



# On the radar and under revision: Using Ground Penetrating Radar to Inform Cemetery Narratives

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Resources



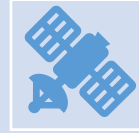
# Today we'll cover:



- What is ground penetrating radar?
- What are precautions, realities?
- Examples of GPR use in story telling and retelling.
- Checklist for best outcomes.



# What is Ground Penetrating Radar?



Geophysical technique used to remotely sense subsurface features using radar waves.



Used in archaeology, geology, engineering, utilities work, forensics, etc.

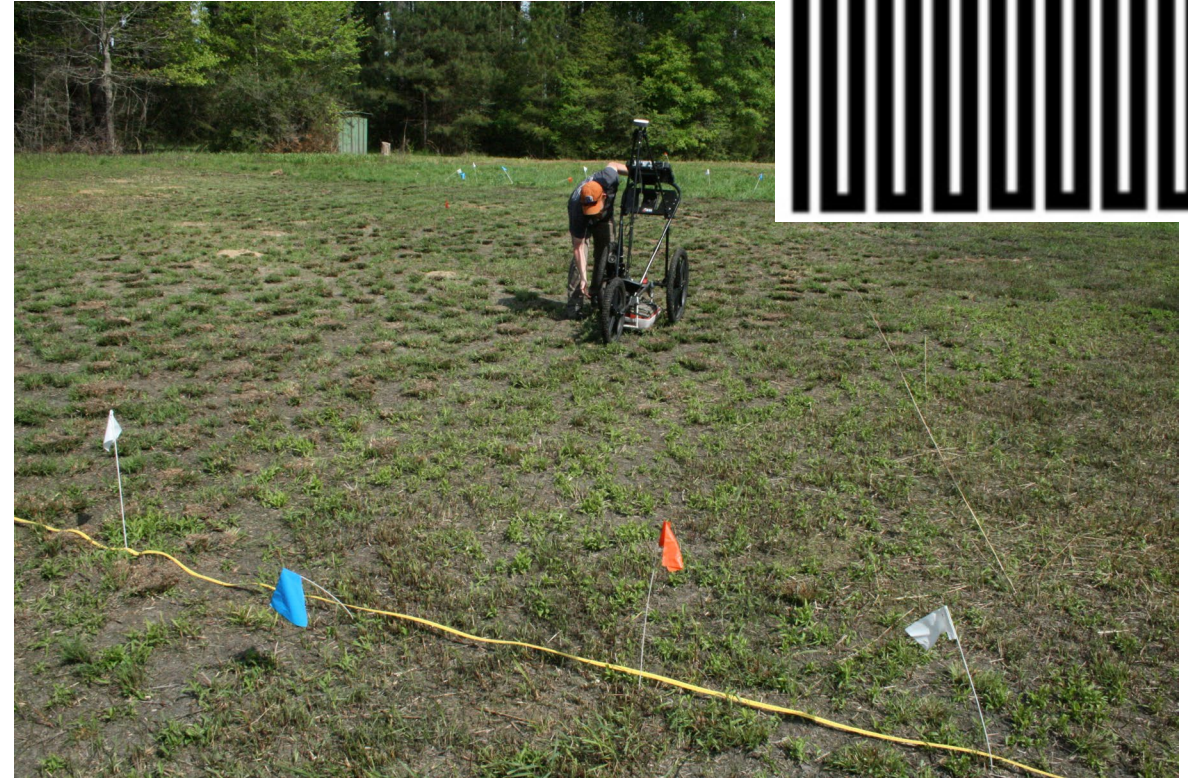
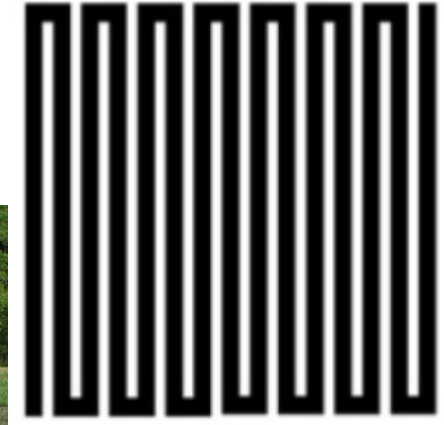


In archaeology, it's used to discover: graves, foundations, roads, pits, industrial features, etc.



# What is GPR?

25-50cm apart (10-20 in)







