DRAINAGE INFORMATION SHEET

PROJECT TITLE: Volcano Vista ZONE ATLAS/DRNG. FILE #: E-10 / D 9

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Lots 1, 2, 3, Blk 11 Unit 3 Volcano Vista Subdivision (2-15-66, C6-107)

CITY ADDRESS: Northeast corner of Tesuque and Mojave

ENGINEERING FIRM: Wilson & Company CONTACT: Dave Thompson

ADDRESS: 6611 Gulton Ct. N.E. PHONE: 345-5345

OWNER: Rick Davis CONTACT: _____

ADDRESS: 1116 Pennsylvania N.E. PHONE: 266-5711

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

- X DRAINAGE REPORT
- _____ DRAINAGE PLAN
- _____ CONCEPTUAL GRADING & DRAINAGE PLAN
- _____ GRADING PLAN
- _____ EROSION CONTROL PLAN
- _____ ENGINEER'S CERTIFICATION
- _____ OTHER _____

PRE-DESIGN MEETING:

- X YES
- _____ NO
- _____ COPY PROVIDED

RECEIVED
FEB 23 1993

CHECK TYPE OF APPROVAL SOUGHT:

- _____ SKETCH PLAT APPROVAL
- X 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
- X GRADING PERMIT APPROVAL
- _____ PAVING PERMIT APPROVAL
- _____ S.A.D. DRAINAGE REPORT
- _____ DRAINAGE REQUIREMENTS
- _____ OTHER _____ (SPECIFY)

DATE SUBMITTED: 2-22-93

BY: Rita Vander Vossen for
David B. Thompson

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 3, 1993

Dave Thompson, P.E.
Wilson & Company
6611 Gulton Ct. N.E.
Albuquerque, N.M. 87109

RE: DRAINAGE REPORT FOR VOLCANO VISTA (E-10/D9)
RECEIVED FEBRUARY 23, 1993 FOR PRELIMINARY PLAT & ROUGH GRADING APPROVAL
STAMPED & DATED 2-22-93

Dear Mr. Thompson:

Based on the information included in the submittal referenced above, City Hydrology APPROVES this project for Preliminary Plat & Rough Grading.

All roof drains must drain to the street not the backyards.

Include the Grading & Drainage Plan in the set of construction documents that you submit for Work Order.

If I can be of further assistance, you may contact me at 768-2727.

Sincerely,

John P. Curtin

John P. Curtin, P.E.
PWD/Hydrology

xc: Fred Aguirre, DRB
Alan Martinez, Permits

WPHYD+7510

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 12, 1993

Dave Thompson, P.E.
Wilson & Company
6611 Gulton Ct. N.E.
Albuquerque, N.M. 87109

RE: DRAINAGE REPORT FOR VOLCANO VISTA (E-10/D9)
RECEIVED JANUARY 25, 1993 FOR PRELIMINARY PLAT & ROUGH GRADING APPROVAL
STAMPED & DATED 1-22-93

Dear Mr. Thompson:

Based on the information included in the submittal referenced above, City Hydrology approves this project for Preliminary Plat & Rough Grading.

The concrete rundown channels will each require a private drainage easement. All roof drains must drain to the street not the backyards.

City Hydrology requests that each lot have existing & proposed spot elevations at every other property corner.

If you have any questions about this project, you may contact me at 768-2727.

Sincerely,

John P. Curtin

John P. Curtin, P.E.
PWD/Hydrology

xc: Fred Aguirre
Alan Martinez

WPHYD+7510

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Volcano Vista ZONE ATLAS/DRNG. FILE #: E-10 /D9

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Lots 1, 2, 3, Blk 11 Unit 3 Volcano Vista Subdivision (2-15-66, C6-107)

CITY ADDRESS: Northeast corner of Tesuque and Mojave

ENGINEERING FIRM: Wilson & Company CONTACT: Dave Thompson

ADDRESS: 6611 Gulton Ct. N.E. PHONE: 345-5345

OWNER: Rick Davis CONTACT: _____

ADDRESS: 1116 Pennsylvania N.E. PHONE: 266-5711

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

RECEIVED
JAN 25 1993
HYDROLOGY DIVISION

TYPE OF SUBMITTAL:

X DRAINAGE REPORT
_____ DRAINAGE PLAN
_____ CONCEPTUAL GRADING & DRAINAGE PLAN
_____ GRADING PLAN
_____ EROSION CONTROL PLAN
_____ ENGINEER'S CERTIFICATION
_____ OTHER _____

PRE-DESIGN MEETING:

_____ YES
X NO
_____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

_____ SKETCH PLAT APPROVAL
X 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
X GRADING PERMIT APPROVAL
_____ PAVING PERMIT APPROVAL
_____ S.A.D. DRAINAGE REPORT
_____ DRAINAGE REQUIREMENTS
_____ OTHER _____ (SPECIFY)

DATE SUBMITTED: 01-22-93

BY: Rita Van der Vossen for
David B. Thompson

7510

VOLCANO VISTA SUBDIVISION, UNITS 1 & 2
DRAINAGE PLAN

Introduction

This report summarizes the hydrologic and hydraulic analysis for Volcano Vista Subdivision, Units 1 & 2, formerly described as Volcano Cliffs, Unit 3, Lots 1, 2 & 3. The City of Albuquerque Development Process Manual was followed as well as the Drainage Report for Special Assessment District 219. The 5.7 acre subdivision consists of 19 residential lots to be developed in two phases. Phase 1 will consist of the westerly 9 lots and phase 2 will consist of the easterly 10 lots. Although the subdivision will be developed in two phases, the entire site will be graded prior to development of the first phase.

Site Location

The project site is located at the intersection of Tesuque Drive and Mojave Street in Northwest Albuquerque and is bordered on the north by the Boca Negra Arroyo. The site was included in Special Assessment District (SAD) 219. The vacant site generally slopes from northwest to southeast at approximately 1.5%, except for the western portion which slopes from west to east at approximately 7%. Topographic mapping at a 1"= 50' scale with 1' contours was prepared for the site.

Methodology

The August 1991 edition of the Development Process Manual, Volume 2 was used to calculate peak runoff (using the Rational method) for the site for both existing and proposed conditions. The design storm for the analysis was the 100-year, 6-hour storm as defined by the NOAA Atlas 2, Precipitation-Frequency Atlas of the Western United States, Volume IV - New Mexico. The site is located in precipitation zone 1 as determined from Figure A in the DPM and is considered a small watershed with less than 40 acres. The Rational method was also used in the SAD 219 Drainage Report to compute the peak runoff. Although the peak intensities of the SAD 219 report and the DPM are similar, the Rational "C" used in the SAD 219 report (0.9) is much higher than that used in this report for the subdivision.

Existing Conditions

The site is currently vacant and is considered Land Treatment Type C, Table 4 of the DPM. The entire area of approximately 5.68 acres is one drainage basin. It currently has a peak flowrate of 16.3 CFS. Several drainage improvements were recommended and constructed under SAD 219. These include two double "C" inlets in Tesuque Drive and a 27" RCP storm drain which outlets into the Boca Negra Arroyo, and two single "C" inlets in the far east part of Mojave Street and a 24" RCP storm drain which also outlets into the Boca Negra Arroyo. The other improvement was the stabilization of the Boca Negra Arroyo. Downstream of the Tesuque Drive crossing, the bottom and sides of the channel are lined with riprap followed immediately by a gabion drop structure.

Developed Conditions

The site will be subdivided into 19 lots for single family residential homes. Except for the grading, it will be constructed in two phases. The Drainage Report for SAD 219 divides the site into two drainage basins with a small eastern portion of the site included in a much larger drainage basin east of the site. Free discharge to the public streets is allowed according to the SAD 219 report. The report used calculated peak runoff for the 100-year storm using the

Rational Method with peak rainfall intensity for the area of 4.65 in/hr and Rational coefficient C = 0.9. This resulted in a peak flowrate for the site of 23.77 CFS.

