B&P Tunnel Replacement Program

North Warwick Avenue Bridge Replacement Project
Historic Properties Construction Protection Plan

01/12/2023

Note:
Specific contact information will be provided prior to construction.

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1.0 Introduction

1.1 Baltimore & Potomac (B&P) Tunnel Replacement Program

The North Warwick Avenue Bridge Replacement Project (see Figure 1) is a component of the B&P Tunnel Replacement Program (Program). In order to improve rail service and reliability on the Northeast Corridor (NEC), the Federal Railroad Administration (FRA) has funded engineering and environmental studies for the National Railroad Passenger Corporation's (Amtrak) proposed replacement of the Baltimore & Potomac (B&P) Tunnel. Opened in 1873, the B&P Tunnel is one of the oldest structures on the NEC and has become a major bottleneck of rail traffic due to its tight curvature and need for frequent repairs of its structural degradation. The 1.4-mile-long tunnel, located between Baltimore Penn Station and the West Baltimore Maryland Area Regional Commuter (MARC) Station, provides service to Amtrak, Maryland's MARC passenger trains, and Norfolk Southern Railway.

1.2 Purpose of the Historic Properties Construction Protection Plan

This Historic Properties Construction Protection Plan (CPP) was developed and included in all relevant construction and bidding documents to guide Amtrak, including its contractors and subcontractors, on how to conduct demolition and construction activities in a manner that will protect historic properties from construction-related adverse impacts. **This CPP only addresses demolition and construction work associated with the North Warwick Avenue Bridge Replacement Project.**

Historic properties include buildings, structures (including bridges), districts, sites, objects, and archaeological resources that have been listed in or determined eligible for inclusion in the National Register of Historic Places (NRHP). The NRHP is the official federal list of properties recognized for their significance in American history, architecture, archaeology, engineering, and culture. Archaeological resources are the remains of past human activity and are usually below ground. They may be pre-contact—meaning they predate Native American contact with Europeans—or may be historic, meaning they postdate the arrival of Europeans.

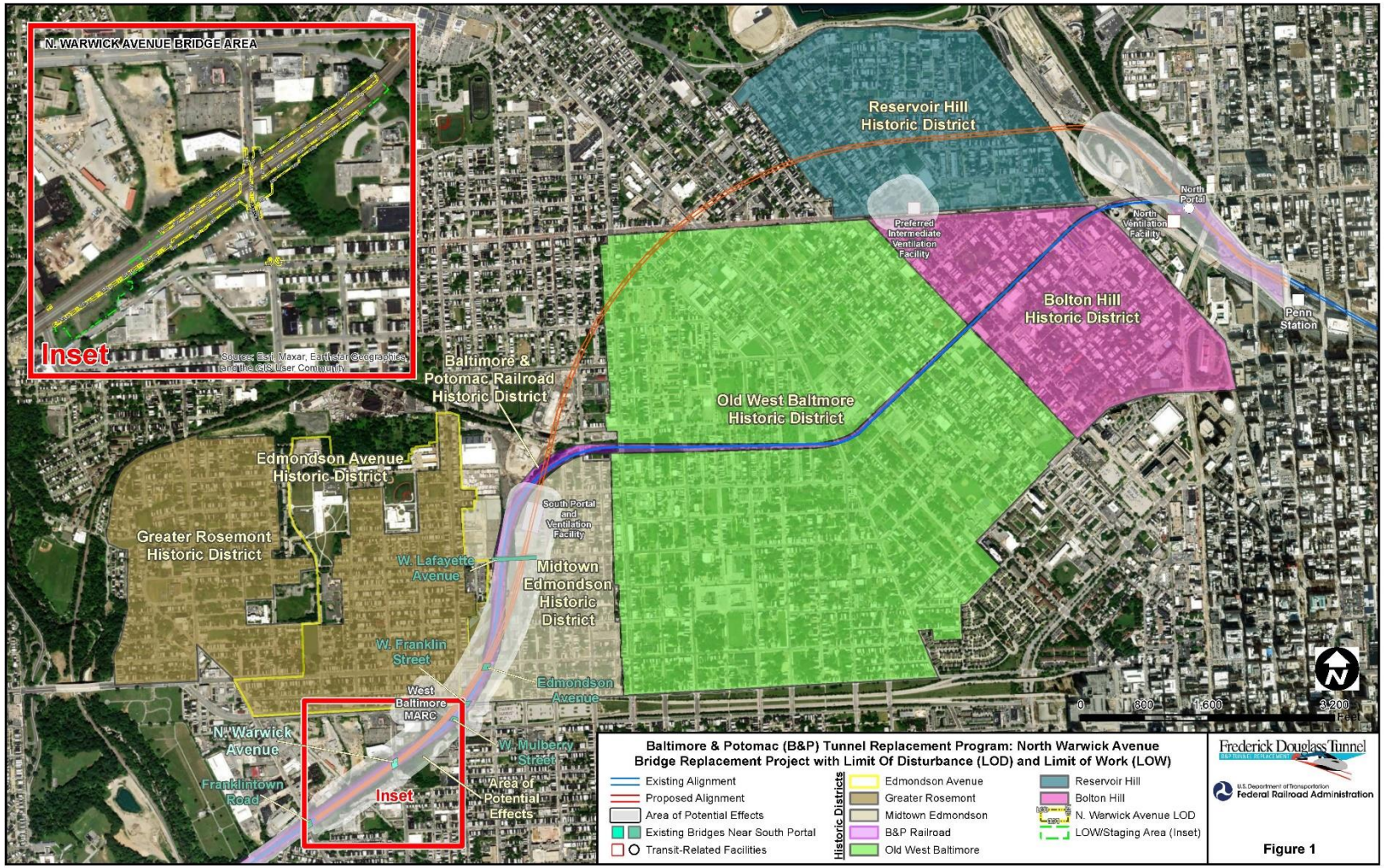

Figure 1: Program Corridor Overview and Location of the North Warwick Avenue Bridge.

For the North Warwick Avenue Bridge Replacement Project, which is part of the B&P Tunnel Replacement Program, protecting historic properties includes:

- Protection of the built environment surrounding the demolition and construction site, including buildings and structures. Section 3 of this document provides an explanation of the historic buildings and structures in the area of the North Warwick Avenue Bridge Replacement Project.
- Protection of potential archaeological resources that may be located within the demolition and construction site. Section 4 of this document provides an evaluation of the likelihood of the North Warwick Avenue Bridge Replacement Project site to contain archaeological resources and explains the steps necessary based on the site evaluation. In addition, Appendix A contains the *Baltimore and Potomac (B&P) Tunnel Replacement Program Unanticipated Discoveries Plan (UDP)* to explain the necessary steps to be taken if an archaeological resource is discovered during the demolition or construction activities.

1.3 Cultural Resources Requirements

Federal Law

Section 106 of the **National Historic Preservation Act** (NHPA) of 1966, as amended (Section 106), requires that projects that receive federal funding or require federal permits, licenses or other federal approvals, incorporate the necessary planning to avoid, minimize, or mitigate a project's adverse effects to historic properties. In accordance with Section 106, FRA determined that the Program would have adverse effects on historic properties. Because of this, FRA implemented a legally binding Programmatic Agreement (PA) for this Program, entitled *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 Project, Baltimore City, Maryland,* which includes a detailed compliance process for mitigating the Program's impacts to historic properties. Stipulation V.D. of the PA requires development and implementation of this CPP.

