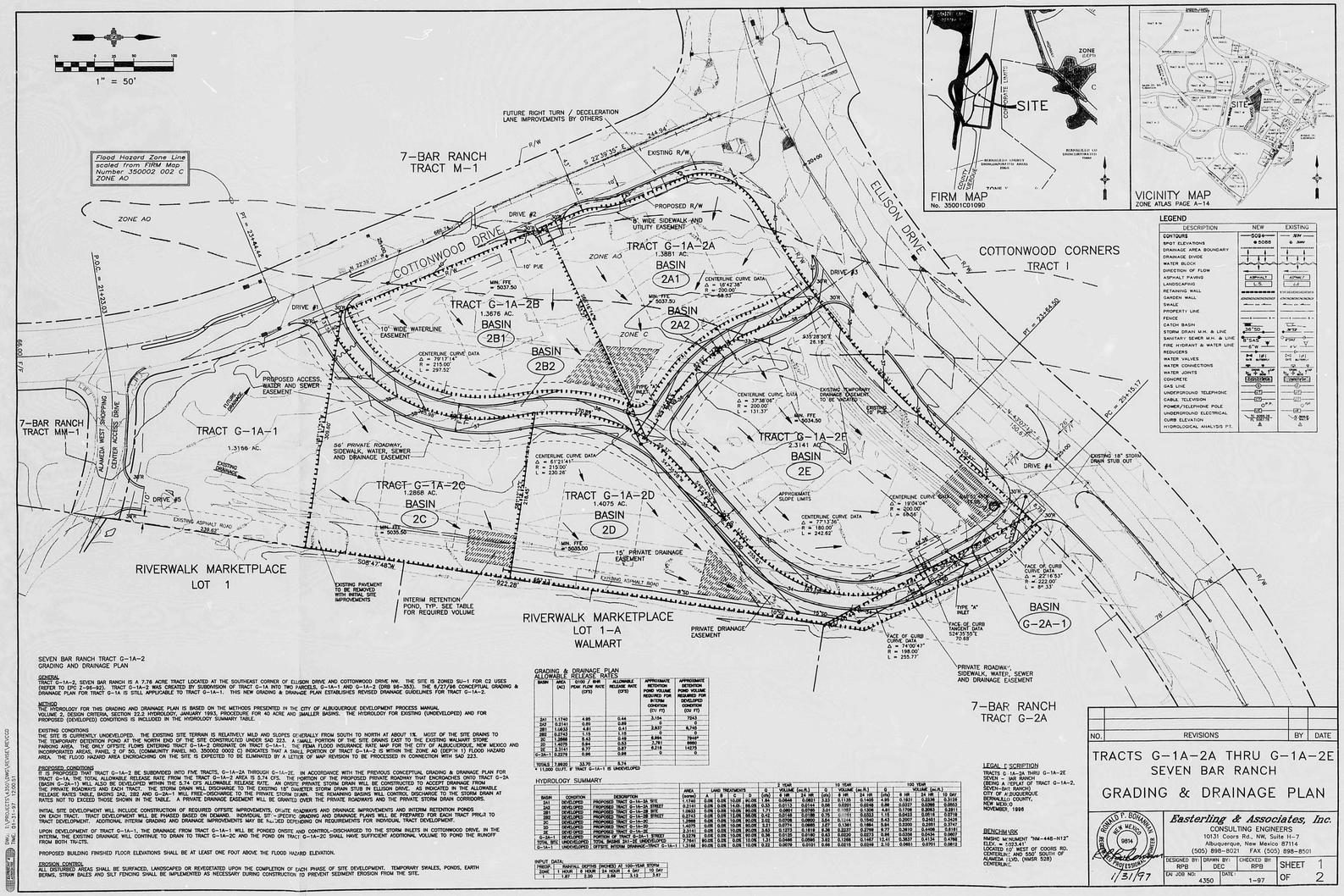
PUBLIC WORKS/HYDROLOGY

A14/D10A



SEVEN BAR RANCH TRACT G-1A-2
GRADING AND DRAINAGE PLAN

GENERAL
TRACT G-1A-2, SEVEN BAR RANCH IS A 7.76 ACRE TRACT LOCATED AT THE SOUTHEAST CORNER OF ELLISON DRIVE AND COTTONWOOD DRIVE NW. THE SITE IS ZONED SU-1 FOR C2 USES (REFER TO EPC Z-96-92). TRACT G-1A-2 WAS CREATED BY SUBDIVISION OF TRACT G-1A INTO TWO PARCELS, G-1A-1 AND G-1A-2 (DRB 96-353). THE 6/27/96 CONCEPTUAL GRADING & DRAINAGE PLAN FOR TRACT G-1A IS STILL APPLICABLE TO TRACT G-1A-1. THIS NEW GRADING & DRAINAGE PLAN ESTABLISHES REVISED DRAINAGE GUIDELINES FOR TRACT G-1A-2.

METHOD
THE HYDROLOGY FOR THIS GRADING AND DRAINAGE PLAN IS BASED ON THE METHODS PRESENTED IN THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL VOLUME 2, DESIGN CRITERIA, SECTION 22.2 HYDROLOGY, JANUARY 1993, PROCEDURE FOR 40 ACRE AND SMALLER BASINS. THE HYDROLOGY FOR EXISTING (UNDEVELOPED) AND FOR PROPOSED (DEVELOPED) CONDITIONS IS INCLUDED IN THE HYDROLOGY SUMMARY TABLE.

EXISTING CONDITIONS
THE SITE IS CURRENTLY UNDEVELOPED. THE EXISTING SITE TERRAIN IS RELATIVELY MILD AND SLOPES GENERALLY FROM SOUTH TO NORTH AT ABOUT 1%. MOST OF THE SITE DRAINS TO THE TEMPORARY DETENTION POND AT THE NORTH END OF THE SITE CONSTRUCTED UNDER SAD 223. A SMALL PORTION OF THE SITE DRAINS EAST TO THE EXISTING WALMART STORE PARKING AREA. THE ONLY OFFSITE FLOWS ENTERING TRACT G-1A-2 ORIGINATE ON TRACT G-1A-1. THE FEMA FLOOD INSURANCE RATE MAP FOR THE CITY OF ALBUQUERQUE, NEW MEXICO AND INCORPORATED AREAS, PANEL 2 OF 50, (COMMUNITY PANEL NO. 350002 0002 C) INDICATES THAT A SMALL PORTION OF TRACT G-1A-2 IS WITHIN THE ZONE AO (DEPTH 1) FLOOD HAZARD AREA. THE FLOOD HAZARD AREA ENCROACHING ON THE SITE IS EXPECTED TO BE ELIMINATED BY A LETTER OF MAP REVISION TO BE PROCESSED IN CONNECTION WITH SAD 223.

PROPOSED CONDITIONS
IT IS PROPOSED THAT TRACT G-1A-2 BE SUBDIVIDED INTO FIVE TRACTS, G-1A-2A THROUGH G-1A-2E. IN ACCORDANCE WITH THE PREVIOUS CONCEPTUAL GRADING & DRAINAGE PLAN FOR TRACT G-1A, THE TOTAL ALLOWABLE RELEASE RATE FROM THE TRACT G-1A-2 AREA IS 5.74 CFS. THE PORTION OF THE PROPOSED PRIVATE ROADWAY THAT ENCROACHES ONTO TRACT G-2A (BASIN G-2A-1) WILL ALSO BE DEVELOPED WITHIN THE 5.74 CFS ALLOWABLE RELEASE RATE. AN ONSITE PRIVATE STORM DRAIN WILL BE CONSTRUCTED TO ACCEPT DRAINAGE FROM THE PRIVATE ROADWAYS AND EACH TRACT. THE STORM DRAIN WILL DISCHARGE TO THE EXISTING 18" DIAMETER STORM DRAIN STUB IN ELLISON DRIVE. AS INDICATED IN THE ALLOWABLE RELEASE RATES TABLE, BASINS 2A2, 2B2 AND G-2A-1 WILL FREE-DISCHARGE TO THE PRIVATE STORM DRAIN. THE REMAINING BASINS WILL CONTROL DISCHARGE TO THE STORM DRAIN AT RATES NOT TO EXCEED THOSE SHOWN IN THE TABLE. A PRIVATE DRAINAGE EASEMENT WILL BE GRANTED OVER THE PRIVATE ROADWAYS AND THE PRIVATE STORM DRAIN CORRIDORS.

INITIAL SITE DEVELOPMENT WILL INCLUDE CONSTRUCTION OF REQUIRED OFFSITE IMPROVEMENTS, ONSITE ROADWAYS AND DRAINAGE IMPROVEMENTS AND INTERIM RETENTION PONDS ON EACH TRACT. TRACT DEVELOPMENT WILL BE PHASED BASED ON DEMAND. INDIVIDUAL SITE - SPECIFIC GRADING AND DRAINAGE PLANS WILL BE PREPARED FOR EACH TRACT PRIOR TO TRACT DEVELOPMENT. ADDITIONAL INTERIM GRADING AND DRAINAGE IMPROVEMENTS MAY BE REQUIRED DEPENDING ON REQUIREMENTS FOR INDIVIDUAL TRACT DEVELOPMENT.

UPON DEVELOPMENT OF TRACT G-1A-1, THE DRAINAGE FROM TRACT G-1A-1 WILL BE PONDED ONSITE AND CONTROL-DISCHARGED TO THE STORM INLETS IN COTTONWOOD DRIVE. IN THE INTERIM, THE EXISTING DRAINAGE WILL CONTINUE TO DRAIN TO TRACT G-1A-2C AND THE POND ON TRACT G-1A-2C SHALL HAVE SUFFICIENT ADDITIONAL VOLUME TO POND THE RUNOFF FROM BOTH TRACTS.

PROPOSED BUILDING FINISHED FLOOR ELEVATIONS SHALL BE AT LEAST ONE FOOT ABOVE THE FLOOD HAZARD ELEVATION.

EROSION CONTROL
ALL DISTURBED AREAS SHALL BE SURFACED, LANDSCAPED OR REVEGETATED UPON THE COMPLETION OF EACH PHASE OF SITE DEVELOPMENT. TEMPORARY SWALES, PONDS, EARTH BERMS, STRAW BALES AND SILT FENCING SHALL BE IMPLEMENTED AS NECESSARY DURING CONSTRUCTION TO PREVENT SEDIMENT EROSION FROM THE SITE.

GRADING & DRAINAGE PLAN
ALLOWABLE RELEASE RATES

BASIN	AREA (AC)	6 HOUR PEAK FLOW RATE (CFS)	ALLOWABLE RELEASE RATE (CFS)	APPROXIMATE EXISTING POND VOLUME REQUIRED FOR INTERIM CONDITION (CU FT)	APPROXIMATE EXISTING POND VOLUME REQUIRED FOR DEVELOPED CONDITION (CU FT)
2A1	1.1740	4.95	0.44	3,194	7843
2A2	0.3141	0.89	0.89	0	0
2B1	1.0833	4.81	0.41	3,837	6,749
2B2	0.2743	1.15	0.15	0	0
2C	1.2868	5.43	0.43	8,686	78167
2D	1.4075	5.84	0.84	6,791	9990
2E	2.3141	9.77	0.87	6,016	14575
G-2A-1	0.2273	0.89	0.89	0	0
TOTALS	7.9920	33.76	5.74		

* 11,000 CU.FT. IF TRACT G-1A-1 IS UNDEVELOPED

HYDROLOGY SUMMARY

BASIN	CONDITION	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	5 YEAR Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR	10 YEAR Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR	100 YEAR Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR	10 DAY
2A1	DEVELOPED	PROPOSED TRACT G-1A-2A SITE	1.1740	0.00	0.00	100.00	4.84	0.0844	0.0881	8.33	0.1135	0.1205	4.95	0.1831	0.2034	0.5128
2A2	DEVELOPED	PROPOSED TRACT G-1A-2A STREET	0.3141	0.00	0.00	100.00	0.53	0.0113	0.0144	0.96	0.0201	0.0248	0.89	0.0327	0.0365	0.0863
2B1	DEVELOPED	PROPOSED TRACT G-1A-2B SITE	1.0833	0.00	0.00	100.00	4.47	0.0780	0.0813	7.69	0.1048	0.1112	4.81	0.1690	0.1877	0.4733
2B2	DEVELOPED	PROPOSED TRACT G-1A-2B STREET	0.2743	0.00	0.00	100.00	1.12	0.0197	0.0248	1.72	0.0353	0.0435	1.15	0.0573	0.0641	0.0716
2C	DEVELOPED	PROPOSED TRACT G-1A-2C	1.2868	0.00	0.00	100.00	5.02	0.0908	0.0950	8.64	0.1164	0.1240	5.43	0.2007	0.2165	0.5439
2D	DEVELOPED	PROPOSED TRACT G-1A-2D	1.4075	0.00	0.00	100.00	5.51	0.0771	0.0805	7.57	0.1061	0.1084	5.84	0.2200	0.2373	0.5747
2E	DEVELOPED	PROPOSED TRACT G-1A-2E	2.3141	0.00	0.00	100.00	9.63	0.1273	0.1319	14.36	0.2237	0.2298	9.77	0.3810	0.4106	0.9181
G-2A-1	DEVELOPED	PROPOSED TRACT G-2A-1 STREET	0.2273	0.00	0.00	100.00	0.89	0.0125	0.0140	0.89	0.0220	0.0237	0.89	0.0358	0.0386	0.0863
TOTAL SITE	UNDEVELOPED	TOTAL BASINS 2A1-2E UNDEVELOPED	7.7941	80.00	0.00	20.00	5.74	0.0449	0.0560	2.82	0.1268	0.1442	12.41	0.4661	0.4701	0.8818
G-1A-1	UNDEVELOPED	OFFSITE BASINS DRAINING TRACT G-1A-1	1.3156	80.00	0.00	20.00	5.28	0.0479	0.0531	2.69	0.1215	0.1382	12.41	0.4661	0.4701	0.8818

INPUT DATA;

PRECIP. ZONE	RAINFALL DEPTH (INCHES) 6 HOUR	24 HOUR	6 DAY	10 DAY	100-YEAR STORM
1	1.87	2.30	3.66	4.13	3.67

LEGAL DESCRIPTION
TRACTS G-1A-2A THRU G-1A-2E SEVEN BAR RANCH (BEING A REPLAT OF TRACT G-1A-2, SEVEN-SIX-SEVEN RANCH) CITY OF ALBUQUERQUE BERNALILLO COUNTY, NEW MEXICO NOVEMBER, 1996

BENCHMARK
MAGNETIC MONUMENT "NM-445-N13" ELEV. = 5023.43' LOCATED 10' WEST OF COORS RD. CENTERLINE AND 550' SOUTH OF ALAMEDA BLVD. (NMSHTD 528) CENTERLINE.

LEGEND

DESCRIPTION	NEW	EXISTING
CONTOURS	5024	824
SPOT ELEVATIONS	◆ 5085	◆ 5MW
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN		
STORM DRAIN M.H. & LINE		
SANITARY SEWER M.H. & LINE		
FIRE HYDRANT & WATER LINE		
REDUCERS		
WATER VALVES		
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE	CONCRETE	CONCRETE
GAS LINE		
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	CATV	CATV
POWER/TELEPHONE POLE		
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION		
HYDROLOGICAL ANALYSIS PT.		

NO.	REVISIONS	BY	DATE

TRACTS G-1A-2A THRU G-1A-2E
SEVEN BAR RANCH
GRADING & DRAINAGE PLAN

RONALD P. BOWMAN NEW MEXICO 9854 REGISTERED PROFESSIONAL ENGINEER
1/31/97

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Albuquerque, New Mexico 87114
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DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET
RPB	DEC	RPB	1
EA JOB NO: 4350	DATE: 1-97		OF 2

DWG. N:\PROJECTS\4350\DWG\VER\VER_REV.DGD
DWG. ELEV.=5147.00'(NGVD29)

R# 22 DATE 3-13-00 DOP

CITY OF ALBUQUERQUE

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Roberta Duran
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My commission expires 07/12/2000

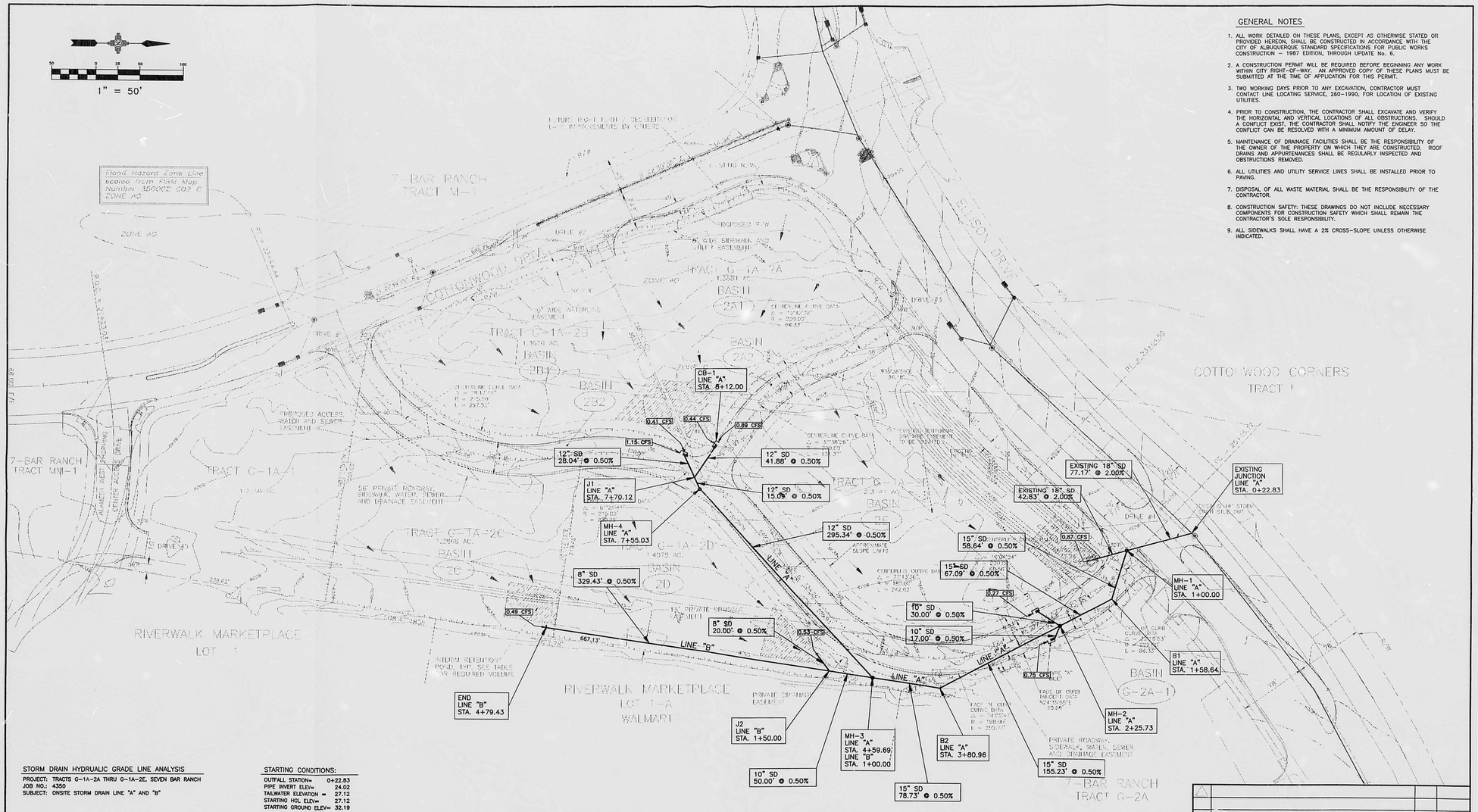
PLANS/PLATS ON FILE

FILE DESC: A14 FD10A

PLANS/PLATS 12

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CITY OF ALBUQUERQUE C D F



GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION – 1987 EDITION, THROUGH UPDATE No. 6.
2. A CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 260-1990, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. MAINTENANCE OF DRAINAGE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY ON WHICH THEY ARE CONSTRUCTED. ROOF DRAINS AND APPURTENANCES SHALL BE REGULARLY INSPECTED AND OBSTRUCTIONS REMOVED.
6. ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
7. DISPOSAL OF ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. CONSTRUCTION SAFETY: THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE CONTRACTOR'S SOLE RESPONSIBILITY.
9. ALL SIDEWALKS SHALL HAVE A 2% CROSS-SLOPE UNLESS OTHERWISE INDICATED.

