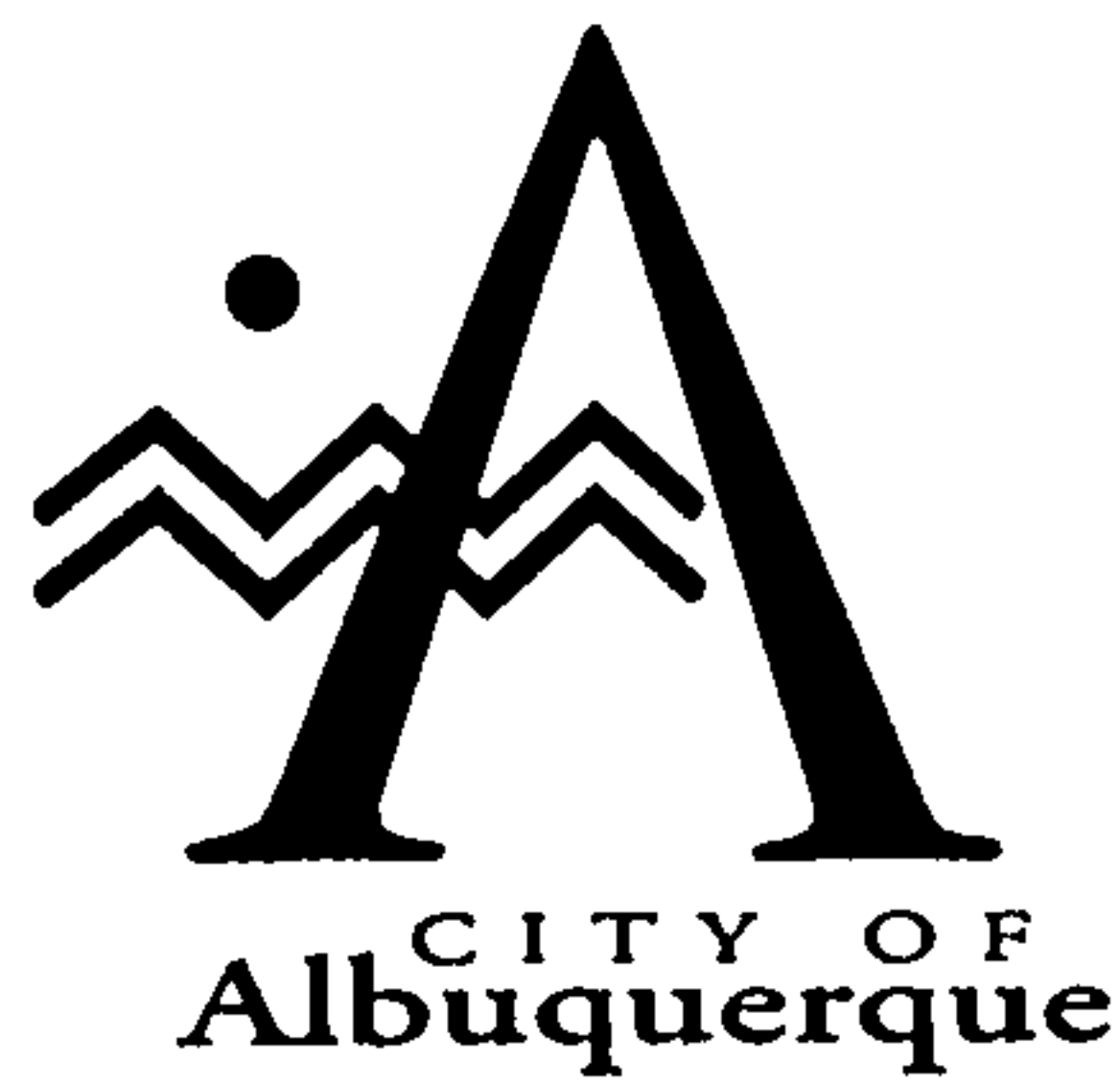




Public Works Department

Martin J. Chávez, Mayor

Robert E. Gurulé, Director

February 13, 1997

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

RE: REVISED ENGINEER CERTIFICATION FOR BUDGETEL INN (L15-D42)  
ENGINEER'S CERTIFICATION STATEMENT DATED 2/7/97

Dear Mr. Goodwin:

Based on the information provided on your February 10, 1997 resubmittal, Engineer Certification for the above referenced site is acceptable.

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

C: Andrew Garcia  
**File**

Sincerely

Bernie J. Montoya CE  
Engineering Associate

Good for You, Albuquerque!

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





# DRAINAGE INFORMATION SHEET

PROJECT TITLE: Budgetel ZONE ATLAS/DRNG, FILE#: L-15 042  
DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_  
LEGAL DESCRIPTION: Lot 1, GIBSON TRACTS  
CITY ADDRESS: University & Gibson NW Corner  
ENGINEERING FIRM: Mark Goodwin & Associates CONTACT: GREGORY KRENIK  
ADDRESS: PO Box 90606 PHONE: 345-2010  
OWNER: Lou Sadler CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: 856-7939  
ARCHITECT: DORMAN & BREEN ARCHITECTS CONTACT: LAWRENCE BREEN  
ADDRESS: 13604 REBONITO COURT PHONE: 299-5940  
SURVEYOR: Southwest Surveying CONTACT: Dan Grancy  
ADDRESS: \_\_\_\_\_ PHONE: 242-7700  
CONTRACTOR: Sadler Southwest CONTACT: Lou Sadler  
ADDRESS: \_\_\_\_\_ PHONE: 856-7939

## TYPE OF SUBMITTAL:

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

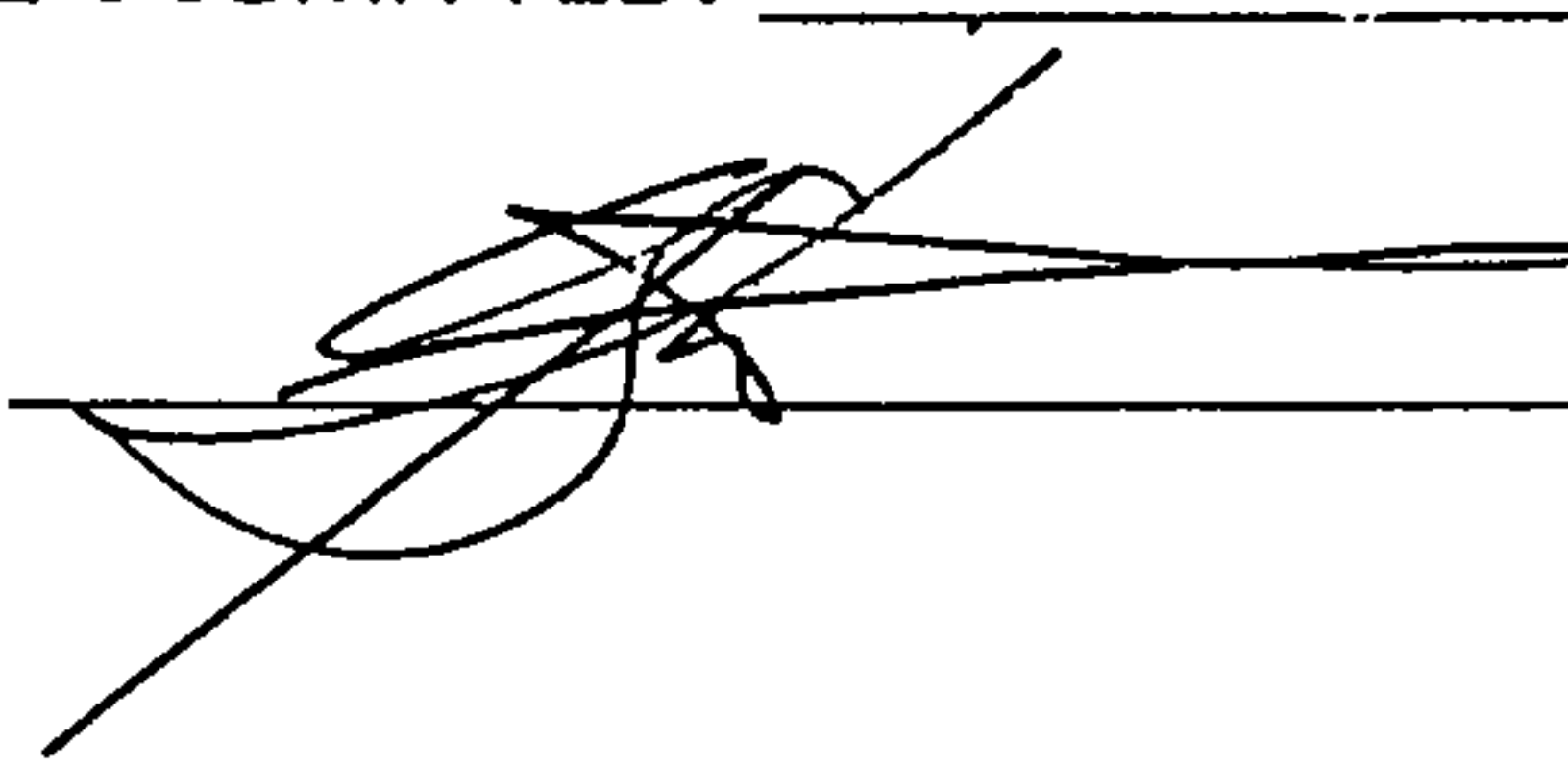
## PRE-DESIGN MEETING:

\_\_\_\_ 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 \_\_\_\_\_ (Specify)

DATE SUBMITTED: 2-7-97

BY: 

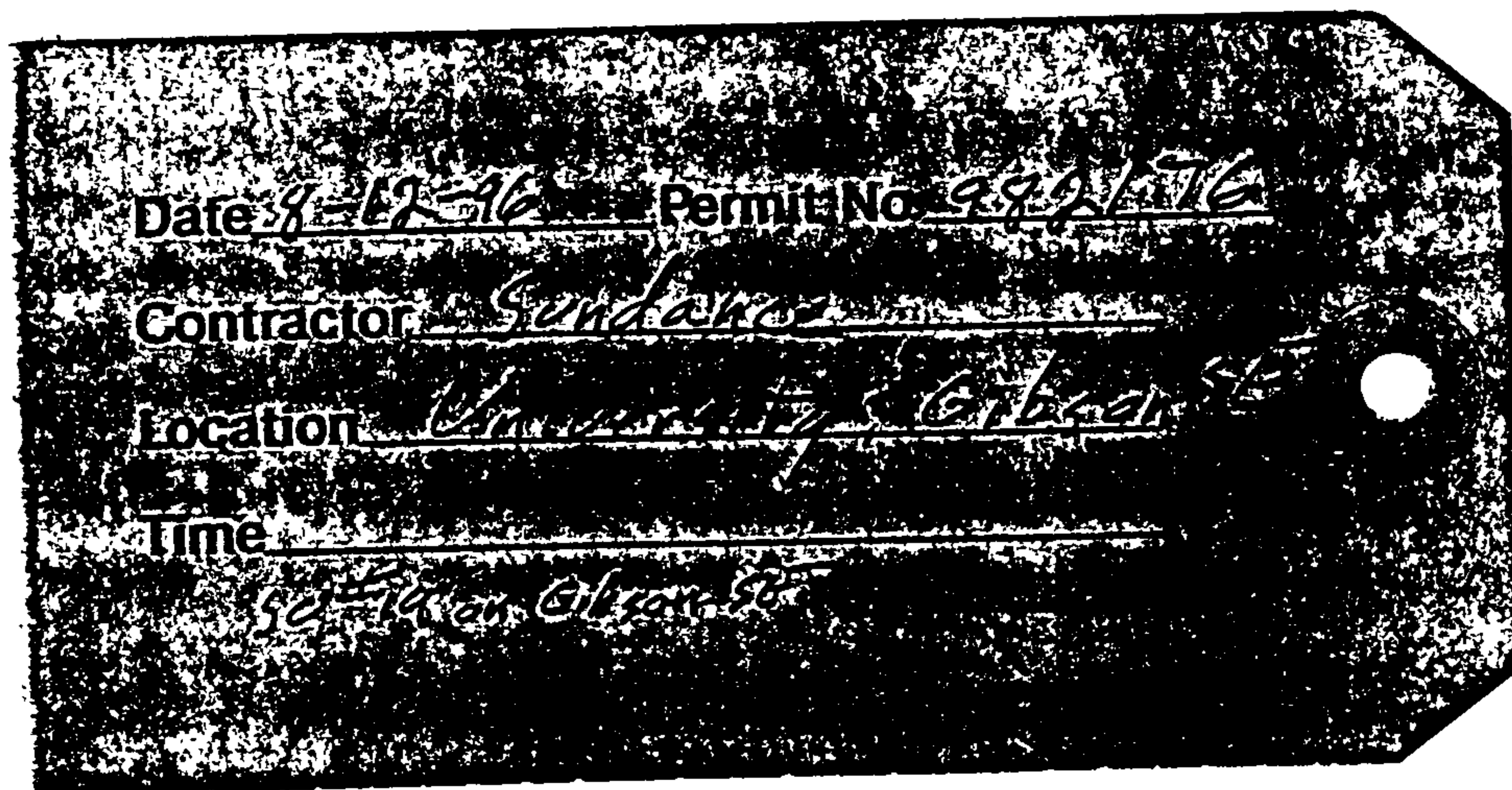
Added essments  
to Plan Per  
DRB,  
This was issued a CO  
on 8-16-96.



BUDGETEL

Gibson & University

4/5/042





# DRAINAGE INFORMATION SHEET

PROJECT TITLE: Budgetel ZONE ATLAS/DRNG, FILE#: L-15/1147  
DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_  
LEGAL DESCRIPTION: Lot 1, Gibson Tracts  
CITY ADDRESS: University & Gibson 1511 Gibson Blvd S.E.  
  
