
APPENDIX D: SECTION 106 COORDINATION



July 16, 2021

Mr. Mark Heckroth
CHA Consulting, Inc.
1501 North Marginal Road
Cleveland, OH 44114
(sent via email only to mheckroth@chacompanies.com)

Subject: Runway 11/29 Improvements – Igor Sikorsky Memorial Airport
1000 Great Meadow Road
Stratford, Connecticut

Dear Mr. Heckroth:

The State Historic Preservation Office (SHPO) has reviewed the potential effects of the referenced project on historic properties. SHPO understands that the Federal Aviation Administration (FAA) plans to fund an Environmental Assessment of proposed actions to improve safety for Runway 11/29. These actions include, but are not limited to, extending the existing runway, installing an engineered materials arresting system, improving runway geometry and drainage, removing obstructions to the approaches, and adding runway turnarounds. Because the proposed activities are receiving funding from the FAA, it is subject to the provisions of Section 106 of the National Historic Preservation Act and project review by this office.

There are no previously reported properties listed on the National Register of Historic Places recorded within the Study Area for this project, but two archaeological sites have been recorded within it and several more in the areas surrounding the project areas. Archaeological Site #138-7 is located within Proposed Action #7, north of where Access Road meets Lordship Boulevard. Archaeological Site #138-14 is reported at the end of the runway in the vicinity of Proposed Actions 1, 2, and 5. The precise nature and extent of these site is not known, and it is possible that they have been largely destroyed. However, their presence, and others just outside the Study Area, suggests that the property is archaeologically sensitive. Therefore, SHPO requests that a professional archaeological assessment survey of the project items be completed with subsurface testing, if needed to confirm whether or not intact archaeological deposits could be impacted by the proposed actions. All work should be in compliance with our *Environmental Review Primer for Connecticut's Archaeological Resources* and no construction or other project-related ground disturbance should be initiated until SHPO has had an opportunity to review and comment upon the requested survey. A list of qualified consultants is attached for your convenience.

SHPO appreciates the opportunity to comment upon this project and we look forward to continuing consultation. For additional information, please contact Catherine Labadia, Environmental Reviewer, at (860) 500-2329 or catherine.labadia@ct.gov.

Sincerely,

Jonathan Kinney
Deputy State Historic Preservation Officer

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | Cultureandtourism.org

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September 24, 2021

Ms. Catherine Labadia
State Historic Preservation Office
Connecticut Department of Economic & Community Development
450 Columbus Boulevard, Suite 5
Hartford, Connecticut 06103

Re: Runway 11-29 Safety Area Improvements
Igor Sikorsky Memorial Airport (BDR)
Stratford, Connecticut
Section 106 Review

Dear Ms. Labadia:

On behalf of the Federal Aviation Administration (FAA), we are submitting this Phase I Archeological Reconnaissance Survey for the Runway 11-29 Safety Area Improvements at Igor Sikorsky Memorial Airport (BDR). Pursuant to 36 CFR Section 800.4(a)(1), the Area of Potential Effect (APE) for this project was developed based on the type and area of proposed construction. This area was determined to be appropriate based on a detailed review of the proposed construction, site observation, and existing conditions. The Phase I survey was performed in compliance with the *Environmental Review Primer for Connecticut's Archaeological Resources*, containing guidelines issued by SHPO for conducting cultural resource management surveys in Connecticut. The report findings recommend that no further archaeological conservation efforts are warranted for the proposed project. Despite a moderate sensitivity for potential prehistoric sites for some of the project area, and the previously reported sites in the western part of the project area, no prehistoric artifacts or feature contexts were recorded as part of the reconnaissance study.

If you have any questions, please contact me at 216-273-8638 or mheckroth@chacompanies.com. We look forward to your comments, at which time, the FAA will make an effect determination.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Mark Heckroth', is written over a light blue horizontal line.

Mark Heckroth, ENV SP
Senior Project Manager

Cc: Mr. Richard Doucette, Federal Aviation Administration
Ms. Michelle Muoio, City of Bridgeport

**Phase I Archaeological Reconnaissance Survey
Runway 11/29 Improvements
Igor Sikorsky Memorial Airport
Town of Stratford, Connecticut**

Interim Report

by

ACS

♦ *Archaeological Consulting Services* ♦
**118 Whitfield Street
Guilford, Connecticut 06437
(203) 458-0550
*www.acsarchaeology.com
acsinfo@yahoo.com***

