



# BRIDGELAND CREEK PARKWAY SECTIONS 7 & 8



## PROJECT OVERVIEW

SUSTAINABILITY STARS AWARDED:

★ INVESTIGATION STAR

★ INVESTMENT STAR

PROJECT TYPE: Residential Community and Infrastructure

LOCAL PERMMITTING ENTITY: Harris County, City of Houston, TxDOT

PROJECT COST: \$5.5 million

SITE SIZE: 24 Acres

PROJECT OWNER: Bridgeland Development LP

PROJECT ENGINEERS: HR Green, Inc.

SWA Group (Landscape Architect)

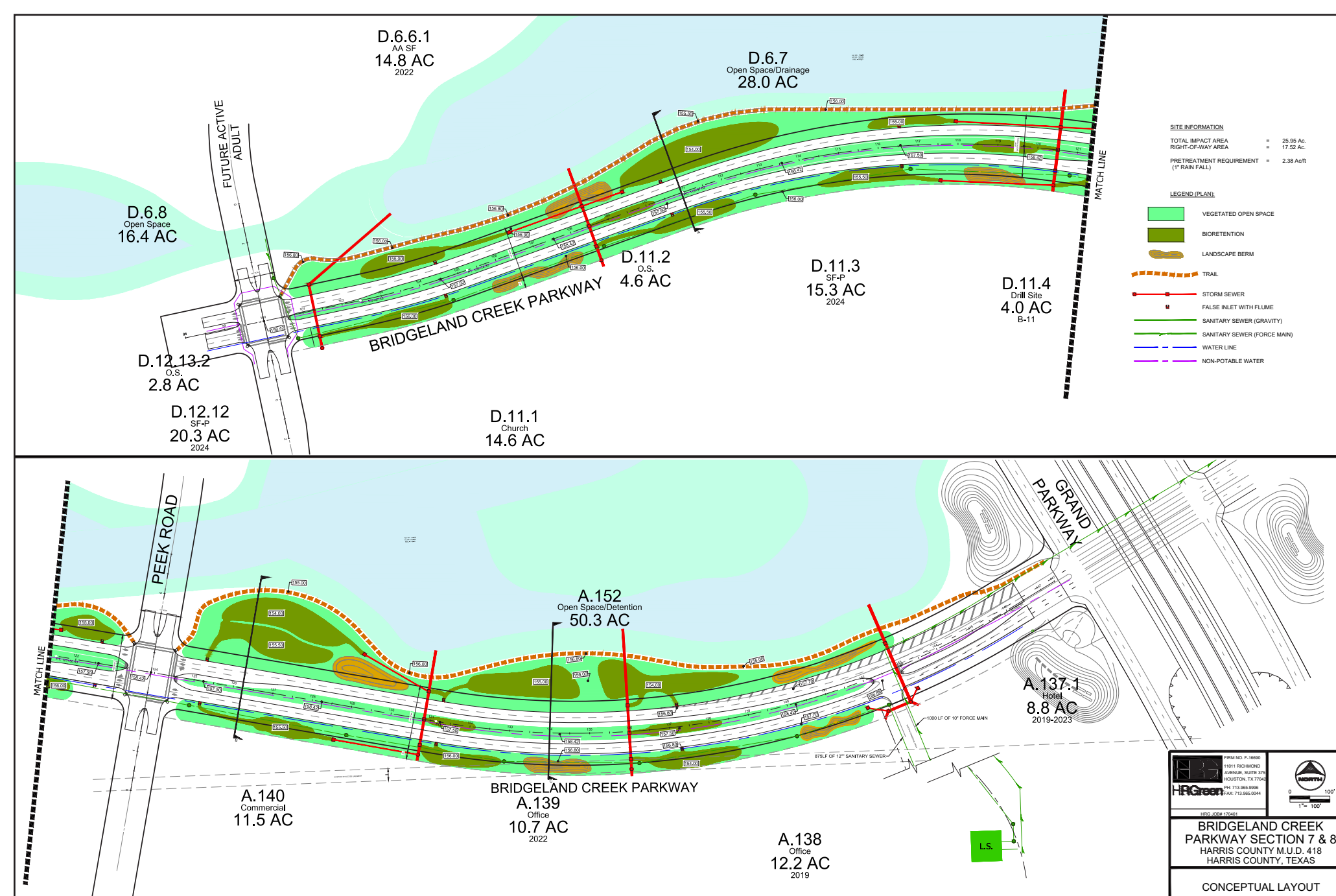
SUSTAINABILITY FEATURES:

- Bio-Retention & Engineered Soil
- False inlets
- Vegetated Filter Strips
- Vegetated Swale

SPECIAL TERMS DEFINED:

Low-Impact Development is a term used to describe a land planning, and engineering design approach to manage stormwater runoff as part of green infrastructure.

LID emphasizes conservation and use of on-site natural features to protect water quality. Green initiative is a term used to describe any initiative that will create a cleaner and healthier environment.



CONCEPTUAL LAYOUT



# INDIVIDUAL STAR OVERVIEW/NARRATIVE

## ★ INVESTIGATION STAR

With a goal to enhance the community's natural environment within the Cypress Creek Watershed, Bridgeland Development LP chose to explore "green initiatives," in the design for two sections of Bridgeland Creek Parkway through Prairieland Village.

