



October 2, 2015

Reference No. 83167

Ms. Jenny Dickson
Supervising Wildlife Biologist
Wildlife Division
Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106

Dear Ms. Dickson:

**Re: Habitat Assessment for the Northern Long-Eared Bat
Baird Substation Expansion, 1770 Stratford Avenue, Stratford, Connecticut**

GHD Services, Inc. (CRA) was retained by The United Illuminating Company (UI) to conduct a habitat assessment for the northern long eared bat at the Baird substation expansion project located at 1770 Stratford Avenue in Stratford, Connecticut (Site). Based on our previous investigations at the Site, the expansion area is primarily wooded but was historically disturbed and is located in an area of urban land uses. We understood that the project involves the fill of a small isolated forested wetland (652 square feet) at this location to facilitate the expansion of the current substation. The United States Fish and Wildlife Service (USFWS) listed the northern long-eared bat (*Myotis septentrionalis*) as a federally threatened species in May 2015. Since the Site is wooded and clearing will be required, the USFWS may request additional consultation or season restriction on work if the Site is determined to provide bat habitat.

1. HABITAT REQUIREMENTS (from USFWS)

GHD reviewed information provided by the USFWS regarding the seasonal habitat of the northern long-eared bat. This information was used to compare the recognized habitat of the northern long-eared bat with the existing conditions in the vicinity of the proposed Baird Substation expansion area.

Winter Habitat: Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. Within hibernacula, surveyors find them hibernating most often in small crevices or cracks, often with only the nose and ears visible.

Summer Habitat: During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or

provide cavities or crevices. This bat has also been found rarely roosting in structures, like barns and sheds.

2.0 HABITAT ASSESSMENT WITHIN THE PROPOSED DISURBANCE AREA

Mr. Scott E. Bush of GHD conducted a Site visit on August 22, 2015 to assess the habitat conditions and evaluate plant and wildlife species within the proposed disturbance area. The weather was sunny and clear with temperatures in the middle 80 degrees Fahrenheit.

The proposed electrical substation will be installed in an area that is currently occupied with wooded land and an asphalt-paved parking lot. A small wetland area (652 square feet) is located within the wooded land. The area to the north is occupied by the Metro-North Commuter Railroad line and residential properties, to the south by Stratford Avenue (Route 130) and beyond by commercial and light industrial businesses, to the east by the Two Roads Brewing Company, and to the west by the existing Baird Substation. A plan showing the existing substation and proposed development area is provided as Figure 1.

UI plans to clear the Site of vegetation and to fill in the wetland area on the project area in order to accommodate the proposed electrical substation.

Photographs of the project area are provided in Attachment A.

2.1 HABITAT DESCRIPTION AND ASSESSMENT

The wooded portion of the site is 0.73 acre in size and can be characterized as a secondary growth deciduous wood lot surrounded by urban and industrial land uses. The dominant tree species present on this lot included pin oak (*Quercus palustris* – 40 percent cover), tree-of-heaven (*Ailanthus altissima* – 30 percent cover), Norway maple (*Acer platanoides* – 20 percent cover), and southern catalpa (*Catalpa speciosa* – 5 percent cover). Additional non-dominant tree species present included red mulberry (*Morus rubra* – 1 percent cover), sycamore (*Platanus occidentalis* – 1 percent cover), black cherry (*Prunus serotina* – 1 percent cover), eastern cottonwood (*Populus deltoides* – 1 percent cover), and white oak (*Quercus alba* -2 percent cover). Because of the small size of the lot, the non-dominant species generally consisted of a 1 or a few species listed above. The understory is generally dominated by poison ivy (*Toxicodendron radicans*) and multiflora rose (*Rosa multiflora*).

The tree species composition is typical of small urban woodlots, being dominated by non-native tree species and species that are pioneering on disturbed sites. The diameter at breast height (dbh) of the trees on the site varies greatly from saplings to individuals of 20 inches dbh. Most of the larger trees on the site are those that tend to have tight smooth bark (pin oak, Norway maple, tree of heaven, and red mulberry). The tree stand is fairly healthy with few dead trees and/or snags that would provide suitable roosting habitat. We observed no caves, mine shafts, or other potentially suitable hibernacula for the northern long-eared bat on or near this property. Evidence of use of the site by transient persons (old tents, mattresses, clothing, and trash) was observed. Photographs of the site and trees present are provided as Attachment A.