STORM DRAIN HYDRUALIC GRADE LINE ANALYSIS

PROJECT: TRACTS G-1A-2A THRU G-1A-2E, SEVEN BAR RANCH
JOB NO.: 4350
SUBJECT: ONSITE STORM DRAIN LINE "A" AND "B"

STARTING CONDITIONS:

OUTFALL STATION=	0+22.83
PIPE INVERT ELEV=	24.02
TAILWATER ELEVATION =	27.12
STARTING HGL ELEV=	27.12
STARTING GROUND ELEV=	32.19

PIPE DATA								STRUCTURE(S) @ UPSTREAM END PIPE SEGMENT						PIPE ELEVATION DATA						GROUND ELEV		PRESSURE FLOW HYDRAULICS						HEAD LOSS CALCULATIONS								EGL & HGL @ UPSTREAM END OF PIPE SEGMENT							HGL BELOW GROUND?	
FROM DOWN STREAM	TO UP STREAM	STA. OFFSET	MAIN FLOW (cfs)	PIPE DIA. (inches)	MANNING COEFF. ("n")	LAY LENGTH (feet)	PIPE SLOPE (fpf)	MANHOLE LOSS (1=yes)	BEND ANGLE (degees)	JUNCTION ANGLE (degees)	LATERAL DIAMETER (inches)	TRANSITION LOSS (1=yes)	PIPE INVERT DOWN STREAM (elev.)	PIPE INVERT UP STREAM (elev.)	PIPE SOFFIT DOWN STREAM (elev.)	PIPE SOFFIT UP STREAM (elev.)	DOWN STREAM (elev.)	UP STREAM (elev.)	FLOW AREA (sq.ft.)	FLOW VELOCITY (fps)	FLOW DEPTH (feet)	FRICTION SLOPE (fpf)	VELOCITY HEAD (feet)	FRICTION LOSS Hf	MANHOLE LOSS Hm	BEND LOSS Hb	JUNCTION LOSS Hj	TRANS LOSS EXPANSION Htx	TRANS LOSS CONTRACTION Htc	SUM OF LOSSES	STORM DRAIN STA.	EGL ELEV. BACK	EGL ELEV. AHEAD	HGL ELEV. BACK	HGL ELEV. AHEAD	DEFAULT HGL ELEV AHEAD	PIPE FULL?	FINISHED GROUND ELEV	CHECK
LINE "A"																																										
OUTFALL	MH1	STA 1+00.00	5.74	18	0.013	77.17	0.020	1	55	1	18	1	24.02	25.56	25.52	27.06	32.2	32.4	1.767	3.25	1.50	0.003	0.164	0.230	0.008	0.026	0.023	0.000	0.000	0.287	0+77.17	27.51	27.57	27.35	27.41	27.41	FULL	32.40	OK
MH1	B1	STA 1+58.64	4.87	15	0.013	58.64	0.005		45				25.81	26.11	27.06	27.36	32.4	33.1	1.227	3.97	1.25	0.006	0.245	0.333	0.000	0.035	0.000	0.000	0.000	0.368	1+35.81	27.99	28.02	27.74	27.78	27.78	FULL	33.10	OK
B1	MH2	STA 2+25.73	4.87	15	0.013	67.09	0.005	1		60	10		26.11	26.44	27.36	27.69	33.1	32.6	1.227	3.97	1.25	0.006	0.245	0.381	0.012	0.000	0.152	0.000	0.000	0.546	2+02.9	28.40	28.57	28.16	28.32	28.32	FULL	32.60	OK
MH2	B2	STA 3+80.96	3.91	15	0.013	155.23	0.005		37				26.44	27.22	27.69	28.47	32.6	33.5	1.227	3.19	1.25	0.004	0.158	0.569	0.000	0.000	0.000	0.000	0.000	0.589	3+56.13	29.05	29.07	28.89	28.91	28.91	FULL	33.50	OK
B2	MH3	STA 4+59.69	3.91	15	0.013	78.73	0.005	1	40	1	10	1	27.22	27.61	28.47	28.86	33.5	31.5	1.227	3.19	1.25	0.004	0.158	0.288	0.008	0.021	0.003	0.000	0.000	0.320	4+36.86	29.36	29.39	29.20	29.23	29.23	FULL	31.50	OK
MH3	MH4	STA 7+55.03	2.89	12	0.013	295.34	0.005	1	18				27.86	29.34	28.86	30.34	31.5	35.8	0.785	3.68	1.00	0.007	0.210	1.943	0.011	0.019	0.000	0.000	0.000	1.973	7+32.2	31.38	31.41	31.17	31.20	31.20	FULL	35.80	OK
MH4	J1	STA 7+70.12	2.89	12	0.013	15.09	0.005		60	1	12		29.34	29.41	30.34	30.41	35.8	35.9	0.785	3.68	1.00	0.007	0.210	0.099	0.000	0.034	0.209	0.000	0.000	0.343	7+47.29	31.51	31.76	31.30	31.55	31.55	FULL	35.90	OK
J1	CB1	STA 8+12.00	1.33	12	0.013	41.88	0.005						29.41	29.62	30.41	30.62	35.9	35.9	0.785	1.69	1.00	0.001	0.045	0.058	0.000	0.000	0.000	0.000	0.000	0.058	7+89.17	31.65	31.65	31.60	31.60	31.60	FULL	35.90	OK
CB1	DUMMY																																									
LINE "B"																																										
MH3	J2	STA 1+50.00	1.02	10	0.013	50.00	0.005			45	8	1	28.03	28.28	28.86	29.11	31.5	32.5	0.545	1.87	0.83	0.002	0.054	0.108	0.000	0.000	0.045	0.000	0.000	0.154	0+50.00	29.39	29.44	29.34	29.38	29.38	FULL	32.50	OK
J2	END	STA 4+79.43	0.49	8	0.013	329.43	0.005						28.45	30.09	29.11	30.76	32.5	32.7	0.349	1.40	0.67	0.002	0.031	0.542	0.000	0.000	0.000	0.000	0.000	0.542	3+79.43	29.96	29.96	29.93	29.93	30.76	(PARTIAL)	32.70	OK
END	DUMMY																																									

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TIME: 01-31-97 12:06:44

NO.	REVISIONS	BY	DATE

TRACTS G-1A-2A THRU G-1A-2E
SEVEN BAR RANCH
GRADING & DRAINAGE PLAN
STORM DRAIN HYDRUALIC GRADE LINE ANALYSIS

RONALD P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER
1/31/97

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DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET 2
RPB	DEC	RPB	OF 2
JOB NO: 4350	DATE: 1-97		

CITY OF ALBUQUERQUE
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DIRECTOR

NOTARY PUBLIC
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO

D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D

ENGINEER'S CERTIFICATION
OF GRADING & DRAINAGE IMPROVEMENTS
TRACTS G-1A-2A THRU G-IA-2D, SEVEN BAR RANCH

1" = 50'

I hereby certify that I have inspected the site grading and drainage improvements and that they have been constructed and are expected to function in substantial compliance with the intent of the approved Grading and Drainage Plan.

The as-constructed information shown on this plan was provided by Surv-Tek, Inc. Proposed contours have not been revised to reflect the as-constructed elevations and should be considered approximate.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R. P Bohannan, P.E.
N.M.P.E. No. 9814

Date 5/4/1997

Flood Hazard Zone Line scaled from FIRM Map Number 350002 002 C ZONE AO

7-BAR RANCH
TRACT M-1

FUTURE RIGHT TURN / DECELERATION LANE IMPROVEMENTS BY OTHERS

EXISTING R/W

PROPOSED R/W

8' WIDE SIDEWALK AND UTILITY EASEMENT

ELLISON DRIVE

COTTONWOOD DRIVE

DRIVE #1

DRIVE #2

DRIVE #3

DRIVE #4

DRIVE #5

ZONE AO

ZONE C

ZONE X

P.O.C. = 21+23.33

P.T. = 23+44.44

P.T. = 23+66.50

P.C. = 25+15.17

TRACT G-1A-2A
1.3881 AC.
BASIN 2A1

TRACT G-1A-2B
1.3676 AC.
BASIN 2B1

BASIN 2A2

BASIN 2B2

TRACT G-1A-2E
2.3141 AC.
BASIN 2E

TRACT G-1A-2C
1.2868 AC.
BASIN 2C

TRACT G-1A-2D
1.4075 AC.
BASIN 2D

TRACT G-1A-1
1.3166 AC.

BASIN G-2A-1

COTTONWOOD CORNERS
TRACT I

7-BAR RANCH
TRACT MM-1

RIVERWALK MARKETPLACE
LOT 1

RIVERWALK MARKETPLACE
LOT 1-A
WALMART

7-BAR RANCH
TRACT G-2A

10' WIDE WATERLINE EASEMENT

PROPOSED ACCESS, WATER AND SEWER EASEMENT

56' PRIVATE ROADWAY, SIDEWALK, WATER, SEWER AND DRAINAGE EASEMENT

15' PRIVATE DRAINAGE EASEMENT

PRIVATE DRIANAGE EASEMENT

PRIVATE ROADWAY, SIDEWALK, WATER, SEWER AND DRAINAGE EASEMENT

EXISTING TEMPORARY DRAINAGE EASEMENT TO BE VACATED

EXISTING 10' PUE

EXISTING 18" STORM DRAIN STUB OUT

EXISTING DRAINAGE

EXISTING ASPHALT ROAD

EXISTING PAVEMENT TO BE REMOVED WITH INITIAL SITE IMPROVEMENTS

INTERIM RETENTION POND, TYP. SEE TABLE FOR REQUIRED VOLUME

APPROXIMATE SLOPE LIMITS

TYPE "A" INLET

TYPE "C" INLET

CENTERLINE CURVE DATA
Δ = 18°42'38"
R = 200.00'
L = 58.53'

CENTERLINE CURVE DATA
Δ = 79°17'14"
R = 215.00'
L = 297.52'

CENTERLINE CURVE DATA
Δ = 61°21'41"
R = 215.00'
L = 230.26'

CENTERLINE CURVE DATA
Δ = 37°38'06"
R = 200.00'
L = 131.37'

CENTERLINE CURVE DATA
Δ = 19°04'04"
R = 200.00'
L = 66.56'

CENTERLINE CURVE DATA
Δ = 77°13'36"
R = 180.00'
L = 242.62'

FACE OF CURB CURVE DATA
Δ = 74°00'47"
R = 198.00'
L = 255.77'

FACE OF CURB CURVE DATA
Δ = 22°16'53"
R = 222.00'
L = 86.33'

FACE OF CURB TANGENT DATA
S24°35'55"E
70.68'

MIN. FFE = 5037.50

MIN. FFE = 5035.50

MIN. FFE = 5034.50

MIN. FFE = 5033.50

AVG. FFE = 5034.50

S22°39'35"E 244.94'

N22°39'35"W 688.74'

S08°47'48"W 922.28'

S35°28'50"E 26.18'

S37°13'42"E 150.67'

N11°12'17"W 306.60'

S22°39'35"E 244.94'

66.00' F/F

FIRM MAP
No. 350010C0109D

VICINITY MAP
ZONE ATLAS PAGE A-14

LEGEND

DESCRIPTION	NEW	EXISTING
CONTOURS	5094	5094
SPOT ELEVATIONS	⊕ 5088	⊕ 5088
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN		
STORM DRAIN M.H. & LINE	36"SD	36"SD
SANITARY SEWER M.H. & LINE	8"SAS	8"SAS
FIRE HYDRANT & WATER LINE	6"W	6"W
REDUCERS		
WATER VALVES	SIZE INTERVEY	SIZE INTERVEY
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE	CONCRETE	CONCRETE
GAS LINE	G	G
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	CT	CT
POWER/TELEPHONE POLE	O P P	O P P
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION	TC 5088.18 FL 5087.18	TC 5088.18 FL 5087.18
HYDROLOGICAL ANALYSIS PT.		

GRADING & DRAINAGE PLAN
ALLOWABLE RELEASE RATES

BASIN	AREA (ac)	Q100 / 6HR PEAK FLOW RATE (CFS)	ALLOWABLE RELEASE RATE (CFS)	APPROXIMATE RETENTION POND VOLUME REQUIRED FOR INTERIM CONDITION (CU FT)	APPROXIMATE DETENTION POND VOLUME REQUIRED FOR DEVELOPED CONDITION (CU FT)
2A1	1.1740	4.95	0.44	3,154	7243
2A2	0.2141	0.87	0.89	0	0
2B1	1.0653	4.61	0.41	2,837	6,745
2B2	0.2743	1.15	1.15	0	0
2C	1.2868	5.43	0.48	6,994	7946*
2D	1.4075	5.94	0.53	3,791	8680
2E	2.3141	9.77	0.87	6,218	14275
G-2A-1	0.2279	0.96	0.96	0	0
TOTALS	7.9920	33.70	5.74		

* 11,000 CU.FT. IF TRACT G-1A-1 IS UNDEVELOPED

HYDROLOGY SUMMARY

PRECIP. ZONE	RAINFALL DEPTHS (INCHES) A: 1 HOUR	B: 6 HOUR	C: 24 HOUR	D: 4 DAY	10 DAY
1	1.87	2.20	2.68	3.12	3.87

BASIN	CONDITION	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	D	2 YEAR Q (cfs)	2 YEAR VOLUME (ac.ft.) 6 HR	24 HR	10 YEAR Q (cfs)	10 YEAR VOLUME (ac.ft.) 6 HR	24 HR	100 YEAR Q (cfs)	100 YEAR VOLUME (ac.ft.) 6 HR	24 HR	10 DAY
2A1	DEVELOPED	PROPOSED TRACT G-1A-2A SITE	1.1740	0.0%	0.0%	10.0%	90.0%	1.84	0.0846	0.0821	3.33	0.1135	0.1409	4.95	0.1431	0.2234	0.3138
2A2	DEVELOPED	PROPOSED TRACT G-1A-2A STREET	0.2141	0.0%	0.0%	14.0%	86.0%	0.53	0.0113	0.0144	0.68	0.0201	0.0248	0.89	0.0327	0.0393	0.0553
2B1	DEVELOPED	PROPOSED TRACT G-1A-2B SITE	1.0653	0.0%	0.0%	10.0%	90.0%	1.71	0.0801	0.0745	3.01	0.1057	0.1308	4.61	0.1706	0.2083	0.2911
2B2	DEVELOPED	PROPOSED TRACT G-1A-2B STREET	0.2743	0.0%	0.0%	12.0%	88.0%	0.42	0.0148	0.0188	0.75	0.0291	0.0333	1.15	0.0453	0.0518	0.0719
2C	DEVELOPED	PROPOSED TRACT G-1A-2C	1.2868	0.0%	0.0%	10.0%	90.0%	2.02	0.0706	0.0900	3.64	0.1244	0.1540	5.43	0.2007	0.2451	0.3426
2D	DEVELOPED	PROPOSED TRACT G-1A-2D	1.4075	0.0%	0.0%	10.0%	90.0%	2.21	0.0774	0.0985	3.87	0.1361	0.1684	5.94	0.2200	0.2681	0.3747
2E	DEVELOPED	PROPOSED TRACT G-1A-2E	2.3141	0.0%	0.0%	10.0%	90.0%	3.63	0.1273	0.1619	6.36	0.2237	0.2769	9.77	0.3610	0.4408	0.6161
G-2A-1	DEVELOPED	PORTION OF TRACT G-2A-1 STREET	0.2279	0.0%	0.0%	10.0%	90.0%	0.36	0.0125	0.0160	0.63	0.0220	0.0273	0.96	0.0356	0.0434	0.0607
TOTAL SITE	UNDEVELOPED	TOTAL BASINS 2A1-2E UNDEVELOPED	7.7841	80.0%	0.0%	0.0%	10.0%	1.31	0.0466	0.0595	3.92	0.1298	0.1467	12.41	0.3837	0.4134	0.4788
G-1A-1	UNDEVELOPED	OFFSITE INTERIM DRAINAGE--TRACT G-1A-1	1.3166	80.0%	0.0%	0.0%	10.0%	0.22	0.0079	0.0101	0.66	0.0315	0.0248	3.10	0.0951	0.0701	0.0812

INPUT DATA:

SEVEN BAR RANCH TRACT G-1A-2
GRADING AND DRAINAGE PLAN

GENERAL
TRACT G-1A-2, SEVEN BAR RANCH IS A 7.76 ACRE TRACT LOCATED AT THE SOUTHEAST CORNER OF ELLISON DRIVE AND COTTONWOOD DRIVE NW. THE SITE IS ZONED SU-1 FOR C2 USES (REFER TO EPC Z-96-92). TRACT G-1A-2 WAS CREATED BY SUBDIVISION OF TRACT G-1A INTO TWO PARCELS, G-1A-1 AND G-1A-2 (DRB 96-353). THE 6/27/96 CONCEPTUAL GRADING & DRAINAGE PLAN FOR TRACT G-1A IS STILL APPLICABLE TO TRACT G-1A-1. THIS NEW GRADING & DRAINAGE PLAN ESTABLISHES REVISED DRAINAGE GUIDELINES FOR TRACT G-1A-2.

METHOD
THE HYDROLOGY FOR THIS GRADING AND DRAINAGE PLAN IS BASED ON THE METHODS PRESENTED IN THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL VOLUME 2, DESIGN CRITERIA, SECTION 22.2 HYDROLOGY, JANUARY 1993, PROCEDURE FOR 40 ACRE AND SMALLER BASINS. THE HYDROLOGY FOR EXISTING (UNDEVELOPED) AND FOR PROPOSED (DEVELOPED) CONDITIONS IS INCLUDED IN THE HYDROLOGY SUMMARY TABLE.

EXISTING CONDITIONS
THE SITE IS CURRENTLY UNDEVELOPED. THE EXISTING SITE TERRAIN IS RELATIVELY MILD AND SLOPES GENERALLY FROM SOUTH TO NORTH AT ABOUT 1%. MOST OF THE SITE DRAINS TO THE TEMPORARY DETENTION POND AT THE NORTH END OF THE SITE CONSTRUCTED UNDER SAD 223. A SMALL PORTION OF THE SITE DRAINS EAST TO THE EXISTING WALMART STORE PARKING AREA. THE ONLY OFFSITE FLOWS ENTERING TRACT G-1A-2 ORIGINATE ON TRACT G-1A-1. THE FEMA FLOOD INSURANCE RATE MAP FOR THE CITY OF ALBUQUERQUE, NEW MEXICO AND INCORPORATED AREAS, PANEL 2 OF 50, (COMMUNITY PANEL NO. 350002 0002 C) INDICATES THAT A SMALL PORTION OF TRACT G-1A-2 IS WITHIN THE ZONE AO (DEPTH 1) FLOOD HAZARD AREA. THE FLOOD HAZARD AREA ENCROACHING ON THE SITE IS EXPECTED TO BE ELIMINATED BY A LETTER OF MAP REVISION TO BE PROCESSED IN CONNECTION WITH SAD 223.

PROPOSED CONDITIONS
IT IS PROPOSED THAT TRACT G-1A-2 BE SUBDIVIDED INTO FIVE TRACTS, G-1A-2A THROUGH G-1A-2E. IN ACCORDANCE WITH THE PREVIOUS CONCEPTUAL GRADING & DRAINAGE PLAN FOR TRACT G-1A, THE TOTAL ALLOWABLE RELEASE RATE FROM THE TRACT G-1A-2 AREA IS 5.74 CFS. THE PORTION OF THE PROPOSED PRIVATE ROADWAY THAT ENCROACHES ONTO TRACT G-2A (BASIN G-2A-1) WILL ALSO BE DEVELOPED WITHIN THE 5.74 CFS ALLOWABLE RELEASE RATE. AN ONSITE PRIVATE STORM DRAIN WILL BE CONSTRUCTED TO ACCEPT DRAINAGE FROM THE PRIVATE ROADWAYS AND EACH TRACT. THE STORM DRAIN WILL DISCHARGE TO THE EXISTING 18" DIAMETER STORM DRAIN STUB IN ELLISON DRIVE. AS INDICATED IN THE ALLOWABLE RELEASE RATES TABLE, BASINS 2A2, 2B2 AND G-2A-1 WILL FREE-DISCHARGE TO THE PRIVATE STORM DRAIN. THE REMAINING BASINS WILL CONTROL DISCHARGE TO THE STORM DRAIN AT RATES NOT TO EXCEED THOSE SHOWN IN THE TABLE. A PRIVATE DRAINAGE EASEMENT WILL BE GRANTED OVER THE PRIVATE ROADWAYS AND THE PRIVATE STORM DRAIN CORRIDORS.

INITIAL SITE DEVELOPMENT WILL INCLUDE CONSTRUCTION OF REQUIRED OFFSITE IMPROVEMENTS, ONSITE ROADWAYS AND DRAINAGE IMPROVEMENTS AND INTERIM RETENTION PONDS ON EACH TRACT. TRACT DEVELOPMENT WILL BE PHASED BASED ON DEMAND. INDIVIDUAL SITE-SPECIFIC GRADING AND DRAINAGE PLANS WILL BE PREPARED FOR EACH TRACT PRIOR TO TRACT DEVELOPMENT. ADDITIONAL INTERIM GRADING AND DRAINAGE IMPROVEMENTS MAY BE NEEDED DEPENDING ON REQUIREMENTS FOR INDIVIDUAL TRACT DEVELOPMENT.

UPON DEVELOPMENT OF TRACT G-1A-1, THE DRAINAGE FROM TRACT G-1A-1 WILL BE PONDED ONSITE AND CONTROL-DISCHARGED TO THE STORM INLETS IN COTTONWOOD DRIVE. IN THE INTERIM, THE EXISTING DRAINAGE WILL CONTINUE TO DRAIN TO TRACT G-1A-2C AND THE POND ON TRACT G-1A-2C SHALL HAVE SUFFICIENT ADDITIONAL VOLUME TO POND THE RUNOFF FROM BOTH TRACTS.

PROPOSED BUILDING FINISHED FLOOR ELEVATIONS SHALL BE AT LEAST ONE FOOT ABOVE THE FLOOD HAZARD ELEVATION.

EROSION CONTROL
ALL DISTURBED AREAS SHALL BE SURFACED, LANDSCAPED OR REVEGETATED UPON THE COMPLETION OF EACH PHASE OF SITE DEVELOPMENT. TEMPORARY SWALES, PONDS, EARTH BERMS, STRAW BALES AND SILT FENCING SHALL BE IMPLEMENTED AS NECESSARY DURING CONSTRUCTION TO PREVENT SEDIMENT EROSION FROM THE SITE.

LEGAL DISCRIPTION
TRACTS G-1A-2A THRU G-1A-2E
SEVEN - BAR RANCH
(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996

BENCHMARK
NMSHC MONUMENT "NM-448-N12"
ELEV. = 5023.41'.
LOCATED 60' WEST OF COORS RD. CENTERLINE AND 550' SOUTH OF ALAMEDA BLVD. (NMSR 528) CENTERLINE.

RONALD P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER
11/3/97

NO.	REVISIONS	BY	DATE

TRACTS G-1A-2A THRU G-1A-2E
SEVEN BAR RANCH
GRADING & DRAINAGE PLAN

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET 1
RPB	DEC	RPB	OF 2
EA JOB NO: 4350	DATE: 1-97		

DWG: T:\PROJECTS\4350\DWG\REVISED\REVCGD
FILE: 01-31-97 12:05:51

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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DIRECTOR

NOTARY PUBLIC
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 07/02/02

D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D

ENGINEER'S CERTIFICATION
OF GRADING & DRAINAGE IMPROVEMENTS
TRACTS G-1A-2A THRU G-1A-2D, SEVEN BAR RANCH

1" = 50'

I hereby certify that I have inspected the site grading and drainage improvements and that they have been constructed and are expected to function in substantial compliance with the intent of the approved Grading and Drainage Plan.

The as-constructed information shown on this plan was provided by Surv-Tek, Inc. Proposed contours have not been revised to reflect the as-constructed elevations and should be considered approximate.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R. P Bohannan, P.E.
N.M.P.E. No. 9814

Date 5/4/87

Flood Hazard Zone Line scaled from FIRM Map Number 350002 002 C ZONE AO

7-BAR RANCH TRACT M-1

FUTURE RIGHT TURN / DECELERATION LANE IMPROVEMENTS BY OTHERS

COTTONWOOD DRIVE

ELLISON DRIVE

COTTONWOOD CORNERS TRACT I

TRACT G-1A-2A 1.3881 AC. BASIN 2A1

TRACT G-1A-2B 1.3676 AC. BASIN 2B1

BASIN 2B2

BASIN 2A2

TRACT G-1A-2E 2.3141 AC. BASIN 2E

TRACT G-1A-2C 1.2868 AC. BASIN 2C

TRACT G-1A-2D 1.4075 AC. BASIN 2D

TRACT G-1A-1 1.3166 AC.

