

# CITY OF ALBUQUERQUE

*Planning Department*

Suzanne Lubar, Director



*Mayor Richard J. Berry*

November 17, 2015

Philip W. Clark, PE  
Clark Consulting Engineers  
19 Ryan Rd  
Edgewood, NM 87015

**Re: Baca Duplexes  
4421 12<sup>th</sup> St. NW  
Request Prmanent CO - Accepted  
Engineer's Stamp dated: 7-18-14 (G14D080)  
Certification dated: 10-7-15**

Dear Mr. Clark,

PO Box 1293

Based on the Certification received 10/20/2015, the site is acceptable for release of permanent Certificate of Occupancy by Hydrology.

Albuquerque

If you have any questions, you can contact me at 924-3695 or Rudy Rael at 924-3977.

New Mexico 87103

Sincerely,

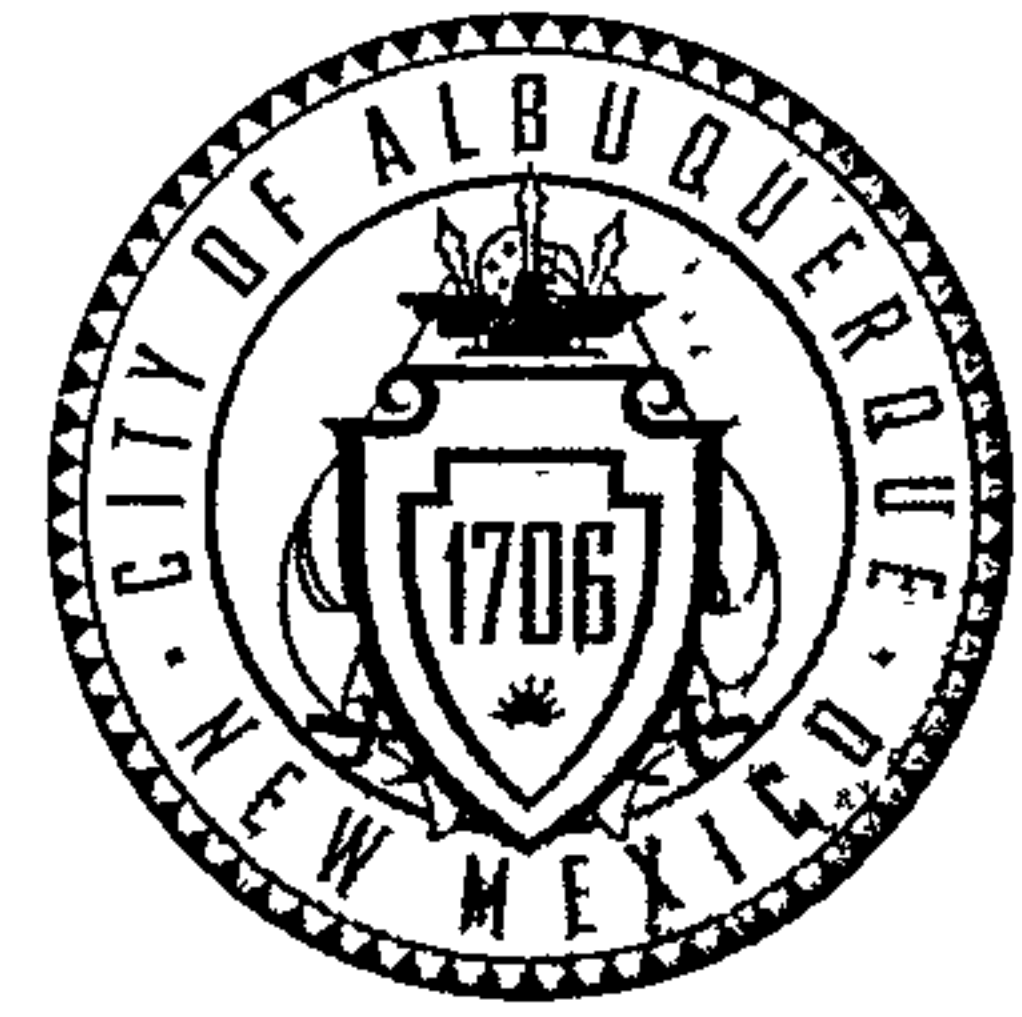
[www.cabq.gov](http://www.cabq.gov)

Shahab Biazar, P.E.  
City Engineer, COA  
Planning Department

RR/CC  
C: email

# CITY OF ALBUQUERQUE

*Planning Department*  
Suzanne Lubar, Director



*Mayor Richard J. Berry*

October 21, 2015

Philip W. Clark, PE  
Clark Consulting Engineers  
19 Ryan Rd  
Edgewood, NM 87015

**Re: Baca Duplexes**  
**4421 12<sup>th</sup> St. NW**  
**Request 30 Day Temp. CO - Accepted**  
**Engineer's Stamp dated: 7-18-14 (G14D080)**  
**Certification dated: 10-7-15**

Dear Mr. Clark,

PO Box 1293

Based on the Certification received 10/20/2015, the site is acceptable for release of Temporary Certificate of Occupancy by Hydrology.

Albuquerque

If you have any questions, you can contact me at 924-3695 or Rudy Rael at 924-3977.

New Mexico 87103

Sincerely,

[www.cabq.gov](http://www.cabq.gov)

  
Shahab Biazar, P.E.  
City Engineer, COA  
Planning Department

C: RR/CC  
email

# CITY OF ALBUQUERQUE

Planning Department

Suzanne Lubar, Director



Mayor Richard J. Berry

October 12, 2015

Philip W. Clark, PE  
Clark Consulting Engineers  
19 Ryan Rd  
Edgewood, NM 87015

**Re: The Baca Duplexes**  
**4421 12<sup>th</sup> St NW**  
**Request Permanent C.O. – Not Accepted**  
**Engineer's Stamp dated: 7-8-14 (G14D080)**  
**Certification dated: 10-7-15**

Dear Mr. Clark,

Based on the Certification received on 10/8/2015, cannot be accepted for release of Certificate of Occupancy by Hydrology until the following comments are addressed.

PO Box 1293

Albuquerque

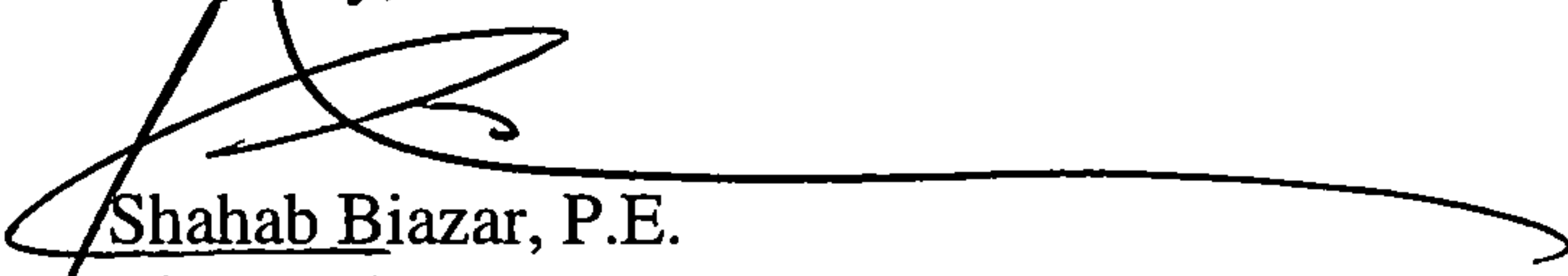
New Mexico 87103

1. The site does not drain with substantial compliance; swales need to be added to the north and south of each duplex for drainage into ponds on the east and west.
2. Landscaping does not appear to be depressed.

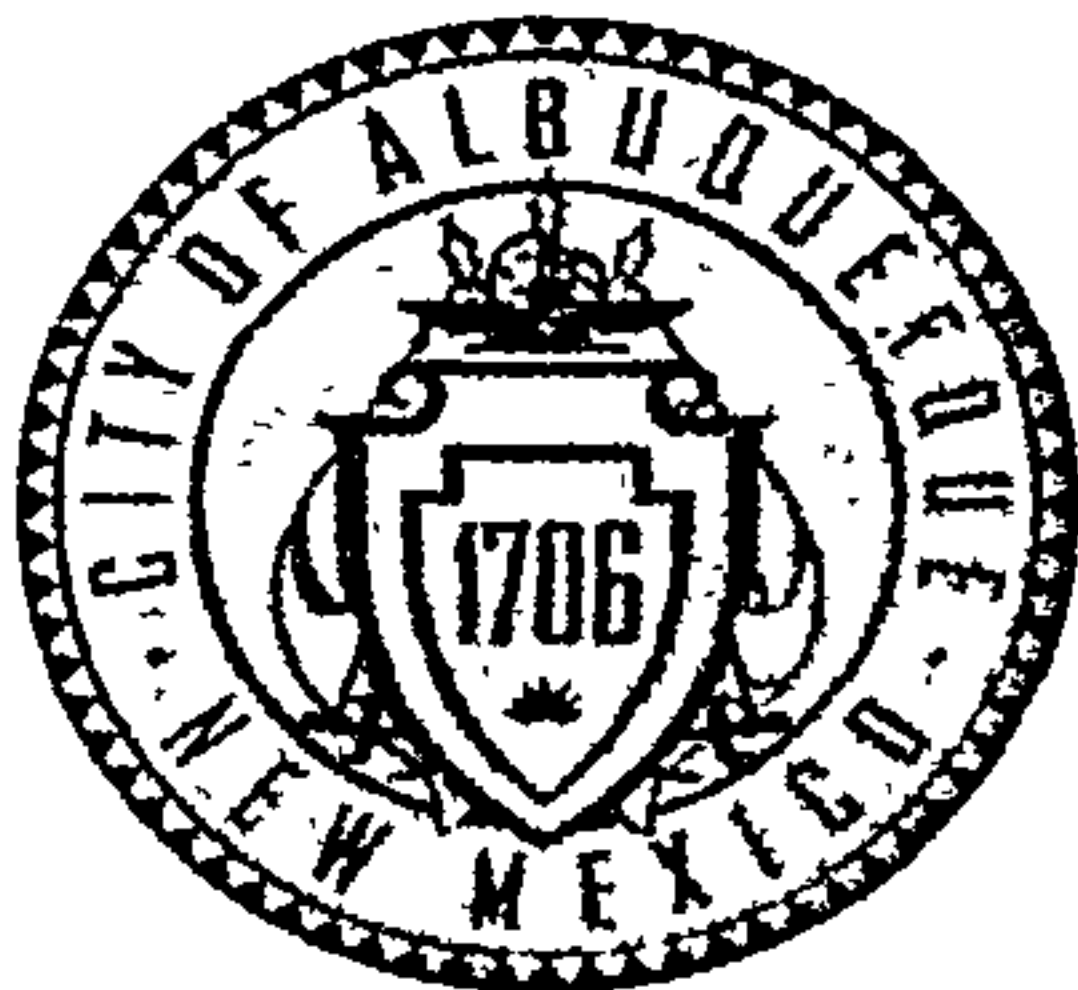
If you have any questions, you can contact me at 924-3999 or Rudy Rael at 924-3977.

www.cabq.gov

Sincerely,

  
Shahab Biazar, P.E.  
City Engineer, COA  
Planning Department

RR/SB  
C: email



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Baca Townhomes Building Permit #: \_\_\_\_\_ City Drainage #: G14 / D080

DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_

Legal Description: \_\_\_\_\_

City Address: 4421 12<sup>th</sup> St. NW

Engineering Firm: \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Owner: \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Architect: \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Other Contact: \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Check all that Apply:

### DEPARTMENT:

- ☒ HYDROLOGY/ DRAINAGE  
☐ TRAFFIC/ TRANSPORTATION  
☐ MS4/ EROSION & SEDIMENT CONTROL

### TYPE OF SUBMITTAL:

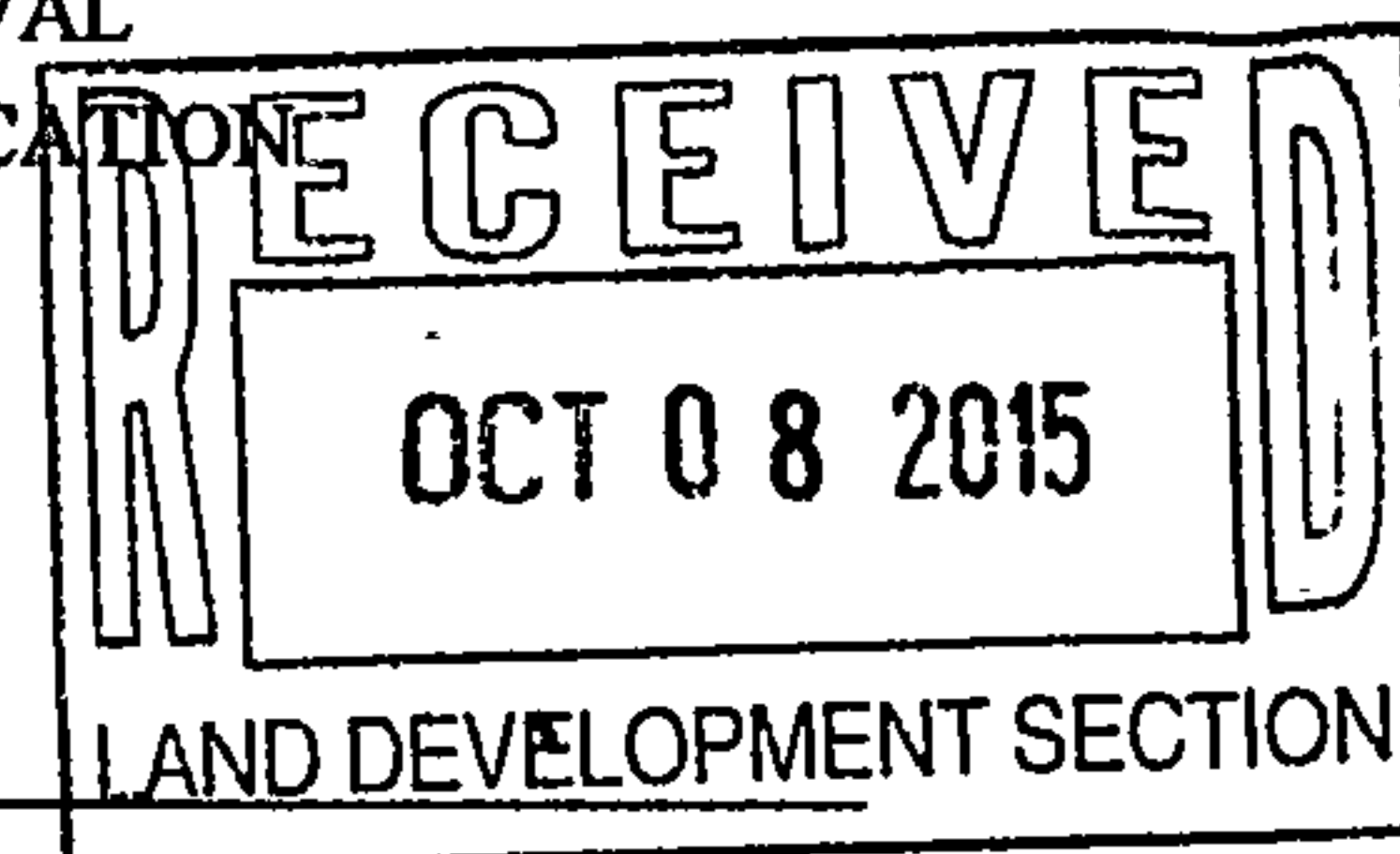
- ☒ ENGINEER/ ARCHITECT CERTIFICATION  
☐ CONCEPTUAL G & D PLAN  
☐ GRADING PLAN  
☐ DRAINAGE MASTER PLAN  
☐ DRAINAGE REPORT  
☐ CLOMR/LOMR  
☐ TRAFFIC CIRCULATION LAYOUT (TCL)  
☐ TRAFFIC IMPACT STUDY (TIS)  
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)  
☐ OTHER (SPECIFY) \_\_\_\_\_

IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

DATE SUBMITTED: 10/8/15 By: [Signature]

### CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL  
☒ CERTIFICATE OF OCCUPANCY  
☐ PRELIMINARY PLAT APPROVAL  
☐ SITE PLAN FOR SUB'D APPROVAL  
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL  
☐ FINAL PLAT APPROVAL  
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE  
☐ FOUNDATION PERMIT APPROVAL  
☐ GRADING PERMIT APPROVAL  
☐ SO-19 APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ GRADING/ PAD CERTIFICATION  
☐ WORK ORDER APPROVAL  
☐ CLOMR/LOMR  
☐ PRE-DESIGN MEETING  
☐ OTHER (SPECIFY) \_\_\_\_\_



COA STAFF: \_\_\_\_\_ ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_

# CITY OF ALBUQUERQUE



July 9, 2014

Philip W. Clark, P.E.  
Clark Consulting Engineers  
19 Ryan Rd  
Edgewood, New Mexico 87015

**RE: Baca Duplexes  
Grading and Drainage Plan  
Engineers Stamp Date 6/7/14 (G14-D080)**

Dear Mr. Clark,

Based upon the information provided in your submittal received 6/10/14, the above referenced Grading and Drainage Plan is approved for Building Permit.

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

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

PO Box 1293

Albuquerque

New Mexico 87103

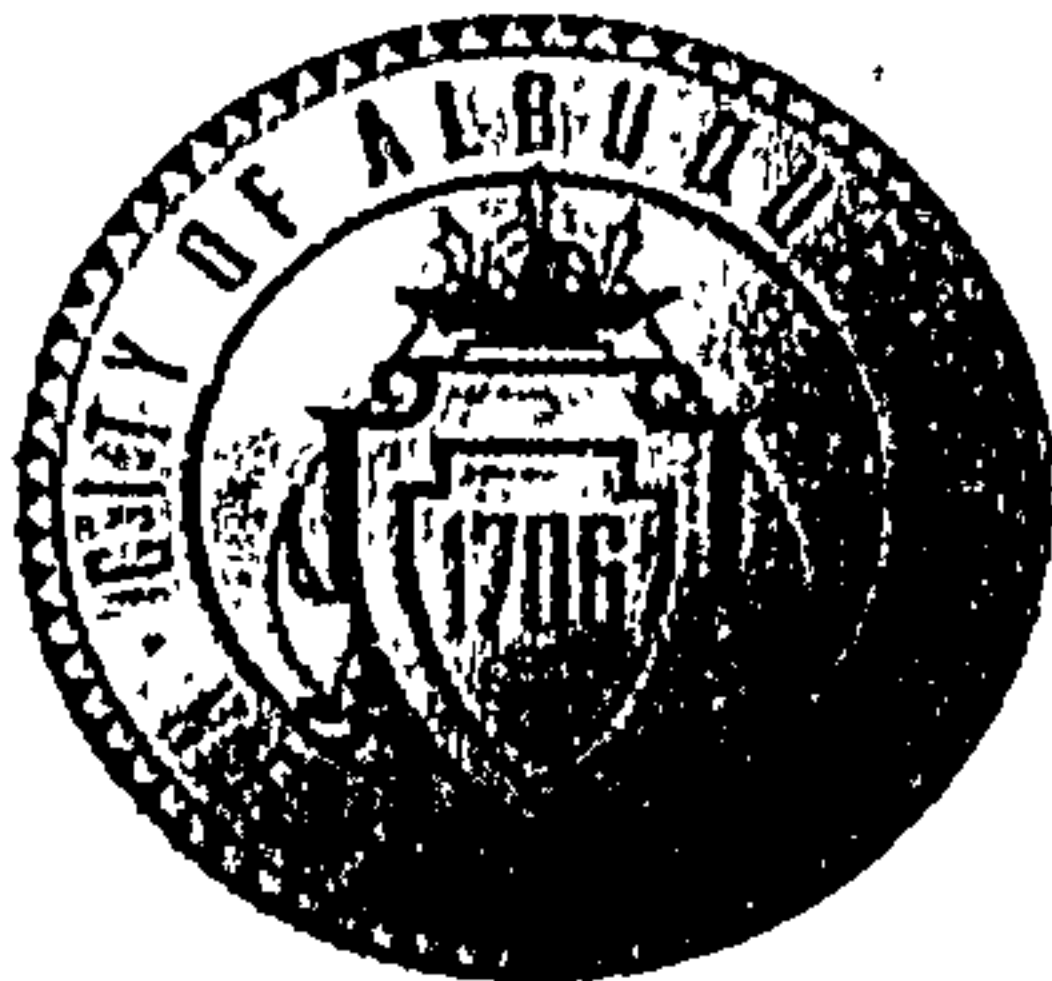
[www.cabq.gov](http://www.cabq.gov)

If you have any questions, please contact me at 924-3986 or Rudy Rael at 924-3977.

Sincerely,

Curtis Cherne, P.E.  
Principal Engineer, Hydrology  
Planning Department

RR/CC  
C: File



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Baca Duplex<sup>3</sup> Building Permit #: \_\_\_\_\_ City Drainage #: G-141080

DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_

Legal Description: LOT 57 Rossiter Addn

City Address: 4421 12th St. NW

Engineering Firm: Clark Consulting Engineers Contact: Phil

Address: 19 Ryan Rd. Edgewood NM 87015

Phone#: 281-2444 Fax#: Same E-mail: CCEA169@AOL.COM

Owner: Billy Baca Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Architect: Del P. JACK Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Surveyor: Herri's Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Contractor: BCR Contact: \_\_\_\_\_

Address: \_\_\_\_\_

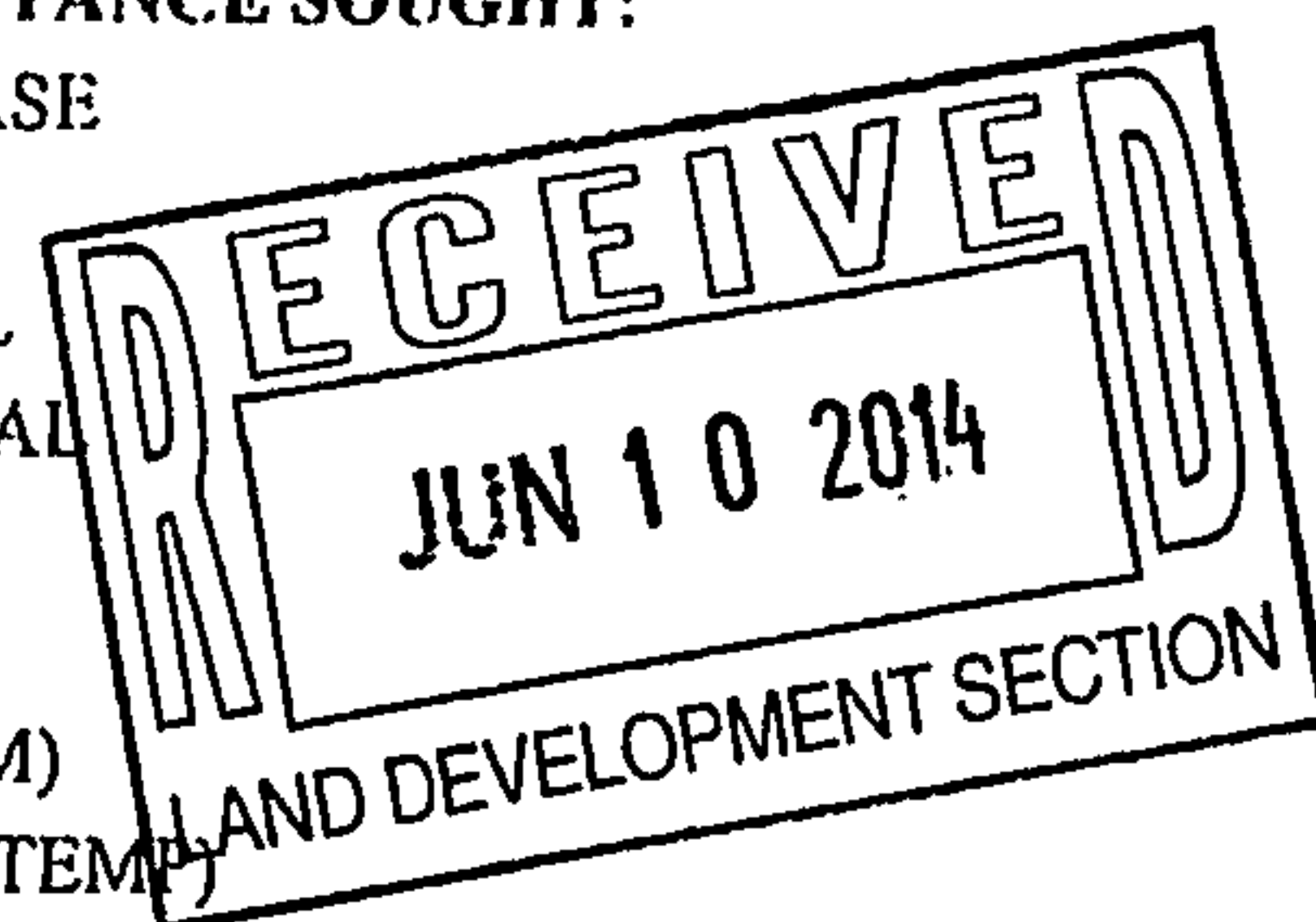
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

### TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT  
☒ DRAINAGE PLAN 1st SUBMITTAL  
☐ DRAINAGE PLAN RESUBMITTAL  
☐ CONCEPTUAL G & D PLAN  
☒ GRADING PLAN  
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)  
☐ ENGINEER'S CERT (HYDROLOGY)  
☐ CLOMR/LOMR  
☐ TRAFFIC CIRCULATION LAYOUT (TCL)  
☐ ENGINEER'S CERT (TCL)  
☐ ENGINEER'S CERT (DRB SITE PLAN)  
☐ ENGINEER'S CERT (ESC)  
☐ SO-19  
☐ OTHER (SPECIFY) \_\_\_\_\_

### CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ SIA/FINANCIAL GUARANTEE RELEASE  
☐ PRELIMINARY PLAT APPROVAL  
☐ S. DEV. PLAN FOR SUB'D APPROVAL  
☐ S. DEV. FOR BLDG. PERMIT APPROVAL  
☐ SECTOR PLAN APPROVAL  
☐ FINAL PLAT APPROVAL  
☐ CERTIFICATE OF OCCUPANCY (PERM)  
☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)  
☐ FOUNDATION PERMIT APPROVAL  
☒ BUILDING PERMIT APPROVAL  
☐ GRADING PERMIT APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ WORK ORDER APPROVAL  
☐ GRADING CERTIFICATION  
☐ SO-19 APPROVAL  
☐ ESC PERMIT APPROVAL  
☐ ESC CERT. ACCEPTANCE  
☐ OTHER (SPECIFY) \_\_\_\_\_



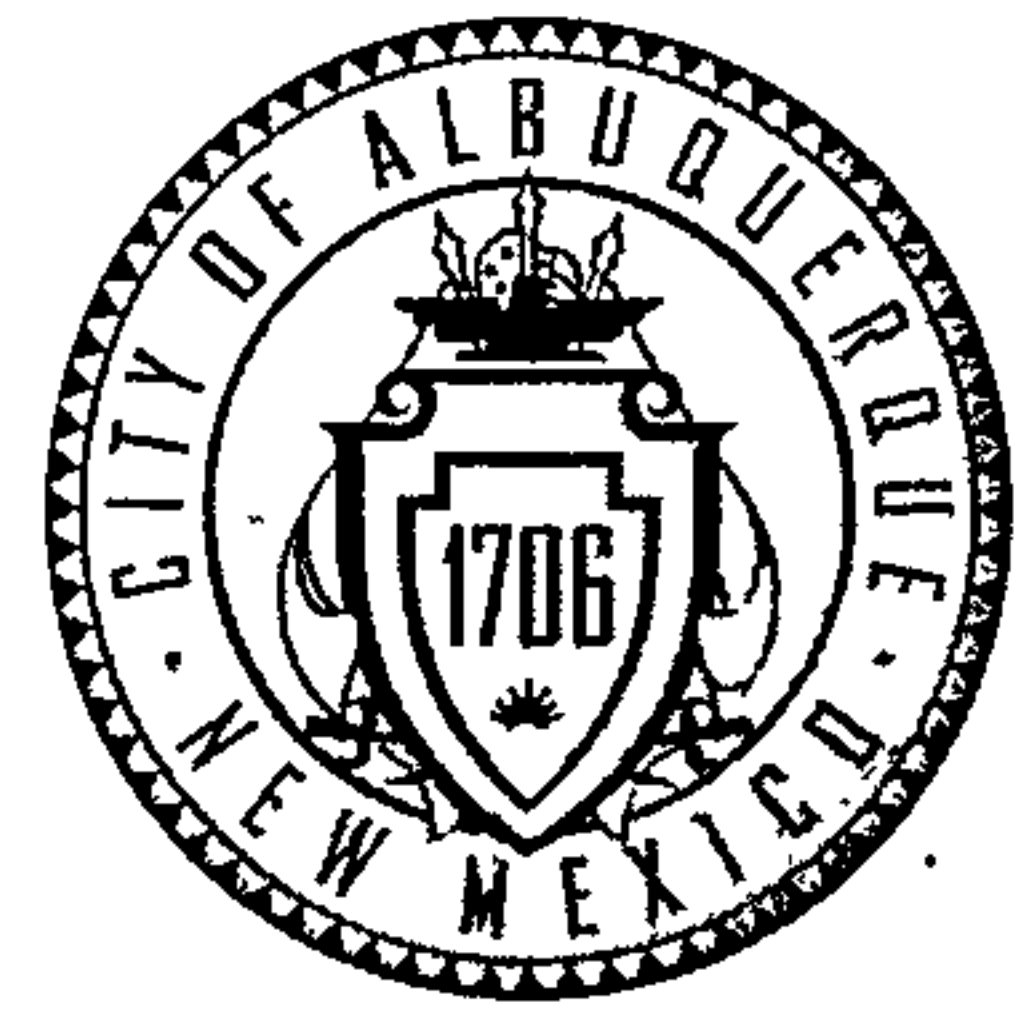
WAS A PRE-DESIGN CONFERENCE ATTENDED: \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Copy Provided

DATE SUBMITTED: 6/10/14 By: PhC

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to 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 subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

# CITY OF ALBUQUERQUE



***Planning Department  
Transportation Development Services***

October 14, 2015

Phillip Clark  
Clark Consulting Engineers  
19 Ryan Rd.  
Edgewood, NM 87015

**Re: Baca Townhomes  
4421 12<sup>th</sup> St., NW  
Request for Certificate of Occupancy- Transportation Development  
Engineer's/Architect's Stamp dated 6-10-14 (G14-D080)  
Certification dated 10-12-15**

Dear Mr. Clark,

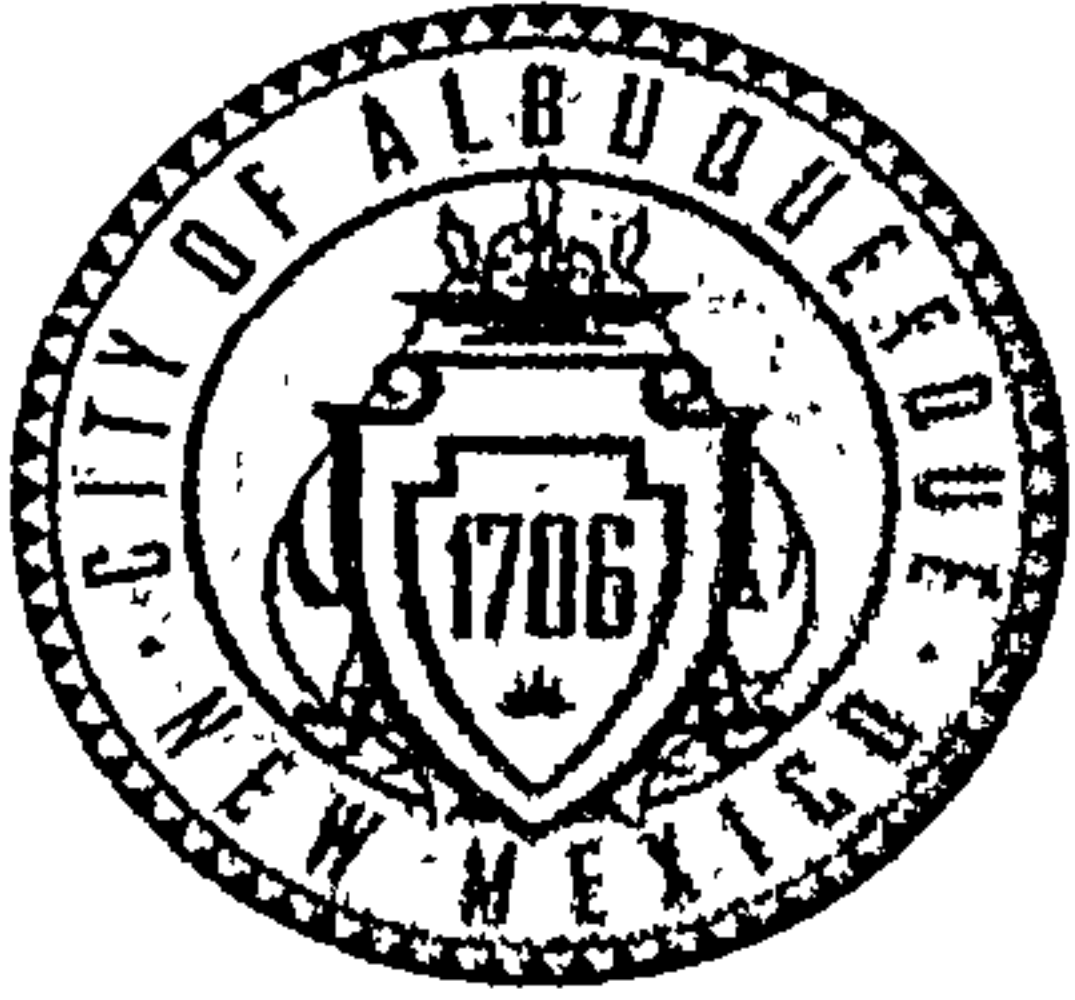
Based upon the information provided in your submittal received 10-13-15, Transportation Development has no objection to the issuance of a Permanent Certificate of Occupancy. This letter serves as a "green tag" from Transportation Development for a Permanent Certificate of Occupancy to be issued by the Building and Safety Division.

If you have any questions, please contact Gary Sandoval at (505) 924-3675 or me at (505) 924-3991.

Sincerely,

Racquel M. Michel, P.E.  
Traffic Engineer, Planning Dept.  
Development Review Services

\gs via: email  
C: CO Clerk, File



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Baca Townhomes Building Permit #: \_\_\_\_\_ City Drainage #: G14/DD80

DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_

Legal Description: \_\_\_\_\_

City Address: 4421 12th St. NW

Engineering Firm: \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Owner: \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Architect: \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Other Contact: \_\_\_\_\_ Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Check all that Apply:

### DEPARTMENT:

- ☐ HYDROLOGY/ DRAINAGE  
☒ TRAFFIC/ TRANSPORTATION  
☐ MS4/ EROSION & SEDIMENT CONTROL

### TYPE OF SUBMITTAL:

- ☒ ENGINEER/ ARCHITECT CERTIFICATION (2)

- ☐ CONCEPTUAL G & D PLAN  
☐ GRADING PLAN  
☐ DRAINAGE MASTER PLAN  
☐ DRAINAGE REPORT  
☐ CLOMR/LOMR

- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)  
☐ TRAFFIC IMPACT STUDY (TIS)  
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)

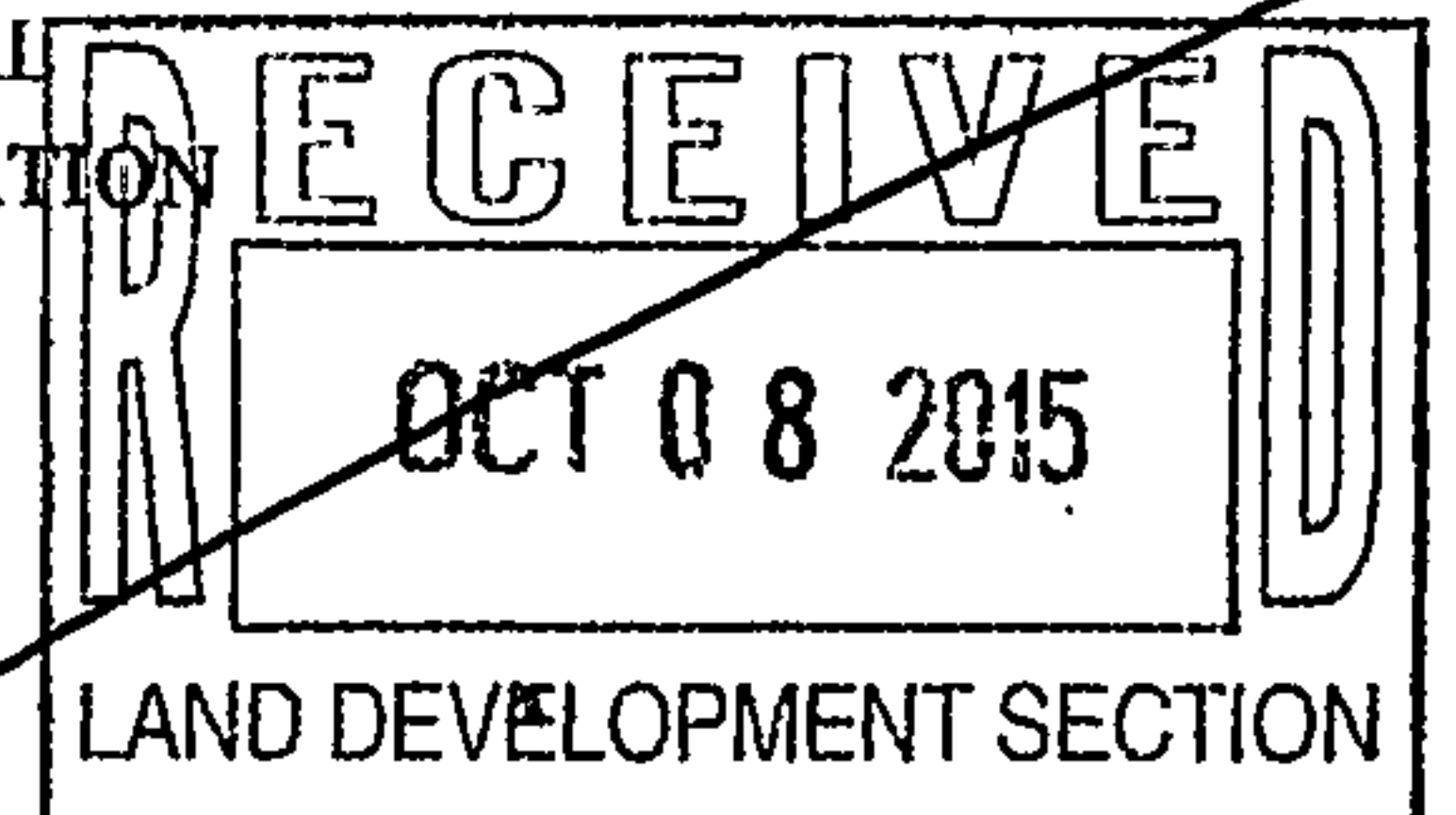
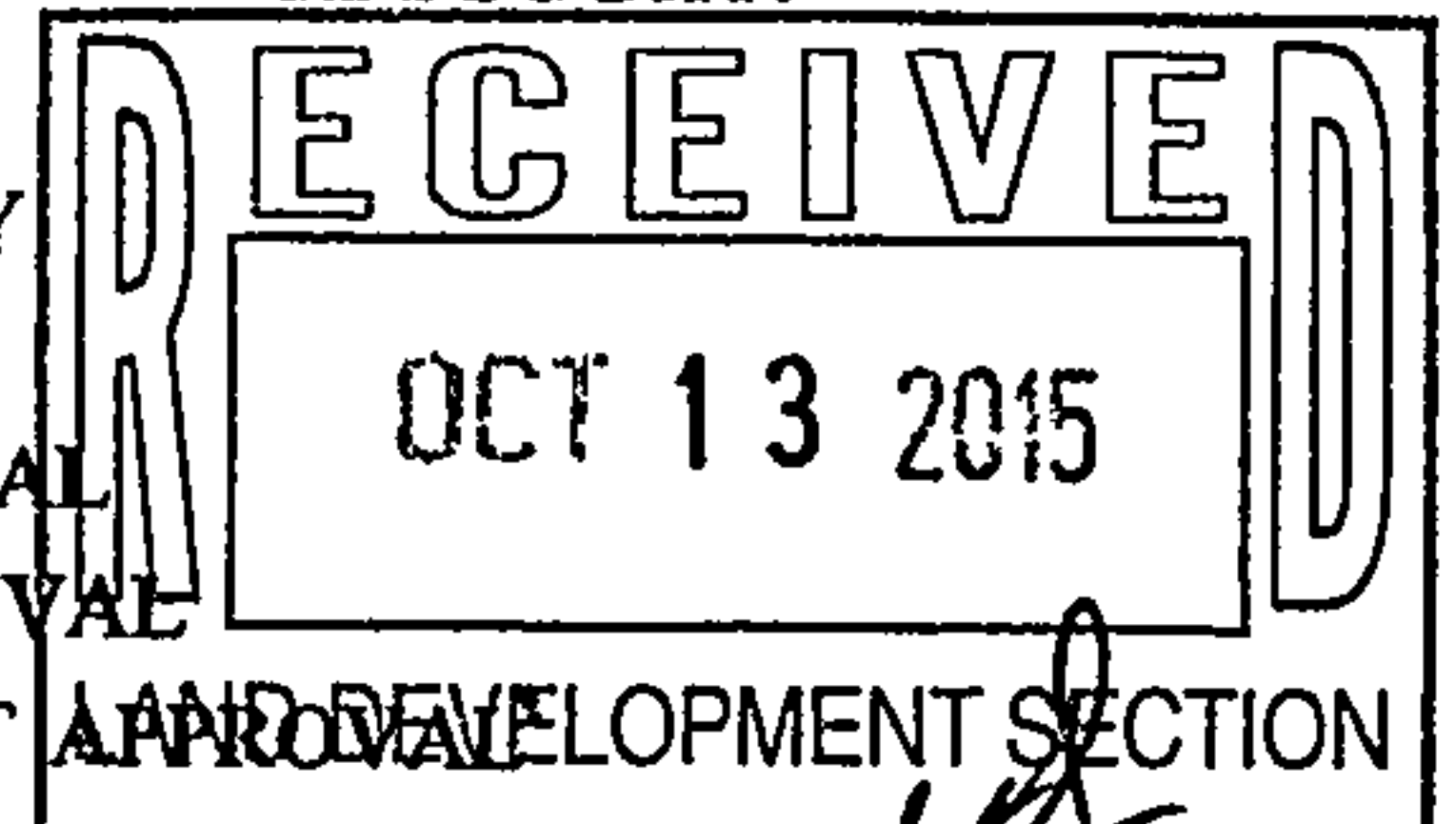
☐ OTHER (SPECIFY) \_\_\_\_\_

### CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ BUILDING PERMIT APPROVAL  
☒ CERTIFICATE OF OCCUPANCY

- ☐ PRELIMINARY PLAT APPROVAL  
☐ SITE PLAN FOR SUB'D APPROVAL  
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL  
☐ FINAL PLAT APPROVAL  
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE  
☐ FOUNDATION PERMIT APPROVAL  
☐ GRADING PERMIT APPROVAL  
☐ SO-19 APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ GRADING/ PAD CERTIFICATION  
☐ WORK ORDER APPROVAL  
☐ CLOMR/LOMR

- ☐ PRE-DESIGN MEETING  
☐ OTHER (SPECIFY) \_\_\_\_\_

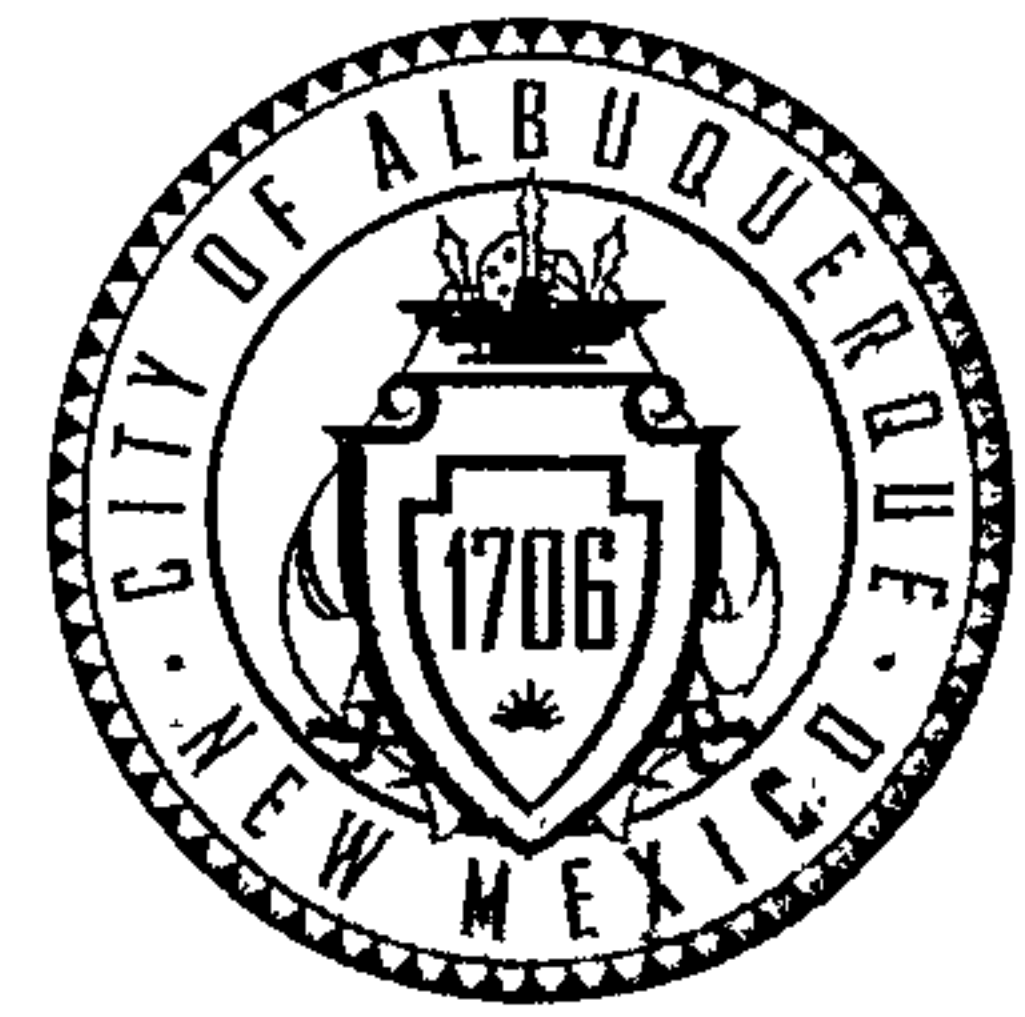


IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

DATE SUBMITTED: 10/8/15 By: [Signature]

COA STAFF: \_\_\_\_\_ ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_

# CITY OF ALBUQUERQUE



**Planning Department  
Transportation Development Services**

October 9, 2015

Phillip Clark  
Clark Consulting Engineers  
19 Ryan Rd.  
Edgewood, NM 87015

**Re: Baca Townhomes  
4421 12<sup>th</sup> St., NW  
Request for Certificate of Occupancy- Transportation Development  
Engineer's/Architect's Stamp dated 6-10-14 (G14-D080)  
Certification dated 10-8-15**

Dear Mr. Clark

PO Box 1293

Based upon the information provided in your submittal received 10-8-15,  
Transportation Development cannot issue Certificate of Occupancy for the above  
referenced project.

Albuquerque

Prior to the issuance of a permanent Certificate of Occupancy, the following items must  
be addressed:

New Mexico 87103

[www.cabq.gov](http://www.cabq.gov)

- Per approved plan, parking lot and spaces are to be of asphalt construction. Upon inspection, the parking spaces are not asphalted. Please correct at the project site or change drawings to specify parking surface.
- The approved plans state that 12 parking spaces are to be provided. Upon inspection the parking spaces between Unit #1 and Unit #4 are a total of 14 ft. wide by 20 ft. long, which will not provide adequate parking width for two vehicles. Please submit updated parking lot layout.
- PCC Header Curb on parking lot has not been constructed, as called out on approved plans.
- Truncated Domes at Public R.O.W. handicap sidewalk ramps have not be installed per approved plan.

# CITY OF ALBUQUERQUE



Once corrections are complete resubmit acceptable package along with a completed Drainage Transportation Information Sheet to front counter personnel for log in and evaluation by Transportation. For digital submittal please submit to [PLNDRS@cabq.gov](mailto:PLNDRS@cabq.gov). If you have any questions, please contact me at (505) 924-3991.

Sincerely,

A handwritten signature in black ink, appearing to read 'Racquel M. Michel'.