3.0 CONCLUSIONS AND RECOMMENDATIONS

GHD's habitat assessment for *Myotis septentrionalis* determined that the wooded portions of the site (0.73 acre) are dominated by relatively mature trees surrounded by urban and industrial land uses. Because of the tree species present and their growth habits, the trees present generally lacked rough shaggy bark, significant standing dead trees, or large snags that could potentially provide critical summer roosting for *Myotis septentrionalis*. There were several individual trees present (white oak and eastern cottonwood) that could potentially provide summer roosting habitat but these were located on the periphery of the woodlot directly adjacent to the railroad and the brewery parking lot, making their use unlikely.

The project plans call for clearing and development of this parcel of land to construct an electric substation. A small isolated wetland area is present within the proposed disturbance that will be filled. Due to the smooth-barked species of trees that dominate the Site, its small size, and juxtaposition within a heavily urbanized area, it is GHD's opinion that this wooded area is unlikely to provide critical habitat for *Myotis septentrionalis* and that the project will not impact the species or its critical habitat.

We look forward to your review, concurrence and project clearance. If you have any questions, please contact me at 610-321-1800 extension 11 or scott.bush@ghd.com.

Yours truly,

A handwritten signature in black ink, appearing to read "Scott E. Bush". The signature is fluid and cursive, with the first name "Scott" and last name "Bush" clearly legible.

