HYDROLOGY L15/D24 ONE PLAN

L 15 - D24

1 PLAN

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

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

August 18, 1986

Frank Lovelady
Lovelady & Associates
7408 Morrow Road, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR OAKCREST THREE APARTMENT (L-15/D24)
RECEIVED AUGUST 13, 1986

Dear Mr. Lovelady:

The above referenced plan, dated July 15, 1986, is approved for Building Permit.

I suggest that because of the amount of discharge through Ash Street, the berm be enlarged. Please attach a copy of this approved plan to both sets of construction drawings prior to sign-off by Hydrology.

If you have any questions, call me at 766-7644.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

F. Loveday
August 12, 1986
Sht 1 of 3

RECEIVED
AUG 13 1986
HYDROLOGY SECTION

Offsite Flow Calculations
Hydrology File No. L15/D24
OakCrest THREE

See Attached Topographic, orthophoto Map.
The two areas shown are considered one area for the purpose of this calculation.
The soil type is Cu, Cut and fill land over all but the residential portions of the runoff area.
The residential is devided unequally between MW (Soil Group "B") and BCC (Soil Group "A"). It is assumed that all residential lies on type "B" soil.

ACTUAL LAND USE & AREA	Land Use - Plate 22.2C2	Soil Type	Curve No
Residential, 420,000 SF = 9.64 Ac	Residential 1/8 Acre	B	85
UNM Gravel Parking Lot 346,500 SF = 7.95 Ac	Streets and Roads, Gravel	A	76
Portion of Playing field 63,750 SF = 1.46 Ac	Open spaces, Lawns parks, etc,	A	39
Tennis Complex 300,000 SF = 6.89 Ac	Commercial & Business	A	89
Athletic Fields — Yellow outlined 717,100 SF = 16.47 Ac	Open spaces, Lawns parks, etc	A	39

$$\text{Weighted CN} = \frac{(9.64 \times 85) + (7.95 \times 76) + (1.46 \times 39) + (6.89 \times 89) + (16.47 \times 39)}{42.41}$$

$$= \frac{2738}{42.41} = 65$$

F. Lovelady
August 12, 1986
Sht. 2 of 3

Time of Concentration

Begin at highest point, intersection of Anderson Ave and Yale Blvd. Compute time based on velocities obtained from Plate 22.2 B-1

Segment	Distance	Elev. Change	Slope	Velocity	Tc
Anderson Ave., Yale to Wilmore	350'	12'	3.4%	2.5	2.33
Wilmore Dr., Anderson to Kathryn	650	12'	1.8%	1.8	6.02
Kathryn, Wilmore to Buena Vista	300'	10'	3.3%	2.4	2.08
UNM Access Road, west	800'	19'	2.4%	2.1	6.35
Overland, Semi-Arroyo (Bare Ground)	600'	18'	3%	1.1	9.09
Improved Channel	500'	8'	1.6%	1.7	4.9
Total Time					30.78

Rainfall in inches (See Plate 22.2 D-1) is 2.5 inches.

Direct Runoff (See Plate 22.2 C-4)

For rainfall = 2.5 inches and CN = 65, the direct runoff is approx. 0.35 inches.

Unit Peak discharge (See Figure 2-4 Attached)

Tc = 0.51 Hours UPD = 0.92 cfs/ac-inch.

Total Peak discharge = 0.92 x 42.41 x 0.35 = 13.6 cfs.

Rational Equation:

$I = 2.5 \times 6.34 \times 30.8^{-0.51} = 2.98$ in/Hour

Weighted "C" Factor –
Residential.
Assume residential area is 65% impervious 25% Landscaping and 10% "undeveloped".

