

NORTHWEST IRRIGATION

AUGUST 29, 2025

WISH-119535

CUSTOMER : PIONEER FEEDYARD

LINDSAY GEN II - 90
11 TOWER - 1972.47 FT
SYSTEM 900 GPM @ 33 PSI

LEGAL : SECTION 15-11-32

SENNINGER UP3 LDN SPRAY NOZZLES
SENNINGER 10 & 6 PSI REGULATORS
NO ENDGUN
ELEVATION 15 FT UP, 0 FT DOWN

1880 SOUTH RANGE AVENUE

COLBY, KANSAS 67701

(785)460-1880

WARRANTY

WATER APPLICATION UNIFORMITY OBTAINED WITH THIS SYSTEM CAN BE ADVERSELY AFFECTED BY MANY VARIABLES INCLUDING THE IMPROPER MAKEUP OR INSTALLATION OF THE SPRINKLER OR SPRAY NOZZLE PACKAGE, OBSTRUCTED NOZZLES, MAINTAINING INCORRECT PIVOT PRESSURE, UNFAVORABLE CLIMATIC CONDITIONS, TIGHT AND/OR SLOPING SOILS, IMPROPER END GUN ARC SETTINGS, ERRATIC AND IMPROPER OPERATING SPEED OF THE SYSTEM, POOR QUALITY OF WATER WITH ABRASIVES, CORROSIVES, AND/OR SOLIDS WHICH CAN CAUSE PLUGGING AND JAMMING, AS WELL AS INHERENT VARIABLES IN THE MANY COMPONENTS COMPRISING THE SYSTEM. THEREFORE WESTERN IRRIGATION SUPPLY HOUSE, INC., MAKES NO WARRANTY AS TO THE UNIFORMITY OF COVERAGE OBTAINED FROM THIS WATER APPLICATION PRINTOUT OTHER THAN ITS MATHEMATICAL ACCURACY.

IT IS THE RESPONSIBILITY OF THE END USER TO DETERMINE IF ANY INCOMPATIBILITY EXISTS BETWEEN THE WATER DISTRIBUTION DEVICES AND THE CROP, THE SOIL, AND THE PHYSICAL STRUCTURE OF THE MECHANICAL MOVE SYSTEM. WESTERN IRRIGATION SUPPLY HOUSE, INC., THEREFORE, DISCLAIMS ANY LIABILITY FOR DAMAGES DUE TO FAILURE OF THE SYSTEM TO PERFORM AS CONTEMPLATED.

FIGURES PRESENTED ON THIS COMPUTER PRINTOUT ARE BASED ON THE FOLLOWING:

1. DATA FURNISHED TO WESTERN IRRIGATION SUPPLY HOUSE, INC., ON PIPE LENGTH, DIAMETER, SURFACE FINISH, OUTLET SPACINGS, WATER FLOW, PIVOT PRESSURE AND ALL OTHER APPLICABLE INFORMATION.
2. THERE IS 100% WATER APPLICATION EFFICIENCY (ZERO WIND VELOCITY AND NO EVAPORATION).
3. PIVOT PRESSURE IS MEASURED ON THE MAIN HORIZONTAL DISTRIBUTION PIPE JUST AFTER THE LAST ELBOW.
4. MAIN PIPE PRESSURE IS CALCULATED AS IF THE PIVOT IS ALWAYS ON LEVEL GROUND.
5. SPRINKLER OR SPRAY NOZZLE BASE PRESSURE MAY BE LESS THAN MAIN LINE PIPE PRESSURE DUE TO THE USE OF PRESSURE REGULATORS. WHERE DROP PIPES ARE USED THE STATIC HEAD IS ADDED TO AND FRICTION LOSS IS SUBTRACTED FROM THE MAIN LINE PIPE PRESSURE TO DETERMINE INLET PSI. REGULATORS ARE CONSIDERED MOUNTED AT THE SAME HEIGHT AS THE SPRINKLING DEVICE UNLESS NOTED.

DEALER

NORTHWEST IRRIGATION
1880 SOUTH RANGE AVENUE
COLBY, KANSAS 67701

IRRIGATOR

PIONEER FEEDYARD
SECTION 15-11-32

TOTAL TARGET GPM	900.00	FRICTION FACTOR USED	138	SPANS	LENGTH	PIPE I.D.
TOP OF PIVOT PRESSURE	33.00	TOTAL LENGTH	1972.47	1	181.60	6.395
NO ENDGUN		NUMBER OF TOWERS	11	5	179.00	6.395
NUMBER OF OUTLETS	275	NUMBER OF SPRINKLERS	262	1	135.00	6.395
				4	179.00	6.395
SENNINGER UP3 LDN SPRAY NOZZLES - CONCAVE GROOVED PADS				OH	44.87	5.369
SENNINGER PSR-2 10 & 6 PSI SERIES REGULATORS						
POLYFLEX DROPS AVERAGE 10 FT						
ELEVATION IS 15 FT UP AND 0 FT DOWN						

CAUTIONS AND WARNINGS

1. Over watering at beginning of system due to practical limitations on smallest nozzle sizes available and/or allowable for proper operation.

2. When using spray nozzles with five foot ground clearance or less, nozzle should travel between crop rows and spacing should not exceed 80 inches.

3. This system designed for minimum pressure. Failure to deliver indicated pressure at the top of pivot point will adversely affect regulator and/or sprinkler/spray performance. Elevations, pipe sizes and type of drop pipe must be as shown.

