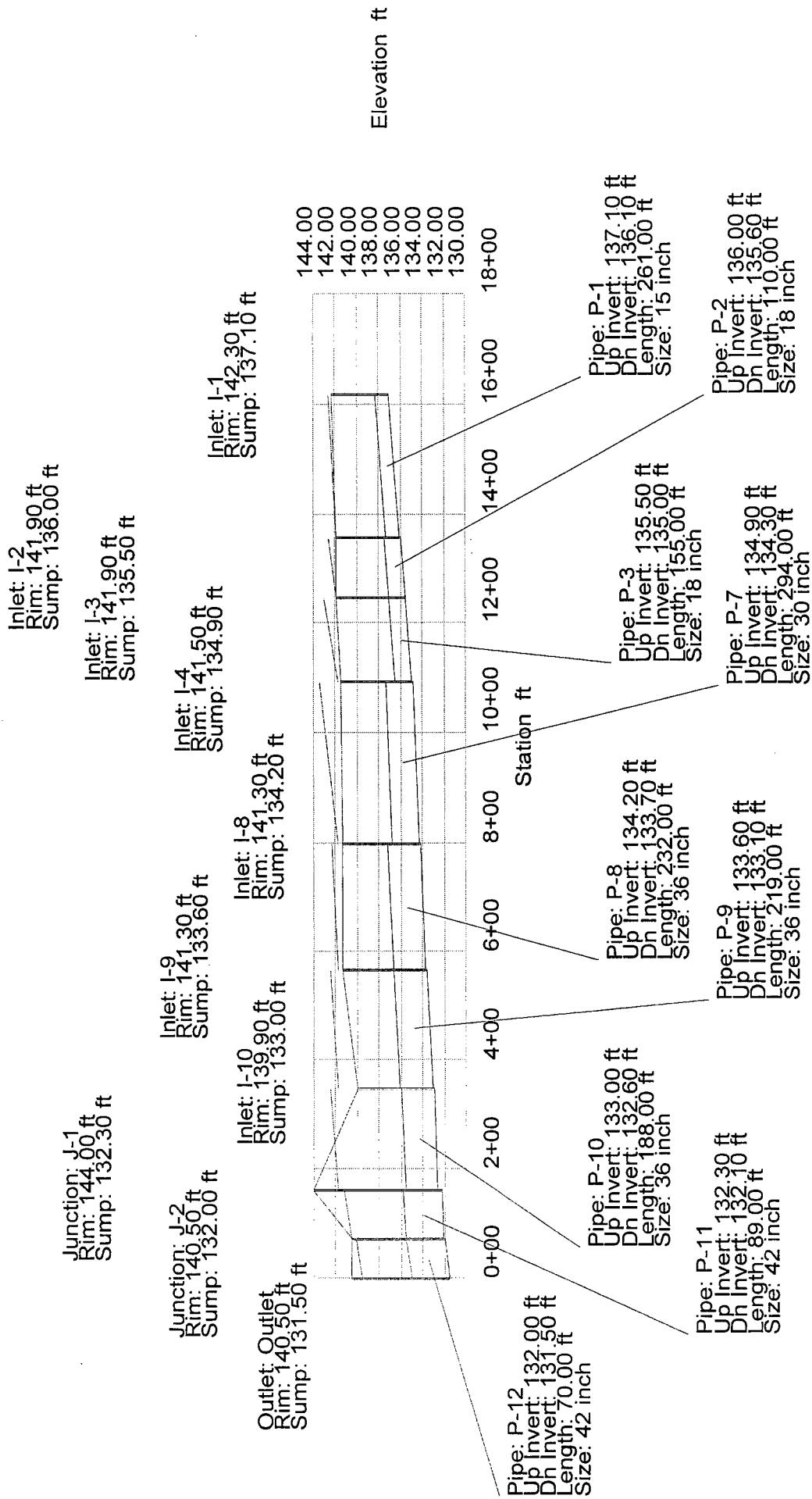


System Report

Pipe	Additional Flow (cfs)	Total Upstream Added (cfs)	Structure Discharge (cfs)	-Node- Upstream Downstream	-Section- Shape Size	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	-Ground- Upstream Downstream (ft)	-HGL- Upstream Downstream (ft)	-Slope- Energy Constructed (ft/ft)	-Section- Discharge Capacity (cfs)	Length (ft)	Average Velocity (ft/s)	Description
P-14	16.40	0.00	16.40	I-13	Circular 18 inch	134.60	134.40	141.40	143.00	0.024378	16.40	41.00	9.28	
P-13	8.20	0.00	8.20	I-11	Circular 18 inch	135.20	134.50	141.40	142.00	0.004878	7.34	168.00	4.64	
P-15	6.50	24.60	31.10	I-12	Circular 30 inch	134.00	133.60	141.40	142.00	0.006094	8.20	128.00	6.34	
P-16	4.90	31.10	36.00	I-14	Circular 36 inch	133.50	133.30	142.00	142.12	0.004167	6.78	41.00	5.09	
P-17	10.40	36.00	46.40	I-15	Circular 36 inch	133.00	132.40	142.00	142.00	0.005750	31.10	178.00	6.56	
P-4	3.80	0.00	3.80	J-1	Circular 15 inch	136.60	136.30	144.00	141.78	0.003125	46.58	41.00	3.10	
P-5	10.90	3.80	14.70	I-6	Circular 18 inch	136.60	135.80	143.30	143.30	0.004878	3.80	72.00	8.32	
P-6	2.20	14.70	16.90	I-7	Circular 24 inch	136.10	135.10	143.30	143.19	0.003371	5.53	209.00	5.38	
P-1	3.30	0.00	3.30	I-1	Circular 15 inch	137.10	136.10	141.50	141.78	0.003461	14.70	261.00	2.69	
P-2	4.90	3.30	8.20	I-2	Circular 18 inch	136.00	135.60	141.90	142.58	0.007317	4.00	110.00	4.64	
P-3	1.10	8.20	9.30	I-3	Circular 18 inch	135.50	135.00	141.90	141.90	0.002392	3.30	155.00	5.26	
P-7	4.40	26.20	30.60	I-4	Circular 30 inch	134.90	134.30	141.50	141.78	0.003831	8.20	294.00	6.23	
P-8	1.60	30.60	32.20	I-8	Circular 36 inch	134.20	133.70	141.30	141.78	0.006094	30.60	232.00	4.56	
P-9	2.70	32.20	34.90	I-9	Circular 36 inch	133.60	133.10	141.30	142.32	0.002610	32.20	219.00	4.94	
P-10	4.90	34.90	39.80	I-10	Circular 36 inch	133.60	132.60	141.30	141.78	0.003226	34.90	188.00	5.63	
P-11	N/A	86.20	86.20	J-1	Circular 42 inch	132.30	132.10	144.00	141.15	0.002041	31.87	89.00	8.96	
P-12	N/A	86.20	86.20	J-2	Circular 42 inch	132.00	131.50	140.50	140.50	0.003561	30.76	70.00	8.96	
				Outlet				140.50	139.60	0.002128	86.20			
								140.50	139.60	0.002247	85.03			



