HYDROLOGY K19/D4 4 PLANS

K19/04

4 Plans

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

June 4, 1981

Mr. Richard NOrton, PE
P. O. Box 345
Corrales, New Mexico 87048

RE: CASAS DE LA MESA DRAINAGE REPORT

DEAR Mr. Norton:

The referenced drainage report has been rejected for the reasons listed on the attached checklists.

If you have any questions concerning our reject, please feel free to call me.

Very truly yours,

Fred J. Aguirre, PE
Civil Engineer

FJA/el

cc: Chuck Easterling, PACE/Hydrology
Jim Maddox

MUNICIPAL DEVELOPMENT DEPARTMENT
Richard S. Heller, P.E., City Engineer ENGINEERING DIVISION Telephone (505) 766-7467

DRAINAGE REPORT CHECKLIST

DATE June 3, 1981 ZONE ATLAS PAGE NO. K-19-D4

PROJECT TITLE (ADDRESS) Casas De La Mesa

SUBDIVISION B+R Addition LOT 2-5 BLOCK 8

ENGINEER Richard Norton CONTACT

ADDRESS P.O. Box 345, Corrales, N.M. 87048 PHONE

OWNER Maddox + Co CONTACT Jim Maddox

ADDRESS City Centre Suite 351W PHONE
6400 Uptown Blvd. N.E., Alb, N.M. 87110

ARCHITECT/SURVEYOR CONTACT

ADDRESS PHONE

GENERAL:

YES	NO	NA	
	✓		Professional Engineer's stamp signature and dated.
✓			North arrow and standard engineering scales used.
	✓		Planning and zoning action history.

OFF-SITE FLOWS:

YES	NO	NA	
	✓		Delineation of off-site contributing watersheds on SCS Bernalillo County Soil Survey Maps.
	✓		Delineation of off-site contributing watersheds on City of Albuquerque Ortho-Topo Area Maps (Scale 1"=500' or 1"=200').
	✓		Quantification of off-site rates of flow caused by contributing watersheds for the 10 and 100 year storm frequency.
	✓		Off-site flow velocities and depths determined and locations indicated.
	✓		Discussion of any other local conditions that affect site drainage.
	✓		Delineation of site and contributing off-site watersheds on pertinent Flood Hazard Boundary Map.
	✓		Adequate treatment of offsite flows.

ON-SITE FLOWS:

YES	NO	NA	
✓			Calculations showing on-site developed and undeveloped flow volumes and rates.
		✓	On-site flow velocities and depths determined and locations indicated.
	✓		Pond volume calculations.
	✓		Positive discharge of ponds with required rate and outlet calculations.
	✓		Pond emergency spillway calculations.
		✓	Pond safety protection (fencing for pond depths greater than 18".)
	✓		Pond landscaping provisions and commitments.
	✓		Pond maintenance provisions and commitments.
	✓		Soils investigation report for ponding within 15' of any structure.

PLAN DRAWINGS:

YES	NO	NA	
	✓		Adequate grading plan provided (See Grading Plan Checklist).
✓			Vicinity map with Zone Atlas designation.
	✓		Indication of all easements and right-of-ways on, or adjacent to, the site with dimensions and purpose shown. Plat does not reflect easements between lots F+E and C+B

YES	NO	N/A	
		✓	Internal contributory drainage areas, including roof areas, outlined on the plan.
	✓		Direction and location of roof drainage including canales, gutters, and downspouts.
✓			Flow lines defined by arrows and spot elevations.
	✓		Details of ponds, swales, rundowns, curb cuts, water blocks, and all other significant drainage structures with contours, cross-sections and spot elevations when appropriate. ALL CROSS-SECTIONS MUST BE DRAWN TO STANDARD ENGINEERING SCALE. (Note: All proposed construction within the public way must be approved by the Assistant City Engineer/Design).
	✓		Standard City drivepad with elevation shown.
	✓		Standard City curb cut.

