City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 7, 2002

Diane Hoelzer, PE
Mark Goodwin & Associates
P.O. 90606
Albuquerque, NM 87199

90th & San Ignacio

Re: San Ygnacio Place Drainage Report
Engineer's Stamp dated 1-11-02 (L9/D28)

Dear Ms. Hoelzer,

Based upon the information provided in your submittal dated 1-11-02 and supplemental information dated 2-4-02, the above referenced report is approved for Preliminary Plat action by the DRB.

The Sunset West Unit IV grading and storm drain supplemental plan dated 2-4-02 is approved for Grading Permit and SO19 Permit. Please contact my office when the permit is granted and schedule inspections with Matt Cline (250-2640) from the Storm Drain Maintenance Division. Upon completion of the storm drain installation, please submit a certified as-built in order to complete the system in AGIS.

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

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Sr. Engineer, PWD
Development and Building Services

C: Pam Lujan, CoA
file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

January 29, 2003

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

RE: SAN YGNACIO SUBD (Sunset West Unit 4) (L-9/D28)
Engineers Certification for Release of Financial Guaranty
Engineers Stamp dated 4/5/2002
Engineers Certification dated 1/15/2003

Dear Diane:

Based upon the information provided in your Engineers Certification submittal dated 1/21/2003, the above referenced plan is adequate to satisfy the Grading and Drainage Certification for Release of Financial Guaranty.

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

Sincerely,

Teresa A. Martin

Teresa A. Martin
Hydrology Plan Checker
Development & Bldg. Ser. Division
BLB

c: Arlene Portillo, COA--Project # 684281
File

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV.1/11/2002)

PROJECT TITLE: San Ygnacio Place ZONE MAP/DRB.FILE#: L-9/D28

DRB#: 1001478 EPC# _____ WORK ORDER#: 684281

LEGAL DESCRIPTION: Tract 432, and a portion of 433 and 434, Town of Atrisco Grant, Unit 3

CITY ADDRESS:

ENGINEERING FIRM:	Mark Goodwin & Associates, PA	CONTACT:	Diane Hoelzer, PE
ADDRESS:	P.O. Box 90606 Albuquerque NM 87119	PHONE:	828-2200
CITY, STATE:	Albuquerque NM	ZIP CODE:	87119
OWNER:	TOB, LLC	CONTACT:	Bill Allen
ADDRESS:	PO Box 7258,	PHONE:	440-7262
CITY, STATE:	Corales NM	ZIP CODE:	87048
ARCHITECT:		CONTACT:	
ADDRESS:		PHONE:	
CITY, STATE:		ZIP CODE:	
SURVEYOR:	ALS	CONTACT:	Tim Aldrich
ADDRESS:	4109 Montgomery Blvd. NE	PHONE:	884-1990
CITY, STATE:	Albuquerque NM	ZIP CODE:	87107
CONTRACTOR:	Franklins Earthmoving	CONTACT:	John Ellis
ADDRESS:	2425 Jefferson NE	PHONE:	884-6947
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87110

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN (revised 4-5-02)
- ____ EROSION CONTROL PLAN
- ✔ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEER'S CERTIFICATION (TCL)
- ____ ENGINEER'S CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- ____ NO
- ____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ✔ SIA / FINANCIAL GUARANTY RELEASE
- ____ PRELIMINARY PLAT APRROVAL
- ____ 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)

RECEIVED JAN 21 2003 HYDROLOGY SECTION

DATE SUBMITTED: January 21, 2003 BY: Diane Hoelzer

Diane Hoelzer, PE

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 to 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).
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.

f:\\forms\drainf.tbl

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

November 19, 2002

Amy Driscoll, P.E.
Mark Goodwin & Assoc.
P.O. Box 90606
Albuquerque, New Mexico 87199

RE: SAN YGNACIO SUBD (Sunset West Unit 4) (L-9/D28)
Engineers Certification – Submitted for Release of Financial Guaranty
Engineers Stamp dated 2/4/2002
Engineers Certification dated 11/5/2002

Dear Amy:

Based on the information provided in your submittal dated 11/5/2002, the above referenced project **can not** be approved for Release of SIA and Finacial Guaranty at this time.

The Engineers Certification must be on the latest approved grading and drainage plan (Engineers seal dated 4/5/2002). As per our conversation, please resubmit your certification on this grading and drainage plan.

When the revised Engineers Certification is submitted to our office, we will again review the certification for Financial Guaranty release.

If I can be of further assistance, please feel free to contact me at 924-3981.

Sincerely,

Teresa A. Martin

Teresa A. Martin, P.E.
Hydrology Plan Checker
Development & Bldg. Ser. Division
BLB

c: File

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV.1/11/2002)

PROJECT TITLE: San Ygnacio Subdivision ~~Sunset West Unit 4~~ ZONE MAP/DRB.FILE#: L-9/D28

DRB#: 1001478 EPC# _____ WORK ORDER#: 684281

LEGAL DESCRIPTION: Tract 432, and a portion of 433 and 434, Town of Atrisco Grant, Unit 3

CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: Amy L. Driscoll, PE

ADDRESS: P.O. Box 90606 Albuquerque NM 87119 PHONE: 828-2200

CITY, STATE: Albuquerque NM ZIP CODE: 87119

OWNER: TOB, LLC CONTACT: Bill Allen

ADDRESS: PO Box 7258, PHONE: 440-7262

CITY, STATE: Corales NM ZIP CODE: 87048

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

SURVEYOR: ALS CONTACT: Tim Aldrich

ADDRESS: 4109 Montgomery Blvd. NE PHONE: 884-1990

CITY, STATE: Albuquerque NM ZIP CODE: 87107

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN (revised 4-5-02)
- ____ EROSION CONTROL PLAN
- x ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEER'S CERTIFICATION (TCL)
- ____ ENGINEER'S CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- ____ NO
- ____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SIA / FINANCIAL GUARANTY RELEASE
- ____ PRELIMINARY PLAT APRROVAL
- ____ 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
- X CERTIFICATE OF OCCUPANCY (PERM)
- ____ CERTIFICATE OF OCCUPANCY (TEMP)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ OTHER (SPECIFY)

RECEIVED
NOV 0 5 2002
PWD/DESIGN REVIEW

DATE SUBMITTED: 11/5/02 BY: _____

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 to 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).
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3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

f:\\forms\drainf.tbl

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

P.O. Box 90606 ❖ Albuquerque, NM 87199
(505) 828-2200 ❖ (505) 797-9539 fax
e-mail: dmg@swcp.com

LETTER OF TRANSMITTAL

To: Brad Bingham
CoA - Hydrology

Date: November 5, 2002

Re: Sunset West (San Ygnacio)
Pond Reclamation (L9/D28)

We are sending:

No. Copies	Date	Item Description
1		Drainage Certification

_____ For your approval _____ For your information

_____ As you requested _____ For your comments

NOTES:

SIGNED: Amy L. Driscoll, PE

COPY

File Sunset West IV T690

AGREEMENT TO CONSTRUCT
PUBLIC IMPROVEMENTS BY CITY CONTRACT

THIS AGREEMENT is made this 26th day of May, 1996, by and between the City of Albuquerque, New Mexico ("City"), whose address is P. O. Box 1293 (One Civic Plaza), Albuquerque, New Mexico 87103, and Sunset West ("Developer"), a [state the type of business entity, for instance, "New Mexico corporation," "general partnership", "joint venture", "individual", etc.:] NM General Partnership, whose address is PO Box 7400 Rio Rancho, NM 87194 and whose telephone number is 239-5383, is made in Albuquerque, New Mexico, and is entered into as of the date of final execution of this Agreement.

1. Recital. The Developer owns certain lands within the City of Albuquerque, Bernalillo County, New Mexico, known as [describe:] Tracts 435, 436, 437 & 438, Unit 3, Town of Atrisco Grant ("Developer's Property"). The Developer's Property is owned by [state the name of the present real property owner exactly as shown on the real estate document conveying title in Developer's Property to the present owner:] Sunset West ("Owner").

The developer of the property is seeking [describe: "preliminary/final plat", "site development plan", etc.] final plat approval. The City and the property developer have agreed that it would be beneficial to all parties and the general public to make certain improvements to the public roadways and that it is appropriate that the Developer contribute to the cost of the improvements.

Developer's Property will benefit from the construction of certain improvements detailed below, which will be located on public right-of-way, and the City is willing to construct those improvements with the participation of the Developers.

Therefore, the City and the Developer agree:

2. Improvements. The City agrees to install and complete the following public improvements, identified as City Project No.: 4991 Tower Road improvements per SAD 222, and drainage improvements per SAD 222. ("Improvements").

3. Developer's Estimated Cost. The Developer's share has been determined to be Two Hundred Fifty One Thousand Four Hundred Forty dollars and 00 cents ($ 251,440.00 ("Developer's Share"), as detailed in the City-approved estimate which is attached at Exhibit A. The estimate includes City fees and contingencies and is the only amount developer will be required to contribute for this project.

4. Payment. All payments will be made only in the following form: cash, certified check, cashier's check or other form of payment approved by the City.

04/19/2002 14:33 0 PAGE 01

5. Notice. For purposes of giving formal written notice, including notice of change of address, the Developer's and the City's addresses are as stated in the first paragraph of this Agreement. Notice may be given either in person or by certified U.S. mail, postage paid. Notice will be considered to have been received within six days after the notice is mailed if there is no actual evidence of receipt.

