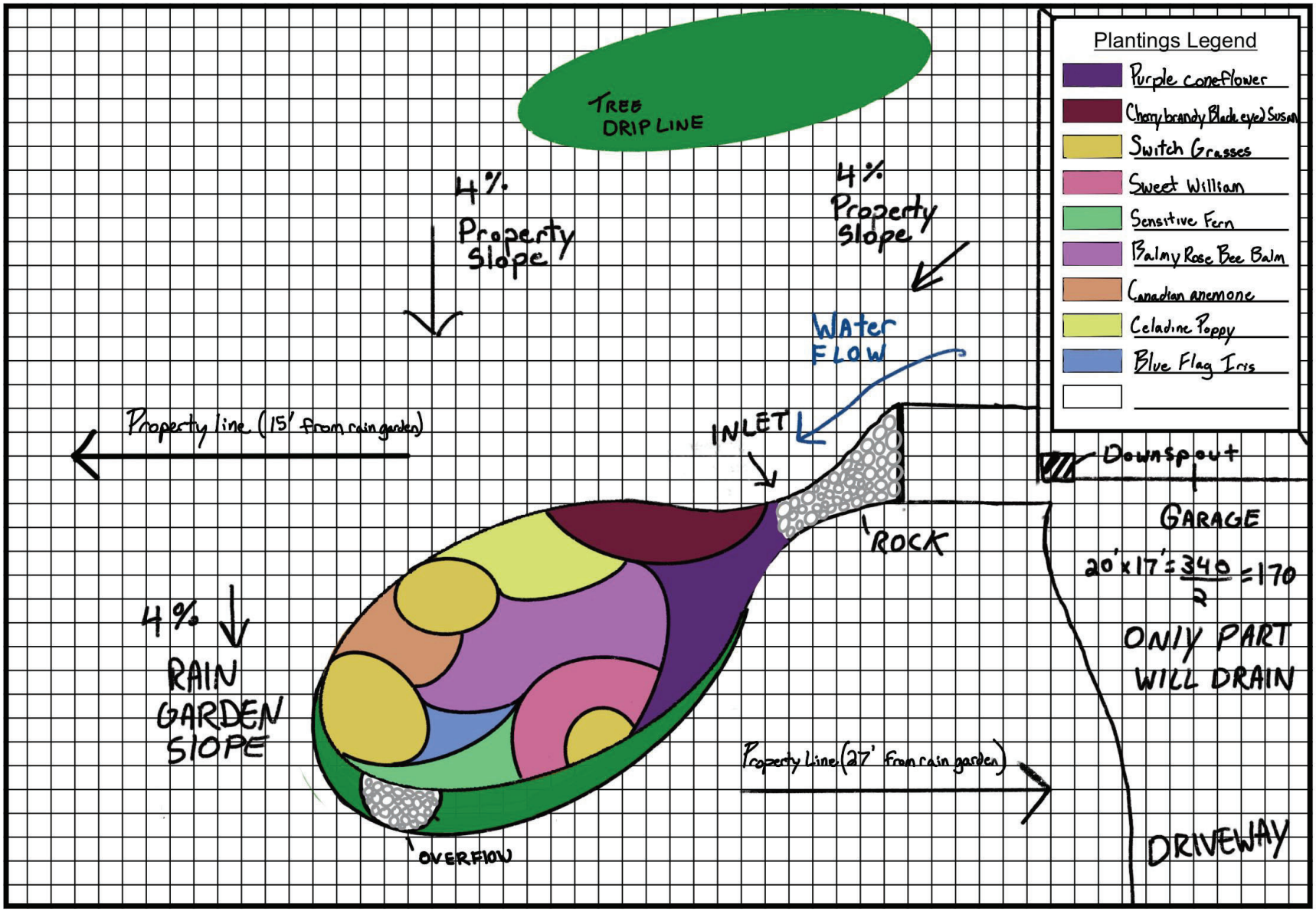
Rain Garden Design Plan Template

RainSmart REBATES

Owner is responsible to field verify location of all underground utilities prior to any work. Call 811 or 800-482-7171 at least 72 hours (3 business days) before you plan to start your work.

MISS DIG 811



Design Checklist

- [x] Property Lines (label distance)
- [x] Structures
- [x] Trees (with dripline)
- [x] Rain Garden Inlet
- [x] Rain Garden Outlet
- [x] Berm
- [x] Water Flow Direction
- [x] Slope Direction (of property)
- [x] Slope Direction (of rain garden)

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
0-4%	3-5"
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 1.25 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr.	0.19	0.15	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

170 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x .19 (Sizing Multiplier) = 32.3 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

45.9 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 21 (Estimated Number of Plants)

Step 5: Design Check

45.9 Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

1 Block = 1/2 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC Water Resources Commissioner Jim Nash

CRWC Clinton River Watershed Council

RainSmart REBATES

Rain Garden Design Plan Template

Owner is responsible to field verify location of all underground utilities prior to any work. Call 811 or 800-482-7171 at least 72 hours (3 business days) before you plan to start your work.

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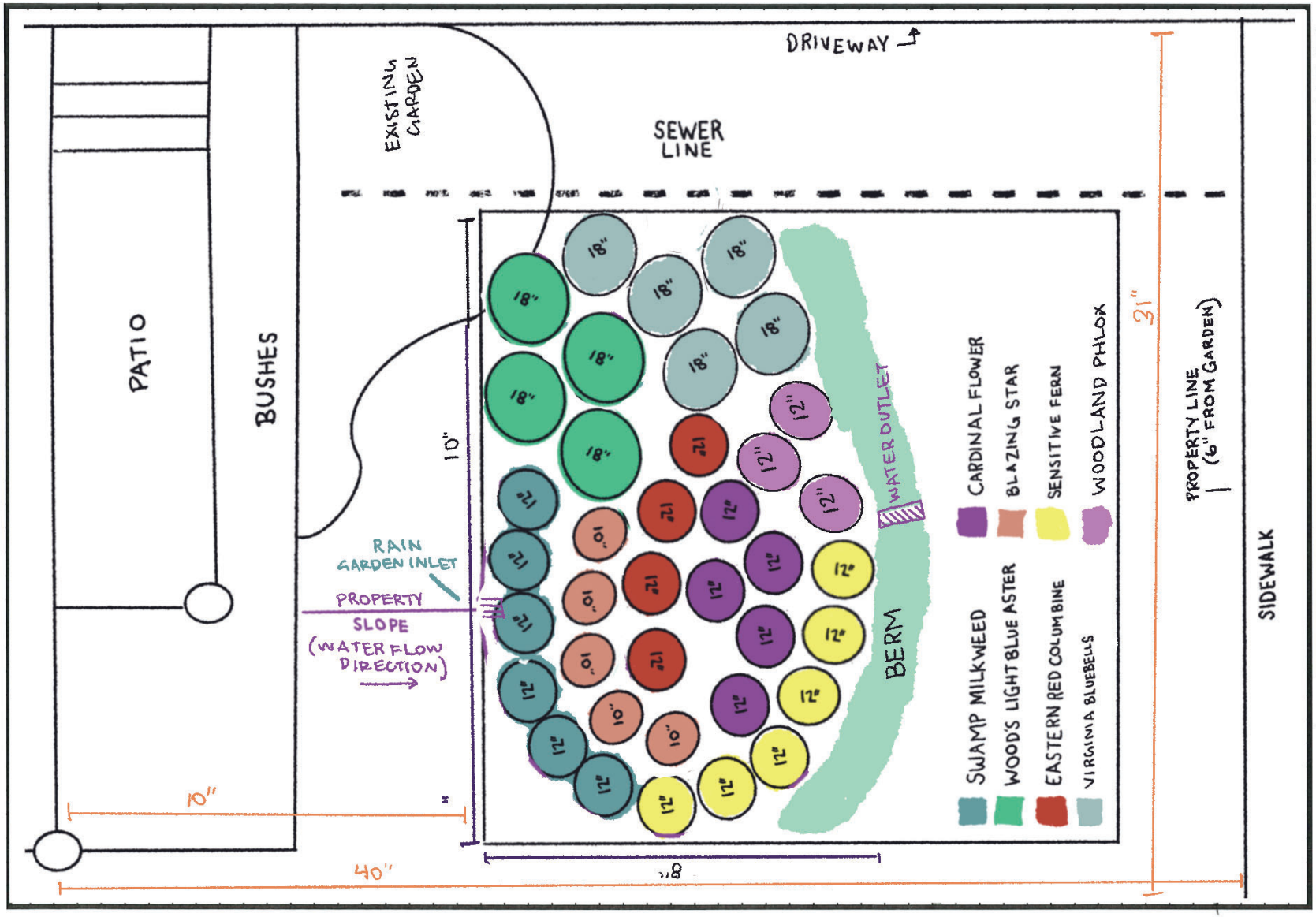

Design Checklist

- [x] Property Lines (label distance)
- [x] Berm
- [x] Structures
- [x] Water Flow Direction
- [x] Trees (with dripline)
- [x] Slope Direction (of property)
- [x] Rain Garden Inlet
- [x] Slope Direction (of rain garden)
- [x] Rain Garden Outlet

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
0-4%	3-5"
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 10 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr.	0.19	0.15	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

251 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x .19 (Sizing Multiplier) = 48 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

96 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 42.6 (Estimated Number of Plants)

Step 5: Design Check

96 Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC WATER RESOURCES COMMISSIONER Jim Nash

CRWC CLINTON RIVER WATERSHED COUNCIL

RainSmart REBATES

Rain Garden Design Plan Template

Owner is responsible to field verify location of all underground utilities prior to any work. Call 811 or 800-482-7171 at least 72 hours (3 business days) before you plan to start your work.

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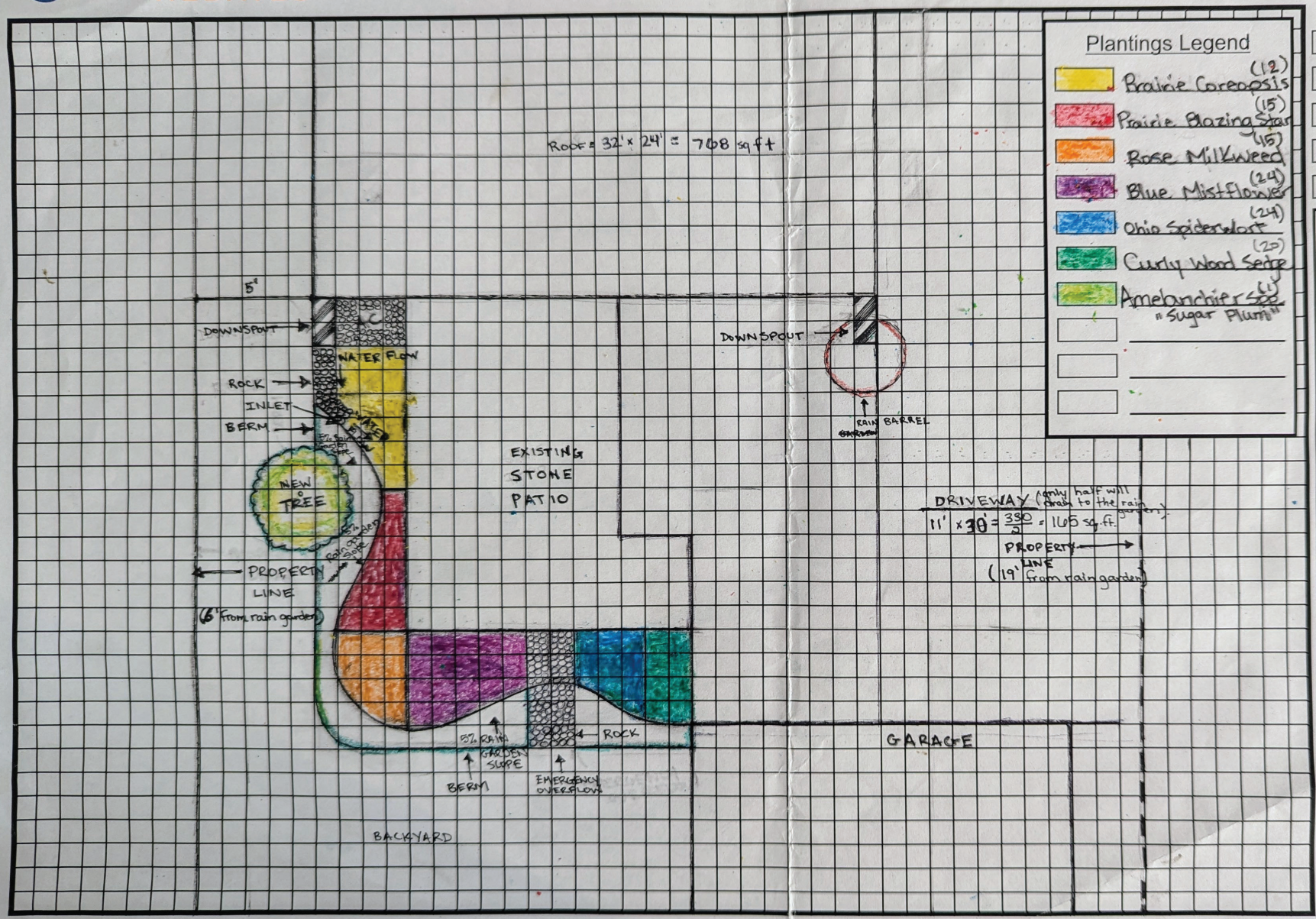

