



Town of Leicester  
Development & Inspectional Services

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# Town of Leicester Site Plan Review

## 1.193 MW Solar Energy Generating Facility

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Submitted By:

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Submitted to:

Town of Leicester  
Planning Board  
3 Washburn Square  
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January 19, 2018  
Revised January 8, 2019

**1.193 MW Solar Energy Generating Facility  
515 Henshaw Street Leicester, MA**

## Project Narrative

The project site is located along the east side of Henshaw Street and north side of Stafford Street at Assessor's Map 45 Block A Lot 8. The site is 33.63 acres in size and is zoned BR-1 (Business-Residential-1) and SA (Suburban-Agricultural). The solar project is located within the BR-1 zoned portion of the parcel. Refer to Figure 1-Zoning Map and Figure 2-Aerial Map.

## ZONING SUMMARY TABLE

Suburban Agricultural District – SA, and Business Residential BR-1. See note 1.

Use: Large-scale ground-mounted solar photovoltaic installation is an allowed use in the SA and BR-1 zoning districts. Under Section 5.2.02.1.g Large-scale ground-mounted solar photovoltaic installations require Site Plan Review by the Planning Board.

		Required (SA Structure)	Required (BR-1 Structure)	Provided	Notes
Minimum Lot Area	sf	80,000	20,000	>>500,000	
Frontage	feet	200/50*	150/50*	330	Along Stafford Street
Front Yard	feet	40	50	171	to array
Side Yard	feet	40	40	151	to array
Rear Yard	feet	40	40	46	to array
Setback from Residential District (SA,R1,R2)	feet	100	-	156	to array
Max. Height of Buildings	Feet	35	15**	12	To top of array
Maximum building coverage	%	30	30	N/A	

\*Minimum frontage in the Zoning Bylaw for Leicester is 50 feet in Section 5.14.5.2.

\*\*Section 5.14 Ground-Mounted Solar Energy Systems 6.2 B

### Note 1:

**2.3.04** Where a district boundary line divides any lot existing at the time such line is adopted, the regulations for the less restricted portion of such lot may extend not more than thirty (30) feet into the more restricted portion, provided only that such lot has the required minimum frontage on a street in the less restricted portion for the existing or intended use of the premises.

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The solar power generating facility is a ground-mounted facility generating approximately 990 kW of electricity (AC rated). The solar system will consist of:

- Approximately 3,060 - 390 watt solar panels
- TerraSmart Terraform racking at 25° racking tilt angle. Racking is approx. 14 feet apart and modules placed in a 2 x 9 portrait layout. Refer to Figures 1 and 2 for typical racking installation. However, the racking will be installed with a 6' high leading edge and maximum height will be less than 15'.
- 1 Inverter
- Data Acquisition System (DAS) for remote monitoring
- Transformer and switchgear
- Underground trenching
- Overhead power lines to interconnection point on Stafford Street (determined by NGrid)
- Gravel access driveway
- Perimeter security fence (7' high Chain-link)
  - o Total Fenced area = 6.29 acres ±
- Access gates
- Warning signage on security fence (in accordance with NEC)

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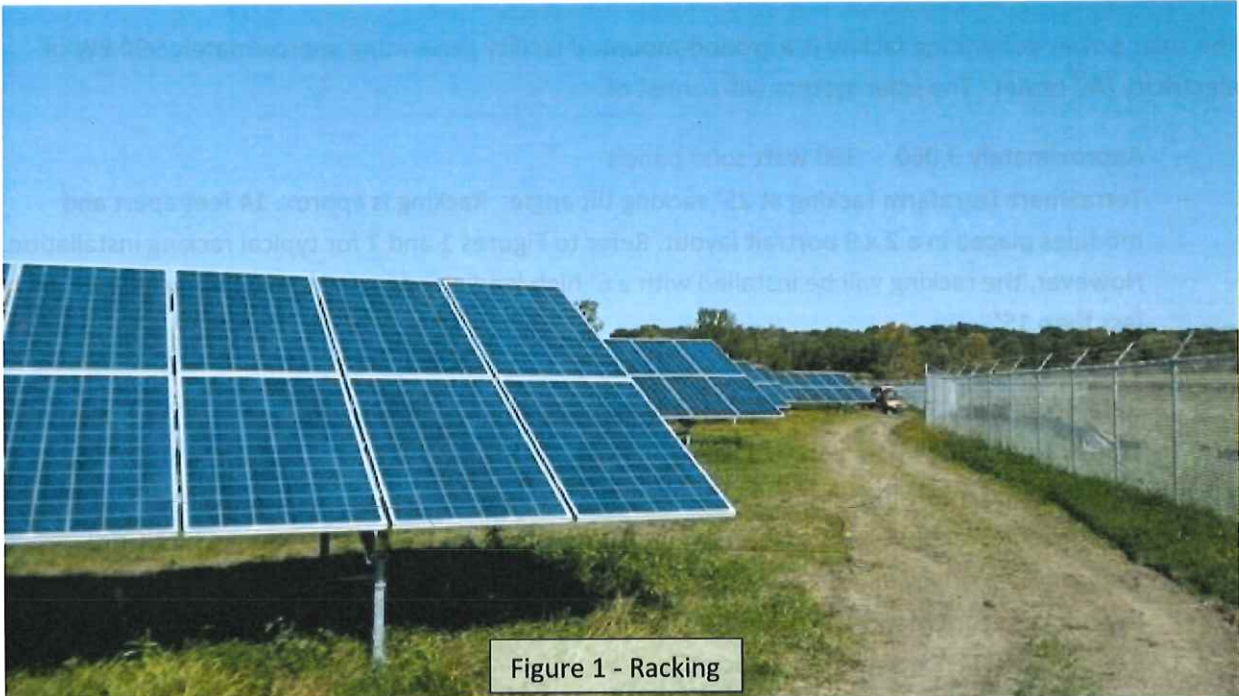