September 24, 2021

Introduction and Project Description

This interim report provides the preliminary results of a Phase I archaeological reconnaissance survey on portions of the Igor Sikorsky Memorial Airport and surrounding property in the town of Stratford, Connecticut. The project area is located at 1000 Great Meadow Road in the southeast part of Stratford. Oriented east-west, Runway 11/29 is long, on the order of one mile in length, although specific improvements will be limited to either end of the runway and at small areas towards the center of the runway. Additional proposed improvements include tree clearing beyond either end of the runway to improve visibility for incoming planes. Specific improvements in and around the runway include extending it at the western end; installing engineered materials arresting systems at either end of the runway; pavement reconstruction; drainage improvements; additional turnaround pavement; some pavement removal; and the tree clearing. Because of the difficulty in accessing the trees, many are proposed to be cut and left in place without grubbing the earth beneath.

ACS was approached by CHA Companies to conduct the survey in response to a correspondence from the Connecticut State Historic Preservation Office (SHPO) indicating the need for the survey. The letter, dated July 16, 2021, indicated that:

“SHPO understands that the Federal Aviation Administration (FAA) plans to fund an Environmental Assessment of proposed actions to improve safety for Runway 11/29... Because the proposed activities are receiving funding from the FAA, it is subject to provisions of Section 106 of the National Historic Preservation Act and project review by this office. There are no previously reported properties listed on the National Register of Historic Places recorded within the Study Area for this project, but two archaeological sites have been recorded within it and several more in the areas surrounding the project area. Archaeological Site #138-7 is located within

Proposed Action #7, north of where Access Road meets Lordship Boulevard. Archaeological Site #138-14 is reported at the end of the runway in the vicinity of Proposed Actions 1, 2, and 5. The precise nature and extent of these sites is not known, and it is possible that they have been largely destroyed. However, their presence and others just outside the Study Area, suggests that the property is archaeologically sensitive. Therefore, SHPO requests that a professional archaeological assessment survey of the project items be completed with subsurface testing, if needed to confirm whether or not intact archaeological deposits could be impacted by the proposed actions...”

Based on the presence of previously recorded prehistoric sites within and around the project area and airport, but also because of variable subsurface conditions, ACS conducted a stratified-systematic subsurface testing strategy, in conjunction with a thorough background research effort and pedestrian surface survey to identify any and all prehistoric and/or historic cultural resources located within the project area. The survey was performed in compliance with the *Environmental Review Primer for Connecticut's Archaeological Resources*, containing guidelines issued by SHPO for conducting cultural resource management surveys in Connecticut. ACS submitted the proposed research design to SHPO for its approval in advance of any fieldwork, with SHPO to serve as review agency for the final report.

Background

The project area lies within the Western Coastal (V-A) ecoregion of Connecticut. Underlying bedrock under deep glacial sediments is projected to be a unit of Oronoque Schist (Oo), an Ordovician formation on the order of 450 to 500 million years old, with other Ordovician and Devonian formations possibly represented near the eastern end of the runway. Surficial materials maps indicate that much of the surrounding area contains artificial fill (af), overlying the boundary area between a substantial salt marsh (sm) to the south and a broad glacial sedimentary landform of sand over fines (s/f) to the north, with a smaller unit of stacked coarse glacial sediments of sand and gravel over sand near the eastern end of the runway. The soil classification by the USDA NRCS is udorthents (306) for the bulk of the runway, dumps (302) beyond the eastern end of the runway, and mostly moderately well drained Ninigret fine sandy loam (701A) beyond the western end of the runway. The salt marsh that is currently to the south of the airport is part of the “Great Meadow” that is separated from the Long Island Sound by Long Beach and the Lewis Gut intercoastal waterway. The Lewis Gut drainage basin (#7107) drains into the Long Island Sound at Bridgeport Harbor to the west of the project area, while the eastern end of the project area is part of the Housatonic River drainage basin (#6000) that also drains into the sound near the airport. The runway is flanked by maintained grass, while the western end of the project area has thick scrub growth and trees, and the eastern end includes a mix of scrub growth and invasive phragmites.

A statistical prehistoric landscape sensitivity model developed and utilized by ACS indicates a variable sensitivity or likelihood of sites being present across the project area, from 18.5 out of a possible 100.0 at the western end and therefore just under the moderate sensitivity range (20-75), to as high as 46.4 at the eastern end of the runway, well within the moderate sensitivity range. The variability relates to the surficial materials and prevailing soils where not disturbed, including better drained Agawams near the eastern end overlying sand and gravel over sand, and moderately drained Ninigret soil at or near the western end overlying sand over fines. Previously recorded sites are mapped as being at the western end of the runway (138-14) where

little is known about the site, and just north of Access Road / Lordship Boulevard within a tree cutting area where a quartz small-stemmed projectile point and some debitage were recorded. A more substantial site (138-002) is known to the north of the eastern end of the runway at Runway 24 where a broad range of material was recovered, and likely included an area evaluated professionally for a related improvements project that revealed a Late Woodland Levanna projectile point, lithic debitage, biface fragment, and oyster shell fragments.