Plantings Legend

- Prairie Coreopsis (12)
- Prairie Blazing Star (15)
- Rose Milkweed (15)
- Blue Mistflower (24)
- Ohio Spiderwort (24)
- Curly Wood Sedge (25)
- Amelanchier 5ft "Sugar Plum" (1)

Design Checklist

- [X] Property Lines (label distance)
- [X] Structures
- [X] Trees (with dripline)
- [X] Rain Garden Inlet
- [X] Rain Garden Outlet
- [X] Berm
- [X] Water Flow Direction
- [X] Slope Direction (of property)
- [X] Slope Direction (of rain garden)

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
0-4%	3-5"
(5-7%)	(6-7")
8-12%	8

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = _____ inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr.	0.19	0.15	0.08
.75-1.00"/hr.	0.34	(0.25)	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

(768 + 165) x .25 = 233

Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.) | Sizing Multiplier | Required Area of the Rain Garden (sq ft)

Step 5: Estimate Number of Plants Needed

250 ÷ 2.25 = 111

Total Area (sq ft) of Rain Garden | Estimated Number of Plants

Step 5: Design Check

250 — Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC Water Resources Commissioner Jim Nash

CRWC Clinton River Watershed Council

RainSmart REBATES

Rain Garden Design Plan Template

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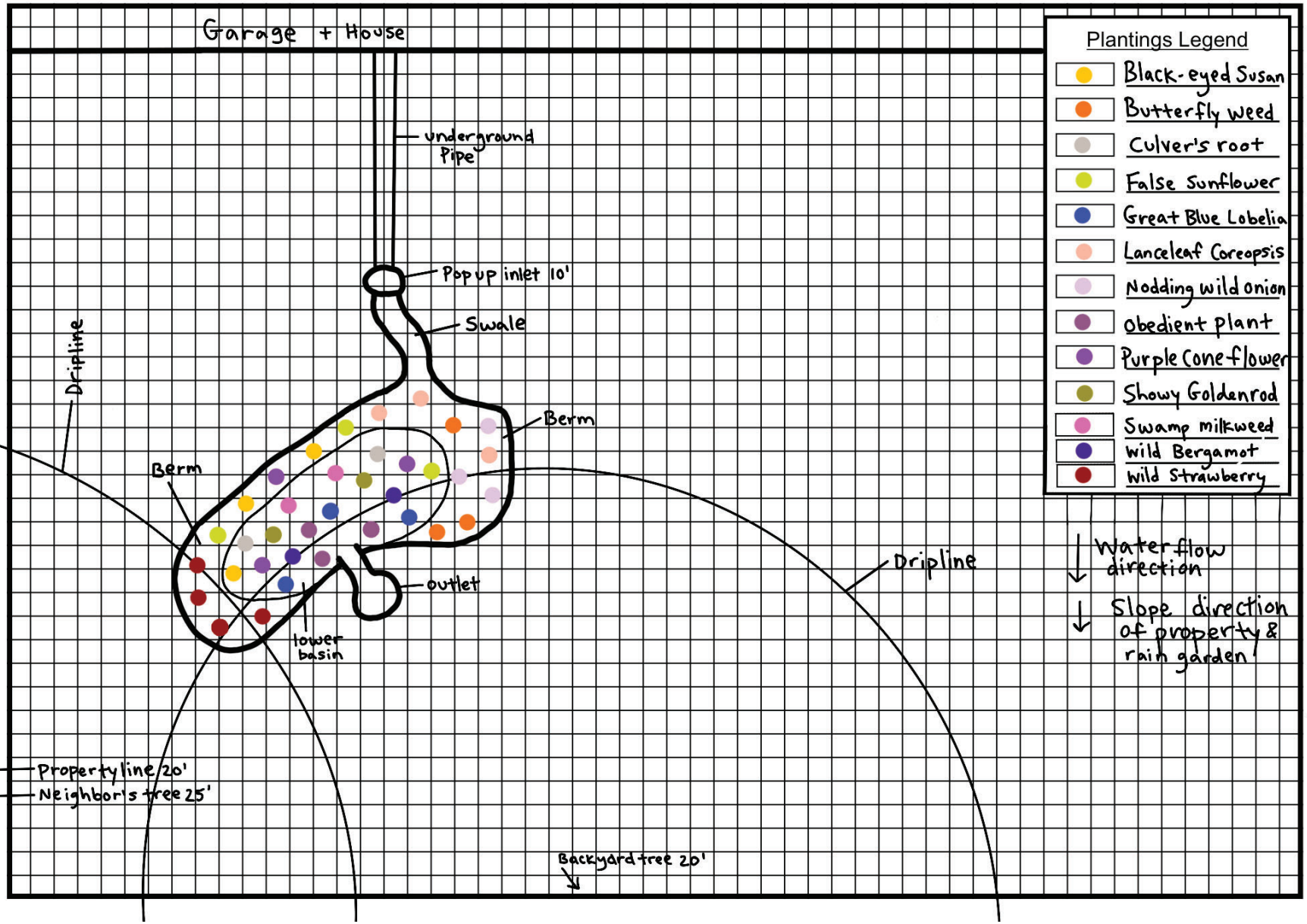

Plantings Legend

- Black-eyed Susan
- Butterfly weed
- Culver's root
- False Sunflower
- Great Blue Lobelia
- Lanceleaf Coreopsis
- Nodding wild onion
- obedient plant
- Purple Coneflower
- Showy Goldenrod
- Swamp milkweed
- wild Bergamot
- wild Strawberry

Design Checklist

- [x] Property Lines (label distance)
- [x] Structures
- [x] Trees (with dripline)
- [x] Rain Garden Inlet
- [x] Rain Garden Outlet
- [x] Berm
- [x] Water Flow Direction
- [x] Slope Direction (of property)
- [x] Slope Direction (of rain garden)

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
0-4%	(3-5")
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 4 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr.	(0.19)	0.15	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

355 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x .19 (Sizing Multiplier) = 67.45 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

80 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 36 (Estimated Number of Plants)

Step 5: Design Check

80 (+20%) Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC Water Resources Commissioner Jim Nash

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RainSmart REBATES

Rain Garden Design Plan Template

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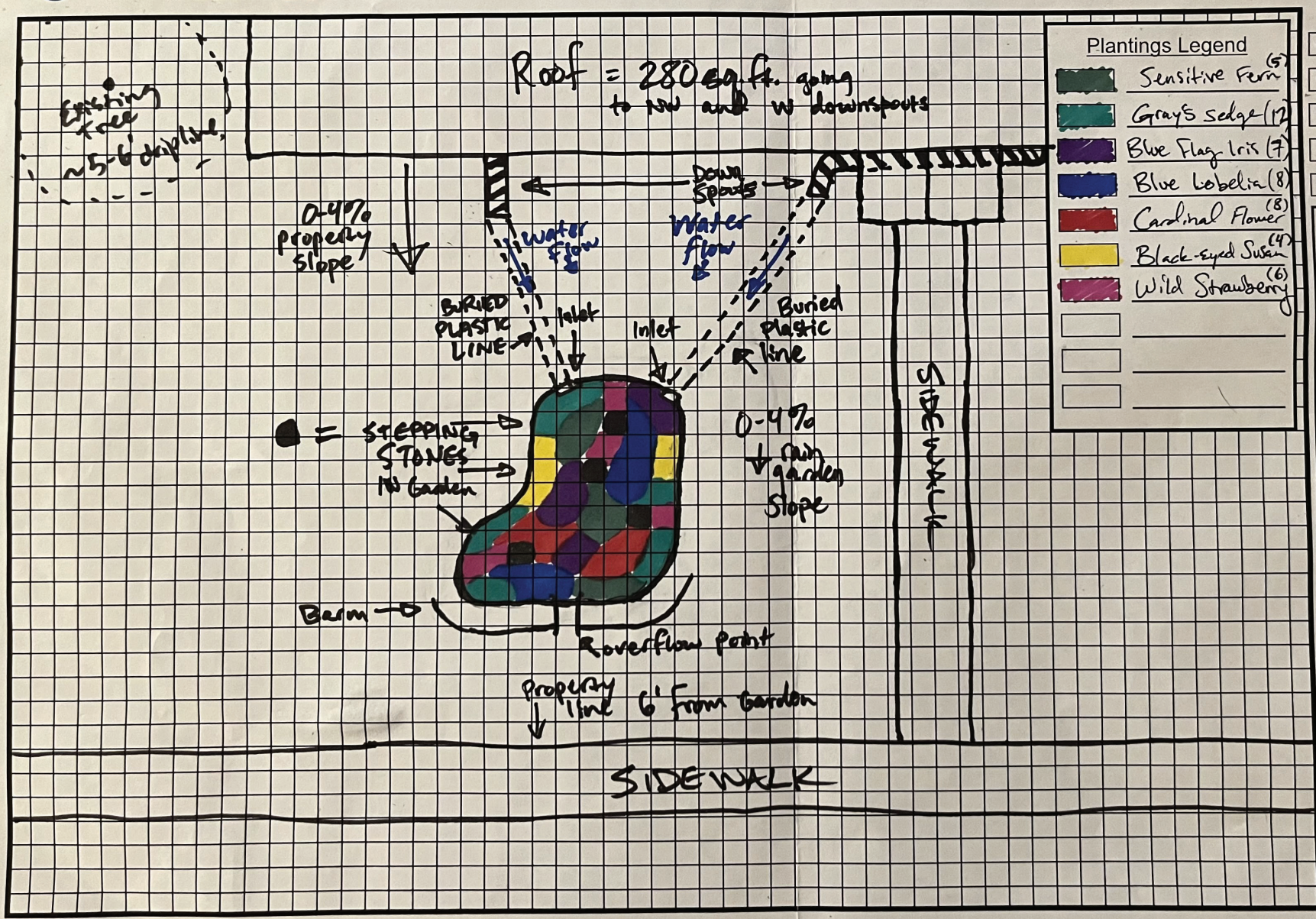


Design Checklist

- [x] Property Lines (label distance)
- [x] Berm
- [x] Structures
- [x] Water Flow Direction
- [x] Trees (with dripline)
- [x] Slope Direction (of property)
- [x] Rain Garden Inlet
- [x] Slope Direction (of rain garden)
- [x] Rain Garden Outlet

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
0-4%	3-5"
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 2 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr.	0.19	0.15	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

280 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x 0.19 (Sizing Multiplier) = 53.2 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

64 (20% over) (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 28 (Estimated Number of Plants)

We'll probably use 50 and plant dense

Step 5: Design Check

64 (Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4))

