

# R-TANK URBANFOREST MEETS THE CITY OF CHARLOTTE'S MINIMUM SOIL VOLUME REQUIREMENTS



## LOCATION:

Charlotte, North Carolina

## STAKEHOLDERS:

McAdams, the City of Charlotte Urban Forestry Division, Mungo Homes, and Crescent South Landscaping

## PRODUCT/SOLUTION:

UrbanForest

Ferguson Waterworks supported the Nichols Landing residential subdivision project with R-Tank UrbanForest™ soil cells. With more than 95% void space, UrbanForest creates room for tree root growth among compact subdivision sidewalks, clay soils, and underground utilities.

## HOW DID R-TANK URBANFOREST™ SOIL CELLS SUPPORT LONG-TERM TREE GROWTH IN A NEW CHARLOTTE, NC SUBDIVISION PROJECT?

UrbanForest addresses one of the most difficult parts of urban tree planting: providing sufficient soil volume in areas where sidewalks, utilities, and limited right-of-way space restrict natural root growth. By creating a dedicated subsurface soil-volume solution, the system supports healthier root development, helps meet urban forestry requirements, and provides project teams with a more coordinated path to integrating trees into dense residential and urban environments.

## WHAT URBAN FORESTRY CHALLENGES DID THE NICHOLS LANDING SUBDIVISION DEVELOPMENT PROJECT FACE?

Nichols Landing, a new subdivision in Charlotte, NC, had limited space to support healthy tree root growth. Due to existing underground utilities, clay soils, and installed sidewalks, the project required a soil cell solution capable of meeting the City of Charlotte's minimum soil volume requirements.



## R-TANK URBANFOREST™ SOIL CELLS

|                                          |                                                         |
|------------------------------------------|---------------------------------------------------------|
| Void Space                               | >95%                                                    |
| Vertical Compression                     | 55 PSI                                                  |
| Horizontal Compression                   | 12 PSI                                                  |
| Construction                             | Modular - Easy to assemble on-site                      |
| Life expectancy                          | 50 years                                                |
| Supports Green Stormwater Infrastructure | Yes                                                     |
| Sidewalk compatibility                   | Reduces sidewalk cracks and provides structural support |
| Tree Benefits                            | Open matrix encourages stronger root systems            |

### WHO WAS INVOLVED IN THE NICHOLS LANDING URBAN GREEN INFRASTRUCTURE PROJECT?

Ferguson Waterworks coordinated efforts with McAdams, the City of Charlotte Urban Forestry Division, Mungo Homes, and Crescent South Landscaping. As a result, all stakeholders were well-informed and accommodated.

### WHY WAS URBANFORST THE RECOMMENDED SOIL CELL SOLUTION?

The high-performance soil cell matrix provided the required soil volume for healthy tree root growth beneath hardscape areas, such as sidewalks and roads. Modular and structurally stable, this practical approach supports urban forestry goals in constrained residential settings.

### BESIDES PROCURING THE R-TANK URBANFOREST SOIL CELLS, HOW DID FERGUSON WATERWORKS SUPPORT THE RESIDENTIAL DEVELOPMENT PROJECT?

During the Nichols Landing residential development project, Ferguson Waterworks worked closely with the engineer and the City of Charlotte to support product approval in a short timeframe. This helped accelerate the homebuilder's progress. Coordinating with key stakeholders, we not only provided a cost-competitive solution but also delivered the soil cells on time and organized smart staging practices. Furthermore, our experts were on-site during installation to provide product assistance.

What steps did Ferguson Waterworks take to support this urban forestry project from start to finish?

1. Met with key stakeholders to expedite product approvals.
2. Coordinated delivery schedules and installation timelines to avoid conflicts.
3. Met with the homebuilder and installer on-site to provide hands-on installation support, answer questions, and educate the team on best practices for placing the UrbanForest system.



## **WAS THE URBANFOREST SYSTEM SUCCESSFUL IN SUPPORTING HEALTHY TREES IN THIS CHARLOTTE, NORTH CAROLINA, COMMUNITY?**

The team piloted the UrbanForest solution at Nichols Landing. This created an important starting point to assess the success of UrbanForest as a soil-volume solution in Charlotte, NC. While there are still design details to refine — including potential adjustments to limit the excavation area and better align with the City of Charlotte’s soil-volume goals — we established UrbanForest as a viable solution for supporting tree growth in constrained urban environments. The project also demonstrated the value of early coordination with Ferguson Waterworks. By securing approval quickly and supporting the soil cell installation, we helped keep the project moving.



Ferguson Waterworks positions itself as more than a distributor; we are your start-to-finish project partner. We work closely with key stakeholders, bringing product expertise, local coordination, and field support. Let us help you move your complex project from concept to installation. Contact your local expert today for solutions at the forefront of urban forestry.