

**CITY OF BALTIMORE
COUNCIL BILL 10-0434
(First Reader)**

Introduced by: The Council President
At the request of: The Administration (Department of Public Works)
Introduced and read first time: January 11, 2010
Assigned to: Land Use and Transportation Committee

REFERRED TO THE FOLLOWING AGENCIES: City Solicitor, Planning Commission, Department of Public Works, Department of Housing and Community Development, Police Department, Baltimore Development Corporation, Department of Finance, Board of Estimates, Commission on Sustainability

A BILL ENTITLED

1 AN ORDINANCE concerning

2 **Stormwater Management**

3 FOR the purpose of modifying the provisions governing stormwater management to comply with
4 new requirements of State law; requiring the development, review, and approval of phased
5 plans for stormwater management; establishing certain minimum control requirements to
6 manage stormwater by using environmental site design to the maximum extent practicable;
7 requiring certain site design techniques and certain structural and nonstructural practices;
8 requiring certain reports and inspections; providing for certain exemptions, waivers, and
9 variances; imposing certain fees; defining and redefining certain terms; correcting, clarifying,
10 and conforming related language; providing for a special effective date; and generally relating
11 to the protection, maintenance, and enhancement of the public health, safety, and welfare
12 through the management of stormwater.

13 BY adding

14 Article 7 - Natural Resources
15 Section(s) 21-1(e-1), (i-1), (j-1), (l-1), (p-1), (t-1), and (v-1), and 26-8(c)
16 Baltimore City Code
17 (Edition 2000)

18 BY repealing and reordaining, with amendments

19 Article 7 - Natural Resources
20 Section(s) 21-1(d), (f), (o), (p), (s), (t), (v), (x), (y) and (bb), 21-3, 21-4, 21-6(b), 22-1,
21 22-2, 22-3, 22-4 to 22-6, 22-7(a)(7), (10), (11), and (14) and (b), 22-8, 22-9(a), 22-10(a)
22 and (c), 23-1, 23-2, 23-4(a)(4), 23-6(a)(1) and (b)(2), (3), and (7), 23-7, 24-2(5), 24-3,
23 25-1(a) and (b)(2), 25-2, 25-3(a) and (d), 25-4(2), 26-1, 26-2, 26-3(a) and (h), 26-4(c),
24 26-7(a), 27-1(b), 27-2(a) and (b), 27-3(a), 27-4, and 27-5(d) and (e)(1)
25 Baltimore City Code
26 (Edition 2000)

EXPLANATION: CAPITALS indicate matter added to existing law.
[Brackets] indicate matter deleted from existing law.

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1 BY repealing
2 Article 7 - Natural Resources
3 Section(s) 21-1(z) and 25-3(e)
4 Baltimore City Code
5 (Edition 2000)

6 **SECTION 1. BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF BALTIMORE,** That the
7 Laws of Baltimore City read as follows:

8 **Baltimore City Code**

9 **Article 7. Natural Resources**

10 ***Division II: Stormwater Management***

11 **Subtitle 21. Definitions; General Provisions**

12 **§ 21-1. Definitions.**

13 (d) *Channel protection storage volume.*

14 “Channel protection storage volume” means the volume, calculated in accordance with
15 the STATE’S Design Manual, used to design structural management practices to control
16 stream channel erosion.

17 (E-1) *DESIGN GUIDELINES, CITY.*

18 “DESIGN GUIDELINES, CITY” MEANS THE 2010 BALTIMORE CITY STORMWATER DESIGN
19 GUIDELINES, AND ALL SUBSEQUENT ADDITIONS, REVISIONS, AND AMENDMENTS TO IT.

20 (f) *Design Manual, STATE.*

21 “Design Manual, STATE” means the 2000 Maryland Stormwater Design Manual[,
22 Volumes I and II], and [any] ALL subsequent additions, revisions, and amendments to it.

23 (I-1) *ENVIRONMENTAL SITE DESIGN.*

24 “ENVIRONMENTAL SITE DESIGN” MEANS USING SMALL-SCALE STORMWATER
25 MANAGEMENT PRACTICES, NONSTRUCTURAL TECHNIQUES, AND BETTER SITE PLANNING
26 THAT, IN ACCORDANCE WITH METHODS SPECIFIED IN THE STATE’S DESIGN MANUAL, ARE
27 USED TO MIMIC NATURAL HYDROLOGIC RUNOFF CHARACTERISTICS AND MINIMIZE THE
28 IMPACT OF LAND DEVELOPMENT ON WATER RESOURCES.

29 (J-1) *IMPERVIOUS AREA.*

30 “IMPERVIOUS AREA” MEANS ANY SURFACE THAT DOES NOT ALLOW STORMWATER TO
31 INFILTRATE INTO THE SOIL SURFACE.

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1 (L-1) *MAXIMUM EXTENT PRACTICABLE.*

2 "MAXIMUM EXTENT PRACTICABLE" MEANS STORMWATER MANAGEMENT SYSTEMS
3 DESIGNED SO THAT:

4 (1) ALL REASONABLE OPPORTUNITIES FOR USING ENVIRONMENTAL SITE DESIGN
5 PLANNING TECHNIQUES AND TREATMENT PRACTICES ARE EXHAUSTED; AND

6 (2) A STRUCTURAL BEST MANAGEMENT PRACTICE IS IMPLEMENTED ONLY WHERE
7 ABSOLUTELY NECESSARY.

8 (o) *Overbank flood protection volume.*

9 "Overbank flood protection volume" means the volume, calculated in accordance with
10 the STATE'S Design Manual, controlled by structural practices to prevent an increase in
11 the frequency of out of bank flooding generated by development.

12 (p) *Person.*

13 (1) *IN GENERAL.*

14 "Person" means:

15 (I) [(1)] an individual;

16 (II) A PARTNERSHIP, FIRM, ASSOCIATION, CORPORATION, OR OTHER ENTITY OF ANY
17 KIND; OR

18 (III) [(2)] a receiver, trustee, guardian, personal representative, fiduciary, or
19 representative of any kind[; or

20 (3) a partnership, firm, association, corporation, or other entity of any kind].

21 (2) *INCLUSIONS.*

22 "PERSON" INCLUDES, EXCEPT AS USED IN § 28-13 {"CRIMINAL PENALTIES"} OF THIS
23 DIVISION II:

24 (I) THE FEDERAL GOVERNMENT;

25 (II) THE STATE GOVERNMENT;

26 (III) ANY COUNTY, MUNICIPAL CORPORATION, OR OTHER POLITICAL SUBDIVISION OF
27 THE STATE; OR

28 (IV) ANY OF THE ENTITIES, INSTRUMENTALITIES, OR OTHER UNITS OF THESE
29 GOVERNMENTS.

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1 (p-1) *PLANNING TECHNIQUES.*

2 “PLANNING TECHNIQUES” MEANS A COMBINATION OF STRATEGIES EMPLOYED EARLY IN
3 PROJECT DESIGN TO REDUCE THE IMPACT FROM DEVELOPMENT AND TO INCORPORATE
4 NATURAL FEATURES INTO A STORMWATER MANAGEMENT PLAN.

5 (s) *Recharge volume.*

6 “Recharge volume” means that portion of the water quality volume, calculated in
7 accordance with the STATE’S Design Manual, used to maintain groundwater recharge
8 rates at development sites.

9 (t) *Redevelopment.*

10 “Redevelopment” means any construction, alteration, or improvement that:

11 (1) disturbs more than 5,000 square feet of land; AND

12 (2) IS PERFORMED on [sites] A SITE where:

13 (i) THE existing land use is commercial, industrial, institutional, or multi-
14 family residential; AND

15 (ii) THE EXISTING IMPERVIOUS AREA OF THE SITE IS MORE THAN 40% OF THE
16 TOTAL AREA OF THE SITE.