Racquel M. Michel, P.E.  
Traffic Engineer, Planning Dept.  
Development Review Services

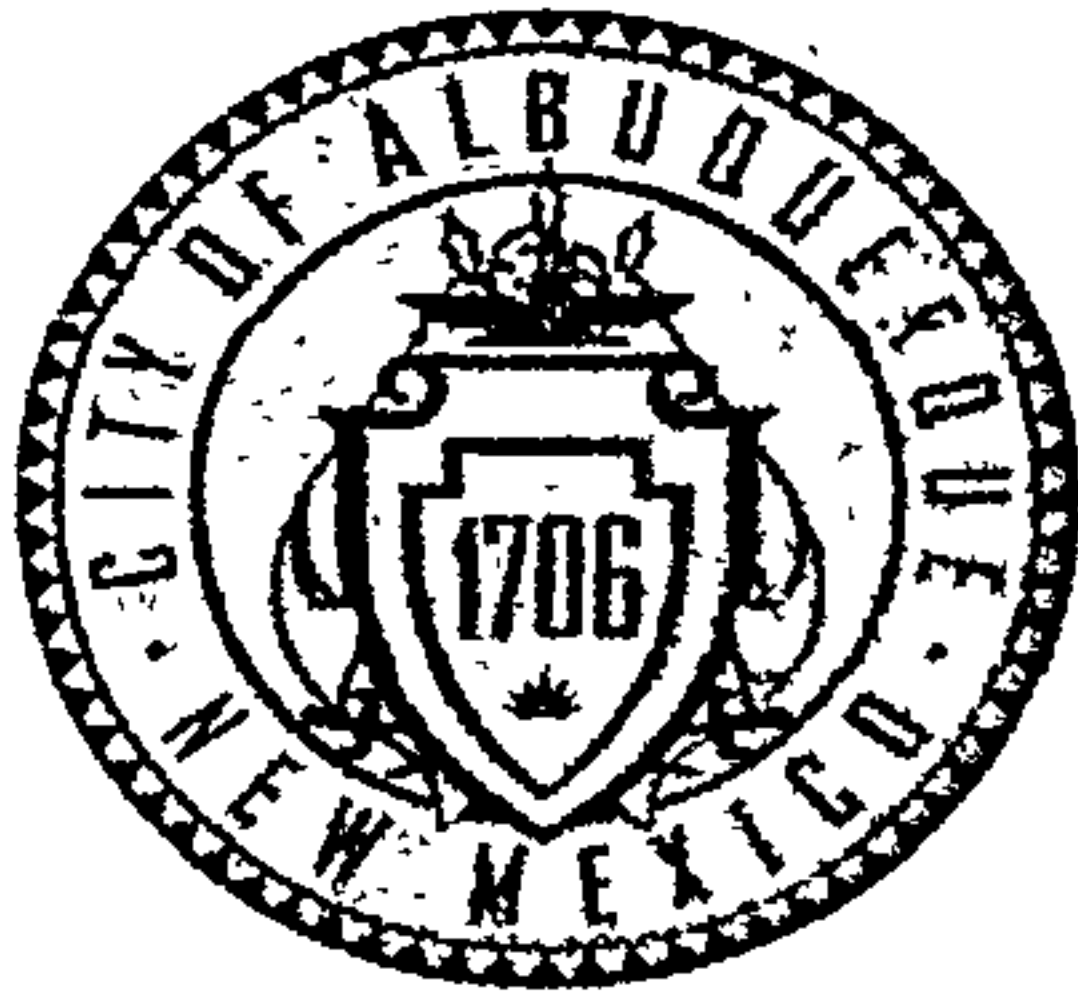
\gs      via: email  
C:      CO Clerk, File

PO Box 1293

Albuquerque

New Mexico 87103

[www.cabq.gov](http://www.cabq.gov)



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: Baca Townhomes Building Permit #: \_\_\_\_\_ City Drainage #: G14/DD80  
DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_  
Legal Description: \_\_\_\_\_  
City Address: 4421 12th St. NW  
Engineering Firm: Clark Consult Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_  
Owner: \_\_\_\_\_ Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_  
Architect: \_\_\_\_\_ Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_  
Other Contact: \_\_\_\_\_ Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Check all that Apply:

### DEPARTMENT:

- ☐ HYDROLOGY/ DRAINAGE  
☒ TRAFFIC/ TRANSPORTATION  
☐ MS4/ EROSION & SEDIMENT CONTROL

### TYPE OF SUBMITTAL:

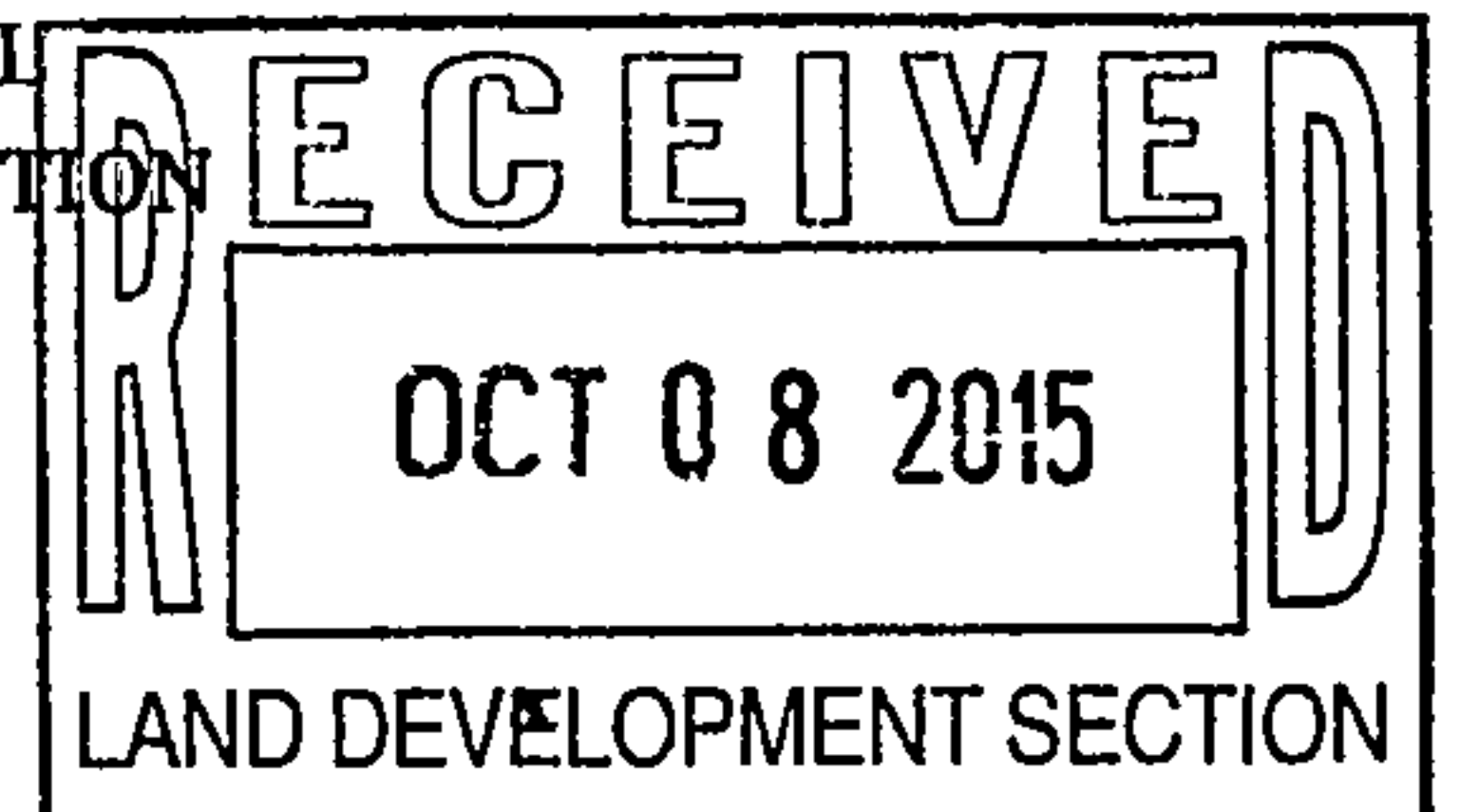
- ☒ ENGINEER/ ARCHITECT CERTIFICATION  
☐ CONCEPTUAL G & D PLAN  
☐ GRADING PLAN  
☐ DRAINAGE MASTER PLAN  
☐ DRAINAGE REPORT  
☐ CLOMR/LOMR  
☐ TRAFFIC CIRCULATION LAYOUT (TCL)  
☐ TRAFFIC IMPACT STUDY (TIS)  
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)  
☐ OTHER (SPECIFY) \_\_\_\_\_

IS THIS A RESUBMITTAL?: ☐ Yes ☒ No

DATE SUBMITTED: 10/8/15 By: [Signature]

### CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

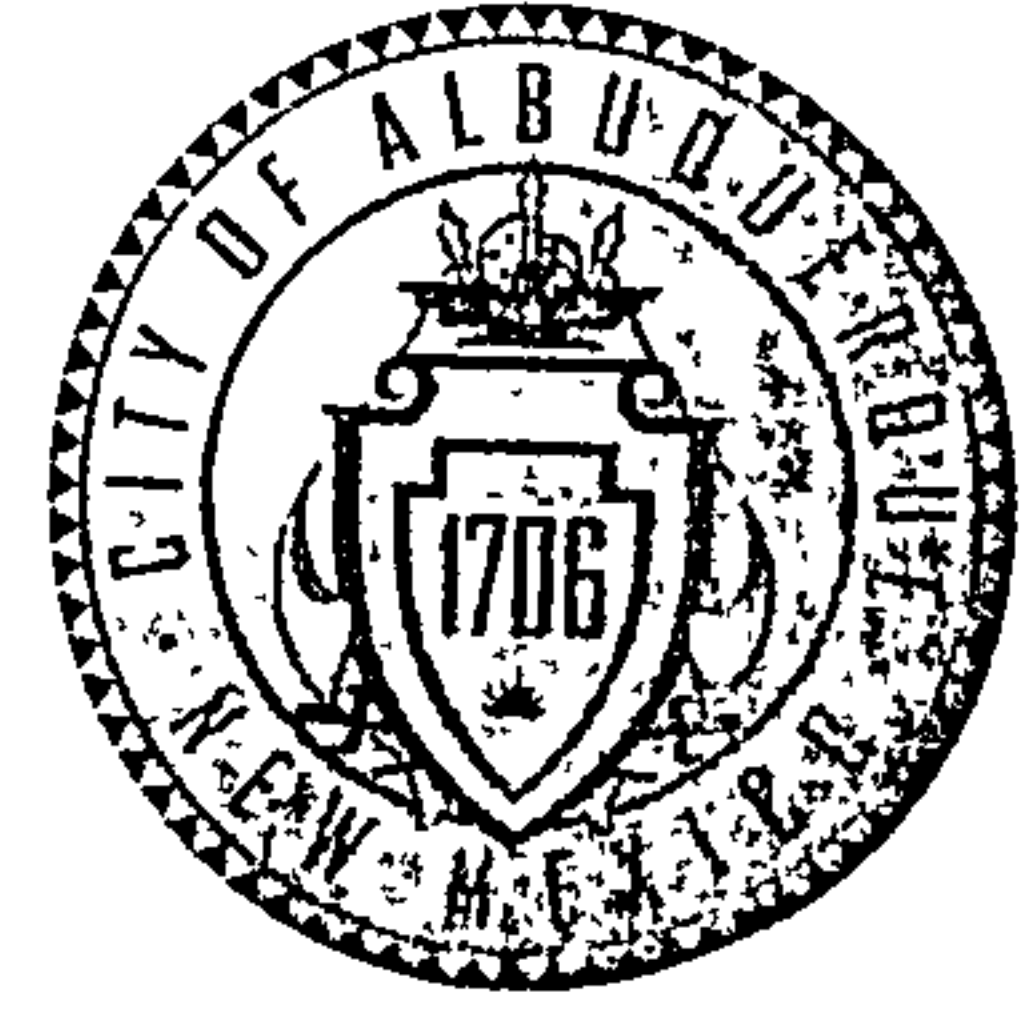
- ☐ BUILDING PERMIT APPROVAL  
☒ CERTIFICATE OF OCCUPANCY  
☐ PRELIMINARY PLAT APPROVAL  
☐ SITE PLAN FOR SUB'D APPROVAL  
☐ SITE PLAN FOR BLDG. PERMIT APPROVAL  
☐ FINAL PLAT APPROVAL  
☐ SIA/ RELEASE OF FINANCIAL GUARANTEE  
☐ FOUNDATION PERMIT APPROVAL  
☐ GRADING PERMIT APPROVAL  
☐ SO-19 APPROVAL  
☐ PAVING PERMIT APPROVAL  
☐ GRADING/ PAD CERTIFICATION  
☐ WORK ORDER APPROVAL  
☐ CLOMR/LOMR  
☐ PRE-DESIGN MEETING  
☐ OTHER (SPECIFY) \_\_\_\_\_



COA STAFF: \_\_\_\_\_ ELECTRONIC SUBMITTAL RECEIVED: \_\_\_\_\_

# CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development & Building Services



September 25, 2008

Amy L. D. Niese, P.E.  
Isaacson & Arfman, P.A.  
128 Monroe St. NE  
Albuquerque, New Mexico 87108

RE: **12<sup>th</sup> Street Villas** – (Rossiter Addition, Lots 57-59)  
**Drainage Plan for Grading Permit (& Work Order)**

File: **G14-D 080**  
( PE Stamp 09-23-08 )

Dear Ms. Niese:

Based upon the information provided in your submittal received 9/24/08, the above referenced Grading and Drainage Plan is approved for Grading Permit and for Work Order preparation through the DRC.

PO Box 1293

A Storm Water Pollution Prevention Plan (SWPPP) is required for construction grading on this site. The SWPPP in MS Word or PDF format on a CD is required to be submitted to the Hydrology Section prior to beginning the site grading work.

Albuquerque

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

NM 87103

Sincerely,

www.cabq.gov

Gregory R. Olson, P.E.  
Hydrology Section  
(Ph: 505-924-3981)

XC: Bradley Bingham, COA-PLN/Hydrology  
Owner: Billy Baca, BCR Construction, PO Box 7489, Albuquerque, NM 87194  
Drainage file **D19-D 012**

**DRAINAGE AND TRANSPORTATION INFORMATION SHEET**  
(Rev. 12/05)

PROJECT TITLE: 12<sup>th</sup> Street Villas ZONE MAP/DRG. FILE # G14/D080  
DRB#: 1005536 EPC#: \_\_\_\_\_ WORK ORDER#: 477881

LEGAL DESCRIPTION: Lots 57, 58, and 59 Rossiter Addition  
CITY ADDRESS: 4421, 4503, 4505 12<sup>th</sup> Street

ENGINEERING FIRM: ISSACSON & ARFMAN, PA  
ADDRESS: 128 MONROE NE  
CITY, STATE: ALBUQUERQUE, NM

CONTACT: Amy L. D. Niese, PE  
PHONE: 268-8828  
ZIP CODE: 87108

OWNER: BCR Construction  
ADDRESS: PO Box 7489  
CITY, STATE: Albuquerque, NM

CONTACT: Billy Baca  
PHONE: 345-1983  
ZIP CODE: 87194

ARCHITECT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

SURVEYOR: Harris Surveying  
ADDRESS: 2412-D Monroe Street  
CITY, STATE: Albuquerque, NM

CONTACT: Tony Harris  
PHONE: 889-8056  
ZIP CODE: 87110

CONTRACTOR: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

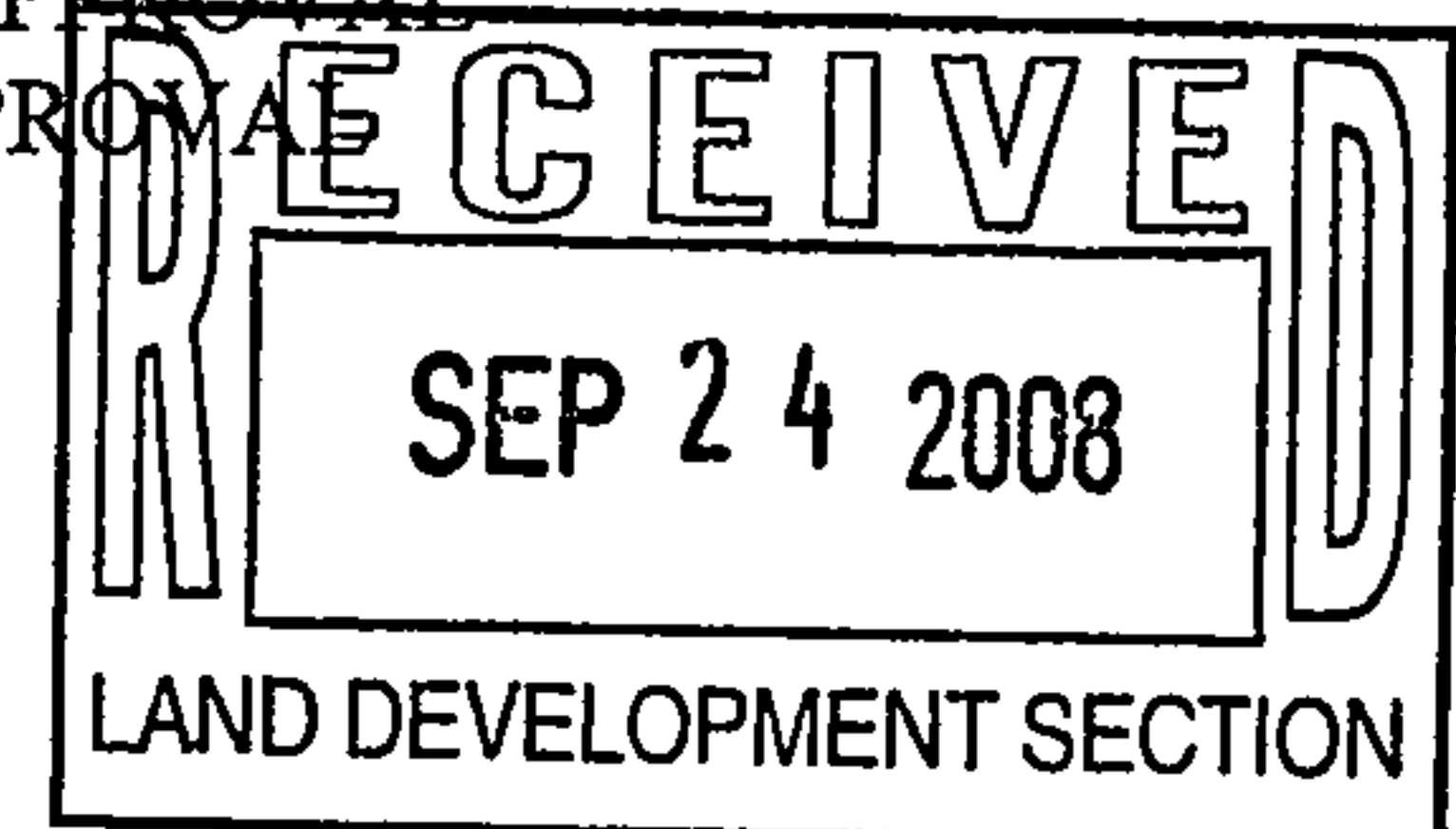
CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

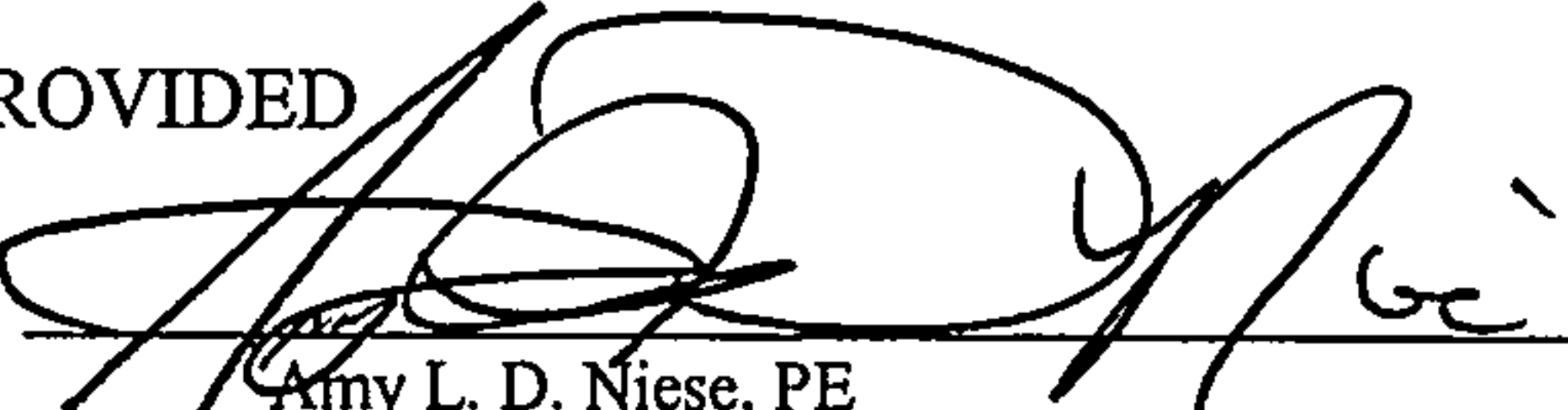
TYPE OF SUBMITTAL:  
\_\_\_\_ DRAINAGE REPORT  
\_\_\_\_ DRAINAGE PLAN 1<sup>st</sup> SUBMITTAL  
X \_\_\_\_ DRAINAGE PLAN RESUBMITTAL  
\_\_\_\_ CONCEPTUAL G & D PLAN  
\_\_\_\_ GRADING PLAN  
\_\_\_\_ EROSION CONTROL PLAN  
\_\_\_\_ ENGINEER'S CERT (HYDROLOGY)  
\_\_\_\_ CLOMR/LOMR  
\_\_\_\_ TRAFFIC CIRCULATION LAYOUT  
\_\_\_\_ ENGINEER/ARCHITECT CERT (TCL)  
\_\_\_\_ ENGINEER/ARCHITECT CERT (DRB S.P.)  
\_\_\_\_ ENGINEER/ARCHITECT CERT (AA)  
\_\_\_\_ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL SOUGHT:  
\_\_\_\_ SIA/FINANCIAL GUARANTEE RELEASE  
\_\_\_\_ PRELIMINARY PLAT APPROVAL  
\_\_\_\_ S. DEV. PLAN FOR SUB'D APPROVAL  
\_\_\_\_ S. DEV. FOR BLDG. PERMIT APPROVAL  
\_\_\_\_ SECTOR PLAN APPROVAL  
\_\_\_\_ FINAL PLAT APPROVAL  
\_\_\_\_ FOUNDATION PERMIT APPROVAL  
\_\_\_\_ BUILDING PERMIT APPROVAL  
\_\_\_\_ CERTIFICATE OF OCCUPANCY (PERM)  
\_\_\_\_ CERTIFICATE OF OCCUPANCY (TEMP)  
x \_\_\_\_ GRADING PERMIT APPROVAL  
\_\_\_\_ PAVING PERMIT APPROVAL  
\_\_\_\_ WORK ORDER APPROVAL  
\_\_\_\_ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

x \_\_\_\_ YES  
\_\_\_\_ NO  
\_\_\_\_ COPY PROVIDED



SUBMITTED BY:  DATE: 9/23/08  
Amy L. D. Niese, 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 to the proposed development define 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 subdivision containing more than ten (10) lots or constituting five (5) acres or more.