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

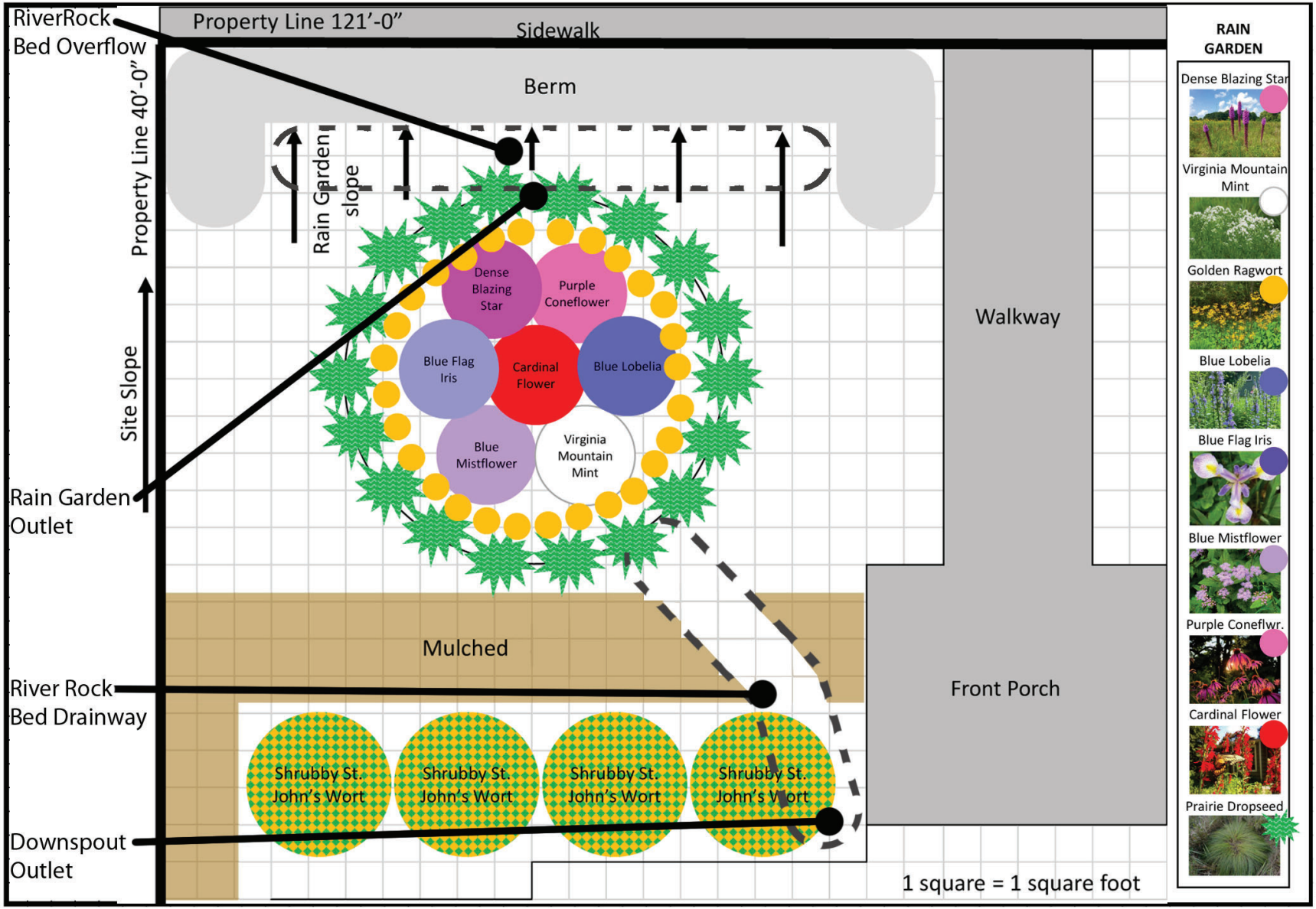
WRC Water Resources Commissioner Jim Nash

CRWC Clinton River Watershed Council

Rain Garden Design Plan Template

RainSmart REBATES

Owner is responsible to field verify location of all underground utilities prior to any work. Call 811 or 800-482-7171 at least 72 hours (3 business days) before you plan to start your work. MISS DIG 811



RAIN GARDEN

Design Checklist

- ☐ Property Lines (label distance)
- ☐ Structures
- ☐ Trees (with dripline)
- ☐ Rain Garden Inlet
- ☐ Rain Garden Outlet
- ☐ Berm
- ☐ Water Flow Direction
- ☐ Slope Direction (of property)
- ☐ Slope Direction (of rain garden)

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
~~0-4%~~	3-5"
5-7%	6-7"
~~8-12%~~	8"

Step 2: Perform Soil Infiltration Test

Infiltration Rate (from infiltration test) = _____ inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr.	0.19	~~0.15~~	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

478 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x 0.25 (Sizing Multiplier) = 133 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

133 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 60 (Estimated Number of Plants)

Step 5: Design Check

144 sq ft — Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC Water Resources Commissioner Jim Nash

CRWC Clinton River Watershed Council

RainSmart REBATES

Rain Garden Design Plan Template

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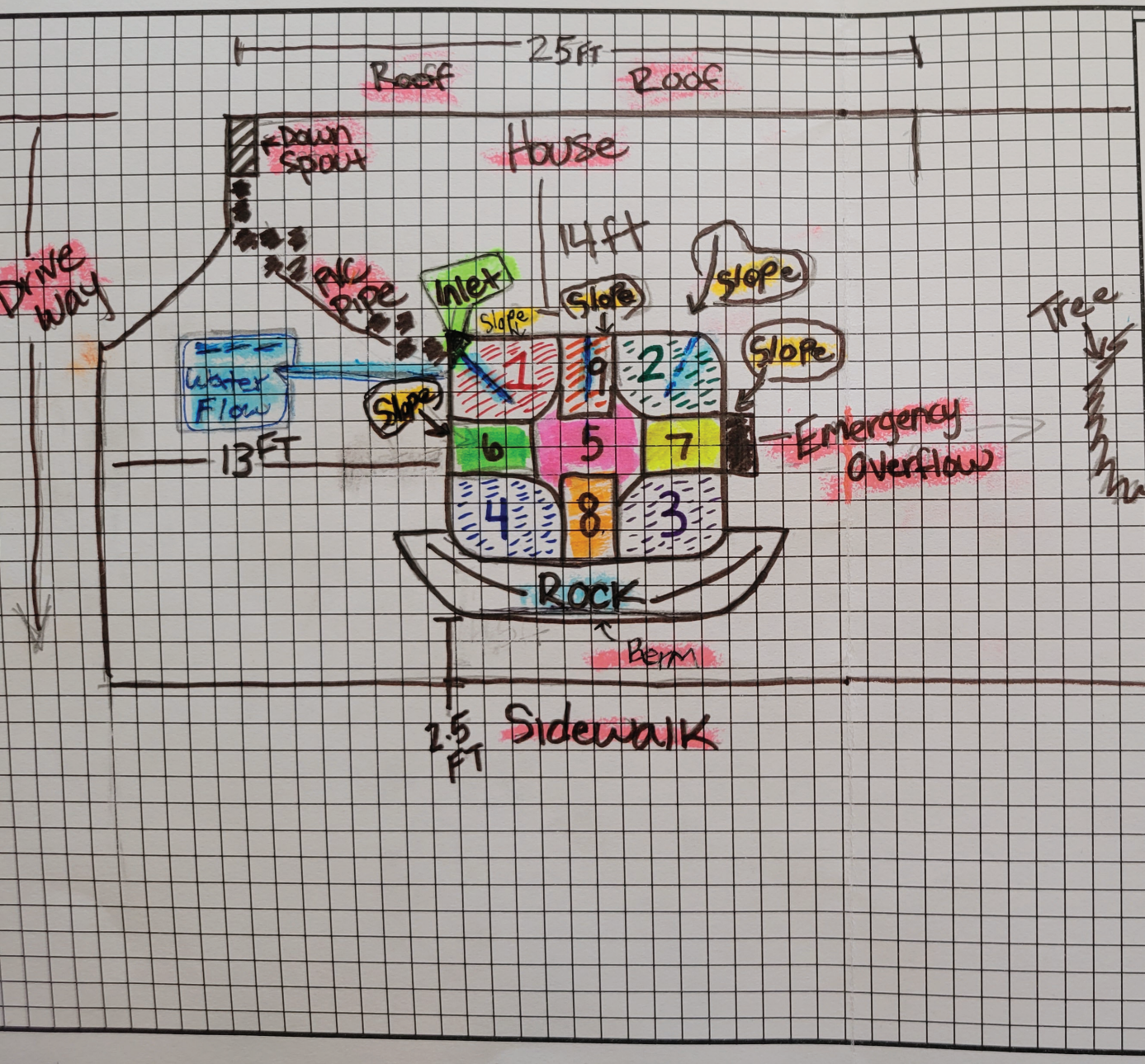

Plantings Legend

1	White Beardtongue	(5)
2	Snow Cone Flower	(5)
3	Canada Anemone	(5)
4	Kobold Blazing Star	(5)
5	Red Bud	(1)
6	Swamp Buttercup	(2)
7	Magnus Purple Cone Flower	(2)
8	Wild Geranium	(13)
9	Woods Blue Aster	(2)
		Total = 36

Design Checklist

- [x] Property Lines (label distance)
- [x] Berm
- [x] Structures
- [x] Water Flow Direction
- [x] Trees (with dripline)
- [x] Slope Direction (of property)
- [x] Rain Garden Inlet
- [x] Slope Direction (of rain garden)
- [x] Rain Garden Outlet

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
(0-4%)	(3-5")
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 1.25 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr.	(0.19)	0.15	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Si

(275) Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.) x 0.19 Sizing Multiplier = 52.25 Required A of the Rai Garden (sq

Step 5: Estimate Number of Plants Neede

68 Total Area (sq ft) of Rain Garden ÷ 2.25 = 30 Estima Number of

Step 5: Design Check

68 Total Area (sq ft) of Designed Ra Garden (must be greater than or to the required area from Step 4

1 Block = 1 Square Foo

Notes

1. Drawing is completed to the accuracy of base information. Slight modifications m necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MIS at least 72 hours (3 business days) befo is planned to start.

WRC Water Resources Commissioner Jim Nash

CRV Clinton River Waters

RainSmart REBATES

Note: my neighbor could not care less about what I do in my yard so it is o.k. being so close to the property line. I would've gone up to the line, but I want him to have room to get out of his car.

Rain Garden Design Plan Template

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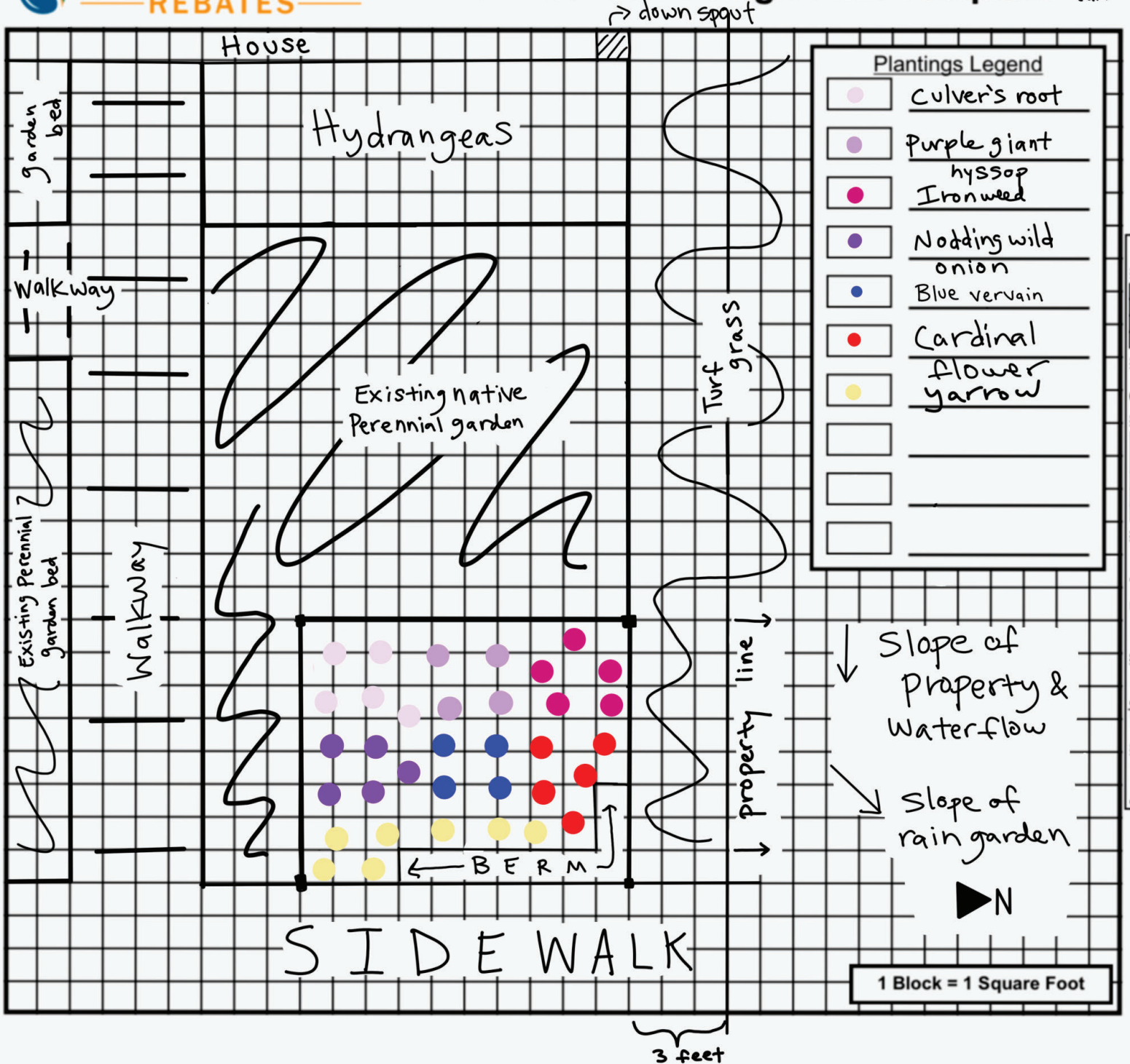

