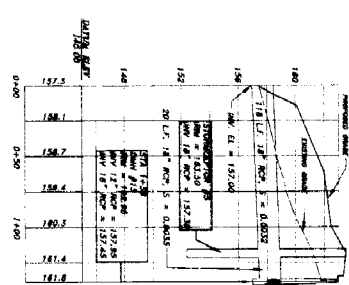


**PROFILE ~ JULIANNA DRIVE**  
 HORIZONTAL SCALE: 1" = 40'  
 VERTICAL SCALE: 1" = 4'

**NOTES:**

1. ALL OVERLAPPING PAGES ARE TO BE 1/2" GAPS IN MOUNTED CONCRETE AND PAPER UNLESS OTHERWISE NOTED.
2. ALL OTHER PAGES ARE TO BE 8" PVC UNLESS OTHERWISE NOTED.
3. ALL CATCH BASINS ARE TO HAVE SEPTICAL DRAINAGE DRAIN INLETS.
4. WATER AND SEWER MAINS SHALL BE INSTALLED A MINIMUM OF 1.0 FEET ABOVE FINISHED GRADE. THE SEWER PIPE SHALL BE INSTALLED AT LEAST 1.0 FEET BELOW THE WATER PIPE (UNLESS OTHERWISE NOTED). THE WATER PIPE SHALL BE INSTALLED AT LEAST 1.0 FEET ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED.
5. THE STATIONS SHOWN FROM THE CURVE AND POINT MARKETS REFERENCE THE CENTERLINE OF THE STRAIGHT PORTION OF THE CURVE. THE CENTERLINE OF THE STRAIGHT PORTION OF THE CURVE SHALL BE THE CENTERLINE OF THE STRAIGHT PORTION OF THE CURVE.
6. THE LOCATION OF THE WATER AND SEWER LINES IN STREET AREAS HAVE BEEN DETERMINED BY THE TOWN ENGINEER AND SHOWN ON THE PLAN AND PROFILE. THE WATER AND SEWER LINES IN STREET AREAS HAVE BEEN DETERMINED BY THE TOWN ENGINEER AND SHOWN ON THE PLAN AND PROFILE.
7. THE LOCATION OF ALL UNMOUNTED CURVES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON A COMPARISON OF FIELD LOCATIONS AND CONSTRUCTION RECORDS. THE LOCATION OF ALL UNMOUNTED CURVES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON A COMPARISON OF FIELD LOCATIONS AND CONSTRUCTION RECORDS. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL STATE AND FEDERAL REQUIREMENTS AND REGULATIONS. THE LOCATION OF ALL UNMOUNTED CURVES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON A COMPARISON OF FIELD LOCATIONS AND CONSTRUCTION RECORDS.

