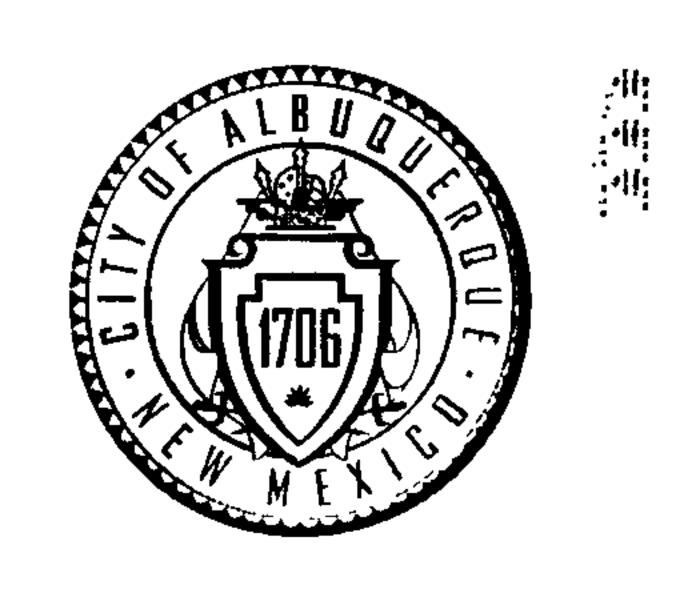
CITY OF ALBUQUERQUE

PLANNING DEPARTMENT - Development & Building Services

November 1, 2012

Genevieve Donart, P.E. Isaacson & Arfman, P.A. 128 Monroe St. NE Albuquerque, New Mexico 87108



Richard J. Berry, Mayor

RE: Casitas de Colores – Grading & Drainage Plan for Building Permit

215 Lead Ave. S.W.

P.E. Stamp: 10/23/12 (K14-D087A)

Dear Ms. Donart,

Based upon the information provided in your submittal received 10-24-2012, the above referenced plan is approved for Building Permit.

As we discussed, the rock swales for roof drainage to the alley gutters, on the N. and S. ends of Block F, Building 3, are adequate for drainage purposes. However, they may be in conflict with sidewalk requirements. If this is true, please notify us as soon as possible for review of any revision.

PO Box 1293

Please attach a copy of this approved plan to the Building Permit plan sets prior to sign-off by Hydrology.

Albuquerque

Prior to our release of a Certificate of Occupancy, an Engineer's Certification of substantial compliance with this plan will be required, per the DPM checklist.

NM 87103

This project will require a Storm Water Pollution Prevention Plan (SWPPP) and a NPDES permit for storm water discharge during construction.

www.cabq.gov

Albuquerque's MS4 Permit became effective March 1st, 2012. Grading and Drainage Plans and Drainage Reports must comply with the requirements of the new permit. Review at: http://ftp.nmenv.state.nm.us/www/swqb/NPDES/Permits/NMS000101-AlbuquerqueMS4.pdf

If you have any questions, you may contact me by email at grolson@cabq.gov, or telephone 505-924-3695.

Sincerely, Sincerely, Man 11/1/2

Gregory R. Olson, P.E.

Senior Engineer

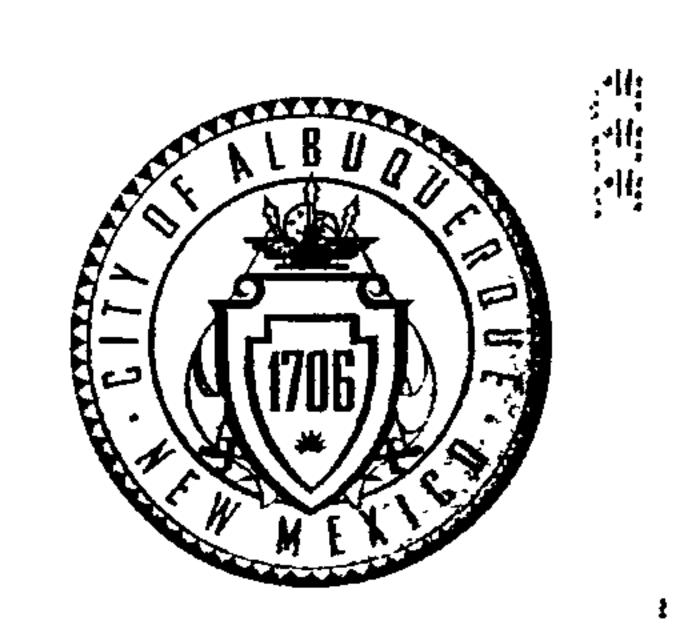
Orig:

Drainage file K14/D087A

c.pdf Addressee via Email gennyd@iacivil.com

1 of 1

TATY OF ALBUQUERQUE



February 11, 2010

Genevieve L. Donart, P.E. Isaacson & Arfman, P.A. 128 Monroe Street N.E. Albuquerque, NM 87108

Re: Silver Town Homes, Silver & Second Street SE, Request for Temporary Certificate of Occupancy - Not Approved Engineer's Stamp dated 03/31/08 (K-14/D087) Certification dated 02-09-10

Dear Ms. Donart,

Based upon the information provided in the Certification received 2-10-10 the above referenced Certification is not approved for Temporary Certificate of Occupancy, (C.O.).

PO Box 1293

After a recent site visit, the request appears early.

- 1. Several trades are still on site; construction vehicles are parked on all of the building pads. The east side of the site also has numerous vehicles parked as well. The construction fence will need to be removed from the area that you are requesting a certificate of occupancy.
 - a. The building will need to be independent from the rest of the site. Owners will need to be able to access and maneuver without conflicting with construction operations.
- 2. Keyed note #6 identifies a 6" PVC Drain; site conditions reflect a different size. These drain pipes are obstructed with soil and requires cleaning.
 - a. Please indicate and amend the plan with the correct material installed; furthermore, all sidewalk culverts are installed and were approved by Duane Schmitz. If you are seeking approval for all sidewalk culverts, include the plan prepared on 10-23-09 by Mr. Arfman.
- 3. Work Order # 555482 will need to be closed out. The pavement is missing on Platinum north and south at the intersection of Nickel Road and Platinum.
- 4. Delineate on the plan which buildings requests a C.O.
 - a. The only buildings that are constructed are on Block D; the addresses will need to be included with all C.O. requests.
- 5. Tract A, Block D will need additional grading, along the south and west sides to prevent soil from leaving the site over the sidewalk. On the north side of the building the hole will need to be filled in prior to C.O.

Albuquerque

NM 87103

www.cabq.gov

TY OF ALBUQUERQUE

6. With future submittals please include the finished floor elevation constructed on the pad site; if a building was not constructed annear read finished pad elevation.

If you have any questions, you can contact me at 924-3982.

Sincerely

Timothy E. Sims

Plan Checker—Hydrology

Development and Building Services

C: File

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

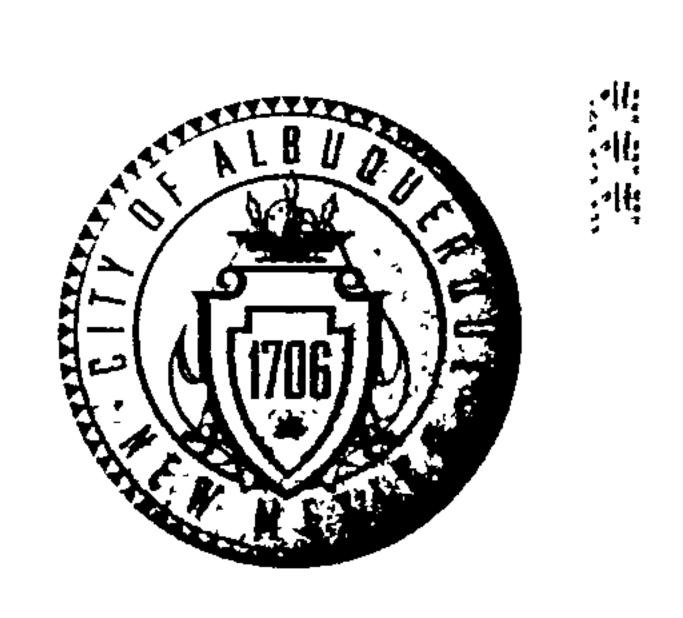
DRAINAGE AND TRANSPORTATION INFORMATION SHEET (Rev. 12/05)

PROJECT TITLE: Silver Townhomes DRB#: 1003904 EPC#:	ZONE MAP/DRG.FILE# <u>K-14</u> /DO 87 WORK ORDER#: <u>555482</u>
LEGAL DESCRIPTION: Silver Townhomes CITY ADDRESS:	
ENGINEERING FIRM: <u>ISAACSON AND ARFMAN</u> ADDRESS: <u>128 MONROE N.E.</u> CITY, STATE: <u>ALBUQUERQUE, NM</u>	CONTACT: Genny Donart PHONE: 268-8828 ZIP CODE: 87108
OWNER: Romero-Rose, LLC ADDRESS: 5201 Indian School Rd NE, Ste 300 CITY, STATE: Albuquerque, NM	CONTACT: <u>Julie Ferguson</u> PHONE: <u>764-3094</u> ZIP CODE: <u>87108</u>
ARCHITECT: Workshop Architects ADDRESS: 811 12th Street NW CITY, STATE: Albuquerque, NM	CONTACT: <u>Treveston Elliot</u> PHONE: <u>259-4617</u> ZIP CODE: <u>87102</u>
SURVEYOR: Rio Grande Surveying	CONTACT: Rex Vogler PHONE: ZIP CODE:
CONTRACTOR: ADDRESS: CITY, STATE:	CONTACT: PHONE: ZIP CODE:
TYPE OF SUBMITTAL: DRAINAGE REPORT DRAINAGE PLAN 1st 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 RELIMINARY PLAT APPROVAL S. DEV. PLAN FOR SUB'D APPROVAL S. DEV. FOR BLDG. PERMIT APPROVAL SECTOR PLAN APPROVAL FINAL PLAT APPROVAL UNDATION PERMIT APPROVAL BUILDING PERMIT APPROVAL CRTIFICATE OF OCCUPANCY (PERM) CRTIFICATE OF OCCUPANCY (TEMP) GADING PERMIT APPROVAL PAVING PERMIT APPROVAL ON GADING PERMIT APPROVAL ON GADING PERMIT APPROVAL ON GADING PERMIT APPROVAL ON GADING PERMIT APPROVAL
WAS A PRE-DESIGN CONFERENCE ATTENDED: YES NO COPY PROVIDED	FEB 1 0 2010 HYDROLOGY
SUBMITTED BY: Genevieve Donart Submit	DATE: 02/09/10 SECTION

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.

