

## **J. Wetland, Habitat, and Groundwater Maps and Exhibits**

The following, including the attachments below, provides documentation regarding site characteristics and constraints.

- **Floodplain**
  - The two FEMA maps (map number 25017C0366F and map number 25017C0358F) attached below highlight that the project site is not located within any flood area zones
  
- **Wetlands**
  - The GIS map attached below highlights that the project site is not located within any wetland areas or wetland buffer zones
  
- **Groundwater Conservancy District**
  - The GIS map below highlights that the project site is located within the Groundwater Conservancy zoning district established in the Town of Concord zoning bylaws (Section 7.6). This district does not impose any use restrictions that this proposed project would violate. Furthermore, only ~40% of the 13.3 acre site would be located within this district. As evidenced by the 40B project located directly to the south of the Club's site, The Prescott, which is entirely within this conservancy district, the development anticipates no issues or restrictions caused by this district.
  
- **MassWildlife's Natural Heritage Atlas**
  - As seen in the Massachusetts Division of Fisheries & Wildlife - Natural Heritage & Endangered Species Program's Priority Habitats and Estimated Habitats map, the Project Site is not located within areas labeled as a Priority Habitat of Rare Species or Estimated Habitat of Rare Wildlife.
  
- **Areas of Critical Environmental Concern**
  - As indicated on the attached Massachusetts GIS map, the Project Site is not located within areas labeled as Areas of Critical Environmental Concern ("ACECs").



**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage or other flood risks. The community map preparer should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **Floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Elevation Tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2 of "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Massachusetts State Plane Mainland Zone (IPSS zone 2001). The horizontal datum was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geospatial Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geospatial Survey website at <http://www.ngs.noaa.gov> or contact the National Geospatial Survey at the following address:

NGS Information Services  
 NOAA, NWS/512  
 National Geospatial Survey  
 SSAC-3 #5002  
 1315 East-West Highway  
 Silver Spring, Maryland 20910-3282  
 (301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geospatial Survey at (301) 713-3242 or visit its website at <http://www.ngs.noaa.gov>.

**Base map** information shown on the FIRM was derived from orthophotography provided by MassGIS at a scale of 1:500 from photography dated April 2008.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