Historically, the bulk of the project area was within wetlands. Duck Neck Creek was a tidal waterway that ran through the project area according to 19th century maps, with massive amounts of fill brought in to create the airport starting around 1930. The one viable historic site area would have been at the eastern end of the runway, where Stratford Road and Short Beach Road meet, and where a glacial meltwater landform of sand and gravel over sand is located. Historic maps indicate the roads or routes were in place by the mid-19th century, but no structures located in the vicinity of the airport.

Field Results

ACS conducted subsurface testing at the airport in September, 2021. There were five blocks of testing performed, with a total of 91 tests excavated. Block A (20 tests) was located to test the western tree cutting area where recent wetlands delineations indicated a substantially raised area. Block C (7 tests) was located to test the presence of Site #138-7 that had been reported to the north of the intersection of Access Road and Lordship Boulevard. Block E (49 tests) was located at the western end of the runway where Site #138-14 had been reported. Block F (6 tests) was located to the north of the runway near the eastern end in an open grassy area. And Block G (9 tests) was located at the eastern end of the runway in the highest scoring part of the project area according to the statistical prehistoric sensitivity model employed by ACS. Block B was originally proposed at a western tree clearing area falling within a newly delineated wetlands area, and Block D was originally proposed within the eastern tree clearing area revealed to contain thick dump deposits, and were both eliminated from subsurface testing.

Block A was located near 1050 Woodend Road close to its intersection with Lordship Boulevard (Route 113). The area tested was on a significantly higher elevation than the surrounding land, forming the western end of a rectangular landform west of the parking lot associated with Lindquist Steel Inc. (LSI) to the east. The area tested was approximately ten feet higher than the surrounding land and was covered with invasive species such as Autumn Olive, Bittersweet, Ragweed, and Black Locust. The terrain was level, with steep slopes on the north side bordering Woodend Road. A total of 20 shovel tests were excavated in a grid pattern measuring 75 feet northwest to southeast by 175 feet northeast to southwest, with shovel tests placed 25 feet apart. The datum for this block was located at the shoulder of Woodend Road. Soils in Block A were found to consist of fill across the entire area tested. Three to four fill layers were encountered in these shovel tests: brown (10YR3/2) sandy loam with little gravel (0-4" below surface (bs)); dark brown (10YR3/3) sandy loam with little gravel (4-8" bs); light yellowish brown (2.5Y6/3) compact fine sandy loam with little gravel (8-20" bs); and light yellowish brown (2.5Y6/3) fine sandy loam with dense deposits of rock and cinder ash (below 20" bs). The second layer (dark brown sandy loam) was often absent, but the tests consistently ended on dense rock and cinder ash fill. Shovel test 2.5S-1E was augured to 35" bs before

ending on rocky fill. This was the deepest that any test was excavated, with most being impeded by rock and cinder ash fill at approximately 20" bs. Modern artifacts were noted in the first fill layer. These included asphalt, plastic, modern, machine-made bottle glass, and slag and coal ash. One piece of cooled molten iron was also encountered. The soils in this area all appear to represent fill deposits, possibly on top of a layer of industrial waste (e.g. coal ash, slag, iron waste) associated with modern foundry work.

Block C was located to the immediate west of a pump station along Access Road. The ground surface was level and forested, primarily with birch, and some maple and white oak being present. A stream or brook was located to the immediate west, emerging from under Access Road and flowing into a phragmites swamp wetland to the immediate north of the testing area. A three-foot high berm separated the testing area from the wetland. The surface of the testing area was covered with scattered accumulations of modern detritus washed and blown down from the adjacent road. A total of seven shovel tests were excavated in a grid pattern measuring 50 x 50 feet. Shovel tests were spaced 25 feet apart. The datum for this block was the northwest corner of the fence of the adjacent pumping station. Shovel test 1S-0.5W yielded a shallow profile consisting of 10" of brown (10YR3/2) sandy loam with dense gravel and rock, and two inches of light olive brown (2.5Y5/4) rock and gravel dense sandy loam, terminating at 12" bs due to rock. A similar profile was found in 1S-1W with the upper 8" of the 20" deep shovel test being olive brown (2.5Y4/4) sandy loam with rock and gravel on top of the light olive brown rocky, gravelly, sandy loam. This test ended at 20" bs on rock. The remainder of the shovel tests revealed a light olive brown (2.5Y5/4) fine sandy loam with little rock or gravel, overlying a mottled brown (7.5YR4/4), light yellowish brown (2.5Y6/4), and dark gray (2.5Y4/1) loamy sand with little gravel. These layers were determined to be fill, and below them a dark gray (2.5Y4/1) fine sandy loam wetland A horizon was found to extend for approximately 10" to a brown (7.5YR4/4) fine sandy loam subsoil. The buried wetland deposit was encountered between 18 and 40" bs. The soils in this area appear to represent fill deposits on top of a buried wetland.

