown/Staging in Existing Materials Storage Yard	Industrial	Temporary impacts for access including construction staging and laydown areas. Project will work with property owner to either reconfigure the site to not impact operations or find a suitable off-site area for temporary or permanent relocation of business.
34	1817 LAURENS ST	C	Temporary impacts staging and laydown (existing industrial parking)	* Low - Laydown/Staging in Existing Parking Area	Industrial	Temporary impacts for the installation of contractor trailers/offices and parking. The work will require installation of electric, water, and sewer connections to the site and will involve ground disturbance.
35	1801 LAURENS ST	C	Temporary impacts staging and laydown (existing industrial parking)	* Low - Laydown/Staging in Existing Parking Area	Industrial	Temporary impacts for the installation of contractor trailers/offices and parking. The work will require installation of electric, water, and sewer connections to the site and will involve ground disturbance.

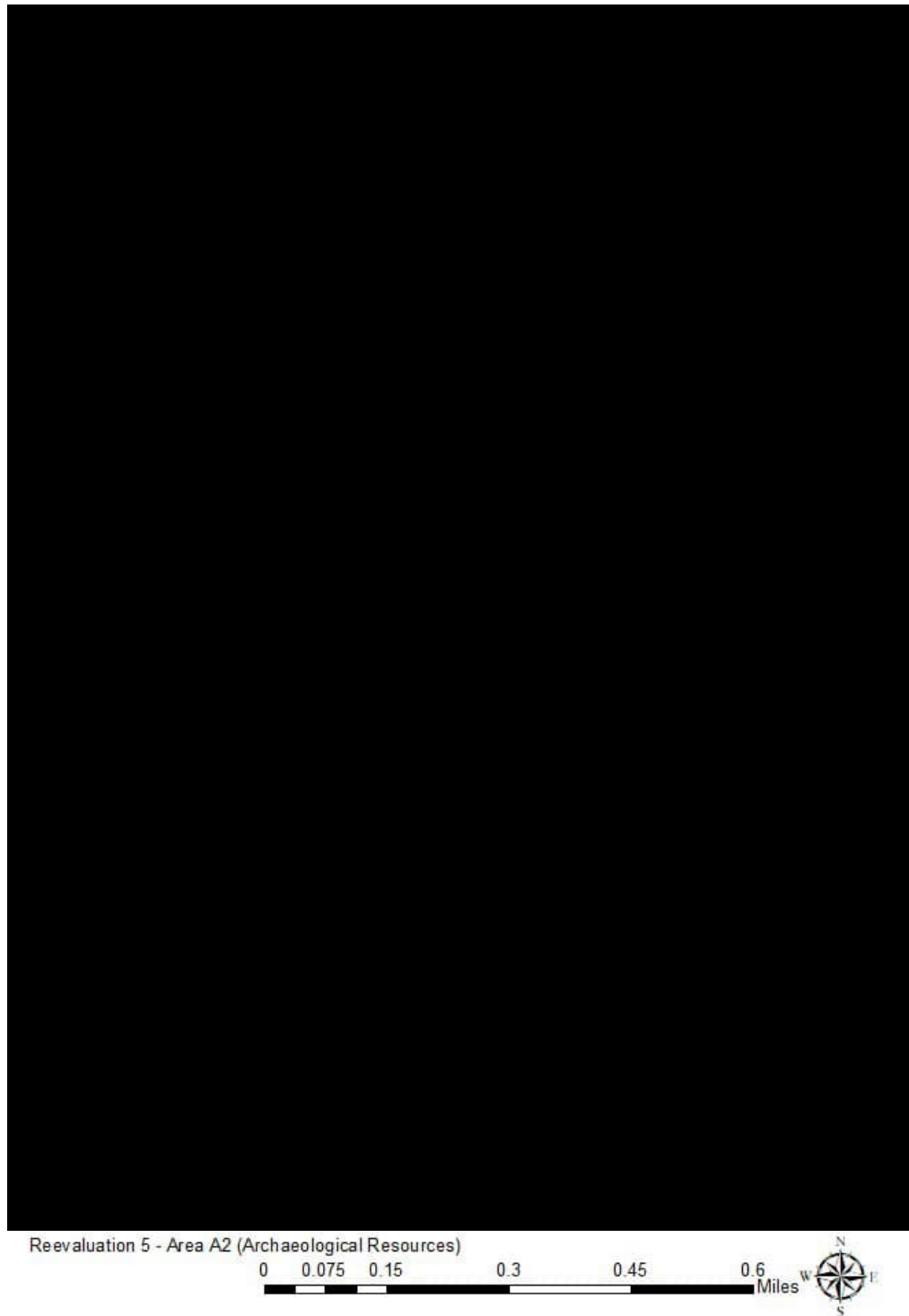
ID	FULL ADDRESS	AREA MAP	APE IMPACT	ARCHAEOLOGICAL SENSITIVITY	EXISTING USE	PROPOSED USE
36	DOT ROW	D	Permanent underground improvements for gas line	* Low - Utility Impacts in Road ROW (Existing Water/Sewer)	DOT ROW	Permanent underground improvements for installation of a gas line. Temporary surface impacts during construction. Area will be restored to existing condition after construction. May include sidewalk disturbances and reconstruction.
37	DOT ROW	E1	Permanent underground improvements to the existing waterline under street	* Low - Utility Impacts in Road ROW (Existing Water/Sewer)	DOT ROW	Permanent underground improvements to install a new 10" valve for the existing waterline located under Reservoir Street. This is needed to maintain flows to the existing fire hydrant in the area. Temporary surface impacts during construction.
38	DOT ROW	E1	Milling and overlay under I-83 for NVF	* Low - Paving impacts in road ROW	DOT ROW	Milling and overlay of existing pavement on/under I-83 for the construction of the NVF.
39	Amtrak ROW	E2-E3	Permanent underground improvements for utilities within rail ROW	* Low for temporary impacts in rail ROW (adjacent to tracks - SWM ponds) * Moderate in existing parking lots	Rail ROW	Permanent underground improvements for utilities within rail ROW. Temporary surface impacts during construction
40	Amtrak ROW	E2-E3	Permanent underground improvements for utilities within rail ROW	* Low for temporary impacts in rail ROW (adjacent to tracks - SWM ponds)	Rail ROW	Permanent underground improvements for utilities within rail ROW. Temporary surface impacts during construction.
41	Amtrak ROW	E2-E3	Permanent underground improvements for utilities within rail ROW	* Low for temporary impacts in rail ROW (existing tracks)	Rail ROW	Permanent underground improvements for utilities within rail ROW. Temporary surface impacts during construction.
42	Amtrak ROW	E2-E3	Permanent underground improvements for utilities within rail ROW	* Low for permanent impacts in rail ROW (adjacent to tracks)	Rail ROW	Permanent underground improvements for utilities within rail ROW. Temporary surface impacts during construction.
43	Amtrak ROW	E2-E3	Permanent underground improvements for utilities within rail ROW	* Low for permanent impacts in rail ROW (adjacent to tracks)	Rail ROW	Permanent underground improvements for utilities within rail ROW. Temporary surface impacts during construction.

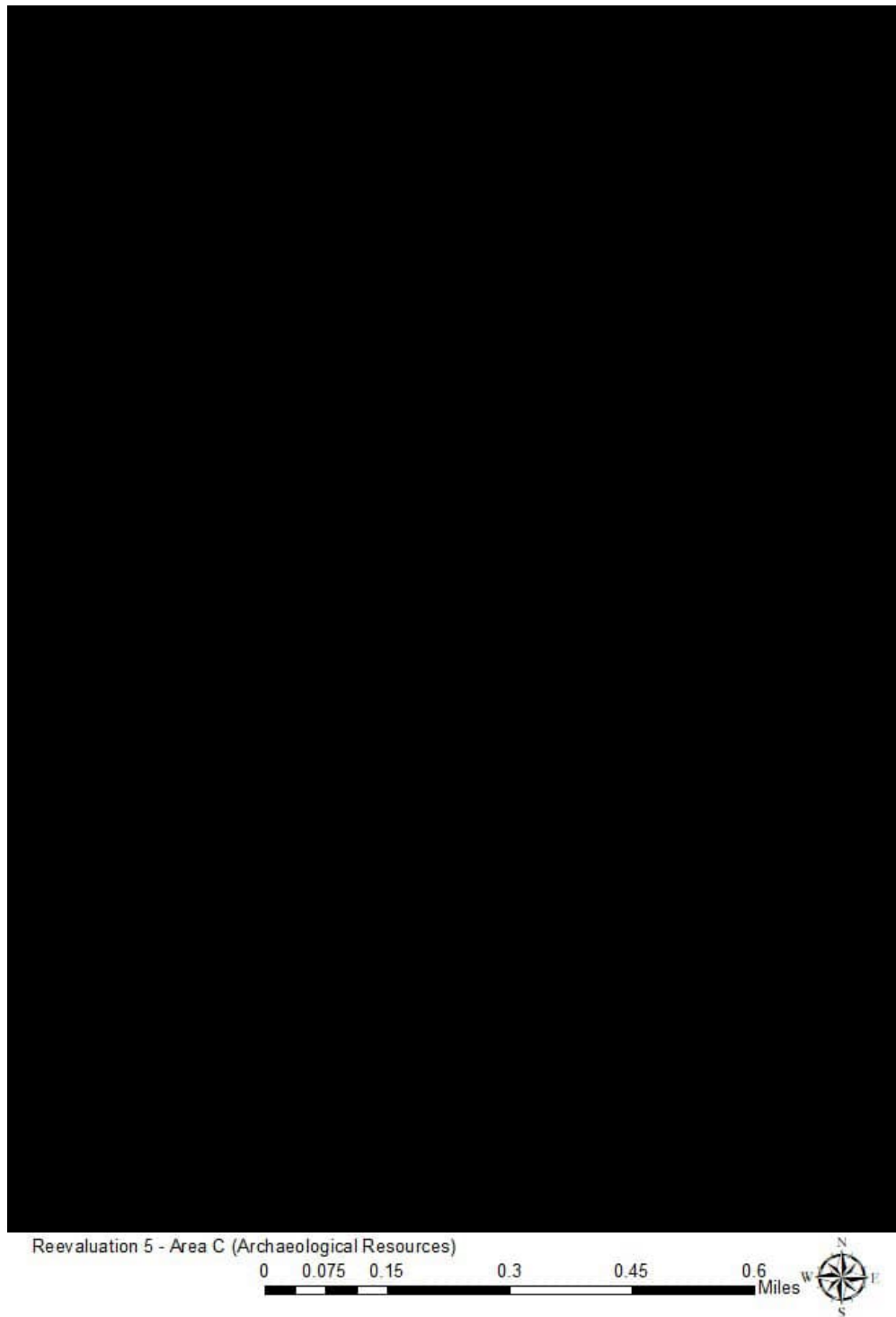
ID	FULL ADDRESS	AREA MAP	APE IMPACT	ARCHAEOLOGICAL SENSITIVITY	EXISTING USE	PROPOSED USE
44	DOT ROW	E2-E3	Permanent underground improvements for installation of a BGE electric conduit at Penn Ave. and Dolphin St. intersection	* Low - Utility Impacts in Road ROW (Existing Water/Sewer)	DOT ROW	Permanent underground improvements for installation of a BGE electric conduit at this intersection. Temporary surface impacts during construction. Area will be restored to existing condition after construction.
45	2100 W FRANKLIN ST	B	Temporary impacts for construction access and shoring of existing retaining wall along property line	Moderate - Potent underground impact to American Ice Company	Industrial	Temporary impacts for construction access and shoring of existing retaining wall along property line. No impacts to the existing building nor improvements to the property are needed.