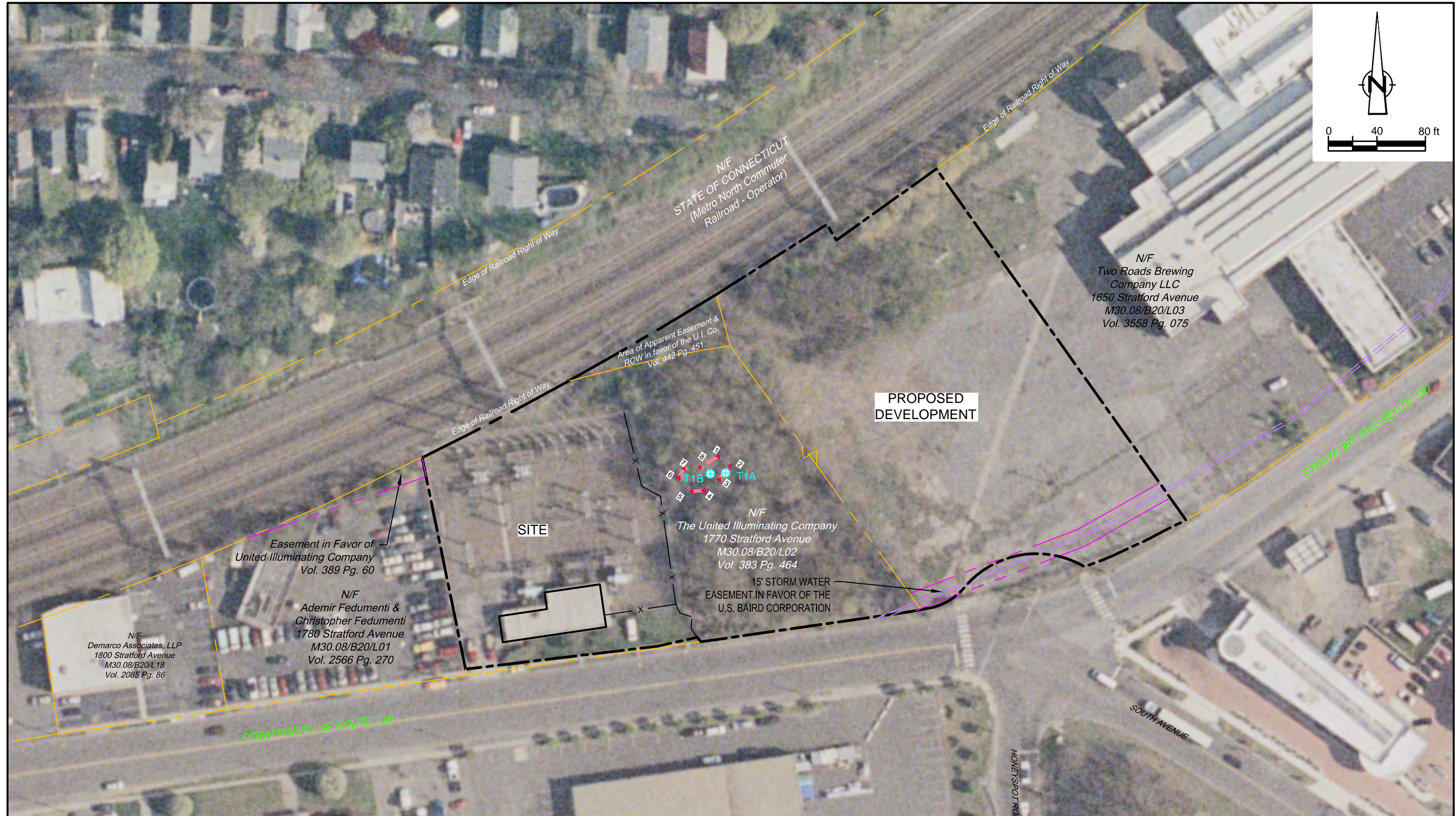
Scott E. Bush, P.W.S.
Senior Ecologist

SEB/srd/1

Encl.

cc. S. Crosbie, UI

APPENDIX K HABITAT ASSESSMENT FOR NORTHERN LONG EARED BAT



SOURCES:
 IMAGE - NAIP IMAGERY OF CONNECTICUT, 2008 - U.S. DEPARTMENT OF AGRICULTURE (USDA) FARM SERVICE AGENCY, AERIAL PHOTOGRAPHY FIELD OFFICE.
 PROPERTY LINES AND SITE SURVEY - PRELIMINARY DRAWING, WETLAND AREA AROUND BAIRD SUBSTATION, BLACK & VEATCH, APRIL 02, 2015.
 PROPOSED DEVELOPMENT PLAN - SUBSTATION ARRANGEMENT PLAN, FULL REPLACEMENT SITE, BAIRD SUBSTATION, BLACK & VEATCH FEBRUARY 02, 2015.
 WETLAND DELINEATION - DAVID LORD, CERTIFIED SOIL SCIENTIST, APRIL 14, 2015.
 WETLAND LIMITS SURVEY - COMPLETED BY NAFIS & YOUNG ENGINEERS, INC., APRIL 14, 2015.



LEGEND	
— — — — —	PROPERTY BOUNDARY
— x — — —	FENCE
- - - - -	WETLAND LIMITS
▲ ²	WETLAND FLAG
⊕ T1A	WETLAND TRANSECT SAMPLING LOCATION

figure 1
 SITE PLAN
 BAIRD SUBSTATION
 1770 STRATFORD AVENUE
 Stratford, Connecticut