**ISAACSON & ARFMAN, P.A.**

**Consulting Engineering Associates**

*Thomas O. Isaacson, PE & LS • Fred C. Arfman, PE  
Scott M. McGee, PE*

September 23, 2008

Mr. Gregory Olson  
Planning Department  
Development and Building Services  
City of Albuquerque  
600 2<sup>nd</sup> Street NW  
Albuquerque, NM 87102

Re: 12<sup>th</sup> Street Villas, DRB #1005536, G14/D80

Dear Mr. Olson:

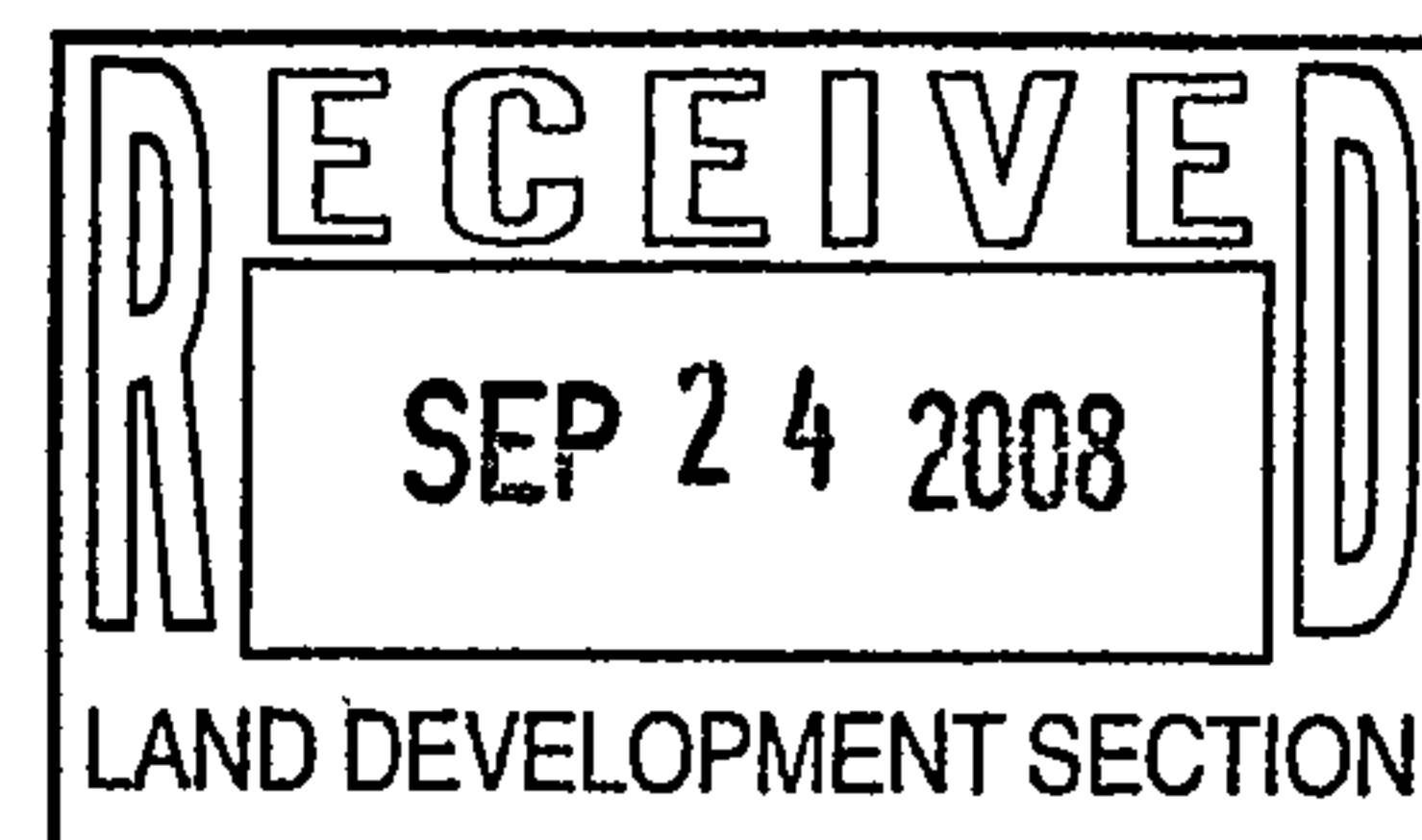
Enclosed is a resubmittal of the Grading and Drainage Plan for 12<sup>th</sup> Street Villas. The following are responses to grading and drainage comments in your letter dated September 18, 2008.

1. The alley gutter now discharges directly to concrete. Please see the enclosed Grading and Drainage Plan.
2. The proposed flow line grades on 12<sup>th</sup> Street at the southern entrance have been revised so that the water drains to the new southern inlet. The grate elevation of the inlet is/will be in the construction plans.
3. The existing topo elevations have been darkened.
4. An SWPPP will be prepared by another party for this project prior to Building Permit.

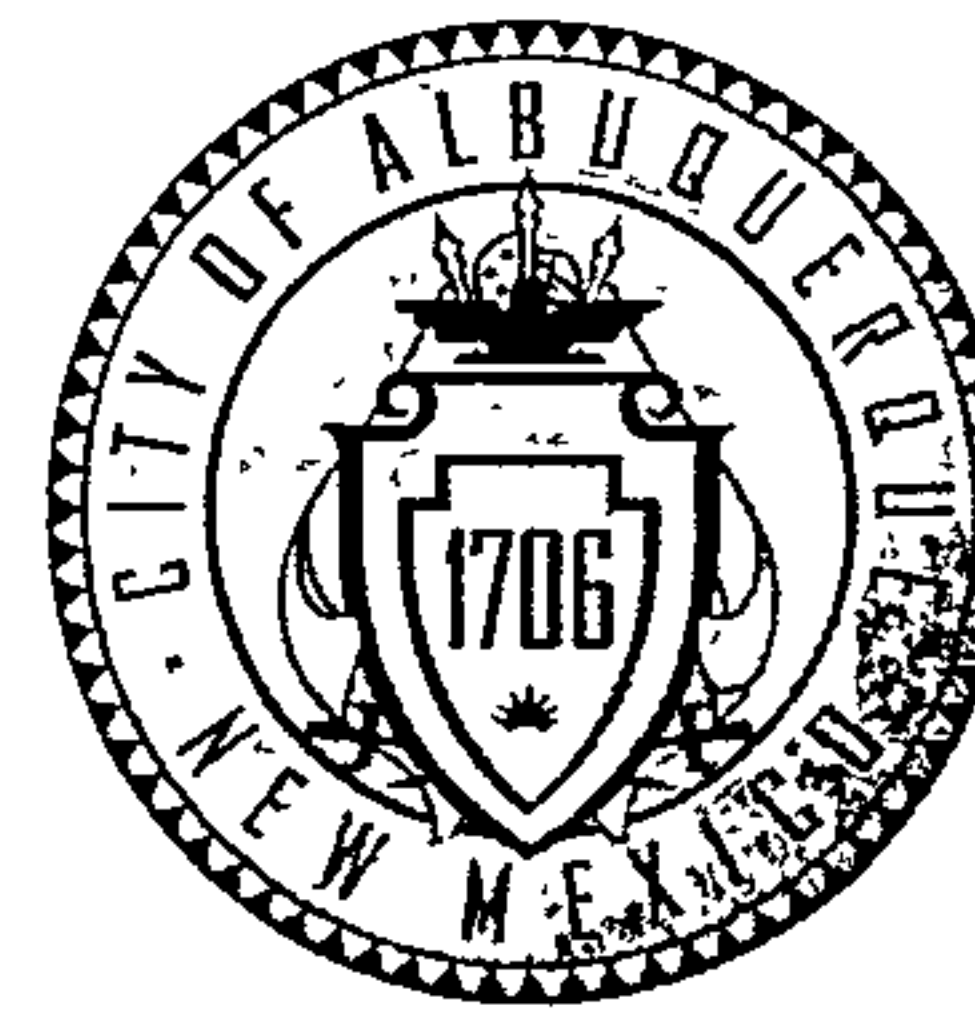
Please contact me if I can be of any assistance.

Sincerely,  
**ISAACSON & ARFMAN, P.A.**

Amy L. D. Niese, PE  
Project Engineer



# CITY OF ALBUQUERQUE



June 20, 2014

Philip W. Clark, P.E.  
Clark Consulting Engineers  
4421 Ryan Rd.  
Edgewood, NM 87015

**Re: Baca Duplex's , 4421 12<sup>th</sup> St. NW, Traffic Circulation Layout  
Engineer's Stamp dated 6-10-14 (G14-D080)**

Dear Mr. Clark,

The TCL submittal received 6-10-14 is approved for Building Permit. The plan is stamped and signed as approved. A copy of this plan will be needed for each of the building permit plans. Please keep the original to be used for certification of the site for final C.O. for Transportation. **Public infrastructure or work done within City Right-of-Way shown on these plans is for information only and is not part of approval. A separate DRC and/or other appropriate permits are required to construct these items.**

If a temporary CO is needed, a copy of the original TCL that was stamped as approved by the City will be needed. This plan must include a statement that identifies the outstanding items that need to be constructed or the items that have not been built in "substantial compliance," as well as the signed and dated stamp of a NM registered architect or engineer. Submit this TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

When the site is completed and a final C.O. is requested, use the original City stamped approved TCL for certification. A NM registered architect or engineer must stamp, sign, and date the certification TCL along with indicating that the development was built in "substantial compliance" with the TCL. Submit this certification TCL with a completed Drainage and Transportation Information Sheet to Hydrology at the Development Services Center of Plaza Del Sol Building.

Once verification of certification is completed and approved, notification will be made to Building Safety to issue Final C.O. To confirm that a final C.O. has been issued, call Building Safety at 924-3306.

Sincerely,

Cynthia K Beck  
Associate Engineer, Planning Dept.  
Development Review Services

C: File

PO Box 1293

Albuquerque

New Mexico 87103

[www.cabq.gov](http://www.cabq.gov)



# City of Albuquerque

Planning Department

Development & Building Services Division

## DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: Baca Duplex<sup>3</sup> Building Permit #: \_\_\_\_\_ City Drainage #: G-14 D080

DRB#: \_\_\_\_\_ EPC#: \_\_\_\_\_ Work Order#: \_\_\_\_\_

Legal Description: LOT 57 Rossiter Addn

City Address: 4421 12<sup>th</sup> St. NW

Engineering Firm: Clark Consulting Engineers Contact: Phil

Address: 19 Ryan Rd. Edgewood NM 87015

Phone#: 281-2444 Fax#: Same E-mail: CCEA169@AOL.COM

Owner: Billy Baca Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Architect: DEL P. JACK Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Surveyor: Harris Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

Contractor: BCR Contact: \_\_\_\_\_

Address: \_\_\_\_\_

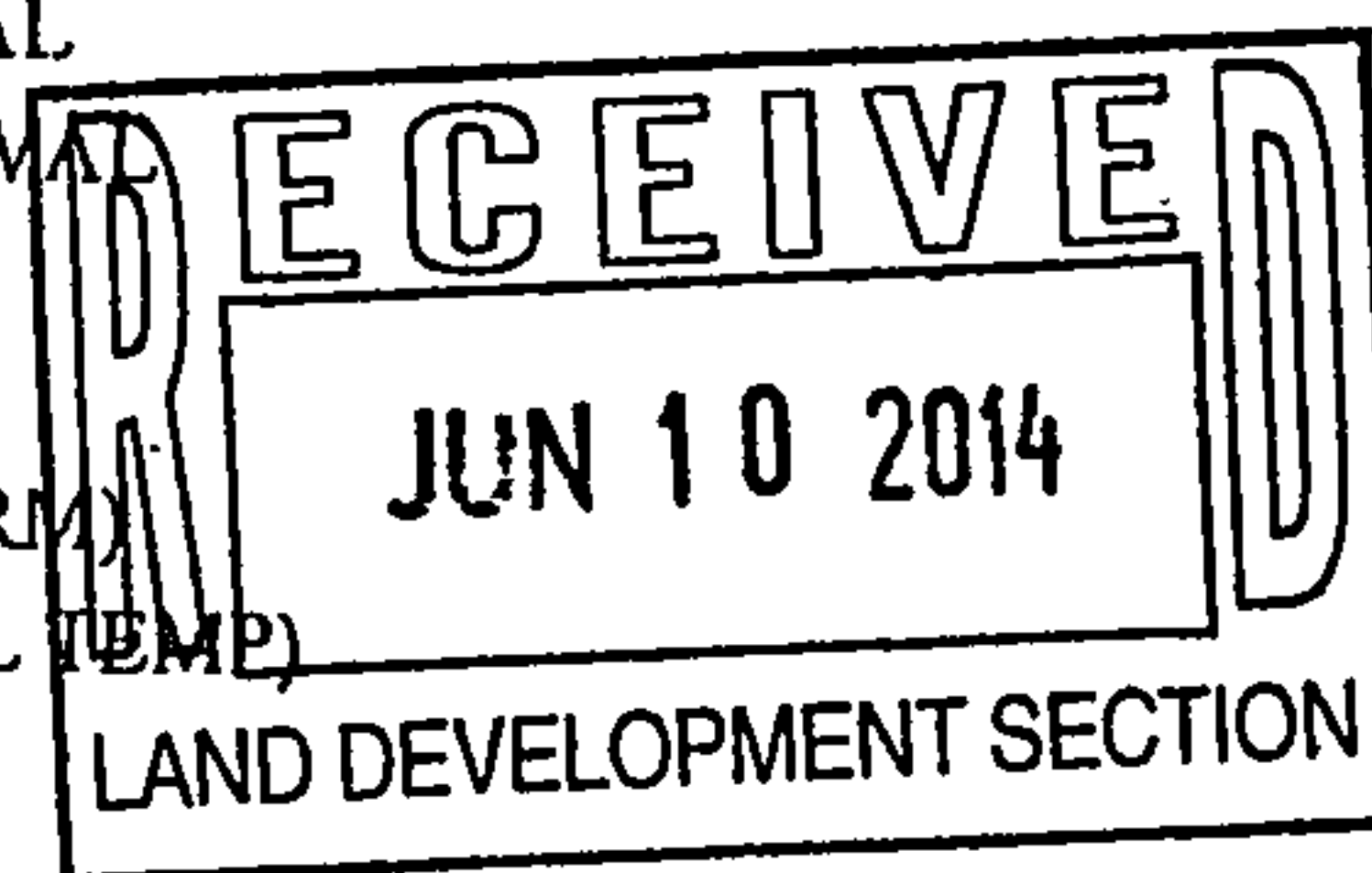
Phone#: \_\_\_\_\_ Fax#: \_\_\_\_\_ E-mail: \_\_\_\_\_

### TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL G & D PLAN
- ☒ GRADING PLAN
- ☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☐ ENGINEER'S CERT (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☒ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEER'S CERT (TCL)
- ☐ ENGINEER'S CERT (DRB SITE PLAN)
- ☐ ENGINEER'S CERT (ESC)
- ☐ SO-19
- ☐ OTHER (SPECIFY) \_\_\_\_\_

### CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ SIA/FINANCIAL GUARANTEE RELEASE
- ☐ PRELIMINARY PLAT APPROVAL
- ☐ S. DEV. PLAN FOR SUB'D APPROVAL
- ☐ S. DEV. FOR BLDG. PERMIT APPROVAL
- ☐ SECTOR PLAN APPROVAL
- ☐ FINAL PLAT APPROVAL
- ☐ CERTIFICATE OF OCCUPANCY (PERM)
- ☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ☐ FOUNDATION PERMIT APPROVAL
- ☒ BUILDING PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☐ GRADING CERTIFICATION
- ☐ SO-19 APPROVAL
- ☐ ESC PERMIT APPROVAL
- ☐ ESC CERT. ACCEPTANCE
- ☐ OTHER (SPECIFY) \_\_\_\_\_



WAS A PRE-DESIGN CONFERENCE ATTENDED: \_\_\_\_\_

Yes \_\_\_\_\_ No \_\_\_\_\_ Copy Provided \_\_\_\_\_

DATE SUBMITTED: 6/10/14 By: PhC

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to 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 subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

# CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development & Building Services

September 18, 2008

Amy L. D. Niese, P.E.  
Isaacson & Arfman, P.A.  
128 Monroe St. NE  
Albuquerque, New Mexico 87108



RE: **12<sup>th</sup> Street Villas – (Rossiter Addition, Lots 57-59)**  
**Drainage Plan for Grading Permit (& Work Order)**

File: **G14-D 080**  
( PE Stamp 08-28-08 )

Dear Ms. Niese:

Based upon the information provided in your submittal received 8/29/08, the above referenced Grading and Drainage Plan **cannot be approved** for Grading Permit nor Work Order preparation until the following comments are addressed:

1. Connect the “Alley Section” valley gutter to the concrete valley gutter at each entrance, as discussed after DRC.
2. Revise flow line grading along 12<sup>th</sup> Street at the south entrance to ensure that the southern point of the existing C & G drains north to the new inlet at the north side of the entrance. ( Please be sure that the grate elevation is on the two new inlets in DRC plans; I don't remember checking that for DRC review ....)
3. Darken the existing grade information on the plot so that it is readable in prints.
4. A Storm Water Pollution Prevention Plan (SWPPP) is required for construction grading on this site. A SWPPP in MS Word or PDF format on a CD is required to be submitted to Hydrology Section, prior to review of this plan.  
(*This policy came into effect July 1st, 2008.*)

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

If you have any questions or would like to schedule a meeting to discuss this, you may contact me at 924-3981.

Sincerely,

Gregory R. Olson, P.E.  
Hydrology Section

XC: Bradley Bingham, COA-PLN/Hydrology  
Drainage file D19-D 012

**DRAINAGE AND TRANSPORTATION INFORMATION SHEET**  
(Rev. 12/05)

PROJECT TITLE: 12<sup>th</sup> Street Villas \_\_\_\_\_ ZONE MAP/DRG. FILE # G14 / DPO  
DRB#: 1005536 EPC#: \_\_\_\_\_ WORK ORDER#: \_\_\_\_\_

LEGAL DESCRIPTION: Lots 57, 58, and 59 Rossiter Addition  
CITY ADDRESS: 4421, 4503, 4505 12<sup>th</sup> Street

ENGINEERING FIRM: ISSACSON & ARFMAN, PA  
ADDRESS: 128 MONROE NE  
CITY, STATE: ALBUQUERQUE, NM

CONTACT: Amy L. D. Niese, PE  
PHONE: 268-8828  
ZIP CODE: 87108

OWNER: BCR Construction  
ADDRESS: PO Box 7489  
CITY, STATE: Albuquerque, NM

CONTACT: Billy Baca  
PHONE: 345-1983  
ZIP CODE: 87194

ARCHITECT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

SURVEYOR: Harris Surveying  
ADDRESS: 2412-D Monroe Street  
CITY, STATE: Albuquerque, NM

CONTACT: Tony Harris  
PHONE: 889-8056  
ZIP CODE: 87110

CONTRACTOR: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

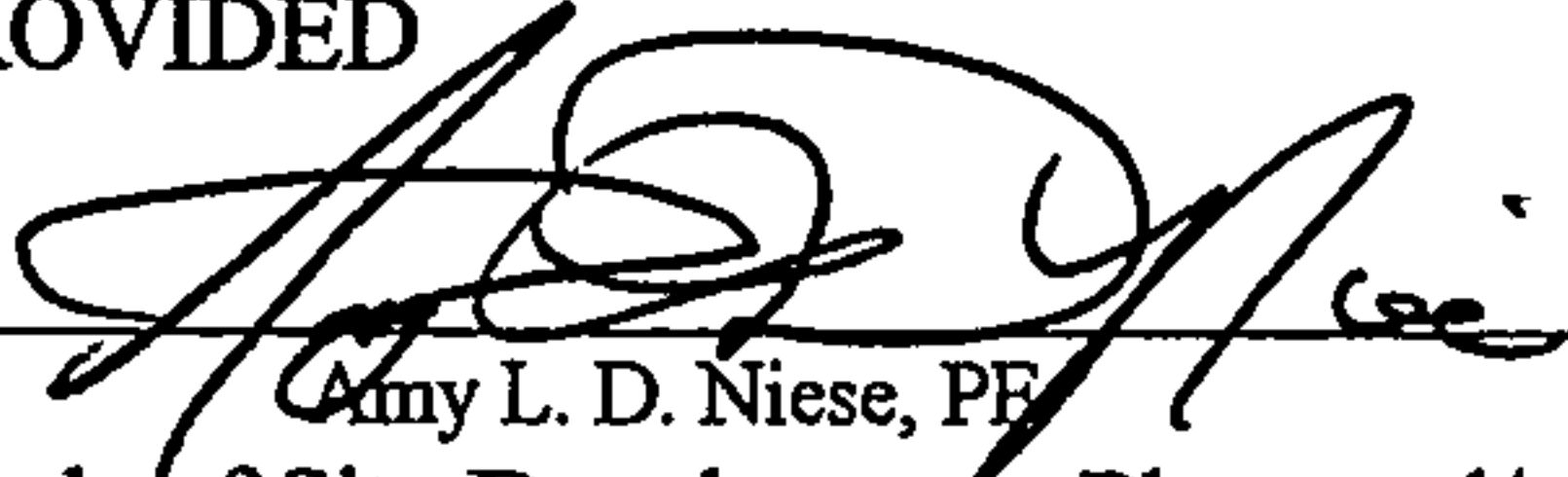
CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

TYPE OF SUBMITTAL:  
☐ DRAINAGE REPORT  
☐ DRAINAGE PLAN 1<sup>st</sup> SUBMITTAL  
☒ DRAINAGE PLAN RESUBMITTAL  
☐ CONCEPTUAL G & D PLAN  
☐ GRADING PLAN  
☐ EROSION CONTROL PLAN  
☐ ENGINEER'S CERT (HYDROLOGY)  
☐ CLOMR/LOMR  
☐ TRAFFIC CIRCULATION LAYOUT  
☐ ENGINEER/ARCHITECT CERT (TCL)  
☐ ENGINEER/ARCHITECT CERT (DRB S.P.)  
☐ ENGINEER/ARCHITECT CERT (AA)  
☐ OTHER (SPECIFY) \_\_\_\_\_

CHECK TYPE OF APPROVAL SOUGHT:  
☐ SIA/FINANCIAL GUARANTEE RELEASE  
☐ PRELIMINARY PLAT APPROVAL  
☐ S. DEV. PLAN FOR SUB'D APPROVAL  
☐ S. DEV. 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) \_\_\_\_\_

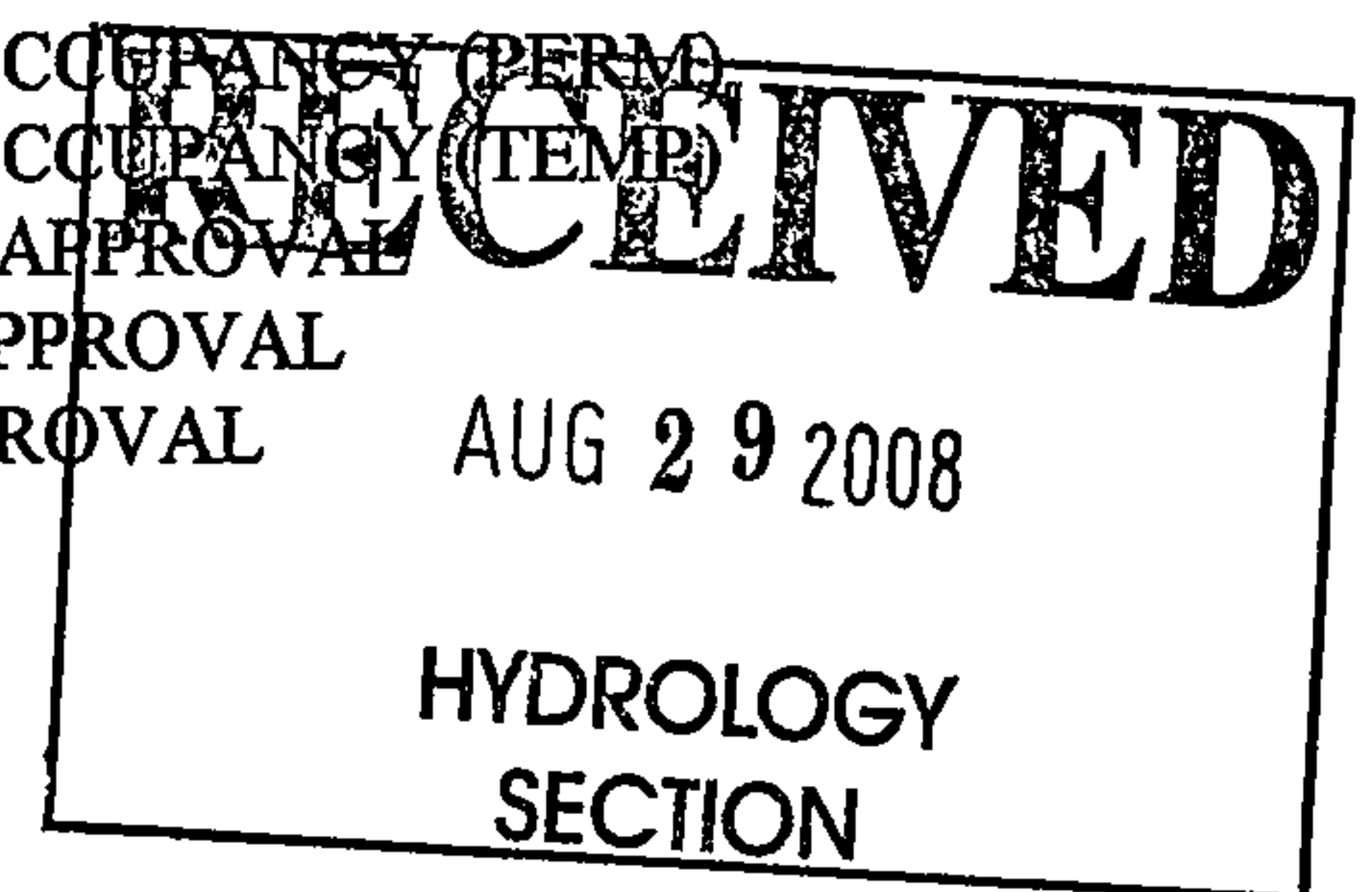
WAS A PRE-DESIGN CONFERENCE ATTENDED:

☒ YES  
☐ NO  
☐ COPY PROVIDED

SUBMITTED BY:  DATE: 8/28/08  
Amy L. D. Niese, 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 to the proposed development define 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 subdivision containing more than ten (10) lots or constituting five (5) acres or more.





