

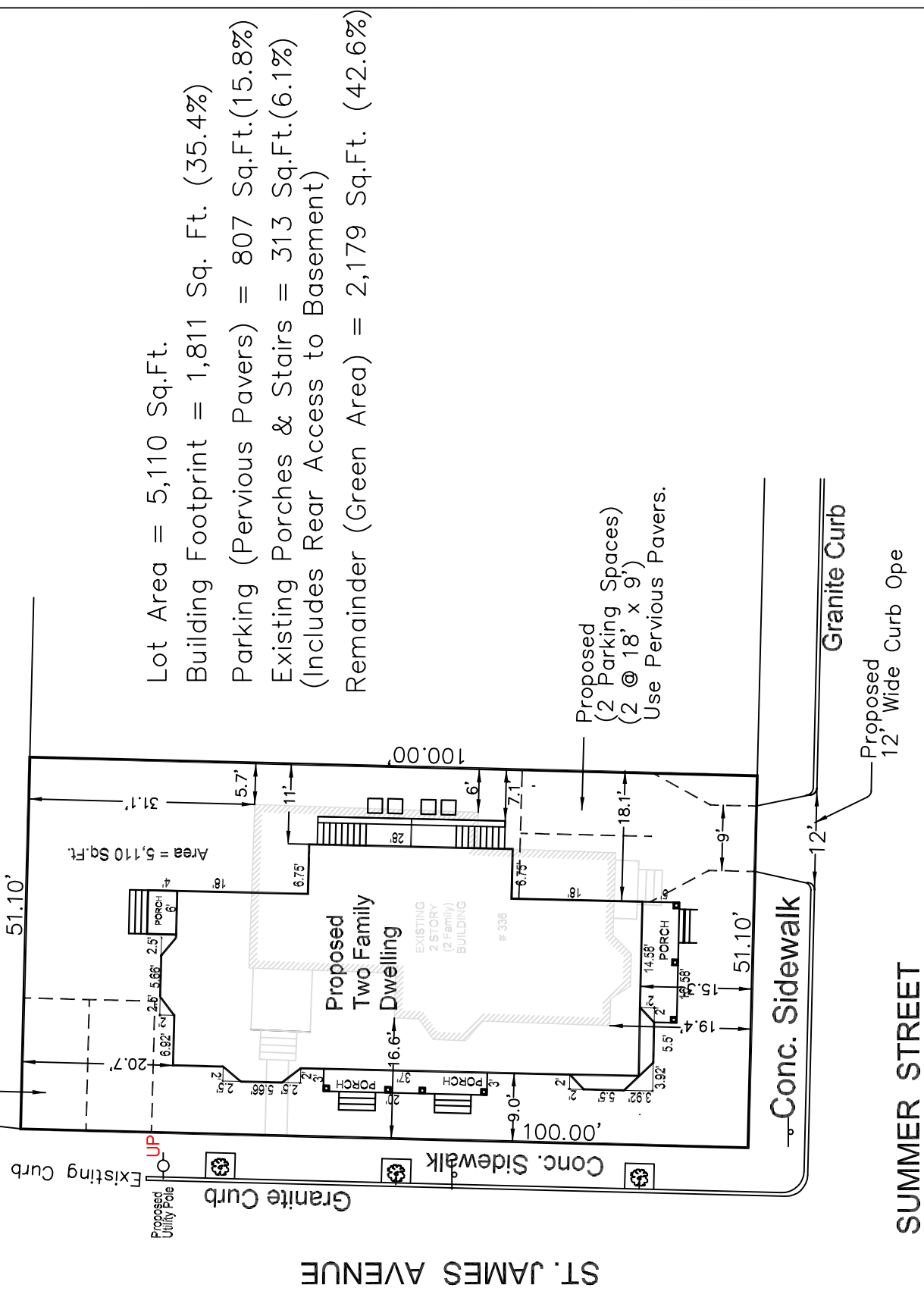
Notes: –

Owner/Applicant: – HI Siyuan & Yi Bao,
12 Thorndike Street,
Sommerville, Ma. 02144.

