



# POTENTIAL TREE PLANTING ANALYSIS

Right-of-Way Map Book

## SUMMARY

This document summarizes a high-level GIS analysis to identify where there may be potential locations for new tree plantings throughout the city. The locations identified in this map book represent hypothetical planting locations that can serve as a strategic planning tool as Charlottesville continues to enhance its urban forest.

Prepared for the City of Charlottesville by the Green  
Infrastructure Center Inc.

January 2017

The information shown in this map book is intended to be used as a high-level, city-wide planning tool. A citywide screening of where there may be potential to plant trees is a useful first step in understanding not only where and how many trees might be planted, but also what benefits might be associated with planting in a given location. This map book provides an overview of potential tree planting locations within existing right-of-way.

These points were created by the Green Infrastructure Center (GIC) using the best available GIS data, not field surveys. The datasets included in the methodology are under constant revision, and may not be perfectly accurate or current. This analysis is not a suitability study and does not represent recommended tree planning sites. The locations identified may include areas where trees could not be physically planted, and could also include areas that may not be suitable for planting. Further field investigation will be needed to determine if the points identified are suitable for planting and to identify the precise tree planting site.

#### Methodology:

The basic outline of this process was to first update the provided “possible planting area” (PPA), create tree points within the final PPA, calculate a variety of metrics to attach to each point, and finally create map books to help guide future tree plantings.

A variety of datasets were used to complete this analysis. The primary data source for this analysis was created for the City of Charlottesville by Plan-It Geo. They developed a full land cover classification, as well as deriving the PPA from the created land cover dataset. Their product was derived from 2014 aerial imagery, which is one of the major limitations of the analysis because trees planted after 2014 are not accounted for, unless their specific location has been tracked by the City. Many of the datasets used as both exclusion factors and point metrics are updated on a regular basis by City of Charlottesville staff. This will allow the City of Charlottesville to update this analysis in the future when it becomes outdated.

The potential tree planting locations are semi-random points that have been placed to maximize the number of trees that can be planted in the PPA. The PPA was created by mapping several types of land cover, including turf grass and bare soil, while excluding land cover types where trees cannot be planted, like buildings and roads. This analysis only considers previous PPA. This does not include impervious PPA, such as parking lots, even though it may be possible to plant trees in these areas. Additional exclusion factors (places where trees cannot be planted) were applied to refine the PPA:

- The Meadow Creek Restoration area (the area was replanted, but not captured in the land cover dataset)
- Railroad right-of-way
- A 10-foot buffer around existing trees
- A 10-foot buffer around existing buildings
- A 15-foot buffer around recent tree plantings
- A 10-foot buffer around underground utilities
- Sidewalks
- Private alleyways (alleyways that do not receive public maintenance, but must remain clear for vehicles)
- Un-addressable buildings – ranging from sheds to parking decks

Additionally, points were given a 40-foot separation distance. A 15-foot buffer was used around the available dataset of overhead utilities, but points that fell within this buffer were not removed, only flagged as constrained. Trees can still be planted in these locations, they are simply not ideal for larger trees. These final two constraints were chosen because they are consistent with codes and best practices for tree planting and maintenance in Charlottesville.

Additionally, for planning and analysis purposes, a number of metrics were collected for each identified point. These were:

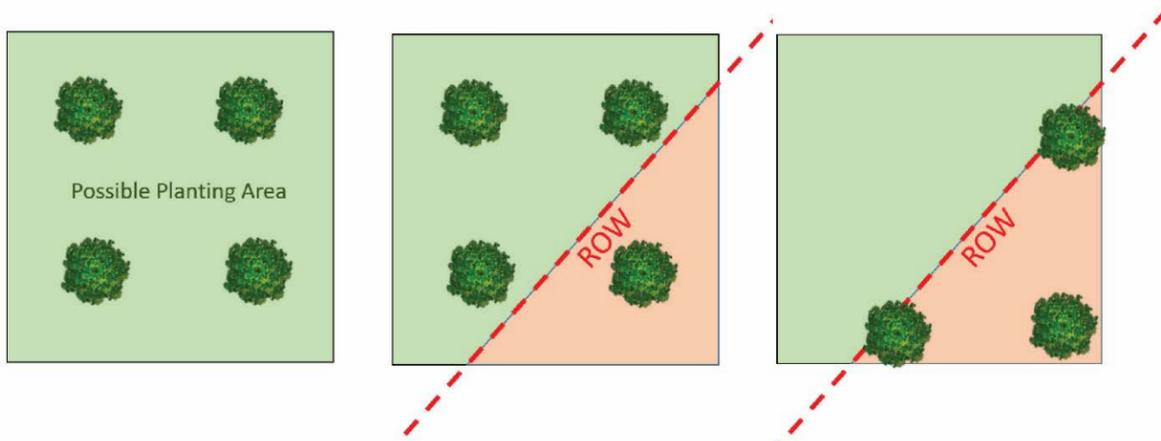
- Census Data (by block group)
  - Population Density (Persons/Acre)
  - Median Household Income
- Proximity (up to 328 feet (100 meters)) to Major Roads (including ADT numbers)
- Proximity (up to 33 feet (10 meters)) to Trails (Existing and Proposed)
- Proximity (up to 49 feet (15 meters)) to Bike Lanes (Existing and Proposed)
- Proximity (up to 656 feet (200 meters)) to Streams
- Near Forest Cores (100 Feet)
- Sub-catchment Imperviousness Percentage
- Relative Temperature
- Type of Framework Street (50 Feet)
- Zoning
- Steep Slopes
- Floodplain
- Underneath overhead power lines (Dominion Data)
- Entrance Corridor
- State Owned Property
- City/County Owned Property
- School Property
- UVa Property
- Walking Distance to Schools (1/4 Mile)

If a metric does not have a discrete value, such as population density, it was given a value of 0 if it does not meet the metric, and a 1 if it does. Metrics that include “Proximity” have distances included. For the metrics that include proximity, a distance of -1 indicates that the point falls outside of the maximum range to be considered for that metric.

Trees can provide many benefits, from stormwater mitigation to reducing urban heat island, and this supplemental information helps identify where these benefits can be realized. While all of the metrics are embedded in each point, these map books help visualize this information spatially. This map book can identify potential tree planting projects, but the exact location of trees should be adjusted based on the realities of the specific site.

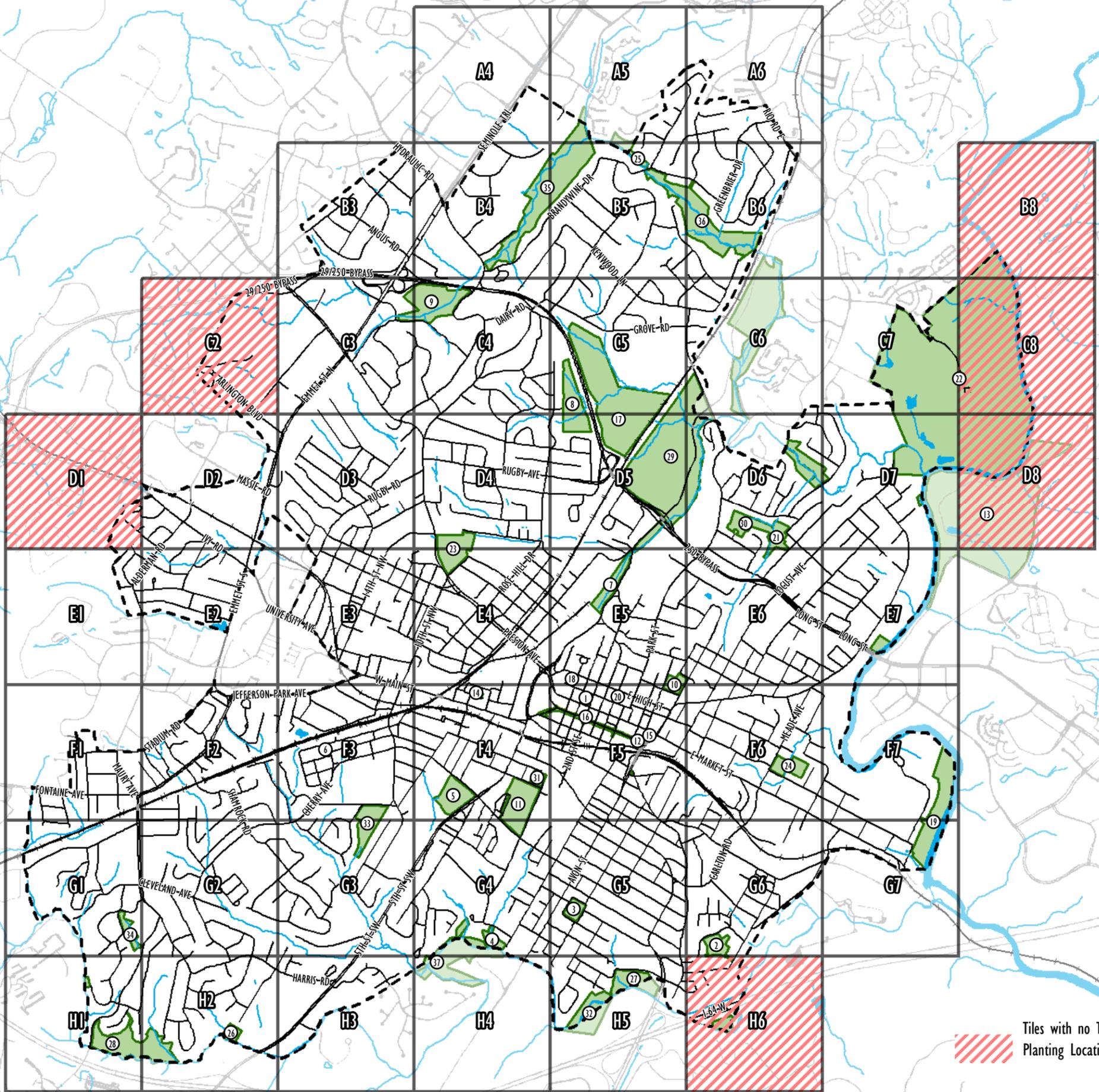
#### Right-of-Way Analysis:

Right-of-way possible planting area points are calculated from their own analysis, not a selection from all potential tree planting locations. This is because the points were placed randomly to maximize the number of points. The random points did not take into account the right-of-way, leading to an under-estimation of points that could fit into the right-of-way. A second, identical calculation was done on just the PPA within the right-of-way so that the number of points were not under-represented. The points in the right-of-way should be considered as a separate analysis from the map book depicting “all” potential tree planting locations in the city.

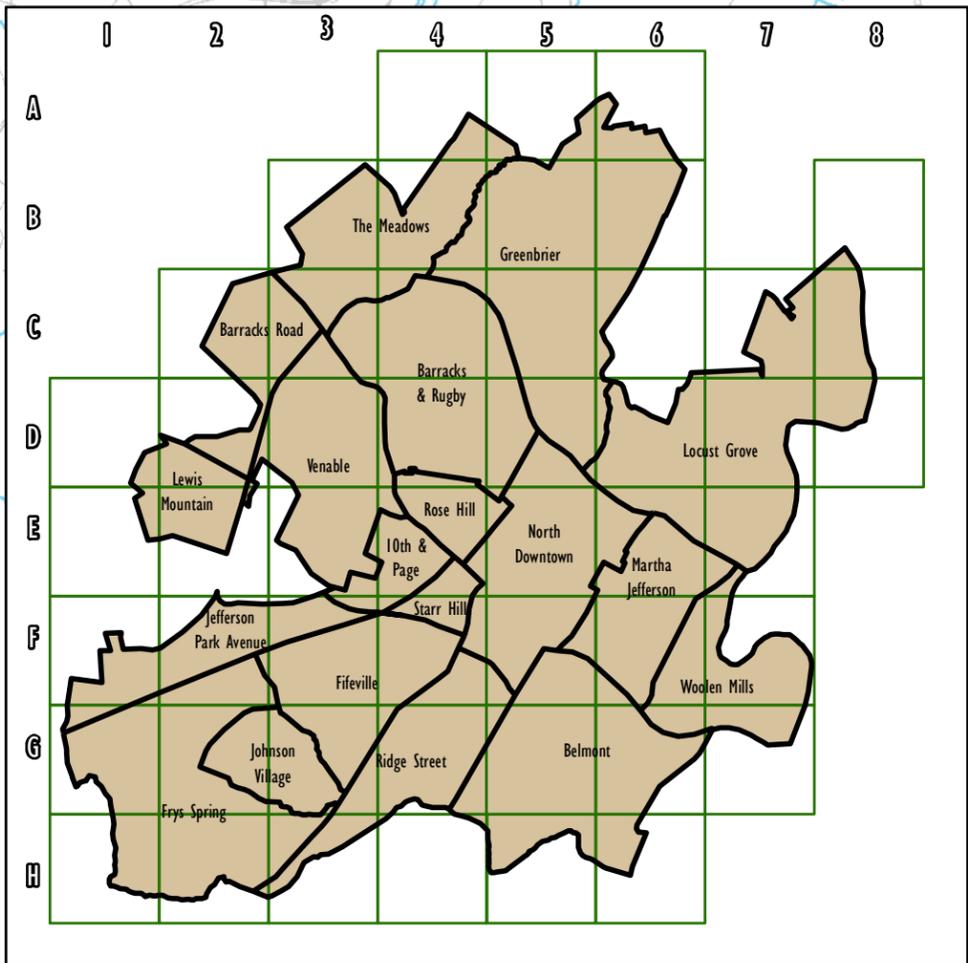


This series of images demonstrates the difference between the possible planting points generated specifically inside the right-of-way. The image at left shows where possible planting points would be located by ArcGIS to maximize the number of points in a given possible planting area (green square) and a specified minimum spacing between points. The middle image demonstrates what would happen assuming the portion of the PPA shown in orange was in the ROW. Under this scenario, only one point would be found to be in the ROW. The image at right shows what would happen if the same analysis is run **only considering the ROW**. Under this scenario, three points can be located in the ROW, using the same assumptions.

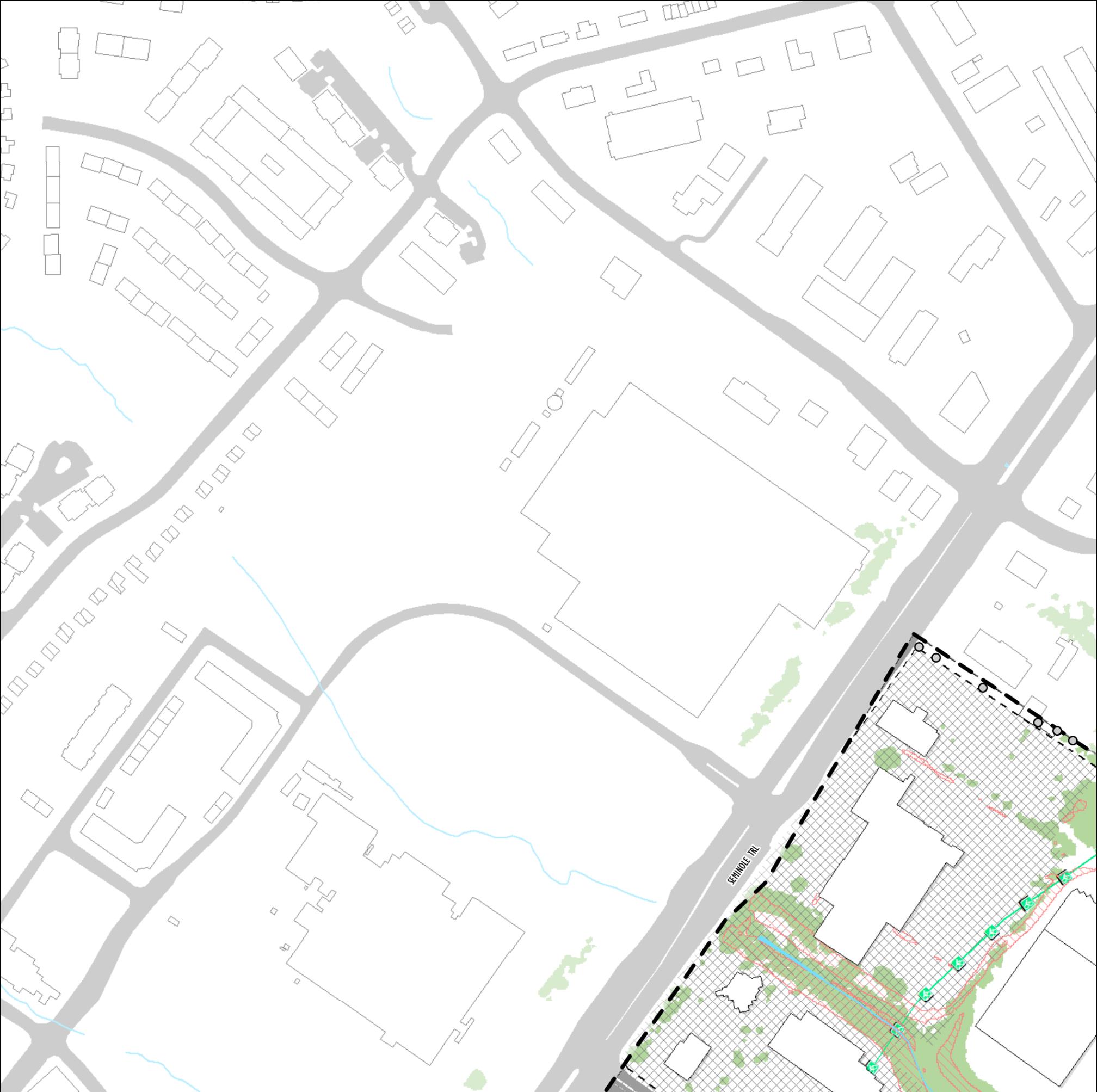
Thus, if one is interested in only what can be done in the ROW, the ROW-specific analysis should be used, as it looks at how planting sites can be maximized in only the ROW.



Tiles with no Tree Planting Locations



- Parks**
- 1: Market Street Park
  - 2: Rives Park
  - 3: Belmont Park
  - 4: Jordan Park
  - 5: Tonsler Park
  - 6: Fifeville Park
  - 7: Schenk's Greenway
  - 8: Greenleaf Park
  - 9: Meadowcreek Gardens & Disc Golf
  - 10: Maplewood Cemetery
  - 11: Oakwood Cemetery
  - 12: Downtown Pavilion
  - 13: Darden Towe
  - 14: Starr Hill
  - 15: Rothwell
  - 16: Downtown Mall
  - 17: McIntire Park
  - 18: McGuffey Park
  - 19: Riverview Park
  - 20: Court Square Park
  - 21: Northeast Park
  - 22: Pen Park
  - 23: Washington Park
  - 24: Meade Park
  - 25: Meadow Creek Valley
  - 26: Longwood Park
  - 27: Quarry Park
  - 28: Azalea Park
  - 29: McIntire Park
  - 30: Davis Field
  - 31: Daughters of Zion Cemetery
  - 32: Quarry Park
  - 33: Forest Hills Park
  - 34: Fry's Springs
  - 35: Meadow Creek Valley
  - 36: Greenbrier Park
  - 37: Hartman's Mill



# Grid A4

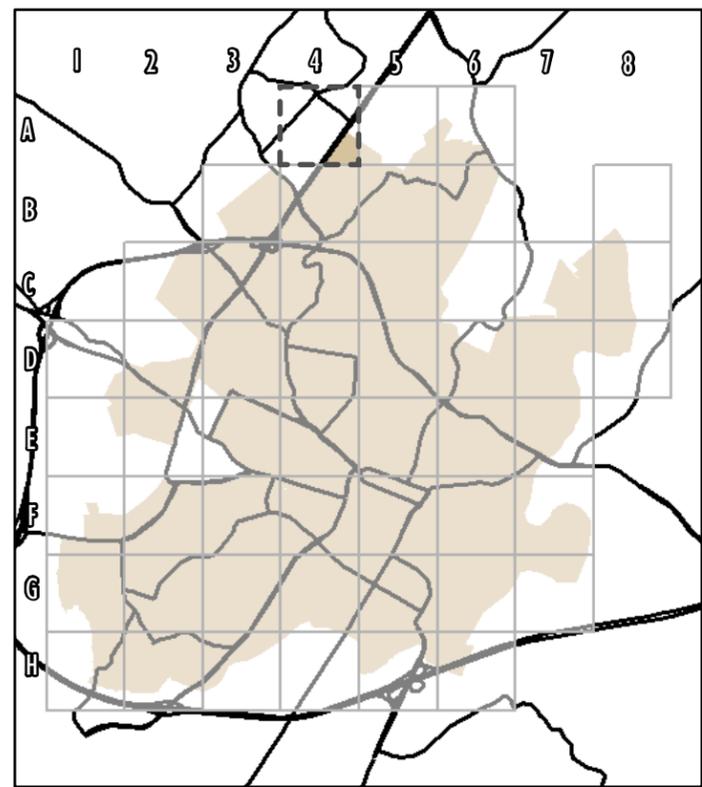


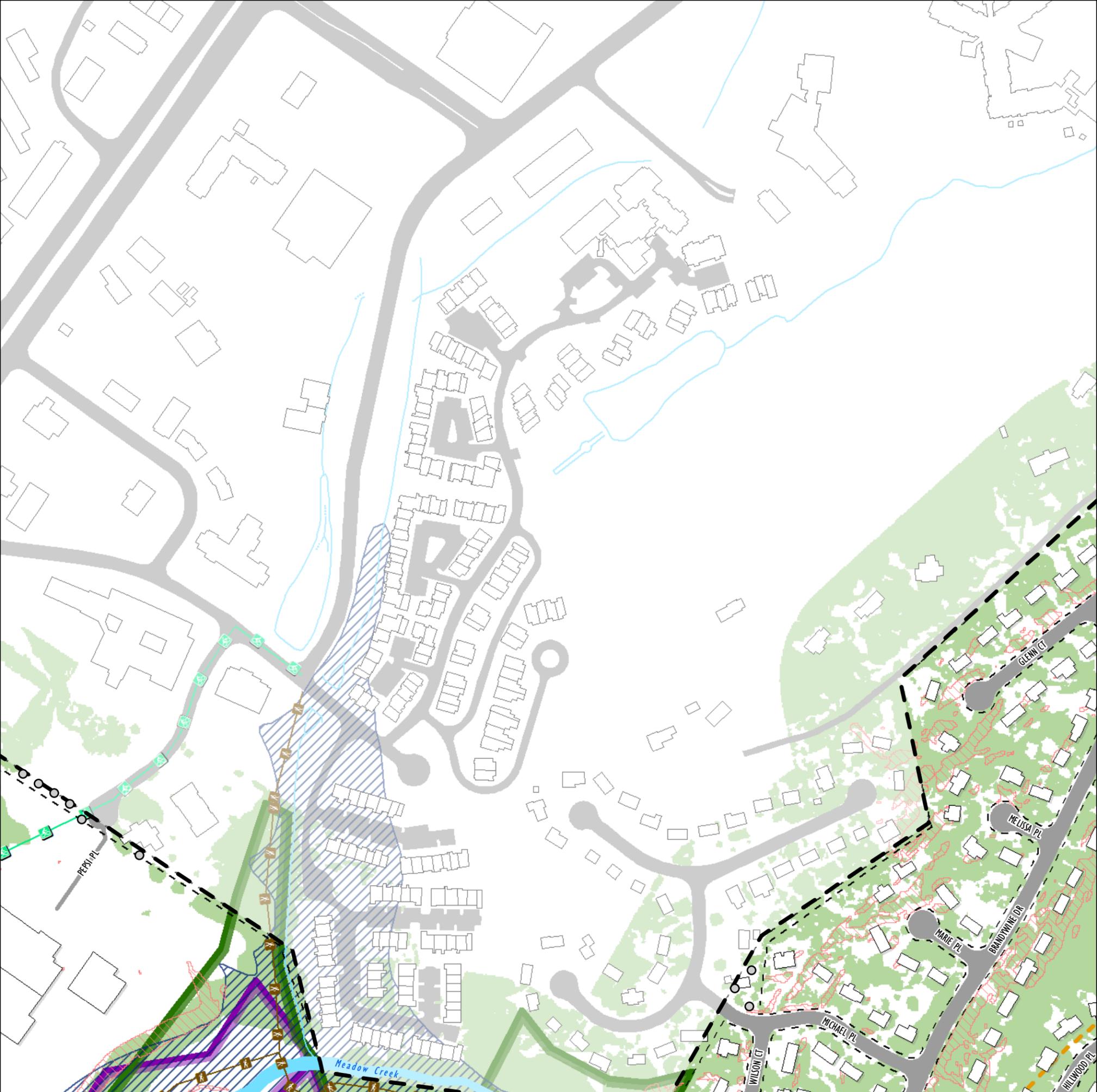
## Legend

- Potential Tree Planting Locations within Right-of-Way
- No Overhead Utility within 15 ft (6)
- ⊕ Bicycle Lanes
- Streams
- City Boundary
- - - City Right-of-Way
- ▨ Entrance Corridor
- ▨ Steep Slopes
- Tree Canopy
- ▭ Park Boundaries
- ▭ School Parcels
- ▭ State-Owned Parcels
- ▭ UVa Parcels
- ▭ City Parcels



This square represents 1 Acre on the map





# Grid A5

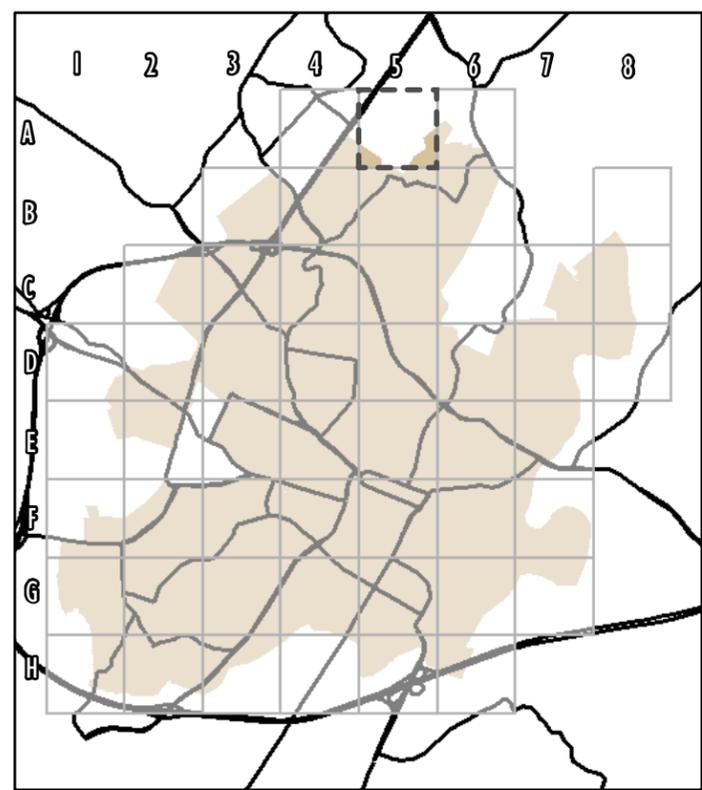


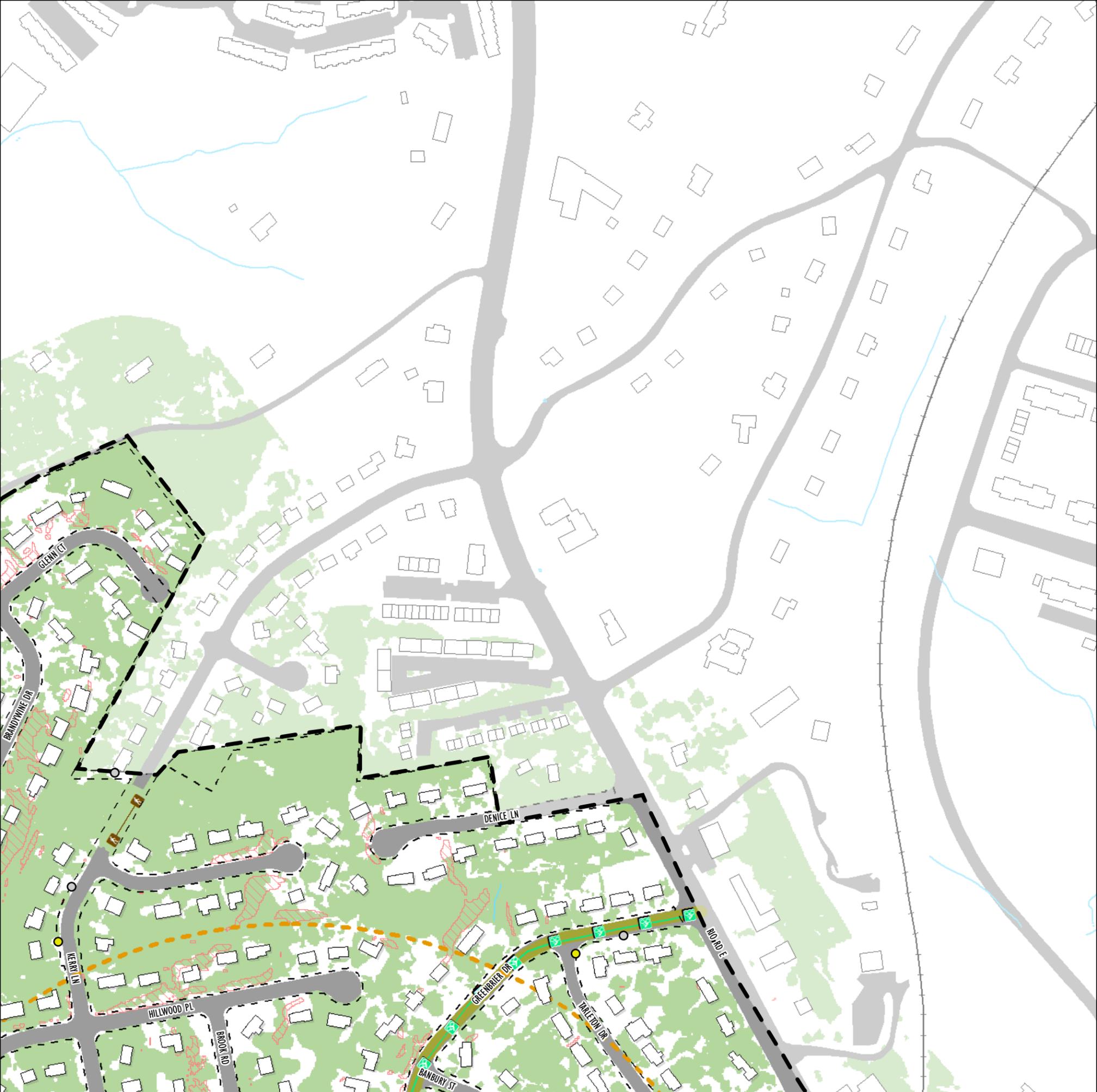
## Legend

- Potential Tree Planting Locations within Right-of-Way
- No Overhead Utility within 15 ft (9)
  - Trail
  - Bicycle Lanes
  - Streams
  - City Boundary
  - 5 Minute School Walkzones
  - City Right-of-Way
  - Entrance Corridor
  - 100 Year Floodplain
  - Steep Slopes
  - Tree Canopy
  - Park Boundaries
  - School Parcels
  - State-Owned Parcels
  - UVa Parcels
  - City Parcels



This square represents 1 Acre on the map





# Grid A6



## Legend

### Potential Tree Planting Locations within Right-of-Way

○ No Overhead Utility within 15 ft (3)

● Overhead Utility within 15 ft (2)

