

Site Feasibility Analysis

Great Barrington Affordable Housing Trust

North Plain Road, Great Barrington, MA

April 2020



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Introduction

White Engineering, Inc. in coordination with Construct, Inc. is pleased to assist the Great Barrington Affordable Housing Trust in your evaluation of purchase of the Alden property on North Plain Road. The property is 7.25 acres on the West side of North Plain Road, AKA Route 41. The property contains pervious land neighboring multiple residences. The site is serviced by a curb cut to a wooded lot. The property is bound by residential properties to the North, South and West with North Plain Road as the eastern property boundary. The goal of this report is to identify the existing conditions for the property and evaluate options on how the land could be developed in a manner consistent with the goals of the Great Barrington Affordable Housing Trust.

Review of Zoning Requirements & Options for Development

The proposed lot resides in the R1A zoning district, Medium-Density Residential, and does not lie within any of the protective overlay districts defined in the Zoning By-Laws by the Town of Great Barrington. The Zoning By-Laws for R1A districts allow up to Two-family dwellings in nature and multi-family dwellings up to 8 units with the discretion of the town Board of Selectmen and a special permit. Special Permits are granted in consideration to the social, economic, and communal needs that are served by the proposal as well as maintaining traffic flow and safety, adequate utilities, while minimizing impacts on natural environment and fiscal resources. R1A district requires family dwellings to maintain a minimum lot area of 10,000 square feet, a width of 100', minimum front yard of 25', minimum side yard of 20', minimum rear yard of 30', a height of 35' (2.5 stories), and a maximum lot coverage by buildings of 20%. Generally, in the R1A district each dwelling unit implemented will be required to accommodate 2 parking spaces.

Within the R1A district the Great Barrington By-Laws state that Planned Unit Residential Developments (PURDs) are allowed, PURDs require special permitting from the Board of Selectmen and enable large affordable living complexes to hold a minimum of 10 dwelling units up to 60 under less strict requirements than a typical residence within the R1A district. PURDs require a minimum lot area of 9,000 square feet per dwelling unit with a minimum open space area of 5,000 square feet and maximum building coverage on the lot of 20%. Additionally, distance between principle buildings shall be a minimum of 50' and one- or two-family dwelling units shall abide by a minimum distance of 20'. Enclosing walls of all buildings within a PURD shall maintain a distance of at least 20' from any roadway, 10' to any parking area, and 50' to all property lines.

Review of Environmental & Soil Conditions

In order to evaluate the property, White Engineering, Inc. utilized MassGIS to confirm the designations of the property. The proposed project site is not located within an Area of Critical Environmental Concern (ACEC). The lot is located outside of the limits of the 100 Year Flood Plains of the Williams River. MassGIS dos not indicate the presence of any bordering vegetated wetlands nor does there appear to be any evidence of jurisdictional wetlands under

the Wetland Protection Act. There are no mapped vernal pools or potential vernal pools. The property does not fall within mapped Estimated Habitat or Priority Habitat . Soil within the property is listed as Copake Fine Sandy Loam 0-3% slopes from Berkshire Soil Survey. This soil is favorable for the purposes of on-site septic systems and storm water management due to the drainage properties and deep-water table. Percolation tests and observation holes per Title 5 Inspection were completed but have not been provided to White Engineering, this data is publicly available via the Board of Health. Observations of properties North and South of this site along North Plain Road have seen septic systems installed with the top of the leachfield flush with grade indicating a water table that was deep enough to not require a mounded system to provide the required separation to the estimated seasonal high water table per Title 5, the State Sanitary Code.

Review of Utilities

The proposed project will have access to water via the Housatonic Water Works system that services the neighborhood. Currently there is no municipal sewer within North Plain Road with the closest location to connect being at the intersection of Main Street & Oak Street. As noted during the discussion of soils that there appear to be favorable soils found on-site for private septic systems. There are a number of items that will impact the site design if septic systems are utilized. The first and most important relevant to site design is the amount of space they will take up as well as the need to potentially clear more open space to accommodate the septic systems. Per Title 5 each residence would need to have perc tests and soil evaluations completed for the area where the leachfield will be built plus another area known as the reserve area which will be tested and left untouched for use should the original septic system fail. While the water system does ease the restrictions in not needing to account for drilled wells the septic systems would, depending on desired density have the potential to either restrict the amount of units on-site or at a minimum require a greater coverage of the land via having to provide room for the septic systems and reserve areas.

A connection to the sewer manhole would provide the ability for leach fields to be avoided completely and provide a situation that is more environmentally protective as well as providing a future developer the maximum flexibility to design a project with clustering in mind and greater flexibility to provide stormwater management on-site. This sewer connection as well as other infrastructure costs could be an ideal candidate for the MassWORKS Infrastructure Grant program. A recent example of this is our firm in coordination with the City of Pittsfield and Central Berkshire Habitat for Humanity obtained a MassWORKS grant in 2017 that covered the costs of constructing a common driveway, water, sewer and stormwater infrastructure to accommodate the Gordon Deming Village development.

For the Alden property the sewer connection would ultimately require the use of sewage pump station(s) to connect our property to the town sewer manhole. My recommendation would be the use of a low-pressure grinding pump station as this would allow for the property to comply with the recent requirements for sewer connections to have either inline grinders for gravity sewer connections or grinding pump stations. The low-pressure system would also allow for the system to potentially be connected to by other homes within the neighborhood. This would require a great deal of coordination with the neighbors and the Town of Great Barrington in how the system would be designed for future expansion as well as site design on behalf of the developer of the Alden property to ensure sufficient easements are accounted for that would allow for sewer lines to enter our property to be connected to the town sewer via our connection. What is important to note is that if the Alden property were to be connected to the municipal sewer it would be helpful in facilitation of connecting the neighborhood at a later date.

On April 17, 2020 June Wolfe of Construct, Inc. and I had the opportunity to walk the Alden property as well as the streets surrounding the Alden property. We noted areas where neighbors had shared concerns about stormwater management. While survey work would need to be completed along with coordination of site design on the Alden property and cooperation with neighbors on the granting of easements it appears possible that the Alden property could provide relief to some existing drainage concerns within the neighborhood. Along with the easements there would be coordination with the Town of Great Barrington on approval of such concepts as they currently own the existing stormwater management system and any on-going maintenance requirements would need to be identified between the developer of the Alden property and the Town.

Review of Driveway & Traffic

Currently the lot consists of vacant land with no pre-existing structures but does have an existing curb cut for access to the site. The existing curb cut location was likely chosen due to the minimal grade change coming off North Plain Road into the site. I would not recommend the use of the current curb cut location for future use of a subdivision road or common driveway for a number of reasons. First and foremost is the insufficient site distance looking to the North based upon the vertical curvature (hill) of North Plain Road heading North of the site. This makes existing the site difficult as well as makes those vehicles difficult to see from vehicles travelling South on the road. The current curb cut is also directly across from an existing driveway.