COMMENTS _____

BY: FRED J. AGUIRRE FJA 6-3-81

APPROVED BY: _____ DATE _____

GRADING PLAN CHECKLIST

DATE June 3, 1981 ZONE ATLAS PAGE NO. K-19-D4

PROJECT TITLE (ADDRESS) Casas De La Mesa

SUBDIVISION B+R Addition LOT 2-5 BLOCK 8

ENGINEER Richard Norton CONTACT

ADDRESS P.O. Box 345, Cuba, N.M. 87013 PHONE

ARCHITECT/SURVEYOR CONTACT

ADDRESS PHONE

YES	NO	NA	ITEM
	✓		Vicinity map with zone atlas page and legal description (or plat).
	✓		Reference bench mark description.
	✓		Drawn to standard engineering scale (1"=10' for sites less than one acre; 1" = 20 for sites less than five acres; 1" = 50' for sites greater than 5 acres).
✓			Ground elevation on the site based on mean sea level datum as established by the U.S. Coast and Geodetic Survey (North American Datum 1929).
	✓		Existing contours extending a minimum of 10 feet beyond the property line.
	✓		Proposed contours at one foot intervals and proposed spot elevations at key points.
	✓		Finish building floor elevation(s) with mean sea level designation.
	✓		Notes defining property line, asphalt sidewalks, planting areas, ponding areas, and all other areas whose definition would increase clarity.
	✓		Slopes (cut or fill) with height of less than 18", 2:1 minimum. Slopes with height greater than 18", 3:1 minimum.
	✓		Elevation of property line at least 0.33 ft. above top of curb.
	✓		Retaining wall required when a vertical grade change greater than 18" is anticipated.
		✓	Proposed street and alley grades if property abuts a dedicated unpaved street or alley. These grades are available, at no charge, from the City Engineer s Office. An advance request will expedite your project. (Note: At present there is a 3 month wait to have the City Engineer supply grades. However, to expedite the plans, the City Engineer may accept grades provided by an engineer).

COMMENTS

BY Fred J. Aguirre FJA 6-3-81

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

January 28, 1981

Mr. Jim Maddox
City Centre/Suite 351W
6400 Uptown Blvd. N.E.
Albuquerque, New Mexico 87110

RE: REPLAT OF LOTS A THRU G, CASAS DE LA MESA

Dear Mr. Maddox:

I apologize for the delay due to the combination of excessive work load and poor health in forwarding the comments of my Assistant, Mr. Fred Aguirre, regarding the referenced development.

I am also attaching to this letter a package of information material that your engineer could use in reviewing City requirements for the preparation of an acceptable drainage report. As the comments of my Assistant indicate, your engineer does not appear to be familiar with the minimum standards considered acceptable to this office. I hope that this information can be useful and an acceptable plan can be received.

Very truly yours,

Bruno Conegliano
Asst. Hydrology Engineer

BC/tsl

Attachments

CITY OF ALBUQUERQUE

ALBUQUERQUE, NEW MEXICO

INTER-OFFICE CORRESPONDENCE January 9, 1981 REF. NO._____

TO: Bruno R.C.

FROM: F. J. Aguirre

SUBJECT: MY COMMENTS FOR CASAS DE LA MESA DRAINAGE REPORT

The following are my comments concerning the Drainage Report For Casas De La Mesa:

1. The report does not provide the proposed ground elevations, to standards specified in Subsection 21.A.11 of the subdivision ordinance.

2. The site plan does not show the bench mark used to survey site.

3. The report says there is no offsite flows into the tract even though the existing grading plan shows the site would intercept flows emanating from higher ground.

4. The report does not indicate type of development for this particular site. If the development is a triplex or bigger I feel a conceptual grading plan will suffice, but if the development is a duplex or less a comprehensive grading plan adequate for construction must also be provided with report.

5. This report should be accompanied by the required soils investigation defined in the subdivision ordinance, Subsection 21.D..

6. The proposed drainage scheme is to pond 100% of the 1% storm within the entire previous area at depth of 4.8". Therefore adequate detail must be provided to show how this retention will be accomplished. Also, southwestern type landscaping (underlined with plastic) should be restricted from this site.

7. The proposed ponding scheme should incorporate any soil investigation recommendations.

FJA/el

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

DRAINAGE REPORT INFORMATION SHEET

PROJECT TITLE Casas de la Mesa

ZONE ATLAS PAGE NO. K-19 CITY ADDRESS

LEGAL ADDRESS Lots 2,3,4 & 5 Blk 9 B&R [redacted] Addition

ENGINEERING FIRM Tom Mann & Assoc Inc CONTACT Tom Mann

ADDRESS 811 Dallas NE PHONE 265-5611

OWNER Jim Maddox CONTACT Jim Maddox

ADDRESS 6400 Uptown Blvd PHONE 881 0400

~~ARCHITECT~~/SURVEYOR Tom Mann & Assoc Inc CONTACT

ADDRESS PHONE

DATE SUBMITTED 10/27/81

BY T. Mann

Tom Mann Associates, Inc.
Engineers
811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110 • 505-265-5611

10721
October 27, 1981

Mr. Charles M. Easterling
Principal Assistant
City Engineer/Hydrology
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

RECEIVED
OCT 28 1981
ENGINEERING

Re: Casas de la Mesa
Drainage Plan

Dear Chuck:

Transmitted herewith is a set of construction drawings for the Casas de la Mesa Subdivision. This subdivision comprises the splitting of four (4) R-1 lots into seven (7) RLT lots. The lots are adjacent to Pennsylvania Avenue N.E. in a developed area and have been in existence for some time.