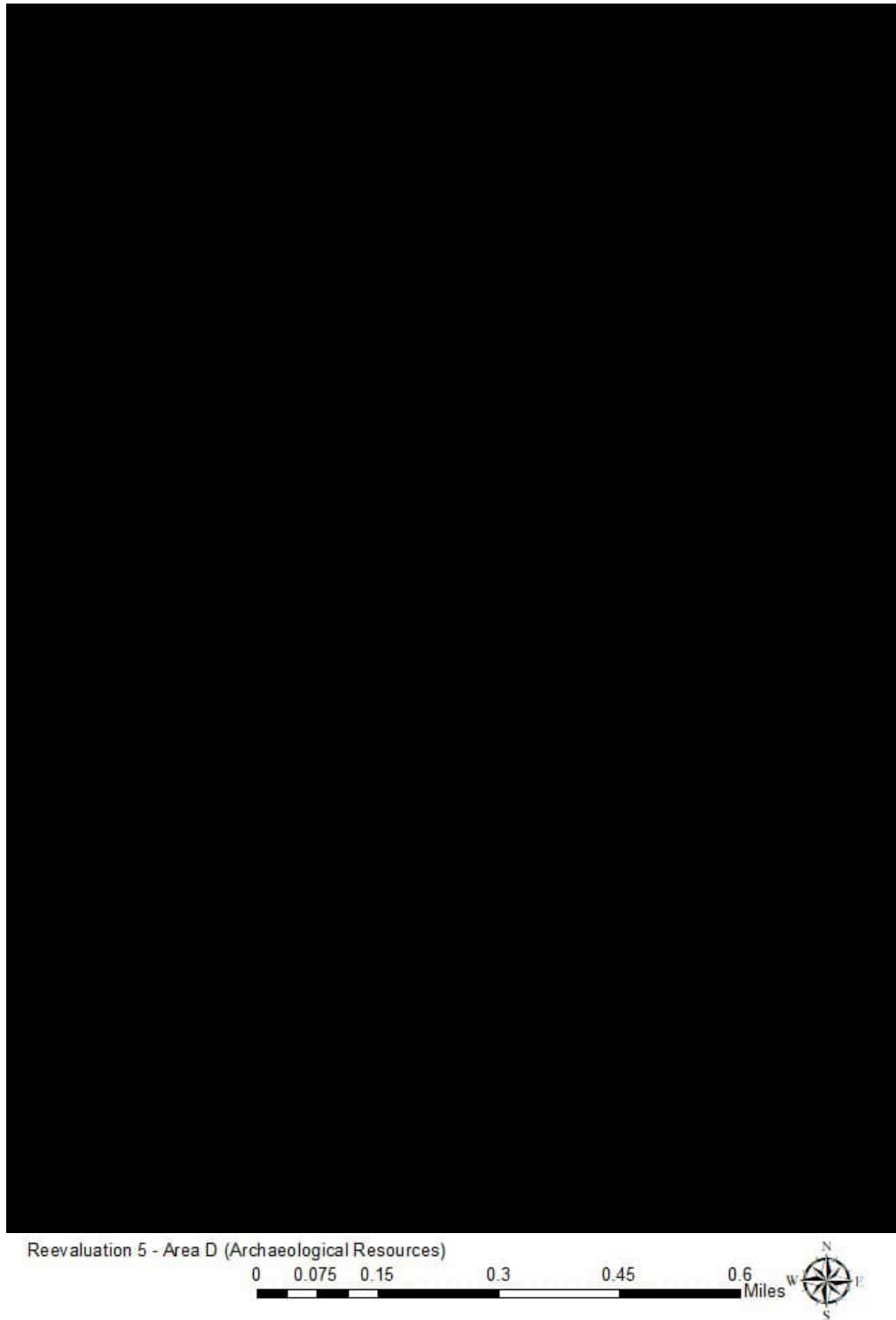
APPENDIX B. ARCHAEOLOGICAL SITES AND SURVEY AREA MAPS

