### CLIENT/COURIER TRANSMITTAL

Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335

www.bhinc.com

voice: 505.823.1000 98.7988 7.5332

			facsimile: 505.79 toll free: 800.87
To:	Brad Bingham, P.E., Senior Engineer Planning Dept / Hydrology Dev Section	Requested by:	Kevin Patton - am
	City of Albuquerque	Date:	February 27, 2008
	600 Second Street NW - 2nd Floor West	Time Due:	This A.M. This P.M. Rush By Tomorrow
Phone:	924-3986		
Job No.:	06 0341 005 CDPABQ	Job Name:	Oxbow Bluff Drainage Analysis
		ltem:	<u>UP</u>
TEM NO.  1	QUANTITY DESCRIPTION  1 Copy of letter to Tom Kelehera Drainage Certification Associa		
COMMENT	S / INSTRUCTIONS		

			ENGINEERING
REC'D BY:	DATE:	TIME:	SPATIAL DATA

## Bollaman Huston

February 26, 2008

Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335

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voice: 505 823.1000 facsimile: 505.798 7988 toll free: 800.877 5332

Mr. Tom Keleher, President Altura West Ltd. Co. P.O. Drawer AA Albuquerque, NM 87103

Re: Oxbow Bluff Drainage – Drainage Certification Associated with the Eastern Boundary or Bluff Edge

Dear Tom:

The purpose of this letter is to provide you with the drainage certification for the bluff area along the eastern boundary of the Oxbow Bluff Subdivision (more specifically the gravel roadway, the redefined bar ditch along the gravel roadway and the existing detention ponds located at isolated areas along the west side of the gravel roadway).

A quick summary (not necessarily inclusive) of the events associated with the Oxbow Bluff Drainage along the bluff:

- The City Of Albuquerque approved the Grading and Drainage Report for the Oxbow Bluff Subdivision at the December 16, 1997 DRB Meeting (Report dated November 26, 1997) that included the eastern bluff area.
- The Grading and Drainage Report approved by the city did not include the existing detention ponds west of and along the gravel roadway in the bluff area, but instead allowed this storm water to drain over the top of the bluff (noting that the amount was significantly less than historic/predevelopment flow rates). It was my recommendation at the time and discussed with the city that no additional analysis should be required because it had no adverse impact on the existing drainage system (if the system couldn't accept the additional runoff it would function as approved) and the city agreed with my recommendation.
- Mr. Charles Berry or the HOA, hired Jeff Mortensen and Associates (JMA) (Currently known as High Mesa Consultants) to review and comment on the drainage w/in this area.
- JMA performed a series of reviews and submitted their summary to Mr. Berry and the HOA. There were numerous letters between all parties involved (Altura West, the HOA, BHI and JMA) over a span of a few years trying to determine what was necessary.
- At your request Bohannan Huston Inc. analyzed what effect the existing detention ponds located along the gravel road had on the existing drainage system. It was agreed upon that each of the lots (I believe those lots are lots 12-14 and lots 25-51) that may have a direct surface impact would be required to hold the 100 year 6 hour developed runoff, thus only allowing pre-developed runoff amounts to drain to the existing ponds in that storm event. The analysis indicated that the amount of runoff in the 100 year 6 hour storm event was reduced from ~120 cfs in the predeveloped condition to ~ 50 cfs in the developed condition (as approved but w/o taking into account the existing detention ponds) and the a further reduction of ~5 cfs when we take into account the existing ponds and bee hive grates along the west side of the gravel roadway.
- You recently hired a contractor to perform some improvements within the bluff area. The contractor recontoured or sloped a section of the gravel roadway from east to west as well as reshaped the bar ditch along the western edge of the grave roadway along w/ removing and replacing a number of pedestrian culvert crossings that cross the bar ditch.

ENGINEERING >

SPATIAL DATA .

Mr. Tom Keleher, President Altura West Ltd. Co. February 26, 2008 Page 2

On Friday January 25, 2008, I met with Brad Bingham P.E., City of Albuquerque's Hydrologist. We walked
the bluff area to visually inspect the improvements that were completed. I indicated to Brad that I would
provide him a copy of this certification for his files. In addition I will send him a copy of an as built plan
(enclosed w/in this letter) showing the location and rim elevations of the bee hive grates that exists along
the western edge of the gravel roadway.

I have included photos that were taken on the January 25, 2008 walkthrough. The photos clearly show that improvements were made to the gravel roadway and the bar ditch. We were not supplied as-built elevations of the roadway or the bar ditch but we did set a level at isolated locations to confirm that there is positive slope from east to west.

Therefore, I am certifying to you that the gravel roadway has positive slope from east to west from and including Lot 47 to and including Lot 42. I am also certifying that the bar ditch has been re-established along lots 42, 46,14, 26 and 27 so as to adequately convey the undeveloped upstream runoff to the detention ponds between Lots 41 and 42 and between Lots 27 and 31 respectively (as recommended in our analysis). I am also certifying to you that the recommended pedestrian culvert crossings have been replaced as recommended to convey the runoff within the bar ditch. I would like to point out that we did notice isolated areas that exhibited signs of erosion from specific lot drainage. As we have noted in previous conversations and correspondence w/ members of the HOA, it is important that the drainage systems be inspected and maintained by each individual lot owner and or the HOA in order for the overall system to function properly.

I would also note that when I met Mr. Berry, Jeff Mortensen and Brad Bingham over a year ago to walk this area it was after the Albuquerque Area had experienced (that previous summer) some of the more intense and significant storm events on record. In our discussion with Mr. Berry, Jeff and Brad, it was my understanding the bluff area performed very well with very little damage or adverse impact.

If you have any questions or require additional information, please give me a call 823-1000.

Singerely,

Kevin G. Patton, P.E. Senior Vice President and Managing Principal

Community Development and Planning

KGP/am Enclosures

CC.

Brad Bingham, COA (w/encls)

Kathryn Guinn, HOA (w/encls)

Jeff Mortensen, HMC/JMA (w/encls).