# ISAACSON & ARFMAN, P.A.

*Consulting Engineering Associates*

*Thomas O. Isaacson, PE & LS • Fred C. Arfman, PE  
Scott M. McGee, PE*

August 28, 2008

Mr. Brad Bingham  
Planning Department  
Development and Building Services  
City of Albuquerque  
600 2<sup>nd</sup> Street NW  
Albuquerque, NM 87102

Re: 12<sup>th</sup> Street Villas, DRB #1005536, G14/D80

Dear Mr. Bingham:

Enclosed is a resubmittal of the Grading and Drainage Plan for 12<sup>th</sup> Street Villas. The following are responses to grading and drainage comments in letters dated November 13, 2007 and December 7, 2007.

The discrepancy regarding the area of the site is due to rounding. The area has been adjusted in the AHYMO run which is shown on the Grading and Drainage Plan.

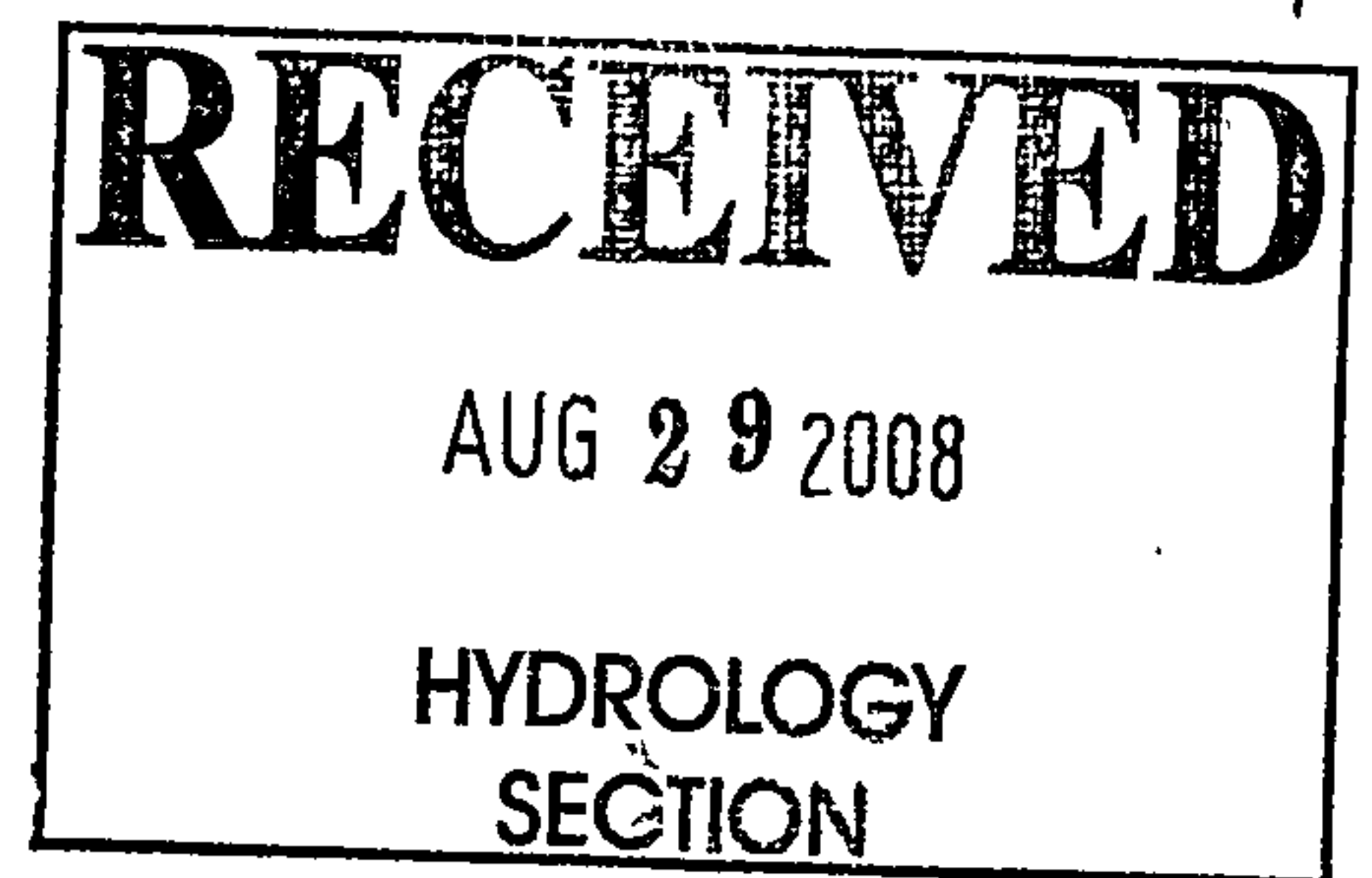
This site is in fact an infill project. Please see the enclosed excerpt from the 1988 Infill Development Study.

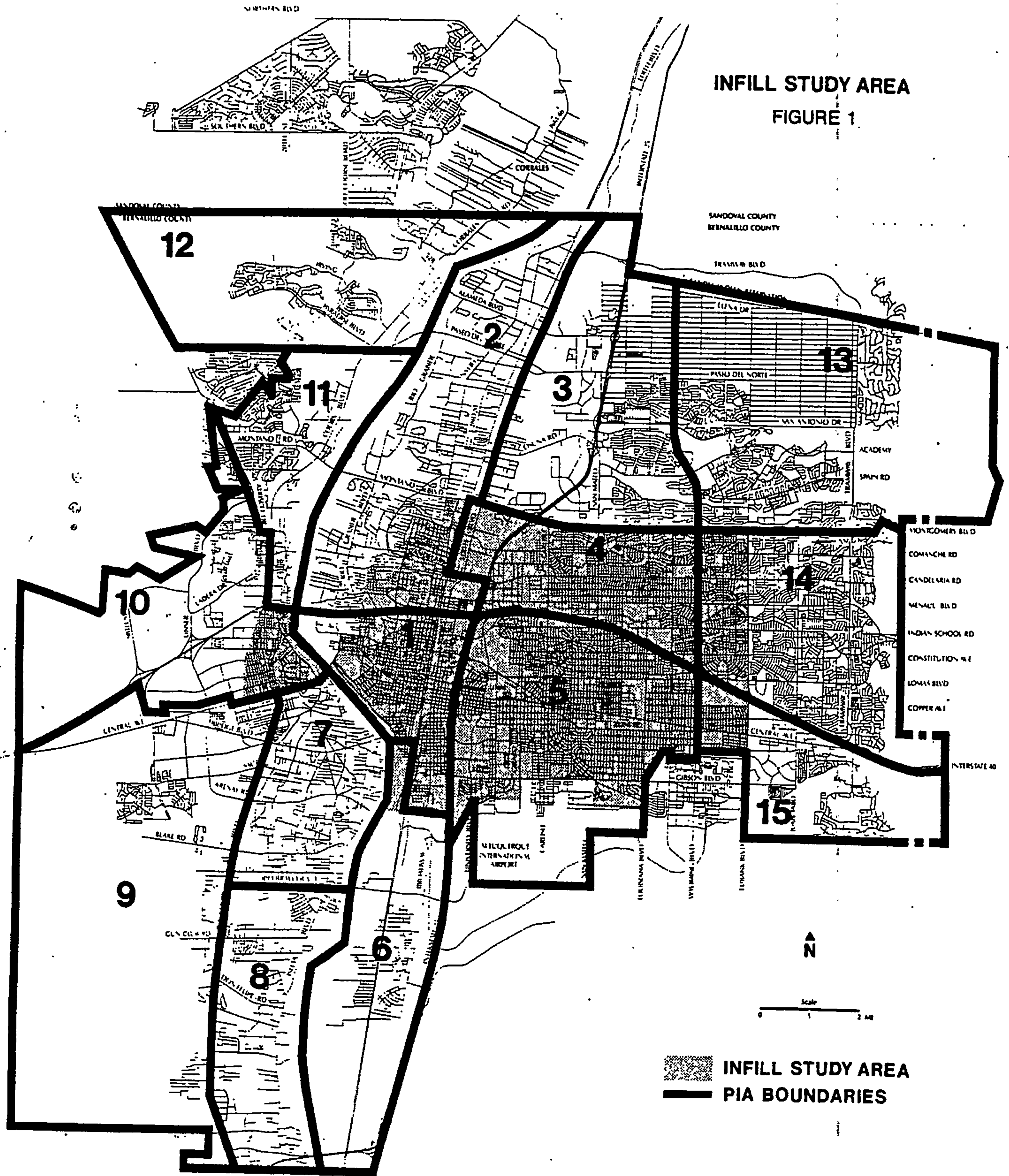
The amount of existing land treatment types have changed to 20% for Type A, 50% for Type B, 20% for Type C, and 10% for Type D. This results in an existing flow of 2.40 cfs. The treatment types for the proposed subdivision did not change. The proposed flow is 3.92 cfs. The increase of 1.52 cfs is an insignificant increase especially for an infill project. We will also be adding an additional inlet in 12<sup>th</sup> Street at the south side of the subdivision which will help more drainage get into the system more quickly which will be before the peak of the basin's hydrograph.

Please contact me if I can be of any assistance.

Sincerely,  
ISAACSON & ARFMAN, P.A.

Amy L. D. Niese, PE  
Project Engineer





FROM INFILL DEVELOPMENT STUDY 1988

**RECEIVED**  
 AUG 29 2008  
 HYDROLOGY  
 SECTION

```
- VERSION: 1997.02d      RUN DATE (MON/DAY/YR) =08/19/2008
                        USER NO. = AHYMO-I-9702dIsa-Arfman1
```

```
TIME=          .00
RAIN6=        2.200
```

```

*S              12TH STREET TOWNHOMES
*S              BCR CONSTRUCTION
*S
*****
*
*      1593.DAT
*      AUGUST 19, 2008
*      BY AMY L. D. NIESE, PE
*
*      A 1.0522 ACRE SITE BOUNDED BY 12th STREET
*
*****

START          RAINFALL BEGINS AT 0.0 HRS
RAINFALL       TYPE=1 RAIN QUARTER=0 RAIN ONE=1.90
               RAIN SIX=2.20 RAIN DAY=2.63 DT=0.03333HR

*S  EXISTING BASIN A - PROPERTY

COMPUTE NM HYD   ID=1 HYD NO=100.00 AREA=0.00164 SQ MI
                PER A=20 PER B=50 PER C=20 PER D=10
                TP=-0.1333 HR   MASS RAIN=-1
PRINT HYD       ID=1   CODE=1

*S  PROPOSED BASIN A - PROPERTY

COMPUTE NM HYD   ID=2 HYD NO=200.00 AREA=0.0016 SQ MI
                PER A=0 PER B=26 PER C=0 PER D=74
                TP=-0.1333 HR   MASS RAIN=-1
PRINT HYD       ID=2   CODE=1

FINISH

```

AHYMO PROGRAM (AHYMO\_97) - - Version: 1997.02d  
RUN DATE (MON/DAY/YR) = 08/19/2008  
START TIME (HR:MIN:SEC) = 15:45:11 USER NO.= AHYMO-I-9702dIsa-Arfman1  
INPUT FILE = 1593.dat

\*S 12TH STREET TOWNHOMES  
\*S BCR CONSTRUCTION  
\*S  
\*\*\*\*\*  
\*  
\* 1593.DAT  
\* AUGUST 19, 2008  
\* BY AMY L. D. NIESE, PE  
\*  
\* A 1.0522 ACRE SITE BOUNDED BY 12th STREET  
\*  
\*\*\*\*\*

START RAINFALL BEGINS AT 0.0 HRS  
RAINFALL TYPE=1 RAIN QUARTER=0 RAIN ONE=1.90  
RAIN SIX=2.20 RAIN DAY=2.63 DT=0.03333HR

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

|        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|
| .0000  | .0013  | .0027  | .0041  | .0055  | .0069  | .0084  |
| .0099  | .0115  | .0131  | .0147  | .0164  | .0181  | .0199  |
| .0217  | .0236  | .0256  | .0276  | .0296  | .0318  | .0340  |
| .0363  | .0387  | .0412  | .0438  | .0465  | .0493  | .0523  |
| .0554  | .0587  | .0622  | .0675  | .0731  | .0791  | .0920  |
| .1208  | .1651  | .2289  | .3159  | .4302  | .5759  | .7574  |
| .9790  | 1.1846 | 1.2704 | 1.3429 | 1.4074 | 1.4661 | 1.5201 |
| 1.5702 | 1.6171 | 1.6610 | 1.7023 | 1.7413 | 1.7781 | 1.8130 |
| 1.8460 | 1.8774 | 1.9071 | 1.9353 | 1.9621 | 1.9681 | 1.9736 |
| 1.9789 | 1.9839 | 1.9887 | 1.9932 | 1.9976 | 2.0018 | 2.0059 |
| 2.0098 | 2.0136 | 2.0172 | 2.0208 | 2.0242 | 2.0275 | 2.0308 |
| 2.0339 | 2.0370 | 2.0400 | 2.0430 | 2.0458 | 2.0486 | 2.0514 |
| 2.0540 | 2.0567 | 2.0592 | 2.0617 | 2.0642 | 2.0666 | 2.0690 |
| 2.0714 | 2.0737 | 2.0759 | 2.0781 | 2.0803 | 2.0825 | 2.0846 |
| 2.0867 | 2.0887 | 2.0907 | 2.0927 | 2.0947 | 2.0966 | 2.0985 |
| 2.1004 | 2.1023 | 2.1041 | 2.1059 | 2.1077 | 2.1095 | 2.1112 |
| 2.1130 | 2.1147 | 2.1164 | 2.1180 | 2.1197 | 2.1213 | 2.1229 |
| 2.1245 | 2.1261 | 2.1277 | 2.1292 | 2.1307 | 2.1322 | 2.1337 |
| 2.1352 | 2.1367 | 2.1382 | 2.1396 | 2.1410 | 2.1425 | 2.1439 |
| 2.1452 | 2.1466 | 2.1480 | 2.1494 | 2.1507 | 2.1520 | 2.1533 |
| 2.1547 | 2.1560 | 2.1572 | 2.1585 | 2.1598 | 2.1611 | 2.1623 |
| 2.1635 | 2.1648 | 2.1660 | 2.1672 | 2.1684 | 2.1696 | 2.1708 |
| 2.1720 | 2.1731 | 2.1743 | 2.1754 | 2.1766 | 2.1777 | 2.1789 |
| 2.1800 | 2.1811 | 2.1822 | 2.1833 | 2.1844 | 2.1855 | 2.1866 |
| 2.1876 | 2.1887 | 2.1897 | 2.1908 | 2.1918 | 2.1929 | 2.1939 |
| 2.1949 | 2.1960 | 2.1970 | 2.1980 | 2.1990 | 2.2000 |        |

\*S EXISTING BASIN A - PROPERTY

COMPUTE NM HYD ID=1 HYD NO=100.00 AREA=0.00164 SQ MI  
PER A=20 PER B=50 PER C=20 PER D=10  
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420  
UNIT PEAK = .64748 CFS UNIT VOLUME = .9815 B = 526.28 P60 = 1.9000  
AREA = .000164 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .132452HR TP = .133300HR K/TP RATIO = .993639 SHAPE CONSTANT, N = 3.553181  
UNIT PEAK = 3.5897 CFS UNIT VOLUME = .9965 B = 324.19 P60 = 1.9000  
AREA = .001476 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD

ID=1 CODE=1

PARTIAL HYDROGRAPH 100.00

RUNOFF VOLUME = .80955 INCHES = .0708 ACRE-FEET  
PEAK DISCHARGE RATE = 2.40 CFS AT 1.500 HOURS BASIN AREA = .0016 SQ. MI.

\*S. PROPOSED BASIN A. PROPERTY

COMPUTE NM HYD ID=2 HYD NO=200.00 AREA=0.0016 SQ MI  
PER A=0 PER B=26 PER C=0 PER D=74  
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420  
UNIT PEAK = 4.6745 CFS UNIT VOLUME = .9969 B = 526.28 P60 = 1.9000  
AREA = .001184 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .130761HR TP = .133300HR K/TP RATIO = .980950 SHAPE CONSTANT, N = 3.599930  
UNIT PEAK = 1.0222 CFS UNIT VOLUME = .9874 B = 327.55 P60 = 1.9000  
AREA = .000416 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD

ID=2 CODE=1

PARTIAL HYDROGRAPH 200.00

RUNOFF VOLUME = 1.63218 INCHES = .1393 ACRE-FEET  
PEAK DISCHARGE RATE = 3.92 CFS AT 1.500 HOURS BASIN AREA = .0016 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 15:45:12

AHYMO PROGRAM (AHYMO\_97) - - Version: 1997.02d  
RUN DATE (MON/DAY/YR) = 08/19/2008  
START TIME (HR:MIN:SEC) = 15:45:11 USER NO.= AHYMO-I-9702dIsa-Arfman1  
INPUT FILE = 1593.dat

\*S 12TH STREET TOWNHOMES  
\*S BCR CONSTRUCTION  
\*S

\*\*\*\*\*  
\*  
\* 1593.DAT  
\* AUGUST 19, 2008  
\* BY AMY L. D. NIESE, PE  
\*  
\* A 1.0522 ACRE SITE BOUNDED BY 12th STREET  
\*  
\*\*\*\*\*

START RAINFALL BEGINS AT 0.0 HRS  
RAINFALL TYPE=1 RAIN QUARTER=0 RAIN ONE=1.90  
RAIN SIX=2.20 RAIN DAY=2.63 DT=0.03333HR

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

|        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|
| .0000  | .0013  | .0027  | .0041  | .0055  | .0069  | .0084  |
| .0099  | .0115  | .0131  | .0147  | .0164  | .0181  | .0199  |
| .0217  | .0236  | .0256  | .0276  | .0296  | .0318  | .0340  |
| .0363  | .0387  | .0412  | .0438  | .0465  | .0493  | .0523  |
| .0554  | .0587  | .0622  | .0675  | .0731  | .0791  | .0920  |
| .1208  | .1651  | .2289  | .3159  | .4302  | .5759  | .7574  |
| .9790  | 1.1846 | 1.2704 | 1.3429 | 1.4074 | 1.4661 | 1.5201 |
| 1.5702 | 1.6171 | 1.6610 | 1.7023 | 1.7413 | 1.7781 | 1.8130 |
| 1.8460 | 1.8774 | 1.9071 | 1.9353 | 1.9621 | 1.9681 | 1.9736 |
| 1.9789 | 1.9839 | 1.9887 | 1.9932 | 1.9976 | 2.0018 | 2.0059 |
| 2.0098 | 2.0136 | 2.0172 | 2.0208 | 2.0242 | 2.0275 | 2.0308 |
| 2.0339 | 2.0370 | 2.0400 | 2.0430 | 2.0458 | 2.0486 | 2.0514 |
| 2.0540 | 2.0567 | 2.0592 | 2.0617 | 2.0642 | 2.0666 | 2.0690 |
| 2.0714 | 2.0737 | 2.0759 | 2.0781 | 2.0803 | 2.0825 | 2.0846 |
| 2.0867 | 2.0887 | 2.0907 | 2.0927 | 2.0947 | 2.0966 | 2.0985 |
| 2.1004 | 2.1023 | 2.1041 | 2.1059 | 2.1077 | 2.1095 | 2.1112 |
| 2.1130 | 2.1147 | 2.1164 | 2.1180 | 2.1197 | 2.1213 | 2.1229 |
| 2.1245 | 2.1261 | 2.1277 | 2.1292 | 2.1307 | 2.1322 | 2.1337 |
| 2.1352 | 2.1367 | 2.1382 | 2.1396 | 2.1410 | 2.1425 | 2.1439 |
| 2.1452 | 2.1466 | 2.1480 | 2.1494 | 2.1507 | 2.1520 | 2.1533 |
| 2.1547 | 2.1560 | 2.1572 | 2.1585 | 2.1598 | 2.1611 | 2.1623 |
| 2.1635 | 2.1648 | 2.1660 | 2.1672 | 2.1684 | 2.1696 | 2.1708 |
| 2.1720 | 2.1731 | 2.1743 | 2.1754 | 2.1766 | 2.1777 | 2.1789 |
| 2.1800 | 2.1811 | 2.1822 | 2.1833 | 2.1844 | 2.1855 | 2.1866 |
| 2.1876 | 2.1887 | 2.1897 | 2.1908 | 2.1918 | 2.1929 | 2.1939 |
| 2.1949 | 2.1960 | 2.1970 | 2.1980 | 2.1990 | 2.2000 |        |

\*S EXISTING BASIN A - PROPERTY

COMPUTE NM HYD ID=1 HYD NO=100.00 AREA=0.00164 SQ MI  
PER A=20 PER B=50 PER C=20 PER D=10  
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420  
UNIT PEAK = .64748 CFS UNIT VOLUME = .9815 B = 526.28 P60 = 1.9000  
AREA = .000164 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .132452HR TP = .133300HR K/TP RATIO = .993639 SHAPE CONSTANT, N = 3.553181  
UNIT PEAK = 3.5897 CFS UNIT VOLUME = .9965 B = 324.19 P60 = 1.9000  
AREA = .001476 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 100.00

RUNOFF VOLUME = .80955 INCHES = .0708 ACRE-FEET  
PEAK DISCHARGE RATE = 2.40 CFS AT 1.500 HOURS BASIN AREA = .0016 SQ. MI.

\*S PROPOSED BASIN A - PROPERTY

COMPUTE NM HYD ID=2 HYD NO=200.00 AREA=0.0016 SQ MI  
PER A=0 PER B=26 PER C=0 PER D=74  
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420  
UNIT PEAK = 4.6745 CFS UNIT VOLUME = .9969 B = 526.28 P60 = 1.9000  
AREA = .001184 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

K = .130761HR TP = .133300HR K/TP RATIO = .980950 SHAPE CONSTANT, N = 3.599930  
UNIT PEAK = 1.0222 CFS UNIT VOLUME = .9874 B = 327.55 P60 = 1.9000  
AREA = .000416 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 200.00

RUNOFF VOLUME = 1.63218 INCHES = .1393 ACRE-FEET  
PEAK DISCHARGE RATE = 3.92 CFS AT 1.500 HOURS BASIN AREA = .0016 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 15:45:12

A large, stylized handwritten signature, possibly reading 'M. J. Smith', is written across the bottom right of the page. A long, straight diagonal line is drawn from the bottom left towards the top right, passing over the signature.

# CITY OF ALBUQUERQUE



December 7, 2007

Amy Niese, PE  
Isaacson & Arfman  
128 Monroe NE  
Albuquerque, NM 87108

Re: 12<sup>th</sup> Street Villas Drainage Report  
Engineer's Stamp dated 10-25-07, (G14/D80)

Dear Ms. Niese,

Based upon the information provided in your submittal dated 10-29-07, the above referenced report is approved for Preliminary Plat action by the DRB. Once that board approves the grading plan, please submit a mylar copy for my signature in order to obtain a Rough Grading Permit. Prior to Work Order or Final Plat, please resubmit the report addressing the comments mentioned in the letter dated November 13, 2007 by Paul Olson (encl.).

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. In addition to submitting an NOI to the EPA and preparing a SWPPP, please send a copy of the SWPPP on a CD in .pdf format to the following address:

P.O. Box 1293

Albuquerque

New Mexico 87103

[www.cabq.gov](http://www.cabq.gov)

Department of Municipal Development  
Storm Drainage Division  
P.O. Box 1293, One Civic Plaza, Rm. 301  
Attn: Kathy Verhage  
Albuquerque, NM 87103

If you have any questions about this permit, please feel free to call the Municipal Development Department, Hydrology section at 768-3654.

Prior to Release of SIA and Financial Guarantees, an Engineer's Certification of this grading plan will be required.

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

Sincerely,

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

C: ✓ Kathy Verhage, DMD  
Paul Olson  
file

# CITY OF ALBUQUERQUE



December 7, 2007

Amy Niese, PE  
Isaacson & Arfman  
128 Monroe NE  
Albuquerque, NM 87108

**Re: 12<sup>th</sup> Street Villas Drainage Report**  
**Engineer's Stamp dated 10-25-07, (G14/D80)**

Dear Ms. Niese,

Based upon the information provided in your submittal dated 10-29-07, the above referenced report is approved for Preliminary Plat action by the DRB. Once that board approves the grading plan, please submit a mylar copy for my signature in order to obtain a Rough Grading Permit. Prior to Work Order or Final Plat, please resubmit the report addressing the comments mentioned in the letter dated November 13, 2007 by Paul Olson (encl.).

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. In addition to submitting an NOI to the EPA and preparing a SWPPP, please send a copy of the SWPPP on a CD in .pdf format to the following address:

P.O. Box 1293

Albuquerque

New Mexico 87103

[www.cabq.gov](http://www.cabq.gov)

Department of Municipal Development  
Storm Drainage Division  
P.O. Box 1293, One Civic Plaza, Rm. 301  
Attn: Kathy Verhage  
Albuquerque, NM 87103

If you have any questions about this permit, please feel free to call the Municipal Development Department, Hydrology section at 768-3654.

Prior to Release of SIA and Financial Guarantees, an Engineer's Certification of this grading plan will be required.