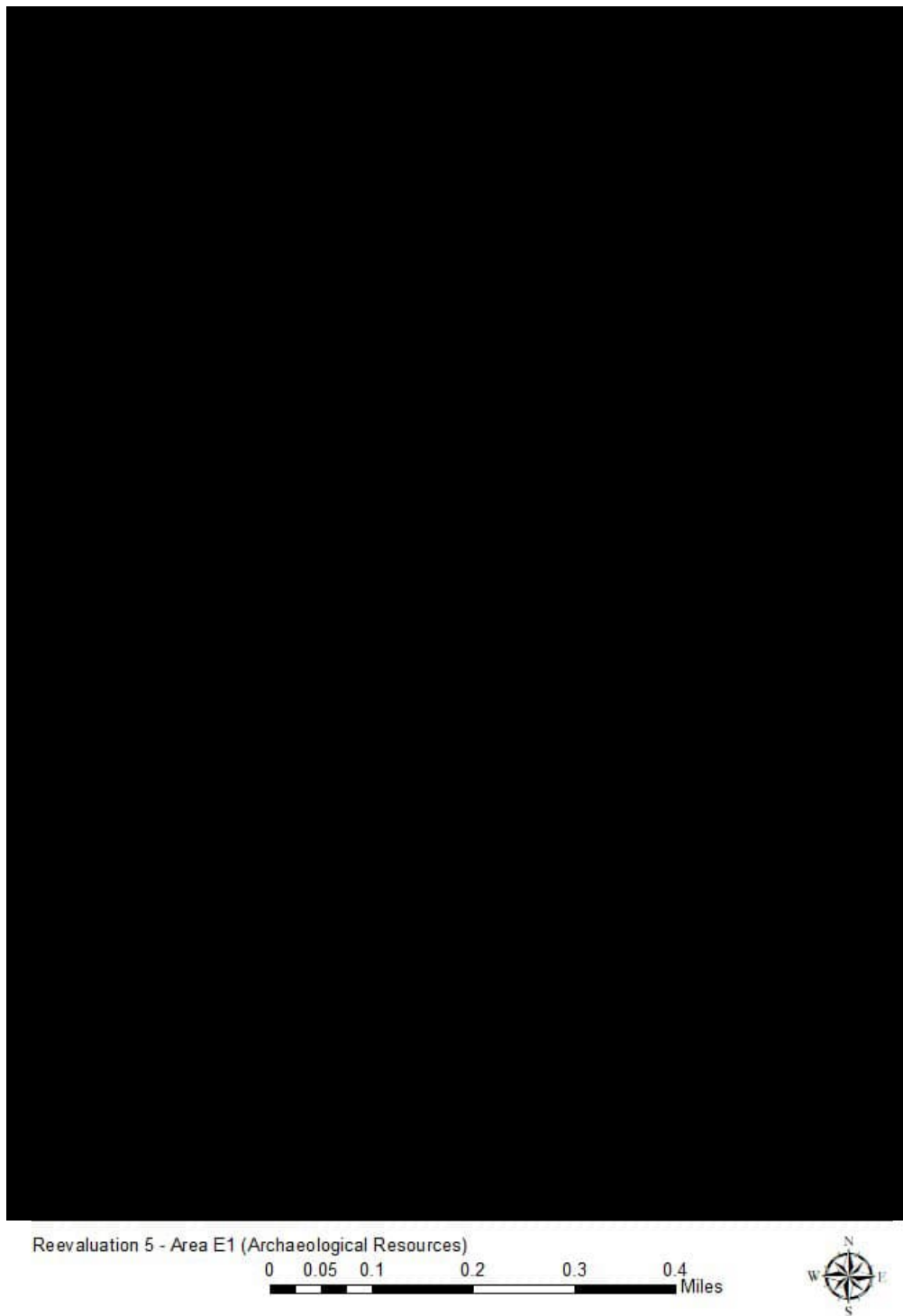
Source: MHT Medusa 09/04/2024

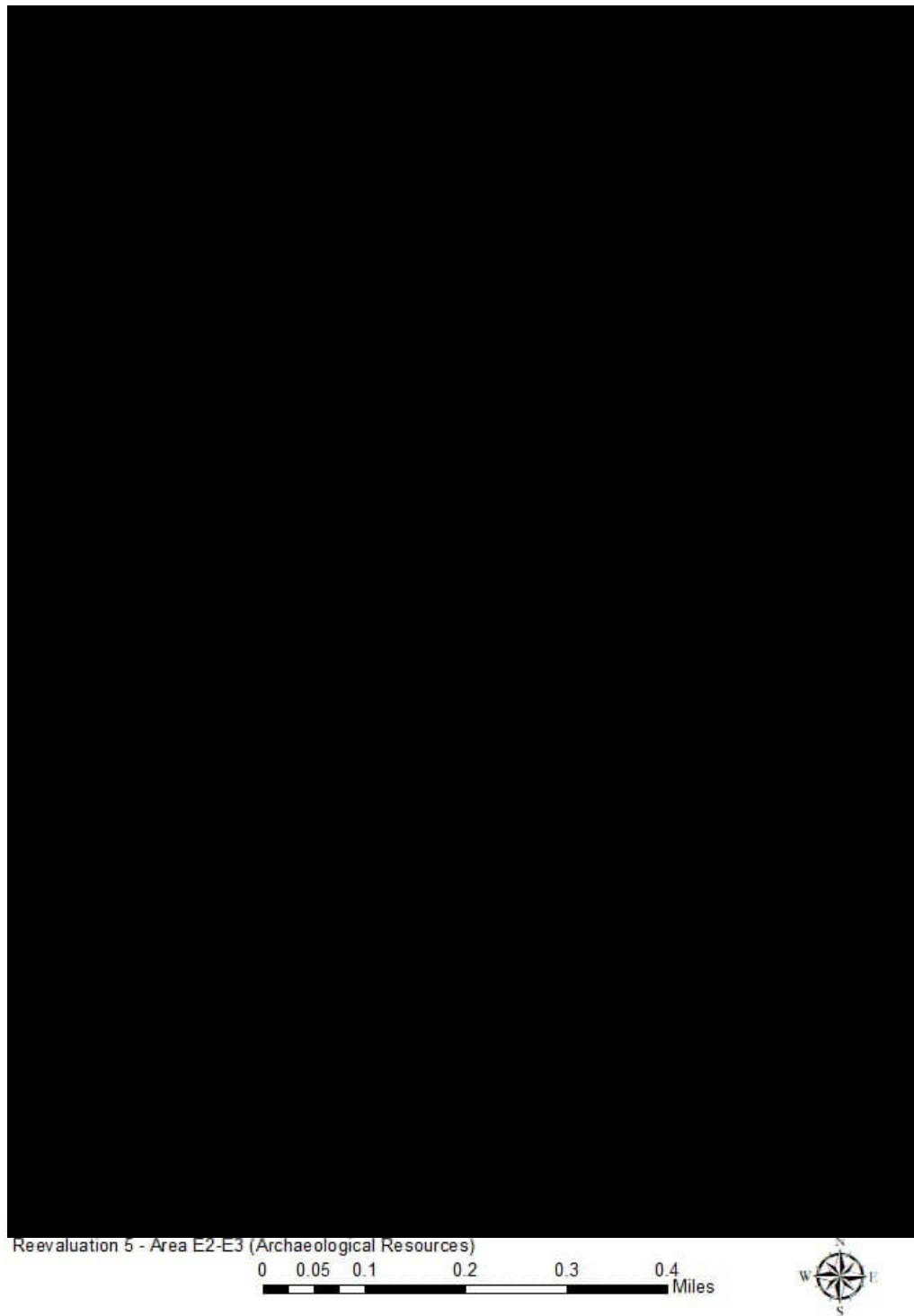


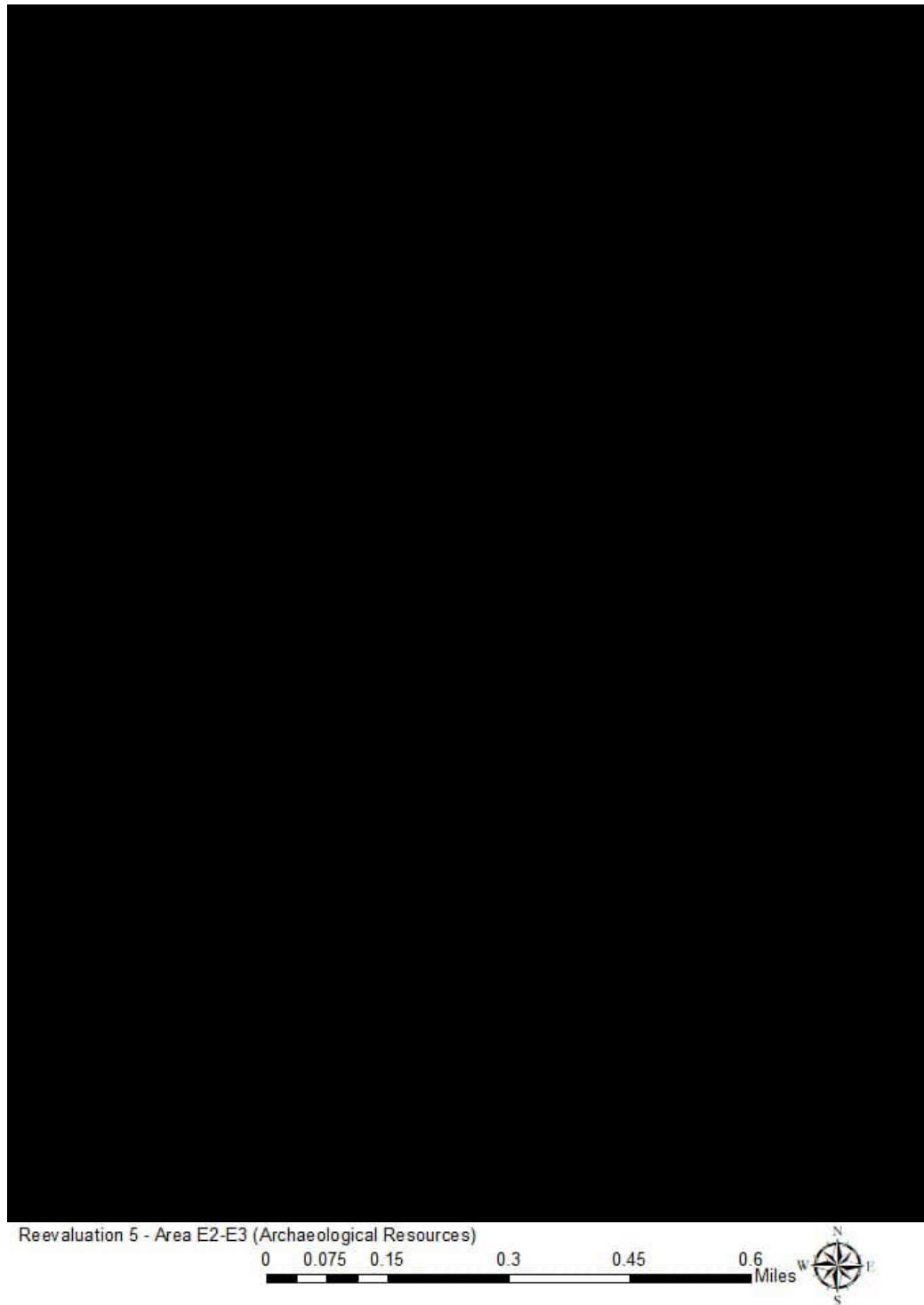








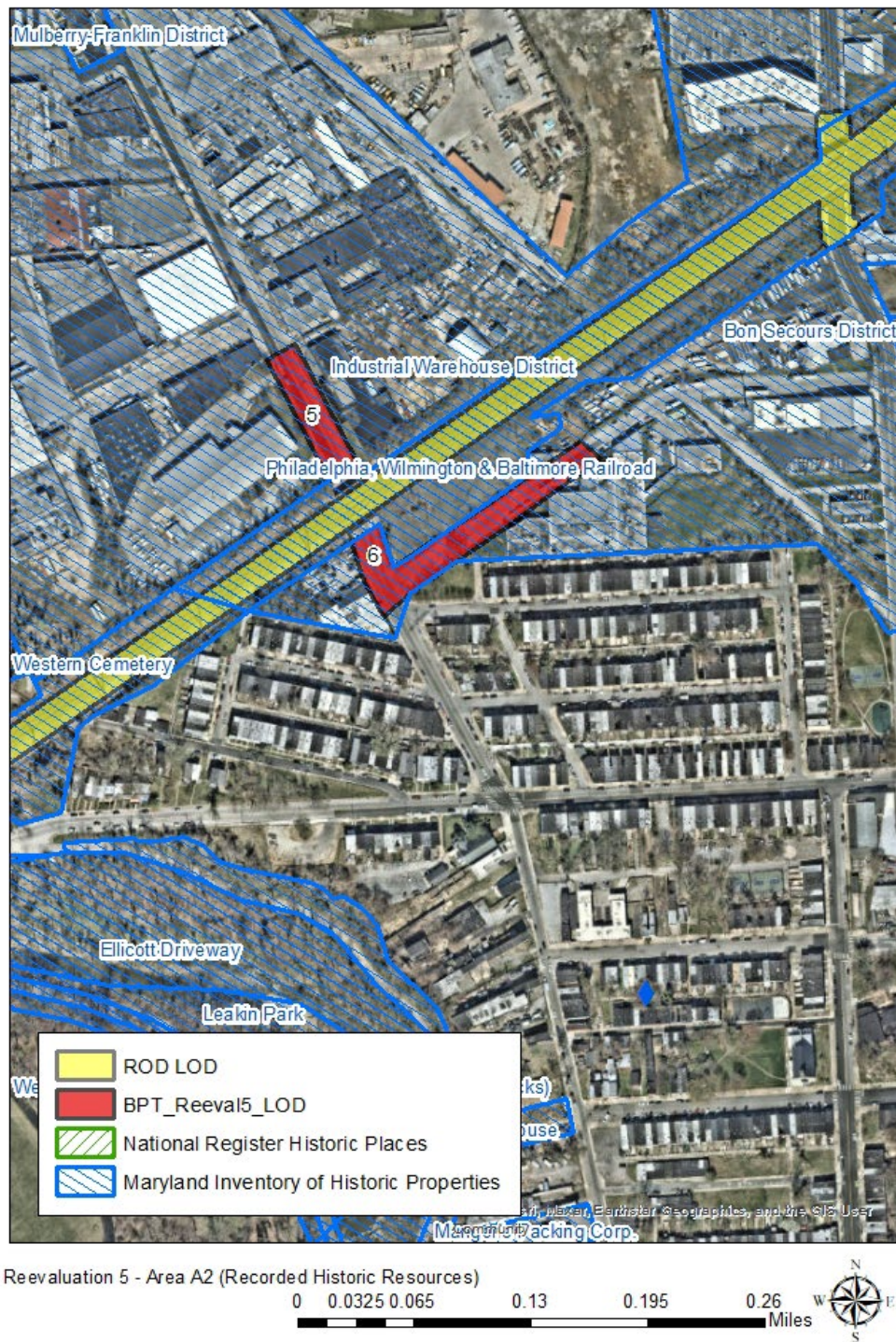


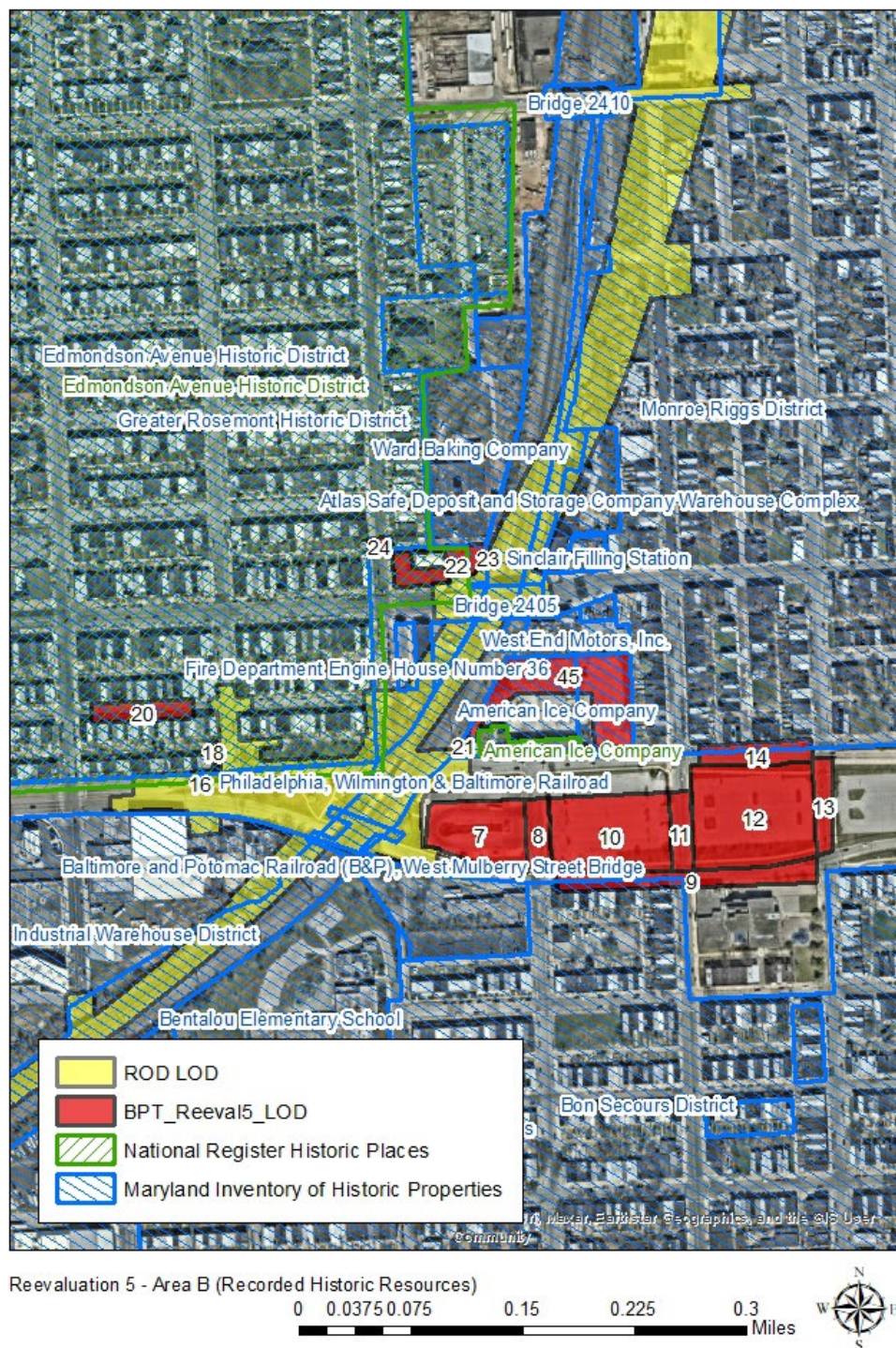


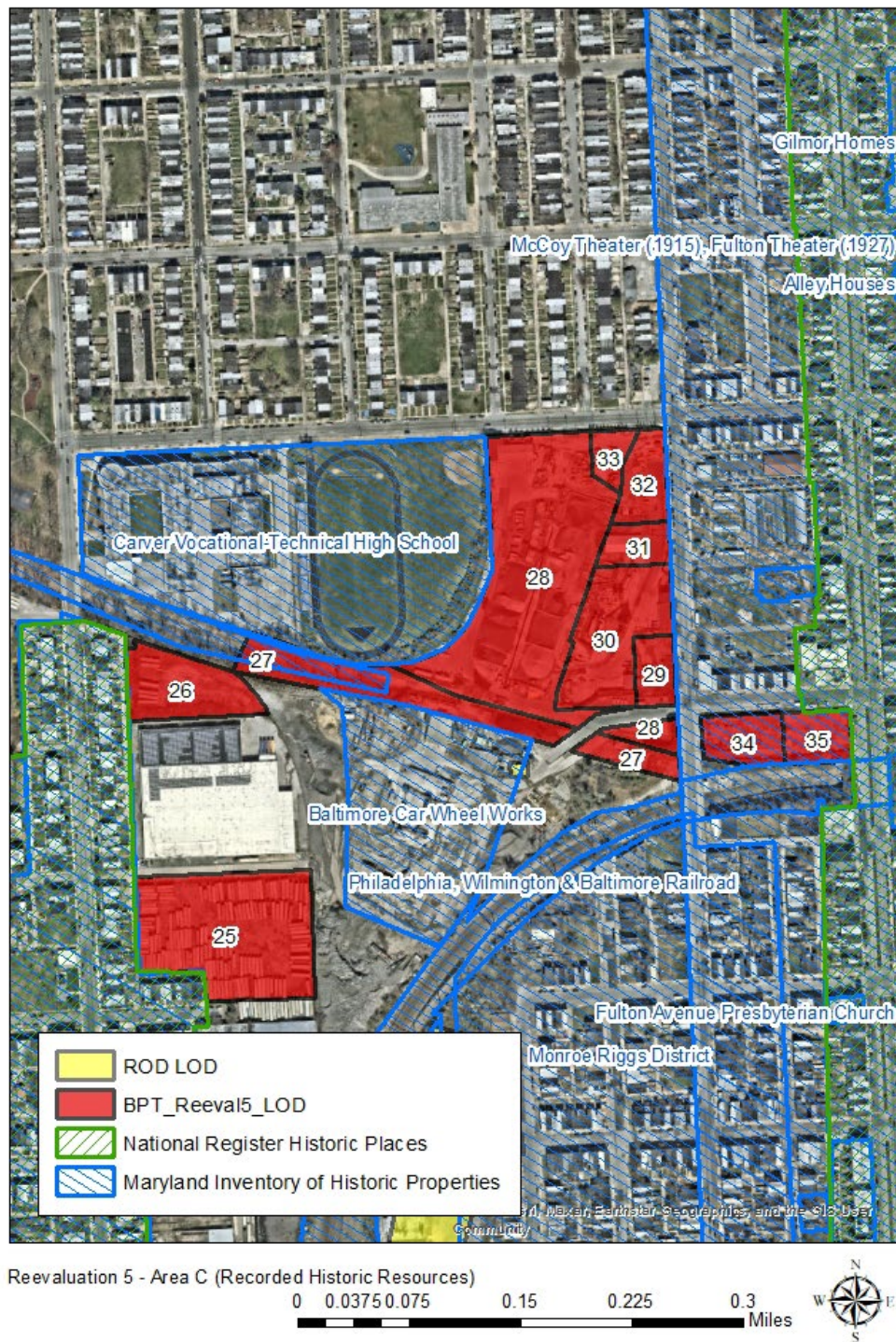
APPENDIX C. HISTORIC ARCHITECTURAL RESOURCES

Source: MHT Medusa 01/03/2025







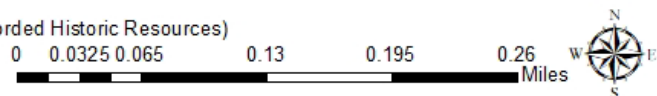








Reevaluation 5 - Area E2-E3 (Recorded Historic Resources)



