

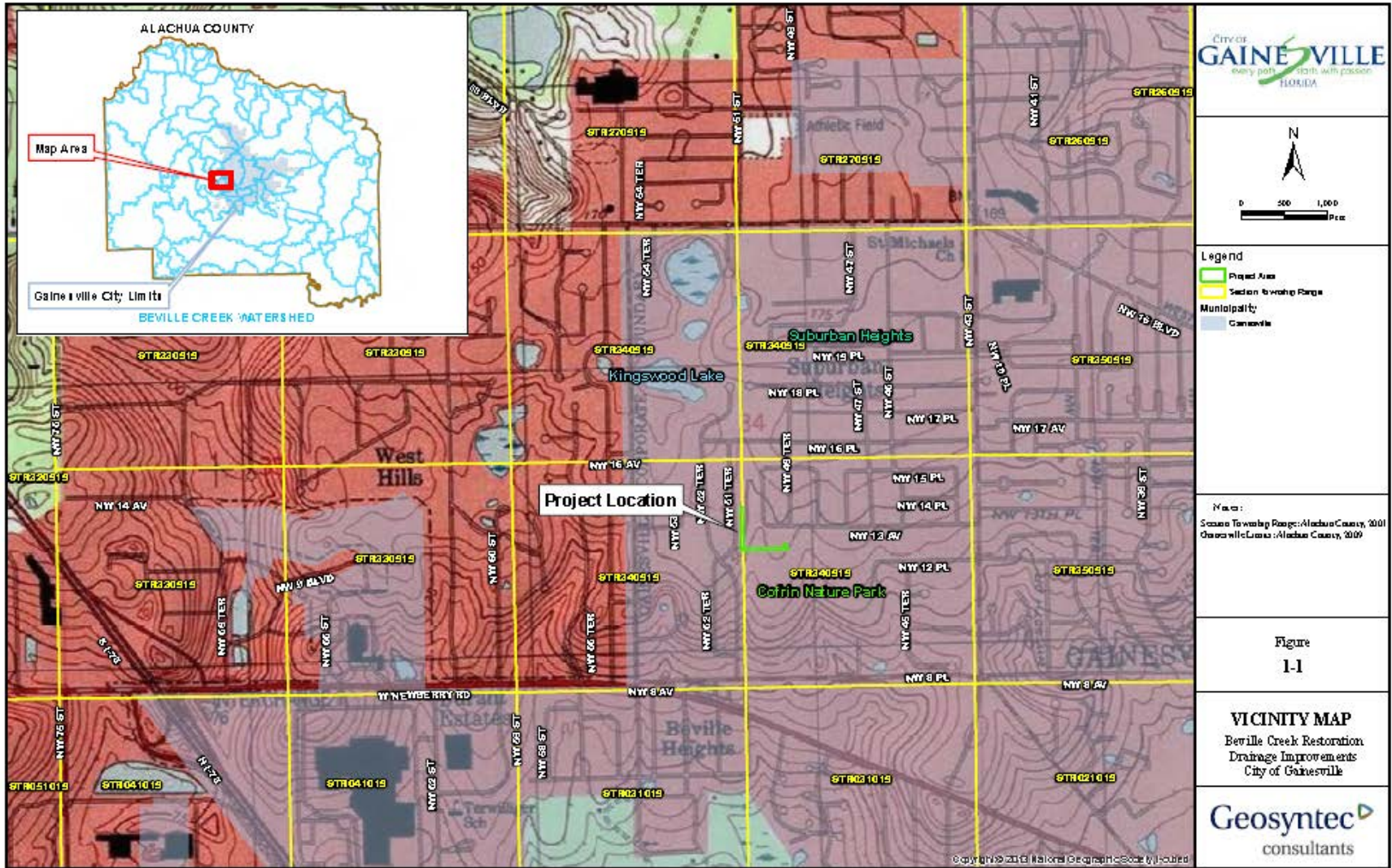


Public Works Department

**SJRWMD COST SHARE
APPLICATION - BEVILLE CREEK:
SUBURBAN HEIGHTS
RESTORATION**

*Betsy Waite, P.E.
November 17, 2016*

BEVILLE CREEK RESTORATION





**EXISTING ERODED AREAS IN
PROJECT LIMITS**

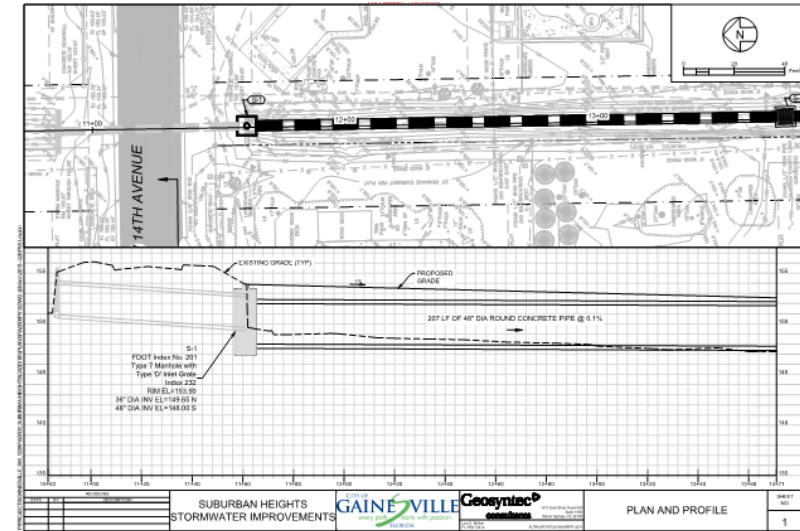


**EXISTING ERODED AREAS
IMMEDIATELY DOWNSTREAM**

**High velocities causing erosion
within and downstream of project
area into Cofrin Nature Park**

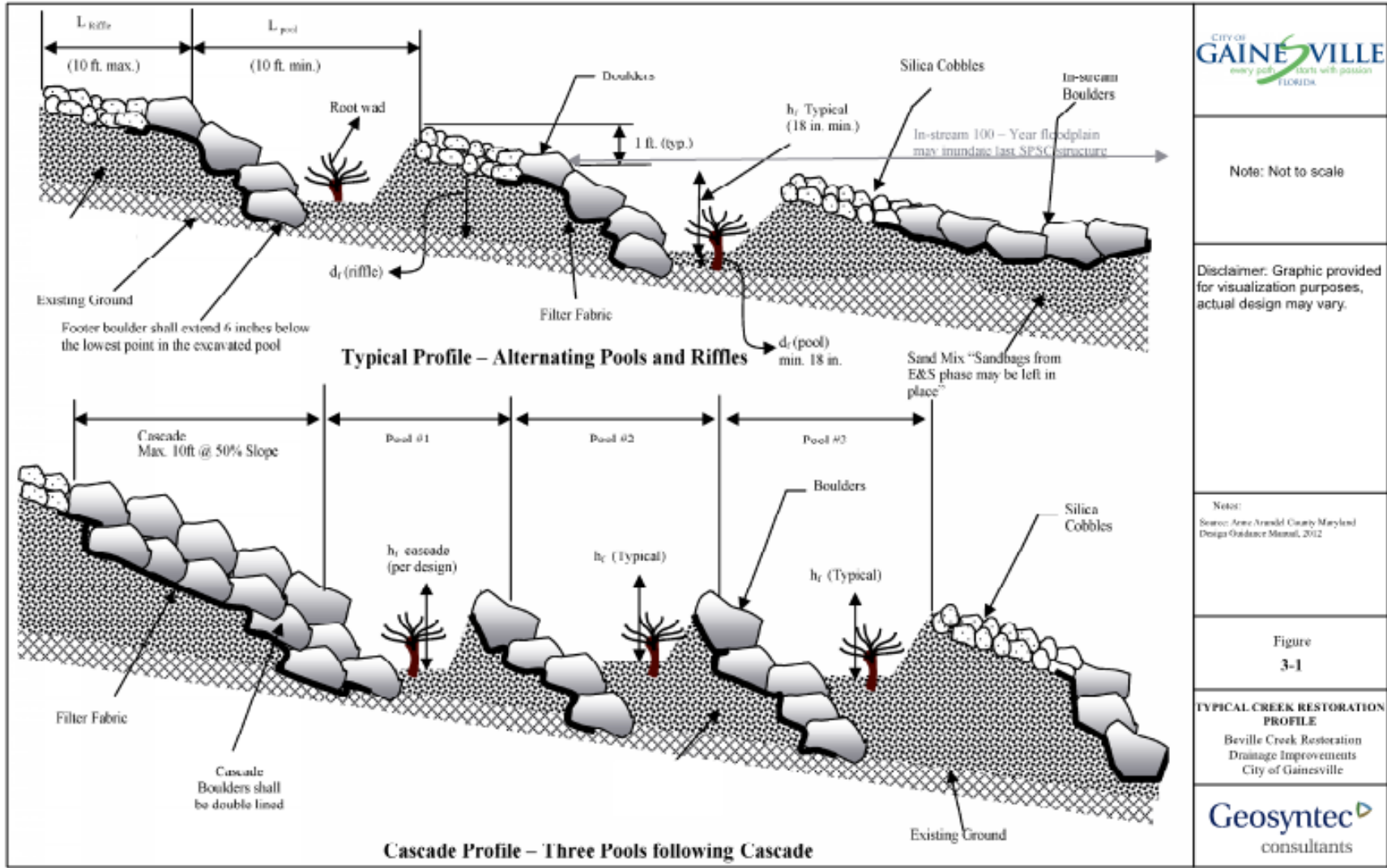
BEVILLE CREEK RESTORATION ORIGINAL PIPED CONCEPT

- Original concept to fill in the Creek and discharging via an enclosed storm pipe
- Multiple stakeholders, including PW staff, residents, City Parks and Environmental Staff, and SJRWMD asked if an improvement that keeps Beville Creek natural and open could be performed.
- This 'open concept' would then allow the Creek to remain and to keep a wildlife corridor between Cofrin Nature Park and Kingswood Lake. Increase expectations for outreach and stakeholder involvement



Original Piped Concept

BEVILLE CREEK RESTORATION PROPOSED RSC NATURAL CONCEPT



What does it look like?





Beville Creek in Cofrin Nature Park during construction (8/19/2015). Large boulders creating a check dam for grade control within Beville Creek.



Source: Florida Association of Environmental Professionals Symposium, UWF

Native Grasses and Vegetation



Switchgrass (*Panicum virgatum*)
Indiangrass (*Sorghastrum nutans*)
Little bluestem (*Schizachyrium scoparium*)
Big bluestem (*Andropogon gerardii*)
Partridge pea (*Chamaecrista fasciculata*)
Black-Eyed-Susan-(*Rudbeckia*)

- **A New LID / Natural Systems approach to stormwater management**
- **Surface runoff entering an RSC exits the system as seepage and exfiltration into native soils. Greatly reduces the discharge of surface water flow.**
- **Water quality enhancements as a result of reduced surface water flows by converting most flow into seepage.**
- **Reduction of TSS, TP, and TN by 72%, 28%, and 30%, respectively per NC State Study in 2014.**
- **Maintains & enhances biodiversity of natural ecosystems by promoting native vegetation and stable habitat environments.**

- **Proposed to include Bold and Gold™ biosorption activated media for additional water quality enhancement.**
- **This combination of RSC + BAM has not previously been performed in Florida**



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