VOLCANO BUSINESS PARK

PHASE I

HYDRAULIC GRADELINE COMPUTATIONS

Prepared For

WESTLAND DEVELOPMENT COMPANY, INC.
401 COORS BOULEVARD, NW
ALBUQUERQUE, NEW MEXICO 87105

Prepared By

EASTERLING & ASSOCIATES, INC.
5643 PARADISE BOULEVARD, NW
ALBUQUERQUE, NEW MEXICO 87114

RECEIVED
FEB 13 1985
HYDROLOGY SECTION

JCA
2-1-85

VOLCANO BUSINESS PARK

HYDRAULIC GRADELINE COMPUTATIONS

The existing concrete drop-structures in the outfall channel are constructed with a slotted crest such that a pool of water at least 1½ ft. deep forms between the structures when water flows in the channel. This pool also will make a good stilling basin for the storm-drain outlet. All that should be necessary for this project is to provide a rip-rap blanket immediately in front of the outlet to avoid creating a scour hole.

($n = 0.013$ throughout)

BEGIN @ OUTLET, STA. 0+74 - 42" RCP END SECTION

Inv. = 15.50 , $D = 3.50'$, $S_o = 0.240$, $L = 177'$

$Q = 130$ cfs , $K = 1006$, $V_{full} = 13.51$ fps ; $h_v = 2.84$

Check for critical depth:

Normal flow $Q_n/Q_o = 130/155 = 0.84$ $d_n = 0.78 \times 3.5 = \underline{2.73'}$

$y_c = 0.325(130/3.5)^{2/3} + 0.083 \times 3.5 = \underline{3.91'}$

$d_n < y_c$ and pipeflow is super critical, i.e. hydraulic jump will form out in the pool. There is no backwater effect in the pipe, since the channel water surface can not rise so high as to submerge the pipe outlet.

($V_n = 13.51 \times 1.22 = 16.48$ fps
$h_v = 4.22$)

STA. 2+51 - 42"X18" WYE - CONTROL

INV. = 19.74 , $D = 3.50'$, $S_o = 0.0240$, $L = 34'$
$Q = 130/120$ cfs $K = 1006$, $V = 13.51/12.47$ fps , $h_v = 2.84/2.42$

Assume 10 cfs contribution from Type D catch basin @ Ouray Rd.

Junction loss:

$Q_1 = 120$ cfs	$Q_2 = 130$ cfs	$Q_3 = 10$ cfs
$D_1 = 3.50'$	$D_2 = 3.50'$	$D_3 = 1.50'$
$A_1 = 9.621\ ft^2$	$A_2 = 9.621\ ft^2$	$A_3 = 1.767\ ft^2$
$V_1 = 12.47$ fps	$V_2 = 13.51$ fps	$V_3 = 5.66$ fps
$S_{f_1} = 0.0142$	$S_{f_2} = 0.0167$	$\theta = 45°$
$h_{v_1} = 2.42'$	$h_{v_2} = 2.84$	

$$\Delta y = \frac{130 \times 13.51 - 120 \times 12.47 - 10 \times 5.66 \cos 45°}{1/2(9.621 + 9.621)32.2} = 0.71'$$

$$h_j = 0.71 + 2.42 - 2.84 = \underline{\underline{0.28'}}$$

STA. 2+85 - VPI

INV. = 20.56 $D = 3.50$, $S_o = 0.0240/0.0140$, $L = 230$
$Q = 120$ cfs $k = 1006$, $v = 12.47$ fps , $h_v = 2.42'$

STA. 5+15 - VPI & 48"x42" REDUCER

INV. = 23.78 $D = 3.50/4.00'$, $S_o = 0.0140/0.0120$, $L = 5'$
$Q = 120$ cfs $k = 1006/1436$, $V = 12.47/9.55$, $h_v = 2.42/1.42$

$$h_t = 0.07 \times 2.42 = \underline{\underline{0.17}}'$$

STA. 5+20.06 - 48" RCP BEND, 34°

Inv = 23.84 $D = 4.00'$, $S_o = 0.0120$, $L = 175'$
$Q = 120$ cfs $K = 1436$, $V = 9.55$ fps , $h_v = 1.42'$

$$h_b = 0.20\sqrt{34/90} \times 1.42 = \underline{\underline{0.17}}'$$

STA. 6+94.72 – CATCH BASIN, TYPE DBL "D"

Inv = $^{25.94}/_{26.44}$, D = $^{4.00}/_{3.50'}$, So = $^{0.0120}/_{0.010}$, L = 10'
Q = $^{120}/_{85}$ cfs , K = $^{1436}/_{1006}$, V = $^{9.55}/_{8.83}$, h_v = $^{1.42}/_{1.21}$

Consider as a junction manhole; Assume inlet distribution of 20 cfs in each upstream inlet, 15 cfs in each downstream inlet (= 70 cfs streetflow in Piedra Lumbre per Drainage Plan)

Q_1 = 85 cfs	Q_2 = 120 cfs	Q_3 = 20 cfs	Q_4 = 15 cfs
D_1 = 3.50'	D_2 = 4.00'	D_3 = 2.0'	D_4 = 2.13 x 2.95
A_1 = 9.621 ft²	A_2 = 12.566 ft²	A_3 = 3.142 ft²	A_4 = 6.26 ft²
V_1 = 8.83 fps	V_2 = 9.55 fps	V_3 = 6.37 fps	V_4 = 2.40 fps
S_{f_1} = 0.0071	S_{f_2} = 0.0070	Θ = 70°	Θ = 90°
h_{v_1} = 1.21'	h_{v_2} = 1.42		
	Θ = 23°		

$$\Delta y = \frac{120 \times 9.55 - 85 \times 8.83 \cos 23° - 20 \times 6.37 \cos 70° - 15 \times 2.40 \cos 90°}{\frac{1}{2}(9.621 + 12.566)\, 32.2}$$

Δy = 1.15'

h_j = 1.15 + 1.21 − 1.42 = $\underline{\underline{0.94'}}$

$h_{m.h.}$ = 0.05 x 1.42 = $\underline{\underline{0.07'}}$

STA. 7+05 – 42" x 24" WYE, 45°

Inv = 26.54 , D = 3.50' , So = 0.010 , L = 45'
Q = $^{85}/_{70}$ cfs, K = 1006 , V = $^{8.83}/_{7.28}$ fps, h_v = $^{1.21}/_{0.82}$

Junction Loss

Q_1 = 70 cfs	Q_2 = 85 cfs	Q_3 = 15 cfs
D_1 = 3.50'	D_2 = 3.50'	D_3 = 3.50'
A_1 = 9.621 ft²	A_2 = 9.621 ft²	A_3 = 9.621 ft²
V_1 = 7.28 fps	V_2 = 8.83 fps	V_3 = 4.77 fps
S_{f_1} = 0.0048	S_{f_2} = 0.0071	Θ = 45°
h_{v_1} = 0.82'	h_{v_2} = 1.21'	

$$\Delta y = \frac{85 \times 8.83 - 70 \times 7.28 - 15 \times 4.77 \cos 45°}{\frac{1}{2}(9.621 + 9.621)\, 32.2} = 0.61'$$

h_j = 0.61 + 0.82 − 1.21 = $\underline{\underline{0.22'}}$

STA. 7+49.41 - SPCL. CATCH BASIN, TYPE "A" W/DBL. GRATE

Inv. = 26.99/31.85 , Q = 70/50 cfs. , n = 0.013

At the peak of a 100-yr storm, with 50 cfs in the channel behind the inlet and 70 cfs in Piedra Lumbre Street, the hydraulic gradeline at the inlet is theoretically at the top of the bars in the grate if the amount of water taken by each inlet is as assumed, and 20 cfs would not make it into this inlet without exceeding the allowable 0.2' above top of curb.

Actually the entire low point intersection will be under water and the flows will adjust between all four inlet structures and get out somehow. The combined intake capacity of the 4 inlets in sump condition is ample for 70 cfs, and in any case the water will escape out to Ouray Rd. if the inlets clog such as to cause the water level to rise above 0.2' over the top of curb.

Furthermore, in the channel above:

$$\boxed{Q = (0.30 \times 10 + \tfrac{1}{2} \times 10.0 \times 0.33)\left(\frac{1.486}{0.013}\right)\left(\frac{4.67}{10.6}\right)^{2/3}\sqrt{0.03} = 53.5 \text{ cfs}}$$

$$\boxed{\approx 50 \text{ cfs}}$$

$V_n = 11.45$ fps , $h_v = 2.04$

Thus with control @ the entrance to the structure:

$$
\begin{array}{ll}
HGL = 31.85 + 0.33 + 0.30 = & 32.48 \\
h_v & \underline{2.04} \\
EGL & = 34.52
\end{array}
$$

That is a fall in the EGL of 1.28' across the structure. Using the Thompson equation on the junction at the structure gives $h_j = 1.14'$. The truth is probably somewhere between these two numbers, which would indicate that the HGL shown is approximately correct and slightly conservative.

C. M. EASTERLING
& ASSOCIATES
ALBUQUERQUE, N.M.

SUMMARY OF HYDRAULIC CALCULATIONS

CLOSED CONDUIT

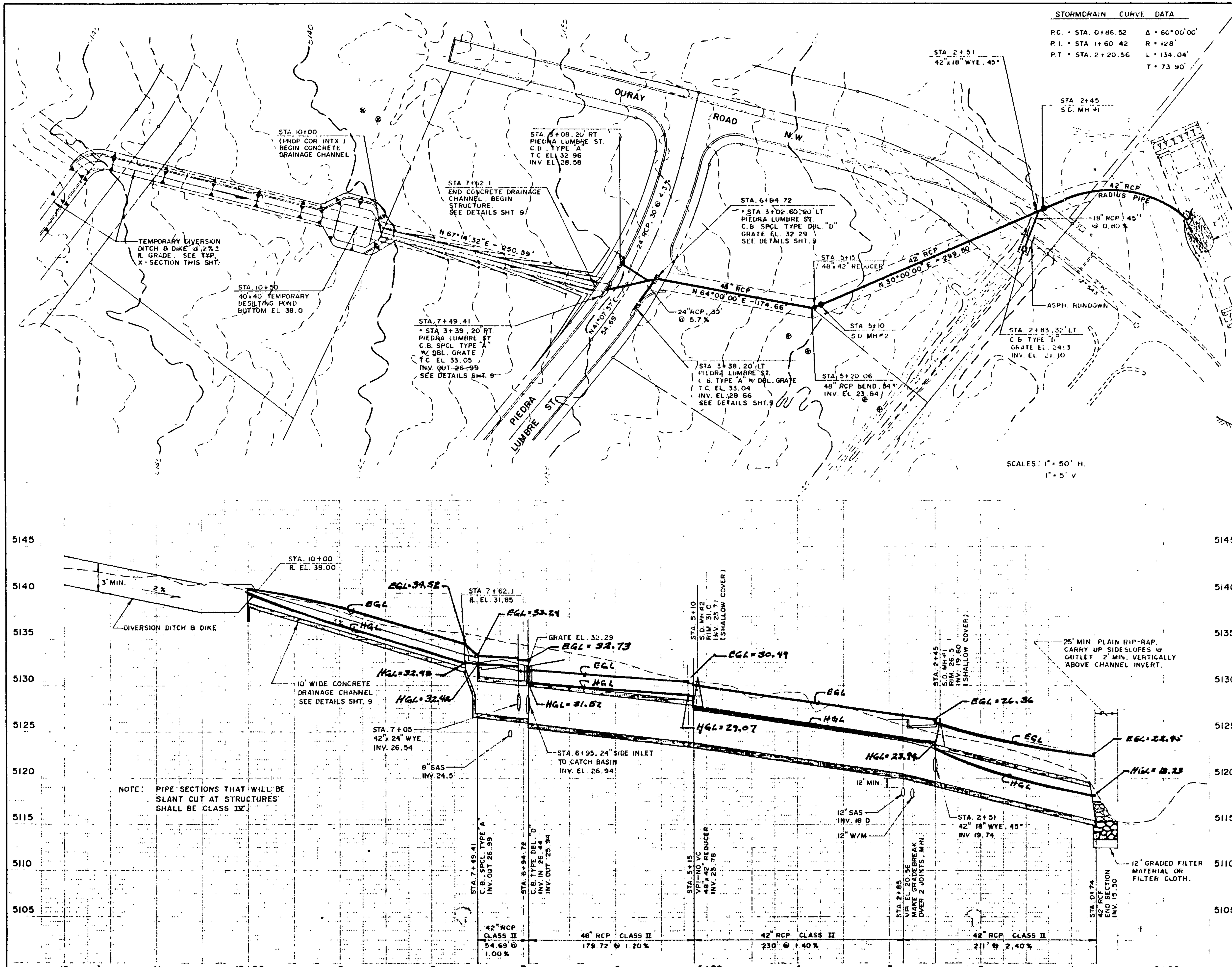
BY: JC-a

DATE: 2-1-85

PROJECT: VOLCANO BUSINESS PARK LINE: SHEET: 1 OF 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
											LOSSES									
STATION	STRUCT.	INV.	D	Q	A	V	K	S_F	L	Δ	H_F	H_B	H_J	H_{MH}	H_T	$H_{MISC.}$	ΣH_L	E.G.	h_v	H.G.
0+74	OUT-FALL	15.50																22.45		18.23
			42"	130	9.621	13.51	1006	0.0167	177'	60°00	- PART FULL PIPE -							26.08	2.84	23.24
2+51	42X18 WYE	19.74	- CONTROL -										0.28				0.28	26.36	2.42	23.94
			42"	120	9.621	12.47	1006	0.0142	34'	—	0.48						0.48	26.84	2.42	24.42
2+85	VPI	20.56															—	—	—	—
			42"	120	9.621	12.47	1006	0.0142	230'	—	3.27						3.27	30.11	2.42	27.69
5+15	VPI / RED.	23.78													0.17		0.17	30.28	1.42	28.86
			48"	120	12.566	9.55	1436	0.0070	5'		0.04						0.04	30.32	1.42	28.90
5+20.06	48" BEND 34°	23.84										0.17					0.17	30.49	1.42	29.07
			48"	120	12.566	9.55	1436	0.0070	175'		1.23						1.23	31.72	1.42	30.30
6+94.72	CATCH BASIN	25.94 / 26.44											0.94		0.07		1.01	32.73	1.21	31.52
			42"	85	9.621	8.83	1006	0.0071	10'		0.07						0.07	32.80	1.21	31.59
7+05	42X24 WYE	26.54											0.22				0.22	33.02	0.82	32.20
			42"	70	9.621	7.28	1006	0.0048	45		0.22						0.22	33.24	0.82	32.42
7+49.41	SPCL. C.B.	26.99																		
				50	VARY				12 ±											
7+62.1	CB INLET	31.85	- CONTROL - SUPERCRITICAL IN CHANNEL ABOVE															34.52	2.04	32.48
				50	4.66	11.45		0.030	237 ±											
10+00	BEGIN CHUTE	39.00																		

REMARKS:



AS BUILT INFORMATION	
CONTRACTOR	
WORK STARTED BY	DATE
INSPECTORS ACCEPTANCE BY	DATE
FIELD VERIFICATION BY	DATE
DRAWINGS CORRECTED BY	DATE
MICRO-FILM INFORMATION	
RECORDED BY	DATE
NO	

BENCH MARKS

SURVEY INFORMATION		
FIELD NOTES		
NO	BY	DATE

ENGINEER'S SEAL

REVISIONS			
NO.	DATE	REMARKS	BY

DESIGN
DESIGNED BY Y.E.O. DATE 2-85
DRAWN BY DATE
CHECKED BY O.E.O. DATE 4-85

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

TITLE: VOLCANO BUSINESS PARK - PHASE I
STORMDRAIN PLAN & PROFILE

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
City Engineer			Liquid Waste		
A C E - Design			Traffic		
A C E - Hydrology			Water		

DRAWING NO.	MAP NO. G-10	SHEET 8 OF 11

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 22, 1997

Dennis Lorenz, P.E.
Brasher & Lorenz, Inc.
2201 San Pedro NE
Building #1 - Suite 210
Albuquerque, NM 87110

RE: VOLCANO BUSINESS PARK (G10-D29). DRAINAGE REPORT FOR PRELIMINARY PLAT AND SITE DEVELOPMENT PLAN FOR SUBDIVISION APPROVAL. ENGINEER'S STAMP DATED 12-5-97.

Dear Mr. Lorenz:

Based on the information provided on your December 5, 1997 submittal, the above referenced project is approved for Preliminary Plat and Site Development.

Prior to Certificate of Occupancy approval, and Engineer's Certification will be required.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

Lisa Ann Manwill, P.E.
Hydrology

c: Andrew Garcia
File

DRAINAGE INFORMATION SHEET

G-10-D29

PROJECT TITLE: Volcano Business Park ZONE ATLAS/DRNG. FILE #: G-10

DRB #: 97-450 EPC #: ______ WORK ORDER #: ______

LEGAL DESCRIPTION: Volcano Business Park, Phase 1, Tract SA2-A1, Lots 1-6

CITY ADDRESS: Ouray Road NW

ENGINEERING FIRM: Brasher & Lorenz, Inc. CONTACT: Dennis A. Lorenz

ADDRESS: 2201 San Pedro NE Bldg.1 Suite 210 Albuquerque, New Mexico 87110 PHONE: 888-6088

OWNER: Westland Development Co. CONTACT: Fred Ambrogi

ADDRESS: 401 Coors Blvd NW PHONE: 831-9600

ARCHITECT: ______ CONTACT: ______

ADDRESS: ______ PHONE: ______

SURVEYOR: Precision Surveys CONTACT: Larry Medrano

ADDRESS: 2929 Coors Blvd NW PHONE: 839-0569

CONTRACTOR: ______ CONTACT: ______

ADDRESS: ______ PHONE: ______

TYPE OF SUBMITTAL:

- ✓ DRAINAGE REPORT
- ____ DRAINAGE PLAN
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION
- ____ OTHER ______

PRE-DESIGN MEETING:

- ____ YES
- ____ NO
- ____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SKETCH PLAT APPROVAL
- ✓ PRELIMINARY PLAT APPROVAL
- ✓ S. DEV. PLAN FOR SUB'D. APPROVAL
- ____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- ____ BUILDING PERMIT APPROVAL
- ____ CERTIFICATE OF OCCUPANCY APPROVAL
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ S.A.D. DRAINAGE REPORT
- ____ DRAINAGE REQUIREMENTS
- ____ OTHER ______ (SPECIFY)

RECEIVED DEC 05 1997 HYDROLOGY SECTION

DATE SUBMITTED: 12-5-97

BY: Dennis A. Lorenz

DRAINAGE MASTERPLAN

FOR

VOLCANO BUSINESS PARK, PHASE 1
TRACT 5A2-A1
LOTS 1-6

Albuquerque, New Mexico

Prepared by:

BRASHER & LORENZ, INC.
Consulting Engineers
2201 San Pedro NE, Building 1, Suite 210
Albuquerque, NM 87110

November 1997

RECEIVED
DEC 05 1997
HYDROLOGY SECTION

DENNIS A. LORENZ
NEW MEXICO
9047
REGISTERED PROFESSIONAL ENGINEER

12-5-97

TABLE OF CONTENTS

PURPOSE AND SCOPE

Pursuant to the established Drainage Ordinance for the City of Albuquerque and the Development Process, this Drainage Report outlines the drainage management criteria for controlling developed runoff from the subject site. The scope of this plan is to provide drainage criteria for the safe management of excess runoff and to identify required grading, paving and drainage improvements.

SITE DESCRIPTION

The subject site contains 11.34 acres. It is on the south side of Ouray Road NW about 0.2 miles east of Unser Boulevard NW near the intersection of Ouray and Todos Santos Street. Presently the site is undeveloped. The site is vegetated with native grasses and shrubs. Site terrain slopes gently downward from southwest to northeast at a slope of about one percent.

The subject site is described legally as Volcano Business Park Phase I, Tract 5A2-A, Lots 1 through 6. The site is bounded on the north by Ouray Road, on the east by a partially developed subdivision called Volcano Business Park Phase I, Lots 1 through 12-A, on the west by an undeveloped tract called Tract 5A1 Volcano Business Park and on the south by the PNM West Mesa Switching Station.

On-site soils fall into three categories: BCC (Bluepoint loamy fine sand), BKD (Bluepoint-Kokan association) and PAC (Pajarito loamy fine sand). These types of soils exhibit slower than normal runoff and a high danger of wind and water eroision.

As shown by the attached FIRM Panel, this site is not impacted by any designated flood hazard zone.

The property will be developed with uses allowed under the current zoning. The tract is zoned IP (Industrial Park) and C-1 (Neighborhood Commercial).

EXISTING DRAINAGE PLANS

This drainage master plan references the following drainage plans:

1. **Volcano Business Park** prepared by Easterling and Associates 4/18/85. The Easterling plan recommends maximum discharges for all the lots to be considered in this report. However the Easterling plan recommended zero discharge from many of the lots in Volcano Business Park. This report will revise the Easterling Report to allow discharge from all lots.

2. **Volcano Business Park Phase 1, Lot 2**
   (Filed at City PWD as Drainage Plan #G-10, 29E) Recommends a detention pond with a maximum discharge of 1.41 cfs
3. **Volcano Business Park Phase 1, Lot 7-A**
   (Filed at City PWD as Drainage Plan #G-10, 29-D) Recommends a detention pond with a maximum discharge of 5.7 cfs.
4. **Volcano Business Park Phase 1, Lot 11**
   (Filed at City PWD as Drainage Plan #G-10, 29-C) Recommends a detention pond with a maximum discharge of 2.48 cfs.
5. **Volcano Business Park Phase 1, Lot 12-A**
   (Filed at City PWD as Drainage Plan #G-10, 29-B) Recommends a detention pond with a maximum discharge of 4.9 cfs.

EXISTING DRAINAGE CONDITIONS

The site drains 40 acres of undeveloped land to the west, hereafter referred to as "offsite basins west of the site." Flows from these basins flow freely onto the subject site.

An existing earthen berm just west of the proposed Painted Rock Drive directs runoff into a crude earthen channel that drains eastward along the south boundary of lot 5A2-A1. The earthen channel becomes a 10 foot wide concrete channel at the east boundary of the site. That channel drains across the subdivision east of the site to drop inlets near the intersection of Ouray Road and Todos Santos Street.

The drop inlets drain to a 42" storm drain that outfalls to the Quick Water Channel on the north side of Ouray Road. Quick Water Channel drains to the Ladera Golf Course retention basin.

The 42" storm drain has a capacity of 120 cfs according to the 1985 Easterling Report. The storm drain drains the following basins:

Subject Site (11.34 acres, undeveloped)	17.6 cfs
Subdivision East of the Site	
undeveloped lots(6.2 acres)	9.6 cfs
streets	5.6 cfs
developed lots, flow based on existing drainage plans	14.5 cfs
Offsite Basins West of the Site (40 acres, undeveloped)	61.9 cfs
Total	109.2 cfs
Capacity of 42" storm drain	120.0 cfs

PROPOSED DRAINAGE CONDITIONS

1. Summary of Changes to 1985 Volcano Business Park Drainage Plan (prepared by Easterling and Associates)

This 1997 drainage plan is essentially an amended version of the 1985 Volcano Business Park Drainage Plan. The following is a summary of changes that the 1997 plan makes to the 1985 plans.

A. OFFSITE BASINS
All offsite basins west of the site will drain as stipulated in the 1985 plan. The only change to offsite basins is that the allowable runoff release rate from the northern portion (6.5 acres) of El Rancho Atrisco Phase II Tract B (at the southeast corner of Ouray and Unser) will be reduced from 3.36 cfs/acre to 2.0 cfs/acre. The client owns this tract and has agreed to the reduction. This reduction was made so onsite lots may drain to the 42" storm drain. (The 1985 plan provided for retention ponding on many of the onsite lots and lots in the subdivision to the east of the site, also developed by the client. Retention ponding is no longer permitted by the City.)

Existing flows calculated in the 1985 report were verfied using hydrology from the City DPM. The flow rates are essentially the same as predicted in the 1985 report. Developed flows did not change because they are based on fixed allowable runoff release rates. All offsite basins are restricted to discharges of 2 cfs/acre except for the northern 5.8 acres of Tract 5A1, Volcano Business Park (the tract that borders the subject site to the west). That tract is still allowed a discharge rate of 3.36 cfs/acre.

B. ONSITE BASINS
The 1985 plan requires retention ponding on most of the on-site lots and lots in the subdivision to the east of the site (also owned by the client.) Because the City no longer allows this practice, this report recommends that discharge limits for El Rancho Atrisco Phase II Tract B be reduced from 3.36 cfs per acre to 2 cfs per acre in order that the on-site lots and the remaining undeveloped parcels in the subdivision to the east may have allowable discharge rates of 0.43 cfs/acre.

