

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/11/2002)

PROJECT TITLE: HOLIDAY BRIDGE SUBDIVISION ZONE MAP/DRG. FILE #: F 22 / D 36
 DRB #: 98 - 343 EPC#: _____ WORK ORDER#: 8224, 81

LEGAL DESCRIPTION: HOLIDAY BRIDGE SUBDIVISION
 CITY ADDRESS: NE QUADRANT, INTERSECTION OF CAIRO DRIVE AND MONTGOMERY BOULEVARD NE

ENGINEERING FIRM: Marvin R. Kortum
 ADDRESS: 1605 Speakman Drive, SE
 CITY, STATE: Albuquerque, New Mexico

CONTACT: FAX 299-9405
 PHONE: (505) 299-0774
 ZIP CODE: 87123

OWNER: UPWEST CORPORATION
 ADDRESS: 7005 TESQUE N.W.
 CITY, STATE: ALBUQUERQUE NM 87120

CONTACT: BILL WADG
 PHONE: 505 323 0250
 ZIP CODE: 87120

ARCHITECT: _____
 ADDRESS: _____
 CITY, STATE: _____

CONTACT: _____
 PHONE: _____
 ZIP CODE: _____

SURVEYOR: _____
 ADDRESS: _____
 CITY, STATE: _____

CONTACT: _____
 PHONE: _____
 ZIP CODE: _____

CONTRACTOR: _____
 ADDRESS: _____
 CITY, STATE: _____

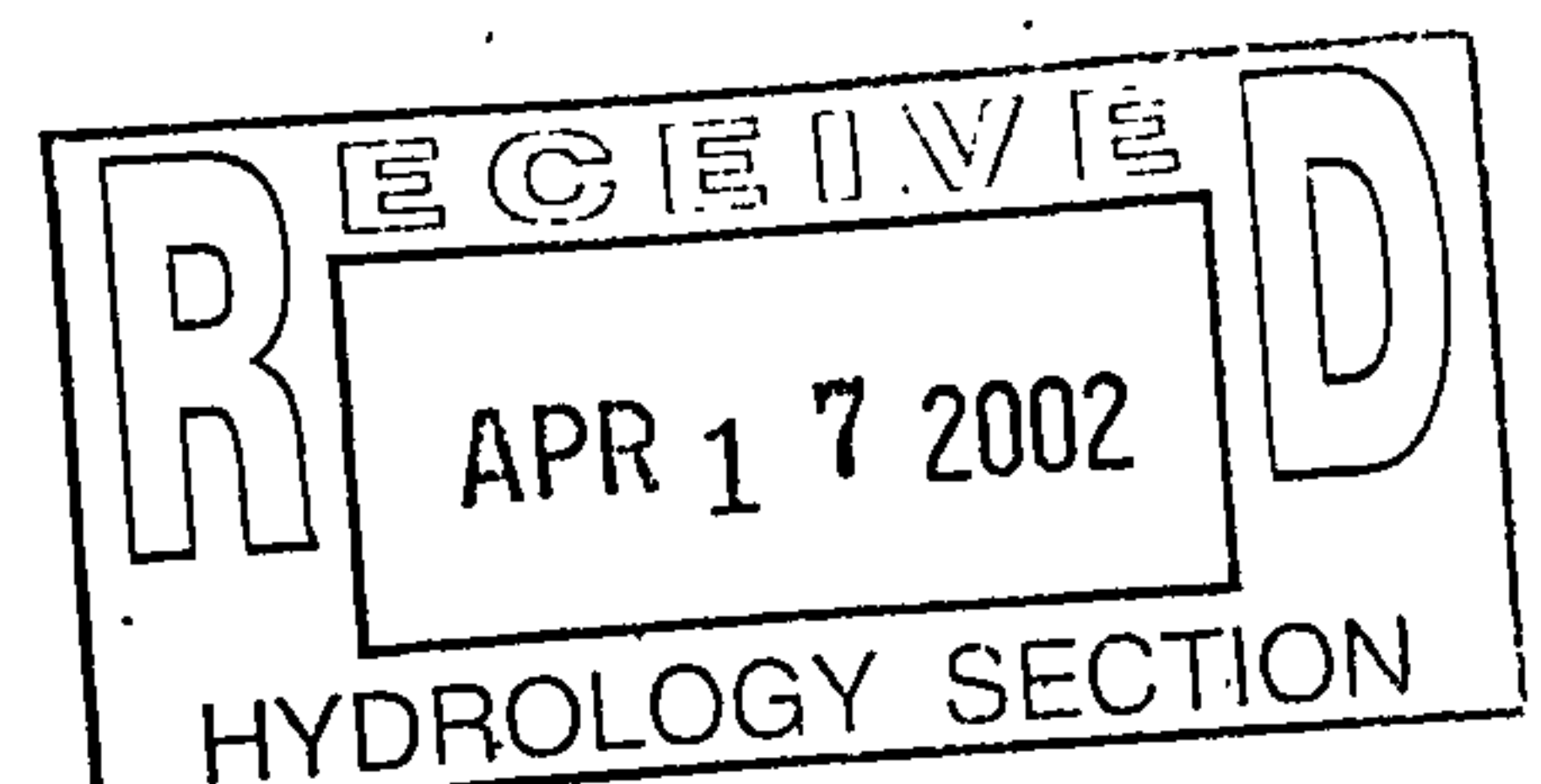
CONTACT: _____
 PHONE: _____
 ZIP CODE: _____

- CHECK TYPE OF SUBMITTAL:**
- ☐ DRAINAGE REPORT
 - ☐ DRAINAGE PLAN
 - ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
 - ☐ GRADING PLAN
 - ☐ EROSION CONTROL PLAN
 - ☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
 - ☐ CLOMP/LOMR
 - ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
 - ☐ ENGINEERS CERTIFICATION (TCL)
 - ☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
 - ☒ OTHER ENGINEERS CERTIFICATION OF GRADING PLAN

- CHECK TYPE OF APPROVAL SOUGHT:**
- ☒ SIA / FINANCIAL GUARANTEE RELEASE
 - ☐ 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 (PERM.)
 - ☐ CERTIFICATE OF OCCUPANCY (TEMP.)
 - ☐ GRADING PERMIT APPROVAL
 - ☐ PAVING PERMIT APPROVAL
 - ☐ WORK ORDER APPROVAL
 - ☐ OTHER (SPECIFY) _____

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
- ☐ NO
- ☐ COPY PROVIDED



DATE SUBMITTED: APRIL 16 2002 BY: MARVIN R KORTUM

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5)



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 5, 2002

Marvin Kortum, P.E.
1605 Speakman Dr SE
Albuquerque, New Mexico 87123

RE: **HOLIDAY BREEZE SUBDIVISION (F-22/D36)**
Engineers Certification- (additional detail sheets submitted)
Engineers Stamp dated 10/29/1998, Rev. 1/25/1999, 4/21/1999, 6/26/2002
Engineers Certification dated 3/21/2002

Dear Mr. Kortum:

Based upon the information provided in your Engineers Certification dated 3/21/2002, and the subsequent sheets submitted 6/26/2002 providing details of the drainage structure at the end of the new cul-de-sac, and the removal of the proposed bollards and insertion of the new retaining wall, the above referenced plan is adequate to satisfy the Grading and Drainage Certification for the above referenced project.

If you have any questions, please call me at 924-3981.

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BUB

C: Arlene Portillo, PWD – #622481
File

017

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/11/2002)

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ENGINEERING FIRM: Marvin R. Kortum
ADDRESS: 1605 Speakman Drive, SE
CITY, STATE: Albuquerque, New Mexico

CONTACT: FAX 299-9405
PHONE: (505) 299-0774
ZIP CODE: 87123

OWNER: UPWEST CORPORATION
ADDRESS: 7005 TESUQUE N.W.
CITY, STATE: ALBUQUERQUE NM 87120

CONTACT: BILL WADE
PHONE: 505 323 0250
ZIP CODE: 87120

ARCHITECT: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
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ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: _____
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CONTRACTOR: _____
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CHECK TYPE OF SUBMITTAL:

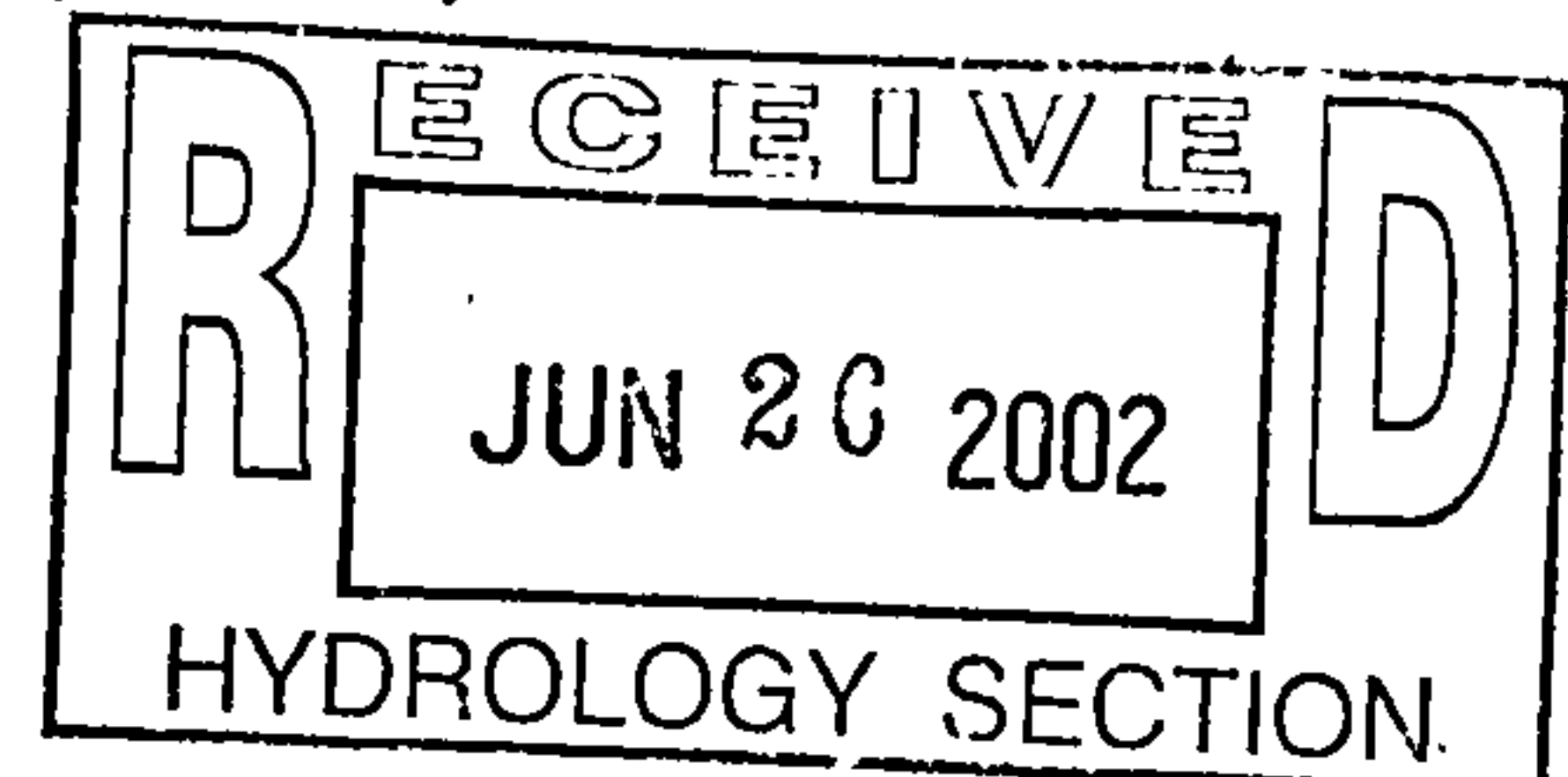
- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN
- ☐ CONCEPTUAL GRADING & DRAINAGE PLAN
- ☐ GRADING PLAN
- ☐ EROSION CONTROL PLAN
- ☐ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ☐ CLOMP/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEERS CERTIFICATION (TCL)
- ☐ ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ☒ OTHER SIDEWALK DRAIN DETAIL
ADDED TO GED AND W.B. 622481

CHECK TYPE OF APPROVAL SOUGHT:

- ☒ SIA / FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D. APPROVAL
- ☐ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
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- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
- ☐ NO
- ☐ COPY PROVIDED



DATE SUBMITTED: JUNE 26 2002 BY: MARVIN R KORTUM

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five
2. **Drainage Plans:** Required for building permits; grading permits, paving permits and site plans less than five (5)
3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more

Marvin R Kortum
1605 Speakman Drive SE
Albuquerque, New Mexico 87123
NMPE 6519
(505) 299-0774 FAX 299-9405

June 26, 2002

City of Albuquerque Public Works
Hydrology Division
ATTN: Brad Bingham
P. O. Box 1293
Albuquerque, New Mexico 87103
924-3986

REFERENCE: Work Order drawings for Project 622481, HOLIDAY BREEZE SUBDIVISION, located in the northeast quadrant of the intersection of Montgomery Boulevard and Cairo Drive, NE, (east of Juan Tabo Boulevard), Map F22.

Dear Brad:

Peter Chang, Construction Management, has requested that Engineering Department approval be obtained for certain changes and additions to the drawings for the referenced project prior to city acceptance of the project. The specific changes are noted on the attached drawings, and are summarized below:

A. The original drawings as approved by the City of Albuquerque showed a black square at the south end of the street, adjacent to Montgomery Boulevard, with a notation;

1. "Provide opening at FL of wall for drainage. Install 6-24" wide sidewalk culverts per COA DWG #2236."

At the request of the city inspector, detailed drawings were prepared to show the drainage structure from the end of the new cul-de-sac to the sidewalk culverts installed on Montgomery Boulevard. These details, which were not shown on the original work order drawings, are shown on the attached drawing, proposed sheet 9 of 9. Construction Management requests specific approval of the drainage structure, including the pipe rail, and the setting of the pipe rail in separate concrete postholes.

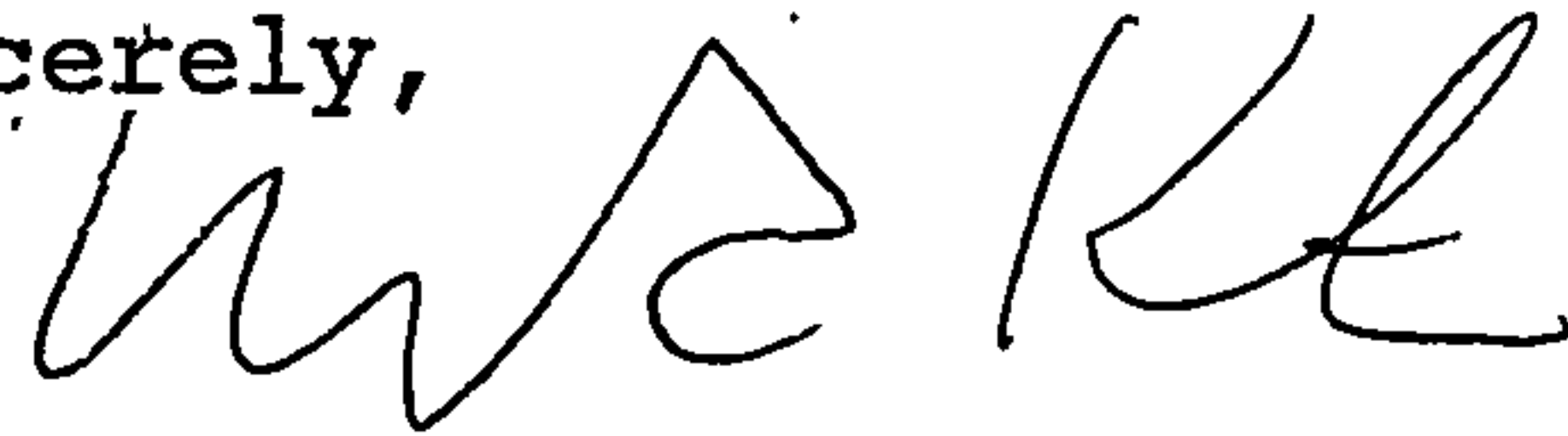
B. The original drawings, sheet 4 of 8, shows 10 bollards placed at 8'-10' intervals along the north side of the street, placed at the back of the curb. These bollards have not been placed. The bollards on the west end of the line were deleted in order to provide vehicle access to lot 1. East of the east corner of lot 1, a retaining wall has been placed away from the curb line, along the existing garden wall of the property to the north. This retaining wall was placed to support the existing wall because of the approximate three feet difference in elevation between the property to the north, and the top of curb elevation to the south. The cluster mail boxes have also been

placed in this location, protected by the new retaining wall. This change to the grading plan provides better protection and support for the adjacent property to the north than the original design with bollards.

I request that the Engineering Department review and approve or comment on the above changes.

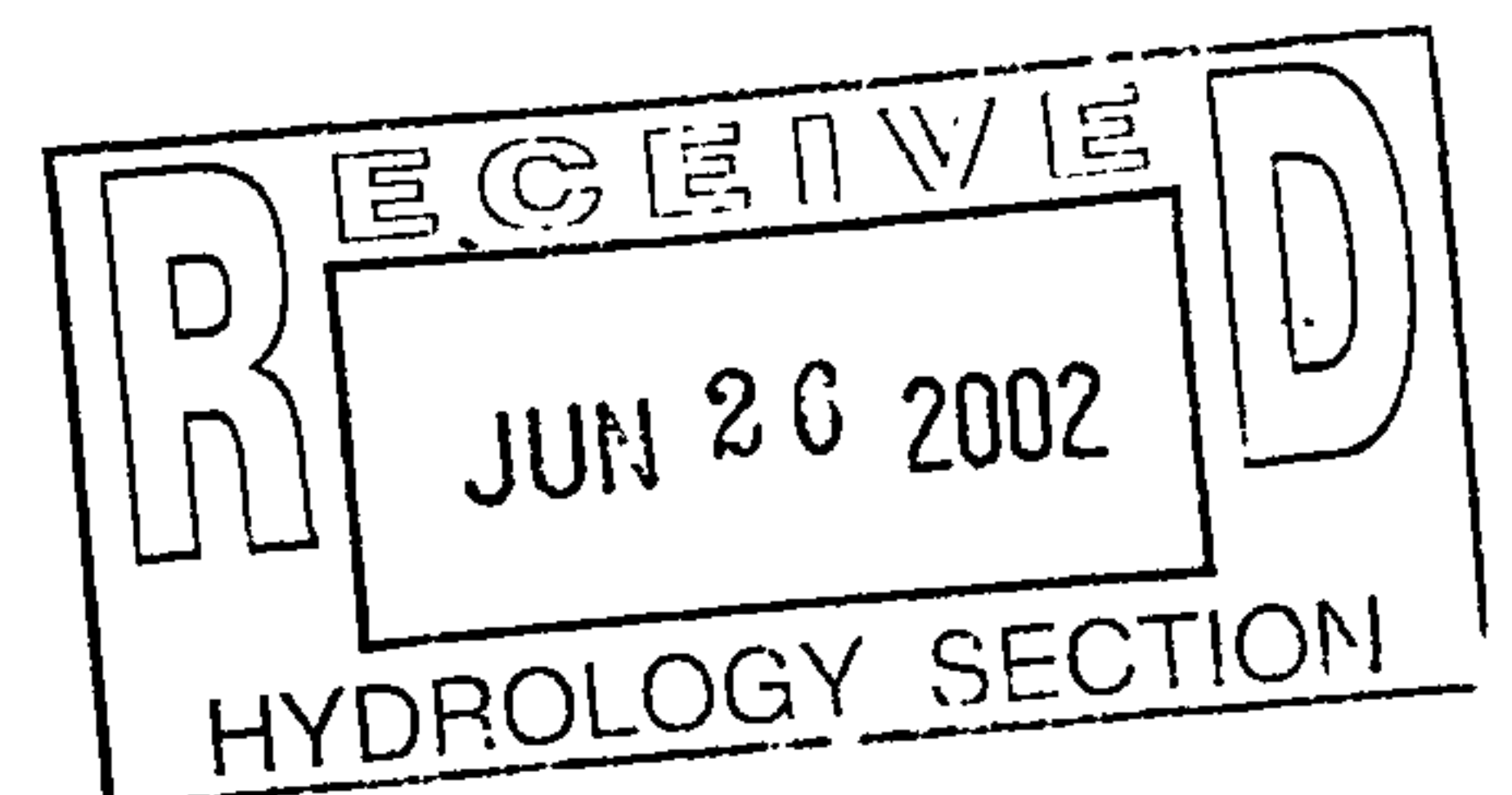
If you have any questions please call me.

Sincerely,


Marvin R. Kortum

cc: Bill Wade
Upwest Corporation

Peter Chang
Construction Management, COA

















City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 8, 2002

Marvin Kortum, P.E.
1605 Speakman Dr SE
Albuquerque, New Mexico 87123

RE: **HOLIDAY BREEZE SUBDIVISION (F-22/D36)**
Engineers Certification For Release of Financial Guaranty
Engineers Stamp dated 10/29/1998, Rev. 1/25/1999, Rev. 4/21/1999
Engineers Certification dated 3/21/2002

Dear Mr. Kortum:

Based upon the information provided in your Engineers Certification dated 3/21/2002, the above referenced plan is adequate to satisfy the Grading and Drainage Certification for Release of Financial Guaranty for the above referenced project.

If you have any questions, please call me at 924-3981.

Sincerely,

Teresa A. Martin

Teresa A. Martin
Hydrology Plan Checker
Public Works Department
BUB

C: Arlene Portillo, PWD - #622481
File

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV. 1/11/2002)

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LEGAL DESCRIPTION: HOLIDAY BRIDGE SUBDIVISION
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ENGINEERING FIRM: Marvin R. Kortum
 ADDRESS: 1605 Speakman Drive, SE
 CITY, STATE: Albuquerque, New Mexico

CONTACT: FAX 299-9405
 PHONE: (505) 299-0774
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 CITY, STATE: ALBUQUERQUE NM 87120

CONTACT: BILL WADG
 PHONE: 505 323 0250
 ZIP CODE: 87120

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 PHONE: _____
 ZIP CODE: _____

SURVEYOR: _____
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 CITY, STATE: _____

CONTACT: _____
 PHONE: _____
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CONTRACTOR: _____
 ADDRESS: _____
 CITY, STATE: _____

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CHECK TYPE OF SUBMITTAL:

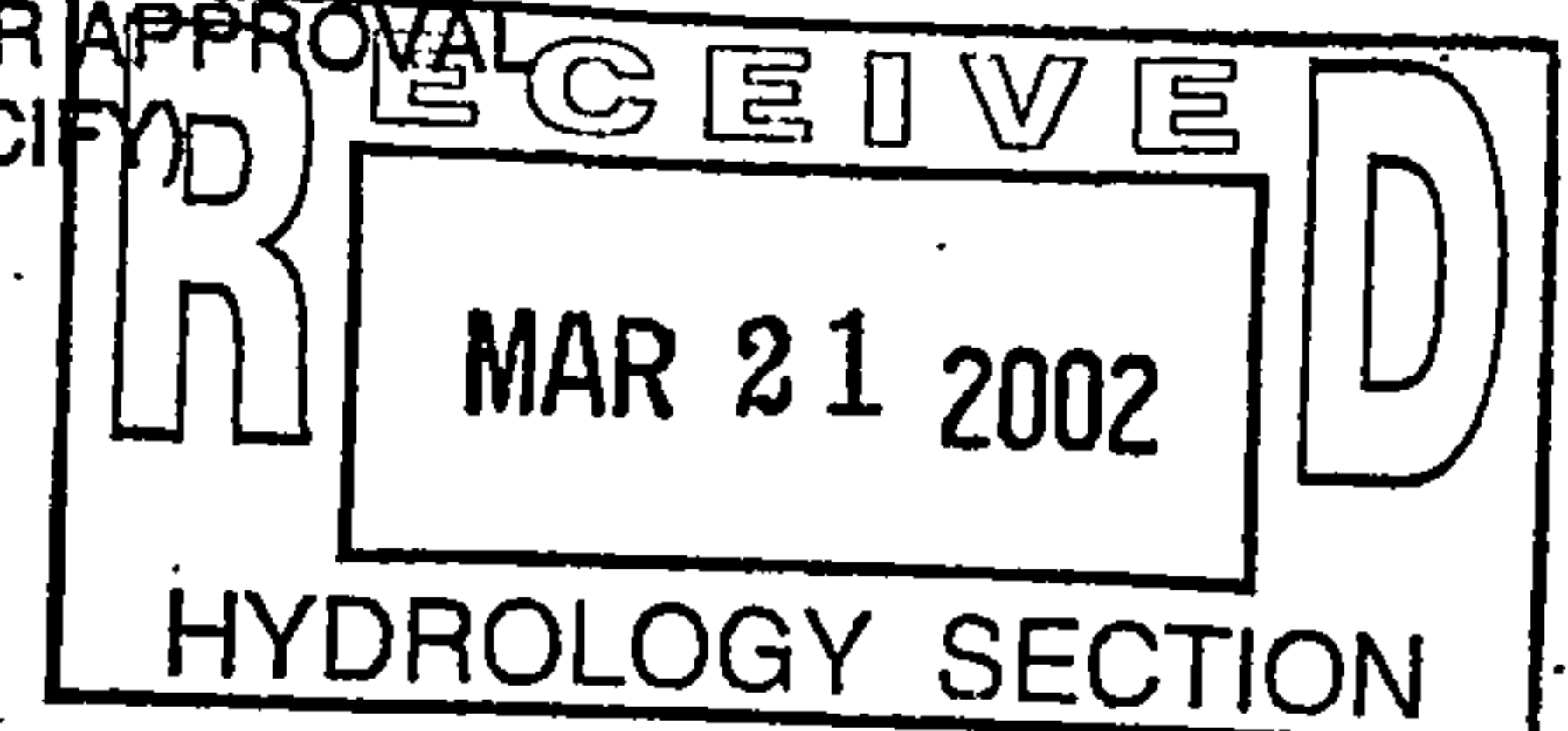
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- ☐ WORK ORDER APPROVAL
- ☐ OTHER (SPECIFY) _____

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☐ YES
- ☐ NO
- ☐ COPY PROVIDED



DATE SUBMITTED: MARCH 21 2002 BY: MARVIN R KORTUM

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five
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3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

May 14, 2001

Marvin R. Kortum, PE
1605 Speakman Dr., SE
Albuquerque, NM 87123

**Re: Holiday Breeze Subdivision Amended Grading Plan
Engineer's Stamp dated 4-20-01 (F22/D36)**

Dear Mr. Kortum,

Based upon the information provided in your submittal dated 4-23-01, the above referenced amended plan is approved for Building Permit and for Grading Permit. These changes are minor enough to forego the need for application to DRB. The original plan dated 4-21-99 and this one will need to be certified to release Financial Guarantees. Building Permit.

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

Prior to issuance of a Certificate of Occupancy and/or Release of Financial Guarantee, an Engineer's Certification per the DPM will be required.

If you have any questions, you can contact me at 924-3986.

Sincerely,

Bradley L. Bingham
Bradley L. Bingham, PE
Sr. Engineer, Hydrology

C: file

DRAINAGE INFORMATION SHEET

HOLIDAY BREEZE SUBDIVISION

PROJECT TITLE: _____ ZONE MAP/DRG. FILE #: *F22/D36*
DRB #: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: *HOLIDAY BREEZE SUBDIVISION*
CITY ADDRESS: *NE QUADRANT MONTGOMERY BLVD & CAIRO DRIVE NE*

ENGINEERING FIRM: *Marvin R. Kortum*
ADDRESS: *1605 Speakman Drive SE*
CITY, STATE: *Albuquerque, New Mexico*

OWNER: *UPWEST CORPORATION*
ADDRESS: *P.O. BOX 66449*
CITY, STATE: _____

ARCHITECT: _____
ADDRESS: _____
CITY, STATE: _____

SURVEYOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTRACTOR: _____
ADDRESS: _____
CITY, STATE: _____

CONTACT: _____
PHONE: *(505) 299-0774*
ZIP CODE: *87123*

CONTACT: *BILL WADE*
PHONE: *(505) 899-8849*
ZIP CODE: *87193-6449*

CONTACT: _____
PHONE: _____
ZIP CODE: _____

CONTACT: _____
PHONE: _____
ZIP CODE: _____

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☐ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAINAGE PLAN
☐ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERTIFICATION
☐ CLOMR/LOMR
☒ OTHER *ADDITION TO GRADING & DRAINAGE PLAN*
- WAS A PRE-DESIGN CONFERENCE ATTENDED: _____
☐ YES
☐ NO
☐ COPY PROVIDED

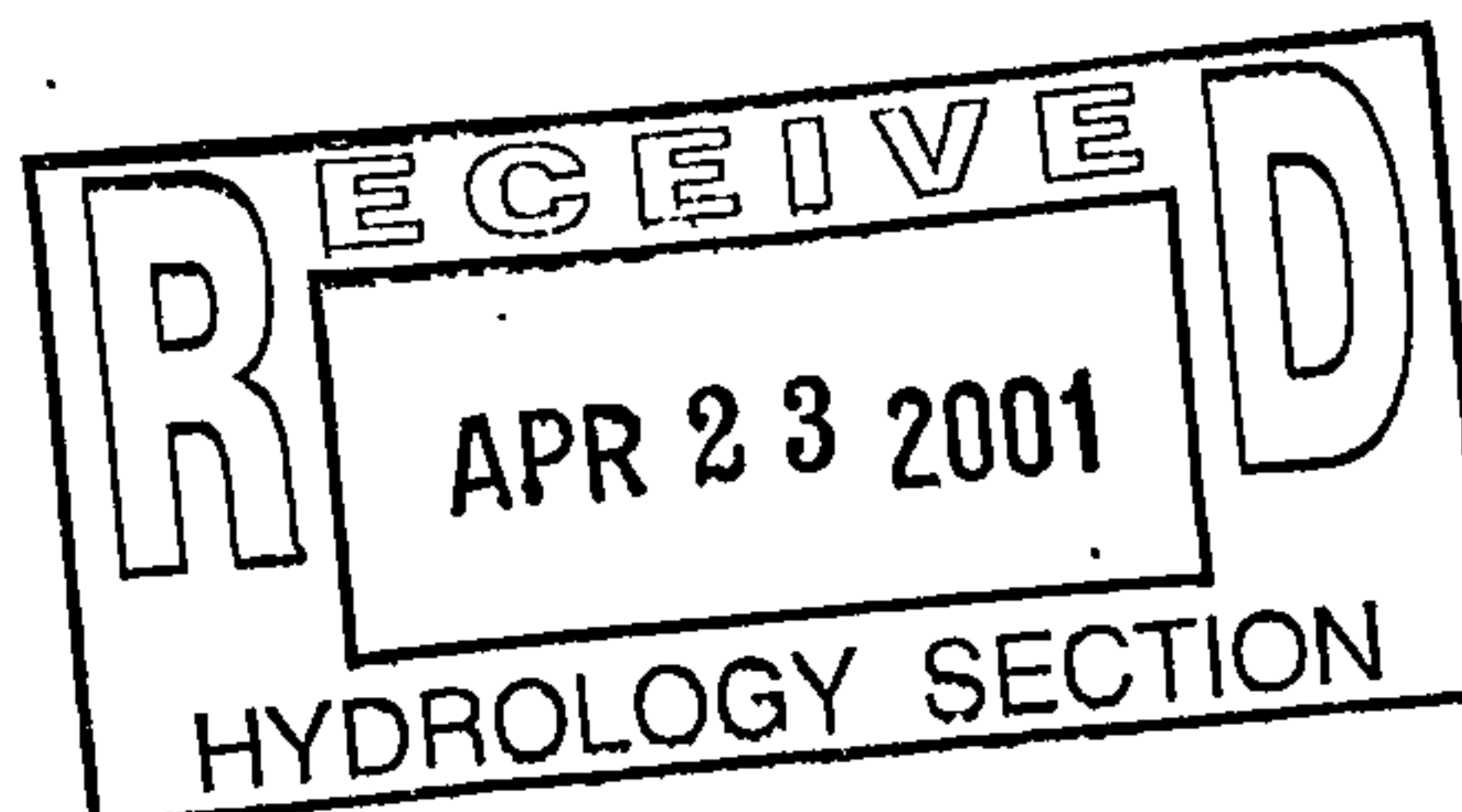
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☒ BUILDING PERMIT APPROVAL
☒ CERTIFICATE OF OCCUPANCY APPROVAL
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☐ OTHER (SPECIFY) _____

DATE SUBMITTED: *APRIL 23 2001* BY: *MARVIN KORTUM*

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope of the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.