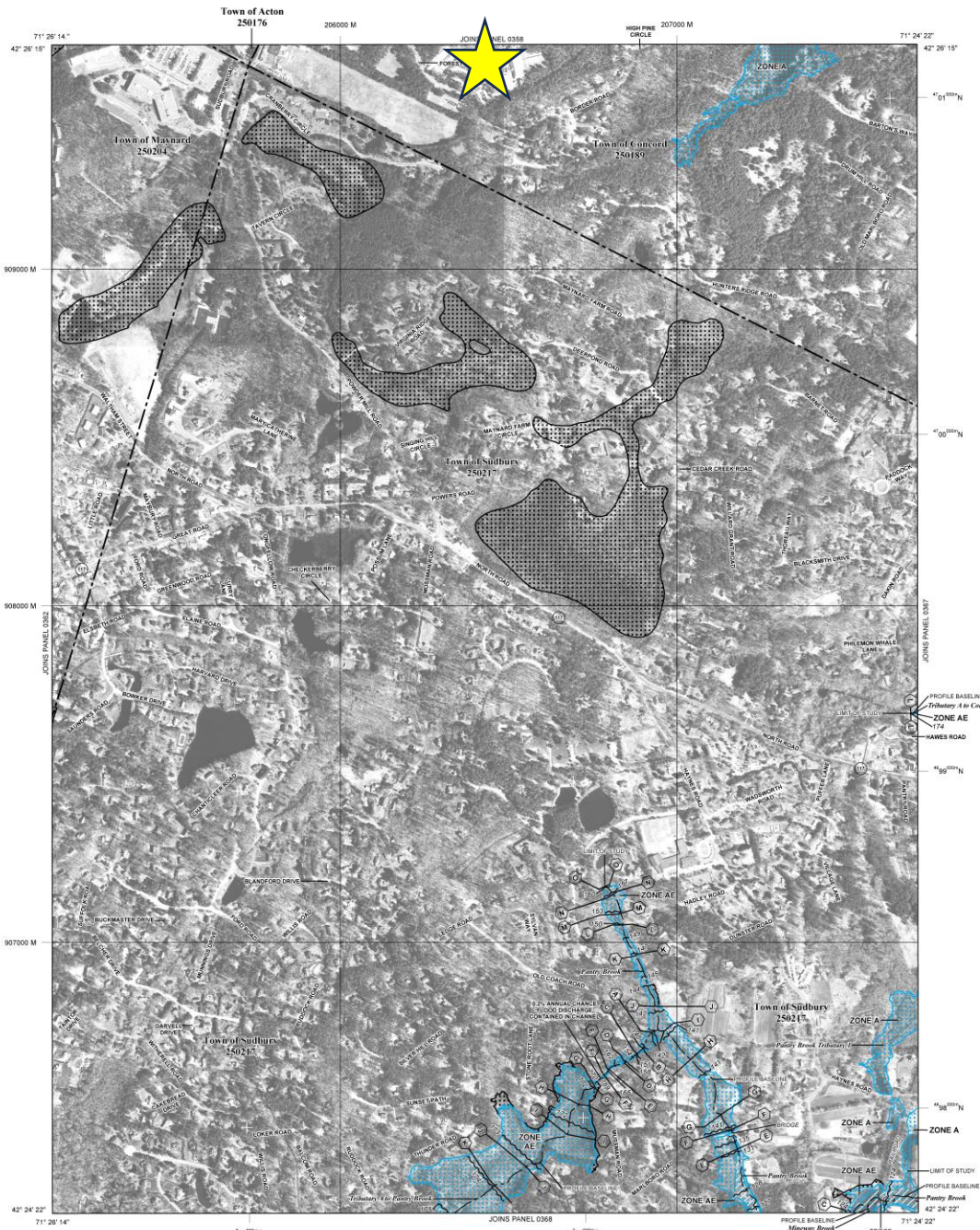
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel changes that differ from what is shown on this map.

**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with the FIRM visit the **Map Service Center (MSC)** website at <http://msc.mafacounty.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/businessinfo/>.



**LEGEND**

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**  
 The 1% annual chance flood (100-year flood) also known as the "base flood," is the flood that has a 1% chance of occurring in any given year. The special flood hazard areas subject to flooding by the 1% annual chance flood are: Areas of Special Flood Hazard (Zone A, AE, AC, AO, AH, and VE); The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.
- ZONE A** No Base Flood Elevations determined.
  - ZONE AE** Base Flood Elevations determined.
  - ZONE AH** Flood depths of 1 to 3 feet (usually shear from ponding); Base Flood Elevations determined.
  - ZONE AO** Flood depths of 1 to 3 feet (usually shear from slugging terrain); average depths determined; for areas of elevated flow flooding, widths also determined.
  - ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently identified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
  - ZONE A99** Areas to be protected from the 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
  - ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
  - ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE**  
 The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS**
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile and are protected by levees from the 1% annual chance flood.
  - OTHER AREAS** Areas determined to be outside the 0.2% annual chance floodplain.
  - ZONE D** Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**  
 CBRS areas and CBRS are normally located within or adjacent to Special Flood Hazard Areas.
- OTHERWISE PROTECTED AREAS (OPAs)**  
 OPAs areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% Annual Chance Floodplain Boundary
  - 0.2% Annual Chance Floodplain Boundary
  - Floodway boundary
  - Zone D boundary
  - Zone D and OPA boundary
  - Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, Flood Depths, or Flood Velocities.
  - Base Flood Elevation line and value; elevation in feet (e.g. 10.0)
  - Base Flood Elevation value where uniform within zone; elevation in feet
  - Profile Baseline
  - Cross section line
  - Transect line

July 7, 2014 - to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to add new and open names, and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to computerized mapping, refer to the Community Map History tables located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or visit the National Flood Insurance Program website at [www.flood.gov](http://www.flood.gov).