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

Sincerely,

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

C: Kathy Verhage, DMD  
Paul Olson  
file

November 13, 2007

Amy L. D. Niese, PE  
Isaacson & Arfman, P.A.  
128 Monroe Street NE  
Albuquerque, NM 87108

**RE: Grading and Drainage Report for 12<sup>th</sup> Street Villas Subdivision,  
G-14/D080**

Dear Amy L. D. Niese, PE:

**The drainage report and grading plan received on October 29, 2007 for 12<sup>th</sup> Street Villas Subdivision, G-14/D080 project is not approved.** Many of the calculations appear to use an AHYMO model that uses a different area than that described in the report. This calculation error is then repeated in subsequent calculations resulting in an under representation of the runoff from the site.

The site is not an infill project and as a subdivision must fully represent how it will affect the City of Albuquerque drainage system. The drainage of 12<sup>th</sup> Street may be impacted by the development. However, it should be noted that the likely the impact is less than that described in the grading and drainage report for the 100-yr frequency event. It appears that the grading and drainage report describes the site's existing conditions with a majority of treatment type A conditions. It is difficult to determine in reviewing the grading and drainage report since it appears that there is an error in the calculation of treatment types for the existing conditions. Please verify the current conditions. Area images appear to show little treatment type A at the site.

**Required Comments to Address:**

- Correct calculations used in AHYMO for apparent discrepancies in area conversions and existing condition treatment types.
- Determine the impact of this development on the City of Albuquerque's drainage system

Please follow the outline and submittal guidance as described in Section 7 the City of Albuquerque's Development Process Manual Chapter 22. Please include all relevant hydrologic parameters and hydraulic calculations used in the analysis of the project site.

If you have any questions please contact me.



Paul Olson  
Construction Engineer  
505-924-3421

✓ Cc: Brad Bingham, COA Planning Dept., Principal Engineer Hydrology and Hydraulics

**DRAINAGE AND TRANSPORTATION INFORMATION SHEET**  
(Rev. 12/05)

PROJECT TITLE: 12<sup>th</sup> Street Villas ZONE MAP/DRG. FILE # G14 / 2080  
DRB#: 1005536 EPC#: \_\_\_\_\_ WORK ORDER#: \_\_\_\_\_

LEGAL DESCRIPTION: Lots 57, 58, and 59 Rossiter Addition  
CITY ADDRESS: 4421, 4503, 4505 12<sup>th</sup> Street

ENGINEERING FIRM: ISSACSON & ARFMAN, PA  
ADDRESS: 128 MONROE NE  
CITY, STATE: ALBUQUERQUE, NM

CONTACT: Amy L. D. Niese, PE  
PHONE: 268-8828  
ZIP CODE: 87108

OWNER: BCR Construction  
ADDRESS: PO Box 7489  
CITY, STATE: Albuquerque, NM

CONTACT: Billy Baca  
PHONE: 345-1983  
ZIP CODE: 87194

ARCHITECT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

SURVEYOR: Harris Surveying  
ADDRESS: 2412-D Monroe Street  
CITY, STATE: Albuquerque, NM

CONTACT: Tony Harris  
PHONE: 889-8056  
ZIP CODE: 87110

CONTRACTOR: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE: \_\_\_\_\_

CONTACT: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
ZIP CODE: \_\_\_\_\_

**TYPE OF SUBMITTAL:**

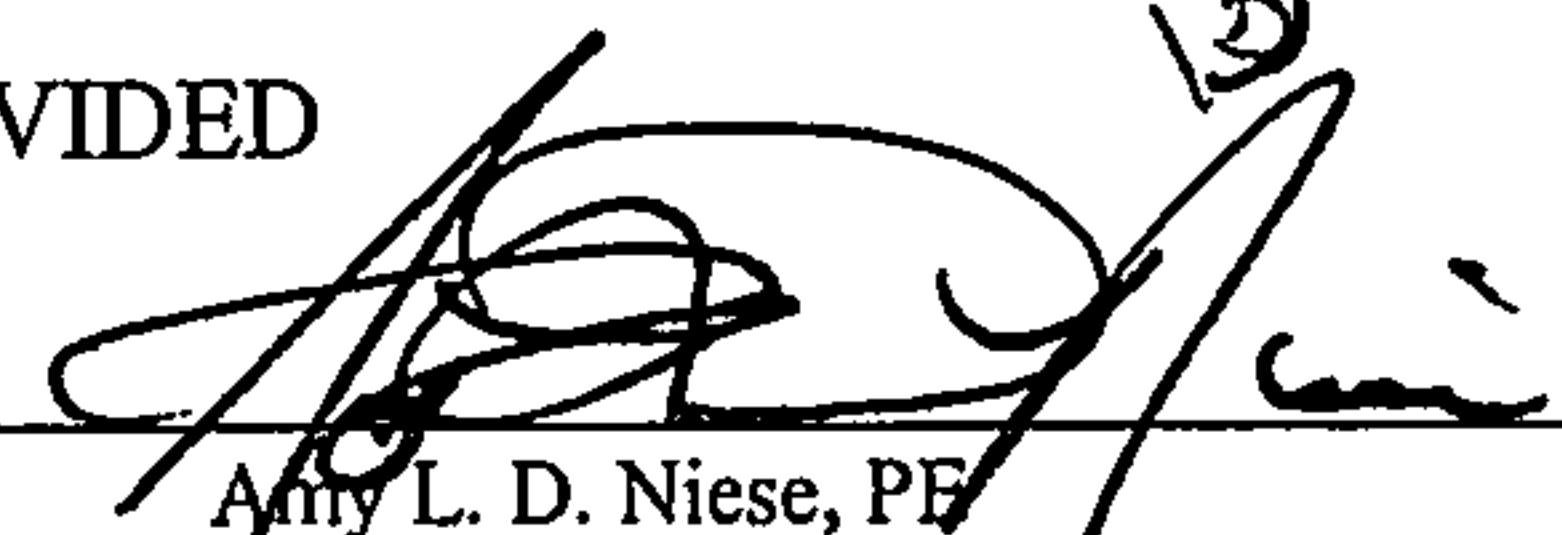
- ☒ DRAINAGE REPORT  
☐ DRAINAGE PLAN 1<sup>st</sup> SUBMITTAL  
☐ DRAINAGE PLAN RESUBMITTAL  
☐ CONCEPTUAL G & D PLAN  
☐ GRADING PLAN  
☐ EROSION CONTROL PLAN  
☐ ENGINEER'S CERT (HYDROLOGY)  
☐ CLOMR/LOMR  
☐ TRAFFIC CIRCULATION LAYOUT  
☐ ENGINEER/ARCHITECT CERT (TCL)  
☐ ENGINEER/ARCHITECT CERT (DRB S.P.)  
☐ ENGINEER/ARCHITECT CERT (AA)  
☐ OTHER (SPECIFY) \_\_\_\_\_

**CHECK TYPE OF APPROVAL SOUGHT:**

- ☐ SIA/FINANCIAL GUARANTEE RELEASE  
☒ PRELIMINARY PLAT APPROVAL  
☐ S. DEV. PLAN FOR SUB'D APPROVAL  
☐ S. DEV. 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:

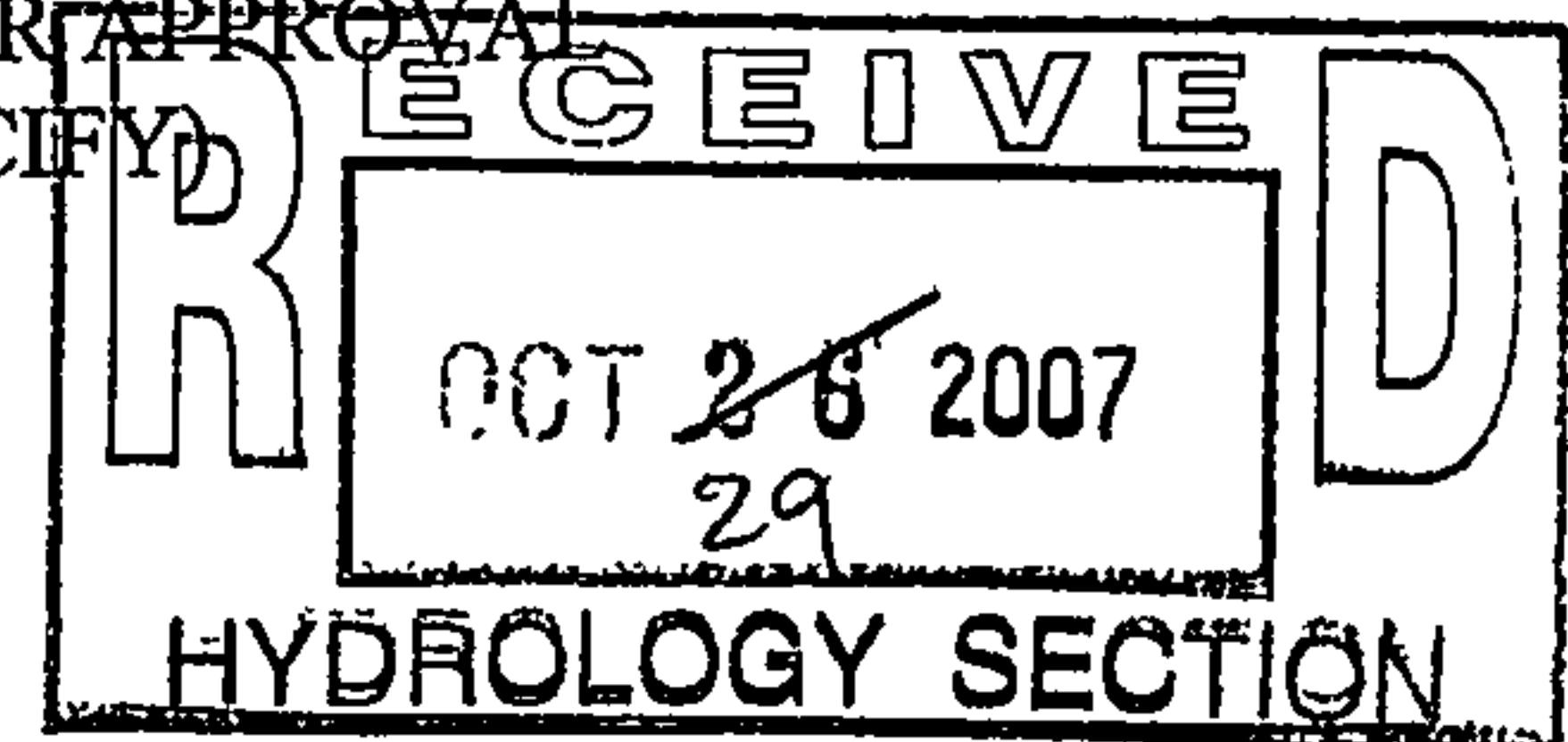
- ☒ YES  
☐ NO  
☐ COPY PROVIDED

SUBMITTED BY:  DATE: 10/26/07  
Amy L. D. Niese, 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 to the proposed development define 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 subdivision containing more than ten (10) lots or constituting five (5) acres or more.

*CALLER*



**GRADING AND DRAINAGE REPORT**

**FOR**

**12<sup>TH</sup> STREET VILLAS  
SUBDIVISION**

**ALBUQUERQUE, NEW MEXICO  
OCTOBER 2007**

# **GRADING AND DRAINAGE REPORT**

**FOR**

## **12<sup>TH</sup> STREET VILLAS SUBDIVISION**

**ALBUQUERQUE, NEW MEXICO  
OCTOBER 2007**

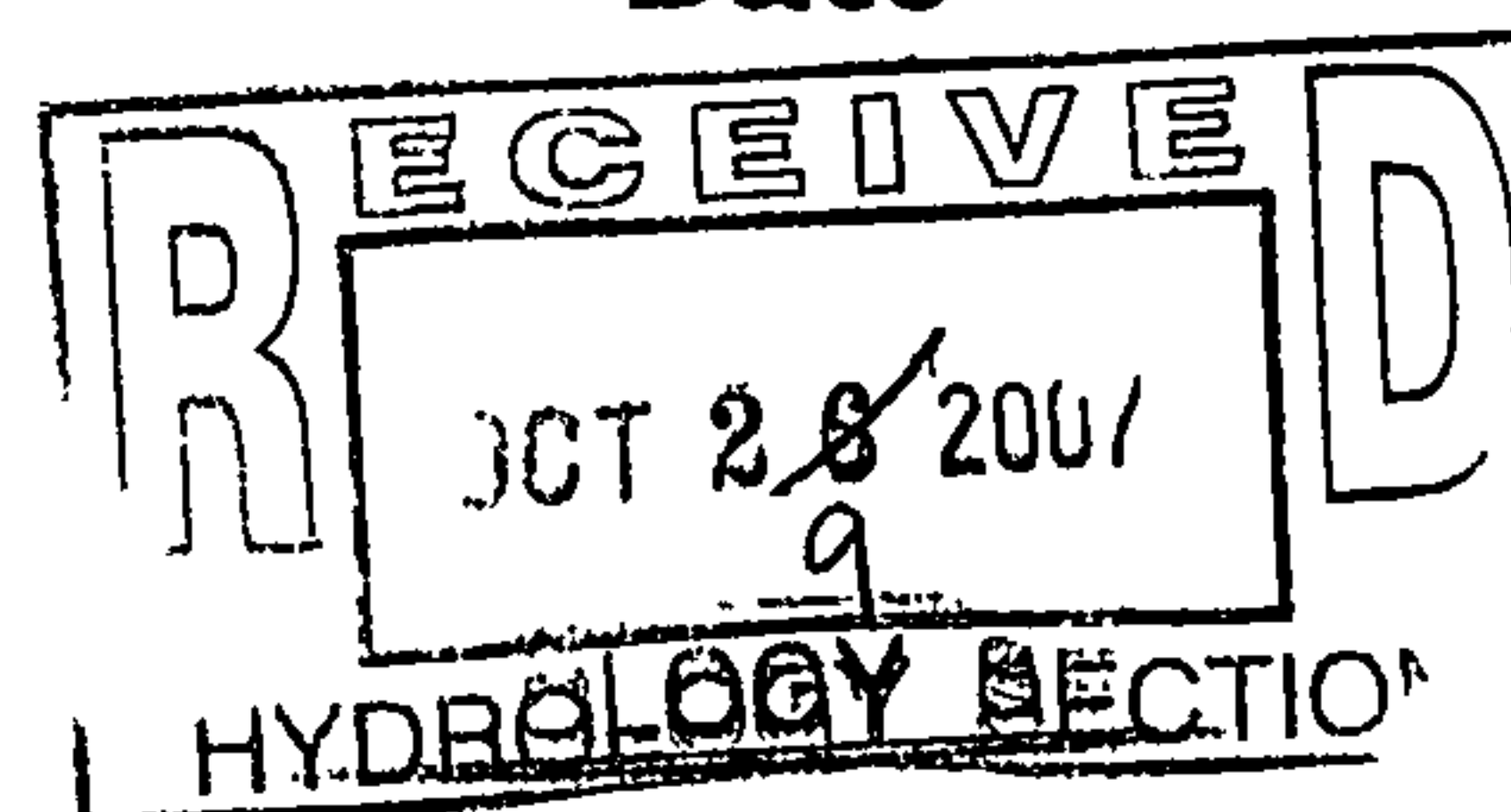
**Prepared by:**

**ISAACSON & ARFMAN, P.A.  
128 Monroe Street NE  
Albuquerque, NM 87108  
(505) 268-8828**



  
\_\_\_\_\_  
Amy L. D. Niese, PE

**Date**



## **TABLE OF CONTENTS**

- I. PROJECT INFORMATION**
  - Zone Atlas Map Exhibit
- II. INTRODUCTION**
- III. EXISTING CONDITIONS**
  - Basin Map Exhibit
  - FIRM Map Exhibit
- IV. PROPOSED CONDITIONS**
  - Preliminary Plat
  - Grading and Drainage Plan Exhibit
  - Road Section Exhibit
- V. SUMMARY AND CONCLUSIONS**

**APPENDIX A: AHYMO Run**

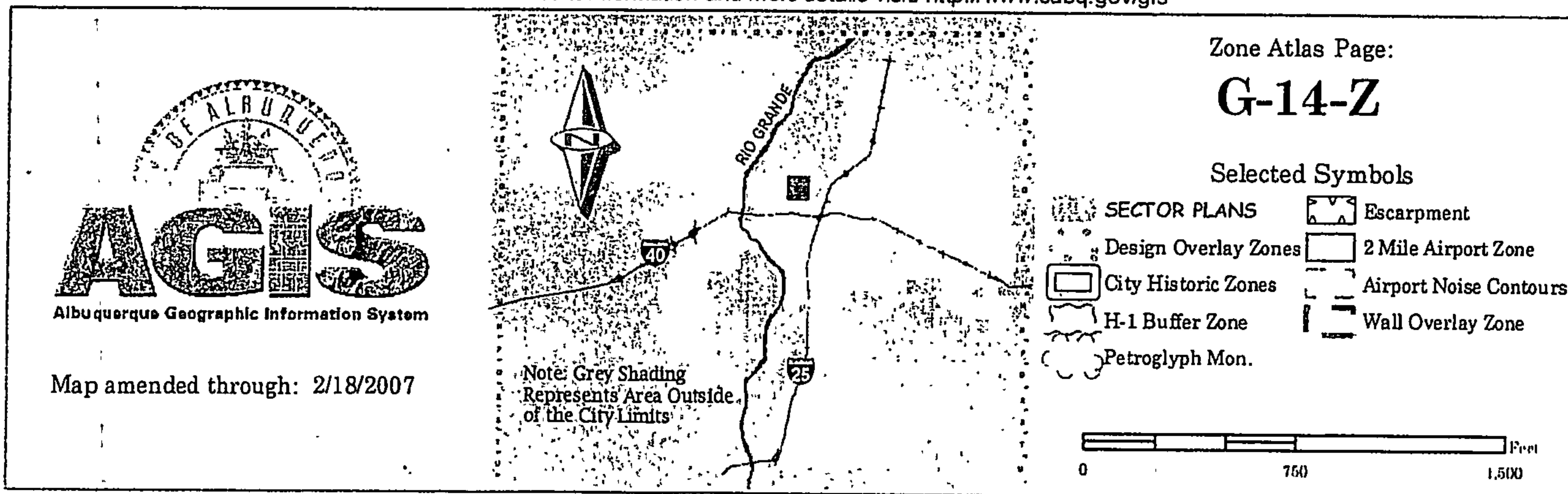
**APPENDIX B: Calculations**

**I. 12<sup>th</sup> STREET VILLAS PROJECT INFORMATION**

|                            |                                                                                            |
|----------------------------|--------------------------------------------------------------------------------------------|
| Existing Legal Description | Lots 57, 58, and 59, Rossiter Addition                                                     |
| Developer                  | BCR Construction<br>PO Box 7489<br>Albuquerque, NM 87194                                   |
| Engineer                   | Isaacson and Arfman, PA<br>128 Monroe Street NE<br>Albuquerque, NM 87108<br>(505) 268-8828 |
| Surveyor                   | Harris Surveying, Inc<br>2412-D Monroe Street NE<br>Albuquerque, NM 87110                  |
| Zoning                     | R-2                                                                                        |
| Number of Existing Lots    | 3 total                                                                                    |
| Number of Proposed Lots    | 15 total                                                                                   |
| Total Area (acre)          | 1.05                                                                                       |
| Flood Plain                | Zone X<br>FIRM Map 35001C0119E dated November 19, 2003                                     |



For more current information and more details visit <http://www.cabq.gov/gis>



## **II. INTRODUCTION**

This Grading and Drainage Report is for 12<sup>th</sup> Street Villas. The site is located on Zone Map G14 which is on the previous page. This report is being submitted for Grading and Drainage approval.

## **III. EXISTING CONDITIONS**

Currently, the site has three lots with two homes on it. The exposed areas are either grass or dirt. Generally, the northeast corner of this site drains to 12<sup>th</sup> Street. The remaining portion of the site ponds in the back yards. The site is very flat. Please see the following Basin Map.

The site is surrounded by 12<sup>th</sup> Street to the east and residential homes on the north, south, and west. A block wall exists on the north side of the site so no drainage crosses from the north to this site. The lots on the west and south are very flat. Ponding occurs in the back yards of those lots. Overall, the site and surrounding areas are very flat.

12<sup>th</sup> Street has existing inlets on the west and east side of the street. A 27 inch RCP storm drain is also in 12<sup>th</sup> Street.

The total existing 100 year flow for this site is 1.88 cfs. The existing impervious area is 9%. Please see Appendix A for the AHYMO run.

*8/14/05 only*  
The site is contained in Zone X per FIRM Map 35001C0119E dated November 19, 2003. See the following FIRM Map. The site is not in the 100 year flood plain.

The zoning is R-2.

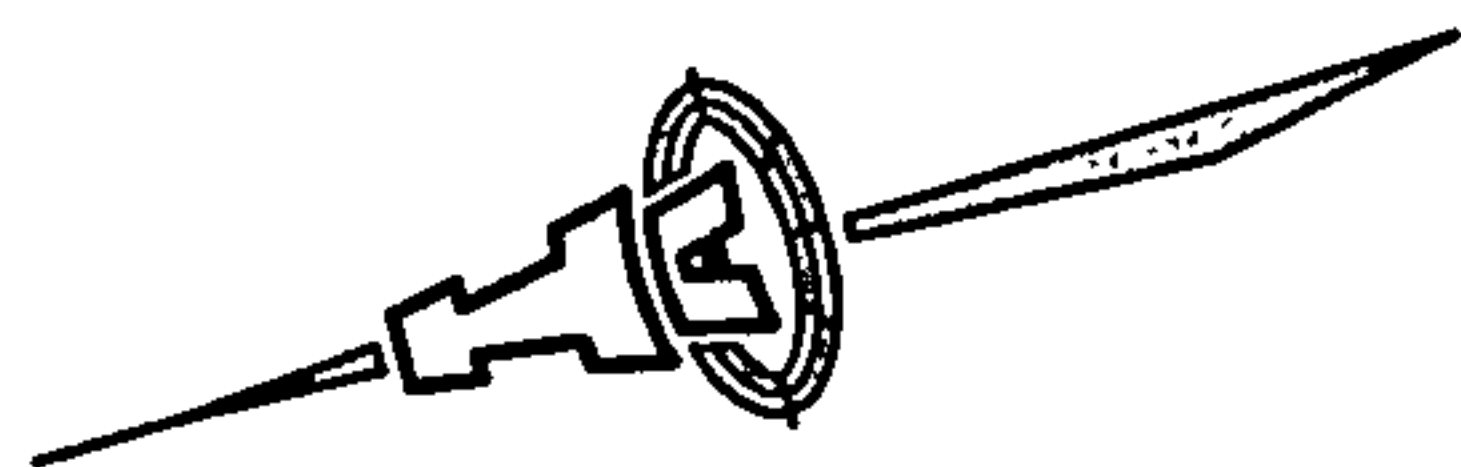
12TH STREET

C.A.