Trails

Bicycle Lanes

Streams

### Framework Streets - Typology

Neighborhood A

City Boundary

5 Minute School Walkzones

City Right-of-Way

Steep Slopes

Tree Canopy

Park Boundaries

School Parcels

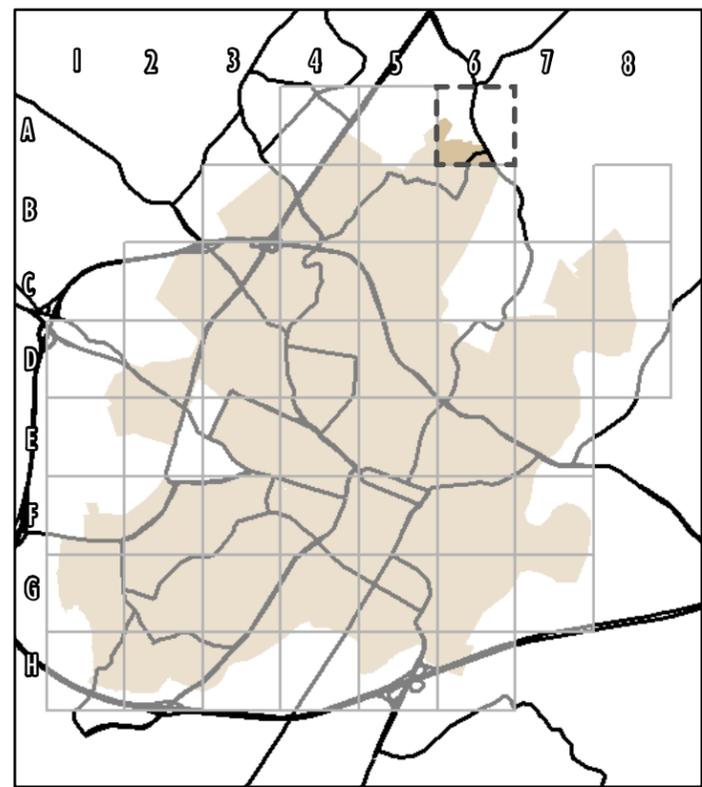
State-Owned Parcels

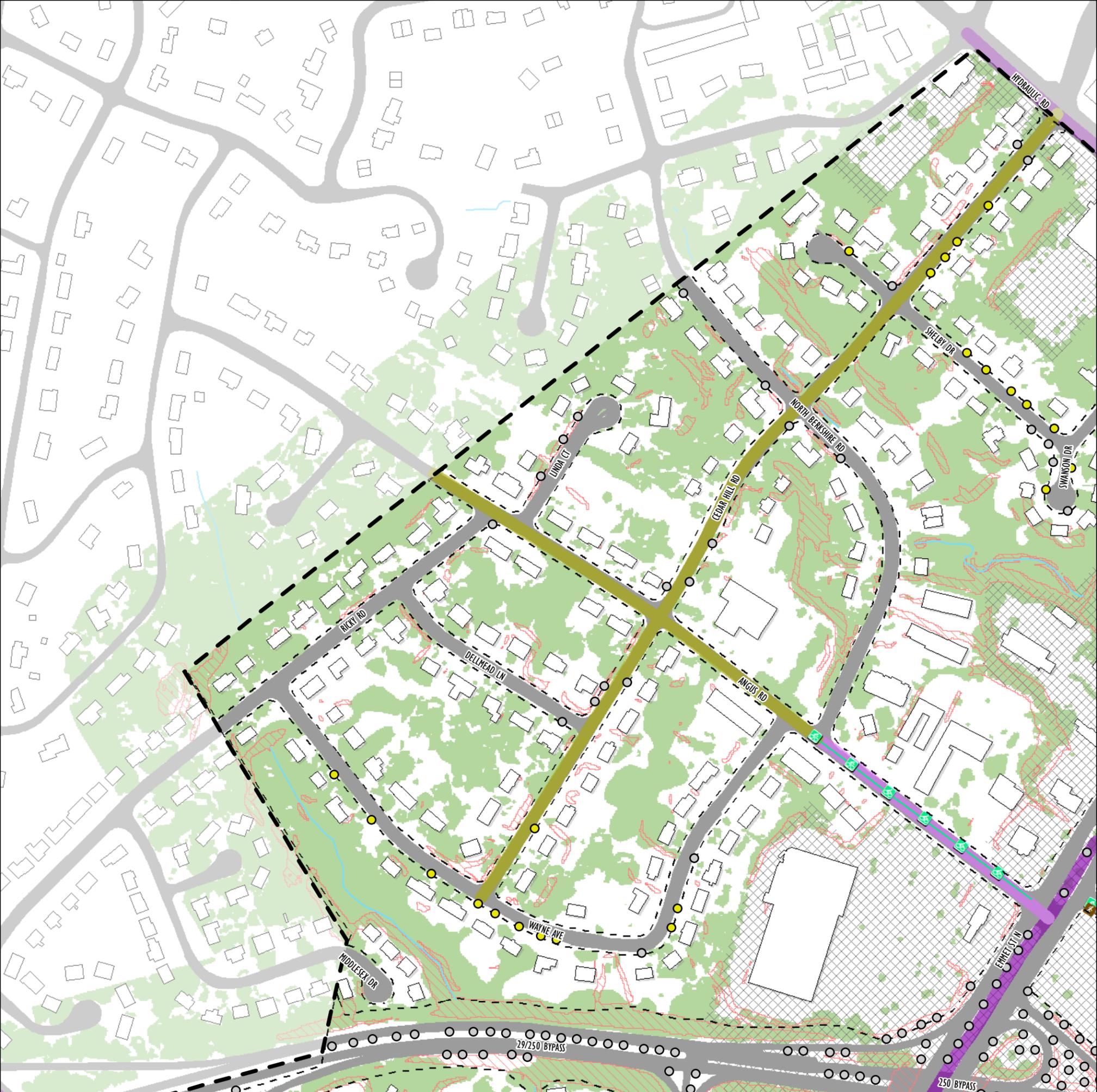
UVa Parcels

City Parcels



This square represents 1 Acre on the map



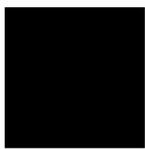


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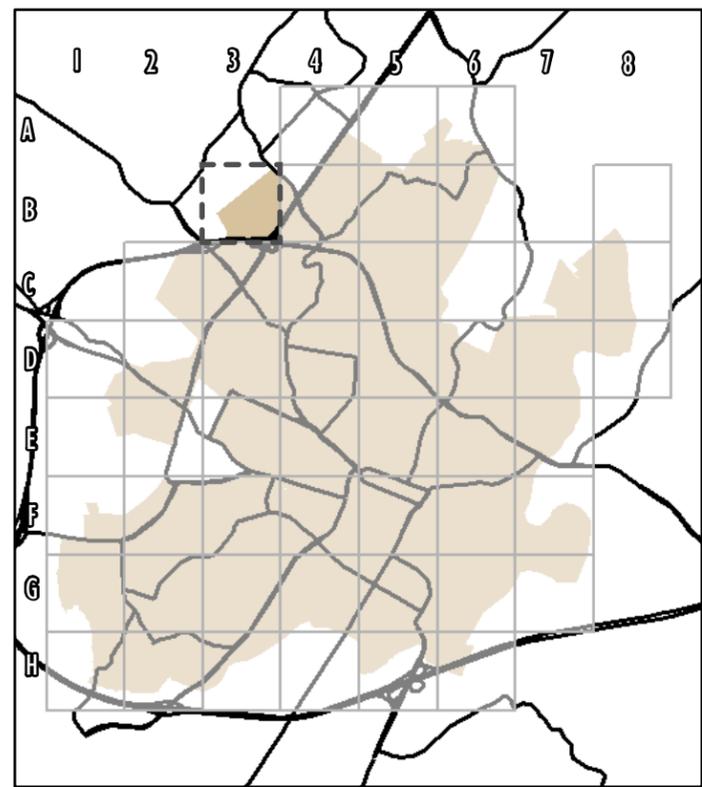


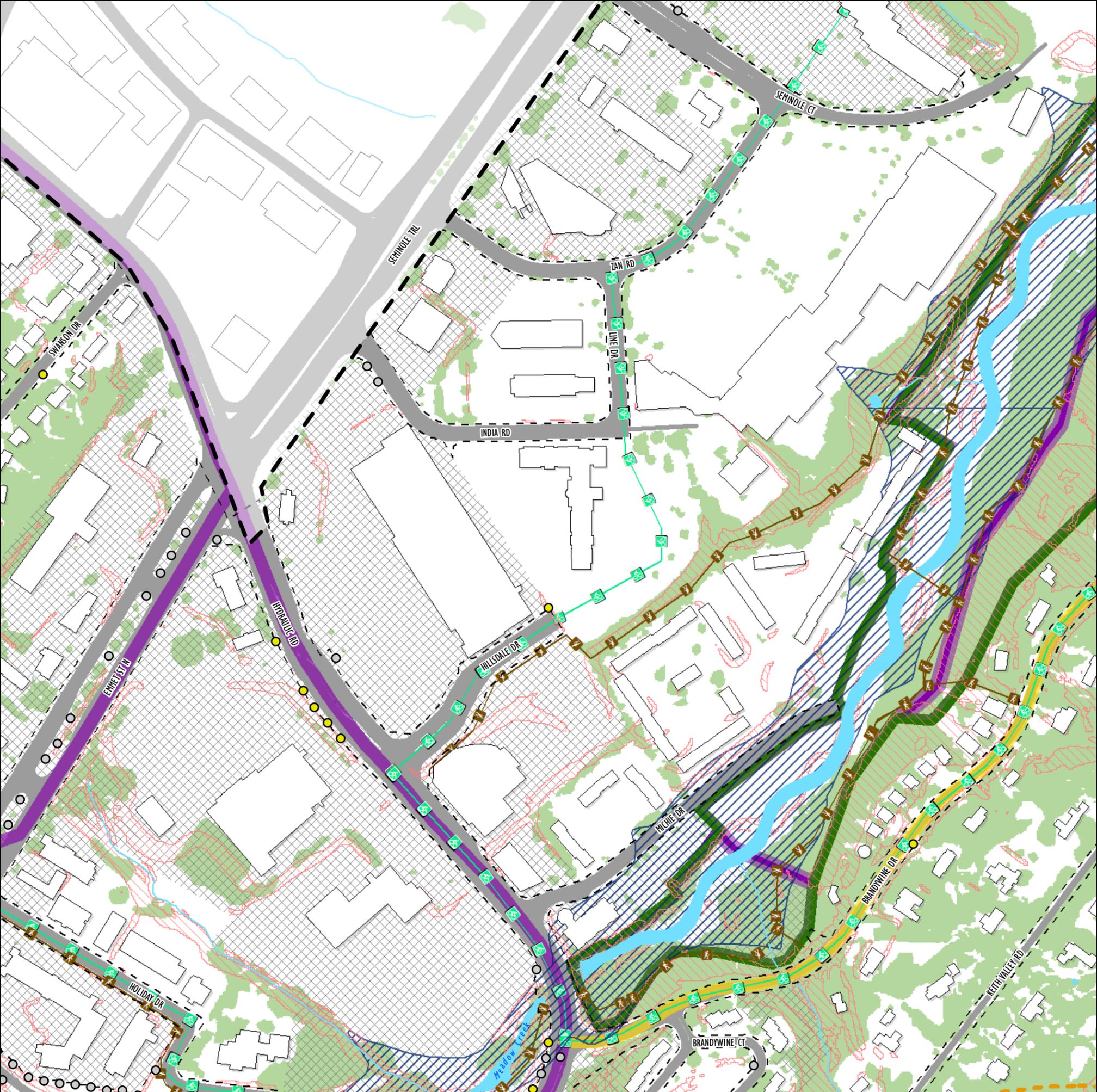
## Legend

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>Potential Tree Planting Locations within Right-of-Way</li> <li>○ No Overhead Utility within 15 ft (100)</li> <li>● Overhead Utility within 15 ft (23)</li> <li>🚶 Trails</li> <li>🚲 Bicycle Lanes</li> <li>— Streams</li> <li>Framework Streets - Typology</li> <li>🟪 Mixed Use A</li> <li>🟩 Mixed Use B</li> <li>🟨 Neighborhood A</li> <li>— City Boundary</li> <li>- - - City Right-of-Way</li> </ul> | <ul style="list-style-type: none"> <li>▨ Entrance Corridor</li> <li>▨ Steep Slopes</li> <li>🟩 Tree Canopy</li> <li>🟩 Park Boundaries</li> <li>🟪 School Parcels</li> <li>🟩 State-Owned Parcels</li> <li>🟨 UVa Parcels</li> <li>🟪 City Parcels</li> </ul> |
|---|---|



This square represents 1 Acre on the map





# Grid B4



## Legend

### Potential Tree Planting Locations within Right-of-Way

- No Overhead Utility within 15 ft (33)
- Overhead Utility within 15 ft (10)

- 🚶 Trails
- 🚲 Bicycle Lanes
- Streams

### Framework Streets - Typology

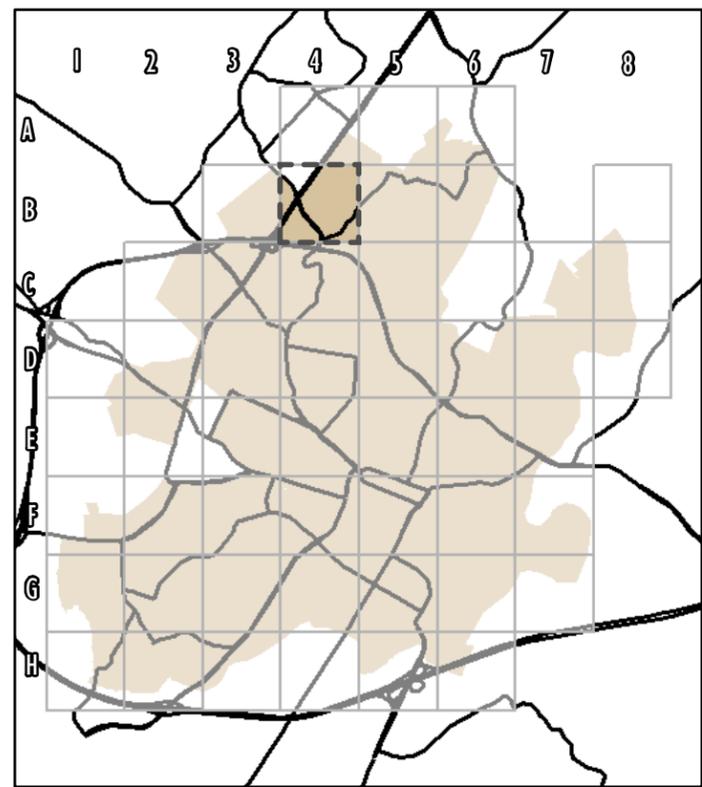
- Mixed Use A
- Neighborhood B

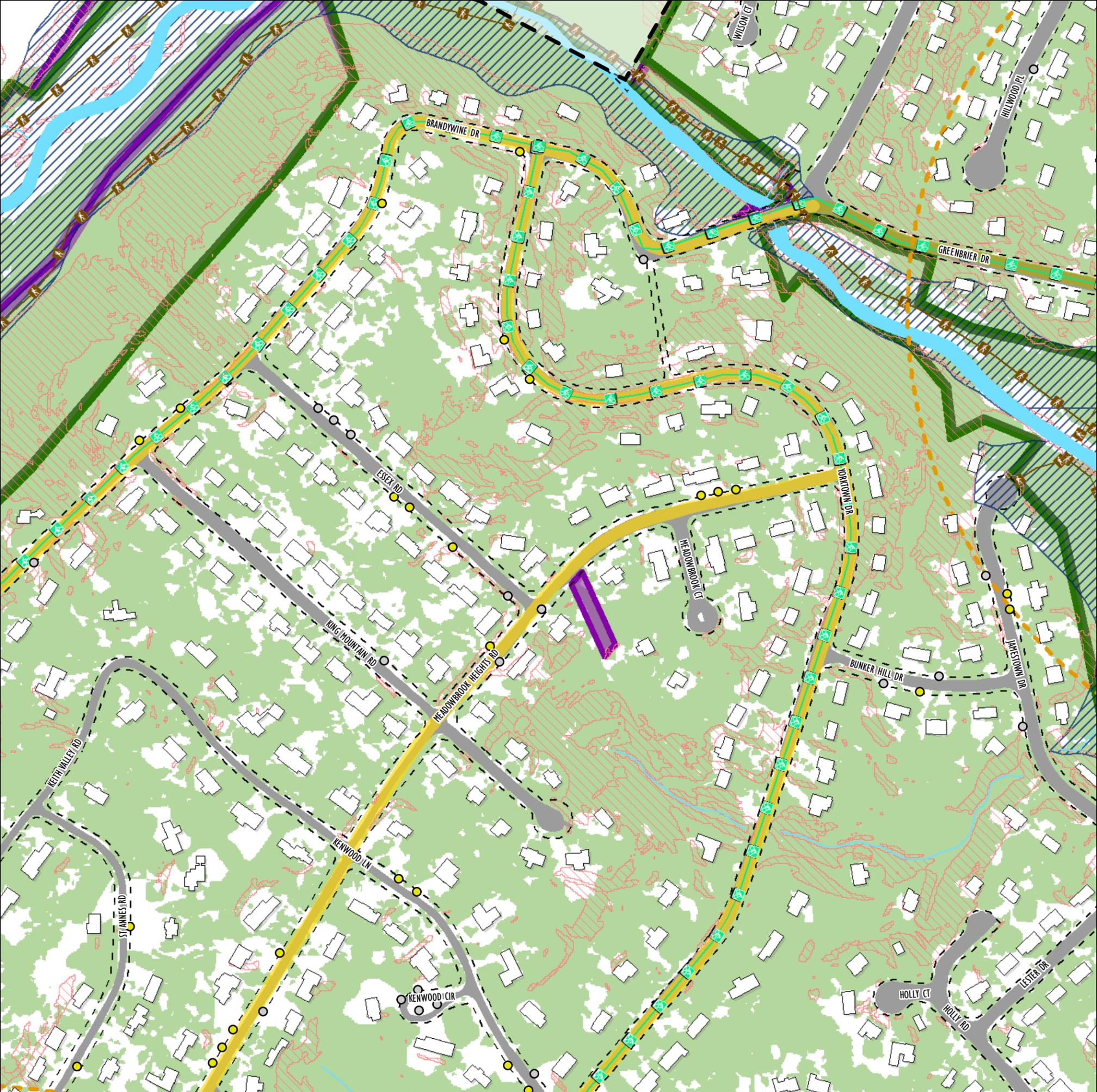
- City Boundary
- 5 Minute School Walkzones
- City Right-of-Way

- Entrance Corridor
- 100 Year Floodplain
- Steep Slopes
- Tree Canopy
- Park Boundaries
- School Parcels
- State-Owned Parcels
- UVa Parcels
- City Parcels



This square represents 1 Acre on the map





# Grid B5

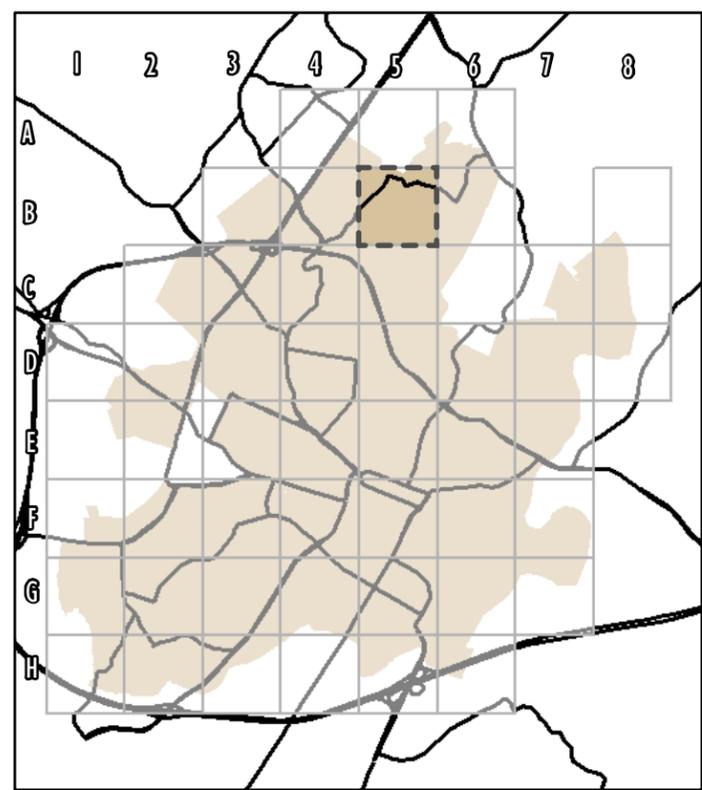


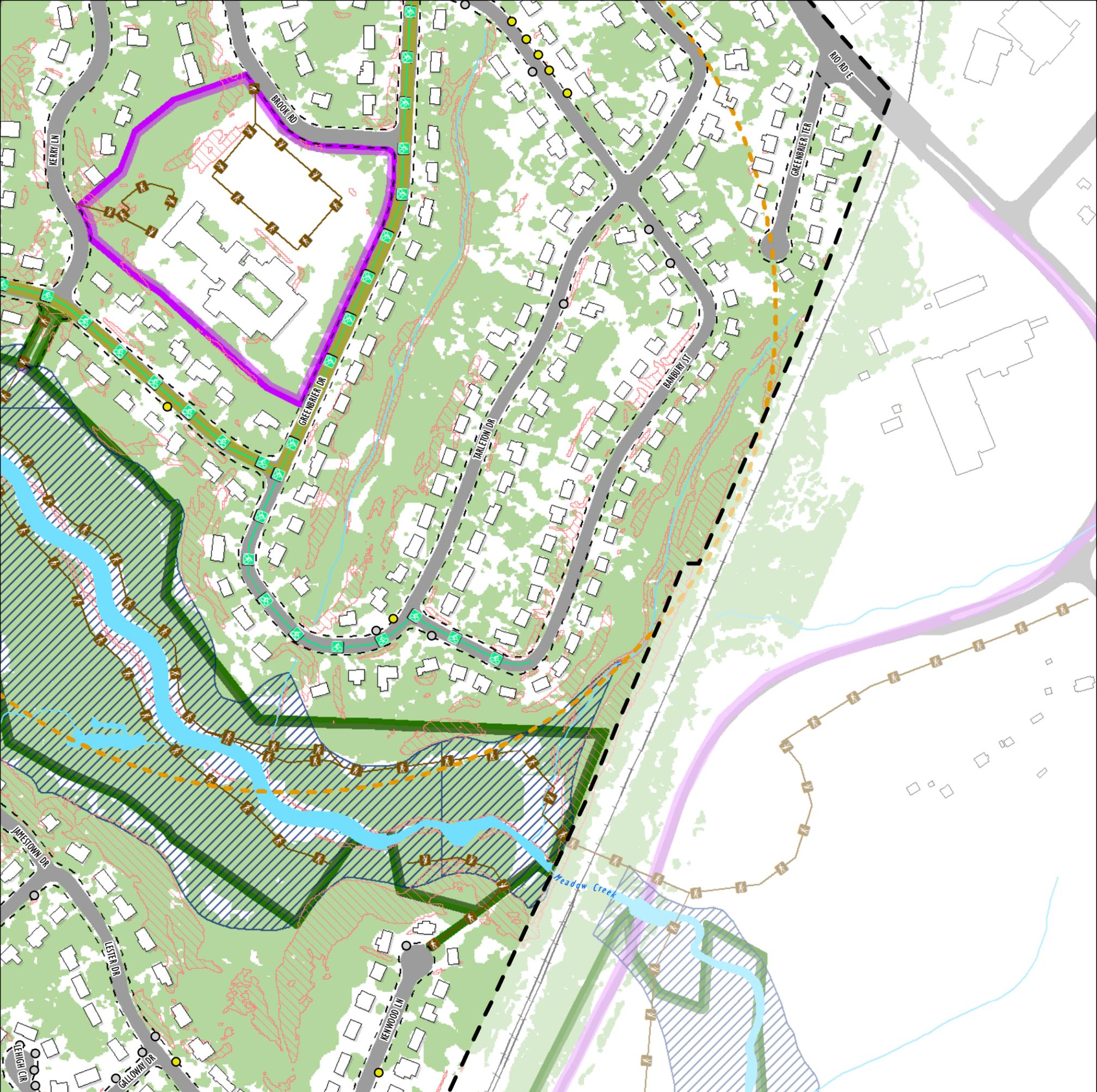
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (20)
  - Overhead Utility within 15 ft (26)
  - 🚶 Trails
  - 🚲 Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- 🟢 Neighborhood A
  - 🟡 Neighborhood B
  - City Boundary
  - 5 Minute School Walkzones
  - City Right-of-Way
- 🔵 100 Year Floodplain
  - 🔴 Steep Slopes
  - 🟢 Tree Canopy
  - 🟩 Park Boundaries
  - 🟪 School Parcels
  - 🔵 State-Owned Parcels
  - 🟠 UVa Parcels
  - 🟡 City Parcels



This square represents 1 Acre on the map





# Grid B6

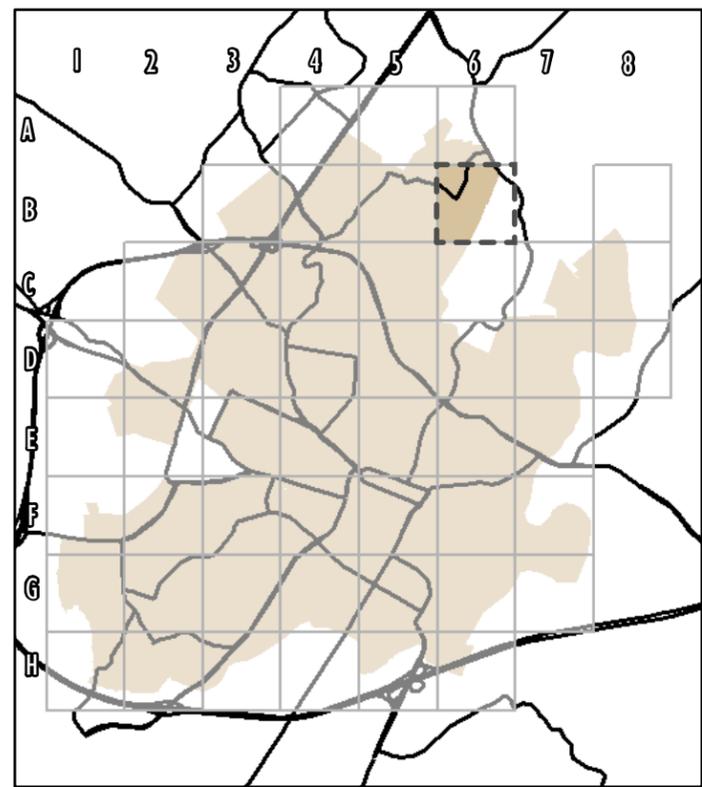


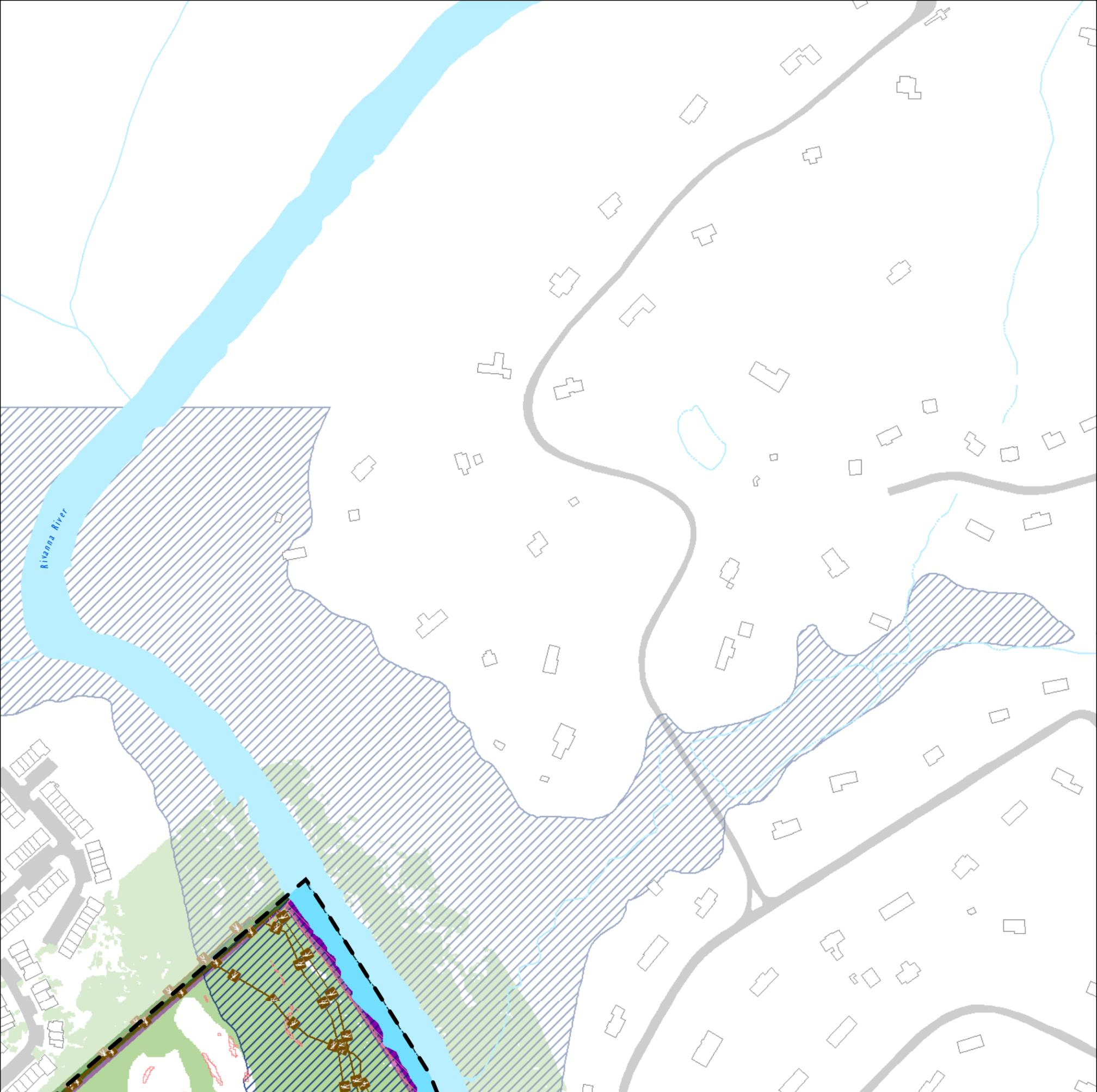
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (16)
  - Overhead Utility within 15 ft (9)
  - 🚶 Trails
  - 🚲 Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- 🟡 Mixed Use B
  - 🟢 Neighborhood A
- Other Features**
- ▭ 100 Year Floodplain
  - ▨ Steep Slopes
  - 🟩 Tree Canopy
  - 🟩 Park Boundaries
  - 🟪 School Parcels
  - 🟦 State-Owned Parcels
  - 🟠 UVa Parcels
  - 🟪 City Parcels
  - ▭ City Boundary
  - ▭ 5 Minute School Walkzones
  - ▭ City Right-of-Way



This square represents 1 Acre on the map



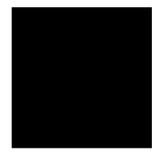


# Grid B8

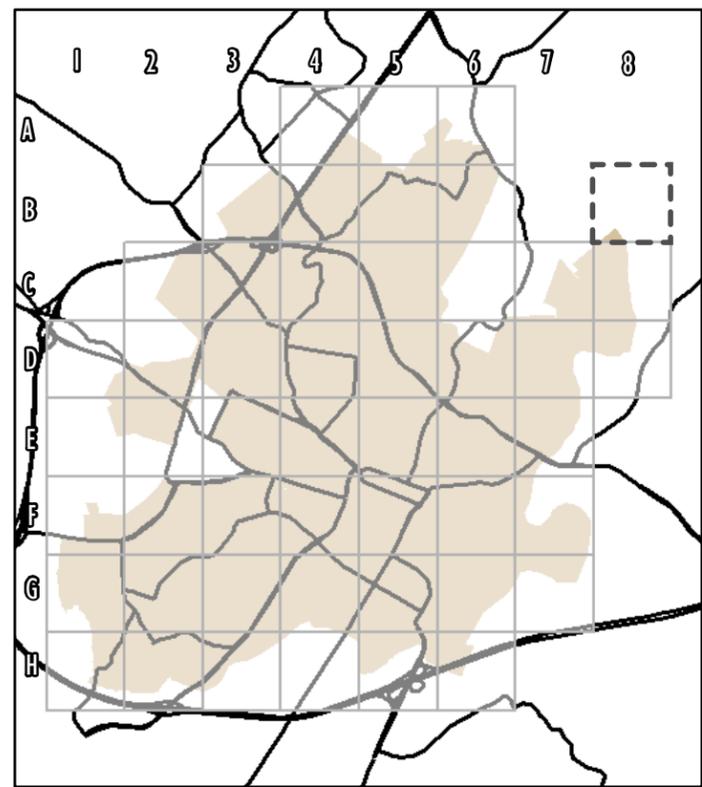


## Legend

-  Trails
-  Streams
-  City Boundary
-  City Right-of-Way
-  100 Year Floodplain
-  Steep Slopes
-  Tree Canopy
-  Park Boundaries
-  School Parcels
-  State-Owned Parcels
-  UVa Parcels
-  City Parcels



This square represents 1 Acre on the map



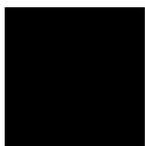


# Grid C2

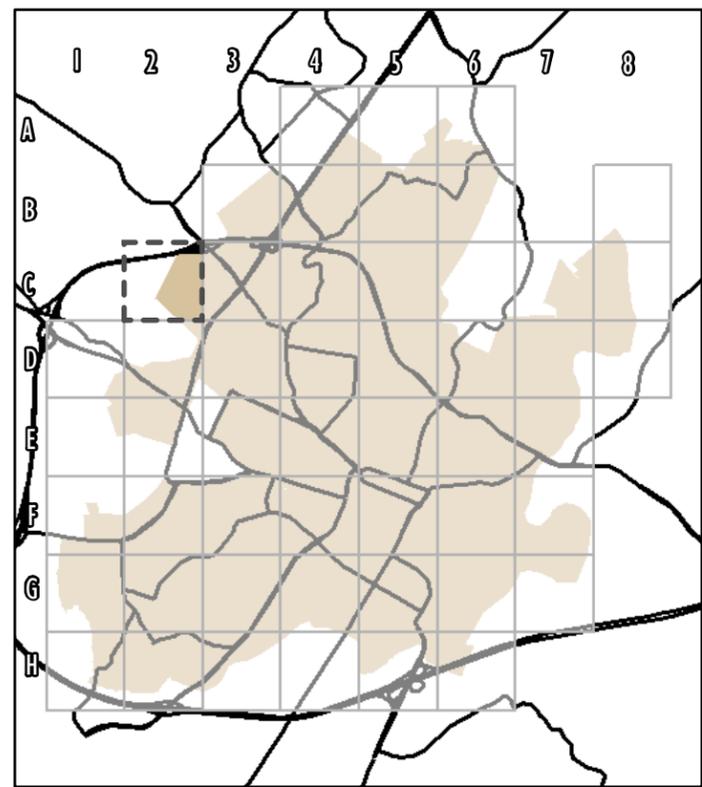


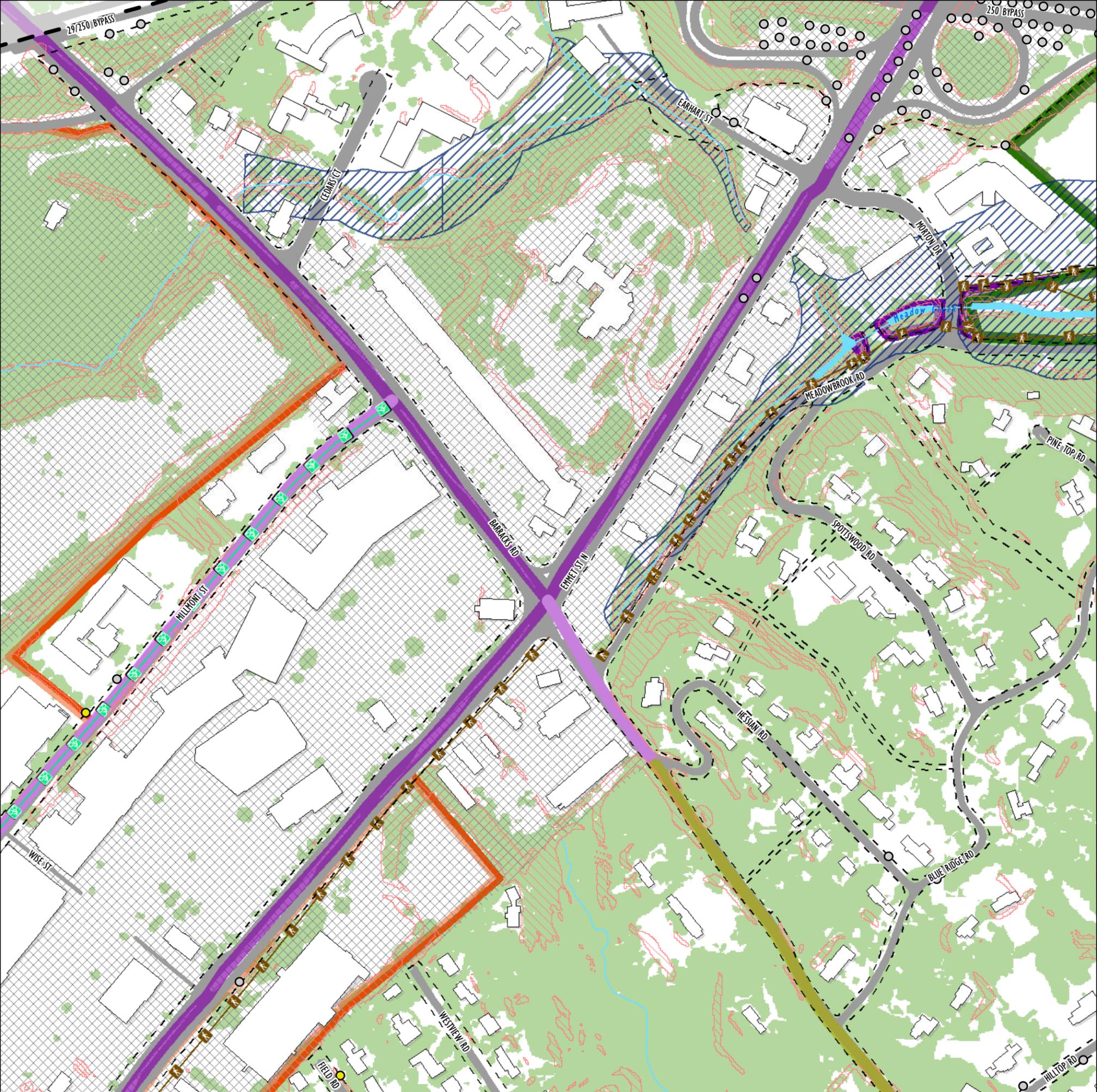
## Legend

- Bicycle Lanes
- Streams
- Framework Streets - Typology
  - Mixed Use A
  - Mixed Use B
- City Boundary
- City Right-of-Way
- Entrance Corridor
- Steep Slopes
- Tree Canopy
- Park Boundaries
- School Parcels
- State-Owned Parcels
- UVa Parcels
- City Parcels