Figure 1 - Racking



Figure 2 - Racking

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In accordance with Section 5.2.05 Standards for Site Plan Approval as outlined in the Zoning Bylaws for the Town of Leicester as amended through May 2, 2017, we have the following responses to items A-G.

**5.2.05 STANDARDS FOR SITE PLAN APPROVAL:**

The Planning Board shall approve a site plan when the following standards are met:

- A. The use complies with all the provisions of the Leicester Zoning By-Law;

**Response: *The ground-mounted solar system use is an allowed use in the SA and BR-1 zoning districts and the dimensional regulations have been met.***

- B. The use will not materially endanger or constitute a hazard to the public health and safety;

**Response: *The project does not pose any hazard or endanger the public health and safety. See responses to items C-G below.***

- C. The use will not create undue traffic congestion or unduly impair pedestrian safety;

**Response: *The project does not generate traffic. Approximately 2 times annually, operations and maintenance personnel will mow inside the fence and keep large woody plants from growing in the cleared areas. O & M personnel may also be visiting the site to maintain the equipment.***

***The project is private and un-manned. There will be no pedestrian access allowed. There are no sidewalks or paths along Stafford Street or Henshaw Street.***

***We will coordinate with the Leicester DPW regarding a Driveway Permit for access onto Stafford Street.***

- D. Sufficient off-street parking exists or will be provided to serve the use;

**Response: *The solar project is un-manned and does not require off-street parking. Adequate space is provided on and alongside the internal gravel access road for O & M personnel.***

- E. The use can be adequately served by water, sewer, and other necessary utilities, or if these are unavailable, that they will be brought to the site at the owner's expense; or, the Planning Board is satisfied that the proposed alternatives will comply with all applicable regulations; and,

**Responses: *See below.***

***Water: The project is un-manned and will not consume any water and will not require connection to any public or private water supply.***

***Sewer: The project is un-manned and does not generate any wastewater and will not require connection to any public or private wastewater system.***



***Other Utilities:*** The project will not require connections to cable TV, gas mains or telephone lines.

***There will be an electrical interconnection to a power pole in Stafford Street. The on-site portion of the interconnection will consist of: 1) customer recloser pole; 2) utility meter pole, 3) customer disconnect pole; 4) a customer recloser pole and 5) existing pole.***

***Within the fenced area electrical lines will be buried.***

- F. The use will not result in a substantial increase of volume or rate of surface water runoff to neighboring properties and streets, nor will result in pollution or degradation to surface water or groundwater;

***Response:*** The project will not result in an increase in the volume of surface water runoff. The project will not result in any increase in the post-development condition. Refer to the Stormwater Memo dated December 13, 2018. In accordance with the MA DEP Stormwater Regulations, the quality of runoff will not change and the recharge to groundwater will be similar. During construction, silt fences, mulch tubes and other erosion control and sedimentation measures will be employed.

- G. The use will not result in any undue disturbance to adjoining property owners or the Town caused by excessive or unreasonable noise, smoke, vapors, fumes, dust, glare, etc.

