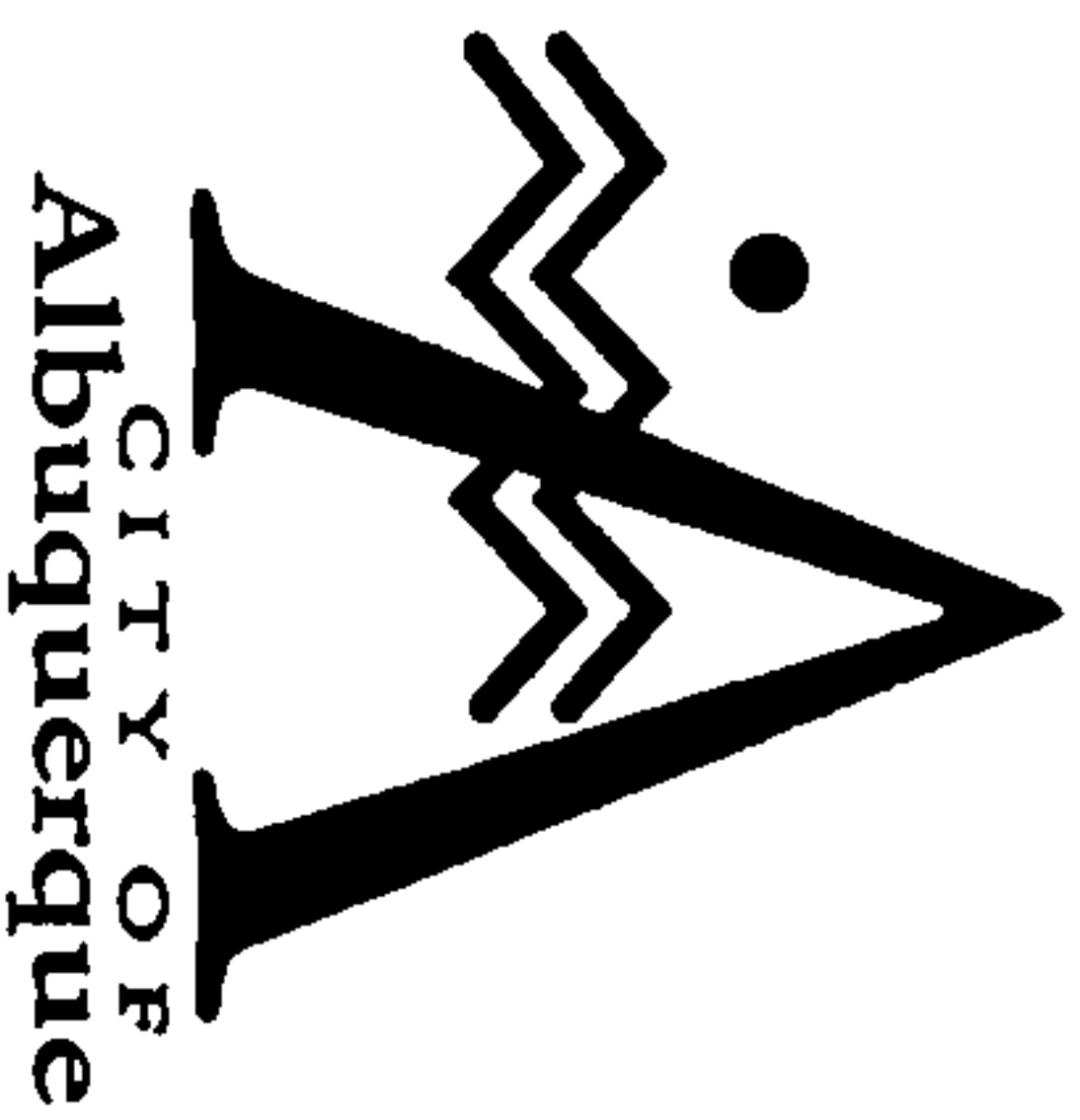




November 27, 1998

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

RE: ENGINEER CERTIFICATION FOR QUALITY PONTIAC-BUICK-GMC (J19-D70)
CERTIFICATION STATEMENT DATED 11/4/98

Dear Mr. Krenik:

Based on the information provided on your November 4, 1998 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
Bernie J. Montoya CE
Associate Engineer

Good for You, Albuquerque!



DRAINAGE INFORMATION SHEET

519-070

PROJECT TITLE: Quality Pontiac - Buick - GMC ZONE ATLAS/DRNG, FILE#: J-19

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Lot 4, Ashcraft Center and Block "E" of Mesa del Norte Heights No. 10, and Lots 10-15, Block

20 of East End Addition.

CITY ADDRESS: 7901 Lomas Blvd NE

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: Gregory J. Krenik PE

ADDRESS: POBox 90606 Albuquerque, NM 87199 PHONE: 828-2200

OWNER: Quality Pontiac CONTACT: Annette Dilorenzo

ADDRESS: 8101 Lomas NE Albuquerque, NM PHONE: 265-3753

ARCHITECT: DuraBilt CONTACT: Brad Little

ADDRESS: 4808 Jefferson NE Albuquerque, NM PHONE: 883-9100

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

DATE SUBMITTED: 11-4-98

BY: Gregory J. Krenik, PE

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

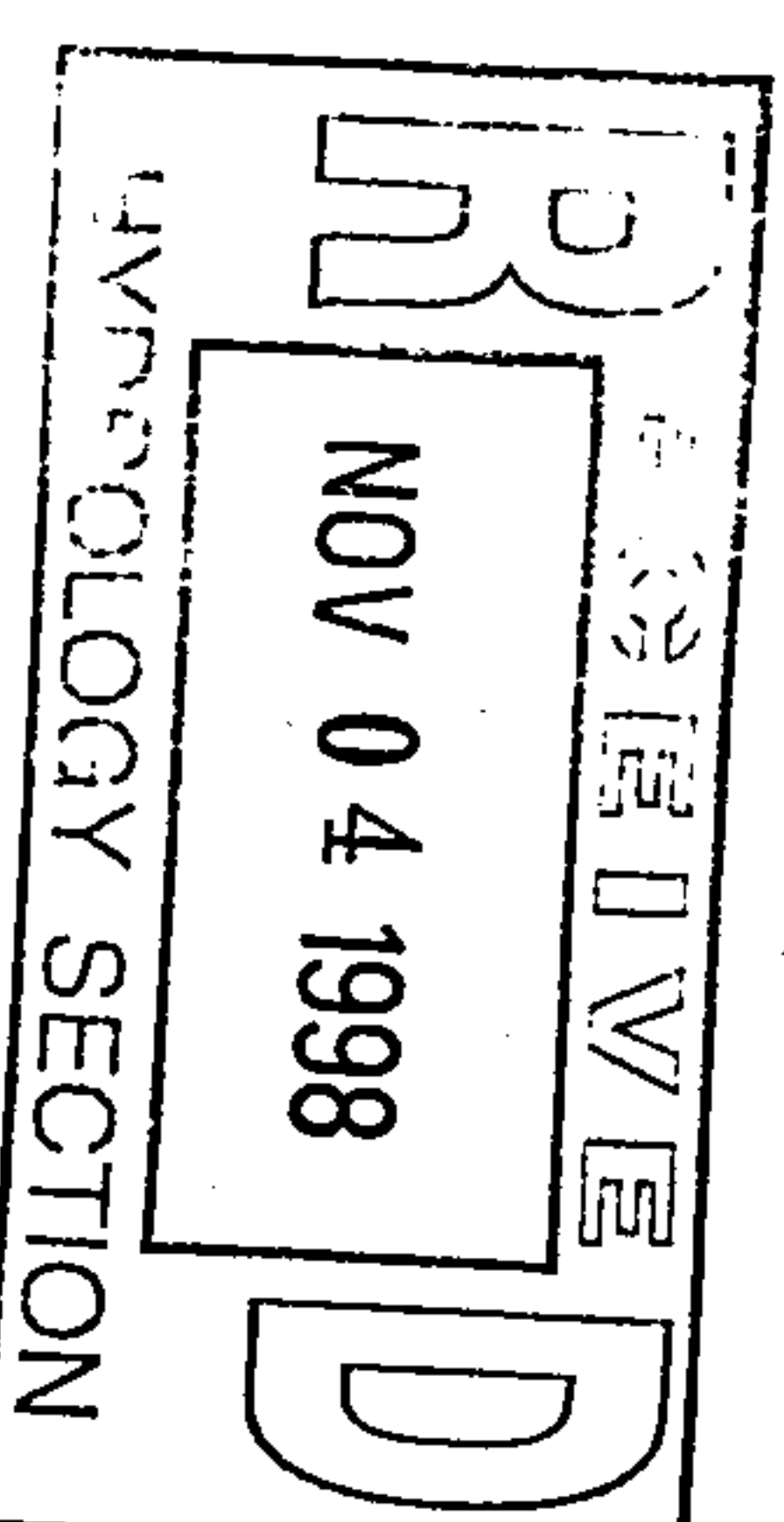
☐ PAVING PERMIT APPROVAL

☐ S.A.D. DRAINAGE REPORT

☐ DRAINAGE REQUIREMENTS

☒ OTHER _____ (Specify)

1mm. 30 day Test.



PUBLIC WORKS DEPARTMENT

SIDEWALK & DRIVEPAD INSPECTION

APPROVED

Inspector

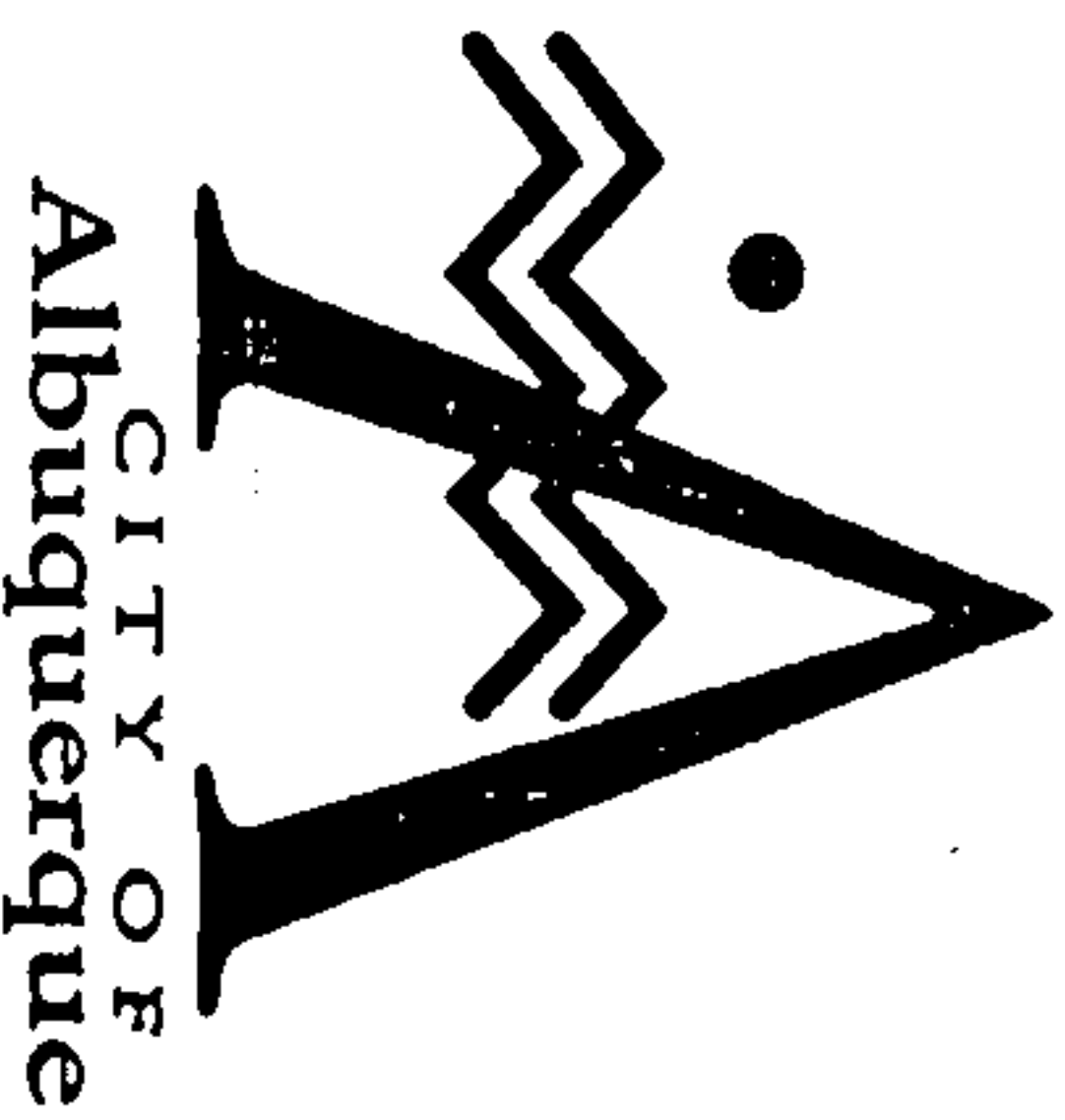
Permits 768-2551 Dispatch 857-8025 Insp. Office 857-8036

Date 11-11-98 Permit No 22011923

Contractor Cice Kenneth

Location 7901 Lenox

Time 11:00 AM



September 25, 1998

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

RE: REVISED DRAINAGE PLAN FOR QUALITY PONTIAC-BUICK-GMC (J19-D70)
REVISION DATED 8/19/98

Dear Mr. Krenik:

Based on the information provided on your August 19, 1998 resubmittal, the above referenced site is approved for Building Permit & SO 19.

