BIORETENTION DETENTION - RAIN GARDEN (RG) - GENERAL NOTES:

- A RAIN GARDEN (RG THIS DESIGN SHEET) MAY BE PROPOSED IF THE ENTIRE FACILITY IS TO BE MORE THAN 10 FEET FROM THE STRUCTURE. THIS RG DESIGN DOES NOT QUALIFY FOR BMP CREDIT AT THIS TIME BUT DOES COMPLY WITH MOST OF THE REQUIREMENTS OF VIRGINIA DEQ STORMWATER DESIGN SPECIFICATION NO. 9 (DEQ-9).
- NO RG CAN RECEIVE DISCHARGE FROM ANY OTHER SWM/BMP FACILITY, FOR THIS DESIGN.
- ONLY ONSITE IMPERVIOUS AND PERVIOUS AREAS ARE PERMITTED TO BE DRAINED TO AN RG, WITH THE MAXIMUM IMPERVIOUS AREA CONTRIBUTING TO A SINGLE RG LIMITED TO 5,500 SQ.FT., PER THE DIRECTOR, AND THE MAXIMUM PERVIOUS AREA CONTRIBUTING TO A SINGLE
- RG LIMITED TO TWICE THE PROPOSED IMPERVIOUS AREA DRAINING TO THAT RG. STANDARD DESIGN DIMENSIONS ARE PROVIDED IN THE RG GENERALIZED SEC A-A AND TYP. RG PLANVIEW, ON THIS SHEET
- THE UNDERDRAIN SHOULD GENERALLY ALIGN WITH THE SOIL MEDIA PERIMETER ALONG THE EXTENT OF THE LONGEST FACILITY DIMENSION OR AXIS; AND THE ATTACHED OUTLET PIPE MUST DISCHARGE TO AN EXISTING ADEQUATE CONVEYANCE FACILITY OR A DRY WELL OUTLET (PREFERRED), OR TO THE EROSION-PROTECTED SURFACE OF ADJACENT OR FARTHER DOWNGRADIENT GROUND (AS LONG AS THE DISCHARGE POINT IS AT LEAST 10 FEET FROM THE BUILDING, 10 FEET FROM THE PROPERTY LINE OF DOWNGRADIENT PROPERTY, AND 5 FEET FROM ALL
- OTHER PROPERTY LINES). SEE THE PRETREATMENT/OUTLET PROTECTION DETAILS SHEET. ATRIUM OR DOME GRATES OR EQUIVALENT TRASH SCREENING STRUCTURES MUST BE INSTALLED ON TOP OF ALL 8-INCH GRAVEL CHIMNEY PIPES AND 4-INCH AUXILIARY OVERFLOW PIPES.
- A REASONABLY-SCALED FACILITY DRAINAGE AREA MAP MUST BE PROVIDED ON THIS SHEET TO IDENTIFY THE ONSITE AREA REQUIRED TO DRAIN TO EACH RG PROPOSED ON THIS SHEET. ALL CONTRIBUTING DOWNSPOUTS AND PIPES, ALL INFLOW AND OUTFLOW CONVEYANCE CONNECTIONS AND EROSION PROTECTIONS, AND ALL OUTLETS MUST ALSO BE SHOWN, ALONG WITH THE EXISTING AND PROPOSED ELEVATION CONTOURS, AND PERTINENT ELEVATION SPOT SHOTS. THE REQUIRED SOIL MEDIA SURFACE AREA (SEE THE DESIGN QUANTITIES TABLE, THIS SHEET), THE ACTUAL PROPOSED PLAN VIEW SHAPE OF THIS AREA AND CONTAINMENT BERM, AND RELEVANT PROPOSED PLAN VIEW DESIGN DIMENSIONS, CONTOURS
- AND SPOT ELEVATIONS MUST ALSO BE DEPICTED FOR EACH RG. THE CONTRACTOR IS TO ENSURE THE SPECIFIC GUTTERS, DOWNSPOUTS, AND PIPES DISCHARGE INTO THE SPECIFIC RG(S), AS DESIGNATED ON THE APPROVED PLAN. THE COUNTY SITE INSPECTOR MUST BE NOTIFIED IMMEDIATELY IF IT BECOMES APPARENT THIS REQUIREMENT CANNOT BE MET. THE <u>PROPERTY OWNER/DEVELOPER AND DESIGN ENGINEER</u> SHALL THEN BE RESPONSIBLE FOR PROPERLY REVISING THE APPROVED PLAN 6 TO RESOLVE THE APPARENT DESIGN DISCREPANCIES.
-). ALL RG MATERIALS MUST MEET THE REQUIREMENTS AND SPECIFICATIONS OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM) & DEQ BMP SPECIFICATION #9.
- . REFER TO THE LANDSCAPING PLAN FOR PROPOSED RG PLANT/VEGETATION SCHEDULES AND LAYOUTS.
- 12. AN RG MUST MAINTAIN A MINIMUM SETBACK OF 2 FEET FROM ALL PROPERTY LINES.
- 13. THE DEPTH BETWEEN A FACILITY BOTTOM AND GROUNDWATER TABLE/BEDROCK MUST BE A MINIMUM OF 2 FEET, DETERMINED BY FIELD RUN SOIL BORINGS (PER PFM).