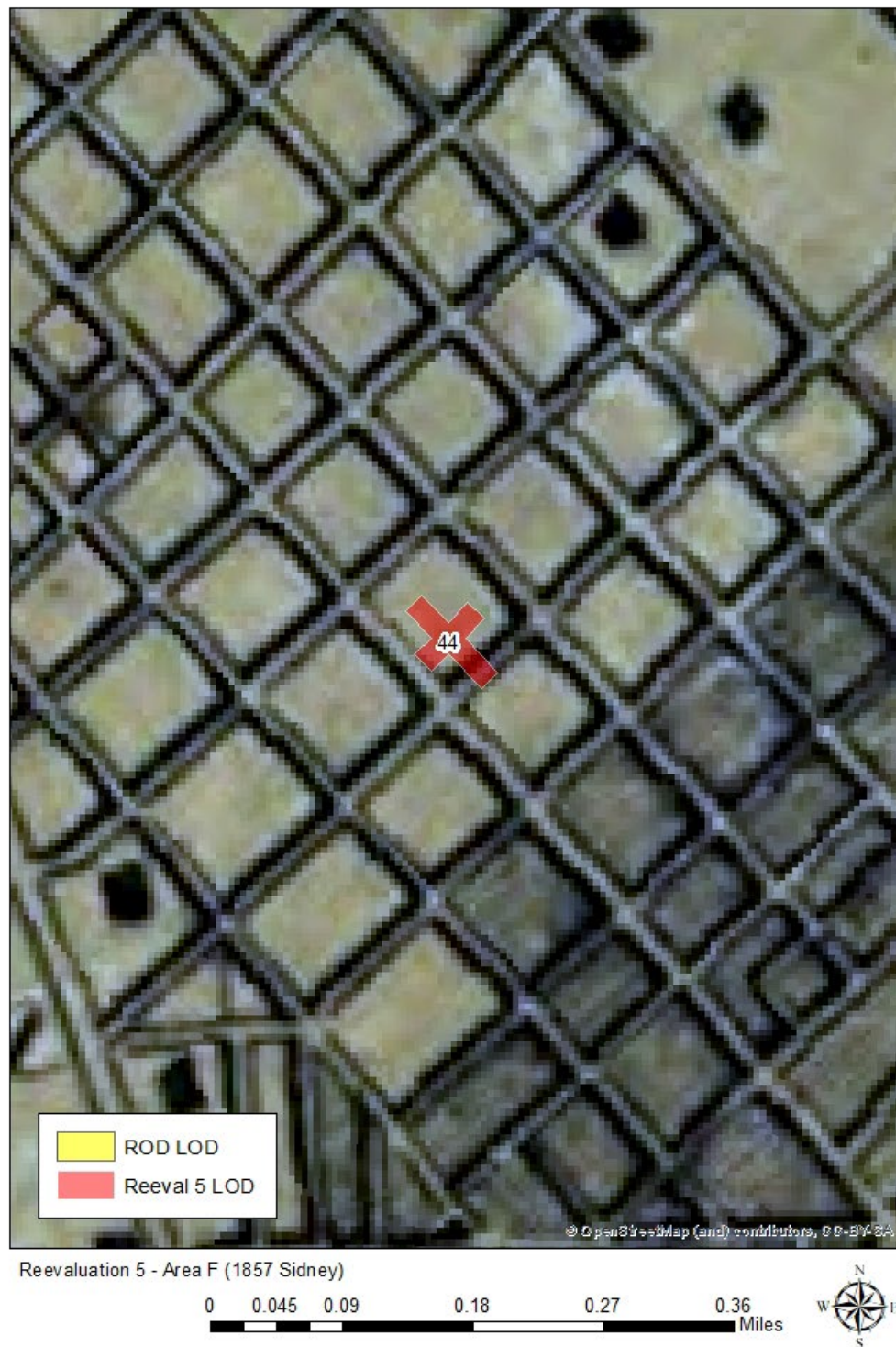


APPENDIX D. HISTORIC MAP SERIES

D1. 1857 MAP OF THE CITY AND COUNTY OF BALTIMORE (J.C. SIDNEY)







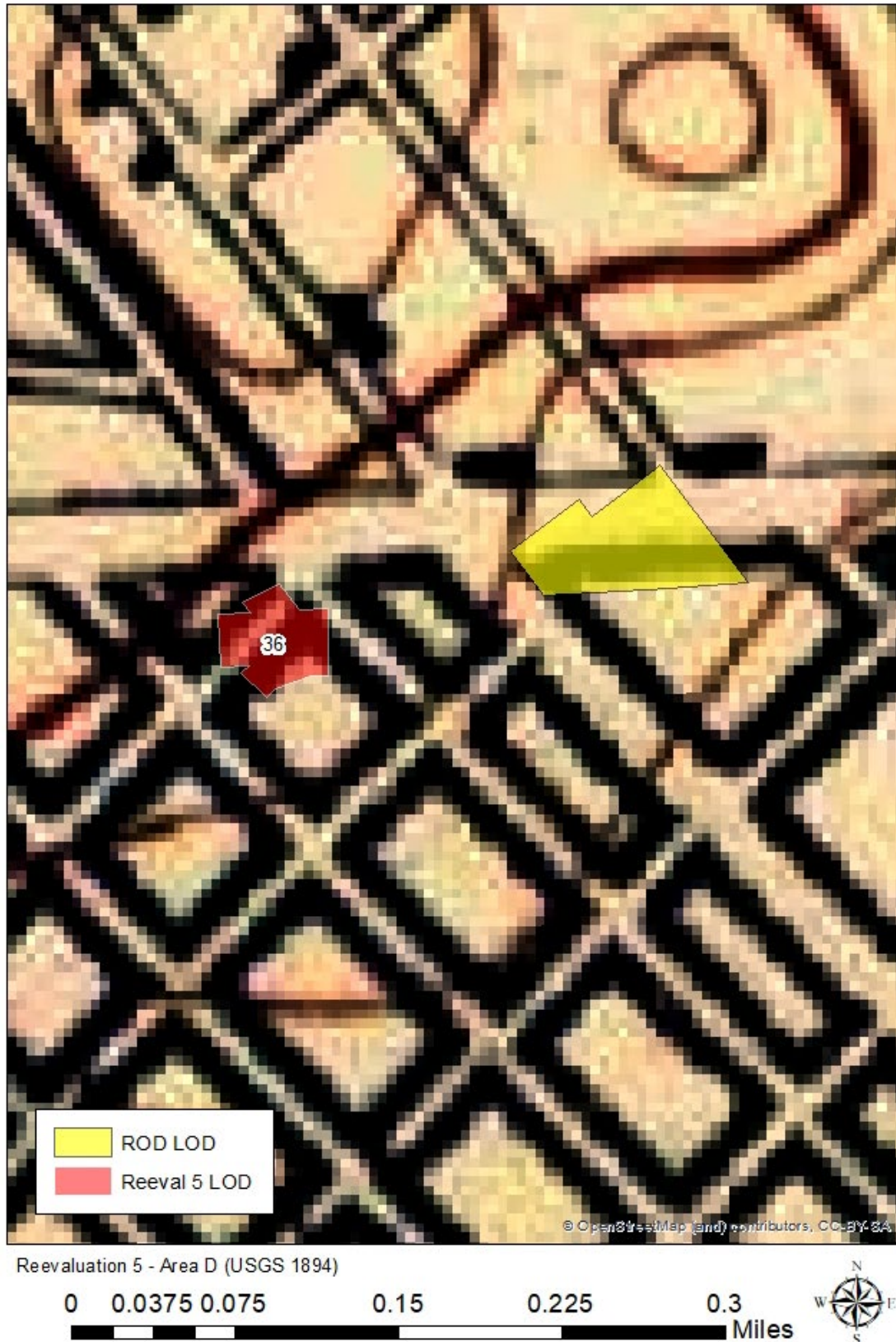
D2. 1865 APPROACHES TO BALTIMORE CITY (C.M. BACHE)



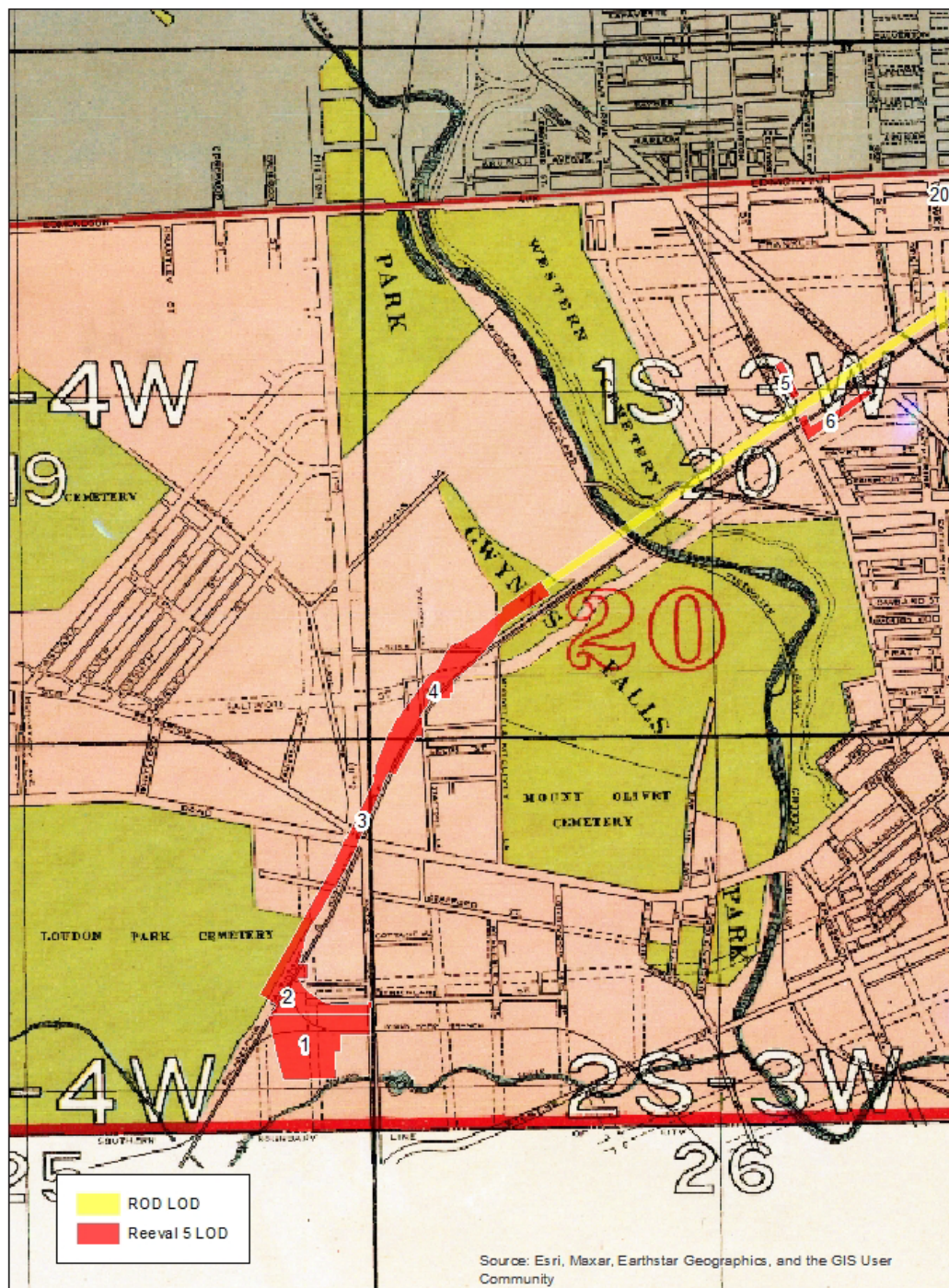
D3. 1894 BALTIMORE TOPOGRAPHIC QUADRANGLE (UNITED STATES
GEOLOGICAL SURVEY)