6. Entire Agreement. This Agreement contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith.

7. Changes to Agreement. Changes to this Agreement are not binding unless made in writing, signed by both parties.

8. Construction and Severability. If any part of this Agreement is held to be invalid or unenforceable, the remainder of the Agreement will remain valid and enforceable if the remainder is reasonably capable of completion.

9. Captions. The captions to the sections or paragraphs of this Agreement are not part of this Agreement and will not affect the meaning or construction of any of its provisions.

10. Authority to Execute. If the Developer signing below is not the Owner of the Developer's Property, the City may require the Developer to provide the City with satisfactory proof of Developer's authority to execute this Agreement.

Executed on the date stated in the first paragraph of this Agreement.

DEVELOPER: SUNSET WEST

By: Mark Pagels Sr.
Name: Mark Pagels, Sr.
Title: Agent
Dated: 5-10-96

CITY OF ALBUQUERQUE

Director, Public Works Department
Dated: 5-30-96

Approved by: 5/15/96
City Engineer 5/14/96
5/14/96

STATE OF NEW MEXICO
COUNTY OF BERNALILLO
FILED

96 MAY 20 PM 2:27

96-14 1690-1695

DEVELOPER'S NOTARY

OFFICIAL SEAL
SUSAN RASINSKI
Notary Public
State of New Mexico
My Commission Expires 9-3-96

STATE OF New Mexico)
) ss.
COUNTY OF Bernalillo)

This instrument was acknowledged before me on 10th day of May, 1992 by (name of person:) Mark Pagels, Sr., (title or capacity, for instance, "President" or "Owner":) Agent of (Developer:) Sunset West.

Susan Rasinski
Notary Public

My Commission Expires:

9-3-96

CITY'S NOTARY

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on 20th day of May, 1996 by ROBERT E GURULE, Director, Public Works Department of the City of Albuquerque, a municipal corporation on behalf of said corporation.

Notary Public

My Commission Expires:

1-20-98

EXHIBIT A ATTACHED

04/19/2002 14:33 0 PAGE 03

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

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

November 5, 2002

Mr. Brad Bingham
Ms. Sheran Matson
Development Review Board
City of Albuquerque
600 2nd Street SW
Albuquerque, NM 87103

Re: DRB Submittal, Sunset West Subdivision Unit 4 Pond Reclamation, DRB #1001798, L9/D28

Dear Mr. Bingham and Ms. Matson:

The final plat is being submitted for signatures by routing. A drainage certification is being submitted to Hydrology today. The downstream storm drain has been accepted by the City. The SAD roll adjustment is enclosed showing the fees have been paid.

Please contact me if I can be of further assistance.

Sincerely,

MARK GOODWIN & ASSOCIATES, P.A.

Amy L. Driscoll, PE
Project Engineer

F:\sunsetwest\drb3

Subject: SAD 222
Date: Tue, 21 May 2002 13:51:45 -0600
From: BBingham@cabq.gov
To: rrb@tierrawestllc.com, dmg@swcp.com
CC: faguirre@cabq.gov, RDourte@cabq.gov

Mark G & Ron B

I have been informed by the SAD engineer that the storm drain built by the SAD east of 98th and north of Sage is installed, complete and functioning. Therefore, any projects that would remove ponds in this portion of the District can proceed forward with applicable vacations, regrading plans, etc. The storm drain in 98th is not quite functioning yet but it is anticipated that it will be in about 3 weeks. Call me if need any additional info.

Brad Bingham

TREASURER'S DAILY REPORT OF DEPOSITS

DEPOSITOR	DESCRIPTION	ACCOUNT/ ACTIVITY	AMOUNT
Depositor · Sunwest Bank of Albuq.	Cashier's Check #261057		
Sunset West Proj # 4991, Tower Rd. & dr. improv	Street Imp. per SAP 222 per SAD 200		
	(86 21040) St. Improvements (Paving)		1,440 00
	(86 21030) Drainage Improvements		90,000 00
		Total 2	91,440 00
		FUND 330 461611 86.210304 86-21030	90,000
		Storm Drainage	Street Imp

CITY OF ALBUQUERQUE, TREASURY DIVISION
9605130041 461611862104 0
$190,000.00 050 03

CITY OF ALBUQUERQUE, TREASURY DIVISION
9605130041 461611862103 0
$1,440.00 050 03

TOTAL AMOUNT: 251,440.00

VERIFIED: Frances Lucero

DEPOSIT DATE: 5-13-96

CITY OF ALBUQUERQUE, TREASURY DIVISION
9605130041 461611862104 0
$61,440.00 050 03

SUNWEST BANKING SUNWEST BANKING SUNWEST BANKING SUNWEST BANKING SUNWEST

95-32-1070

261057

CASHIER'S CHECK

REMITTER SUNSET WEST

FOR

SUNWEST

DATE MAY 10, 1996

PAY

$ *251,440.00*

PAY TO THE ORDER OF

CITY OF ALBUQUERQUE

SUNWEST BANK OF ALBUQUERQUE

BY

AUTHORIZED SIGNATURE

⑈261057⑈ ⑆107000327⑆01 0962098 9⑈

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 8, 2002

Diane Hoelzer, PE
Mark Goodwin & Associates
P.O. 90606
Albuquerque, NM 87199

Re: San Ygnacio Place Amended Grading Plan
Engineer's Stamp dated 4-5-02 (L9/D28)

Dear Ms. Hoelzer,

Based upon the information provided in your submittal dated 3-13-02 the above referenced plan is approved as amended. This is now the plan that must be certified for release of Financial Guarantees.

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

Sincerely,

Bradley L. Bingham, PE
Sr. Engineer, Planning Dept.
Development and Building Services

C: file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV.1/11/2002)

PROJECT TITLE: San Ygnacio Place ZONE MAP/DRB.FILE#: L-9/D28

DRB#: 1001478 EPC# WORK ORDER#: 684281

LEGAL DESCRIPTION: Tract 432, and a portion of 433 and 434, Town of Atrisco Grant, Unit 3

CITY ADDRESS:

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: Diane Hoelzer, PE

ADDRESS: P.O. Box 90606 Albuquerque NM 87119 PHONE: 828-2200

CITY, STATE: Albuquerque NM ZIP CODE: 87119

OWNER: TOB, LLC CONTACT: Bill Allen

ADDRESS: PO Box 7258, PHONE: 440-7262

CITY, STATE: Corales NM ZIP CODE: 87048

ARCHITECT: CONTACT:

ADDRESS: PHONE:

CITY, STATE: ZIP CODE:

SURVEYOR: ALS CONTACT: Tim Aldrich

ADDRESS: 4109 Montgomery Blvd. NE PHONE: 884-1990

CITY, STATE: Albuquerque NM ZIP CODE: 87107

CONTRACTOR: CONTACT:

ADDRESS: PHONE:

CITY, STATE: ZIP CODE:

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN (revised 4-5-02)
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEER'S CERTIFICATION (TCL)
- ____ ENGINEER'S CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SIA / FINANCIAL GUARANTY RELEASE
- ✔ PRELIMINARY PLAT APRROVAL
- ____ S. DEV. PLAN FOR SUB'D. APPROVAL
- ____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
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- ____ CERTIFICATE OF OCCUPANCY (PERM)
- ____ CERTIFICATE OF OCCUPANCY (TEMP)
- ✔ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ OTHER (SPECIFY)

RECEIVED APR 05 2002 HYDROLOGY SECTION

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- ____ NO
- ____ COPY PROVIDED

DATE SUBMITTED: April 5, 2002 BY: Diane Hoelzer

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 to the following levels of submittal may be required based on the following:

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

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

April 5, 2002

Mr. Bradley Bingham
Plaza del Sol
Hydrology Dept.
P.O. Box 1293
Albuquerque, NM 87103

Re: San Ygnacio Place (DRB 1001478)
Engineer's stamp 4-5-02 (L9 / D28)

Dear Mr. Bingham,

This submittal is a followup to the last submittal, engineers stamp dated 3-12-02. In an effort to reduce the 6-7' retaining wall requirement along the east property line, backyard ponds were created on Lots 9-20 as we discussed on the phone. The runoff from the residential building shall be directed to the front yard.

If you have any questions, please call me.

Sincerely,

MARK GOODWIN AND ASSOCIATES, P.A.

Diane Hoelzer, P.E.

file: sanygnacio/dr_ltr3.wpd

RECEIVED
APR 05 2002
HYDROLOGY SECTION

City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

February 7, 2002

Diane Hoelzer, PE
Mark Goodwin & Associates
P.O. 90606
Albuquerque, NM 87199

Re: San Ygnacio Place Drainage Report
Engineer's Stamp dated 1-11-02 (L9/D28)

Dear Ms. Hoelzer,

Based upon the information provided in your submittal dated 1-11-02 and supplemental information dated 2-4-02, the above referenced report is approved for Preliminary Plat action by the DRB.

The Sunset West Unit IV grading and storm drain supplemental plan dated 2-4-02 is approved for Grading Permit and SO19 Permit. Please contact my office when the permit is granted and schedule inspections with Matt Cline (250-2640) from the Storm Drain Maintenance Division. Upon completion of the storm drain installation, please submit a certified as-built in order to complete the system in AGIS.