Deed Ref.: – Book 59108, Page 395.

Assessors Ref.: – 25/F/3

Zone: – RA



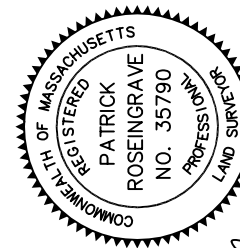
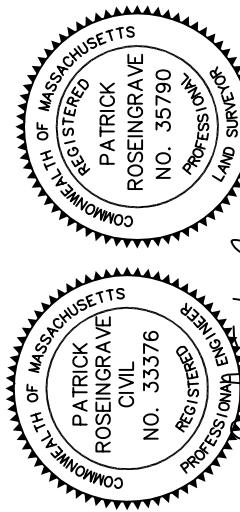
Lot Area = 5,110 Sq.Ft.

Building Footprint = 1,811 Sq. Ft. (35.4%)

Parking (Pervious Pavers) = 807 Sq.Ft.(15.8%)

Existing Porches & Stairs = 313 Sq.Ft.(6.1%)
(Includes Rear Access to Basement)

Remainder (Green Area) = 2,179 Sq.Ft. (42.6%)



Patrick Rosegrave

CCR Associates
Civil Engineers & Land Surveyors
40 Mears Ave.,
Quincy, Ma. 02169
Phone 617-769-0111.

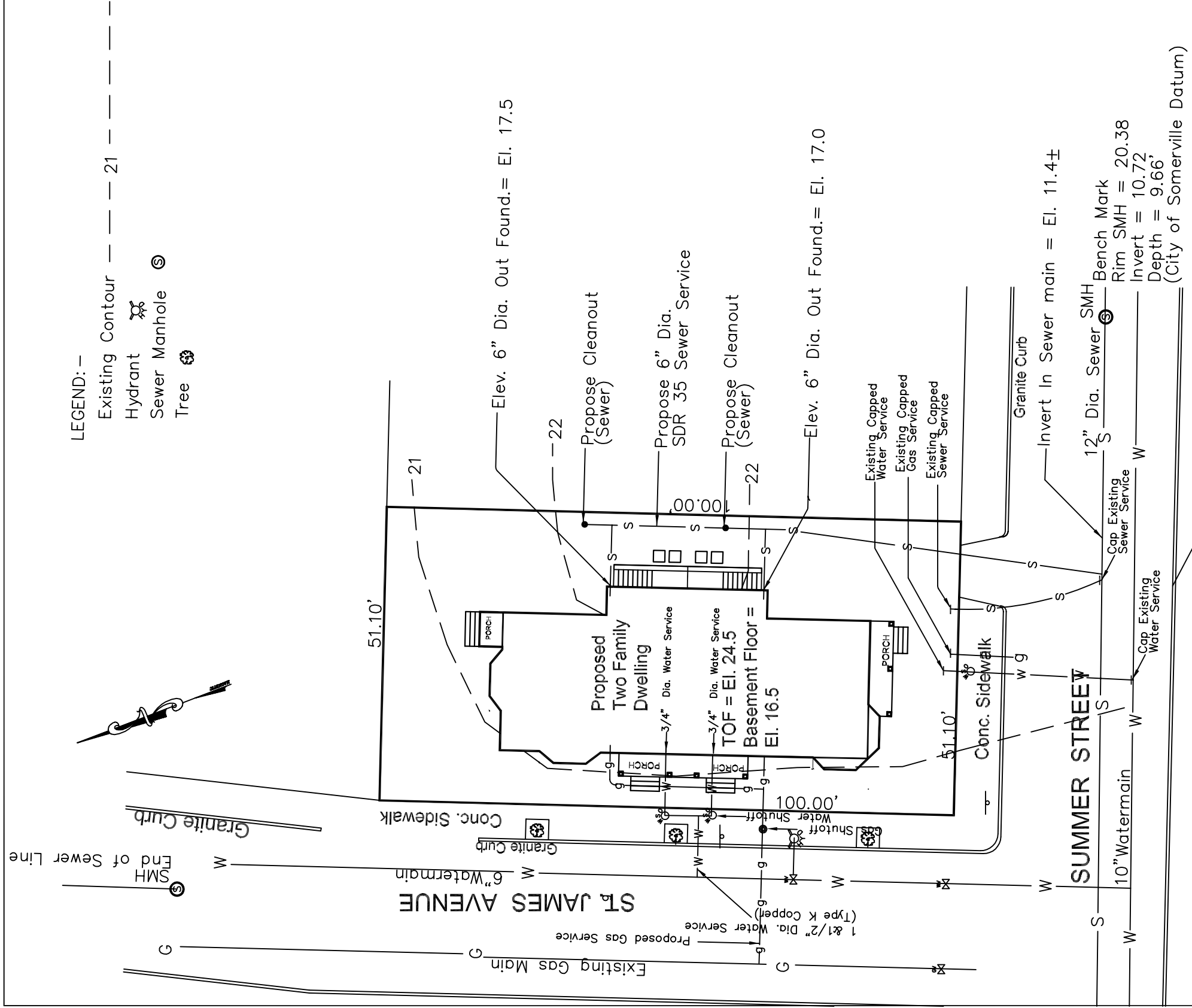
Date: – March 24, 2013.

