



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 14, 2001

Scott M. McGee, P.E.
ISAACSON & ARFMAN
128 Monroe Street NE
Albuquerque, NM 87108

**Re: Grading and Drainage Certification
Kensington Subd Unit 3 (H-10/D023A)
Submitted for Release of Financial Guaranty
Engineers Stamp dated 5/6/1999
Engineers Certification Dated 3/12/2001**

Dear Mr. McGee:

Based upon the information provided in your submittal dated 3/12/2001, the above referenced plan is adequate to satisfy the Grading and Drainage Certification requirements for Release of Financial Guaranty for Unit 3.

If I can be of further assistance, please contact me at 924-3986.

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Senior Civil Engineer, Hydrology
Public Works Dept./C.O.A.

C: Arlene Portillo, PWD – #623181

✓
file



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

June 4, 1999

Scott McGee, P.E.
Isaacson & Arfman
128 Monroe NE
Albuquerque, New Mexico 87108

*RE: H10/D23A Drainage Report and Grading and Drainage Plan for Kensington Subdivision, Phase 3
(H10/D23) Submitted for Preliminary and Final Plat and Work Order Approval,
Engineer's Stamp Dated 5/6/99.*

Dear Mr. McGee:

Based on the information provided in the submittal of May 7, 1999, the above referenced plan is approved for Preliminary Plat action.

It appears by the Conceptual Master Plan, that the southern portion of Ouray Road is to drain into Brackley Drive when Future Phase 4 is developed. Although the western limit of this drainage basin in Ouray was not shown, it is assumed that this basin extends to Ladera.

As you are aware, the Subdivision Improvements Agreement (SIA), or Financial Guarantees must be in place prior to Final Plat sign-off. The Engineer's Certification is required prior to release of the SIA for this Phase.

If you have any questions, or if I may be of further assistance to you, please call me at 924-3982.