PRETREATMENT NOTES:

- SEE THE "PRETREATMENT/OUTLET PROTECTION DETAILS" SHEET FOR THE SPECIFICATIONS AND DETAILS FOR THE PRETREATMENT PRACTICES SELECTED FOR EACH PROPOSED RG IN THE DESIGN DATA TABLES (THIS SHEET), INCLUDING:
- GUTTER SCREEN MUST BE INSTALLED ALONG THE ENTIRE SECTION OF ANY ROOF THAT IS TO DRAIN TO AN RG, IN ORDER TO HELP MAINTAIN THE CAPACITY OF THE CONTRIBUTING GUTTERS AND DOWNSPOUTS.
- AN IN-LINE LEAF STRAINER MUST BE INSTALLED ON EACH DOWNSPOUT THAT IS TO BE CONNECTED TO A PIPE, IN ORDER TO HELP MAINTAIN PIPE
- GRASS, TURF/SOD, OR SMALL ROCK RIPRAP (AS DESCRIBED FOR OUTLET PROTECTION) MUST BE INSTALLED AT THE OUTLET END OF ANY INFLOW PIPE, AND OUTSIDE OF THE RG FILTER BED AREA, IN ORDER TO HELP PREVENT THE EROSION OF MULCH AND SOIL MEDIA.
- A DEBRIS TRAP IS REQUIRED ON ANY INFLOW PIPELINE THAT CONVEYS STORMWATER FROM ANY NON-ROOF IMPERVIOUS AREA. IN ORDER TO HELP MAINTAIN PIPE CAPACITY.
- A GRAVEL DIAPHRAGM (AS A FLOW SPREADER) IS REQUIRED AT THE DOWNSTREAM END OF ANY SWALE THAT CONVEYS STORMWATER INFLOW
- TO AN RG, IN ORDER TO PROMOTE SHEETFLOW INFLOW. A GRASS FILTER STRIP IS REQUIRED TO PRETREAT ANY SHEETFLOW INFLOW.

STRUCTURE AND FOUNDATION NOTES:

- MEANS AND METHODS OF ANY PROPOSED STRUCTURAL SUPPORT OR COMPONENT FOR THE RG ARE THE RESPONSIBILITY OF THE DESIGN
- ENGINEER AND ARE NOT REPRESENTED BY ANY FAIRFAX COUNTY DETAIL. THE DESIGN OF ANY PROPOSED RG STRUCTURAL COMPONENT IS THE RESPONSIBILITY OF THE DESIGN ENGINEER.