Boone

Clarissa Cemetery  
05 May 2021, 10:01:12





<https://historicjamestowne.org/march-2024/>

Historic Jamestowne  
2024





# What GPR *isn't*.



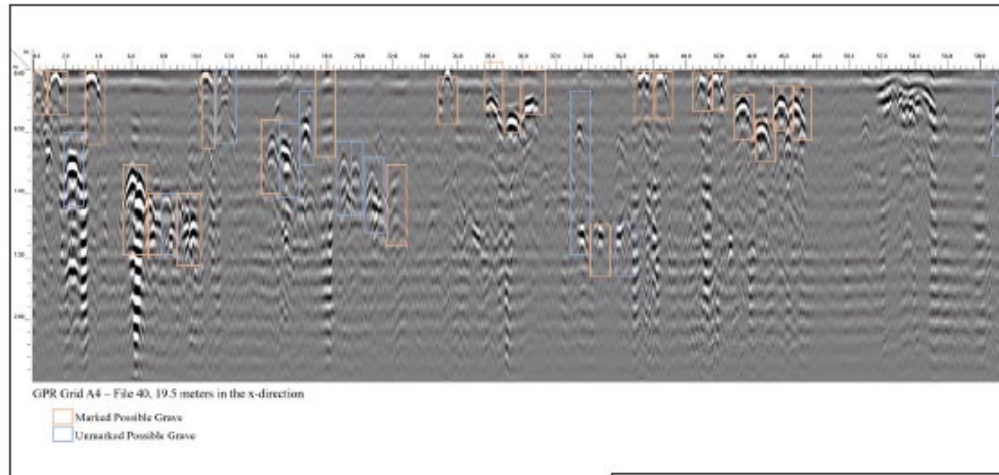
Criminal Minds



CSI: New York

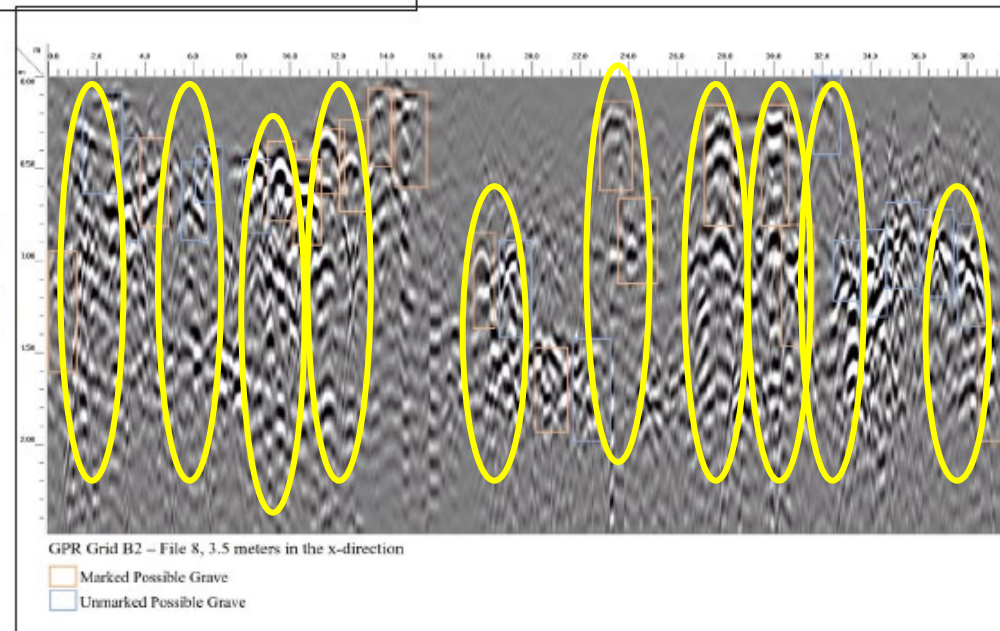


# What you see: In the field



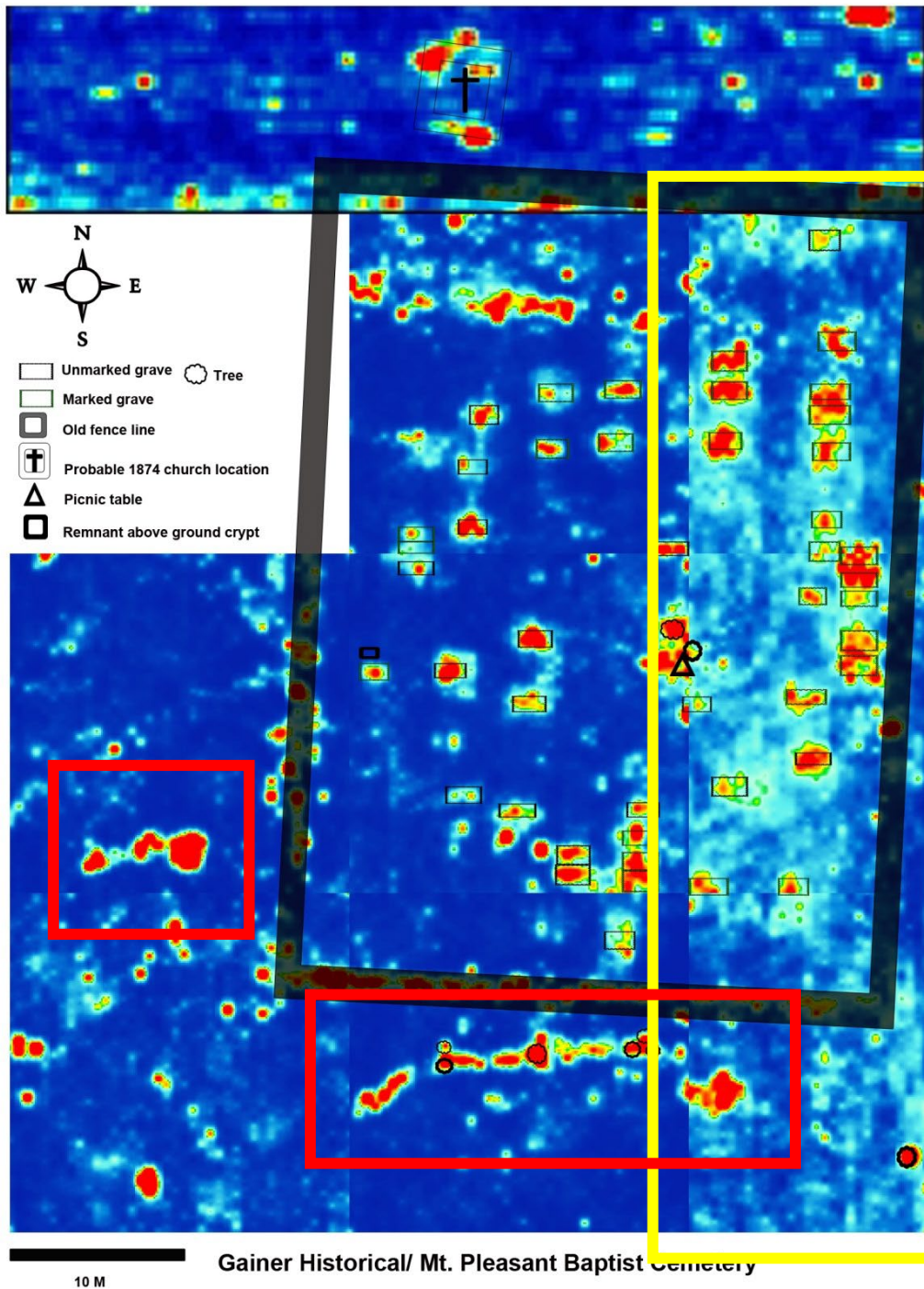
A. Typical marked and unmarked grave anomalies in profile (GPR Grid A4)