It is important that all contractors are aware of the locations of all historic properties because unanticipated impacts may result from demolition and construction activities near historic properties. Historic properties' settings, which may include landscape features and hardscape, often contribute to their significance, and should also be considered when making decisions about demolition, construction, and protection methods. Amtrak is committed to avoiding adverse effects whenever possible, and the Program team's proactive planning and diligence is essential to protecting irreplaceable historic properties.

All demolition and construction work requires compliance with the procedures in this protection plan; Amtrak and its Project Engineer will monitor work sites to ensure that procedures included in this plan are followed.

The Project Engineer is Amtrak's designated representative to monitor and manage Contractor and Sub-contractor efforts, provide guidance, and approve submittals.

Liability for damage to any historic property will be the sole responsibility of the Contractor. Failure of Contractor or its employees to comply may result in removal from the Program and/or imposition of fines or financial damages.

Contractors are encouraged to contact Amtrak's Project Engineer to discuss concerns or questions about this manual's content by calling XX at XXX-XXX-XXXX.

At no time and under no conditions should the Contractor provide information or comment to the media regarding any Program-related activities. All media inquiries should be referred to:
Amtrak Media Relations
202-906-3860
MediaRelations@amtrak.com

2.0 Contractor's Responsibilities

2.1 Before Starting Work

1. Review the existing conditions plans for any historic properties noted on the plans.
2. Prepare directions for loaded trucks that comply with street and speed limitations and that avoid driving through historic districts to the extent possible, with the exception of major roadways where such traffic is appropriate.
3. Review Section 4 to learn the likelihood that the construction site contains archaeological resources, and to determine the appropriate treatment measures.
4. Implement protective measures to avoid soil compaction and subsurface disturbance of exposed soil that may contain subsurface historic resources.
5. Obtain prior approval from the Amtrak Project Engineer for all areas selected for staging, demolition, or storing equipment that are not already pre-approved on the existing conditions plan.
6. Confirm with Amtrak the hotline telephone number that the public can use to report concerns about a threat or damage to historic properties that are not planned for demolition. The Contractor must post the hotline number and its purpose in a prominent, publicly visible location at the work site. Amtrak will also post the hotline information on the project website. Amtrak will handle any calls into the hotline in accordance with Section 5 of this CPP.
7. Ensure that all persons working on the demolition and construction are aware of the surrounding historic properties and the measures necessary to protect them, as well as the treatment measures to protect archaeological resources.
8. Develop a work plan ("Work Plan") to protect historic properties in close proximity to the demolition site and submit the Work Plan to the Project Engineer for review and approval. The Work Plan must address the provisions for protecting historic buildings and structures that are included in Section 3 of this CPP and the provisions for protecting potential archaeological resources that are included in Section 4, including preventing intrusion into adjacent properties and securing the work site.

2.2 During Work Efforts

1. Perform the demolition of the North Warwick Avenue Bridge and the construction of the new bridge in accordance with the project plans and specifications in order to avoid adversely affecting historic properties.
2. Limit all work to the pre-established Limit of Disturbance (LOD) and Limit of Work (LOW) for the Program.
3. Comply with the Archaeological Treatment Measures in Section 4.2 to avoid potential damage to surface and subsurface archaeological features and artifacts.
4. If subsurface archaeological materials are encountered (as identified in the UDP), follow the procedures defined in the UDP under Section 3.0: 1) Contractor reports

the discovery to the Project Engineer, 2) Project Engineer stops work within 75 feet of the discovery and protects the resource, and 3) Project Engineer reports the location to Amtrak. If human remains are exposed, follow the notification procedures in Section 4.0 of the UDP. The UDP is provided in Appendix A of this Construction Protection Plan.

5. If any damage is done to a historic property other than the subject North Warwick Avenue Bridge, stop all work and follow the procedures in Section 5.0.

3.0 Built Historic Properties

As part of the Program planning, Amtrak established the Program's Area of Potential Effects (APE), which is the area that may be affected by the proposed demolition and construction activities and subsequent facility operation. Effects can include demolition or physical alterations/damage caused by the Program. Other effects include noise, vibration, dust, rodent migration, and drainage issues, among others, resulting from the Program's construction or operation.

Within the Program's APE, Amtrak identified the following historic districts (see Figure 1) that are within the general vicinity of the North Warwick Avenue Bridge Replacement Project site:

- Northeast Corridor, which has been identified as the Baltimore & Potomac (B&P) / Philadelphia, Baltimore, and Washington Railroad Historic District (#B-5164)
- Midtown Edmondson Historic District (also listed as the Monroe Riggs Historic District #B-5118)
- Edmondson Avenue Historic District (#B-5187)
- Greater Rosemont Historic District (#B-5112)

The National Park Service's National Register Office defines a historic district as a geographic area that "possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development."[1] The Contractor should assume that individual features within a historic district, such as buildings, a property's landscaping features, bridges, and a rail line's catenary structures and signal bridges, are historic when working within or in close proximity to a historic district.

3.1 Historic Districts in Close Proximity to the North Warwick Avenue Bridge Replacement Project

The North Warwick Avenue Bridge is located along a historic rail line (see 3.1.1). In addition, there are three primarily residential historic districts in the vicinity of the bridge project (see 3.1.2 – 3.1.4 below and Figure 1 above).

3.1.1 B&P / PHILADELPHIA, BALTIMORE, AND WASHINGTON RAILROAD HISTORIC DISTRICT (#B-5164)

The NEC alignment is located on the rail line that historically developed as the Baltimore & Potomac (B&P) / Philadelphia, Baltimore, and Washington Railroad. The segment of the rail line between Baltimore Penn Station and the Baltimore city/county line has been determined eligible

[1] *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*

for inclusion in the NRHP. The bridge carrying the Northeast Corridor over North Warwick Avenue is contributing to the significance of the historic rail corridor.

3.1.2. MIDTOWN EDMONDSON HISTORIC DISTRICT (#B-5118)

The Midtown Edmondson Historic District (also listed as the Monroe Riggs Historic District), as shown on Figure 1, includes a mix of residential, commercial, and industrial properties on both sides of the NEC from approximately the existing southern portal of the existing B&P Tunnel to West Franklin Street. The historic district includes the neighborhoods of Midtown Edmondson and the western edge of Harlem Park. Approximately 1,500 of the buildings within the historic district are considered historically significant.

3.1.3 EDMONDSON AVENUE HISTORIC DISTRICT (#B-5187)

The Edmondson Avenue Historic District, also shown on Figure 1, includes a mix of residential, commercial, and industrial properties on the west side of the NEC from approximately the existing southern portal of the B&P Tunnel to West Franklin Street.

3.1.4 GREATER ROSEMONT HISTORIC DISTRICT (#B-5112)

The Greater Rosemont Historic District, also shown on Figure 1, includes a mix of residential, commercial, and industrial properties on the west side of the NEC from approximately the existing southern portal of the B&P Tunnel to West Franklin Street.