CITY OF ALBUQUERQUE



March 19, 2010

Genevieve L. Donart, P.E. Isaacson & Arfman, P.A. 128 Monroe Street N.E. Albuquerque, NM 87108

RE: Silver Townhomes, (K-14/D087)

Engineers Certification for Release of Financial Guaranty

Engineers Stamp dated 03/31/2008 Engineers Certification dated 2-25-10

Dear Ms. Donart,

Based upon your Engineer's Certification submitted on 2/25/2010, the above referenced plan is adequate and satisfies the Grading and Drainage Certification for Release of Financial Guaranty.

Release of Finalicial Guaranty.

All future buildings require an Engineer's Certification prior to Certificate of Occupancy.

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

Sincerely,

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Bradley L. Bingham, P.E.

City Hydrologist

Development and Building Services

C: Marilyn Maldonado, COA# 555482

File

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

PROJECT TITLE: Silver Townhomes	ZONE MAP/DRG.FILE# K-14/DO 87
DRB#: 1003904 EPC#:	WORK ORDER#: <u>555482</u>
LEGAL DESCRIPTION: Silver Townhomes CITY ADDRESS:	
ENGINEERING FIRM: <u>ISAACSON AND ARFMAN</u> ADDRESS: <u>128 MONROE N.E.</u> CITY, STATE: <u>ALBUQUERQUE, NM</u>	CONTACT: Genny Donart PHONE: 268-8828 ZIP CODE: 87108
OWNER: Romero-Rose, LLC ADDRESS: 5201 Indian School Rd NE, Ste 300 CITY, STATE: Albuquerque, NM	CONTACT: <u>Julie Ferguson</u> PHONE: <u>764-3094</u> ZIP CODE: <u>87108</u>
ARCHITECT: Workshop Architects ADDRESS: 811 12th Street NW CITY, STATE: Albuquerque, NM	CONTACT: <u>Treveston Elliot</u> PHONE: <u>259-4617</u> ZIP CODE: <u>87102</u>
SURVEYOR: Walker Surveying ADDRESS: CITY, STATE:	CONTACT: Steve Walker PHONE: 269-4888 ZIP CODE:
CONTRACTOR:	CONTACT: PHONE: ZIP CODE:
TYPE OF SUBMITTAL: DRAINAGE REPORT DRAINAGE PLAN 1st SUBMITTAL DRAINAGE PLAN RESUBMITTAL CONCEPTUAL G & D PLAN READING PLAN READING PLAN EROSION CONTROL PLAN ENGINEER'S CERT (HYDROLOGY) TEMP 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 RELIMINARY PLAT APPROVAL S. DEV. PLAN FOR SUB'D APPROVAL S. DEV. FOR BLDG. PERMIT APPROVAL SECTOR PLAN APPROVAL FINAL PLAT APPROVAL UNDATION PERMIT APPROVAL BUILDING PERMIT APPROVAL CRTIFICATE OF OCCUPANCY (PERM) CRTIFICATE OF OCCUPANCY (TEMP) GADING PERMIT APPROVAL PAVING PERMIT APPROVAL WORK ORDER PEROVAL OTHER (SPECIALLY)
WAS A PRE-DESIGN CONFERENCE ATTENDED: YES NO	FEB 25 2010
COPY PROVIDED SUBMITTED BY: Genevieve Donart	HYDROLOGY SECTION DATE: 02/25/10
PODMITTED DI. OCHEVIEVE DUHALI	DMID. <u>VZ/ZJ/IV</u>

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Isaacson & Arfman, P.A.

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- 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.

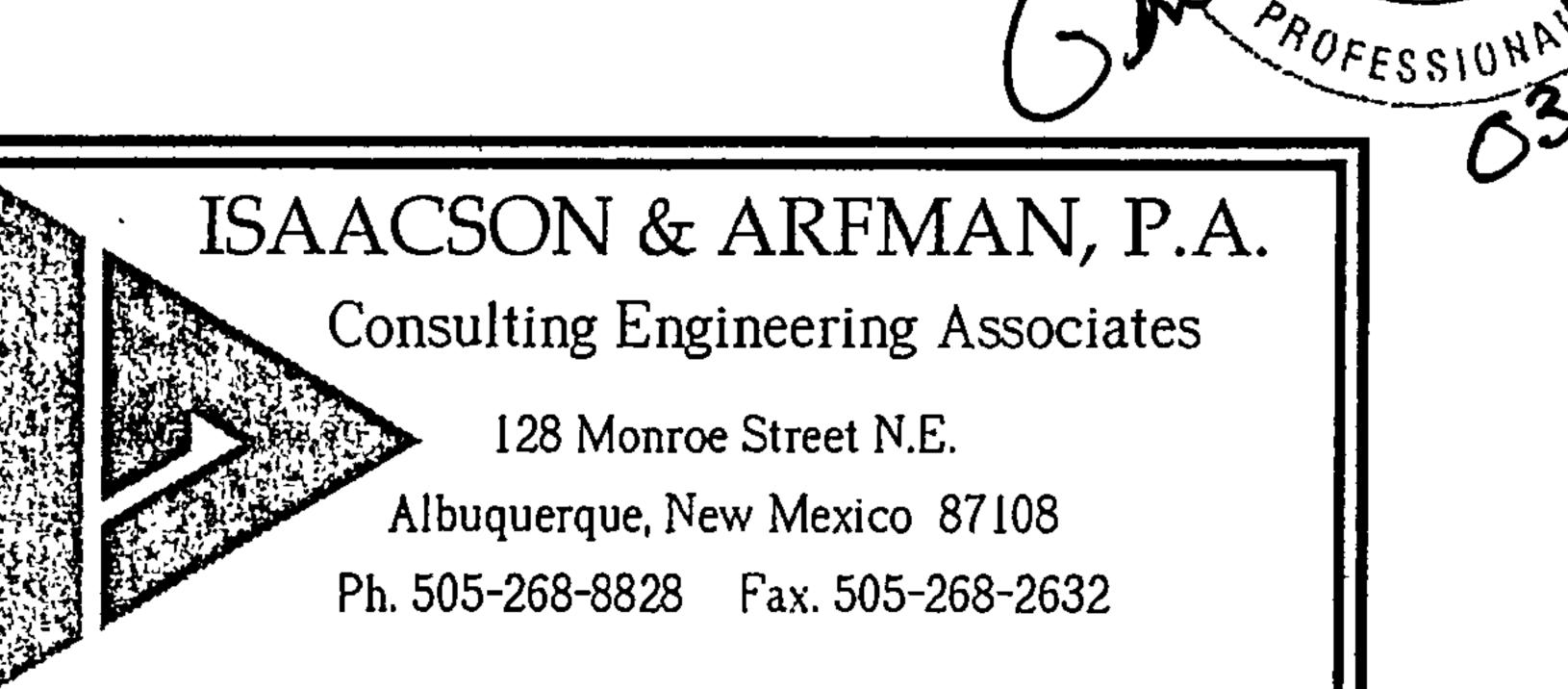
MARCH 31, 2008

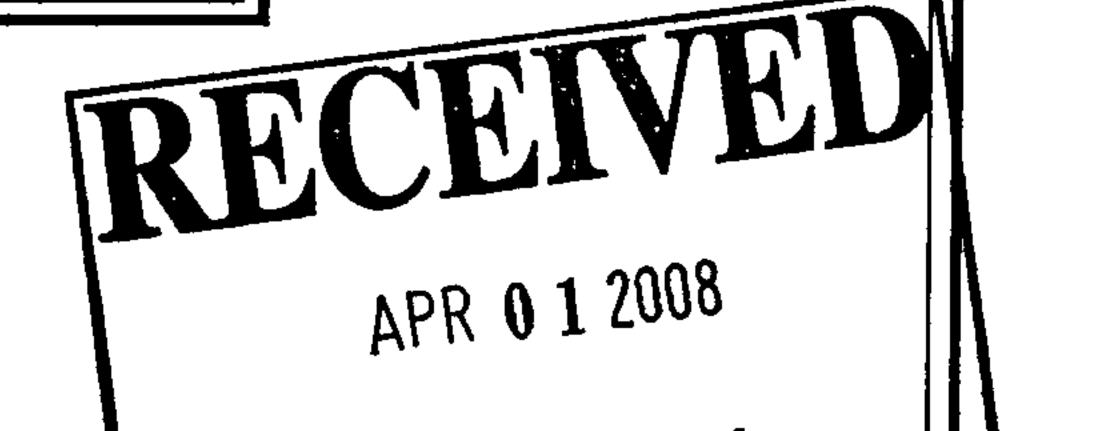
SUPPLEMENTAL DRAINAGE INFORMATION

FOR

SILVER TOWNHOMES

BY





15088)

HYDROLOGY

General Information:

Legal Description:

Lots 1 through 24, Inclusive, Block 30, New Mexico Town Companys Original Townsite, City of Albuquerque, Bernalillo County, New Mexico

Site Description:

The site consists of 2.1 acres. It is bounded by Silver Avenue S.W. to the north, Lead Avenue S.W. to the south, 2nd St. S.W. to the east and 3rd St. S.W. to the west. The property slopes to the southwest at approximately 0.35%.

Offsite Drainage:

No off-site drainage affects this property.

Flood Hazard:

Per Bernalillo County FIRM Map #334, the site is located within Floodzone 'X' designated as areas determined to be outside the 500-year floodplain.

Existing Conditions:

The existing properties are currently fully developed as a commercial site (building demolished) and associated parking. All existing structures and site improvements will be demolished.

RECEIVED

APR 0 1 2008

HYD?OLOGY SECTION

Existing Conditions:

Currently, the site consists of 10% land treatment 'C' and 90% land treatment 'D'. All site discharge (100-year, 6-hour = 9.4 cfs) drains to the southwest and is passed to the surrounding streets to enter the existing public storm drain system. Due to settlement of the portion of Silver Ave. adjacent to the property, a low point occurs near the north east corner which ponds flow. C.O.A. plans to reconstruct this portion of Silver Ave. are currently being developed and will occur concurrently with this project (design and construction of Silver Ave. improvements by others).

Proposed Conditions:

The proposed project consists of 72 multi-story townhome units and two commercial units with associated alley pavement, pedestrian walks and landscaping.