Photo 1 – Looking northwest from trail at culvert F



Photo 2 – Looking southwest from trail at culvert F



Photo 3 – Looking south at re-graded trail with 1% cross-slope from east to west

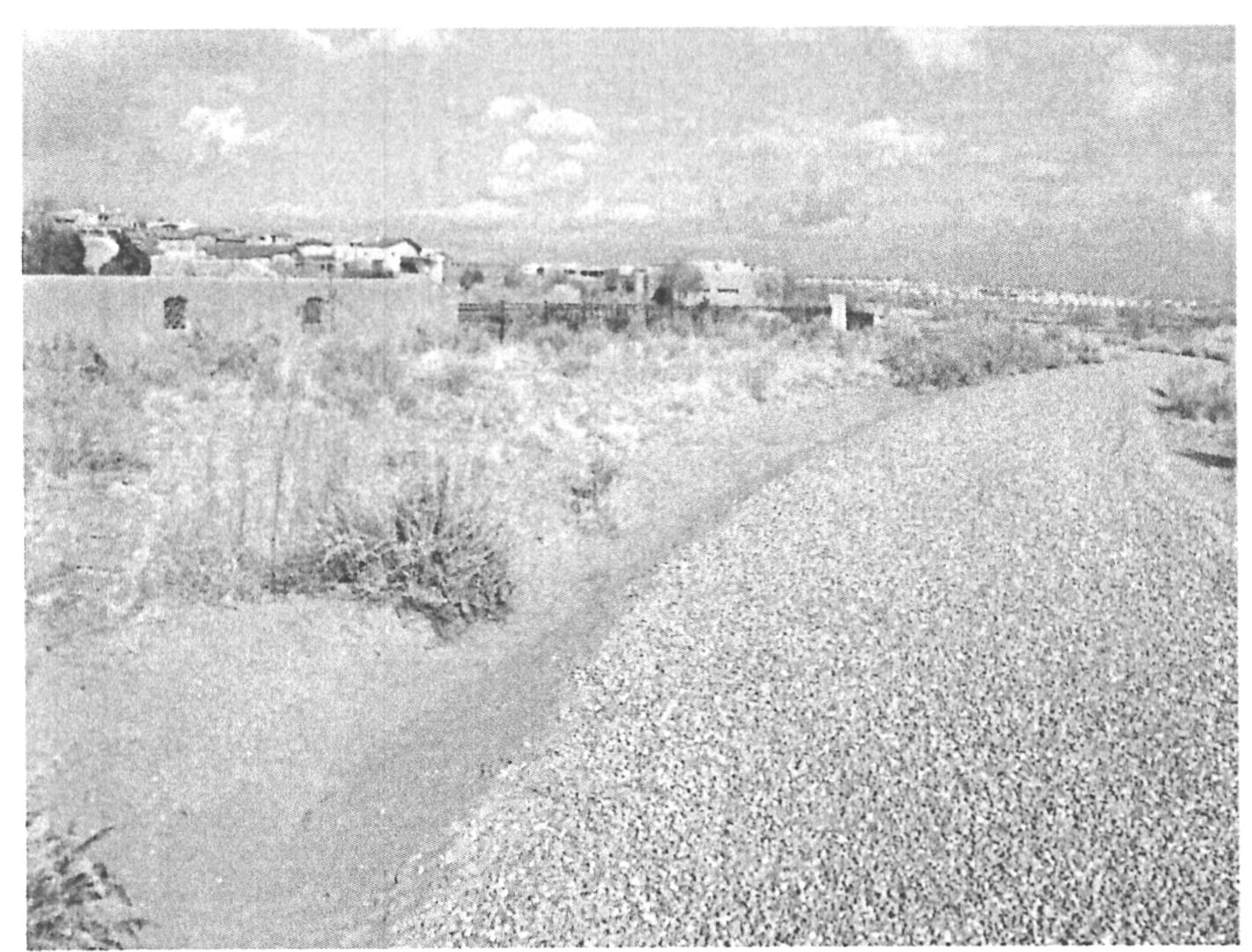


Photo 4 – Looking north from trail at re-graded swale

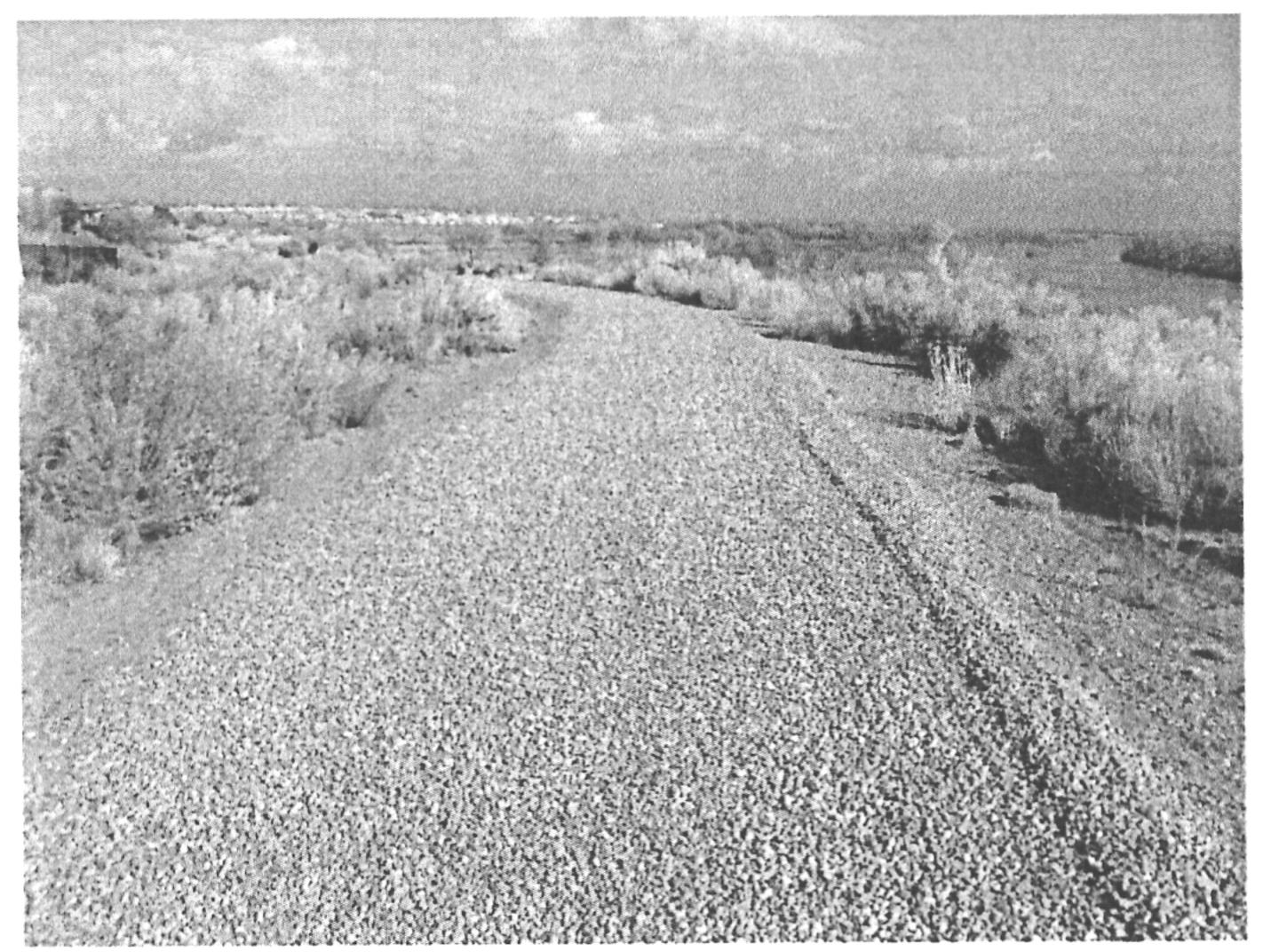