This square represents 1 Acre on the map





# Grid C3



## Legend

### Potential Tree Planting Locations within Right-of-Way

- No Overhead Utility within 15 ft (70)
- Overhead Utility within 15 ft (2)

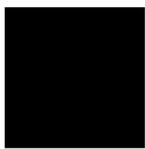
- 🚶 Trails
- 🚲 Bicycle Lanes
- Streams

### Framework Streets - Typology

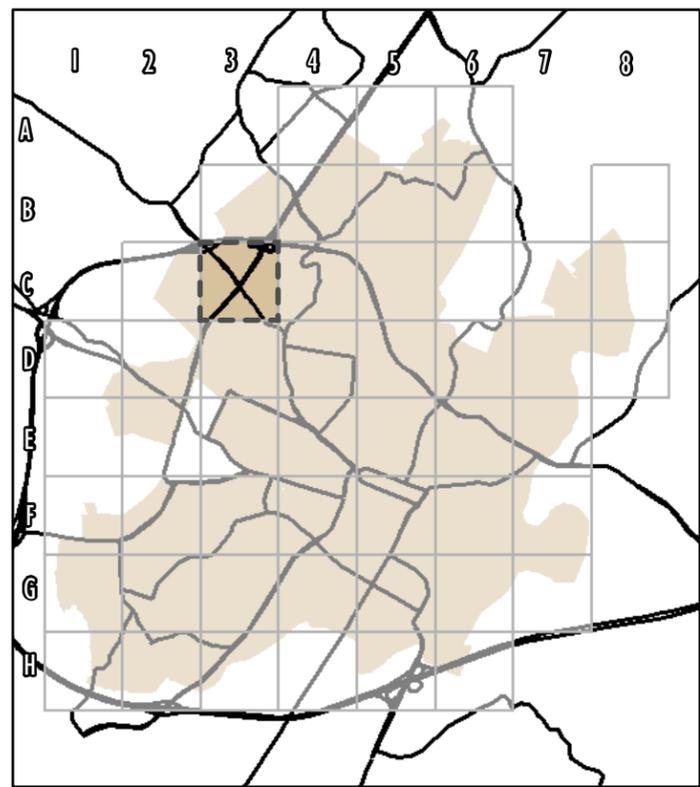
- 🟪 Mixed Use A
- 🟩 Mixed Use B
- 🟨 Neighborhood A

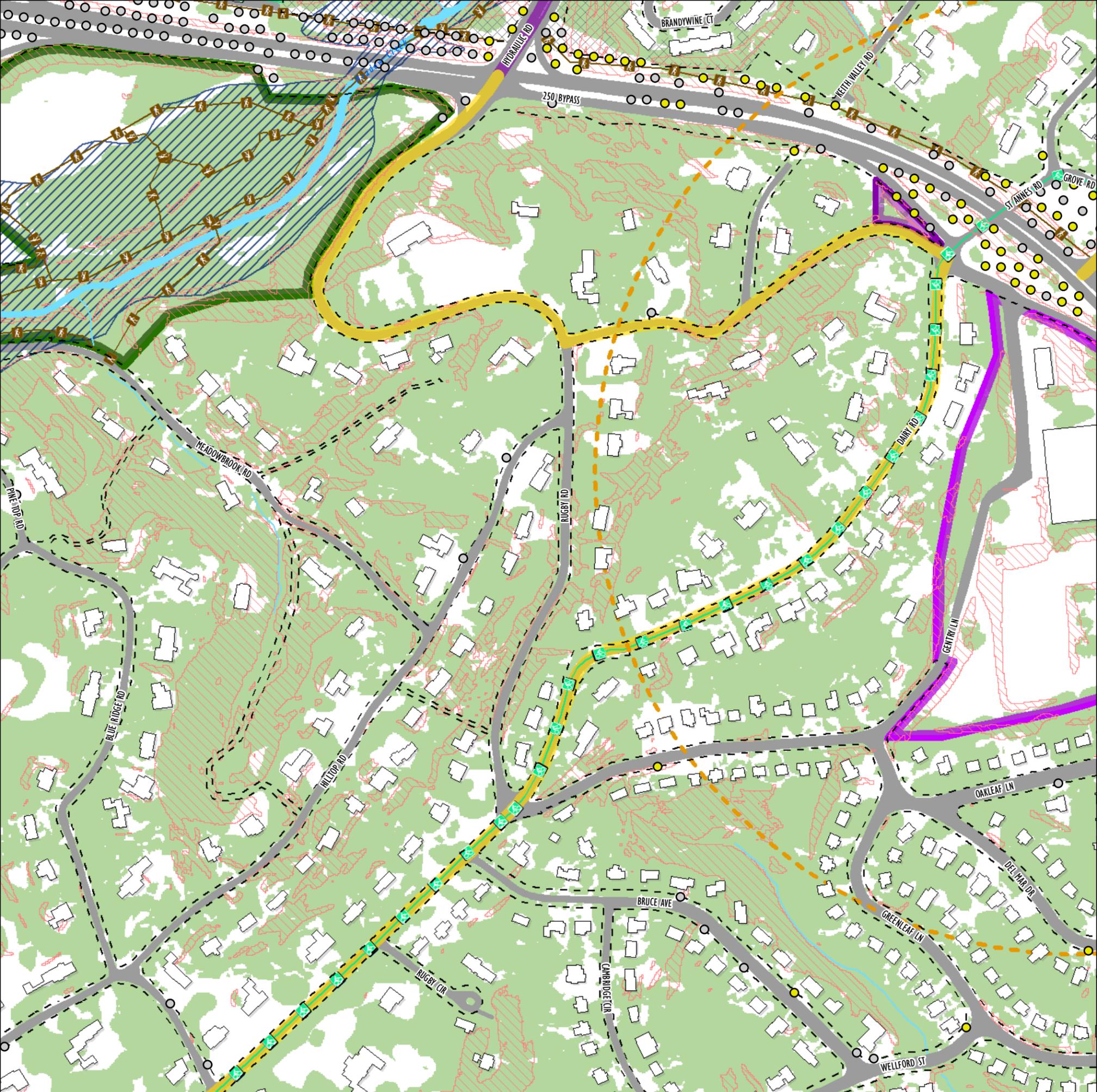
- City Boundary
- - - City Right-of-Way

- 🧩 Entrance Corridor
- 🌊 100 Year Floodplain
- 📏 Steep Slopes
- 🌳 Tree Canopy
- 🏞️ Park Boundaries
- 🎓 School Parcels
- 🏛️ State-Owned Parcels
- 🏠 UVa Parcels
- 🏡 City Parcels



This square represents 1 Acre on the map





# Grid C4

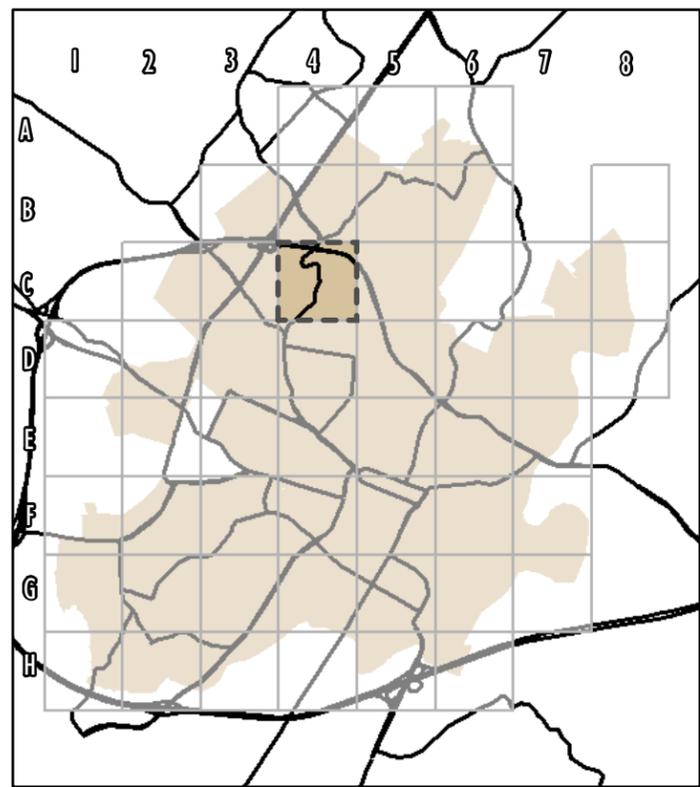


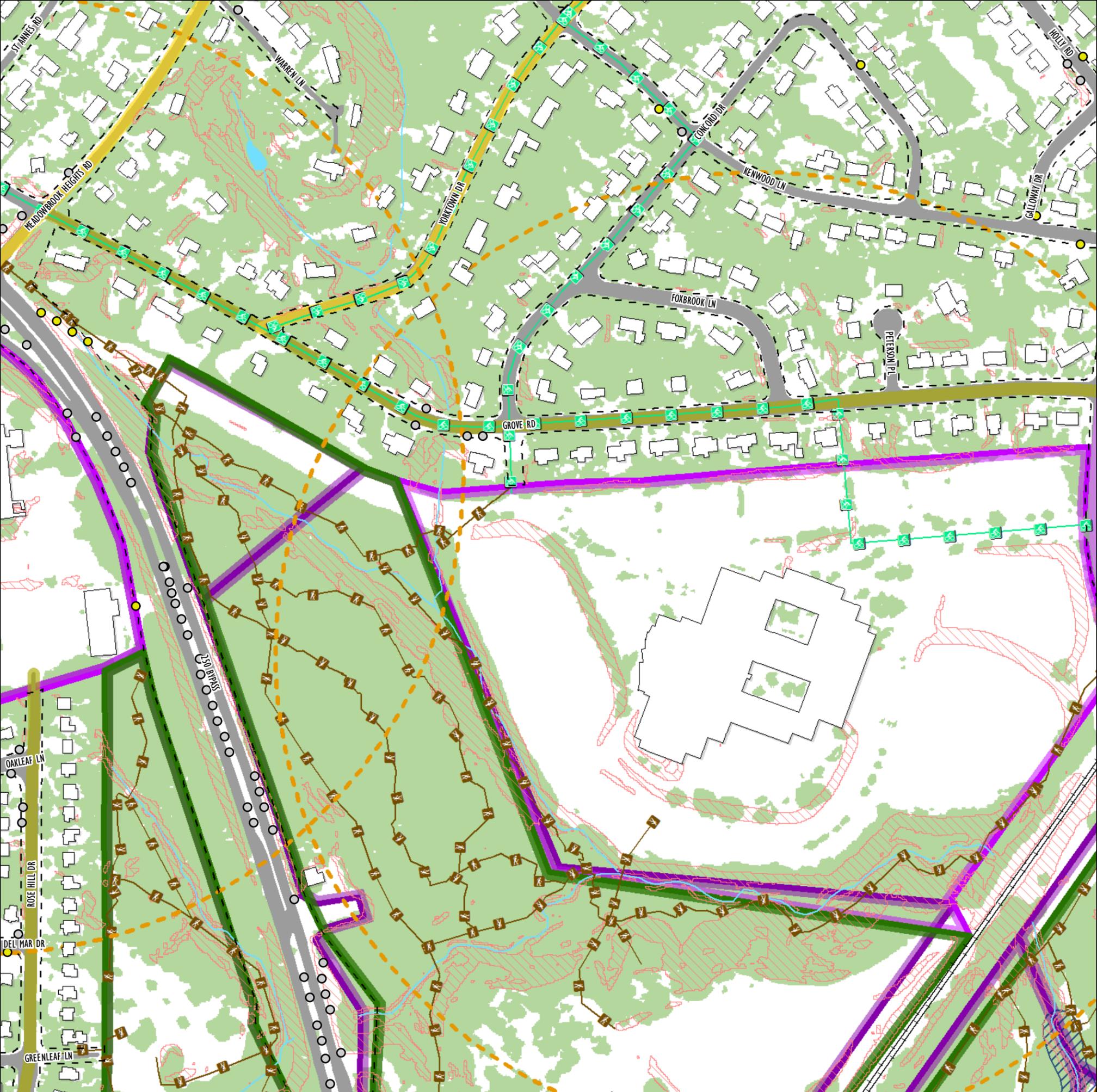
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (119)
  - Overhead Utility within 15 ft (58)
  - Trail
  - Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- Mixed Use A
  - Neighborhood B
  - 5 Minute School Walkzones
  - City Right-of-Way
  - Entrance Corridor
- 100 Year Floodplain
  - Steep Slopes
  - Tree Canopy
  - Park Boundaries
  - School Parcels
  - State-Owned Parcels
  - UVa Parcels
  - City Parcels



This square represents 1 Acre on the map





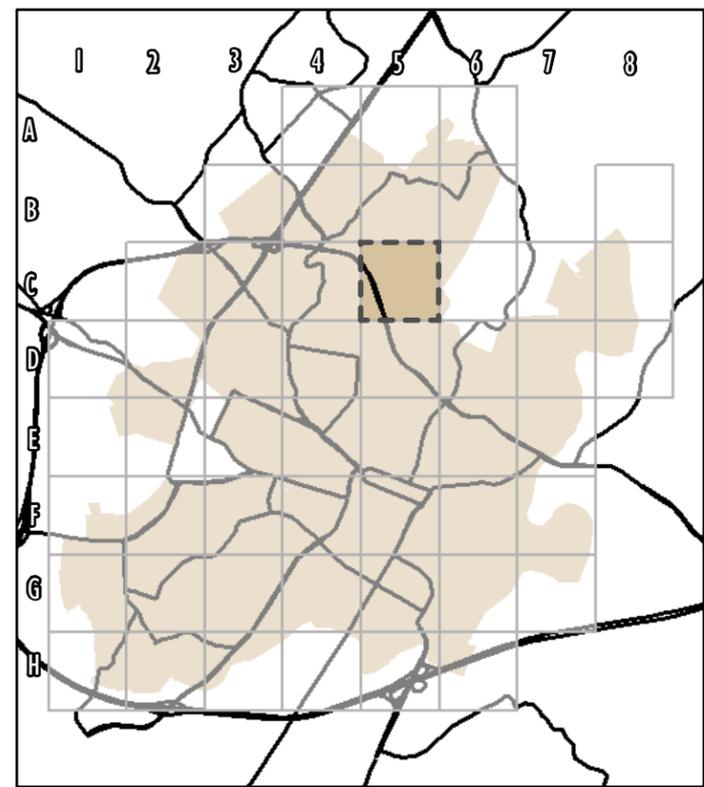
# Grid C5



## Legend

- |   |                     |
|---|---------------------|
| Potential Tree Planting Locations within Right-of-Way | 100 Year Floodplain |
| No Overhead Utility within 15 ft (58)                 | Steep Slopes        |
| Overhead Utility within 15 ft (13)                    | Tree Canopy         |
| Trails  | Park Boundaries     |
| Bicycle Lanes   | School Parcels      |
| Streams   | State-Owned Parcels |
| Framework Streets - Typology                          | UVa Parcels         |
| Mixed Use B   | City Parcels        |
| Neighborhood A  |                     |
| Neighborhood B  |                     |
| 5 Minute School Walkzones                             |                     |
| City Right-of-Way                                     |                     |

This square represents 1 Acre on the map





# Grid C6

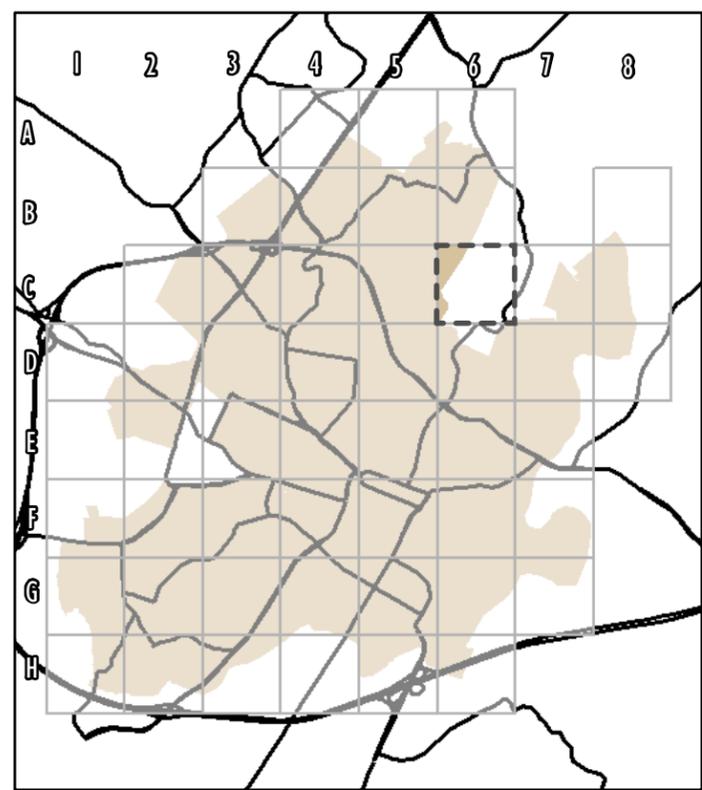


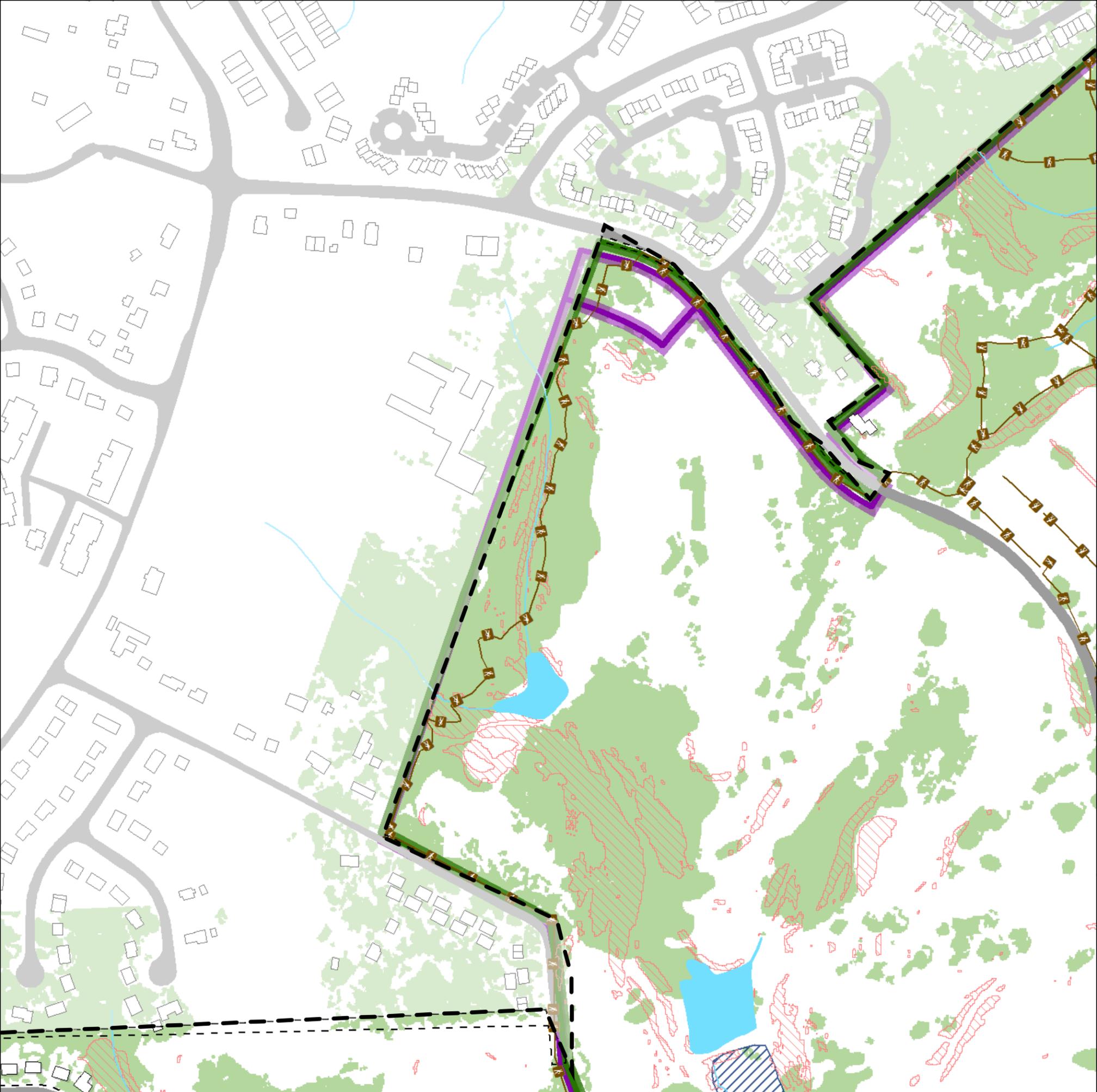
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (12)
  - Overhead Utility within 15 ft (8)
  - Trails
  - Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- Mixed Use B
  - Neighborhood A
  - City Boundary
  - 5 Minute School Walkzones
  - City Right-of-Way
- ▨ 100 Year Floodplain
  - ▨ Steep Slopes
  - Tree Canopy
  - Park Boundaries
  - School Parcels
  - State-Owned Parcels
  - UVA Parcels
  - City Parcels



This square represents 1 Acre on the map

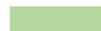




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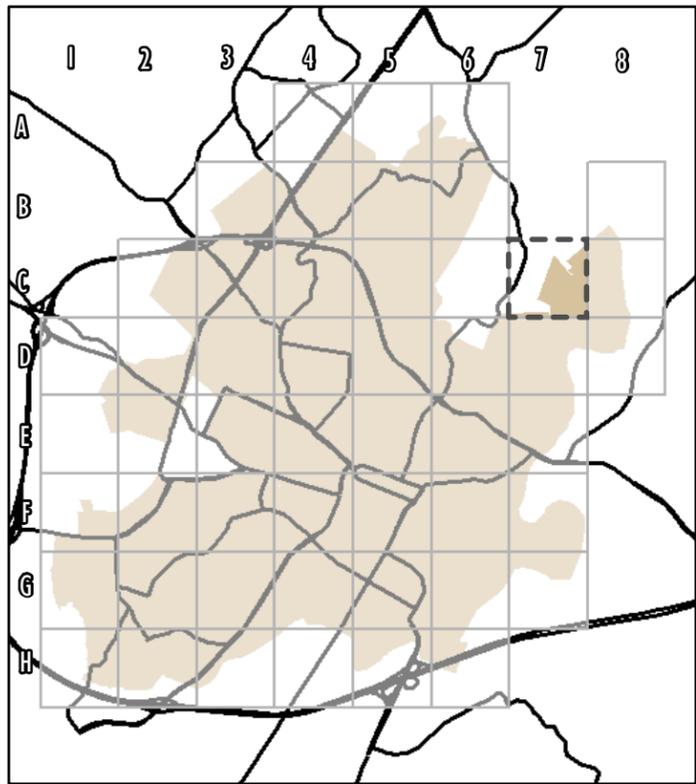


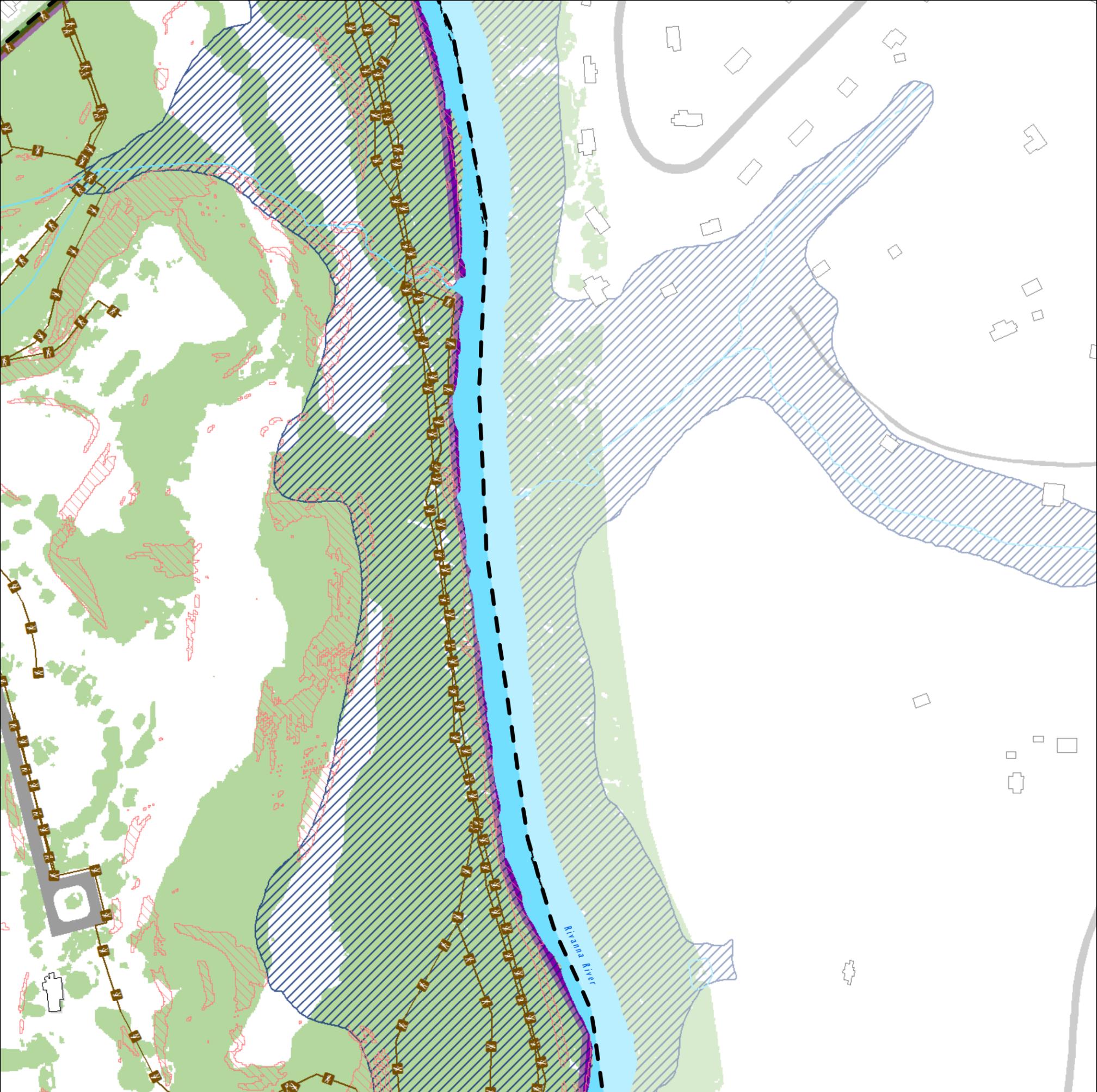
## Legend

-  Trails
-  Streams
-  City Boundary
-  City Right-of-Way
-  100 Year Floodplain
-  Steep Slopes
-  Tree Canopy
-  Park Boundaries
-  School Parcels
-  State-Owned Parcels
-  UVa Parcels
-  City Parcels



This square represents 1 Acre on the map



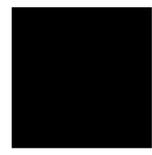


# Grid C8

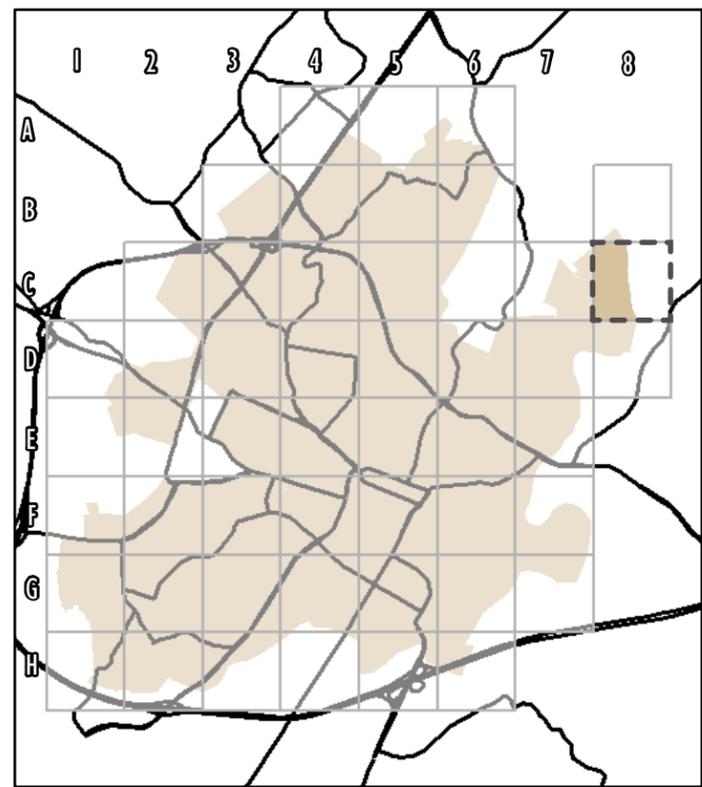


## Legend

-  Trails
-  Streams
-  City Boundary
-  City Right-of-Way
-  100 Year Floodplain
-  Steep Slopes
-  Tree Canopy
-  Park Boundaries
-  School Parcels
-  State-Owned Parcels
-  UVa Parcels
-  City Parcels