ENGINEERING FIRM: Mark Goodwin & Associates CONTACT: GREGORY KRENIK  
ADDRESS: PO Box 90606 PHONE: 345-2010  
OWNER: Lou Sadler CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: 856-7939  
ARCHITECT: DORMAN & BREEN ARCHITECTS CONTACT: LAUNCE BREEN  
ADDRESS: 13604 REBONITO COURT PHONE: 299-5940  
SURVEYOR: Southwest Surveying CONTACT: Dan Grancy  
ADDRESS: \_\_\_\_\_ PHONE: 242-7700  
CONTRACTOR: Sadler Southwest CONTACT: Lou Sadler  
ADDRESS: \_\_\_\_\_ PHONE: 856-7939

## 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 \_\_\_\_\_ (Specify)

30 day Temp C.O. issued on 7-16-96

DATE SUBMITTED: 7/16/96

BY: [Signature]

CEC

JUL 17 1996

TOLOGY





August 1, 1996

Martin J. Chávez, Mayor

Gregory Krenik  
Mark Goodwin & Assoc.  
P.O. Box 90606  
Albuquerque, NM 87199

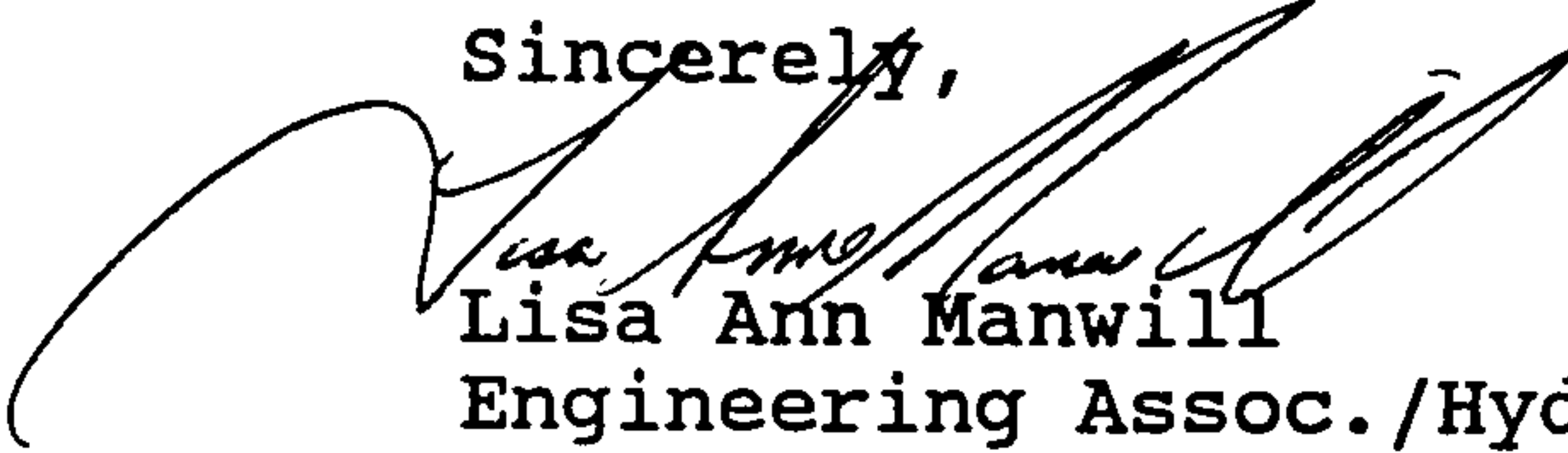
**RE: BUDGETEL INN (L15-D42) ENGINEER'S CERTIFICATION FOR  
CERTIFICATE OF OCCUPANCY. ENGINEER'S CERTIFICATION DATED  
JULY 16, 1996.**

Dear Mr. Krenik:

Based on the information provided on your July 17, 1996  
submittal, the above referenced project is approved for  
Certificate of Occupancy.

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







# ***City of Albuquerque***

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

December 21, 1995

Gregory Krenik  
Mark Goodwin & Assoc.  
P.O. Box 90606  
Albuquerque, NM 87199

**RE: BUDGETEL INN (L15-D42) REVISED GRADING AND DRAINAGE PLAN FOR  
BUILDING PERMIT. ENGINEER'S STAMP DATED 12-18-95.**

Dear Mr. Krenik:

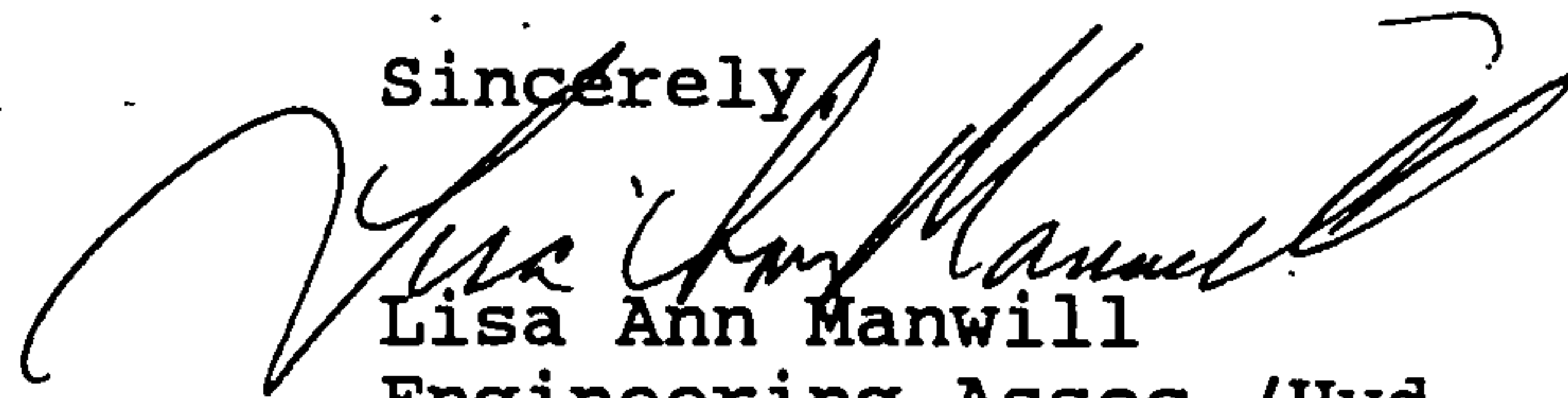
Based on the information provided on your revised December 18, 1995 submittal, the above referenced project is approved for Building Permit. This approval notification supersedes the letter dated October 6, 1995.

Per our conversation on December 21, 1995, it is my understanding that there is a Work Order submittal for this job. Your work order approval encompasses the 4 inch diameter storm drain pipes through the curb (City right-of-way).

Prior to Certificate of Occupancy approval, an Engineer's Certification for the approved plans is required.

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



# DRAINAGE INFORMATION SHEET

PROJECT TITLE: Budgetel ZONE ATLAS/DRNG, FILE#: L-15/042  
DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_  
LEGAL DESCRIPTION: Lot 1, GIBSON TRACTS  
CITY ADDRESS: \_\_\_\_\_

ENGINEERING FIRM: Mark Goodwin & Associates CONTACT: GREGORY KRENIK  
ADDRESS: PO Box 90606 PHONE: 345-2010  
OWNER: Lou Sadler CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: 856-7939  
ARCHITECT: DORMAN & BREEN ARCHITECTS CONTACT: LAURENCE BREEN  
ADDRESS: 13604 REBONITO COURT PHONE: 299-5940  
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:

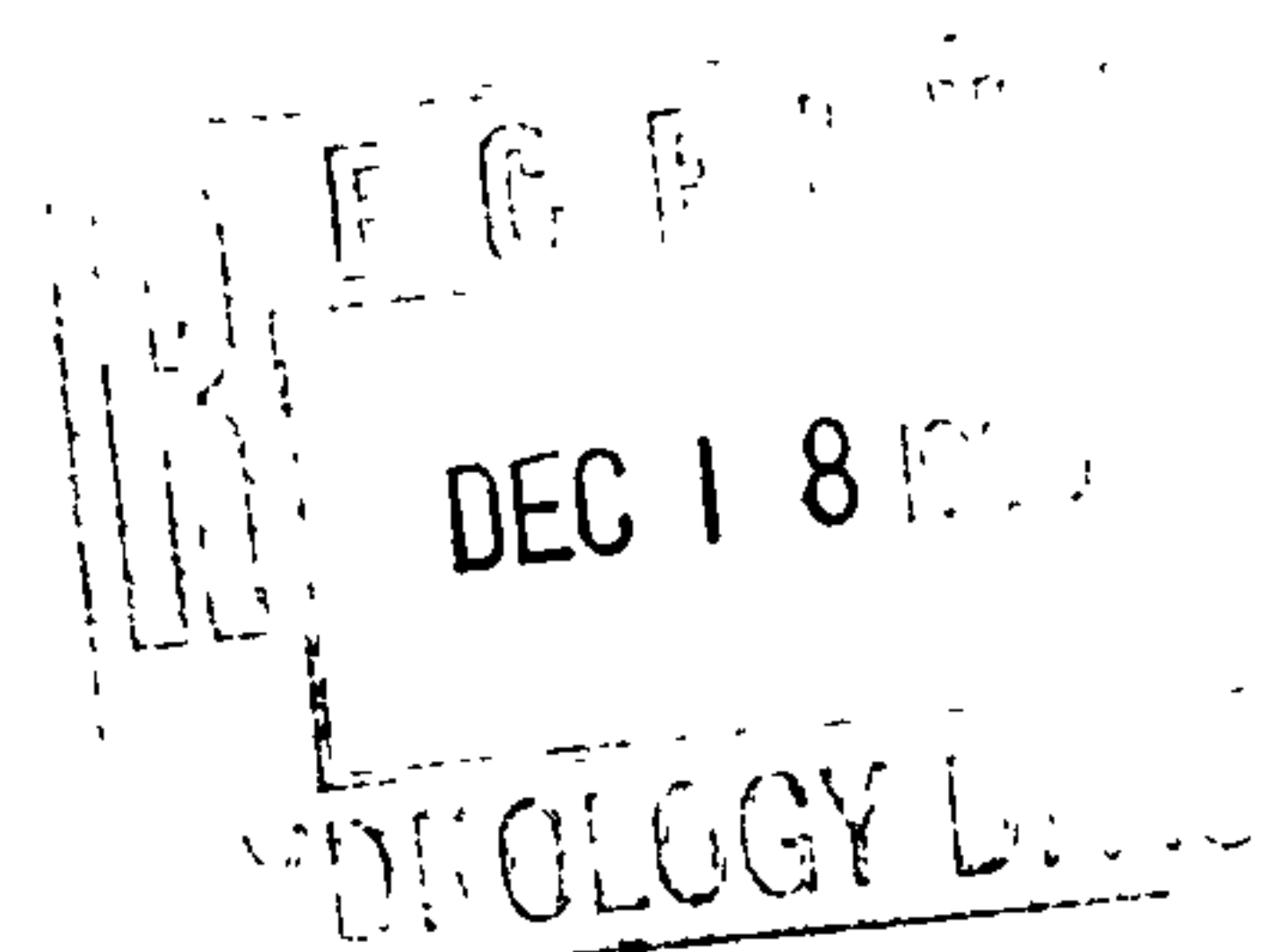
☐ YES  
☒ NO  
☐ COPY PROVIDED

## 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 \_\_\_\_\_ (Specify)

DATE SUBMITTED: 12-18-95

BY: [Signature]







# **City of Albuquerque**

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

October 6, 1995

Gregory Krenik  
Mark Goodwin & Assoc.  
P.O. Box 90606  
Albuquerque, NM 87199

**RE: BUDGETEL INN (L15-D42) GRADING AND DRAINAGE PLAN FOR BUILDING PERMIT. ENGINEER'S STAMP DATED 9-15-95.**

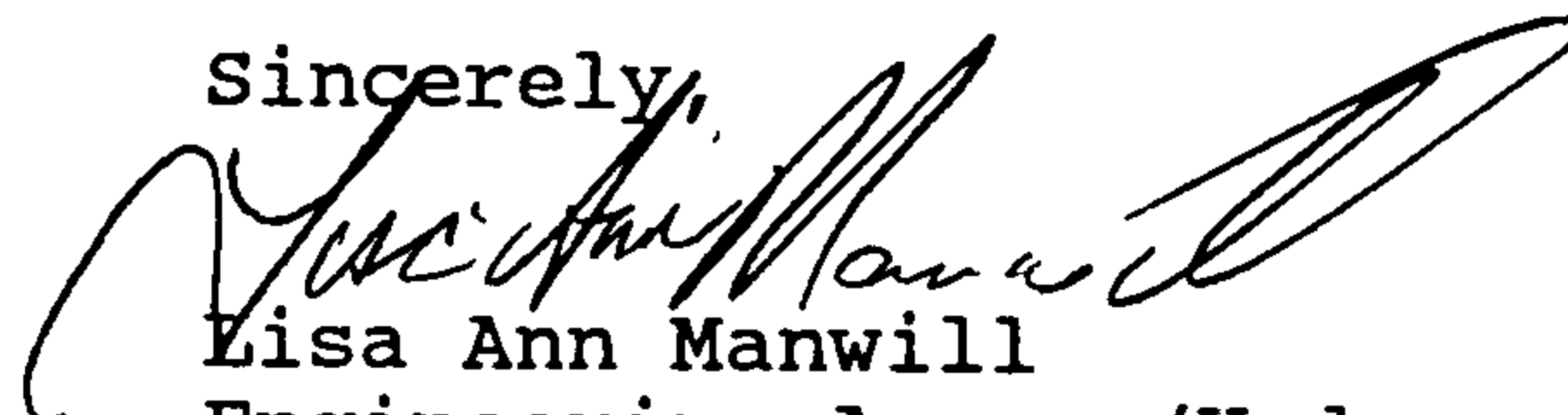
Dear Mr. Krenik:

Based on the information provided on your October 6, 1995 submittal, the changes (addition of quarter point at each entrance) to the above referenced project are acceptable; and therefore Building Permit is approved.

Prior to Certificate of Occupancy approval, an Engineer's Certification for the approved plans is required.

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



# DRAINAGE INFORMATION SHEET

PROJECT TITLE: Budgetel ZONE ATLAS/DRNG, FILE#: L-15/042  
DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_  
LEGAL DESCRIPTION: Lot 1, Gibson Tracts  
CITY ADDRESS: \_\_\_\_\_

ENGINEERING FIRM: Mark Goodwin & Associates CONTACT: GREGORY KRENIK  
ADDRESS: PO Box 90606 PHONE: 345-2010  
OWNER: Lou Sadler CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: 856-7939  
ARCHITECT: DORMAN & BREEN ARCHITECTS CONTACT: LANCE BREEN  
ADDRESS: 13604 REBONITO COURT PHONE: 299-5940  
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:

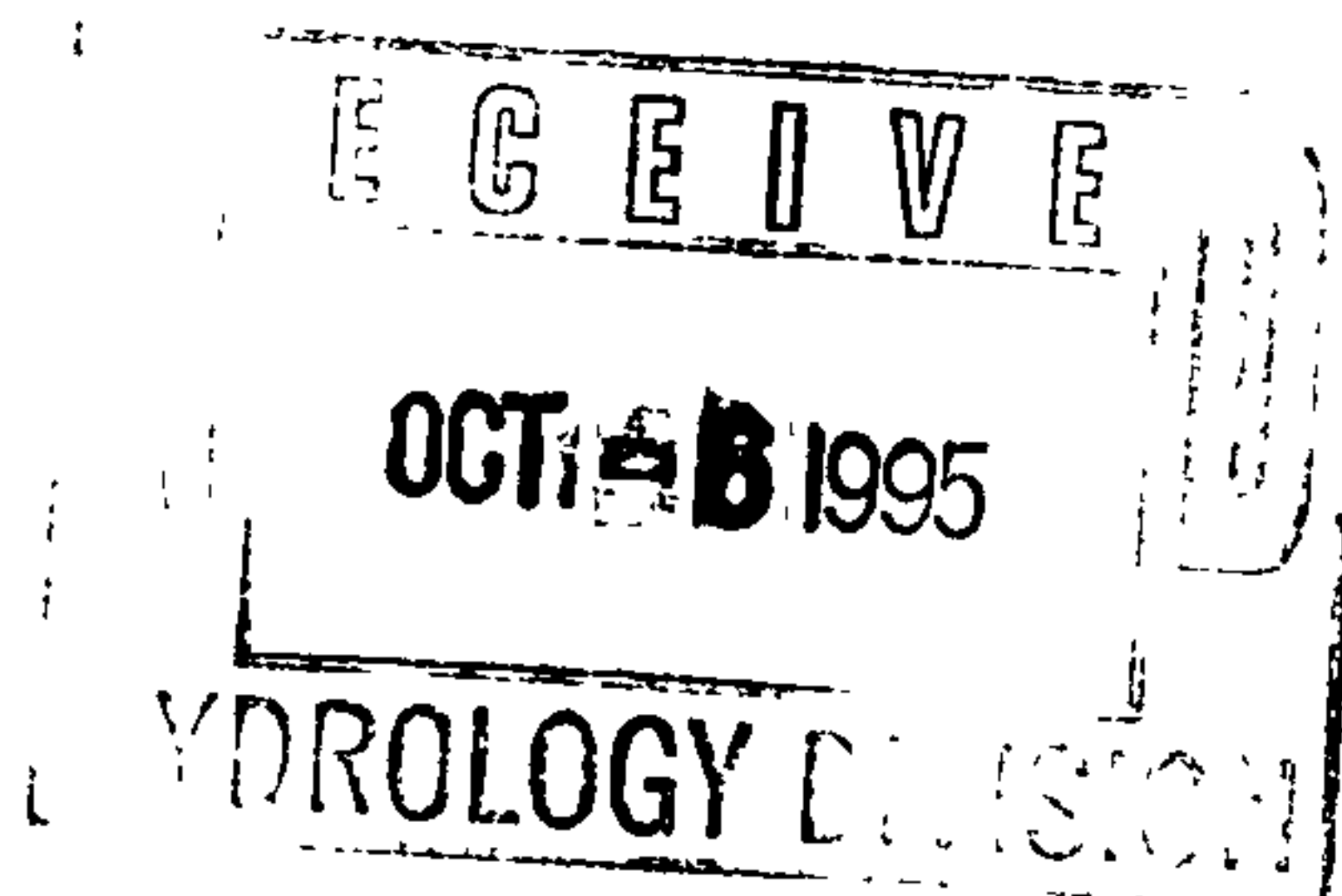
☐ YES  
☒ NO  
☐ COPY PROVIDED

## CHECK TYPE OF APPROVAL SOUGHT:

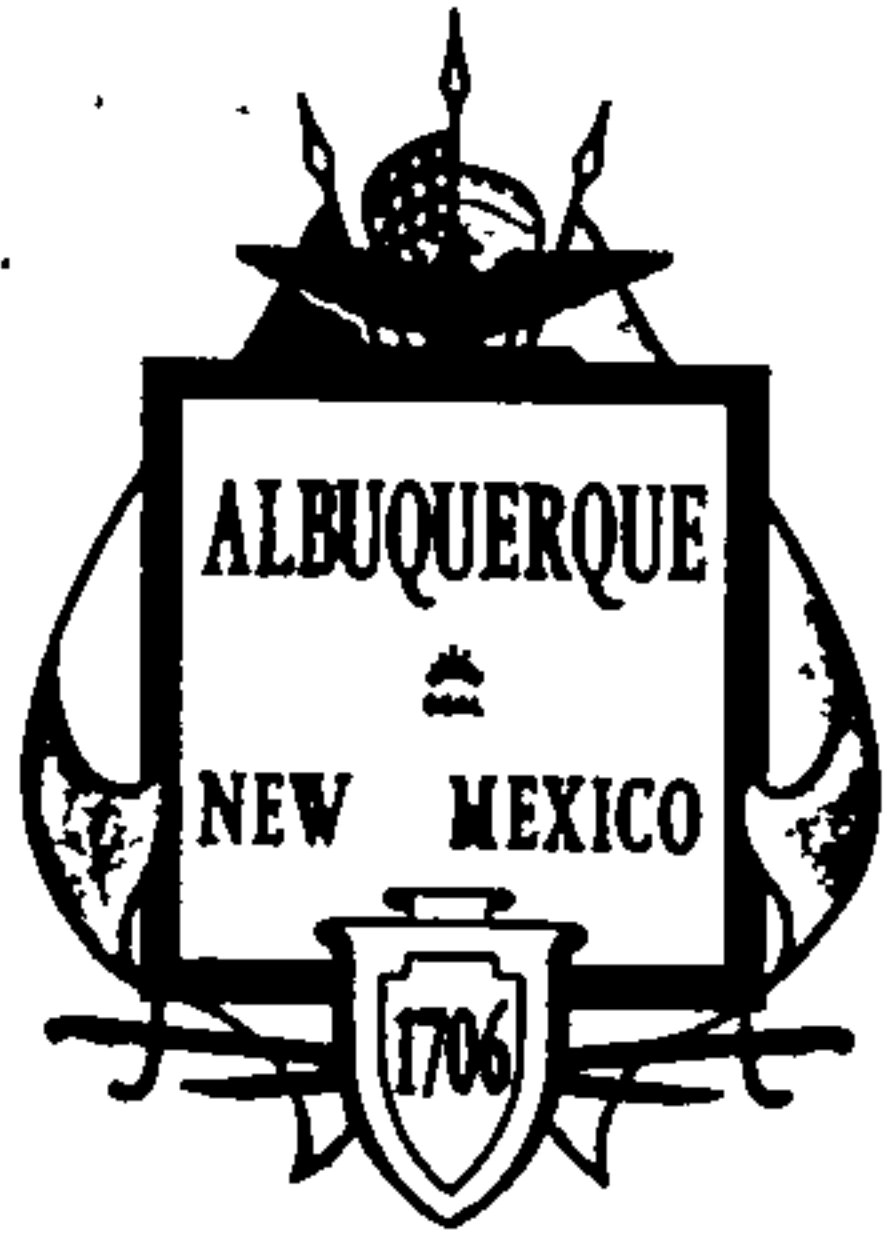
☐ SKETCH PLAT APPROVAL  
☐ PRELIMINARY PLAT APPROVAL  
☐ S. DEV. PLAN FOR SUB'D APPROVAL  
☐ S. DEV. PLAN FOR BLDG PERMIT APPROVAL  
☐ SECTOR PLAN APPROVAL  
☐ FINAL PLAT APPROVAL  
☐ FOUNDATION PERMIT APPROVAL  
☒ BUILDING PERMIT APPROVAL  
☐ CERTIFICATION OF OCCUPANCY APPROVAL  
☐ GRADING PERMIT APPROVAL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

DATE SUBMITTED: 10-5-95

BY: [Signature]







# ***City of Albuquerque***

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 25, 1995

Gregory J Krenik  
Mark Goodwin & Assoc.  
P.O. Box 90606  
Albuquerque, NM 87199

**RE: BUDGETEL INN (L15-D42) GRADING AND DRAINAGE PLAN FOR BUILDING PERMIT. ENGINEER'S STAMP DATED 9-15-95.**

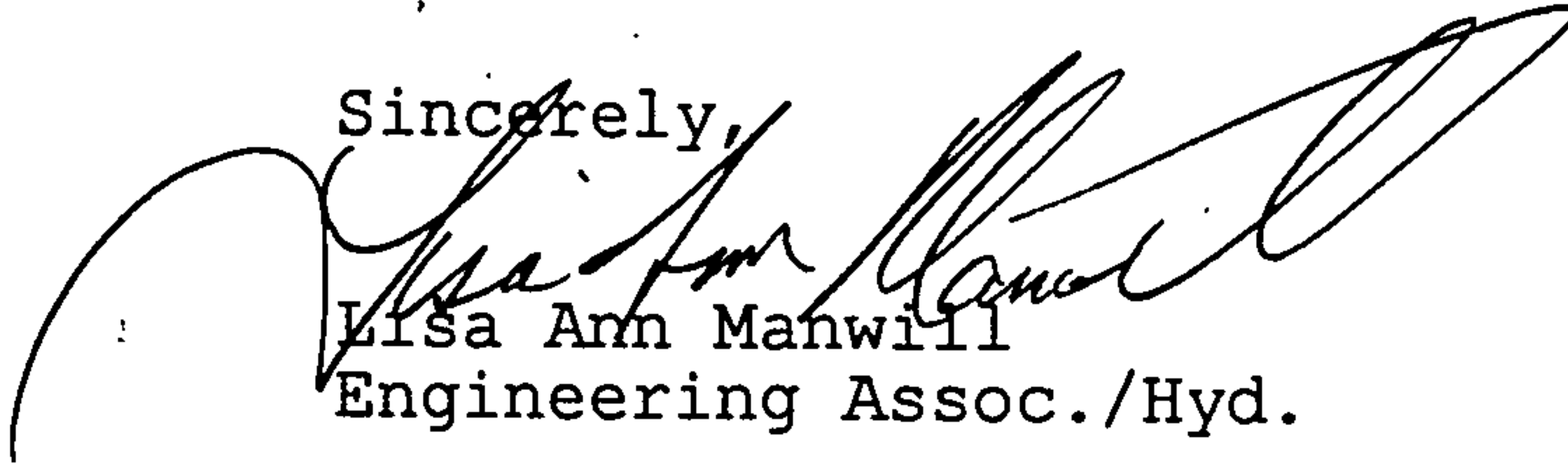
Dear Mr. Krenik:

Based on the information provided on your September 18, 1995 submittal, the above referenced project is approved for Building Permit.

Prior to Certificate of Occupancy approval, an Engineer's Certification for the approved plans is required.

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

Sincerely,

  
Lisa Ann Mahwill  
Engineering Assoc./Hyd.

c: Andrew Garcia  
File



# DRAINAGE INFORMATION SHEET

PROJECT TITLE: Budgetel ZONE ATLAS/DRNG, FILE#: L-15/442

DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_

LEGAL DESCRIPTION: Lot 1, GIBSON TRACTS

CITY ADDRESS: \_\_\_\_\_

ENGINEERING FIRM: Mark Goodwin & Associates CONTACT: GREGORY KRENK

ADDRESS: PO Box 90606 PHONE: 345-2010

OWNER: Lou Sadler CONTACT: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ PHONE: 856-7939

ARCHITECT: DORMAN & BREEN ARCHITECTS CONTACT: LAURENCE BREEN

ADDRESS: 13604 REBONITO COURT PHONE: 299-5940

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 - CALCULATIONS

## PRE-DESIGN MEETING:

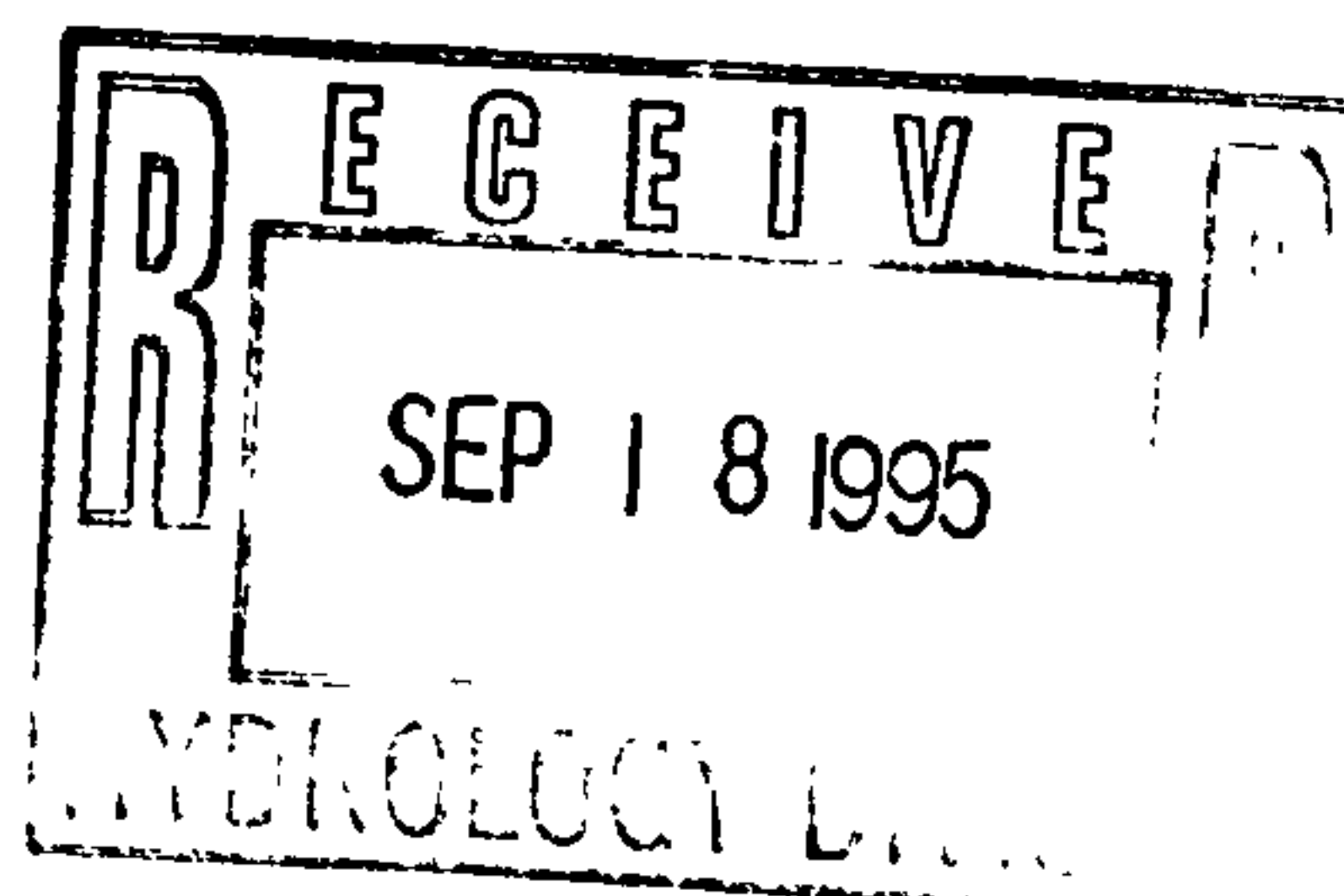
- ☐ YES
- ☒ NO
- ☐ COPY PROVIDED

## 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 \_\_\_\_\_ (Specify)

DATE SUBMITTED: 9-12-95

BY: [Signature]







# ***City of Albuquerque***

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 6, 1995

Gregory J Krenik  
Mark Goodwin & Assoc.  
P.O. Box 90606  
Albuquerque, NM 87199

**RE: BUDGETEL INN (L15-D42) GRADING AND DRAINAGE PLAN FOR BUILDING PERMIT. ENGINEER'S STAMP DATED 8-30-95.**

Dear Mr. Krenik:

Based on the information provided on your August 30, 1995 submittal for the above referenced project, the following comments must be addressed before Building Permit Approval:

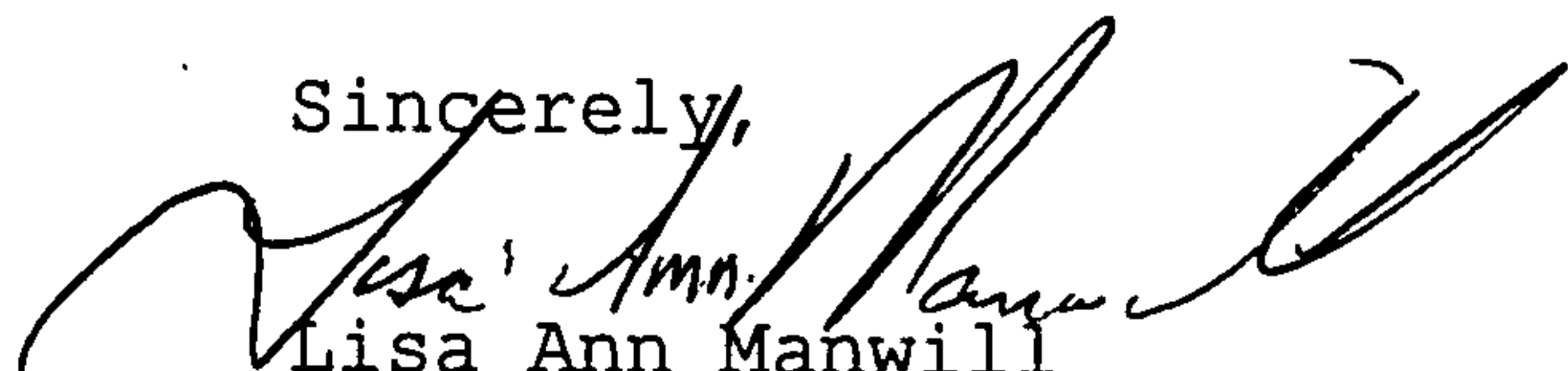
1. Show what area each catch basin intercepts. Basin boundary lines would be appropriate.
2. Give pipe size from CB #1 to MH #1.
3. Draw lines on pipe solution graph in your report. It is your responsibility to do all aspects of the design.
4. You need to relate your site to the approved plat. The legal description given is not detailed enough.