12TH STREET

C.A.

| Country | Year | Value |
|---------|------|-------|
| China   | 2000 | 1.00  |
| China   | 2001 | 1.00  |
| China   | 2002 | 1.00  |
| China   | 2003 | 1.00  |
| China   | 2004 | 1.00  |
| China   | 2005 | 1.00  |
| China   | 2006 | 1.00  |
| China   | 2007 | 1.00  |
| China   | 2008 | 1.00  |
| China   | 2009 | 1.00  |
| China   | 2010 | 1.00  |
| China   | 2011 | 1.00  |
| China   | 2012 | 1.00  |
| China   | 2013 | 1.00  |
| China   | 2014 | 1.00  |
| China   | 2015 | 1.00  |
| China   | 2016 | 1.00  |
| China   | 2017 | 1.00  |
| China   | 2018 | 1.00  |
| China   | 2019 | 1.00  |
| China   | 2020 | 1.00  |
| China   | 2021 | 1.00  |
| China   | 2022 | 1.00  |
| China   | 2023 | 1.00  |
| China   | 2024 | 1.00  |
| China   | 2025 | 1.00  |
| China   | 2026 | 1.00  |
| China   | 2027 | 1.00  |
| China   | 2028 | 1.00  |
| China   | 2029 | 1.00  |
| China   | 2030 | 1.00  |
| China   | 2031 | 1.00  |
| China   | 2032 | 1.00  |
| China   | 2033 | 1.00  |
| China   | 2034 | 1.00  |
| China   | 2035 | 1.00  |
| China   | 2036 | 1.00  |
| China   | 2037 | 1.00  |
| China   | 2038 | 1.00  |
| China   | 2039 | 1.00  |
| China   | 2040 | 1.00  |
| China   | 2041 | 1.00  |
| China   | 2042 | 1.00  |
| China   | 2043 | 1.00  |
| China   | 2044 | 1.00  |
| China   | 2045 | 1.00  |
| China   | 2046 | 1.00  |
| China   | 2047 | 1.00  |
| China   | 2048 | 1.00  |
| China   | 2049 | 1.00  |
| China   | 2050 | 1.00  |
| China   | 2051 | 1.00  |
| China   | 2052 | 1.00  |
| China   | 2053 | 1.00  |
| China   | 2054 | 1.00  |
| China   | 2055 | 1.00  |
| China   | 2056 | 1.00  |
| China   | 2057 | 1.00  |
| China   | 2058 | 1.00  |
| China   | 2059 | 1.00  |
| China   | 2060 | 1.00  |
| China   | 2061 | 1.00  |
| China   | 2062 | 1.00  |
| China   | 2063 | 1.00  |
| China   | 2064 | 1.00  |
| China   | 2065 | 1.00  |
| China   | 2066 | 1.00  |
| China   | 2067 | 1.00  |
| China   | 2068 | 1.00  |
| China   | 2069 | 1.00  |
| China   | 2070 | 1.00  |
| China   | 2071 | 1.00  |
| China   | 2072 | 1.00  |
| China   | 2073 | 1.00  |
| China   | 2074 | 1.00  |
| China   | 2075 | 1.00  |
| China   | 2076 | 1.00  |
| China   | 2077 | 1.00  |
| China   | 2078 | 1.00  |
| China   | 2079 | 1.00  |
| China   | 2080 | 1.00  |
| China   | 2081 | 1.00  |
| China   | 2082 | 1.00  |
| China   | 2083 | 1.00  |
| China   | 2084 | 1.00  |
| China   | 2085 | 1.00  |
| China   | 2086 | 1.00  |
| China   | 2087 | 1.00  |
| China   | 2088 | 1.00  |
| China   | 2089 | 1.00  |
| China   | 2090 | 1.00  |
| China   | 2091 | 1.00  |
| China   | 2092 | 1.00  |
| China   | 2093 | 1.00  |
| China   | 2094 | 1.00  |
| China   | 2095 | 1.00  |
| China   | 2096 | 1.00  |
| China   | 2097 | 1.00  |
| China   | 2098 | 1.00  |
| China   | 2099 | 1.00  |
| China   | 2100 | 1.00  |
| China   | 2101 | 1.00  |
| China   | 2102 | 1.00  |
| China   | 2103 | 1.00  |
| China   | 2104 | 1.00  |
| China   | 2105 | 1.00  |
| China   | 2106 | 1.00  |
| China   | 2107 | 1.00  |
| China   | 2108 | 1.00  |
| China   | 2109 | 1.00  |
| China   | 2110 | 1.00  |
| China   | 2111 | 1.00  |
| China   | 2112 | 1.00  |
| China   | 2113 | 1.00  |
| China   | 2114 | 1.00  |
| China   | 2115 | 1.00  |
| China   | 2116 | 1.00  |
| China   | 2117 | 1.00  |
| China   | 2118 | 1.00  |
| China   |      |       |



|   |    |    |     |     |
|---|----|----|-----|-----|
| 0 | 25 | 50 | 100 | 150 |
|   |    |    |     |     |
|   |    |    |     |     |

**SCALE 1"-50'**

# 12TH STREET VILLAS BASIN MAP

ISAACSON & ARFMAN, P.A.

## Consulting Engineering Associates

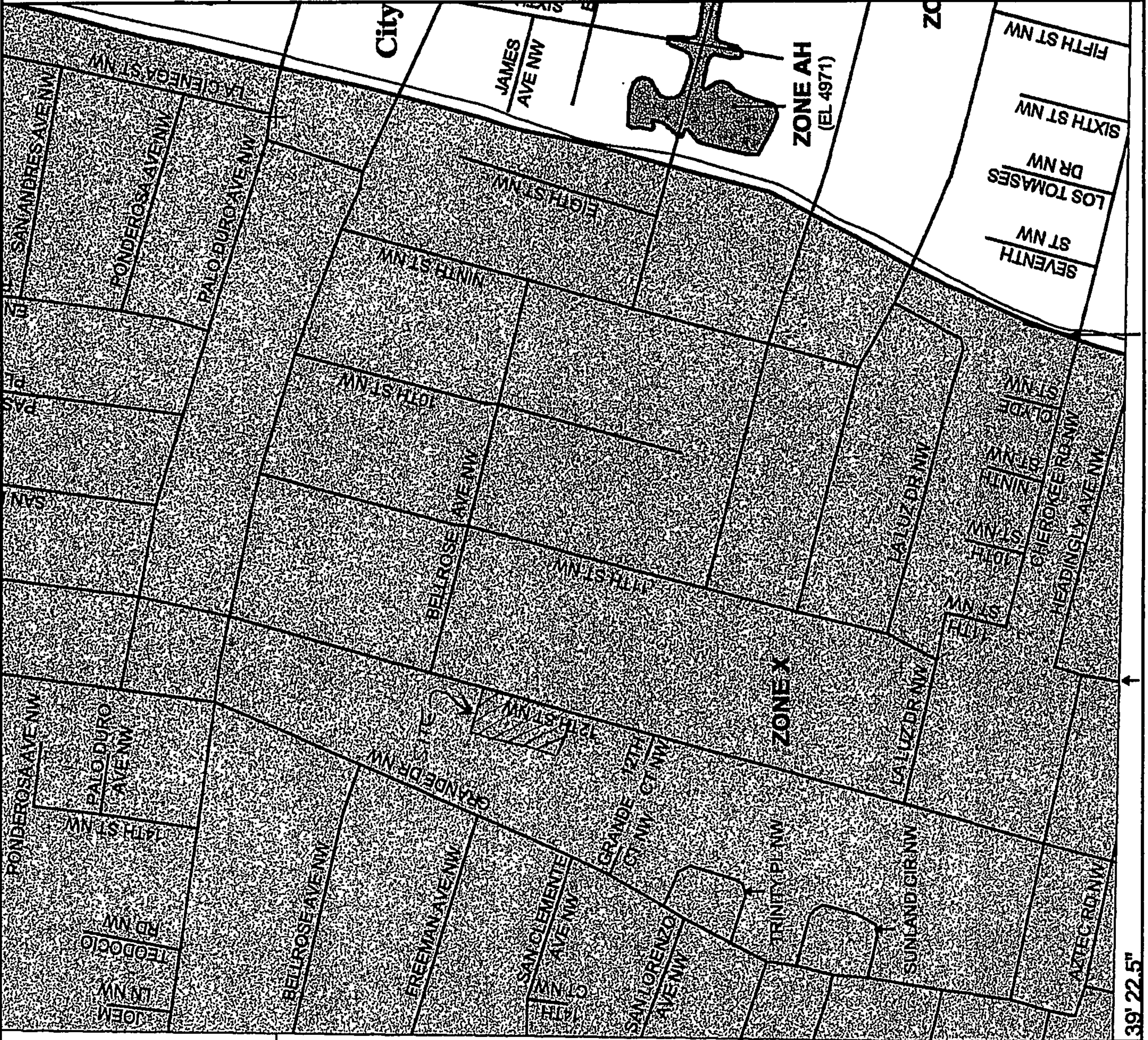
128 Monroe Street N.E.

Albuquerque, New Mexico 87108

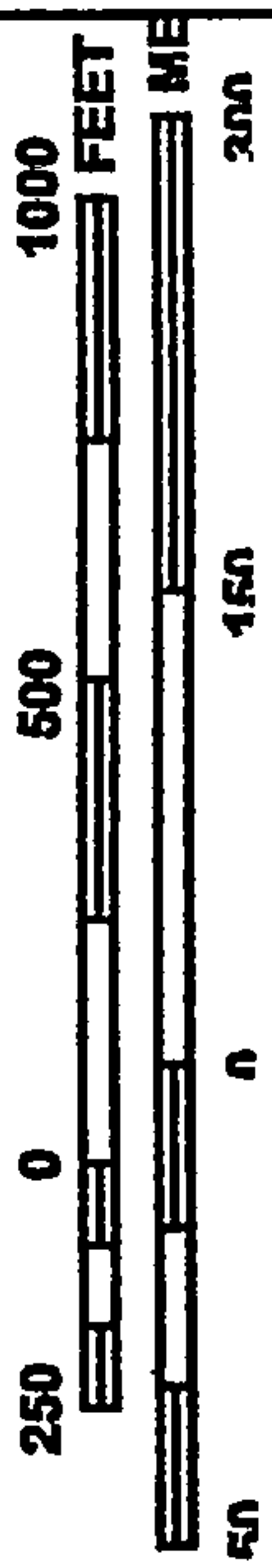
Ph. 505-268-8828 Fax. 505-268-2632

Oct 24, 2007

1593EXH-BASIN MAP.dwg



MAP SCALE 1" = 500'



**NATIONAL FLOOD INSURANCE PROGRAM**

|                                              |                             |        |      |   |
|----------------------------------------------|-----------------------------|--------|------|---|
| <b>PANEL 0119E</b>                           |                             |        |      |   |
| <b>FIRM</b>                                  |                             |        |      |   |
| <b>FLOOD INSURANCE RATE MAP</b>              |                             |        |      |   |
| <b>BERNALILLO COUNTY, NEW MEXICO</b>         |                             |        |      |   |
| <b>AND INCORPORATED AREAS</b>                |                             |        |      |   |
| <b>PANEL 119 OF 825</b>                      |                             |        |      |   |
| (SEE MAP INDEX FOR FIRM PANEL LAYOUT)        |                             |        |      |   |
| <b>CONTAINS:</b>                             | <b>NUMBER PANEL SUFFIX</b>  |        |      |   |
| <b>COMMUNITY</b>                             | <b>ALBUQUERQUE, CITY OF</b> | 350002 | 0119 | E |
| <b>BERNALILLO COUNTY</b>                     | 350001                      | 0119   | E    |   |
| <b>LOS RANCHOS DE ALBUQUERQUE VILLAGE OF</b> | 350123                      | 0119   | E    |   |

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on Insurance applications for the subject community.

**MAP NUMBER**  
35001C0119E

**MAP REVISED**  
NOVEMBER 19, 2003

**Federal Emergency Management Agency**

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

# LEGEND



## SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.



## FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.



## OTHER FLOOD AREAS

- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.



## OTHER AREAS

- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.



## COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS



## OTHERWISE PROTECTED AREAS (OPAs)

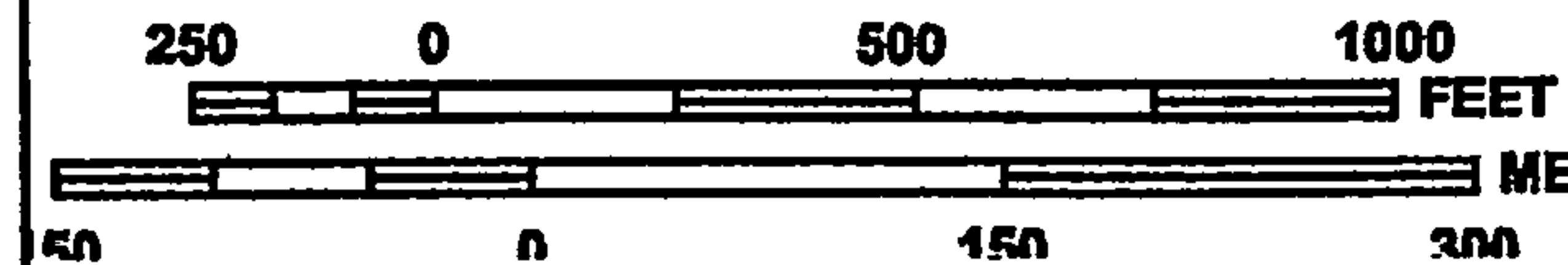
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.



Floodplain boundary

Floodway boundary

MAP SCALE 1" = 500'



NFIP

PANEL 0119E

**FIRM**

FLOOD INSURANCE RATE MAP

**BERNALILLO COUNTY,  
NEW MEXICO  
AND INCORPORATED AREAS**

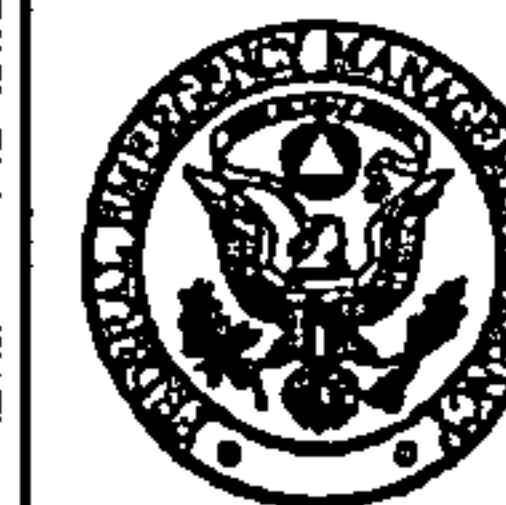
**PANEL 119 OF 825**

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

### CONTAINS:

| COMMUNITY                                    | NUMBER | PANEL | SUFFIX |
|----------------------------------------------|--------|-------|--------|
| ALBUQUERQUE, CITY OF                         | 350002 | 0119  | E      |
| BERNALILLO COUNTY                            | 350001 | 0119  | E      |
| LOS RANCHOS<br>DE ALBUQUERQUE<br>VILLAGE OF, | 350123 | 0119  | E      |

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



**MAP NUMBER  
35001C0119E**

**MAP REVISED  
NOVEMBER 19, 2003**

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

## **PROPOSED CONDITIONS**

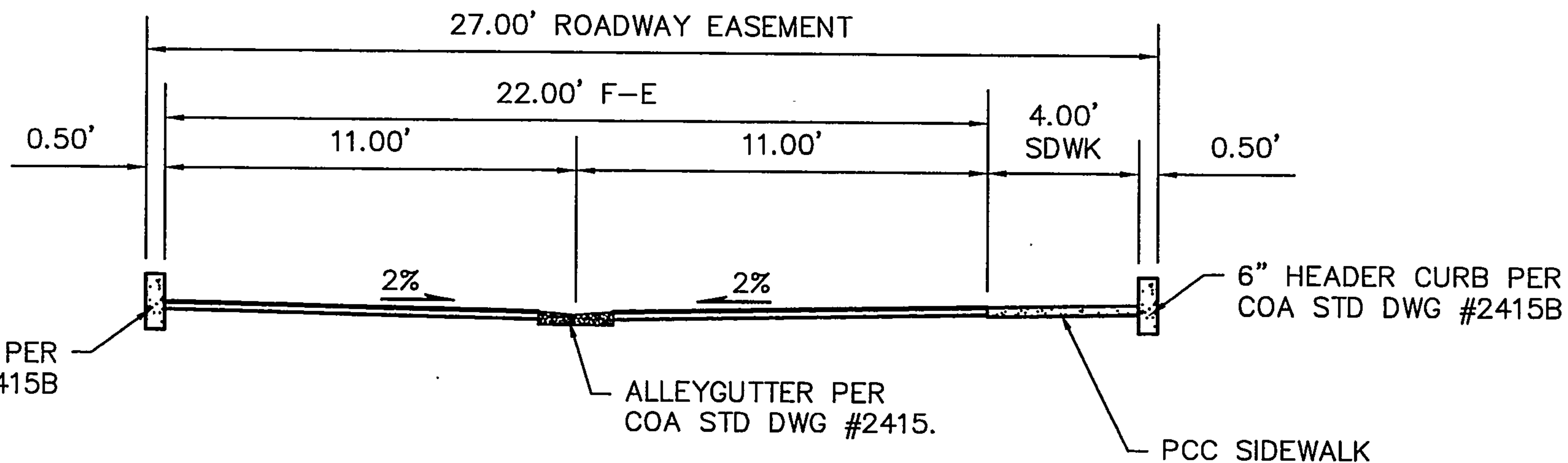
This site will be developed into 15 town homes on a private road. The zoning will remain R-2. See the enclosed Preliminary Plat.

The total proposed 100 year flow for this subdivision is 3.92 cfs. The proposed impervious area is 74%. Please see the AHYMO run in Appendix A. This site is an infill site so it will free discharge to 12<sup>th</sup> Street.

Roof drains from all of the town homes will be directed to the internal street, John Marc Lane. Please see the enclosed Grading and Drainage Plan. The road section for John Marc Lane will be an alley with a valley gutter in the middle and header curb on both sides. Please see the following Road Section. The flow going to John Marc Lane is 3.38 cfs. The alley section without header curb has capacity for 3.77 cfs which is greater than the actual flow of 3.38 cfs. Please see the Calculations for this site in Appendix B. 65% of the flow (2.20 cfs) in John Marc Lane will go north to free discharge to 12<sup>th</sup> Street and 35% of the flow (1.18 cfs) in John Marc Lane will go south to drain to 12<sup>th</sup> Street.

The existing inlet in 12<sup>th</sup> Street will be converted to a Type D inlet. Another inlet will be added in 12<sup>th</sup> Street near the southern property line of this site. This will provide additional capacity since the Type D inlet will not have a throat on it.

For the lots on the west side of the site, the backyards will drain into a private 10 inch diameter storm line that will eventually drain to a proposed Type A inlet in 12<sup>th</sup> Street. That inlet will connect to a 24 inch RCP that will connect to an existing manhole in 12<sup>th</sup> Street. For the lots on the east side of the street, the backyards will drain a total of 0.18 cfs below wrought iron gates to 12<sup>th</sup> Street.



## ROAD SECTION

SCALE: 1"=5'

## 12TH STREET VILLAS

ISAACSON & ARFMAN, P.A.

Consulting Engineering Associates

128 Monroe Street N.E.

Albuquerque, New Mexico 87108

Ph. 505-268-8828 Fax. 505-268-2632

1593PMSTR.dwg

Oct 18, 2007

#### **IV. SUMMARY AND CONCLUSIONS**

##### Existing Conditions

The site has 3 lots with two existing homes. The exposed ground is grass or dirt. The site is not within the 100 year flood plain. The site and surrounding areas are very flat. The existing total flow is 1.88 cfs.

##### Proposed Conditions

The site will be developed into 15 town homes. The proposed flow is 3.92 cfs. This site is an infill site. As a result, all of the drainage will free discharge to 12<sup>th</sup> Street by pipe or surface drainage.

# **APPENDIX A**

**AHYMO Run**

AHYMO PROGRAM SUMMARY TABLE (AHYMO\_97) -  
INPUT FILE = 1593.dat

AHYMO.SUM

- VERSION: 1997.02d

RUN DATE (MON/DAY/YR) =10/11/2007  
USER NO.= AHYMO-I-9702dIsa-Arfman1

| COMMAND                        | HYDROGRAPH<br>IDENTIFICATION | FROM<br>ID<br>NO. | TO<br>ID<br>NO. | AREA<br>(SQ MI) | PEAK<br>DISCHARGE<br>(CFS) | RUNOFF<br>VOLUME<br>(AC-FT) | RUNOFF<br>(INCHES) | TIME TO<br>PEAK<br>(HOURS) | CFS<br>PER<br>ACRE | PAGE = 1<br>NOTATION      |
|--------------------------------|------------------------------|-------------------|-----------------|-----------------|----------------------------|-----------------------------|--------------------|----------------------------|--------------------|---------------------------|
| *S                             |                              |                   |                 |                 |                            |                             |                    |                            |                    |                           |
| *S                             |                              |                   |                 |                 |                            |                             |                    |                            |                    |                           |
| *S                             |                              |                   |                 |                 |                            |                             |                    |                            |                    |                           |
| START                          |                              |                   |                 |                 |                            |                             |                    |                            |                    |                           |
| RAINFALL TYPE= 1               |                              |                   |                 |                 |                            |                             |                    |                            |                    | TIME= .00<br>RAIN6= 2.200 |
| *S EXISTING BASIN A - PROPERTY |                              |                   |                 |                 |                            |                             |                    |                            |                    |                           |
| COMPUTE NM HYD                 | 100.00                       | -                 | 1               | .00160          | 1.88                       | .056                        | .65339             | 1.533                      | 1.833              | PER IMP= 8.57             |
| *S PROPOSED BASIN A - PROPERTY |                              |                   |                 |                 |                            |                             |                    |                            |                    |                           |
| COMPUTE NM HYD                 | 200.00                       | -                 | 2               | .00160          | 3.92                       | .139                        | 1.63218            | 1.500                      | 3.830              | PER IMP= 74.00            |
| FINISH                         |                              |                   |                 |                 |                            |                             |                    |                            |                    |                           |

\*S 12TH STREET TOWNHOMES  
\*S BCR CONSTRUCTION  
\*S

\*\*\*\*\*

\*

\* 1593.DAT

\* OCTOBER 11, 2007

\* BY AMY L. D. NIESE, PE

\*

\*

\* A 1.0522 ACRE SITE BOUNDED BY 12th STREET

\*

\*

\*

\*\*\*\*\*

START RAINFALL BEGINS AT 0.0 HRS  
RAINFALL TYPE=1 RAIN QUARTER=0 RAIN ONE=1.90  
RAIN SIX=2.20 RAIN DAY=2.63 DT=0.03333HR

\*S EXISTING BASIN A - PROPERTY

COMPUTE NM HYD ID=1 HYD NO=100.00 AREA=0.0016 SQ MI  
PER A=65 PER B=25 PER C=6 PER D=9  
TP=-0.1333 HR MASS RAIN=-1  
PRINT HYD ID=1 CODE=1

\*S PROPOSED BASIN A - PROPERTY

COMPUTE NM HYD ID=2 HYD NO=200.00 AREA=0.0016 SQ MI  
PER A=0 PER B=26 PER C=0 PER D=74  
TP=-0.1333 HR MASS RAIN=-1  
PRINT HYD ID=2 CODE=1

FINISH

AHYMO PROGRAM (AHYMO\_97) -

- Version: 1997.02d

RUN DATE (MON/DAY/YR) = 10/11/2007

START TIME (HR:MIN:SEC) = 15:38:51

USER NO.= AHYMO-I-9702dIsa-Arfman1

INPUT FILE = 1593.dat

\*S 12TH STREET TOWNHOMES  
\*S BCR CONSTRUCTION  
\*S

\*\*\*\*\*

\* 1593.DAT  
\* OCTOBER 11, 2007  
\* BY AMY L. D. NIESE, PE  
\*

\* A 1.0522 ACRE SITE BOUNDED BY 12th STREET  
\*  
\*

\*\*\*\*\*

START RAINFALL TYPE=1 RAIN QUARTER=0 RAIN ONE=1.90  
RAIN SIX=2.20 RAIN DAY=2.63 DT=0.03333HR

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

DT = .033330 HOURS END TIME = 5.999400 HOURS

|        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|
| .0000  | .0013  | .0027  | .0041  | .0055  | .0069  | .0084  |
| .0099  | .0115  | .0131  | .0147  | .0164  | .0181  | .0199  |
| .0217  | .0236  | .0256  | .0276  | .0296  | .0318  | .0340  |
| .0363  | .0387  | .0412  | .0438  | .0465  | .0493  | .0523  |
| .0554  | .0587  | .0622  | .0675  | .0731  | .0791  | .0920  |
| .1208  | .1651  | .2289  | .3159  | .4302  | .5759  | .7574  |
| .9790  | 1.1846 | 1.2704 | 1.3429 | 1.4074 | 1.4661 | 1.5201 |
| 1.5702 | 1.6171 | 1.6610 | 1.7023 | 1.7413 | 1.7781 | 1.8130 |
| 1.8460 | 1.8774 | 1.9071 | 1.9353 | 1.9621 | 1.9681 | 1.9736 |
| 1.9789 | 1.9839 | 1.9887 | 1.9932 | 1.9976 | 2.0018 | 2.0059 |
| 2.0098 | 2.0136 | 2.0172 | 2.0208 | 2.0242 | 2.0275 | 2.0308 |
| 2.0339 | 2.0370 | 2.0400 | 2.0430 | 2.0458 | 2.0486 | 2.0514 |
| 2.0540 | 2.0567 | 2.0592 | 2.0617 | 2.0642 | 2.0666 | 2.0690 |
| 2.0714 | 2.0737 | 2.0759 | 2.0781 | 2.0803 | 2.0825 | 2.0846 |
| 2.0867 | 2.0887 | 2.0907 | 2.0927 | 2.0947 | 2.0966 | 2.0985 |
| 2.1004 | 2.1023 | 2.1041 | 2.1059 | 2.1077 | 2.1095 | 2.1112 |
| 2.1130 | 2.1147 | 2.1164 | 2.1180 | 2.1197 | 2.1213 | 2.1229 |
| 2.1245 | 2.1261 | 2.1277 | 2.1292 | 2.1307 | 2.1322 | 2.1337 |
| 2.1352 | 2.1367 | 2.1382 | 2.1396 | 2.1410 | 2.1425 | 2.1439 |
| 2.1452 | 2.1466 | 2.1480 | 2.1494 | 2.1507 | 2.1520 | 2.1533 |
| 2.1547 | 2.1560 | 2.1572 | 2.1585 | 2.1598 | 2.1611 | 2.1623 |
| 2.1635 | 2.1648 | 2.1660 | 2.1672 | 2.1684 | 2.1696 | 2.1708 |
| 2.1720 | 2.1731 | 2.1743 | 2.1754 | 2.1766 | 2.1777 | 2.1789 |
| 2.1800 | 2.1811 | 2.1822 | 2.1833 | 2.1844 | 2.1855 | 2.1866 |
| 2.1876 | 2.1887 | 2.1897 | 2.1908 | 2.1918 | 2.1929 | 2.1939 |
| 2.1949 | 2.1960 | 2.1970 | 2.1980 | 2.1990 | 2.2000 |        |

\*S EXISTING BASIN A - PROPERTY

COMPUTE NM HYD ID=1 HYD NO=100.00 AREA=0.0016 SQ MI  
PER A=65 PER B=25 PER C=6 PER D=9  
TP=-0.1333 HR MASS RAIN=-1

\*\*\*\*\*WARNING\*\*\*\*\* SUM OF TREATMENT TYPES DOES NOT EQUAL 100 PERCENT OR TOTAL AREA

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420

UNIT PEAK = .54145 CFS UNIT VOLUME = .9786 B = 526.28 P60 = 1.9000  
AREA = .000137 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

3.124550 K = .151006HR TP = .133300HR K/TP RATIO = 1.132825 SHAPE CONSTANT, N =  
UNIT PEAK = 3.2025 CFS UNIT VOLUME = .9955 B = 291.82 P60 = 1.9000  
AREA = .001463 SQ MI IA = .59219 INCHES INF = 1.50812 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 100.00

RUNOFF VOLUME = .65339 INCHES = .0558 ACRE-FEET  
PEAK DISCHARGE RATE = 1.88 CFS AT 1.533 HOURS BASIN AREA = .0016 SQ. MI.