Block E, situated at the western end of the runway, was located in a level, grass-covered field that bordered a wetland associated with a brook or stream to the west. The wetland was located approximately eight feet lower than the field, which hinted that the area may consist of fill deposits associated with the construction of the runway over a buried ground surface. The goal of testing in this area was to attempt to identify intact buried ground surfaces that may be present with traces of Site #138-14. A total of 49 shovel tests were excavated in a grid pattern measuring 150 x 150 feet, with shovel tests placed 25 feet apart. The datum for this block was the northwest corner of the runway as defined by the west edge of the runway and the northern white boundary stripe. The entire area tested was found to be covered with fill to a depth of over 20 inches below surface. One consistent soil profile was present in this block, consisting of a 9-13" thick layer of olive brown (2.5Y4/4) loamy sand with dense rock and gravel, followed by up to 10" of light olive brown (2.5Y5/4) loamy sand with dense rocks and gravel, commonly to approximately 20" bs where large rocks covered the floor of most tests. Two tests (0N-4W and 0.5S-6W) revealed a 3-5" thick layer of dense black (2.5Y2.5/1) sandy loam with little gravel beneath a light olive brown layer at a depth of 20-21" bs. This was then followed by light olive brown (2.5Y5/4) loamy sand with dense rocks and gravel and impenetrable rocks. The soils in this area all appear to represent airport construction-related fill deposits.

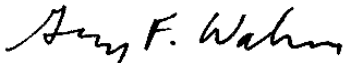
Block F was located towards the eastern end of the runway on a grass-covered space close to the crossing point of the east to west and southwest to northeast running runways. The ground

was level and was presumed to have been affected to some degree by runway construction. It was hoped that intact ground surfaces would be found buried beneath 20th century fill layers. Six shovel tests were placed 25 feet apart in a grid pattern measuring 25 feet north to south by 75 feet east to west. The datum for this block was the western edge of a series of white painted stripes at the northern edge of the runway. The soil profile in this block was consistently found to be made up of four consecutive fill layers: a brown (10YR3/2) loamy sand with a heavy concentration of gravel and rock; a light olive brown (2.5Y5/4) loamy sand with a heavy concentration of gravel and rock; a light yellowish brown (2.5Y6/4) coarse sand with little gravel or rock; and a dark gray (2.5Y4/1) coarse sand with little gravel or rock. The first layer ranged between 4 and 7" thick, the second between 5 and 7", the third between 10 and 13", and the final one between 4 and 12". The tests were terminated between 12 and 32" bs on rocks. The soils in this area all appear to represent airport construction-related fill deposits.

