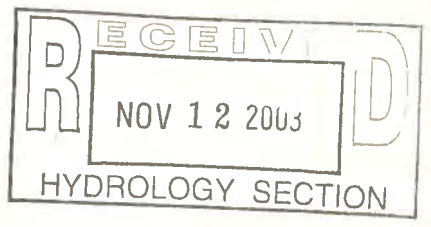
Submitted
6/9/14

DRAINAGE REPORT
FOR
CRESTVIEW
ALBUQUERQUE, NM

KB HOME



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SITE DESCRIPTION

The proposed subdivision, Crestview, is comprised of 10.4 acres zoned SU-1 for residential to be developed on the south side of McMahon Blvd. Near the intersection of Unser and McMahon. The site location is shown on the enclosed zone atlas map A-11 and A-12, The report represents an overall drainage management and conceptual grading plan for approval by the City of Albuquerque in order that the subsequent subdivision and development may proceed. The site is not located in a designated Flood Hazard Zone per FEMA – Firm Map 35001C0404 D. Per the USDA Soil Conservation Services (SCS), the soils type for this site is "Type A".

DESIGN-CRITERIA/LANDTREATMENT

The drainage plan presented in this report has been prepared in accordance with the City of Albuquerque Drainage Ordinances and Chapter 22 of the Development Process Manual DPM.

The hydrological analysis is based on the 100-year frequency, 6-hour duration storm, as represented in Section 22, Part A, Hydrology, of the Development Process Manual. Rainfall intensities per this report are as follows:

Zone	P60	P360	P1440
1	1.87	2.20	2.66

LAND TREATMEMNT

Residential DPM-Eqn a-4, pg 22-n

Treatment Type	A	B	C	D
	0.00%	45%	7%	48%

EXISTING DRAINAGE CONDITIONS

The site is currently undeveloped. Topography consists of sparse vegetation and native grasses and chamisa weeds. It has as cross-slope of approximately 3.0 to 4.5%. The site accepts no offsite flows. The existing drainage is to the north through McMahon Blvd. The existing discharge for the site is 17.07 cfs.

PREVIOUS STUDIES

The allowable runoff for this site was previously determined in "Drainage Report for Fineland Development" dated March 7, 2001 and the plans for Tuscany Ridge Unit 2 city project #603481. In the Fineland report, flows from McMahon Blvd. drain directly into the Tuscany Ridge drainage system at 21.6 cfs. and it allowed for 24.0 cfs from tracts E & F of the Fineland Development. Final design profiles for McMahon Blvd. have designed flows for the Tuscany system at 8.5 cfs. Final design for the Tuscany system allows for 37.5 cfs.

DEVELOPED DRAINAGE CONDITIONS

It is the intent for the developed flows to be surface transported via street sections to an inlet in the cul-de-sac at the east end of the subdivision. This flow will be routed to the proposed storm drain extension in McMahon Blvd. The storm drain extension in McMahon outfalls to the existing system in Tuscany Unit 2. Drop inlets in McMahon Blvd. have been designed to capture 8.5 cfs. The inlet in Crestview will add an additional 29.3 cfs. The total flow into the Tuscany system will be 37.8 cfs. The design capacity of the system can accommodate the proposed drainage.

Drainage area "DA5" will be routed to the west via surface flow to drainage improvements adjacent to and in McMahon Blvd. A temporary pond will be provided until completion of the drainage system proposed with the McMahon improvements.

CONCLUSION

No adverse impact will result due to developed conditions. Flows will be contained within proposed and existing improvements. Existing and currently designed improvements for McMahon Blvd. and the Tuscany system flows are 37.5 cfs. Developed flows for the system will be 37.8 cfs.

AP-1

Worksheet
Worksheet for Irregular Channel

Project Description	
Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data		
Slope	0.730000	ft/ft
Discharge	17.45	cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Metho	Horton's Method

Results		
Mannings Coefficient	0.015	
Water Surface Elevation	0.39	ft
Elevation Range	0.17 to 1.00	
Flow Area	1.1	ft²
Wetted Perimeter	14.16	ft
Top Width	13.80	ft
Actual Depth	0.22	ft
Critical Elevation	0.61	ft
Critical Slope	0.005547	ft/ft
Velocity	15.59	ft/s
Velocity Head	3.78	ft
Specific Energy	4.17	ft
Froude Number	9.65	
Flow Type	Supercritical	

Calculation Messages:
Flow is divided.

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+46	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	1.00
0+08	0.83
0+09	0.83
0+09	0.17
0+11	0.29
0+23	0.53
0+35	0.29
0+37	0.17
0+37	0.83
0+38	0.83
0+46	1.00

AP-1

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Discharge	17.45	cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Methc	Horton's Method

Results		
Mannings Coefficient	0.015	
Water Surface Elevation	0.39	ft
Elevation Range	0.17 to 1.00	
Flow Area	1.1	ft²
Wetted Perimeter	14.16	ft
Top Width	13.80	ft
Actual Depth	0.22	ft
Critical Elevation	0.61	ft
Critical Slope	0.005547	ft/ft
Velocity	15.59	ft/s
Velocity Head	3.78	ft
Specific Energy	4.17	ft
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Flow is divided.