Attachment A Photographic Record



1. View east at Two Roads Brewing Company parking lot from the Site.



2. View north at active rail line that abuts the norther Site boundary.



3. View southwest at developed land south of the Site.



4. View west at the existing Baird Sub-station property south of the Site.



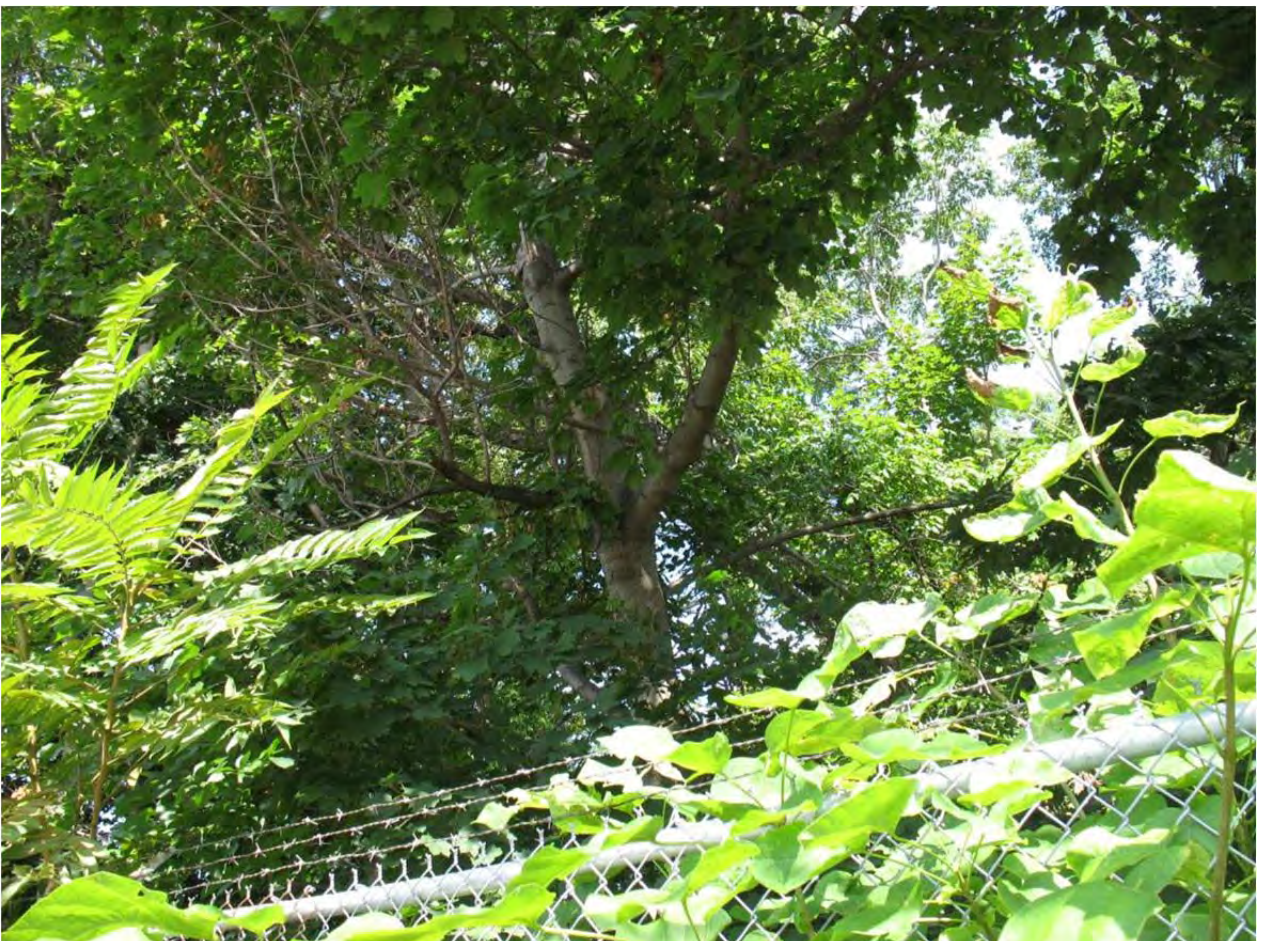
5. Existing pin oak trees in the interior of the wooded patch. All smooth barked with limited roosting habitat for bats.



6. Existing pin oak trees the western side of the wooded patch. All smooth barked with limited roosting habitat for bats.