Block G was situated at the eastern end of the runway between it and Stratford Road (Route 113) to the east. The road was located approximately six feet higher than the airfield. Review of historic maps indicated that this portion of the airport may have been subjected to less impact than the remainder of the airport, and it was hoped that intact soil horizons would be encountered. A total of nine shovel tests were excavated in a grid pattern measuring 75 feet east to west and 100 feet north to south. Shovel tests along the 0S, 1S, and 2S lines were spaced 25 feet apart while each of those lines were spaced 50 feet from each other. The datum for this area was the northeast corner of the runway. Three different soil profiles, all representing fill deposits, were found in this block. The first consisted of 4" of brown (10YR3/2) loamy sand with little gravel overlying 5" of olive brown (2.5Y4/4) gravelly, rocky, loamy sand, followed by 15" of light olive brown (2.5Y5/4) coarse sand with little gravel, and finally 8" of light yellowish brown (2.5Y6/4) coarse sand with little gravel to the bottom of the shovel test. Water was encountered at 31" bs, and the excavation was ceased at 34". This profile was only present in test 2S-1E, although water was also encountered in 0S-1.5E. The second profile consisted of more fill layers and was found in test 2S-2.5E and 1S-2.5E. It consisted of 3" of brown (10YR3/2) loamy sand with little gravel overlying 4" of yellowish brown (10YR5/6) loamy sand with little gravel. This layer was followed by 3" of light olive brown (2.5Y5/4) loamy sand with dense rock and gravel that was over a 4" layer of olive brown (2.5Y4/4) loamy sand with dense gravel and rock. The olive brown layer overlaid 4" of the light olive brown (2.5Y5/4) coarse sand with little gravel layer seen in 2S-1E, and 5" of the light yellowish brown (2.5Y6/4) coarse sand with little gravel seen in that same test. This light yellowish brown layer overlaid a final layer of olive brown (2.5Y4/4) loose, collapsing gravel to the bottom of the test at 37" bs. The remaining shovel tests showed a consistent profile of up to 6" of brown (10YR3/2) loamy sand with little gravel, overlying a mottled layer approximately 6" thick of yellowish brown (10YR5/6) and brown (10YR3/2) loamy sand with little gravel that rested on light olive brown (2.5Y5/4) coarse sand with little gravel, but with rocks. Excavation stopped around 20" bs due to large rocks. The soils in this area all appear to represent airport construction-related fill deposits.

Recommendations

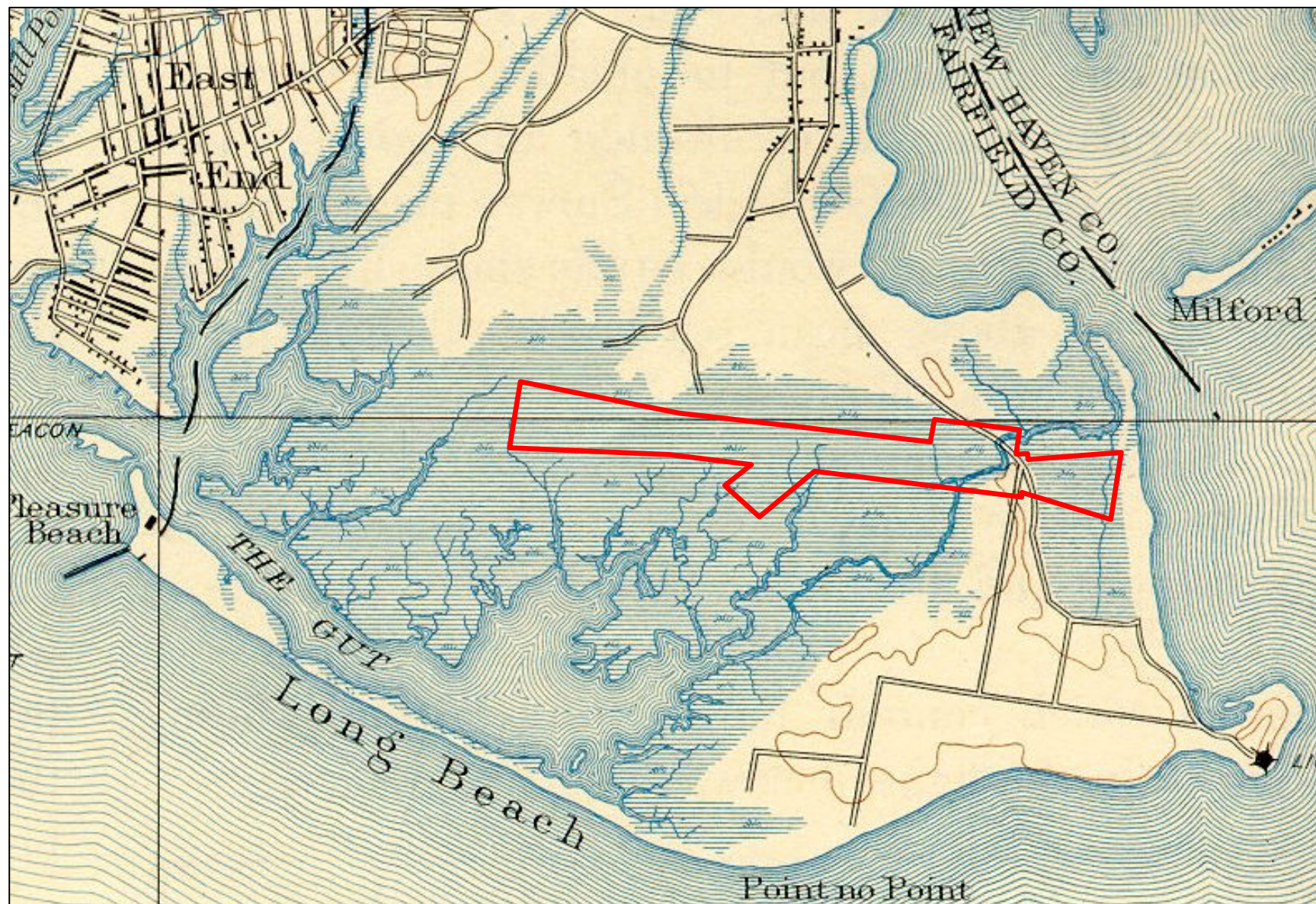
ACS recommends that no further archaeological conservation efforts are warranted for the proposed project. Despite a moderate sensitivity for potential prehistoric sites for some of the project area, and the previously reported sites in the western part of the project area, no prehistoric artifacts or feature contexts were recorded. Historic maps suggest the locations of the previously reported sites were not likely recorded precisely, and were likely instead located further to the north outside the bounds of the project area and airport property. Historic maps additionally show no structures or developments within the property itself, which is known to have been largely constructed of fill overlying the marsh. If the project boundaries change to include other parts of the airport property or properties outside the bounds of the airport, further consultation with SHPO should be conducted.