**MAP SCALE 1" = 500'**  
 150 300 450 600 750 900  
 METERS  
 150 300 450 600 750 900  
 FEET

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0366F**

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**MIDDLESEX COUNTY,**  
**MASSACHUSETTS**  
**(ALL JURISDICTIONS)**

**PANEL 366 OF 656**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

JURISDICTION	COMMUNITY	NUMBER	PANEL	SUFFIX
ACTON TOWN OF	250176	0366F		F
	250176	0366F		F
	250176	0366F		F
	250176	0366F		F
MAYNARD TOWN OF	250204	0366F		F
	250204	0366F		F
SUDBURY TOWN OF	250217	0366F		F
	250217	0366F		F

Notice to User: The **Map Number** shown below should be used when placing map orders, the **Community Number** shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
 25017C0366F  
**MAP REVISED**  
 JULY 7, 2014

Federal Emergency Management Agency

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage ditches and small scale flooding. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Elevation Tables contained within the Flood Insurance Study (FIS) Report that accompanies the FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Massachusetts State Plane Mercator Zone (FIPS zone 5001). The horizontal datum was NAD 83, GRS 1980 adjustment. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1985. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geospatial Vertical Datum of 1929 and the North American Vertical Datum of 1985, visit the National Geospatial Survey website at <http://www.ngs.noaa.gov> or contact the National Geospatial Survey at the following address:

NGS Information Services  
 NOAA/NUNGS/2  
 National Geospatial Survey  
 SSNDC-89202  
 1315 East-West Highway  
 Silver Spring, Maryland 20910-3282  
 (301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geospatial Survey at (301) 713-3242 or visit its website at <http://www.ngs.noaa.gov>.

**Base map** information shown on this map was derived from orthorectification provided by MassGIS at a scale of 1:500 from photography dated April 2008.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