To address this concern I believe access to the lot should be provided by a new curb cut on North Plain Road between 391 and 383 North Plain Road. This would result in the curb cut being shifted approximately 100' north from the current curb cut which would result in the driveway coming off North Plain Road at the crest of the hill and avoiding conflict with a driveway on the opposite side of North Plain Road.

This new location will provide ample site distance to the north and south resulting in greater vehicle safety for entry and exit to the site as well as traffic along North Plain Road to see traffic coming in and out of the new curb cut. Crash reports from the online MassDOT inquiry tool show that in total, 3 accidents occurred along North Plain Road north of the proposed lot over the course of 2015 – 2020. All accidents were non-fatal and single vehicle but resulted in damages to nearby properties.

A 2019 study on daily traffic along North plain Road from the MassDOT Transportation Data Management System online tool shows an annual average daily traffic (AADT) of 2760 vehicles per day with peaks of 240 vehicles at 07:30 – 08:30, and 277 vehicles at 15:30 – 16:30. Average northbound trips show 1371 vehicles (49.7% of AADT) and average southbound trips show 1389 vehicles (50.3% of AADT). The average range of speeds by these vehicles along North Plain Road was 40mph – 50mph. Data from a 2018 study compared against the 2019 study used shows that there was 0% increase in traffic over the year, and a 2% increase in traffic between 2013 and 2018. For the purposes of evaluation if 16 units were developed on the site the number of daily trips would be approximately 70 trips per day and would result in an approximate 2.5% increase in traffic along North Plain Road. The actual percentage increase will be dictated based upon the final number of units proposed for development.

One concern I understand that has been raised during neighborhood meetings was with respect to speed on North Plain Road. During my evaluation I noted that the closest speed limit sign in either direction is North of Samantha Lane along Route 41 in West Stockbridge. In order to address an existing concern of the neighborhood as well as to help facilitate the proposed development I would recommend a proposal to develop the site include working with the Great Barrington DPW Superintendent to allow for the installation of additional speed limit signs in closer proximity to the intersection of North Plain Road and Main Street and possibly consider using the solar-powered radar speed signs. Throughout Berkshire County they have become more prominent and used in locations such as the entrance to downtown Lenox via Route 7A as well as passing the Richmond Elementary School further North along Route 41 as examples. While relocation of the curb cut would help address concerns on the Alden property the speed signs could help to address overall concerns of speeding in the area.

Conclusion

Overall it is my belief that the Alden property is suitable for use in the development of affordable housing. Understanding that there may be various ways a developer may choose to develop the lot will influence the desired path the permitting such a project. If the a traditional subdivision were proposed I would envision a subdivision road designed to town standards where the lots are developed and sold off to each homeowner with the town eventually taking over ownership of the road in utilities. My feelings are this option would provide the developer less flexibility to address neighborhood concerns. If the project is permitted via a Special Permit and common areas such as the roadway, sewer pump stations are owned and maintained by the association that may allow for greater flexibility in the design of the site to ensure sufficient housing is provided, provide as much of a natural buffer and preservation of open space on the perimeter of the project site. I also understand the success of fundraising and awarding of grants may influence how the property may be developed. As you develop plans for the property I would strongly encourage reference be made to Section 10.5.5 of the Great Barrington Zoning Bylaw for the criteria for which a project would be evaluated.

- a. Minimize the volume of cut and fill, the number of removed trees 6" caliper or larger, the length of removed stone walls, the area of wetland vegetation displaced, the extent of stormwater flow increase from the site, soil erosion, and threat of air and water pollution.*
- b. Maximize accessibility and pedestrian and vehicular safety, both on the site and accessing and exiting the site.*
- c. Minimize obstruction of scenic views from publicly accessible locations.*

The proposed lot does not encompass any scenic view or protected areas, shown in the Exhibits provided by White Engineering and Zoning Map set by the Town of Great Barrington.

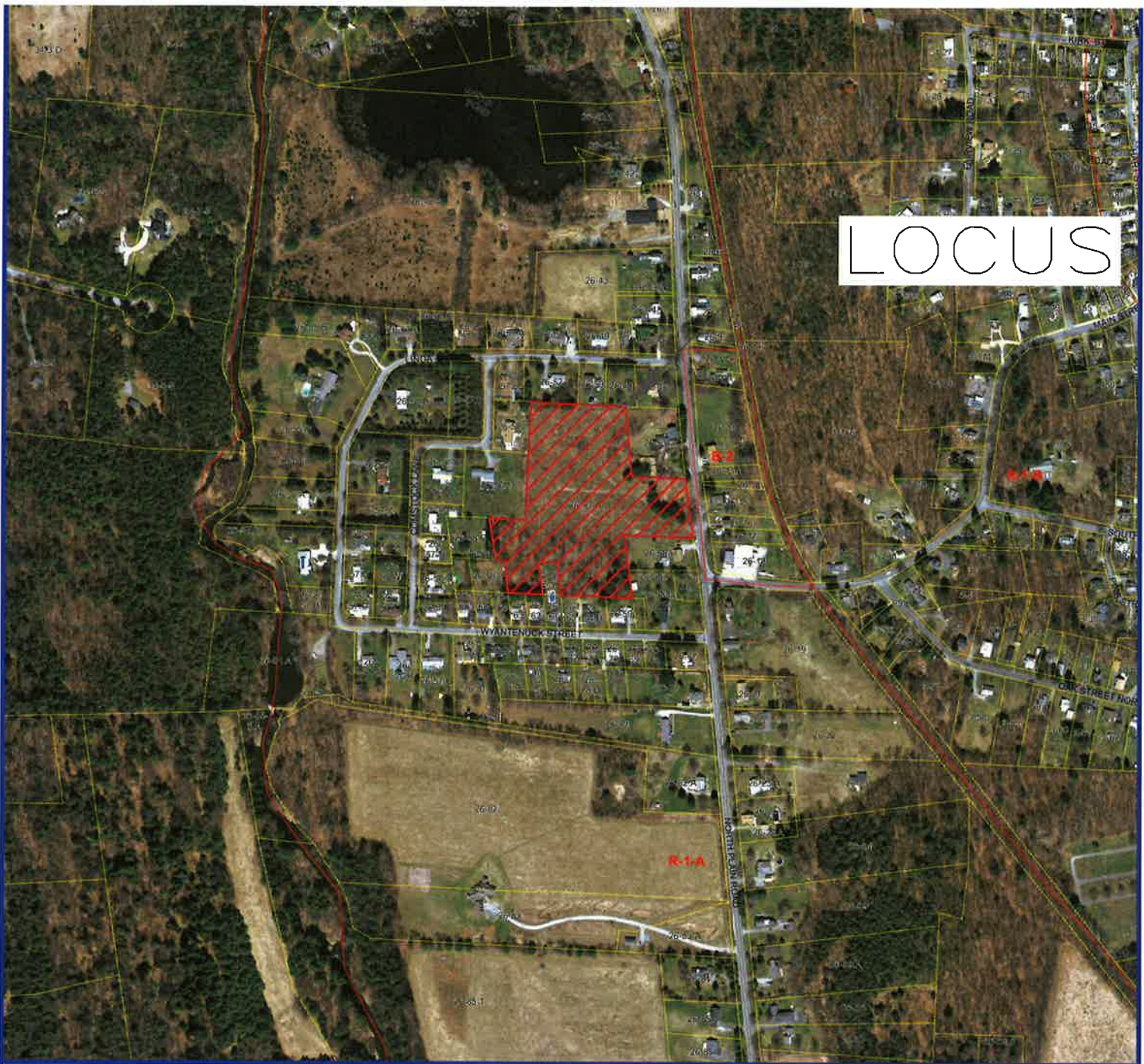
- d. Minimize visual intrusion by controlling the visibility of parking, storage, or other outdoor service areas viewed from public ways or premises residentially used or zoned.*
- e. Minimize glare from headlights, minimize light glare into the night sky, and minimize overspill into adjacent properties.*
- f. Minimize unreasonable departure from the character, materials, and scale of buildings in the vicinity, as viewed from public ways and places.*
- g. Minimize contamination of groundwater from on-site waste-water disposal systems or operations on the premises involving the use, storage, handling, or containment of hazardous substances.*
- h. Ensure compliance with the provisions of this Zoning Bylaw, including parking and landscaping.*