Inlet: I-10
Rim: 139.90 ft
Sump: 133.00 ft

Junction: J-2
Rim: 140.50 ft
Sump: 132.00 ft

Junction: J-1
Rim: 144.00 ft
Sump: 132.30 ft

Outlet: Outlet
Rim: 140.50 ft
Sump: 131.50 ft

Inlet: I-8
Rim: 141.30 ft
Sump: 134.20 ft

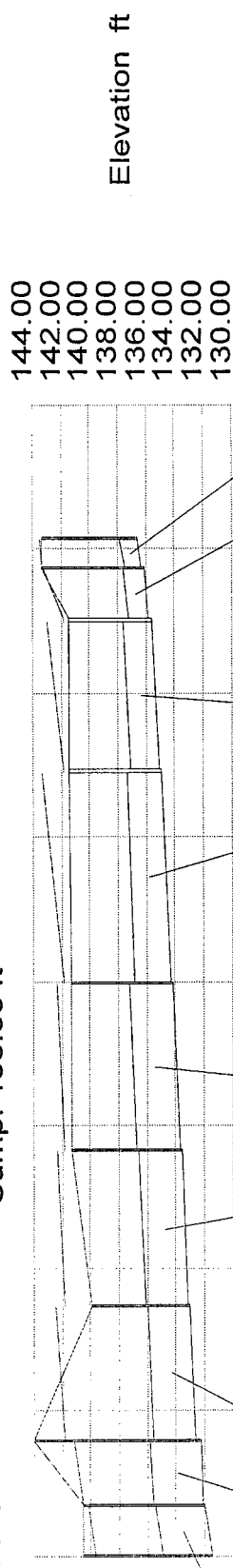
Inlet: I-9
Rim: 141.30 ft
Sump: 133.60 ft

Inlet: I-7
Rim: 141.50 ft
Sump: 135.60 ft

Inlet: I-6
Rim: 143.30 ft
Sump: 136.10 ft

Inlet: I-4
Rim: 141.50 ft
Sump: 134.90 ft

Inlet: I-5
Rim: 143.30 ft
Sump: 136.60 ft



Pipe: P-12
Up Invert: 132.00 ft
Dn Invert: 131.50 ft
Length: 70.00 ft
Size: 42 inch

Pipe: P-10
Up Invert: 133.00 ft
Dn Invert: 132.60 ft
Length: 188.00 ft
Size: 36 inch

Pipe: P-11
Up Invert: 132.30 ft
Dn Invert: 132.10 ft
Length: 89.00 ft
Size: 42 inch

Pipe: P-8
Up Invert: 134.20 ft
Dn Invert: 133.70 ft
Length: 232.00 ft
Size: 36 inch

Pipe: P-9
Up Invert: 133.60 ft
Dn Invert: 133.10 ft
Length: 219.00 ft
Size: 36 inch

Pipe: P-6
Up Invert: 135.60 ft
Dn Invert: 135.10 ft
Length: 209.00 ft
Size: 24 inch

Pipe: P-7
Up Invert: 134.90 ft
Dn Invert: 134.30 ft
Length: 294.00 ft
Size: 30 inch

Pipe: P-4
Up Invert: 136.60 ft
Dn Invert: 136.30 ft
Length: 41.00 ft
Size: 15 inch

Pipe: P-5
Up Invert: 136.10 ft
Dn Invert: 135.80 ft
Length: 72.00 ft
Size: 18 inch

Inlet: I-15
 Rim: 142.00 ft
 Sump: 133.00 ft

Inlet: I-11
 Rim: 140.10 ft
 Sump: 135.20 ft

Junction: J-2
 Rim: 140.50 ft
 Sump: 132.00 ft

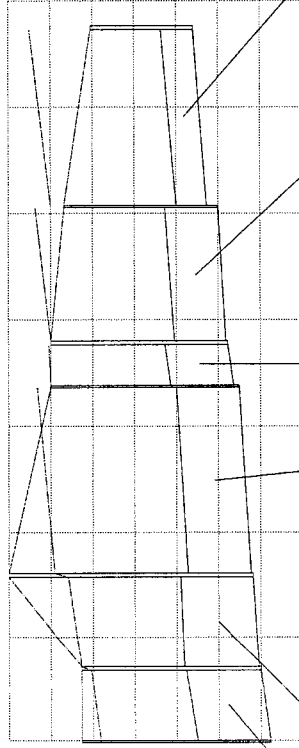
Inlet: I-14
 Rim: 142.00 ft
 Sump: 133.50 ft

Outlet: Outlet
 Rim: 140.50 ft
 Sump: 131.50 ft

Junction: J-1
 Rim: 144.00 ft
 Sump: 132.30 ft

Inlet: I-12
 Rim: 141.40 ft
 Sump: 134.00 ft

144.00
 142.00
 140.00
 138.00
 136.00
 134.00
 132.00
 130.00



Elevation ft

0+001+002+003+004+005+006+007+00

Station ft

Pipe: P-11
 Up Invert: 132.30 ft
 Dn Invert: 132.10 ft
 Length: 89.00 ft
 Size: 42 inch

Pipe: P-13
 Up Invert: 135.20 ft
 Dn Invert: 134.50 ft
 Length: 168.00 ft
 Size: 18 inch