***Responses:*** See below.

***Noise:*** The projects central inverter does make minimal noise, only when generating electricity (when the sun is shining). During early morning and evening the system will not make noise. The nearest residence to a string inverter is 530 feet. In a typical quiet rural area the background noise levels during the daylight hours is approximately 45-50 dB. The noise level associated with the central inverter is approximately 72 dB (@1 meter). At 530 feet or 162 meters, the shortest distance to any residence, the noise associated with the central inverter will be com less than ambient noise and therefore will not be heard.

***Smoke:*** Solar photovoltaic systems do not generate emissions or smoke. There are no mechanical devices or equipment and no combustible engines. There are no buildings.

***Vapors/fumes:*** The solar photovoltaic systems do not generate fumes or vapors. There are no emissions or exhausts and there is no condensation associated with the electrical equipment.

***Dust:*** The project will fully vegetated aside from the gravel roads and the electrical equipment area. Dust during construction will be controlled (when necessary) using water trucks.

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*Glare: Motion-activated lighting (approximately 8 feet high) is proposed at the electrical equipment area. It is necessary for maintenance purposes.*

*Lighting will be directed downward and towards the equipment. The lighting for system A will be located approximately 520 feet from the nearest residence on Strafford Street. The lighting is also screened by the existing vegetation that will be left around the system, the system fence, and the racking.*

*Glare from the solar modules is minimized through anti-glare coatings.*

**Waivers**

In accordance with Section IIA of the Town of Leicester Planning Board's Plan Review Rules and Regulations the following waivers are being requested.

***Location, height, size and design of signage/lighting: The project will include signage as required by the National Electric Code. They will be mounted on the fence at specific locations as well as on the electrical equipment. There will be a motion-activated light also at the equipment area and it will be directed away from residences.***

***Location/Description of existing/proposed utilities: The project does not require connections/extensions or improvement to any water, sewer, storm drain, gas or telephone utilities. There are no underground utilities proposed in public or private streets. The project will interconnect to the power grid adjacent to parcel limits.***

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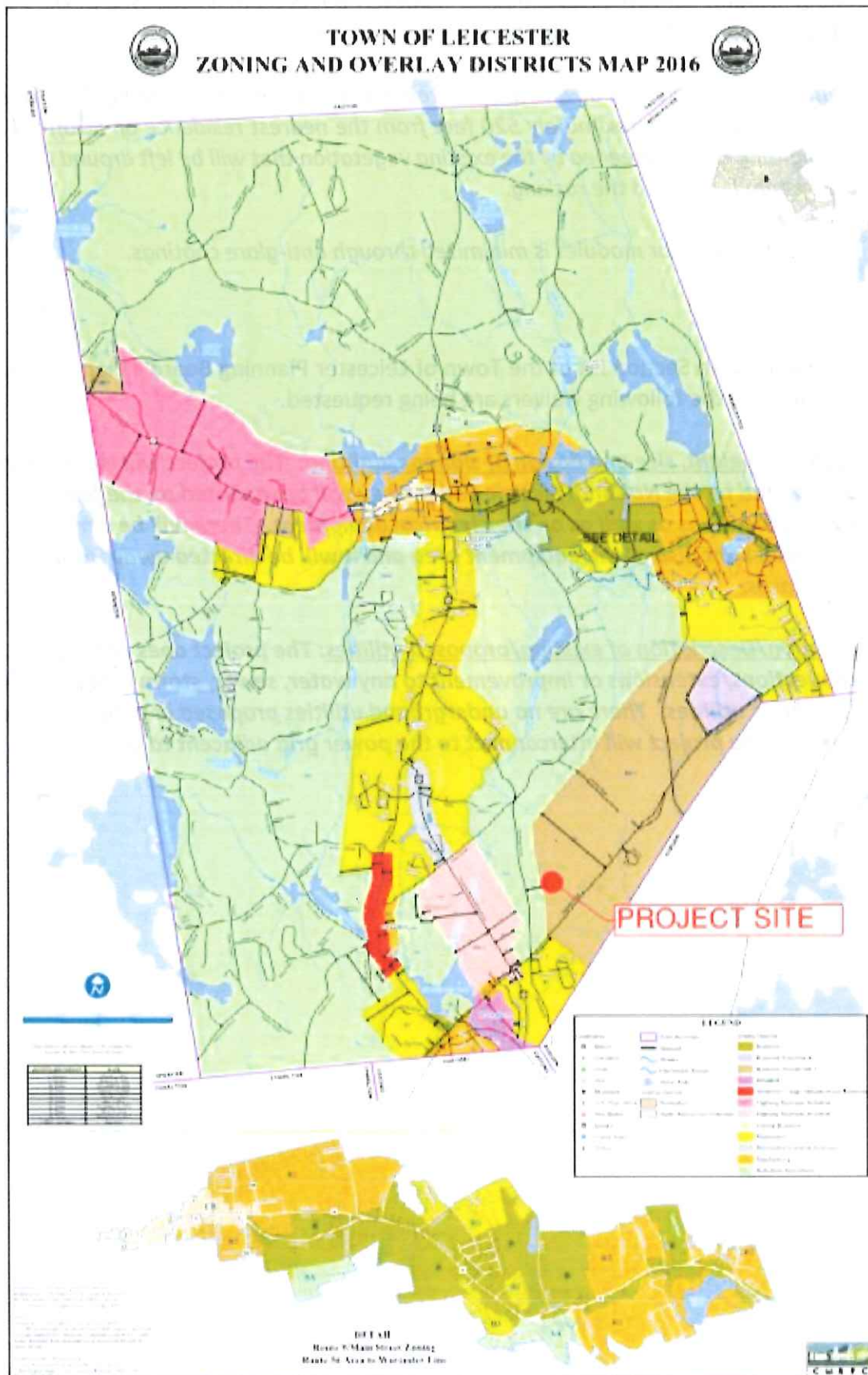