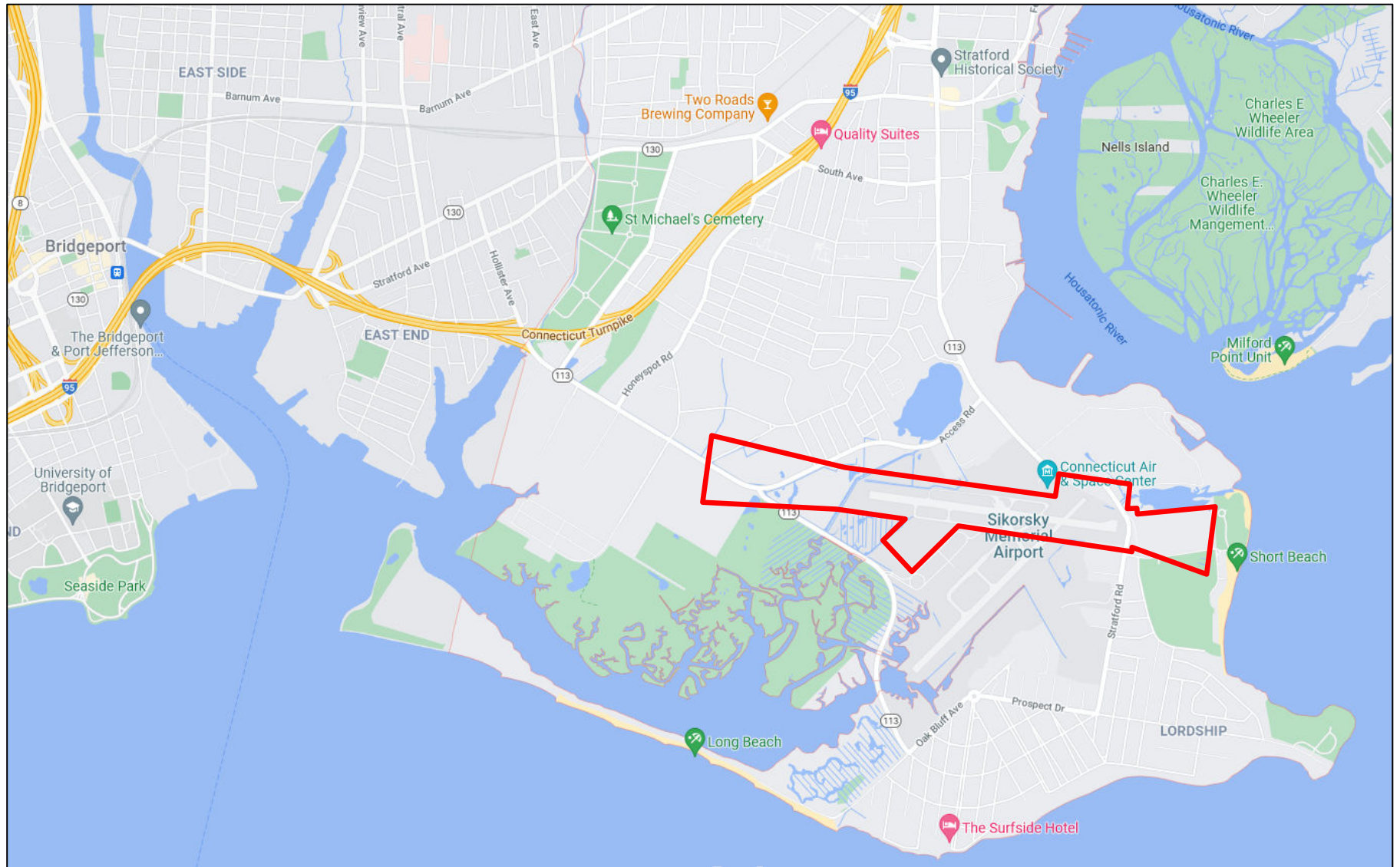
Gregory F. Walwer, Ph.D
ACS Director and Principal Investigator