MATERIAL SPECIFICATIONS FOR RG(S):

MATERIAL SPECIFICATION		NOTES			
FILTER MEDIA COMPOSITION (per DEQ-9)	FILTER MEDIA TO CONTAIN: 80% - 90% SAND 10%-20% SOIL FINES 3%-5% ORGANIC MATTER	THE VOLUME OF FILTER MEDIA BASED ON 110% OF THE PLAN VOLUME, TO ACCOUNT FOR SETTLING OR COMPACTION.			
FILTER MEDIA TESTING (per DEQ-9)	AVAILABLE P BETWEEN L+ AND M, PER DCR 2005 NUTRIENT MANAGEMENT CRITERIA.	THE MEDIA SHOULD BE CERTIFIED BY THE SUPPLIER.			
MULCH LAYER	USE AGED, DOUBLE SHREDDED HARDWOOD BARK MULCH (PARTICLE SIZE > 0.5-INCH).	LAY A 2-INCH LAYER, FREE OF CHEMICALS AND EXTRANEOUS MATERIAL, ABOVE THE FILTER BED.			
ALTERNATIVE SURFACE COVER	USE RIVER STONE, PEA GRAVEL, COIR MATTING, OR JUTE MATTING.	LAY A 2-INCH LAYER TO SUPPRESS WEED GROWTH.			
GEOTEXTILE/LINER	USE A NON-WOVEN GEOTEXTILE FABRIC WITH A FLOW RATE OF > 110 GAL./MIN./SQ.FT. (E.G., GEOTEX 351 OR EQUIVALENT	APPLY ONLY TO THE SIDES AND DIRECTLY ABOVE THE UNDERDRAIN. FOR HOTSPOTS AND CERTAIN KARST SITES ONLY, USE AN APPROPRIATE LINER ON BOTTOM.			
CHOKING LAYER	LAY A 3-INCH LAYER OF CHOKER STONE (TYPICALLY #8 OR UNDERDRAIN STONE.	#89 WASHED GRAVEL), ABOVE THE 9-INCH LAYER OF			
STONE FOR UNDERDRAIN AND STORAGE LAYER	VDOT #57 STONE SHOULD BE DOUBLE-WASHED AND CLEAN AND FREE OF ALL FINES.	LAY A 6-INCH LAYER OF SAND ON THE RG FLOOR, FOR BEDDING, AND LAY A 9-INCH LAYER OF STONE OVER THE UNDERDRAIN, AFTER THE PIPES HAVE BEEN PLACED.			
UNDERDRAINS	USE 4-INCH RIGID SCHEDULE 40 PVC PIPE, WITH 3/8-INCH PERFORATIONS AT 6 INCHES ON CENTER; LAY UNDERDRAIN AT 0.5% SLOPE (MIN.), AND SPACE PARALLEL PIPE RUNS AT NO MORE THAN 20 FEET.	LAY UNDERDRAIN ON THE RG BEDDING LAYER, ALONG THE ALIGNMENT DESCRIBED IN GENERAL NOTE 6, AND CONNECT TO THE EXTERIOR OUTFALL WITH NON-PERFORATED PIPE. ENSURE 1 OF 3 EVENLY SPACED (IN GENERAL) ROWS OF PERFORATIONS ALONG THE PIPE LENGTH, IS FACE-DOWN.			
GRAVEL CHIMNEY PIPE	USE 8-INCH RIGID SCHEDULE 40 PVC PIPE, WITH 1/2-INCH PERFORATIONS PROVIDED ONLY WITHIN BOTTOM 9 VERTICAL INCHES. FOOTPLATE TO BE INSTALLED ON SAND BEDDING AND COMPOSED OF RIGID PLASTIC OR NON-CORROSIVE METAL MATERIAL.	PIPE MUST BE ANCHORED TO FOOTPLATE. PERFORATIONS COMPRISING A ROW ARE TO BE LOCATED AT 4 INCHES ON CENTER AROUND THE PIPE PERIMETER, AND FOUR EVENLY SPACED (AT 2 INCHES ON CENTER) ROWS ARE REQUIRED WITHIN THE BOTTOM 9 INCHES OF PIPE.			
PLANT MATERIALS	 SELECT NATIVE PERENNIAL SEDGES OR GRASSES, HERBACEOUS PLANTS, SHRUBS, OR TREES. PLANT ONE TREE PER 250 SQUARE FEET (15 FEET ONCENTER, MINIMUM 1 INCH CALIPER). SHRUBS A MINIMUM OF 30 INCHES HIGH SHOULD BE PLANTED A MINIMUM OF 10 FEET ON-CENTER. PLANT GROUND COVER PLUGS AT 12 TO 18 INCHES ONCENTER; PLANT CONTAINER-GROWN PLANTS AT 18 TO 24 INCHES ON-CENTER, DEPENDING ON THE INITIAL PLANT SIZE AND HOW LARGE IT WILL GROW. TURF, THE USE OF SEEDS, AND PLANTING ANNUALS OR VEGETABLES, IS NOT PERMITTED 	 PLANT MATERIALS MUST BE SELECTED PER THE RECOMMENDED PLANTS LIST AND INCLUDED IN THE LANDSCAPING PLAN FOR DETAILS. PLANT SPACING MUST BE SUFFICIENT TO ENSURE A MINIMUM OF 80% COVERAGE WITHIN 3 YEARS. PLANTS SHOULD COME FROM QUALIFIED SUPPLIERS, BE APPROPRIATE FOR STORMWATER APPLICATIONS, AND CONSIST OF NATIVE SPECIES. 			