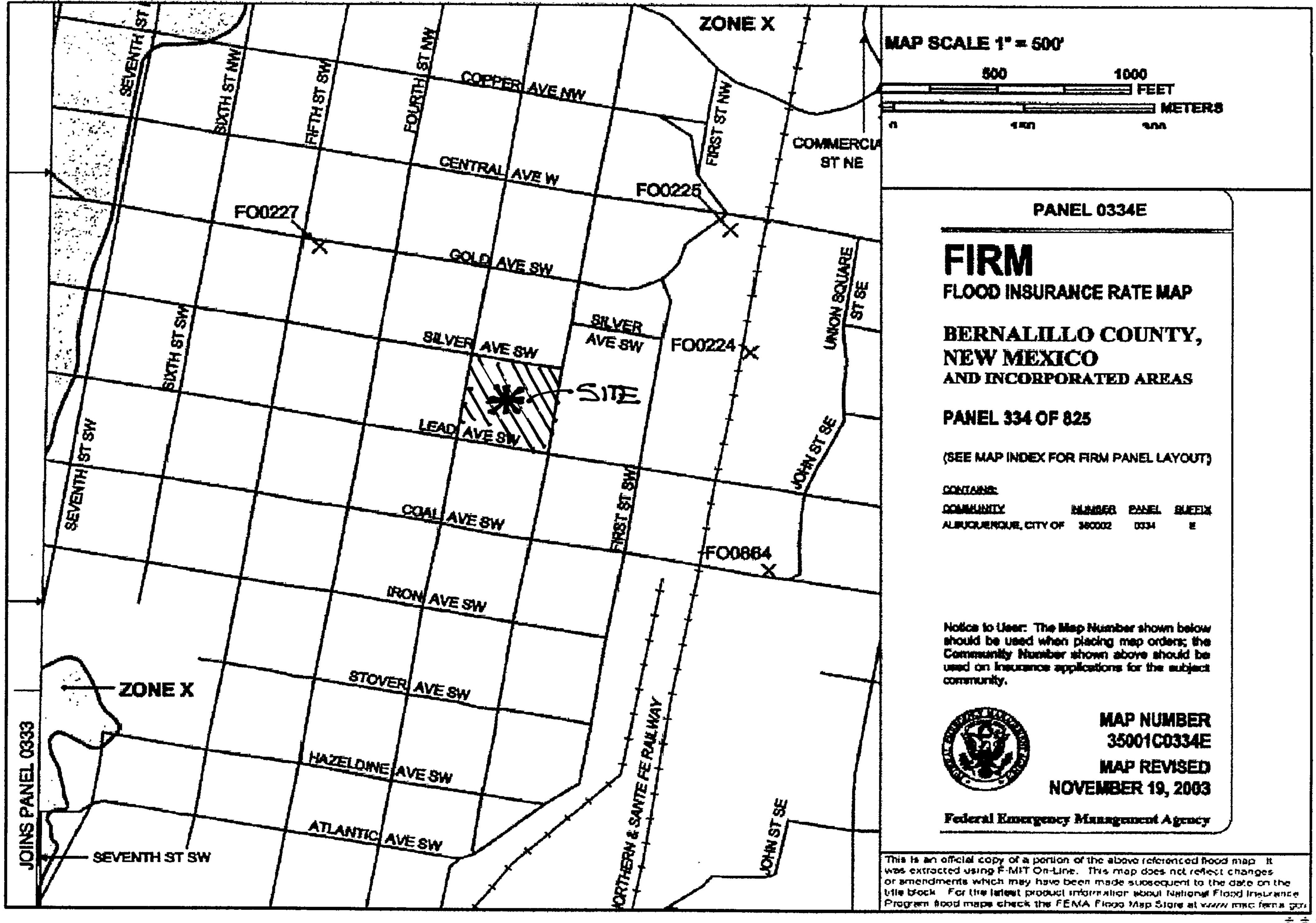
Roof discharge from each townhome unit will be split with approximately 50% draining to the adjacent alley. (Basins 1, 2, 3, 5, 6, & 7) The other 50% drains to either 2nd Street or 3rd Street through PVC drains penetrating the curb (Basins 11, 12, 13, & 14), or to the internal private landscaping tracts (Basins 9 & 10). The two commercial tracts drain to either the landscaping tracts or Silver Ave or Lead Street through PVC drains penetrating the curb (Basins 4 & 8). (See Sub-Basin Map and associated calculations).

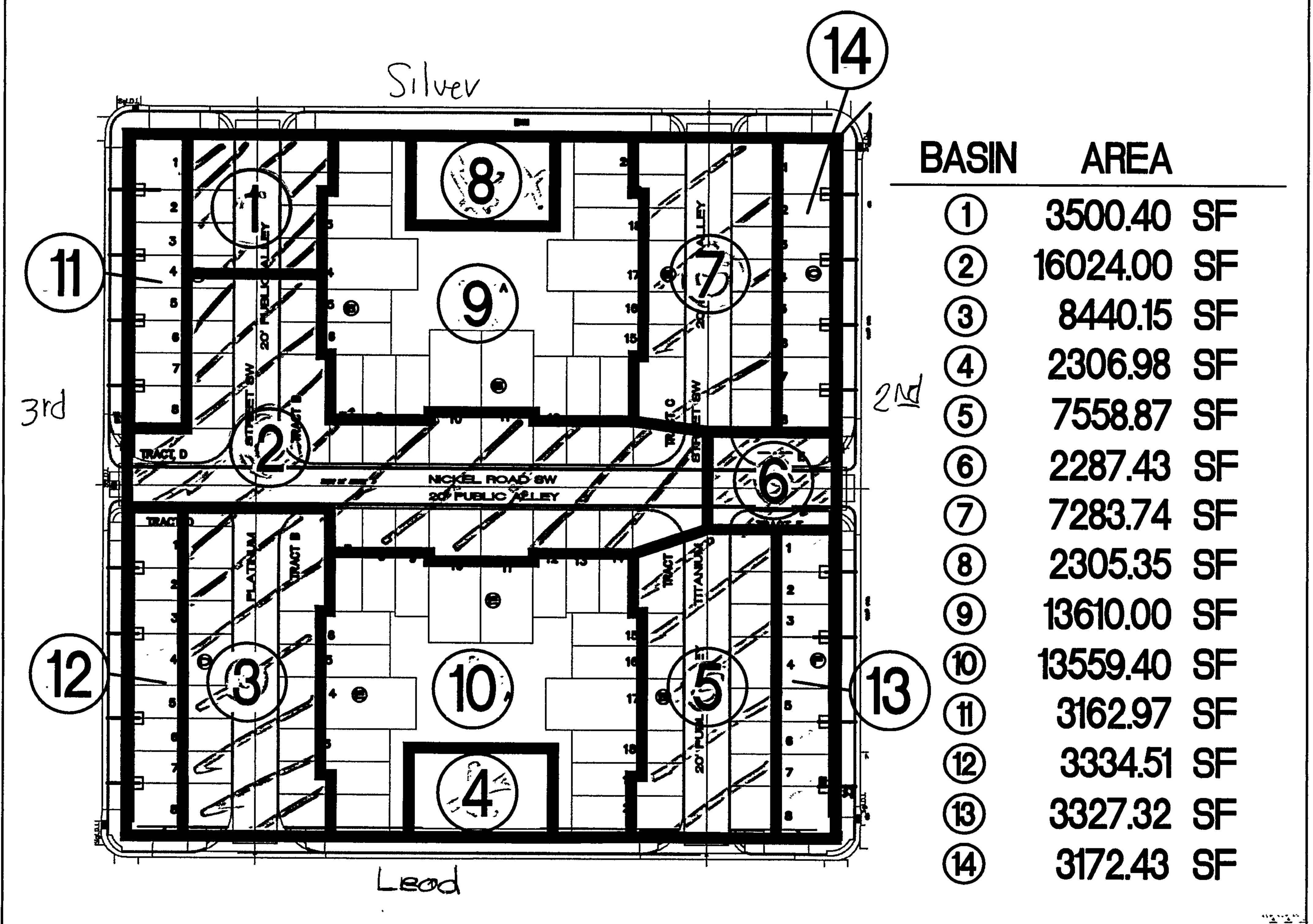
The internal alleys free discharge a total of 4.8 cfs to the adjoining streets. The commercial tracts and half of the external townhomes free discharge a total of 1.8 cfs to the external streets. The internal landscaping tracts accept 2.4 cfs. A privately maintained, underground "pumice wick" system will be used to harvest rainwater for the private landscaping. Once this underground system achieves capacity, overflow will be surface discharged to either Silver Avenue or Lead Street. At a maximum, 9.1 cfs would discharge from the site, which is less than the 9.4 cfs historical.

The internal alleys are 20' wide, and designed to have a 3% inverted crown (0.3' max depth.) Nickel Road carries the largest flows with 1.7 cfs on a 0.7% slope. Under these conditions, the 100-year flow depth in Nickel Road is 0.18', leaving 0.12' of freeboard. (See the associated calculations.) The next largest alley flow is 0.9 cfs on Platinum Street. All internal alleys have capacity for the 100-year flows.

 $\frac{24.8}{1.8}$ $\frac{2.4}{9.0} = 9.1 + 9.4 \text{ G/S}_{2}$







BA5/105 2007

1582 DPM Calculations - 100 yr 6 hr 21 03-28-08.xls

Job Name:
Client:
Workshop Architects

Date Prepared:
Date Modified:
May 8, 2007

Precipitation Zone:

Silver Townhomes

Workshop Architects

8-May-07

May 8, 2007

Based on Drainage	Desi	gn Criteria for City	of A	1buquerque Section 2	2.2, DP	M, Vol 2, dated Ja	n., 19	93	
```				ON-SI	E				<u> </u>
AREA OF SITE:				89896	SF		2.1	Ac.	
HISTORIC FLOV	WS:			DEVELOPED FLO	OWS:			EXCESS PR	ECIP;
On-Site Histori	ic La	nd Condition		On-Site Deve	eloped L	and Condition		Precip. Zone	(2 ')
Area a	=	0.	SF	\ Area a	=	0	SF	Ea =	0.53
Area b	<del>==</del>	0	SF	Area b	=	4495	SF	Eb =	0.78
Area c	=	8989.6	SF	Area c	=	13484	SF	Ec =	1.13
Area d	=	80906.4	SF	Area d	=	71917	SF	Ed =	2.12
Total Area	=	89896	SF	Total Area	=	89896	SF		

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

Weighted E =

EaAa + EbAb + EcAc + EdAd

Aa + Ab + Ac + Ad

Historic	<u>E</u>	<del></del>	2	2.02 in.	Developed	<u>E</u>	=	1.90 in.

On-Site Volume of Runoff: V360 =

E*A / 12

	Historic V360	=	15140	CF	Developed V360	=	14267	CF	]
_						<del></del>			J

On-Site Peak Discharge Rate: Qp = QpaAa+QpbAb+QpcAc+QpdAd / 43,560

For Precipitation Zone 2

Qpa = 1.56

$$Qpa = 1.56$$

$$Qbb = 2.28$$

$$Wistoric Qp = 9.38 CFS Developed Qp$$

Qpc = 3.14

$$\frac{\text{Qpd}}{\text{p}} = \frac{4.70}{9.0} \checkmark$$

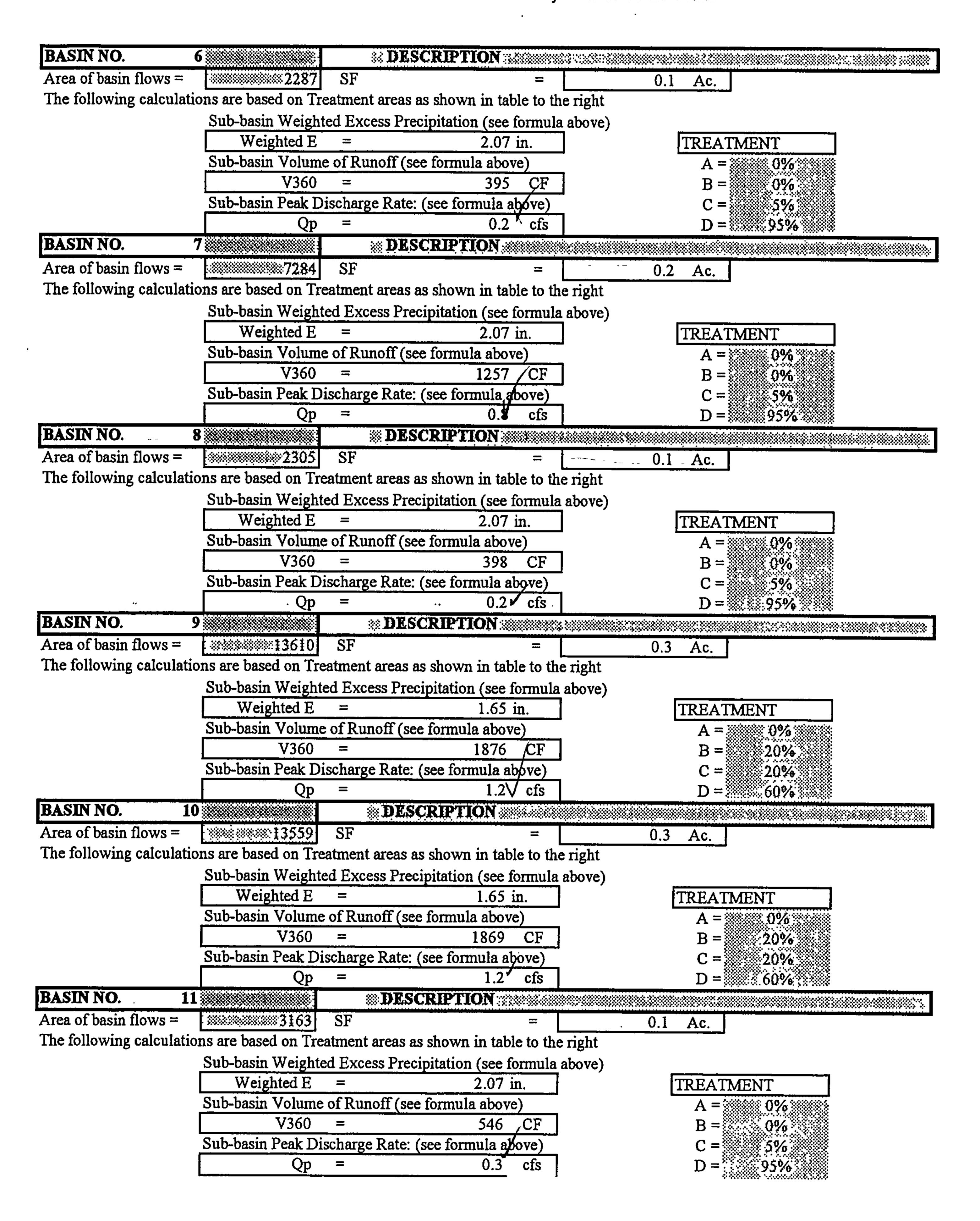
$$= \frac{9.0 \text{ CFS}}{}$$

The overall site consists of 2.06372819100092 acre(s) located in Zone 2 which is designated as properties between the Rio Grande River and San Mateo Blvd.. The 100-year, 6-hour historic discharge is 9.4 cfs. The proposed developed discharge is 9 cfs.

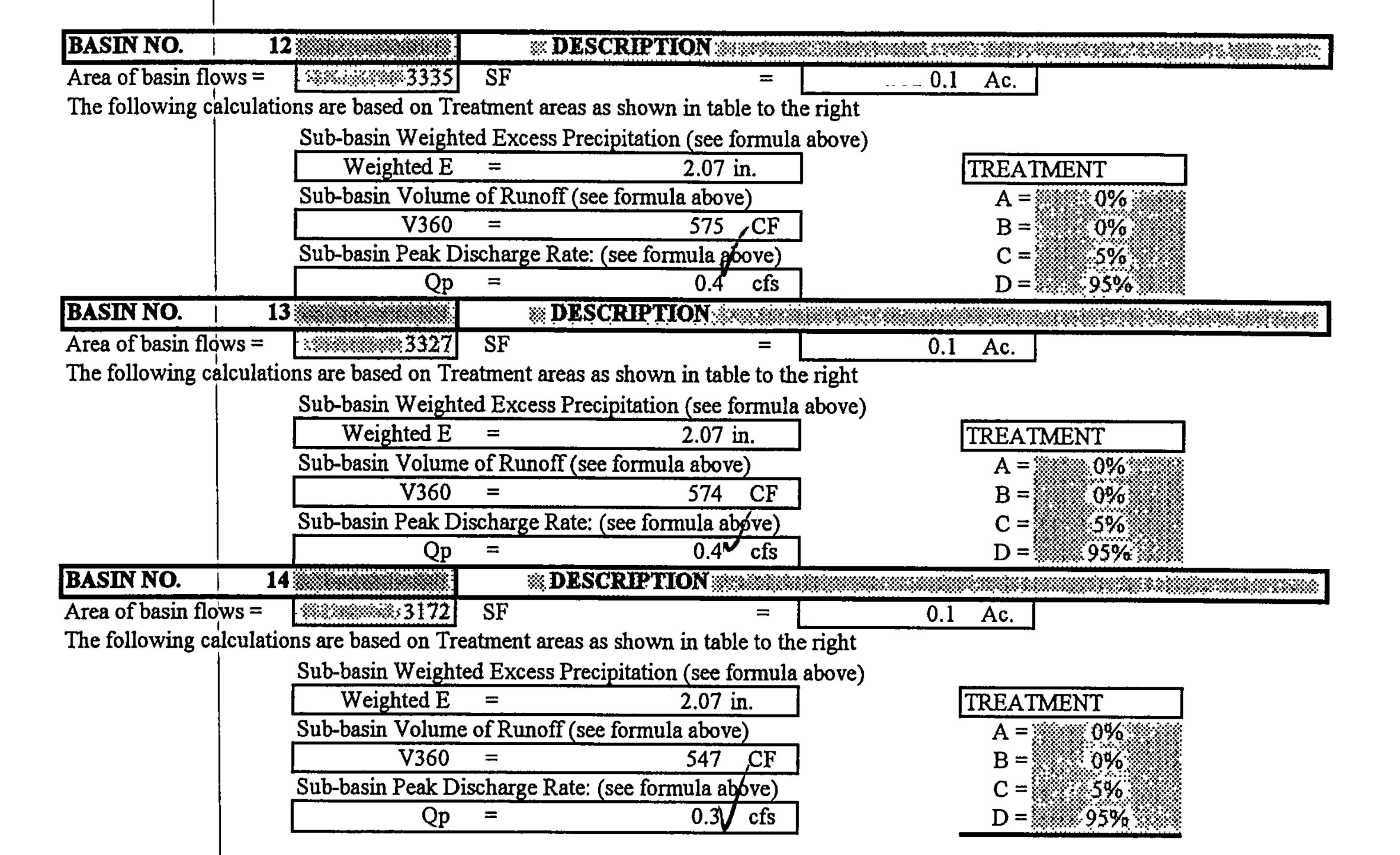
Job Name:	Silver Townhomes	
Client:	Workshop Architects	
Date Prepared:	8-May-07	
Date Modified:	='DPM Calculations'!C6	· · · · · · · · · · · · · · · · · · ·
Precipitation Zone:	2	

BASIN NO.	1	** DESCRIPTION	
Area of basin flows =	<b>3500</b>	SF =	0.1 Ac.
The following calculati	ons are based on Tr	eatment areas as shown in table to the rig	çht
		ted Excess Precipitation (see formula abo	ve)
	Weighted E	= 2.07 in.	TREATMENT
	Sub-basin Volum	e of Runoff (see formula above)	A = ***********************************
	V360	= 604 CF	B =
	Sub-basin Peak D	ischarge Rate: (see formula aboyé)	C =
	Qp	= 0.4 /cfs	D =95%
BASIN NO.	2	DESCRIPTION	
Area of basin flows =	:::::::::::::::::::::::::::::::::::::::		0.4 Ac.
The following calculati		eatment areas as shown in table to the rig	
		ted Excess Precipitation (see formula above	ve)
	Weighted E	= 2.07 in.	TREATMENT
		e of Runoff (see formula above)	A =
	V360	= 2765 CF	B =0%
•	Sub-basin Peak D	ischarge Rate: (see formula above)	C = 5%
TO A CITY NIC	Qp	= 1.W cfs	D = \$\$\$\$\$95%
BASIN NO.	5	* DESCRIPTION	
Area of basin flows =	<b>8440</b>		0.2 Ac.
The following calculation		eatment areas as shown in table to the rigi	
		ted Excess Precipitation (see formula above	· · · · · · · · · · · · · · · · · · ·
	Weighted E	= 2.07  in.	TREATMENT
	V360	e of Runoff (see formula above)	$A = \frac{0\%}{0\%}$
•		= 1456 CF ischarge Rate: (see formula above)	$\mathbf{B} = \frac{0\%}{0\%}$
	On	= 0.9 cfs	C =
BASIN NO.	4	DESCRIPTION	
Area of basin flows =	<b>2307</b>	SF =	
		eatment areas as shown in table to the righ	ht
Tile Tollo William		ed Excess Precipitation (see formula above	
	Weighted E	= 2.07  in.	TREATMENT
		e of Runoff (see formula above)	A =
	V360	= 398 CF	B =
	Sub-basin Peak D	ischarge Rate: (see formula above)	C =
	Qp	= 0.2 cfs	D =
BASIN NO.	5	DESCRIPTION	
Area of basin flows =	7559	SF =	0.2 Ac.
Area of basin flows =		SF eatment areas as shown in table to the right	ht 0.2 Ac.
Area of basin flows =	ons are based on Tre		ht
Area of basin flows =	ons are based on Tre	eatment areas as shown in table to the righ	ht
Area of basin flows =	ons are based on Tre Sub-basin Weight Weighted E	eatment areas as shown in table to the right ed Excess Precipitation (see formula above	ht ve)
Area of basin flows =	ons are based on Tre Sub-basin Weight Weighted E	eatment areas as shown in table to the right ed Excess Precipitation (see formula abov = 2.07 in.	ht ve) TREATMENT
