

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 17, 2002

Ron Bohannon, PE
Tierra West LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: Bluewater/94th Storm Drain Drainage Report
Engineer Stamp date 12-22-01 (K9/D22)

Dear Mr. Bohannon,

Based on information provided in your submittal dated 1-7-02, the above referenced plan cannot be approved for Work Order requirements until the following comments are addressed.

- On the developed basin map, please add all pipe sizes in Bluewater, 90th and Volcano, and denote if they are existing, proposed or future.
- Also, please add runoff (Q's) from Avalon 2, WRMH2, WRMH and the basin west of WRMH to your basin map.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham, PE
Sr. Engineer, PWD
Development and Building Services

C: file

DRAINAGE INFORMATION SHEET

(REV. 11/01/2001)

K-9/D22

PROJECT TITLE: Bluewater Road near 90th Street

ZONE ATLAS/DRG. FILE #: K-9

DRB #: _____ EPC #: _____

WORK ORDER #: _____

LEGAL DESCRIPTION Bluewater Road

CITY ADDRESS: Bluewater Road located between 90th Street and 98th Street

ENGINEERING FIRM: TIERRA WEST, LLC

ADDRESS: 8509 JEFFERSON NE

CITY, STATE: ALBUQUERQUE, NM

CONTACT: RONALD R. BOHANNAN OR SARA LAVY

PHONE: (505) 858-3100

ZIP CODE: 87113

OWNER: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

ARCHITECT: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

SURVEYOR: _____

Precision Surveys

ADDRESS: 8414-D Jefferson Street, NE

CITY, STATE: ALBUQUERQUE, NM

CONTACT: Larry Medrano

PHONE: (505) 856-5700

ZIP CODE: 87113

CONTRACTOR: _____

ADDRESS: _____

CITY, STATE: _____

CONTACT: _____

PHONE: _____

ZIP CODE: _____

CHECK TYPE OF SUBMITTAL:

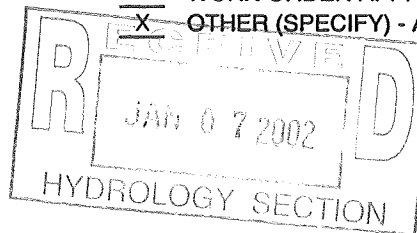
- ☒ DRAINAGE REPORT
☐ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☐ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ ENGINEERS CERTIFICATION (TCL)
☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA / FINANACIAL GUARANTEE RELEASE
☐ 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 (PERM.)
☐ CERTIFICATE OF OCCUPANCY (TEMP.)
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☒ OTHER (SPECIFY) - Analysis for DRC submittal

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
☒ NO
☐ COPY PROVIDED



DATE SUBMITTED: 1/7/02

BY: Sara Lavy

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plans:** Required for approval of Site Development Plans greater than five (5) acres
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

DRAINAGE ANALYSIS

for

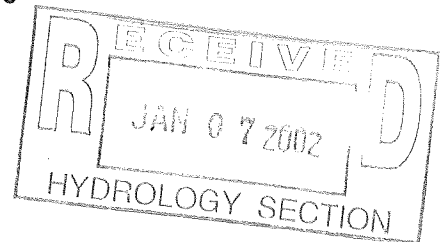
Bluewater Road near 90th Street

Prepared by

Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

Prepared for

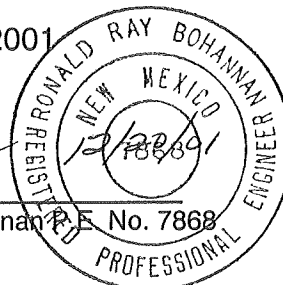
Bo Johnson
Curb Inc.
6301 Indian School Road, NE Suite 680
Albuquerque, New Mexico 87110



December 2001

A handwritten signature in black ink, appearing to read "R. Bohannon".

Ronald R. Bohannon P.E. No. 7868



Purpose

This is a drainage analysis of Bluewater Road to facilitate approval of construction plans for storm drain. The owner of the property adjacent to Bluewater on the south has an existing infrastructure list with storm drain in Bluewater still to be completed. The construction drawings for this storm drain have been submitted to DRC. The construction drawings show for reference only the paving sheet for Bluewater. We are not constructing Bluewater Road as is not part of the existing infrastructure, but it is shown as it affects the storm drain. The only improvement to be constructed at this time is the storm drain in Bluewater Road.