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE					SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
1		2.92	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	1	
2		7.76	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	2	
3		15.26	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	3	
4	22.59	22.59	0.07	0.59	32.34	11.40	LD NOZ UP3 5	BEIGE				1	SPSR2-10		114
5	7.34	29.93	0.10	0.59	32.07	11.40	LD NOZ UP3 5	BEIGE				2	SPSR2-10		114
6	7.33	37.26	0.13	0.59	31.82	11.40	LD NOZ UP3 5	BEIGE				3	SPSR2-10		120
7	7.50	44.76	0.15	0.59	31.57	11.40	LD NOZ UP3 5	BEIGE				4	SPSR2-10		120
8	7.00	51.76	0.17	0.59	31.36	11.40	LD NOZ UP3 5	BEIGE				5	SPSR2-10		126
9	7.50	59.26	0.20	0.59	31.15	11.40	LD NOZ UP3 5	BEIGE				6	SPSR2-10		126
10	7.33	66.59	0.23	0.59	30.96	11.40	LD NOZ UP3 5	BEIGE				7	SPSR2-10		132
11	7.34	73.93	0.25	0.59	30.79	11.40	LD NOZ UP3 5	BEIGE				8	SPSR2-10		132
12	7.33	81.26	0.28	0.59	30.63	11.40	LD NOZ UP3 5	BEIGE				9	SPSR2-10		132
13	7.50	88.76	0.30	0.59	30.49	11.40	LD NOZ UP3 5	BEIGE				10	SPSR2-10		132
14	7.00	95.76	0.32	0.59	30.37	11.40	LD NOZ UP3 5	BEIGE				11	SPSR2-10		132
15	7.50	103.26	0.35	0.59	30.26	11.40	LD NOZ UP3 5	BEIGE				12	SPSR2-10		132
16	7.33	110.59	0.37	0.59	30.17	11.40	LD NOZ UP3 5	BEIGE				13	SPSR2-10		132
17	7.34	117.93	0.40	0.59	30.09	11.40	LD NOZ UP3 5	BEIGE				14	SPSR2-10		132
18	7.33	125.26	0.43	0.59	30.03	11.40	LD NOZ UP3 5	BEIGE				15	SPSR2-10		126
19	7.50	132.76	0.44	0.59	29.99	11.40	LD NOZ UP3 5	BEIGE				16	SPSR2-10		126
20	7.00	139.76	0.47	0.59	29.97	11.40	LD NOZ UP3 5	BEIGE				17	SPSR2-10		120
21	7.50	147.26	0.50	0.59	29.96	11.40	LD NOZ UP3 5	BEIGE				18	SPSR2-10		120
22	7.33	154.59	0.52	0.59	29.96	11.40	LD NOZ UP3 5	BEIGE				19	SPSR2-10		114
23	7.34	161.93	0.55	0.59	29.99	11.40	LD NOZ UP3 5	BEIGE				20	SPSR2-10		114
24	7.33	169.26	0.58	0.59	30.03	11.40	LD NOZ UP3 5	BEIGE				21	SPSR2-10		108
25	7.50	176.76	0.71	0.72	29.96	11.40	LD NOZ UP3 5.5	BEIGE				22	SPSR2-10		102
TOWER 1	181.60	181.60													
26		182.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	4	
27	10.00	186.76	0.75	0.72	29.79	11.40	LD NOZ UP3 5.5	BEIGE				23	SPSR2-10		102
28	7.50	194.26	0.66	0.72	29.56	11.40	LD NOZ UP3 5.5	BEIGE				24	SPSR2-10		108
29	7.33	201.59	0.68	0.72	29.27	11.40	LD NOZ UP3 5.5	BEIGE				25	SPSR2-10		114
30	7.34	208.93	0.70	0.72	29.01	11.40	LD NOZ UP3 5.5	BEIGE				26	SPSR2-10		114
31	7.33	216.26	0.74	0.72	28.76	11.40	LD NOZ UP3 5.5	BEIGE				27	SPSR2-10		120
32	7.50	223.76	0.75	0.72	28.52	11.40	LD NOZ UP3 5.5	BEIGE				28	SPSR2-10		120
33	7.00	230.76	0.77	0.72	28.31	11.40	LD NOZ UP3 5.5	BEIGE				29	SPSR2-10		126
34	7.50	238.26	0.81	0.85	28.10	11.40	LD NOZ UP3 6	GOLD				30	SPSR2-10		126
35	7.33	245.59	0.83	0.85	27.92	11.40	LD NOZ UP3 6	GOLD				31	SPSR2-10		132
36	7.34	252.93	0.85	0.85	27.75	11.40	LD NOZ UP3 6	GOLD				32	SPSR2-10		132
37	7.33	260.26	0.89	0.85	27.59	11.40	LD NOZ UP3 6	GOLD				33	SPSR2-10		132
38	7.50	267.76	0.89	0.85	27.46	11.40	LD NOZ UP3 6	GOLD				34	SPSR2-10		132
39	7.00	274.76	0.92	0.85	27.34	11.40	LD NOZ UP3 6	GOLD				35	SPSR2-10		132
40	7.50	282.26	0.96	1.00	27.24	11.40	LD NOZ UP3 6.5	GOLD				36	SPSR2-10		132
41	7.33	289.59	0.98	1.00	27.15	11.40	LD NOZ UP3 6.5	GOLD				37	SPSR2-10		132
42	7.34	296.93	1.00	1.00	27.08	11.40	LD NOZ UP3 6.5	GOLD				38	SPSR2-10		132
43	7.33	304.26	1.04	1.00	27.02	11.40	LD NOZ UP3 6.5	GOLD				39	SPSR2-10		126
44	7.50	311.76	1.04	1.00	26.99	11.40	LD NOZ UP3 6.5	GOLD				40	SPSR2-10		126
45	7.00	318.76	1.06	1.00	26.96	11.40	LD NOZ UP3 6.5	GOLD				41	SPSR2-10		120
46	7.50	326.26	1.11	1.16	26.96	11.40	LD NOZ UP3 7	LIME				42	SPSR2-10		120
47	7.33	333.59	1.13	1.16	26.97	11.40	LD NOZ UP3 7	LIME				43	SPSR2-10		114

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE				SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
48	7.34	340.93	1.15	1.16	27.00	11.40	LD NOZ UP3 7	LIME			44	SPSR2-10		114
49	7.33	348.26	1.19	1.16	27.04	11.40	LD NOZ UP3 7	LIME			45	SPSR2-10		108
50	7.50	355.76	1.43	1.35	26.98	11.40	LD NOZ UP3 7.5	LIME			46	SPSR2-10		102
TOWER 2	179.00	360.60												
51		361.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	5	
52	10.00	365.76	1.47	1.53	26.82	11.40	LD NOZ UP3 8	LAVENDER			47	SPSR2-10		102
53	7.50	373.26	1.27	1.35	26.60	11.40	LD NOZ UP3 7.5	LIME			48	SPSR2-10		108
54	7.33	380.59	1.28	1.35	26.32	11.40	LD NOZ UP3 7.5	LIME			49	SPSR2-10		114
55	7.34	387.93	1.31	1.35	26.06	11.40	LD NOZ UP3 7.5	LIME			50	SPSR2-10		114
56	7.33	395.26	1.35	1.35	25.81	11.40	LD NOZ UP3 7.5	LIME			51	SPSR2-10		120
57	7.50	402.76	1.34	1.35	25.58	11.40	LD NOZ UP3 7.5	LIME			52	SPSR2-10		120
58	7.00	409.76	1.37	1.35	25.38	11.40	LD NOZ UP3 7.5	LIME			53	SPSR2-10		126
59	7.50	417.26	1.42	1.35	25.18	11.40	LD NOZ UP3 7.5	LIME			54	SPSR2-10		126
60	7.33	424.59	1.43	1.35	25.00	11.40	LD NOZ UP3 7.5	LIME			55	SPSR2-10		132
61	7.34	431.93	1.46	1.53	24.84	11.40	LD NOZ UP3 8	LAVENDER			56	SPSR2-10		132
62	7.33	439.26	1.50	1.53	24.69	11.40	LD NOZ UP3 8	LAVENDER			57	SPSR2-10		132
63	7.50	446.76	1.49	1.53	24.56	11.40	LD NOZ UP3 8	LAVENDER			58	SPSR2-10		132
64	7.00	453.76	1.51	1.53	24.45	11.40	LD NOZ UP3 8	LAVENDER			59	SPSR2-10		132
65	7.50	461.26	1.57	1.53	24.36	11.40	LD NOZ UP3 8	LAVENDER			60	SPSR2-10		132
66	7.33	468.59	1.58	1.53	24.28	11.40	LD NOZ UP3 8	LAVENDER			61	SPSR2-10		132
67	7.34	475.93	1.61	1.53	24.21	11.40	LD NOZ UP3 8	LAVENDER			62	SPSR2-10		132
68	7.33	483.26	1.65	1.73	24.17	11.40	LD NOZ UP3 8.5	LAVENDER			63	SPSR2-10		126
69	7.50	490.76	1.64	1.73	24.14	11.40	LD NOZ UP3 8.5	LAVENDER			64	SPSR2-10		126
70	7.00	497.76	1.66	1.73	24.13	11.40	LD NOZ UP3 8.5	LAVENDER			65	SPSR2-10		120
71	7.50	505.26	1.72	1.73	24.13	11.40	LD NOZ UP3 8.5	LAVENDER			66	SPSR2-10		120
72	7.33	512.59	1.73	1.73	24.15	11.40	LD NOZ UP3 8.5	LAVENDER			67	SPSR2-10		114
73	7.34	519.93	1.75	1.73	24.19	11.40	LD NOZ UP3 8.5	LAVENDER			68	SPSR2-10		114
74	7.33	527.26	1.80	1.73	24.24	11.40	LD NOZ UP3 8.5	LAVENDER			69	SPSR2-10		108
75	7.50	534.76	2.15	2.16	24.19	11.38	LD NOZ UP3 9.5	GREY			70	SPSR2-10		102
TOWER 3	179.00	539.60												
76		540.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	6	
77	10.00	544.76	2.19	2.10	24.04	7.19	LD NOZ UP3 10.5	TURQUOISE			71	SPSR2-06		102
78	7.50	552.26	1.88	1.91	23.82	7.20	LD NOZ UP3 10	TURQUOISE			72	SPSR2-06		108
79	7.33	559.59	1.89	1.91	23.56	7.20	LD NOZ UP3 10	TURQUOISE			73	SPSR2-06		114
80	7.34	566.93	1.91	1.91	23.30	7.20	LD NOZ UP3 10	TURQUOISE			74	SPSR2-06		114
81	7.33	574.26	1.96	1.91	23.07	7.20	LD NOZ UP3 10	TURQUOISE			75	SPSR2-06		120
82	7.50	581.76	1.94	1.91	22.85	7.20	LD NOZ UP3 10	TURQUOISE			76	SPSR2-06		120
83	7.00	588.76	1.96	1.91	22.65	7.20	LD NOZ UP3 10	TURQUOISE			77	SPSR2-06		126
84	7.50	596.26	2.03	2.10	22.47	7.19	LD NOZ UP3 10.5	TURQUOISE			78	SPSR2-06		126
85	7.33	603.59	2.04	2.10	22.30	7.19	LD NOZ UP3 10.5	TURQUOISE			79	SPSR2-06		132
86	7.34	610.93	2.06	2.10	22.15	7.19	LD NOZ UP3 10.5	TURQUOISE			80	SPSR2-06		132
87	7.33	618.26	2.11	2.10	22.01	7.19	LD NOZ UP3 10.5	TURQUOISE			81	SPSR2-06		132
88	7.50	625.76	2.09	2.10	21.89	7.19	LD NOZ UP3 10.5	TURQUOISE			82	SPSR2-06		132
89	7.00	632.76	2.11	2.10	21.79	7.19	LD NOZ UP3 10.5	TURQUOISE			83	SPSR2-06		132
90	7.50	640.26	2.18	2.10	21.71	7.19	LD NOZ UP3 10.5	TURQUOISE			84	SPSR2-06		132
91	7.33	647.59	2.18	2.10	21.64	7.19	LD NOZ UP3 10.5	TURQUOISE			85	SPSR2-06		132
92	7.34	654.93	2.21	2.30	21.59	7.18	LD NOZ UP3 11	YELLOW			86	SPSR2-06		132
93	7.33	662.26	2.26	2.30	21.55	7.18	LD NOZ UP3 11	YELLOW			87	SPSR2-06		126