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

Sincerely,

Bradley L. Bingham

Bradley L. Bingham, PE
Sr. Engineer, PWD
Development and Building Services

C: Pam Lujan, CoA
file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

DRAINAGE INFORMATION SHEET

(REV.11/01/2001)

L-9/D28

PROJECT TITLE: San Ygnacio Place ZONE ATLAS#: L9 /

DRB#: EPC# WORKORDER#:

LEGAL DESCRIPTION: Tract 432, and a portion of 433 and 434, Town of Atrisco Grant, Unit 3

CITY ADDRESS:

ENGINEERING FIRM:	Mark Goodwin & Associates, PA	CONTACT:	Diane Hoelzer, PE
ADDRESS:	PO Box 90606, ABQ, NM 87199	PHONE:	828-2200
OWNER:	TOB, LLC	CONTACT:	Bill Allen
ADDRESS:	PO Box 2758, Corrales, NM 87048	PHONE:	440-7262
ARCHITECT:		CONTACT:	
ADDRESS:		PHONE:	
SURVEYOR:	ALS	CONTACT:	Tim Aldrich
ADDRESS:	4109 Montgomery Blvd. NE, ABQ, NM 87107	PHONE:	884-1990
CONTRACTOR:		CONTACT:	
ADDRESS:		PHONE:	

TYPE OF SUBMITTAL:

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- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEER'S CERTIFICATION (TCL)
- ____ ENGINEER'S CERTIFICATION (DRB APPR. SITE PLAN)
- X OTHER **(Supplemental Information)**

PRE-DESIGN MEETING:

- ____ YES
- ____ NO
- ____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SIA / FINANCIAL GUARANTY RELEASE
- X PRELIMINARY PLAT APRROVAL
- ____ S. DEV. PLAN FOR SUB'D APPROVAL
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- ____ CERTIFICATE OF OCCUPANCY (TEMP)
- X GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ OTHER (SPECIFY)

RECEIVED
FEB 04 2002
HYDROLOGY SECTION

DATE SUBMITTED: February 4, 2002

BY: Diane Hoelzer

Diane Hoelzer, PE

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 to 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).
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.

f:\\forms\drainingf.tbl

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

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

February 4, 2002

Mr. Bradley Bingham
Plaza del Sol
Hydrology Dept.
P.O. Box 1293
Albuquerque, NM 87103

L-9/D28

Re: San Ygnacio Place (DRB 1001478)
Engineer's stamp 2-4-02 (L9)

Dear Mr. Bingham,

Per your request I am submitting the Sunset West Unit 4 Grading and Drainage Plan and Storm Sewer Improvement Plan that will reclaim the temporary detention pond as part of the San Ygnacio Place G&D Plan. The excess dirt from the San Ygnacio project site will be used to fill in the temporary detention pond in Sunset West Unit 4 as shown on the accompanying drawing. This in conjunction with raising the site 6 inches will result in a balanced site.

If you have any questions, please call me.

Sincerely,

MARK GOODWIN AND ASSOCIATES, P.A.

Diane Hoelzer, P.E.

file: sanygnacio/drainage.ltr

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV.1/11/2002)

PROJECT TITLE: San Ygnacio Place ZONE MAP/DRB.FILE#: L-9/D28

DRB#: 1001478 EPC# _____ WORK ORDER#: _____

LEGAL DESCRIPTION: Tract 432, and a portion of 433 and 434, Town of Atrisco Grant, Unit 3

CITY ADDRESS: _____

ENGINEERING FIRM: Mark Goodwin & Associates, PA CONTACT: Diane Hoelzer, PE

ADDRESS: P.O. Box 90606 Albuquerque NM 87119 PHONE: 828-2200

CITY, STATE: Albuquerque NM ZIP CODE: 87119

OWNER: TOB, LLC CONTACT: Bill Allen

ADDRESS: PO Box 7258, PHONE: 440-7262

CITY, STATE: Corales NM ZIP CODE: 87048

ARCHITECT: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

SURVEYOR: ALS CONTACT: Tim Aldrich

ADDRESS: 4109 Montgomery Blvd. NE PHONE: 884-1990

CITY, STATE: Albuquerque NM ZIP CODE: 87107

CONTRACTOR: _____ CONTACT: _____

ADDRESS: _____ PHONE: _____

CITY, STATE: _____ ZIP CODE: _____

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN (revised 3-12-02)
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEER'S CERTIFICATION (TCL)
- ____ ENGINEER'S CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- ____ NO
- ____ COPY PROVIDED

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SIA / FINANCIAL GUARANTY RELEASE
- ✔ PRELIMINARY PLAT APRROVAL
- ____ 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)

RECEIVED MAR 13 2002 HYDROLOGY SECTION

DATE SUBMITTED: March 13, 2002 BY: Diane Hoelzer

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 to the following levels of submittal may be required based on the following:

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3. **Drainage Report:** Required for subdivisions containing more than ten (10) lots or constituting five (5) acres or more.

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City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 8, 2002

Diane Hoelzer, PE
Mark Goodwin & Associates
P.O. 90606
Albuquerque, NM 87199

Re: San Ygnacio Place Amended Grading Plan
Engineer's Stamp dated 3-12-02 (L9/D28)

Dear Ms. Hoelzer,

Based upon the information provided in your submittal dated 3-13-02 the above referenced plan is approved as amended. This is the plan that must be certified for release of Financial Guarantees.

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

Sincerely,

Bradley L. Bingham, PE
Sr. Engineer, Planning Dept.
Development and Building Services

C: file

THE CITY OF ALBUQUERQUE IS AN EQUAL OPPORTUNITY/REASONABLE ACCOMMODATION EMPLOYER

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

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

March 13, 2002

Mr. Bradley Bingham
Plaza del Sol
Hydrology Dept.
P.O. Box 1293
Albuquerque, NM 87103

Re: San Ygnacio Place (DRB 1001478)
Engineer's stamp 3-12-02 (L9 / D28)

Dear Mr. Bingham,

This submittal is a followup to the last letter dated February 4, 2002. I mistakenly stated that the site needed to be raised 6 inches in order to balance the site while in actuality the site needed to be lowered by 6 inches. The site has been lowered 6 inches as reflected on the accompanying revised grading and drainage plan. Since this is the plan being used in the field I wanted to get this copy approved and in the hydrology file.

If you have any questions, please call me.

Sincerely,

MARK GOODWIN AND ASSOCIATES, P.A.

Diane Hoelzer, P.E.

file: sanygnacio/dr_ltr2.wpd

RECEIVED
MAR 13 2002
HYDROLOGY SECTION

[redacted]

RECEIVED
JAN 11 2002
HYDROLOGY SECTION

MARK GOODWIN & ASSOCIATES

RECEIVED
JAN 11 2002
HYDROLOGY SECTION

MARK GOODWIN & ASSOCIATES

mg

Drainage Report

For

San Ygnacio Place

Subdivision

DIANE HOELZER
NEW MEXICO
11967
REGISTERED PROFESSIONAL ENGINEER
1-11-02

RECEIVED
JAN 11 2002
HYDROLOGY SECTION

Mark Goodwin & Associates, P.A.

January 2002

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TUNNABORA AVE

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SAN YGNACIO PLACE MASTER UTILITY SHEET - OFFSITE IMPROVEMENTS

I. PROJECT DESCRIPTION

The proposed San Ygnacio Place Subdivision is located in the southwest part of Albuquerque and is bounded by 90th street to the west, San Ygnacio Road to the south and Tower Road to the north. This project covers approximately 13.2 acres and will be developed into 77 single family residential homes.

The project site is affected by the SAD 222 construction that is currently underway in both Tower Road and San Ygnacio Road. There is indication in the field that the master planned storm sewer in Tower Road and San Ygnacio Road have both been constructed. Coordination of the required storm sewer connections to the project site is being pursued with the City SAD 222 Project Manager and the Larkin Group Engineer in an effort to have the proper utilities stubbed to the property line prior to the paving of those streets.

II. DRAINAGE DESIGN CRITERIA AND PREVIOUS REPORTS

The design criteria used in this report was in accordance with Section 22.2 Hydrology of the Development Process Manual, Volume 2, Design Criteria, January 1993 edition. The 100-year 6-hour storm event was analyzed to determine street capacities and sizing of the internal storm drain system using P(1 hr) = 1.87", P(6 hr)=2.20". The Land Treatment values used in the AHYMO analysis are in accordance with Table 5-A in the DPM Section 22.2 for Hydrology design.