I have attached the zoning action for your review.

Basically, we held all water that fell in the rear yards in the rear yards. All roof water is directed toward the front. Since a new storm drain system has been constructed approximately 100 feet away at the intersection of Pennsylvania and Copper, we felt that the direct discharge was the best approach. If you will note, we have tried to maintain as much area in landscaping as possible so that even the front yard will, to a minor effect, act as a pond and help to retard the flow going into the system.

Please review and comment. We will submit the drawings for full City approval as soon as we have obtained your comments. If you have any questions, please do not hesitate to call. Thank you.

Yours truly,

TOM MANN & ASSOCIATES, INC.

Thomas T. Mann, Jr., P.E.
President

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

K19 - D15

November 19, 1981

Tom Mann & Associates
Tom Mann & Associates, Inc.
811 Dallas N.E.
Albuquerque, N.M. 87110

RE: CASAS DE LA MESA DRAINAGE REPORT

Dear Tom:

The referenced drainage report is approved based on your submittal dated November 16, 1981 and received in our office on November 16, 1981.

If I can be of any further help, please call.

Sincerely,

Jim Fink
Civil Engineer/Hydrology

JF/tsl

811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110 • 505-265-5611

Tom Mann Associates, Inc.
Engineers

10721
November 16, 1981

Mr. Jim Fink
Civil Engineer/Hydrology
City of Albuquerque
P. O. Box 1293
Albuquerque, New Mexico 87103

RECEIVED
NOV 16 1981
ENGINEERING

Re: Casas de la Mesa
Drainage Plan

Dear Jim:

First, I want to thank you for catching our location error on the Casas de la Mesa. As I explained, we just blew it by one block. I guess we were trying to keep you on your toes.

Within the last two months, a 24-inch RCP storm sewer has been constructed from Pennsylvania and Grand to Dallas and Grand. This is the storm sewer that I referred to on my drainage plan. As also stated, we would like to empty into the catch basin at Dallas and Grand and utilize that for storm water disposal. I feel that this is appropriate since the upland water shed to Pennsylvania and Grand is approximately one block long. The time of concentration there would be less than 10 minutes, whereas the water shed tributary to Copper which eventually flows down to the intersection of Dallas and Grand goes all the way to Wyoming. The time of concentration of that basin would be in excess of 10 minutes; therefore, any waters that might come off our development would be in the system and gone before the major peak would come down.

Also, per your request, we have added waterproofing to the walls adjacent to the structures and the developed areas. Hopefully, these items will take care of all of your questions. If we can be of any further help, please do not hesitate to call. Thank you.

Yours truly,

TOM MANN & ASSOCIATES, INC.

Thomas T. Mann, Jr., P.E.
President

TTM:bb
Encs.

DRAINAGE REPORT

FOR

CASAS DE LA MESA

RECEIVED

MAY 21 1981

CITY ENGINEER

Prepared by
Richard E. Norton P.E.5059
3205 Claremont NE
Albuquerque, New Mexico

REGISTERED PROFESSIONAL ENGINEER
STATE OF
NO. 5059
NEW MEXICO
RICHARD E. NORTON

GARCIA - MARQUEZ and ASSOCIATES
ENGINEERING - SANITATION - CIVIL
PLANNING AND SURVEYING

3205 Claremont N.E.
Albuquerque, New Mexico 87107
Telephone 262-2171

Maddox and Co.
6400 Uptown Blvd NE
Albuquerque, New Mexico

Dear Jim:

As per your and John Garcia's conversation with Chuck Easterling I am enclosing a revised drainage report on Casas De La Mesa.

If ou have any questions please do not hesitate to contact us.

Sincerely,

R. E. Norton
P. E. 5059

I. PURPOSE OF THIS REPORT

The purpose of this report is to determine the runoff characteristics of the area and make recommendations for the economical and safe disposal of storm drainage after development, without damage to property or danger to life.

II. DESCRIPTION AND LOCATION OF PROJECT

The project consists of seven townhouses in a proposed replat of Lots 2 thru 5 in Block 8 of the B and R Addition. It is bounded on the North by an undeveloped tract, on the South by an empty lot, on the East by Pennsylvania Avenue NE and on the west by Blocks 14, 15, 16 and 17 of the B and R Addition.