B. Typical Marked and Unmarked Grave Anomalies in Profile (GPR Grid B2)





# Up next: Post-processing

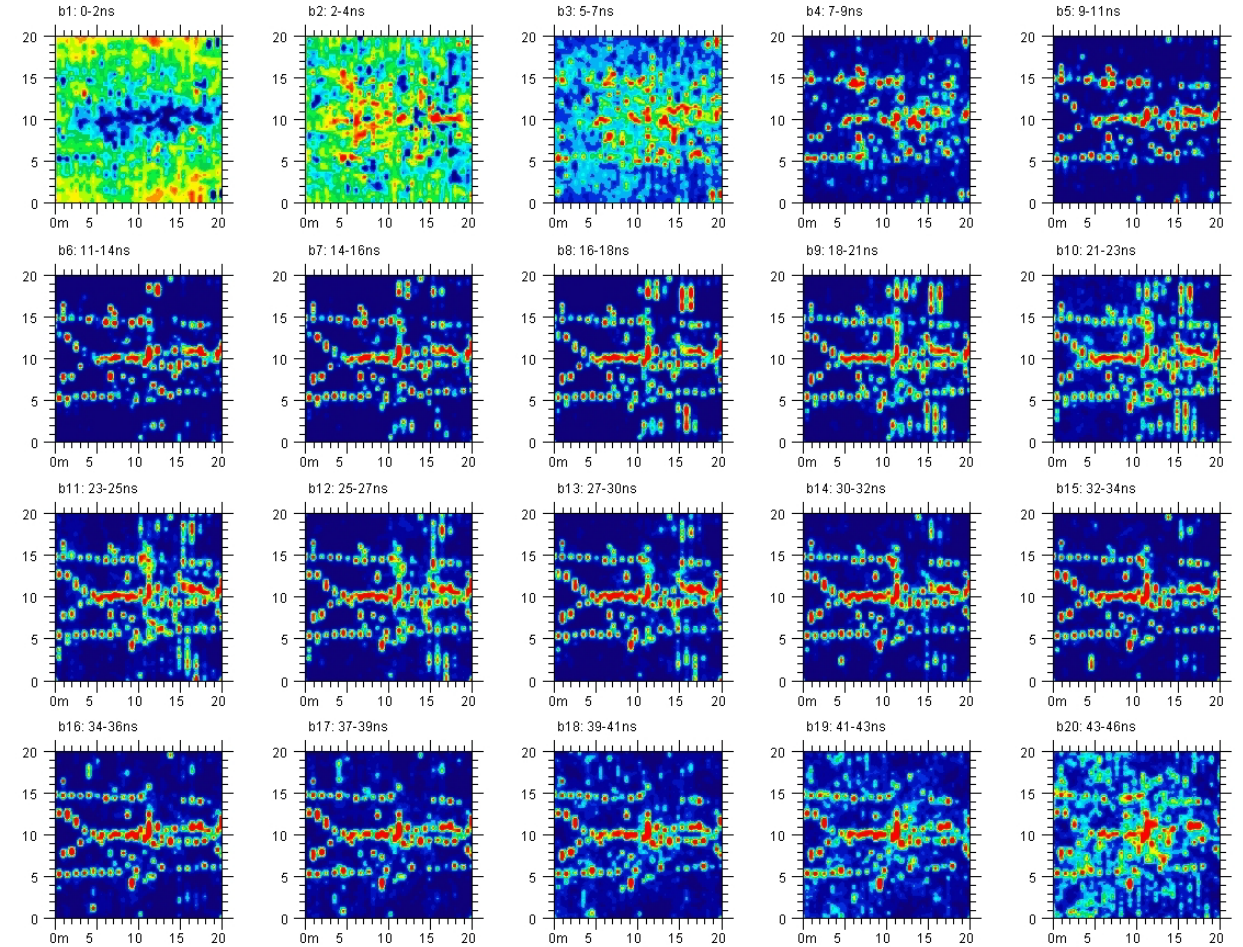
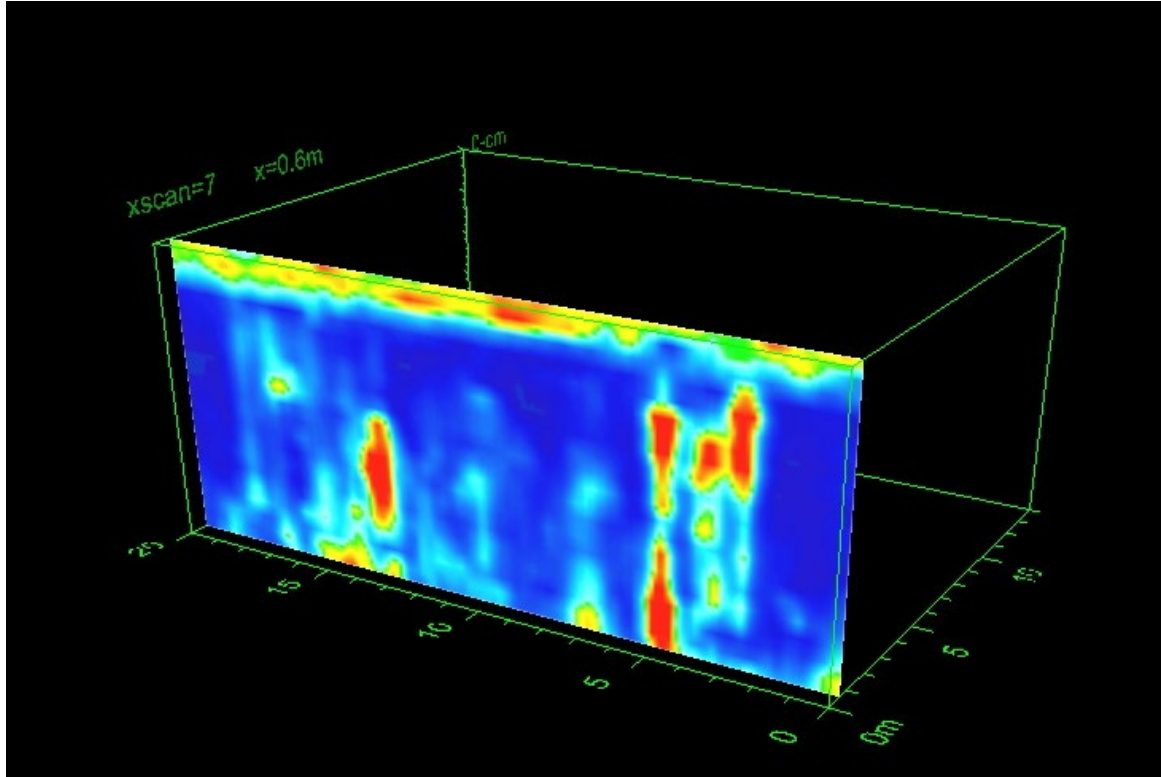