3.2 How to Protect Built Historic Properties: General Protection Measures

1. Perform the demolition of the existing North Warwick Avenue Bridge and the construction of the new bridge in accordance with the project plans and specifications in order to avoid adversely affecting historic properties, including any other components of the Baltimore & Potomac (B&P) / Philadelphia, Baltimore, and Washington Railroad Historic District other than the North Warwick Avenue Bridge.
2. Limit all work to the pre-established LOD and LOW for the Program.

To the extent possible, avoid routing heavily loaded trucks through the Midtown Edmondson, Edmondson Avenue, and Greater Rosemont Historic Districts shown on Figure 1, with the exception of major roadways where such traffic is appropriate. Ensure compliance with street and speed limitations.

4.0 Archaeological Historic Properties

The Section 106 process also requires the identification of archaeological historic properties and the implementation of steps to protect them from adverse effects, including damage or destruction either from construction activities or from compaction of soil. For the North Warwick Avenue Bridge Replacement Project, this includes: 1) consideration of the subsurface archaeological resources in the vicinity of the North Warwick Avenue Bridge Replacement Project area that might be impacted by the proposed construction activities (Section 4.1), and 2) general protection measures to protect archaeological historic properties to the greatest extent possible (Section 4.2).

4.1 Archaeological Sensitivity

The North Warwick Avenue Bridge Replacement Project area was assessed by qualified archaeologists to identify its potential to contain archaeological resources and to estimate the horizontal and vertical extent of previous ground disturbance. Historic cartographic information and recent geotechnical investigations were reviewed to determine the archaeological sensitivity of the North Warwick Avenue Bridge Replacement Project area.

This location is situated within the Eastern Piedmont physiographic region and Maryland Archaeological Research Unit 14. The upland setting of this area would have presented an attractive locale for Native American occupation with access to the resources associated with the Gwynns Falls portion of the Middle Branch of the Patapsco River. However, despite the attractiveness of the setting, the potential for the presence of pre-contact period archaeological resources would be considered low. As noted in the Phase IA archaeological study for the Program, because of the later intensive historic development along the historic railroad corridor, most of the areas within the study corridor are considered to have a low probability for containing any intact pre-contact archaeological resources.

Early historic development in the industrial area south of Edmondson Avenue consisted primarily of saw and grist mills along the Gwynns Falls; however, this watermill-driven industrial development was largely located directly adjacent to the power source of the waterway. The area further east from the falls remained largely undeveloped until the start of the 20th century, following the extension of the Pennsylvania Railroad through Baltimore. In 1902, the Pennsylvania Railroad purchased the Baltimore & Potomac Railroad and merged it with the Philadelphia, Wilmington, and Baltimore Railroad to form the Philadelphia, Baltimore, and Washington Railroad.

The construction of the railroad spurred a period of expanded commercial development in the area, as access to railroad shipping made the area attractive to light manufacturing and warehousing businesses. The development of the Franklin-Mulberry/Edmondson Avenue corridor provided a direct connection to Maryland Route 40 south of the city, adding a crucial trucking connection that further stimulated the growth and expansion of the area. Unlike the more densely developed rowhouse residential areas north of Edmondson Avenue and southwest of the railroad, this

commercial/industrial district was characterized by low density light industrial manufacturing and industrial warehouse buildings, dating from ca. 1920-1960.

The North Warwick Avenue Bridge was one of the later bridges constructed to carry the railroad corridor in this area. The bridges at Franklintown and Calverton Roads were completed by 1894, with the grade separated crossing at North Warwick Avenue completed by 1932. At this location, the railroad bridge crosses above the roadbed, and is supported by masonry abutments containing retained fill. Historic mapping and aerial photographs confirm that earlier historic structures, which might have resulted in significant historic archaeological deposits, did not occur in the area in which the bridge was constructed.

Additionally, the land surfaces in the vicinity of the bridge area would have been altered by the construction/expansion of the railroad corridor and the additional ground disturbance to the roadbed and adjacent areas from the construction of the grade-separated underpass and bridge abutments. As a result, it is not anticipated that the proposed reconstruction of the North Warwick Avenue Bridge, including ancillary soil disturbance from geotechnical micropiles or other fixtures, has the potential to affect intact or significant pre-contact or historic period archaeological features or deposits. The archaeological sensitivity for the North Warwick Avenue Bridge Replacement Project area is considered very low.

4.2 Archaeological Treatment Measures

This **s**ection pertains to the protection of potential archaeological historic properties near the construction activity. The level of protection for archaeological resources reflects the North Warwick Avenue Bridge Replacement Project area's potential to contain significant intact archaeological resources. Section 4.2 contains general protection measures that clearly describe what protections are needed to prevent damage to surface and subsurface archaeological features and artifacts, if present.

General Protection Measures

No heavy equipment, either wheeled or tracked vehicles, will be operated from/on **exposed ground surfaces** in the project area or on adjacent parcels with **exposed ground surfaces**, to the greatest extent possible, unless stipulated on the project plans.

No construction debris associated with the reconstruction activities will be stockpiled on **exposed ground surfaces** in the project area or on adjacent parcels with **exposed ground surfaces,** unless stipulated on the project plans.

No staging of construction equipment (such as dumpsters) or supplies will occur on **exposed ground surfaces** in the project area or on adjacent parcels with **exposed ground surfaces,** unless stipulated on the project plans.

No lunch breaks, smoke breaks, or associated personal refuse debris will be allowed in areas with **exposed ground surfaces** or on adjacent parcels with **exposed ground surfaces,** unless stipulated on the project plans.

No privately owned vehicles (POVs) or construction company vehicles will be parked on **exposed ground surfaces** or on adjacent parcels with **exposed ground surfaces,** unless stipulated on the project plans.

As the North Warwick Avenue Bridge Replacement Project area has been determined by project archaeologists to have very low archaeological sensitivity, no intact subsurface materials are expected to be encountered. If, however, archaeological materials are encountered, identification and notification protocols in the UDP (Appendix A) will be followed.

5.0 Procedures if Historic Property is Threatened or Damaged

The Contractor is responsible for avoiding alterations to any historic properties other than the subject North Warwick Avenue Bridge. Alterations include, but are not limited to, damaging historic rail structures, removing historic building materials, or altering significant landscape features.

Repairing damage caused to a historic property is time consuming and costly; it may result in a construction delay. **Workers may be removed from work related to the B&P Tunnel Replacement Program for carelessness.**

If damage to a historic property occurs:

1. The Contractor shall **immediately** cease all construction work in the vicinity and notify the Amtrak Project Engineer.
2. The Project Engineer will determine if the damaged property's structural integrity is in question. If the Project Engineer determines that a building or structure is in immediate danger of additional damage or collapse, the Project Engineer will, in consultation with Amtrak, instruct the Contractor as to the necessary steps to secure and stabilize the property to avoid additional damage and injury to others. If needed, Amtrak will notify the Baltimore City Police Department as quickly as possible. The Contractor must only take the steps they are instructed to by the Project Engineer.
3. In accordance with PA Stipulation X, "Emergency Situations," Amtrak will inform the PA signatories and other consulting parties of the emergency and consult with them to develop, as appropriate, a treatment plan to address the emergency.
4. The Project Engineer will provide the Contractor with the approved treatment plan. Upon written notice from Amtrak, the Contractor may begin making the repairs in accordance with the approved plan.
5. A professional Architect or Architectural Historian who meets the National Park Service Professional Qualifications Standards will inspect all repairs to ensure that the work complies with *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (available online at https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf). Work that does not meet these standards or is not compatible with the historic character of the property will need to be executed again in an appropriate manner.