Area of basin flows =	Sub-basin Weighted E Sub-basin Volume V360	eatment areas as shown in table to the right ed Excess Precipitation (see formula above)  = 2.07 in. e of Runoff (see formula above)	ht ve)  TREATMENT  A = \$\times 0\%





## 1582 DPM Calculations - 100 yr 6 hr 21 03-28-08.xls



•

SUMMARY									
Basin No. Description		DISCHA	RGE	Comments					
1	=	0.4	cfs	Platinum St					
2	=	1.7	cfs	Nickel Rd					
3	=	0.9	cfs	Platinum St					
4	=	0.2	cfs	commercial tract					
5	=	0.8	cfs	Titanium St					
6	=	0.2	cfs	Nickel Rd					
7	=	0.8	cfs	Titanium St					
8	=	0.2	cfs	commercial tract					
9	=	1.2	cfs	Entering north courtyard					
10	=	1.2	cfs	Entering south courtyard					
11	=	0.3	cfs	3rd St					
12	=	0.4	cfs	3rd St					
13	=	0.4	cfs	2nd St					
14	=	0.3	cfs	2nd St					
TOTAL DISCHARGE	=	9.1	CFS						

•

# SILVER TOWNHOMES Worksheet for Triangular Channel

Project Description	วก
Project File	m:\active\project documents\1582\calcs\1582 fm.fm2
Worksheet	20' Alley 3% cross-slope 0.75& slope
Flow Element	Triangular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Mannings Coefficient	0.017
Channel Slope	0.007500 ft/ft
Left Side Slope	33.330000 H:V
Right Side Slope	33.330000 H:V
Discharge	1.70 cfs

MICKEL AVE

BASIN (2)

Results		
Depth	0.18	ft
Flow Area	1.11	ft²
Wetted Perimeter	12.16	ft
Top Width	12.16	ft
Critical Depth	0.17	ft
Critical Slope	0.0095	01 ft/ft
Velocity	1.53	ft/s
Velocity Head	0.04	ft
Specific Energy	0.22	ft
Froude Number	0.90	
Flow is subcritical.		

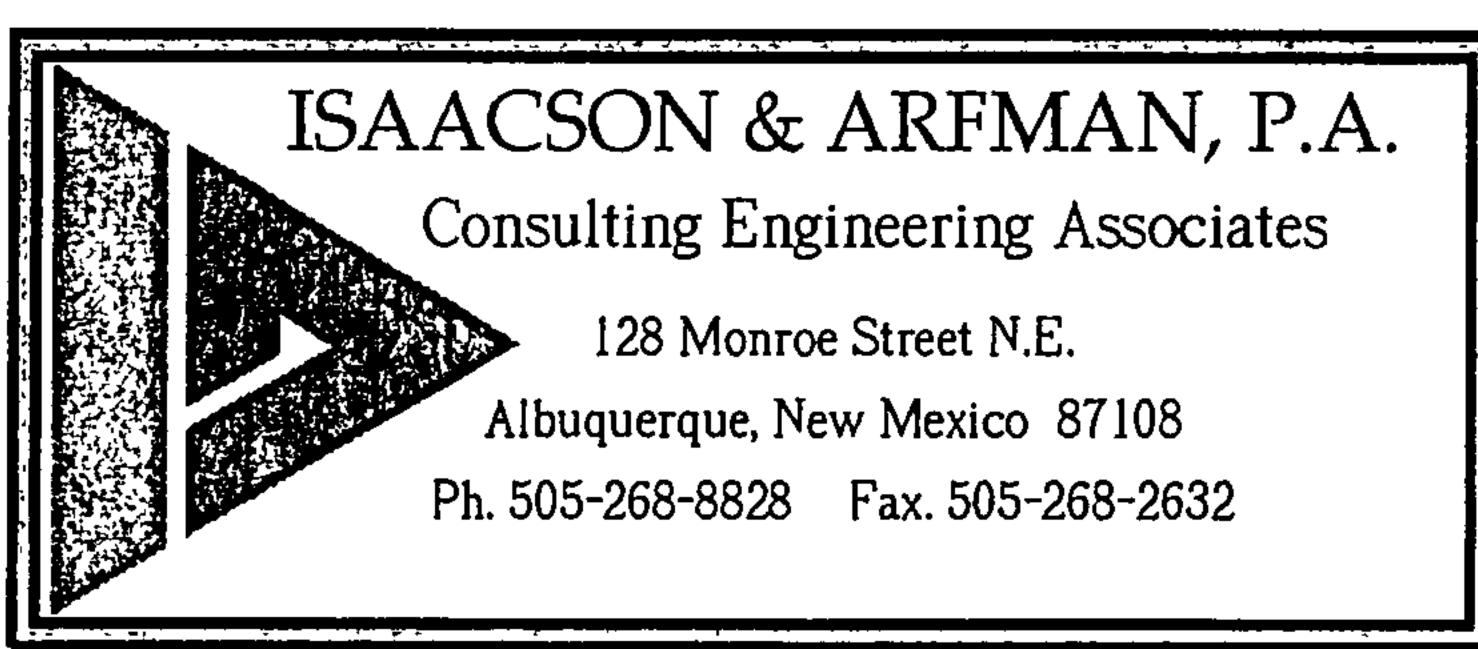
MAY 9, 2007

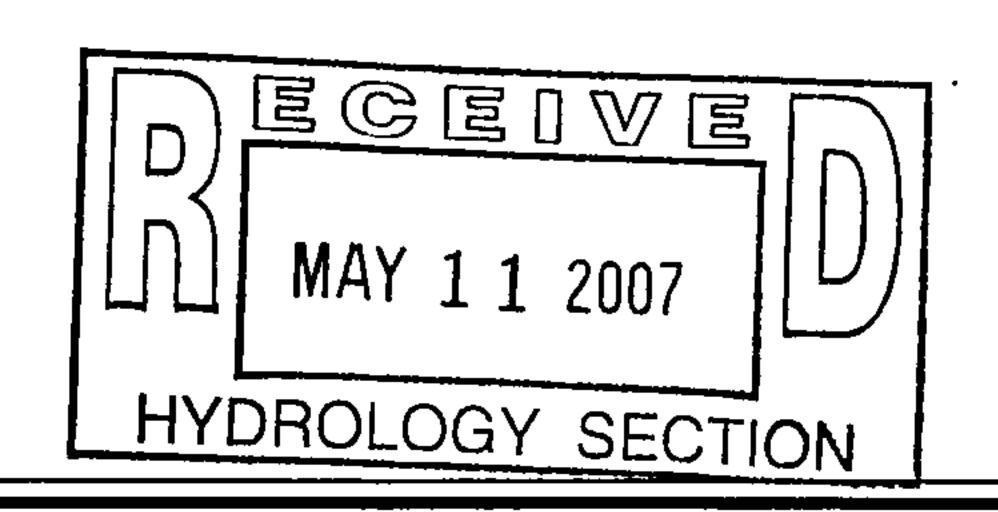
# SUPPLEMENTAL DRAINAGE INFORMATION

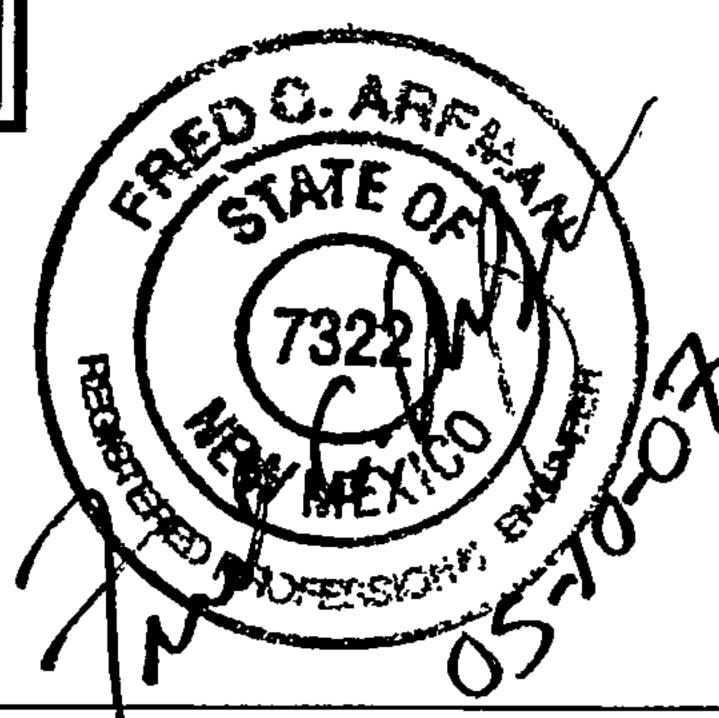
FOR

## SILVER TOWNHOMES

RY







## General Information:

## Legal Description:

Lots 1 through 24, Inclusive, Block 30, New Mexico Town Companys Original Townsite, City of Albuquerque, Bernalillo County, New Mexico

## Site Description:

The site consists of 2.1 acres. It is bounded by Silver Avenue S.W. to the north, Lead Avenue S.W. to the south, 2nd St. S.W. to the east and 3rd St. S.W. to the west. The property slopes to the southwest at approximately 0.35%.

## Offsite Drainage:

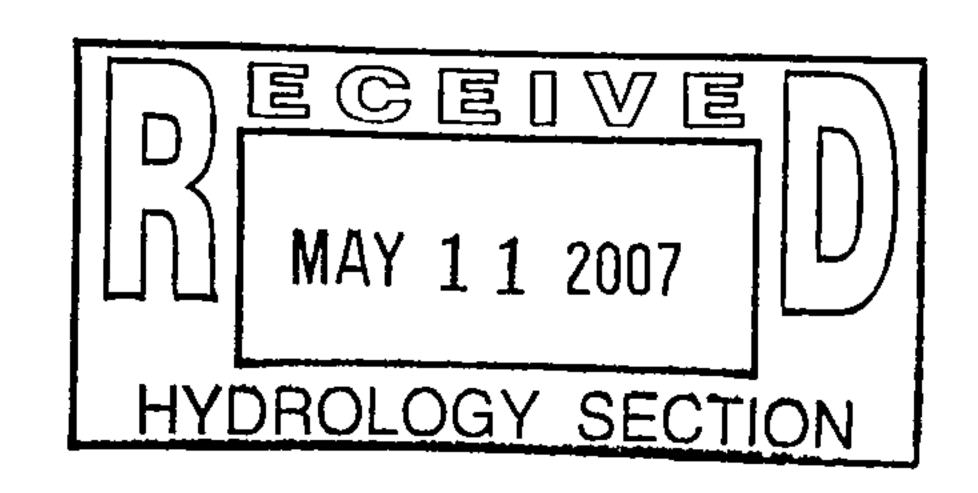
No off-site drainage affects this property.

### Flood Hazard:

Per Bernalillo County FIRM Map #334, the site is located within Floodzone 'X' designated as areas determined to be outside the 500-year floodplain.

## **Existing Conditions:**

The existing properties are currently fully developed as a commercial site (building demolished) and associated parking. All existing structures and site improvements will be demolished.



## **Existing Conditions:**

Currently, the site consists of 10% land treatment 'C' and 90% land treatment 'D'. All site discharge (100-year, 6-hour = 9.4 cfs) drains to the southwest and is passed to the surrounding streets to enter the existing public storm drain system. Due to settlement of the portion of Silver Ave. adjacent to the property, a low point occurs near the north east corner which ponds flow. C.O.A. plans to reconstruct this portion of Silver Ave. are currently being developed and will occur concurrently with this project (design and construction of Silver Ave. improvements by others).

## **Proposed Conditions:**

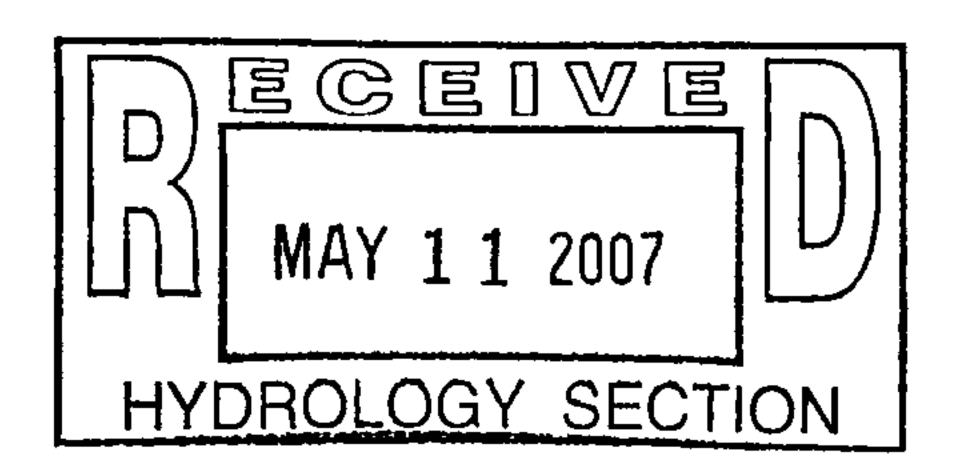
The proposed project consists of 72 multi-story townhome units and two commercial units with associated alley pavement, pedestrian walks and landscaping.

Roof discharge from each townhome unit will be split with approximately 50% draining to the adjacent alley and 50% draining to a private cistern system to collect rainwater for personal use. Excess discharge to the cistern system (from the interior townhome unites) will overflow to the proposed landscaped rain gardens to be collected in a community underground retention system to be used for overall site landscaping. Once this underground system achieves capacity, overflow will be directed to an underground detention system to percolate.

