

Georeferencing

AMST 3710/5710

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What is Georeferencing?

Assigning spatial location to a digital dataset

Datasets can be...

- Historic Maps

- Aerial Photographs

- Construction Drawings

- Architectural Plans

- ...



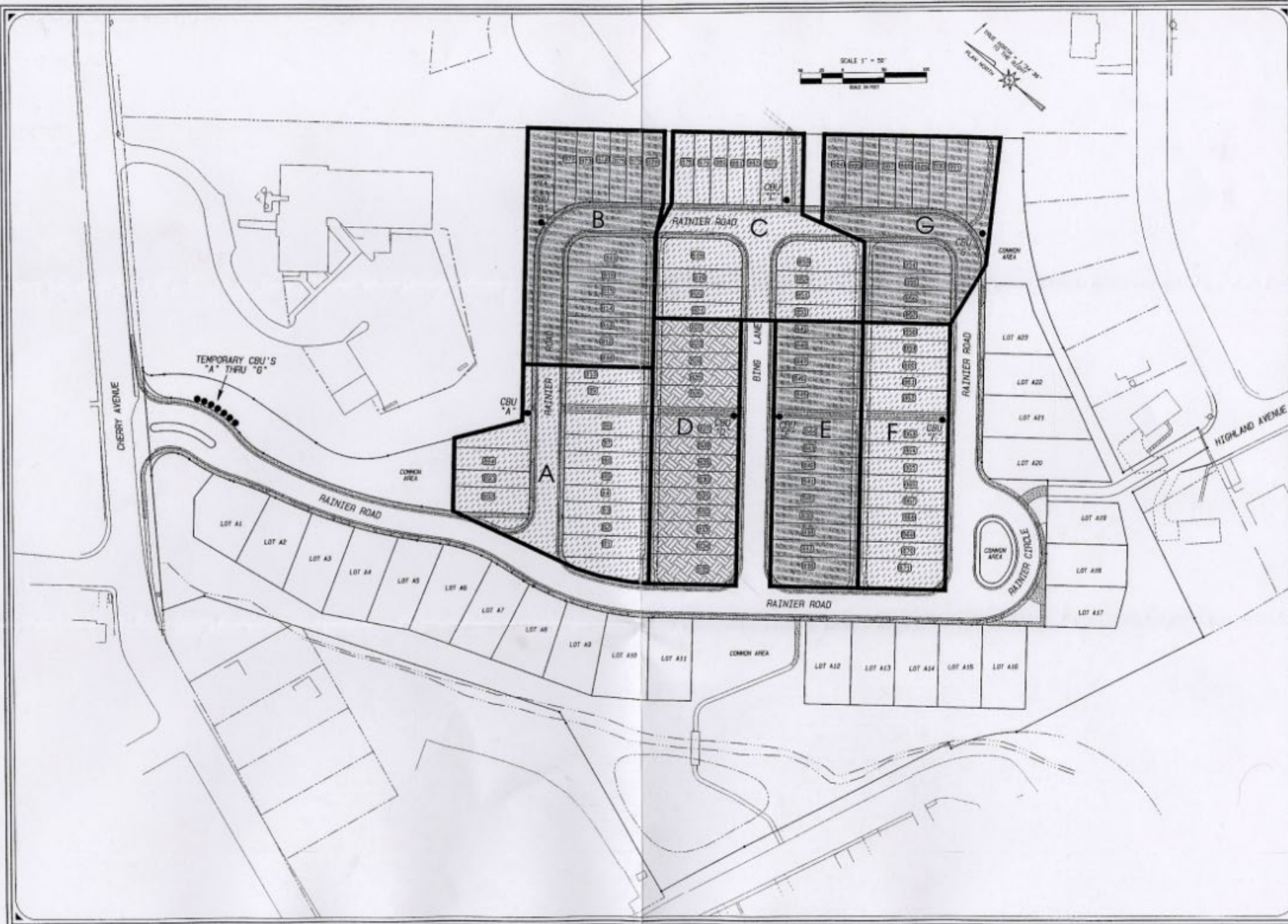
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Imagery Date: Feb 1, 2006

38° 1' 218" N 78° 30' 500" W elev. 435 ft

Eye alt 4114 ft



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 ENGINEERS, SURVEYORS AND LAND PLANNERS
 A PROFESSIONAL CORPORATION
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 PHONE 84-977-0055 - FAX 84-977-0056 - EMAIL INFO@ROUDABUSH.COM

REVISIONS

DATE
 AUG. 27, 2007

SCALE
 1" = 50'