Figure 1-Zoning Map



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**Figure 2 - Aerial Map**

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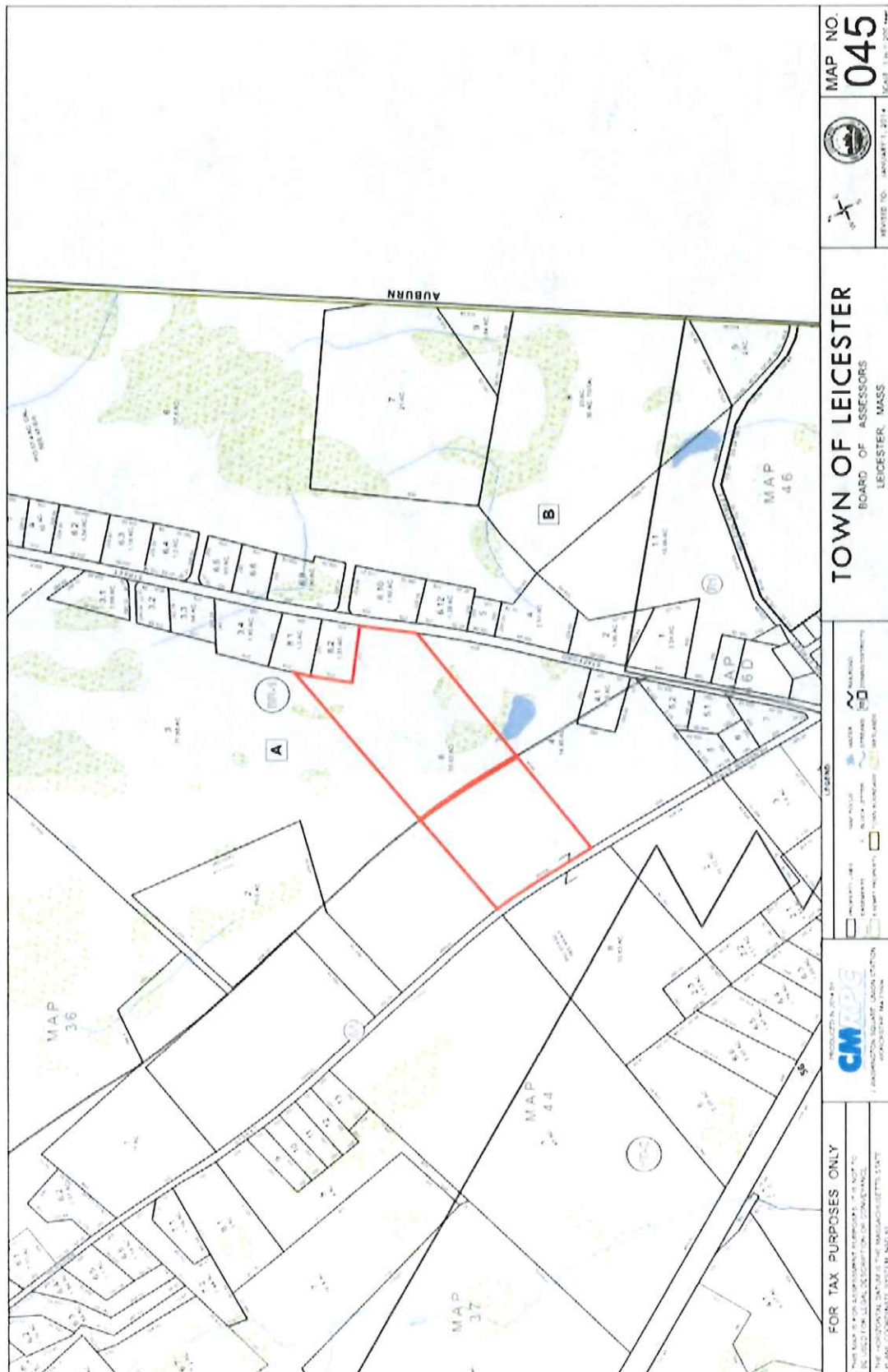