For this report, the site was divided into four drainage basins. According to the formula in table 5 of the DPM, approximately 37% of the entire site (or 2.1 ac) will now be impervious area or land treatment type D. The remaining area of the site was divided into 13% land treatment C (0.74 ac) and 50% land treatment B (2.84 ac). For each of the four basins a weighted coefficient "C" was calculated using the values in Table 11 of the DPM, depending on the percentage of each land treatment type in each basin. The peak intensity used was 4.70 in/hr at a t_c = 12 min (Table 10). The peak discharge for each basin is summarized below:

Basin	Area(ac)	Rational C	Peak Q
A	0.82	0.657	2.53 CFS
B	1.63	0.673	5.16 CFS
C	2.20	0.597	6.17 CFS
D	1.03	0.657	3.18 CFS
Total	5.68	-----	17.04 CFS

The computed peak flowrate of 17.04 CFS is less than the 23.77 CFS calculated under SAD 219. Therefore, the property will have less of an impact on the storm sewer system than previously calculated.

Lots 1 through 3, Unit 1, and Lots 7 through 10, Unit 2 have breaklines at the building pads and the runoff drains in two directions. Runoff from the back edge of the building pad to the front on the lot drains to the street. Runoff from the back edge of the building pad to the back of the lot ponds in the backyard. The backyard pond volume required is 186 ft^3. Ponding will be accomplished by filling the first course of the garden wall with concrete and allowing the water to pond against the wall. Except for these lots, the remainder of the lots drain entirely to the streets. Once the runoff is drained to the street, the existing inlets will collect the flows and discharge to the Boca Negra Arroyo through the storm sewers.

COMP.

CK.

DATE 12/92

WILSON &COMPANY

LOC.

FILE 92-549

PROJ. Volcano Vista

SHEET 1

SUBJ.

OF

SAD 219 100-yr runoff

$Q_{100} = CiA$

$Q_{100} = 0.9(4.65)5.68$

$Q_{100} = 23.77$ CFS

Volcano Vista 100 yr runoff following DPM

Rational Method $Q_{100} = CiA$

$i = 4.70$ in/hr

Calculate weighted "C" for each Basin

$C_A = 0.27$

$C_B = 0.43$

$C_C = 0.61$

$C_D = 0.93$

Basin A: Area = 0.82 acres

%A = 0 %

%B = 45 %

%C = 15 %

%D = 40 %

$C = .45(.43) + .15(.61) + .40(.93)$

$C = .657$

$Q = 0.657(4.70)0.82$

$Q_A = 2.53$ cfs

Basin B: Area = 1.63 acres

%A = 0
%B = 47%
%C = 7%
%D = 46%

C = .47(.43) + .07(.61) + .46(.93)

C = 0.673

$Q_B = 0.673(4.70)1.63$

$Q_B = 5.16$ cfs

Basin C: Area = 2.20 acres

%A = 0
%B = 57%
%C = 15%
%D = 28%

C = .57(.43) + .15(.61) + .28(.93)

C = .597

$Q_C = .597(4.70)2.20$

$Q_C = 6.17$

Basin D: Area = 1.03 acres

%A = 0
%B = 45
%C = 15
%D = 40

C = .45(.43) + .15(.61) + .40(.93)

C = 0.657

$Q_D = 0.657(4.70)1.03$

$Q_D = 3.18$ cfs

COMP. | WILSON & COMPANY | LOC. | FILE 92-549

CK. | PROJ. Volcano Vista | SHEET

DATE 2/93 | SUBJ. | OF

Determine Volume of runoff that will pond in backyards of lots

Typical lot backyards: 35' x 95' = 3325 sq.ft

From DPM sec 22.2

for zone 1, land treatment type B

excess precipitation = 0.67"

$$\text{Volume of ponding} = 3325 \times \frac{0.67}{12}$$

$$= 186 \text{ ft}^3$$

Ponding will be against back garden walls

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

February 10, 1994

Dave Thompson, P.E.
Wilson & Company
6611 Gulton Ct. N.E.
Albuquerque, N.M. 87109

RE: ENGINEER'S CERTIFICATION FOR VOLCANO VISTA SUBDIVISION (E-10/D9)
RECEIVED FEBRUARY 4, 1994 FOR FINANCIAL GUARANTY RELEASE
ENGINEER'S STAMP DATED 2-3-94

Dear Mr. Thompson:

Based on the information included in the submittal referenced above, City Hydrology releases the Financial Guaranties for this project.

