

Solar Ordinance Council & Plan Commission Workshop



July 18, 2019

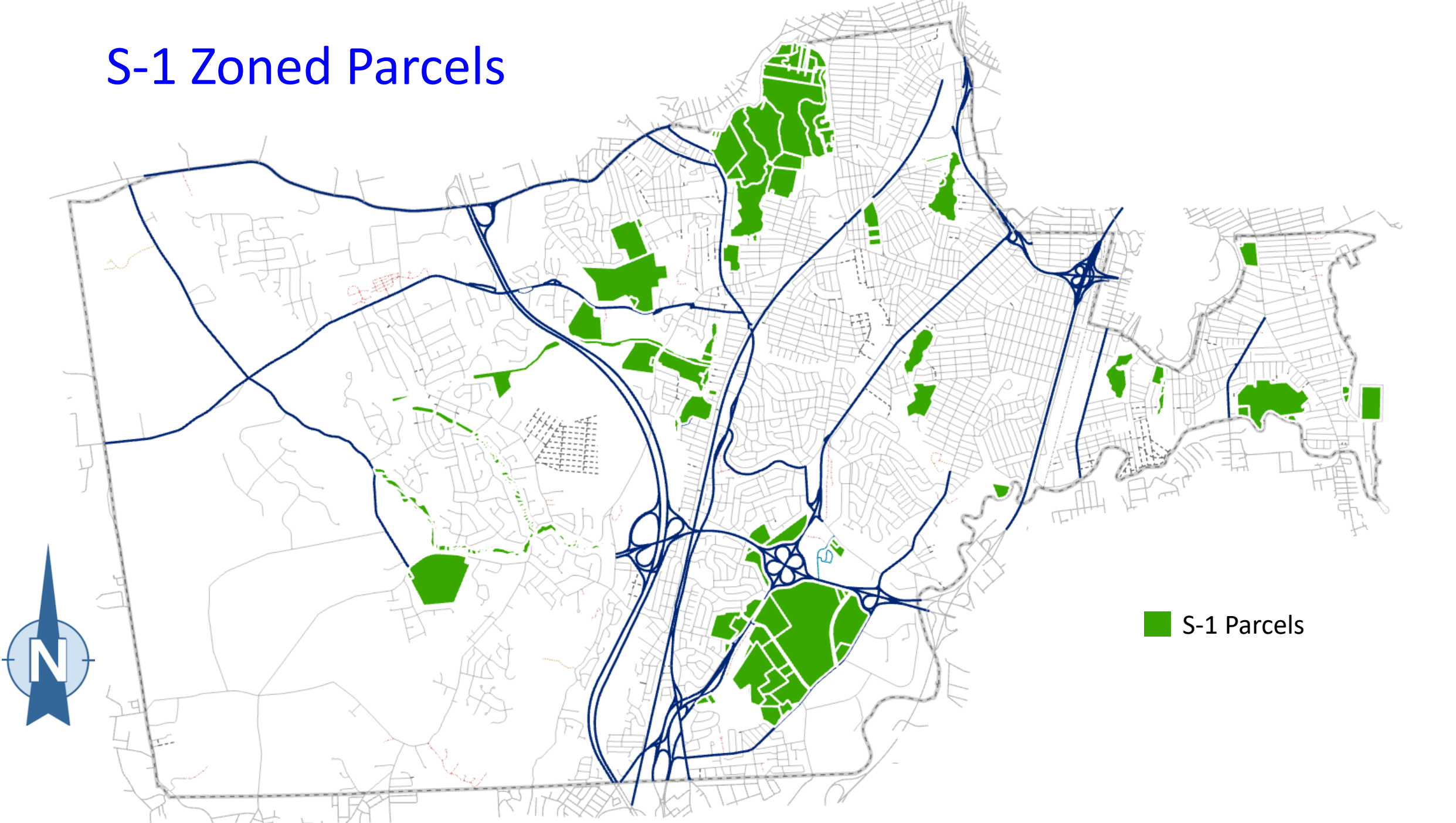
Finding Common Ground

1. We want to responsibly support sustainable energy production to reduce our dependency on non-sustainable energy sources.

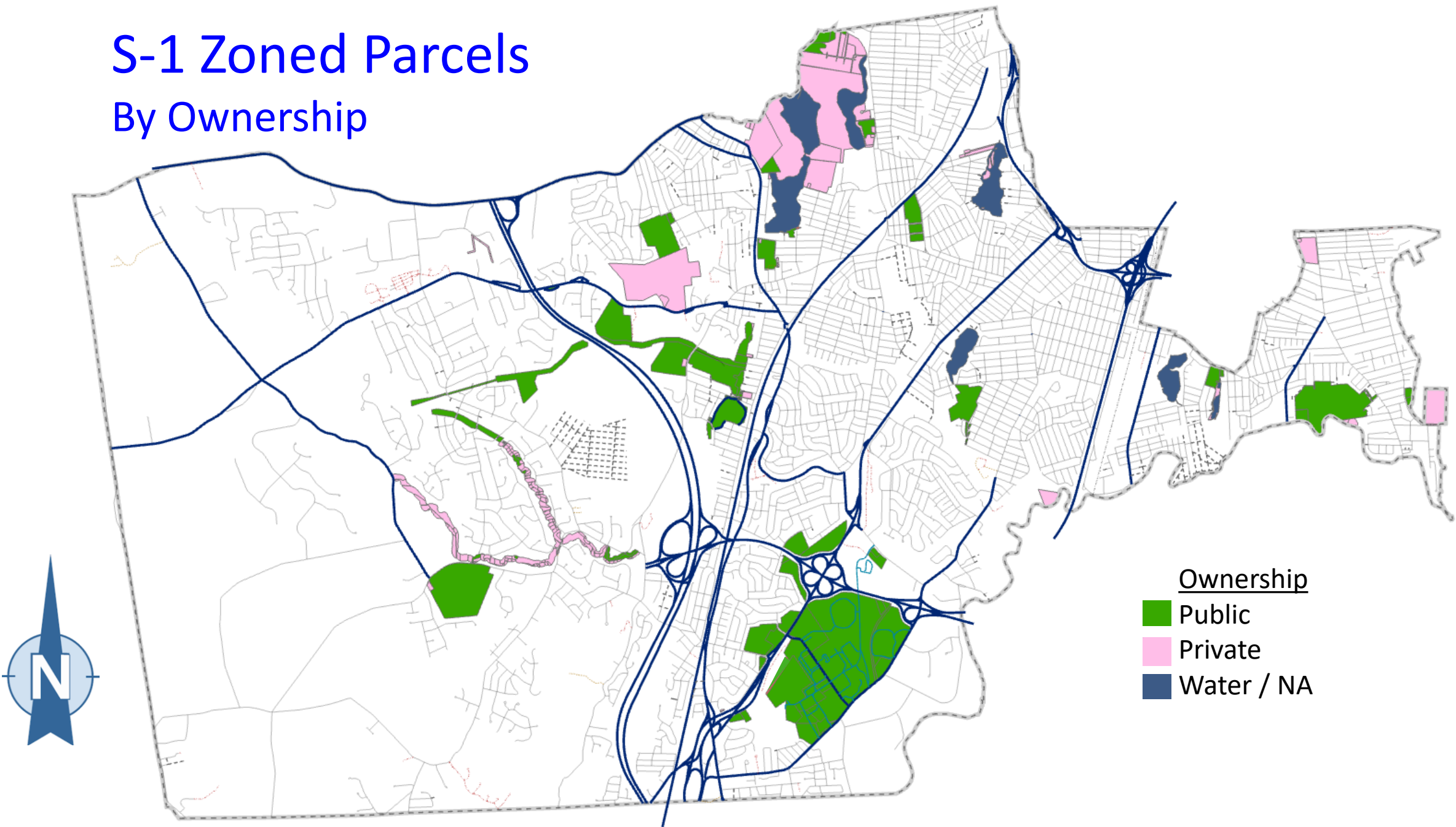
2. We want to minimize negative impacts to our communities and environment to the greatest extent possible.

- The ideal scenario* - to responsibly address renewable energy production without negative impacts to our communities and environment.
- *The reality* – there are tradeoffs to all known energy solutions.

S-1 Zoned Parcels



S-1 Zoned Parcels By Ownership



Location:

Scituate Ave

Zone:

S-1

Current Use:

RI Boy Scouts

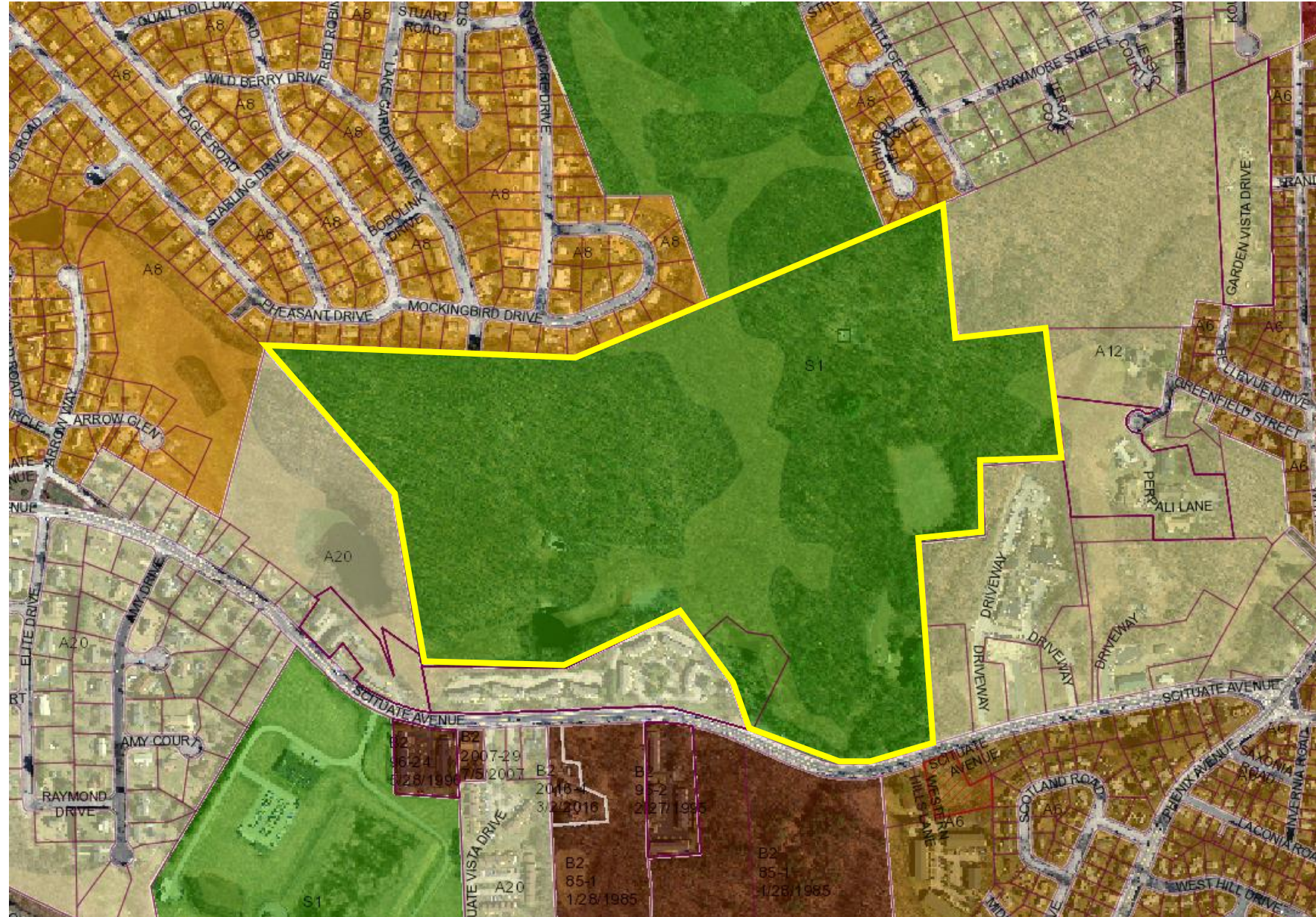
Total area:

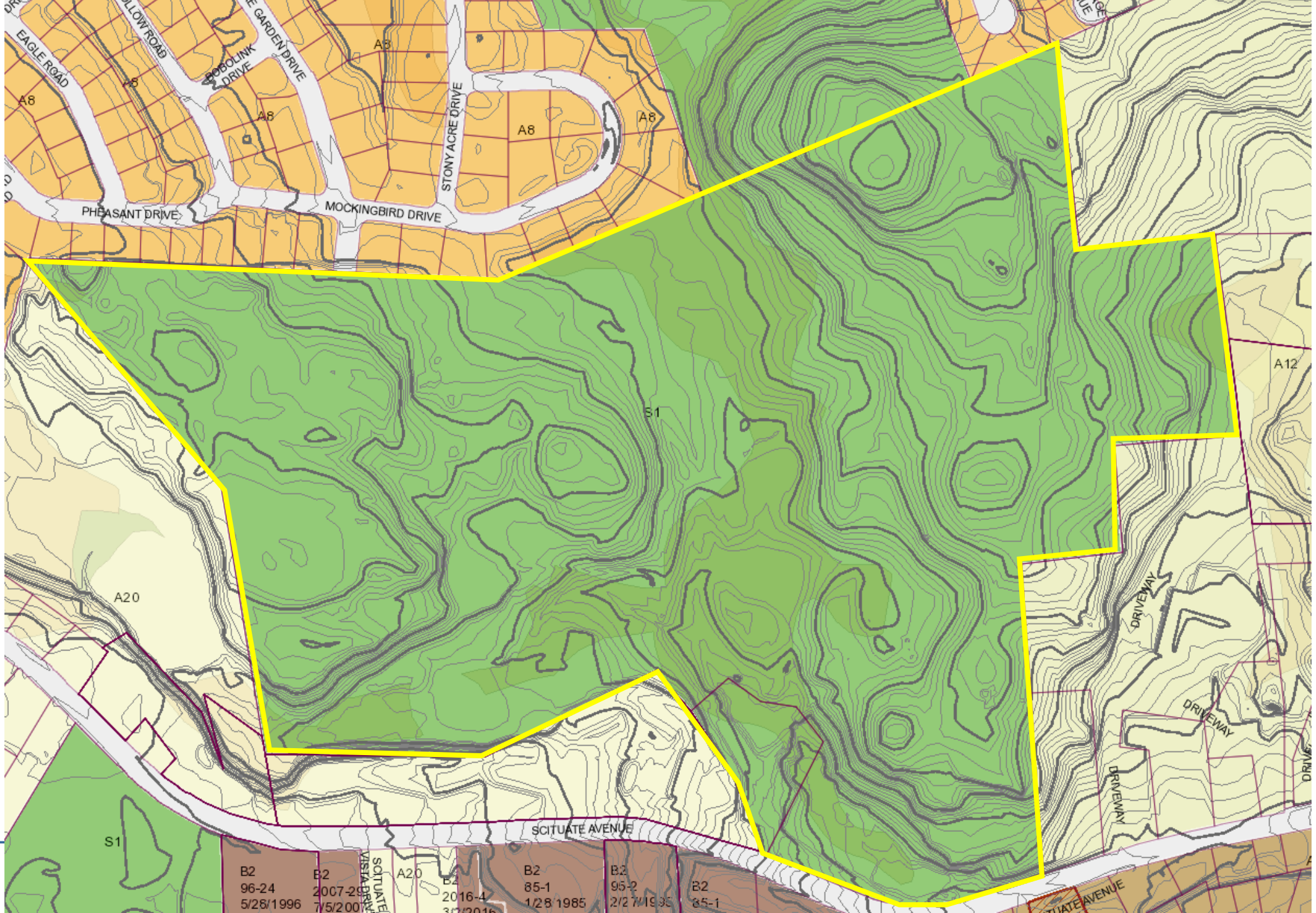
90.58 acres

Potential Energy Yield:

0 MW

Considerable Topography &
Wetlands On Site





B2	B2	A20	B2	B2	B2
96-24	2007-25	SOTUIATE	2016-4	85-1	95-2
5/28/1996	7/5/2007	VISTA DRIVE	3/1/2016	1/28 1985	2/27/1935
					85-1

Location:

Phenix Ave

Zone:

S-1

Current Use:

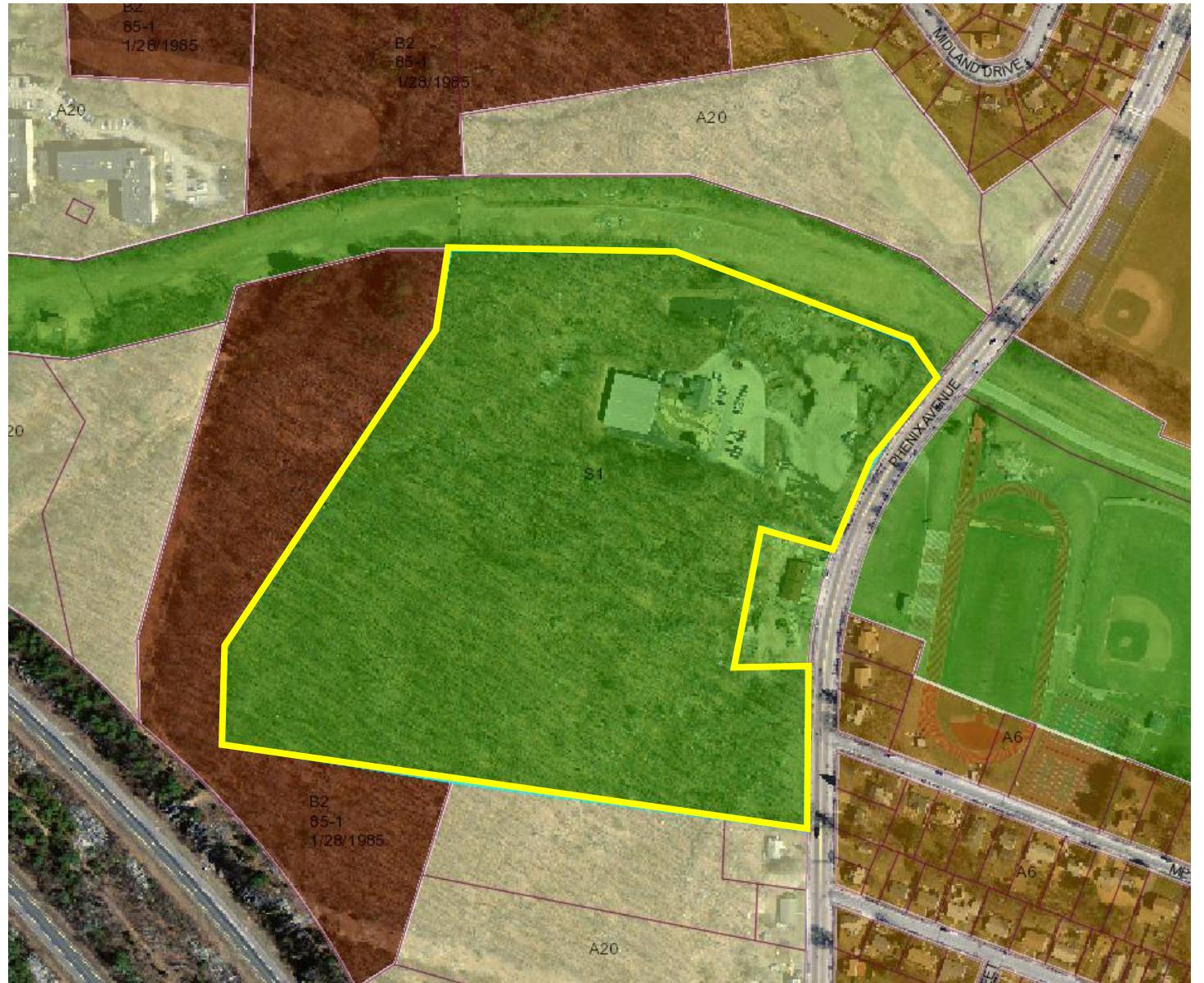
Police Training

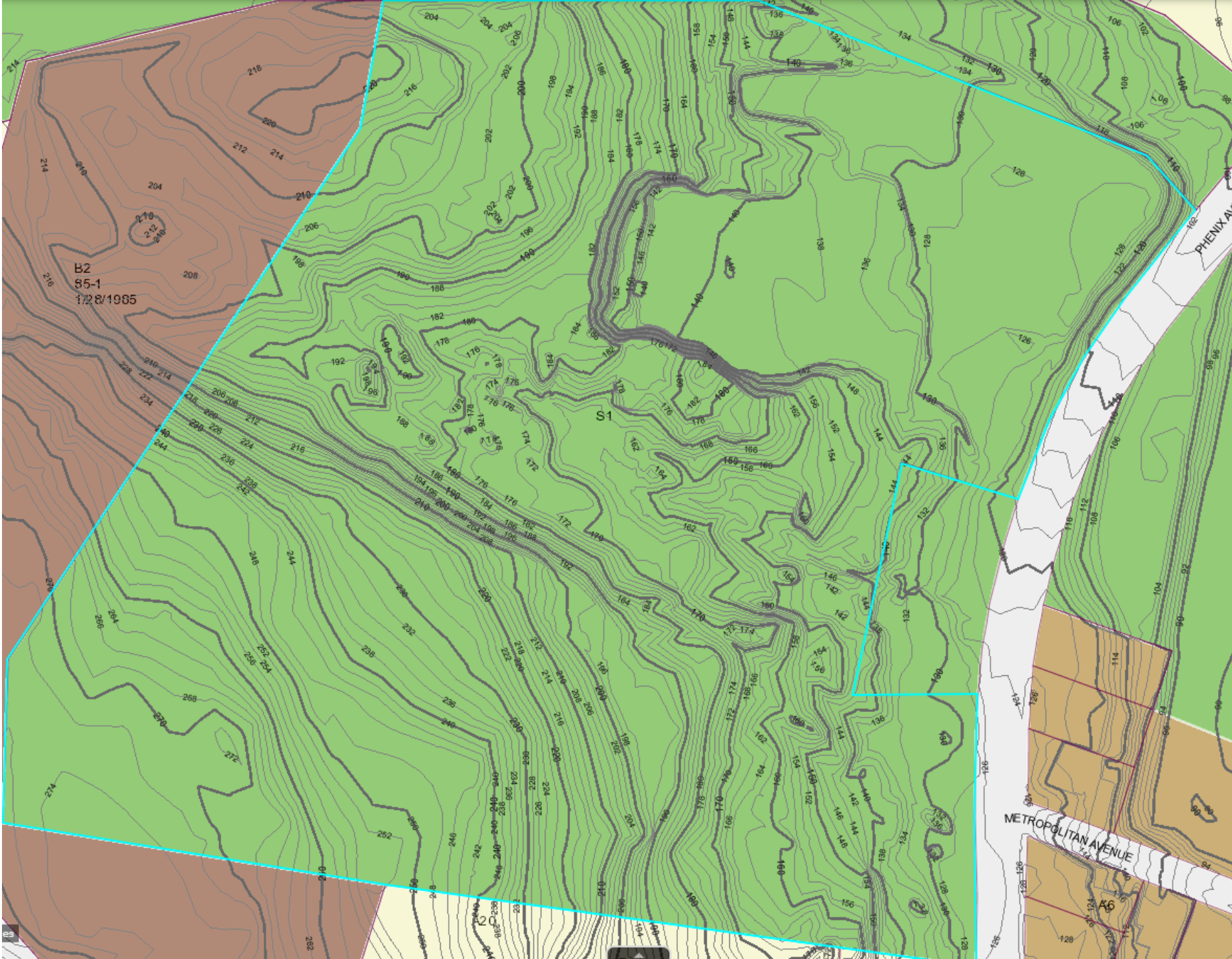
Total area:

25.31 acres

Potential Energy Yield:

0 MW





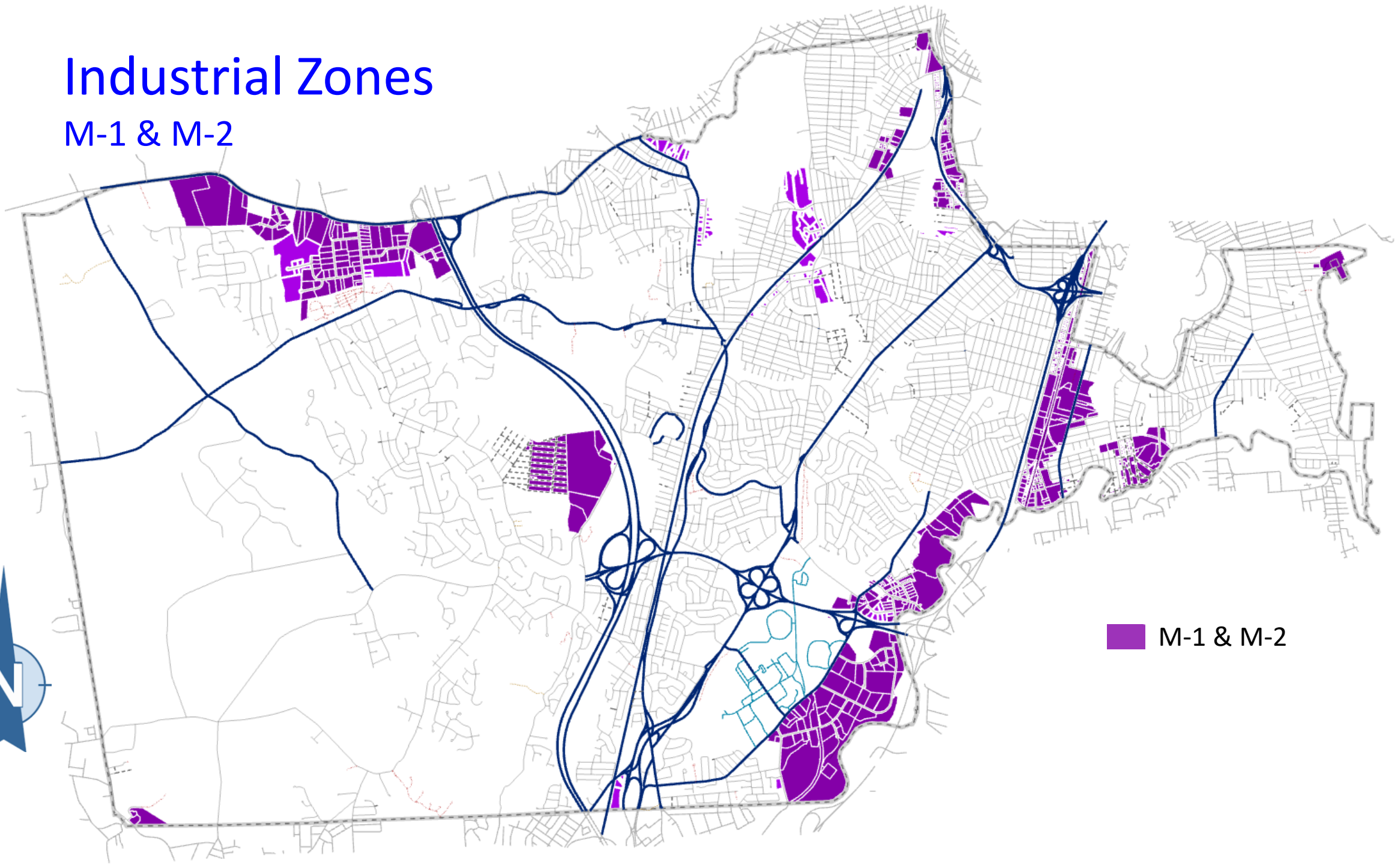
S-1 Findings

- There are no existing or proposed solar projects in S-1.
- There are no viable S-1 zoned site in the City. The sites are not viable due to ownership, existing uses, topography, wetlands, etc.
- Publicly-owned parcels are preserved for conservation.
- State-owned land is exempt from zoning.