17 (T-1) *RETROFITTING.*

18 “RETROFITTING” MEANS THE IMPLEMENTATION OF ENVIRONMENTAL SITE DESIGN
19 PRACTICES, THE CONSTRUCTION OF A STRUCTURAL BEST MANAGEMENT PRACTICE, OR THE
20 MODIFICATION OF AN EXISTING STRUCTURAL BEST MANAGEMENT PRACTICE IN A
21 PREVIOUSLY DEVELOPED AREA TO IMPROVE WATER QUALITY OVER CURRENT CONDITIONS.

22 (v) *Site.*

23 (1) *FOR NEW DEVELOPMENT.*

24 [“Site”] FOR NEW DEVELOPMENT, “SITE” means[: (1) for “new development”,] any
25 tract, lot, or parcel of land or combination of tracts, lots, or parcels of land that [are]
26 IS:

27 (i) in one ownership; or

28 (ii) in diverse ownership, but [contiguous] where:

29 A. development is to be performed as part of a unit, subdivision, or
30 project; AND

31 B. EITHER:

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- 1 1. THE TRACTS, LOTS, OR PARCELS OF LAND ARE CONTIGUOUS; OR
2 2. THE DEVELOPMENT IS A COOPERATIVE PUBLIC-PRIVATE
3 UNDERTAKING[; and].

4 (2) *FOR REDEVELOPMENT.*

5 FOR REDEVELOPMENT [for “redevelopment”], “SITE” MEANS either of the following,
6 as the Department determines:

- 7 (i) the area of new construction as shown on an approved site plan; or
8 (ii) the original parcel.

9 (v-1) *STORMWATER.*

10 “STORMWATER” MEANS WATER THAT ORIGINATES FROM A PRECIPITATION EVENT.

11 (x) *Stormwater management – Qualitative control.*

12 (1) *IN GENERAL.*

13 “Stormwater management” means, for qualitative control, a system of vegetative,
14 structural, and nonstructural practices, NATURAL AREAS, ENVIRONMENTAL SITE
15 DESIGN PRACTICES, STORMWATER MANAGEMENT MEASURES, AND ANY OTHER
16 STRUCTURE that [reduce] REDUCES or [eliminate] ELIMINATES pollutants that might
17 otherwise be carried by surface runoff.

18 (2) *INCLUSIONS.*

19 “Stormwater management” includes, for qualitative control, design parameters for:

- 20 (i) water quality volume; and
21 (ii) recharge volume.

22 (y) *Stormwater management – Quantitative control.*

23 (1) *IN GENERAL.*

24 “Stormwater management” means, for quantitative control, a system of vegetative,
25 structural, and nonstructural practices, NATURAL AREAS, ENVIRONMENTAL SITE
26 DESIGN PRACTICES, STORMWATER MANAGEMENT MEASURES, AND ANY OTHER
27 STRUCTURE that [control] CONTROLS the increased volume and rate of surface runoff
28 caused by man-made changes to the land.

29 (2) *INCLUSIONS.*

30 “Stormwater management” includes, for quantitative controls, design parameters for:

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- 1 (i) channel protection storage volume;
- 2 (ii) overbank flood protection volume; and
- 3 (iii) extreme flood volume.

4 [(z) *Stormwater management plan.*

5 “Stormwater management plan” means a set of drawings, reports, and other documents
6 that:

- 7 (1) is submitted as a prerequisite to obtaining a stormwater management approval;
8 and
- 9 (2) contains all of the information and specifications required by this Division II.]

10 (bb) *Water quality volume.*

11 “Water quality volume” means the volume needed, calculated in accordance with the
12 STATE’S Design Manual, to capture and treat the runoff from 90% of the average annual
13 rainfall at a development site.

14 **§ 21-3. Incorporation by reference.**

15 (a) *In general.*

16 For purposes of this Division II, the following documents are incorporated by reference:

- 17 (1) The STATE’S Design Manual, which serves as the official City guide for
18 stormwater MANAGEMENT principles, methods, and practices; [and]
- 19 (2) The USDA Natural Resources Conservation Service Maryland Conservation
20 Practice Standard Pond Code 378 (January 2000); AND
- 21 (3) THE CITY’S DESIGN GUIDELINES, WHICH SERVE TO SUPPLEMENT THE STATE’S
22 DESIGN MANUAL AS IT RELATES TO STORMWATER MANAGEMENT PRINCIPLES,
23 METHODS, AND PRACTICES IN THE CITY.

24 (b) *Defined terms.*

- 25 (1) Terms used in the STATE’S Design Manual have the meanings ascribed to them in the
26 Design Manual or otherwise by the State Water Management Administration.
- 27 (2) These terms include, AMONG OTHERS:
 - 28 (i) “Agricultural land management activities”.
 - 29 (ii) “Aquifer”.
 - 30 (iii) “Detention structure”.

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1 (iv) “Extended detention”.

2 (v) “Grade”.

3 **§ 21-4. Purpose; GOAL; authority.**

4 (a) *Purpose.*

5 The purpose of this Division II is to:

6 (1) protect, maintain, and enhance the public health, safety, and general welfare
7 through the management of stormwater;

8 (2) protect public and private property from damage;

9 (3) reduce the adverse effects of development;

10 (4) [control] REDUCE stream channel erosion, POLLUTION, SILTATION, AND
11 SEDIMENTATION;

12 (5) reduce local flooding;

13 (6) RESTORE, ENHANCE, AND MAINTAIN THE CHEMICAL, PHYSICAL, AND BIOLOGICAL
14 INTEGRITY OF STREAMS; and

15 (7) [(6)] maintain after development, as nearly as possible, pre-development runoff
16 characteristics.

17 (B) *GOAL.*

18 THE GOAL OF THIS DIVISION II IS TO MANAGE STORMWATER BY:

19 (1) USING ENVIRONMENTAL SITE DESIGN TO THE MAXIMUM EXTENT PRACTICABLE;
20 AND

21 (2) USING STRUCTURAL BEST MANAGEMENT PRACTICES AND ALTERNATIVE PRACTICES
22 ONLY WHEN NECESSARY.

23 (C) [(b)] *Authority.*

24 This Division II is adopted under the authority of State Environment Article, Title 4,
25 Subtitle 2.

26 **§ 21-6. Scope.**

27 (b) *Exemptions.*

28 The following activities are exempt from this Division II:

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1 (1) agricultural land management activities that employ methods and procedures to
2 further crop and livestock production and conservation to conserve related soil
3 and water resources;

4 (2) A SINGLE-FAMILY DETACHED DWELLING IF:

5 (I) THE ACTIVITY DOES NOT DISTURB MORE THAN 2,500 SQUARE FEET OF LAND
6 AREA; AND

7 (II) THE TRACT, LOT, OR PARCEL HAS NOT PREVIOUSLY BEEN THE SUBJECT OF
8 AN EXEMPTION UNDER THIS ITEM (2);

9 (3) [(2)] construction, grading, or development (OTHER THAN FOR SINGLE-FAMILY
10 DWELLINGS) IF:

11 (I) [that] THE ACTIVITY does not disturb more than 5,000 square feet of land;
12 AND

13 (II) THE TRACT, LOT, OR PARCEL HAS NOT PREVIOUSLY BEEN THE SUBJECT OF
14 AN EXEMPTION UNDER THIS ITEM (3);

15 (4) A SINGLE-FAMILY DWELLING THAT DISTURBS MORE THAN 2,500 SQUARE FEET OF
16 LAND AREA BUT LESS THAN 5,000 SQUARE FEET OF LAND AREA, SUBJECT TO THE
17 PAYMENT OF A “SMALL-PROJECT” FEE ESTABLISHED UNDER § 25-2 {“FEES”} OF
18 THIS DIVISION II; and

19 (5) [(3)] development [regulated under a State law] that THE STATE WATER
20 MANAGEMENT ADMINISTRATION DETERMINES WILL BE REGULATED UNDER
21 SPECIFIC STATE LAWS THAT [provides] PROVIDE for managing stormwater runoff.