Immediate rescue and salvage operations conducted to preserve life or property are exempt from these provisions.

The public will be able to notify Amtrak of a potential threat or damage to historic properties not subject to demolition. Once a call is received at the hotline, the hotline operator will provide the information to the Project Engineer, who will tell the Contractor to cease work in the vicinity, if it is warranted. Amtrak and the Contractor will then investigate the issue and implement the above

provisions of Section 5, Steps #2-#5. Amtrak will log incoming calls to the hotline and document resolution of concerns.

The Contractor will be financially responsible for repairs deemed necessary through consultation per the Program's PA.

How do I Report Historic Property Concerns?

In order to ensure that historic properties are protected during Program construction, Amtrak has established a line of responsibility on the construction site. This line of responsibility will reduce confusion, clarify accountability, and streamline any coordination and approvals that may be needed from Amtrak. To report an issue or concern to Amtrak, call XX at XXX-XXX-XXXX.

When in doubt, always contact your supervisor before proceeding!

Baltimore and Potomac (B&P) Tunnel Replacement Program

Unanticipated Discoveries Plan

September 16, 2022

Appendix A

Note:
Specific contact information will be provided prior to construction.

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1.0 Introduction

1.1 Baltimore & Potomac (B&P) Tunnel Replacement Program

To improve rail service and reliability on the Northeast Corridor (NEC), the Federal Railroad Administration (FRA) has funded engineering and environmental studies related to National Railroad Passenger Corporation's (Amtrak) proposed replacement of the Baltimore & Potomac (B&P) Tunnel. Opened in 1873, the B&P Tunnel is one of the oldest structures on the NEC and is approaching the end of its useful service life. The 1.4-mile-long tunnel, located between Baltimore Penn Station and the West Baltimore Maryland Area Regional Commuter (MARC) Station, provides service to Amtrak and Maryland's MARC Commuter Rail passenger trains and Norfolk Southern Railway freight trains.

The proposed B&P Tunnel Replacement Program ("Program") extends four miles along the NEC from Baltimore Penn Station to the Gwynns Falls Bridge along a new arcing alignment north of the present B&P Tunnel (Figure 1). The Program includes two new high-capacity tubes for electrified passenger trains, new roadway and railroad bridges, new rail systems and track, a new ADA-accessible West Baltimore MARC station, portal and vent plant construction, modifications to the overhead power and signal structures, and utilities and other site work.

1.2 Purpose of the Unanticipated Discoveries Plan

This Unanticipated Discoveries Plan (UDP) is to be included in all relevant construction and bidding documents for contractor/team use in the event of encountering unanticipated discoveries of subsurface/buried archaeological or historic architectural resources. This plan includes identification of archaeological resources, chains of contact (i.e., notification protocols) for different types of resources, a protocol for media inquiries, and other relevant provisions.

Significant archaeological resources can sometimes be unexpectedly discovered in areas that may have already been subjected to Phase I archaeological survey or have been determined not to contain archaeological resources due to extensive ground disturbance. A Phase IA Archaeological Assessment was completed for the Program in 2015 and concluded that although the Area of Potential Effects (APE) in the proposed study corridor has been subjected to prior soil disturbance, there is still the potential for both Native American and historic-era archaeological sites. Based on the results of these prior investigations, it is believed that the subsurface integrity of most sites that may be in the Program APE is probably poor; it is also believed that a rare preserved archaeological site could be encountered. Given current information on existing archaeological site distributions, the Program APE has a higher potential for containing historic-era sites than Native American sites. An unanticipated discovery is defined as any indications of the presence of archaeological materials, including Native American and historic-era artifacts, animal bone, and/or human remains, and includes, but is not limited to, archaeological resources identified in Section 2.0.