Revised – June 25, 2013.

Scale: – 1" = 20'

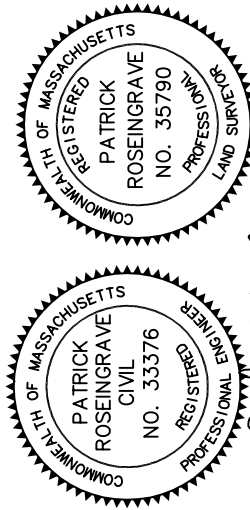
Sheet 1 of 5
(Showing Existing & Proposed Buildings,
Setbacks & Proposed Parking)

Proposed Two Family Dwelling, 336 Summer Street, Sommerville, Ma.



Installer to call digsafe before starting utility work.
Installer to verify location of all underground utilities before starting work.

Proposed Two Family Dwelling, 336 Summer Street, Sommerville, Ma.



Patrick Rosegrave

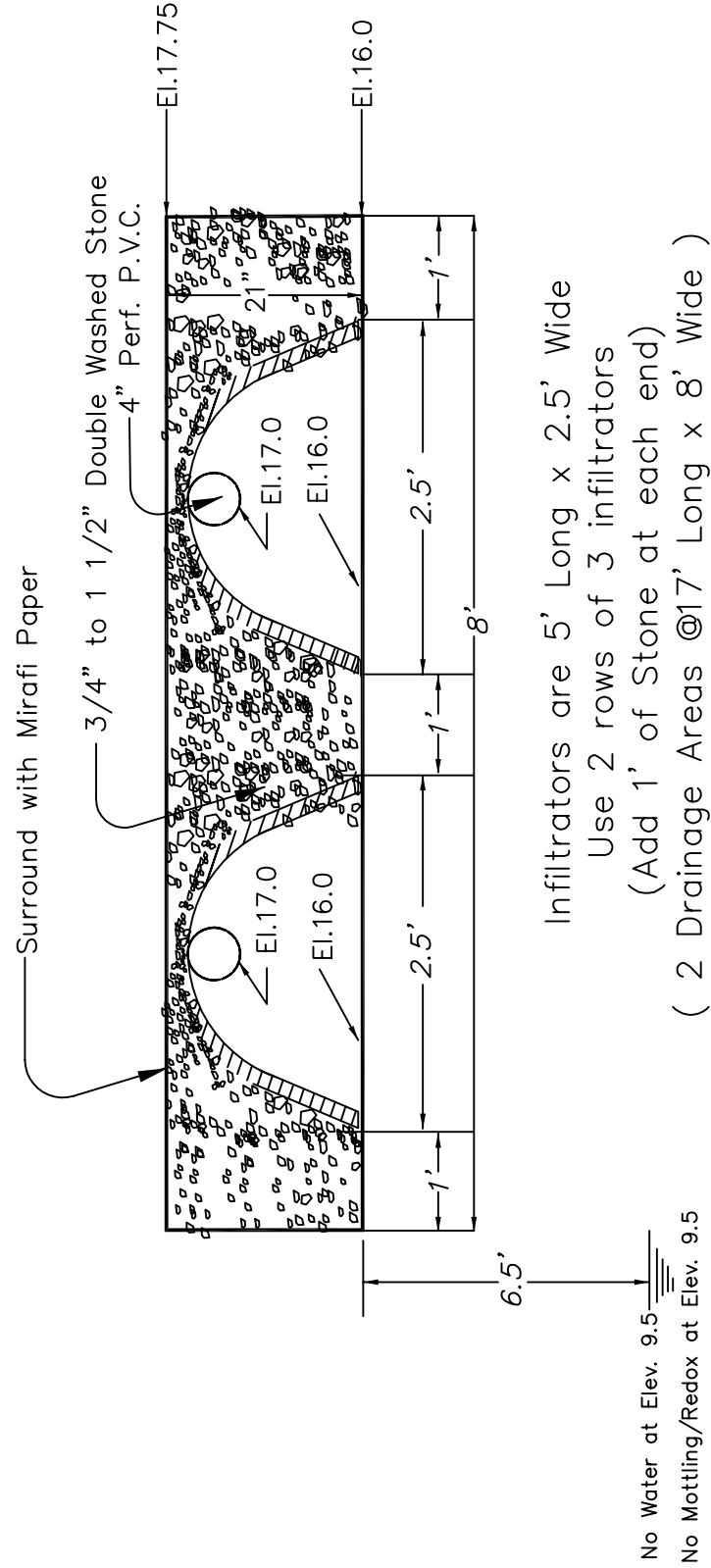
Sheet 2 of 5

Showing Proposed Utilities
Water/Sewer/Gas)



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Remove unsuitable material (Fill) from approx. Elev. 16.0 to Elev. 18.0 in area of proposed leaching system and for a distance of 3' all around proposed leaching system and replace with coarse sand.

Drainage Design: -

Roof Area Discharging to Drainage System = 1,960 Sq. Ft.