This square represents 1 Acre on the map

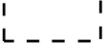


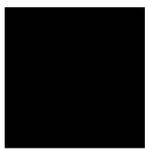


# Grid D1

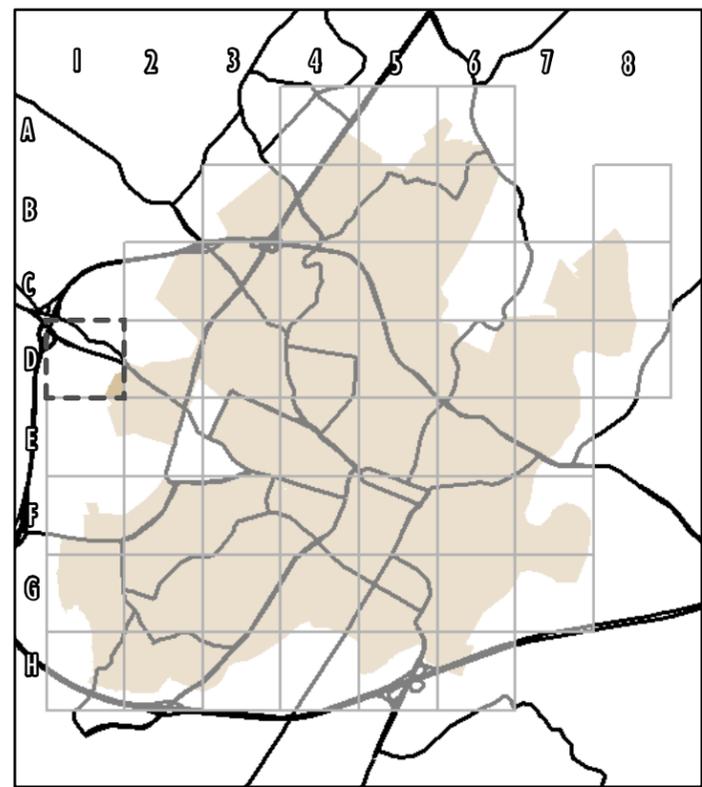


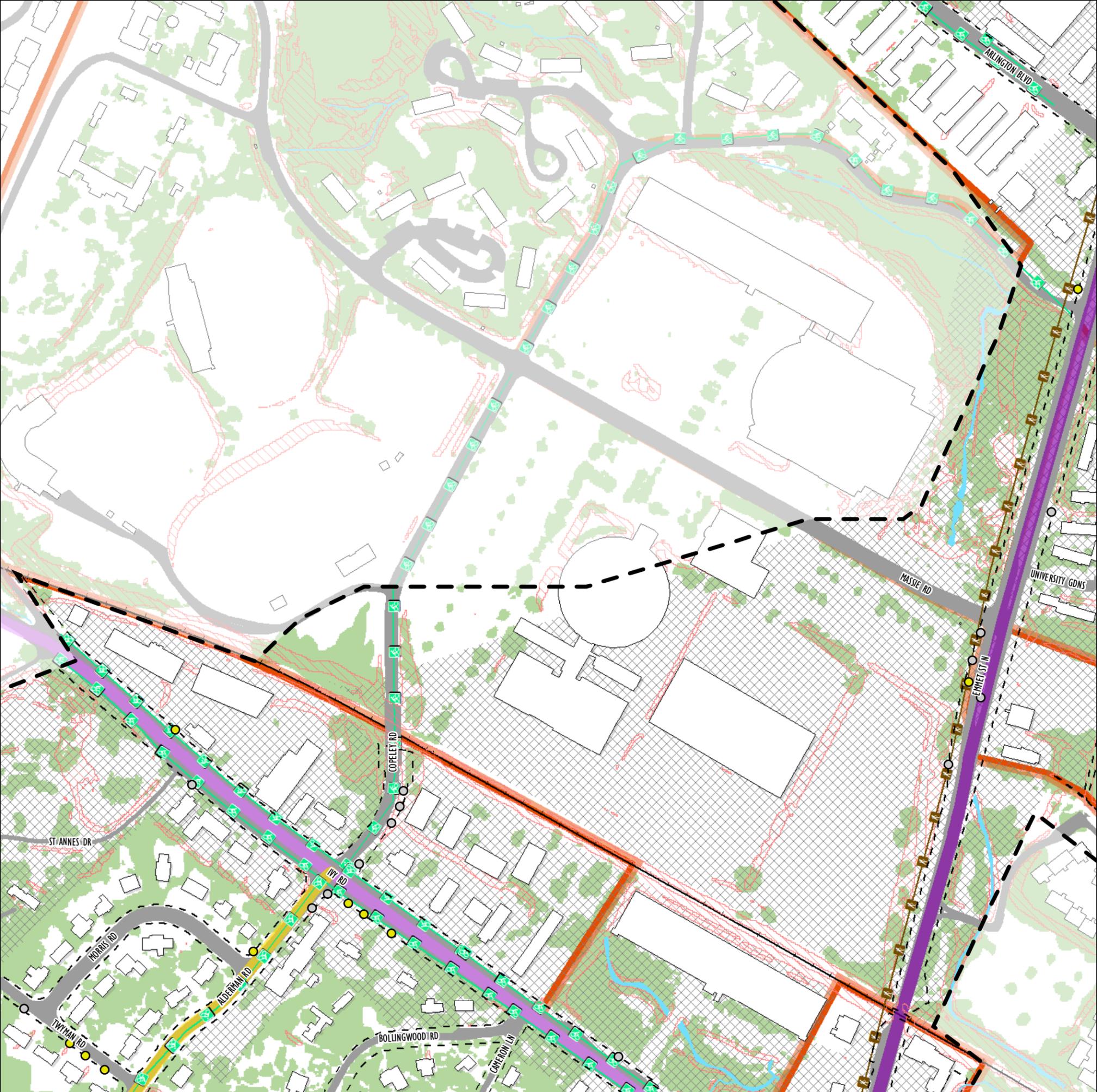
## Legend

-  Streams
-  City Parcels
- Framework Streets - Typology**
-  Mixed Use B
-  City Boundary
-  City Right-of-Way
-  Entrance Corridor
-  Steep Slopes
-  Tree Canopy
-  Park Boundaries
-  School Parcels
-  State-Owned Parcels
-  UVa Parcels



This square represents 1 Acre on the map





# Grid D2

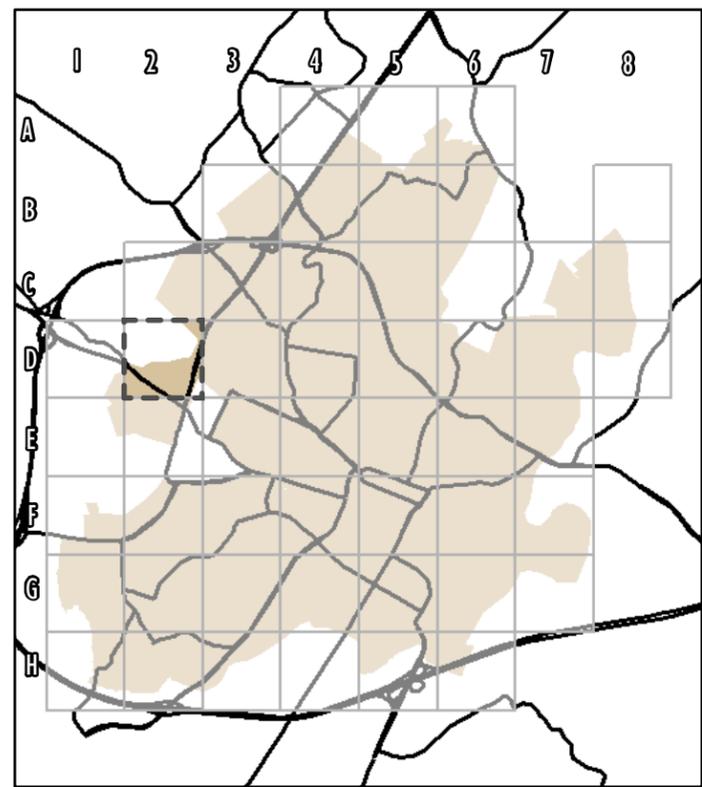


## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (14)
  - Overhead Utility within 15 ft (10)
  - 🚶 Trails
  - 🚲 Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- 🟪 Mixed Use A
  - 🟩 Mixed Use B
  - 🟨 Neighborhood B
- Other Features**
- ⎓ City Boundary
  - ⎓ City Right-of-Way
  - ⎓ Entrance Corridor
  - ⎓ Steep Slopes
  - 🟩 Tree Canopy
  - 🟩 Park Boundaries
  - 🟪 School Parcels
  - 🟦 State-Owned Parcels
  - 🟠 UVa Parcels
  - 🟪 City Parcels



This square represents 1 Acre on the map







# Grid D4



## Legend

### Potential Tree Planting Locations within Right-of-Way

- No Overhead Utility within 15 ft (43)
- Overhead Utility within 15 ft (20)

- 🚶 Trails
- 🚲 Bicycle Lanes
- Streams

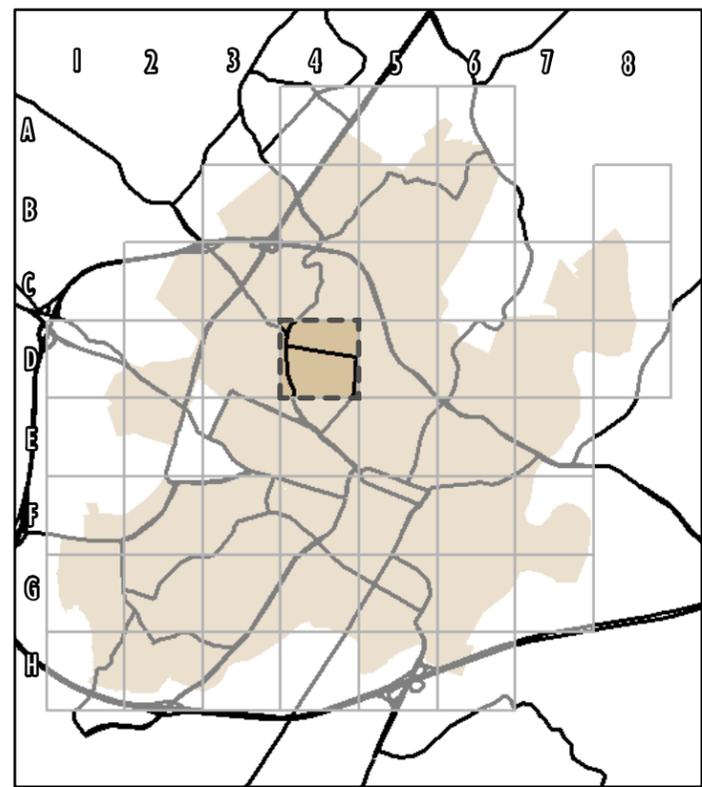
### Framework Streets - Typology

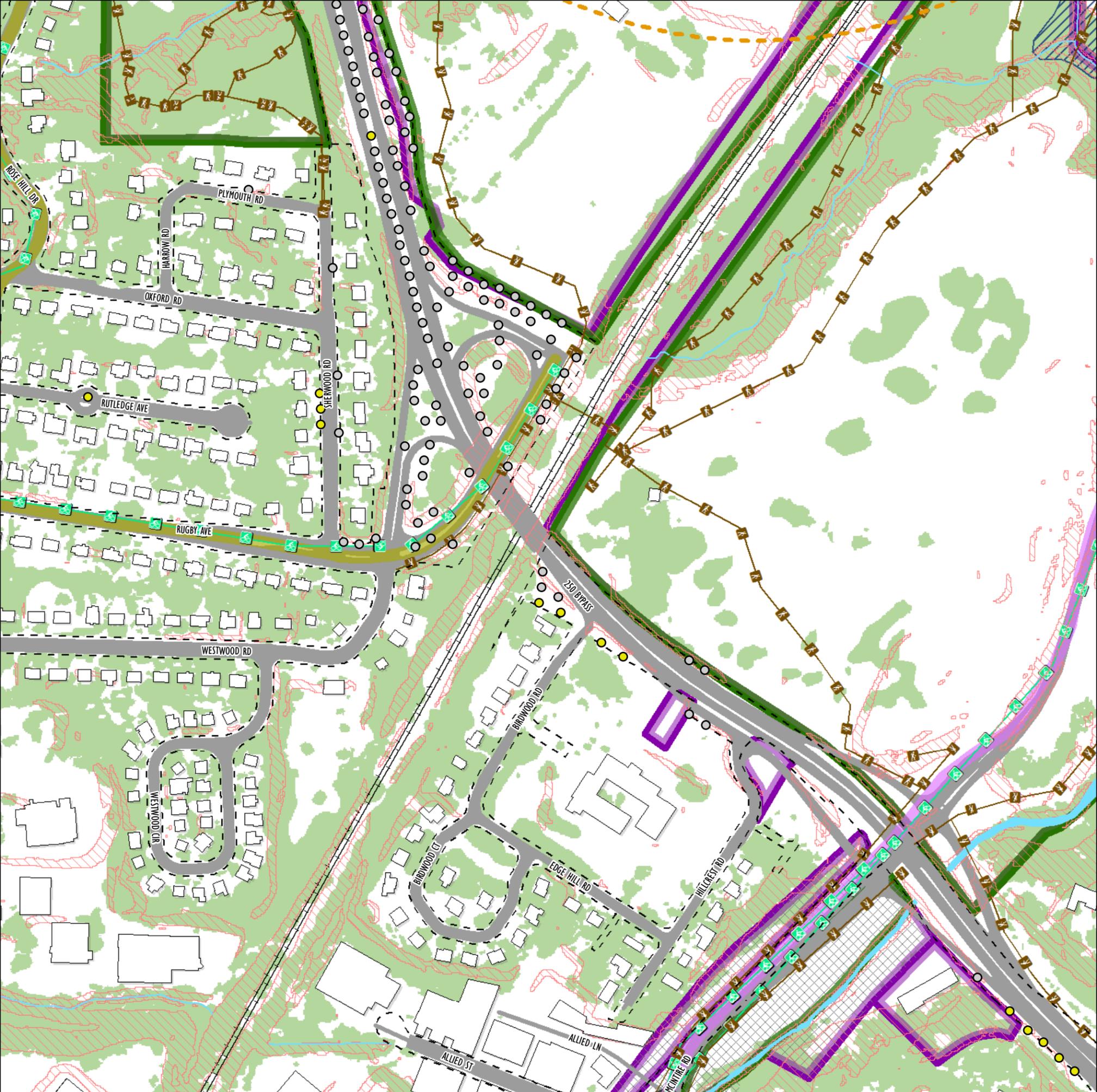
- Neighborhood A
- Neighborhood B
- 5 Minute School Walkzones
- City Right-of-Way
- Steep Slopes

- Tree Canopy
- Park Boundaries
- School Parcels
- State-Owned Parcels
- UVa Parcels
- City Parcels



This square represents 1 Acre on the map





# Grid D5



## Legend

### Potential Tree Planting Locations within Right-of-Way

- No Overhead Utility within 15 ft (108)
- Overhead Utility within 15 ft (14)

- Trails
- Bicycle Lanes
- Streams

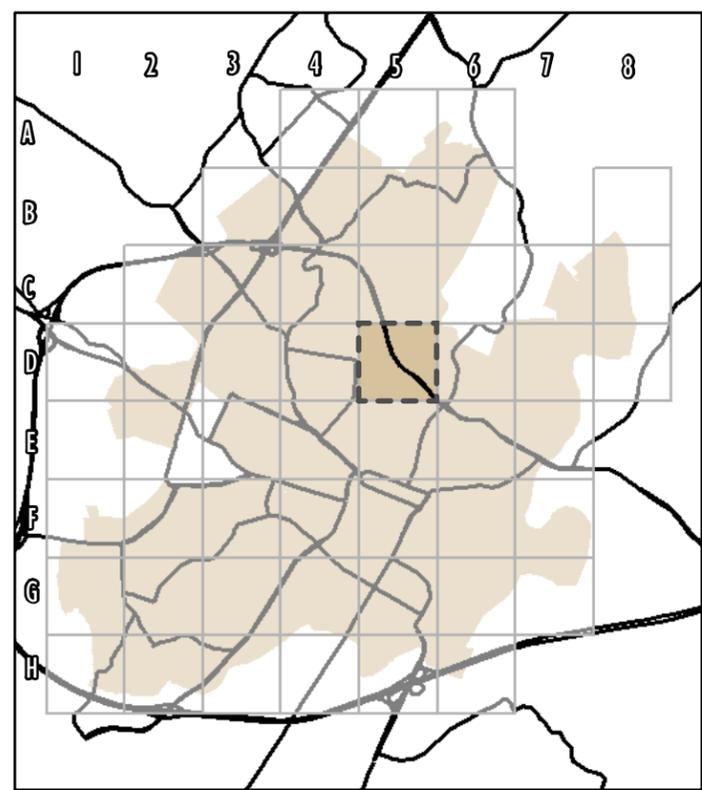
### Framework Streets - Typology

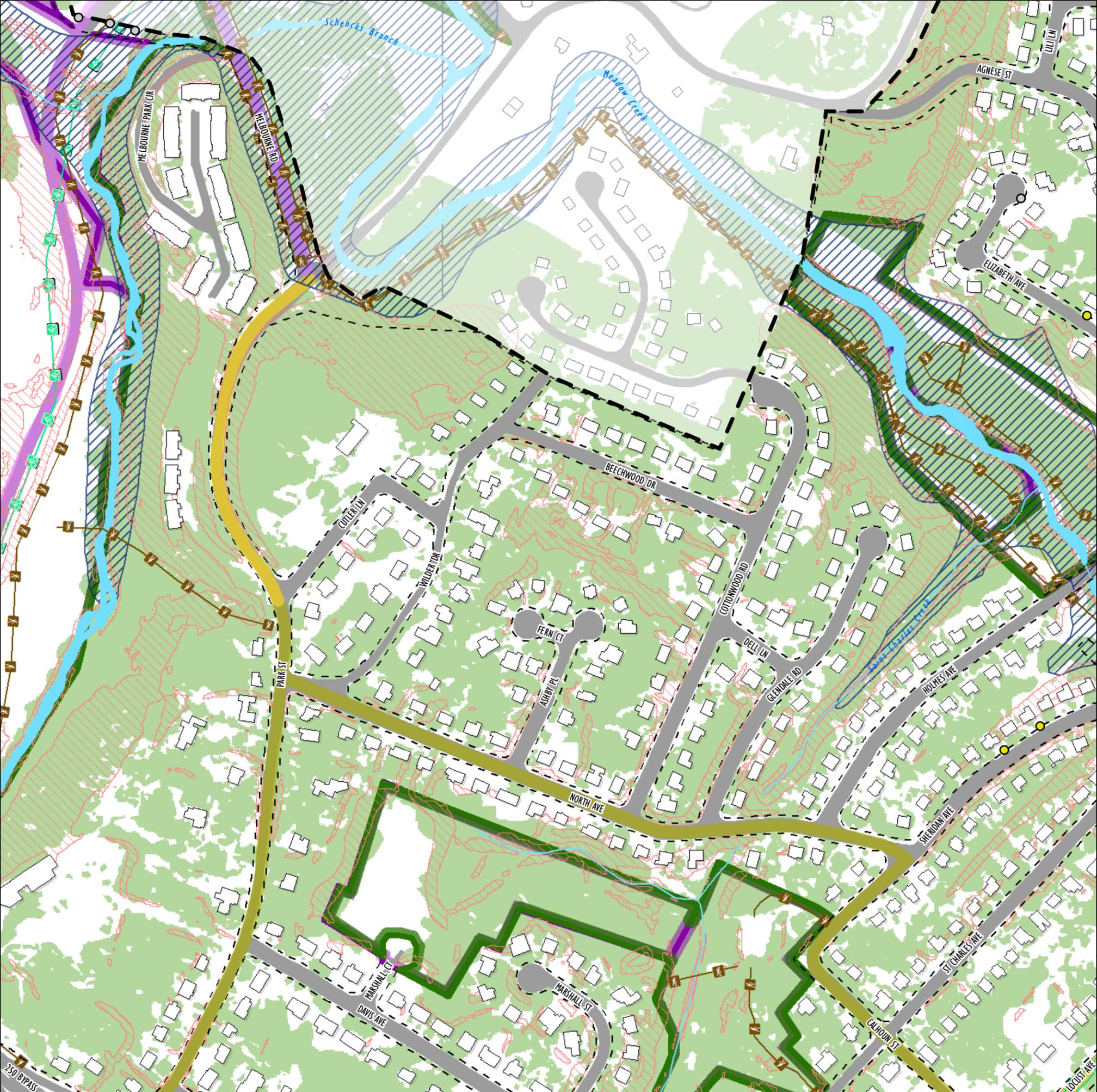
- Industrial
- Mixed Use B
- Neighborhood A
- 5 Minute School Walkzones
- City Right-of-Way

- Entrance Corridor
- 100 Year Floodplain
- Steep Slopes
- Tree Canopy
- Park Boundaries
- School Parcels
- State-Owned Parcels
- UVA Parcels
- City Parcels



This square represents 1 Acre on the map





# Grid D6

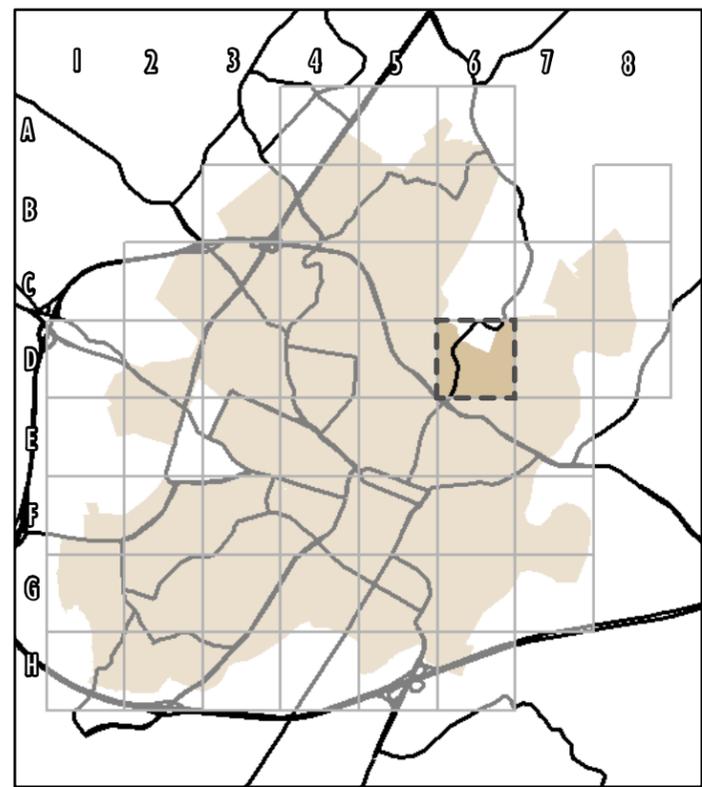


## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (5)
  - Overhead Utility within 15 ft (4)
  - Trails
  - Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- Mixed Use B
  - Neighborhood A
  - Neighborhood B
- Other Features**
- 100 Year Floodplain
  - Steep Slopes
  - Tree Canopy
  - Park Boundaries
  - School Parcels
  - State-Owned Parcels
  - UVa Parcels
  - City Parcels
  - City Boundary
  - City Right-of-Way



This square represents 1 Acre on the map





# Grid D7

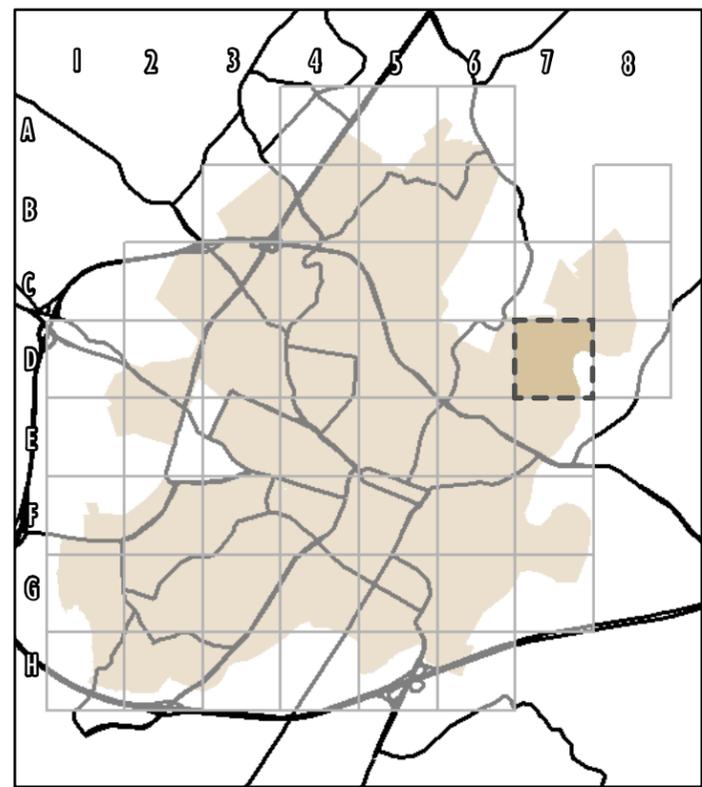


## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (18)
  - Overhead Utility within 15 ft (18)
  - Trails
  - Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- Industrial
  - Neighborhood B
  - City Boundary
  - City Right-of-Way
  - 100 Year Floodplain
- Steep Slopes
  - Tree Canopy
  - Park Boundaries
  - School Parcels
  - State-Owned Parcels
  - UVa Parcels
  - City Parcels



This square represents 1 Acre on the map





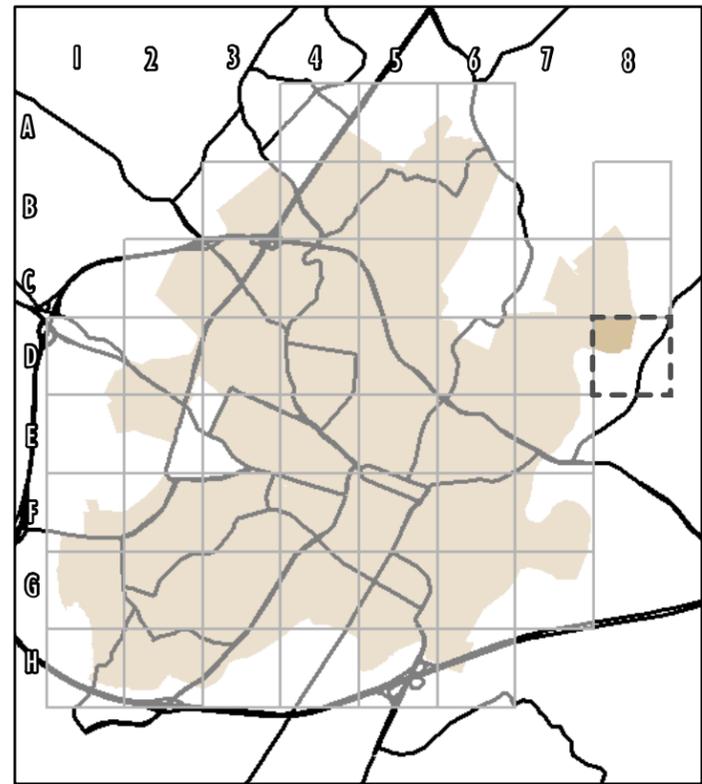
# Grid D8

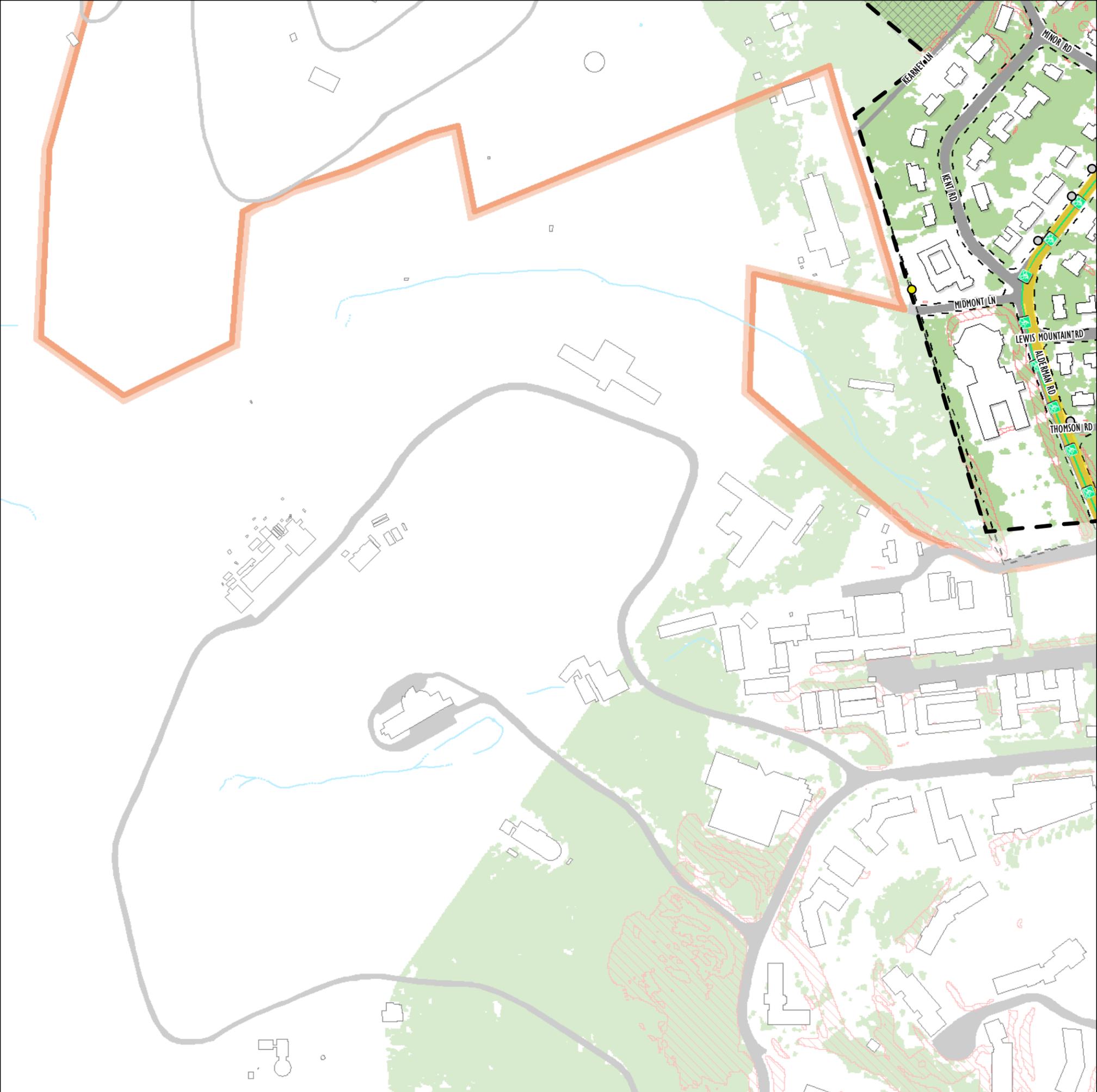


## Legend

- Trails
- Streams
- City Boundary
- City Right-of-Way
- 100 Year Floodplain
- Steep Slopes
- Tree Canopy
- Park Boundaries
- School Parcels
- State-Owned Parcels
- UVa Parcels
- City Parcels

This square represents 1 Acre on the map





# Grid E1

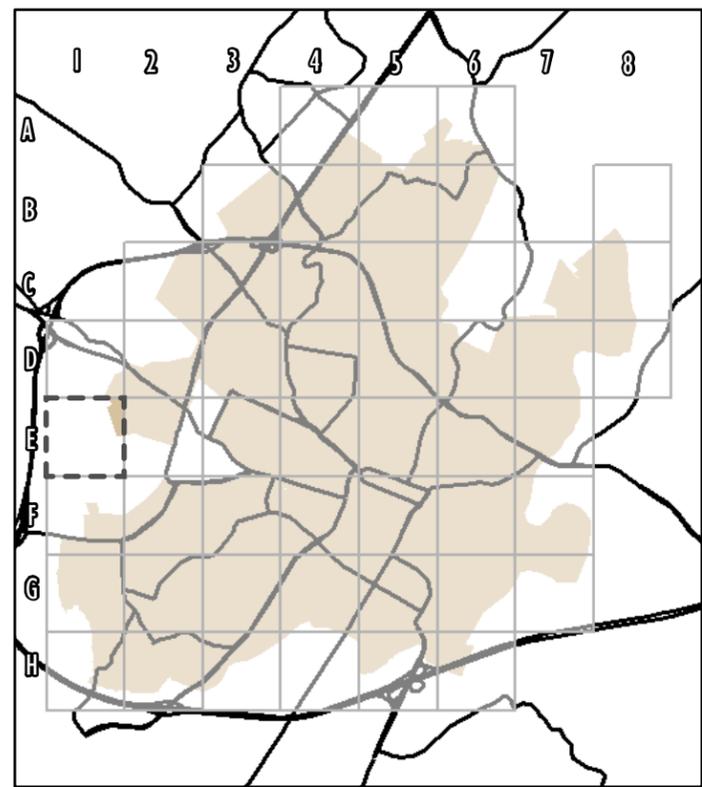


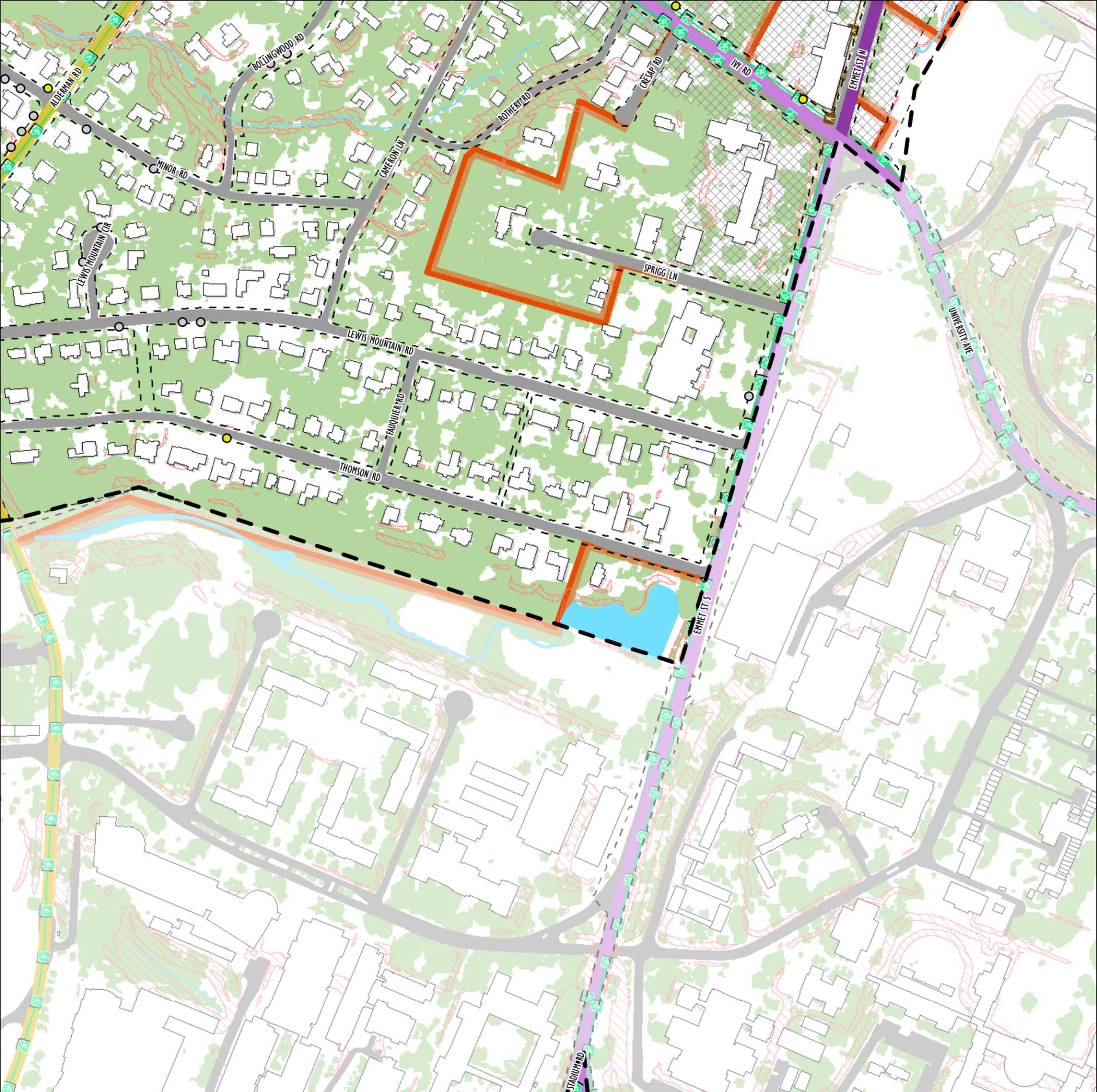
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (4)
  - Overhead Utility within 15 ft (1)
  - 🚲 Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- 🟡 Neighborhood B
  - ⚡ City Boundary
  - ⚡ City Right-of-Way
  - 🧱 Entrance Corridor
  - 🔴 Steep Slopes
  - 🟢 Tree Canopy
- 🟩 Park Boundaries
  - 🟪 School Parcels
  - 🟦 State-Owned Parcels
  - 🟠 UVa Parcels
  - 🟡 City Parcels