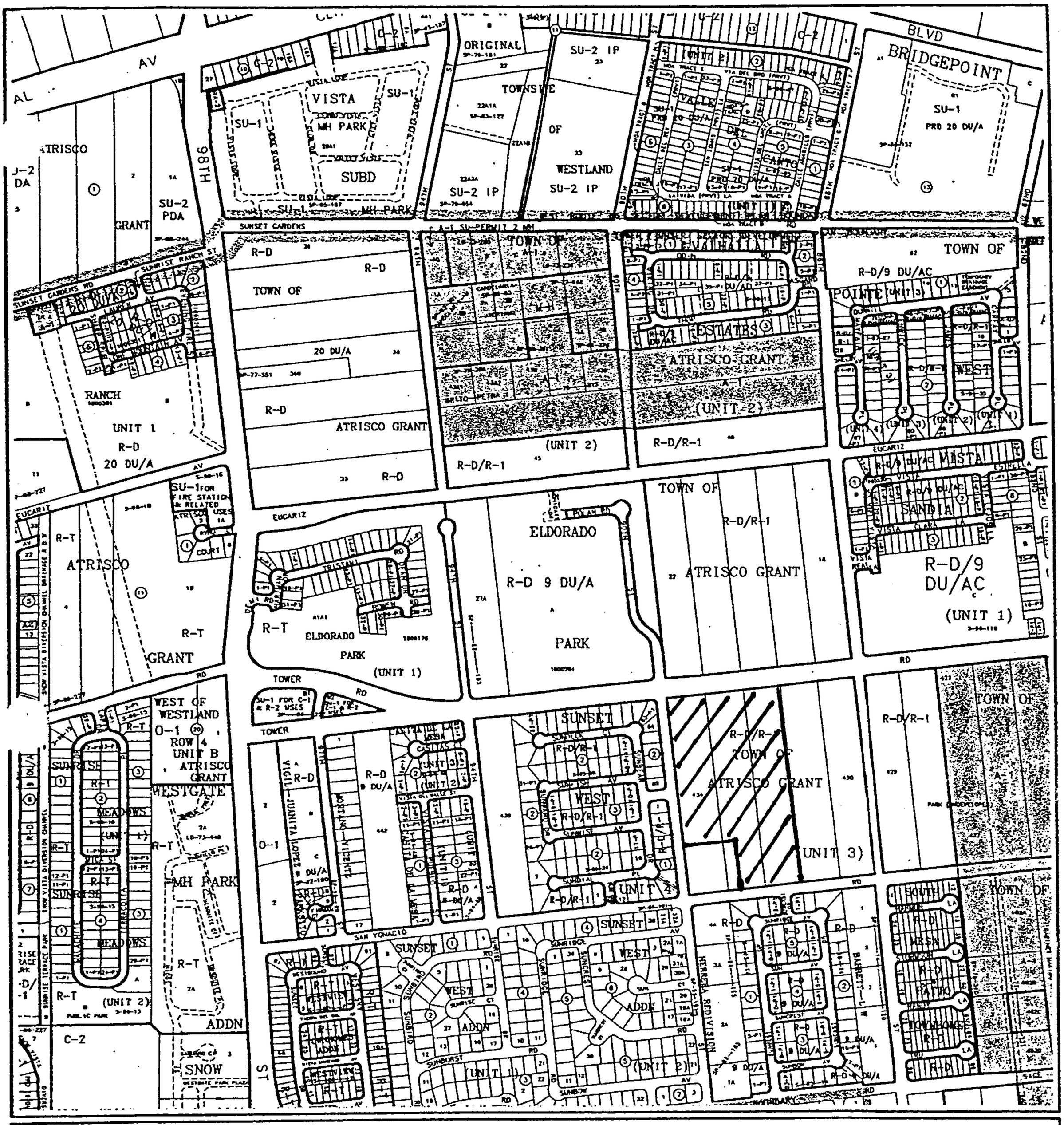
This project lies within the Tower Sage Subasin of the approved AMAFCA Amole Hubbell Drainage Management Plan as prepared by Leedshill-Herkenhoff, July, 1999. This project site lies within the western half of the Tower Sage subasins A7 and B4. The 100 year peak discharge from this site is within 2 cfs of the master plan peak discharge as shown in Appendix A - Hydrology. As shown on the master plan, approximately half of the runoff from the site will discharge to Tower Road and half to San Ygnacio Road.

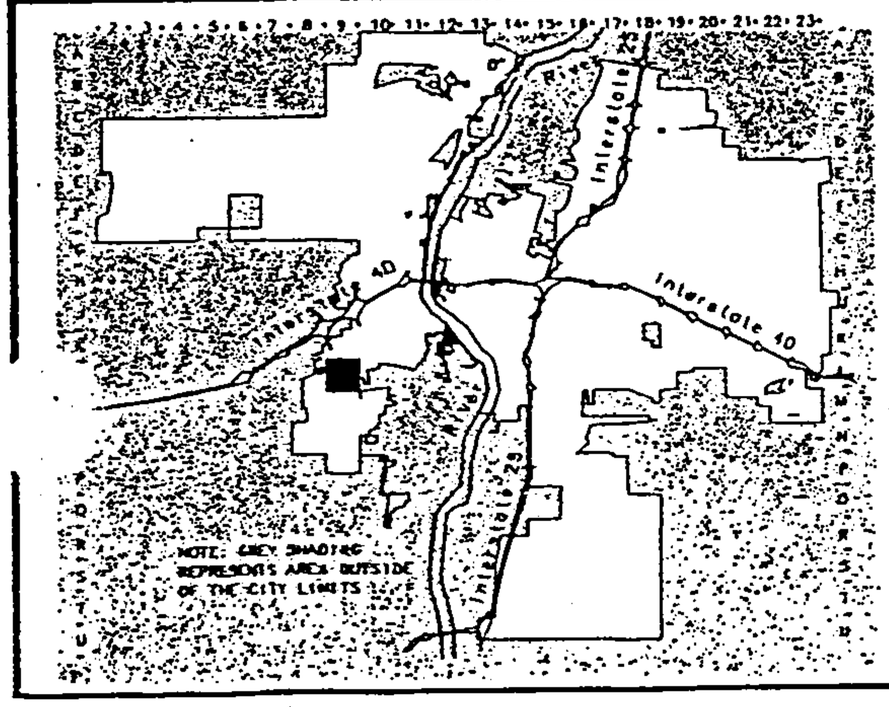
III. EXISTING DRAINAGE CONDITIONS

The general slope of the land is in an easterly direction at a 2 percent grade. There is a general swale located in the middle of the site that flows easterly as shown on Figure 2. There is a 24' pavement section in 90th street that was developed as part of the Sunset West subdivision. Curb and gutter and the underlying utilities in San Ygnacio Road and Tower Road are constructed as of this report. There is vacant land to the east with one residence located immediately adjacent to the project in the northeast corner.

IV. DEVELOPED DRAINAGE CONDITIONS

The 100 year peak discharge from the site is 43.4 cfs which is within the 2 cfs of the 100 year peak discharge of 41.67 cfs as determined using the hydrologic parameters in the Tower Sage Subasin AHYMO from Amole-Hubbell Drainage Management Plan. Approximately 50 percent of this site discharges to Tower Road and 50 percent discharges to San Ygnacio Road. This is in agreement with the overall subasin area split between the Tower Sage Subasins A-7 and B-4 as shown in Figure 2. Discharge from the site will flow to two sump inlet locations, on Tunnabora Avenue and on Lone Pine Drive. These inlets will be connected to the master planned SAD 222 storm sewers in San Ygnacio Road and Tower Road through two 24" RCP lateral connections to the existing manholes in those roads as shown on the G&D plan. A preliminary storm sewer analysis are in Appendix C. The sump inlet calculations are in Appendix B.





CITY OF Albuquerque

A Albuquerque G Geographic I Information S System

PLANNING DEPARTMENT

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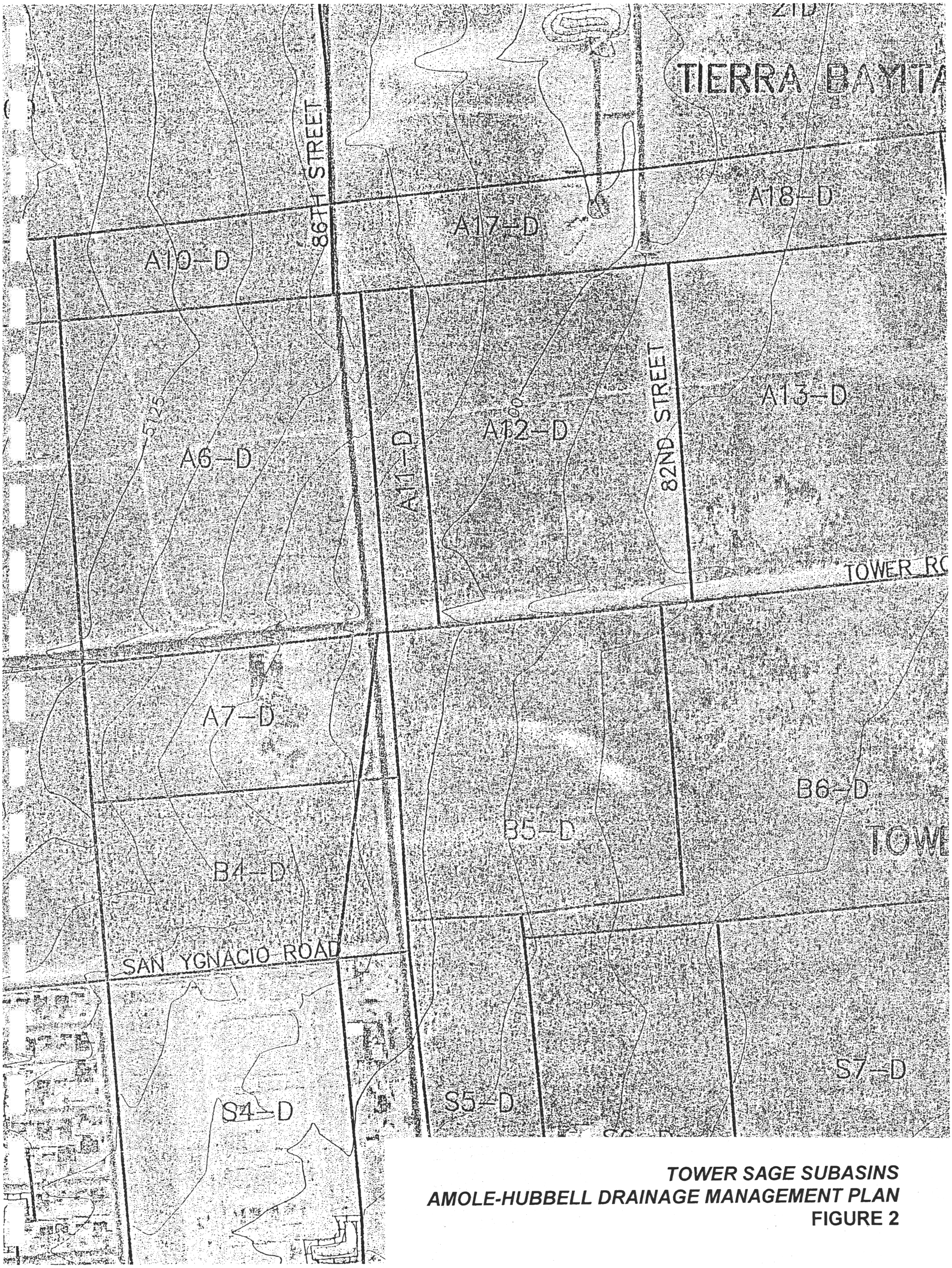
GRAPHIC SCALE IN FEET