**CHERRY HILL
 MAILBOX EXHIBIT**

FILE NUMBER
 8081
 CHERRY HILL EXHIBIT

SHEET
 1 / 1



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Eye alt 4114 ft

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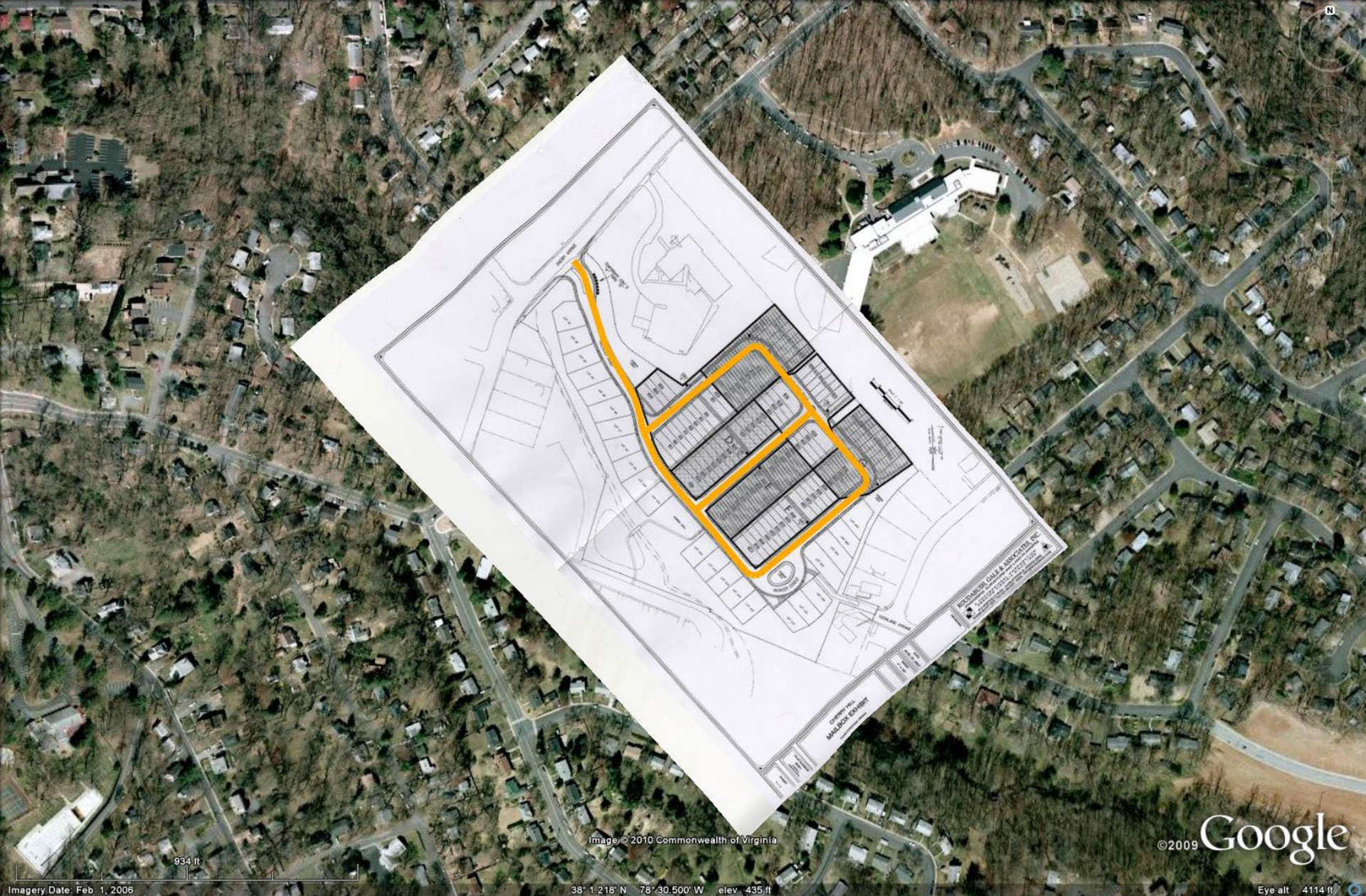


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COMMONWEALTH
MALCOLM EXHIBIT



