

SUPPLEMENTAL DRAINAGE INFORMATION

FOR

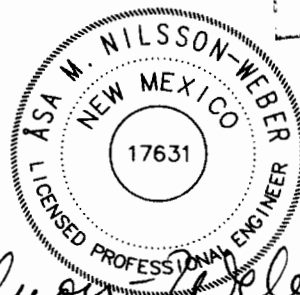
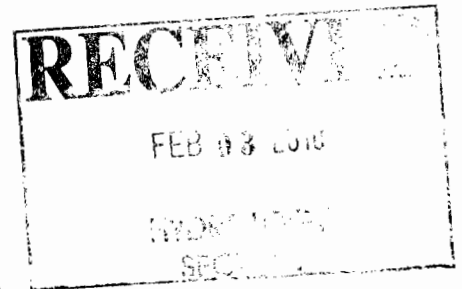
BLACK ARROYO PARK

ALBUQUERQUE, NEW MEXICO

FEBRUARY 2010

Prepared by:

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Date

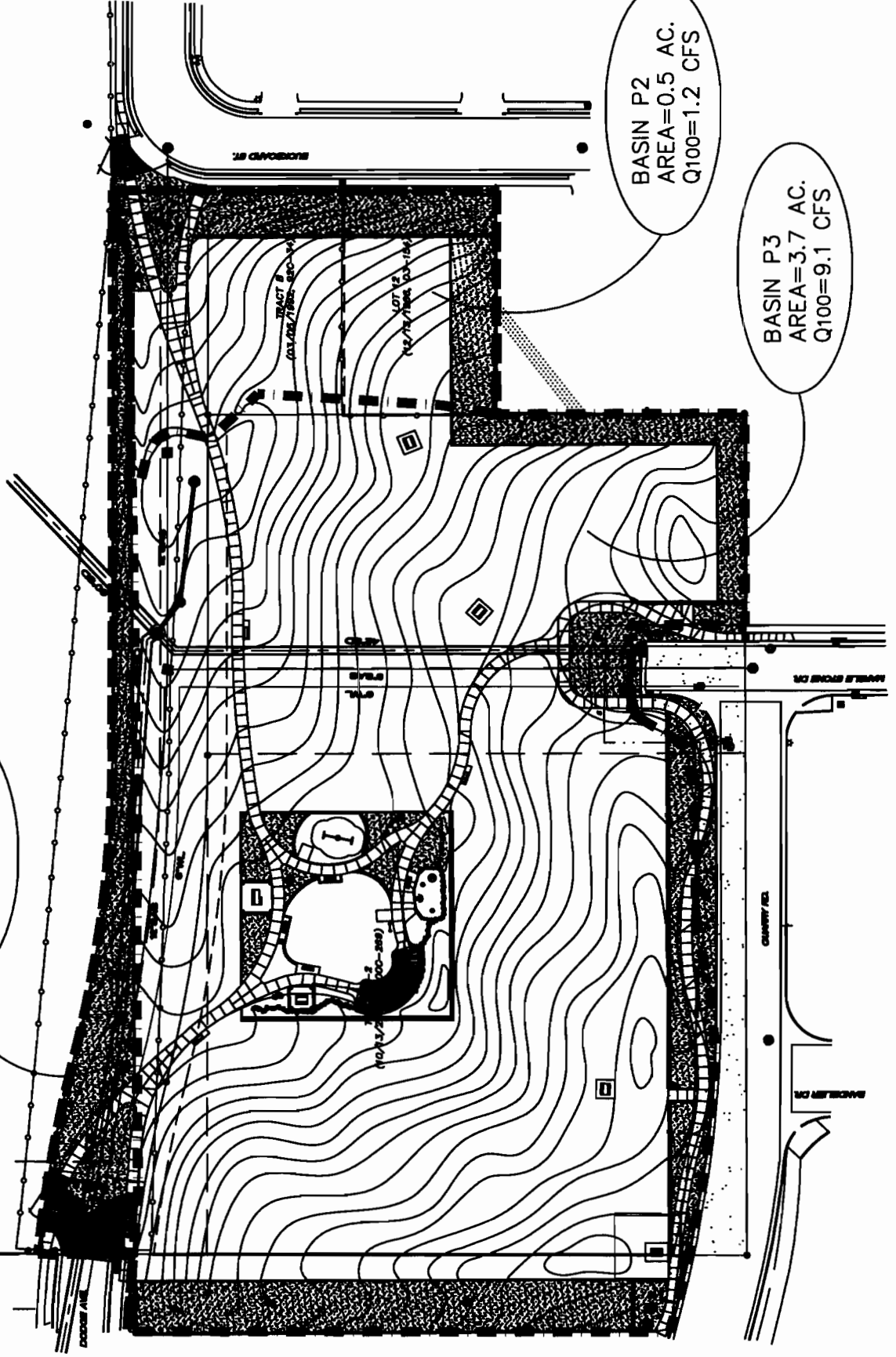
BLACK ARROYO PARK
DRAINAGE BASIN MAP

1"=80'

BASIN P1
AREA=0.2 AC
Q100=0.7 CFS

BASIN P2
AREA=0.5 AC.
Q100=1.2 CFS

BASIN P3
AREA=3.7 AC.
Q100=9.1 CFS



1751 DPM Calculations - 100 yr 6 hr1

BASIN NO.	P1	DESCRIPTION
Area of basin flows =	10742	SF = 0.2 Ac.
The following calculations are based on Treatment areas as shown in table to the right		
Sub-basin Weighted Excess Precipitation (see formula above)		LAND TREATMENT
Weighted E = 0.98 in.		A = 0%
Sub-basin Volume of Runoff (see formula above)		B = 26%
V ₃₆₀ = 873 CF		C = 67%
Sub-basin Peak Discharge Rate: (see formula above)		D = 7%
Q _P = 0.7 cfs		
BASIN NO.	P2	DESCRIPTION
Area of basin flows =	10989	SF = 0.3 Ac.
The following calculations are based on Treatment areas as shown in table to the right		