The City Construction Division must also accept Project # 4640.90 before Lynda-Michelle will release the Financial Guaranty.

If I can be of further assistance, You may contact me at 768-2727.

Sincerely,

John P. Curtin

John P. Curtin, P.E.
Civil Engineer/Hydrology

c: Lynda-Michelle DeVanti - Project # 4640.90

WPHYD/7510/jpc

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Volcano Vista ZONE ATLAS/DRNG. FILE #: E-10 / D 9

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Lots 1, 2, 3, Blk 11 Unit 3 Volcano Vista Subdivision (2-15-66, C6-107)

CITY ADDRESS: Northeast corner of Tesuque and Mojave

ENGINEERING FIRM: Wilson & Company CONTACT: Dave Thompson

ADDRESS: 6611 Gulton Ct. N.E. PHONE: 345-5345

OWNER: Rick Davis CONTACT: _____

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ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

_____ DRAINAGE REPORT
_____ DRAINAGE PLAN
_____ CONCEPTUAL GRADING & DRAINAGE PLAN
_____ GRADING PLAN
_____ EROSION CONTROL PLAN
X ENGINEER'S CERTIFICATION
_____ OTHER _____

PRE-DESIGN MEETING:

_____ YES
X 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
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X CERTIFICATE OF OCCUPANCY APPROVAL
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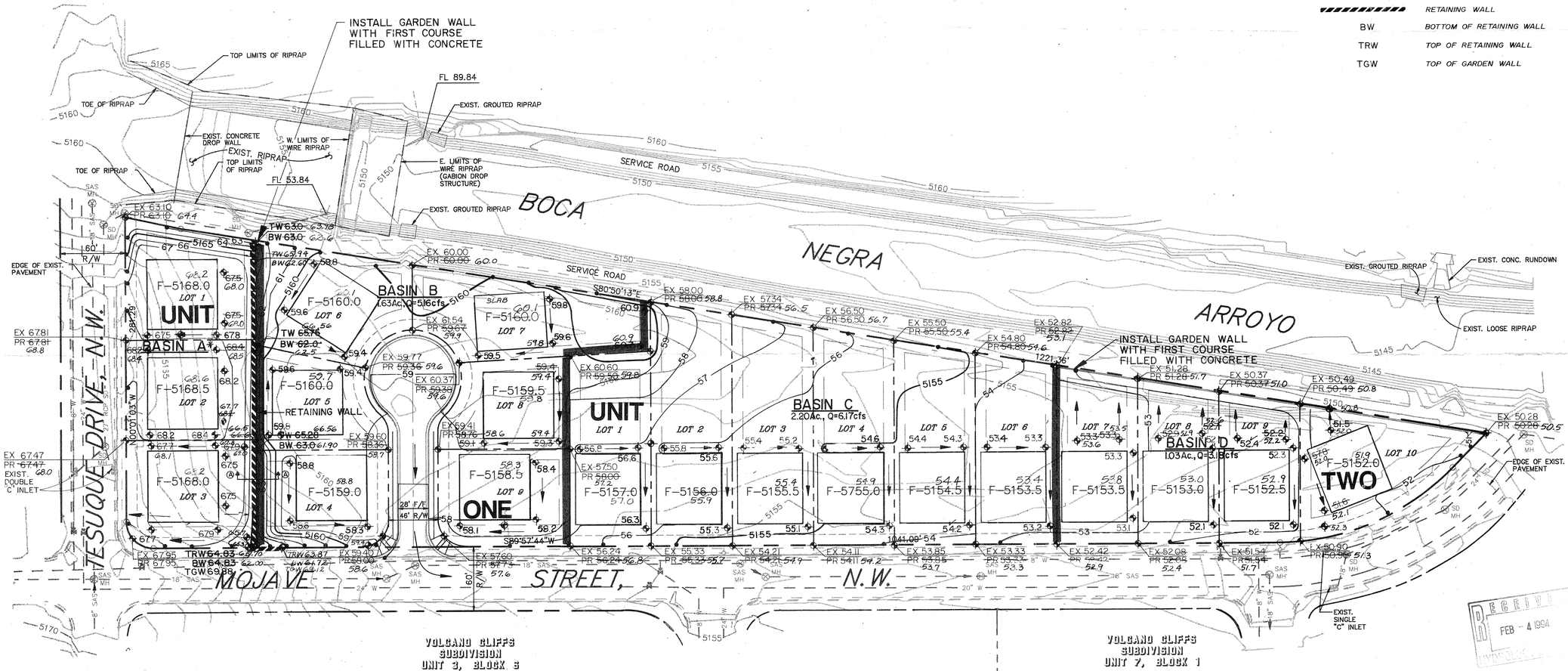
___ PAVING PERMIT APPROVAL
___ S.A.D. DRAINAGE REPORT
___ DRAINAGE REQUIREMENTS
___ OTHER _____ (SPECIFY)

