



CITY OF CAMBRIDGE, MASSACHUSETTS

# PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

## SPECIAL PERMIT APPLICATION • COVER SHEET

In accordance with the requirements of the City of Cambridge Zoning Ordinance, the undersigned hereby petitions the Planning Board for one or more Special Permits for the premises indicated below.

Location of Premises: 350 Third Street, Cambridge, MA  
Zoning District: O-3A  
Applicant Name: Twining Properties  
Applicant Address: One Broadway, Cambridge, MA  
Contact Information: (617) 401-2871      david.downing@twiningp      (617) 401-3735  
Telephone #      Email Address      Fax #

List all requested special permit(s) (with reference to zoning section numbers) below. *Note that the Applicant is responsible for seeking all necessary special permits for the project. A special permit cannot be granted if it is not specifically requested in the Application.*

Zoning Section 22.33.2 Functional Green Roof

List all submitted materials (include document titles and volume numbers where applicable) below.

Site Context / Existing Conditions, Prospective, Schematic, and Section Plan

**Signature of Applicant:**

For the Planning Board, this application has been received by the Community Development Department (CDD) on the date specified below:

Date

Signature of CDD Staff

**OWNERSHIP CERTIFICATE**

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**Project Address:** 350 Third Street

**Application Date:** 11/21/12

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This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: Twining Properties LLC

at the following address: One Broadway, Cambridge, MA

to apply for a special permit for: Functional Green Roof Area

on premises located at: 350 Third Street

for which the record title stands in the name of: Residential Tower Apartment Unit, LLC

whose address is: 350 Third Street

by a deed duly recorded in the:

Registry of Deeds of County: Middlesex S. Book: 49126 Page: 368

*OR* Registry District of the Land Court,  
Certificate No.: \_\_\_\_\_ Book: \_\_\_\_\_ Page: \_\_\_\_\_

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Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

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To be completed by Notary Public:

Commonwealth of Massachusetts, County of \_\_\_\_\_

The above named \_\_\_\_\_ personally appeared before me,

on the month, day and year \_\_\_\_\_ and made oath that the above statement is true.

Notary: \_\_\_\_\_

My Commission expires: \_\_\_\_\_

**FEE SCHEDULE**

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**Project Address:** 350 Third Street

**Application Date:** 11/21/12

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The Applicant must provide the full fee (by check or money order) with the Special Permit Application. Depending on the nature of the proposed project and the types of Special Permit being sought, the required fee is the larger of the following amounts:

- If the proposed project includes the creation of new or substantially rehabilitated floor area, or a change of use subject to Section 19.20, the fee is ten cents (\$0.10) per square foot of total proposed Gross Floor Area.
- If a Flood Plain Special Permit is being sought as part of the Application, the fee is one thousand dollars (\$1,000.00), unless the amount determined above is greater.
- In any case, the minimum fee is one hundred fifty dollars (\$150.00).

**Fee Calculation**

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New or Substantially Rehabilitated Gross Floor Area (SF): × \$0.10 =

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Flood Plain Special Permit Enter \$1,000.00 if applicable:

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Other Special Permit Enter \$150.00 if no other fee is applicable: \$150.00

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**TOTAL SPECIAL PERMIT FEE** **Enter Larger of the Above Amounts: \$150.00**

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November 21, 2012

**SPECIAL PERMIT APP: PROJECT NARRATIVE**

350 Third Street, Cambridge, MA

PROJECT OVERVIEW

The Watermark project located at 350 Third Street in Cambridge, consists of 321 residential units and 25,000 square feet of retail. The building was completed in late 2006 and permitted under the City of Cambridge zoning ordinance for PUD-3. The building stands 23-stories tall abutting Third Street to the West, Kendall Street to the North, and Broad Canal Way to the South. Typical floors are “L”-shaped providing panoramic views overlooking the Charles River – see attached *Context Plan* for location details.

The purpose of this application is to request the conversion of the existing mechanical roof area accessed from the 21<sup>st</sup> floor to a “**Functional Green Roof Area**” pursuant to *Article 22.32* of the City Zoning Ordinance. This renovation will comply with “green roof” standards and will also include a wood deck meeting the requirements of *Article 22.34.2*, which allows hardscape to be no more than 15% of the *Functional Green Roof Area* and positioned with a 10-foot setback from the edge of the roof. These improvements qualify for the Gross Floor Area exemption detailed in the zoning code and therefore do not affect the current PUD. The addition of this *Functional Green Roof Area* will provide a significant amenity for the Watermark community, while promoting a richer living environment for existing and future residents.