Photo 5 – Looking north at re-graded trail

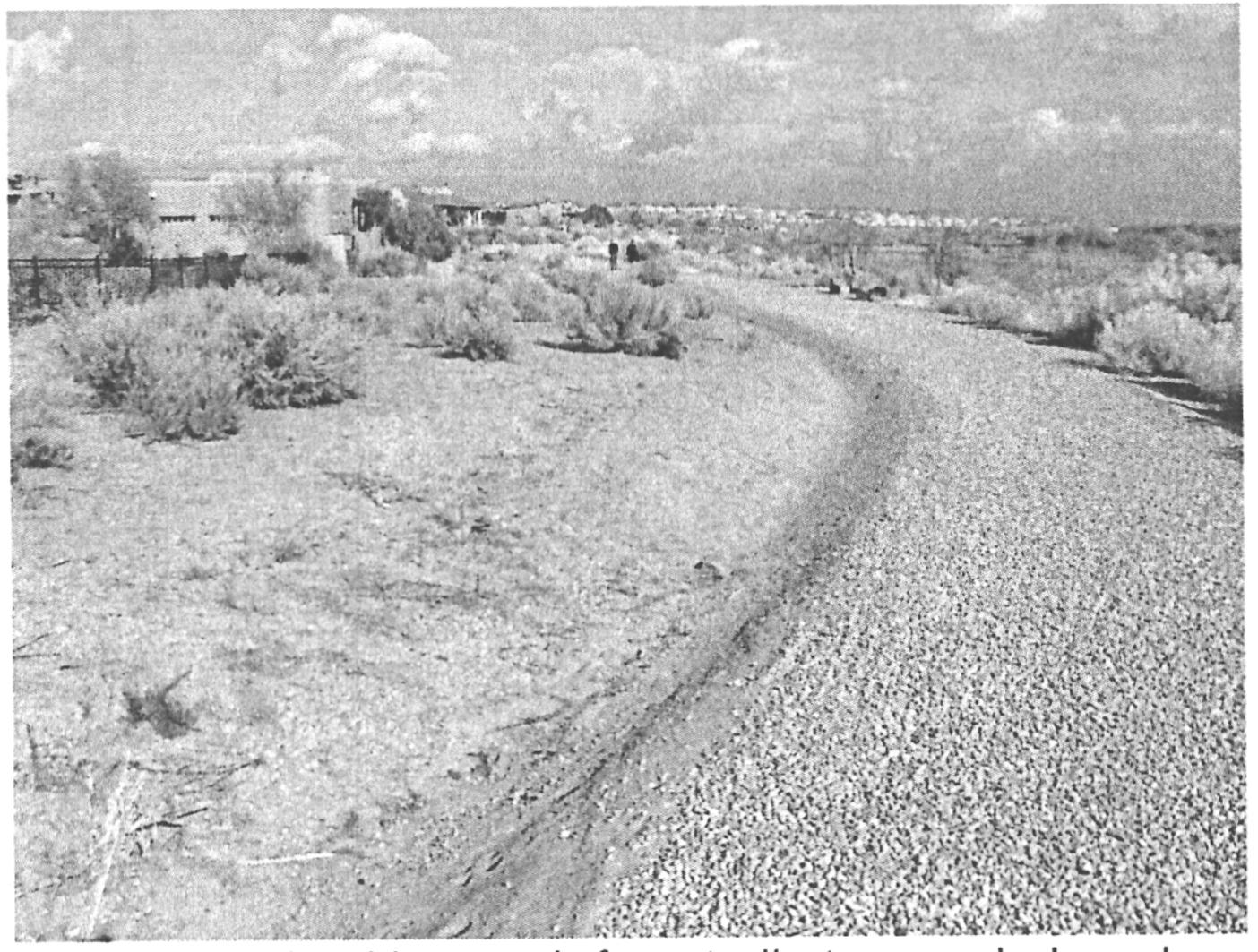


Photo 6 – Looking north from trail at re-graded swale

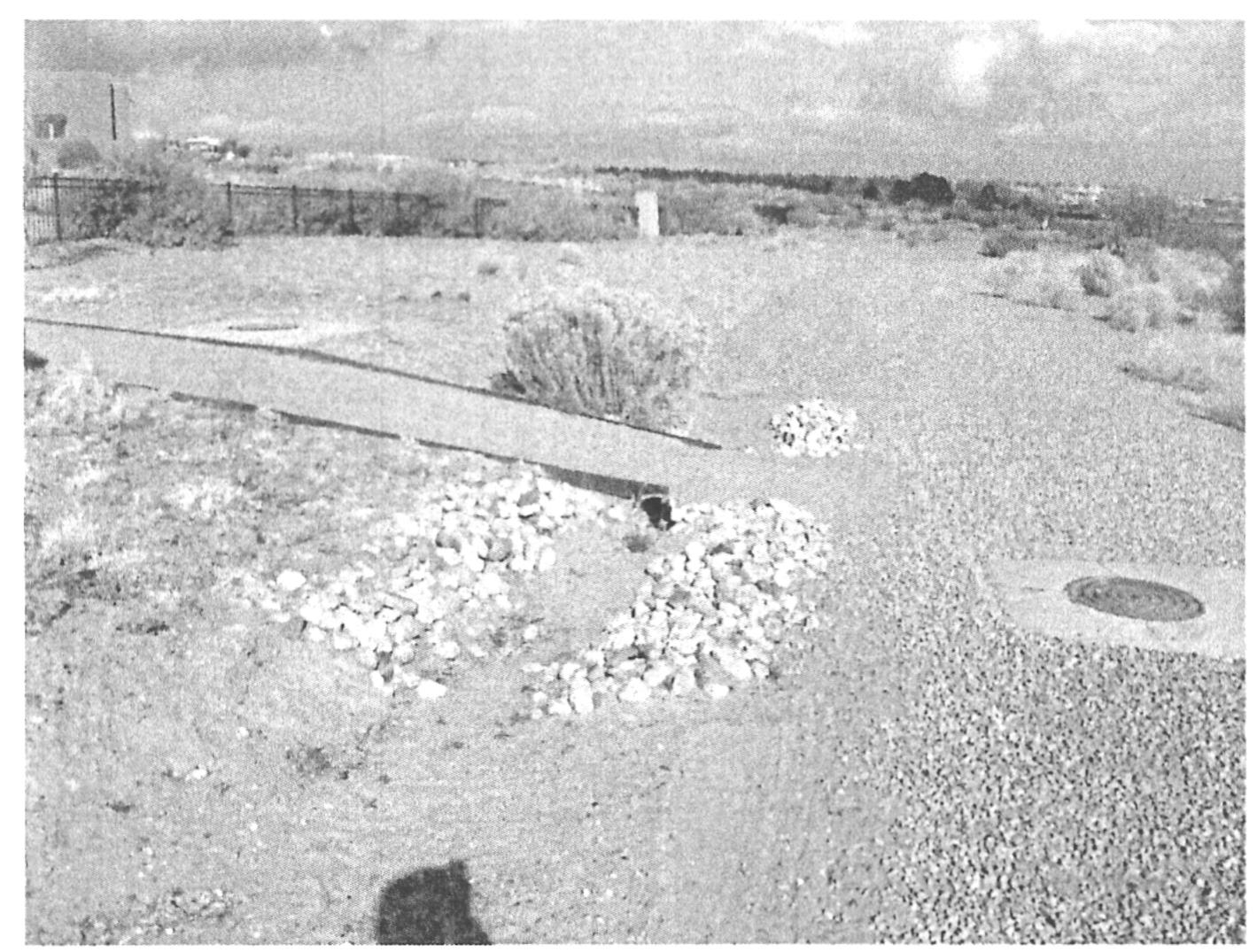


Photo 16 – Looking north from trail at culvert B



Photo 17 – Looking northwest from trail at bee-hive grate #3



Photo 18 – Looking west from trail at bee-hive grate #3

