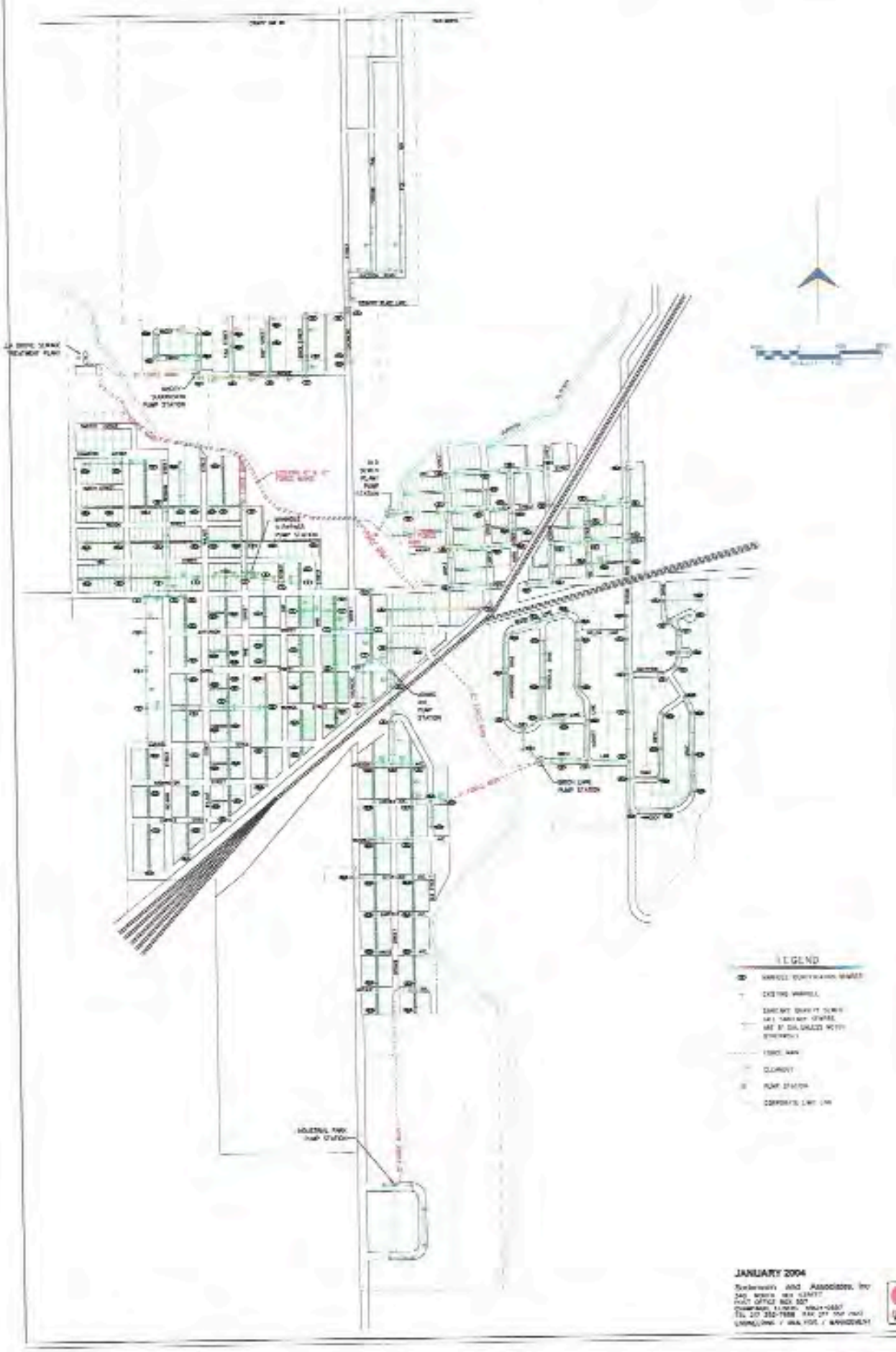
Appendix

CITY OF VILLA GROVE, ILLINOIS



CITY OF VILLA GROVE, ILLINOIS
WATER DISTRIBUTION MAP

Sewer and Water Rate Chart, by hundreds of gallons

Effective date 03/16/2017

Ordinance 2015-MC02, passed and effective on February 23, 2015

Sewer Rate=$0.692/100 gallons Water Rate=$0.625/100 gallons

USAGE	Sewer	Water	TOTAL ON TIME BILL	Late Charge Sewer	Late Charge Water	TOTAL LATE SEWER AMT	TOTAL LATE WATER AMT	TOTAL LATE BILL
1,000	**21.16**	**22.03**	**43.19**	**2.12**	**2.20**	**23.28**	**24.23**	**47.51**
1,100	21.85	22.66	**44.51**	2.19	2.27	24.04	24.93	**48.97**
1,200	22.55	23.28	**45.83**	2.26	2.33	24.81	25.61	**50.42**
1,300	23.24	23.91	**47.15**	2.32	2.39	25.56	26.30	**51.86**
1,400	23.93	24.53	**48.46**	2.39	2.45	26.32	26.98	**53.30**
1,500	24.62	25.16	**49.78**	2.46	2.52	27.08	27.68	**54.76**
1,600	25.31	25.78	**51.09**	2.53	2.58	27.84	28.36	**56.20**
1,700	26.01	26.41	**52.42**	2.60	2.64	28.61	29.05	**57.66**
1,800	26.70	27.03	**53.73**	2.67	2.70	29.37	29.73	**59.10**
1,900	27.39	27.66	**55.05**	2.74	2.77	30.13	30.43	**60.56**
2,000	28.08	28.28	**56.36**	2.81	2.83	30.89	31.11	**62.00**
2,100	28.77	28.91	**57.68**	2.88	2.89	31.65	31.80	**63.45**
2,200	29.47	29.53	**59.00**	2.95	2.95	32.42	32.48	**64.90**
2,300	30.16	30.16	**60.32**	3.02	3.02	33.18	33.18	**66.36**
2,400	30.85	30.78	**61.63**	3.09	3.08	33.94	33.86	**67.80**
2,500	31.54	31.41	**62.95**	3.15	3.14	34.69	34.55	**69.24**
2,600	32.23	32.03	**64.26**	3.22	3.20	35.45	35.23	**70.68**
2,700	32.93	32.66	**65.59**	3.29	3.27	36.22	35.93	**72.15**
2,800	33.62	33.28	**66.90**	3.36	3.33	36.96	36.61	**73.59**
2,900	34.31	33.91	**68.22**	3.43	3.39	37.74	37.30	**75.04**
3,000	35.00	34.53	**69.53**	3.50	3.45	38.50	37.98	**76.48**
3,100	35.69	35.16	**70.85**	3.57	3.52	39.26	38.68	**77.94**
3,200	36.39	35.78	**72.17**	3.64	3.58	40.03	39.36	**79.39**
3,300	37.08	36.41	**73.49**	3.71	3.64	40.79	40.05	**80.84**
3,400	37.77	37.03	**74.80**	3.78	3.70	41.55	40.73	**82.28**
3,500	38.46	37.66	**76.12**	3.85	3.77	42.31	41.43	**83.74**
3,600	39.15	38.28	**77.43**	3.92	3.83	43.07	42.11	**85.18**
3,700	39.85	38.91	**78.76**	3.99	3.89	43.84	42.80	**86.64**
3,800	40.54	39.53	**80.07**	4.05	3.95	44.59	43.48	**88.07**
3,900	41.23	40.16	**81.39**	4.12	4.02	45.35	44.18	**89.53**
4,000	41.92	40.78	**82.70**	4.19	4.08	46.11	44.86	**90.97**
4,100	42.61	41.41	**84.02**	4.26	4.14	46.87	45.55	**92.42**
4,200	43.31	42.03	**85.34**	4.33	4.20	47.64	46.23	**93.87**
4,300	44.00	42.66	**86.66**	4.40	4.27	48.40	46.93	**95.33**
4,400	44.69	43.28	**87.97**	4.47	4.33	49.16	47.61	**96.77**
4,500	45.38	43.91	**89.29**	4.54	4.39	49.92	48.30	**98.22**
4,600	46.07	44.53	**90.60**	4.61	4.45	50.68	48.98	**99.66**
4,700	46.77	45.16	**91.93**	4.68	4.52	51.45	49.68	**101.13**
4,800	47.46	45.78	**93.24**	4.75	4.58	52.21	50.36	**102.57**
4,900	48.15	46.41	**94.56**	4.82	4.64	52.97	51.05	**104.02**
5,000	48.84	47.03	**95.87**	4.88	4.70	53.72	51.73	**105.45**
5,100	49.53	47.66	**97.19**	4.95	4.77	54.48	52.43	**106.91**
5,200	50.23	48.28	**98.51**	5.02	4.83	55.25	53.11	**108.36**
5,300	50.92	48.91	**99.83**	5.09	4.89	56.01	53.80	**109.81**
5,400	51.61	49.53	**101.14**	5.16	4.95	56.77	54.48	**111.25**
5,500	52.30	50.16	**102.46**	5.23	5.02	57.53	55.18	**112.71**
5,600	52.99	50.78	**103.77**	5.30	5.08	58.29	55.86	**114.15**
5,700	53.69	51.41	**105.10**	5.37	5.14	59.06	56.55	**115.61**
5,800	54.38	52.03	**106.41**	5.44	5.20	59.82	57.23	**117.05**
5,900	55.07	52.66	**107.73**	5.51	5.27	60.58	57.93	**118.51**
6,000	55.76	53.28	**109.04**	5.58	5.33	61.34	58.61	**119.95**
6,100	56.45	53.91	**110.36**	5.65	5.39	62.10	59.30	**121.40**
6,200	57.15	54.53	**111.68**	5.72	5.45	62.87	59.98	**122.85**
6,300	57.84	55.16	**113.00**	5.78	5.52	63.62	60.68	**124.30**
6,400	58.53	55.78	**114.31**	5.85	5.58	64.38	61.36	**125.74**
6,500	59.22	56.41	**115.63**	5.92	5.64	65.14	62.05	**127.19**