MAINTENANCE NOTES FOR RG(S):

- A PRIVATE MAINTENANCE AGREEMENT (PMA) IS REQUIRED BEFORE PLAN APPROVAL.
- FIRST YEAR MAINTENANCE OPERATIONS SHOULD INCLUDE: A) INSPECTING FACILITIES AT LEAST TWICE AFTER STORMS EXCEEDING 1/2 INCH FOR THE FIRST 6 MONTHS AFTER INSTALLATION; AND B) WATERING ONCE A WEEK DURING THE FIRST 2 MONTHS, AND AS NEEDED DURING THE FIRST GROWING SEASON (APRIL-
- THIRD-PARTY LANDSCAPE MAINTENANCE CONTRACTS FOR RG(S) SHOULD INCLUDE SPECIFICS ABOUT UNIQUE BIORETENTION LANDSCAPING NEEDS, SUCH AS: MAINTAINING THE ELEVATION DIFFERENCES REQUIRED FOR NEEDED PONDING, PROPER MULCHING, SEDIMENT AND TRASH REMOVAL, AND LIMITED USE OF FERTILIZERS AND PESTICIDES.
- CONSULT THE PMA ATTACHMENT A OR FAIRFAX FACT SHEET FOR BIORETENTION PRACTICES, FOR ADDITIONAL INFORMATION.

SUGGESTED MAINTENANCE ACTIVITIES FOR RG(S)

MAINTENANCE TASKS	FREQUENCY
 SPOT WEEDING, EROSION REPAIR, TRASH & SEDIMENT REMOVAL, DEBRIS REMOVAL FROM GRAVEL CHIMNEY PIPE, AND MULCH RAKING 	TWICE DURING APROCT.
 ADD REINFORCEMENT PLANTING TO MAINTAIN THE DESIRED VEGETATION DENSITY OF 75-90%. REMOVE INVASIVE PLANTS USING RECOMMENDED CONTROL METHODS. INSPECT INLETS AND PRETREATMENT DEVICES INCLUDING GUTTERS, DOWNSPOUTS, INFLOW PIPES, & GRAVEL CHIMNEY PIPES, AND INSPECT THE OUTLET SYSTEM, INCLUDING UNDERDRAIN CAPS, DISCHARGE PIPES, DRY WELLS, POP UP EMITTERS FOR BLOCKAGES AND CLOGS. 	AS NEEDED
 SPRING INSPECTION AND CLEANUP SUPPLEMENT MULCH TO MAINTAIN A 2-INCH LAYER PRUNE TREES AND SHRUBS REMOVE, THOROUGHLY WASH AND RESTORE THE UPPER 6-INCHES OF GRAVEL IN THE GRAVEL CHIMNEY PIPE. DO THIS INSTEAD FOR THE UPPER 12 INCHES, IF DIRT & DEBRIS ARE EVIDENT AT THE 6-INCH DEPTH 	ANNUALLY
REPLACE THE MULCH OR SURFACE COVER LAYER	EVERY 3 YEARS

CONSTRUCTION NOTES FOR RG(S):

3H:1V SIDESLOPE-

6" MIN. & 12" MAX. OFFSET-

FROM SOIL MEDIA PERIMETER

TYPICAL RG GENERALIZED PLANVIEW

(TOP OF MULCH BED)

SCALE: 1" = XX"