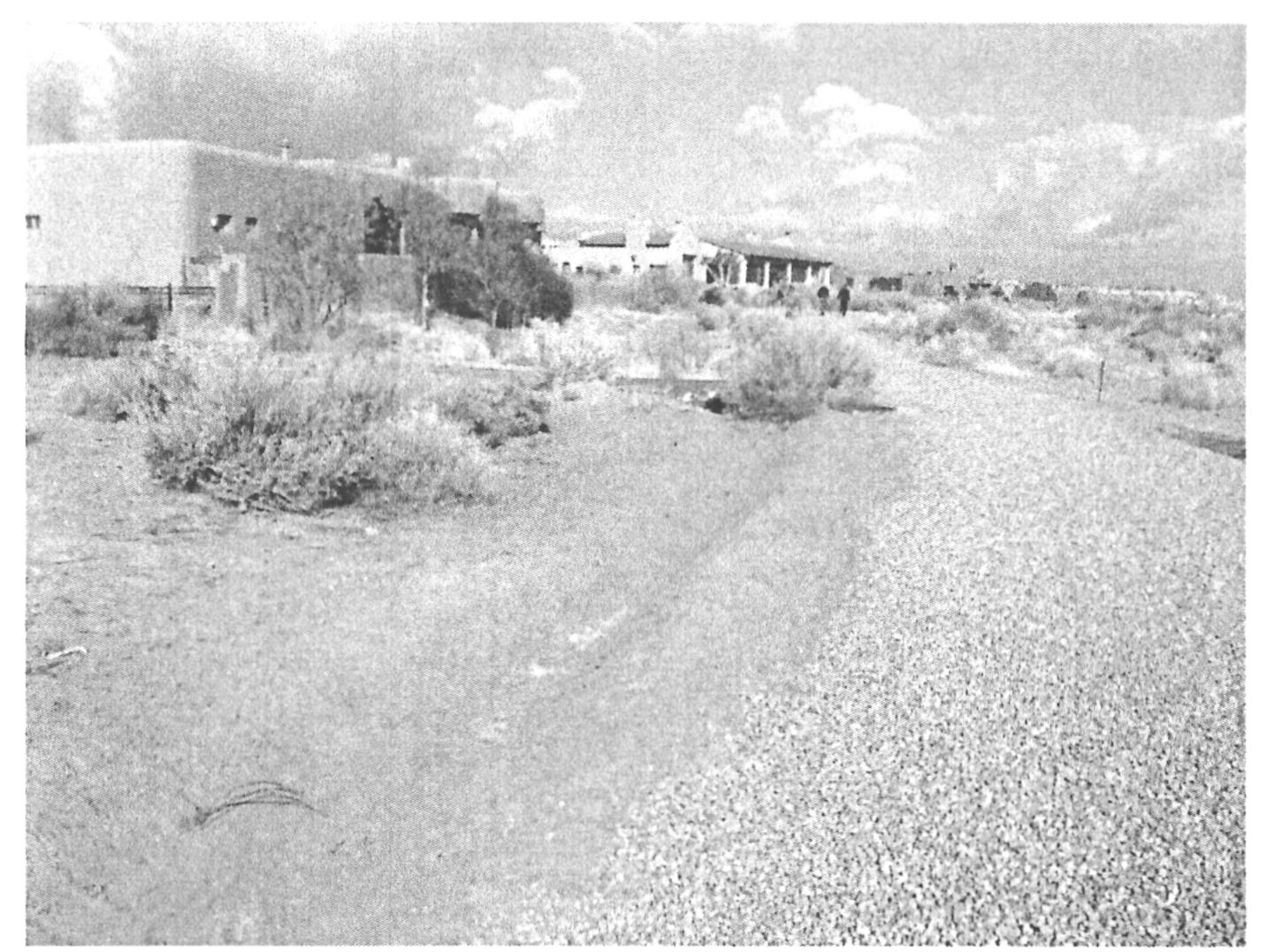


Photo 7 – Looking northwest at re-graded swale

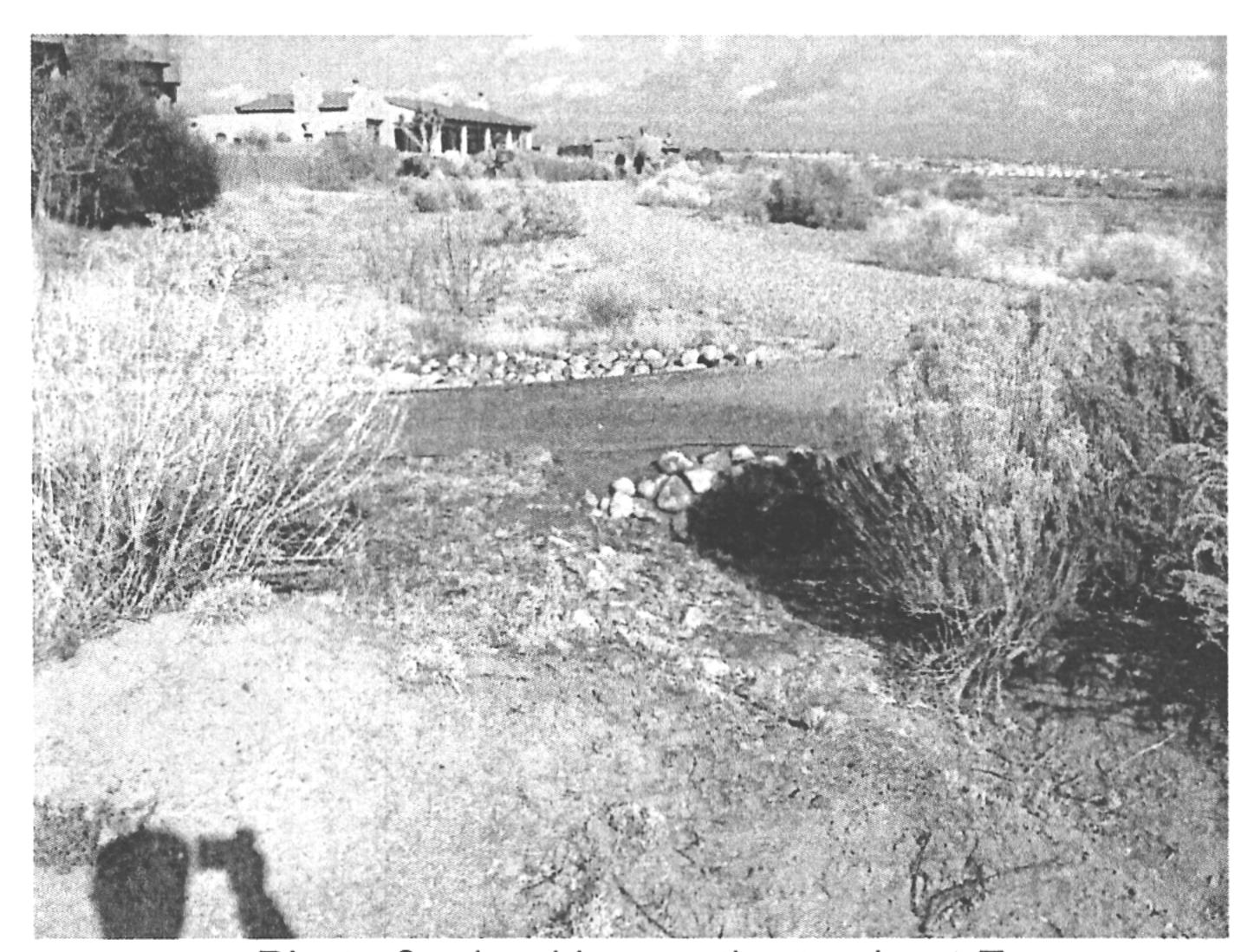


Photo 8 – Looking north at culvert E

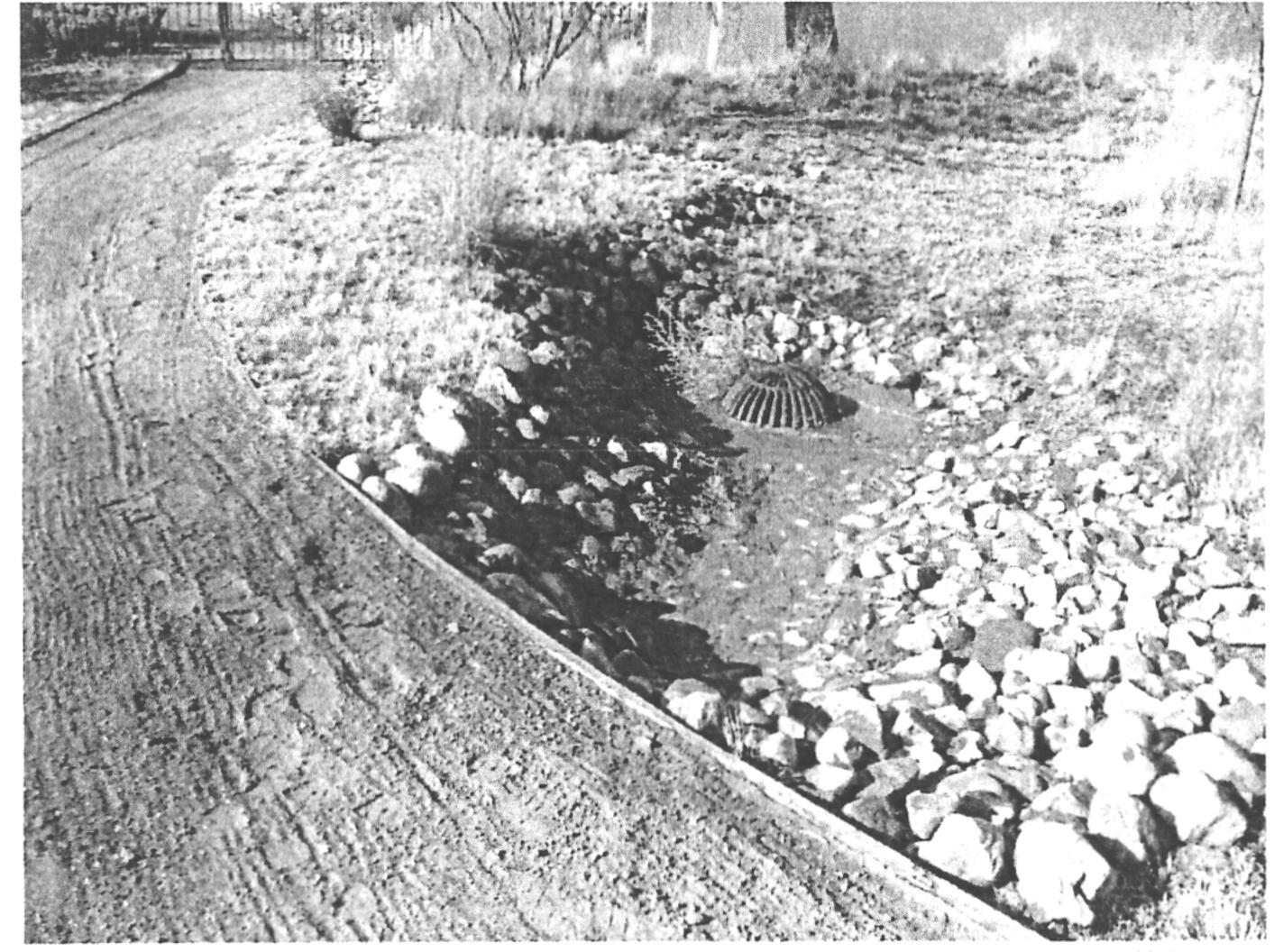


Photo 9 – Looking northwest at bee-hive grate #1

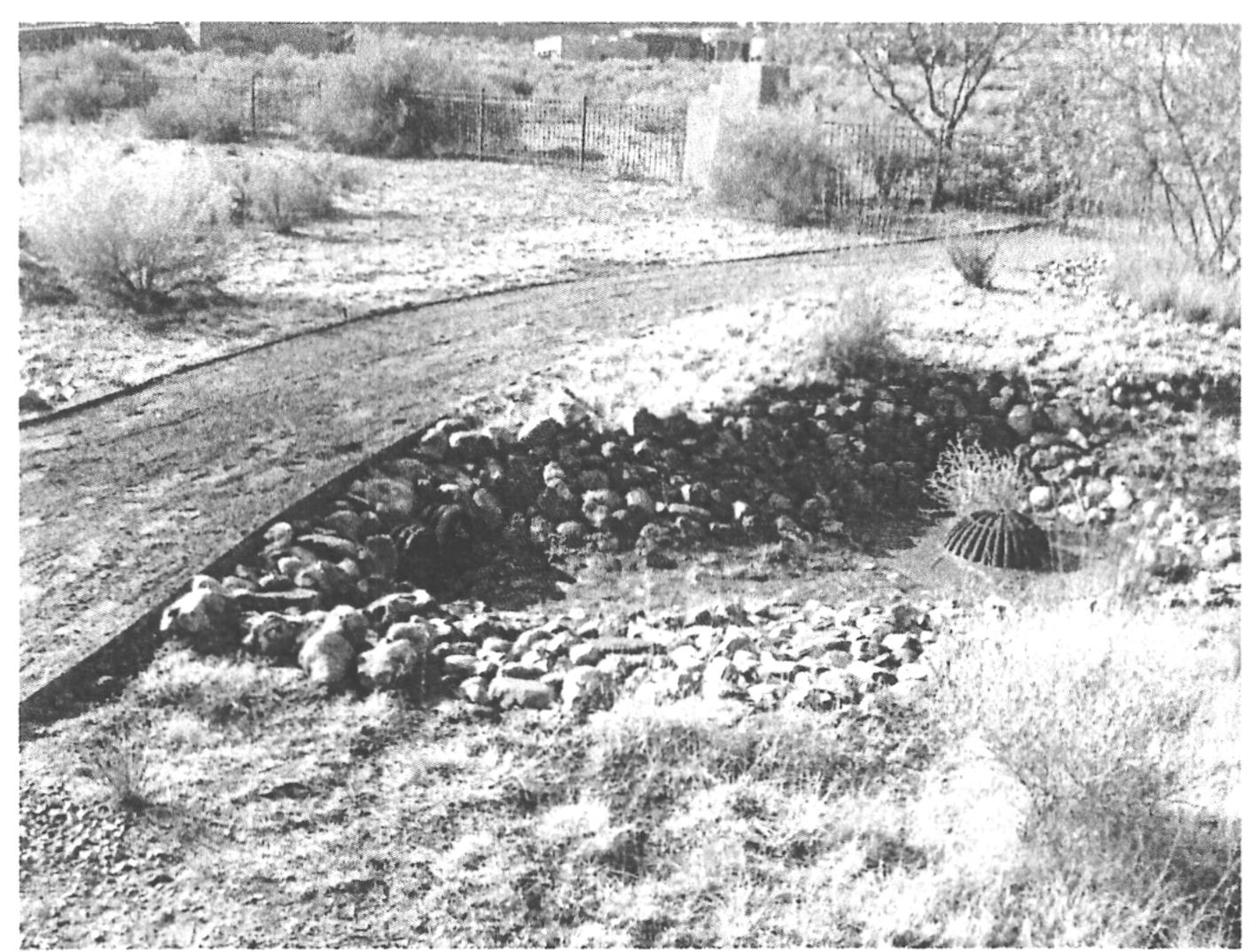


Photo 10 – Looking west from trail at culvert E and bee-hive grate #1



