

Wastewater Management System Development

Farrell / Craft Property



Integrated Water Strategies

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Overview of Integrated Water Strategies

What We Do:

Implement on-site wastewater treatment and rainwater management systems that emulate natural filtration and purification.

System Advantages:

- ◆ Low Impact, On-site Treatment
- ◆ Stormwater and Pollutant Mitigation
- ◆ Water Re-Use and Nutrient Reclamation

Overview of Integrated Water Strategies

Examples of System Design and Components:

- ◆ Constructed Wetlands
- ◆ Vegetated Treatment Berms
- ◆ Rainwater Collection
- ◆ Stormwater Retention

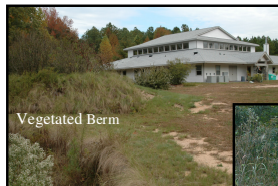
Example of End Use:

- ◆ Drip and Spray Irrigation



System Example:

Montessori School of Raleigh, Middle School Campus



System Example:

Montessori School of Raleigh, Middle School Campus

- Forest Irrigation
- 11 Irrigation Fields at 2845 sq ft per Field
- 6 Spray Irrigation
- 5 Drip Irrigation



System Example:

Montessori School of Raleigh, Middle School Campus



Drip Irrigation

System Example:

Montessori School of Raleigh, Middle School Campus



Spray Irrigation

Farrell Property Proposal: Site Development and Design

Goals:

- Develop Property while Maintaining Greenspace
- Irrigate Forest with a Low Impact Design

Low Impact Forest Irrigation Proposal

Drip: 0' Property Line Setback

Total flow of 2480 GPD at a 0.25 inches per week loading rate

Irrigation Area # 1 = 40,730 sq ft

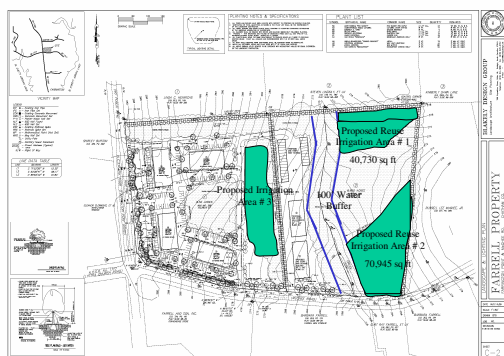
Irrigation Area # 2 = 70,945 sq ft

Site Location

Intersection of Farrington Point Rd. (SR 1008)
and McGhee Rd, At 354 McGee Rd.

