



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 11, 1997

Diane Hoelzer
Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, New Mexico 87199

RE: ENGINEER CERTIFICATION FOR BURGER KING @ GIBSON & MULBERRY
(M15-D31) CERTIFICATION STATEMENT DATED 11/17/97

Dear Ms. Hoelzer:

Based on the information provided on your November 17, 1997 submittal, Engineer Certification for the above referenced site is acceptable.

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

C: Andrew Garcia

☐ File

Sincerely

Bernie J. Montoya CE
Associate Engineer

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Burger King at Gibson ZONE ATLAS/DRNG, FILE#: M15/D31
DRB #: 96-161 EPC #: _____ WORK ORDER #: _____
LEGAL DESCRIPTION: Tract 1, Lands of Rabadi Lujan
CITY ADDRESS: 2501 Mulberry S.E.

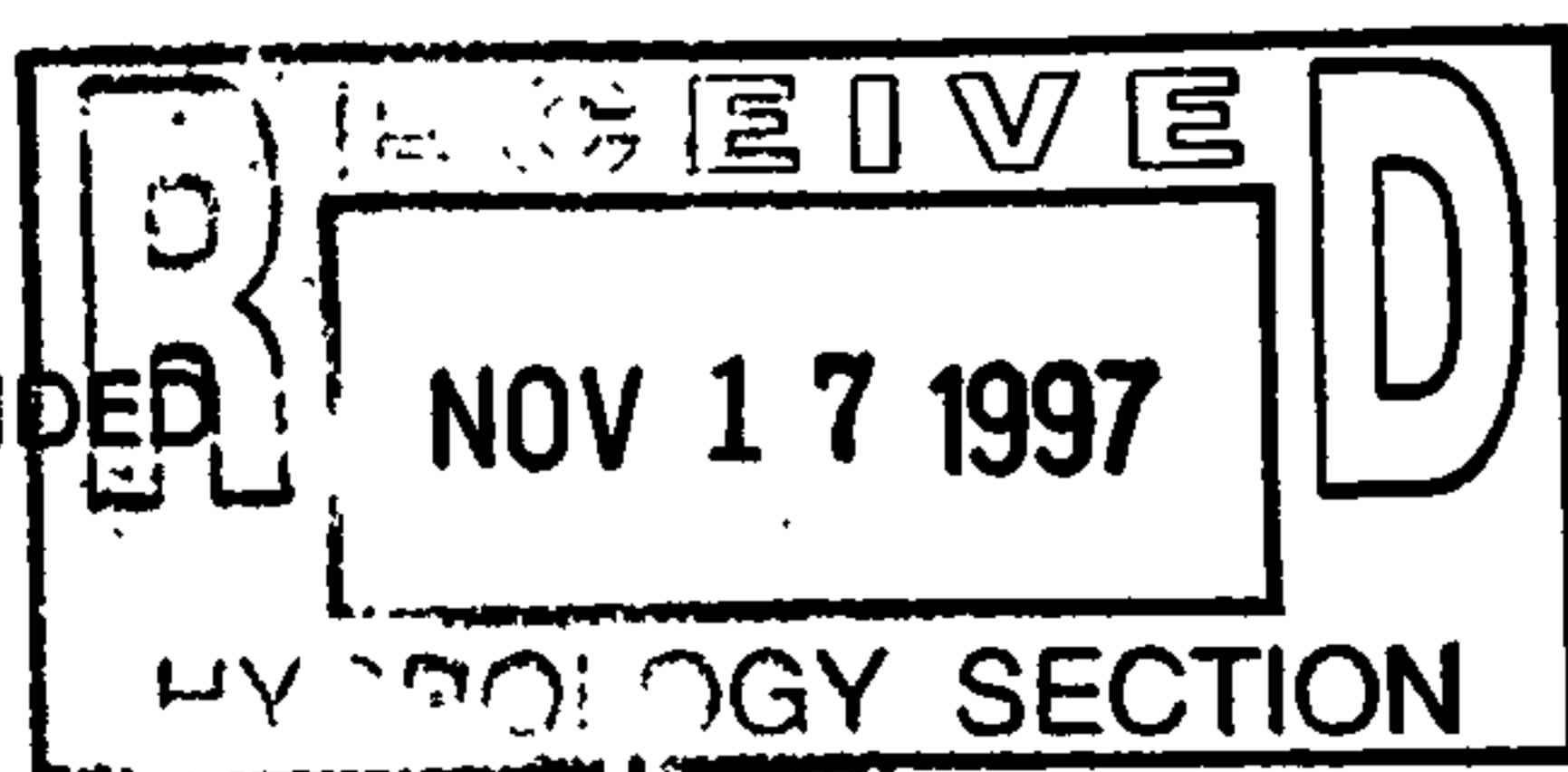
ENGINEERING FIRM:	<u>Mark Goodwin & Associates PA</u>	CONTACT:	<u>Diane Hoelzer PE</u>
ADDRESS:	<u>PO Box 90606</u>	PHONE:	<u>828-2200</u>
OWNER:	<u>S & J Enterprises</u>	CONTACT:	<u>Ron McCormick</u>
ADDRESS:	<u>3535 Princeton NE</u>	PHONE:	<u>884-6234</u>
ARCHITECT:	<u>SLNB Architects</u>	CONTACT:	<u>Jim Lewis</u>
ADDRESS:	<u>1620 Central SE</u>	PHONE:	<u>247-1529</u>
SURVEYOR:	<u>Joaquin Arguelles</u>	CONTACT:	<u>Jake Arguelles</u>
ADDRESS:	<u>2912 San Ygnacio Rd SW</u>	PHONE:	<u>873-3775</u>
CONTRACTOR:	<u>S & J Enterprises</u>	CONTACT:	<u>Ron McCormick</u>
ADDRESS:	<u>3535 Princeton NE</u>	PHONE:	<u>884-6234</u>

TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION
☐ OTHER

PRE-DESIGN MEETING:

☐ YES
☐ NO
☐ COPY PROVIDED

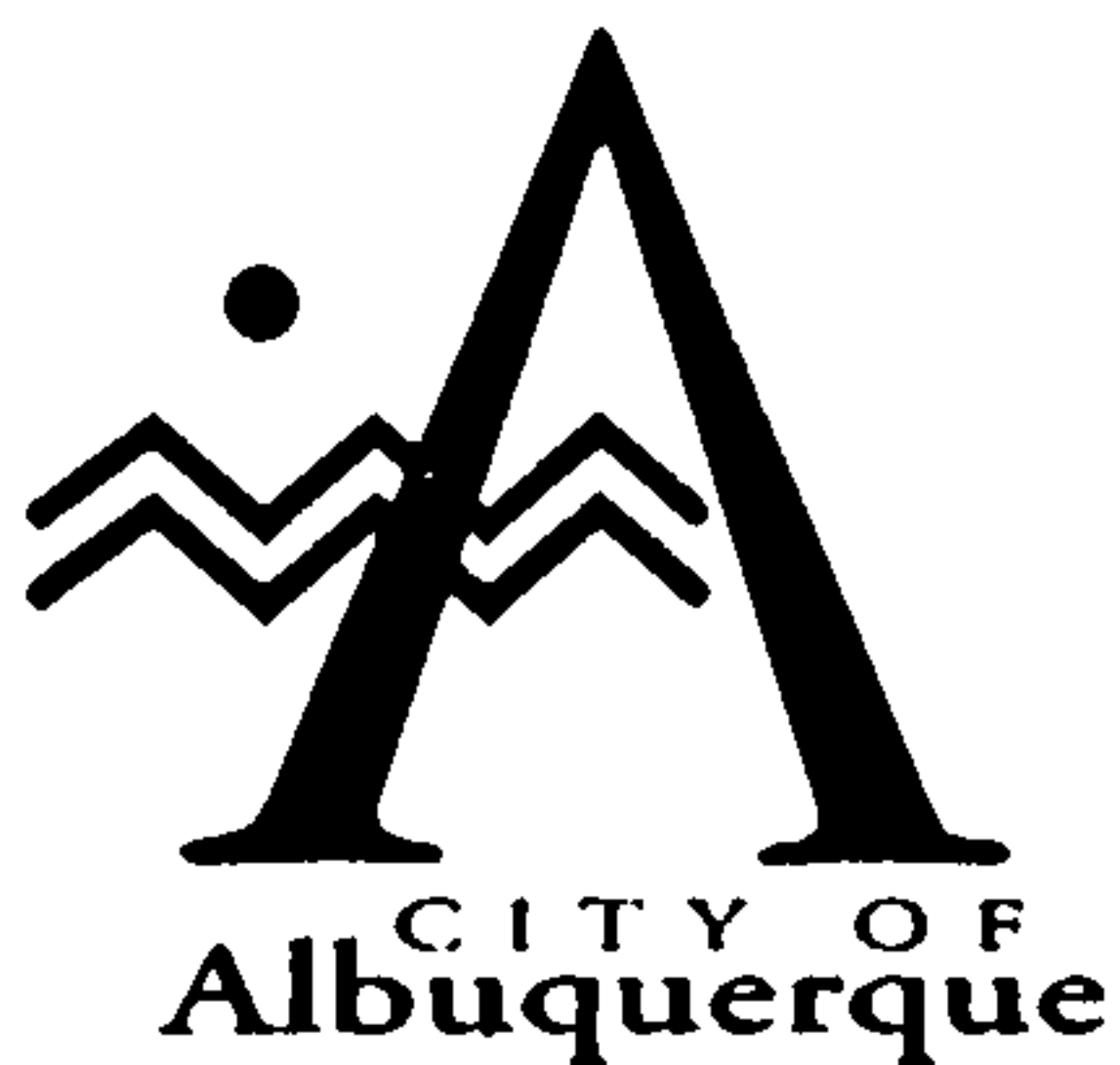


CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. PLAN FOR BLDG PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☐ BUILDING PERMIT APPROVAL
☒ CERTIFICATION OF OCCUPANCY APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☒ OTHER temporary C.O. (Specify)
30 day issued on 11/18/97 Ag.

DATE SUBMITTED: 11-17-97

BY: Diane Hoelzer
Diane Hoelzer PE



Martin J. Chávez, Mayor

May 14, 1997

Mark Goodwin
Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, New Mexico 87199

RE: REVISED DRAINAGE PLAN FOR BURGER KING - MULBERRY & GIBSON
(M15-D31) REVISION DATED 5/6/97

Dear Mr. Goodwin:

Based on the information provided on your May 7, 1997 resubmittal, listed are some concerns that will need to be addressed prior to final approval:

1. What impact will Gerald Ave. SE have on the proposed new drive pad?
2. You will need to provide the hydraulics showing that the run-off from Gerald Ave. SE will not create a hydraulic jump into the property.

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

C: Andrew Garcia
~~File~~

Sincerely

Bernie J. Montoya
Bernie J. Montoya CE
Associate Engineer

create a hydraulic jump into the



DRAINAGE INFORMATION SHEET

PROJECT TITLE: Burger King ZONE/ATLAS/DRNG, FILE# M-15/D31
 DRB#: 96-161 EPC# WORK ORDER#:
 LEGAL DESCRIPTION: Tract 1, Lands of Rabadi Lujan
 CITY ADDRESS: West of Mulberry Street, south of Gibson

ENGINEERING FIRM:	Mark Goodwin & Associates, PA	CONTACT:	Diane Hoelzer, PE
ADDRESS:	P.O. Box 90606	PHONE:	345-2010
OWNER:	S & J Enterprises	CONTACT:	Ron McCormick
ADDRESS:	3535 Princeton NE	PHONE:	884-6234
ARCHITECT:	SLNB Architects	CONTACT:	Jim Lewis
ADDRESS:	1620 Central SE	PHONE:	247-1529
SURVEYOR:	N/A	CONTACT:	
ADDRESS:		PHONE:	
CONTACTOR:	N/A	CONTACT:	
ADDRESS:		PHONE:	

TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL
☐ ENGINEER'S CERTIFICATION
☐ OTHER

PRE-DESIGN MEETING:

☐ YES
☐ NO
☐ COPY PROVIDED

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☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☐ OTHER

DATE SUBMITTED

6 May 97

BY

Diane Hoelzer, PE



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 345-2010

May 6, 1997

Mr. Bernie J. Montoya
City Of Albuquerque, Hydrology
P.O. Box 1293
Albuquerque, NM 87103

RE: Burger King - Mulberry @ Gibson M15-D31

Dear Mr. Montoya,

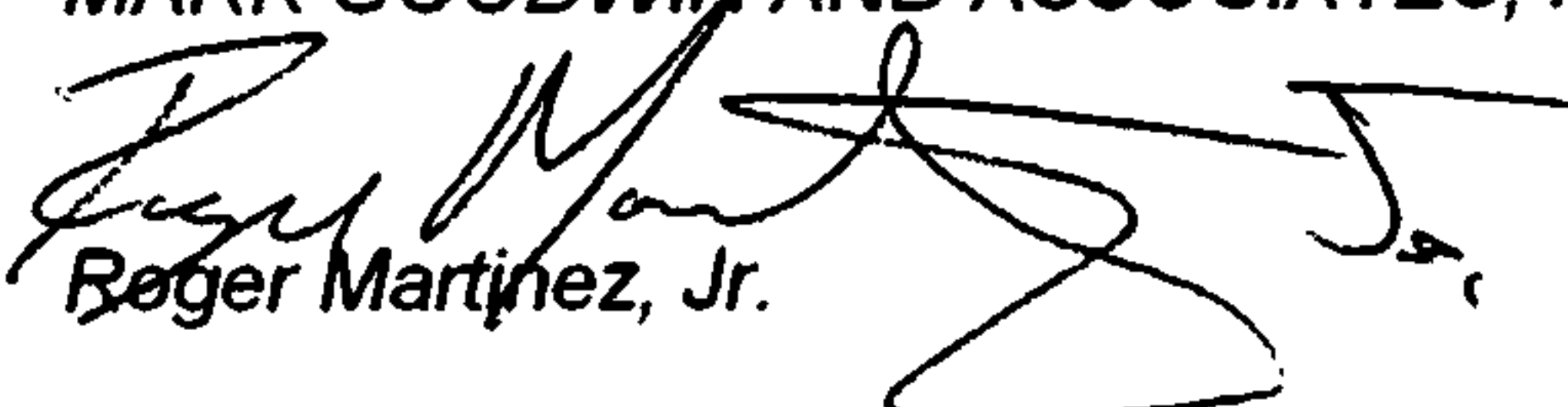
The intent of this letter is to inform you of the revisions of the referenced project since your letter dated January 21, 1997. Attached, please find the revised grading and drainage plan for the referenced project.

The site has been approved but rearranged to accomodate an additional entrance. There has been a negligible increase in impervious area due to the additional access. The drainage management plan has remained consistant throughout the change. Drainage is directed from the site around the fueling bays and over the driveways.

If you have any questions concerning this project or the letter, please contact me at 345-2010.

Sincerely,

MARK GOODWIN AND ASSOCIATES, P.A.


Roger Martinez, Jr.

Attachments

RM/bm

MAY 07 1997



CITY OF
Albuquerque

Public Works Department

Martin J. Chávez, Mayor

Robert E. Gurulé, Director

January 21, 1997

Diane Hoelzer
Mark Goodwin & Assoc.
P.O. Box 90606
Albuquerque, New Mexico 87199

RE: REVISED DRAINAGE PLAN FOR BURGER KING (M15-D31) REVISION DATED
1/3/97

Dear Ms. Hoelzer:

Based on the information provided on your January 7, 1997 resubmittal, the above referenced site is approved for Building Permit. Please attach a copy of this approved plan to the construction plan prior to sign off by Hydrology.