Bridgeland Development LP partnered with HR Green to develop low-impact and stormwater quality alternatives to be incorporated into the design for Bridgeland Creek Parkway.

HR Green developed multiple concepts to be evaluated, and the final alternative used false inlets that have an orifice directing flow into bio-swales, allowing for infiltration and sediment control prior to entering the bio-cell areas.

## BENEFITS & ADDED VALUE

The project embraces a sustainable and low impact design philosophy by implementing a sustainable stormwater conveyance and flood protection system with bio-swales. When compared with a conventional stormwater conveyance system, this "green initiative" system recognizes multiple benefits:

- Reduces modeled peak flows
- Reduces stormwater pollutants
- Increases stormwater infiltration and recharge
- Lowers construction estimates (10%)
- Preserves the community's natural characteristics

## ★ INVESTMENT STAR

The Bridgeland Creek Parkway project implements sustainable stormwater management concepts throughout the project area to provide the desired level of storm water conveyance and flooding protection within the street system.

The implementation of the "green initiative" design concepts, consisting of 18 bio-swales and approximately 88,000 cubic feet of storm water storage, in conjunction with the neighborhood roadways with false inlets and minimal storm sewer, results in the preservation and enhancement of the Prairieland Village characteristics.

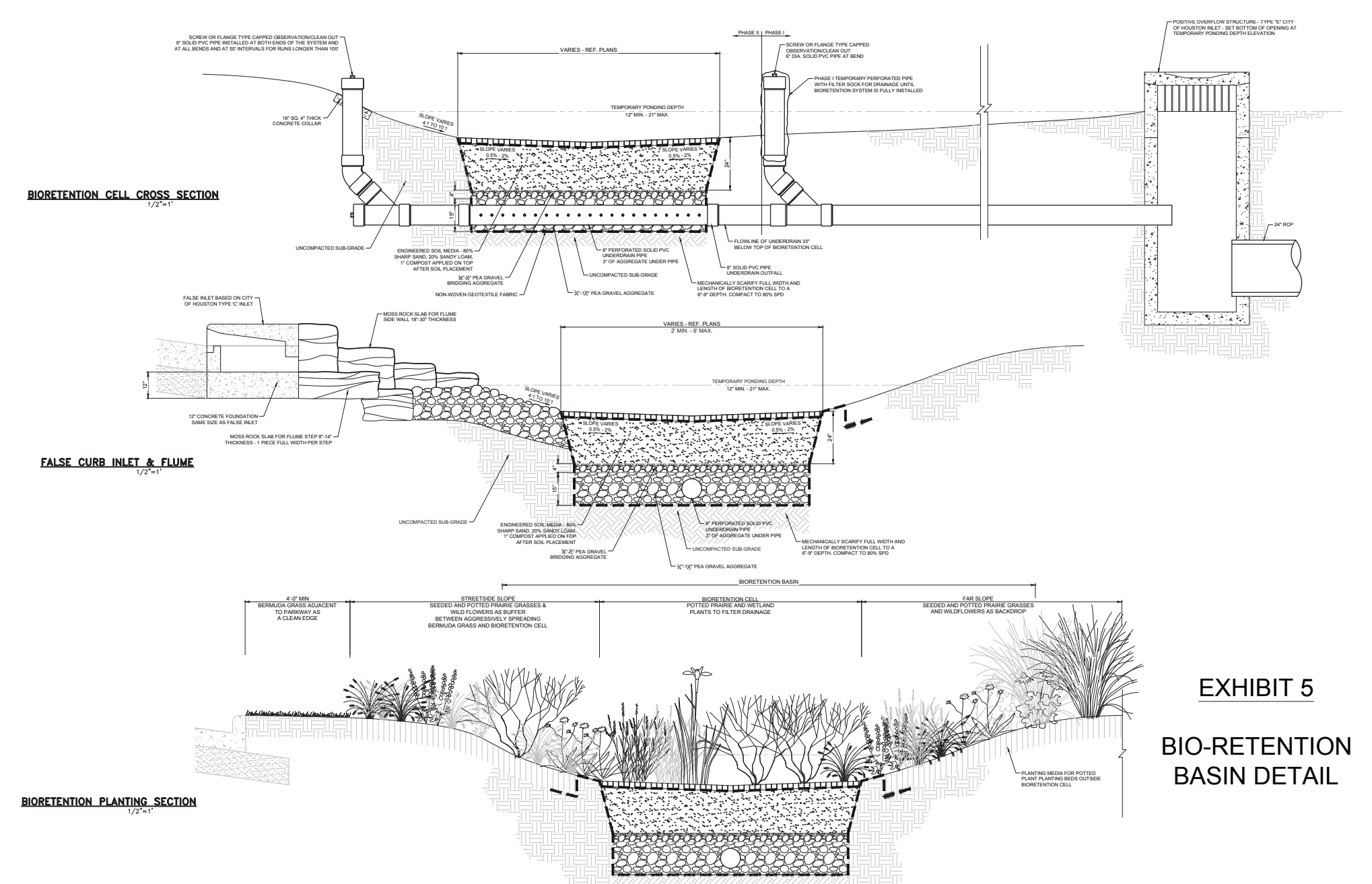


EXHIBIT 5  
BIO-RETENTION  
BASIN DETAIL

## BIO-RETENTION DETAILS



## PLANT MATERIAL