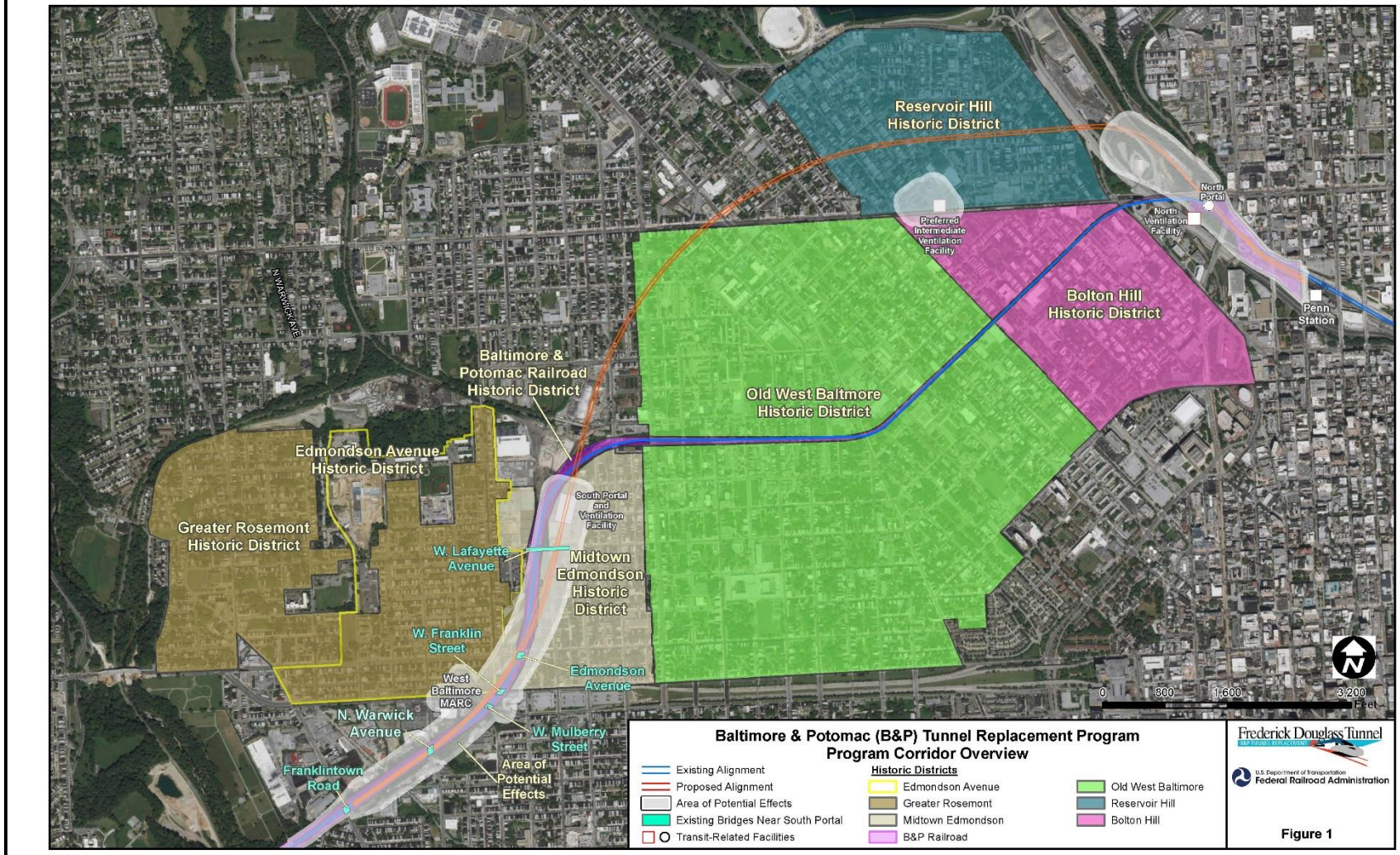

Figure 1: Program Corridor Overview

Historic properties include buildings, structures (including bridges), districts, sites, objects, and archaeological resources that have been listed in or determined eligible for inclusion in the National Register of Historic Places (NRHP). The NRHP is the official federal list of properties recognized for their significance in American history, architecture, archaeology, engineering, and culture. Archaeological resources are the remains of past human activity and are usually below ground. They may be Native American resources that pre-date contact with European settlers or historic resources postdating the arrival of Europeans.

1.3 Cultural Resources Requirements

Federal Law

Section 106 of the **National Historic Preservation Act** of 1966 (now 54 U.S.C. 306108), as amended (Section 106), requires that projects such as the B&P Tunnel Replacement Program that receive federal funding or require federal permits, licenses, or other approvals incorporate the necessary planning to avoid, minimize, or mitigate a project's adverse effects to historic properties. In accordance with Section 106, Amtrak and the FRA determined that the Program would have adverse effects on historic properties. Because of the adverse effects, FRA implemented a legally binding Programmatic Agreement (PA) for the Program entitled the *Programmatic Agreement Among the Federal Railroad Administration, Maryland State Historic Preservation Officer, National Railroad Passenger Corporation, and Preservation Maryland Regarding the Baltimore & Potomac Tunnel, Baltimore City, Maryland* that includes a detailed compliance process for mitigating the Program's adverse effects to historic properties. Stipulation VIII.A of the PA requires development and implementation of this UDP.

State Law

Legal protection and procedural guidelines for historic burials (Discussed in more detail in Section 4.0) is provided by the following state and city/county legislation:

- Maryland Code, Criminal Law Title 10, Sections 10-401 to 10-404 (2010) (i.e. the Maryland Burial Law: Crimes Relating to Human Remains);
- Maryland Code, Business Regulation Title 5, Section 101 (2016);
- Maryland Code, Health-General Title 4, Section 4-215 (2015); and
- Annotated Code of Maryland: Real Property, Title 14, Section 14-121.1

2.0 Archaeological Resources Identification

Federal law requires that federal agencies, their contractors, and their sub-contractors avoid, minimize, or mitigate a Program's adverse effect to underground or subsurface archaeological resources. Whereas every effort will be/was made to identify the potential for subsurface archaeological resources through the Supplemental Phase IA Survey and the Phase IB Survey, deeply buried archaeological deposits could still be encountered during the Program's demolition and construction activities.

Archaeological Resources

The process of identifying and recording archaeological resources has been incorporated into each stage of the planning for the Program and has included consideration to encounter a number of possible archaeological resources. For each area to be impacted by construction-related soil disturbance, Program archaeologists try to answer the following questions.

Are known archaeological resources present in this area?

Previously identified archaeological sites are resources uncovered during prior investigations and whose locations are known and mapped. Based on completed research and evaluation, there are no known pre-contact or historic period archaeological resources that should be impacted by the current project. However, as noted earlier, the Program APE has a higher potential for containing historic-era sites than Native American sites.

Could unrecorded archaeological resources be present in this area?

There is the potential that unrecorded archaeological resources may be present within the limits of disturbance (LOD). During the early stages of Program planning, specific areas of archaeological sensitivity were identified within the LOD based on historic land use (for historic period sites) and environmental settings (for pre-contact sites).

Could we find anything important during construction?

People have lived in the Maryland area for over 13,000 years and archaeological evidence has been found indicating human occupation within the Baltimore area on sites that date from 11,000 years ago through the twentieth century. Archaeologists look for evidence of pre-contact occupations such as shell middens, stone hearth features, stone tools, pottery sherds, and burials, as well as historic occupations that may include the remains of intact building foundations, usually brick or other masonry, and buried yard and alley surfaces that might contain concentrations of non-construction material such as broken pottery, glass, animal bone, oyster shell, coal and or coal ash. Prior to the twentieth century, many neighborhoods lacked indoor plumbing, and homes relied on privies, wells, and cisterns. Many of these features take the form of brick-lined shafts that extended deep into the ground; the lower section of these shafts may still be intact even if the associated buildings have been demolished. Often these shaft features served as a trash or disposal receptacle during the course of use and may contain hundreds or thousands of artifacts associated with one family from one time period. These items are particularly important despite them having

been considered trash in the past. These artifacts provide archaeologists with important information about past people and their lives.

Given the crowded conditions and the use of flammable building materials, urban sites often contain evidence of historic buildings destroyed by fire. As building fires often preserved remains of personal material contained in the consumed building, these kinds of archaeological remains also can be very significant in reconstructing the lives of its inhabitants. Evidence of burned historic buildings include significant amounts of burned building debris (brick, mortar, melted glass and metal), as well as concentrations of charcoal, ash and burned wood. Artifacts recovered from these urban contexts provide archaeologists with important information about past people and their lives, including socially or economically marginalized groups that may not have had their personal histories recorded.

Contractors and employees should be aware of the following and immediately contact a supervisor, who will contact Amtrak, if any of the following are discovered **(Note: the photographs provided only represent examples of some potential archaeological features, and that actual encountered features may differ in appearance)**.

2.1 Native American Archaeological Features

Native American archaeological sites usually lack structural features and can be more difficult to identify. However, they may contain concentrations of oyster shells, animal bone, stone flakes, unglazed pottery, charcoal, or fire altered stones/soils. Dense concentrations of these materials are referred to as "middens", the domestic trash deposits of Native American groups.

Shell Midden Layers or Trash Pit Features: The midden deposits may be uncovered as a dense horizontal layer, like a thick oyster shell midden deposit (Figure 2) or may be contained within a pit feature that was dug into the ground and may be exposed in the wall of a trench (Figure 3). Whether in a horizontal layer or pit, these features can often contain animal bones, broke/burned rocks and charcoal. Scattered oyster shells are commonly part of historic trash deposits as well, but dense concentrations of crushed or burned shell require careful examination by an archaeologist.