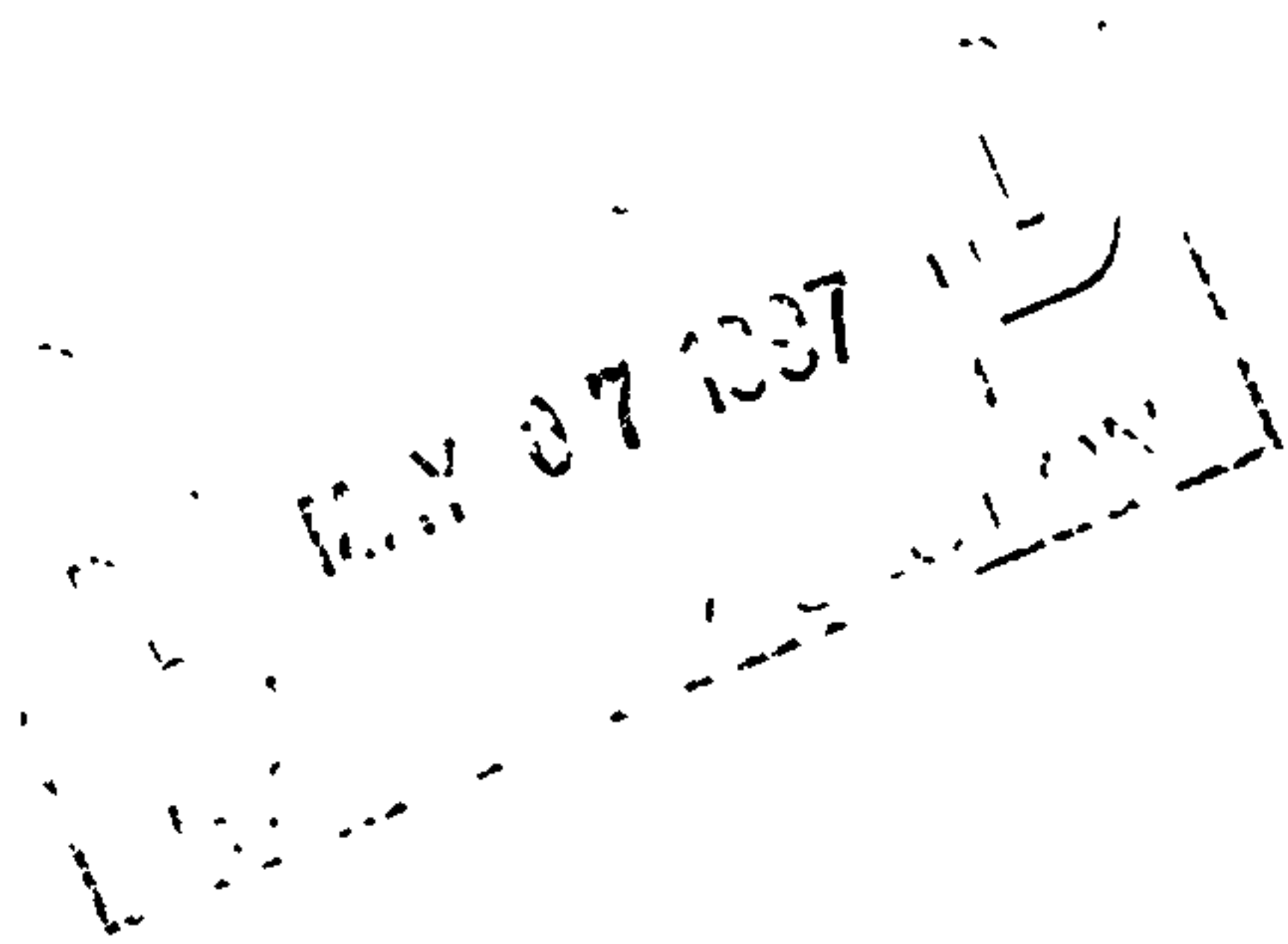
Also, prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

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

C: Andrew Garcia

Sincerely

Bernie J. Montoya
Engineering Associate



Good for You. Albuquerque!



DRAINAGE INFORMATION SHEET

PROJECT TITLE: Burger King ZONE ATLAS/DRNG, FILE#: M-15/D31
DRB #: _____ EPC #: _____ WORK ORDER #: _____
LEGAL DESCRIPTION: Tract 1, Lands of Rabadia Lujan
CITY ADDRESS: _____

ENGINEERING FIRM: DMG CONTACT: Am McKenzie
ADDRESS: Box 9606 90606 PHONE: 345-2010
OWNER: S&T Enterprises CONTACT: Ron McCormick
ADDRESS: _____ PHONE: 884 6234
ARCHITECT: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
SURVEYOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

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☐ ENGINEER'S CERTIFICATION
☐ OTHER

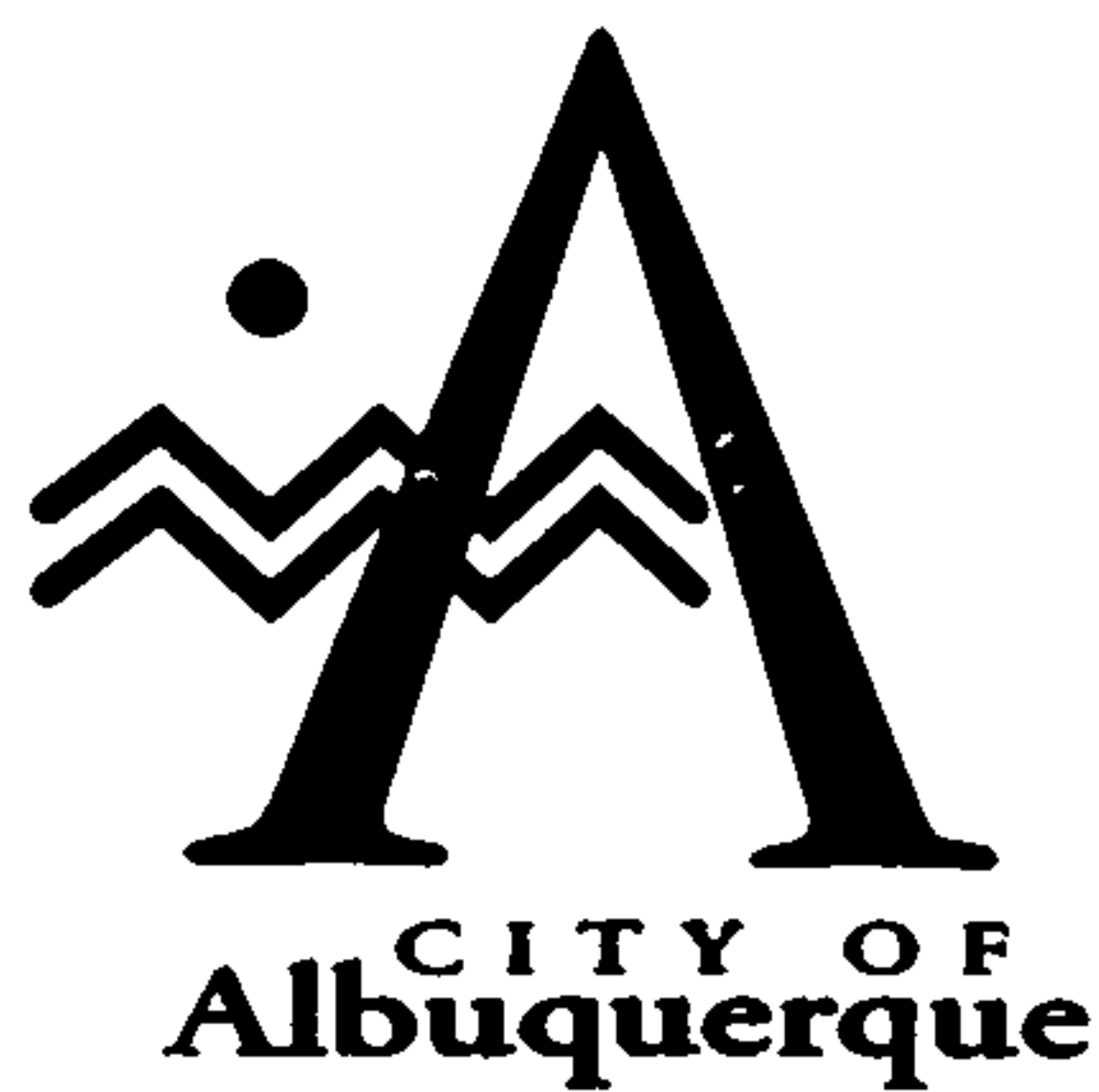
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☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☐ OTHER _____ (Specify)

PRE-DESIGN MEETING:

☐ YES
☒ NO
☐ COPY PROVIDED

DATE SUBMITTED: 7/2/96

BY: John McKenzie



July 18, 1996

Martin J. Chávez, Mayor
Mark Goodwin
D. Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, NM 87199

RE: REVISED DRAINAGE PLAN FOR BURGER KING @ GIBSON & MULBERRY
(M15-D31) REVISION DATED 6/18/96.

Dear Mr. Goodwin:

Based on the information provided on your July 3, 1996 resubmittal, the above referenced site is approved for Building permit and S.O. 19 permits.

Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

Also, a separate permit is required for construction within City Right-of-Way. A copy of this approval letter must be on hand when applying for the excavation permit.

Please be advised that prior to Certificate of Occupancy release, Engineer Certification per the D.P.M. checklist will be required. Also AMAFCA's concurrence will be required.

If I can be of further assistance, please feel free to contact me at 768-2667.

Sincerely,
Bernie J. Montoya
Bernie J. Montoya, CE
Engineering Associate

BJM/dl
c: Andrew Garcia
Arlene Portillo
File

Good for You, Albuquerque!





D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 345-2010

January 3, 1997

Ms. Lisa Ann Manwill
Hydrology Dept.
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

Re: Burger King @ Mulberry and Gibson (M15-D31) Grading and Drainage Plan For Building Permit, Engineers Stamp dated 1/3/97.

Dear Ms. Manwill:

This letter is in response to your comment letter dated December 30, 1996.

1. *Per our discussion I have raised the water block to 10 inches and have shifted it closer to the entrance at the north driveway.*
2. *Local surface flows from the east that reach Mulberry, flow to a low spot in Mulberry located south of the Burger King site and enters a deep rip-rap lined channel/spillway section through a cut in the curb at this low point and then discharges into AMAFCA's South Diversion Channel. There is a storm sewer system in parts of Gerald, Sycamore, Spence and Mulberry Avenues which conveys flows to a junction box at Alamo and Mulberry which is then directed west under the interstate to an outfall in the McKinney Apodaca Area.*

The site is relatively flat. Historically, it appears from field visits that some of the site's runoff will flow into Mulberry and into the nearby inlet. Runoff to Mulberry that bypasses this inlet will either flow south and into the AMAFCA rip-rap lined channel/spillway section or north and into a concrete lined spillway at the southeast corner of Mulberry and Gibson and into the AMAFCA Diversion Channel. Some of the site towards the west and south flows directly into AMAFCA's South Diversion Channel or the rip-rap lined channel/spillway. I am proposing to direct developed site flows to Mulberry. The flows at the south entrance will be conveyed a short distance before flowing into the AMAFCA rip-rap channel/spillway. The flows from the north entrance will flow north to the spillway channel at the Mulberry and Gibson intersection.

3. *Except for runoff at the south and west end of the site which discharges directly into the AMAFCA rip-rap channel spillway, the historical flow patterns are being maintained. The increase in discharge into Mulberry is negligible.*
4. *An SO #19 is not required and my plans reflect this change.*
5. *Drainage report has been revised to include more detailed information.*

Please call me if you have any further comments or request additional information.

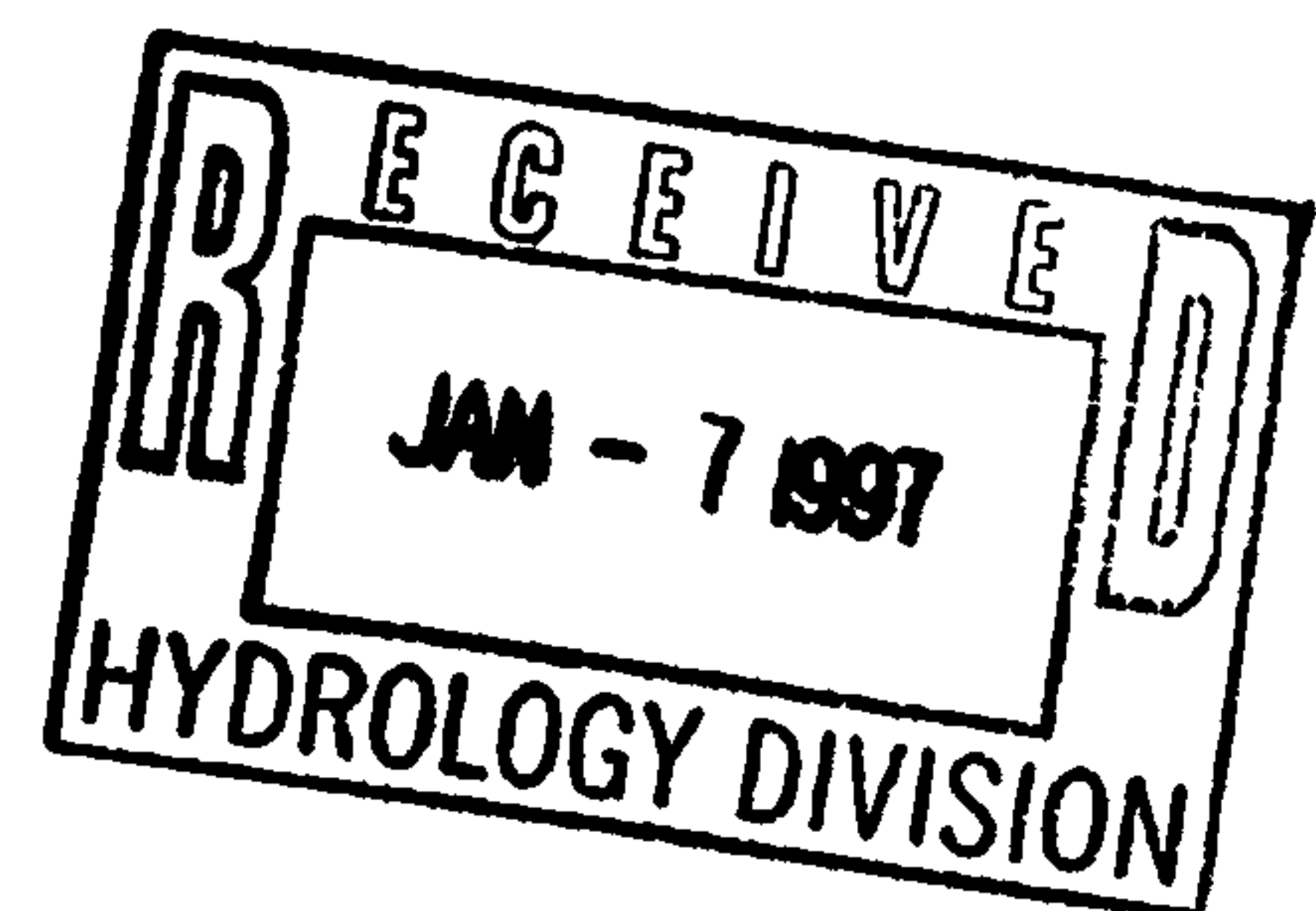
Sincerely,

MARK GOODWIN & ASSOCIATES, P.A.

Diane Hoelzer, P.E.
DLH/sb

DRAINAGE REPORT
for
BURGER KING RESTAURANT
@ Mulberry and Gibson

(M15-D31)



JANUARY 3, 1997

PROJECT DESCRIPTION

The site is currently undeveloped vacant land. The proposed developed site will consist of a Burger King Restaurant, gas station, drive-thru and parking area. This site has already been approved several times previously. In the previous approvals the primary difference was a change in the building location on the site. Presently the building has shifted back to the south part of the property and a gas service station has been added to the site.

EXISTING DRAINAGE CONDITIONS

The project site consists of relatively flat terrain. Under existing drainage conditions, it appears from field investigations that on-site flows in the eastern portion of the site will discharge into Mulberry Street. On-site flows along the western and south boundary either discharge directly into AMAFCA's South Diversion Channel to the west or AMAFCA's rip-rap lined channel spillway located immediately to the south of the project site. Some of the runoff entering Mulberry street will flow south to a low point in Mulberry at Spence Avenue before exiting Mulberry through a curb cut on the west side and discharging into the AMAFCA rip-rap lined channel spillway which discharges directly into the AMAFCA South Diversion Channel. Some of the runoff toward the north end of the project site either enters the storm drain inlet located near the Gerald Avenue intersection or continues north to the concrete spillway located at the southwest corner of the Mulberry and Gibson intersection. Discharge from this spillway enters the AMAFCA Diversion Channel.

The storm sewer system in Mulberry appears to be a very old system. The city does not have construction plans for the inlet connection at Gerald Ave. and Mulberry St. Field investigations and survey information have verified that it does exist. The area where this inlet is located is relatively flat with roadway flowline eventually sloping off toward the north and south from the inlet location point. I suspect that this inlet was constructed as an afterthought to relieve possible ponding at this location because it's connection to the existing storm sewer manhole seems to have been made at an adverse angle to the flowline direction.

Construction plans for the storm sewer system in Mulberry, Spence and Gerald Avenues indicate that some of the runoff originating from the subdivision to the east of the site is conveyed south in the Mulberry storm sewer to a junction box at the intersection of Alamo Ave. and Mulberry St. which then turns west and continues runoff conveyance under Interstate 25 to an outfall area called out as the McKinney Apodaca Area in the construction plans.

DEVELOPED CONDITIONS

Under developed conditions, all of the runoff from the site is proposed to be directed into Mulberry Street as free discharge through one of two driveway exits. Runoff exiting through the south driveway will flow a short distance before exiting into the AMAFCA rip-rap lined channel spillway and then into the AMAFCA South Diversion Channel. Runoff exiting through the north driveway will partially flow north to the concrete spillway at Mulberry and Gibson which discharges into the AMAFCA South Diversion Channel. At the north driveway exit, most of the runoff will flow north to the concrete spillway opening located at the southwest corner of Gibson and Mulberry St. and into the South Diversion Channel.

