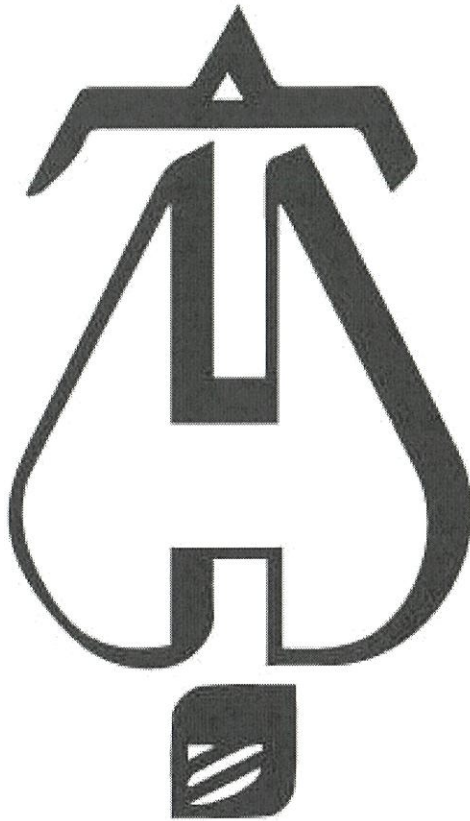




Hydraulic Calculations by HydraCALC

Hydratec Incorporated
64 Haverhill Road
Route 111
Windham, NH 03087
603-434-0502

Job Name : LINCOLN EQUITIES SOUTHEAST
Drawing : HIGH PILED STORAGE
Location : NY312 & PUGSLEY RD, BREWSTER, NY 10509
Remote Area : SYSTEM 8
Contract : 5031092
Data File : Lincoln Equities - BLDG A SYS 8 K25 8.23.23.WXF



Hydraulic Design Information Sheet

Name - LINCOLN EQUITIES SOUTHEAST Date - 8.23.23
Location - NY312 & PUGSLEY RD, BREWSTER, NY 10509
Building - HIGH PILED STORAGE System No. - SYSTEM 8
Contractor - SA COMUNALE Contract No. - 5031092
Calculated By - JUSTIN BEOUGHER Drawing No. - PG.9
Construction: () Combustible (X) Non-Combustible Ceiling Height - 44'-6
Occupancy - ESFR

S (X) NFPA 13 () Lt. Haz. Ord.Haz.Gp. () 1 () 2 () 3 () Ex.Haz.
Y () Figure Curve

S Other

T Specific Ruling

Made By

Date

M	Number of ESFR Sprinklers	- 12	System Type	Sprinkler/Nozzle
	End Head Pressure (PSI)	- 45	(X) Wet	Make TYCO
D	ESFR K-Factor	- 25.2	() Dry	Model ESFR-25
E	Elevation at Highest Outlet	- 45'-2	() Deluge	Size 1"
S	Hose Allowance - Inside	- 100	() Preaction	K-Factor 25.2
I	Rack Sprinkler Allowance	- NA	() Other	Temp.Rat.165
G	Hose Allowance - Outside	- 150		

N
Note

Calculation Flow Required - 2288.92 Press Required - 134.530
Summary C-Factor Used: 120 Overhead 150 Underground

W	Water Flow Test:	Pump Data:	Tank or Reservoir:
A	Date of Test -		Cap. -
T	Time of Test -	Rated Cap.- 2000	Elev.-
E	Static Press -	@ Press - 149	
R	Residual Press -	Elev. - 2	Well
	Flow -		Proof Flow
S	Elevation -		