2. Overall Summary Of Developed Flows
The subject site and offsite basins will continue to drain to the 42" storm drain at the corner of Ouray and Todos Santos Street. Developed runoff will be as follows:

SUBJECT SITE	
streets (1.2 acres)	4.8 cfs
lots (discharge rate = 0.43 cfs/acre)	4.3 cfs
SUBDIVISION TO THE EAST	
lots yet to be developed (discharge rate = 0.43 cfs/acre)	2.8 cfs
streets (1.4 acres)	5.6 cfs
developed lots (flow based on existing drainage plans)	14.5 cfs
OFFSITE BASINS TO THE WEST (40 acres, developed, with 2 cfs per acre discharge limits, except the north 5.8 acres of Tract 5A1 which has a 3.36 cfs/acre discharge limit)	87.8 cfs
TOTAL	119.8 cfs
Capacity of 42" storm drain	120.0 cfs

3. Drainage Facilities

A. NORTH CHANNEL

The existing 10-foot concrete channel that runs between Volcano Business Park Phase 1 Lots 11 and 12 will be extended and reconstructed as a 1.5 foot deep, ten foot wide channel per COA Standard Detail 2260 in order to carry a portion of offsite and onsite flows. The existing channel is only one-foot deep.

The channel will be extended to Painted Rock Drive as designed in the approved Construction Plans for Volcano Business Park Phase II-A (except it will be 1.5 feet deep instead of 1 foot deep). The design includes a 10-foot valley gutter to convey flows across Painted Rock Drive. The channel extension will continue to the west tract boundary as shown on the enclosed plan. Transpo

Flows draining to the north channel will be as follows:

offsite (tracts to west with discharge limits of 2 cfs per acre or 3.36 cfs per acre)	32.5 cfs
Painted Rock Drive (550 feet)	3.1 cfs
Lots 2-5 of and 4.5 acre portion of lot 1 of subject site (discharge limit of 0.43 cfs/acre)	3.1 cfs
total	**38.7 cfs**
capacity of existing channel with 0.5 feet added to walls (Reach 1)	94.3 cfs
capacity of channel extension to Painted Rock Drive (Reach 2)	72.4 cfs
capacity of channel from Painted Rock to west tract bdry (Reach 3)	81.3 cfs

2. SOUTH CHANNEL

A new 1.5 foot deep, 10 foot wide concrete-lined drainage channel (per COA standard detail 2260) will be built to convey offsite flows and some onsite flows to

Todos Santos Street. These flows will drain as proposed in the 1985 plan to the drop inlets near the intersection of Ouray and Todos Santos. The drop inlets drain to the 42" storm drain.

Flows draining to the south channel will be as follows:

offsite (tracts to west with discharge limits of 2 cfs/acre)	55.4 cfs
2.5 acre portion of lot 1 of subject site (disch. limit of 0.43 cfs/acre)	1.1 cfs
total	**56.5 cfs**
capacity of south channel	69.5 cfs

3. TODOS SANTOS STREET
Flows draining to Todos Santos Street are as follows:

South Channel	56.5 cfs
Lot 6 of subject site (disch. limit of 0.43 cfs/acre)	0.5 cfs
Lot 12-A of subdivision to east (per drainage plan #G-10, 29-B)	4.9 cfs
1050 feet of Todos Santos Street	5.8 cfs
total	**67.7 cfs**
capacity of Todos Santos Street	123.3 cfs

4. REAR LOT SWALE
A five foot wide asphalt swale will be constructed in the rear of lots 3, 4 and 5 of the subject site. The swale will convey runoff from those lots to the North Channel. Total 100 year flows in the swale will be 0.7 cfs. The capacity of the swale is 1.8 cfs.

TEMPORARY EROSION CONTROL PLAN

1. The intent of this temporary erosion control plan is to limit the discharge of sediment into the public street and/or storm drainage system and to protect adjacent properties from excess runoff during construction.

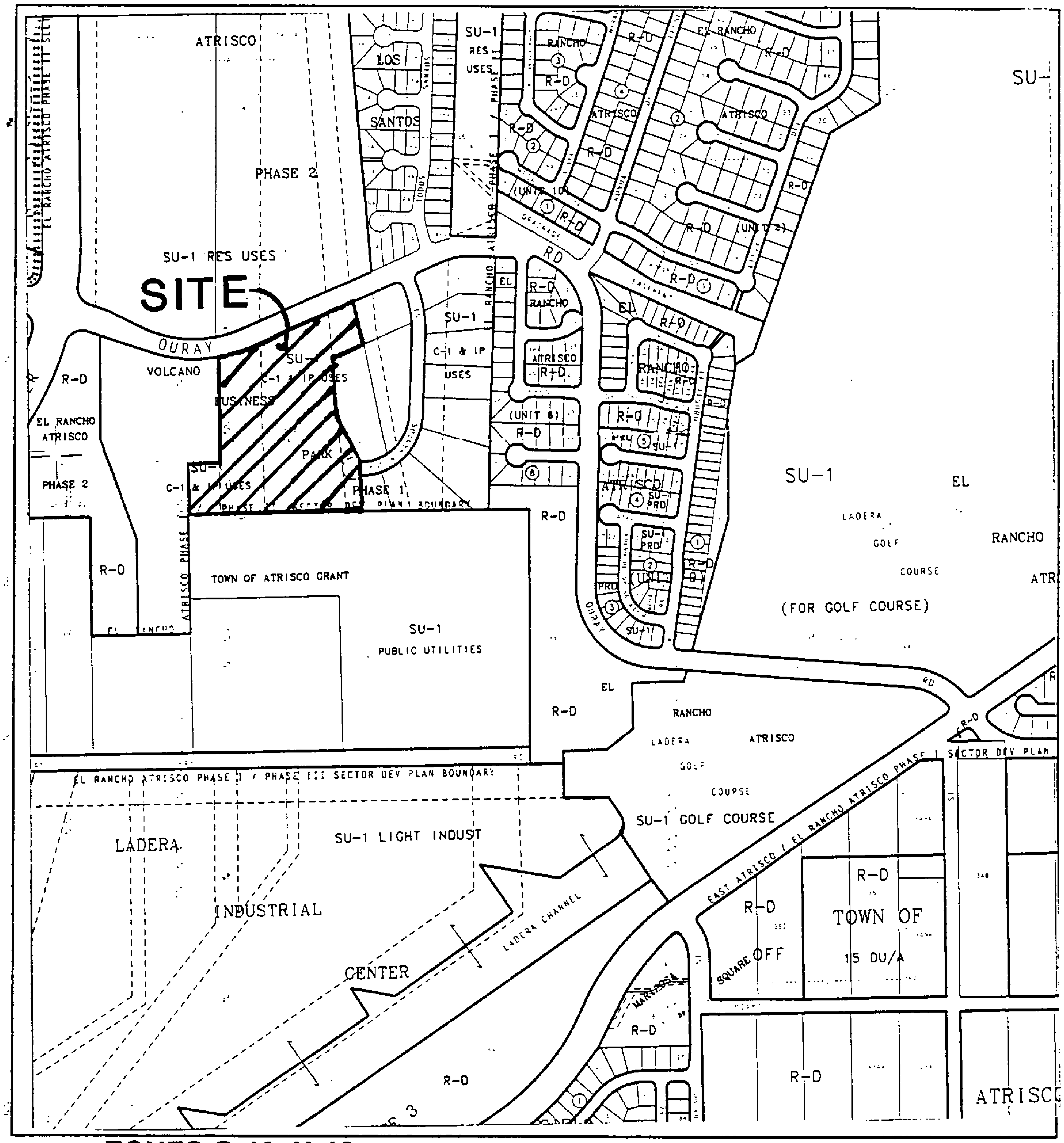
2. The Contractor shall obtain a Top Soil Disturbance Permit from Environmental Health prior to performing any earthwork related operations.

3. After the initial site clearing, temporary erosion control facilities should be constructed per details on the plan. Temporary erosion control will be required along the project boundaries during construction to prevent this discharge of sediment into the public street system and adjoining private property.

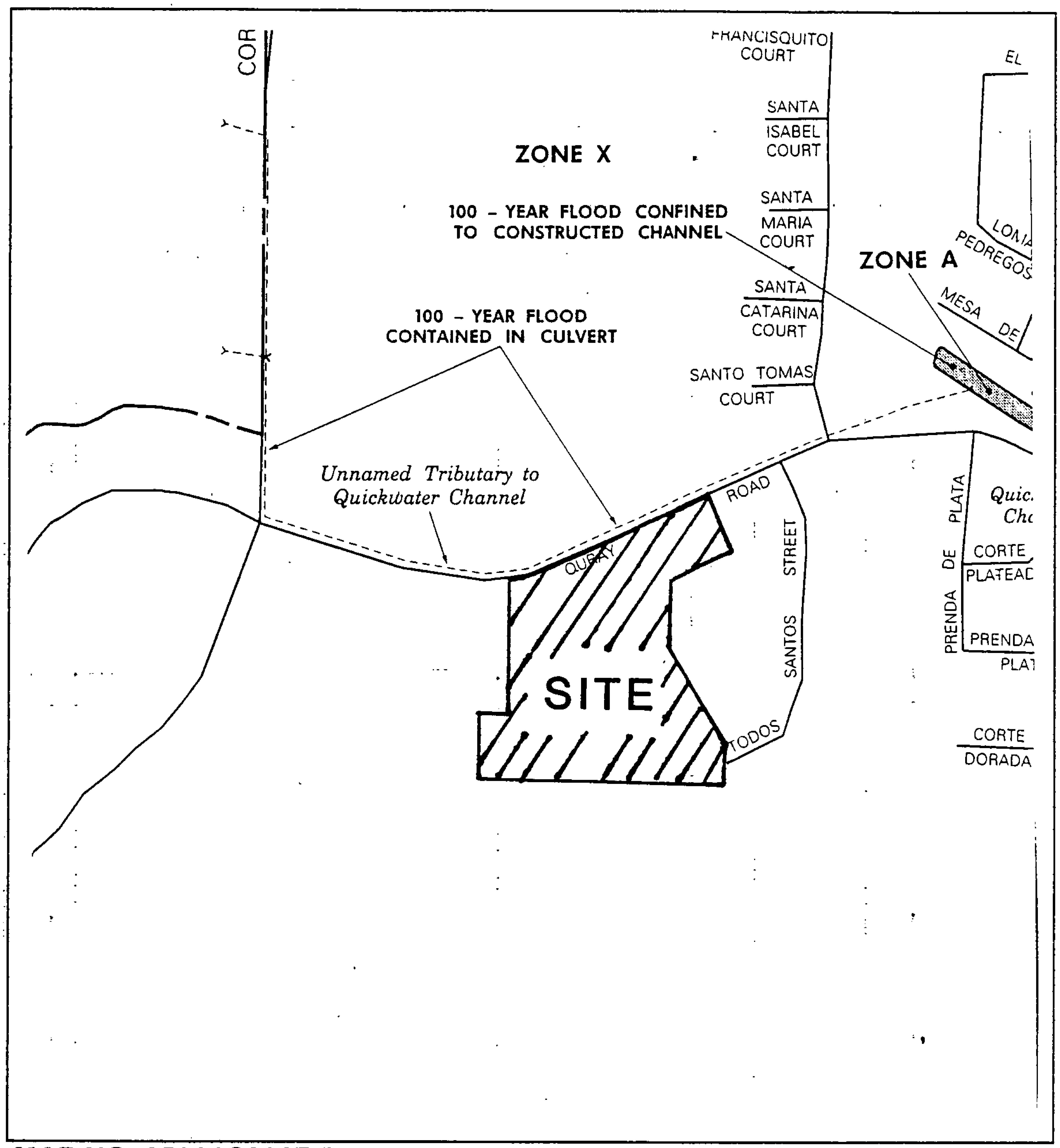
The contractor should construct a ditch dike system (See Detail D on Drainage Master Plan in pocket) or silt fencing (See Detail E and F on Drainage Master Plan in pocket) to effectively retain all runoff generated by the project. Care should be taken to provide ponding areas at the site perimeter. Silt fencing should be used to prevent discharge of sediment into the existing concrete channel that currently drains the site.

4. It is the Contractor's responsibility to properly maintain all temporary erosion control facilities during the construction phase of the project.

MAPS

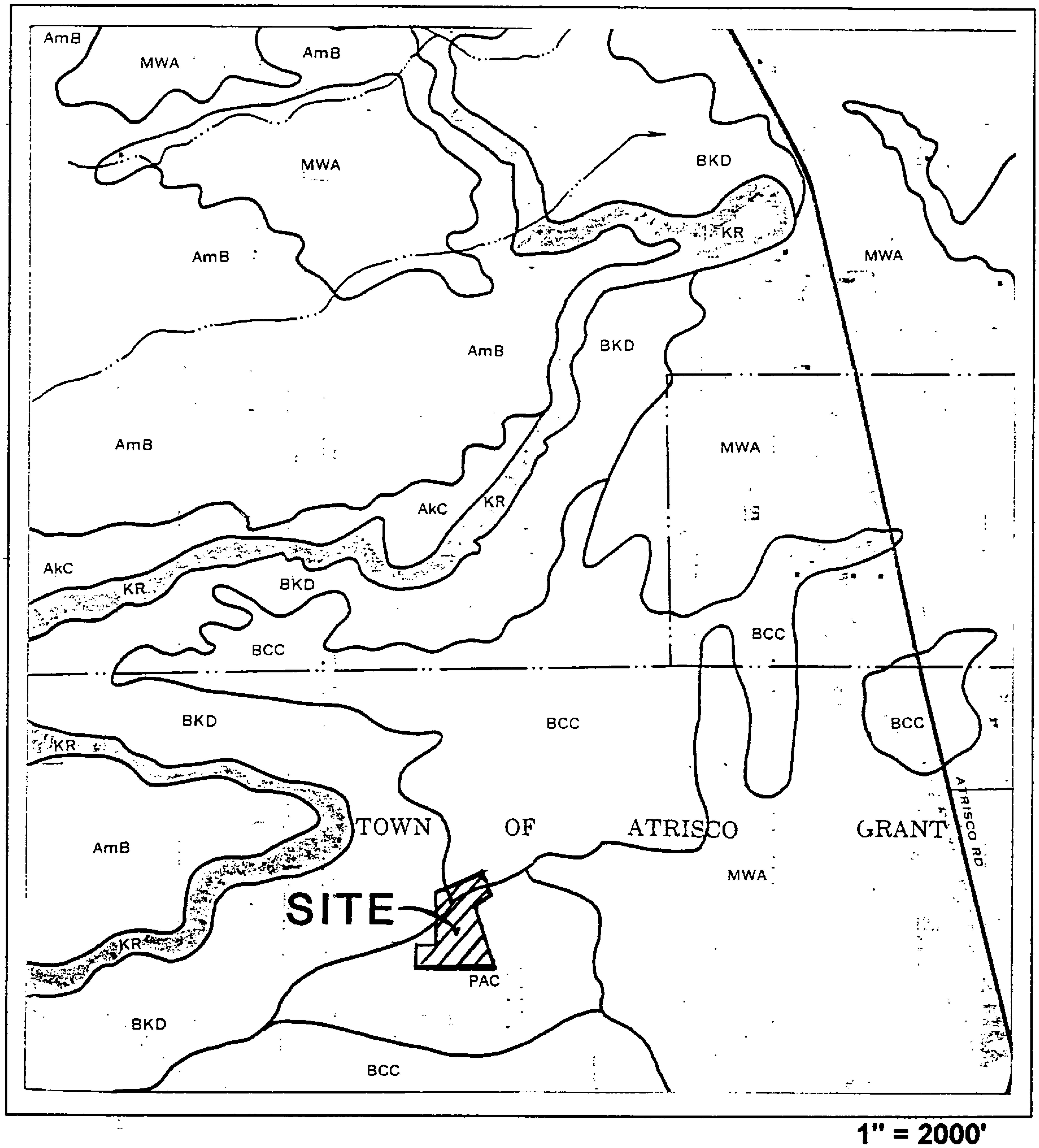


CITY ZONING MAP
Figure 1



MAP NO. 35001C0327 D 1" = 500'

FLOOD INSURANCE RATE MAP
Figure 2



SOILS MAP
(From Soil Survey, Bernalillo County, USDA, SCS)
Figure 3

CALCULATIONS

BASIN HYDROLOGY PER DPM

Precipitation Zone 1				P360 = 2.20 in					
Basin	Basin #acres	Land Treatment (acre) A	B	C	D	Ew (in)	V100 (af)	Q100 (cfs)	Qbulk (cfs)
EXISTING CONDITIONS									
Subject Site	11.34	11.34				0.44	0.42	14.63	17.55
Subdivision to East									
undeveloped lots	6.2	6.2				0.44	0.23	8.00	9.60
streets	1.4		0.21		1.19	1.78	0.21	5.63	5.63
developed lots (based on existing individual drainage plans)								14.50	14.50
Offsite Basins to West	40	40				0.44	1.47	51.60	61.92
total									109.20
DEVELOPED CONDITIONS									
Subject Site									
streets	1.2		0.18		1.02	1.78	0.18	4.82	
lots (10 acres at maximum discharge rate of 0.43 cfs/acre)								4.30	
Subdivision to East									
lots yet to be developed (6.4 acres at max. discharge rate of 0.43 cfs/acre)								2.75	
developed lots (flow based on existing individual drainage plans)								14.50	
streets	1.4		0.21		1.19	1.78	0.21	5.63	
Offsite Basins to West									
5.8 acres at max discharge rate of 3.36 cfs/acre								19.48	
34.2 acres at max discharge rate of 2.00 cfs/acre								68.40	
total								119.9	
North Channel									
550' Painted Rock Dr	0.76		0.11		0.65	1.78	0.11	3.06	
Lots 2-5 and 4.5 acres of lot 1 (7.1 ac. at max disch. rate of .43 cfs/acre)								3.05	
Offsite Basins to west (5.8 acres @ 3.36 cfs/acre; 6.5 acres @ 2 cfs/acre)								32.48	
total								38.59	
South Channel									
Offsite Basins to west (27.7 acres at max discharge rate of 2.0 cfs/acre)								55.4	
2.5 acre portion of lot 1 (2.5 acres at max discharge rate of 0.43 cfs/acre)								1.08	
total								56.5	
Todos Santos Street									
South Channel (see above)								56.5	
Lot 6 (1.1 acres at max. discharge limit of 0.43 cfs/acre)								0.5	
Lot 12-A of subdivision to east (per drainage plan #G-10, 29-B)								4.9	
1050' Todos Santos	1.44		0.21		1.22	1.77	0.21	5.76	
total								67.7	

CAPACITY OF TODOS SANTOS STREET

CALCULATE FLOW RATE FOR 40 FOOT STREET WITH STANDARD CURB

Channel Reach	S (ft/ft)	A	WP	R	Q	V
Todos Santos Street	0.016	18.8	41.34	0.455	123.2	6.56

CAPACITY OF REAR LOT SWALE

CALCULATE FLOW RATE IN "V" DITCH

Channel Reach	y	S (ft/ft)	M ratio	A sqft	WP	R	Q cfs	V fps
Rear Lot Swale	0.25	0.01	10	0.625	5.024	0.124	1.78	2.86

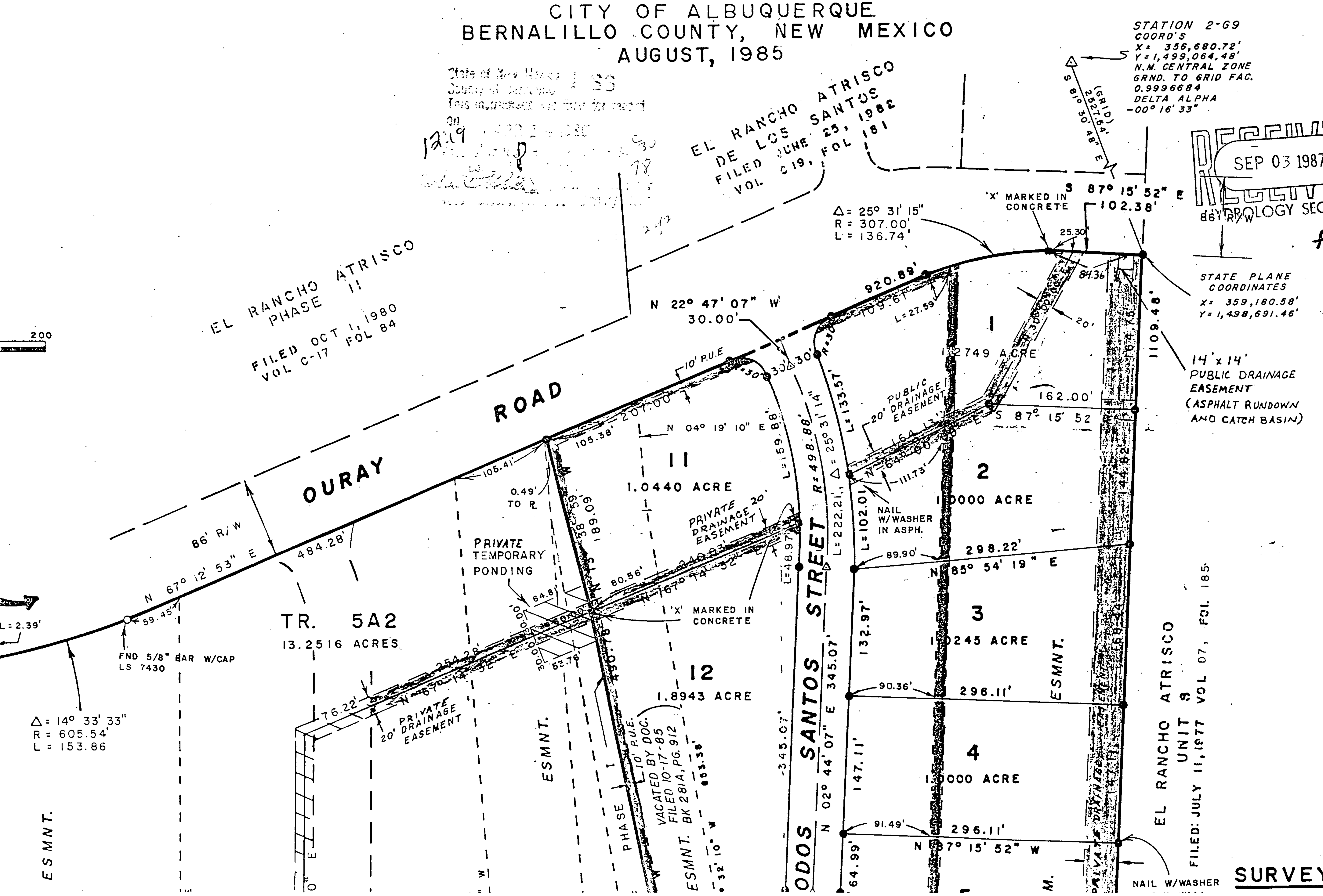
CAPACITY OF CHANNELS

CALCULATE FLOW RATE AND WALL HEIGHT IN 10 FOOT CHANNEL WITH 4" INVERTED CROWN

WALL HEIGHT = EGL + ONE FOOT FREEBOARD

Channel Reach	y	S (ft/ft)	A	WP	R	Q	V	wall ht	crit.depth	.8 x Dc	conj.depth	Froude
South Channel (required)	0.4189	0.0163	5.839	10.858	0.538	56.50	9.68	1.42	2.15	1.72	1.30	1.97
South Channel (proposed)	0.5	0.0163	6.65	11.02	0.603	69.49	10.45	1.50	2.47	1.97	1.19	2.02
North Channel Reach 1 (req'd)	0.216	0.03	3.81	10.452	0.365	38.60	10.13	1.22	1.67	1.33	1.65	3.84
North Channel Reach 1 (prop.)	0.5	0.03	6.65	11.02	0.603	94.27	14.18	1.50	3.02	2.42	1.19	3.53
North Channel Reach 2 (req'd)	0.284	0.0177	4.49	10.588	0.424	38.65	8.61	1.28	1.67	1.33	1.52	2.85
North Channel Reach 2 (prop)	0.5	0.0177	6.65	11.02	0.603	72.41	10.89	1.50	2.53	2.03	1.19	2.71
North Channel Reach 2 (req'd)	0.2105	0.0223	3.755	10.441	0.360	32.50	8.66	1.21	1.49	1.19	1.66	3.32
North Channel Reach 2 (prop)	0.5	0.0223	6.65	11.02	0.603	81.28	12.22	1.50	2.74	2.19	1.19	3.05

VOLCANO BUSINESS PARK 86 35844
PHASE I
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
AUGUST, 1985



SIGN-OFFS

APPROVED AND ACCEPTED B

A.M.A.F.C.A.

Parks and Recreation De

Traffic Engineer

City Engineer

Property Management

Water Resources Departm

Planning Department

City Surveyor

UTILITY COMPANY APPROVA

Public Service Company

Gas Company of New Mexi

Mountain Bell

SURVEYOR'S CERTIFICA

G10/D29

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

PLANNING & PROGRAMMING

/___/ Comments received

/___/ N.A.

8-12-87

DATE

CITY ENGINEERS PROJECT NO. 3324

SHEET ______ OF ______

STANDARD REVIEW COMMENT SHEET

TO: Andre Houle /CHAIRMAN DRC - APPLICANT

(USER DEPT./DIVISION)

FROM: Carlos Montoya /HYDROLOGY/ENGINEERING

(REVIEWER/REVIEW DEPT./DIVISION)

PROJECT: Volcano Business Park Phase II

PROJECT DESCRIPTION STATUS: ☐ Pre-design, ☐ Prel., ☐ Final

FOR REVIEWER DEPT/DIVISION			FOR USER DEPT.	
PAGE NO.	COM. NO.	COMMENT	A/D	REMARK
	1	Is there a recorded plat for the business park?		
	2.	Please address downstream capacity for the proposed construction of Ouray		
	3.	Do flows enter Ouray from Unser Blvd?		
	4.	What is the capacity of the proposed concrete channel?		
	5	What is the capacity of the dip section on Vulcan Street?		