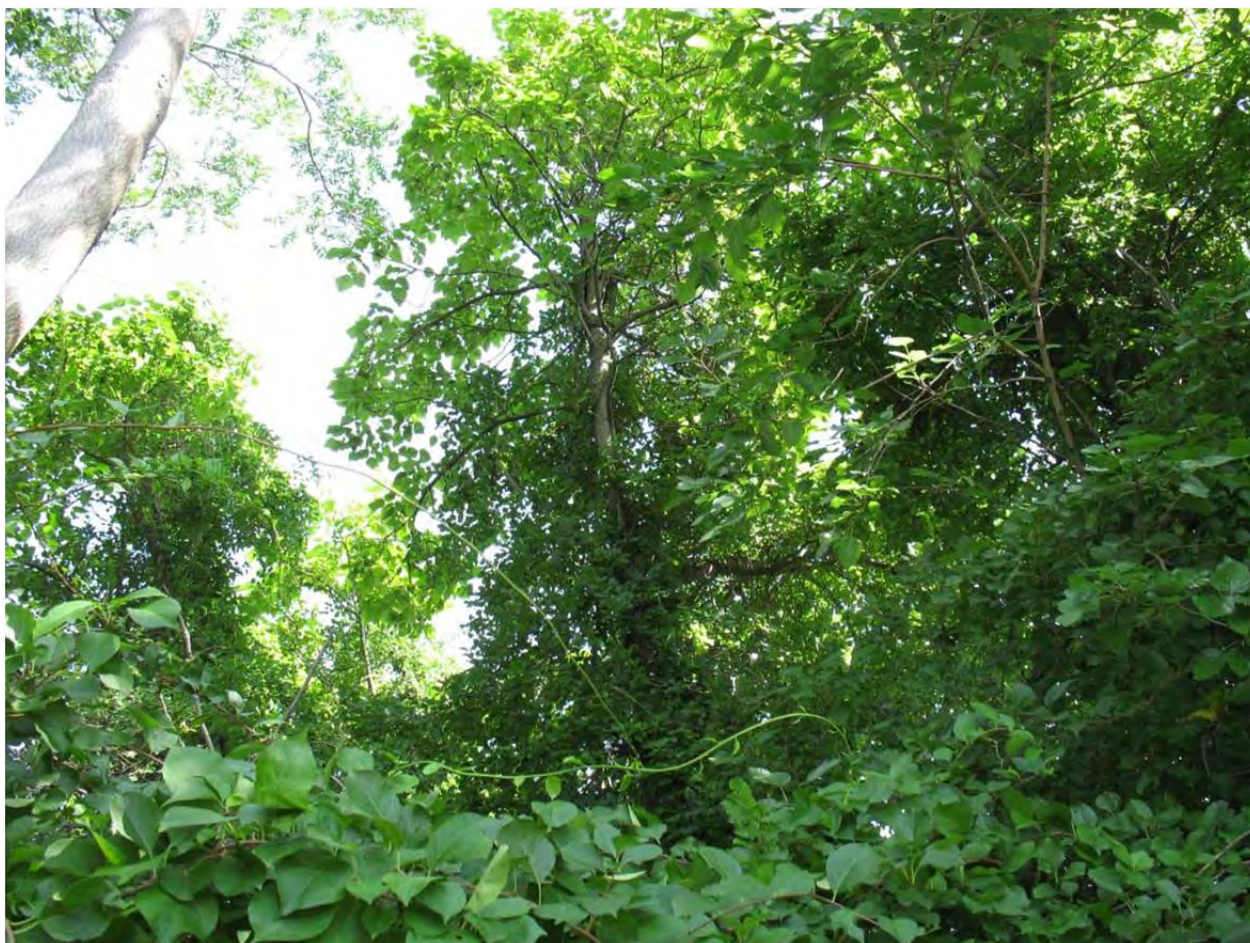
7. Existing pin oak trees in the interior of the wooded patch. All smooth barked with limited roosting habitat for bats.



8. View of Norway maples along the southern site boundary. This section of the woods is mostly non-native species that lack furrowed or shaggy bark.



9. View of tree-of-heaven along the southern site boundary. This section of the woods is mostly non-native species that lack furrowed or shaggy bark.



10. View of southern catalpa and tree-of-heaven along the southern site boundary. This section of the woods is mostly non-native species that lack furrowed or shaggy bark.



