



Installation Data Pack for Serta

Pipe Type America
Date 9/13/22
Installer Fire Chief Equipment
Units US
Altitude 0'
Designed with Hole Sizes 1/8"

NICET CERTIFICATION

MICHAEL A. BARCLAY
CERTIFIED ENGINEERING TECHNICIAN
NICET CERTIFICATION NO.: 106070, FIRE ALARM
SYSTEMS LEVEL III, SPECIAL HAZARDS SUPPRESSION
SYSTEMS LEVEL III

 9/15/2022
SIGNATURE

Detector : ASSD #4

Type	VEU
Sensitivity Objective	Early Warning
Endcap Usage	Create a Balanced Design
Application Defaults	default
Aspirator Speed	7
Air Temperature	68.0°F
Absolute Pressure	1013hPa
System Flowrate	155.4l/min
Total Pipe Length	890' 8"
Number Of Sample Points	31
Maximum Transport Time	83sec
Maximum Allowed TT	90sec
Minimum Hole Flow Rate	2.0l/min
Exhaust Length	0'
Exhaust Diameter	0.874
Exhaust Pressure Drop	0Pa
Invert	No
Notes	Set Aspirator Speed to 7.

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Thresholds

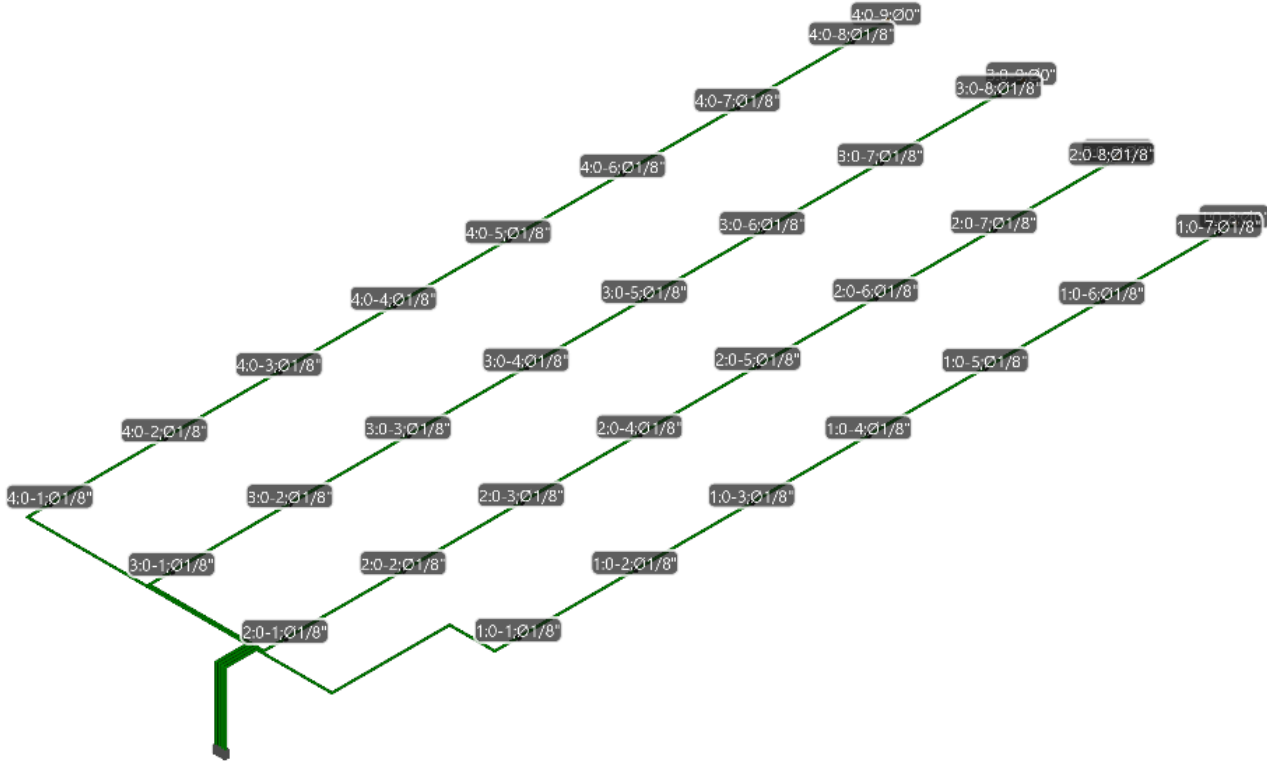
Safety Factor (% reduction in alarm threshold) 0%