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0+00	1.00
0+08	0.83
0+09	0.83
0+09	0.17
0+11	0.29
0+23	0.53
0+35	0.29
0+37	0.17
0+37	0.83
0+38	0.83
0+46	1.00

AP-2

Worksheet

Worksheet for Irregular Channel

Project Description	
Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data		
Slope	0.005000	ft/ft
Discharge	24.02	cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Methc	Horton's Method

Results		
Mannings Coefficient	0.015	
Water Surface Elevation	0.67	ft
Elevation Range	0.17 to 1.00	
Flow Area	8.1	ft²
Wetted Perimeter	29.05	ft
Top Width	28.25	ft
Actual Depth	0.50	ft
Critical Elevation	0.67	ft
Critical Slope	0.005188	ft/ft
Velocity	2.98	ft/s
Velocity Head	0.14	ft
Specific Energy	0.81	ft
Froude Number	0.98	
Flow Type	Subcritical	

Roughness Segments

Start Station	End Station	Mannings Coefficient
0+00	0+46	0.015

Natural Channel Points

Station (ft)	Elevation (ft)
0+00	1.00
0+08	0.83
0+09	0.83
0+09	0.17
0+11	0.29
0+23	0.53
0+35	0.29
0+37	0.17
0+37	0.83
0+38	0.83
0+46	1.00

AP-2

Worksheet
Worksheet for Irregular Channel

Project Description	
Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data		
Slope	0.005000	ft/ft
Discharge	24.02	cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Methc	Horton's Method

Results		
Mannings Coefficient	0.015	
Water Surface Elevation	0.67	ft
Elevation Range	0.17 to 1.00	
Flow Area	8.1	ft²
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Critical Elevation	0.67	ft
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Velocity	2.98	ft/s
Velocity Head	0.14	ft
Specific Energy	0.81	ft
Froude Number	0.98	
Flow Type	Subcritical	

Roughness Segments

Start Station	End Station	Mannings Coefficient
0+00	0+46	0.015

Natural Channel Points

Station (ft)	Elevation (ft)
0+00	1.00
0+08	0.83
0+09	0.83
0+09	0.17
0+11	0.29
0+23	0.53
0+35	0.29
0+37	0.17
0+37	0.83
0+38	0.83
0+46	1.00

AP-3

Worksheet

Worksheet for Irregular Channel

Project Description	
Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data		
Slope	0.017500	ft/ft
Discharge	31.96	cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Methc	Horton's Method

Results		
Mannings Coefficient	0.015	
Water Surface Elevation	0.62	ft
Elevation Range	0.17 to 1.00	
Flow Area	6.6	ft²
Wetted Perimeter	28.94	ft
Top Width	28.22	ft
Actual Depth	0.45	ft
Critical Elevation	0.73	ft
Critical Slope	0.004890	ft/ft
Velocity	4.87	ft/s
Velocity Head	0.37	ft
Specific Energy	0.99	ft
Froude Number	1.78	
Flow Type	Supercritical	

Roughness Segments

Start Station	End Station	Mannings Coefficient
0+00	0+46	0.015

Natural Channel Points

Station (ft)	Elevation (ft)
0+00	1.00
0+08	0.83
0+09	0.83
0+09	0.17
0+11	0.29
0+23	0.53
0+35	0.29
0+37	0.17
0+37	0.83
0+38	0.83
0+46	1.00

AP-3

Worksheet

Worksheet for Irregular Channel

Project Description	
Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data		
Slope	0.017500	ft/ft
Discharge	31.96	cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Metho	Horton's Method

Results		
Mannings Coefficient	0.015	
Water Surface Elevation	0.62	ft
Elevation Range	0.17 to 1.00	
Flow Area	6.6	ft²
Wetted Perimeter	28.94	ft
Top Width	28.22	ft
Actual Depth	0.45	ft
Critical Elevation	0.73	ft
Critical Slope	0.004890	ft/ft
Velocity	4.87	ft/s
Velocity Head	0.37	ft
Specific Energy	0.99	ft
Froude Number	1.78	
Flow Type	Supercritical	

Roughness Segments

Start Station	End Station	Mannings Coefficient
0+00	0+46	0.015

Natural Channel Points

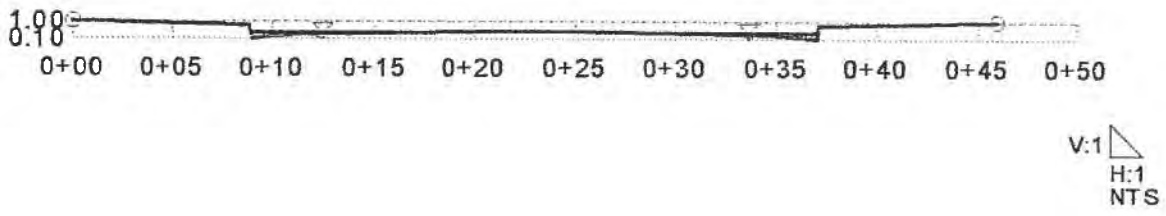
Station (ft)	Elevation (ft)
0+00	1.00
0+08	0.83
0+09	0.83
0+09	0.17
0+11	0.29
0+23	0.53
0+35	0.29
0+37	0.17
0+37	0.83
0+38	0.83
0+46	1.00

AT-1

Cross Section
Cross Section for Irregular Channel

Project Description	
Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data		
Mannings Coefficient	0.015	
Slope	0.730000	ft/ft
Water Surface Elevation	0.39	ft
Elevation Range	0.17 to 1.00	
Discharge	17.45	cfs



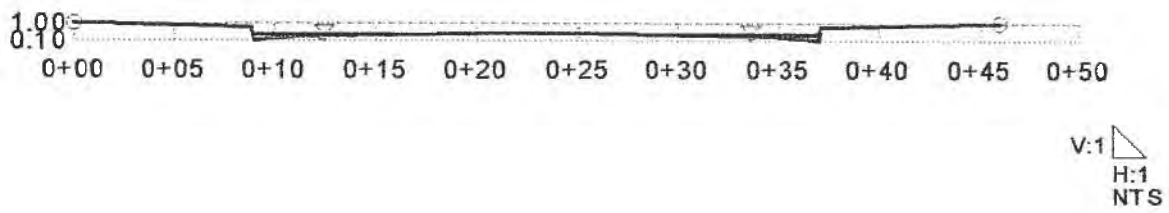
AF-1

Cross Section

Cross Section for Irregular Channel

Project Description	
Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data		
Mannings Coefficient	0.015	
Slope	0.730000	ft/ft
Water Surface Elevation	0.39	ft
Elevation Range	0.17 to 1.00	
Discharge	17.45	cfs