Max Anticipated Capacity = 0 MW

Industrial Zones

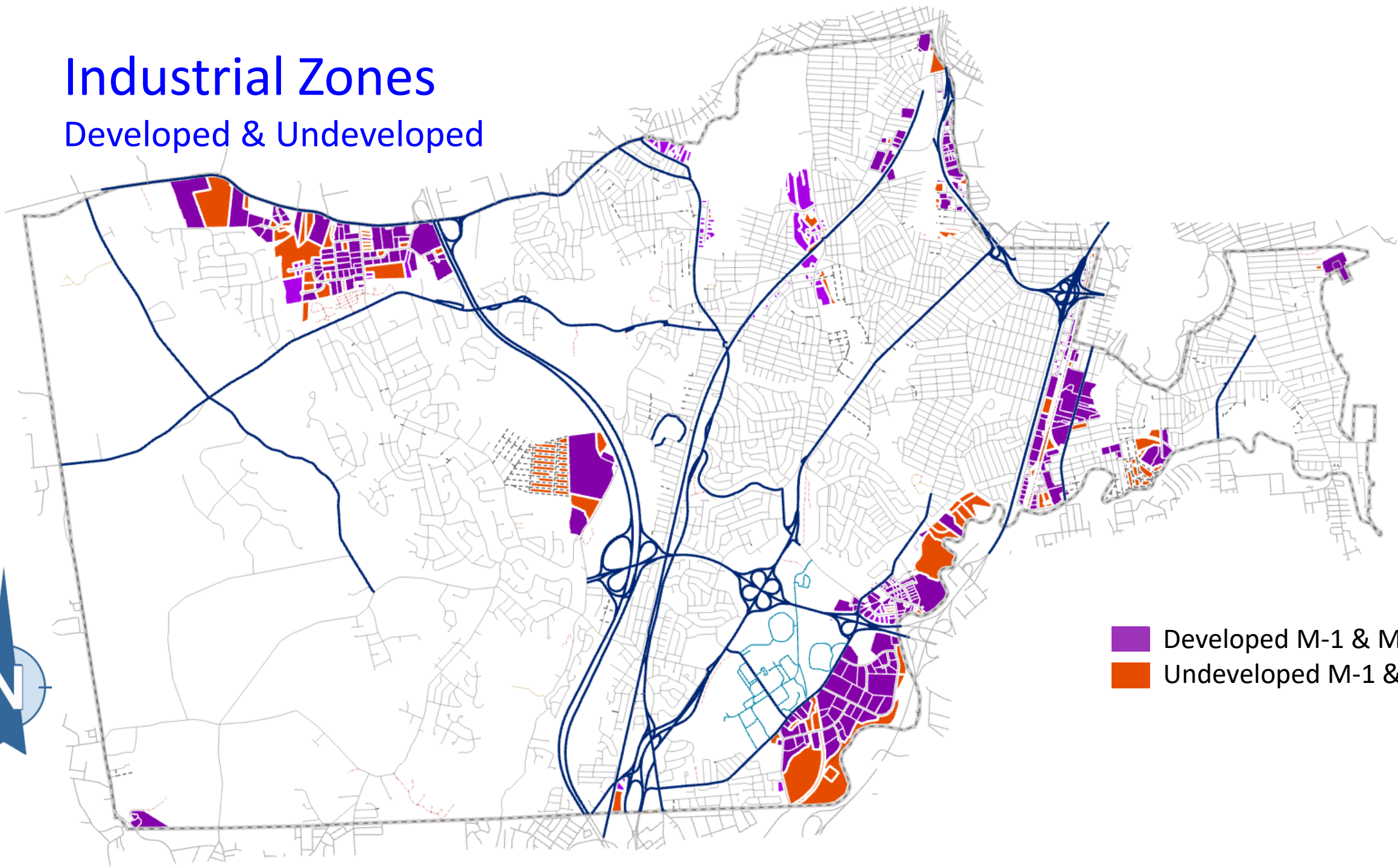
M-1 & M-2





M-1 & M-2

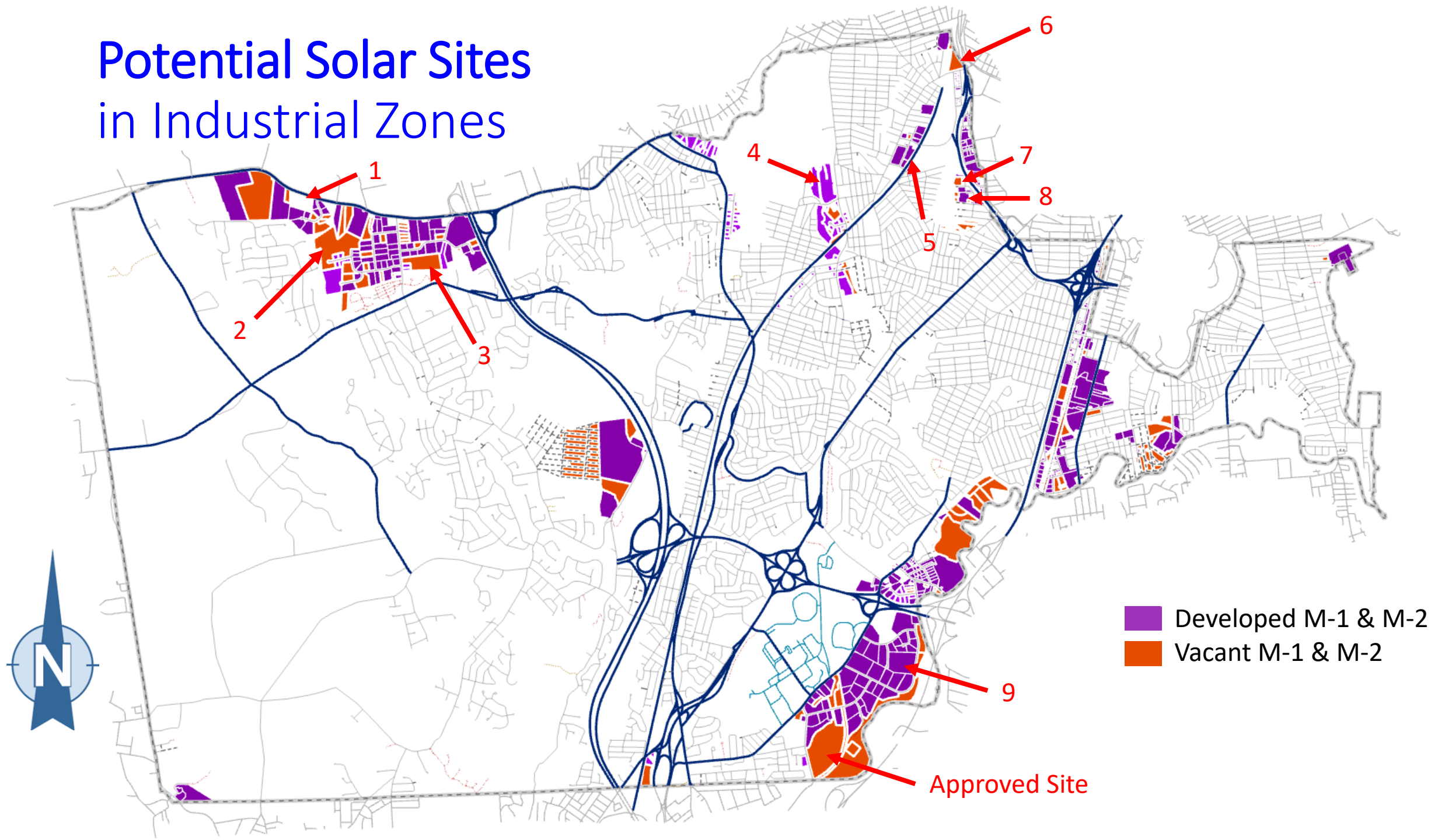
Industrial Zones

Developed & Undeveloped



-  Developed M-1 & M-2
-  Undeveloped M-1 & M-2

Potential Solar Sites in Industrial Zones



Potential Industrial Site #1 (Plainfield Pike)

Location:

2110 Plainfield Pike
AP 35 Lot 9

Zone:

A-80 (*FLUM Industrial*)

Current Use:

Single Family Residence

Total area:

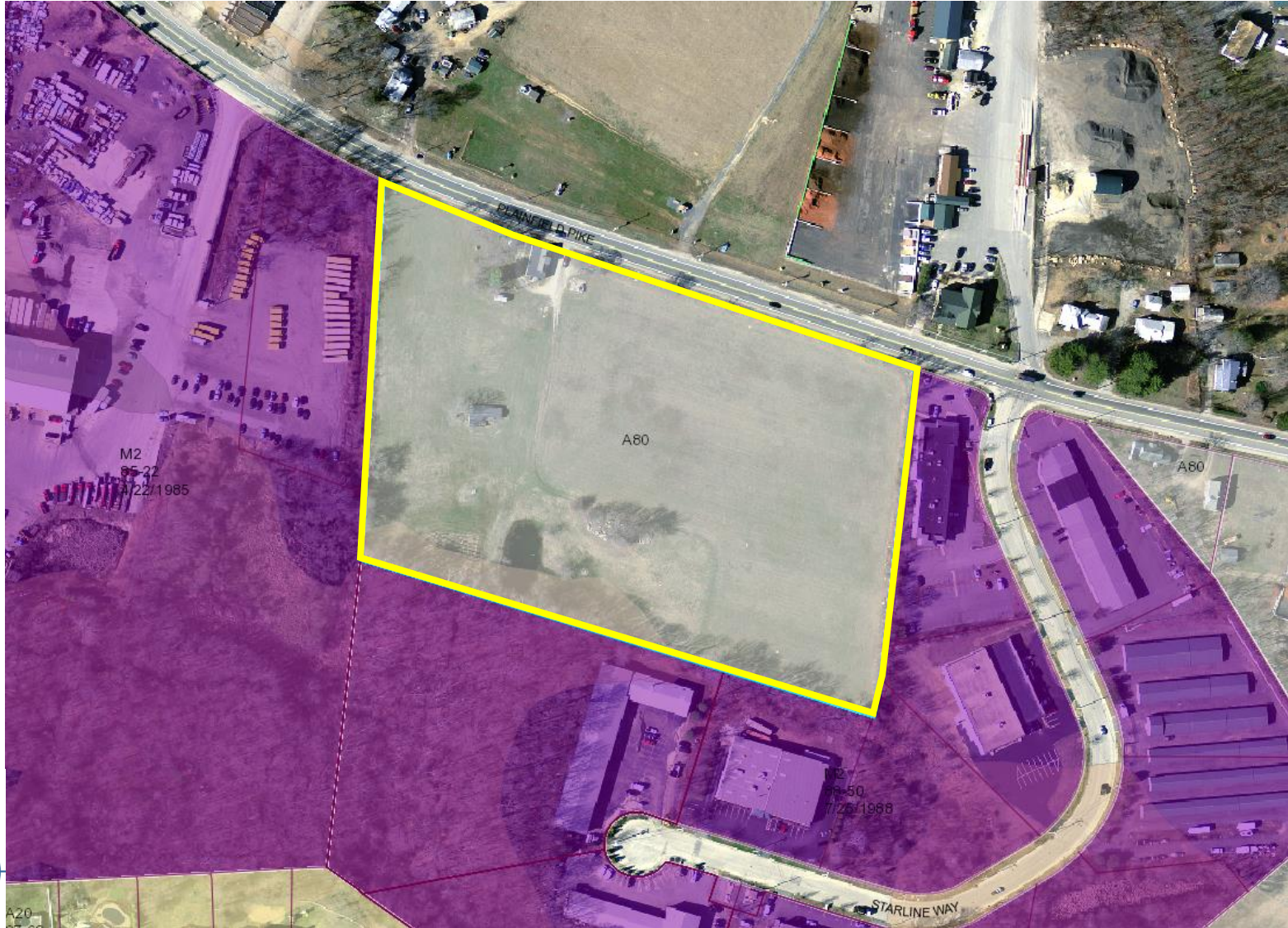
10.48 acres

Potential Energy Yield:

1.5 MW

Assessed Value:

\$197,300



Potential Industrial Site #2 (Daniels Way)

Location:

Daniels Way

AP 36 Lot 96

Zone:

M-1

Current Use:

Vacant

Total area:

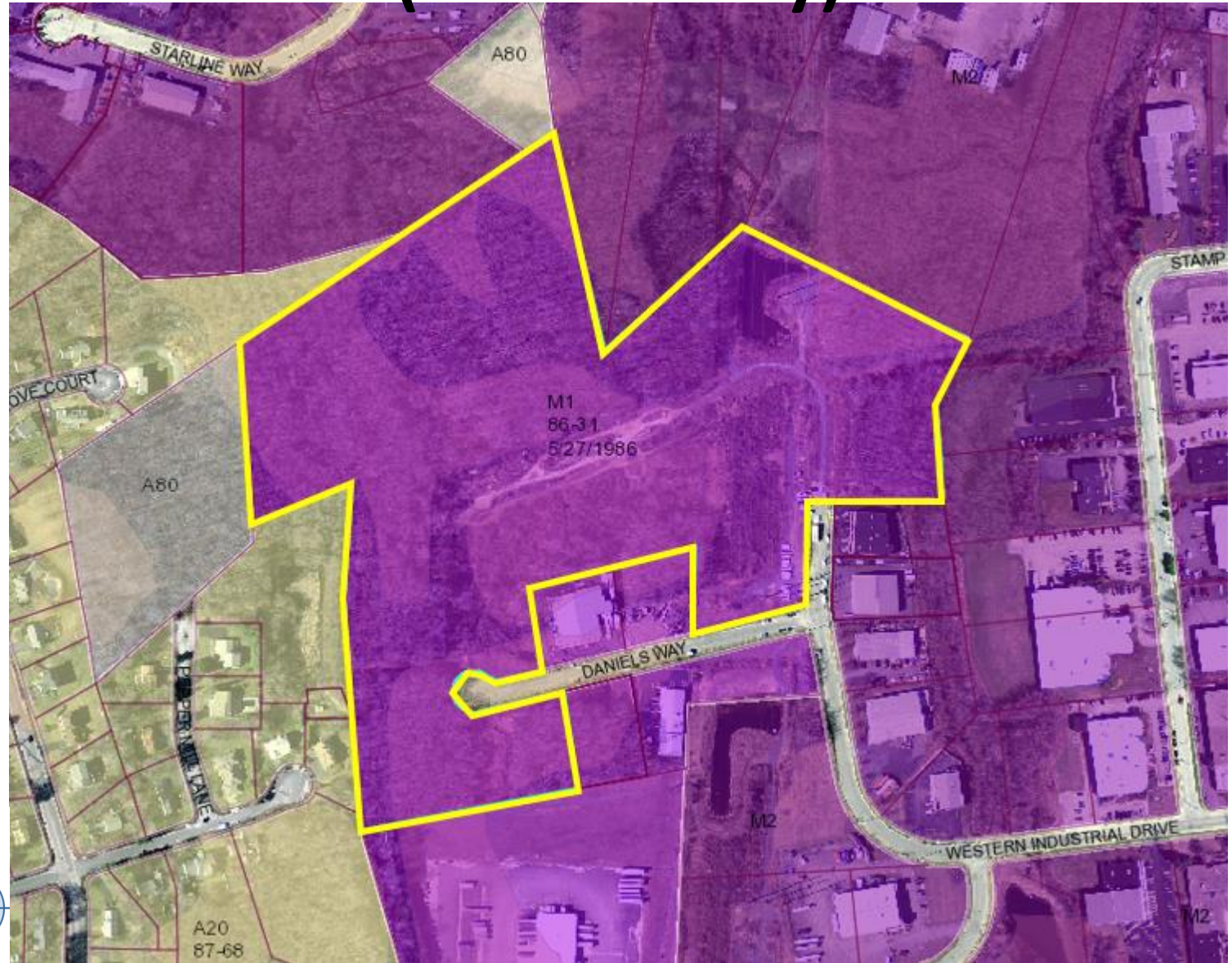
31.38 acres

Potential Energy Yield:

1-2 MW

Assessed Value:

\$20,400



Potential Industrial Site #3 (Comstock PWKY)

Location:

Comstock PKWY

AP 36 Lot 46

Zone:

M-2

Current Use:

Vacant

Total area:

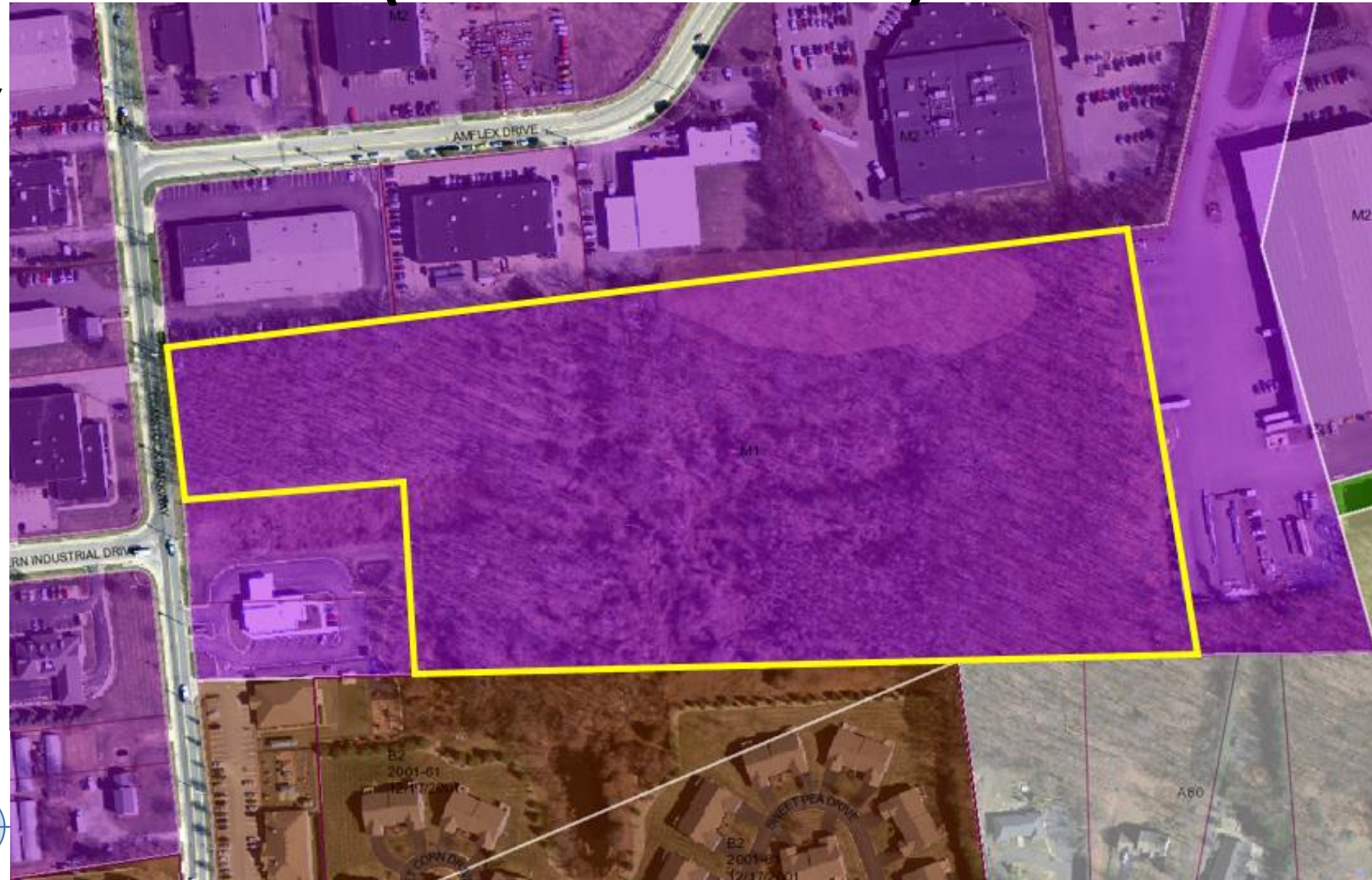
17.31 acres

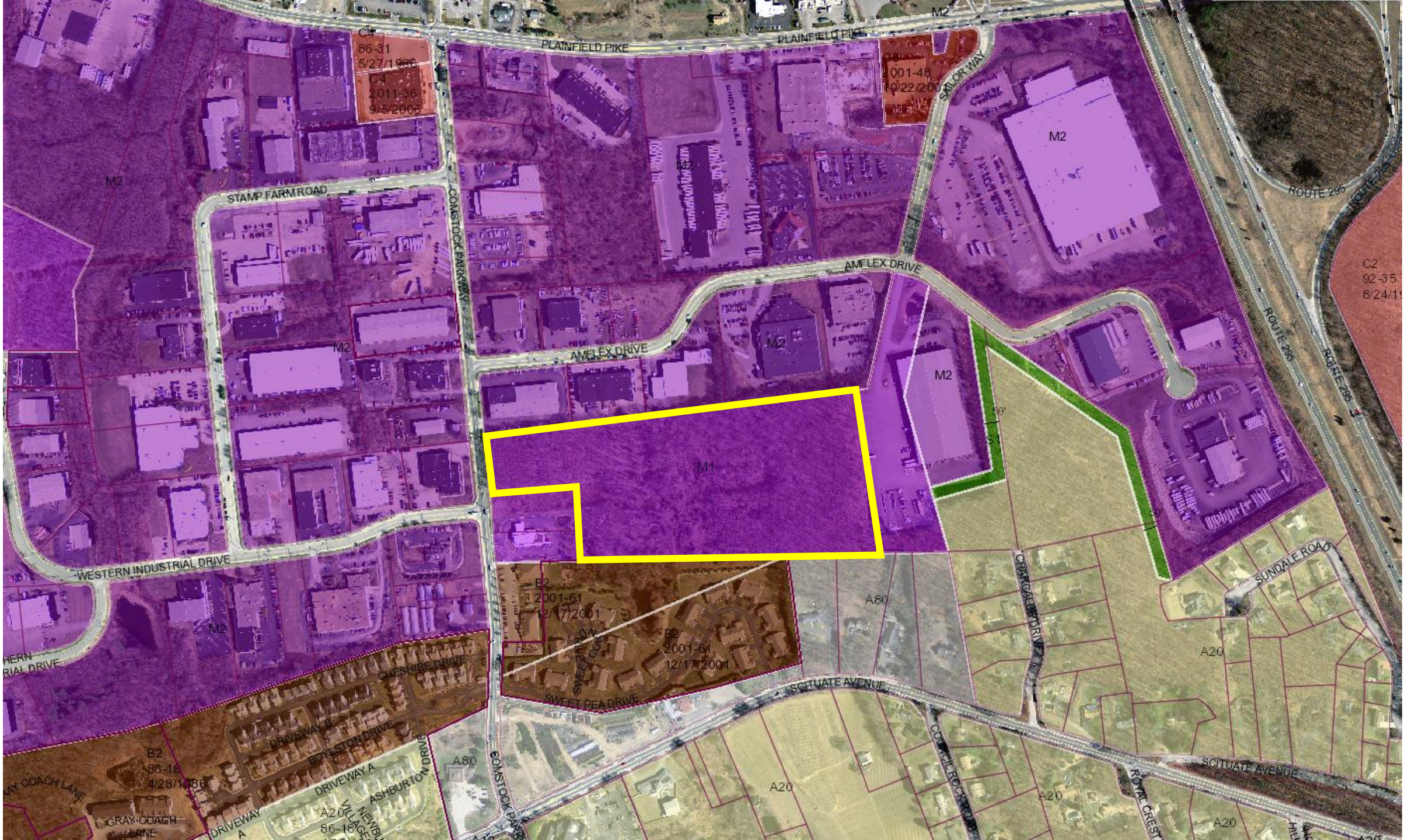
Potential Energy Yield:

2 MW

Assessed Value:

\$493,700





Potential Industrial Site #4 (Cranston Print Works)

Location:

Haven Ave & Dyer Ave

AP 8 Lot 195

Zone:

M-1 (FLUM Special
Redev. Area)

Current Use:

Cranston Print Works

Total area:

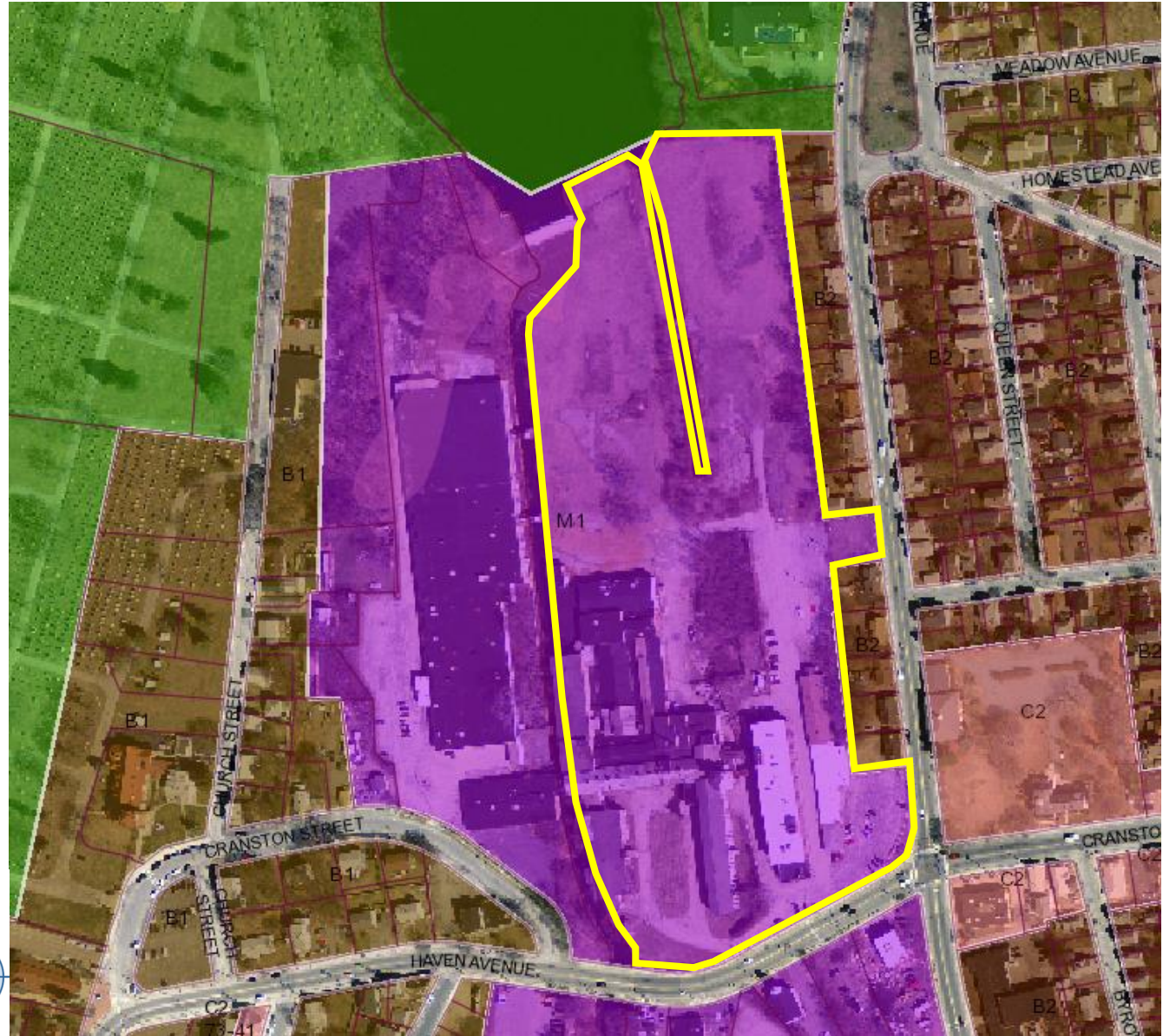
17.32 acres

Potential Energy Yield:

0.5 - 1 MW

Assessed Value:

\$1,289,600



Potential Industrial Site #5 (TACO Parking Lot)

Location:

Carlsbad St. &
Burnham Ave
AP 7 Lot 3744 & 3141

Zone:

M-2 & C-4

Current Use:

Taco Parking Lot

Total area:

4.96 acres

Potential Energy Yield:

0.7 MW

Assessed Value:

\$856,700



Potential Industrial Site #6 (Former Trolley Barn)

Location:

Cranston Street
AP 7 Lot 1

Zone:

M-2

Current Use:

Vacant

Total area:

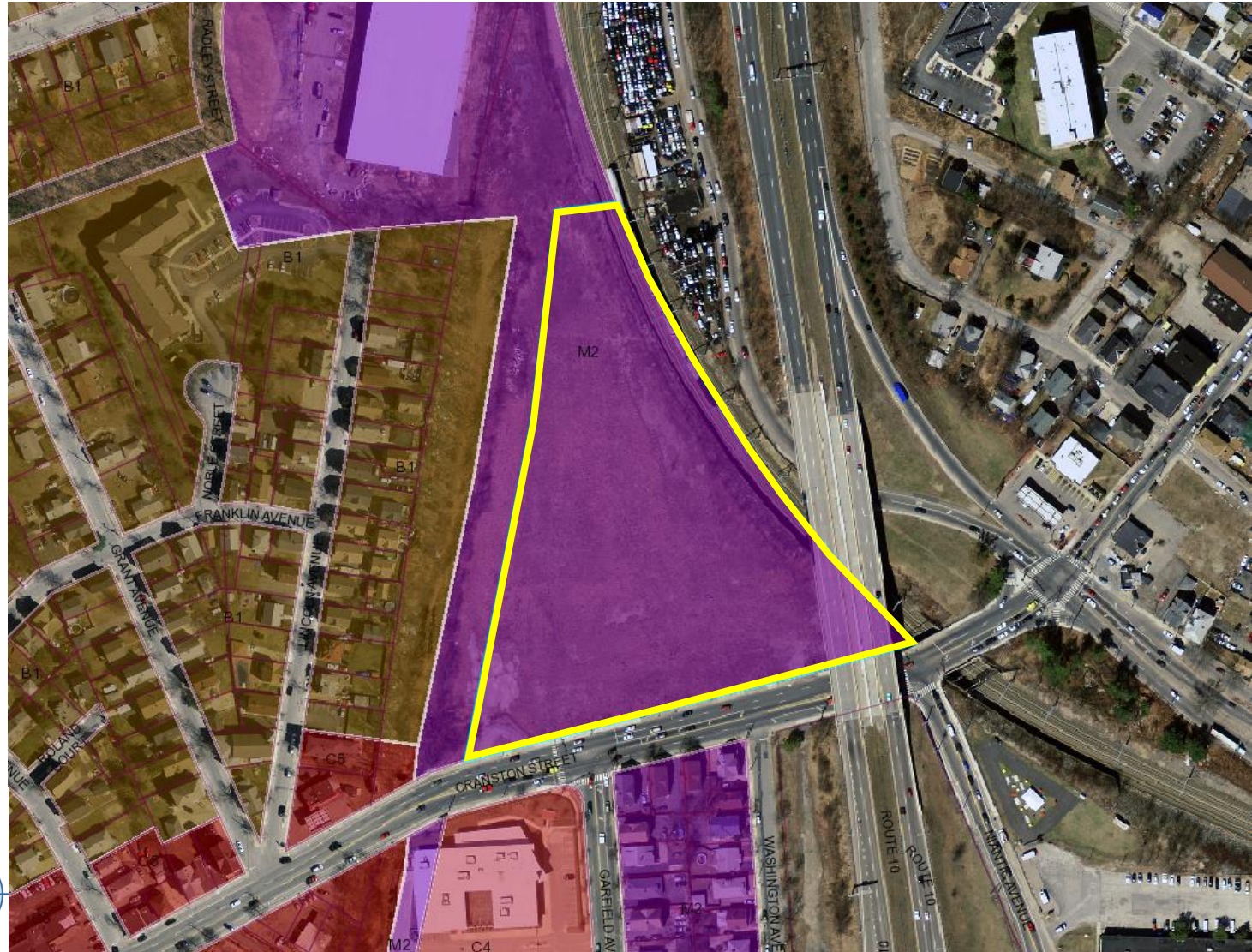
6.91 acres

Potential Energy Yield:

1 MW

Assessed Value:

\$750,400



Potential Industrial Site #7 (Technic)

Location:

West Russe St. &
Spectacle St
AP 6 Lots 1286,
3226, 3229, & 3230

Zone:

M-2

Current Use:

Vacant

Total area:

2.96 acres

Potential Energy Yield:

0.5 MW

Assessed Value:

\$207,400



Potential Industrial Site #8 (Shuster)

Location:

Molter St. &
Manhasset St.
AP 6 Lots 3124-3127,
1244-1247

Zone:

M-2

Current Use:

Industrial

Total area:

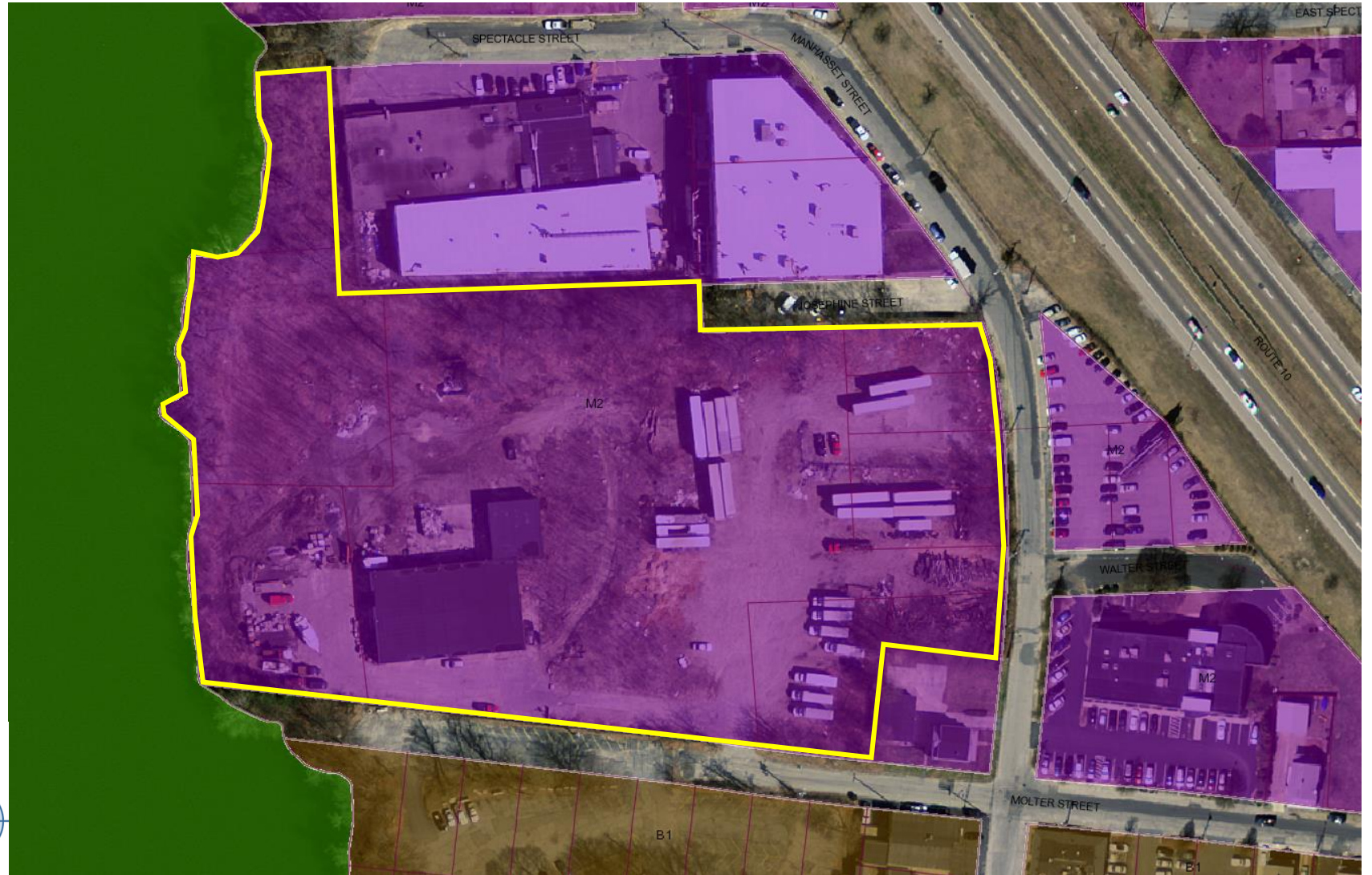
5.53 acres

Potential Energy Yield:

0.7 MW

Assessed Value:

\$554,500



Potential Industrial Site #9 (Howard Industrial)

Location:

Goddard Dr.
AP 13 Lot 39

Zone:

M-2

Current Use:

Being sold by
the State

Total area:

20 acres

Potential Energy Yield:

3 MW

Assessed Value:

\$685,408



Remaining M-1 & M-2 Questions

- Are these “preferred sites?” Are there others?
- Should the City be concerned about the opportunity cost of industrial land going to a “passive” use that does not bring jobs or generate activity in the City?
- What more can we do to incentivize renewable energy on “preferred sites?”