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 R/W. A copy of this approved plan must be on hand when applying for the excavation permit.

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

Arlene Portillo

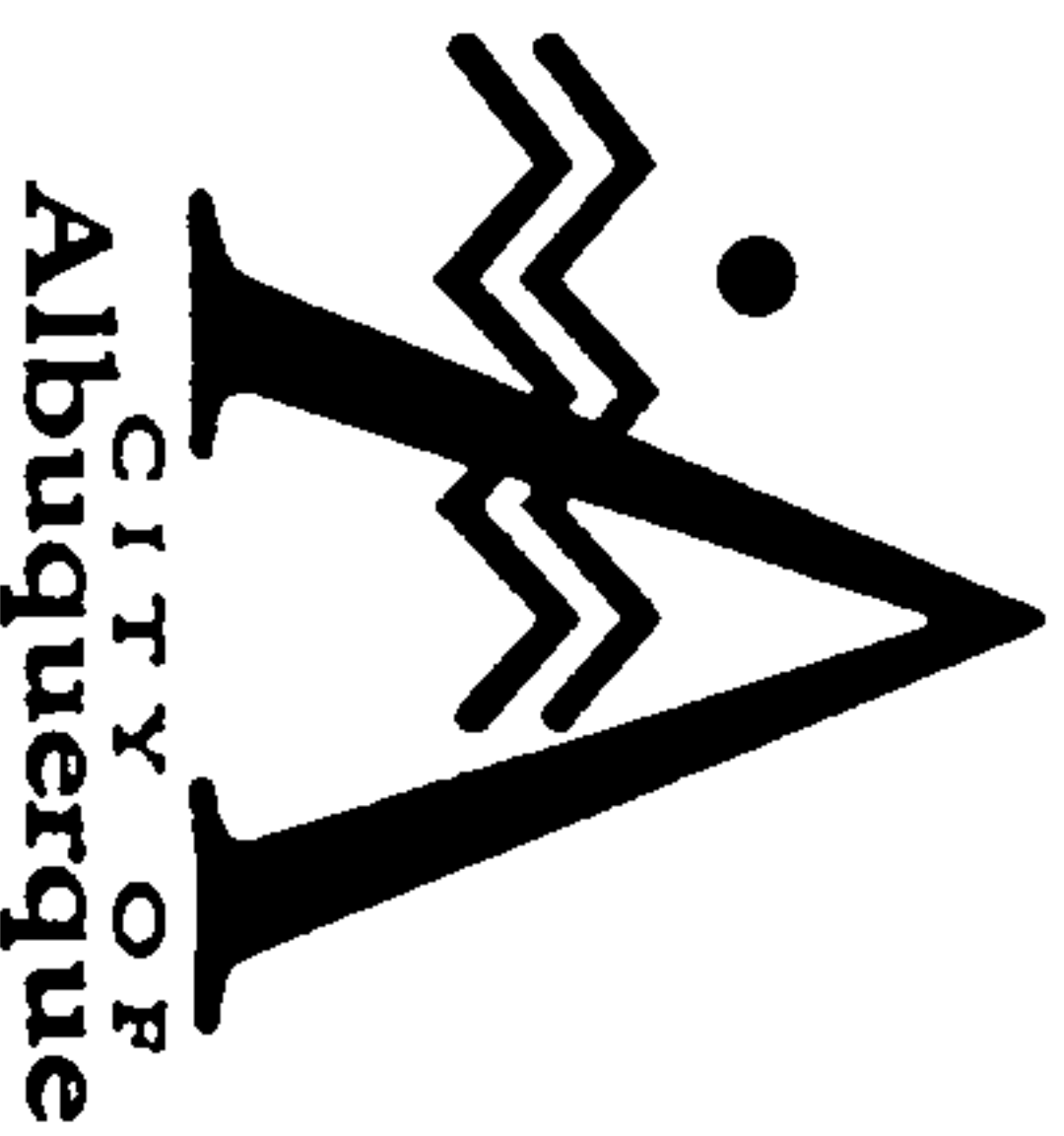
~~File~~

Sincerely

Bernie J. Montoya CE
Associate Engineer

Good for You, Albuquerque!





June 25, 1998

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

RE: REVISED DRAINAGE PLAN FOR QUALITY PONTIAC-BUICK-GMC (J19-D70)
REVISION DATED 6/23/98

Dear Mr. Krenik:

Based on the information provided on your June 23, 1998 resubmittal, the above referenced site is approved for Building Permit.

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 R/W. A copy of this approval letter must be on hand when applying for the excavation permit.

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
File

Sincerely

Bernie J. Montoya
Bernie J. Montoya CE
Associate Engineer

Good for You, Albuquerque!



DRAINAGE INFORMATION SHEET

PROJECT TITLE: Quality Pontiac - Buick - GMC ZONE ATLAS/DRNG, FILE#: J-19

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Lot 4, Ashcraft Center and Block "E" of Mesa del Norte Heights No. 10, and Lots 10-15, Block 20 of East End Addition.

CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: Gregory J. Krenik PE

ADDRESS: POBox 90606 Albuquerque, NM 87199 PHONE: 828-2200

OWNER: Quality Pontiac CONTACT: Annette Dilorenzo

ADDRESS: 8101 Lomas NE Albuquerque, NM PHONE: 265-3753

ARCHITECT: Durabilt CONTACT: Brad Little

ADDRESS: 4808 Jefferson NE Albuquerque, NM PHONE: 883-9100

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

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

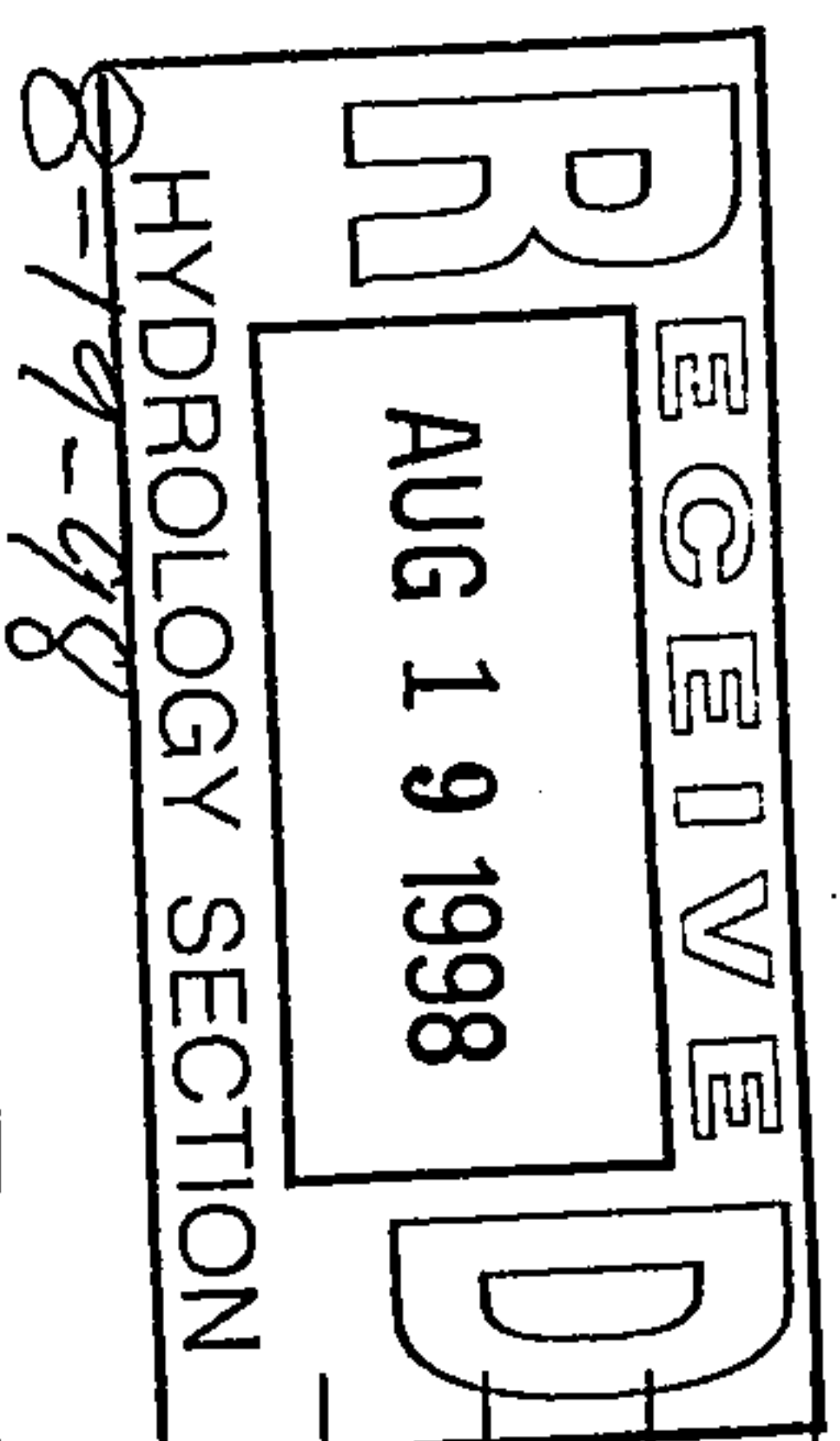
☐ S.A.D. DRAINAGE REPORT

☐ DRAINAGE REQUIREMENTS

☐ OTHER _____ (Specify)

DATE SUBMITTED: _____

BY: Gregory J. Krenik, PE



THE NORTH DRIVEWAYS USES
RECALCATED

DRAINAGE INFORMATION SHEET

PROJECT TITLE: Quality Pontiac - Buick - GMC ZONE ATLAS/DRNG, FILE#: J-19

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Lot 4, Ashcraft Center and Block "E" of Mesa del Norte Heights No. 10, and Lots 10-15, Block 20 of East End Addition.

CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: Gregory J. Krenik PE

ADDRESS: POBox 90606 Albuquerque, NM 87199 PHONE: 828-2200

OWNER: Quality Pontiac CONTACT: Annette DiLorenzo

ADDRESS: 8101 Lomas NE Albuquerque, NM PHONE: 265-3753

ARCHITECT: DuraBilt CONTACT: Brad Little

ADDRESS: 4808 Jefferson NE Albuquerque, NM PHONE: 883-9100

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

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

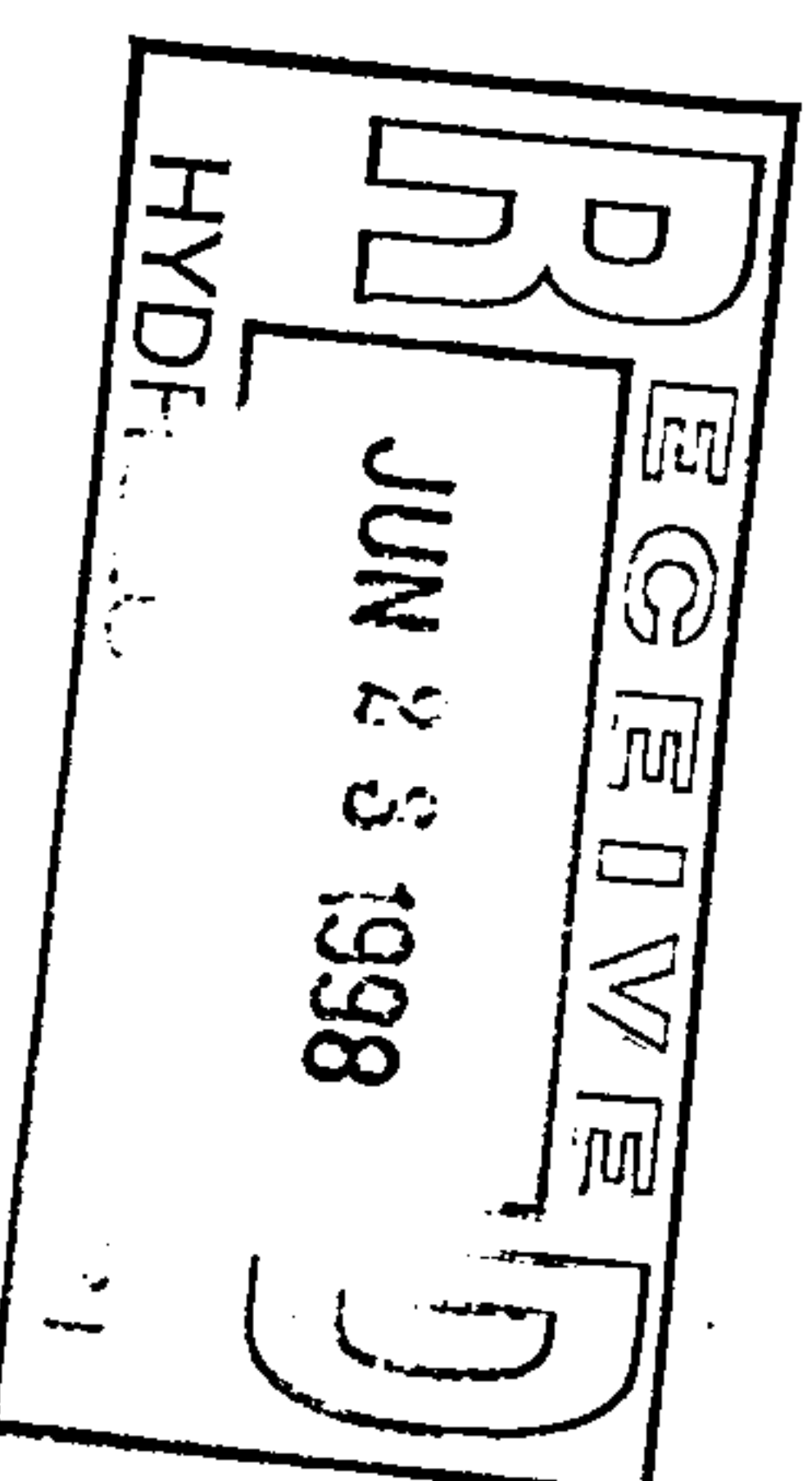
☐ OTHER _____ (Specify)