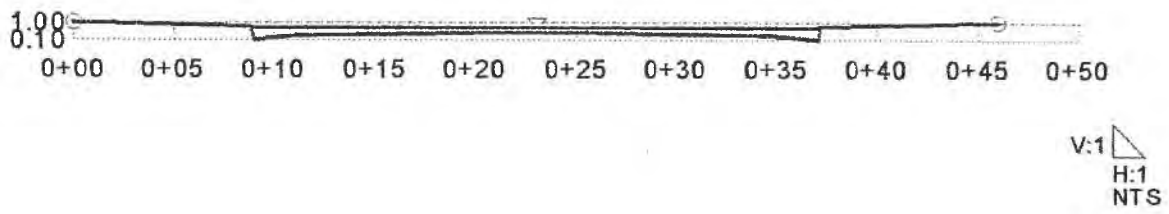


A2-2

Cross Section
Cross Section for Irregular Channel

Project Description	
Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data		
Mannings Coefficient	0.015	
Slope	0.005000	ft/ft
Water Surface Elevation	0.67	ft
Elevation Range	0.17 to 1.00	
Discharge	24.02	cfs



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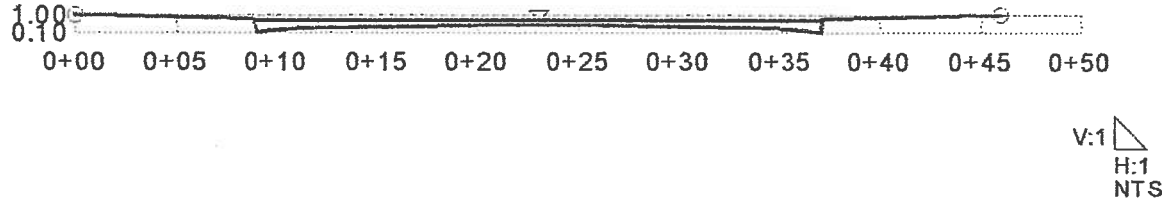
AF-2

Cross Section
Cross Section for Irregular Channel

Project Description	
Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data		
Mannings Coefficient	0.015	
Slope	0.005000	ft/ft
Water Surface Elevation	0.67	ft
Elevation Range	0.17 to 1.00	
Discharge	24.02	cfs



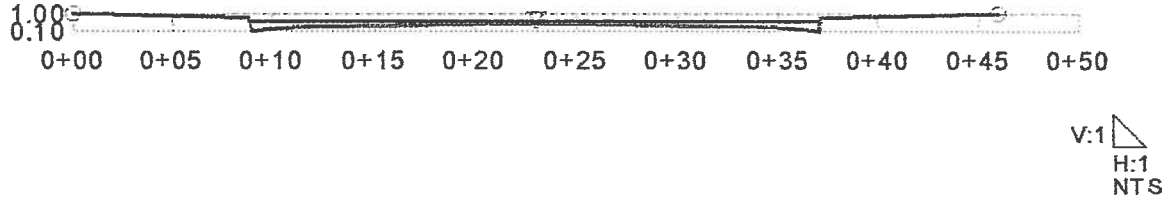
AP-3

Cross Section

Cross Section for Irregular Channel

Project Description	
Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data		
Mannings Coefficient	0.015	
Slope	0.017500	ft/ft
Water Surface Elevation	0.62	ft
Elevation Range	0.17 to 1.00	
Discharge	31.96	cfs



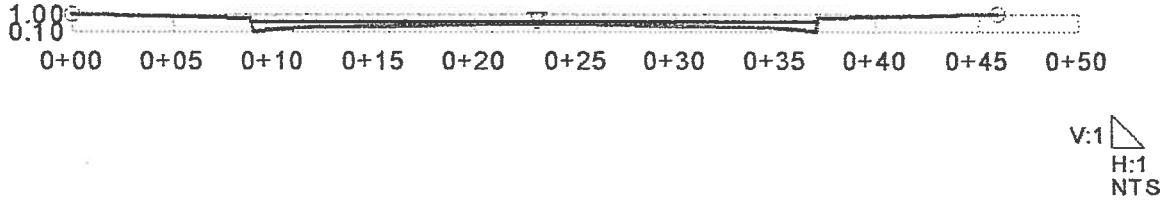
AP-3

Cross Section

Cross Section for Irregular Channel

Project Description	
Worksheet	Irregular Channel - 1
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data		
Mannings Coefficient	0.015	
Slope	0.017500	ft/ft
Water Surface Elevation	0.62	ft
Elevation Range	0.17 to 1.00	
Discharge	31.96	cfs



Hydraflow 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 type	N value (n)	J-loss coeff (K)	Inlet/ Rim El (ft)	
1	End	50.5	0.0	Curb	0.00	0.00	0.00	0.0	5284.68	0.53	5284.95	36	Cir	0.013	0.50	0.00	Existing 36
2	1	158.0	0.0	Curb	5.50	0.00	0.00	0.0	5284.68	0.64	5285.69	36	Cir	0.013	1.50	5290.38	McMahon Proposed 3
3	2	108.0	-90.0	MH	0.00	0.00	0.00	0.0	5285.69	2.00	5287.85	24	Cir	0.013	0.45	5296.00	Crestview 36
4	3	43.0	19.0	Comb	29.34	0.00	0.00	0.0	5287.85	2.00	5288.71	24	Cir	0.013	1.00	5294.48	Crestview Inlet

Project File: crest1.stm	I-D-F File: crest1.IDF	Total number of lines: 4	Date: 11-11-2003

Hydraflow Summary Report

Line No.	Line ID	Flow rate (cfs)	Line size (in)	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line slope (%)	HGL down (ft)	HGL up (ft)	Minor loss (ft)	Dns line No.
1	Existing 36	34.84	36 c	50.5	5284.68	5284.95	0.535	5287.68	5287.79	0.20	End
2	McMahon Proposed 3	34.84	36 c	158.0	5284.68	5285.69	0.639	5287.99	5288.34	0.65	1
3	Crestview 36	29.34	24 c	108.0	5285.69	5287.85	2.000	5288.99*	5290.81*	0.61	2
4	Crestview Inlet	29.34	24 c	43.0	5287.85	5288.71	2.000	5291.42*	5292.14*	1.36	3

Project File: crest1.stm	I-D-F File: crest1.IDF	Total No. Lines: 4	Run Date: 11-11-2003

NOTES: c = circular; e = elliptical; b = box; Return period = 100 Yrs.; * Indicates surcharge condition.