Marvin R Kortum
1605 Speakman Drive SE
Albuquerque, New Mexico 87123
NMPE 6519
(505) 299-0774 FAX 299-9405

April 23, 2001

City of Albuquerque Public Works
Hydrology Division
ATTN: Brad Bingham
P. O. Box 1293
Albuquerque, New Mexico 87103
924-3986

REFERENCE: Drainage and Grading Plan for HOLIDAY BREEZZE SUBDIVISION,
located in the northeast quadrant of the intersection of Montgomery
Boulevard and Cairo Drive, NE, (east of Juan Tabo Boulevard), Map F22.

Dear Brad:

Attached are two sheets with changes to the approved Grading and
Drainage Plan for the reference project.

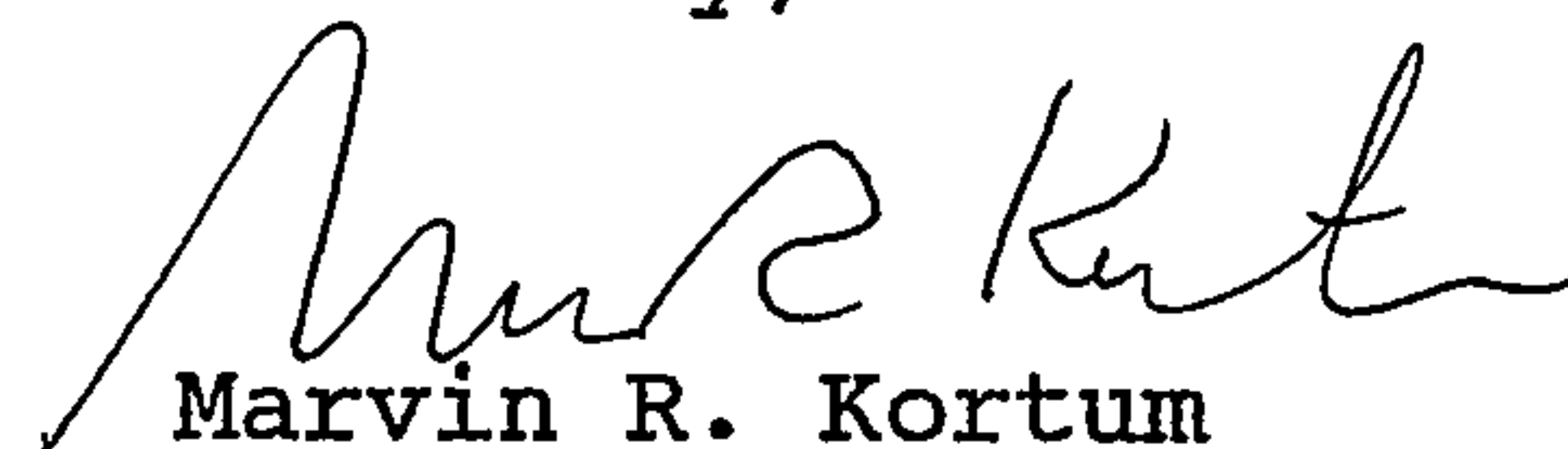
The changes are requested by the owner/developer in order to
obtain building occupancy permit.

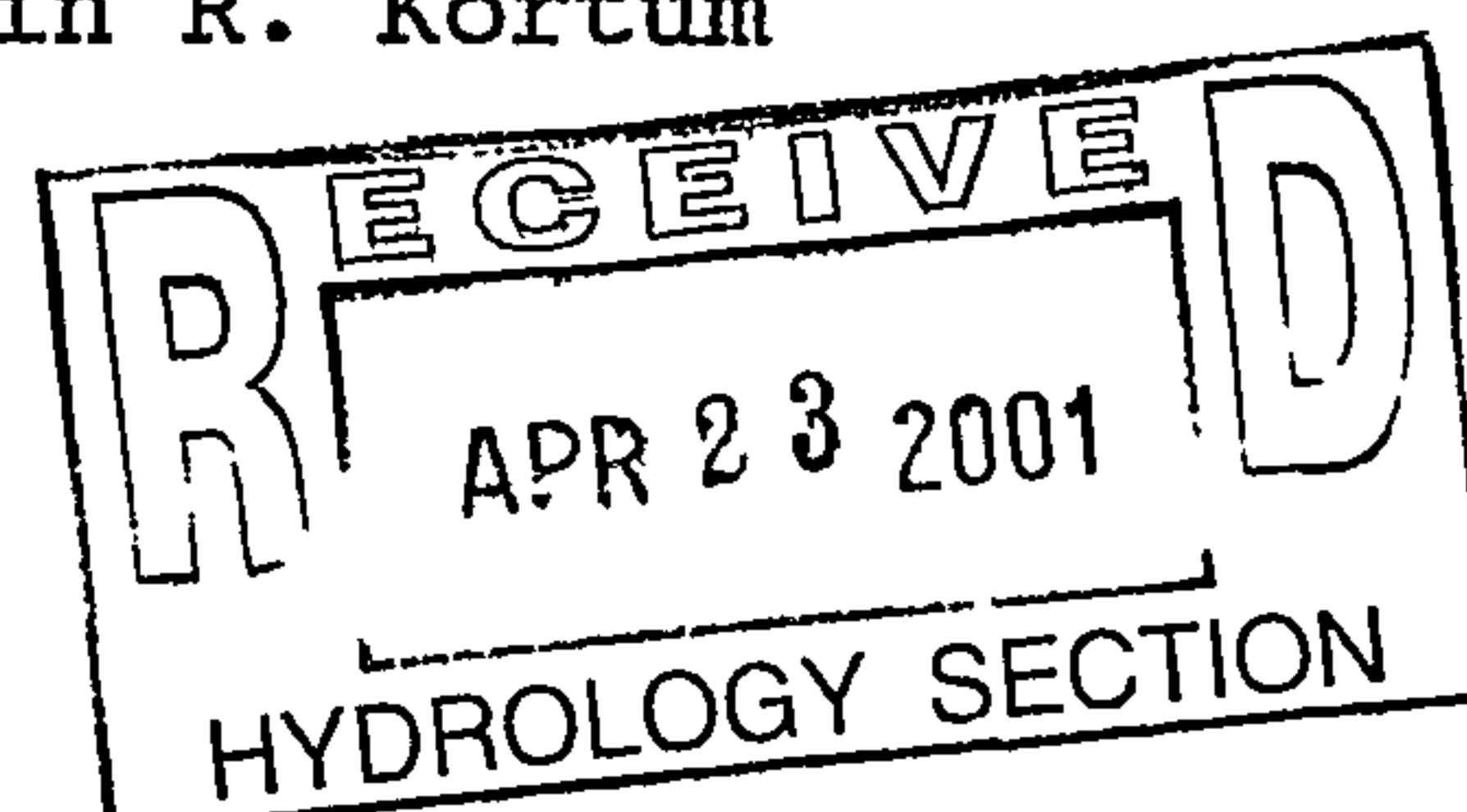
The specific changes required for lots 16 through 30 are that a
retaining wall is required along the east property line so that there
is sufficient area within the back yards for the required ponding, and
also permit the yard surface to be sloped away from the building
perimeter as required by the building code.

The specific changes for lots 1 through 4 are to raise the
retaining wall along Cairo Drive so that the yards are at an elevation
nearer the house elevation in order to have the yards accessible for
wheelchair use.

If you have any questions please call me.

Sincerely,


Marvin R. Kortum



cc: Bill Wade
Upwest Corporation

McDowell Engineering, Inc.

7820 Beverly Hills Ave, NE

Albuquerque, New Mexico 87122

Telephone: (505)828-2130

Fax: (505)821-4857

FAX**TRANSMITTAL**FileTO: BRAD BINGHAM
COADATE: 9-1-00

PROJ. NO.: _____

FAX NO.: 924-3864RE: HOLIDAY BREEZE SUB'D

WE ARE SENDING YOU THE FOLLOWING:

DATE	DESCRIPTION
8/31	Letter w/ attachments (revised street grades due to as-built pad - lot #35)

THESE ARE TRANSMITTED as checked below:

☒ For approval ☐ For your use ☐ As requested ☐ For review and comment☐ Other _____

REMARKS:

COPY TO: John Todd

SIGNED: _____

Jackie S. McDowell, P.E.

NUMBER OF COPIES INCLUDING THIS COVER SHEET 4

REEZE COURT NE

1" = 50'

PVI STA = 14+23.11

PVI ELEV = 5771.09

PROPOSED GROUND @ CL

EXIST. GROUND @ CL

5.90%

PVI STA = 17+00.27

PVI ELEV = 5781.90

STA 17+00 REMOVE CURB TO STA 17+00
REPLACE TO REVISED DESIGN DUE
TO PAD ELEV ON LOT # 35

STA 17+39 (APPROX. NW COR. LOT # 35)
ELEV. = 83.39

$\Delta = 0.51$

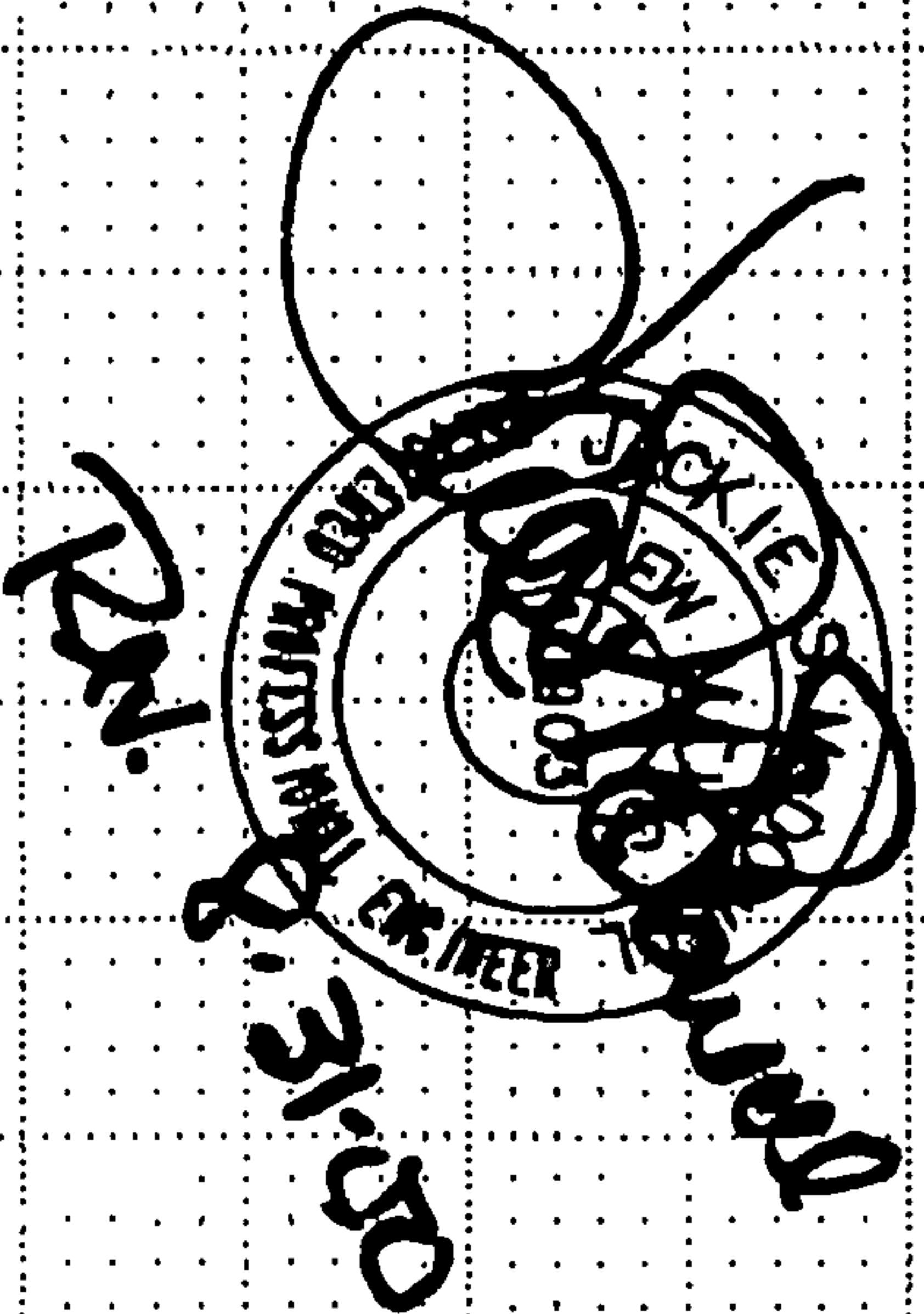
$\Delta = 1.04$

$\Delta = 1.56$

DESIGN 83.80' BUILT = 84.04'
 $\Delta = 0.24'$

LOWER SERVICES
AS NECESSARY

REVISED SLOPE
3.85%



EXIST. GROUND ELEV. (TYP)
NEW GROUND ELEV. (TYP)

5772.4
5770.42

5774.1
5772.14

5775.7
5774.09

5777.6
5776.04

5779.4
5777.99

5781.5
5779.94

5783.8
5781.89

5785.9
5784.33
83.82

5788.0
5786.78
85.74

5789.9
5789.23
87.67

14+00

15+00

16+00

17+00

18+00

1" = 50'

ED @ 8-10'
STREET

BLOCK F
NEW HOLIDAY PARK
(1/15/70, 04-57)

LOT 2

LOT 3

LOT LINE TO
BE ELIMINATED

276.38'

OLD LOT LINE

N 89°49'11" W

340.06'

LOT 30

LOT 29

LOT 28

LOT 27

LOT 26

LOT 25

LOT 24

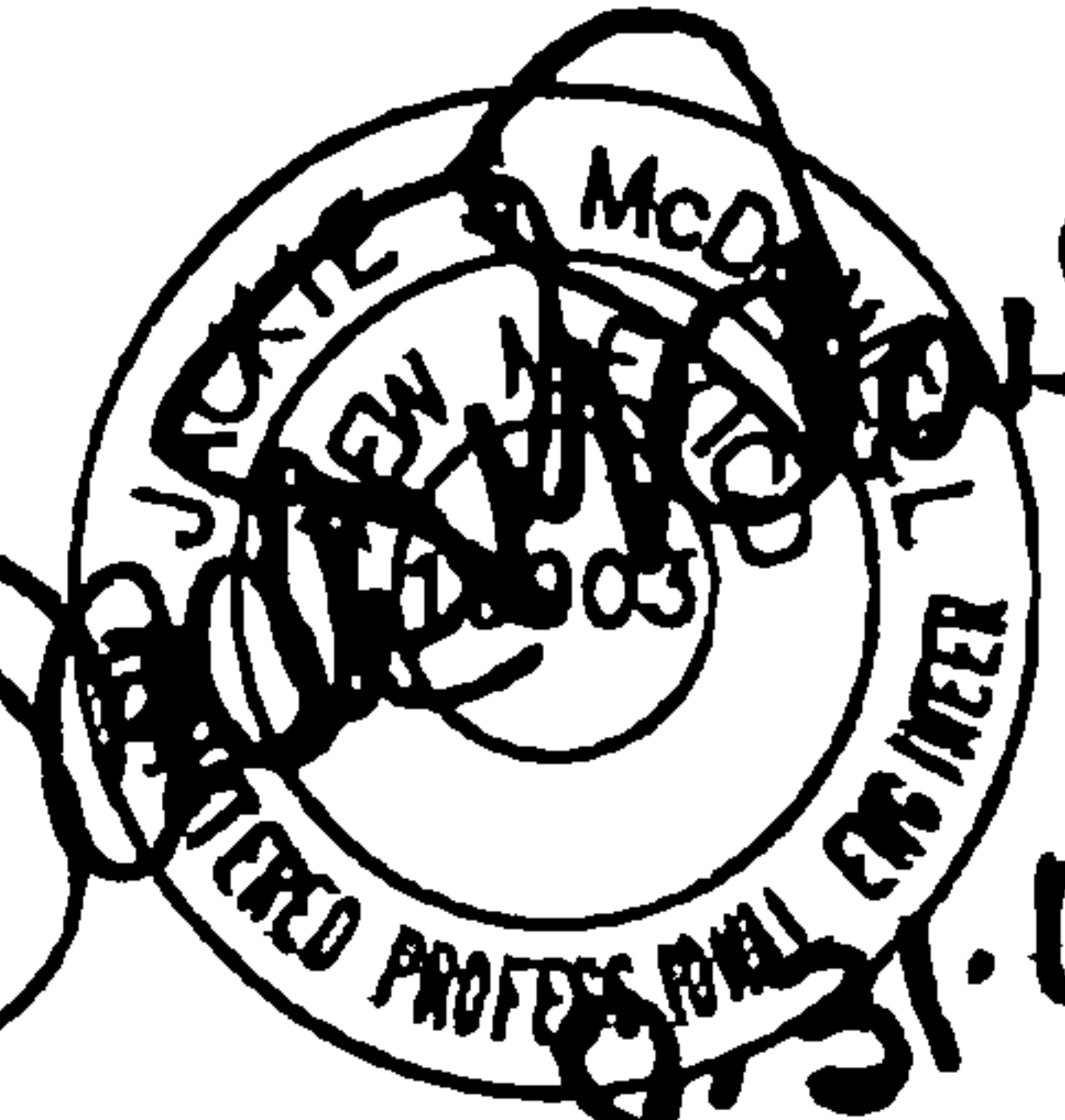
LOT 23

TRACT D
(VACANT)

346.73'

INSTALL WHEEL CHAIR
RAMP PER COA STD.

Rev. 8-31-00



REMAINDER OF TRACT E
NEW HOLIDAY PARK
(1/15/70, D4-57)

400.92'

S 00°08'29" W

S 00°08'29" W

699.89'

FENCE (TYP)

LOT 4

LOT 48

LOT 47

LOT 46

LOT 45

LOT 44

LOT 43

TRACT F
(VACANT)

LOT 34

LOT 35

LOT 36

LOT 37

LOT 38

LOT 5

N 48°02'49" E

BLOCK HALL (TYP)
UTILITY EASEMENT

REVISED
ROAD
8A39

REVISED
ROAD
8A39

REVISED
ROAD
8A39

REVISED
ROAD
8A39

REVISED
ROAD
8A39

REVISED
ROAD
8A39

DRAINAGE PLAN

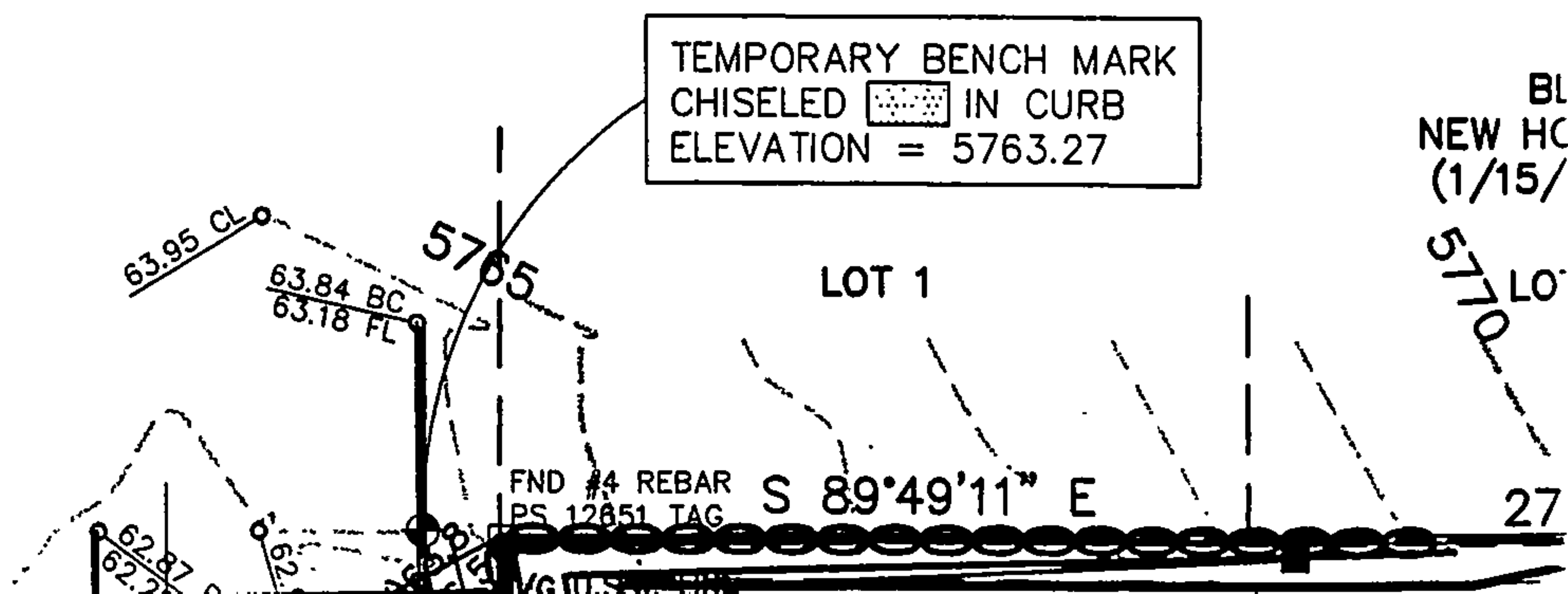
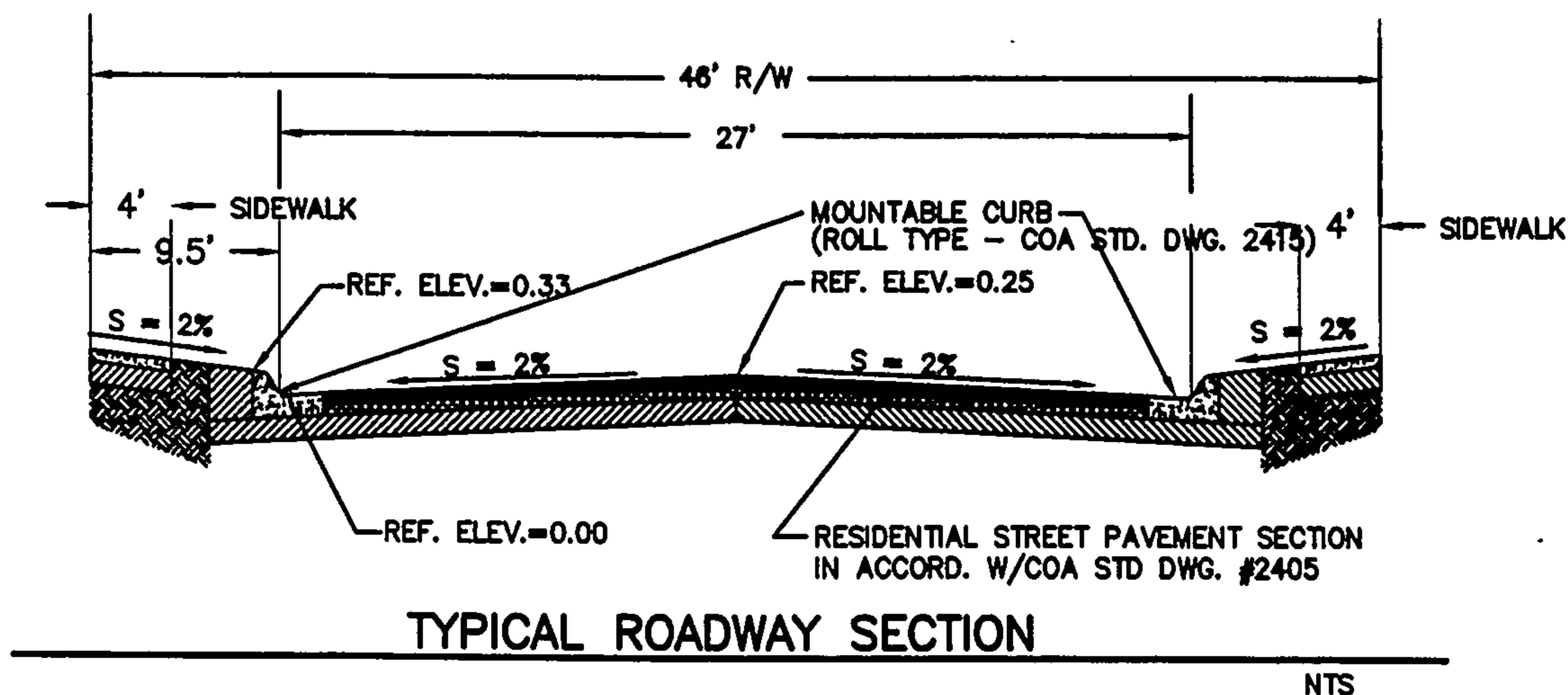
SCOPE:

Pursuant to the latest City of Albuquerque Drainage Ordinance, the Drainage Plan shown hereon outlines the drainage management criteria for controlling developed runoff on and exiting the project site. 47 lots are proposed with, with associated access, landscaping, and utility improvements.

EXISTING CONDITIONS:

Presently the 4.05 acre site is undeveloped. The site is bounded on the north by residential development, on the south by Montgomery Boulevard, and on the west by Cairo Street. Topographically, the site slopes from the northeast to the southwest with an average slope of 4 percent. Site drainage is in the form of surface sheet flow to Cairo Street and Montgomery Boulevard. Vegetation consists of a sparse to moderate growth of grasses and weeds. Offsite flows (minimal) currently enter the property from the east. The flows from the upstream offsite basin will continue to flow south to Montgomery Blvd.

As shown by Floodway Map No. 144, dated September 20, 1996, the site is not located in a 100-year flood plain.





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103
August 26, 1999

Jackie McDowell
McDowell Engineering, Inc.
7820 Beverly Hills Ave. NE
Albuquerque, NM 87122

RE: HOLIDAY BREEZE SUBDIVISION (F22/D36), 8-16-99 GRADING & DRAINAGE
RESUBMITTAL. ENGINEER'S STAMP DATED 4-21-99 (stamp not updated since
last submittal).

Dear Ms. McDowell:

Based upon the information provided in your most recent submittal, and from our discussion yesterday, the referenced project is approved for Preliminary Plat, Final Plat and for Grading Permit. Please note the following from our earlier discussion:

- For the downstream lots, ponding against a garden or retaining wall is not permitted. As we discussed, it appears that the downstream lots within this subdivision all back up to public right-of-way. As a remedy to this situation, please identify on your plan that a weep hole or turned block should be placed in the backyard retaining wall at an elevation just above finished grade (2 or 3 inches). The intent is for nuisance flows to be retained within the yard while excessive storm flow is allowed to spill onto the sidewalk below.
- In regards to the proposed cul-de-sac adjacent to Montgomery Blvd., if you do plan to proceed with a wall opening so that pedestrians can access the site, please do not plan for the drainage spillway to serve also as the walkway. Sidewalk culverts may be the only alternative in this instance.

Please see to it that these issues are addressed prior to submitting for Hydrology Div. signoff. Also, please attach a copy of this approval letter to the construction drawings when submitting for signoff.

If you have any questions, I can be reached at 768-2766.

Sincerely,

Scott Davis
PWD, Hydrology Div.

c: file



City of Albuquerque

5 March, 1999

Ms. Jackie S. McDowell, P.E.
McDowell Engineering, Inc. 7820 Beverly Hills Avenue NE
Albuquerque, NM 87122

RE: HOLIDAY BREEZE SUBDIVISION (F22/D36), 1/29/99 GRADING & DRAINAGE
RESUBMITTAL. ENGINEER'S STAMP DATED 1-25-99

Dear Ms. McDowell:

Based upon the information provided in your 1-29-99 submittal, you will need to address the following concerns from both myself and Smith Engineering (comments attached) prior to gaining City approval.