This square represents 1 Acre on the map





# Grid E2

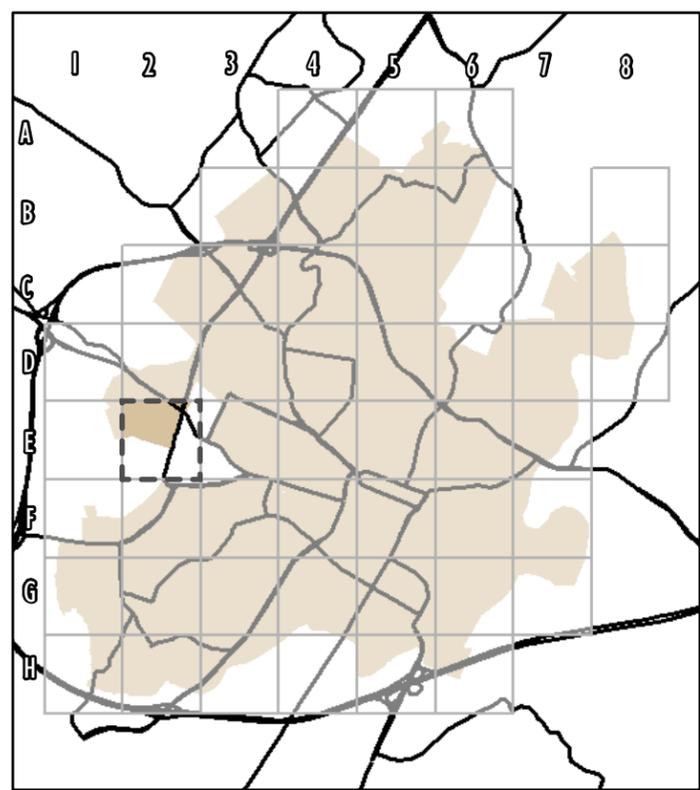


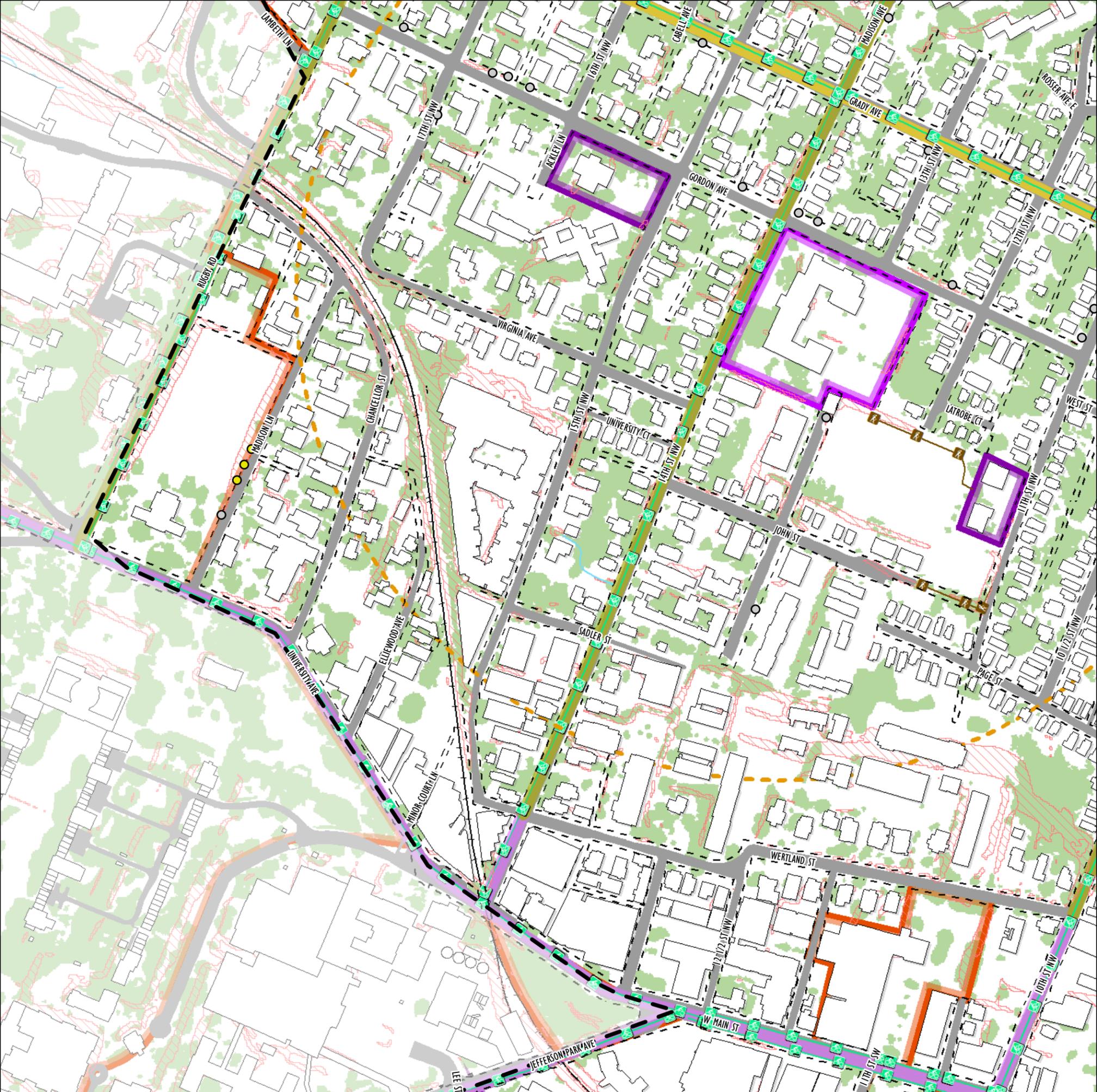
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (15)
  - Overhead Utility within 15 ft (4)
  - 🚶 Trails
  - 🚲 Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- 🟪 Mixed Use A
  - 🟩 Mixed Use B
  - 🟨 Neighborhood B
  - City Boundary
  - - - City Right-of-Way
- 🧩 Entrance Corridor
  - 🔴 Steep Slopes
  - 🟩 Tree Canopy
  - 🟩 Park Boundaries
  - 🟪 School Parcels
  - 🟢 State-Owned Parcels
  - 🟠 UVa Parcels
  - 🟪 City Parcels



This square represents 1 Acre on the map



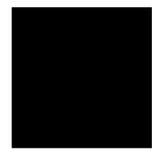


# Grid E3

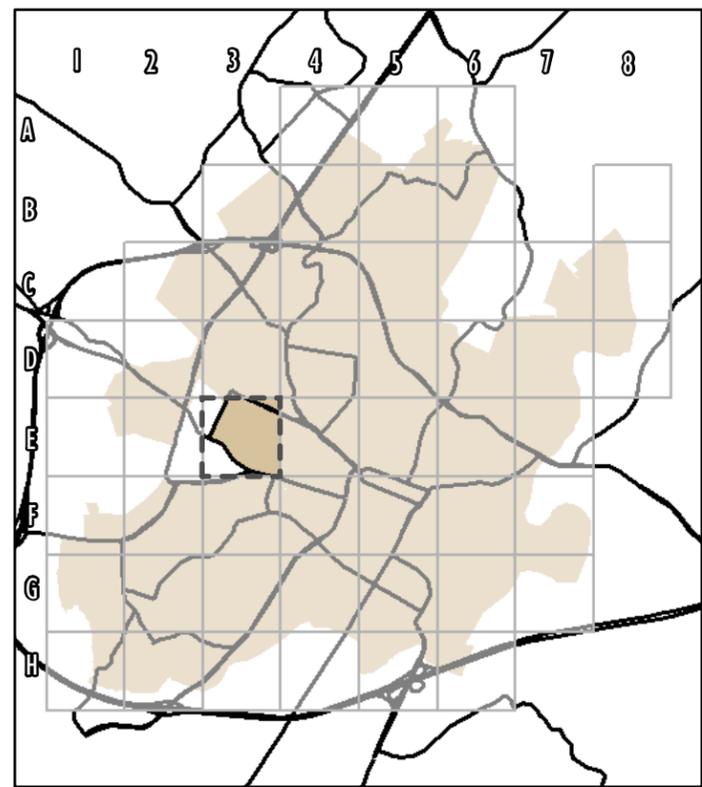


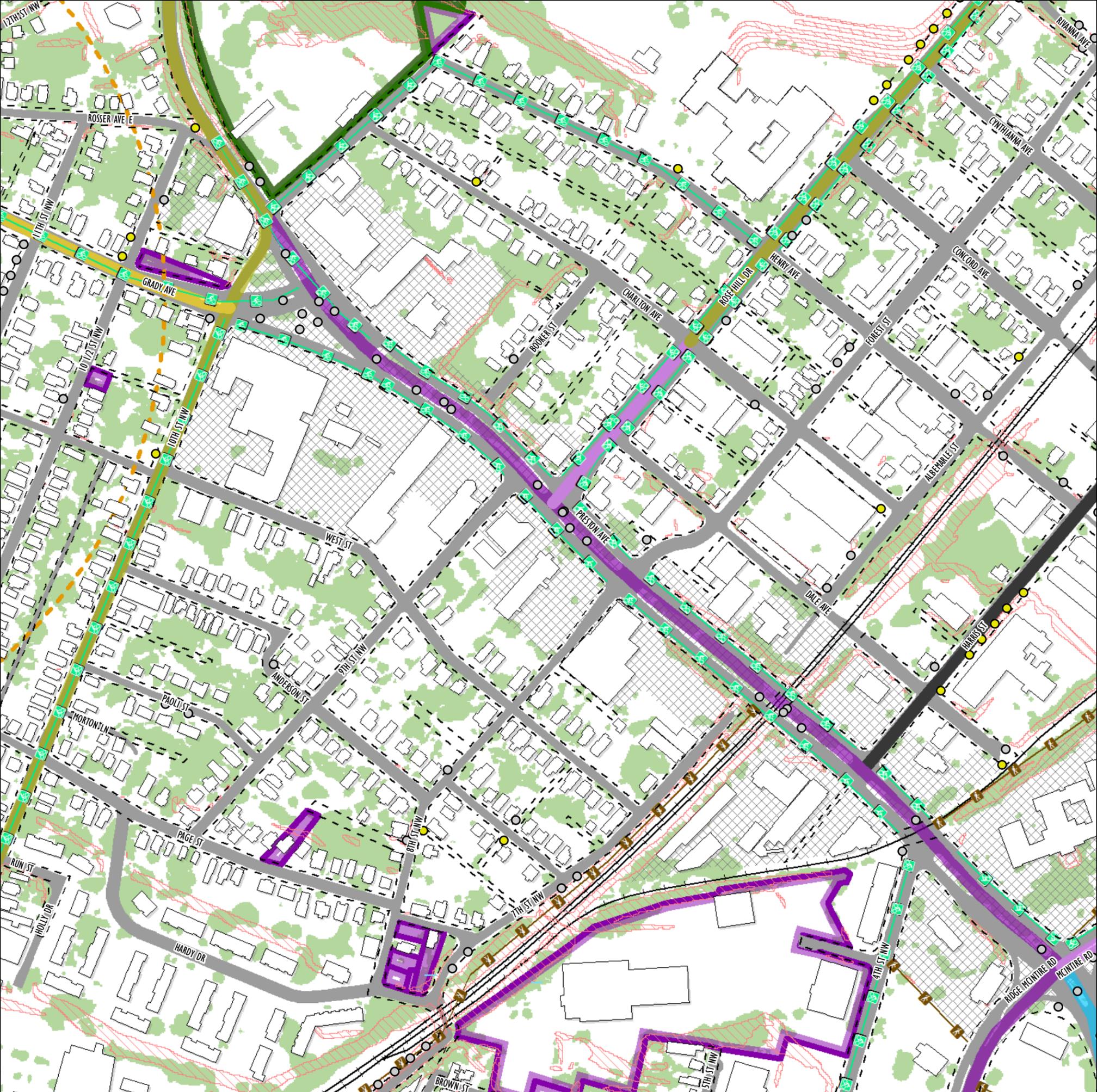
## Legend

- Potential Tree Planting Locations within Right-of-Way
  - No Overhead Utility within 15 ft (18)
  - Overhead Utility within 15 ft (3)
  - 🚶 Trails
  - 🚲 Bicycle Lanes
  - Streams
- Framework Streets - Typology
  - 🟡 Neighborhood A
  - 🟠 Neighborhood B
- City Boundary
- 5 Minute School Walkzones
- City Right-of-Way
- Steep Slopes
- Tree Canopy
- Park Boundaries
- School Parcels
- State-Owned Parcels
- UVA Parcels
- City Parcels



This square represents 1 Acre on the map





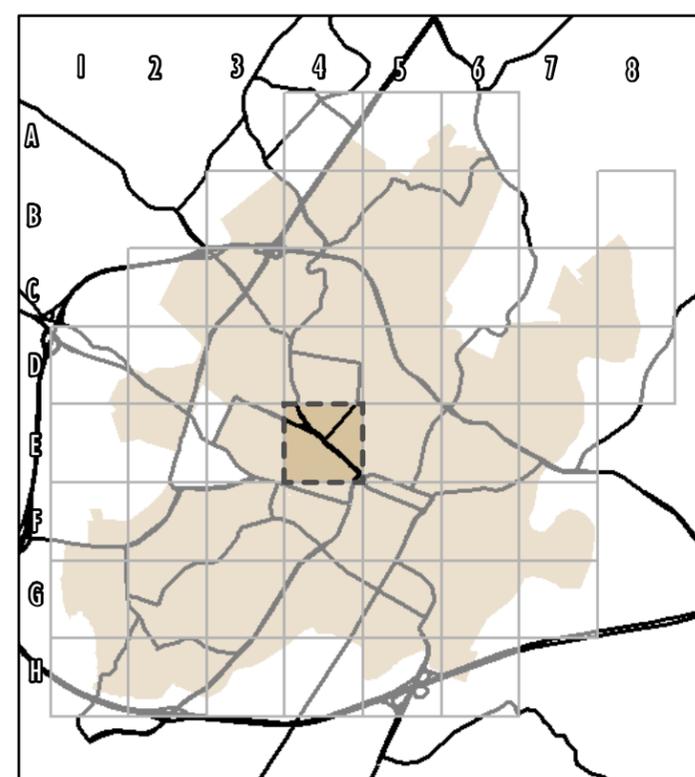
# Grid E4



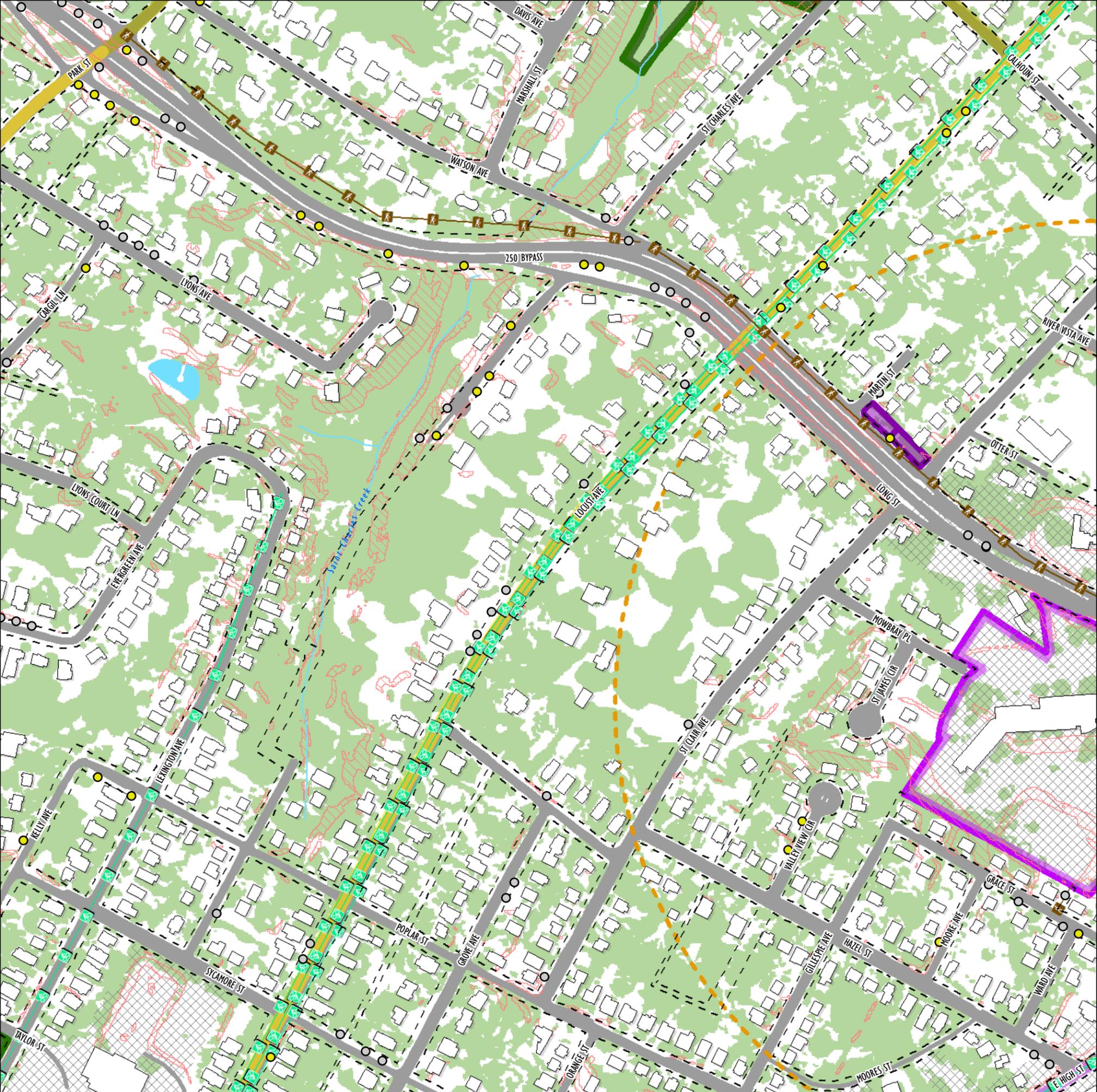
## Legend

- Potential Tree Planting Locations within Right-of-Way
  - No Overhead Utility within 15 ft (75)
  - Overhead Utility within 15 ft (24)
  - 🚶 Trails
  - 🚲 Bicycle Lanes
  - 🌊 Streams
- Framework Streets - Typology
  - 🏙 Downtown
  - 🏭 Industrial
  - 🏘 Mixed Use A
  - 🏘 Mixed Use B
  - 🏘 Neighborhood A
  - 🏘 Neighborhood B
- Other Features
  - 📐 5 Minute School Walkzones
  - 📐 City Right-of-Way
  - 📐 Entrance Corridor
  - 📐 Steep Slopes
  - 🌳 Tree Canopy
  - 🌳 Park Boundaries
  - 📐 School Parcels
  - 📐 State-Owned Parcels
  - 📐 UVa Parcels
  - 📐 City Parcels

This square represents 1 Acre on the map







# Grid E6

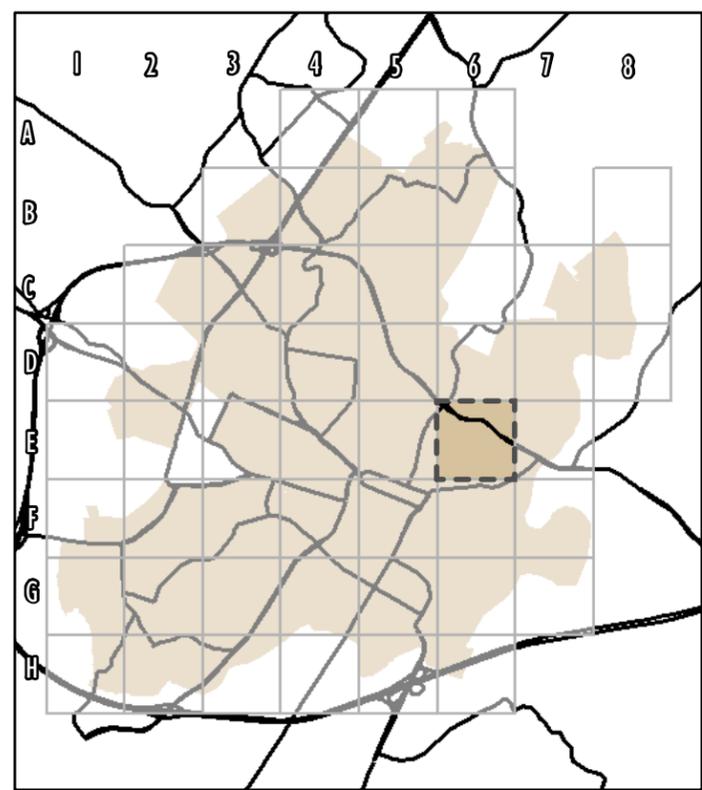


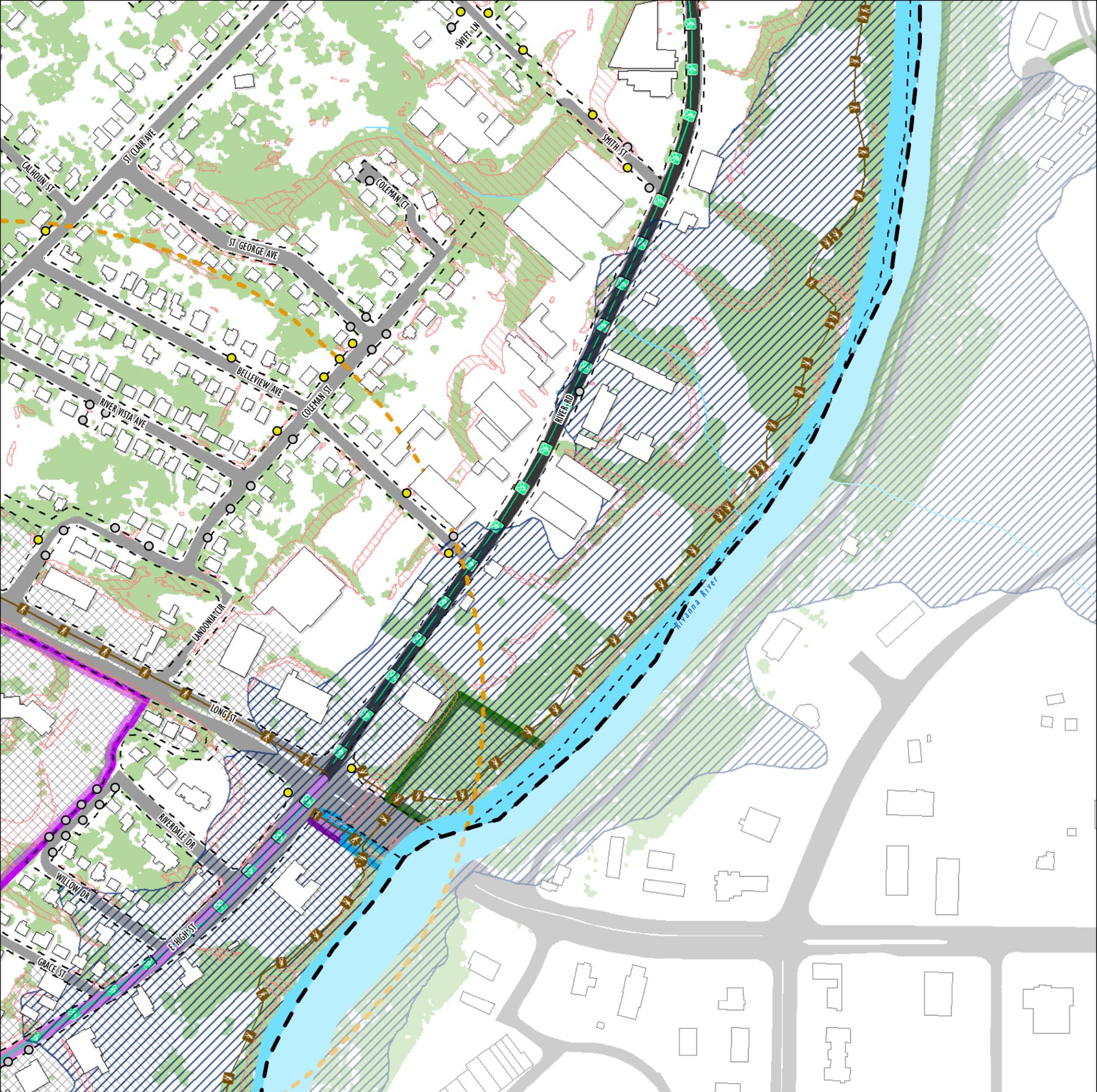
## Legend

- |  |                     |
|--|---------------------|
| <b>Potential Tree Planting Locations within Right-of-Way</b> | Entrance Corridor   |
| No Overhead Utility within 15 ft (53)                        | Steep Slopes        |
| Overhead Utility within 15 ft (30)                           | Tree Canopy         |
| Trails   | Park Boundaries     |
| Bicycle Lanes  | School Parcels      |
| Streams  | State-Owned Parcels |
| <b>Framework Streets - Typology</b>                          | UVa Parcels         |
| Mixed Use B  | City Parcels        |
| Neighborhood A   |                     |
| Neighborhood B   |                     |
| 5 Minute School Walkzones                                    |                     |
| City Right-of-Way  |                     |



This square represents 1 Acre on the map





# Grid E7

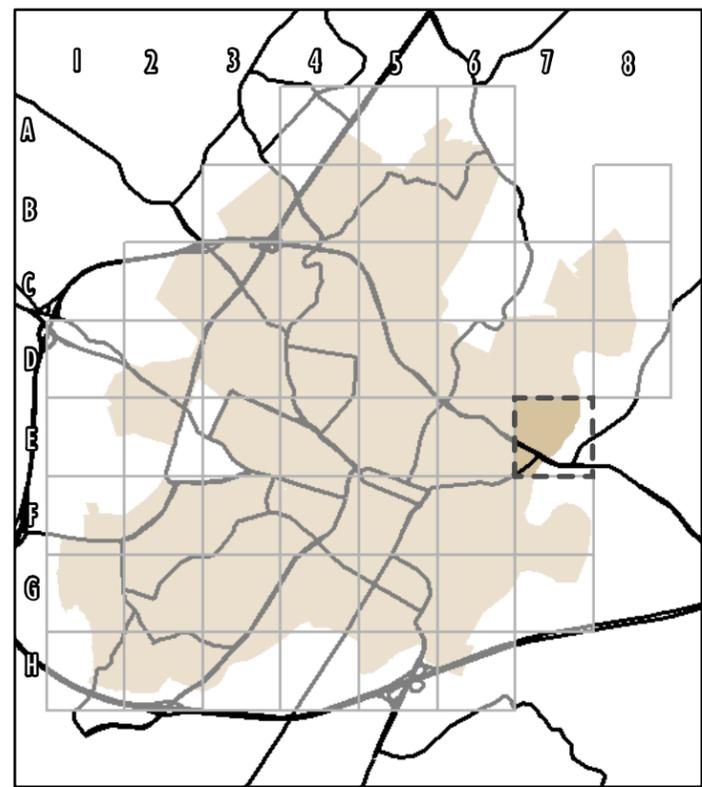


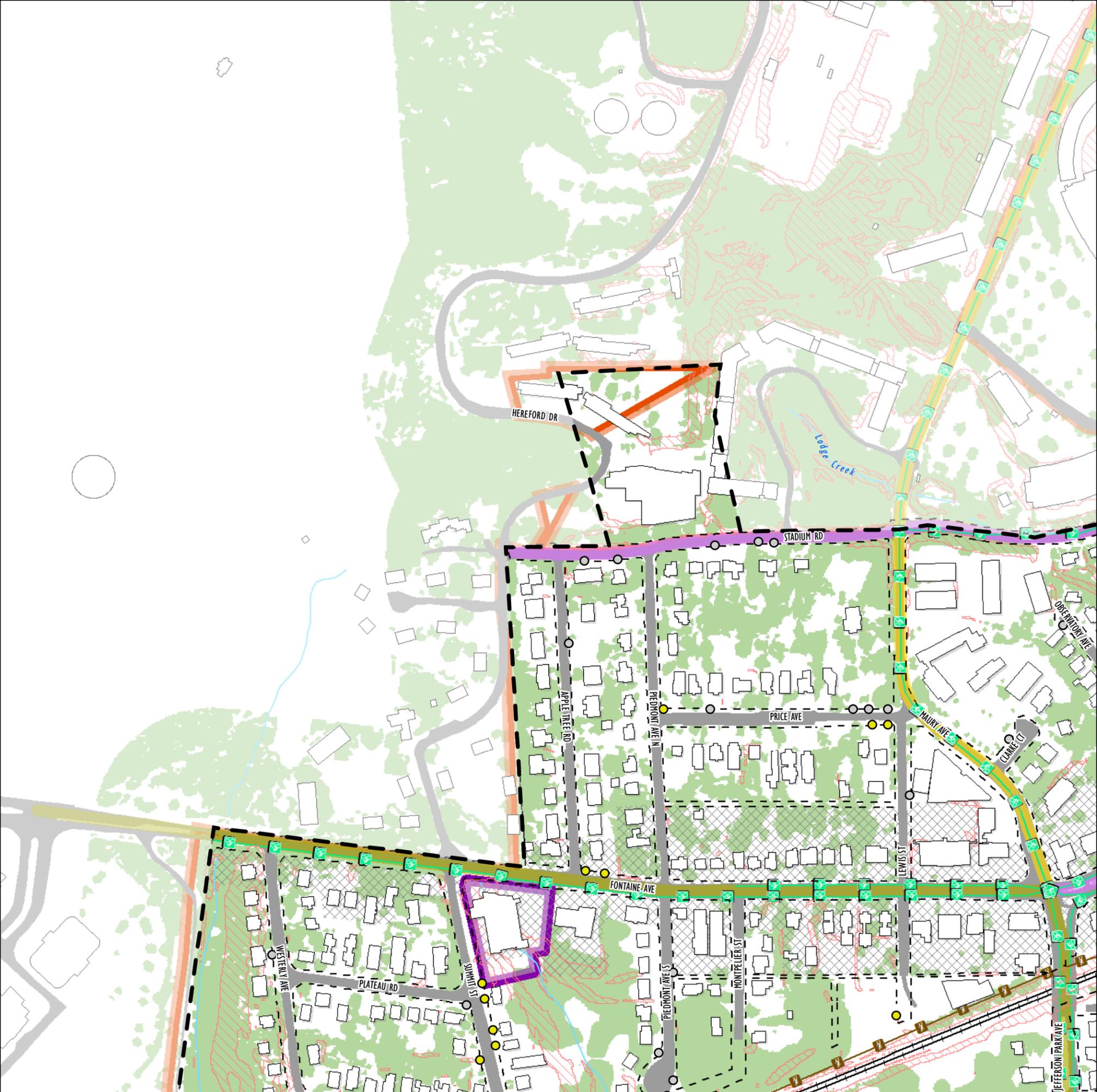
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (32)
  - Overhead Utility within 15 ft (16)
  - 🚶 Trails
  - 🚲 Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- Industrial
  - Mixed Use B
  - City Boundary
  - 5 Minute School Walkzones
  - City Right-of-Way
- ▨ Entrance Corridor
  - ▨ 100 Year Floodplain
  - ▨ Steep Slopes
  - ▨ Tree Canopy
  - ▨ Park Boundaries
  - ▨ School Parcels
  - ▨ State-Owned Parcels
  - ▨ UVa Parcels
  - ▨ City Parcels