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

PLANNING & PROGRAMMING

/__/ Comments received

/__/ N.A.

8-12-87
DATE

CITY ENGINEERS PROJECT NO. 3324

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	5	What is the capacity of the dip section on Vulcan Street?		

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

May 20, 1985

Leroy Chavez
Westland Development Company, Inc.
401 Coors Boulevard, NW
Albuquerque, New Mexico 87105

RE: VOLCANO BUSINESS PARK IMPROVEMENTS
(G10/D29)

Dear Mr. Chavez:

Attached herewith is a copy of the approved infrastructure listing as modified by the appropriate D.R.B. members for Volcano Business Park.

Should you have any questions, comments, or modifications to this listing, please call myself or any of the other D.R.B. members.

Cordially,

Fred J. Aguirre, P.E.
Design Hydrologist

FJA/bsj

cc: Bob Ryals
Robert Fosnaugh
Jon Ertsgaard

WESTLAND DEVELOPMENT CO., INC.
401 COORS BLVD. NW
ALBUQUERQUE, N.M. 87105
Contact: Leroy Chavez
831-9600

VOLCANO BUSINESS PARK IMPROVEMENTS

PHASE I

TRAFFIC IMPROVEMENTS:

1. Ouray Road, 25' in width, from 270' West of Todos Santos ? see below
Street to 170' East of Todos Santos Street. Said road consisting of a 6' sidewalk, standard curb and gutter on the South and ~~temporary asphalt~~ permanent curb on the North. From that point, 300' East to the existing pavement on Ouray, consisting of temporary pavement and ~~temporary~~ ~~permanent~~ or curb. This section will also include a 6' sidewalk and standard curbs and gutters built out along R.O.W> of Ouray and tying into the curb return at Ouray and Piedra De Plata. Overall length will be approximately 694'.

2. Todos Santos ? Street 40' in width from Ouray Road to West P.C. of Todos Santos.? Said road consisting of standard curb and gutter on both sides - approximately 1023' in length.

Total Traffic Improvement Cost = $102,410.80

WATER & SEWER IMPROVEMENTS:

1. 12" water line along Ouray Road including a Meter Manhole with a 10" mainline meter and ~~10"~~ Pressure Reducing station with 8" and 4" Pressure Reducing Valves - approximate length of 12" line is 725'.

2. 8" water line along ~~Todos Santos~~ Piedra Lombre Street - approximately 1055' including all service lines, fire hydrants and valves.

3. 12" SAS line along Ouray Road - approximately 700' including all service connections and manholes.

4. 8" SAS line along ~~Todos Santos~~ Piedra Lombre Street - approximately ~~725'~~ 1045' including all service connections and manholes.

Total Water Improvement Cost = $47,504.50

Total Sewer Improvement Cost = $37,447.50

STORM SEWER IMPROVEMENTS: & 496' of 42" RCP

1. 180' ~~475~~' of 48" R.C.P. storm drain, & 496' of 42" RCP located in and across Lot 1 and tying into an existing energy dissipater North of Ouray.

2. 3 type A & 1 Dbl D Catch Basins located in Todos Santos Street which tie into the 48" R.C.P. storm drain. & 1 Type "D" CB in Ouray Rd.

3. A 10' wide concrete drainage channel structure to feed into catch basin in Todos Santos Street - approximately 238' in length. Located West of Piedra Lumbre between Lots 11 and 12.

4. A 40' by 40' temporary disilting pond located West of the concrete channel. West of that will be a temporary diversion ditch and dike - approximately 290' in length extending across the proposed Vulcan Road.

Total Storm Sewer Improvement Cost = $107,547.00

PHASE I

TOTAL IMPROVEMENT COST = $294,939.80

(Excluding permits, bonds and taxes)

VOLCANO BUSINESS PARK IMPROVEMENTS

PHASE II

TRAFFIC IMPROVEMENTS:

1. Ouray Road 25' in width from 270' west of Todos Santos St. to future alignment at Unser Blvd. Said road consisting of 6' sidewalk, standard curb and gutter on the South and permanent ~~temporary asphalt~~ curb on the North, approximately 1280' in length.

2. Vulcan Street, 40' in width, from Ouray Road to Todos Santos St. Said road to consist of standard curb and gutter on both sides - approximately 748' in length.

3. Todos Santos Road, 40' in width, from the West P.C. of Todos Santos, 771' West to an end. Said road consisting of standard curb and gutter on both sides - 771' in length.

WATER & SEWER IMPROVEMENTS:

✓1. 12" water line along Ouray Road. Approximate length of line is 1280'.

✓2. 8" water line in Vulcan Street - approximately 821', including all service lines, fire hydrants and valves.

✓3. 8" water line along ~~Todos Santos~~ Piedra Lombre Street - approximately 771' including all service lines, fire hydrants and valves.

✓4. 12" SAS line along Ouray Road - approximately 1280' including all service connections and manholes.

✓5. 8" SAS Line along Vulcan Street - approximately 821' including all service connections and manholes.

✓6. 8" SAS line along ~~Todos Santos~~ Piedra Lombre - approximately 871' including all service connections and manholes.

STORM SEWER IMPROVEMENTS:

✓1. A 10' wide concrete drainage channel structure from 250' East of Vulcan St. to 345' West of Vulcan St. - tying into concrete channel in Phase I. ok

✓2. A diversion ditch and dike will run parallel to Vulcan St. approximately 345' away being 380' in length. It will tie into the proposed 10' concrete channel. ok

Robert A. [signature] 4-29-85
Traffic Engineer Date

[signature] 5/20/85
City Engineer - Hydrology Date

Jon E. Ertsgaard 4-30-85
Water Resource Dept. Date

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

May 14, 1985

Mr. Charles Easterling
Easterling & Associates
5643 Paradise Boulevard NW
Albuquerque, NM 87114

REF: REVISED DRAINAGE REPORT FOR VOLCANO BUSINESS PARK (G10-D29) RECEIVED APRIL 18, 1985

Dear Chuck:

I have reviewed the above referenced submittal and hereby identify that it is sufficient to sign-off for the Site Development Plan, give Preliminary Plat approval and to submit the appropriate construction plans for review and approval in the work order process.

Please be advised that it is recommended that all future submittals be in accordance with the DPM. If everyone is following the same procedure, the review time can be substantially reduced. When the information has to be accumulated and researched from other sources, our efficiency drops and pressure from other applicants has a detrimental effect on this section's morale.

Therefore, cooperation on your part will be greatly appreciated.

Since the rainy season is coming up, please provide an Erosion Control Plan, per the DPM, for review and approval for inclusion in the construction plans.

If I can be of further service, please give me a call at 766-7644.

Cordially,

Billy J. Goolsby

Billy J. Goolsby, PE
Civil Engineer/Hydrology

BJG:mrk

WESTLAND DEVELOPMENT CO., INC.
401 Coors Blvd. N.W., Albuquerque, New Mexico 87105
Phone (505) 831-9600

RECEIVED
MAY 16 1985
DH0128
HYDROLOGY SECTION

RECEIVED
MAY 13 1985
CITY ENGINEER

May 8, 1985

Mr. C.D. Sheppard
City Engineer
City of Albuquerque
P.O. Box 1293
Albuquerque, N.M. 87103

RE: VOLCANO BUSINESS PARK
Infrastructure Improvements Project No. 2404

Dear Mr. Sheppard:

Transmitted herein for the above referenced project is the following:

1. Subdivision Improvements Agreement;
2. Owners Construction Contract with New Concepts, Inc., including bonds and certificates of insurance;
3. Pro Rata Form

It is intended that the City of Albuquerque will provide inspection, testing services and construction staking for the construction project.

A Design Deposit Fee of $4,307.95 has been previously paid.

We are requesting a Work Order be issued as soon as possible. Should you have any questions concerning the transmittal or any other matter, please do not hesitate to call.

Sincerely,

Ron Bohannan, P.E.
Senior Engineer

RRB:ama
encls.
cc: New Concepts, Inc.

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

April 26, 1985

Charles Easterling
Easterling & Associates, Inc.
5643 Paradise Boulevard, NW
Albuquerque, New Mexico 87114

RE: DRAINAGE REPORT FOR VOLCANO BUSINESS PARK
(G-10/D29) RECEIVED APRIL 18, 1985

Dear Mr. Easterling:

The referenced submittal is not adequate for what you are seeking with this approval. With preliminary and final plat approvals, the detailed construction plans may be submitted for review and approval.

The information as presented is not of sufficient detail to prepare a set of construction plans. Please refer to my letter, dated April 16, 1985, requesting detailed information, and respond accordingly such that I may continue my review and work toward an approval for the subject project.

If there is a lack of understanding of my request, please call me for clarification at 766-7644.

Cordially,

Billy J. Goolsby

Billy J. Goolsby, P.E.
C.E./Design Hydrology

BJG/bsj

WESTLAND DEVELOPMENT CO,. INC.
401 COORS BLVD. NW
ALBUQUERQUE, N.M. 87105
Contact: Leroy Chavez
831-9600

VOLCANO BUSINESS PARK IMPROVEMENTS

PHASE I

TRAFFIC IMPROVEMENTS:

1. Ouray Road, 25' in width, from 270' West of Todos Santos Street to 170' East of Todos Santos Street. Said road consisting of a 6' sidewalk, standard curb and gutter on the South and permanent ~~temporary asphalt~~ curb on the North. From that point, 300' East to the existing pavement on Ouray, consisting of temporary pavement and permanent or ~~temporary~~ curb. This section will also include a 6' sidewalk and standard curbs and gutters built out along R.O.W> of Ouray and tying into the curb return at Ouray and Piedra De Plata. Overall length will be approximately 694'.

2. Todos Santos Street 40' in width from Ouray Road to West P.C. of Todos Santos. Said road consisting of standard curb and gutter on both sides - approximately 1023' in length.

Total Traffic Improvement Cost = $102,410.80

WATER & SEWER IMPROVEMENTS:

1. 12" water line along Ouray Road including a Meter Manhole with a 10" mainline meter and ~~[illegible]~~ Pressure Reducing station with 8" and 4" Pressure Reducing Valves - approximate length of 12" line is 725'.

2. 8" water line along Piedra Lombre ~~Todos Santos~~ Street - approximately 1055' including all service lines, fire hydrants and valves.

3. 12" SAS line along Ouray Road - approximately 700' including all service connections and manholes.

4. 8" SAS line along Piedra Lombre ~~Todos Santos~~ Street - approximately ~~725'~~ 1045' including all service connections and manholes.

Total Water Improvement Cost = $47,504.50

Total Sewer Improvement Cost = $37,447.50

STORM SEWER IMPROVEMENTS:

1. 475' of 48" R.C.P. storm drain, located in and across Lot 1 and tying into an existing energy dissipater North of Ouray.

2. Catch Basins located in Todos Santos Street which tie into the 48" R.C.P. storm drain.

3. A 10' wide concrete drainage channel structure to feed into catch basin in Todos Santos Street - approximately 238' in length. Located West of Piedra Lumbre between Lots 11 and 12.

4. A 40' by 40' temporary disilting pond located West of the concrete channel. West of that will be a temporary diversion ditch and dike - approximately 290' in length extending across the proposed Vulcan Road.

Total Storm Sewer Improvement Cost = $107,547.00

PHASE I

TOTAL IMPROVEMENT COST = $294,939.80

(Excluding permits, bonds and taxes)

VOLCANO BUSINESS PARK IMPROVEMENTS

PHASE II

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1. Ouray Road 25' in width from 270' west of Todos Santos St. to future alignment at Unser Blvd. Said road consisting of 6' sidewalk, standard curb and gutter on the South and ~~temporary asphalt~~ permanent curb on the North, approximately 1280' in length.

2. Vulcan Street, 40' in width, from Ouray Road to Todos Santos St. Said road to consist of standard curb and gutter ~~on both~~ sides - approximately 748' in length.

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STORM SEWER IMPROVEMENTS:

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2. A diversion ditch and dike will run parallel to Vulcan St. approximately 345' away being 380' in length. It will tie into the proposed 10' concrete channel.

Robert A. [signature] 4-29-85
Traffic Engineer Date

City Engineer - Hydrology Date

Jon E. Entsgaard 4-30-85
Water Resource Dept. Date

RECEIVED
APR 25 1985
DH0045
HYDROLOGY SECTION

WESTLAND DEVELOPMENT CO,. INC.
401 COORS BLVD. NW
ALBUQUERQUE, N.M. 87105
Contact: Leroy Chavez
831-9600

VOLCANO BUSINESS PARK IMPROVEMENTS

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Total Sewer Improvement Cost = $37,447.50

APR 5 1985
HYDROLOGY SECTION

- Billy has report
- Volcano ~~Clif~~ Business Park
- Review with drainage report
- List of public infrastructures

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(Excluding permits, bonds and taxes)

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Traffic Engineer	Date
City Engineer - Hydrology	Date
Water Resource Dept.	Date

Biely Goolsby

G10/D29

INFORMATION SHEET

PROJECT TITLE Volcano Business Park

ZONE ATLAS PAGE NO. ~~H-9, H-10~~ G-9, G-10 TYPE OF SUBMITTAL Resubmittal

CITY ADDRESS Unser Blvd. and Ouray Rd.

LEGAL DESCRIPTION

ENGINEERING FIRM Easterling & Assoc. Inc.

ADDRESS 5643 Paradise Blvd. N.W.

PHONE 898-8021 CONTACT C. M. Easterling

OWNER Westland Development Corp.

ADDRESS 401 Coors Rd. N.W. 87105

PHONE 831-9600 CONTACT Ron R. Bohannan

ARCHITECT

ADDRESS

PHONE CONTACT

SURVEYOR

ADDRESS

PHONE CONTACT

RECEIVED
APR 18 1985
HYDROLOGY SECTION

CONTRACTOR

ADDRESS

PHONE CONTACT

PRE-DESIGN MEETING: X YES ____ NO

____ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

____ SKETCH PLAT APPROVAL
X SITE DEVELOPMENT PLAN APPROVAL
____ BUILDING PERMIT APPROVAL
____ ROUGH GRADING PERMIT APPROVAL
____ OTHER ____ (SPECIFY)

X PRELIMINARY PLAT APPROVAL
X FINAL PLAT APPROVAL
____ CERT. OF OCCUPANCY APRVL.
____ GRAD./PAVING PERMIT APRVL.

DATE SUBMITTED: 4-18-85

BY: EASTERLING & ASSOCIATES, INC.

4/17/85

TO: Billy Goolsby - Design Hydrology
From: Dan Hogan - P&P Hydrology
RE: Volcano Buisness Park

Billy,

After review of the file and other backup on the refrenced project. I am more convenced than ever that my comments are appropriate and should be addressed. The cover letter from R.S. Heller makes statements that only backup my concerns. More specificly:

1.) "These guidelines are intended to be used in conjunction with engineering criteria as published the the Drainage and Flood Control chapter of the Development Process Manual,"

2.) "designers will be expected to investigate the suitability of these details to the projects under their direction and demonstrate the <u>greater</u> desirability of any alternates proposed.

As I have stated before my review time on this project has gotten to the point of being ridiculous. If the consultant involved would have addressed the comments in lieu of fighting every little concern he would have saved himself many hours of time and I wouldn't have to be writing you now.

Enough said, please address all comments

Don Hogan

4/17/85

TO: Dan Hogan - P&P Hydrology

From: Billy Goolsby - Design Hydrology

RE: Volcano Business Park

Dan,

Submitted herewith is a complete package, including the Drainage File & the construction plans, for the above referenced subject.

Please review, at your convenience, and see if any of your previous comments may be revised with the information provided.

Also, please be advised that a technical standards action may be forthcoming to establish the policies for this design. The memorandum I previousely transmitted to you will be the topic of review.

Your earliest response to this matter will be appreciated

RECEIVED

APR 17 1985

PLANNING & PROGRAMMING HYDROLOGY

Ron Bohannon and ——→ 4/17/85
Fred J. Aguirre
Chuck Easterling

- OFF-SITE FLOWS → interim plan until Unser is diverts flows
- Ouray Rd St Grades approval → DRC APPROVAL
- INTERNAL St NETWORK / TC & F.C. elevation
- Require Drg Easement for those facilities required for this development i.e desilting ponds, etc
- construction PNM / PNM will sign plat.

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE REF. NO.________

March 27, 1985 MAR 29 1985

CITY ENGINEER

TO: Dan Hogan, Civil Engineer; Engineering Division

FROM: Fred J. Aguirre, Design Hydrologist; Design Hydrology Section FJA

SUBJECT: VOLCANO BUSINESS PARK DRAINAGE PLAN

Attached herewith is a complete drainage plan for the subject development. Please provide me with any comments you feel appropriate regarding this development plan.

FJA/bsj

Attachment

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

April 16, 1985

Charles Easterling
Easterling & Associates, Inc.
5643 Paradise Boulevard, NW
Albuquerque, New Mexico 87114

RE: DRAINAGE REPORT FOR VOLCANO BUSINESS PARK (G-10/D29) RECEIVED MARCH 19, 1985

Dear Chuck:

The DRB records indicate that neither Preliminary Plat nor Site Development plan approvals have been granted. Therefore, construction plan submittal is pre-mature. Also, for Preliminary Plat approval, a listing of the required infrastructure improvements (private and public) are required to be submitted to DRB for review and approval prior to sign-off. Please advise your client of this matter.

For Preliminary Plat approval, a comprehensive Drainage Report (per DPM) will need to be submitted for review and approval and for inclusion in the construction plans. Please use the checklist for preparation of this plan.

The complete Drainage Report shall include, and not be limited to, the following information:

1. A detailed grading plan showing top of curb and flowline elevations for all streets in and adjacent to the project site.

2. The plan will need to address the treatment and show in detail how the off-site and on-site flows will be passed through and off of the site.

3. The hydraulic design information of the streets and required channels and swales with sufficient detail for construction.

4. Any and all easements and rights-of-way necessary to accommodate this development will need to be shown and provided both on and off-site including dimensions and purpose.

5. All ponds and or swales, channels and etc., will need to be shown with appropriate details and easements for construction.

6. Vicinity map and legal description should also be shown.

7. Bench mark information with MSL designation will need to be provided.

8. Sufficient spot elevations and contours shall be provided to adequately show the on-site existing and proposed conditions as well as the interfacing with adjacent properties.

9. Any and all required retaining walls shall be shown on the plan

10. Pond elevations and details shall be provided. Also, the details, calculations, spot elevations, and contours and appropriate cross-sections as necessary for all structures to accommodate the the drainage scheme.

11. The report will need to identify phased development in the order of construction and the proposed erosion control plan for each phase.

The following are comments regarding the current submittal:

A. It is not clear from the information submitted as to what is included in the project site. Are areas C & D included in the area? If so, how will they drain? Have the appropriate easements been provided?

B. Are there City approved street grades established for Ouray Road? If not, then the grades will be required.

C. The plan submitted is not of sufficient detail to establish elevations and grades for the proposed improvements.

D. Coordination with regard to the study and construction of Unser Boulevard will be required to assure the appropriate interfacing with this project.

E. The information as presented is not any more than what had originally been submitted for conceptual approval.

F. The review of the construction plan cannot be done at this time since a listing of the required infrastructures has not been presented to and approved by DRB. Also, without an approved Drainage Report, the construction plans are ahead of schedule and could have some significant changes. Consequently, review comments on the construction plan will not be forthcoming at this time.

Should you have any questions or comments, please call me at 766-7644.

Cordially,

Billy J. Goolsby

Billy J. Goolsby, P.E.
Civil Engineer/Hydrology

BJG/bsj

cc: Greg Olson
Design Section

G10/D29

INFORMATION SHEET

PROJECT TITLE VOLCANO BUSINESS PARK

ZONE ATLAS PAGE NO. ~~H-9, H-10~~ G-9, G-10 TYPE OF SUBMITTAL DRAINAGE PLAN

CITY ADDRESS UNSER BLVD. AND OURAY RD. N.W.

LEGAL DESCRIPTION

ENGINEERING FIRM EASTERLING & ASSOCIATES INC.

ADDRESS 5643 PARADISE BLVD. N.W. 87114

PHONE 898-8021 CONTACT C. M. EASTERLING

OWNER WESTLAND DEVELOPMENT CORPORATION

ADDRESS 401 COORS RD. N.W. 87105

PHONE 831-9600 CONTACT RON BOHANNAN.

ARCHITECT

ADDRESS

PHONE CONTACT

SURVEYOR

ADDRESS

PHONE CONTACT

RECEIVED
MAR 19 1985
HYDROLOGY SECTION

CONTRACTOR

ADDRESS

PHONE CONTACT

PRE-DESIGN MEETING: X YES ___ NO

___ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

___ SKETCH PLAT APPROVAL
X SITE DEVELOPMENT PLAN APPROVAL
___ BUILDING PERMIT APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ OTHER ___ (SPECIFY)

X PRELIMINARY PLAT APPROVAL
X FINAL PLAT APPROVAL
___ CERT. OF OCCUPANCY APRVL.
___ GRAD./PAVING PERMIT APRVL.

DATE SUBMITTED: 3-19-85

BY: EASTERLING & ASSOCIATES, INC.

G10/D29

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE

REF. NO.

March 27, 1985

TO: Dan Hogan, Civil Engineer; Engineering Division

FROM: Fred J. Aguirre, Design Hydrologist; Design Hydrology Section FJA

SUBJECT: VOLCANO BUSINESS PARK DRAINAGE PLAN

Attached herewith is a complete drainage plan for the subject development. Please provide me with any comments you feel appropriate regarding this development plan.

FJA/bsj

Attachment

KNC INC.
A RODGERS COMPANY

KNC, INC.
4001 BOGAN NE / 87109
P.O. BOX 14627
ALBUQUERQUE, NEW MEXICO 87191
(505) 881-2511

February 13, 1985

G10/D29

Hydrology Section
City Engineer's Office
4th Floor, Municipal Office Building
Albuquerque, NM

RECEIVED
FEB 13 1985
HYDROLOGY SECTION

SUBJECT: Volcano Business Park - Phase I
D.R.B. Case No. 84-832

Gentlemen:

Transmitted herewith are three (3) copies of Hydraulic Gradeline computations for the subject development.

Sincerely yours,
KNC, Inc.

Claude A.L. Pilley

Claude A.L. Pilley, PE/LS
Project Manager

CP:df

encl.

READING FILE

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DESIGN HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 766-7644

January 14, 1985

Chuck Easterling
Leverton-Easterling
5629 Paradise Boulevard, NW
Albuquerque, New Mexico 87114

RE: VOLCANO BUSINESS PARK (G-10/D29)
DATED NOVEMBER 8, 1984

Dear Chuck:

The referenced plan is approved in concept; however, prior to site development plan sign-off/preliminary plat approval, an approved drainage report will be required. The report should address the following items:

- The proposed street grades for the internal street network (including Ouray Road). Please provide these grades on the grading plan.

- The proposed treatment of off-site flows referenced in your conceptual plan with sufficient construction details.

- The hydraulic calculations for the proposed private/public infrastructures identified in your conceptual plan.

  NOTE: The construction plans for the required private/public infrastructures improvements will be approved thru the work order process.

- Identify the required infrastructures (private/public) and extent of grading proposed with this subdivsion and subsequent subdivisions.

- The allowable discharge rate for each tract.

- The proposed channel between Vulcan Street and Tract C1 is considered a private easement since the easement does not convey public waters, likewise, those future easements identified by Section B-B. Please identify these easements on the plat.

I apologize for the delay in responding to your submittal; however, given our backlog on drainage submittals, this delay was unavoidable. I might add, this section is working to resolve our backlog problem and hope to have it under control within the next month. I appreciate your patience in this matter.

Please feel free to call me at 766-7644 if you have any questions or comments.

Cordially,

Fred J. Aguirre

Fred J. Aguirre
Design Hydrologist

FJA/bsj

INFORMATION SHEET

PROJECT TITLE VOLCANO BUSINESS PARK

ZONE ATLAS PAGE NO. ~~G9~~ G-10/ D29 ~~H9, H-10~~ TYPE OF SUBMITTAL DRAINAGE PLAN.

CITY ADDRESS UNSER BLVD AND OURAY RD.

LEGAL DESCRIPTION ____

ENGINEERING FIRM LEVERTON-EASTERLING INC.

ADDRESS 5629 PARADISE BLVD. N.W.