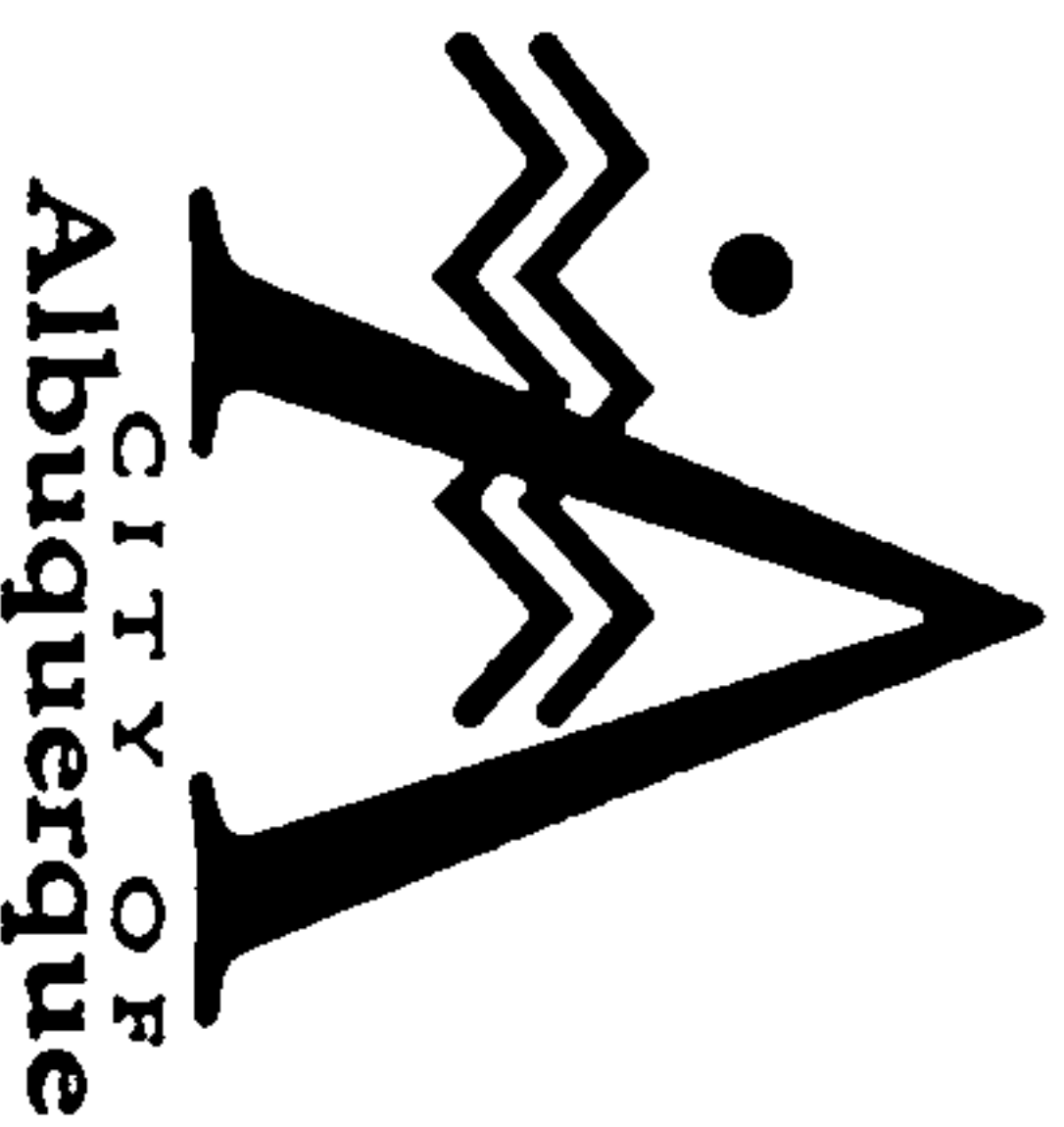
☐ YES
☒ NO
COPY PROVIDED

DATE SUBMITTED: 6-23-98

BY: _____

Gregory J. Krenik, PE





June 22, 1998

Greg Krenik
D. Mark Goodwin & Associates
P.O. Box 90606
Albuquerque, New Mexico

RE: REVISED DRAINAGE PLAN FOR QUALITY PONTIAC-BUICK-GMC (J19-D70)
REVISION DATED 5/26/98

Dear Mr. Krenik:

Based on the information provided on your May 27, 1998 resubmittal, listed are some concerns that will need to be addressed prior to final approval:

1. Please identify the spec. no. that pertains to the sidewalk culvert. Remove the narrative about saw cutting the curb. The spec. Indicates that the full stone must be removed.

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

C: Andrew Garcia

File

Sincerely

A handwritten signature in cursive script that reads 'Bernie J. Montoya'.

Bernie J. Montoya CE
Associate Engineer

Good for You, Albuquerque!



DRAINAGE INFORMATION SHEET

070

PROJECT TITLE: Quality Pontiac - Buick - GMC ZONE ATLAS/DRNG, FILE#: J-19

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Lot 4, Ashcraft Center and Block "E" of Mesa del Norte Heights No. 10, and Lots 10-15, Block 20 of East End Addition.

CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: Gregory J. Krenik PE

ADDRESS: POBox 90606 Albuquerque, NM 87199 PHONE: 828-2200

OWNER: Quality Pontiac CONTACT: Annette Dileo

ADDRESS: 8101 Lomas NE Albuquerque, NM PHONE: 265-3753

ARCHITECT: DuraBit CONTACT: Brad Little

ADDRESS: 4808 Jefferson NE Albuquerque, NM PHONE: 883-9100

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

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)

ONE STOP

☐ COPY PROVIDED

☐ PRE-DESIGN MEETING:

☐ YES

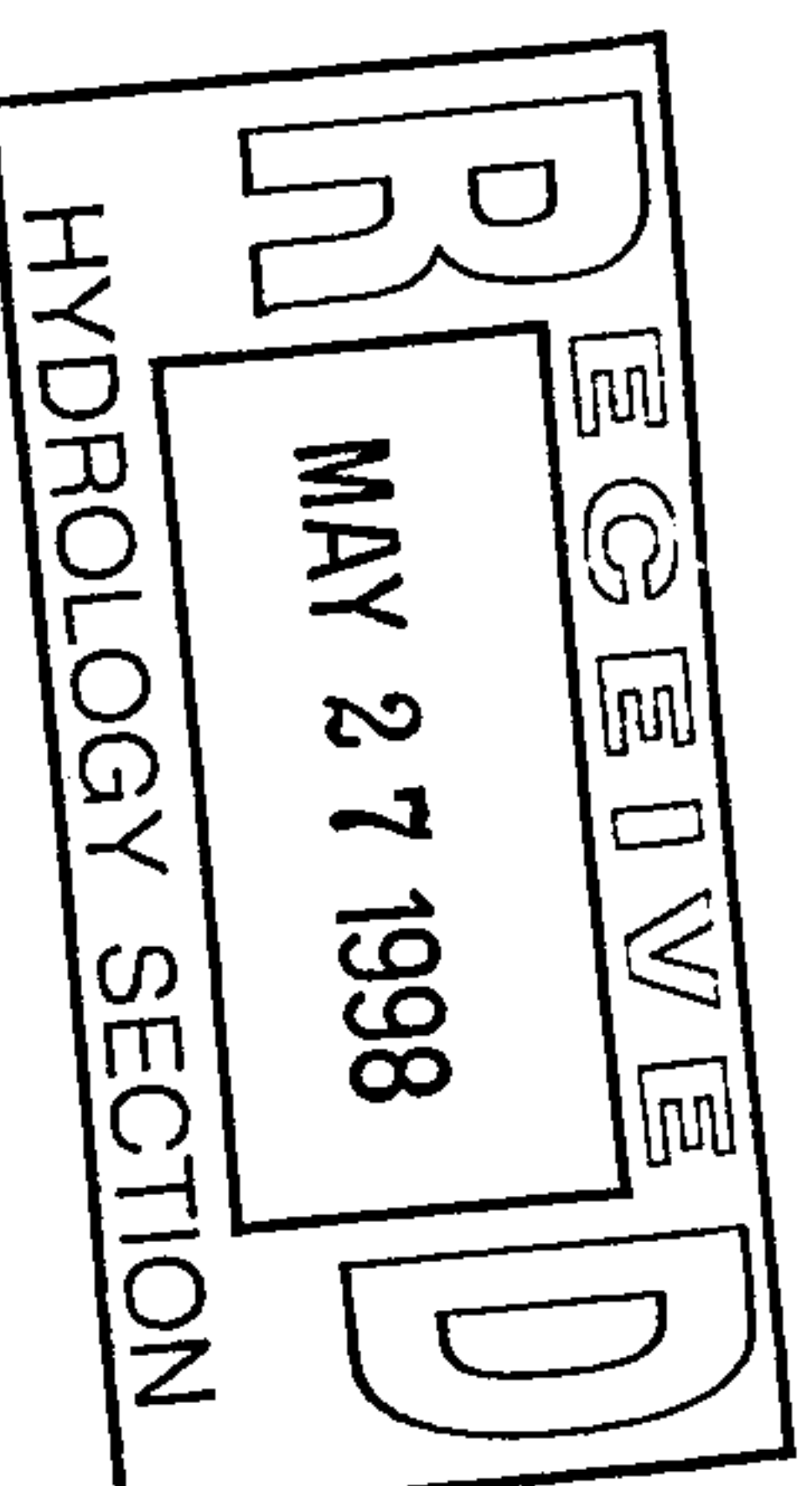
☒ NO

☐ COPY PROVIDED

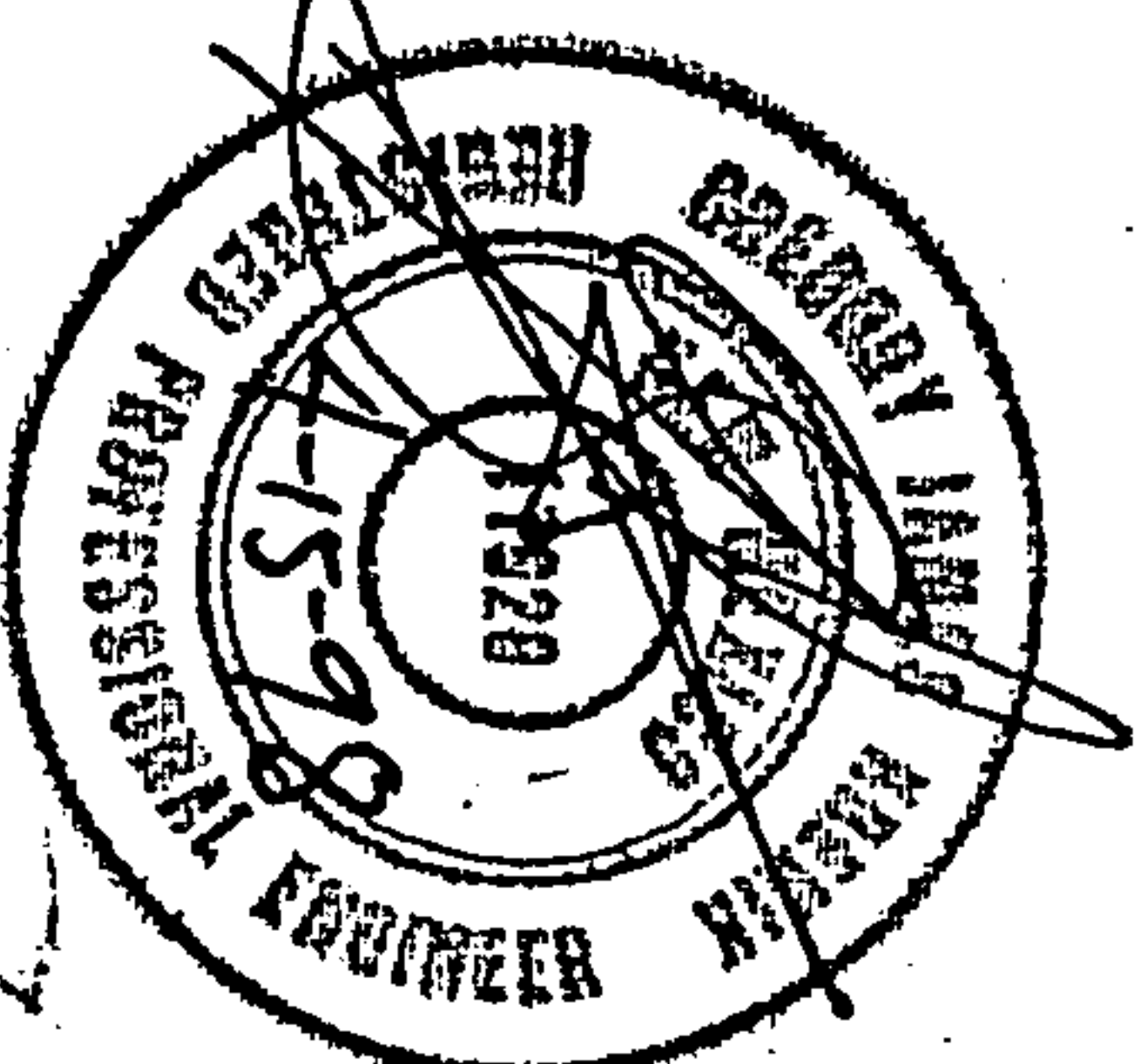
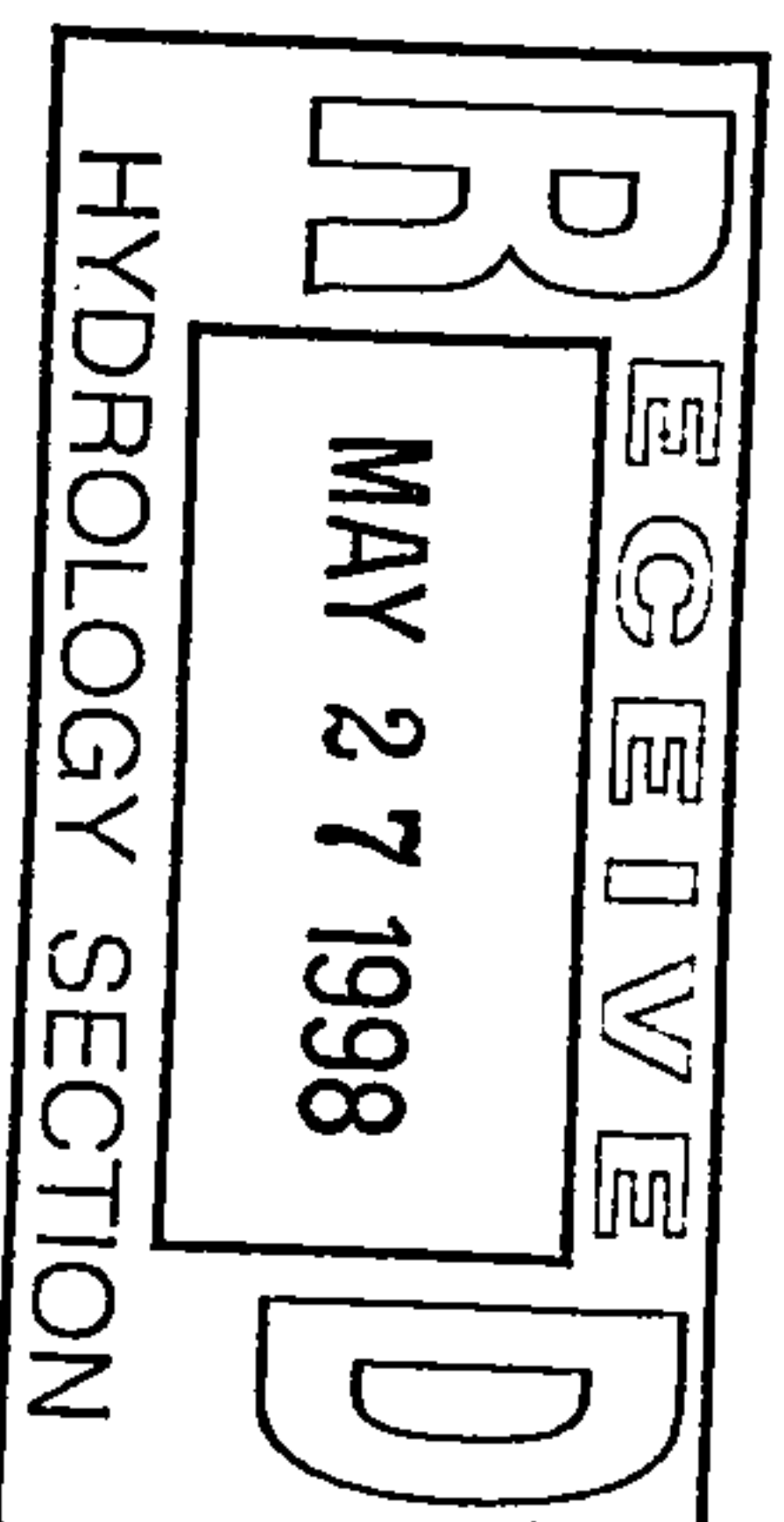
DATE SUBMITTED: 5-26-98

BY: _____

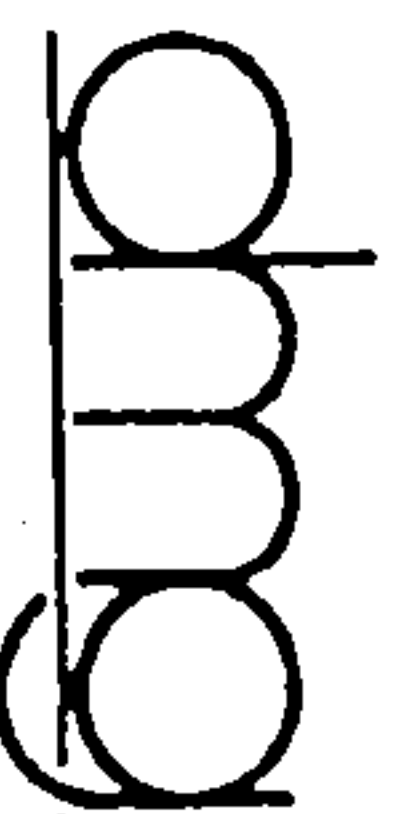
Gregory J. Krenik, PE



DRAINAGE CALCULATIONS
FOR
QUALITY PONTIAC - BUICK - GMC



5-26-98



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

PROJECT Capacity Route
SUBJECT Drainage Cals
BY GSK DATE 4-15-98

CHECKED _____ DATE _____

SHEET 2 OF _____

Revised 5-26-98

- FIND DEVELOPED AND UNDEVELOPED RUNOFF.

<u>DEVELOPED</u>		<u>NORTH PARCEL</u>	<u>SOUTH PARCEL</u>
AREA		0.6801 AC	2.9468 AC
TYPE "B"		16.23%	8.33%
TYPE "D"		83.77%	91.67%
P ₁		2.05 in	2.05 in
P ₄		2.45 in	2.45 in
P ₂₄		2.90 in	2.90 in

FROM HYDRO OUTPUT SHEETS 4-9

Q 3.02 CFS 13.58 CFS

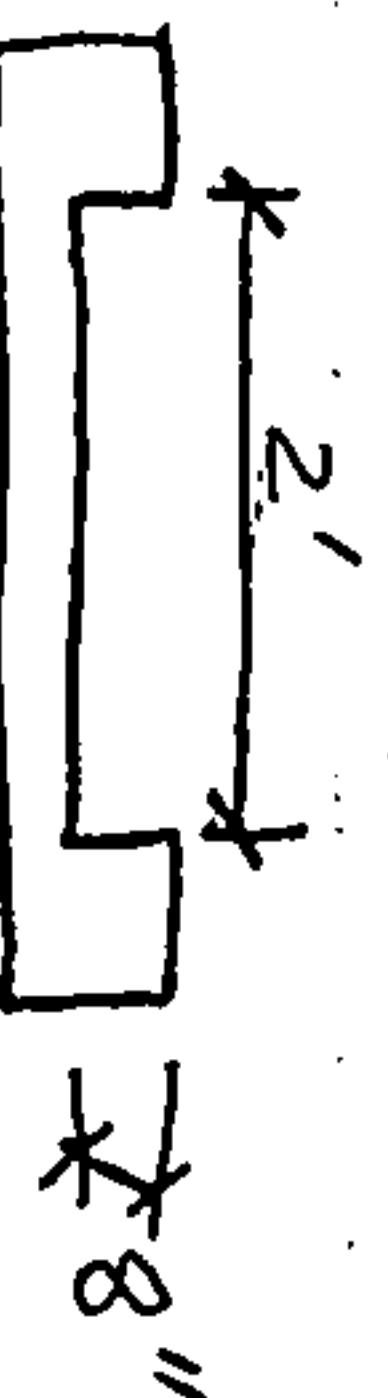
UNDEVELOPED

FROM HYDRO OUTPUT SHEETS 10-15

Q 1.15 CFS 4.96 CFS

- THE RUNOFF FROM THIS SITE DOES NOT CONTRIBUTE TO A DESIGNATED DOWNSTREAM FLOOD HAZARD AND THEREFORE DIRECT DISCHARGE IS ACCEPTABLE.

- SIZE SIDEWALK CURB



- SIZE WEIR

$$Q = 2.95 \text{ CFS} < 4.15$$

$$= 3.24 \text{ CFS} > 3.02 \text{ CFS} \text{ OK}$$

$$\text{SCORE} = \frac{30.00 - 28.74}{12}$$

$$= 10.5\%$$

- CAPACITY

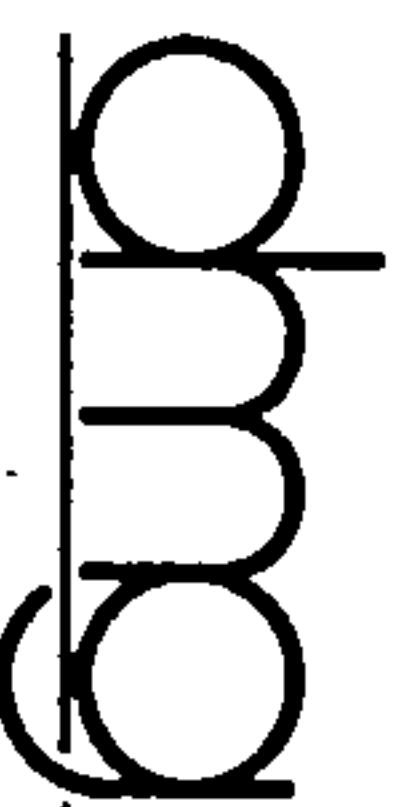
$$d = 1.67$$

$$wP = 3.34$$

$$A = 1.34$$

$$V = 20.15 \text{ F/S}$$

$$Q = 27.00 \text{ CFS} >> 3.02 \text{ CFS} \text{ OK}$$



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

P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmgs@swcp.com

May 26, 1998

Mr. Bernie J. Montoya, CE
Hydrology Division
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

Re: **Quality Pontiac (J19-D70)**

Dear Mr. Montoya:

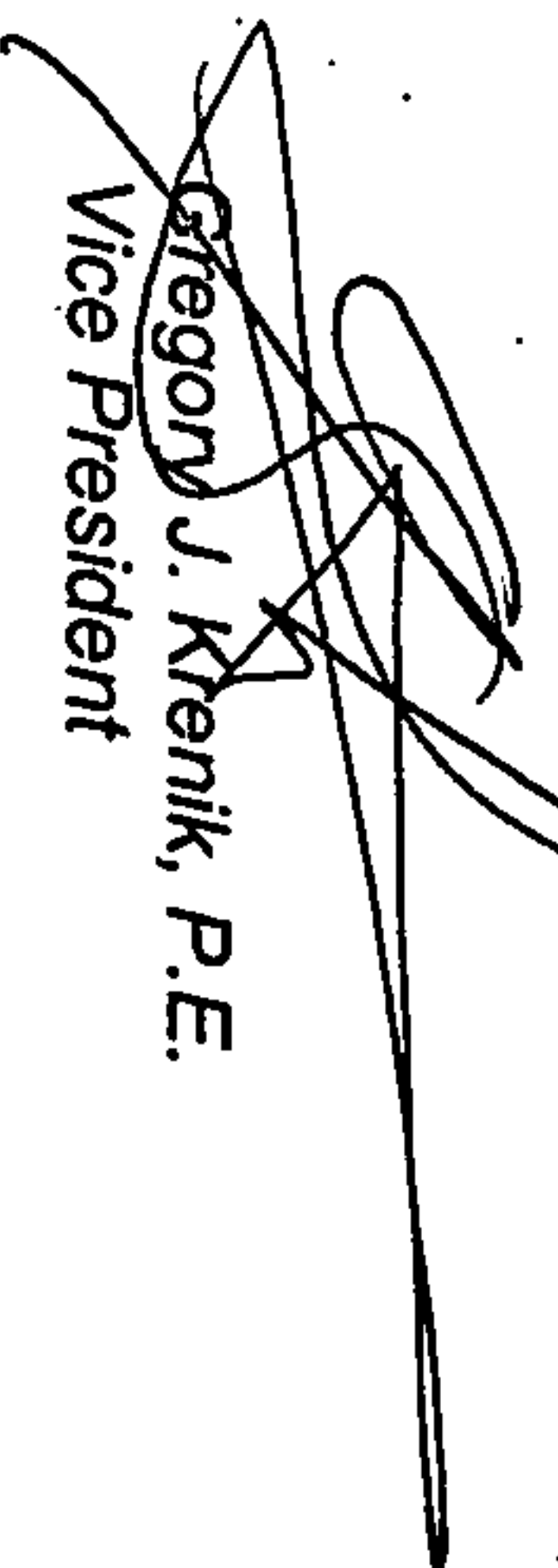
This letter is an itemized response to your letter of May 21, 1998, and part of the resubmittal.

