



96TH STREET

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LANDSCAPE REGULATIONS

General Principles

Landscaping, particularly in lush, tropical settings like South Florida, can be used to help create visual unity and coherence, and also to help articulate important or special places within a community context. More importantly -- street trees shade pedestrian pathways, helping to encourage and promote walkability, and provide spatial definition for the street in addition to a practical, as well as perceptual, measure of insulation from nearby traffic.

Landscape can also play a role in “green” communities, in terms of moderating micro-climatic impacts, and in terms of the suitability of the species deployed, relative to their location and climatic conditions in which they will reside.

Observation

There is, at present, no coherent landscaping scheme in Surfside to speak of, leading to a discordant visual effect, as

well as some very real potential safety hazards, in terms of intersection sight lines, “eyes on the street,” etc. In addition, the combination of a lack of the street trees, and relatively wide residential streets, results in an unsafe and unpleasant walking environment -- counterproductive to encouraging walking and/or biking as viable transportation modes and/or recreational activities, within the residential neighborhoods of Surfside.

Discussion

The residents stated that they would like more street trees, as it is uncomfortable to walk in Surfside without shade. They also expressed a strong desire for a safer walking environment, though many were not willing to give up space in their front yards to make room for sidewalks. That may have been a perceptual problem, however, as the needed space in question would mostly comprise existing municipal right-of-way, however the sentiment was sincere, and also reflected concern over a potential impact to on-street parking, as well as any costs associated with implementation.



TOP LEFT: Shade trees help to create a more attractive and comfortable walking experience.

ABOVE: Manicured hedges can provide privacy where desired, but also can present safety issues, reduce neighborly interaction, and contribute to an overall sense of anonymity.

LEFT: A unified planting scheme can help bring visual coherence to Surfside streets.



Bay to ocean thoroughfare section illustrates context specific landscape elements in a cross-island framework.

Specific Recommendations

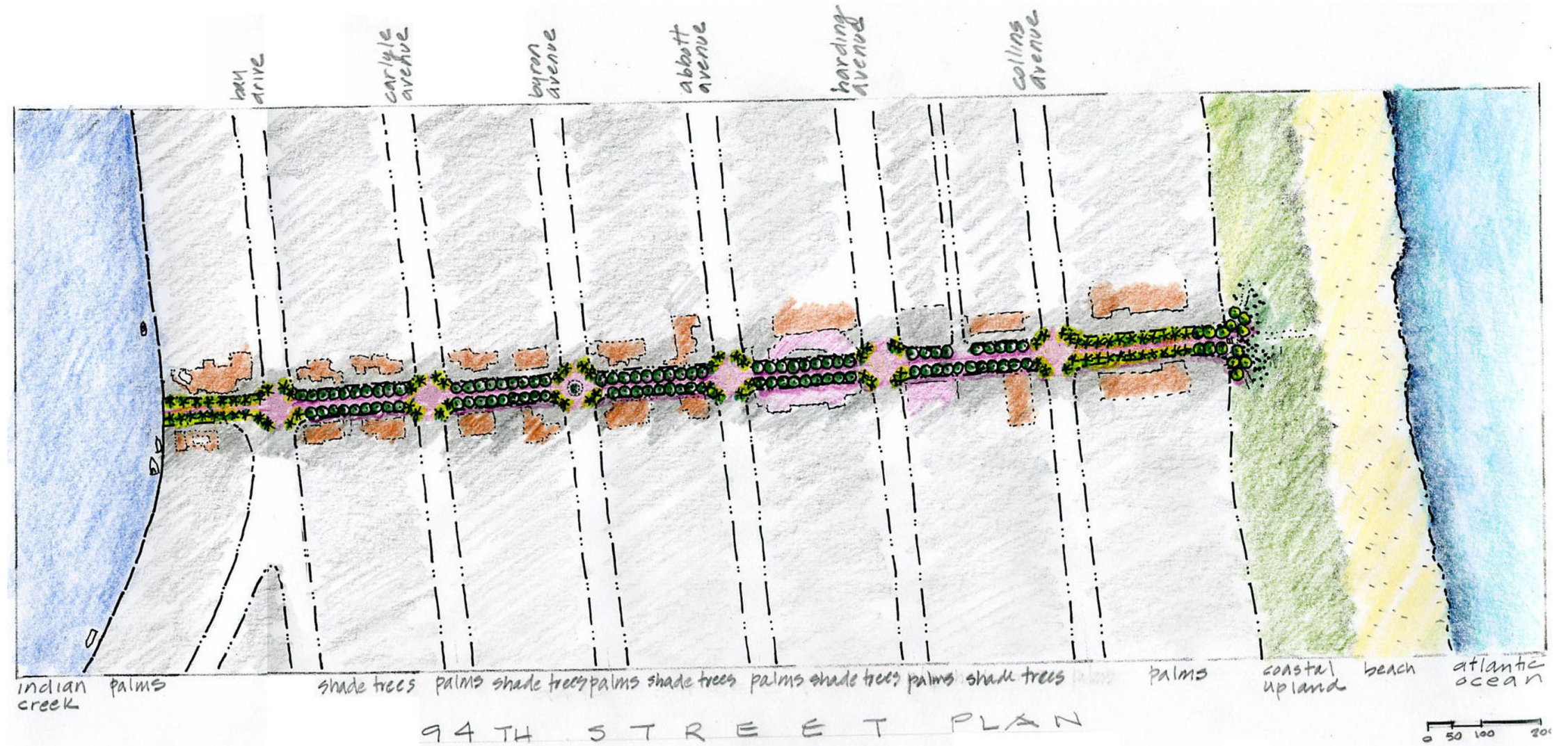
Comprehensive Street Landscaping Regulations