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE					SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
94	7.50	669.76	2.23	2.30	21.53	7.18	LD NOZ UP3 11	YELLOW				88	SPSR2-06		126
95	7.00	676.76	2.26	2.30	21.53	7.18	LD NOZ UP3 11	YELLOW				89	SPSR2-06		120
96	7.50	684.26	2.33	2.30	21.55	7.18	LD NOZ UP3 11	YELLOW				90	SPSR2-06		120
97	7.33	691.59	2.33	2.30	21.58	7.18	LD NOZ UP3 11	YELLOW				91	SPSR2-06		114
98	7.34	698.93	2.36	2.30	21.63	7.18	LD NOZ UP3 11	YELLOW				92	SPSR2-06		114
99	7.33	706.26	2.41	2.51	21.70	7.17	LD NOZ UP3 11.5	YELLOW				93	SPSR2-06		108
100	7.50	713.76	2.87	2.97	21.66	7.14	LD NOZ UP3 12.5	RED				94	SPSR2-06		102
TOWER 4	179.00	718.60													
101		719.59	-	-	-	-	-	-	-	-	-	-	-	-	7
102	10.00	723.76	2.91	2.97	21.52	7.14	LD NOZ UP3 12.5	RED				95	SPSR2-06		102
103	7.50	731.26	2.49	2.51	21.32	7.17	LD NOZ UP3 11.5	YELLOW				96	SPSR2-06		108
104	7.33	738.59	2.49	2.51	21.07	7.17	LD NOZ UP3 11.5	YELLOW				97	SPSR2-06		114
105	7.34	745.93	2.52	2.51	20.83	7.17	LD NOZ UP3 11.5	YELLOW				98	SPSR2-06		114
106	7.33	753.26	2.57	2.51	20.61	7.17	LD NOZ UP3 11.5	YELLOW				99	SPSR2-06		120
107	7.50	760.76	2.54	2.51	20.40	7.17	LD NOZ UP3 11.5	YELLOW				100	SPSR2-06		120
108	7.00	767.76	2.56	2.51	20.22	7.17	LD NOZ UP3 11.5	YELLOW				101	SPSR2-06		126
109	7.50	775.26	2.64	2.74	20.04	7.15	LD NOZ UP3 12	RED				102	SPSR2-06		126
110	7.33	782.59	2.64	2.74	19.89	7.15	LD NOZ UP3 12	RED				103	SPSR2-06		132
111	7.34	789.93	2.66	2.74	19.75	7.15	LD NOZ UP3 12	RED				104	SPSR2-06		132
112	7.33	797.26	2.72	2.74	19.63	7.15	LD NOZ UP3 12	RED				105	SPSR2-06		132
113	7.50	804.76	2.68	2.74	19.52	7.15	LD NOZ UP3 12	RED				106	SPSR2-06		132
114	7.00	811.76	2.71	2.74	19.44	7.15	LD NOZ UP3 12	RED				107	SPSR2-06		132
115	7.50	819.26	2.79	2.74	19.36	7.15	LD NOZ UP3 12	RED				108	SPSR2-06		132
116	7.33	826.59	2.79	2.74	19.31	7.15	LD NOZ UP3 12	RED				109	SPSR2-06		132
117	7.34	833.93	2.81	2.74	19.27	7.15	LD NOZ UP3 12	RED				110	SPSR2-06		132
118	7.33	841.26	2.87	2.97	19.25	7.14	LD NOZ UP3 12.5	RED				111	SPSR2-06		126
119	7.50	848.76	2.83	2.74	19.25	7.15	LD NOZ UP3 12	RED				112	SPSR2-06		126
120	7.00	855.76	2.85	2.74	19.26	7.15	LD NOZ UP3 12	RED				113	SPSR2-06		120
121	7.50	863.26	2.94	2.97	19.29	7.14	LD NOZ UP3 12.5	RED				114	SPSR2-06		120
122	7.33	870.59	2.94	2.97	19.34	7.14	LD NOZ UP3 12.5	RED				115	SPSR2-06		114
123	7.34	877.93	2.96	2.97	19.40	7.14	LD NOZ UP3 12.5	RED				116	SPSR2-06		114
124	7.33	885.26	3.02	2.97	19.48	7.14	LD NOZ UP3 12.5	RED				117	SPSR2-06		108
125	7.50	892.76	3.59	3.72	19.46	7.09	LD NOZ UP3 14	BLUE				118	SPSR2-06		102
TOWER 5	179.00	897.60													
126		898.59	-	-	-	-	-	-	-	-	-	-	-	-	8
127	10.00	902.76	3.63	3.72	19.34	7.09	LD NOZ UP3 14	BLUE				119	SPSR2-06		102
128	7.50	910.26	3.10	3.21	19.16	7.12	LD NOZ UP3 13	WHITE				120	SPSR2-06		108
129	7.33	917.59	3.09	3.21	18.92	7.12	LD NOZ UP3 13	WHITE				121	SPSR2-06		114
130	7.34	924.93	3.12	3.21	18.69	7.12	LD NOZ UP3 13	WHITE				122	SPSR2-06		114
131	7.33	932.26	3.18	3.21	18.49	7.12	LD NOZ UP3 13	WHITE				123	SPSR2-06		120
132	7.50	939.76	3.13	3.21	18.29	7.12	LD NOZ UP3 13	WHITE				124	SPSR2-06		120
133	7.00	946.76	3.15	3.21	18.13	7.12	LD NOZ UP3 13	WHITE				125	SPSR2-06		126
134	7.50	954.26	3.25	3.21	17.97	7.12	LD NOZ UP3 13	WHITE				126	SPSR2-06		126
135	7.33	961.59	3.24	3.21	17.83	7.12	LD NOZ UP3 13	WHITE				127	SPSR2-06		132
136	7.34	968.93	3.26	3.21	17.71	7.12	LD NOZ UP3 13	WHITE				128	SPSR2-06		132
137	7.33	976.26	3.33	3.21	17.60	7.12	LD NOZ UP3 13	WHITE				129	SPSR2-06		132
138	7.50	983.76	3.28	3.21	17.51	7.12	LD NOZ UP3 13	WHITE				130	SPSR2-06		132
139	7.00	990.76	3.30	3.21	17.44	7.12	LD NOZ UP3 13	WHITE				131	SPSR2-06		132