Photo 11 – Looking north from trail at culvert D

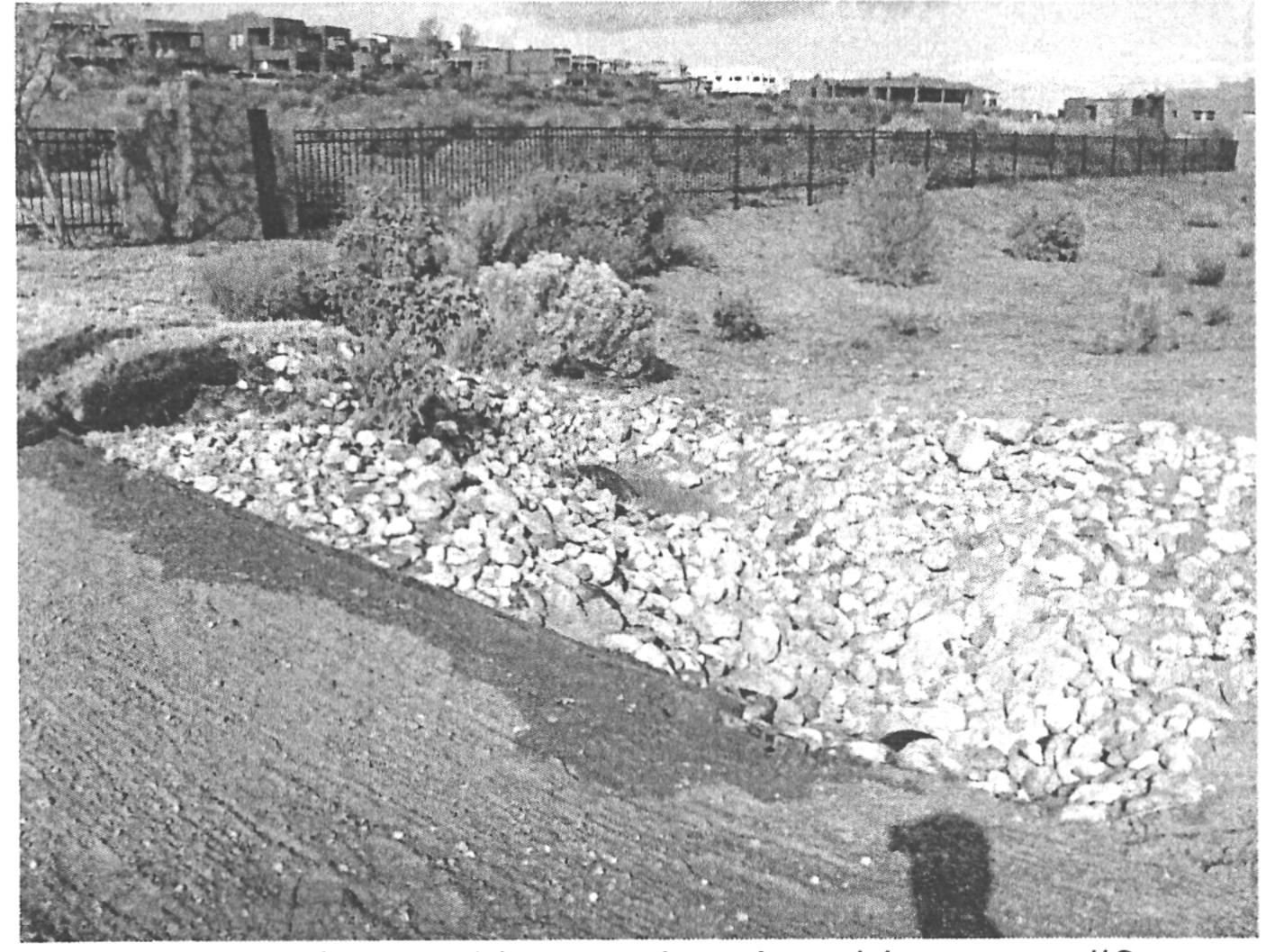


Photo 12 – Looking north at bee-hive grate #2



Photo 13 – Looking west from trail at culvert D and bee-hive grate #2



Photo 14 – Looking west from trail at ponding area

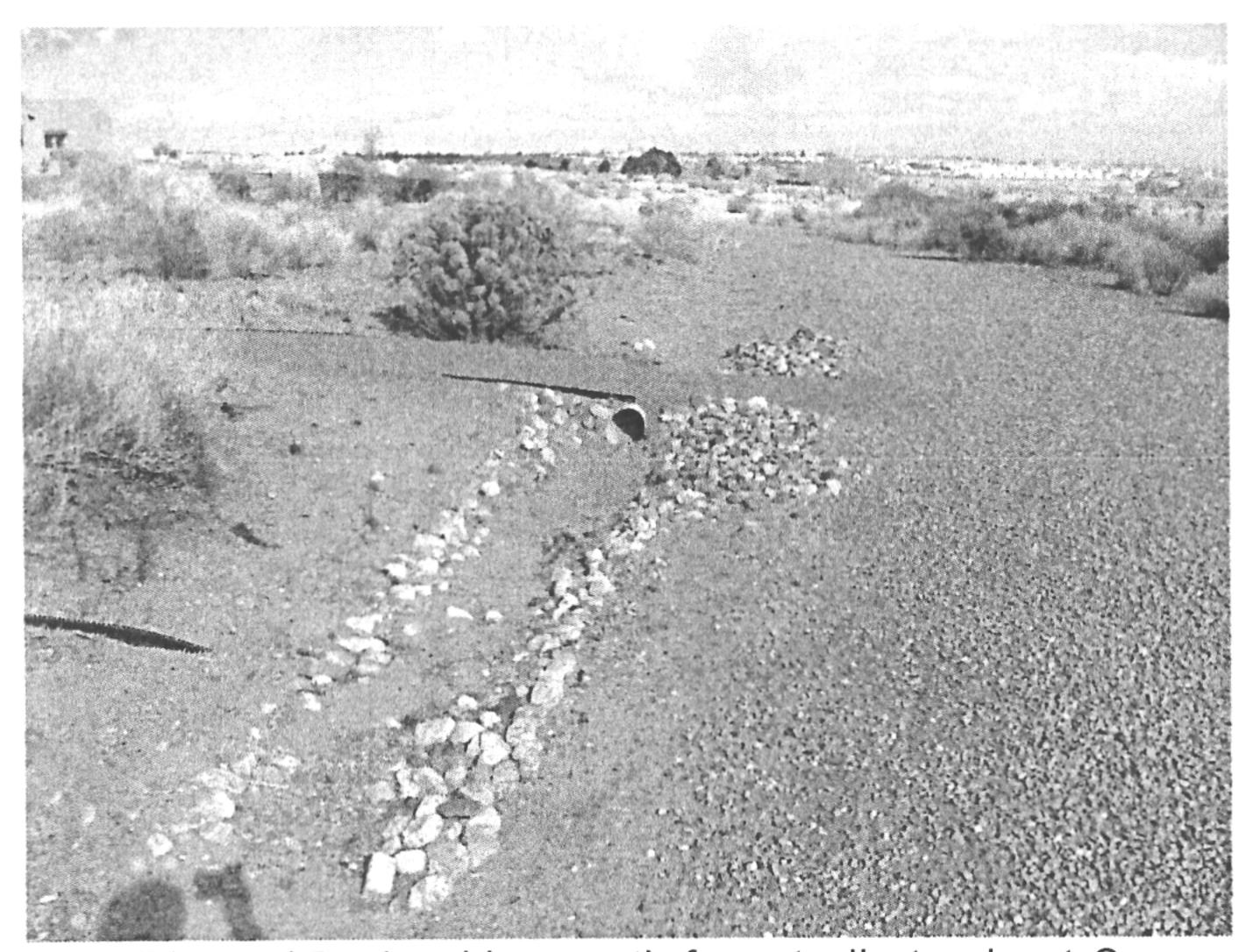


Photo 15 – Looking north from trail at culvert C