Sewer and Water Rate Chart
Ordinance 2015-MC02, passed and effective on February 23, 2015
Page 2

Sewer Rate=$0.692/100 Gal
Water Rate=$0.625/100 Gal

USAGE	Sewer	Water	TOTAL ON TIME BILL	Late Charge Sewer	Late Charge Water	TOTAL LATE SEWER AMT	TOTAL LATE WATER AMT	TOTAL LATE BILL
6,600	59.91	57.03	116.94	5.99	5.70	65.90	62.73	128.63
6,700	60.61	57.66	118.27	6.06	5.77	66.67	63.43	130.10
6,800	61.30	58.28	119.58	6.13	5.83	67.43	64.11	131.54
6,900	61.99	58.91	120.90	6.20	5.89	68.19	64.80	132.99
7,000	62.68	59.53	122.21	6.27	5.95	68.95	65.48	134.43
7,100	63.37	60.16	123.53	6.34	6.02	69.71	66.18	135.89
7,200	64.07	60.78	124.85	6.41	6.08	70.48	66.86	137.34
7,300	64.76	61.41	126.17	6.48	6.14	71.24	67.55	138.79
7,400	65.45	62.03	127.48	6.55	6.20	72.00	68.23	140.23
7,500	66.14	62.66	128.80	6.61	6.27	72.75	68.93	141.68
7,600	66.83	63.28	130.11	6.68	6.33	73.51	69.61	143.12
7,700	67.53	63.91	131.44	6.75	6.39	74.28	70.30	144.58
7,800	68.22	64.53	132.75	6.82	6.45	75.04	70.98	146.02
7,900	68.91	65.16	134.07	6.89	6.52	75.80	71.68	147.48
8,000	69.60	65.78	135.38	6.96	6.58	76.56	72.36	148.92
8,100	70.29	66.41	136.70	7.03	6.64	77.32	73.05	150.37
8,200	70.99	67.03	138.02	7.10	6.70	78.09	73.73	151.82
8,300	71.68	67.66	139.34	7.17	6.77	78.85	74.43	153.28
8,400	72.37	68.28	140.65	7.24	6.83	79.61	75.11	154.72
8,500	73.06	68.91	141.97	7.31	6.89	80.37	75.80	156.17
8,600	73.75	69.53	143.28	7.38	6.95	81.13	76.48	157.61
8,700	74.45	70.16	144.61	7.45	7.02	81.90	77.16	159.08
8,800	75.14	70.78	145.92	7.51	7.08	82.65	77.86	160.51
8,900	75.83	71.41	147.24	7.58	7.14	83.41	78.55	161.96
9,000	76.52	72.03	148.55	7.65	7.20	84.17	79.23	163.40
9,100	77.21	72.66	149.87	7.72	7.27	84.93	79.93	164.86
9,200	77.91	73.28	151.19	7.79	7.33	85.70	80.61	166.31
9,300	78.60	73.91	152.51	7.86	7.39	86.46	81.30	167.76
9,400	79.29	74.53	153.82	7.93	7.45	87.22	81.98	169.20
9,500	79.98	75.16	155.14	8.00	7.52	87.98	82.68	170.66
9,600	80.67	75.78	156.45	8.07	7.58	88.74	83.36	172.10
9,700	81.37	76.41	157.78	8.14	7.64	89.51	84.05	173.56
9,800	82.06	77.03	159.09	8.21	7.70	90.27	84.73	175.00
9,900	82.75	77.66	160.41	8.28	7.77	91.03	85.43	176.46
10,000	83.44	78.28	161.72	8.34	7.83	91.78	86.11	177.89
10,100	84.13	78.91	163.04	8.41	7.89	92.54	86.80	179.34
10,200	84.83	79.53	164.36	8.48	7.95	93.31	87.48	180.79
10,300	85.52	80.16	165.68	8.55	8.02	94.07	88.18	182.25
10,400	86.21	80.78	166.99	8.62	8.08	94.83	88.86	183.69
10,500	86.90	81.41	168.31	8.69	8.14	95.59	89.55	185.14
10,600	87.59	82.03	169.62	8.76	8.20	96.35	90.23	186.58
10,700	88.29	82.66	170.95	8.83	8.27	97.12	90.93	188.05
10,800	88.98	83.28	172.26	8.90	8.33	97.88	91.61	189.49
10,900	89.67	83.91	173.58	8.97	8.39	98.64	92.30	190.94
11,000	90.36	84.53	174.89	9.04	8.45	99.40	92.98	192.38
11,100	91.05	85.16	176.21	9.11	8.52	100.16	93.68	193.84
11,200	91.75	85.78	177.53	9.18	8.58	100.93	94.36	195.29
11,300	92.44	86.41	178.85	9.24	8.64	101.68	95.05	196.73
11,400	93.13	87.03	180.16	9.31	8.70	102.44	95.73	198.17
11,500	93.82	87.66	181.48	9.38	8.77	103.20	96.43	199.63
11,600	94.51	88.28	182.79	9.45	8.83	103.96	97.11	201.07
11,700	95.21	88.91	184.12	9.52	8.89	104.73	97.80	202.53
11,800	95.90	89.53	185.43	9.59	8.95	105.49	98.48	203.97
11,900	96.59	90.16	186.75	9.66	9.02	106.25	99.18	205.43
12,000	97.28	90.78	188.06	9.73	9.08	107.01	99.86	206.87

Sewer and Water Rate Chart
Ordinance 2015-MC02, passed and effective on February 23, 2015
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Sewer Rate=$0.692/100 Gal
Water Rate=$0.625/100 Gal

USAGE	Sewer	Water	TOTAL ON TIME BILL	Late Charge Sewer	Late Charge Water	TOTAL LATE SEWER AMT	TOTAL LATE WATER AMT	TOTAL LATE BILL
12,100	97.97	91.41	189.38	9.80	9.14	107.77	100.55	208.32
12,200	98.67	92.03	190.70	9.87	9.20	108.54	101.23	209.77
12,300	99.36	92.66	192.02	9.94	9.27	109.30	101.93	211.23
12,400	100.05	93.28	193.33	10.01	9.33	110.06	102.61	212.67
12,500	100.74	93.91	194.65	10.07	9.39	110.81	103.30	214.11
12,600	101.43	94.53	195.96	10.14	9.45	111.57	103.98	215.55
12,700	102.13	95.16	197.29	10.21	9.52	112.34	104.68	217.02
12,800	102.82	95.78	198.60	10.28	9.58	113.10	105.36	218.46
12,900	103.51	96.41	199.92	10.35	9.64	113.86	106.05	219.91
13,000	104.20	97.03	201.23	10.42	9.70	114.62	106.73	221.35
13,100	104.89	97.66	202.55	10.49	9.77	115.38	107.43	222.81
13,200	105.59	98.28	203.87	10.56	9.83	116.15	108.11	224.26
13,300	106.28	98.91	205.19	10.63	9.89	116.91	108.80	225.71
13,400	106.97	99.53	206.50	10.70	9.95	117.67	109.48	227.15
13,500	107.66	100.16	207.82	10.77	10.02	118.43	110.18	228.61
13,600	108.35	100.78	209.13	10.84	10.08	119.19	110.86	230.05
13,700	109.05	101.41	210.46	10.91	10.14	119.96	111.55	231.51
13,800	109.74	102.03	211.77	10.97	10.20	120.71	112.23	232.94
13,900	110.43	102.66	213.09	11.04	10.27	121.47	112.93	234.40
14,000	111.12	103.28	214.40	11.11	10.33	122.23	113.61	235.84
14,100	111.81	103.91	215.72	11.18	10.39	122.99	114.30	237.29
14,200	112.51	104.53	217.04	11.25	10.45	123.76	114.98	238.74
14,300	113.20	105.16	218.36	11.32	10.52	124.52	115.68	240.20
14,400	113.89	105.78	219.67	11.39	10.58	125.28	116.36	241.64
14,500	114.58	106.41	220.99	11.46	10.64	126.04	117.05	243.09
14,600	115.27	107.03	222.30	11.53	10.70	126.80	117.73	244.53
14,700	115.97	107.66	223.63	11.60	10.77	127.57	118.43	246.00
14,800	116.66	108.28	224.94	11.67	10.83	128.33	119.11	247.44
14,900	117.35	108.91	226.26	11.74	10.89	129.09	119.80	248.89
15,000	118.04	109.53	227.57	11.80	10.95	129.84	120.48	250.32
15,100	118.73	110.16	228.89	11.87	11.02	130.60	121.18	251.78
15,200	119.43	110.78	230.21	11.94	11.08	131.37	121.86	253.23
15,300	120.12	111.41	231.53	12.01	11.14	132.13	122.55	254.68
15,400	120.81	112.03	232.84	12.08	11.20	132.89	123.23	256.12
15,500	121.50	112.66	234.16	12.15	11.27	133.65	123.93	257.58
15,600	122.19	113.28	235.47	12.22	11.33	134.41	124.61	259.02
15,700	122.89	113.91	236.80	12.29	11.39	135.18	125.30	260.48
15,800	123.58	114.53	238.11	12.36	11.45	135.94	125.98	261.92
15,900	124.27	115.16	239.43	12.43	11.52	136.70	126.68	263.38
16,000	124.96	115.78	240.74	12.50	11.58	137.46	127.36	264.82
16,100	125.65	116.41	242.06	12.57	11.64	138.22	128.05	266.27
16,200	126.35	117.03	243.38	12.64	11.70	138.99	128.73	267.72
16,300	127.04	117.66	244.70	12.70	11.77	139.74	129.43	269.17
16,400	127.73	118.28	246.01	12.77	11.83	140.50	130.11	270.61
16,500	128.42	118.91	247.33	12.84	11.89	141.26	130.80	272.06
16,600	129.11	119.53	248.64	12.91	11.95	142.02	131.48	273.50
16,700	129.81	120.16	249.97	12.98	12.02	142.79	132.18	274.97
16,800	130.50	120.78	251.28	13.05	12.08	143.55	132.86	276.41
16,900	131.19	121.41	252.60	13.12	12.14	144.31	133.55	277.86
17,000	131.88	122.03	253.91	13.19	12.20	145.07	134.23	279.30
17,100	132.57	122.66	255.23	13.26	12.27	145.83	134.93	280.76
17,200	133.27	123.28	256.55	13.33	12.33	146.60	135.61	282.21
17,300	133.96	123.91	257.87	13.40	12.39	147.36	136.30	283.66
17,400	134.65	124.53	259.18	13.47	12.45	148.12	136.98	285.10
17,500	135.34	125.16	260.50	13.53	12.52	148.87	137.68	286.55