Moisture in the soil from  
overnight rainstorm

NOT graves, but charcoal from  
burned tree roots









# Putting the pieces together

- ✓Visible cultural features
- ✓Research, oral history gathering
- ✓Landscape features
- ✓Post-processed GPR results





# Case study 1: Slave Cemetery at Clearview Plantation







Cemetery before clean up (facing west)





Panoramic view after clean up (facing east)





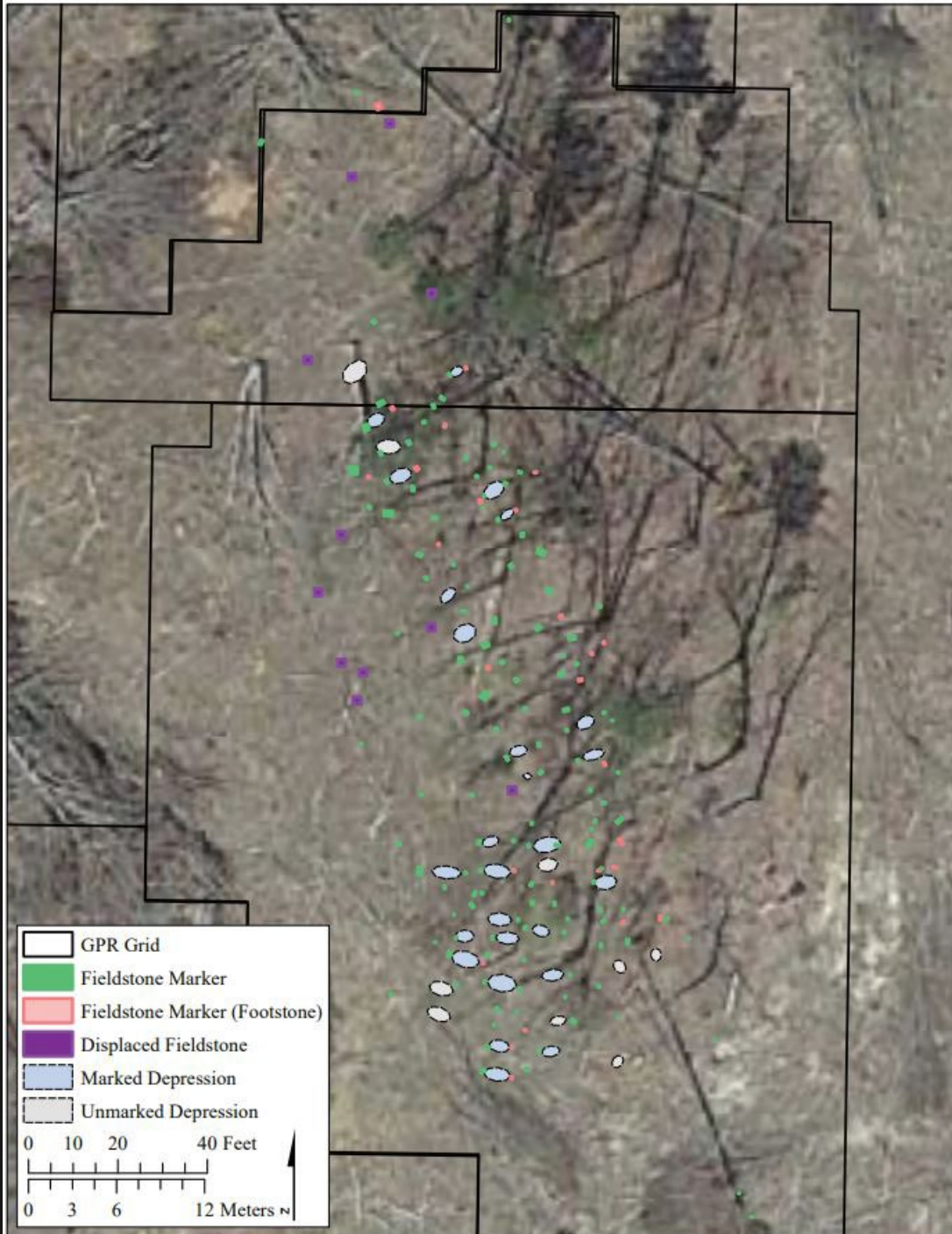




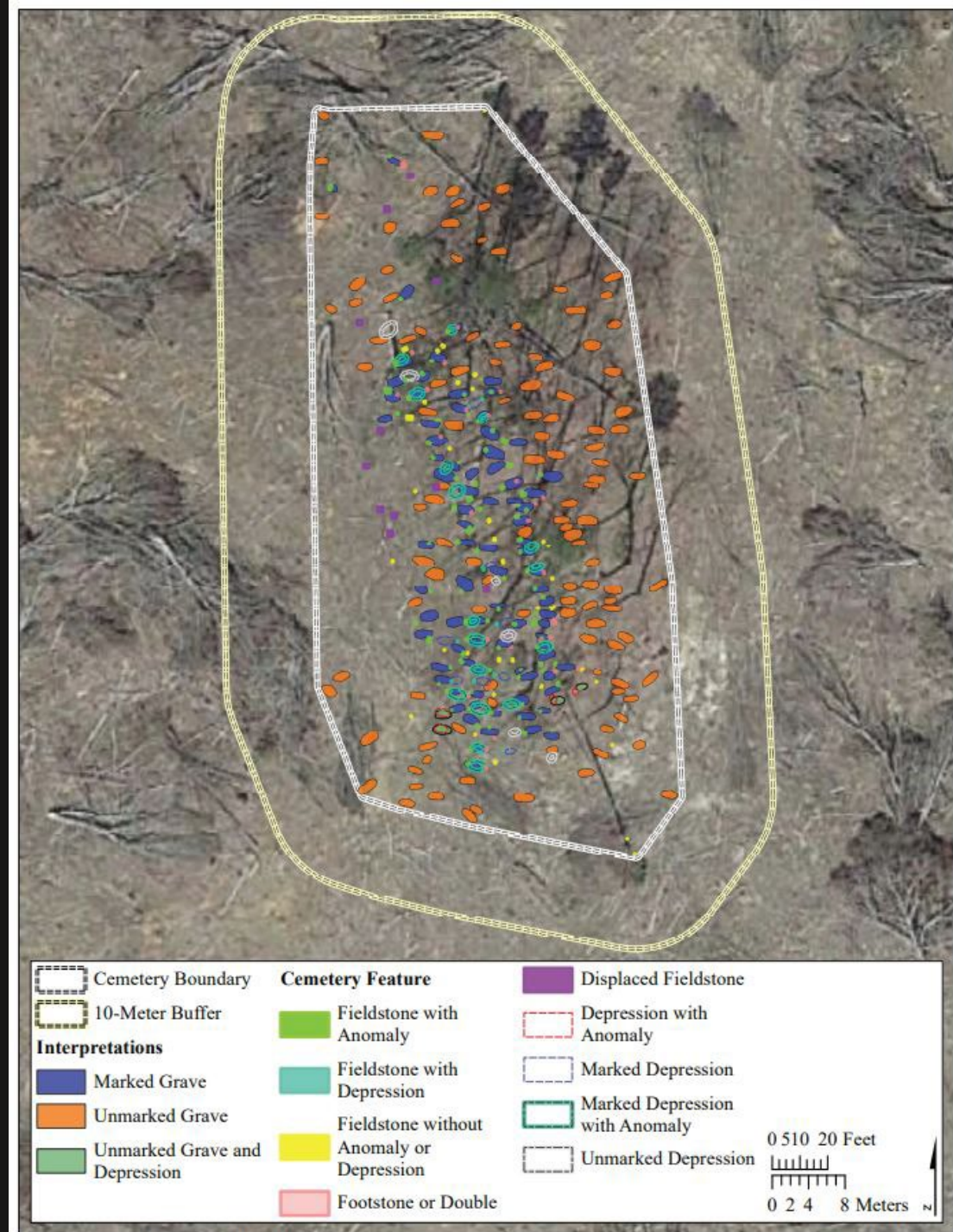








Imagery source: Google Earth, 2019