250 0 750 1000

Zone Atlas Page

L-9-Z

VICINITY MAP **FIGURE 1**



TOWER SAGE SUBASINS
AMOLE-HUBBELL DRAINAGE MANAGEMENT PLAN
FIGURE 2

SAN YGNACIO PLACE SUBDIVISION

TABLE 1 SUMMARY OF STREET CAPACITIES

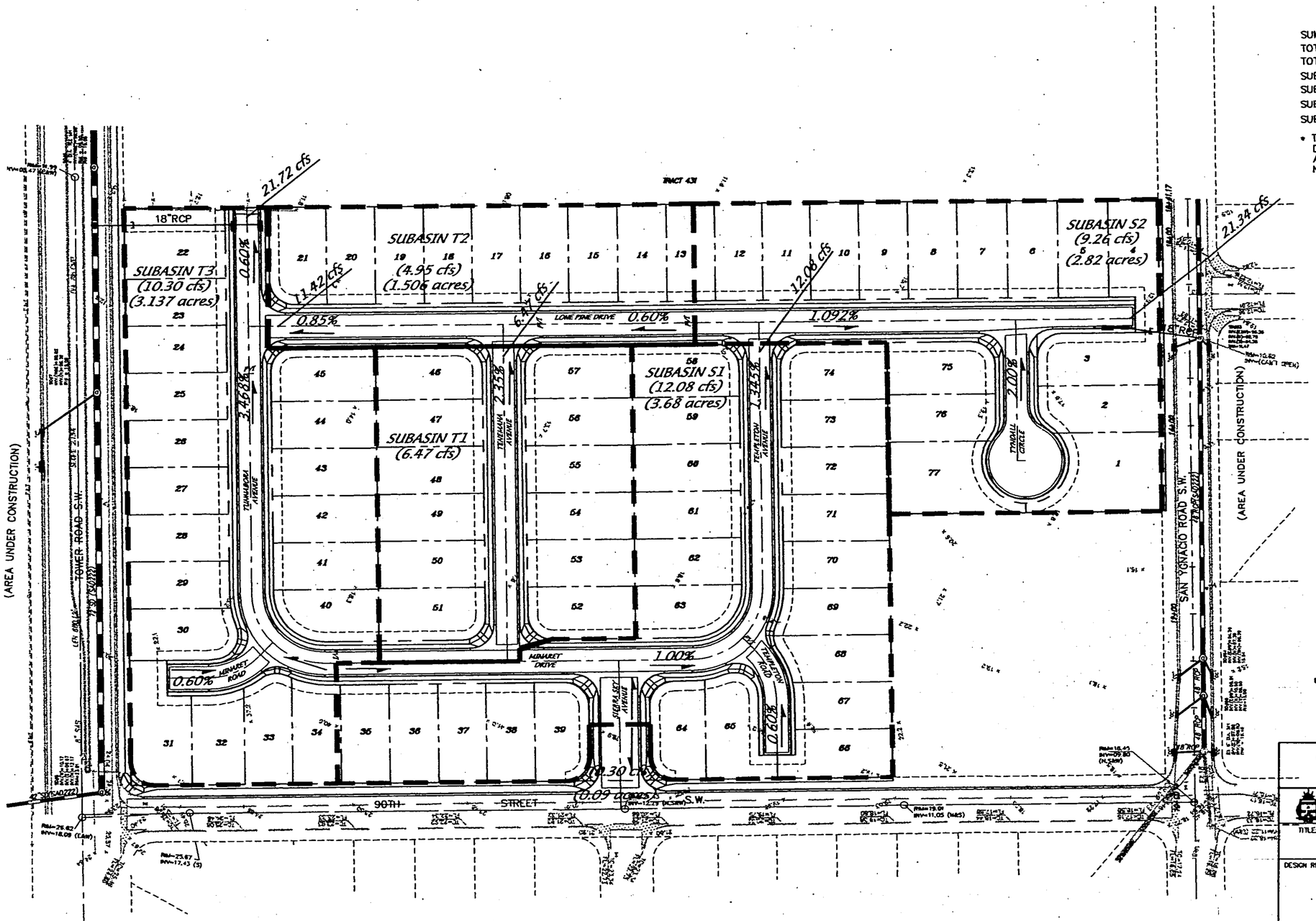
LOCATION	CURB	CROWN	WIDTH ft.	SLOPE %	Q cfs	DEPTH ft	EG ft.
Lone Pine Drive	Mtb	Y	28' FF	0.850	11.42	.31	.40
Tunnabora Avenue	Mtb	Y	28' FF	3.468	10.30	.23	.46
Tenemaha Avenue	Mtb	Y	28' FF	2.350	6.47	.21	.34
Templeton Avenue	Mtb	Y	28' FF	1.345	12.08	.29	.42
Tunnabora Drive	Std	Y	28' FF	0.600	21.72	.49	.62
Lone Pine Drive	Std	Y	28'FF	1.092	21.34	.45	.62

Mtb = Mountable Curb
Std = Standard Curb

F:\sanygnacio\str_cap1.tbl
1-10-02

SUMMARY OF HYDROLOGY
TOTAL Q(100)=43.35 cfs
TOTAL AREA=13.20 acres
SUBASIN *A7 (to Tower Rd)=21.7 cfs
SUBASIN *B4 (to San Ygnacio Rd)=21.34 cfs
SUBASIN A7= ONSITE SUBASINS T1 + T2 + T3
SUBASIN B4= ONSITE SUBASINS S1 + S2

* THESE SUBASIN ID's ARE FROM THE TOWER SAGE DEVELOPED DRAINAGE BASIN MAP, AS SHOWN ON THE AMAFCA AMOLE HUBBEL DRAINAGE MANAGEMENT PLAN. NOV. 1998, BY LEEDSHILL-HERKENHOFF,INC.



A01117TWR\SB_BNDRY_EX.DWG\1-86-02 DLH

MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
P.O. BOX 90806
ALBUQUERQUE, NEW MEXICO 87199
(505) 828-2200, FAX (505) 797-9539

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

TITLE: SAN YGNACIO PLACE
SUBASIN BOUNDARY and
STREET CAPACITY EXHIBIT

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	MO./DAY/YR.	MO./DAY/YR.

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
	L-9	1	1

APPENDIX A

Hydrology

AHYMO

D. Mark Goodwin & Associates, P.A.
Consulting Engineers
P.O. BOX 90606, ALBUQUERQUE, NM 87199
(505) 828-2200 FAX 797-9539
e-mail: dmg@swcp.com

PROJECT San Ygnacio Place
SUBJECT Hydrology Calcs.
BY DLH DATE 1-10-02
CHECKED _____ DATE _____
SHEET ____ OF ____

Tower Sage - SAD 222

Total Area Project = 575090 SF
Out Parcel 78351 SF
653441 SF

SB A7-D 45% = +/- 294,048 SF
SB B4-D 55% = +/- 359,393 SF

Actual Area to Tower = 288125 SF (50%)
Actual Area to San Ygnacio = 365,316 SF (286,965 SF Project Site) (50%)

N value = $\frac{77 \text{ units}}{13.2 \text{ acres}} = 5.8\overline{3}$ ⇒ D = 55.6, B = 44.4 } Land Treatment

AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =01/06/2002
USER NO.= M_GOODWN.I01
INPUT FILE = YGNACIO.DAT

