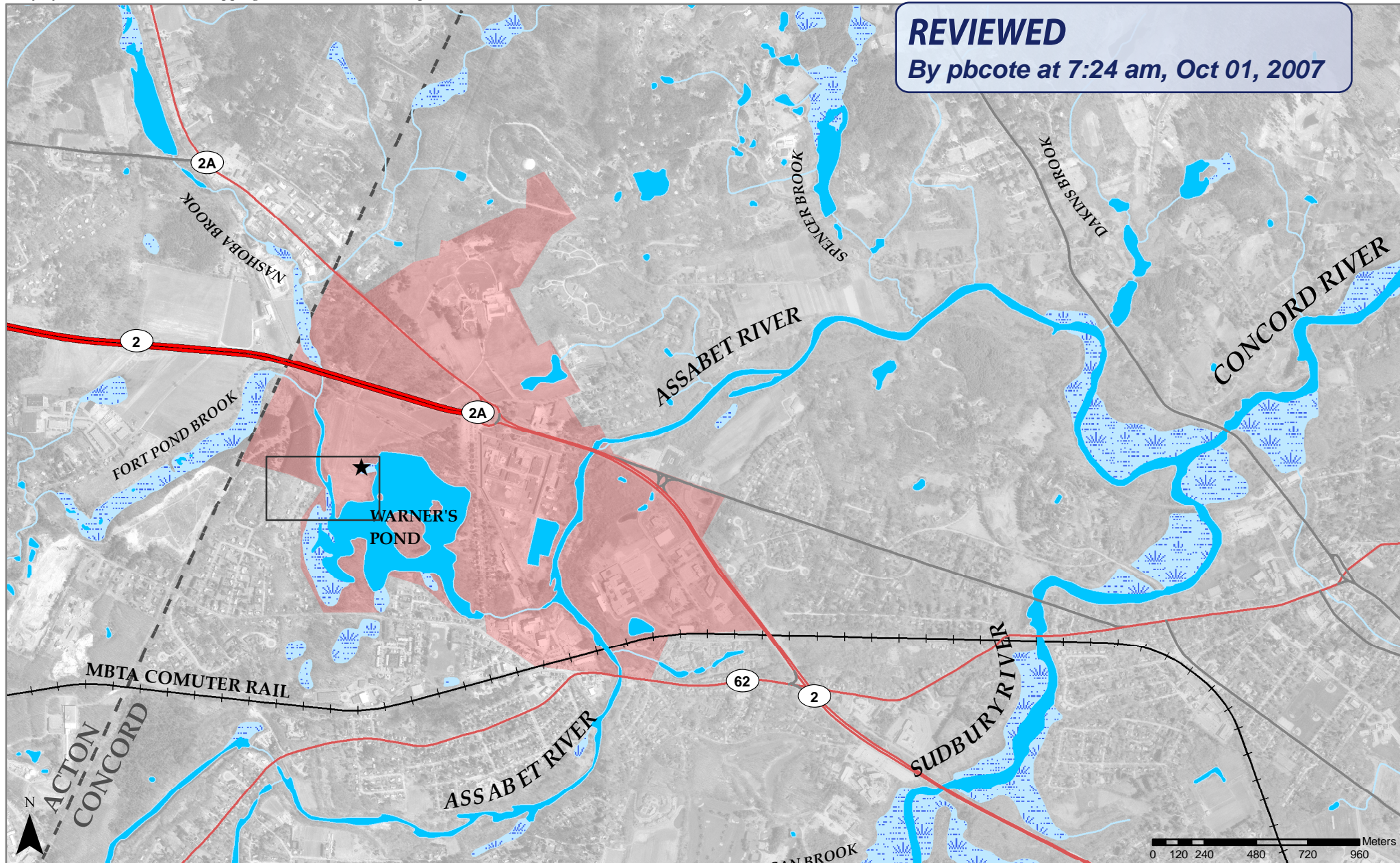


REVIEWED
By pbcote at 7:24 am, Oct 01, 2007



Context Map: 2 Ha Plot Concord, MA

The assigned point is located in the western portion of the studio study area in Concord, Massachusetts. The site lies to the south of Union Turnpike / Route 2 and north of the MBTA commuter rail corridor. It is located on the western bank of Warner's Pond, which collects water from the Nashoba Brook and the Fort Pond Brook to the west. Warner's Pond drains into the Assabet River, which runs northeast to merge with the Sudbury

River from the South, forming the Concord River. Significant wetlands are evident south of the assigned point along Warner's Pond and along Fort Pond Brook to the west. The western edge of the studio study area, about 750 m from the assigned point, corresponds with the boundary between Concord and Acton, MA.