Imagery source: Google Earth, 2019



# GPR Survey Results

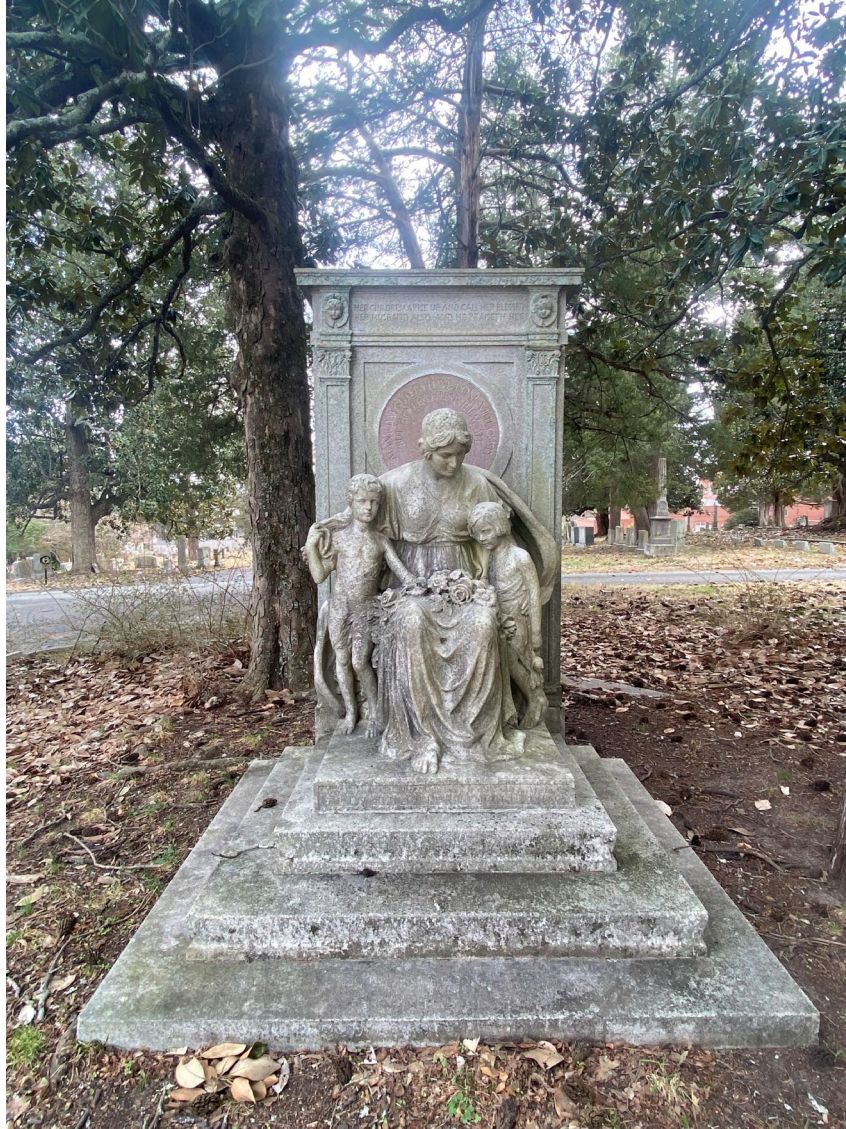
- 250 marked and unmarked graves
- Large buffer and fence installed to prevent damage from solar farm construction and activities
- Cemetery out-parcelled and quit-claim deeded to descendants
- Foundation of Slave Cemetery at Clearview Plantation Legacy Education Non-Profit Services



<https://www.sccp-lens.org/>



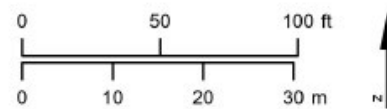
## Case study 2: Fitzgerald Cemetery/Maplewood Cemetery