COMPLIANCE WITH ZONING

The proposed Functional Green Roof Area complies with the intention of the zoning ordinance: “... by providing for limited access and enjoyment of green roofs by occupants of a building,” and specific provisions noted below:

**Art. 22.32** The roof area is open to the sky, and surfaced with soil and planting materials that retain rainwater and absorb heat. The depth of the soil and planted material will be approximately 4-4.75”, exceeding the 2” minimum requirement – see attached *Section Plan* for further detail.

**Art. 22.33.2** The *Functional Green Roof Area* will be accessible to all building occupants, including residents and visitors of the sister tower opening in the spring of 2013. The majority of the green roof area will be “structural lawn” with an embedded plastic grid in the growth media designed to withstand pedestrian traffic without damaging the grass. Located on the 21<sup>st</sup> floor, the *Functional Green Roof Area* is visually and acoustically isolated from adjacent uses. The closest adjacent use is the office building at One Broadway (home of the Cambridge Innovation Center), a commercial neighbor to the South.

**Art. 22.34.2** As measured in the chart below, green roof areas include structural lawn (permitting pedestrian access without damaging the grass), ornamental grass planters, vine planters at the base of vertical “green” walls that hide mechanicals, and sedum planted areas. The accessible hardscape

includes a wood deck, set back 10 feet from roof edges, and stepping-stone pavers. Please see attached Design and Perspective Plans for further visuals.

Functional Green Roof Area	SF	Comments
Greenscape	2,034	Structural Lawn + Planters
Hardscape	296	15% of Greenscape
<b>Total</b>	<b>2,330</b>	

\* Note: hardscape is 15% of the Functional Green Roof Area as required by zoning

COMPLIANCE WITH CRITERIA SPECIFIC TO SPECIAL PERMITS BEING SOUGHT

**Art. 22.34.2** The proposed *Functional Green Roof Area* is isolated, far from adjacent properties, and will have no adverse impacts on abutters due to its remote location and orientation. The closest abutter is the office building at One Broadway, the far side of Broad Canal Way, approximately 150’ to the South.

COMPLIANCE WITH GENERAL SPECIAL PERMIT CRITERIA (SECTION 10.43)

*Criteria: all criteria permitting the issuance of a Special Permit are satisfied:*

