CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

PRE-DESIGN CONFERENCE RECAP

HYDROLOGY SECTION PROJECT NO.: I/15 DATE: 6-7-85

PLANNING DIVISION NOS. EPC: ____________ DRB: ____________

SUBJECT: 1600 University

LEGAL DESCRIP.: Lot 4 of Ballut

APPROVAL REQUESTED

____ PRELIMINARY PLAT ____ FINAL PLAT

____ SITE DEVELOPMENT PLAN X BUILDING PERMIT

____ ROUGH GRADING

	WHO:	REPRESENTING:
ATTENDANCE:	Gan Tibljas	
	Carlos A Mont	
	KNIGHT SEAVEY	

____ Conceptual Drainage Plan/Report required for Preliminary Plat and/or Site Development Plan sign-off.

X Approved Drainage Plan/Report required for Final Plat and/or Building Permit sign-off.

____ Subdivision Improvements Agreement or Financial Security required.

FINDINGS: (1) DRAINAGE PLAN PER DPM (2) Free Discharge - (A) INFILL site (B) Minimum SIZE of impervious area (C) STORM DRAIN SYSTEM IN STREET. (D) Bottom of watershed

The undersigned agrees that the above findings are summarized accurately and are only subject to change if further investigation reveals that they are not reasonable or that they are based on inaccurate information.

SIGNED: Carlos A Mont SIGNED: ____________
TITLE: ____________ TITLE: ____________
DATE: 6-7-85 DATE: ____________

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

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

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

August 19, 1985

Mr. Gary Tibjlas
Denney-Gross & Associates
2400 Comanche NE
Albuquerque, NM 87110

REF: DRAINAGE PLAN FOR OFFICE COMPLEX (J15-D24) RECEIVED JULY 16, 1985

Dear Mr. Tibljas:

I have reviewed the referenced plan and forward the following comments:

1. Please show the north arrow on your drawing.

2. Off-site flows must be accepted and conveyed through your site. Future plans of the upstream owners are not guaranteed.

3. Flows from the site are not allowed to cross City sidewalks. Please redirect these flows.

4. Please address the capacity of the existing storm inlet on Indian School.

If you should have any questions, please feel free to call me at 766-5040.

Sincerely,

Carlos A. Montoya

Carlos A. Montoya
City/County Flood Plain Admin.

CAM:mrk

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Office Complex 1600 University Blvd. N.E. ZONE ATLAS/DRNG. FILE #: J-15 / D24

LEGAL DESCRIPTION: Lot 4 Lands of Ballut Abyad Temple

CITY ADDRESS: 1600 University Blve. N.E.

ENGINEERING FIRM: DENNEY-GROSS & ASSOCIATES CONTACT: Gar/ Tibljas P.E.

ADDRESS: 2400 Comanche, N.E. PHONE: 884-0696

OWNER: Bill Carpenter CONTACT: Bill Carpenter

ADDRESS: 509 Roma NW PHONE: 243-1336

ARCHITECT: Knight Seavey Design CONTACT: Knight Seavey

ADDRESS: P.O. Box 14887 Sta. G PHONE: 299-5900

SURVEYOR: DENNEY-GROSS & ASSOCIATES CONTACT: Steve Youtsey

ADDRESS: 2400 Comanche N.E. PHONE: 884-0696

CONTRACTOR: N/A CONTACT:

ADDRESS: PHONE:

RECEIVED
AUG 28 1985
HYDROLOGY SECTION

PRE-DESIGN MEETING:

_x_ YES
___ NO
___ COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB No. ____
EPC No. ____
PROJ. No. ____

TYPE OF SUBMITTAL:

_x_ 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
_x_ BUILDING PERMIT APPROVAL
___ FOUNDATION PERMIT APPROVAL
___ CERTIFICATE OF OCCUPANCY APPROVAL
___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER ____ (SPECIFY)

DATE SUBMITTED: 8-27-85

BY: Joe Jones

DENNEY-GROSS & ASSOCIATES, INC.
CONSULTING ENGINEERS
2400 COMANCHE ROAD, N.E.
ALBUQUERQUE, NEW MEXICO 87107
(505) 884-0696

August 26, 1985

Mr. Carlos Montoya
City of Albuquerque
Hydrology Department
123 Central NW
Albuquerque, NM 87104

RECEIVED
AUG 28 1985
HYDROLOGY SECTION

Re: Office Complex
DTM Job No. 828.12
J15-D24

Dear Mr. Montoya:

Enclosed for your approval is one copy of the Revised Grading and Drainage Plan for the above referenced project.