U Location - PUMP

P WATER STORAGE TANK

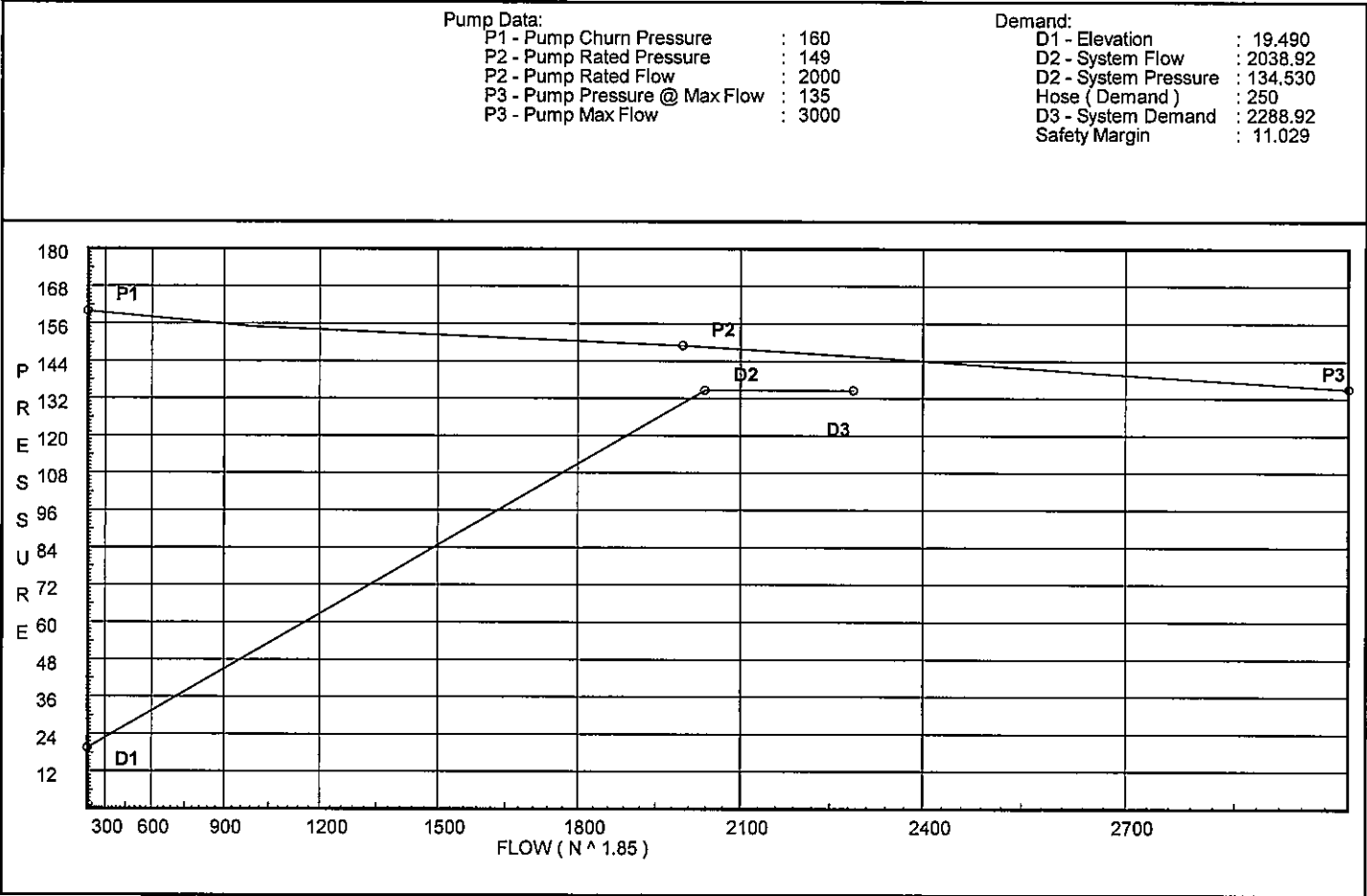
L Source of Information -

Y

C	Commodity GROUP A CARTONED UNEXP.	Class 1-4	Location
O	Storage Ht. 40 FT	Area	Aisle W.
M	Storage Method: Solid Piled	% Palletized	% Rack
M	() Single Row	() Conven. Pallet	() Auto. Storage
S	() Double Row	() Slave Pallet	() Solid Shelf
T	() Mult. Row	() Open Shelf	() Encap.
O			() Non

R	K	Flue Spacing	Clearance:Storage to Ceiling
A		Longitudinal	Transverse

E Horizontal Barriers Provided:



Fittings Used Summary

Hydratec Incorporated
LINCOLN EQUITIES SOUTHEAST

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Fitting Legend		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8	10	12	14	16	18	20	24
Abbrev.	Name																				
B	NFPA 13 Butterfly Valve	0	0	0	0	0	6	7	10	0	12	9	10	12	19	21	0	0	0	0	0
F	NFPA 13 45° Elbow	1	1	1	1	2	2	3	3	3	4	5	7	9	11	13	17	19	21	24	28
G	NFPA 13 Gate Valve	0	0	0	0	0	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13
L	NFPA 13 Long Turn Elbow	0.5	1	2	2	2	3	4	5	5	6	8	9	13	16	18	24	27	30	34	40
S	NFPA 13 Swing Check	0	0	5	7	9	11	14	16	19	22	27	32	45	55	65					
T	NFPA 13 90° Flow thru Tee	3	4	5	6	8	10	12	15	17	20	25	30	35	50	60	71	81	91	101	121
V	90° Ell Firelock #001	0	0	0	0	0	3.5	4.3	5	0	6.8	8.5	10	13	4.5	5.1	0	0	0	0	0
X	90° Tee-Branch Firelock 002	0	0	0	0	0	8.5	10.8	13	0	16	21	25	33	9.3	11	0	0	0	0	0

Units Summary

Diameter Units	Inches
Length Units	Feet
Flow Units	US Gallons per Minute
Pressure Units	Pounds per Square Inch

Note: Fitting Legend provides equivalent pipe lengths for fittings types of various diameters. Equivalent lengths shown are standard for actual diameters of Sched 40 pipe and CFactors of 120 except as noted with *. The fittings marked with a * show equivalent lengths values supplied by manufacturers based on specific pipe diameters and CFactors and they require no adjustment. All values for fittings not marked with a * will be adjusted in the calculation for CFactors of other than 120 and diameters other than Sched 40 per NFPA.

Flow Summary - NFPA

Hydratec Incorporated
LINCOLN EQUITIES SOUTHEAST

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SUPPLY ANALYSIS

<i>Node at Source</i>	<i>Static Pressure</i>	<i>Residual Pressure</i>	<i>Flow</i>	<i>Available Pressure</i>	<i>Total Demand</i>	<i>Required Pressure</i>
PO	See Information on Pump Curve			145.559	2288.92	134.53

NODE ANALYSIS

<i>Node Tag</i>	<i>Elevation</i>	<i>Node Type</i>	<i>Pressure at Node</i>	<i>Discharge at Node</i>	<i>Notes</i>
R13	47.0		68.87		
1	47.0		69.04		
2	47.0		69.09		
3	47.0		69.14		
4	47.0		69.19		
R14	47.0		68.87		
5	47.0		69.04		
6	47.0		69.09		
7	47.0		69.14		
8	47.0		69.19		
R15	47.0		68.86		
9	47.0		69.03		
10	47.0		69.08		
11	47.0		69.13		
12	47.0		69.18		
R16	47.0		68.85		
R17	47.0		68.83		
R18	47.0		68.8		
R19	47.0		68.76		
R20	47.0		68.7		
R21	47.0		68.64		
R22	47.0		68.55		
R23	47.0		68.44		
R24	47.0		68.3		
R25	47.0		68.13		
R26	47.0		67.93		
R27	47.0		58.38		
H1	47.0	25.2	45.78	170.5	
H2	47.0	25.2	45.0	169.05	
H3	47.0	25.2	45.0	169.05	
H4	47.0	25.2	45.74	170.44	
R28	47.0		58.39		
H5	47.0	25.2	45.82	170.57	
H6	47.0	25.2	45.04	169.13	
H7	47.0	25.2	45.04	169.13	
H8	47.0	25.2	45.79	170.53	
R29	47.0		58.57		
H9	47.0	25.2	45.97	170.87	
H10	47.0	25.2	45.2	169.42	

Flow Summary - NFPA

Hydratec Incorporated
LINCOLN EQUITIES SOUTHEAST

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NODE ANALYSIS (cont.)