Historic flow patterns for the most part are to remain the same and impacts to existing street capacities from the increase in runoff from development of the site is negligible.

Summary of Drainage Conditions

Project Area: 0.83 acres

Time of Concentration = 12 minutes

100-year 6-hour rainfall dsn.

P1 = 2.01 inches

P6 = 2.31 inches

EXISTING CONDITIONS

Land Treatment A = 100%

North Basin = 0.5 cfs

South Basin = 0.8 cfs

DEVELOPED CONDITIONS

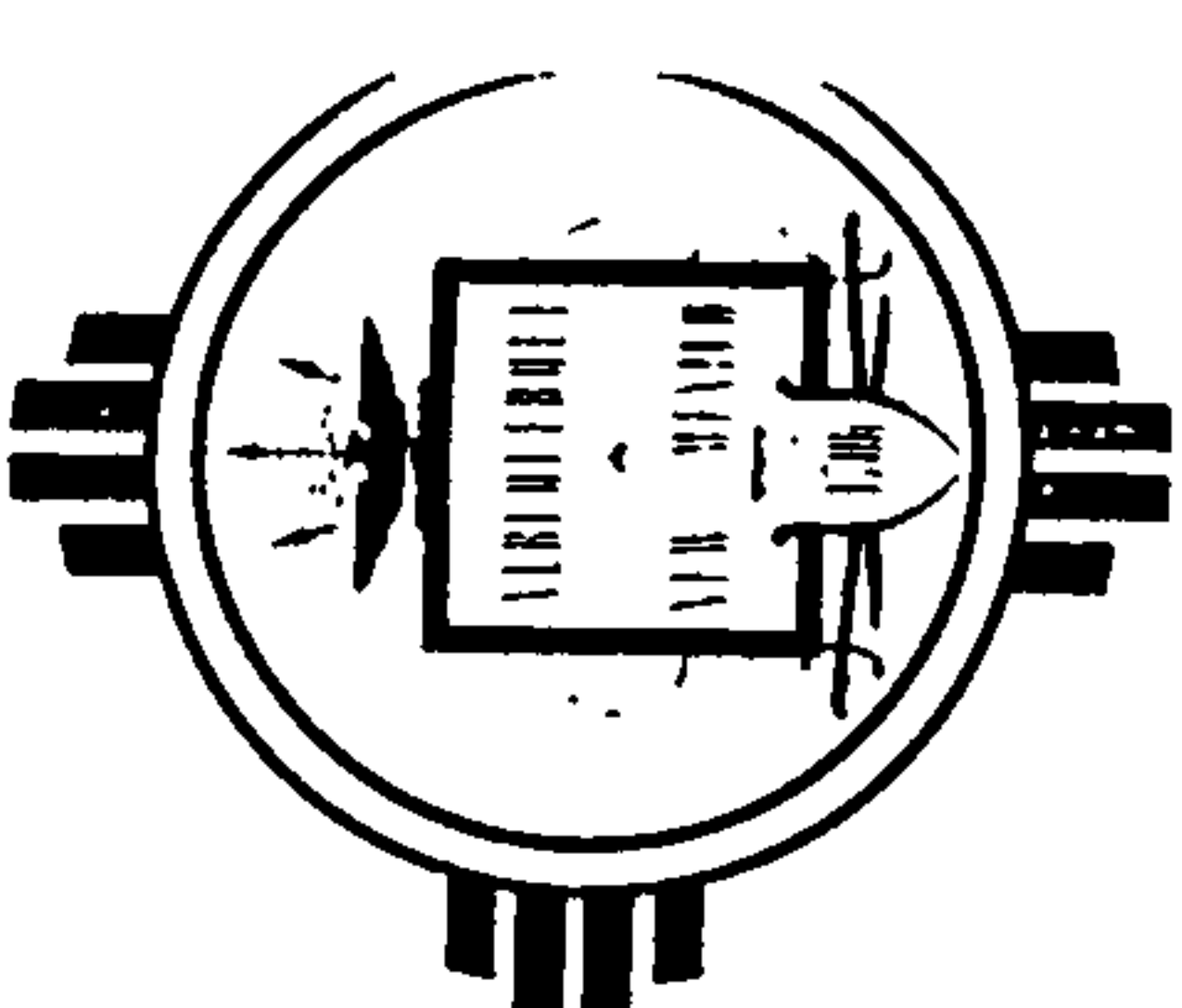
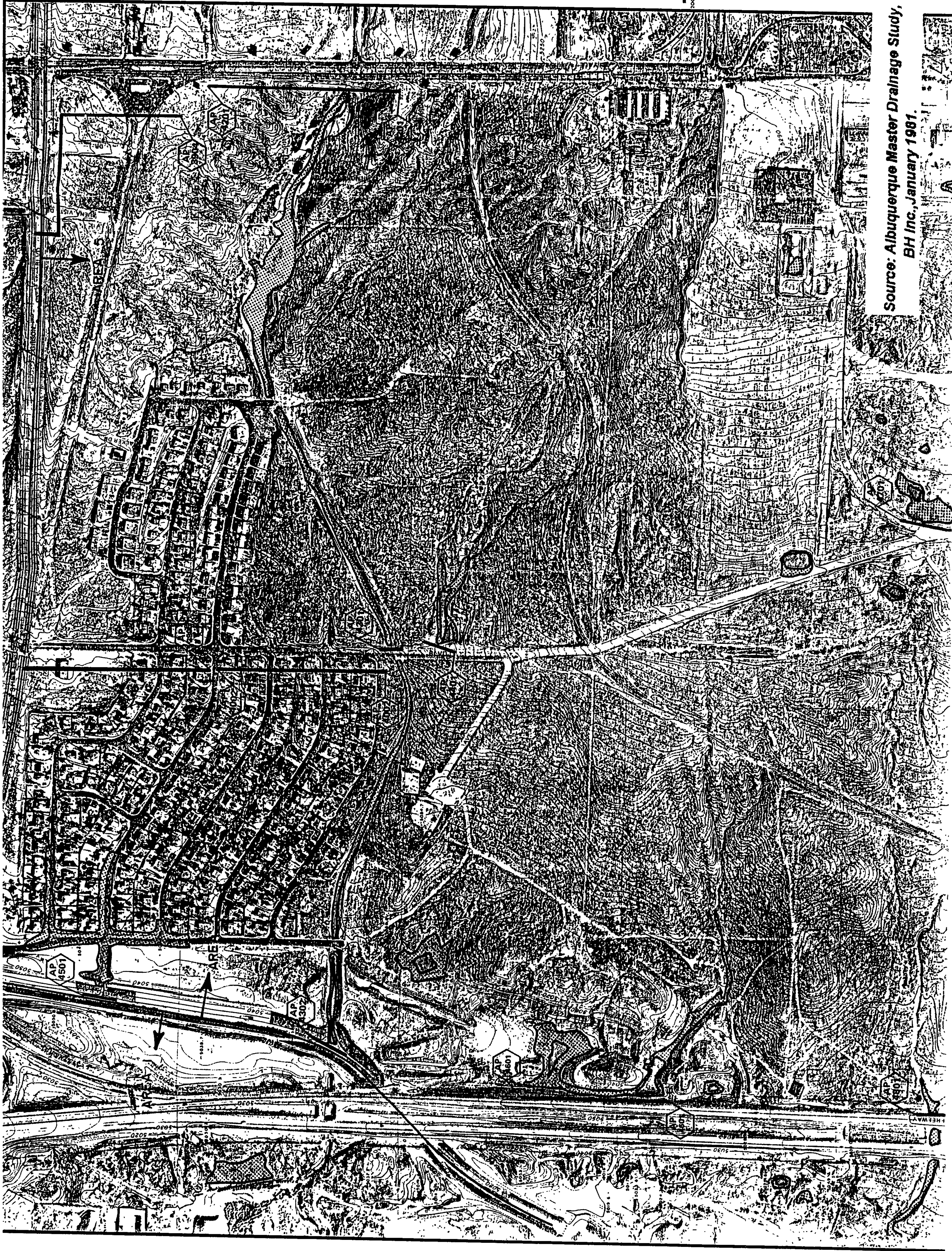
Land Treatment B= 10%

Land Treatment D = 90%

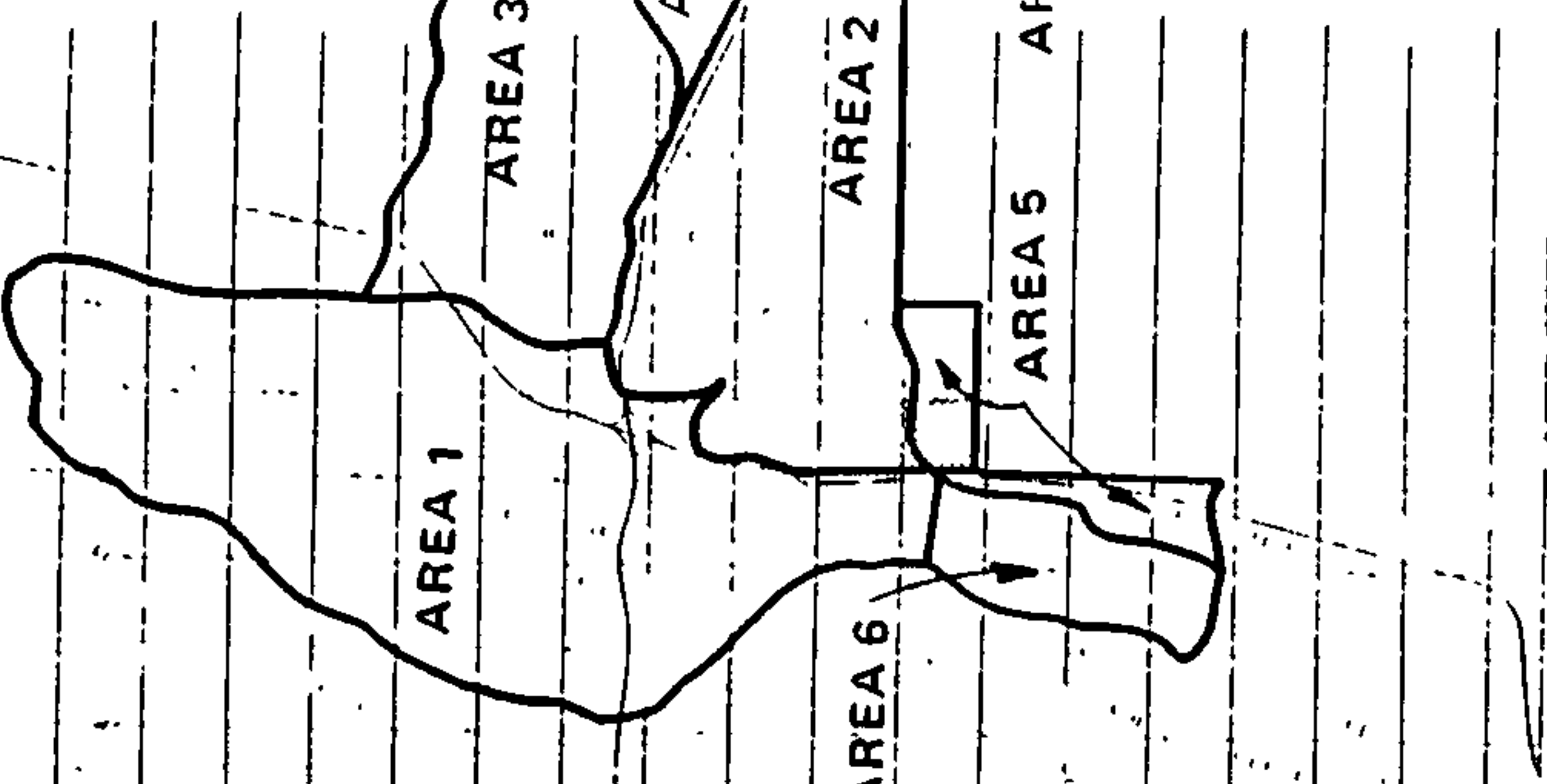
North Basin = 1.4 cfs

South Basin = 2.3 cfs

An increase in flow rate of 2.4 cfs is negligible.



11 12 13 14 15 16 17 18 19 20



Source: Albuquerque Master Drainage Study, Volume II,
BH Inc., January 1981.

**Source: Albuquerque Master Drainage Study, Volume II,
BH Inc., January 1981.**

2. A development site in the upper reaches of a drainage system may have a restricted allowable peak rate but be able, to discharge a tremendously higher runoff volume than the predevelopment allotment by temporarily storing the large volume and releasing it at a controlled rate.

3. Development sites midway through drainage systems may also have relaxation opportunities, but they may require solutions which use combinations of both higher rates from a portion of the site and detention storage from the remainder.

It is further recommended that all significant modifications to drainage improvement systems or to the land which drains to them be modeled in order to determine the effectiveness and/or consequences of such modifications.

Area 4

The Four Hills area is developing as a strictly residential development with a relatively low potential for generating storm runoff. The existing development has generally respected the flood plains of the several small arroyos which traverse the area (see Table 2). Recommendations for flood damage mitigation with one exception are to continue avoiding construction within the flood plains

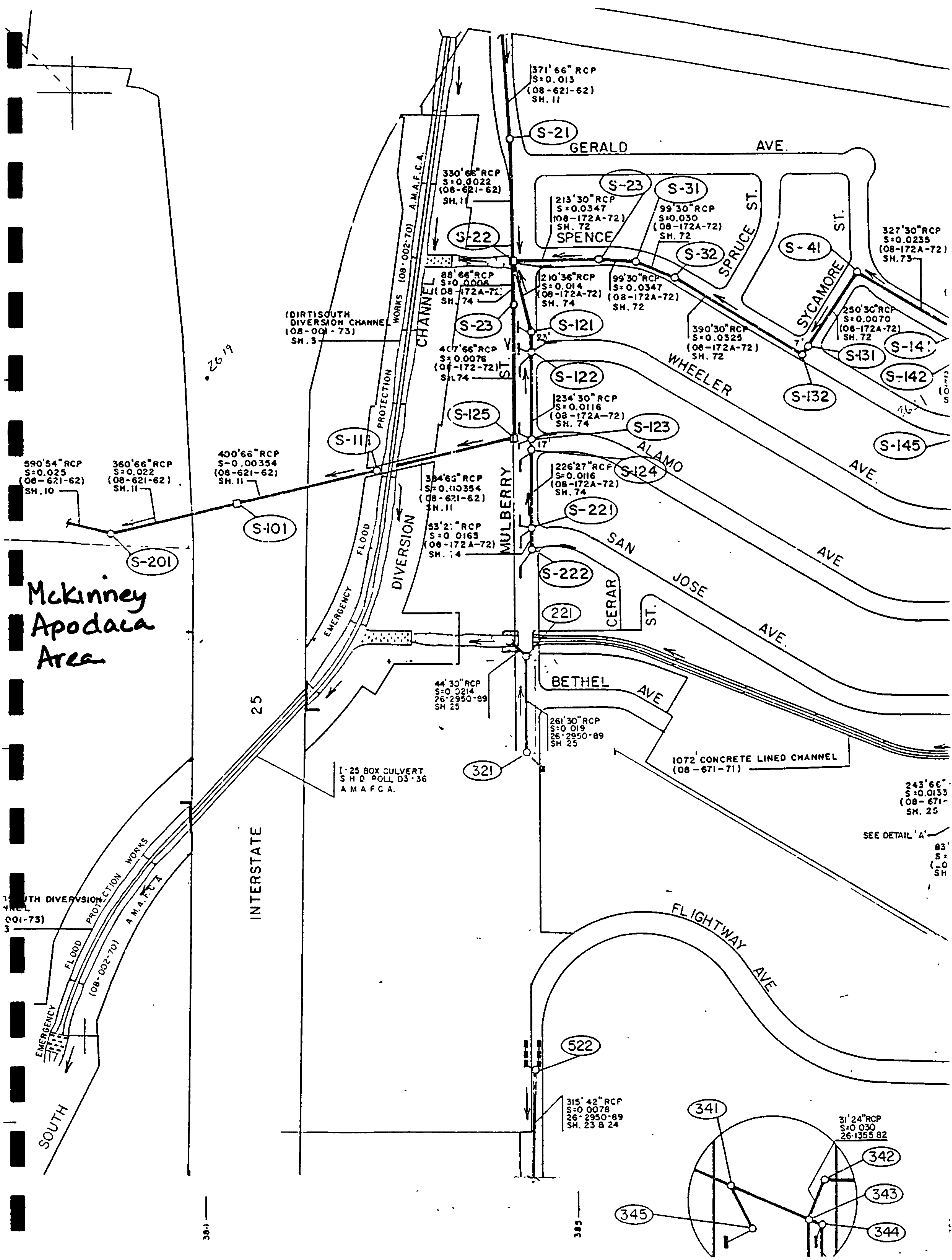
Area 5

The undeveloped and developing areas within Area 5 are good candidates for non-structural flood damage mitigation measures. The areas are steep and have deeply incised water courses. The outfalls for these areas are the Tijeras Arroyo or the south diversion channel. Both of which have capacities of such magnitude that the most intense development possible in Area 5 will not have a significant negative impact on them. This is due to the relative size of the drainage areas to those of the total areas draining to these large channels. The only hydrologic constraint on development in Area 5 exists at the numerous crossing structures under Interstate 25. With proper maintenance, these structures are capable of safely passing flows up the 100-year frequency flood from a fully developed Area 5. Channel stability in the area is, however, a serious problem which will require treatment as development occurs, but should be the developer's responsibility.

