File

TIERRA WEST, LLC

8509 Jefferson NE
Albuquerque, NM 87113

Phone: 505-858-3100
800-245-3102
Fax: 505-858-1118

FACSIMILE TRANSMITTAL

TO: Mr. Brad Bingham
Mr. Joe Janusz

FAX NO: (505) 924-3864
FAX NO: (262) 703-7105

DATE: 12/8/2005

FROM: Jonathan D. Niski, EI

TOTAL OF PAGES: (3) **INCLUDING COVER SHEET**

SUBJECT: Kohl's – Louisiana & Paseo Del Norte **JN:** 25017

Gentlemen:

Attached, please find the following documents regarding the above referenced project site.

If you have any questions regarding this fax, you may contact Jon Niski @ (505) 858-3100.

Thank you,

Debbie Gale for
Jonathan D. Niski, EI

IF YOU DO NOT RECEIVE ALL PAGES OF THIS TRANSMITTAL, OR IF MATERIAL IS NOT LEGIBLE, PLEASE CONTACT OUR OFFICE FROM 7:00 AM TO 5:00 PM, MST, MONDAY THROUGH THURSDAY OR 8:00 AM TO 12:00 PM, MST, FRIDAY. THANK YOU

November 28, 2005

Mr. Jason Daskalos
Pete Daskalos Properties
5321 Menaul Boulevard NE
Albuquerque, NM 87110

RE: Permission to Grade on Adjacent Property

Dear Mr. Daskalos:

Tierra West LLC, on behalf of Kohl's Departments Stores Inc., is requesting permission to grade within 30 feet along the east property line of Lots 10 and 23, Unit B, North Albuquerque Acres, which you currently own. This will allow Kohl's Department Stores Inc. to grade a 3:1 maximum slope from there development down to the existing grade on your property, filling in an existing arroyo. The extents of the fill are shown on the enclosed exhibit. The slope area would be grubbed of all organic material and filled in with compacted clean fill generated from the Kohl's site. The compaction would be completed using normal construction methods and compacted to 95% of maximum density as determined by ASTM D1557. Once the slope is graded it would be reseeded with a native seed mixture to prevent erosion. This work will also be shown on the Storm Water Pollution Prevention Plans for the Kohl's Development.

If you agree to grant permission to grade within your property please sign below.

If you have any questions or need additional information regarding this matter, please do not hesitate to call me.