- 1) *I've indicated on the plans where the one foot waterblock is located.*
- 2) *I've included a revised calculation sheet for the 2' sidewalk culvert.*
- 3) *I've added into the legend the garden and retaining walls.*

Please contact our office if you have any questions.

Very Truly Yours,

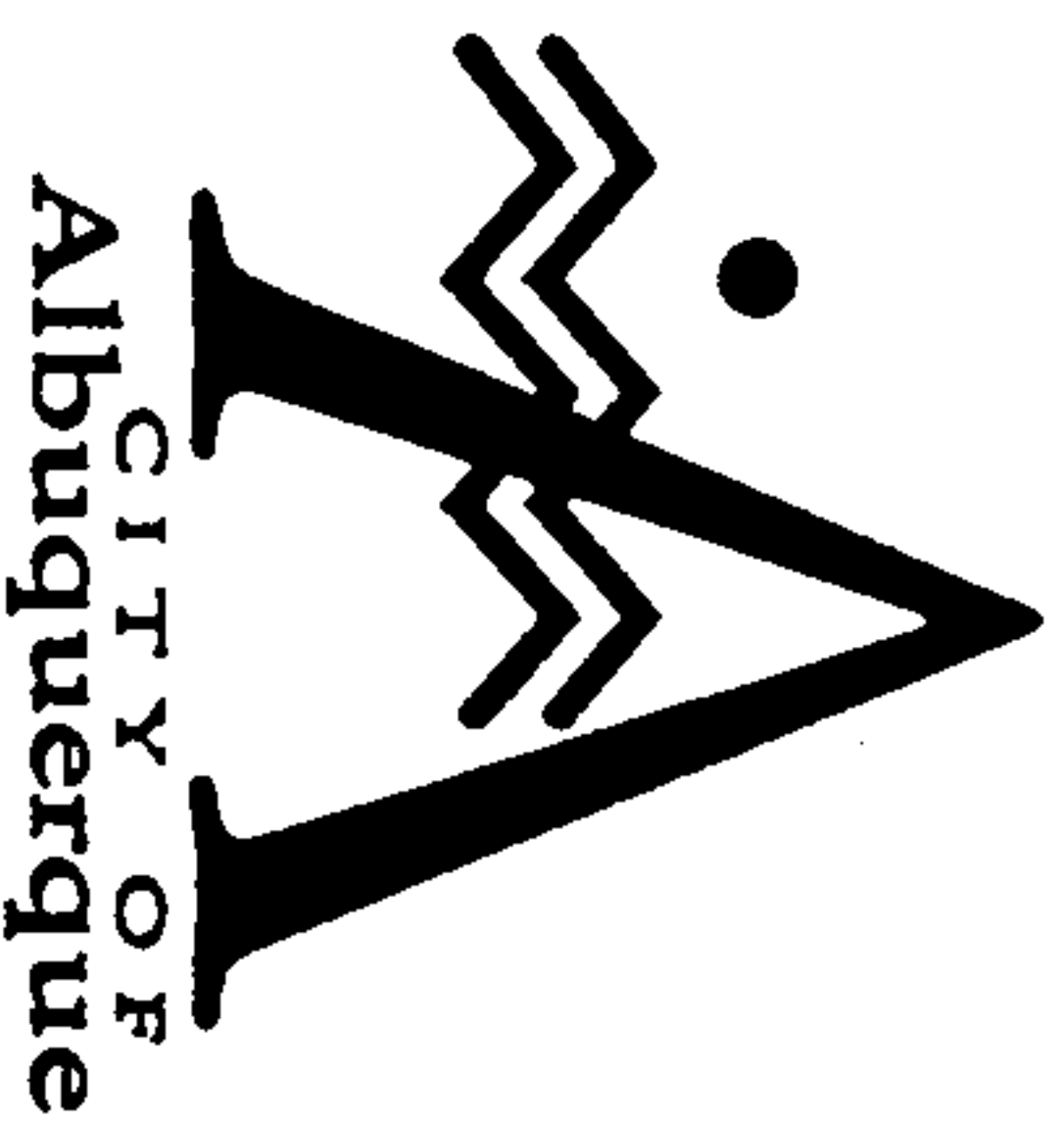
MARK GOODWIN & ASSOCIATES, P.A.



Gregory J. Krenik, P.E.
Vice President

GJK/sb

f:\quality\comments.1



May 21, 1998

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

RE: DRAINAGE PLAN FOR QUALITY PONTIAC-BUICK-GMC ON LOMAS (J19-D70)
ENGINEER'S STAMP DATED 4/23/98

Dear Mr. Krenik:

Based on the information provided on your April 23, 1998 submittal, listed are some concerns that will need to be addressed prior to final approval:

1. You will need a one foot water block at each driveway adjacent to the street.
2. Hydraulics for the proposed 2' sidewalk culvert on the north parcel.
3. Please identify on your legend what the thick hatch line around the property line designates.

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

C. Andrew Garcia



Sincerely

A handwritten signature in cursive script that reads 'Bernie J. Montoya'.

Bernie J. Montoya CE
Associate Engineer

Good for You, Albuquerque!



DRAINAGE INFORMATION SHEET

PROJECT TITLE: Quality Pontiac - Buick - GMC ZONE ATLAS/DRNG, FILE#: J-19

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: Lot 4, Ashcraft Center and Block "E" of Mesa del Norte Heights No. 10, and Lots 10-15, Block 20 of East End Addition.

CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: Gregory J. Krenik PE

ADDRESS: POBox 90606 Albuquerque, NM 87199 PHONE: 828-2200

OWNER: Quality Pontiac CONTACT: Annette Dilorenzo

ADDRESS: 8101 Lomas NE Albuquerque, NM PHONE: 265-3753

ARCHITECT: DuraBit CONTACT: Brad Little

ADDRESS: 4808 Jefferson NE Albuquerque, NM PHONE: 883-9100

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

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☐ FINAL PLAT APPROVAL

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☒ BUILDING PERMIT APPROVAL

☐ CERTIFICATION OF OCCUPANCY APPROVAL

☐ GRADING PERMIT APPROVAL

☐ PAVING PERMIT APPROVAL

☐ S.A.D. DRAINAGE REPORT

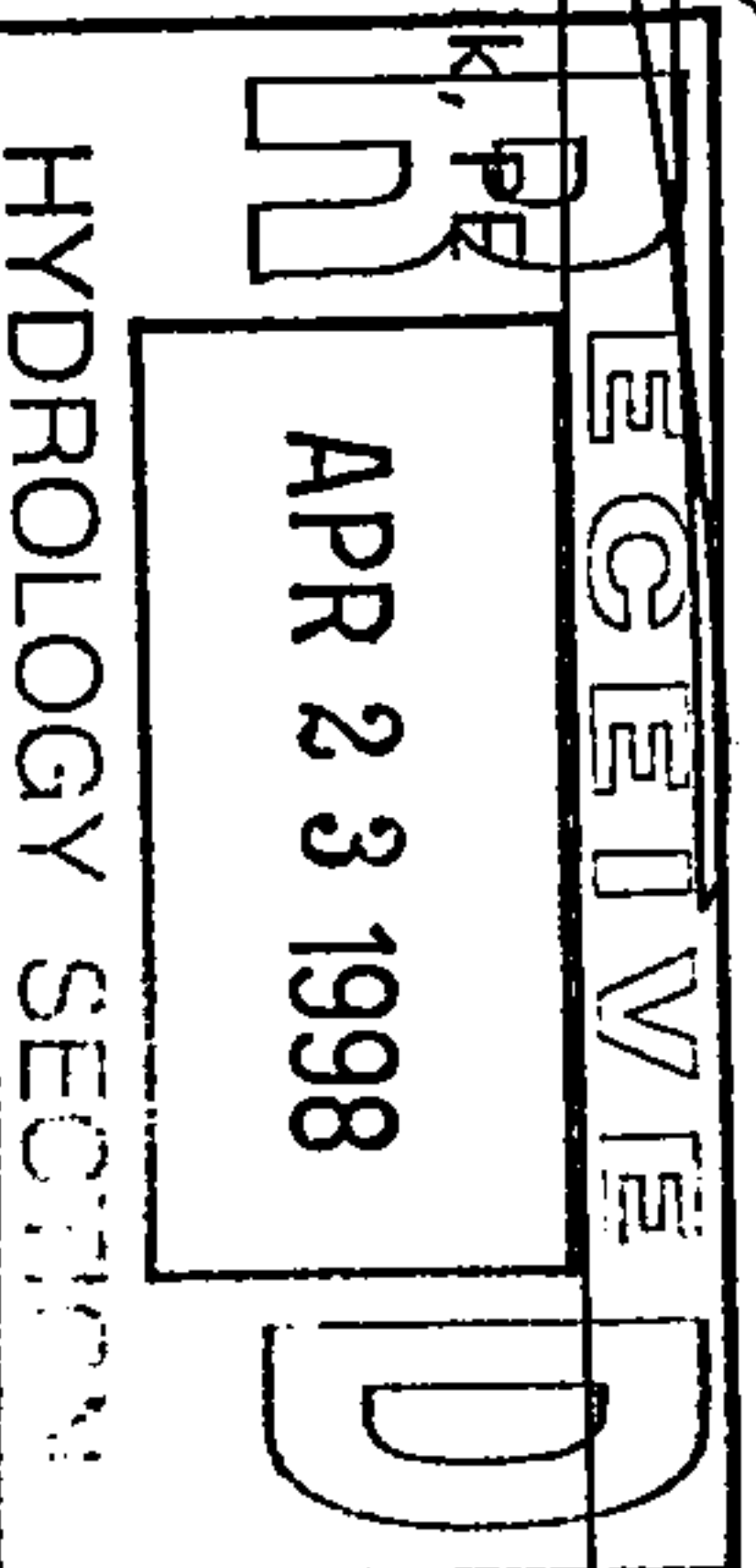
☐ DRAINAGE REQUIREMENTS

☐ OTHER _____ (Specify)

DATE SUBMITTED: 4-23-98

BY: _____

Gregory J. Krenik, PE



NOTE:

- 1) BUILDING RAISED 1 FOOT,
- 2) DRIVEWAY AT NORTHWEST CORNER MOVED.
- 3) DRIVEWAY AT SOUTHWEST CORNER MOVED.
- 4) SMALL PARCEL EXPANDED ASPHALT.

DRAINAGE INFORMATION SHEET

ZONE ATLAS/DRNG, FILE#: J-19

PROJECT TITLE: Quality Pontiac - Buick - GMC

DRB #: EPC #: WORK ORDER #:

LEGAL DESCRIPTION: Lot 4, Ashcraft Center and Block "E" of Mesa del Norte Heights No. 10, and Lots 10-15, Block 20 of East End Addition.