This square represents 1 Acre on the map





# Grid F1

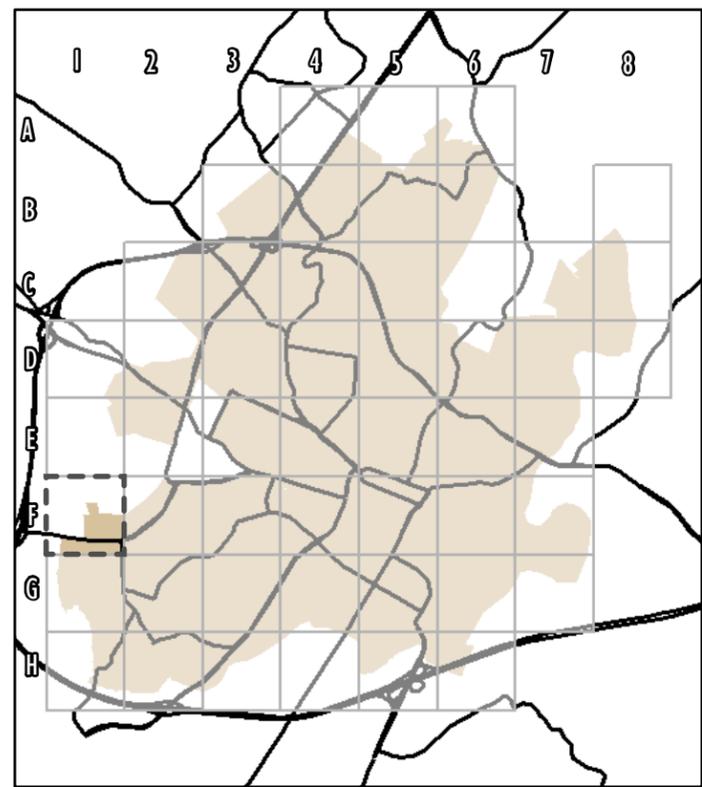


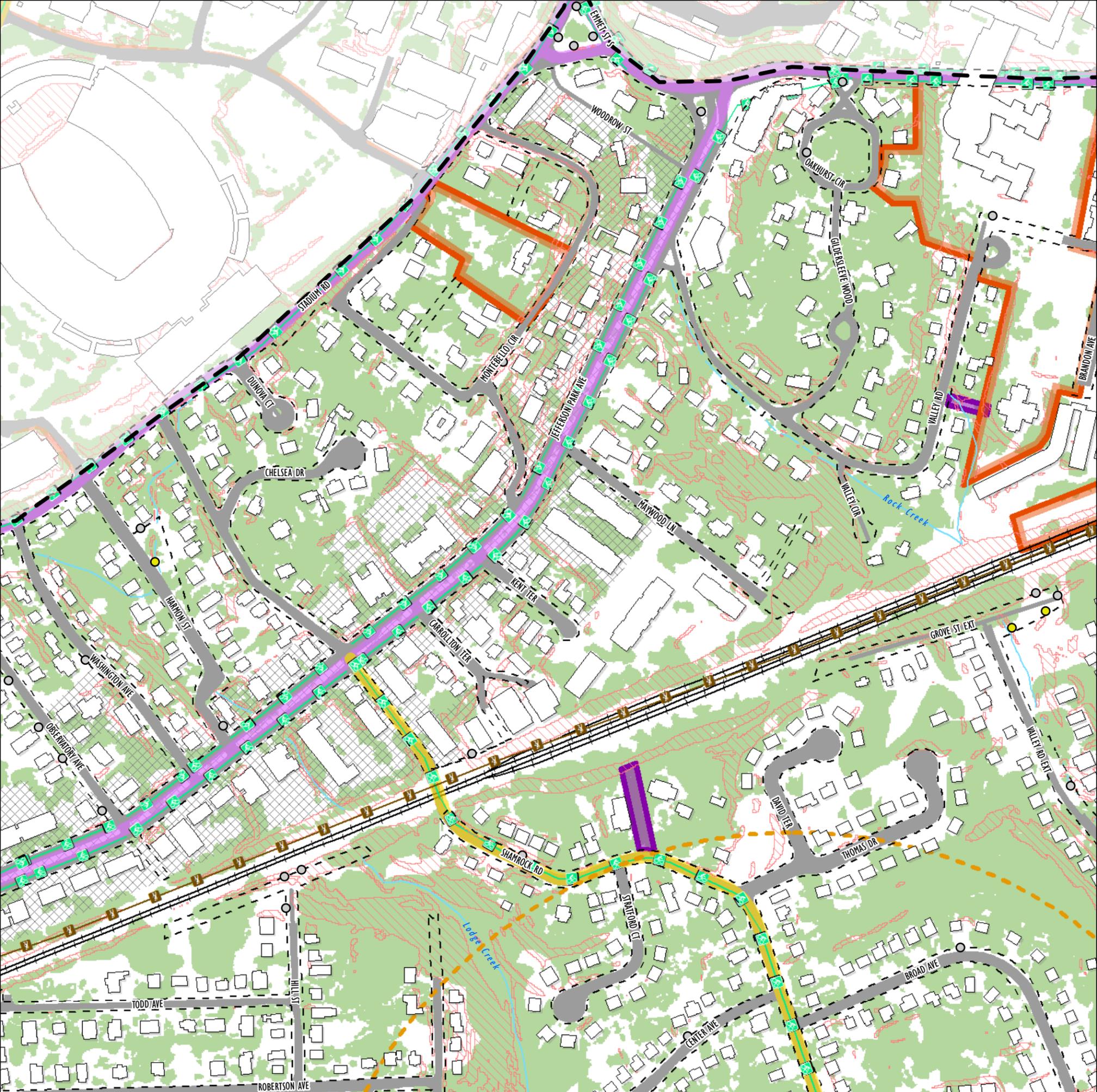
## Legend

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>○ No Overhead Utility within 15 ft (20)</li> <li>● Overhead Utility within 15 ft (12)</li> <li>🚶 Trails</li> <li>🚲 Bicycle Lanes</li> <li>— Streams</li> </ul> | <ul style="list-style-type: none"> <li>▨ Entrance Corridor</li> <li>▨ Steep Slopes</li> <li>■ Tree Canopy</li> <li>▭ Park Boundaries</li> <li>▭ School Parcels</li> <li>▭ State-Owned Parcels</li> <li>▭ UVa Parcels</li> <li>▭ City Parcels</li> </ul> |
| <p>Framework Streets - Typology</p> <ul style="list-style-type: none"> <li>▭ Mixed Use B</li> <li>▭ Neighborhood A</li> <li>▭ Neighborhood B</li> </ul>   |   |
| <ul style="list-style-type: none"> <li>▭ City Boundary</li> <li>▭ City Right-of-Way</li> </ul>  |   |



This square represents 1 Acre on the map





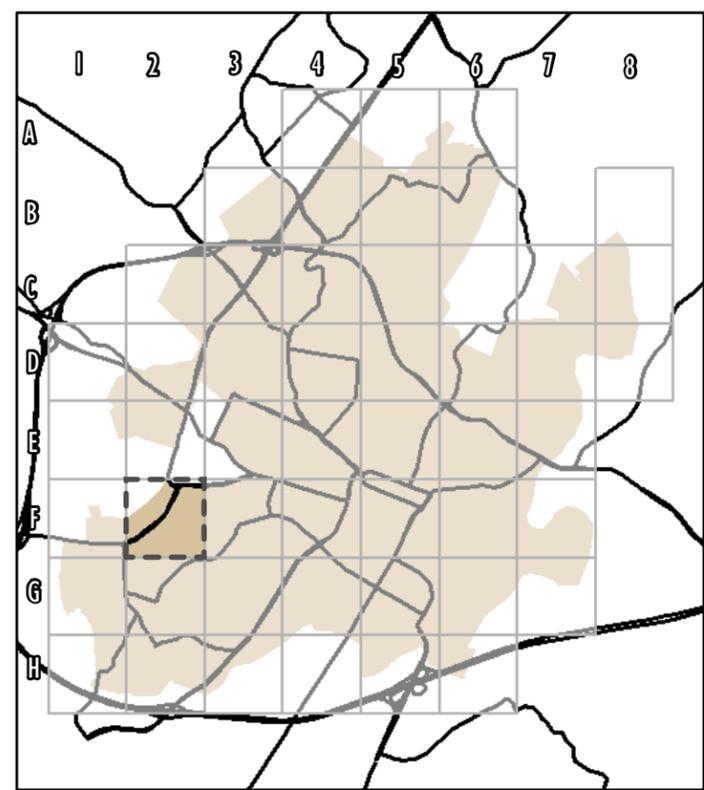
# Grid F2

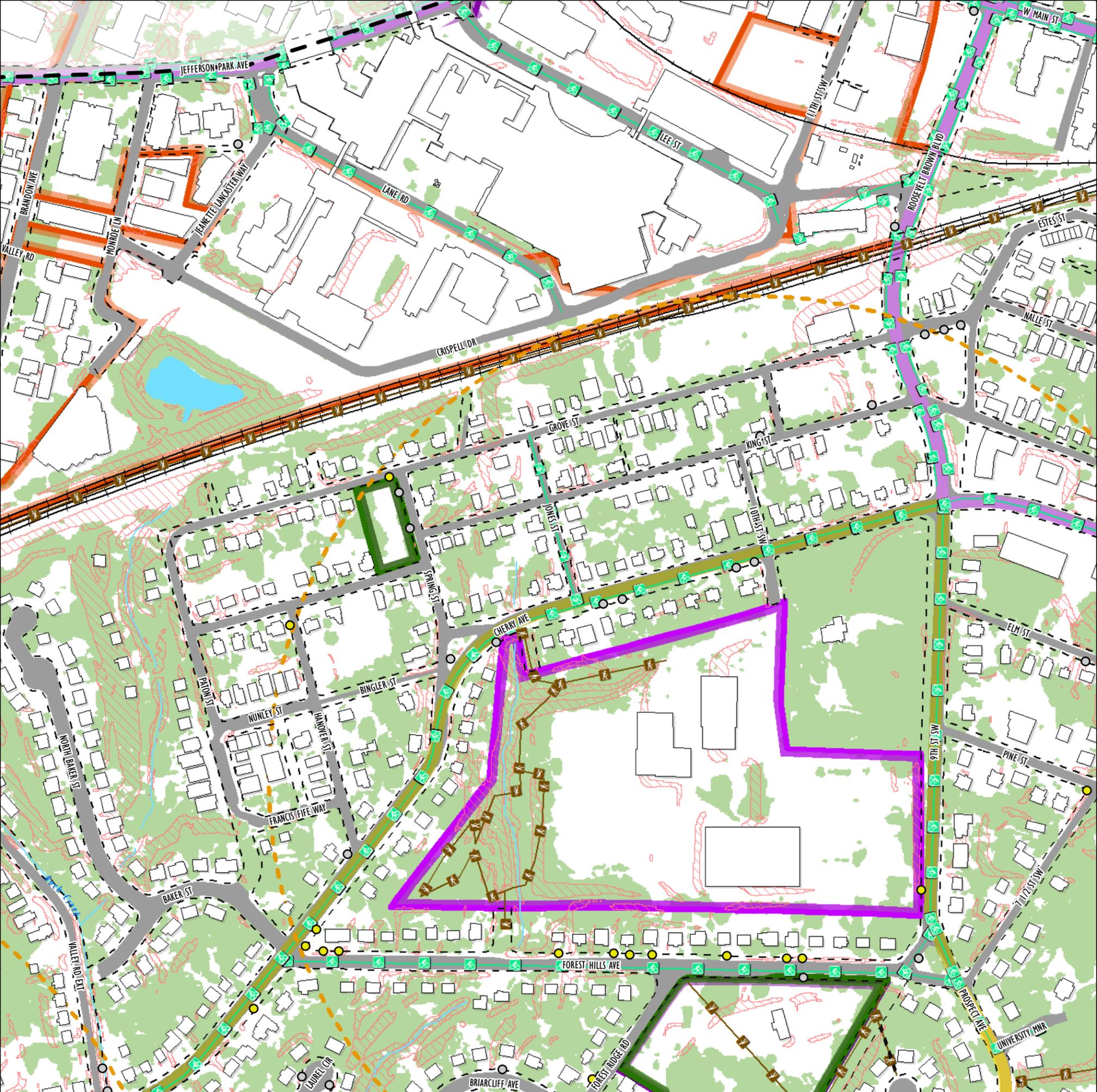


## Legend

- |   |                     |
|---|---------------------|
| Potential Tree Planting Locations within Right-of-Way | Entrance Corridor   |
| No Overhead Utility within 15 ft (27)                 | Steep Slopes        |
| Overhead Utility within 15 ft (4)                     | Tree Canopy         |
| Trails  | Park Boundaries     |
| Bicycle Lanes   | School Parcels      |
| Streams   | State-Owned Parcels |
| Framework Streets - Typology                          | UVa Parcels         |
| Mixed Use B   | City Parcels        |
| Neighborhood B  |                     |
| City Boundary   |                     |
| 5 Minute School Walkzones                             |                     |
| City Right-of-Way                                     |                     |

This square represents 1 Acre on the map





# Grid F3

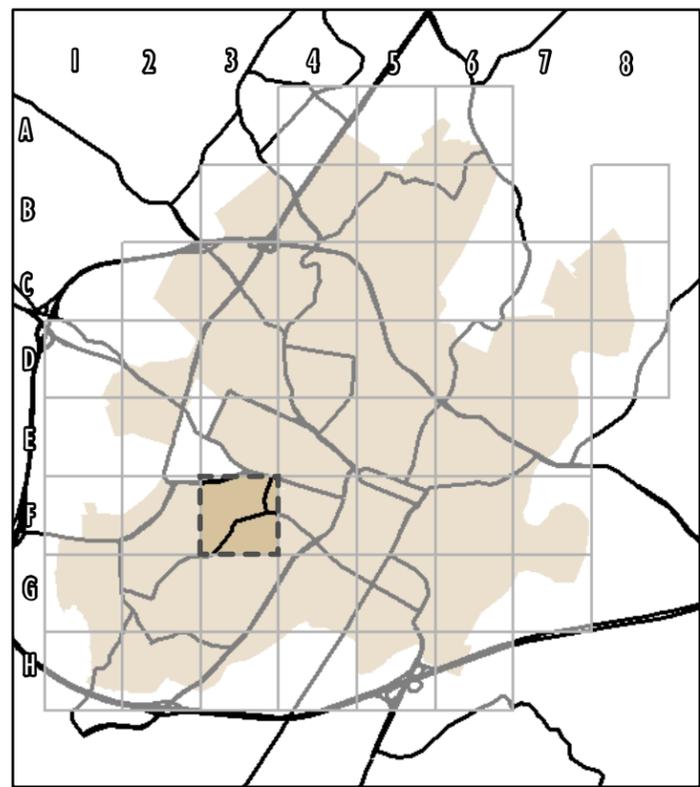


## Legend

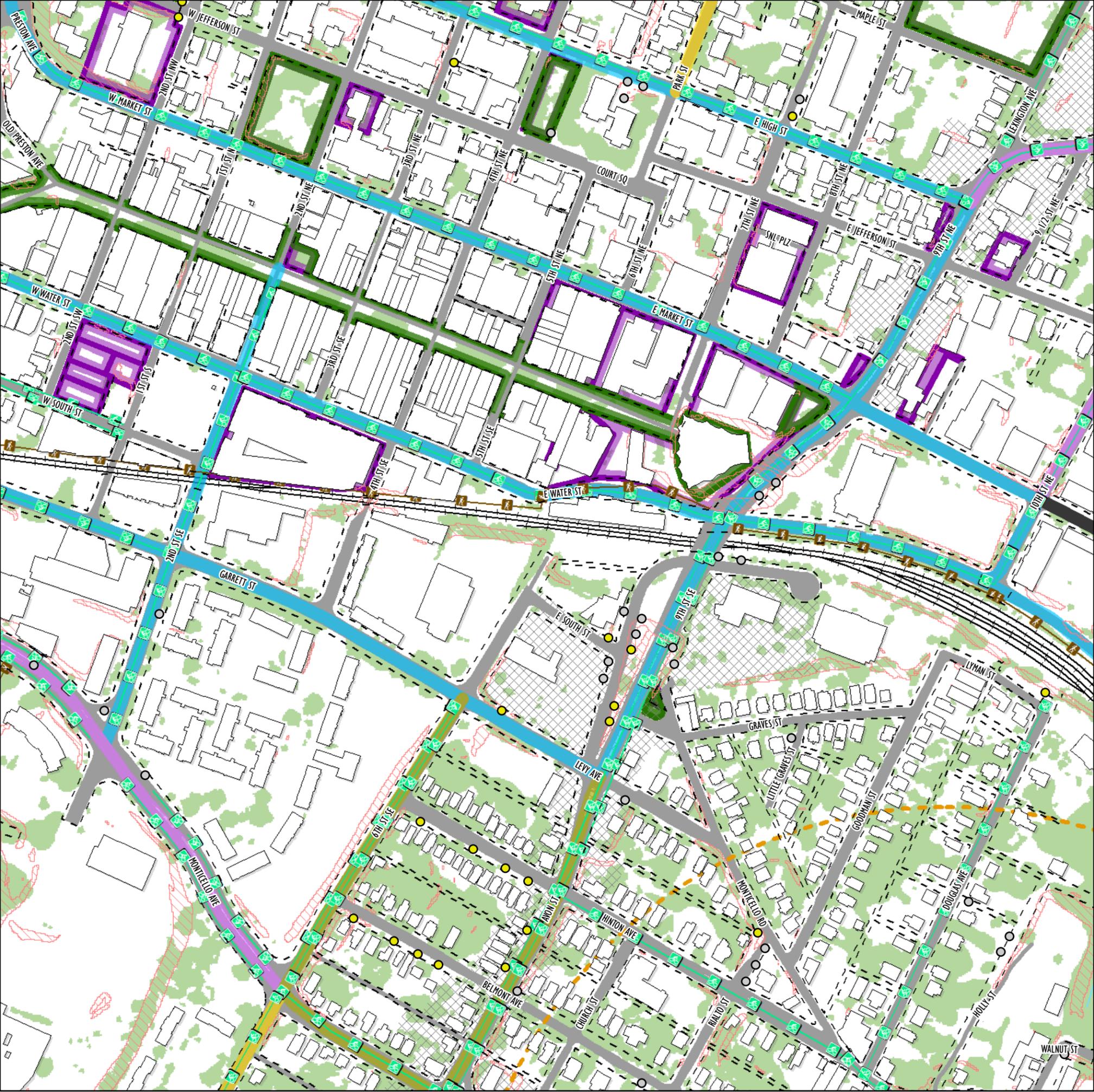
- |   |   |                                      |                  |                 |                             |                   |                |               |                    |                  |                        |               |                |
|---|---|--------------------------------------|------------------|-----------------|-----------------------------|-------------------|----------------|---------------|--------------------|------------------|------------------------|---------------|----------------|
| Potential Tree Planting Locations within Right-of-Way | ○ No Overhead Utility within 15 ft (26) | ○ Overhead Utility within 15 ft (17) | ⚡ Trails         | 🚲 Bicycle Lanes | — Streams                   | City Right-of-Way | ▨ Steep Slopes | 🌳 Tree Canopy | 🏞️ Park Boundaries | 🏫 School Parcels | 🏛️ State-Owned Parcels | 🏠 UVa Parcels | 🏡 City Parcels |
| Framework Streets - Typology                          | 🟪 Mixed Use B                           | 🟩 Neighborhood A                     | 🟨 Neighborhood B | — City Boundary | ⬜ 5 Minute School Walkzones |                   |                |               |                    |                  |                        |               |                |



This square represents 1 Acre on the map





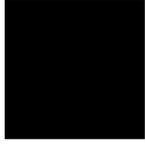


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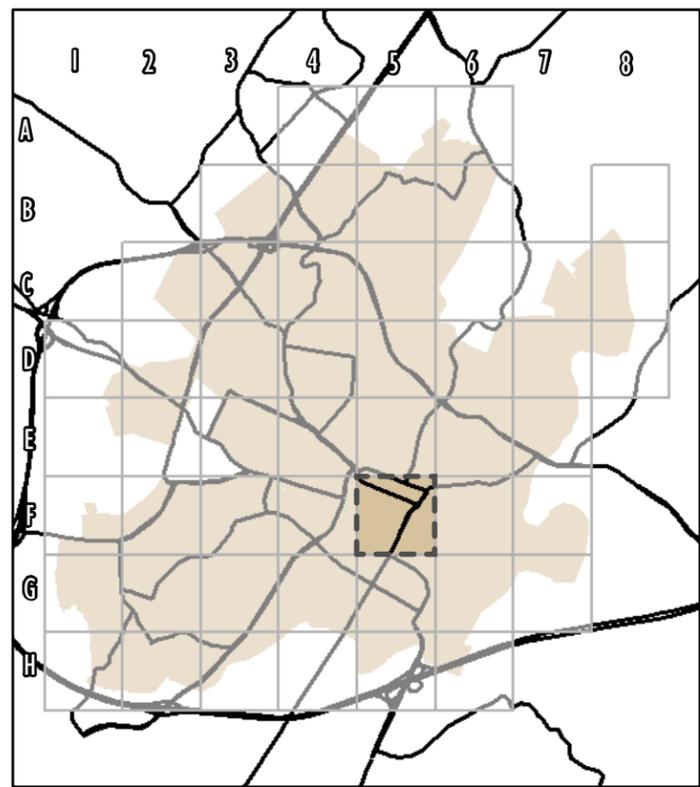


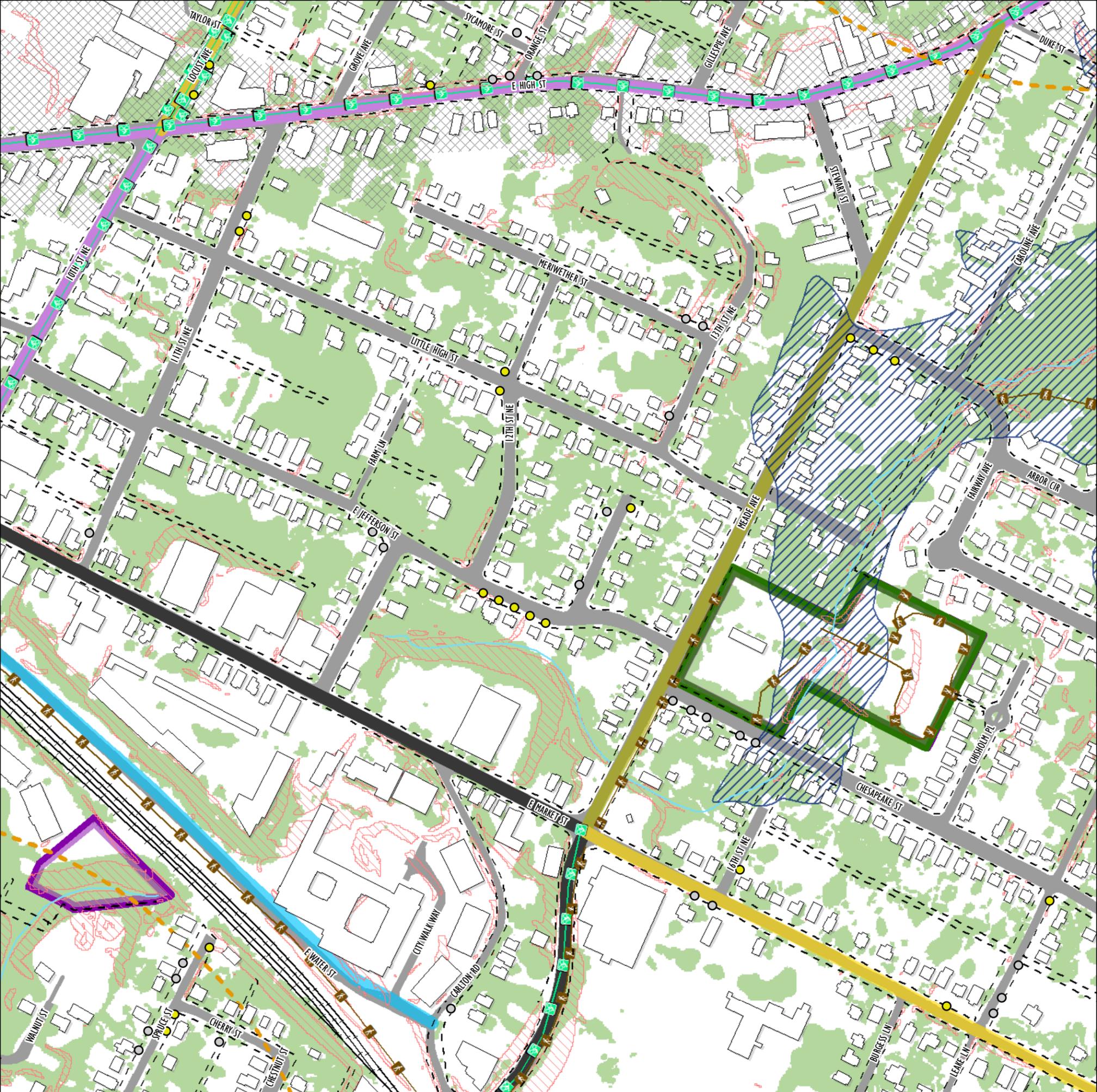
## Legend

- Potential Tree Planting Locations within Right-of-Way
- 5 Minute School Walkzones
- No Overhead Utility within 15 ft (32)
- City Right-of-Way
- Overhead Utility within 15 ft (21)
- Entrance Corridor
- Trails
- Steep Slopes
- Bicycle Lanes
- Tree Canopy
- Streams
- Park Boundaries
- Framework Streets - Typology
- School Parcels
- Downtown
- State-Owned Parcels
- Industrial
- UVa Parcels
- Mixed Use B
- City Parcels
- Neighborhood A
- Neighborhood B



This square represents 1 Acre on the map





# Grid F6

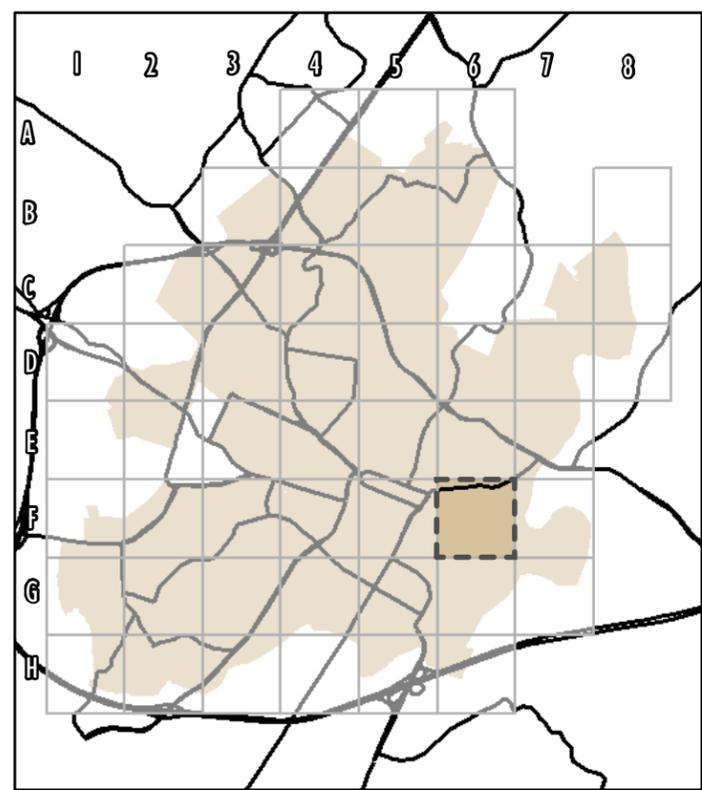


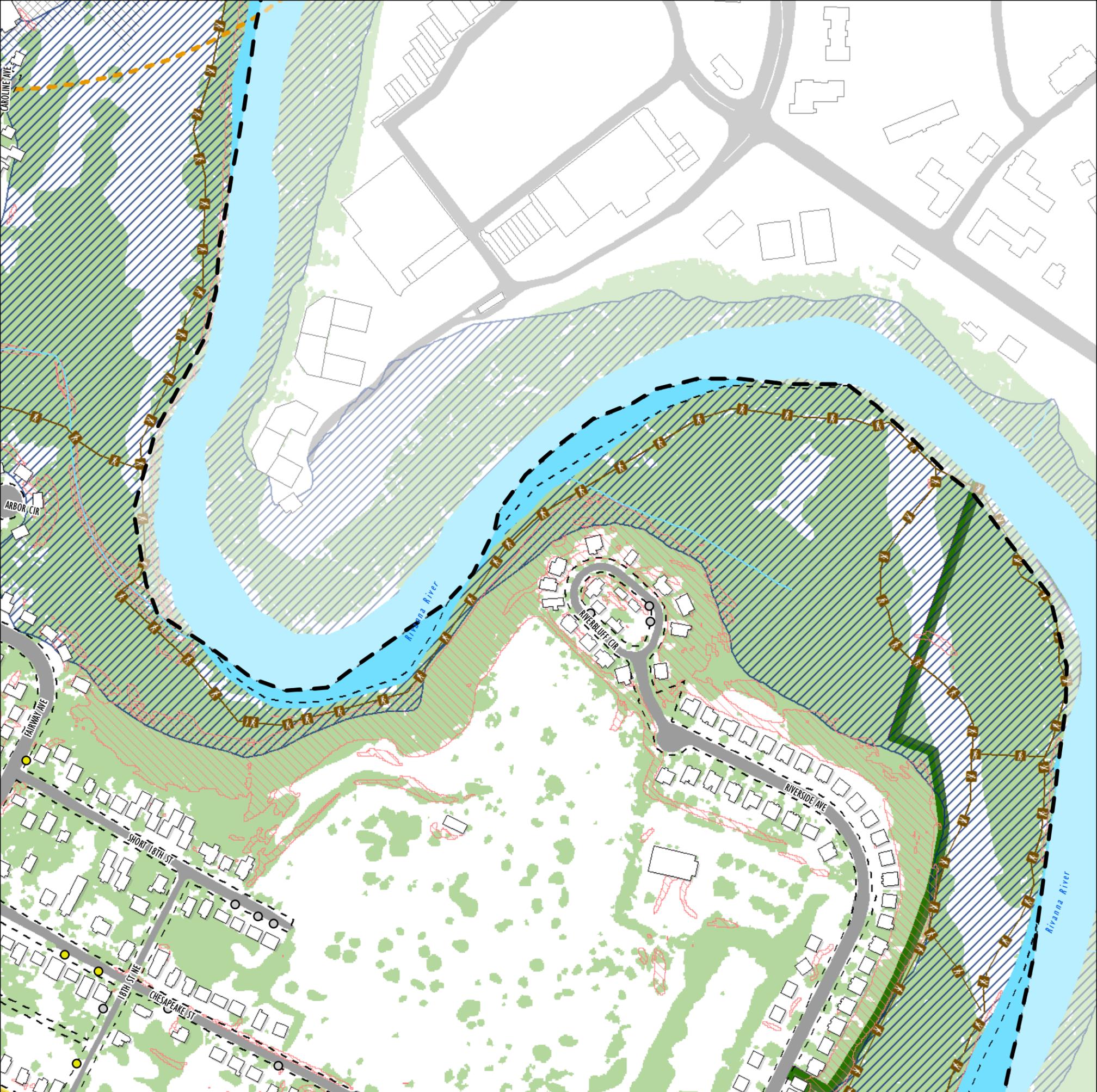
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (28)
  - Overhead Utility within 15 ft (22)
  - 🚶 Trails
  - 🚲 Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- 🟡 Downtown
  - ⚫ Industrial
  - 🟡 Mixed Use B
  - 🟢 Neighborhood A
  - 🟠 Neighborhood B
- 🟡 5 Minute School Walkzones
  - ⋯ City Right-of-Way
  - ▨ Entrance Corridor
  - ▨ 100 Year Floodplain
  - ▨ Steep Slopes
  - 🟢 Tree Canopy
  - 🟢 Park Boundaries
  - 🟡 School Parcels
  - 🟡 State-Owned Parcels
  - 🟡 UVa Parcels
  - 🟡 City Parcels



This square represents 1 Acre on the map





# Grid F7

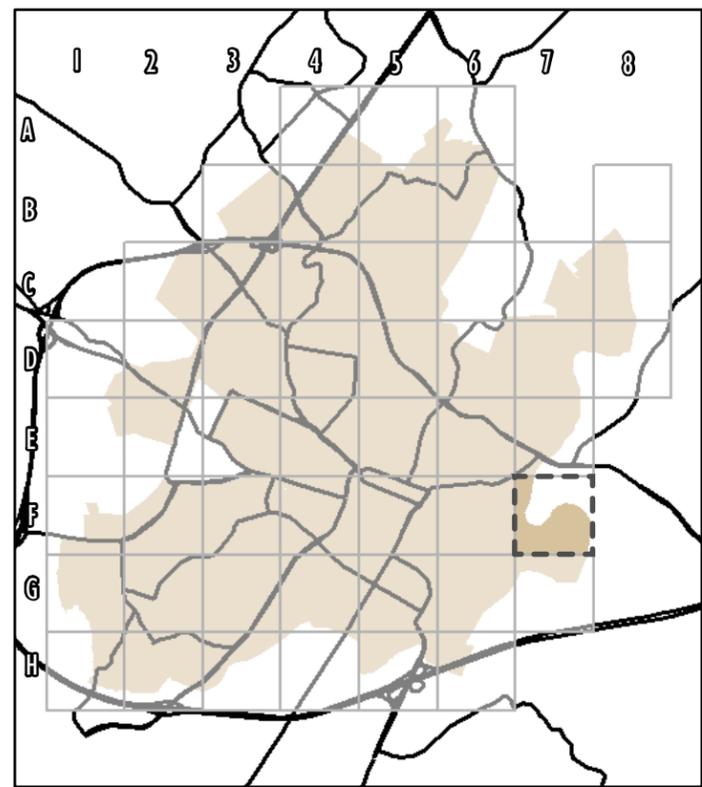


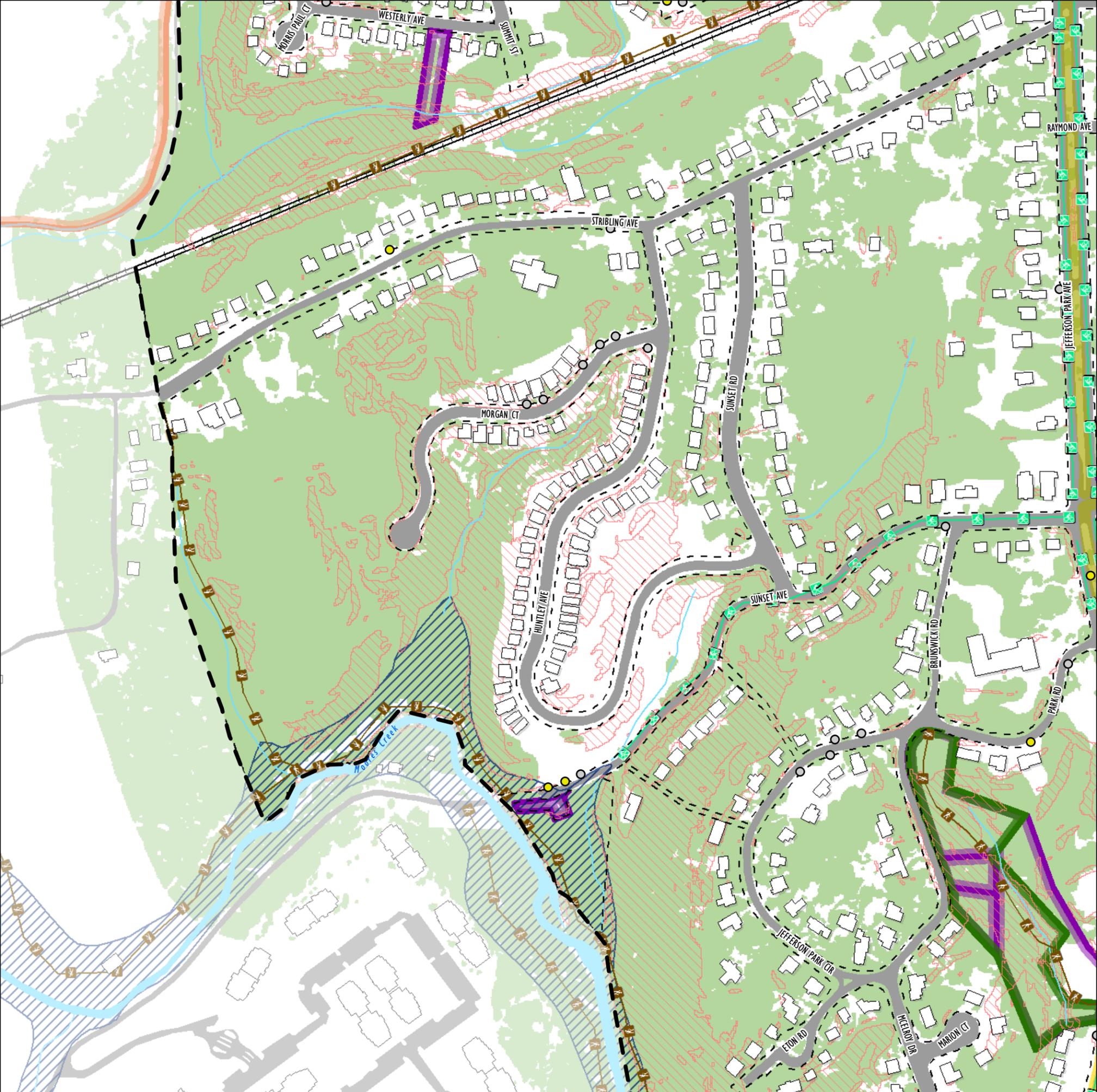
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (9)
  - Overhead Utility within 15 ft (4)
  - Trails
  - Streams
- Framework Streets - Typology**
- Neighborhood B
  - City Boundary
  - 5 Minute School Walkzones
  - City Right-of-Way
  - Entrance Corridor
  - 100 Year Floodplain
- ▨ Steep Slopes
  - Tree Canopy
  - ▭ Park Boundaries
  - ▭ School Parcels
  - ▭ State-Owned Parcels
  - ▭ UVa Parcels
  - ▭ City Parcels