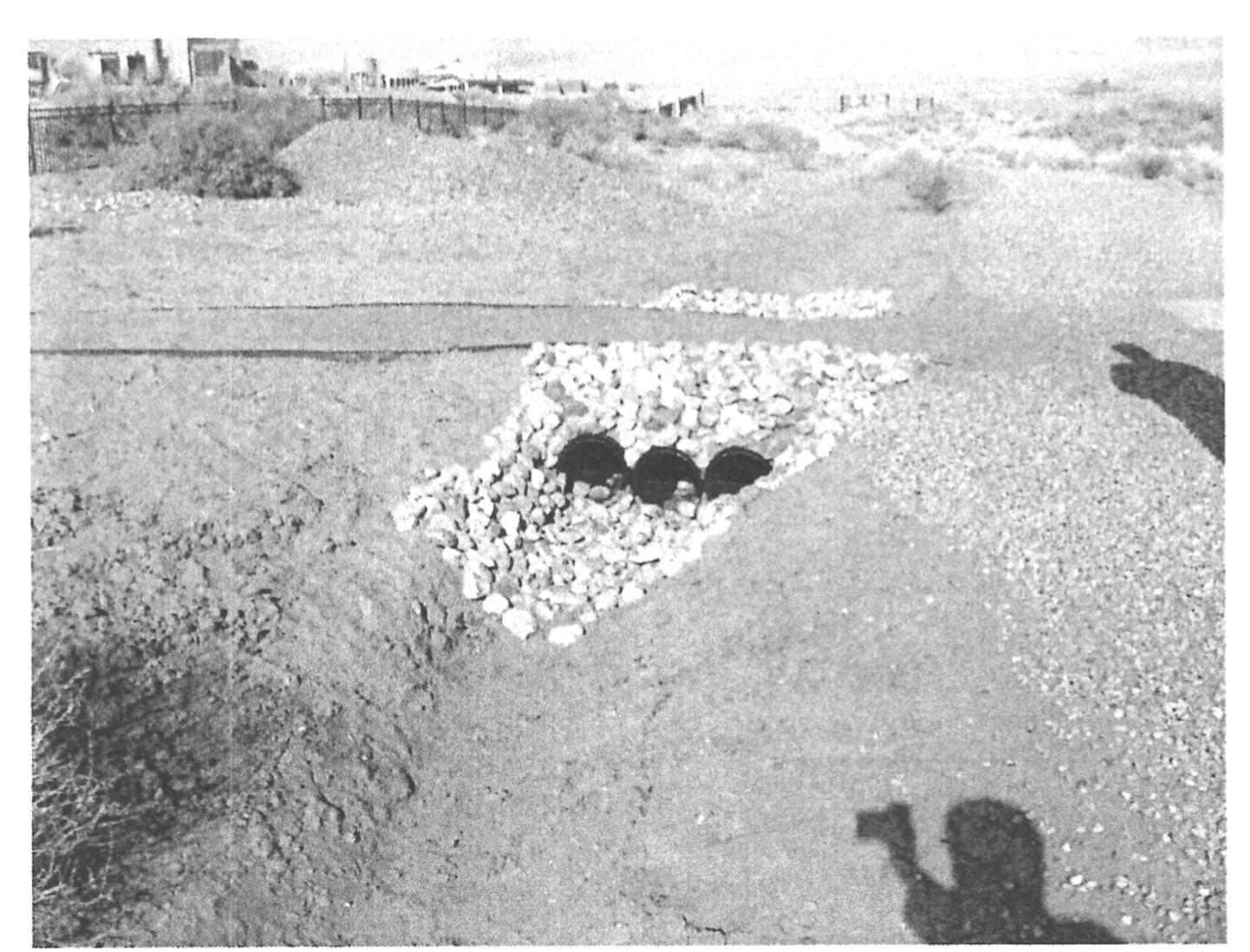


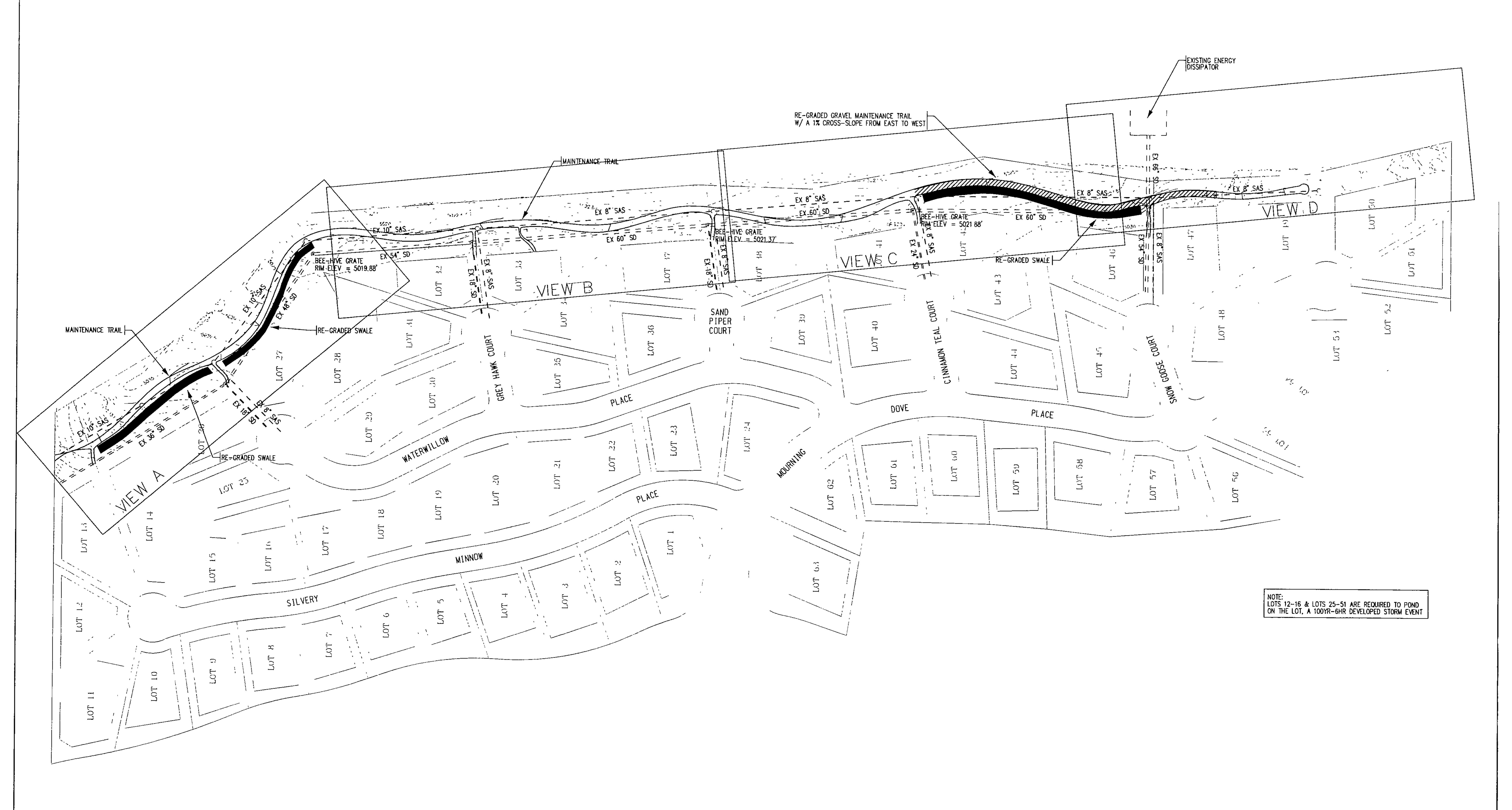
Photo 19 - Looking north at culvert A



Photo 20 – Looking southwest from trail at culvert A

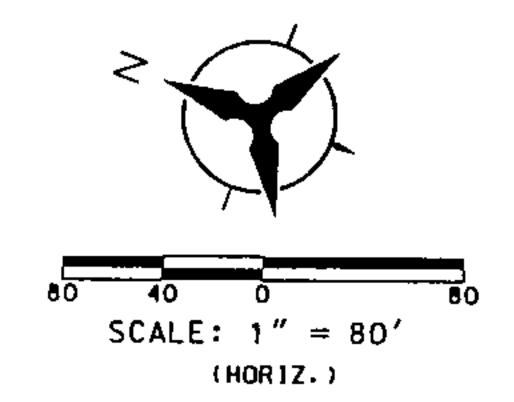


Photo 21 – Looking south from trail at re-graded swale



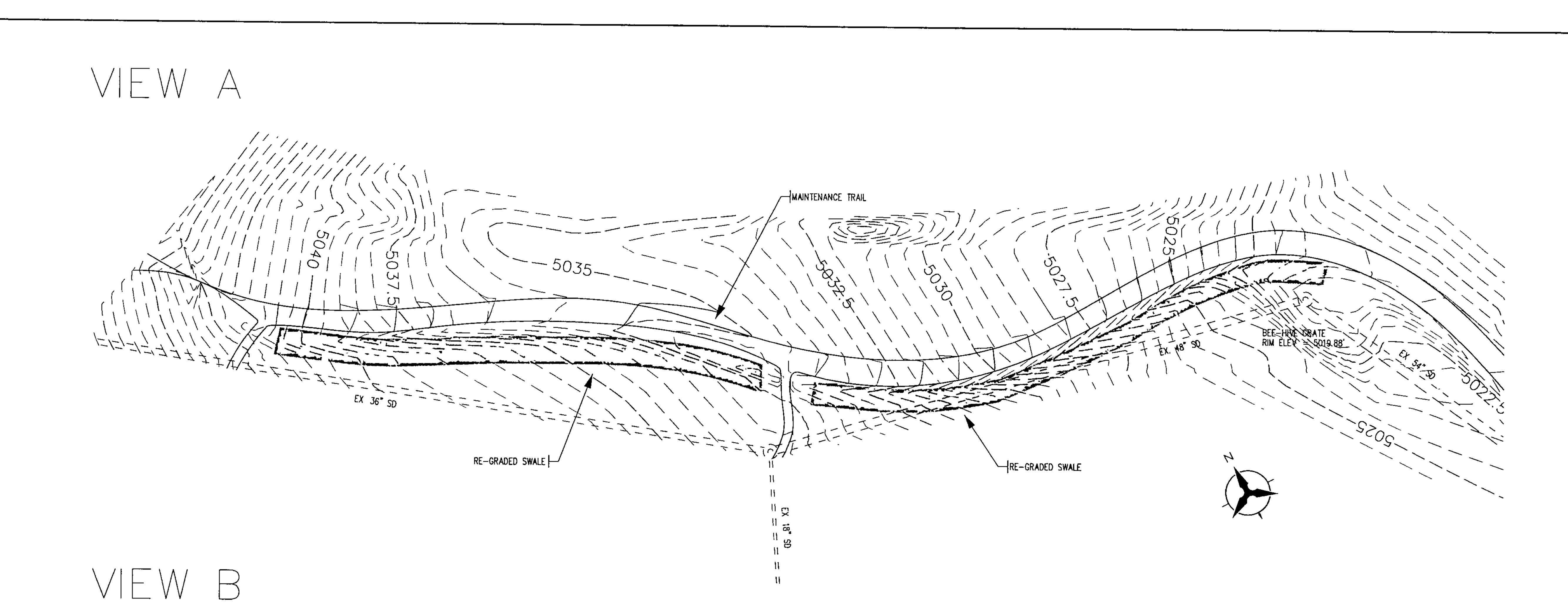
OXBOW BLUFF