In summary, Area 5 does not require structural improvements to improve the hydraulic capacities of the storm drainage network with existing or full development conditions as long as channel stability is respected and major interbasin transfers do not occur

C. Structural Flood Mitigation Measures

**McKinney
Apodaca
Area**



ANYMO PROGRAM (ANYMO194) - AMAPCA Hydrologic Model - January, 1994

RUN DATE (MON/DAY/YR) = 01/03/1997

START TIME (HR:MIN:SEC) = 13:51:24 USER NO. = M_GOODWIN.101

INPUT FILE = BK.DAT

START TIME=0.0

***** BURGER KING ON MULBERRY SOUTH OF GIBSON

***** 100-YEAR 6-HOUR STORM EVENT

***** JANUARY 1997

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=2.01 IN RAIN SIX=2.31 IN

RAIN DAY=2.69 IN DT=0.0333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.

DT = .033300 HOURS END TIME = 5.994000 HOURS

.0000	.0013	.0025	.0039	.0052	.0066	.0080
.0094	.0109	.0124	.0139	.0155	.0172	.0189
.0206	.0224	.0242	.0261	.0281	.0301	.0322
.0344	.0366	.0390	.0415	.0440	.0467	.0495
.0525	.0557	.0590	.0645	.0704	.0767	.0898
.1198	.1661	.2327	.3238	.4435	.5964	.7867
1.0192	1.2424	1.3340	1.4110	1.4795	1.5417	1.5989
1.6521	1.7018	1.7483	1.7921	1.8335	1.8725	1.9094
1.9444	1.9776	2.0091	2.0390	2.0674	2.0748	2.0805
2.0859	2.0911	2.0960	2.1007	2.1052	2.1095	2.1136
2.1176	2.1215	2.1252	2.1289	2.1324	2.1358	2.1391
2.1423	2.1455	2.1485	2.1515	2.1544	2.1573	2.1600
2.1628	2.1654	2.1680	2.1706	2.1731	2.1756	2.1780
2.1804	2.1827	2.1850	2.1872	2.1894	2.1916	2.1938
2.1959	2.1979	2.2000	2.2020	2.2040	2.2059	2.2079
2.2098	2.2117	2.2135	2.2154	2.2172	2.2189	2.2207
2.2225	2.2242	2.2259	2.2276	2.2292	2.2309	2.2325
2.2341	2.2357	2.2373	2.2388	2.2404	2.2419	2.2434
2.2449	2.2464	2.2478	2.2493	2.2507	2.2521	2.2536
2.2550	2.2563	2.2577	2.2591	2.2604	2.2618	2.2631
2.2644	2.2657	2.2670	2.2683	2.2696	2.2708	2.2721
2.2733	2.2746	2.2758	2.2770	2.2782	2.2794	2.2806
2.2818	2.2829	2.2841	2.2853	2.2864	2.2876	2.2887
2.2898	2.2909	2.2920	2.2931	2.2942	2.2953	2.2964
2.2975	2.2985	2.2996	2.3006	2.3017	2.3027	2.3038

2.3048 2.3058 2.3068 2.3078 2.3088 2.3098

***** SOUTH BASIN - EXISTING CONDITIONS

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0008 SQ MI
PER A=100 PER B=0 PER C=0 PER D=0
TP=0.1333 HR MASS RAINFALL=-1

K = .160154HR TP = .133300HR K/TP RATIO = 1.201459 SHAPE CONSTANT, N = 2.957910
UNIT PEAK = 1.6707 CFS UNIT VOLUME = .9911 B = 278.37 P60 = 2.0100
AREA = .000800 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = .51968 INCHES = .0222 ACRE-FEET
PEAK DISCHARGE RATE = .79 CFS AT 1.532 HOURS BASIN AREA = .0008 SQ. MI.

***** NORTH BASIN - EXISTING CONDITIONS

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0005 SQ MI
PER A=100 PER B=0 PER C=0 PER D=0
TP=0.1333 HR MASS RAINFALL=-1

K = .160154HR TP = .133300HR K/TP RATIO = 1.201459 SHAPE CONSTANT, N = 2.957910
UNIT PEAK = 1.0442 CFS UNIT VOLUME = .9857 B = 278.37 P60 = 2.0100
AREA = .000500 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = .51968 INCHES = .0139 ACRE-FEET
PEAK DISCHARGE RATE = .50 CFS AT 1.532 HOURS BASIN AREA = .0005 SQ. MI.

***** SOUTH BASIN - DEVELOPED CONDITIONS

COMPUTE NM HYD ID=2 HYD NO=101.2 AREA=0.0008 SQ MI
 PER A=0 PER B=10 PER C=0 PER D=90
 TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 2.8426 CFS UNIT VOLUME = .9955 B = 526.28 P60 = 2.0100
 AREA = .000720 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .132088HR TP = .133300HR K/TP RATIO = .990905 SHAPE CONSTANT, N = 3.563124
 UNIT PEAK = .19499 CFS UNIT VOLUME = .9284 B = 324.91 P60 = 2.0100
 AREA = .000080 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 101.20

RUNOFF VOLUME = 1.94538 INCHES = .0830 ACRE-FEET
 PEAK DISCHARGE RATE = 2.29 CFS AT 1.499 HOURS BASIN AREA = .0008 SQ. MI.

***** NORTH BASIN - DEVELOPED CONDITIONS

COMPUTE NM HYD ID=2 HYD NO=101.2 AREA=0.0005 SQ MI
 PER A=0 PER B=10 PER C=0 PER D=90
 TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 1.7766 CFS UNIT VOLUME = .9932 B = 526.28 P60 = 2.0100
 AREA = .000450 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .132088HR TP = .133300HR K/TP RATIO = .990905 SHAPE CONSTANT, N = 3.563124
 UNIT PEAK = .12187 CFS UNIT VOLUME = .8908 B = 324.91 P60 = 2.0100
 AREA = .000050 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 101.20

RUNOFF VOLUME = 1.94538 INCHES = .0519 ACRE-FEET

PEAK DISCHARGE RATE = 1.44 CPS AT 1.499 HOURS BASIN AREA = .0005 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 13:51:30

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Burger King ZONE ATLAS/DRNG, FILE#: M-15/D31
DRB #: 96-161 EPC #: _____ WORK ORDER #: _____
LEGAL DESCRIPTION: Tract 1, Lands of Rabadi Lujan
CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates PA CONTACT: Diane Hoelzer PE
ADDRESS: PO Box 90606 PHONE: 345-2010
OWNER: S & J Enterprises CONTACT: Ron McCormick
ADDRESS: 3535 Princeton NE PHONE: 884-6234
ARCHITECT: SLNB Architects CONTACT: Jim Lewis
ADDRESS: 1620 Central SE PHONE: 247-1529
SURVEYOR: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____
CONTRACTOR: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

☐ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION
☐ OTHER

PRE-DESIGN MEETING:

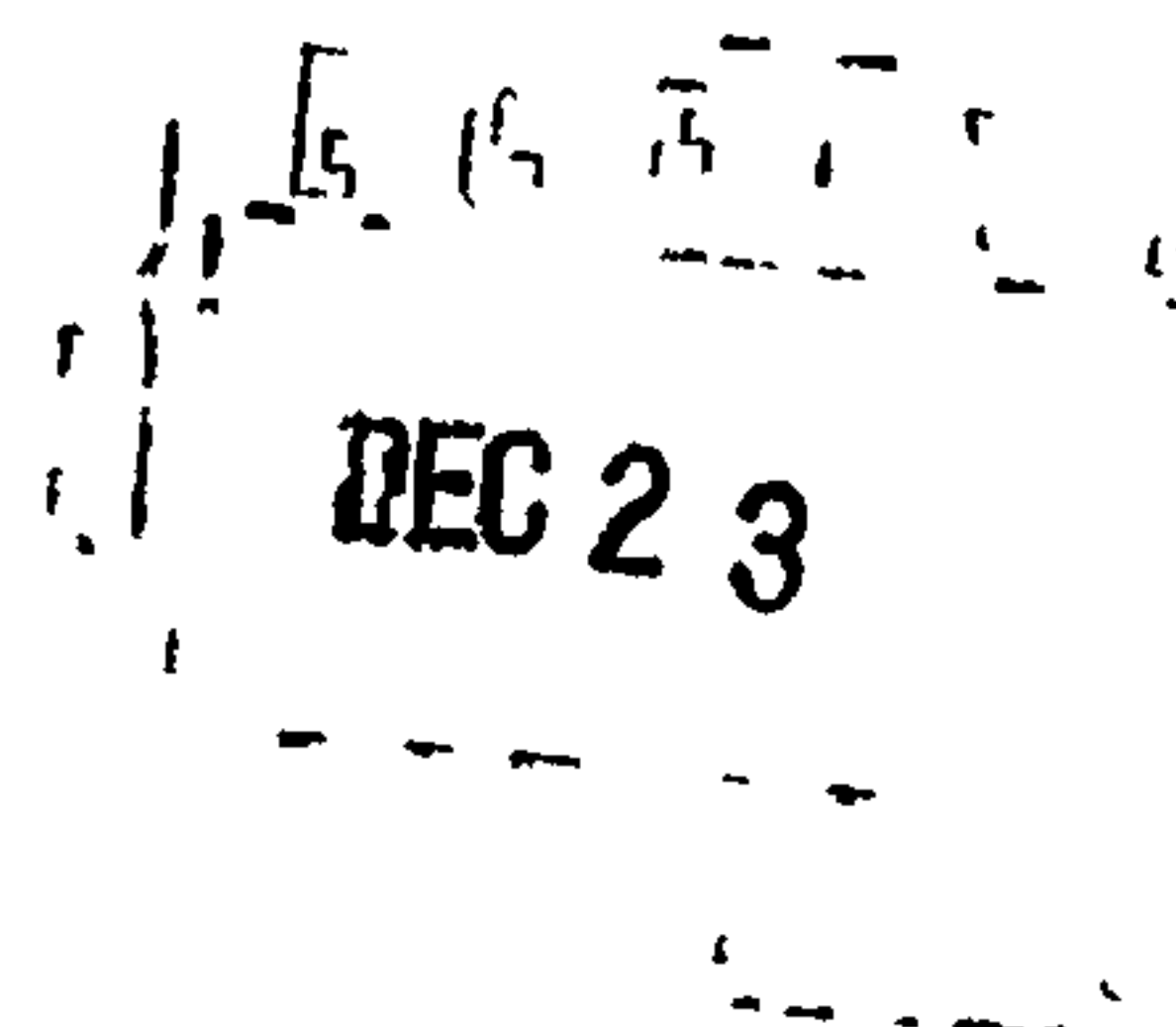
☐ YES
☐ NO
☐ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. PLAN FOR BLDG PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATION OF OCCUPANCY APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☒ OTHER SO19 (Specify)

DATE SUBMITTED: 12-20-96

BY: Diane Hoelzer
Diane Hoelzer PE



SPENCE AVE.

MULBERRY STREET S.E.

GERALD AVE.

BURGER KING • MULBERRY AND GIBSON
DRAINAGE EXHIBIT 12-15-86

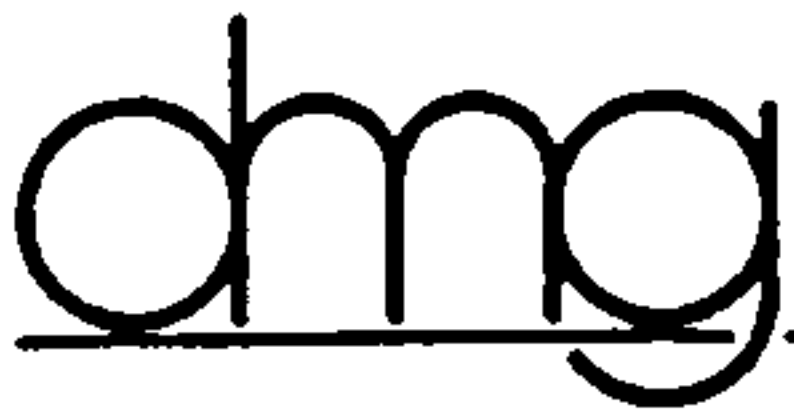
SOUTH SUB-BASIN
0.48/ACRES

NORTH SUB-BASIN
0.32 ACRES

BURGER KING RESTAURANT

SLOPE FROM TOP OF CURB
TO EXISTING GRADE.
1% MAX SLOPE

NEC 2 3



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors

PROJECT Burger King

SUBJECT _____

BY DLH DATE 12-20-96

CHECKED _____ DATE _____

SHEET _____ OF _____

Existing Conditions

Under existing conditions, this area is relatively flat. Flows eventually end up in the AMAFCA channel.

Proposed Conditions

The site has been divided into two sub-basins. Both discharge into Mulberry Street with flows reaching the AMAFCA channel. Developed flows from South sub-basin is 2.2 cfs and from north sub-basin is 1.4 cfs.

AR

10.1 cfs

10.1 cfs

10.1 cfs

Basin

South

North

10.1 cfs

10.1 cfs

BK.OUT

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
RUN DATE (MON/DAY/YR) = 12/13/1996
START TIME (HR:MIN:SEC) = 14:46:47 USER NO.= M_GOODWN.I01
INPUT FILE = BK.DAT

START TIME=0.0

*****BURGER KING ON MULBERRY SOUTH OF GIBSON

*****DECEMBER 1996

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=2.01 IN RAIN SIX=2.31 IN

RAIN DAY=2.69 IN DT=0.0333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS
2 - PEAK AT 1.40 HR.

DT =	.033300 HOURS	END TIME =	5.994000 HOURS			
.0000	.0013	.0025	.0039	.0052	.0066	.0080
.0094	.0109	.0124	.0139	.0155	.0172	.0189
.0206	.0224	.0242	.0261	.0281	.0301	.0322
.0344	.0366	.0390	.0415	.0440	.0467	.0495
.0525	.0557	.0590	.0645	.0704	.0767	.0898
.1198	.1661	.2327	.3238	.4435	.5964	.7867
1.0192	1.2424	1.3340	1.4110	1.4795	1.5417	1.5989
1.6521	1.7018	1.7483	1.7921	1.8335	1.8725	1.9094
1.9444	1.9776	2.0091	2.0390	2.0674	2.0748	2.0805
2.0859	2.0911	2.0960	2.1007	2.1052	2.1095	2.1136
2.1176	2.1215	2.1252	2.1289	2.1324	2.1358	2.1391
2.1423	2.1455	2.1485	2.1515	2.1544	2.1573	2.1600
2.1628	2.1654	2.1680	2.1706	2.1731	2.1756	2.1780
2.1804	2.1827	2.1850	2.1872	2.1894	2.1916	2.1938
2.1959	2.1979	2.2000	2.2020	2.2040	2.2059	2.2079

BK.OUT

2.2098	2.2117	2.2135	2.2154	2.2172	2.2189	2.2207
2.2225	2.2242	2.2259	2.2276	2.2292	2.2309	2.2325
2.2341	2.2357	2.2373	2.2388	2.2404	2.2419	2.2434
2.2449	2.2464	2.2478	2.2493	2.2507	2.2521	2.2536
2.2550	2.2563	2.2577	2.2591	2.2604	2.2618	2.2631
2.2644	2.2657	2.2670	2.2683	2.2696	2.2708	2.2721
2.2733	2.2746	2.2758	2.2770	2.2782	2.2794	2.2806
2.2818	2.2829	2.2841	2.2853	2.2864	2.2876	2.2887
2.2898	2.2909	2.2920	2.2931	2.2942	2.2953	2.2964
2.2975	2.2985	2.2996	2.3006	2.3017	2.3027	2.3038
2.3048	2.3058	2.3068	2.3078	2.3088	2.3098	

***** EXISTING CONDITIONS SOUTH BASIN

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0008 SQ MI

PER A=50 PER B=15 PER C=35 PER D=0

TP=0.1333 HR MASS RAINFALL=-1

K = .137496HR TP = .133300HR K/TP RATIO = 1.031481 SHA
PE CONSTANT, N = 3.422258

UNIT PEAK = 1.8881 CFS UNIT VOLUME = .9927 B = 314.
61 P60 = 2.0100

AREA = .000800 SQ MI IA = .52250 INCHES INF = 1.31300
INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - D
T = .033300

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = .72379 INCHES = .0309 ACRE-FEET
PEAK DISCHARGE RATE = 1.10 CFS AT 1.532 HOURS BASIN AREA =

EK.OUT

.0008 SQ. MI.