22 **Subtitle 22. Stormwater Management Plans**

23 **§ 22-1. [Plan] PHASED PLANS required.**

24 Except as otherwise expressly provided in this Division II, no person may develop any land
25 unless:

26 (1) THE PROJECT IS A SINGLE-LOT RESIDENTIAL CONSTRUCTION THAT ESTABLISHES
27 STORMWATER MANAGEMENT MEASURES IN ACCORDANCE WITH A STANDARD
28 STORMWATER MANAGEMENT PLAN PREPARED IN ACCORDANCE WITH THE CITY’S
29 DESIGN GUIDELINES AND APPROVED BY THE DEPARTMENT; OR

30 (2) the person:

31 (i) [(1)] establishes stormwater management measures that control or manage
32 runoff from the development; and

33 (ii) [(2)] incorporates those measures into [a] PHASED stormwater management
34 [plan] PLANS approved by the Department.

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1 **§ 22-2. Design and construction.**

2 These stormwater management measures must:

3 (1) meet the [design] requirements of the STATE’S Design Manual, THIS DIVISION II, AND
4 THE CITY’S DESIGN GUIDELINES; and

5 (2) be constructed according to:

6 (i) an approved plan for new development; or

7 (ii) the policies stated in § 23-7 of this Division II for redevelopment.

8 **§ 22-3. Minimum control requirements.**

9 (a) *In general.*

10 The minimum control requirements for these management measures are as provided in
11 this section and the STATE’S Design Manual.

12 (b) *Volume sizing criteria.*

13 [The Design Manual’s sizing criteria for recharge volume, water quality volume, and
14 channel protection storage volume must be used to design best management practices.]

15 (1) THE CRITERIA IN THE STATE’S DESIGN MANUAL FOR ENVIRONMENTAL SITE DESIGN TO
16 THE MAXIMUM EXTENT PRACTICABLE AND THE USE OF ENVIRONMENTAL SITE DESIGN
17 PLANNING TECHNIQUES AND TREATMENT PRACTICES MUST BE EXHAUSTED BEFORE
18 ANY STRUCTURAL BEST MANAGEMENT PRACTICE OR ALTERNATIVE PRACTICE IS
19 IMPLEMENTED.

20 (2) STORMWATER MANAGEMENT PLANS FOR DEVELOPMENT PROJECTS SUBJECT TO THIS
21 DIVISION II MUST BE DESIGNED USING ENVIRONMENTAL SITE DESIGN SIZING CRITERIA,
22 RECHARGE VOLUME, WATER QUALITY VOLUME, AND CHANNEL PROTECTION STORAGE
23 VOLUME CRITERIA ACCORDING TO THE STATE’S DESIGN MANUAL. THE MAXIMUM-
24 EXTENT-PRACTICABLE STANDARD IS MET WHEN CHANNEL STABILITY IS MAINTAINED,
25 PREDEVELOPMENT GROUNDWATER RECHARGE IS REPLICATED, NONPOINT SOURCE
26 POLLUTION IS MINIMIZED, AND STRUCTURAL STORMWATER MANAGEMENT PRACTICES
27 OR ALTERNATIVE PRACTICES ARE USED ONLY IF DETERMINED TO BE ABSOLUTELY
28 NECESSARY.

29 (c) *10-year frequency storm event.*

30 Runoff from the 10-year frequency storm event must be controlled in accordance with the
31 STATE’S Design Manual if the Department determines that ADDITIONAL STORMWATER
32 MANAGEMENT IS NECESSARY BECAUSE historical flooding problems exist and downstream
33 floodplain development and conveyance system design cannot be controlled.

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1 (d) *Additional control requirements.*

2 The Department may require more than the minimum control requirements of the
3 STATE'S Design Manual if:

- 4 (1) hydrologic or topographic conditions warrant; or
5 (2) flooding, stream channel erosion, or water quality problems exist downstream
6 from a proposed project.

7 (E) *ALTERNATIVE MINIMUM CONTROLS.*

8 WITH THE APPROVAL OF THE STATE WATER MANAGEMENT ADMINISTRATION, THE
9 DEPARTMENT MAY ADOPT ALTERNATIVE MINIMUM CONTROL REQUIREMENTS THAT WILL:

- 10 (1) IMPLEMENT ENVIRONMENTAL SITE DESIGN TO THE MAXIMUM EXTENT
11 PRACTICABLE; AND
12 (2) CONTROL FLOOD DAMAGES, ACCELERATED STREAM EROSION, WATER QUALITY,
13 AND SEDIMENTATION.

14 (F) [(e)] *Consistency with FHMA plans.*

15 Where applicable, stormwater management and development plans must be consistent
16 with watershed management plans and flood management plans approved by the State
17 Water Management Administration under the Flood Hazard Management Act of 1976.

18 **§ 22-4. ENVIRONMENTAL SITE DESIGN; Structural and nonstructural practices.**

19 (a) *In general.*

20 (1) In designing stormwater management measures, [structural and nonstructural
21 practices] THE FOLLOWING must be used, either alone or in combination:

- 22 (I) ENVIRONMENTAL SITE DESIGN TECHNIQUES AND PRACTICES; AND
23 (II) STRUCTURAL PRACTICES.

24 (2) THE APPLICANT MUST DEMONSTRATE THAT ENVIRONMENTAL SITE DESIGN HAS BEEN
25 IMPLEMENTED TO THE MAXIMUM EXTENT PRACTICABLE BEFORE THE USE OF A
26 STRUCTURAL BEST MANAGEMENT PRACTICE OR ALTERNATIVE PRACTICE MAY BE
27 CONSIDERED IN DEVELOPING THE STORMWATER MANAGEMENT PLAN.

28 (3) [These structural and nonstructural practices] STORMWATER MANAGEMENT
29 MEASURES, their selection, basic design criteria, methodologies, and construction
30 specifications:

- 31 (i) must comply with the STATE'S Design Manual AND THE CITY'S DESIGN
32 GUIDELINES; and

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1 (ii) are subject to approval of the Department and the State Water Management
2 Administration.

3 (4) ENVIRONMENTAL SITE DESIGN TECHNIQUES AND PRACTICES AND STRUCTURAL
4 STORMWATER MANAGEMENT MEASURES USED TO SATISFY THE MINIMUM CONTROL
5 REQUIREMENTS OF § 22-3 OF THIS SUBTITLE:

6 (I) MUST BE RECORDED IN THE LAND RECORDS OF BALTIMORE CITY;

7 (II) MUST BE BINDING ON SUBSEQUENT PROPERTY OWNERS; AND

8 (III) MAY NOT BE ALTERED WITHOUT THE DEPARTMENT'S PRIOR APPROVAL.

9 (B) *ENVIRONMENTAL SITE DESIGN PLANNING TECHNIQUES AND PRACTICES.*

10 (1) THE FOLLOWING PLANNING TECHNIQUES MUST BE APPLIED ACCORDING TO THE
11 STATE'S DESIGN MANUAL TO SATISFY THE APPLICABLE MINIMUM CONTROL
12 REQUIREMENTS OF § 22-3 OF THIS SUBTITLE:

13 (I) PRESERVING AND PROTECTING NATURAL RESOURCES;

14 (II) CONSERVING NATURAL DRAINAGE PATTERNS;

15 (III) MINIMIZING IMPERVIOUS AREA;

16 (IV) REDUCING RUNOFF VOLUME;

17 (V) USING ENVIRONMENTAL SITE DESIGN PRACTICES TO MAINTAIN 100% OF THE
18 ANNUAL PREDEVELOPMENT GROUNDWATER RECHARGE VOLUME;

19 (VI) USING GREEN ROOFS, PERMEABLE PAVEMENT, REINFORCED TURF, AND OTHER
20 ALTERNATIVE SURFACES;

21 (VII) LIMITING SOIL DISTURBANCE, MASS GRADING, AND COMPACTION;

22 (VIII) CLUSTERING DEVELOPMENT; AND

23 (IX) OTHER PRACTICES APPROVED BY THE DEPARTMENT.