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE					SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
140	7.50	998.26	3.40	3.46	17.39	7.10	LD NOZ UP3 13.5	WHITE				132	SPSR2-06		132
141	7.33	1005.59	3.39	3.46	17.35	7.10	LD NOZ UP3 13.5	WHITE				133	SPSR2-06		132
142	7.34	1012.93	3.41	3.46	17.33	7.10	LD NOZ UP3 13.5	WHITE				134	SPSR2-06		132
143	7.33	1020.26	3.48	3.46	17.32	7.10	LD NOZ UP3 13.5	WHITE				135	SPSR2-06		126
144	7.50	1027.76	3.42	3.46	17.33	7.10	LD NOZ UP3 13.5	WHITE				136	SPSR2-06		126
145	7.00	1034.76	3.45	3.46	17.36	7.10	LD NOZ UP3 13.5	WHITE				137	SPSR2-06		120
146	7.50	1042.26	3.55	3.46	17.41	7.10	LD NOZ UP3 13.5	WHITE				138	SPSR2-06		120
147	7.33	1049.59	3.54	3.46	17.47	7.10	LD NOZ UP3 13.5	WHITE				139	SPSR2-06		114
148	7.34	1056.93	3.56	3.46	17.55	7.10	LD NOZ UP3 13.5	WHITE				140	SPSR2-06		114
149	7.33	1064.26	3.63	3.72	17.65	7.09	LD NOZ UP3 14	BLUE				141	SPSR2-06		108
150	7.50	1071.76	4.31	4.26	17.64	7.05	LD NOZ UP3 15	DK BROWN				142	SPSR2-06		102
TOWER 6	179.00	1076.60													
151		1077.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	9	
152	10.00	1081.76	4.35	4.26	17.55	7.05	LD NOZ UP3 15	DK BROWN				143	SPSR2-06		102
153	7.50	1089.26	3.71	3.72	17.32	7.09	LD NOZ UP3 14	BLUE				144	SPSR2-06		108
154	7.33	1096.59	3.70	3.72	17.09	7.09	LD NOZ UP3 14	BLUE				145	SPSR2-06		114
155	7.34	1103.93	3.72	3.72	16.89	7.09	LD NOZ UP3 14	BLUE				146	SPSR2-06		114
156	7.33	1111.26	3.79	3.72	16.71	7.09	LD NOZ UP3 14	BLUE				147	SPSR2-06		120
157	7.50	1118.76	3.73	3.72	16.56	7.09	LD NOZ UP3 14	BLUE				148	SPSR2-06		120
158	7.00	1125.76	3.75	3.72	16.43	7.09	LD NOZ UP3 14	BLUE				149	SPSR2-06		126
159	7.50	1133.26	3.86	3.98	16.32	7.07	LD NOZ UP3 14.5	BLUE				150	SPSR2-06		126
160	7.33	1140.59	3.84	3.72	16.24	7.09	LD NOZ UP3 14	BLUE				151	SPSR2-06		126
161	7.34	1147.93	3.87	3.98	16.19	7.07	LD NOZ UP3 14.5	BLUE				152	SPSR2-06		126
162	7.33	1155.26	3.94	3.98	16.15	7.07	LD NOZ UP3 14.5	BLUE				153	SPSR2-06		126
163	7.50	1162.76	3.87	3.98	16.15	7.07	LD NOZ UP3 14.5	BLUE				154	SPSR2-06		126
164	7.00	1169.76	3.90	3.98	16.16	7.07	LD NOZ UP3 14.5	BLUE				155	SPSR2-06		120
165	7.50	1177.26	4.01	3.98	16.21	7.07	LD NOZ UP3 14.5	BLUE				156	SPSR2-06		120
166	7.33	1184.59	3.99	3.98	16.27	7.07	LD NOZ UP3 14.5	BLUE				157	SPSR2-06		114
167	7.34	1191.93	4.02	3.98	16.36	7.07	LD NOZ UP3 14.5	BLUE				158	SPSR2-06		114
168	7.33	1199.26	4.09	3.98	16.47	7.07	LD NOZ UP3 14.5	BLUE				159	SPSR2-06		108
169	7.50	1206.76	4.85	4.84	16.55	7.01	LD NOZ UP3 16	ORANGE				160	SPSR2-06		102
TOWER 7	135.00	1211.60													
170		1212.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	10	
171	10.00	1216.76	4.89	4.84	16.47	7.01	LD NOZ UP3 16	ORANGE				161	SPSR2-06		102
172	7.50	1224.26	4.17	4.26	16.32	7.05	LD NOZ UP3 15	DK BROWN				162	SPSR2-06		108
173	7.33	1231.59	4.15	4.26	16.11	7.05	LD NOZ UP3 15	DK BROWN				163	SPSR2-06		114
174	7.34	1238.93	4.17	4.26	15.91	7.05	LD NOZ UP3 15	DK BROWN				164	SPSR2-06		114
175	7.33	1246.26	4.24	4.26	15.74	7.05	LD NOZ UP3 15	DK BROWN				165	SPSR2-06		120
176	7.50	1253.76	4.17	4.26	15.57	7.05	LD NOZ UP3 15	DK BROWN				166	SPSR2-06		120
177	7.00	1260.76	4.20	4.26	15.44	7.05	LD NOZ UP3 15	DK BROWN				167	SPSR2-06		126
178	7.50	1268.26	4.32	4.26	15.31	7.05	LD NOZ UP3 15	DK BROWN				168	SPSR2-06		126
179	7.33	1275.59	4.30	4.26	15.20	7.05	LD NOZ UP3 15	DK BROWN				169	SPSR2-06		132
180	7.34	1282.93	4.32	4.26	15.11	7.05	LD NOZ UP3 15	DK BROWN				170	SPSR2-06		132
181	7.33	1290.26	4.39	4.26	15.03	7.05	LD NOZ UP3 15	DK BROWN				171	SPSR2-06		132
182	7.50	1297.76	4.32	4.26	14.97	7.05	LD NOZ UP3 15	DK BROWN				172	SPSR2-06		132
183	7.00	1304.76	4.35	4.26	14.93	7.05	LD NOZ UP3 15	DK BROWN				173	SPSR2-06		132
184	7.50	1312.26	4.47	4.55	14.91	7.03	LD NOZ UP3 15.5	DK BROWN				174	SPSR2-06		132
185	7.33	1319.59	4.45	4.55	14.90	7.03	LD NOZ UP3 15.5	DK BROWN				175	SPSR2-06		132

