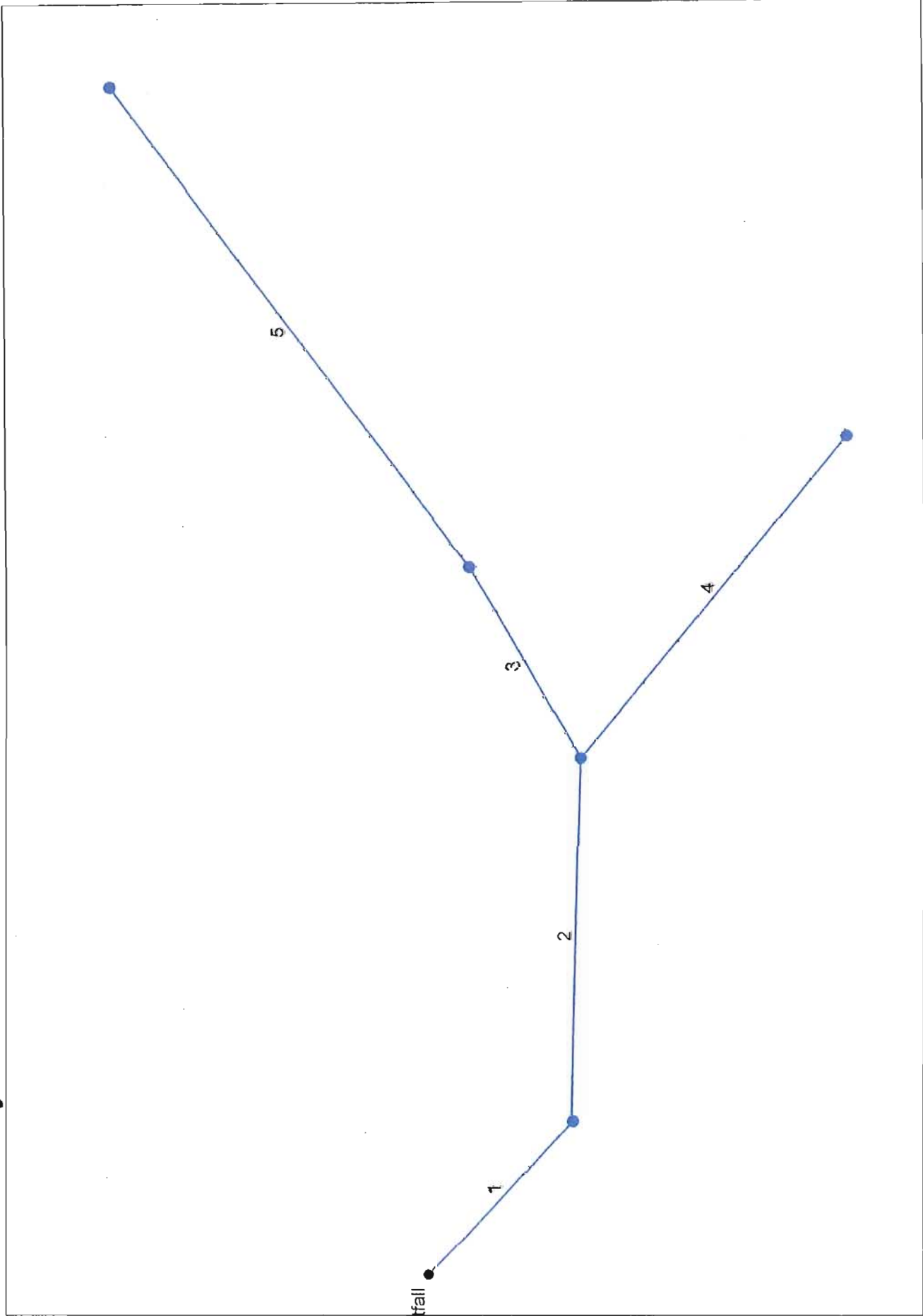


SYSTEM THROUGH PG&E PROPERTY

The system which discharges through the PG&E property presently receives flow from subwatersheds 1, 2, 3, 4, and 5. Analysis of the system reveals that the system has the capacity in excess of that required to accommodate the flow from this drainage area for each of the four conditions. In this instance there are effectively three subsystems separated by open waterway areas so that the calculations reflect that situation. The run through the PG&E property is a 30 inch and a 36 inch pipe. The calculations were done for two 33 inch pipes which have the same capacity as the 30 inch and 36 inch pipes. The following pages contain the system data and the hydrologic and hydraulic calculations.

Marin Sanitary Service



Project File: pointD.stm	CONDITION of and by	Number of lines: 5	Date: 06-14-2010
--------------------------	---------------------	--------------------	------------------

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data							Line ID	
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert EI Dn (ft)	Line slope (%)	Invert EI Up (ft)	Line size (in)	Line shape	N value (n)	J-loss coeff (K)		Inlet/Rim EI (ft)
1	End	80.000	43.094	DrGrt	0.00	5.30	0.75	0.0	6.00	1.81	7.45	30	Cir	0.013	1.07	12.70	
2	1	140.000	-41.831	MH	0.00	0.00	0.00	0.0	7.45	1.14	9.05	30	Cir	0.013	0.68	13.50	
3	2	85.000	-31.171	MH	0.00	0.00	0.00	0.0	9.05	1.35	10.20	34	Cir	0.013	0.15	14.40	
4	2	160.000	38.760	DrGrt	0.00	9.04	0.45	20.0	9.05	1.72	11.80	36	Cir	0.013	1.00	15.80	
5	3	230.000	-6.835	DrGrt	0.00	7.98	0.47	20.0	10.20	1.54	13.75	22	Cir	0.013	1.00	16.40	
Marin Sanitary Service																Number of lines: 5	Date: 06-14-2010

1/1

Storm Sewer Tabulation

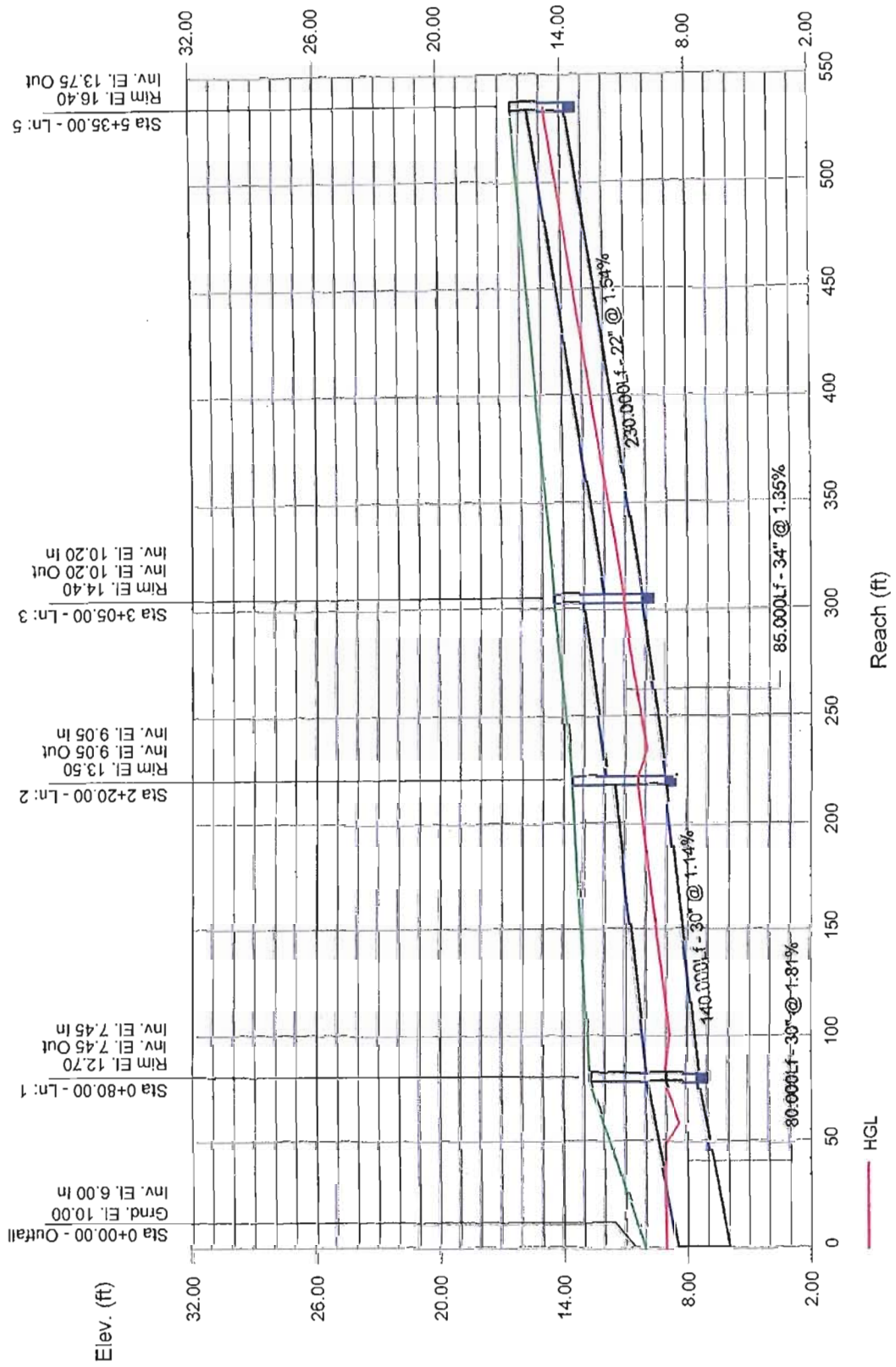
Station Line	To Line	Len (ft)	Drng Area (ac)		Rnoff coeff (C)	Area x C		Tc (min)		Rain (l) (in/hr)	Total flow (cfs)	Cap fu'l (cfs)	Vel (ft/s)	Pipe		Invert Elev (ft)		HGL Elev (ft)		Grnd / Rim Elev (ft)		Line ID
			Incr	Total		Inlet	Syst	Incr	Total					Dn	Up	Dn	Up	Dn	Up	Dn	Up	
1	End	80.000	5.30	22.32	0.75	3.98	11.79	0.0	21.5	2.0	23.25	55.21	5.84	30	1.81	6.00	7.45	9.00	9.06	10.00	12.70	
2	1	140.000	0.00	17.02	0.00	0.00	7.82	0.0	21.1	2.0	15.57	43.84	5.29	30	1.14	7.45	9.05	9.06	10.37	12.70	13.50	
3	2	85.000	0.00	7.98	0.00	0.00	3.75	0.0	20.7	2.0	7.54	66.61	3.54	34	1.35	9.05	10.20	10.37	11.09	13.50	14.40	
4	2	160.000	9.04	9.04	0.45	4.07	4.07	20.0	20.0	2.0	8.31	87.44	3.65	36	1.72	9.05	11.80	10.37	12.72	13.50	15.80	
5	3	230.000	7.98	7.98	0.47	3.75	3.75	20.0	20.0	2.0	7.66	22.28	5.61	22	1.54	10.20	13.75	11.09	14.75	14.40	16.40	

Marin Sanitary Service
 Number of lines: 5
 Run Date: 06-14-2010

NOTES: intensity = 9.01 / (Inlet time + 0.50) ^ 0.49; Return period = 100 Yrs. ; c = cir e = ellip b = box