The overall property is divided into three sub-basins (see Sub-Basin Map and associated calculations).

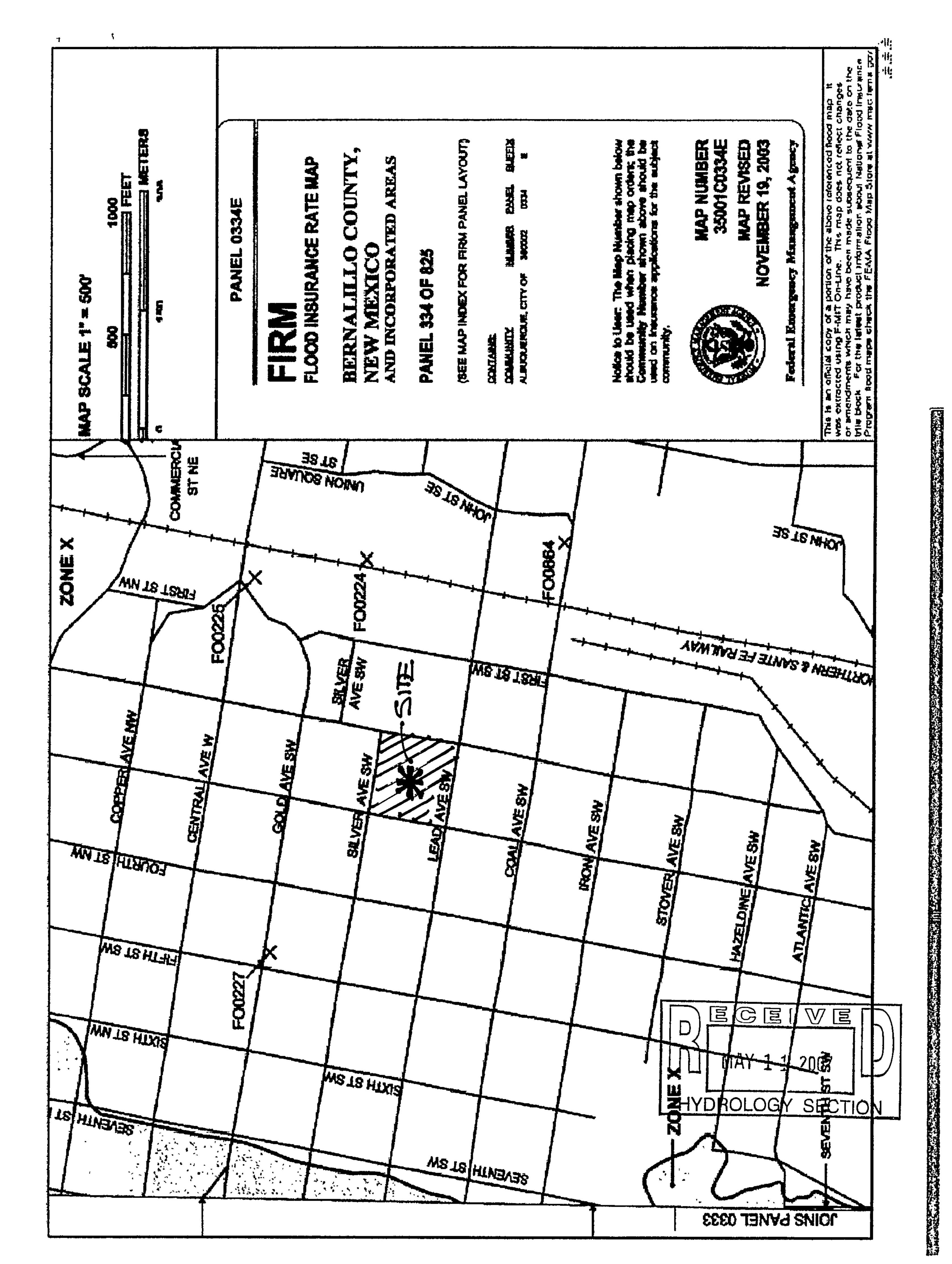
Sub-basin 1 (1.4 acres) consists of the back 50% of all townhome units, the commercial units and all alley paving. The discharge from this sub-basin of 6.5 cfs will discharge to the surrounding streets at the six alley entrances (approx. 0.23 cfs at each alley entrance).

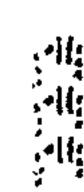
Sub-basins 2 and 3 each (0.3 acres each) consist of a landscaped plaza and the surrounding townhome discharge (50% of each townhome roof). 100-year, 6-hour discharge of 1.3 cfs (each) will be collected in the individual private cisterns (approx. 0.67 cf each x 20 = 13.4 cf), and in the underground retention and detention system. Flow in excess of the proposed storm drain systems will discharge to the surrounding streets.





AND THE STREET

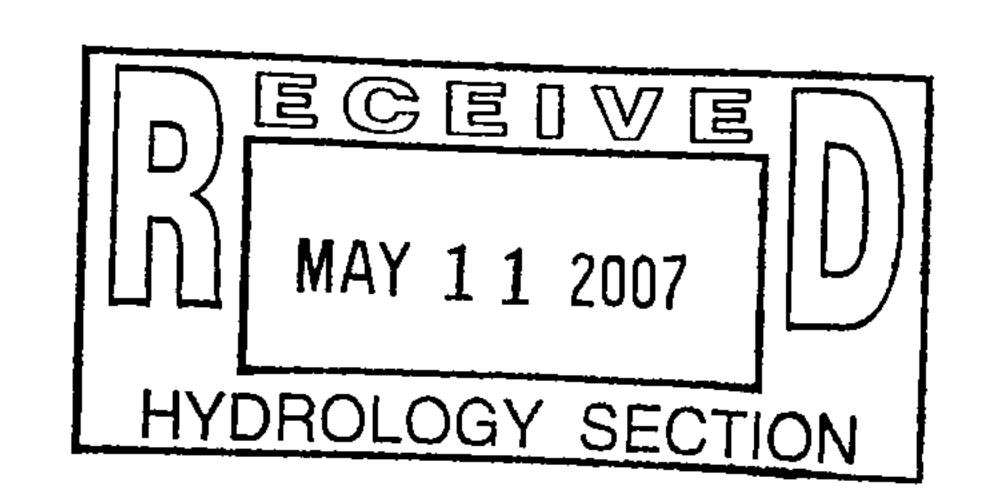




		CAL	CTIT.	ATIONS: Silver Tox	wnhon	1es • May 8, 200	7			<u> </u>
Based on Drainag	ge Des	· · · · ·		1buquerque Section 2				993		
				ON-SIT					· · ·	
AREA OF SITE:				89896	SF		2.1	Ac.		
HISTORIC FLO	ows:			DEVELOPED FLO	WS:			EXCESS PR	ECIP	<b>)</b> :
On-Site Histo	On-Site Historic Land Condition			On-Site Devel	oped L	and Condition		Precip. Zone		2
Area a	=	0	SF	Area a		0	SF	ר ^	0.53	
Area b	=	0	SF	Area b	==	4495	SF	Eb =	0.78	
Area c	=	8989.6	SF	Area c	=	13484	SF	Ec =	1.13	
Area d	=	80906.4	SF	Area d	=	71917	SF	Ed =	2.12	
Total Area	=	89896	SF	Total Area	=	89896	SF			
On-Site Weighted	d Exce	ess Precipitation (10 Weighted E =	)0-Ye	ar, 6-Hour Storm)  EaAa + EbAb + EcA  Aa + Ab + Ac	•	<u>Ad</u>				
Historic E	<del></del>	2 02 ;	<del></del>	<del></del>	<del></del>	1 00				
On-Site Volume		0.02 i $0.02 i$ $0.0360 = 0.02$	II.	Developed E  E*A / 12		1.90 i	III.	]		
Historic V360	=	15140	CF	Developed V360	=	14267	CF	7		
For Precipitation Qpa	Zone =	2 1.56	a+Qp	bAb+QpcAc+QpdAd Qpc	=	3.14				
Q <b>b</b> b	<del>=</del>	2.28		Qpd		4.70				

9.38 CFS Developed Qp

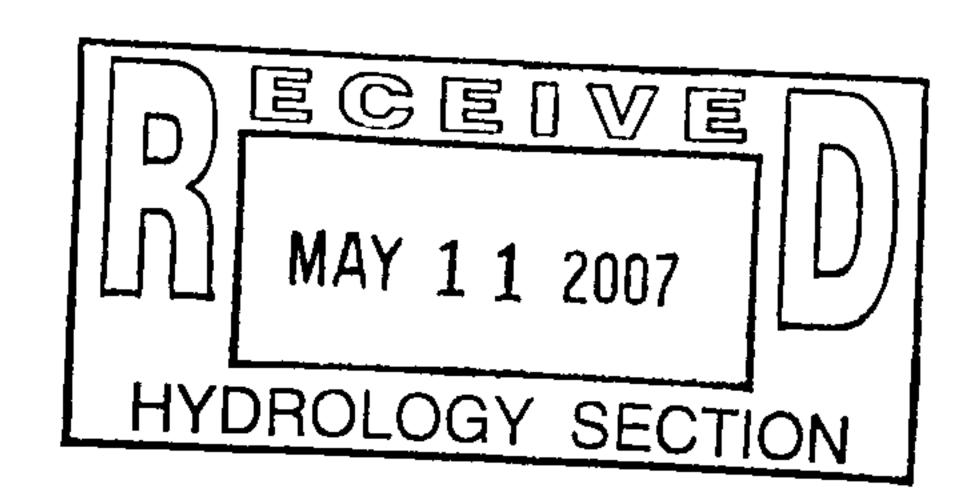
Historic Qp

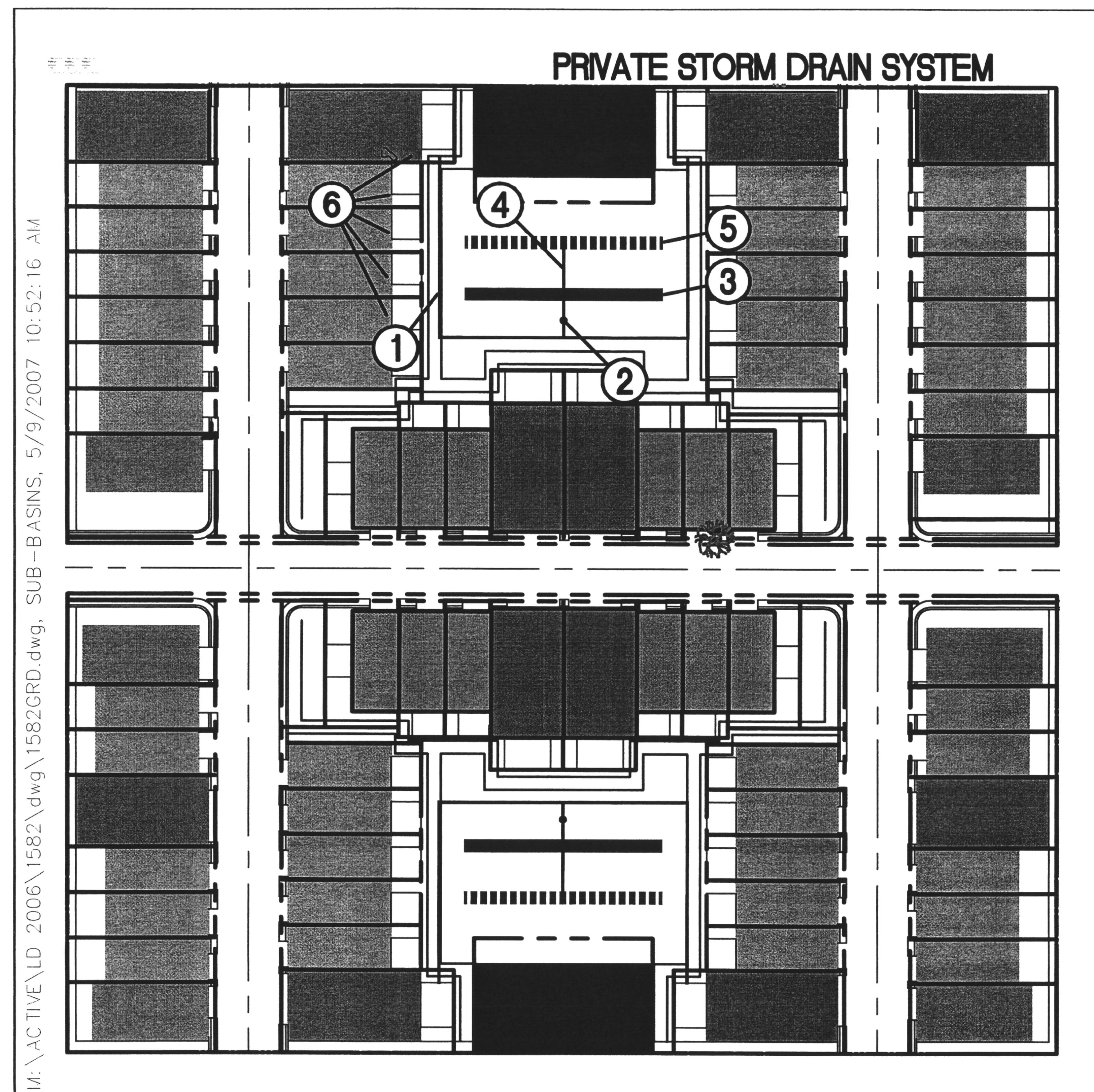


9.0 CFS

## 1582 DPM Calculations - 100 yr 6 hr 21.xls

DESCRIPTION OVERALL BASIN DRAINING TO SURROUNDING STREET BASIN NO. 是是可以不可以不可以 Area of basin flows = 61467 SF 1.4 Ac. The following calculations are based on Treatment areas as shown in table to the right Sub-basin Weighted Excess Precipitation (see formula above) TREATMENT Weighted E 2.07 in. Sub-basin Volume of Runoff (see formula above) 0% 0% V360 CF B =10606 Sub-basin Peak Discharge Rate: (see formula above) 5% cfs 6.5 95% DESCRIPTION **经验证证明** BASIN NO. DRAINING TO NORTH RAIN GARDEN Area of basin flows = 14369 SF 0.3 Ac. 7 THE SECTION The following calculations are based on Treatment areas as shown in table to the right Sub-basin Weighted Excess Precipitation (see formula above) Weighted E TREATMENT 1.65 in. 0% Sub-basin Volume of Runoff (see formula above) 20% V360 B =1981 Sub-basin Peak Discharge Rate: (see formula above) 20% D = 60%cfs 1.3 BASIN NO. ** DESCRIPTION : *** DRAINING TO SOUTH RAIN GARDEN 的。这个人的 Area of basin flows = 14060 SF 0.3 Ac. The following calculations are based on Treatment areas as shown in table to the right Sub-basin Weighted Excess Precipitation (see formula above) TREATMENT Weighted E 1.65 in. Sub-basin Volume of Runoff (see formula above) 0% A =20% CF V360 1938 B =Sub-basin Peak Discharge Rate: (see formula above) 20% C =60% cfs 1.3  $\mathbf{D} = 0$ Qp





- 1. 12" DIA. STORM DRAIN
  TO COLLECT
  TOWNHOME ROOF
  DISCHARGE IN EXCESS
  OF INDIVIDUAL
  CISTERN SYSTEM
- 2. WATER QUALITY
  CONTROL INLET WITH
  TRASH / GREASE
  SEPARATOR
- 3. COMMUNITY
  WATERTIGHT
  UNDERGROUND
  RETENTION SYSTEM
  FOR ON—SITE
  IRRIGATION
- 4. RETENTION SYSTEM OVERFLOW LINE
- 5. PERFORATED
  UNDERGROUND
  DETENTION SYSTEM
- 6. INDIVIDUAL 5 GALLON CISTERN AT EACH TOWNHOME UNIT OF PERSONAL USE

The second secon