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE					SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
186	7.34	1326.93	4.47	4.55	14.91	7.03	LD NOZ UP3 15.5 DK BROWN					176	SPSR2-06		132
187	7.33	1334.26	4.54	4.55	14.93	7.03	LD NOZ UP3 15.5 DK BROWN					177	SPSR2-06		126
188	7.50	1341.76	4.47	4.55	14.98	7.03	LD NOZ UP3 15.5 DK BROWN					178	SPSR2-06		126
189	7.00	1348.76	4.49	4.55	15.03	7.03	LD NOZ UP3 15.5 DK BROWN					179	SPSR2-06		120
190	7.50	1356.26	4.62	4.55	15.11	7.03	LD NOZ UP3 15.5 DK BROWN					180	SPSR2-06		120
191	7.33	1363.59	4.59	4.55	15.20	7.03	LD NOZ UP3 15.5 DK BROWN					181	SPSR2-06		114
192	7.34	1370.93	4.62	4.55	15.32	7.03	LD NOZ UP3 15.5 DK BROWN					182	SPSR2-06		114
193	7.33	1378.26	4.70	4.84	15.44	7.01	LD NOZ UP3 16 ORANGE					183	SPSR2-06		108
194	7.50	1385.76	5.57	5.44	15.46	6.93	LD NOZ UP3 17 DK GREEN					184	SPSR2-06		102
TOWER 8	179.00	1390.60													
195		1391.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	11	
196	10.00	1395.76	5.61	5.74	15.42	6.88	LD NOZ UP3 17.5 DK GREEN					185	SPSR2-06		102
197	7.50	1403.26	4.78	4.84	15.28	7.01	LD NOZ UP3 16 ORANGE					186	SPSR2-06		108
198	7.33	1410.59	4.75	4.84	15.08	7.01	LD NOZ UP3 16 ORANGE					187	SPSR2-06		114
199	7.34	1417.93	4.77	4.84	14.91	7.01	LD NOZ UP3 16 ORANGE					188	SPSR2-06		114
200	7.33	1425.26	4.85	4.84	14.75	7.01	LD NOZ UP3 16 ORANGE					189	SPSR2-06		120
201	7.50	1432.76	4.77	4.84	14.60	7.01	LD NOZ UP3 16 ORANGE					190	SPSR2-06		120
202	7.00	1439.76	4.79	4.84	14.48	7.01	LD NOZ UP3 16 ORANGE					191	SPSR2-06		126
203	7.50	1447.26	4.92	4.84	14.37	7.01	LD NOZ UP3 16 ORANGE					192	SPSR2-06		126
204	7.33	1454.59	4.90	4.84	14.28	7.01	LD NOZ UP3 16 ORANGE					193	SPSR2-06		132
205	7.34	1461.93	4.92	4.84	14.20	7.01	LD NOZ UP3 16 ORANGE					194	SPSR2-06		132
206	7.33	1469.26	5.00	5.13	14.14	6.98	LD NOZ UP3 16.5 ORANGE					195	SPSR2-06		132
207	7.50	1476.76	4.91	4.84	14.10	7.01	LD NOZ UP3 16 ORANGE					196	SPSR2-06		132
208	7.00	1483.76	4.94	4.84	14.08	7.01	LD NOZ UP3 16 ORANGE					197	SPSR2-06		132
209	7.50	1491.26	5.08	5.13	14.07	6.98	LD NOZ UP3 16.5 ORANGE					198	SPSR2-06		132
210	7.33	1498.59	5.05	5.13	14.08	6.98	LD NOZ UP3 16.5 ORANGE					199	SPSR2-06		132
211	7.34	1505.93	5.07	5.13	14.10	6.98	LD NOZ UP3 16.5 ORANGE					200	SPSR2-06		132
212	7.33	1513.26	5.15	5.13	14.14	6.98	LD NOZ UP3 16.5 ORANGE					201	SPSR2-06		126
213	7.50	1520.76	5.06	5.13	14.20	6.98	LD NOZ UP3 16.5 ORANGE					202	SPSR2-06		126
214	7.00	1527.76	5.08	5.13	14.28	6.98	LD NOZ UP3 16.5 ORANGE					203	SPSR2-06		120
215	7.50	1535.26	5.22	5.13	14.37	6.98	LD NOZ UP3 16.5 ORANGE					204	SPSR2-06		120
216	7.33	1542.59	5.19	5.13	14.48	6.98	LD NOZ UP3 16.5 ORANGE					205	SPSR2-06		114
217	7.34	1549.93	5.22	5.13	14.61	6.98	LD NOZ UP3 16.5 ORANGE					206	SPSR2-06		114
218	7.33	1557.26	5.30	5.44	14.75	6.93	LD NOZ UP3 17 DK GREEN					207	SPSR2-06		108
219	7.50	1564.76	6.29	6.37	14.79	6.78	LD NOZ UP3 18.5 PURPLE					208	SPSR2-06		102
TOWER 9	179.00	1569.60													
220		1570.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	12	
221	10.00	1574.76	6.32	6.37	14.76	6.78	LD NOZ UP3 18.5 PURPLE					209	SPSR2-06		102
222	7.50	1582.26	5.38	5.44	14.64	6.93	LD NOZ UP3 17 DK GREEN					210	SPSR2-06		108
223	7.33	1589.59	5.35	5.44	14.46	6.93	LD NOZ UP3 17 DK GREEN					211	SPSR2-06		114
224	7.34	1596.93	5.37	5.44	14.30	6.93	LD NOZ UP3 17 DK GREEN					212	SPSR2-06		114
225	7.33	1604.26	5.45	5.44	14.15	6.93	LD NOZ UP3 17 DK GREEN					213	SPSR2-06		120
226	7.50	1611.76	5.36	5.44	14.02	6.93	LD NOZ UP3 17 DK GREEN					214	SPSR2-06		120
227	7.00	1618.76	5.38	5.44	13.92	6.93	LD NOZ UP3 17 DK GREEN					215	SPSR2-06		126
228	7.50	1626.26	5.53	5.44	13.82	6.93	LD NOZ UP3 17 DK GREEN					216	SPSR2-06		126
229	7.33	1633.59	5.49	5.44	13.74	6.93	LD NOZ UP3 17 DK GREEN					217	SPSR2-06		132
230	7.34	1640.93	5.52	5.44	13.68	6.93	LD NOZ UP3 17 DK GREEN					218	SPSR2-06		132
231	7.33	1648.26	5.60	5.74	13.64	6.88	LD NOZ UP3 17.5 DK GREEN					219	SPSR2-06		132

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE					SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
232	7.50	1655.76	5.50	5.44	13.61	6.93	LD NOZ UP3 17 DK GREEN					220	SPSR2-06		132
233	7.00	1662.76	5.53	5.44	13.60	6.93	LD NOZ UP3 17 DK GREEN					221	SPSR2-06		132
234	7.50	1670.26	5.68	5.74	13.61	6.88	LD NOZ UP3 17.5 DK GREEN					222	SPSR2-06		132
235	7.33	1677.59	5.64	5.74	13.63	6.88	LD NOZ UP3 17.5 DK GREEN					223	SPSR2-06		132
236	7.34	1684.93	5.66	5.74	13.67	6.88	LD NOZ UP3 17.5 DK GREEN					224	SPSR2-06		132
237	7.33	1692.26	5.75	5.74	13.72	6.88	LD NOZ UP3 17.5 DK GREEN					225	SPSR2-06		126
238	7.50	1699.76	5.65	5.74	13.80	6.88	LD NOZ UP3 17.5 DK GREEN					226	SPSR2-06		126
239	7.00	1706.76	5.67	5.74	13.88	6.88	LD NOZ UP3 17.5 DK GREEN					227	SPSR2-06		120
240	7.50	1714.26	5.82	5.74	13.99	6.88	LD NOZ UP3 17.5 DK GREEN					228	SPSR2-06		120
241	7.33	1721.59	5.78	5.74	14.11	6.88	LD NOZ UP3 17.5 DK GREEN					229	SPSR2-06		114
242	7.34	1728.93	5.81	5.74	14.25	6.88	LD NOZ UP3 17.5 DK GREEN					230	SPSR2-06		114
243	7.33	1736.26	5.90	6.05	14.41	6.83	LD NOZ UP3 18 PURPLE					231	SPSR2-06		108
244	7.50	1743.76	6.99	7.02	14.46	6.68	LD NOZ UP3 19.5 BLACK					232	SPSR2-06		102
TOWER 10	179.00	1748.60													
245		1749.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	13	
246	10.00	1753.76	7.02	7.02	14.45	6.68	LD NOZ UP3 19.5 BLACK					233	SPSR2-06		102
247	7.50	1761.26	5.98	6.05	14.34	6.83	LD NOZ UP3 18 PURPLE					234	SPSR2-06		108
248	7.33	1768.59	5.94	6.05	14.17	6.83	LD NOZ UP3 18 PURPLE					235	SPSR2-06		114
249	7.34	1775.93	5.96	6.05	14.02	6.83	LD NOZ UP3 18 PURPLE					236	SPSR2-06		114
250	7.33	1783.26	6.05	6.05	13.89	6.83	LD NOZ UP3 18 PURPLE					237	SPSR2-06		120
251	7.50	1790.76	5.93	6.05	13.77	6.83	LD NOZ UP3 18 PURPLE					238	SPSR2-06		120
252	7.00	1797.76	5.95	6.05	13.68	6.83	LD NOZ UP3 18 PURPLE					239	SPSR2-06		126
253	7.50	1805.26	6.11	6.05	13.59	6.83	LD NOZ UP3 18 PURPLE					240	SPSR2-06		126
254	7.33	1812.59	6.07	6.05	13.53	6.83	LD NOZ UP3 18 PURPLE					241	SPSR2-06		132
255	7.34	1819.93	6.10	6.05	13.47	6.83	LD NOZ UP3 18 PURPLE					242	SPSR2-06		132
256	7.33	1827.26	6.19	6.05	13.44	6.83	LD NOZ UP3 18 PURPLE					243	SPSR2-06		132
257	7.50	1834.76	6.08	6.05	13.42	6.83	LD NOZ UP3 18 PURPLE					244	SPSR2-06		132
258	7.00	1841.76	6.11	6.05	13.42	6.83	LD NOZ UP3 18 PURPLE					245	SPSR2-06		132
259	7.50	1849.26	6.28	6.37	13.44	6.78	LD NOZ UP3 18.5 PURPLE					246	SPSR2-06		132
260	7.33	1856.59	6.23	6.37	13.47	6.78	LD NOZ UP3 18.5 PURPLE					247	SPSR2-06		132
261	7.34	1863.93	6.25	6.37	13.52	6.78	LD NOZ UP3 18.5 PURPLE					248	SPSR2-06		132
262	7.33	1871.26	6.33	6.37	13.58	6.78	LD NOZ UP3 18.5 PURPLE					249	SPSR2-06		126
263	7.50	1878.76	6.21	6.37	13.67	6.78	LD NOZ UP3 18.5 PURPLE					250	SPSR2-06		126
264	7.00	1885.76	6.22	6.37	13.76	6.78	LD NOZ UP3 18.5 PURPLE					251	SPSR2-06		120
265	7.50	1893.26	6.38	6.37	13.88	6.78	LD NOZ UP3 18.5 PURPLE					252	SPSR2-06		120
266	7.33	1900.59	6.33	6.37	14.01	6.78	LD NOZ UP3 18.5 PURPLE					253	SPSR2-06		114
267	7.34	1907.93	6.35	6.37	14.16	6.78	LD NOZ UP3 18.5 PURPLE					254	SPSR2-06		114
268	7.33	1915.26	6.45	6.37	14.32	6.78	LD NOZ UP3 18.5 PURPLE					255	SPSR2-06		108
269	7.50	1922.76	7.30	7.34	14.38	6.62	LD NOZ UP3 20 DK TURQUOISE					256	SPSR2-06		102
TOWER 11	179.00	1927.60													
PIPE ID CHANGES FROM 6.395 TO 5.369															
270	9.21	1931.97	7.33	7.34	14.38	6.62	LD NOZ UP3 20 DK TURQUOISE					257	SPSR2-06		102
271	7.50	1939.47	6.53	6.68	14.38	6.73	LD NOZ UP3 19 BLACK					258	SPSR2-06		102
272	7.33	1946.80	6.44	6.37	14.38	6.78	LD NOZ UP3 18.5 PURPLE					259	SPSR2-06		102
273	7.34	1954.14	6.49	6.37	14.37	6.78	LD NOZ UP3 18.5 PURPLE					260	SPSR2-06		102
274	7.33	1961.47	6.65	6.68	14.37	6.73	LD NOZ UP3 19 BLACK					261	SPSR2-06		102
275	7.50	1968.97	6.60	6.68	14.37	6.73	LD NOZ UP3 19 BLACK					262	SPSR2-06		102