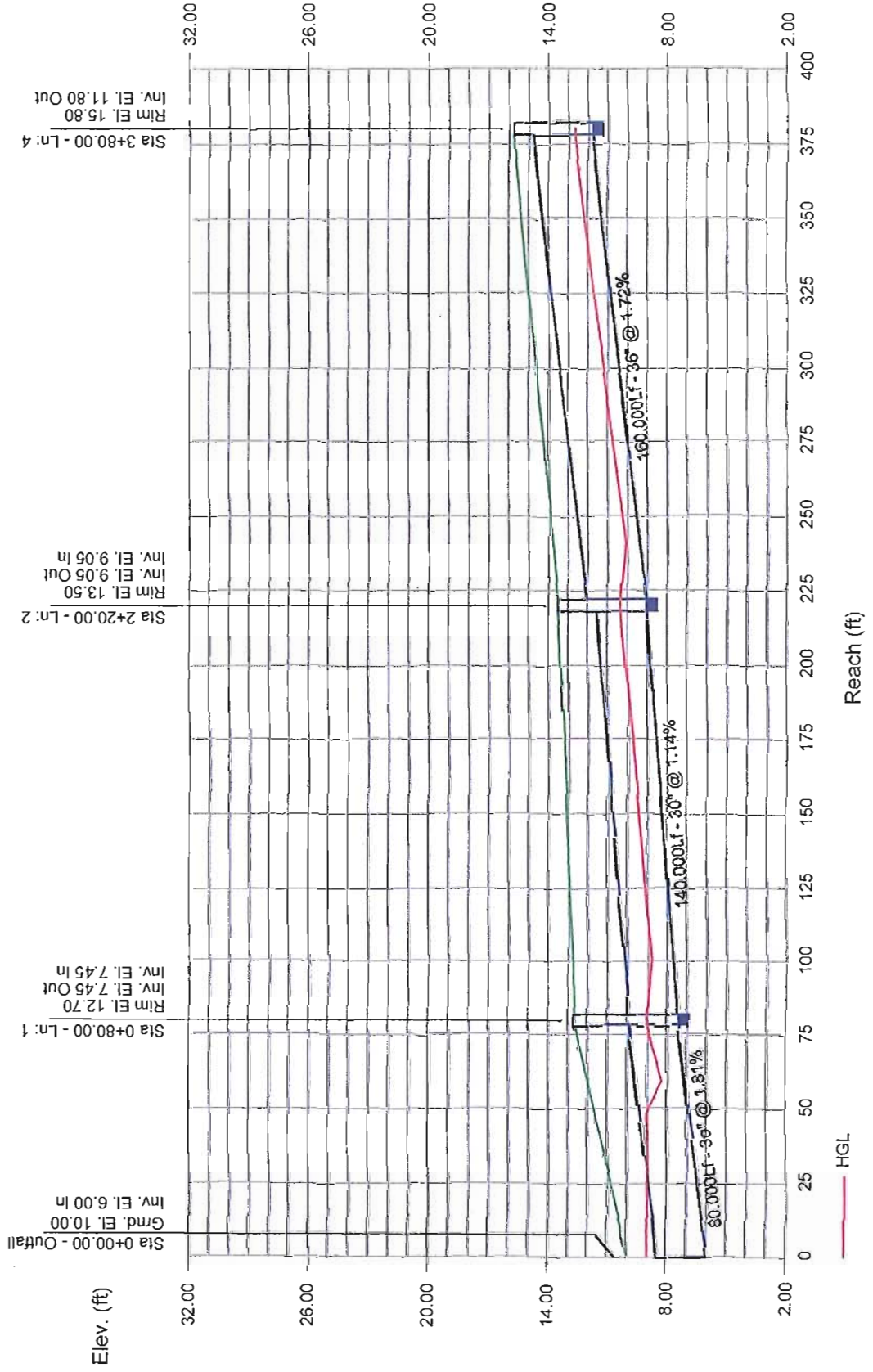
Storm Sewer Profile

Proj. file: pointD.stm

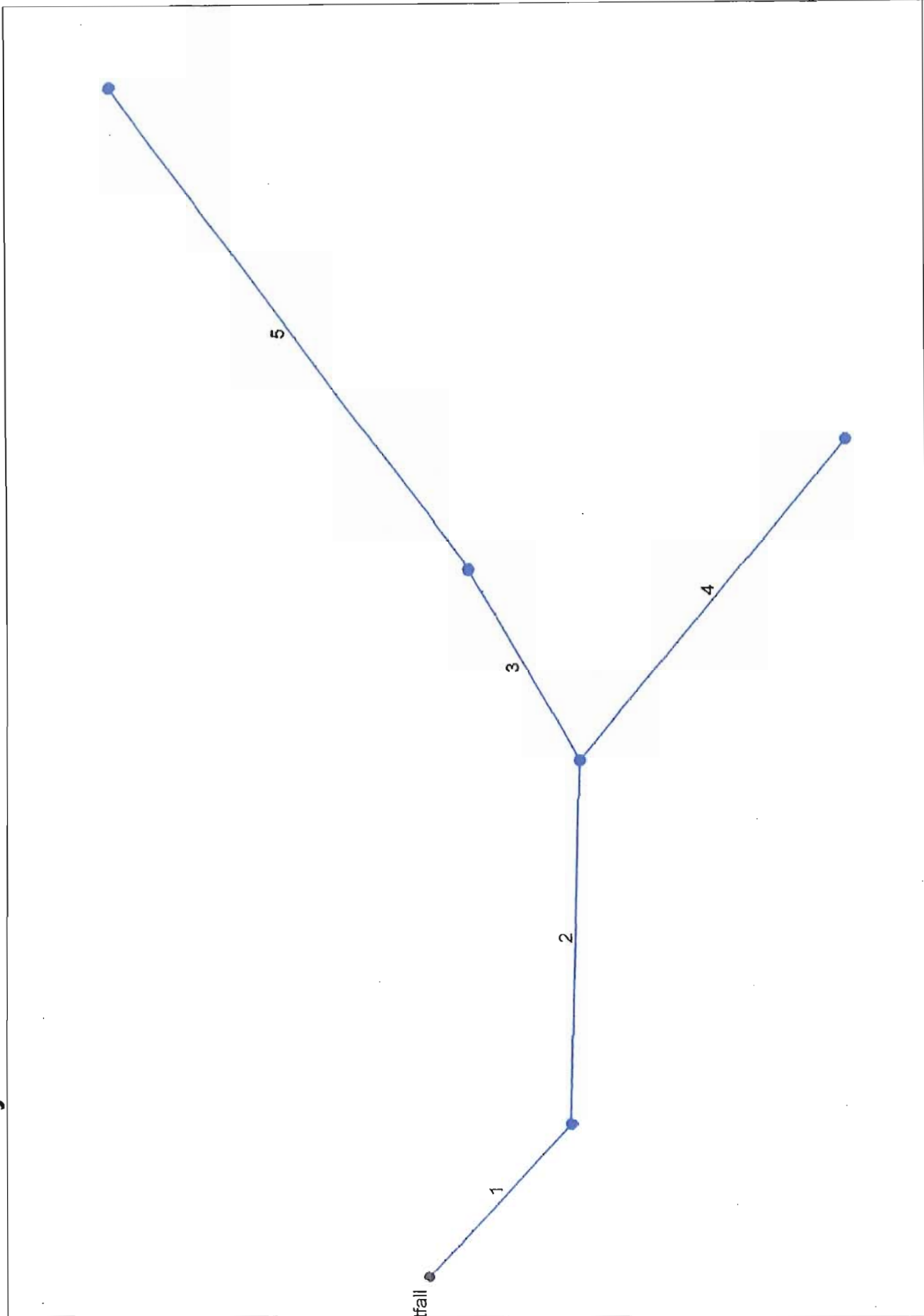


Storm Sewer Profile

Proj. file: pointD.stm



Marin Sanitary Service



Project File: pointDbefore.stm

CONNECTION c) and d)

Number of lines: 5

Date: 06-29-2010

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data							Line ID	
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Dmg area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line shape	N value (n)	J-loss coeff (K)		Inlet/ Rim El (ft)
1	End	80.000	43.094	DrGr	0.00	5.30	0.73	0.0	6.00	1.81	7.45	30	Cir	0.013	1.07	12.70	
2	1	140.000	-41.831	MH	0.00	0.00	0.00	0.0	7.45	1.14	9.05	30	Cir	0.013	0.68	13.50	
3	2	85.000	-31.171	MH	0.00	0.00	0.00	0.0	9.05	1.35	10.20	34	Cir	0.013	0.15	14.40	
4	2	160.000	38.760	DrGr	0.00	9.04	0.41	20.0	9.05	1.72	11.80	36	Cir	0.013	1.00	15.80	
5	3	230.000	-6.835	DrGr	0.00	7.98	0.43	20.0	10.20	1.54	13.75	22	Cir	0.013	1.00	16.40	
Marin Sanitary Service																Number of lines: 5	Date: 06-29-2010

Storm Sewer Tabulation

Station Line	To Line	Len (ft)	Drng Area (ac)		Rnoff coeff (C)	Area x C		Tc (min)		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev (ft)		HGL Elev (ft)		Grnd / Rim Elev (ft)		Line ID
			Incr	Total		Incr	Total	Inlet	Syst					Size (in)	Slope (%)	Dn	Up	Dn	Up	Dn	Up	
1	End	80.000	5.30	22.32	0.73	3.87	11.01	0.0	21.6	2.0	21.67	55.21	5.58	30	1.81	6.00	7.45	9.00	9.01	10.00	12.70	
2	1	140.000	0.00	17.02	0.00	0.00	7.14	0.0	21.1	2.0	14.20	43.84	5.08	30	1.14	7.45	9.05	9.01	10.31	12.70	13.50	
3	2	85.000	0.00	7.98	0.00	0.00	3.43	0.0	20.7	2.0	6.89	66.61	3.44	34	1.35	9.05	10.20	10.31	11.05	13.50	14.40	
4	2	160.000	9.04	9.04	0.41	3.71	3.71	20.0	20.0	2.0	7.57	87.44	3.54	36	1.72	9.05	11.80	10.31	12.68	13.50	15.80	
5	3	230.000	7.98	7.98	0.43	3.43	3.43	20.0	20.0	2.0	7.01	22.28	5.44	22	1.54	10.20	13.75	11.05	14.71	14.40	16.40	

Marin Sanitary Service

Number of lines: 5

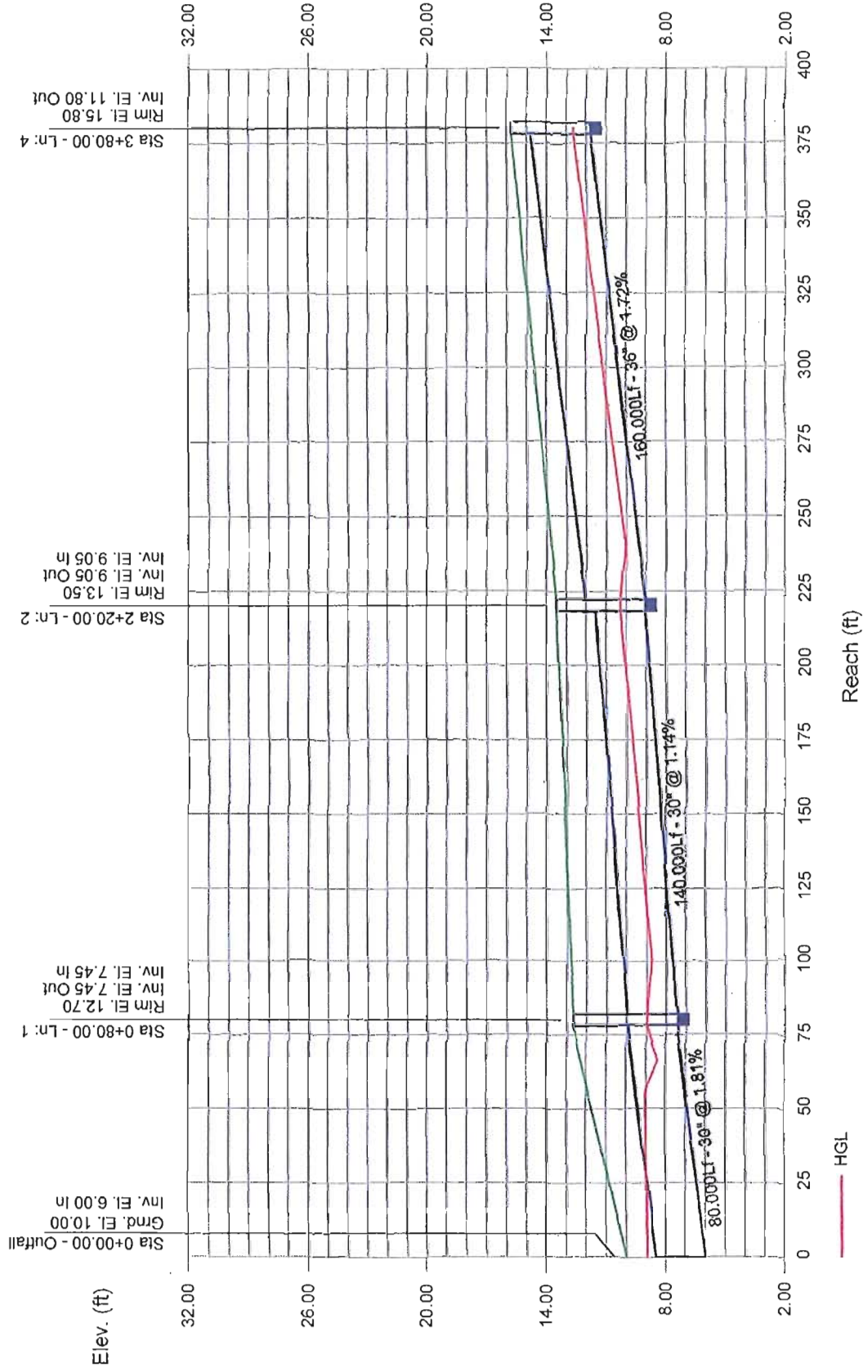
Run Date: 06-29-2010

NOTES: Intensity = 9.01 / (Inlet time + 0.50) ^ 0.49; Return period = 100 Yrs. ; c = cir e = ellip b = box