24 (2) THE FOLLOWING ENVIRONMENTAL SITE DESIGN TREATMENT PRACTICES MUST BE
25 DESIGNED ACCORDING TO THE STATE'S DESIGN MANUAL AND THE CITY'S DESIGN
26 GUIDELINES TO SATISFY THE APPLICABLE MINIMUM CONTROL REQUIREMENTS
27 ESTABLISHED IN § 22-3 OF THIS SUBTITLE:

28 (I) DISCONNECTION OF ROOFTOP RUNOFF;

29 (II) DISCONNECTION OF NON-ROOFTOP RUNOFF;

30 (III) SHEETFLOW TO CONSERVATION AREAS;

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- 1 (IV) RAINWATER HARVESTING;
- 2 (V) SUBMERGED GRAVEL WETLANDS;
- 3 (VI) LANDSCAPE INFILTRATION;
- 4 (VII) INFILTRATION BERMS;
- 5 (VIII) DRY WELLS;
- 6 (IX) MICRO-BIORETENTION;
- 7 (X) RAIN GARDENS;
- 8 (XI) SWALES;
- 9 (XII) ENHANCED FILTERS; AND
- 10 (XIII) OTHER PRACTICES APPROVED BY THE DEPARTMENT.

11 (3) THE USE OF ENVIRONMENTAL SITE DESIGN PLANNING TECHNIQUES AND TREATMENT
12 PRACTICES MAY NOT CONFLICT WITH EXISTING STATE OR LOCAL LAWS, ORDINANCES,
13 REGULATIONS, OR POLICIES.

14 (C) [(b)] *Structural [practices] STORMWATER MANAGEMENT MEASURES.*

15 (1) The following structural stormwater management practices must be designed to
16 satisfy the applicable minimum control requirements [established in] OF § 22-3 of this
17 subtitle.

- 18 (i) stormwater management ponds;
- 19 (ii) stormwater management wetlands;
- 20 (iii) stormwater management infiltration;
- 21 (iv) stormwater management filtering systems;
- 22 (v) stormwater management open channel systems; and
- 23 (vi) other practices provided in the STATE'S Design Manual.

24 (2) In selecting structural practices, consideration must be given to the performance
25 criteria specified in the STATE'S Design Manual for:

- 26 (i) general feasibility;
- 27 (ii) conveyance;
- 28 (iii) pretreatment;

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- 1 (iv) treatment and geometry;
- 2 (v) environment and landscaping; and
- 3 (vi) maintenance.

4 (3) Structural practices must accommodate the unique hydrologic or geologic regions of
5 the [City] SITE.

6 [(c) *Nonstructural practices.*

7 (1) The following nonstructural stormwater management practices must be applied to
8 minimize increases in new development runoff:

- 9 (i) natural area conservation;
- 10 (ii) disconnection of rooftop runoff;
- 11 (iii) disconnection of non-rooftop runoff;
- 12 (iv) sheet flow to buffers;
- 13 (v) grass channels; and
- 14 (vi) environmentally sensitive development.

15 (2) The use of nonstructural practices is encouraged to minimize the reliance on structural
16 best management practices.

17 (3) The minimum control requirements [listed in] OF § 22-3 of this subtitle may be
18 reduced when nonstructural practices are incorporated into site designs according to
19 the Design Manual.

20 (4) The use of nonstructural practices may not conflict with existing State or local laws,
21 ordinances, regulations, or policies.

22 (5) Nonstructural practices used to reduce the minimum control requirements:

- 23 (i) must be recorded in the land records of Baltimore City;
- 24 (ii) are binding on subsequent property owners; and
- 25 (iii) may not be altered without the prior approval of the Department.]

26 [(d) *Alternative practices.*

27 (1) Alternative structural and nonstructural stormwater management practices may be
28 used for new development water quality control if they:

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- 1 (i) meet the performance criteria established in the STATE's Design Manual; and
- 2 (ii) are approved by the State Water Management Administration.

3 (2) SEPARATE POLICIES FOR PROVIDING WATER QUALITY CONTROL MAY BE USED FOR NEW
4 DEVELOPMENT PROJECTS IF THEY ARE REVIEWED AND APPROVED BY THE STATE
5 WATER MANAGEMENT ADMINISTRATION. SEPARATE POLICIES INCLUDE:

6 (I) RETROFITTING;

7 (II) STREAM RESTORATION;

8 (III) POLLUTION TRADING;

9 (IV) DESIGN CRITERIA BASED ON WATERSHED MANAGEMENT PLANS DEVELOPED
10 UNDER § 23-6(B) OF THIS DIVISION II; OR

11 (V) FEES PAID THAT ARE DEDICATED EXCLUSIVELY TO PROVIDE STORMWATER
12 MANAGEMENT.

13 (3) [(2)] Practices used for redevelopment projects must be approved by the Department.

14 (e) *Impact analysis.*

15 (1) For the purposes of modifying the minimum control requirements or design criteria,
16 the [developer] APPLICANT must submit to the Department an analysis of the impacts
17 of stormwater flows downstream in the watershed.

18 (2) The analysis must include the hydrologic and hydraulic calculations necessary to
19 determine the impact of hydrograph timing modifications of the proposed
20 development upon a dam, highway, structure, or natural point of restricted
21 streamflow.

22 (3) The point of investigation is to be established, with the Department's concurrence,
23 downstream of the first downstream tributary whose drainage area equals or exceeds
24 the contributing area to the project or stormwater management facility.

25 **§ 22-5. Contents of plan.**

26 [(a) *In general.*]

27 [The plan submitted for review and approval must contain supporting computations,
28 drawings, and sufficient information to describe the manner, location, and type of
29 measures in which stormwater runoff will be managed from the entire development.]

30 [(b) *Report and construction drawings.*]

31 [The plan must be accompanied by a report and construction drawings that include
32 sufficient information to evaluate:

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- 1 (1) the environmental characteristics of affected areas;
- 2 (2) the potential impacts of the proposed development on water resources; and
- 3 (3) the effectiveness and acceptability of measures proposed for managing stormwater
- 4 runoff.]

5 (A) *IN GENERAL.*

- 6 (1) FOR ANY PROPOSED DEVELOPMENT, THE APPLICANT MUST SUBMIT PHASED
- 7 STORMWATER MANAGEMENT PLANS TO THE DEPARTMENT FOR REVIEW AND
- 8 APPROVAL.
- 9 (2) AT A MINIMUM, PLANS MUST BE SUBMITTED FOR THE CONCEPT, SITE DEVELOPMENT,
- 10 AND FINAL STORMWATER MANAGEMENT CONSTRUCTION PHASES OF PROJECT DESIGN.
- 11 (3) EACH PLAN MUST:
 - 12 (i) INCLUDE THE MINIMUM CONTENT SPECIFIED IN § 22-3 {"MINIMUM CONTROL
 - 13 REQUIREMENTS"} OF THIS SUBTITLE; AND
 - 14 (ii) MEET THE REQUIREMENTS OF THE STATE'S DESIGN MANUAL, THE CITY'S
 - 15 DESIGN GUIDELINES, AND § 22-4 {"ENVIRONMENTAL SITE DESIGN;
 - 16 STRUCTURAL, NONSTRUCTURAL PRACTICES"} OF THIS SUBTITLE.