Because of the unique and often conflicting desires and objectives related to enhancing the visual coherency of the neighborhoods, while also improving pedestrian comfort and safety, a comprehensive solution was proposed that attempts to address all of those issues within one overall design framework.

Specifically, it is recommended that a comprehensive system of planting street trees within the existing right-of-way, and more importantly, within the existing paved portion of the street (see images), be implemented in such a way that:

1. The perceived visual width of the street is reduced, thereby encouraging traffic to move more slowly;
2. Storm water run off and absorption is not impeded and ideally, improved;
3. On-street parking is not appreciably impacted or reduced, nor driveway access;
4. Bike lanes and “virtual” sidewalks are added to the carriageway (lane) such that when one car is traveling down the street, a clearly delineated pedestrian path is perceptible but that:
 - a. The street will function as an effective “yield street” when oncoming cars approach; i.e., they will both be obliged to slow and, if necessary, “encroach” upon the virtual pedestrian/bike lanes, in order to pass, and
 - b. Worst case scenario, pedestrians can always step between trees and/or parked cars, as needed, for additional safety. While this is not ideal, it represents an effective compromise, given all of the practical constraints placed upon the resolution of this particular issue, and lastly;
5. It is felt that this approach (along with the removal or relocation of the existing overhead power lines) will provide sufficient visual coherency as to allow for a significant level of landscaping “flexibility” within private yards (beyond the actual R.O.W., subject to safety considerations).

Specific recommendations are as follows: Plant street trees along all residential streets for a continuously shaded walking network, but switch to palm trees at intersections to allow more light and better visibility at these location.



TYPICAL BAY TO OCEAN THOROUGHFARE PLAN ILLUSTRATES CONTEXT SPECIFIC LANDSCAPE ELEMENTS IN A CROSS-ISLAND FRAMEWORK.

Improve 91st street by creating a more formal axis through the town from Indian Creek Village to Collins. Plant shade trees along the street with palm trees at the intersections.

Create a jogging and cycling loop around Surfside, connecting all existing parks and the proposed street-end parks along Bay Drive with the beach through the use of an integrated network of footpaths, sidewalks, and designated bike lanes. Plant a different species of trees along this route, to help denote the significance of this path.