Sewer and Water Rate Chart
Ordinance 2015-MC02, passed and effective on February 23, 2015
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Sewer Rate=$0.692/100 Gal
Water Rate=$0.625/100 Gal

USAGE	Sewer	Water	TOTAL ON TIME BILL	Late Charge Sewer	Late Charge Water	TOTAL LATE SEWER AMT	TOTAL LATE WATER AMT	TOTAL LATE BILL
17,600	136.03	125.78	261.81	13.60	12.58	149.63	138.36	287.99
17,700	136.73	126.41	263.14	13.67	12.64	150.40	139.05	289.45
17,800	137.42	127.03	264.45	13.74	12.70	151.16	139.73	290.89
17,900	138.11	127.66	265.77	13.81	12.77	151.92	140.43	292.35
18,000	138.80	128.28	267.08	13.88	12.83	152.68	141.11	293.79
18,100	139.49	128.91	268.40	13.95	12.89	153.44	141.80	295.24
18,200	140.19	129.53	269.72	14.02	12.95	154.21	142.48	296.69
18,300	140.88	130.16	271.04	14.09	13.02	154.97	143.18	298.15
18,400	141.57	130.78	272.35	14.16	13.08	155.73	143.86	299.59
18,500	142.26	131.41	273.67	14.23	13.14	156.49	144.55	301.04
18,600	142.95	132.03	274.98	14.30	13.20	157.25	145.23	302.48
18,700	143.65	132.66	276.31	14.37	13.27	158.02	145.93	303.95
18,800	144.34	133.28	277.62	14.43	13.33	158.77	146.61	305.38
18,900	145.03	133.91	278.94	14.50	13.39	159.53	147.30	306.83
19,000	145.72	134.53	280.25	14.57	13.45	160.29	147.98	308.27
19,100	146.41	135.16	281.57	14.64	13.52	161.05	148.68	309.73
19,200	147.11	135.78	282.89	14.71	13.58	161.82	149.36	311.18
19,300	147.80	136.41	284.21	14.78	13.64	162.58	150.05	312.63
19,400	148.49	137.03	285.52	14.85	13.70	163.34	150.73	314.07
19,500	149.18	137.66	286.84	14.92	13.77	164.10	151.43	315.53
19,600	149.87	138.28	288.15	14.99	13.83	164.86	152.11	316.97
19,700	150.57	138.91	289.48	15.06	13.89	165.63	152.80	318.43
19,800	151.26	139.53	290.79	15.13	13.95	166.39	153.48	319.87
19,900	151.95	140.16	292.11	15.20	14.02	167.15	154.18	321.33
20,000	152.64	140.78	293.42	15.26	14.08	167.90	154.86	322.76
20,100	153.33	141.41	294.74	15.33	14.14	168.66	155.55	324.21
20,200	154.03	142.03	296.06	15.40	14.20	169.43	156.23	325.66
20,300	154.72	142.66	297.38	15.47	14.27	170.19	156.93	327.12
20,400	155.41	143.28	298.69	15.54	14.33	170.95	157.61	328.56
20,500	156.10	143.91	300.01	15.61	14.39	171.71	158.30	330.01
20,600	156.79	144.53	301.32	15.68	14.45	172.47	158.98	331.45
20,700	157.49	145.16	302.65	15.75	14.52	173.24	159.68	332.92
20,800	158.18	145.78	303.96	15.82	14.58	174.00	160.36	334.36
20,900	158.87	146.41	305.28	15.89	14.64	174.76	161.05	335.81
21,000	159.56	147.03	306.59	15.96	14.70	175.52	161.73	337.25
21,100	160.25	147.66	307.91	16.03	14.77	176.28	162.43	338.71
21,200	160.95	148.28	309.23	16.10	14.83	177.05	163.11	340.16
21,300	161.64	148.91	310.55	16.16	14.89	177.80	163.80	341.60
21,400	162.33	149.53	311.86	16.23	14.95	178.56	164.48	343.04
21,500	163.02	150.16	313.18	16.30	15.02	179.32	165.18	344.50
21,600	163.71	150.78	314.49	16.37	15.08	180.08	165.86	345.94
21,700	164.41	151.41	315.82	16.44	15.14	180.85	166.55	347.40
21,800	165.10	152.03	317.13	16.51	15.20	181.61	167.23	348.84
21,900	165.79	152.66	318.45	16.58	15.27	182.37	167.93	350.30
22,000	166.48	153.28	319.76	16.65	15.33	183.13	168.61	351.74
22,100	167.17	153.91	321.08	16.72	15.39	183.89	169.30	353.19
22,200	167.87	154.53	322.40	16.79	15.45	184.66	169.98	354.64
22,300	168.56	155.16	323.72	16.86	15.52	185.42	170.68	356.10
22,400	169.25	155.78	325.03	16.93	15.58	186.18	171.36	357.54
22,500	169.94	156.41	326.35	16.99	15.64	186.93	172.05	358.98
22,600	170.63	157.03	327.66	17.06	15.70	187.69	172.73	360.42
22,700	171.33	157.66	328.99	17.13	15.77	188.46	173.43	361.89
22,800	172.02	158.28	330.30	17.20	15.83	189.22	174.11	363.33
22,900	172.71	158.91	331.62	17.27	15.89	189.98	174.80	364.78
23,000	173.40	159.53	332.93	17.34	15.95	190.74	175.48	366.22

STRUCTURES

05	INFLUENT SPLITTER BOX
10	PRELIMINARY TREATMENT BUILDING
12	STORMWATER DIVERSION BOX
15	ASP SPLITTER BOX
20/25	DUAL ACTIVATED SLUDGE PLANTS
28	SECONDARY CLARIFIER SPLITTER BOX
30/35	SECONDARY CLARIFIERS
40	CONTROL BUILDING
50	SLUDGE STORAGE TANKS
55	STORMWATER SOUTHWEST OF PUMP STATION
60	STORMWATER CLARIFIER
70	CHLORINE CONTACT TANK

N
W E
S

50 0 50 FEET
GRAPHIC SCALE IN FEET

EXHIBIT I

VILLA GROVE WWTP PROPOSED SITE PLAN VILLA GROVE, ILLINOIS

10/18/19

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL

ILLINOIS
IOWA
WISCONSIN

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Fact Sheet: Bioprocess Intelligent Optimization System (BIOS)

Modified Ludzack-Ettinger (MLE) Activated Sludge Process BIOS Implementation

The BIOS is an integrated hardware and software solution that enables real-time monitoring and dynamic control of Biological Nutrient Removal (BNR) processes, such as the MLE process.

The BIOS process control algorithms optimize operation of the BNR process, making adjustments to account for the variable influent loading and biological activity in the bioreactor.

The BIOS consists of a controller and nutrient analyzers. The BIOS controller calculates optimal Dissolved Oxygen (DO) and Internal Recycle Flow (IRQ) set-points based upon real-time measurements from the nutrient analyzers, and transmits the set-points to the plant SCADA system for use in plant control.