I would like to thank Construct, Inc. and the Great Barrington Affordable Housing Trust for the opportunity to assist in the evaluation of the Alden property. With the existing infrastructure in place and a collaborative effort with the Trust, a future developer and the Town of Great Barrington this property has the opportunity to provide needed housing in Berkshire County. Should you have any questions on the contents of this report please don't hesitate to contact my office.



Brent M. White, MCE, PE, LEED AP

Principal



LOCUS

TOWN ASSESSORS MAP
FOR
GREAT BARRINGTON
AFFORDABLE HOUSING TRUST

0 NORTH PLAIN ROAD

GREAT BARRINGTON, MA



WHITE ENGINEERING INC.

CIVIL & ENVIRONMENTAL

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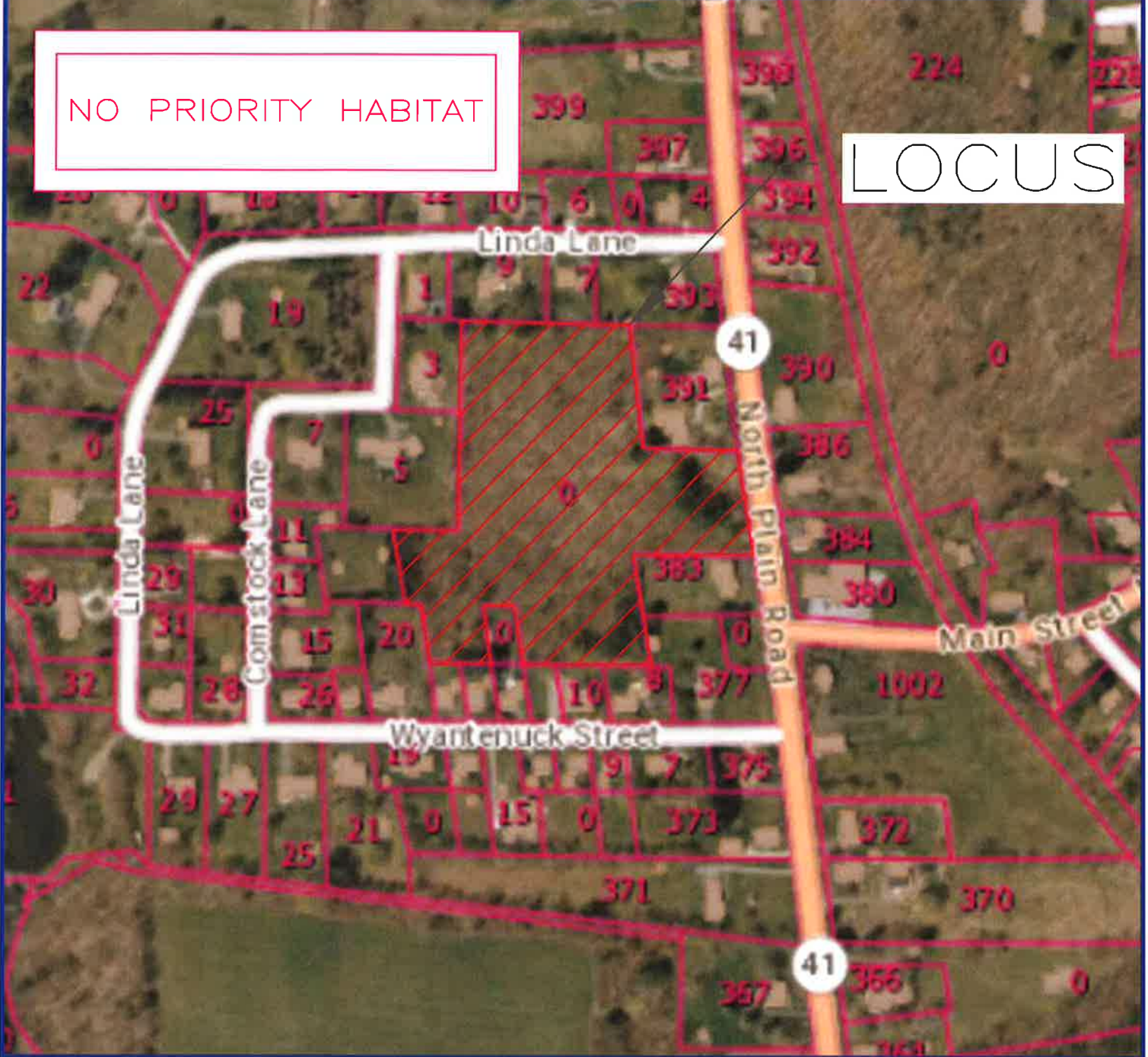
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DATE: MARCH 30, 2020	DR'N: MCL	AP'VD: SDB/BMW	DWG NO: TBD
DS'GN: SDB	CK'D: SDB/BMW	SCALE: N.T.S.	