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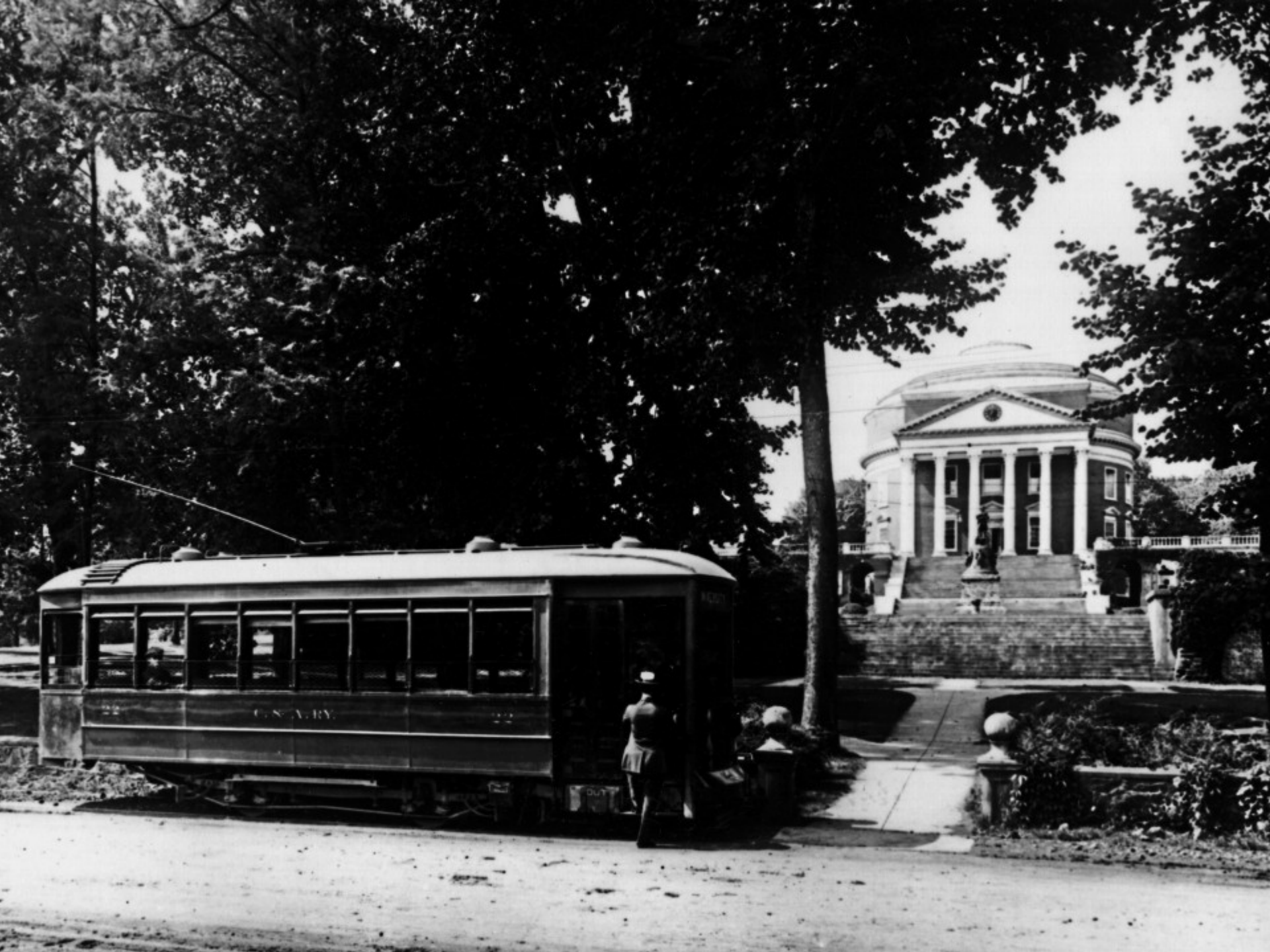
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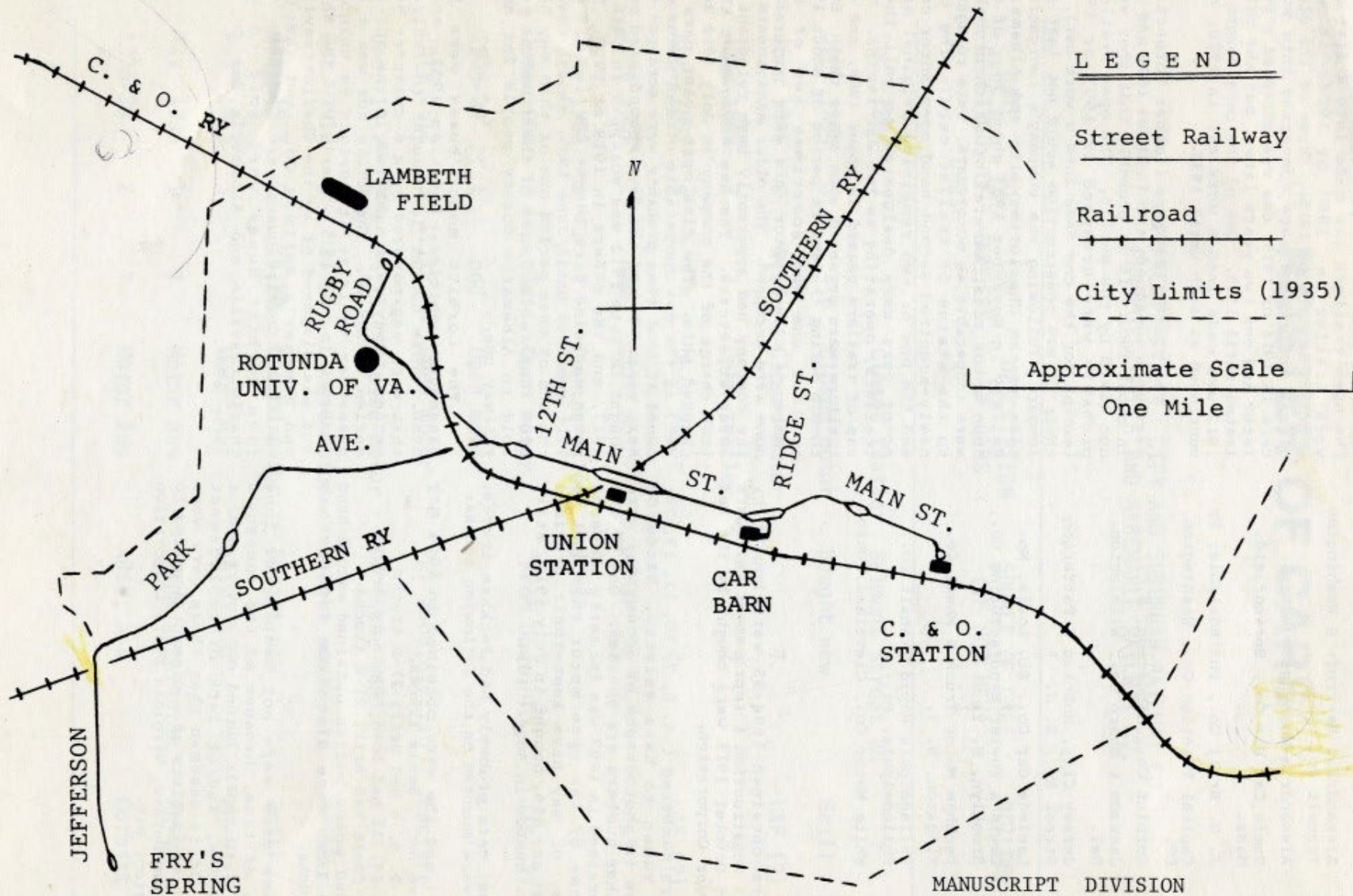
934 ft

Imagery Date: Feb 1, 2006

38° 1.218' N 78° 30.500' W elev. 435 ft

Eye alt 4114 ft





STREET RAILWAYS - 1920

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UNIVERSITY OF VIRGINIA

GAJ-1981



1468 Barracks

29

1482 1481

LEGEND

Street Railway

Railroad

City Limits (1935)