This square represents 1 Acre on the map





# Grid G1

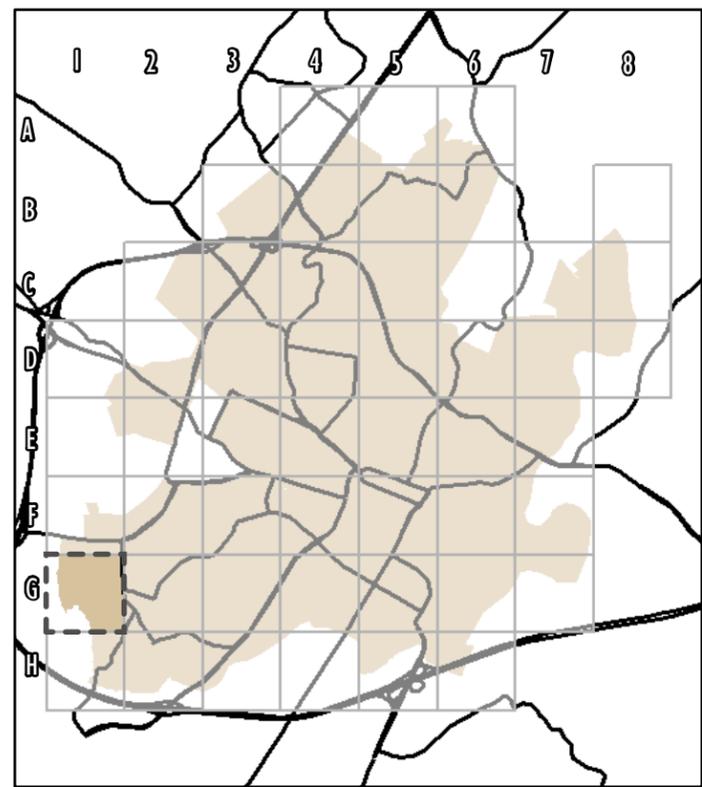


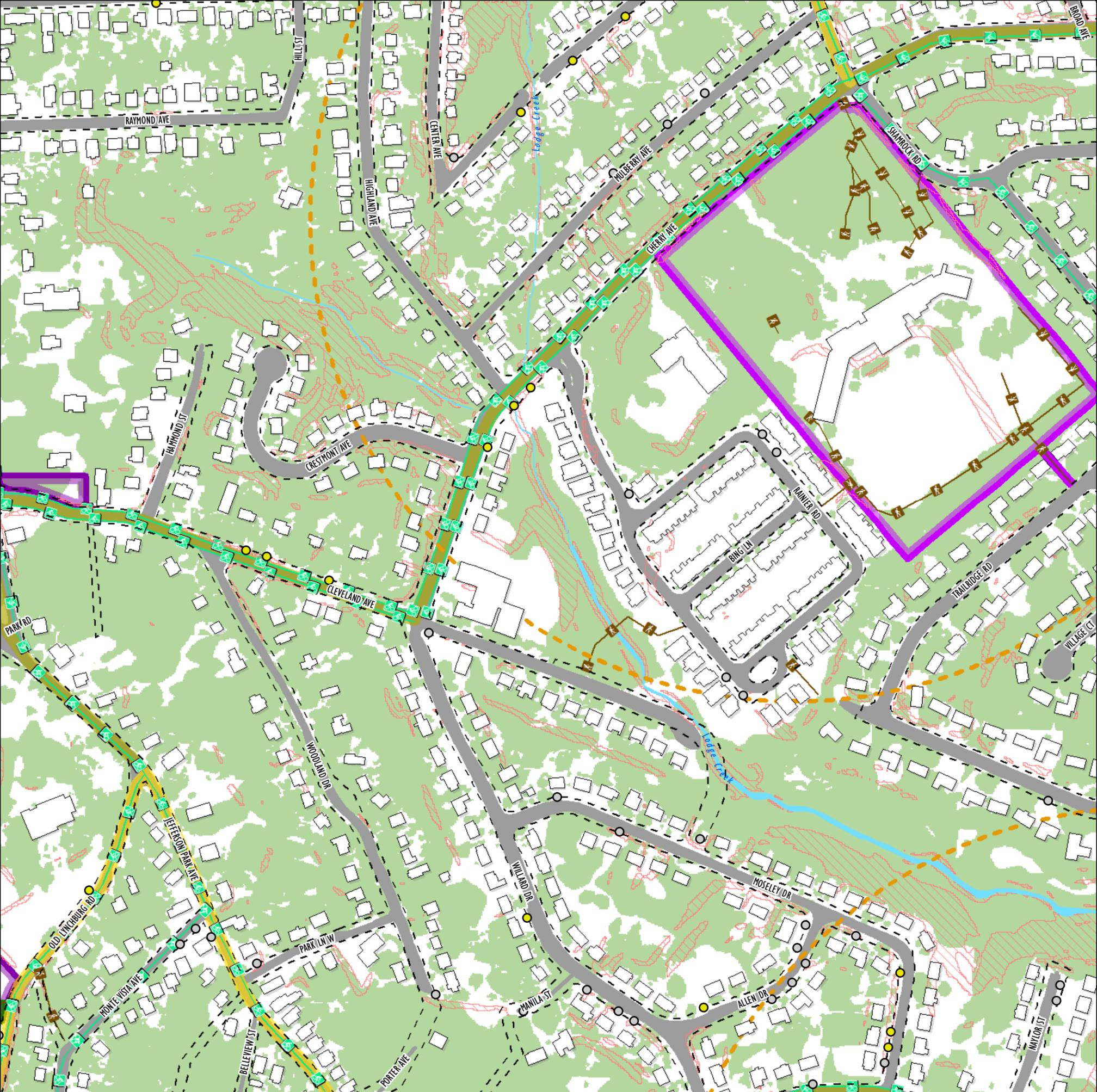
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (18)
  - Overhead Utility within 15 ft (6)
  - Trails
  - Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- Neighborhood A
  - Neighborhood B
  - City Boundary
  - City Right-of-Way
  - 100 Year Floodplain
- Steep Slopes
  - Tree Canopy
  - Park Boundaries
  - School Parcels
  - State-Owned Parcels
  - UVa Parcels
  - City Parcels



This square represents 1 Acre on the map





# Grid G2



## Legend

### Potential Tree Planting Locations within Right-of-Way

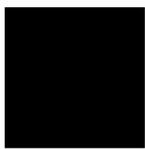
- No Overhead Utility within 15 ft (34)
- Overhead Utility within 15 ft (16)

- 🚶 Trails
- 🚲 Bicycle Lanes
- Streams

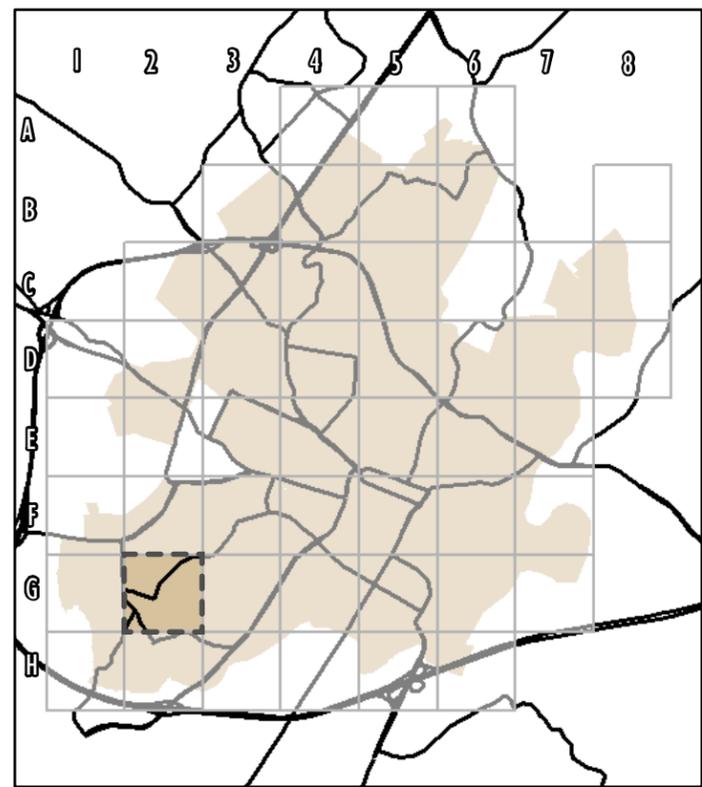
### Framework Streets - Typology

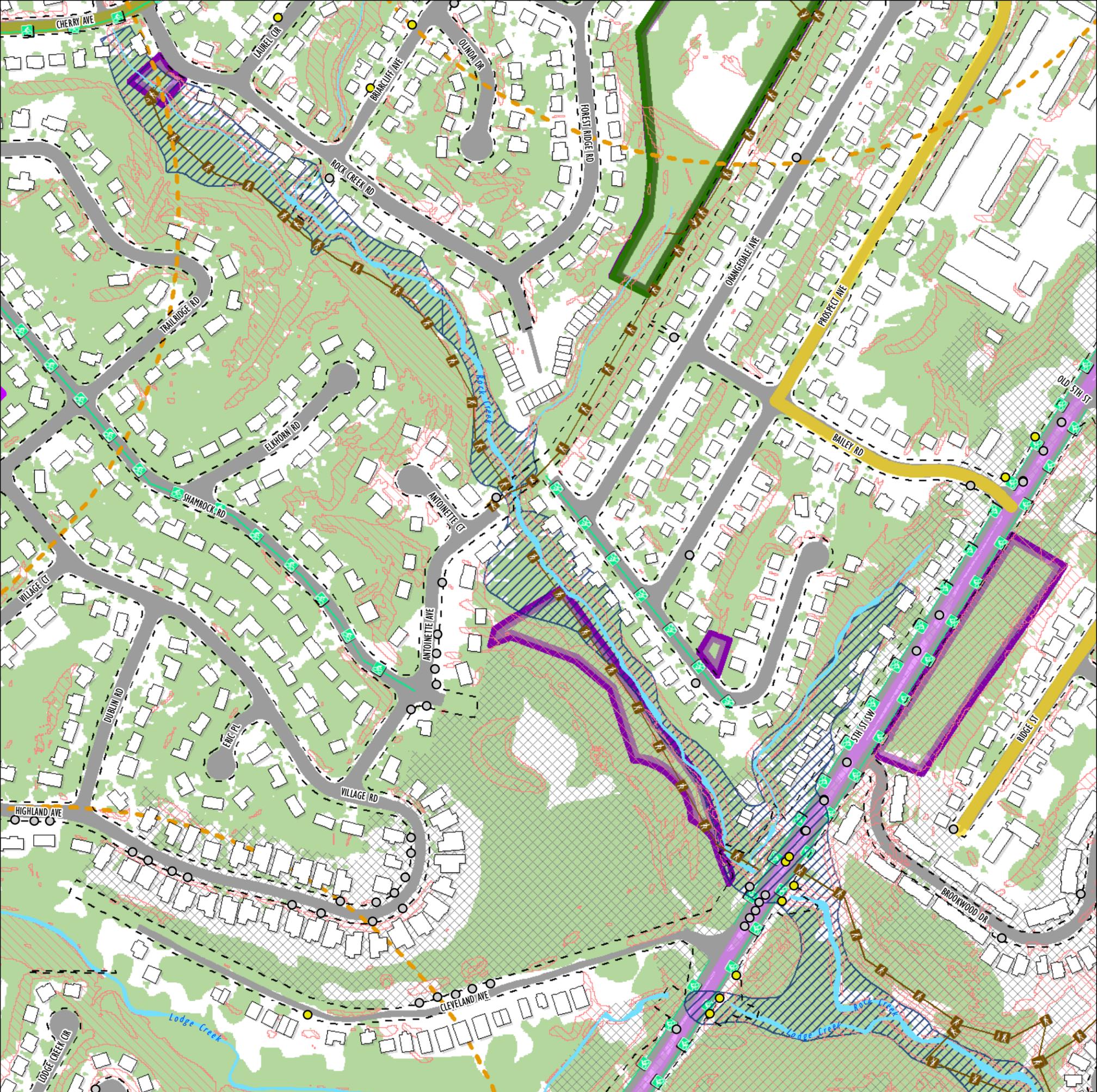
- Neighborhood A
- Neighborhood B
- ⬜ 5 Minute School Walkzones
- ⬜ City Right-of-Way
- ⬜ Steep Slopes

- 🌳 Tree Canopy
- 🌳 Park Boundaries
- 🏫 School Parcels
- 🏛️ State-Owned Parcels
- 🏠 UVA Parcels
- 🏢 City Parcels



This square represents 1 Acre on the map





# Grid G3

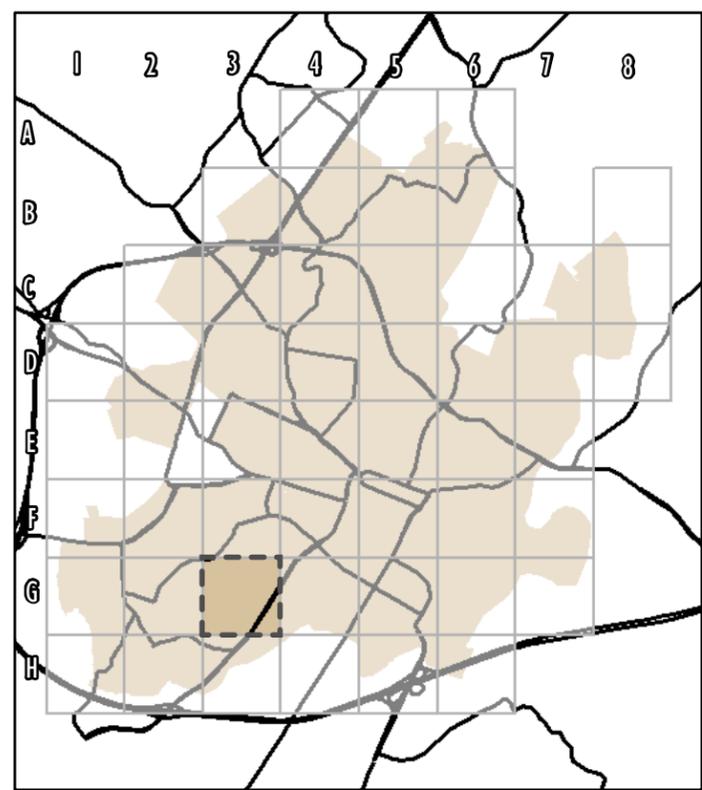


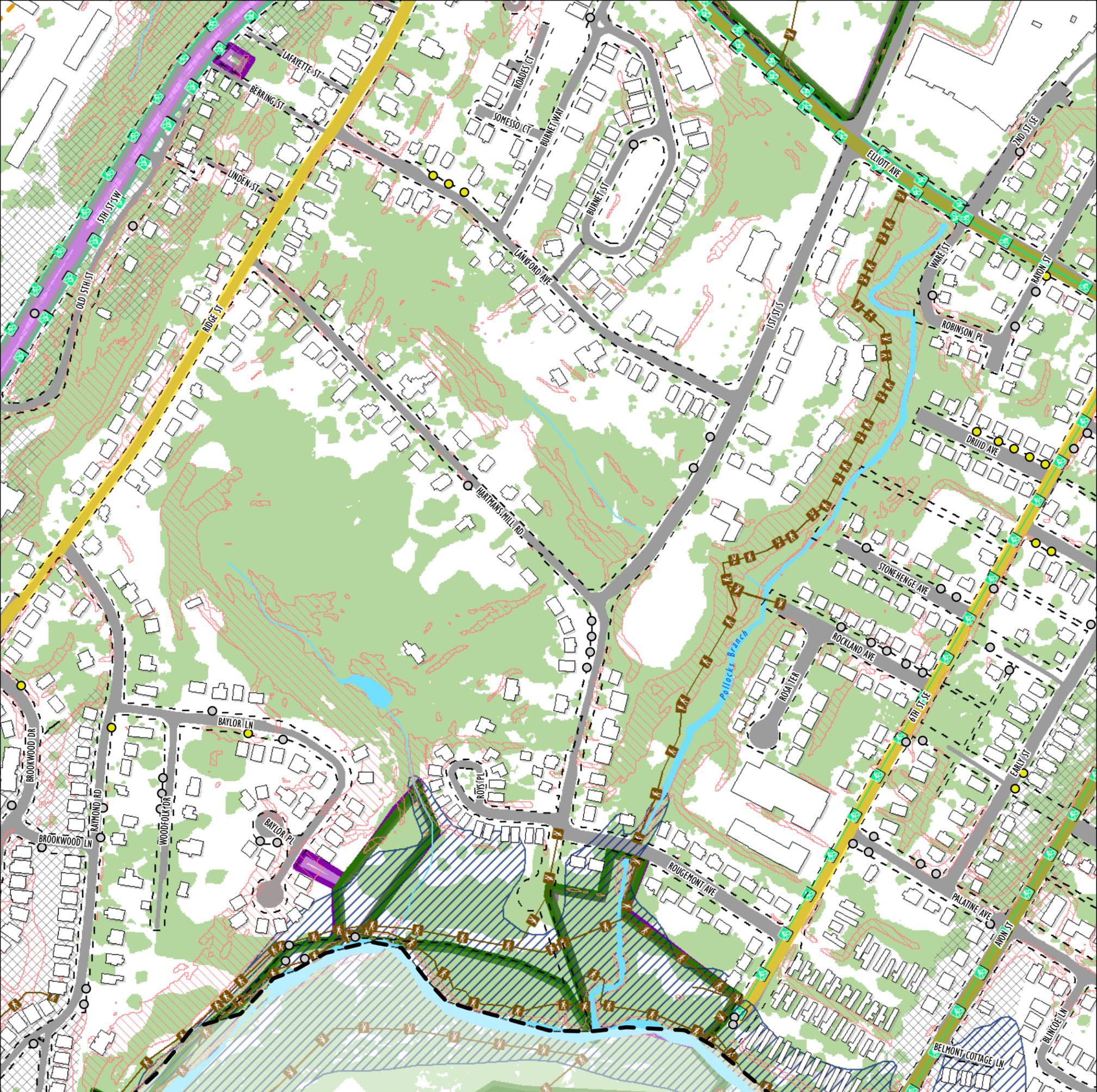
## Legend

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>○ No Overhead Utility within 15 ft (61)</li> <li>● Overhead Utility within 15 ft (13)</li> <li>🚶 Trails</li> <li>🚲 Bicycle Lanes</li> <li>— Streams</li> </ul>                     | <ul style="list-style-type: none"> <li>▨ Entrance Corridor</li> <li>▨ 100 Year Floodplain</li> <li>▨ Steep Slopes</li> <li>■ Tree Canopy</li> <li>▭ Park Boundaries</li> <li>▭ School Parcels</li> <li>▭ State-Owned Parcels</li> <li>▭ UVa Parcels</li> <li>▭ City Parcels</li> </ul> |
| <p>Framework Streets - Typology</p> <ul style="list-style-type: none"> <li>▭ Mixed Use B</li> <li>▭ Neighborhood A</li> <li>▭ Neighborhood B</li> <li>▭ 5 Minute School Walkzones</li> <li>▭ City Right-of-Way</li> </ul> |  |



This square represents 1 Acre on the map





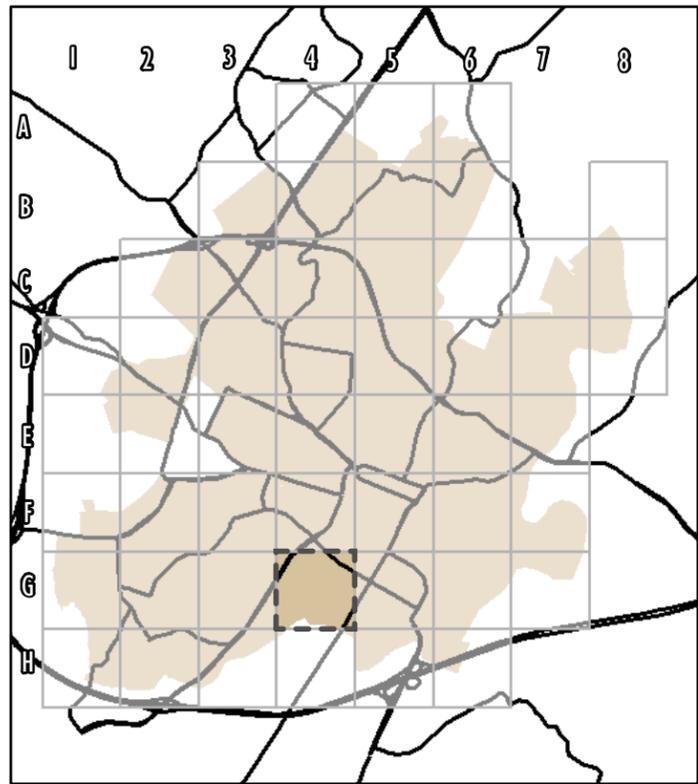
# Grid G4

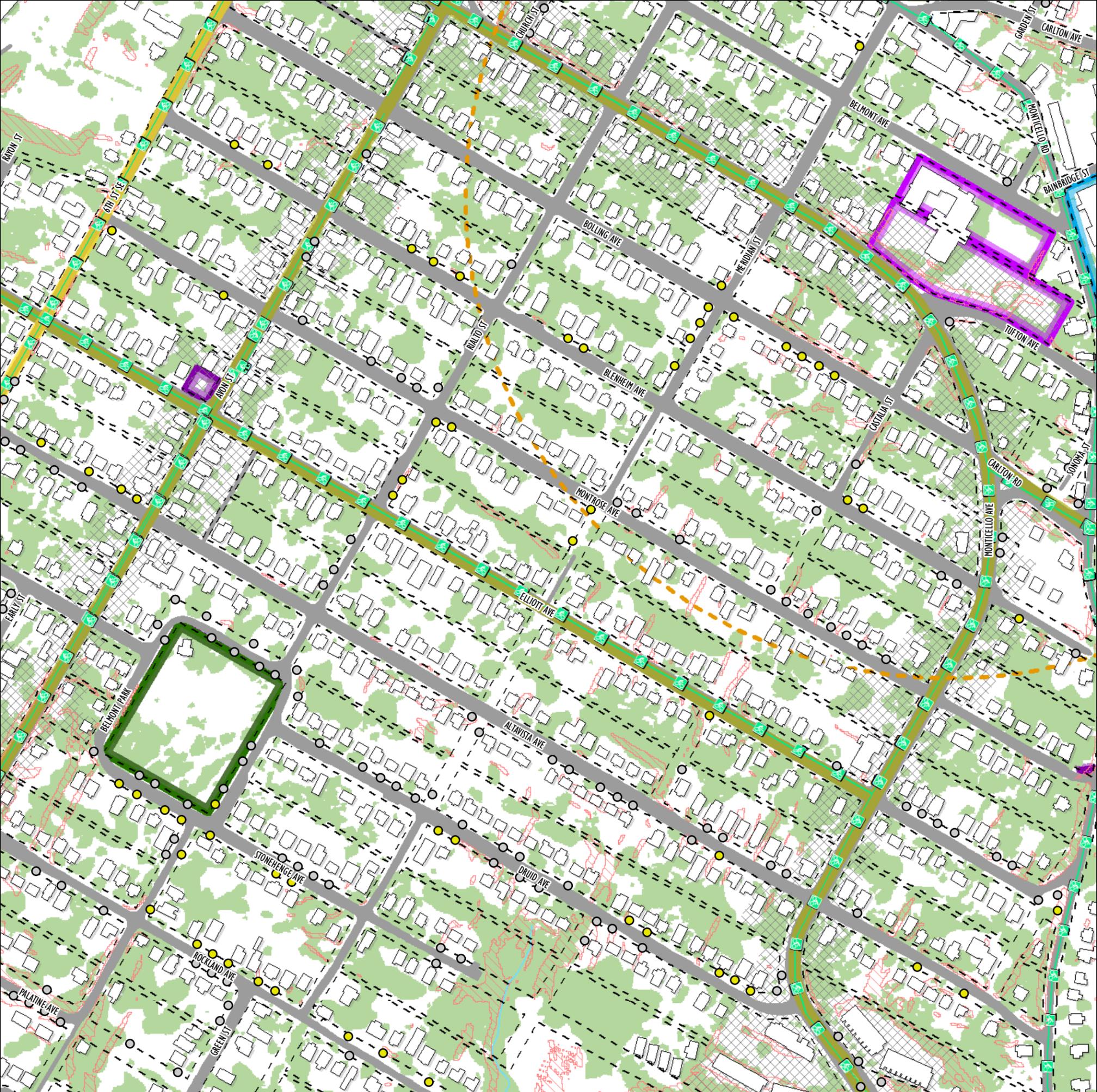


## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (58)
  - Overhead Utility within 15 ft (16)
  - 🚶 Trails
  - 🚲 Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- Mixed Use B
  - Neighborhood A
  - Neighborhood B
- Other Features**
- City Boundary
  - 5 Minute School Walkzones
  - City Right-of-Way
  - Entrance Corridor
  - 100 Year Floodplain
  - Steep Slopes
  - Tree Canopy
  - Park Boundaries
  - School Parcels
  - State-Owned Parcels
  - UVa Parcels
  - City Parcels

This square represents 1 Acre on the map





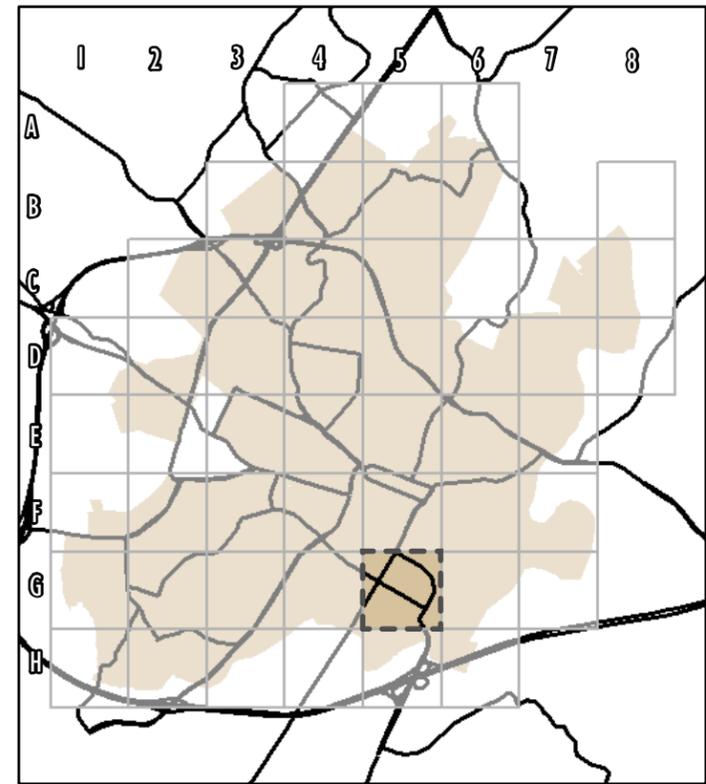
# Grid G5

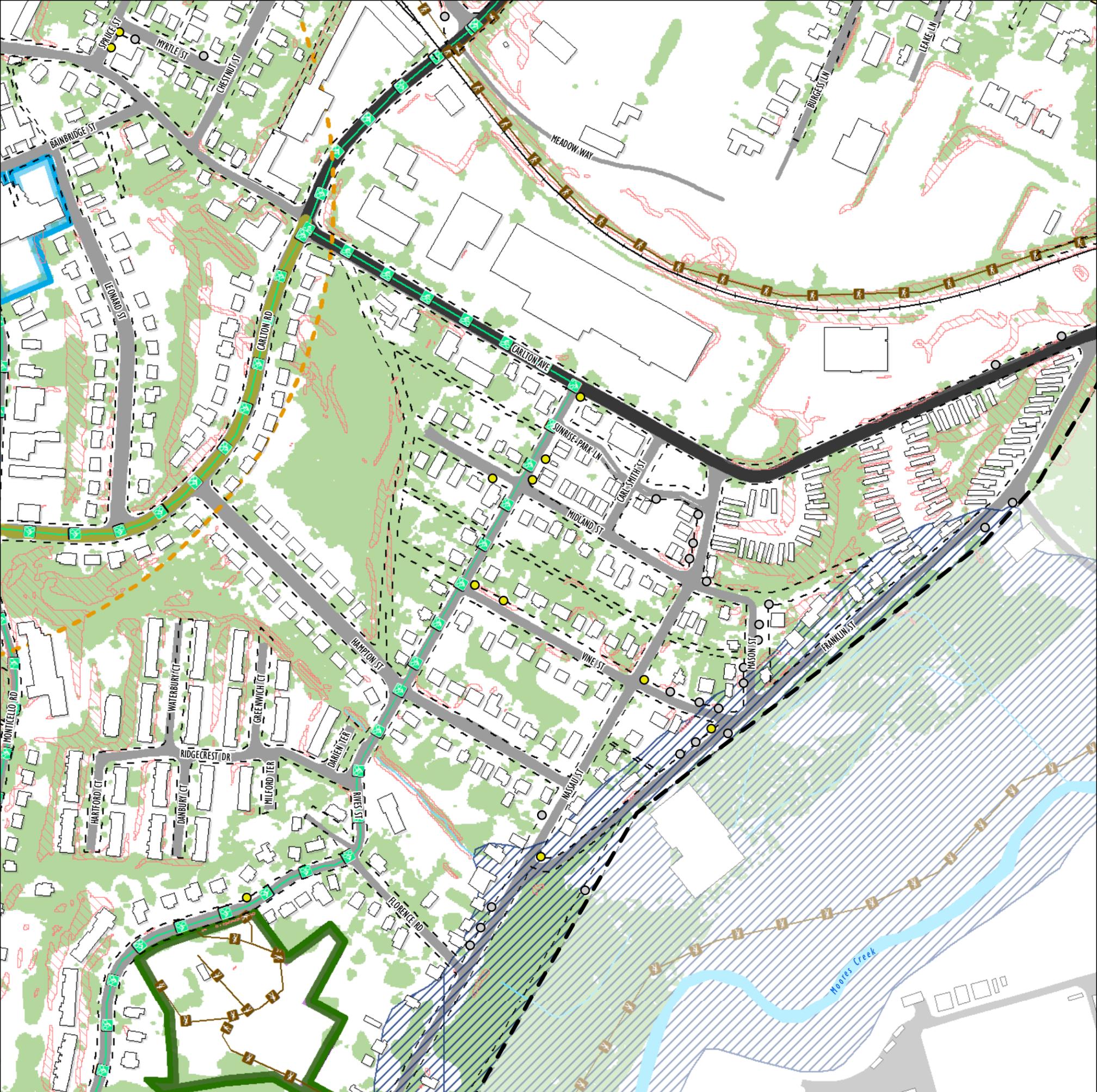


## Legend

- |  |                       |
|--|-----------------------|
| ○ No Overhead Utility within 15 ft (136) | ■ Tree Canopy         |
| ● Overhead Utility within 15 ft (63)     | ▭ Park Boundaries     |
| 🚲 Bicycle Lanes                          | ▭ School Parcels      |
| — Streams                                | ▭ State-Owned Parcels |
| Framework Streets - Typology             | ▭ UVa Parcels         |
| ▬ Neighborhood A                         | ▭ City Parcels        |
| ▬ Neighborhood B                         |                       |
| ▭ 5 Minute School Walkzones              |                       |
| ▭ City Right-of-Way                      |                       |
| ▭ Entrance Corridor                      |                       |
| ▭ Steep Slopes                           |                       |