NO PRIORITY HABITAT

LOCUS



LEGEND:

— NHESP PRIORITY HABITATS FOR STATE PROTECTED RARE SPECIES

NHESP PRIORITY HABITATS FOR GREAT BARRINGTON AFFORDABLE HOUSING TRUST

0 NORTH PLAIN ROAD

GREAT BARRINGTON, MA



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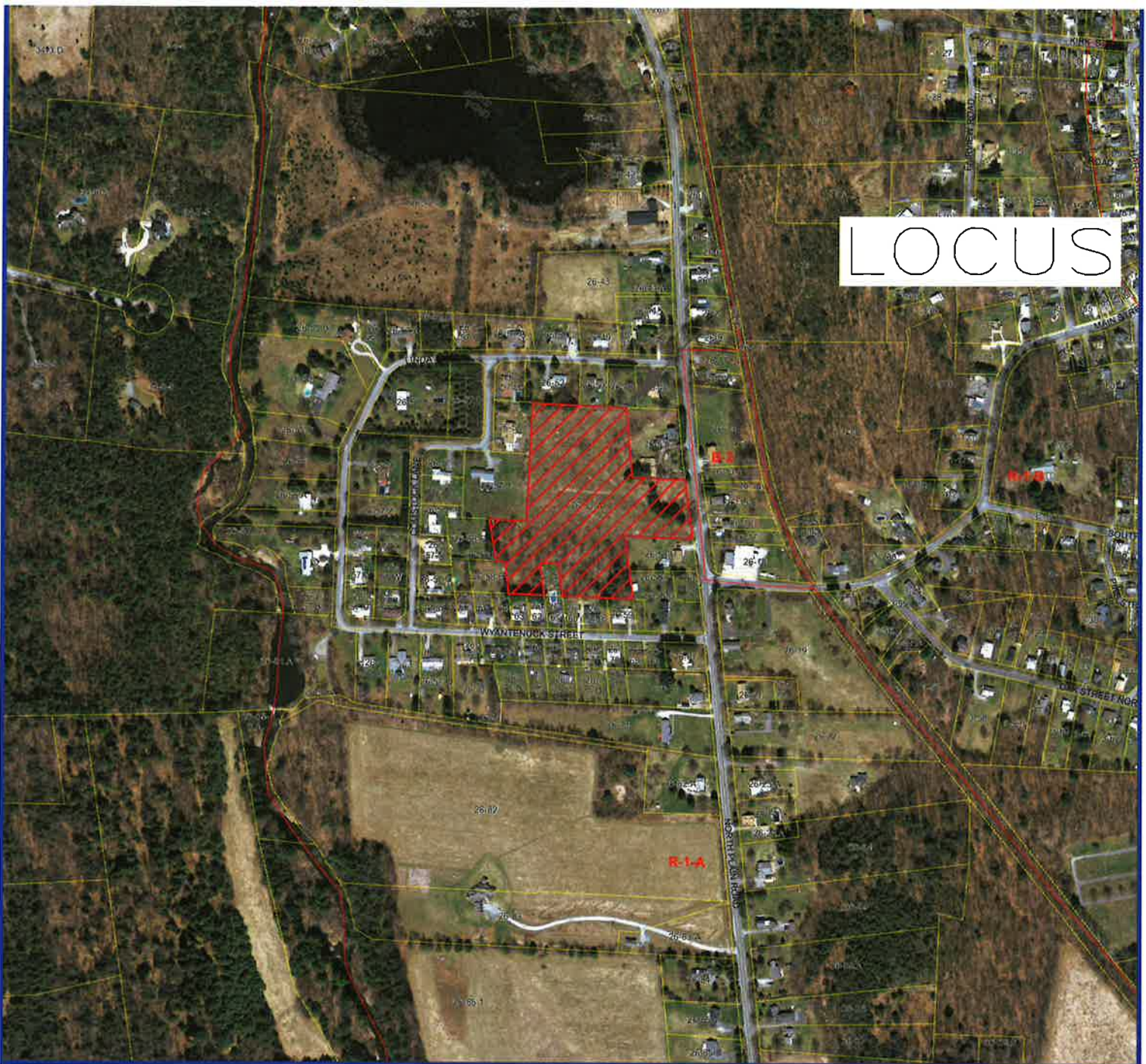
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LOCUS

TOWN ASSESSORS MAP
FOR
GREAT BARRINGTON
AFFORDABLE HOUSING TRUST

0 NORTH PLAIN ROAD

GREAT BARRINGTON, MA



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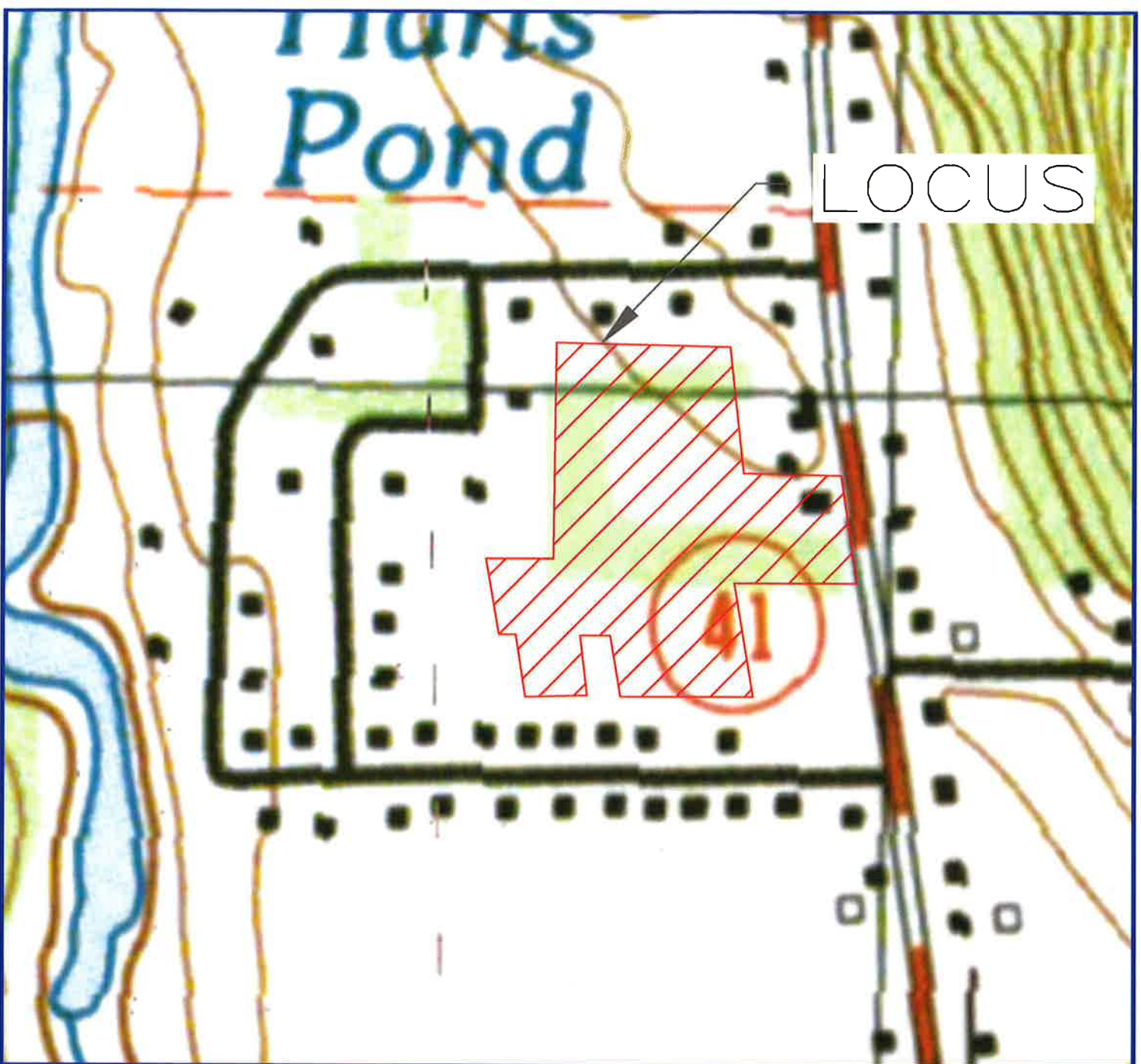
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USGS MAP
FOR
GREAT BARRINGTON
AFFORDABLE HOUSING TRUST