In the future, clearly label all your calculations and quantify all offsite flows. It would simplify the review process if you would add to your report a narrative explaining, in general, what you are trying to accomplish.

Also, free discharge is allowed to Gibson Avenue. A Gibson Avenue storm drain system is anticipated in the near future.

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



# DRAINAGE INFORMATION SHEET

PROJECT TITLE: Budgetel ZONE ATLAS/DRNG, FILE#: L-15/1142  
DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_  
LEGAL DESCRIPTION: 40/25 ASSOC. TRACT A  
CITY ADDRESS: \_\_\_\_\_

ENGINEERING FIRM: Mark Goodwin & Associates CONTACT: GREGORY KRENK  
ADDRESS: PO Box 90606 PHONE: 345-2010  
OWNER: Lou Sadler CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: 856-7939  
ARCHITECT: DORMAN & BREEN ARCHITECTS CONTACT: LAURENCE BREEN  
ADDRESS: 13604 REBONITO COURT PHONE: 299-5940  
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

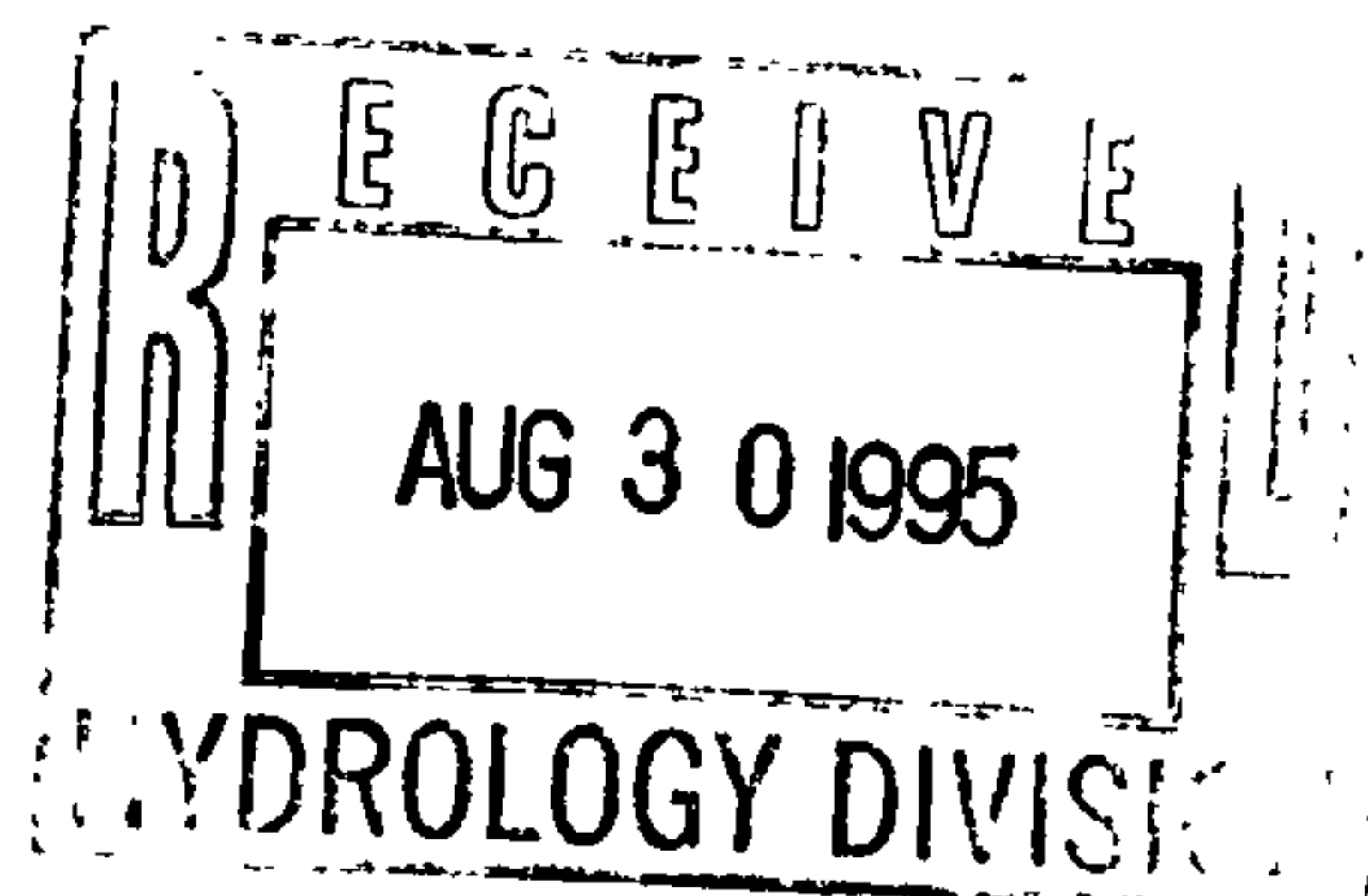
## PRE-DESIGN MEETING:

☐ YES  
☒ NO  
☐ COPY PROVIDED

☐ 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 \_\_\_\_\_ (Specify)

DATE SUBMITTED: 8-29-95

BY: [Signature]







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

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

August 29, 1995

Ms. Lisa Ann Manwell  
Hydrology Division  
City of Albuquerque  
P.O. Box 1293  
Albuquerque, NM 87103

Re: **Budgetel Inn (L15-D42)**

Dear Ms. Manwell:

*This letter is part of the resubmittal and an itemized response to your letter of August 18, 1995.*

- 1) *The calculations for the storm drain are included in the report. The grate / rim, inverts, size and type are shown on the plans.*
- 2) *The invert of the 8" orifice is the bottom of the pond, 72.00, and is indicated on the plans.*
- 3) *The fencing requirements are shown on the plans in note 9.*
- 4) *The desilting pond has been changed to a 1' depth. The bottom is 72.50 and the overflow into the drive is 73.50.*
- 5) *Quarter points have been added to the plan.*
- 6) *Water does discharge to Gibson via the driveway. All water from the Budgetel site goes into the pond. The driveway crosses the parcel to the south. The high point is the common property line. No additional calculations are required.*

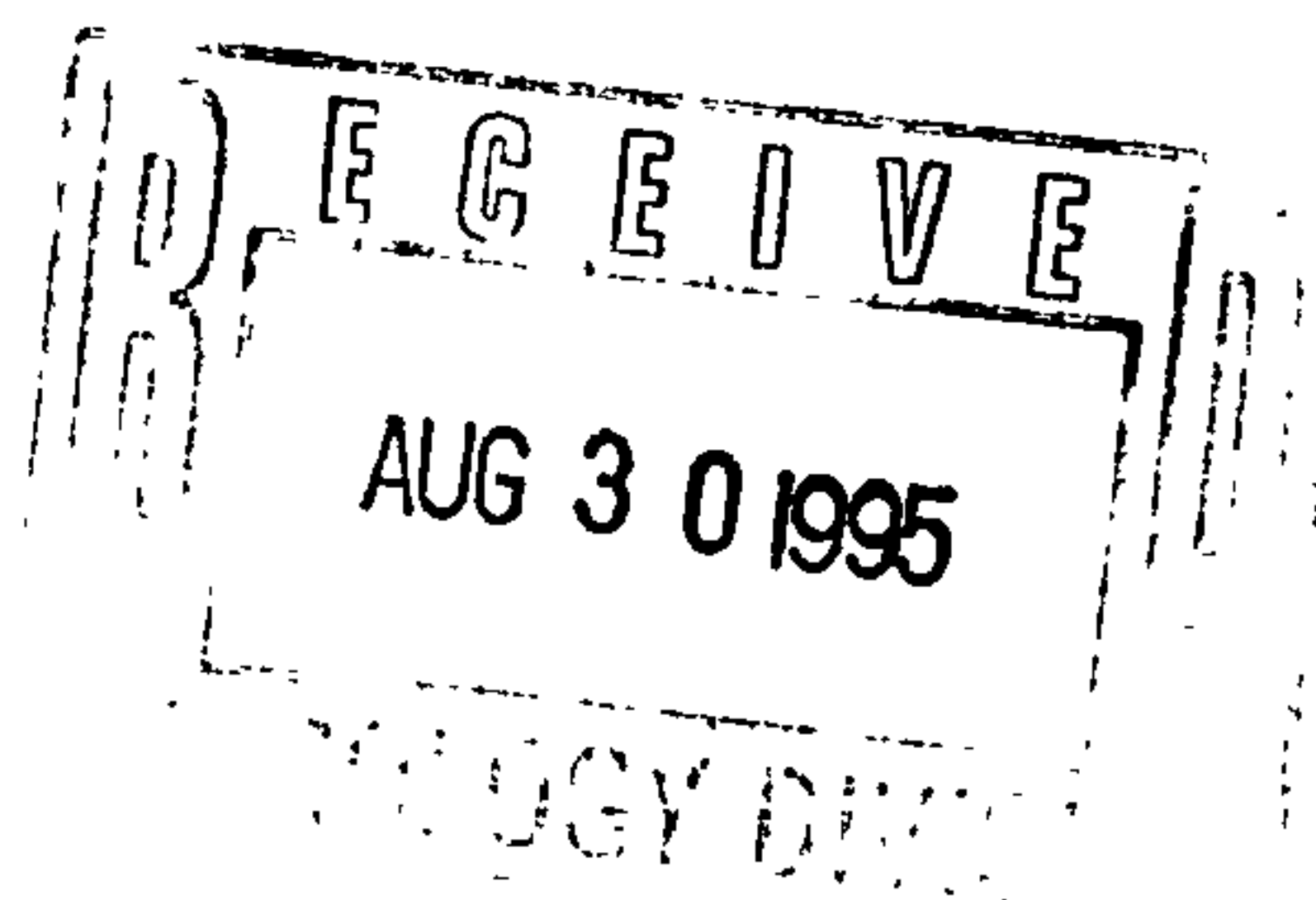
*The parcel to the south, from what I understand, is in the process of a site plan, which means it will be developed soon after this project. I do not know who the engineer will be.*

Very Truly Yours,

MARK GOODWIN & ASSOCIATES, P.A.

Gregory J. Krenik, P.E.  
Project Manager

GJK: smr







# ***City of Albuquerque***

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

August 18, 1995

Gregory J Krenik  
Mark Goodwin & Assoc.  
P.O. Box 90606  
Albuquerque, NM 87199

**RE: BUDGETEL INN (L15-D42) GRADING AND DRAINAGE PLAN FOR BUILDING PERMIT. ENGINEER'S STAMP DATED 8-11-95.**

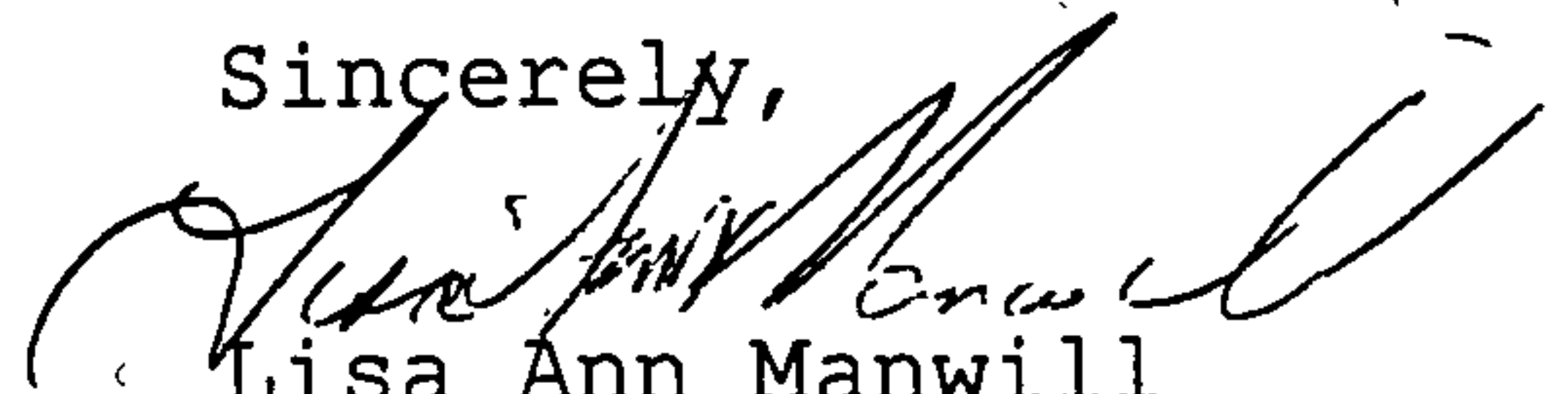
Dear Mr. Krenik:

Based on the information provided on your August 15, 1995 submittal for the above referenced project, the following comments must be addressed before Building Permit Approval:

1. Please provide calculations for the storm drain line. Show, on plan sheet, pipe size and type. Also, give grate and all invert elevations of pipe.
2. What is invert elevation of 8 inch orifice pipe?
3. Please provide safety fencing around pond wall.
4. It appears that desilting pond will retain too much water. Ideally, the pond should be a maximum of 1 foot deep. You may want to consider increasing the area, and decreasing the depth of the pond.
5. Give quarter points on your drives (top of curb and flow line).
6. Water discharges onto Gibson via a concrete swale and driveway. It appears that by using driveway, more than allowable flow is exiting site. Direct parking lot flow to detention pond. You may need to install another opening on the east pond wall to accept the additional flow. Please recheck pond capacity.

