Addendum Phase IB Archaeological Identification Survey Negative Survey Form

I-80 Reconstruction Project Monroe County, Pennsylvania

ER# 2013-8131-089

Prepared for:



Engineering District 5-0 1002 Hamilton Street Allentown, PA 18101

and



1700 Market Street, Suite 1600 Philadelphia, PA 19103

Prepared by:



5 Capital Drive, Suite 400 Harrisburg, Pennsylvania 17110

September 2018

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Engineering District 5-0 1002 Hamilton Street Allentown, PA 18101

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1700 Market Street, Suite 1600 Philadelphia, PA 19103

Prepared by:



Allison Brewer, MA Amanda Rasmussen, MA 5 Capital Drive, Suite 400 Harrisburg, Pennsylvania 17110

September 2018

Negative Survey Form

(This form may be used if the Phase I guidelines have been followed and no cultural resources have been identified.)

1. Project Identification:

ER Number 2013-8131-089

Project Name &/or Agency Tracking #: Addendum Phase IB Archaeological Survey for the SR 0080-17M,

Interstate 80 (I-80) Reconstruction Project, MPMS# 76357

Agency: FHWA Applicant: PennDOT District 5-0

Preparers Name and affiliation: Allison Brewer, MA, RPA: McCormick Taylor, Inc.

Date Prepared: 06/25/2018

Project Area County/Municipality (list all)

County	Municipality
Monroe County	Stroud Township
	Stroudsburg Borough

2. Project Setting: (check all that apply)

\square	urban/suburban;	\square	rural
IXI.	urban/suburban:		rurai

□ upland; □ floodplain/terrace (□ active; □ stable terrace)

7.5" USGS Quadrangle(s) Name (list all):

Name	Date
Stroudsburg	2000

Physiographic Zone(s)(list All. Use DCNR Map 13 compiled by W.D. Sevon. Fourth Edition. 2000.)

IJ	/slographic zone(s)(list Ali. Use DCNR Map 13 complied by W.D. Sevon, Fourth Edition, 2000.).
	Physiographic Zone
	Blue Mountain Section of the Ridge and Valley Province

Project Area Drainage(s), (list all) (Sub-basin and Watershed can be obtained from CRGIS):

Sub-basin	Watershed	Major Stream	Minor Stream
(1) Upper Delaware River	E	Delaware River	Brodhead Creek

3. Basic Field Conditions:

(Text fields will expand as needed. Please be complete)

Area of APE / Project Area in hectares: 6.87 Hectares tested: 1.59

General Description of APE / Project Area:

In 2014, McCormick Taylor, Inc. (MT) developed a project-specific GIS-based archaeological predictive model for the I-80 Reconstruction Project (Brewer *et al.* 2014; concurred upon by the PA SHPO October 3, 2014). From 2015 to 2017, MT conducted a Phase IB/II Archaeological Identification and Evaluation Survey for the I-80 Reconstruction Project (Brewer *et al.* 2017). The current Area of Potential Effects (APE) has been revised and expanded to include the locations of proposed storm water basins (Attachment A).

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The Addendum Phase IB Archaeological APE is comprised of proposed basins associated with two (2) Alternatives under consideration for the I-80 Reconstruction Project (Alternatives 2B and 2D). Basins associated with Alternative 2B include Basins 1030, 1040, 1053, 1080, 1101, 1120, 1125, 1140, 1155, and 1184. Basins associated with Alternative 2D include Basins 1030, 1053, 1080, 1095, 1120, 1125, and 1155. Several general basin locations are shared by both Alternatives 2B and 2D; however, the orientation and extent of specific basins are variable between alternatives (Attachment B). Alternative 2B Basin #1101 was not included as part of the Addendum Phase IB survey due to HAZMAT concerns. Subsurface testing will not be able to be completed therein until additional hazardous material testing has been completed. A portion of the basin lies within previously identified Site 36MR0283. Due to the presence of multiple extant structures therein, Phase II survey has been recommended on this property/site. Should Alternative 2B be selected, and archaeological survey of the property be necessary, testing will likely take place during final design. The results of any additional investigations will be provided within a separate report.

The majority of the proposed basin locations within the Addendum Phase IB APE lie within areas of low archaeological probability. Numerous proposed basin locations have been subject to previous disturbance from roadway and/or industrial/commercial development; these locations include Basins 1053, 1120, 1125, 1155, and 1184. HAZMAT concerns were also identified within Basin 1155. Portions of four (4) basins (Basins 1040, 1080, 1095, and 1140) were determined to exhibit moderate or high archaeological potential.

Type of Proposed Project / Impact: The Pennsylvania Department of Transportation, in cooperation with the Federal Highway Administration and the Northeastern Pennsylvania Alliance Metropolitan Planning Organization, is proposing a highway widening project within Stroudsburg Borough, East Stroudsburg Borough, and Stroud Township, Monroe County, Pennsylvania. The project includes a section of Interstate 80 (I-80) within Monroe County that extends from Exit 303 to Exit 307 of I-80 and along adjacent sections of S.R. 611 and U.S. 209 (S.R. 0209). The project includes the I-80 right-of-way and associated transportation infrastructure improvements to improve traffic and access. Proposed improvements to the current alignment include widening, improvements to on- and off-ramps, side streets, intersections, highway alignment, and shoulder improvements. Proposed storm water management basins for two alternatives (Alternatives 2B and 2D) are also under consideration; these locations are confined to Stroudsburg Borough and Stroud Township.

Date of field investigation(s): 05/14/2018 - 5/30/2018

Description of Field Conditions including percentage of surface visibility:

The majority of the proposed basin locations are within areas subjected to previous disturbance in association with roadway and/or industrial/commercial development. Specifically, these locations include Basins 1053, 1120, 1125, 1155, and 1184. No subsurface testing was conducted within these locations of obvious disturbance. The remainder of the Addendum Phase IB APE consisted of a mixture of manicured lawns and wooded areas. A total of 32 STPs (STPs 212-243) were excavated as part of the Addendum Phase IB survey. However, graded and disturbed landforms and soils were also encountered within the majority of the remaining proposed basin locations;

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the encountered disturbance was determined to have been associated with roadway construction and residential development (Attachment C).

The Addendum Phase IB APE was photo-documented. Representative photographs of all proposed basin locations, including observed disturbance within the APE, are provided in Attachment D.

4. Previously Recorded Archaeological Sites within APE / Project Area and not relocated by this project:

PASS Site Number	Reason not re-located
36MR0255	Site boundary equivalent to 25 foot buffer around recovered 19 th and 20 th century artifacts. Testing within the same property encountered severe disturbance; boundaries of the site not expanded/revised.
36MR0273	Site boundary equivalent to parcel boundary; untested portions of the parcel exhibited previous disturbance.

5. Survey Methodology: (check all that apply to the entire project	t; attach any supporting documents)
 ☑ PASS file Research ☐ Informant Data ☐ Surface Survey ☐ Test Units ☐ Geomorphological Tree Other: Pedestrian Reconnaissance 	s/Photos SCS Soil Maps
Professional Geomorphologist was ☐ Present or ☒ Not	Present During Field Investigations
Name: Affiliation:	
Formal Geomorphological Report Prepared: X Yes [□ No

6. Results: (Describe both the design and the results of every methodology checked in **5.** Include the size and condition of the area tested by each.)

Prior to the development and implementation of the *Statewide Pre-contact Predictive Model*, a project-specific GIS-based archaeological predictive model was created by McCormick Taylor, Inc. for the I-80 Reconstruction Project (Brewer *et al.* 2014; concurred upon by the PA SHPO October 3, 2014). As part of the I-80 Predictive Model, geomorphological testing was conducted on properties that abut Brodhead Creek, McMichael Creek, Pocono Creek, and Little Pocono Creek in order to characterize the depositional history of the alluvium and other soils within the preliminary archaeological APE, identify areas in which previous disturbance has occurred, and identify the depth to which prehistoric archaeological deposits are likely to extend (Brewer *et al.* 2014). The results of the geomorphological evaluation indicated that the floodplains associated with McMichael Creek, Pocono Creek, Little Pocono Creek, and Brodhead Creek within the APE are comprised of shallow soils of relatively recent age and have low potential for containing pre-contact deposits. As a result of the pedestrian reconnaissance, previous disturbance was also able to be taken into account as a variable within the model.

The GIS-based archaeological predictive model was utilized to delineate areas of high, medium, and low archaeological potential for both pre-contact and historic archaeological resources within the archaeological APE. The Phase IB fieldwork was conducted in accordance with the designated probabilities (Brewer *et al.* 2017; concurred upon September 21, 2017). Areas designated by the predictive model as having a high probability for containing archaeological resources were tested at 15 meter (50 foot) intervals and areas designated by the predictive model as having a medium probability for containing archaeological resources were tested at 25 meter (82 foot) intervals. The Phase IB APE was tested at the highest level probability regardless of pre-contact or historic potential.