- STUDIO STUDY AREA
- ASSIGNED POINT
- PONDS & RIVERS
- WETLANDS
- STREAMS

SOURCES
Major Roads, MBTA Commuter Rail, MA Town Boundary and Water Bodies: MassGIS 2006
Projection: Massachusetts State Plane Mainland Zone





Topographic Framework 2-Ha Plot

SOURCES
 Residential Buildings: Concord MassGIS
 DEP Wetlands: MassGIS using USGS Digital Line Graphs and Topographic Quadrangle Maps 2005
 Projection: Massachusetts State Plane Mainland Zone

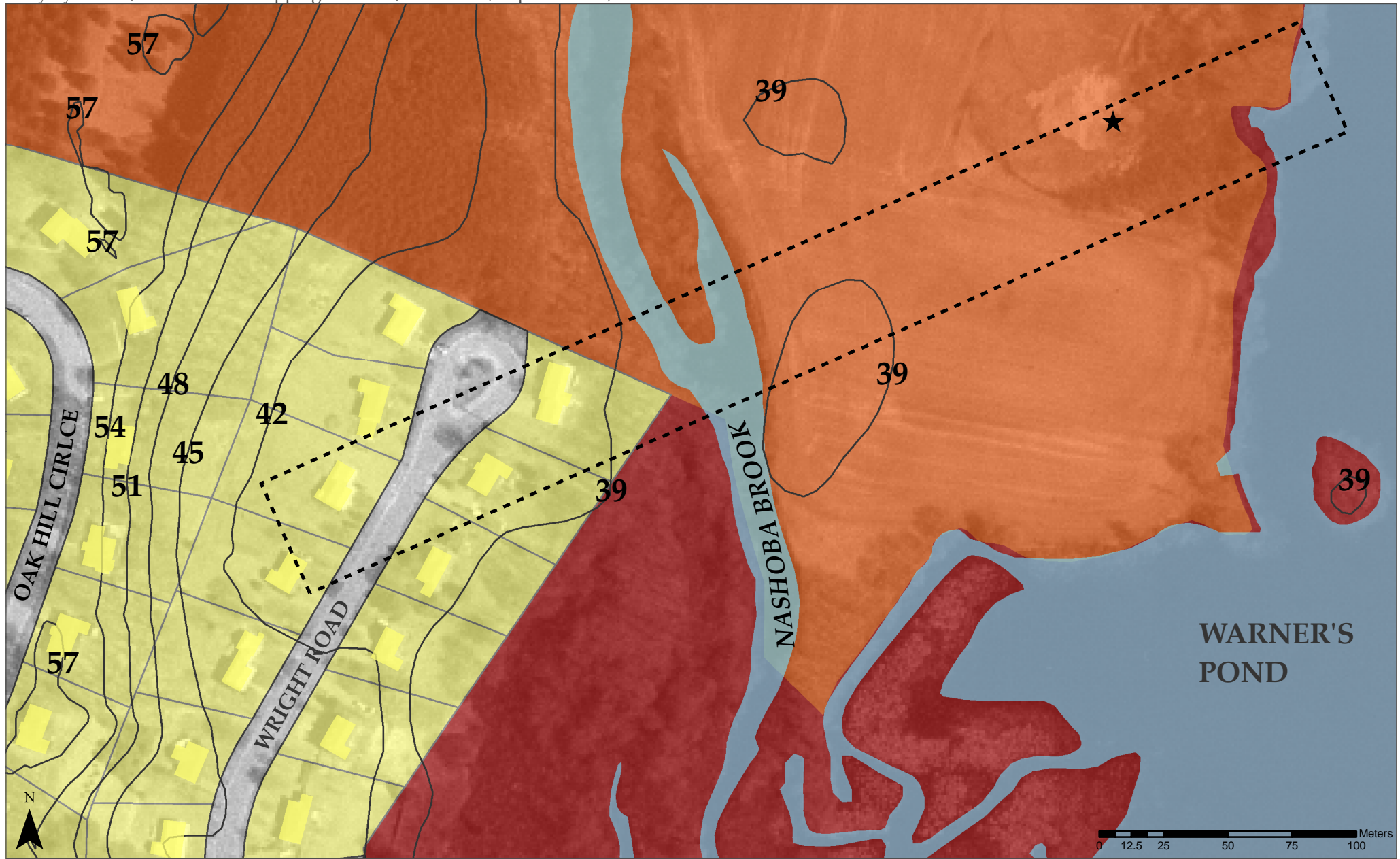
The two-hectare plot around the project site is a rectangular band that includes a residential development to the west, a south-running brook, an agricultural field, and Warner's Pond. Both water bodies are surrounded by wetlands. Riparian wetlands composed primarily of deciduous wooded swamp separate the residential homes on Wright Road from the brook; Warner's Pond is edged by deep marsh as well as