Plantings Legend

- Culver's root
- Purple giant hyssop
- Ironweed
- Nodding wild onion
- Blue vervain
- Cardinal flower
- yarrow

Design Checklist

X	Property Lines (label distance)	X	Berm
X	Structures	X	Water Flow Direction
NA	Trees (with dripline)	X	Slope Direction (of property)
X	Rain Garden Inlet	X	Slope Direction (of rain garden)
N/A	Rain Garden Outlet existing garden will act as overflow		

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
(0-4%)	3-5"
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 3-5" inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one) 3-5"	6-7"	8"
>1.25"/hr.	0.19	0.15	0.08
.75-1.00"/hr.	(0.34)	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

200 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x 0.34 (Sizing Multiplier) = 68 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

80 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 35 (Estimated Number of Plants)

Step 5: Design Check

80 Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC Water Resources Commissioner Jim Nash

CRWC Clinton River Watershed Council

RainSmart REBATES

Rain Garden Design Plan Template

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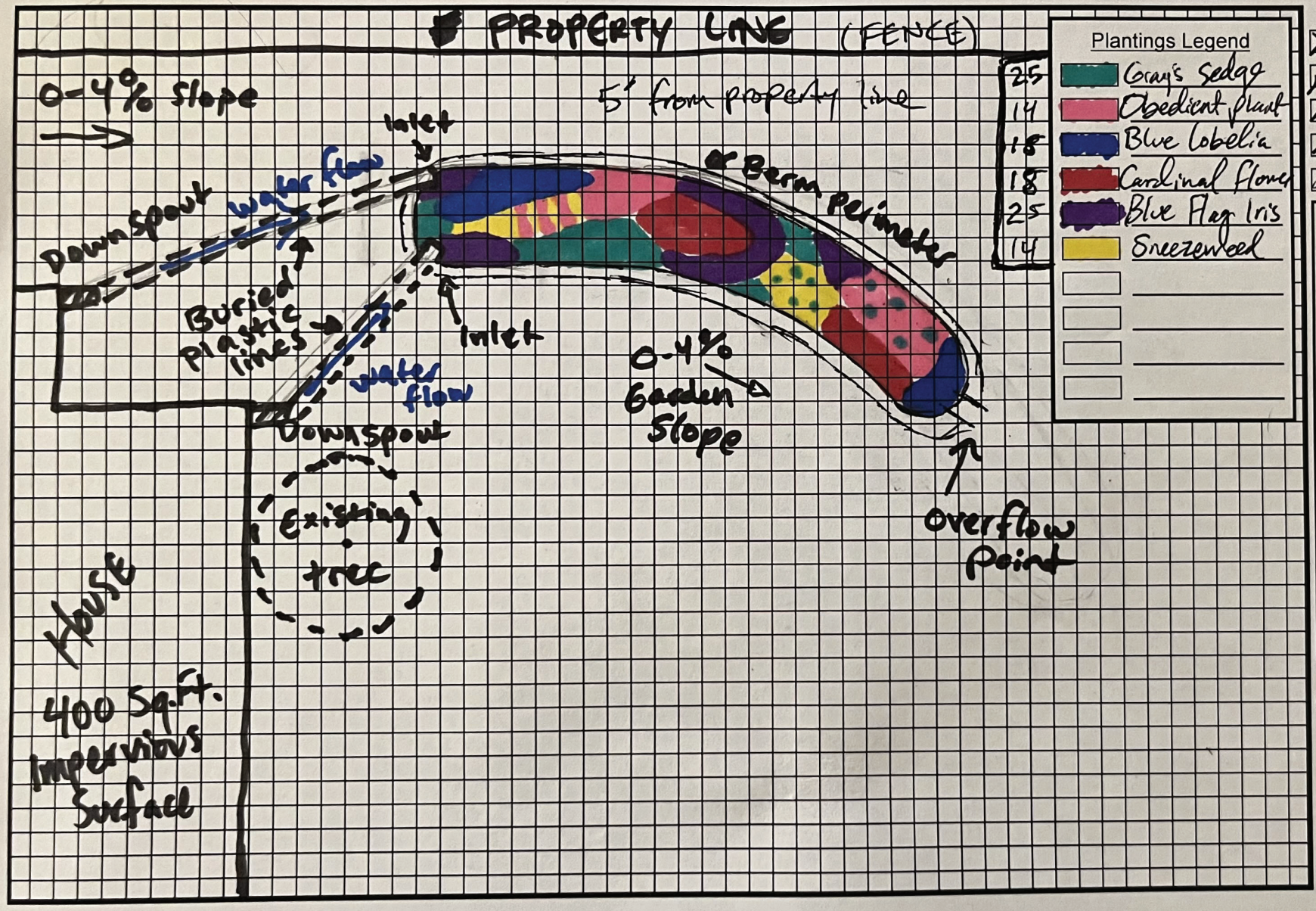


Plantings Legend

- Gray's Sedge
- Obedient plant
- Blue Lobelia
- Cardinal Flower
- Blue Flag Iris
- Sneezeweed

Design Checklist

- [x] Property Lines (label distance)
- [x] Structures
- [x] Trees (with dripline)
- [x] Rain Garden Inlet
- [x] Rain Garden Outlet
- [x] Berm
- [x] Water Flow Direction
- [x] Slope Direction (of property)
- [x] Slope Direction (of rain garden)

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
(0-4%)	3-5"
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltration Test

Infiltration Rate (from infiltration test) = 1.25 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr	(0.19)	0.15	0.08
.75-1.00"/hr	0.34	0.25	0.16
.25-.50"/hr	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Siz

400 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x 0.19 (Sizing Multiplier) = 76 (Required Are of the Rain Garden (sq ft

Step 5: Estimate Number of Plants Needed

91 (20% overage) (Total Area (sq ft) of Rain Garden) 2.25 = 40 (Estimated Number of Plar

Step 5: Design Check

91 Total Area (sq ft) of Designed Rain Garden (must be greater than or equ to the required area from Step 4)

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS D at least 72 hours (3 business days) before wo is planned to start.

WRC WATER RESOURCES COMMISSIONER

CRW CLINTON RIVER WATERSHED CO

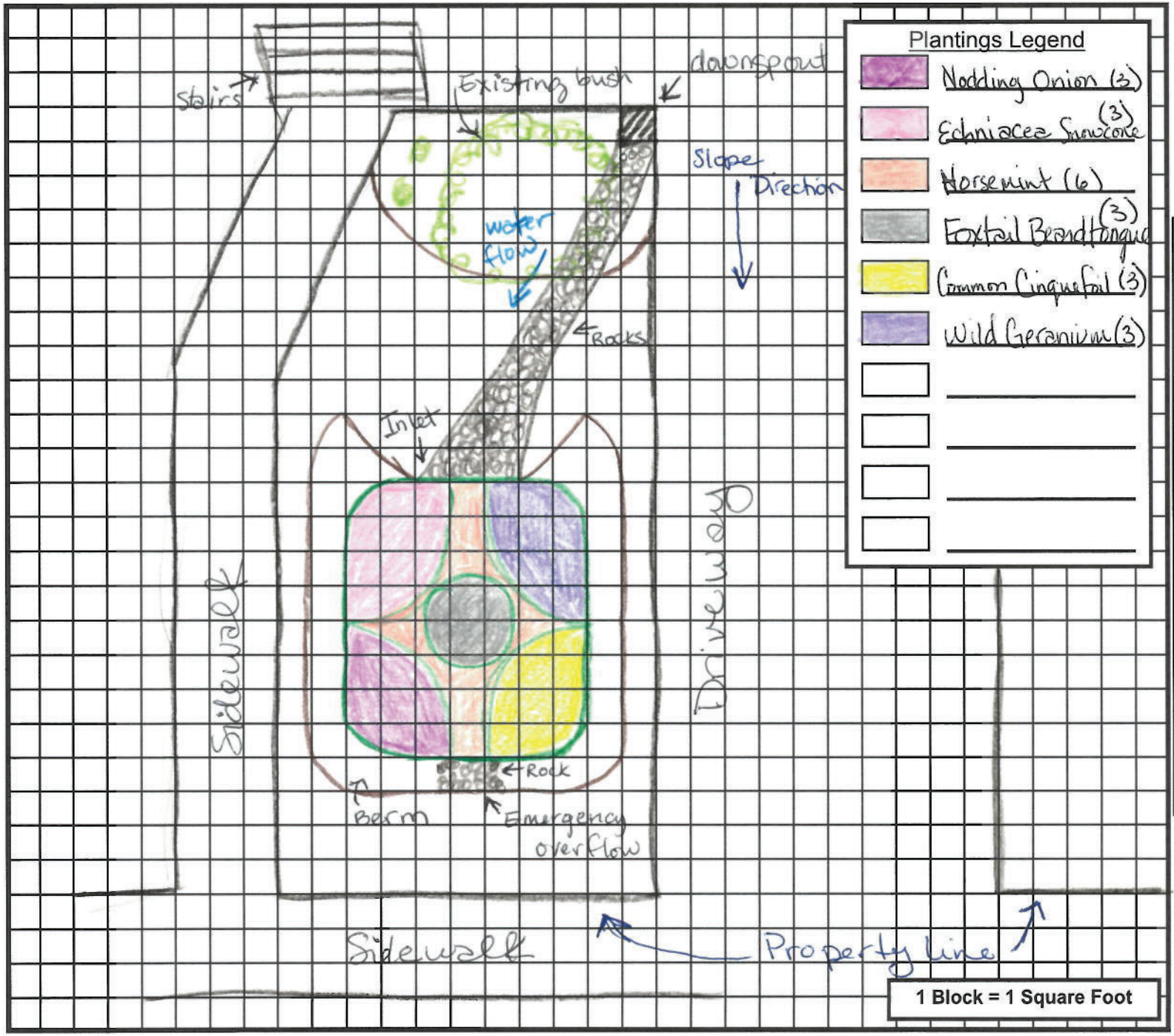
RainSmart REBATES

Rain Garden Design Plan Template

Owner is responsible to field verify location of all underground utilities prior to any work. Call 811 or 800-482-7171 at least 72 hours (3 business days) before you plan to start your work. MISS DIG 811

Design Checklist

- [x] Property Lines (label distance)
- [x] Berm
- [x] Structures
- [x] Water Flow Direction
- [x] Trees (with dripline)
- [x] Slope Direction (of property)
- [x] Rain Garden Inlet
- [ ] Slope Direction (of rain garden)
- [x] Rain Garden Outlet



Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
(0-4%)	3-5"
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 12 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one) 3-5"	6-7"	8"
>1.25"/hr.	(0.19)	0.15	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

200 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) X .19 (Sizing Multiplier) = 40 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

40 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 17.8 (Estimated Number of Plants)

Step 5: Design Check

48 Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC Water Resources Commissioner Jim Nash