Sub-basin Weighted Excess Precipitation (see formula above)		LAND TREATMENT
Weighted E = 0.75 in.		A = 0%
Sub-basin Volume of Runoff (see formula above)		B = 74%
V ₃₆₀ = 690 CF		C = 26%
Sub-basin Peak Discharge Rate: (see formula above)		D = 0%
Q _P = 0.6 cfs		
BASIN NO.	P3	DESCRIPTION
Area of basin flows =	159335	SF = 3.7 Ac.
The following calculations are based on Treatment areas as shown in table to the right		
Sub-basin Weighted Excess Precipitation (see formula above)		LAND TREATMENT
Weighted E = 0.87 in.		A = 0%
Sub-basin Volume of Runoff (see formula above)		B = 57%
V ₃₆₀ = 11504 CF		C = 37%
Sub-basin Peak Discharge Rate: (see formula above)		D = 6%
Q _P = 9.1 cfs		

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	109.000	150.000	MH	172.50	0.00	0.00	0.0	75.03	3.95	79.34	60	Cir	0.012	1.00	89.44	60-in
2	1	20.000	-90.000	MH	0.00	0.00	0.00	0.0	83.00	1.25	83.25	18	Cir	0.012	0.89	89.20	SD MH1
3	2	65.000	-60.000	Genr	9.10	0.00	0.00	0.0	83.35	1.00	84.00	18	Cir	0.012	1.00	87.00	INLET
Number of lines: 3																	Date: 1/28/2010
1751																	