Hydraflow Inlet Report

Line No	Line ID	A (ac)	Inlet time (min)	I (in/hr)	C	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q byp (cfs)	Junc type	Curb Inlet		Grate Inlet			Gutter				Flow		Byp line No
											Ht (in)	L (ft)	area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	depth (ft)	spread (ft)	
1	Existing 36	0.00	0.0	0.00	0.00	0.00	2.93	2.93	0.00	Curb	8.0	7.39	0.00	0.00	0.00	Sag	2.00	0.080	0.020	0.31	9.41	Offsite
2	McMahon Propose	0.00	0.0	0.00	0.00	5.50*	0.00	2.57	2.93	Curb	8.0	7.80	0.00	0.00	0.00	0.025	2.00	0.083	0.020	0.35	11.20	1
3	Crestview 36	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	0.000	0.00	0.000	0.000	0.00	0.00	2
4	Crestview Inlet	0.00	0.0	0.00	0.00	29.34*	0.00	29.34	0.00	Comb	8.0	15.39	14.00	7.39	2.00	Sag	2.00	0.083	0.020	0.57	6.87	3

Project File: crest1.stm	I-D-F File: crest1.IDF	Total number of lines: 4	Run Date: 11-11-2003

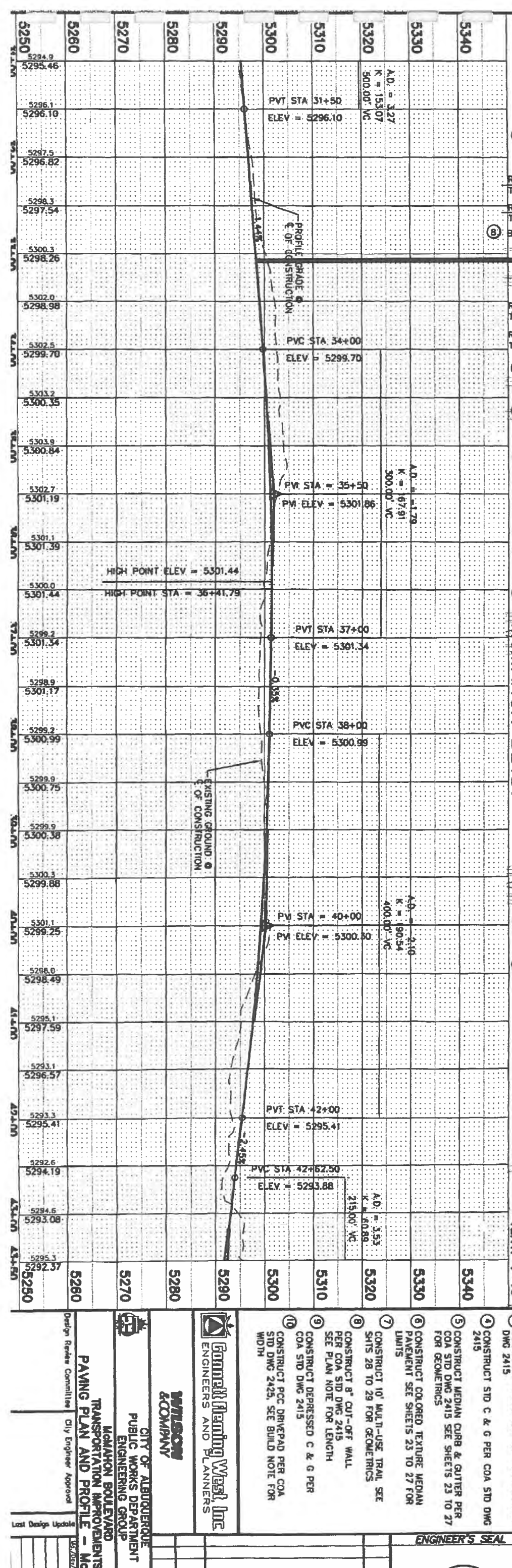
NOTES: Inlet N-Values = 0.017 ; Design depth for grate(s) = 0.83 (ft); Intensity = 0.00 / (Inlet time + 0.00) ^ 0.00; Return period = 100 Yrs. ; * Indicates Known Q added

Hydraflow Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
1	36	34.84	5284.68	5287.68	3.00	7.07	4.93	0.38	5288.06	0.273	50.5	5284.95	5287.79	2.84	6.93	5.03	0.39	5288.19	0.236	0.255	0.129	0.50	0.20
2	36	34.84	5284.68	5287.99	3.00	7.07	4.93	0.38	5288.37	0.273	158	5285.69	5288.34	2.65	6.61	5.27	0.43	5288.77	0.244	0.259	0.409	1.50	0.65
3	24	29.34	5285.69	5288.99	2.00	3.14	9.34	1.36	5290.35	1.683	108	5287.85	5290.81	2.00	3.14	9.34	1.36	5292.16	1.683	1.683	1.818	0.45	0.61
4	24	29.34	5287.85	5291.42	2.00	3.14	9.34	1.36	5292.78	1.683	43.0	5288.71	5292.14	2.00	3.14	9.34	1.36	5293.50	1.683	1.683	0.724	1.00	1.36

Project File: crest1.stm	I-D-F File: crest1.IDF	Total number of lines: 4	Run Date: 11-11-2003

NOTES: Initial tailwater elevation = 5287.68 (ft) , * Normal depth assumed., ** Critical depth assumed.



④ STA 32+51.15–41.00' RT TO STA 32+81.15–71.00' RT–BUILD 47.12 LF OF STD C & G.

RET STA 32+51.15–41.00' RT T/C=5297.33 FL=5296.66'

RET STA 32+81.15–71.00' RT T/C=5298.88 FL=5298.21

⑧ BUILD 49.25 LF OF CUT–OFF WALL

RET STA 32+29.17–71.00' RT T/C=5298.31 FL=5297.63

RET STA 33+59.17–41.00' RT T/C=5298.88 FL=5298.21

④ STA 32+29.17–71.01' RT TO STA 33+59.17–41.00' RT BUILD 47.13 LF OF STD C & G.