Location

Bluewater Road is located north of Volcano Road and east of 98th Street. Tierra West is only concerned with the piece of Bluewater that is north of West Ridge MHP and Avalon Subdivision (see attached Zone Atlas Page K-9). We divided Bluewater into two sections for ease of discussion. The storm drain in Bluewater is completed north of Avalon Subdivision between 94th Street and 90th Street (Section 1). The current construction plans only show Bluewater Road north of West Ridge MHP and west of 94th Street (Section 2). We have analyzed the drainage to show the new and existing storm drain has capacity for the upland flows.

FIRM Map

This site is located on FIRM Map 35001C0328 D which shows the site in a 100-year floodplain. However, a LOMR was done with the West Ridge Mobile Home Park that removed the floodplain. I have enclosed a copy of the revised floodplain from the LOMR.

Existing Conditions

The undeveloped flows sheet flow southeast from I-40 towards the West Ridge MHP. A large retention pond was built north of Bluewater Road to capture those flows. This is a temporary solution and only captures undeveloped flows. Developed flows upland of the pond will not be



APPROXIMATE SCALE IN FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
**BERNALILLO COUNTY,
NEW MEXICO AND
INCORPORATED AREAS**

PANEL 328 OF 825
(SEE MAP INDEX FOR

CONTAINS:
COMMUNITY

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
DATE 03-28-2003 BY 60322
0328