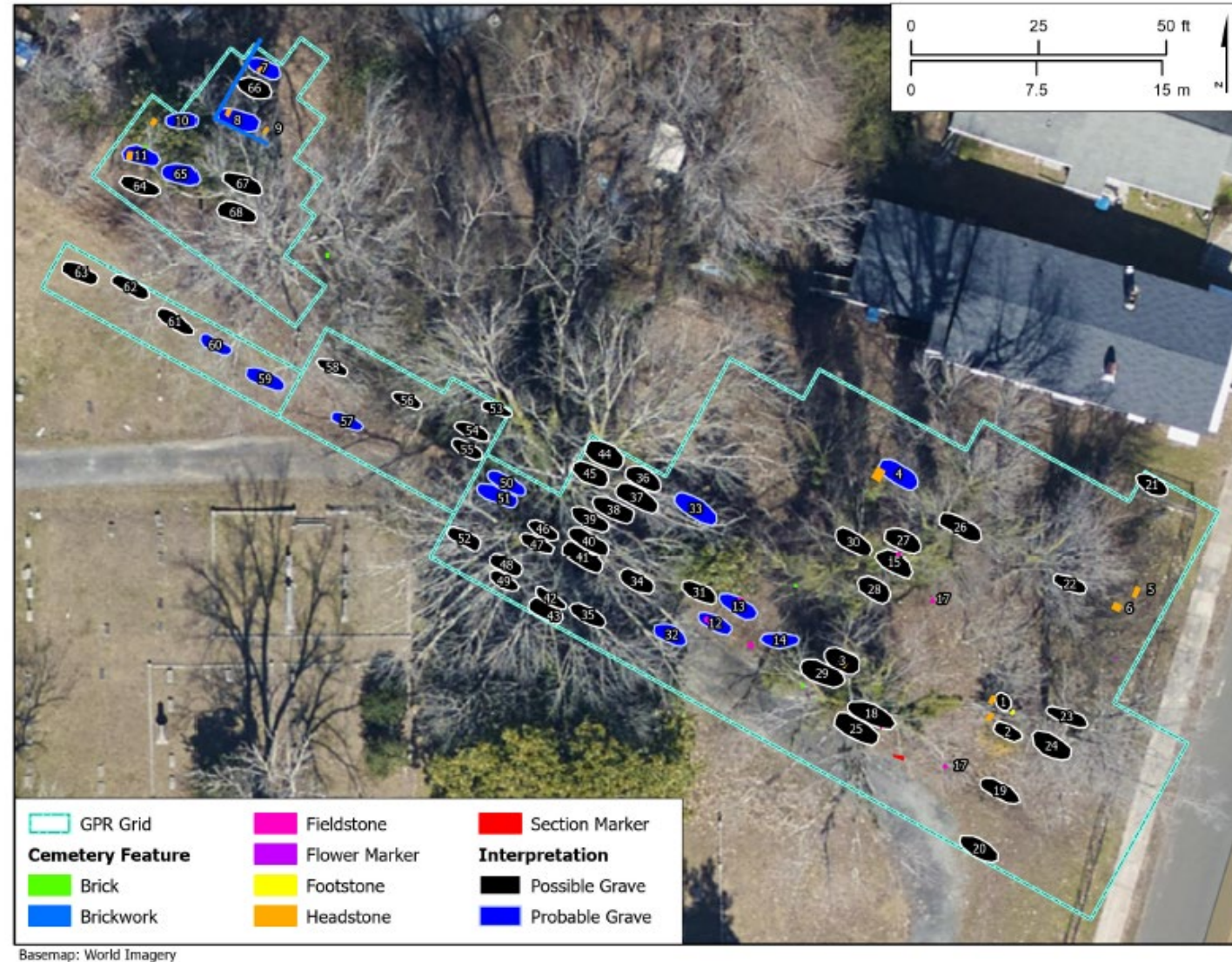
 GPR Grid





# GPR Survey Results

- 63 graves
- Confirmation and support for descendant community
- Memorialization efforts
- National Register of Historic Places District: West End Cemetery District



