

Brem - 133 - 12.08.2014



TOWN CLERK/CARLISLE
CHARLENE D. HENTON

Environment One Corporation

Pressure Sewer Preliminary

Cost and Design Analysis

For

THE BIRCHES

Carlisle, MA

Prepared For:

Meisner Brem Corporation

142 Littleton Road, Suite 16

Westford MA 01886 USA

Tel: (978) 692-1313

Fax: (978) 692-0303

Prepared By: Henry Albro

December 8, 2014

**THE BIRCHES
Carlisle, MA**

Prepared by : Henry Albro

On: December 8, 2014

Notes :

At your request we have prepared this design of E-One systems for units 12,13,14,15,16,17 as shown on attached. I think I will be using in home units unless the pricing, or other rationale is more conducive to exterior units. From the layout we have also included lot 11.

<<<<< END OF NOTES >>>>>

PRELIMINARY PRESSURE SEWER - PIPE SIZING AND BRANCH ANALYSIS

Prepared By:
Henry Albro

THE BIRCHES
Carlisle, MA

December 8, 2014

Zone Number	Connects to Zone	Number of Pumps in Zone	Accum Pumps in Zone	Crafts/day per Pump	Max Flow per Pump (gpm)	Max Sim Ops (GPN)	Max Flow (GPN)	Pipe Size (inches)	Max Velocity (FPS)	Length of Main in this Zone	Friction Factor (ft/100 ft)	Friction Loss This Zone	Accum Friction Loss (feet)	Max Main Elevation	Minimum Pump Sizing Head (feet)	Total Dynamic Head (ft)	
1.00	1.00	7	7	125	11.00	3	33.00	2.00	2.92	400.00	1.54	6.17	6.17	112.00	100.61	11.39	17.56

Friction loss calculations were based on a Constant for inside roughness "C" of: 150