Pipe: P-12
 Up Invert: 132.00 ft
 Dn Invert: 131.50 ft
 Length: 70.00 ft
 Size: 42 inch

Pipe: P-16
 Up Invert: 133.50 ft
 Dn Invert: 133.30 ft
 Length: 41.00 ft
 Size: 36 inch

Pipe: P-15
 Up Invert: 134.00 ft
 Dn Invert: 133.60 ft
 Length: 128.00 ft
 Size: 30 inch

Pipe: P-17
 Up Invert: 133.00 ft
 Dn Invert: 132.40 ft
 Length: 178.00 ft
 Size: 36 inch

Inlet: I-12
 Rim: 141.40 ft
 Sump: 134.00 ft

Inlet: I-15
 Rim: 142.00 ft
 Sump: 133.00 ft

Inlet: I-13
 Rim: 141.40 ft
 Sump: 134.60 ft

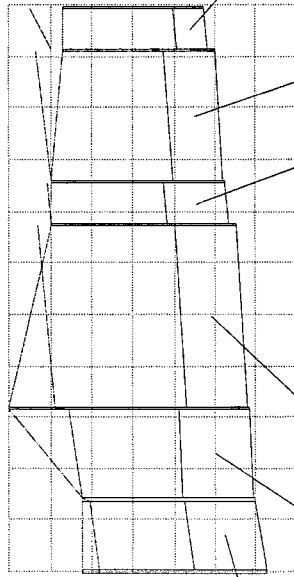
Junction: J-2
 Rim: 140.50 ft
 Sump: 132.00 ft

Junction: J-1
 Rim: 144.00 ft
 Sump: 132.30 ft

Inlet: I-14
 Rim: 142.00 ft
 Sump: 133.50 ft

Outlet: Outlet
 Rim: 140.50 ft
 Sump: 131.50 ft

144.00
 142.00
 140.00
 138.00
 136.00
 134.00
 132.00
 130.00



0+005002020500050050050050

Station ft

Elevation ft

Pipe: P-12
 Up Invert: 132.00 ft
 Dn Invert: 131.50 ft
 Length: 70.00 ft
 Size: 42 inch

Pipe: P-11
 Up Invert: 132.30 ft
 Dn Invert: 132.10 ft
 Length: 89.00 ft
 Size: 42 inch

Pipe: P-17
 Up Invert: 133.00 ft
 Dn Invert: 132.40 ft
 Length: 178.00 ft
 Size: 36 inch

Pipe: P-15
 Up Invert: 134.00 ft
 Dn Invert: 133.60 ft
 Length: 128.00 ft
 Size: 30 inch

Pipe: P-14
 Up Invert: 134.60 ft
 Dn Invert: 134.40 ft
 Length: 41.00 ft
 Size: 18 inch

Pipe: P-16
 Up Invert: 133.50 ft
 Dn Invert: 133.30 ft
 Length: 41.00 ft
 Size: 36 inch

System Report

Pipe	Additional Flow (cfs)	Total Upstream Added (cfs)	Structure Discharge (cfs)	-Node- Upstream Downstream	-Section- Shape Size	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	-Ground- Upstream Downstream (ft)	-HGL- Upstream Downstream (ft)	-Slope- Energy Constructed (ft/ft)	-Section- Discharge Capacity (cfs)	Length (ft)	Average Velocity (ft/s)	Description
P-14	5.50	0.00	5.50	I-13	Circular 18 inch	134.60	134.40	141.40	135.57	0.004968	5.50	41.00	4.61	
P-13	2.80	0.00	2.80	I-11	Circular 18 inch	135.20	134.50	141.40	135.35	0.004878	7.34	168.00	3.18	
P-15	2.20	8.30	10.50	I-12	Circular 30 inch	134.00	133.60	141.40	135.35	0.004167	6.78	128.00	4.49	
P-16	1.70	10.50	12.20	I-14	Circular 36 inch	133.50	133.30	142.00	134.82	0.003125	22.93	41.00	4.41	
P-17	3.50	12.20	15.70	I-15	Circular 36 inch	133.00	132.40	142.00	134.62	0.002434	46.58	178.00	3.63	
P-4	1.30	0.00	1.30	J-1	Circular 15 inch	136.60	136.30	144.00	134.56	0.001283	15.70	41.00	1.85	
P-5	3.70	1.30	5.00	I-6	Circular 18 inch	136.10	135.80	143.30	134.47	0.003371	38.72	72.00	4.25	
P-6	0.70	5.00	5.70	I-7	Circular 24 inch	135.60	135.10	141.50	137.18	0.001054	1.30	209.00	3.08	
P-1	1.10	0.00	1.10	I-1	Circular 15 inch	137.10	136.10	142.30	137.19	0.007317	5.53	261.00	2.17	
P-2	1.70	1.10	2.80	I-2	Circular 18 inch	136.00	135.60	141.90	136.80	0.003831	4.00	110.00	2.92	
P-3	0.40	2.80	3.20	I-3	Circular 18 inch	135.50	135.00	141.90	136.71	0.002430	2.80	155.00	2.27	
P-7	1.50	8.90	10.40	I-4	Circular 30 inch	134.90	134.30	141.50	136.53	0.003636	6.33	294.00	4.03	
P-8	0.60	10.40	11.00	I-8	Circular 36 inch	134.20	133.70	141.30	136.48	0.001113	3.20	232.00	3.76	
P-9	0.90	11.00	11.90	I-9	Circular 36 inch	133.60	133.10	141.30	136.35	0.003226	5.97	219.00	3.51	
P-10	1.70	11.90	13.60	I-10	Circular 36 inch	133.00	132.60	139.90	136.24	0.002163	10.40	188.00	3.24	
P-11	N/A	29.30	29.30	J-1	Circular 42 inch	132.30	132.10	144.00	135.57	0.002041	18.53	89.00	5.42	
P-12	N/A	29.30	29.30	J-2	Circular 42 inch	132.00	131.50	140.50	135.44	0.001895	11.00	70.00	7.16	
				Outlet				140.50	135.05	0.002155	30.96			
								140.50	134.93	0.001461	11.90			
								140.50	134.70	0.002283	31.87			
								140.50	134.61	0.001059	13.60			
								140.50	134.47	0.002128	30.76			
								140.50	134.25	0.002477	29.30			
								140.50	134.00	0.002247	47.69			
								140.50	133.67	0.006012	29.30			
								140.50	132.94	0.007143	85.03			