⑥ STA 33+59.83–6.17' RT TO STA 34+44.46–5.67' RT BUILD 474.52 SF OF COLRED TEXTURE MEDIAN PAVEMENT

④ STA 33+59.17–41.00' RT TO STA 44+23.77–41.00' RT BUILD 1064.06 LF OF STD C & G.

⑤ STA 33+55.17–6.17' RT TO STA 39+39.88–6.15' LT BUILD 1176.36 LF OF MEDIAN C & G

① STA 33+46.85–45.23' RT TO STA 43+70.20–47.72' RT BUILD 1030.83 LF OF SIDEWALK

⑥ STA 38+20.60–5.65' RT TO STA 39+39.22–6.15' RT BUILD 474.48 SF OF COLRED TEXTURE MEDIAN PAVEMENT

⑤ STA 40+37.93–6.53' LT TO STA 44+19.77–6.17' LT BUILD 732.89 LF OF MEDIAN C & G

⑥ STA 40+38.55–6.30' RT TO STA 40+46.27–3.39' RT BUILD 43.74 SF OF COLRED TEXTURE MEDIAN PAVEMENT

STA 31+35.87–5.67' LT TO STA 32+54.49–6.17' LT BUILD 474.48 SF OF COLORED TEXTURE MEDIAN PAVEMENT

STA 32+51.16–41.00' LT TO STA 32+81.16–71.00' LT–BUILD 30.00 LF OF STD C & G.

RET STA 32+51.16–41.00' LT T/C=5297.32 FL=5296.66

RET STA 32+81.16–71.00' LT T/C=5299.21 FL=5298.54

⑧ BUILD 49.25 LF OF CUT–OFF WALL

RET STA 33+29.14–70.99' LT T/C=5298.63 FL=297.96

RET STA 33+59.14–41.00' LT T/C5298.88 FL=5298.21

STA 33+29.77–70.99' RT TO STA 33+59.14–41.00' RT BUILD 29.37 LF OF STD C & G.

STA 33+59.14–41.00' LT TO STA 44+29.62–41.00' LT–BUILD 1070.48 LF OF STD C & G.

STA 33+59.17–41.00' LT TO STA 39+36.39–41.00' LT–BUILD 577.25 LF OF STD C & G.

STA 33+45.74–44.16' LT TO STA 39+49.39–44.66' LT–BUILD 586.85 LF OF MULTI–USE TRAIL

STA 39+36.39–41.00' LT TO STA 39+66.32–103.08' LT–BUILD 79.21 LF OF STD C & G.

STA 39+66.39–41.00' LT TO STA 40+13.39–41.00' LT–BUILD 47 LF OF VALLEY GUTTER

STA 40+13.94–103.08' LT TO STA 40+43.39–41.00' LT–BUILD 79.21 LF OF STD C & G.

STA 40+43.39–41.00' LT TO STA 44+29.62–41.00' LT–BUILD 386.23 LF OF STD C & G.

STA 40+30.40–44.61' LT TO STA 44+33.36–41.96' LT–BUILD 388.06 LF OF MULTI–USE TRAIL

STA 43+00.41–5.67' LT TO STA 44+19.04–6.17' RT BUILD 474.52 SF OF COLRED TEXTURE MEDIAN PAVEMENT

KEYED NOTES

① CONSTRUCT 6' SIDEWALK PER COA STD DWG 2430 OR PER ADA SIDEWALK DETAIL SHT 14

② CONSTRUCT WHEELCHAIR RAMP PER COA STD DWG 2441 AND DETAIL SHT 14

③ CONSTRUCT VALLEY GUTTER PER COA STD DWG 2415

④ CONSTRUCT STD C & G PER COA STD DWG 2415

⑤ CONSTRUCT MEDIAN CURB & GUTTER PER COA STD DWG 2415 SEE SHEETS 23 TO 27 FOR GEOMETRICS

⑥ CONSTRUCT COLORED TEXTURE MEDIAN PAVEMENT SEE SHEETS 23 TO 27 FOR LIMITS

⑦ CONSTRUCT 10' MULTI–USE TRAIL SEE SHTS 28 TO 29 FOR GEOMETRICS

⑧ CONSTRUCT 8" CUT–OFF WALL PER COA STD DWG 2415 SEE PLAN NOTE FOR LENGTH

⑨ CONSTRUCT DEPRESSED C & G PER COA STD DWG 2415

⑩ CONSTRUCT PCC DRIVEPAD PER COA STD DWG 2425, SEE BUILD NOTE FOR WIDTH

* CURB RETURN ELEVATIONS TO BE PROVIDED BY OTHERS.

Ⓐ

	T/C	FL
1	5298.74	5298.07
2	---	5297.60
3	5297.80	5297.13
4	---	5297.09

Δ= 89°59'54" R= 30.00' L= 47.12'

Ⓑ

	T/C	FL
1	5298.82	5298.15
2	---	5298.09
3	5298.89	5298.02
4	---	5297.78

Δ= 89°59'14" R= 30.00' L= 47.12'

Ⓒ

	T/C	FL
1	5298.39	5297.72
2	---	5298.11
3	5299.16	5298.49
4	---	5297.09

Δ= 90°00'06" R= 30.00' L= 47.12'

Ⓓ

	T/C	FL
1	5298.45	5297.78
2	---	5297.92
3	5298.74	5298.07
4	---	5297.78

Δ= 90°00'46" R= 30.00' L= 47.13'

Ⓔ

	T/C	FL
1	52°.00	52°.00
2	---	52°.00
3	52°.00	52°.00
4	---	52°.00

Δ= 90°07'40" R= 30.00' L= 47.19'

Ⓕ

	T/C	FL
1	52°.00	52°.00
2	---	52°.00
3	52°.00	52°.00
4	---	52°.00

Δ= 89°52'20" R= 30.00' L= 47.08'

Gonnett Fleming West, Inc.
ENGINEERS AND PLANNERS

WILSON & COMPANY

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

McMAHON BOULEVARD
TRANSPORTATION IMPROVEMENTS
PAVING PLAN AND PROFILE – McMA

Design Review Committee | City Engineer Approval | Last Design Update | Mo./Day/Yr.