Features and Benefits

Features

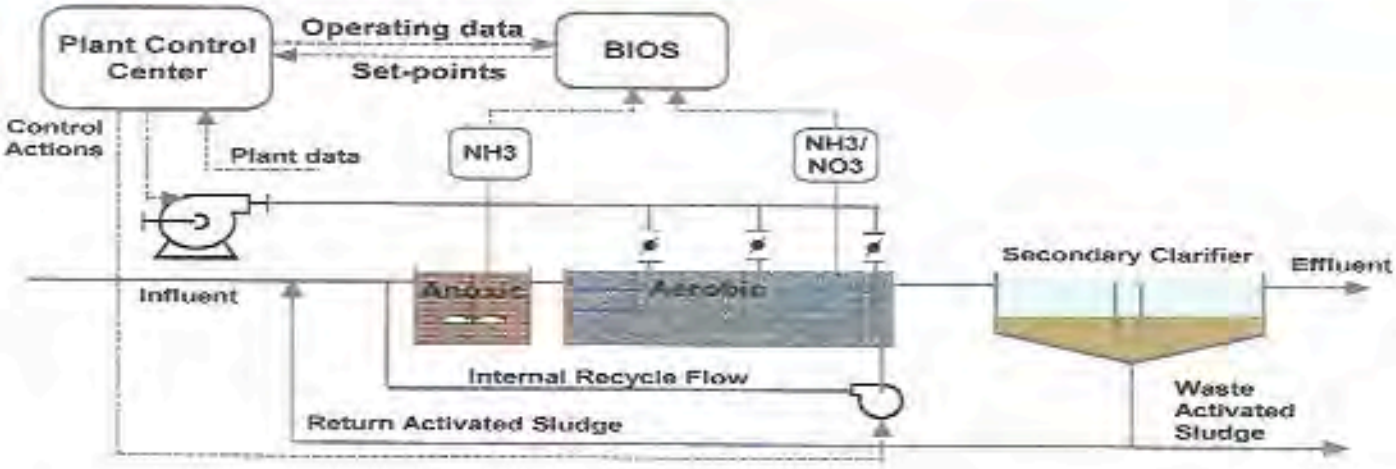
- Calculates optimal DO and IRQ set-points
- Feed-forward, real time control
- Monitors real time influent and operating data
- Works with existing plant infrastructure
- Real time process simulation using the Activated Sludge Model
- Communicates with plant SCADA system
- Allows remote monitoring and control
- Easy to install and operate
- Touch screen user-interface
- Self-calibrating

Benefits

- Reduces blower energy by up to 25% and total plant energy by up to 15%
- Provides an environment for optimal biological performance
- Optimizes nitrogen removal in the MLE process
- Stabilizes the process
- Manages plant start-up, maintenance, and recovery conditions
- Maximizes oxygen transfer efficiency
- Quick return on investment

BIOCHEM TECHNOLOGY, INC.

Modified Ludzack-Ettinger (MLE) Process Description



The Modified Ludzack-Ettinger (MLE) process has been developed for the combination removal of BOD, ammonia, and nitrate/nitrite. The process employs a combination of an anoxic and aerobic zone. Nitrification (ammonia removal) occurs in the aerobic zone. The mixed liquor, high in nitrate from nitrification, is recycled to the anoxic zone (by the internal recycle) for denitrification. Typical IRQ rates range from 200 – 400% of the process influent flow rate. The MLE process can achieve a 6 to 8 mg/l Total Nitrogen discharge, depending upon the wastewater influent characteristics.

BIOS Control Theory

DO Control Theory

The BIOS DO Set-Point Controller calculates the optimal DO set-point(s) to treat the BOD and ammonia loading. Optimizing the DO set-point(s) decreases the aeration requirements and increases the oxygen transfer efficiency, ultimately resulting in energy savings.

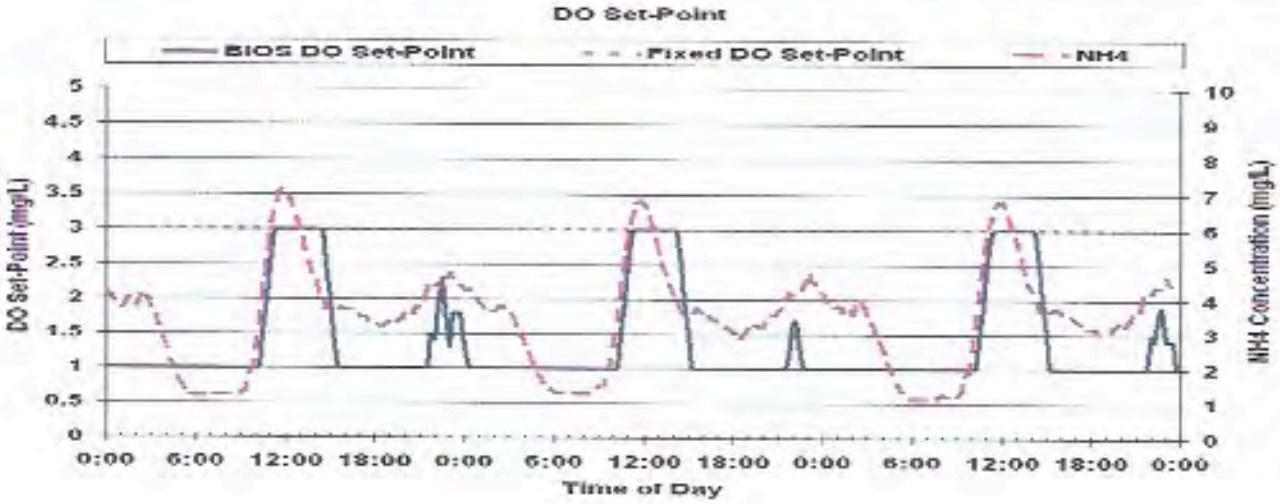
An ammonia analyzer located in the last anoxic zone provides the control system with the ammonia concentration entering the aerobic zones. Utilizing the measured ammonia concentration along with other measured parameters such as flow rates, DO, and MLSS, the BIOS DO Set-Point Controller conducts biological and hydraulic simulations to predict how the DO concentration will effect the final effluent quality. The optimum DO set-point(s) is the minimum DO concentration required to meet the effluent quality goals. An effluent ammonia analyzer is used to confirm the simulation results and automatically adjust model parameters if necessary.

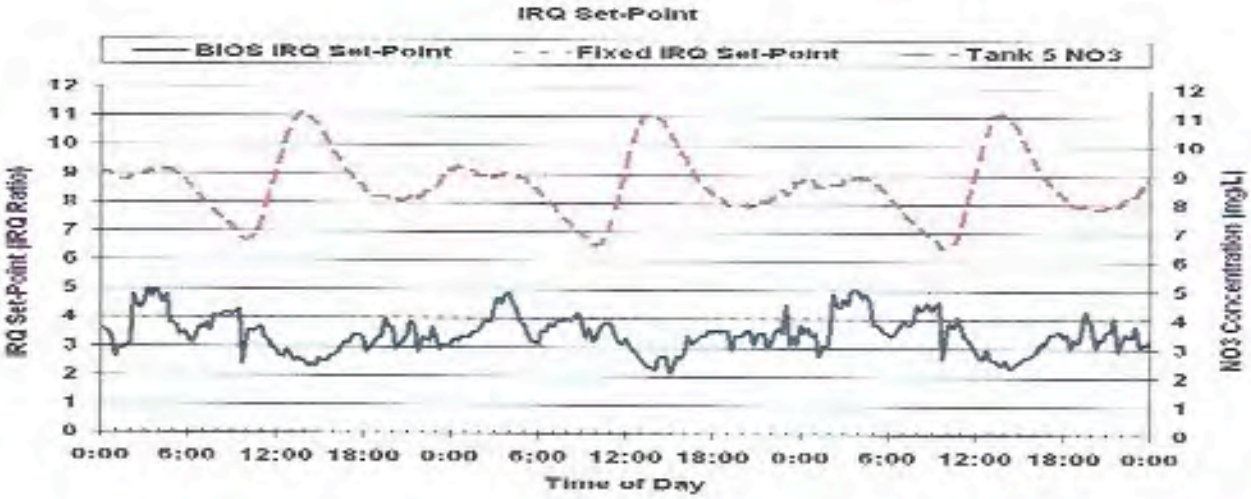
IRQ Control Theory

The BIOS IRQ Set-Point Controller calculates the IRQ set-point required to maximize denitrification performance. Optimizing the IRQ set-point results in several benefits including: minimizing effluent total nitrogen, maximizing oxygen credits generated in the anoxic zone(s) to reduce aeration requirements, and minimizing IRQ pumping energy.

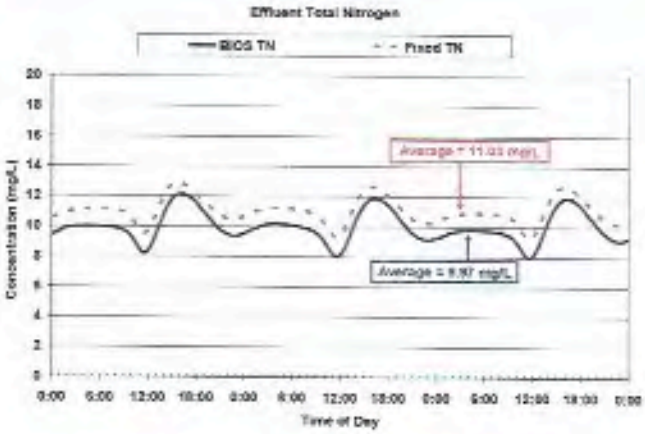
A nitrate analyzer located by the IRQ pump inlet provides the control system with the nitrate concentration in the IR stream. The controller conducts iterated biological and hydraulic simulations that predict the effluent ammonia and nitrate concentrations under different IRQ rates. The optimum IRQ set-point is the value that results in the lowest effluent ammonia and nitrate concentration.