September 24, 2021

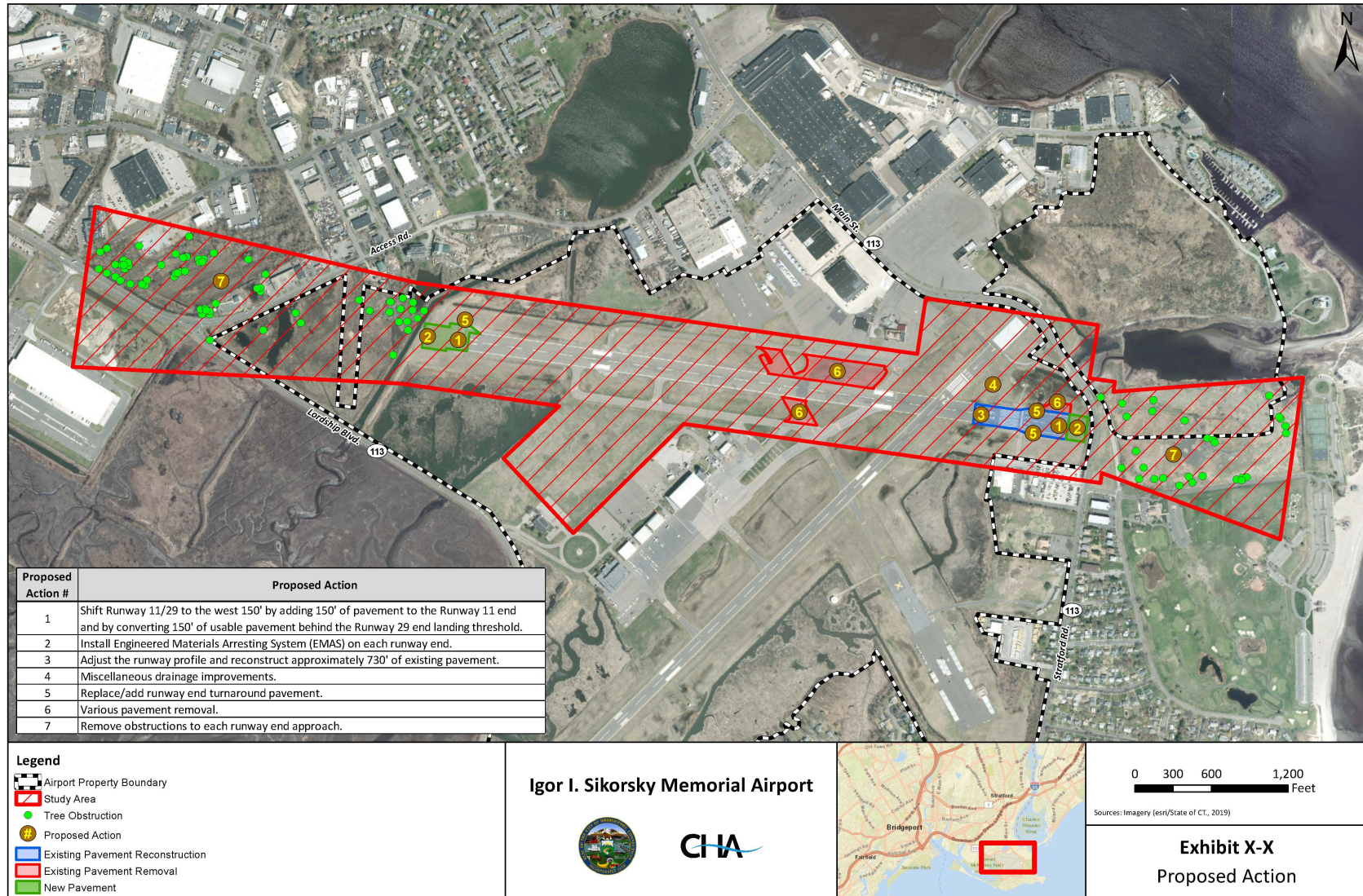
Historic USGS Topographic Map, Bridgeport 15' Quadrangle, 1893