M-1 & M-2 Findings

- Existing industrial sites are not redeveloped for solar due to the costs.
- There are some opportunities for ground-mounted and canopy solar installations on industrial land. Land values, hazardous conditions and existing vegetation were NOT factors in the feasibility analysis.
- 12.5MW = Estimated MAX potential if all viable sites were developed.

Cranston's Solar Capacity Analysis Summary

- Rooftops – Current MW = 2.87 Anticipated MW = 1-10
 - Solar Canopies – Current MW = 0 Anticipated MW= 0-3
 - M-1 & M-2 zones – Current MW = 3.1 Anticipated MW= 12.5*
 - S-1 zone – Current MW = 0 Anticipated MW= 0
 - A-80 zone – Current MW = 42.1 Anticipated MW= ???
-
- Total Current MW = 48.07 Anticipated MW = ???

*Figure represents the unlikely scenario that all potential sites in the City were fully developed

Cranston's Solar Capacity Analysis Summary

• Rooftops	– Current MW = 2.87	Anticipated MW = 1-10
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• M-1 & M-2 zones	– Current MW = 3.1	Anticipated MW= 12.5*
• S-1 zone	– Current MW = 0	Anticipated MW= 0
• A-80 zone	– Current MW = 42.1	Anticipated MW= ???
<hr/>		
• Total	Current MW = 48.07	Anticipated MW = ???

Largely
Permissive

*Figure represents the unlikely scenario that all potential sites in the City were fully developed

Cranston's Solar Capacity Analysis Summary

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Largely
Permissive

- S-1 zone – Current MW = 0 Anticipated MW= 0
- A-80 zone – Current MW = 42.1 Anticipated MW= ???

Highly
Regulated

-
- Total Current MW = 48.07 Anticipated MW = ???

*Figure represents the unlikely scenario that all potential sites in the City were fully developed

Proposed Categories

1. Minor Accessory Solar Energy System (SES).

1. Roof-mounted & building-integrated & Solar Canopies
2. Self serving accessory ground-mounted (produce < 125% of site usage)

2. Major Accessory Solar Energy System.

1. Not a Minor Accessory SES
2. Accessory to a principal use
3. Solar Lot Coverage does not exceed 25% of the Upland area of the site

3. Principal Solar Energy System.

1. Not a Minor or Major Accessory SES and/or;
2. Solar Lot Coverage exceeds Major Accessory Solar Lot Coverage maximum

Key Regulatory Concepts (1/2)

1. Minimum Lot Area

Principal SES – 30 acres min, Major Acc. SES - 10 acres min

2. Solar Lot Coverage

Principal SES – 60%, Major Acc. SES – 25%

3. Tree Disturbance Maximum

Principal SES – 60%, Major Acc. SES – 10%

4. Tree Disturbance Setbacks

100' from ROW, 400' from primary residential structures, 100' from residential property lines

5. Panel Locations

100' from all property lines & sited to minimize impacts

Key Regulatory Concepts (2/2)

6. Buffering / Screening

Inclusive processes and case-by-case buffer depths

7. Grading

Restricted to the greatest reasonable extent possible

8. Interconnections

All onsite cables to be underground to pad-mounted equipment

9. Fencing

Barbed wire strictly prohibited, stockade fencing required if/where visible, 6-8 inch gap/spacing for critters

10. Process

Special Use Permit required for Principal SES's in A-80 & S-1

Minimum Lot Area

Current Ordinance

- Not addressed

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory
 - 10 Acres of Upland minimum
- Principal
 - 30 Acres of Upland minimum

Minimum Lot Area

Current Ordinance

- Not addressed

Perceived Benefits

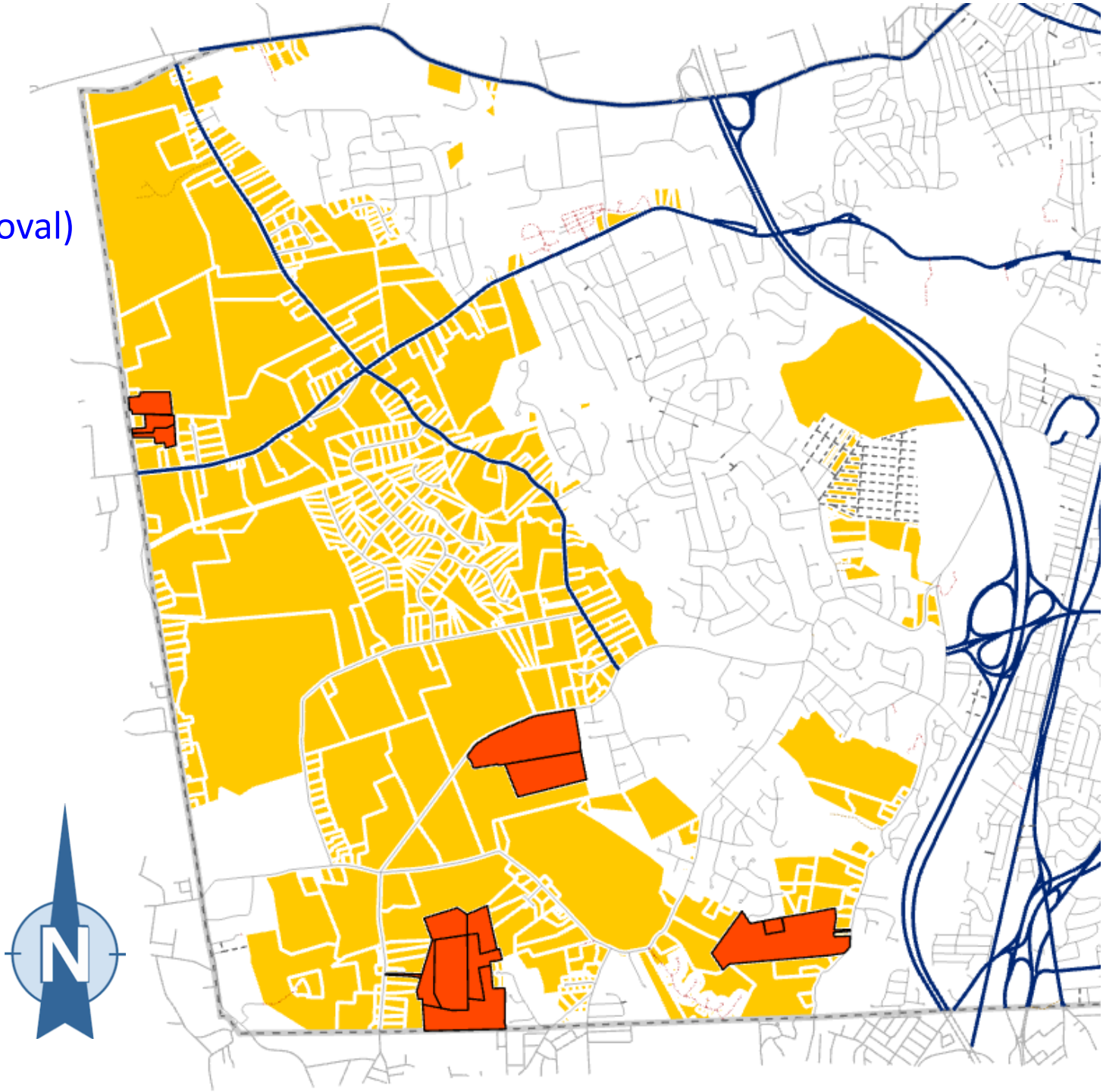
1. Allows for greatest ability for desirable site design
2. Allows for significant % of conservation
3. Reduces the number of potential sites
4. Targets larger sites most susceptible to subdivision

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory
 - 10 Acres of Upland minimum
- Principal
 - 30 Acres of Upland minimum

A-80 Zoned Parcels

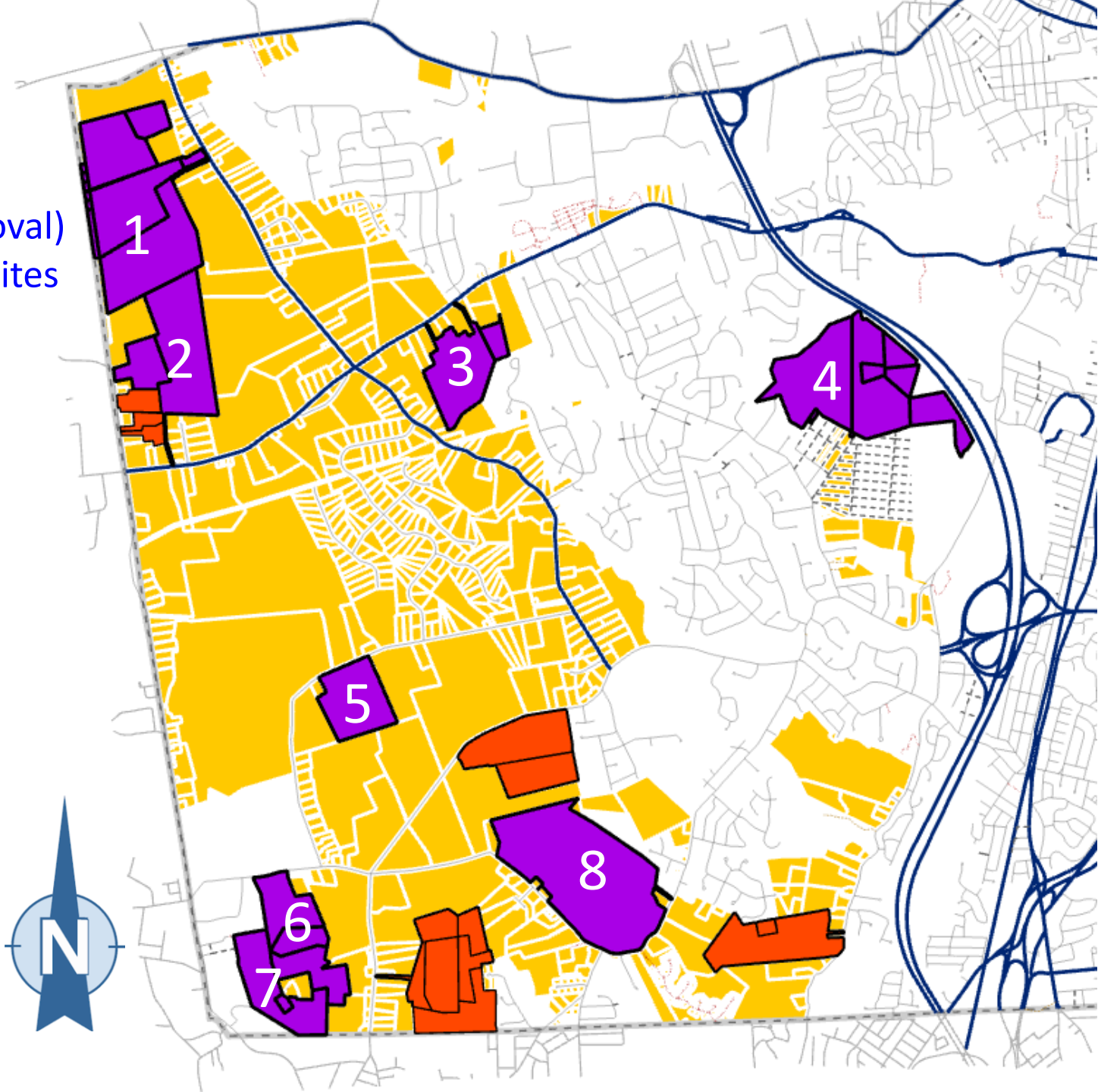
Existing Sites (MP Approval)