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
										TIME= .00
START										RAIN6= 2.200
RAINFALL TYPE= 1									3.156	PER IMP= 50.00
COMPUTE NM HYD	100.A7B4	-	1	.02063	41.67	1.449	1.31698	1.500	3.285	PER IMP= 55.60
COMPUTE NM HYD	100.A7	-	1	.01055	22.17	.782	1.38985	1.500	3.285	PER IMP= 55.60
COMPUTE NM HYD	100.B4	-	1	.01008	21.19	.747	1.38985	1.500	3.284	PER IMP= 55.60
COMPUTE NM HYD	110.A7B4	-	2	.02063	43.35	1.529	1.38985	1.500	3.285	PER IMP= 55.60
COMPUTE NM HYD	110.A7	-	1	.01034	21.73	.766	1.38985	1.500	3.285	PER IMP= 55.60
COMPUTE NM HYD	110.B4	-	1	.01029	21.64	.763	1.38985	1.500		
FINISH										

```
START                    TIME=0.0
*****     SAN YGNACIO PLACE (L-9)
*****     100-YEAR 6-HOUR STORM EVENT
*****     FILE: YGNACIO.DAT  JAN 2002 BY:DLH
RAINFALL                 TYPE=1 RAIN QUARTER=0.0 IN
                         RAIN ONE=1.87 IN RAIN SIX=2.20 IN
                         RAIN DAY=2.66 IN DT=0.05 HR
***** ***************************************************
*****       DEVELOPED CONDITIONS
*****       TOTAL AREA=575090 SF(13.20 ACRES)
*****       77 UNITS PER 13.2 ACRES (N value = 5.8333)
***** ***************************************************
***** TOTAL ALLOWABLE FROM TOWER SAGE MASTER PLAN REPORT
***** SUBASIN A7.B4 (13.20 ACRES)
*****
COMPUTE NM HYD           ID=1 HYD NO=100.A7B4 AREA=0.020625 SQ MI
                         PER A=0 PER B=50 PER C=0 PER D=50
                         TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD                ID=1 CODE=1
*****
***** ALLOWABLE FROM TOWER SAGE MASTER PLAN
***** SUBASIN A7 (6.75 ACRES)
*****
COMPUTE NM HYD           ID=1 HYD NO=100.A7 AREA=0.010546 SQ MI
                         PER A=0 PER B=44.4 PER C=0 PER D=55.6
                         TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD                ID=1 CODE=1
*****
***** ALLOWABLE FROM TOWER SAGE MASTER PLAN
***** SUBASIN B4 (6.45 ACRES)
*****
COMPUTE NM HYD           ID=1 HYD NO=100.B4 AREA=0.010079 SQ MI
                         PER A=0 PER B=44.4 PER C=0 PER D=55.6
                         TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD                ID=1 CODE=1

*****
***** TOTAL ACTUAL FROM PROJECT SITE
***** SUBASIN A7.B4 (13.2 ACRES)
*****
COMPUTE NM HYD           ID=2 HYD NO=110.A7B4 AREA=0.020625 SQ MI
                         PER A=0 PER B=44.4 PER C=0 PER D=55.6
                         TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD                ID=2 CODE=1
*****
***** TOTAL ACUTAL FROM PROJECT SITE
***** SUBASIN A7 (6.61444 ACRES)
*****
COMPUTE NM HYD           ID=1 HYD NO=110.A7 AREA=0.010335 SQ MI
                         PER A=0 PER B=44.4 PER C=0 PER D=55.6
                         TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD                ID=1 CODE=1
*****
***** TOTAL ACTUAL FROM PROJECT SITE
***** SUBASIN B4 (6.58556 ACRES)
*****
COMPUTE NM HYD           ID=1 HYD NO=110.B4 AREA=0.010290 SQ MI
                         PER A=0 PER B=44.4 PER C=0 PER D=55.6
                         TP=0.1333 HR MASS RAINFALL=-1
PRINT HYD                ID=1 CODE=1
FINISH
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AHYMO SUMMARY TABLE (AHYMO194) - AMAFCA Hydrologic Model - January, 1994 RUN DATE (MON/DAY/YR) =01/10/2002
INPUT FILE = ts_dmp.dat USER NO.= M_GOODWN.I01

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	NOTATION
										TIME= .00
START										
*S										
*S TOWER/SAGE WATERSHED SAD 222										
*S										
*S										
*S 100-YR, 24-HR STORM WITH SEDIMENT										
*S FILE NAME: TS_DMP.DAT										
*S BY: RICHARD STOCKTON PEER REVIEWED BY: DEBORAH DIXON										
*S LAST REVISION: 08-15-96										RAIN24= 2.660
RAINFALL TYPE= 2										
COMPUTE NM HYD	A1-D&AP#1	-	3	.04580	103.28	4.897	2.00463	1.500	3.523	PER IMP= 76.00
ROUTE	AP-1R	3	2	.04580	101.55	4.897	2.00464	1.550	3.464	
COMPUTE NM HYD	A2-D	-	3	.03950	89.28	4.001	1.89898	1.500	3.532	PER IMP= 70.00
ADD HYD	AP#2	2& 3	10	.08530	185.32	8.897	1.95570	1.500	3.395	
ROUTE	AP#2R	10	2	.08530	184.43	8.897	1.95571	1.550	3.378	
COMPUTE NM HYD	A3-D	-	3	.04190	94.80	4.047	1.81093	1.500	3.535	PER IMP= 65.00
ADD HYD	AP#3	2& 3	10	.12720	266.97	12.944	1.90801	1.550	3.279	
ROUTE	AP#3R	10	2	.12720	271.22	12.944	1.90801	1.550	3.332	
COMPUTE NM HYD	A4-D	-	3	.04390	101.56	4.858	2.07506	1.500	3.615	PER IMP= 80.00
ADD HYD	AP#4	2& 3	10	.17110	368.16	17.802	1.95087	1.550	3.362	
ROUTE	AP#4R	10	2	.17110	371.05	17.802	1.95087	1.550	3.388	
COMPUTE NM HYD	A5-D	-	3	.04520	95.53	4.153	1.72289	1.500	3.302	PER IMP= 60.00
ADD HYD	AP#5	2& 3	10	.21630	458.83	21.956	1.90323	1.550	3.314	
ROUTE	AP#5R	10	2	.21630	460.09	21.956	1.90323	1.550	3.324	
COMPUTE NM HYD	A6-D	-	3	.04520	88.89	3.729	1.54680	1.500	3.073	PER IMP= 50.00
ADD HYD	PART_AP#9	2& 3	10	.26150	542.31	25.684	1.84162	1.550	3.240	
COMPUTE NM HYD	A7-D	-	3	.02060	40.52	1.699	1.54680	1.500	3.074	PER IMP= 50.00
ADD HYD	PART_AP#9	10& 3	10	.28210	579.79	27.384	1.82009	1.550	3.211	
COMPUTE NM HYD	A8-D&AP#6	-	3	.05700	110.97	5.773	1.89898	1.550	3.042	PER IMP= 70.00
ROUTE	AP&6R	3	2	.05700	108.92	5.773	1.89898	1.600	2.986	
COMPUTE NM HYD	A9-D	-	3	.01020	20.86	.841	1.54680	1.500	3.196	PER IMP= 50.00
ADD HYD	AP#7	2& 3	20	.06720	123.22	6.614	1.84551	1.600	2.865	
ROUTE	AP#7R	20	2	.06720	123.98	6.614	1.84552	1.600	2.883	
COMPUTE NM HYD	A10-D	-	3	.01020	20.86	.841	1.54680	1.500	3.196	PER IMP= 50.00
ADD HYD	AP#8	2& 3	20	.07740	138.28	7.456	1.80614	1.600	2.791	
ROUTE	AP#8R	20	2	.07740	136.11	7.456	1.80615	1.600	2.748	
ADD HYD	AP#9	10& 2	10	.35950	701.38	34.840	1.81709	1.550	3.048	
ROUTE	AP#9R	10	2	.35950	700.23	34.840	1.81709	1.550	3.043	
COMPUTE NM HYD	A11-D	-	3	.00860	20.85	.919	2.00463	1.500	3.787	PER IMP= 76.00
ADD HYD	AP#10	2& 3	20	.36810	718.26	35.759	1.82147	1.550	3.049	
COMPUTE NM HYD	B1-D&AP#11	-	3	.02300	53.05	2.286	1.86376	1.500	3.604	PER IMP= 68.00
ROUTE	AP#11R	3	2	.02300	49.30	2.286	1.86378	1.550	3.349	
COMPUTE NM HYD	B2-D	-	3	.03500	76.65	3.216	1.72289	1.500	3.422	PER IMP= 60.00
ADD HYD	AP#12	2& 3	10	.05800	122.10	5.502	1.77874	1.500	3.289	

ROUTE	AP#12R	10	2	.05800	117.16	5.502	1.77876	1.550	3.156		
COMPUTE NM HYD	B3-D	-	3	.04360	81.77	3.597	1.54680	1.500	2.931	PER IMP=	50.00
ADD HYD	AP#13	2& 3	10	.10160	196.47	9.099	1.67920	1.550	3.021		
ROUTE	AP#13R	10	2	.10160	195.91	9.099	1.67921	1.550	3.013		
COMPUTE NM HYD	B4-D	-	3	.02300	47.03	1.897	1.54680	1.500	3.195	PER IMP=	50.00
ADD HYD	AP#14	2& 3	10	.12460	237.27	10.996	1.65476	1.550	2.975		
ROUTE	AP#14R	10	12	.12460	236.83	10.996	1.65477	1.550	2.970		
COMPUTE NM HYD	S1-D&AP#15	-	3	.03140	71.05	3.033	1.81093	1.500	3.536	PER IMP=	65.00
ROUTE	AP-15R	3	2	.03140	69.21	3.033	1.81095	1.500	3.444		
COMPUTE NM HYD	S2-D	-	3	.01630	33.33	1.345	1.54680	1.500	3.195	PER IMP=	50.00
ADD HYD	AP#16	2& 3	10	.04770	102.54	4.377	1.72066	1.500	3.359		
ROUTE	AP#16R	10	2	.04770	100.02	4.377	1.72068	1.550	3.276		
COMPUTE NM HYD	S3-D	-	3	.05670	111.51	4.678	1.54680	1.500	3.073	PER IMP=	50.00
ADD HYD	AP#17	2& 3	10	.10440	208.85	9.055	1.62623	1.500	3.126		
ROUTE	AP#17R	10	2	.10440	208.86	9.055	1.62624	1.550	3.126		
COMPUTE NM HYD	S4-D	-	3	.04360	84.44	4.006	1.72289	1.550	3.026	PER IMP=	60.00
ADD HYD	AP#18	2& 3	10	.14800	293.30	13.061	1.65471	1.550	3.096		
ROUTE	AP#18R	10	2	.14800	282.01	13.061	1.65471	1.550	2.977		
COMPUTE NM HYD	S5-D	-	3	.02380	51.78	2.165	1.70528	1.500	3.399	PER IMP=	59.00
ADD HYD	AP#19	2& 3	10	.17180	327.26	15.226	1.66171	1.550	2.976		
ADD HYD	AP#20	12&10	10	.29640	564.09	26.222	1.65879	1.550	2.974		
ADD HYD	PART_AP#21	20&10	10	.66450	1282.35	61.981	1.74891	1.550	3.015		
COMPUTE NM HYD	B5-D_TWRPND	-	3	.03910	50.89	1.489	.71403	1.500	2.033	PER IMP=	5.00
ADD HYD	AP#21	10& 3	20	.70360	1329.61	63.470	1.69140	1.550	2.953		
ROUTE RESERVOIR	AP#22	20	12	.70360	24.77	63.388	1.68920	2.900	.055	AC-FT=	47.808
MODIFY TIME	AP#22	12	12	.70360	30.06	63.388	1.68920	2.950	.067		
ROUTE	AP#22R	12	2	.70360	30.05	63.306	1.68703	2.850	.067		
COMPUTE NM HYD	B6-D	-	3	.04590	63.53	4.433	1.81093	1.700	2.163	PER IMP=	65.00
ADD HYD	AP#23	2& 3	10	.74950	89.40	67.739	1.69461	1.700	.186		
ROUTE	AP#23R	10	2	.74950	87.26	67.632	1.69192	1.750	.182		
COMPUTE NM HYD	B7-D	-	3	.05910	90.35	5.819	1.84615	1.650	2.389	PER IMP=	67.00
ADD HYD	AP#24	2& 3	10	.80860	171.99	73.451	1.70319	1.700	.332		
ROUTE	AP#24R	10	2	.80860	170.11	73.357	1.70102	1.700	.329		
COMPUTE NM HYD	B8-D	-	3	.08910	80.38	7.350	1.54680	1.900	1.410	PER IMP=	50.00
ADD HYD	TS2_DMP.HYD	2& 3	30	.89770	239.28	80.707	1.68571	1.750	.416		
COMPUTE NM HYD	A12-D&AP#26	-	3	.03590	84.31	3.838	2.00463	1.500	3.669	PER IMP=	76.00
ROUTE	AP#26R	3	2	.03590	80.90	3.838	2.00464	1.550	3.521		
COMPUTE NM HYD	A13-D	-	3	.04520	79.18	4.366	1.81093	1.600	2.737	PER IMP=	65.00
ADD HYD	AP#27	2& 3	10	.08110	159.76	8.204	1.89667	1.550	3.078		
ROUTE	AP#27R	10	2	.08110	152.20	8.204	1.89667	1.600	2.932		
COMPUTE NM HYD	A14-D	-	3	.04520	59.45	4.578	1.89897	1.750	2.055	PER IMP=	70.00
ADD HYD	AP#28	2& 3	10	.12630	195.52	12.781	1.89749	1.600	2.419		
ROUTE	AP#28R	10	2	.12630	194.13	12.782	1.89749	1.600	2.402		
COMPUTE NM HYD	A15-D	-	3	.02530	44.20	2.325	1.72289	1.550	2.730	PER IMP=	60.00
ADD HYD	PART_AP#33	2& 3	20	.15160	237.29	15.106	1.86835	1.600	2.446		
COMPUTE NM HYD	A17-D&AP#29	-	3	.01080	22.09	.891	1.54680	1.500	3.196	PER IMP=	50.00
ROUTE	AP&29R	3	2	.01080	16.02	.891	1.54684	1.600	2.317		
COMPUTE NM HYD	A18-D	-	3	.01030	22.57	.946	1.72289	1.500	3.423	PER IMP=	60.00
ADD HYD	AP#30	2& 3	10	.02110	35.43	1.837	1.63273	1.550	2.624		
ROUTE	AP&30R	10	2	.02110	25.29	1.837	1.63269	1.650	1.873		
COMPUTE NM HYD	A19-D	-	3	.01080	20.14	.992	1.72289	1.550	2.914	PER IMP=	60.00

ADD HYD	AP#31	2& 3	10	.03190	43.04	2.830	1.66321	1.600	2.108		
ROUTE	AP#31R	10	2	.03190	42.34	2.830	1.66321	1.600	2.074		
COMPUTE NM HYD	A20-D	-	3	.00690	15.12	.634	1.72289	1.500	3.424	PER IMP=	60.00
ADD HYD	AP#32	2& 3	10	.03880	52.59	3.464	1.67382	1.600	2.118		
ROUTE	AP#32R	10	22	.03880	49.74	3.464	1.67381	1.650	2.003		
ADD HYD	AP#33	20&22	10	.19040	286.03	18.570	1.82870	1.600	2.347		
ROUTE	AP#33R	10	2	.19040	283.46	18.570	1.82870	1.650	2.326		
COMPUTE NM HYD	A16-D	-	3	.06380	71.41	5.263	1.54680	1.750	1.749	PER IMP=	50.00
ADD HYD	TS1_DMP.HYD	2& 3	10	.25420	347.92	23.833	1.75795	1.650	2.139		
COMPUTE NM HYD	S6-D&AP#35	-	3	.03780	51.00	3.473	1.72289	1.700	2.108	PER IMP=	60.00
ROUTE	AP#35R	3	2	.03780	50.09	3.473	1.72289	1.700	2.070		
COMPUTE NM HYD	S7-D	-	3	.05700	65.54	5.826	1.91658	1.850	1.797	PER IMP=	71.00
ADD HYD	AP#36	2& 3	10	.09480	110.86	9.300	1.83933	1.800	1.827		
ROUTE	AP#36R	10	2	.09480	108.65	9.300	1.83934	1.850	1.791		
COMPUTE NM HYD	S8-D	-	3	.06830	81.37	6.468	1.77571	1.750	1.861	PER IMP=	63.00
ADD HYD	AP#37	2& 3	10	.16310	189.29	15.768	1.81269	1.800	1.813		
ROUTE	AP#37R	10	2	.16310	188.47	15.768	1.81269	1.800	1.806		
COMPUTE NM HYD	S9-D	-	3	.07480	152.95	6.171	1.54680	1.500	3.195	PER IMP=	50.00
ADD HYD	TS3_DMP.HYD	2& 3	20	.23790	235.52	21.939	1.72909	1.750	1.547		
FINISH											

APPENDIX B

Hydraulics

HEC-2

CALCULATIONS FOR INLETS AT SUMP
for
San Ygnacio Place

Capacity is measured by the weir equation at the lip of the gutter assuming an allowable ponding elevation equal to the lowest adjacent right of way elevation. The length of the double grate facing the street is 6.5' and the maximum depth is 0.725' at the lip of the gutter. The sides are each 2' long and the average depth is 0.892'. These depths assume an 8" curb with right of way 9' behind the curb for an additional depth of 0.18' above the top of curb. From the weir equation:

Lone Pine Drive and Tunnabora Avenue sump inlets:

FOR DOUBLE 'C' INLET

*Front Q cap = (3.0) x (6.5') x (0.725) **1.5 = 12.04 cfs*

*Sides Q cap = (3.0) x (4.0') x (0.892) **1.5 = 10.11 cfs*

Total Q cap = 12.04 cfs + 10.11 cfs = 22.15 cfs

The 100 year flow to the sump at Tower Road is 21.72 cfs. The 100 year flow to the sump at San Ygnacio Road is 21.34 cfs. The sump inlets are designed for 2 times the flow rate of 44.30 cfs.

Two double 'C' inlets at each sump location will have capacity for 2 times the 100 year runoff.