Inlet: I-2
Rim: 141.90 ft
Sump: 136.00 ft

Inlet: I-8
Rim: 141.30 ft
Sump: 134.20 ft

Inlet: I-10
Rim: 139.90 ft
Sump: 133.00 ft

Inlet: I-3
Rim: 141.90 ft
Sump: 135.50 ft

Junction: J-2
Rim: 140.50 ft
Sump: 132.00 ft

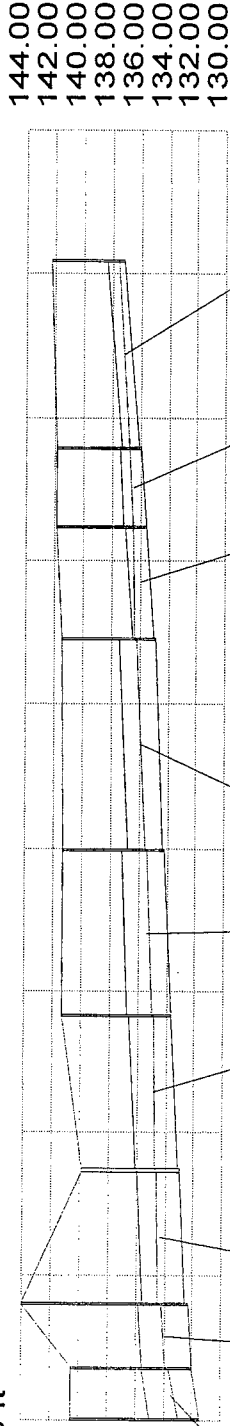
Junction: J-1
Rim: 144.00 ft
Sump: 132.30 ft

Inlet: I-9
Rim: 141.30 ft
Sump: 133.60 ft

Inlet: I-4
Rim: 141.50 ft
Sump: 134.90 ft

Inlet: I-1
Rim: 142.30 ft
Sump: 137.10 ft

Outlet: Outlet
Rim: 140.50 ft
Sump: 131.50 ft



Pipe: P-1
Up Invert: 137.10 ft
Dn Invert: 136.10 ft
Length: 261.00 ft
Size: 15 inch

Pipe: P-2
Up Invert: 136.00 ft
Dn Invert: 135.60 ft
Length: 110.00 ft
Size: 18 inch

Pipe: P-3
Up Invert: 135.50 ft
Dn Invert: 135.00 ft
Length: 155.00 ft
Size: 18 inch

Pipe: P-7
Up Invert: 134.90 ft
Dn Invert: 134.30 ft
Length: 294.00 ft
Size: 30 inch

Pipe: P-8
Up Invert: 134.20 ft
Dn Invert: 133.70 ft
Length: 232.00 ft
Size: 36 inch

Pipe: P-9
Up Invert: 133.60 ft
Dn Invert: 133.10 ft
Length: 219.00 ft
Size: 36 inch

Pipe: P-10
Up Invert: 133.00 ft
Dn Invert: 132.60 ft
Length: 188.00 ft
Size: 36 inch

Pipe: P-11
Up Invert: 132.30 ft
Dn Invert: 132.10 ft
Length: 89.00 ft
Size: 42 inch

Pipe: P-12
Up Invert: 132.00 ft
Dn Invert: 131.50 ft
Length: 70.00 ft
Size: 42 inch

Inlet: I-5
 Rim: 143.30 ft
 Sump: 136.60 ft

Inlet: I-7
 Rim: 141.50 ft
 Sump: 135.60 ft

Inlet: I-8
 Rim: 141.30 ft
 Sump: 134.20 ft

Inlet: I-4
 Rim: 141.50 ft
 Sump: 134.90 ft

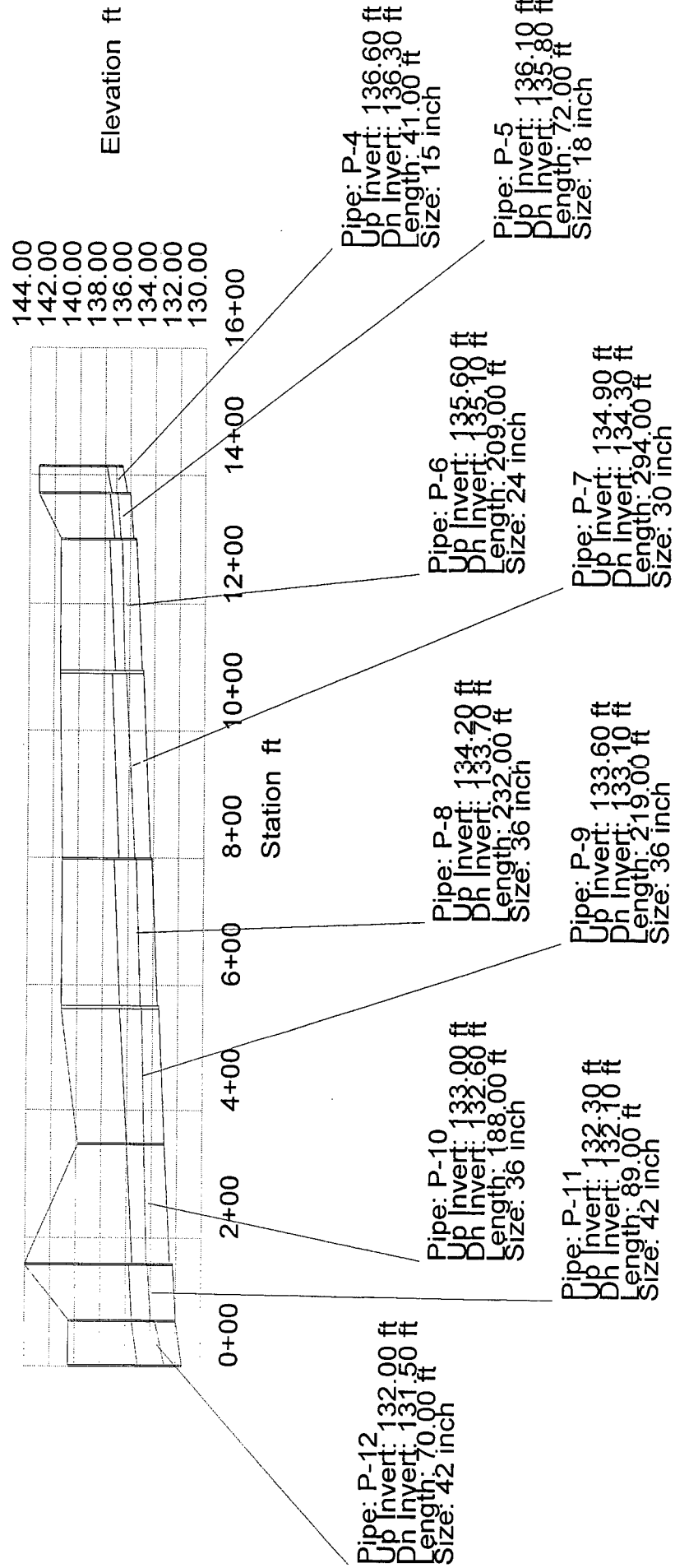
Inlet: I-9
 Rim: 141.30 ft
 Sump: 133.60 ft