420,000	× 0.65	× 0.95	= 259,350
420,000	× 0.25	× 0.25	= 26,250
420,000	× 0.10	× 0.40	= 16,800
			302,400

"C" Factor = 302,400 / 420,000 = 0.72

UNM Gravel Parking
Assume it is an average of streets (0.95) and undeveloped (0.40)
Average = 0.68

Playing Field – Landscaping 0.25

Tennis Complex 85% impervious Assume 15% Landscaping

300,000	× 0.85	× 0.95	= 242,250
300,000	× 0.15	× 0.25	= 11,250
Total			253,500

"C" Factor = 253,500 / 300,000 = 0.85

Athletic Fields – Landscaping at 0.25

Weighted "C" Factor =

$$\text{"C"} = \frac{(9.64 \times 0.72) + (7.95 \times 0.68) + (1.46 \times 0.25) + (6.89 \times 0.85) + (16.47 \times 0.25)}{42.41}$$

"C" $\frac{22.7}{42.41} = 0.54$

$Q = CIA = 0.54 \times 2.98 \times 42.41 = 68.25$ cfs

DRAINAGE INFORMATION SHEET

PROJECT TITLE: OAKCRE THREE-FOUR PLEX APARTMENT ZONE ATLAS/DRNG. FILE #: L-15/D-24

LEGAL DESCRIPTION: Lot 1, Block D, Sunshine Terrace Addition

CITY ADDRESS: _____

ENGINEERING FIRM: Lovelady & Associates CONTACT: Frank Lovelady

ADDRESS: 7408 Morrow Road, N.E.87110 PHONE: 883-7973

OWNER: Downum's Unique Building Concepts CONTACT: Fred Downum

ADDRESS 1405 Snowdrop Place, N.E. PHONE: 299-1059

ARCHITECT: Rick Bennett, Architect CONTACT: Rick Bennett

ADDRESS: 3803 Riverview Place, N.W. PHONE: 831-3950

SURVEYOR: Alpha Surveying Group CONTACT: Cary Gritsko

ADDRESS: 623 Amherst Drive, N.E. PHONE: 265-5538

CONTRACTOR: Downum's Unique Building Concepts CONTACT: Fred Downum

ADDRESS: 1405 Snowdrop Place, N.E. PHONE: 299-1059

PRE-DESIGN MEETING:

X YES

____ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

RECEIVED
AUG 13 1986
HYDROLOGY SECTION

DRB NO. _____

EPC NO. _____

PROJECT NO. _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT

X DRAINAGE PLAN

____ CONCEPTUAL GRADING & DRAIN. PLAN

____ GRADING PLAN

____ EROSION CONTROL PLAN

____ ENGINEER'S CERTIFICATION

X Quantification of existing off-site flows as per Carlos Montoya's letter of 8/6/86

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: Aug. 12, 1986

BY: Frank D. Lovelady
Frank D. Lovelady, P.E.

Rev. 11/84

FILE COPY

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

HYDROLOGY SECTION
123 Central NW, Albuquerque, NM 87102
(505) 768-7644

August 6, 1986

Frank Lovelady
Lovelady & Associates
7408 Morrow Road, NE
Albuquerque, New Mexico 87110

RE: DRAINAGE PLAN FOR OAKCREST THREE APARTMENT (L-15/D24)
RECEIVED JULY 15, 1986

Dear Mr. Lovelady:

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

Please quantify the existing off-site flows through the site. The amount of flows will determine the amount of protection for the property.

If you have any questions, call me at 766-7644.

Cordially,

Carlos A. Montoya, P.E.
City/County Floodplain Administrator

CAM/bsj

DRAINAGE INFORMATION SHEET

PROJECT TITLE: OAKCREST THREE-FOUR PLEX APARTMENT ZONE ATLAS/DRNG. FILE #: L-15 / D24

LEGAL DESCRIPTION: Lot 1, Block D, Sunshine Terrace Addition

CITY ADDRESS:

ENGINEERING FIRM: Lovelady & Associates CONTACT: Frank Lovelady

ADDRESS: 7408 Morrow Road, N.E.87110 PHONE: 883-7973

OWNER: Downum's Unique Building Concepts CONTACT: Fred Downum

ADDRESS 1405 Snowdrop Place, N.E. PHONE: 299-1059

ARCHITECT: Rick Bennett, Architect CONTACT: Rick Bennett

ADDRESS: 3803 Riverview Place, N.W. PHONE: 831-3950

SURVEYOR: Alpha Surveying Group CONTACT: Cary Gritsko

ADDRESS: 623 Amherst Drive, N.E. PHONE: 265-5538

CONTRACTOR: Downum's Unique Building Concepts CONTACT: Fred Downum

ADDRESS: 1405 Snowdrop Place, N.E. PHONE: 299-1059

PRE-DESIGN MEETING:

X YES

____ NO

X COPY OF CONFERENCE RECAP SHEET PROVIDED

RECEIVED
JUL 15 1986
HYDROLOGY SECTION

DRB NO. ____

EPC NO. ____

PROJECT NO. ____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT

X DRAINAGE PLAN

____ CONCEPTUAL GRADING & DRAIN. PLAN

____ GRADING PLAN

____ EROSION CONTROL PLAN

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____ 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: July 14, 1986

BY: Frank D. Lovelady

Frank D. Lovelady, P.E.

Rev. 11/84

Lovelady & Associates
7408 Morrow Road, NE
Albuquerque, NM 87110
July 15, 1986

Greg Olsen, P.E.
Chief Design Engineer
Project Design Section
Public Works Department
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

RE: APPLICATION FOR CITY TO DESIGN STREET GRADES ONLY ON ASH STREET NORTH OF SUNSHINE TERRACE AVENUE:

Dear Mr. Olsen:

The attached application is submitted with this letter for the purpose of conforming to the requirements of the DPM regarding Hydrology submittals. A print of the drainage plan for Lot 1, Block D, Sunshine Terrace Addition, is attached for your review. Since Ash Street right-of-way adjacent to this lot is undeveloped, the DPM requires that street grades be provided.

In this particular case, there is no real purpose in designing the street grades. Both of the adjacent lots obtain their access form Sunshine Terrace Avenue and the Land to the north of this little section of street R.O.W. is the UNM tennis complex which obtains its access from the UNM Stadium parking lot. There is no immediately apparent reason to provide street grades for this section of Ash Street other than the DPM requirement.

However, the second purpose of the application is to emphasize the need for drainage improvements of some type within this section of R.O.W. A very large portion of the UNM property drains to this point and it would appear that what is needed more than street grades is adequate facilities to convey the storm runoff from UNM property safely to the channel to the south.

In addition, the facilities on the UNM side of the fence seem hardly adequate to handle the design year storm. These improvements are probably already under consideration. In talking with Mr. Ross of the UNM Physical Plant Department, he stated that a study is currently underway in that area.

If a variance from the requirements for street grades is appropriate, please indicate your approval by signing in the space provided below. If you have any questions, please call me at 883-7973.

Sincerely,

Frank D. Lovelady, P.E.

Variance Approved:

_____
Gregory Olsen, P.E., Chief Design Engineer

FIGURE 2

APPLICATION FOR DESIGN AND CONSTRUCTION OF INFRASTPUCTURE IMPROVEMENTS

INSTRUCTIONS: PRINT OR TYPE IN BLACK INK ONLY. Use additional sheets, if necessary.

1. APPLICANT INFORMATION:

   a. Developer: Downum's Unique Building Concepts Date: July 15,1986

   Mailing Address: 1405 Snowdrop Place, N.E. Zip Code: 87112

   b. Owner's Name: Downum's Unique Building Concepts

   Mailing Address: 1405 Snowdrop Place, N.E. Zip Code: 87112

   c. Consulting Engineer: Frank Lovelady

   Mailing Address: 7408 Morrow Road, N.E. Zip Code: 87110

   d. Person to call regarding this application Frank Lovelady

   Phone No. 883-7973 Firm: Lovelady & Associates

2. LOCATION OF REQUEST:

   Map Key No. L-15 MRGCD Map No. (If applicable) N/A

   In Sunshine Terrace ~~Subdivision~~/Addition DRB Case #: N/A

   IF FINAL PLAT NOT YET APPROVED, DATE PRELIMINARY PLAT EXPIRES: N/A

   Date Plat Approved: N/A Date Plat Recorded: N/A

3. IMPROVEMENTS TO BE DESIGNED BY: / /Developer's Consulting Engineer /X/City.

4. DESCRIPTION OF IMPROVEMENTS PROPOSED: (Give Street Names Where Applicable)

   Ash Street between Sunshine Terrace Avenue and UNM Tennis Complex.