50

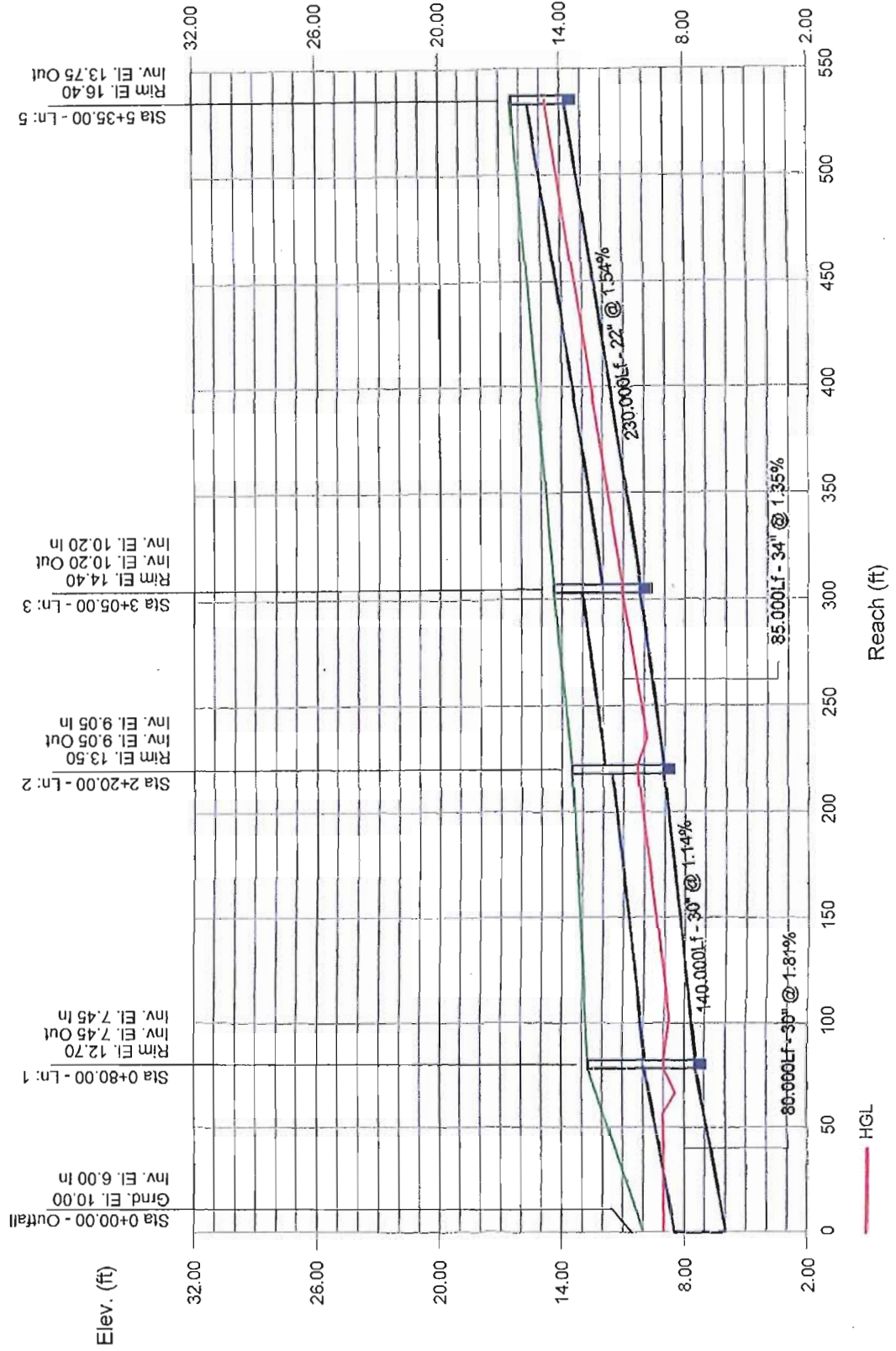
Storm Sewer Profile

Proj. file: pointDbefore.stm

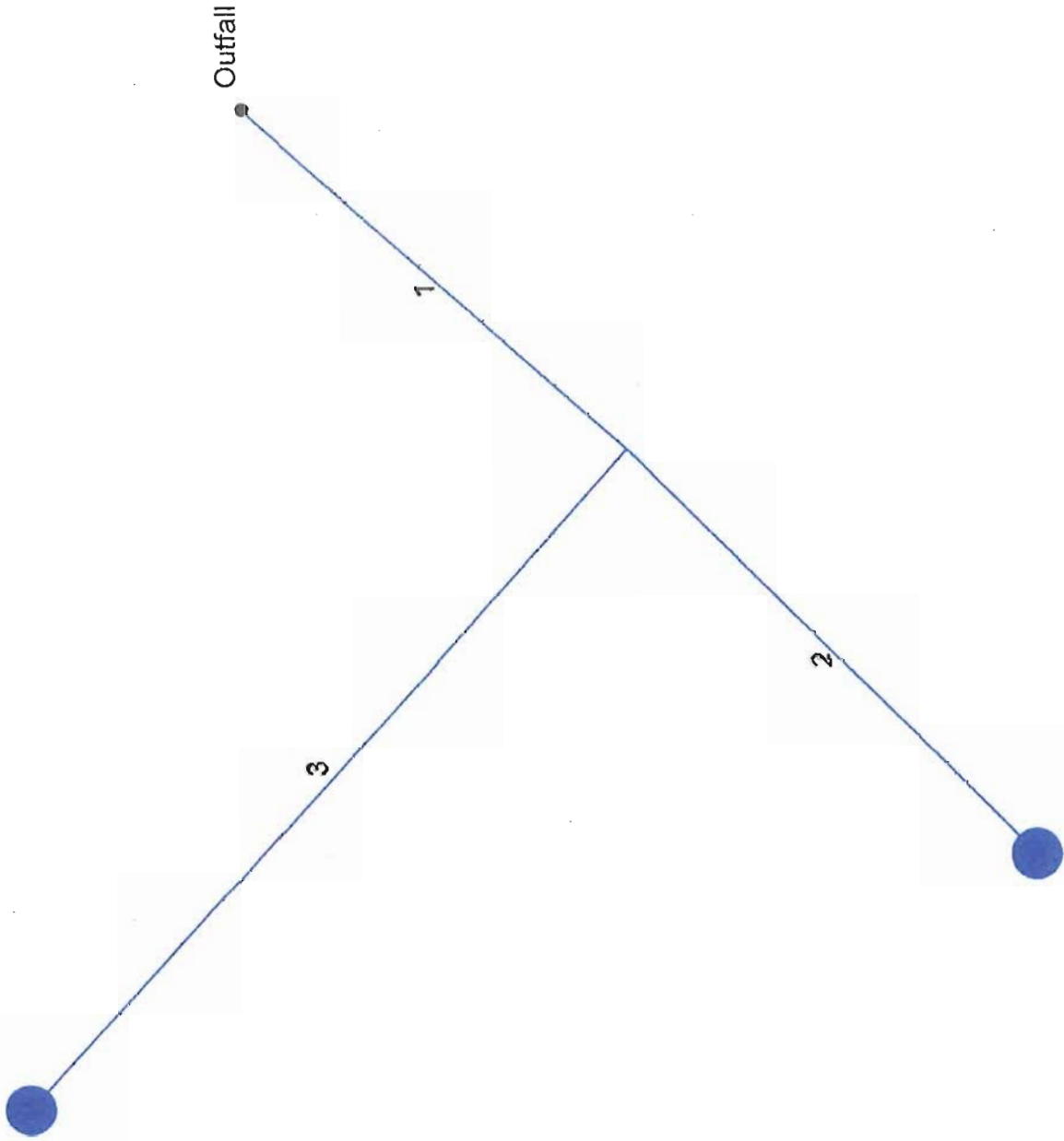


Storm Sewer Profile

Proj. file: pointDbefore.stm



Hydraflow Storm Sewers Extension for AutoCAD® Civil 3D® 2009 Plan



Project File: Area5 2003.stm

CONDITION A

Number of lines: 3

Date: 07-01-2010

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data							Line ID
	Dnsfr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line shape	N value (n)	J-loss coeff (K)	
1	End	42.000	131.243	None	0.00	0.00	0.00	0.0	11.40	4.76	13.40	15	Cir	0.013	1.00	16.00
2	1	47.000	3.274	DrGrt	0.00	5.67	0.50	15.0	13.40	4.26	15.40	15	Cir	0.013	1.00	17.50
3	1	73.000	90.801	DrGrt	0.00	2.00	0.57	15.0	13.40	2.05	14.90	12	Cir	0.013	1.00	16.50
Project File: Area5 2003.stm Number of lines: 3																
Date: 07-01-2010																

Storm Sewer Tabulation

Station Line	To Line	Len (ft)	Drng Area (ac)		Rnoff coeff (C)	Area x C		Tc (min)		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev (ft)		HGL Elev (ft)		Grnd / Rim Elev (ft)		Line ID	
			Incr	Total		Incr	Total	Inlet	Syst					Size (in)	Slope (%)	Dn	Up	Dn	Up	Dn	Up		Dn
1	End	42,000	0.00	7.67	0.00	3.98	0.00	3.98	0.0	15.4	2.3	9.21	14.09	7.50	15	4.76	11.40	13.40	14.00	14.85	15.00	16.00	
2	1	47,000	5.67	5.67	0.50	2.84	2.84	15.0	15.0	2.3	6.64	13.32	5.77	15	4.26	13.40	15.40	15.73	16.43	16.00	17.50		
3	1	73,000	2.00	2.00	0.57	1.14	1.14	15.0	15.0	2.3	2.67	5.10	3.40	12	2.05	13.40	14.90	15.73	16.14	16.00	16.50		

Project File: Area5 2003.stm

Number of lines: 3

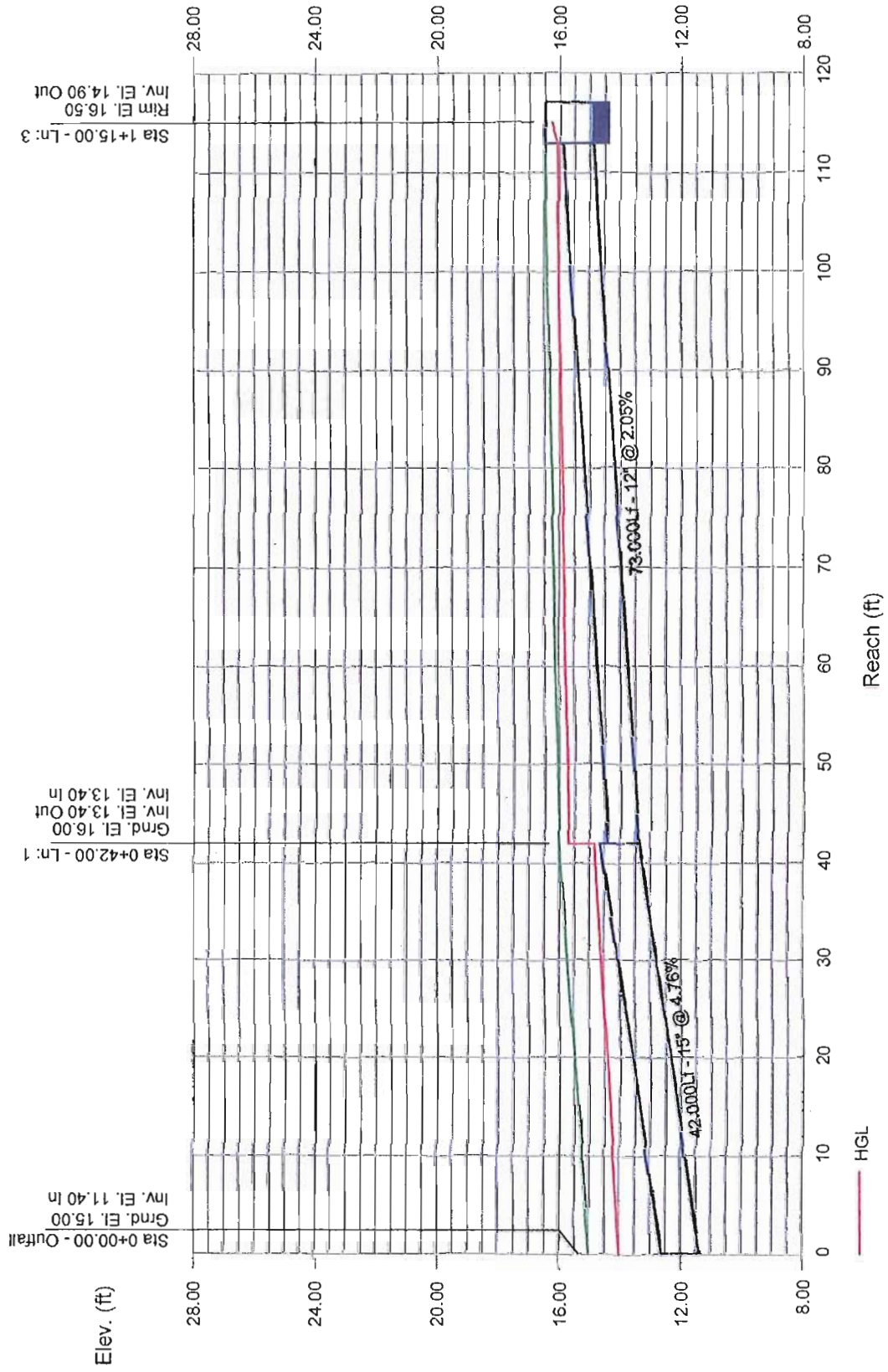
Run Date: 07-01-2010

NOTES: Intensity = 9.01 / (Inlet time + 0.50) ^ 0.49; Return period = 100 Yrs. ; c = cir e = ellip b = box