317531 TEC Development & Building Services Diff Par 2000 H3NV31 Aitery - Juli I SECOLI AGENT **ADDRESS** DRB0066,006173 PROJECT & APP # PROJECT NAME 441032/3424000 Conflict Management Fee \$'\[ \( \lambda \) \( \frac{15}{5} \) \( \frac{1006}{4983000} \) DRB Actions 441006/4971000 EPC/AA/LUCC Actions & All Appeals 441018/4971000 Public Notification 441006/4983000 DRAINAGE PLAN REVIEW OR TRAFFIC IMPACT STUDY: (Major/Minor Subdivision ()Site Development Plan ()Bldg Permit Letter of Map Revision ( ) Conditional Letter of Map Revision ) Traffic Impact Study TOTAL AMOUNT DUE ***NOTE: If a subsequent submittal is required, bring a copy of this paid receipt with you to avoid an additional charge. 非常常DUFLICATE的企業 1⁻2 Pund 5005 725% City Of Albuquerqua Treasury Divisir: 5/11/2007 12:03PH LOC: ANYX RECEIPT# 00075429 US# 008 TRANS# CO23 Counterreceipt doc 6/21/04 Account- 441006 Fund 0:10 Activity 4933000 TRSLIS Trains mit 12,560.00 J24 Misc \$790.00

Thank You

CHANGI

10.00

\$50,00 \$2,510.00

# CITY OF ALBUQUERQUE

May 18, 2007

Fred C. Arfman, PE Isaacson & Arfman, PA 128 Monroe St. NE. Albuquerque, NM 87108

Re: Silver Ave. Townhomes, Silver Ave.

Grading and Drainage Plan

Engineer's Stamp dated 5-10-07 (K14/D087)

Dear Mr. Arfman,

Kathy Verhage

file

Based upon the information provided in your submittal received 5-1-07, the above referenced plan is approved for Preliminary Plat. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology. Also, prior to Certificate of Occupancy release, Engineer Certification of the grading plan per the DPM checklist will be required.

P.O.Box 1293

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. If you have any questions regarding this permit please feel free to call the DMD Storm Drainage Design section at 768-3654 (Kathy Verhage).

Albuquerque

If you have any questions, you can contact me at 924-3977.

New Mexico 87103

www.cabq.gov

Rudy E. Rael, Associate Engineer

Planning Department.

Sincerely,

Building and Development Services

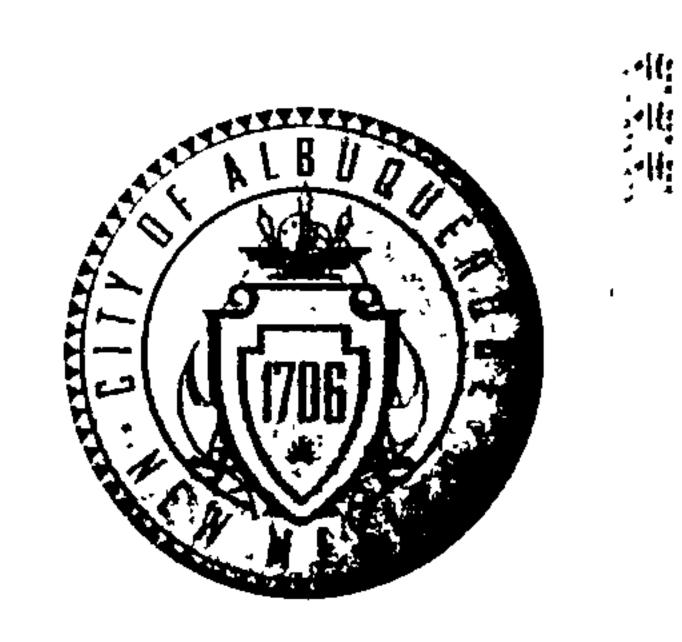
(Rev. 12/05)ZONE MAP/DRG. FILE # K-14 ORB#: WORK ORDER#: LEGAL DESCRIPTION; LOTS 1-24, BLOCK 30, NEW MEXICO TOUN COMPANY'S ORG TOWNSITE CITY ADDRESS: __N/A Isaacson & Arfman, P.A. ENGINEERING FIRM: CONTACT: Fred C. Arfman, PE ADDRESS: 128 Monroe Street NE 268-8828 PHONE: CITY, STATE: Albuquerque, NM ZIP CODE: 87108 OWNER: PHONE: CITY, STATE: ASO. NW ZIP CODE: ___87102 CONTACT: REX YUGLER ARCHITECT: ADDRESS: PHONE: ____ CITY, STATE: ZIP CODE: _____ CONTACT: KEX SURVEYOR: RIO GRANDE SURVEYING (O. ADDRESS: 8.2.6 × CITY, STATE: NIA ZIP CODE: \$7191 RUSCO FLOSH. NET CONTRACTOR: CONTACT: ____ ADDRESS: PHONE: CITY, STATE: ZIP CODE: TYPE OF SUBMITTAL: CHECK TYPE OF APPROVAL SOUGHT: DRAINAGE REPORT SIA/FINANCIAL GUARANTEE RELEASE DRAINAGE PLAN 1st SUBMITTAL PRELIMINARY PLAT APPROVAL DRAINAGE PLAN RESUBMITTAL S. DEV. PLAN FOR SUB'D APPROVAL CONCEPTUAL G & D PLAN S. DEV. FOR BLDG. PERMIT APPROVAL GRADING PLAN SECTOR PLAN APPROVAL EROSION CONTROL PLAN FINAL PLAT APPROVAL ENGINEER'S CERT (HYDROLOGY) FOUNDATION PERMIT APPROVAL CLOMR/LOMR BUILDING PERMIT APPROVAL TRAFFIC CIRCULATION LAYOUT CERTIFICATE OF OCCUPANCY (PERM) ENGINEER/ARCHITECT CERT (TCL) CERTIFICATE OF OCCUPANCY (TEMP) ENGINEER/ARCHITECT CERT (DRB S.P.) GRADING PERMIT APPROVAL ENGINEER/ARCHITECT CERT (AA) PAVING PERMIT APPROVAL OTHER (SPECIFY) WORK ORDER APPROVAL OTHER (SPECIFY) WAS A PRE-DESIGN CONFERENCE ATTENDED: MAY 1 1 2007 YES **★** NO HYDROLOGY SECTION COPY PROVIDED SUBMITTED BY: TRED C. HRENAN

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

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.

# CITY OF ALBUQUERQUE



October 23, 2009

Fred C. Arfman, P.E.

Isaacson & Arfman, P.A.

128 Monroe Street N.E.

Albuquerque, NM 87108

Re: Silver Townhomes, Grading & Drainage—SO-19 Approval,

Engineer's Stamp dated 10-23-09 (K-14/D087)

Dear Mr. Arfman:

Based upon the information provided in your submittal received 10-23-09, the above referenced plan is approved for SO-19 permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