PHONE 898-8021 CONTACT C.M. EASTERLING

OWNER WESTLAND DEVELOPMENT CORPORATION

ADDRESS 401 COORS RD. N.W. 87105

PHONE 831-9600 CONTACT RON BOHANNAN

ARCHITECT ____

ADDRESS ____

PHONE ____ CONTACT ____

SURVEYOR ____

ADDRESS ____

PHONE ____ CONTACT ____

CONTRACTOR ____

ADDRESS ____

PHONE ____ CONTACT ____

PRE-DESIGN MEETING: ✓ YES ____ NO

____ COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

- ____ SKETCH PLAT APPROVAL
- ✓ SITE DEVELOPMENT PLAN APPROVAL
- ____ BUILDING PERMIT APPROVAL
- ____ ROUGH GRADING PERMIT APPROVAL
- ____ OTHER ____ (SPECIFY)
- ✓ PRELIMINARY PLAT APPROVAL
- ✓ FINAL PLAT APPROVAL
- ____ CERT. OF OCCUPANCY APRVL.
- ____ GRAD./PAVING PERMIT APRVL.

DATE SUBMITTED: 11-15-84

BY: Leverton-Easterling, Inc.

RECEIVED
NOV 16 1984
DESIGN HYDROLOGY SECTION

12/13/84

Mtg with

- CHUCK EASTERLING
- Ron Ray Bohannan
- F.J. AGUIRRE

SUBJECT: VOLCANO BUSINESS PARK DRAINAGE requirement FOR PRELIMINARY plat APPROVAL / site devel plan approval.

COMMENTS:

HYDROLOGY WILL REVIEW PLAN AND IDENTIFY THE REQUIRED INFORMATION TO GIVE PRELIMINARY PLAT APPROVAL.

Street details, etc

Subdivision process

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 17, 1982

All Consultants

R. S. Heller, City Engineer RSH

Preferred Storm Drainage Design Details for Capital Projects

Attached is a compilation of preferred guidelines for the design of certain elements of storm drain systems. This material is presented to guide designers in preparing storm drain designs for City of Albuquerque Storm Drainage Capital Improvement Projects. These guidelines are intended to be used in conjunction with engineering criteria as published in the Drainage and Flood Control chapter of the Development Process Manual, together with applicable adopted drainage master plans. Although the guidelines transmitted herein are not mandatory, designers will be expected to investigate the suitability of these details to the projects under their direction and to demonstrate the greater desirability of any alternates proposed.

Please contact the City Engineer if you need additional information regarding these materials or their applications.

CDS/RSH/fs
Enclosures

cc: R. Leonard, Executive Engineer, AMAFCA
    C. Rodolph, Director/MDD

MUNICIPAL DEVELOPMENT DEPARTMENT
Richard S. Heller, P.E., City Engineer — ENGINEERING DIVISION — Telephone (505) 766-7467
AN EQUAL OPPORTUNITY EMPLOYER

CITY OF ALBUQUEQUE
CITY ENGINEER
PREFERRED STORM DRAINAGE DESIGN DETAILS FOR CAPITAL PROJECTS

Major Lines

Alignment Changes - to be preferably curvilinear. 45^{o} bends accomplished by prefabricated pipe sections are a second choice. Normal or 90^{o} changes in alignment are acceptable only when design flow velocity does not exceed 11 feet per second or when circumstances preclude use of the preferred alignments.

Pipe Size Changes - Preferably to be accomplished by matching pipe soffits. If pipe size changes occur at a normal location for a manhole or access point, the change can be incorporated in the structure by design of manhole invert configuration. Pipe changes which occur at other than normal access point locations preferably should be designed as prefabricated transitions or less desirably, as a field constructed transition. An access structure will not generally be required unless the change in pipe sizes is from larger to smaller in the direction of flow.

Manhole/Access Points - Preferred spacing is 450' maximum and desired on tangent alignment. At curvilinear or angle point changes in alignment not involving confluence flows, the following is preferred manhole placement:

1. An access point is desired at the downstream point of tangency of curvilinear alignments or at the downstream angle point when using 45^{o} bends. An upstream access point is a second, less desirable choice.

2. If 90^{o} or near 90^{o} alignment change at an angle point is unavoidable, an access point will be required.

3. The total distance between manhole/access points immediately upstream and downstream from changes in alignment may not exceed 450', not including any access point within the change in alignment. The alignment change access point may serve as the terminal of any such 450' reach.

4. Manhole/Access points formed from prefabricated vertical tees of 48" I.D. are preferred on all lines of 48" and larger. Smaller lines will normally be accessed by standard 4' diameter manholes. Access and manhole configurations should preferably be concentric and centered over the centerline of the pipeline for non-confluence installations. Foundation analysis will generally be required for vertical tee installations when depth of bury is greater than 10' measured to invert of pipe.

Minor Lines (Excluding Inlet Connection Lines)

Alignment Changes - for design flow velocities exceeding 11 feet per second, curvilinear is preferred with 45^{o} prefabricated bends a second choice. Economic considerations will generally dictate. For flow velocities of less than 11 feet per second, 45^{o} bends are preferred, but 90° angle points incorporating manholes or access points with well designed inverts will be acceptable depending on economic and conflict considerations.

<u>Pipe Size Changes</u> - As given for major lines.

<u>Manhole/Access Points</u> - As given for major lines.

Confluences: (Excluding Inlet Connective Lines)

<u>Horizontal Configuration</u>

Generally, it is preferred that minor lines approach major lines on a curvilinear alignment and intersect the major line at an angle of between 30° and 45° between the upstream alignments. Minor line approaches using 45° bends are a second choice. 90° intersections are not desired unless special circumstances require such. Unless extraordinary conditions prevail, confluences involving minor design flows in excess of 10% of the design flow capacity of the intersected major and/or minor flows having design velocities in excess of 11 feet per second must be accomplished with angled intersections not to exceed 45° between upstream alignments.

<u>Vertical Configuration</u>:

When design discharge of minor flow does not exceed 10% of the major flow and/or the velocity head values of the major and minor flows do not differ by more than one foot, confluences shall be such that the minor flow pipe enters the major pipe radially (in cross section to the main line) for lines 24 inches in diameter and smaller when prefabricated or field fabricated wyes are used. For minor lines of 27" dia. and larger, under the same flow constraints, either the minor line may enter the major cross section radially or soffits may be matched, however, in no case may the invert of the minor lateral be more than 5' above the invert of the major line at the intersection.

All confluences in which the minor design flow exceeds 10% of the major flow and/or in which the velocity heads of the major and minor flows differ by more than one foot or when either one of the flow velocities or the combined flow velocity exceeds 20 feet per second, will require analysis of hydraulic gradient relationships. Such confluences shall be designed to match flow hydraulics between the intersecting lines and to produce as smooth a hydraulic profile as practical. All confluences must be designed so that minor flows will have positive discharge into the major system while maintaining the hydraulic grade line through the confluence below the ground or pavement surface during 10 year frequency flows.

<u>Manholes/Access Points</u> - preferred at the upstream point of curvature of the minor flow approach (or upstream 45° bend) but acceptable, if economical, at the confluence. A maximum distance of 450' must be maintained between access points immediately upstream and downstream of the confluence, along either flow alignment and excluding the access point at the confluence or at the beginning of the minor flow transition alignment. The access provided at the confluence or at the beginning of the minor flow transition may be the terminal of a 450' reach.

Prefabricated wye confluences are preferred, with field fabricated wyes a second choice. Special confluence structures incorporating access points may be acceptable when circumstances and economics clearly dictate.

Inlets:

Inlets should generally be positioned to intercept street flow before it is allowed to cross intersections or flow transversely across streets.

Type "A" standard inlets are preferred for single installations and are generally required as the first upstream interception in any multiple or battery installation of inlets. Type "B" inlets are preferred as the second and third units of multiple inlet installations on minor streets. Type "B" should not be used on arterial streets. Type "C" are preferred as the second and third inlets on arterial streets. Normally, multiple installations should not exceed 3 units per battery. Units in multiple installations must generally be spaced a minimum of 20 feet apart, measured between the near edges of adjacent inlets. If multiple batteries of multiple inlets are required to intercept exceptional flows, such batteries must be spaced such that the upstream most inlet in each battery can intercept the maximum amount of flow consistent with street flow requirements and constraints. Generally, the spacing between batteries of multiple inlets shall be such that the near edges of the grates of the terminal inlets of adjacent batteries will be no closer than 50 feet.

Inlet connecting pipes if less than 30' in length to main conduits, preferably are to be joined by means of prefabricated 45^{o} wyes. Field fabricated wyes are an allowable second choice. Connecting pipes normally should enter the main conduit radial to the cross section. If connecting pipes from inlets to main are longer than 30', a manhole or access point will be required at the point of connection to the main; 45^{o} intersection is still desired with such manhole connection. Manhole/access points may be prefabricated vertical tees placed immediately downstream of the connection point, within the next joint of pipe.

Slopes of inlet connecting lines when connected directly to main lines by either wyes or manholes should preferably be a minimum of 2% Inlet positioning at major intersections should generally be designed to eliminate nuisance flow across any leg of the intersection. When only one storm drain main is flowing through the intersection, the preferred connection scheme for inlets is to connect inlets directly to each other by parallel connecting on either side of the main and then connect downstream of the intersection by means of 45^{o} connecting pipes to the main; a manhole or access point will be required at such connection point.

If a confluence of major and minor storm drains occurs in an intersection such that a manhole is required in the intersection, inlet connectors may be connected to such manhole if room is available, however, connecting lines which flow in a direction opposite to the main flow must be connected so that flow from the connector will drop into the main flow rather than oppose it. For battery installation, it is preferred that multiple inlets be connected in series of not more than 3 units by means of connnectors paralleling the street and that these parallel connectors then be joined to the main by 45^{o} connectors with an access point or manhole.

In all instances involving arterial streets, every reasonable effort should be made to design for the interception of side street flows on the side streets before such flows reach the arterial.

Summary: The preceding guidelines are not intended to discourage innovative or economical design of systems, but rather to establish desired features considered necessary to achieve hydraulically efficient and easily maintained systems with reasonable economy. Designers will be expected to at least investigate the suitability of the guide lines in each case and to demonstrate the greater desirability of any alternates proposed.

CDS/fs


NOTE:
OURAY ROAD GRADES ARE SUBJECT TO CHANGE BEYOND (WEST OF) THE LIMIT OF DETAILED STUDY IN ORDER TO MATCH FUTURE UNSER BLVD. (PER DRC REVIEW 4-17-85)
N
SCALE: 1" = 00'
EL RANCHO ATRISCO
PHASE II
Wall & curb per STAD 2/15 As-builts
5170
5160
5150
5130
200'
P.N.M. EASEMENT
200'
P.N.M. EASEMENT
PHASE I
LIMIT OF DETAILED STUDY
Future westbound lanes will carry stormwater (if any) from property north of Ouray Rd.
OURAY RD. N.W.
2.5%
2%
2.5%
N.W.
Contributing drainage area = 1.9 ac.
A impervious = 1.1 Ac
% imperv. = 60
i = 4.65 x 0.66 = 3.05
C = 0.72
Q_{10} = C i A = 4.2 cfs
PLAINS ELECTRIC CO-OP, INC. UTILITY EASEMENT
60'
12' 13'
C-1
12.3 AC.
ALLOWABLE DEVELOPED 100 YR. RELEASE RATE 3.36 CFS/ACRE.
Capacity: Manning Equation
$Q = \frac{1.49}{n} A R^{2/3} S^{1/2}$
n = 0.017
A = 1.6 sf
R = 1.6/13.5 = 0.12
S = 0.017 (min. @ downstream end)
Q = 4.5 cfs
V_{100} = 4.5 fps
d_{100} = .55'
AP-1
AP-2
AP-3
AP-4
AP-5
AP-6
Q_{100} = 41.4 CFS
S = 2.5%
S = 2.0%
17 1.0 Ac. Q_{100} = 2.3 CFS
18 1.0 Ac. Q_{100} = 1.7 CFS
19 1.0 Ac. Q_{100} = 1.7 CFS
20 1.0 Ac. Q_{100} = 1.7 CFS
Q_{100} = 50.2 CFS
1%
2%
VULCAN ST.
CONCRETE VALLEY GUTTER
SEE DESIGN REPORT
V_{100} = 2.8 fps
d_{100} = .28'
13 1.0 Ac.
14 1.0 Ac.
15 1.0 Ac.
16 1.0 Ac.
11 1.0 Ac. Q_{100} = 2.6 CFS
12 1.9 Ac.
Q_{100} = 4.9 CFS
PIEDRA LUMBRE ST.
Q_{100} = 69.0 CFS
1.6%
42" RCP STORM DRAIN, SEE DESIGN REPORT
1 1.3 Ac.
2 1.0 Ac.
3 1.0 Ac.
4 1.0 Ac.
5 1.2 Ac.
V_{100} = 4.8 fps
d_{100} = .57'
Catch basin per Volcano Bus. Park Phase I drawings
PRENDA DE PLATA
EASEMENT
W/ RIP-R
RECEIVED SEP 03 1987 HYDROLOGY SECTION
EL RANCHO ATRISCO - UNIT 8

811 DALLAS, N.E. • A[illegible]QUERQUE • NEW MEXICO • 87110 • 505-265[illegible]

Tom Mann Associates, Inc.
Engineers

61582
August 18, 1987

DRC Package

Mr. Andre Houle
c/o Terry Martin
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Volcano Business Park - Phase II - Work Order No. 3324

Dear Andre:

Transmitted herewith are four (4) sets of construction drawings for final sign-off. We will bring the estimate to the meeting. We have addressed all comments except as follows:

1. Median noses were provided at the intersection of Ouray and Vulcan Street. Median noses have not been designed at Ouray and Todos Santos. Turnbays have not been designed, at the developer's request.

2. The preliminary plat for Volcano Business Park has expired. The Development Review Board will re-hear the case August 25, 1987. The revised preliminary plat will reflect right-of-way requirements on the south side of Ouray at Unser Boulevard. We will bring a copy of this plat to the DRC meeting.

As per the comments from Carlos Montoya, calculations are attached for the channel capacity. The runoff in Ouray is being collected by a storm drain inlet at the east end of Volcano Business Park Phase I.

Sidewalk culverts in the channel have been eliminated due to their effect on the hydraulics of the channel. Therefore, the dip-section acts as a channel and has sufficient capacity. The calculations are attached.

Attached are as-built drawings of the Unser/Ouray intersection and the Volcano storm drain system, per Carlos Montoya's request.

If you should have any further questions or comments regarding this information, please do not hesitate to call.

Sincerely,

TOM MANN & ASSOCIATES, INC.

Stev K Schroll

Steven K. Schroll
Project Engineer

SKS:dj
Enclosures

xc: Carlos Montoya w/attachments
Leroy Chavez


STORMDRAIN CURVE DATA
P.C. = STA. 0+86.52
P.I. = STA. 1+50.42
P.T. = STA. 2+20.56
Δ = 60°00'00"
R = 128
L = 134.04
T = 73.90
OURAY ROAD N.W.
PIEDRA LUMBRE ST.
STA. 10+00 (PROP. CCP INTX.) BEGIN CONCRETE DRAINAGE CHANNEL SEE DETAIL SHT. 11
STA. 7+62.1 END CONCRETE DRAINAGE CHANNEL, BEGIN STRUCTURE. SEE DETAILS SHT. 11
STA. 6+94.72
STA. 7+49.41
STA. 5+15 48"x42" REDUCER SEE SHT. 13
STA. 5+10 S.D. MH #2 SEE SHT. 12
STA. 5+20.06 48" RCP BEND, 54° SEE SHT. 13
STA. 2+59 42"x15" WYE, 45° SEE SHT. 13
STA. 2+53 S.D. MH #1 SEE SHT. 12
STA. 0+74 42" RCP END SECTION NMSHD SERIAL No. ES-1
42" RCP RADIUS PIPE
EXISTING DRAINAGE CHANNEL
PLAIN RIP-RAP @ OUTLET
EXIST. CONCRETE DROP STRUCTURE
TEMPORARY DIVERSION DITCH & DIKE
TEMP. POND EASEMENT
STA. 10+50 10'x40' TEMPORARY DESILTING POND BOTTOM EL. 39.3
N 87°14'32" E - 237.54'
N 64°00'00" E - 174.66'
N 30°00'00" E - 399.50'
48" RCP
42" RCP
CLEAN FILL COMPACTED @ 90% ASTM D-1557
TEMPORARY DIVERSION DITCH & DIKE
NO SCALE
SCALES: 1" = 50' H, 1" = 5' V
NOTE: PIPE SECTIONS THAT WILL BE SLANT CUT AT STRUCTURES SHALL BE CLASS IV.
10' WIDE CONCRETE DRAINAGE CHANNEL SEE DETAILS SHT. 11
DIVERSION DITCH & DIKE
12" GRADED FILTER MATERIAL OR FILTER CLOTH
AS BUILTS
WESTLAND DEVELOPMENT CO., INC.
401 Coors Blvd. N.W.
Albuquerque, New Mexico 87105
CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION
TITLE: VOLCANO BUSINESS PARK - PHASE I
STORMDRAIN PLAN & PROFILE
APPROVALS
ENGINEER
DATE
City Engineer
A.C.E.-Design
A.C.E.-Hydrology
Liquid Waste
Traffic
Water
DRAWING
MAP NO.
SHEET
OF
AS BUILT INFORMATION
SURVEY INFORMATION
FIELD NOTES
BENCH MARKS
ENGINEER'S SEAL
REVISIONS
REMARKS
DESIGN

61582

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

PLANNING & PROGRAMMING
/___/ Comments received
/___/ N.A.

8-12-87
DATE

CITY ENGINEERS PROJECT NO. 3324

STANDARD REVIEW COMMENT SHEET

SHEET ______ OF ______

TO: Andre Houle /CHAIRMAN DRC - APPLICANT
(USER DEPT./DIVISION)

FROM: Carlos Montoya / HYDROLOGY/ENGINEERING
(REVIEWER/REVIEW DEPT./DIVISION)

PROJECT: Volcano Business Park Phase II

PROJECT DESCRIPTION STATUS: ☐ Pre-design, ☐ Prel., ☐ Final

FOR REVIEWER DEPT/DIVISION			FOR USER DEPT.	
PAGE NO.	COM. NO.	COMMENT	A/D	REMARK
	1	Is there a recorded plat for the business Park?	A	in progress Aug 25 DRB
	2.	Please address downstream capacity for the proposed construction of Ouray.	D	see Easterling report by const dwgs
	3.	Do flows enter Ouray from Unser Blvd.?	A	see as-builts - No
	4.	What is the capacity of the proposed concrete channel?	A	see attached
	5	What is the capacity of the dip section on Vulcan Street?	A	see attached
		Public easement		

Channel Capacity:

Manning Equation:

$$Q = \frac{1.49}{n} A R^{2/3} S^{1/2}$$

$n = 0.017$ = Manning coefficient

$A = 11.65$ sf x-sectional area

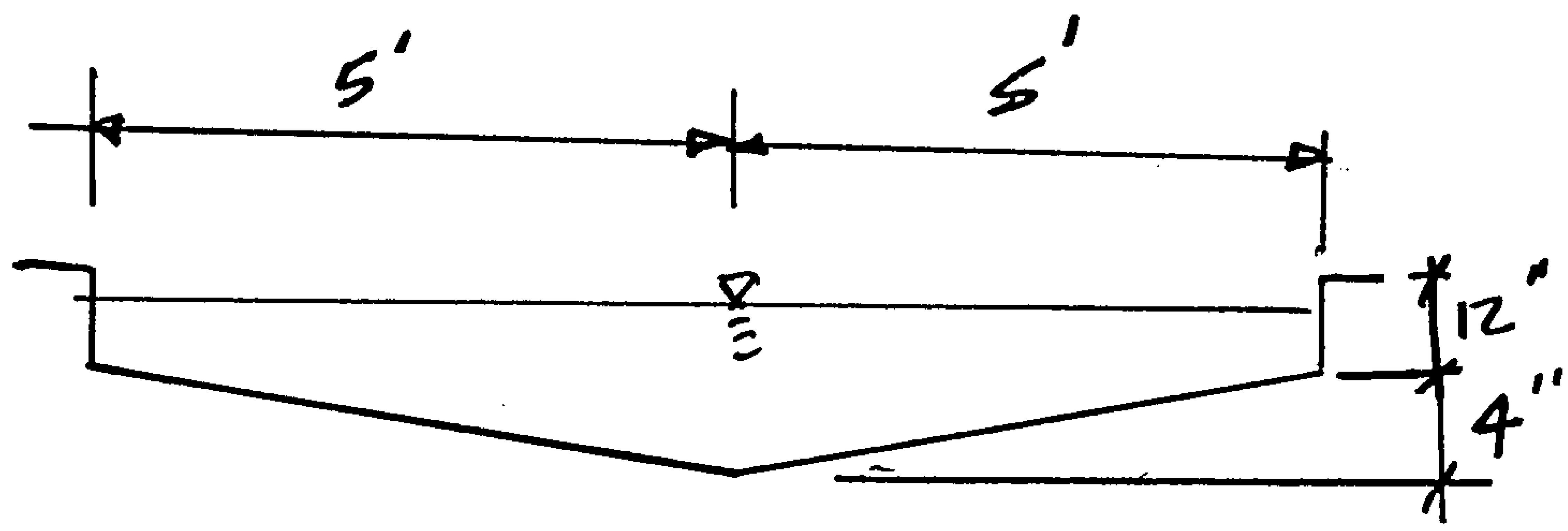
$R = A/P = 11.65 / 12 = 0.97$ hydraulic Rad.

$S = 0.019$ min.

$Q = 138$ cfs

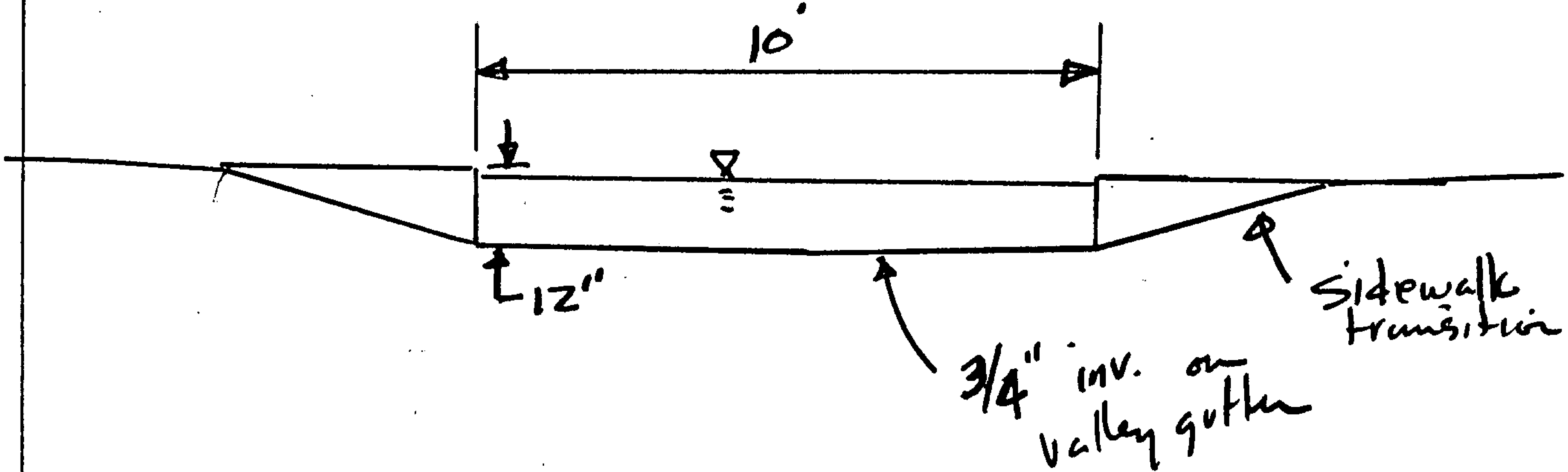
Design flow:

$Q_{100} = 48.8$ cfs per Easterling report



AMPAD 22-141 50 SHEETS 22-142 100 SHEETS 22-144 200 SHEETS

Dip - Section Capacity



Manning Equation:

$$Q = \frac{1.49}{n} A R^{2/3} S^{1/2}$$

$n = 0.017$

$A = 12.0$ SF

$R = 12/12 = 1$

$S = 0.008$

$Q = 94$ cfs

Design flow:

$Q_{100} = 48.8$ cfs per Easterling Report

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS
AMPAD

Tom Mann Associates, Inc.
Engineers
811 DALLAS, N.E. • A JQUERQUE • NEW MEXICO • 87110 • 505-2 11

61582
August 18, 1987

Mr. Andre Houle
c/o Terry Martin
City of Albuquerque
P. O. Box 1293
Albuquerque, NM 87103

Re: Volcano Business Park - Phase II - Work Order No. 3324

Dear Andre:

Transmitted herewith are four (4) sets of construction drawings for final sign-off. We will bring the estimate to the meeting. We have addressed all comments except as follows:

1. Median noses were provided at the intersection of Ouray and Vulcan Street. Median noses have not been designed at Ouray and Todos Santos. Turnbays have not been designed, at the developer's request.

2. The preliminary plat for Volcano Business Park has expired. The Development Review Board will re-hear the case August 25, 1987. The revised preliminary plat will reflect right-of-way requirements on the south side of Ouray at Unser Boulevard. We will bring a copy of this plat to the DRC meeting.

As per the comments from Carlos Montoya, calculations are attached for the channel capacity. The runoff in Ouray is being collected by a storm drain inlet at the east end of Volcano Business Park Phase I.