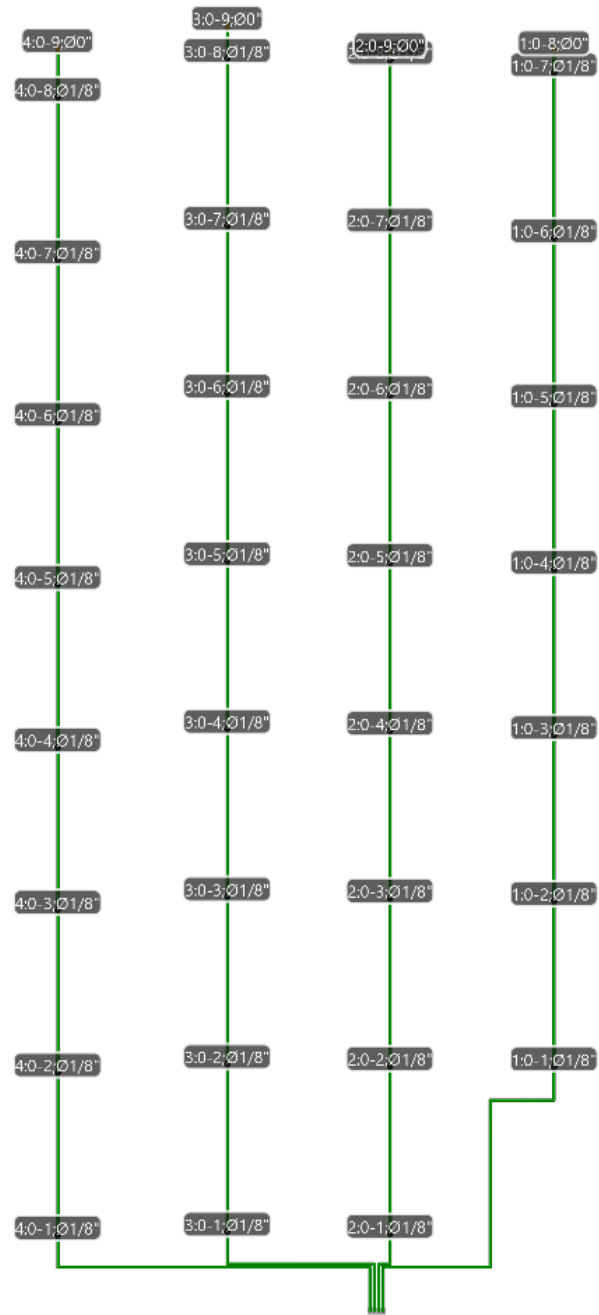
	Alert	Action	Fire 1	Fire 2
Recommended Thresholds (%/ft)	0.0158	0.0277	0.0397	0.0795
Smoke at least sensitive hole (%/ft)	0.5625	0.9844	1.4062	2.8125

Group Details

	Hole Sensitivity	Flow	Pressure	Transport Time	Hole Diameter	[Default Group]
Aggregate smoke from holes						0
Group Type						
Max Target Aggregate Sensitivity						
Min Target Aggregate Sensitivity						
Contribution ratio(%)						
Applied Max Aggregate Sensitivity						
Applied Min Aggregate Sensitivity						
Target Suction Pressure						25
Target Balance						70
Exclude from Autobalance						
1:Section0-1	1.1141	5.5	167	15	1/8"	✓
1:Section0-2	1.1663	5.3	153	19	1/8"	✓
1:Section0-3	1.2119	5.1	141	24	1/8"	✓
1:Section0-4	1.2483	4.9	133	30	1/8"	✓
1:Section0-5	1.2746	4.8	128	38	1/8"	✓
1:Section0-6	1.2929	4.8	124	50	1/8"	✓
1:Section0-7	1.3023	4.7	122	76	1/8"	✓
2:Section0-1	1.0360	6.0	193	8	1/8"	✓
2:Section0-2	1.0933	5.6	174	12	1/8"	✓
2:Section0-3	1.1444	5.4	158	16	1/8"	✓
2:Section0-4	1.1891	5.2	147	21	1/8"	✓
2:Section0-5	1.2249	5.0	138	27	1/8"	✓
2:Section0-6	1.2504	4.9	133	35	1/8"	✓
2:Section0-7	1.2682	4.9	129	47	1/8"	✓
2:Section0-8	1.2774	4.8	127	72	1/8"	✓
3:Section0-1	1.0814	5.7	177	11	1/8"	✓
3:Section0-2	1.1409	5.4	159	15	1/8"	✓
3:Section0-3	1.1958	5.2	145	19	1/8"	✓
3:Section0-4	1.2438	5.0	134	24	1/8"	✓
3:Section0-5	1.2821	4.8	126	30	1/8"	✓
3:Section0-6	1.3101	4.7	121	39	1/8"	✓
3:Section0-7	1.3297	4.6	117	52	1/8"	✓
3:Section0-8	1.3398	4.6	116	78	1/8"	✓
4:Section0-1	1.1336	5.4	161	15	1/8"	✓
4:Section0-2	1.1955	5.2	145	19	1/8"	✓
4:Section0-3	1.2530	4.9	132	23	1/8"	✓
4:Section0-4	1.3033	4.7	122	28	1/8"	✓
4:Section0-5	1.3431	4.6	115	34	1/8"	✓
4:Section0-6	1.3728	4.5	110	43	1/8"	✓
4:Section0-7	1.3937	4.4	107	56	1/8"	✓
4:Section0-8	1.4044	4.4	105	83	1/8"	✓
Number of holes						31