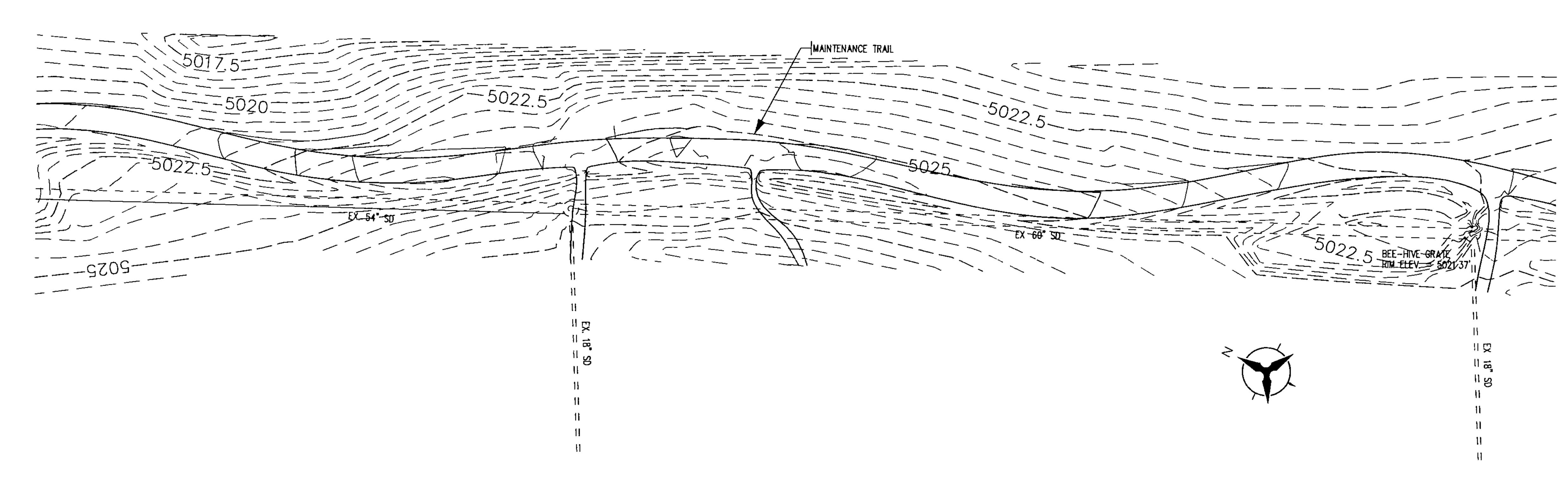
ALBUQUERQUE, NEW MEXICO JANUARY, 2008



### Bohaman A Huston

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ENGINEERING \* SPATIAL DATA \* ADVANCED TECHNOLOGIES





OXBOW BLUFF

ALBUQUERQUE, NEW MEXICO JANUARY, 2008

## Bohannan A Huston

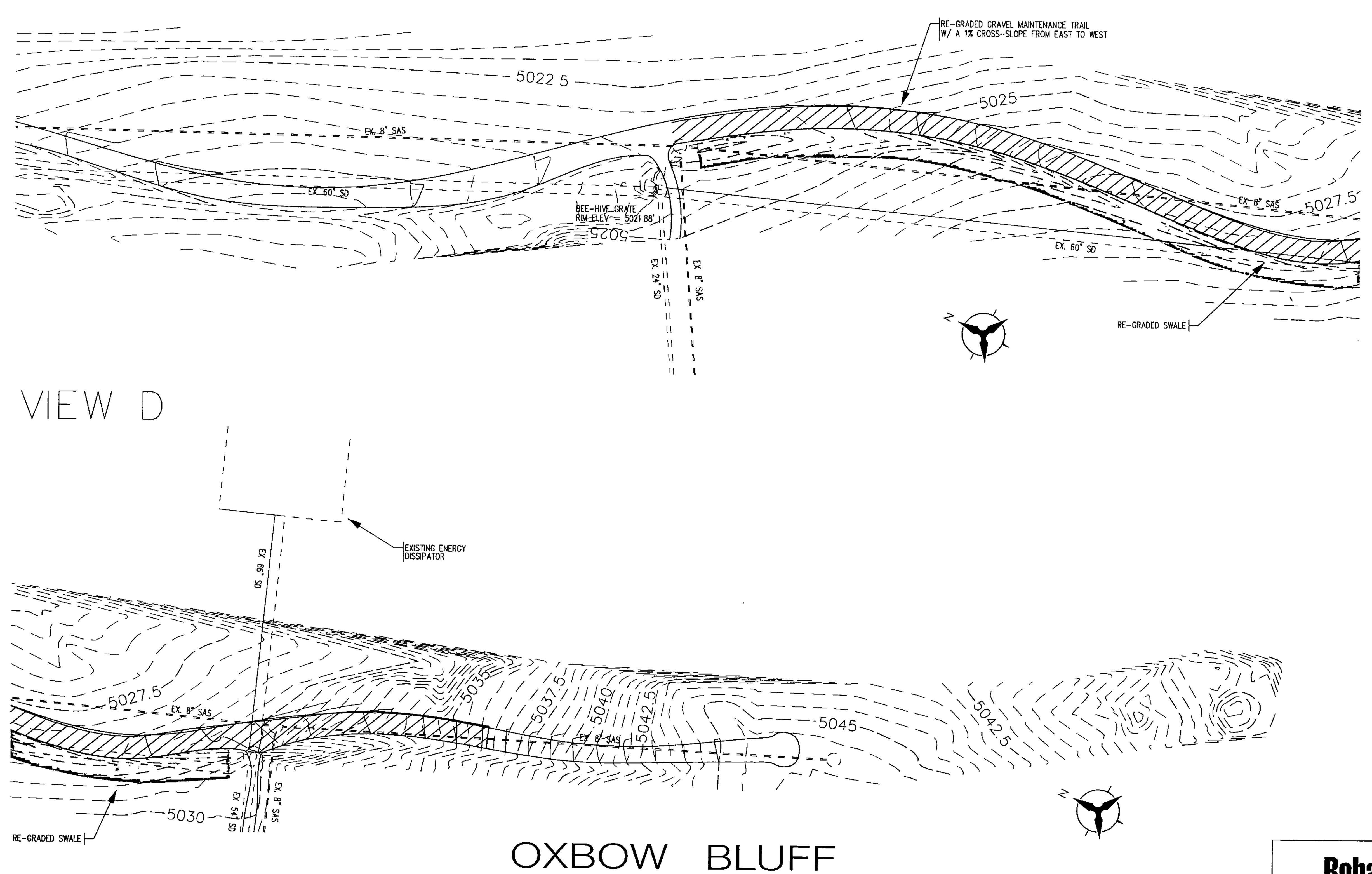
SCALE: 1" = 30'