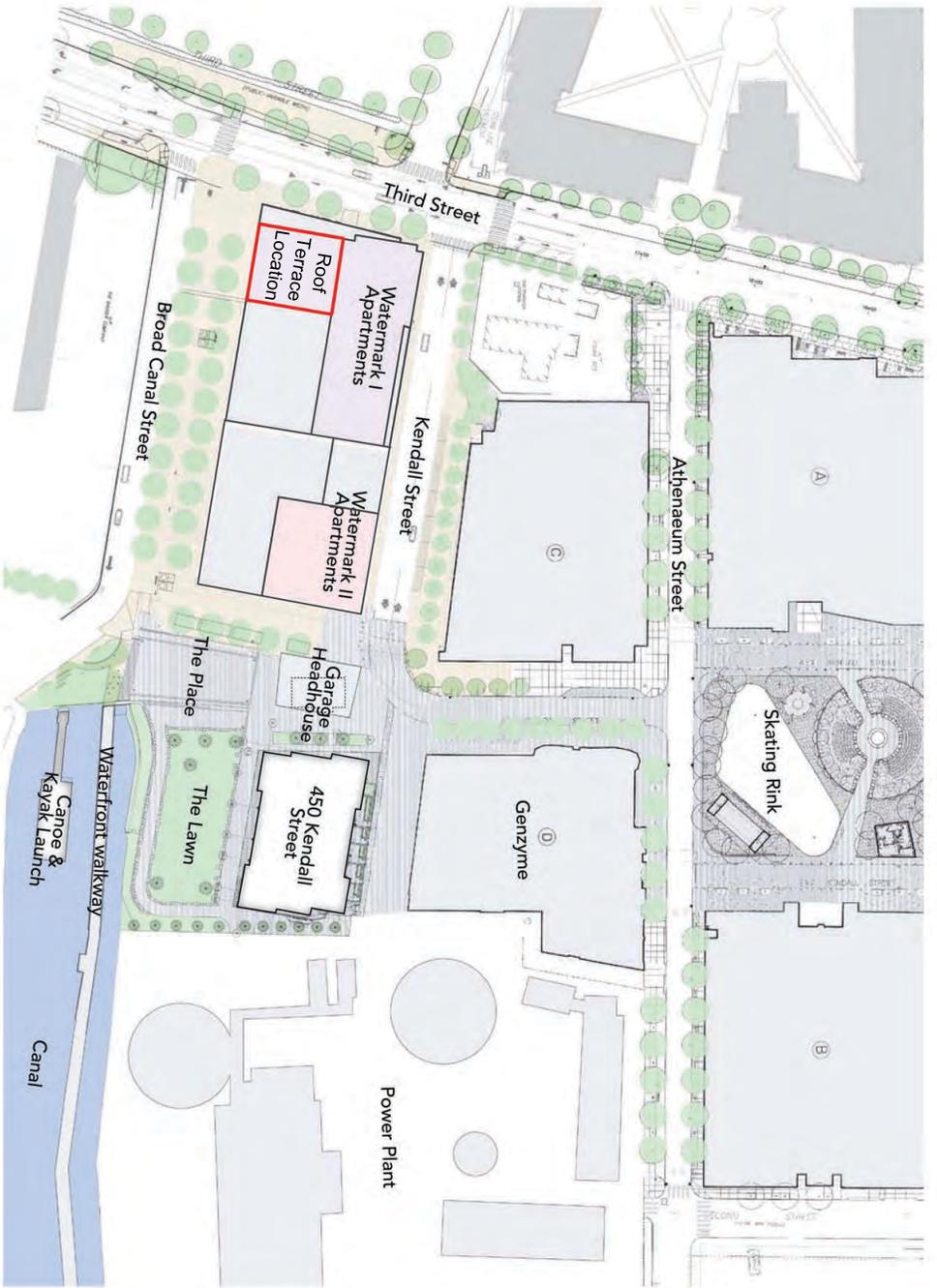
- (a) All requirements of the Ordinance are met.
- (b) There is no traffic impact.
- (c) Adjacent uses are not impacted: the functional green roof is isolated on the 21<sup>st</sup> floor and removed from adjacent uses.
- (d) Occupants of the building and Cambridge citizens are not impacted: the active roof area is far from building occupants and adjacent uses.
- (e) The PUD district and adjoining districts are not impacted: the functional green roof is isolated on the 21<sup>st</sup> floor and removed from adjacent uses.
- (f) Functional Green Roof areas are consistent with Urban Design Objectives, and are specifically encouraged in Art 22.31, which states, “the purpose of this section is to remove potential impediments to the development of green roof systems on new and existing buildings by clarifying that such systems should not count against a building’s Gross Floor Area, and by providing for limited access and enjoyment of green roofs by occupants of the building.”