1. Prior to gaining City approval for a Grading Permit, you will need to provide this division with a copy of a recorded drainage easement from the adjacent properties east of the site where the concrete valley gutter is proposed.
2. Your developed drainage plan calls for the offsite valley gutter to run along lots 34 & 35, yet the plan does not call for this. Also, to convey these offsite flows to Montgomery, it would appear that this same valley gutter will have to run adjacent to the entire east side of the site.
3. How will the offsite flows within the valley gutter enter the Montgomery right-of-way? Are not sidewalk culverts needed at this location as well?
4. With the relatively steep onsite road grade, I am concerned that storm waters may not be retained within the road in the area of the curve to the south. Are you comfortable that a hydraulic jump will not occur in this location?
5. Your plan calls for back yard retention ponds. Why then does the plan also call for wall openings to allow for cross-lot drainage?
6. The lot sections, as shown, are not acceptable. I believe you may want to change the



City of Albuquerque

both of these to more accurately reflect your plan. Ponding against a retaining wall is not recommended, and it appears that the wall footing on the upstream lot section will be undermined, thus jeopardizing the structural integrity of the retaining wall.

If you need assistance in helping you address either my or Smith Engineering's concerns, feel free to contact myself or Fred Aguire. Our numbers are 924-3986 and 924-3980 respectively.

Sincerely,

Scott Davis
PWD, Hydrology Div.

c: Andrew Garcia
file

DRAINAGE INFORMATION SHEET

PROJECT TITLE: HOLIDAY BREEZE SUB'D ZONE ATLAS/DRNG. FILE #: F-22 / D036

DRB #: 98-343 EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: HOLIDAY BREEZE SUB'D, SECTION 34, T11N, R4E, NMPM

CITY ADDRESS: CAIRO STREET AND MONTGOMERY BOULEVARD

ENGINEERING FIRM: MCDOWELL ENGINEERING, INC. CONTACT: JACKIE MCDOWELL

ADDRESS: 7820 BEVERLY HILLS AVE. NE PHONE: 828-2430

OWNER: KEITH MACDUFFEE CONTACT: KEITH MACDUFFEE

ADDRESS: BOX 2243 PHONE: 275-9253

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: SOUTHWEST SURVEYING CO. INC. CONTACT: DAN GRANEY

ADDRESS: 333 LOMAS BLVD NE PHONE: 247-4444

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

CHECK TYPE OF APPROVAL SOUGHT:

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

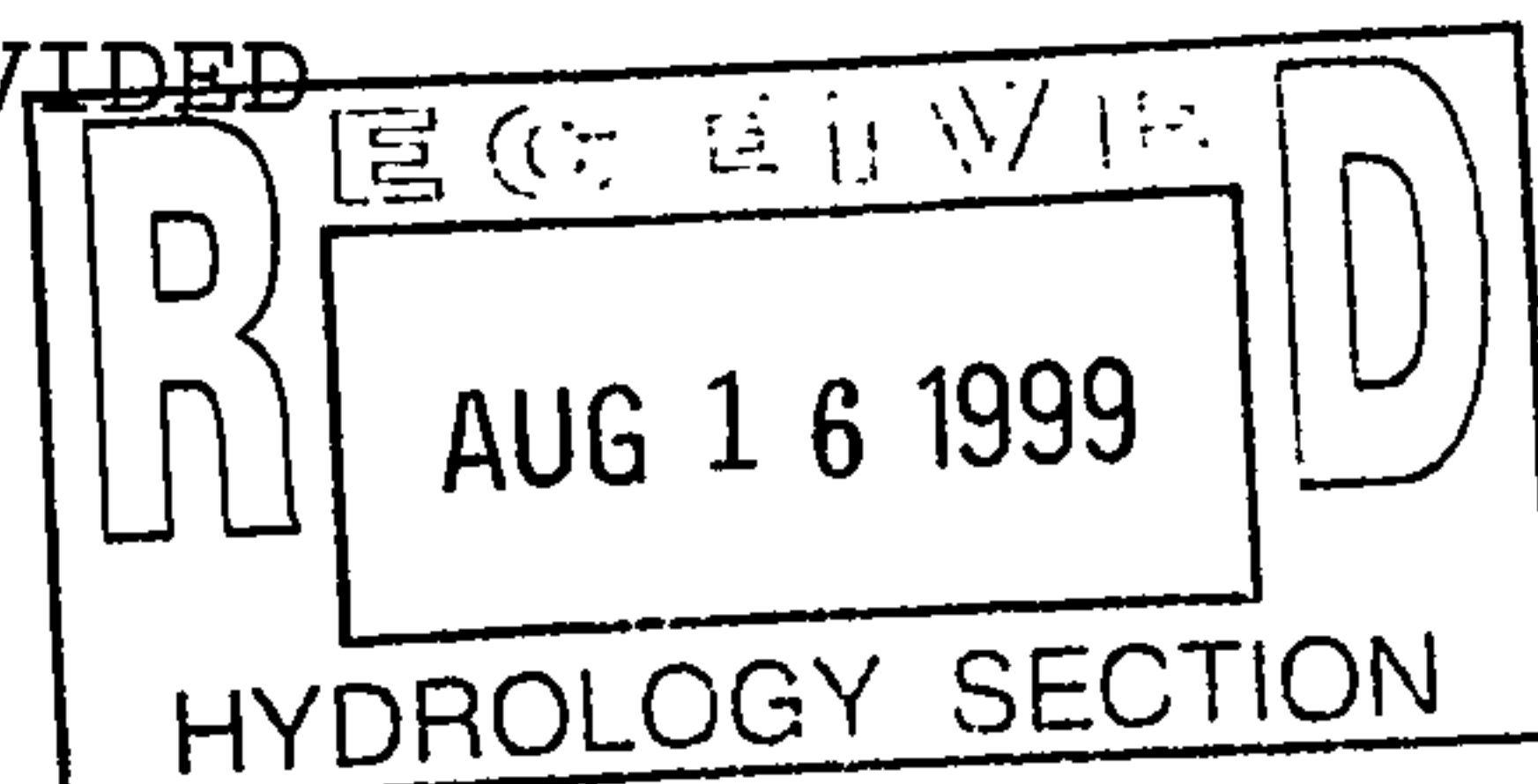
☐ SKETCH PLAT APPROVAL
☒ PRELIMINARY PLAT APPROVAL
☐ S.DEV PLAN FOR SUB'D APPROVAL
☐ S.DEV PLAN FOR BLDG PMT APPR.
☐ SECTOR PLAN APPROVAL
☒ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☐ BUILDING PERMIT APPROVAL
☐ CERT. OF OCCUPANCY APPROVAL
☒ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D.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

PRE-DESIGN MEETING:

☐ YES

☒ NO

☐ COPY PROVIDED



DATE SUBMITTED: AUGUST 16 , 1999

BY: JACKIE S. MCDOWELL, P.E.

McDowell Engineering, Inc.

Jackie Sedillo McDowell, P.E.
Civil Engineering Consultant

August 16, 1999

Mr. Fred Aguirre, P.E. and Mr. Scott Davis
City Hydrologist
City of Albuquerque
Public Works Department
P.O. Box 1293
Albuquerque, NM 87103

RE: MACDUFFEE HOLIDAY BREEZE SUBDIVISION (F22/D-36)

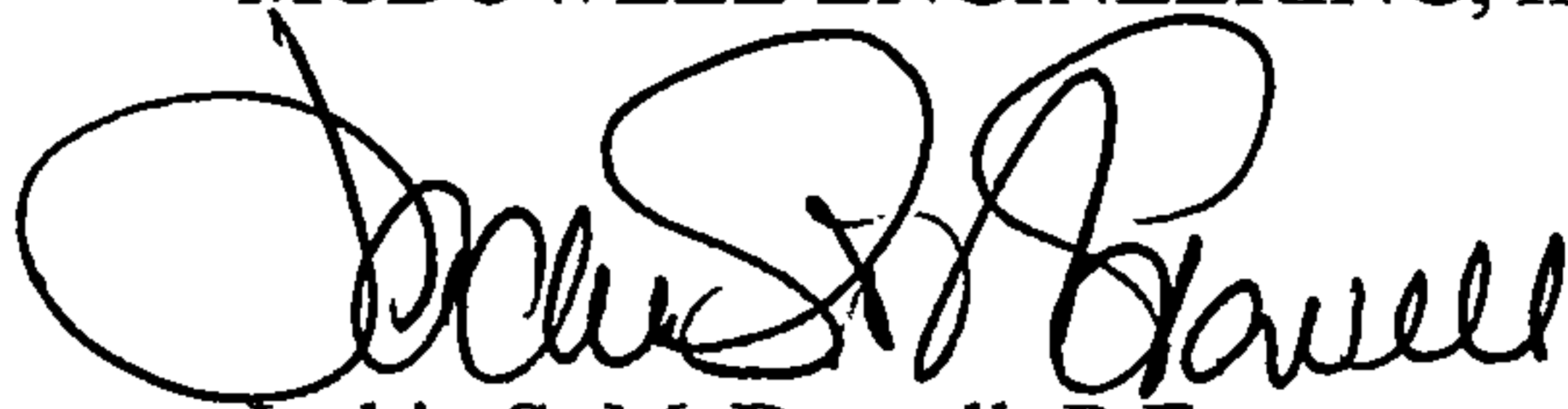
Dear Mr. Aguirre & Mr. Davis:

Per your comments at the public hearing for the referenced project (copy of written comments attached) we offer the following response in the same numerical order.

1. The drainage plan has been revised and is at a larger scale and more legible.
2. No hydraulic jumps occur within the proposed subdivision. We have analyzed the worst case scenario and the 100 year maximum flow will remain in a supercritical state. See the attached calculations.
3. We have added a retaining wall along the north side of Lot #1.
4. The note has been removed. All roof drainage and driveway drainage is directed at the street. The only runoff to the back yards is what falls on it.

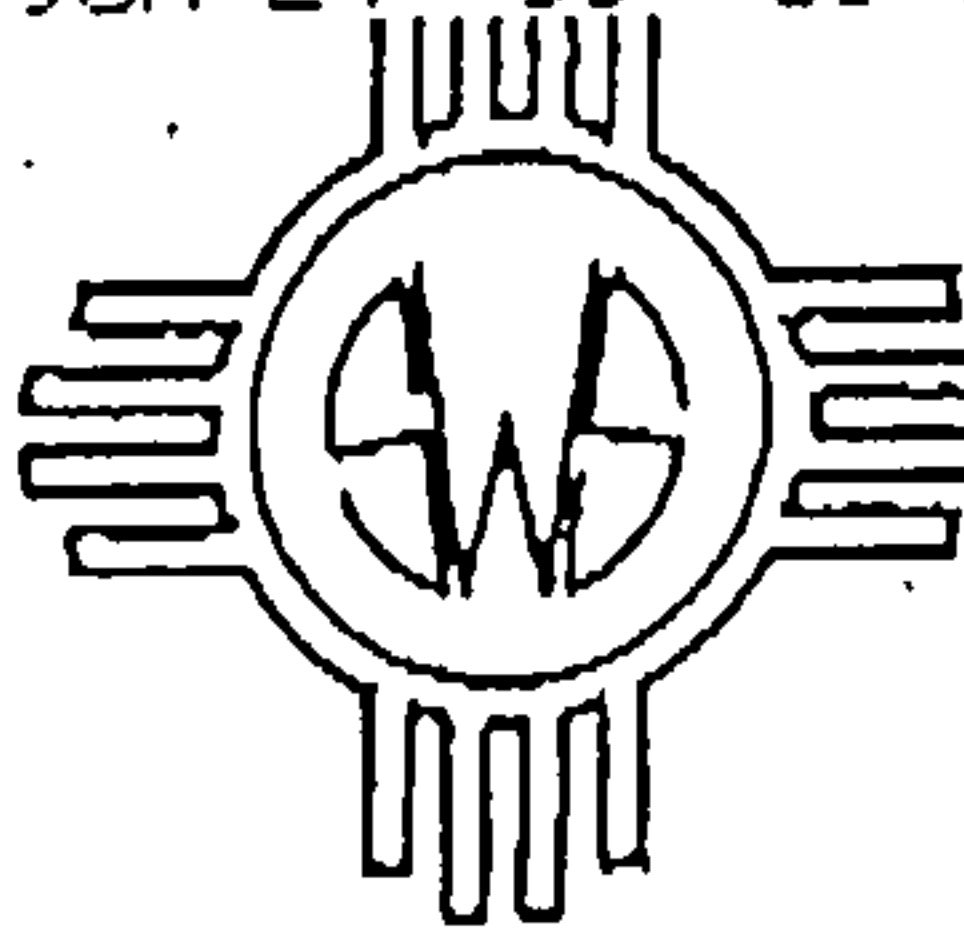
Sincerely,

MCDOWELL ENGINEERING, INC.



Jackie S. McDowell, P.E.

cc: Mr. Daniel Graney, SW Surveying, Inc.

**SOUTHWEST SURVEYING CO., INC.**

333 LOMAS BLVD., N.E.
ALBUQUERQUE, NEW MEXICO
87102

PHONE: (505)998-0303
FAX: (505)998-0306
e-mail address swsurvey@thuntek.net

June 23, 1999

MCDOWELL ENGINEERING, INC.
7820 BEVERLY HILLS AVE NE
ALBUQUERQUE, NM 87122

REF: DRB 98-343 / HOLIDAY BREEZE

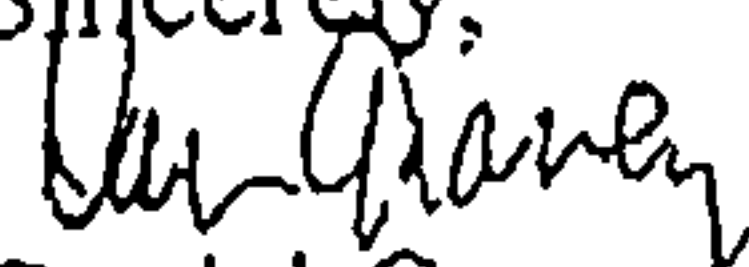
Dear Jackie:

At the public hearing for the above referenced subdivision; on June 23, 1999 the following were discussed with Hydrology and need to be addressed prior to any DRC or Final Plat approvals:

1. The drainage plan needs to be more legible - the compressed site is difficult to read.
2. Are there any hydrologic jump blocks on the city streets as proposed within the subdivision. (your answer to Hydrology needs to be specific).
3. There appears to be a need for retaining walls within Lot 1. There is a significant grade difference from adjoining property to the North.
4. A note on the drainage plan states that a turned block at downstream end of each lot for drainage overflow is required. (Does this mean that there is rear cross lot drainage?) Are easements required?

Please respond to these concerns and forward a copy to me so that I have knowledge of these concerns. Attached is the approved infrastructure list.

Sincerely,


Daniel Graney
General Manager

DG / sa

Worksheet
Worksheet for Irregular Channel

HOLIDAY BREEZE
SUB'D

max.
Slope = 4%

Project Description	
Project File	
Worksheet	
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	0.040000 ft/ft	
Elevation range: 0.00 ft to 0.53 ft.		
Station (ft)	Elevation (ft)	S
0.00	0.53	
10.00	0.33	
10.05	0.00	
23.50	0.25	
37.00	0.00	
37.00	0.33	
37.05	0.33	
47.00	0.53	
Discharge	19.12	cfs

Results	
Wtd. Mannings Coefficient	0.017
Water Surface Elevation	0.27 ft
Flow Area	3.97 ft ²
Wetted Perimeter	27.50 ft
Top Width	26.99 ft
Height	0.27 ft
Critical Depth	0.39 ft
Critical Slope	0.007148 ft/ft
Velocity	4.81 ft/s
Velocity Head	0.36 ft
Specific Energy	0.63 ft
Froude Number	2.21
Flow is supercritical.	

Supercritical - No hydraulic jump
to S = 1.3%

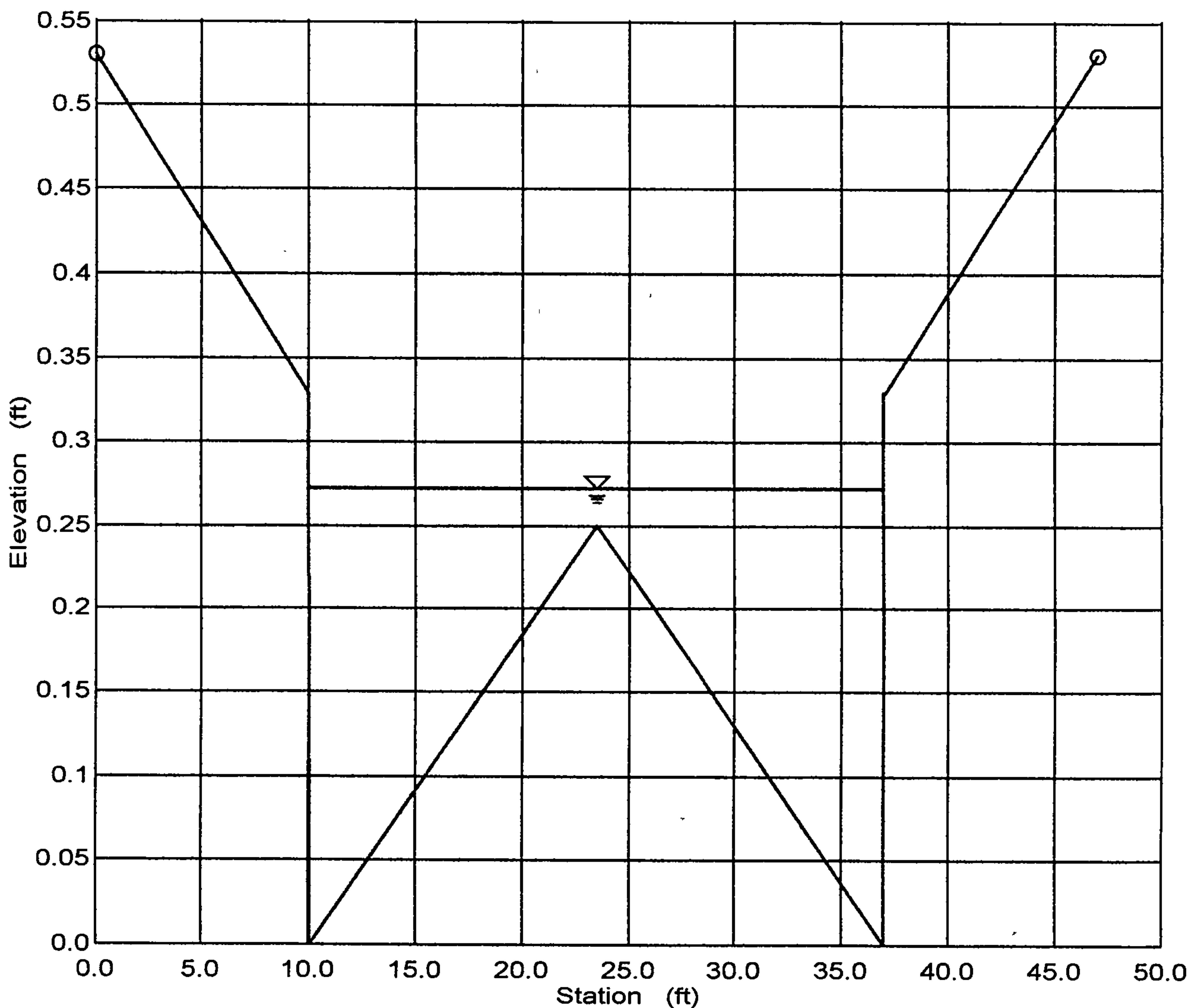
HOLIDAY BREEZE
SUB'D

Cross Section
Cross Section for Irregular Channel

max slope = 4%

Project Description	
Project File	
Worksheet	
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Section Data	
Wtd. Mannings Coefficient	0.017
Channel Slope	0.040000 ft/ft
Water Surface Elevation	0.27 ft
Discharge	19.12 cfs



HOLIDAY FREEZE
SUB'D

Worksheet
Worksheet for Irregular Channel

min. slope = 1.3%

Project Description	
Project File	
Worksheet	
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data				
Channel Slope		0.013400 ft/ft		
Elevation range: 0.00 ft to 0.53 ft.				
Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	0.53	0.00	47.00	0.017
10.00	0.33			
10.05	0.00			
23.50	0.25			
37.00	0.00			
37.00	0.33			
37.05	0.33			
47.00	0.53			
Discharge	19.12	cfs		

Results		
Wtd. Mannings Coefficient	0.017	
Water Surface Elevation	0.33	ft
Flow Area	5.52	ft ²
Wetted Perimeter	27.62	ft
Top Width	27.00	ft
Height	0.33	ft
Critical Depth	0.39	ft
Critical Slope	0.007149	ft/ft
Velocity	3.46	ft/s
Velocity Head	0.19	ft
Specific Energy	0.52	ft
Froude Number	1.35	
Flow is supercritical.		

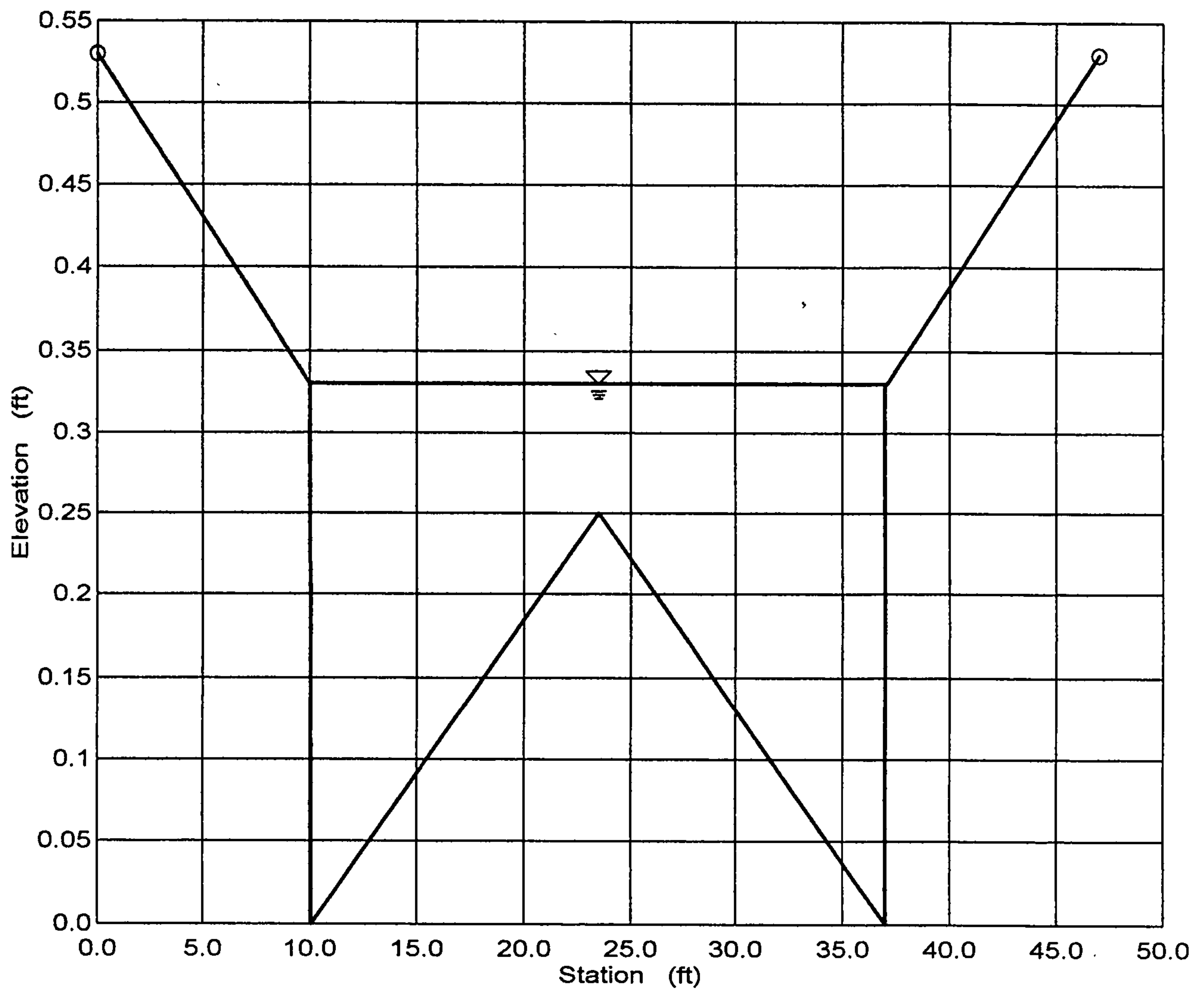
1.35 - supercritical - No hydraulic jump.
from $S = 4\%$

Cross Section
Cross Section for Irregular Channel

HOLIDAY BREEZE
SUB'D
Min. Slope = 1.3%

Project Description	
Project File	
Worksheet	
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Section Data	
Wtd. Mannings Coefficient	0.017
Channel Slope	0.013400 ft/ft
Water Surface Elevation	0.33 ft
Discharge	19.12 cfs





City of Albuquerque

10 May 1999

Jackie McDowell
McDowell Engineering, Inc.
7820 Beverly Hills Ave. NE
Albuquerque, NM 87122

RE: HOLIDAY BREEZE SUBDIVISION (F22/D36), 4/22/99 GRADING & DRAINAGE
RESUBMITTAL. ENGINEER'S STAMP DATED 4/21/99

Dear Ms. McDowell:

Based upon the information provided in your 4/22/99 resubmittal, the referenced project is conditionally approved for Preliminary Plat, Final Plat and for Grading Permit. In my 3-5-99 letter to you, I expressed concern regarding the lot sections depicted on your plan. To clarify the City's position once again, if the vertical separation between lots is over 1.5' the supporting wall will need to be a retaining wall. Also, a retaining wall is required if water is allowed to pond against the wall. Again, this plan is approved assuming that retaining walls are not required. If it is determined that they are indeed needed, then a revised plan will need to be submitted to this office for approval and permitting.

For any work being performed by the contractor within City right-of-way, proper permitting is required prior to commencing with the work.

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

Sincerely,

Scott Davis
PWD, Hydrology Division

c: Andrew Garcia
file

April 22, 1999

Mr. Fred Aguirre, P.E. and Mr. Scott Davis
City Hydrologist
City of Albuquerque
Public Works Department
P.O. Box 1293
Albuquerque, NM 87103

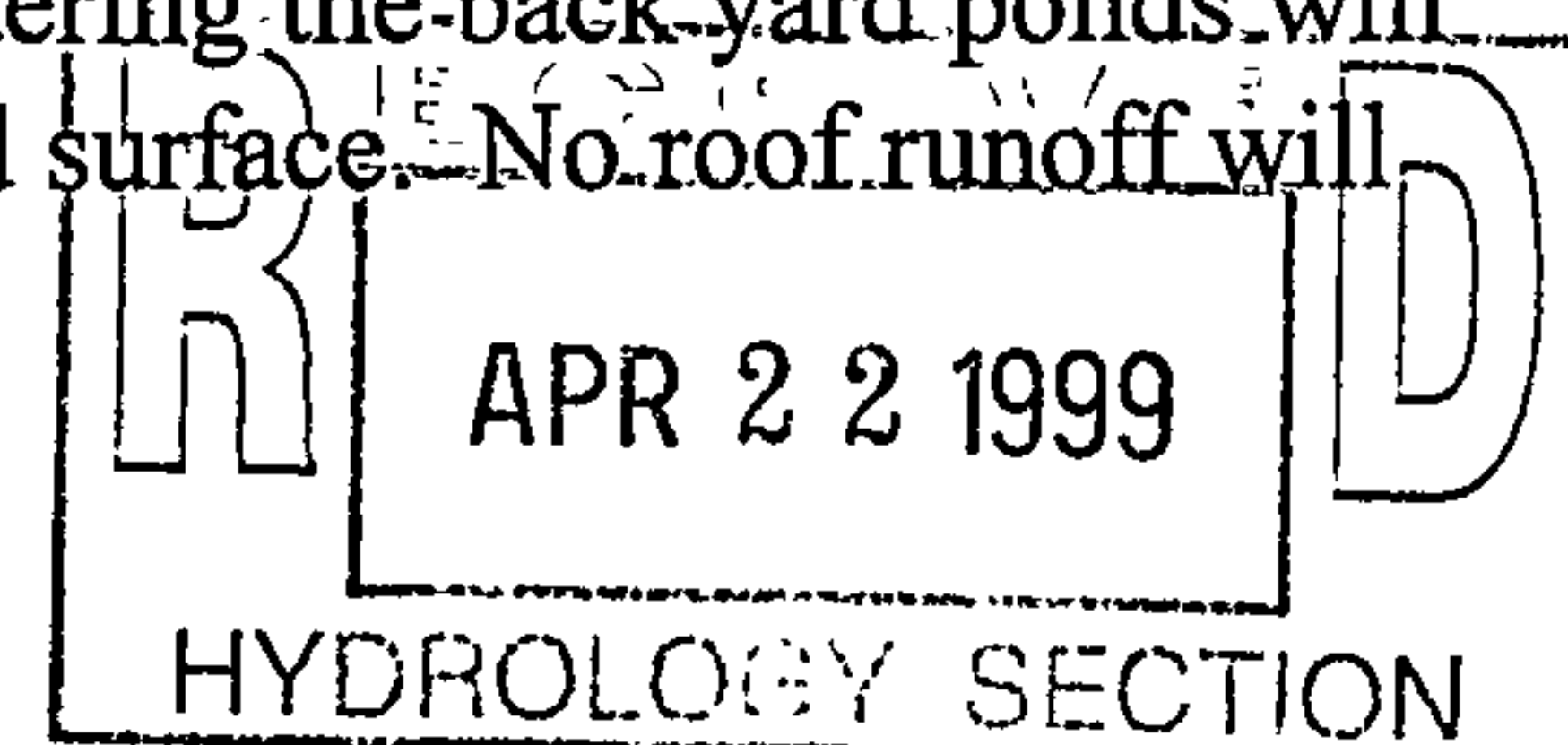
RE: MACDUFFEE HOLIDAY BREEZE SUBDIVISION (F22/D-36)

Dear Mr. Aguirre & Mr. Davis:

We received your letter dated March 5, 1999 with comments for the referenced project Grading & Drainage Plan.

In accordance with our telephone conversation of April 20, 1999, we have revised the Grading and Drainage Plan. Listed below are responses to your comments in the same numerical order listed.