(HORIZ.)

Courtyard | 7500 Jefferson St NE Albuquerque, NM 87109-4335
ENGINEERING - SPATIAL DATA - ADVANCED TECHNOLOGIES

O:\*Brian Patterson\*OXBOW\*Submittal 1-28-08\*As-built Exhibit-1.dgn

### VIEW C



ALBUQUERQUE, NEW MEXICO

JANUARY, 2008

Bohannan A Huston

SCALE: 1" = 30'

(HORIZ.)

Courtyard i 7500 Jefferson St NE Albuquerque, NM 87109-4335
ENGINEERING \* SPATIAL DATA \* ADVANCED TECHNOLOGIES



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

September 14, 2001

Kevin Patton
Bohannan-Huston
7500 Jefferson NE
Courtyard One
Albuquerque, New Mexico 87109-4335

RE: SO #19 For Drain Line Through Curb On Silvery Minnow Place (G11-D14E) Dated September 4, 2001

Dear Mr. Patton:

I have attached a procedure, the necessary notes, and approval box for your review. Please use this information for your next submittal. Please place drawing on a 24 X 36 drawing.

If you have any questions please call me at 924-3982.

Sincerely,

Carlos A. Montoya

City Floodplain Administrator

# PRIVATE STORM DRAIN IMPROVEMENTS WITHIN CITY RIGHTS-OF-WAY AND/OR EASEMENTS (SO#-19)

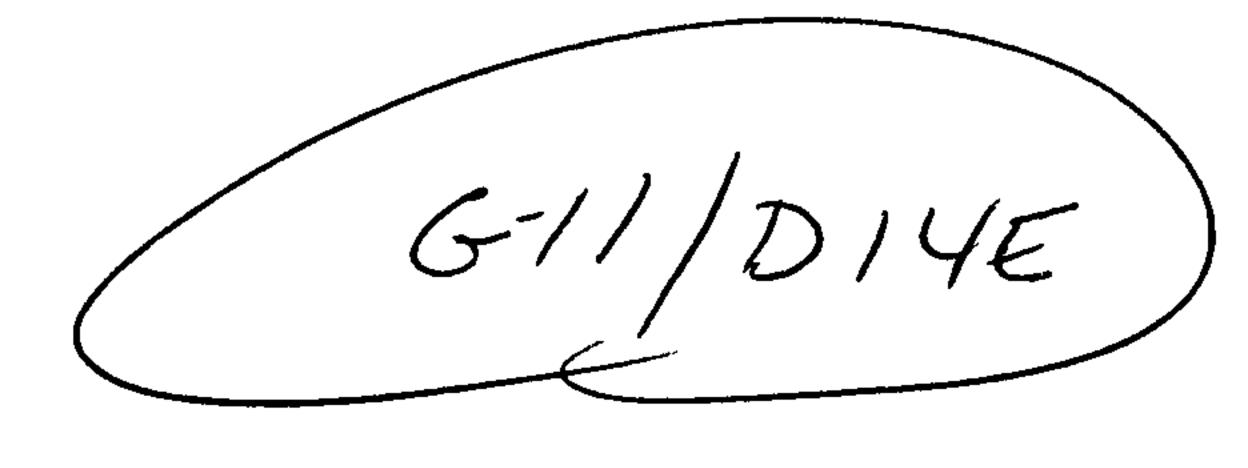
Frequently a drainage plan developed for a particular property involves either discharge directly into a public facility or across a portion of a public right-of-way to a public facility. Examples include connections to the back of an existing storm inlet, construction of sidewalk culverts or a connection to a storm drain manhole or a channel. When such solutions are employed the construction of private storm drain improvements within the City's R/W shall follow these steps:

- 1. There must be two copies of the Grading and Drainage Plan submitted to City Hydrology for approval.
  - These plans must include the notes to the contractor and a signature block.
  - The Engineer must incorporate the proposed improvements on the grading and drainage plans.
  - These plans must include the design or City standards to be used and the location of the proposed construction in the City ROW.
  - The Plan must also have the street address.
- 2. After review and approval by the City, one copy of the plan and approval letter will be forwarded to Barricading/Permits. This plan will then be forwarded to Street Maintenance or Storm Drain Maintenance.
- 3. One plan will be kept at the City for record.
- 4. The contractor must obtain an excavation/construction permit for inspection before beginning any work within the City's ROW. A 24-hour advanced notice is needed for inspection (857-8025).
- 5. After inspection of the completed work, the Street Maintenance or Storm Drain Inspector must sign the signature block of the plan as part of the certification process. The contractor must keep the signed plan and return it to their Engineer.
- 6. The plans signed off by the Street Maintenance or Storm Drain Inspector must be included with the Engineer Certification at the completion of the construction in order to obtain the Certificate of Occupancy.

### NOTICE TO CONTRACTORS

- 1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
- 2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.
- 3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
- 4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- 5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
- 6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
  - 7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

 DATE





September 4, 2001

Mr. Brad Bingham, P.E.

**Hydrology Division** 

City of Albuquerque Public Works Department BOHANNAN-HUSTON, INC.

PO Box 1293

Courtyard One Albuquerque, NM 87103

7500 JEFFERSON NE Special Order 19 for Installation of a Drain Line Through Curb on Silvery Minnow Place Re:

Albuquerque Dear Brad:

voice 505 823 1000

NM 87109-4335 Enclosed for review and approval for installation of a drain line though a curb are copies of the following information:

One (1) copy of our Construction Plans fax 505 821 0892 One (1) copy of COA STD DWG 2235

> The purpose of our request to install a drain line through the curb is to provide an emergency overflow drain for the private water harvesting ponds on Lots 15 and 16 in the Oxbow Bluff Subdivision. A private easement exists on Lot 25 for this purpose. The plat also provided for cross lot drainage (via an blanket easement outside of the building envelopes). It is my understanding that the individual lot owner(s) and/or the Oxbow Homeowners Association will be responsible for the maintenance of the private storm drain line.

If you have any questions or required further information, please contact me.

Bohannah Huster

Ketin Patton, P.E. Group Leader/Project Manager Community Development

and Planning Group

KP/ca Enclosures

Sincerely

cc: Mr. Thomas Keleher, Altura West Ltd. Co. (w/ enclosures)

P \00217\cdp\corres\B Bingham SO19 doc

### CLIENT/COURIER TRANSMITTAL

	To:	<b>To</b> : Brad Bingham Hydrology Division		Requested By: Kevin Patton / ca		
		City of Albuquerque 600 2 <sup>nd</sup> Street NW, 2 <sup>nd</sup> FI	oor	Date:	September 4, 2	2001
OHANNAN HUSTON				Time Due:	☐ This A.M.	⊠ This P.M.
Courtyard One	Phone	•: 924-3986			□ Rush	☐ By Tomorrow
500 JEFFERSON NE						
Ipadne	Job No.: 00 217			Job Name: Oxbow Bluff Subdivision		
EW MEXICO 87109						
oice 505.823.1000						
ax 505.798.7988		DELIVERY VIA			PICK UP	
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		Mail UPS				
		Other				
	ITEM	NO. QUANTITY	DESCRIPTION			

9/4/01 letter with attachments to Mr. Bingham

#### **COMMENTS / INSTRUCTIONS**

REC'D BY: Process Duan DATE: 9/11/64 TIME: 3:20

SEP 0 4 2001

HYDROLOGY SECTION