CRWC Clinton River Watershed Council

RainSmart REBATES

Rain Garden Design Plan Template

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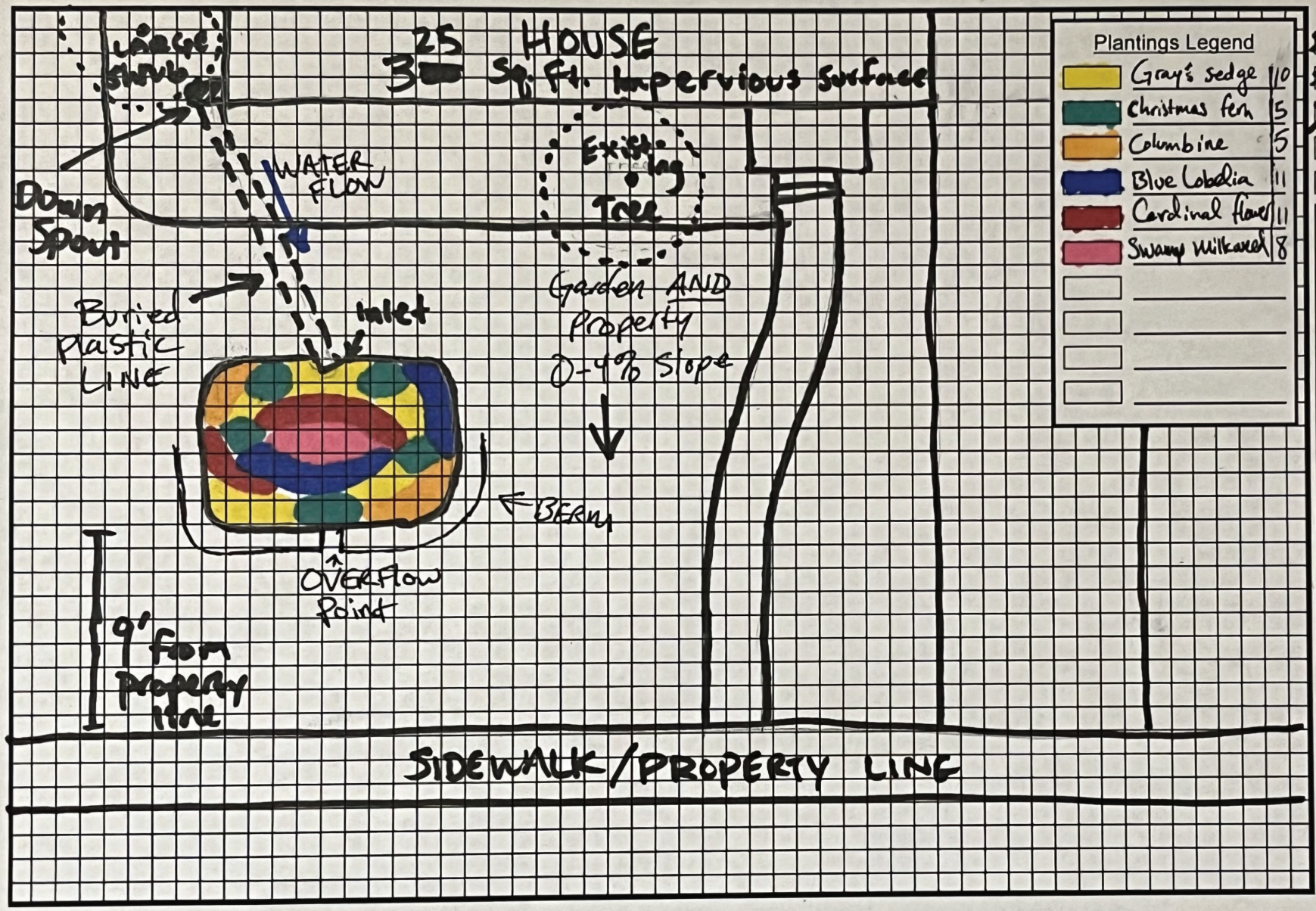


Design Checklist

- [x] Property Lines (label distance)
- [x] Structures
- [x] Trees (with dripline)
- [x] Rain Garden Inlet
- [x] Rain Garden Outlet
- [x] Berm
- [x] Water Flow Direction
- [x] Slope Direction (of property)
- [x] Slope Direction (of rain garden)

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
0-4%	3-5"
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltration Test

Infiltration Rate (from infiltration test) = 2 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one) 3-5"	6-7"	8"
>1.25"/hr.	0.19	0.15	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Siz

325 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x 0.19 (Sizing Multiplier) = 62 (Required Area of the Rain Garden (sq ft

Step 5: Estimate Number of Plants Needed

62 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 28 (Estimated Number of Plan

Step 5: Design Check

74 Total Area (sq ft) of Designed Rain Garden (must be greater than or equa to the required area from Step 4)

(20% over calculation)

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS D at least 72 hours (3 business days) before wo is planned to start.

WRC Water Resources Commissioner

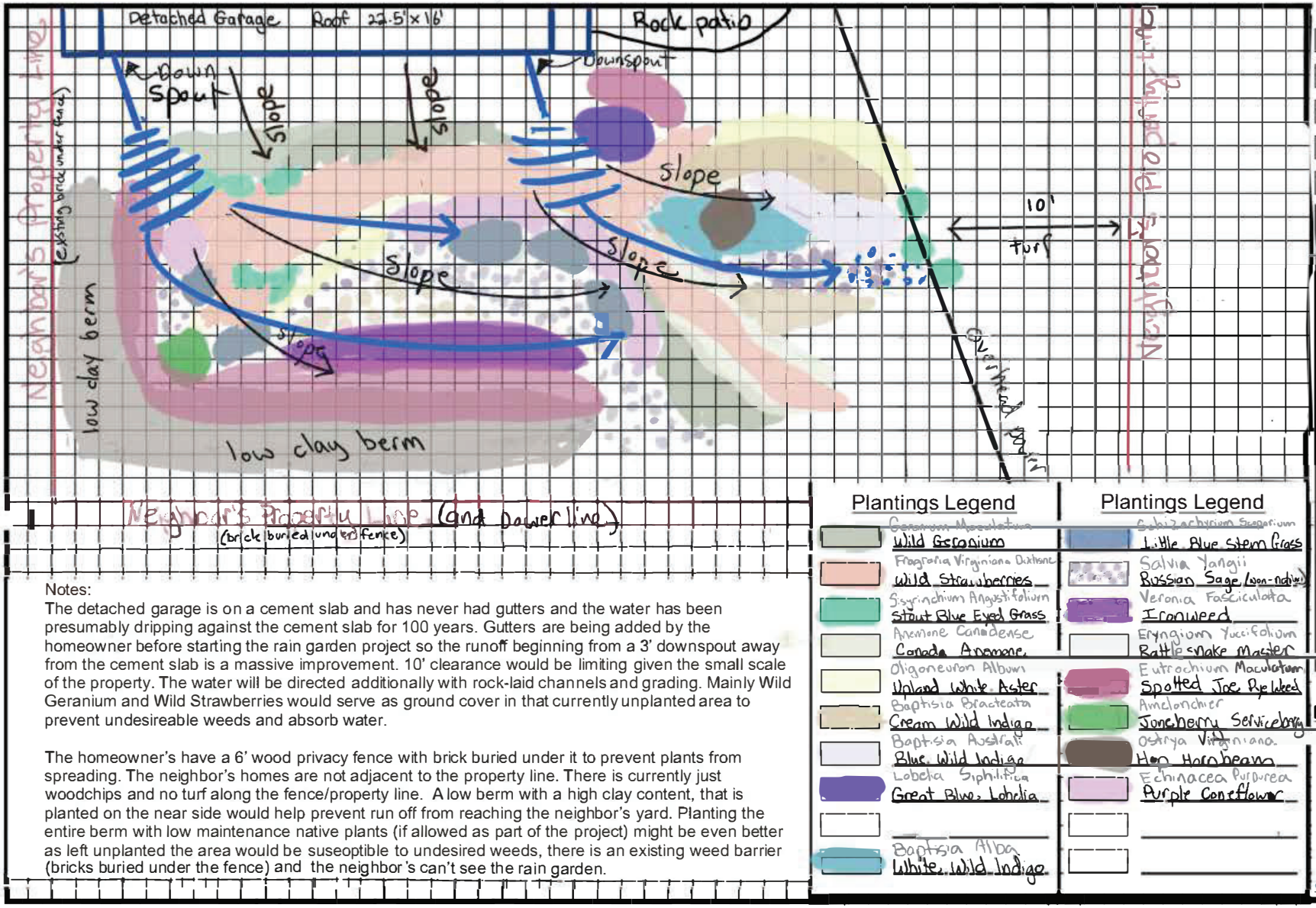
CRW

Rain Garden Design Plan Template

RainSmart REBATES

Owner is responsible to field verify location of all underground utilities prior to any work. Call 811 or 800-482-7171 at least 72 hours (3 business days) before you plan to start your work.

MISS DIG 811



Notes:

The detached garage is on a cement slab and has never had gutters and the water has been presumably dripping against the cement slab for 100 years. Gutters are being added by the homeowner before starting the rain garden project so the runoff beginning from a 3' downspout away from the cement slab is a massive improvement. 10' clearance would be limiting given the small scale of the property. The water will be directed additionally with rock-laid channels and grading. Mainly Wild Geranium and Wild Strawberries would serve as ground cover in that currently unplanted area to prevent undesireable weeds and absorb water.

The homeowner's have a 6' wood privacy fence with brick buried under it to prevent plants from spreading. The neighbor's homes are not adjacent to the property line. There is currently just woodchips and no turf along the fence/property line. A low berm with a high clay content, that is planted on the near side would help prevent run off from reaching the neighbor's yard. Planting the entire berm with low maintenance native plants (if allowed as part of the project) might be even better as left unplanted the area would be suseoptible to undesired weeds, there is an existing weed barrier (bricks buried under the fence) and the neighbor's can't see the rain garden.

Design Checklist

- ☑ Property Lines (label distance)
- ☑ Berm
- ☑ Structures
- ☑ Water Flow Direction
- ☑ No existing trees Trees (with dripline)
- ☑ Slope Direction (of property)
- ☑ Rain Garden Inlet
- ☑ Slope Direction (of rain garden)
- ☑ Rain Garden Outlet

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
(0-4%)	3-5"
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 12 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr.	0.19	0.15	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

360 sq ft (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x .19 (Sizing Multiplier) = 68.4 sq ft (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

est 377 sq ft (Total Area (sq ft.) of Rain Garden) ÷ 2.25 = 167 (Estimated Number of Plants)

Step 5: Design Check

√ Total Area (sq ft.) of Designed Rain Garden (must be greater than or equal to the requiredarea from Step 4)

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Subslitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC Water Resources Commissioner — Jim Nash

CRWC Clinton River Watershed Council

Rain Garden Design Plan Template

RainSmart REBATES

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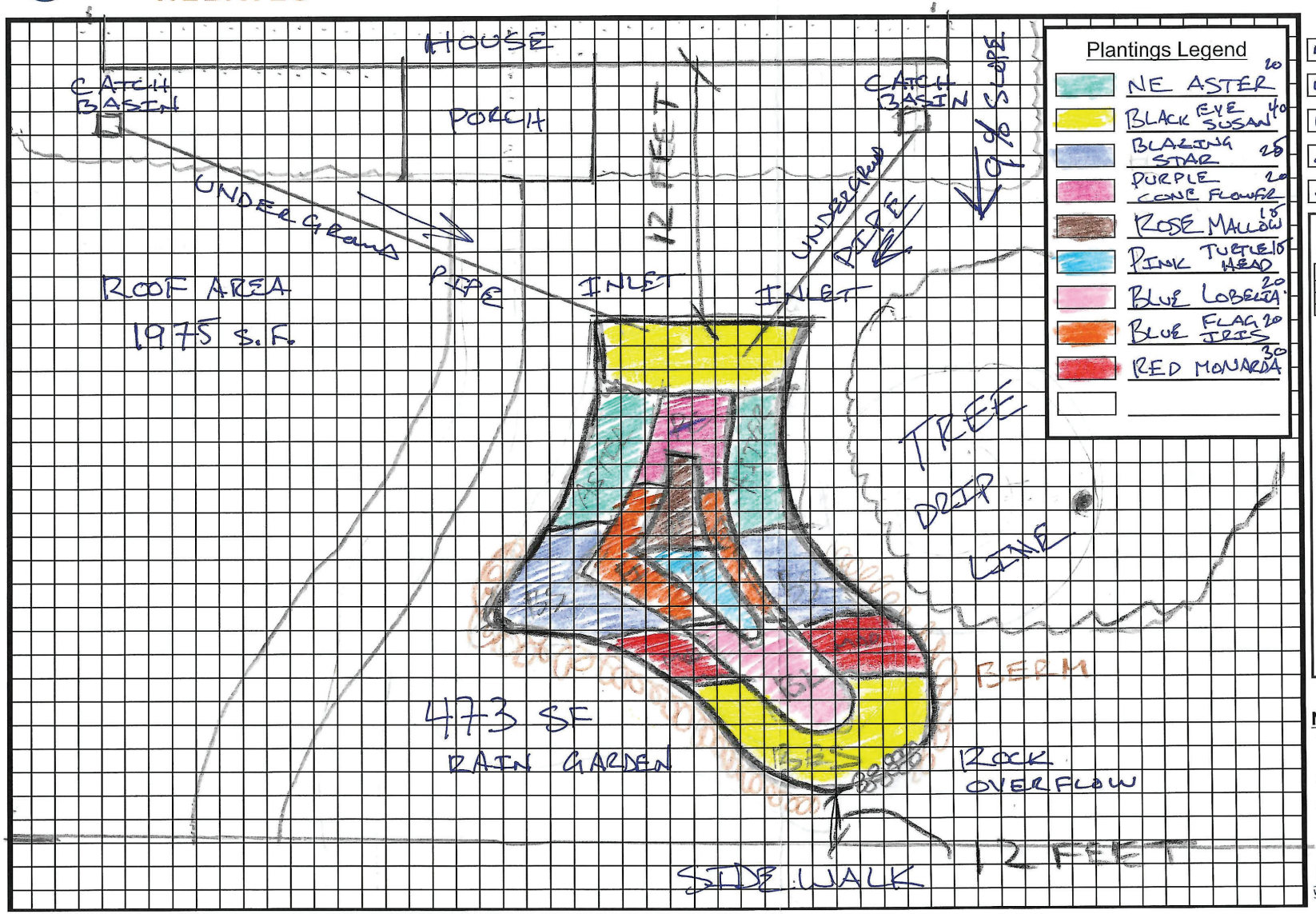