Figure 2: Intact Shell Midden Layer

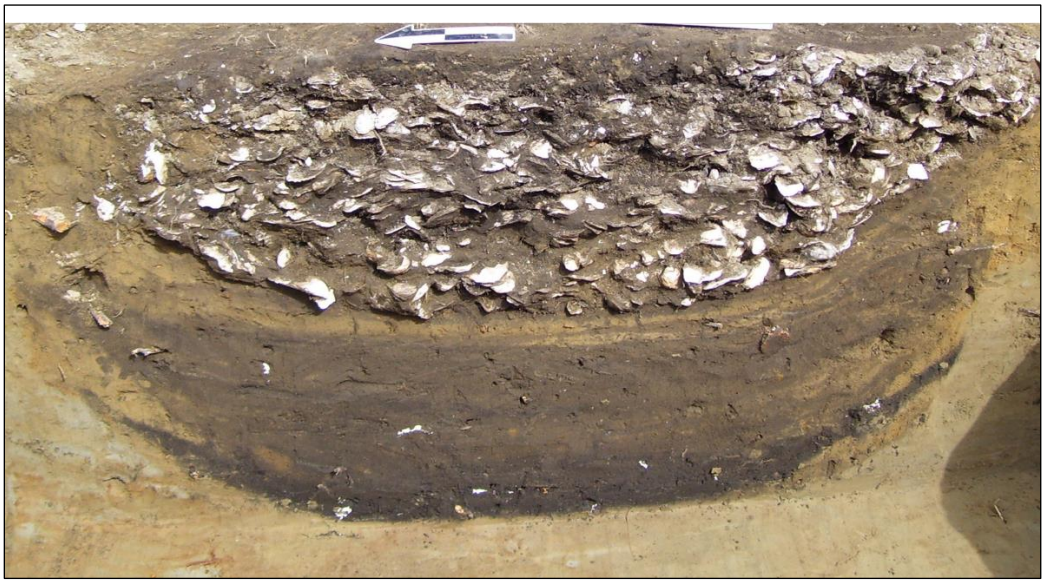

Figure 3: Intact Pit Feature with Shell Deposit

Stone Hearth Features: Another feature commonly encountered in Maryland is dense concentrations of small to medium-sized rocks formed into a cooking hearth. These hearth features often contain concentrations of dark charcoal, and the rocks and surrounding soil may show dark or reddish staining. Hearths can be exposed in a horizontal excavation (Figure 4) or identified within a pit feature (like Figure 3).

Figure 4: Intact Hearth Feature

Pre-contact Artifacts: While large, dense concentration of artifacts in discrete features may be encountered, it is also possible that light scatters or individual pre-contact period artifacts could be uncovered. The majority of artifacts uncovered on these sites are the result of flaked-stone tool manufacture. These include the waste stone flakes produced during the tool making process (Figure 5 - top), and well as finished or damaged stone tools like spearpoints or hafted knives (Figure 5 - bottom right). Pre-contact pottery sherds, formed of low-fired, un-glazed clay with simple surface marking may also be found (Figure 5 - below left).

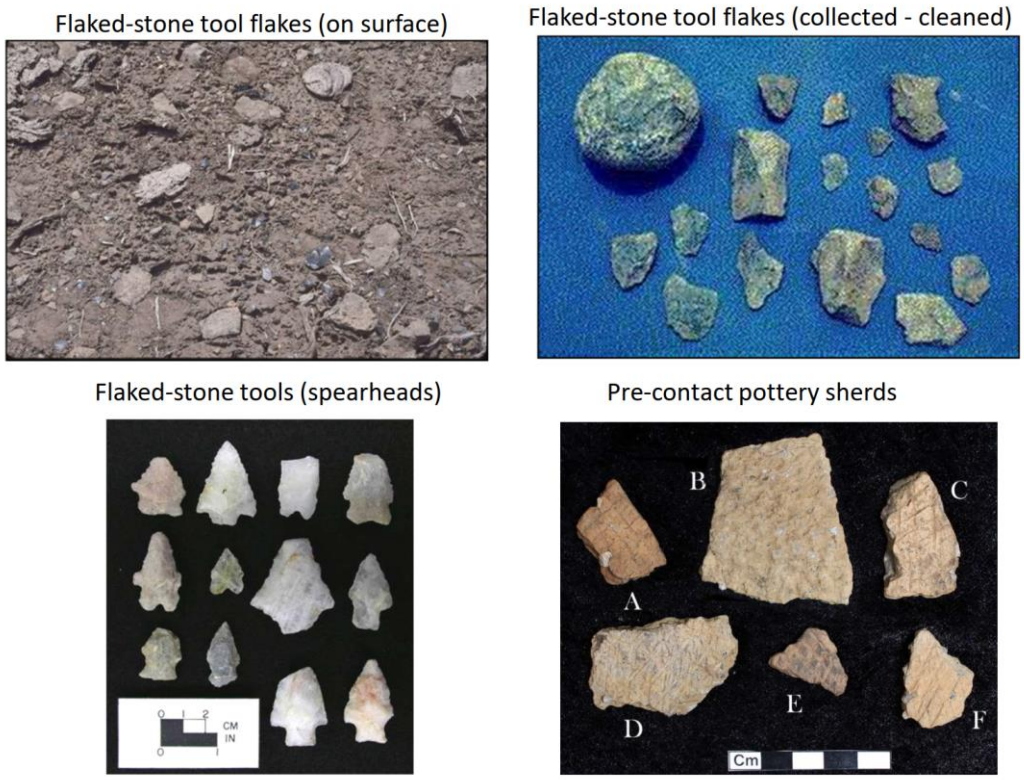

Figure 5: Pre-contact Artifact Examples

Burials and Human Remains: The possibility of encountering intact pre-contact period Native American burials of human remains in Baltimore City is very low. However, given the sensitivity in the treatment of any human remains and special consideration of the need to consult existing ancestral Native American tribes, any human remains encountered must be treated with the utmost care and dignity. Pre-contact period Native American burials can be identified by an oval shaped area of darker soil and the concentrated bones of one or more individuals. These burials will not exhibit the remains of a five-sided wooden coffin as illustrated in the historic example shown in Figure 16. Specific procedures for the treatment of burials and human remains are detailed in Section 3.0 below.

2.2 Historic Archaeological Features

Intact Streetcar/Trolley/Railroad Tracks: Many of the roads included in the LOD were part of earlier streetcar, trolley, or railroad networks. As a result, it is possible that intact metal rails and other features will be encountered directly below the current street paving (Figure 6).

Figure 6: Intact Streetcar/Trolley Tracks, as exposed in street.

Intact Stone Paving: Prior to the introduction of asphalt and concrete road paving, many streets were paved with cut stone blocks or rounded cobble stones (Figures 7 and 8). These earlier road surfaces may also contain the remains of early water and sewer systems consisting of clay or wooden pipes.

Figure 7: Intact Stone Block Paving, as exposed in excavation.

Figure 8: Intact Masonry Foundation and Cobble Paving, as exposed in excavation.

Intact Building Foundations: Although most eighteenth- and nineteenth-century buildings sat on brick foundations, it is possible that some stone foundations may be encountered (Figures 9 and 10). These foundation walls may surround buried basements and could contain important historic deposits.

Figure 9: Intact Brick Foundation, as exposed in excavation.