*Incredible View from 21<sup>st</sup> Floor Roof*



*Street View from Third Street & Broad Canal Way*

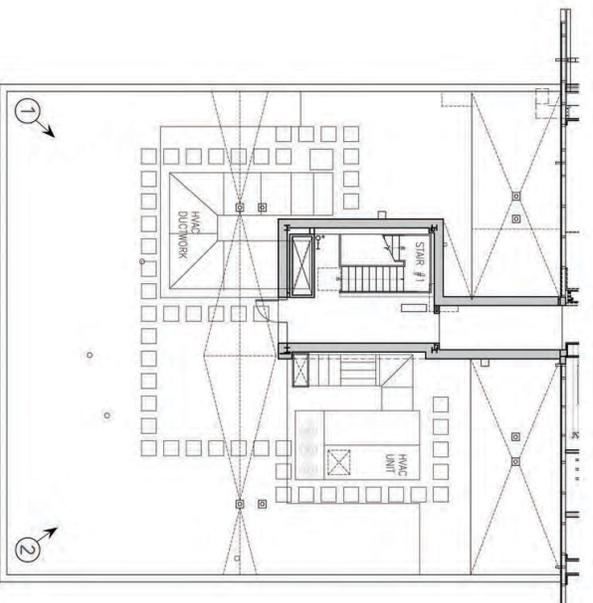




SITE CONTEXT MAP

WM1 PROPOSED 21st FLOOR ROOF TERRACE

11.16.2012 Not to Scale



EXISTING CONDITIONS - ROOF TERRACE

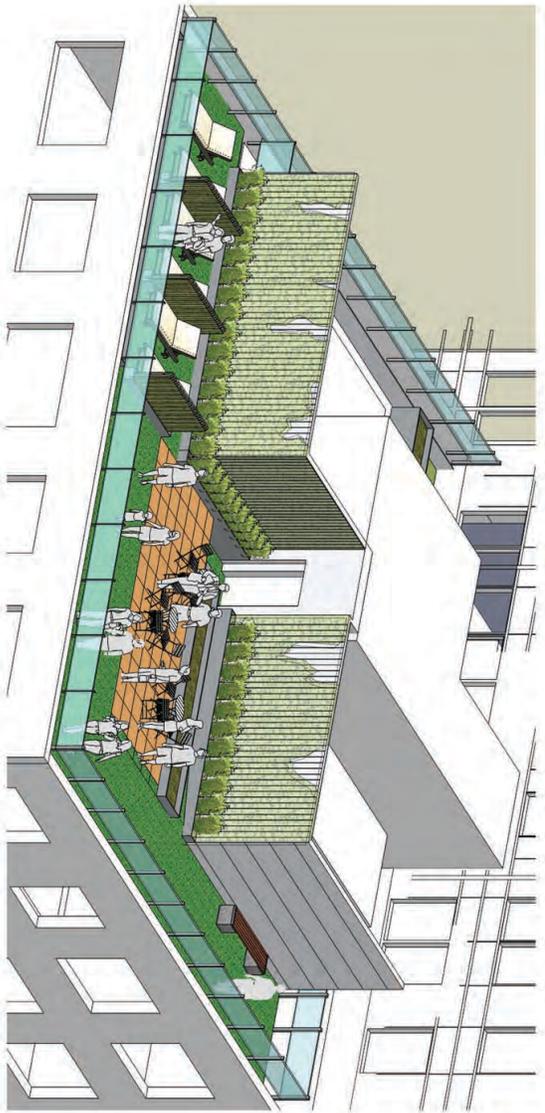


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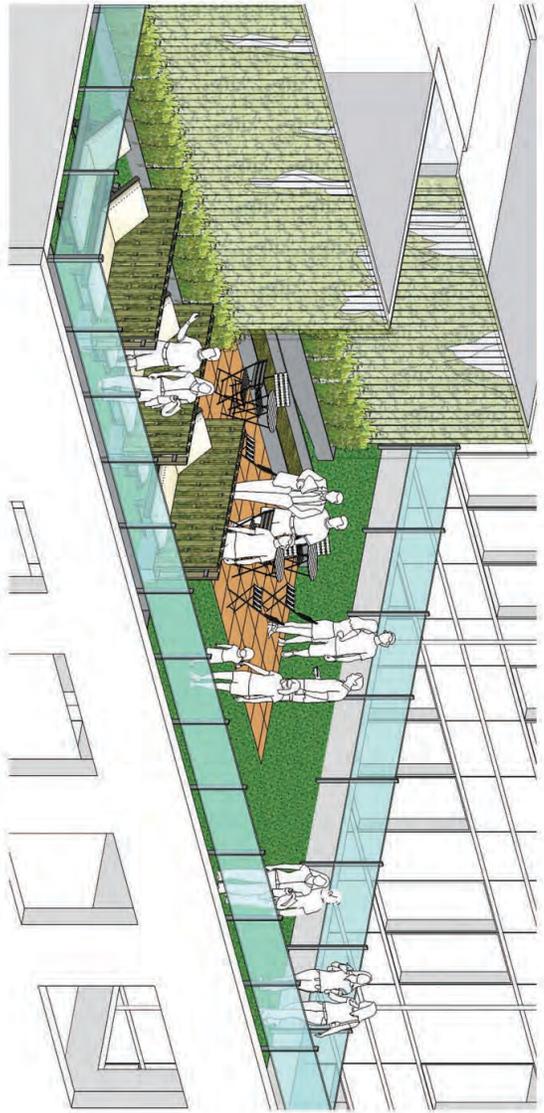


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PERSPECTIVE LOOKING NORTH-WEST