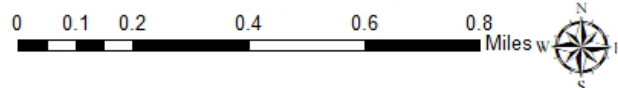


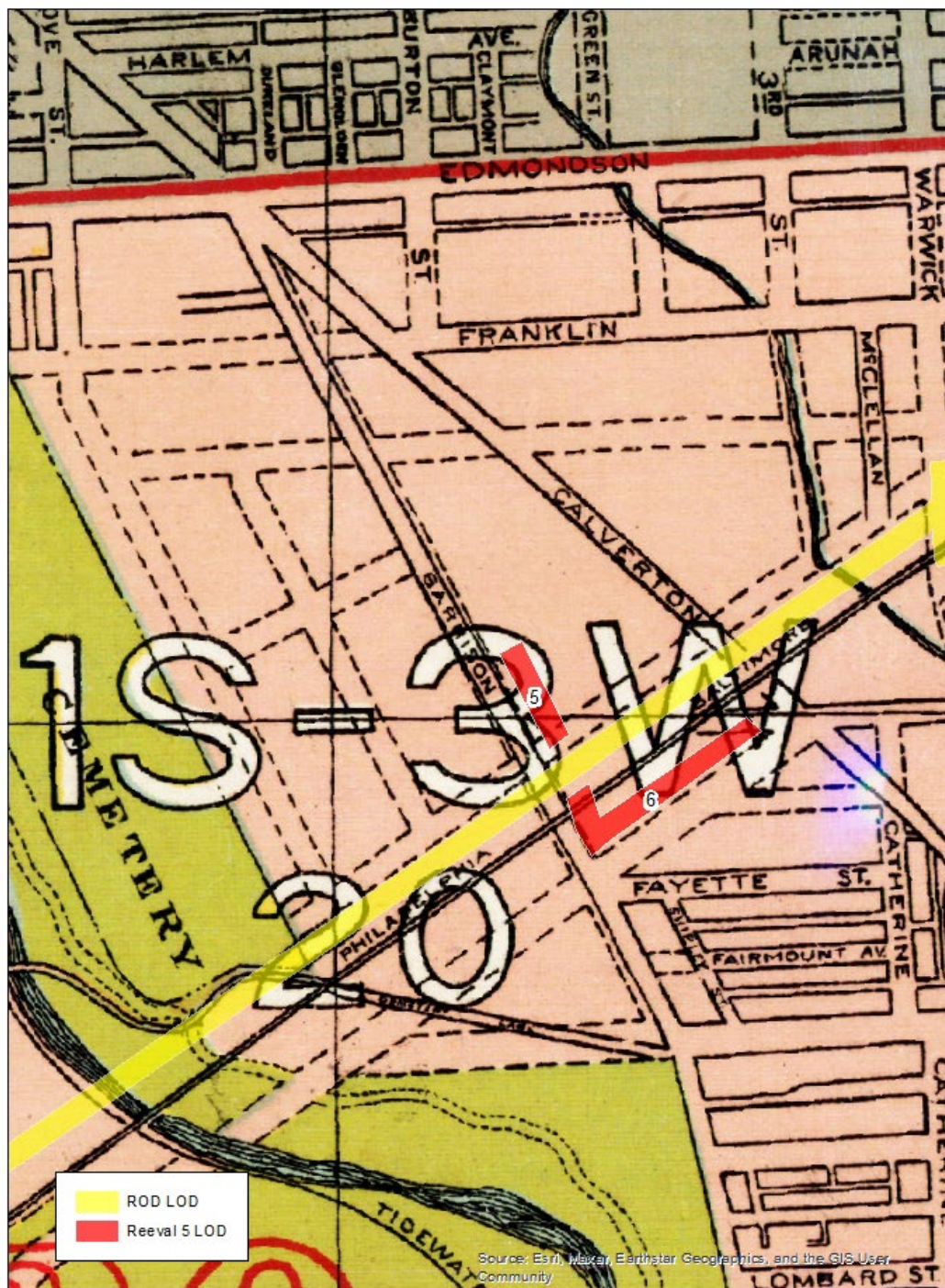


D4. 1914 CITY OF BALTIMORE ATLAS

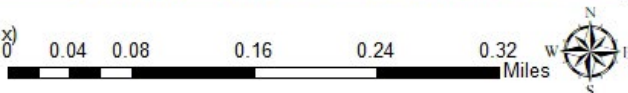


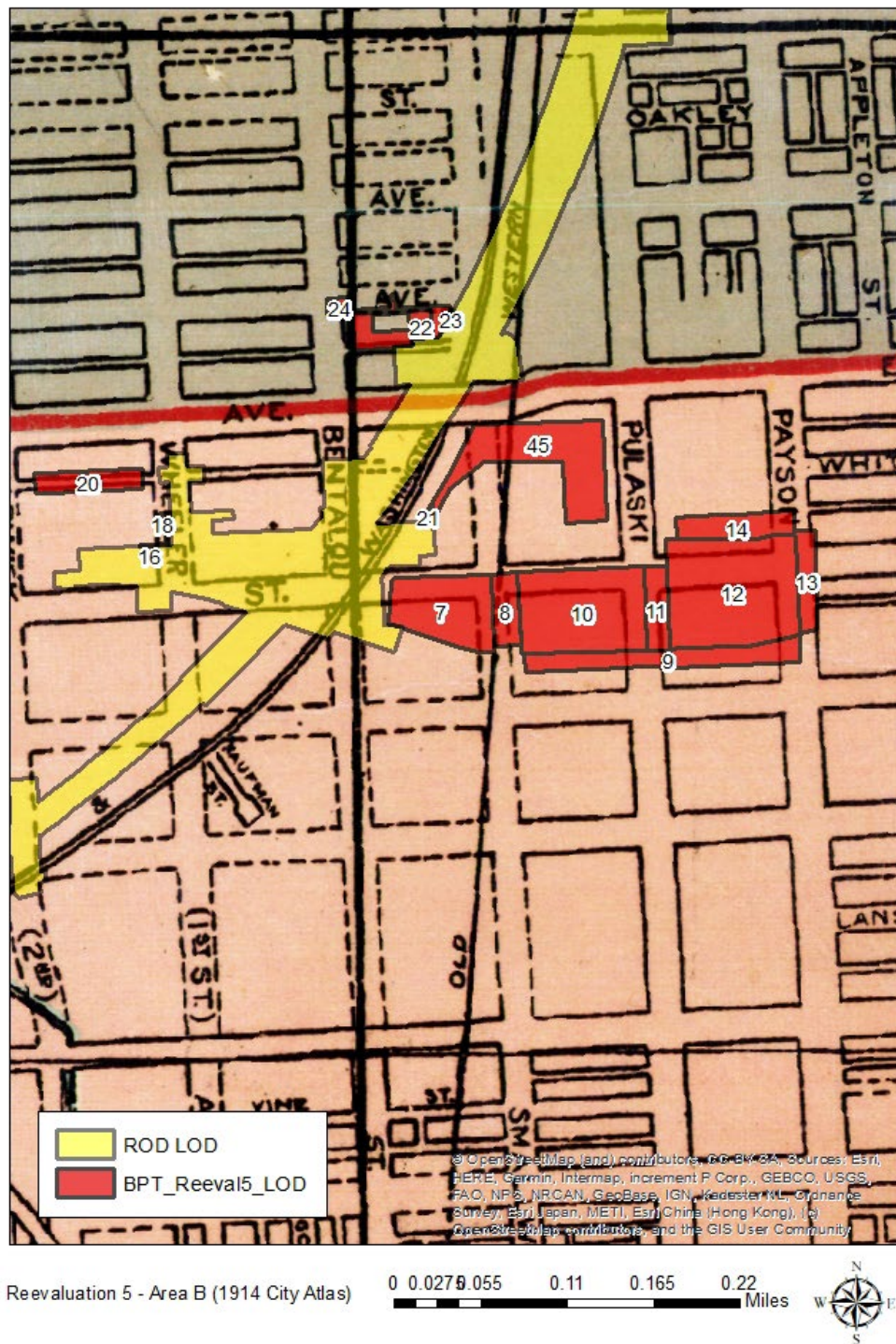
Reevaluation 5 - Area A (1914 City Atlas)





Reevaluation 5 - Area A2 (1914 CityAtlas_Street Index)

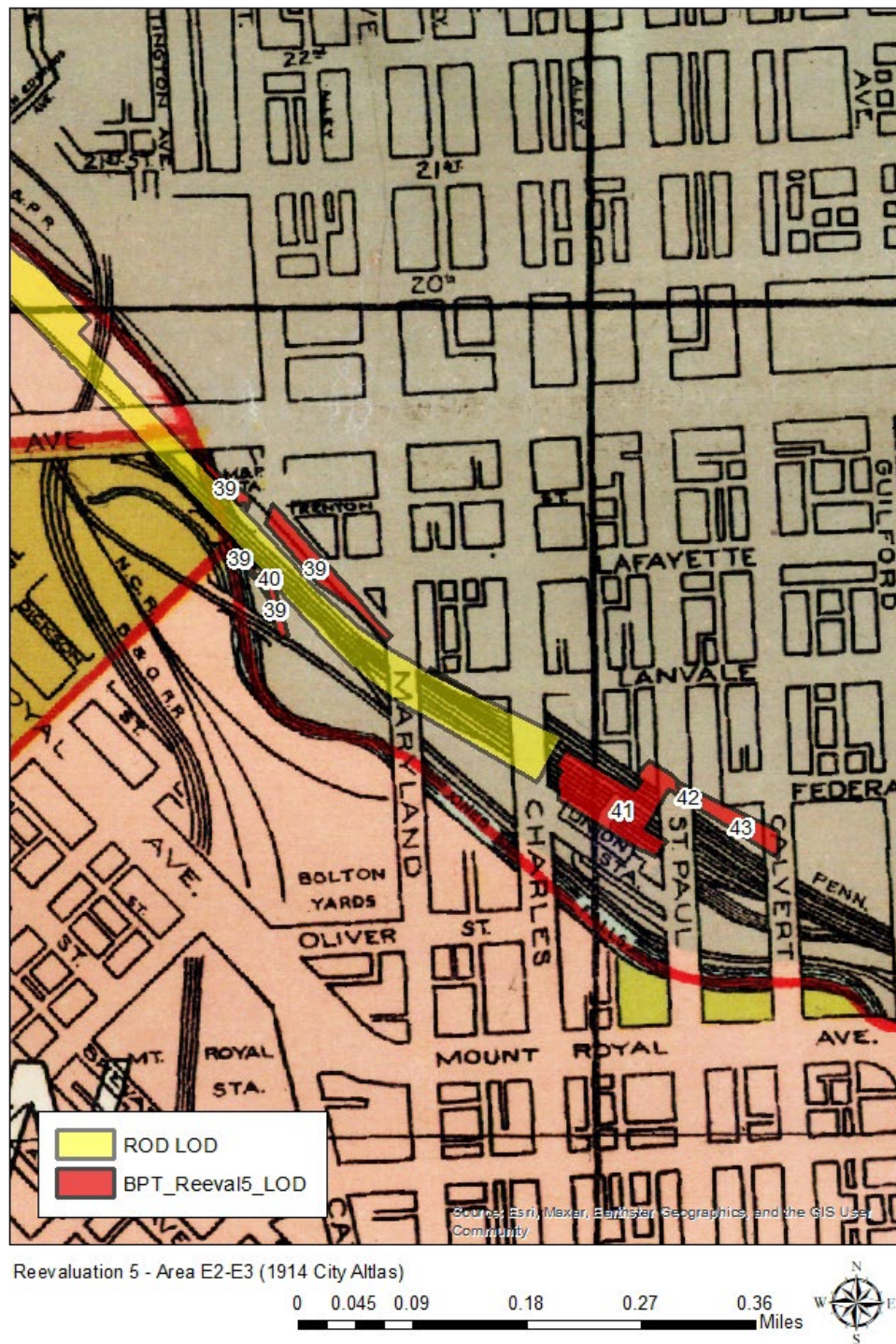


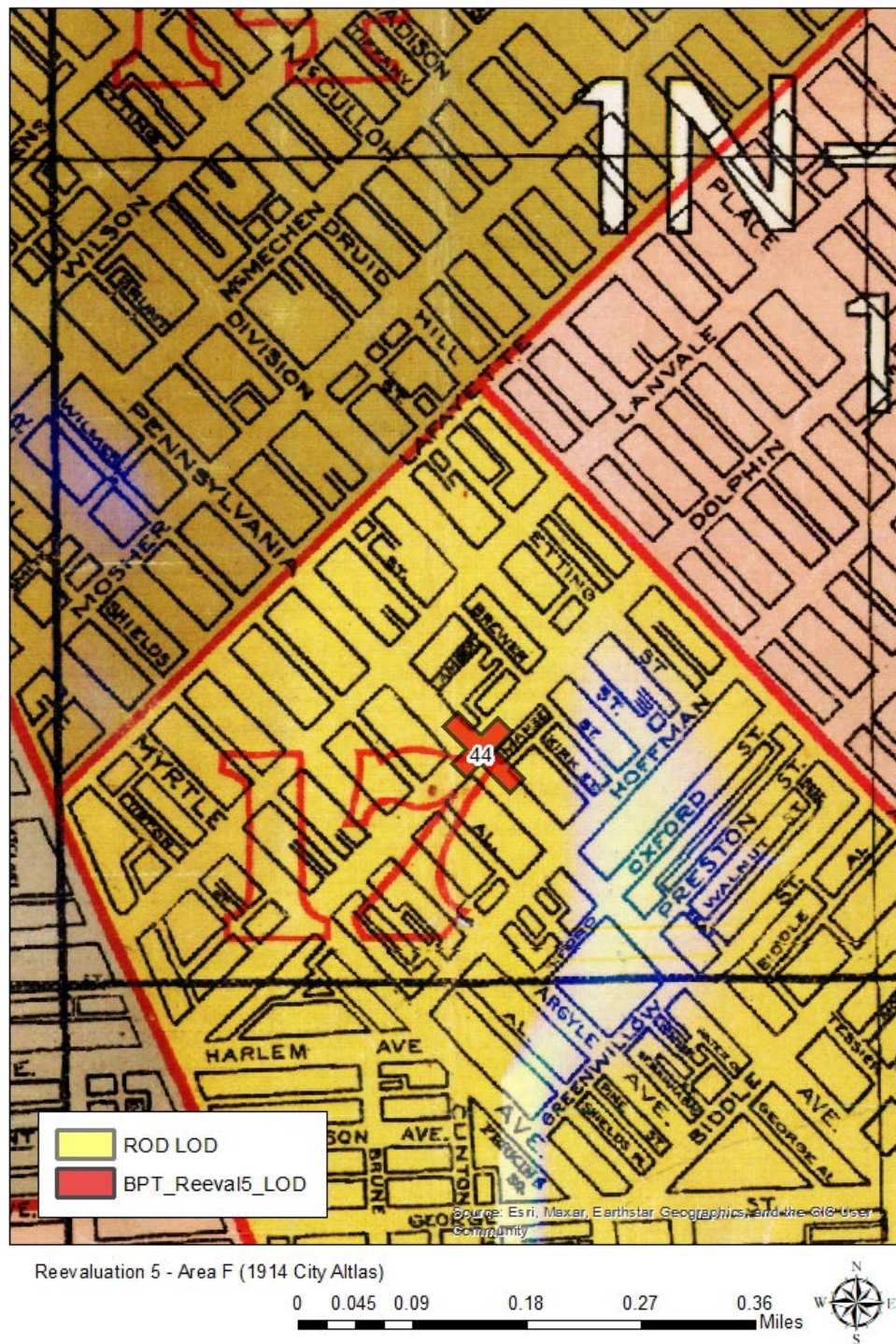












APPENDIX E. LIDAR MAPPING (SHADED RELIEF)

