

GENERAL NOTES AND MAP REFERENCES

1. THIS PLAN WAS PREPARED UTILIZING INFORMATION FROM THE FOLLOWING MAP REFERENCES AND SHALL BE USED IN CONJUNCTION WITH THESE REFERENCED MAPS:

- A. SITE PLAN FOR THE TULLERY RESIDENCE LOT #70-12
- GARRETT ROAD CANTON, CONNECTICUT
- SCALE: 1"=50'
- DATED: APRIL 15, 2014
- REVISED TO: JUNE 19, 2014

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HEREIN REFERRED TO AS "DESIGN PLAN" OR "SITE PLAN"

2. THIS STORMWATER MANAGEMENT PLAN, PREPARED BY BUCK AND BUCK, LLC IS FOR THE SOLE PURPOSE OF PRESENTING THE STORMWATER MANAGEMENT ELEMENTS OF THE SITE TO THE TOWN OF CANTON, CONNECTICUT. THE DESIGNER'S RESPONSIBILITIES SHALL BE AS INDICATED ON THE ABOVE-REFERENCED SITE PLAN BY DAVID E. WHITNEY.

STORMWATER MANAGEMENT COMPUTATIONS:

1. THE CANTON ZONING REGULATIONS (13.C.6) STATE THAT THE STORMWATER MANAGEMENT PLAN SHALL BE DESIGNED TO TREAT THE WATER QUALITY VOLUME (WQV) FROM THE FIRST INCH OF RAINFALL FROM THE DEVELOPED AREA.
2. PER THE CT DEP 2004 STORMWATER QUALITY MANUAL (7.4.1), WATER QUALITY VOLUME SHALL BE COMPUTED (WQV) AS FOLLOWS:

$$WQV = (I^2 \times R \times A) / 12$$

WHERE: WQV = Water Quality Volume (acre-ft)
 R = Volume Runoff Coefficient = 0.05 = 0.0090
 I = Percent Impervious Cover
 A = Site Area (acres)

$$\text{Impervious Area} = 2,886 \text{ sf} \div 2,881 \text{ sf} = 5,817 \text{ sf} = 0.13 \text{ acres}$$

$$\text{Site Area} = A = 2.07 \text{ acres} = 90,386 \text{ sf}$$

$$\text{Percent Impervious Cover} = 5,817 / 90,386 = 0.0644 = 6.44\%$$

$$\text{Volume Runoff Coefficient} = R = 0.05 + (0.009 \times 6.44) = 0.108$$

$$WQV = (I^2 \times R \times A) / 12 = 1 \times 0.108 \times 2,07 / 12 = 0.0186 \text{ acre-ft} = 811.5 \text{ cf}$$

3. THE WATER QUALITY VOLUME WILL BE STORED IN TWO RAIN GARDENS, ONE FOR THE DRIVEWAY AND ONE FOR THE HOUSE RUNOFF. PROPORTIONING THE SIZE OF EACH RAIN GARDEN BASED ON ITS IMPERVIOUS AREA:

$$\text{DRIVEWAY: } 2,886 / 5,817 = .497 \Rightarrow .497 (811.5 \text{ cf}) = 396 \text{ cf REQ'D}$$

$$\text{HOUSE: } 2,981 / 5,817 = .512 \Rightarrow .512 (811.5 \text{ cf}) = 416 \text{ cf REQ'D}$$