A plant species list should be developed and implemented, which promotes and requires the use of species specifically native to, or appropriately acclimated to, the localized and regional climatic conditions the area is subjected to. Recommended species are :

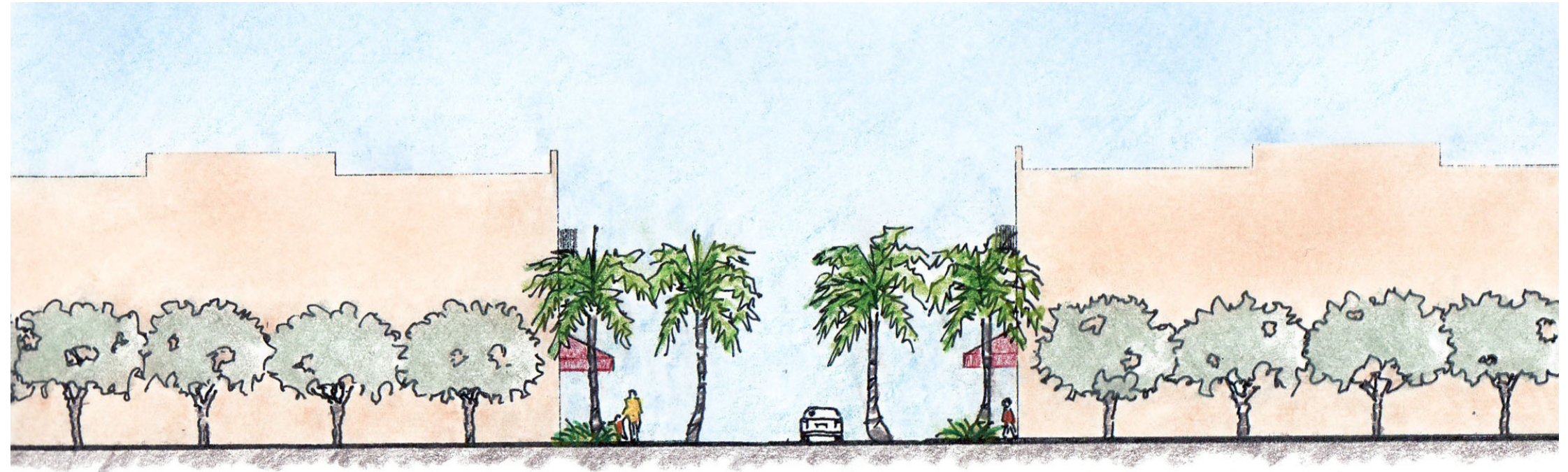
Residential neighborhood.