Node Tag	Elevation	Node Type	Pressure at Node	Discharge at Node	Notes
H11	47.0	25.2	45.2	169.42	
H12	47.0	25.2	45.95	170.83	
R30	47.0		68.73		
R31	47.0		69.36		
R32	47.0		69.9		
R33	47.0		70.36		
R34	47.0		70.73		
R35	47.0		71.04		
R36	47.0		71.28		
R37	47.0		71.48		
R38	47.0		71.64		
R39	47.0		69.51		
R40	47.0		69.51		
R41	47.0		69.51		
R42	47.0		69.51		
R43	47.0		69.51		
R44	47.0		69.51		
R45	47.0		69.51		
R46	47.0		69.51		
R47	47.0		69.51		
R48	47.0		69.51		
R49	47.0		69.51		
R50	47.0		69.5		
R51	47.0		69.5		
R52	47.0		69.5		
R53	47.0		61.04		
R54	47.0		61.14		
R55	47.0		61.38		
R56	47.0		70.31		
R57	47.0		70.84		
R58	47.0		71.38		
R59	47.0		71.94		
R60	47.0		72.52		
R61	47.0		73.12		
R62	47.0		73.75		
R63	47.0		74.43		
R64	47.0		75.15		
13	47.0		68.75		
14	47.0		68.75		
15	47.0		68.74		
16	47.0		68.73		
17	47.0		68.71		
18	47.0		68.67		
19	47.0		68.62		
20	47.0		68.56		
21	47.0		68.48		
22	47.0		68.38		
23	47.0		68.25		
24	47.0		68.08		

Flow Summary - NFPA

Hydratec Incorporated
LINCOLN EQUITIES SOUTHEAST

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NODE ANALYSIS (cont.)

Node Tag	Elevation	Node Type	Pressure at Node	Discharge at Node	Notes
25	47.0		67.89		
26	47.0		67.65		
27	47.0		67.36		
28	47.0		67.35		
29	47.0		67.55		
30	47.0		68.34		
31	47.0		69.0		
32	47.0		69.54		
33	47.0		69.97		
34	47.0		70.29		
35	47.0		70.53		
36	47.0		70.68		
37	47.0		70.76		
39	47.0		69.63		
40	47.0		69.63		
41	47.0		69.63		
42	47.0		69.63		
43	47.0		69.63		
44	47.0		69.64		
45	47.0		69.65		
46	47.0		69.65		
47	47.0		69.67		
48	47.0		69.68		
49	47.0		69.7		
50	47.0		69.72		
51	47.0		69.75		
52	47.0		69.78		
53	47.0		69.83		
54	47.0		69.96		
55	47.0		70.24		
56	47.0		70.7		
57	47.0		71.2		
58	47.0		71.75		
59	47.0		72.33		
60	47.0		72.96		
61	47.0		73.63		
62	47.0		74.36		
63	47.0		75.15		
64	47.0		76.01		
FMJ	47.0		77.57		
TR3	47.0		83.5		
BR3	2.0		116.52	100.0	
FLG	2.0		117.06		
UG1	-5.0		126.25		
UG2	-5.0		123.23	150.0	
UG3	-5.0		131.66		
UG4	-5.0		130.95		
UG5	-5.0		130.93		
UG6	-5.0		135.79		

Flow Summary - NFPA

Hydratec Incorporated
LINCOLN EQUITIES SOUTHEAST

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NODE ANALYSIS (cont.)

<i>Node Tag</i>	<i>Elevation</i>	<i>Node Type</i>	<i>Pressure at Node</i>	<i>Discharge at Node</i>	<i>Notes</i>
PUMP	2.0		133.18		
PO	2.0		134.53		

Final Calculations : Hazen-Williams

Hydratec Incorporated
LINCOLN EQUITIES SOUTHEAST

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
R13 to 1	47 47		22.69	2	0.0 0.0	35.083 0.0	120	68.867 0.0			
1 to 2	47 47		22.69	2.157	0.0	35.083	0.0049	0.173	Vel =	1.99	
2 to 3	47 47		0.0	2	0.0 0.0	10.000 0.0	120	69.040 0.0			
2 to 3	47 47		22.69	2.157	0.0	10.000	0.0049	0.049	Vel =	1.99	
3 to 4	47 47		0.0	2	0.0 0.0	10.000 0.0	120	69.089 0.0			
3 to 4	47 47		22.69	2.157	0.0	10.000	0.0049	0.049	Vel =	1.99	
4 to R39	47 47		0.0	2	0.0 0.0	10.000 0.0	120	69.138 0.0			
4 to R39	47 47		22.69	2.157	0.0	10.000	0.0049	0.049	Vel =	1.99	
R39			0.0								
R39			22.69					69.511	K Factor =	2.72	
R14 to 5	47 47		22.72	2	0.0 0.0	35.083 0.0	120	68.866 0.0			
5 to 6	47 47		22.72	2.157	0.0	35.083	0.0049	0.172	Vel =	1.99	
5 to 6	47 47		0.0	2	0.0 0.0	10.000 0.0	120	69.038 0.0			
5 to 6	47 47		22.72	2.157	0.0	10.000	0.0050	0.050	Vel =	1.99	
6 to 7	47 47		0.0	2	0.0 0.0	10.000 0.0	120	69.088 0.0			
6 to 7	47 47		22.72	2.157	0.0	10.000	0.0049	0.049	Vel =	1.99	
7 to 8	47 47		0.0	2	0.0 0.0	10.000 0.0	120	69.137 0.0			
7 to 8	47 47		22.72	2.157	0.0	10.000	0.0049	0.049	Vel =	1.99	
8 to R40	47 47		0.0	2	0.0 0.0	65.958 0.0	120	69.186 0.0			
8 to R40	47 47		22.72	2.157	0.0	65.958	0.0049	0.325	Vel =	1.99	
R40			0.0								
R40			22.72					69.511	K Factor =	2.73	
R15 to 9	47 47		22.82	2	0.0 0.0	35.083 0.0	120	68.860 0.0			
9 to 10	47 47		22.82	2.157	0.0	35.083	0.0050	0.174	Vel =	2.00	
9 to 10	47 47		0.0	2	0.0 0.0	10.000 0.0	120	69.034 0.0			
9 to 10	47 47		22.82	2.157	0.0	10.000	0.0050	0.050	Vel =	2.00	
10 to 11	47 47		0.0	2	0.0 0.0	10.000 0.0	120	69.084 0.0			
10 to 11	47 47		22.82	2.157	0.0	10.000	0.0050	0.050	Vel =	2.00	
11 to 12	47 47		0.0	2	0.0 0.0	10.000 0.0	120	69.134 0.0			
11 to 12	47 47		22.82	2.157	0.0	10.000	0.0049	0.049	Vel =	2.00	
12 to R41	47 47		0.0	2	0.0 0.0	65.958 0.0	120	69.183 0.0			
12 to R41	47 47		22.82	2.157	0.0	65.958	0.0050	0.328	Vel =	2.00	