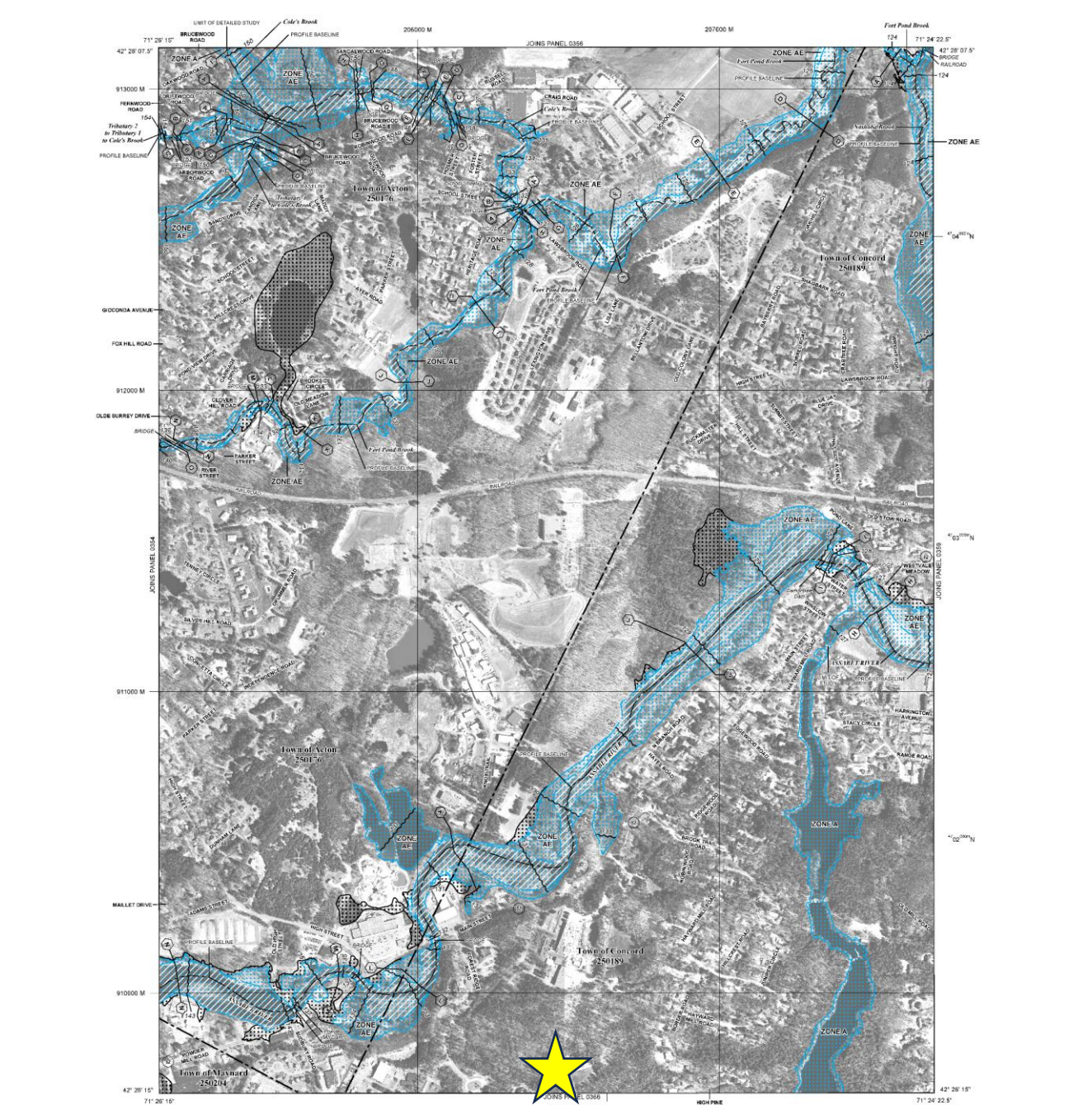
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodways and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel changes that differ from what is shown on this map.

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**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (100 year flood) also known as the 100 year flood, is the flood that has a 1% chance of occurring in any given year. Special Flood Hazard Areas (SFHAs) are the areas subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AC, AD, AO, AH, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

**ZONE A** No Base Flood Elevations determined.

**ZONE AE** Base Flood Elevations determined.

**ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

**ZONE AD** Flood depths of 1 to 3 feet (usually flow from adjacent terrain); average depths determined for areas of shallow flooding, otherwise also determined.

**ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by flood control systems that were subsequently identified. Zone AR indicates that the former flood control system is being considered to provide protection from the 1% annual chance or greater flood for a Federal Flood protection system under consideration; no Base Flood Elevations determined.

**ZONE AVB** Areas to be protected from the 1% annual chance flood by a Federal Flood protection system under consideration; no Base Flood Elevations determined.

**ZONE V** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain area that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; areas protected by levees from the 1% annual chance flood.

**OTHER AREAS**

**ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.

**ZONE D** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

Areas in which flood hazards are undetermined, but possible.

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

— 1% Annual Chance Floodplain Boundary

— 0.2% Annual Chance Floodplain Boundary

— Floodway Boundary

— Zone D Boundary

— CBRS and OPA Boundary

— Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, Flood Depths, or Flood Velocities.

— Base Flood Elevation line and value; elevation in feet (EL 987)

— Base Flood Elevation value where within urban zone; elevation in feet

— Referenced to the North American Vertical Datum of 1985

— Cross section line

— Threshold line

— Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) datum transformation:

4998950 M  
 1020 meter north Massachusetts State Plane Mercator Zone (NIP 15, zone 7001), United States Central Core projection  
 1020 meter Universal Transverse Mercator datum and zone 18Q  
 035610 X  
 035610 Y  
 Bench mark (see explanation in Notes to Users section of this FIRM MAP)

**MAP REPOSITORIES**

Refer to Map Repository on Map Index

**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**  
 Area 4: 2015

**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**

July 7, 2014 - update corporate limits to change Base Flood Elevations and Special Flood Hazard Areas to add roads and spot names, and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to computer mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or visit the National Flood Insurance Program at 1-800-368-6622.