BIOS Versus Fixed Set-Points

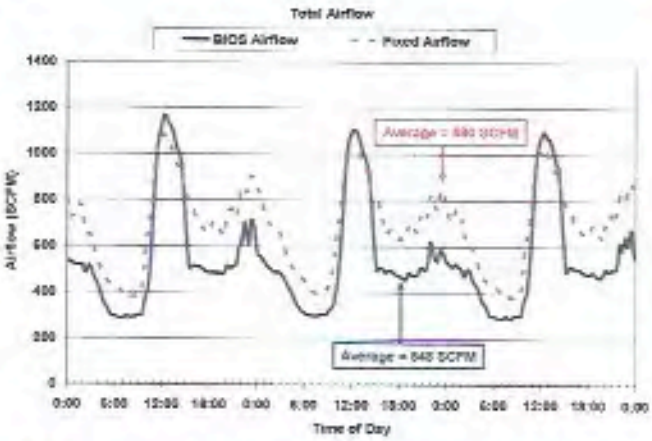




BIOS Results



9.6% TN Reduction with BIOS



20% Airflow Reduction with BIOS

BIOS Specifications

Control Panel

Calculation Frequency	15 Minutes
Programmable Logic Controller (PLC)	CompactLogix L35E or Equal
Industrial Computer	PanelView 1000 (Allen Bradley) or Equal
Dimensions (HxWxD)	33 x 24 x 11 inches
Weight	115 lbs.
Enclosure Ratings	NEMA 4X, IP 66
Temperature Rating	-21° to 131°F (-30° to 55°C)
AC Power Supply	115 VAC 60 Hz
Average Current Consumption	5A
Maximum Current Consumption	8A
User Interface	Analog resistive touch screen
Protocol	EtherNet/IP messages encapsulated within standard TCP/UDP/IP protocol, or MODBUS TCP/IP
Common Application Layer	ControlNet and DeviceNet
Cable	Category 5 twisted pair cable
Speed	Half/Full Duplex 10 Mbit or 100 Mbit operation

Nutrient Analyzer

Measurement Parameters	Ammonia and Nitrate
Measurement Type	Ion-Selective, In-situ
Measurement Range	0.1 – 99.9 ppm
Resolution	0.1 ppm
Reproducibility	Within 5%
Calibration Method	Automatic
Calibration Frequency	Variable (operator settable)
Accuracy	+/- 5 % of measurement or +/- 0.5 ppm (whichever is larger)
Temperature Rating (Controller system)	-21° to 140° F (-30° to 60°C)
Sample Temperature	34° to 122° F (1° to 50°C)
AC Power Supply	115 VAC 60 Hz
Average Current Consumption	1A
Maximum Current Consumption	5A
Internal Data Storage	150,000 time-stamped measurements
Output Signals	4-20 mA, MODBUS, RS-485, RS-232, RS-422
Relays / Alarms	(4) relays as follows: High and Low levels detected for Ammonium and Nitrate Concentration. (1) alarm condition for Low Calibration Solution / Reagent Warning and for Empty Calibration Solution / Reagent – Automatic analyzer shutdown.
Display Screen	Daylight readable QVGA LCD

BIOCHEM TECHNOLOGY, INC.
3620 Horizon Drive, Suite 200
King of Prussia, PA 19406
Phone: 610-768-9360
E-mail: sales@biochemtech.com
Website: www.biochemtech.com

From: **Scott Arbuckle** scott.arbuckle@villagrove.org
Subject: Fwd: Aeration System Retrofit Project Budget
Date: June 21, 2020 at 9:26 AM
To: gerry@hartmanconsultant.com

Sent from my iPhone

Begin forwarded message:

> **From:** scott arbuckle <scott.arbuckle@villagrove.org>
> **Date:** June 21, 2020 at 8:25:15 AM CDT
> **To:** ghartm
> **Subject: FW: Aeration System Retrofit Project Budget**
>
> Sent from Mail for Windows 10
>
> **From:** scott arbuckle
> **Sent:** Sunday, June 21, 2020 8:24 AM
> **To:** scott arbuckle
> **Subject:** FW: Aeration System Retrofit Project Budget
>
> Sent from Mail for Windows 10
>
> **From:** Tim Bronn
> **Sent:** Friday, June 12, 2020 11:15 AM
> **To:** PUBLIC.WORKS@VILLAGROVE.ORG
> **Cc:** Don Kramer
> **Subject:** Aeration System Retrofit Project Budget
>
> Scott:
>
> I have assembled all of the budget numbers for the aeration system retrofit and can prepare a contract if this is acceptable to the City. The project includes:
>
> Engineering and Permitting.
> Builders Risk and General Liability Insurance.
> General Conditions (Dumpsters, Cleaning, Mobilization/Demobilization, Construction Surveying, ...).
> Two Gardner Denver IQHE85/3P50 HP Enclosed Blower packages.
> New PLC blower controls including variable frequency drives for the new blowers and a dissolved oxygen monitoring system to control blower speed.
> 96 two-meter Gummi Jaeger silicone strip diffusers with associated air piping for the aeration tanks.
> 20 two-meter Gummi Jaeger silicone strip diffusers with associated air piping for the digester tanks.
> Complete demolition of the existing aerators and tank air piping.

Demolition of the existing blowers.
Complete mechanical installation of the new aeration system and blowers.
Complete electrical installation of the new blowers and controls package.

The total budget price for all of the above work is $545,000.00

If this price is acceptable to you and the City, I will prepare a contract and we can begin as soon as the contract is signed. I would be happy to meet with any Council Members to discuss the project if they would like.

Thanks for the opportunity.

Tim Bronn, P.E., BCEE
Senior Vice President
McMAHON
ENGINEERS ARCHITECTS
The McMAHON Way…*Values. Culture. Relationships.*

1700 Hutchins Road, Machesney Park, Illinois 61115
815 636-9590 MCMGRP.COM

We're GROWING Now HIRING

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Rebuild-it Services Group
6810 South 300 West, Suite 8
Midvale, Utah 84047
www.rebuild-it.com

PROPOSAL NO. Q122010

June 10, 2020

PREPARED FOR:

City of Villa Grove
612 Front Street
Villa Grove, IL 61956
Attn: Scott Arbuckle
Email: utilities.dept@villagrove.org
Ph#: 217-714-9133

SCOPE OF WORK:

Replacement of underwater steel components on two existing 35'-0" diameter clarifier and the optional supply of a new launder system complete with new FRP weir and baffles.

PROPOSAL PREPARED BY:

Rebuild-It Services Group, LLC
6810 South 300 West, Suite 8
Midvale, Utah 84047
John Lull
Main: (888) 709-5676
Mobile: (949) 606-6591
jlull@rebuild-it.com
www.rebuild-it.com

PROJECT SUMMARY:

The supply of new clarifier underwater steel for two existing 35'-0" diameter clarifier and optional adder for the supply of a new segmented launder system as described below in the scope of work section. The design of all clarifier components is per Rebuild-it engineering standard practices and all OSHA, International Building Code requirements.

SCOPE OF WORK:

Clarifier Underwater Steel

- Carbon steel rake shaft (Pipe 5" Sch 40 minimum) with center cone scraper.
- Rake arm with standard slope plow blades (carbon steel) with adjustable 20-gauge 304 stainless squeegee. Rake arm blade spacing is designed to rake tank bottom twice per revolution.
- Feed well (8'-0" inside diameter x 5'-1" deep) with provisions for up to an 8" diameter side influent pipe.
- Influent pipe up to 8" diameter from a flange just within the tank wall extending to the feed well; including any necessary pipe support.
- Scum trough extending from baffle to within 9" of feed well, including scum trough support.
- Scum trough flush system.
- Two (2) skimmer arm attached to rake shaft and extending out the baffle. Skimmer arms to have a 1/2" thick neoprene wiper that extend a 3" below the liquid level.
- Assembly fasteners: Galvanized SAE grade 8 steel minimum.
- Anchor bolts: 304 stainless steel epoxy anchor using Hilti HIT-RE 100 epoxies.
- A site visit to verify existing tank and drive unit mounting conditions.
- Check out services of one (1) trip for one (1) day.
- Submittal package.
- Freight: F.O.B. factory, freight allowed to job site.

Clarifier coating:

All carbon steel shall receive one shop coat of Tnemec N69F Hi-Build Epoxoline to a dry film thickness of 4.0 to 6.0 mils; steel surface preparation prior to paint shall be SSPC-SP10.

Excluded items & clarifications:

- Reuse existing drive units.
- Reuse existing walkway structures, floor coverings & handrail.

- Electrical controls, mounting plates, brackets, conduit, wiring, mounting channels, light posts, photocells, etc.
- Lubricating oils / greases
- Access stairways, walkways, floor coverings, handrailing, etc. outside the tank.

SCHEDULE:

Rebuild-it intends to ship all steel within 14 - 20 weeks after receipt and acceptance of purchase order based on the following:

4 - 6 weeks for submittals drawings.
2 - 4 weeks for return of approved submittal drawing.
8 – 10 weeks for fabrication after receipt of approved submittals.