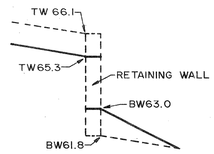
DATE SUBMITTED: 2/3/94

BY: David B. Thompson

RECEIVED
FEB - 4 1994



* BASIN A = 0.82 ACRES, Q=2.53 CFS



SECTION A-A
NTS
---- AS-BUILT
—— DESIGNED

APPROVED FOR ROUGH GRADING ±1'

CoA — DATE 3-8-93

ENGINEER'S CERTIFICATION

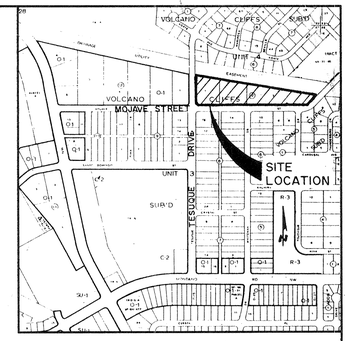
I, DAVID THOMPSON, DO HEREBY CERTIFY THAT THE AS-BUILT INFORMATION HEREON IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED GRADING PLAN.

2-3-94

W&C

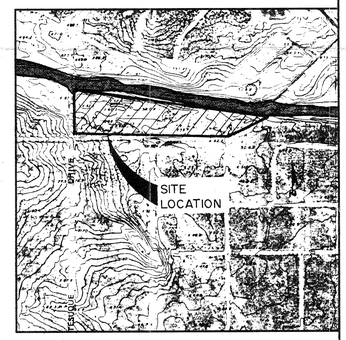
50 0 25 50 100 200

1 inch = 50 ft.



LOCATION MAP
ZONE ATLAS MAP NO. E-10

SOILS MAP
REFERENCE: SCS BERNALILLO COUNTY SOIL SURVEY SHEET NO. 20



FLOOD INSURANCE MAP
REFERENCE: FLOOD INSURANCE STUDY PANEL 14

RECEIVED FEB - 4 1994

LEGEND

5094	EXISTING INTERMEDIATE CONTOUR
5095	EXISTING INDEX CONTOUR
5089	PROPOSED INTERMEDIATE CONTOUR
5090	PROPOSED INDEX CONTOUR
95.0	PROPOSED SPOT ELEVATION
	FLOW DIRECTION
	BASIN BOUNDARY
	EXISTING UTILITIES
	NEW UTILITIES
SD MH	EXISTING STORM DRAIN MANHOLE
SAS MH	EXISTING SANITARY SEWER MANHOLE
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
	RETAINING WALL
BW	BOTTOM OF RETAINING WALL
TRW	TOP OF RETAINING WALL
TGW	TOP OF GARDEN WALL

BENCH MARK: ACS BM "13-E10", AN "X" CHISELED ON A BONNET BOLT OF A FIRE HYDRANT, LOCATED IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF ATRISCO RD. AND SANTO DOMINGO ST. N.W. ELEV. = 5204.850.

VOLCANO VISTA SUBDIVISION
UNITS 1 & 2

GRADING & DRAINAGE PLAN

DESIGN	DRAWN
D.B.T.	K.I.S.

2-22-93

WILSON & COMPANY
6611 GULTON CT
ALBUQUERQUE, NEW MEXICO
87109
(505) 345-5345

DATE: JAN 1993
FILE NO. 92-549
SHEET NO. 1 OF 1