```
1*****************************************************
 *  WATER SURFACE PROFILES                           *
 *  VERSION OF SEPTEMBER 1988                        *
 *  ERROR: 01,02                                     *
 *  UPDATED:  4 APRIL    1989                        *
 *  RUN DATE     1/10/ 2   TIME   10:12:30           *
 *****************************************************
```

```
*****************************************
*  U.S. ARMY CORPS OF ENGINEERS         *
*  THE HYDROLOGIC ENGINEERING CENTER    *
*  609 SECOND STREET, SUITE D           *
*  DAVIS, CALIFORNIA 95616-4687         *
*  (916) 756-1104, (916) 551-1748       *
*****************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X         XXXXX     XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX              XXXXXXX
```

```
 END OF BANNER
THIS RUN EXECUTED  1/10/ 2    10:12:30
 ************************************************
   HEC2 RELEASE DATED SEP 88 UPDATED APR  1989
   ERROR CORR -  01,02
   MODIFICATION -
 ************************************************

 T1          SAN YGNACIO PLACE
 T2          28'FF MOUNTABLE CURB
 T3 LONE PINE DRIVE

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0         2         0         1      .0085        0         0         0         0         0

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     38        43         1         2        26         4        68         3

 NC     .017      .017      .017       .1       .3
 QT        4     11.42     10.3     6.47    12.08
 X1        1         7         0       48        0         0         0         0         0         0
 GR      .67         0       .33      9.9        0        10       .28        24         0        38
 GR      .33      38.1       .67       48

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST

 *PROF 1

 CCHV=     .100 CEHV=     .300
 *SECNO 1.000
 2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED
      1.00      .31       .31       .32       .00       .40       .09       .00       .00       .67
       11.       0.       11.        0.        0.        5.        0.        0.        0.       .67
       .00      .00      2.42       .00      .000      .017      .000      .000       .00      9.91
```

```
  .008446       0.       0.       0.        0       10        5      .00    28.19    38.09

T1
T2 TUNNABORA
T3 28FF MOUNTABLE

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0        3        0        1     .03468

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

      2        0       -1        0        0        0        0        0        0        0