Sidewalk culverts in the channel have been eliminated due to their effect on the hydraulics of the channel. Therefore, the dip-section acts as a channel and has sufficient capacity. The calculations are attached.

Attached are as-built drawings of the Unser/Ouray intersection and the Volcano storm drain system, per Carlos Montoya's request.

If you should have any further questions or comments regarding this information, please do not hesitate to call.

Sincerely,

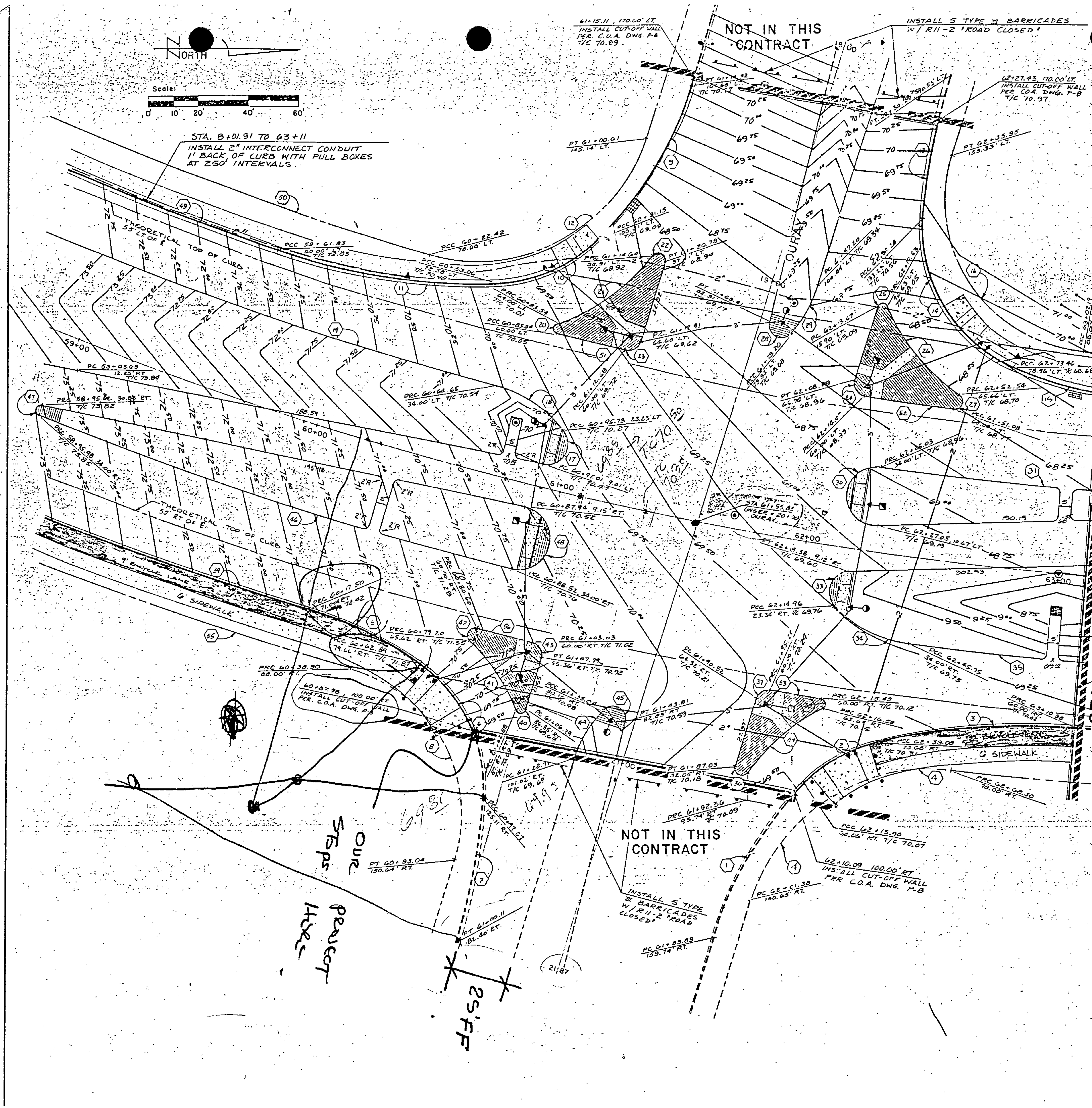
TOM MANN & ASSOCIATES, INC.

Steven K. Schroll

Steven K. Schroll
Project Engineer

SKS:dj
Enclosures

xc: Carlos Montoya w/attachments
Leroy Chavez



LEGEND

	THEORETICAL TOP OF CURB LOCATION (55' FROM ℄)
111.71 T.C.	ELEVATION AT TOP OF CURB
5111.40 T.P.	ELEVATION AT TOP OF PAVEMENT
5110.67 F.L.	ELEVATION AT FLOWLINE
0.5%	PERCENT OF SLOPE
	ELECTRICAL PULL BOX (STD. TYPE "T-4") MARKED STREET LIGHTS
	ELECTRICAL PULL BOX (STD. TYPE "T-4") MARKED TRAFFIC LIGHTS
	ELECTRICAL PULL BOX (TYPE "LARGE") MARKED TRAFFIC LIGHTS
	CONTROLLER FOUNDATION (TYPE II)
	PEDESTAL FOUNDATION (TYPE I (SP))
	MAST ARM FOUNDATION TYPE I (TYPE II NW, SE CORNERS)
⊗	ELECTRICAL MANHOLE
—2"—	2" CONDUIT FOR "STREET LIGHTS"
—3"—	3" CONDUIT FOR "TRAFFIC LIGHTS"
---2"---	2" CONDUIT INTERCONNECT TO TRAFFIC
—7²⁵—	PROPOSED CONTOURS
	CUT-OFF WALL (PER C.O.A. DWG. P-8)
	TYPE I WHEEL CHAIR RAMP (PER C.O.A. DWG. P-17)

STA. 63+30, 85' LEFT
INSTALL CONTROLLER FOUNDATION

STA. 63+40, 85' LEFT
INSTALL PEDESTAL FOUNDATION AND ELECTRICAL MANHOLE

NO.	DELTA	RADIUS	LENGTH	CH. BRG.
1.	27°15'58"	150.00	71.38	N57°04'32"W
[illegible]	32°30'18"	60.00	34.04	N27°11'25"W
3.	17°37'09"	250.00	76.88	N02°07'42"W
4.	78°23'31"	100.00	136.82	S31°30'46"E
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14.	70°13'16"	60.00	73.54	N61°00'26"E
15.	19°53'58"	150.00	52.10	N15°56'49"E
16.	102°14'54"	60.00	107.07	S58°10'02"W
17.	138°37'56"	8.00	19.36	N56°10'47"W
18.	37°40'53"	50.00	32.88	S35°39'49"W
19.	10°34'22"	1357.70	250.53	S22°06'33"W
20.	180°00'00"	2.00	6.28	S73°57'19"E
21.	33°00'43"	80.00	46.28	S34°36'40"E
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57.	06°48'16"	1303.70	154.83	S03°38'27"W
58.	05°45'31"	1320.70	132.74	N03°07'05"E

NOTE:

1. SEE SHEET 13 FOR CROSS STREET PROFILES.
2. SEE SHEET 10 FOR PLAN & PROFILES.
3. SEE SHEET 4 FOR TYP. INTERSECTION DETAILS.

AS BUILT INFORMATION

BENCH MARKS

"BH-39" B&H BRASS CAP CO NORTH 0.4 MILES FROM THE INTERSECTION OF I-40 & COORS RD. TO OURAY RD. GO WEST APPROX. 0.7 MILES TO THE END OF PAVEMENT. CONTINUE

SURVEY INFORMATION

NO.	FIELD NOTES	BY	DATE

ENGINEER'S SEAL

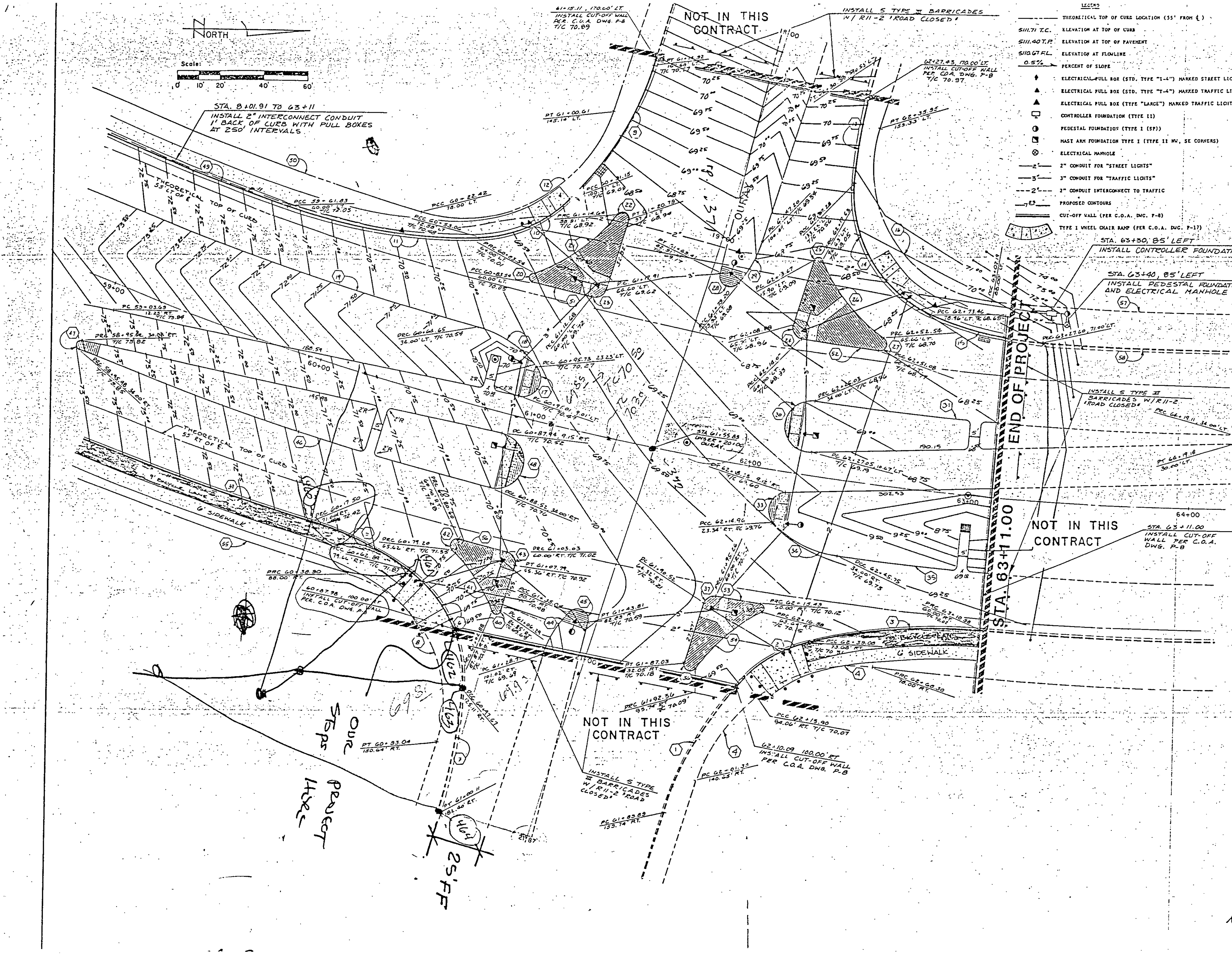
GREINER ENGINEERING
2601 Wyoming NE
Albuquerque, New Mexico 87112
(505) 292-1936

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPT.

TITLE: SAD 215 61582

INTERSECTION OF UNSER BLVD. AND OURAY

APPROVALS	ENGINEER	DATE	APPROVALS	ENGI
City Engineer		1/9/87	Liquid Waste	
A.C.E. Design		1-8-87	Traffic	
A.C.E. Hydrology		1/9/87	Water	



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	TYPE I WHEEL CHAIR RAMP (PER C.O.A. DWG. P-17)

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NOTE:

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2. SEE SHEET 10 FOR PLAN & PROFILES.
3. SEE SHEET 4 FOR TYP. INTERSECTION DETAILS.

AS BUILT INFORMATION

BENCH MARKS

SURVEY INFORMATION

FIELD NOTES

NO. | BY | DATE

ENGINEER'S SEAL

REMARKS

NO. | DATE | BY

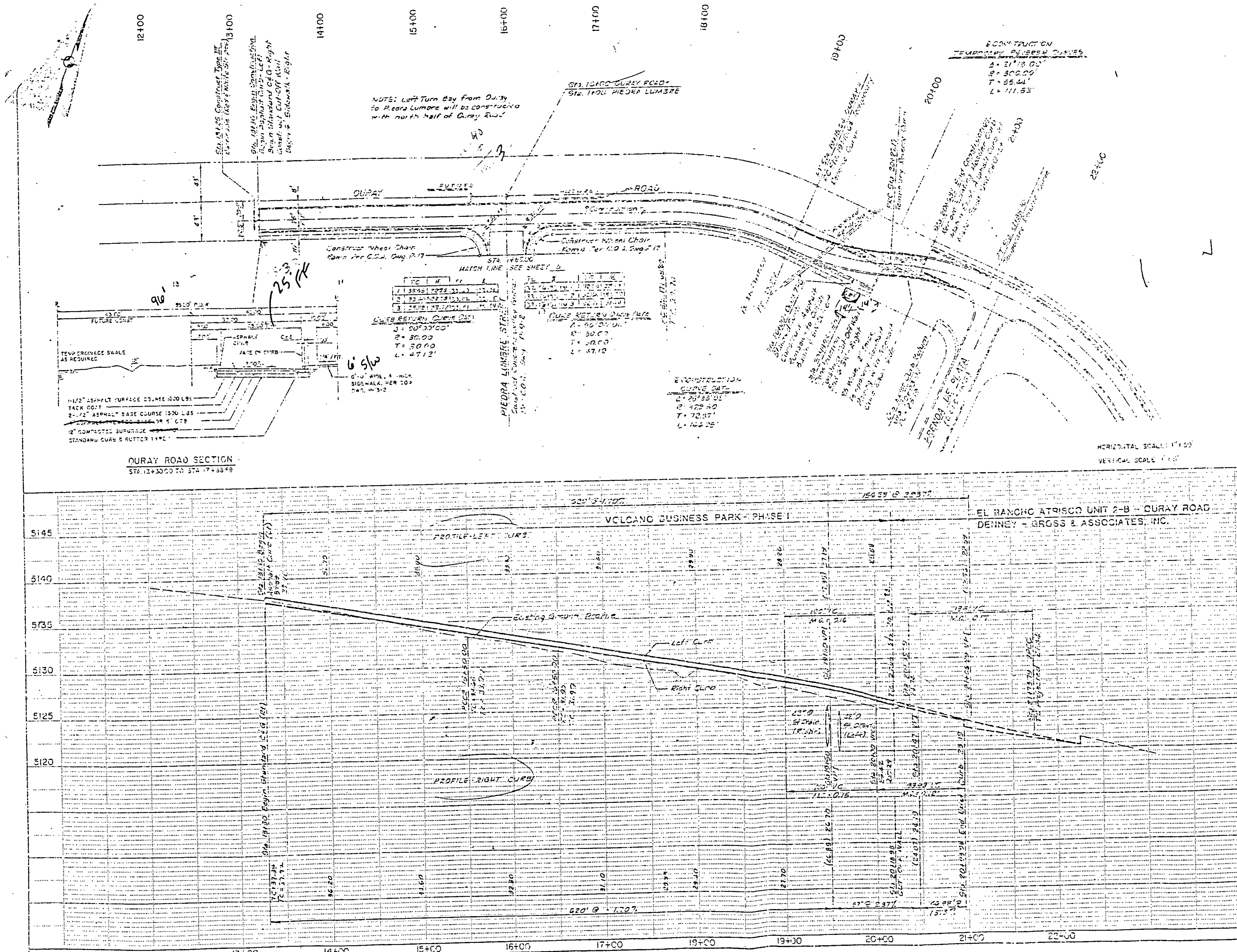
GREINER ENGINEERING
2601 Wyoming NE
Albuquerque, New Mexico 87112
(505) 292-1936

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPT.

TITLE: SAD 215 01582

INTERSECTION OF UNSER BLVD. AND OURAY

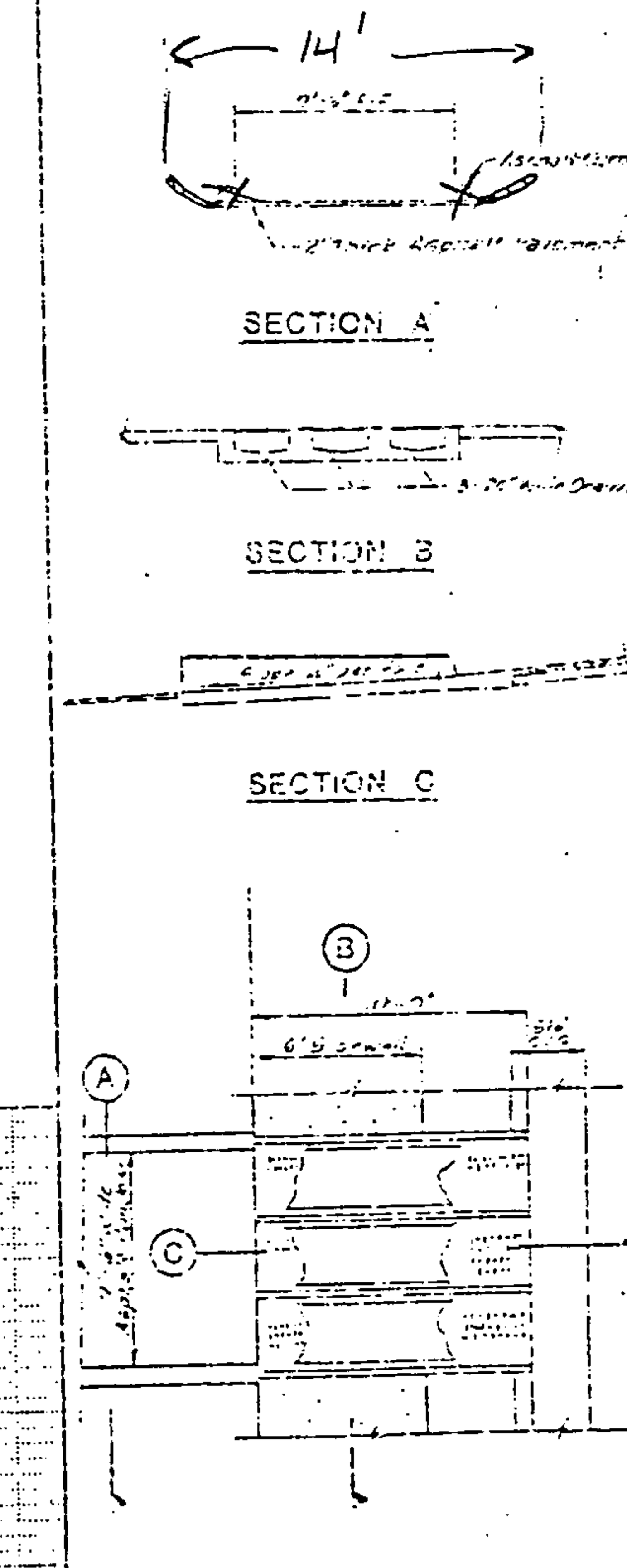
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER
City Engineer	[illegible]	1/9/87	Liquid Waste	[illegible]
~~A.C.E.~~ Design	[illegible]	1-8-87	Traffic	[illegible]
~~A.C.E.~~ Hydrology	[illegible]	1/9/87	Water	[illegible]



2. CONSTRUCT REVERSE CURVE CONNECTION BETWEEN NEW CONSTRUCTION AND EXISTING OURAY ROAD AS SHOWN.

3. REVERSE CURVE CONNECTION SHALL BE CONSTRUCTED WITH A TWO INCH THICK TEMPORARY ASPHALTIC CONCRETE SURFACE, 25 FEET WIDE AND ASPHALT CURB ON EACH SIDE.

4. PROVIDE FOUR 2'0" WIDE OPENINGS IN TEMPORARY ASPHALT CURB FOR DRAINAGE TO CATCH BASIN.



AS BUILTS

Name [signature]

Date 12-5-85

AS BUILT INFORMATION

BENCH MARKS

CITY OF ALBUQUERQUE BM 81-119

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

REVISIONS

NO.	DATE	REMARKS	BY

DESIGN

WESTLAND DEVELOPMENT CO., INC.
401 Coors Blvd. N.W.
Albuquerque, New Mexico 87105
(505) 831-9600

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

TITLE: VOLCANO BUSINESS PARK - PHASE I
OURAY ROAD - PAVING

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER
City Engineer	[signature]	6/12/85	Liquid Waste	
A.C.E.-Design	[signature]		Traffic	[signature]
A.C.E.-Hydrology	[signature]	5/5/85	Water	

DRAWING | MAP NO. | SHEET | OF

Tom Mann & Associates, Inc.
Engineers
811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110 • 505-265-5611

61582
August 31, 1987

Mr. Carlos Montoya
City of Albuquerque
Hydrology Section
P. O. Box 1293
Albuquerque, NM 87103

RECEIVED
SEP 03 1987
HYDROLOGY SECTION

Re: Volcano Business Park - Phase II

Dear Carlos:

As per our recent discussions, the previously approved Master Drainage Plan for Volcano Business Park needs to be clarified on the following items:

1. The existence of a continuous cross slope on the existing pavement.

2. The existence of a public easement for the catch basin at the east end of the Phase I Ouray Road improvements.

3. The capacity of Ouray. One lane should be kept dry during the 10-year storm since this roadway is a minor arterial.

I believe the attached documents clarify these three items. If you should have any further questions or comments regarding this information, please do not hesitate to call.

Sincerely,

TOM MANN & ASSOCIATES, INC.

Steven K. Schroll
Project Engineer

SKS:dj
Enclosures
xc: Leroy Chavez
Andre Houle

ALBUQUERQUE NEW MEXICO 1706

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

Mayor
Ken Schultz

DESIGN REVIEW COMMITTEE MEETING 8/26/87 1:30 p.m.

PROJECT: Volcano Business Park, Phase 2, Project #3324

CONSULTANT: Tom Man & Associates

IN ATTENDANCE: Andre Houle, DRC Chairman/Design Review Section
John Castillo, PWD/Engineering-Transportation Design
~~Carlos Montoya, PWD/Engineering-Hydrology Section~~
Steve Schroll, Tom Man & Associates
Jon Erstgaard, PWD/Engineering-Utility Development Division

The above mentioned project was submitted to the DRC for a final signature session. Following are a summary of the comments discussed at the meeting:

<u>John Castillo</u>:

1. On the paving plan show the cul-de-sac on Piedra Lumbre.
2. Revise asphalt curb to portland cement median curb along Ouray Rd.
3. Show median openings.
4. It was recommended to swab the left turn bay into the project for a left turn bay to the north, since construction would be easier.

<u>Carlos Montoya</u>:

1. The inlet must be in a public easement on the east side of development at the east most corner of Ouray Rd.

Water Utilities had no comments.

Plans were returned to the consultant for correction. Plans will be approved after above mentioned comments are incorporated.

AH/trs

cc: Attendees
Walter H. Nickerson, City Engineer/Development Division

G10/029

D.R.B. Case No. 87-596
D.R.C. Project No. 3324
Date Submitted 9-15-87

EXHIBIT "D"
to Subdivision Improvements Agreement

DEVELOPMENT REVIEW BOARD (D.R.B.)
REQUIRED INFRASTRUCTURE LISTING
for Volcano Business Park Phase II

Following is a summary of Public/Private Infrastructure required to be constructed or financially guaranteed to be constructed for the above development.

Size	*Type Improvement	Location	From	To
25'	Arterial Paving	Ouray Rd.	273' E. of Vulcan	Unser Blvd.
6'	Side Walk	Ouray Rd. (s. side)	273' E. of Vulcan	Unser Blvd.
	Curb & Gutter (s.side)	Ouray Rd. (s.side)	273' E. of Vulcan	Unser Blvd.
	Asphalt Curb (n.side)	Ouray Rd. (s.side)		
40'	Arterial Paving	Vulcan St.	Ouray Rd.	Piedra Lumbre St.
	Curb & Gutter (both sides)	Volcan St.	Ouray Rd.	Piedra Lumbre St.
	4' Sidewalk both sides	Vulcan St	Ouray Rd.	Piedra Lumbre St.
40'	Arterial Paving	Piedra Lumbre	Todos Santos	771' West
	4' Sidewalks both sides, Curb & Gutter both sides	Piedra Lumbre	Todos Santos	771' West
12"	Water line	Ouray Rd.	273' E. of Vulcan	Unser
8"	Water line	Vulcan St.	Ouray Rd.	Piedra Lumbre
8"	Water Line	Piedra Lumbre St.	Todos Santos	771' West
12"	Sanitary Sewer	Ouray Rd.	273' E. of Vulcan	Unser
8"	Sanitary Sewer	Vulcan St.	Ouray Rd.	Piedra Lumbre
8"	Sanitary Sewer	Piedra Lumbre St.	Todos Santos	771' West
10'	Concrete Channel	Within Drag Esmt.	Vulcan St.	254' East
Private) 10'	Concrete Channel	Within Drag Esmt.	Vulcan St.	345' West
Private)	Ditch & Dikes	Along W. Boundry of park	80' S. of Ouray	1125' South

Inlets in accordance with DPM Ouray Road (per SAD 215 hydraulic analysis and/or street criteria requirements)
Street Lighting not to be bonded

Prepared by ____________________
Print Name Leroy J. Chavez
Firm Westland Development Co., Inc.