Sincerely,

Jonathan D. Niski, El

12-7-05

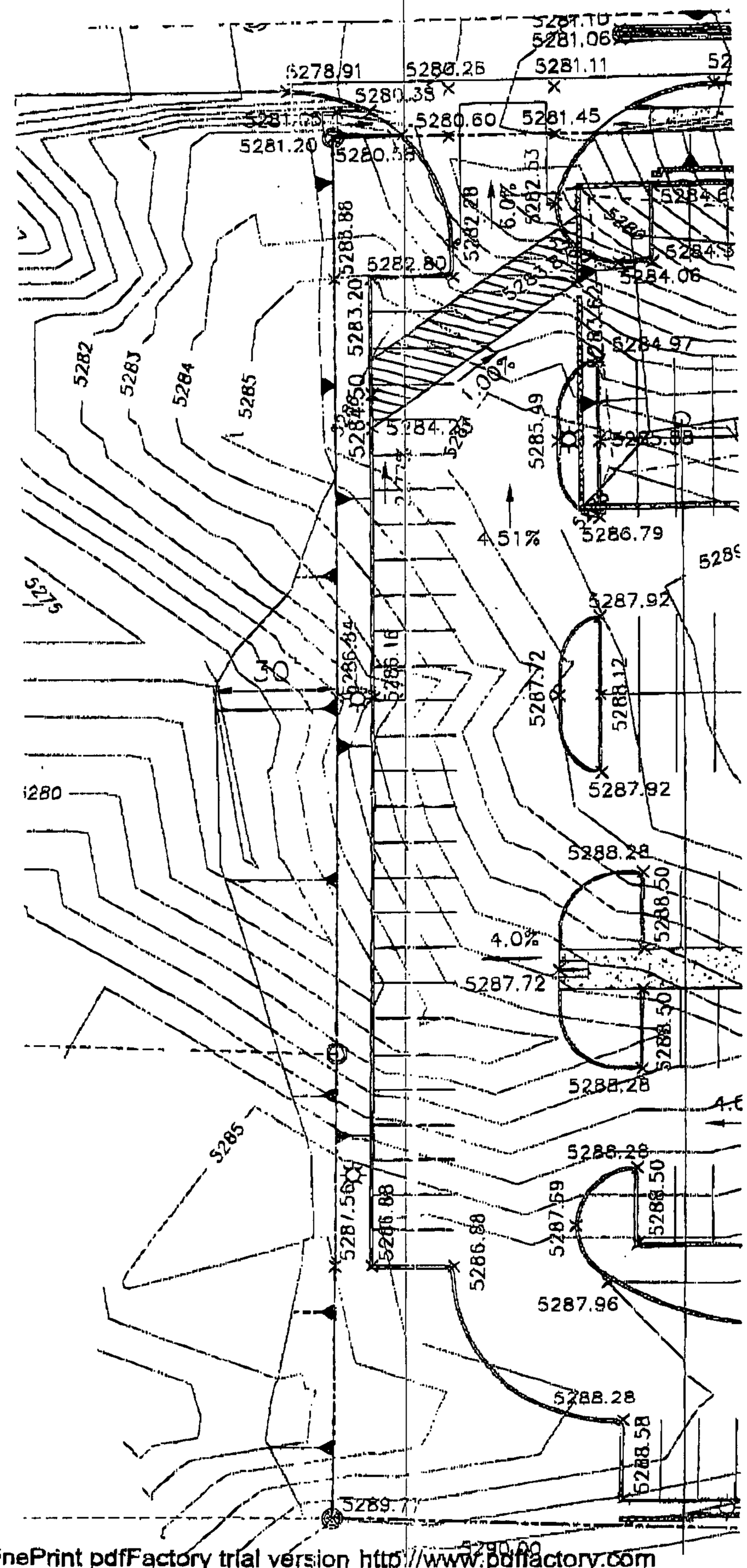
Jason Daskalos Date

Enclosure/s

cc: Joe Janusz

JN: 25017
JDN/dg

2005: 25017 Jason Daskalos 112805



CITY OF ALBUQUERQUE

Planning Department
Transportation Development Services Section

November 16, 2006

Ronald R. Bohannan, P.E.
5571 Midway Park Place NE
Albuquerque, NM 87109

Re: Certification Submittal for Final Building Certificate of Occupancy for Kohl's, [C-18 / D57]
6800 Holly Ave. NE
Engineer's Stamp Dated 11/16/06

Dear Mr. Bohannan:

The TCL / Letter of Certification submitted on November 16, 2006 is sufficient for acceptance by this office for final Certificate of Occupancy (C.O.). Notification has been made to the Building and Safety Section.

Sincerely,

Nilo E. Salgado-Fernandez, P.E.
Senior Traffic Engineer
Development and Building Services
Planning Department

c: Engineer
Hydrology file
CO Clerk

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

DRAINAGE AND TRANSPORTATION SHEET

(REV. 1/28/2003rd)

PROJECT TITLE: Kohl's @ Paseo Del Norte & Louisiana
ZONE MAP/DRG. FILE #: C18/D57
DRB #: 1000579
EPC #:
WORK ORDER #:

LEGAL DESCRIPTION: Tract A, Paseo De Louisiana
CITY ADDRESS: 6800 Holly Avenue NE

ENGINEERING FIRM:	Tierra West, LLC	CONTACT:	Jonathan Niski
ADDRESS:	8509 Jefferson NE	PHONE:	(505) 858-3100
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87113
OWNER:	Kohl's Department Stores	CONTACT:	Joseph Janusz
ADDRESS:	N56 W17000 Ridgewood Drive	PHONE:	262-703-1632
CITY, STATE:	Menomonee Falls, WI	ZIP CODE:	53051
ARCHITECT:	Perkowitz & Ruth Architects	CONTACT:	Zohair Vajihuddin
ADDRESS:	111 W. Ocena Blvd, 21st Floor	PHONE:	562-628-8000
CITY, STATE:	Long Beach, CA	ZIP CODE:	90802
SURVEYOR:	Precision Surveys	CONTACT:	Larry Medrano
ADDRESS:	8500 Jefferson St. NE	PHONE:	505-856-5700
CITY, STATE:	Albuquerque, NM	ZIP CODE:	87113
CONTRACTOR:	Whiting-Turner Construction	CONTACT:	Nick Cizauskas
ADDRESS:	300 East Joppa Road	PHONE:	(410) 494-7427
CITY, STATE:	Baltimore, MD	ZIP CODE:	21286