The comments of your August 19, 1985, letter have been addressed as follows:

1. The north arrow has been added.

2. The header curb has been eliminated and offsite flows will be accepted and conveyed through the site.

3. The roof drain will be relocated such that minimal flows will cross the public sidewalk on University Blvd. Please note that the sidewalks along Indian School Road are private and are only intended for entrance into the complex.

4. The capacity of the Double "C" inlet has been addressed and is included on the plan.

If you have any further questions, please feel free to call.

Very truly yours,

Gary W. Tibljas, P.E.

GWT/klo
Enclosure

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

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

August 29, 1985

Mr. Joe Jones
Denney-Gross & Associates
2400 Comanche NE
Albuquerque, NM 87107

REF: OFFICE COMPLEX (J15-D24) RECEIVED AUGUST 28, 1985

Dear Mr. Jones:

The referenced plan dated August 27, 1985 is approved for Building Permit sign-off.

Please attach a copy of this approved plan to both sets of construction plans prior to sign-off by Hydrology.

If you have any questions or comments regarding this project, please call me at 766-7644.

Cordially,

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

CAM:mrk

I, Gary W. Tibljas, hereby certify that the enclosed documents and drawings were prepared under my supervision and are true and correct to the best of my knowledge and belief.

Gary W Tibljas

New Mexico Professional Engineer No. 8117

GARY W. TIBLJAS
NEW MEXICO
8117
REGISTERED PROFESSIONAL ENGINEER

DRAINAGE INFORMATION SHEET

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ADDRESS: 2400 Comanche N.E. PHONE: 884-0696

CONTRACTOR: N/A CONTACT:

ADDRESS: PHONE:

PRE-DESIGN MEETING:

x YES
___ NO
x COPY OF CONFERENCE RECAP SHEET PROVIDED

DRB No. 84 822 12/5/84
EPC No. _____
PROJ. No. _____

TYPE OF SUBMITTAL:

x DRAINAGE REPORT
___ DRAINAGE PLAN
___ CONCEPTUAL GRADING & DRAINAGE PLAN
___ GRADING PLAN
___ EROSION CONTROL PLAN
___ ENGINEER'S CERTIFICATION

CHECK TYPE OF APPROVAL SOUGHT:

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___ ROUGH GRADING PERMIT APPROVAL
___ GRADING/PAVING PERMIT APPROVAL
___ OTHER _____ (SPECIFY)

DATE SUBMITTED: _____

BY: _____

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION/DESIGN HYDROLOGY SECTION

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	WHO:	REPRESENTING:
ATTENDANCE:	Gary Tibljas	
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SIGNED: Carlos A Montoya SIGNED: ______
TITLE: ______ TITLE: ______
DATE: 6-7-85 DATE: ______

NOTE PLEASE PROVIDE A COPY OF THIS RECAP WITH THE DRAINAGE SUBMITTAL

STORMWATER MANAGEMENT REPORT
OFFICE COMPLEX
AT
1600 UNIVERSITY BLVD. N.E.

PURPOSE:

The purpose of this report is to determine an economical and effective stormwater management plan for subject site.

GENERAL:

The development consists of 0.799 acres and is located at the northeast corner of University Blvd. N.E. and Indian School Rd. N.E. (See exhibit I). Presently the site slopes to the southwest and is not located within a flood plain (See Exhibit II). The soil on site is of the hydrologic soil group type A (cu, cut and fill land, See exhibit III).

Per the findings of the hydrology pre-design conference (report attached). A free discharge solution will be pursued with all runoff being directed to an existing stormsewer inlet at the property's southern most tip via overland flow.

DRAINAGE:

The site will be graded such that runoff from 60% of the site will be routed through the parking area and discarded onto University Blvd. at the curb cut. From this point the flow will travel via curb & gutter to the existing catch basin at the site's southern tip. The remaining 40% of the site shall discharge directly to University Blvd. and Indian School Rd. as directed by the finished contours. These flows too will be delivered to the catch basin via each street's respective curb & gutter system.

Extraneous flows from approximately 2.5 acres located immediately north of the site will be intercepted at the northern border by a header curb. These flows will then, in turn, be directed west to University Blvd and transported to the catch basin

at University Blvd and Indian School Rd.

Currently these flows are directed through the project site to the catch basin. Owners of this property to the north are planning to construct a planter box strip along the site's northern boundary which will divert these extraneous flows to University Blvd in the same manner as the aforementioned header curb.