4. ACTUAL VOLUME OF RAIN GARDENS:

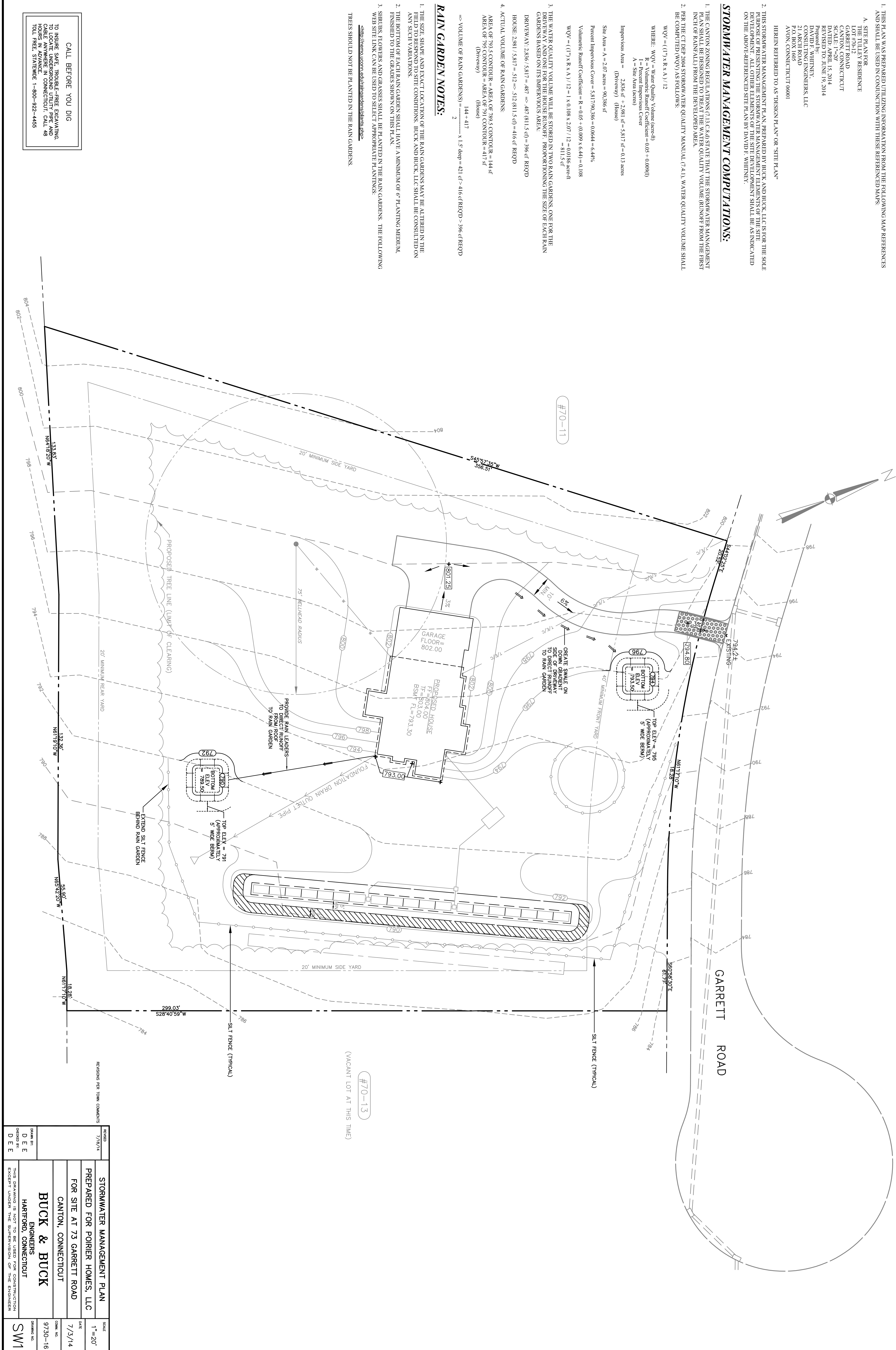
$$\text{AREA OF 793.5 CONTOUR} = \text{AREA OF 789.5 CONTOUR} = 144 \text{ sf}$$

$$\text{AREA OF 795 CONTOUR} = \text{AREA OF 791 CONTOUR} = 417 \text{ sf (House)}$$

$$\Rightarrow \text{VOLUME OF RAIN GARDENS} = \frac{144 + 417}{2} \times 1.5' \text{ deep} = 421.5 \text{ cf} > 416 \text{ cf REQ'D} > 396 \text{ cf REQ'D}$$

RAIN GARDEN NOTES:

1. THE SIZE, SHAPE AND EXACT LOCATION OF THE RAIN GARDENS MAY BE ALTERED IN THE FIELD TO RESPOND TO SITE CONDITIONS. BUCK AND BUCK, LLC SHALL BE CONSULTED ON ANY SUCH VARIATIONS.
 2. THE BOTTOM OF EACH RAIN GARDEN SHALL HAVE A MINIMUM OF 6" PLANTING MEDIUM, FINISHED TO THE GRADES SHOWN ON THIS PLAN.
 3. SHRUBS, FLOWERS AND GRASSES SHALL BE PLANTED IN THE RAIN GARDENS. THE FOLLOWING WEB SITE LINK CAN BE USED TO SELECT APPROPRIATE PLANTINGS:
ctweb.com.eco.com.edu/infocenter/plants.php
- TREES SHOULD NOT BE PLANTED IN THE RAIN GARDENS.



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REVISIONS PER TOWN COMMENTS	DATE	BY
	7/3/14	D E E
		D E E
		D E E

STORMWATER MANAGEMENT PLAN
 PREPARED FOR POIRIER HOMES, LLC
 FOR SITE AT 73 GARRETT ROAD
 CANTON, CONNECTICUT

BUCK & BUCK
 ENGINEERS
 HARTFORD, CONNECTICUT

SCALE: 1"=20'
 DATE: 7/3/14
 CDM. NO.: 9730-16
 DRAWING NO.: SW1

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION EXCEPT UNDER THE SUPERVISION OF THE ENGINEER