A

III. DRAINAGE AREAS

There are no areas that drain through the proposed development. The development itself will drain into Pennsylvania Avenue and west through Grand Avenue for two blocks where it will enter a storm drain. See exhibit 2.

IV. DRAINAGE COMPUTATIONS

Drainage computations are on page 4 and 5 of this report.

Casas De La Mesa

Drainage computations

This tract contains 0.608 acres and is located in Northeast Albuquerque.

The tract is bounded on the East by Pennsylvania Avenue, on the North,South and West by lots 6; 14,15,16,17; and 1, respectively, of the B and R Addition, Block 8, Zone Atlas page No.K 19.

The tract is zoned RLT. It has a gentle slope from the Northeast to the Southwest. The soils are of the Anapra clay loam according to the United States Soil Conservation Soils survey.

There is no offsite drainage into the tract.

RUNOFF CALCULATIONS

Q_b = Runoff rate before development

Q_a = Runoff rate after development

V_b = Runoff volume before development

V_a = Runoff volume after development

C = Runoff coefficient: 0.4 for all pervious soil and 0.9 for all impervious soil

A = Area in acres or square feet

i = Rainfall intensity

$$\text{Composite C} = \frac{\text{impervious area (.9) + pervious area (.4)}}{\text{total area}}$$

$$= \frac{0.268\ (.9) + 0.34\ (.4)}{.608} = .62$$

$$Q_b = Cia$$
$$= .4\ (4.2)(.61) = .10$$

$$Q_a = .6\ (4.2)(.61) = .16$$

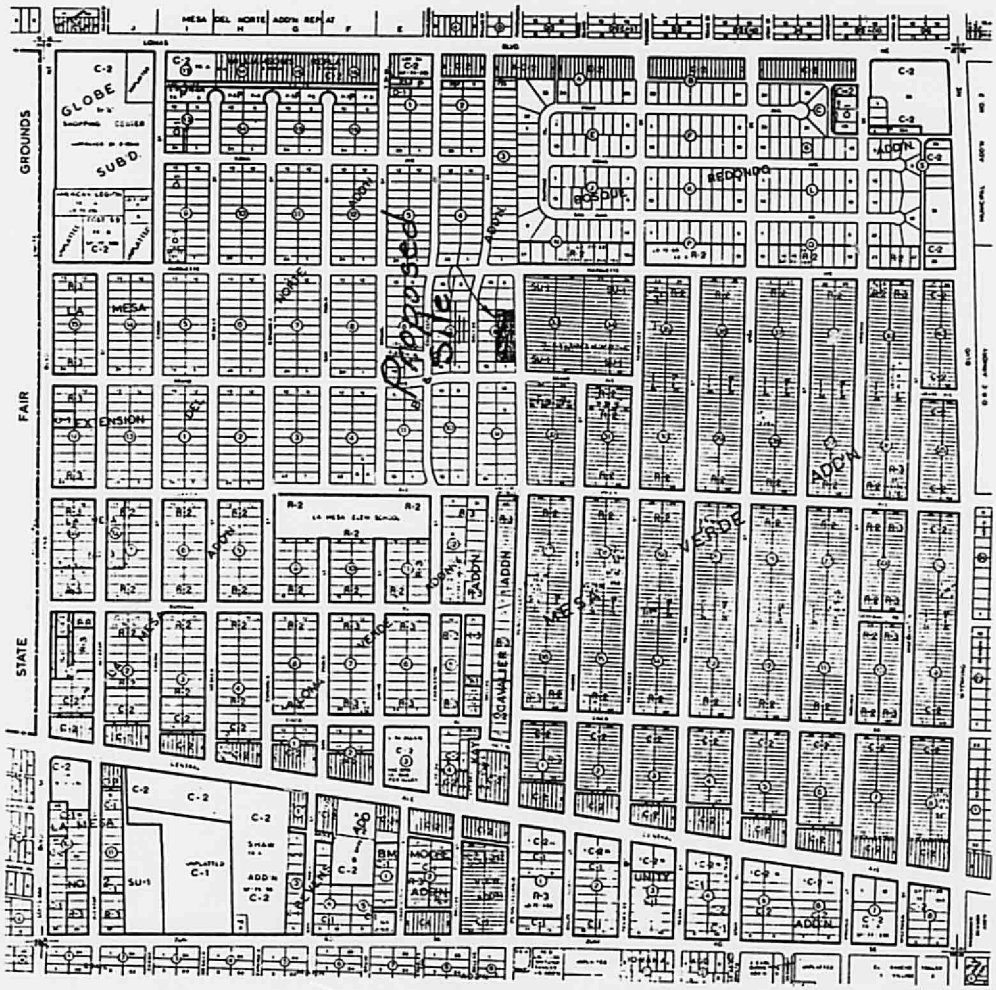
Difference = .06

$$V_b = .4\ (\tfrac{2.4}{12})(.608)\ 43560 = 2118 \text{ cf}$$

$$V_a = .6\ (\tfrac{2.4}{12})(.608)\ 43560 = 3284 \text{ cf}$$

Difference = 1166

It is proposed to direct the excess runoff of 1166 cf. into Pennsylvania Avenue, thence into Grande Avenue for a distance of two blocks. The water will then enter a storm drain. See exhibit 2.


GROUNDS
FAIR
STATE
GLOBE
SUBD.
LA MESA
EXTENSION
REDONDO
ADDN
VISTA
ALTA
ADDN
ADDN
ADDN

OFFICIAL NOTICE

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
PLANNING DIVISION
P.O. Box 1293, Albuquerque, NM 87103

Date: July 25, 1980

CERTIFICATION OF ZONING

Jim Maddox, Inc.
6400 Uptown Blvd. N. E., #351-W
Albuquerque, New Mexico 87110

File Z- 80-64
Date of Final Action: 6-20-80
Location: Lots 1, 2, 3, 4, & 5, Block 8, B & R Addition

The Environmental Planning Commission Land Controls Board ruled favorably on your request to amend the zone map as it applies to the above cited property.