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For the current effort, the project-specific predictive model was applied to the Addendum Phase IB APE; the Addendum Phase IB fieldwork was conducted in accordance with the designated probabilities and in accordance with the previously established methodology (Attachment C).

The majority of the proposed basin locations are within areas observed to have been subjected to previous disturbance in association with roadway and/or industrial/commercial development. Specifically, these locations include Basins 1053, 1120, 1125, 1155, and 1184. No subsurface testing was conducted within these locations. Observed disturbance was photo-documented. Representative photographs of the encountered disturbance are provided in Attachment D (Photographs 1, 2, 3, 4, and 5).

A total of 32 STPs (STPs 212-243) were excavated as part of the Addendum Phase IB survey. Representative soil profiles are provided in Attachment E. No archaeological sites were identified. Cultural material encountered during the survey was recovered from fill contexts and were determined to not represent intact deposits. The majority of the historic material consisted of wire nails, vessel glass, and brick fragments. One pre-contact flake was recovered from STP 238; however, the artifact was recovered from an historic fill disturbance. No radial STPs were excavated.

All STPs were 0.52 meters (1.7 feet) in diameter and were excavated by natural strata. The STPs were excavated to a maximum depth of one meter. Excavated soils were screened through ¼ inch hardware cloth. All excavations within an identified T1 terrace extended to the top of relict lateral accretion deposits. All excavations within the upland valley slopes extended at least 0.10 meters (~0.33 feet) into sterile subsoil. The soil profiles for the STPs were recorded on a standardized form using Munsell color designations and U.S. Department of Agriculture soil texture terminology. All recovered artifacts were segregated by stratigraphic context.

In accordance with the previously established methodology, a percentage of the low probability areas that did not display evidence of prior disturbance was tested at the high probability interval in order to assess the effectiveness of the model. Basin 1030 was selected for testing, as it is one of the few low probability areas within the Addendum Phase IB APE that did not exhibit obvious surficial disturbance. Testing began at a 50 foot interval; however, upon encountered disturbance within the initial tests, the testing interval was increased in order to determine the extent of the disturbance within/on the landform. In total, 5 STPs (STPs 212-216) (2.4% sample of low probability areas) were excavated. As all five STPs yielded disturbed profiles, testing of the landform was abandoned. These excavations did not result in the recovery of pre-contact material or identification of archaeological sites.

Basin 1030 is located at the western project terminus and is situated on a relatively flat low lying area south of the I-80 corridor (Photograph 6). Basin 1030 exhibited steep slopes at the eastern and western extent of the basin. Five (5) STPs 212-216 were excavated within Basin 1030. Soil profiles revealed stacked fills; the majority of the STPs were refused by rock at ~1.5 feet bgs. Based on the rounded cobbles and iron staining encountered within the lower reaches of these tests, it is likely that this area previously functioned as a wetland and was infilled in association with the construction of the I-80 corridor. No cultural material was recovered.

Basin 1040 is also located near the western project terminus, east of White Stone Corner Road. The majority of the basin extent has been disturbed as a result of residential development, including cutting/grading of the rear yard (Photograph 7). STPs 217-226 were excavated within areas of mixed moderate and high probability and yielded predominantly plowed profiles; overlying fill layers were also encountered in the vicinity of the I-80 corridor and refusal within fill was received in the vicinity of the extant 20th century residence. Due to observed disturbance and steep slopes, areas demarcated as exhibiting moderate and high probability within the northern portion of the basin were not subjected to subsurface testing. No cultural material was recovered.

Basin 1080 is located west of Bridge Street within the southwestern quadrant of the I-80 overpass over Pocono Creek (Photograph 8). STPs 227-230 were excavated within an area of moderate archaeological probability. All excavations encountered stacked alluvial deposits. Plastic, miscellaneous glass, and wire nails were recovered; however, due to the poor contexts from which they were recovered, no site was identified.

Basin 1095 is located adjacent to Tanite Road west of US 209 (Photograph 9). STPs 231-234 were excavated within an area of high archaeological probability. STPs 231-233 revealed disturbed soil profiles, likely associated with the construction of the current medical facility and parking lot. STP 234, located farther north and east within

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an adjacent wooded area, exhibited a plowed, relatively undisturbed profile. Artifacts, including wire nails, aluminum, a metal washer, and miscellaneous flat metal, were recovered from the encountered disturbed contexts only and do not constitute an archaeological site.

Basin 1140 is located along the north/west side of Dreher Avenue, south of the I-80 overpass. STPs 235-243 were excavated within areas of high archaeological probability within the extent of the proposed basin. Portions of the proposed basin were previously subjected to subsurface testing in support of the current project. The majority of the basin extent includes the parcels associated with 1220, 1222, and 1224 Dreher Avenue. Residences associated with these parcels were documented as part of the Historic Structures survey completed in support of the current project, *Historic Structures Survey & Determination of Eligibility Report, SR 0080-17M, Interstate 80 (I-80) Reconstruction Project* (2016). All three residences, constructed ca. 1925, 1930, and 1950, respectively, were recommended Not Eligible for the National Register of Historic Places (NRHP) under Criterion A, B, and C. No earlier non-extant structures are documented within this portion of the project area. Two archaeological sites (36MR0255 and 36MR0273) were identified as a result of the Phase IB Archaeological survey; both sites were recommended Not Eligible for the NRHP under Criterion D and no further work was conducted (concurred upon 09/21/17).

Site 36MR0255 was previously identified in the front yard of 1224 Dreher Avenue due to the recovery of 19th and 20th century architectural, personal, and domestic artifacts; as the recovered artifacts did not align with the age of the current (c. 1950) residence, an historic site of unknown function was identified. Addendum Phase IB testing could not be placed immediately adjacent to the site due to observed disturbance (driveway, garage, fence line, and storm debris/tree fall). However, STPs excavated adjacent to the site/within the same property/parcel encountered severe disturbance, indicating that the landform had been filled/graded prior to or in association with the construction of the current (ca. 1950) residence. A retaining wall (comprised of stacked cobbles) located along the western parcel boundary demarcates the line between the original and disturbed/truncated landforms. The boundaries of Site 36MR0255 were not expanded/revised.

Site 36MR0273 was previously identified due to the recovery of 19th and 20th century domestic artifacts; the artifacts were determined to represent items related to casual discard by the occupants of the associated residence (c. 1925). The site boundary is equivalent to parcel boundary (1220 Dreher Avenue); untested portions of the parcel exhibited previous disturbance with the associated gravel driveway. No additional testing was conducted at the site in association with the Addendum Phase IB survey. The boundaries of Site 36MR0273 were not expanded/revised.

STPs excavated within Basin 1140, in the rear yards of the properties/parcels associated with 1222 and 1224 Dreher Avenue, revealed disturbed soil profiles, indicating that the rear yards had been stripped/graded (Photographs 10 and 11). STPs 237-239 and 241-243 exhibited deep fill disturbance (some refused on cobbles/fill, some overlying an intact B horizon, and one excavated to 3.3 ft). In two instances (STPs 238 and 241), the fills were found to overlie very thin truncated Ap horizons. Cultural material recovered from the Ap remnants consisted of brick fragments (n=2), wire nails (n=3), and single examples of window glass, terra cotta, and lantern glass. These materials likely represent field scatter or redeposition within the Ap horizon by the mechanized placement of the overlying fill. One pre-contact flake was recovered from STP 238; however, the artifact was recovered from an historic fill disturbance. Relatively undisturbed plowed soil profiles were encountered at greater distance from the residences (STPs 235, 236, and 240).

The majority of the proposed basin locations has been disturbed as a result of the construction of the I-80 corridor and 20th century residential development. No archaeological sites were identified as a result of the Addendum Phase IB survey.

Once a preferred alternative has been selected, it is anticipated that additional Phase IB survey will be necessary in order to determine the presence/absence of archaeological deposits within untested/unevaluated areas adjacent to and/or between the mainline and proposed storm water basins. It is also anticipated that additional Phase II survey may be necessary.

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7. Statewide Pre-Contact Probability Model Analysis: (Use the model from CRGIS to determine portions of the project area that were located within each sensitivity tier and list all testing methods used within each tier. If more than one method was used, estimate the percentage of the tier tested by each method. In the Sites Located section, include Isolated Finds for which a number is assigned.)

Sensitivity Tier	Area within this Tier	Percent of Total Project Area	Method(s) Used to test this tier (Use list from 5 above. Include % if multiple.)	Number of Sites Located
High	sq. m.	%		
Moderate	sq. m.	%		
Low	sq. m.	%		

Prior to the development and implementation of the *Statewide Pre-contact Predictive Model*, a project-specific GIS-based archaeological predictive model was created by McCormick Taylor, Inc. for the I-80 Reconstruction Project (Brewer *et al.* 2014; concurred upon by the PA SHPO October 3, 2014).