***** EXISTING CONDITIONS NORTH BASIN

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0005 SQ MI

PER A=50 PER B=15 PER C=35 PER D=0

TP=0.1333 HR MASS RAINFALL=-1

K = .137496HR TP = .133300HR K/TP RATIO = 1.031481 SHA
PE CONSTANT, N = 3.422258

UNIT PEAK = 1.1801 CFS UNIT VOLUME = .9881 B = 314.
61 P60 = 2.0100

AREA = .000500 SQ MI IA = .52250 INCHES INF = 1.31300
INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - D
T = .033300

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = .72379 INCHES = .0193 ACRE-FEET
PEAK DISCHARGE RATE = .69 CFS AT 1.532 HOURS BASIN AREA =
.0005 SQ. MI.

***** PROPOSED CONDITIONS SOUTH BASIN

COMPUTE NM HYD ID=2 HYD NO=101.2 AREA=0.0008 SQ MI

BK.OUT

PER A=0 PER B=15 PER C=0 PER D=85

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHA
PE CONSTANT, N = 7.106420
UNIT PEAK = 2.6847 CFS UNIT VOLUME = .9948 B = 526.
28 P60 = 2.0100
AREA = .000680 SQ MI IA = .10000 INCHES INF = .04000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - D
T = .033300

K = .132088HR TP = .133300HR K/TP RATIO = .990905 SHA
PE CONSTANT, N = 3.563124
UNIT PEAK = .29249 CFS UNIT VOLUME = .9531 B = 324.
91 P60 = 2.0100
AREA = .000120 SQ MI IA = .50000 INCHES INF = 1.25000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - D
T = .033300

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 101.20

RUNOFF VOLUME = 1.87988 INCHES = .0802 ACRE-FEET
PEAK DISCHARGE RATE = 2.23 CFS AT 1.499 HOURS BASIN AREA =
.0008 SQ. MI.

***** PROPOSED CONDITIONS NORTH BASIN

BK.OUT

COMPUTE NM HYD ID=2 HYD NO=101.2 AREA=0.0005 SQ MI

PER A=0 PER B=15 PER C=0 PER D=85

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHA
 PE CONSTANT, N = 7.106420
 UNIT PEAK = 1.6779 CFS UNIT VOLUME = .9922 B = 526.
 28 P60 = 2.0100
 AREA = .000425 SQ MI IA = .10000 INCHES INF = .04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - D
 T = .033300

K = .132088HR TP = .133300HR K/TP RATIO = .990905 SHA
 PE CONSTANT, N = 3.563124
 UNIT PEAK = .18281 CFS UNIT VOLUME = .9221 B = 324.
 91 P60 = 2.0100
 AREA = .000075 SQ MI IA = .50000 INCHES INF = 1.25000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - D
 T = .033300

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 101.20

RUNOFF VOLUME = 1.87988 INCHES = .0501 ACRE-FEET
 PEAK DISCHARGE RATE = 1.40 CFS AT 1.499 HOURS BASIN AREA =
 .0005 SQ. MI.



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 29, 1995

J. Arsenio Martinez
Rodriguez Development Consultants
12800 San Juan NE
Albuquerque, NM 87123

RE: GRADING PLAN FOR LANDS OF RABADI-LUJAN (M15-D31)
ENGINEER STAMP DATED 8/25/95.

Dear Mr. Martinez:

Based on the information provided on your August 28, 1995
submittal, the above referenced site is approved for Building
Permit.

Please be advised that once this lots are developed, a formal
drainage plan will be required prior to Building Permit release.

If I can be of further assistance, please feel free to contact me
at 768-2667.

Sincerely,

Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
Felix Rabadi
File



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 31, 1995

John MacKenzie
D. Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, NM 87199

RE: DRAINAGE PLAN FOR BURGER KING @ GIBSON & MULBERRY
(M15-D31) ENGINEER'S STAMP DATED 9/29/95.

Dear Mr. MacKenzie:

Based on the information provided on your October 19, 1995
submittal, the above referenced site is approved for Site
Development.

Please be advised that prior to Building Permit release, the
following must be addressed:

1. ✓ Sign-off block for AMAFCA's approval.
2. ✓ Additional T.C. & F.L. elevations on Gibson & Mulberry.
3. ✓ Bench mark & T.B.M. on plan drawing.
4. ✓ Recommend that prior to resubmittal, sign-off block from
AMAFCA be signed off.

If I can be of further assistance, please feel free to contact me
at 768-2667.

Sincerely,
Bernie J. Montoya
Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
File

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Burger King ZONE ATLAS/DRNG, FILE#: M-15/1031
DRB #: _____ EPC #: _____ WORK ORDER #: _____
LEGAL DESCRIPTION: Tract 1, Lands of Rabadi Lujan
CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates PA CONTACT: John M. MacKenzie PE
ADDRESS: PO Box 90606 PHONE: 345-2010
OWNER: S & J Enterprises CONTACT: Ron McCormick
ADDRESS: 3535 Princeton NE PHONE: 884-6234
ARCHITECT: Design Collaborative SW CONTACT: _____
ADDRESS: 105 4th Street SW PHONE: 843-9639
SURVEYOR: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____
CONTRACTOR: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

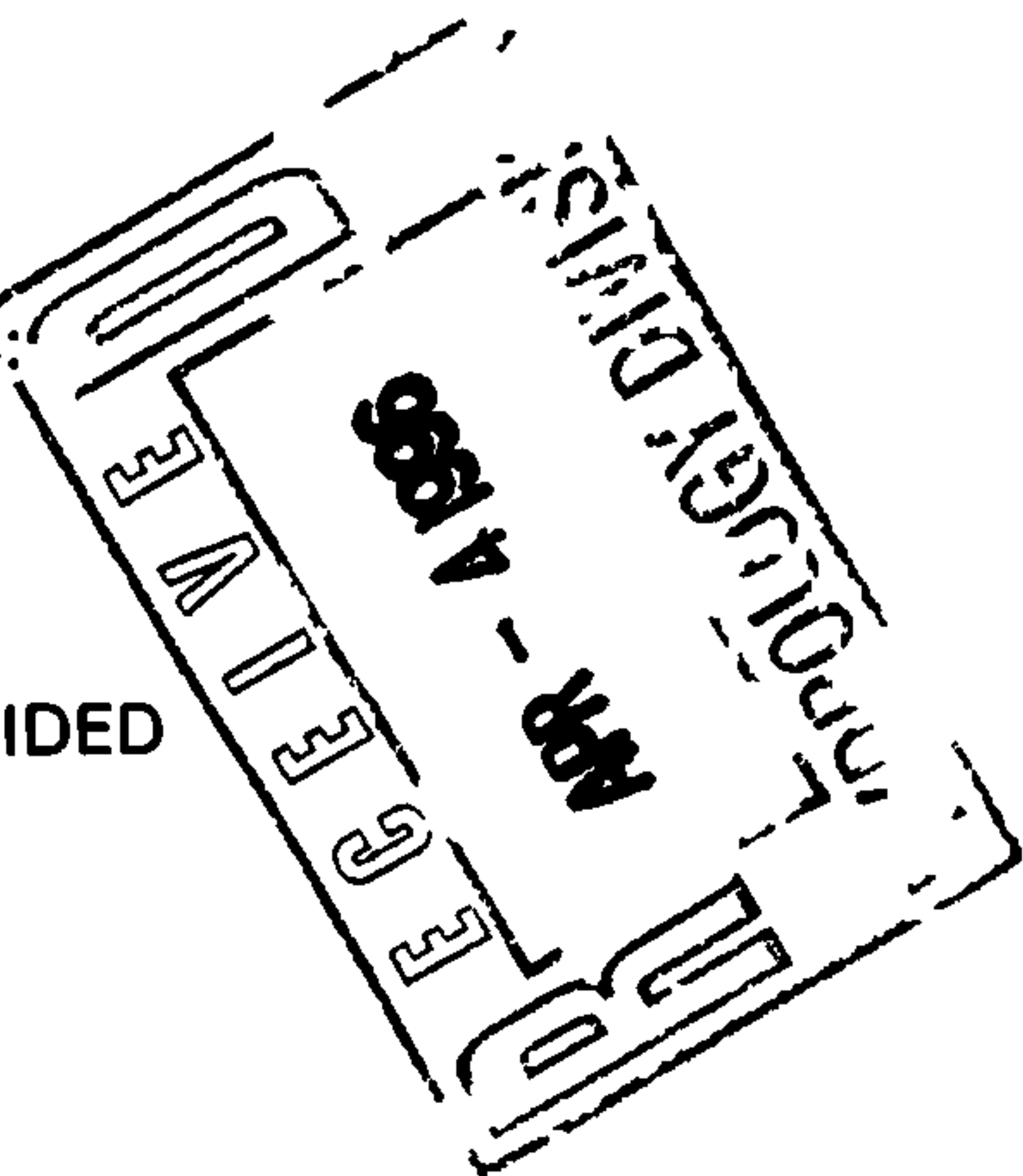
CHECK TYPE OF APPROVAL SOUGHT:

☐ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION
☐ OTHER

☐ SKETCH PLAT APPROVAL
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. PLAN FOR BLDG PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATION OF OCCUPANCY APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☒ OTHER SO.19 (Specify)

PRE-DESIGN MEETING:

☐ YES
☐ NO
☐ COPY PROVIDED



DATE SUBMITTED: _____

BY: John M. MacKenzie
John M. MacKenzie PE



D. Mark Goodwin & Associates, P.A.
Consulting Engineers and Surveyors
P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 345-2010

April 4, 1996

Bernie J. Montoya
City of Albuquerque
Hydrology Department
P.O. Box 1293
Albuquerque, NM 87103

**RE: REVISED DRAINAGE PLAN FOR BURGER KING @ MULBERRY & GIBSON,
(M15/D31) DATED APRIL, 4, 1996**

Dear Mr. Montoya:

At this time we are submitting a revised drainage and grading plan for the Burger King site and are seeking building permit approval and a SO.19.

In response to your comments made in a letter dated October 31, 1995:

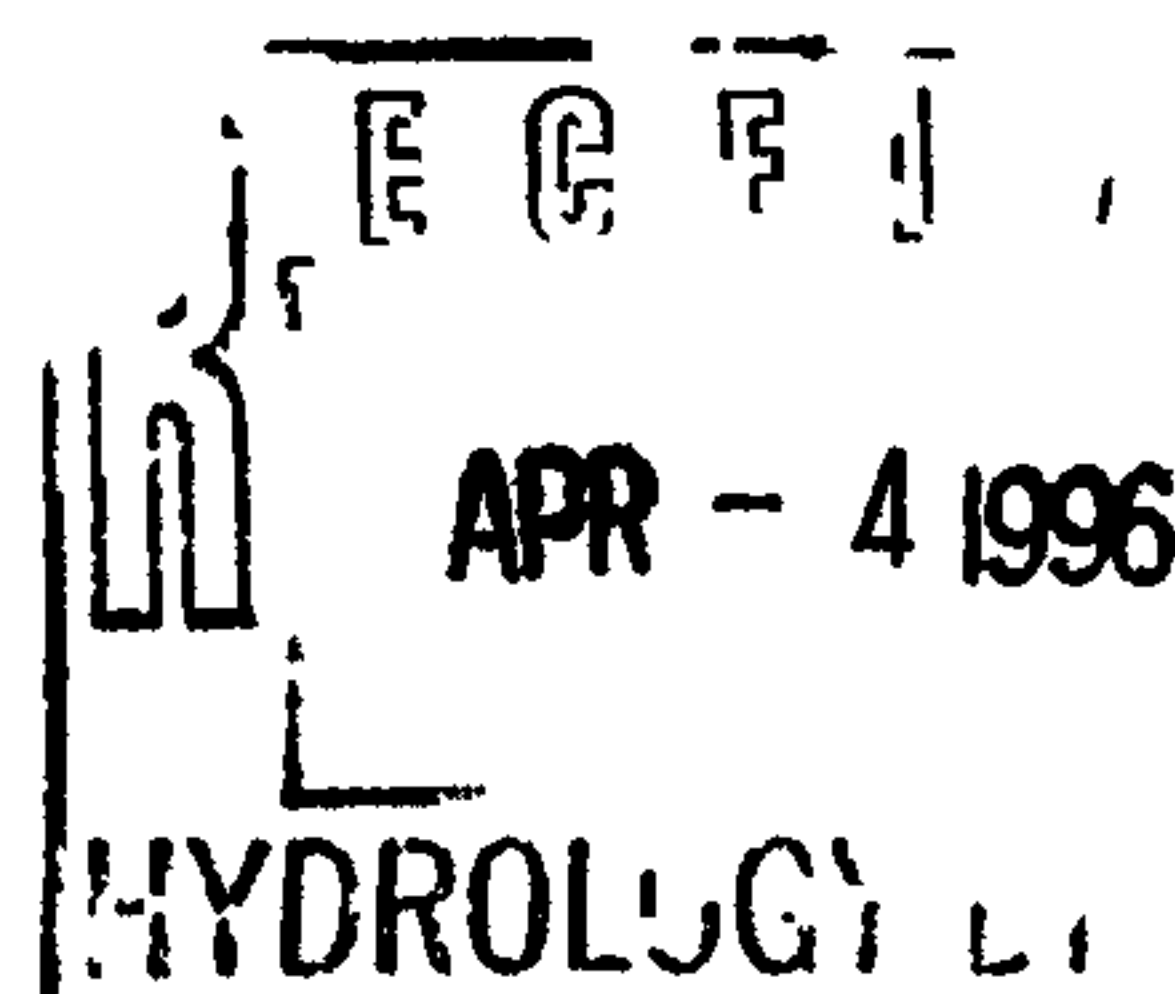
1. An AMAFCA approval sign off block will not be required because we are not discharging directly into the AMAFCA drainage channel.
2. Additional T.C. and F.L. elevations have been provided on Mulberry.
3. Bench mark and TBM are also shown on the drawing.

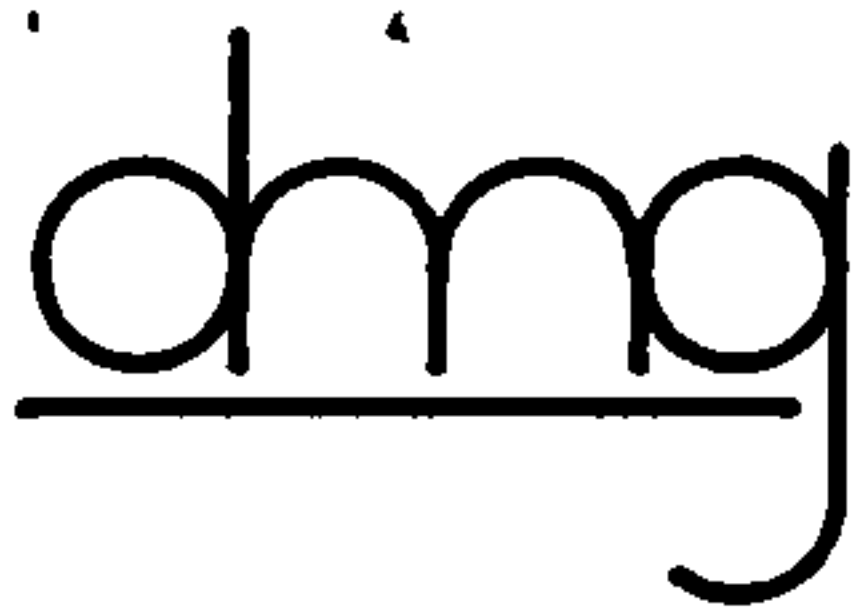
Although the building and parking lot location have switched places since the last submittal, the drainage patterns on the site have basically remained unchanged. Runoff from the site is still in a southeastern direction and exists the property in the southeast corner of the parking lot and into Mulberry for a short distance before discharging into the AMAFCA channel located at the south property boundary.

If you have any questions regarding this submittal please call John MacKenzie or Diane Hoelzer.