Labor Services:

Rebuild-it Service Group will provide the necessary equipment and labor to for the removal of the existing clarifier unit. RSG will provide the installation of the clarifier units, repair of several areas of rusted walkway and bridge. RSG will coordinate our work schedule with plant operations, to ensure minimal interruptions. We'll also coordinate with the plant the location for job trailer, laydown, storage area, crane access, etc.

The scope of work per tank for this project is as follows:

- Site mobilization and travel time to the job site.
- Removal of existing clarifiers
- Installation of the new clarifier
- Walkway and bridge repair as needed
  Crane, mats, rigging equipment as needed.
- Rake and drive leveling.
- Provide assistance during start-up and testing.
- Provide all required confined space entry equipment, hosting and rigging.
- Demobilization of personnel and equipment.

This proposal excludes the following items:

- Permits, fees, and/or stamped engineering documents.
- Overtime premiums or weekend work
- Removal of electrical conduit, panels, etc. on clarifier walkway or platform.
- Installation of electrical and/or instrumentation to be by others, except as noted in this proposal.

- Concrete demolition and/or repair, if required, can be provided at additional cost.
- Grouting of the tank or concrete work.
- Assumes reasonable access to basins.
- Hazardous material abatement, handling and/or disposal.
- Any work not specifically included.
- Draining and cleaning of tank.
- Lubrication for drive unit.

Total for (2) Clarifier under water steel and Turn-Key labor.....$186,417

Optional for One Launder system scope of supply for 2 tanks

- 304 stainless steel launder troughs (12" wide x 12" deep)
- Launder support (carbon steel) with neoprene gasketing to isolation to the launder troughs.
- 12" FRP baffle support off the launder troughs.
- 9" high FRP weirs with 2-1/2" deep 90° "V" notches on 6" centers, located on both sides of the launder troughs.
- Assembly bolts: 304 stainless steel.
- Anchor bolts: 304 stainless steel epoxy anchor using Hilti HIT-RE 100 epoxies.
- A site visit to verify existing tank and drive unit mounting conditions.
- Submittal package.
- Freight: F.O.B. factory, freight allowed to job site.

Launder support coating:

All carbon steel shall receive one shop coat of Tnemec N69F Hi-Build Epoxoline to a dry film thickness of 4.0 to 6.0 mils; steel surface preparation prior to paint shall be SSPC-SP10.

All stainless steel will be passivated for the removal of all embedded carbon, all heat marks from welding shall be removed.

Excluded items

- Finishing / Final painting of launder steel.
- Concrete work.

SCHEDULE:

Rebuild-it intends to ship all steel within 14 – 20 weeks after receipt and acceptance of purchase order based on the following:

4 - 6 weeks for submittals drawings.
2 - 4 weeks for return of approved submittal drawing.
8 – 10 weeks for fabrication after receipt of approved submittals.

PRICING:

Pricing for the weirs and troughs as described above $85,865.00
See terms and conditions page attached to this proposal.

Please be sure to reference this quotation number and date on your purchase order.
Remit order to:

Rebuild-it Services Group, LLC
P.O. Box 9178
Midvale, Utah 84047
Attention: Candace King
Email: cking@rebuild-it.com

PRICING AND PAYMENT TERMS:

We appreciate the opportunity to offer our parts & services. Upon receipt of an order, we assure you of our continued interest and service. RSG will provide the best service possible to ensure we exceed your expectations.

This proposal, including all terms and conditions contained herein, shall become part of any resulting contract or purchase order. Changes to any terms and conditions, including but not limited to submittal and shipment days, payment terms, and escalation clause shall be negotiated at order placement, otherwise the proposal terms and conditions contained herein shall apply.

Terms: If not outline otherwise in the proposal, terms for the parts and/or equipment are 100% due after shipment or service is completed. Net 30 days from shipment or after service is completed. The prices are good for 60 days.

Sales Tax: No sales taxes, use taxes, or duties have been included in our pricing. Unless you live in Utah, we are not registered to collect sales tax in your state. If you are not tax exempt, please remit taxes directly to the governing authorities.

Freight: Prices quoted are F.O.B. shipping point with freight prepaid and added to a readily accessible location nearest to jobsite, unless otherwise indicated. All claims for damage or loss in shipment shall be initiated by purchaser.

Shipment: Estimated shipment time is (see above) after purchase order is received in our office.

Field Service: Prices do not include field service unless noted in the rebuild scope of work description. Additional field service is available at $900.00 per day plus expenses.

OEM Parts: If applicable RSG will quote OEM factory parts furnished by FLSmidth USA, Inc. EIMCO® and Dorr-Oliver™ are registered trademarks of FLSmidth USA, Inc. FLSmidth is the sole owner of the EIMCO® and Dorr-Oliver® registered trademarks and brand names.

EIMCO & Dorr-Oliver: RSG is the only authorized distributor for EIMCO and Dorr-Oliver parts and services for FLSmidth in the municipal market. No other company is authorized to use the EIMCO or Dorr-Oliver name or trademark unless approved by FLSmidth or Rebuild-it Services Group.

WARRANTY & TERMS AND CONDITIONS:

Parts and/or Equipment manufactured or rebuilt and sold by Rebuild-it Services Group, once paid for in full, is backed by the following warranty:

For the benefit of the original user, RSG warrants all new parts and equipment sold or rebuilt RSG, LLC. to be free from defects in material and workmanship, and will replace or repair, F.O.B. its factories or other location designated by it, any part or parts returned to it which RSG's examination shall show to have failed under normal use and service by the original user within two (2) years following initial start-up, or two (2) years and six (6) months from shipment to the purchaser, whichever occurs first.

Such repair or replacement shall be free of charge for all items except for those items such as resin, filter media and the like that are consumable and normally replaced during maintenance, with respect to which, repair or replacement shall be subject to a pro-rata charge based upon RSG's estimate of the percentage of normal service life realized from the part. RSG's obligation under this warranty is conditioned upon its receiving prompt notice of claimed defects, which shall in no event be later than thirty (30) days following expiration of the warranty period, and is limited to repair or replacement as aforesaid.

This warranty is expressly made by RSG and accepted by purchaser in lieu of all other warranties, including warranties of merchantability and fitness for particular purpose, whether written, oral, express, implied, or statutory. RSG shall not be liable for normal wear and tear, corrosion, or any contingent, incidental, or consequential damage or expense due to partial or complete inoperability of its equipment for any reason whatsoever.

This warranty shall not apply to equipment or parts thereof which have been altered or repaired outside of a RSG factory, or damaged by improper installation, application, or maintenance, or subjected to misuse, abuse, neglect, accident, or incomplete adherence to all manufacturer's requirements, including, but not limited to, Operations & Maintenance Manual guidelines & procedures. When buying a drive or drive rebuild, if the drive control has not been hooked up or disabled, the warranty on the drive is not valid.

This warranty applies only to equipment made or sold by Rebuild-it Services Group, LLC (RSG).

RSG makes no warranty with respect to parts, accessories, or components purchased by the customer from others. The warranties which apply to such items are those offered by their respective manufacturers.

CONFIDENTIALITY:

All the information in this quotation is confidential and has been prepared for your use solely in considering services described. Transmission of all or any parts of this information to others or use by you for other purposes is unauthorized without our written consent.

TERMS AND CONDITIONS:

Terms and Conditions appearing in any order based on this proposal which are inconsistent herewith shall not be binding on Rebuild-it Services Group (RSG). The sale and purchase of equipment described herein shall be governed exclusively by the foregoing proposal and the following provisions:

1. SPECIFICATIONS: RSG is furnishing its standard equipment as outlined in the proposal and as will be covered by final approved drawings if applicable. The equipment will, however, meet the general intention of the mechanical specifications of these documents.

2. ITEMS INCLUDED: This proposal includes only the equipment specified herein and does not include erection, installation, accessories, nor associated materials such as controls, piping, etc., unless specifically listed.

3. PRICE AND DELIVERY: All selling prices quoted are subject to change without notice after 30 days from the date of this proposal unless specified otherwise. Unless otherwise stated, all prices are F.O.B. RSG or its supplier's shipping points. All claims for damage, delay or shortage arising from such equipment shall be made by Purchaser directly against the carrier. When shipments are quoted F.O.B. job site or other designation, Purchaser shall inspect the equipment shipped, notifying RSG of any damage or shortage within forty-eight hours of receipt, and failure to so notify RSG shall constitute acceptance by Purchaser, relieving RSG of any liability for shipping damages or shortages.

4. PAYMENTS: All invoices are net 30 days. Delinquencies are subject to a 1.5 percent service charge per month or the maximum permitted by law, whichever is less on all past due accounts. Pro rata payments are due as shipments are made. If shipments are delayed by the Purchaser, invoices shall be sent on the date when RSG is prepared to make shipment and payment shall become due under standard invoicing terms. If the work to be performed hereunder is delayed by the Purchaser, payments shall be based on the purchase price and percentage of completion. Products held for the Purchaser shall be at the risk and expense of the Purchaser. Unless specifically stated otherwise, prices quoted are for equipment only. These terms are independent of and not contingent upon the time and manner in which the Purchaser receives payment from the owner.

5. INSTALLATION SUPERVISION: Prices quoted for equipment do not include installation supervision, unless otherwise noted. RSG recommends and will, upon request, make available, RSG's then current rate, an experienced installation supervisor to act as the Purchaser's employee and agent to supervise installation of the equipment. Purchaser shall at its sole expense furnish all necessary labor equipment, and materials needed for installation.