As stated above, Basin 1030, though demarked as exhibiting low archaeological potential, was subject to subsurface testing in order to test the project-specific model. A total of five (5) STPs (STPs 212-216), 2.4% sample of low probability areas, were excavated. These excavations did not result in the recovery of pre-contact material or identification of archaeological sites.

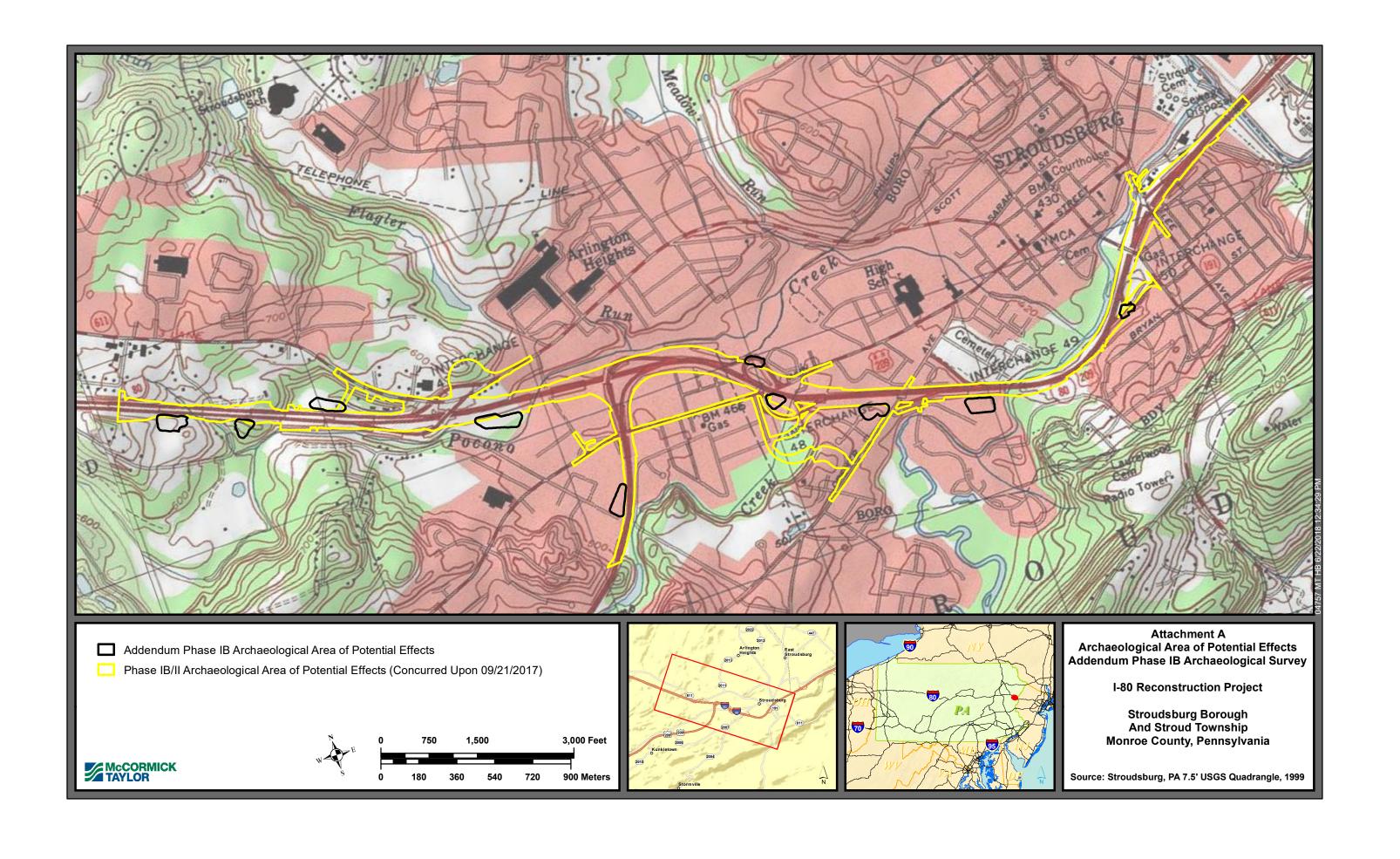
8. Required Attachments:

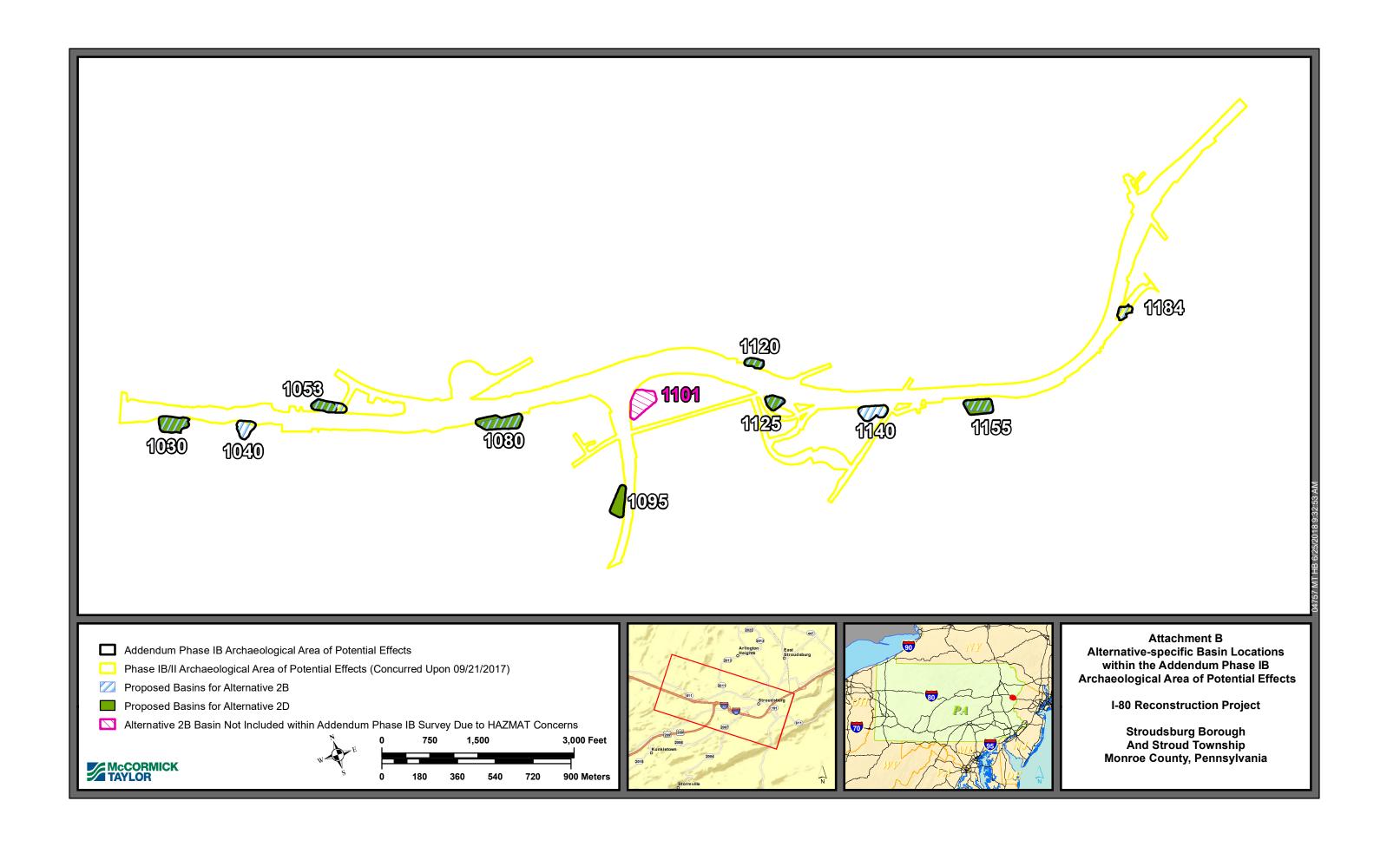
\bowtie	7.5' USGS Quadrangle Map delineating APE / Project Area
\boxtimes	Project map showing testing strategy(ies)
\boxtimes	Testing strategy justification / predictive model
\boxtimes	Supporting photographs with descriptions of view and view direction
	Engineering / Project Plans if prepared
	Geomorphological Report if prepared
\boxtimes	Representative excavation profiles and descriptions