54

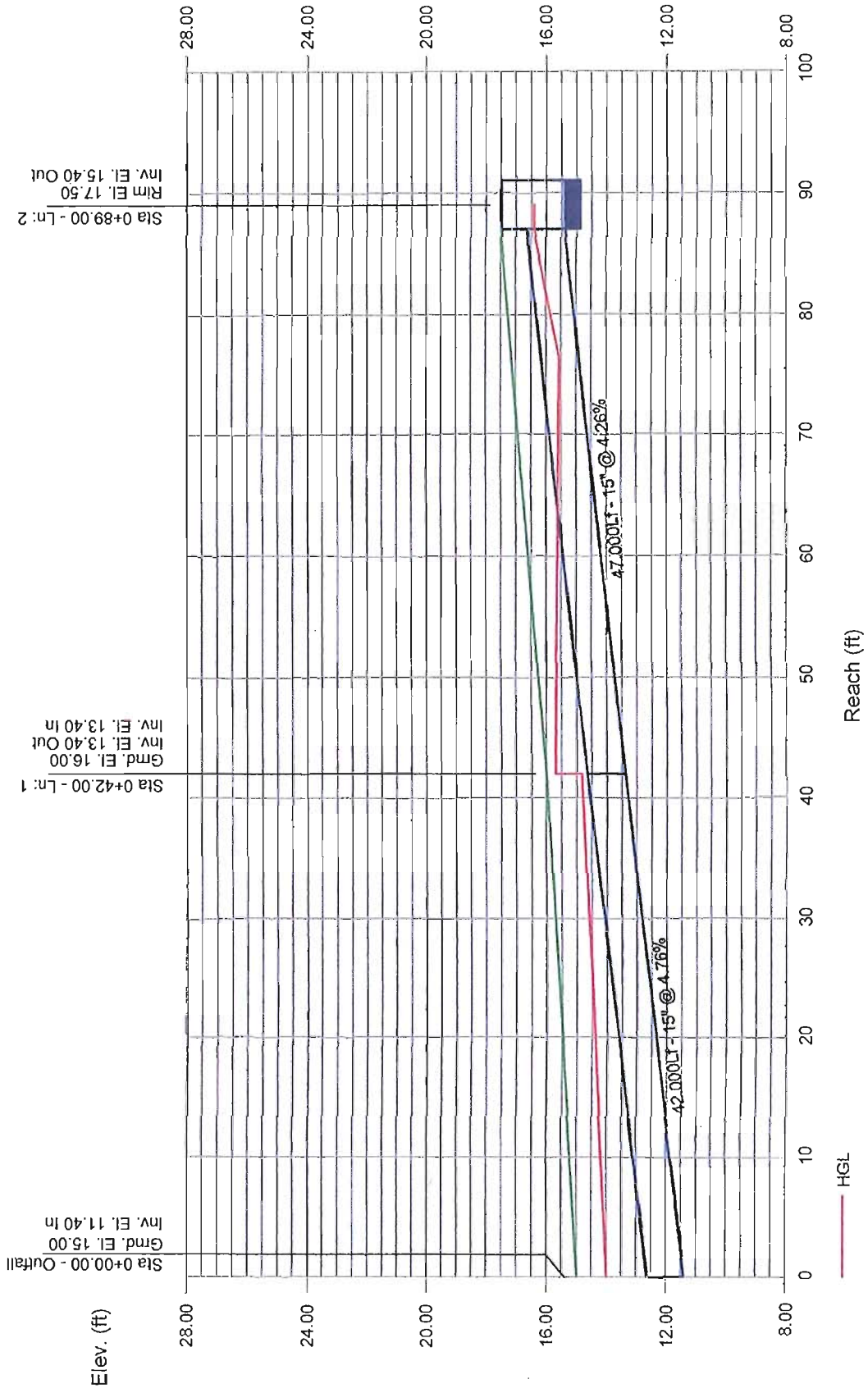
Storm Sewer Profile

Proj. file: Area5 2003.stm

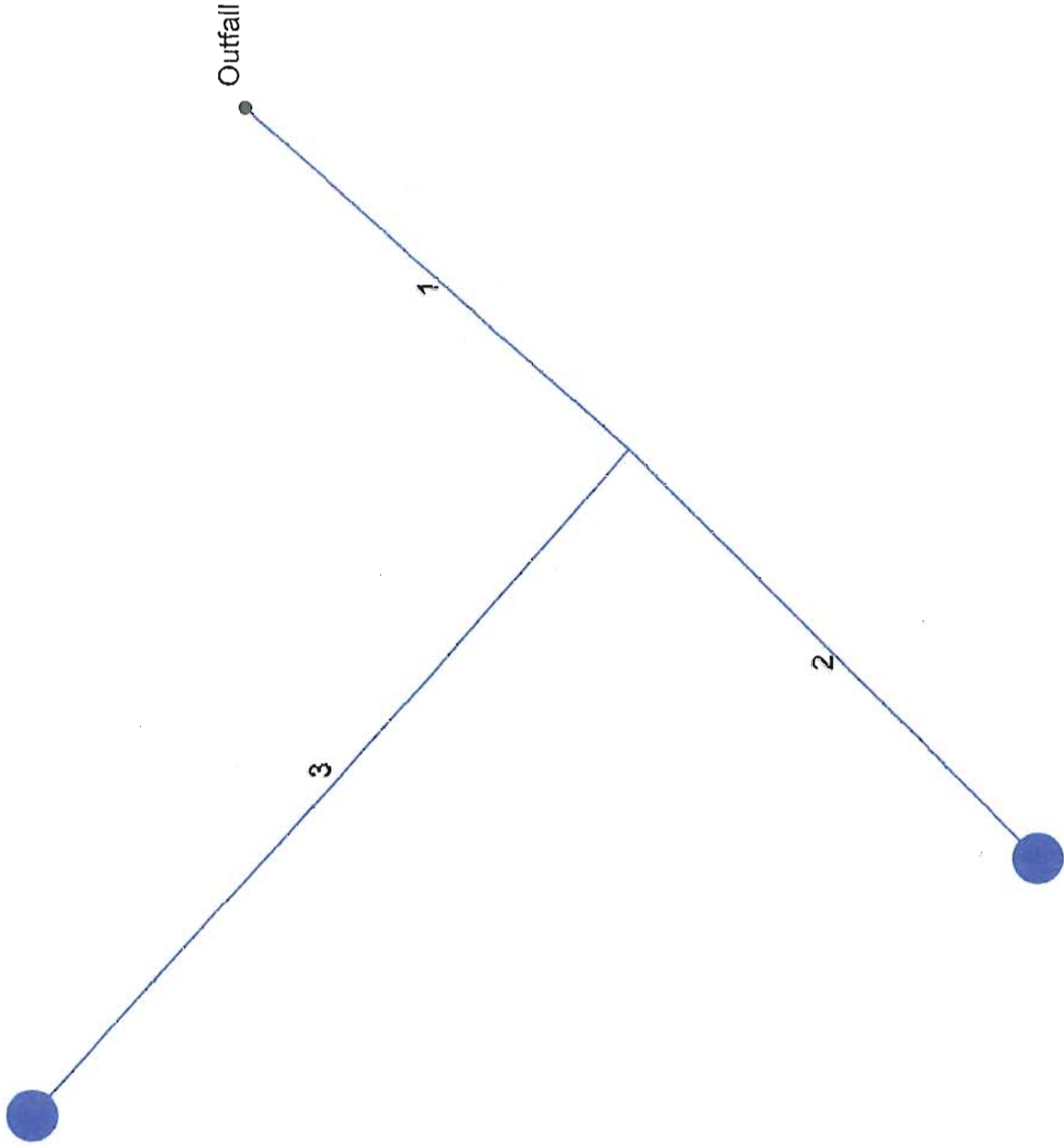


Storm Sewer Profile

Proj. file: Area5 2003.stm



Hydraflow Storm Sewers Extension for AutoCAD® Civil 3D® 2009 Plan



Project File: Area5.stm

CONDITION 6

Number of lines: 3

Date: 06-30-2010

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data							Line ID
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Dmg area (ac)	Runoff coeff (C)	Inlet time (min)	Invert EI Dn (ft)	Line slope (%)	Invert EI Up (ft)	Line size (in)	Line shape	N value (n)	J-loss coeff (K)	
1	End	42.000	131.243	None	0.00	0.00	0.00	0.0	11.40	4.76	13.40	15	Cir	0.013	1.00	16.00
2	1	47.000	3.274	DrGr	0.00	5.67	0.57	15.0	13.40	4.26	15.40	15	Cir	0.013	1.00	17.50
3	1	73.000	90.801	DrGr	0.00	2.00	0.57	15.0	13.40	2.05	14.90	12	Cir	0.013	1.00	16.50

Project File: Area5.sfm

Number of lines: 3

Date: 06-30-2010

58

Storm Sewer Tabulation

Station Line	To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
			Incr (ac)	Total (ac)		Incr Total	Inlet (min)	Syst (min)	Size (in)					Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)		
1	End	42.000	0.00	7.67	0.00	0.00	4.37	0.0	15.4	2.3	10.13	14.09	8.25	15	4.76	11.40	13.40	14.00	15.03	15.00	16.00	
2	1	47.000	5.67	5.67	0.57	3.23	3.23	15.0	15.0	2.3	7.57	13.32	6.17	15	4.26	13.40	15.40	16.09	16.74	16.00	17.50	
3	1	73.000	2.00	2.00	0.57	1.14	1.14	15.0	15.0	2.3	2.67	5.10	3.40	12	2.05	13.40	14.90	16.09	16.50	16.00	16.50	

Project File: Area5.stm

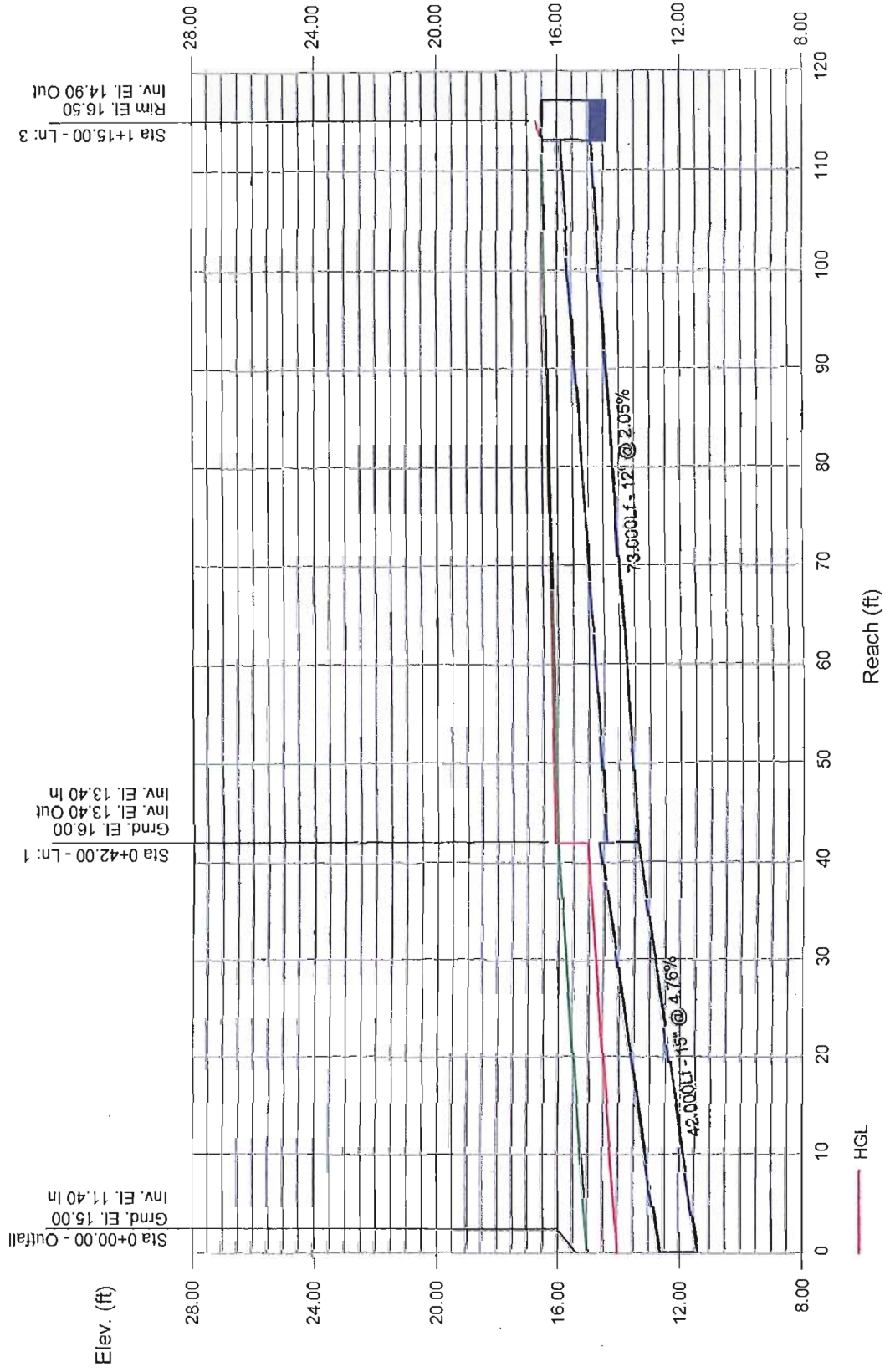
Number of lines: 3

Run Date: 06-30-2010

NOTES: Intensity = 9.01 / (Inlet time + 0.50) ^ 0.49; Return period = 100 Yrs. ; c = cir e = ellip b = box