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





# ***City of Albuquerque***

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 13, 1995

Gregory J. Krenik, P.E.  
Mark Goodwin & Assoc.  
P. O. Box 90606  
Albuquerque, N.M. 87199

RE: GRADING & DRAINAGE PLAN FOR BUDGETEL MOTEL (L-15/D42)  
RECEIVED FEBRUARY 15, 1995 FOR BUILDING PERMIT APPROVAL  
ENGINEER'S STAMP DATED 2-14-95

Dear Mr. Krenik:

Based on the information included in the submittal referenced above, City Hydrology has the following comments must be addressed before Building Permit approval:

1. The entrance on University must have an adequate water block. Public water must not enter private property. This entrance requires an access easement. Provide spot elevations at the PI, PC & PT locations for both entrances.
2. An S.O.19 is required for the sidewalk culvert. Provide the invert of the sidewalk culvert at the curb line. Design & label the emergency spillway. Execute and submit to Hydrology a Drainage Covenant for the detention pond.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.  
Civil Engineer/Hydrology

c: Andrew Garcia  
Laurence Breen, Dorman & Breen Architects, 13604 Rebonito Ct 87112



# DRAINAGE INFORMATION SHEET

PROJECT TITLE: Budgetel ZONE ATLAS/DRNG, FILE#: L-15/1042  
DRB #: 94-618 EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_  
LEGAL DESCRIPTION: 40/25 ASSOC. TRACT A  
CITY ADDRESS: \_\_\_\_\_

ENGINEERING FIRM: Mark Goodwin & Associates CONTACT: GREGORY KRENIK  
ADDRESS: PO Box 90606 PHONE: 345-2010  
OWNER: Lou Sadler CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: 856-7939  
ARCHITECT: DORMAN & BREEN ARCHITECTS CONTACT: LANCE BREEN  
ADDRESS: 13604 REBONITO COURT 87112 PHONE: 299-5940  
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:

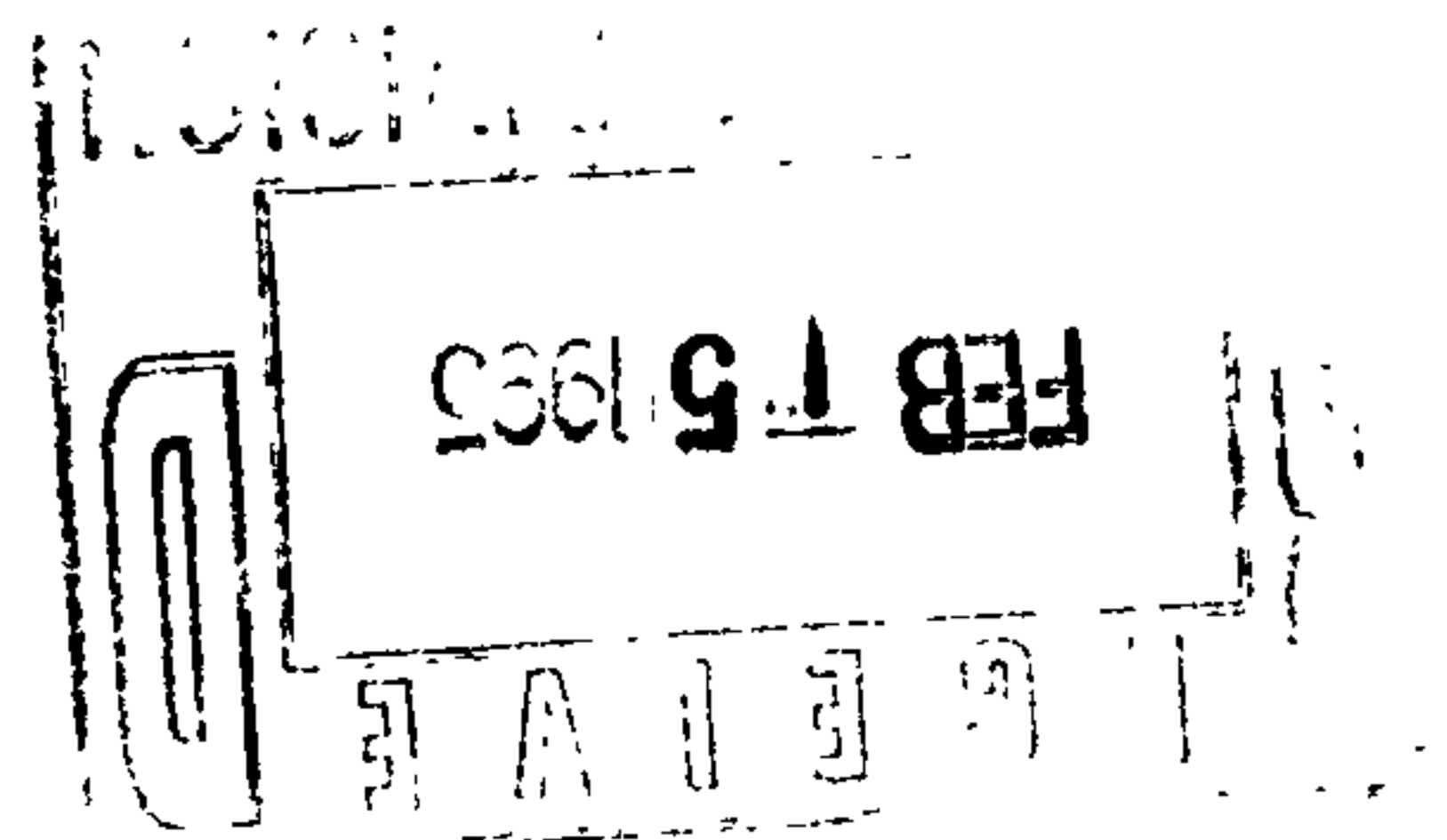
☐ YES  
☒ NO  
☐ COPY PROVIDED

## 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 \_\_\_\_\_ (Specify)

DATE SUBMITTED: 2-15-95

BY: [Signature]







# ***City of Albuquerque***

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

**January 27, 1995**

**Gregory J. Krenik, P.E.  
Mark Goodwin & Assoc.  
P. O. Box 90606  
Albuquerque, N.M. 87199**

**RE: CONC. GRADING & DRAINAGE PLAN FOR BUDGETEL MOTEL (L-15/D42)  
RECEIVED JANUARY 12, 1995 FOR SITE DEV PLAN FOR B.P. APPROVAL  
ENGINEER'S STAMP DATED 1/12/95**

**Dear Mr. Krenik:**

**Based on the information included in the submittal referenced above, City Hydrology accepts the concept and approves this project for Site Development Plan for B.P.**

**The following comments must be addressed before Building Permit approval:**

- 1. Provide proposed spot elevations to prevent birdbaths in the parking lot and to verify the water blocks at entrances on University & Gibson. Is an access easement required for the entrance on University?**
- 2. Calculate the pond volume & the outlet size required. Indicate the pond volume provided. Design & label the emergency spillway. Execute and submit a Drainage Covenant for the detention pond.**

**If you have any questions about this project, You may contact me at 768-2727.**

**Sincerely,**

**John P. Curtin, P.E.  
Civil Engineer/Hydrology**

**c: Andrew Garcia  
Fred Aguirre, DRB 94-618**



# DRAINAGE INFORMATION SHEET

PROJECT TITLE: Budgetel ZONE ATLAS/DRNG, FILE#: L-151D42  
DRB #: 94-B18 EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_  
LEGAL DESCRIPTION: 40/25 ASSOC. TRACT A  
CITY ADDRESS: \_\_\_\_\_

ENGINEERING FIRM: Mark Goodwin & Associates CONTACT: GREGORY KRENIK  
ADDRESS: PO Box 90606 PHONE: 345-2010  
OWNER: Lou Sadler CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ PHONE: 856-7939  
ARCHITECT: DORMAN & BREEN ARCHITECTS CONTACT: LAURENCE BREEN  
ADDRESS: 13604 REBONITO COURT PHONE: 299-5940  
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:

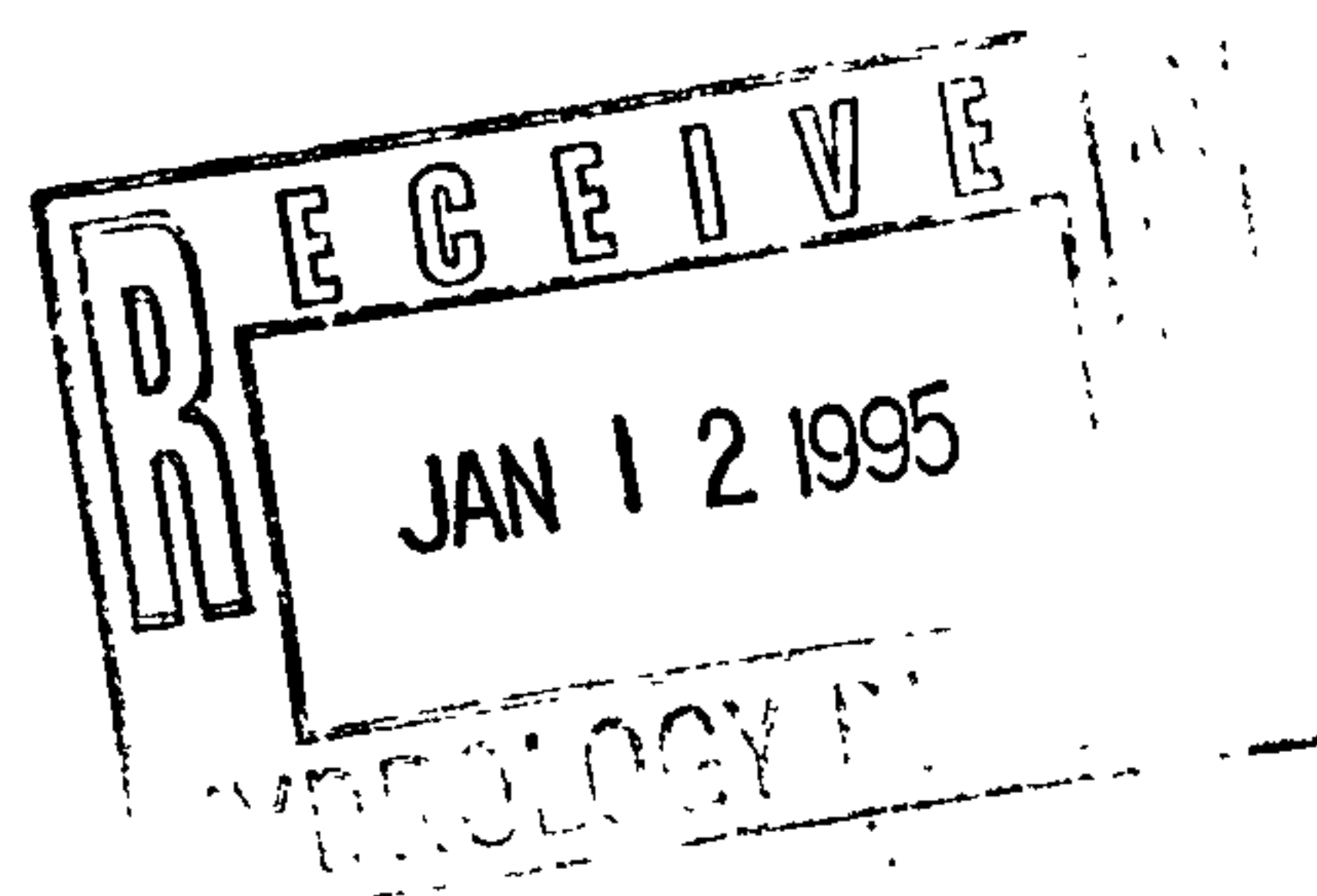
\_\_\_\_ YES  
X NO  
\_\_\_\_ COPY PROVIDED

## 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  
X DRAINAGE REQUIREMENTS  
\_\_\_\_ OTHER \_\_\_\_\_ (Specify)

DATE SUBMITTED: 1-11-95

BY: [Signature]







# ***City of Albuquerque***

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 4, 1995

Gregory J. Krenik, P.E.  
Mark Goodwin & Assoc.  
P. O. Box 90606  
Albuquerque, N.M. 87199

RE: CONC. GRADING & DRAINAGE PLAN FOR BUDGETEL MOTEL (L-15/D42)  
RECEIVED DECEMBER 14, 1994 FOR BUILDING PERMIT APPROVAL  
ENGINEER'S STAMP DATED 12-14-94

Dear Mr. Krenik:

Based on the information included in the submittal referenced above, City Hydrology has the following comments that must be addressed prior to Building Permit approval:

1. A Grading & Drainage Plan is required for Building Permit approval. Add spot elevations to prevent bird baths in the parking lot. Verify water blocks at entrances on University and Gibson. Is an access easement required for the entrance on Gibson? Indicate whether any off-site flows enter the site.
2. Retention ponds are accepted on a temporary basis only. Identify the programmed improvement that will replace the retention pond. indicate the maximum water surface elevation of the pond and the volume provided at that elevation. Any pond must have a Drainage Covenant executed, processed and recorded prior to Building Permit approval.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.  
Civil Engineer/Hydrology

c: Andrew Garcia



# DRAINAGE INFORMATION SHEET

PROJECT TITLE: Budgetel ZONE ATLAS/DRNG, FILE#: L-15/1042  
 DRB #: \_\_\_\_\_ EPC #: \_\_\_\_\_ WORK ORDER #: \_\_\_\_\_  
 LEGAL DESCRIPTION: 40/25 ASSOC. TRACT A  
 CITY ADDRESS: \_\_\_\_\_

ENGINEERING FIRM: Mark Goodwin & Associates CONTACT: GREGORY KRENIK  
 ADDRESS: PO Box 90606 PHONE: 345-2010  
 OWNER: Lou Sadler CONTACT: \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_ PHONE: 856-7939  
 ARCHITECT: DORMAN & BREEN ARCHITECTS CONTACT: LAURENCE BREEN  
 ADDRESS: 13604 REBONITO COURT PHONE: 299-5940  
 SURVEYOR: N/A CONTACT: \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
 CONTRACTOR: N/A CONTACT: \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

## TYPE OF SUBMITTAL:

## CHECK TYPE OF APPROVAL SOUGHT:

\_\_\_\_\_ DRAINAGE REPORT  
 \_\_\_\_\_ DRAINAGE PLAN  
X 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  
X BUILDING PERMIT APPROVAL  
 \_\_\_\_\_ CERTIFICATION OF OCCUPANCY APPROVAL  
 \_\_\_\_\_ GRADING PERMIT APPROVAL  
 \_\_\_\_\_ PAVING PERMIT APPROVAL  
 \_\_\_\_\_ S.A.D. DRAINAGE REPORT  
 \_\_\_\_\_ DRAINAGE REQUIREMENTS  
 \_\_\_\_\_ OTHER \_\_\_\_\_ (Specify)

## PRE-DESIGN MEETING:

\_\_\_\_\_ YES  
X NO  
 \_\_\_\_\_ COPY PROVIDED

DATE SUBMITTED: 12-14-94

BY: [Signature]