1. VERIFY THAT THIS PLAN CONFORMS TO THE MASS LAND REGULATIONS OF 801 CMR 17.00. DATE: 1/8/01



**PROFILE ~ CROSS-COUNTRY DRAIN "A"**  
 HORIZONTAL SCALE: 1" = 40'  
 VERTICAL SCALE: 1" = 4'

**DRAINAGE PIPE SCHEDULE**

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	PRICE	TOTAL
1	8" PVC PIPE	100	LINEAL FEET	1.50	150.00
2	12" PVC PIPE	50	LINEAL FEET	3.00	150.00
3	18" PVC PIPE	20	LINEAL FEET	6.00	120.00
4	24" PVC PIPE	10	LINEAL FEET	12.00	120.00
5	30" PVC PIPE	5	LINEAL FEET	24.00	120.00
6	36" PVC PIPE	2	LINEAL FEET	48.00	96.00
7	42" PVC PIPE	1	LINEAL FEET	96.00	96.00
8	48" PVC PIPE	1	LINEAL FEET	192.00	192.00
9	54" PVC PIPE	1	LINEAL FEET	288.00	288.00
10	60" PVC PIPE	1	LINEAL FEET	384.00	384.00
11	66" PVC PIPE	1	LINEAL FEET	480.00	480.00
12	72" PVC PIPE	1	LINEAL FEET	576.00	576.00
13	78" PVC PIPE	1	LINEAL FEET	672.00	672.00
14	84" PVC PIPE	1	LINEAL FEET	768.00	768.00
15	90" PVC PIPE	1	LINEAL FEET	864.00	864.00
16	96" PVC PIPE	1	LINEAL FEET	960.00	960.00
17	102" PVC PIPE	1	LINEAL FEET	1056.00	1056.00
18	108" PVC PIPE	1	LINEAL FEET	1152.00	1152.00
19	114" PVC PIPE	1	LINEAL FEET	1248.00	1248.00
20	120" PVC PIPE	1	LINEAL FEET	1344.00	1344.00
21	126" PVC PIPE	1	LINEAL FEET	1440.00	1440.00
22	132" PVC PIPE	1	LINEAL FEET	1536.00	1536.00
23	138" PVC PIPE	1	LINEAL FEET	1632.00	1632.00
24	144" PVC PIPE	1	LINEAL FEET	1728.00	1728.00
25	150" PVC PIPE	1	LINEAL FEET	1824.00	1824.00
26	156" PVC PIPE	1	LINEAL FEET	1920.00	1920.00
27	162" PVC PIPE	1	LINEAL FEET	2016.00	2016.00
28	168" PVC PIPE	1	LINEAL FEET	2112.00	2112.00
29	174" PVC PIPE	1	LINEAL FEET	2208.00	2208.00
30	180" PVC PIPE	1	LINEAL FEET	2304.00	2304.00
31	186" PVC PIPE	1	LINEAL FEET	2400.00	2400.00
32	192" PVC PIPE	1	LINEAL FEET	2496.00	2496.00
33	198" PVC PIPE	1	LINEAL FEET	2592.00	2592.00
34	204" PVC PIPE	1	LINEAL FEET	2688.00	2688.00
35	210" PVC PIPE	1	LINEAL FEET	2784.00	2784.00
36	216" PVC PIPE	1	LINEAL FEET	2880.00	2880.00
37	222" PVC PIPE	1	LINEAL FEET	2976.00	2976.00
38	228" PVC PIPE	1	LINEAL FEET	3072.00	3072.00
39	234" PVC PIPE	1	LINEAL FEET	3168.00	3168.00
40	240" PVC PIPE	1	LINEAL FEET	3264.00	3264.00
41	246" PVC PIPE	1	LINEAL FEET	3360.00	3360.00
42	252" PVC PIPE	1	LINEAL FEET	3456.00	3456.00
43	258" PVC PIPE	1	LINEAL FEET	3552.00	3552.00
44	264" PVC PIPE	1	LINEAL FEET	3648.00	3648.00
45	270" PVC PIPE	1	LINEAL FEET	3744.00	3744.00
46	276" PVC PIPE	1	LINEAL FEET	3840.00	3840.00
47	282" PVC PIPE	1	LINEAL FEET	3936.00	3936.00
48	288" PVC PIPE	1	LINEAL FEET	4032.00	4032.00
49	294" PVC PIPE	1	LINEAL FEET	4128.00	4128.00
50	300" PVC PIPE	1	LINEAL FEET	4224.00	4224.00

**DIST. OF HAVERHILL**  
 Planning Board  
 CHRISTIANSEN & SERCI  
 100 SUMMER ST. HAVERHILL, MASSACHUSETTS 01930-2101  
 TEL: 978-371-0110