Approximate Scale

One Mile

STREET RAILWAYS - 1920

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CAF-1281

64

53

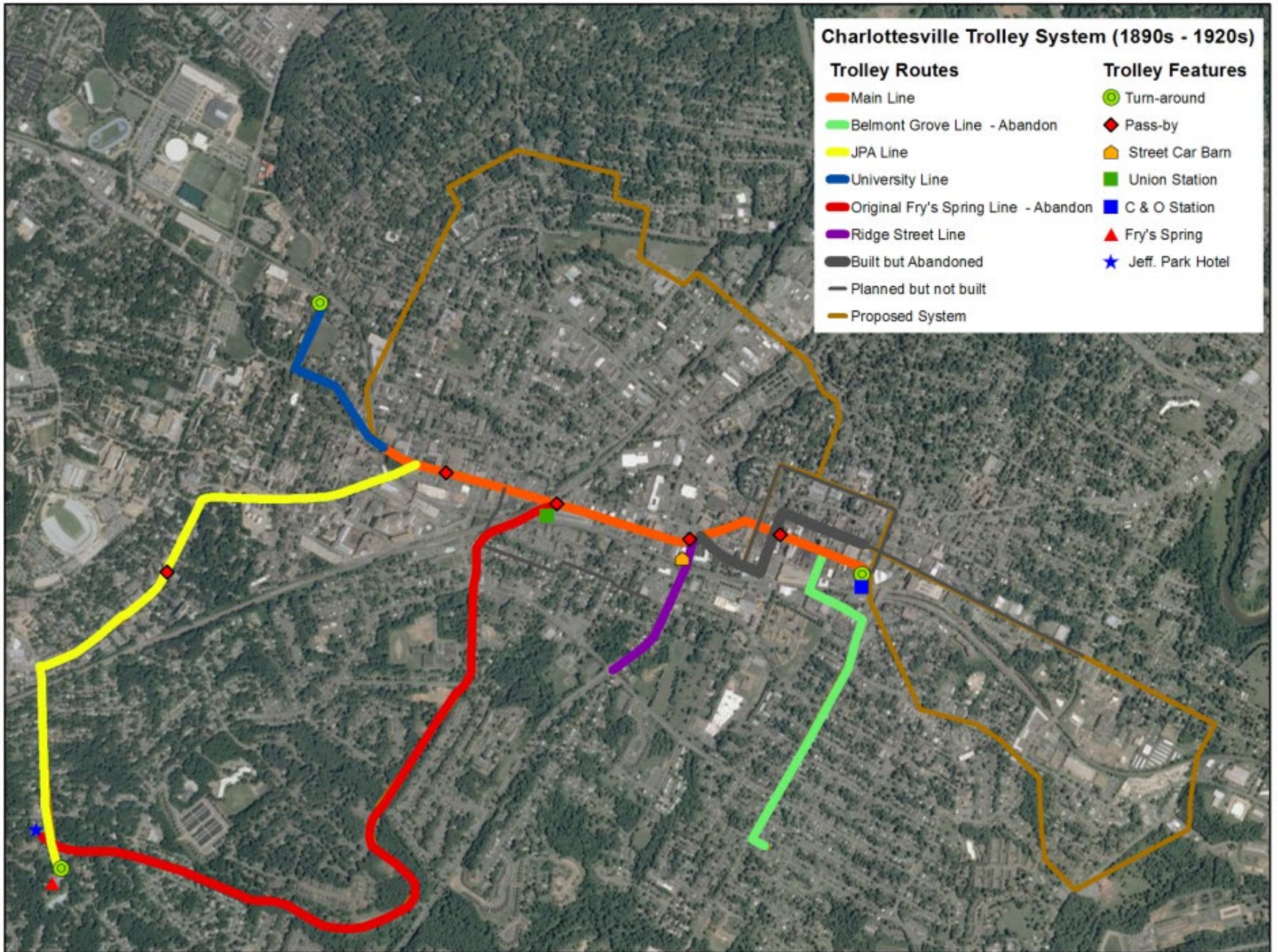
Charlottesville Trolley System (1890s - 1920s)

Trolley Routes

- Main Line
- Belmont Grove Line - Abandon
- JPA Line
- University Line
- Original Fry's Spring Line - Abandon
- Ridge Street Line
- Built but Abandoned
- Planned but not built
- Proposed System

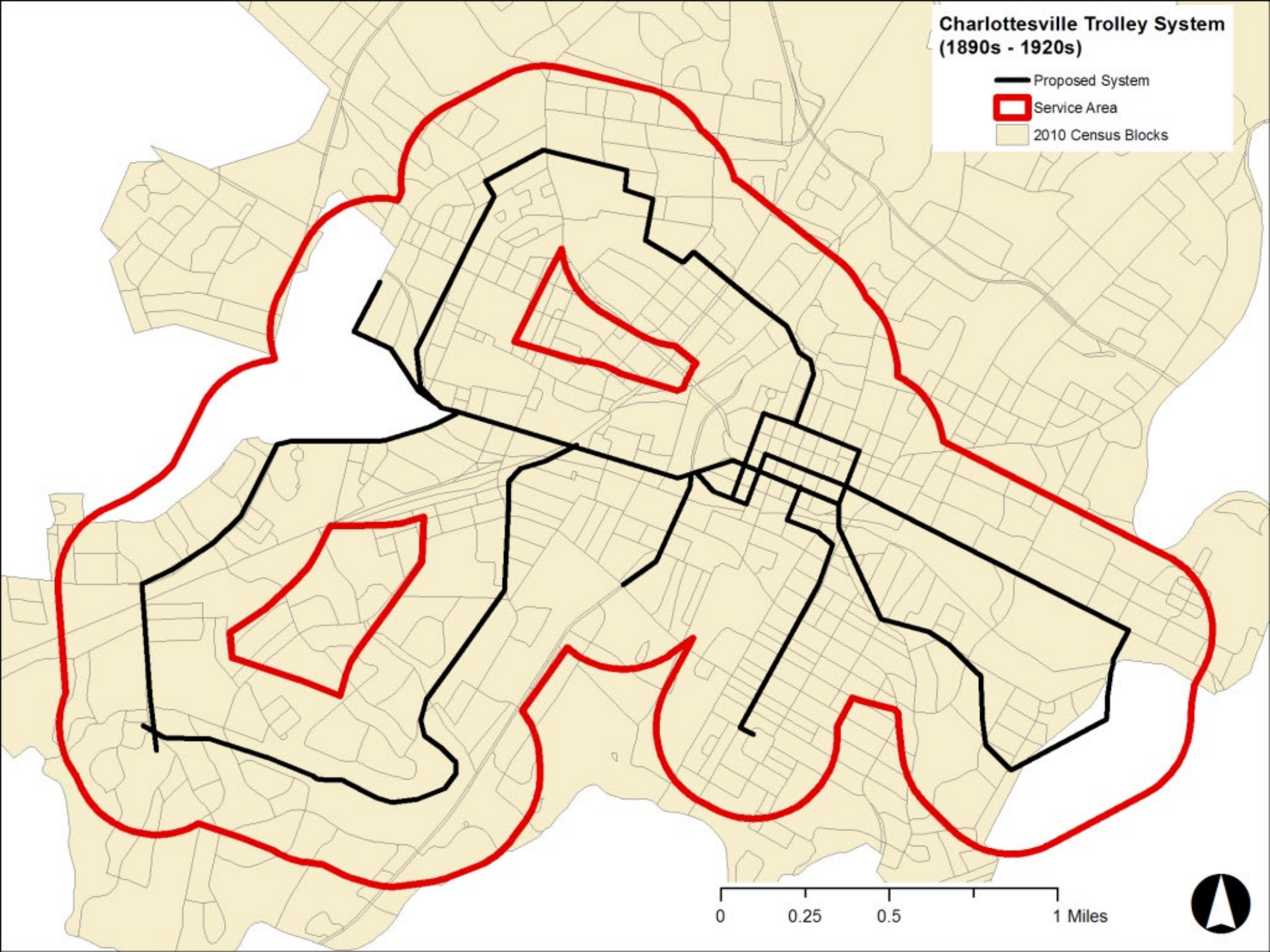
Trolley Features

- Turn-around
- Pass-by
- Street Car Barn
- Union Station
- C & O Station
- Fry's Spring
- Jeff. Park Hotel