1. Per our discussion, a drainage easement will not be required since the offsite runoff will flow along the new property line wall to the south to Montgomery. The concrete valley gutter has been eliminated.
2. The valley gutter has been eliminated. Minor upstream flow will drain south to Montgomery.
3. See responses above.
4. Since grades are not changing drastically at this location, a hydraulic jump should not occur.
5. The back yard ponds are very small and are not considered in the calculations. The turned blocks will be located along the west walls along Cairo Street for overflow drainage. The only storm water flow entering the back yard ponds will be that rainfall that falls directly on the landscaped surface. No roof runoff will flow to the back yard ponds.



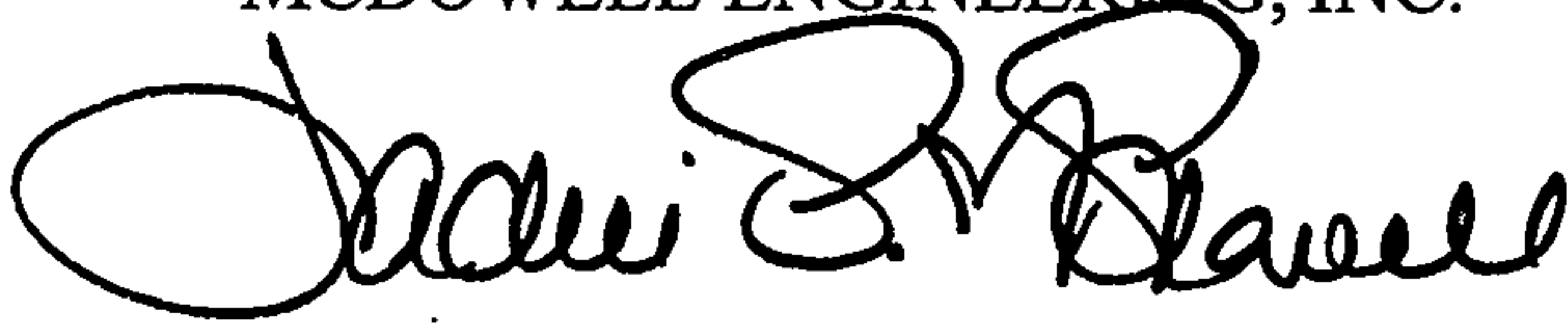
6. The lot sections are at an exaggerated vertical scale. The basic criteria is shown schematically for concept only. Again, back yard ponds are for convenience only and were not considered in the calculations, therefore, free discharge is calculated for these lots.

The Owner would like to get a Grading permit as soon as possible. Anything you can to expedite the issuance of the permit would be greatly appreciated.

Your timely approval of this Grading & Drainage Plan is appreciated.

Sincerely,

MCDOWELL ENGINEERING, INC.

A handwritten signature in black ink, appearing to read "Jackie S. McDowell". The signature is fluid and cursive, with the first name "Jackie" being the most prominent part.

Jackie S. McDowell, P.E.

McDowell Engineering, Inc.

Jackie Sedillo McDowell, P.E.
Civil Engineering Consultant

May 17, 1999

Mr. Fred Aguirre, P.E. and Mr. Scott Davis
City Hydrologist
City of Albuquerque
Public Works Department
P.O. Box 1293
Albuquerque, NM 87103

RE: MACDUFFEE HOLIDAY BREEZE SUBDIVISION (F22/D-36)

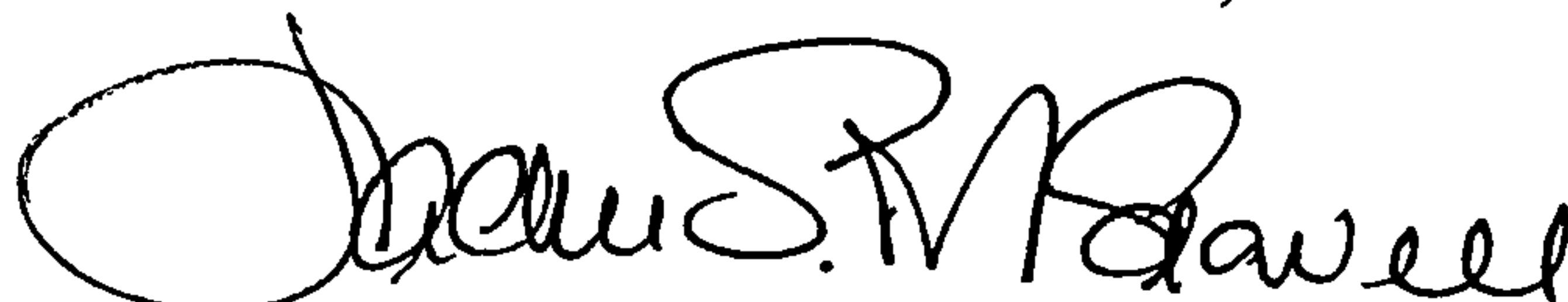
Dear Mr. Aguirre & Mr. Davis:

We received your letter dated May 5, 1999 noting the approval for Preliminary Plat, Final Plat and Grading Permit. We would like to clarify the retaining wall concern.

Please note that on the plan dated 4-21-99 we show retaining walls along the back yards of Lots 1-27. Please see the legend for the retaining wall linetype designation. Spot elevations were also provided around the wall.

Sincerely,

MCDOWELL ENGINEERING, INC.

A handwritten signature in black ink, appearing to read "Jackie S. McDowell", written over a large, stylized circular flourish.

Jackie S. McDowell, P.E.

McDowell Engineering, Inc.

7820 Beverly Hills Ave. NE
Albuquerque, New Mexico 87122
Telephone: (505)828-2430 Fax: (505)821-4857

LETTER OF TRANSMITTAL

TO: FRED AGUIRRE/SCOTT DAVIS
COA HYDROLOGY
100 SECOND ST.
PLAZA DEL SOL

DATE: 4-22-99
PROJ. NO.: _____

RE: MACDUFFEE HOLIDAY BREEZE SUBD

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

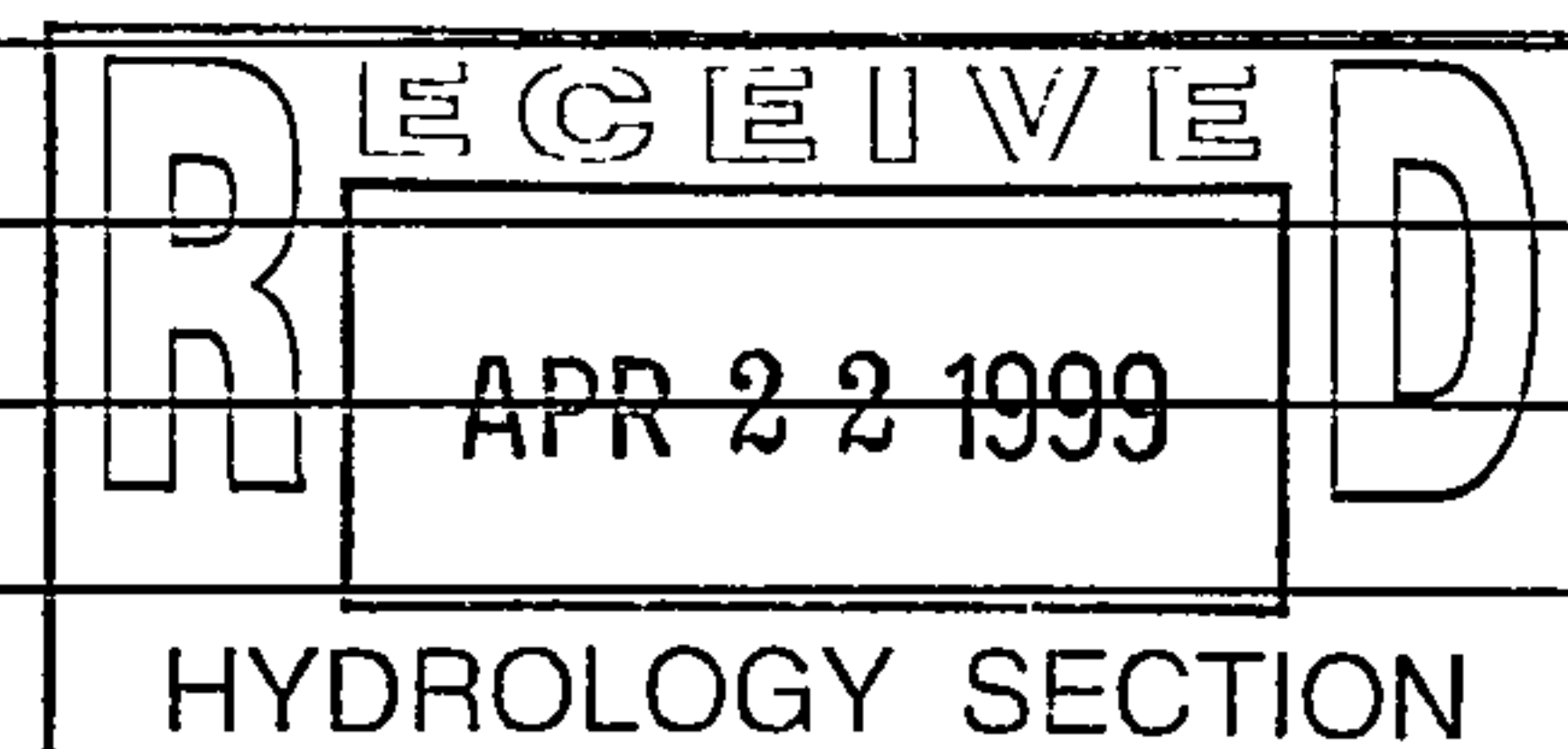
COPIES	DATE	DESCRIPTION
2		Revised G&D Plan (for Grading Permit)
1		Response to comments
1		Info Sheet

THESE ARE TRANSMITTED as checked below:

☒ For approval ☐ For your use ☐ As requested ☐ For review and comment

☐ Other _____

REMARKS:



COPY TO: JD

SIGNED: Jackie S. McDowell
Jackie S. McDowell, P.E.

DRAINAGE INFORMATION SHEET

PROJECT TITLE: HOLIDAY BREEZE SUB'D ZONE ATLAS/DRNG. FILE #: F-22 036

DRB #: 98-343 EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: HOLIDAY BREEZE SUB'D, SECTION 34, T11N, R4E, NMPM

CITY ADDRESS: CAIRO STREET AND MONTGOMERY BOULEVARD

ENGINEERING FIRM: MCDOWELL ENGINEERING, INC. CONTACT: JACKIE MCDOWELL

ADDRESS: 7820 BEVERLY HILLS AVE. NE PHONE: 828-2430

OWNER: KEITH MACDUFFEE CONTACT: KEITH MACDUFFEE

ADDRESS: BOX 2243 PHONE: 275-9253

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: SOUTHWEST SURVEYING CO. INC. CONTACT: DAN GRANEY

ADDRESS: 333 LOMAS BLVD NE PHONE: 247-4444

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

CHECK TYPE OF APPROVAL SOUGHT:

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

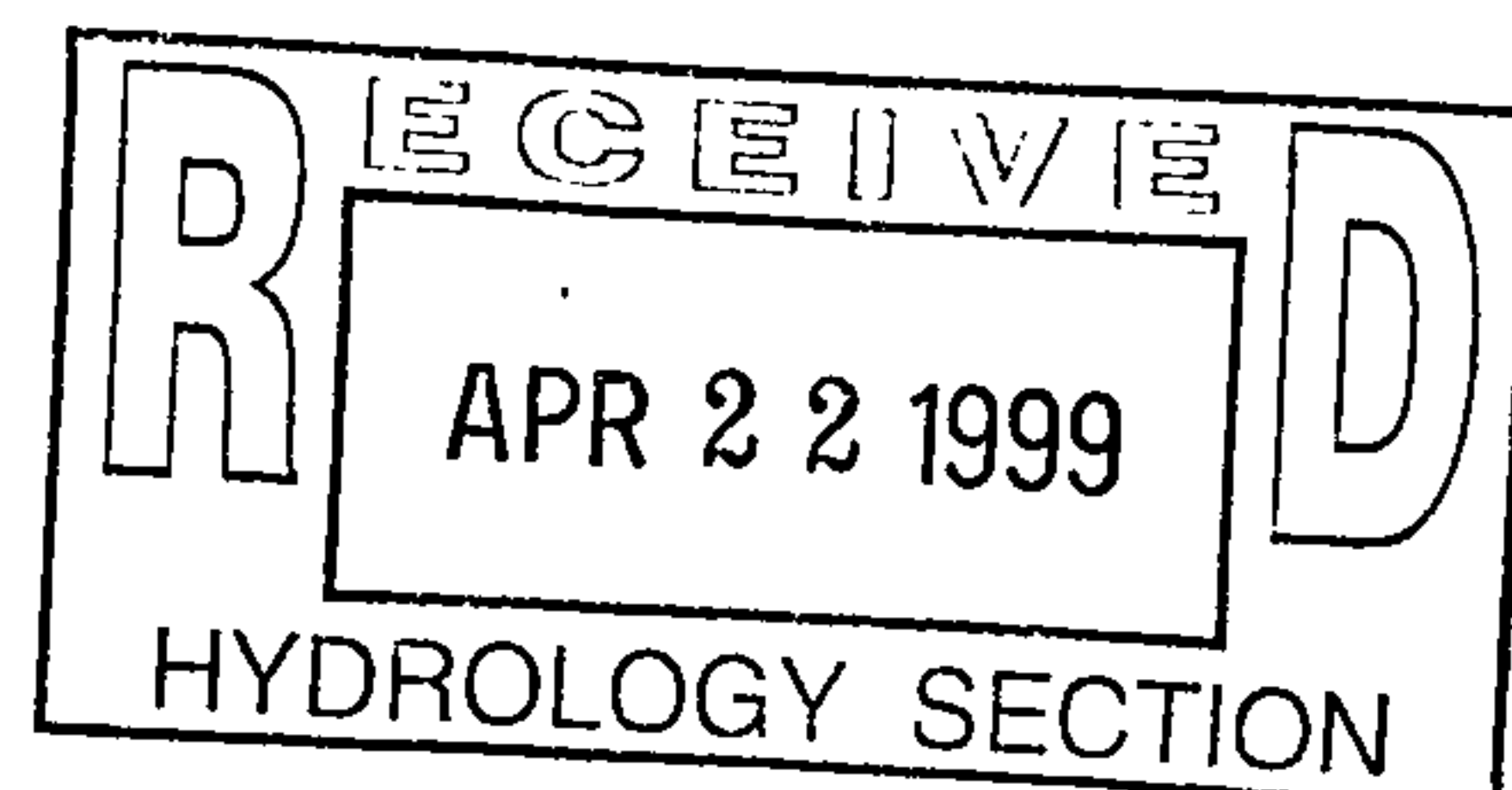
☐ SKETCH PLAT APPROVAL
☒ PRELIMINARY PLAT APPROVAL
☐ S.DEV PLAN FOR SUB'D APPROVAL
☐ S.DEV PLAN FOR BLDG PMT APPR.
☐ SECTOR PLAN APPROVAL
☒ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☐ BUILDING PERMIT APPROVAL
☐ CERT. OF OCCUPANCY APPROVAL
☒ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D.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

PRE-DESIGN MEETING:

☐ YES
☒ NO
☐ COPY PROVIDED

DATE SUBMITTED: APRIL 22, 1999

BY: JACKIE S. MCDOWELL, P.E.





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

10 May 1999

Jackie McDowell
McDowell Engineering, Inc.
7820 Beverly Hills Ave. NE
Albuquerque, NM 87122

RE: HOLIDAY BREEZE SUBDIVISION (F22/D36), 4/22/99 GRADING & DRAINAGE
RESUBMITTAL. ENGINEER'S STAMP DATED 4/21/99

Dear Ms. McDowell:

Based upon the information provided in your 4/22/99 resubmittal, the referenced project is conditionally approved for Preliminary Plat, Final Plat and for Grading Permit. In my 3-5-99 letter to you, I expressed concern regarding the lot sections depicted on your plan. To clarify the City's position once again, if the vertical separation between lots is over 1.5' the supporting wall will need to be a retaining wall. Also, a retaining wall is required if water is allowed to pond against the wall. Again, this plan is approved assuming that retaining walls are not required. If it is determined that they are indeed needed, then a revised plan will need to be submitted to this office for approval and permitting.

For any work being performed by the contractor within City right-of-way, proper permitting is required prior to commencing with the work.

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

Sincerely,

Scott Davis

PWD, Hydrology Division

c: Andrew Garcia
file



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

5 March, 1999

Ms. Jackie S. McDowell, P.E.
McDowell Engineering, Inc. 7820 Beverly Hills Avenue NE
Albuquerque, NM 87122

RE: HOLIDAY BREEZE SUBDIVISION (F22/D36), 1/29/99 GRADING & DRAINAGE
RESUBMITTAL. ENGINEER'S STAMP DATED 1-25-99

Dear Ms. McDowell:

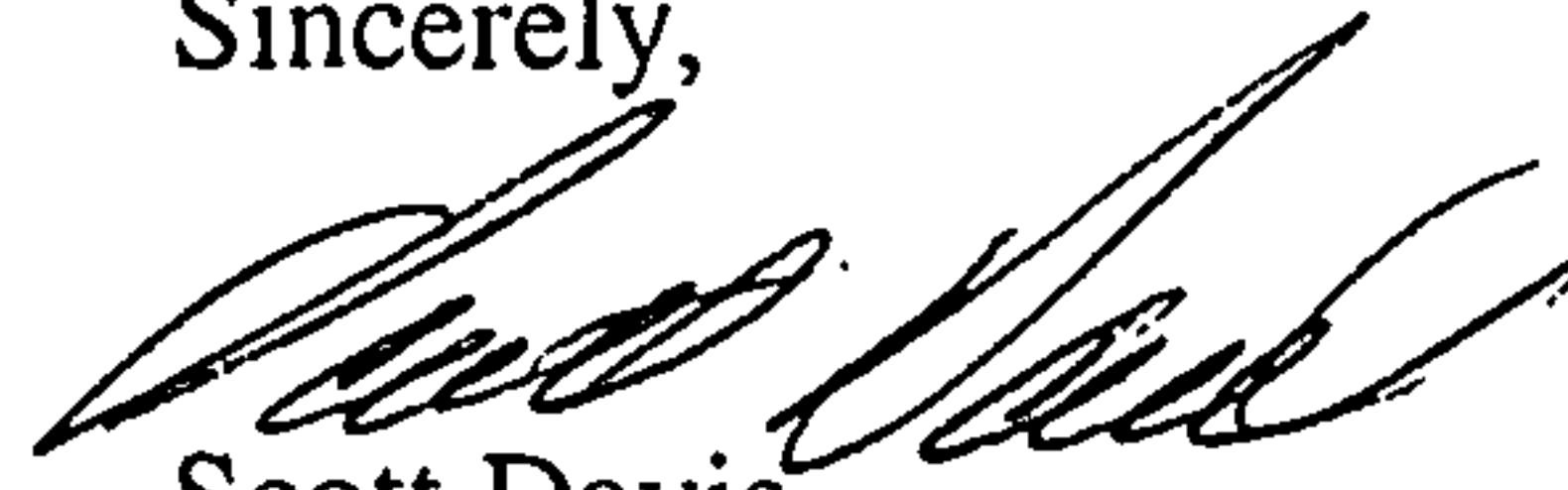
Based upon the information provided in your 1-29-99 submittal, you will need to address the following concerns from both myself and Smith Engineering (comments attached) prior to gaining City approval.

1. Prior to gaining City approval for a Grading Permit, you will need to provide this division with a copy of a recorded drainage easement from the adjacent properties east of the site where the concrete valley gutter is proposed.
2. Your developed drainage plan calls for the offsite valley gutter to run along lots 34 & 35, yet the plan does not call for this. Also, to convey these offsite flows to Montgomery, it would appear that this same valley gutter will have to run adjacent to the entire east side of the site.
3. How will the offsite flows within the valley gutter enter the Montgomery right-of-way? Are not sidewalk culverts needed at this location as well?
4. With the relatively steep onsite road grade, I am concerned that storm waters may not be retained within the road in the area of the curve to the south. Are you comfortable that a hydraulic jump will not occur in this location?
5. Your plan calls for back yard retention ponds. Why then does the plan also call for wall openings to allow for cross-lot drainage?
6. The lot sections, as shown, are not acceptable. I believe you may want to change the

scale of these to more accurately reflect your plan. Ponding against a retaining wall is not allowed, and it appears that the wall footing on the upstream lot section will be undermined, thus jeopardizing the structural integrity of the retaining wall.

If we can be of assistance in helping you address either my or Smith Engineering's concerns, feel free to contact myself or Fred Aguire. Our numbers are 924-3986 and 924-3980 respectively.

Sincerely,

A handwritten signature in black ink, appearing to read 'Scott Davis', written in a cursive style.

Scott Davis

PWD, Hydrology Div.

c: Andrew Garcia
file

SMITH ENGINEERING COMPANY
A Full Service Engineering Company

February 25, 1999

Mr. Fred Aguirre, P.E.
Hydrologist
City of Albuquerque
Public Works Department
P.O. Box 1293
Albuquerque, NM 87103

RE: Revised Drainage Study for :
Macduffee Holiday Breeze Subdivision. (F22/D36) Sheet 1 of 1 and
Attachment No. 2 (Supplemental Calculations - Grading and Drainage Plan)
Stamped 1-25-99 by Jackie McDowell, P.E.)

Request Approvals for:

Preliminary Plat Approval (Amended)
Final Plat Approval
Grading Permit Approval

Drainage File (F22/D36)

Dear Mr. Aguirre,

Smith Engineering Company (SEC) is please to review the referenced submittal. As you know, I previously reviewed this report, and in addition to my comment letter (December 31, 1998), you asked Ms. McDowell in your letter (January 7, 1999) to verify that downstream capacity existed to justify release of storm water from the proposed subdivision into Montgomery Blvd.

My review comments are as follows:

1. Verification of Montgomery Blvd. downstream capacity.

Ms. McDowell has discussed the downstream capacity in reference to her research of the AMDS and subsequent SAD storm drainage projects. It appears that release of storm water from this proposed subdivision will have negligible impact on downstream capacity. However, I refer this issue for your judgement.

2. Off-site flows.

A. It appears that the entire off-site basin has not been computed. There is additional area east of the eastern most boundary of the subdivision that appears (from the contours) to drain to this proposed subdivision. The attached off-site drainage map

SMITH ENGINEERING COMPANY
A Full Service Engineering Company

does not address this area. Therefore, the off-site flow calculations and the concrete rundown capacity should be recomputed.

B. Need to show block wall along lots 34 and 35.

C. Please discuss if any problems will occur along the rear walls of lots 34 and 35 due to the off-site flow from the COA well site concentrating along the wall. Based on that, would it be prudent to also construct another small concrete channel, or provide some type of protection for those walls from the off-site flow?

3. Sheet 1 of 1 - I am unclear on the Drainage Note: "Provide 1 - turned block @ downstream end of each lot for drainage overflow" . That would imply cross-lot drainage which is not allowed?

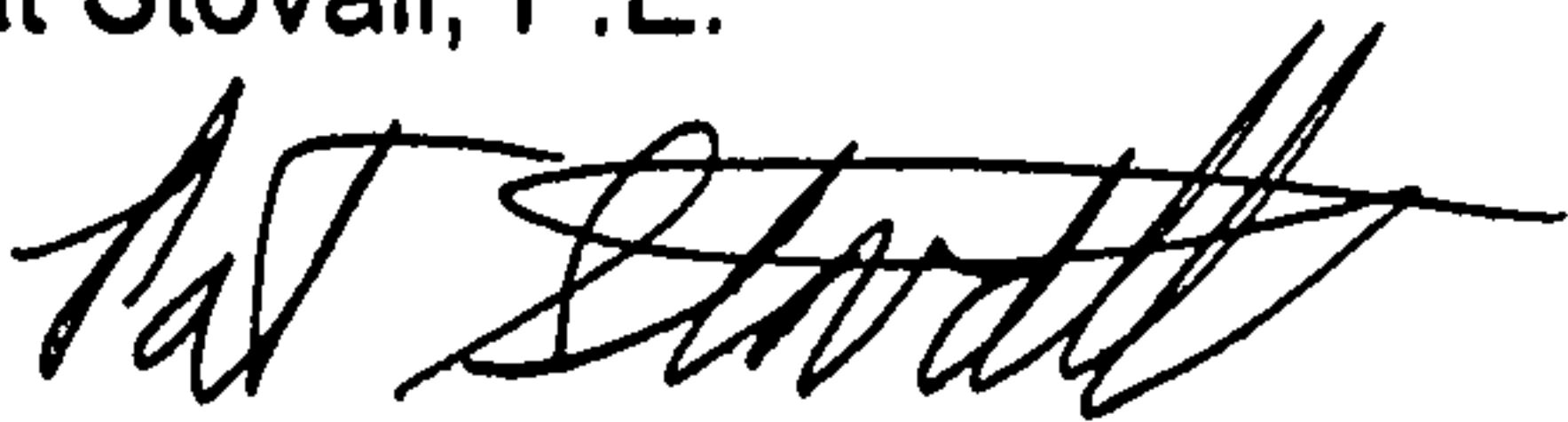
4. Street flow capacity calculations in terms of Q capacity at top of curb as compared to the Q for the entire subdivision. Depth and Velocity were not provided, but it appears that the flow depth and velocity should not be a problem.

5. There is no discussion of how the flow from the proposed concrete rundown located on the off-site adjacent property will outfall across the sidewalk. A sidewalk culvert may be required.

6. The 34 foot wide concrete rundown near Montgomery is not labeled as such on Sheet 1 of 1, nor is there a detail to show its cross section, etc.

Sincerely,
Pat Stovall, P.E.

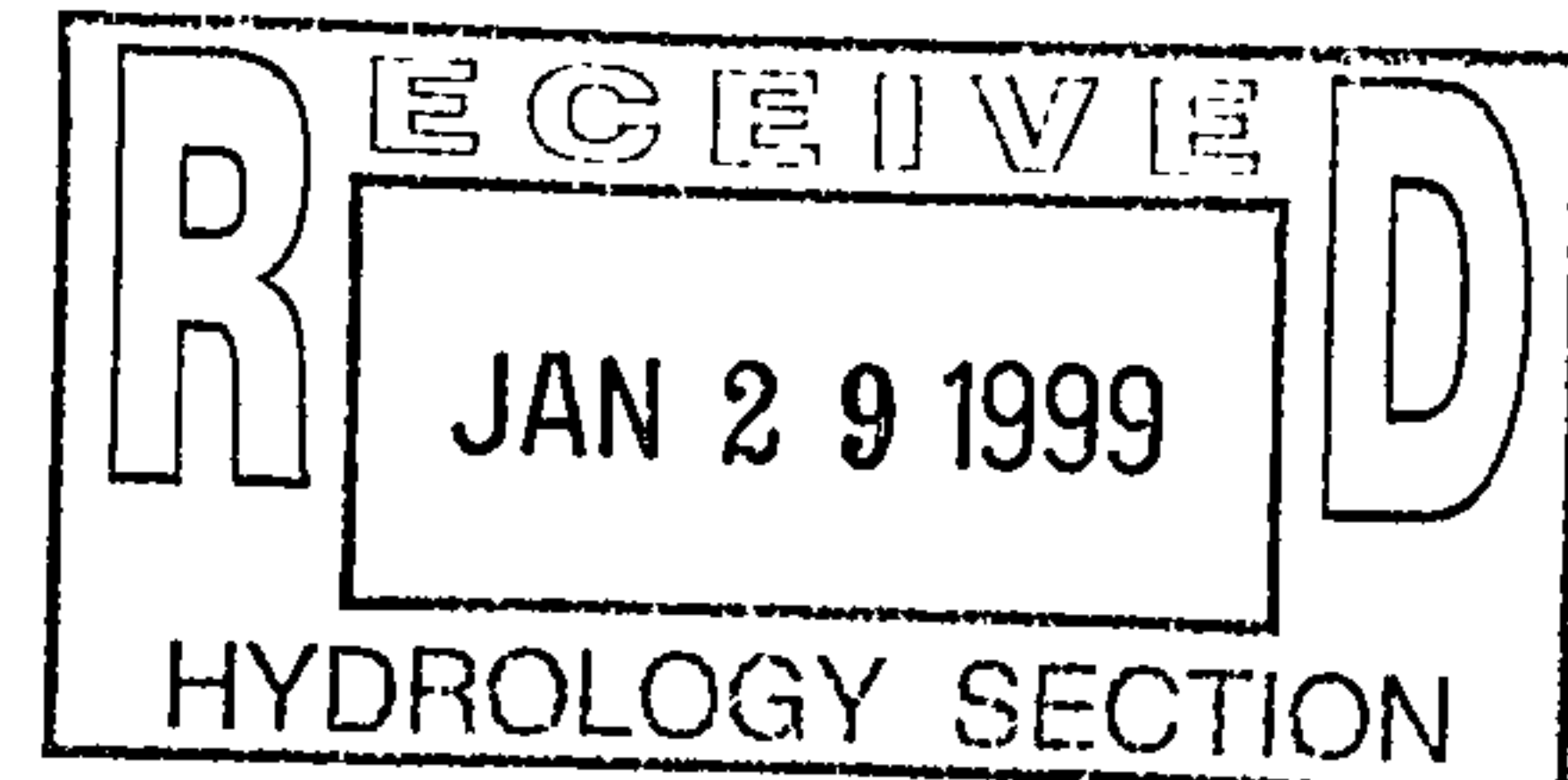
O:\100\198624B\b20



SEC Job No. #198624.b20

January 25, 1999

Mr. Fred Aguirre, P.E.
City Hydrologist
City of Albuquerque
Public Works Department
P.O. Box 1293
Albuquerque, NM 87103



RE: MACDUFFEE HOLIDAY BREEZE SUBDIVISION (F22/D-36)

Dear Mr. Aguirre:

We received your letter dated January 7, 1999 along with the letter from Smith Engineering Company dated December 31, 1998 with comments for the referenced project Grading & Drainage Plan.

