CITY OF
Albuquerque

February 10, 1998

Bryan J. Bobrick
C.L. Weiss
P.O. Box 97
Sandia Park, NM 87047

RE: G. BLAKE CHANSLOR ADDITION (E18-D51). GRADING AND DRAINAGE PLAN FOR BUILDING AND SO #19 PERMIT APPROVALS. ENGINEER'S STAMP DATED JANUARY 4, 1998.

Dear Mr. Bobrick:

Based on the information provided on your January 15, 1998 submittal, the above referenced project is approved for Building and SO #19 Permits.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. A separate permit is required for construction within the City right-of-way. A copy of this approval letter must be on hand when applying for the excavation permit.

Prior to Certificate of Occupancy approval, and Engineer's Certification will be required.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,

Lisa Ann Manwill, P.E.
Hydrology

c: Arlene Portillo
Andrew Garcia
File

CALCULATIONS:

Calculations are based on the Drainage Design Criteria for City of Albuquerque, Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE

AREA OF SITE: Upper portion only | 31554 | SF | 0.724 | Ac.

HISTORIC FLOWS:

On-Site Historic Land Condition

Area a	=	0	SF
Area b	=	31554	SF
Area c	=	0	SF
Area d	=	0	SF
Total Area	=	31554	SF

DEVELOPED FLOWS:

On-Site Developed Land Condition

Area a	=	0	SF
Area b	=	17046	SF
Area c	=	0	SF
Area d	=	14508	SF
Total Area	=	31554	SF

EXCESS PRECIPITATION:

Precip. Zone 2

Ea = 0.53
Eb = 0.78
Ec = 1.13
Ed = 2.12

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

$$\text{Weighted E} = \frac{EaAa + EbAb + EcAc + EdAd}{Aa + Ab + Ac + Ad}$$

Historic E	=	0.78 in.	Developed E	=	1.40 in.

On-Site Volume of Runoff: V360 = E*A / 12

Historic V360	=	2051 CF	Developed V360	=	3671 CF

On-Site Peak Discharge Rate: Qp = QpaAa+QpbAb+QpcAc+QpdAd / 43,560

For Precipitation Zone 2

Qpa	=	1.56	Qpc	=	3.14
Qbb	=	2.28	Qpd	=	4.70
Historic Qp	=	1.7 CFS	Developed Qp	=	2.5 CFS

FLOWS TO BE DIRECTED TO STORM DRAIN INLET

Area of sub-basin flows | 11442 SF | = | 0.3 Ac. | Precip. Zone | 2

The following calculations are based on Treatment areas as shown in table to the right

Sub-basin Weighted Excess Precipitation (see formula above)

Weighted E = 1.23 in.

Sub-basin Volume of Runoff (see formula above)

V360 = 1168 CF

Sub-basin Peak Discharge Rate: (see formula above)

Qp = 0.8 cfs

to be routed to storm drain through back of existing inlet in San Antonio

TREATMENT	
A =	0%
B =	67%
C =	0%
D =	33%

SUMMARY

The Historic Discharge Rate	=	1.7	CFS
The Developed Discharge Rate	=	2.5	CFS
Difference to be routed to storm drain	=	0.8	CFS see calculations above

The flows to San Pedro Blvd. will not be increased. A storm drain inlet will be constructed as shown to capture all building roof flows and a portion of the surrounding site (see basin key).

6" dia storm drain to existing storm drain within San Antonio

INPUT INFORMATION

This is a Round Culvert

Pipe diameter = 0.50 ft

Entrance Shape:

Sharp Flush

Culvert Length = 27.00 ft
Culvert Slope = 0.0200 ft/ft
Roughness Coef. = 0.0100
Orifice Coef. of Discharge = 0.700
Entry Loss Coef. 'Ke' = 0.500

Water Head above bottom of Culv. at entrance = 2.00 ft

Output:

Flow Capacity 'Q' = 1.36 cfs > 0.8 CFS REQ'D OK
Flow Velocity 'V' = 6.91 fps

Under Pressure