Responsibility for proper operation of equipment, if not installed by RSG or installed in accordance with RSG or original manufacture instructions, and inspected and accepted in writing by RSG or manufacture representing RSG.

RSG will supply the safety devices described in this proposal or shown in RSG's or manufacture represented drawings furnished as part of this order but excepting these, RSG shall not be required to supply or install any safety devices whether required by law or otherwise. The Purchaser hereby agrees to indemnify and hold harmless RSG from any claims or losses arising due to alleged or actual insufficiency or inadequacy of the safety devices offered or supplied hereunder, whether specified by RSG or Purchaser, and from any damage resulting from the use of the equipment supplied hereunder.

6. ACCEPTANCE OF PRODUCTS: Products will be deemed accepted without any claim by Purchaser unless written notice of non-acceptance is received by RSG within 30 days of delivery if shipped F.O.B. point of shipment, or 48 hours of delivery if shipped F.O.B. point of destination. Such written notice shall not be considered received by RSG unless it is accompanied by all freight bills for said shipment, with Purchaser's notations as to damages, shortages and conditions of equipment, containers, and seals. Non-accepted products are subject to the return policy stated below.

7. TAXES: Any federal, state, or local sales, use or other taxes applicable to this transaction, unless specifically included in the price, shall be for Purchaser's account.

8. INSURANCE: From date of shipment until the invoice is paid in full, Purchaser agrees to provide and maintain at its expense, but for RSG benefit, adequate insurance including, but not limited to, builders risk insurance on the equipment against any loss of any nature whatsoever.

9. SHIPMENTS: Any shipment of delivery dates recited represent RSG's best estimate but no liability, direct or indirect, is assumed by RSG for failure to ship or deliver on such dates.

RSG shall have the right to make partial shipments; and invoices covering the same shall be due and payable by Purchaser in accordance with the payment terms thereof. If Purchaser defaults in any payment when due hereunder, RSG may, without incurring any liability therefore to Purchaser or Purchaser's customers, declare all payments immediately due and payable with maximum legal interest thereon from due date of said payment, and at its option, stop all further work and shipments until all past due payments have been made; and/or require that any further deliveries be paid for prior to shipment.

If Purchaser requests postponements of shipments, the purchase price shall be due and payable upon notice from RSG that the equipment is ready for shipment; and thereafter any storage or other charge RSG incurs on account of the equipment shall be for the Purchaser's account.

If delivery is specified at a point other than RSG or its supplier's shipping points, and delivery is postponed or prevented by strike, accident, embargo, or other cause beyond RSG reasonable control and occurring at a location other than RSG or its supplier's shipping points, RSG assumes no liability in delivery delay. If Purchaser refuses such delivery, RSG may store the equipment at Purchaser's expense. For all purposes of this agreement such tender of delivery or storage shall constitute delivery.

10. SURFACE PREPARATION AND PAINTING: If furnished, shop primer paint is intended to serve only as minimal protective finish. RSG will not be responsible for the condition of primed or finish painted surfaces after equipment leaves its shops. Purchasers are invited to inspect paint in shops for proper preparation and application prior to shipment. RSG assumes no responsibility for field surface preparation or touch-up of shipping damage to paint. Painting of fasteners and other touch-up to painted surfaces will be by Purchaser's painting contractor after mechanism installation.

11. RETURN OF PRODUCTS: No products may be returned to RSG without RSG's prior written permission. Said permission may be withheld by RSG at its sole discretion.

12. BACK CHARGES: RSG will not approve or accept back charges for labor, materials, or other costs incurred by Purchaser or others in modification, adjustment, service, or repair of RSG furnished materials unless such back charge has been authorized in advance in writing by a RSG employee and a purchase order, or work requisition signed by RSG.

13. INDEMNIFICATION: Purchaser agrees to indemnify RSG from all costs incurred, including but not limited to court costs and reasonable attorney fees, from enforcing any provisions of this contract, including but not limited to breach of contract or costs incurred in collecting monies owed on this contract.

14. ENTIRE AGREEMENT: This proposal expresses the entire agreement between the parties hereto superseding any prior understandings, and is not subject to modification except by a writing signed by an authorized officer of each party.

15. EXTENDED STORAGE: Extended storage instructions will be part of information provided to shipment. If equipment installation and start-up is delayed more than 30 days, the provisions of the storage instructions must be followed to keep WARRANTY in force.

16. LIABILITY: Professional liability insurance, including but not limited to, errors and omissions insurance, is not included. In any event, liability for errors and omissions shall be limited to the lesser of 25,000USD or the value of the particular piece of equipment (not the value of the entire order) supplied by RSG against which a claim is sought.

17. ARBITRATION NEGOTIATION: Any controversy or claim arising out of or relating to the performance of any contract resulting from this proposal or contract issued, or the breach thereof, shall be settled by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator(s) may be entered to any court having jurisdiction.

ACCEPTED BY PURCHASER

Customer Name: _____ Customer Address: _____

_____ Contact Name: _____

Contact Phone: _____ Contact Email: _____

Signature: _____ Printed Name: _____

Title: _____ Date: _____

From: **Scott Arbuckle** scott.arbuckle@villagrove.org
Subject: **Fwd: Clarifier Rebuilds**
Date: June 19, 2020 at 3:48 PM
To: gerry@hartmanconsultant.com

Sent from my iPhone

Begin forwarded message:

> **From:** Don Kramer <kramerdon49@gmail.com>
> **Date:** June 12, 2020 at 9:19:50 AM CDT
> **To:** scott.arbuckle@villagrove.org
> **Subject: Fwd: Clarifier Rebuilds**
>
> How's this
>
> ---------- Forwarded message ---------
> From: **Don Kramer** <kramerdon49@gmail.com>
> Date: Thu, Jun 11, 2020, 10:39 AM
> Subject: Clarifier Rebuilds
> To: <utilities dept@villagrove.org>
>
> Hi Scott
>
> Please see the attached proposal from The Rebuild-It Group for the rebuilding of the clarifiers. For grant purposes we need to keep the clarifier rebuild separate from the aeration upgrade. I believe Tim with McMahon will have something for you later today.
>
> Please reply with any questions
>
> Don Kramer
> Process Energy LLC
> Cell# 252-226-1971
> email: kramerdon49@gmail.com

Q122010 - Villa Grove I...ed.pdf

From: **Scott Arbuckle** scott.arbuckle@villagrove.org
Subject: Fwd: Storage tank
Date: June 19, 2020 at 3:15 PM
To: **Gerry Hartman** gerry@hartmanconsultant.com

Sent from my iPhone

Begin forwarded message:

From: Don Kramer <kramerdon49@gmail.com>
Date: June 18, 2020 at 9:46:09 AM CDT
To: scott.arbuckle@villagrove.org, utilities.dept@villagrove.org
Subject: Fwd: Storage tank

Hi Scott,

Attached is the proposal from Rebuild-It for the 260,000 gal sludge storage tank. Tim Bronn thinks we can install pumps and piping for about an additional $50,000 budget. Will need to put together a detailed estimate first to confirm.

How's everything going with the trustees?

Take Care!

Don Kramer
Process Energy LLC
Cell# 262-226-1971
email: kramerdon49@gmail.com

--------- Forwarded message ---------
From: **John Lull** <jlull@rebuild-it.com>
Date: Wed, Jun 17, 2020 at 6:30 PM
Subject: Storage tank
To: Don Kramer <kramerdon49@gmail.com>

Here you go

John Lull

Rebuild-it Services Group, LLC

Midvale, Utah

Mobile: 949-606-6591

Office: 888-709-5676

www.Rebuild-it.com

Q122859 - Villa Grove I...nk.pdf

Rebuild-it Services Group
6810 South 300 West, Suite 8
Midvale, Utah 84047
www.rebuild-it.com

PROPOSAL NO. Q122859

June 10, 2020

PREPARED FOR:

City of Villa Grove
612 Front Street
Villa Grove, IL 61956
Attn: Scott Arbuckle
Email: utilities.dept@villagrove.org
Ph#: 217-714-9133

SCOPE OF WORK:

Supply and install a refurbished glass lined tank with a 244,000 gal compacity

PROPOSAL PREPARED BY:

Rebuild-It Services Group, LLC
6810 South 300 West, Suite 8
Midvale, Utah 84047
John Lull
Main: (888) 709-5676
Mobile: (949) 606-6591
jlull@rebuild-it.com
www.rebuild-it.com

PROJECT SUMMARY:

The supply and installation of a refurbished glass lined tank with a capacity of 244,200 gallon that is 46.52' diameter x 19.21' high open top tank. An engineered soils report and the foundation to house the tank.

SCOPE OF WORK:

Refurbished glass lined tank

- (1)-46.52' diameter x 19.21' high glass lined tank w/open top
- (1)-32" Stainless steel side manway
- (1)-Hot-Dipped Galvanized (HDG) ladder, cage, lockout and step-off platform
- (2)-8" Stainless steel, single, 150# flanged nozzles
- (1)-American Structures, Inc. Tank Logo
- P.E. Stamp for the State of Illinois
- Freight to the job site is included
- Labor to build the tank is included
- Concrete foundation to house the tank
- Concrete labor and concrete design are included (2,500 psf soil bearing capacity will be assumed, unless a Geotech report is provided)
- Includes hydro test (owner to supply and dispose of the water)
- Includes a five-year warranty on the tank and appurtenances, only manufactured by American Structures, Inc.
- Quote is based on a non-prevailing wage

Exclusions: Process piping, electrical, state and local taxes, permits and off-loading.