Provide 2 Drain Systems (Drainage Area -1 & Drainage Area-2)

Both Drainage Areas are similar

Storage Volume in Both Drainage Areas :-

1. Infiltrators 2 x 15 x 2.66 = 79.8 Cu. Ft.

2. Stone 15 x 5.32 x 0.35 = 28 Cu. Ft.

3. Stone (ends) 2 x 8 x 1.33 x 0.35 = 7.5 Cu.Ft.

Total Storage (Per Drainage Area) = 115.3 Cu.Ft. [Total Storage = (230.6 Cu. Ft.)]

Leaching Area (Per Drainage Area)= Bottom (8' x 17') + Sides (1.75 x 50)
= 223.5 Sq.Ft.

Total Storage (Per Drainage Area) = 115.3 Cu.Ft.

Discharge from Drainage areas (at 1 Min./Inch Perc. Rate) = $2(223.5 \times 1/12) = 37.26$ Cu. Ft. Per Minute (or 2,235 Cu. Ft Per Hour)

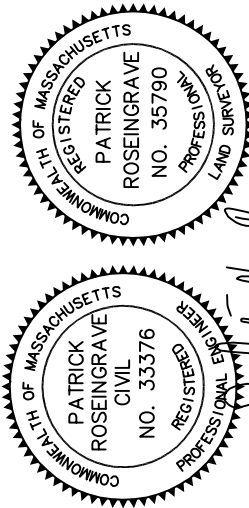
Discharge from Drainage areas (at 5 Min./Inch Perc. Rate) = 447 Cu. Ft. Per Hour
Assume over time Perc Rate Slows to 5 Min./Inch (Use for Design)

In 2 Year storm (at Rainfall of 2.31" in 1 Hour) Inflow = $(2.31 \times 1960)/12 = 377$ Cu. Ft.