CHECK TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN 1st SUBMITTAL, ***REQUIRES TCL or equal***
- ____ DRAINAGE PLAN RESUBMITTAL
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- ____ ENGINEER'S CERTIFICATION (HYDROLOGY)
- ____ CLOMR/LOMR
- ____ TRAFFIC CIRCULATION LAYOUT (TCL)
- ____ ENGINEERS CERTIFICATION (TCL)
- X ENGINEERS CERTIFICATION (DRB APPR. SITE PLAN)
- ____ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ____ SIA / FINANACIAL GUARANTEE RELEASE
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D. APPROVAL
- ____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- ____ BUILDING PERMIT APPROVAL
- X CERTIFICATE OF OCCUPANCY (PERM.)
- ____ CERTIFICATE OF OCCUPANCY (TEMP.)
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ WORK ORDER APPROVAL
- ____ SO-19

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ____ YES
- ____ NO
- ____ COPY PROVIDED

RECEIVED
NOV 15 2006
LAND DEVELOPMENT SECTION

RECEIVED
NOV 16 2006
HYDROLOGY SECTION

DATE SUBMITTED: 11/16/2006 BY: Jon Niski

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

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

TIERRA WEST, LLC

5571 Midway Park Place NE
Albuquerque, NM 87109

(505) 858-3100
fax (505) 858-1118

twllc@tierrawestllc.com
1-800-245-3102

November 16, 2006

Mr. Nilo Salgado-Fernandez, PE
Development and Building Services
Public Works Department
PO Box 1293
Albuquerque, NM 87103

RE: DRB Approved Site Plan Certification for Permanent Certificate of Occupancy
Kohl's Department Stores
6800 Holly Avenue NE

Dear Mr. Salgado-Fernandez:

Tierra West, LLC requests a Permanent Certification of the DRB approved Site Plan for Building Permit for the Kohl's Department Store located at 6800 Holly Avenue NE. Enclosed please find the information sheet, the As-Built Administrative Amendment Site Plan for Building Permit and the Approved Site Plan for Building Permit (for reference only). All punchlist items have been completed and the project has been constructed in substantial compliance with the approved plan. Therefore, we request Certification of the As-Built Administrative Amendment Site Plan for Building Permit for a Permanent Certificate of Occupancy.

If you have any questions or need additional information regarding this matter, please do not hesitate to contact me.

Sincerely,

RONALD RAY BOHANNAN NEW MEXICO 7868 REGISTERED PROFESSIONAL ENGINEER 11/6/06

Ronald R. Bohannan, PE

Enclosure/s

cc: Jospeh Janusz

JN: 25017
RRB/bf/kdk

RECEIVED
NOV 15 2006
LAND DEVELOPMENT SECTION

2005: 25017 Nilo Temp CO 092706

CITY OF ALBUQUERQUE

November 17, 2006

Mr. Ron Bohannan, PE
TIERRA WEST, LLC
5571 Midway Park Place NE
Albuquerque, NM 87109

Re: KOHL'S @ LOUISIANA BLVD. NE
6800 Holly Ave. NE
Approval of ~~Temporary~~ Permanent Certificate of Occupancy (C.O.)
Engineer's Stamp dated 11/02/2005 (C-18/D57)
Certification dated 11/16/2006

Dear Ron,

Based upon the information provided in your submittal received 11/16/2006 the above referenced certification is approved for release of Permanent Certificate of Occupancy by Hydrology.

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

Sincerely,

Arlene V. Portillo

Arlene V. Portillo
Plan Reviewer, Planning Dept.-Hydrology
Development and Building Services

C: ~~CO~~ Clerk
File

P.O. Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

CITY OF ALBUQUERQUE

January 4, 2006

Ronald R. Bohannan, P.E.
Tierra West, LLC
8509 Jefferson NE
Albuquerque, NM 87113

Re: Kohl's Department Store, NW Corner of Paseo Del Norte and Louisiana
Grading and Drainage Plan

Engineer's Stamp dated 11-2-05 (C18-D57)

Dear MR. Bohannan,

Based upon the information provided in your submittal received 9-21-05 and subsequent approval of the adjoining property owner to grade on his property, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

This project requires a National Pollutant Discharge Elimination System (NPDES) permit. Refer to the attachment that is provided with this letter for details. If you have any questions please feel free to call the Municipal Development Department, Hydrology section at 768-3654 (Charles Caruso).