17 (B) *CONCEPT PLAN.*

- 18 (1) THE APPLICANT MUST SUBMIT A CONCEPT PLAN THAT PROVIDES SUFFICIENT
- 19 INFORMATION FOR AN INITIAL ASSESSMENT OF THE PROPOSED PROJECT AND WHETHER
- 20 STORMWATER MANAGEMENT CAN BE PROVIDED ACCORDING TO § 22-4
- 21 {"ENVIRONMENTAL SITE DESIGN; STRUCTURAL, NONSTRUCTURAL PRACTICES"} OF
- 22 THIS SUBTITLE AND THE STATE'S DESIGN MANUAL.
- 23 (2) PLANS SUBMITTED FOR CONCEPT APPROVAL MUST INCLUDE THE FOLLOWING,
- 24 MINIMUM INFORMATION:
 - 25 (i) A MAP THAT SHOWS, AT A SCALE SPECIFIED BY THE DEPARTMENT:
 - 26 A. SITE LOCATION;
 - 27 B. EXISTING NATURAL FEATURES;
 - 28 C. WATER AND OTHER SENSITIVE RESOURCES;
 - 29 D. TOPOGRAPHY; AND
 - 30 E. NATURAL DRAINAGE PATTERNS;

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1 (II) THE ANTICIPATED LOCATION OF ALL:

- 2 A. IMPERVIOUS AREAS;
- 3 B. BUILDINGS;
- 4 C. ROADWAYS;
- 5 D. PARKING;
- 6 E. SIDEWALKS;
- 7 F. UTILITIES; AND
- 8 G. OTHER SITE IMPROVEMENTS;

9 (III) THE LOCATION OF:

- 10 A. THE PROPOSED LIMIT OF DISTURBANCE;
- 11 B. ERODIBLE SOILS;
- 12 C. STEEP SLOPES; AND
- 13 D. AREAS TO BE PROTECTED DURING CONSTRUCTION;

14 (IV) PRELIMINARY ESTIMATES OF:

- 15 A. STORMWATER MANAGEMENT REQUIREMENTS;
- 16 B. THE SELECTION AND LOCATION OF ENVIRONMENTAL SITE DESIGN
- 17 PRACTICES TO BE USED; AND
- 18 C. THE LOCATION OF ALL POINTS OF DISCHARGE FROM THE SITE;

19 (V) A NARRATIVE THAT SUPPORTS THE CONCEPT DESIGN AND DESCRIBES HOW

20 ENVIRONMENTAL SITE DESIGN WILL BE IMPLEMENTED TO THE MAXIMUM

21 EXTENT PRACTICABLE; AND

22 (VI) ANY OTHER INFORMATION THE DEPARTMENT REQUIRES.

23 (C) *SITE DEVELOPMENT PLAN.*

24 (1) AFTER APPROVAL OF THE CONCEPT PLAN, THE APPLICANT MUST SUBMIT, UNLESS

25 EXEMPTED BY THE DEPARTMENT, AT THE DEPARTMENT'S DISCRETION, SITE

26 DEVELOPMENT PLANS THAT REFLECT COMMENTS RECEIVED DURING THE PREVIOUS

27 REVIEW PHASE.

28 (2) PLANS SUBMITTED FOR SITE DEVELOPMENT APPROVAL MUST BE OF SUFFICIENT DETAIL

29 TO ALLOW SITE DEVELOPMENT TO BE REVIEWED.

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1 (3) THESE PLANS MUST INCLUDE THE FOLLOWING, MINIMUM INFORMATION:

2 (I) ALL INFORMATION PROVIDED DURING THE CONCEPT PLAN REVIEW PHASE;

3 (II) FINAL SITE LAYOUT, INCLUDING:

4 A. EXACT IMPERVIOUS AREA LOCATIONS AND ACREAGES;

5 B. PROPOSED TOPOGRAPHY;

6 C. DELINEATED DRAINAGE AREAS AT ALL POINTS OF DISCHARGE FROM THE
7 SITE; AND

8 D. STORMWATER VOLUME COMPUTATIONS FOR ENVIRONMENTAL SITE
9 DESIGN PRACTICES AND QUANTITY CONTROL STRUCTURES;

10 (III) A PROPOSED EROSION AND SEDIMENT CONTROL PLAN THAT CONTAINS:

11 A. THE CONSTRUCTION SEQUENCE;

12 B. ANY PHASING NECESSARY TO LIMIT EARTH DISTURBANCES AND
13 IMPACTS TO NATURAL RESOURCES; AND

14 C. AN OVERLAY PLAN THAT SHOWS THE TYPES AND LOCATIONS OF
15 ENVIRONMENTAL SITE DESIGN PRACTICES AND EROSION AND SEDIMENT
16 CONTROL PRACTICES TO BE USED;

17 (IV) A NARRATIVE THAT:

18 A. SUPPORTS THE SITE DEVELOPMENT DESIGN;

19 B. DESCRIBES HOW ENVIRONMENTAL SITE DESIGN WILL BE USED TO MEET
20 THE MINIMUM CONTROL REQUIREMENTS; AND

21 C. JUSTIFIES ANY PROPOSED STRUCTURAL STORMWATER MANAGEMENT
22 OR ALTERNATIVE PRACTICE MEASURE; AND

23 (V) ANY OTHER INFORMATION THE DEPARTMENT REQUIRES.

24 (D) *FINAL EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLANS.*

25 (1) AFTER SITE DEVELOPMENT APPROVAL, THE APPLICANT MUST SUBMIT FINAL EROSION
26 AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLANS THAT REFLECT THE
27 COMMENTS RECEIVED DURING THE PREVIOUS REVIEW PHASE.

28 (2) PLANS SUBMITTED FOR FINAL APPROVAL MUST BE OF SUFFICIENT DETAIL TO ALLOW
29 ALL APPROVALS AND PERMITS TO BE ISSUED AS FOLLOWS:

30 (i) FINAL EROSION AND SEDIMENT CONTROL PLANS MUST BE SUBMITTED
31 ACCORDING TO COMAR 26.17.01.05; AND

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1 (II) FINAL STORMWATER MANAGEMENT PLANS MUST BE SUBMITTED IN THE FORM
2 OF CONSTRUCTION DRAWINGS, ACCOMPANIED BY A REPORT THAT INCLUDES
3 SUFFICIENT INFORMATION TO EVALUATE THE EFFECTIVENESS OF THE
4 PROPOSED RUNOFF CONTROL DESIGN.

5 (E) [(c)] *Waivers and variances.*

6 The plan must be accompanied by an application for any waiver or variance sought under
7 Subtitle 23 or Subtitle 24.

8 **§ 22-6. Report FOR FINAL PLAN.**

9 The report SUBMITTED FOR FINAL STORMWATER MANAGEMENT PLAN APPROVAL must contain
10 the following, minimum information:

- 11 (1) a brief narrative description of the project;
- 12 (2) geotechnical investigations, including soil maps, borings, site specific
13 recommendations, and any additional information necessary to evaluate the [proposed]
14 FINAL stormwater management design;
- 15 (3) descriptions of all water courses, impoundments, and wetlands on or adjacent to the
16 site or into which stormwater directly flows;
- 17 (4) [hydrologic computations, including] drainage area maps that show pre-development
18 and post-development runoff flow path segmentation and land use;
- 19 (5) hydraulic computations OF THE APPLICABLE ENVIRONMENTAL SITE DESIGN AND
20 UNIFIED SIZING CRITERIA, ACCORDING TO THE STATE'S DESIGN MANUAL, FOR ALL
21 POINTS OF DISCHARGE FROM THE SITE;
- 22 (6) HYDRAULIC COMPUTATIONS FOR ALL ENVIRONMENTAL SITE DESIGN PRACTICES AND
23 STRUCTURAL STORMWATER MANAGEMENT MEASURES TO BE USED;
- 24 (7) [(6)] structural computations;
- 25 (8) [(7) unified] VOLUME sizing [criteria volume] computations, according to the STATE'S
26 Design Manual, THAT SUPPORT THE FINAL STORMWATER MANAGEMENT DESIGN; and
- 27 (9) [(8)] any other information [required by] THAT the Department REQUIRES.