0 NORTH PLAIN ROAD

GREAT BARRINGTON, MA



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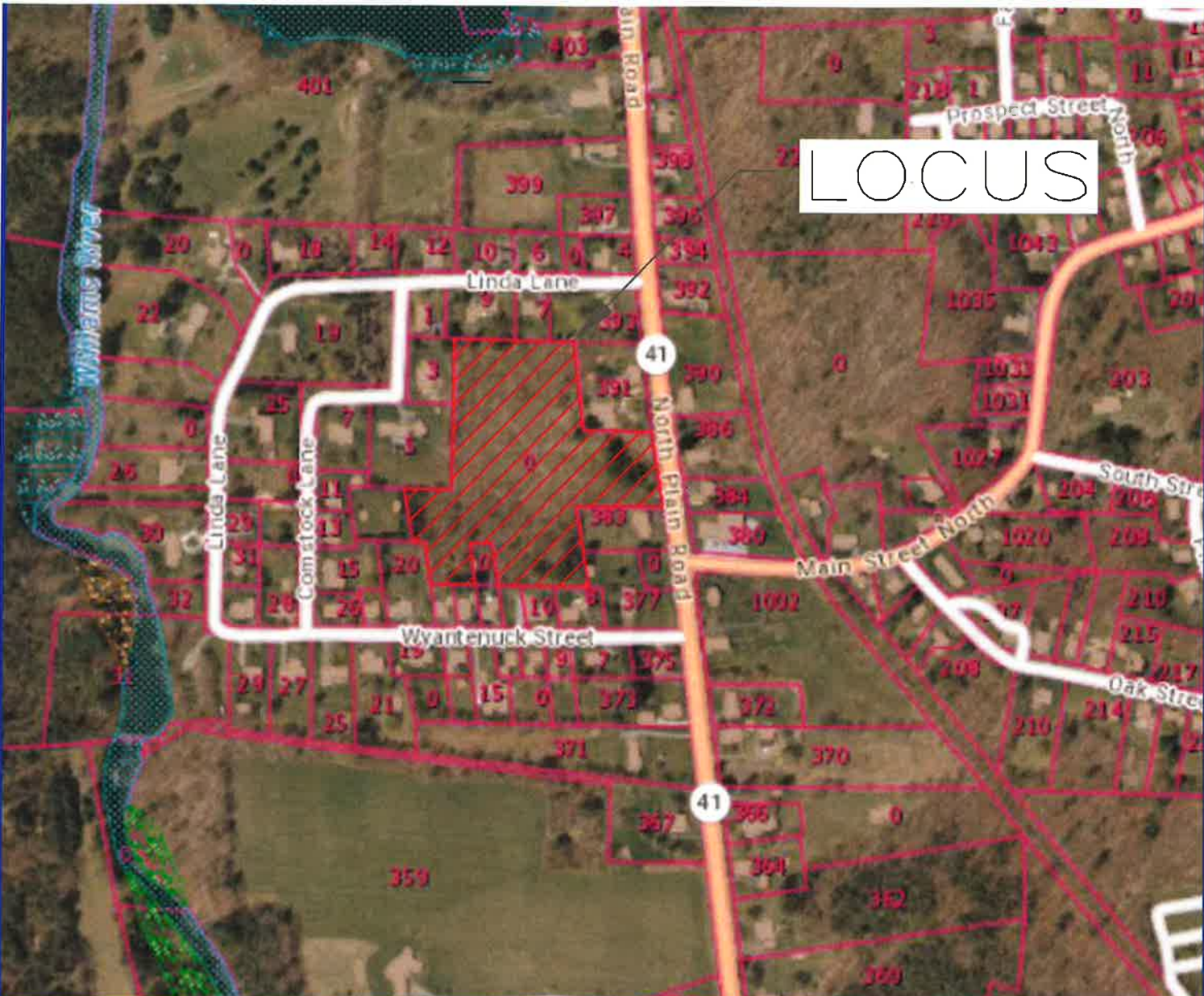
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LOCUS



WETLANDS 12 K MAP
FOR
GREAT BARRINGTON
AFFORDABLE HOUSING
TRUST

LEGEND:

- Barrier Beach System
- Barrier Beach-Deep Marsh
- Barrier Beach-Wooded Swamp Mixed Trees
- Barrier Beach-Coastal Beach
- Barrier Beach-Coastal Dune
- Barrier Beach-Marsh
- Barrier Beach-Salt Marsh
- Barrier Beach-Shrub Swamp
- Barrier Beach-Wooded Swamp Coniferous
- Barrier Beach-Wooded Swamp Deciduous
- Bog
- Coastal Bank Bluff or Sea Cliff
- Coastal Beach
- Coastal Dune
- Cranberry Bog
- Deep Marsh
- Barrier Beach-Open Water
- Open Water
- Rocky Intertidal Shore
- Salt Marsh
- Shallow Marsh Meadow or Fen
- Shrub Swamp
- Tidal Flat
- Wooded Swamp Coniferous
- Wooded Swamp Deciduous
- Wooded Swamp Mixed Trees