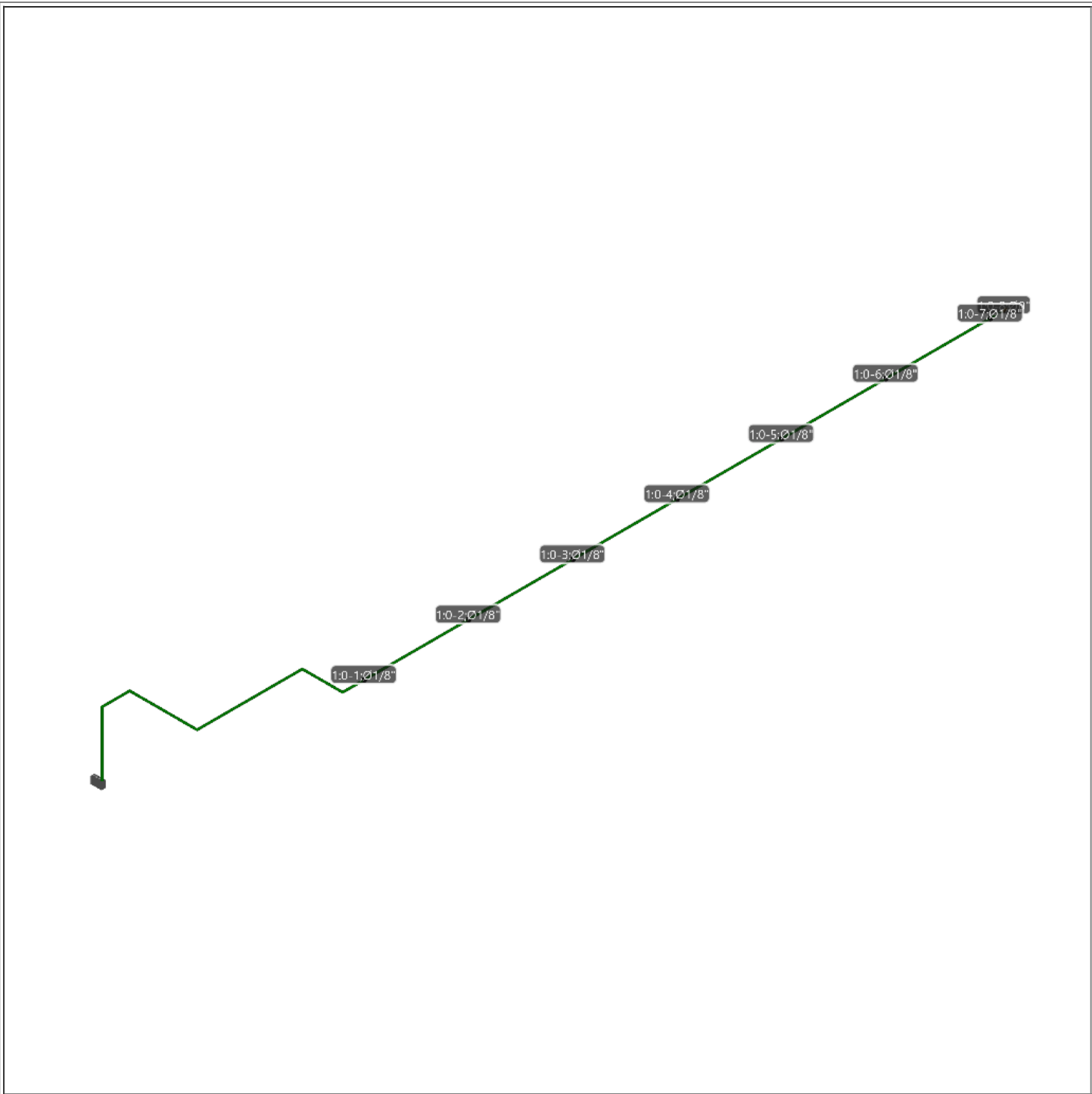
Flow Share(%)						100
Aggregate Sensitivity						
Balance(%)						74
Suction pressure (least)						105