NO.	DATE	REMARKS	BY

ENGINEER'S SEAL

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

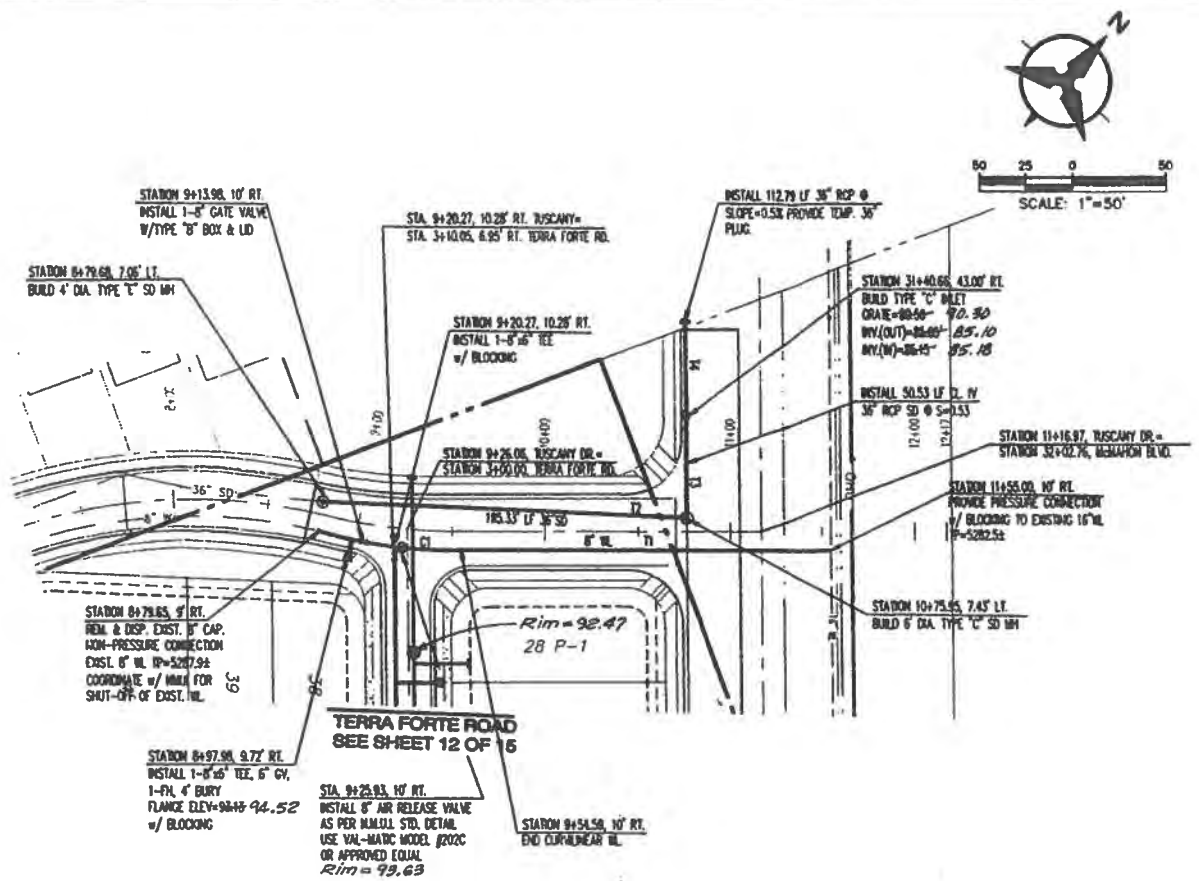
BENCH MARKS
THE STA. IS A USGS BRASS TABLET STAMPED "BLACK–2 1977" SET FLUSH W/THE GROUND. THE STA IS LOCATED 8.5 MI. N.W. OF DOWNTOWN ALBQ. TO REACH THE STA FROM

AS–BUILT INFORMATION
CONTRACTOR
WORK STARTED BY: DATE:
INSPECTOR'S ACCEPTANCE BY: DATE:

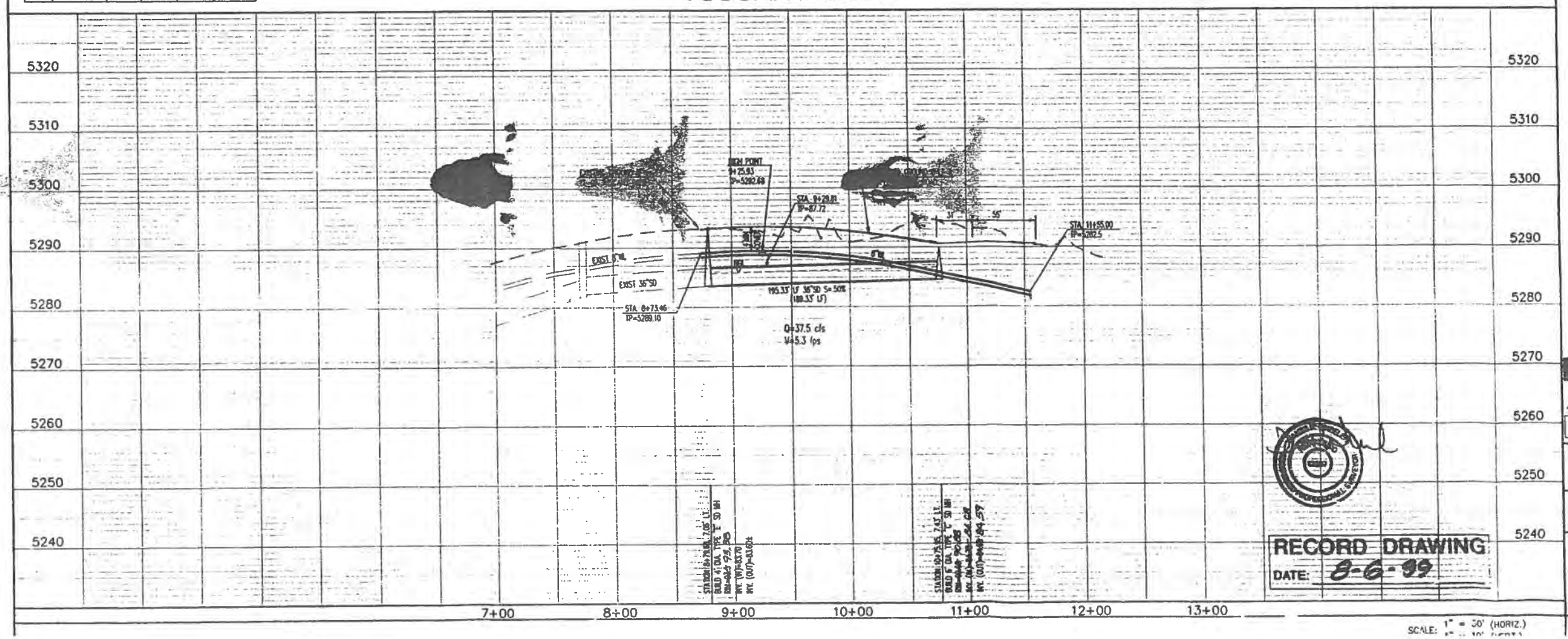
8" WATER TANGENT TABLE		
NUMBER	BEARING	DISTANCE
T1	N 20°46'19" E	200.41'