**DEFINITIVE SUBDIVISION PLAN**  
**"LYONS FARMS"**  
 LOCATED IN  
**HAVERHILL, MASS.**

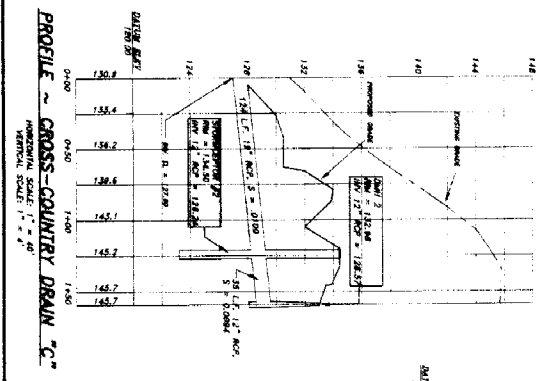
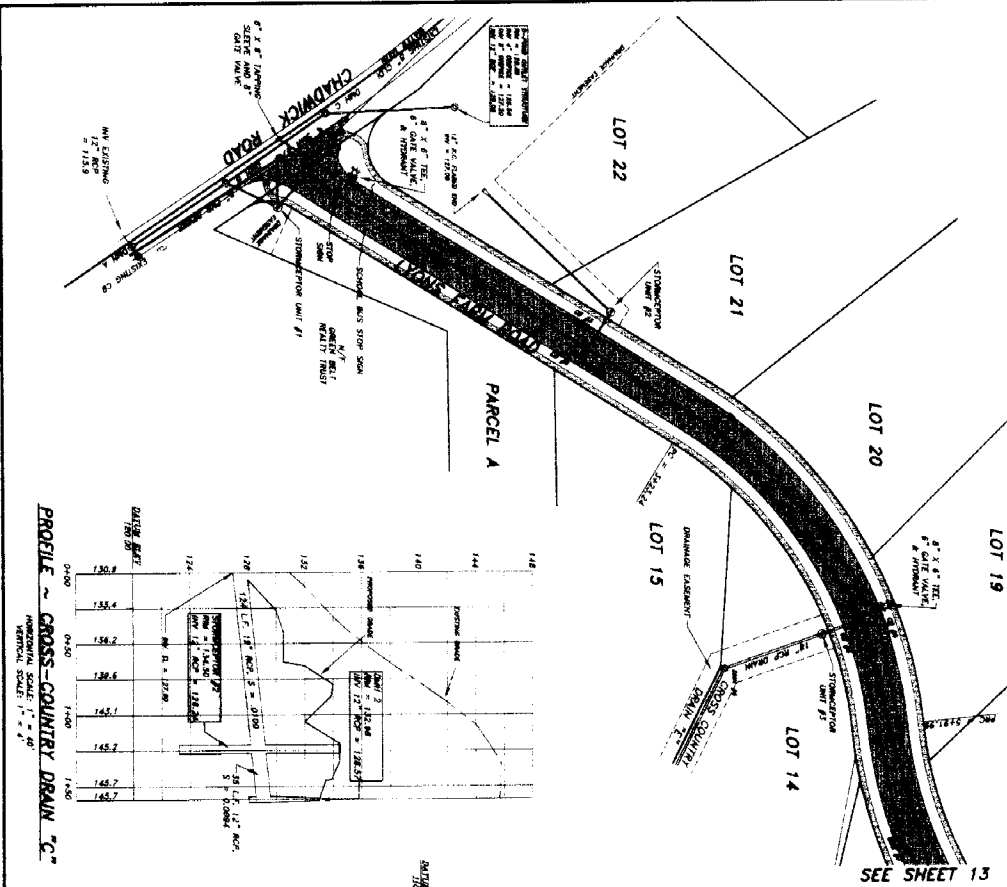
**PLAN & PROFILE ~ JULIANNA DRIVE**

APPLICANT & RECORD OWNER:  
**CHRISTIANSEN & SERCI**  
 100 SUMMER ST. HAVERHILL, MASSACHUSETTS 01930-2101  
 TEL: 978-371-0110