PERSPECTIVE LOOKING NORTH-EAST

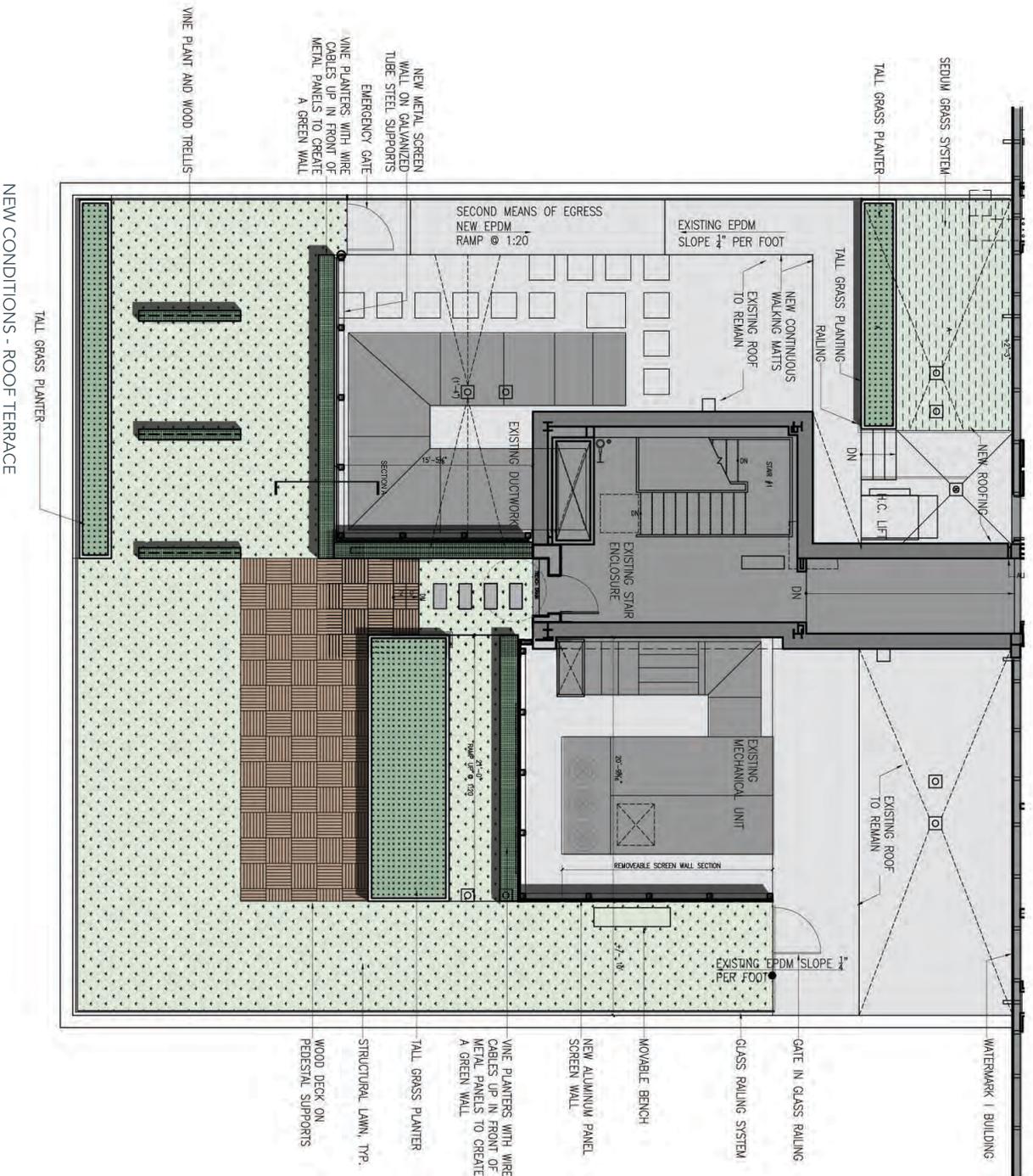
**WM1 PROPOSED 21st FLOOR ROOF TERRACE**

11.16.2017 Not to Scale



WM1 PROPOSED 21st FLOOR ROOF TERRACE

11.16.2012 1'-0" = 1/8" Scale



**KEY PLAN**

	STRUCTURAL LAWN		WOOD DECK
	TALL GRASS PLANTERS		PAVERS
	VINE PLANTERS WITH WIRE CABLES		SEDUM
	VINE PLANT AND WOOD TRELLIS		
	TOTAL GREENSCAPE		TOTAL HARDSCAPE
	2,034 SF		296 SF

TOTAL PROPOSED ROOF TERRACE AREA: 2,330 SF  
 TOTAL ZONING HARDSCAPE REQUIRED @ 15%: 296 SF





BODPAVE®85

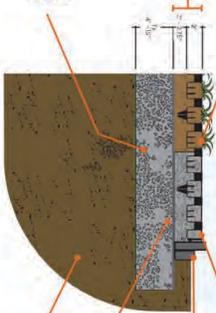
## Design Guidance For Stormwater

BODPAVE®85 porous pavers are specially designed to incorporate a greater water holding capacity for stormwater runoff. In contrast to other open cell systems and permeable paving, BODPAVE®85 pavers reinforce 4" (min) of 60/40 Geardcompost Rootzone (see detail), providing superior water infiltration and retention for stormwater events. The superior performance decreases plant mortality and increases plant health. In addition to the Rootzone's 18-26% water holding capacity, BODPAVE®85 pavers have integrated water retention cells that encourage additional moisture holding up to a certain saturation point before draining out the weep hole (see image). If further water capacity is needed, the sub-base can be designed for holding (see detail).