**Charlottesville Trolley System
(1890s - 1920s)**

- Proposed System
- ▭ Service Area
- 2010 Census Blocks

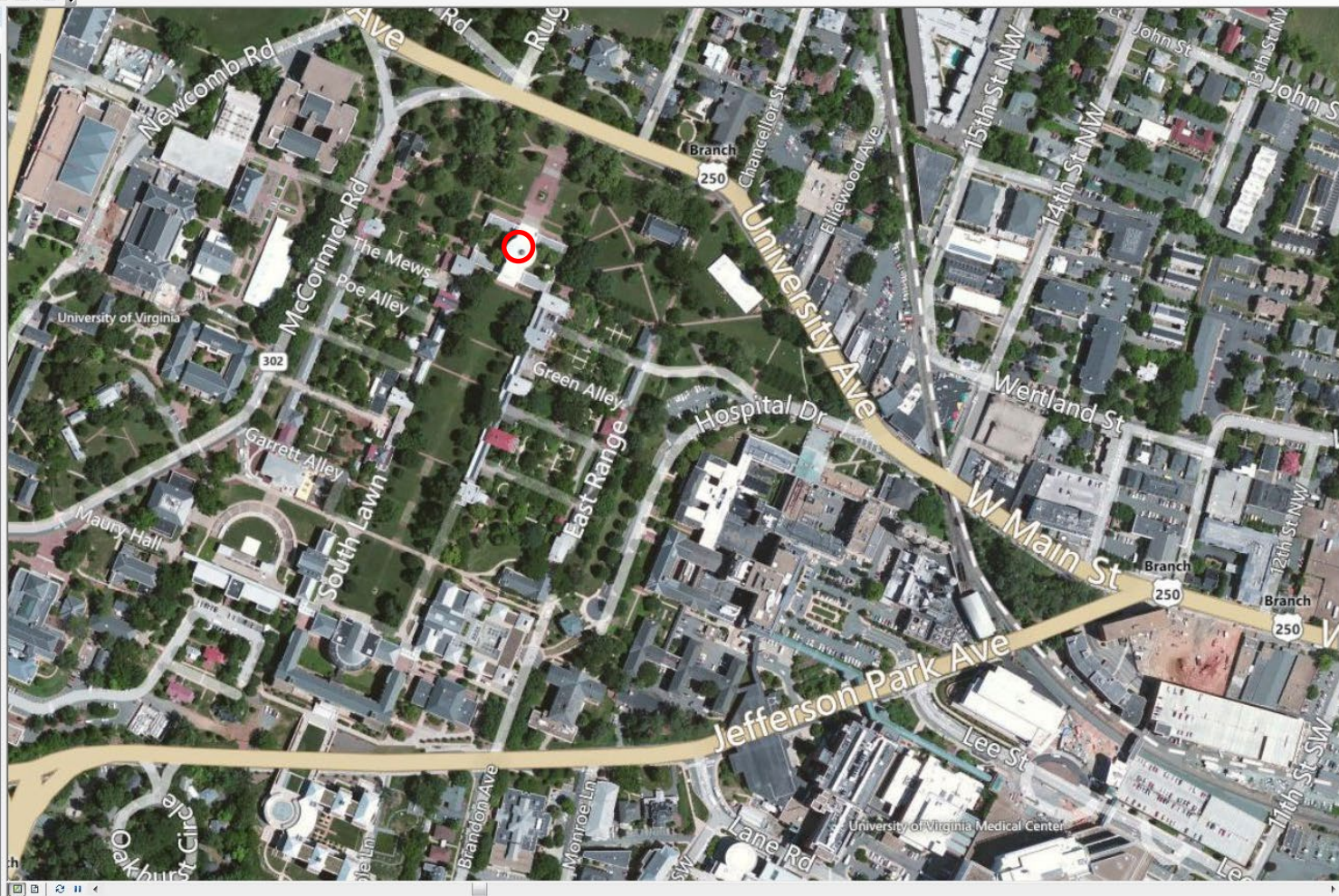


ArcMap Georeferencing Steps

1. Add the basemap
2. Add the raster dataset to be georeferenced
3. Add control points
4. Transform the raster dataset
5. Save (create georeferencing world files)
6. Rectify to create a new raster dataset (optional)