Pipe:P6

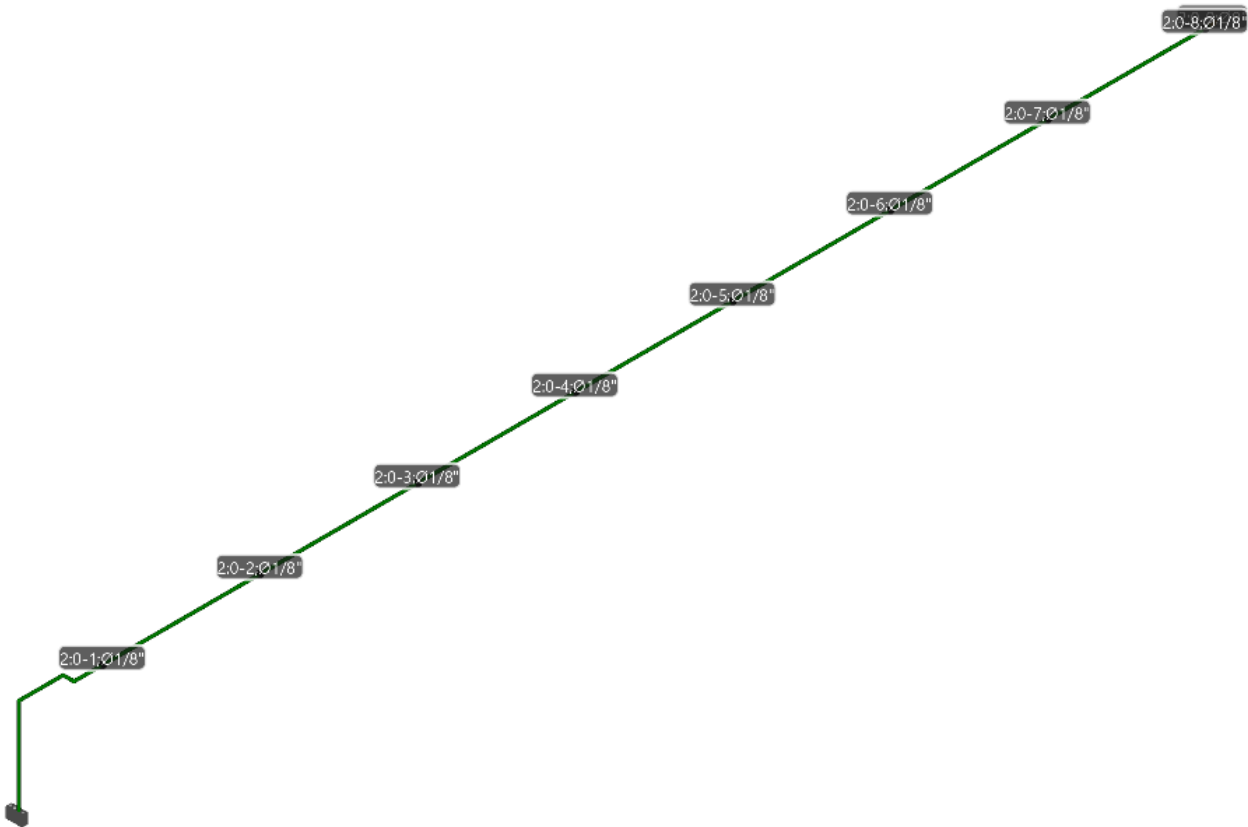
Total Pipe Length	224' 2"
Ambient Pressure	0Pa
Sector Pressure	233Pa
Number of Sample Points	7
Pipe Flowrate	35.3l/min