(MAX. SCALE 1"=30')

CUT IN THE MATTING TO INSTALL THE PLANTS;

CONSTRUCTION OF THE RG AREA MAY ONLY BEGIN AFTER THE ENTIRE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED WITH VEGETATION. TEMPORARY E&S CONTROLS ARE NEEDED DURING CONSTRUCTION OF THE RG AREA TO DIVERT STORMWATER AWAY FROM THE AREA UNTIL THE INSTALLATION IS COMPLETED. EROSION CONTROL FABRICS MAY BE NEEDED TO PROTECT EXPOSED SIDESLOPES DURING CONSTRUCTION. EXCAVATORS OR BACKHOES SHOULD WORK FROM THE SIDES, AND NOT SIT INSIDE THE FOOTPRINT, TO EXCAVATE THE RG AREA TO ITS APPROPRIATE DESIGN DEPTH AND DIMENSIONS.

RIP THE BOTTOM SOILS TO A DEPTH OF 6 TO 12 INCHES TO PROMOTE GREATER INFILTRATION POTENTIAL; PLACE GEOTEXTILE FABRIC ON THE SIDES OF THE RG AREA WITH A 6-INCH OVERLAP ON THE SIDES; AND PROCEED WITH THE LAYERING AS DESCRIBED BELOW:

PLACE A 6-INCH LAYER OF SAND ON THE BOTTOM, AS BEDDING; INSTALL THE UNDERDRAIN SYSTEM ON THE SAND BEDDING OF THE RG, ENSURING MINIMUM PIPE SLOPES ARE MAINTAINED AND THE CONNECTED (NON-PERFORATED) 4-INCH AUXILIARY OVERFLOW AND CLEANOUT PIPES EXTEND VERTICALLY TO AT LEAST THE TOP-OF-BERM LEVI

ALSO, INSTALL THE FOOTPLATE FOR THE 8-INCH GRAVEL CHIMNEY PIPE ON THE SAND BEDDING, ANCHOR THE PIPE TO THE PLATE (WITH THE PERFORATED SECTION OF THE PIPE LOCATED NEAREST THE PLATE), AND ENSURE THE PIPE TOP REACHES AT LEAST TO THE TOP-OF-BEF

ENSURE THE UNDERDRAIN SYSTEM IS CONNECTED TO THE OUTLET PIPE, AND CAN FREELY DRAIN, AND PACK A 9-INCH DEPTH OF #57 STONE AROUND THE UNDERDRAIN AND VERTICAL PIPES;