OVERHANG 44.87 1972.47

TOTAL GPM = 900.19
GPA = 3.21

MINIMUM RECOMMENDED REGULATOR INLET PRESSURE IS 11.00 PSI
WITH GRADUATED ELEVATION OF 15.00 FT THE INLET PRESSURE IS 11.06 PSI FOR SPRINKLER 262
THIS POSITION IS THE CLOSEST TO THE MINIMUM RECOMMENDED INLET PRESSURE

HYDRAULICS SUMMARY

TOWER NUMBER	ACRES UNDER SPAN	GPM NEED	ACTUAL GPM	PERCENT DEVIATION	GPM PER ACRE	AVERAGE IN. PER HR DELIVERED UNDER SPAN	AVERAGE IN. DELIVERED FOR REVOLUTION TIME		
							36 HR	48 HR	60 HR
1	2.38	7.63	13.04	71%	5.48	0.012	0.44	0.58	0.73
2	7.00	22.45	22.19	-1%	3.17	0.007	0.25	0.34	0.42
3	11.62	37.27	37.17	0%	3.20	0.007	0.25	0.34	0.42
4	16.24	52.10	51.92	0%	3.20	0.007	0.25	0.34	0.42
5	20.86	66.92	66.72	0%	3.20	0.007	0.25	0.34	0.42
6	25.49	81.75	81.38	0%	3.19	0.007	0.25	0.34	0.42
7	22.28	71.46	70.96	-1%	3.19	0.007	0.25	0.34	0.42
8	33.59	107.75	107.22	0%	3.19	0.007	0.25	0.34	0.42
9	38.22	122.57	122.06	0%	3.19	0.007	0.25	0.34	0.42
10	42.84	137.40	136.64	-1%	3.19	0.007	0.25	0.34	0.42
11	47.46	152.22	150.94	-1%	3.18	0.007	0.25	0.34	0.42
OVERHANG	12.62	40.48	39.94	-1%	3.16	0.007	0.25	0.34	0.42
TOTAL	280.60	900.00	900.19		3.21				

SUMMARY OF SPRINKLERS

21 LD NOZ UP3 5 BEIGE
8 LD NOZ UP3 5.5 BEIGE
6 LD NOZ UP3 6 GOLD
6 LD NOZ UP3 6.5 GOLD
4 LD NOZ UP3 7 LIME
9 LD NOZ UP3 7.5 LIME
8 LD NOZ UP3 8 LAVENDER
7 LD NOZ UP3 8.5 LAVENDER
1 LD NOZ UP3 9.5 GREY
6 LD NOZ UP3 10 TURQUOISE
9 LD NOZ UP3 10.5 TURQUOISE
7 LD NOZ UP3 11 YELLOW
7 LD NOZ UP3 11.5 YELLOW
11 LD NOZ UP3 12 RED
7 LD NOZ UP3 12.5 RED
12 LD NOZ UP3 13 WHITE
9 LD NOZ UP3 13.5 WHITE
10 LD NOZ UP3 14 BLUE
9 LD NOZ UP3 14.5 BLUE
14 LD NOZ UP3 15 DK BROWN
9 LD NOZ UP3 15.5 DK BROWN
14 LD NOZ UP3 16 ORANGE
10 LD NOZ UP3 16.5 ORANGE
13 LD NOZ UP3 17 DK GREEN
11 LD NOZ UP3 17.5 DK GREEN
13 LD NOZ UP3 18 PURPLE
14 LD NOZ UP3 18.5 PURPLE
3 LD NOZ UP3 19 BLACK
2 LD NOZ UP3 19.5 BLACK
2 LD NOZ UP3 20 DK TURQUOISE

13 PLUGS**SUMMARY OF DROPS**

27 102 IN DROP
21 108 IN DROP
44 114 IN DROP
44 120 IN DROP
46 126 IN DROP
80 132 IN DROP

TOTAL OF 262 DROPS**SUMMARY OF REGULATORS**

70 Senn PSR2 10 psi
192 Senn PSR2 6 psi

TOTAL OF 262 REGULATORS

NOZZLE POSITION CHART

LD NOZ UP3 5 BEIGE	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21
LD NOZ UP3 5.5 BEIGE	22, 23, 24, 25, 26, 27, 28, 29
LD NOZ UP3 6 GOLD	30, 31, 32, 33, 34, 35
LD NOZ UP3 6.5 GOLD	36, 37, 38, 39, 40, 41
LD NOZ UP3 7 LIME	42, 43, 44, 45
LD NOZ UP3 7.5 LIME	46, 48, 49, 50, 51, 52, 53, 54, 55
LD NOZ UP3 8 LAVENDER	47, 56, 57, 58, 59, 60, 61, 62
LD NOZ UP3 8.5 LAVENDER	63, 64, 65, 66, 67, 68, 69
LD NOZ UP3 9.5 GREY	70
LD NOZ UP3 10 TURQUOISE	72, 73, 74, 75, 76, 77
LD NOZ UP3 10.5 TURQUOISE	71, 78, 79, 80, 81, 82, 83, 84, 85
LD NOZ UP3 11 YELLOW	86, 87, 88, 89, 90, 91, 92
LD NOZ UP3 11.5 YELLOW	93, 96, 97, 98, 99, 100, 101
LD NOZ UP3 12 RED	102, 103, 104, 105, 106, 107, 108, 109, 110, 112, 113
LD NOZ UP3 12.5 RED	94, 95, 111, 114, 115, 116, 117
LD NOZ UP3 13 WHITE	120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131
LD NOZ UP3 13.5 WHITE	132, 133, 134, 135, 136, 137, 138, 139, 140
LD NOZ UP3 14 BLUE	118, 119, 141, 144, 145, 146, 147, 148, 149, 151
LD NOZ UP3 14.5 BLUE	150, 152, 153, 154, 155, 156, 157, 158, 159
LD NOZ UP3 15 DK BROWN	142, 143, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173
LD NOZ UP3 15.5 DK BROWN	174, 175, 176, 177, 178, 179, 180, 181, 182
LD NOZ UP3 16 ORANGE	160, 161, 183, 186, 187, 188, 189, 190, 191, 192, 193, 194, 196, 197
LD NOZ UP3 16.5 ORANGE	195, 198, 199, 200, 201, 202, 203, 204, 205, 206
LD NOZ UP3 17 DK GREEN	184, 207, 210, 211, 212, 213, 214, 215, 216, 217, 218, 220, 221
LD NOZ UP3 17.5 DK GREEN	185, 219, 222, 223, 224, 225, 226, 227, 228, 229, 230
LD NOZ UP3 18 PURPLE	231, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245
LD NOZ UP3 18.5 PURPLE	208, 209, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 259, 260
LD NOZ UP3 19 BLACK	258, 261, 262
LD NOZ UP3 19.5 BLACK	232, 233
LD NOZ UP3 20 DK TURQUOISE	256, 257