CITY ADDRESS:

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: Gregory J. Krenik PE

ADDRESS: POBox 90606 Albuquerque, NM 87199 PHONE: 828-2200

OWNER: Quality Pontiac CONTACT: Annette Dilorenzo

ADDRESS: 8101 Lomas NE Albuquerque, NM PHONE: 265-3753

ARCHITECT: DuraBilt CONTACT: Brad Little

ADDRESS: 4808 Jefferson NE Albuquerque, NM PHONE: 883-9100

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

CHECK TYPE OF APPROVAL SOUGHT:

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☐ GRADING PERMIT APPROVAL

☐ PAVING PERMIT APPROVAL

☐ S.A.D. DRAINAGE REPORT

☐ DRAINAGE REQUIREMENTS

☐ OTHER (Specify)

PRE-DESIGN MEETING:

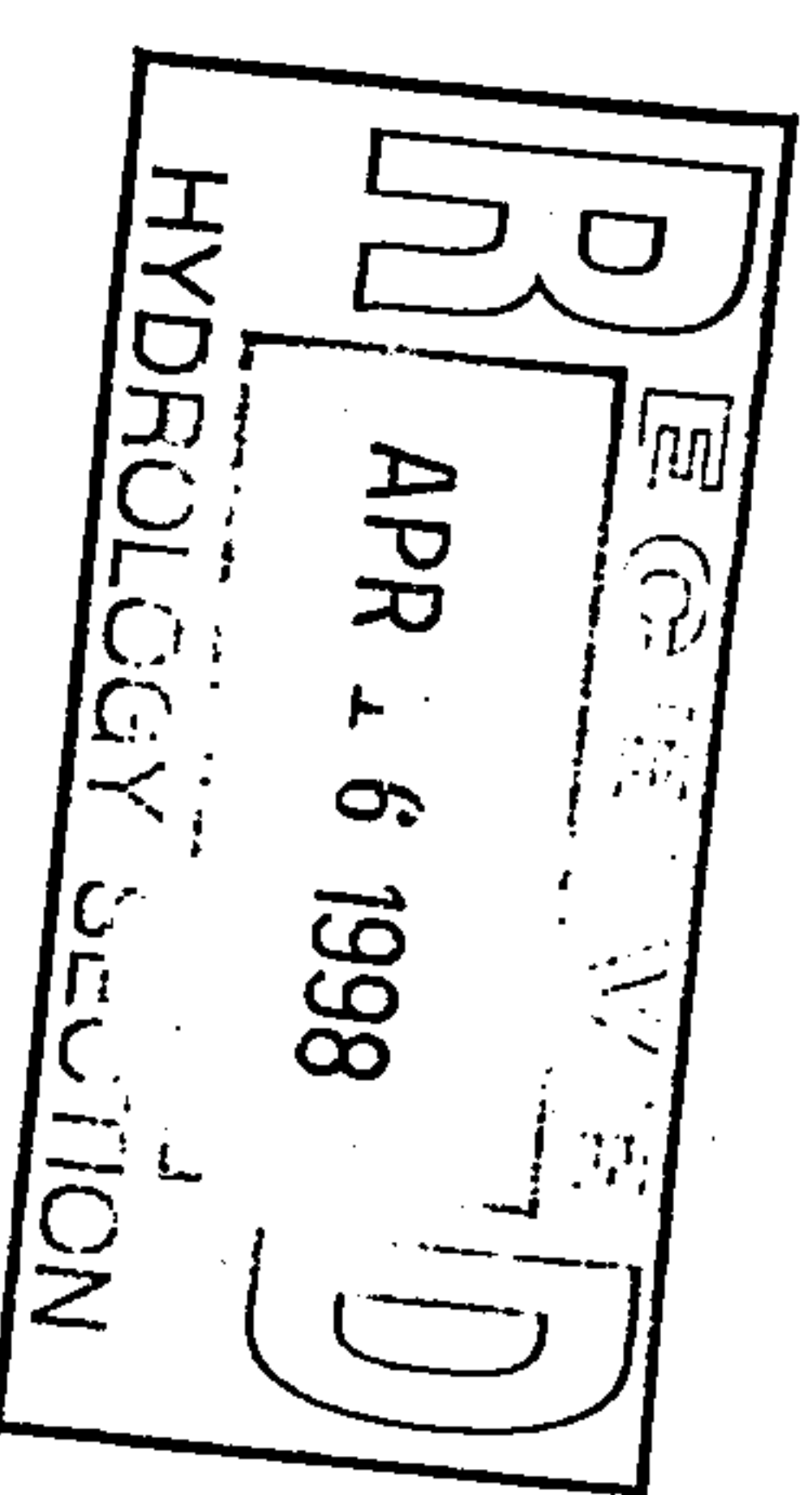
☐ YES

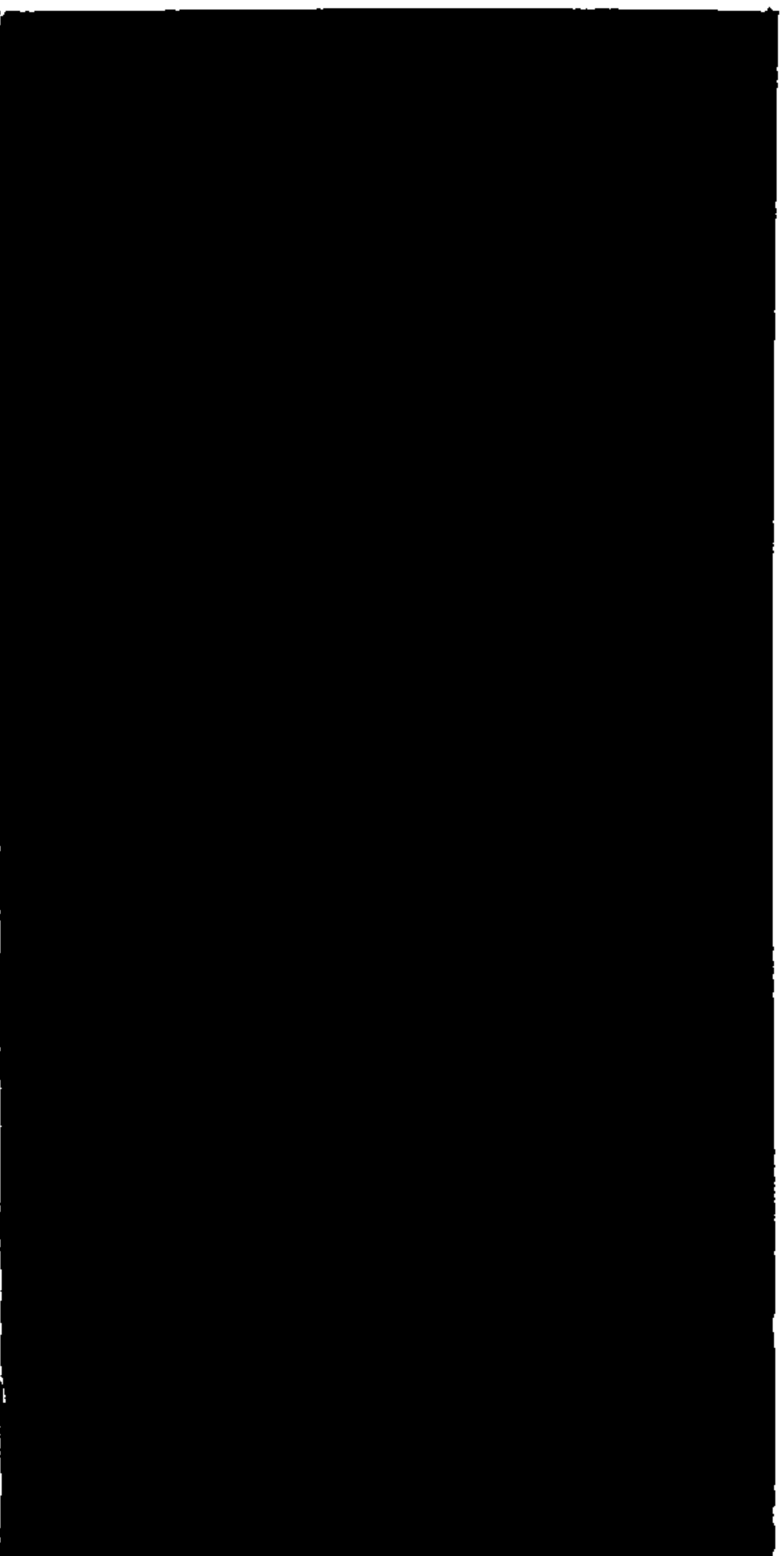
☒ NO

☐ COPY PROVIDED

DATE SUBMITTED: 4-16-98

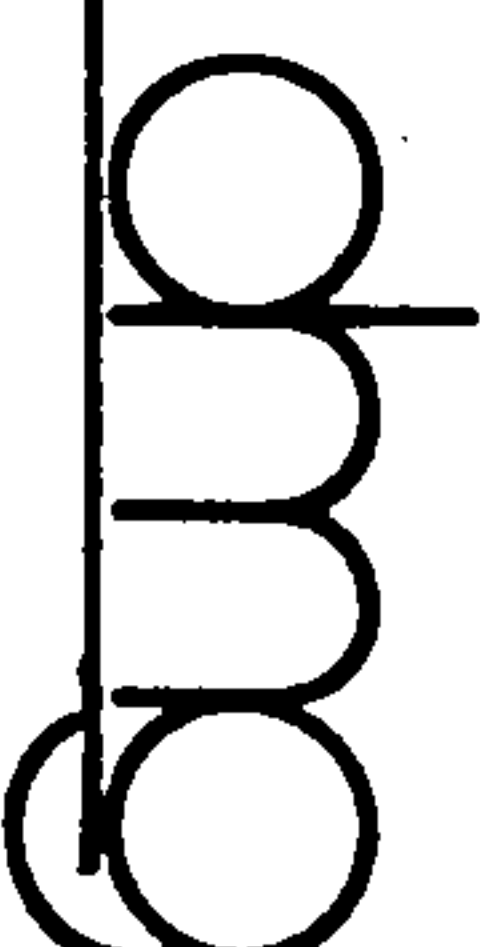
BY: Gregory J. Krenik, PE



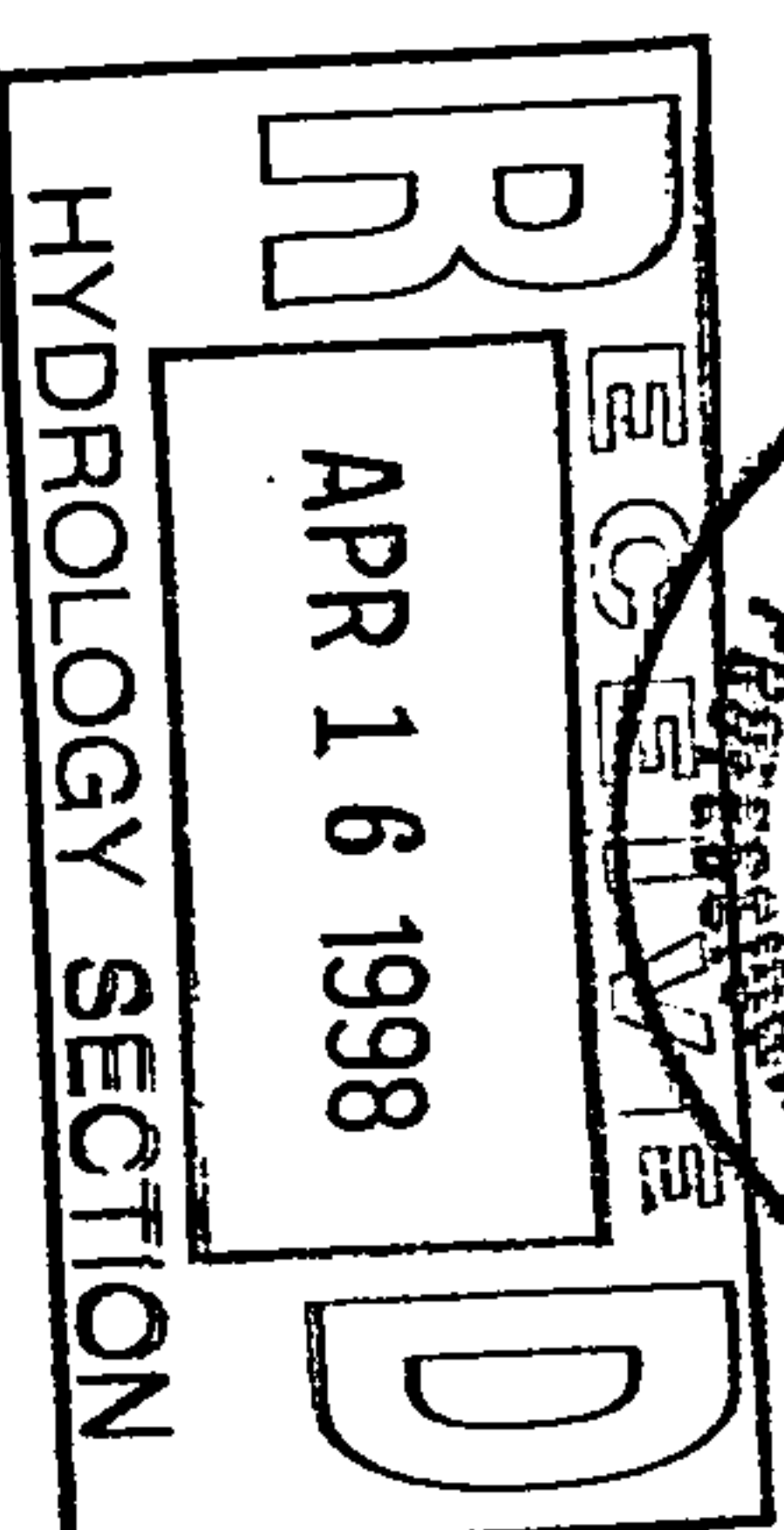
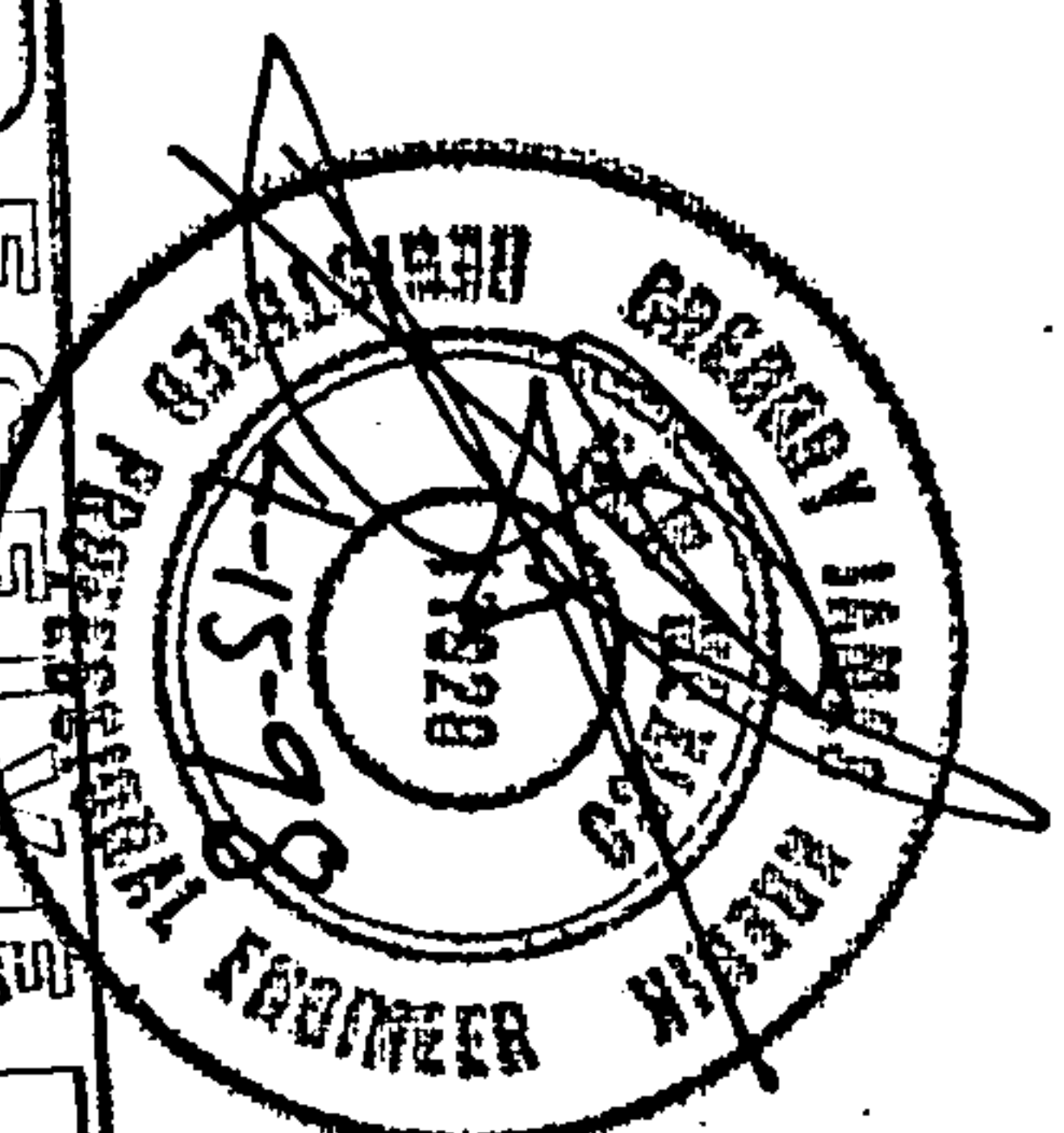