28 **§ 22-7. Construction drawings FOR FINAL PLAN.**

29 (a) *In general.*

30 The construction drawings SUBMITTED FOR FINAL STORMWATER MANAGEMENT PLAN
31 APPROVAL must include the following:

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1 (7) structural and construction details, INCLUDING REPRESENTATIVE CROSS SECTIONS,
2 for all components of:

3 (i) the proposed drainage system or systems; and

4 (ii) stormwater management facilities;

5 (10) [dimensions of] DATA FOR:

6 (i) total site area;

7 (ii) disturbed area;

8 (iii) new impervious area; and

9 (iv) total impervious area;

10 (11) a table that shows the ENVIRONMENTAL SITE DESIGN AND unified sizing criteria
11 volumes required by the STATE'S Design Manual;

12 (14) a maintenance INSPECTION AND MAINTENANCE ACTIVITY schedule;

13 (b) [*Covenant of compliance*] CERTIFICATION OF COMPLIANCE.

14 The [developer] APPLICANT must [covenant] CERTIFY on the drawings that all grading,
15 drainage, construction, and development will be done in strict accordance with the
16 APPROVED plan.

17 **§ 22-8. Preparation of plan.**

18 (a) *In general.*

19 [A] THE DESIGN OF ALL stormwater management [plan] PLANS must be prepared by a
20 professional engineer, professional land surveyor, or landscape architect licensed in the
21 State.

22 (b) *Professional engineer only.*

23 If STORMWATER best management practices require a dam safety permit from the
24 Maryland Department of the Environment OR SMALL POND APPROVAL FROM THE CITY, the
25 plan must be prepared by a professional engineer licensed in the State.

26 **§ 22-9. Easements for runoff.**

27 (a) *Easement.*

28 If a stormwater management plan involves directing some or all runoff from the site, the
29 [developer] APPLICANT is responsible for obtaining from adjacent property owners any
30 needed easements or property interests for water flow.

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1 **§ 22-10. Review and approval of plan.**

2 (a) *Review AND COMMENT.*

3 (1) The Department must PERFORM A COMPREHENSIVE review OF THE PLANS FOR each
4 [proposed plan] PHASE OF SITE DESIGN to determine [its] compliance with this Division
5 II.

6 (2) FOR EACH PLAN PHASE, COORDINATED COMMENTS WILL BE PROVIDED THAT REFLECT
7 INPUT FROM ALL APPROPRIATE AGENCIES, INCLUDING PLANNING, ZONING, AND PUBLIC
8 WORKS.

9 (3) AT EACH PHASE OF PROJECT DESIGN, COMMENTS FROM THE DEPARTMENT AND OTHER
10 APPROPRIATE AGENCIES MUST BE ADDRESSED BY THE APPLICANT AND APPROVAL
11 RECEIVED BEFORE SUBSEQUENT SUBMISSIONS.

12 (c) *Notification.*

13 [Within 30 days after it receives a completed stormwater management plan] AFTER THE
14 DEPARTMENT HAS COMPLETED ITS COMPREHENSIVE REVIEW FOR EACH PHASE OF SITE
15 DESIGN, the Department must notify the applicant of:

16 (1) the Department's approval of the plan;

17 (2) the Department's disapproval of the plan, together with:

18 (i) the reasons for disapproval; and

19 (ii) any modifications that the Department requires for approval; or

20 (3) if no decision has yet been made:

21 (i) the status of the review process; and

22 (ii) the anticipated date of completion.

23 **Subtitle 23. Waivers**

24 **§ 23-1. Quantitative control waiver.**

25 The Department may grant a waiver of quantitative control requirements for a project if:

26 (1) the project is within an area for which a watershed management plan has been
27 developed [under] CONSISTENT WITH § 23-6 of this subtitle;

28 (2) the project has a direct, CONCENTRATED discharge OF STORMWATER to tidal waters or
29 TO CONNECTED CLOSED STORM DRAINAGE SYSTEMS OF ADEQUATE CAPACITY;

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1 (3) THE PROJECT HAS A DIRECT, CONCENTRATED DISCHARGE OF STORMWATER TO [other
2 tidal] TIDALLY INFLUENCED RECEIVING wetlands;

3 (4) THE APPLICANT DEMONSTRATES THROUGH ENGINEERING ANALYSIS THAT UNMANAGED
4 10-YEAR AND 100-YEAR STORM EVENTS FOR THE PROPOSED DEVELOPMENT WILL NOT
5 CAUSE EROSION, FLOODING, OR AN ADVERSE IMPACT ON THE RECEIVING WATERS OR
6 DOWNSTREAM STORMWATER CONVEYANCE SYSTEM; or

7 (5) [(3)] the Department determines that circumstances exist that prevent the reasonable
8 implementation of quantity control practices.

9 **§ 23-2. Qualitative control waiver.**

10 The Department may grant a waiver of qualitative control requirements for a project if:

11 (1) THE PROJECT WILL RETURN THE DISTURBED AREA TO A PREDEVELOPMENT RUNOFF
12 CONDITION, SUCH AS PIPELINE OR CONDUIT PROJECTS, CERTAIN LANDSCAPING
13 PROJECTS, CERTAIN MAINTENANCE PROJECTS, AND CERTAIN UNDERGROUND PROJECTS;

14 (2) [(1)] the project is [a] AN IN-FILL development project (THAT IS, A DEVELOPMENT ON
15 VACANT, BYPASSED, OR UNDERUTILIZED LAND WITHIN AN EXISTING DEVELOPED AREA)
16 for which [stormwater management implementation is]:

17 (I) ENVIRONMENTAL SITE DESIGN HAS BEEN IMPLEMENTED TO THE MAXIMUM
18 EXTENT PRACTICABLE; AND

19 (II) IT HAS BEEN DEMONSTRATED THAT OTHER BEST MANAGEMENT PRACTICES ARE
20 not feasible;

21 (3) [(2)] the project is a redevelopment project for which the requirements of § 23-7 of this
22 subtitle are satisfied; or

23 (4) [(3)] the Department determines that circumstances exist that prevent the reasonable
24 implementation of [quality control practices] ENVIRONMENTAL SITE DESIGN TO THE
25 MAXIMUM EXTENT PRACTICABLE.

26 **§ 23-4. Application for waiver.**

27 (a) *In general.*

28 The application for a waiver must:

29 (4) be submitted to the Department with the [developer's] APPLICANT'S proposed
30 stormwater management plan.

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1 **§ 23-6. Watershed management plan.**

2 (a) *In general.*

3 (1) The Department may develop [a] AN OVERALL watershed management plan for the
4 purpose of implementing different policies for waivers and redevelopment.

5 (b) *Requisites.*

6 For this purpose, the watershed management plan must:

7 (2) include an evaluation of both quantity and quality management AND OF
8 OPPORTUNITIES FOR ENVIRONMENTAL SITE DESIGN IMPLEMENTATION;

9 (3) include a cumulative impact assessment of CURRENT AND PROPOSED watershed
10 development;

11 (7) be consistent with the General Performance Standards for Stormwater
12 Management in Maryland, found in Section 1.2 of the STATE'S Design Manual;
13 and

14 **§ 23-7. Redevelopment.**

15 (A) *IN GENERAL.*

16 (1) STORMWATER MANAGEMENT PLANS ARE REQUIRED FOR ALL REDEVELOPMENT, UNLESS
17 OTHERWISE SPECIFIED BY WATERSHED MANAGEMENT PLANS DEVELOPED UNDER
18 § 23-6(B) OF THIS SUBTITLE.