In accordance with our telephone conversation of January 7, 1999, we have revised the Grading and Drainage Plan by eliminating the detention pond originally designed for the site, which was in accordance with our original pre-design discussion with Ms. Lisa Manwill for the subject site. The elimination of the pond is based on several issues as listed below:

1. The subject site is an "infill" site where the basin is almost fully developed at this time. After reviewing the Albuquerque Master Drainage Plan (AMDS), the following is evident:
 - a) The Major Basin is identified as Basin 3 by the AMDS. The subject site is located at the upstream end of the basin (see attached map). The size of Basin 3 is approximately 13 sq. miles (8320 acres). The size of the subject subdivision is 4.05 acres. This amounts to .05% of the entire basin, being a very negligible part of the entire basin.
 - b) According to the AMDS there is no flooding in this site area (see attached FEMA flood map). Flooding in Montgomery starts just east of Wyoming Blvd., approximately 10200 feet (approx. 2 miles) downstream and west of the subject site.



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

5 March, 1999

Ms. Jackie S. McDowell, P.E.
McDowell Engineering, Inc. 7820 Beverly Hills Avenue NE
Albuquerque, NM 87122

RE: HOLIDAY BREEZE SUBDIVISION (F22/D36), 1/29/99 GRADING & DRAINAGE
RESUBMITTAL. ENGINEER'S STAMP DATED 1-25-99

Dear Ms. McDowell:

Based upon the information provided in your 1-29-99 submittal, you will need to address the following concerns from both myself and Smith Engineering (comments attached) prior to gaining City approval.

1. Prior to gaining City approval for a Grading Permit, you will need to provide this division with a copy of a recorded drainage easement from the adjacent properties east of the site where the concrete valley gutter is proposed.
2. Your developed drainage plan calls for the offsite valley gutter to run along lots 34 & 35, yet the plan does not call for this. Also, to convey these offsite flows to Montgomery, it would appear that this same valley gutter will have to run adjacent to the entire east side of the site.
3. How will the offsite flows within the valley gutter enter the Montgomery right-of-way? Are not sidewalk culverts needed at this location as well?
4. With the relatively steep onsite road grade, I am concerned that storm waters may not be retained within the road in the area of the curve to the south. Are you comfortable that a hydraulic jump will not occur in this location?
5. Your plan calls for back yard retention ponds. Why then does the plan also call for wall openings to allow for cross-lot drainage?
6. The lot sections, as shown, are not acceptable. I believe you may want to change the

c) Storm drainage improvements have been installed downstream of the site since the AMDS study was completed. These include storm sewer improvements near Morris Street, north of Montgomery, which diverts much of the upstream flow to the Bear Arroyo, along with improvements per the AMDS (System 322-04) which eliminates flooding in Wyoming Blvd. from Gutierrez Road to Montgomery Blvd.

d) According to the AMDS the flow at analysis point 202 (AP 202 - before the improvements listed above were installed) was 148 cfs, with a flow depth of 0.59 feet (the standard allowable depth is 1 foot). This analysis point is located between Eubank and Wyoming with a flowrate of 148 cfs. The increase in flow due to this development is approximately 10.21 cfs (19.12 - 8.91). This amounts to an increase in flow of 6.9%. This is negligible and the downstream basin should not be effected by the small amount of increase in runoff due to this development.

2. In response to the comments from Smith Engineering Company we offer the following in the same numerical order listed.

OFF-SITE FLOWS

1. We have modified the plan to allow the minimal amount of offsite runoff currently entering the site to flow to the south (Montgomery Blvd.) via a new concrete valley gutter. A construction easement will be acquired from the adjacent property owner to allow for this.

CONC.
SWALE
must be
along 3
sides of
SUB.
need sidewalk
curb at
mont.

- A. Off-site drainage map is attached.
B. Off-site hydrologic calculations have been provided with this submittal.
C. Brick/block walls will be built along the 2 eastern most lots (Lots 34 & 35) to prevent off-site flows from entering the subject site. A concrete valley gutter will be installed along the east side of this area to allow the small upstream basin to drain to Montgomery Blvd.
D. See above response.

GRADING PLAN

1. We were instructed that back yard minimal ponding (only water falling directly on it, but not roof drainage) was allowed, but not to be considered in the calculations.
2. Several TBM's and ACS Benchmarks are provided, two TBM's along the northwestern edge of the site and an ACS Benchmark listed in the title block along the right side of the sheet.
3. A note has been added to the plan to provide 1-turned block along each lot, at downstream end, to allow for overflow drainage.

THIS would
ALLOW CROSS
LOT-PAVING

DETENTION POND

The pond has been eliminated per the above justification; therefore, comments #1-6 are no longer relevant.

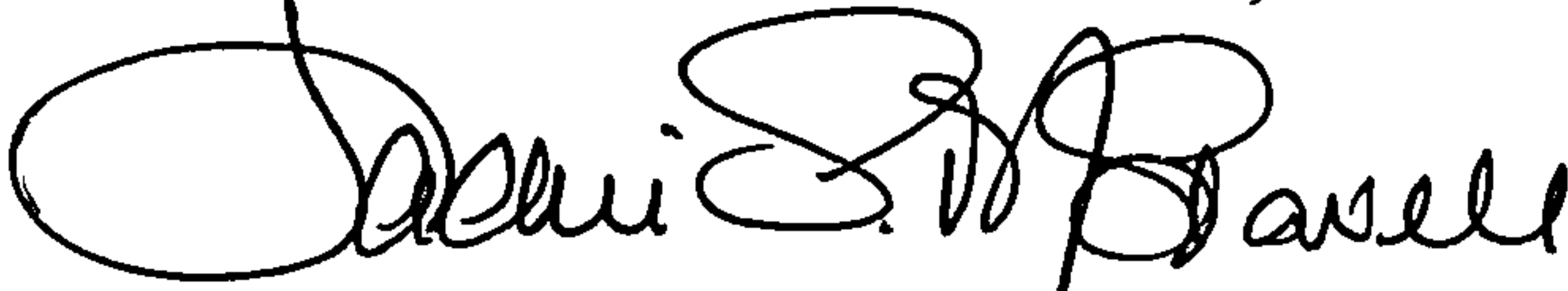
STREET HYDRAULICS

1. The street cross section has been added to the plan. This includes a roll type curb height of 4" and a right-of-way width of 46 feet.
2. The minimum flow capacity of the proposed street is 38.26 cfs. Calculations are attached.
3. The velocity and depth should be acceptable for this area of the city. 
4. Since the pond has been removed and a curb rundown has been provided there should be no hydraulic jump in the cul-de-sac.
5. The flow depth is less than 4", since the street capacity is twice that required for the entire development. The water block height is approximately 1 foot. The water will continue to flow south and not turn west over the water block.

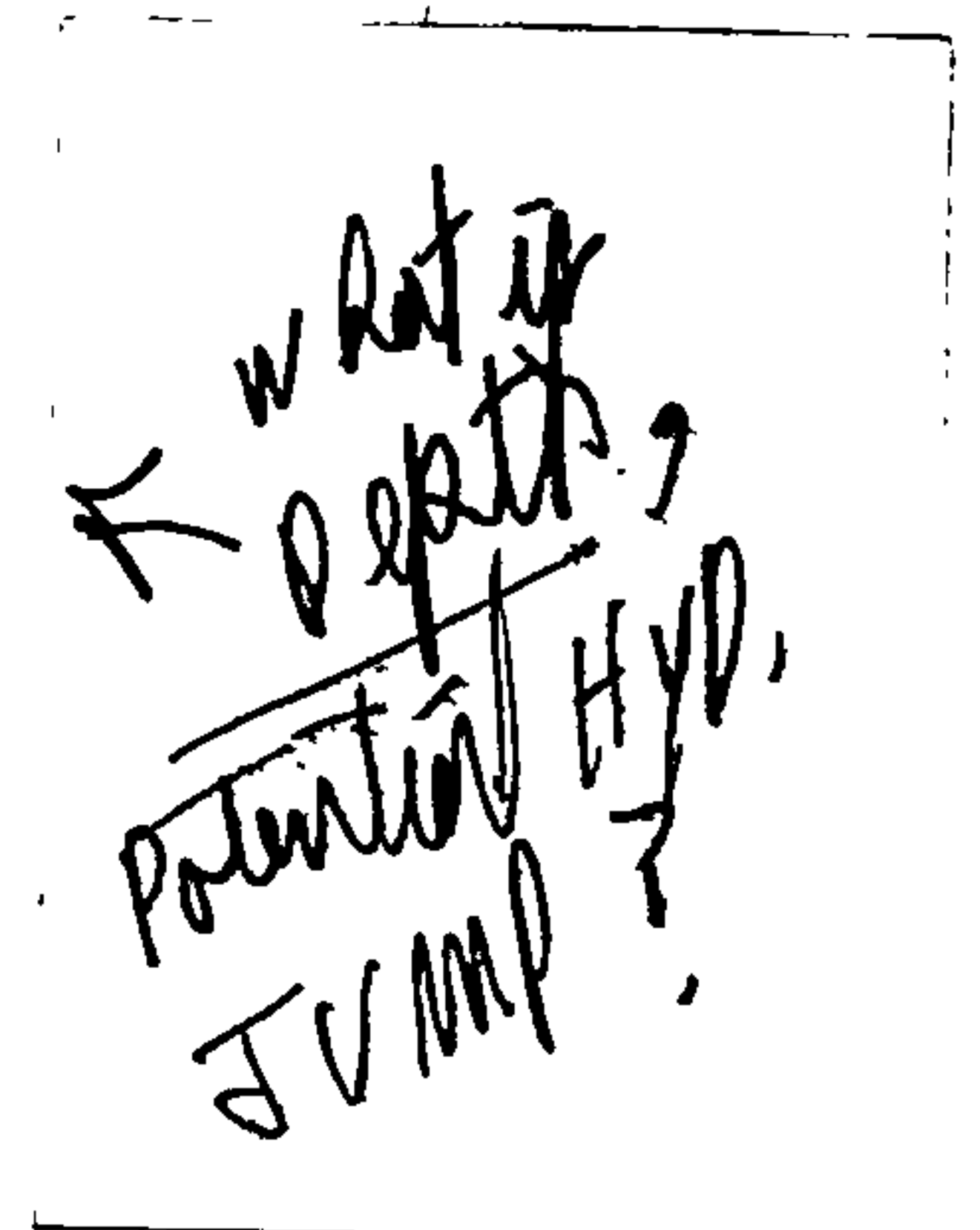
Your timely approval of this Grading & Drainage Plan is appreciated.

Sincerely,

MCDOWELL ENGINEERING, INC.



Jackie S. McDowell, P.E.



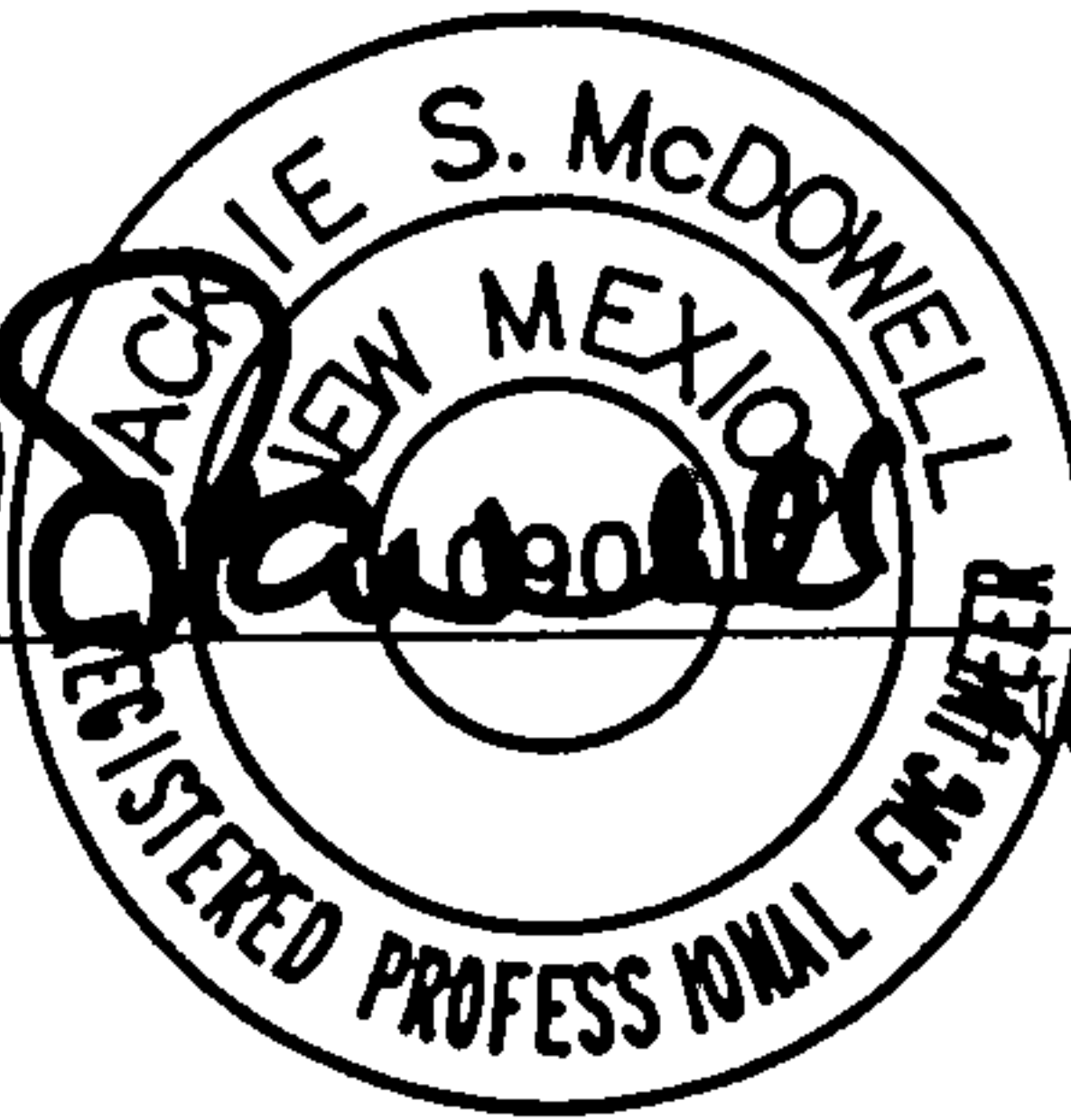
ATTACHMENT NO. 2

SUPPLEMENTAL CALCULATIONS TO

**MACDUFFEE
HOLIDAY BREEZE SUBDIVISION
SECTION 34
T11N, R4E, NMPM**

GRADING & DRAINAGE PLAN

I, Jackie S. McDowell, Registered Professional Engineer, No. 10903, hereby certify that I have prepared the attached calculations.


Jackie S. McDowell, P.E.  1-25-99

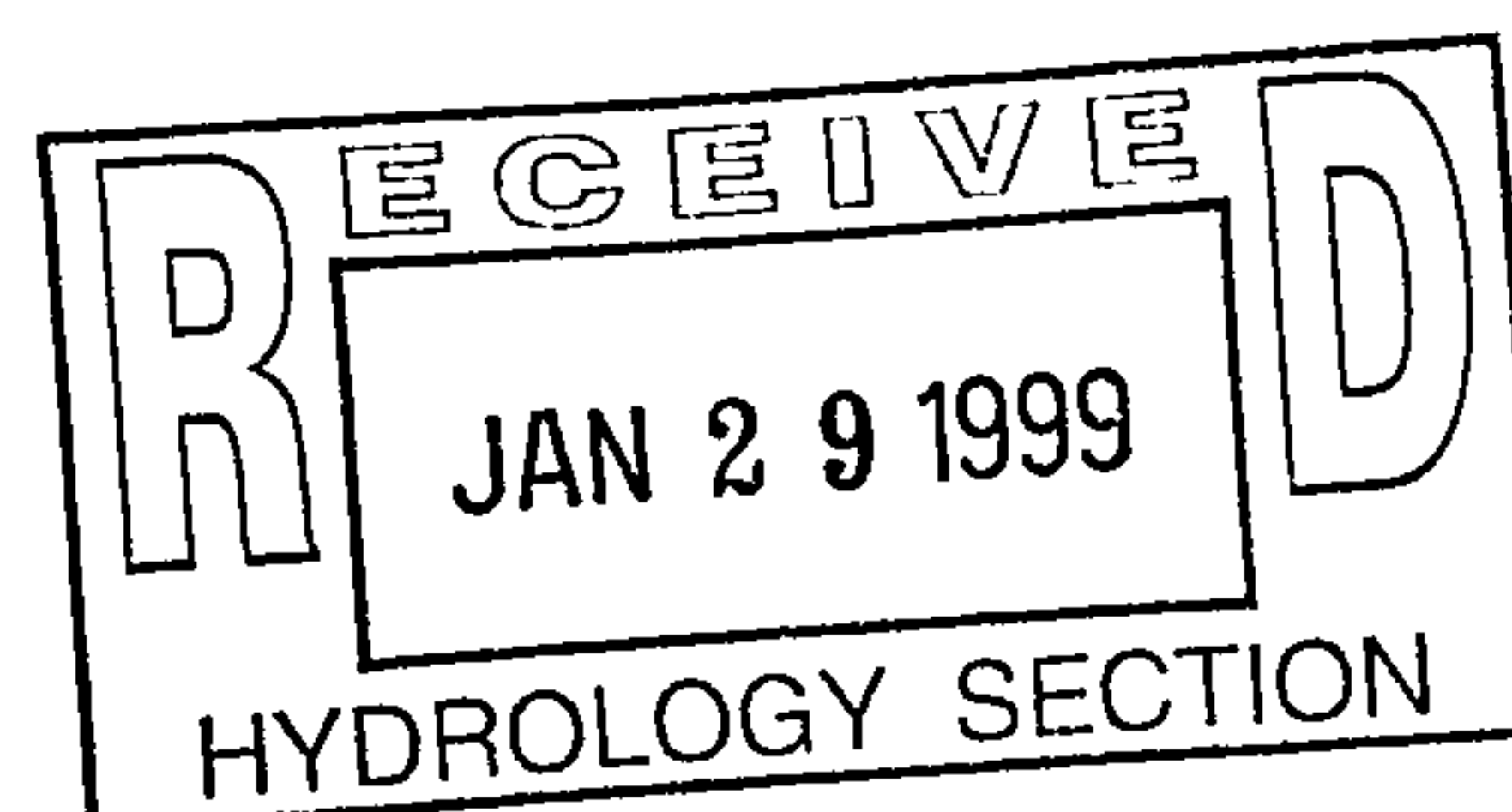
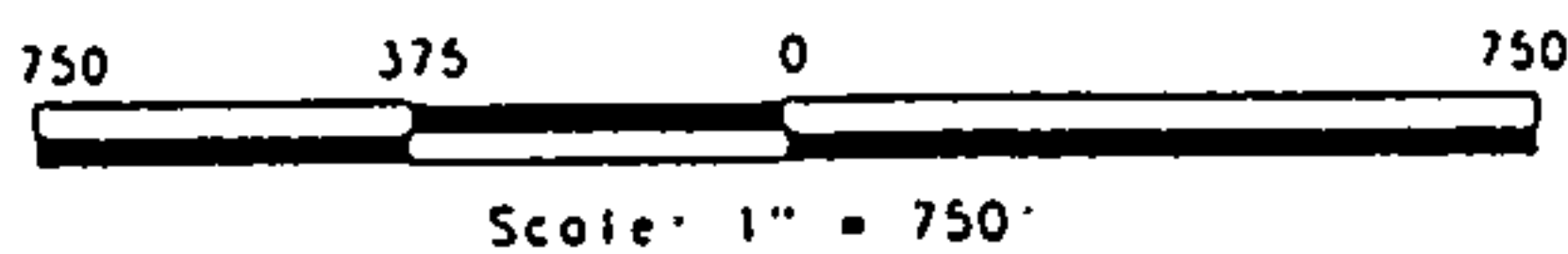
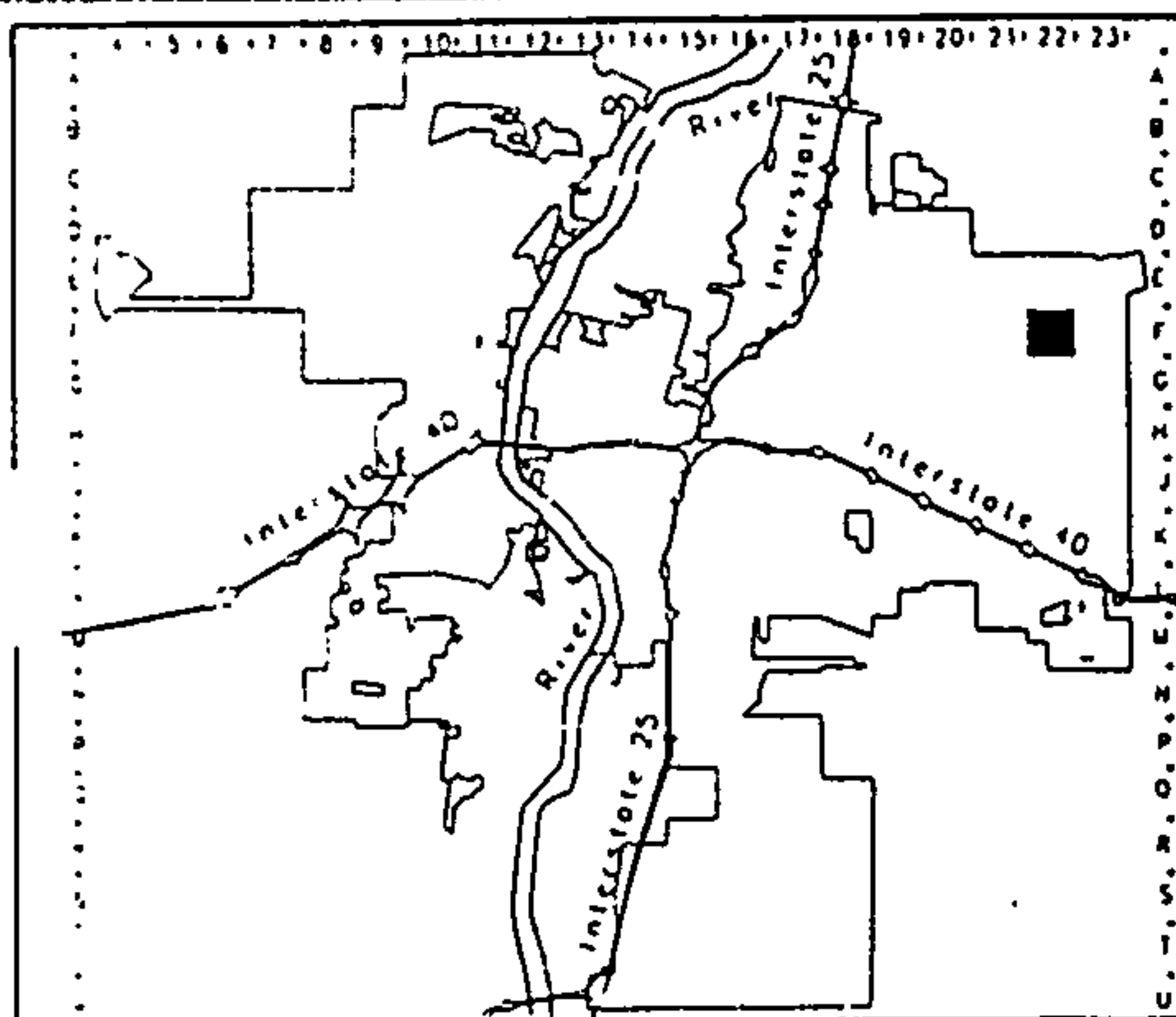
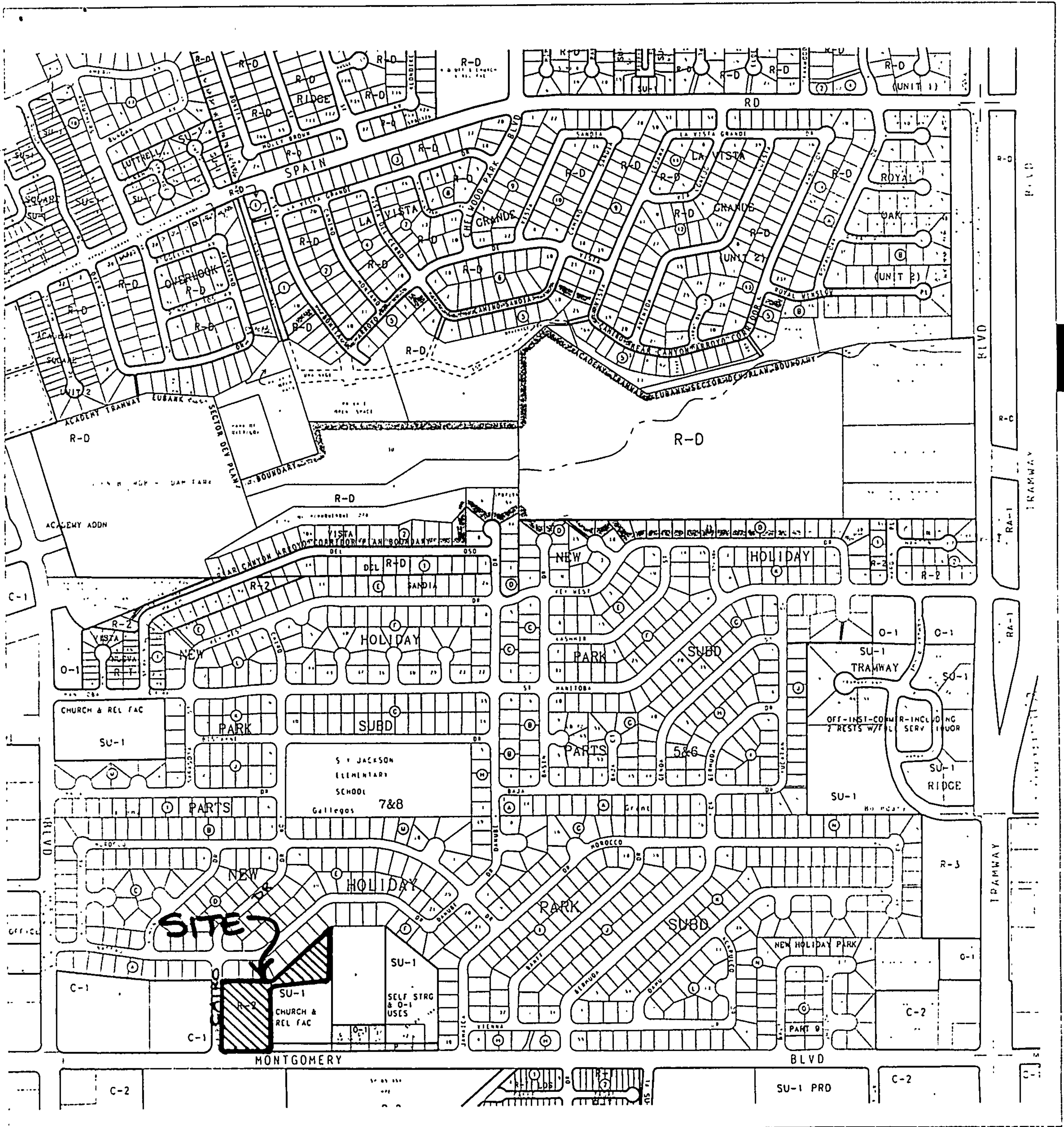


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AMDS Basin Map	3
Revised On-Site Calculations	4
Rundown/Outfall Calculations	5
Offsite Basin Map	6
Offsite Valley Gutter Calculation	7
Offsite Calculation	8
Street Capacity Calculations	9



Abuquerque **G**eographic **I**nformation **S**ystem
City of Albuquerque

© Planning Department July 02, 1993

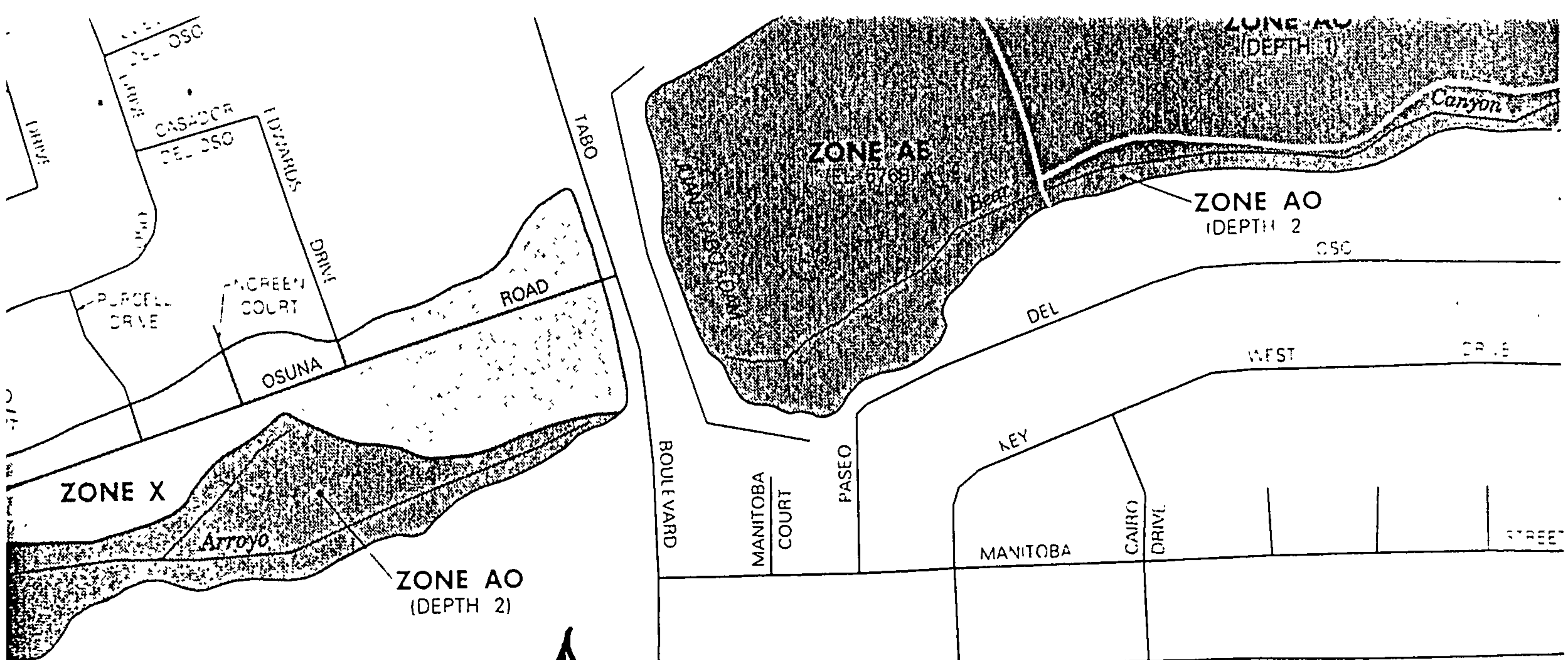
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T11N
R4E
SEC 34