Layers

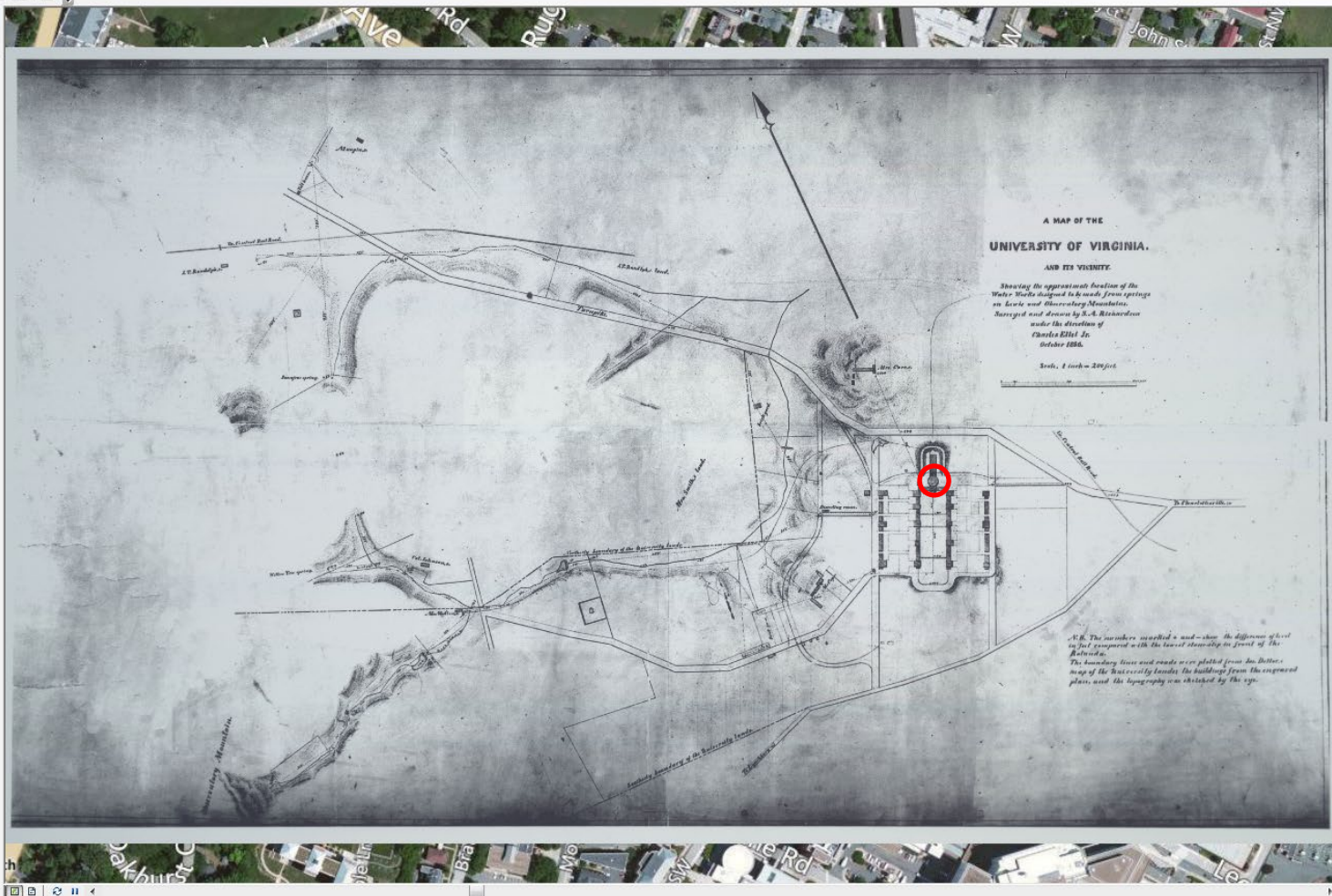
- ☐ Ellet Map 1856.jpg
 - RGB
 - Red: Band_1
 - Green: Band_2
 - Blue: Band_3
- ☒ Basemap
 - ☒ Bing Maps Hybrid