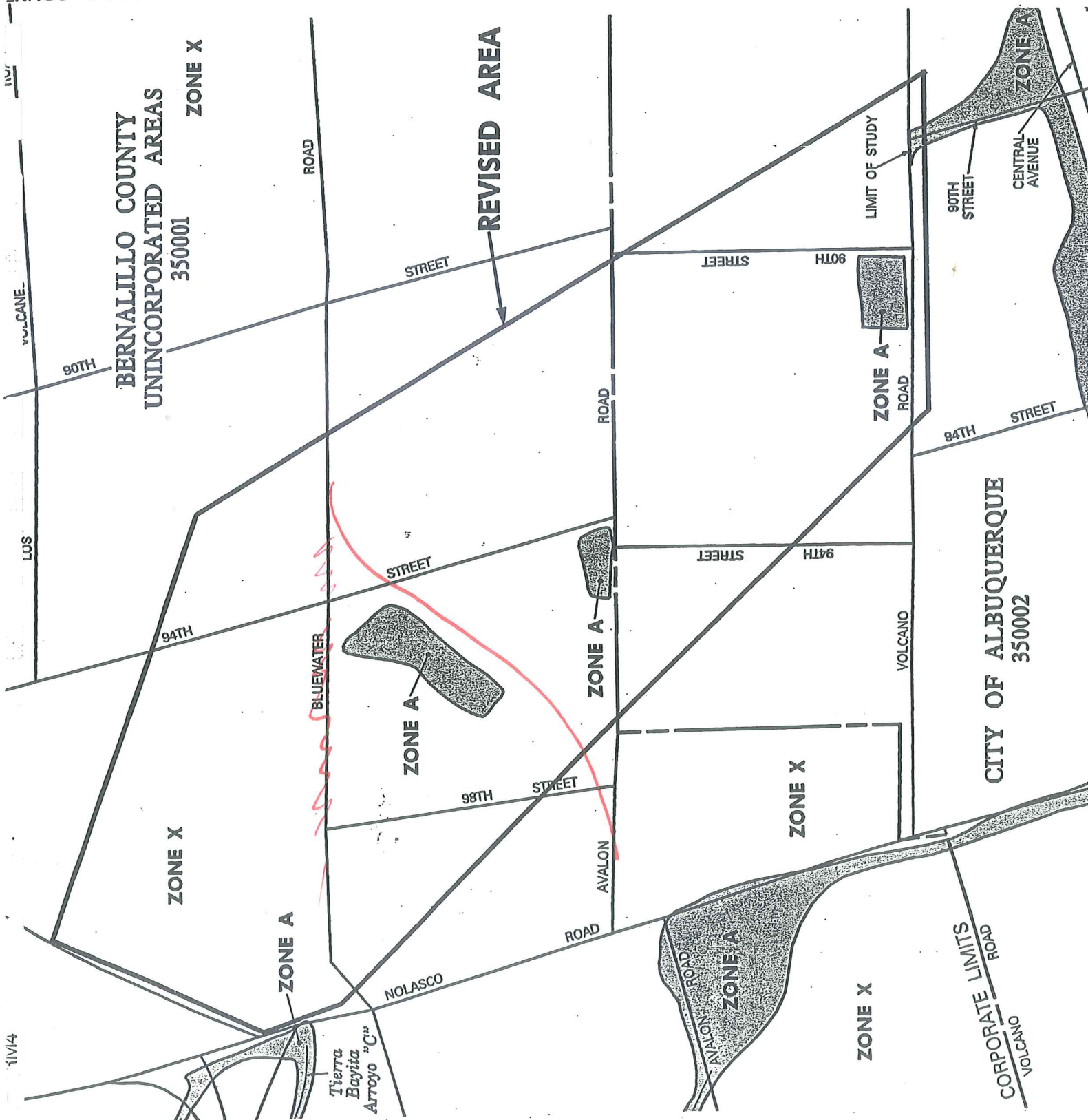
1000

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MAP NUMBER
35001C0328 D

EFFECTIVE DATE:
SEPTEMBER 20, 1996

Federal Emergency Management Agency



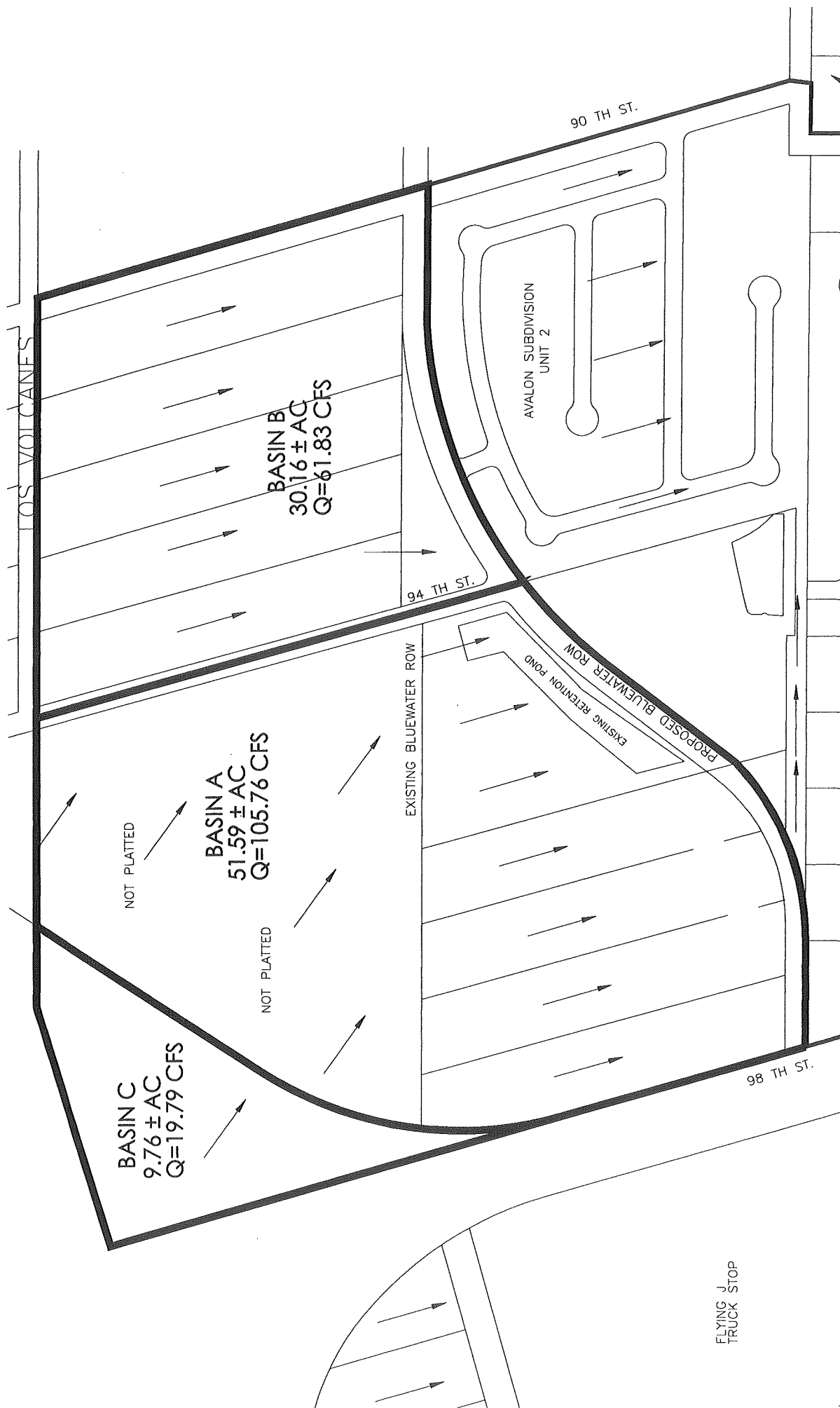
allowed to drain to the pond. The pond is not sized for developed flows and was constructed with the understanding that it would be temporary and the land reclaimed eventually.