Inlet: I-10
 Rim: 139.90 ft
 Sump: 133.00 ft

Junction: J-2
 Rim: 140.50 ft
 Sump: 132.00 ft

Junction: J-1
 Rim: 144.00 ft
 Sump: 132.30 ft

Outlet: Outlet
 Rim: 140.50 ft
 Sump: 131.50 ft



Inlet: I-11
 Rim: 140.10 ft
 Sump: 135.20 ft

Inlet: I-14
 Rim: 142.00 ft
 Sump: 133.50 ft

Inlet: I-12
 Rim: 141.40 ft
 Sump: 134.00 ft

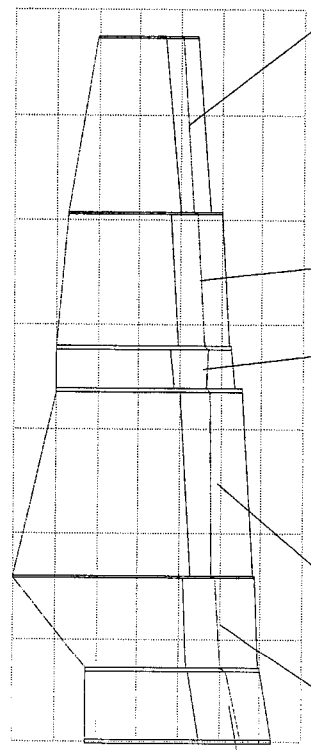
Inlet: I-15
 Rim: 142.00 ft
 Sump: 133.00 ft

Junction: J-1
 Rim: 144.00 ft
 Sump: 132.30 ft

Junction: J-2
 Rim: 140.50 ft
 Sump: 132.00 ft

Outlet: Outlet
 Rim: 140.50 ft
 Sump: 131.50 ft

144.00
 142.00
 140.00
 138.00
 136.00
 134.00
 132.00
 130.00



0+001+002+003+004+005+006+007+00

Station ft

Elevation ft

Pipe: P-12
 Up Invert: 132.00 ft
 Dn Invert: 131.50 ft
 Length: 70.00 ft
 Size: 42 inch

Pipe: P-17
 Up Invert: 133.00 ft
 Dn Invert: 132.40 ft
 Length: 178.00 ft
 Size: 36 inch

Pipe: P-11
 Up Invert: 132.30 ft
 Dn Invert: 132.10 ft
 Length: 89.00 ft
 Size: 42 inch

Pipe: P-13
 Up Invert: 135.20 ft
 Dn Invert: 134.50 ft
 Length: 168.00 ft
 Size: 18 inch

Pipe: P-15
 Up Invert: 134.00 ft
 Dn Invert: 133.60 ft
 Length: 128.00 ft
 Size: 30 inch

Pipe: P-16
 Up Invert: 133.50 ft
 Dn Invert: 133.30 ft
 Length: 41.00 ft
 Size: 36 inch

Inlet: I-12
Rim: 141.40 ft
Sump: 134.00 ft

Inlet: I-15
Rim: 142.00 ft
Sump: 133.00 ft

Inlet: I-13
Rim: 141.40 ft
Sump: 134.60 ft

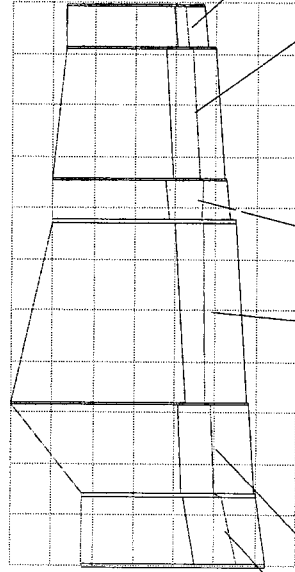
Junction: J-2
Rim: 140.50 ft
Sump: 132.00 ft

Inlet: I-14
Rim: 142.00 ft
Sump: 133.50 ft

Junction: J-1
Rim: 144.00 ft
Sump: 132.30 ft

Outlet: Outlet
Rim: 140.50 ft
Sump: 131.50 ft

144.00
142.00
140.00
138.00
136.00
134.00
132.00
130.00



Elevation ft

0+0050002005000500050050

Station ft

Pipe: P-14
Up Invert: 134.60 ft
Dh Invert: 134.40 ft
Length: 41.00 ft
Size: 18 inch