G E D V  
 DEC 14 1994



NEXT SHEET No. L-14S

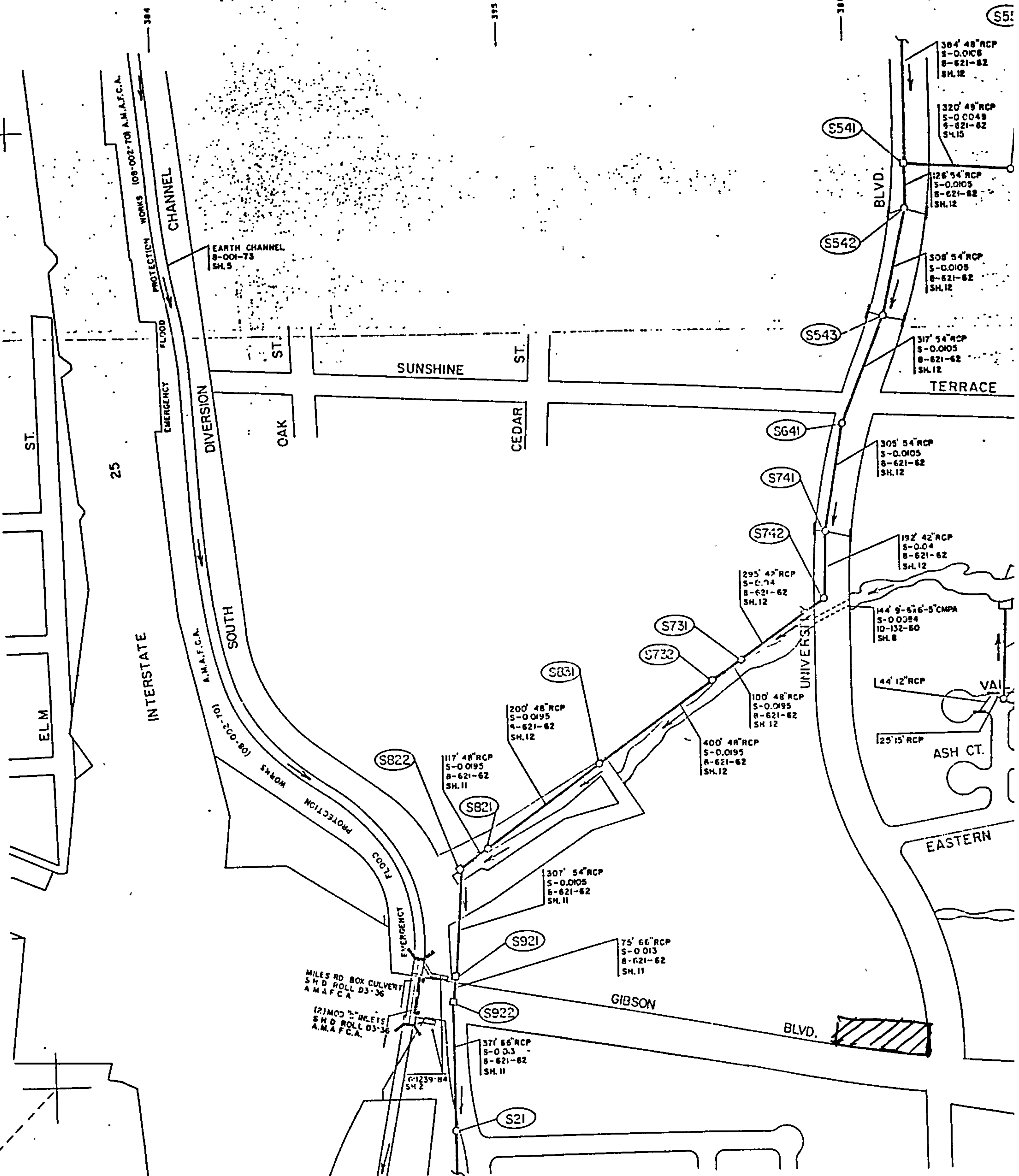
29 28  
32 33

ML

1479

1478

1477



L-15S



MARK GOODWIN

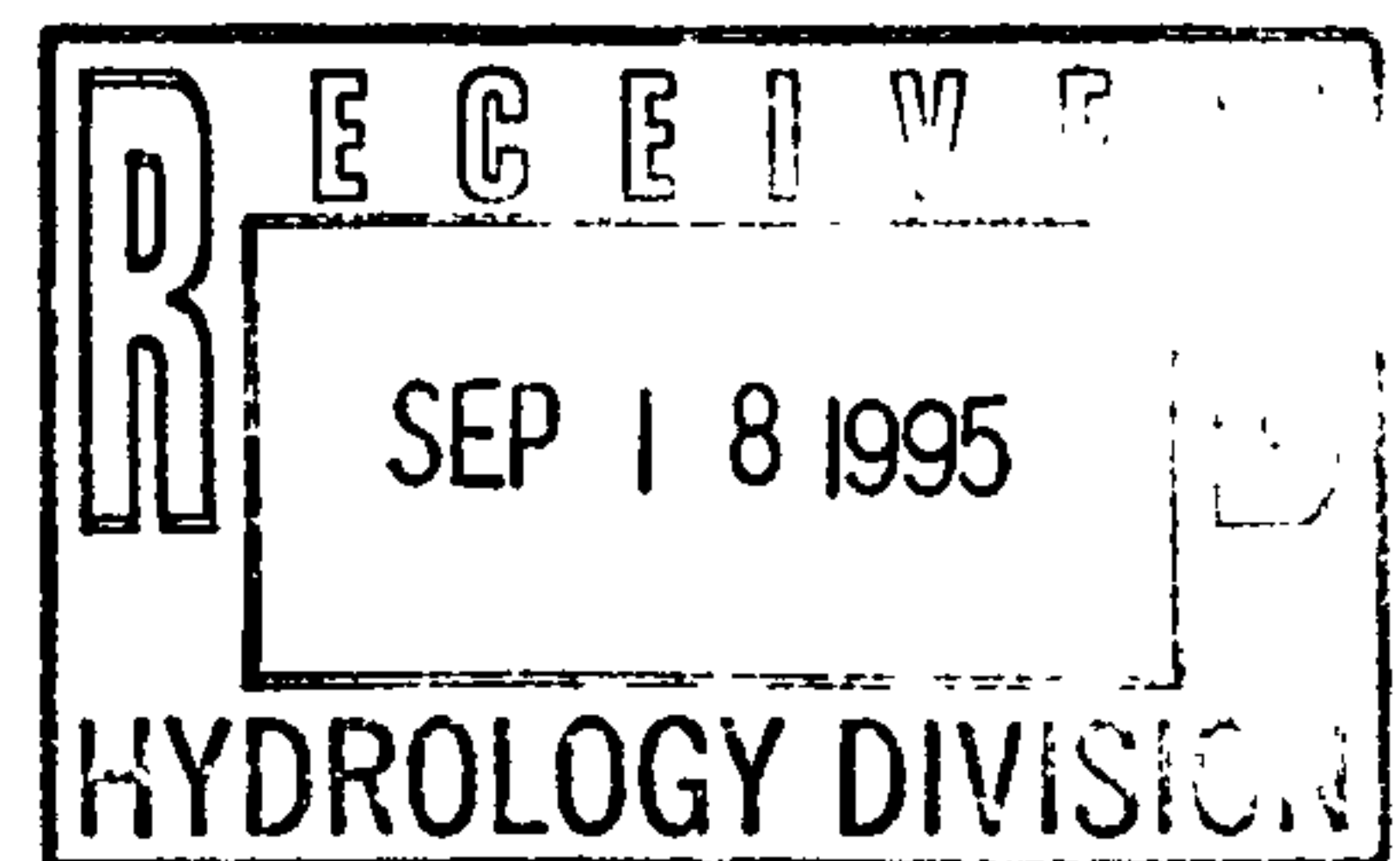
**& ASSOCIATES**  
CONSULTING ENGINEERS

dmg

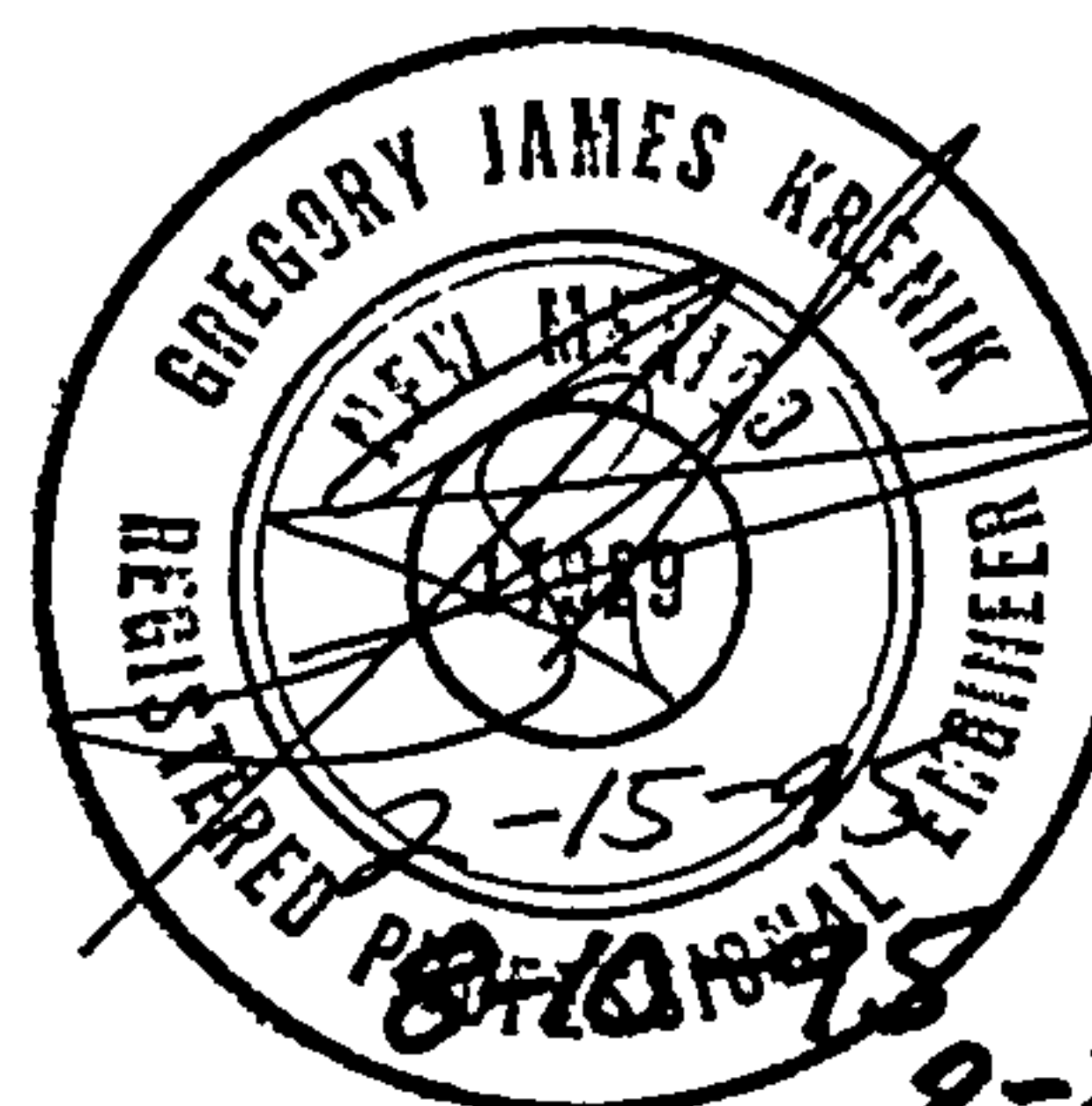


***DRAINAGE CALCULATIONS***  
***for***  
***BUDGETEL INN***

*Prepared For*  
  
*Mr. Lou Sadler*  
*Sadler Southwest*  
*PO Box 21640*  
*Albuquerque, NM 87154*



*February 1995*



D. MARK GOODWIN & ASSOCIATES

8-29-95  
9-6-95





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

PROJECT BUDGETEL  
SUBJECT DRAINAGE CALCS  
BY GJK DATE 1-11-95  
CHECKED \_\_\_\_\_ DATE \_\_\_\_\_

REvised 8-10-95 SHEET 1 OF 1  
9-6-95

TOTAL AREA = 2,2422 AC = 0.0035 SQ MI

$P_1 = 2.011$   
 $P_6 = 2.311$   
 $P_{24} = 2.6511$   
 $OT = 0.03333$  HR  
 $TP = 0.1333$  HR

\* OFFSITE FLOWS AS MINIMAL  
AS THEY ARE WILL BE  
ALLOWED TO ENTER THE SITE.

\* \* FREE DISCHARGE IS ALLOWED

EXISTING CONDITIONS

TYPE "A" = 100%

PROPOSED CONDITIONS

TYPE "B" = 29.76 %  
TYPE "D" = 70.24 %

FROM HYMO OUTPUT SHEETS 2-7

$Q = 3.38$  CFS  
 $V = 0.0958$  AC-FT

$Q = 8.84$  CFS  
 $V = 0.3131$  AC-FT

- WE WILL ASSUME WE CAN DISCHARGE AT THE EXISTING RATE OF 3.38 CFS TO GIBSON.