**MAP SCALE 1" = 500'**  
 500  
 1000  
 1500  
 2000  
 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0358F**

**FIRM**

**FLOOD INSURANCE RATE MAP**

**MIDDLESEX COUNTY, MASSACHUSETTS (ALL JURISDICTIONS)**

**PANEL 358 OF 656**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

JURISDICTION	COMMUNITY	NUMBER	PANEL	SUFFIX
ACTON TOWN OF	250176	0358	F	
	250177	0358	F	
CONCORD TOWN OF	250189	0358	F	
	250190	0358	F	

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
 25017C0358F

**MAP REVISED**  
 JULY 7, 2014

Federal Emergency Management Agency



ACTON

KNOX TRAIL

62

MAIN ST

FOREST RIDGE RD

62

MAYNARD

SUDBURY

BORDER RD

MAIN ST

62

KENNEDY'S POND

RANGE RD

CATERINA HTS

DEACON HAYNES RD

OLD MARLBORO RD

SPRING RD

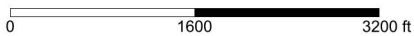
BARTON'S WAY

OLD PICKARD RD

INDIAN PIPE LN

- Town Boundary - State Su
- Address Numbers
- Tax Map Parcel ID Labels
- Tax Map Parcel Area Labels
- Buildings (ft)
- Wetlands Combined
- Parcels
- MA Highways
  - Interstate
  - US Highway
  - Numbered Routes
- MBTA Commuter Rail Station
- Railroad
- Streams
- Streets Area
- Rivers & Ponds