Final Calculations : Hazen-Williams

Hydratec Incorporated
LINCOLN EQUITIES SOUTHEAST

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Date 8.23.23

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
R41			0.0 22.82					69.511		K Factor = 2.74	
R16 to R42	47 47		23.04	2	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0051	68.849 0.0 0.662		Vel = 2.02	
R42			0.0 23.04					69.511		K Factor = 2.76	
R17 to R43	47 47		23.41	2	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0052	68.829 0.0 0.681		Vel = 2.06	
R43			0.0 23.41					69.510		K Factor = 2.81	
R18 to R44	47 47		23.96	2	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0054	68.798 0.0 0.712		Vel = 2.10	
R44			0.0 23.96					69.510		K Factor = 2.87	
R19 to R45	47 47		24.69	2	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0057	68.757 0.0 0.753		Vel = 2.17	
R45			0.0 24.69					69.510		K Factor = 2.96	
R20 to R46	47 47		25.60	2	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0061	68.705 0.0 0.804		Vel = 2.25	
R46			0.0 25.60					69.509		K Factor = 3.07	
R21 to R47	47 47		26.75	2	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0067	68.636 0.0 0.872		Vel = 2.35	
R47			0.0 26.75					69.508		K Factor = 3.21	
R22 to R48	47 47		28.16	2	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0073	68.548 0.0 0.959		Vel = 2.47	
R48			0.0 28.16					69.507		K Factor = 3.38	
R23 to R49	47 47		29.85	2	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0082	68.438 0.0 1.068		Vel = 2.62	
R49			0.0 29.85					69.506		K Factor = 3.58	
R24 to R50	47 47		31.83	2	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0092	68.301 0.0 1.204		Vel = 2.79	
			0.0								

Final Calculations : Hazen-Williams

Hydratec Incorporated
LINCOLN EQUITIES SOUTHEAST

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
R50			31.83					69.505		K Factor = 3.82	
R25 to R51	47 47		34.13 34.13	2 2.157	0.0 0.0	131.041 0.0	120 0.0104	68.134 0.0		Vel = 3.00	
R51			0.0 34.13					69.503		K Factor = 4.09	
R26 to R52	47 47		36.76 36.76	2 2.157	0.0 0.0	131.041 131.041	120 0.0120	67.930 1.571		Vel = 3.23	
R52			0.0 36.76					69.501		K Factor = 4.41	
R27 to H1	47 47		-341.54 -341.54	2.5 2.635	0.0 0.0	45.083 0.0	120 -0.2795	58.377 0.0		Vel = 20.09	
H1 to H2	47 47	25.20	170.50 -171.04	2.5 2.635	0.0 0.0	10.000 10.000	120 -0.0778	45.778 -0.778		Vel = 10.06	
H2 to H3	47 47	25.20	169.05 -1.99	2.5 2.635	0.0 0.0	10.000 10.000	120 0	45.000 0.0		Vel = 0.12	
H3 to H4	47 47	25.20	169.04 167.05	2.5 2.635	0.0 0.0	10.000 10.000	120 0.0744	45.000 0.744		Vel = 9.83	
H4 to R53	47 47	25.20	170.44 337.49	2.5 2.635	0.0 0.0	55.958 55.958	120 0.2734	45.744 15.297		Vel = 19.86	
R53			0.0 337.49					61.041		K Factor = 43.20	
R28 to H5	47 47		-341.19 -341.19	2.5 2.635	0.0 0.0	45.083 45.083	120 -0.2789	58.390 -12.574		Vel = 20.07	
H5 to H6	47 47	25.20	170.57 -170.62	2.5 2.635	0.0 0.0	10.000 10.000	120 -0.0774	45.816 -0.774		Vel = 10.04	
H6 to H7	47 47	25.20	169.13 -1.49	2.5 2.635	0.0 0.0	10.000 10.000	120 0	45.042 0.0		Vel = 0.09	
H7 to H8	47 47	25.20	169.13 167.64	2.5 2.635	0.0 0.0	10.000 10.000	120 0.0749	45.042 0.749		Vel = 9.86	
H8 to R54	47 47	25.20	170.52 338.16	2.5 2.635	0.0 0.0	55.958 55.958	120 0.2744	45.791 15.353		Vel = 19.90	
R54			0.0 338.16					61.144		K Factor = 43.25	
R29 to H9	47 47		-341.52 -341.52	2.5 2.635	0.0 0.0	45.083 45.083	120 -0.2794	58.572 -12.597		Vel = 20.09	