11. View of tree covered in Asiatic bittersweet vines along the eastern woodland boundary.



12. Most of the wooded area has a groundcover dominated by poison ivy.



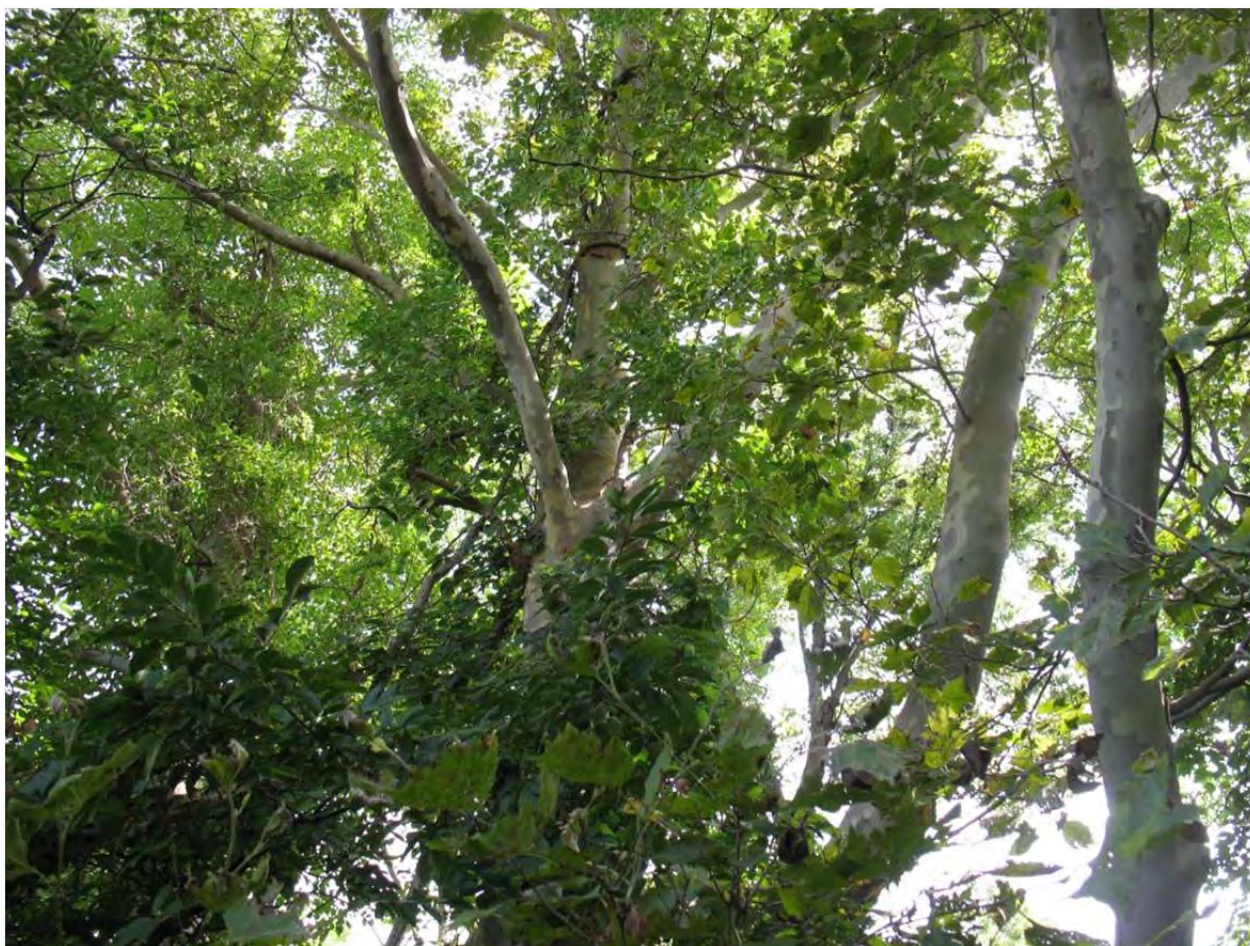
13. A white oak along the northern woodland boundary right next to the active rail lines.



14. A rock outcrop observed onsite. No caves or mineshafts are present.



15. Pin oak covered in poison ivy vines in the interior of the woodland.



16. A single sycamore is present. It lacked significant shaggy bark at the time of our visit.



17. One eastern cottonwood is located along the edge of the Two Roads Brewery parking lot.