



The depth of the rain garden varies from 2-3.5 feet and the success of this system was evident when preliminary monitoring tests showed a 25% reduction in stormwater entering Johnson Creek and an 80% removal of suspended solids.

EXPANDED SHALE IDEAL FOR USE AS RAIN GARDEN MEDIA

A prestigious honor was given to The Green at College Park when it became certified by the Sustainable Sites Initiative some years ago. The Sustainable Sites Initiative (SITES) is an effort to create voluntary national guidelines and performance benchmarks for sustainable land design, construction and maintenance practices.

Project engineers estimated that 1/3 of the stormwater on the UT Arlington Campus washed through this highly impervious area and contributed to the flooding problems of nearby Johnson Creek. While the project goals were to provide an identity to the Southwest corner of the campus and link it to the City of Arlington's Center Street trail system, the need for an ecological water detention system and a large scale rain garden was evident.

North of the rain garden is a gathering plaza, activity lawn, shade arbors, a pedestrian promenade and other amenities like seating and LED lighting. A pervious path system circles the rain garden to the south and provides areas for additional seating and small gatherings. The park is adjacent to a new mixed use development that

includes a 7,000 seat special events center, apartments, single family homes, offices, retail, and education buildings. While the connection to these various uses is noteworthy, it is the design of the rain garden that is most impressive.

STORMWATER CONTROL

Two practices of the sustainable sites initiative deal with soils and hydrology. The goal is to integrate these systems in a way that mimics nature's capacity to store, filter and clean water. At The Green at College Park, the heavily compacted clay soils were insufficient for this purpose so a new soil mix was created using 1 part compost, 1 part expanded shale, 1 part native soil and 2 parts sand. This allowed for better infiltration, cleansing, and filtering of the storm drainage.

Native and locally adapted plants that thrive in drought and wet conditions were planted throughout the garden and serve an integral role in the cleansing process. In addition to the surface drainage, there is a "storm spring" that allows water in underground storm drains from other areas on campus to enter the site during large storm events.

Using locally chosen materials is another sustainable practice. It is best when these materials are salvaged, reused and have low costs associated with energy use, production and transportation. The rain garden was covered by many cobbles, gravels, rocks and boulders to direct drainage and eliminate erosion. They also provide a low maintenance, visual contrast to the vegetation and area surrounds.