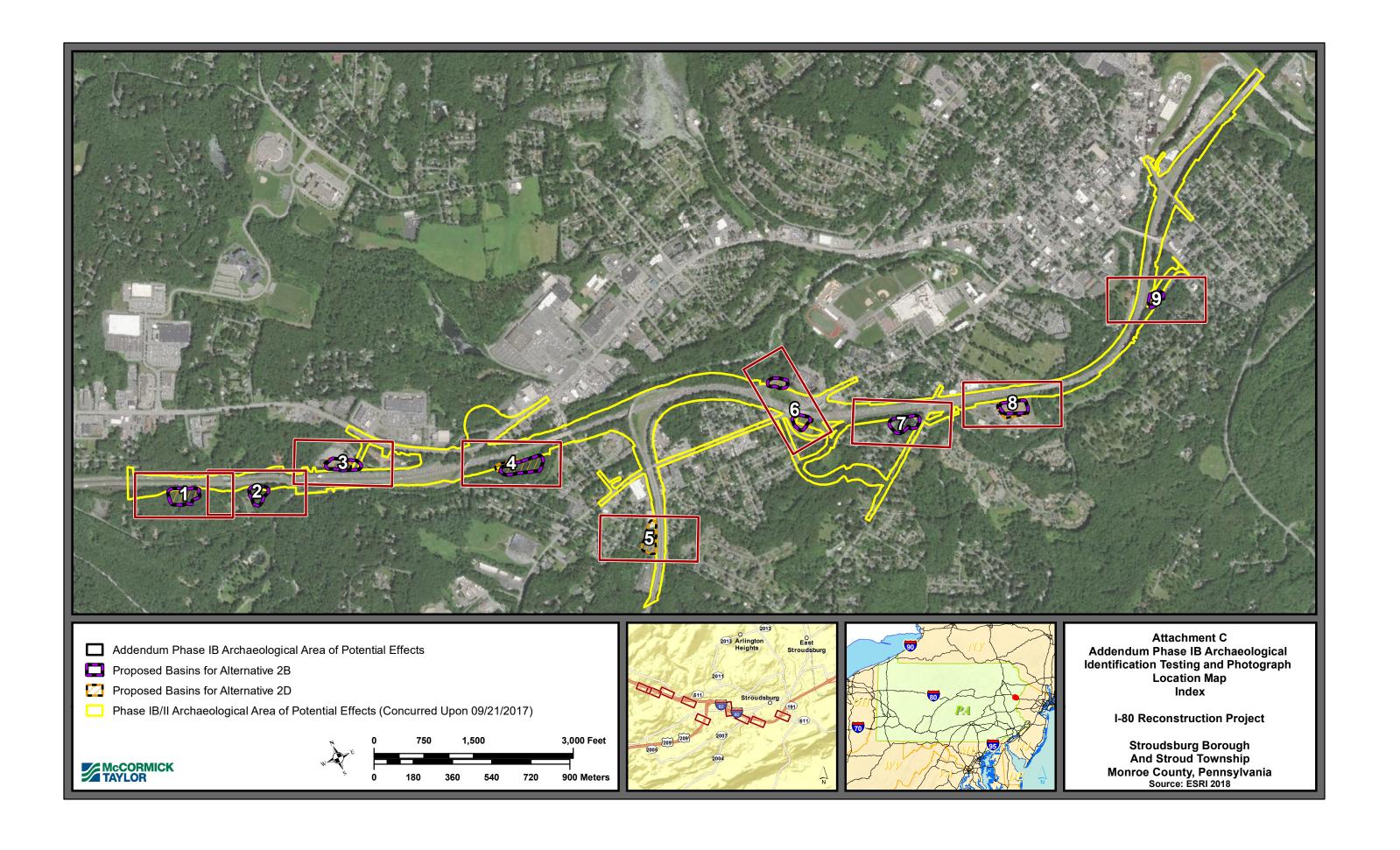
List all other attachments to this Negative Survey Form:

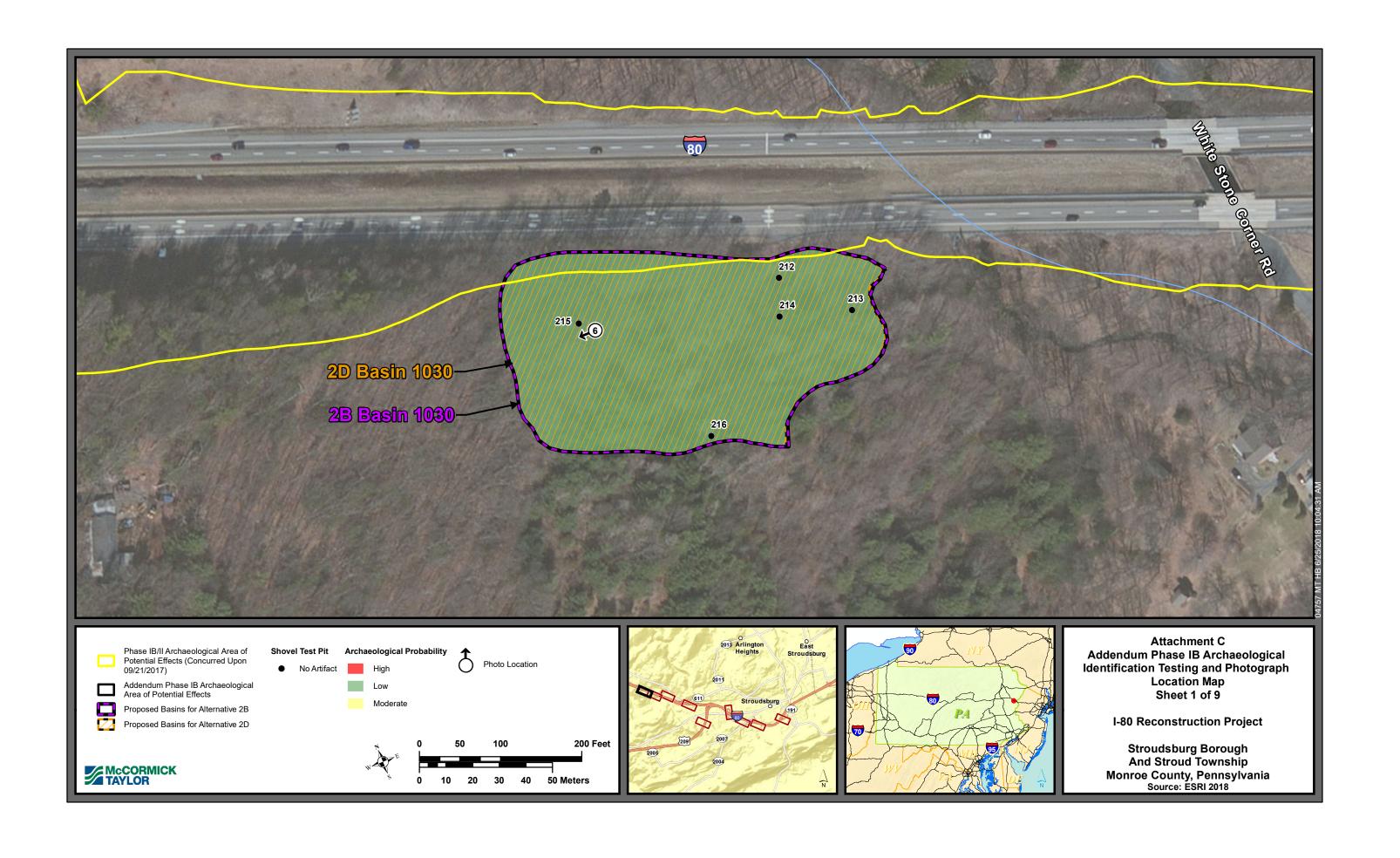
Attachment Type
Attachment A: Archaeological Area of Potential Effects
Attachment B: Alternative-specific Basin Locations
within the Addendum Phase IB Archaeological APE
Attachment C: Addendum Phase IB Archaeological
Identification Testing and Photograph Location Map
Attachment D: Photographs
Attachment E: Representative STP Profiles