Final Calculations : Hazen-Williams

Hydratec Incorporated
LINCOLN EQUITIES SOUTHEAST

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
H9 to H10	47 47	25.20	170.86 -170.66	2.5 2.635	0.0 0.0 0.0	10.000 0.0 10.000	120 -0.0775	45.975 0.0 -0.775		Vel = 10.04	
H10 to H11	47 47	25.20	169.43 -1.23	2.5 2.635	0.0 0.0 0.0	10.000 0.0 10.000	120 0	45.200 0.0 0.0		Vel = 0.07	
H11 to H12	47 47	25.20	169.42 168.19	2.5 2.635	0.0 0.0 0.0	10.000 0.0 10.000	120 0.0754	45.200 0.0 0.754		Vel = 9.90	
H12 to R55	47 47	25.20	170.83 339.02	2.5 2.635	0.0 0.0 0.0	55.958 0.0 55.958	120 0.2757	45.954 0.0 15.425		Vel = 19.95	
R55			0.0 339.02					61.379		K Factor = 43.27	
R30 to R56	47 47		62.48 62.48	2.5 2.635	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0121	68.732 0.0 1.581		Vel = 3.68	
R56			0.0 62.48					70.313		K Factor = 7.45	
R31 to R57	47 47		60.24 60.24	2.5 2.635	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0113	69.363 0.0 1.478		Vel = 3.54	
R57			0.0 60.24					70.841		K Factor = 7.16	
R32 to R58	47 47		60.31 60.31	2.5 2.635	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0113	69.901 0.0 1.481		Vel = 3.55	
R58			0.0 60.31					71.382		K Factor = 7.14	
R33 to R59	47 47		62.55 62.55	2.5 2.635	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0121	70.355 0.0 1.585		Vel = 3.68	
R59			0.0 62.55					71.940		K Factor = 7.37	
R34 to R60	47 47		66.71 66.71	2.5 2.635	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0136	70.732 0.0 1.785		Vel = 3.92	
R60			0.0 66.71					72.517		K Factor = 7.83	
R35 to R61	47 47		72.46 72.46	2.5 2.635	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0159	71.040 0.0 2.079		Vel = 4.26	
R61			0.0 72.46					73.119		K Factor = 8.47	
R36 to R62	47 47		79.49 79.49	2.5 2.635	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0188	71.284 0.0 2.469		Vel = 4.68	

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv Len	Pipe Ftns Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
R62			0.0 79.49					73.753		K Factor = 9.26	
R37 to R63	47 47		87.48 87.48	2.5 2.635	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0225	71.478 0.0 2.947		Vel = 5.15	
R63			0.0 87.48					74.425		K Factor = 10.14	
R38 to R64	47 47		96.13 96.13	2.5 2.635	0.0 0.0 0.0	131.041 0.0 131.041	120 0.0268	71.640 0.0 3.508		Vel = 5.66	
R64			0.0 96.13					75.148		K Factor = 11.09	
R13 to 13	47 47		-22.69 -22.69	2 2.157	X T 0.0	10.461 12.307 23.601	0.833 22.768 -0.0049	120 0.0 -0.116		Vel = 1.99	
13			0.0 -22.69					68.751		K Factor = -2.74	
R14 to 14	47 47		-22.72 -22.72	2 2.157	X T 0.0	10.461 12.307 23.601	0.833 22.768 -0.0049	120 0.0 -0.116		Vel = 1.99	
14			0.0 -22.72					68.750		K Factor = -2.74	
R15 to 15	47 47		-22.82 -22.82	2 2.157	X T 0.0	10.461 12.307 23.601	0.833 22.768 -0.0050	120 0.0 -0.117		Vel = 2.00	
15			0.0 -22.82					68.743		K Factor = -2.75	
R16 to 16	47 47		-23.04 -23.04	2 2.157	X T 0.0	10.461 12.307 23.601	0.833 22.768 -0.0051	120 0.0 -0.120		Vel = 2.02	
16			0.0 -23.04					68.729		K Factor = -2.78	
R17 to 17	47 47		-23.41 -23.41	2 2.157	X T 0.0	10.461 12.307 23.601	0.833 22.768 -0.0052	120 0.0 -0.123		Vel = 2.06	
17			0.0 -23.41					68.706		K Factor = -2.82	
R18 to 18	47 47		-23.96 -23.96	2 2.157	X T 0.0	10.461 12.307 23.601	0.833 22.768 -0.0054	120 0.0 -0.128		Vel = 2.10	
18			0.0 -23.96					68.670		K Factor = -2.89	
R19 to 19	47 47		-24.69 -24.69	2 2.157	X T 0.0	10.461 12.307 23.601	0.833 22.768 -0.0057	120 0.0 -0.135		Vel = 2.17	
			0.0								

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv	Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
19			-24.69						68.622		K Factor = -2.98	
R20 to 20	47 47		-25.60 -25.6	2 2.157	X T	10.461 12.307 0.0	0.833 22.768 23.601	120 -0.0061	68.705 0.0 -0.145		Vel = 2.25	
20			0.0 -25.60						68.560		K Factor = -3.09	
R21 to 21	47 47		-26.75 -26.75	2 2.157	X T	10.461 12.307 0.0	0.833 22.768 23.601	120 -0.0067	68.636 0.0 -0.157		Vel = 2.35	
21			0.0 -26.75						68.479		K Factor = -3.23	
R22 to 22	47 47		-28.16 -28.16	2 2.157	X T	10.461 12.307 0.0	0.833 22.768 23.601	120 -0.0073	68.548 0.0 -0.173		Vel = 2.47	
22			0.0 -28.16						68.375		K Factor = -3.41	
R23 to 23	47 47		-29.85 -29.85	2 2.157	X T	10.461 12.307 0.0	0.833 22.768 23.601	120 -0.0082	68.438 0.0 -0.193		Vel = 2.62	
23			0.0 -29.85						68.245		K Factor = -3.61	
R24 to 24	47 47		-31.83 -31.83	2 2.157	X T	10.461 12.307 0.0	0.833 22.768 23.601	120 -0.0092	68.301 0.0 -0.217		Vel = 2.79	
24			0.0 -31.83						68.084		K Factor = -3.86	
R25 to 25	47 47		-34.13 -34.13	2 2.157	X T	10.461 12.307 0.0	0.833 22.768 23.601	120 -0.0105	68.134 0.0 -0.247		Vel = 3.00	
25			0.0 -34.13						67.887		K Factor = -4.14	
R26 to 26	47 47		-36.76 -36.76	2 2.157	X T	10.461 12.307 0.0	0.833 22.768 23.601	120 -0.0120	67.930 0.0 -0.283		Vel = 3.23	
26			0.0 -36.76						67.647		K Factor = -4.47	
R27 to 27	47 47		341.54 341.54	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 0.2795	58.377 0.0 8.980		Vel = 20.09	
27			0.0 341.54						67.357		K Factor = 41.62	
R28 to 28	47 47		341.19 341.19	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 0.2790	58.390 0.0 8.964		Vel = 20.07	
28			0.0 341.19						67.354		K Factor = 41.57	