****

Development Review Board Member Approvals

Daniel W. Hauman	9/15/87	[signature]	9-15-87	Janet Sauers	9-15-87
Traffic	Date	WUD	Date	Parks & Rec.	Date
[signature]	9/15/87			[signature]	9-15-87
City Engineer/AMAFCA	Date			DRB Chairman	Date

Fred Aguirre

G10/D24

8691530

87101765

AGREEMENT TO CONSTRUCT
SUBDIVISION IMPROVEMENTS
PUBLIC & PRIVATE

RECEIVED
OCT 05 1987
HYDROLOGY SECTION

(Procedure "B")

#3324

468

THIS AGREEMENT made this 22nd day of September, 1987, by and between the City of Albuquerque, New Mexico (hereinafter referred to as "City") and Westland Development Co., Inc. (hereinafter referred to as "Developer") pursuant to Section 6 of the City's Subdivision Ordinance (Enactment No. 56-1983, effective June 29, 1983).

WHEREAS, the Developer is developing certain lands within the City of Albuquerque, County of Bernalillo, State of New Mexico known as Volcano Business Park Phase I (hereinafter referred to as the "Subdivision"); and

WHEREAS, the Developer has submitted and the City has approved a preliminary plat identified as Volcano Business Park Phase II describing the Subdivision; and

WHEREAS, the preliminary plat submitted by the Developer proposes both private and public infrastructure improvements within the subdivision; and

WHEREAS, Section 6 of the City's Subdivision Ordinance requires the Developer to install and construct certain public improvements at no cost to the City; and

WHEREAS, the City requires the execution of an Agreement to construct said public improvements, together with actual satisfactory construction or acceptable guarantees of construction as specified below, as a prerequisite to approval of a Final Plat of the Subdivision; and

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

1987 SEP 30 PM 1:36
BK MS540A PG 468-484
GLADYS M. DAVIS
CO CLERK & RECORDER
DEPUTY

Rev. 12/85
(3558E)

WHEREAS, the Developer must obtain City approval of construction plans, specifications, and cost estimates for the improvements and upon City approval of such construction plans, specifications, and cost estimates the City is prepared to issue the Developer a Work Order permitting the commencement of construction activities upon execution of this Agreement and payment of allrequired fees, all as set forth and specified in Exhibit "A", which is attached hereto and incorporated herein as if fully set forth in this Agreement; and

WHEREAS, the City is willing to inspect or monitor the private inspection of the improvements during the course of their construction and accept said improvements upon their satisfactory completion, all as set forth and specified in Exhibit "B", which is attached hereto and incorporated herein as if fully set forth in this Agreement; and

WHEREAS, the Developer financially guarantees the satisfactory completion of the infrastructure construction required herein and the payment of all labor and material costs and charges, all as set forth and specified in Exhibit "C", which is attached hereto and incorporated herein as if fully set forth in this Agreement;

NOW, THEREFORE, in consideration of the above, the City and the Developer hereby agree as follows:

1. The Developer shall, on or before the 15th day of September, 1988, complete to the satisfaction of the City the improvements required for the Subdivision as set forth, specified and referenced in Exhibit "A" attached hereto. The improvements which the Developer shall satisfactorily complete within the time limitation stated above are described and identified in Exhibit "D", which is attached hereto and incorporated herein as fully set forth in this Agreement.

The time limitation stated above may be extended by the City Engineer for a period not to exceed twelve (12) months if the Developer shows adequate reasons for said extension.

2. After execution of this Agreement, payment of all fees as specified in Exhibit "A" attached hereto, and, if applicable, delivery of the financial guarantee specified in Exhibit "C" attached hereto, the Developer shall be issued a Work Order by the City. The Developer shall advise the City Engineer in advance of the actual start of construction and arrange for all inspections required and specified in Exhibit "B" attached hereto. The Developer shall permit the City or other participating agencies to make such tests and inspections during the construction of the improvements and upon completion of the improvements as are necessary or desirable.

3. a) Prior to final acceptance of the completed Public Improvements by the City, the Developer shall furnish to the City Engineer all documentation of the completion of construction as set forth and specified in Exhibit "A" attached hereto.

b) Prior to release of financial assurance, the Developer shall either provide Certification by a New Mexico registered Professional Engineer that the required Private Improvements have been constructed in compliance with approved plans and specifications or the Developer shall make necessary arrangements for Certification by the City Engineer that the required improvements are satisfactorily completed.

4. Until acceptance of the improvements by the City, the Developer shall be solely responsible for maintaining the premises being subdivided in a safe condition. The Developer agrees to defend, indemnify and hold harmless the City and its officers, agents and employees from and against all suits, actions or claims of any character brought because of any injury or damage arising out of the design or construction of the improvements or by reason of

any act or omission, or misconduct of the Developer, his agents, employees or the Engineer or Contractor or their agents or employees. The indemnity required hereunder shall not be limited by reason of the specifications of any particular insurance coverage in this Agreement. Nothing herein is intended to impair any right or indemnity under the laws of the State of New Mexico.

5. The Developer shall procure or cause to be procured and maintain public liability insurance in the amount of not less than One Million Dollars ($1,000,000) for accidents or occurrences which cause bodily injury, death or property damage to any member of the public resulting from any condition of the lands of the subdivision or improvements therein or the construction activities thereon. The insurance policy must name the City of Albuquerque, its employees, and elected officials, as their interest may appear, as additional insureds. The Developer shall maintain such insurance until acceptance of the improvements by the City. Any cancellation provision must provide that if the policy is cancelled prior to the expiration date hereof, materially changed, or not renewed, the issuing company will mail 30 days written notice to the City, attention City Engineer. The Developer shall furnish the Ctiy Engineer a certificate of said insurance prior to issuance of a Work Order for construction of the improvements.

6. If at the time that construction of the Project is completed the City does not own the real property on or in which the improvements are constructed, the Developer shall convey such real property and property rights as the City deems necessary, together with all improvements, to the City free and clear of all claims, encumbrances and liens prior to final acceptance of the improvements by the City. Conveyance may be appropriate dedication on the final plat of the subdivision.

7. At the time of acceptance of the completed improvements or any portion thereof by the City, the Developer shall furnish or cause to be furnished a bond or other suitable guarantee in a form and with a surety satisfactory to the City to guarantee the completed project against defective materials and workmanship for a period of three (3) years following the date of acceptance by the City.

8. The City shall either perform or monitor the performance of inspections during the course of construction of the improvements and inspect the improvements upon their completion in a timely manner, all as set forth and specified in Exhibit "B" attached hereto.

9. The City shall designate a Construction Engineer and/or Inspector for this project.

10. The City shall make available at established reproduction costs for the use of the Developer or its agents all of its maps, records, laboratory tests, or other data pertinent to the work to be performed by the Developer or its agents pursuant to this Agreement and also any other maps, records, or other materials available to the City upon the City's request to any other public agency or body.

11. a) The City shall issue a Certificate of Completion and Acceptance for the Public Improvements upon final completion to the City's satisfaction of the Improvements as described in the plans and specifications as set forth and specified in Exhibit "A" attached hereto.

b) The City shall issue a Certificate of Completion for the Private Improvements upon final completion to the City's satisfaction of the Private Improvements as described in the plans and specifications as set forth and specified in Exhibit "A" attached hereto.

12. If the Developer has requested Final Plat approval by the City prior to the actual construction of the improvements, the City will approve the Final Plat for recordation upon execution of this Agreement, payment of all fees specified in Exhibit "A" attached hereto, delivery of the financial guarantee specified in Exhibit "C" attached hereto and full compliance with the City's Subdivision Ordinance.

13. This Agreement shall not be assigned except with the written consent of the parties hereto and the express written concurrence of any surety who has undertaken to guarantee the completion of the Improvements. If so assigned, this Agreement shall extend to and be binding upon the successors and assigns of the parties hereto.

14. In the event of the sale, conveyance, or assignment of the Subdivision or any portion thereof, the City will not release the Developer from its obligations under this Agreement and will continue to hold the Developer responsible for all Improvements until a successor in interest to the Developer has posted a suitable guarantee and entered into a Subdivision Improvement Agreement with the City. At such time as acceptable security has been posted by the Developer's successor in interest and the Agreement executed, the City will release the guarantee.

15. Should there be a conflict between the terms and conditions of this Agreement (with Exhibits A, B, C, and D) and the terms and conditions of any other document referred to herein, the terms and conditions of this Agreement (with Exhibits A, B, C, and D) shall govern.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

DEVELOPER

Gil E. Cordova
Signed
Gil E. Cordova
Name
President and CEO
Title

ATTEST:

n/a
City Clerk

REVIEWED BY:

Assistant City Attorney

9/18
City Attorney

CITY OF ALBUQUERQUE, NEW MEXICO

Walter H. Nickerson, Jr.,
City Engineer

Gene Romo
Chief Administrative Officer

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 9 day of SEPTEMBER, 19 87, by GIL E. CORDOVA, PRESIDENT & CEO of WESTLAND DEVELOPMENT CO., INC.

OFFICIAL SEAL
LINDA J. BLAIR
NOTARY PUBLIC - STATE OF NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires: 7/5/89

Linda J. Blair
Notary Public

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 22nd day of September, 1987, by Gene Romo, Chief Administrative Officer of the City of Albuquerque.

Priscilla Phillips
Notary Public

My Commission Expires:

3-17-90

EXHIBIT "A"

475

TO SUBDIVISION IMPROVEMENT AGREEMENT
EXECUTED BY AND BETWEEN Westland Development Co.Inc (DEVELOPER)
AND CITY OF ALBUQUERQUE, NEW MEXICO (CITY) ON
THE 22nd DAY OF September, 1987.

1. COMMITMENT TO CONSTRUCT IMPROVEMENTS.

The Developer shall construct in a manner satisfactory to the City the improvements listed in Paragraph 1 of the Subdivision Improvement Agreement and which are shown in greater detail on the Developer's proposed and approved Subdivision Improvements Plan, which was filed with the office of the City Engineer and identified as Project No. 3324.

2. DESIGN AND CONSTRUCTION METHODS.

As soon as reasonably practical after approval of the Developer's Preliminary Plat of the Subdivision, the Developer shall submit to the City Engineer final construction plans, specifications, and cost estimates for the proposed public improvements. At this time, the Developer shall pay all fees required under Section 12.D of the City's Subdivision Ordinance and Paragraph 4 of this Exhibit.

The Developer has engaged Tom Mann & Associates as Engineer(s) for the construction project, who are Registered Professional Engineers in the State of New Mexico. The Developer shall ensure that the Engineer(s), in such capacity, shall provide the following services prior to, during, and after construction of the improvements:

Design of Infrastructure Improvements

The Developer shall ensure that the Engineer(s) perform all of the above services in a satisfactory manner and submit to the City Engineer any reports required by the City Engineer.

The Developer has engaged Construction Contracting & Management, Inc. as Contractor(s), who is properly licensed in the State of New Mexico. The Developer shall ensure that the Contractor(s), in such capacity, shall in a manner satisfactory to the City construct the improvements as shown on Developer's proposed Subdivision Improvements Plan (Project No. 3324), incorporating any change orders approved by the City Engineer, City of Albuquerque Interim Standard Specifications for Public Works Construction, 1986 and all other applicable laws, regulations, and policies. Construction surveying and testing shall be performed as set forth in Exhibit "B" of the Subdivision Improvement Agreement between Developer and the City.

3. COMPLETION OF CONSTRUCTION.

The Developer shall report the completion of construction in writing to the City Engineer. Upon receipt of the report, the City Engineer or his representative shall visually inspect the public improvements to verify completion of construction according to plan. Subsequent to verification, the Developer shall submit to the City Engineer a "final acceptance package", which shall consist of the following documents:

a. "As-built" drawings of reproducible quality, depicting all construction of the public improvements as actually accomplished in the field and certified by a New Mexico Registered Professional Engineer or Land Surveyor, as appropriate,

b. A list of quantities of contract items in place, using the bid items in the City Engineer's Standard Estimated Unit Prices.

This list shall be divided into the following categories as applicable:

(1) Sanitary sewer items and quantities;

(2) Water service items and quantities;

(3) Street paving quantities;

(4) Street curb and gutter quantities; and

(5) Storm drainage improvements and quantities.

The City shall concurrently provide a written certification from the City Engineer that the construction has been performed in substantial compliance with the City of Albuquerque Interim Standard Specifications for Public Works Construction, 1986, and with the approved final plans and specifications for public improvements. If the City is acting as the Contractor for all or a portion of the improvements constructed pursuant to this Agreement, the City shall prepare its own final acceptance package documents for those improvements actually constructed by the City.

Upon receipt of the Developer's "final acceptance package", the City Engineer shall review it for completeness and accuracy. If the documentation has been satisfactorily completed, the City Engineer shall approve the package and issue a Certificate of Completion and Acceptance. Any financial guarantee provided by the Developer in accordance with Section 6.D.2 of the City's Subdivision Ordinance and as described in Exhibit "C" to the Subdivision Improvement Agreement between the Developer and the City shall be released no later than sixty (60) days after approval of the first acceptance package by the City Engineer.

4. PAYMENT OF FEES.

Prior to issuance of a Work Order, the Developer shall pay to the City the following fees:

Type of Fee	Amount
Engineering Fee	6% of actual construction (both public & private) cost
Excavation Ordinance Fee	As required per City approved engineer's estimate
Sidewalk Ordinance Fee	As required per City approved engineer's estimate

Prior to final acceptance of the improvements by the City, the Developer shall pay any other City fees which may have been incurred during the course of construction.

EXHIBIT "B"
TO SUBDIVISION IMPROVEMENT AGREEMENT
EXECUTED BETWEEN Westland Development Co Inc (DEVELOPER)
AND THE CITY OF ALBUQUERQUE (CITY)
ON THE 22nd DAY OF September, 1987.

1. CONSTRUCTION INSPECTION METHODS.

Inspection of the subdivision improvement construction shall be performed by City of Albuquerque on private facilities and by City of Albuquerque on public facilities both being New Mexico Registered Professional Engineers, in accordance with all applicable laws, ordinances and regulations. If said inspection is performed by an entity other than the City, the City may monitor said inspection and the Developer shall ensure that the inspecting entity provides all inspection results, reports and related data to the City as required for review. The City retains the right to perform its own general overall inspection of the construction project at any time prior to final acceptance of the improvements if deemed necessary or advisable by the City Engineer. For any inspections performed by the City, the Developer shall pay to the City a reasonable fee therefor.

2. CONSTRUCTION SURVEYING.

Construction surveying for the subdivision improvement project shall be performed by City of Albuquerque on private facilities and by City of Albuquerque on public facilities in accordance with all applicable laws, ordinances and regulations. If said construction surveying is performed by an entity other than the City, the City may monitor said construction surveying and the Developer shall ensure that the construction surveying entity provides all construction surveying field notes, plats, reports and related data to the City as required for review. If any construction surveying is performed by the City, the Developer shall pay to the City a reasonable fee therefor.

3. FIELD TESTING.

Field testing of the subdivision improvement construction shall be performed by Western Technologies, Inc. on private facilities and by Western Technologies, Inc. on public facilities, each being a certified testing laboratory under the supervision of a New Mexico Registered Professional Engineer, in accordance with the technical standards contained in the applicable contract documents and all applicable laws, ordinances and regulations. If any field testing is performed by an entity other than the City, the City may monitor said field testing and the Developer shall ensure that the field testing entity provides all field testing results, reports and related data to the City as required for review. If any field testing is performed by the City, the Developer shall pay to the City a reasonable fee therefor.

4. RECORD TESTING.

Notwithstanding the provisions of Paragraph 3 above, the City retains the right to perform any and all record testing which may be deemed necessary or advisable by the City Engineer at the expense of the Developer.

EXHIBIT "C"
TO SUBDIVISION IMPROVEMENT AGREEMENT
EXECUTED BETWEEN Westland Development Co Inc (DEVELOPER)
AND THE CITY OF ALBUQUERQUE (CITY) ON
THE 22nd DAY OF September, 1987.

1. PLAT APPROVAL STATUS

The Developer has/has not (circle one) requested final plat approval by the City prior to construction of the Subdivision Improvements described in Paragraph 1 of the Subdivision Improvement Agreement. If the Developer has not requested final plat approval prior to construction of the improvements, no financial guarantee is required by the City. However, the Developer understands and agrees that the City will not approve the Developer's proposed plat until the improvements are completed in accordance with the Agreement to which this document is attached as an Exhibit.

If the Developer has requested final plat approval prior to the construction of the improvements, a financial guarantee in an amount of not less than 125 percent of the costs of completing the improvements (as estimated by the City Engineer) is required pursuant to the City's Subdivision Ordinance. Said financial guarantee must be irrevocable in form and may be effected by a bond, letter of credit, escrow deposit, or other acceptable pledge of liquid assets payable to the City in the event of Developer's default under the Subdivision Improvement Agreement.

2. FINANCIAL GUARANTEE.

With respect to the Subdivision Improvement Agreement to which this document is attached as an Exhibit, the Developer has acquired or is able to acquire the following described financial guarantee (describe fully, indicate amount, identification number, names of bank or bonding entity, inclusive dates of guarantee, and all other relevant information):

N/A - Not requesting final plat signoff

The Developer understands and agrees that the original executed financial guarantee described above must be delivered to the City simultaneously with the City's execution of the Subdivision Improvement Agreement between Developer and the City; and must be in an amount of not less than 125 percent of the cost of completing the improvements, as estimated by the City Engineer.

In the event the Developer shall fail or neglect to fulfill his obligations under this Agreement, the City shall have the right to construct or cause to be constructed the Improvements specified herein, as shown on the Final Plat and in the plans and specifications as approved, and the Developer as Principal and the surety or sureties shall be jointly and severally liable to pay to and indemnify the City, the total cost to the City thereof, including but not limited to, engineering, legal, and contingent costs together with any damages, either direct or consequential, which the City may sustain on account of the failure of the Developer to carry out and execute all of the provisions of the Agreement to which this document is attached as an Exhibit. The City shall have the unconditional right to call upon the financial guarantee provided by the Developer described in this paragraph for the purposes specified and in the amounts enumerated in such guarantee.

3. PROCEDURES FOR REDUCTION OF FINANCIAL GUARANTEE UPON PARTIAL COMPLETION OF IMPROVEMENTS.

The Developer may request a reduction in the amount of financial guarantee upon partial completion of the subdivision improvements. To qualify for a financial guarantee reduction, the completed improvements must be of a free-standing nature, functionally independent of any uncompleted improvements, and completed in substantial compliance with the subdivision improvement construction plans as determined by an inspection conducted by the City.

If the completed improvements meet the above requirements, the City Engineer will then estimate the cost of completing the remaining improvements. The Developer may then submit the following documents to the City for review and approval:

a) A revised financial guarantee in an amount of not less than 125 percent of the City Engineer's estimated cost of completing the remaining improvements;

b) A release of the original financial guarantee for execution by the City;

c) Documentation that the completed improvements and the land in which the completed improvements are located are subject to no liens, claims or other encumbrances;

d) A bond or other suitable instrument guaranteeing the completed improvements against defective materials and workmanship for a period of three (3) years as set forth in Paragraph 7 of the Subdivision Improvement Agreement between the Developer and the City.

Upon receipt of the above-described documents in forms acceptable to the City, the City shall issue a Certificate of Completion and Acceptance for the completed improvements and accepts the revised financial guarantee tendered by the Developer.

D.R.B. Case No. 87-596
D.R.C. Project No. 3324
Date Submitted 9-15-87

484

EXHIBIT "D"
to Subdivision Improvements Agreement

DEVELOPMENT REVIEW BOARD (D.R.B.)
REQUIRED INFRASTRUCTURE LISTING
for Volcano Business Park Phase II

Following is a summary of Public/Private Infrastructure required to be constructed or financially guaranteed to be constructed for the above development.

	Size	*Type Improvement	Location	From	To
	25'	Arterial Paving	Ouray Rd.	273' E. of Vulcan	Unser Blvd.
	6'	Side Walk	Ouray Rd. (s. side)	273' E. of Vulcan	Unser Blvd.
		Curb & Gutter (s.side) Asphalt Curb (n.side)	Ouray Rd. (s.side) Ouray Rd. (s.side)	273' E. of Vulcan	Unser Blvd.
	40'	Arterial Paving	Vulcan St.	Ouray Rd.	Piedra Lumbre St.
		Curb & Gutter (both sides)	Volcan St.	Ouray Rd.	Piedra Lumbre St.
	4'	Sidewalk both sides	Vulcan St	Ouray Rd.	Piedra Lumbre St.
	40'	Arterial Paving	Piedra Lumbre	Todos Santos	771' West
	4'	Sidewalks both sides, Curb & Gutter both sides	Piedra Lumbre	Todos Santos	771' West
	12"	Water line	Ouray Rd.	273' E. of Vulcan	Unser
	8"	Water line	Vulcan St.	Ouray Rd.	Piedra Lumbre
	8"	Water Line	Piedra Lumbre St.	Todos Santos	771' West
	12"	Sanitary Sewer	Ouray Rd.	273' E. of Vulcan	Unser
	8"	Sanitary Sewer	Vulcan St.	Ouray Rd.	Piedra Lumbre
	8"	Sanitary Sewer	Piedra Lumbre St.	Todos Santos	771' West
	10'	Concrete Channel	Within Drag. Esmt.	Vulcan St.	254' East
Private)	10'	Concrete Channel	Within Drag Esmt.	Vulcan St.	345' West
Private)		Ditch & Dikes	Along W. Boundry of park	80' S. of Ouray	1125' South
		Inlets in accordance with app. Ouray Road		per SAD 215 hydraulic analysis and/or street criteria requirement	
		Street Lighting, not to be bonded			

Prepared by [signature]
Print Name Leroy J. Chavez
Firm Westland Development Co., Inc.

****

Development Review Board Member Approvals

[signature]	9/15/87	[signature]	9-15-87	Janet Saiers	9-15-87
Traffic	Date	WUD	Date	Parks & Rec.	Date
[signature]	9/15/87			[signature]	9-15-87
City Engineer/AMAFCA	Date			DRB Chairman	Date

86 43952

RECEIVED MAY 27 1986 HYDROLOGY SECTION

4057 G10/029

960

RELEASE OF AGREEMENT

THIS RELEASE, EXECUTED THIS 28th DAY OF April, 1986.

WHEREAS the City of Albuquerque, New Mexico, a municipal corporation (hereinafter referred to as the City) and Westland Development Co., Inc. (hereinafter referred to as Developer), entered into an Agreement dated the 21st day of June, 1985 and recorded in the records of Bernalillo County, New Mexico at Book Misc. 241-A, pages 212-229, whereby Developer agreed to construct certain subdivision improvements; and

WHEREAS the Developer has completed the improvements to the satisfaction of the City and has otherwise fully performed all of its obligations under the above-mentioned Agreement;

NOW THEREFORE, in consideration of the above, the City does hereby release and discharge Developer from all obligations and covenants contained in the above-mentioned Agreement.

ATTEST:

City Clerk

APPROVED AS TO FORM:

Assistant City Attorney

4/21

City Attorney

CITY OF ALBUQUERQUE, NEW MEXICO

Gene Romo
Chief Administrative Officer

James N. Hicks, Jr., Principal Engineer, Design Division, PWD

STATE OF NEW MEXICO COUNTY OF BERNALILLO FILED FOR RECORD
1986 MAY 19 AM 8:15
Misc 352A PG 960
DOLORES C. WALLER CO. CLERK & RECORDER
DEPUTY

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me on this ____ day of April, 1986, by Gene Romo, Chief Administrative Officer of the City of Albuquerque, a municipal corporation on behalf of said corporation.

Notary Public

My Commission Expires:

3-17-90

Rev. 10/85
(0108E)

83 31676 G101024 (#2404) 7057 871

AMENDMENT TO
AGREEMENT TO CONSTRUCT SUBDIVISION IMPROVEMENTS

That certain Agreement to Construct Subdivision Improvements ("Agreement") entered into between the City of Albuquerque and Westland Development Co., Inc. on June 21, 1985 and recorded at Book Misc. 241-A, Pages 212-229-A, of the records of the Clerk of Bernalillo County, New Mexico is hereby amended as follows:

Delete Section 2 of EXHIBIT "A" to Agreement and substitute the following:

2. DESIGN AND CONSTRUCTION METHODS

As soon as reasonably practical after approval of the Developer's Preliminary Plat of the Subdivision, the Developer shall submit to the City engineer final construction plans, specifications, and cost estimates for the proposed public improvements. At this time, the Developer shall pay all fees required under Section 12.D of the City's Subdivision Ordinance and Paragraph 4 of this Exhibit.

