Natural Drainage SmartCode Module

Prepared by PlanGreen - Mary Vogel

Water is the driver of Nature.

Leonardo da Vinci

These annotations are advisory only. The SmartCode itself appears only on the right side of each spread.

NATURAL DRAINAGE STANDARDS

The Natural Drainage Standards may be incorporated into the Riparian and Wetland Buffers Module for Article 3, or, if that Module is not used, then into the Public Frontage Standards that are already in the base SmartCode. Alternatively, they may be added to the base Code as an addendum. The numbers provided here are for incorporation into the Public Frontage Standards. Note that there is "should" language in green type which may be changed to the mandatory "shall." For more detailed drainage strategies, see the Sustainable Urbanism Module and the Light Imprint Matrix at www.transect.org.

3.7.3c This provision becomes letter c. The calibrator must reletter the rest of the subsection if inserting it there.

5.13.1a If this provision is included, make sure it does not conflict with any requirements for sloped (pitched) roofs in the same T-zone. If sloped roofs are required in the code, it is possible to incentivize green roofs by allowing flat roofs only if they are green roofs. Some green roofs are possible on roofs with gentle pitch. See the Sustainable Urbanism Module for pitch recommendations.

ARTICLE 7. DEFINITIONS OF TERMS NATURAL DRAINAGE STANDARDS

These terms should be added to Article 7 if they appear in the calibrated code.

ARTICLE 3. NEW COMMUNITY SCALE PLANS
NATURAL DRAINAGE STANDARDS

3.7.3 a. General to all zones T1, T2, T3, T4, T5, T6

iv. Trees should be planted below the grade of the sidewalk and the street in structural cells with sufficient root space.

v. Rain Gardens and Bioswales should be installed to infiltrate runoff from parking lots, Thoroughfares, Plazas and other impervious surfaces.

vi. Where vegetative solutions are not feasible, porous concrete or porous asphalt should be specified for Sidewalks, parking lots, and Plazas to infiltrate stormwater.

3.7.3 c. Specific to zones T3, T4

i. Native plant perennial landscapes should replace turf grass where possible and be very diverse.They should be placed lower than walkways, not mounded up.

ARTICLE 5. BUILDING SCALE PLANS
5.13 NATURAL DRAINAGE STANDARDS

5.13.1 General to Zones T3, T4, T5, T6

a. Buildings should be equipped with roofs of shallow 4-inch soils and drought-tolerant plants. Buildings approved for Intensive Green Roofs may hold soils deeper than 4" and larger plants and trees.

b. Balconies should be equipped with planter boxes designed to capture runoff from the balcony.

c. Green walls, if provided, shall be restricted to non-invasive species.

d. Cisterns may be used to capture and recirculate stormwater from buildings.

5.13.2 Specific to Zone T3

a. The landscape installed shall consist primarily of native species requiring minimal irrigation, fertilization, and maintenance

5.13.3 Specific to Zones T3, T4

a. Native plant perennial landscapes should replace turf grass wherever possible and be highly diverse. These should be placed lower than walkways, not mounded up.

5.13.4 Specific to Zones T4, T5, T6

a. The landscape installed shall consist primarily of durable species tolerant of soil compaction.

b. Planter boxes should be bottomless, flow-through boxes with native plants, placed next to buildings and designed to capture building runoff. They may be placed in courtyards or adjacent sidewalks with runoff sent to them via French drains or hidden pipes.

ARTICLE 7. DEFINITIONS OF TERMS - NATURAL DRAINAGE STANDARDS

Bioswale: an extended Rain Garden that sometimes runs the length of the block.

Green Roof: see Definitions for Sustainability Tables.

Intensive Green Roof: see Definitions for Sustainability Tables.

Rain Garden: sunken garden using native plants and sometimes trees.