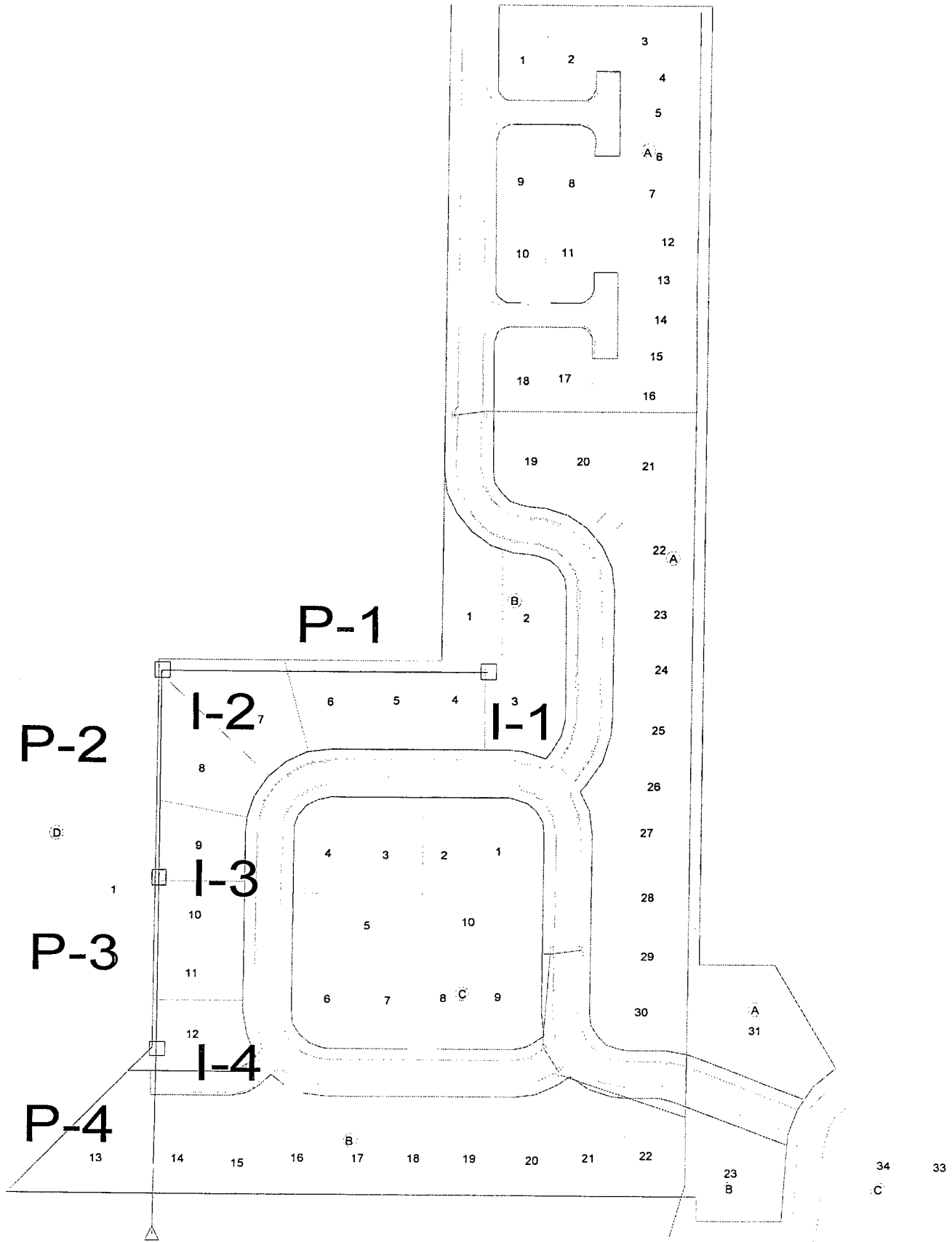
Pipe: P-15
Up Invert: 134.00 ft
Dh Invert: 133.60 ft
Length: 128.00 ft
Size: 30 inch

Pipe: P-11
Up Invert: 132.30 ft
Dh Invert: 132.10 ft
Length: 89.00 ft
Size: 42 inch

Pipe: P-16
Up Invert: 133.50 ft
Dh Invert: 133.30 ft
Length: 41.00 ft
Size: 36 inch

Pipe: P-12
Up Invert: 132.00 ft
Dh Invert: 131.50 ft
Length: 70.00 ft
Size: 42 inch

Pipe: P-17
Up Invert: 133.00 ft
Dh Invert: 132.40 ft
Length: 178.00 ft
Size: 36 inch



Outlet

System Report

Pipe	Additional Flow (cfs)	Total Upstream Added (cfs)	Structure Discharge (cfs)	-Node- Upstream Downstream	-Section- Shape Size	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	-Ground- Upstream Downstream (ft)	-HGL- Upstream Downstream (ft)	-Slope- Energy Constructed (ft/ft)	-Section- Discharge Capacity (cfs)	Length (ft)	Average Velocity (ft/s)	Description
P-1	1.70	0.00	1.70	I-1	Circular	137.10	135.40	140.30	137.62	0.003675	1.70	435.00	2.60	
P-2	1.10	1.70	2.80	I-2	18 inch Circular	135.30	134.40	141.80	136.11	0.003908	6.57	274.00	3.36	
P-3	0.70	2.80	3.50	I-3	18 inch Circular	134.30	133.60	142.00	135.11	0.003285	6.02	230.00	3.36	
P-4	0.60	3.50	4.10	I-4	24 inch Circular	133.50	130.00	141.50	134.34	0.003043	12.48	244.00	2.70	
				Outlet	24 inch			140.50	132.00	0.014344	27.09			

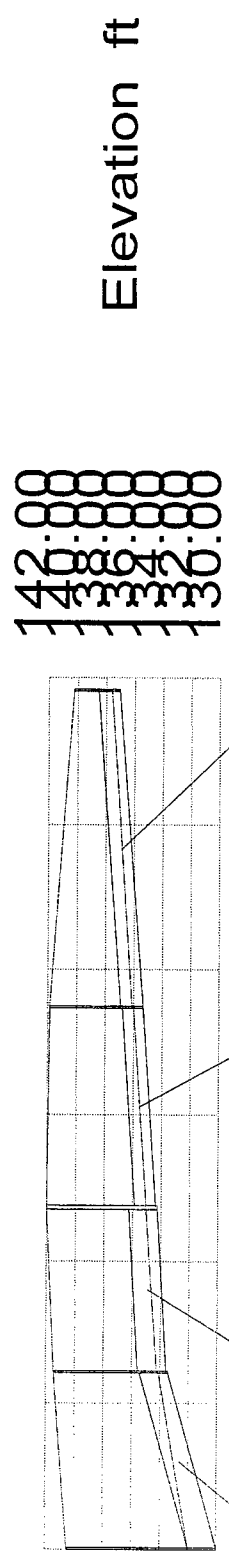
Inlet: I-1
 Rim: 140.30 ft
 Sump: 137.10 ft