The Developer has engaged Claude Pilley, PE/LS, as Engineer for the construction project, who is a Registered Professional Engineer in the State of New Mexico. The Developer shall ensure that the Engineer, in such capacity, shall provide the following services prior to, during, and after construction of the improvements:

Design of Infrastructure Improvements

The Developer has engaged Ronald R. Bohannan, P.E., as Engineer for the construction project, who is a Registered Professional Engineer in the State of New Mexico. The Developer shall ensure that the Engineer, in such capacity, shall provide the following services prior to, during, and after construction of the improvements:

Inspection of Private Improvements
Certification of Private Improvements

The Developer shall ensure that the Engineer(s) perform all of the above services in a satisfactory manner and submit to the City Engineer any reports required by the City Engineer.

The Developer has engaged New Concepts, Inc. as Contractor, who is properly licensed in the State of New Mexico. The Developer shall ensure that the Contractor(s), in such capacity, shall in a manner satisfactory to the City construct the improvements as shown on Developer's proposed Subdivision Improvments Plan (Project No. 2404), incorporating any change orders approved by the City Engineer, Contract Documents for Public Works Contract No. 85-1, and all other applicable laws, regulations, and policies. Construction surveying and testing shall be performed as set forth in Exhibit "B" of the Subdivision Improvement Agreement between Developer and the City.

All other terms of the Agreemnet shall remain unchanged.

Executed this 10TH day of APRIL, 1986.

DEVELOPER

Signed
Name: Gil E. Cordova
Title: President and Chief Executive Officer

CITY OF ALBUQUERQUE, NEW MEXICO

C. Dwayne Sheppard 3/11/86
City Engineer

Gene Romo
Chief Administrative Officer

ATTEST:

City Clerk

REVIEWED AS TO FORM:

Assistant City Attorney

City Attorney

ACKNOWLEDGEMENTS

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 13TH day of MARCH, 1986, by Gil E. Cordova, President and Chief Executive Officer, Westland Development Co., Inc..

OFFICIAL SEAL
LINDA J. BLAIR
NOTARY PUBLIC - STATE OF NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires 8/5/89

Linda J. Blair
Notary Public

My commission expires:

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 31st day of March, 1986, by C. Dwayne Sheppard, City Engineer of the City of Albuquerque.

Carmen L. Castillo
Notary Public

My commission expires:
3/24/89

OFFICIAL SEAL
CARMEN L. CASTILLO
NOTARY PUBLIC - STATE OF NEW MEXICO
My Commission Expires 3/24/89

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 9th day of April, 1986, by Gene Romo, Chief Administrative Officer of the City of Albuquerque.

Priscilla Phillips
Notary Public

My commission expires:

3-17-90

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

1986 APR 11 PM 1:14

Misc 340A PG 871-873
DOLORES C. WALLER
CO. CLERK & RECORDER

#2404 212

85 49547

G10/029

AGREEMENT TO CONSTRUCT
SUBDIVISION IMPROVEMENTS

THIS AGREEMENT made this 21st day of JUNE, 1985, by and between the City of Albuquerque, New Mexico (hereinafter referred to as "City"), and WESTLAND DEVELOPMENT CO., INC. (hereinafter referred to as "Developer") pursuant to Section 6 of the City's Subdivision Ordinance (Enactment No. 56-1983, effective June 29, 1983).

WHEREAS, the Developer is developing certain lands within the City of Albuquerque, County of Bernalillo, State of New Mexico known as VOLCANO BUSINESS PARK (hereinafter referred to as the "Subdivision"); and

WHEREAS, the preliminary plat submitted by the Developer proposes both private and public infrastructure improvements within the subdivision; and

WHEREAS, Section 6 of the City's Subdivision Ordinance requires the Developer to install and construct certain public improvements at no cost to the City; and

WHEREAS, the City requires the execution of an Agreement to construct said public improvements, together with actual satisfactory construction or acceptable guarantees to construct as specified below, as a prerequisite to approval of a Final Plat of the Subdivision; and

WHEREAS, the Developer must obtain City approval of construction plans, specifications, and cost estimates and the City is prepared to issue the Developer a Work Order permitting the commencement of construction activities upon execution of this Agreement and payment of all required fees, all as set forth and specified in Exhibit "A", which is attached hereto and incorporated herein as if fully set forth in this Agreement; and

WHEREAS, the City is [illegible] monitor the private inspection of the improvements during the course of their construction and accept said improvements upon their satisfactory completion, all as set forth and specified in Exhibit "B", which is attached hereto and incorporated herein as if fully set forth in this Agreement; and

WHEREAS, the Developer [illegible] guarantees the satisfactory completion of the infrastructure construction required herein and the payment of all labor and materials cost and charges, all set for and specified in Exhibit "C", which is attached hereto and incorporated as if fully set forth in this Agreement;

NOW THEREFORE, in consideration of the above, the City and the Developer hereby agree as follows:

1. The Developer shall, on or before the 1st day of JUNE, 1987, complete to the satisfaction of the City improvements required for the Subdivision as set forth, specified and referenced in Exhibit "A" attached hereto. The improvements which the Developer shall satisfactorily complete within the time limitation stated above are described and identified as follows:

VOLCANO BUSINESS PARK - PHASE I

TYPE OF IMPROVEMENT & LOCATION

TRAFFIC IMPROVEMENTS:

1. Ouray Road, 25'' in width, from 270' West of Piedra Lumbre Street to 170' East of Piedra Lumbre Street. Said road consisting of a 6' sidewalk, standard curb and gutter on the South and permanent asphalt curb on the North. From that point, 300' East to the existing pavement on Ouray, consisting of temporary pavement and temporary curb. This section will also include a 6' sidewalk and standard curbs and gutters built out along R.O.W. of Ouray and tying into the curb return at Ouray and Piedra De Plata. Overall length will be approximately 694'.

2. Piedra Lumbre Street 40' in width from Ouray Road to West P.C. of Piedra Lumbre. Said road consisting of standard curb and gutter on both sides, approximately 1023' in length.

Total Traffic Improvement Cost = $102,410.80

WATER & SEWER IMPROVEMENTS:

1. 12" water line along Ouray Road including a Meter Manhole with a 10" mainline meter, a Pressure Reducing Station with 3" and 4" pressure reducing valves - approximate length of 12" line is 725'.

2. 8" water line along Piedra Lumbre St. - approximately 1055' including all service lines, fire hydrants and valves.

3. 12" SAS line along Ouray Road - approximately 700', including all service connections and manholes.

4. 8" SAS line along Piedra Lumbre St. - approximately 1045' including all service connections and manholes.

Total Water Improvement Cost = $47,504.50
Total Sewer Improvement Cost = $37,447.50

STORM SEWER IMPROVEMENTS:

1. 180' of 48" R.C.P. storm drain and 496' of 42" RCP, located in and across Lot 1 and tying into an existing energy dissipater North of Ouray.

2. 3 Type A & 1 Double D Catch Basins located in Piedra Lumbre St. which tie into the 48" R.C.P. storm drain and 1 Type D Catch Basin in Ouray Rd.

3. A private 10' wide concrete drainage channel structure, to feed into catch basin in Piedra Lumbre St. - approximately 238' in length. Located West of Piedra Lumbre between Lots 11 and 12.

4. A private 40' by 40' temporary disilting pond located West of the concrete channel. West of that will be a temporary diversion ditch and dike - approximately 290' in length extending across the proposed Vulcan Road.

Total Storm Sewer Improvement Cost = $107,547.00

PHASE I TOTAL IMPROVEMENT COST = $294,939.80
(Excluding permits, bonds and taxes)

The time limitation stated above may be extended by the City Engineer for a period not to exceed twelve (12) months if the Developer shows adequate reasons for said extension.

2. After execution of this Agreement, payment of all fees as specified in Exhibit "A" attached hereto, and , if applicable,

delivery of the financial guarantee specified in Exhibit "C" attached hereto, the Developer shall be issued a Work Order by the City. The Developer shall advise the City Engineer in advance of the actual start of construction and arrange for all inspections required and specified in Exhibit "B" attached hereto. The Developer shall permit the City or other participating agencies to make such tests and inspections during the construction of the improvements and upon completion of the improvements as are necessary or desirable.

3.a) Prior to the final acceptance of the completed Public Improvements by the City, the Developer shall furnish to the City Engineer all documentation of the completions of construction ~~as~~ as set forth and specified in Exhibit "A" attached hereto.

3.b) Prior to the release of financial assurance, the Developer shall either provide Certification by a New Mexico Registered Professional Engineer that the required Private Improvements have been constructed in compliance with approved plans and specifications or the Developer shall make necessary arrangements for Certification by the City Engineer that the required improvements are satisfactorily completed.

4. Until acceptance of the improvements by the City, the Developer shall be solely responsible for maintaining the premises being subdivided in a safe condition. Until acceptance of the improvements by the City, the Developer agrees to defend, indemnify and hold harmless the City and its officers, agents and employees from and against all suits, actions or claims of any character brought because of any injury or damage arising out of the design or construction of the improvements or by any reason of any act or omission, of misconduct of the Developer, his agents or the Engineer or Contractor or their agents or employees. The indemnity required hereunder shall not be limited by reason of the specifications of any particular insurance coverage in this Agreement. Nothing herein is intended to impair any right or indemnify under the laws of the State of New Mexico.

5. The Developer shall procure or cause to be procured and maintain public liability insurance in the amount of not less

than One Million Dollars ($1,000,000) for accident, injuries or death to any member of the public caused by any condition of the lands of the subdivision or improvements therein or the construction activities thereon. The Developer shall maintain such insurance until acceptance of the improvements by the City. The Developer shall furnish the City Engineer a certificate of said insurance prior to issuance of a Work Order for construction of the improvements.

6. If at the time that construction of the Project is completed the City does not own the real property on or in which the improvements are constructed, the Developer shall convey such real property and property rights as the City deems necessary, together with all improvements, to the City free and clear of all claims, encumbrances and liens prior to final acceptance of the improvements by the City. Conveyance may be by appropriate dedication on the final plat of the subdivision.

7. At the time of acceptance of the completed improvements or any portion thereof by the City, the Developer shall furnish or cause to be furnished a bond or other suitable guarantee in a form and with a surety satisfactory to the City to guarantee the completed project against defective materials and workmanship for a period of three (3) years following the date of acceptance by the City.

8. The City shall either perform or monitor the performance of inspections during the course of construction of the improvements and inspect the improvements upon their completion in a timely manner, all as set forth and specified in Exhibit "B" attached hereto.

9. The City shall designate a Construction Engineer and/or Inspector for this project.

10. The City shall make available, at established reproduction costs for the use of the Developer or its agents all of its maps, records, laboratory tests, or other data pertinent to the work to be performed by the Developer or its agents pursuant to this Agreement and also any other maps, records, or

[illegible] materials available to the City [illegible] the City's request to any other public agency or body.

11.a) The City shall issue a Certificate of Completion and Acceptance for the Public Improvements upon final completion, to the City's satisfaction of the Improvements described in the plans and specifications as set forth in Exhibit "A" attached hereto. attached hereto.

11.b) The City shall issue a Certificate of Completion for the Private Improvements upon final completion to the City's satisfaction of the Private Improvements as described in the plans and specifications as set forth and specified in Exhibit "A" attached hereto.

12. If the Developer has requested Final Plat approval by the City prior to the actual construction of the improvements, the City will approve the Final Plat for recordation upon execution of this Agreement, payment of all fees specified in Exhibit "A" attached hereto, delivery of financial guarantee specified in Exhibit "C" attached hereto and full compliance with the City's Subdivision Ordinance.

13. This Agreement shall not be assigned except with the written consent of the parties hereto and the express written concurrence of any surety who has undertaken to guarantee the completion of the Improvements. If so assigned, this Agreement shall extend to and be binding upon the successors and assigns of the parties hereto.

14. In the event of the sale, conveyance, or assignment of the Subdivision or any portion thereof, the City will not release the Developer from its obligations under this Agreement and will continue to hold the Developer responsible for all Improvements until a successor in interest to the Developer has posted a suitable guarantee and entered in a Subdivision Improvement Agreement with the City. At such time as acceptable security has been posted by the Developer's successor in interest and the Agreement executed, the City will release the guarantee.

15. Should there be a conflict between the terms and conditions of this Agreement (with Exhibits A, B, and C) and the

terms and conditions of any other document referred to herein, the terms and conditions of this Agreement (with Exhibits A, B, and C) shall govern.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

DEVELOPER:

Bol E. Cordova

Chief Executive Officer

ATTEST:

Georgie Lucidi

City Clerk

CITY OF ALBUQUERQUE

James N. Hicks

C. Dwayne Sheppard
City Engineer

Bob V. Stover 6-20-88

Bob V. Stover
Chief Administrative Officer

REVIEWED BY:

Adela W. Kearny

Assistant City Attorney

REVIEWED BY:

Greg O'Donell

City Attorney

STATE OF NEW MEXICO) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 4th day of June, 1985, by Gil E. Cordova, President & Chief Executive Officer of Westland Development Co., Inc.

Anita Maruli Allen
Notary Public

My commission expires:
10/4/88

STATE OF NEW MEXICO) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 14th day of June, 1985, ~~by~~ for C. Dwayne Sheppard, City Engineer of the City of Albuquerque. By James N. Hickson Jr.

Carmen L. Castillo
Notary Public

My commission expires:
2/24/89

OFFICIAL SEAL
CARMEN L. CASTILLO
NOTARY PUBLIC - STATE OF NEW MEXICO
My Commission Expires 2/24/89

STATE OF NEW MEXICO) ss.
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 20th day of June, 1985, by Bob V. Stover, Chief Administrative Officer of the City of Albuquerque.

Ida L. Grant
Notary Public

My commission expires:
12/18/88

EXHIBIT "A"

TO SUBDIVISION IMPROVEMENT DIVISION AGREEMENT

EXECUTED BY AND BETWEEN WESTLAND DEVELOPMENT CO., INC

AND THE CITY OF ALBUQUERQUE, NEW MEXICO ON

THE 21ST DAY OF JUNE, 1985.

1. COMMITMENT TO CONSTRUCT IMPROVEMENTS.

The Developer shall construct in a manner satisfactory to the City the improvements listed in Paragraph 1 of the Subdivision Improvement Agreement and which are shown in greater detail on the Developer's proposed and approved Subdivision Improvements Plan, which was filed with the office of the City Engineer and identified as Project No. 2404.

2. DESIGN AND CONSTRUCTION METHODS.

As soon as reasonably practical after approval of the Developer's Preliminary Plat of the Subdivision, the Developer shall submit to the City Engineer final construction plans, specifications, and cost estimates for the proposed public improvements. At this time, the Developer shall pay all fees required under Section 12.D of the City's Subdivision Ordinance and Paragraph 4 of this Exhibit.

The Developer has engaged CLAUDE PILLEY, PE/LS Engineer for the construction project, who is a Registered Professional Engineer in the State of New Mexico. The Developer shall ensure that the Engineer, in such capacity, shall provide the following services prior to, during, and after construction of the improvements:

_______ Design of Infrastructure Improvements. _______

_______ Inspection of Private Infrastructure. _______

_______ Certification of Private Improvements. _______

The Developer shall [illegible] the Engineer perform all of the above services in a satisfactory manner and submit to the City Engineer an[illegible] as required by the City Engineer.

The Developer has engaged NEW CONCEPTS, INC. as Contractor, who is properly licensed in the State of New Mexico. The Developer shall ensure that the Contractor(s), in such capacity, shall in a manner satisfactory to the City construct the improvements as shown on Developer's proposed Subdivision Improvements Plan (Project No. 2404), incorporating any change orders approved by the City Engineer, Contract Documents for Public Works Contract No. 85-1, and all other applicable laws, regulations, and policies. Construction surveying and testing shall be performed as set forth in Exhibit "B" of the Subdivision Improvement Agreement between Developer and the City.

3. COMPLETION OF CONSTRUCTION.

The Developer shall report the completion of construction in writing to the City Engineer. Upon receipt of the report, the City Engineer or his representative shall visually inspect the public improvements to verify completion of construction according to plan. Subsequent to verification, the Developer shall submit to the City Engineer a "final acceptance package", which shall consist of the following documents:

a. "As Built" drawings of reproducible quality, depicting all construction of the public improvements as actually accomplished in the field and certified by a New Mexico Registered Professional Engineer or Land Surveyor, as appropriate,

b. A list of quantities of contract items in place, using the bid items in the Contract Documents for City-wide Utilities and Cash Paving Contract No. 31 . This list shall be divided into the following categories as applicable:

(1) Sanitary sewer items and quantities;

(2) Water service items and quantities;

(3) Street paving quantities;

(4) Street curb and gutter quantities; and

(5) Storm drainage improvements and quantities.

The City shall concurrently provide a written certification from the City Engineer that the construction has been performed in substantial compliance with the Contract Documents for Public Work Contract No. 85-1 and with the approved final plans and specifications for public improvements. If the City is acting as the Contractor for all or a portion of the improvements constructed pursuant to this Agreements, the City shall prepare its own final acceptance package documents for those improvements actually constructed by the City.

Upon receipt of the Developer's "final acceptance package", the City Engineer shall review it for completeness and accuracy. If the documentation has been satisfactorily completed, the City Engineer shall approve the package and issue a Certificate of Completion and Acceptance. Any financial guarantee provided by the Developer in accordance with Section 6:D.2 of the City's Subdivision Ordinance and as described in Exhibit "C" to the Subdivision Improvement Agreement between Developer and the City shall be released no later than sixty (60) days after approval of the first acceptance package by the City Engineer.

4. PAYMENT OF FEES.

Prior to issuance of a Work Order, the Developer shall pay to the City the following fees:

TYPE OF FEE	AMOUNT:
Engineering Fee	6% of Actual Contract Amount for Public Improvements.
Excavation Fee	As Required By Approved City Estimate.
Sidewalk Ordinance Fee	As Required By Approved City Estimate.

Prior to final acceptance of the improvements by the City, the Developer shall pay any other City fees which may have been incurred during the course of construction.

END OF EXHIBIT A

EXHIBIT "B"

TO SUBDIVISION IMPROVEMENT AGREEMENT

EXECUTED BETWEEN WESTLAND DEVELOPMENT CO., INC.

AND THE CITY OF ALBUQUERQUE

ON THE 21ST DAY OF JUNE, 1985.

1. CONSTRUCTION INSPECTION METHODS.

Inspection of the subdivision improvement construction shall be performed by the City of Albuquerque, under the direction of a New Mexico Registered Professional Engineer, in accordance with all applicable laws, ordinances and regulations. If said inspection is performed by an entity other than the City, the City may monitor said inspection and the Developer shall ensure that the inspection entity provides all inspection results, reports, and related data to the City as required for review. The City retains the right to perform its own general overall inspection of the construction project at any time prior to final acceptance of the improvements if deemed necessary or advisable by the City Engineer. For any inspections performed by the City, the Developer shall pay to the City a reasonable fee therefor.

2. CONSTRUCTION SURVEYING.

Construction surveying for the subdivision improvement project shall be performed by the City of Albuquerque in accordance will all applicable laws, ordinances and regulations. If said construction surveying is performed by an entity other than the City, the City may monitor said construction surveying and the Developer shall ensure that the construction surveying entity provides all construction surveying field notes, plats, reports and related data to the City as required for review. If any construction surveying is performed by the City, the Developer shall pay to the City a reasonable fee therefor.

3. FIELD TESTING.

Field testing of the subdivision improvement construction shall be performed by the City of Albuquerque, under the direction of a certified testing laboratory under the supervision of a New Mexico Registered Professional Engineer, in accordance with the technical standards contained in the applicable contract documents and all applicable laws, ordinances, and regulations. If any field testing is performed by an entity other than the City, the City may monitor said field testing and the Developer shall ensure that the field testing entity provides all field testing results, reports and related data to the City as required for review. If any field testing is performed by the City, the Developer shall pay to the City a reasonable fee therefor.

4. RECORD TESTING.

Notwithstanding the provisions of Paragraph 3 above, the City retains the right to perform any and all record testing which may be deemed necessary or advisable by the City Engineer at the expense of the Developer.

END OF EXHIBIT B.

EXHIBIT "C"

TO SUBDIVISION IMPROVEMENT AGREEMENT

EXECUTED BETWEEN WESTLAND DEVELOPMENT CO., INC.

AND THE CITY OF ALBUQUERQUE (CITY) ON

THE 21st DAY OF JUNE, 1980.

1. PLAT APPROVAL STATUS.

The Developer has/has not (circle one) requested final plat approval by the City prior to construction of the Subdivision Improvements described in Paragraph 1 of the Subdivision Improvement Agreement. If the Developer has not requested final plat approval prior to construction of the improvements, no financial guarantee is required by the City. However, the Developer understands and agrees that the City will not approve the Developer's proposed plat until the improvements are completed in accordance with the Agreement to which this document is attached as an Exhibit.

If the Developer has requested final plat approval prior to the construction of the improvements, a financial guarantee in an amount of not less than 125 percent of the costs of completing the improvements (as estimated by the City Engineer) is required pursuant to the City's Subdivision Ordinance. Said financial guarantee must be irrevocable in form and may be effected by a bond, letter of credit, escrow deposit, or other acceptable pledge of liquid assets payable to the City in the event of Developer's default under the Subdivision Improvement Agreement.

2. FINANCIAL GUARANTEE.

With respect to the Subdivision Improvement Agreement to which this document is attached as an Exhibit, the Developer has acquired or is able to acquire the following described financial guarantee (describe fully, indicate amount, identification number, names of bank or bonding entity, inclusive dates of guarantee, and all other relevant information):

N/A

2. The Developer understands and agrees that the original executed financial guarantee described above must be delivered to the City simultaneously with the City's execution of the Subdivision Improvement Agreement between Developer and the City; and must be in the amount of not less than 125 percent of the cost of completing the improvements, as estimated by the City Engineer.

In the event the Developer shall fail or neglect to fulfill his obligations under this Agreement, the City shall have the right to construct or cause to be constructed the Improvements specified herein, as shown on the Final Plat and in the plans and specifications as approved, and the Developer as Principal and the surety or sureties shall be jointly and severally liable to pay to and indemnify the City, the total cost the City thereof, including but not limited to, engineering, legal, and contingent costs together with any damages, either direct or consequential, which the City may sustain on account of failure of the Developer to carry out and execute all of the provisions of the Agreement to which this document is attached as an Exhibit. The City shall have the unconditional right to call upon the financial guarantee provided by the Developer in this paragraph for the purposes specified and in the amounts enumerated in such guarantee.

3. PROCEDURES FOR REDUCTION OF FINANCIAL GUARANTEE UPON PARTIAL COMPLETION OF IMPROVEMENTS.

The Developer may request a reduction in the amount of financial guarantee upon partial completion of the subdivision improvements. To qualify for a financial guarantee reduction, the completed improvements must be of a free-standing nature, functionally independent of any uncompleted improvements," are completed in substantial compliance with the subdivision improvement construction plans as determined by an inspection conducted by the City.

If the completed improvements meet the above requirements, the City Engineer will then estimate the cost of completing the remaining improvements. The Developer may then submit the following documents to the City for review and approval:

a) A revised financial guarantee in an amount not less than 125 percent of the City Engineer's estimated cost of completing the remaining improvements;

b) A release of the original financial guarantee for execution by the City;

c) Documentation that the completed improvements and the land in which completed improvements are located are subject to no liens, claims, or other encumbrances;

d) A bond or other suitable instrument guaranteeing the completed improvements against defective materials and workmanship for a period of three (3) years as set forth in Paragraph 7 of the Subdivision Improvement Agreement between Developer and the City.

Upon receipt of the above-described documents in forms acceptable to the City, the City shall issue a Certificate of Completion and Acceptance for the completed improvements and accept the revised financial guarantee tendered by the Developer.

END OF EXHIBIT C

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED FOR RECORD

1985 JUN 21 AM 10:59
ms
BK 241A PG 212-229-A
DOLORES C. WALLER
CO. CLERK & RECORDER
[signature] DEPUTY

PNM JOB NO. ROWT #10133

565481

G10/D029

PNM

A personal commitment to New Mexico

Alvarado Square, Albuquerque, New Mexico 87158-2101

EASEMENT ENCROACHMENT AGREEMENT

THIS INFORMATION TO BE PROVIDED BY TITLE COMPANY

This Easement Encroachment Agreement made this 27 day of February, 20 04,

by and between (BUYER/BORROWER/OWNER) CAKO, LLC

whose address is 3021 Todos Santos NW STE F, Santa Fe, NM 87120,

(hereinafter called "First Party"), (his) (her) (their) (its) heirs, successors, and assigns, and PUBLIC SERVICE COMPANY OF NEW MEXICO, a New Mexico Corporation (hereinafter called "PNM"), and all collectively hereinafter called "Parties."

WITNESSETH:

WHEREAS, PNM is the Grantee of a certain Easement within the hereinafter described property;

WHEREAS, First Party desires to encroach upon the Easement as more particularly specified hereinafter; and

WHEREAS, PNM has agreed to said encroachment;

NOW THEREFORE, for and in valuable consideration, the receipt of which is hereby acknowledged, PNM does hereby grant First Party the right to encroach upon the Easement only to the extent of, and for the purposes set forth below:

PNM USE ONLY FOR LEGAL DESCRIPTION

PNM Project No. ROWT #10133

Encroachment of a Drainage Pond within a 200 foot wide easement in Lot 2, VOLCANO BUSINESS PARK PHASE I, situate within Section 3, T. 10 N., R. 2 E., N.M.P.M., Bernalillo County, New Mexico, as the same is shown and designated on said Plat filed for record in the Office of the County Clerk of Bernalillo County on April 24, 1986, in Plat Book C30, Page 78.