Also, prior to Certificate of Occupancy release, Engineer Certification of the grading plan per the DPM checklist 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: Chuck Caruso, DMD
file

P.O. Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

DRAINAGE REPORT
FOR

Tract A
Paseo De Louisiana
Albuquerque, NM

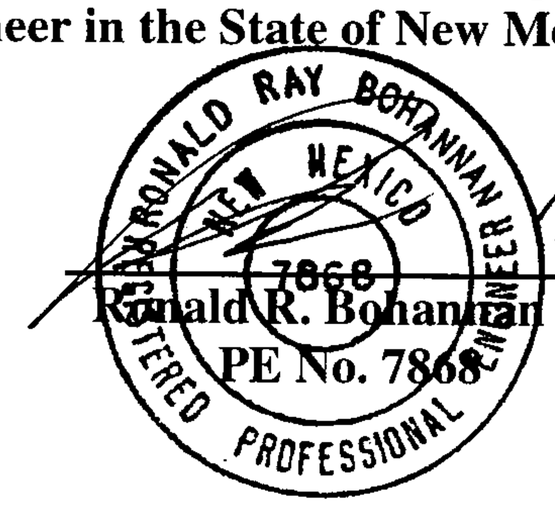
Prepared by:

Tierra West, LLC
8509 Jefferson NE
Albuquerque, New Mexico 87113

Prepared for:
Kohl's Department Stores
N56 W17000 Ridgewood Dr.
Menomonee Falls, WI 53051

September 2005
(Revised)

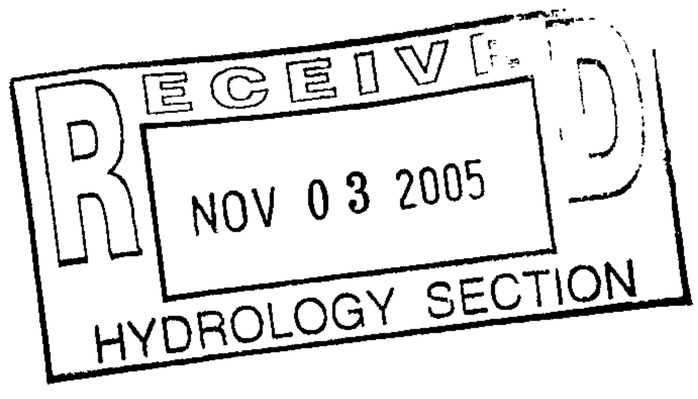
I certify that this report was prepared under my supervision, and I am a registered professional engineer in the State of New Mexico in good standing.



11/1/05

Ronald R. Bohannan
PE No. 7868

Job No 25017



Prelude

This report is being prepared at the request of the current owner, Kohl's Department Stores, who proposes to develop a single retail store on the subject property.

Location

The subject site is located on the northwest corner of Paseo Del Norte and Louisiana Boulevard and consists of Tract A, Paseo De Louisiana. The exact location of the site is shown highlighted on the enclosed Zone Atlas page number C-18. The site will be built in one phase and contains 7.3572 acres, more or less.

Existing Drainage Conditions

The site is currently undeveloped and is bordered by Paseo Del Norte on the south, Holly Avenue on the north, Louisiana Boulevard on the east and a vacant tract of land to the west.

The flows from the site sheet flow to the northwest corner of the site, eventually flowing to Holly Avenue, which is currently undeveloped. From this point the flows continue to the west eventually reaching San Pedro Drive. All flow from the east of Louisiana is intercepted by the existing storm sewer in the street. There are minimal flows currently entering the site from the north, south and east.

