

THE UNIVERSITY OF VIRGINIA

Stream Relocation at Emmet Street Garage

Charlottesville, Virginia



This innovative design allows a natural stream to function within a stormwater management facility and within close proximity to campus facilities.

In order to construct a new, state-of-the-art, multi-purpose arena, the University of Virginia needed to create parking spaces to replace those that would be eliminated by the new facility. A vacant parcel of land at the corner of Ivy Road and Emmet Street was chosen as the site for a multi-level parking garage. Unknown to the University, a tributary of Meadow Creek flowed through the middle of the parcel. The University turned to Biohabitats to design and implement the relocation of this stream away from the proposed garage structure.

Biohabitats developed an innovative design that not only moved the stream away from the structure but also incorporated the stream into a stormwater management facility to

attenuate large storm flows and thus help reduce downstream flooding. The upper half of the new channel was designed as a step/pool/riffle system to drop the elevation of the channel quickly. This allowed the bottom half of the new channel to be designed with a very low slope so that it could be incorporated into the stormwater management area. Trees and boulders salvaged from the site were utilized as stabilization and habitat structures. Native trees, shrubs, flowers and grasses were planted along the channel to create a natural riparian corridor.

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