



BOHANNAN-HUSTON INC.

4125 Carlisle Blvd. NE Albuquerque, New Mexico 87107
(505) 881-2000

Transmittal

To:

City Hydrology
2nd Central

☐ Parcel Post

☐ Messenger

☐ First Class

☐ UPS

☐ Express Mail

☐ Air Freight

☐ Bus

☐

Attention:

Felix Aguirre

Date:

4/6/84

Our job number:

41341

Your job number:

Job:

Drainage Plan for Mini Warehouse

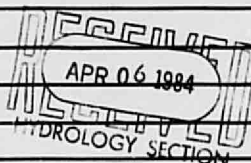
We are enclosing:

For:

J-15-D21

Comments:

For review



By:

Brian Burnett

thank you

Rec'd by:

Capitula Alderete

Date:

4/16/84

☐ Please Return Signed Yellow Copy

2/1/84

BOHANNAN-HUSTON INC.



4125 CARLISLE BLVD., N.E. ALBUQUERQUE, NEW MEXICO 87107 505 881-2000
673 VISCOUNT BLVD., EL PASO, TEXAS 79925 915 784-4351
330 GARFIELD, SANTA FE, NEW MEXICO 87501 505 886-7871

ENGINEERS PLANNERS PHOTOGRAMMETRISTS

April 6, 1984

Mr. Fred J. Aguirre
Civil Engineer/Hydrology
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

Re: University Self Storage Drainage Plan

Dear Fred:

Enclosed is a copy of the referenced drainage plan for your review. The site is bordered on the north and east by Legion Road, on the west by the Legion Hall parking lot, and on the south by a cemetery.

If you have any questions, please give me a call.

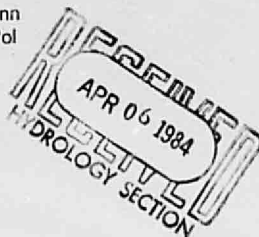
Sincerely yours,

Brian G. Burnett, P.E.
Project Manager

Enclosure

cc: Mr. Steve Schumann
Mr. John VanderPol

KBA/mw
4 134 1



PRINCIPALS

JERRY R. BOHANNAN, P.E. & L.S.
LARRY W. HUSTON
MICHAEL M. EMERY, P.E.

4/18/84

Mr. Brian Burnett
Bohannon-Huston, Inc.
4125 Carlisle Blvd. NE.
Albuquerque, N.M. 87107

Handwritten signature: *Brian*

RE: Grading & Drainage Plan For University
Self Storage Site (J15-D21) Received April
6, 1984.

Dear Brian,

As we discussed on the date of your
submittal, the following item will need
to be addressed for this site.

1. A soils report will be required
for the encroachment into the
flooding area in the street.
2. The ponding volume displaced
by the development will have to
be accounted for by either pond-
ing on-site (the ponding will also
have to contain on-site contribution)
or by providing a storm sewer
system for removal.

I was informed that Dan Montano
of the survey section may know
where the outfall for the existing
stormsewer is. I haven't asked
him.

(2)

3. The structures in the eastern end of the property will have to be raised above the flood ponding elevation (BFE = 5082.00). It is also suggested that the entrance to the site be moved to the north and western portion of the site to allow for the elevation of the southeastern corner of the property where the entrance is currently proposed.

Should you have any questions or comments, please contact me.

Sincerely yours

AB



May 1, 1984

Mr. Billy J. Goolsby
 City/County Flood Ordinance Administrator
 City of Albuquerque
 P.O. Box 1293
 Albuquerque, NM 87103

Re: Lomas—Legion MiniWarehouse Drainage Report

(115-D21)

Dear Billy:

In early April, we met to discuss the referenced project. As you recall, the site lies next to a flood plain caused by a depression in the road surface. In the conference, you outlined three items that would be required for approval of the plan:

1. A soils report would be required outlining requirements for constructing any retaining walls adjacent to the flood pool.
2. Ponding should be provided for the amount of flood plain displaced by the project and for the runoff volume increase due to paving the west end of the project.
3. Off-site flows should be conveyed through the property by providing openings in the walls.

I have enclosed a revised report which supercedes our previous submittal. The above items have been addressed in the report.