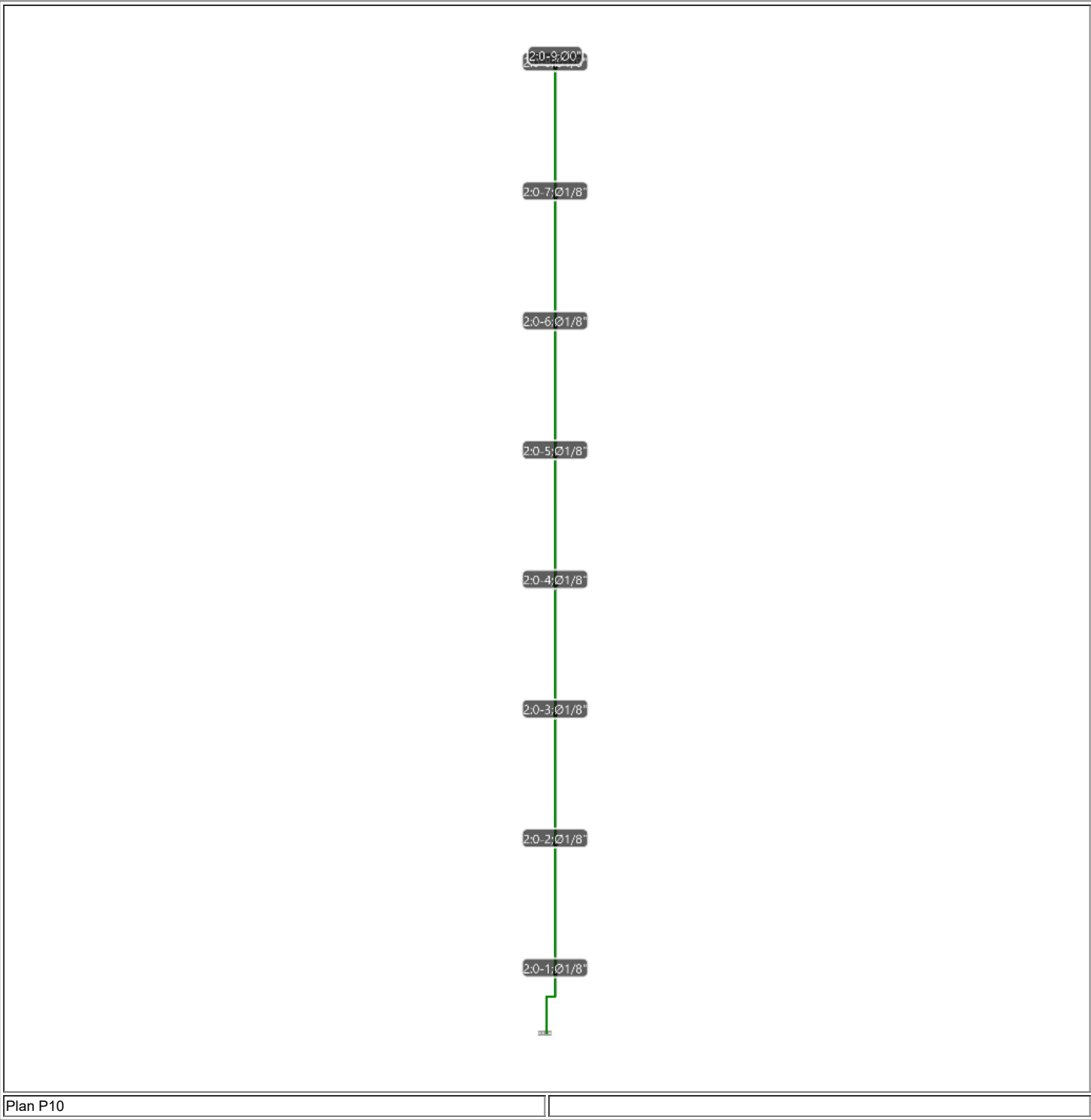


[illegible]

Pipe:P10

Total Pipe Length	202' 4"
Ambient Pressure	0Pa
Sector Pressure	231Pa
Number of Sample Points	8
Pipe Flowrate	41.9l/min