BASIN G-2A-1

7-BAR RANCH TRACT G-2A

7-BAR RANCH TRACT MM-1

RIVERWALK MARKETPLACE LOT 1

RIVERWALK MARKETPLACE LOT 1-A WALMART

ALAMEDA WEST SHOPPING CENTER ACCESS DRIVE

DRIVE #1 · DRIVE #2 · DRIVE #3 · DRIVE #4 · DRIVE #5

PROPOSED R/W

8' WIDE SIDEWALK AND UTILITY EASEMENT

10' WIDE WATERLINE EASEMENT

10' PUE

PROPOSED ACCESS, WATER AND SEWER EASEMENT

56' PRIVATE ROADWAY, SIDEWALK, WATER, SEWER AND DRAINAGE EASEMENT

15' PRIVATE DRAINAGE EASEMENT

PRIVATE DRAINAGE EASEMENT

PRIVATE ROADWAY, SIDEWALK, WATER, SEWER AND DRAINAGE EASEMENT

EXISTING TEMPORARY DRAINAGE EASEMENT TO BE VACATED

EXISTING 10' PUE

EXISTING 18" STORM DRAIN STUB OUT

EXISTING ASPHALT ROAD

EXISTING PAVEMENT TO BE REMOVED WITH INITIAL SITE IMPROVEMENTS

INTERIM RETENTION POND, TYP. SEE TABLE FOR REQUIRED VOLUME

TYPE "A" INLET

TYPE "C" INLET

ZONE AO · ZONE C

P.O.C. = 21+23.03

P.T. = 23+44.44

P.C. = 25+15.17

P.T. = 23+64.50

MIN. FFE = 5037.50 · MIN. FFE = 5037.50 · MIN. FFE = 5034.50 · MIN. FFE = 5035.50

CENTERLINE CURVE DATA
Δ = 78°17'14"
R = 215.00'
L = 297.52'

CENTERLINE CURVE DATA
Δ = 61°21'41"
R = 215.00'
L = 230.26'

CENTERLINE CURVE DATA
Δ = 37°38'06"
R = 200.00'
L = 131.37'

CENTERLINE CURVE DATA
Δ = 16°42'38"
R = 200.00'
L = 58.33'

CENTERLINE CURVE DATA
Δ = 19°04'04"
R = 200.00'
L = 66.56'

CENTERLINE CURVE DATA
Δ = 77°13'36"
R = 180.00'
L = 242.62'

FACE OF CURB CURVE DATA
Δ = 22°16'53"
R = 222.00'
L = 86.33'

FACE OF CURB CURVE DATA
Δ = 74°00'47"
R = 198.00'
L = 255.77'

FACE OF CURB TANGENT DATA
S24°35'55"E
70.68'

S 22°39'35" E 244.94'

N 22°39'35" W 250.00'

S35°28'50"E 26.18'

N 43°37'10" E 150.00'

S08°47'48"W 239.62'

S08°47'48"W 922.28'

686.74'

GRADING & DRAINAGE PLAN
ALLOWABLE RELEASE RATES

BASIN	AREA (AC)	Q100 / 6HR PEAK FLOW RATE (CFS)	ALLOWABLE RELEASE RATE (CFS)	APPROXIMATE RETENTION POND VOLUME REQUIRED FOR INTERIM CONDITION (CU FT)	APPROXIMATE DETENTION POND VOLUME REQUIRED FOR DEVELOPED CONDITION (CU FT)
2A1	1.1740	4.95	0.44	3,154	7243
2A2	0.2141	0.81	0.89	0	0
2B1	1.0633	4.81	0.41	2,937	6,745
2B2	0.2743	1.15	1.15	0	0
2C	1.2868	5.43	0.49	6,994	7946*
2D	1.4075	5.84	0.53	3,781	8880
2E	2.3141	9.77	0.87	6,216	14275
G-2A-1	0.2279	0.95	0.89	0	0
TOTALS	7.9920	33.70	5.74		

* +11,000 CU.FT. IF TRACT G-1A-1 IS UNDEVELOPED

HYDROLOGY SUMMARY

BASIN	CONDITION	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	D	Q (cfs)	2 YEAR VOLUME (ac.ft.) 6 HR	24 HR	Q (cfs)	10 YEAR VOLUME (ac.ft.) 6 HR	24 HR	Q (cfs)	100 YEAR VOLUME (ac.ft.) 6 HR	24 HR	10 DAY
2A1	DEVELOPED	PROPOSED TRACT G-1A-2A SITE	1.1740	0.0%	0.0%	10.0%	90.0%	1.84	0.0848	0.0821	3.33	0.1135	0.1405	4.95	0.1631	0.2236	0.3128
2A2	DEVELOPED	PROPOSED TRACT G-1A-2A STREET	0.2141	0.0%	0.0%	14.0%	86.0%	0.33	0.0113	0.0144	0.58	0.0201	0.0248	0.89	0.0327	0.0388	0.0553
2B1	DEVELOPED	PROPOSED TRACT G-1A-2B SITE	1.0633	0.0%	0.0%	10.0%	90.0%	1.71	0.0801	0.0765	3.01	0.1057	0.1308	4.81	0.1708	0.2083	0.2911
2B2	DEVELOPED	PROPOSED TRACT G-1A-2B STREET	0.2743	0.0%	0.0%	12.0%	88.0%	0.42	0.0148	0.0188	0.75	0.0261	0.0323	1.15	0.0423	0.0516	0.0719
2C	DEVELOPED	PROPOSED TRACT G-1A-2C	1.2868	0.0%	0.0%	10.0%	90.0%	2.02	0.0708	0.0900	3.54	0.1244	0.1540	5.43	0.2007	0.2451	0.3426
2D	DEVELOPED	PROPOSED TRACT G-1A-2D	1.4075	0.0%	0.0%	10.0%	90.0%	2.21	0.0774	0.0985	3.87	0.1361	0.1684	5.84	0.2200	0.2681	0.3747
2E	DEVELOPED	PROPOSED TRACT G-1A-2E	2.3141	0.0%	0.0%	10.0%	90.0%	3.63	0.1273	0.1619	6.36	0.2237	0.2769	9.77	0.3610	0.4408	0.6181
G-2A-1	DEVELOPED	PORTION OF TRACT G-2A-1 STREET	0.2279	0.0%	0.0%	10.0%	90.0%	0.36	0.0125	0.0160	0.63	0.0220	0.0273	0.96	0.0356	0.0434	0.0607
TOTAL SITE	UNDEVELOPED	TOTAL BASINS 2A1-2E UNDEVELOPED	7.7841	90.0%	0.0%	0.0%	10.0%	1.31	0.0466	0.0595	3.82	0.1268	0.1467	12.41	0.3837	0.4134	0.4788
G-1A-1	UNDEVELOPED	OFFSITE INTERIM DRAINAGE--TRACT G-1A-1	1.3166	90.0%	0.0%	0.0%	10.0%	0.22	0.0079	0.0101	0.66	0.0215	0.0249	2.10	0.0651	0.0701	0.0812

INPUT DATA:

PRECIP ZONE	RAINFALL DEPTHS (INCHES) / 1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY	100-YEAR STORM 10 DAY
1	1.87	2.20	2.66	3.12	3.67	

SEVEN BAR RANCH TRACT G-1A-2
GRADING AND DRAINAGE PLAN

GENERAL
TRACT G-1A-2, SEVEN BAR RANCH IS A 7.76 ACRE TRACT LOCATED AT THE SOUTHEAST CORNER OF ELLISON DRIVE AND COTTONWOOD DRIVE NW. THE SITE IS ZONED SU-1 FOR C2 USES (REFER TO EPC Z-96-92). TRACT G-1A-2 WAS CREATED BY SUBDIVISION OF TRACT G-1A INTO TWO PARCELS, G-1A-1 AND G-1A-2 (DRB 96-353). THE 6/27/96 CONCEPTUAL GRADING & DRAINAGE PLAN FOR TRACT G-1A IS STILL APPLICABLE TO TRACT G-1A-1. THIS NEW GRADING & DRAINAGE PLAN ESTABLISHES REVISED DRAINAGE GUIDELINES FOR TRACT G-1A-2.

METHOD
THE HYDROLOGY FOR THIS GRADING AND DRAINAGE PLAN IS BASED ON THE METHODS PRESENTED IN THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL VOLUME 2, DESIGN CRITERIA, SECTION 22.2 HYDROLOGY, JANUARY 1993, PROCEDURE FOR 40 ACRE AND SMALLER BASINS. THE HYDROLOGY FOR EXISTING (UNDEVELOPED) AND FOR PROPOSED (DEVELOPED) CONDITIONS IS INCLUDED IN THE HYDROLOGY SUMMARY TABLE.

EXISTING CONDITIONS
THE SITE IS CURRENTLY UNDEVELOPED. THE EXISTING SITE TERRAIN IS RELATIVELY MILD AND SLOPES GENERALLY FROM SOUTH TO NORTH AT ABOUT 1%. MOST OF THE SITE DRAINS TO THE TEMPORARY DETENTION POND AT THE NORTH END OF THE SITE CONSTRUCTED UNDER SAD 223. A SMALL PORTION OF THE SITE DRAINS EAST TO THE EXISTING WALMART STORE PARKING AREA. THE ONLY OFFSITE FLOWS ENTERING TRACT G-1A-2 ORIGINATE ON TRACT G-1A-1. THE FEMA FLOOD INSURANCE RATE MAP FOR THE CITY OF ALBUQUERQUE, NEW MEXICO AND INCORPORATED AREAS, PANEL 2 OF 50, (COMMUNITY PANEL NO. 350002 0002 C) INDICATES THAT A SMALL PORTION OF TRACT G-1A-2 IS WITHIN THE ZONE AO (DEPTH 1) FLOOD HAZARD AREA. THE FLOOD HAZARD AREA ENCROACHING ON THE SITE IS EXPECTED TO BE ELIMINATED BY A LETTER OF MAP REVISION TO BE PROCESSED IN CONNECTION WITH SAD 223.

PROPOSED CONDITIONS
IT IS PROPOSED THAT TRACT G-1A-2 BE SUBDIVIDED INTO FIVE TRACTS, G-1A-2A THROUGH G-1A-2E. IN ACCORDANCE WITH THE PREVIOUS CONCEPTUAL GRADING & DRAINAGE PLAN FOR TRACT G-1A, THE TOTAL ALLOWABLE RELEASE RATE FROM THE TRACT G-1A-2 AREA IS 5.74 CFS. THE PORTION OF THE PROPOSED PRIVATE ROADWAY THAT ENCROACHES ONTO TRACT G-2A (BASIN G-2A-1) WILL ALSO BE DEVELOPED WITHIN THE 5.74 CFS ALLOWABLE RELEASE RATE. AN ONSITE PRIVATE STORM DRAIN WILL BE CONSTRUCTED TO ACCEPT DRAINAGE FROM THE PRIVATE ROADWAYS AND EACH TRACT. THE STORM DRAIN WILL DISCHARGE TO THE EXISTING 18" DIAMETER STORM DRAIN STUB IN ELLISON DRIVE. AS INDICATED IN THE ALLOWABLE RELEASE RATES TABLE, BASINS 2A2, 2B2 AND G-2A-1 WILL FREE-DISCHARGE TO THE PRIVATE STORM DRAIN. THE REMAINING BASINS WILL CONTROL DISCHARGE TO THE STORM DRAIN AT RATES NOT TO EXCEED THOSE SHOWN IN THE TABLE. A PRIVATE DRAINAGE EASEMENT WILL BE GRANTED OVER THE PRIVATE ROADWAYS AND THE PRIVATE STORM DRAIN CORRIDORS.

INITIAL SITE DEVELOPMENT WILL INCLUDE CONSTRUCTION OF REQUIRED OFFSITE IMPROVEMENTS, ONSITE ROADWAYS AND DRAINAGE IMPROVEMENTS AND INTERIM RETENTION PONDS ON EACH TRACT. TRACT DEVELOPMENT WILL BE PHASED BASED ON DEMAND. INDIVIDUAL SITE-SPECIFIC GRADING AND DRAINAGE PLANS WILL BE PREPARED FOR EACH TRACT PRIOR TO TRACT DEVELOPMENT. ADDITIONAL INTERIM GRADING AND DRAINAGE IMPROVEMENTS MAY BE NEEDED DEPENDING ON REQUIREMENTS FOR INDIVIDUAL TRACT DEVELOPMENT.

UPON DEVELOPMENT OF TRACT G-1A-1, THE DRAINAGE FROM TRACT G-1A-1 WILL BE PONDED ONSITE AND CONTROL-DISCHARGED TO THE STORM INLETS IN COTTONWOOD DRIVE. IN THE INTERIM, THE EXISTING DRAINAGE WILL CONTINUE TO DRAIN TO TRACT G-1A-2C AND THE POND ON TRACT G-1A-2C SHALL HAVE SUFFICIENT ADDITIONAL VOLUME TO POND THE RUNOFF FROM BOTH TRACTS.

PROPOSED BUILDING FINISHED FLOOR ELEVATIONS SHALL BE AT LEAST ONE FOOT ABOVE THE FLOOD HAZARD ELEVATION.

EROSION CONTROL
ALL DISTURBED AREAS SHALL BE SURFACED, LANDSCAPED OR REVEGETATED UPON THE COMPLETION OF EACH PHASE OF SITE DEVELOPMENT. TEMPORARY SWALES, PONDS, EARTH BERMS, STRAW BALES AND SILT FENCING SHALL BE IMPLEMENTED AS NECESSARY DURING CONSTRUCTION TO PREVENT SEDIMENT EROSION FROM THE SITE.

FIRM MAP
No. 35001C0109D

VICINITY MAP
ZONE ATLAS PAGE A-14

LEGEND

DESCRIPTION	NEW	EXISTING
CONTOURS	5094	5094
SPOT ELEVATIONS	5088	5088
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	LS	LS
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN		
STORM DRAIN M.H. & LINE	36"SD	36"SD
SANITARY SEWER M.H. & LINE	8"SAS	8"SAS
FIRE HYDRANT & WATER LINE	6"W	6"W
REDUCERS		
WATER VALVES	W	W
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE	CONCRETE	CONCRETE
GAS LINE	G	G
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	UTV	UTV
POWER/TELEPHONE POLE	O P.P.	O P.P.
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION	TC 5088.16 FL 5087.16	TC 5088.16 FL 5087.16
HYDROLOGICAL ANALYSIS PT.		

LEGAL DISCRIPTION
TRACTS G-1A-2A THRU G-1A-2E
SEVEN - BAR RANCH
(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996

BENCHMARK
NMSHC MONUMENT "NM-448-N12"
ELEV. = 5021.41'
LOCATED 60' WEST OF COORS RD. CENTERLINE AND 550' SOUTH OF ALAMEDA BLVD. (NMSR 528) CENTERLINE.

NO.	REVISIONS	BY	DATE

TRACTS G-1A-2A THRU G-1A-2E
SEVEN BAR RANCH
GRADING & DRAINAGE PLAN

RONALD P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER
1/31/97

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY: RPB	DRAWN BY: DEC	CHECKED BY: RPB	SHEET 1
JOB NO: 4350	DATE: 1-97		OF 2

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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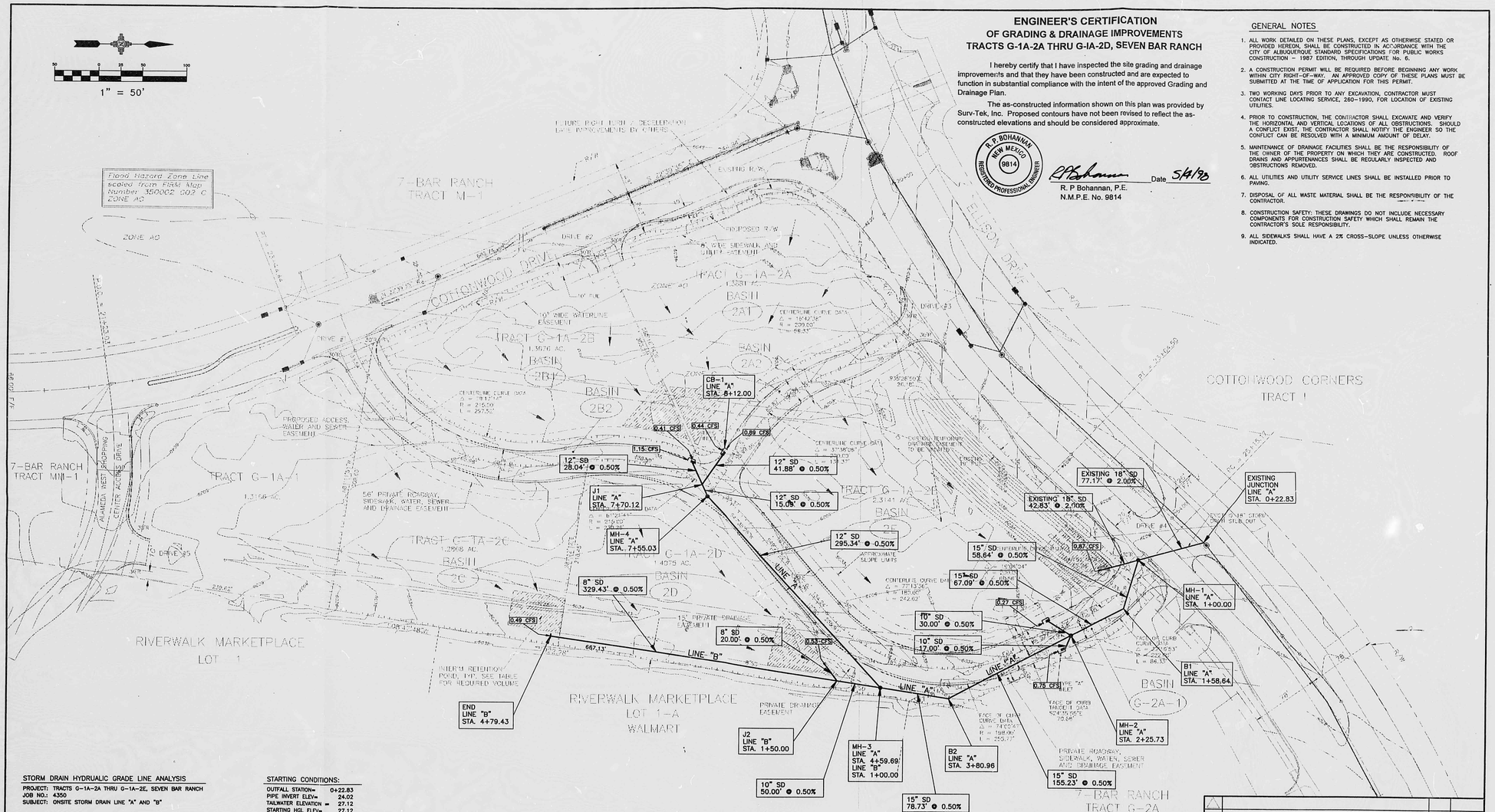
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Roberta Duran
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STATE OF NEW MEXICO
07/02/02

D24 C20 B16 A12 | CITY OF ALBUQUERQUE C D

PUBLIC WORKS/HYDROLOGY

2 OF 6

A14/D10A



ENGINEER'S CERTIFICATION
OF GRADING & DRAINAGE IMPROVEMENTS
TRACTS G-1A-2A THRU G-1A-2D, SEVEN BAR RANCH

I hereby certify that I have inspected the site grading and drainage improvements and that they have been constructed and are expected to function in substantial compliance with the intent of the approved Grading and Drainage Plan.

The as-constructed information shown on this plan was provided by Surv-Tek, Inc. Proposed contours have not been revised to reflect the as-constructed elevations and should be considered approximate.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R. P Bohannan, P.E.
N.M.P.E. No. 9814

Date 5/1/98

GENERAL NOTES

1. ALL WORK DETAILED ON THESE PLANS, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION – 1987 EDITION, THROUGH UPDATE No. 6.
2. A CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 260-1990, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. MAINTENANCE OF DRAINAGE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY ON WHICH THEY ARE CONSTRUCTED. ROOF DRAINS AND APPURTENANCES SHALL BE REGULARLY INSPECTED AND OBSTRUCTIONS REMOVED.
6. ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
7. DISPOSAL OF ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. CONSTRUCTION SAFETY: THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE CONTRACTOR'S SOLE RESPONSIBILITY.
9. ALL SIDEWALKS SHALL HAVE A 2% CROSS-SLOPE UNLESS OTHERWISE INDICATED.

STORM DRAIN HYDRAULIC GRADE LINE ANALYSIS

PROJECT: TRACTS G-1A-2A THRU G-1A-2E, SEVEN BAR RANCH
JOB NO.: 4350
SUBJECT: ONSITE STORM DRAIN LINE "A" AND "B"

STARTING CONDITIONS:

OUTFALL STATION=	0+22.83
PIPE INVERT ELEV=	24.02
TAILWATER ELEVATION =	27.12
STARTING HGL ELEV=	27.12
STARTING GROUND ELEV=	32.19

PIPE DATA								STRUCTURE(S) @ UPSTREAM END			PIPE SEGMENT			PIPE ELEVATION DATA				GROUND ELEV		PRESSURE FLOW HYDRAULICS					HEAD LOSS CALCULATIONS								EGL & HGL @ UPSTREAM END OF PIPE SEGMENT						HGL BELOW GROUND?	
PIPE SEGMENT FROM DOWN STREAM	PIPE SEGMENT TO UP STREAM	STA. OFFSET	MAIN FLOW (cfs)	PIPE DIA. (inches)	MANNING COEFF. ("n")	LAY LENGTH (feet)	PIPE SLOPE (fpf)	MANHOLE LOSS (1=yes)	BEND ANGLE (degees)	JUNCTION ANGLE (degees)	LATERAL DIAMETER (inches)	TRANSITION LOSS (1=yes)	PIPE INVERT DOWN STREAM (elev.)	PIPE INVERT UP STREAM (elev.)	PIPE SOFFIT DOWN STREAM (elev.)	PIPE SOFFIT UP STREAM (elev.)	DOWN STREAM (elev.)	UP STREAM (elev.)	FLOW AREA (sq.ft.)	FLOW VELOCITY (fps)	FLOW DEPTH (feet)	FRICTION SLOPE (fpf)	VELOCITY HEAD (feet)	FRICTION LOSS Hf	MANHOLE LOSS Hm	BEND LOSS Hb	JUNCTION LOSS Hj	TRANS LOSS EXPANSION Htx	TRANS LOSS CONTRACTION Htc	SUM OF LOSSES	STORM DRAIN STA.	EGL ELEV. BACK	EGL ELEV. AHEAD	HGL ELEV. BACK	HGL ELEV. AHEAD	DEFAULT HGL ELEV AHEAD	PIPE FULL?	FINISHED GROUND ELEV	CHECK
LINE "A"																																								
OUTFALL	MH1	STA 1+00.00	5.74	18	0.013	77.17	0.020	1	55	1	18	.1	24.02	25.56	25.52	27.06	32.2	32.4	1.767	3.25	1.50	0.003	0.164	0.230	0.008	0.026	0.023	0.000	0.000	0.287	0+77.17	27.51	27.57	27.35	27.41	27.41	FULL	32.40	OK
MH1	B1	STA 1+58.64	4.87	15	0.013	58.64	0.005		45				25.81	26.11	27.06	27.36	32.4	33.1	1.227	3.97	1.25	0.008	0.245	0.333	0.000	0.035	0.000	0.000	0.000	0.368	1+35.81	27.99	28.02	27.74	27.78	27.78	FULL	33.10	OK
B1	MH2	STA 2+25.73	4.87	15	0.013	67.09	0.005	1		60	10		26.11	26.44	27.36	27.69	33.1	33.6	1.227	3.97	1.25	0.008	0.245	0.381	0.012	0.000	0.152	0.000	0.000	0.546	2+02.9	28.40	28.57	28.16	28.32	28.32	FULL	32.60	OK
MH2	B2	STA 3+80.96	3.91	15	0.013	155.23	0.005		37				28.44	27.22	27.69	28.47	32.6	33.5	1.227	3.19	1.25	0.004	0.158	0.569	0.000	0.020	0.000	0.000	0.000	0.589	3+58.13	29.05	29.07	28.89	28.91	28.91	FULL	33.50	OK
B2	MH3	STA 4+59.69	3.91	15	0.013	78.73	0.005	1	40	1	10	1	27.22	27.61	28.47	28.86	33.5	31.5	1.227	3.19	1.25	0.004	0.158	0.288	0.008	0.021	0.003	0.000	0.000	0.320	4+36.86	29.36	29.39	29.20	29.23	29.23	FULL	31.50	OK
MH3	MH4	STA 7+55.03	2.89	12	0.013	295.34	0.005	1	18				27.88	29.34	28.86	30.34	31.5	35.8	0.785	3.68	1.00	0.007	0.210	1.843	0.011	0.019	0.000	0.000	0.000	1.873	7+32.2	31.38	31.41	31.17	31.20	31.20	FULL	35.80	OK
MH4	J1	STA 7+70.12	2.89	12	0.013	15.09	0.005		60	1	12		29.34	29.41	30.34	30.41	35.8	35.9	0.785	3.68	1.00	0.007	0.210	0.099	0.000	0.034	0.209	0.000	0.000	0.343	7+47.29	31.51	31.76	31.30	31.55	31.55	FULL	35.90	OK
J1	CB1	STA 8+12.00	1.33	12	0.013	41.88	0.005						29.41	29.62	30.41	30.62	35.9	35.9	0.785	1.69	1.00	0.001	0.045	0.058	0.000	0.000	0.000	0.000	0.000	0.058	7+89.17	31.65	31.65	31.60	31.60	31.60	FULL	35.90	
CB1	DUMMY																																						
LINE "B"																																							
MH3	J2	STA 1+50.00	1.02	10	0.013	50.00	0.005			45	8	1	28.03	28.28	28.86	29.11	31.5	32.5	0.545	1.87	0.83	0.002	0.054	0.108	0.000	0.000	0.045	0.000	0.000	0.154	0+50.00	29.39	29.44	29.34	29.38	29.38	FULL	32.50	OK
J2	END	STA 4+79.43	0.49	8	0.013	329.43	0.005						28.45	30.09	29.11	30.76	32.5	32.7	0.349	1.40	0.67	0.002	0.031	0.542	0.000	0.000	0.000	0.000	0.000	0.542	3+79.43	29.98	29.98	29.93	29.93	30.76	(PARTIAL)	32.70	OK
END	DUMMY																																						