Shaft Features: Prior to the twentieth century, many neighborhoods lacked indoor plumbing, and homes relied on privies, wells, and cisterns. Many of these features take the form of brick-lined shafts that extended deep into the ground. When exposed, it is possible to identify the top of these features by a distinct circle or oval of bricks (Figure 10). These features were dry-laid to promote drainage and are characterized by a distinctive pattern of over-lapping bricks (Figure 11). Less frequently, these shaft features may have been formed by buried wooden boxes of fastened planks or by wooden barrels stacked on top of each other. These shafts were often filled with household debris before being sealed and abandoned, and may contain hundreds or thousands of objects from a specific time period. These are considered to be particularly important archaeological features.

THESE SHAFTS OFTEN CONTAIN INTACT BOTTLES THAT MIGHT BE OF SPECIAL INTEREST TO COLLECTORS. HOWEVER, REMOVAL OF ANY BOTTLES OR OTHER OBJECTS BY CONSTRUCTION PERSONNEL IS ILLEGAL AND <u>STRICTLY FORBIDDEN.</u>

Figure 10: Intact Brick Privy Shaft, Top of Privy Shaft, as exposed in excavation.

Figure 11: Intact Brick Privy Shaft, Side of Privy Shaft, after excavation.

Concentrations of Historic Material: Excavation may uncover scattered early architectural or construction debris such as broken brick, slate, window glass, mortar and plaster as well as broken fragments of pottery, bottles, shell or bone. This material usually occurs in disturbed or fill soils

and is usually of limited importance, as determined by a qualified archaeologist. Excavations may, however, encounter more densely concentrated historic material that may be the remains of wooden shaft features that have rotted away or concentrated refuse piles that could contain large amounts of important material (Figure 12).

Figure 12: Concentration of Historic Material (privy deposit).

Historic Bottle or Pottery Concentrations: While dense concentrations of historic domestic debris can be contained in lined shaft features, they can also occur as both dense surface or subsurface trash layers that could be encountered during either horizontal or vertical excavations. While a few broken glass bottles and jars are a common part of present-day street and yard debris, in the past, large quantities of these items were often deposited in the same location, forming dense "bottle dumps" (Figure 13). Historic bottle concentrations are defined here as five (5) or more intact bottles. These deposits may contain important information about a property or neighborhood, particularly if buried, and need to be carefully investigated. As noted previously, **THE REMOVAL OF BOTTLES OR ANY OTHER EXCAVATED MATERIAL FROM ANY CONSTRUCTION SITE IS ILLEGAL AND STRICTLY PROHIBITED.**

Figure 13: Historic Surface “Bottle Dump”, intact and broken bottles.

Baltimore City has a long and diverse industrial history as well, and some of the waste materials and byproducts of the city’s factories and manufacturers may also be encountered during excavation. Dense concentrations of debris from pottery kilns, containing piles or layer of broken, damaged and incomplete pottery vessels and kiln items (Figure 14) have been found in a number of places in the city. Dense concentrations of burned or unburned coal, reddish cinders or dark glassy slag material may indicate material associated with a nearby historic industrial plant or smaller manufacturer.

Figure 14: Historic Pottery and Kiln Deposit, as exposed in excavation.

Concentrations of Fire Debris: Remains of burned buildings and other fire debris may be encountered. This material can usually be identified by large amounts of charred wood and blackened brick, as well as melted glass and metal objects (Figure 15).

Figure 15: Concentration of Historic Fire Debris (burned wood).

Human Graves or Skeletal Material: Extreme care must be taken if any human remains are uncovered. There are very important legal procedures that must be followed if human remains of any kind are found. The LOD for the Program does not include any known cemeteries or burial grounds. However, given the sensitivity of any such discoveries, everyone working on construction must be especially careful and diligent. Historic period burials will almost always be enclosed in a wooden coffin with its characteristic four- or five-sided shape (Figure 16). Though the actual wood may have rotted away, the shape may still be visible as a darker stain in the soil. It is unlikely that construction excavation will uncover exposed human skeletons or loose human bones. However, it may be difficult to distinguish human bones from large animal bones. Any concentration of bones, especially those larger than commonly encountered small bones like individual chicken bones, should be immediately noted and reported following the procedure identified below in Section 4.0. Only qualified professionals should make determinations regarding any bones.

Figure 16: Human Remains, Intact Coffin, as exposed in excavation.

3.0 Notification Procedures for Archaeological Resources Other Than Human Remains

What do we do if we find something?

Identify, Protect and Report Archaeological Resources: In areas of high archaeological sensitivity, Program Archaeologists may be on-site to monitor demolition and construction activities, and identify potential archaeological resources in real time. In many areas, however, archaeologists may not be present during all construction excavation. In those areas, it will be the responsibility of the construction team to bring potential archaeological resources to the attention of construction supervisors who can contact Amtrak in order to have the discovery inspected by a qualified Archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology (36 CFR § 61). Specific archaeological reporting procedures will be provided to each construction crew, but the basic process follows these steps:

1. **Report Discovery:** The Contractor will immediately notify the Project Engineer or other appropriate staff of an unanticipated discovery.
2. **Stop Work and Protect the Resource:** The Project Engineer will direct a *Stop Work* order to the Contractor's site foreman to flag or fence (avoiding additional soils disturbance) off the archaeological discovery location within a 75-foot radius and direct the Contractor to take measures to ensure site security. The Contactor will ensure that any discovery made on a weekend will be protected until all appropriate parties are notified of the discovery. The Contractor will not restart work in the cordoned off area of the discovery until the Project Engineer has granted clearance.
3. **Report Location to Amtrak:** The Project Engineer will report the location and date of the discovery on the program plans and notifies Amtrak.
4. **Archaeologist Assesses Discovery:** Amtrak will arrange for a qualified Archaeologist to make an immediate site visit to determine whether the discovery constitutes an archaeological resource. If the Archaeologist determines no archaeological resource is present, they will prepare and submit a memorandum of the discovery including photographs to the file. Notification to the PA signatories and other consulting parties is not required if no archaeological resource is present.

   If the Archaeologist determines the discovery consists of non-significant archaeological deposits, such as isolated artifacts in non-native fill soils or scattered architectural/construction debris, they will prepare and submit a memorandum of the discovery including photographs to the file. Notification to the PA signatories and other consulting parties will NOT be required, unless recommended by the Archaeologist.

   If the discovery is an archaeological resource, the Archaeologist will assess the type, extent, and importance of the discovery and follow the notification and documentation procedures outlined in Steps 5-8, below. The Contractor will grant the Archaeologist

full access to the required site area and otherwise facilitate the Archaeologist's assessment in the most expeditious manner possible.

5. **Report Location to PA Signatories and Other Consulting Parties:** Amtrak will notify the PA signatories and other consulting parties and FRA will notify the federally recognized Native American tribes, if appropriate, within 48 hours of the discovery. As needed, FRA will also identify and invite other consulting parties to confer on the identified unanticipated discovery.