SCHEDULE:

Rebuild-it intends to ship tank within 8 - 10 weeks after receipt and acceptance of purchase order based on the following:

2 - 3 weeks for submittals drawings.
2 - 4 weeks for return of approved submittal drawing.
Shipment 2 weeks after receipt of approved submittals.

Total for (1) Refurbished glass lined tank and foundation.....$222,151.00

Please be sure to reference this quotation number and date on your purchase order.
Remit order to:

Rebuild-it Services Group, LLC
P.O. Box 9178
Midvale, Utah 84047
Attention: Candace King
Email: cking@rebuild-it.com

PRICING AND PAYMENT TERMS:

We appreciate the opportunity to offer our parts & services. Upon receipt of an order, we assure you of our continued interest and service. RSG will provide the best service possible to ensure we exceed your expectations.

This proposal, including all terms and conditions contained herein, shall become part of any resulting contract or purchase order. Changes to any terms and conditions, including but not limited to submittal and shipment days, payment terms, and escalation clause shall be negotiated at order placement, otherwise the proposal terms and conditions contained herein shall apply.

Terms: If not outline otherwise in the proposal, terms for the parts and/or equipment are 100% due after shipment or service is completed. Net 30 days from shipment or after service is completed. The prices are good for 60 days.

Sales Tax: No sales taxes, use taxes, or duties have been included in our pricing. Unless you live in Utah, we are not registered to collect sales tax in your state. If you are not tax exempt, please remit taxes directly to the governing authorities.

Freight: Prices quoted are F.O.B. shipping point with freight prepaid and added to a readily accessible location nearest to jobsite, unless otherwise indicated. All claims for damage or loss in shipment shall be initiated by purchaser.

Shipment: Estimated shipment time is (see above) after purchase order is received in our office.

Field Service: Prices do not include field service unless noted in the rebuild scope of work description. Additional field service is available at $900.00 per day plus expenses.

OEM Parts: If applicable RSG will quote OEM factory parts furnished by FLSmidth USA, Inc. EIMCO® and Dorr-Oliver™ are registered trademarks of FLSmidth USA, Inc. FLSmidth is the sole owner of the EIMCO® and Dorr-Oliver® registered trademarks and brand names.

EIMCO & Dorr-Oliver: RSG is the only authorized distributor for EIMCO and Dorr-Oliver parts and services for FLSmidth in the municipal market. No other company is authorized to use the EIMCO or Dorr-Oliver name or trademark unless approved by FLSmidth or Rebuild-it Services Group.

WARRANTY & TERMS AND CONDITIONS:

Parts and/or Equipment manufactured or rebuilt and sold by Rebuild-it Services Group, once paid for in full, is backed by the following warranty:

For the benefit of the original user, RSG warrants all new parts and equipment sold or rebuilt RSG, LLC. to be free from defects in material and workmanship, and will replace or repair, F.O.B. its factories or other location designated by it, any part or parts returned to it which RSG's examination shall show to have failed under normal use and service by the original user within two (2) years following initial start-up, or two (2) years and six (6) months from shipment to the purchaser, whichever occurs first.

Such repair or replacement shall be free of charge for all items except for those items such as resin, filter media and the like that are consumable and normally replaced during maintenance, with respect to which, repair or replacement shall be subject to a pro-rata charge based upon RSG's estimate of the percentage of normal service life realized from the part. RSG's obligation under this warranty is conditioned upon its receiving prompt notice of claimed defects, which shall in no event be later than thirty (30) days following expiration of the warranty period, and is limited to repair or replacement as aforesaid.

This warranty is expressly made by RSG and accepted by purchaser in lieu of all other warranties, including warranties of merchantability and fitness for particular purpose, whether written, oral, express, implied, or statutory. RSG shall not be liable for normal wear and tear, corrosion, or any contingent, incidental, or consequential damage or expense due to partial or complete inoperability of its equipment for any reason whatsoever.

This warranty shall not apply to equipment or parts thereof which have been altered or repaired outside of a RSG factory, or damaged by improper installation, application, or maintenance, or subjected to misuse, abuse, neglect, accident, or incomplete adherence to all manufacturer's requirements, including, but not limited to, Operations & Maintenance Manual guidelines & procedures. When buying a drive or drive rebuild, if the drive control has not been hooked up or disabled, the warranty on the drive is not valid.

This warranty applies only to equipment made or sold by Rebuild-it Services Group, LLC (RSG).

RSG makes no warranty with respect to parts, accessories, or components purchased by the customer from others. The warranties which apply to such items are those offered by their respective manufacturers.

CONFIDENTIALITY:

All the information in this quotation is confidential and has been prepared for your use solely in considering services described. Transmission of all or any parts of this information to others or use by you for other purposes is unauthorized without our written consent.

TERMS AND CONDITIONS:

Terms and Conditions appearing in any order based on this proposal which are inconsistent herewith shall not be binding on Rebuild-it Services Group (RSG). The sale and purchase of equipment described herein shall be governed exclusively by the foregoing proposal and the following provisions:

1. SPECIFICATIONS: RSG is furnishing its standard equipment as outlined in the proposal and as will be covered by final approved drawings if applicable. The equipment will, however, meet the general intention of the mechanical specifications of these documents.

2. ITEMS INCLUDED: This proposal includes only the equipment specified herein and does not include erection, installation, accessories, nor associated materials such as controls, piping, etc., unless specifically listed.

3. PRICE AND DELIVERY: All selling prices quoted are subject to change without notice after 30 days from the date of this proposal unless specified otherwise. Unless otherwise stated, all prices are F.O.B. RSG or its supplier's shipping points. All claims for damage, delay or shortage arising from such equipment shall be made by Purchaser directly against the carrier. When shipments are quoted F.O.B. job site or other designation, Purchaser shall inspect the equipment shipped, notifying RSG of any damage or shortage within forty-eight hours of receipt, and failure to so notify RSG shall constitute acceptance by Purchaser, relieving RSG of any liability for shipping damages or shortages.

4. PAYMENTS: All invoices are net 30 days. Delinquencies are subject to a 1.5 percent service charge per month or the maximum permitted by law, whichever is less on all past due accounts. Pro rata payments are due as shipments are made. If shipments are delayed by the Purchaser, invoices shall be sent on the date when RSG is prepared to make shipment and payment shall become due under standard invoicing terms. If the work to be performed hereunder is delayed by the Purchaser, payments shall be based on the purchase price and percentage of completion. Products held for the Purchaser shall be at the risk and expense of the Purchaser. Unless specifically stated otherwise, prices quoted are for equipment only. These terms are independent of and not contingent upon the time and manner in which the Purchaser receives payment from the owner.

5. INSTALLATION SUPERVISION: Prices quoted for equipment do not include installation supervision, unless otherwise noted. RSG recommends and will, upon request, make available, RSG's then current rate, an experienced installation supervisor to act as the Purchaser's employee and agent to supervise installation of the equipment. Purchaser shall at its sole expense furnish all necessary labor equipment, and materials needed for installation.

Responsibility for proper operation of equipment, if not installed by RSG or installed in accordance with RSG or original manufacture instructions, and inspected and accepted in writing by RSG or manufacture representing RSG.

RSG will supply the safety devices described in this proposal or shown in RSG's or manufacture represented drawings furnished as part of this order but excepting these, RSG shall not be required to supply or install any safety devices whether required by law or otherwise. The Purchaser hereby agrees to indemnify and hold harmless RSG from any claims or losses arising due to alleged or actual insufficiency or inadequacy of the safety devices offered or supplied hereunder, whether specified by RSG or Purchaser, and from any damage resulting from the use of the equipment supplied hereunder.

6. ACCEPTANCE OF PRODUCTS: Products will be deemed accepted without any claim by Purchaser unless written notice of non-acceptance is received by RSG within 30 days of delivery if shipped F.O.B. point of shipment, or 48 hours of delivery if shipped F.O.B. point of destination. Such written notice shall not be considered received by RSG unless it is accompanied by all freight bills for said shipment, with Purchaser's notations as to damages, shortages and conditions of equipment, containers, and seals. Non-accepted products are subject to the return policy stated below.

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13. INDEMNIFICATION: Purchaser agrees to indemnify RSG from all costs incurred, including but not limited to court costs and reasonable attorney fees, from enforcing any provisions of this contract, including but not limited to breach of contract or costs incurred in collecting monies owed on this contract.

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16. LIABILITY: Professional liability insurance, including but not limited to, errors and omissions insurance, is not included. In any event, liability for errors and omissions shall be limited to the lesser of 25,000USD or the value of the particular piece of equipment (not the value of the entire order) supplied by RSG against which a claim is sought.

17. ARBITRATION NEGOTIATION: Any controversy or claim arising out of or relating to the performance of any contract resulting from this proposal or contract issued, or the breach thereof, shall be settled by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator(s) may be entered to any court having jurisdiction.

ACCEPTED BY PURCHASER

Customer Name: _____ Customer Address: _____

_____ Contact Name: _____

Contact Phone: _____ Contact Email: _____

Signature: _____ Printed Name: _____

Title: _____ Date: _____