In 10 Year storm (at Rainfall of 3.81" in 1 Hour) Inflow = $(3.81 \times 1960)/12 = 622$ Cu. Ft.

In 25 Year storm (at Rainfall of 4.88" in 1 Hour) Inflow = $(4.88 \times 1960)/12 = 797$ Cu. Ft.

In 25 Year Storm Outflow = 447 Cu. Ft. Per Hour with 230 Cu. Ft of Storage



Sheet 4 of 5
(Drainage Details)

336 Summer Street,
Sommerville, Ma.

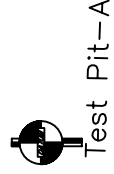
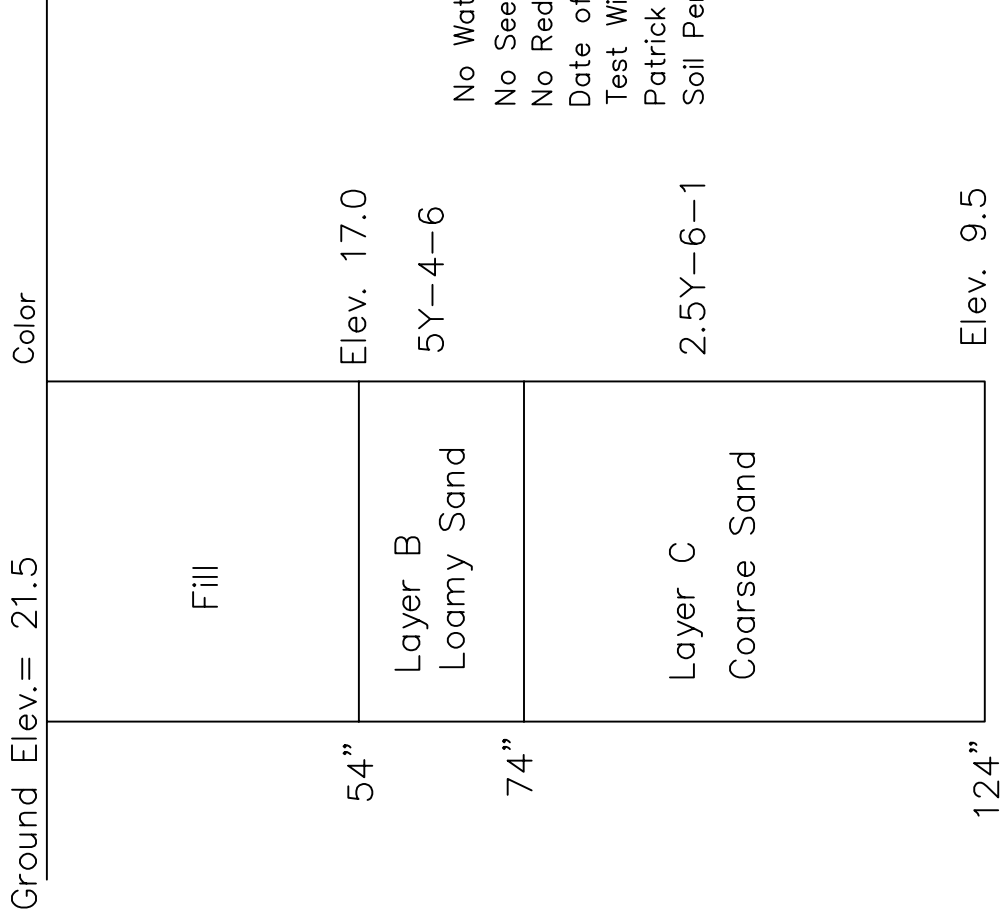
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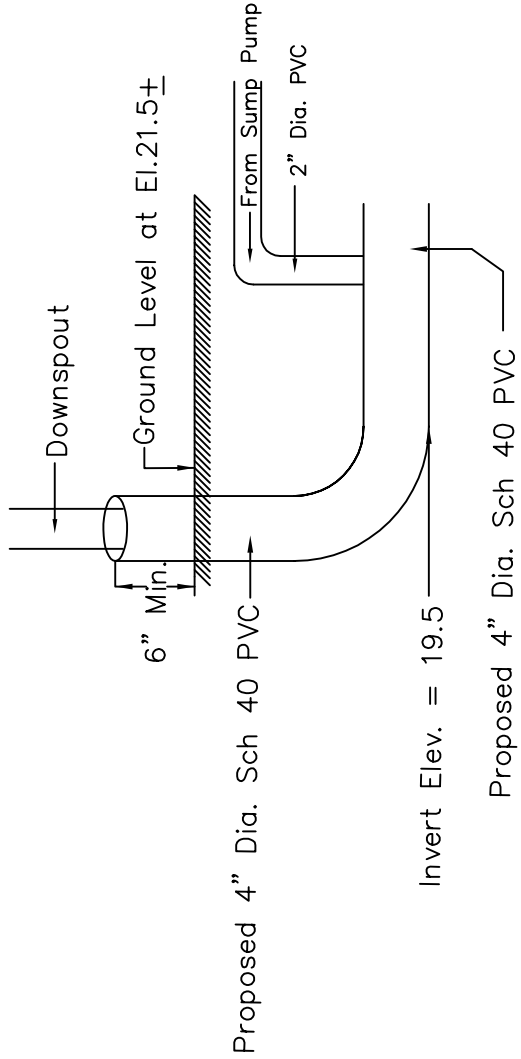
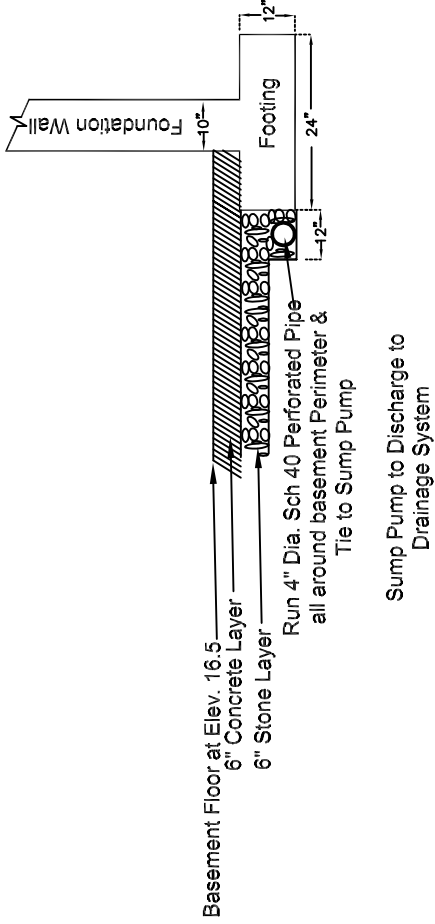
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Test Pit-A

See Sheet 3 of 5 For
Location of Test Pit-A

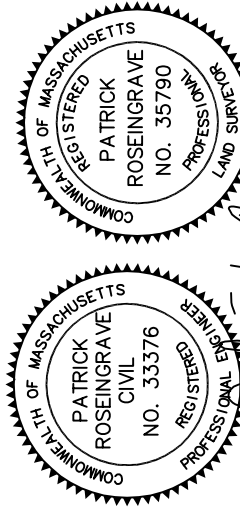


No Water in Test Pit
No Seeping Water in Test Pit
No Redox or Mottling in Test Pit(Down to Elev. 9.5)
Date of Test:— May 17,2012.
Test Witnessed by:— Tom Roux (Soil Evaluator – SE 2703)
Patrick Roseingrave(P.E. & Soil Evaluator –SE 13276)
Soil Percolation Rate = Less 1 Min./Inch at depth of 7' to 8'.



DOWNSPOUT DETAIL (Not to Scale)

336 Summer Street,
Sommerville, Ma.



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Sheet 5 of 5
Test Pit Information)

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