UNIFORM PROPERTY CODE

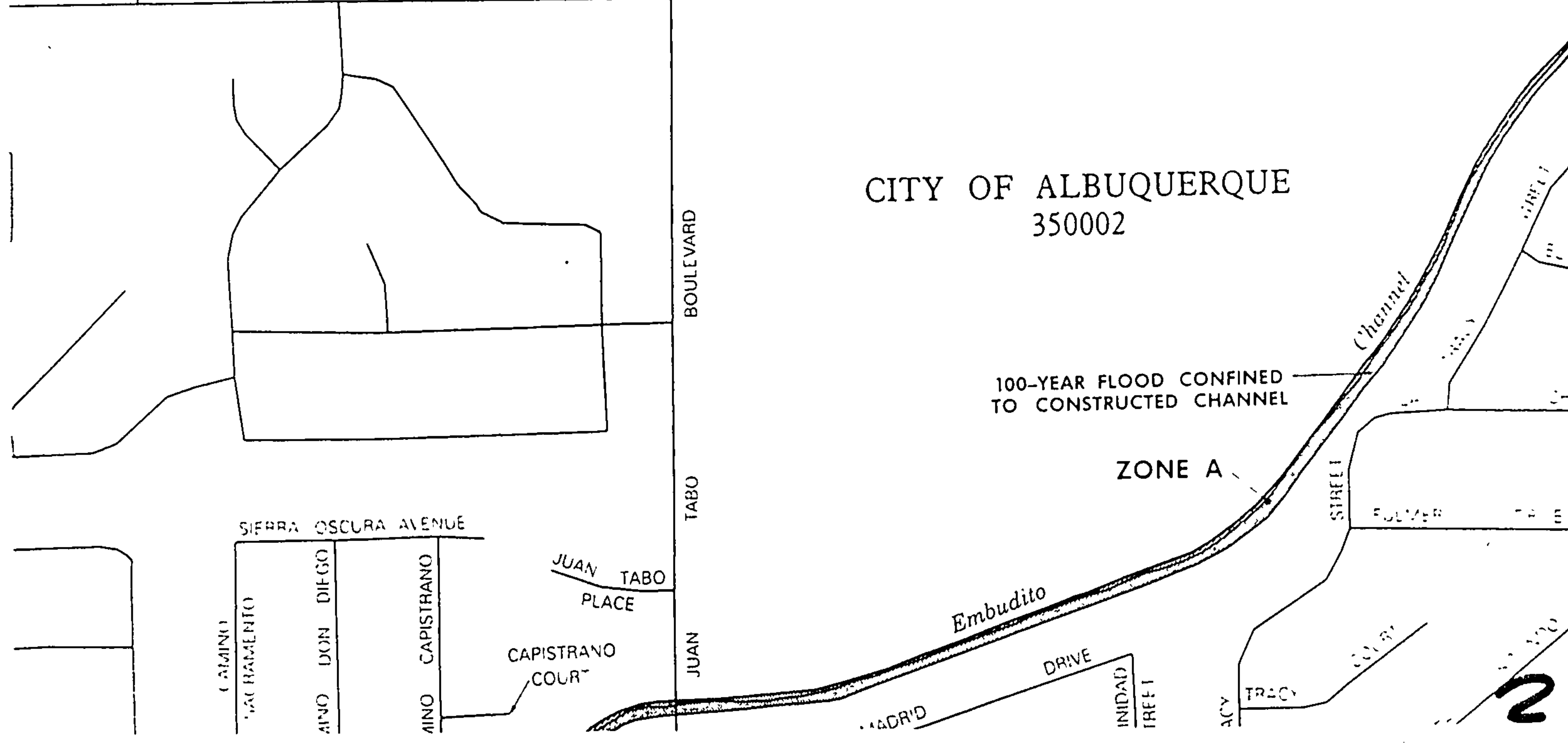
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F-22-Z



↑ N
1" = 500'
PANEL # 144
9-20-96

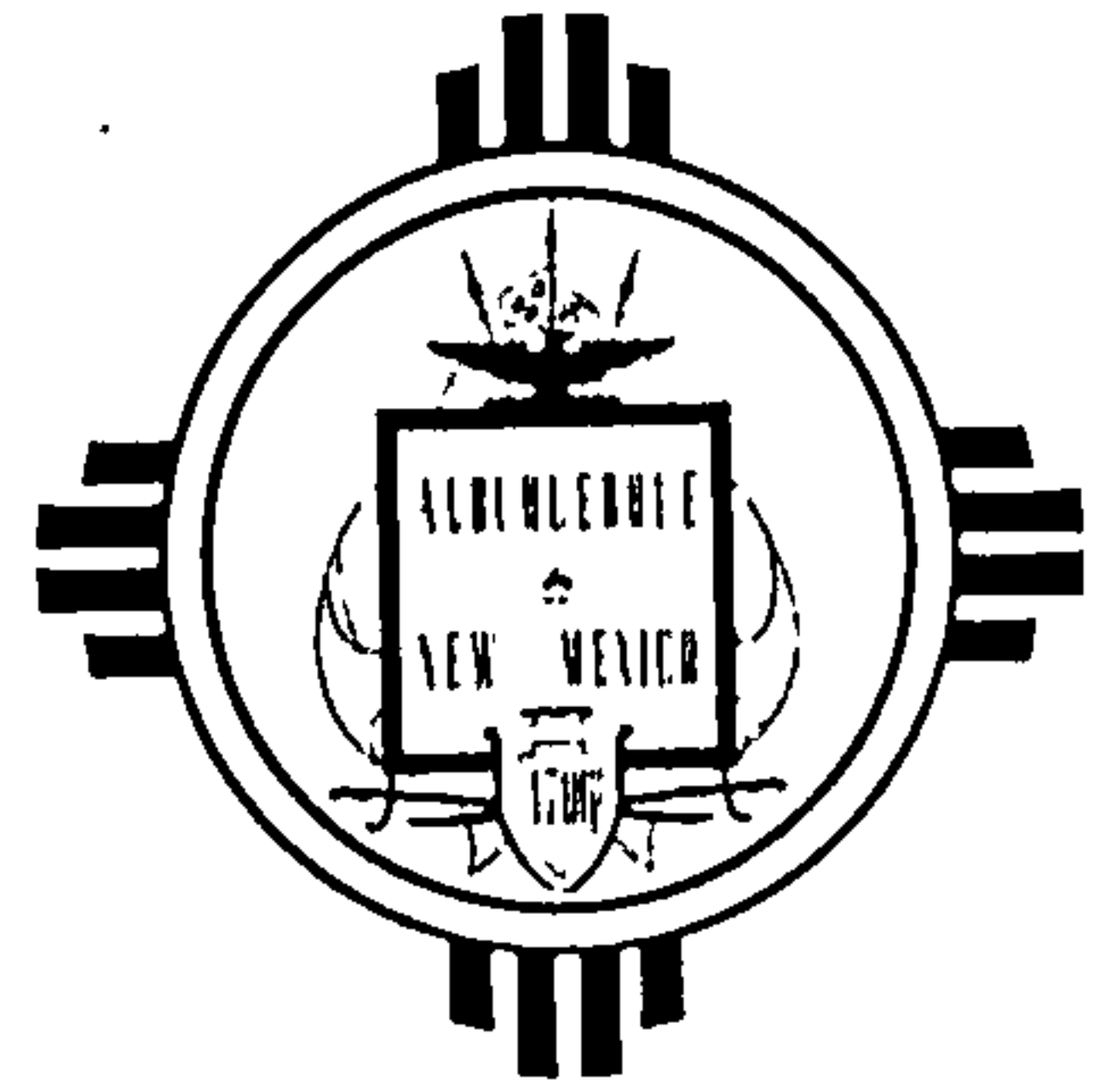
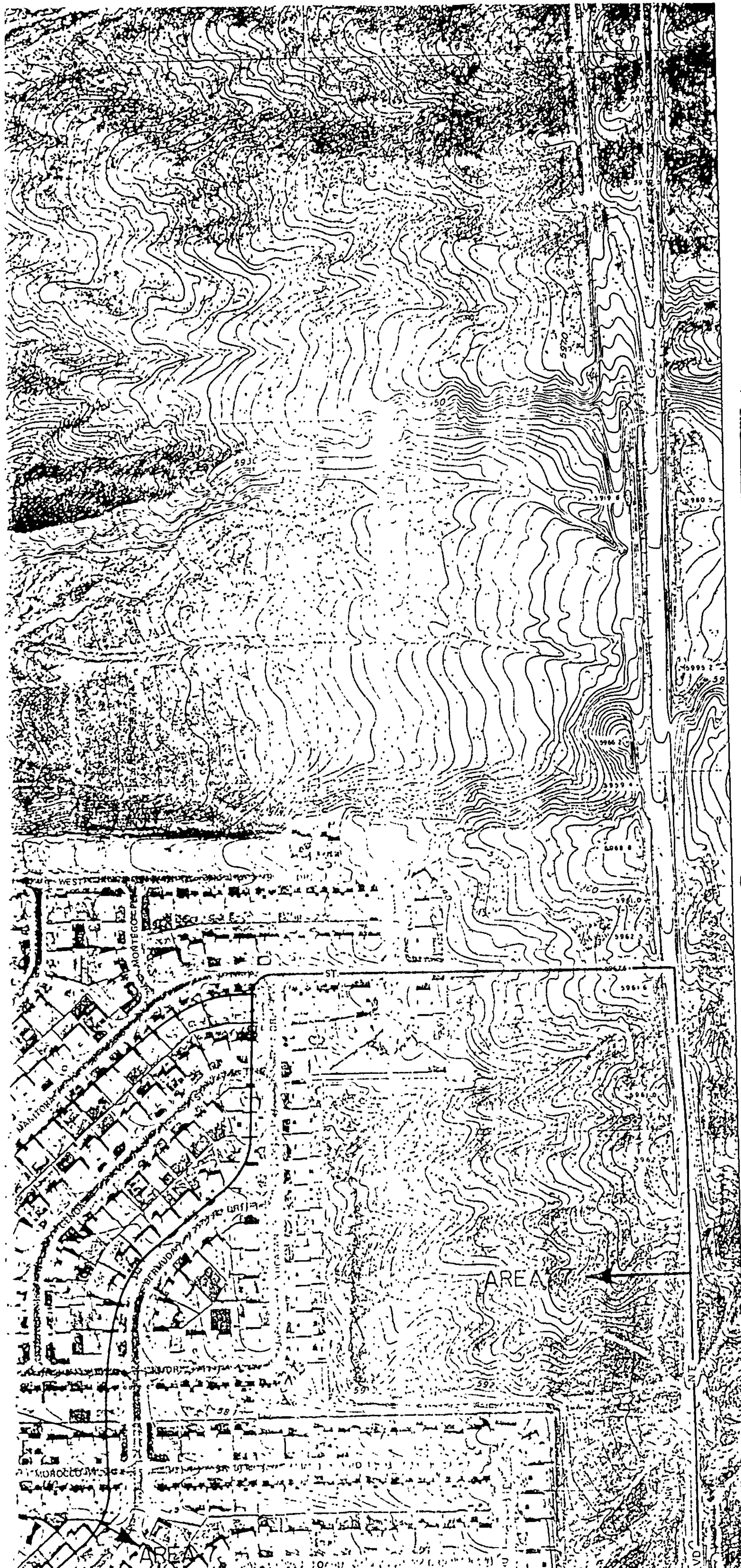
AS SHOWN ON THIS PANEL IS
N TOWNSHIP 11 NORTH, RANGE
WN 10 NORTH, RANGE 4 EAST.
NE X



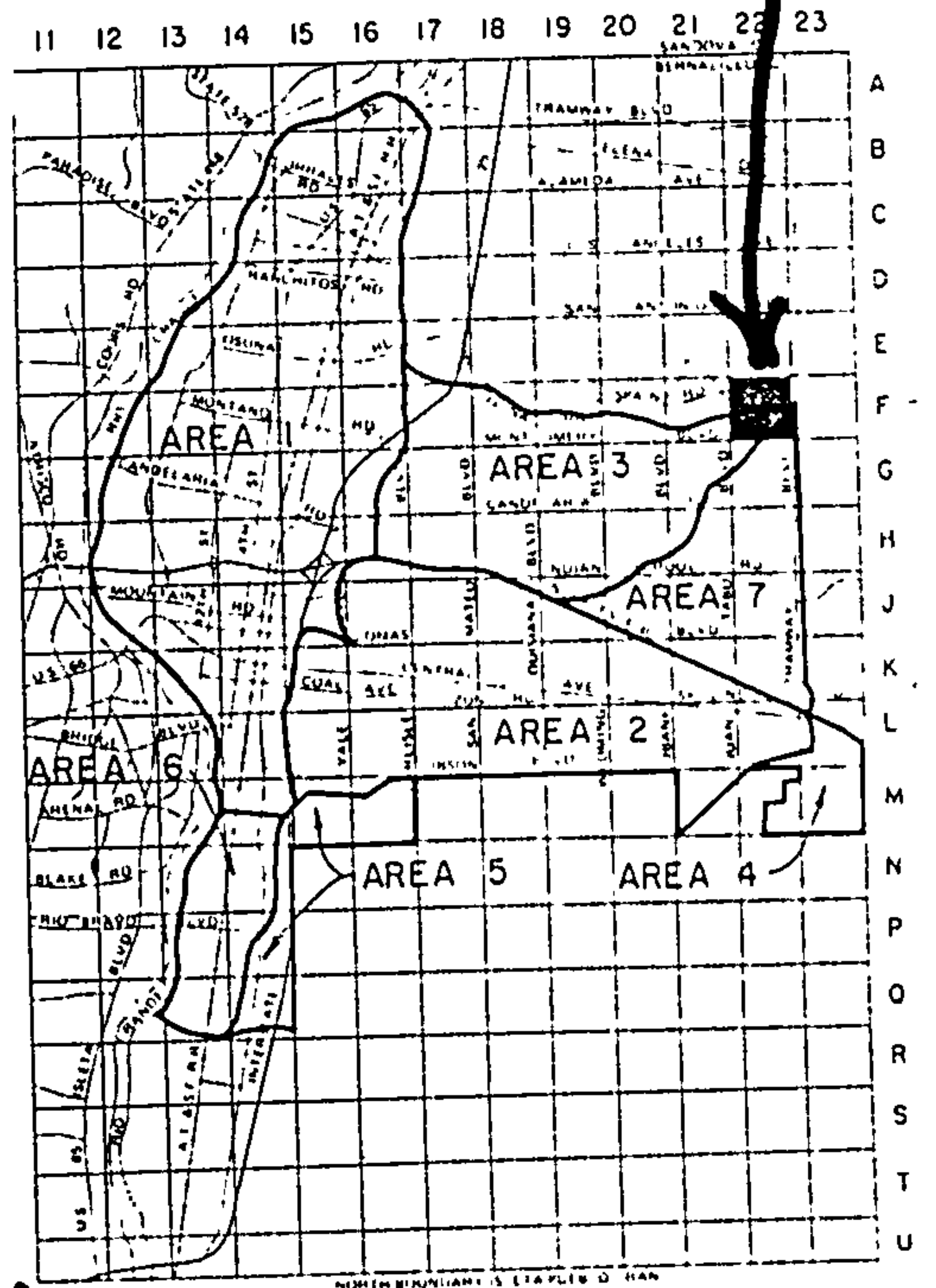
CITY OF ALBUQUERQUE
350002

100-YEAR FLOOD CONFINED
TO CONSTRUCTED CHANNEL

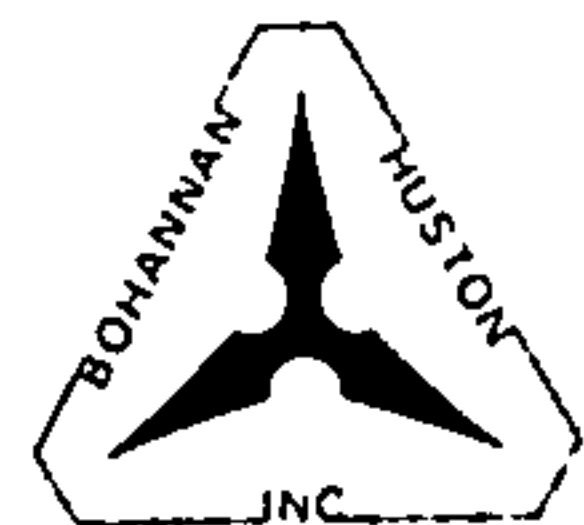
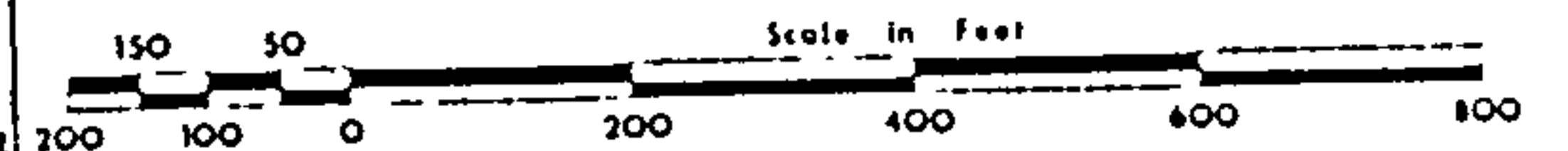
ZONE A



SITE
LOCATION



"BASIN 3"



Project: MACDUFFEE - HOLIDAY BREEZE SUB'D ON-SITE CALCULATIONS

25-Jan-99

Calculations: Total Basin

Calculations are based on "Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, January 1993 - basins < 40 acres".

Precipitation Zone = 4

Depth at 100-year, 6-hour storm: (Table A-2)

P = 2.90 inches

Land Treatments:

From Table 5 - Percent Treatment D

Single Family Residential =

$7 \times \text{SQR}((N \times N) + (5 \times N))$

where N = units/acre

N = ----- = -----, ok < 6

N = 0.00

Therefore Percent Treatment D = 0.00%

(includes local streets)

Areas: (acres)	Existing	Proposed
Treatment A	4.05	0.00
Treatment B	0.00	0.92
Treatment C	0.00	0.00
Treatment D	0.00	3.13
Total (acres) =	4.05	4.05

Volume	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.27	0.77	0.09	0.48	0.01	0.27
Volume (cubic feet) =	11,761	33,602	4,116	20,738	294	11,843

Total Q(p), cfs:	100 year Existing Q(p)*A	100 year Proposed Q(p)*A	10 year Existing Q(p)*A	10 year Proposed Q(p)*A	2 year Existing Q(p)*A	2 year Proposed Q(p)*A
Treatment A	8.91	0.00	3.52	0.00	0.20	0.00
Treatment B	0.00	2.69	0.00	1.33	0.00	0.35
Treatment C	0.00	0.00	0.00	0.00	0.00	0.00
Treatment D	0.00	16.43	0.00	11.17	0.00	6.79
Total Q (cfs) =	8.91	19.12	3.52	12.51	0.20	7.14

McDowell Engineering, Inc.

7820 Beverly Hills Ave. NE
Albuquerque, New Mexico 87122
Tele: (505)828-2430
Fax: (505)821-4857

Project: MACDUFFEE-HOLIDAY BEE

Project No.: MAC 498L Date: 1-23-99

Subject: OUTFALL TO MONTG. CALCS

By: DSM Sheet 1 of 1

DEVELOPED FLOW TO S. END OF S.

$$\text{Cul-de-sac} = 19.12 - 0.80 = \underline{18.32 \text{ cfs}}$$

Capacity of run down @ Flowline of cul-de-sac:

$$Q = CLH^{3/2}$$

Where, $C = 3.0$

$$Q = 18.32 \text{ cfs.}$$

$$H = 0.33$$

$$\therefore L = 32.2 \text{ ft}$$

Actual $L = 34 \text{ ft.}$ OK

Capacity of sidewalk curbs along
Montgomery:

$$Q = CLH^{3/2}$$

$$L = \frac{Q}{CH^{3/2}}$$

Where, $C = 3.0$

$$H = 0.67$$

$$Q = 18.32 \text{ cfs}$$

$$\therefore L = 11.14 \text{ ft.}$$

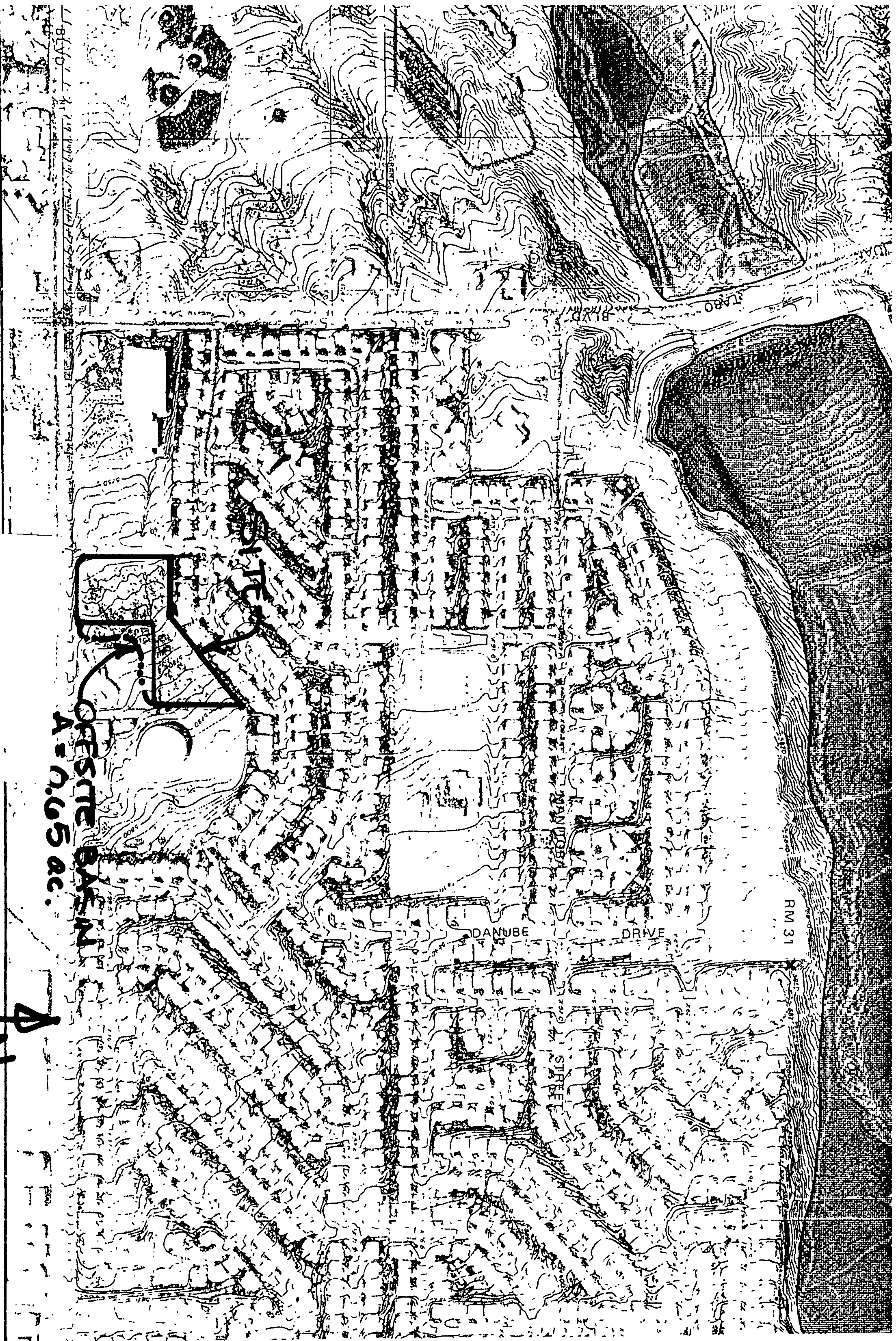
Actual $L = 12 \text{ ft.}$ OK

(6~2' wide sidewalk curbs)

၇

313-119

74



McDowell Engineering, Inc.

7820 Beverly Hills Ave. NE
Albuquerque, New Mexico 87122
Tele: (505)828-2430
Fax: (505)821-4857

Project: MACDUFFEE-HOLIDAY BRZ.

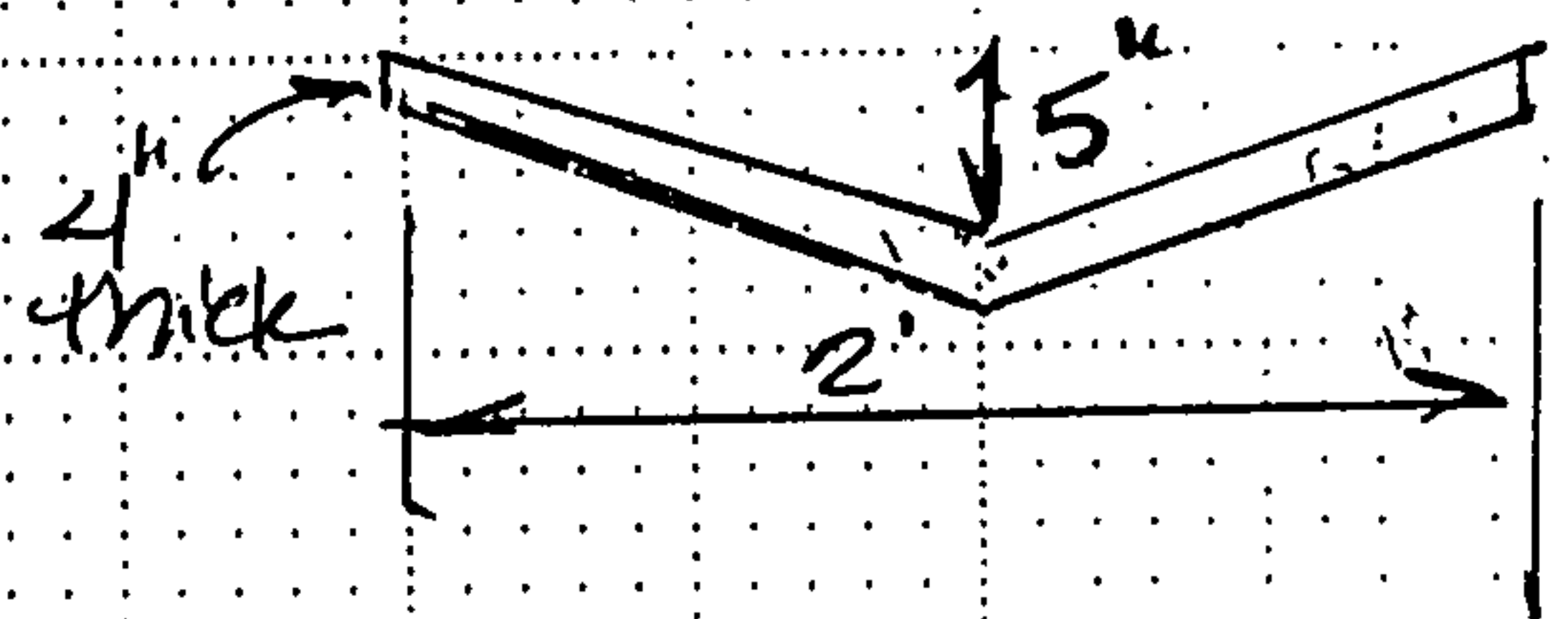
Project No.: MAC019BL Date: 1-23-99

Subject: OFFSITE VALLEY GUTTER CALCS

By: OSD Sheet 1 of 1

OFFSITE FLOW = 1.43 cfs (see attached
calc. sheet)

Use a 2' wide x 5" deep valley gutter
conc.
@ upstream end of site to direct
offsite flow to Montgomery.



Capacity:

$$Q = \frac{1.486 A^{5/3} S^{1/2}}{n P^{2/3}}$$

Where: $n = 0.013$

$A = 0.42$

$P = 2$

$S = 0.014$ (min)

$$\therefore Q = 2.01 \text{ cfs} > 1.43 \text{ cfs} \quad \checkmark$$

OK

Project: MACDUFFEE - HOLIDAY BREEZE SUB'D OFF-SITE CALCULATIONS

25-Jan-99

Calculations: Total Basin

Calculations are based on "Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, January 1993 - basins < 40 acres".

Precipitation Zone = 4

Depth at 100-year, 6-hour storm: (Table A-2)

P = 2.90 inches

Land Treatments:

From Table 5 - Percent Treatment D

Single Family Residential =

$7 \times \text{SQR}((N \times N) + (5 \times N))$

where N = units/acre

N = ----- = -----, ok < 6

N = 0.00

Therefore Percent Treatment D = 0.00%

(includes local streets)

Areas: (acres)	Existing	Proposed
Treatment A	0.65	0.65
Treatment B	0.00	0.00
Treatment C	0.00	0.00
Treatment D	0.00	0.00
Total (acres) =	0.65	0.65

Volume	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.04	0.04	0.02	0.02	0.00	0.00
Volume (cubic feet) =	1,888	1,888	661	661	47	47

Total Q(p), cfs:	100 year Existing Q(p)*A	100 year Proposed Q(p)*A	10 year Existing Q(p)*A	10 year Proposed Q(p)*A	2 year Existing Q(p)*A	2 year Proposed Q(p)*A
Treatment A	1.43	1.43	0.57	0.57	0.03	0.03
Treatment B	0.00	0.00	0.00	0.00	0.00	0.00
Treatment C	0.00	0.00	0.00	0.00	0.00	0.00
Treatment D	0.00	0.00	0.00	0.00	0.00	0.00
Total Q (cfs) =	1.43	1.43	0.57	0.57	0.03	0.03

McDowell Engineering, Inc.