NO.	REVISIONS	BY	DATE

TRACTS G-1A-2A THRU G-1A-2E
SEVEN BAR RANCH
GRADING & DRAINAGE PLAN
STORM DRAIN HYDRAULIC GRADE LINE ANALYSIS

RONALD P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER
1/31/97

Easterling & Associates, Inc.
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10131 Coors Rd., NW, Suite H-7
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(505) 898-8021 FAX (505) 898-8501

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET 2
RPB	DEC	RPB	OF 2

EA JOB NO: 4350 DATE: 1-97

DWG. T:\PROJECTS\4350\DWG\REVPSET\G14SD
TIME: 01-31-97 12:08:44

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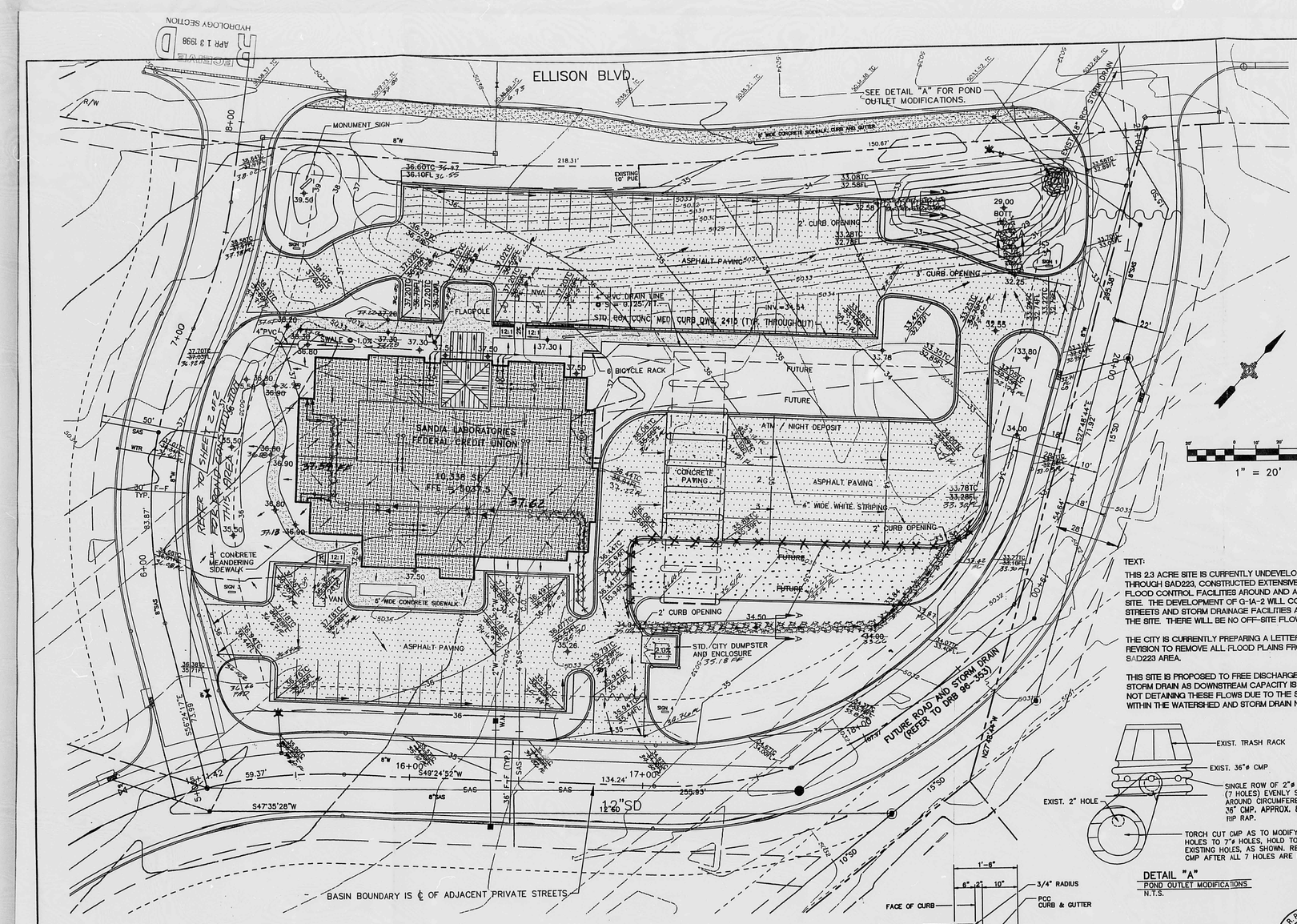
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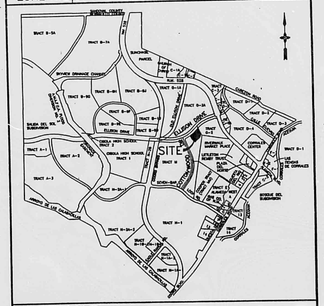
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Roberta Duran
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STATE OF NEW MEXICO
My Commission Expires 07/04/02

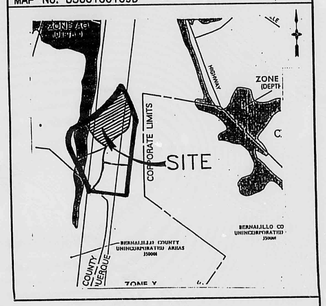
D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D



VICINITY MAP
ZONE ATLAS MAP NO. A-14



FIRM MAP
MAP No. 35001C0109D



TEXT:

THIS 2.3 ACRE SITE IS CURRENTLY UNDEVELOPED. THE CITY, THROUGH SAD223, CONSTRUCTED EXTENSIVE DRAINAGE AND FLOOD CONTROL FACILITIES AROUND AND ADJACENT TO THE SITE. THE DEVELOPMENT OF G-1A-2 WILL CONSTRUCT STREETS AND STORM DRAINAGE FACILITIES ADJACENT TO THE SITE. THERE WILL BE NO OFF-SITE FLOWS.

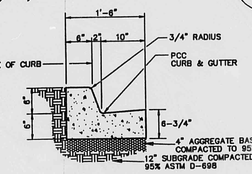
THE CITY IS CURRENTLY PREPARING A LETTER OF MAP REVISION TO REMOVE ALL FLOOD PLAINS FROM WITHIN THE SAD223 AREA.

THIS SITE IS PROPOSED TO FREE DISCHARGE TO THE ELLISON STORM DRAIN AS DOWNSTREAM CAPACITY IS INCREASED BY NOT DETAINING THESE FLOWS DUE TO THE SITE'S LOCATION WITHIN THE WATERSHED AND STORM DRAIN NETWORK.

LEGEND

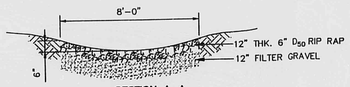
DESCRIPTION	NEW	EXISTING
CONTOURS	5050	5050
SPOT ELEVATIONS	5088	5088
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN	36"SD	36"SD
STORM DRAIN M.H. & LINE		
SANITARY SEWER M.H. & LINE	S.S.A.S.	S.S.A.S.
FIRE HYDRANT & WATER LINE	6"W	6"W
REDUCERS		
WATER VALVES		
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE	CONCRETE	CONCRETE
GAS LINE	G	G
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	CTV	CTV
POWER/TELEPHONE POLE	O P.P.	O P.P.
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION		
HYDROLOGICAL ANALYSIS PT.		

DETAIL "A"
POND OUTLET MODIFICATIONS
N.T.S.



TYPICAL SECTION
MEDIAN CURB AND GUTTER
C.O.A. STD. DWG. NO. 2415
N.T.S.

NOTES:
1. PROVIDE CONTRACTION JOINTS AT 6' O.C. MAX.
2. PROVIDE EXPANSION JOINTS AT 48' O.C. MAX.



SECTION A-A
NTS

LEGAL DISCRIPTION
TRACT G-1A-2E
SEVEN - BAR RANCH
(BEING A REPLAT OF TRACT G-1A-1 SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996
2.3141 AC.

BENCHMARK
HUNDIC MONUMENT "HM-448-N12"
ELEV. = 5023.41'
LOCATED 90' WEST OF COORS RD. CENTERLINE AND 550' SOUTH OF ALAMEDA BLVD. (NMSR 528) CENTERLINE.

R. P. MCMANAMAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

GREGORY A. HEILING NEW MEXICO 6411 REGISTERED PROFESSIONAL ENGINEER

NO.	REVISIONS	BY	DATE
1	ADDED SHEET 2 - AS-BUILTS - PAVD - CERTIFICATION	RPM	2-16-98

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

RECEIVED
APR 14 1998
HYDROLOGY SECTION

Easterling & Associates, Inc.
CONSULTING ENGINEERS
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Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET 1
CME	DEC	CME	OF 2
JOB NO. 4550	DATE: 2-97		

RECEIVED
APR 13 1998
HYDROLOGY SECTION

HYDROLOGY SUMMARY
PROJECT NAME: SANDIA LABS FEDERAL CREDIT UNION
JOB NUMBER: 4550

INPUT DATA:

PRECIP. ZONE	RAINFALL DEPTHS (INCHES) AT 100-YEAR STORM					
	1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY	
1	1.87	2.20	2.66	3.12	3.67	

BASIN	COND.	DESCRIPTION	AREA (acres)	LAND TREATMENTS				2 YEAR			10 YEAR			100 YEAR		
				A	B	C	D	Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR	Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR	Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR
1	UNDEV	TRACT G-1A-2E	2.31	100.0%	0.0%	0.0%	0.0%	0.0	0.0000	0.0000	0.6	0.0154	0.0154	3.0	0.0849	0.0849
1	DEV	TRACT G-1A-2E	2.31	0.0%	32.5%	0.0%	67.5%	2.7	0.0943	0.1203	5.1	0.1752	0.2151	8.4	0.2984	0.3583

NOTE: AHYMO94 MODELING INDICATES A PEAK Q_{100}=12.2CFS WHICH WAS USED FOR HYDRAULIC DESIGN OF OUTLET.

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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R# 23 DATE 3-13-00 OP. E&P.

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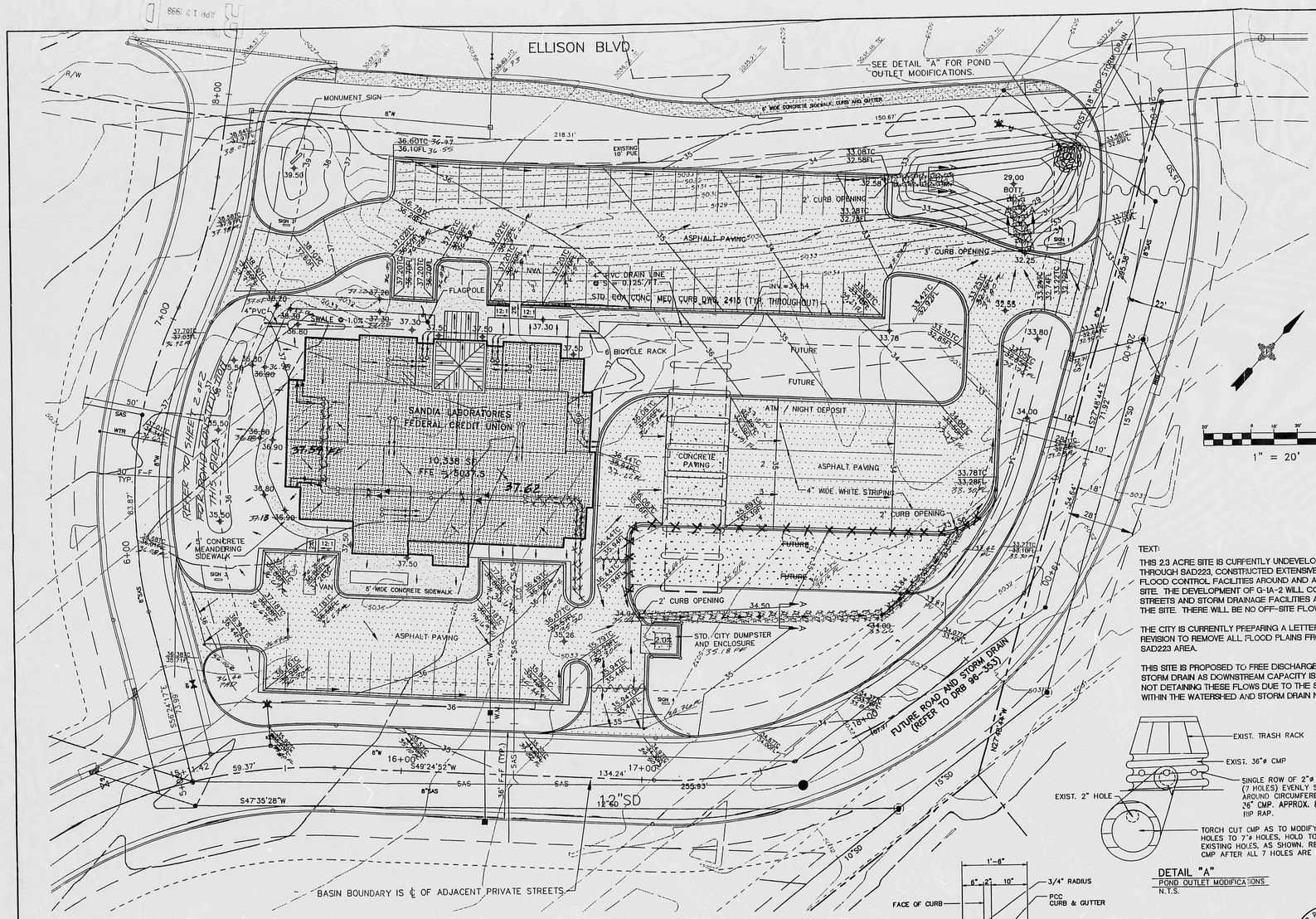
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DIRECTOR

NOTARY PUBLIC

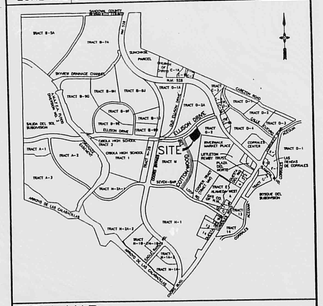
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My commission expires: 07/02/02

D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D

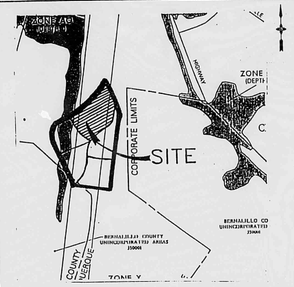




VICINITY MAP
ZONE ATLAS MAP NO. A-14



FIRM MAP
MAP No. 35001C0109D



TEXT:

THIS 2.3 ACRE SITE IS CURRENTLY UNDEVELOPED. THE CITY, THROUGH SAD223, CONSTRUCTED EXTENSIVE DRAINAGE AND FLOOD CONTROL FACILITIES AROUND AND ADJACENT TO THE SITE. THE DEVELOPMENT OF G-1A-2 WILL CONSTRUCT STREETS AND STORM DRAINAGE FACILITIES ADJACENT TO THE SITE. THERE WILL BE NO OFF-SITE FLOWS.

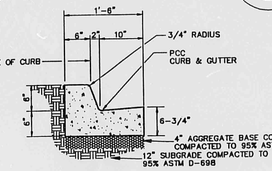
THE CITY IS CURRENTLY PREPARING A LETTER OF MAP REVISION TO REMOVE ALL FLOOD PLAINS FROM WITHIN THE SAD223 AREA.

THIS SITE IS PROPOSED TO FREE DISCHARGE TO THE ELLISON STORM DRAIN AS DOWNSTREAM CAPACITY IS INCREASED BY NOT DETAINING THESE FLOWS DUE TO THE SITE'S LOCATION WITHIN THE WATERSHED AND STORM DRAIN NETWORK.

LEGEND

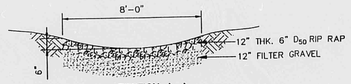
DESCRIPTION	NEW	EXISTING
CONTOURS	5085	5087
SPOT ELEVATIONS	⊕ 5088	⊕ 5088
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN		
STORM DRAIN M.H. & LINE	36"SD	36"SD
SANITARY SEWER M.H. & LINE	S.S.A.S.	S.S.A.S.
FIRE HYDRANT & WATER LINE	8"W	6"W
REDUCERS		
WATER VALVES	W.V. W.V.	W.V. W.V.
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE	EXISTING	EXISTING
GAS LINE		
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	UTV	UTV
POWER/TELEPHONE POLE	O P.P.	O P.P.
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION	5088.18 A	5088.18 A
HYDROLOGICAL ANALYSIS PT.		

DETAIL "A"
POND OUTLET MODIFICATIONS
N.T.S.



TYPICAL SECTION
MEDIAN CURB AND GUTTER
C.O.A. STD. DWG. NO. 2415
N.T.S.

NOTES:
1. PROVIDE CONTRACTION JOINTS AT 6' O.C. MAX.
2. PROVIDE EXPANSION JOINTS AT 48' O.C. MAX.



SECTION A-A
NTS

LEGAL DESCRIPTION
TRACT G-1A-2E
SEVEN — BAR RANCH
(BEING A REPLAT OF TRACT G-1A SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996
2.3141 AC.

BENCHMARK
NMSHC MONUMENT "HM-448-N12"
ELEV. = 5023.41'
LOCATED 80' WEST OF COORS RD. CENTERLINE AND 550' SOUTH OF ALAMEDA BLVD. (NMSR 528) CENTERLINE.

R. P. MOHANAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

GREGORY A. HEILMAN NEW MEXICO 6411 REGISTERED PROFESSIONAL ENGINEER

NO.	REVISIONS	BY	DATE
1	ADDED SHEET 2 - AS-BUILTS' PAVD - CERTIFICATION	KEMP	2-16-98

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

APR 14 1998 CITY ENGINEER

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET 1
CME	DEC	CME	OF 2
JOB NO. 4550	DATE 2-97		

APR 13 1998 HYDROLOGY SECTION

HYDROLOGY SUMMARY
PROJECT NAME: SANDIA LABS FEDERAL CREDIT UNION
JOB NUMBER: 4550

INPUT DATA:

PRECIP. ZONE	RAINFALL DEPTHS (INCHES) AT 100-YEAR STORM 1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY
1	1.87	2.20	2.66	3.12	3.67

BASIN	COND.	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	D	2 YEAR Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR	10 YEAR Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR	100 YEAR Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR
1	UNDEV	TRACT G-1A-2E	2.31	100.0%	0.0%	0.0%	0.0%	0.0	0.0000	0.0000	0.6	0.0154	0.0154	3.0	0.0849	0.0849
1	DEV	TRACT G-1A-2E	2.31	0.0%	32.5%	0.0%	67.5%	2.7	0.0943	0.1203	5.1	0.1752	0.2151	8.4	0.2984	0.3583

NOTE: AHYMO94 MODELING INDICATES A PEAK Q_{100}=12.2CFS WHICH WAS USED FOR HYDRAULIC DESIGN OF OUTLET.

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

R# 23 DATE 3-13-98 OP. E.P.
0

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the Public Works Department and was created in the normal course of business.

The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS14S-1977)

DIRECTOR

Rebuta Duran
NOTARY PUBLIC
OFFICIAL SEAL
Rebuta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/09/02

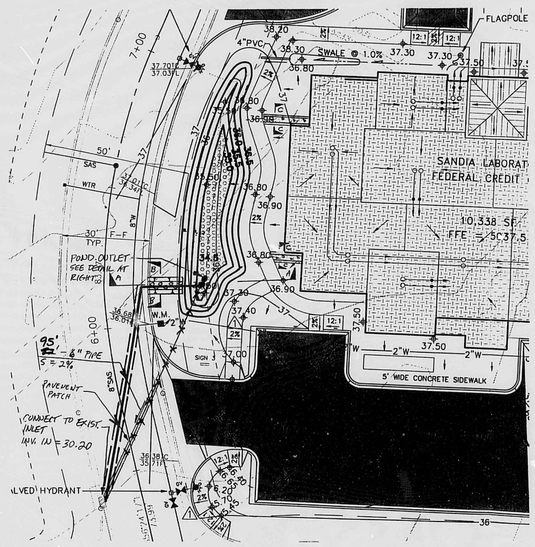
D24 C20 B16 A12 | CITY OF ALBUQUERQUE C D

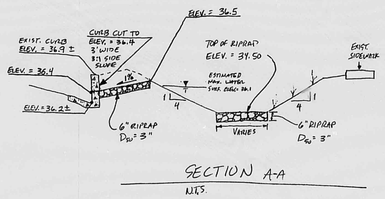
SANDIA LAB FEDERAL CREDIT UNION

EASTERLING & ASSOC., INC. 2-16-98 (GN)

PLAN

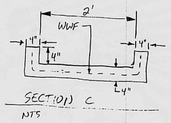
1" = 20'





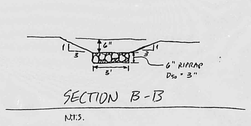
SECTION A-A

N.T.S.



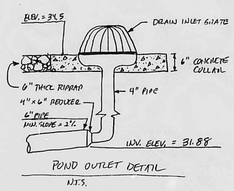
SECTION C

N.T.S.



SECTION B-B

N.T.S.



POND OUTLET DETAIL

N.T.S.

ENGINEER'S CERTIFICATION FOR PERMANENT CERTIFICATE OF OCCUPANCY

I hereby certify that I have inspected the site grading and drainage improvements and that they have been constructed and are expected to function in accordance with the intent of the approved Grading and Drainage as amended with this certification.