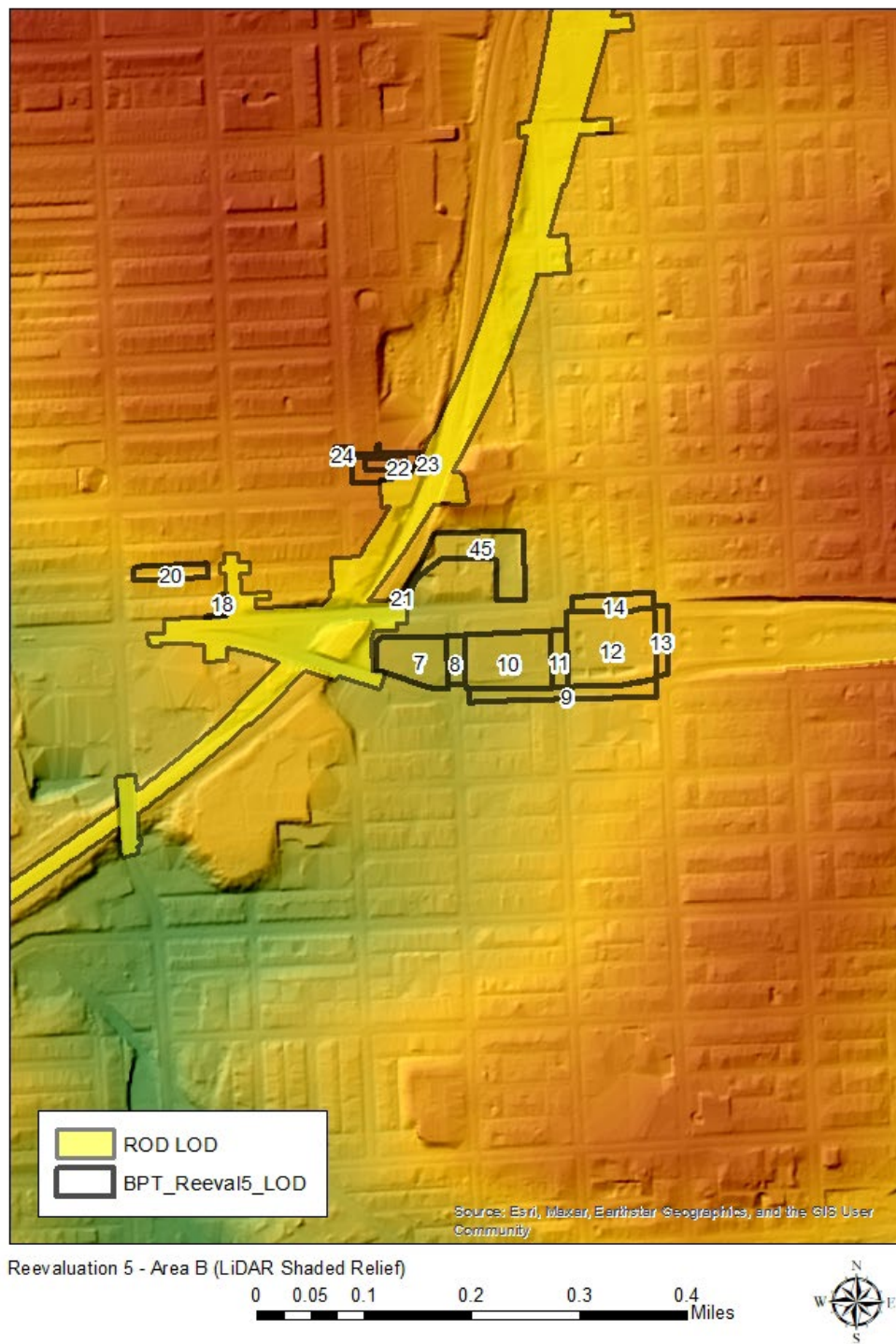


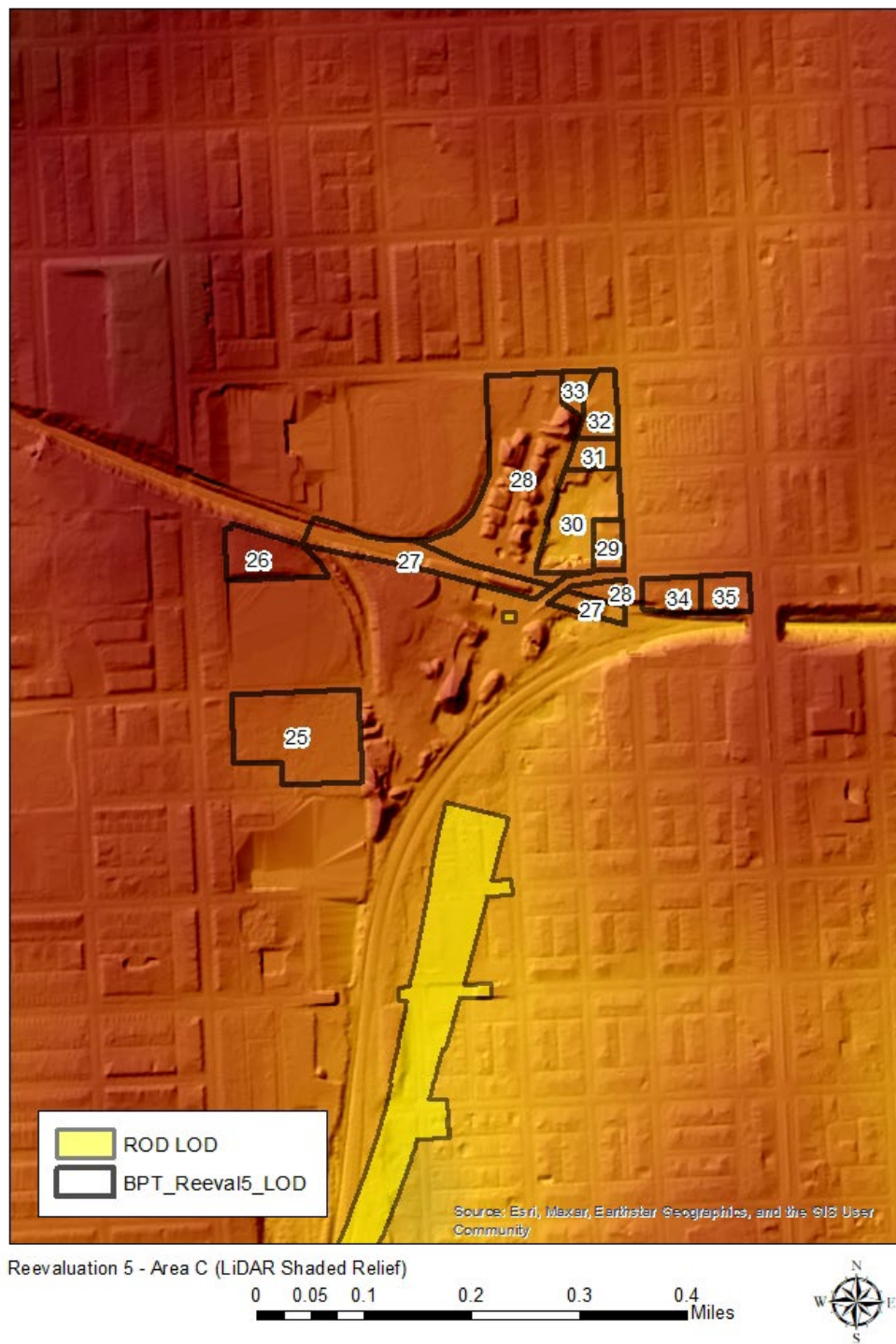
Reevaluation 5 - Area A1 (LiDAR Shaded Relief)