   Design Street Grades Only (See Attached Letter)

   (Use additional sheets, if needed)

   Master Plan water line to be constructed? ___YES _X_NO ___UNKNOWN

   Master Plan sanitary sewer line to be constructed? ___YES _X_NO ___UNKNOWN

5. LEVEL OF SUBMITTAL: Applicant requests entry into the Design Development process as indicated below, and has included appropriate submittals required:

/X/ Pre-Design (Orientation) /__/ Design Review (Preliminary=65%-95%)

/__/ Pre-Design w/Submittals /__/ Design Review (Final=95% Complete)

Applicant requests consideration for Partial Acceptance. ___YES ___ NO

Drainage Submittal is being prepared by: Frank Lovelady

6. PROPOSED METHODS TO CONSTRUCT N/A

- Public Improvements will be built by:

  [_] Private Contractor (Procedure A or B)

  [_] City Contractor (Procedure C)

- Public Improvements will be constructed

  [_] Under one contract (single Plan set)

  [_] Under separate contracts for portions of the work (This requires separate plan sets for each contract)

7. REQUEST PRE-DESIGN CONFERENCE NOT LATER THAN: _____

8. REQUIRED ATTACHMENTS (SEE PRE-DESIGN PHASE).

SIGNATURE: Frank D. Lovelady _____ SIGNATURE: _____
APPLICANT/AGENT OWNER

****

ENGINEERING DIVISION INTERNAL USE ONLY

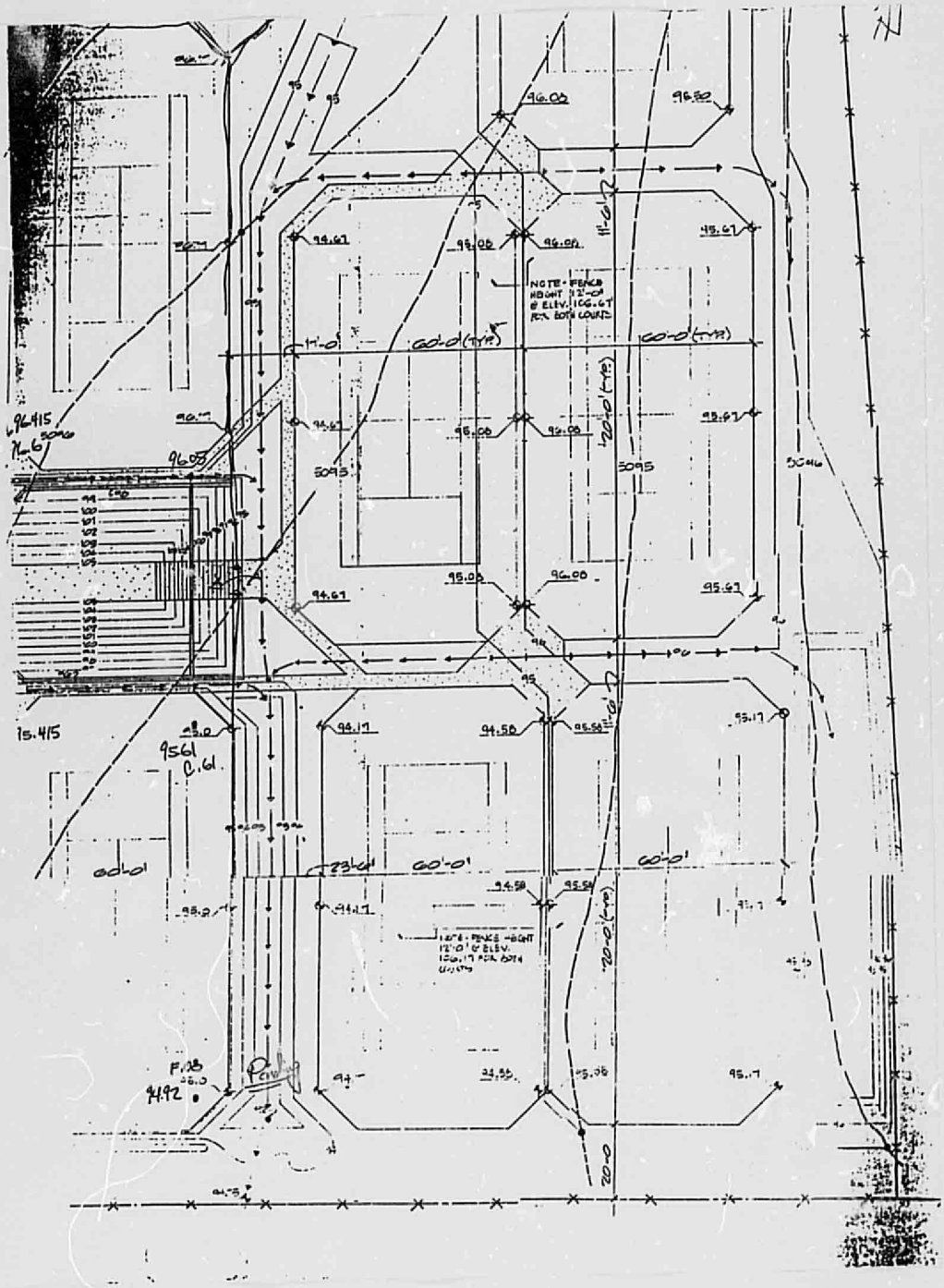
Application Received by: _____ Date: _____

Application Reviewed by: _____ Date: _____

Design Engineer Assigned: _____
(Name)

Pre-Design Conference Date: _____

Copy Distribution: Applicant/Agent