Please contact me at your earliest convenience to discuss the project. We are most anxious to proceed with obtaining a building permit.

Sincerely yours,

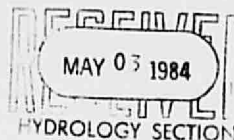
Brian G. Burnett

Brian G. Burnett, P.E.
 Project Manager

Enclosure

cc: Mr. Steve Schumann

BGB/mw
 Job No. 4 134 1





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

May 21, 1984

Mr. Brian Burnett
Bohannon-Huston, Inc.
4125 Carlisle Boulevard NE
Albuquerque, NM 87107

REF: REVISED GRADING AND DRAINAGE PLAN FOR UNIVERSITY SELF STORAGE
(J15-D21) RECEIVED MAY 3, 1984

Dear Brian:

The above referenced plan, dated April 27, 1984, is approved.

Please attach a copy of this approved plan to the construction set
prior to issuance of the building permit.

If I can be of further assistance, please contact me at 766-7644.

Sincerely yours,

Billy J. Goolsby, PE
City/County Flood Plain Admin.

BJG:mrk

MUNICIPAL DEVELOPMENT DEPARTMENT

C. Dwayne Sheppard, P.E., City Engineer

ENGINEERING DIVISION

Telephone (505) 766-7467

AN EQUAL OPPORTUNITY EMPLOYER

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Cubby Hole Mini-Storage ZONE ATLAS/DRNG. FILE #: J-15/D21
R.V. Parking Lot
LEGAL DESCRIPTION: A tract of land in the south half of Section 16, T10N, R3E
CITY ADDRESS: n/a
ENGINEERING FIRM: Bohannon-Huston, Inc. CONTACT: Brian Burnett
ADDRESS: 4125 Carlisle NE PHONE: 881-2000
Albuquerque, New Mexico 87107
OWNER: Steve Schumann CONTACT: Steve Schumann
ADDRESS: 1200 Legion N.E. PHONE: 243-6262
Albuquerque, New Mexico 87102
ARCHITECT: n/a CONTACT: _____
ADDRESS: _____ PHONE: _____
SURVEYOR: n/a CONTACT: _____
ADDRESS: _____ PHONE: _____
CONTRACTOR: n/a CONTACT: _____
ADDRESS: _____ PHONE: _____
PRE-DESIGN MEETING: NOV 19 1985
YES DRB NO. n/a 84-298 4/24/84
x NO EPC NO. n/a
COPY OF CONFERENCE RECAP PROJ. NO. n/a
SHEET PROVIDED

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☐ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ SITE DEVELOPMENT PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY APPROVAL
☐ ROUGH GRADING PERMIT APPROVAL
☐ GRADING/PAVING PERMIT APPROVAL
☐ OTHER _____ (SPECIFY)

DATE SUBMITTED

BY:

10/19/85

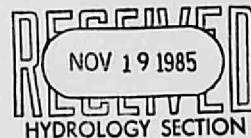
Brian G. Burnett

BOHANNAN-HUSTON INC.



4125 CARLISLE BLVD., N. E. ALBUQUERQUE, NEW MEXICO 87107 505 281-2000
UNIVERSITY PLAZA 330 GARFIELD SUITE 104 SANTA FE, N. M. 87508 505 988-7671
6713 VISCOUNT BLVD. EL PASO, TEXAS 79925 915 778-4491

November 18, 1985



Mr. Fred Aguirre
Hydrology Section
City of Albuquerque
Post Office Box 1293
Albuquerque, NM 87103

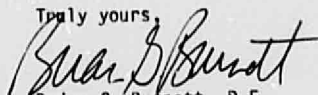
Re: Drainage Plan Submittal for Recreational Vehicle Parking Lot

Dear Fred:

Enclosed for your review is one copy of the referenced drainage plan. We are seeking a building permit at this time. Please note that the drainage plan for the adjoining "Cubby Hole Mini Warehouse" project is included for reference (previous drainage log number J15-D21).

In an effort to construct and pave the lot prior to cold weather setting in, we are seeking approval at the earliest possible date. If we can assist in expediting the review process, please do not hesitate to call.