Section0

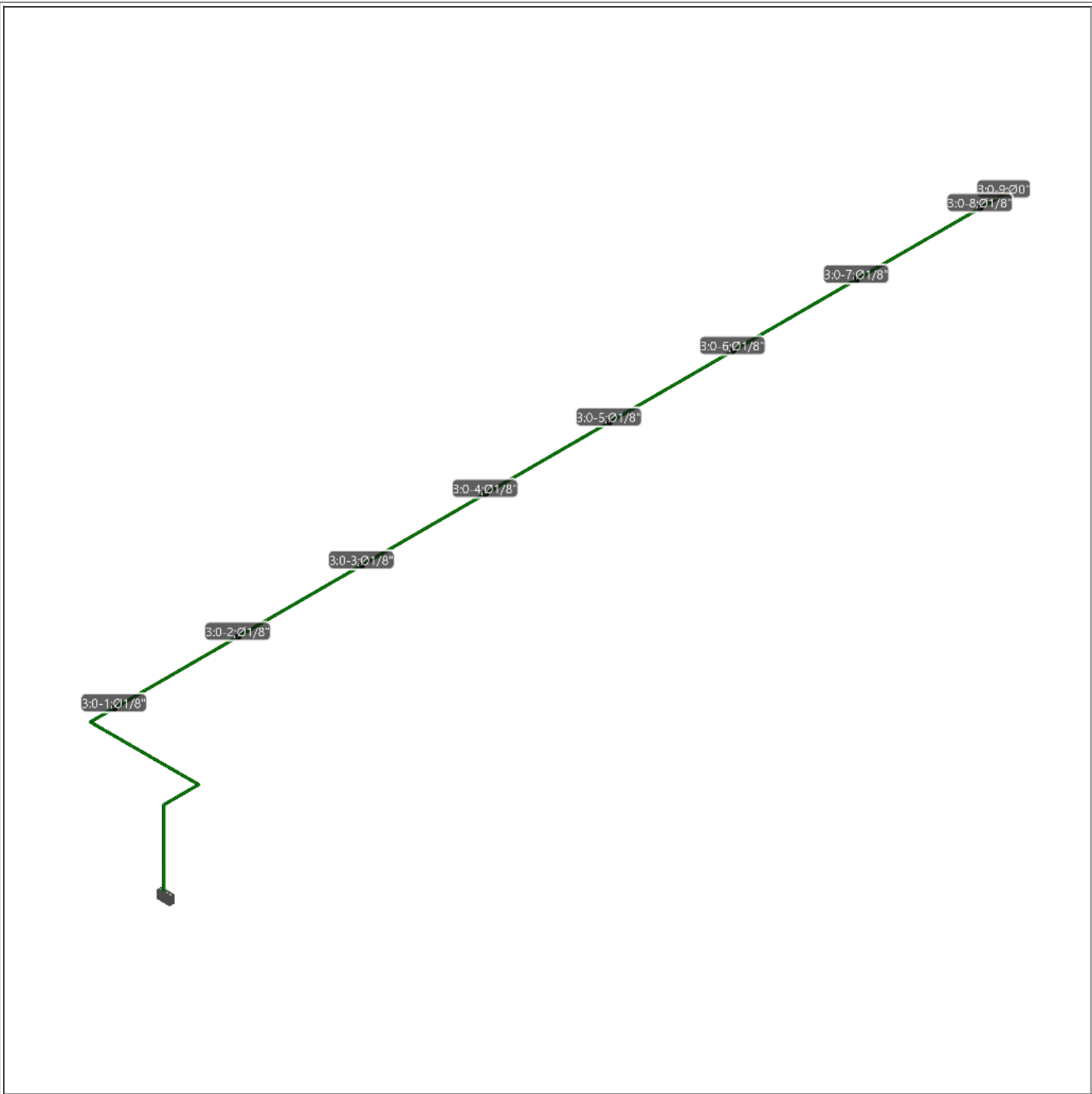
Pipe Diameter 0.874

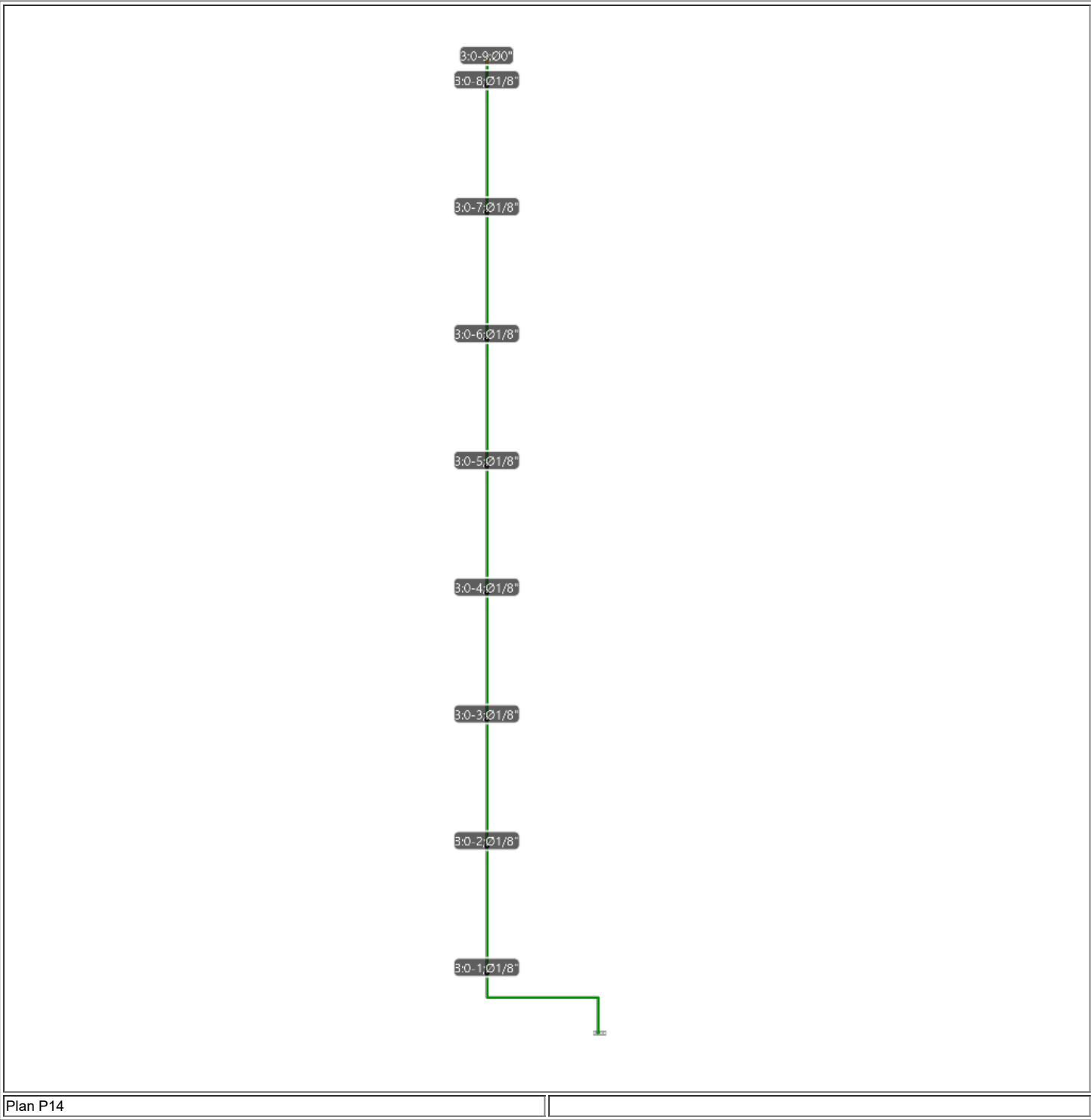
#		Distance ft	Relative ft	Direction	Hole Diameter in	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/ft	Pipe Diameter in	Capillary Diameter	Intersection Pressure
-	Bend 90	15'	15'	F										
-	Bend 90	22'	7'	R										
-	Bend 90	23' 8 1/2"	1' 8 1/2"	F										
2:Section0-1	Hole	28' 2 1/2"	4' 6"		1/8"		8	193	6.0	3.8	1.0360	0.874		
2:Section0-2	Hole	53' 1"	24' 10 1/2"		1/8"		12	174	5.6	3.6	1.0933	0.874		

[illegible]

Pipe:P14

Total Pipe Length	222' 8 1/2"
Ambient Pressure	0Pa
Sector Pressure	232Pa
Number of Sample Points	8
Pipe Flowrate	40.1l/min