This spreadsheet was calculated using pipe diameters for: SDR21PVC

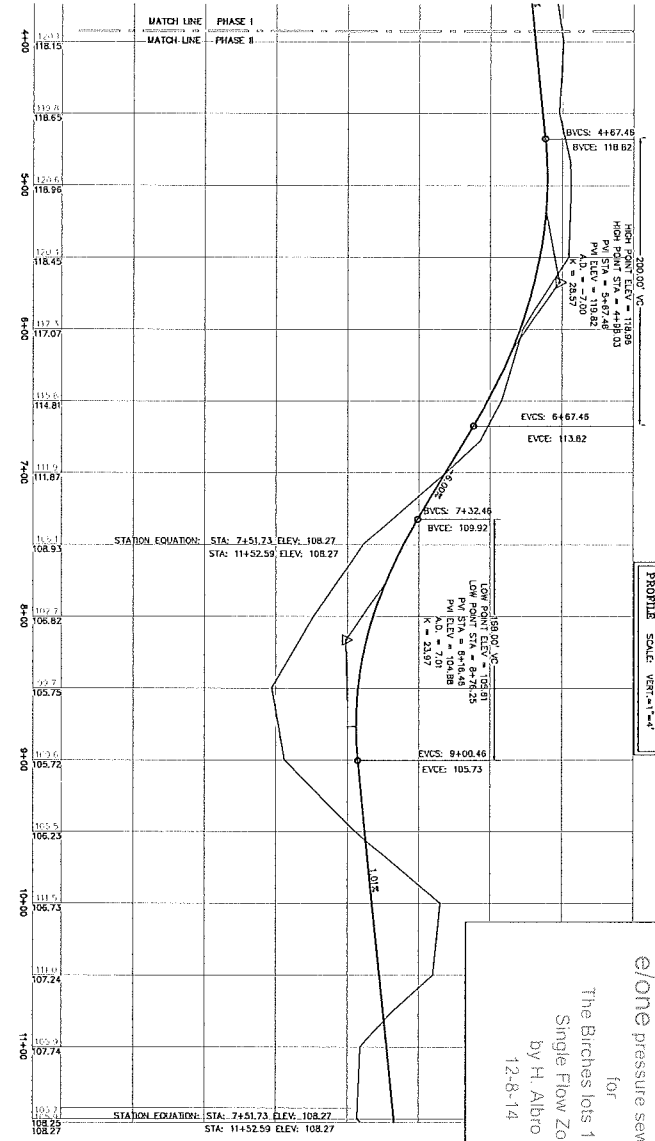
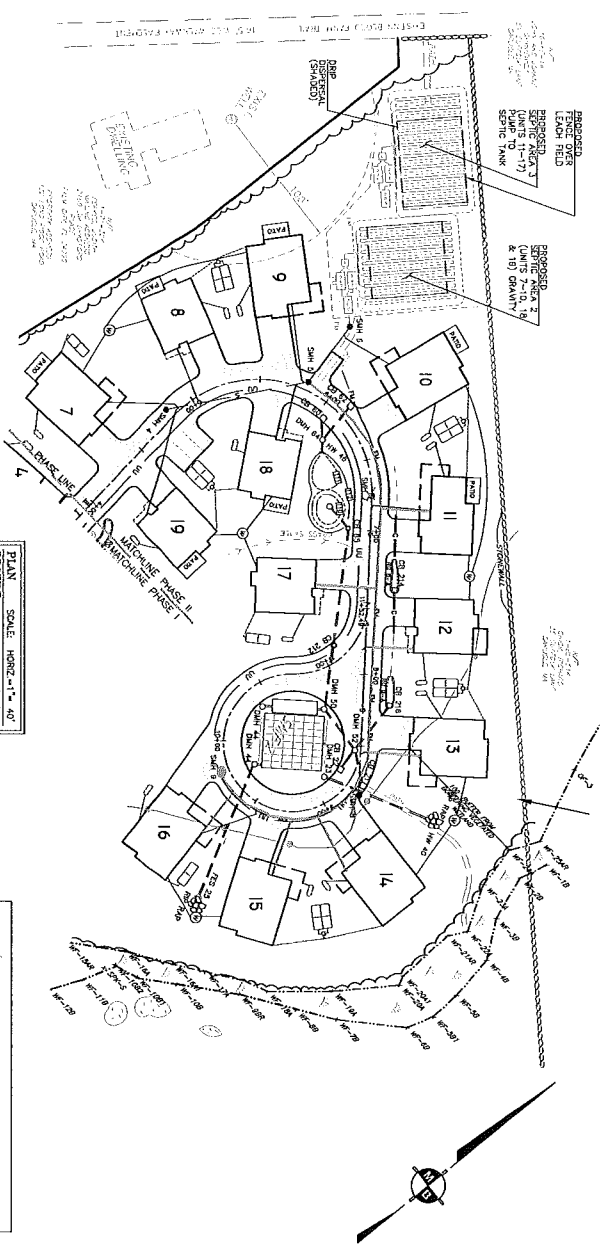
Note: This analysis is valid only with the use of progressive cavity type grinder pumps as manufactured by Environment One.

Prepared By:
Henry Albro

PRELIMINARY PRESSURE SEWER - ACCUMULATED RETENTION TIME (HR)
THE BIRCHES
Carlisle, MA

December 8, 2014

Zone Number	Connects to Zone	Accumulated Total of Pumps this Zone	Pipe Size (inches)	Gallons per 100 lineal feet	Length of Zone	Capacity of Zone	Average Daily Flow	Average Fluid Changes per Day	Average Retention Time (Hr)	Accumulated Retention Time (Hr)
This spreadsheet was calculated using pipe diameters for: SDR21PVC										
1.00	1.00	7	2.00	18.84	400.00	75.37	875	11.61	2.07	2.07
									Gals per Day per Dwelling	125



e/one pressure sewer layout
 for
 The Birches lots 11 - 17
 Single Flow Zone
 by H. Albro
 12-8-14

APPROVAL: CHAIRMAN BOARD OF APPEALS
 DATE: _____
 PREPARED FOR:
The Birches, PHASE II
 100 LONG RIDGE ROAD
 CARLISLE, MASSACHUSETTS
 PREPARED BY:
 LEPETITE GREEN HOMES, LLC
 142 LITTLETON ROAD
 WESTFORD, MA 01088
 NOVEMBER 4, 2014 SCALE: 1" = 40'
 40 20 0 40 80

© 2014 H. Albro, Licensed Professional Engineer
 PAUL & BOBBIE AND FAMILY, PLAN
 THE BIRCHES, PHASE II
 100 LONG RIDGE ROAD
 CARLISLE, MASSACHUSETTS
 NOVEMBER 4, 2014
 SHEET 1 OF 1