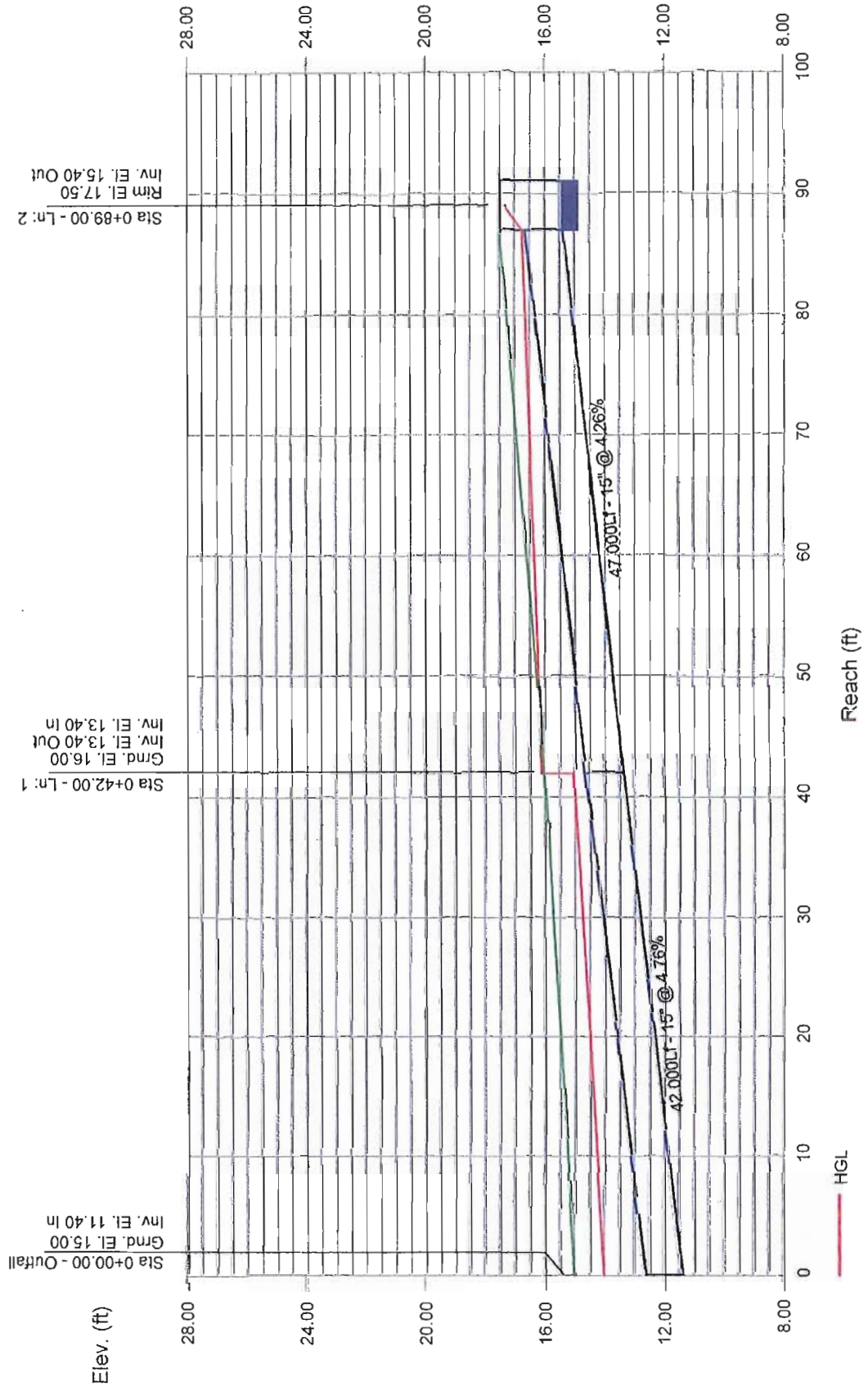
Storm Sewer Profile

Proj. file: Area5.stm

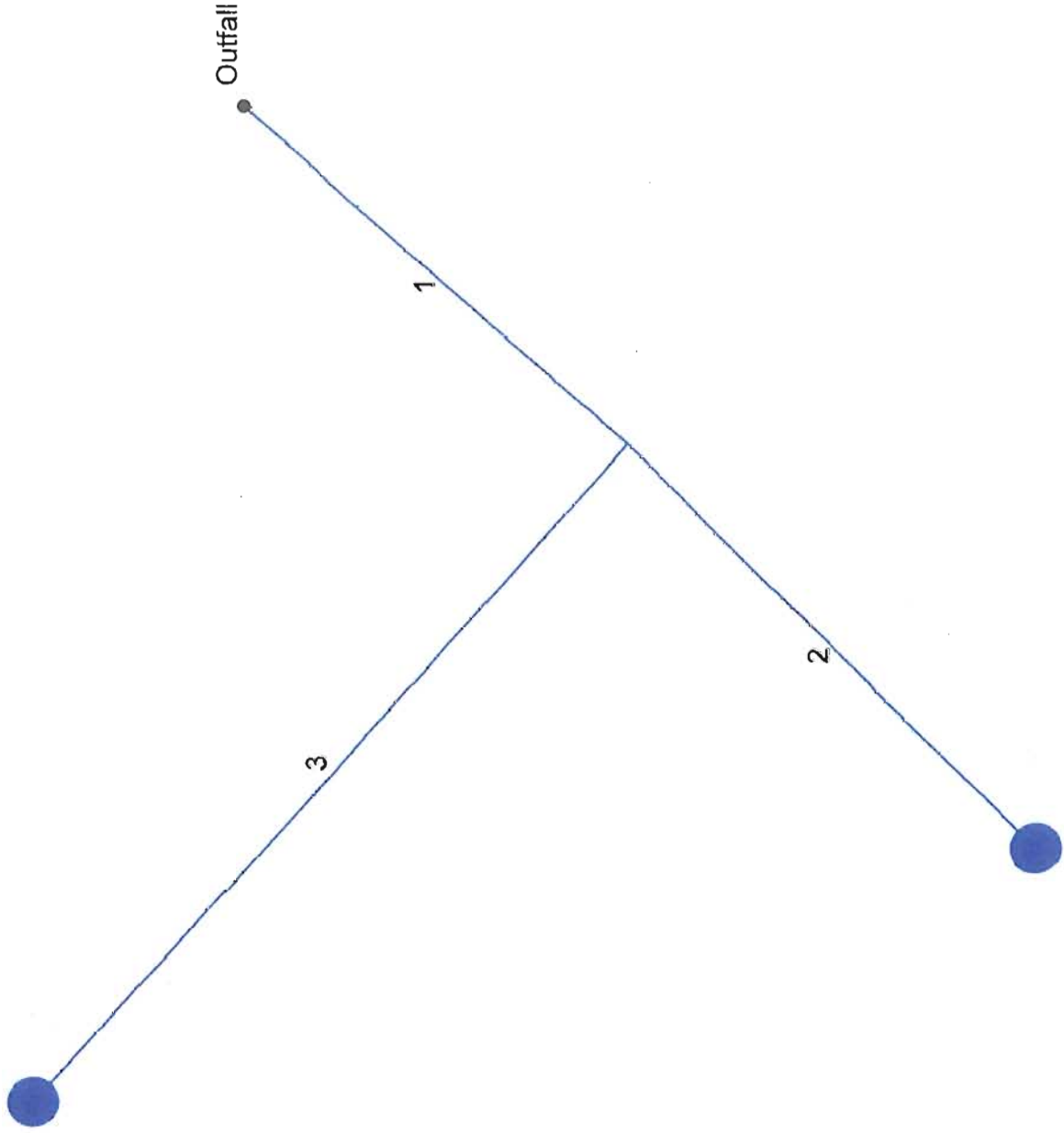


Storm Sewer Profile

Proj. file: Area5.stm



Hydraflow Storm Sewers Extension for AutoCAD® Civil 3D® 2009 Plan



Date: 07-01-2010

Number of lines: 3

Project File: Area5before 2003.stm

CONNECTION ↵

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data							Line ID
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Dmg area (ac)	Runoff coeff (C)	Inlet time (min)	Invert E: Dn (ft)	Line slope (%)	Invert E: Up (ft)	Line size (in)	Line shape	N value (n)	J-loss coeff (K)	
1	End	42.000	131.243	None	0.00	0.00	0.00	0.0	11.40	4.76	13.40	15	Cir	0.013	1.00	16.00
2	1	47.000	3.274	DrGr	0.00	5.67	0.49	15.0	13.40	4.26	15.40	15	Cir	0.013	1.00	17.50
3	1	73.000	90.801	DrGr	0.00	2.00	0.56	15.0	13.40	2.05	14.90	12	Cir	0.013	1.00	16.50
Project File: Area5before 2003.stm Number of lines: 3 Date: 07-01-2010																

6.3

Storm Sewer Tabulation

Station Line	To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
			Incr (ac)	Total (ac)		Incr (min)	Syst (min)	Incr (in)	Slope (%)					Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)			
1	End	42.000	0.00	7.67	0.00	3.90	0.0	15.4	2.3	9.03	14.09	7.36	15	4.76	11.40	13.40	14.00	14.82	15.00	16.00		
2	1	47.000	5.67	5.67	0.49	2.78	15.0	15.0	2.3	6.51	13.32	5.68	15	4.26	13.40	15.40	15.66	16.42	16.00	17.50		
3	1	73.000	2.00	2.00	0.56	1.12	15.0	15.0	2.3	2.62	5.10	3.34	12	2.05	13.40	14.90	15.66	16.06	16.00	16.50		

Project File: Area5before 2003.stm

Number of lines: 3

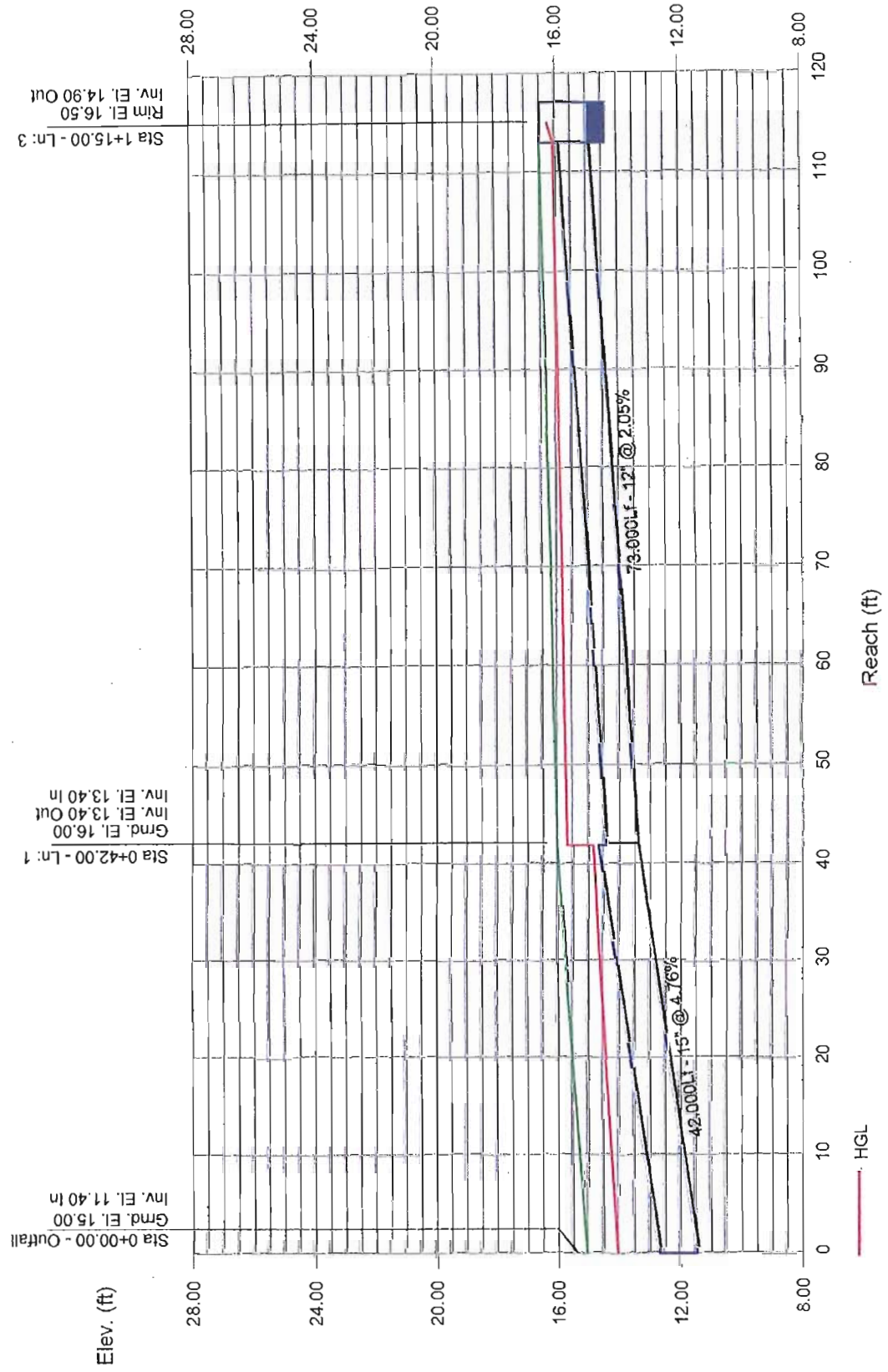
Run Date: 07-01-2010

NOTES: Intensity = 9.01 / (Inlet time + 0.50) ^ 0.49; Return period = 100 Yrs. ; c = cir e = ellip b = box