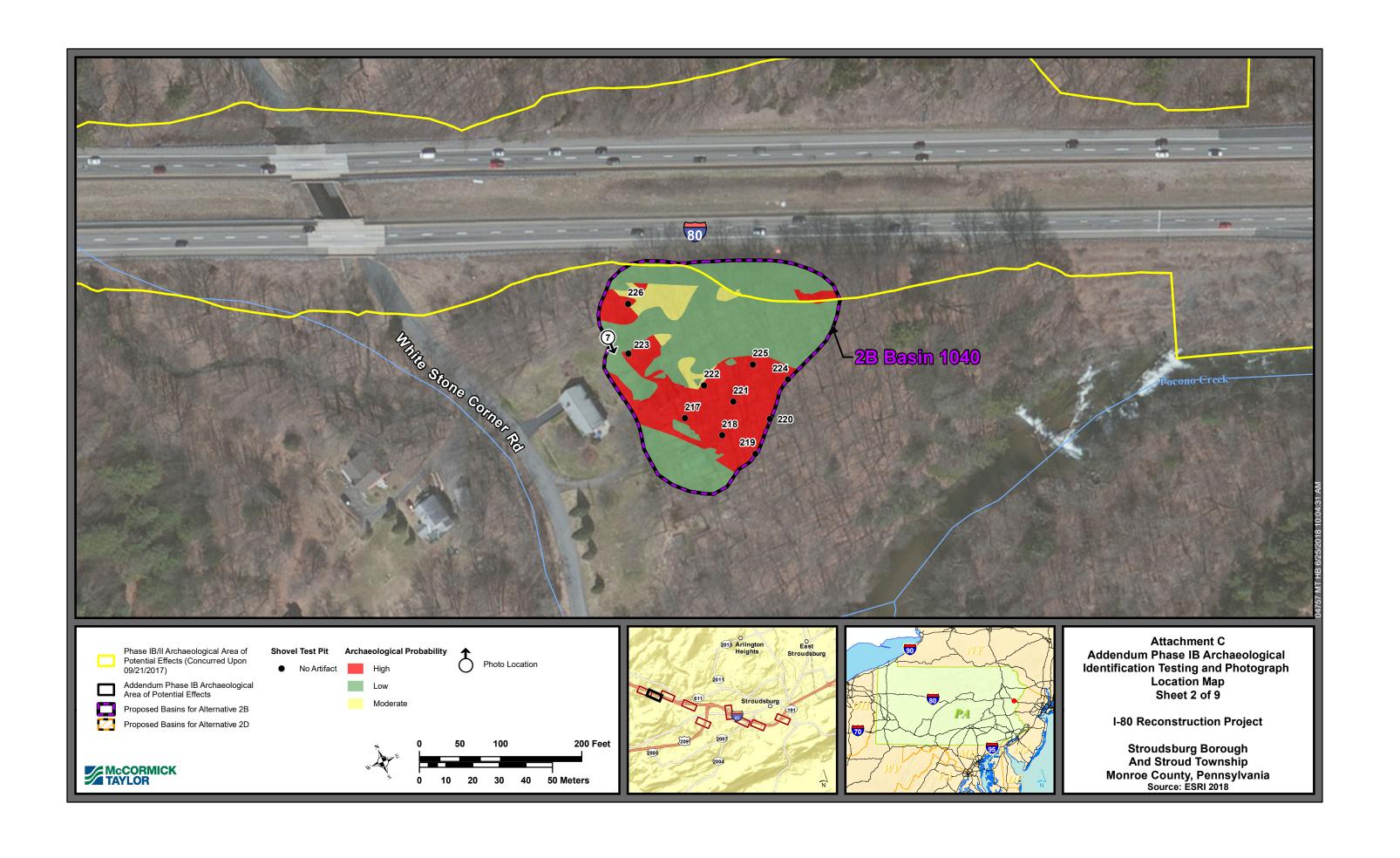
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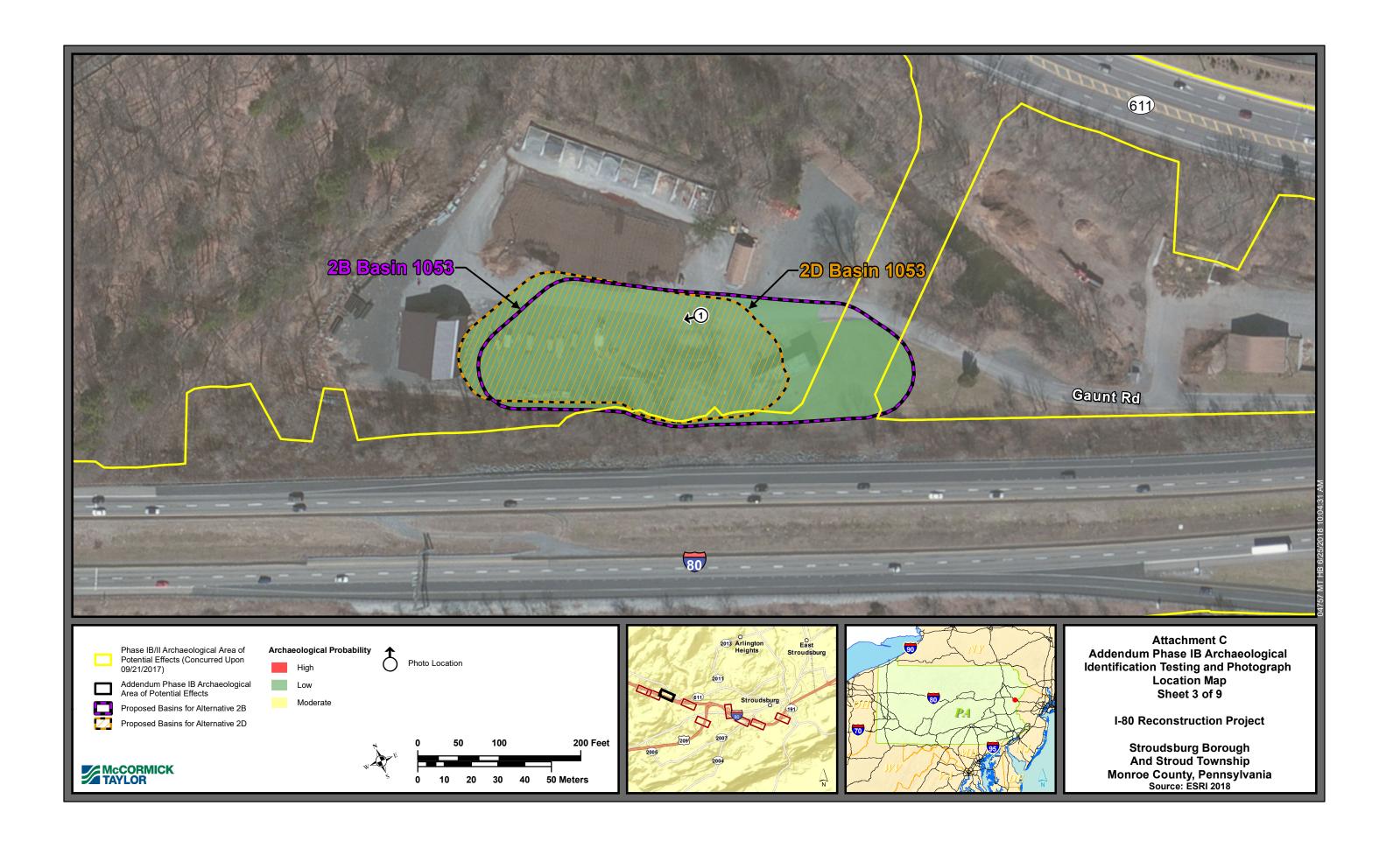