- PLACE A 3-INCH LAYER OF CHOKER STONE/PEA GRAVEL ABOVE THE 9-INCH #57 STONE LAYER, AND AROUND THE PERIMETER(S) OF THE VERTICAL PIPE(S); OBTAIN THE THOROUGHLY MIXED SOIL MEDIA FROM A QUALIFIED VENDOR, STORE MATERIAL ON AN ADJACENT IMPERVIOUS AREA OR PLASTIC SHEETING, AND VERIFY THE MEDIA MEETS THE SPECIFICATIONS. KEEP THE MEDIA MOISTENED TO AVOID SEPARATION DURING INSTALLATION;
- PLACE AND SPREAD THE MEDIA BY HAND ABOVE THE CHOKER STONE AND AROUND THE PERIMETER(S) OF THE VERTICAL PIPE(S), IN 8- TO 12-INCH LIFTS (WITH NO MACHINERY ALLOWED DIRECTLY ON THE MEDIA), UNTIL THE DESIRED TOP ELEVATION OF THE MEDIA HAS BEEN ACHIEVED. (SEE SECTION A-A AND THE DESIGN QUANTITIES TABLES ON THIS SHEET FOR THE REQUIRED SOIL MEDIA DEPTHS.) LIFTS MAY BE LIGHTLY WATERED TO ENCOURAGE SETTLEMENT; AFTER THE FINAL LIFT IS PLACED, THE MEDIA SHOULD BE RAKED (TO LEVEL IT), SATURATED, AND ALLOWED TO SETTLE FOR AT LEAST ONE WEEK. APPLY ADDITIONAL MEDIA, AS NEEDED, TO ACHIEVE THE DESIGN ELEVATION;
- FILL THE CHIMNEY PIPE(S) WITH #57 STONE. TO 8-INCHES ABOVE THE MEDIA SURFACE, AND CUT THE TOPS OF THE 4-INCH AUXILIARY OVERFLOW AND CLEANOUT PIPES. AND THE 8-INCH CHIMNEY PIPE TO THE RESPECTIVE DESIGN ELEVATIONS (THE GRAVEL LEVEL(S) SHOULD BE ABOUT 6-INCHES BELOW THE TOP(S) OF THE 8-INCH CHIMNEY PIPE(S), AT THIS POINT). INSTALL THE TRASH GRATES/SCREENS;
- PREPARE PLANTING HOLES FOR ANY TREES AND/OR SHRUBS, INSTALL THE PLANT MATERIAL PER THE LANDSCAPING PLAN AND PFM 12-0505, AND WATER ACCORDINGLY. PLANTING MUST TAKE PLACE AFTER INSTALLATION IS COMPLETED AND DURING THE FOLLOWING PERIODS: MARCH 15 THROUGH JUNE 15, AND SEPT. 15 THROUGH NOV. 15, UNLESS OTHERWISE APPROVED BY THE DIRECTOR. INSTALL ANY TEMPORARY IRRIGATION; PLACE 2-INCH SURFACE COVER LAYER, TYPICALLY MULCH, ABOVE THE FILTER MEDIA. IF THE DESIGN SPECIFIES COIR OR JUTE MATTING BE USED IN LIEU OF MULCH, THE MATTING WILL NEED TO BE INSTALLED PRIOR TO PLANTING (STEP G), AND HOLES OR SLITS WILL HAVE TO BE
- INSTALL THE PRETREATMENT PRACTICES; THE RG(S) MUST BE INSPECTED AT 12-24 HOURS AND 36-48 HOURS AFTER A SIGNIFICANT RAINFALL (0.5-1.0 INCHES) OR ARTIFICIAL FLOODING TO DETERMINE THAT THE FACILITY IS DRAINING PROPERLY. RESULTS OF THE INSPECTION MUST BE PROVIDED TO LDS BEFORE THE
- RELEASE OF THE CONSERVATION ESCROW. CONSTRUCTION INSPECTION MUST BE PROVIDED IN ACCORDANCE WITH PFM 6-1307.11.
- CONSTRUCTION CONTRACTS SHOULD INCLUDE A CARE & REPLACEMENT WARRANTY TO ENSURE 85% PLANT SURVIVAL DURING THE FIRST GROWING SEASON FOLLOWING INSTALLATION.