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv	Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
R29 to 29	47 47		341.52 341.52	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 0.2795	58.572 0.0 8.980		Vel = 20.09	
29			0.0 341.52						67.552		K Factor = 41.55	
R30 to 30	47 47		-62.48 -62.48	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 -0.0121	68.732 0.0 -0.388		Vel = 3.68	
30			0.0 -62.48						68.344		K Factor = -7.56	
R31 to 31	47 47		-60.24 -60.24	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 -0.0113	69.363 0.0 -0.362		Vel = 3.54	
31			0.0 -60.24						69.001		K Factor = -7.25	
R32 to 32	47 47		-60.31 -60.31	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 -0.0113	69.901 0.0 -0.363		Vel = 3.55	
32			0.0 -60.31						69.538		K Factor = -7.23	
R33 to 33	47 47		-62.55 -62.55	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 -0.0121	70.355 0.0 -0.388		Vel = 3.68	
33			0.0 -62.55						69.967		K Factor = -7.48	
R34 to 34	47 47		-66.71 -66.71	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 -0.0136	70.732 0.0 -0.437		Vel = 3.92	
34			0.0 -66.71						70.295		K Factor = -7.96	
R35 to 35	47 47		-72.46 -72.46	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 -0.0159	71.040 0.0 -0.511		Vel = 4.26	
35			0.0 -72.46						70.529		K Factor = -8.63	
R36 to 36	47 47		-79.49 -79.49	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 -0.0188	71.284 0.0 -0.605		Vel = 4.68	
36			0.0 -79.49						70.679		K Factor = -9.46	
R37 to 37	47 47		-87.48 -87.48	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 -0.0225	71.478 0.0 -0.722		Vel = 5.15	
37			0.0 -87.48						70.756		K Factor = -10.40	
R38 to 38	47 47		-96.13 -96.13	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 -0.0268	71.640 0.0 -0.861		Vel = 5.66	

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
38			0.0 -96.13					70.779		K Factor = -11.43	
R39 to 39	47 47		22.69 22.69	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0049	69.511 0.0 0.116		Vel = 1.99	
39			0.0 22.69					69.627		K Factor = 2.72	
R40 to 40	47 47		22.72 22.72	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0049	69.511 0.0 0.116		Vel = 1.99	
40			0.0 22.72					69.627		K Factor = 2.72	
R41 to 41	47 47		22.82 22.82	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0050	69.511 0.0 0.117		Vel = 2.00	
41			0.0 22.82					69.628		K Factor = 2.73	
R42 to 42	47 47		23.04 23.04	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0050	69.511 0.0 0.119		Vel = 2.02	
42			0.0 23.04					69.630		K Factor = 2.76	
R43 to 43	47 47		23.41 23.41	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0052	69.510 0.0 0.123		Vel = 2.06	
43			0.0 23.41					69.633		K Factor = 2.81	
R44 to 44	47 47		23.96 23.96	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0054	69.510 0.0 0.128		Vel = 2.10	
44			0.0 23.96					69.638		K Factor = 2.87	
R45 to 45	47 47		24.69 24.69	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0057	69.510 0.0 0.135		Vel = 2.17	
45			0.0 24.69					69.645		K Factor = 2.96	
R46 to 46	47 47		25.60 25.6	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0061	69.509 0.0 0.145		Vel = 2.25	
46			0.0 25.60					69.654		K Factor = 3.07	
R47 to 47	47 47		26.75 26.75	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0067	69.508 0.0 0.158		Vel = 2.35	
			0.0								

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	***** Notes *****
47			26.75					69.666	K Factor = 3.20
R48 to 48	47 47		28.16 28.16	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0073	69.507 0.0 0.173	Vel = 2.47
48			0.0 28.16					69.680	K Factor = 3.37
R49 to 49	47 47		29.85 29.85	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0082	69.506 0.0 0.193	Vel = 2.62
49			0.0 29.85					69.699	K Factor = 3.58
R50 to 50	47 47		31.83 31.83	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0092	69.505 0.0 0.217	Vel = 2.79
50			0.0 31.83					69.722	K Factor = 3.81
R51 to 51	47 47		34.13 34.13	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0105	69.503 0.0 0.247	Vel = 3.00
51			0.0 34.13					69.750	K Factor = 4.09
R52 to 52	47 47		36.76 36.76	2 2.157	X T 10.461 12.307 0.0	0.833 22.768 23.601	120 0.0120	69.501 0.0 0.283	Vel = 3.23
52			0.0 36.76					69.784	K Factor = 4.40
R53 to 53	47 47		337.49 337.49	2.5 2.635	X T 14.827 16.474 0.0	0.833 31.301 32.134	120 0.2734	61.041 0.0 8.784	Vel = 19.86
53			0.0 337.49					69.825	K Factor = 40.39
R54 to 54	47 47		338.16 338.16	2.5 2.635	X T 14.827 16.474 0.0	0.833 31.301 32.134	120 0.2744	61.144 0.0 8.816	Vel = 19.90
54			0.0 338.16					69.960	K Factor = 40.43
R55 to 55	47 47		339.02 339.02	2.5 2.635	X T 14.827 16.474 0.0	0.833 31.301 32.134	120 0.2757	61.379 0.0 8.858	Vel = 19.95
55			0.0 339.02					70.237	K Factor = 40.45
R56 to 56	47 47		62.48 62.48	2.5 2.635	X T 14.827 16.474 0.0	0.833 31.301 32.134	120 0.0120	70.313 0.0 0.387	Vel = 3.68
56			0.0 62.48					70.700	K Factor = 7.43