Truly yours,


Brian G. Burnett, P.E.
Vice President

Enclosure

cc: Mr. Steve Schumann

BGB/mls
Job No. 5 307 1

85 1181A

AGREEMENT

J15 D2

0 311

Whereas, Steven Schumann and Sherri Schumann, his wife are owners of the following described real property located in Bernalillo County, New Mexico to wit:

Tract W lands of Southwestern Construction and Tract M-1 lands of Southwestern construction located in the City of Albuquerque, County of Bernalillo, State of New Mexico

Be it known by these present that the owner do, hereby, agree that by agreement they shall allow water to flow from the North Boundry of Tract M-1 to the South Boundry of Tract W, without restriction.

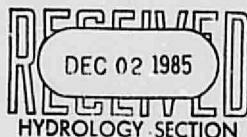
The owners do agree that this agreement shall be binding on all successors and assigns of said owners.

Steven Schumann

Steven Schumann

Sherri Schumann

Sherri Schumann



Sworn to and subscribed before me this 29th day of Nov. 1985.

Patricia A. Moore

Notary Public

My commission expires Aug. 15, 1987

STATE OF NEW MEXICO
COUNTY OF BERNALILLO

1985 DEC -2 PM 12:59
Miss 286A-311
Moore



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

December 12, 1985

Mr. Brian G. Burnett, PE
Bohannon-Huston Inc.
4125 Carlisle Boulevard NE
Albuquerque, NM 87107

REF: DRAINAGE PLAN FOR RECREATIONAL VEHICLE PARKING LOT (J15-D21) RECEIVED
NOVEMBER 19, 1985

Dear Brian:

The above referenced drainage plan is approved for Building Permit dated
November 20, 1985.

If you should have any further questions, please feel free to call me at
766-7644.

Sincerely,

Carlos A. Montoya, PE
City/County Flood Plain Admin.

CAM:mrk

MUNICIPAL DEVELOPMENT DEPARTMENT

C. Dwayne Sheppard, P.E., City Engineer

ENGINEERING DIVISION

Telephone (505) 766-7467

AN EQUAL OPPORTUNITY EMPLOYER

DRAINAGE PLAN
FOR
UNIVERSITY SELF
STORAGE SITE

PREPARED FOR:

STEVE SCHUMANN
12909 BRYCE, NE
ALBUQUERQUE, NM 87112

PREPARED BY:

BOHANNAN-HUSTON, INC.
4125 CARLISLE BLVD., NE
ALBUQUERQUE, NM 87107

April, 1984

Job No. 4 134 1



Brian G. Burnett, P.E.
N.M.P.E. No. 8541

INFORMATION SHEET

PROJECT TITLE UNIVERSITY SELF STORAGE TYPE OF SUBMITTAL Drainage Report
ZONE ATLAS PAGE NO. J-15 CITY ADDRESS None
LEGAL DESCRIPTION South half of Section 16, 10 North, Range 3
ENGINEERING FIRM Bohannon-Huston, Inc. CONTACT Brian Burnett
ADDRESS 4125 Carlisle Blvd. NE PHONE 881-2000
Albuquerque, NM 87107
OWNER STEVE SCHUMANN CONTACT Same
ADDRESS 12909 Bryce, NE PHONE 288-1197 - 243 6262
Albuquerque, NM 87112
ARCHITECT John VanderPol CONTACT Same
ADDRESS 2539-B Wyoming, NE PHONE
Albuquerque, NM 87112
SURVEYOR Southwest Surveying Co., Inc. CONTACT Carl Harrington
ADDRESS 215 Marble NW PHONE 247-4444
Albuquerque, NM 87102
CONTRACTOR None CONTACT
ADDRESS PHONE

PRE-DESIGN MEETING:

YES
XX NO
COPY OF CONFERENCE RECAP SHEET PROVIDED

PLEASE CHECK TYPE OF APPROVAL EXPECTED WITH THIS SUBMITTAL:

SKETCH PLAT APPROVAL
PRELIMINARY PLAT APPROVAL
SITE DEVELOPMENT PLAN APPROVAL
FINAL PLAT APPROVAL
XX BUILDING PERMIT APPROVAL
CERTIFICATE OF OCCUPANCY APPROVAL
ROUGH GRADING PERMIT APPROVAL
GRADING/PAVING PERMIT APPROVAL
OTHER (SPECIFY)