0 NORTH PLAIN ROAD GREAT BARRINGTON, MA

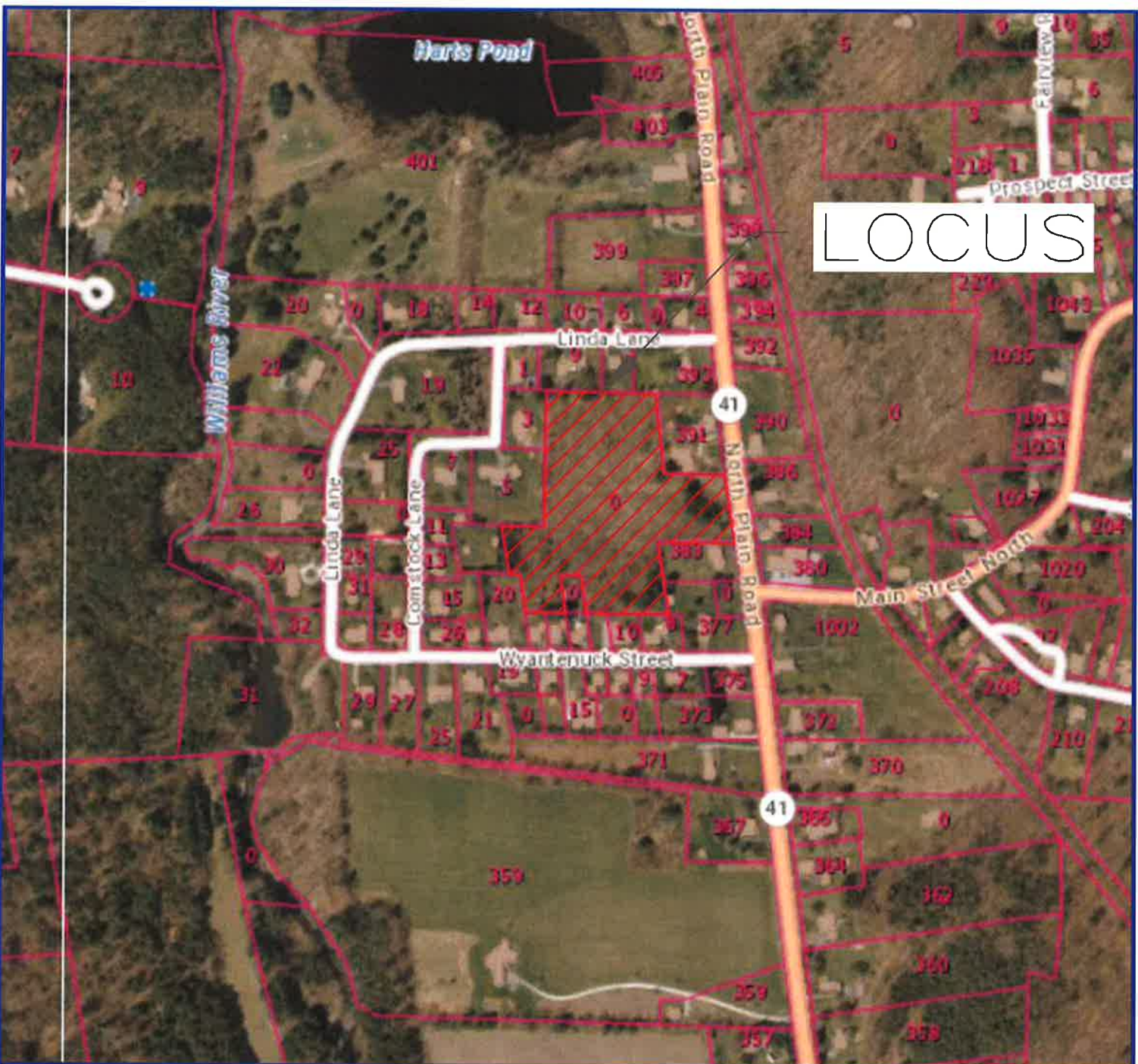


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LOCUS

 CERTIFIED
VERNAL
POOL

CERTIFIED VERNAL POOLS
FOR
GREAT BARRINGTON
AFFORDABLE HOUSING TRUST

0 NORTH PLAIN ROAD

GREAT BARRINGTON, MA



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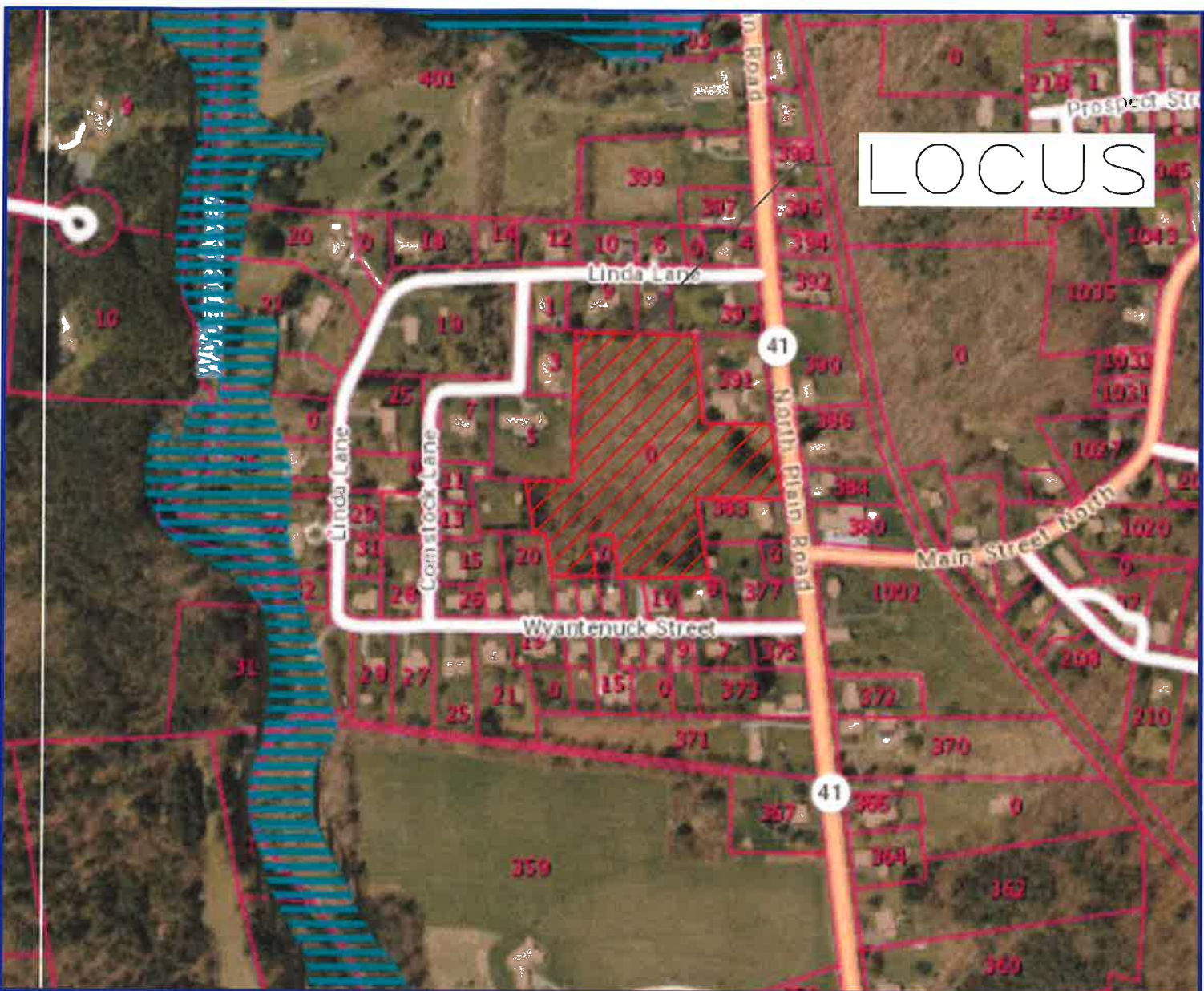
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TBD