- Live oaks
- Mahoganies
- Gumbo limbos
- Hurricane palms at intersections

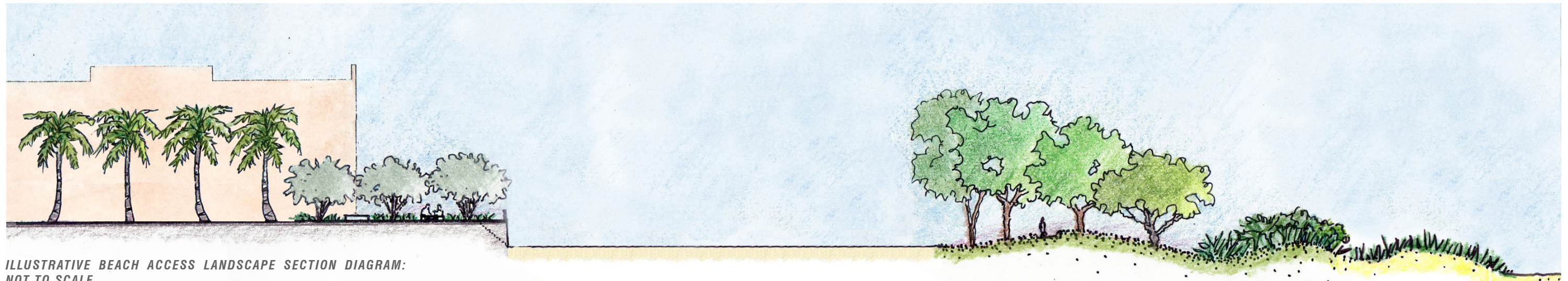
Downtown

- Hurricane palms
- Coconut palms towards the beach

And lastly, fence and hedge regulations should be developed as well as standards for their maintenance.



ILLUSTRATIVE COMMERCIAL AREA LANDSCAPE SECTION DIAGRAM:
NOT TO SCALE



ILLUSTRATIVE BEACH ACCESS LANDSCAPE SECTION DIAGRAM:
NOT TO SCALE

Storm Water Retention

There are several issues related to storm water management best practices and potential storm water management strategies for the Town of Surfside. The first is related to the unique nature of South Florida's topography and hydrology; the second relates specifically to Surfside's history and the costal barrier islands in general.

The history of Surfside is the same history as most of South Florida barrier islands, such as Miami Beach. The Town was once a low lying barrier island comprising a beach, coastal dune area, and a bayside mangrove estuary, which was later filled in to help create the developable area now known as Surfside. Like most barrier islands, the relative lack of elevation, along with water quality issues associated with the health of the bay, complicate the issue of storm water management.

In general, most urbanized areas are have street sections optimized around pedestrian movements and walkability, which often means a continuous curb and gutter, sidewalks, and storm sewers, and that is indeed the case in Surfside's mixed-use downtown area. In many residential areas throughout South Florida, however, the streets have no curb or sidewalk, and an open swale (and/or simply a private lawn) acting as the primary conduit for conveyance, retention, infiltration and recharge.