The possible appeal period having expired, the zoning on the above cited property is now changed to RLT.

Successful applicants are reminded that other regulations of the City must be complied with, even after approval of the zoning is secured. Approval of this case does not constitute approval of plans for a building permit. You should take two copies of your plans to the Building & Inspection Division of the City to initiate a building permit.

Sincerely,

Gene Mares

Gene Mares
Principal Planner
For the City Planner

cc: Graphics
Zoning

Z CERTIFICATION

DRAINAGE REPORT

FOR

CASAS DE LA MESA

Prepared by
Richard E. Norton P.E.5059
3205 Claremont NE
Albuquerque, New Mexico

REGISTERED PROFESSIONAL ENGINEER
STATE OF
NO. 5059
NEW MEXICO
RICHARD E. NORTON

STATE
FAIR
GROUNDS
GLOBE
SUBD
Proposed
Site
SCAVALIER
ADDN
BERONDO
ADDN
K-19-Z

Casas De La Mesa

Drainage computations

This tract contains 0.608 acres and is located in Northeast Albuquerque.

The tract is bounded on the East by Pennsylvania Avenue, on the North,South and West by lots 6; 14,15,16,17; and 1, respectively, of the B and R Addition, Block 8, Zone Atlas page No.K 19.

The tract is zoned R 3, It has a gentle slope from the Northeast to the Southwest. The soils are of the Anapra clay loam according to the United States Soil Conservation Soils survey.

There is no offsite drainage into the tract.

RUNOFF CALCULATIONS

Q_b =	Runoff rate before development
Q_a =	Runoff rate after development
V_b =	Runoff volume before development
V_a =	Runoff volume after development
C =	Runoff coefficient: 0.4 for all pervious soil and 0.9 for all impervious soil
A =	Area in acres or square feet
i =	Rainfall intensity

$$\text{Composite C} = \frac{\text{impervious area (.9) + pervious area (.4)}}{\text{total area}}$$

$$= \frac{0.268\ (.9) + 0.34\ (.4)}{.608} = .62$$

$Q_b = Cia$

$= .4\ (4.2)(.61) = .10$

$Q_a = .6\ (4.2)(.61) = .16$

Difference = .06

$V_b = .4\ (\frac{2.4}{12})(.608)\ 43560 = 2118$ cf

$V_a = .6\ (\frac{2.4}{12})(.608)\ 43560 = 3284$ cf

Difference = 1166

Computations for ponding excess of 1166 cf

3831 = Total area

1751 = Impervious area

2074 = Pervious area

Composite C = $\frac{.9(1751) + .4(2074)}{3831}$ = .63

Runoff .63 $(\frac{2.2}{12})$ X 3831 = 442 cf

Ponding Areas Available 1043 sq. ft.

Ponding depth $\frac{442}{1043}$ = .4

Use Ponding areas: P, 1, P_2, P_3, P_4, P_5, P_6, P_7,
at depths of 0.5 foot