SIZE DETENTION POND WITH ORIFICE OPENING

$Q = 0.6 A \sqrt{2gh}$  SAY 8" OPENING

| ELEV | OUTFLOW (CFS) |
|------|---------------|
| 72   | 0             |
| 73   | 1.39          |
| 74   | 2.19          |
| 75   | 2.77          |

- FIND POND SIZE

| ELEV. | AREA | STORAGE (CF) [AC-FT] |
|-------|------|----------------------|
| 72    | 2576 | 0                    |
| 73    | 2576 | 2576 [0.059]         |
| 74    | 2576 | 5152 [0.118]         |
| 75    | 2576 | 7728 [0.177]         |

FROM HYMO SHEETS 8-11

MAX WATER SURFACE = 74.62

MAX DISCH = 2.55 CFS < 3.38

- SIZE CHANNEL

$S = 1.39$  % 2' wide channel

$d = 0.50$

$WP = 3$

$A = 1.5$

$V = 6.48$  F/S

$Q = 6.48$  CFS

SHAPE OF CHANNEL TO MEET  
GRADE ON GIBSON



START TIME=0.0  
\*\*\* HYDROGRAPH FOR BUDGETEL MOTEL - EXIST  
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN  
RAIN ONE=2.00 IN RAIN SIX=2.30 IN  
RAIN DAY=2.65 IN DT=0.03333 HR  
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0035 SQ MI  
PER A=100.00 B=0.0 C=0.0 D=0.0  
TP=0.1333 HR MASS RAINFALL=-1  
PFONT HYD ID=1 CODE=1  
FINISH



AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994  
 RUN DATE (MON/DAY/YR) = 08/10/1995  
 START TIME (HR:MIN:SEC) = 16:11:02 USER NO.= M\_GOODWN.101  
 INPUT FILE = BUDEX.DAT

START TIME=0.0

\*\*\*\*\* HYDROGRAPH FOR BUDGETEL MOTEL - EXIST

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=2.00 IN RAIN SIX=2.30 IN

RAIN DAY=2.65 IN DT=0.03333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2

PEAK AT 1.40 HR.

| DT = .033330 HOURS |        |        | END TIME = 5.999400 HOURS |        |        |        |
|--------------------|--------|--------|---------------------------|--------|--------|--------|
| .0000              | .0013  | .0026  | .0039                     | .0052  | .0066  | .0080  |
| .0095              | .0109  | .0125  | .0140                     | .0156  | .0173  | .0190  |
| .0207              | .0225  | .0243  | .0263                     | .0282  | .0303  | .0324  |
| .0346              | .0369  | .0392  | .0417                     | .0443  | .0470  | .0498  |
| .0528              | .0560  | .0593  | .0649                     | .0708  | .0771  | .0906  |
| .1210              | .1677  | .2348  | .3263                     | .4467  | .6001  | .7911  |
| 1.0243             | 1.2408 | 1.3312 | 1.4075                    | 1.4753 | 1.5371 | 1.5939 |
| 1.6467             | 1.6960 | 1.7423 | 1.7858                    | 1.8268 | 1.8656 | 1.9023 |
| 1.9370             | 1.9700 | 2.0013 | 2.0310                    | 2.0592 | 2.0654 | 2.0711 |
| 2.0765             | 2.0816 | 2.0865 | 2.0911                    | 2.0956 | 2.0999 | 2.1041 |
| 2.1081             | 2.1119 | 2.1156 | 2.1192                    | 2.1227 | 2.1261 | 2.1294 |
| 2.1327             | 2.1358 | 2.1388 | 2.1418                    | 2.1447 | 2.1476 | 2.1503 |
| 2.1531             | 2.1557 | 2.1583 | 2.1609                    | 2.1634 | 2.1658 | 2.1682 |
| 2.1706             | 2.1729 | 2.1752 | 2.1775                    | 2.1797 | 2.1819 | 2.1840 |
| 2.1861             | 2.1882 | 2.1902 | 2.1922                    | 2.1942 | 2.1962 | 2.1981 |
| 2.2000             | 2.2019 | 2.2037 | 2.2056                    | 2.2074 | 2.2092 | 2.2109 |
| 2.2127             | 2.2144 | 2.2161 | 2.2178                    | 2.2194 | 2.2211 | 2.2227 |
| 2.2243             | 2.2259 | 2.2274 | 2.2290                    | 2.2305 | 2.2321 | 2.2336 |
| 2.2351             | 2.2365 | 2.2380 | 2.2395                    | 2.2409 | 2.2423 | 2.2437 |
| 2.2451             | 2.2465 | 2.2479 | 2.2493                    | 2.2506 | 2.2519 | 2.2533 |
| 2.2546             | 2.2559 | 2.2572 | 2.2585                    | 2.2597 | 2.2610 | 2.2623 |
| 2.2635             | 2.2647 | 2.2660 | 2.2672                    | 2.2684 | 2.2696 | 2.2708 |
| 2.2719             | 2.2731 | 2.2743 | 2.2754                    | 2.2766 | 2.2777 | 2.2788 |
| 2.2800             | 2.2811 | 2.2822 | 2.2833                    | 2.2844 | 2.2855 | 2.2865 |
| 2.2876             | 2.2887 | 2.2897 | 2.2908                    | 2.2918 | 2.2929 | 2.2939 |
| 2.2949             | 2.2960 | 2.2970 | 2.2980                    | 2.2990 | 2.3000 |        |

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0035 SQ MI

PER A=100.00 B=0.0 C=0.0 D=0.0

TP=0.1333 HR MASS RAINFALL=-1

K = .160407HR TP = .133300HR K/TP RATIO = 1.203350 SHAPE

CONSTANT, N = 2.953649

UNIT PEAK = 7.2999 CFS UNIT VOLUME = .9977 B = 278.02

P60 = 2.0000



AREA = .003500 SQ MI IA = .65000 INCHES INF = 1.67000 I  
INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT  
= .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = .51315 INCHES = .0958 ACRE-FEET  
PEAK DISCHARGE RATE = 3.38 CFS AT 1.533 HOURS BASIN AREA =  
.0035 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 16:11:08



START TIME=0.0  
\*\*\* HYDROGRAPH FOR BUDGETEL MOTEL  
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN  
RAIN ONE=2.00 IN RAIN SIX=2.30 IN  
RAIN DAY=2.65 IN DT=0.03333 HR  
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0035 SQ MI  
PER A=00.00 B=29.76 C=000000 D=70.24  
TP=0.1333 HR MASS RAINFALL=-1  
PRINT HYD ID=1 CODE=1  
FINISH



6

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994  
 RUN DATE (MON/DAY/YR) = 08/03/1995  
 START TIME (HR:MIN:SEC) = 08:01:31 USER NO.= M\_GOODWN.101  
 INPUT FILE = BUD.DAT

START TIME=0.0

\*\*\*\*\* HYDROGRAPH FOR BUDGETEL MOTEL

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN  
 RAIN ONE=2.00 IN RAIN SIX=2.30 IN  
 RAIN DAY=2.65 IN DT=0.03333 HR

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

| DT = .033330 HOURS |        |        | END TIME = 5.999400 HOURS |        |        |        |
|--------------------|--------|--------|---------------------------|--------|--------|--------|
| .0000              | .0013  | .0026  | .0039                     | .0052  | .0066  | .0080  |
| .0095              | .0109  | .0125  | .0140                     | .0156  | .0173  | .0190  |
| .0207              | .0225  | .0243  | .0263                     | .0282  | .0303  | .0324  |
| .0346              | .0369  | .0392  | .0417                     | .0443  | .0470  | .0498  |
| .0528              | .0560  | .0593  | .0649                     | .0708  | .0771  | .0906  |
| .1210              | .1677  | .2348  | .3263                     | .4467  | .6001  | .7911  |
| 1.0243             | 1.2408 | 1.3312 | 1.4075                    | 1.4753 | 1.5371 | 1.5939 |
| 1.6467             | 1.6960 | 1.7423 | 1.7858                    | 1.8268 | 1.8656 | 1.9023 |
| 1.9370             | 1.9700 | 2.0013 | 2.0310                    | 2.0592 | 2.0654 | 2.0711 |
| 2.0765             | 2.0816 | 2.0865 | 2.0911                    | 2.0956 | 2.0999 | 2.1041 |
| 2.1081             | 2.1119 | 2.1156 | 2.1192                    | 2.1227 | 2.1261 | 2.1294 |
| 2.1327             | 2.1358 | 2.1388 | 2.1418                    | 2.1447 | 2.1476 | 2.1503 |
| 2.1531             | 2.1557 | 2.1583 | 2.1609                    | 2.1634 | 2.1658 | 2.1682 |
| 2.1706             | 2.1729 | 2.1752 | 2.1775                    | 2.1797 | 2.1819 | 2.1840 |
| 2.1861             | 2.1882 | 2.1902 | 2.1922                    | 2.1942 | 2.1962 | 2.1981 |
| 2.2000             | 2.2019 | 2.2037 | 2.2056                    | 2.2074 | 2.2092 | 2.2109 |
| 2.2127             | 2.2144 | 2.2161 | 2.2178                    | 2.2194 | 2.2211 | 2.2227 |
| 2.2243             | 2.2259 | 2.2274 | 2.2290                    | 2.2305 | 2.2321 | 2.2336 |
| 2.2351             | 2.2365 | 2.2380 | 2.2395                    | 2.2409 | 2.2423 | 2.2437 |
| 2.2451             | 2.2465 | 2.2479 | 2.2493                    | 2.2506 | 2.2519 | 2.2533 |
| 2.2546             | 2.2559 | 2.2572 | 2.2585                    | 2.2597 | 2.2610 | 2.2623 |
| 2.2635             | 2.2647 | 2.2660 | 2.2672                    | 2.2684 | 2.2696 | 2.2708 |
| 2.2719             | 2.2731 | 2.2743 | 2.2754                    | 2.2766 | 2.2777 | 2.2788 |
| 2.2800             | 2.2811 | 2.2822 | 2.2833                    | 2.2844 | 2.2855 | 2.2865 |
| 2.2876             | 2.2887 | 2.2897 | 2.2908                    | 2.2918 | 2.2929 | 2.2939 |
| 2.2949             | 2.2960 | 2.2970 | 2.2980                    | 2.2990 | 2.3000 |        |

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0035 SQ MI  
 PER A=00.00 B=29.76 C=000000 D=70.24  
 TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE  
 CONSTANT, N = 7.106420  
 UNIT PEAK = 9.7059 CFS UNIT VOLUME = .9982 B = 526.28  
 P60 = 2.0000



AREA = .002458 SQ MI IA = .10000 INCHES INF = .04000 I  
NCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT  
= .033330

7

K = .131967HR TF = .133300HR K/TF RATIO = .990000 SHAPE  
CONSTANT, N = 3.566429  
UNIT PEAK = 2.5407 CFS UNIT VOLUME = .9951 B = 325.15  
P60 = 2.0000

AREA = .001042 SQ MI IA = .50000 INCHES INF = 1.25000 I  
NCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT  
= .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 1.67723 INCHES = .3131 ACRE-FEET  
PEAK DISCHARGE RATE = 8.84 CFS AT 1.500 HOURS BASIN AREA =  
.0035 SQ. MI.

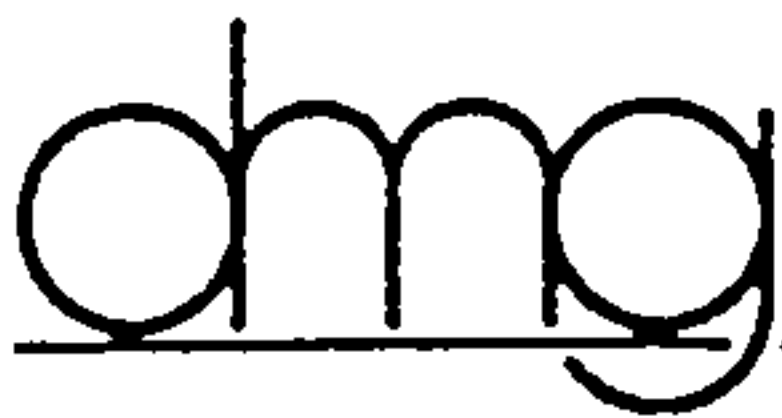
*Proposed*

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 08:01:55

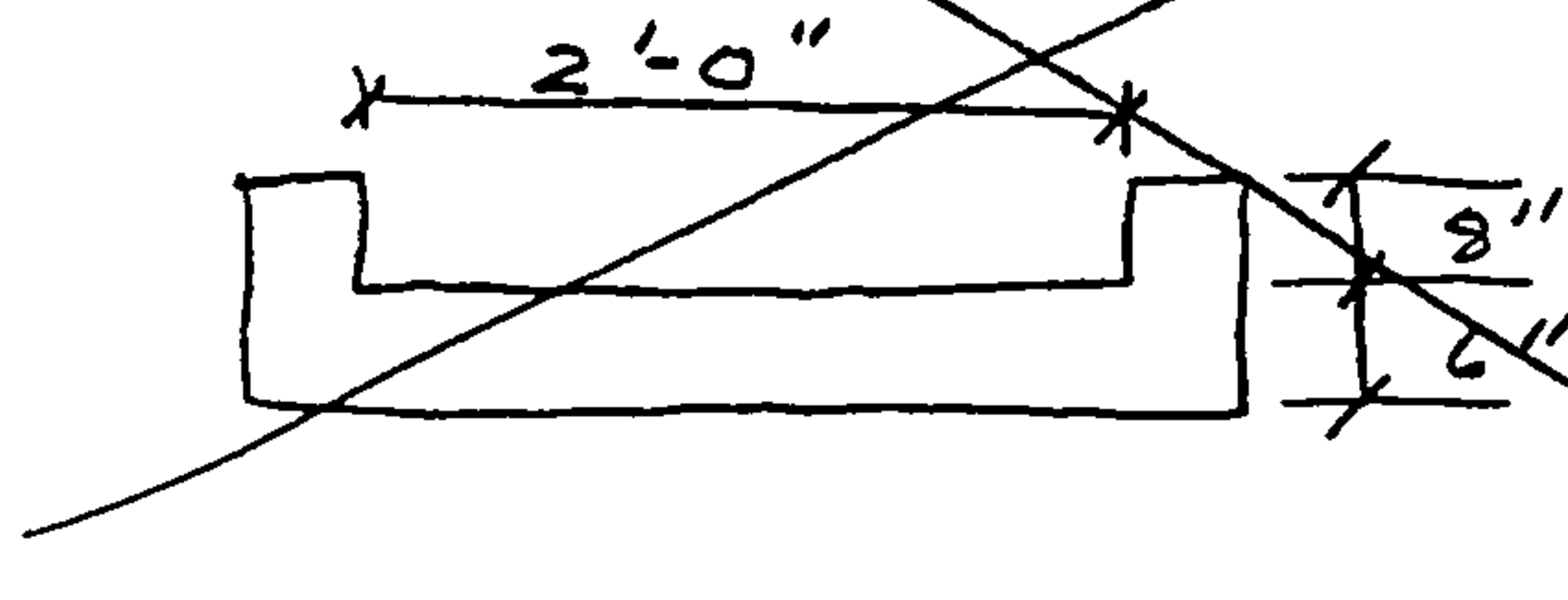




D. Mark Goodwin & Associates, P.A.  
Consulting Engineers and Surveyors

PROJECT BUGETEL  
SUBJECT DRAINAGE CALCS  
BY GJK DATE 1-11-95  
CHECKED \_\_\_\_\_ DATE \_\_\_\_\_  
SHEET 8 OF \_\_\_\_\_  
REVISED 8-29-95 9-6-95

A 2' SIDEWALK CULVERT WILL WORK WITH  
8" HIGH WALL



• SIZE STORM DRAIN

CB1 in sump condition

$$\text{AREA} = 20 \times 120 = 2400 \text{ SF} = 0.055 \text{ AC} \\ = 0.00086 \text{ SM}$$

TYPE "B" = 80%

TYPE "D" = 20%

FROM HYMO SHEETS 9-11 *where?*

$$Q = 0.24 \text{ CFS}$$

$$V = 0.0083 \text{ AC-FT}$$

CB2 in sump condition

$$\text{AREA} = 8764 \text{ SF} = 0.201 \text{ AC} = 0.000314 \text{ SM}$$

TYPE "B" = 16.43 %

TYPE "D" = 83.57 %

FROM HYMO SHEETS 12-14 *where?*

$$Q = 0.88 \text{ CFS}$$

$$V = 0.0311 \text{ AC-FT}$$

FOR INLET IN SUMP

$$Q/P = 3.0 H^{3/2}$$

$$P = 11 \text{ FT} \quad \text{ASSUME } 50\% \text{ CLOGGED}$$

• CB1 •

$$Q/P = 1.24/5.5 = 0.0436 = 3.0 H^{3/2} \quad H = 0.06' \quad \text{OK}$$

• CB2 •

$$Q/P = 1.88/5.5 = 0.16 = 3.0 H^{3/2} \quad H = 0.14' \quad \text{OK}$$

• SIZE CONNECTOR PIPES.