The as-constructed information shown on this plan was provided by Hall Engineering, Inc. Proposed contours have not been revised to reflect the as-constructed elevations and should be considered approximate.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R P Bohannan Date 4/13/98

R. P Bohannan, P.E.
N.M.P.E. No. 9814

NO.	REVISIONS	BY	DATE
1	Added Sheet 2 of 2	RPB	2/17/98

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

R. P BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER 2/17/98

Easterling & Associates, Inc.
CONSULTING ENGINEERS
2600 The American Rd., SE, Suite 100
Rio Rancho, New Mexico 87124
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY	DRAWN BY:	CHECKED BY:	SHEET 2
GN	DEC	RPB	OF 2
JOB NO: 4550	DATE: 2-98		

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

R# 23 DATE 3-13-02 OP EJP

CITY OF ALBUQUERQUE

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The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MSAIC-1977)

Thomas J. Hall 3/13/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/02/02

D 24 C 20 B 16 A 12

CITY OF ALBUQUERQUE C D

PUBLIC WORKS/HYDROLOGY

3 OF 6

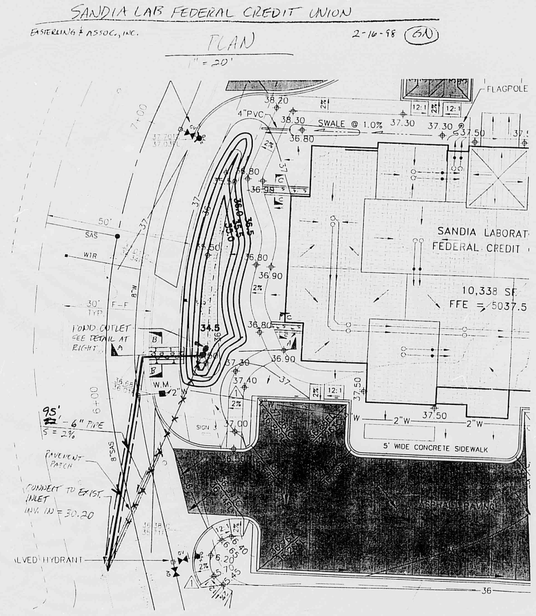
A14/D10A

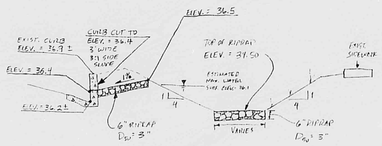
SANDIA LAB FEDERAL CREDIT UNION

EASTERLING & ASSOC., INC. 2-16-98 (GN)

PLAN

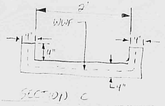
1" = 20'





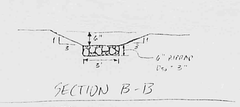
SECTION A-A

N.T.S.



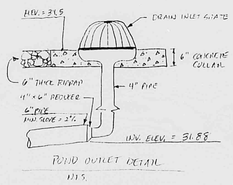
SECTION C

N.T.S.



SECTION B-B

N.T.S.



POND OUTLET DETAIL

N.T.S.

ENGINEER'S CERTIFICATION FOR PERMANENT CERTIFICATE OF OCCUPANCY

I hereby certify that I have inspected the site grading and drainage improvements and that they have been constructed and are expected to function in accordance with the intent of the approved Grading and Drainage as amended with this certification.

The as-constructed information shown on this plan was provided by Hall Engineering, Inc. Proposed contours have not been revised to reflect the as-constructed elevations and should be considered approximate.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R P Bohannan Date 1/13/98

R. P. Bohannan, P.E.
N.M.P.E. No. 9814

NO.	REVISIONS	BY	DATE
1	Added Sheet 2 of 2	RPB	2/17/98

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER
2/17/98

Easterling & Associates, Inc.
CONSULTING ENGINEERS
2600 The American Rd., SE, Suite 100
Rio Rancho, New Mexico 87124
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY	DRAWN BY	CHECKED BY	SHEET
GN	DEC	RPB	2
JOB NO	DATE		OF
4550	2-98		2

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

R# 23 DATE 3/13/02 OP

CITY OF ALBUQUERQUE

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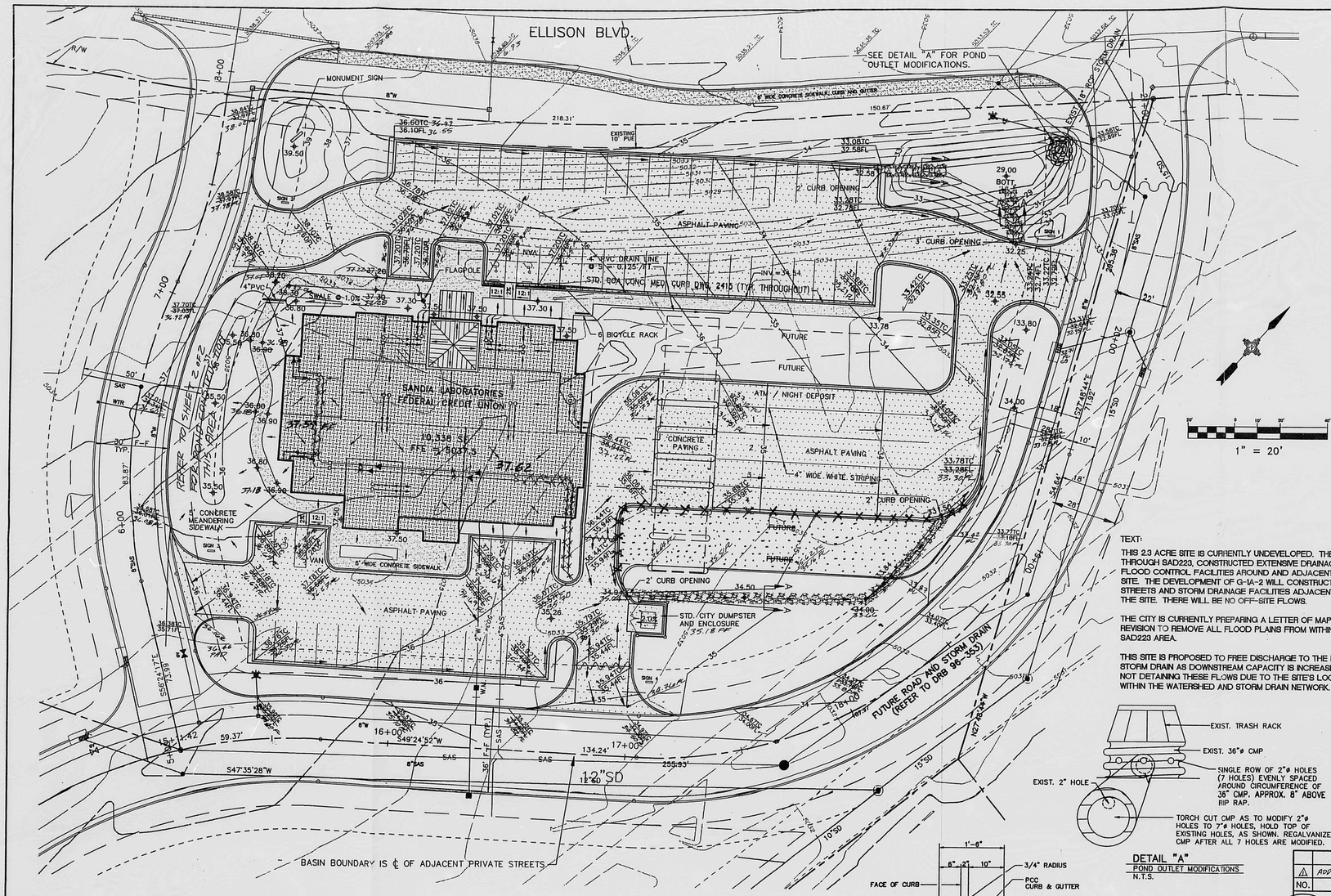
The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS118-1977)

DIRECTOR

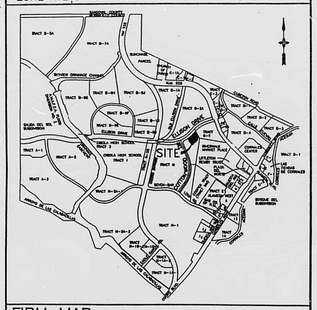
NOTARY PUBLIC

OFFICIAL SEAL
Rebecca Dillman
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires
07/03/02

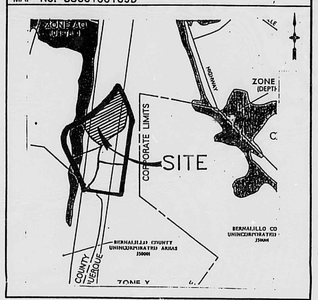
D24 C20 B16 A12 CITY OF ALBUQUERQUE C D



VICINITY MAP
ZONE ATLAS MAP NO. A-14



FIRM MAP
MAP No. 35001C0109D



TEXT:

THIS 2.3 ACRE SITE IS CURRENTLY UNDEVELOPED. THE CITY, THROUGH SAD223, CONSTRUCTED EXTENSIVE DRAINAGE AND FLOOD CONTROL FACILITIES AROUND AND ADJACENT TO THE SITE. THE DEVELOPMENT OF G-1A-2 WILL CONSTRUCT STREETS AND STORM DRAINAGE FACILITIES ADJACENT TO THE SITE. THERE WILL BE NO OFF-SITE FLOWS.

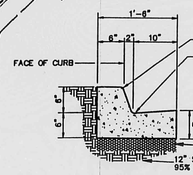
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LEGEND

DESCRIPTION	NEW	EXISTING
CONTOURS	5024 / 5028	5024 / 5028
SPOT ELEVATIONS		
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN	36"SD	36"SD
STORM DRAIN M.H. & LINE		
SANITARY SEWER M.H. & LINE		
FIRE HYDRANT & WATER LINE		
REDUCERS		
WATER VALVES		
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE		
GAS LINE		
UNDERGROUND TELEPHONE		
CABLE TELEVISION		
POWER/TELEPHONE POLE		
UNDERGROUND ELECTRICAL		
CURB ELEVATION		
HYDROLOGICAL ANALYSIS PT.		

DETAIL "A"
POND OUTLET MODIFICATIONS
N.T.S.



TYPICAL SECTION
MEDIAN CURB AND GUTTER
C.O.A. STD. DWG. NO. 2415
N.T.S.

NOTES:
1. PROVIDE CONTRACTION JOINTS AT 6' O.C. MAX.
2. PROVIDE EXPANSION JOINTS AT 48' O.C. MAX.



LEGAL DISCRIPTION
TRACT G-1A-2E
SEVEN - BAR RANCH
(BEING A REPLAT OF TRACT G-1A-2 SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996
2.3141 AC.

BENCHMARK
MNMSHC MONUMENT "NM-448-M12"
ELEV. = 5023.41'
LOCATED 60' WEST OF COORS RD. CENTERLINE AND 550' SOUTH OF ALAMEDA BLVD. (NMSR 528) CENTERLINE.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

GREGORY L. EASTERLING NEW MEXICO 6411 REGISTERED PROFESSIONAL ENGINEER

NO.	REVISIONS	BY	DATE
⚠	ADDED SHEET 2 - AS BUILTS - POND - CERTIFICATION	RGE	2-16-98

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL
GRADING & DRAINAGE PLAN

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY	DRAWN BY:	CHECKED BY:	SHEET 1
CME	DEC	CME	OF 2
JOB NO: 4550	DATE: 2-97		

HYDROLOGY SUMMARY
PROJECT NAME: SANDIA LABS FEDERAL CREDIT UNION
JOB NUMBER: 4550

BASIN	COND.	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	D	2 YEAR Q (cfs)	2 YEAR VOLUME (ac.ft.) 6 HR	2 YEAR VOLUME (ac.ft.) 24 HR	10 YEAR Q (cfs)	10 YEAR VOLUME (ac.ft.) 6 HR	10 YEAR VOLUME (ac.ft.) 24 HR	100 YEAR Q (cfs)	100 YEAR VOLUME (ac.ft.) 6 HR	100 YEAR VOLUME (ac.ft.) 24 HR
1	UNDEV	TRACT G-1A-2E	2.31	100.0%	0.0%	0.0%	0.0%	0.0	0.0000	0.0000	0.6	0.0154	0.0154	3.0	0.0849	0.0849
1	DEV	TRACT G-1A-2E	2.31	0.0%	32.5%	0.0%	67.5%	2.7	0.0943	0.1203	5.1	0.1752	0.2151	8.4	0.2984	0.3583

INPUT DATA:

PRECIP. ZONE	RAINFALL DEPTHS (INCHES) AT 100-YEAR STORM 1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY
1	1.87	2.20	2.66	3.12	3.67

NOTE: AHYMO94 MODELING INDICATES A PEAK Q_{100}=12.2CFS WHICH WAS USED FOR HYDRAULIC DESIGN OF OUTLET.

DWG: I:\PROJECTS\4550\DWG\SLGD
TIME: 02-16-97 10:05:44

PLAN SHOT TWICE ONCE ON LIGHT ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

R# 23 DATE 3-13-98 OP. EJP

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the Public Works Department and was created in the normal course of business.

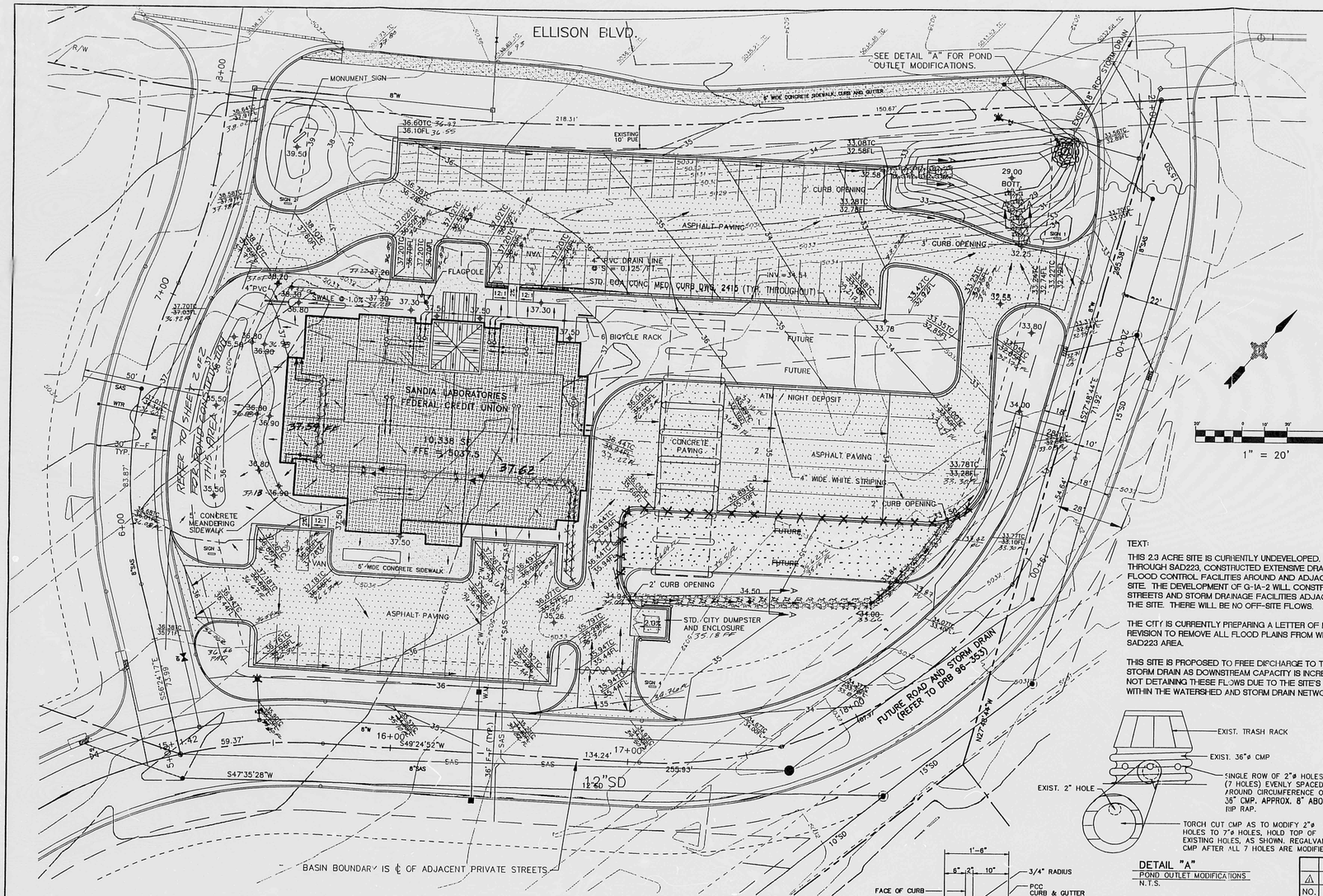
The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS116-1977)

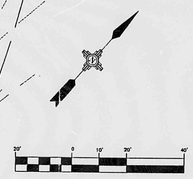
Mgr. J. Allen 1/5/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

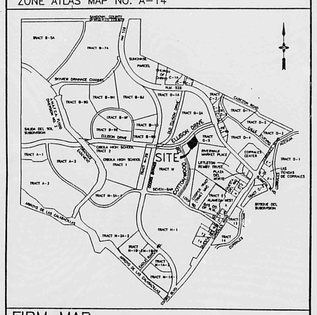
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
01/22/02

D24 C20 B16 A12 CITY OF ALBUQUERQUE C D

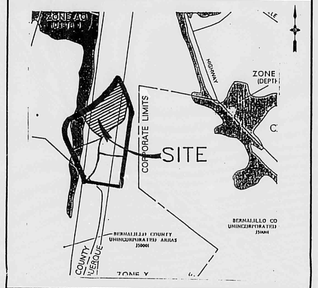




VICINITY MAP
ZONE ATLAS MAP NO. A-14



FIRM MAP
MAP No. 35001C0109D



TEXT:

THIS 2.3 ACRE SITE IS CURRENTLY UNDEVELOPED. THE CITY, THROUGH SAD223, CONSTRUCTED EXTENSIVE DRAINAGE AND FLOOD CONTROL FACILITIES AROUND AND ADJACENT TO THE SITE. THE DEVELOPMENT OF G-1A-2 WILL CONSTRUCT STREETS AND STORM DRAINAGE FACILITIES ADJACENT TO THE SITE. THERE WILL BE NO OFF-SITE FLOWS.

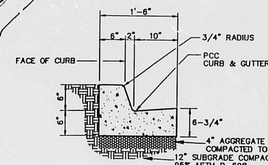
THE CITY IS CURRENTLY PREPARING A LETTER OF MAP REVISION TO REMOVE ALL FLOOD PLAINS FROM WITHIN THE SAD223 AREA.

THIS SITE IS PROPOSED TO FREE DISCHARGE TO THE ELLISON STORM DRAIN AS DOWNSTREAM CAPACITY IS INCREASED BY NOT DETAINING THESE FLOWS DUE TO THE SITE'S LOCATION WITHIN THE WATERSHED AND STORM DRAIN NETWORK.

LEGEND

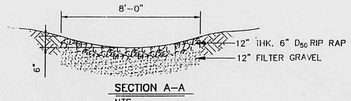
DESCRIPTION	NEW	EXISTING
CONTOURS	5084	5084
SPOT ELEVATIONS	● 5068	● 5068
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN	36"SD	
STORM DRAIN M.H. & LINE	8"SAS	8"SAS
SANITARY SEWER M.H. & LINE	6"W	6"W
FIRE HYDRANT & WATER LINE		
REDUCERS		
WATER VALVES		
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE		
GAS LINE		
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	CTV	CTV
POWER/TELEPHONE POLE	O P.P.	O P.P.
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION	5081.18 △	5081.18 △
HYDROLOGICAL ANALYSIS PT.	5077.18 △	5077.18 △

DETAIL "A"
POND OUTLET MODIFICATIONS
N.T.S.



TYPICAL SECTION
MEDIAN CURB AND GUTTER
C.O.A. STD. DWG. NO. 2415
N.T.S.

NOTES:
1. PROVIDE CONTRACTION JOINTS AT 6' O.C. MAX.
2. PROVIDE EXPANSION JOINTS AT 48' O.C. MAX.



SECTION A-A
NTS

LEGAL DISCRIPTION
TRACT G-1A-2E
SEVEN - BAR RANCH
(BEING A REPLAT OF TRACT G-1A-2 SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996
2.3141 AC.

BENCHMARK
NMSHC MONUMENT "NM-448-N12"
ELEV. = 5023.41'
LOCATED 60' WEST OF COORS RD. CENTERLINE AND 350' SOUTH OF ALAMEDA BLVD. (NMSR 528) CENTERLINE.

HYDROLOGY SUMMARY
PROJECT NAME: SANDIA LABS FEDERAL CREDIT UNION
JOB NUMBER: 4550

INPUT DATA:

PRECIP. ZONE	RAINFALL DEPTHS (INCHES) AT 100-YEAR STORM 1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY
1	1.87	2.20	2.88	3.12	3.67

BASIN	COND.	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	D	2 YEAR Q	VOLUME (ac.ft.) 6 HR	24 HR	10 YEAR Q	VOLUME (ac.ft.) 6 HR	24 HR	100 YEAR Q	VOLUME (ac.ft.) 6 HR	24 HR
1	UNDEV	TRACT G-1A-2E	2.31	100.0%	0.0%	0.0%	0.0%	0.0	0.0000	0.0000	0.6	0.0154	0.0154	3.0	0.0849	0.0849
1	DEV	TRACT G-1A-2E	2.31	0.0%	32.5%	0.0%	67.5%	2.7	0.0943	0.1203	5.1	0.1752	0.2151	8.4	0.2984	0.3583

NOTE: AHYMO94 MODELING INDICATES A PEAK Q_{100}=12.2CFS WHICH WAS USED FOR HYDRAULIC DESIGN OF OUTLET.

NO.	REVISIONS	BY	DATE
△	ADDED SHEET 2-AS BUILTS POND - CERTIFICATION	RDMS	2-16-98

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

R. P. McMAHANNA NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

CHARLES C. EASTERLING NEW MEXICO 6411 REGISTERED PROFESSIONAL ENGINEER

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY	DRAWN BY:	CHECKED BY:	SHEET 1
CME	DEC	CME	OF 2
JOB NO: 4550	DATE: 2-97		

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

R# 23 DATE 3-13-98 DP E-21

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the **Public Works Department** and was created in the normal course of business.

The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS14-1977)

DIRECTOR

NOTARY PUBLIC
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/03/98

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TIME: 02-18-97 10:00:44

D24 C20 B16 A12 | CITY OF ALBUQERQUE C D

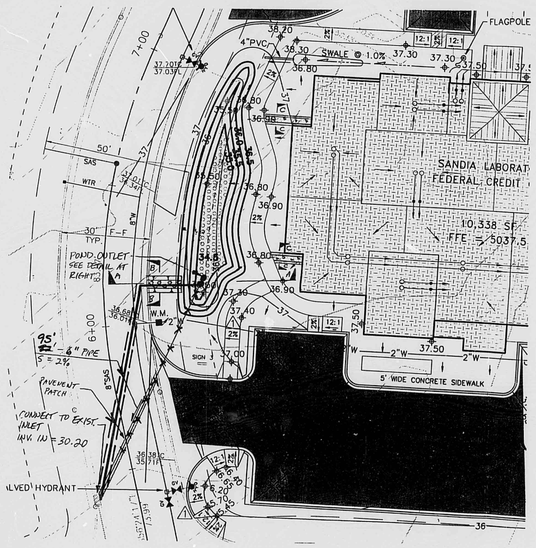
SANDIA LAB FEDERAL CREDIT UNION

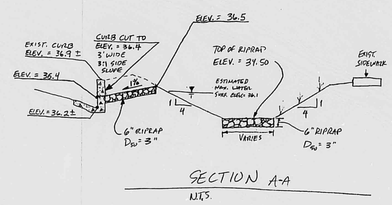
EASTERLING & ASSOC., INC.

