

## Briarwood HOA Detention Pond Status October 2017

### Outstanding Issues - Estimates for Repairs:

Provide submerged Rock-Filled Wire-Baskets to preclude erosion at pipe discharge. The top of the wire basket and rock will be at the bottom of the discharge pipe and water jet.

#### South Pond

Wire Baskets w Rock for Tipton Dr & Briarwood Dr Discharge.

Remove excess Sediment, Grading & Seeding.

Raise Spillway to Design Level & Provide Concrete Erosion Pad.

#### North Pond

Wire Basket w Rock for Aster Circle Discharge, Backfill along eroded walls, Grading & Seeding.

Total Estimated Cost ..... \$15,568

[Details Pending]

Budgeted for 2018..... \$ 5,000

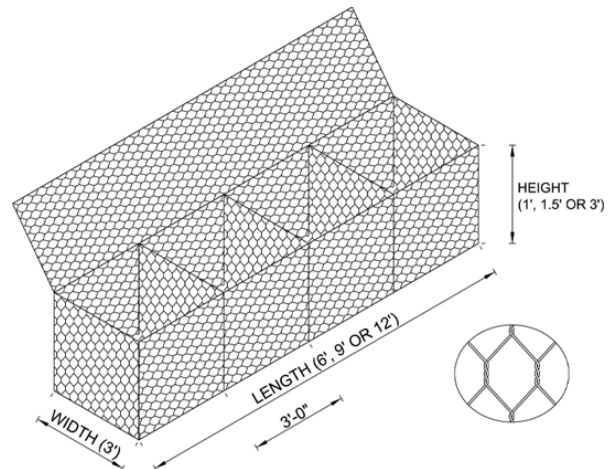
#### **Brief History**

During the past several years, HOA board members have searched for a solution to the continuing erosion issues presented at the inlet pipe discharge, particularly at the larger 3' diameter Tipton Drive inlet to the South Pond. Early attempts to engage the Council Bluffs City Engineering Department and the A&E firm that provided the original design were unsuccessful and costly. Neither organization was able to provide original design document details that could have saved years of time and several thousands of dollars in unnecessary expenses, not to mention the frustration. Recently, I contacted the NRCS\* for help but was informed they too have limited resources.

Upon close observation of secondary inlet areas in each pond, wire basket enclosed rock is present at each location, and is continuing to function with minimal wear. Evidence of wire baskets were present in 2013 and 2014 at the Tipton discharge when I first observed the erosion issues with Roger Thompson, an original board member. In those days, a recently constructed wire covered rock wall was placed at the Tipton and Aster discharge in the South and North ponds respectively. There may have been a submerged wire cage as well. The rock walls were

destroyed with the first significant rainfall or shortly thereafter.

The Aster north pond submerged wire cage design has worked until last year (>15 years total), and the Tipton South Pond held together for almost 13 years. After considerable review and search for suitable design information, the rock filled wire cage appears to be the only design able to provide a more permanent solution.



Wire Cage



Rock Filled Wire Cage

George Sawtelle - October 2017

\* Natural Resources Conservation Service (NRCS), formerly known as the Soil Conservation Service (SCS) is an agency of the USDA that provides technical assistance to farmers and other private landowners and managers.