There exists a 0.25 acre strip of right-of-way on Indian School Road's northside that is being incorporated into the projects site and landscaping plan. As indicated, this strip will be completely sodded with a meandering sidewalk strip facilitating pedestrain access to the office complex. arrangements have been made with State Highway Department to utilize this strip in this manner.

CALCULATIONS:

UNDEVELOPED RUNOFF

PROJECT SITE
A = 0.799 ACRES (34,804 SF)
RIGHT OF WAY STRIP
A = 0.25 ACRES (10,890 SF)

$$Tc = (0.0078)\ (L^{0.77} / S^{0.385})$$

$$Tc = (0.0078)\ (250^{0.77} / 0.0149^{0.385}) =$$

2.76 MINUTES USE 10.0 MINUTES

0% IMPERVIOUS SOIL TYPE A
C = 0.16

$$I = (2.2)(6.84)(10)^{-0.51} = 4.65 \text{ in/hr}$$

Q = CIA > (.016)(4.65)(1.03) = 0.78 cfs

DEVELOPED RUNOFF

AREA A

A = 0.48 AC (20,882 SF)

$$Tc = (0.0078)(L^{0.77} / S^{0.385})$$

$$= (0.0078)(550^{0.77} / 0.015^{0.385}) = 5.06 \text{ MIN USE IN 10 MIN.}$$

USE 100 MINUTES

TOTAL AREA = 20,882 SF (0.48 AC)
PAVED AREA = 17,720 SF (0.41 AC)
PERVIOUS AREA = 3162 SF (0.07 AC)

17,720/20,882 = 85% IMPERVIOUS
C=0.70

$$I = (2.2)(6.84)(10)^{-0.51} = 4.65 \text{ IN/HR}$$

Q = CIA > (0.70) (4.65) (0.48) = 1.56 CFS

AREA B

A = 0.57 AC (24,829 SF) INCLUDES RIGHT OF WAY STRIP

$$Tc = (0.0078)(L^{0.77} / S^{0.385}) = 0.0078$$

$$(0.0078)(270^{0.77} / 0.034^{0.385}) = 2.14 \text{ MIN USE 10.0 MIN.}$$

TOTAL AREA = 24,829 SF (0.57 ACRES)
PAVED AREA = 1,800 SF (0.04 ACRES)
PERVIOUS AREA = 23,029 SF (0.53 ACRES)

1800 / 24,829 = 7% IMPERVIOUS

C = 0.19

$$I = (2.2)(6.84)(10)^{-0.51} = 4.65 \text{ IN/HR}$$

Q = CIA > (0.19)(4.65)(0.57) = 0.50 CFS

OFFSITE EXTRANEOUS FLOWS

A = 2.5 AC (108,900 SF)

$$Tc = (0.0078)(L^{0.77} / S^{0.385})$$

$$= (0.0078)(300^{0.770} / 0.006^{0.385}) = 4.5 \text{ MIN. USE } 10.0 \text{ MIN.}$$

TOTAL AREA = 2.5 ACRES (108,900 SF)
PAVED AREA = 1.9 ACRES (82,764 SF)
PERVIOUS AREA = 0.6 ACRES (26,076 SF)

82,764/108,900 = 76% IMPERVIOUS

C = 0.61

$$I = (2.2)(6.84)\ (10)^{-0.51} = 4.65 \text{ IN/HR}$$

Q = CIA = 0.61 (4.65)(2.5) = 7.1 CFS

<u>HEADER CURB CAPACITY</u>

$$Q = (1.486/n)(R^{2/3})(S^{1/2})(A)$$

n = 0.016 (ASPHALT)
A = 20.75 SF
P = 83.5 FT
R = A/P = 0.25
S = 0.012

$$Q = (1.486/0.016)\ (0.25^{2/3})(0.012^{1/2})(20.75)$$

= 83.8 CFS > 7.1 CFS OK

CONCLUSION:

DEVELOPED RUNOFF CONDITIONS WILL DELIVER 2.06 CFS OF RUNOFF TO THE CATCH BASIN VERSUS 0.78 CFS OF RUNOFF WHICH CURRENTLY IS DIRECTED TO THE CATCH BASIN. DUE TO THE EXTREMELY SMALL TIMES OF CONCENTRATION ASSOCIATED WITH THESE DEVELOPED FLOWS, THE EXISTING CATCH BASIN AND CORRESPONDING STORM SEWER WILL ABSORB THESE FLOWS BEFORE PEAK FLOW QUANTITIES ARIVE AT THE CATCH BASIN FROM THE OUTER REACHES OF THE WATERSHED IN WHICH THE PROJECT SITE IS LOCATED.