PLAN

1" = 20'

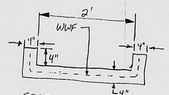
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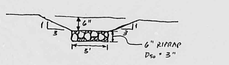
SECTION A-A

N.T.S.



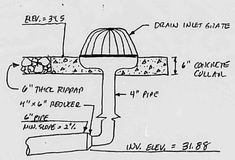
SECTION C

N.T.S.



SECTION B-B

N.T.S.



POND OUTLET DETAIL

N.T.S.

ENGINEER'S CERTIFICATION FOR PERMANENT CERTIFICATE OF OCCUPANCY

I hereby certify that I have inspected the site grading and drainage improvements and that they have been constructed and are expected to function in substantial compliance with the intent of the approved Grading and Drainage as amended with this certification.

The as-constructed information shown on this plan was provided by Hall Engineering, Inc. Proposed contours have not been revised to reflect the as-constructed elevations and should be considered approximate.

R. P. BOHANNAN, NEW MEXICO, 9814, REGISTERED PROFESSIONAL ENGINEER

R. P. Bohannan, P.E.
N.M.P.E. No. 9814

Date 5/4/98

NO.	REVISIONS	BY	DATE
1	Added Sheet 2 of 2	RPB	2/17/98

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

R. P. BOHANNAN, NEW MEXICO, 9814, REGISTERED PROFESSIONAL ENGINEER
2/17/98

Easterling & Associates, Inc.
CONSULTING ENGINEERS
2600 The American Rd., SE, Suite 100
Rio Rancho, New Mexico 87124
(505) 858-8021 FAX (505) 898-8501

DESIGNED BY	DRAWN BY:	CHECKED BY:	SHEET
GN	DEC	RPB	2
JOB NO.	DATE:		OF
4550	2-98		2

DWG. T:\PROJECTS\4550\DWG\SU24
DATE 04-28-97 08:22:02

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

R# 23 DATE 3-13-02 OP E.P.

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the **Public Works Department** and was created in the normal course of business.

The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS116-1977)

DIRECTOR

NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/02/02

D 24 C 20 B 16 A 12

CITY OF ALBUQUERQUE C D

PUBLIC WORKS/HYDROLOGY

4 OF 6

A14/D10A

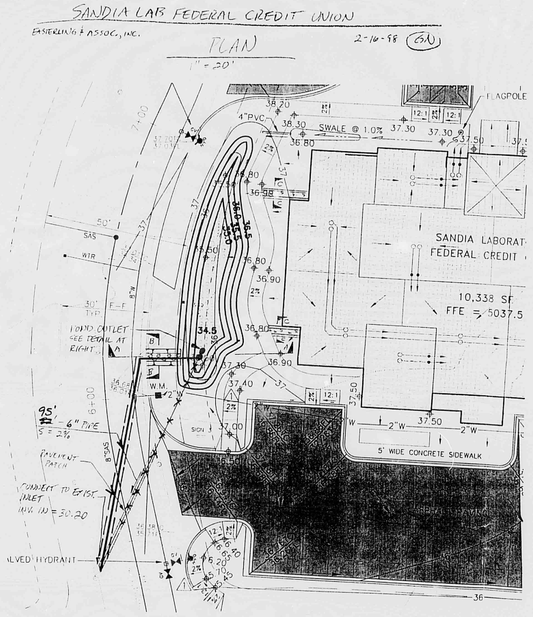
SANDIA LAB FEDERAL CREDIT UNION

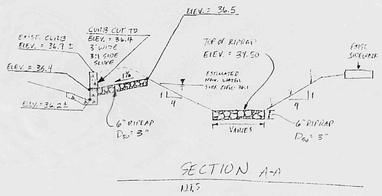
EASTERLING & ASSOC., INC.

2-16-98 (GN)

PLAN

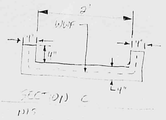
1" = 20'



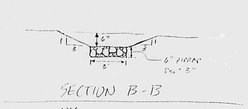


SECTION A-A

N.T.S.

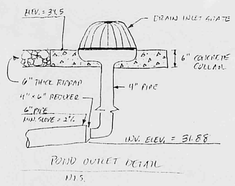


N.T.S.



SECTION B-B

N.T.S.



POND OUTLET DETAIL

N.T.S.

ENGINEER'S CERTIFICATION FOR PERMANENT CERTIFICATE OF OCCUPANCY

I hereby certify that I have inspected the site grading and drainage improvements and that they have been constructed and are expected to function in substantial compliance with the intent of the approved Grading and Drainage as amended with this certification.

The as-constructed information shown on this plan was provided by Hall Engineering, inc. Proposed contours have not been revised to reflect the as-constructed elevations and should be considered approximate.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R.P. Bohannan Date 5/4/98

R. P. Bohannan, P.E.
N.M.P.E. No. 9814

NO.	REVISIONS	BY	DATE
1	Added Sheet 2 of 2	RPB	2/17/98

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER 2/17/98

Easterling & Associates, Inc.
CONSULTING ENGINEERS
2600 The American Rd., SE, Suite 100
Rio Rancho, New Mexico 87124
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY	DRAWN BY	CHECKED BY	SHEET
GN	DEC	RPB	2
JOB NO.	DATE		OF
4550	2-98		2

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

R# 22 DATE 5-13-02 OP EJT

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the **Public Works Department** and was created in the normal course of business.

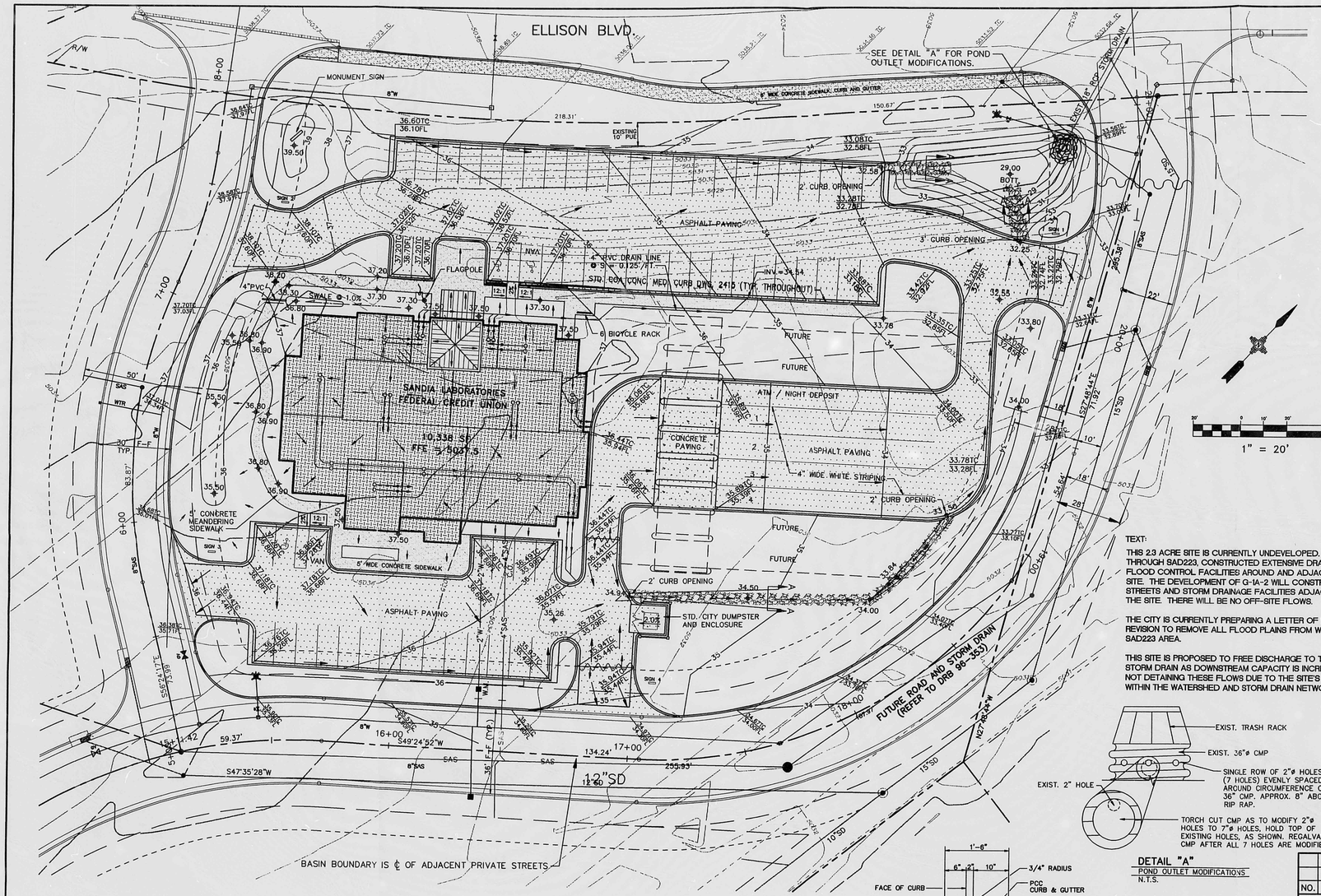
The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS115-1977)

DIRECTOR

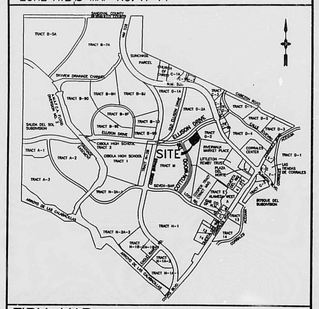
NOTARY PUBLIC

OFFICIAL SEAL
REBECCA DIXON
NOTARY PUBLIC
STATE OF NEW MEXICO
07/02/02 /mel

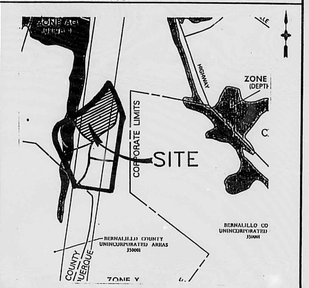
D 24 C 20 B 16 A 12 | CITY OF ALBUQERQUE C D



VICINITY MAP
ZONE ATLAS MAP NO. A-14



FIRM MAP
MAP No. 35001C0109D



TEXT:

THIS 2.3 ACRE SITE IS CURRENTLY UNDEVELOPED. THE CITY, THROUGH SAD223, CONSTRUCTED EXTENSIVE DRAINAGE AND FLOOD CONTROL FACILITIES AROUND AND ADJACENT TO THE SITE. THE DEVELOPMENT OF G-1A-2 WILL CONSTRUCT STREETS AND STORM DRAINAGE FACILITIES ADJACENT TO THE SITE. THERE WILL BE NO OFF-SITE FLOWS.

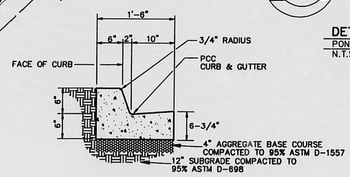
THE CITY IS CURRENTLY PREPARING A LETTER OF MAP REVISION TO REMOVE ALL FLOOD PLAINS FROM WITHIN THE SAD223 AREA.

THIS SITE IS PROPOSED TO FREE DISCHARGE TO THE ELLISON STORM DRAIN AS DOWNSTREAM CAPACITY IS INCREASED BY NOT DETAINING THESE FLOWS DUE TO THE SITE'S LOCATION WITHIN THE WATERSHED AND STORM DRAIN NETWORK.

LEGEND

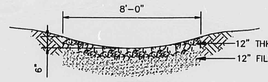
DESCRIPTION	NEW	EXISTING
CONTOURS	5024	5024
SPOT ELEVATIONS	● 5088	● 5088
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN		
STORM DRAIN M.H. & LINE	36"SD	36"SD
SANITARY SEWER M.H. & LINE	8"SAS	8"SAS
FIRE HYDRANT & WATER LINE	6"W	6"W
REDUCERS		
WATER VALVES		
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE	CONCRETE	CONCRETE
GAS LINE		
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	CATV	CATV
POWER/TELEPHONE POLE		
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION		
HYDROLOGICAL ANALYSIS PT.	A	A

DETAIL "A"
POND OUTLET MODIFICATIONS
N.T.S.



TYPICAL SECTION
MEDIAN CURB AND GUTTER
C.O.A. STD. DWG. NO. 2415
N.T.S.

NOTES:
1. PROVIDE CONTRACTION JOINTS AT 6' O.C. MAX.
2. PROVIDE EXPANSION JOINTS AT 48' O.C. MAX.



NTS

LEGAL DISCRIPTION
TRACT G-1A-2E
SEVEN - BAR RANCH
(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996
2.3141 AC.

BENCHMARK
NMSHC MONUMENT "NM-448-N12"
ELEV. = 5023.41'
LOCATED 60' WEST OF COORS RD. CENTERLINE AND 550' SOUTH OF ALAMEDA BLVD. (NMSR 528) CENTERLINE.

HYDROLOGY SUMMARY
PROJECT NAME: SANDIA LABS FEDERAL CREDIT UNION
JOB NUMBER: 4550

INPUT DATA:

PRECIP.	RAINFALL DEPTHS (INCHES) AT 100-YEAR STORM				
ZONE	1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY
1	1.87	2.20	2.66	3.12	3.67

BASIN	COND.	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	D (cfs)	2 YEAR Q	VOLUME (ac.ft.) 6 HR	24 HR (cfs)	10 YEAR Q	VOLUME (ac.ft.) 6 HR	24 HR (cfs)	100 YEAR Q	VOLUME (ac.ft.) 6 HR	24 HR
1	UNDEV	TRACT G-1A-2E	2.31	100.0%	0.0%	0.0%	0.0%	0.0	0.0000	0.0000	0.6	0.0154	0.0154	3.0	0.0849	0.0849
1	DEV	TRACT G-1A-2E	2.31	0.0%	32.5%	0.0%	67.5%	2.7	0.0943	0.1203	5.1	0.1752	0.2151	8.4	0.2984	0.3583

NOTE: AHYMO94 MODELING INDICATES A PEAK Q_{100}=12.2CFS WHICH WAS USED FOR HYDRAULIC DESIGN OF OUTLET.

NO.	REVISIONS	BY	DATE

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY	DRAWN BY:	CHECKED BY:	SHEET	1
CME	DEC	CME	OF	1
JOB NO. 4550	DATE: 2-97			

PLAN SHOT TWICE ONCE ON LIGHT ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

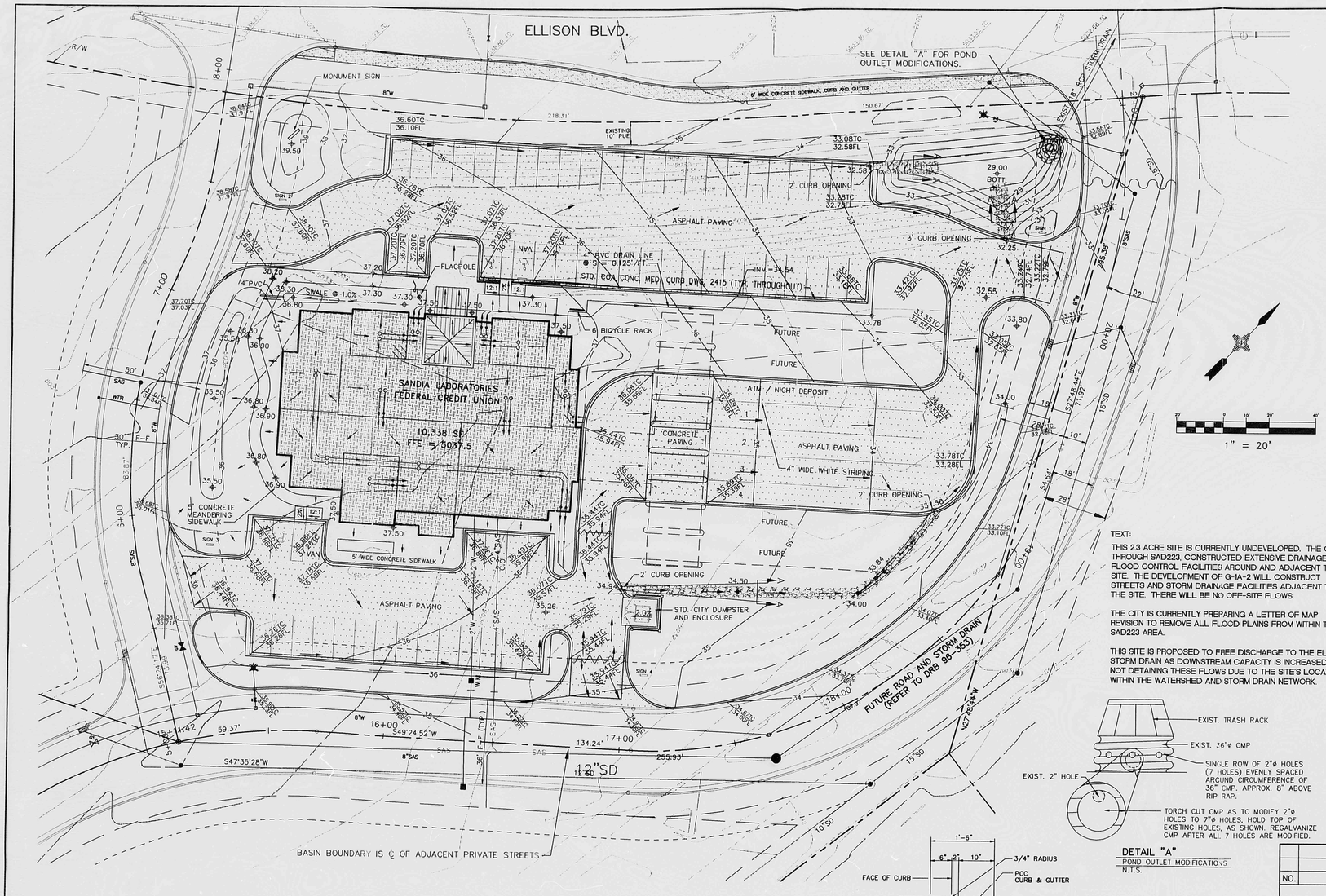
R# 23 DATE 3-13-00 OCR

CITY OF ALBUQUERQUE
This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the Public Works Department and was created in the normal course of business.
The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS14/5-1977)
DIRECTOR

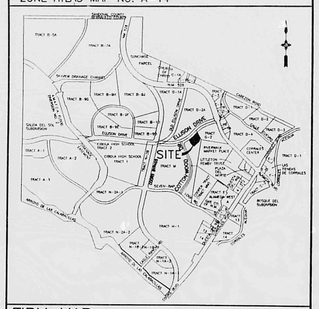
NOTARY PUBLIC
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 07/01/02

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TIME: 02-18-97 10:05:44

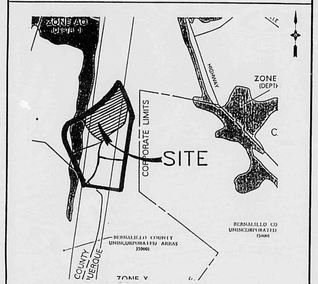
D 24 C 20 B 16 A 12 | CITY OF ALBUQERQUE C D



VICINITY MAP
ZONE ATLAS MAP NO. A-14



FIRM MAP
MAP No. 35001C0109D



TEXT:

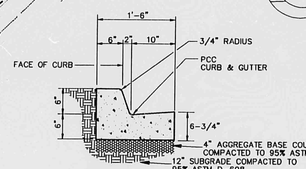
THIS 2.3 ACRE SITE IS CURRENTLY UNDEVELOPED. THE CITY, THROUGH SAD223, CONSTRUCTED EXTENSIVE DRAINAGE AND FLOOD CONTROL FACILITIES AROUND AND ADJACENT TO THE SITE. THE DEVELOPMENT OF G-1A-2 WILL CONSTRUCT STREETS AND STORM DRAINAGE FACILITIES ADJACENT TO THE SITE. THERE WILL BE NO OFF-SITE FLOWS.

THE CITY IS CURRENTLY PREPARING A LETTER OF MAP REVISION TO REMOVE ALL FLOOD PLAINS FROM WITHIN THE SAD223 AREA.

THIS SITE IS PROPOSED TO FREE DISCHARGE TO THE ELLISON STORM DRAIN AS DOWNSTREAM CAPACITY IS INCREASED BY NOT DETAINING THESE FLOWS DUE TO THE SITE'S LOCATION WITHIN THE WATERSHED AND STORM DRAIN NETWORK.

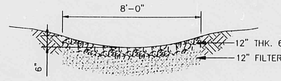
LEGEND

DESCRIPTION	NEW	EXISTING
CONTOURS	5094	5094
SPOT ELEVATIONS	⊕ 5088	⊕ 5088
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN		
STORM DRAIN M.H. & LINE	36"SD	36"SD
SANITARY SEWER M.H. & LINE	8"SAS	8"SAS
FIRE HYDRANT & WATER LINE	6"W	6"W
REDUCERS		
WATER VALVES		
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE		
GAS LINE		
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	CTV	CTV
POWER/TELEPHONE POLE	P.P.	P.P.
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION	TC 5089.12 FC 5087.72	TC 5089.12 FC 5087.72
HYDROLOGICAL ANALYSIS PT.		



TYPICAL SECTION
MEDIAN CURB AND GUTTER
C.O.A. STD. DWG. NO. 2415
N.T.S.

NOTES:
1. PROVIDE CONTRACTION JOINTS AT 6' O.C. MAX.
2. PROVIDE EXPANSION JOINTS AT 48' O.C. MAX.



SECTION A-A
NTS

DETAIL "A"
POND OUTLET MODIFICATIONS
N.T.S.

LEGAL DISCRIPTION
TRACT G-1A-2E
SEVEN - BAR RANCH
(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996
2.3141 AC.

BENCHMARK
NMSHC MONUMENT "NM-448-N12"
ELEV. = 5023.41'
LOCATED 60' WEST OF COORS RD. CENTERLINE AND 550' SOUTH OF ALAMEDA BLVD. (NMSI 528) CENTERLINE.

HYDROLOGY SUMMARY
PROJECT NAME: SANDIA LABS FEDERAL CREDIT UNION
JOB NUMBER: 4550

INPUT DATA:

PRECIP. ZONE	1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY
1	1.87	2.20	2.66	3.12	3.67

BASIN	COND.	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	D	2 YEAR Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR	10 YEAR Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR	100 YEAR Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR
1	UNDEV	TRACT G-1A-2E	2.31	100.0%	0.0%	0.0%	0.0%	0.0	0.0000	0.0000	0.6	0.0154	0.0154	3.0	0.0849	0.0849
1	DEV	TRACT G-1A-2E	2.31	0.0%	32.5%	0.0%	67.5%	2.7	0.0943	0.1203	5.1	0.1752	0.2151	8.4	0.2984	0.3583

NOTE: AHYMO94 MODELING INDICATES A PEAK Q_{100}=12.2CFS WHICH WAS USED FOR HYDRAULIC DESIGN OF OUTLET.

NO.	REVISIONS	BY	DATE

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL
GRADING & DRAINAGE PLAN

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

REGISTERED PROFESSIONAL ENGINEER — NEW MEXICO — 6411 — 6-2-97

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET
CME	DEC	CME	1
JOB NO. 4550	DATE: 2-97		OF 1

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

R# 23 DATE 3-13-02 OP E.P.