Sincerely,

Susan M. Calongne, P.E.
City/County Floodplain Administrator

c: Fred Aguirre, DRB-99-112
Jeff Jesionowski, Kensington Ltd. Partnership
File

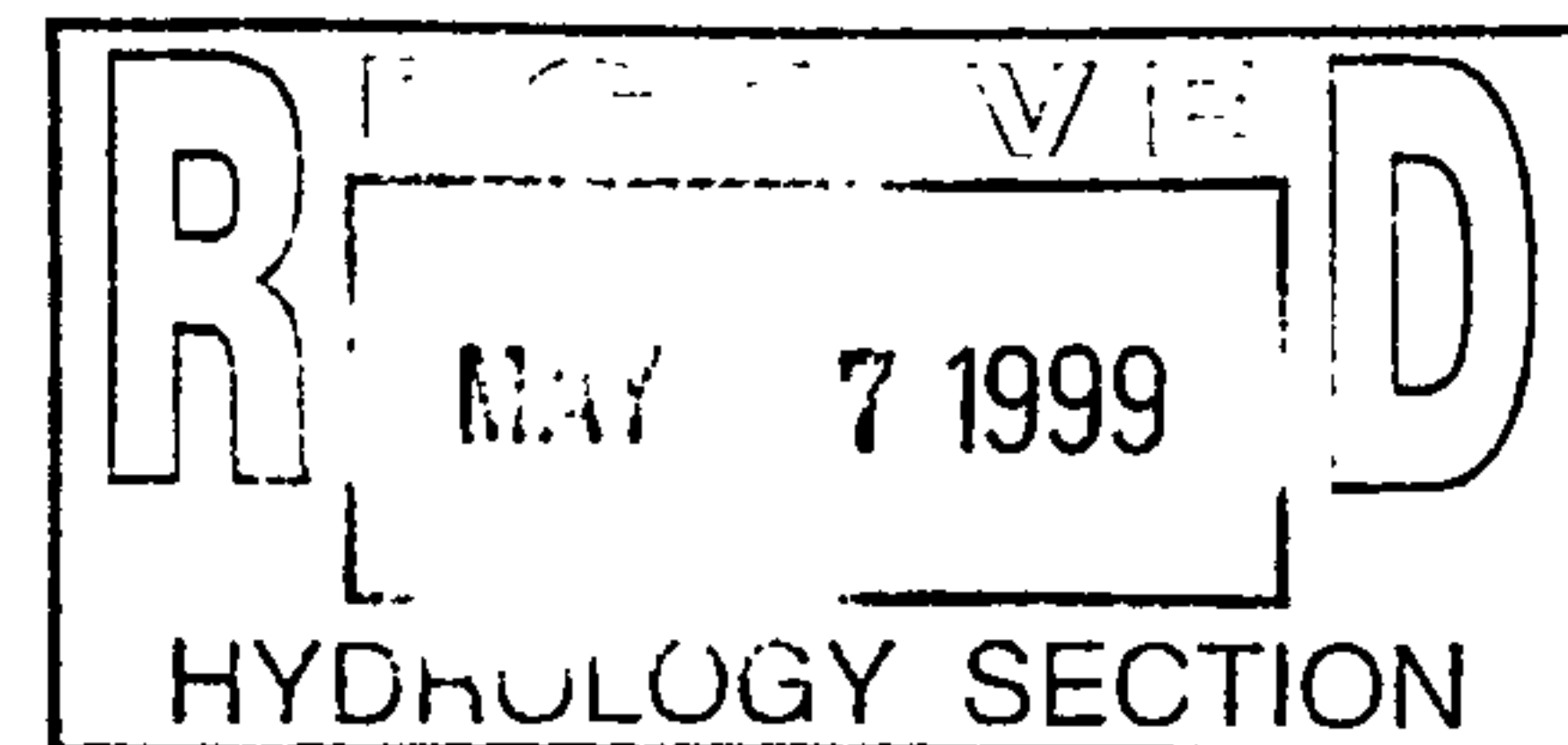
DRAINAGE REPORT

FOR

KENSINGTON SUBDIVISION PHASE THREE

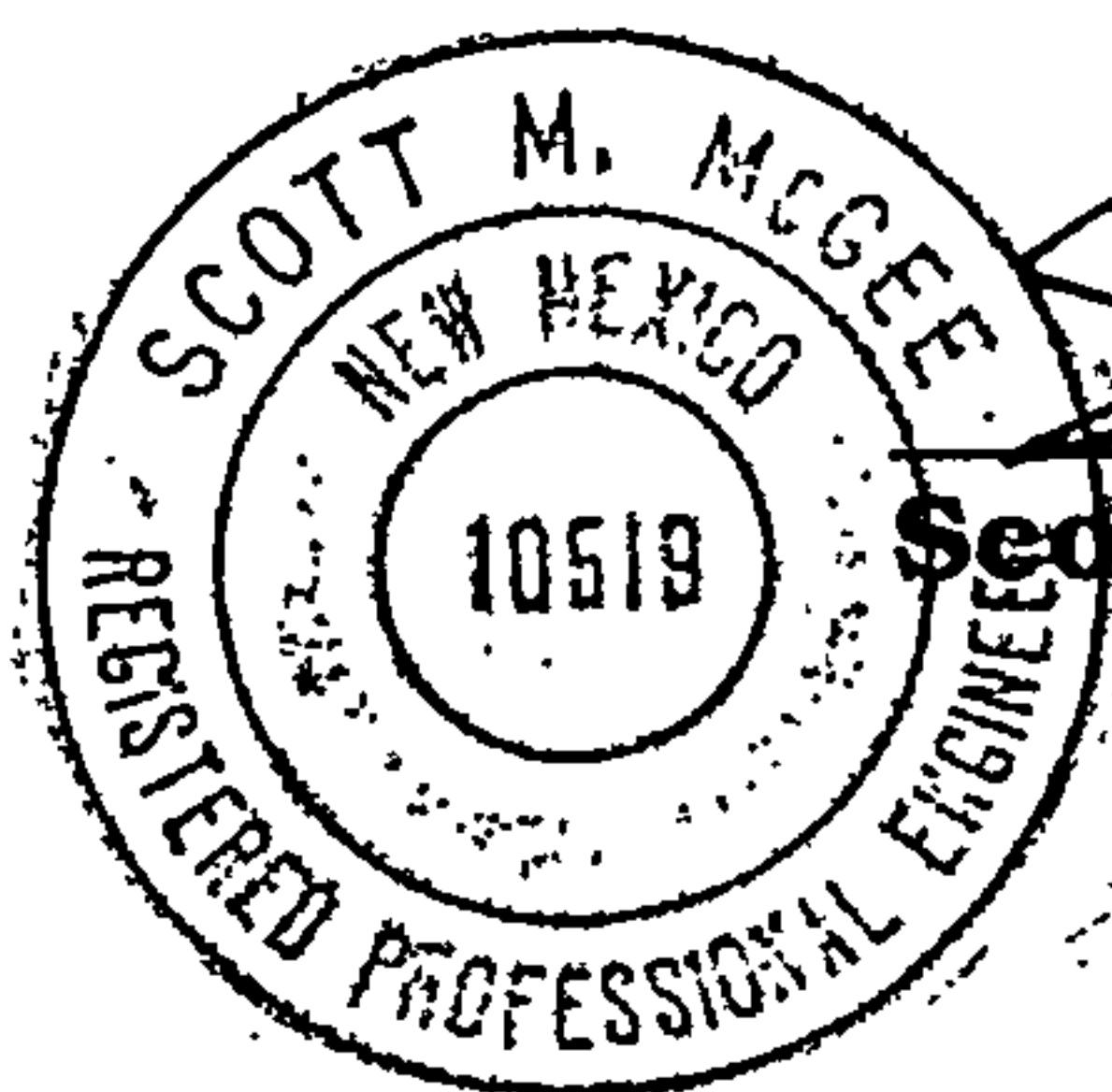
**A 32 LOT SINGLE FAMILY
RESIDENTIAL SUBDIVISION**

**ALBUQUERQUE, NEW MEXICO
MAY 1999**



Prepared by:

**ISAACSON & ARFMAN, P.A.
128 Monroe Street NE
Albuquerque, NM 87108
(505) 268-8828**



Scott M McGee
Scott M. McGee, PE

5-6-99
Date

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INTRODUCTION

The third phase of Kensington Subdivision will be developed as a 32 lot single family residential subdivision. It is bordered on the ~~west~~ by 64th Street and on the north by Ouray Road. Land to the south has been developed as Kensington Subdivision Unit One. West of the site the land is currently undeveloped.

This site was previously addressed in the approved Kensington Subdivision, Units One, Two, and Three Drainage Report (H10/D23). Unit Three as defined, that report has been split into two units (Three and Four) because the land west of 64th Street is zoned for office development. Phase Three as addressed in this report will be the area located to the east of 64th Street (see attached map).

I. PROJECT INFORMATION

LEGAL DESCRIPTION: Tract A, Kensington Subdivision Phase One as filed in the records of the County Clerk of Bernalillo on May 14, 1998 in Book 98-C, Page 134.

ENGINEER: Isaacson & Arfman, P.A.
128 Monroe Street NE
Albuquerque, NM 87108
(505) 268-8828
Attn: Scott M. McGee, P.E.

SURVEYOR: Aldrich Land Surveying, Inc.
Attn: Tim Aldrich, NMPLS No. 7719
(505) 884-1990

BENCHMARK: ACS Control Station "2-H10" located at the northwest quadrant of 64th Street and Miami Road NW.
Elevation: 5108.81

ZONING: R-D (15 Du/Ac maximum) as defined by the East Atrisco Sector Development Plan.