DATE: JANUARY 8, 2001  
 REVISION: NONE 1/8, 2001  
 SHEET 10 OF 17  
 DRAWING NO. 0410101

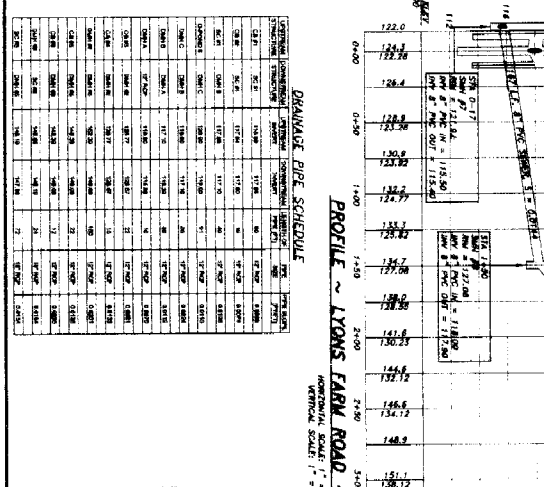


FOR RECORD USE ONLY  
 PLAN BOOKS 1 PLAN  
 DATE 1/8/01  
 1/8/01



Drainage Pipe Schedule

ITEM NO.	DESCRIPTION	LENGTH (FEET)	DIAMETER (INCHES)	DEPTH (FEET)	MANHOLE TYPE	MANHOLE SIZE (INCHES)	MANHOLE SPACING (FEET)	MANHOLE ELEVATION (FEET)	PIPE ELEVATION (FEET)
1	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
2	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
3	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
4	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
5	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
6	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
7	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
8	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
9	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
10	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
11	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
12	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
13	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
14	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
15	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
16	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
17	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
18	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
19	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
20	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
21	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
22	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
23	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
24	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
25	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
26	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
27	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
28	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
29	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
30	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
31	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
32	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
33	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
34	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
35	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
36	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
37	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
38	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
39	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
40	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
41	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
42	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
43	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
44	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
45	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
46	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
47	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
48	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
49	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
50	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
51	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
52	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
53	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
54	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
55	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
56	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
57	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
58	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
59	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
60	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
61	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
62	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
63	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
64	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
65	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
66	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
67	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
68	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
69	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
70	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
71	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
72	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
73	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
74	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
75	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
76	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
77	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
78	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
79	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
80	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
81	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
82	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
83	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
84	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
85	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
86	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
87	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
88	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
89	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
90	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
91	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
92	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
93	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
94	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
95	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
96	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
97	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
98	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
99	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0
100	12" DIA. 12' MANHOLE	12	12	4.0	1	12	12	144.0	144.0



DEFINITIVE SUBDIVISION PLAN  
 "LYONS FARMS"  
 LOCATED IN  
 HAVERHILL, MASS.

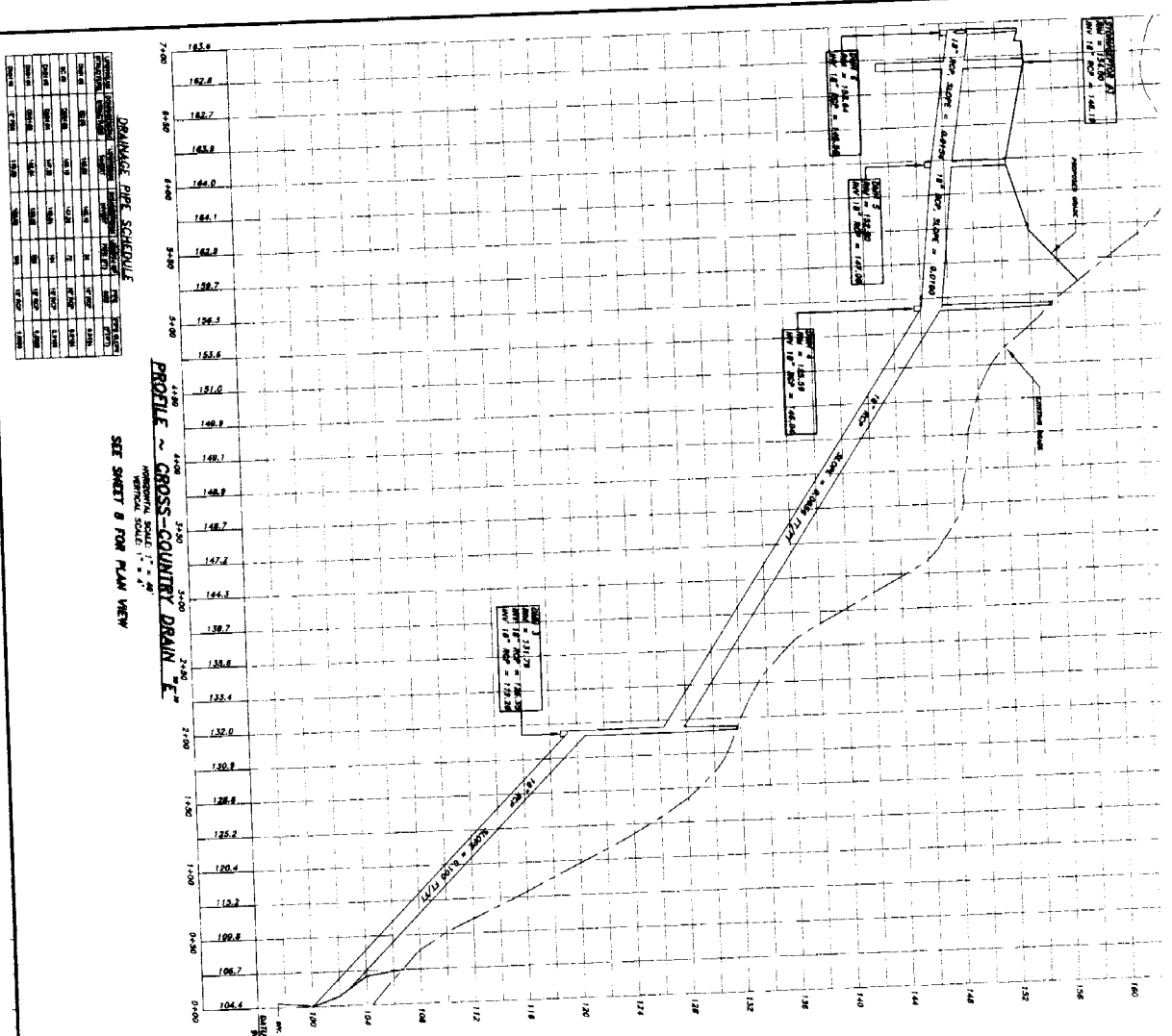
APPLICANT & RECORD OWNER  
 DENNYVILLE-LYONS REALTY TRUST  
 281 FIRST AVENUE, HAVERHILL, MA 01830