36" SD TANGENT TABLE		
NUMBER	BEARING	DISTANCE
T2	N 23°21'03" E	195.35'
T3	N 69°19'47" W	54.53'
T4	N 69°19'47" W	50.83'

8" WATER CURVE DATA TABLE					
NUMBER	PI STATION	RADIUS	ARC	TANGENT	DELTA
C1	9+17.18	258.82'	77.25'	38.91'	17°06'03"



TUSCANY DRIVE



NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY OF OF ANY DISCREPANCIES.
2. ALL CURB RETURN RADII SHALL BE 20' UNLESS OTHERWISE SPECIFIED.
3. ALL CURVE DATA AND DIMENSIONS REFER TO FACE OF CURB UNLESS OTHERWISE SPECIFIED.
4. GRADE ELEVATIONS, WHERE NOTED, ARE FOR TOP OF STANDARD CURB UNLESS OTHERWISE SPECIFIED.
5. CONTRACTOR IS TO INSTALL A 4" X 4" X 5' POST AND EMD AT THE END OF EACH SANITARY SEWER SERVICE.
6. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ALL UTILITY CONDUITS AND EXISTING LINES.
7. ANY ADDITIONAL GRADING REQUIRED TO MATCH PROPOSED STREET GRADES SHALL BE INCIDENTAL TO PAVING ITEMS.
8. CONTRACTOR SHALL PROVIDE THE INSPECTORS, (CITY AND PRIVATE) WITH THE PROPOSED HYDROSTATIC TESTING PLAN. THE PLAN MUST BE APPROVED BEFORE TESTING OPERATIONS BEGIN.
9. CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS OR OTHER CONTRACTORS ON SITE.
10. ANY DAMAGE TO THE EXISTING FACILITIES (CURB & GUTTER), PAVEMENT, CONDUITS, LANDSCAPING, UTILITY LINES, ETC.) DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS' EXPENSE.
11. REMOVAL OF THE EXISTING CURB AND GUTTER SHALL BE AS PER COA STD. DWG. 2415 (SAWCUT ONLY).
12. WHEELCHAIR RAMPS SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB & GUTTER.

AS-BUILT INFORMATION
CONTRACTOR GCM DATE 7/99
STAKED BY BH DATE 7/99
INSPECTOR'S SIGNATURE & DATE Scott Evans 7/99
FIELD VERIFICATION BY BH DATE 8/99
CORRECTED BY BH DATE
RECORDED BY DATE
MICRO-FILM INFORMATION
PO.

BENCH MARKS
ACS Brass Tablet stamped "Block-2 1977"
Geographic Position (NAD 1927)
N.M. State Plane Coordinates (Central Zone)
X= 372,920.43 Y= 1,530,241.52
Ground-to-Grid Factor= 0.9996692
alt.= -00°14'43"
SID 1929 Elevation= 5213.926

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL

REMARKS
REVISIONS
DESIGN
No. Date
Designed By: BS, CG
Drawn By: RB, LR

Bohannan Huston
Courtyard One 7500 JEFFERSON NE Albuquerque NEW MEXICO 87109
ENGINEERS PLANNERS PROJECT MANAGERS SURVEYORS SOFTWARE DEVELOPERS