NUMBER OF EXISTING TRACTS: 1

NUMBER OF PROPOSED LOTS: Phase Three: 32

TOTAL AREA: 4.98 Ac.
216,929 SF

II. SITE CHARACTERISTICS

FLOOD HAZARD: No portion of this Phase falls within a flood zone as determined by Panel No. 350002-0327 of the September 20, 1996 edition of the F.E.M.A. maps. The following floodplain map shows that a ZONE AH (a shallow playa area) falls within the future Phase Four. A LOMR will be requested based on as-built plans of the future Phase Four storm drain proposed to drain the playa area.

EXISTING CONDITIONS: The site is undeveloped with native vegetative cover typical of the City's west side. It slopes at approximately 1.5% from the northwest to the southeast. A temporary retention pond (constructed with Phase One) located along the southern boundary captures the undeveloped flows generated within this phase.

64th Street has been improved with standard curb and gutter and 25 feet of permanent pavement along the east side. An existing sump inlet along 64th Street and storm drain to west Tauton Place has been installed. Ouray Road is constructed along the north side with permanent pavement and curb and gutter. The south side will be constructed with this project.

Runoff from the (developed) 64th Street and a portion of the future Phase Four (undeveloped) are collected by the existing storm drain system in 64th Street and conveyed south to the Miami Road storm drain system. No offsite flows enter the site.

PROPOSED CONDITIONS: Upon development of Phase Three the temporary retention pond located along the southern property boundary will be removed. The site will be re-graded to direct the developed flows west to 64th Street.

All of this site falls within Basin 103 as defined in the Kensington Subdivision, Units One, Two, and Three drainage report. Additional subbasins were defined for this phase to aid in street flow and sump capacity calculations. (see attached Runoff Calculation Sheet). Tauton Place and Keswick Place will not require any storm drain or inlets (see Table 2 for street flow depths).

Ouray Road will convey runoff via street flows along Phase Three. The developed flows from the portion of Ouray Road fronting Phase Three will be allowed to enter the site at 64th Street. 64th Street will convey these flows plus developed Phase Three flows to the existing sump inlet at the intersection of Tauton Place. In the interim condition this inlet will collect 23.52 cfs from Basins 103a, 103b, Ouray Road, and OF-1A (refer to sump capacity calculation sheet and basin map). Once Phase Four is developed an additional sump inlet will be added along the west side of 64th Street to capture the additional developed flows. As shown in the previously approved report for Kensington, this phase will not require any additional storm drains.

CONCLUSIONS & RECOMMENDATIONS

The Drainage Study for revised Kensington Phase Three is consistent with the Drainage Report for Kensington Subdivision, Units One, Two, and Three previously approved and on file at the Hydrology Division, Public Works Department, City of Albuquerque. Phases One and Two are currently under construction and conform to the same plan. The individual recommendations for Phase Three are presented below:

1. The temporary retention pond along the southern property boundary will be removed and re-graded.
2. No rear ponding shall be allowed in this portion of the development.
3. Adjacent lots may share a common lot line drainage swale.

TABLE 1
PHASE TWO BASIN SUMMARY
(Per Masterplan AHYMO)

Basin ID	Area Ac.	Contributing Basins	% A	% B	% C	% D	Basin Q (cfs)
103a*	2.49		0	20	23	57	8.86
103b*	2.49		0	20	23	57	8.86
OF-1A*	1.65		40	10	10	40	4.54
Ouray*	0.31		0	0	20	80	1.26
103 (Ultimate)	12.75	103a, 103b, OF-1A	0	20	23	57	43.07