   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST

*PROF 2

CCHV=      .100 CEHV=      .300
*SECNO 1.000
2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED

3265 DIVIDED FLOW

     1.00      .23      .23      .30      .00      .46      .23      .00      .00      .67
      10.       0.      10.       0.       0.       3.       0.       0.       0.      .67
      .00      .00     3.82      .00     .000     .017     .000     .000      .00     9.93
  .034534       0.       0.       0.        0       15        7      .00    23.29    38.07

T1
T2 TENEMAHA
T3 28FF MOUNTABLE

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0        4        0        1     .0235

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

      3        0       -1        0        0        0        0        0        0        0

   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST

*PROF 3

CCHV=      .100 CEHV=      .300
*SECNO 1.000
2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED
```

3265 DIVIDED FLOW

1.00	.21	.21	.25	.00	.34	.13	.00	.00	.67
6.	0.	6.	0.	0.	2.	0.	0.	0.	.67
.00	.00	2.93	.00	.000	.017	.000	.000	.00	9.94
.023208	0.	0.	0.	0	19	7	.00	21.08	38.06

T1
T2 TEMPLETON
T3 28FF MOUNTABLE

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	5	0	1	.01345					

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	4	0	-1	0	0	0	0	0	0	0

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 4

CCHV= .100 CEHV= .300
*SECNO 1.000
2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED

1.00	.29	.29	.32	.00	.42	.13	.00	.00	.67
12.	0.	12.	0.	0.	4.	0.	0.	0.	.67
.00	.00	2.84	.00	.000	.017	.000	.000	.00	9.91
.013440	0.	0.	0.	0	11	6	.00	28.18	38.09

THIS RUN EXECUTED 1/10/ 2 10:12:30
****
HEC2 RELEASE DATED SEP 88 UPDATED APR 1989
ERROR CORR - 01,02
MODIFICATION -
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

PINE DRIVE

SUMMARY PRINTOUT

SECNO	Q	CWSEL	CRIWS	VCH	TOPWID	FRCH	EG
1.000	11.42	.31	.32	2.42	28.19	1.04	.40
1.000	10.30	.23	.30	3.82	23.29	2.17	.46
1.000	6.47	.21	.25	2.93	21.08	1.84	.34
1.000	12.08	.29	.32	2.84	28.18	1.29	.42

SUMMARY OF ERRORS AND SPECIAL NOTES

```
1*****************************************************
 *  WATER SURFACE PROFILES                           *
 *  VERSION OF SEPTEMBER 1988                        *
 *  ERROR: 01,02                                     *
 *  UPDATED:  4 APRIL    1989                        *
 *  RUN DATE     1/10/ 2   TIME    9: 6: 3            *
 *****************************************************
```

```
*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  THE HYDROLOGIC ENGINEERING CENTER *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*  (916) 756-1104, (916) 551-1748   *
*************************************
```

```
x     x  xxxxxxx   xxxxx              xxxxx
x     x  x        x     x            x     x
x     x  x        x                        x
xxxxxxx  xxxx     x          xxxxx    xxxxx
x     x  x        x                  x
x     x  x        x     x            x
x     x  xxxxxxx   xxxxx              xxxxxxx
```

END OF BANNER

THIS RUN EXECUTED 1/10/ 2 9: 6: 3

```
*************************************************
  HEC2 RELEASE DATED SEP 88 UPDATED APR  1989
  ERROR CORR -  01,02
  MODIFICATION -
*************************************************
```

```
T1          SAN YGNACIO STREET CAPACITY CALCULATIONS
T2          28'FF 8" STD CURB
T3          TUNNABORA
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	2	0	0	.006	0	0	0	0	0

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38	43	1	2	26	4	68	3

NC	.017	.017	.017	.1	.3					
QT	2	21.72	21.34							
X1	1	9	0	46	0	0	0	0	0	0
GR	.87	0	.67	8.9	0	9	.125	11	.365	23
GR	.125	35	0	37	.67	37.1	.87	46		

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 1

```
CCHV=      .100 CEHV=      .300
*SECNO 1.000
2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED
    1.00      .49      .49      .00      .00      .62      .12      .00      .00      .87
     22.       0.      22.       0.       0.       8.       0.       0.       0.      .87
     .00      .00     2.81      .00     .000     .017     .000     .000      .00     8.93
  .006006       0.       0.       0.        0        0        6      .00    28.15    37.07

T1 28' FF
T2 LONE PINE
T3
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	3	0	1	.01092					

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	2	0	-1	0	0	0	0	0	0	0

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

```
*PROF 2

CCHV=      .100 CEHV=      .300
*SECNO 1.000
2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED
    1.00      .45      .45      .48      .00      .62      .17      .00      .00      .87
     21.       0.      21.       0.       0.       6.       0.       0.       0.      .87
     .00      .00     3.34      .00     .000     .017     .000     .000      .00     8.93
  .010907       0.       0.       0.        0        8        5      .00    28.13    37.07
THIS RUN EXECUTED  1/10/ 2     9: 6: 3
 ************************************************
   HEC2 RELEASE DATED SEP 88 UPDATED APR  1989
   ERROR CORR -  01,02
   MODIFICATION -
 ************************************************

 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

     TUNNABORA

 SUMMARY PRINTOUT
```

SECNO	Q	CWSEL	CRIWS	VCH	TOPWID	FRCH	EG
1.000	21.72	.49	.00	2.81	28.15	.94	.62
1.000	21.34	.45	.48	3.34	28.13	1.23	.62

```
  SUMMARY OF ERRORS AND SPECIAL NOTES
```

APPENDIX C

STORM SEWER ANALYSES

Tower Road

San Ygnacio Road

1

HYDRAULIC REPORT FOR

SAN YGNACIO PLACE

STORM SEWER ANALYSIS

TUNNABORA - TOWER ROAD

INITIAL HGL=104.2

MARK GOODWIN & ASSOCIATES

DLH

JANUARY 2002

Run date: 01-10-2002
File:

Return Period = 5 Yrs
Rainfall file: Your_County

LINE 1 / Q = 21.7 / HT = 24 / WID = 24 / N = .013 / L = 65 / JLC = .1

EX.MH 6- MH 1 / Outfall

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	107.12	19.06	105.53	8.12	108.14	19.40	2.87	2.68
UPSTRM	107.77	19.06	106.18	8.12	108.79	19.40	4.81	2.68

Drainage area (ac)	= 0	Slope of invert (%)	= 1.000
Runoff coefficient	= 0	Slope energy grade line (%)	= 1.000
Time of conc (min)	= 1	Critical depth (in)	= 19.80
Inlet time (min)	= 0	Req'd length curb inlet (ft)	= 0.0
Intensity (in/hr)	= 0.00	Req'd grate area (sf)	= 0.0
Cumulative C*A	= 0.0	Depth at inlet opening (in)	= 0
Flow contrib (cfs)	= 21.7	Confluence angle (deg)	= 20
Default Q (cfs)	= 21.72	Natural ground elev (ft)	= 113
Line capac. (cfs)	= 22.6	Line storage (cuft)	= 174

LINE 2 / Q = 21.7 / HT = 24 / WID = 24 / N = .013 / L = 123 / JLC = .1

MH 1- MH 2 / DNLN = 1

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	107.87	20.29	106.18	7.62	108.77	17.08	4.81	2.85
UPSTRM	109.17	19.81	107.42	7.83	110.12	18.21	2.58	2.77

Drainage area (ac)	= 0	Slope of invert (%)	= 1.008
Runoff coefficient	= 0	Slope energy grade line (%)	= 1.017
Time of conc (min)	= 0	Critical depth (in)	= 19.80
Inlet time (min)	= 0	Req'd length curb inlet (ft)	= 0.0
Intensity (in/hr)	= 0.00	Req'd grate area (sf)	= 0.0
Cumulative C*A	= 0.0	Depth at inlet opening (in)	= 0
Flow contrib (cfs)	= 21.7	Confluence angle (deg)	= 70
Default Q (cfs)	= 21.72	Natural ground elev (ft)	= 112
Line capac. (cfs)	= 22.7	Line storage (cuft)	= 346

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HYDRAULIC REPORT FOR

SAN YGNACIO PLACE

STORM SEWER ANALYSIS

LONE PINE - SAN YGNACIO RD

INITIAL HGL=104.4

MARK GOODWIN & ASSOCIATES

DLH

JANUARY 2002

LINE 1 / Q = 21.3 / HT = 24 / WID = 24 / N = .013 / L = 75 / JLC = .1

EX.MH 53 - INLET / Outfall

	HGL	DEPTH	INVERT	VEL	EGL	T WID	COVER	AREA
DNSTRM	107.78	18.57	106.23	8.18	108.82	20.09	2.16	2.61
UPSTRM	108.65	18.57	107.00	8.18	109.69	20.09	1.5	2.61

Drainage area (ac)	= 0	Slope of invert (%)	= 1.027
Runoff coefficient	= 0	Slope energy grade line (%)	= 1.027
Time of conc (min)	= 0	Critical depth (in)	= 19.63
Inlet time (min)	= 0	Req'd length curb inlet (ft)	= 0.0
Intensity (in/hr)	= 0.00	Req'd grate area (sf)	= 0.0
Cumulative C*A	= 0.0	Depth at inlet opening (in)	= 0
Flow contrib (cfs)	= 21.3	Confluence angle (deg)	= 81
Default Q (cfs)	= 21.34	Natural ground elev (ft)	= 110.5
Line capac. (cfs)	= 22.9	Line storage (cuft)	= 196