

ATHENS, GA RETAIL STORMWATER MANAGEMENT

This Athens store is determined to give their customers the best products at the lowest costs. They have been a staple in the community for doing just that.



PROBLEM

In Athens, Georgia a store's stormwater detention pond outlet was being affected by substantial erosion. Trees surrounding the area had grown too large for their proximity to the outlet. This allowed roots to entangle themselves with the outlet pipe as the tree continued to grow. The roots grew with time as well, and eventually caused a washout and collapse of the pipe.

A section of pipe approximately 20' of 60" in size became completely detached. This allowed water to flow freely over unprotected soil, leading to the massive eroded area. During heavy rain events, erosion patterns caused water to swirl in front of the outlet leading to more intense erosion and compromised the soil integrity of the entire area. It was concluded that the entire slop would need to be reconstructed to ensure stabilization.

SOLUTION

AQUALIS experts new the first step was to remove the source of the problem, overgrown vegetation. The trees were cut down and the entirety of the plants were removed, stumps and root systems included. This was done to ensure the repair efforts would not be subdued by tree roots in the same way as the original pipe.

Once the area was cleared, the pond had to be drained to allow pipe access, inspection, and proper reconstruction.

Next, sediment and debris were removed from the eroded area. Any good dirt, referring to dry and compactible, found was saved and used later in the reconstruction.

Reshaping and grading then prepared the outlet area for dredge sox, rocks, and the new pipe. Soil was compacted every 2 feet for stabilization, until built grade was met. Geo-textile liner and riprap were used during the rebuilding of the outlet to ensure stability and minimize future erosion as preventive measures. A new headwall was constructed to thwart vegetation growth and erosion, so this location does not face the same problem again. Once the slope was completely reshaped, any areas of concern were stabilized with love grass and erosion control blankets.

Finally, any disturbances to the pond were repaired, fencing was reinstalled, and the area was seeded with Love grass and Juniper.

This location now has many layers of defense against erosion and, with proper maintenance, should never face severe issues like this again.