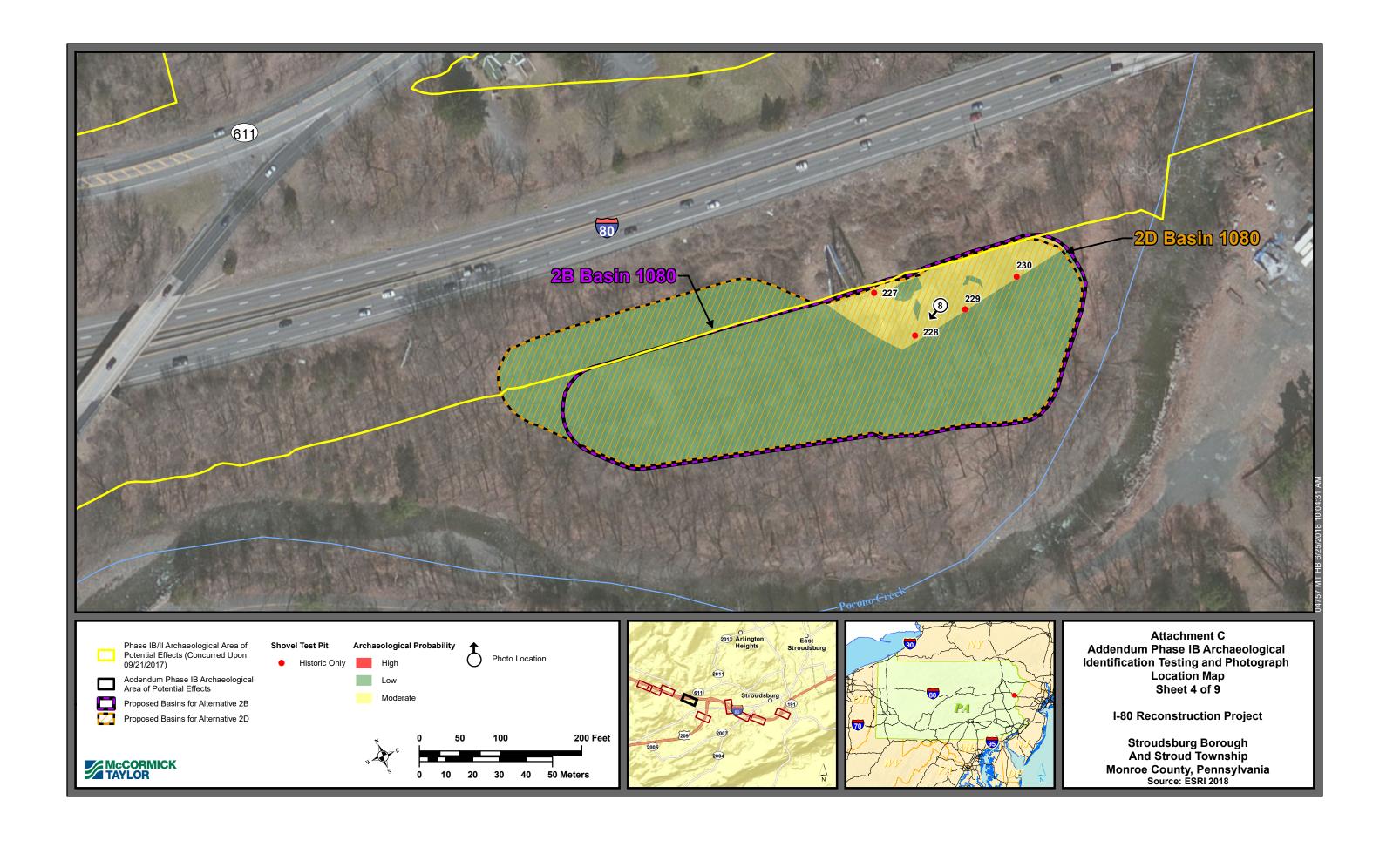


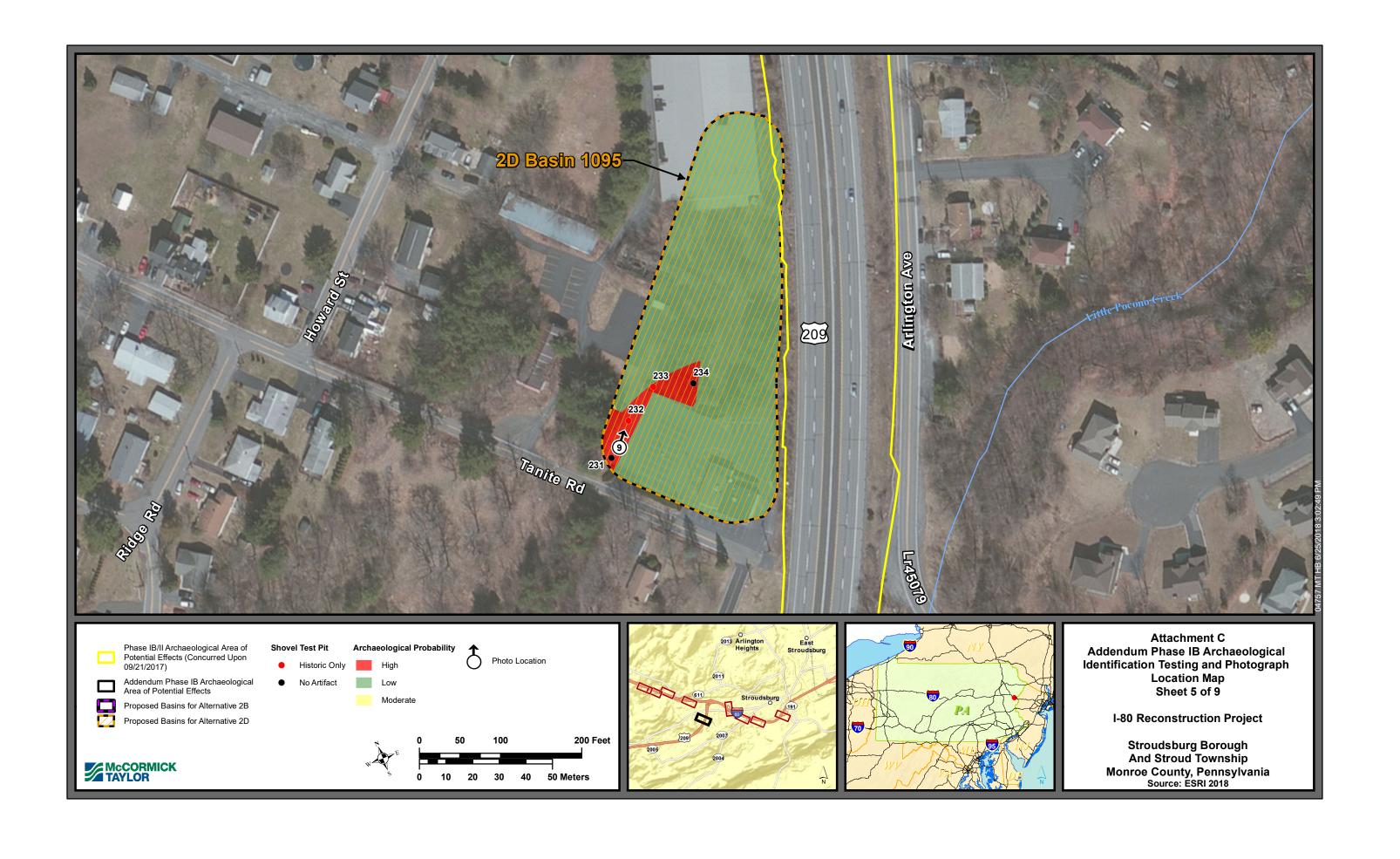


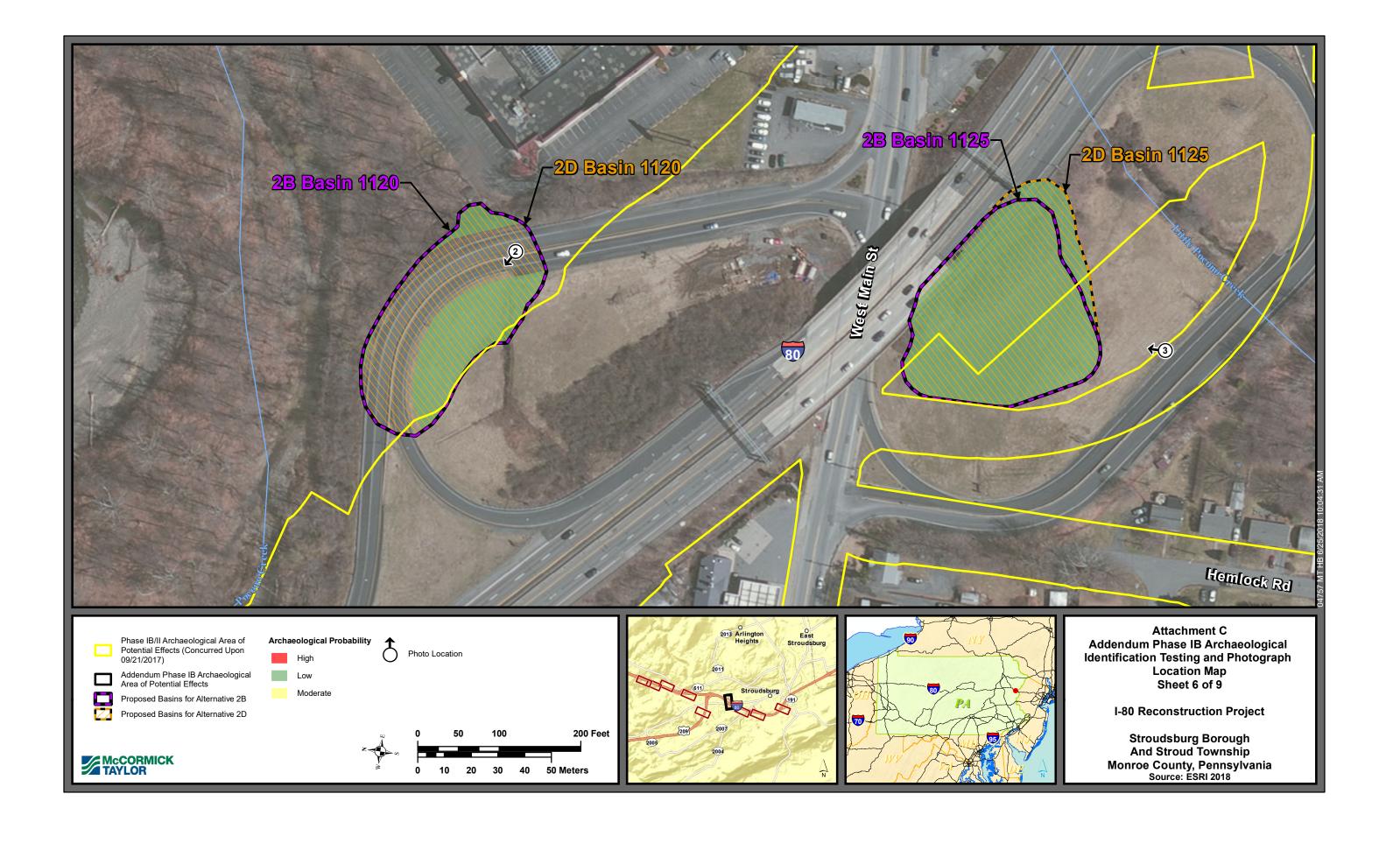


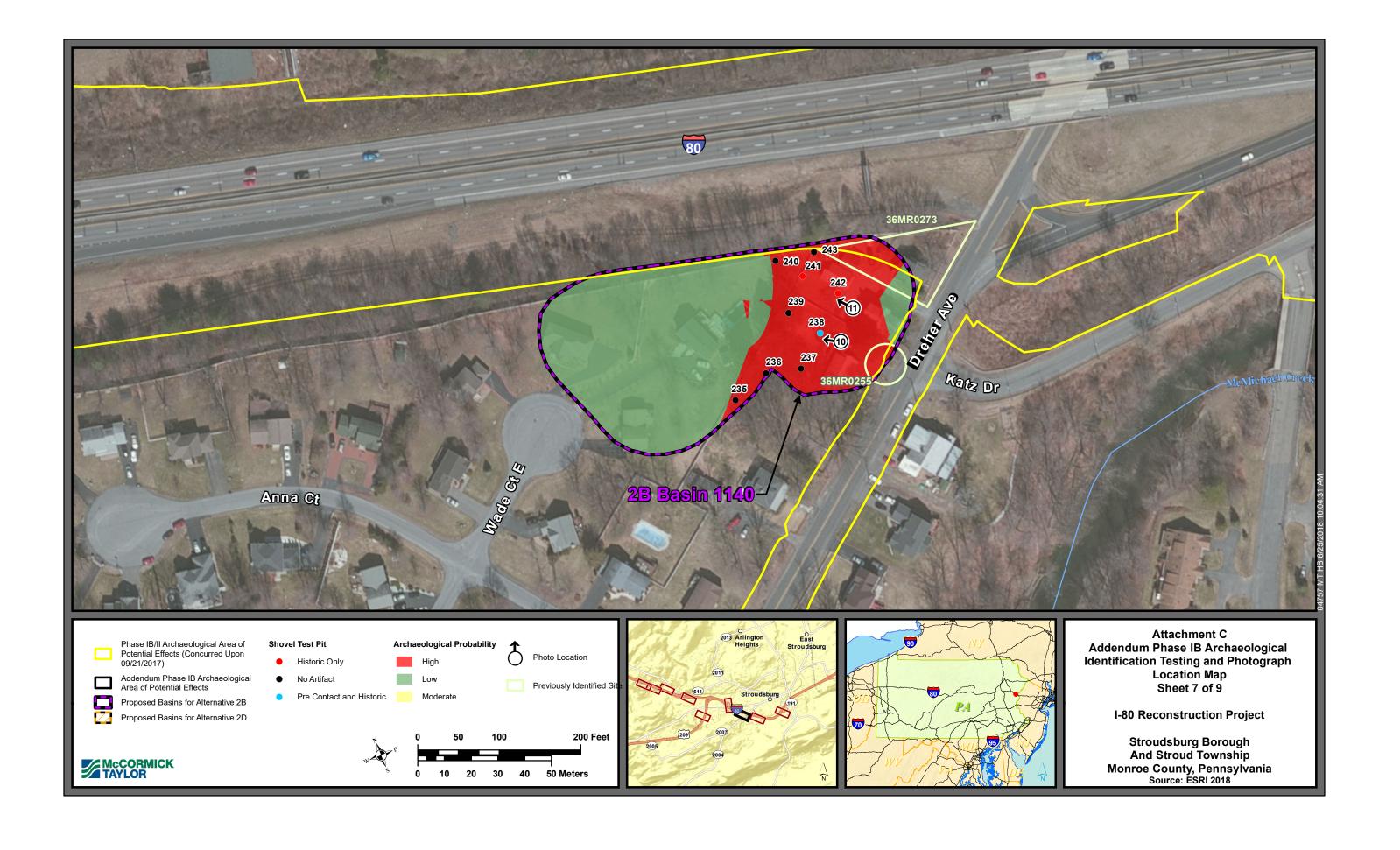


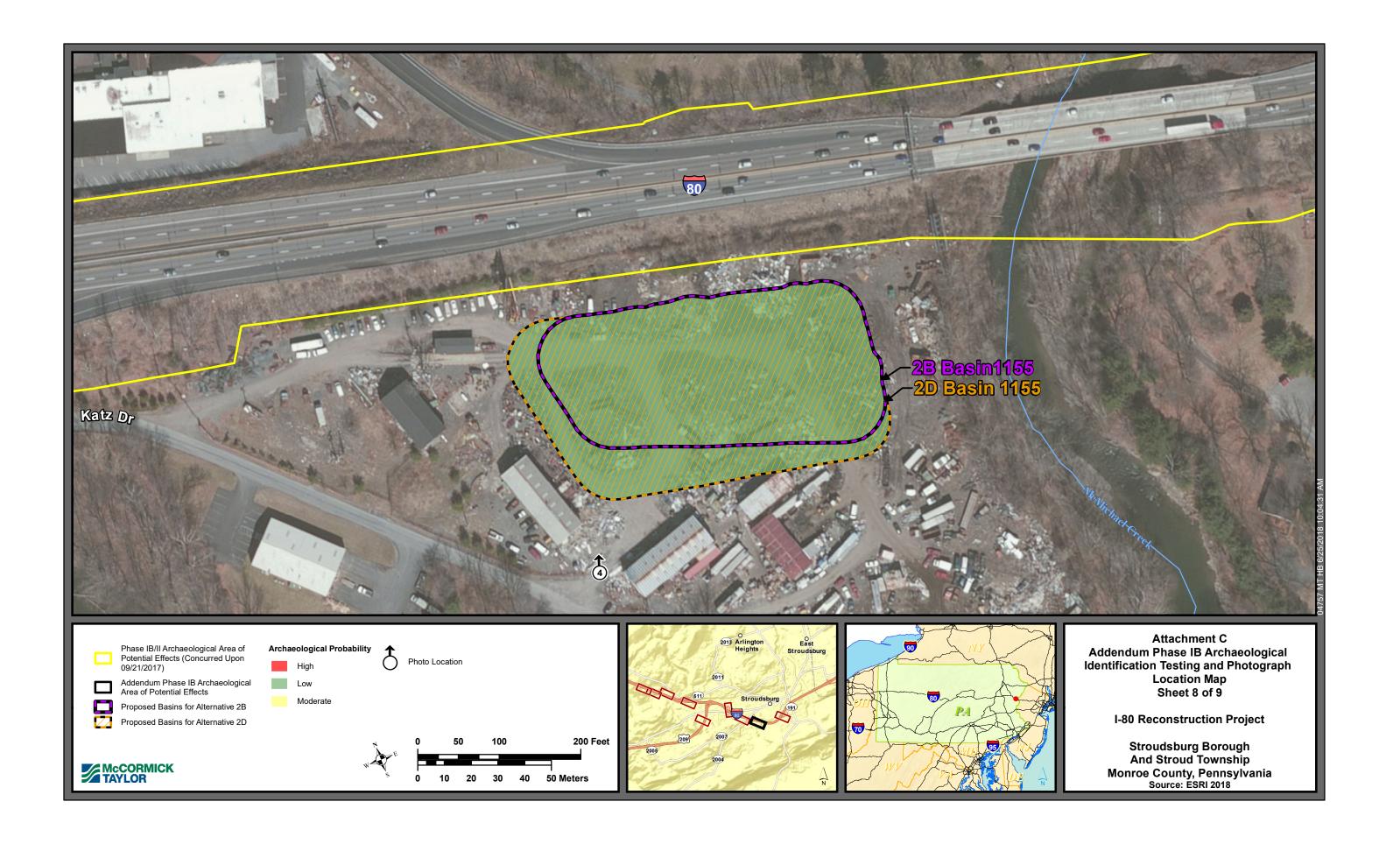


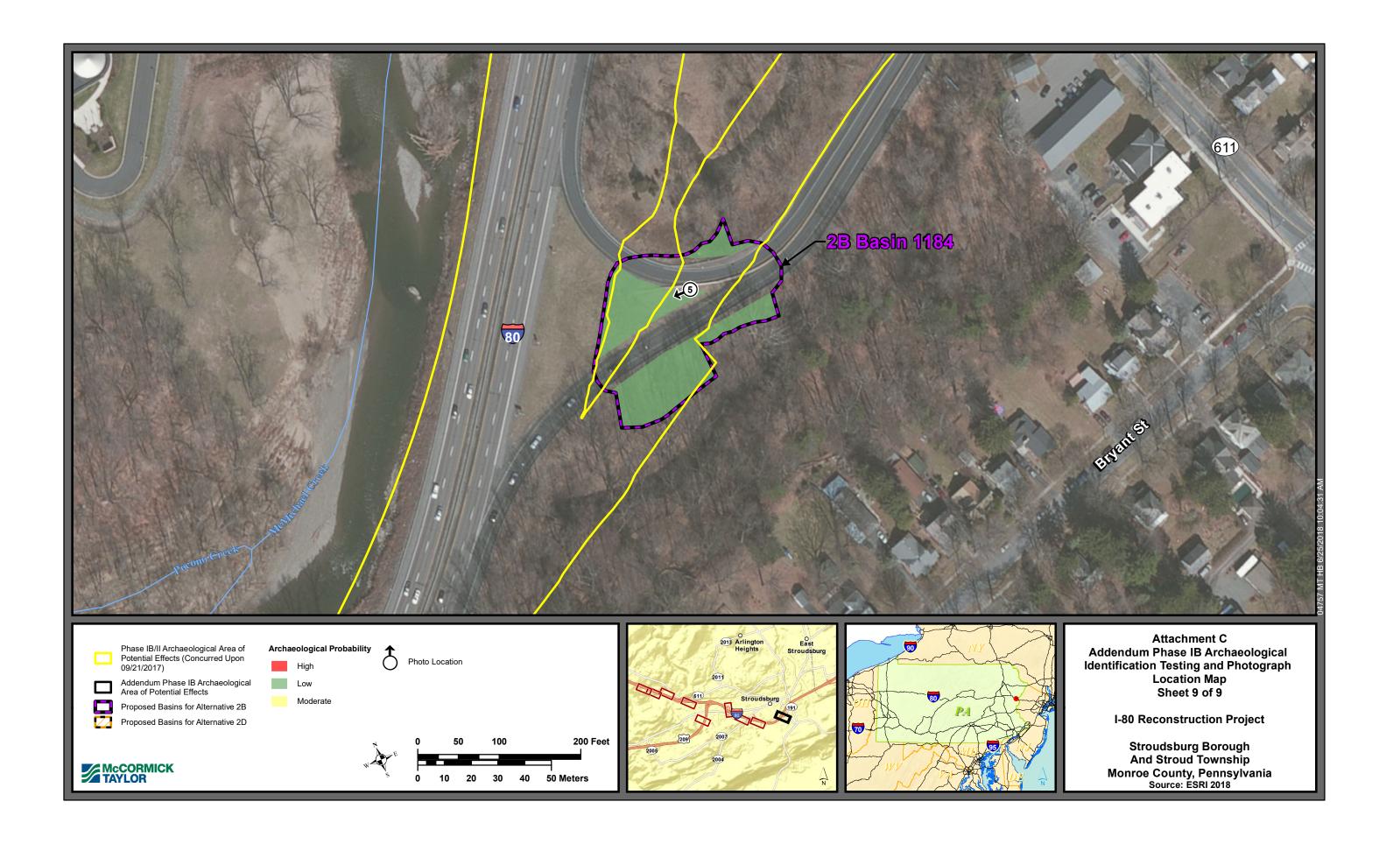














Photograph 1: General view of previous disturbance observed within Basin 1053, facing west. Basin 1053 was not subjected to subsurface testing.



Photograph 2: General view of previous disturbance observed within Basin 1120, facing northwest. Basin 1120 was not subjected to subsurface testing.



Photograph 3: General view of previous disturbance observed within Basin 1125, facing north.

Basin 1125 was not subjected to subsurface testing.



Photograph 4: General view of previous disturbance observed within Basin 1155, facing north.