BODPAVE®85 paver cells filled within 0.2" of the surface with 60/40 rootzone then seeded or tilled and fertilized

4" - 4.75" of root zone/ aggregate available for stormwater holding capacity

Open Graded Sub-Base Layer (4" Open Depth C1X1) with 18-26% water holding stormwater capacity.



BODPAVE®85 filled with angular aggregate in range of 0.2" - 0.8"

Optional vertical edging board or curb

TYPAR® 3401 Geotextile Separation Fabric

Subgrade Soil (Subsoil)

BODPAVE®85 porous grass pavers create a structurally stable soil profile strong enough to support Heavy Goods Vehicles (HGV) while protecting the soil profile from compaction. Structural support ensures pore space through the entire 4-4.75" profile to maintain aeration, infiltration, and water holding capacity for infiltration and vegetative growth. Regardless of subsoil conditions, BODPAVE®85 pavers will reduce stormwater movement through the system and establish a naturalistic water cycle by:  
Absorbing the majority of heavy rainfall by infiltrating high catching contaminants and reducing nutrients in the water system by catching, containing, and cleaning the first flush (1-1.5") of rainfall.  
Reducing impact on adjacent water bodies and increasing local infiltration and evapotranspiration

### 60:40 Rootzone Calculation Values: 18-26% water capacity

4" - 4.75" Rootzone can infiltrate water at 0.15"-0.30"/hr and Retain 0.72"-1.24" (min) of rainfall, not including designed sub-base storage

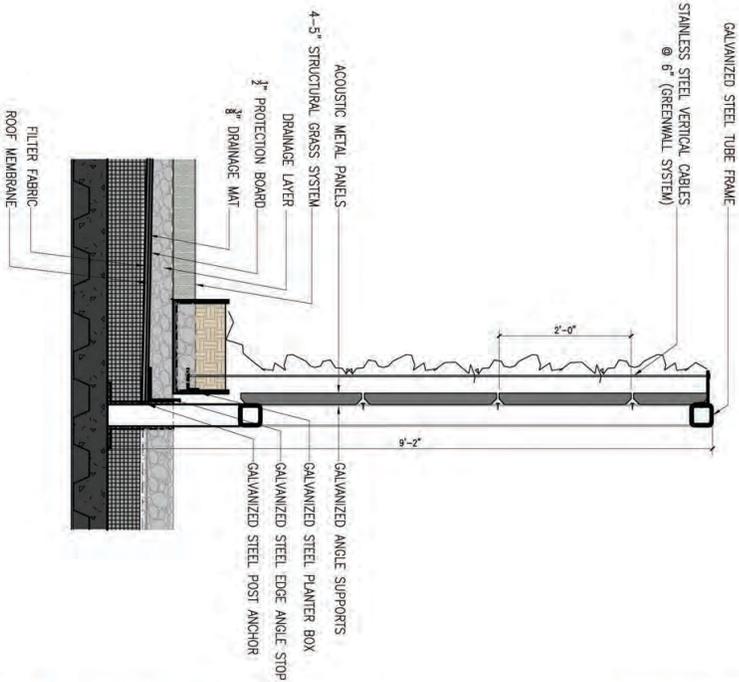
General Calculation Values [May Vary]	Porous Sub-base or Soils	Non-porous Sub-base or Soils
Curve Number Value (CN)	39	74
Rainfall Coefficient (C <sub>2</sub> )	0.10	0.40
Manning's Roughness Coefficient <sup>2</sup>	0.24	0.24

<sup>1</sup> SDS (now VEGIS) (7860) Urban Rootzone for Small Watersheds US Dept. of Agric. Soil Conservation Service in BS

<sup>2</sup> Values for Storm S. Weber & DeDeo Site Engineering for Lakeside Advanced Facility Station 15, 118

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SECTION A AT GREEN SCREEN WALL

## WM1 PROPOSED 21st FLOOR ROOF TERRACE

1:11.6/2012 1'-0" = 1" Scale

## STRUCTURAL GRASS SPECIFICATIONS