Refer to the attached exhibit for Basin Locations

*See attached Runoff Calculation sheet

TABLE 2
STREET FLOW DEPTHS @ KEY LOCATIONS

Street	Location	Street Width	Curb Type	Slope (ft/ft)	Q100(cfs)	Depth (ft)	EG (ft)
Keswick Pl	@ 64th Street	28	MTBL	0.005	8.86	0.31	0.36
Tauton Pl	@ 64th Street	28	MTBL	0.005	8.86	0.31	0.36
64th Street**	Sump Inlets	36	STD	0.01	44.33	0.57	0.81

*Flowrates listed are for the full street width

** The flowrate listed for 64th St is for the ultimate conditions with Phase 4 developed

RUNOFF CALCULATIONS FOR Q_{100}

Precip. Zone	Q_{100} Runoff Rates (cfs/ac)			
	A	B	C	D
1	1.29	2.03	2.87	4.37
2	1.56	2.28	3.14	4.70
3	1.87	2.60	3.45	5.02
4	2.20	2.92	3.73	5.25

Analysis : Point	Land Treatment Areas (ac)					Q_{100} (cfs)	Remarks
	A_T	A_A	A_B	A_C	A_D		
Ouray Rd	0.31 AC	—	—	0.06	0.25	1.26	Ouray Rd (1/2 width) fronting the site
BASIN 103 A	2.49 AC	—	0.50	0.57	1.42	8.86	A Portion of BASIN 103 - KESWICK PLACE
BASIN 103 B	2.49 AC	—	0.50	0.57	1.42	8.86	A Portion of BASIN 103 - TAUTON PLACE
OF 1-A	1.65 AC	0.66	0.165	0.165	0.66	4.54	PARTIALLY CONSTRUCTED 64 TH Street & FUTURE PHASE 4

ANALYZE SUMP INLETS

DATA:

Q = 44.33
H = 0.57
GRATE OPEN AREA:

GROSS AREA FOR ONE GRATE = $2' - 1 \frac{1}{2}" \times 2' - 11 \frac{3}{8}" = 6.28 \text{ SF}$
LESS BEARING BARS = $(0.5")(1/12) \times 2.95 \times 13 = 1.60 \text{ SF}$
LESS CROSS BARS = $(0.5")(1/12) \times 2.13 \times 7 = 0.62 \text{ SF}$
PLUS THE INTERSECTION COUNTED 2X = $(0.5")(1/12) \times (0.5")(1/12) \times 77 = 0.13 \text{ SF}$
AREA = 4.2

*ASSUME 1/2 CLOGGING FACTOR THEREFORE USE AN AREA EQUAL TO 2.1 SF

CALCULATIONS:

FLOW THROUGH THE GRATE = $CA(2gH)^{.5} = 8.524609$
FLOW THROUGH DOUBLE THROAT = $CA(2gH)^{.5} = 27.19756$

TOTAL CAPACITY= 35.72 EA

RECOMMENDATION:

INTERIM CONDITIONS:

THE FLOWS ALONG 64TH STREET IN THE INTERIM CONDITION TOTAL 23.52 CFS. THIS IS APPROXIMATELY EQUAL TO HALF OF THE ULTIMATE FLOWRATE IN THIS STREET & THEREFORE A FLOW DEPTH OF 0.57 FEET CAN BE USED TO CHECK THE SUMP CAPACITY CURRENTLY THERE IS ONE SUMP INLET LOCATED ALONG THE EAST SIDE OF 64TH ST. WITH A TOTAL CAPACITY OF 35.72 CFS THIS INLET CAN ACCEPT ALL FLOWS ALONG THIS STREET IN THE INTERIM CONDITION.

ULTIMATE CONDITIONS:

AN ADDITIONAL SUMP INLET AT THE INTERSECTION OF TAUTON PL & 64TH STREET WILL BE ADDED TO THE WEST SIDE OF THE ROAD. WITH A TOTAL CAPACITY OF 71.44 CFS, THE TWO INLETS ARE ADEQUATELY SIZED TO HANDLE THE PROPOSED FLOWS FROM PHASE 3 & THE FUTURE PHASE 4.