HYDROLOGY G14/D13 ONE PLAN

G 14 - D 13

1 PLAN

CITY OF ALBUQUERQUE
MUNICIPAL DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

HYDROLOGY SECTION PROJ. NO. G14 DATE: 12-8-82

PLANNING DIVISION NO.

CONFERENCE RECAP

SUBJECT: Los Tomases Townhouses

ATTENDANCE: WHO	REPRESENTING
Brian Burnett	City
HERMAN HOOD	
William Osofsky	

FINDINGS:
1. Drainage Plan required per DPM checklist
2. Survey (plan) should reflect condition of inlets and storm sewer system
3. Roof runoff should be directed toward the street through drive-pads
4. Landscaped areas should mitigate nuisance runoff to street
5. Approved plan required prior to plat sign-off at DRB.

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: William Osofsky SIGNED: Brian Burnett

TITLE: Developer / Designer TITLE: CE / Hydrology

DATE: 12/7/82 DATE: 12-8-82

INFORMATION SHEET

PROJECT TITLE Los Tomases Townhouses

TYPE OF SUBMITTAL Preliminary Grading Plan and Drainage Study

ZONE ATLAS PAGE NO. G-14 D 13 CITY ADDRESS Los Tomases Drive N. E.

LEGAL DESCRIPTION Lots 1-A,1-B,1-C,1-D,2-A,2-B,2-C,2-D,3-A,3-B,3-C,3-D,Block D, Monkbridge Place Addition

ENGINEERING FIRM Engineering Associates, Inc. CONTACT August Mosimann,P.E.

ADDRESS 1840 Lomas N. E. PHONE 242-7522

OWNER William Osofsky CONTACT Bill Osofsky

ADDRESS PHONE 242-1799

ARCHITECT Bill Osofsky CONTACT Bill Osofsky

ADDRESS PHONE 242-1799

SURVEYOR Albuquerque Surveying Co. CONTACT Fred Sanchez

ADDRESS 2119 Menaul N. E. PHONE 884-2036

CONTRACTOR Owner CONTACT

ADDRESS PHONE

DATE SUBMITTED Jan 5, 1983

BY August F. Mosimann
for
Engineerin Associates, Inc.

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PROJECT DESCRIPTION

The project will consist of twelve townhouses. Each unit will have 1224 Sq. Ft. of impervious area(roofs, sidewalks, and drivepads). Each unit will also have 541 Sq. Ft. of landscaped areas which will not be drained.

ON-SITE FLOWS

The developed runoff characteristics of each of the twelve individual townhouses is as follows:

The area is 1765 Sq. Ft.(0.041 Acres)
The impervious portion is 69%
The soil classification is "B",(Gb)
(Soil Survey Sheet 20)
The "C" factor is .70
(Plate 22.2 C-1)
The runoff length is 75 ft.
The slope is 1.0%
The Concentration time is .0078x(75^.77)/(.01^.385)=1.28 min
(10 min minimum)
The average velocity is 75/(10x60)=.3 ft/sec
The 100 year-6 hour precipitation amount is 2.2 in.
(Plate 22.2 D-1)
The 10 year-6 hour precipitation amount is 2.2x0.657=1.45 in.
(Plate 22.2 D-1)
The 100 year intensity is 2.15x2.2=4.73 in/hr.
The 10 year intensity is 2.15x1.45=3.12 in/hr.
The 100 year flow rate is Q=CxIxA=.70x4.73x0.041=0.14 cfs
The 10 year flow rate is Q=CxIxA=.70x3.12x0.041=0.09 cfs.
The 100 year volume is V=CxPxA=.70x2.2x1765/12=227 cu. ft.
The 10 year volume is V=CxPxA=.70x1.45x1765/12=149 cu ft.

The runoff from the northerly six lots will flow into Aztec Road. The cumulative runoff in Active Rd. is as follows:

The 100 year flow rate is 6x0.14=0.84 cfs
The 10 year flow rate is 6x0.09=0.54 cfs
The 100 year volume is 6x227=1362 cu. ft.
The 10 year volume is 6x149=894 cu. ft.

The runoff from the southerly six lots will flow into Altamonte Place. The cumulative effect on Altamonte Place is as follows:

The 100 year flow rate is 6x0.14=0.84 cfs
The 10 year flow rate is 6x0.09=0.54 cfs
The 100 year volume is 6x227=1362 cu. ft.
The 10 year volume is 6x149=894 cu. ft.

Drop inlets in both Aztec Rd. and Altamonte Place intercept the flows and route them to a storm sewer in Fourth Street to the south. The City of Albuquerque Master Drainage Study does not indicate any downstream flooding conditions. The area is essentially fully developed. Therefore; no retention will be provided and the site will be allowed to discharge directly into the streets.

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Preliminary Drainage Study

for

LOS TOMASES TOWNHOUSES

DESCRIPTION

The site is located on Los Tomases Rd. N. W. between Altamonte Place and Aztec Rd. It consists of ten 1765 Sq. Ft. lots and two 2158 Sq. Ft. lots. The total area is 21966 Sq. Ft.(0.504 Acres). Six small residences with a total area of 3400 Sq. Ft. are located on the site. They will be removed.

EXISTING SITE STUDY

The site is 50% impervious. Runoff is predominately from North to South.

The area is 21966 Sq. Ft.(0.504 Acres)
The impervious portion is 50%
The soil classification is "B",(Gb)
(Soil Survey Sheet 20)
The "C" factor is .57
(Plate 22.2 C-1)
The runoff length is 180 ft.
The slope is 1.2%
The Concentration time is .0078x(180^.77)/(.012^.385)=2.33 min
(10 min minimum)
The average velocity is 180/(10x60)=.3 ft/sec
The 100 year-6 hour precipitation amount is 2.2 in.
(Plate 22.2 D-1)
The 10 year-6 hour precipitation amount is 2.2x0.657=1.45 in.
(Plate 22.2 D-1)
The 100 year intensity is 2.15x2.2=4.73 in/hr.
The 10 year intensity is 2.15x1.45=3.12 in/hr.
The 100 year flow rate is Q=CxIxA=.57x4.73x0.504=1.36 cfs
The 10 year flow rate is Q=CxIxA=.57x3.12x0.504=0.90 cfs.
The 100 year volume is V=CxPxA=.57x2.2x21966/12=2295 cu. ft.
The 10 year volume is V=CxPxA=.57x1.45x21966/12=1513 cu ft.

OFFSITE FLOWS

There are no offsite flows affecting the site. This is verifiable on the city Ortho-Topo G-14.

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

G14 - D13

January 20, 1983

Mr. August Mosimann
Engineering Associates, Inc.
1840 Lomas N.E.
Albuquerque, N.M. 87106

RE: DRAINAGE PLAN FOR LOS TOMASES TOWNHOUSES

Dear Auggie:

I have made an initial review of the referenced report and forward the following comments:

1. I would like to clarify several statements contained in your drainage submittal. First, the Master Drainage Study does indicate flooding problems in the general vicinity of the project. Downstream capacity as defined in the Drainage Ordinance Section 12G does not exist in most of the valley. And secondly, discharge to the streets was allowed because:

   a. Storm inlets are in place adjacent to the parcel and;

   b. Since 4" canales will be used to drain the structure, the total release from the site is in a sense controlled to a minimum discharge rate.

2. The grading/drainage plan submitted in the building sets should reflect the checklist items contained on page 108 of the DPM. Please see that the plan is stamped, signed, and dated.

If you or your client have any questions concerning these matters, please call.

Very truly yours,

Brian G. Burnett
Civil Engineer/Hydrology

BGB/tsl