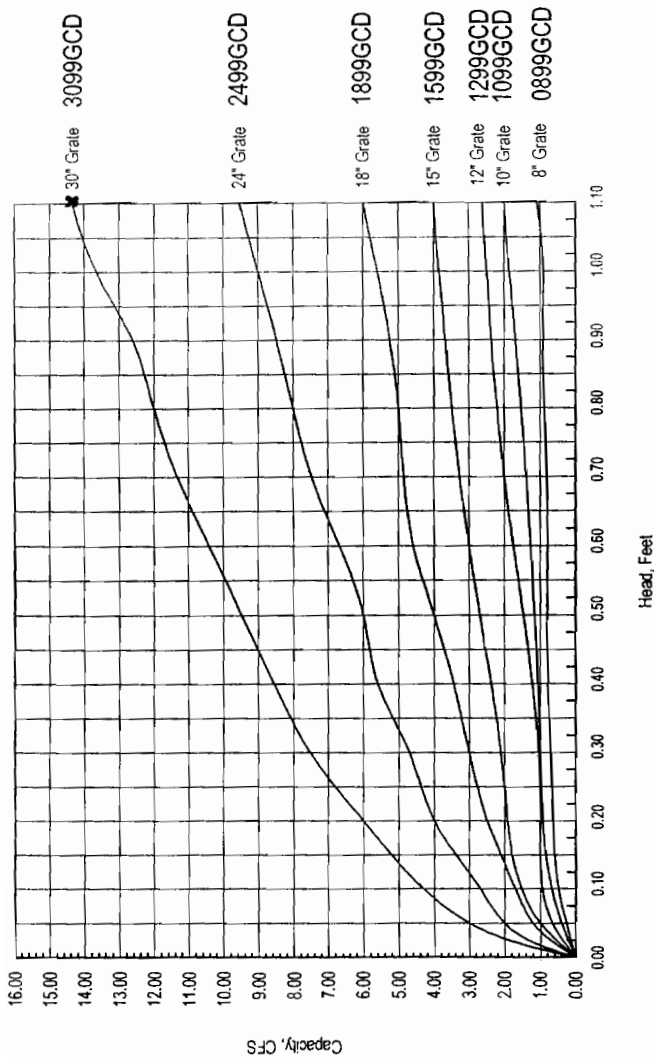
Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	60-in	181.6	60	Cir	109,000	75.03	79.34	3.954	79.70	83.10	n/a	83.10	End	Manhole
2	SD MH1	9.10	18	Cir	20,000	83.00	83.25	1.250	83.94	84.62	0.40	85.02	1	Manhole
3	INLET	9.10	18	Cir	65,000	83.35	84.00	1.000	85.02	85.38	0.45	85.82	2	Generic
										Number of lines: 3			Run Date: 1/28/2010	
1751										NOTES: Return period = 2 Yrs.				

Storm Sewer Tabulation

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (l) (lin/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID	
Line	To Line		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	109.000	0.00	0.00	0.00	0.00	0.0	0.3	0.0	0.0	181.6	561.1	10.49	60	3.95	75.03	79.34	79.70	83.10	89.00	89.44	60-in	
2	1	20.000	0.00	0.00	0.00	0.00	0.0	0.2	0.0	0.0	9.10	12.72	6.60	18	1.25	83.00	83.25	83.94	84.62	89.44	89.20	SD MH1	
3	2	65.000	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	9.10	11.38	5.25	18	1.00	83.35	84.00	85.02	85.38	89.20	87.00	INLET	
1751																Number of lines: 3						Run Date: 1/28/2010	
NOTES: Intensity = 69.87 / (Inlet time + 13.10) ^ 0.87; Return period = Yrs. 2 ; c = cir e = ellip b = box																							

Calculation based on an average pipe slope of 1%.



3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com		Nyloplast 8" - 30" DOME INLET CAPACITY	
MATERIAL PROJECT NO/NAME GRATE / COVER		TITLE 8" - 30" DOME INLET CAPACITY	
DRAWN BY AWA DATE 07MAR00	APPD BY CJA DATE 07MAR00	SCALE 1:2 DWG NO. 7001-110-000	SHEET 1 OF 1 REV C
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30" Beehive Grate Inlet Capacity

- Assume 25% clogging

Capacity @ 1.1' of head
(elev = 5188.1) = 14.3 cfs

Capacity w/ 25%
clogging = 10.7 cfs

Needed capacity = 9.1 cfs
OK.