DESIGNED BY  
 CHRISTIANSEN & SERGI PROFESSIONAL ENGINEERS  
 180 SPANARD ST., HAVERHILL, MASS 01830 TEL: 978-371-8116

DATE: JANUARY 8, 2001  
 REVISION: APRIL 18, 2001  
 SHEET 12 OF 17  
 DRAWING NO. 0801024

PROFESSIONAL  
 REGISTERED ENGINEER  
 STATE OF MASSACHUSETTS  
 NO. 10154  
 CHRISTIANSEN & SERGI



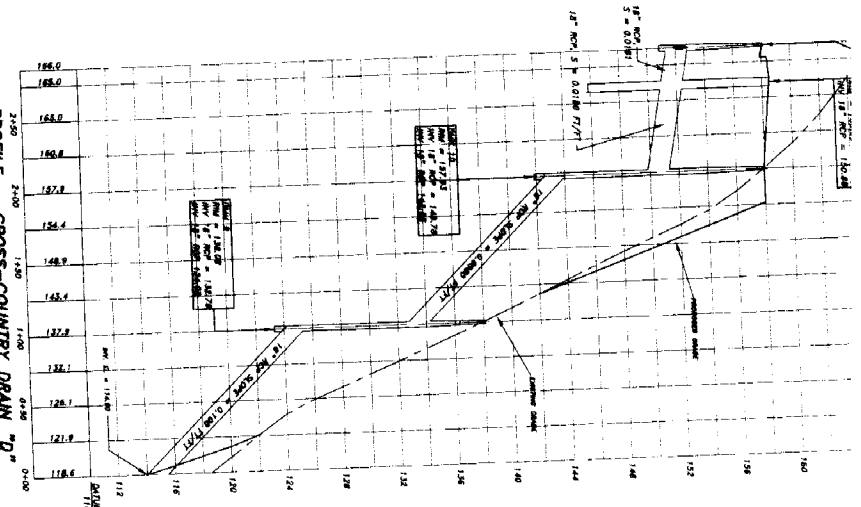


**DRAINAGE PIPE SCHEDULE**

PIPE SIZE	DEPTH	LENGTH	DATE	BY	CHKD
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS

**PROFILE ~ CROSS-COUNTRY DRAIN "E"**  
 HORIZONTAL SCALE: 1" = 40'  
 VERTICAL SCALE: 1" = 4'

SEE SHEET B FOR PLAN VIEW



**PROFILE ~ CROSS-COUNTRY DRAIN "D"**  
 HORIZONTAL SCALE: 1" = 40'  
 VERTICAL SCALE: 1" = 4'

SEE SHEET 7 FOR PLAN VIEW

**DRAINAGE PIPE SCHEDULE**

PIPE SIZE	DEPTH	LENGTH	DATE	BY	CHKD
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS
12" MC	3'	100'	1/2/01	AS	AS

CITY OF HAVERHILL  
 PLANNING DEPARTMENT  
 DATE: 1/2/01

APPROVED:  
 [Signature]  
 DATE: 1/2/01

HAVERHILL, MASS.

**DEFINITIVE SUBDIVISION PLAN**  
**"LYONS FARMS"**  
 LOCATED IN  
**HAVERHILL, MASS.**

APPROVED & SEALS:  
 [Seal]  
 DATE: 1/2/01

**CHRISTANSEN & SERGI**  
 PROFESSIONAL ENGINEERS  
 100 SUMMIT ST., HAVERHILL, MASS. 01830  
 TEL. 978-379-0310

**PROFILES ~ CROSS-COUNTRY DRAINS "D" & "E"**  
 DATE: JANUARY 8, 2001  
 DRAWN BY: JAMES L. BENT  
 SHEET 14 OF 17  
 DRAWING NO. 10011201

DATE: 1/2/01  
 [Signature]  
 1/2/01