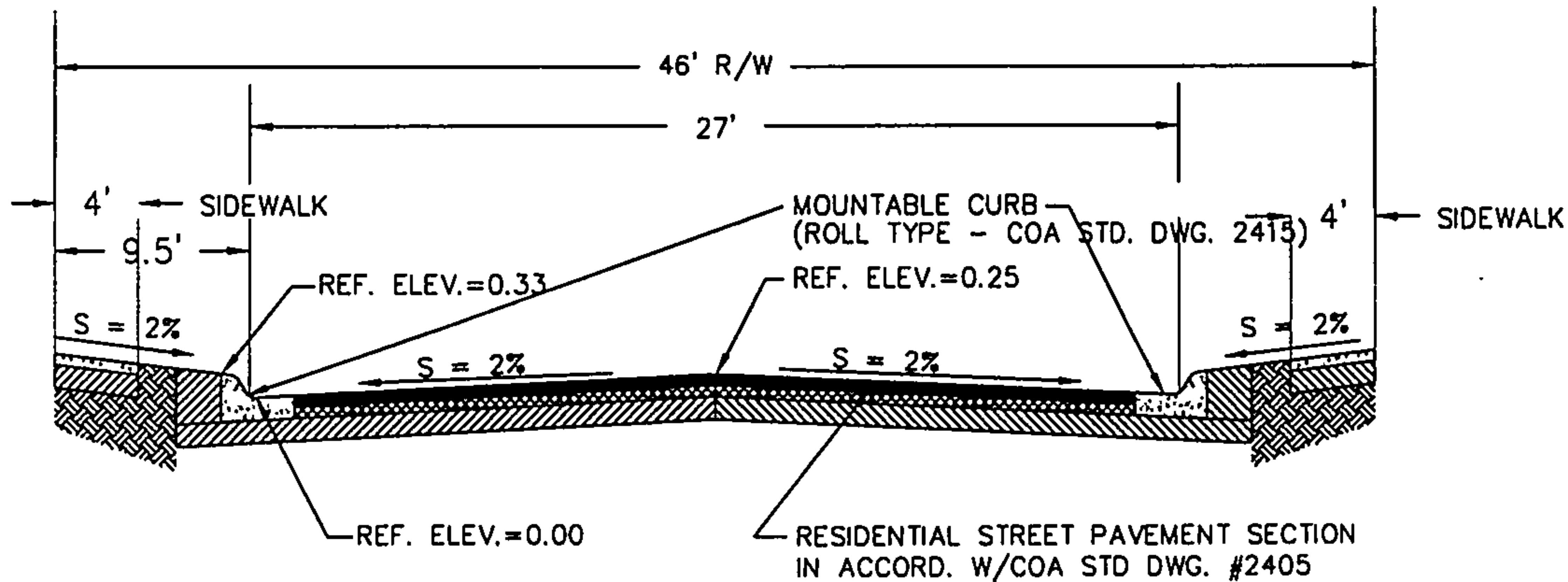
7820 Beverly Hills Ave. NE
Albuquerque, New Mexico 87122
Tele: (505)828-2430
Fax: (505)821-4857

Project: MACDUFFEE HOLIDAY BLZ.

Project No.: MACP198L Date: 1-23-99

Subject: STREET CAPACITY

By: JSM Sheet 1 of 1



TYPICAL ROADWAY SECTION

NTS

CAPACITY OF STREET (MINIMUM):

$$Q = \frac{1.486 A^{5/3} S^{1/2}}{n P^{2/3}}$$

Where, $A = 12.2 \text{ sf}$
 $S_{\min} = 0.0077 \%$
 $P = 46.67$
 $n = 0.017$

$$\therefore Q = 38.26 \text{ cfs} > 19.12 \text{ cfs} \quad \checkmark \text{ OR} \quad \text{Entire Property}$$

Elevations have been added to the plan @ the water block @ depth $\approx 1' > 4"$
 $\therefore$ water block is adequate in height & the water will not go west since it is going south @ a good slope.

DRAINAGE INFORMATION SHEET

PROJECT TITLE: HOLIDAY BREEZE SUB'D ZONE ATLAS/DRNG. FILE #: F-22/D036
DRB #: 98-343 EPC #: _____ WORK ORDER #: _____
LEGAL DESCRIPTION: HOLIDAY BREEZE SUB'D, SECTION 34, T11N, R4E, NMPM
CITY ADDRESS: CAIRO STREET AND MONTGOMERY BOULEVARD
ENGINEERING FIRM: MCDOWELL ENGINEERING, INC. CONTACT: JACKIE MCDOWELL
ADDRESS: 7820 BEVERLY HILLS AVE. NE PHONE: 828-2430
OWNER: KEITH MACDUFFEE CONTACT: KEITH MACDUFFEE
ADDRESS: BOX 2243 PHONE: 275-9253
ARCHITECT: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
SURVEYOR: SOUTHWEST SURVEYING CO. INC. CONTACT: DAN GRANEY
ADDRESS: 333 LOMAS BLVD NE PHONE: 247-4444
CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

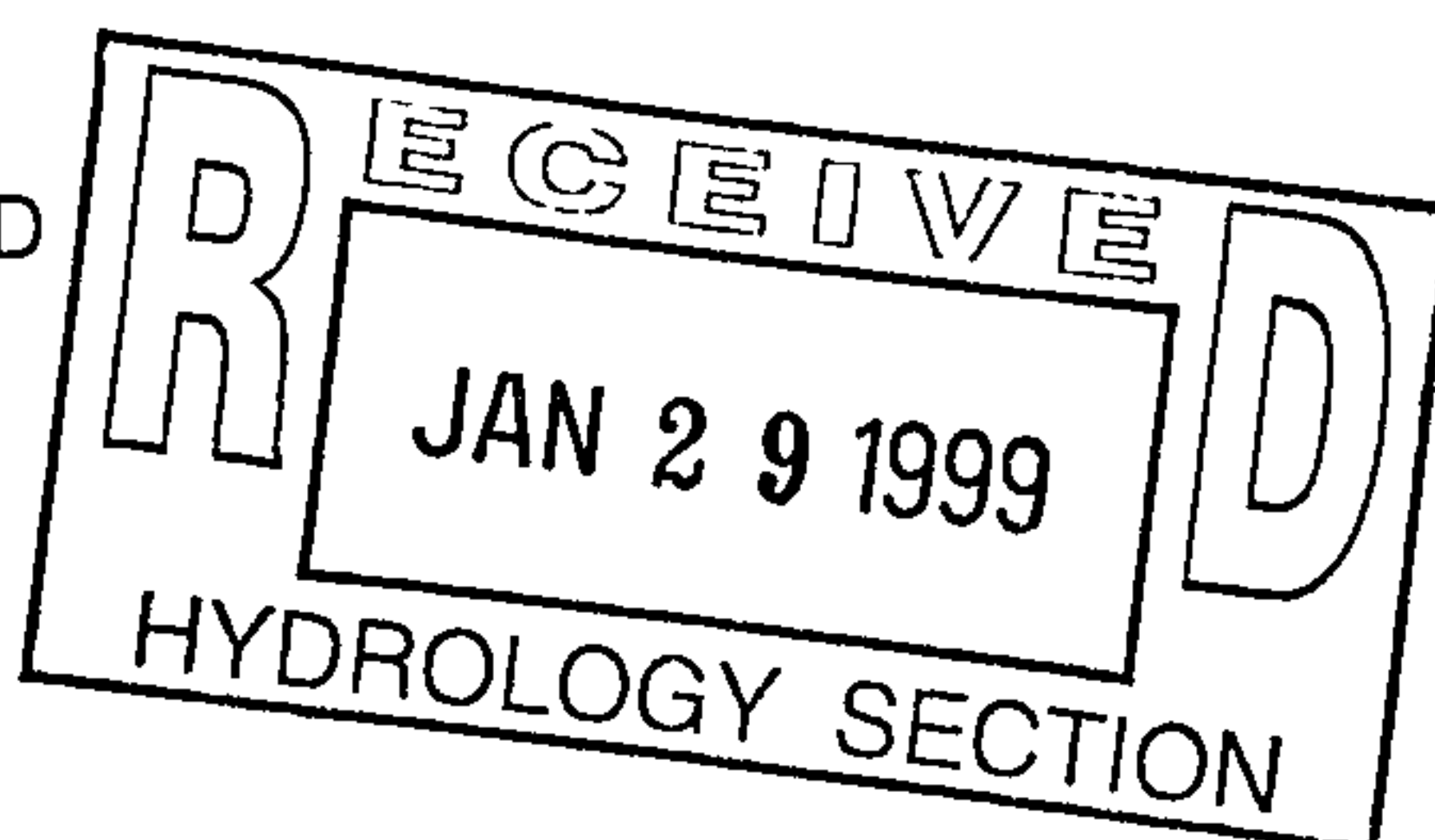
CHECK TYPE OF APPROVAL SOUGHT:

☐ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAIN. 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 PMT APPR.
☐ SECTOR PLAN APPROVAL
☒ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☐ BUILDING PERMIT APPROVAL
☐ CERT. OF OCCUPANCY APPROVAL
☒ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☐ OTHER _____ (SPECIFY)

PRE-DESIGN MEETING:

☐ YES
☒ NO
☐ COPY PROVIDED



DATE SUBMITTED: JANUARY 25, 1998

BY: JACKIE S. MCDOWELL, P.E.

McDowell Engineering, Inc.

7820 Beverly Hills Ave. NE
Albuquerque, New Mexico 87122
Telephone: (505)828-2430 Fax: (505)821-4857

LETTER OF TRANSMITTAL

TO: FRED AGUIRRE
COA HYDROLOGY
600 2ND ST
PLAZA DEL SOL - MAIN FLOOR - WEST SIDE

DATE: 1-25-99
PROJ. NO.: _____

RE: MACDUFFEE HOLIDAY BREEZE SUB'D

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

COPIES	DATE	DESCRIPTION
1	1/25	Drainage Info. Sheet
1	"	Revised Grading & Drainage Plan
1	"	Attachment No. 2 - Calculations
1	"	Response Letter to Comments.

THESE ARE TRANSMITTED as checked below:

☒ For approval ☐ For your use ☐ As requested ☐ For review and comment
☐ Other _____

REMARKS:

COPY TO: file

SIGNED: _____

Jackie S. McDowell, P.E.



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 7, 1999

Ms. Jackie S. McDowell, P.E.
McDowell Engineering, Inc.
7820 Beverly Hills Avenue NE
Albuquerque, NM 87122

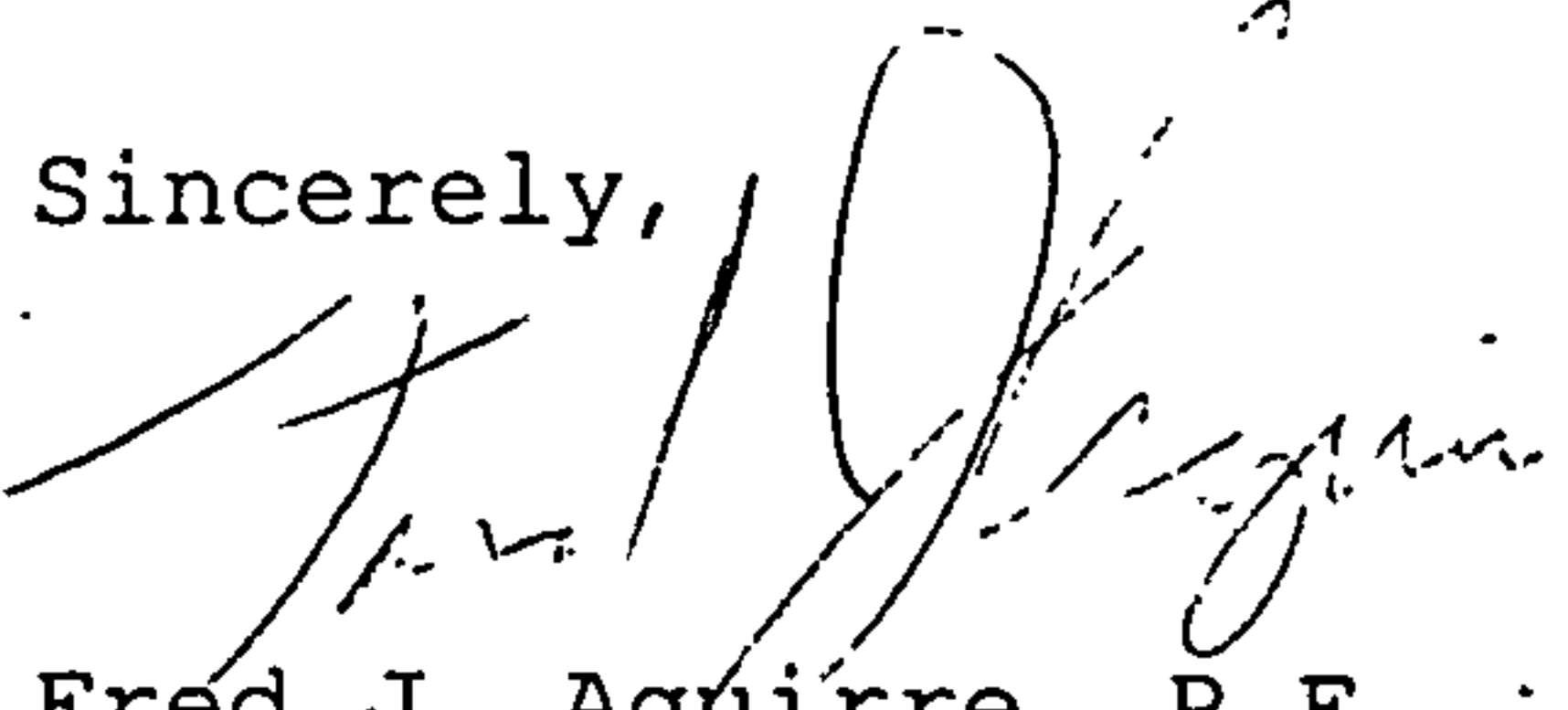
Re: Grading and Drainage Plan for Proposed - MacDuffee Holiday Breeze
Subdivision Grading and Drainage Plan (Consists of Grading Plan
Sheet 1 of 1 and Attachment No. 1), Engineer Stamp dated October
29, 1998 (F22/D-36).

Dear Ms. McDowell:

Smith Engineering Company (SEC) reviewed your drainage submittal referenced above and submitted the following comments (see attached letter). In addition to Smith's comments, your re-submittal must address downstream capacity to determine the allowable discharge from the proposed development. Also please refer to the DPM checklist for grading detail requirements.

Please address these comments and re-submit for our review and approval.

Sincerely,


Fred J. Aguirre, P.E.
City Hydrologist
Public Works Department

Attachment:

c: file /



December 31, 1998

Mr. Fred Aguirre, P.E.
Hydrologist
City of Albuquerque
Public Works Department
P.O. Box 1293
Albuquerque, NM 87103

RE: Proposed - Holiday Breeze Subdivision

Grading and Drainage Plan for Proposed -

Macduffee Holiday Breeze Subdivision Grading and Drainage Plan (Consists of Grading Plan Sheet 1 of 1 and Attachment NO. 1) October 29, 1998

Brief History of Project Submittals and Reviews

First Submittal - October 29, 1998 (Date on Grading Plan and the Attachment).

Date Submitted (Drainage Information Sheet) - October 30, 1998
Date Stamped Received in Hydrology Section - November 3, 1998
Grading Plan Stamped 10-29-98 by Jackie S. McDowell, P.E.)

Drainage File : F-22 / D- 36

Legal Description - Holiday Breeze Subdivision, Section 34, T11N, R4E, NMPM

Address - Cairo Street and Montgomery Blvd.

Request Approvals for : **Preliminary Plat**
 Final Plat
 Foundation Permit
 Building Permit
 Grading Permit

SEC Job # 198624.B20

Dear Mr. Aguirre,

Smith Engineering Company (SEC) is pleased to review the referenced submittal. The scope of the project includes construction of a 44 lot residential subdivision.



My comments are as follows:

OFF-SITE FLOWS

1. The text on the Grading Plan state that existing off-site flows will enter the subdivision on the east and will continue after development via the proposed road (Holiday Breeze Ct. NE). None of the following information regarding off-site flows was provided and should be.
 - A. Off-site drainage map and the off-site area
 - B. Off-site hydrologic calculations (what are the 10-yr, 100-yr 6-hr Qp and volumes that will enter the subdivision and eventually into the proposed detention pond.
 - C. Will brick walls be built along the 2 eastern most lots (Lots 34 and 35 to prevent off-site flows from entering these lots.
 - D. How will off-site flows be collected to ensure it enters into Holiday Breeze Court on the east side of project.

GRADING PLAN (Sheet 1 of 1)

1. It is my understanding that the City of Albuquerque does not allow back yard retention ponds which is what is proposed. If that is true the grading plan must be revised to reflect no retention ponding. It also appears that the detention pond was sized to accommodate the entire subdivision runoff volume (without subtraction of the retention ponding areas.
2. The COA benchmark used to set the TBM's is not provided.
3. Need a preliminary detail on the retaining walls (cross-sections) that show how high, how much retaining, weep holes, etc.

DETENTION POND

1. Note that the grading plan states that the pond is to be a public facility.
2. It would seem that curb cuts in the mountable curb at the detention pond would be necessary to allow low flows into pond.
3. A weir flow calculation is required to determine the width and depth of flow over the mountable curb. Also, are the adjacent house pad elevation high enough relative to the 100-yr. depth over the curb.
4. Pond preliminary design details are required for:



- A. mountable curb / cuts in curb at pond inlet
 - B. rundown (for erosion protection) into pond bottom
 - C. pipe outfall / emergency spillway (emergency spillway may be required)
5. The pond volume, or pond discharge calculations do not address how the off-site flows will pass through the pond. If that volume is to pass through the pond, must show how the pond depth / outflow will accommodate that, (would it pass through emergency spillway? Need analysis and explanation.
6. Discuss the freeboard with respect to the back of sidewalk, and the adjacent house finished floor elevations.

STREET HYDRAULICS

Items Needed:

- 1. What type of street and curb will be constructed?
- 2. What are the 10-yr and 100-yr flow depths in the street?
- 3. Is the velocity and depth * velocity acceptable?
- 4. Determine if a hydraulic jump will occur in the culdesac as the street flow must pass over the mountable curb into the pond?
- 5. The flow depth in the main roadway near the proposed "water block" must be computed to determine how high the water block must be, and where it will be Will it be a traffic hazard?

Please call me if you have any questions or want to review this comments together.

Sincerely,

Smith Engineering Company
Pat Stovall, P.E.

O:\100\198624b\b20-12-31.doc

January 7, 1999

Ms Jackie S, McDowell, P.E.
McDowell Engineering, Inc.
7820 Beverly Hills Ave. N.E.
Albuquerque, NM

RE: Grading and Drainage Plan for Proposed -Macduffee Holiday Breeze Subdivision Grading and Drainage Plan (Consists of Grading Plan Sheet 1 of 1 and Attachment NO. 1) Engineer Stamp Dated October 29, 1998 (F-22-D36)

Dear Ms. McDowell:

Smith Engineering Company (SEC) reviewed your drainage submittal referenced above and submits the following comments (see attached letter). In Addition to Smith's comments, your resubmittal must address downstream capacity to determine the allowable discharge from the proposed development. Also, please refer to the DPM checklist for grading detail requirements.

Please, address these and resubmit for our review & approval.

FAX

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
DEVELOPMENT AND BUILDING SERVICES
(ONE STOP SHOP)

600 2ND STREET - PLAZA DEL SOL - 2ND FLOOR WEST
FAX NO. 924-3864

DATE: 1/7/99

TIME: 10:11

NO. OF PAGES: 2
(INCLUDING COVER PAGE)

TO: Roy A. McClung FAX 271-5054

FROM: Fred Aguirre

COMMENTS: _____

Desert Sunrise
Builders and Remodelers

ROY A. McCLUNG
Construction Superintendant

11024 Montgomery Blvd. NE
Suite 202
Albq., NM 87111

Phone: 293-1496
Fax: 271-5054
Mobile: ~~244-9672~~
NM Cont. Lic. # 15089

Mobile-259-0564



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 7, 1999

Ms. Jackie S. McDowell, P.E.
McDowell Engineering, Inc.
7820 Beverly Hills Avenue NE
Albuquerque, NM 87122

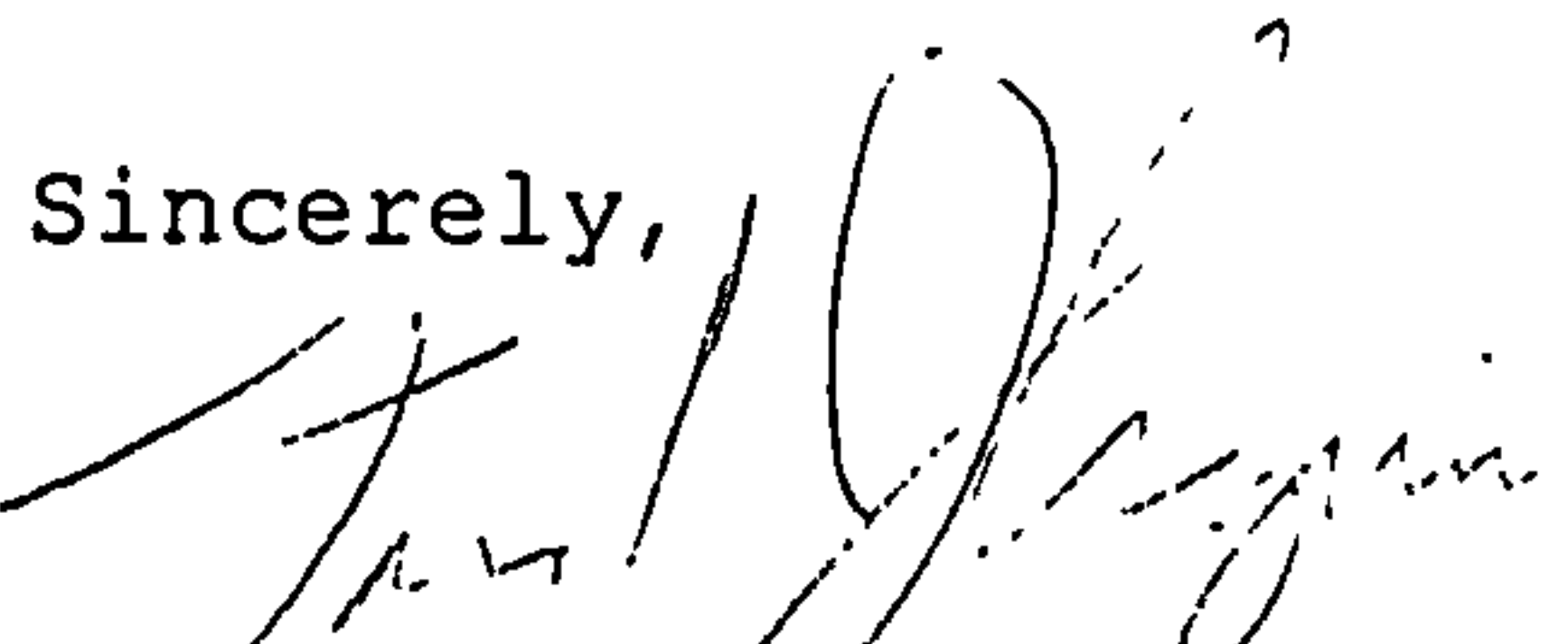
Re: Grading and Drainage Plan for Proposed - MacDuffee Holiday Breeze
Subdivision Grading and Drainage Plan (Consists of Grading Plan
Sheet 1 of 1 and Attachment No. 1), Engineer Stamp dated October
29, 1998 (F22/D-36).

Dear Ms. McDowell:

Smith Engineering Company (SEC) reviewed your drainage submittal referenced above and submitted the following comments (see attached letter). In addition to Smith's comments, your re-submittal must address downstream capacity to determine the allowable discharge from the proposed development. Also please refer to the DPM checklist for grading detail requirements.

Please address these comments and re-submit for our review and approval.

Sincerely,


Fred J. Aguirre, P.E.
City Hydrologist
Public Works Department

Attachment:

c: file 

DRAINAGE INFORMATION SHEET

PROJECT TITLE: HOLIDAY BREEZE SUB'D ZONE ATLAS/DRNG. FILE #: F-22/D 36
DRB #: 98-343 EPC #: _____ WORK ORDER #: _____
LEGAL DESCRIPTION: HOLIDAY BREEZE SUB'D, SECTION 34, T11N, R4E, NMPM
CITY ADDRESS: CAIRO STREET AND MONTGOMERY BOULEVARD
ENGINEERING FIRM: MCDOWELL ENGINEERING, INC. CONTACT: JACKIE MCDOWELL
ADDRESS: 7820 BEVERLY HILLS AVE. NE PHONE: 828-2430
OWNER: KEITH MACDUFFEE CONTACT: KEITH MACDUFFEE
ADDRESS: BOX 2243 PHONE: 275-9253
ARCHITECT: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
SURVEYOR: SOUTHWEST SURVEYING CO. INC. CONTACT: DAN GRANEY
ADDRESS: 333 LOMAS BLVD NE PHONE: 247-4444
CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____

TYPE OF SUBMITTAL:

CHECK TYPE OF APPROVAL SOUGHT:

☐ DRAINAGE REPORT
☒ DRAINAGE PLAN
☐ CONCEPTUAL GRADING & DRAIN. 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 PMT APPR.
☐ SECTOR PLAN APPROVAL
☒ FINAL PLAT APPROVAL
☒ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERT. OF OCCUPANCY APPROVAL
☒ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ S.A.D. DRAINAGE REPORT
☐ DRAINAGE REQUIREMENTS
☐ OTHER _____ (SPECIFY)

PRE-DESIGN MEETING:

☐ YES
☒ NO
☐ COPY PROVIDED

DATE SUBMITTED: OCTOBER 30, 1998

BY: JACKIE S. MCDOWELL, P.E.

RECEIVED
NOV 03 1998
HYDROLOGY SECTION

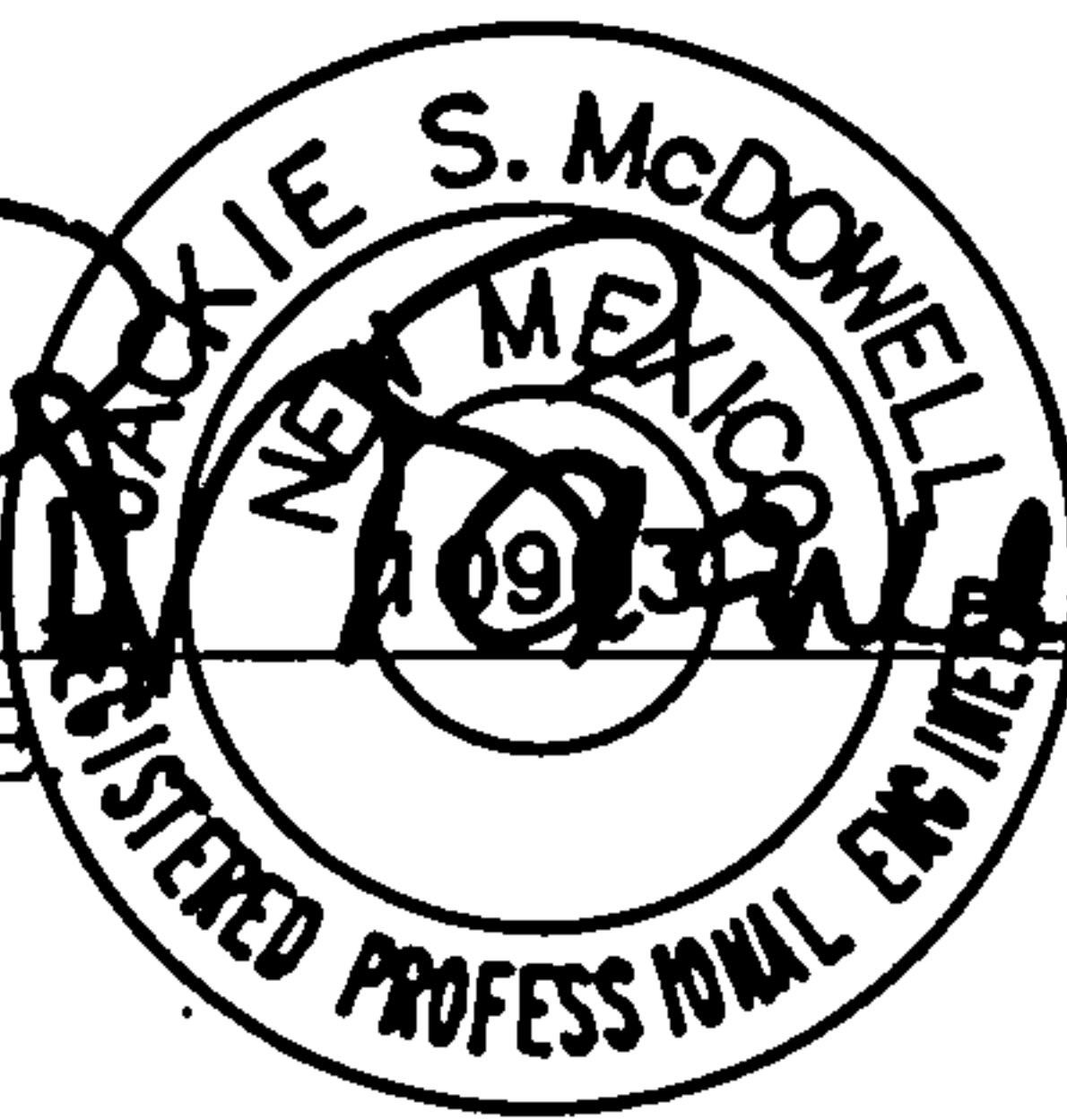
ATTACHMENT NO. 1

SUPPLEMENTAL CALCULATIONS TO

MACDUFFEE
HOLIDAY BREEZE SUBDIVISION
SECTION 34
T11N, R4E, NMPM

GRADING & DRAINAGE PLAN

I, Jackie S. McDowell, Registered Professional Engineer, No. 10903, hereby certify that I have prepared the attached calculations.