\*S PROPOSED BASIN A - PROPERTY

COMPUTE NM HYD ID=2 HYD NO=200.00 AREA=0.0016 SQ MI  
PER A=0 PER B=26 PER C=0 PER D=74  
TP=-0.1333 HR MASS RAIN=-1

7.106420 K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N =  
UNIT PEAK = 4.6745 CFS UNIT VOLUME = .9969 B = 526.28 P60 = 1.9000  
AREA = .001184 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

3.599930 K = .130761HR TP = .133300HR K/TP RATIO = .980950 SHAPE CONSTANT, N =  
UNIT PEAK = 1.0222 CFS UNIT VOLUME = .9874 B = 327.55 P60 = 1.9000  
AREA = .000416 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR  
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033330

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 200.00

RUNOFF VOLUME = 1.63218 INCHES = .1393 ACRE-FEET  
PEAK DISCHARGE RATE = 3.92 CFS AT 1.500 HOURS BASIN AREA = .0016 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 15:38:51

**APPENDIX B**

**Calculations**

# PROPOSED FLOWS

AREA OF PROP

$$1.0522 \text{ AC} = 45,834 \text{ SF} = 0.0016 \text{ sq mi}$$

CURRENT  
(TYPE D)

$$\text{IMPERV} = 240 + 784 + 980 + 144 + 768 + 1144 = 4060 \text{ SF} \quad 9\%$$

TYPE C

$$= 1824 + 1060 = 2884 \text{ SF}$$

TYPE B

25%

TYPE A

$$28,325 \text{ SF}$$

65%

$$9 + 6 + 25 + 65 = 105\% \quad 6\%$$

?

$$\rightarrow 1.88 \text{ CFS FROM ATTYMO}$$

## PROPOSED

TYPE

D

$$34,060 \text{ SF}$$

74%

TYPE

B

26%

$$\rightarrow 3.92 \text{ CFS FROM ATTYMO AND } 3.83 \text{ CFS/AC}$$

## FLOWS IN WESTERN BACKYARDS

$$275 \times 15 = 4125 \text{ SF}$$

$$4125 \text{ SF} \times 3.83 \frac{\text{CFS}}{\text{AC}} = 0.36 \text{ CFS}$$

## FLOWS IN EASTERN BACKYARDS

$$204 \times 10 = 2040$$

$$2040 \text{ SF} \times 3.83 \frac{\text{CFS}}{\text{AC}} = 0.18 \text{ CFS}$$

## FLOWS GOING TO JOHN MARC

$$3.92 \text{ CFS} - 0.36 - 0.18 = 3.38 \text{ CFS}$$

Using Table A-9

Zone 2

$$\text{Type D} = 4.7 \times 74\% = 3.478$$

$$\text{Type B} = 2.28 \times 26\% = 0.5928$$

$$4.07 \frac{\text{CFS}}{\text{AC}}$$

@ 3.83 cfs/acre they are 94% of regulations

$$\therefore \text{West} = 0.39 \text{ cfs}$$

$$\text{East} = 0.19 \text{ cfs}$$

$$\text{John Marc} = 3.71 \text{ cfs}$$

& used remaining area not subtraction scheme

JOHN MARC LANE

CAPACITY OF V-SECTION



$$Q = 1.49 A R^{2/3} S^{1/2}$$

$$A = 2\left(\frac{1}{2}\right) 11 (.22) = 2.42$$

$$WP = 2(11.0) = 22$$

$$R = \frac{A}{WP} = \frac{2.42}{22} = 0.11$$

$$Q = \frac{1.49 (2.42) (.11)^{2/3} \sqrt{.017}}{.017} = 3.77 \text{ CFS}$$

ASSUME: ROOF DRAINS GO TO STREET  
BACKYARDS TO STORM LINES OR 12<sup>th</sup>

$$\text{AREA TO JOHN MARC} = .275 \times 137 = 37,688 \text{ SF} = 0.865 \text{ AC}$$

$$3.830 \text{ CFS/AC} \times 0.865 \text{ AC} = 3.31 \text{ CFS TO ROAD} < 3.77 \text{ ✓}$$

(WHICH SPLITS TO N+S)

The 3.31 cfs differs  
from last page.

0.865 acres to  
Street

# SIZE PRIVATE STORM DRAIN PIPES

FROM ATTYMO  $Q/A = 3.830 \text{ CFS/AC}$

AREA OF BACKYARDS + TOWNHOUSES (SHOULD JUST BE BACKYARDS)  
 $64 \times 275 = 17,600 \text{ SF} = 0.404 \text{ AC}$

$$Q = 3.830 \times 0.404 \text{ AC} = 1.55 \text{ CFS}$$

$$D = 1.33 \left( \frac{Q}{S} \right)^{3/8} = 1.33 \left[ \frac{.009(1.55)}{.01} \right]^{3/8} = 0.63 \text{ FT} = 7.6 \text{ IN.} \quad \checkmark \text{ USE } 8" @ 1\%$$

$$= 0.70 \text{ FT} = 8.4 \text{ IN.} @ S = 0.6\%$$

## SIZE PUBLIC STORM DRAIN

$$Q = 1.55 \text{ CFS}$$

$$D = 1.33 \left[ \frac{.009(1.55)}{.01} \right]^{3/8} = 0.63 \text{ FT} = 7.6 \text{ IN.} < 24 \text{ IN.} \checkmark$$

$$\frac{\text{Private}}{1.33} \left( \frac{.009(1.64)}{.01} \right)^{3/8}$$

$$0.65' = 7.79$$

$$7.8 \text{ IN.}$$

So 10"

8" nominal is 7.65"  
w/ inlet drop  
8" would work

0.404 acres  
private

+ 0.865 street

1.269 acres?  
must be townhomes?

City of Albuquerque Planning Department  
One Sun. Ave. - Development and Planning Services

Patent Number: 2002-041-068

1-2-1964

Application Number: 107956068, Review Date: 09/10/2015, Review Panel: 10/15/2015, and 12/15/2015

**Abstract**

| Location | Sample no. | Year | Depth |
|----------|------------|------|-------|
| 1        | 1          | 1997 | 1000  |
| 2        | 2          | 1997 | 1000  |
| 3        | 3          | 1997 | 1000  |
| 4        | 4          | 1997 | 1000  |
| 5        | 5          | 1997 | 1000  |
| 6        | 6          | 1997 | 1000  |
| 7        | 7          | 1997 | 1000  |
| 8        | 8          | 1997 | 1000  |
| 9        | 9          | 1997 | 1000  |
| 10       | 10         | 1997 | 1000  |
| 11       | 11         | 1997 | 1000  |
| 12       | 12         | 1997 | 1000  |
| 13       | 13         | 1997 | 1000  |
| 14       | 14         | 1997 | 1000  |
| 15       | 15         | 1997 | 1000  |
| 16       | 16         | 1997 | 1000  |
| 17       | 17         | 1997 | 1000  |
| 18       | 18         | 1997 | 1000  |
| 19       | 19         | 1997 | 1000  |
| 20       | 20         | 1997 | 1000  |
| 21       | 21         | 1997 | 1000  |
| 22       | 22         | 1997 | 1000  |
| 23       | 23         | 1997 | 1000  |
| 24       | 24         | 1997 | 1000  |
| 25       | 25         | 1997 | 1000  |
| 26       | 26         | 1997 | 1000  |
| 27       | 27         | 1997 | 1000  |
| 28       | 28         | 1997 | 1000  |
| 29       | 29         | 1997 | 1000  |
| 30       | 30         | 1997 | 1000  |
| 31       | 31         | 1997 | 1000  |
| 32       | 32         | 1997 | 1000  |
| 33       | 33         | 1997 | 1000  |
| 34       | 34         | 1997 | 1000  |
| 35       | 35         | 1997 | 1000  |
| 36       | 36         | 1997 | 1000  |
| 37       | 37         | 1997 | 1000  |
| 38       | 38         | 1997 | 1000  |
| 39       | 39         | 1997 | 1000  |
| 40       | 40         | 1997 | 1000  |
| 41       | 41         | 1997 | 1000  |
| 42       | 42         | 1997 | 1000  |
| 43       | 43         | 1997 | 1000  |
| 44       | 44         | 1997 | 1000  |
| 45       | 45         | 1997 | 1000  |
| 46       | 46         | 1997 | 1000  |
| 47       | 47         | 1997 | 1000  |
| 48       | 48         | 1997 | 1000  |
| 49       | 49         | 1997 | 1000  |
| 50       | 50         | 1997 | 1000  |
| 51       | 51         | 1997 | 1000  |
| 52       | 52         | 1997 | 1000  |
| 53       | 53         | 1997 | 1000  |
| 54       | 54         | 1997 | 1000  |
| 55       | 55         | 1997 | 1000  |
| 56       | 56         | 1997 | 1000  |
| 57       | 57         | 1997 | 1000  |
| 58       | 58         | 1997 | 1000  |
| 59       | 59         | 1997 | 1000  |
| 60       | 60         | 1997 | 1000  |
| 61       | 61         | 1997 | 1000  |
| 62       | 62         | 1997 | 1000  |
| 63       | 63         | 1997 | 1000  |
| 64       | 64         | 1997 | 1000  |
| 65       | 65         | 1997 | 1000  |
| 66       | 66         | 1997 | 1000  |
| 67       | 67         | 1997 | 1000  |
| 68       | 68         | 1997 | 1000  |
| 69       | 69         | 1997 | 1000  |
| 70       | 70         | 1997 | 1000  |
| 71       | 71         | 1997 | 1000  |
| 72       | 72         | 1997 | 1000  |
| 73       | 73         | 1997 | 1000  |
| 74       | 74         | 1997 | 1000  |
| 75       | 75         | 1997 | 1000  |
| 76       | 76         | 1997 | 1000  |
| 77       | 77         | 1997 | 1000  |
| 78       | 78         | 1997 | 1000  |
| 79       | 79         | 1997 | 1000  |
| 80       | 80         | 1997 | 1000  |
| 81       | 81         | 1997 | 1000  |
| 82       | 82         | 1997 | 1000  |
| 83       | 83         | 1997 | 1000  |
| 84       | 84         | 1997 | 1000  |
| 85       | 85         | 1997 | 1000  |
| 86       | 86         | 1997 | 1000  |
| 87       | 87         | 1997 | 1000  |
| 88       | 88         | 1997 | 1000  |
| 89       | 89         | 1997 | 1000  |
| 90       | 90         | 1997 | 1000  |
| 91       | 91         | 1997 | 1000  |
| 92       | 92         | 1997 | 1000  |
| 93       | 93         | 1997 | 1000  |
| 94       | 94         | 1997 | 1000  |
| 95       | 95         |      |       |

Project Number:

100-443887-100

**THE UNIVERSITY OF CHICAGO**

1998

2000年12月15日

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

12345678910111213141516171819202122232425262728293031323334353637383940414243444546474849505152535455565758596061626364656667686970717273747576777879808182838485868788899091929394959697989910010110210310410510610710810911011111211311411511611711811912012112212312412512612712812913013113213313413513613713813914014114214314414514614714814915015115215315415515615715815916016116216316416516616716816917017117217317417517617717817918018118218318418518618718818919019119219319419519619719819920020120220320420520620720820921021121221321421521621721821922022122222322422522622722822923023123223323423523623723823924024124224324424524624724824925025125225325425525625725825926026126226326426526626726826927027127227327427527627727827928028128228328428528628728828929029129229329429529629729829930030130230330430530630730830931031131231331431531631731831932032132232332432532632732832933033133233333433533633733833934034134234334434534634734834935035135235335435535635735835936036136236336436536636736836937037137237337437537637737837938038138238338438538638738838939039139239339439539639739839940040140240340440540640740840941041141241341441541641741841942042142242342442542642742842943043143243343443543643743843944044144244344444544644744844945045145245345445545645745845946046146246346446546646746846947047147247347447547647747847948048148248348448548648748848949049149249349449549649749849950050150250350450550650750850951051151251351451551651751851952052152252352452552652752852953053153253353453553653753853954054154254354454554654754854955055155255355455555655755855956056156256356456556656756856957057157257357457557657757857958058158258358458558658758858959059159259359459559659759859960060160260360460560660760860961061161261361461561661761861962062162262362462562662762862963063163263363463563663763863964064164264364464564664764864965065165265365465565665765865966066166266366466566666766866967067167267367467567667767867968068168268368468568668768868969069169269369469569669769869970070170270370470570670770870971071171271371471571671771871972072172272372472572672772872973073173273373473573673773873974074174274374474574674774874975075175275375475575675775875976076176276376476576676776876977077177277377477577677777877978078178278378478578678778878979079179279379479579679779879980080180280380480580680780880981081181281381481581681781881982082182282382482582682782882983083183283383483583683783883984084184284384484584684784884985085185285385485585685785885986086186286386486586686786886987087187287387487587687787887988088188288388488588688788888989089189289389489589689789889990090190290390490590690790890991091191291391491591691791891992092192292392492592692792892993093193293393493593693793893994094194294394494594694794894995095195295395495595695795895996096196296396496596696796896997097197297397497597697797897998098198298398498598698798898999099199299399499599699799899910001001100210031004100510061007100810091010101110121013101410151016101710181019102010211022102310241025102610271028102910301031103210331034103510361037103810391040104110421043104410451046104710481049105010511052105310541055105610571058105910601061106210631064106510661067106810691070107110721073107410751076107710781079108010811082108310841085108610871088108910901091109210931094109510961097109810991100110111021103110411051106110711081109111011111112111311141115111611171118111911201121112211231124112511261127112811291130113111321133113411351136113711381139114011411142114311441145114611471148114911501151115211531154115511561157115811591160116111621163116411651166116711681169117011711172117311741175117611771178117911801181118211831184118511861187118811891190119111921193119411951196119711981199120012011202120312041205120612071208120912101211121212131214121512161217121812191220122112221223122412251226122712281229123012311232123312341235123612371238123912401241124212431244124512461247124812491250125112521253125412551256125712581259126012611262126312641265126612671268126912701271127212731274127512761277127812791280128112821283128412851286128712881289129012911292129312941295129612971298129913001

THE UNIVERSITY OF CHICAGO

**06-00000000000000000000000000000000**

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

**THE UNIVERSITY OF CHICAGO**

THE UNIVERSITY OF CHICAGO

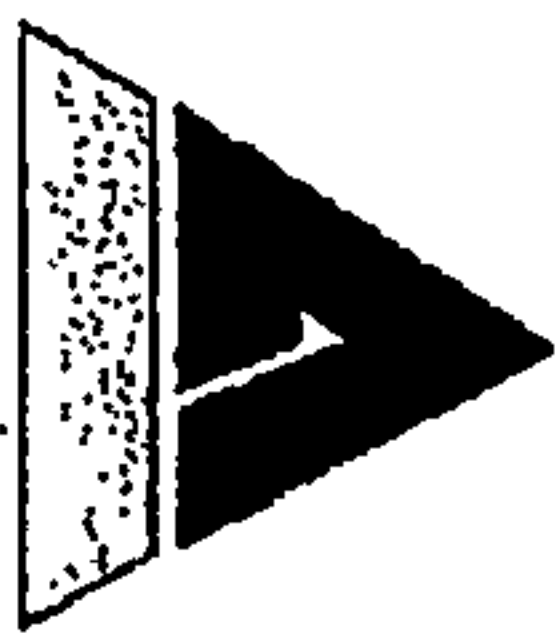
THE UNIVERSITY OF CHICAGO PRESS

[illegible]

**附件二**

401

## APPENDIX

**ISAACSON & ARFMAN, P.A.***Consulting Engineering Associates**Thomas O. Isaacson, PE & LS • Fred C. Arfman, PE  
Scott M. McGee, PE***FAX NO. (505) 268-2632****\*\*\* FAX TRANSMITTAL MEMO \*\*\***

TO: Tim Sims DATE: 10/29/07  
Hydrology Section CC: \_\_\_\_\_  
FAX #: 924-3864  
FROM: Ruth, Isaacson & Arfman, P.A.  
REFERENCE: 12th Street Villas  
Hydrology Receipt  
TOTAL NUMBER OF PAGES (INCLUDING COVER) 2

☐ Hard copy to follow via mail.

MESSAGE:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This fax is intended only for the personal and confidential use of the addressee or addressees named above. It contains information that is privileged and confidential. Any unauthorized review, disclosure, copying or dissemination of this transmission is strictly prohibited. If you have received this transmission in error, please notify the sender by telephone immediately so that we can arrange for its return to us. Thank you for your cooperation.

**IN CASE OF DIFFICULTY, PLEASE CALL THE NUMBER LISTED BELOW**

128 Monroe St. NE • Albuquerque, NM 87108 • (505) 268-8828 • FAX (505) 268-2632



Current DRC

Project Number: \_\_\_\_\_

FIGURE 12

INFRASTRUCTURE LIST

(Rev. 9-20-05)

## EXHIBIT "A"

TO SUBDIVISION IMPROVEMENTS AGREEMENT  
DEVELOPMENT REVIEW BOARD (D.R.B.) REQUIRED INFRASTRUCTURE LIST

## 12TH STREET VILLAS SUBDIVISION

## PROPOSED NAME OF PLAT AND/OR SITE DEVELOPMENT PLAN

## LOTS 57, 58, &amp; 59, ROSSITER ADDITION

## EXISTING LEGAL DESCRIPTION PRIOR TO PLATTING ACTION

Date Submitted: 10/26/07Date Site Plan Approved: NADate Preliminary Plat Approved: 11/21/07Date Preliminary Plat Expires: 11/21/08DRB Project No.: 105536DRB Application No.: 07 DRB - 70344**ORIGINAL**

Following is a summary of PUBLIC/PRIVATE Infrastructure required to be constructed or financially guaranteed for the above development. This Listing is not necessarily a complete listing. During the SIA process and/or in the review of the construction drawings, if the DRC Chair determines that appurtenant items and/or unforeseen items have not been included in the infrastructure listing, the DRC Chair may include those items in the listing and related financial guarantee. Likewise, if the DRC Chair determines that appurtenant or non-essential items can be deleted from the listing, those items may be deleted as well as the related portions of the financial guarantees. All such revisions require approval by the DRC Chair, the User Department and agent/owner. If such approvals are obtained, these revisions to the listing will be incorporated administratively. In addition, any unforeseen items which arise during construction which are necessary to complete the project and which normally are the Subdivider's responsibility will be required as a condition of project acceptance and close out by the City.

| Financially<br>Guaranteed<br>DRC # | Constructed<br>Under<br>DRC # | Size           | Type of Improvement                                     | Location            | From                 | To                  | Construction Certification |      |                       |
|------------------------------------|-------------------------------|----------------|---------------------------------------------------------|---------------------|----------------------|---------------------|----------------------------|------|-----------------------|
|                                    |                               |                |                                                         |                     |                      |                     | Private<br>Inspector       | P.E. | City Cnst<br>Engineer |
|                                    |                               | PAVING         |                                                         |                     |                      |                     |                            |      |                       |
|                                    |                               | 22' FE         | Asphalt Alley (including 2' wide concrete alley gutter) | John Marc Drive     | 12th Street          | 12th Street         | /                          | /    | /                     |
|                                    |                               | 4'             | Deferred Sidewalk (east side)                           | John Marc Drive     | 12th Street          | 12th Street         | /                          | /    | /                     |
|                                    |                               | 6"             | Header Curb (both sides)                                | John Marc Drive     | 12th Street          | 12th Street         | /                          | /    | /                     |
|                                    |                               |                | REPLACE <del>SE</del> DRIVEPADS WITH SW + C+G           | 12 <sup>th</sup> ST | NORTH E              | SOUTH E             |                            |      |                       |
|                                    |                               | WATER          |                                                         |                     |                      |                     |                            |      |                       |
|                                    |                               | 6"             | Waterline                                               | John Marc Drive     | 12 <sup>th</sup> ST  | 12 <sup>th</sup> ST | /                          | /    | /                     |
|                                    |                               | 6"             | Waterline                                               | 12th Street         | Existing FH Line     | N. Property Line    | /                          | /    | /                     |
|                                    |                               |                | Relocate Fire Hydrant                                   | 12th Street         | Existing Location    | S. of Entrance Road | /                          | /    | /                     |
|                                    |                               | SANITARY SEWER |                                                         |                     |                      |                     |                            |      |                       |
|                                    |                               | 8"             | Sanitary Sewer                                          | John Marc Drive     | N. Side Property     | 12th Street         | /                          | /    | /                     |
|                                    |                               | STORM          |                                                         |                     |                      |                     |                            |      |                       |
|                                    |                               | (1 EA)         | Type A Inlet                                            | 12th Street         | S. of Existing Inlet |                     | /                          | /    | /                     |
|                                    |                               | (1 EA)         | Existing Inlet to Type D                                | 12th Street         | Existing Inlet       |                     | /                          | /    | /                     |
|                                    |                               | 10"            | PRIVATE STORM PIPE #                                    | W+S SIDES OF PROP   | NORTH E              | EAST E              |                            |      |                       |
|                                    |                               | 12"            |                                                         |                     |                      |                     |                            |      |                       |

The Items listed below are on the CCIP and approved for Impact Fee credits. Signatures from the Impact Fee Administrator and the City User Department is required prior to DRB approval of this listing. The Items listed below are subject to the standard SIA requirements.

| Financially<br>Guaranteed<br>DRC #           | Constructed<br>Under<br>DRC # | Size | Type of Improvement | Location | From | To | Construction Certification          |      |                       |
|----------------------------------------------|-------------------------------|------|---------------------|----------|------|----|-------------------------------------|------|-----------------------|
|                                              |                               |      |                     |          |      |    | Private                             |      | City Cnst<br>Engineer |
|                                              |                               |      |                     |          |      |    | Inspector                           | P.E. |                       |
|                                              |                               |      |                     |          |      |    | /                                   | /    | /                     |
|                                              |                               |      |                     |          |      |    | /                                   | /    | /                     |
| Approval of Creditable Items:                |                               |      |                     |          |      |    | Approval of Creditable Items:       |      |                       |
| Impact Fee Administrator Signature      Date |                               |      |                     |          |      |    | City User Dept. Signature      Date |      |                       |

NOTES

If the site is located in a floodplain, then the financial guarantee will not be released until the LOMR is approved by FEMA.

Street lights per City requirements.

1 Grading and Drainage certification per DPM including perimeter walls as shown on the Grading Plan for release of SIA and financial guarantees.

2 Water infrastructure to include valves, fittings, valve boxes, and fire hydrants.

3 Sanitary sewers to include manholes and service connections.

\* TO BE CERTIFIED WITH GRADING AND DRAINAGE CERTIFICATION

AGENT / OWNER

Amy L.D. Niese, PE

NAME (print)

Isaacson & Arfman, P.A.

FIRM

SIGNATURE - date

DEVELOPMENT REVIEW BOARD MEMBER APPROVALS

DRB CHAIR - date

PARKS & GENERAL RECREATION - date

TRANSPORTATION DEVELOPMENT - date

AMAFCA - date

UTILITY DEVELOPMENT - date

- date

CITY ENGINEER - date

- date

DESIGN REVIEW COMMITTEE REVISIONS

| REVISION | DATE | DRC CHAIR | USER DEPARTMENT | AGENT / OWNER |
|----------|------|-----------|-----------------|---------------|
|          |      |           |                 |               |
|          |      |           |                 |               |
|          |      |           |                 |               |



site

Zone G-14-Z drains to  
12<sup>th</sup> Street.

4421 12<sup>th</sup> St. NW  
4503  
4505

---