shrub swamp.

The residential homes on Wright Road are organized into a suburban pattern of one- to two-acre plots lining a paved two-lane asphalt road; a private driveway connects each house to the road, and few trees are visible in the front and back lawns.

- ★ ASSIGNED POINT
- 2-HECTARE PLOT
- OPEN WATER
- DEEP MARSH
- SHRUB SWAMP
- DECIDUOUS SWAMP





PUBLIC & PRIVATE PROPERTY

SOURCES
 3 Meter Contours: MassGIS
 Parcel Boundaries: Town of Concord
 Projection: Massachusetts State Plane Mainland Zone

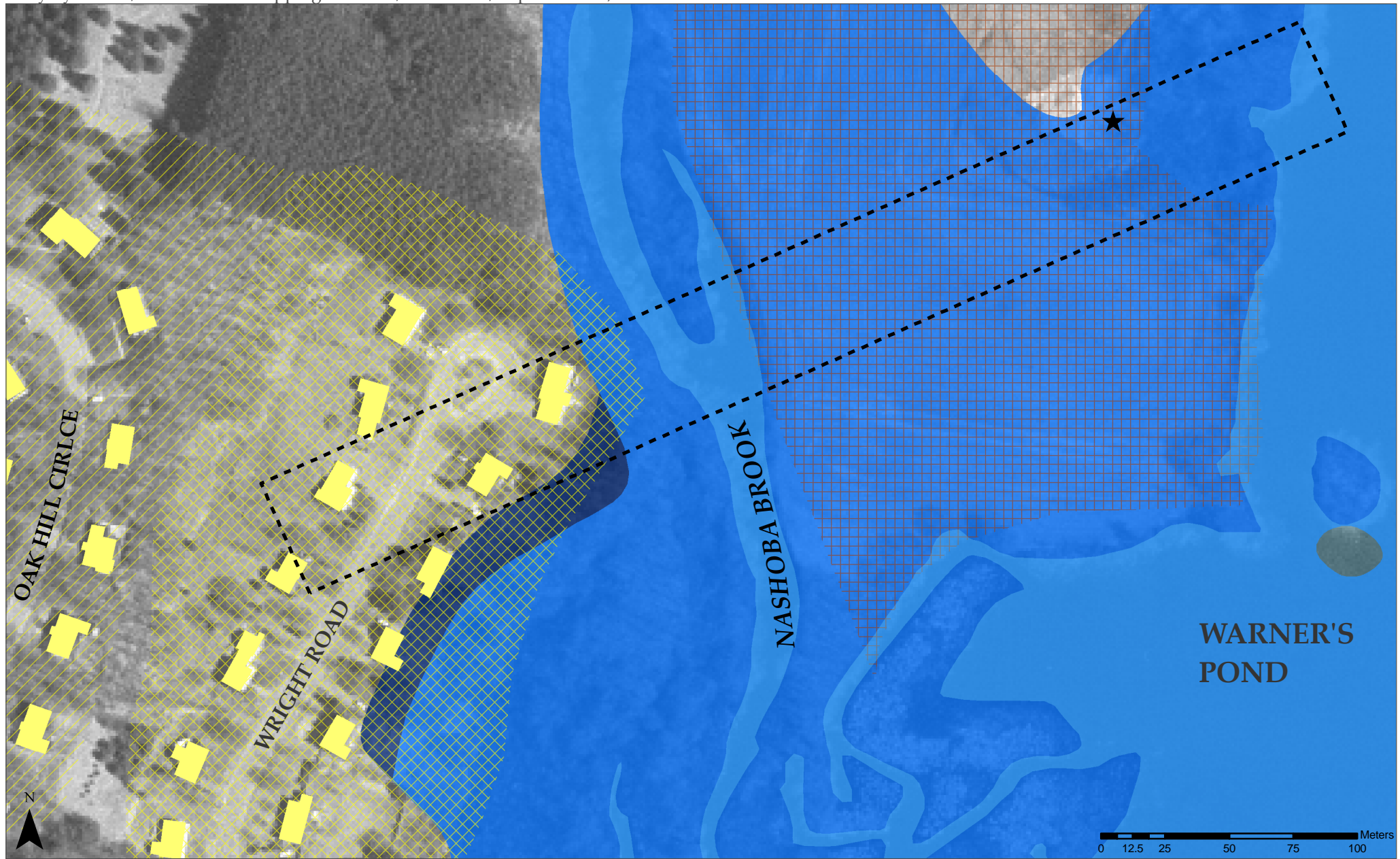


The 2-hectare plot includes land that is both publicly and privately owned. The residential development is all parceled into ¼ hectare private plots; the cropland is jointly owned by the Commonwealth of Massachusetts and the Department of Corrections; and Warner's Pond and its related wetlands are jointly owned by the Town of Concord and the Department of Natural Resources. It appears unlikely that the suburban development

would be able to expand into either the state- or city-owned area.

The slope and aspect of the topography shows that water runs off both the private residences and the public cropland into the Nashoba Brook and Warner's Pond, managed by the Town of Concord and the Dept. of Natural Resources.

- ★ ASSIGNED POINT
- ... 2-HECTARE PLOT
- COM. OF MASS. & DEPT. OF CORR.
- TOWN OF CONCORD & DEPT. OF NAT. RES.
- PRIVATE PROPERTY