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
R57 to 57	47 47		60.24 60.24	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 0.0113	70.841 0.0 0.362	Vel = 3.54	
57			0.0 60.24						71.203	K Factor = 7.14	
R58 to 58	47 47		60.31 60.31	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 0.0113	71.382 0.0 0.364	Vel = 3.55	
58			0.0 60.31						71.746	K Factor = 7.12	
R59 to 59	47 47		62.55 62.55	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 0.0121	71.940 0.0 0.388	Vel = 3.68	
59			0.0 62.55						72.328	K Factor = 7.35	
R60 to 60	47 47		66.71 66.71	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 0.0136	72.517 0.0 0.438	Vel = 3.92	
60			0.0 66.71						72.955	K Factor = 7.81	
R61 to 61	47 47		72.46 72.46	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 0.0159	73.119 0.0 0.511	Vel = 4.26	
61			0.0 72.46						73.630	K Factor = 8.44	
R62 to 62	47 47		79.49 79.49	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 0.0188	73.753 0.0 0.605	Vel = 4.68	
62			0.0 79.49						74.358	K Factor = 9.22	
R63 to 63	47 47		87.48 87.48	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 0.0225	74.425 0.0 0.723	Vel = 5.15	
63			0.0 87.48						75.148	K Factor = 10.09	
R64 to 64	47 47		96.13 96.13	2.5 2.635	X T	14.827 16.474 0.0	0.833 31.301 32.134	120 0.0268	75.148 0.0 0.860	Vel = 5.66	
64			0.0 96.13						76.008	K Factor = 11.03	
13 to 14	47 47		-22.69 -22.69	4 4.26		0.0 0.0 0.0	10.000 0.0 10.000	120 -0.0001	68.751 0.0 -0.001	Vel = 0.51	
14 to 15	47 47		-22.72 -45.41	4 4.26		0.0 0.0 0.0	10.000 0.0 10.000	120 -0.0007	68.750 0.0 -0.007	Vel = 1.02	

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
15 to 16	47 47		-22.83 -68.24	4 4.26	0.0 0.0	10.000 0.0	120 -0.0014	68.743 0.0		Vel = 1.54	
16 to 17	47 47		-23.04 -91.28	4 4.26	0.0 0.0	10.000 10.000	120 -0.0023	68.729 0.0		Vel = 2.05	
17 to 18	47 47		-23.41 -114.69	4 4.26	0.0 0.0	10.000 10.000	120 -0.0036	68.706 0.0		Vel = 2.58	
18 to 19	47 47		-23.96 -138.65	4 4.26	0.0 0.0	9.500 9.500	120 -0.0051	68.670 0.0		Vel = 3.12	
19 to 20	47 47		-24.69 -163.34	4 4.26	0.0 0.0	9.000 9.000	120 -0.0069	68.622 0.0		Vel = 3.68	
20 to 21	47 47		-25.60 -188.94	4 4.26	0.0 0.0	9.000 9.000	120 -0.0090	68.560 0.0		Vel = 4.25	
21 to 22	47 47		-26.75 -215.69	4 4.26	0.0 0.0	9.000 9.000	120 -0.0116	68.479 0.0		Vel = 4.86	
22 to 23	47 47		-28.15 -243.84	4 4.26	0.0 0.0	9.000 9.000	120 -0.0144	68.375 0.0		Vel = 5.49	
23 to 24	47 47		-29.85 -273.69	4 4.26	0.0 0.0	9.000 9.000	120 -0.0179	68.245 0.0		Vel = 6.16	
24 to 25	47 47		-31.83 -305.52	4 4.26	0.0 0.0	9.000 9.000	120 -0.0219	68.084 0.0		Vel = 6.88	
25 to 26	47 47		-34.13 -339.65	4 4.26	0.0 0.0	9.000 9.000	120 -0.0267	67.887 0.0		Vel = 7.65	
26 to 27	47 47		-36.76 -376.41	4 4.26	0.0 0.0	9.000 9.000	120 -0.0322	67.647 0.0		Vel = 8.47	
27 to 28	47 47		341.54 -34.87	4 4.26	0.0 0.0	9.000 9.000	120 -0.0003	67.357 0.0		Vel = 0.78	
28 to 29	47 47		341.19 306.32	4 4.26	0.0 0.0	9.000 9.000	120 0.0220	67.354 0.198		Vel = 6.90	
29 to 30	47 47		341.52 647.84	4 4.26	0.0 0.0	9.000 9.000	120 0.0880	67.552 0.792		Vel = 14.58	
30 to 31	47 47		-62.47 585.37	4 4.26	0.0 0.0	9.000 9.000	120 0.0730	68.344 0.657		Vel = 13.18	

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
31 to 32	47 47		-60.24 525.13	4 4.26	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0597	69.001 0.0 0.537		Vel = 11.82	
32 to 33	47 47		-60.31 464.82	4 4.26	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0477	69.538 0.0 0.429		Vel = 10.46	
33 to 34	47 47		-62.56 402.26	4 4.26	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0364	69.967 0.0 0.328		Vel = 9.05	
34 to 35	47 47		-66.71 335.55	4 4.26	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0260	70.295 0.0 0.234		Vel = 7.55	
35 to 36	47 47		-72.46 263.09	4 4.26	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0167	70.529 0.0 0.150		Vel = 5.92	
36 to 37	47 47		-79.49 183.6	4 4.26	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0086	70.679 0.0 0.077		Vel = 4.13	
37 to 38	47 47		-87.47 96.13	4 4.26	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0026	70.756 0.0 0.023		Vel = 2.16	
38			0.0 96.13					70.779		K Factor = 11.43	
39 to 40	47 47		22.69 22.69	6 6.357	0.0 0.0 0.0	10.000 0.0 10.000	120 0	69.627 0.0 0.0		Vel = 0.23	
40 to 41	47 47		22.72 45.41	6 6.357	0.0 0.0 0.0	10.000 0.0 10.000	120 0.0001	69.627 0.0 0.001		Vel = 0.46	
41 to 42	47 47		22.83 68.24	6 6.357	0.0 0.0 0.0	10.000 0.0 10.000	120 0.0002	69.628 0.0 0.002		Vel = 0.69	
42 to 43	47 47		23.04 91.28	6 6.357	0.0 0.0 0.0	10.000 0.0 10.000	120 0.0003	69.630 0.0 0.003		Vel = 0.92	
43 to 44	47 47		23.41 114.69	6 6.357	0.0 0.0 0.0	10.000 0.0 10.000	120 0.0005	69.633 0.0 0.005		Vel = 1.16	
44 to 45	47 47		23.96 138.65	6 6.357	0.0 0.0 0.0	9.500 0.0 9.500	120 0.0007	69.638 0.0 0.007		Vel = 1.40	
45 to 46	47 47		24.69 163.34	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0010	69.645 0.0 0.009		Vel = 1.65	
46 to 47	47 47		25.60 188.94	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0013	69.654 0.0 0.012		Vel = 1.91	