NORTHWEST IRRIGATION
1880 SOUTH RANGE AVENUE
COLBY, KANSAS 67701

AUGUST 29, 2025
WISH-119535
PIONEER FEEDYARD
SECTION 15-11-32
900 GPM @ 33 PSI

LINDSAY GEN II - 90
SENNINGER UP3 LDN SPRAY NOZZLES
SENNINGER 10 & 6 PSI REGULATORS
POLYFLEX DROPS
NO ENDGUN

Rotation time at 100% = 18.19 Hours Or 1091 minutes

Installation Chart Page 1

Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg
1	PLUG				9	126	54	7.5	PSR210	17	132	110	12	PSR206	5	114	164	15	PSR206	13	132	220	17	PSR206
2	PLUG				10	132	55	7.5	PSR210	18	126	111	12.5	PSR206	6	120	165	15	PSR206	14	132	221	17	PSR206
3	PLUG				11	132	56	8	PSR210	19	126	112	12	PSR206	7	120	166	15	PSR206	15	132	222	17.5	PSR206
4	114	1	5	PSR210	12	132	57	8	PSR210	20	120	113	12	PSR206	8	126	167	15	PSR206	16	132	223	17.5	PSR206
5	114	2	5	PSR210	13	132	58	8	PSR210	21	120	114	12.5	PSR206	9	126	168	15	PSR206	17	132	224	17.5	PSR206
6	120	3	5	PSR210	14	132	59	8	PSR210	22	114	115	12.5	PSR206	10	132	169	15	PSR206	18	126	225	17.5	PSR206
7	120	4	5	PSR210	15	132	60	8	PSR210	23	114	116	12.5	PSR206	11	132	170	15	PSR206	19	126	226	17.5	PSR206
8	126	5	5	PSR210	16	132	61	8	PSR210	24	108	117	12.5	PSR206	12	132	171	15	PSR206	20	120	227	17.5	PSR206
9	126	6	5	PSR210	17	132	62	8	PSR210	25	102	118	14	PSR206	13	132	172	15	PSR206	21	120	228	17.5	PSR206
10	132	7	5	PSR210	18	126	63	8.5	PSR210	TOWER 5					14	132	173	15	PSR206	22	114	229	17.5	PSR206
11	132	8	5	PSR210	19	126	64	8.5	PSR210	1	PLUG				15	132	174	15.5	PSR206	23	114	230	17.5	PSR206
12	132	9	5	PSR210	20	120	65	8.5	PSR210	2	102	119	14	PSR206	16	132	175	15.5	PSR206	24	108	231	18	PSR206
13	132	10	5	PSR210	21	120	66	8.5	PSR210	3	108	120	13	PSR206	17	132	176	15.5	PSR206	25	102	232	19.5	PSR206
14	132	11	5	PSR210	22	114	67	8.5	PSR210	4	114	121	13	PSR206	18	126	177	15.5	PSR206	TOWER 10				
15	132	12	5	PSR210	23	114	68	8.5	PSR210	5	114	122	13	PSR206	19	126	178	15.5	PSR206	1	PLUG			
16	132	13	5	PSR210	24	108	69	8.5	PSR210	6	120	123	13	PSR206	20	120	179	15.5	PSR206	2	102	233	19.5	PSR206
17	132	14	5	PSR210	25	102	70	9.5	PSR210	7	120	124	13	PSR206	21	120	180	15.5	PSR206	3	108	234	18	PSR206
18	126	15	5	PSR210	TOWER 3					8	126	125	13	PSR206	22	114	181	15.5	PSR206	4	114	235	18	PSR206
19	126	16	5	PSR210	1	PLUG				9	126	126	13	PSR206	23	114	182	15.5	PSR206	5	114	236	18	PSR206
20	120	17	5	PSR210	2	102	71	10.5	PSR206	10	132	127	13	PSR206	24	108	183	16	PSR206	6	120	237	18	PSR206
21	120	18	5	PSR210	3	108	72	10	PSR206	11	132	128	13	PSR206	25	102	184	17	PSR206	7	120	238	18	PSR206
22	114	19	5	PSR210	4	114	73	10	PSR206	12	132	129	13	PSR206	TOWER 8					8	126	239	18	PSR206
23	114	20	5	PSR210	5	114	74	10	PSR206	13	132	130	13	PSR206	1	PLUG				9	126	240	18	PSR206
24	108	21	5	PSR210	6	120	75	10	PSR206	14	132	131	13	PSR206	2	102	185	17.5	PSR206	10	132	241	18	PSR206
25	102	22	5.5	PSR210	7	120	76	10	PSR206	15	132	132	13.5	PSR206	3	108	186	16	PSR206	11	132	242	18	PSR206
TOWER 1					8	126	77	10	PSR206	16	132	133	13.5	PSR206	4	114	187	16	PSR206	12	132	243	18	PSR206
1	PLUG				9	126	78	10.5	PSR206	17	132	134	13.5	PSR206	5	114	188	16	PSR206	13	132	244	18	PSR206
2	102	23	5.5	PSR210	10	132	79	10.5	PSR206	18	126	135	13.5	PSR206	6	120	189	16	PSR206	14	132	245	18	PSR206
3	108	24	5.5	PSR210	11	132	80	10.5	PSR206	19	126	136	13.5	PSR206	7	120	190	16	PSR206	15	132	246	18.5	PSR206
4	114	25	5.5	PSR210	12	132	81	10.5	PSR206	20	120	137	13.5	PSR206	8	126	191	16	PSR206	16	132	247	18.5	PSR206
5	114	26	5.5	PSR210	13	132	82	10.5	PSR206	21	120	138	13.5	PSR206	9	126	192	16	PSR206	17	132	248	18.5	PSR206
6	120	27	5.5	PSR210	14	132	83	10.5	PSR206	22	114	139	13.5	PSR206	10	132	193	16	PSR206	18	126	249	18.5	PSR206
7	120	28	5.5	PSR210	15	132	84	10.5	PSR206	23	114	140	13.5	PSR206	11	132	194	16	PSR206	19	126	250	18.5	PSR206
8	126	29	5.5	PSR210	16	132	85	10.5	PSR206	24	108	141	14	PSR206	12	132	195	16.5	PSR206	20	120	251	18.5	PSR206
9	126	30	6	PSR210	17	132	86	11	PSR206	25	102	142	15	PSR206	13	132	196	16	PSR206	21	120	252	18.5	PSR206
10	132	31	6	PSR210	18	126	87	11	PSR206	TOWER 6					14	132	197	16	PSR206	22	114	253	18.5	PSR206
11	132	32	6	PSR210	19	126	88	11	PSR206	1	PLUG				15	132	198	16.5	PSR206	23	114	254	18.5	PSR206
12	132	33	6	PSR210	20	120	89	11	PSR206	2	102	143	15	PSR206	16	132	199	16.5	PSR206	24	108	255	18.5	PSR206
13	132	34	6	PSR210	21	120	90	11	PSR206	3	108	144	14	PSR206	17	132	200	16.5	PSR206	25	102	256	20	PSR206
14	132	35	6	PSR210	22	114	91	11	PSR206	4	114	145	14	PSR206	18	126	201	16.5	PSR206	TOWER 11				
15	132	36	6.5	PSR210	23	114	92	11	PSR206	5	114	146	14	PSR206	19	126	202	16.5	PSR206	1	102	257	20	PSR206
16	132	37	6.5	PSR210	24	108	93	11.5	PSR206	6	120	147	14	PSR206	20	120	203	16.5	PSR206	2	102	258	19	PSR206
17	132	38	6.5	PSR210	25	102	94	12.5	PSR206	7	120	148	14	PSR206	21	120	204	16.5	PSR206	3	102	259	18.5	PSR206
18	126	39	6.5	PSR210	TOWER 4					8	126	149	14	PSR206	22	114	205	16.5	PSR206	4	102	260	18.5	PSR206
19	126	40	6.5	PSR210	1	PLUG				9	126	150	14.5	PSR206	23	114	206	16.5	PSR206	5	102	261	19	PSR206
20	120	41	6.5	PSR210	2	102	95	12.5	PSR206	10	126	151	14	PSR206	24	108	207	17	PSR206	6	102	262	19	PSR206
21	120	42	7	PSR210	3	108	96	11.5	PSR206	11	126	152	14.5	PSR206	25	102	208	18.5	PSR206	TOWER 9				
22	114	43	7	PSR210	4	114	97	11.5	PSR206	12	126	153	14.5	PSR206	TOWER 9					1	PLUG			
23	114	44	7	PSR210	5	114	98	11.5	PSR206	13	126	154	14.5	PSR206	2	102	209	18.5	PSR206	2	108	210	17	PSR206
24	108	45	7	PSR210	6	120	99	11.5	PSR206	14	120	155	14.5	PSR206	3	108	210	17	PSR206	3	114	211	17	PSR206
25	102	46	7.5	PSR210	7	120	100	11.5	PSR206	15	120	156	14.5	PSR206	4	114	211	17	PSR206	4	114	212	17	PSR206
TOWER 2					8	126	101	11.5	PSR206	16	114	157	14.5	PSR206	5	114	212	17	PSR206	5	120	213	17	PSR206
1	PLUG				9	126	102	12	PSR206	17	114	158	14.5	PSR206	6	120	213	17	PSR206	6	120	214	17	PSR206
2	102	47	8	PSR210	10	132	103	12	PSR206	18														