|                    |                        |                             |    |
|--------------------|------------------------|-----------------------------|----|
| CB1 - MH1          | 18" RCP AT 1% SLOPE    | CARRIES 10.5 CFS > 0.24 CFS | OK |
| CB2 - MH1          | " " "                  | " > 0.88 CFS                | OK |
| MH1 - MH2          | 18" RCP AT 1.74% SLOPE | CARRIES 13.9 CFS > 1.12 CFS | OK |
| MH2 - CURB OUTFALL | 4-4" PVC AT 1.7% SLOPE | CARRIES 1.3 CFS > 1.12 CFS  | OK |

SEE NOMO SHEET 15



START                    TIME=0.0  
\*\*\*\*\* HYDROGRAPH FOR BUDGETEL MOTEL-CB1  
RAINFALL                TYPE=1 RAIN QUARTER=0.0 IN  
                        RAIN ONE=2.00 IN RAIN SIX=2.30 IN  
                        RAIN DAY=2.65 IN DT=0.03333 HR  
COMPUTE NM HYD        ID=1 HYD NO=101.1 AREA=0.000086 SQ MI  
                        PER A=00.00 B=20.0 C=0.00 D=80.0  
                        TP=0.1333 HR MASS RAINFALL=-1  
PRINT HYD              ID=1 CODE=1  
FINISH



AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994  
RUN DATE (MON/DAY/YR) = 08/29/1995  
START TIME (HR:MIN:SEC) = 12:09:50    USER NO.= M\_GOODWN.I01  
INPUT FILE = BUDCB1.DAT

START                    TIME=0.0  
\*\*\*\*\* HYDROGRAPH FOR BUDGETEL MOTEL-CB1  
RAINFALL                TYPE=1 RAIN QUARTER=0.0 IN  
                        RAIN ONE=2.00 IN RAIN SIX=2.30 IN  
                        RAIN DAY=2.65 IN DT=0.03333 HR

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

DT = .033330 HOURS            END TIME = 5.999400 HOURS

|        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|
| .0000  | .0013  | .0026  | .0039  | .0052  | .0066  | .0080  |
| .0095  | .0109  | .0125  | .0140  | .0156  | .0173  | .0190  |
| .0207  | .0225  | .0243  | .0263  | .0282  | .0303  | .0324  |
| .0346  | .0369  | .0392  | .0417  | .0443  | .0470  | .0498  |
| .0528  | .0560  | .0593  | .0649  | .0708  | .0771  | .0906  |
| .1210  | .1677  | .2348  | .3263  | .4467  | .6001  | .7911  |
| 1.0243 | 1.2408 | 1.3312 | 1.4075 | 1.4753 | 1.5371 | 1.5939 |
| 1.6467 | 1.6960 | 1.7423 | 1.7858 | 1.8268 | 1.8656 | 1.9023 |
| 1.9370 | 1.9700 | 2.0013 | 2.0310 | 2.0592 | 2.0654 | 2.0711 |
| 2.0765 | 2.0816 | 2.0865 | 2.0911 | 2.0956 | 2.0999 | 2.1041 |
| 2.1081 | 2.1119 | 2.1156 | 2.1192 | 2.1227 | 2.1261 | 2.1294 |
| 2.1327 | 2.1358 | 2.1388 | 2.1418 | 2.1447 | 2.1476 | 2.1503 |
| 2.1531 | 2.1557 | 2.1583 | 2.1609 | 2.1634 | 2.1658 | 2.1682 |
| 2.1706 | 2.1729 | 2.1752 | 2.1775 | 2.1797 | 2.1819 | 2.1840 |
| 2.1861 | 2.1882 | 2.1902 | 2.1922 | 2.1942 | 2.1962 | 2.1981 |
| 2.2000 | 2.2019 | 2.2037 | 2.2056 | 2.2074 | 2.2092 | 2.2109 |
| 2.2127 | 2.2144 | 2.2161 | 2.2178 | 2.2194 | 2.2211 | 2.2227 |
| 2.2243 | 2.2259 | 2.2274 | 2.2290 | 2.2305 | 2.2321 | 2.2336 |
| 2.2351 | 2.2365 | 2.2380 | 2.2395 | 2.2409 | 2.2423 | 2.2437 |
| 2.2451 | 2.2465 | 2.2479 | 2.2493 | 2.2506 | 2.2519 | 2.2533 |
| 2.2546 | 2.2559 | 2.2572 | 2.2585 | 2.2597 | 2.2610 | 2.2623 |
| 2.2635 | 2.2647 | 2.2660 | 2.2672 | 2.2684 | 2.2696 | 2.2708 |
| 2.2719 | 2.2731 | 2.2743 | 2.2754 | 2.2766 | 2.2777 | 2.2788 |
| 2.2800 | 2.2811 | 2.2822 | 2.2833 | 2.2844 | 2.2855 | 2.2865 |
| 2.2876 | 2.2887 | 2.2897 | 2.2908 | 2.2918 | 2.2929 | 2.2939 |
| 2.2949 | 2.2960 | 2.2970 | 2.2980 | 2.2990 | 2.3000 |        |

COMPUTE NM HYD    ID=1 HYD NO=101.1 AREA=0.000086 SQ MI

PER A=00.00 B=20.0 C=0.00 D=80.0



TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE  
 CONSTANT, N = 7.106420  
 UNIT PEAK = .27163 CFS UNIT VOLUME = .9546 B = 526.28  
 P60 = 2.0000  
 AREA = .000069 SQ MI IA = .10000 INCHES INF = .04000 INCHES  
 PER HOUR  
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER  
 METHOD - DT = .033330

K = .131967HR TP = .133300HR K/TP RATIO = .990000 SHAPE  
 CONSTANT, N = 3.566429  
 UNIT PEAK = .41954E-01CFS UNIT VOLUME = .8711 B = 325.15  
 P60 = 2.0000  
 AREA = .000017 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES  
 PER HOUR  
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER  
 METHOD - DT = .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 1.80487 INCHES = .0083 ACRE-FEET  
 PEAK DISCHARGE RATE = .24 CFS AT 1.500 HOURS BASIN AREA =  
 .0001 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 12:09:56



START TIME=0.0  
\*\*\*\*\* HYDROGRAPH FOR BUDGETEL MOTEL-CB2  
RAINFALL TYPE=1 RAIN QUARTER=0.0 IN  
RAIN ONE=2.00 IN RAIN SIX=2.30 IN  
RAIN DAY=2.65 IN DT=0.03333 HR  
COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0003145 SQ MI  
PER A=00.00 B=16.43 C=0.00 D=83.57  
TP=0.1333 HR MASS RAINFALL=-1  
PRINT HYD ID=1 CODE=1  
FINISH



AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994  
 RUN DATE (MON/DAY/YR) = 08/29/1995  
 START TIME (HR:MIN:SEC) = 12:36:18 USER NO.= M\_GOODWN.101  
 INPUT FILE = BUDCB2.DAT

START TIME=0.0  
 \*\*\*\*\* HYDROGRAPH FOR BUDGETEL MOTEL-CB2  
 RAINFALL TYPE=1 RAIN QUARTER=0.0 IN  
 RAIN ONE=2.00 IN RAIN SIX=2.30 IN  
 RAIN DAY=2.65 IN DT=0.03333 HR

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

DT = .033330 HOURS END TIME = 5.999400 HOURS

|        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|
| .0000  | .0013  | .0026  | .0039  | .0052  | .0066  | .0080  |
| .0095  | .0109  | .0125  | .0140  | .0156  | .0173  | .0190  |
| .0207  | .0225  | .0243  | .0263  | .0282  | .0303  | .0324  |
| .0346  | .0369  | .0392  | .0417  | .0443  | .0470  | .0498  |
| .0528  | .0560  | .0593  | .0649  | .0708  | .0771  | .0906  |
| .1210  | .1677  | .2348  | .3263  | .4467  | .6001  | .7911  |
| 1.0243 | 1.2408 | 1.3312 | 1.4075 | 1.4753 | 1.5371 | 1.5939 |
| 1.6467 | 1.6960 | 1.7423 | 1.7858 | 1.8268 | 1.8656 | 1.9023 |
| 1.9370 | 1.9700 | 2.0013 | 2.0310 | 2.0592 | 2.0654 | 2.0711 |
| 2.0765 | 2.0816 | 2.0865 | 2.0911 | 2.0956 | 2.0999 | 2.1041 |
| 2.1081 | 2.1119 | 2.1156 | 2.1192 | 2.1227 | 2.1261 | 2.1294 |
| 2.1327 | 2.1358 | 2.1388 | 2.1418 | 2.1447 | 2.1476 | 2.1503 |
| 2.1531 | 2.1557 | 2.1583 | 2.1609 | 2.1634 | 2.1658 | 2.1682 |
| 2.1706 | 2.1729 | 2.1752 | 2.1775 | 2.1797 | 2.1819 | 2.1840 |
| 2.1861 | 2.1882 | 2.1902 | 2.1922 | 2.1942 | 2.1962 | 2.1981 |
| 2.2000 | 2.2019 | 2.2037 | 2.2056 | 2.2074 | 2.2092 | 2.2109 |
| 2.2127 | 2.2144 | 2.2161 | 2.2178 | 2.2194 | 2.2211 | 2.2227 |
| 2.2243 | 2.2259 | 2.2274 | 2.2290 | 2.2305 | 2.2321 | 2.2336 |
| 2.2351 | 2.2365 | 2.2380 | 2.2395 | 2.2409 | 2.2423 | 2.2437 |
| 2.2451 | 2.2465 | 2.2479 | 2.2493 | 2.2506 | 2.2519 | 2.2533 |
| 2.2546 | 2.2559 | 2.2572 | 2.2585 | 2.2597 | 2.2610 | 2.2623 |
| 2.2635 | 2.2647 | 2.2660 | 2.2672 | 2.2684 | 2.2696 | 2.2708 |
| 2.2719 | 2.2731 | 2.2743 | 2.2754 | 2.2766 | 2.2777 | 2.2788 |
| 2.2800 | 2.2811 | 2.2822 | 2.2833 | 2.2844 | 2.2855 | 2.2865 |
| 2.2876 | 2.2887 | 2.2897 | 2.2908 | 2.2918 | 2.2929 | 2.2939 |
| 2.2949 | 2.2960 | 2.2970 | 2.2980 | 2.2990 | 2.3000 |        |

COMPUTE NM HYD ID=1 HYD NO=101.1 AREA=0.0003145 SQ MI

PER A=00.00 B=16.43 C=0.00 D=83.57



TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE  
 CONSTANT, N = 7.106420  
 UNIT PEAK = 1.0377 CFS UNIT VOLUME = .9881 B = 526.28  
 P60 = 2.0000  
 AREA = .000263 SQ MI IA = .10000 INCHES INF = .04000 INCHES  
 PER HOUR  
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER  
 METHOD - DT = .033330

K = .131967HR TP = .133300HR K/TP RATIO = .990000 SHAPE  
 CONSTANT, N = 3.566429  
 UNIT PEAK = .12604 CFS UNIT VOLUME = .8911 B = 325.15  
 P60 = 2.0000  
 AREA = .000052 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES  
 PER HOUR  
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER  
 METHOD - DT = .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 101.10

RUNOFF VOLUME = 1.85156 INCHES = .0311 ACRE-FEET  
 PEAK DISCHARGE RATE = .88 CFS AT 1.500 HOURS BASIN AREA =  
 .0003 SQ. MI.

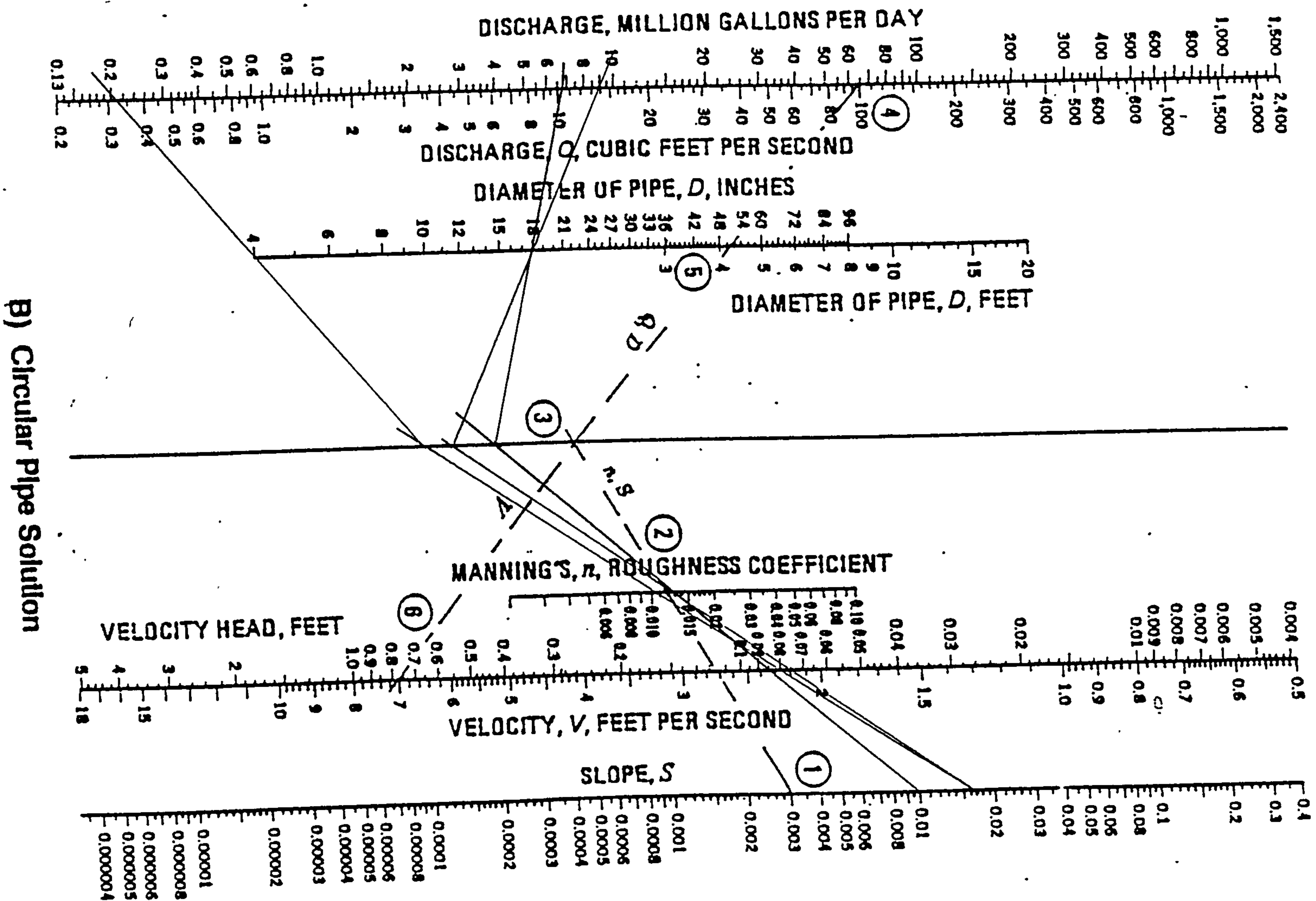
FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 12:36:25



Reference: American Concrete Pipe Association (1980).



B) Circular Pipe Solution