File/Log
Assigned Engineer


96.00
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96.67
96.00
96.00
NOTE - FENCE HEIGHT 12'-0" @ ELEV. 106.67 FOR BOTH COURTS
11'-0"
60'-0" (TYP)
60'-0" (TYP)
20'-0" (TYP)
96.67
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95
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94.17
94.50
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60'-0"
60'-0"
60'-0"
94.17
94.58
95.54
20'-0" (TYP)
NOTE - FENCE HEIGHT 12'-0" @ ELEV. 106.67 FOR BOTH COURTS
94
95.58
95.17
20'-0"

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

CONFERENCE RECAP

DRAINAGE FILE/ZONE ATLAS PAGE NO.: L15 DATE: 7-5-86

PLANNING DIVISION NOS: EPC: _____ DRB: _____

SUBJECT: Lot 1 Blk D Sunrise Terrace

STREET ADDRESS (IF KNOWN): _____

SUBDIVISION NAME: _____

APPROVAL REQUESTED:

_____ PRELIMINARY PLAT
_____ SITE DEVELOPMENT PLAN
_____ OTHER
_____ FINAL PLAT
X BUILDING PERMIT
_____ ROUGH GRADING

	WHO	REPRESENTING
ATTENDANCE:	Frank Lovelady	
	Carl A Montoya	

FINDINGS:

(1) Drainage plan no DRN

(2) Prior to C.O. please need street grade for Ash St.

(3) Prior to Build Permit please need exhibit of contours of Ash CT

(4) Need to accept offsite historic runoff through site and convey to Tramway ST.

(5) Free discharge to Tramway ST allowed, impact and collection

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:	Carl A Montoya	SIGNED:	Frank Lovelady
TITLE:		TITLE:	
DATE:	7-5-86	DATE:	7-9-86

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