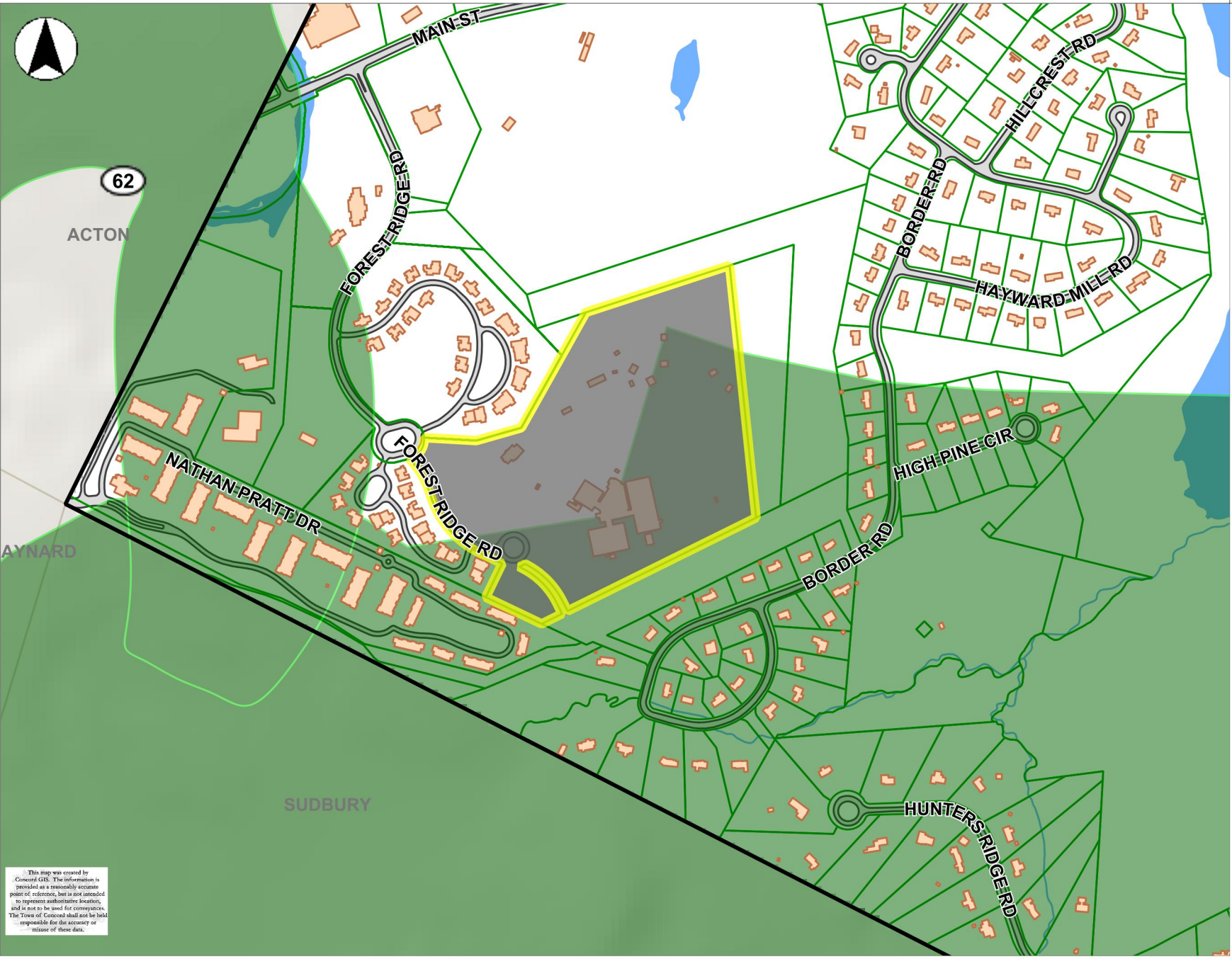
This map was created by  
 Concord GIS. The information is  
 provided as a reasonably accurate  
 point of reference, but is not intended  
 to represent authoritative location,  
 and is not to be used for conveyance.  
 The Town of Concord shall not be held  
 responsible for the accuracy or  
 misuse of these data.



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- Town Boundary - State Su
- Address Numbers
- Tax Map Parcel ID Labels
- Tax Map Parcel Area Labels
- Buildings (ft)
- Groundwater Conservancy
- Parcels
- MA Highways
  - Interstate
  - US Highway
  - Numbered Routes
  - MBTA Commuter Rail Stati
- Railroad
- Streams
- Streets Area
- Rivers & Ponds