- A-80
- Approved Projects

A-80 Zoned Parcels

Existing Sites (MP Approval)
Potential Principal SES Sites



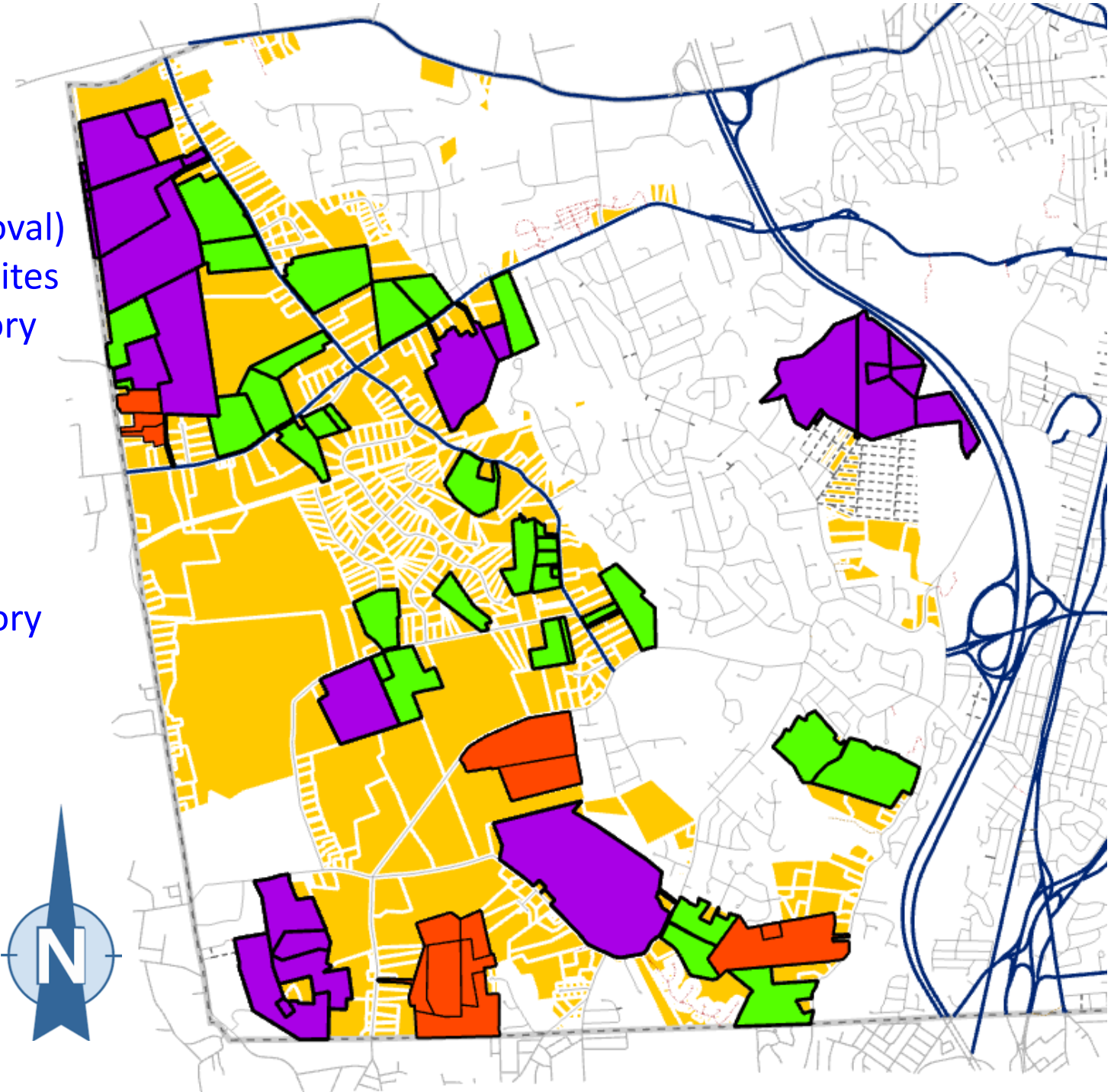
- A-80
- Approved Projects
- Potential Principal SES Site

A-80 Zoned Parcels

Existing Sites (MP Approval)
Potential Principal SES Sites
Potential Major Accessory
SES Sites

8 Viable Principal Sites

19 Viable Major Accessory
Sites



- A-80
- Approved Projects
- Viable Principal SES Site
- Viable Major Accessory SES Site

Solar Lot Coverage

Current Ordinance

- Not addressed – interpreted not to count against Building Lot Coverage

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory
 - 25% Maximum
- Principal
 - 60% Maximum

Solar Lot Coverage

Current Ordinance

- Not addressed – interpreted not to count against Building Lot Coverage

Perceived Benefits

1. Restricts the ability to build property line to property line
2. Ensures Major Accessory SES's are accessory
3. Restricts Principal similar to standard conservation subdivision

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory
 - 25% Maximum
- Principal
 - 60% Maximum

Tree Disturbance Maximum

Current Ordinance

- Not addressed

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory
 - 10% Maximum
- Principal
 - 60% Maximum

Tree Disturbance Maximum

Current Ordinance

- Not addressed

Perceived Benefits

1. Conserves the environment & habitats
2. Preserves the rural character of western Cranston
3. Protects residents from visual impacts
4. Encourages solar on non-vegetated sites

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory
 - 10% Maximum
- Principal
 - 60% Maximum

Tree Disturbance Setback

Current Ordinance

- Not addressed

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory & Principal
 - 100' from ROW
 - 400' from primary residential structures
 - 100' from property lines of lots with residential land use codes

Tree Disturbance Setback

Current Ordinance

- Not addressed

Perceived Benefits

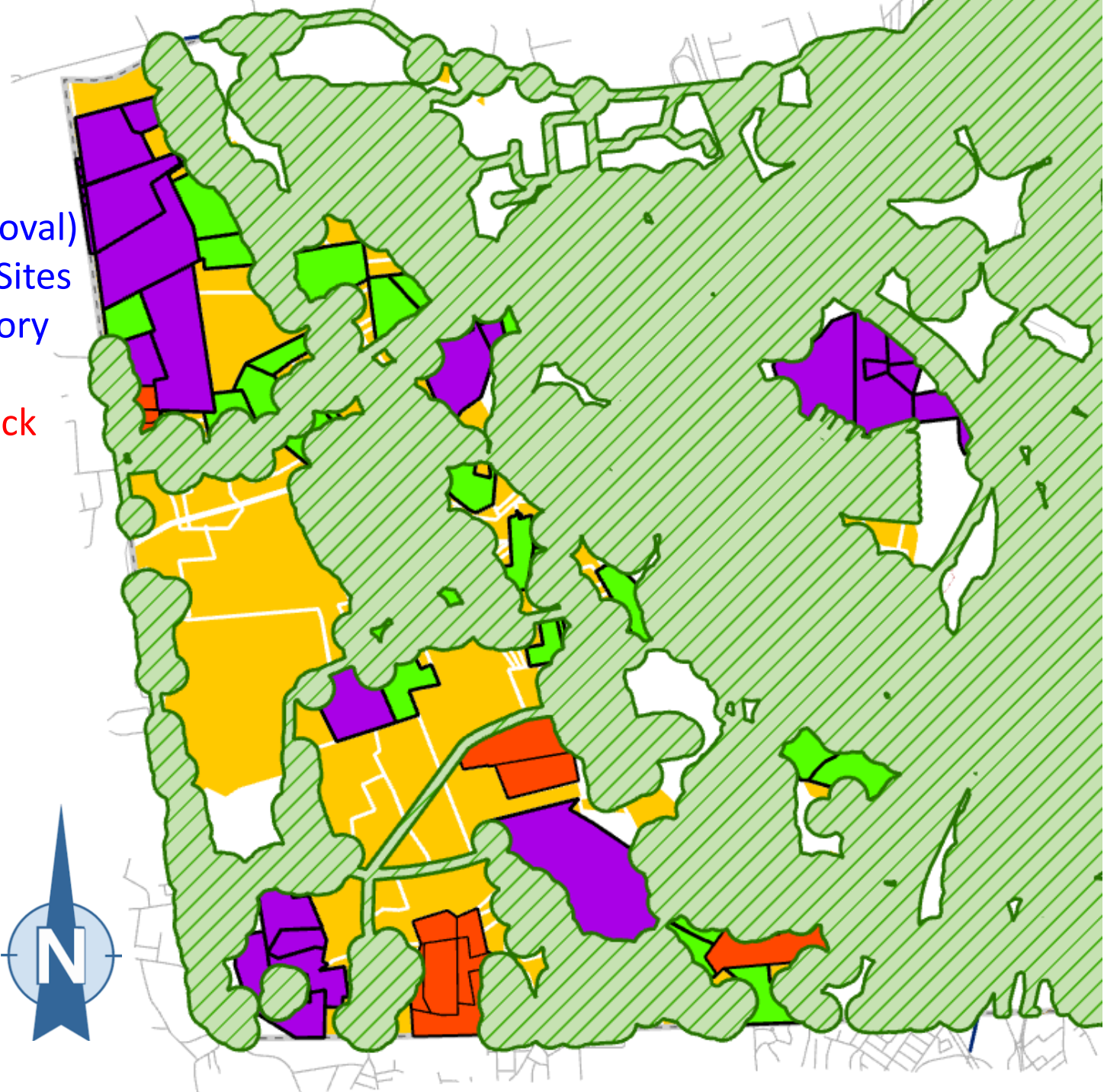
1. Preserves the environment & habitats
2. Preserves the rural character of western Cranston
3. Targets critical impact areas / protects residents from visual impacts
4. Encourages solar on non-vegetated sites

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory & Principal
 - 100' from ROW
 - 400' from primary residential structures
 - 100' from property lines of lots with residential land use codes

A-80 Zoned Parcels

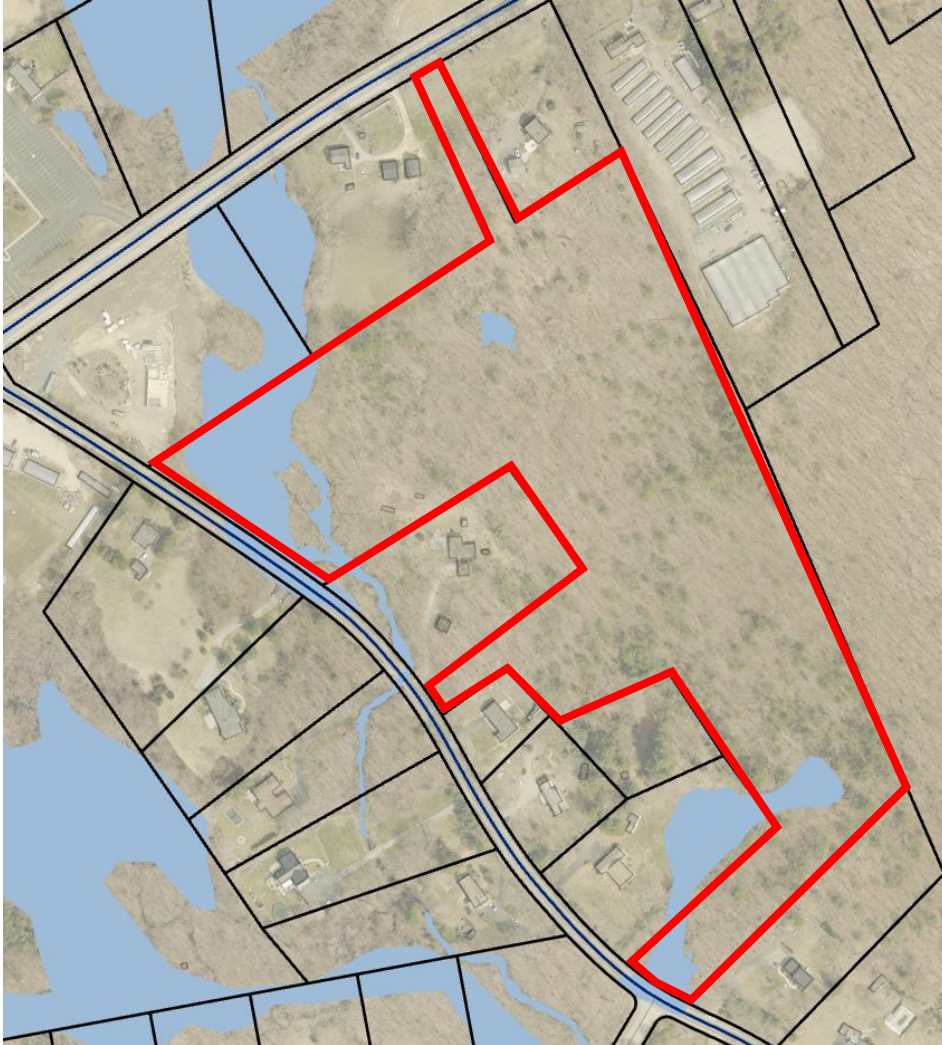
- Existing Sites (MP Approval)
- Potential Principal SES Sites
- Potential Major Accessory SES Sites
- Tree Disturbance Setback



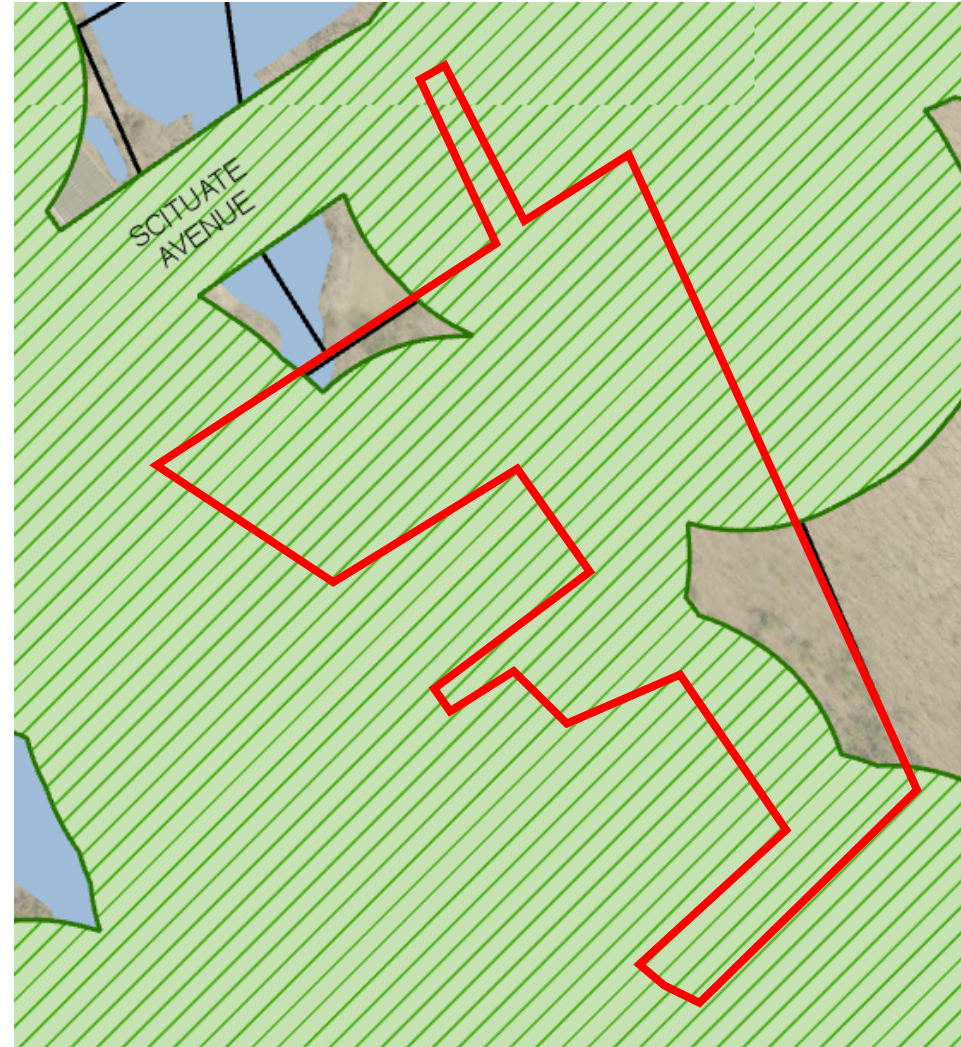
- A-80
- Approved Projects
- Viable Principal SES Site
- Viable Major Accessory SES Site
- Tree Disturbance Setback

Example of Regulatory Impact

17.7 acre vegetated site.