Sincerely,

Diane Hoelzer, PE
Project Manager





D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS

PROJECT Burger King
SUBJECT Drainage
BY dmn DATE 10/16/95
CHECKED _____ DATE _____
SHEET _____ OF _____

All site runoff will be conveyed to south end of site and into the existing Spence Ave. outfall to the South Diversion Channel. The curb opening will be sized to accept the fully developed flow. Use 6" high curb

$$L = \frac{Q}{1.9(0.5)^{1.5}} = \frac{3.53}{2.9(0.5)^{1.5}} = 3.44 \text{ ft}$$

use 3'-6" curb opening

START TIME=0.0

*****SEPTEMBER 1995

TYPE=1 RAIN QUARTER=0.0 IN

RAIN DAY=2.69 IN DT=0.0333 HR

DT = .033300 HOURS END TIME = 5.994000 HOURS

.0000	.0013	.0025	.0039	.0052	.0066	.0080
.0094	.0109	.0124	.0139	.0155	.0172	.0189
.0206	.0224	.0242	.0261	.0281	.0301	.0322

.0344	.0366	.0390	.0415	.0440	.0467	.0495
.0525	.0557	.0590	.0645	.0704	.0767	.0898
.1198	.1661	.2327	.3238	.4435	.5964	.7867
1.0192	1.2424	1.3340	1.4110	1.4795	1.5417	1.5989
1.6521	1.7018	1.7483	1.7921	1.8335	1.8725	1.9094
1.9444	1.9776	2.0091	2.0390	2.0674	2.0748	2.0805
2.0859	2.0911	2.0960	2.1007	2.1052	2.1095	2.1136
2.1176	2.1215	2.1252	2.1289	2.1324	2.1358	2.1391
2.1423	2.1455	2.1485	2.1515	2.1544	2.1573	2.1600
2.1628	2.1654	2.1680	2.1706	2.1731	2.1756	2.1780
2.1804	2.1827	2.1850	2.1872	2.1894	2.1916	2.1938
2.1959	2.1979	2.2000	2.2020	2.2040	2.2059	2.2079
2.2098	2.2117	2.2135	2.2154	2.2172	2.2189	2.2207
2.2225	2.2242	2.2259	2.2276	2.2292	2.2309	2.2325
2.2341	2.2357	2.2373	2.2388	2.2404	2.2419	2.2434
2.2449	2.2464	2.2478	2.2493	2.2507	2.2521	2.2536
2.2550	2.2563	2.2577	2.2591	2.2604	2.2618	2.2631
2.2644	2.2657	2.2670	2.2683	2.2696	2.2708	2.2721
2.2733	2.2746	2.2758	2.2770	2.2782	2.2794	2.2806
2.2818	2.2829	2.2841	2.2853	2.2864	2.2876	2.2887
2.2898	2.2909	2.2920	2.2931	2.2942	2.2953	2.2964
2.2975	2.2985	2.2996	2.3006	2.3017	2.3027	2.3038
2.3048	2.3058	2.3068	2.3078	2.3088	2.3098	

***** EXISTING CONDITIONS WITHIN ON-SITE BASIN

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.00127 SQ MI

PER A=50 PER B=15 PER C=35 PER D=0

TP=0.1333 HR MASS RAINFALL=-1

K = .137496HR TP = .133300HR K/TP RATIO = 1.031481 SHAPE
 CONSTANT, N = 3.422258
 UNIT PEAK = 2.9974 CFS UNIT VOLUME = .9956 B = 314.61
 P60 = 2.0100
 AREA = .001270 SQ MI IA = .52250 INCHES INF = 1.31300 I
 NCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
 = .033300

PRINT HYD ID=1 CODE=24

PARTIAL HYDROGRAPH 101.10

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
.000	.000	.0	1.332	1.332	.0	2.664	.0
.666	.666	.0	1.998	1.998	.2	3.330	.0

RUNOFF VOLUME = .72379 INCHES = .0490 ACRE-FEET
 PEAK DISCHARGE RATE = 1.74 CFS AT 1.532 HOURS BASIN AREA =
 .0013 SQ. MI.

***** PROPOSED CONDITIONS WITHIN ON-SITE BASIN

COMPUTE NM HYD ID=2 HYD NO=101.2 AREA=0.00127 SQ MI

PER A=0 PER B=15 PER C=0 PER D=85

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
CONSTANT, N = 7.106420
UNIT PEAK = 4.2619 CFS UNIT VOLUME = .9965 B = 526.28
P60 = 2.0100
AREA = .001080 SQ MI IA = .10000 INCHES INF = .04000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
= .033300

K = .132088HR TP = .133300HR K/TP RATIO = .990905 SHAPE
CONSTANT, N = 3.563124
UNIT PEAK = .46433 CFS UNIT VOLUME = .9718 B = 324.91
P60 = 2.0100
AREA = .000191 SQ MI IA = .50000 INCHES INF = 1.25000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
= .033300

PRINT HYD

ID=2 CODE=24

PARTIAL HYDROGRAPH 101.20

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
TIME	FLOW		TIME	FLOW		TIME	FLOW
HRS	CFS	CFS	HRS	CFS	CFS	HRS	CFS
.000	.0	.0	1.332	1.0		2.664	.1
3.996	.0	.0	5.328	.0			
.666	.0	.0	1.998	.8		3.330	.0
4.662	.0		5.994	.0			

RUNOFF VOLUME = 1.87988 INCHES = .1273 ACRE-FEET
PEAK DISCHARGE RATE = 3.53 CFS AT 1.499 HOURS BASIN AREA =
.0013 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 15:48:52

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Burger King ZONE ATLAS/DRNG, FILE#: M-15/431
DRB #: _____ EPC #: _____ WORK ORDER #: _____
LEGAL DESCRIPTION: Tract 1, Lands of Rabadi Lujan
CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates PA CONTACT: John M. MacKenzie PE
ADDRESS: PO Box 90606 PHONE: 345-2010
OWNER: S & J Enterprises CONTACT: Ron McCormick
ADDRESS: 3535 Princeton NE PHONE: 884-6234
ARCHITECT: Design Collaborative SW CONTACT: _____
ADDRESS: 105 4th Street SW PHONE: 843-9639
SURVEYOR: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____
CONTRACTOR: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

____ DRAINAGE REPORT
____ DRAINAGE PLAN
X CONCEPTUAL GRADING & DRAINAGE PLAN
____ GRADING PLAN
____ EROSION CONTROL PLAN
____ ENGINEER'S CERTIFICATION
____ OTHER

PRE-DESIGN MEETING:

____ YES
____ NO
____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

____ SKETCH PLAT APPROVAL
____ PRELIMINARY PLAT APPROVAL
____ S. DEV. PLAN FOR SUB'D APPROVAL
X S. DEV. PLAN FOR BLDG PERMIT APPROVAL
____ SECTOR PLAN APPROVAL
____ FINAL PLAT APPROVAL
____ FOUNDATION PERMIT APPROVAL
____ BUILDING PERMIT APPROVAL
____ CERTIFICATION OF OCCUPANCY APPROVAL
____ GRADING PERMIT APPROVAL
____ PAVING PERMIT APPROVAL
____ S.A.D. DRAINAGE REPORT
____ DRAINAGE REQUIREMENTS
____ OTHER _____ (Specify)

DATE SUBMITTED: _____

BY: John M. MacKenzie
John M. MacKenzie PE

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
 RUN DATE (MON/DAY/YR) = 09/28/1995
 START TIME (HR:MIN:SEC) = 15:48:45 USER NO.= M_GOODWN.I01
 INPUT FILE = BURG.DAT

START TIME=0.0

*****BURGER KING ON MULBERRY SOUTH OF GIBSON

*****SEPTEMBER 1995

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=2.01 IN RAIN SIX=2.31 IN

RAIN DAY=2.69 IN DT=0.0333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2
 - PEAK AT 1.40 HR.

DT =	.033300 HOURS					END TIME =	5.994000 HOURS
.0000	.0013	.0025	.0039	.0052	.0066	.0080	
.0094	.0109	.0124	.0139	.0155	.0172	.0189	
.0206	.0224	.0242	.0261	.0281	.0301	.0322	
.0344	.0366	.0390	.0415	.0440	.0467	.0495	
.0525	.0557	.0590	.0645	.0704	.0767	.0898	
.1198	.1661	.2327	.3238	.4435	.5964	.7867	
1.0192	1.2424	1.3340	1.4110	1.4795	1.5417	1.5989	
1.6521	1.7018	1.7483	1.7921	1.8335	1.8725	1.9094	
1.9444	1.9776	2.0091	2.0390	2.0674	2.0748	2.0805	
2.0859	2.0911	2.0960	2.1007	2.1052	2.1095	2.1136	
2.1176	2.1215	2.1252	2.1289	2.1324	2.1358	2.1391	
2.1423	2.1455	2.1485	2.1515	2.1544	2.1573	2.1600	
2.1628	2.1654	2.1680	2.1706	2.1731	2.1756	2.1780	
2.1804	2.1827	2.1850	2.1872	2.1894	2.1916	2.1938	
2.1959	2.1979	2.2000	2.2020	2.2040	2.2059	2.2079	
2.2098	2.2117	2.2135	2.2154	2.2172	2.2189	2.2207	
2.2225	2.2242	2.2259	2.2276	2.2292	2.2309	2.2325	
2.2341	2.2357	2.2373	2.2388	2.2404	2.2419	2.2434	
2.2449	2.2464	2.2478	2.2493	2.2507	2.2521	2.2536	
2.2550	2.2563	2.2577	2.2591	2.2604	2.2618	2.2631	
2.2644	2.2657	2.2670	2.2683	2.2696	2.2708	2.2721	
2.2733	2.2746	2.2758	2.2770	2.2782	2.2794	2.2806	
2.2818	2.2829	2.2841	2.2853	2.2864	2.2876	2.2887	
2.2898	2.2909	2.2920	2.2931	2.2942	2.2953	2.2964	
2.2975	2.2985	2.2996	2.3006	2.3017	2.3027	2.3038	
2.3048	2.3058	2.3068	2.3078	2.3088	2.3098		

***** EXISTING CONDITIONS WITHIN ON-SITE BASIN

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.00127 SQ MI

.0344	.0366	.0390	.0415	.0440	.0467	.0495
.0525	.0557	.0590	.0645	.0704	.0767	.0898
.1198	.1661	.2327	.3238	.4435	.5964	.7867
1.0192	1.2424	1.3340	1.4110	1.4795	1.5417	1.5989
1.6521	1.7018	1.7483	1.7921	1.8335	1.8725	1.9094
1.9444	1.9776	2.0091	2.0390	2.0674	2.0748	2.0805
2.0859	2.0911	2.0960	2.1007	2.1052	2.1095	2.1136
2.1176	2.1215	2.1252	2.1289	2.1324	2.1358	2.1391
2.1423	2.1455	2.1485	2.1515	2.1544	2.1573	2.1600
2.1628	2.1654	2.1680	2.1706	2.1731	2.1756	2.1780
2.1804	2.1827	2.1850	2.1872	2.1894	2.1916	2.1938
2.1959	2.1979	2.2000	2.2020	2.2040	2.2059	2.2079
2.2098	2.2117	2.2135	2.2154	2.2172	2.2189	2.2207
2.2225	2.2242	2.2259	2.2276	2.2292	2.2309	2.2325
2.2341	2.2357	2.2373	2.2388	2.2404	2.2419	2.2434
2.2449	2.2464	2.2478	2.2493	2.2507	2.2521	2.2536
2.2550	2.2563	2.2577	2.2591	2.2604	2.2618	2.2631
2.2644	2.2657	2.2670	2.2683	2.2696	2.2708	2.2721
2.2733	2.2746	2.2758	2.2770	2.2782	2.2794	2.2806
2.2818	2.2829	2.2841	2.2853	2.2864	2.2876	2.2887
2.2898	2.2909	2.2920	2.2931	2.2942	2.2953	2.2964
2.2975	2.2985	2.2996	2.3006	2.3017	2.3027	2.3038
2.3048	2.3058	2.3068	2.3078	2.3088	2.3098	

***** EXISTING CONDITIONS WITHIN ON-SITE BASIN

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.00127 SQ MI

PER A=50 PER B=15 PER C=35 PER D=0

TP=0.1333 HR MASS RAINFALL=-1

K = .137496HR TP = .133300HR K/TP RATIO = 1.031481 SHAPE
 CONSTANT, N = 3.422258
 UNIT PEAK = 2.9974 CFS UNIT VOLUME = .9956 B = 314.61
 P60 = 2.0100
 AREA = .001270 SQ MI IA = .52250 INCHES INF = 1.31300 I
 NCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
 = .033300

PRINT HYD ID=1 CODE=24

PARTIAL HYDROGRAPH 101.10

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
HRS	HRS	CFS	HRS	HRS	CFS	HRS	CFS
.000		.0	1.332		.0	2.664	.0
.666		.0	1.998		.2	3.330	.0

RUNOFF VOLUME = .72379 INCHES = .0490 ACRE-FEET
 PEAK DISCHARGE RATE = 1.74 CFS AT 1.532 HOURS BASIN AREA =
 .0013 SQ. MI.

***** PROPOSED CONDITIONS WITHIN ON-SITE BASIN

COMPUTE NM HYD ID=2 HYD NO=101.2 AREA=0.00127 SQ MI

PER A=0 PER B=15 PER C=0 PER D=85

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE
CONSTANT, N = 7.106420
UNIT PEAK = 4.2619 CFS UNIT VOLUME = .9965 B = 526.28
P60 = 2.0100
AREA = .001080 SQ MI IA = .10000 INCHES INF = .04000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
= .033300

K = .132088HR TP = .133300HR K/TP RATIO = .990905 SHAPE
CONSTANT, N = 3.563124
UNIT PEAK = .46433 CFS UNIT VOLUME = .9718 B = 324.91
P60 = 2.0100
AREA = .000191 SQ MI IA = .50000 INCHES INF = 1.25000 I
NCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT
= .033300

PRINT HYD

ID=2 CODE=24

PARTIAL HYDROGRAPH 101.20

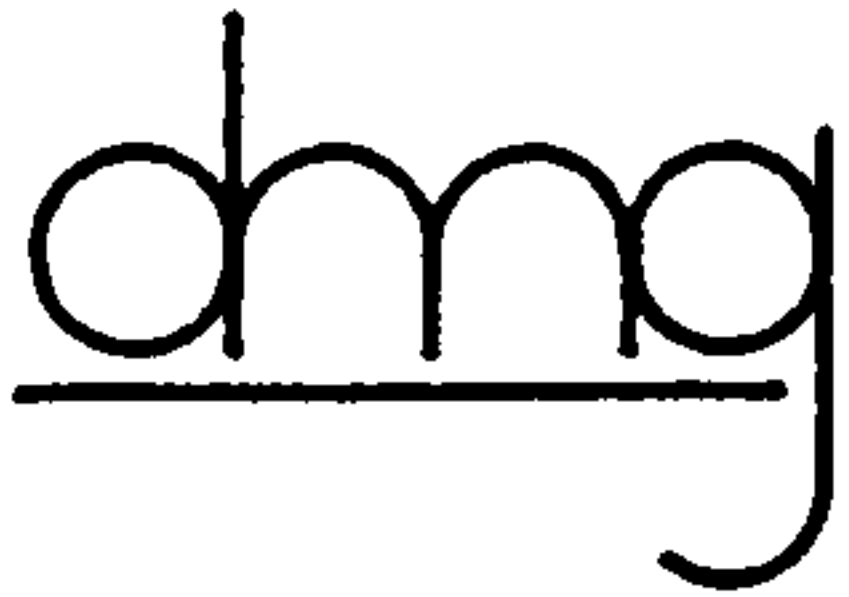
TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
TIME	FLOW		TIME	FLOW			
HRS	CFS	CFS	HRS	CFS	CFS	HRS	CFS
	.000	.0		1.332	1.0		2.664
3.996	.0		5.328	.0			.1
	.666	.0		1.998	.8		3.330
4.662	.0		5.994	.0			.0

RUNOFF VOLUME = 1.87988 INCHES = .1273 ACRE-FEET
PEAK DISCHARGE RATE = 3.53 CFS AT 1.499 HOURS BASIN AREA =
.0013 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 15:48:52



D. MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS & SURVEYORS

PROJECT Burger King
SUBJECT Drainage
BY Jmin DATE 10/16/95
CHECKED _____ DATE _____
SHEET _____ OF _____

All site runoff will be conveyed to south end of site and into the existing Spence Ave. outfall to the South Diversion Channel. The curb opening will be sized to accept the fully developed flow. Use 6" high curb

$$L = \frac{Q}{2.9(0.5)^{1.5}} = \frac{3.53}{2.9(0.5)^{1.5}} = 3.44 \text{ ft}$$

use 3'-6" curb opening

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Lands of Labadie - Lijano ONE ATLAS/DRNG. FILE #: 14-15/113
 DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: _____

CITY ADDRESS: _____

ENGINEERING FIRM: J. Arsenio Martinez, PE CONTACT: Mr. Martinez
George T. Rodriguez Don L... CONTACT: Mr. Rodriguez