Plantings Legend

NE ASTER	20
BLACK EYE SUSAN	40
BLAZING STAR	25
PURPLE CONE FLOWER	20
ROSE MALLOW	15
PINK TURTLE HEAD	10
BLUE LOBELIA	20
BLUE FLAG IRIS	20
RED MONARDA	30

Design Checklist

- ✓ Property Lines (label distance)
- ✓ Structures
- ✓ Trees (with dripline)
- ✓ Rain Garden Inlet
- ✓ Rain Garden Outlet
- ✓ Berm
- ✓ Water Flow Direction
- ✓ Slope Direction (of property)
- ✓ Slope Direction (of rain garden)

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
0-4%	3-5"
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 1 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one) 3-5"	6-7"	8"
>1.25"/hr.	0.19	0.15	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

1975 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x .16 (Sizing Multiplier) = 316 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

473 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 210 (Estimated Number of Plants)

Step 5: Design Check

473 Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

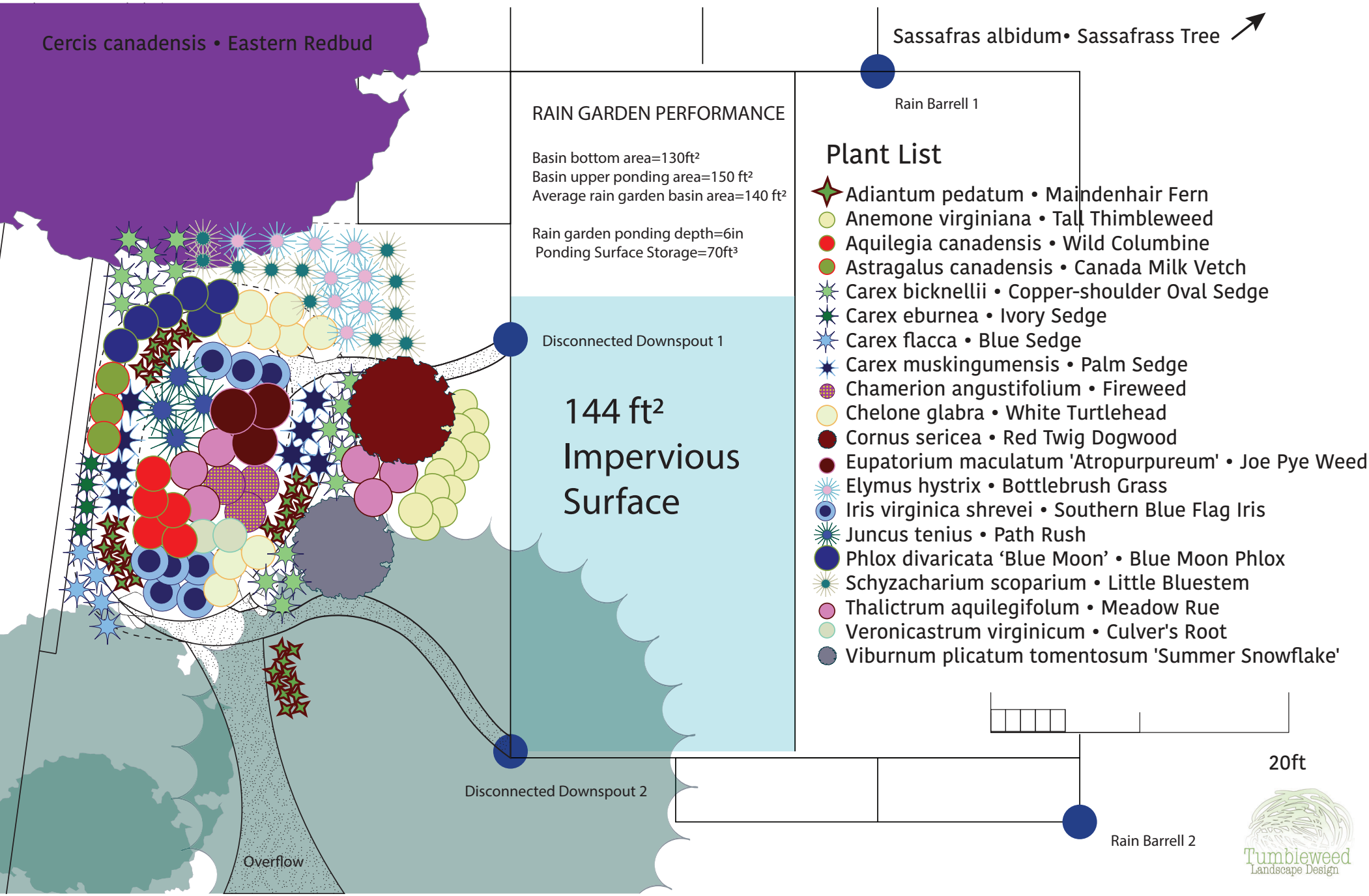
1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC WATER RESOURCES COMMISSIONER Jim Nash

CRWC CLINTON RIVER WATERSHED COUNCIL

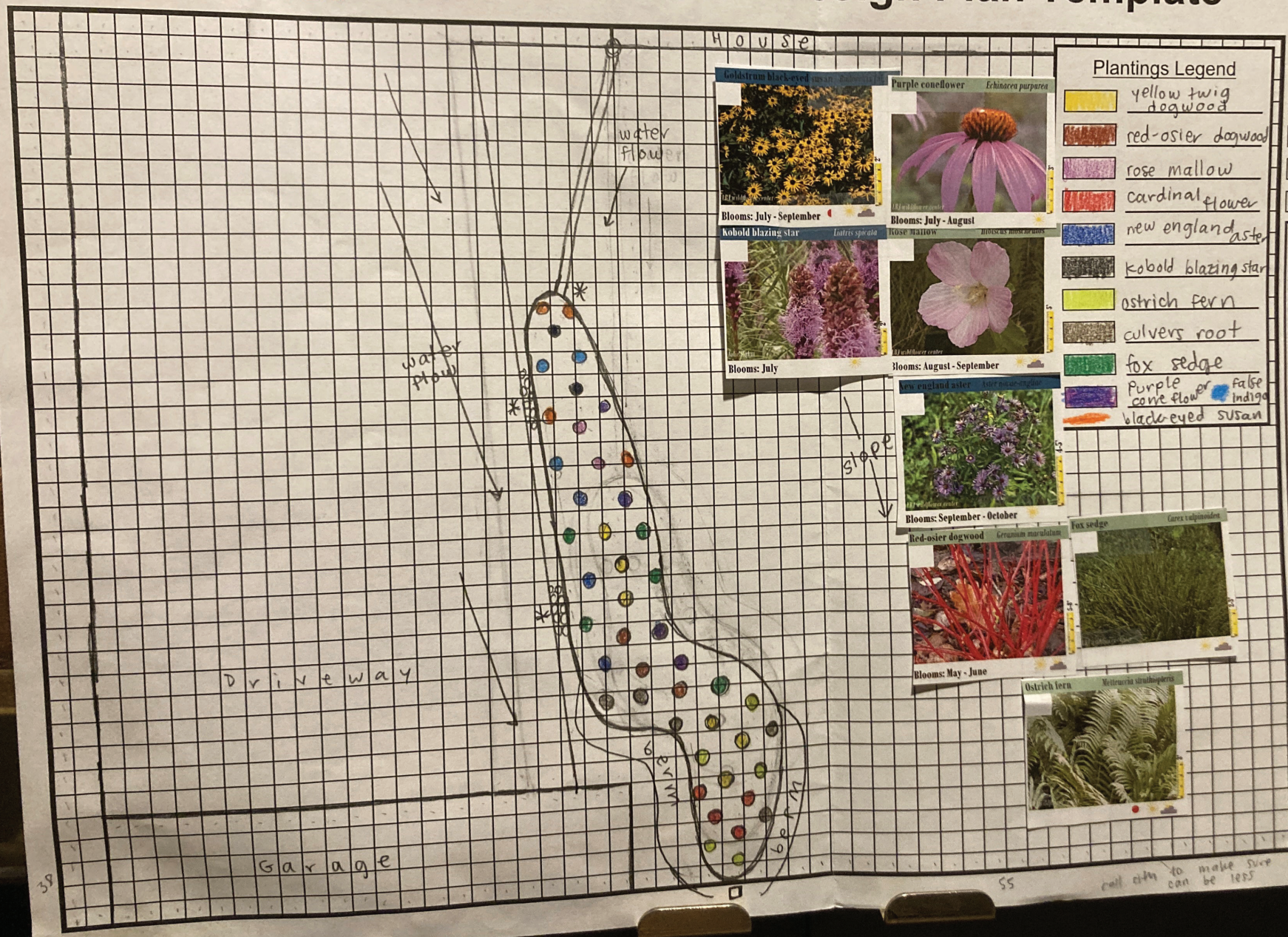

Cercis canadensis • Eastern Redbud
Sassafras albidum• Sassafrass Tree
Rain Barrell 1
RAIN GARDEN PERFORMANCE
Basin bottom area=130ft²
Basin upper ponding area=150 ft²
Average rain garden basin area=140 ft²
Rain garden ponding depth=6in
Ponding Surface Storage=70ft³
Disconnected Downspout 1
144 ft²
Impervious
Surface
Plant List
Adiantum pedatum • Maindenhair Fern
Anemone virginiana • Tall Thimbleweed
Aquilegia canadensis • Wild Columbine
Astragalus canadensis • Canada Milk Vetch
Carex bicknellii • Copper-shoulder Oval Sedge
Carex eburnea • Ivory Sedge
Carex flacca • Blue Sedge
Carex muskingumensis • Palm Sedge
Chamerion angustifolium • Fireweed
Chelone glabra • White Turtlehead
Cornus sericea • Red Twig Dogwood
Eupatorium maculatum 'Atropurpureum' • Joe Pye Weed
Elymus hystrix • Bottlebrush Grass
Iris virginica shrevei • Southern Blue Flag Iris
Juncus tenius • Path Rush
Phlox divaricata ‘Blue Moon’ • Blue Moon Phlox
Schyzacharium scoparium • Little Bluestem
Thalictrum aquilegifolum • Meadow Rue
Veronicastrum virginicum • Culver's Root
Viburnum plicatum tomentosum 'Summer Snowflake'
20ft
Disconnected Downspout 2
Rain Barrell 2
Overflow
Tumbleweed
Landscape Design

RainSmart REBATES

Rain Garden Design Plan Template

Owner is responsible to field verify location of all underground utilities prior to any work. Call 811 or 800-482-7171 at least 72 hours (3 business days) before you plan to start your work.