Proposed Drainage Solution

A Master Drainage Plan was approved by the City in January 1998 with the West Ridge MHP project (K9/D6). A storm drain in Bluewater was required to capture the upland developed flows. The storm drain will continue east to 90th Street and then turn south to Volcano Road. Several developments have occurred since the Master Plan was approved. We are updating the area of the Master Plan above Bluewater for the new developments in the area.

An Overall Basin Map is included that shows the upland basins based on the current platting in the area. All the land within Basin A has a limitation of 2.05 cfs/ acre. Basin B has the same 2.05 cfs/ acre discharge restriction. The land within Basin C is State Highway Department right-of-way that is allowed to free discharge. The 2.05 cfs/acre is based on the downstream capacity of the storm sewer the City of Albuquerque is building in Central Avenue. Basin A and C will drain to a new 48" storm drain in Bluewater Road (Section 2). Basin B drains to the existing storm drain in Bluewater Road adjacent to Avalon Subdivision (Section 1).

Section 2 of Bluewater has 125.55 cfs draining to it. The street has capacity for 51.10 cfs at a 0.6% slope. This is the slope we have shown on the paving sheet for Bluewater. The remaining 74.45 cfs will be conveyed in a 42" storm drain to Section 1 of Bluewater. Drop inlets will be constructed at the east side of Section 2 to capture the 51.10 cfs being carried in the street. Section 1 of Bluewater exists and has 61.83 cfs of upland flow draining to it. The existing storm drain has capacity for the upland flows and the flows draining from Section 2. This storm drain connects to an existing storm drain in 90th and drains to Volcano Road.



OVERALL BASIN LAYOUT

Runoff Calculations

Basin Calculations

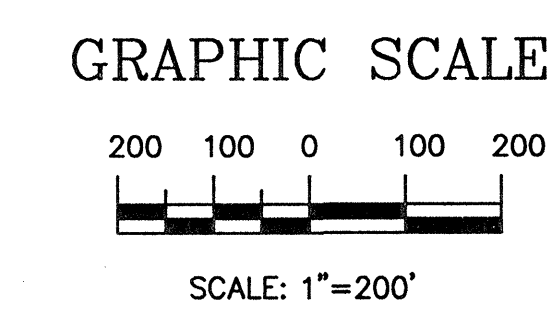
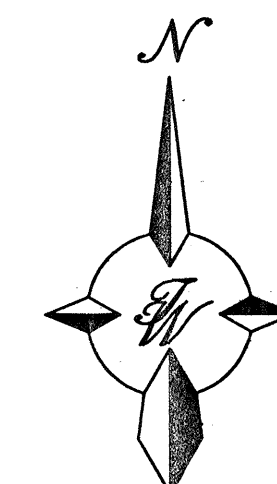
Basin	Area (SF)	Area (AC)	Area (MI ²)	Flow (cfs)
A	2,247,260.40	51.59	0.08061	105.76
B	1,313,769.60	30.16	0.04713	61.83
C	425,145.60	9.76	0.01525	19.79

Notes:

The allowable discharge for Basin A and B is limited to 2.05 cfs/acre.

See attached AHYMO for flow calculation for Basin C.

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HYDROLOGY SECTION



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HYDROLOGY SECTION

ENGINEER'S SEAL	WEST RIDGE MOBILE HOME PARK	DRAWN BY: WCHJ
	FUTURE DEVELOPED BASINS / DRAINAGE MANAGEMENT PLAN	DATE: 1-24-02
	TERRA WEST, LLC 8509 JEFFERSON NE ALBUQUERQUE, NEW MEXICO 87113 (505)858-3100	2119BASIN.DWG
	RONALD R. BOHANNAN P.E. #7868	SHEET # 21019