Section0

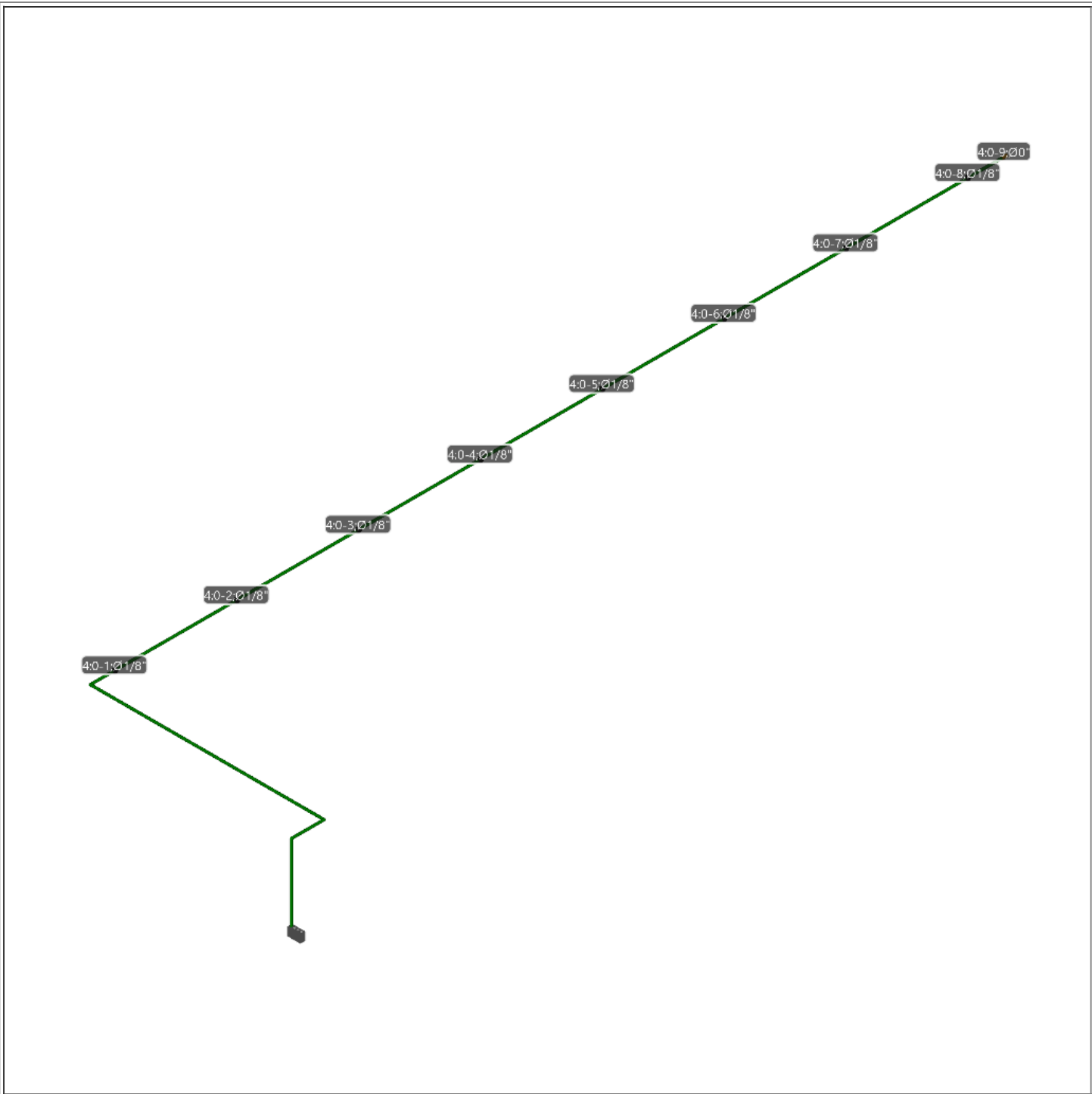
Pipe Diameter 0.874

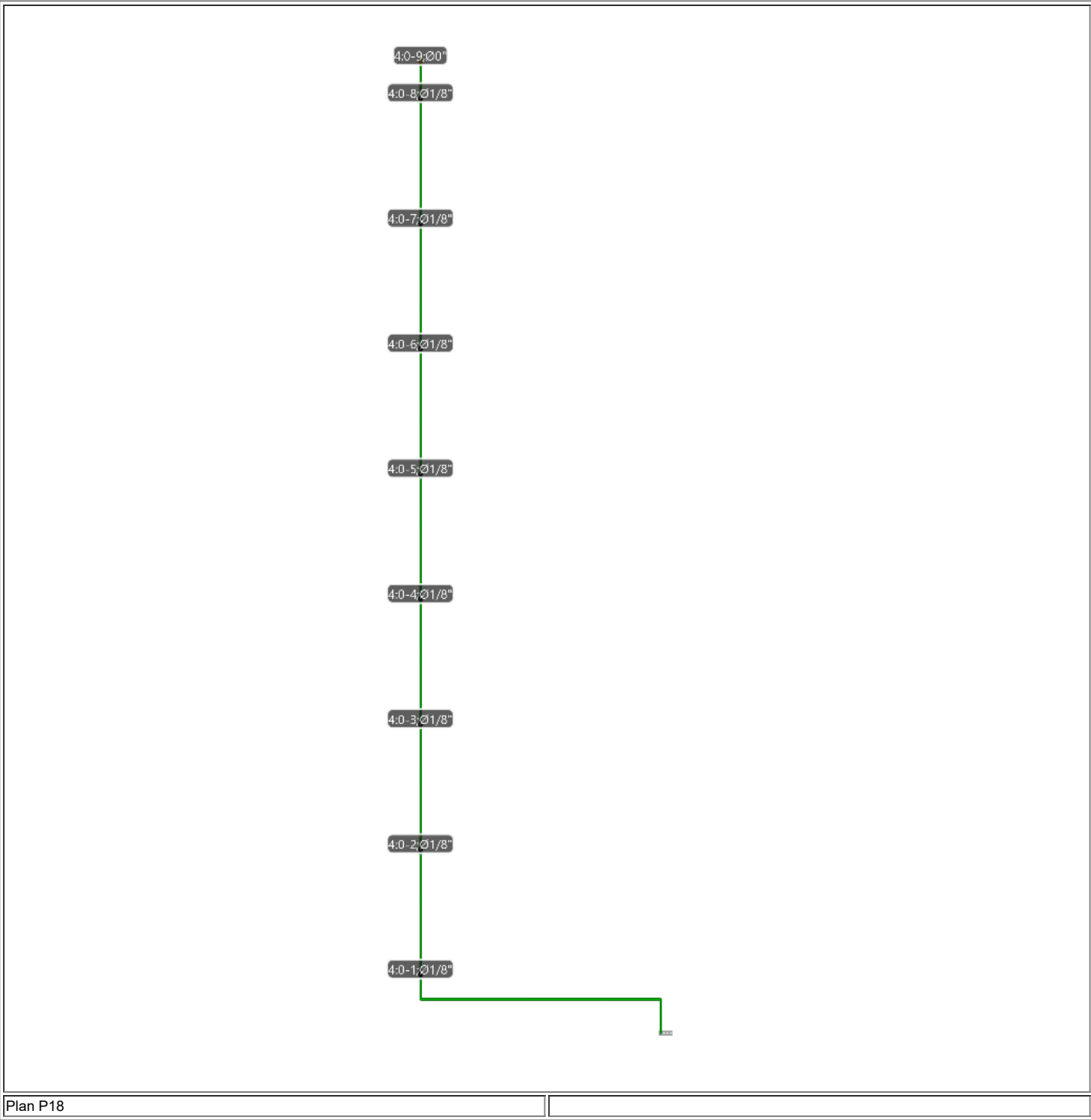
#		Distance ft	Relative ft	Direction	Hole Diameter in	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/ft	Pipe Diameter in	Capillary Diameter	Intersection Pressure
-	Bend 90	15'	15'	F										
-	Bend 90	22'	7'	L										
-	Bend 90	43' 9 1/2"	21' 9 1/2"	F										
3:Section0-1	Hole	48' 7"	4' 9 1/2"		1/8"		11	177	5.7	3.7	1.0814	0.874		
3:Section0-2	Hole	73' 5 1/2"	24' 10 1/2"		1/8"		15	159	5.4	3.5	1.1409	0.874		

[illegible]

Pipe:P18

Total Pipe Length	241' 5 1/2"
Ambient Pressure	0Pa
Sector Pressure	232Pa
Number of Sample Points	8
Pipe Flowrate	38.2l/min





Section0

Pipe Diameter 0.874

#		Distance ft	Relative ft	Direction	Hole Diameter in	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/ft	Pipe Diameter in	Capillary Diameter	Intersection Pressure
-	Bend 90	15'	15'	F										