MISS DIG 811



Plantings Legend

- yellow twig dogwood
- red-osier dogwood
- rose mallow
- cardinal flower
- new england aster
- kobold blazing star
- ostrich fern
- culvers root
- fox sedge
- Purple cone flower or false indigo
- black-eyed susan

Design Checklist

- [x] Property Lines (label distance) out of the drawing
- [x] Structures
- [x] Trees (with dripline) out of the drawing
- [*] Rain Garden Inlet
- [ ] Rain Garden Outlet
- [x] Berm
- [x] Water Flow Direction
- [x] Slope Direction (of property)
- [x] Slope Direction (of rain garden) } same

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
2-4%	3-5"
(5-7%)	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 12" inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one) 3-5"	6-7"	8"
>1.25"/hr.	0.19	(0.15)	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

448+240 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x 0.15 (Sizing Multiplier) = 103.2 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

103.2 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 45.86 (Estimated Number of Plants)

Step 5: Design Check

Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC Water Resources Commissioner Jim Nash

CRWC Clinton River Watershed Council

RainSmart REBATES

Rain Garden Design Plan Template

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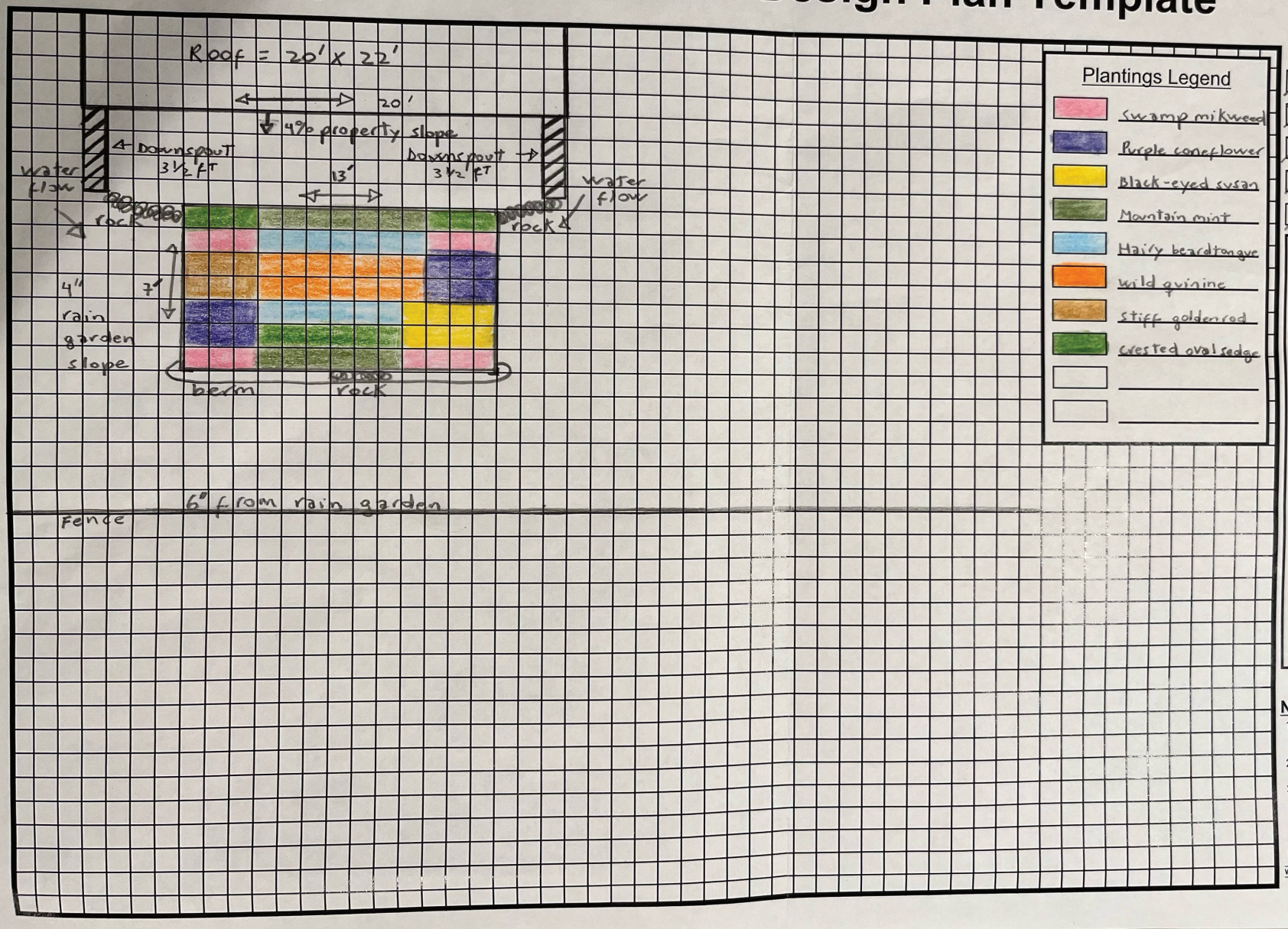
MISS DIG 811



Plantings Legend

- Swamp milkweed
- Purple coneflower
- Black-eyed susan
- Mountain mint
- Hairy beardtongue
- Wild quinine
- Stiff goldenrod
- Crested oval sedge

Design Checklist

- [x] Property Lines (label distance)
- [x] Structures
- [x] Trees (with dripline)
- [x] Rain Garden Inlet
- [x] Rain Garden Outlet
- [x] Berm
- [x] Water Flow Direction
- [x] Slope Direction (of property)
- [x] Slope Direction (of rain garden)

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
(0-4%)	3-5"
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 2 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr.	(0.19)	0.15	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

440 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x 0.19 (Sizing Multiplier) = 83.60 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

198 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 40 (Estimated Number of Plants)

Step 5: Design Check

90 (Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4))

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC Water Resources Commissioner Jim Nash

CRWC Clinton River Watershed Council

RainSmart REBATES

Rain Garden Design Plan Template

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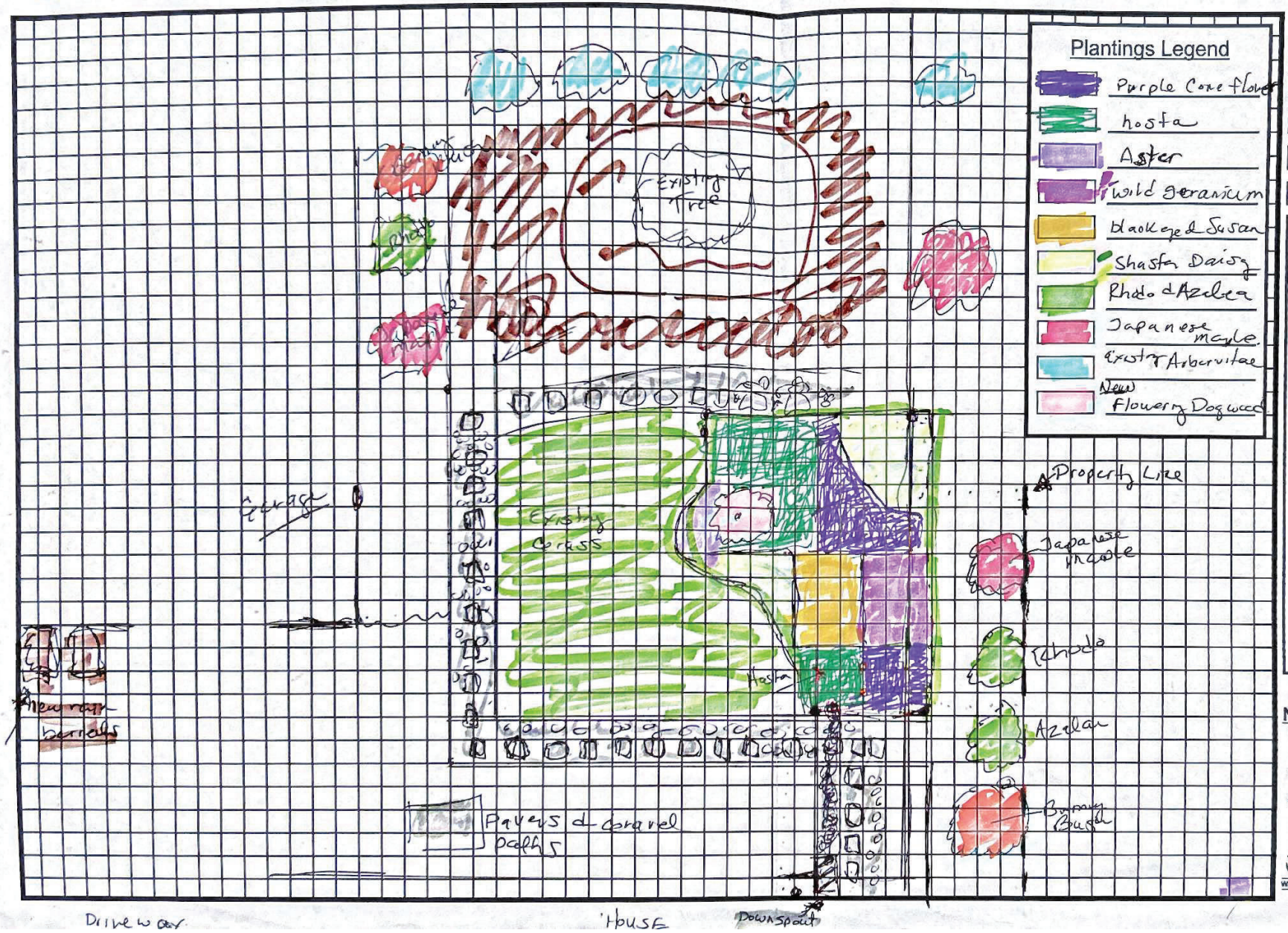

Plantings Legend

- Purple Cone flower
- hosta
- Aster
- Wild Geranium
- Blackeyed Susan
- Shasta Daisy
- Rhodo & Azalea
- Japanese maple
- Exist'g Arborvitae
- New Flowering Dogwood

Design Checklist

- [x] Property Lines (label distance)
- [x] Berm
- [x] Structures
- [x] Water Flow Direction
- [x] Trees (with dripline)
- [x] Slope Direction (of property)
- [x] Rain Garden Inlet
- [x] Slope Direction (of rain garden)
- [x] Rain Garden Outlet

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
0-4%	3-5"
(5-7%)	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 3.4 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
(>1.25"/hr.)	0.19	(0.15)	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

200 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) X .15 (Sizing Multiplier) = 30 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

50 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 22 (Estimated Number of Plants)

Step 5: Design Check

_____ Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC Water Resources Commissioner Jim Nash

CRWC Clinton River Watershed Council

RainSmart REBATES

Rain Garden Design Plan Template

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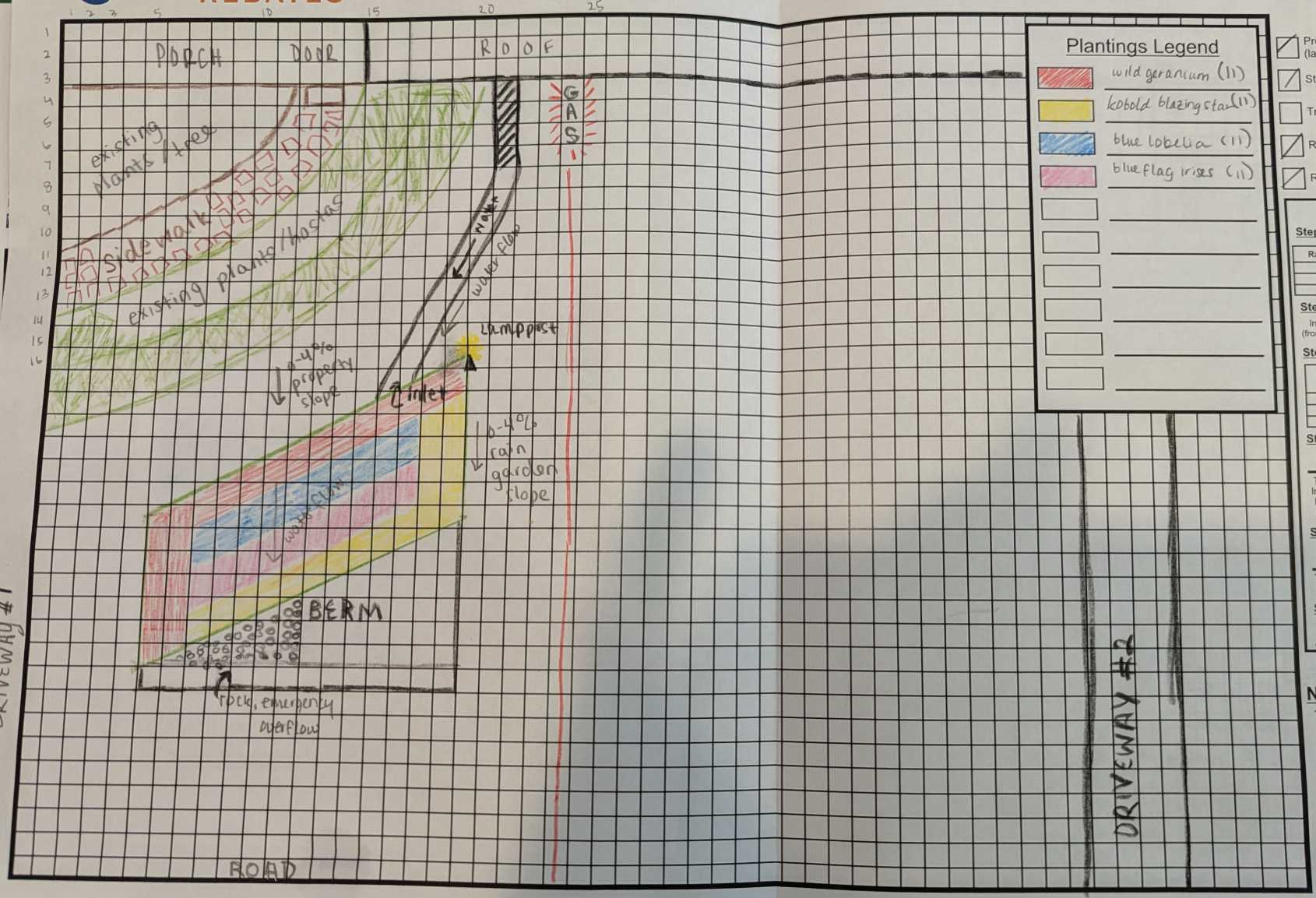

