Metropolitan
St. Louis Sewer
District

2350 Market Street
St. Louis, MO 63103-2555
(314) 768-6200

November 8, 2013

Ms. Brenda Guglielmina
DeepRoot Green Infrastructure, LLC
P.O. Box 927
Decatur, GA 30031-0927

RE: Silva Cell System: St. Louis MSD Submission

Dear Ms. Guglielmina:

The Metropolitan St. Louis Sewer District (MSD) has reviewed your application regarding the Silva Cell for use as a Best Management Practice for stormwater management. Silva Cell may be used to supplement permeable pavement as a stand-alone water quality BMP, subject to the following provisions:

- The Silva Cell is approved for use on new development and redevelopment sites of any size (including roadway projects) in which permeable pavement is used.
- The Silva Cell shall be designed and applied in accordance with the details attached to this letter. When supplemented with permeable pavement, the permeable pavement may manage a larger upstream tributary area (up to a ratio of 4:1) as a stand-alone BMP, regardless of the saturated hydraulic conductivity of the underlying soil.
- Channel Protection Volume (CPv) storage may be provided within the void space of the soil media, ponding zone, and within the rock layer of the permeable pavement.
- Project specific design calculations and maintenance plans furnished by DeepRoot LLC must be included within the project's "Stormwater Management Facilities Report" prepared by the consulting engineer.
- The initial installation of the Silva Cell under this design criteria in the MSD shall include the following:
    1) A manufacturer's or vendor's representative must be onsite during the proprietary BMP installation to ensure the product's installation requirements are met.
    2) Shop drawings indicating elevations of flowlines, weirs, pipe inverts, etc. will be required prior to installation.
    3) The manufacturer or vendor must arrange for an as-built survey of the proprietary BMP to be performed by a Missouri-registered Professional Land Surveyor once the device has been installed, and prior to any testing or monitoring.
    4) The manufacturer or vendor must perform quarterly inspections of the proprietary BMP during its' first year of operation, which will include visual inspections and quantitative analysis of the service's sediment removal efficiency, especially as compared to its design efficiency. MSD requests to be

invited to these inspections to further enhance familiarity and understanding of the device.

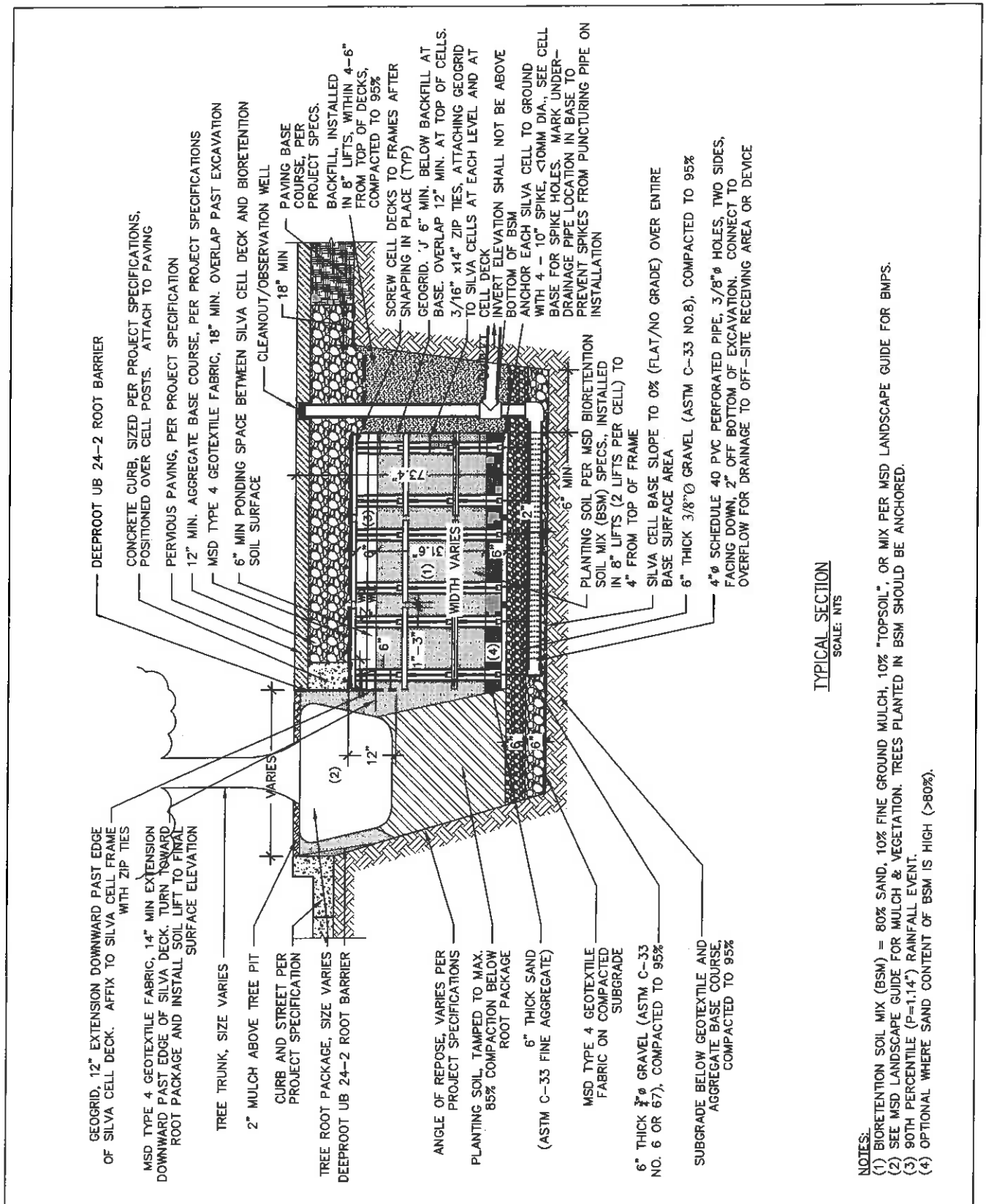
5) Formal reports shall be submitted to MSD, including as-builts and at each quarterly inspection. The reports shall include summaries, quantitative analysis mentioned in item 4, photographs of the structure, inlet, internal conditions of the structure, the filters, and outfall conditions, etc. The reports shall also evaluate the performance of the owner's adherence to the approved maintenance program, and offer suggestions for any areas of improvement.

MSD reserves the ability to withdraw or modify this approval based on subsequent information, including information indicating that this BMP does not satisfy MSD rules, requirements, or construction specifications.

Sincerely,

Jason Peterein, P.E.
Principal Engineer (BMP Committee Chairman)
Engineering/Planning – Development Review
Metropolitan St. Louis Sewer District

Pc: Brenda Guglielmina – DeepRoot, LLC
File



BIORETENTION WITH INTERNAL WATER STORAGE IN SOIL CELLS FOR RETROFIT TYPICAL SECTION

DEEPROOT GREEN INFRASTRUCTURE
Non-Standard Details of Sewer Construction

AUGUST 2013

DETAIL 5A-1

BIORETENTION WITH INTERNAL WATER STORAGE IN SOIL CELLS FOR RETROFIT TYPICAL SECTION	DEEPROOT GREEN INFRASTRUCTURE *Non-Standard Details of Sewer Construction*	
	AUGUST 2013	DETAIL 5A-2