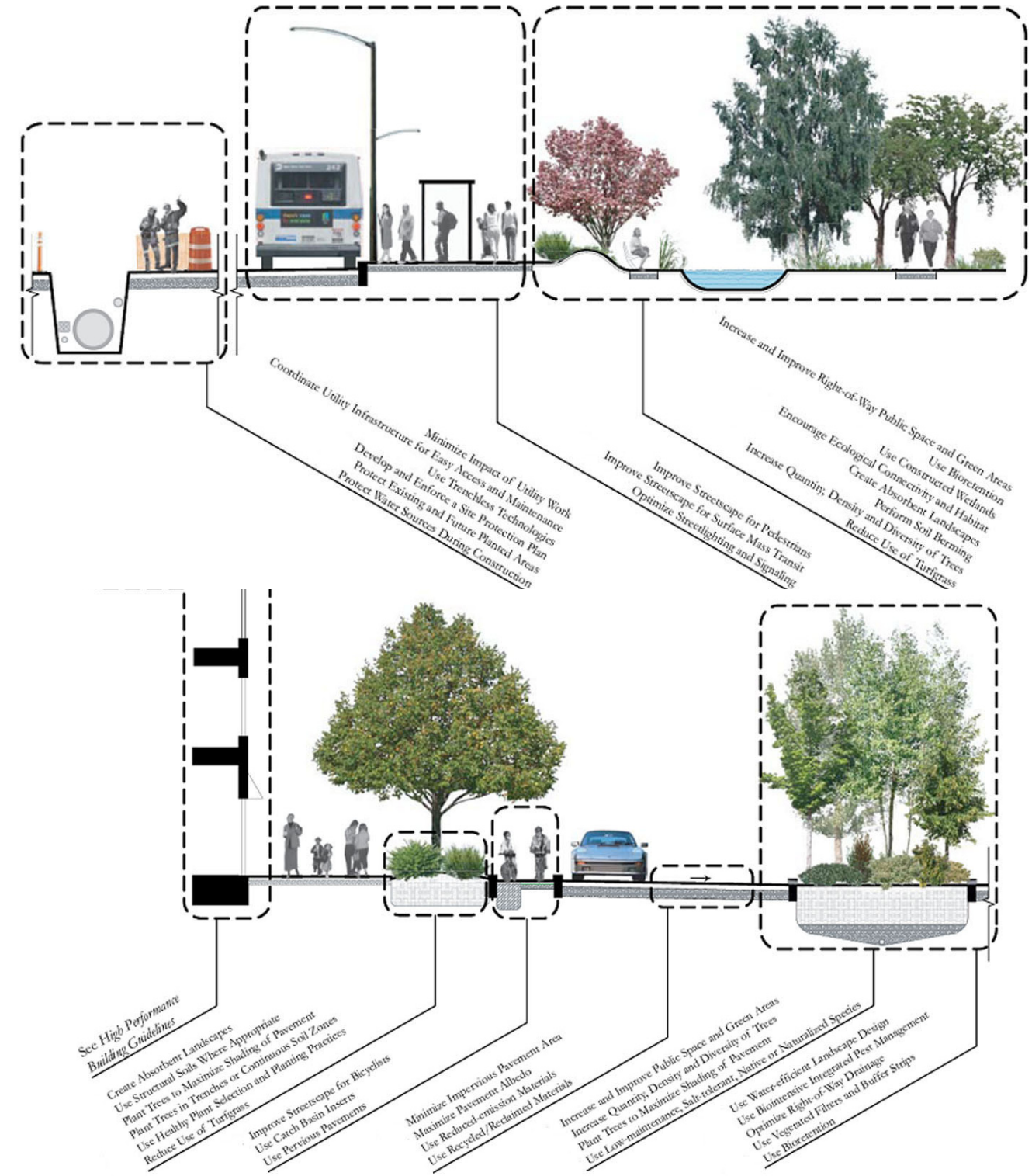
In these instances, the introduction and use of bio-retention swales can dramatically enhance the quality and nature of stormwater management by managing storm water at the source, allowing rainfall to be returned to the natural cycle as early in the urbanized environment as possible. Bio-retention swales are an excellent tool for capturing and retaining storm water on site, and allowing for