Plantings Legend

- wild geranium (11)
- kobold blazingstar (11)
- blue lobelia (11)
- blue flag irises (11)

Design Checklist

- [x] Property Lines (label distance)
- [x] Structures
- [ ] Trees (with dripline)
- [x] Rain Garden Inlet
- [x] Rain Garden Outlet
- [x] Berm
- [x] Water Flow Direction
- [x] Slope Direction (of property)
- [x] Slope Direction (of rain garden)

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
0-4%	3-5"
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = 9 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr.	0.19	0.15	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

430 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x 0.19 (Sizing Multiplier) = 81.7 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

98 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 44 (Estimated Number of Plants)

Step 5: Design Check

98 Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC Water Resources Commissioner Jim Nash

CRWC Clinton River Watershed Council

RainSmart REBATES

Rain Garden Design Plan Template

Owner is responsible to field verify location of all underground utilities prior to any work. Call 811 or 800-482-7171 at least 72 hours (3 business days) before you plan to start your work.

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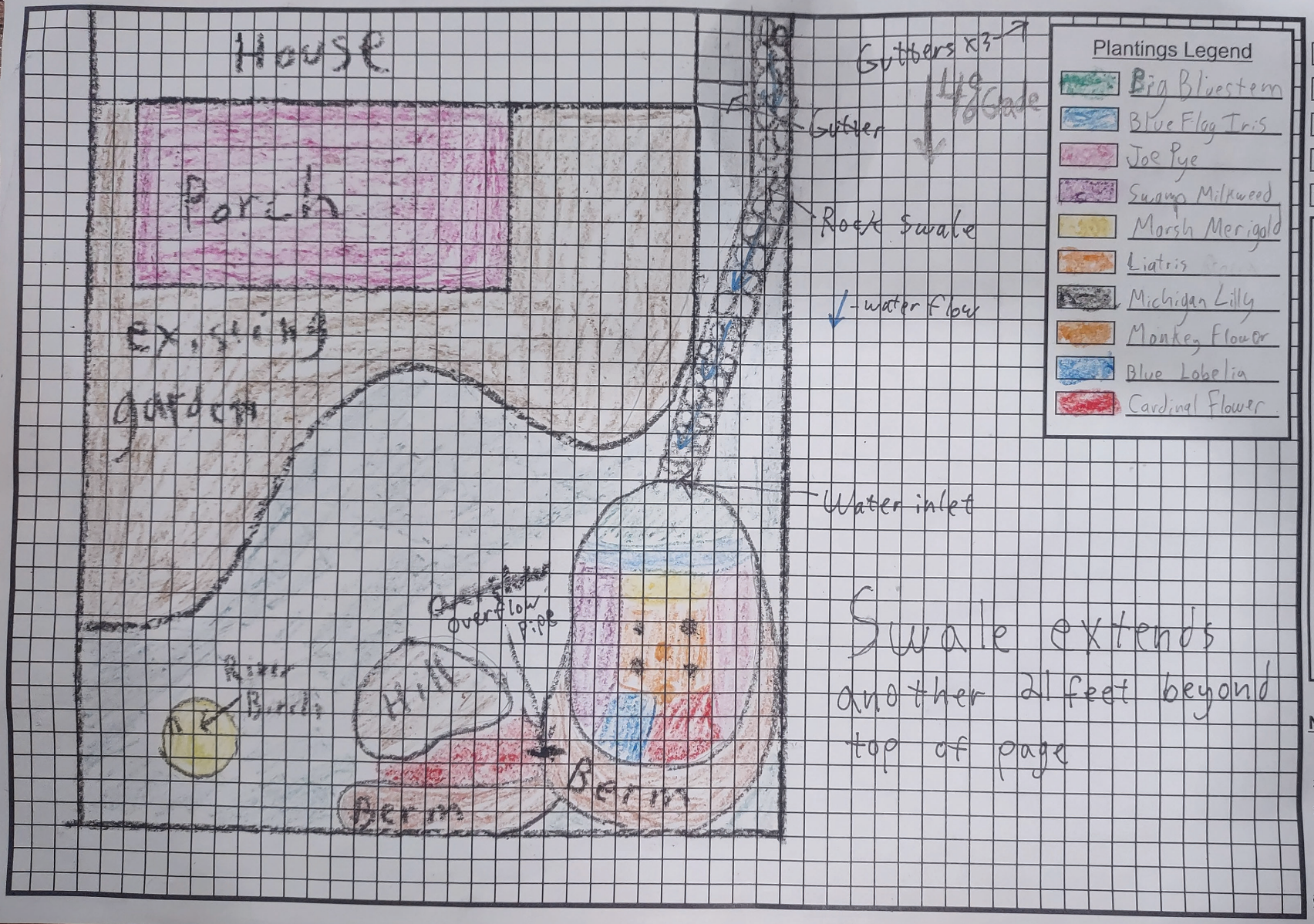

Plantings Legend

- Big Bluestem
- Blue Flag Iris
- Joe Pye
- Swamp Milkweed
- Marsh Marigold
- Liatris
- Michigan Lilly
- Monkey Flower
- Blue Lobelia
- Cardinal Flower

Design Checklist

- [ ] Property Lines (label distance)
- [ ] Berm
- [ ] Structures
- [ ] Water Flow Direction
- [ ] Trees (with dripline)
- [ ] Slope Direction (of property)
- [ ] Rain Garden Inlet
- [ ] Slope Direction (of rain garden)
- [ ] Rain Garden Outlet

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
(0-4%)	3-5"
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltation Test

Infiltration Rate (from infiltration test) = _____ inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr.	0.19	(0.15)	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

1786 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x 0.15 (Sizing Multiplier) = 267 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

129 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 57 (Estimated Number of Plants)

Step 5: Design Check

_____ Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC WATER RESOURCES COMMISSIONER Jim Nash

CRWC CLINTON RIVER WATERSHED COUNCIL

Rain Garden Design Plan Template

RainSmart REBATES

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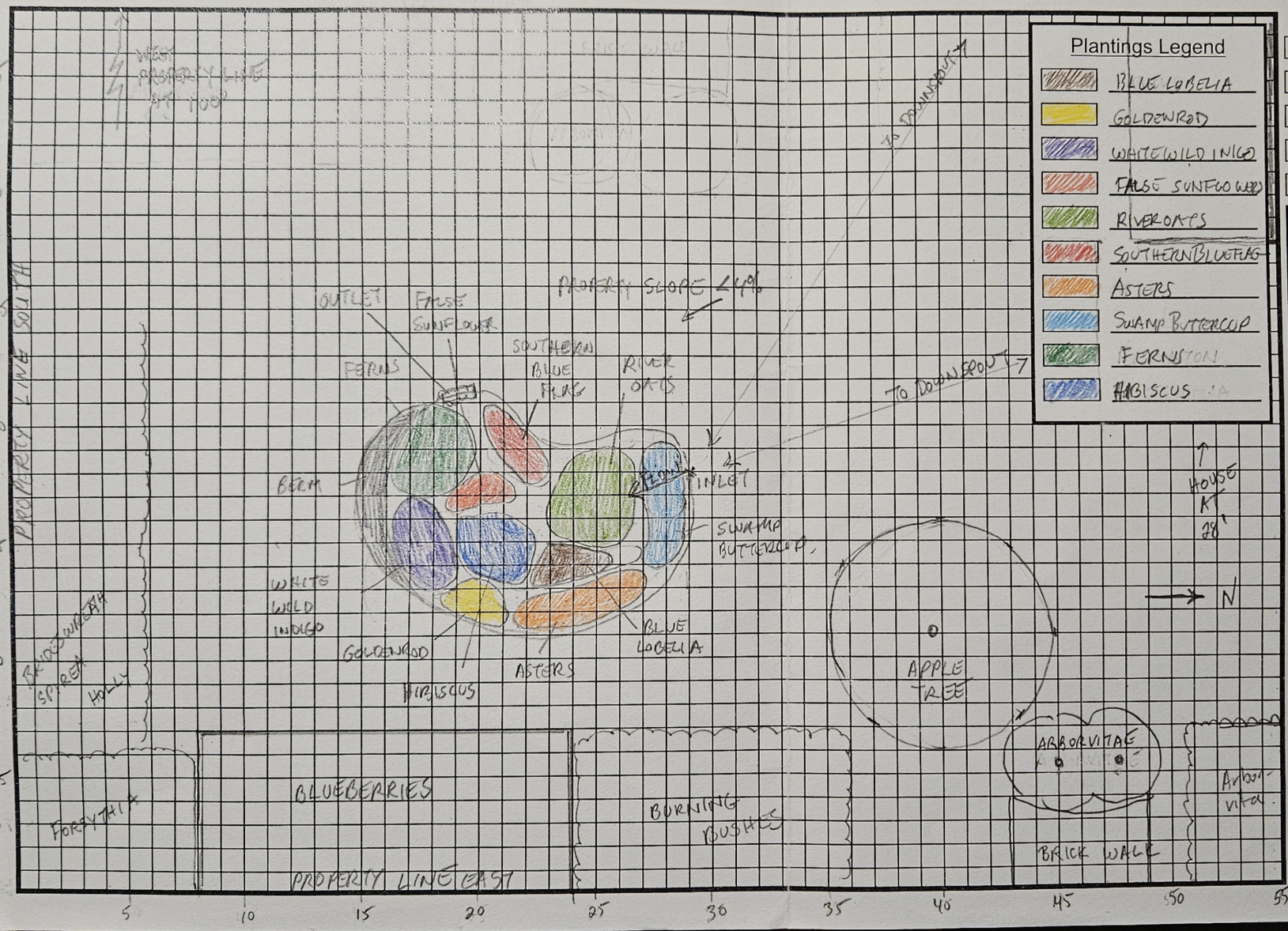

Design Checklist

- [x] Property Lines (label distance)
- [x] Berm
- [x] Structures
- [x] Water Flow Direction
- [x] Trees (with dripline)
- [x] Slope Direction (of property)
- [x] Rain Garden Inlet
- [x] Slope Direction (of rain garden)
- [x] Rain Garden Outlet

Rain Garden Sizing

Step 1: Determine Depth of Rain Garden

Rain Garden Slope (circle one)	Required Depth
(0-4%)	(3-5")
5-7%	6-7"
8-12%	8"

Step 2: Perform Soil Infiltration Test Actually 15 minutes

Infiltration Rate (from infiltration test) = 12 inches/hour

Step 3: Determine Sizing Multiplier

Infiltration Rate	Sizing Multiplier (circle one)		
	3-5"	6-7"	8"
>1.25"/hr.	(0.19)	0.15	0.08
.75-1.00"/hr.	0.34	0.25	0.16
.25-.50"/hr.	0.43	0.32	0.20

Step 4: Calculate Required Rain Garden Size

550 (Total Area (sq ft) of Impervious Surfaces Draining to Garden (roofs, drives, etc.)) x .19 (Sizing Multiplier) = 104.5 (Required Area of the Rain Garden (sq ft))

Step 5: Estimate Number of Plants Needed

104.5 (Total Area (sq ft) of Rain Garden) ÷ 2.25 = 46 (Estimated Number of Plants)

Step 5: Design Check

116 Total Area (sq ft) of Designed Rain Garden (must be greater than or equal to the required area from Step 4)

1 Block = 1 Square Foot

Notes

1. Drawing is completed to the accuracy of the base information. Slight modifications may be necessary during installation.
2. Plants are subject to nursery availability. Substitutions may be made.
3. It is the Owner's responsibility to call MISS DIG at least 72 hours (3 business days) before work is planned to start.

WRC Water Resources Commissioner Jim Nash

CRWC Clinton River Watershed Council