64

Storm Sewer Profile

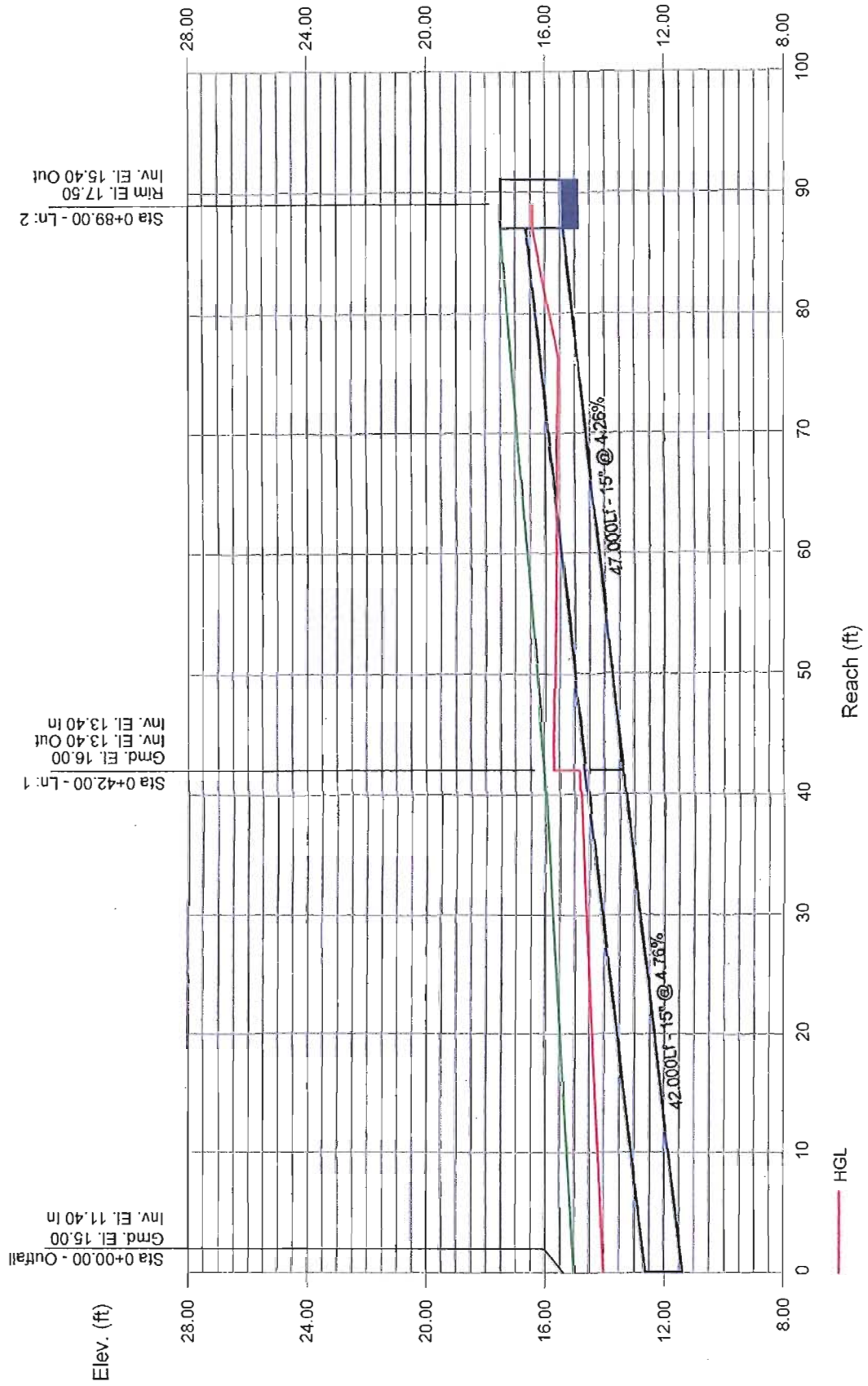
Proj. file: Area5before 2003.stm



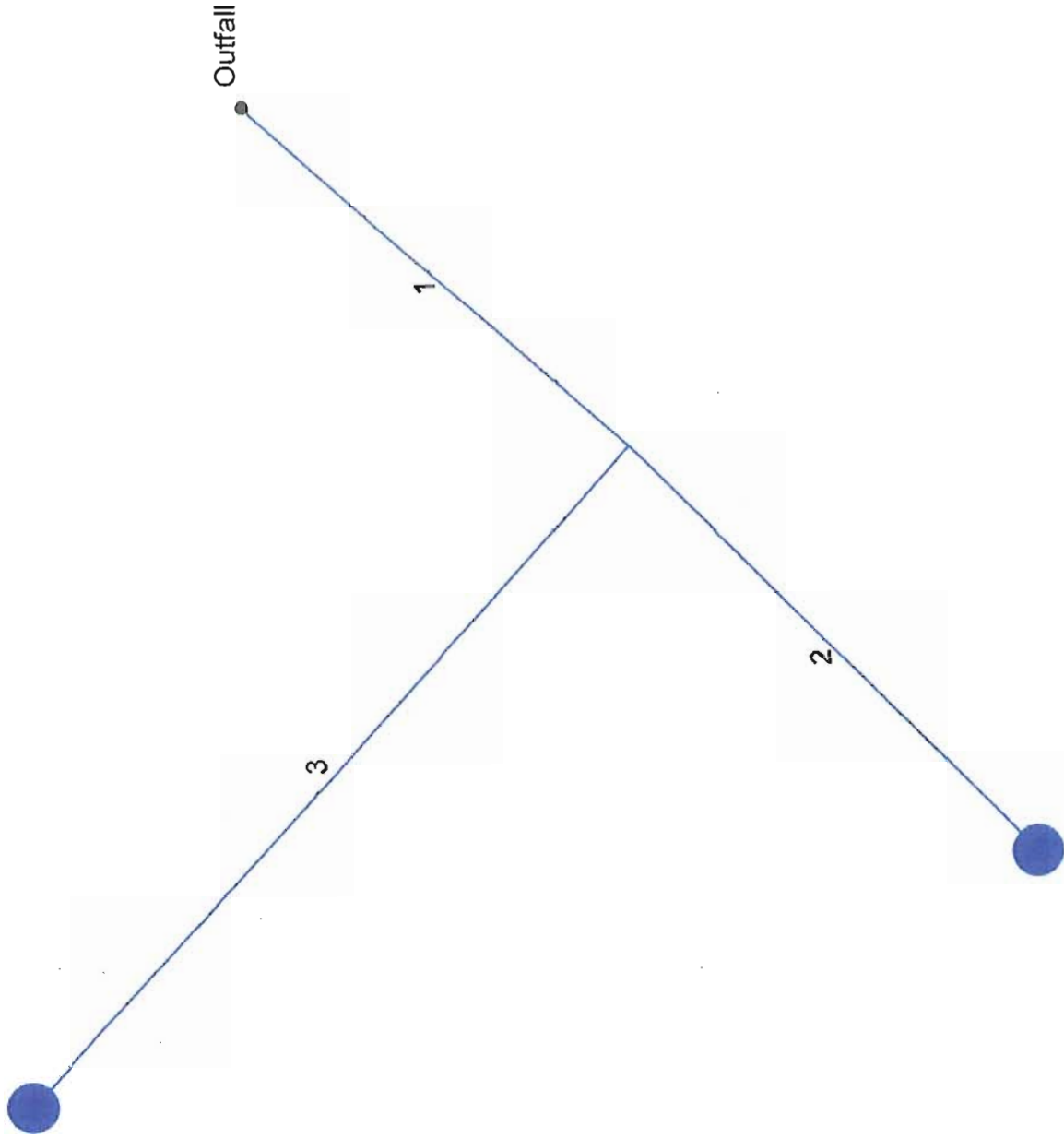
65

Storm Sewer Profile

Proj. file: Area5before 2003.stm



Hydraflow Storm Sewers Extension for AutoCAD® Civil 3D® 2009 Plan



Project File: Area5before.stm

CANDITORY d)

Number of lines: 3

Date: 06-30-2010

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data							Line ID
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Dmg area (ac)	Runoff coeff (C)	Inlet time (min)	Invert EI Dn (ft)	Line slope (%)	Invert EI Up (ft)	Line size (in)	Line shape	N value (n)	J-loss coeff (K)	
1	End	42.000	131.243	None	0.00	0.00	0.00	0.0	11.40	4.76	13.40	15	Cir	0.013	1.00	16.00
2	1	47.000	3.274	DrGrt	0.00	5.67	0.56	15.0	13.40	4.26	15.40	15	Cir	0.013	1.00	17.50
3	1	73.000	90.801	DrGrt	0.00	2.00	0.56	15.0	13.40	2.05	14.90	12	Cir	0.013	1.00	16.50

Project File: Area5before.stm

Number of lines: 3

Date: 06-30-2010

Storm Sewer Tabulation

Station Line	To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
			Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	42.000	0.00	7.67	0.00	0.00	4.30	0.0	15.4	2.3	9.95	14.09	8.11	15	4.76	11.40	13.40	14.00	15.00	15.00	16.00	
2	1	47.000	5.67	5.67	0.56	3.18	3.18	15.0	15.0	2.3	7.44	13.32	6.15	15	4.26	13.40	15.40	16.02	16.57	16.00	17.50	
3	1	73.000	2.00	2.00	0.56	1.12	1.12	15.0	15.0	2.3	2.62	5.10	3.34	12	2.05	13.40	14.90	16.02	16.42	16.00	16.50	