Inlet: I-2
 Rim: 141.80 ft
 Sump: 135.30 ft

Inlet: I-4
 Rim: 141.50 ft
 Sump: 133.50 ft

Outlet: Outlet
 Rim: 140.50 ft
 Sump: 130.00 ft

Inlet: I-3
 Rim: 142.00 ft
 Sump: 134.30 ft



0+00 2+00 4+00 6+00 8+00 10+00 12+00
 Station ft

Pipe: P-1
 Up Invert: 137.10 ft
 Dn Invert: 135.40 ft
 Length: 435.00 ft
 Size: 18 inch

Pipe: P-2
 Up Invert: 135.30 ft
 Dn Invert: 134.40 ft
 Length: 274.00 ft
 Size: 18 inch

Pipe: P-3
 Up Invert: 134.30 ft
 Dn Invert: 133.60 ft
 Length: 230.00 ft
 Size: 24 inch

Pipe: P-4
 Up Invert: 133.50 ft
 Dn Invert: 130.00 ft
 Length: 244.00 ft
 Size: 24 inch

System Report

Pipe	Additional Flow (cfs)	Total Upstream Added (cfs)	Structure Discharge (cfs)	-Node- Upstream Downstream	-Section- Shape Size	Upstream Invert Elevation (ft)	Downstream Invert Elevation (ft)	-Ground- Upstream Downstream (ft)	-HGL- Upstream Downstream (ft)	-Slope- Energy Constructed (ft/ft)	-Section- Discharge Capacity (cfs)	Length (ft)	Average Velocity (ft/s)	Description
P-1	4.90	0.00	4.90	I-1	Circular	137.10	135.40	140.30	142.75	0.002176	4.90	435.00	2.77	
P-2	3.30	4.90	8.20	I-2	18 inch Circular	135.30	134.40	141.80	141.80	0.003908	6.57	274.00	4.64	
P-3	2.20	8.20	10.40	I-3	18 inch Circular	134.30	133.60	142.00	140.97	0.003285	6.02	230.00	3.31	
P-4	1.60	10.40	12.00	I-4	24 inch Circular	133.50	130.00	141.50	140.40	0.003043	12.48	244.00	3.82	
				Outlet	24 inch Circular			140.50	139.60	0.014344	27.09			

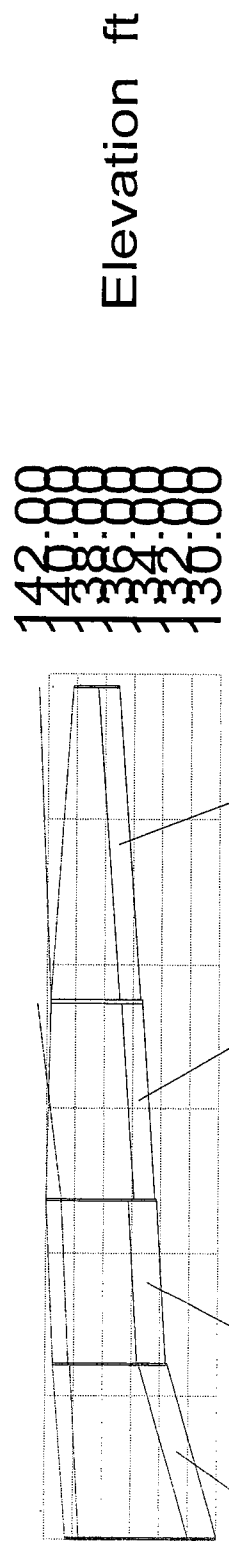
Inlet: I-4
 Rim: 141.50 ft
 Sump: 133.50 ft

Inlet: I-2
 Rim: 141.80 ft
 Sump: 135.30 ft

Inlet: I-3
 Rim: 142.00 ft
 Sump: 134.30 ft

Inlet: I-1
 Rim: 140.30 ft
 Sump: 137.10 ft

Outlet: Outlet
 Rim: 140.50 ft
 Sump: 130.00 ft



0+00 2+00 4+00 6+00 8+00 10+00 12+00

Station ft

Pipe: P-1
 Up Invert: 137.10 ft
 Dn Invert: 135.40 ft
 Length: 435.00 ft
 Size: 18 inch

Pipe: P-2
 Up Invert: 135.30 ft
 Dn Invert: 134.40 ft
 Length: 274.00 ft
 Size: 18 inch

Pipe: P-3
 Up Invert: 134.30 ft
 Dn Invert: 133.60 ft
 Length: 230.00 ft
 Size: 24 inch

Pipe: P-4
 Up Invert: 133.50 ft
 Dn Invert: 130.00 ft
 Length: 244.00 ft
 Size: 24 inch