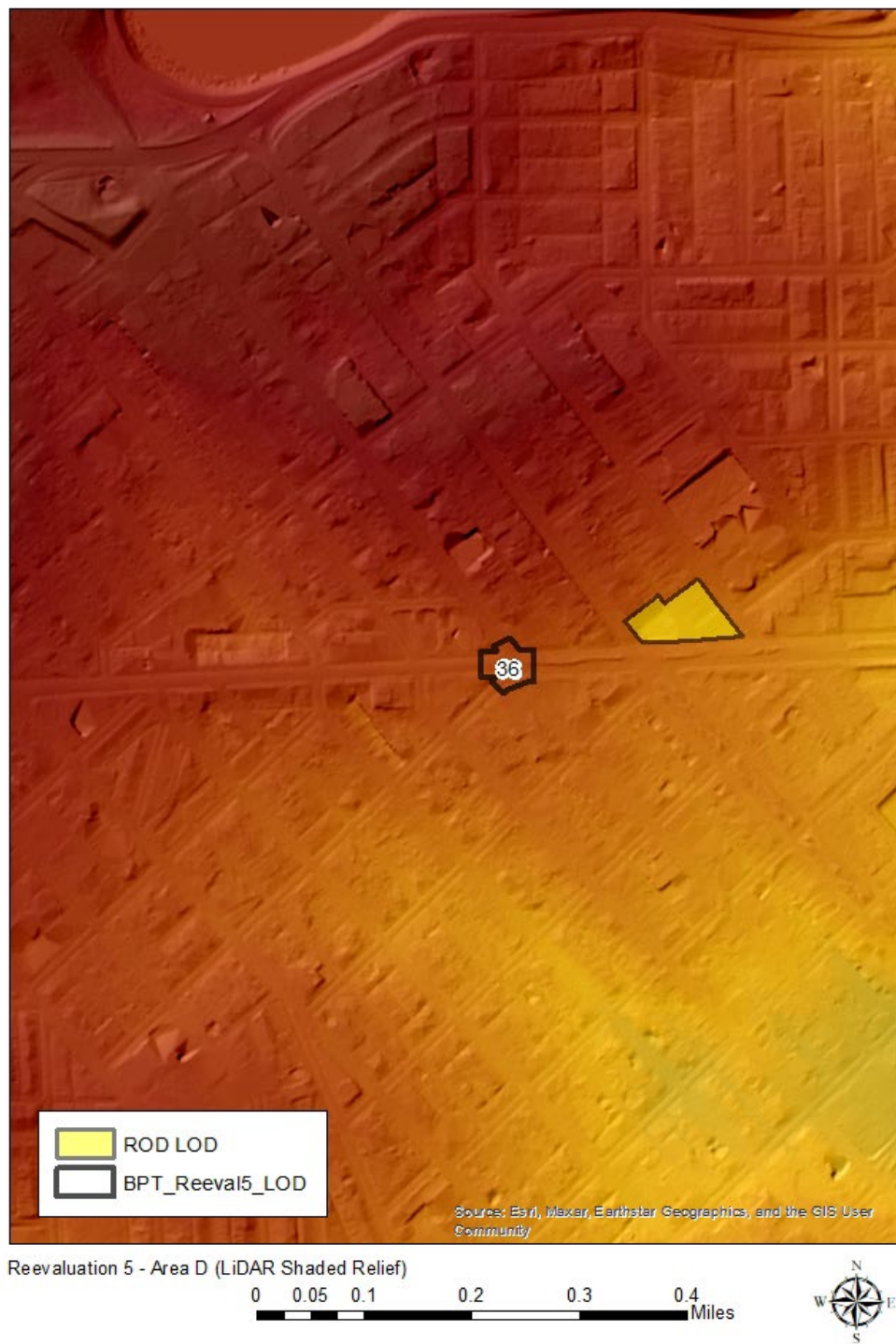
0 0.05 0.1 0.2 0.3 0.4 Miles

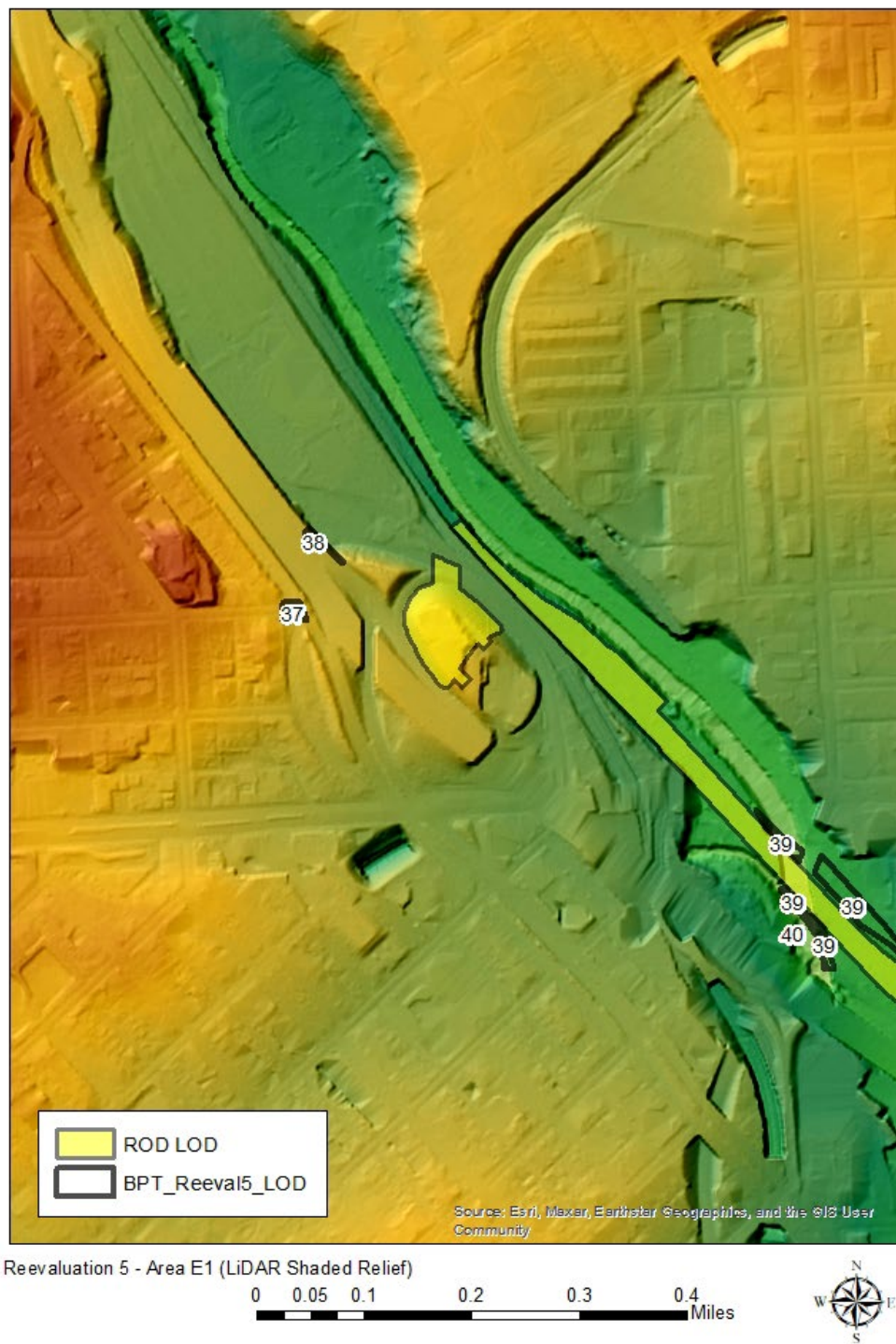




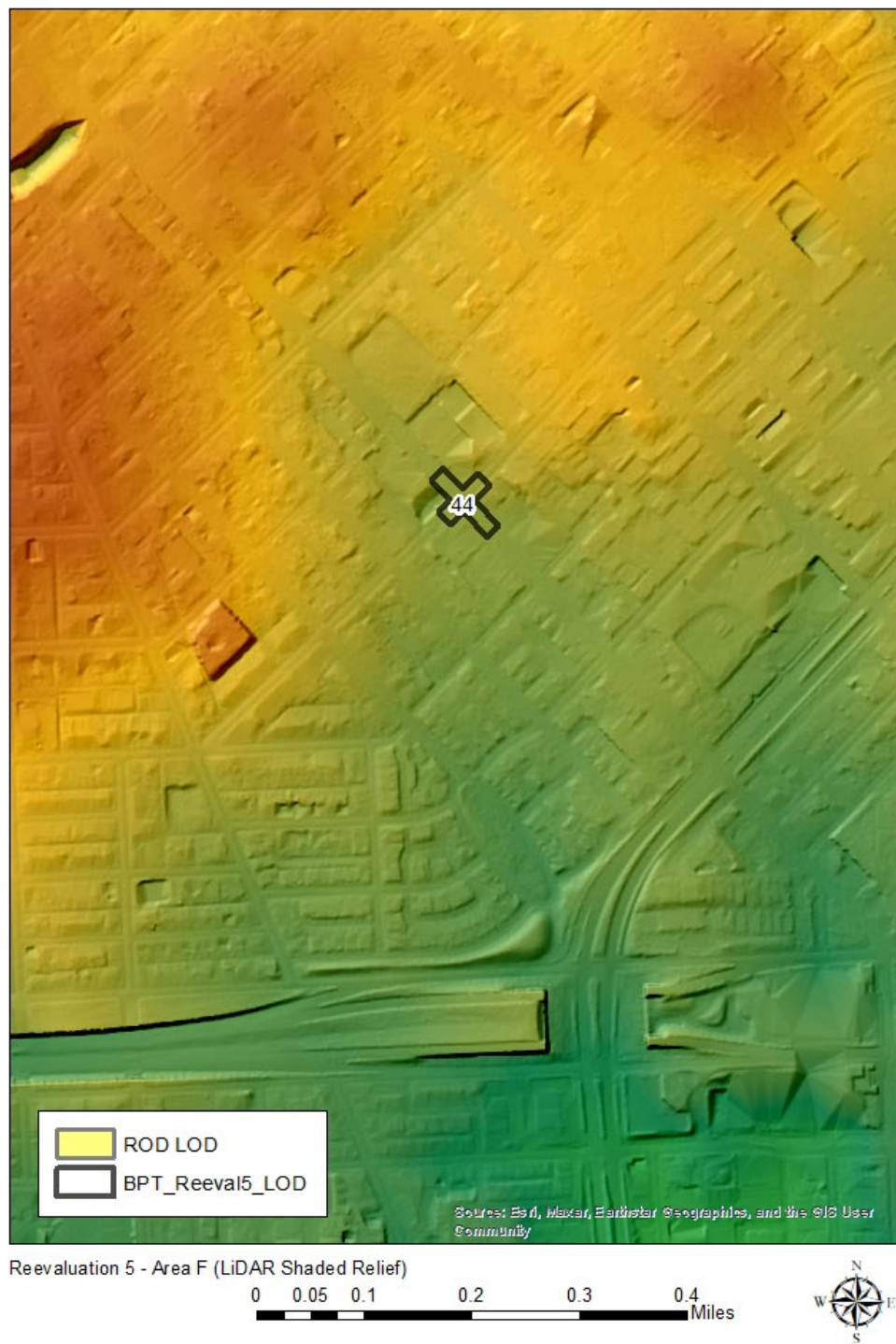




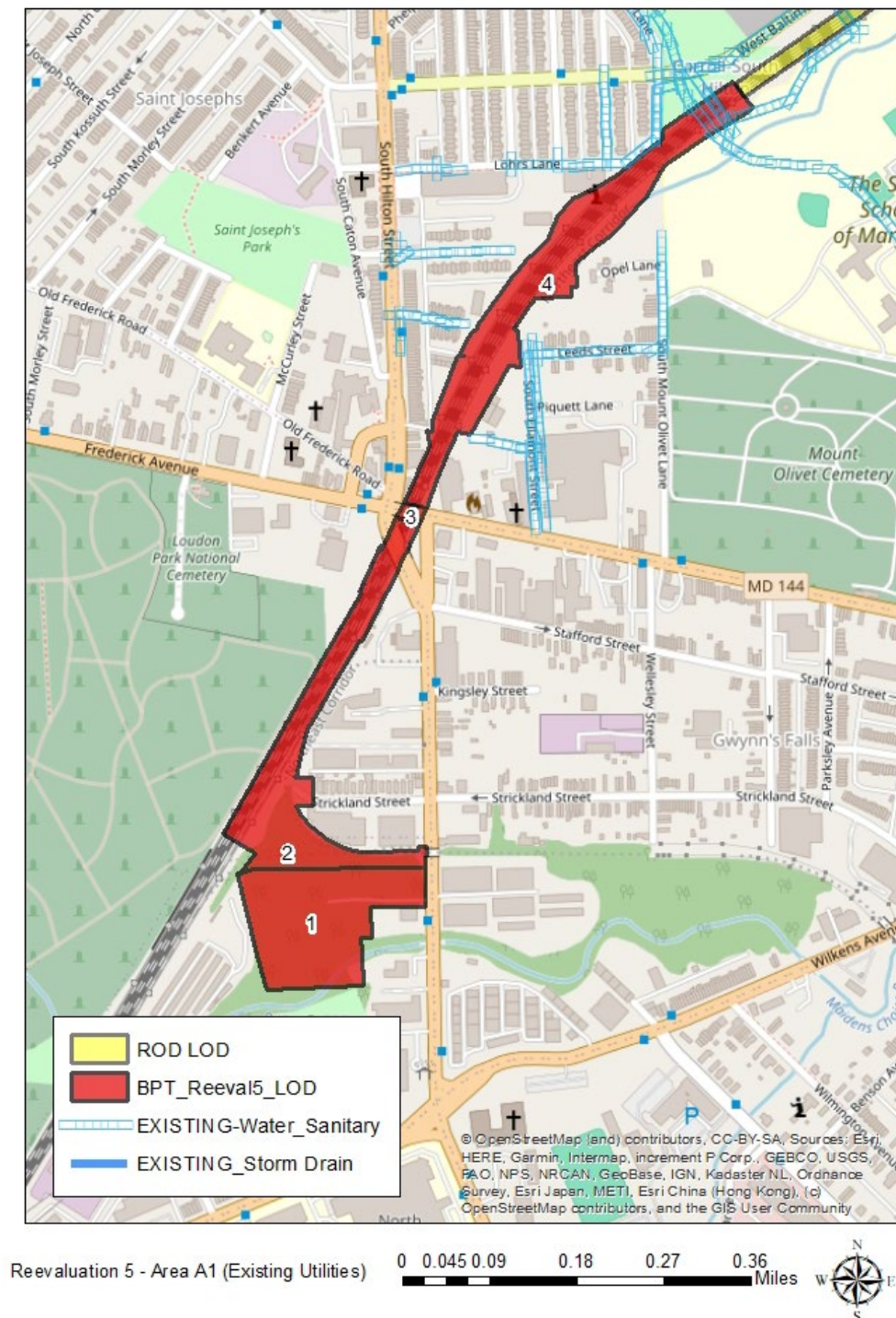




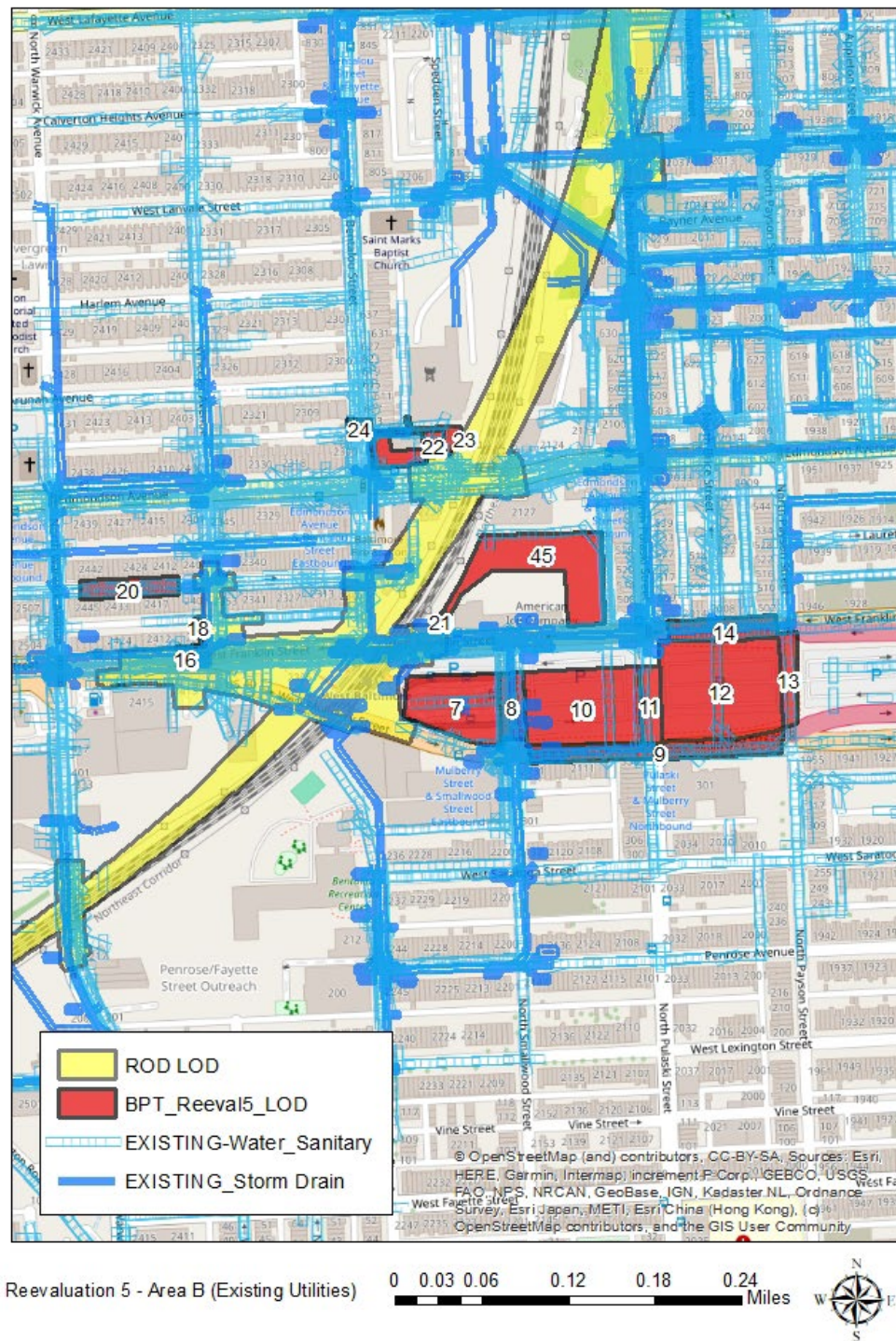


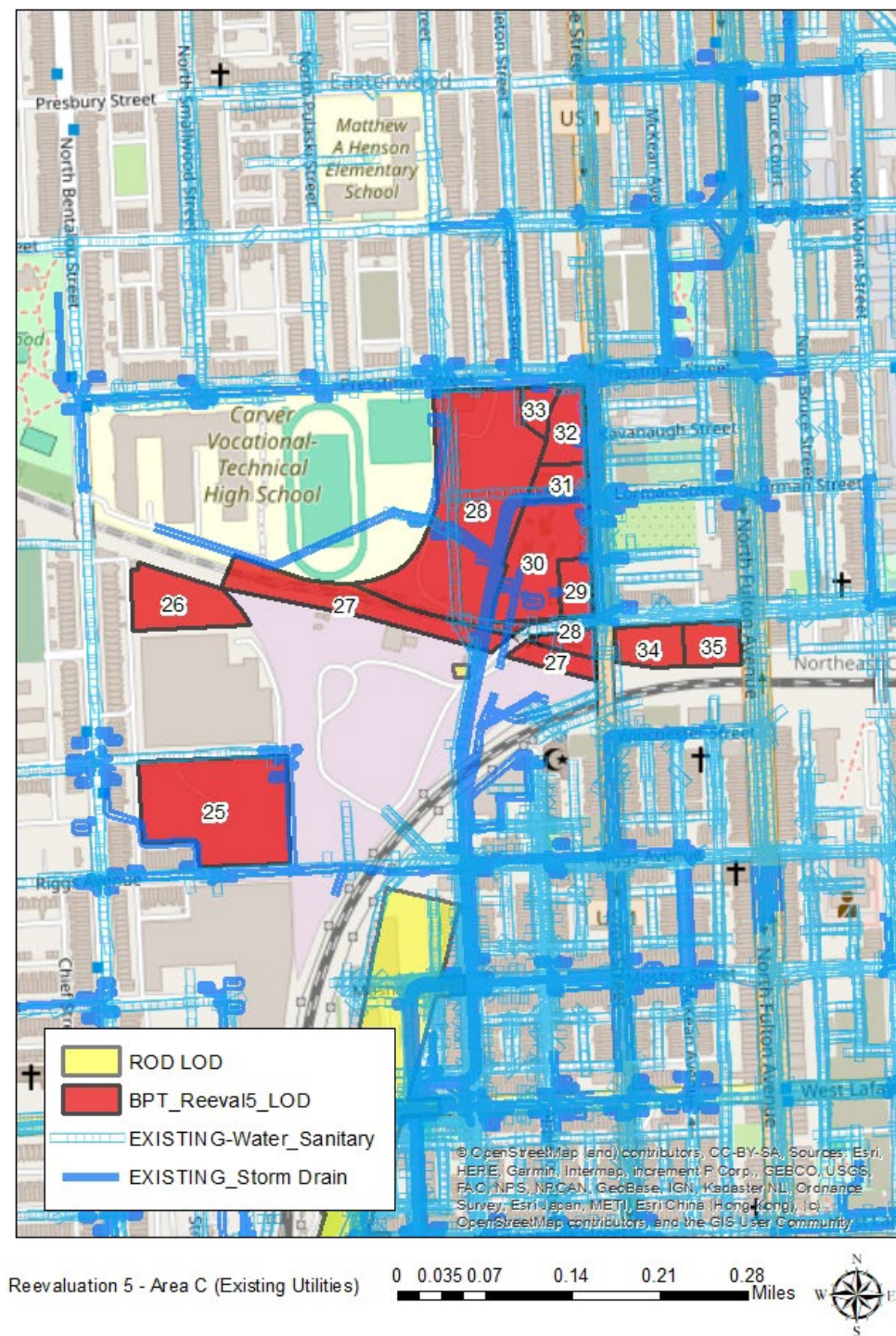