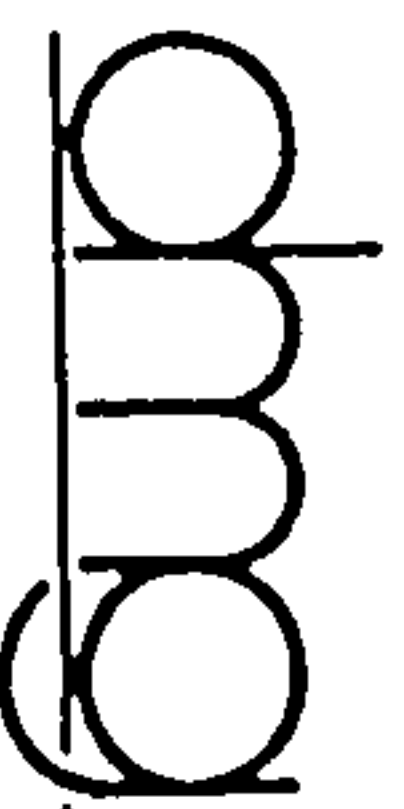
MARK GOODWIN

& ASSOCIATES
CONSULTING ENGINEERS



DRAINAGE CALCULATIONS
FOR
QUALITY PONTIAC - BUICK - GMC





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

PROJECT Quality Pouring

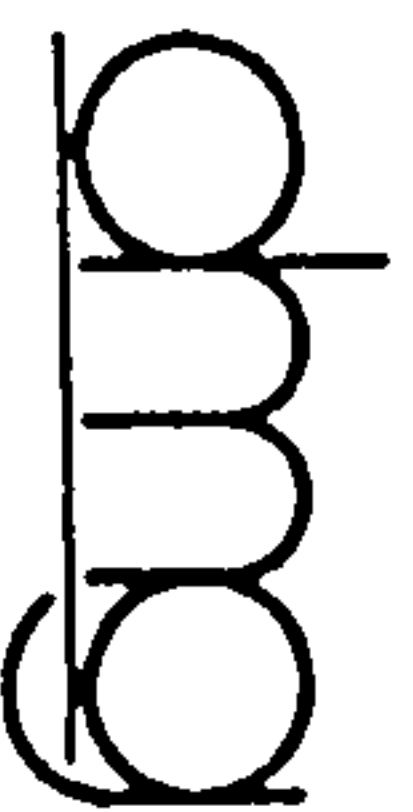
SUBJECT Drainage Cases

BY GSK DATE 4-15-98

CHECKED _____ DATE _____

SHEET 1 OF _____

- SITE DOES NOT LIE IN A 100yr FLOOD ZONE.
 - OFFSITE FLOWS DO NOT AFFECT THE SITE.
 - FLOWS DRAIN OVERLAND TO THE NW.
 - THIS SITE IS INCLUDED IN THE AREA UNDER THE ALBUQUERQUE MASTER DRAINAGE STUDY, VOLUME 3.
 - DIRECT DISCHARGE IS ALLOWED.
 - THE SITE CONSISTS OF 2 PARCELS - NORTH & SOUTH OF MARBLE AVE NE AT PENNSYLVANIA NE.
 - THE NORTH PARCEL CONSISTS OF 0.6801 AC THE SOUTH PARCEL CONSISTS OF 2.9468 AC
 - THE DEVELOPED FLOWS WILL LEAVE THE LARGE PARCEL AT THE DRIVEWAYS ALONG PENNSYLVANIA & MARBLE AND LEAVE THE SMALL PARCEL AT THE DRIVEWAY ON MARBLE.
- ONCE THESE FLOWS REACH THE INTERSECTION OF MARBLE AND PENNSYLVANIA THE RUNOFF IS CONVEYED TO THE NORTH IN PENNSYLVANIA, THE RUNOFF CONTINUES NORTH TO THE INTERSECTION OF MOUNTAIN. AT THIS POINT THE RUNOFF ENTERS TWO SINGLE C INLETS, ALL RUNOFF THAT DOES NOT ENTER THE INLETS IS ALLOWED TO CROSS PENNSYLVANIA TO THE WEST AND CONTINUE ALONG MOUNTAIN TO DALLAS STREET WHERE IT TURNS NORTH. AT THIS POINT THE RUNOFF CONTINUES NORTH WHERE IT INTERSECTS MOUNTAIN AGAIN AND FLOWS WEST AN MOUNTAIN TO SAN PABLO STREET, AT THIS POINT FLOWS ARE INTERCEPTED BY ONE SINGLE C INLET AND ONE DOUBLE C INLET. FLOWS THAT PASS THE INLETS CONTINUE NORTH TO THE INTERSECTION OF SUMMER AVE WHERE FLOWS ARE INTERCEPTED BY ONE SINGLE C INLET AND TWO DOUBLE C INLETS. THE FLOW THAT PASSES THE INLETS TURNS WEST AND CONTINUES TO ESPANOLA STREET WHERE THE FLOW TURNS NORTH AND CONTINUES TO CONSTITUTION AVE. HERE THE FLOW TURNS EAST TO THE INTERSECTION OF SAN PABLO AND ENDS UP IN SOUP CONVEYED WITH ONE SINGLE C INLET AND TWO DOUBLE C INLETS. THIS FLOW IS THEN TRANSPORTED TO THE I-40 DITCH.
- SEE ATTACHED MAP & ASSUETS



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

PROJECT Quincy Route
SUBJECT Drainage Cals
BY GSK DATE 4-15-98
CHECKED _____ DATE _____
SHEET 2 OF _____

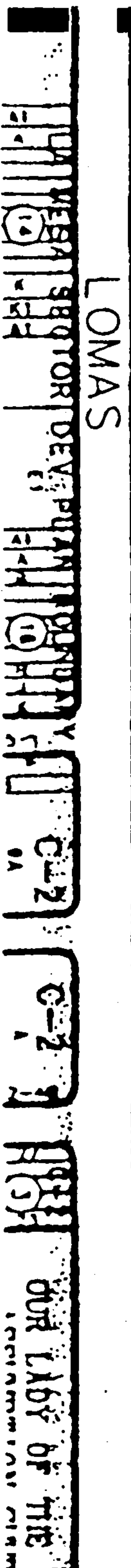
- FIND DEVELOPED AND UNDEVELOPED RUNOFF.

<u>DEVELOPED</u>		<u>NORTH PARCEL</u>	<u>SOUTH PARCEL</u>
AREA		0.6801 AC	2.9468 AC
TYPE "B"		16.23%	8.33%
TYPE "D"		83.77%	91.67%
P_1		2.05 in	2.05 in
P_4		2.45 in	2.45 in
P_{24}		2.90 in	2.90 in

FROM HYDRO OUTPUT SHEETS 4-9
Q 3.02 CFS 13.58 CFS

UNDEVELOPED
FROM HYDRO OUTPUT SHEETS 10-15
Q 1.15 CFS 4.96 CFS

- THE RUNOFF FROM THIS SITE DOES NOT CONTRIBUTE TO A DESIGNATED DOWNSTREAM FLOOD HAZARD AND THEREFORE DIRECT DISCHARGE IS ACCEPTABLE.



START

TIME=0.0

*** HYDROGRAPH FOR QUALITY PONTIAC NORTH PARCEL

INFALL

TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=2.05 IN RAIN SIX=2.45 IN

RAIN DAY=2.90 IN DT=0.03333 HR

ID=1 HYD NO=101.1 AREA=0.001063 SQ MI

PER A=00.00 B=16.23 C=0 D=83.77

TP=0.1333 HR MASS RAINFALL=-1

ID=1 CODE=1

INT HYD

FINISH

5
AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994
RUN DATE (MON/DAY/YR) = 04/15/1998
START TIME (HR:MIN:SEC) = 14:44:14 USER NO. = M_GOODWN.I01
INPUT FILE = QUALPOMN.DAT

START

TIME=0.0

***** HYDROGRAPH FOR QUALITY PONTIAC NORTH PARCEL

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=2.05 IN RAIN SIX=2.45 IN

RAIN DAY=2.90 IN DT=0.03333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 H
DT = .033330 HOURS END TIME = 5.999400 HOURS

.0000	.0022	.0044	.0066	.0090	.0113	.0137
.0162	.0187	.0213	.0240	.0267	.0295	.0324
.0354	.0384	.0416	.0448	.0482	.0516	.0552
.0589	.0628	.0668	.0710	.0753	.0799	.0847
.0897	.0950	.1006	.1063	.1123	.1188	.1327
.1638	.2117	.2804	.3743	.4976	.6549	.8507
1.0897	1.3116	1.4042	1.4824	1.5520	1.6153	1.6736
1.7277	1.7782	1.8256	1.8702	1.9123	1.9520	1.9896
2.0253	2.0591	2.0911	2.1216	2.1505	2.1575	2.1641
2.1703	2.1763	2.1820	2.1874	2.1927	2.1978	2.2027
2.2074	2.2120	2.2164	2.2207	2.2249	2.2290	2.2330
2.2369	2.2407	2.2444	2.2480	2.2515	2.2550	2.2584
2.2617	2.2650	2.2682	2.2713	2.2744	2.2774	2.2804
2.2834	2.2862	2.2891	2.2919	2.2946	2.2973	2.3000
2.3027	2.3053	2.3078	2.3103	2.3128	2.3153	2.3177
2.3201	2.3225	2.3249	2.3272	2.3295	2.3317	2.3340
2.3362	2.3384	2.3405	2.3427	2.3448	2.3469	2.3490
2.3510	2.3531	2.3551	2.3571	2.3590	2.3610	2.3629
2.3649	2.3668	2.3687	2.3705	2.3724	2.3742	2.3761
2.3779	2.3797	2.3815	2.3832	2.3850	2.3867	2.3884
2.3902	2.3919	2.3935	2.3952	2.3969	2.3985	2.4002
2.4018	2.4034	2.4050	2.4066	2.4082	2.4098	2.4113
2.4129	2.4144	2.4159	2.4174	2.4190	2.4205	2.4219
2.4234	2.4249	2.4264	2.4278	2.4293	2.4307	2.4321
2.4336	2.4350	2.4364	2.4378	2.4391	2.4405	2.4419
2.4433	2.4446	2.4460	2.4473	2.4486	2.4500	