Street Map



Project Area



1856 Map



Koutropoulos, Taylor

From: Labadia, Catherine <Catherine.Labadia@ct.gov>
Sent: Thursday, October 14, 2021 1:02 PM
To: Heckroth, Mark
Cc: Doucette, Richard (FAA); Muoio, Michelle; Koutropoulos, Taylor
Subject: RE: [--EXTERNAL--]: CT SHPO - Sikorsky Improvements
Attachments: GreatMeadowRD_1000_SikorskyImprovements_ArchSurv_NHPA.pdf

Categories: MSGFILE_067655.000

Good Afternoon,
Please find attached a letter of SHPO concurrence for the referenced project. Do not hesitate to contact me if you have any questions.
Thank you,
Cathy

From: Heckroth, Mark <MHeckroth@chacompanies.com>
Sent: Friday, September 24, 2021 10:27 AM
To: Labadia, Catherine <Catherine.Labadia@ct.gov>
Cc: Doucette, Richard (FAA) <richard.doucette@faa.gov>; Muoio, Michelle <michelle.muoio@bridgeportct.gov>; Koutropoulos, Taylor <TKoutropoulos@chacompanies.com>
Subject: RE: [--EXTERNAL--]: CT SHPO - Sikorsky Improvements

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Cathy,

Based on your 7/16/21 response to our early coordination letter (attached), on behalf of the FAA, we are pleased to submit a Phase I Archeology Reconnaissance Study for the project. Let me know if you have any questions.

Thank you,
Mark

Mark Heckroth, ENV SP
Office: (216) 273-8638
Cell: (216) 904-6283

From: Labadia, Catherine <Catherine.Labadia@ct.gov>
Sent: Monday, July 19, 2021 2:55 PM
To: Heckroth, Mark <MHeckroth@chacompanies.com>
Subject: [--EXTERNAL--]: CT SHPO - Sikorsky Improvements

Good Afternoon,
As you will see from the attached letter, our office does have concerns about potential archaeological impacts that may result from the proposed actions at Sikorsky Airport. Do not hesitate to contact me if you have any questions.
Cathy

Catherine Labadia
Staff Archaeologist/Environmental Review

W3R Coordinator
State Historic Preservation Office
Department of Economic & Community Development
450 Columbus Boulevard, Suite 5
Hartford, CT 06103
860-500-2329 (direct)

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October 14, 2021

Mr. Mark Heckroth
CHA Consulting, Inc.
1501 North Marginal Road
Cleveland, OH 44114
(sent via email only to mheckroth@chacompanies.com)

Subject: Igor Sikorsky Memorial Airport Archaeological Survey
1000 Great Meadow Road
Stratford, Connecticut

Dear Mr. Heckroth:

The State Historic Preservation Office (SHPO) has reviewed the Phase I Archaeological Reconnaissance interim report prepared by Archaeological Consulting Services (ACS) for the Runway 11/29 Improvement project. The project includes, but is not limited to, extending the existing runway, installing an engineered materials arresting system, improving runway geometry and drainage, removing obstructions to the approaches, and adding runway turnarounds. The archaeological survey was completed at the request of this office in a letter dated July 16, 2021 pursuant to Section 106 of the National Historic Preservation Act. The methods described in the interim report meets the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*.

During the archeological reconnaissance survey, the project area was divided into testing blocks (Blocks A through G) to facilitate control during the investigation. Although subsurface testing was planned for Blocks B and D, field conditions eliminated them from additional consideration. A total of 91 shovel tests were excavated during subsurface testing within Blocks A, C, E, F, and G. Testing revealed a landscape primarily comprised of fill soils. Although archaeological sites had been reported in the vicinity of the proposed project areas, no cultural material was recovered as part of the current investigation. It is SHPO's opinion that no additional archaeological investigation of the project area is warranted and that no historic properties will be affected by the proposed undertaking.

SHPO appreciates the cooperation of all interested parties in the professional management of Connecticut's archeological resources. This letter updates and supersedes all previous correspondence regarding the proposed project. For additional information, please contact Catherine Labadia, Staff Archaeologist, at (860) 500-2329 or catherine.labadia@ct.gov.

Sincerely,

Jonathan Kinney
Deputy State Historic Preservation Officer

cc: Walwer, ACS (via email)

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | Cultureandtourism.org

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