ADDRESS: 12800 San Juan NE 87123 PHONE: 294-0320

OWNER: Felix PABAN CONTACT: Roulo Panno

ADDRESS: 118 Wyoming SE PHONE: 266-2224

ARCHITECT: ? CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: TORRES Surveying CONTACT: Jim Torres

ADDRESS: 1570 Bridge Burn SW PHONE: 243-4854

CONTRACTOR: ? CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☒ DRAINAGE PLAN
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☒ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION
- ☐ OTHER

PRE-DESIGN MEETING:

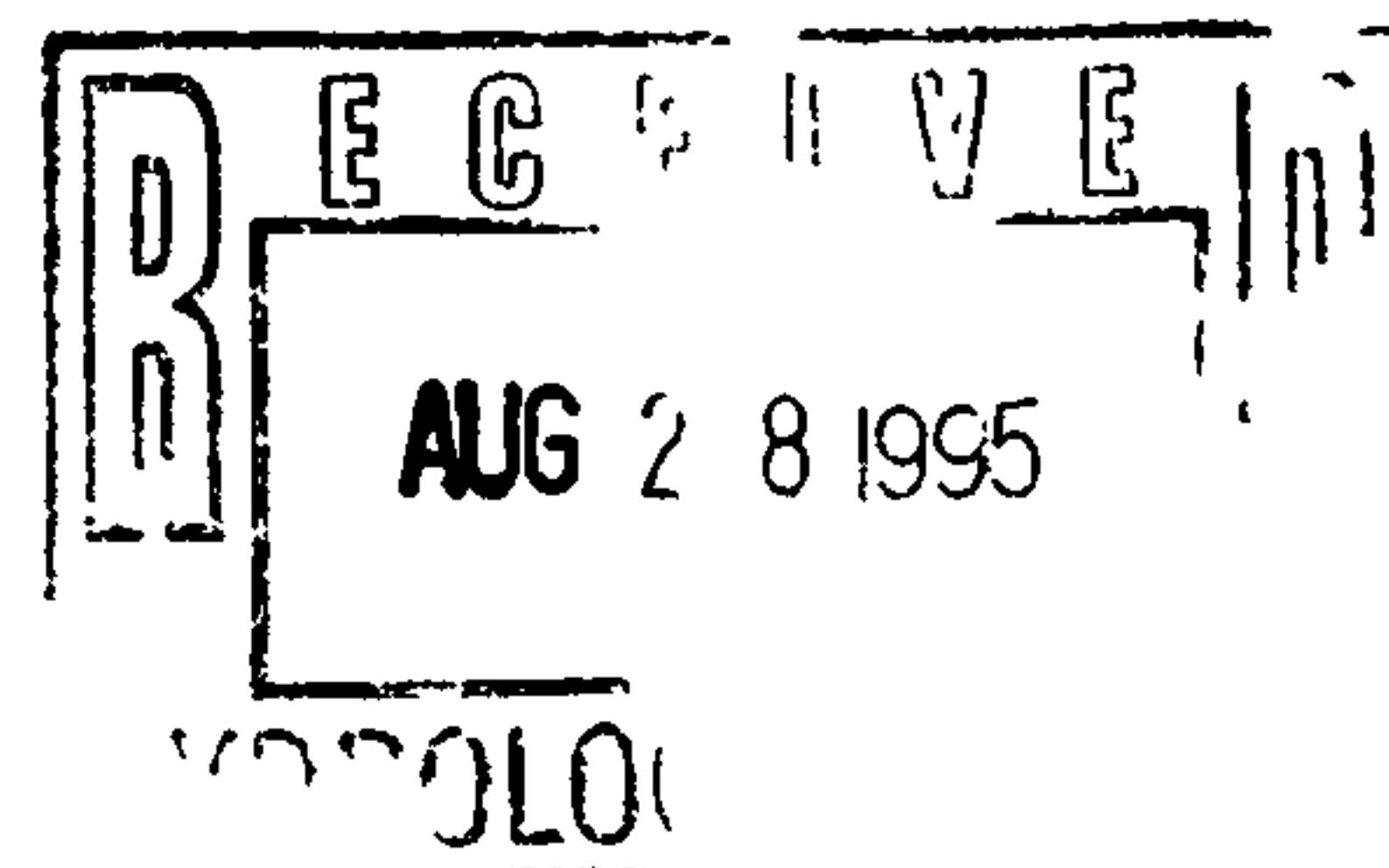
- ☒ YES
- ☐ NO
- ☐ COPY PROVIDED

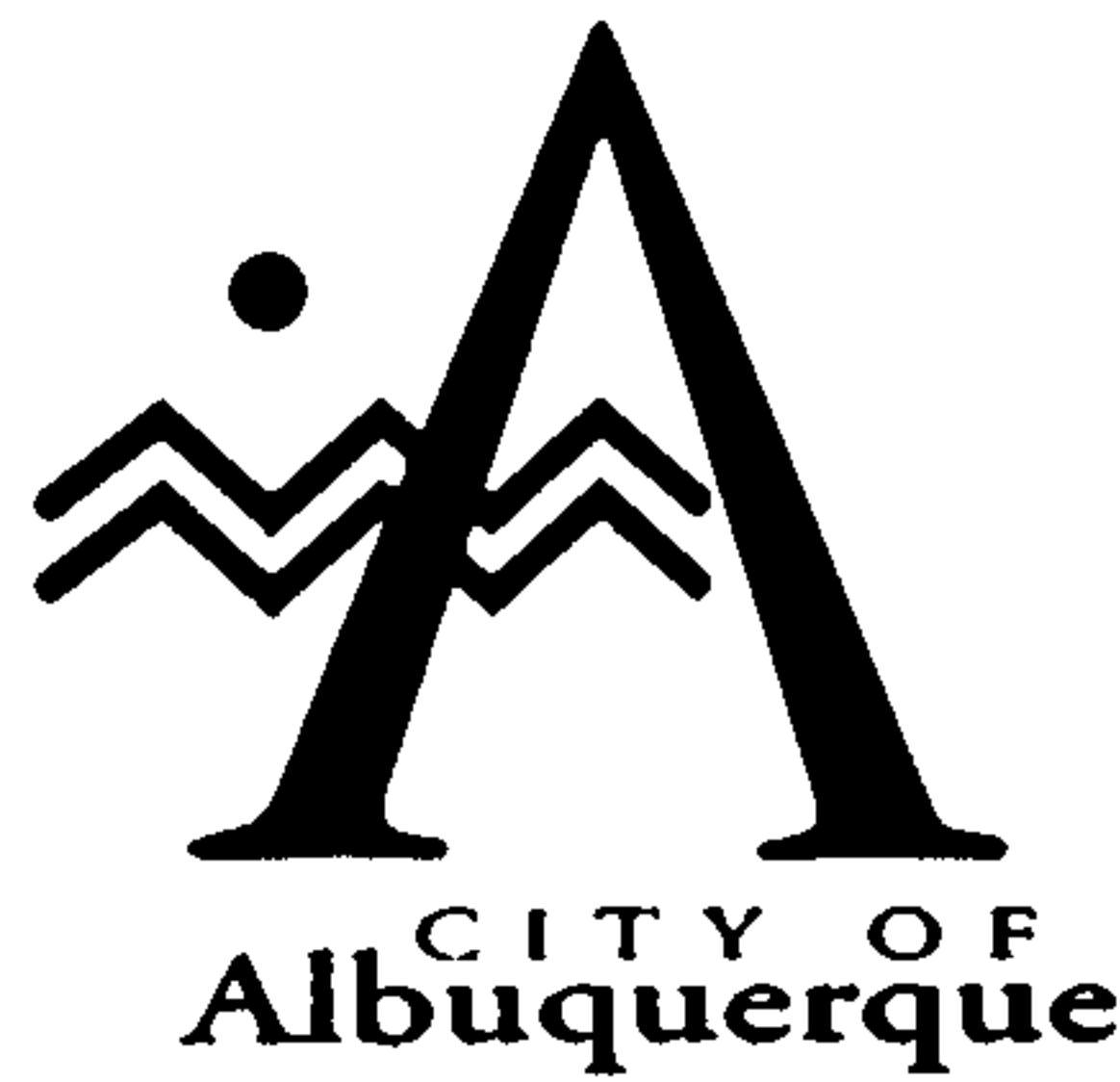
CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SKETCH PLAT APPROVAL
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY APPROVAL
- ☒ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ S.A.D. DRAINAGE REPORT
- ☐ DRAINAGE REQUIREMENTS
- ☐ OTHER _____ (SPECIFY)

DATE SUBMITTED: _____

BY: _____





Public Works Department

Martin J. Chávez, Mayor

Robert E. Gurulé, Director

January 21, 1997

Diane Hoelzer
Mark Goodwin & Assoc.
P.O. Box 90606
Albuquerque, New Mexico 87199

RE: REVISED DRAINAGE PLAN FOR BURGER KING (M15-D31) REVISION DATED
1/3/97

Dear Ms. Hoelzer:

Based on the information provided on your January 7, 1997 resubmittal, the above referenced site is approved for Building Permit. Please attach a copy of this approved plan to the construction plan prior to sign off by Hydrology.

Also, prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

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

C: Andrew Garcia

Sincerely

Bernie J. Montoya
Engineering Associate

Good for You, Albuquerque!

P.O. Box 1293, Albuquerque, New Mexico 87103



DRAINAGE INFORMATION SHEET

PROJECT TITLE: Burger King ZONE/ATLAS/DRNG, FILE#: M-15/D31
DRB#: 96-161 EPC# WORK ORDER#:
LEGAL DESCRIPTION: Tract 1, Lands of Rabadi Lujan
CITY ADDRESS: West of Mulberry Street, south of Gibson

ENGINEERING FIRM:	<u>Mark Goodwin & Associates, PA</u>	CONTACT	<u>Diane Hoelzer, PE</u>
ADDRESS:	<u>P.O. Box 90606</u>	PHONE:	<u>345-2010</u>
OWNER:	<u>S & J Enterprises</u>	CONTACT:	<u>Ron McCormick</u>
ADDRESS	<u>3535 Princeton NE</u>	PHONE	<u>884-6234</u>
ARCHITECT:	<u>SLNB Architects</u>	CONTACT:	<u>Jim Lewis</u>
ADDRESS:	<u>1620 Central SE</u>	PHONE:	<u>247-1529</u>
SURVEYOR	<u>N/A</u>	CONTACT:	<u> </u>
ADDRESS.	<u> </u>	PHONE	<u> </u>
CONTACTOR	<u>N/A</u>	CONTACT:	<u> </u>
ADDRESS.	<u> </u>	PHONE:	<u> </u>

TYPE OF SUBMITTAL:

 DRAINAGE REPORT
 X DRAINAGE PLAN
 CONCEPTUAL GRADING & DRAINAGE PLAN
 X GRADING PLAN
 EROSION CONTROL
 ENGINEER'S CERTIFICATION
 OTHER

PRE-DESIGN MEETING:

 YES
 NO
 COPY PROVIDED

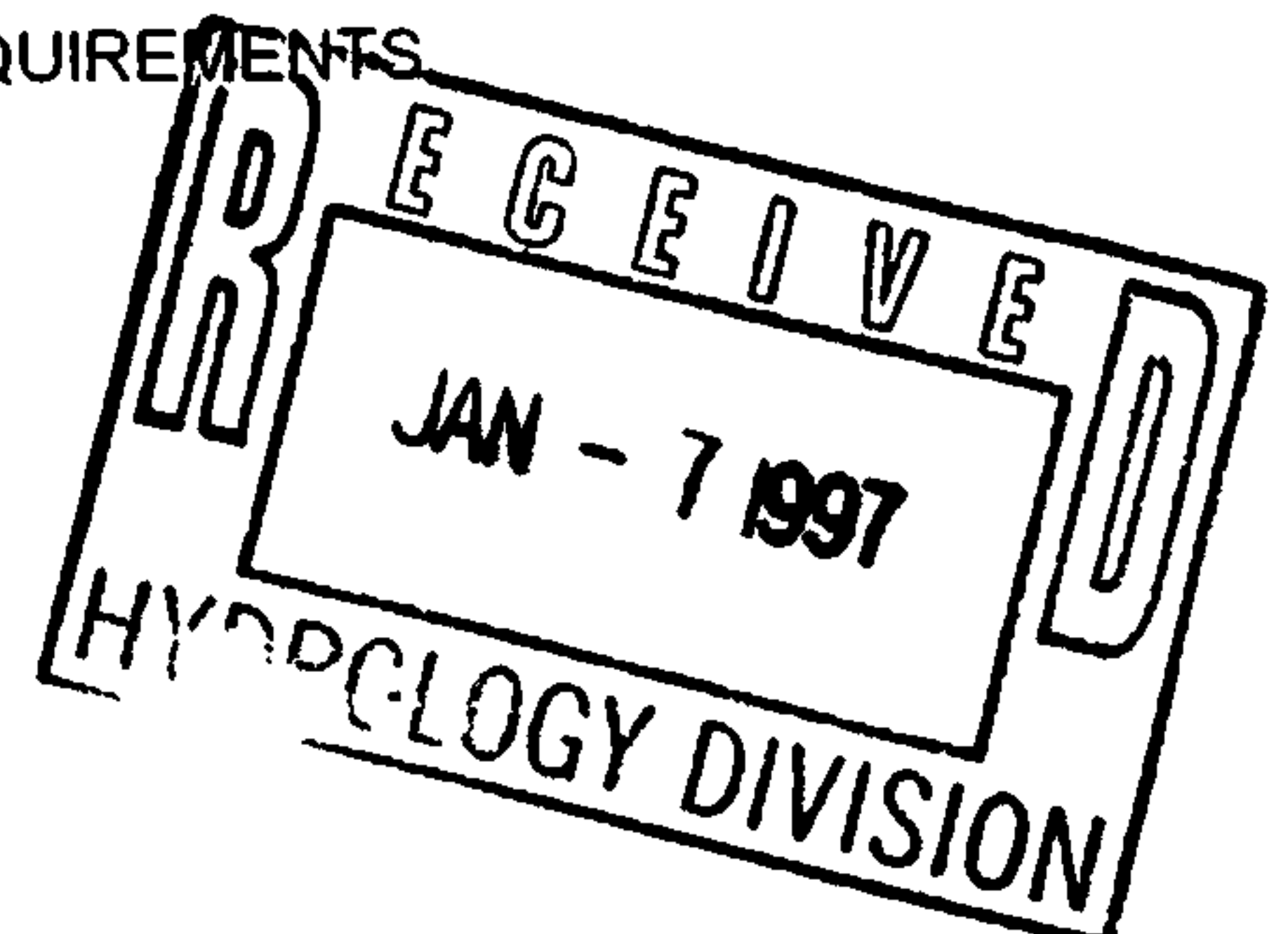
CHECK TYPE OF APPROVAL SOUGHT:

 SKETCH PLAT APPROVAL
 PRELIMINARY PLAT APPROVAL
 S. DEV. PLAN FOR SUB'D APPROVAL
 S. DEV. PLAN FOR BLDG PERMIT APPROVAL
 SECTOR PLAN APPROVAL
 FINAL PLAT APPROVAL
 FOUNDATION PERMIT APPROVAL
 X BUILDING PERMIT APPROVAL
 CERTIFICATION OF OCCUPANCY APPROVAL
 GRADING PERMIT APPROVAL
 PAVING PERMIT APPROVAL
 S.A.D. DRAINAGE REPORT
 DRAINAGE REQUIREMENTS
 OTHER

DATE SUBMITTED: 1/6/97

BY: Diane Hoelzer

Diane Hoelzer, PE



LETTER OF TRANSMITTAL



D. Mark Goodwin & Associates, P.A.
Consulting Engineers & Surveyors

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 345-2010

TO

COA - Hydrology

DATE	1-6-97	JOB NO.	
ATTENTION	Lisa Manwill		
RE:	Burger King at Mulberry & Gibson		
	M15-D31		

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

- | | | | | |
|---|---------------------------------------|--------------------------------|----------------------------------|---|
| ☐ Shop drawings | ☐ Prints | ☐ Plans | ☐ Samples | ☐ Specifications |
| ☐ Copy of letter | ☐ Change order | ☐ _____ | | |