MAINTAIN MIN. SOIL MEDIA PERIMETER OFFSETS AND

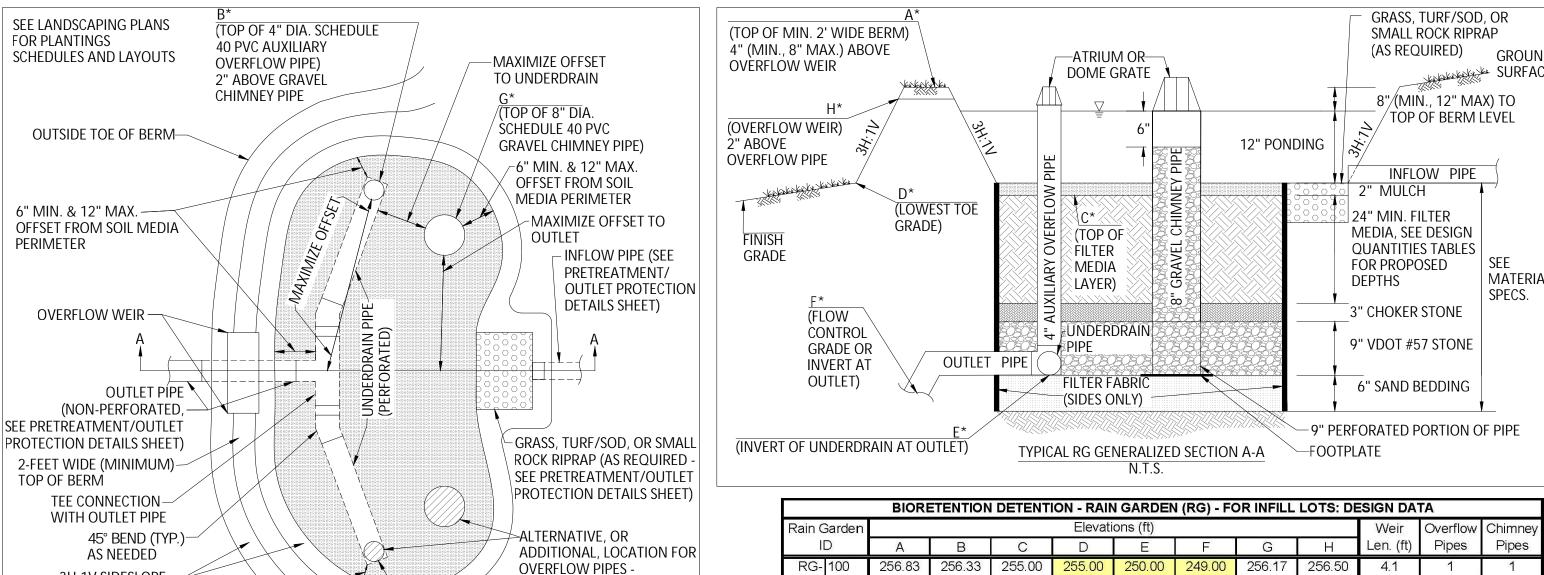
MAXIMIZE SPACING FROM

-4" CLEANOUT PIPE WITH CAP, AND

ELEVATION (IF NOT OVERFLOW PIPE)

TOP AT 4" OVERFLOW PIPE

UNDERDRAIN & OUTLET, AS



		Perpendi	icular Pro	perty Lii	ne Offset	Coordin	ates for \$	Structure	Centerli	ne (CL) L	ocations.	
Rain Garden	~	We	ir & Outl	et Pipe C	L's				Vertical F	Pipe CL's		
ID	Weir	Weir Crest Out. Pipe @ UD			Out. Pip	e @ OP	8" Chi	imney	4" Ov	erflow	4" Cle	anout
	Dist.	PL ID	Dist.	PL ID	Dist.	PL ID	Dist.	PL ID	Dist.	PL ID	Dist.	PL ID
RG- 100	30.00	W	30.00	W	30.00	W	25.00	W	20.00	W	40.00	W
	10.00	S	15.00	S	5.00	S	25.00	S	20.00	S	20.00	S
RG- 200	30.00	W	30.00	W	30.00	W	25.00	W	20.00	W	40.00	W
RG- 200	10.00	S	15.00	S	5.00	S	25.00	S	20.00	S	20.00	S
RG- 300	30.00	W	30.00	W	30.00	W	25.00	W	20.00	W	40.00	W
	10.00	S	15.00	S	5.00	S	25.00	S	20.00	S	20.00	S

RG-	200	255.83	255.33	254.00	254.00	250.00	249.00	255.17	255.50	2.0	1	1	
RG-	300	255.33	254.83	253.50	253.50	250.00	249.00	254.67	255.00	2.0	1	1	
Rain G	Sarden	Drainag	ge Area	a.	PRET	REATME	NT PRACT	TICES .	,	OUTL	ET DDATE	PROTECTION	
10)	Sou	ırce	if Roc	f area	if Inflow	if Inflow Pipeline if Pervious Area OUTLET PROTEC				CHON		
RG-	100	Pervious	+ R + IA	Gutter Screen				GFS + Gravel Diaphragm		Grass			
RG-	200	Pervio	us + R	Gutter Screen + In- Line Leaf Strainer		Small Ro	ck Riprap	Grass Filter Strip (GFS)		Small Rock Riprap		prap	
RG-	300	Perviou	us + IA			Leaves to the same of the same	Trap + Rock	0.0000000000000000000000000000000000000	lter Strip S)		Turf/Sod		

CERTIFICATI	ON OF NO CHANGE			
	Y THAT NO CHANGES HAVE BEEN MADE CHANGES HAVE BEEN MADE TO, OR AF			,
-,	GN CALCULATIONS SPREADSHEET.	TETROT GOED FOR THE SECION	ONEOGENITORIO GENERALI	TED FOR THIS PROJECT BY THE RE
SIGNATURE _				
DESIGNER				