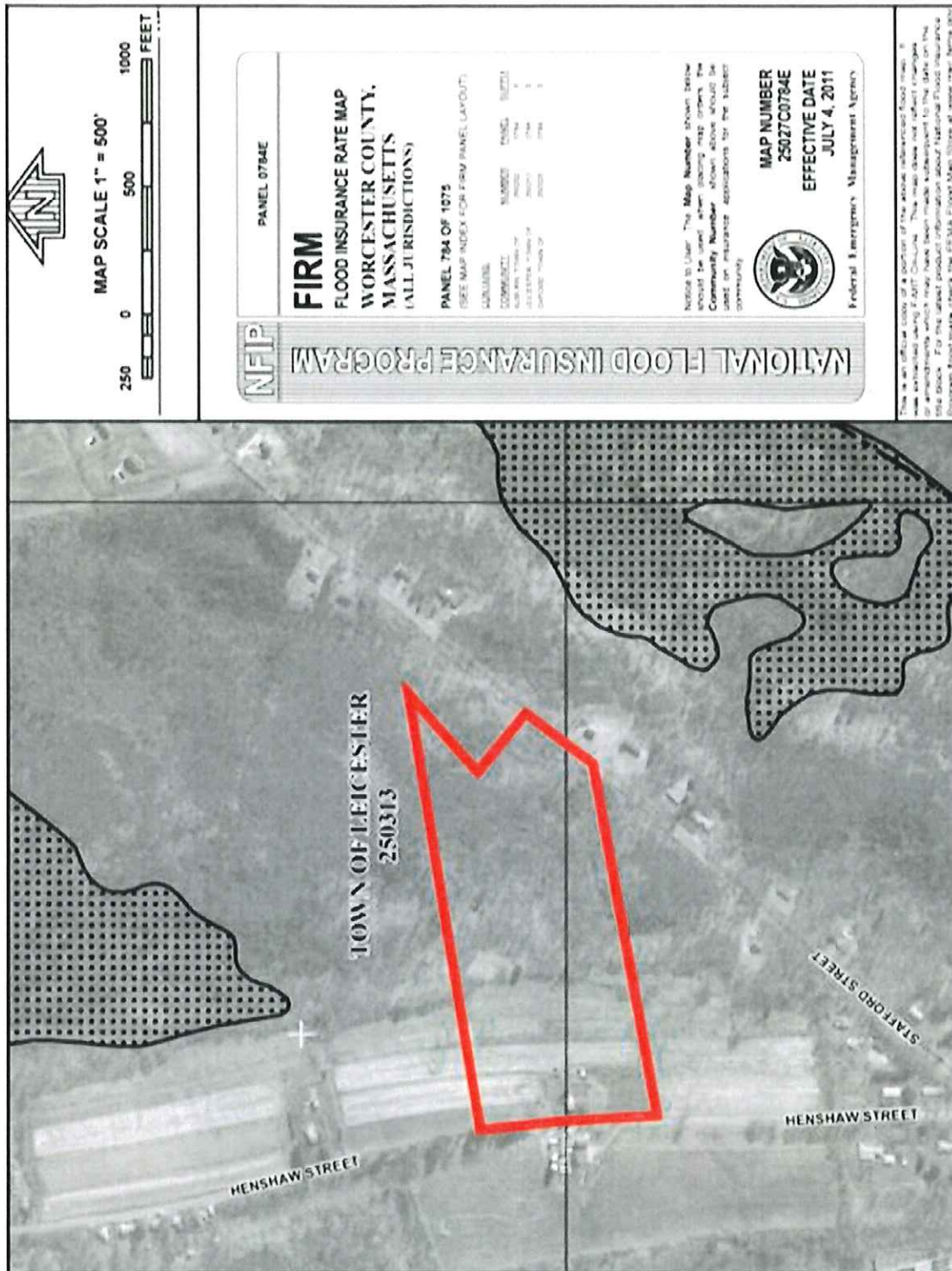


Figure 3 - Assessors Map



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**Figure 4a – FEMA Map**