Scale:
1" = 60'
• = Iron

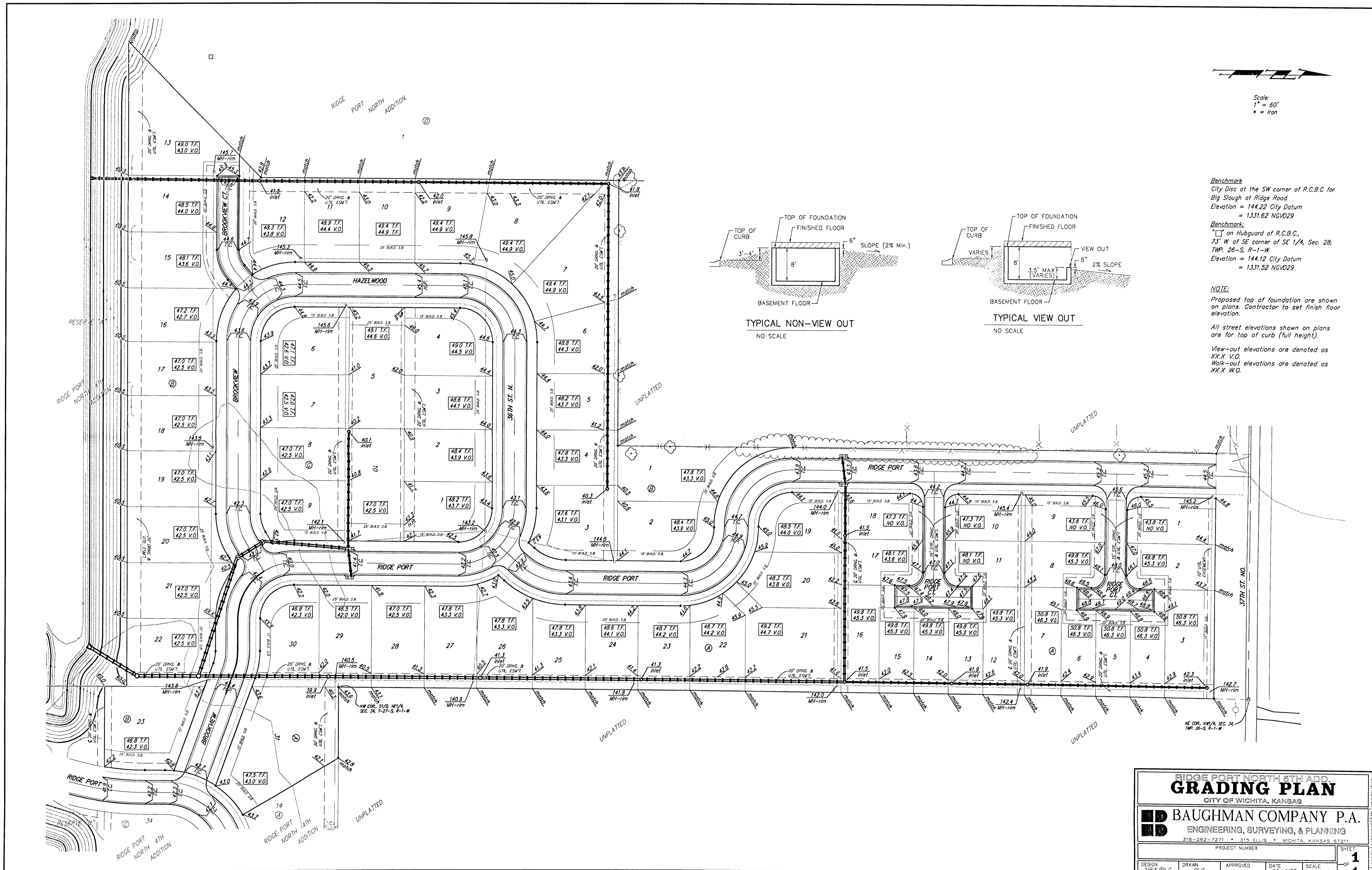
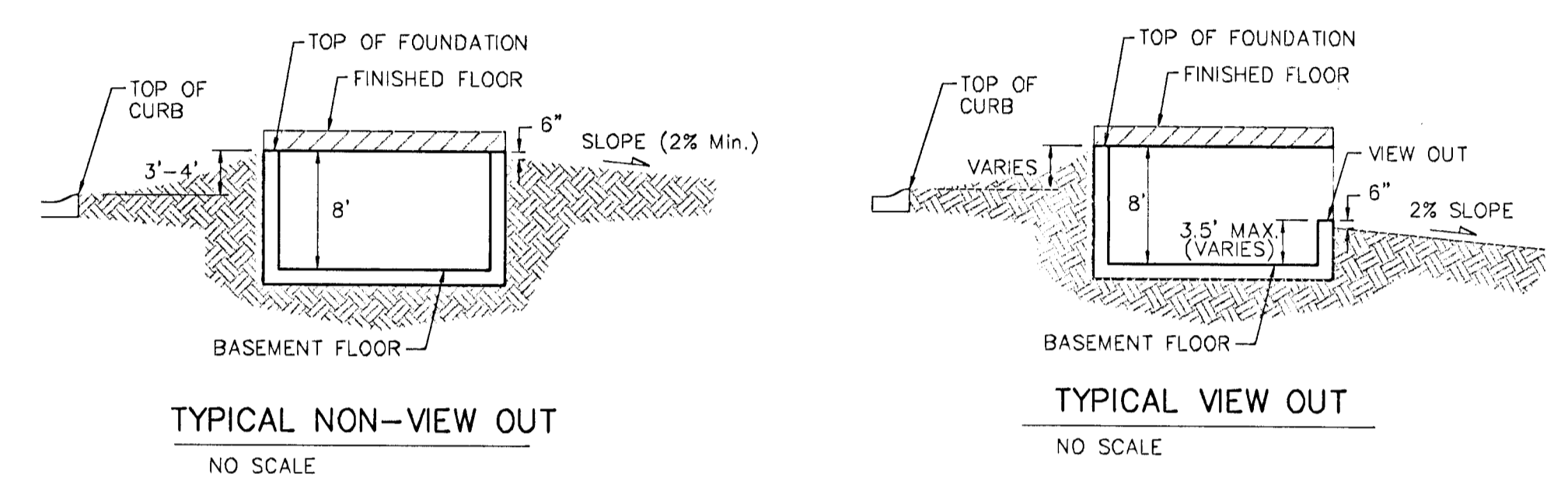
Benchmark
City Disc at the SW corner of R.C.B.C for Big Slough at Ridge Road.
Elevation = 144.22 City Datum
= 1331.62 NGVD29

Benchmark:
" on Hubguard of R.C.B.C., 73' W. of SE corner of SE 1/4, Sec. 28, TWP. 26-S, R-1-W.
Elevation = 144.12 City Datum
= 1331.52 NGVD29

NOTE:
Proposed top of foundation are shown on plans. Contractor to set finish floor elevation.

All street elevations shown on plans are for top of curb (full height).

View-out elevations are denoted as XX.X V.O.
Walk-out elevations are denoted as XX.X W.O.



RIDGE PORT NORTH 5TH ADD.
GRADING PLAN
CITY OF WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
318-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER _____ SHEET **1** OF **1**

DESIGN NGW/BLG	DRAWN BLG	APPROVED	DATE 14 JUN 02	SCALE As Shown
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