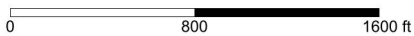
62

ACTON

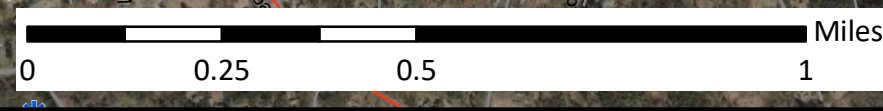
AYNARD

SUDBURY

This map was created by  
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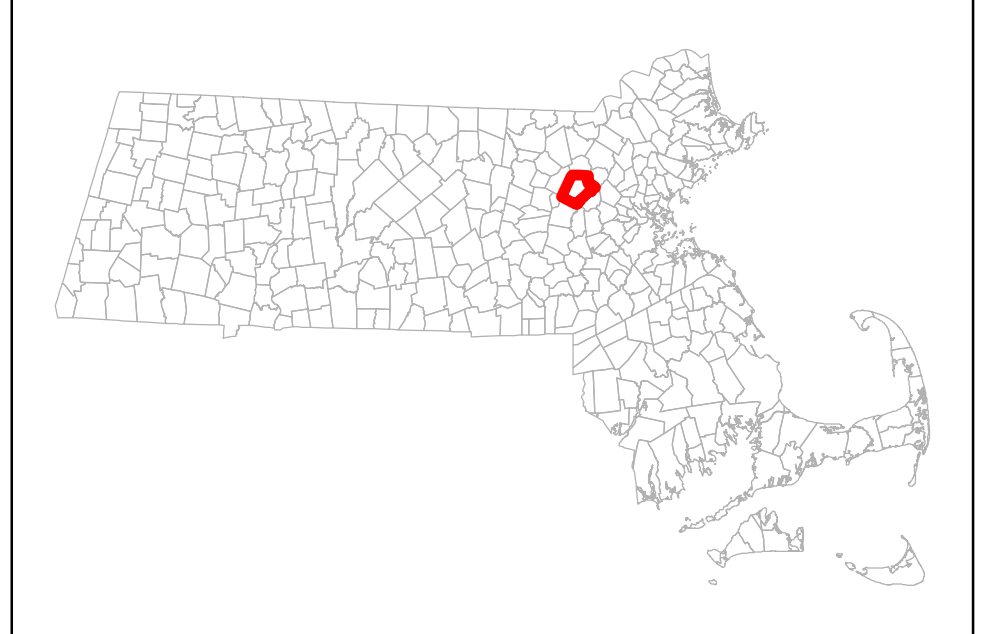
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## CONCORD

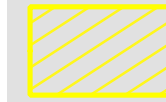
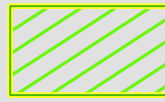






### Priority Habitats and Estimated Habitats

*Priority Habitats, for use with the MA Endangered Species Act Regulations (321 CMR 10)*  
*Estimated Habitats, for use with the MA Wetlands Protection Act Regulations (310 CMR 10)*  
 Effective August 1, 2021



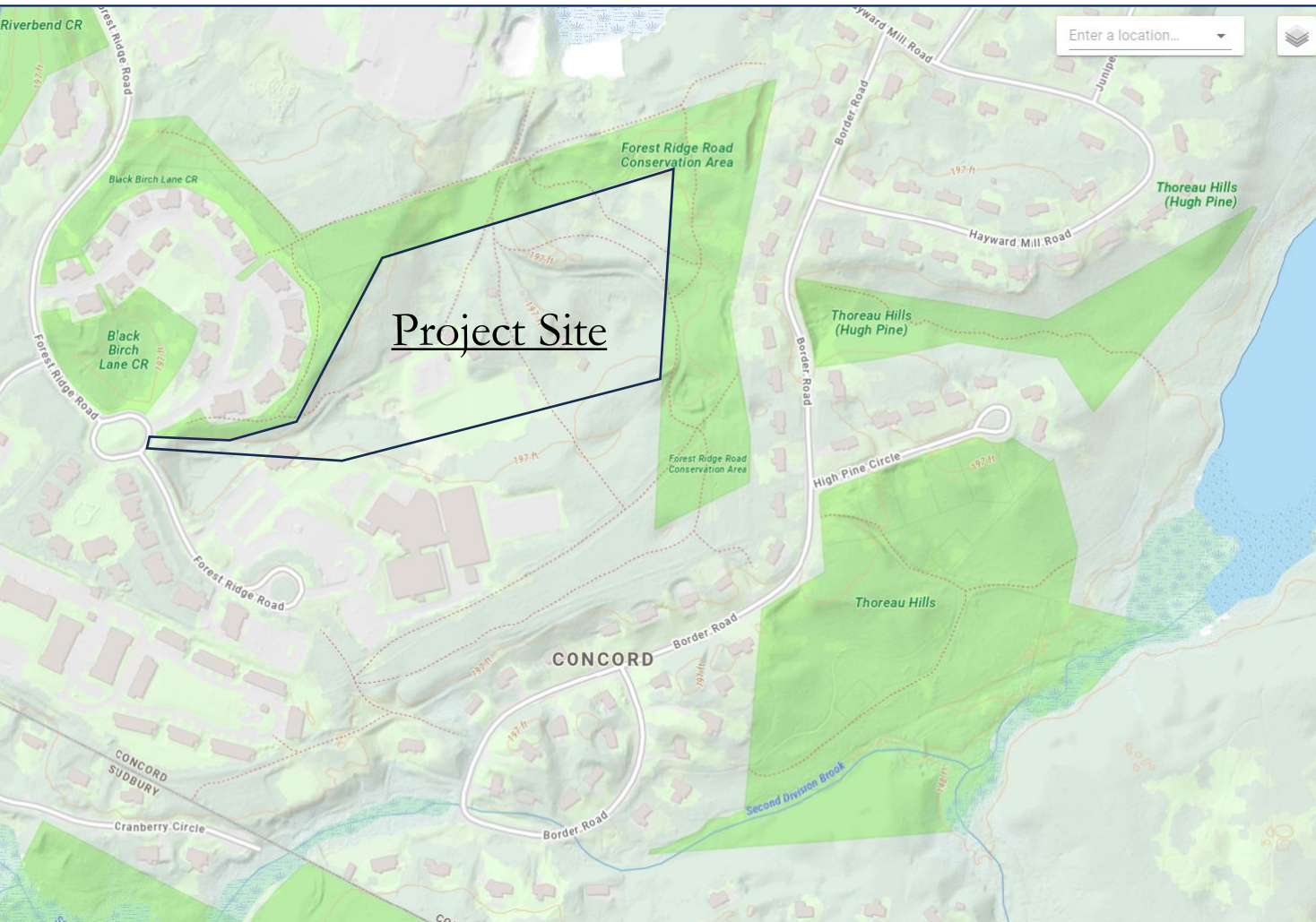
**Natural Heritage & Endangered Species Program**  
 1 Rabbit Hill Road, Westborough, MA 01581  
 tel: (508) 389-6360; fax: (508) 389-7890