First Party hereby agrees that any contractor's equipment will maintain a minimum clearance of 20 feet to the overhead conductor and that there will be no disturbance of the soil within 5 feet of any PNM pole.

Said encroachment is more particularly shown on the drawing attached hereto and made a part hereof as Exhibit "A."

By granting the aforesaid right to encroach PNM does not waive or relinquish any rights or benefits that it may have, either expressed or implied, under or by reason of the Easement, including, but not limited to, the right to build, rebuild, construct, reconstruct, locate, relocate, In consideration of PNM granting First Party the right to encroach upon the Easement, First Party hereby agrees to indemnify and hold harmless PNM, its agents, officers, and employees from any and all claims whatsoever for personal injuries or damages to property when such injuries or damages directly or indirectly arise out of the existence, construction, maintenance, repair, condition, use, or presence of the encroachment upon the Easement, regardless of the cause of said injuries or damages; **provided**, however, that notwithstanding anything to the contrary in this paragraph, First Party shall not be required to indemnify PNM for liability, claims, damages, losses, or expenses, arising out of:

(a) The preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications by PNM or the agents or employees of PNM; or

(b) The giving of or the failure to give directions or instructions by PNM or the agents or employees of PNM, where such giving or failure to give directions or instructions is the primary cause of bodily injury to persons or damage to property.

In consideration of PNM permitting First Party to encroach upon the Easement, First Party agrees that PNM shall not be responsible for any damage caused to facilities, equipment, structures, or other property of First Party if damaged by reason of PNM's use of Easement.

First Party shall comply with all applicable laws, ordinances, rules, and regulations enacted or promulgated by any federal, state, or local governmental body having jurisdiction over First Party's encroachment.

The provisions hereof shall inure to the benefit of and bind the heirs, executors, administrators, personal representatives, mortgagees, lessees, tenants, successors, and assigns of the Parties hereto; **provided**, however, that no such heir, executor, administrator, personal representative, mortgagee, lessee, tenant, successor, or assign of First Party shall have the right to use, alter, or modify the encroachment in a manner which will increase the burden of the encroachment on the Easement.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the day and year first written above.

FIRST PARTY

[signature] ______________________

____

PUBLIC SERVICE COMPANY OF NEW MEXICO

By: [signature] ______________________
Rob Roberts, Manager, Right of Way Department

PNM USE ONLY

STATE OF NEW MEXICO }
COUNTY OF BERNALILLO } SS
This instrument was acknowledged before me on March 3, 20 04.
By Rob Roberts, Manager, Right of Way Department of the Public Service Company of New Mexico, a New Mexico corporation, on behalf of said corporation.

My commission expires: April 22, 2007
(Seal)

NOTARY PUBLIC STATE OF NEW MEXICO

Susie Rogers
Notary Public

ACKNOWLEDGEMENT FOR NATURAL PERSONS

STATE OF ______________________ **}**

COUNTY OF ______________________ **} SS**
This instrument was acknowledged before me on ______________________, **20**______.

By ______________________.

My commission expires:
(Seal)

____
Notary Public

ACKNOWLEDGEMENT FOR CORPORATIONS

STATE OF New Mexico **}**

COUNTY OF Curry **} SS**
This instrument was acknowledged before me on February 27, **20** 04

By LAWRENCE KOCEK Pres.
(Name of Officer) **(Title of Officer)**

of CAKQ LLC,
(Corporation Acknowledgement)

a NEW MEXICO **corporation, on behalf of said corporation.**
(State of Incorporation)

My commission expires: 10/30/04
(Seal)

NOTARY PUBLIC

Veronica Ulibarri
Notary Public

PNM REFERENCE NUMBER ______

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Mary Herrera Bern. Co. EASE R 13.00 Bk-A74 Pg-1228

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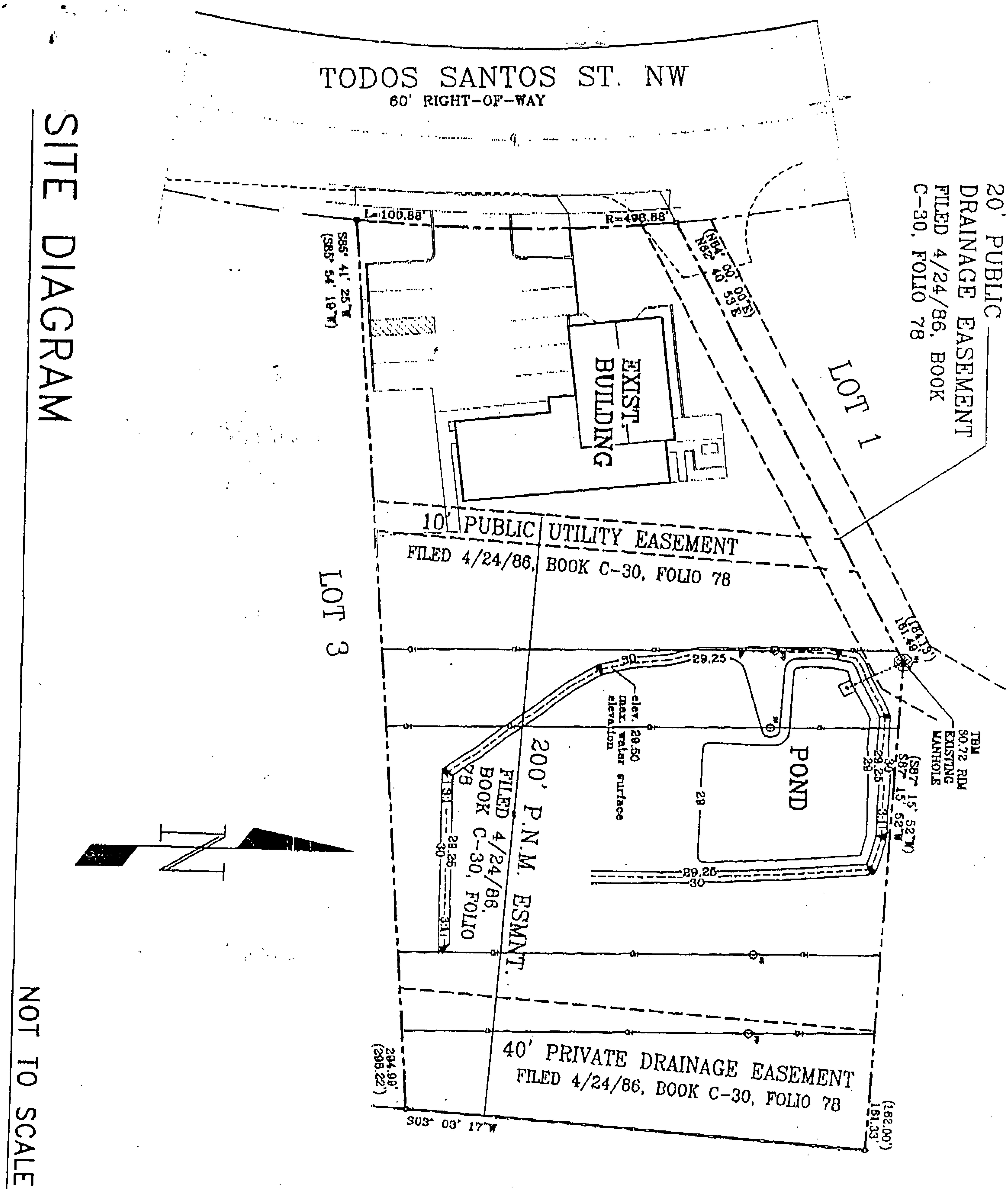

Exhibit "A"

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#1

PRIVATE FACILITY
DRAINAGE COVENANT

3/8/04

This Drainage Covenant, between [state the name of the present real property owner exactly as shown on the real estate document conveying title to the present owner and state the legal status of the owner, for example, "single person" "husband and wife," "corporation of the State of NEW MEXICO or "partnership":] ALLSTATE MECHANICAL, INC. ("Owner"), whose address is 3221 AXTELL ST. CLOVIS, NM 88101, and the City of Albuquerque, a New Mexico municipal corporation ("City"), whose address is P.O. Box 1293, Albuquerque, New Mexico 87103, is made in Albuquerque, Bernalillo County, New Mexico and is entered into as of the date Owner signs this Covenant.

1. Recital. The Owner is the owner of the following described real property located at [give legal description, and street address:] LOT 2 VOLCANO BUSINESS PARK FILED 4-24-86 C-30, FOLIO 78 3021 TODOS SANTOS NW

in Bernalillo County, New Mexico (the "Property").

Pursuant to City ordinances, regulations and other applicable laws, the Owner is required to construct and maintain certain drainage facilities on the Property, and the parties wish to enter into this Covenant to establish the obligations and responsibilities of the parties.

2. Description and Construction of Drainage Facility. The Owner shall construct the following "Drainage Facility" within the Property at the Owner's sole expense in accordance with the standards, plans and specifications approved by the City: DRAINAGE POND AND PIPE (6" DIA.) FROM DRAINAGE POND TO EXISTING STORM SEWER MANHOLE AS SHOWN ON CITY PROJECT #5654

The Drainage Facility is more particularly described in Exhibit A AND EXHIBIT B attached hereto and made a part hereof.

3. Maintenance of Drainage Facility. The Owner shall maintain the Drainage Facility at the Owner's sole cost in accordance with the approved Drainage Report and plans.

4. Benefit to Property. The Owner acknowledges and understands that the Drainage Facility required herein to be constructed on the Owner's property is for the private benefit and protection of the Owner's property and that failure to maintain such facility could result in damage or loss to the Property.

5. Inspection of Drainage Facility. The City shall have no duty or obligation whatsoever to perform any inspection, maintenance or repair of the Drainage Facility, it being the duty of the Owner, its heirs, successors and assigns to construct and maintain the facility in accordance with approved plans and specifications.

6. Liability of City. The O[...] that the City shall not be liable to the

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Mary Herrera Bern. Co. COV R 19.00 Bk-A74 Pg-1545

Owner, its heirs, successors or assigns, or to any third parties for any damages resulting from the Owner's failure to construct, maintain or repair the Drainage Facility.

7. Indemnification. The Owner owns and controls the Drainage Facility and shall not permit the Drainage Facility to constitute a hazard to the health or safety of the general public. The Owner agrees to indemnify, defend and hold harmless the City, its officials, agents and employees, from any claims, actions, suits or other proceedings arising from or out of the negligent acts or omissions of the Owner, its agents, representatives, contractors or subcontractors or arising from the failure of the Owner, its agents, representatives, contractor or subcontractors to perform any act or duty required of the Owner herein; provided, however, to the extent, if at all, Section 56-7-1 NMSA 1978 is applicable to this Agreement, this Agreement to indemnify will not extend to liability, claims, damages, losses or expenses, including attorney's fees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications by the respective indemnitee, or the agents or employees of the respective indemnitee; or (2) the giving of or the failure to give direction or instructions by the respective indemnitee, where such giving or failure to give directions or instructions is the primary cause of bodily injury to persons or damage to property.

8. Assessment. Nothing in this Covenant shall be construed to relieve the Owner, its heirs, assigns and successors from an assessment against the Owner's Property for improvements to the Property under a duly authorized and approved Special Assessment District. The parties specifically agree that the value of the Drainage Facility will not reduce the amount assessed by the City.

9. Binding on Owner's Property. The covenants and obligations of the Owner set forth herein shall be binding on the Owner, its heirs, assigns and successors and on the Owner's Property and constitute covenants running with the Owner's Property until released by the City. This Covenant can only be released by the City's Chief Administrative Officer with the concurrence of the City Engineer.

10. Entire Covenant. This Covenant contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith.

11. Changes to Covenant. Changes to this Covenant are not binding unless made in writing, signed by both parties.

12. Effective Date of Covenant. This Covenant shall be effective as of the date of signature of the Owner.

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Mary Herrera Bern. Co. COV R 19.00 Bk-A74 Pg-1545

CITY OF ALBUQUERQUE:
ACCEPTED:

By: ____________________
Jay J. Czar
Chief Administrative Officer
Dated: 3-08-04

OWNER: ALL STATE MECHANICAL, INC.

By: LARRY KOLEK
Title: Owner, President

Dated: 1-5-04

APPROVED:

____________________ 3-8-04
Director, Public Works Dept.

KJ 3/4/04

Reviewed by:

____________________ 3-08-04
City Engineer

2/20/04

CITY'S ACKNOWLEDGMENT

STATE OF NEW MEXICO)
) **ss**
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on March 8th, 2004, by Richard Dourte for Jay J. Czar, Chief Administrative Officer for the City of Albuquerque, a New Mexico municipal corporation, on behalf of the corporation.

Gloria D. Saavedra
Notary Public

My Commission Expires:

11-25-2007

rpd4\pfdrain1.cov (Revised by Legal 8/97)

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Mary Herrera Bern. Co. COV R 19.00

OWNER'S ACKNOWLEDGMENT

STATE OF NEW MEXICO)
) **ss.**
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on 5th. Jan., 2004, by Lawrence Kolek, President, on behalf of 4U STATE MECHANICAL

Veronica Murguia
Notary Public

My Commission Expires:

10/30/04

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Mary Herrera Bern. Co. COV R 19.00 Bk-A74 Pg-1545

[EXHIBIT A ATTACHED]

PROPOSED DRAIN LINE TO MANHOLE FOR LOT 2 VOLCANO BUSINESS PARK

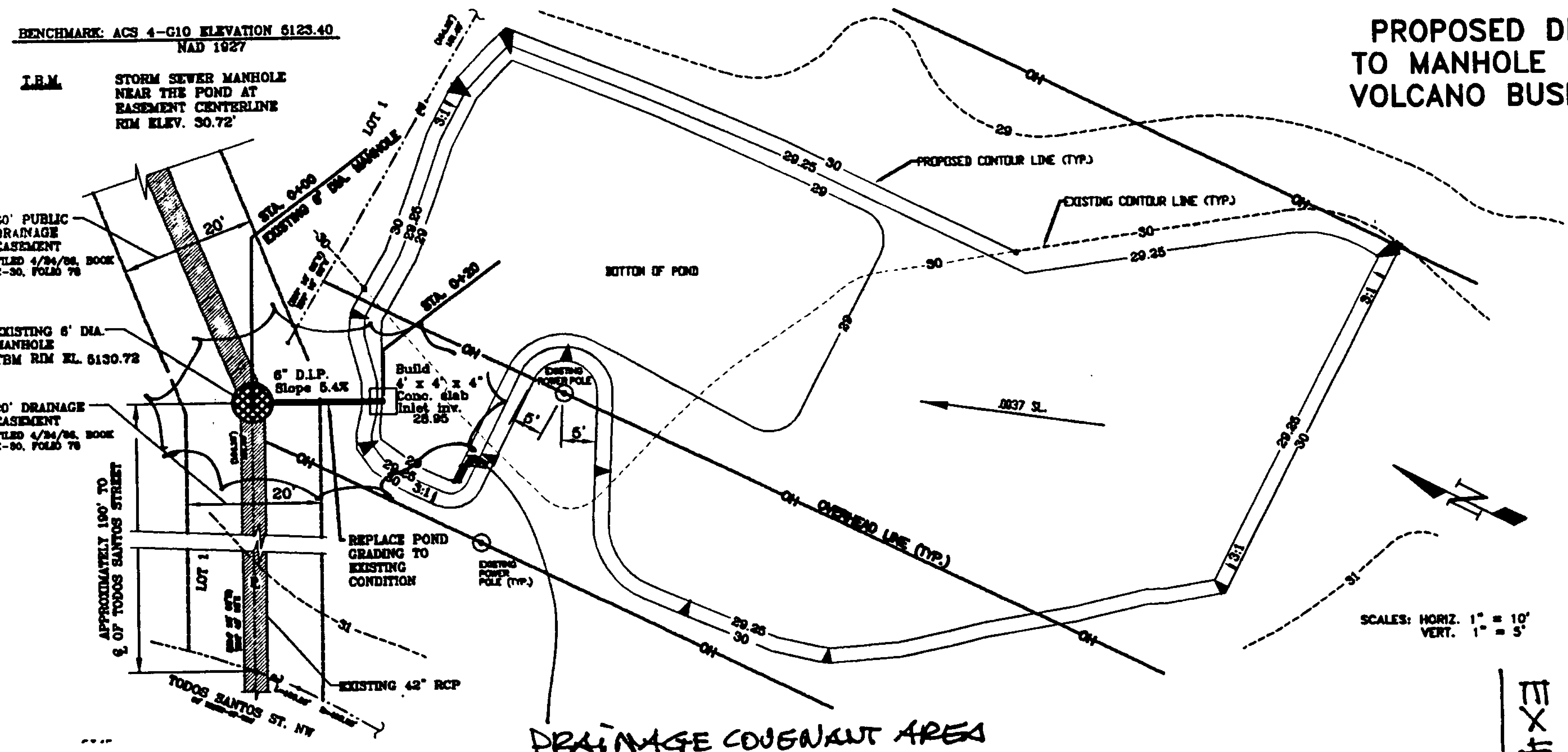

EXHIBIT A

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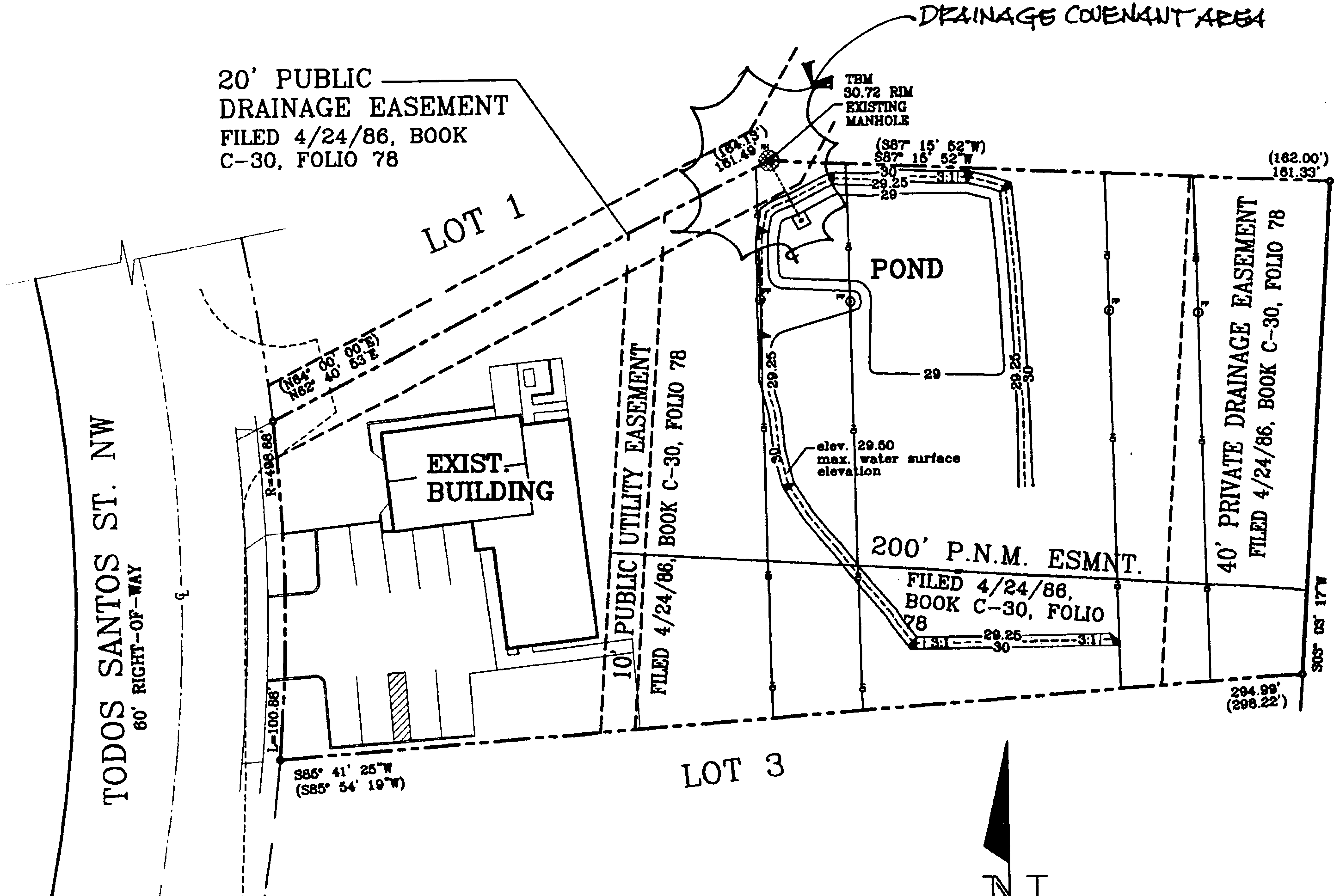
Mary Herrera Bern. Co. COV R 19.00 Bk-A74 Pg-1545

EXHIBIT B



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SITE DIAGRAM

NOT TO SCALE

ADDENDUM TO COVER PAGE

2-20-04
(Date)

TO: Kevin Curran, Assistant City Attorney, Legal Department

FROM: Project Administrator, Project Review Sec., PWD

SUBJECT: PROJECT TITLE: Volcano Bus. Park Detention Pond PROJECT # 565481

The attached documents have been review, approved, initialed and/or signed by the DRC Chairman and are submitted for your action as noted.

2/20/04

ITEM	ACTION: Review & Approval	ACTION: Reference	Comments
Procedure "A"	☐☐☐	☐☐	
Procedure "B"	☐☐☐	☐☐	
Procedure "B" Modified Non Work Order	☐☐☐	☐☐	
Procedure "C"	☐☐☐	☐☐	
Procedure "C" Modified	☐☐☐	☐☐	
Special Agreement	☐☐☐	☐☐	
Sidewalk Deferral Agreement	☐☐☐	☐☐	
Amendment	☐☐☐	☐☐	
Assignment	☐☐☐	☐☐	
Financial Guarantee	☐☐☐	☐☐	
Construction Paperwork:			
Contractors Proposal	☐☐☐	☐☐	
Performance/Warranty Bonds	☐☐☐	☐☐	
Labor/Material Bonds	☐☐☐	☐☐	
Certificate of Insurance	☐☐☐	☐☐	
Engineers Cost Estimate	☐☐☐	☐☐	
Extension	☐☐☐	☐☐	
Release/Agreement	☐☐☐	☐☐	
Release/Financial Guarantee	☐☐☐	☐☐	
Calling Notice	☐☐☐	☐☐	
Letter of Commitment	☐☐☐	☐☐	
Reduction Letter	☐☐☐	☐☐	
License Agreement	☐☐☐	☐☐	
Monitoring Well Permit	☐☐☐	☐☐	
Agreement & Covenant	☐☐☑	☐☐	
Drainage Covenant	☑☐☐	☐☐	
Revocable Permit	☐☐☐	☐☐	
Encroachment	☐☐☐	☐☐	
Permanent Easement	☐☐☐	☐☐	
Temporary Easement	☐☐☐	☐☐	

Other:

Please Call Kathy at 3996 if you have any questions regarding the above or when the documents are ready to be picked up.

No. of Attachments (1)

CONTRACT CONTROL FORM

PRELIMINARY REVIEW

Project # 565481
CCN# 2004 00 858
New or Ext. #

Contact Person: Kathy Jaramillo
Phone No.: 924-3996

Type of Agreement: private facility drainage covenant

Description/Project Name: Volcano Bus-Park Dentention Pond
Planning Dept./Div.: Design Review
Developer: Allstate Mechanical

Contract Amount $ -0- SIA Contract Period: 3/8/04 - 12/31/2024
Contract Amount $ ______ SIA Contract Period: ______ - ______
Contract Amount $ ______ S/W Contract Period: ______ - ______

DRAFT CONTRACT:
Rec'd by Legal: ______ Rejected/Returned to Dept.: ______ / ______
Returned to Legal: ______ / ______ Approved: ______ Initials: ______

FINANCIAL GUARANTY:
Letter of Credit No.: ______ Date: ______ Attached: Yes ___ No. ___ Initial ______
Other: Type ______ Date: ______ Attached: Yes ___ No. ___ Initial ______

FINAL CONTRACT REVIEW

APPROVALS REQUIRED:

	Date Delivered	Returned to Dept.	Approved By	Approval Date
Utility Div				
Hydrology Div	2/18/04 lg	2/19/04	BLD	2/18/04
Transportation Div				
DRC Chairman	2/19/04	2/20/04	[illegible]	2/20/04
Legal Dept	2/20/04	3/4/04	[illegible]	3/4/04
City Engineer	3/8/04 lg	3-05-04	[illegible]	3-05-04
PWD Director				
Finance				
City Clerk				
CAO				

DISTRIBUTION:

	Date:	By:
User Department.	3/10/04	lg
Vendor		
City Clerk	3-12-04	JN
Treasury		
Other: ______		