  10-29-98

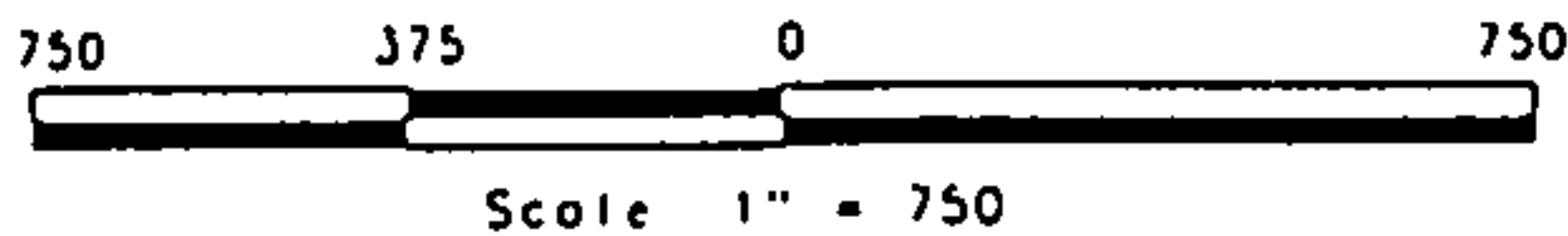
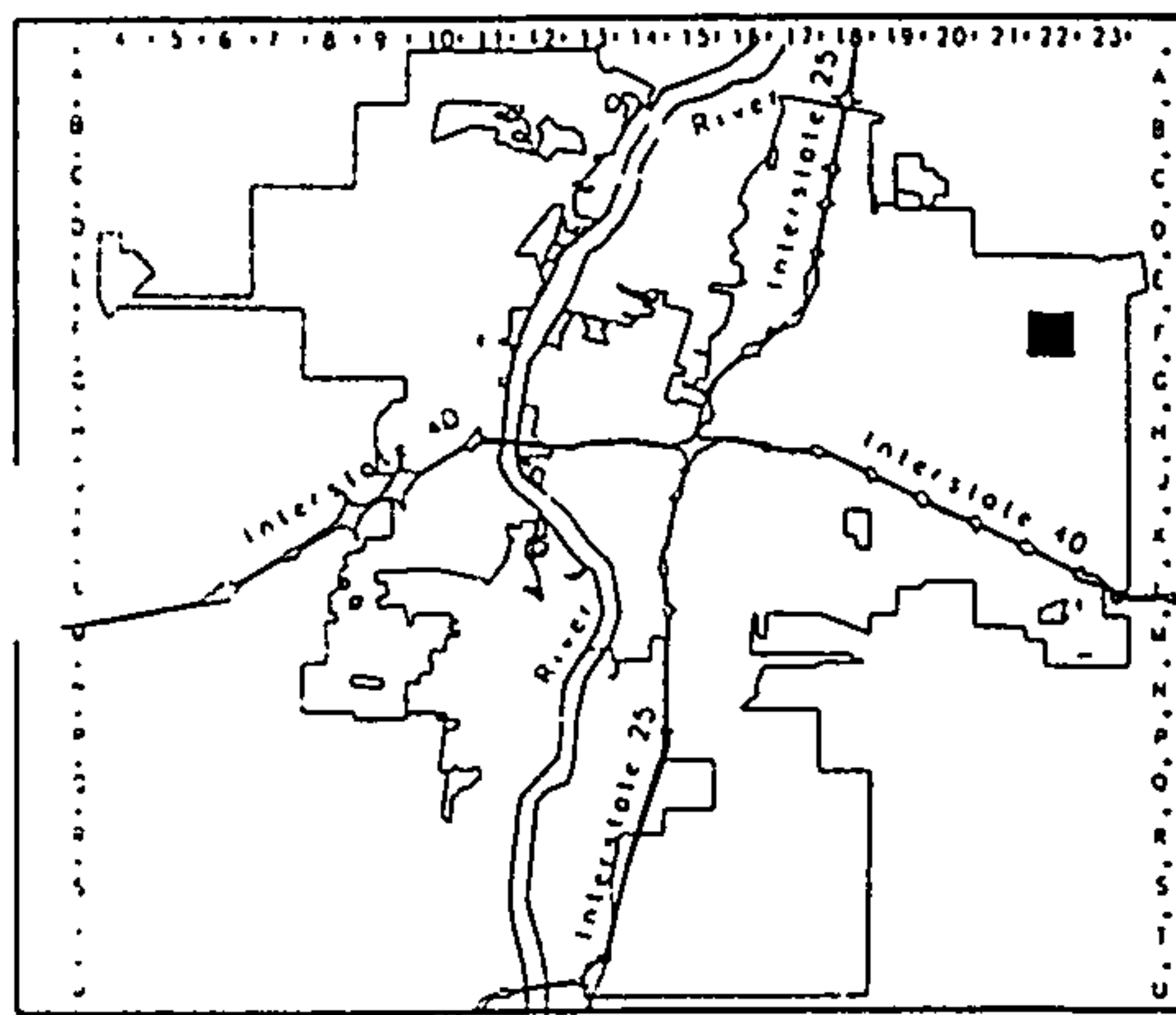
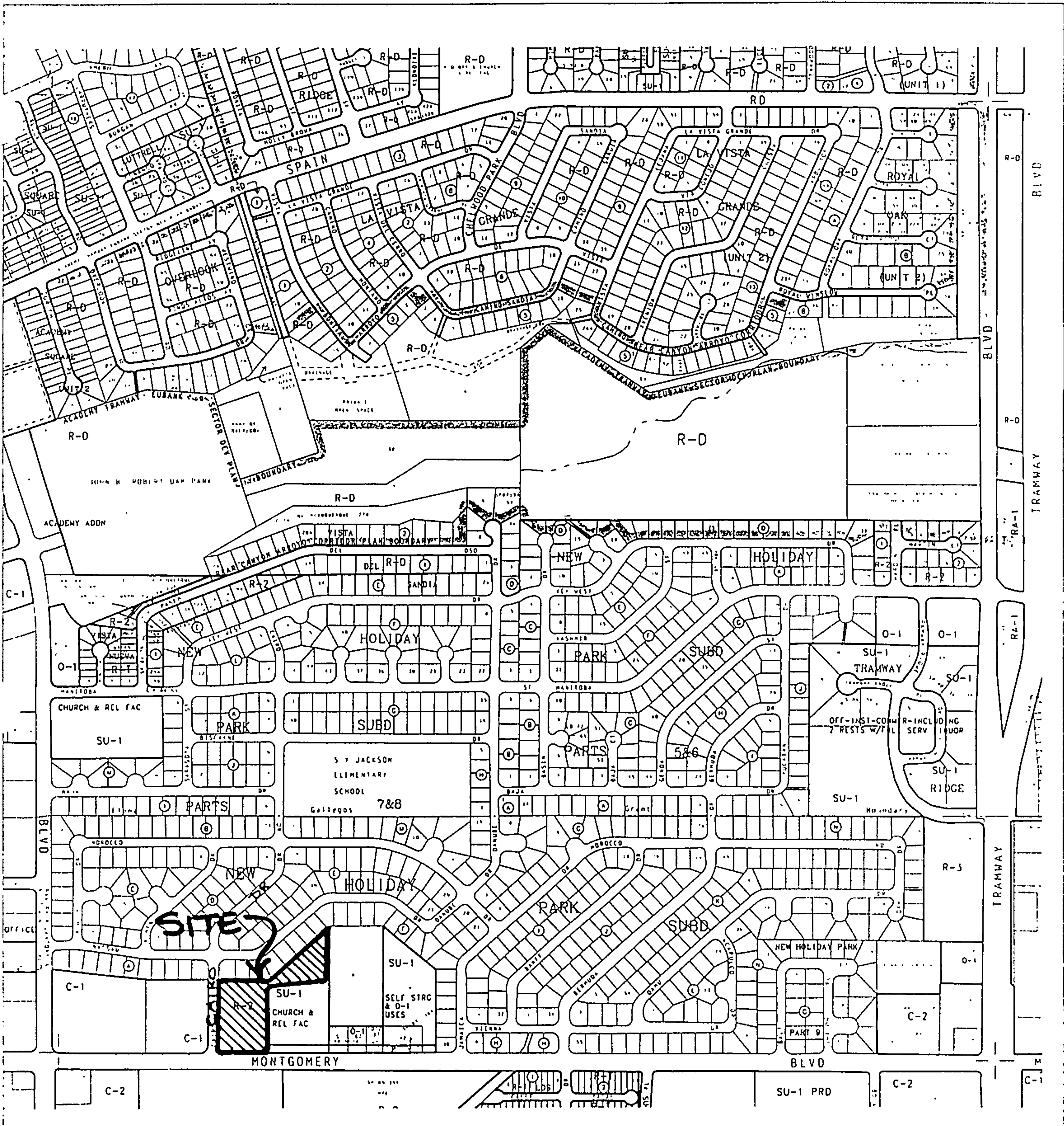
Jackie S. McDowell, P.E. No. 10903

R **E**CEIVE **D**
NOV 03 1998
HYDROLOGY SECTION

TABLE OF CONTENTS

	Page No.
Vicinity Map - Zone Atlas F-22	1
Floodway Map	2
Calculations - Short Form	3
Calculations - Long Form	4-6
Pond Calculations	7-8

R **ECEIVE** **D**
NOV 03 1998
HYDROLOGY SECTION

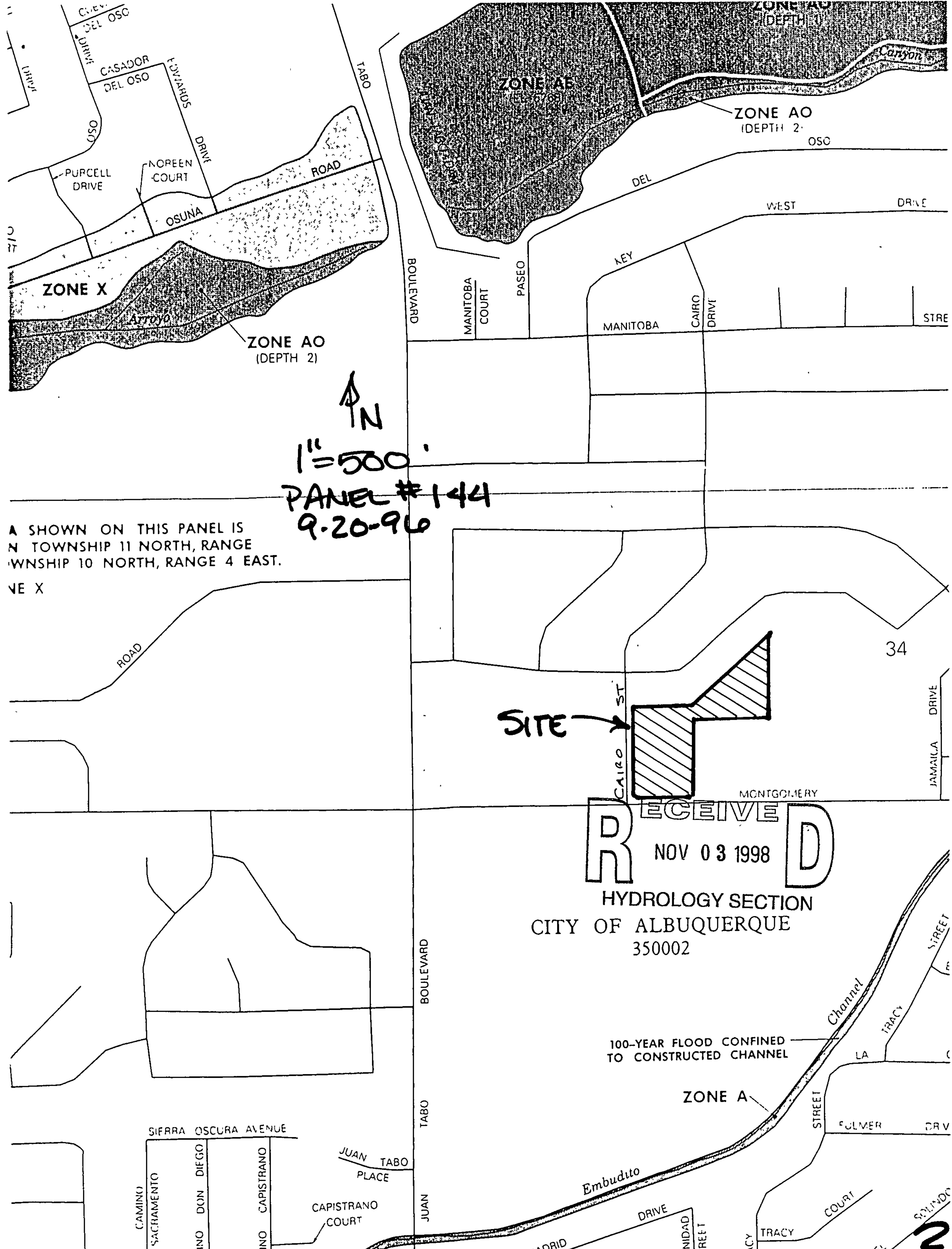


Albuquerque Geographic Information System
City of Albuquerque

© Planning Department July 02, 1993

RECEIVED
LEGAL DESCRIPTION
NOV 03 1998
HYDROLOGY SECTION
UNIFORM PROPERTY CODE
1-022 061

F-22-Z



A SHOWN ON THIS PANEL IS
N TOWNSHIP 11 NORTH, RANGE
WNSHIP 10 NORTH, RANGE 4 EAST.
VE X

1"=500'
PANEL #144
9-20-96

SITE

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NOV 03 1998

HYDROLOGY SECTION
CITY OF ALBUQUERQUE
350002

100-YEAR FLOOD CONFINED
TO CONSTRUCTED CHANNEL

ZONE A

SIFERRA OSCURA AVENUE

CAMINO
SACRAMENTO
CINO DON DIEGO

CINO CAPISTRANO

JUAN TABO
PLACE
CAPISTRANO
COURT

MADRID

DRIVE

INIDAD
STREET

ACY
TRACY

COURT

FULMER

STREET

2

26-Oct-98

Calculations: Total Basin

Calculations are based on "Section 22.2 Hydrology of the
Development Process Manual, Volume 2, Design Criteria for the
City of Albuquerque, New Mexico, January 1993 - basins < 40 acres".

Precipitation Zone = 4

Depth at 100-year, 6-hour storm: (Table A-2)

P = 2.90 inches

Land Treatments:

From Table 5 - Percent Treatment D

Single Family Residential =

$$7 * \text{SQR}((N * N) + (5 * N))$$

where N = units/acre

N = ----- = -----, ok < 6

N = 0.00

Therefore Percent Treatment D = 0.00%

(includes local streets)

Areas: (acres)	Existing	Proposed
Treatment A	4.05	0.00
Treatment B	0.00	1.02
Treatment C	0.00	0.00
Treatment D	0.00	3.03
Total (acres) =	4.05	4.05

RECEIVED
NOV 03 1998
HYDROLOGY SECTION

Volume	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.27	0.76	0.09	0.47	0.01	0.26
Volume (cubic feet) =	11,761	33,036	4,116	20,291	294	11,516

Total Q(p), cfs:	100 year Existing Q(p)*A	100 year Proposed Q(p)*A	10 year Existing Q(p)*A	10 year Proposed Q(p)*A	2 year Existing Q(p)*A	2 year Proposed Q(p)*A
Treatment A	8.91	0.00	3.52	0.00	0.20	0.00
Treatment B	0.00	2.98	0.00	1.48	0.00	0.39
Treatment C	0.00	0.00	0.00	0.00	0.00	0.00
Treatment D	0.00	15.91	0.00	10.82	0.00	6.58
Total Q (cfs) =	8.91	18.89	3.52	12.30	0.20	6.96

Project: MACDUFFEE - HOLIDAY BREEZE SUB'D ON-SITE CALCULATIONS

(LONG FORM; 3 PAGES)

26-Oct-98

Calculations: Total Basin

Calculations are based on "Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, January 1993 - basins < 40 acres".

Precipitation Zone = 4

Depth at 100-year, 6-hour storm: (Table A-2) P = 2.90 inches

Land Treatments:

From Table 5 - Percent Treatment D

Single Family Residential =

$7 \times \text{SQR}((N \times N) + (5 \times N))$

where N = units/acre

N = ----- = -----, ok < 6 N = 0.00

Therefore Percent Treatment D = 0.00%

(includes local streets)

Areas: (acres)	Existing	Proposed
Treatment A	4.05	0.00
Treatment B	0.00	1.02
Treatment C	0.00	0.00
Treatment D	0.00	3.03
Total (acres) =	4.05	4.05

Excess Precipitation (E): (Table A-8)	100 yr	10 yr	2 yr
Treatment A	0.80	0.28	0.02
Treatment B	1.08	0.46	0.11
Treatment C	1.46	0.73	0.27
Treatment D	2.64	1.69	1.01

Weighted E:	100 year Existing E*A	100 year Proposed E*A	10 year Existing E*A	10 year Proposed E*A	2 year Existing E*A	2 year Proposed E*A
Treatment A	3.24	0.00	1.13	0.00	0.08	0.00
Treatment B	0.00	1.10	0.00	0.47	0.00	0.11
Treatment C	0.00	0.00	0.00	0.00	0.00	0.00
Treatment D	0.00	8.00	0.00	5.12	0.00	3.06
Total	3.24	9.10	1.13	5.59	0.08	3.17

Project: MACDUFFEE - HOLIDAY BREEZE SUB'D ON-SITE CALCULATIONS

$$\text{Weighted E} = \frac{\text{Total E} \cdot \text{A}}{\text{Total Area}}$$

$$\text{Total Area} = 4.05$$

	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Weighted E (inches) =	0.80	2.25	0.28	1.38	0.02	0.78
Weighted E (feet) =	0.07	0.19	0.02	0.12	0.00	0.07

$$\text{Volume} = \text{Weighted E} \cdot \text{Watershed Area}$$

	100 year Existing	100 year Proposed	10 year Existing	10 year Proposed	2 year Existing	2 year Proposed
Volume (acre-feet) =	0.27	0.76	0.09	0.47	0.01	0.26
Volume (cubic feet) =	11,761	33,036	4,116	20,291	294	11,516

Peak Discharge (cfs/acre) = Q(p): (Table A-9)	Q(p) 100 year	Q(p) 10 year	Q(p) 2 year
Treatment A	2.20	0.87	0.05
Treatment B	2.92	1.45	0.38
Treatment C	3.73	2.26	1.00
Treatment D	5.25	3.57	2.17

Total Q(p), cfs:	100 year Existing Q(p)*A	100 year Proposed Q(p)*A	10 year Existing Q(p)*A	10 year Proposed Q(p)*A	2 year Existing Q(p)*A	2 year Proposed Q(p)*A
Treatment A	8.91	0.00	3.52	0.00	0.20	0.00
Treatment B	0.00	2.98	0.00	1.48	0.00	0.39
Treatment C	0.00	0.00	0.00	0.00	0.00	0.00
Treatment D	0.00	15.91	0.00	10.82	0.00	6.58
Total Q (cfs) =	8.91	18.89	3.52	12.30	0.20	6.96

RATIONAL METHOD:

Coefficient C: (Table A-11)	100 year	10 year	2 year
Treatment A	0.39	0.23	0.02
Treatment B	0.52	0.38	0.16
Treatment C	0.66	0.59	0.43
Treatment D	0.94	0.93	0.93
Peak Intensity (in/hour): (Table A-10)	5.61	3.83	2.34

Q = CIA (cfs):	100 year Existing CIA	100 year Proposed CIA	10 year Existing CIA	10 year Proposed CIA	2 year Existing CIA	2 year Proposed CIA
Treatment A	8.86	0.00	3.57	0.00	0.19	0.00
Treatment B	0.00	2.98	0.00	1.48	0.00	0.38
Treatment C	0.00	0.00	0.00	0.00	0.00	0.00
Treatment D	0.00	15.98	0.00	10.79	0.00	6.59
Total Q (cfs) =	8.86	18.95	3.57	12.28	0.19	6.98

McDowell Engineering, Inc.

7820 Beverly Hills Ave. NE
Albuquerque, New Mexico 87122
Tele: (505)828-2430
Fax: (505)821-4857

Project: MACDUFFEE - HOLLOAY BREEZE

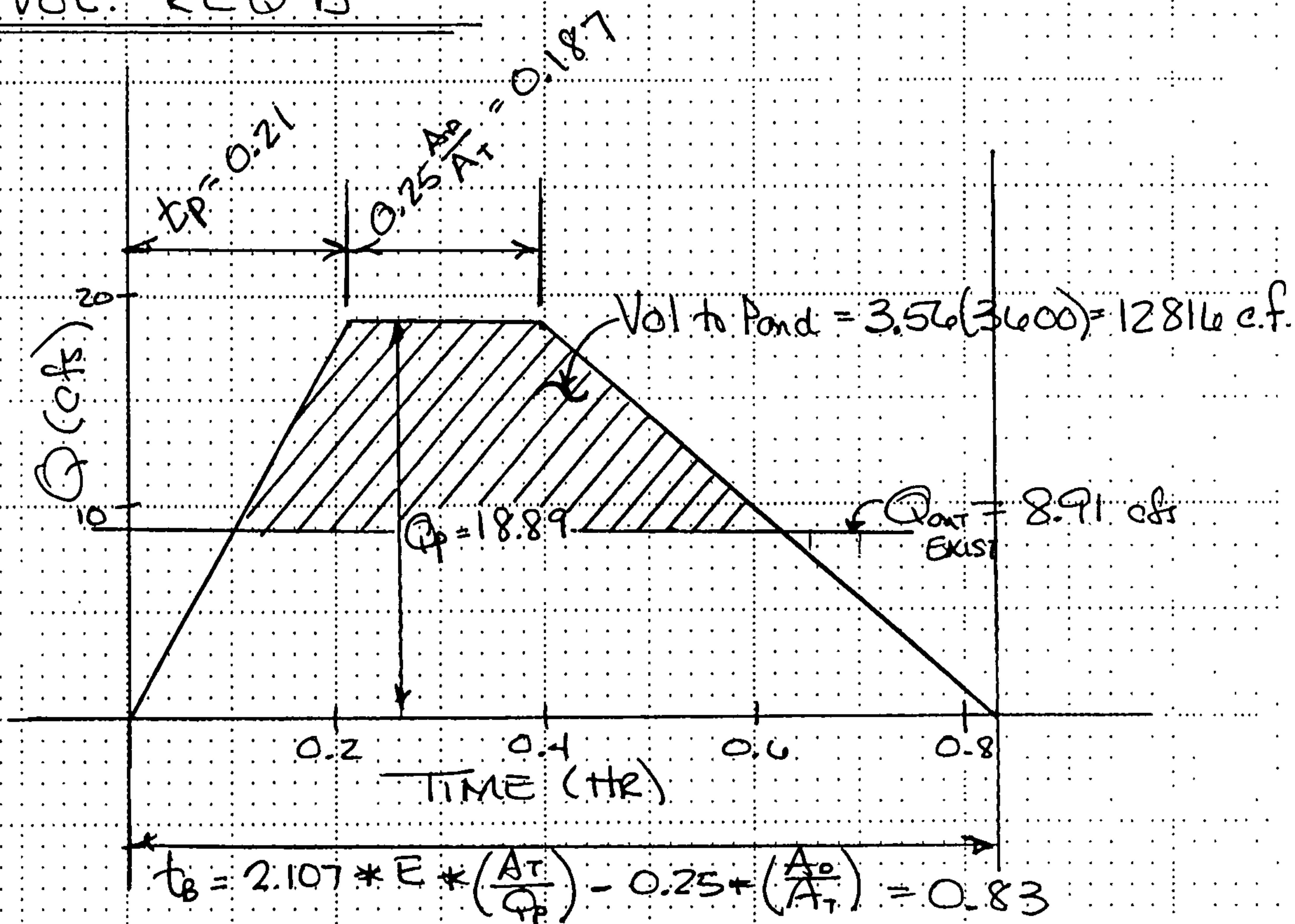
Project No.: MSZ-198L Date: 10-20-98

Subject: POND CALCS

By: OSTA Sheet 1 of 2

A detention pond is proposed for this development. The detention pond will be sized to hold that volume of storm water runoff generated by the development of the property. The outlet of the pond will be connected to the existing storm drain system in Montgomery.

POND VOL. REQ'D



$$A_D = 3.03, \quad A_T = 4.05$$

$$t_p = 0.7 * t_c + (1.6 - \frac{A_D}{A_T}) / 12 = 0.21$$

$$E = 2.25$$

McDowell Engineering, Inc.

7820 Beverly Hills Ave. NE
Albuquerque, New Mexico 87122
Tele: (505)828-2430
Fax: (505)821-4857

Project: MACDUFFIE-HOLIDAY BREEZE

Project No.: MAC 1984 Date: 10-20-98

Subject: POND CALCS

By: DSM Sheet 2 of 2

POND VOL. PROVIDED

<u>ELEVATION</u>	<u>AREA (s.f.)</u>	<u>VOL (cf)</u>
------------------	--------------------	-----------------

5762

7041

6457

5761

6273

5816

5760

5359

4200

5759

3040

TOT. VOL.

16673 cf

> 12816 cf

✓ OK

POND OUTLET: CONTROLLED DISCHARGE = 8.91 cfs EXISTING
(exist Q) 100-YR.
Qp

$$Q = CA\sqrt{2gh} \text{ , where } C = 0.6$$

Try 2-10" culverts: $A = 0.54$, $q = 32.2$, $h = 3$

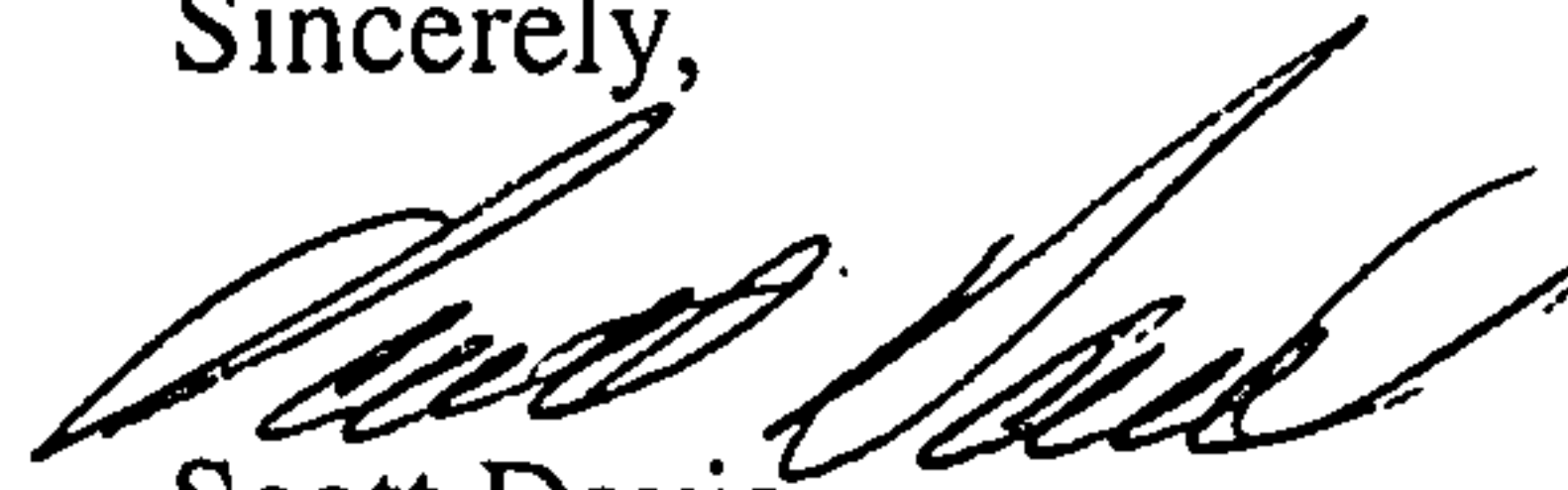
$$\therefore Q = 4.5 \text{ cfs/culverts} \times 2 \text{ culverts} = 9.0 \text{ cfs} \checkmark$$

OK

scale of these to more accurately reflect your plan. Ponding against a retaining wall is not allowed, and it appears that the wall footing on the upstream lot section will be undermined, thus jeopardizing the structural integrity of the retaining wall.

If we can be of assistance in helping you address either my or Smith Engineering's concerns, feel free to contact myself or Fred Aguire. Our numbers are 924-3986 and 924-3980 respectively.

Sincerely,

A handwritten signature in black ink, appearing to read 'Scott Davis', written in a cursive style.

Scott Davis

PWD, Hydrology Div.

c: Andrew Garcia
file

SMITH ENGINEERING COMPANY
A Full Service Engineering Company

February 25, 1999

Mr. Fred Aguirre, P.E.
Hydrologist
City of Albuquerque
Public Works Department
P.O. Box 1293
Albuquerque, NM 87103

RE: Revised Drainage Study for :
Macduffee Holiday Breeze Subdivision. (F22/D36) Sheet 1 of 1 and
Attachment No. 2 (Supplemental Calculations - Grading and Drainage Plan)
Stamped 1-25-99 by Jackie McDowell, P.E.)

Request Approvals for:
Preliminary Plat Approval (Amended)
Final Plat Approval
Grading Permit Approval

Drainage File (F22/D36)

Dear Mr. Aguirre,

Smith Engineering Company (SEC) is please to review the referenced submittal. As you know, I previously reviewed this report, and in addition to my comment letter (December 31, 1998), you asked Ms. McDowell in your letter (January 7, 1999) to verify that downstream capacity existed to justify release of storm water from the proposed subdivision into Montgomery Blvd.

My review comments are as follows:

1. Verification of Montgomery Blvd. downstream capacity.

Ms. McDowell has discussed the downstream capacity in reference to her research of the AMDS and subsequent SAD storm drainage projects. It appears that release of storm water from this proposed subdivision will have negligible impact on downstream capacity. However, I refer this issue for your judgement.

2. Off-site flows.

A. It appears that the entire off-site basin has not been computed. There is additional area east of the eastern most boundary of the subdivision that appears (from the contours) to drain to this proposed subdivision. The attached off-site drainage map