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	***** Notes *****
47 to 48	47 47		26.75 215.69	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0016	69.666 0.0 0.014	Vel = 2.18
48 to 49	47 47		28.15 243.84	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0021	69.680 0.0 0.019	Vel = 2.46
49 to 50	47 47		29.85 273.69	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0026	69.699 0.0 0.023	Vel = 2.77
50 to 51	47 47		31.83 305.52	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0031	69.722 0.0 0.028	Vel = 3.09
51 to 52	47 47		34.13 339.65	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0038	69.750 0.0 0.034	Vel = 3.43
52 to 53	47 47		36.76 376.41	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0046	69.784 0.0 0.041	Vel = 3.80
53 to 54	47 47		337.49 713.9	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0150	69.825 0.0 0.135	Vel = 7.22
54 to 55	47 47		338.16 1052.06	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0308	69.960 0.0 0.277	Vel = 10.63
55 to 56	47 47		339.02 1391.08	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0514	70.237 0.0 0.463	Vel = 14.06
56 to 57	47 47		62.48 1453.56	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0559	70.700 0.0 0.503	Vel = 14.69
57 to 58	47 47		60.24 1513.8	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0603	71.203 0.0 0.543	Vel = 15.30
58 to 59	47 47		60.31 1574.11	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0647	71.746 0.0 0.582	Vel = 15.91
59 to 60	47 47		62.55 1636.66	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0697	72.328 0.0 0.627	Vel = 16.54
60 to 61	47 47		66.71 1703.37	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0750	72.955 0.0 0.675	Vel = 17.22
61 to 62	47 47		72.46 1775.83	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0809	73.630 0.0 0.728	Vel = 17.95
62 to 63	47 47		79.49 1855.32	6 6.357	0.0 0.0 0.0	9.000 0.0 9.000	120 0.0878	74.358 0.0 0.790	Vel = 18.75

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Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Equiv	Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
63 to 64	47 47		87.48 1942.8	6 6.357		0.0 0.0	9.000 0.0	120 0.0956	75.148 0.0			
64 to FMJ	47 47		96.12 2038.92	6 6.357	V	12.573 0.0	2.333 12.573	120 0.1045	76.008 0.0		Vel = 19.64	
FMJ			0.0 2038.92									
FMJ to TR3	47 47		2038.92 2038.92	6 6.357	V	12.573 0.0	44.208 12.573	120 0.1045	77.566 0.0		K Factor = 231.51	
TR3 to BR3	47 2		2038.92 2038.92	6 6.357	S B T	40.235 12.573 37.72	38.875 90.528 129.403	120 0.1045	83.501 19.490 13.525		Vel = 20.61	
BR3 to FLG	2 2	H100	100.00 2138.92	8 7.98	L	19.632 0.0	2.000 19.632	150 0.0250	116.516 0.0		Vel = 20.61	
FLG to UG2	2 -5		0.0 2138.92	8 7.98	L T	19.632 52.855 0.0	53.167 72.487 125.654	150 0.0250	117.056 3.032 3.138		Vel = 13.72	
UG2			0.0 2138.92									
UG1 to UG2	-5 -5		-853.63 -853.63	8 7.98	3F G	40.774 6.041 0.0	614.875 46.814 661.689	150 -0.0046	126.247 0.0 -3.021		K Factor = 192.68	
UG2 to UG3	-5 -5	H150	2288.92 1435.29	8 7.98	3F L T 2G	40.774 19.632 52.855 12.081	580.958 125.343 706.301	150 0.0119	123.226 0.0 8.432		Vel = 5.48	
UG3 to UG4	-5 -5		-2288.92 -853.63	12 11.65	F G	17.441 8.05 0.0	958.917 25.490 984.407	150 -0.0007	131.658 0.0 -0.712		Vel = 9.21	
UG4 to UG5	-5 -5		0.0 -853.63	12 11.65	G	8.05 0.0 0.0	16.167 8.049 24.216	150 -0.0007	130.946 0.0 -0.017		Vel = 2.57	
UG5 to UG1	-5 -5		0.0 -853.63	8 7.98	5F 2G	67.957 12.081 0.0	945.542 80.039 1025.581	150 -0.0046	130.929 0.0 -4.682		Vel = 2.57	
UG1			0.0 -853.63									
UG3 to UG6	-5 -5		2288.92 2288.92	12 11.65	6F 2G	104.647 16.1 0.0	801.750 120.747 922.497	150 0.0045	131.658 0.0 4.137		K Factor = -75.97	
UG6 to PUMP	-5 2		0.0 2288.92	12 11.65	2L	48.299 0.0 0.0	45.500 48.298 93.798	150 0.0045	135.795 -3.032 0.421		Vel = 6.89	

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Node1	Elev1	K	Qa	Nom	Fitting or		Pipe Ftngs	CFact	Pt Pe	*****	Notes	*****
to Node2	Elev2	Fact	Qt	Act	Equiv	Len	Total	Pf/Ft	Pf			
PUMP	2		0.0	10	2V	10.89	15.000	120	133.184			
to					S	66.551	100.431		0.0			
PO	2		2288.92	10.42	B	22.99	115.431	0.0117	1.346	Vel =	8.61	
			0.0									
PO			2288.92						134.530	K Factor =	197.34	