PRECIPITATION CHART FOR FULL CIRCLE

WISH-119535

AUGUST 29, 2025

DEALER - NORTHWEST IRRIGATION

IRRIGATOR - PIONEER FEEDYARD

FIELD - SECTION 15-11-32

TOTAL LENGTH PIPE = 1972.47 SYSTEM PRESSURE = 33 PSI
 GPM UNDER PIPE = 900.19 TOTAL GPM = 900.19
 ACRES UNDER PIPE = 280.60
 RANGE OF ENDGUN = .00 RUN FOR MINIMUM PRESSURE
 GPM OF ENDGUN = .00
 ACRES UNDER ENDGUN = .00

MOTOR SIZE (HP) = 3/4
 LOADED MOTOR RPM = 1750
 CENTER GEAR BOX RATIO = 40
 WHEEL GEAR BOX RATIO = 50
 TIRE SIZE = NFTrax
 LAST TOWER SPEED (FPM) = 11.10

PRECIPITATION BASED

% TIMER BASED

PRECIPITATION INCHES	% TIMER SETTING	TIME HOURS	% TIMER SETTING	PRECIPITATION INCHES	TIME HOURS
.13	100.00	18.19 - 1091(min)	100.00	.13	18.19 - 1091(min)
.20	64.45	28.21	90.00	.14	20.21
.25	51.56	35.27	80.00	.16	22.73
.30	42.97	42.32	70.00	.18	25.98
.40	32.23	56.43	60.00	.21	30.31
.50	25.78	70.54	50.00	.26	36.37
.60	21.48	84.64	45.00	.29	40.41
.70	18.42	98.75	40.00	.32	45.46
.75	17.19	105.80	35.00	.37	51.96
.80	16.11	112.86	30.00	.43	60.62
.90	14.32	126.97	25.00	.52	72.74
1.00	12.89	141.07	20.00	.64	90.93
1.25	10.31	176.34	15.00	.86	121.24
1.50	8.59	211.61	10.00	1.29	181.85
1.75	7.37	246.88	5.00	2.58	363.71

CAUTION: The relationship between precipitation rate, timer setting, and hours per revolution provided above are theoretical numbers based on the data list at the top of the page. Actual precipitation rates may vary due to the following field and machine conditions: wind drift; evaporation; tire slippage, tire loaded radius; drive train efficiency; elevation changes; soil type. Due to these varying field and machine conditions the above chart should be used as a guide only.

DEALER - NORTHWEST IRRIGATION

IRRIGATOR - PIONEER FEEDYARD
FIELD - SECTION 15-11-32

SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6	SPAN 7	SPAN 8	SPAN 9	SPAN 10	SPAN 11	ENDBOOM
<u>POS/LEN</u>	<u>POS/LEN</u>	<u>POS/LEN</u>	<u>POS/LEN</u>	<u>POS/LEN</u>	<u>POS/LEN</u>	<u>POS/LEN</u>	<u>POS/LEN</u>	<u>POS/LEN</u>	<u>POS/LEN</u>	<u>POS/LEN</u>	<u>POS/LEN</u>
1 - 114	23 - 102	47 - 102	71 - 102	95 - 102	119 - 102	143 - 102	161 - 102	185 - 102	209 - 102	233 - 102	257 - 102
2 - 114	24 - 108	48 - 108	72 - 108	96 - 108	120 - 108	144 - 108	162 - 108	186 - 108	210 - 108	234 - 108	258 - 102
3 - 120	25 - 114	49 - 114	73 - 114	97 - 114	121 - 114	145 - 114	163 - 114	187 - 114	211 - 114	235 - 114	259 - 102
4 - 120	26 - 114	50 - 114	74 - 114	98 - 114	122 - 114	146 - 114	164 - 114	188 - 114	212 - 114	236 - 114	260 - 102
5 - 126	27 - 120	51 - 120	75 - 120	99 - 120	123 - 120	147 - 120	165 - 120	189 - 120	213 - 120	237 - 120	261 - 102
6 - 126	28 - 120	52 - 120	76 - 120	100 - 120	124 - 120	148 - 120	166 - 120	190 - 120	214 - 120	238 - 120	262 - 102
7 - 132	29 - 126	53 - 126	77 - 126	101 - 126	125 - 126	149 - 126	167 - 126	191 - 126	215 - 126	239 - 126	
8 - 132	30 - 126	54 - 126	78 - 126	102 - 126	126 - 126	150 - 126	168 - 126	192 - 126	216 - 126	240 - 126	
9 - 132	31 - 132	55 - 132	79 - 132	103 - 132	127 - 132	151 - 126	169 - 132	193 - 132	217 - 132	241 - 132	
10 - 132	32 - 132	56 - 132	80 - 132	104 - 132	128 - 132	152 - 126	170 - 132	194 - 132	218 - 132	242 - 132	
11 - 132	33 - 132	57 - 132	81 - 132	105 - 132	129 - 132	153 - 126	171 - 132	195 - 132	219 - 132	243 - 132	
12 - 132	34 - 132	58 - 132	82 - 132	106 - 132	130 - 132	154 - 126	172 - 132	196 - 132	220 - 132	244 - 132	
13 - 132	35 - 132	59 - 132	83 - 132	107 - 132	131 - 132	155 - 120	173 - 132	197 - 132	221 - 132	245 - 132	
14 - 132	36 - 132	60 - 132	84 - 132	108 - 132	132 - 132	156 - 120	174 - 132	198 - 132	222 - 132	246 - 132	
15 - 126	37 - 132	61 - 132	85 - 132	109 - 132	133 - 132	157 - 114	175 - 132	199 - 132	223 - 132	247 - 132	
16 - 126	38 - 132	62 - 132	86 - 132	110 - 132	134 - 132	158 - 114	176 - 132	200 - 132	224 - 132	248 - 132	
17 - 120	39 - 126	63 - 126	87 - 126	111 - 126	135 - 126	159 - 108	177 - 126	201 - 126	225 - 126	249 - 126	
18 - 120	40 - 126	64 - 126	88 - 126	112 - 126	136 - 126	160 - 102	178 - 126	202 - 126	226 - 126	250 - 126	
19 - 114	41 - 120	65 - 120	89 - 120	113 - 120	137 - 120		179 - 120	203 - 120	227 - 120	251 - 120	
20 - 114	42 - 120	66 - 120	90 - 120	114 - 120	138 - 120		180 - 120	204 - 120	228 - 120	252 - 120	
21 - 108	43 - 114	67 - 114	91 - 114	115 - 114	139 - 114		181 - 114	205 - 114	229 - 114	253 - 114	
22 - 102	44 - 114	68 - 114	92 - 114	116 - 114	140 - 114		182 - 114	206 - 114	230 - 114	254 - 114	
	45 - 108	69 - 108	93 - 108	117 - 108	141 - 108		183 - 108	207 - 108	231 - 108	255 - 108	
	46 - 102	70 - 102	94 - 102	118 - 102	142 - 102		184 - 102	208 - 102	232 - 102	256 - 102	

SUMMARY OF DROPS

27 - 102 IN DROP - 96

21 - 108 IN DROP - 102

44 - 114 IN DROP - 108

44 - 120 IN DROP - 114 SM X POLY X 271R X 8 IN 163 HOSE X 271R X SENNINGER PLASTIC MALE

46 - 126 IN DROP - 120

80 - 132 IN DROP - 126

TOTAL OF 262 DROPS

POLYFLEX DROPS - 8 IN HOSE PLASTIC MALE

SPLIT DROPS = 30 IN POLY SM X SM + SM X 66 IN POLY X 271R X 8 IN 163 HOSE X 271R X SENNINGER PLASTIC MALE