**Data Sources:**  
 Priority Habitats and Estimated Habitats: created by NHESP in 2021.  
 Certified Vernal Pools: created by NHESP, July 20, 2021.  
 Town Boundaries: 1:25,000 community boundary data, from MassGIS (updated March, 2017).  
 Roads: MassDOT roads, from MassGIS (updated 2018).  
 Digital Orthophoto: 15cm resolution, taken in 2019, from MassGIS.

 Priority Habitat of Rare Species	 Priority Habitat of Rare Species and also Estimated Habitat of Rare Wildlife	 Certified Vernal Pools (as of July 20, 2021)
Project or Activity falls within Priority Habitat only: - You must file directly with NHESP pursuant to Massachusetts Endangered Species Act (MESA)	Project or Activity is within BOTH Estimated Habitat and Priority Habitat: - Is a Notice of Intent (NOI) under wetlands regulations required? -Yes Send copy of NOI to NHESP and must also file under MESA (streamlined MESA-NOI filing option available) -No MESA filing only (see 'Priority Habitat' details at left)	--- Town Boundary <b>Transportation:</b>  Interstate  U.S. Highway  State Route  Non-numbered Route  Railroad
Examples of projects: single family home, subdivision, commercial building, widening of driveway/road, beaver dam removal, etc.  Some projects or activities may be exempt from MESA filing: see 321 CMR 10.14	For more information, see our website at <a href="http://www.mass.gov/nhesp">www.mass.gov/nhesp</a>	



Commonwealth of Massachusetts  
 Executive Office of Energy & Environmental Affairs  
 Charlie Baker, Governor  
 Karyn Polito, Lt. Governor  
 Kathleen A. Theoharides, Secretary



- > Census
- > Coastal and Marine Features
- > Conservation / Recreation
- > Cultural Resources
- > Environmental Monitoring (testing/monitoring sites)
- > Images
- > Index (grids/tiling schemes for certain layers)
- > Infrastructure
- > Physical Resources
- > Political / Administrative Boundaries
- > Regulated Areas
- > Status / Availability (maps showing where data is available or date of data)
- > Tiled Layers

- [Areas of Critical Environmental Concern ACECs](#)