6. **Coordination with the PA Signatories and Other Consulting Parties:** If discovery constitutes an archaeological resource, Amtrak will prepare and submit a memorandum to FRA for review. The memorandum will include the proposed determination of NRHP eligibility of the discovery, an assessment of project effects on historic properties and any recommended treatment measures, if appropriate.
   Upon FRA's approval, Amtrak will submit the determination of NRHP eligibility, effects assessment, and/or recommended treatment measures document, if appropriate, to the MHT and other consulting parties, as appropriate, for review and comment. If the discovery is associated with Native American prehistory or history, FRA will provide the documentation to federally recognized Native American tribes within five (5) working days for their review with a request for comment. The signatories, other consulting parties, and federally recognized Native American tribes, if participating, will respond with any comments within five (5) working days of receipt.

7. **If the Discovery is Not Significant (Not NRHP Eligible):** If the FRA determines the discovery is not significant after consulting with the PA signatories and other consulting parties, Amtrak will inform the Project Engineer when it is a *Cleared Site* and work in the area may resume.

8. **If the Discovery is Significant (NRHP Eligible):** Amtrak will develop an archaeological site mitigation plan which will be submitted for review to the PA signatories and other consulting parties prior to implementation. Once the site mitigation plan is approved, all necessary archaeological investigations will be completed as quickly as possible. Construction work with the potential to disturb the archaeological resources will not be restarted until Amtrak informs the Project Engineer that it is a *Cleared Site* and work can resume.

4.0 Notification Procedures for Human Remains

It is not anticipated that burials or other human remains will be encountered during demolition or construction of the B&P Tunnel Replacement Program. However, given the legal requirements and cultural sensitivity related to human remains, special care should be taken to identify, protect, and report any human skeletal remains or other large intact bones (i.e., those larger than small bones like individual chicken bones). The procedures outlined below will be followed to immediately bring such discovery to the attention of the appropriate authorities without delay. There are very strict legal requirements related to the disturbance of human remains that must be followed.

If suspected human remains are discovered at any point, all work in the area of the discovery must immediately cease. It is crucial that all human remains (or potential human remains) be treated with the utmost respect and dignity. Any member of the construction team who believes an unanticipated discovery involving potential human skeletal remains has occurred is required to stop work in the immediate vicinity of the discovery. The basic process follows these steps:

1. **Report Discovery:** The Contractor will immediately notify the Project Engineer of an unanticipated discovery that may be human remains or other large intact bones.
2. **Stop Work and Protect the Resource:** The Project Engineer will direct a Stop Work order to the Contractor's site foreman to flag or fence off a 75-foot radius area around the possible human remains and any associated funerary objects without creating new ground disturbance in the vicinity and direct the Contractor to take measures to ensure site security in a manner that minimizes further exposure or damage to the remains from the elements, looting, and/or vandalism. Do not backfill or otherwise place heavy materials on the remains. The Contractor will not restart work in the area of the discovery until the Project Engineer has granted clearance.
3. **Report Location to Amtrak:** The Project Engineer will indicate the location and date of the discovery on the plans and will immediately notify Amtrak.
4. **Archaeologist Assesses Discovery:** Amtrak will arrange for a qualified Archaeologist to make an immediate site visit. The Archaeologist will **visually** assess the intact bones and determine whether the remains are animal (i.e., non-human) or human. The Contractor will grant the Archaeologist full access to the required site area and otherwise facilitate the Archaeologist's assessment in the most expeditious manner possible. **The remains will stay in situ and will not be moved or disturbed in any way in case this is determined to be a crime scene under Step #5a below.**
    a. **If the Remains are Non-Human within an Archaeological Context:** If the remains are determined to be animal (i.e., non-human), the Archaeologist will assess whether they occur in an archaeological context. If the remains are non-

human and are determined to occur within an archaeological context, the procedures outlined in Section 3.0, Steps 5-8 will be followed.

b. **If the Remains are Non-Human and NOT within an Archaeological Context:** If the remains are non-human and the Archaeologist determines that no archaeological resource is present, they will prepare and submit a memorandum of the discovery including photographs to the file. The Archaeologist will immediately advise Amtrak who will inform the Project Engineer that it is a *Cleared Site* and work in the area may resume.

c. **If the Remains are Human:** If the Archaeologist determines that the remains are human, Amtrak will immediately notify the Baltimore City Police Department to determine if the discovery is subject to a criminal investigation by law enforcement. Amtrak will also notify FRA and the other PA Signatories of the discovery within 24 hours.

5. **Law Enforcement Assesses Discovery as Potential Crime Scene:** Local law enforcement and, if necessary, a representative of the medical examiner's office will inspect the human remains to determine whether the site constitutes a crime scene.

   a. **If the Discovery is a Crime Scene:** If local law enforcement and a representative of the medical examiner's office declare the discovery as a criminal matter, the Archaeologist will have no further involvement and the decision to declare it a cleared site for construction will be made by the appropriate legal authorities. Amtrak will inform the Project Engineer when it is a *Cleared Site* and work in the area may resume.

   b. **If the Discovery is NOT a Crime Scene:** If the find is determined not to be a criminal matter, the Archaeologist will develop a research design/treatment plan which will be presented to Amtrak and FRA for review and consultation with MHT and other involved agencies. In the event the human remains encountered could be of Native American origin, whether pre-contact or historic, FRA will immediately notify the appropriate federally recognized Native American tribes and Maryland Commission on Indian Affairs (MCIA), and consult with them and the MHT to determine the treatment plan for the Native American human remains and any associated funerary objects that are present.

6. **Research Design/Treatment Plan:** Specific elements of the research design/treatment plan to be applied by the Archaeologist in the case of the unanticipated discovery of human remains include:

   - Consult with the next of kin or descendant community.

- Conduct careful removal of human remains and associated artifacts in a sensitive and respectful manner and as expeditiously as possible without causing further damage to the remains.
- Complete appropriate regulatory and legal documentation of analytical studies in a respectful manner and in keeping with the requests from the next of kin or descendant community.
- Identify an appropriate reinterment location and establish a protocol for reinterment with the next of kin or descendant community.

7. **Resume Construction Activities:** After the completion of the careful removal of human remains and associated artifacts by the archaeological team and prior to the initiation of an analytical studies and reinterment, the archaeologist will notify Amtrak. Amtrak will inform the Project Engineer that it is a *Cleared Site* and work in the area may resume.

5.0 Protocol for Media Inquiries

At no time and under no conditions should any team members (i.e., the Contractor, Subcontractors, Trades, the archaeologist, etc.) provide information or comment to the media regarding any Program-related activities. No media access will be granted to any archaeological location and no media photography will be permitted. All media inquiries should be referred to Amtrak Media Relations, which can be reached by phone at 202-906-3860, or by email at MediaRelations@amtrak.com.

In addition, the location and character of any uncovered archaeological resources is sensitive and protected information, and no mention or images or such remains will be included in any messages or posts to any social media platform or application.

How do I Report Historic Property Concerns?

In order to ensure that historic properties are protected during Program construction, Amtrak has established a line of responsibility on the construction site. This line of responsibility will reduce confusion, clarify accountability, and streamline any coordination and approvals that may be needed from Amtrak. To report an issue or concern to Amtrak, call [Number to be added].

When in doubt, always contact your supervisor before proceeding!