19 (2) STORMWATER MANAGEMENT MEASURES MUST BE CONSISTENT WITH THE STATE'S
20 DESIGN MANUAL.

21 (B) [(a)] *Waived requirements.*

22 Unless otherwise specified by the Department, a redevelopment project need not comply
23 with requirements of the STATE'S Design Manual for:

24 (1) recharge volume;

25 (2) channel protection storage volume; [and]

26 (3) overbank flood protection volume; AND

27 (4) EXTREME FLOOD PROTECTION VOLUME.

28 (C) [(b)] *Applicable requirements – In general.*

29 (1) All redevelopment projects must, IN ACCORDANCE WITH THE STATE'S DESIGN
30 MANUAL, reduce existing site impervious areas WITHIN THE LIMITS OF DISTURBANCE
31 by at least [20%] 50%.

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1 (2) If site conditions prevent the reduction of impervious area, then [stormwater
2 management practices] ENVIRONMENTAL SITE DESIGN PRACTICES must be implemented
3 TO THE MAXIMUM EXTENT PRACTICABLE [to provide qualitative control] for at least
4 [20%] 50% of the site's EXISTING impervious area WITHIN THE LIMITS OF
5 DISTURBANCE.

6 (3) If a combination of impervious area reduction and stormwater practice implementation
7 is used, the combined area must equal or exceed [20%] 50% of the [site] SITE'S
8 EXISTING IMPERVIOUS AREA WITHIN THE LIMITS OF DISTURBANCE.

9 (D) [(c)] *Applicable requirements – Alternatives.*

10 [If conditions prevent impervious area reduction or on-site stormwater management,
11 practical alternatives may be considered, including:]

12 (1) ALTERNATIVE STORMWATER MANAGEMENT MEASURES MAY BE USED TO MEET THE
13 REQUIREMENTS OF SUBSECTION (C) OF THIS SECTION IF THE APPLICANT
14 SATISFACTORILY DEMONSTRATES TO THE DEPARTMENT THAT:

15 (i) IMPERVIOUS AREA REDUCTION HAS BEEN MAXIMIZED; AND

16 (ii) ENVIRONMENTAL SITE DESIGN HAS BEEN IMPLEMENTED TO THE MAXIMUM
17 EXTENT PRACTICABLE.

18 (2) Alternative stormwater management measures include:

19 (i) [(1) fees] AN ON-SITE STRUCTURAL BEST MANAGEMENT PRACTICE;

20 (ii) [(2)] off-site implementation of STRUCTURAL best management practices TO
21 PROVIDE WATER QUALITY TREATMENT for [a drainage area comparable in size
22 and percent imperviousness to that of the project] AN AREA EQUAL TO AT LEAST
23 50% OF THE EXISTING IMPERVIOUS AREA WITHIN THE LIMITS OF DISTURBANCE;

24 (iii) [(3) watershed or stream restoration] A COMBINATION OF IMPERVIOUS AREA
25 REDUCTION, ENVIRONMENTAL SITE DESIGN IMPLEMENTATION, AND AN ON-SITE
26 OR OFF-SITE STRUCTURAL BEST MANAGEMENT PRACTICE FOR AN AREA EQUAL
27 TO AT LEAST 50% OF THE EXISTING SITE IMPERVIOUS AREA WITHIN THE LIMITS
28 OF DISTURBANCE;

29 (iv) [(4)] retrofitting to improve water quality over current conditions by:

30 A. [(i)] construction of structural best management practices in a
31 previously developed area; OR

32 B. [(ii)] modification of existing structural best management practices; [or]

33 [(iii)] implementation of a nonstructural practice; or]

34 (v) WATERSHED OR STREAM RESTORATION;

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1 (VI) POLLUTION TRADING;

2 (VII) DESIGN CRITERIA BASED ON WATERSHED MANAGEMENT PLANS DEVELOPED
3 UNDER § 23-6(B) OF THIS SUBTITLE;

4 (VIII) FEES DEDICATED EXCLUSIVELY FOR STORMWATER MANAGEMENT; OR

5 (IX) [(5)] other practices approved by the Department.

6 (E) *APPLICABLE REQUIREMENTS – INCREASED IMPERVIOUS AREA.*

7 FOR ANY NET INCREASE IN IMPERVIOUS AREA RESULTING FROM THE PROJECT,
8 STORMWATER MANAGEMENT MUST BE ADDRESSED ACCORDING TO THE NEW DEVELOPMENT
9 REQUIREMENTS OF THE STATE’S DESIGN MANUAL.

10 **Subtitle 24. Variances**

11 **§ 24-2. Application for variance.**

12 The application for a variance must:

13 (5) be submitted to the Department with the [developer’s] APPLICANT’S proposed
14 stormwater management plan.

15 **§ 24-3. Justification required.**

16 The Department may not grant a variance unless the applicant [provides sufficient justification
17 for the variance] SATISFACTORILY DEMONSTRATES THAT THE IMPLEMENTATION OF
18 ENVIRONMENTAL SITE DESIGN TO THE MAXIMUM EXTENT PRACTICABLE HAS BEEN
19 THOROUGHLY INVESTIGATED.

20 **Subtitle 25. Permits; Fees; Security**

21 **§ 25-1. Approved plan prerequisite to permits.**

22 (a) *Grading and building permits.*

23 For any development that requires a stormwater management plan under this Division II, a
24 grading or building permit may not be issued unless a FINAL EROSION AND SEDIMENT
25 CONTROL PLAN AND A stormwater management plan has been approved by the
26 Department.

27 (b) *Building permits.*

28 A building permit may not be issued without:

29 (2) a recorded stormwater management maintenance agreement, AS DESCRIBED IN
30 § 27-3 OF THIS DIVISION II;

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1 **§ 25-2. Fees.**

2 (a) *In general.*

3 Non-refundable fees will be assessed and collected IN ADVANCE by the Department [at the
4 time the stormwater management plan is submitted] FOR EACH PHASE OF A DEVELOPMENT.

5 (b) *Fee schedule.*

6 (1) The fees assessed under this Division II[: (1)] are in addition to the usual fees charged
7 for grading or building permits[; and].

8 (2) FEES shall be assessed for plan reviews, waivers, offsets, stormwater [permits]
9 APPROVALS, ADMINISTRATION AND MANAGEMENT OF THE APPROVAL PROCESS,
10 inspections, “SMALL-PROJECT” EXEMPTIONS UNDER § 21-6(B)(4) OF THIS DIVISION II,
11 fees in lieu, and the like[.].

12 (3) THE AMOUNT OF THESE FEES SHALL BE BASED ON THE RELATIVE COMPLEXITY OF A
13 PROJECT, in accordance with [the] A fee schedule established from time to time by the
14 Board of Estimates.

15 **§ 25-3. Performance security.**

16 (a) *Required.*

17 For any development that requires a stormwater management plan under this Division II, a
18 grading or building permit may not be issued until the applicant posts a surety or cash bond,
19 [irrevocable letter of credit,] or other means of security acceptable to the Department.

20 (d) *Full release.*

21 The security may not be fully released until:

22 (1) the Department conducts a final inspection of the completed work;

23 (2) the [developer] APPLICANT submits “as-built” plans to the Department, CONTAINING
24 AN EXECUTED AS-BUILT CERTIFICATION BLOCK; and

25 (3) the Department [certifies] VERIFIES that the stormwater management facilities:

26 (i) have been completed; and

27 (ii) comply with the approved plan and this Division II.