CITY OF ALBUQUERQUE

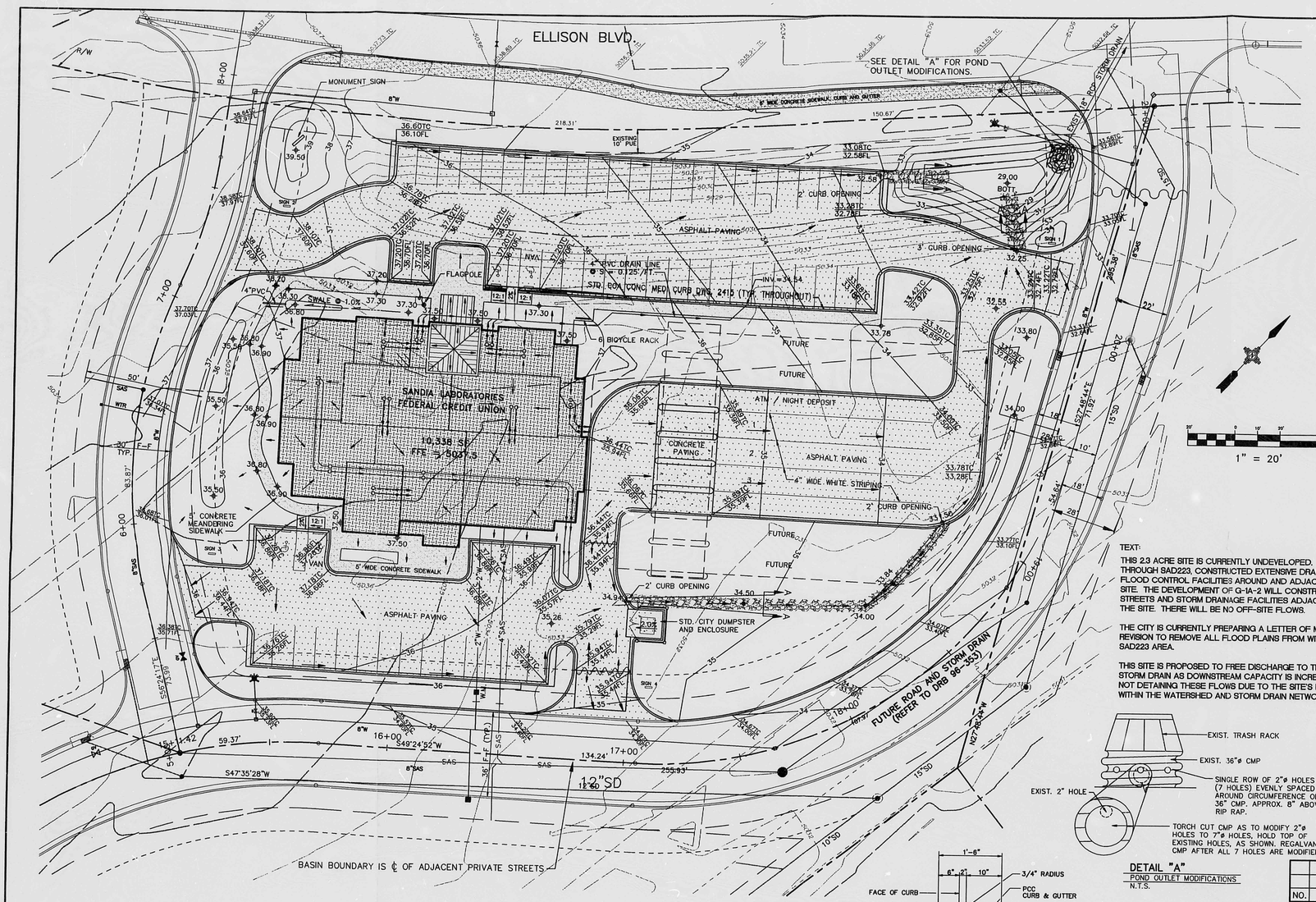
This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the **Public Works Department** and was created in the normal course of business.

The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS14-1977)

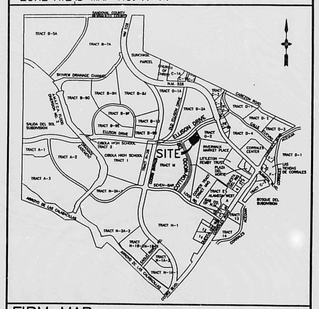
DIRECTOR

NOTARY PUBLIC
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/07/02

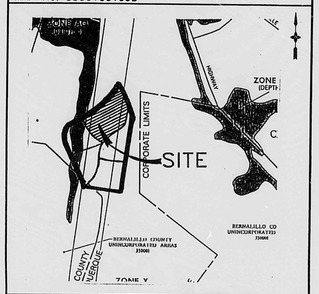
D 24 C 20 B 16 A 12 | CITY OF ALBUQERQUE C D



VICINITY MAP
ZONE ATLAS MAP NO. A-14



FIRM MAP
MAP No. 35001C0109D



TEXT:

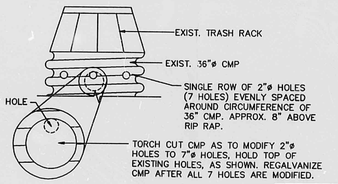
THIS 2.3 ACRE SITE IS CURRENTLY UNDEVELOPED. THE CITY, THROUGH SAD223, CONSTRUCTED EXTENSIVE DRAINAGE AND FLOOD CONTROL FACILITIES AROUND AND ADJACENT TO THE SITE. THE DEVELOPMENT OF G-1A-2 WILL CONSTRUCT STREETS AND STORM DRAINAGE FACILITIES ADJACENT TO THE SITE. THERE WILL BE NO OFF-SITE FLOWS.

THE CITY IS CURRENTLY PREPARING A LETTER OF MAP REVISION TO REMOVE ALL FLOOD PLAINS FROM WITHIN THE SAD223 AREA.

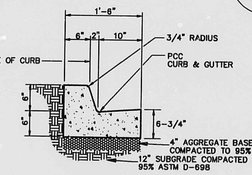
THIS SITE IS PROPOSED TO FREE DISCHARGE TO THE ELLISON STORM DRAIN AS DOWNSTREAM CAPACITY IS INCREASED BY NOT DETAINING THESE FLOWS DUE TO THE SITE'S LOCATION WITHIN THE WATERSHED AND STORM DRAIN NETWORK.

LEGEND

DESCRIPTION	NEW	EXISTING
CONTOURS	5094	5094
SPOT ELEVATIONS	⊕5088	⊕ 5088
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT L.S.	ASPHALT L.S.
LANDSCAPING		
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN		
STORM DRAIN M.H. & LINE	36"SD	M-02
SANITARY SEWER M.H. & LINE	8"SAS	P-21
FIRE HYDRANT & WATER LINE	6"W	
REDUCERS		
WATER VALVES		
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE		
GAS LINE		
UNDERGROUND TELEPHONE		
CABLE TELEVISION		
POWER/TELEPHONE POLE		
UNDERGROUND ELECTRICAL		
CURB ELEVATION		
HYDROLOGICAL ANALYSIS PT.		

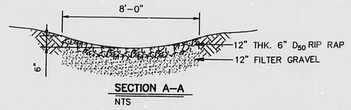


DETAIL "A"
POND OUTLET MODIFICATIONS
N.T.S.



TYPICAL SECTION
MEDIAN CURB AND GUTTER
C.O.A. STD. DWG. NO. 2415
N.T.S.

NOTES:
1. PROVIDE CONTRACTION JOINTS AT 6' O.C. MAX.
2. PROVIDE EXPANSION JOINTS AT 48' O.C. MAX.



SECTION A-A
NTS

LEGAL DISCRIPTION
TRACT G-1A-2E
SEVEN - BAR RANCH:
(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996
2.3141 AC.

BENCHMARK
NMSHC MONUMENT "NM-448-N12"
ELEV. = 5023.41'
LOCATED 60' WEST OF COORS RD. CENTERLINE AND 650' SOUTH OF ALAMEDA BLVD. (NMSR 528) CENTERLINE.

HYDROLOGY SUMMARY
PROJECT NAME: SANDIA LABS FEDERAL CREDIT UNION
JOB NUMBER: 4550

INPUT DATA:

PRECIP. ZONE	RAINFALL DEPTHS (INCHES) AT 100-YEAR STORM 1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY
1	1.87	2.20	2.66	3.12	3.67

BASIN	COND.	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	D	2 YEAR Q (cfs)	VOLUME 6 HR (ac.ft.)	VOLUME 24 HR (cfs)	10 YEAR Q	VOLUME 6 HR (ac.ft.)	VOLUME 24 HR (cfs)	100 YEAR Q	VOLUME 6 HR (cfs)	VOLUME 24 HR (ac.ft.)
1	UNDEV	TRACT G-1A-2E	2.31	100.0%	0.0%	0.0%	0.0%	0.0	0.0000	0.0000	0.6	0.0154	0.0154	3.0	0.0849	0.0849
1	DEV	TRACT G-1A-2E	2.31	0.0%	32.5%	0.0%	67.5%	2.7	0.0943	0.1203	5.1	0.1752	0.2151	8.4	0.2984	0.3583

NOTE: AHYMO94 MODELING INDICATES A PEAK Q_{100}=12.2CFS WHICH WAS USED FOR HYDRAULIC DESIGN OF OUTLET.

NO.	REVISIONS	BY	DATE

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY	DRAWN BY:	CHECKED BY:	SHEET
CME	DEC	CME	1
JOB NO: 4550	DATE: 2-97		OF 1

PLAN SHOT TWICE ONCE ON LIGHT ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

REV 23 DATE 3-13-02 OP. EP.

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the **Public Works Department** and was created in the normal course of business.

The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS14.5-1977)

DIRECTOR

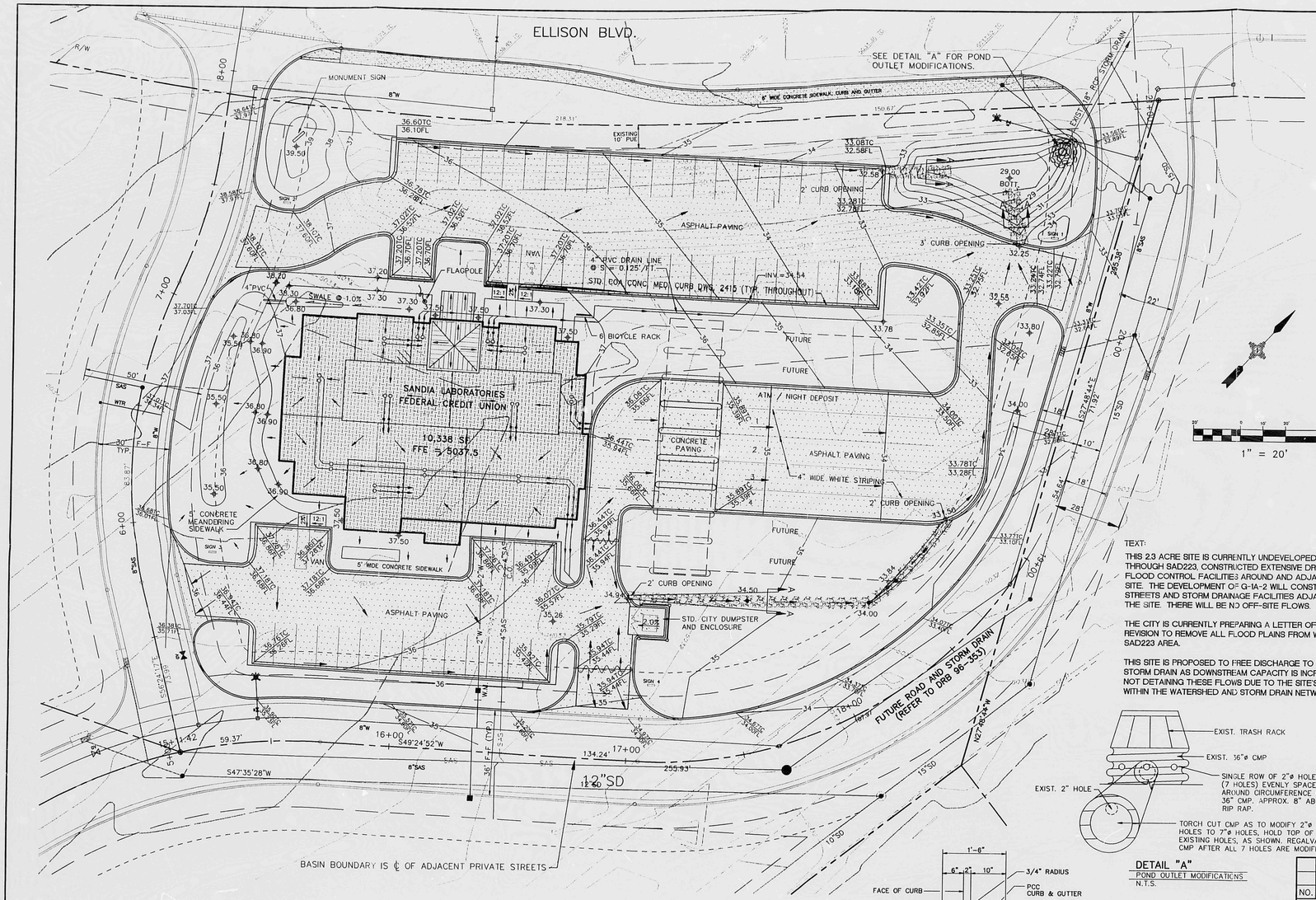
NOTARY PUBLIC
OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
07/29/02

D24 C20 B16 A12 CITY OF ALBUQUERQUE C D

PUBLIC WORKS/HYDROLOGY

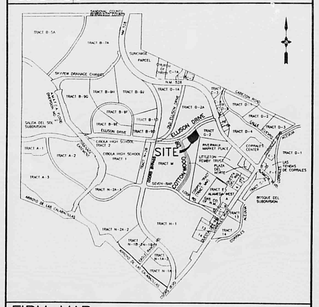
5 OF 6

A14/D10A

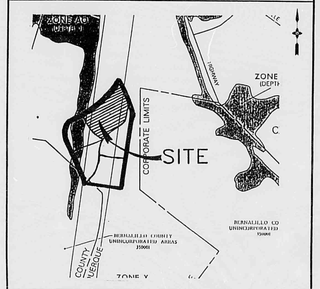


1" = 20'

VICINITY MAP
ZONE ATLAS MAP NO. A-14



FIRM MAP
MAP No. 35001C0109D



TEXT:

THIS 2.3 ACRE SITE IS CURRENTLY UNDEVELOPED. THE CITY, THROUGH SAD223, CONSTRUCTED EXTENSIVE DRAINAGE AND FLOOD CONTROL FACILITIES AROUND AND ADJACENT TO THE SITE. THE DEVELOPMENT OF G-1A-2 WILL CONSTRUCT STREETS AND STORM DRAINAGE FACILITIES ADJACENT TO THE SITE. THERE WILL BE NO OFF-SITE FLOWS.

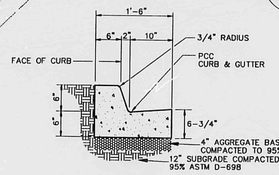
THE CITY IS CURRENTLY PREPARING A LETTER OF MAP REVISION TO REMOVE ALL FLOOD PLAINS FROM WITHIN THE SAD223 AREA.

THIS SITE IS PROPOSED TO FREE DISCHARGE TO THE ELLISON STORM DRAIN AS DOWNSTREAM CAPACITY IS INCREASED BY NOT DETAINING THESE FLOWS DUE TO THE SITE'S LOCATION WITHIN THE WATERSHED AND STORM DRAIN NETWORK.

LEGEND

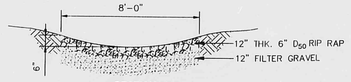
DESCRIPTION	NEW	EXISTING
CONTOURS	5094	5088
SPOT ELEVATIONS	@ 5088	@ 5088
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN		
STORM DRAIN M.H. & LINE	36"SD	36"SD
SANITARY SEWER M.H. & LINE	8"SAS	8"SAS
FIRE HYDRANT & WATER LINE	6"W	6"W
REDUCERS		
WATER VALVES	W.V. INTERST.	W.V. INTERST.
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE	CONCRETE	CONCRETE
GAS LINE	G	G
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	CT	CT
POWER/TELEPHONE POLE	O P.P.	O P.P.
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION	TC 5088.48 FL 5087.98	TC 5088.48 FL 5087.98
HYDROLOGICAL ANALYSIS PT.	A	A

DETAIL "A"
POND OUTLET MODIFICATIONS
N.T.S.



TYPICAL SECTION
MEDIAN CURB AND GUTTER
C.O.A. STD. DWG. NO. 2415
N.T.S.

NOTES:
1. PROVIDE CONTRACTION JOINTS AT 6' O.C. MAX.
2. PROVIDE EXPANSION JOINTS AT 48' O.C. MAX.



SECTION A-A
NTS

LEGAL DISCRIPTION
TRACT G-1A-2E
SEVEN - BAR RANCH
(BEING A REPLAT OF TRACT G-1A-2, SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996
2.3141 AC.

BENCHMARK
NMSHC MONUMENT "TIM-448-N12"
ELEV. = 5023.41'
LOCATED 80' WEST OF COORS RD. CENTERLINE AND 550' SOUTH OF ALAMEDA BLVD. (NMST 528) CENTERLINE.

HYDROLOGY SUMMARY
PROJECT NAME: SANDIA LABS FEDERAL CREDIT UNION
JOB NUMBER: 4550

INPUT DATA:

PRECIP. ZONE	RAINFALL DEPTHS (INCHES) AT 100-YEAR STORM 1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY
1	1.87	2.20	2.66	3.12	3.67

BASIN	COND.	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	D	2 YEAR Q (cfs)	2 YEAR VOLUME (ac.ft.) 6 HR	2 YEAR VOLUME (ac.ft.) 24 HR	10 YEAR Q (cfs)	10 YEAR VOLUME (ac.ft.) 6 HR	10 YEAR VOLUME (ac.ft.) 24 HR	100 YEAR Q (cfs)	100 YEAR VOLUME (ac.ft.) 6 HR	100 YEAR VOLUME (ac.ft.) 24 HR
1	UNDEV	TRACT G-1A-2E	2.31	100.0%	0.0%	0.0%	0.0%	0.0	0.0000	0.0000	0.6	0.0154	0.0154	3.0	0.0849	0.0849
1	DEV	TRACT G-1A-2E	2.31	0.0%	32.5%	0.0%	67.5%	2.7	0.0943	0.1203	5.1	0.1752	0.2151	8.4	0.2984	0.3583

NOTE: AHYMO94 MODELING INDICATES A PEAK Q_{100}=12.2CFS WHICH WAS USED FOR HYDRAULIC DESIGN OF OUTLET.

NO.	REVISIONS	BY	DATE

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

Basterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

NEW MEXICO 6411 REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY	DRAWN BY	CHECKED BY	SHEET
CME	DEC	CME	1
JOB NO.	DATE		OF
4550	2-97		1

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

Rec. 23 DATE 3-13-02 OPER. EP

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the **Public Works Department** and was created in the normal course of business.

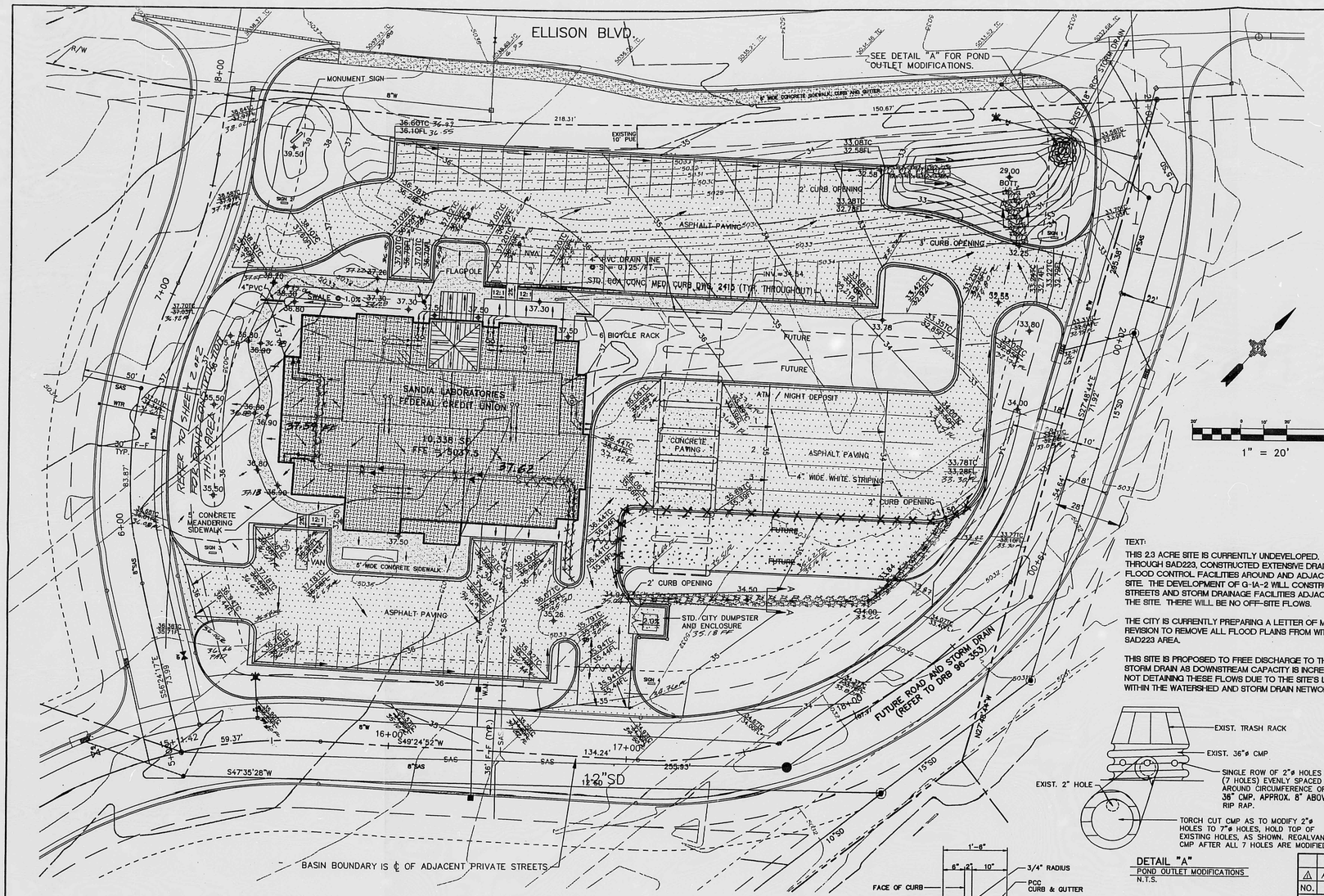
The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS115-1977)

DIRECTOR

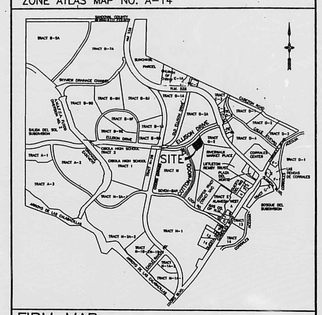
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
01/02/04

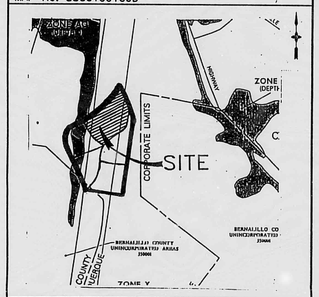
D24 C20 B16 A12 | CITY OF ALBUQUERQUE C D



VICINITY MAP
ZONE ATLAS MAP NO. A-14



FIRM MAP
MAP No. 35001C0109D



1" = 20'

TEXT:

THIS 2.3 ACRE SITE IS CURRENTLY UNDEVELOPED. THE CITY, THROUGH SAD223, CONSTRUCTED EXTENSIVE DRAINAGE AND FLOOD CONTROL FACILITIES AROUND AND ADJACENT TO THE SITE. THE DEVELOPMENT OF G-1A-2 WILL CONSTRUCT STREETS AND STORM DRAINAGE FACILITIES ADJACENT TO THE SITE. THERE WILL BE NO OFF-SITE FLOWS.