Flood Levels & Land Use

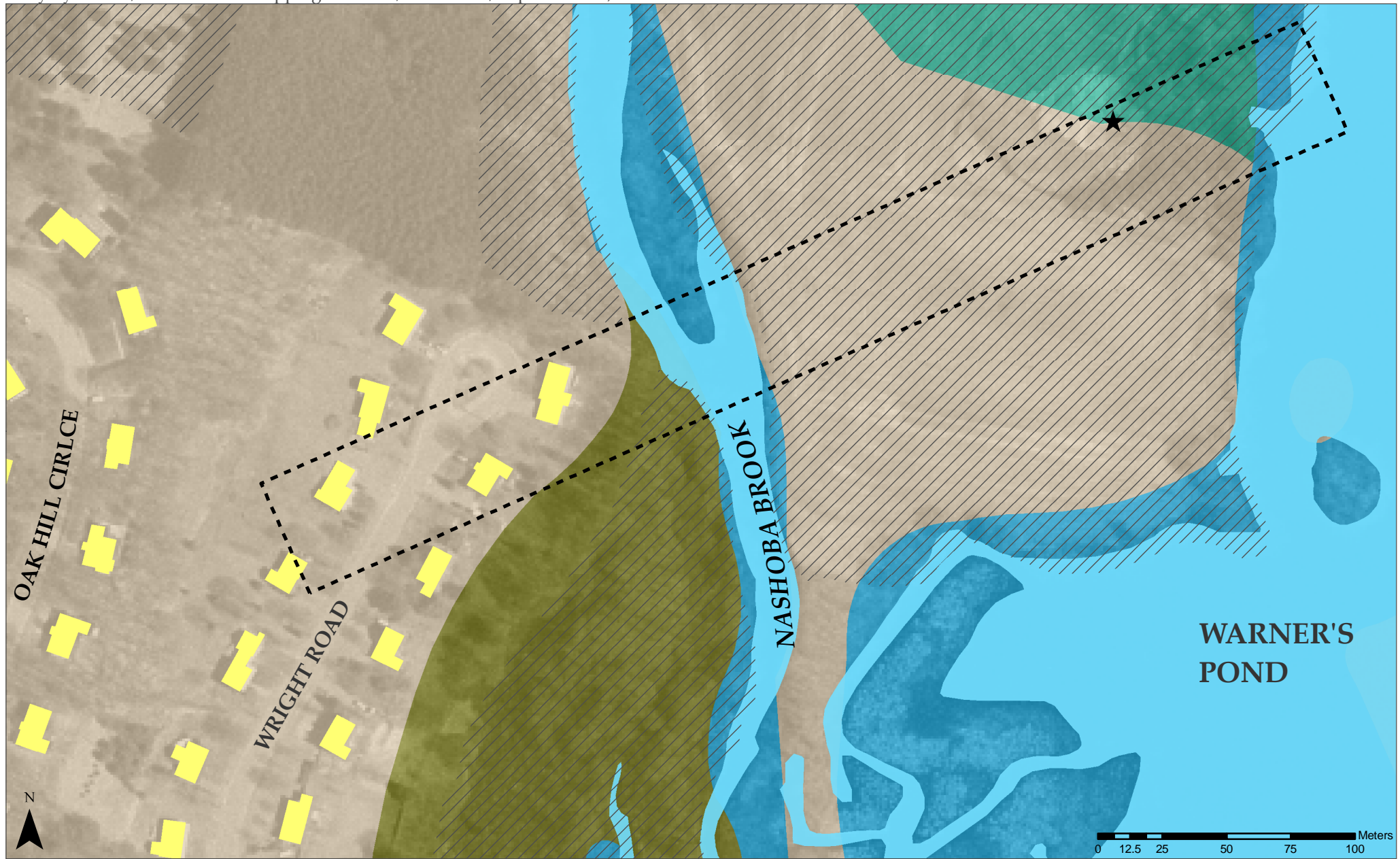
SOURCES
 100- and 500-Year Flood Plain: FEMA, Flood Insurance Rate Maps, July 1997, MassGIS
 Land Use: MassGIS
 Projection: Massachusetts State Plane Mainland Zone

The primary land uses within this 2-ha plot are low- and medium-density residential homes and cropland. The water at both Warner's Pond and the Nashoba River periodically rises usual levels. The 100-year flood plain (1% annual flood risk) reaches about 15 m short of the closest home on Wright Road. The 500-year flood plain (0.2-1% annual flood risk) just reaches the back of two homes on Wright Road.

Although the residential land lies predominantly outside of the flood plain, the crop land is well within the 100-year flood plain, and immediately borders the habitual shorelines of Nashoba Brook and Warner's Pond, suggesting that periodic flooding is well-anticipated for these agricultural lands.

- ★ ASSIGNED POINT
- 2-HECTARE PLOT
- 100-YEAR FLOOD
- 500-YEAR FLOOD
- ++ CROP LAND
- XX MED. DENSITY RES.
- /// LOW DENSITY RES.





Soil Hydrology & Prime Farmland

SOURCES
 Soil Hydrology: Concord, USGS Survey 1967
 Prime Farmland: MassGIS
 Projection: Massachusetts State Plane Mainland Zone

The soils along Nashoba Brook and Warner's Pond are primarily well-drained, with the exception of hydric soils in the wetlands to the south of the 2-hectare plot, and an area that experiences a seasonably high water table to the northeast. Well-drained soils are suitable for both residential development and croplands. However, for reasons that are not identified here, the land occupied by the residential development is not

ideal for farmland. In order to cultivate all prime farmland in this area, the wetlands along the southwest of the Nashoba Brook and the forested woodland to the northwest of the brook would require clearing.



- ★ ASSIGNED POINT
- 2-HECTARE PLOT
- OPEN WATER
- HIGH WATERTABLE
- HYDRIC
- WELL-DRAINED
- /// PRIME FARMLAND