RECORD DRAWING
DATE: 8-6-99

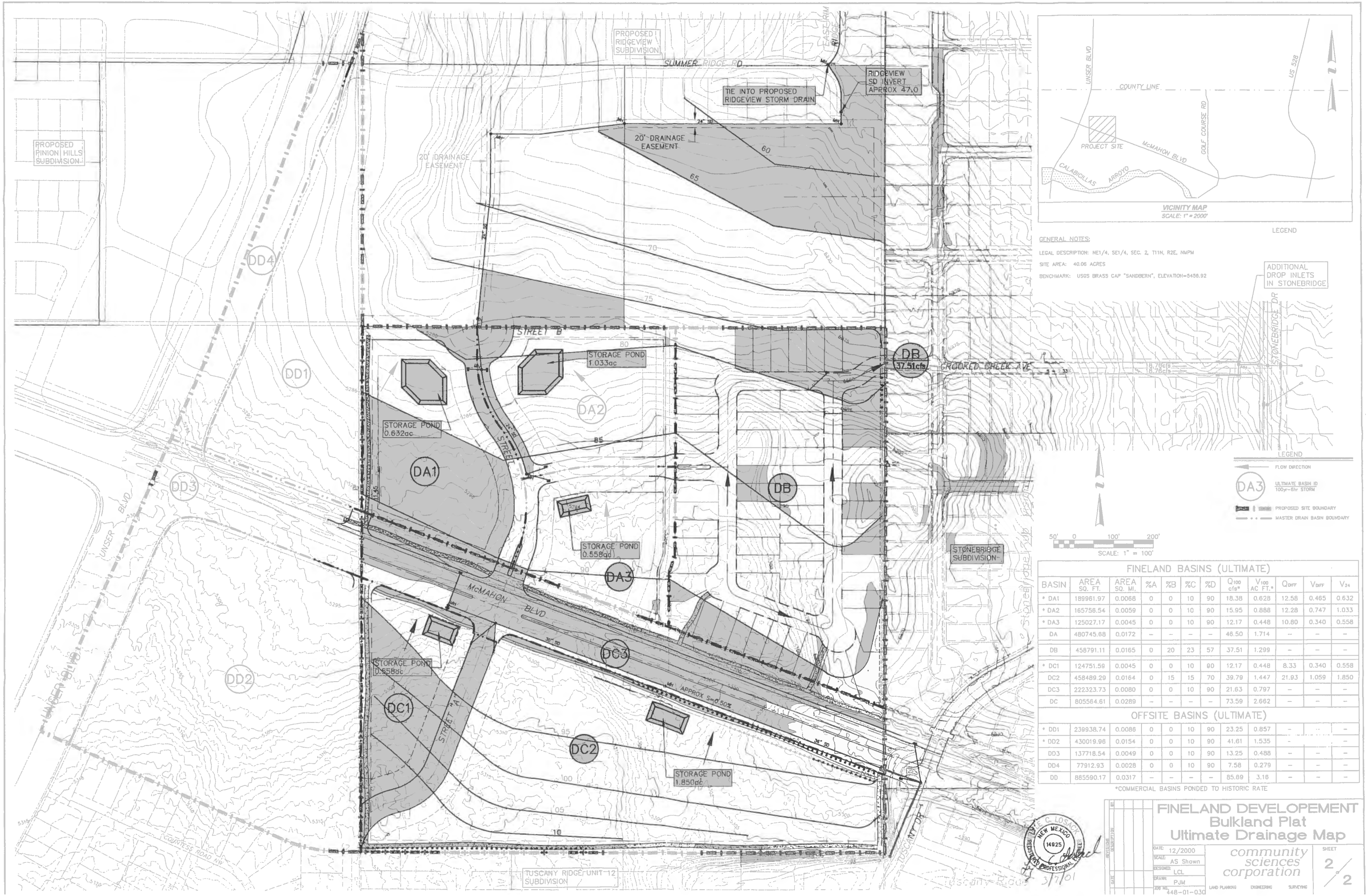
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TUSCANY RIDGE UNIT 2
UTILITY & STORM DRAIN PLAN & PROFILE
TUSCANY DRIVE STA. 2+00 TO STA. 12+00

Design Review Committee: APPROVED AUG - 1 1999 DESIGN REVIEW COMMITTEE
City Engineer Approval
Last Design Update: Mo./Day/Yr.
Mo./Day/Yr.

City Projec. No. 603481
Zone Map No. A-12-Z
Sheet 11 Of 15

COMMUNITY SCIENCES CORPORATION - CORRALES, NEW MEXICO - (505) 897-0000



LEGEND

GENERAL NOTES:

LEGAL DESCRIPTION: NE1/4, SE1/4, SEC. 2, T11N, R2E, NMPM

SITE AREA: 40.06 ACRES

BENCHMARK: USGS BRASS CAP "SANDBERN", ELEVATION=5456.92

LEGEND

FLOW DIRECTION

DA3 ULTIMATE BASIN ID 100yr-6hr STORM

PROPOSED SITE BOUNDARY

MASTER DRAIN BASIN BOUNDARY

50' 0 100' 200'

SCALE: 1" = 100'

FINELAND BASINS (ULTIMATE)

BASIN	AREA SQ. FT.	AREA SQ. MI.	%A	%B	%C	%D	Q_{100} cfs*	V_{100} AC FT.*	Q_{DIFF}	V_{DIFF}	V_{24}
* DA1	189961.97	0.0068	0	0	10	90	18.38	0.628	12.58	0.465	0.632
* DA2	165756.54	0.0059	0	0	10	90	15.95	0.888	12.28	0.747	1.033
* DA3	125027.17	0.0045	0	0	10	90	12.17	0.448	10.80	0.340	0.558
DA	480745.68	0.0172	–	–	–	–	46.50	1.714	–	–	–
DB	458791.11	0.0165	0	20	23	57	37.51	1.299	–	–	–
* DC1	124751.59	0.0045	0	0	10	90	12.17	0.448	8.33	0.340	0.558
DC2	458489.29	0.0164	0	15	15	70	39.79	1.447	21.93	1.059	1.850
DC3	222323.73	0.0080	0	0	10	90	21.63	0.797	–	–	–
DC	805584.61	0.0289	–	–	–	–	73.59	2.662	–	–	–

OFFSITE BASINS (ULTIMATE)

* DD1	239938.74	0.0086	0	0	10	90	23.25	0.857	–	–	–
* DD2	430019.96	0.0154	0	0	10	90	41.61	1.535	–	–	–
DD3	137718.54	0.0049	0	0	10	90	13.25	0.488	–	–	–
DD4	77912.93	0.0028	0	0	10	90	7.58	0.279	–	–	–
DD	885590.17	0.0317	–	–	–	–	85.69	3.16	–	–	–

*COMMERCIAL BASINS PONDED TO HISTORIC RATE

JEFFREY C. LOSACK NEW MEXICO 14925 REGISTERED PROFESSIONAL ENGINEER 3/7/01

FINELAND DEVELOPEMENT
Bulkland Plat
Ultimate Drainage Map

DATE: 12/2000
SCALE: AS Shown
DESIGNED: LCL
DRAWN: PJM
JOB NO. 448-01-030

community sciences corporation
LAND PLANNING ENGINEERING SURVEYING

SHEET 2 / 2