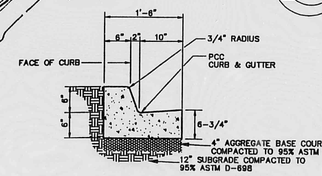
THE CITY IS CURRENTLY PREPARING A LETTER OF MAP REVISION TO REMOVE ALL FLOOD PLAINS FROM WITHIN THE SAD223 AREA.

THIS SITE IS PROPOSED TO FREE DISCHARGE TO THE ELLISON STORM DRAIN AS DOWNSTREAM CAPACITY IS INCREASED BY NOT DETAINING THESE FLOWS DUE TO THE SITE'S LOCATION WITHIN THE WATERSHED AND STORM DRAIN NETWORK.

LEGEND

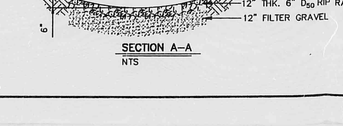
DESCRIPTION	NEW	EXISTING
CONTOURS	5084	5084
SPOT ELEVATIONS	⊕ 5088	⊕ 3987
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN		
STORM DRAIN M.H. & LINE	36"SD	36"SD
SANITARY SEWER M.H. & LINE	8"SAS	8"SAS
FIRE HYDRANT & WATER LINE	6"W	FH
REDUCERS		
WATER VALVES		
WATER CONNECTIONS		
WATER JOINTS		
CONCRETE		
GAS LINE		
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	CTV	CTV
POWER/TELEPHONE POLE	OPP	OPP
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION		
HYDROLOGICAL ANALYSIS PT.		

DETAIL "A"
POND OUTLET MODIFICATIONS
N.T.S.



TYPICAL SECTION
MEDIAN CURB AND GUTTER
C.O.A. STD. DWG. NO. 2415
N.T.S.

NOTES:
1. PROVIDE CONTRACTION JOINTS AT 6' O.C. MAX.
2. PROVIDE EXPANSION JOINTS AT 48' O.C. MAX.



SECTION A-A
NTS

RECEIVED
FEB 18 1998
HYDROLOGY SECTION

LEGAL DISCRIPTION

TRACT G-1A-2E
SEVEN - BAR RANCH
(BEING A REPLAT OF TRACT G-1A SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
NOVEMBER, 1996
2.3141 AC.

BENCHMARK

NMSHC MONUMENT "NM-448-N12"
ELEV. = 5033.41'
LOCATED 60' WEST OF COORS RD. CENTERLINE AND 580' SOUTH OF ALAMEDA BLVD. (NMSR 528) CENTERLINE.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER M. LINE NEW MEXICO 6411 REGISTERED PROFESSIONAL ENGINEER

NO.	REVISIONS	BY	DATE
1	ADDED SHEET 2 - AS BUILTS PAVD - CERTIFICATION	RPB	2-16-98

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY	DRAWN BY:	CHECKED BY	SHEET 1
CME	DEC	CME	OF 2
JOB NO. 4550	DATE: 2-97		

HYDROLOGY SUMMARY
PROJECT NAME: SANDIA LABS FEDERAL CREDIT UNION
JOB NUMBER: 4550

INPUT DATA:

PRECIP.	RAINFALL DEPTHS (INCHES) AT 100-YEAR STORM				
ZONE	1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY
1	1.87	2.20	2.66	3.12	3.67

BASIN	COND.	DESCRIPTION	AREA (acres)	LAND TREATMENTS				2 YEAR			10 YEAR			100 YEAR		
				A	B	C	D	Q (cfs)	VOLUME (ac.ft.) 6 HR	VOLUME (ac.ft.) 24 HR	Q (cfs)	VOLUME (ac.ft.) 6 HR	VOLUME (ac.ft.) 24 HR	Q (cfs)	VOLUME (ac.ft.) 6 HR	VOLUME (ac.ft.) 24 HR
1	UNDEV	TRACT G-1A-2E	2.31	100.0%	0.0%	0.0%	0.0%	0.0	0.0000	0.0000	0.6	0.0154	0.0154	3.0	0.0849	0.0849
1	DEV	TRACT G-1A-2E	2.31	0.0%	32.5%	0.0%	67.5%	2.7	0.0943	0.1203	5.1	0.1752	0.2151	8.4	0.2984	0.3583

NOTE: AHYMO94 MODELING INDICATES A PEAK Q_{100}=12.2CFS WHICH WAS USED FOR HYDRAULIC DESIGN OF OUTLET.

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

R# 23 DATE 3-13-02 OP

CITY OF ALBUQUERQUE

This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the **Public Works Department** and was created in the normal course of business.

The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS)AIIM-1977)

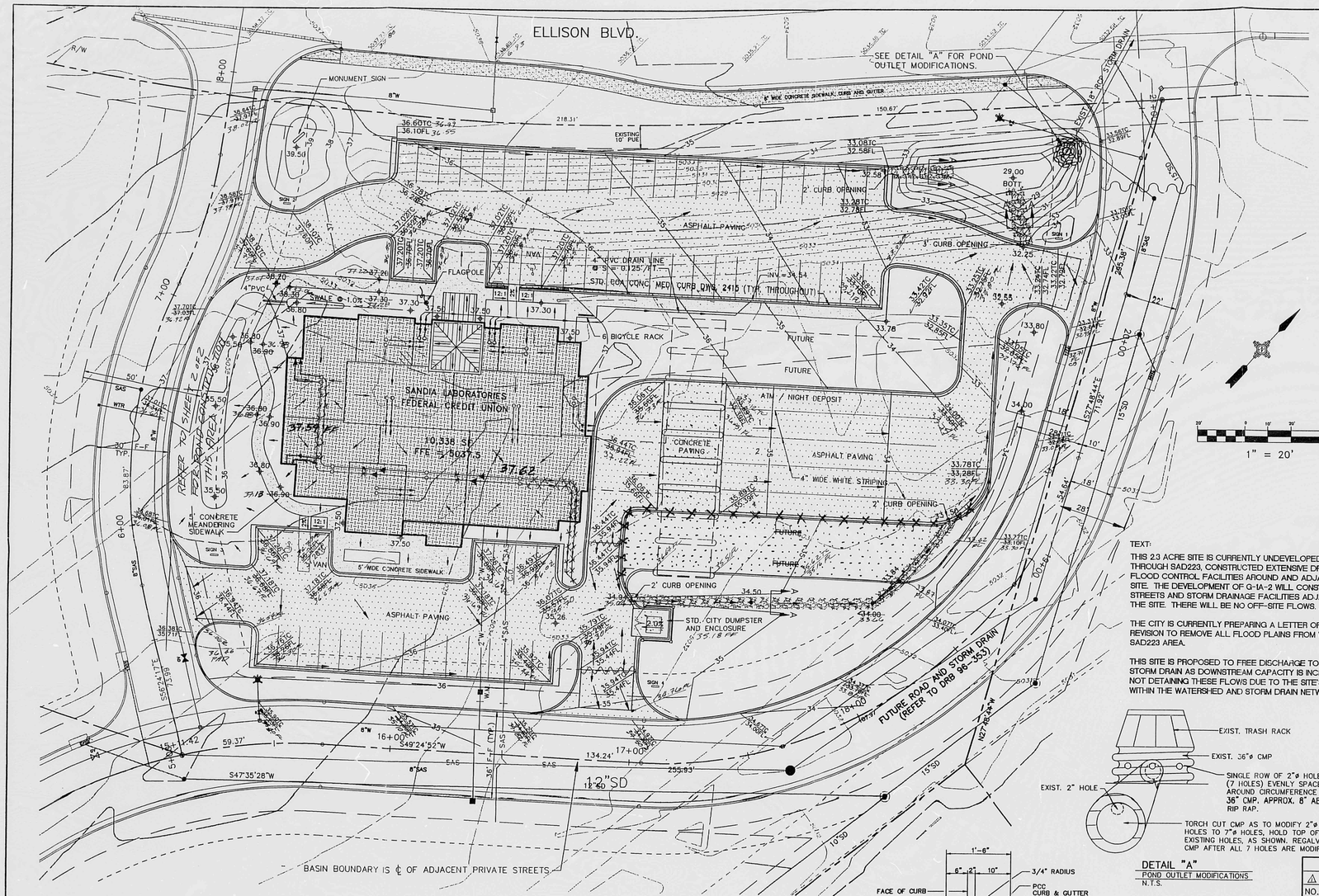
DIRECTOR

NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 07/07/02

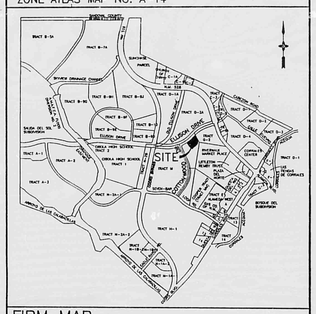
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TIME: 02-18-97 10:05:44

D 24 C 20 B 16 A 12 | CITY OF ALBUQUERQUE C D

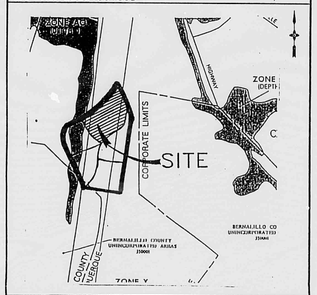


1" = 20'

VICINITY MAP
ZONE ATLAS MAP NO. A-14



FIRM MAP
MAP No. 35001C0109D



TEXT:

THIS 23 ACRE SITE IS CURRENTLY UNDEVELOPED. THE CITY, THROUGH SAD223, CONSTRUCTED EXTENSIVE DRAINAGE AND FLOOD CONTROL FACILITIES AROUND AND ADJACENT TO THE SITE. THE DEVELOPMENT OF G-1A-2 WILL CONSTRUCT STREETS AND STORM DRAINAGE FACILITIES ADJACENT TO THE SITE. THERE WILL BE NO OFF-SITE FLOWS.

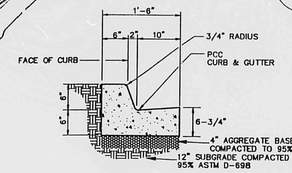
THE CITY IS CURRENTLY PREPARING A LETTER OF MAP REVISION TO REMOVE ALL FLOOD PLAINS FROM WITHIN THE SAD223 AREA.

THIS SITE IS PROPOSED TO FREE DISCHARGE TO THE ELLISON STORM DRAIN AS DOWNSTREAM CAPACITY IS INCREASED BY NOT DETAINING THESE FLOWS DUE TO THE SITE'S LOCATION WITHIN THE WATERSHED AND STORM DRAIN NETWORK.

LEGEND

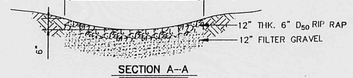
DESCRIPTION	NEW	EXISTING
CONTOURS	5094	5094
SPOT ELEVATIONS	@ 5088	@ 5088
DRAINAGE AREA BOUNDARY		
DRAINAGE DIVIDE		
WATER BLOCK		
DIRECTION OF FLOW		
ASPHALT PAVING	ASPHALT	ASPHALT
LANDSCAPING	L.S.	L.S.
RETAINING WALL		
GARDEN WALL		
SWALE		
PROPERTY LINE		
FENCE		
CATCH BASIN		
STORM DRAIN M.H. & LINE	36"SD	36"SD
SANITARY SEWER M.H. & LINE	8"SAS	8"SAS
FIRE HYDRANT & WATER LINE	6"W	6"W
REDUCERS		
WATER VALVES		
WATER CONNECTIONS		
WATER JOINTS	CONCENTRIC	ECCENTRIC
CONCRETE		
GAS LINE	G	G
UNDERGROUND TELEPHONE	UT	UT
CABLE TELEVISION	UT	UT
POWER/TELEPHONE POLE	OPP.	OPP.
UNDERGROUND ELECTRICAL	UE	UE
CURB ELEVATION	TC 5089.98 FC 5089.48	TC 5089.98 FC 5089.48
HYDROLOGICAL ANALYSIS PT.		

DETAIL "A"
POND OUTLET MODIFICATIONS
N.T.S.



TYPICAL SECTION
MEDIAN CURB AND GUTTER
C.O.A. STD. DWG. NO. 2415
N.T.S.

NOTES:
1. PROVIDE CONTRACTION JOINTS AT 6' O.C. MAX.
2. PROVIDE EXPANSION JOINTS AT 48' O.C. MAX.



SECTION A-A
NTS

LEGAL DISCRIPTION
TRACT G-1A-2E
SEVEN - BAR RANCH
(BEING A REPLAT OF TRACT G-1A-1, SEVEN-BAR RANCH)
CITY OF ALBUQUERQUE
BERNALILLO COUNTY,
NEW MEXICO
NOVEMBER, 1996
2.3141 AC.

BENCHMARK
NMSHC MONUMENT "NM-448-N12"
ELEV. = 5023.41
LOCATED 60' WEST OF COORS RD. CENTERLINE AND 550' SOUTH OF ALAMEDA BLVD. (NMSH 528) CENTERLINE.

HYDROLOGY SUMMARY
PROJECT NAME: SANDIA LABS FEDERAL CREDIT UNION
JOB NUMBER: 4550

INPUT DATA:

PRECIP. ZONE	RAINFALL DEPTHS (INCHES) AT 100-YEAR STORM 1 HOUR	6 HOUR	24 HOUR	4 DAY	10 DAY
1	1.87	2.20	2.66	3.12	3.67

BASIN	COND.	DESCRIPTION	AREA (acres)	LAND TREATMENTS A	B	C	D	2 YEAR Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR	10 YEAR Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR	100 YEAR Q (cfs)	VOLUME (ac.ft.) 6 HR	24 HR
1	UNDEV	TRACT G-1A-2E	2.31	100.0%	0.0%	0.0%	0.0%	0.0	0.0000	0.0000	0.6	0.0154	0.0154	3.0	0.0849	0.0849
1	DEV	TRACT G-1A-2E	2.31	0.0%	32.5%	0.0%	67.5%	2.7	0.0943	0.1203	5.1	0.1752	0.2151	8.4	0.2984	0.3583

NOTE: AHYMO94 MODELING INDICATES A PEAK Q_{100}=12.2CFS WHICH WAS USED FOR HYDRAULIC DESIGN OF OUTLET.

FEB 19 1999
HYDROLOGY SECTION

NO.	REVISIONS	BY	DATE
⚠	ADDED SHEET 2 - AS BUILTS & PAVING - CERTIFICATION	RPB	2-16-98

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

R. P. MADHANNAH NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

KELLY A. CORTINAS NEW MEXICO 6411 REGISTERED PROFESSIONAL SURVEYOR

Easterling & Associates, Inc.
CONSULTING ENGINEERS
10131 Coors Rd., NW, Suite H-7
Albuquerque, New Mexico 87114
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY	DRAWN BY:	CHECKED BY:	SHEET 1
CME	DEC	CME	OF 2
JOB NO: 4550	DATE: 2-97		

PLAT SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

R# 23 DATE 3-13-02 OP Ext.

CITY OF ALBUQUERQUE
This microimage is certified to be a complete and accurate copy of the original as it appears in the files of the Public Works Department and was created in the normal course of business.
The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS118-1977)

DIRECTOR

NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 07/02/02

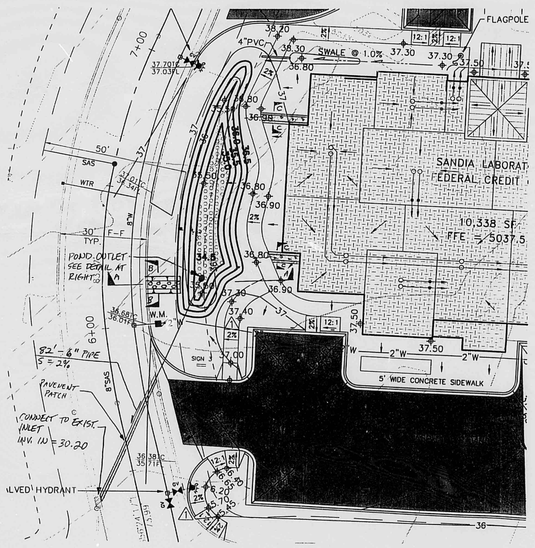
D24 C20 B16 A12 | CITY OF ALBUQUERQUE C D

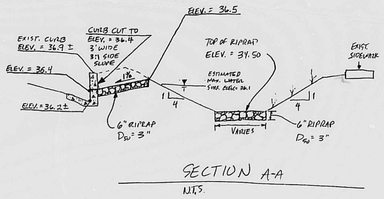
SANDIA LAB FEDERAL CREDIT UNION

EASTERLING & ASSOC., INC. 2-16-98 (GN)

PLAN

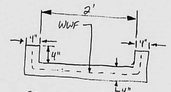
1" = 20'





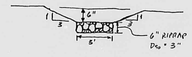
SECTION A-A

N.T.S.



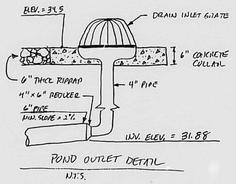
SECTION C

N.T.S.



SECTION B-B

N.T.S.



POND OUTLET DETAIL

N.T.S.

ENGINEER'S CERTIFICATION FOR TEMPORARY CERTIFICATE OF OCCUPANCY

I hereby certify that I have inspected the site grading and drainage improvements and that they have been constructed and are expected to function in accordance with the intent of the approved Grading and Drainage as amended with this certification.

The as-constructed information shown on this plan was provided by Hall Engineering, Inc. Proposed contours have not been revised to reflect the as-constructed elevations and should be considered approximate.

The following items remain to be completed before a permanent Certificate of Occupancy can be approved:

1. Complete detention pond improvements, inlet, drain line, curb cut, rip rap pond bottom and swale, and concrete swales for roof drains on southwest end of building per revisions shown on this plan.

2. At the detention pond at the northwest corner of the site, remove the trash rack from the outlet riser, cut the riser off 6" above the pond bottom and reinstall the trash rack.

3. Assure that the swale along the dumpster area drains as indicated on the plan. Rip rap appears high and may block flow in the swale.

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R P Bohannan Date 2/17/98

R. P Bohannan, P.E.
N.M.P.E. No. 9814

RECEIVED
FEB 18 1998
HYDROLOGY SECTION

NO.	REVISIONS	BY	DATE
1	Added Sheet 2 of 2	RPB	2/17/98

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL GRADING & DRAINAGE PLAN

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER 2/17/98

Easterling & Associates, Inc.
CONSULTING ENGINEERS
2600 The American Rd., SE, Suite 100
Rio Rancho, New Mexico 87124
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY	DRAWN BY:	CHECKED BY:	SHEET 2
GN	DEC	RPB	OF 2

JOB NO: 4550 DATE: 2-98

DWG. T:\PROJECTS\4550\DWG\SLG04
TIME 04-28-97 08:22:02

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
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R# 23 DATE 3-13-02 OP E.S.P.

CITY OF ALBUQUERQUE

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The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS14S-1977)

Thomas J. Hall 3/13/02
DIRECTOR

Roberta Duran
NOTARY PUBLIC

OFFICIAL SEAL
Roberta Duran
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 07/07/02

D 24 C 20 B 16 A 12 CITY OF ALBUQUERQUE C D

PUBLIC WORKS/HYDROLOGY

6 OF 6

A14/D10A

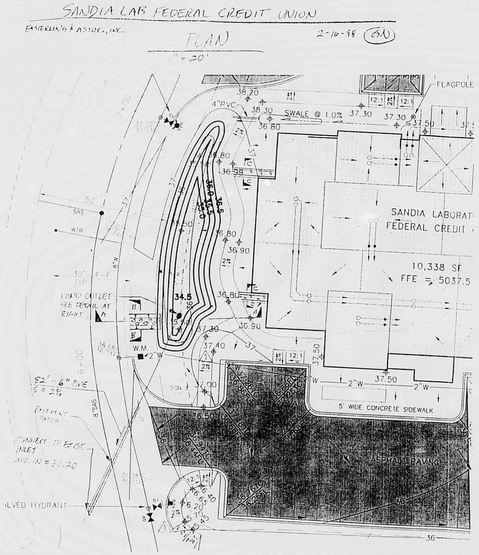
SANDIA LAB FEDERAL CREDIT UNION

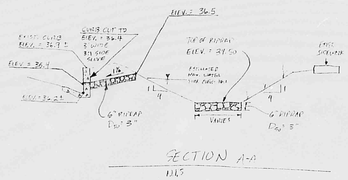
EASTERLING & ASSOC., INC.

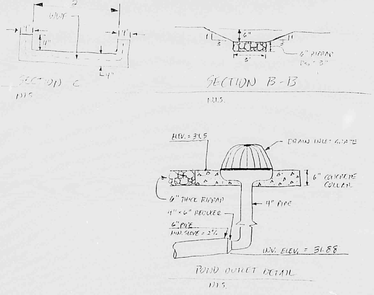
PLAN

1" = 20'

2-16-98 (3U)







ENGINEER'S CERTIFICATION FOR TEMPORARY CERTIFICATE OF OCCUPANCY

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R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER

R. P Bohannan Date 2/17/98

R. P Bohannan, P.E.
N.M.P.E. No. 9814

NO.	REVISIONS	BY	DATE
1	Added Sheet 2 of 2.	RPB	2/17/98

TRACT G-1A-2E
SEVEN BAR RANCH
CONCEPTUAL
GRADING & DRAINAGE PLAN

R. P. BOHANNAN NEW MEXICO 9814 REGISTERED PROFESSIONAL ENGINEER
2/17/98

Easterling & Associates, Inc.
CONSULTING ENGINEERS
2600 The American Rd., SE, Suite 100
Rio Rancho, New Mexico 87124
(505) 898-8021 FAX (505) 898-8501

DESIGNED BY	DRAWN BY	CHECKED BY	SHEET
GN	DEC	RPB	2
JOB NO.	DATE		OF
4550	2-98		2

PLAN SHOT TWICE
ONCE ON LIGHT
ONCE ON DARK

CITY OF ALBUQUERQUE
THIS MICROIMAGE IS THE BEST POSSIBLE REPRODUCTION DUE TO THE POOR QUALITY OF THE ORIGINAL DOCUMENT.

R# 32 DATE 3/13/02 OP

CITY OF ALBUQUERQUE

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The photographic process used meets the Basic Microfilm Standards of the National Micrographics Association (MS118-1977).

DIRECTOR

NOTARY PUBLIC

07/02/02

D 24 C 20 B 16 A 12

CITY OF ALBUQERQUE C D