	DESIGN QUANTITIES TABLE (An RG MUST be located at least 10' from a residential struct	rure)
A separ	ate stand-alone design & Design Quantities Table is required	d for each lot
Enter the	e requested design data in the yellow cells below.	
MUST n	tional impervious area created by proposed project: natch net additional impervious area value identified on Cover Sh s) proposed on this sheet:	9000 sq. ft. heet
Total <u>on</u>	site impervious area drained to RG(s): rea MUST NOT drain into RG(s)	8000 sq. ft.
-	<u>site</u> area (impervious+pervious) drained to RG(s): area must be no more than 2 x impervious area:	24000 sq. ft. ok
	rea MUST NOT drain into RG(s) In a livalent net impervious area to be drained to RG(s):	89 %
	uired stormwater volume to be detained by RG(s): of individual RG(s) proposed:	1707 cu. ft. 3
	Water Quality credit is not available for these proposed Ra	ain Gardens.
each pro quantitie 5500 sq. impervio	the contributing onsite total & impervious areas and the propositions of RG, below, to obtain the required soil media surface areas. NOTE: the max. allowed contributing onsite (only) impervious ft., with no more onsite (only) pervious area allowed than doubtus area drained to the RG - offsite flows must be bypassed. The with Individual RG designs of the Individu	and other design us area to an RG is ble the actual
etc. Not	following this order may lead to erroneous "remaining" quantities	
#1 RG	- 100 (enter plan number for RG) Contributing onsite impervious area = impervious area must not be greater than 5500 sq. ft.:	4000 sq. ft.
	<pre>offsite area prohibited Total contributing onsite area (imperv.+perv.) = pervious area must not be more than 2 x impervious area:</pre>	12000 sq. ft.
	<pre>offsite area prohibited Stormwater volume required to be detained =</pre>	853 cu. ft.
	Soil Media Depth proposed (24" minimum) = Soil Media Surface Area required =	48 in. 375 sq. ft.
	3H:1V or flatter sideslopes required along surface ponding	g perimeter
	Remaining <u>onsite</u> imperv. area to be captured by RG(s) = Remaining total <u>onsite</u> area to be captured by RG(s) =	4000 sq. ft. 12000 sq. ft.
#2 RG	- 200 (enter plan number for RG) Contributing onsite impervious area = impervious area must not be more than 5500 sq. ft.: offsite area prohibited	2000 sq. ft.
	Total contributing <u>onsite</u> area (imperv.+perv.) = pervious area must not be more than 2 x impervious area: offsite area prohibited	6000 sq. ft.
	Stormwater volume required to be detained = Soil Media Depth proposed (24" minimum) =	427 cu. ft. 36 in.
	Soil Media Surface Area required = 3H:1V or flatter sideslopes required along surface ponding	174 sq. ft. g perimeter
	Remaining <u>onsite</u> imperv. area to be captured by RG(s) = Remaining total <u>onsite</u> area to be captured by RG(s) =	2000 sq. ft. 6000 sq. ft.
#3 RG	- 300 (enter plan number for RG) Contributing onsite impervious area =	2000 sq. ft.
	impervious area must not be more than 5500 sq. ft.: offsite area prohibited Total contributing onsite area (imperv.+perv.) = pervious area must not be more than 2 x impervious area:	6000 sq. ft.
	offsite area prohibited Stormwater volume required to be detained =	427 cu. ft.
	Soil Media Depth proposed (24" minimum) = Soil Media Surface Area required =	30 in. 174 sq. ft.
	3H:1V or flatter sideslopes required along surface ponding	
	Remaining onsite imperv. area to be captured by RG(s) =	0 sq. ft.

BIORETENTION DETENTION FOR INFILL LOTS: RAIN GARDEN (RG) -

		NAME	DATE
DRAINAGE MAF	(S) AND	ADDITIONAL	CALCULATIONS/NOTES

TION DETENT IN GARDEN (RG) COU EETS TE RA BIORE SHEET___OF___ First Draft V 1.0