DATE SUBMITTED: 4/6/84

BY: Brian G. Burnett

TABLE OF CONTENTS

BASIC INFORMATION

EXISTING CONDITIONS

PROPOSED CONDITIONS

TABLES

RUNOFF COMPUTATIONS

APPENDIX

SOILS REPORT

PLATE
(in rear pocket)

1 - DRAINAGE/GRADING PLAN

BASIC INFORMATION

1. Legal Description: A tract of land in the south half of Section 16, Township 10 north, Range 3 east, New Mexico Principal Meridian, Bernalillo County, New Mexico.
2. Project TBM — Highway marker located at southeast corner of property, elevation 5079.62.
3. Boundaries of site:

North and east — Legion Road (public)
West — Legion Hall parking lot
South — Cemetery

EXISTING CONDITIONS

The Master Drainage Study indicates that flooding occurs adjacent to the site due to a depression at elevation 5075.5. The study indicates that this flood pool rises to elevation 5082.0 during the 100-year runoff event. The flood plain has been indicated on the grading plan.

A clogged storm sewer is located adjacent to the east boundary of the site. After a lengthy search, no as-built information has been located. It appears that there are three drain lines entering the manhole adjacent to the site: a) a connection from the storm drain system in Lomas Boulevard; b) a short stub-out to collect runoff reaching the low spot in Legion Road, and c) a line running northward to the Campus Wash System. The effectiveness of this entire system is minimal since the manhole and lines are $\frac{3}{4}$ full of sediment and debris.

The mini-warehouse site (Basin B on watershed map) is approximately 2.05 acres in size. At the present time, $\frac{2}{3}$ of the site is covered with asphalt. The remaining $\frac{1}{3}$ of the site is a dirt surface of 'B' type soil. Using a 'C' factor of 0.69 (Plate 22.2 C-1), a 100-year flow rate of 6.7 cfs is generated from the site. This represents a runoff volume of 0.27 acre-feet (11,325 cu. ft.) which contributes to the existing flood pool.

Off-site Basin A drains through the site. This paved parking lot, 0.58 acres in size, generates a 100-year peak flow rate of 2.8 cfs and a runoff volume of 0.11 acre-feet (8270 cu. ft.).

PROPOSED CONDITIONS

In a pre-design meeting with Billy Goolsby, the following requirements were established for the site:

1. Ponding should be provided for the amount of flood plain displaced by the project and for the runoff volume increase due to paving the west end of the project.
2. Ponding within 15 feet of a building or retaining wall must be supported with a soils report and recommendations for waterproofing the structures.
3. Off-site flows should be conveyed through the project by providing openings in the walls.

Following are highlights of the plan as related to the above items:

1. Ponding has been provided for approximately 5600 cu. ft. of runoff. The increase in pavement surface generates 3000 cu. ft. of runoff volume. The displaced volume has been computed as being approximately 2600 cu. ft. Runoff will discharge to the right-of-way from the pond through a 4" PVC outlet pipe.
2. A soils investigation has been prepared by Fox & Associates of New Mexico, Inc. The recommended techniques for designing and constructing the retaining walls and foundation will be followed. This document has been included in the Appendix.
3. Openings at two locations in the wall situated along the west boundary will allow off-site flows to be conveyed through the site. A detail has been provided on the grading plan.



PROJECT NAME _____ SHEET _____ OF _____
 PROJECT NO. _____ BY _____ DATE _____
 SUBJECT _____ CHD _____ DATE _____

DEVELOPED DRAINAGE

Basin	Area (ac.)	Length (ft.)	Top Elev. (ft.)	Bottom Elev. (ft.)	Slope (ft./ft.)	Time of Concentration	Soil Group	% Impervious	Runoff Coefficient, C	100 YEAR				10 YEAR			
										6 Hr. Rain Volume (in.)	I / 6 Hr. Rain (in./hr.)	Peak Flow Rate Q (cfs)	Runoff Volume (ac. ft.)	6 Hr. Rain Volume (in.)	I / 6 Hr. Rain (in./hr.)	Peak Flow Rate Q (cfs)	Runoff Volume (ac. ft.)
A	.58	1	1	1	1	10	B	100	1.0	2.25	4.76	2.76	.108	1.48	3.13	1.81	.071
B	2.05	1	1	1	1	10	B	100	1.0	2.25	4.76	9.76	.384	1.48	3.13	6.41	.262
Ref.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