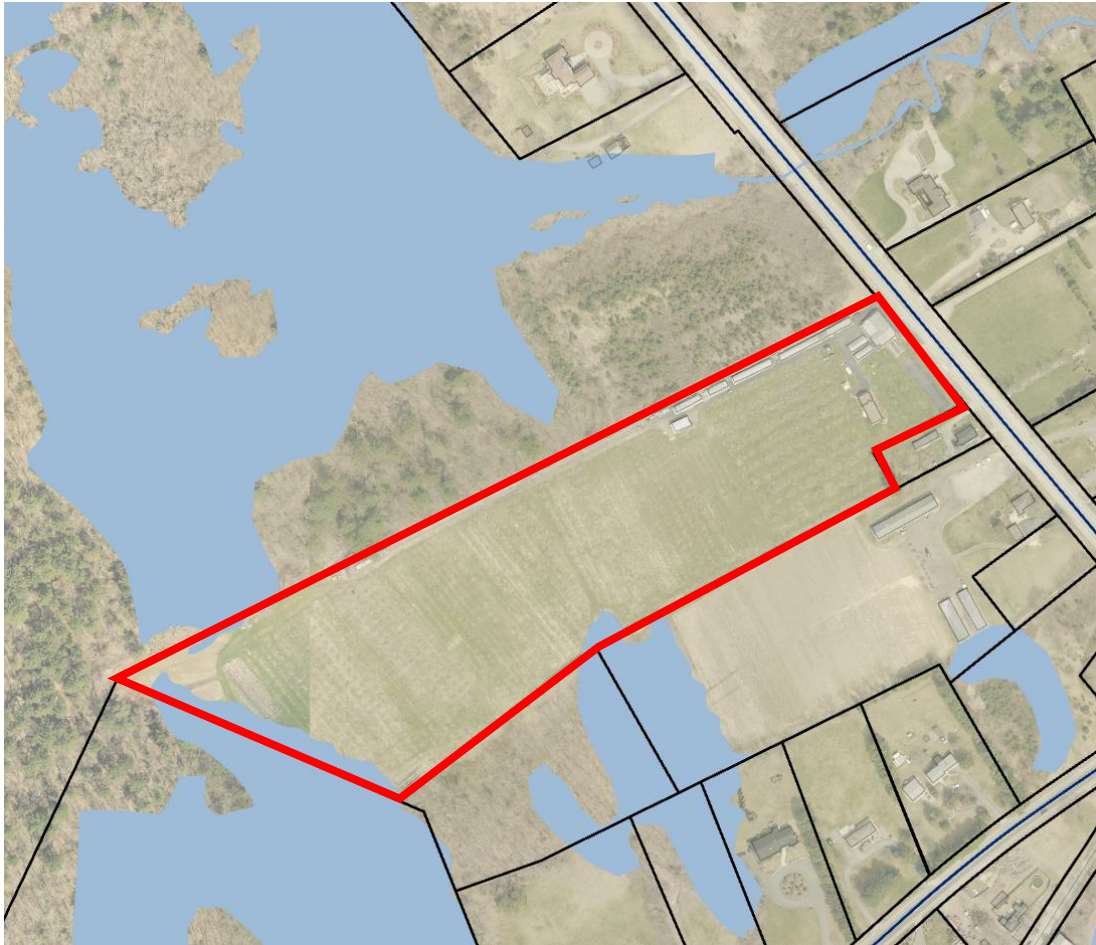


Tree Disturbance Setback renders unviable.

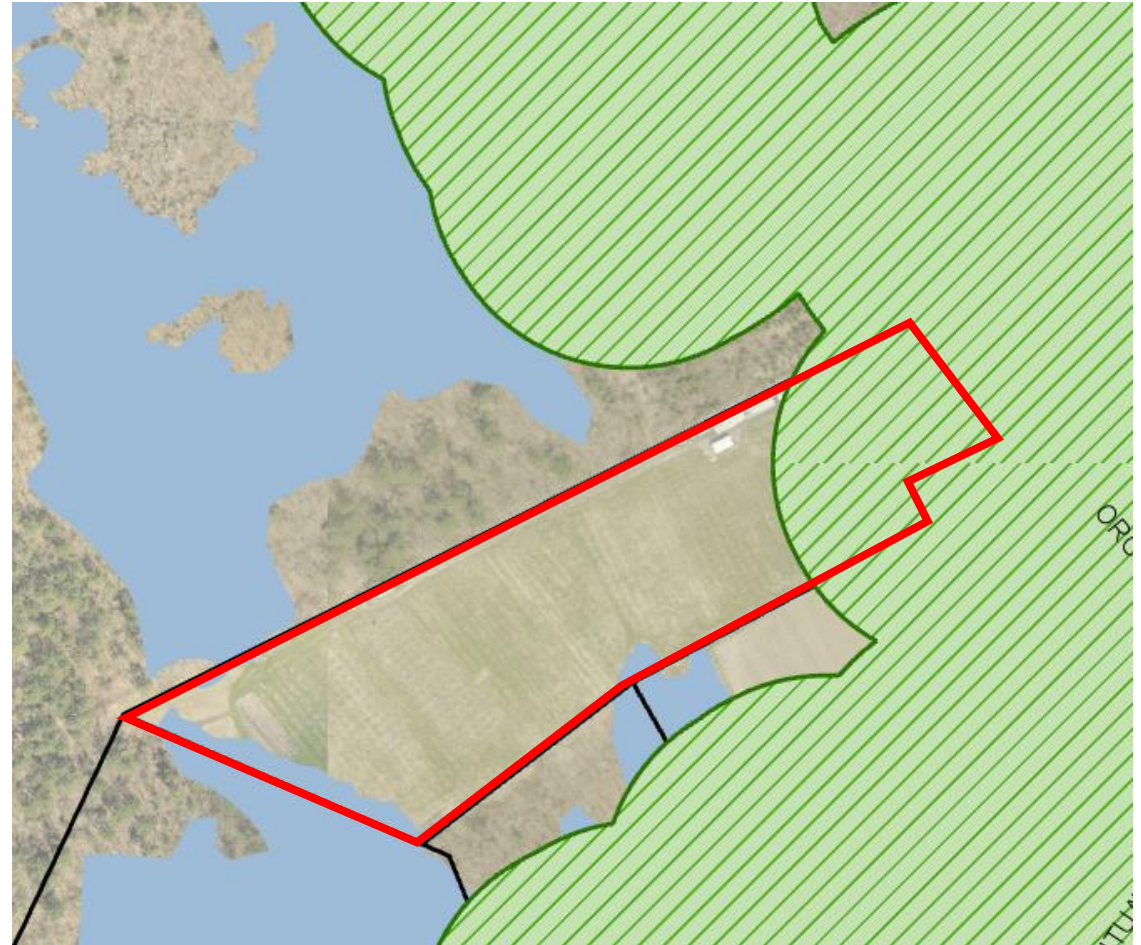


Example of Regulatory Impact #2

16.5 acre cleared farm site.



Viable site for Major Accessory



Panel Locations & Setbacks

Current Ordinance

- Not addressed / underlying zoning governs

Proposed Ordinance

- Minor Accessory
 - Underlying zoning governs
- Major Accessory & Principal
 - 100' from all property lines
 - Panels must be sited “to minimize potentially adverse impacts to nearby properties, communities and natural resources. . .”

Panel Locations & Setbacks

Current Ordinance

- Not addressed / underlying zoning governs

Perceived Benefits

1. Preserves the environment & habitats
2. Preserves the rural character of western Cranston
3. Targets critical impact areas / protects residents from visual impacts
4. Encourages solar on non-vegetated sites

Proposed Ordinance

- Minor Accessory
 - Underlying zoning governs
- Major Accessory & Principal
 - 100' from all property lines
 - Panels must be sited “to minimize potentially adverse impacts to nearby properties, communities and natural resources. . .”

Buffering / Screening

Current Ordinance

- Not addressed

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory & Principal
 - Inclusive Approach
 - Buffers as wide as necessary
 - Flexibility for already cleared sites
 - Regulations on plantings

Buffering / Screening

Current Ordinance

- Not addressed

Perceived Benefits

1. Protects residents / abutters
2. Preserves the rural character of western Cranston
3. Includes abutters in process
4. Better quality of buffer/plantings
5. Allows flexibility as appropriate

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory & Principal
 - Inclusive Approach
 - Buffers as wide as necessary
 - Flexibility for already cleared sites
 - Regulations on plantings

Grading

Current Ordinance

- Restricts disturbance of topsoil

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory & Principal
 - Installations “shall keep with the existing contours of the land to the greatest extent possible. . .”
 - Restricts disturbance of topsoil

Grading

Current Ordinance

- Restricts disturbance of topsoil

Perceived Benefits

1. Protects existing grades
2. Reduces disturbance caused by site work
3. Preserves the rural character of western Cranston
4. Incentivizes sites with workable slopes

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory & Principal
 - Installations “shall keep with the existing contours of the land to the greatest extent possible. . .”
 - Restricts disturbance of topsoil

Interconnection

Current Ordinance

- Not addressed

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory & Principal
 - Onsite cables must be underground
 - Information required at various phases

Interconnection

Current Ordinance

- Not addressed

Perceived Benefits

1. Preserves the rural character of Western Cranston
2. More information assists Approving Bodies

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory & Principal
 - Onsite cables must be underground
 - Information required at various phases

Fencing

Current Ordinance

- Not addressed

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory & Principal
 - Barbed wire strictly prohibited
 - 8' height requirement
 - Visible portions to be stockade
 - 6-8" gap for animals

Fencing

Current Ordinance

- Not addressed

Perceived Benefits

1. Better aesthetic outcomes
2. More environmentally sensitive

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory & Principal
 - Barbed wire strictly prohibited
 - 8' height requirement
 - Visible portions to be stockade
 - 6-8" gap for animals

Process

Current Ordinance

- Not addressed

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory
 - DPRC if under 5 acres
 - MLD if over 5 acres
- Principal
 - Special Use Permit required

Process

Current Ordinance

- Not addressed

Perceived Benefits

1. No longer “by-right” as principal use
2. Process requirements proportionate to size

Proposed Ordinance

- Minor Accessory
 - Does not apply
- Major Accessory
 - DPRC if under 5 acres
 - MLD if over 5 acres
- Principal
 - Special Use Permit required (ZBR)

Regulation Overview by Categories

1. Minor Accessory Solar Energy System

Largely unregulated, no disincentives (consistent with existing ordinance)

2. Major Accessory Solar Energy System

Accessory use, 10-acre upland min, 10% Tree Disturbance Max, fully screened

3. Principal Solar Energy System

Special Use permit required, 30-acre upland min (limits to 8 sites), 60% Tree Disturbance Max.

Goals Served (1/2)

- **Maintain rural character of Western Cranston**

By limiting the amount & locations of tree disturbance, siting & screening SES's appropriately, burying onsite poles, and providing farmers with a revenue option to keep them farming.

- **Enhance the City's capacity to acquire & preserve land**

By offsetting permanent development while creating new tax revenues which can be allocated to land or development rights acquisition.

Goals Served (2/2)

- **Support renewable energy production**

By allowing various forms of SES's throughout the City with regulations tailored to respective zoning districts.

- **Maintain a healthy municipal budget**

By generating commercial tax revenue and offsetting cost burdens associated with residential development.

- **Minimize traffic congestion**

By allowing a development with no traffic generation.

IN CONCLUSION

- Not trees vs cutting emissions, trees & cutting emissions
- Can the ordinance offer adequate protections?
- We need feedback!!
 - Email – jberry@cranstonri.org