LOCUS

LEGEND:

-  A
-  AE
-  AE Floodway
-  AH
-  AO
-  D
-  VE
-  Area Not Included
-  X500

FEMA FLOOD ZONES
FOR
GREAT BARRINGTON
AFFORDABLE HOUSING
TRUST

0 NORTH PLAIN ROAD

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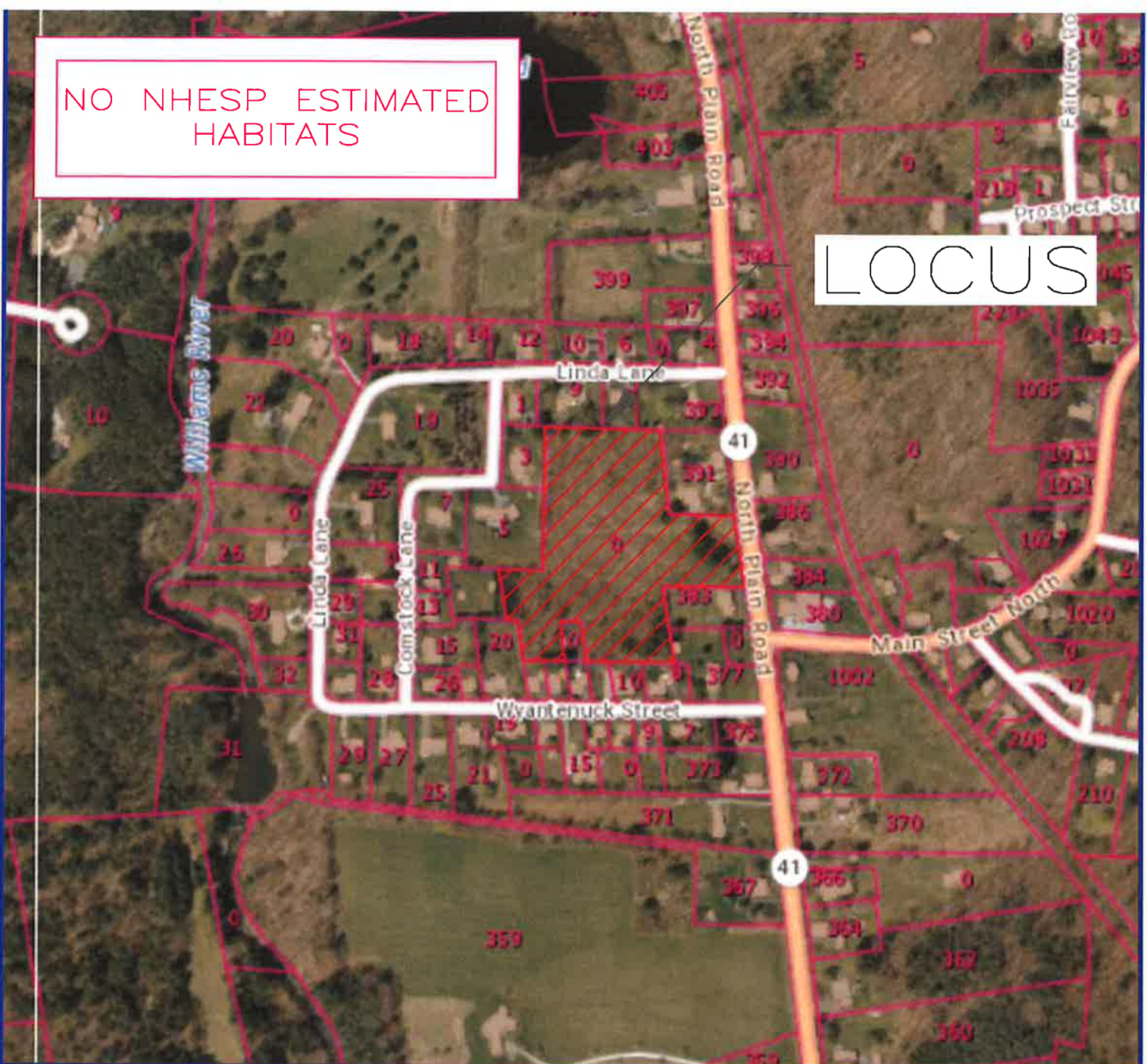
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NO NHESP ESTIMATED HABITATS

LOCUS



LEGEND:

— NHESP ESTIMATED HABITATS OF RARE WILDLIFE

NHESP ESTIMATED HABITATS FOR GREAT BARRINGTON AFFORDABLE HOUSING TRUST

MARCH 30, 2020

GREAT BARRINGTON, MA



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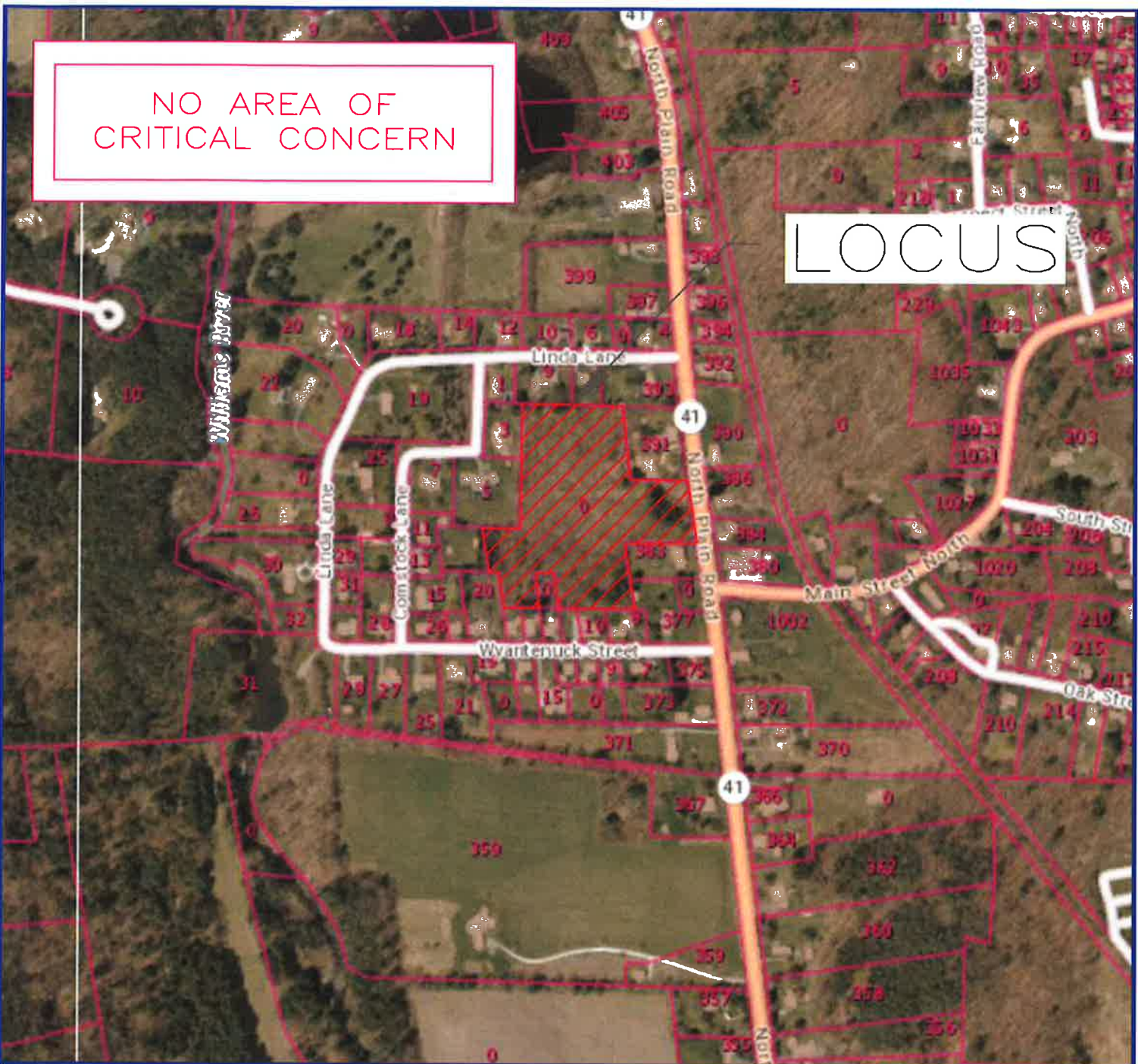
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NO AREA OF
CRITICAL CONCERN

LOCUS



— AREA OF
CRITICAL
ENVIRONMENTAL
CONCERN

ACEC MAP
FOR
GREAT BARRINGTON
AFFORDABLE HOUSING TRUST

0 NORTH PLAIN ROAD

GREAT BARRINGTON, MA



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NHESP POTENTIAL VERNAL POOLS
 FOR
 GREAT BARRINGTON
 AFFORDABLE HOUSING TRUST

0 NORTH PLAIN ROAD

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ORTHO PHOTO
FOR
GREAT BARRINGTON
AFFORDABLE HOUSING TRUST

0 NORTH PLAIN ROAD

GREAT BARRINGTON, MA



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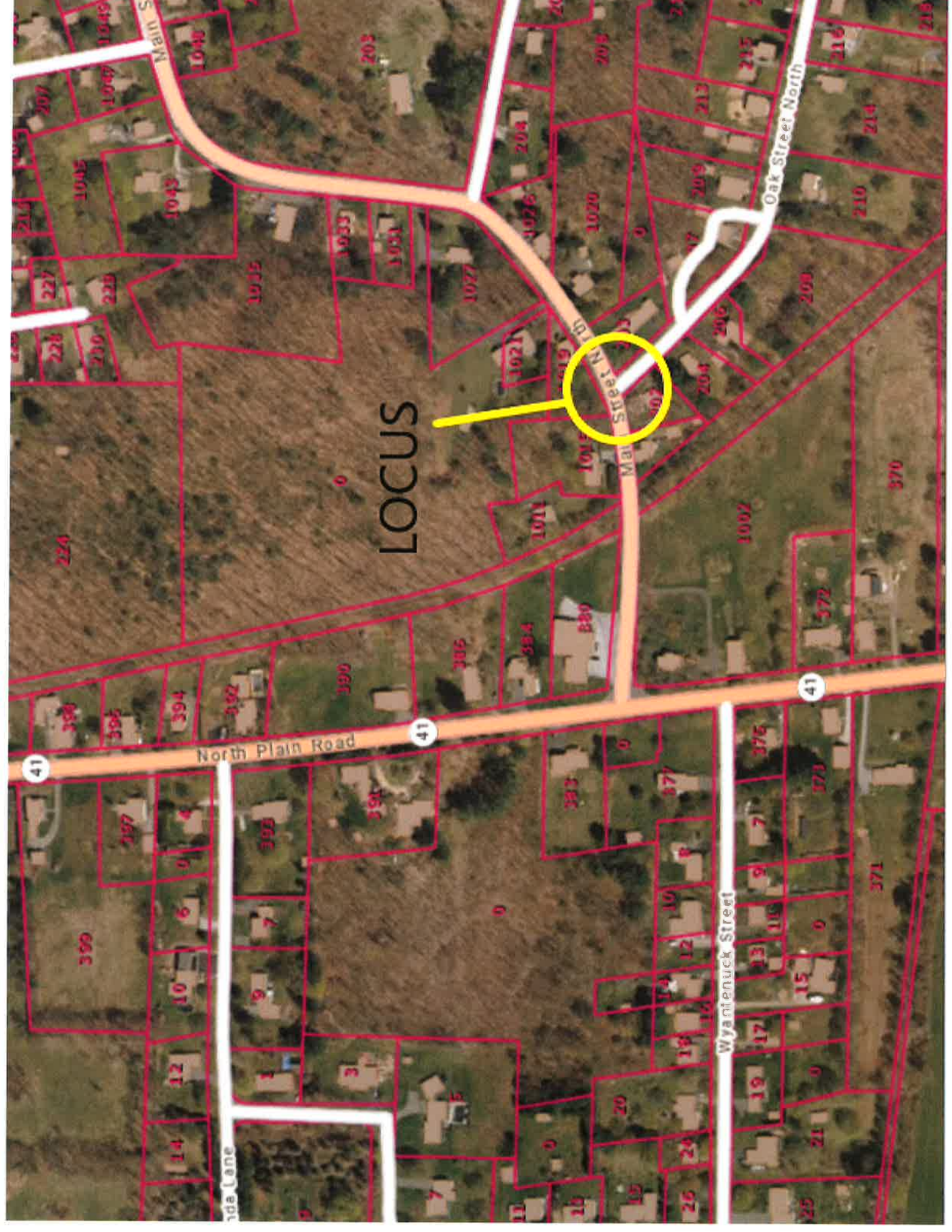
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SCALE: N.T.S

TBD



LOCUS

41

41

41

North Plain Road

Main St

Oak Street North

Wyamienuck Street

side Lane

MANHOLE LOCUS

SEED LOT