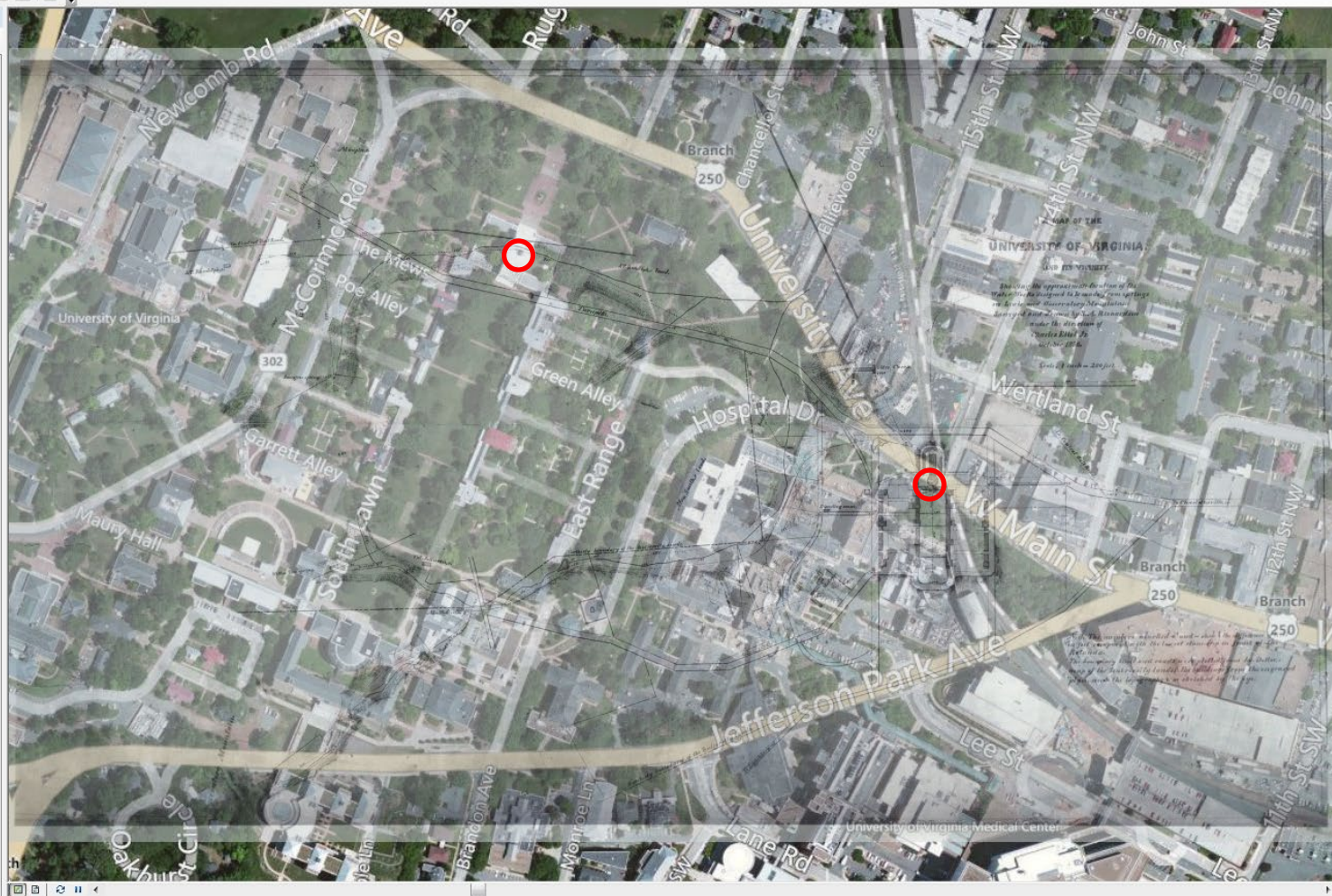


Layers

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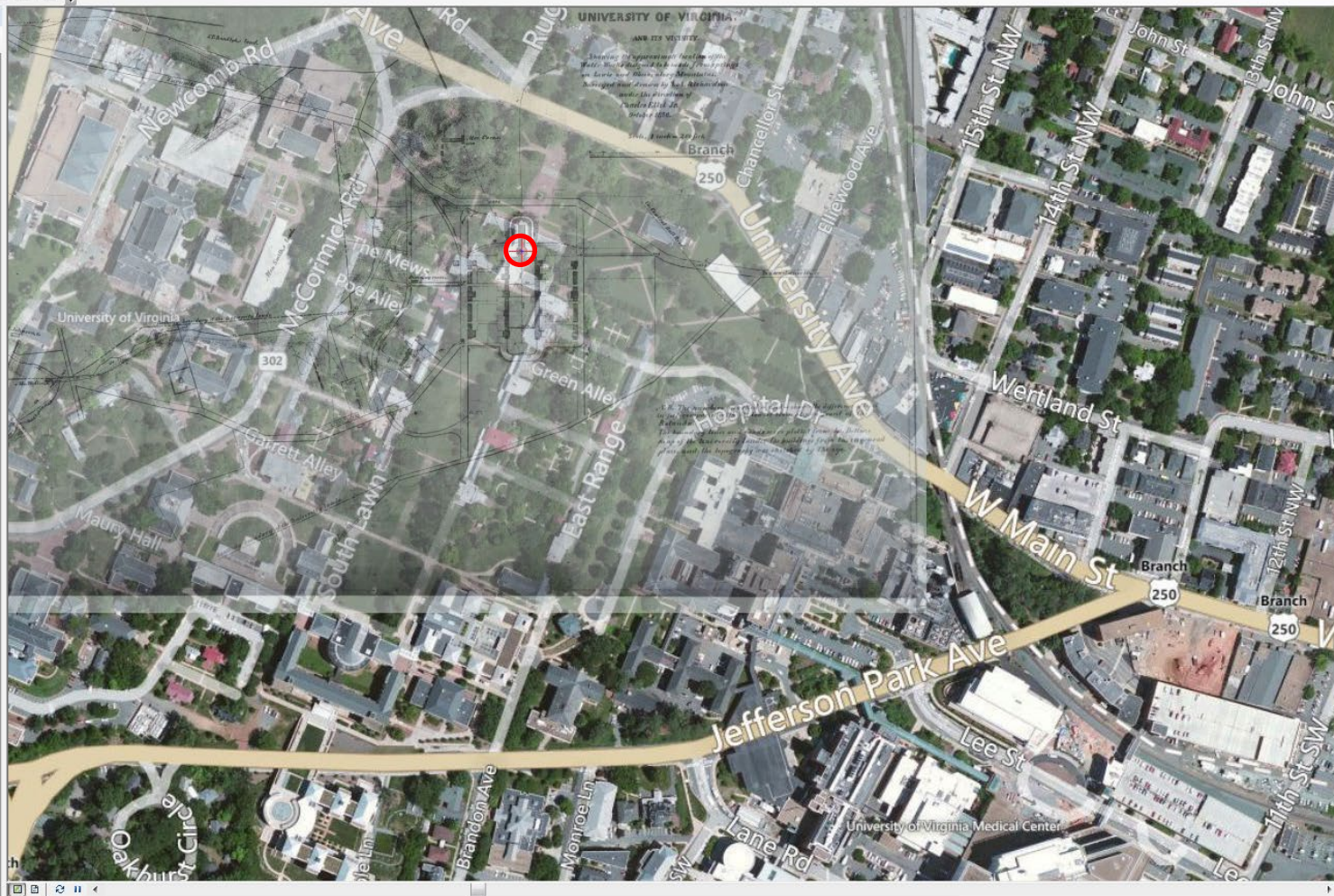


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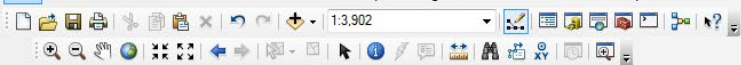