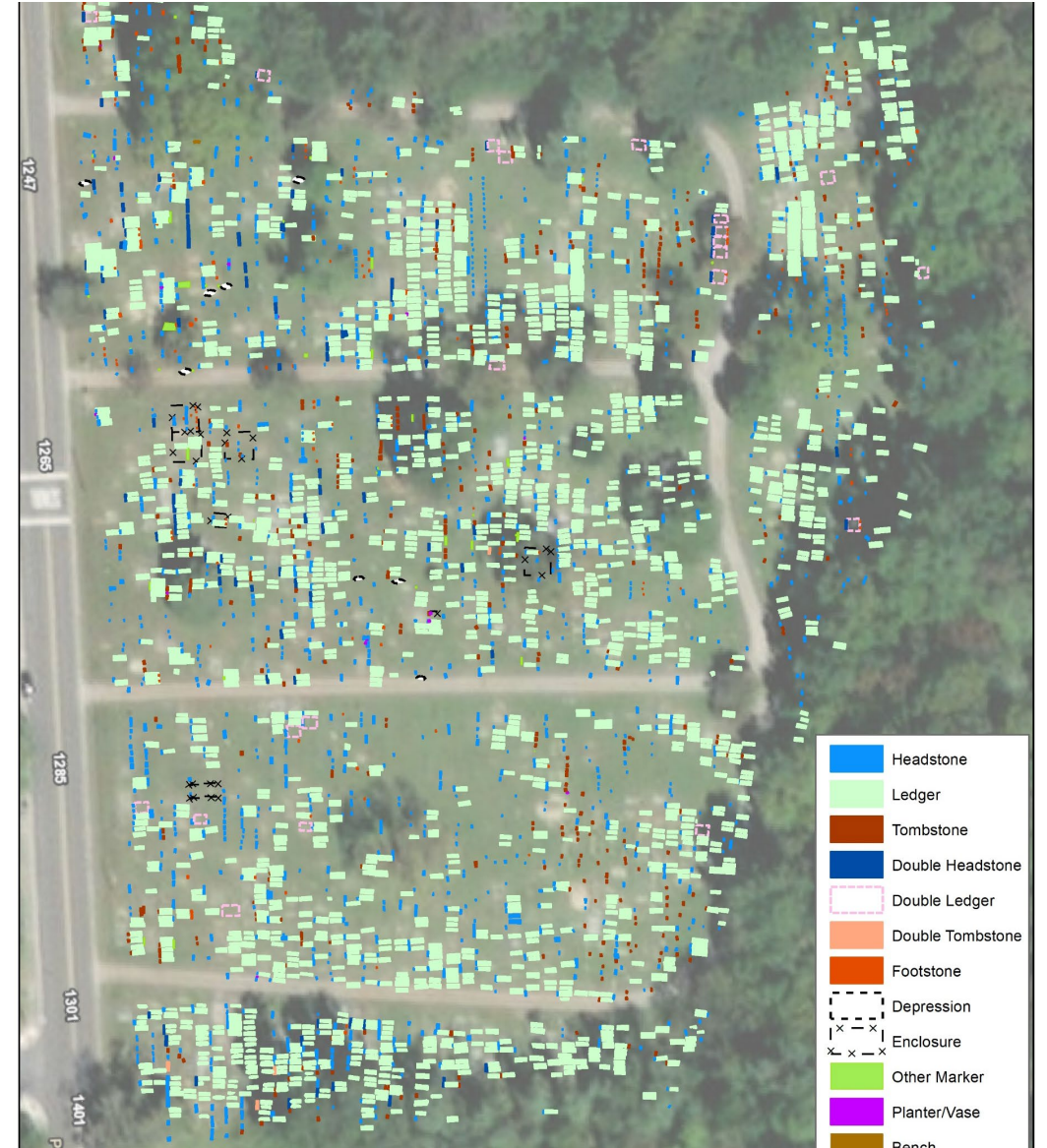


# Case study 3: Old Oak Grove Cemetery



Original estimated grave total: Around 2,500

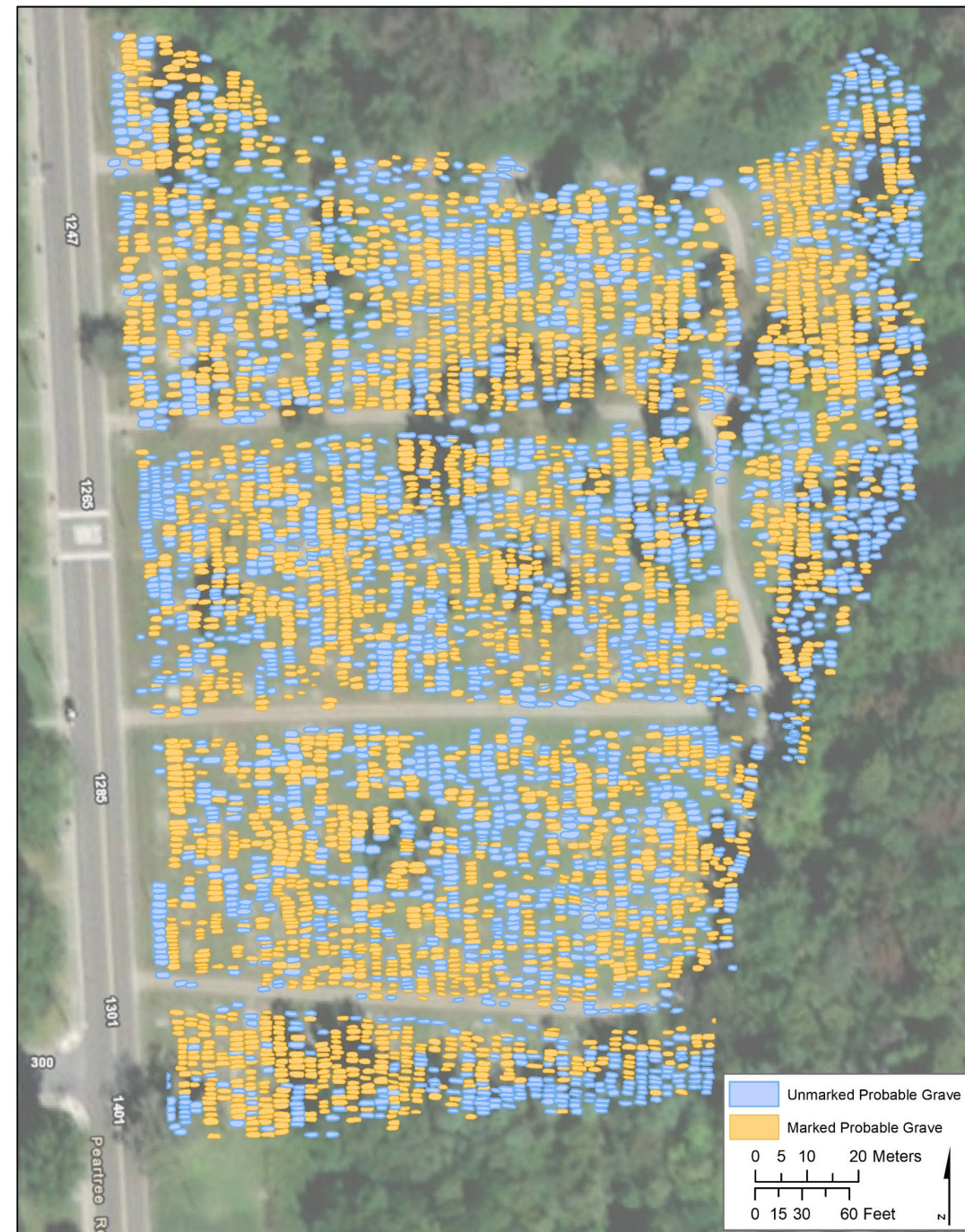






# GPR and mapping survey results

- Total number of marked graves: 3,889
- Total number of graves discovered through GPR: 5,418
- National Register of Historic Places listing 8/2025
- Greater municipal focus and partnership
- Recommendations: closure, evolution from active burying place to static sacred community memorial





# GPR success checklist

- Managed expectations: site compatibility and timing
- Right practitioners: SOI qualified
- Right equipment: 200-700 MHz are recommended
- Post-processing: ex. GPR-Splice
- Responsible deliverables: Reporting, slices, georeferenced maps
- Bonus: Public outreach proficient



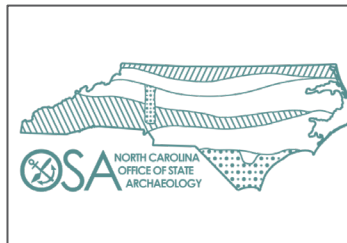


# Contact Information

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