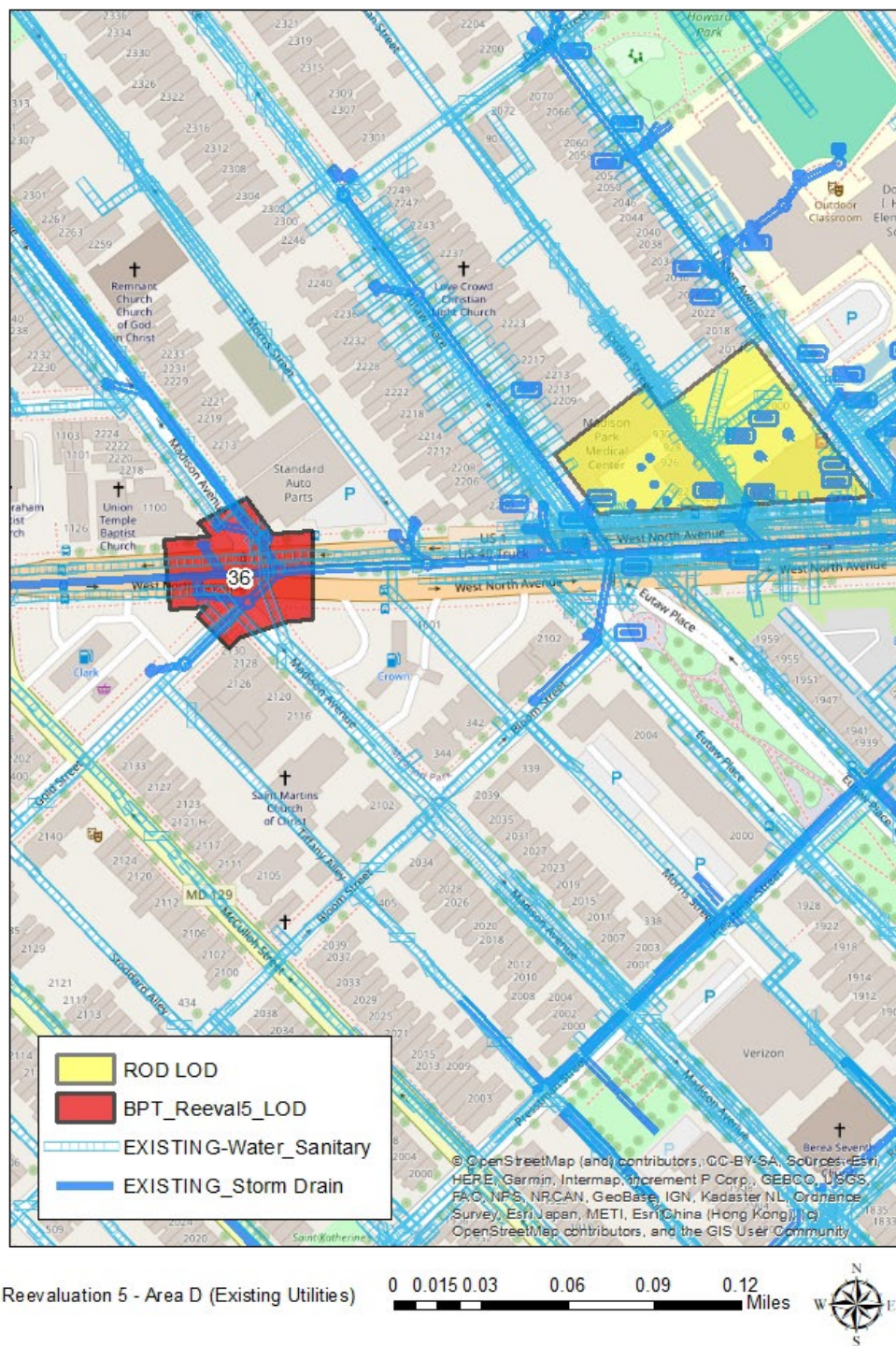
APPENDIX F. EXISTING UTILITIES MAPPING



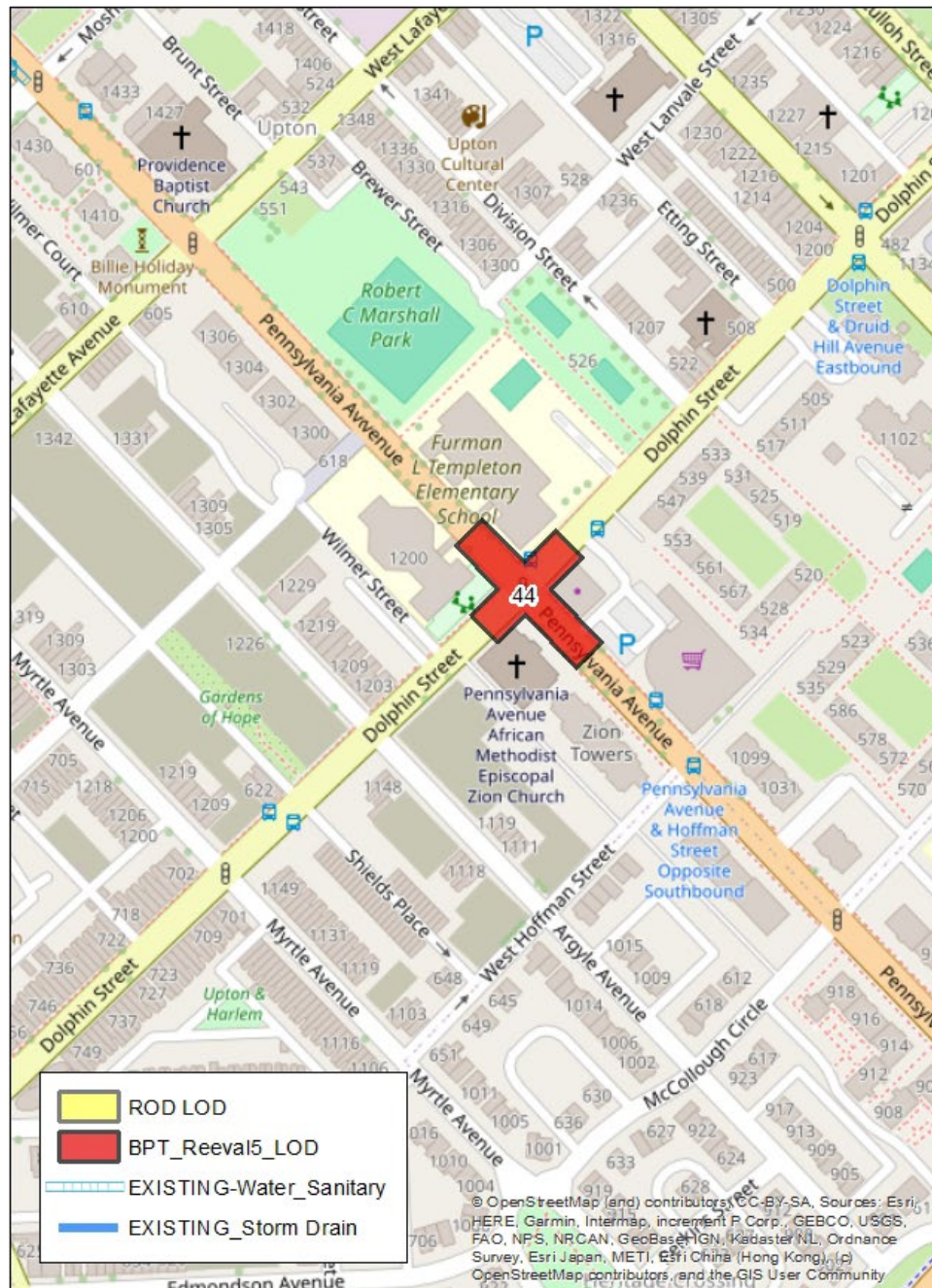






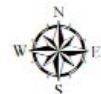






Reevaluation 5 - Area E (Existing Utilities)

0 0.0175 0.035 0.07 0.105 0.14 Miles



wsp