Project File: Area5before.stm

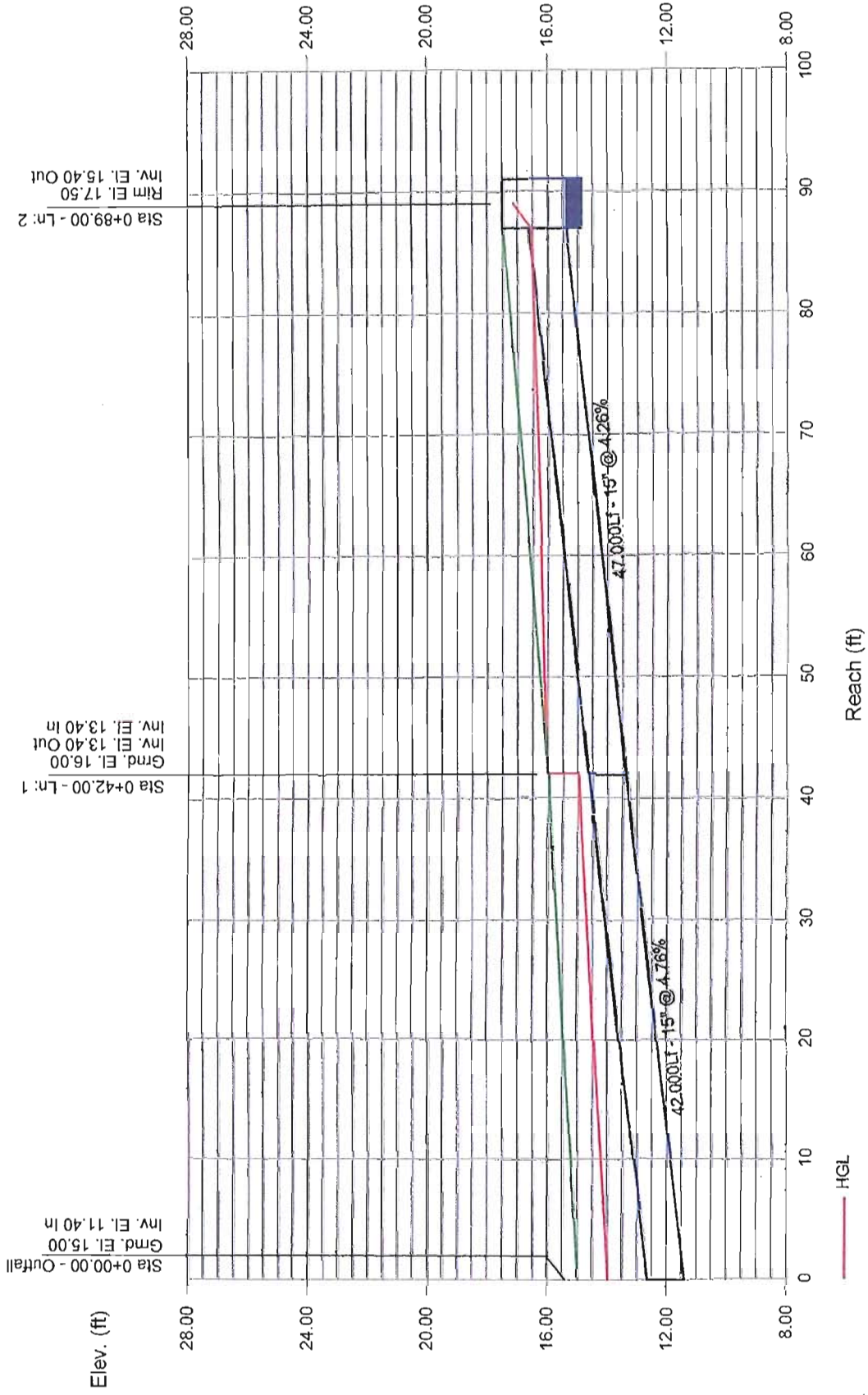
Number of lines: 3

Run Date: 06-30-2010

NOTES: Intensity = 9.01 / (Inlet time + 0.50) ^ 0.49; Return period = 100 Yrs. ; c = cir e = ellip b = box

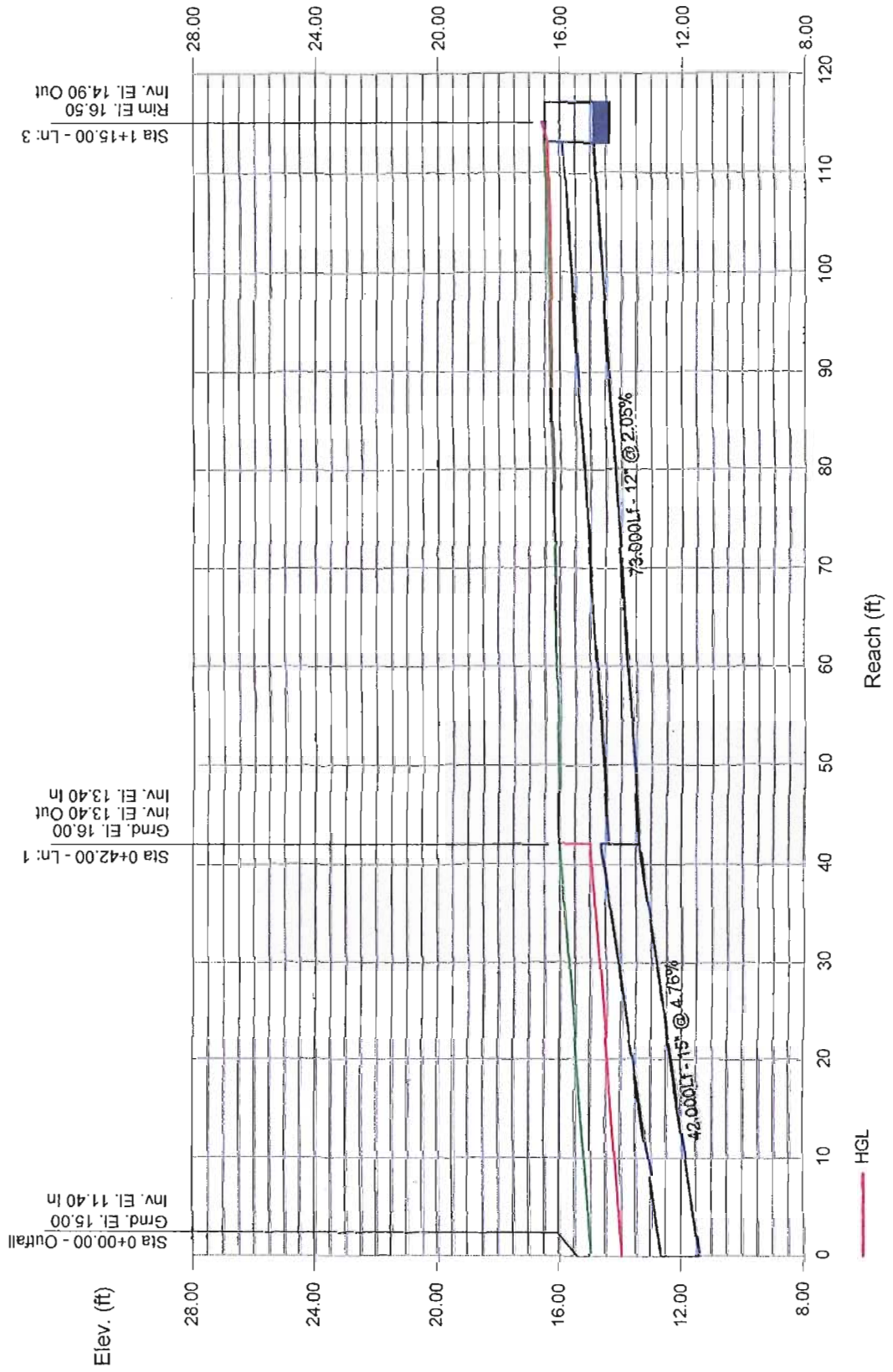
Storm Sewer Profile

Proj. file: Area5before.stm



Storm Sewer Profile

Proj. file: Area5before.stm



Point E

Outfall



Project File: Point E 2003.stm

CONTRIBUTION a)

Number of lines: 1

Date: 07-01-2010

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data							Line ID	
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Drng area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line shape	N value (n)	J-loss coeff (K)		Inlet/ Rim El (ft)
1	End	650.000	180.000	Hdwl	32.33	0.00	0.00	0.0	0.50	0.69	5.00	33	Cir(2b)	0.013	1.00	10.00	
Point E																	
Number of lines: 1															Date: 07-01-2010		

Storm Sewer Tabulation

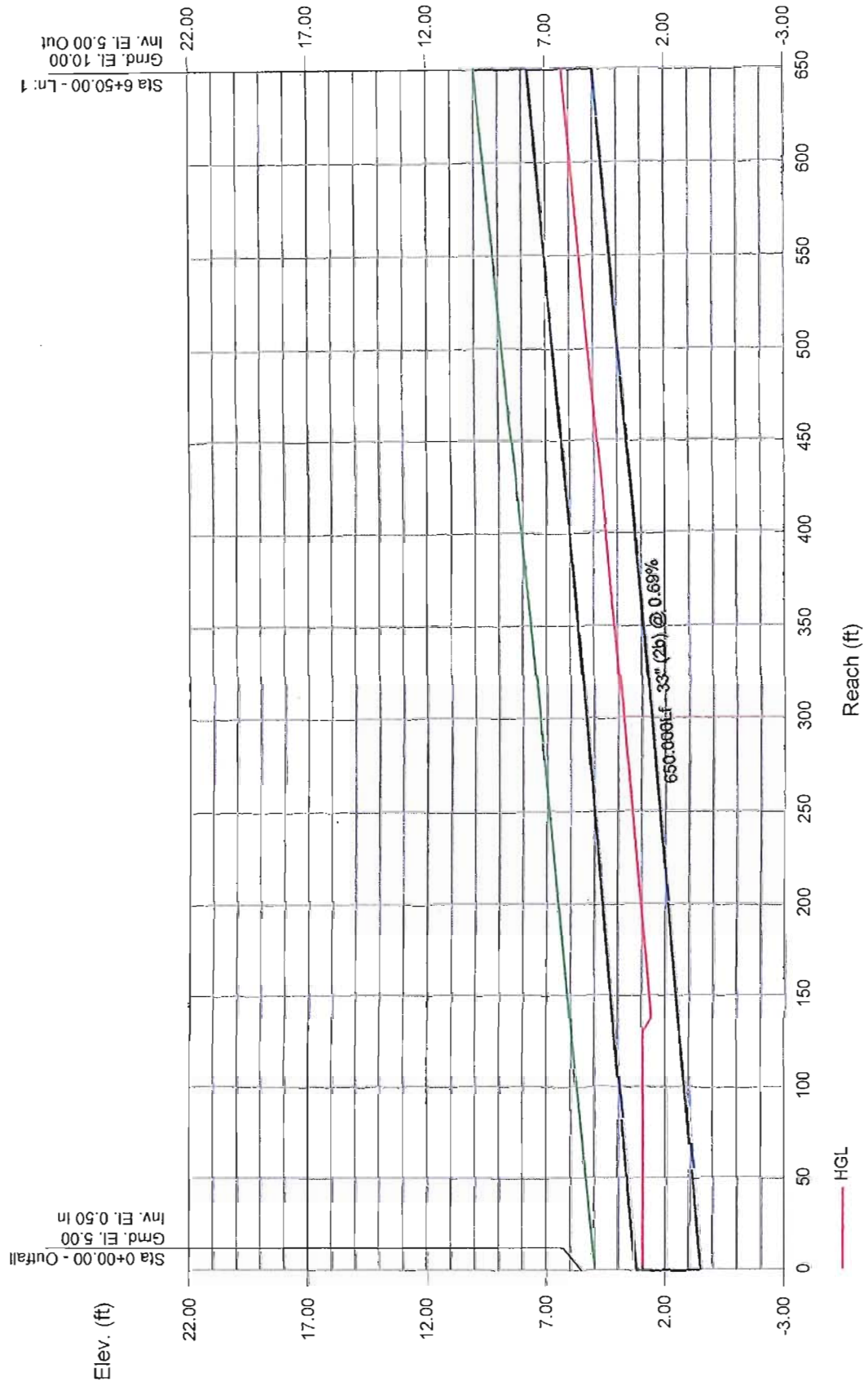
Station Line	To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
			Incr (ac)	Total (ac)		Incr (min)	Total (min)	Syst (min)	Inlet (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	650.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	32.33	88.00	4.32	33(26)	0.69	0.50	5.00	3.00	6.31	5.00	10.00	
Point E														Number of lines: 1				Run Date: 07-01-2010				

73

NOTES: Intensity = 9.01 / (Inlet time + 0.50) ^ 0.49; Return period = 100 Yrs. ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: Point E 2003.stm



7/1

Point E

Outfall



1

Project File: Point E.stm

CONDITION b)

Number of lines: 1

Date: 07-01-2010

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data							Line ID
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Dmg area (ac)	Runoff coeff (C)	Inlet time (min)	Invert EI Dn (ft)	Line slope (%)	Invert EI Up (ft)	Line size (in)	Line shape	N value (n)	J-loss coeff (K)	
1	End	650.000	180.000	Hdwl	33.38	0.00	0.00	0.0	0.50	0.69	5.00	33	Cir(2b)	0.013	1.00	10.00
Number of lines: 1																
Date: 07-01-2010																
Point E																