Basin 1155 was not subjected to subsurface testing.



Photograph 5: General view of previous disturbance observed within Basin 1184, facing southwest. Basin 1184 was not subjected to subsurface testing.



Photograph 6: General view of Basin 1030 situated south of the I-80 corridor, facing southwest. Steep slopes were present in the eastern and western extent of the basin.



Photograph 7: General view of Basin 1040, facing southeast. The majority of the basin extent has been disturbed as a result of residential development, including cutting/grading of the rear yard.



Photograph 8: General view of Basin 1080 within the southwest quadrant of the I-80 overpass over McMichael Creek, facing southwest. All excavations encountered stacked alluvial deposits.



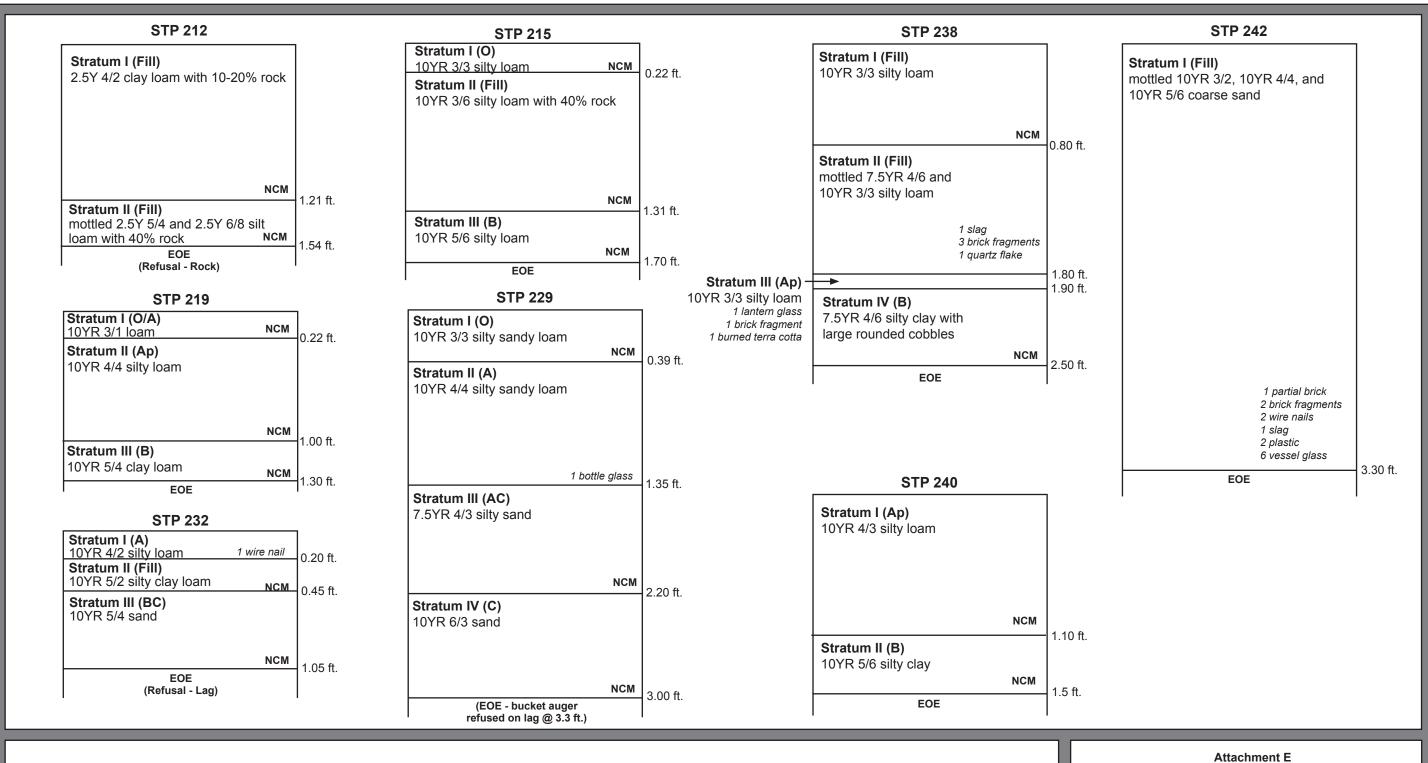
Photograph 9: General view of Basin 1095, located adjacent to Tanite Road west of US 209, facing northeast. The majority of the basin extent is located within the adjacent parking lot. Disturbed soil profiles were likely associated with the construction of the adjacent medical facility and parking lot.



Photograph 10: General view of high probability area within Basin 1140 (rear yard of 1224 Dreher Avenue), facing west.



Photograph 11: General view of high probability area within Basin 1140 (rear yard of 1222 Dreher Avenue), facing northwest.



EOE - End of Excavation
NCM - No Cultural Material



Attachment E
Representative Shovel Test Pit Profiles:
Addendum Phase IB Archaeological Survey

I-80 Reconstruction Project Stroudsburg Borough and Stroud Township Monroe County, Pennsylvania