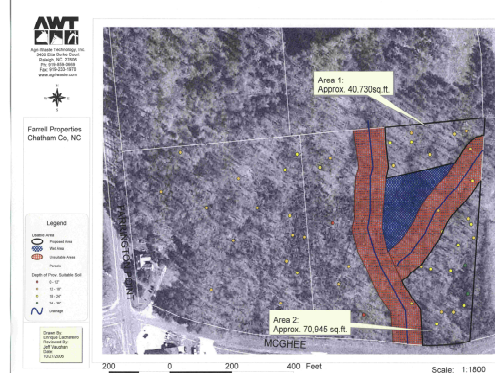


Forest Irrigation Locations




Irrigation Area # 3 - Pine Forest Irrigation Areas # 1, 2 -Oak Forest

Soils Map: Reuse




Rainbird Drip Irrigation


- **AG-5/Maxi-Paw®**
Deluxe Pop-Up Impact Rotor
Sprinkler



Xeri-Sprays™ 360° True Spray
Broadcast Emission Devices



Montessori and Farrell Properties: Site Comparison




Montessori School

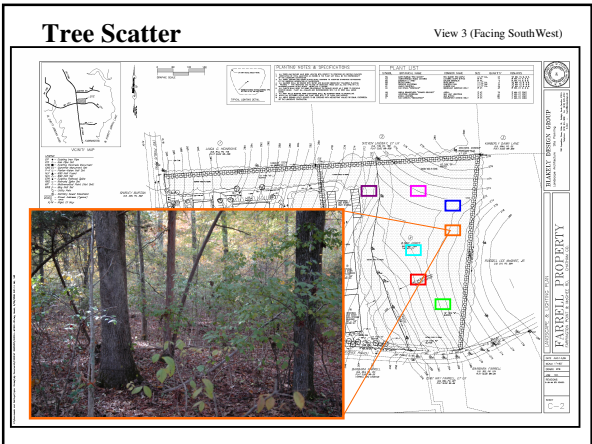
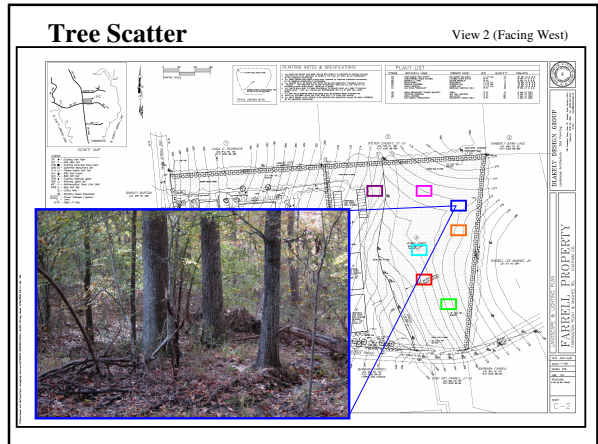
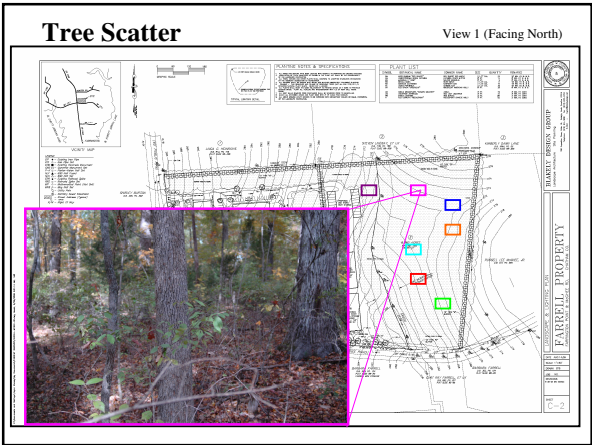
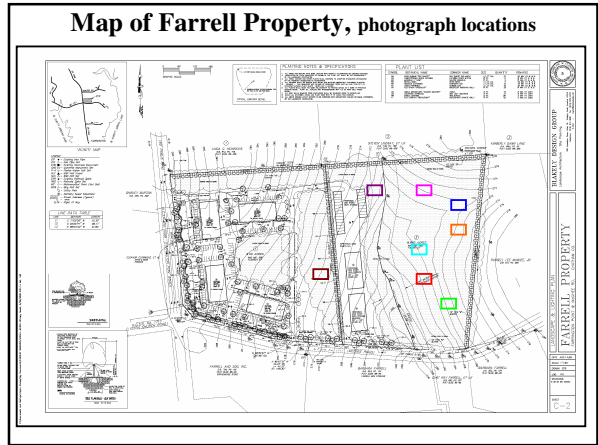
Similar Tree Characteristics:

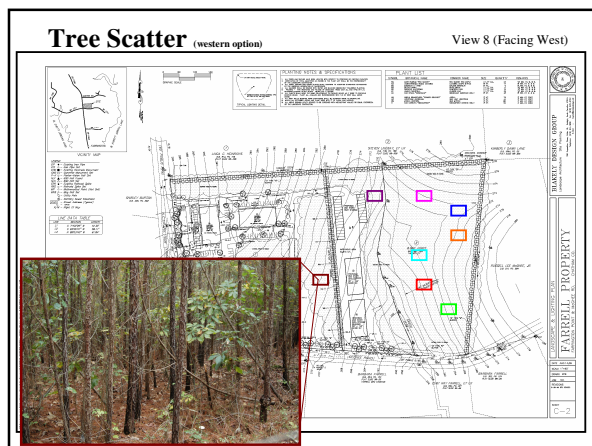
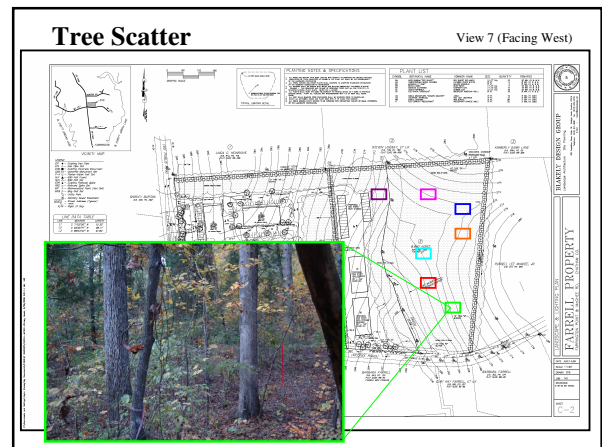
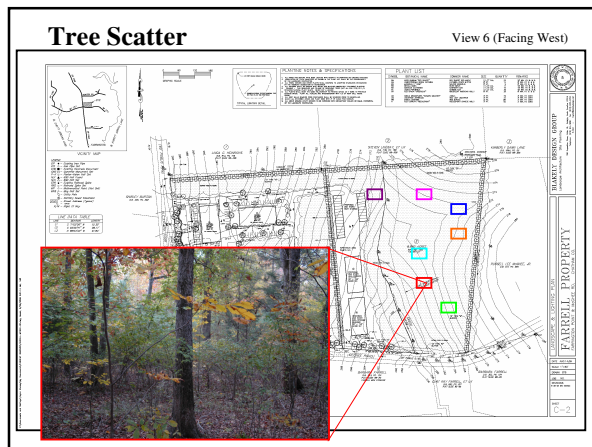
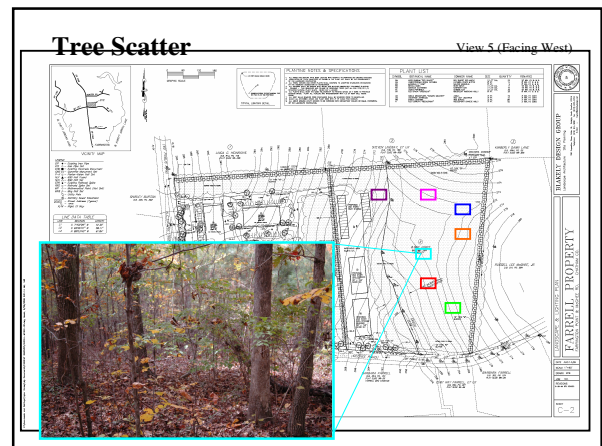
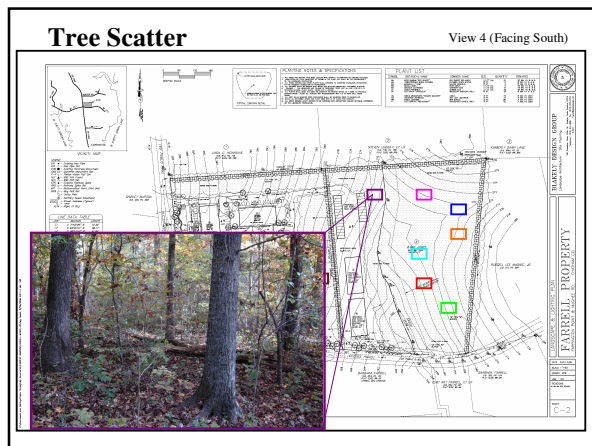
Diameter Range--10" to 36"


Species-- Oak, Sweet Gum, Maple, Hickory, Elm



Farrell Property, Proposed Treatment Site







IWS
integrated water strategies

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