A separate permit (SO 19) is required for construction within City ROW. A copy of this approval letter must be on hand when applying for the excavation/barricading permit.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required and the sidewalk culverts will need to be inspected and approved. Also, Duane Schmitz, 235-8016, will need to inspect and approve this work prior to any certificate of occupancy.

If you have any questions, you can contact me at 924-3982.

Viett

Timothy E. Sims

Sincerely

Albuquerque

NM 87103

www.cabq.gov

Plan Checker - Hydrology, Planning Dept.

Development and Building Services

Cc: Curtis Cherne, P.E.

File

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

PROJECT TITLE: Siyes lous from es DRB#: 1003094 EPC#:	_ ZONE MAP/DRG. FILE # <u>と- 14</u> <u>37</u> _ WORK ORDER#: <u>554</u> 多る
LEGAL DESCRIPTION: SILVER TOWNHOM = 3: REPLANTED TO STUDIES SILVER AN. E 3 PO ST	
ENGINEERING FIRM: Isaacson & Arfman, P.A.  ADDRESS: 128 Monroe Street NE  CITY, STATE: Albuquerque, NM	CONTACT: Fred C. Arfman, PE PHONE: 268-8828 ZIP CODE: 87108
OWNER: ALAYARON-SO, LLC  ADDRESS: 60, TUSRAS NW, STE 7W  CITY, STATE: 460 NM	CONTACT: JULIE FERGUSON  PHONE: 764-3094  ZIP CODE: 87102
ARCHITECT: WORK SAOP ARCH.  ADDRESS: 811 12th ST.  CITY, STATE: ARA. NM	CONTACT: TREV ELLOTT  PHONE: 246-9608  ZIP CODE: 87102
SURVEYOR: RIO CRANDE SURVEYING  ADDRESS:  CITY, STATE: ABO. NM	CONTACT: REX VOLCER PHONE: 764-8891 ZIP CODE:
CONTRACTOR: GERALD MARTIN ADDRESS: 8501 JEFFERSON ST. I CITY, STATE: ABO, NM	CONTACT: GREE HAWRYLSHYN PHONE: 828 - 6846 ZIP CODE: 57113
TYPE OF SUBMITTAL:  DRAINAGE REPORT  DRAINAGE PLAN 1st SUBMITTAL  CONCEPTUAL G & D PLAN  CONCEPTUAL G & D 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) ( S p. L91)	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 AMING PERMIT APPROVAL OTHER (SPECIFY)
WAS A PRE-DESIGN CONFERENCE ATTENDED: YESNOCOPY PROVIDED	OCT 23 2009  HYDROLOGY  SECTION
SUBMITTED BY: FRSO C. ARFIND	DATE: いつ・ころ・09

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

PROJECT TITLE: Silver Townes  ORB#: 1003094 EPC#:	ZONE MAP/DRG. FILE # <u>V-14 0 37</u> WORK ORDER#: <u>555482</u>
LEGAL DESCRIPTION: SILVER TOWNHOMES: REPLACED SILVER AN. & 3 PO ST	
CITY ADDRESS: SILVER AW. & 3 PO ST	
ENGINEERING FIRM: Isaacson & Arfman, P.A.	CONTACT: Fred C. Arfman, PE
ADDRESS: 128 Monroe Street NE	PHONE: 268-8828
CITY, STATE: Albuquerque, NM	ZIP CODE: 87108
,	
OWNER: ALAYAROO-SG, LLC	CONTACT: JULIE FERGUSON
ADDRESS: 601 TUSRAS NULL STE 70	2000 PHONE: 764-3094
CITY, STATE: ABO NA	ZIP CODE: S7102.
ARCHITECT: WORK SAOP ARCH	CONTACT: TREV ELLOTT
ADDRESS: 811 12th ST. CITY, STATE: A&a. Nh	PHONE: 246-968
CITT, STATE: ALE	ZIP CODE: 87102
SURVEYOR: RIO GARAGE SURVEYING	CONTACT: R=x Vouce
ADDRESS:	CONTACT: KEX VOLCE  PHONE: 764-8891
CITY, STATE: ASO. NA	ZIP CODE:
CONTRACTOR: GERRO MARTIN	CONTACT: GREE HAWRYLSHYN
ADDRESS: 8501 JEFERSON ST.	PHONE: 828 - 6846
CITY, STATE: NM	ZIP CODE:
TYPE OF SUBMITTAL:	τε συντική του
DRAINAGE REPORT	<u>K TYPE OF APPROVAL SOUGH</u> T: SIA/FINANCIAL GUARANTEE RELEASE
DRAINAGE PLAN 1 st SUBMITTAL	PRELIMINARY PLAT APPROVAL
DRAINAGE PLAN RESUBMITTAL	S. DEV. PLAN FOR SUB'D APPROVAL
CONCEPTUAL G & D PLAN	S. DEV. FOR BLDG. PERMIT APPROVAL
GRADING PLAN	SECTOR PLAN APPROVAL
EROSION CONTROL PLAN	FINAL PLAT APPROVAL
ENGINEER'S CERT (HYDROLOGY)	FOUNDATION PERMIT APPROVAL
CLOMR/LOMR	BUILDING PERMIT APPROVAL
TRAFFIC CIRCULATION LAYOUT	_ CERTIFICATE OF OCCUPANCY (PERM)
ENGINEER/ARCHITECT CERT (TCL)	CERTIFICATE OF OCCUPANCY (TEMP)
ENGINEER/ARCHITECT CERT (DRB S.P.)	GRADING PERMIT APPROVAL
ENGINEER/ARCHITECT CERT (AA)	PAVING PERMIT APPROVACE DE LA VINCENTIA DE LA
OTHER (SPECIFY) (So.19)	WORK ORDER APPROVAL
	OTHER (SPECIFY)
VAS A PRE-DESIGN CONFERENCE ATTENDED:	50-17
YES	1111
NO	HYDRÖLÖGY
COPY PROVIDED	SECTION
SUBMITTED BY: FRSO C. ARFM	DATE: 10.23.09

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