References:

- | | | | |
|---------------|---|--------|---|
| 1, 2, 3, 4, 5 | Basin areas, lengths, top and bottom elevations and slopes from Plate 1 | 10, 14 | DPM Plate 22.2 D-1 |
| 6 | T_c by Kirpich formula $T_c = .0078 \frac{\text{Length}^{.77}}{\text{Slope}^{.385}}$ (10 minutes minimum) | 11, 15 | DPM Plate 22.2 D-2 |
| 7 | See Soils Map Plate 31 and Text. | 12, 16 | Rational Formula $Q = C/A$ |
| 8 | By area computation. | 13, 17 | Rational Formula $V = \frac{\text{Rainfall} \times C \times A}{12}$ |
| 9 | DPM Plate 22.2 C-1 | | |



BY _____ DATE _____
CH'D _____ DATE _____

Basin	Area (ac.)	Length (ft.)	Top Elev. (ft.)	Bottom Elev. (ft.)	Slope (ft./ft.)	Time of Concentration	Soil Group	% Impervious	Runoff Coefficient, C	100 YEAR				10 YEAR			
										6 Hr. Rain Volume (in.)	I / 6 Hr Rain (in./hr.)	Peak Flow Rate Q (cfs)	Runoff Volume (ac. ft.)	6 Hr. Rain Volume (in.)	I / 6 Hr. Rain (in./hr.)	Peak Flow Rate Q (cfs)	Runoff Volume (ac. ft.)
A	58	1	1	1	1	10	B	100	1.0	2.25	4.76	276	1188	1148	8.13	1101	971
B	205	1	1	1	1	10	B	70	.67	2.25	4.76	6.73	270	1148	3.13	313	177
Ref.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

1, 2, 3, 4, 5	Basin areas, lengths, top and bottom elevations and slopes from Plate 1	10, 14	DPM Plate 22.2 D-1
6.	T_c by Kirpich formula $T_c = .0078 \frac{\text{Length}^{.777}}{\text{Slope}^{.385}}$ (10 minutes minimum)	11, 15	DPM Plate 22.2 D-2
7.	See Soils Map Plate 31 and Text.	12, 16	Rational Formula $Q = CIA$
8.	By area computation.	13, 17	Rational Formula $V = \frac{\text{Rainfall} \times C \times A}{12}$
9.	DPM Plate 22.2 C-1		

seven feet high around the eastern perimeter of the site. During the 100-year flood the area will be inundated with a maximum of seven feet of water. With time the flood waters will flow under and possibly through the retaining wall and into the soils supporting the structures and retaining wall. This moisture will cause densification and settlement of the soils supporting the retaining wall and structures.

Based upon a flood duration of 12 hours or less we anticipate that moisture will penetrate no more than three feet into the soil. To minimize settlement of the retaining wall the footing should be covered with a minimum of three feet of controlled structural fill soil cover. If the retaining wall is permeable the three feet of soil immediately behind the wall may become saturated. If this material is controlled structural fill compacted to a minimum of 95% of maximum density as determined by ASTM D-1557, settlement should be minimal. Heavy compaction equipment should not be used immediately behind the wall to prevent overstressing of the wall. Prior to foundation placement the exposed soils should be scarified to optimum moisture content ($\pm 2\%$) and compacted to a minimum of 95% of maximum density as determined by ASTM D-1557 with a minimum of 10 passes of a heavy vibratory roller.

An evaluation of depth of scour or the effects of flowing water on the structures was beyond the scope of this investigation. The static water situation only was evaluated. Additionally, this report did not evaluate the suitability of the man-made fill or natural soils for structure support.

Should you have any questions regarding this letter, or if we may be

University Self Storage
Page 3

of further service please call.

Sincerely,
Fox & Associates of New Mexico, Inc.



Martin D. Vinyard

Martin D. Vinyard, P. E.
Geotechnical Section Head