■ This square represents 1 Acre on the map





# Grid G6

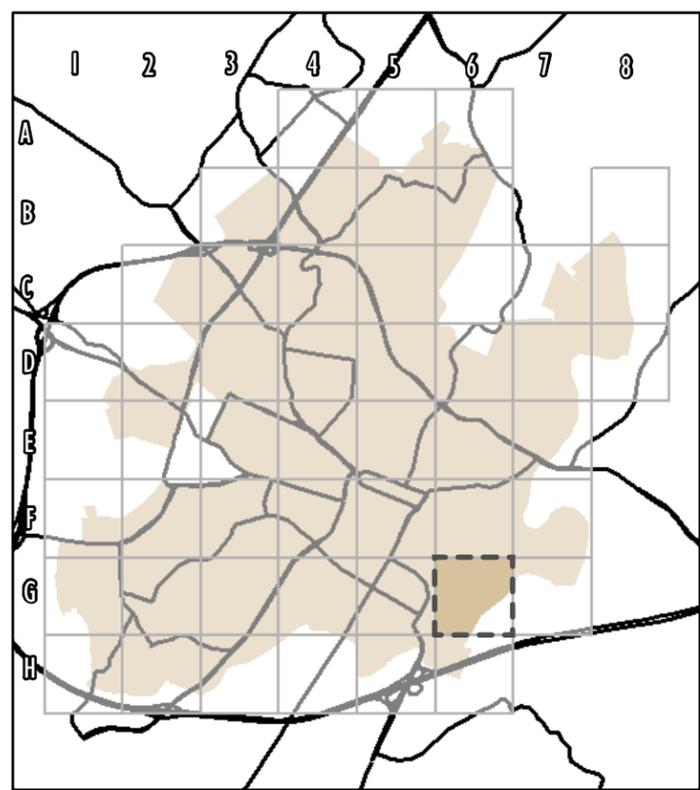


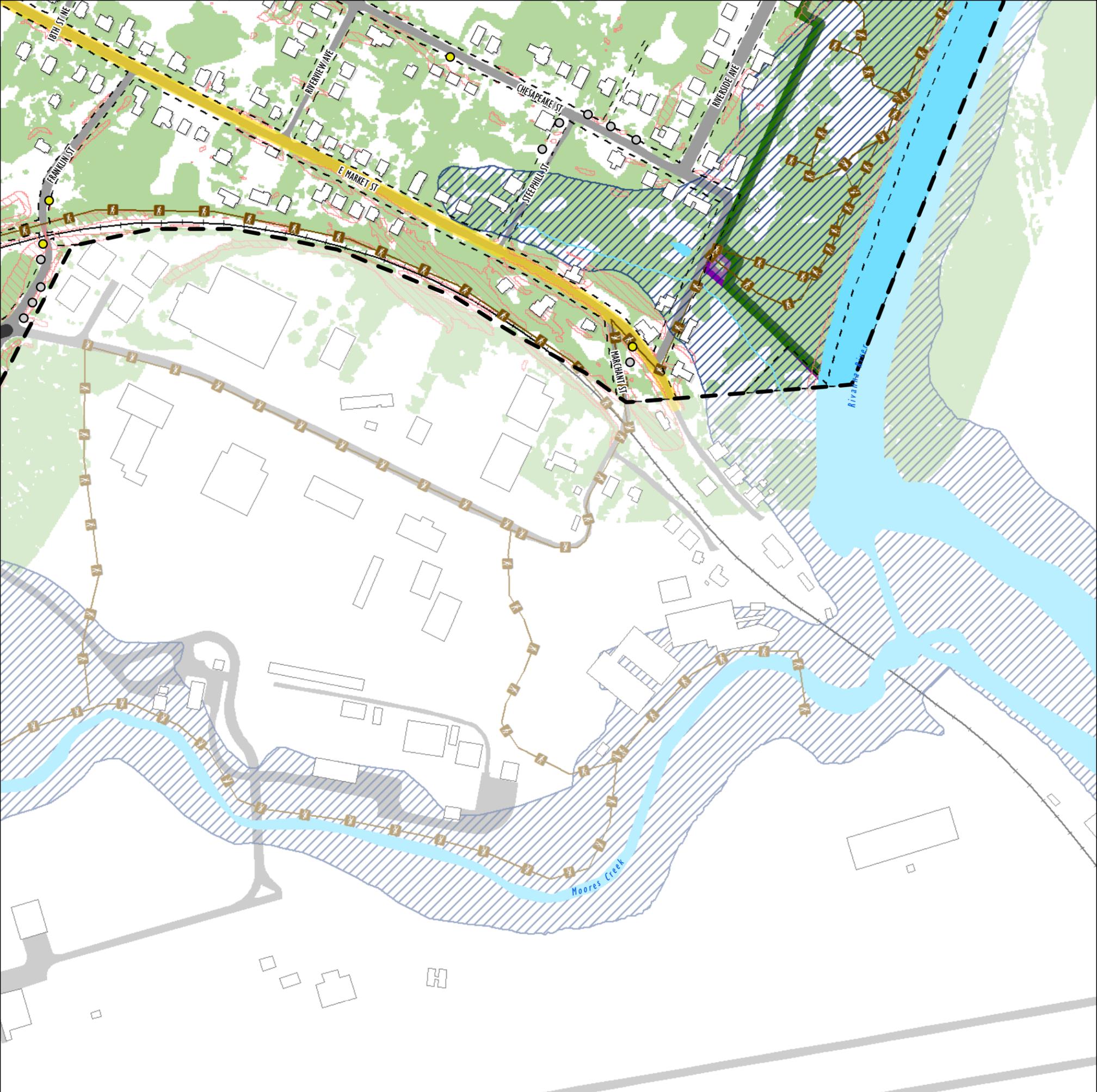
## Legend

- Potential Tree Planting Locations within Right-of-Way
  - No Overhead Utility within 15 ft (28)
  - Overhead Utility within 15 ft (12)
  - 🚶 Trails
  - 🚲 Bicycle Lanes
  - Streams
- Framework Streets - Typology
  - Industrial
  - Neighborhood A
  - City Boundary
  - 5 Minute School Walkzones
  - City Right-of-Way
- 100 Year Floodplain
- Steep Slopes
- Tree Canopy
- Park Boundaries
- School Parcels
- State-Owned Parcels
- UVa Parcels
- City Parcels



This square represents 1 Acre on the map





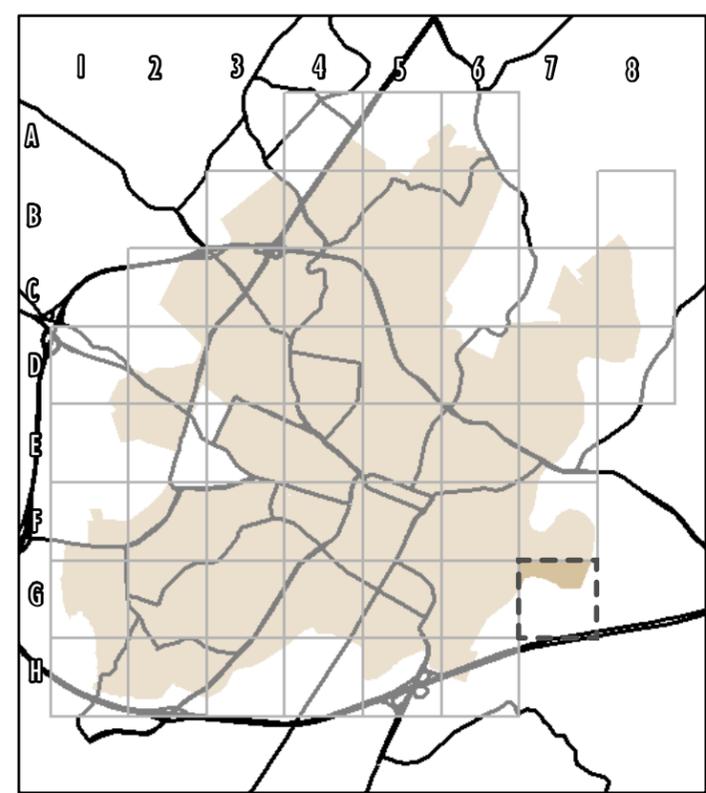
# Grid G7



## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (10)
  - Overhead Utility within 15 ft (4)
  - Trails
  - Streams
- Framework Streets - Typology**
- Industrial
  - Neighborhood B
  - - - City Boundary
  - - - City Right-of-Way
  - ▨ 100 Year Floodplain
  - ▨ Steep Slopes
- ▨ Tree Canopy
  - ▨ Park Boundaries
  - ▨ School Parcels
  - ▨ State-Owned Parcels
  - ▨ UVa Parcels
  - ▨ City Parcels

This square represents 1 Acre on the map





# Grid HI

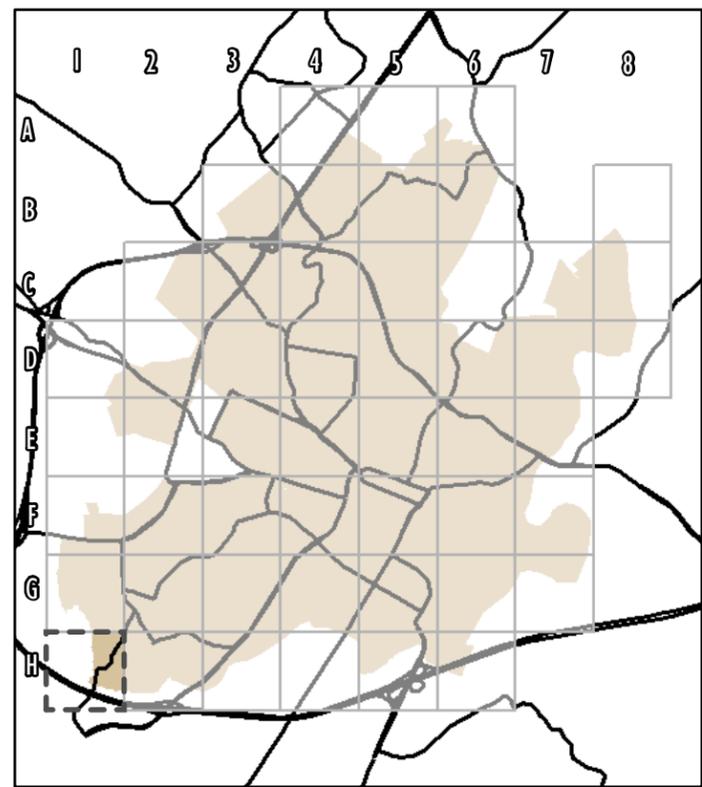


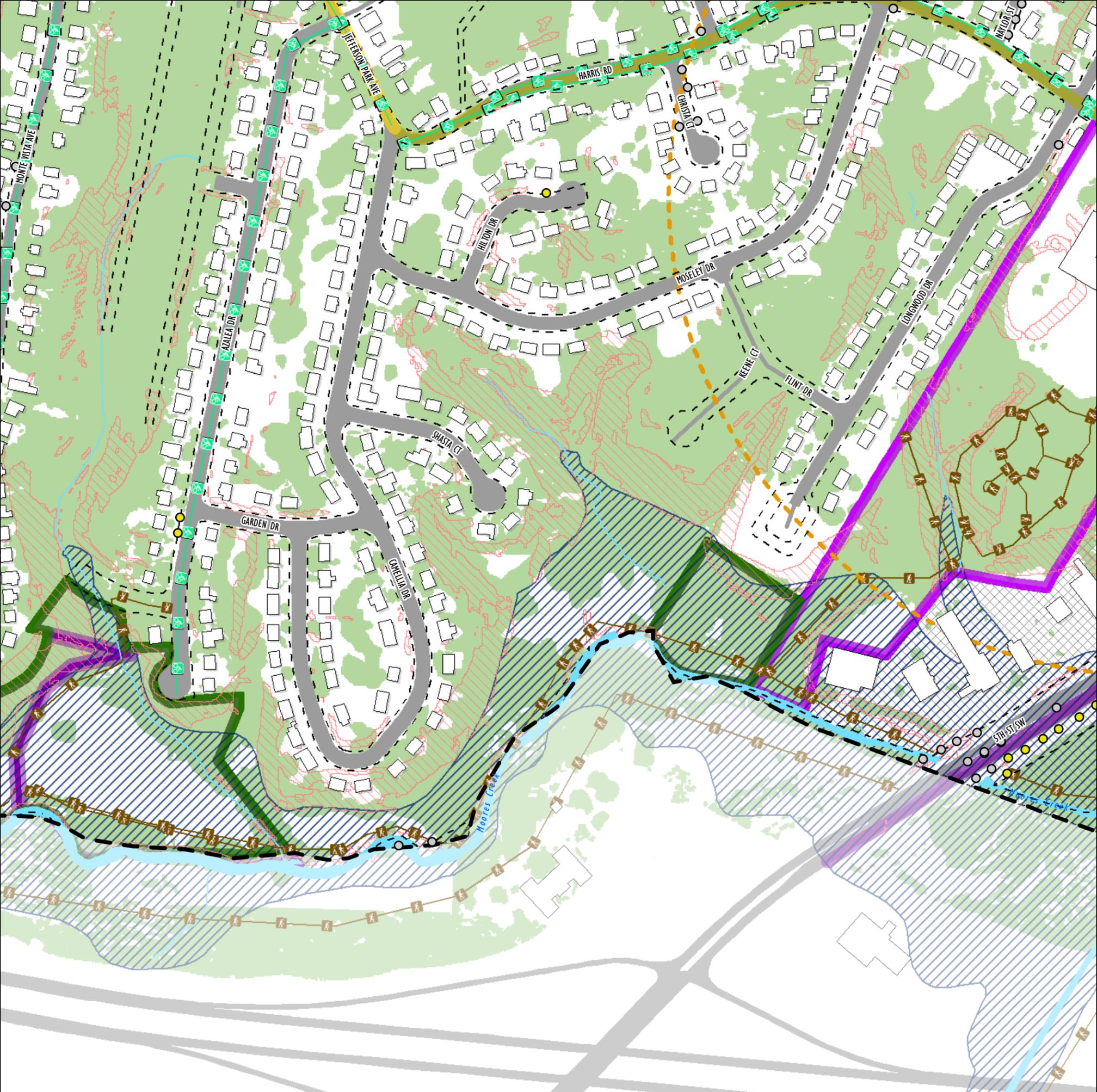
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (9)
  - Overhead Utility within 15 ft (2)
  - Trails
  - Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- Neighborhood B
  - City Boundary
  - City Right-of-Way
  - 100 Year Floodplain
  - Steep Slopes
- Tree Canopy
  - Park Boundaries
  - School Parcels
  - State-Owned Parcels
  - UVa Parcels
  - City Parcels



This square represents 1 Acre on the map





# Grid H2

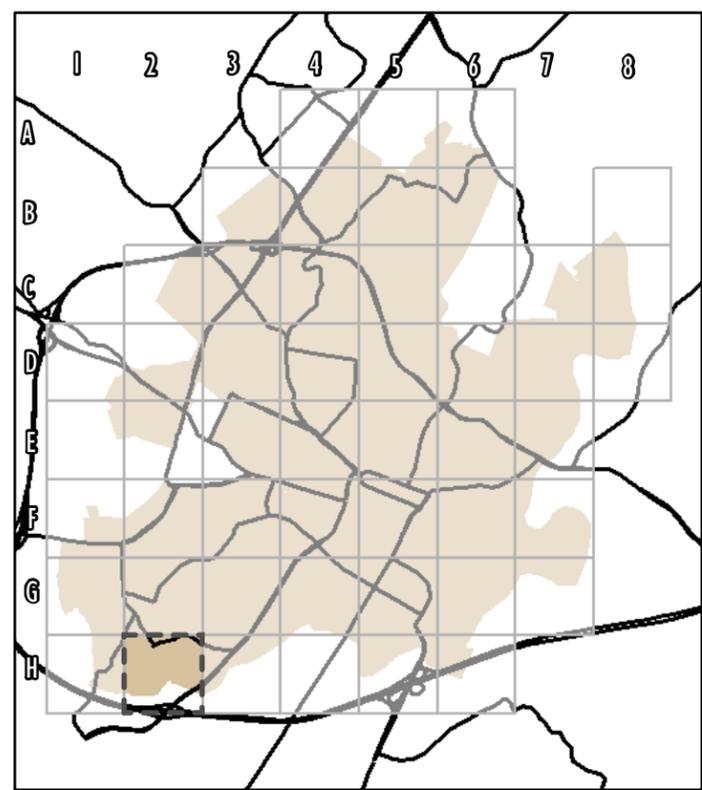


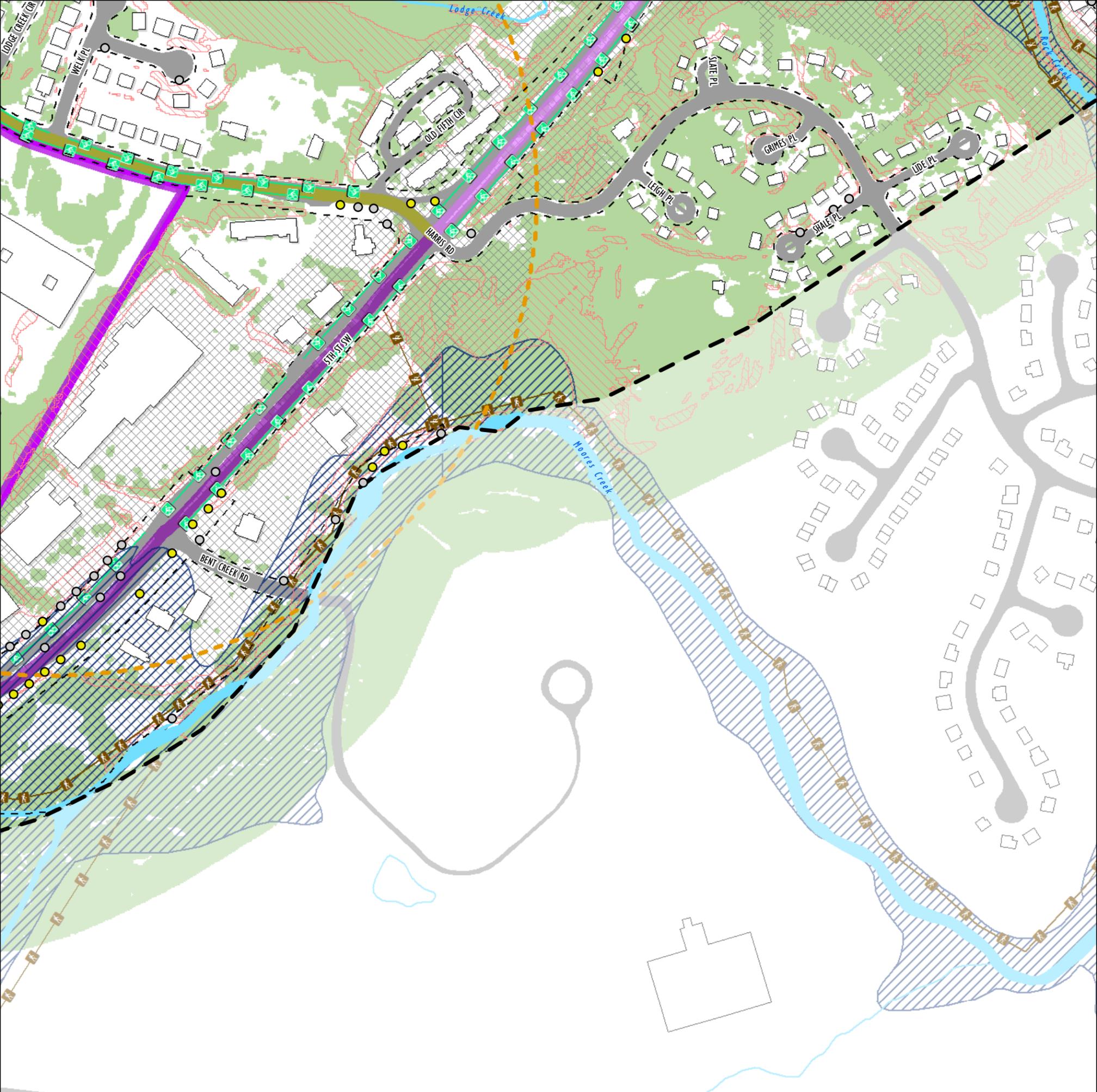
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (26)
  - Overhead Utility within 15 ft (10)
- Framework Streets - Typology**
- Mixed Use A
  - Neighborhood A
  - Neighborhood B
- Other Features**
- Trails
  - Bicycle Lanes
  - Streams
  - City Boundary
  - 5 Minute School Walkzones
  - City Right-of-Way
  - Entrance Corridor
  - 100 Year Floodplain
  - Steep Slopes
  - Tree Canopy
  - Park Boundaries
  - School Parcels
  - State-Owned Parcels
  - UVa Parcels
  - City Parcels



This square represents 1 Acre on the map





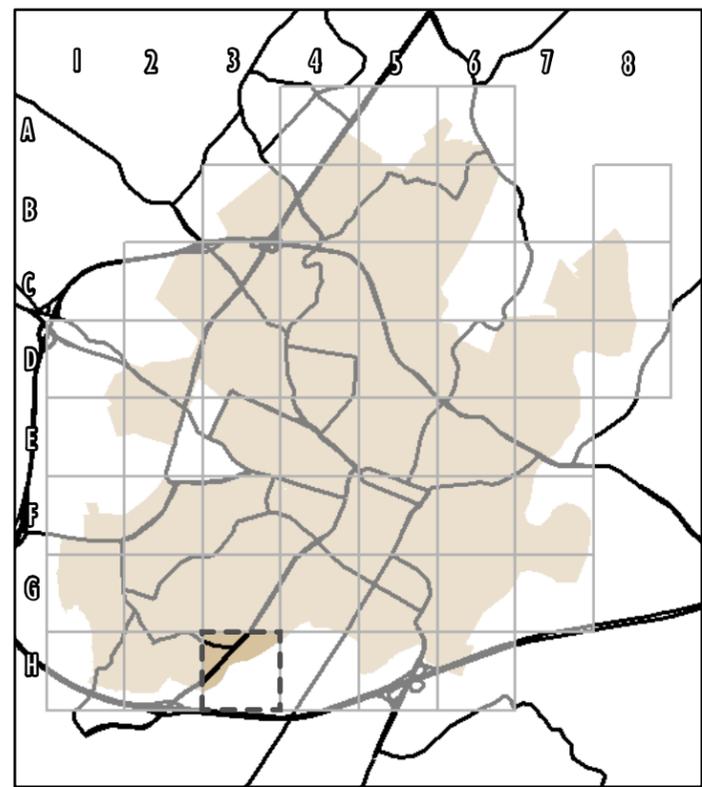
# Grid H3



## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (27)
  - Overhead Utility within 15 ft (20)
  - Trails
  - Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- Mixed Use A
  - Mixed Use B
  - Neighborhood A
- Other Features**
- City Boundary
  - 5 Minute School Walkzones
  - City Right-of-Way
  - Entrance Corridor
  - 100 Year Floodplain
  - Steep Slopes
  - Tree Canopy
  - Park Boundaries
  - School Parcels
  - State-Owned Parcels
  - UVa Parcels
  - City Parcels

This square represents 1 Acre on the map





# Grid H4

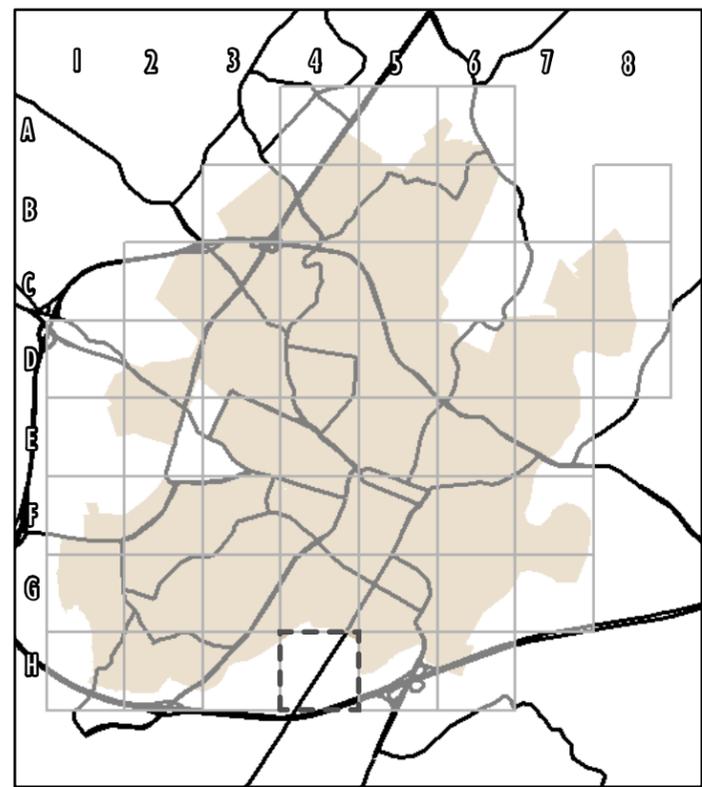


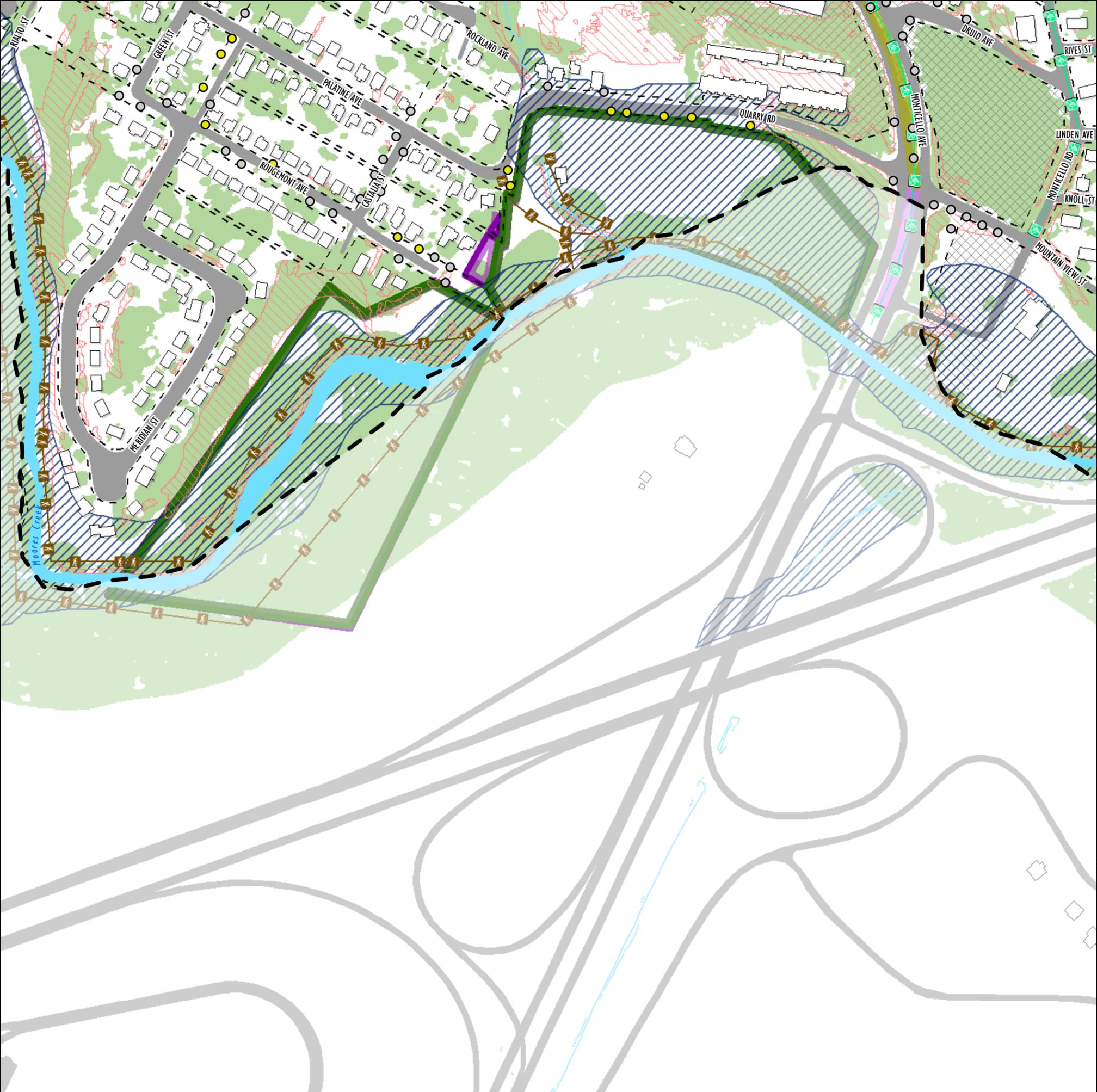
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (1)
  - Overhead Utility within 15 ft (1)
  - Trails
  - Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- Neighborhood A
- Other Features**
- City Boundary
  - City Right-of-Way
  - Entrance Corridor
  - 100 Year Floodplain
  - Steep Slopes
  - Tree Canopy
  - Park Boundaries
  - School Parcels
  - State-Owned Parcels
  - UVa Parcels
  - City Parcels



This square represents 1 Acre on the map





# Grid H5

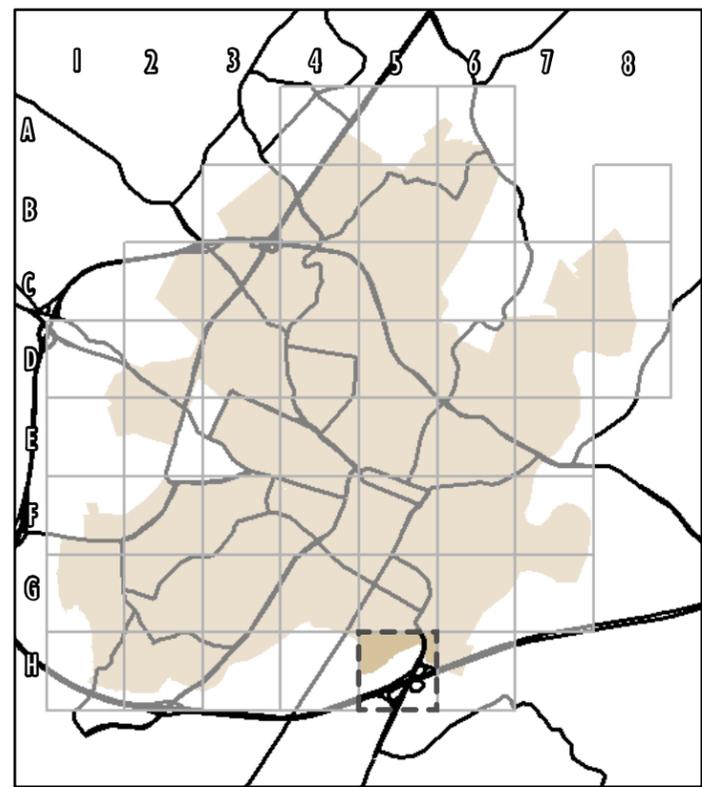


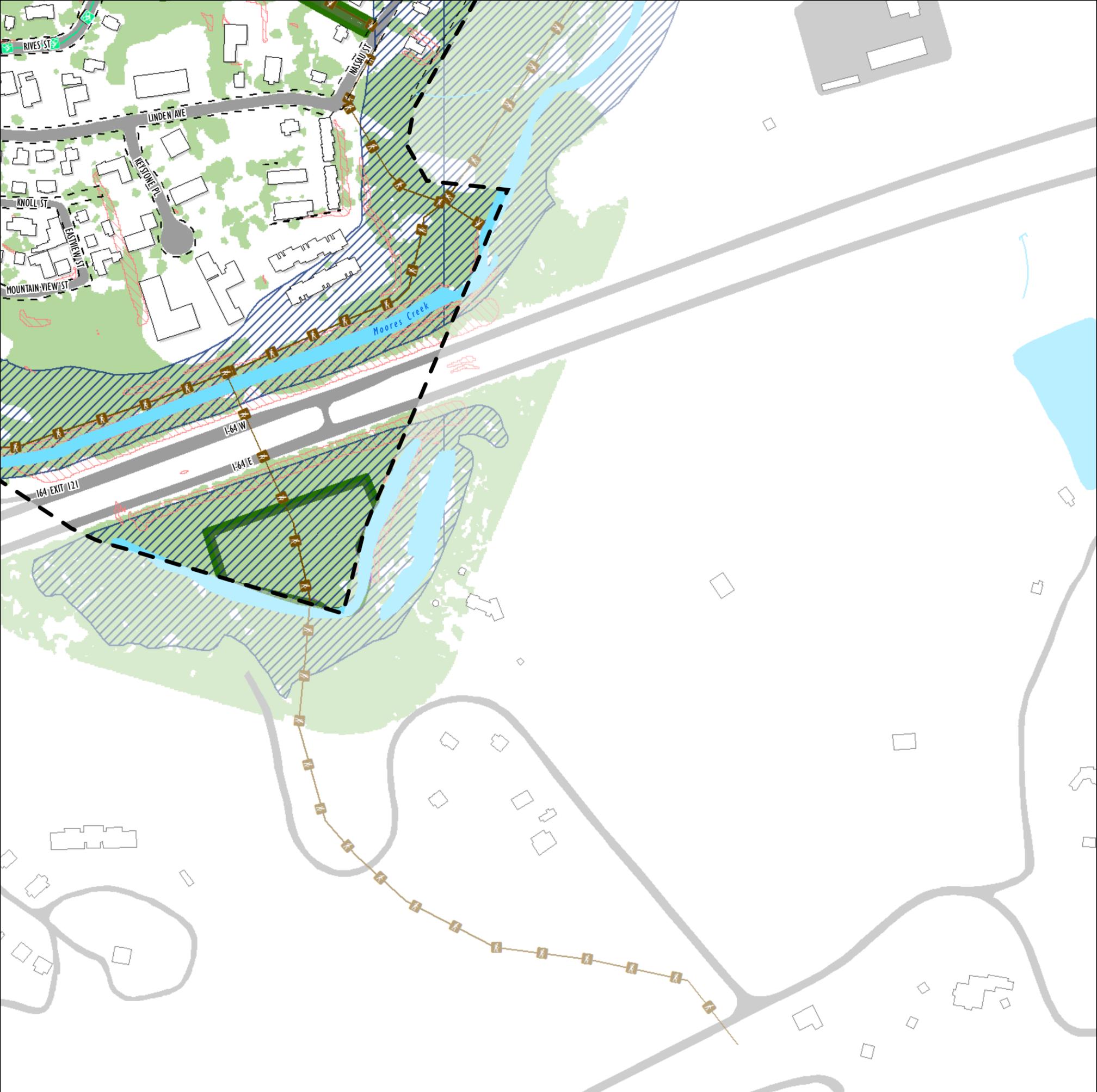
## Legend

- Potential Tree Planting Locations within Right-of-Way**
- No Overhead Utility within 15 ft (40)
  - Overhead Utility within 15 ft (14)
  - 🚶 Trails
  - 🚲 Bicycle Lanes
  - Streams
- Framework Streets - Typology**
- Mixed Use B
  - Neighborhood A
  - City Boundary
  - City Right-of-Way
  - ▨ Entrance Corridor
- ▨ 100 Year Floodplain
  - ▨ Steep Slopes
  - ▨ Tree Canopy
  - ▨ Park Boundaries
  - ▨ School Parcels
  - ▨ State-Owned Parcels
  - ▨ UVa Parcels
  - ▨ City Parcels



This square represents 1 Acre on the map



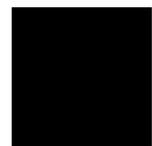


# Grid H6



## Legend

- Trails
- Bicycle Lanes
- Streams
- City Boundary
- City Right-of-Way
- 100 Year Floodplain
- Steep Slopes
- Tree Canopy
- Park Boundaries
- School Parcels
- State-Owned Parcels
- UVa Parcels
- City Parcels



This square represents 1 Acre on the map