ABOVE: GENERIC EXAMPLES OF LANDSCAPED BIO-RETENTION SWALES



RIGHT: ILLUSTRATIVE DIAGRAMS SHOWING TYPICAL "GREEN" STREET SECTIONS



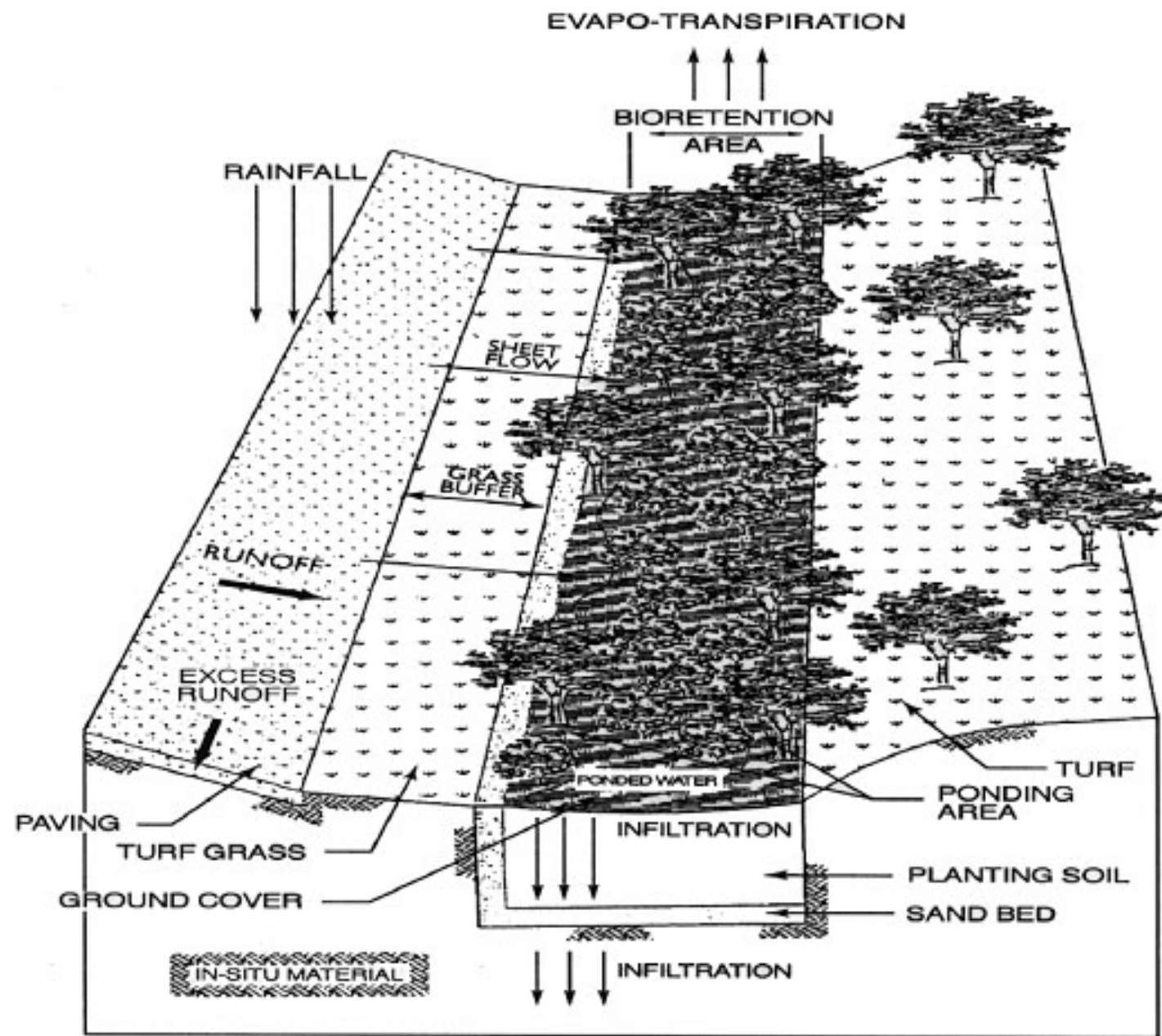


Figure 1: Bioretention Area Conceptual Layout (Functioning like an Infiltration Basin)

Source: Prince George's County Department of Environmental Protection, 1993



The Discovery Center parking lot features bioswales planted with native species that filter pollutants from parking lot runoff.

both filtration and recharge at the source, thereby minimizing the need for costly conveyance and large scale retention facilities.

Such swales also offer water quality improvements and evapotranspiration. In Surfside, certain areas have become problematic, likely due to a combination of soil compaction, which interferes with localized retention infiltration capabilities; grade issues, which can contribute to water collecting in specific areas and overwhelming the ability of the pervious surfaces to absorb the runoff in an efficient and timely fashion; and water quality issues, as the storm water under these circumstances rarely benefits from the normal processes associated with a well designed system.

In the case of Surfside, where there is continuous curb and gutter throughout the residential areas, such a system can be implemented through the use of periodic breaks in the curb, which can allow for the introduction of bio-retention swales within the right-of-way. The existing storm drains would then be integrated into these swales such that retention, filtration, recharge and water quality would be improved prior to storm water entering the existing system.

Without the benefit of a detailed engineering and drainage analysis, it is still reasonable to assume that a more focused grading effort targeting the isolated problem areas of standing water related to storm events, could benefit from a comprehensive strategy to manage storm water collection and treatment based upon current best practices, including bio-retention swales and other recognized "green" techniques. These approaches may include soil reconstitution and specific planting selections to optimize the storage, evapotranspiration, and water quality improvement opportunities in each location.