Layers

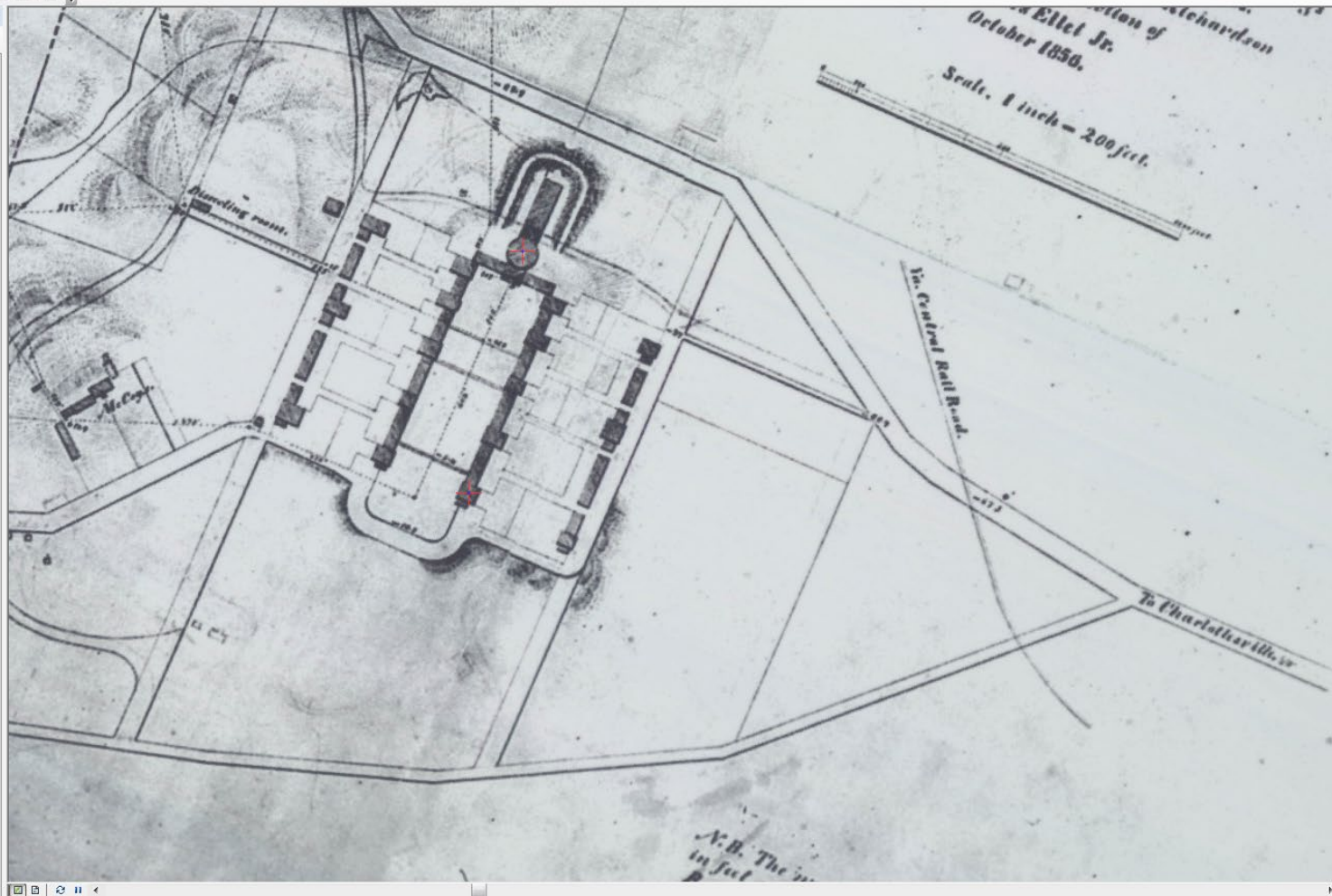
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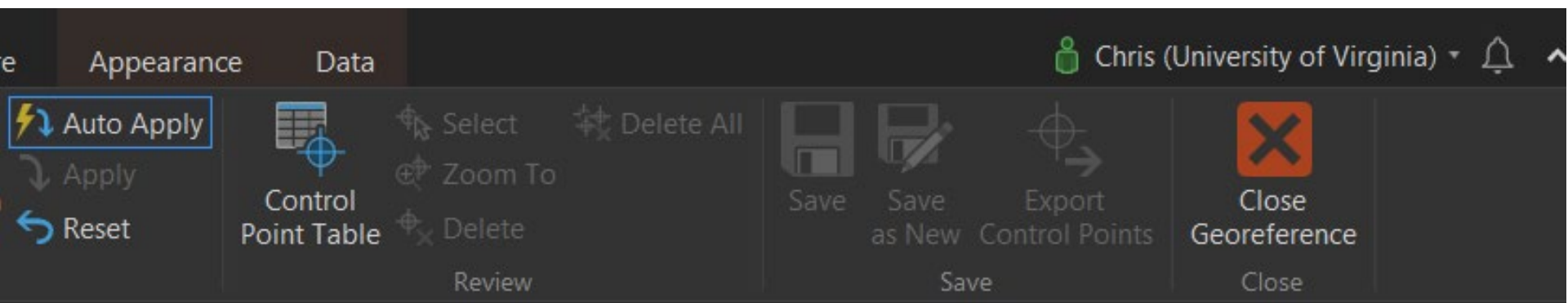
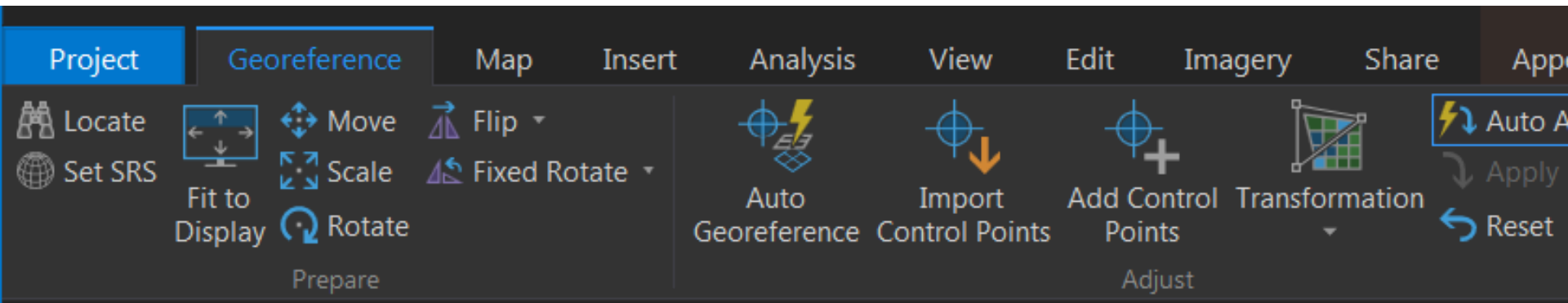
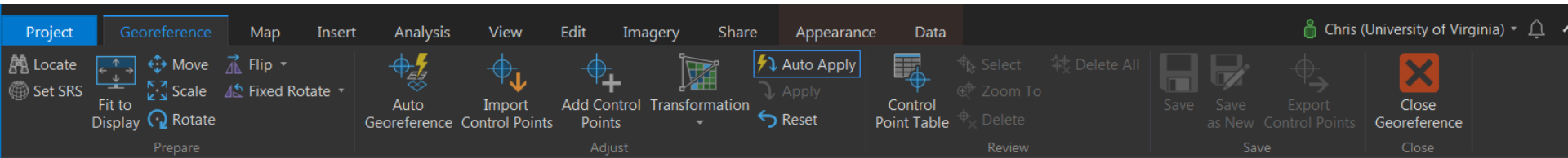




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ArcMap Georeferencing Toolbar



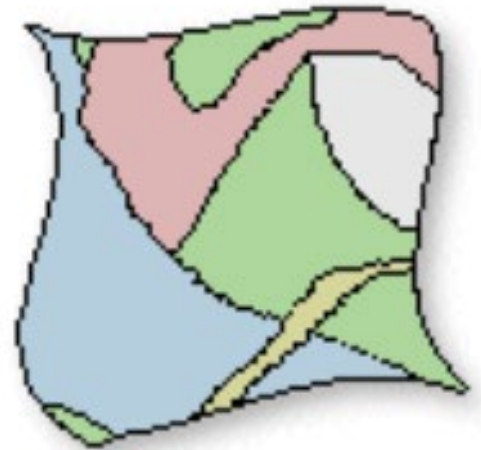
Transformation Types



1st Order / Affine
3 control points



2nd Order
6 control points



3rd Order
10 control points

World File