28 [(e) *Partial release.*

29 (1) The Department may establish a procedure for releasing the security in arts, prorated
30 on completion and acceptance of the various stages of development and construction, as
31 specifically delineated, described, and scheduled on the stormwater management plan.

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1 (2) This procedure must be established before approval of the stormwater
2 management plan.

3 (3) To obtain a partial release, the applicant must notify the Department, on completion of
4 each stage, that the facility is ready for inspection.]

5 § 25-4. Permit suspension or revocation.

6 After written notice to the permit holder, the Department may suspend or revoke any grading or
7 building permit for any of the following reasons:

8 (2) any change in the site runoff characteristics on which a plan APPROVAL or waiver was
9 [approved] GRANTED;

10 Subtitle 26. Inspections

11 § 26-1. By whom conducted.

12 All inspections under this Division II must be:

13 (1) conducted by an authorized representative of the Department; OR

14 (2) CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THIS STATE.

15 § 26-2. Notices by [developer] APPLICANT.

16 The [developer] APPLICANT must notify the Department:

17 (1) AT LEAST 48 HOURS BEFORE STARTING ANY WORK IN CONJUNCTION WITH SITE
18 DEVELOPMENT;

19 (2) [(1)] at least 48 hours before starting any work in conjunction with the stormwater
20 management plan; and

21 (3) [(2)] on completion of the project.

22 § 26-3. Inspections during construction.

23 (a) *In general.*

24 At a minimum, regular inspections must be made AND DOCUMENTED, at the stages of
25 construction specified in this section, FOR EACH ENVIRONMENTAL SITE DESIGN PLANNING
26 TECHNIQUE AND PRACTICE AND EACH STRUCTURAL AND NONSTRUCTURAL STORMWATER
27 MANAGEMENT PRACTICE.

28 (h) [*Nonstructural*] *ENVIRONMENTAL SITE DESIGN AND NONSTRUCTURAL practices.*

29 For ENVIRONMENTAL SITE DESIGN AND nonstructural practices:

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- 1 (1) on completion of final grading;
- 2 (2) on establishment of permanent stabilization; and
- 3 (3) before issuance of use and occupancy approval.

4 **§ 26-4. Inspection reports.**

5 (c) *Notice to [developer] APPLICANT.*

6 The Department must provide the [developer] APPLICANT with the results of each
7 inspection report as soon as possible after the inspection.

8 **§ 26-7. As-built certification.**

9 (a) *Required.*

10 Once construction is complete, the [developer] APPLICANT must submit to the Department
11 an as-built plan certification by a professional engineer or professional land surveyor
12 licensed in the State.

13 **§ 26-8. Notice to State Administration.**

14 (c) *CONTENTS.*

15 THE NOTICE MUST REPORT, ON A SITE-BY-SITE BASIS, THE TYPE, NUMBER, TOTAL DRAINAGE
16 AREA, AND TOTAL IMPERVIOUS AREA TREATED BY ALL ENVIRONMENTAL SITE DESIGN
17 TECHNIQUES AND PRACTICES AND STRUCTURAL STORMWATER MANAGEMENT PRACTICES.

18 **Subtitle 27. Maintenance**

19 **§ 27-1. Maintenance responsibility.**

20 (b) *Scope of responsibility.*

21 The owner OF A PROPERTY THAT CONTAINS PRIVATE STORMWATER MANAGEMENT
22 FACILITIES INSTALLED UNDER THIS DIVISION II or ANY other person in control OF THAT
23 PROPERTY must. IN PERPETUITY, maintain in good condition and promptly repair and restore
24 all:

- 25 (1) ENVIRONMENTAL SITE DESIGN PRACTICES;
- 26 (2) STORMWATER MANAGEMENT FACILITIES;
- 27 (3) [(1)] grade surfaces, walls, drains, dams, and structures;
- 28 (4) [(2)] vegetation;

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1 (5) [(3)] erosion and sediment control measures; and

2 (6) [(4)] other protective devices.

3 **§ 27-2. Maintenance schedule.**

4 (a) *Required.*

5 A maintenance schedule must be developed for the life of every stormwater management
6 facility OR SYSTEM OF ENVIRONMENTAL SITE DESIGN PRACTICES.

7 (b) *Contents.*

8 The schedule must specify:

9 (1) the maintenance to be completed;

10 (2) the time for completing that maintenance; and

11 (3) the person [who will perform] IS RESPONSIBLE FOR PERFORMING that maintenance.

12 **§ 27-3. Maintenance agreement.**

13 (a) *Prerequisite for permit.*

14 Before any grading or building permit may be issued for A PROJECT FOR WHICH a private
15 stormwater management facility IS REQUIRED, the owner must execute an inspection and
16 maintenance agreement binding on all current and subsequent owners of land served by the
17 facility.

18 **§ 27-4. Maintenance inspections.**

19 (a) *Periodic inspections required.*

20 (1) The Department must periodically inspect all ENVIRONMENTAL SITE DESIGN PRACTICES
21 AND STRUCTURAL stormwater management [systems] MEASURES to ensure that
22 preventative maintenance is being performed.

23 (2) These inspections must be made:

24 (i) at least once during the 1st year of operation; and

25 (ii) at least once every 3 years following.

26 (b) *Inspection reports.*

27 (1) These inspection reports must include the following:

28 (i) the date of inspection;

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1 (ii) the name of the inspector;

2 (III) AN ASSESSMENT OF THE QUALITY OF THE STORMWATER MANAGEMENT SYSTEM
3 RELATED TO ENVIRONMENTAL SITE DESIGN TREATMENT PRACTICE EFFICIENCY
4 AND THE CONTROL OF RUNOFF TO THE MAXIMUM EXTENT PRACTICABLE;

5 (IV) [(iii)] the condition of:

6 A. vegetation and filter media;

7 B. fences and other safety devices;

8 C. spillways, valves, and other control structures;

9 D. embankments, slopes, and safety benches;

10 E. reservoir and treatment areas;

11 F. inlet and outlet channels and structures;

12 G. underground drainage;

13 H. sediment and debris accumulation in storage and forebay areas;

14 I. any nonstructural practices to the extent practicable; and

15 J. any other item that could affect the proper function of the stormwater
16 management system; and

17 (v) [(iv)] a description of needed maintenance.

18 **§ 27-5. Deficiencies.**

19 (d) *Enforcement action.*

20 If repairs are not made or are not done properly, the Department may take any enforcement
21 action authorized by SUBTITLE 28 OF THIS ARTICLE OR OTHERWISE BY LAW.

22 (e) *Immediate danger to health or safety.*

23 (1) If, [because of an unsafe condition or improper maintenance] AFTER AN INSPECTION BY
24 THE DEPARTMENT, the CONDITION OF A stormwater management facility [presents] IS
25 DETERMINED TO PRESENT an immediate danger to the public health or safety, the
26 Department may take whatever action is necessary to protect the public and make the
27 facility safe.

28 **SECTION 2. AND BE IT FURTHER ORDAINED,** That the catchlines contained in this Ordinance
29 are not law and may not be considered to have been enacted as a part of this or any prior
30 Ordinance.

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1 **SECTION 3. AND BE IT FURTHER ORDAINED,** That plans submitted before the effective date of
2 this Ordinance will be reviewed under the then-existing stormwater management regulations. If
3 those plans do not receive final approval for stormwater management and for erosion and sediment
4 control before the effective date of this Ordinance, then the plans must be resubmitted under this
5 Ordinance. If those plans do receive final approval before the effective date of this Ordinance, but
6 construction does not begin within 2 years of that plan's approval, the plan or portion not under
7 construction must be resubmitted under this Ordinance.

8 **SECTION 4. AND BE IT FURTHER ORDAINED,** That this Ordinance takes effect on May 4, 2010.