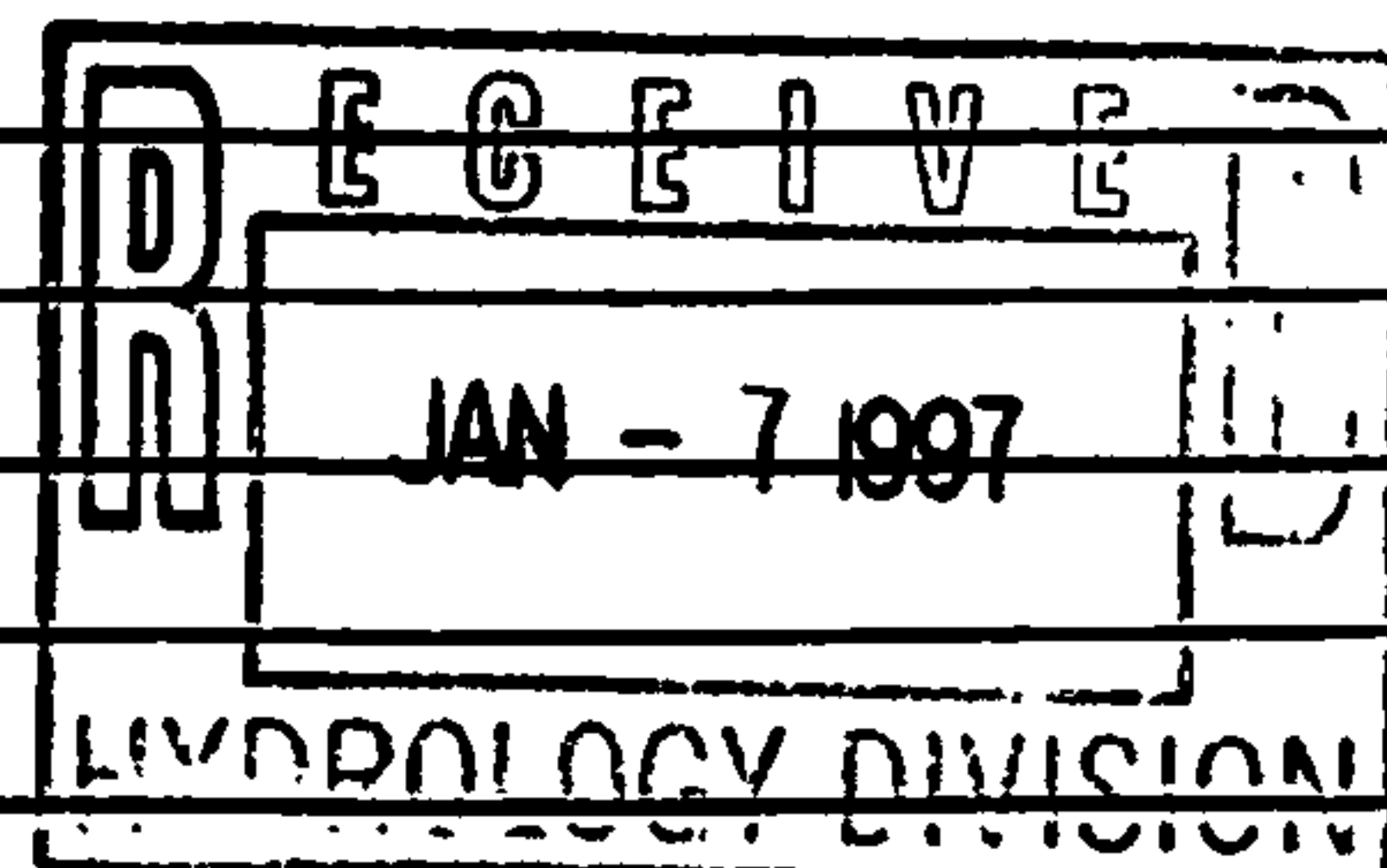
COPIES	DATE	NO.	DESCRIPTION
1			DIS
1			Cover Letter
1			Revised Drainage Rpt.
1			Burger King & D Plan

THESE ARE TRANSMITTED as checked below:

- | | | |
|--|---|---|
| ☒ For approval | ☐ Approved as submitted | ☐ Resubmit _____ copies for approval |
| ☐ For your use | ☐ Approved as noted | ☐ Submit _____ copies for distribution |
| ☐ As requested | ☐ Returned for corrections | ☐ Return _____ corrected prints |
| ☐ For review and comment | ☐ _____ | |
| ☐ FOR BIDS DUE _____ 19 _____ ☐ PRINTS RETURNED AFTER LOAN TO US | | |

REMARKS

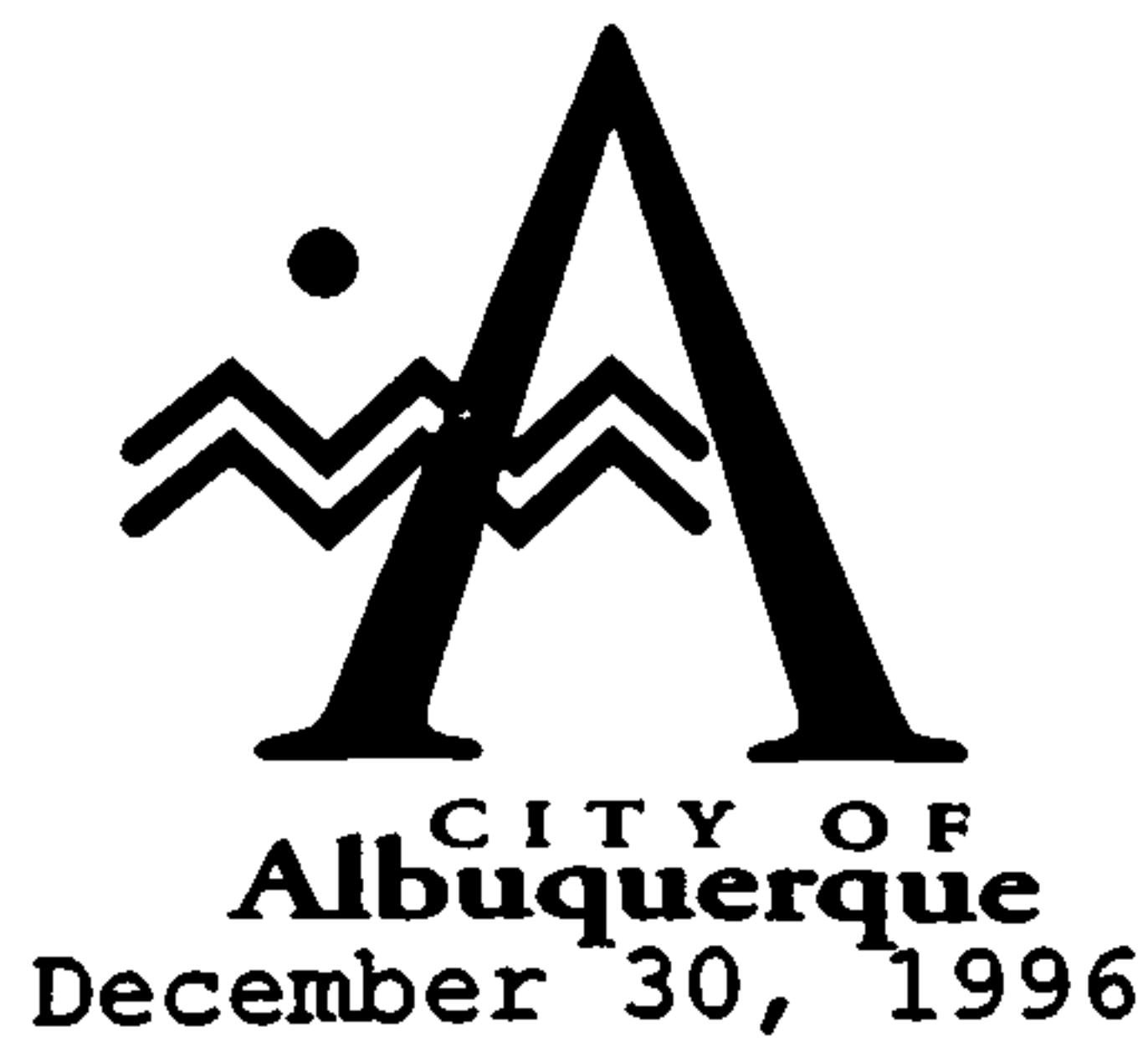
Please call me if you have further questions



COPY TO _____

SIGNED:

Diane Healy



Martin J. Chávez, Mayor

Diane Hoelzer, P.E.
Mark Goodwin & Assoc.
P.O. Box 90606
Albuquerque, NM 87199

**RE: BURGER KING (M15-D31). GRADING AND DRAINAGE PLAN FOR BUILDING AND
SO #19 PERMIT APPROVAL. ENGINEER'S STAMP DATED 12-13-96.**

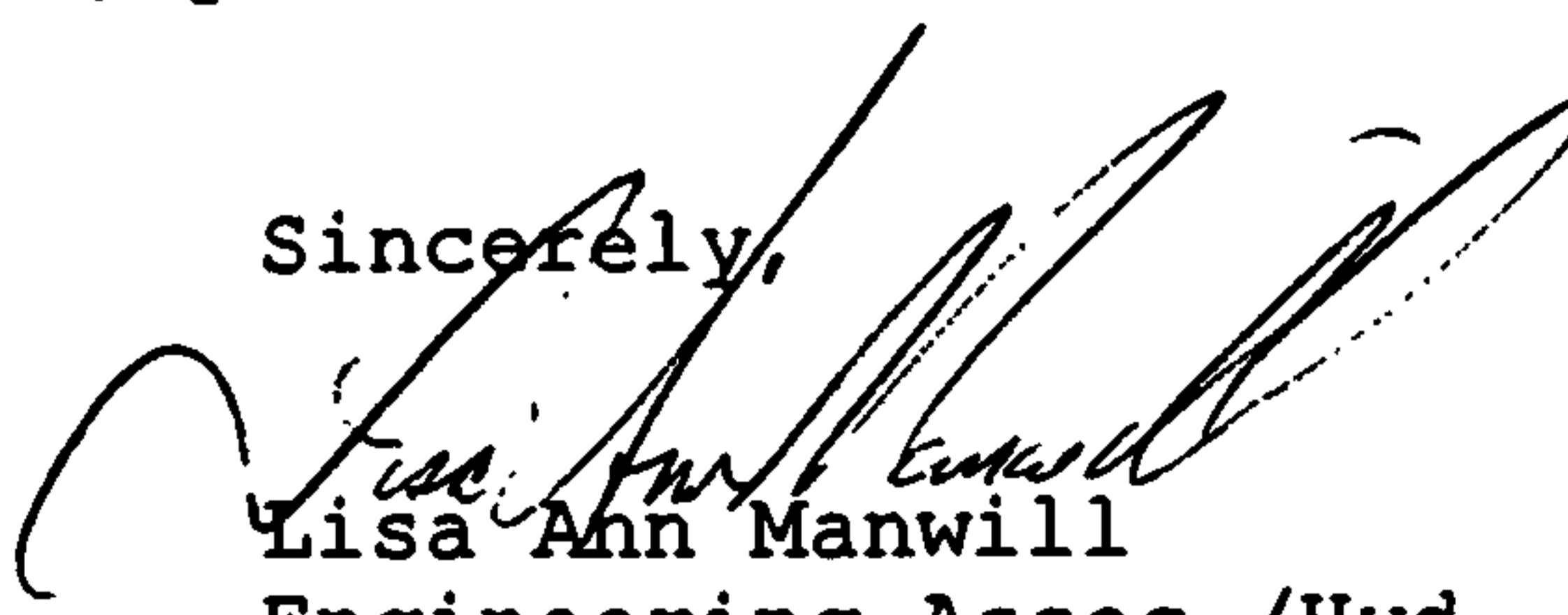
Dear Ms Hoelzer:

Based on the information provided on your December 23, 1996 submittal,
City Hydrology has the following comments:

1. It appears that the water block on the north driveway is below 1-foot. The 45.55 foot spot elevation is too far west to be used as an entrance water block.
2. How does storm water currently enter the AMAFCA facility? Are you changing the historical drainage pattern?
3. Justify your allowable release rate. I assume there is street capacity. Where does storm water enter AMAFCA's channel? It appears that Mulberry has a storm drain system.
4. Why do you need a SO #19? Are you constructing a sidewalk culvert? Please call out.
5. Provide a drainage management narrative. Summarize existing and proposed drainage conditions in the narrative.

If I can be of further assistance, please feel free to contact me at
768-3622.

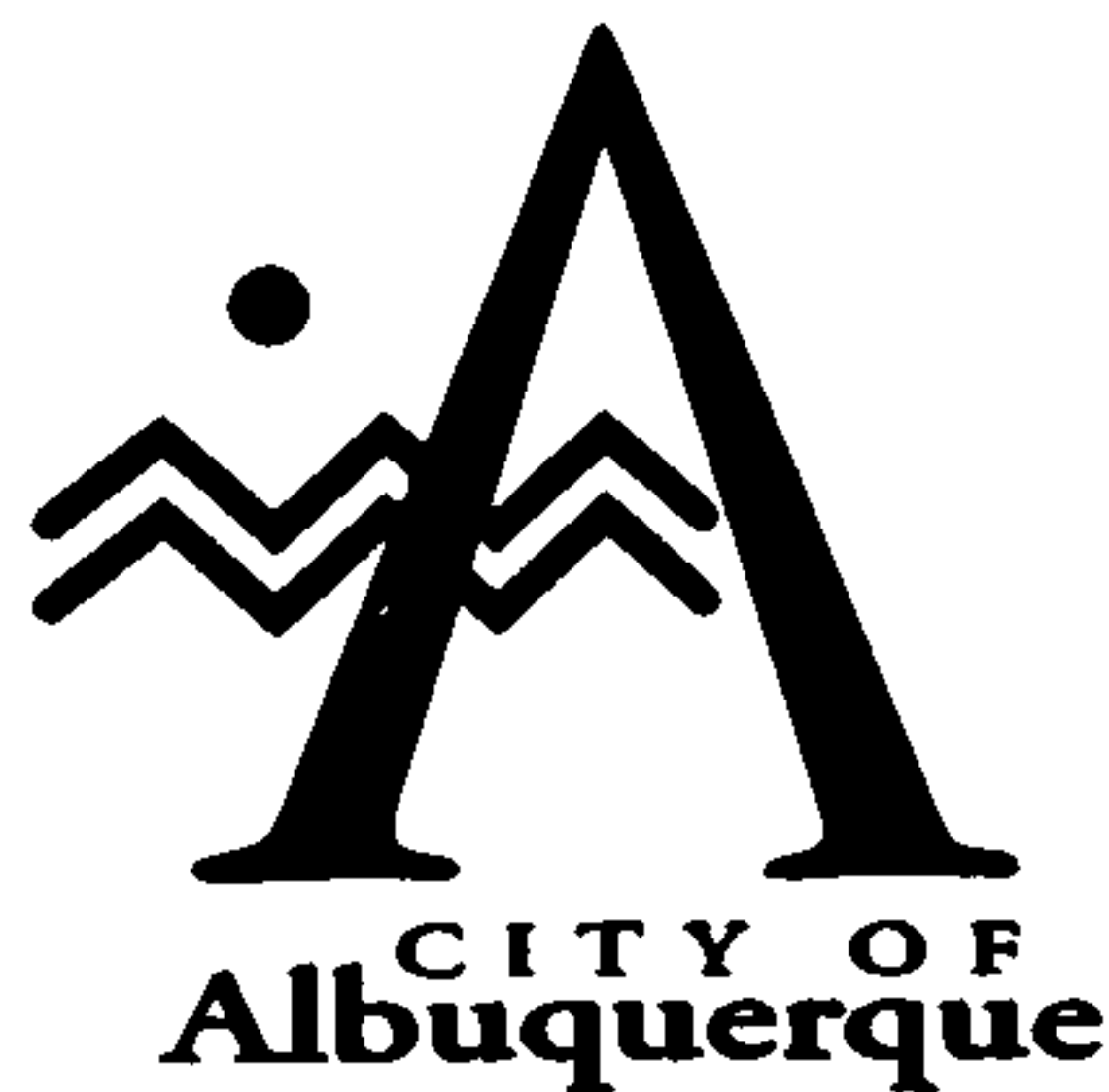
Sincerely,


Lisa Ann Manwill
Engineering Assoc./Hyd.

c: Andrew Garcia
File

Good for You, Albuquerque!





May 8, 1996

Martin J. Chávez, Mayor

Mark Goodwin
D. Mark Goodwin & Associates
P.O.Box 90606
Albuquerque, NM 87199

RE: REVISED DRAINAGE PLAN FOR BURGER KING @ GIBSON & MULBERRY
(M15-D31) REVISION DATED 4/4/96.

Dear Mr. Goodwin:

Based on the information provided on your April 4, 1996
submittal, the above referenced site is approved for Building
Permit and S.O. 19 Permits.

Please attach a copy of this approved plan to the construction
sets prior to sign-off by Hydrology.

Also, a separate permit is required for construction within City
Right-of-Way. A copy of this approval letter must be on hand
when applying for the excavation permit.

Please be advised that prior to Certificate of Occupancy release,
Engineer Certification per the D.P.M. checklist will be required.
Also AMAFCA's concurrence will be required.

If I can be of further assistance, please feel free to contact me
at 768-2667.

Sincerely,
Bernie J. Montoya
Bernie J. Montoya, CE
Engineering Associate

BJM/dl

c: Andrew Garcia
Arlene Portillo
FILED

Good for You, Albuquerque!