COMPUTE NM HYD

ID=1 HYD NO=101.1 AREA=0.001063 SQ MI
PER A=00.00 B=16.23 C=0 D=83.77
TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N =
UNIT PEAK = 3.5156 CFS UNIT VOLUME = .9961 B = 526.28 P60 = 2.05
AREA = .000890 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .132570HR TP = .133300HR K/TP RATIO = .994525 SHAPE CONSTANT, N =
UNIT PEAK = .41929 CFS UNIT VOLUME = .9663 B = 323.96 P60 = 2.05
AREA = .000173 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

6
RUNOFF VOLUME = 1.98642 INCHES = .1126 ACRE-FEET
PEAK DISCHARGE RATE = 3.02 CFS AT 1.500 HOURS BASIN AREA = .0011 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 14:44:21

START

TIME=0.0

**** HYDROGRAPH FOR QUALITY PONTIAC SOUTH PARCEL
INFALL

MPUTE NM HYD

PRINT HYD
NISH

TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=2.05 IN RAIN SIX=2.45 IN
RAIN DAY=2.90 IN DT=0.03333 HR
ID=1 HYD NO=101.1 AREA=0.004604 SQ MI
PER A=00.00 B=8.33 C=0 D=91.67
TP=0.1333 HR MASS RAINFALL=-1
ID=1 CODE=1

8
AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994

RUN DATE (MON/DAY/YR) = 04/15/1998

START TIME (HR:MIN:SEC) = 14:46:11

USER NO.= M_GOODWN.I01

INPUT FILE = QUALPONS.DAT

START

TIME=0.0

***** HYDROGRAPH FOR QUALITY PONTIAC SOUTH PARCEL

RAINFALL

TYPE=1 RAIN. QUARTER=0.0 IN

RAIN ONE=2.05 IN RAIN SIX=2.45 IN

RAIN DAY=2.90 IN DT=0.03333 HR

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 H
DT = .033330 HOURS END TIME = 5.999400 HOURS

.0000	.0022	.0044	.0066	.0090	.0113	.0137
.0162	.0187	.0213	.0240	.0267	.0295	.0324
.0354	.0384	.0416	.0448	.0482	.0516	.0552
.0589	.0628	.0668	.0710	.0753	.0799	.0847
.0897	.0950	.1006	.1063	.1123	.1188	.1327
.1638	.2117	.2804	.3743	.4976	.6549	.8507
1.0897	1.3116	1.4042	1.4824	1.5520	1.6153	1.6736
1.7277	1.7782	1.8256	1.8702	1.9123	1.9520	1.9896
2.0253	2.0591	2.0911	2.1216	2.1505	2.1575	2.1641
2.1703	2.1763	2.1820	2.1874	2.1927	2.1978	2.2027
2.2074	2.2120	2.2164	2.2207	2.2249	2.2290	2.2330
2.2369	2.2407	2.2444	2.2480	2.2515	2.2550	2.2584
2.2617	2.2650	2.2682	2.2713	2.2744	2.2774	2.2804
2.2834	2.2862	2.2891	2.2919	2.2946	2.2973	2.3000
2.3027	2.3053	2.3078	2.3103	2.3128	2.3153	2.3177
2.3201	2.3225	2.3249	2.3272	2.3295	2.3317	2.3340
2.3362	2.3384	2.3405	2.3427	2.3448	2.3469	2.3490
2.3510	2.3531	2.3551	2.3571	2.3590	2.3610	2.3629
2.3649	2.3668	2.3687	2.3705	2.3724	2.3742	2.3761
2.3779	2.3797	2.3815	2.3832	2.3850	2.3867	2.3884
2.3902	2.3919	2.3935	2.3952	2.3969	2.3985	2.4002
2.4018	2.4034	2.4050	2.4066	2.4082	2.4098	2.4113
2.4129	2.4144	2.4159	2.4174	2.4190	2.4205	2.4219
2.4234	2.4249	2.4264	2.4278	2.4293	2.4307	2.4321
2.4336	2.4350	2.4364	2.4378	2.4391	2.4405	2.4419
2.4433	2.4446	2.4460	2.4473	2.4486	2.4500	

COMPUTE NM HYD

ID=1 HYD NO=101.1 AREA=0.004604 SQ MI

PER A=00.00 B=8.33 C=0 D=91.67

TP=0.1333 HR MASS RAINFALL=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N =

UNIT PEAK = 16.663 CFS UNIT VOLUME = .9987 B = 526.28 P60 = 2.05

AREA = .004220 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .132570HR TP = .133300HR K/TP RATIO = .994525 SHAPE CONSTANT, N =

UNIT PEAK = .93205 CFS UNIT VOLUME = .9856 B = 323.96 P60 = 2.05

AREA = .000384 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 = 2.09551 INCHES = .5145 ACRE-FEET
PEAK DISCHARGE RATE = 13.58 CFS AT 1.500 HOURS BASIN AREA = .0046 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 14:46:17

START

TIME=0.0

*** HYDROGRAPH FOR QUALITY PONTIAC NORTH PARCEL EXISTING
INFALL

TYPE=1 RAIN QUARTER=0.0 IN
RAIN ONE=2.05 IN RAIN SIX=2.45 IN

RAIN DAY=2.90 IN DT=0.03333 HR

ID=1 HYD NO=101.1 AREA=0.001063 SQ MI

PER A=100 B=0 C=0 D=0

TP=0.1333 HR MASS RAINFALL=-1

ID=1 CODE=1

PRINT HYD

FINISH

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994

RUN DATE (MON/DAY/YR) = 04/15/1998

START TIME (HR:MIN:SEC) = 14:56:42 USER NO. = M_GOODWN.I01

INPUT FILE = QUALNEX.DAT

START TIME=0.0

***** HYDROGRAPH FOR QUALITY PONTIAC NORTH PARCEL EXISTING

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=2.05 IN RAIN SIX=2.45 IN

RAIN DAY=2.90 IN DT=0.03333 HR

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

DT =	.033330 HOURS	END TIME = 5.999400 HOURS									
.0000	.0022	.0044	.0066	.0090	.0113	.0137					
.0162	.0187	.0213	.0240	.0267	.0295	.0324					
.0354	.0384	.0416	.0448	.0482	.0516	.0552					
.0589	.0628	.0668	.0710	.0753	.0799	.0847					
.0897	.0950	.1006	.1063	.1123	.1188	.1327					
.1638	.2117	.2804	.3743	.4976	.6549	.8507					
1.0897	1.3116	1.4042	1.4824	1.5520	1.6153	1.6736					
1.7277	1.7782	1.8256	1.8702	1.9123	1.9520	1.9896					
2.0253	2.0591	2.0911	2.1216	2.1505	2.1575	2.1641					
2.1703	2.1763	2.1820	2.1874	2.1927	2.1978	2.2027					
2.2074	2.2120	2.2164	2.2207	2.2249	2.2290	2.2330					
2.2369	2.2407	2.2444	2.2480	2.2515	2.2550	2.2584					
2.2617	2.2650	2.2682	2.2713	2.2744	2.2774	2.2804					
2.2834	2.2862	2.2891	2.2919	2.2946	2.2973	2.3000					
2.3027	2.3053	2.3078	2.3103	2.3128	2.3153	2.3177					
2.3201	2.3225	2.3249	2.3272	2.3295	2.3317	2.3340					
2.3362	2.3384	2.3405	2.3427	2.3448	2.3469	2.3490					
2.3510	2.3531	2.3551	2.3571	2.3590	2.3610	2.3629					
2.3649	2.3668	2.3687	2.3705	2.3724	2.3742	2.3761					
2.3779	2.3797	2.3815	2.3832	2.3850	2.3867	2.3884					
2.3902	2.3919	2.3935	2.3952	2.3969	2.3985	2.4002					
2.4018	2.4034	2.4050	2.4066	2.4082	2.4098	2.4113					
2.4129	2.4144	2.4159	2.4174	2.4190	2.4205	2.4219					
2.4234	2.4249	2.4264	2.4278	2.4293	2.4307	2.4321					
2.4336	2.4350	2.4364	2.4378	2.4391	2.4405	2.4419					
2.4433	2.4446	2.4460	2.4473	2.4486	2.4500						

COMPUTE NM HYD

ID=1 HYD NO=101.1 AREA=0.001063 SQ MI

PER A=100 B=0 C=0 D=0

TP=0.1333 HR MASS RAINFALL=-1

K = .159146HR TP = .133300HR K/TP RATIO = 1.193894 SHAPE CONSTANT, N =
UNIT PEAK = 2.2312 CFS UNIT VOLUME = .9934 B = 279.79 P60 = 2.05
AREA = .001063 SQ MI IA = .65000 INCHES INF = 1.67000 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 = .57658 INCHES = .0327 ACRE-FEET
PEAK DISCHARGE RATE = 1.15 CFS AT 1.533 HOURS BASIN AREA = .0011 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 14:56:48

TART

TIME=0.0

*** HYDROGRAPH FOR QUALITY PONTIAC SOUTH PARCEL EXISTING
INFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=2.05 IN RAIN SIX=2.45 IN

RAIN DAY=2.90 IN DT=0.03333 HR

ID=1 HYD NO=101.1 AREA=0.004604 SQ MI

PER A=100 B=0 C=0 D=0

TP=0.1333 HR MASS RAINFALL=-1

PINT HYD

ID=1 CODE=1

NISH

AHYMO PROGRAM (AHYMO194) - AMAFCA Hydrologic Model - January, 1994

14

RUN DATE (MON/DAY/YR) = 04/15/1998

START TIME (HR:MIN:SEC) = 14:53:43

USER NO. = M_GOODWN.I01

INPUT FILE = QUALSEX.DAT

START

TIME=0.0

***** HYDROGRAPH FOR QUALITY PONTIAC SOUTH PARCEL EXISTING

RAINFALL TYPE=1 RAIN QUARTER=0.0 IN

RAIN ONE=2.05 IN RAIN SIX=2.45 IN

RAIN DAY=2.90 IN DT=0.03333 HR

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

DT =	.033330 HOURS	END TIME = 5.999400 HOURS									
.0000	.0022	.0044	.0066	.0090	.0113	.0137					
.0162	.0187	.0213	.0240	.0267	.0295	.0324					
.0354	.0384	.0416	.0448	.0482	.0516	.0552					
.0589	.0628	.0668	.0710	.0753	.0799	.0847					
.0897	.0950	.1006	.1063	.1123	.1188	.1327					
.1638	.2117	.2804	.3743	.4976	.6549	.8507					
1.0897	1.3116	1.4042	1.4824	1.5520	1.6153	1.6736					
1.7277	1.7782	1.8256	1.8702	1.9123	1.9520	1.9896					
2.0253	2.0591	2.0911	2.1216	2.1505	2.1575	2.1641					
2.1703	2.1763	2.1820	2.1874	2.1927	2.1978	2.2027					
2.2074	2.2120	2.2164	2.2207	2.2249	2.2290	2.2330					
2.2369	2.2407	2.2444	2.2480	2.2515	2.2550	2.2584					
2.2617	2.2650	2.2682	2.2713	2.2744	2.2774	2.2804					
2.2834	2.2862	2.2891	2.2919	2.2946	2.2973	2.3000					
2.3027	2.3053	2.3078	2.3103	2.3128	2.3153	2.3177					
2.3201	2.3225	2.3249	2.3272	2.3295	2.3317	2.3340					
2.3362	2.3384	2.3405	2.3427	2.3448	2.3469	2.3490					
2.3510	2.3531	2.3551	2.3571	2.3590	2.3610	2.3629					
2.3649	2.3668	2.3687	2.3705	2.3724	2.3742	2.3761					
2.3779	2.3797	2.3815	2.3832	2.3850	2.3867	2.3884					
2.3902	2.3919	2.3935	2.3952	2.3969	2.3985	2.4002					
2.4018	2.4034	2.4050	2.4066	2.4082	2.4098	2.4113					
2.4129	2.4144	2.4159	2.4174	2.4190	2.4205	2.4219					
2.4234	2.4249	2.4264	2.4278	2.4293	2.4307	2.4321					
2.4336	2.4350	2.4364	2.4378	2.4391	2.4405	2.4419					
2.4433	2.4446	2.4460	2.4473	2.4486	2.4500						

COMPUTE NM HYD

ID=1 HYD NO=101.1 AREA=0.004604 SQ MI

PER A=100 B=0 C=0 D=0

TP=0.1333 HR MASS RAINFALL=-1

K = .159146HR TP = .133300HR K/TP RATIO = 1.193894 SHAPE CONSTANT, N =

UNIT PEAK = 9.6634 CFS UNIT VOLUME = .9983 B = 279.79 P60 = 2.05

AREA = .004604 SQ MI IA = .65000 INCHES INF = 1.67000 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 = .57658 INCHES = .1416 ACRE-FEET

PEAK DISCHARGE RATE = 4.96 CFS AT 1.533 HOURS BASIN AREA = .0046 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 14:53:50