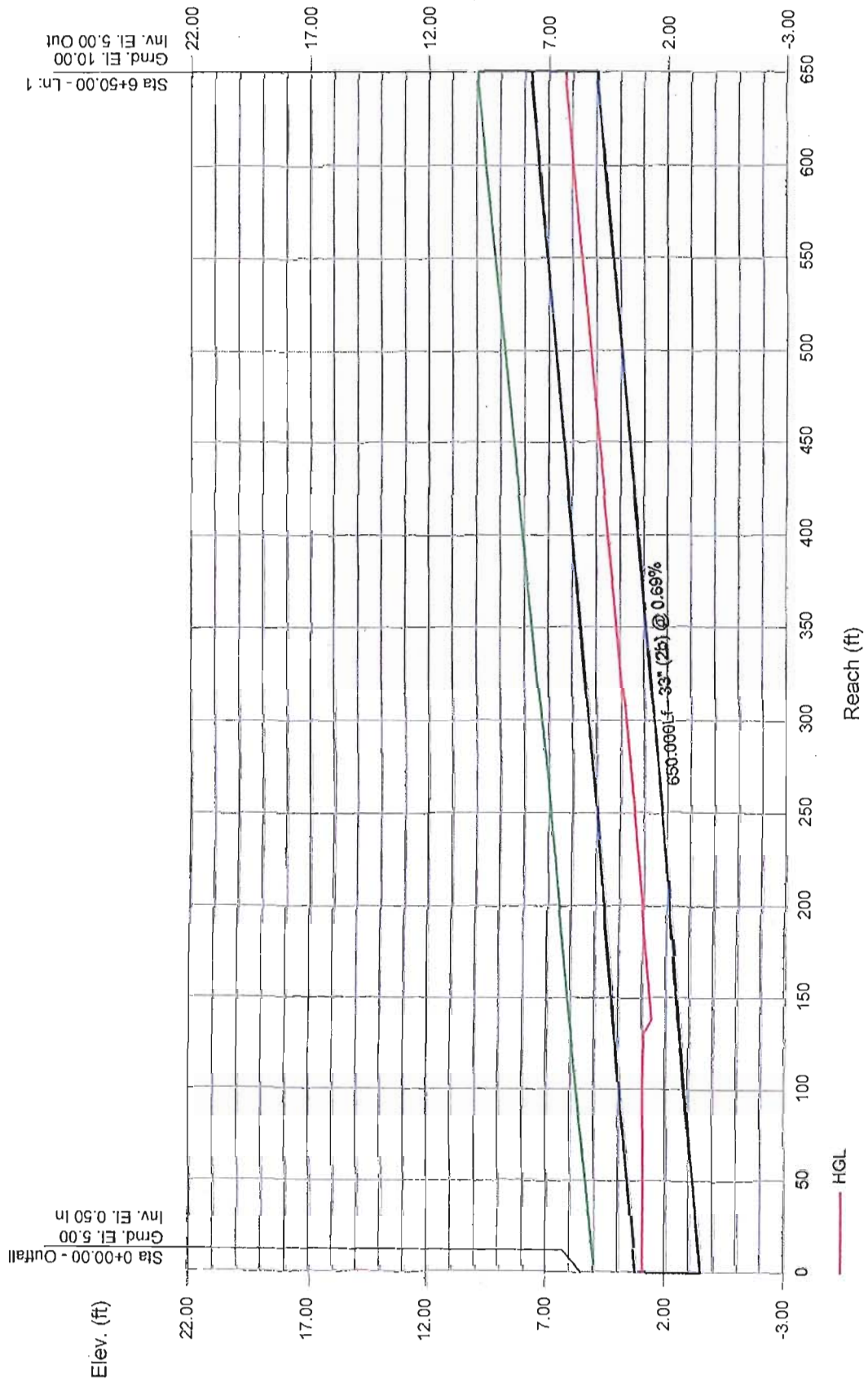
Storm Sewer Tabulation

Station Line	To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
			Incr (ac)	Total (ac)		Incr (min)	Syst (min)	Incr (in)	Slope (%)					Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)			
1	End	650.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	33.38	88.00	4.40	33(2b)	0.69	0.50	5.00	3.00	6.33	5.00	10.00	
Point E														Number of lines: 1				Run Date: 07-01-2010				

NOTES: Intensity = 9.01 / (Inlet time + 0.50) ^ 0.49; Return period = 100 Yrs. ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: New.stm



Point E

Outfall



Project File: Point E before.stm

COMBITION C-D

Number of lines: 1

Date: 07-01-2010

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data							Line ID	
	Distr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Dmg area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line shape	N value (n)	J-loss coeff (K)		Inlet/Rim El (ft)
1	End	650.000	180.000	Hdwl	31.62	0.00	0.00	0.0	0.50	0.69	5.00	33	Cir(2b)	0.013	1.00	10.00	
Point E																	
Number of lines: 1																	
Date: 07-01-2010																	

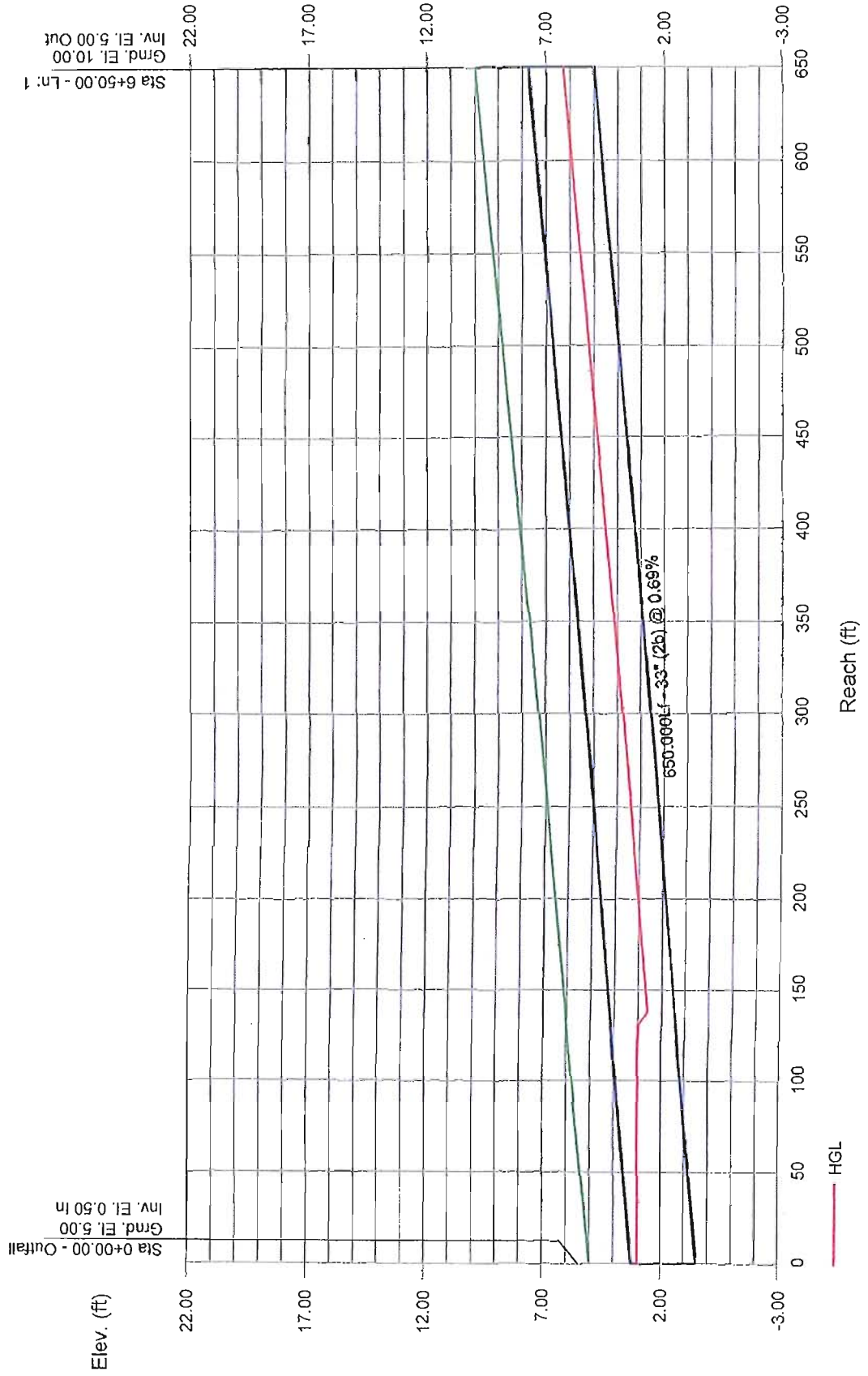
Storm Sewer Tabulation

Station Line	To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
			Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	550.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	31.62	88.00	4.26	33(2b)	0.69	0.50	5.00	3.00	6.30	5.00	10.00	
Point E														Number of lines: 1				Run Date: 07-01-2010				

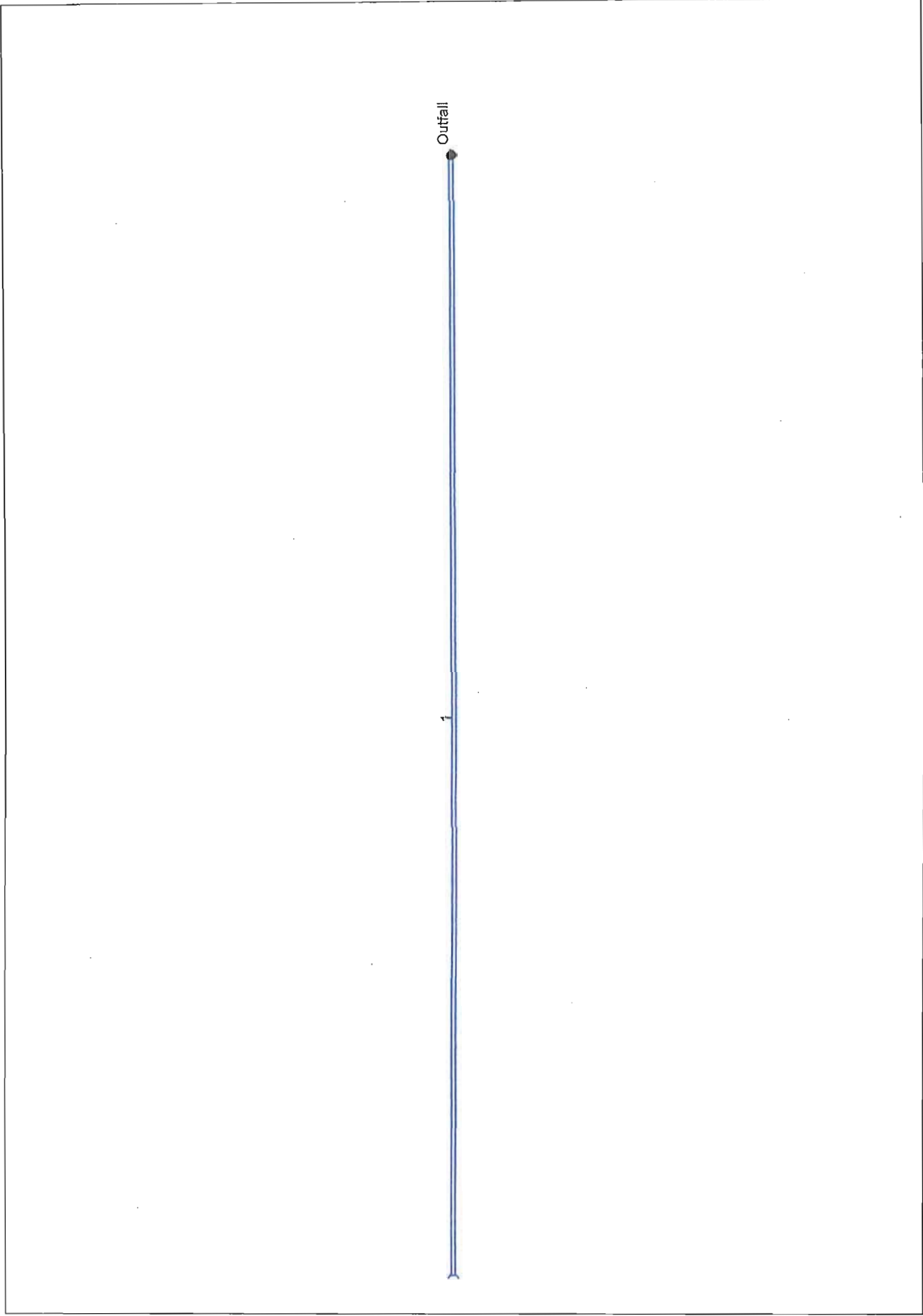
NOTES: Intensity = 9.01 / (Inlet time + 0.50) ^ 0.49; Return period = 100 Yrs. ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: Point E before.stm



Point E



Outfall



1



Project File: Point E 2003 no E.stm

CONDITION d)

Number of lines: 1

Date: 07-01-2010

Storm Sewer Inventory Report

Line No.	Alignment			Flow Data				Physical Data							Line ID	
	Dnstr line No.	Line length (ft)	Defl angle (deg)	Junc type	Known Q (cfs)	Dmg area (ac)	Runoff coeff (C)	Inlet time (min)	Invert El Dn (ft)	Line slope (%)	Invert El Up (ft)	Line size (in)	Line shape	N value (n)		J-loss coeff (K)
1	End	650.000	180.000	Hdwl	30.70	0.00	0.00	0.0	0.50	0.69	5.00	33	Cir(2b)	0.013	1.00	10.00
Point E																
Number of lines: 1																
Date: 07-01-2010																

Storm Sewer Tabulation

Line	Station To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
			Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	650.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	30.70	88.00	4.19	33(2b)	0.69	0.50	5.00	3.00	6.28	5.00	10.00	

Point E Number of lines: 1 Run Date: 07-01-2010

NOTES: Intensity = 9.01 / (Inlet time + 0.50) ^ 0.49; Return period = 100 Yrs. ; c = cir e = ellip b = box

Storm Sewer Profile

Proj. file: Point E 2003 no E.stm