-	Bend 90	21' 6"	6' 6"	L										
-	Bend 90	67' 9 1/2"	46' 3 1/2"	F										
4:Section0-1	Hole	72' 7"	4' 9 1/2"		1/8"		15	161	5.4	3.5	1.1336	0.874		
4:Section0-2	Hole	96' 8 1/2"	24' 1 1/2"		1/8"		19	145	5.2	3.3	1.1955	0.874		

4:Section0-3	Hole	120' 10"	24' 1 1/2"		1/8"		23	132	4.9	3.2	1.2530	0.874		
4:Section0-4	Hole	144' 11 1/2"	24' 1 1/2"		1/8"		28	122	4.7	3.0	1.3033	0.874		
4:Section0-5	Hole	169' 1"	24' 1 1/2"		1/8"		34	115	4.6	3.0	1.3431	0.874		
4:Section0-6	Hole	193' 2 1/2"	24' 1 1/2"		1/8"		43	110	4.5	2.9	1.3728	0.874		
4:Section0-7	Hole	217' 4"	24' 1 1/2"		1/8"		56	107	4.4	2.9	1.3937	0.874		
4:Section0-8	Hole	241' 5 1/2"	24' 1 1/2"		1/8"		83	105	4.4	2.8	1.4044	0.874		
4:Section0-9	Endcap	248' 8"	7' 2 1/2"		0"							0.874		