Flood Plain

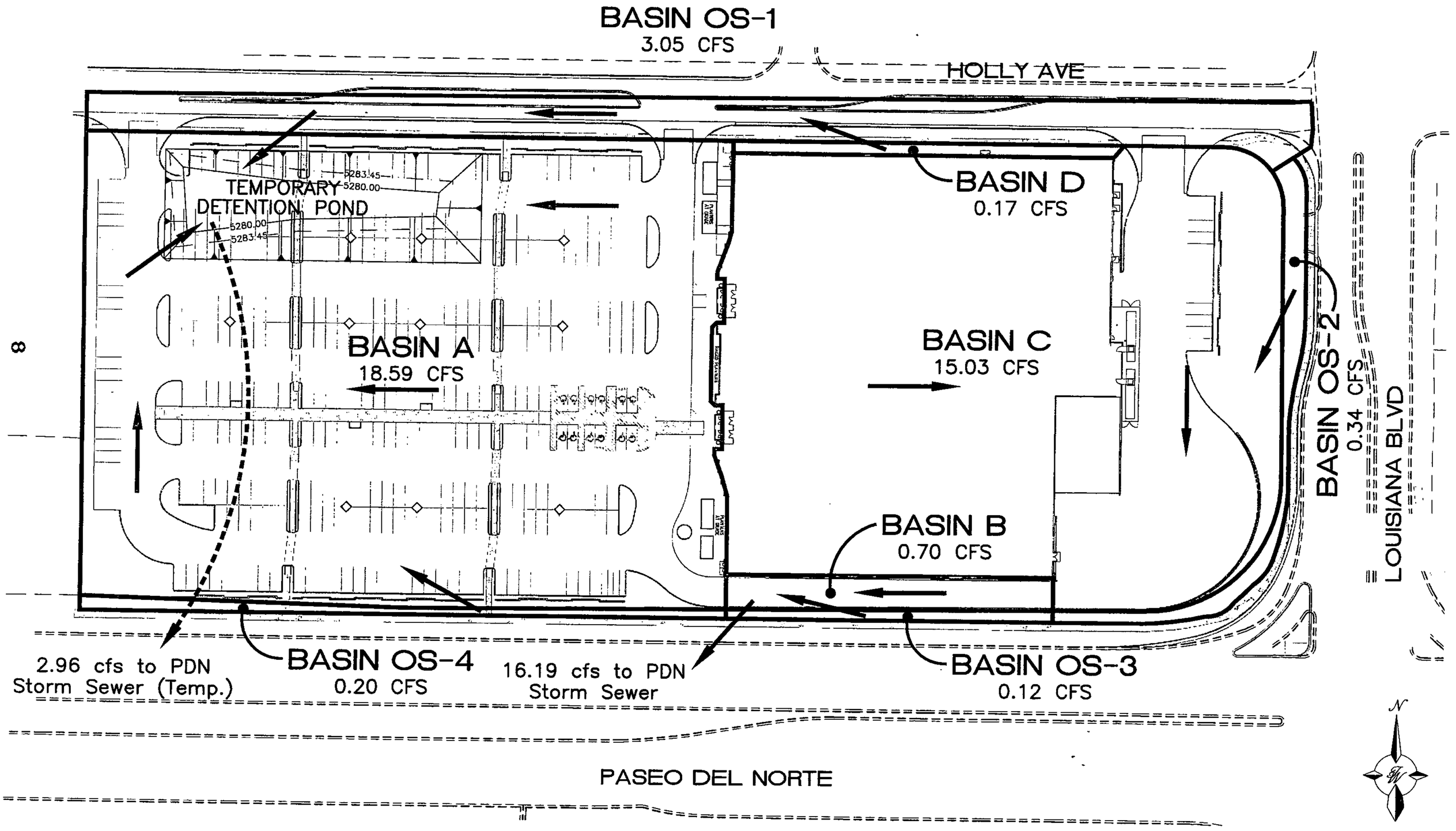
The site is located on FIRM Map 35001C0137F as shown on the attached excerpt. The map shows that the site does not lie within a flood plain; however it does lie within an area that has a 1% annual chance of flood discharge contained in the Paseo Del Norte storm sewer system.

Proposed Drainage Management Plan

As shown on the attached exhibit, the proposed site is divided into 4 onsite basins and 4 off-site basins. Based on the approved Conceptual Grading and Drainage Plan for the Sanchez Properties (C18/D57) dated March 2000, this site is allowed to discharge 20 cfs to the Paseo Del Norte storm sewer system that runs along the south boundary of the site. The site is also allowed free discharge to the Holly Avenue and San Pedro Drive storm sewer system, which is currently not built. This information is further outlined in letters found in Appendix A of this report.

Based on this information Basins B, C, OS-2 and OS-3 will drain to a storm sewer system on site which will be connected to the Paseo Del Norte storm sewer system at an existing man-hole located adjacent to the southern property line mid-way through the property. The total discharge from these basins is 16.19 cfs.

The remainder of the site (Basins A, D, OS-1 and OS-4) will be allowed free discharge to the Holly Avenue storm sewer system that is not currently built. As an interim solution, these basins sheet flow to a temporary detention pond located along the northern property line. Basin D drains to Holly Avenue via a 24" sidewalk culvert. Basin OS-1 (Holly Avenue) will drain to the temporary detention pond via a temporary sidewalk culvert. The temporary detention pond will be allowed to discharge at a rate of 2.96 cfs to the Paseo Del Norte storm sewer system bringing the total discharge to the Paseo Del Norte storm sewer system to 19.15 cfs, which is below the 20 cfs allowed. When construction of the Holly Avenue storm sewer system is complete, the temporary detention pond will be removed and the flows allowed to free discharge to Holly Avenue. These flows will be collected in drop inlets proposed in Holly Avenue and conveyed to the storm sewer located at San Pedro Drive.



PROPOSED BASIN MAP

Calculations

The weighted E method from the "City of Albuquerque Development Process Manual Volume 11 – Design Criteria, 1997 Revision" was used to calculate the runoff and volume for the site. The site was further analyzed using the AHYMO program routing the flows through the site.

Summary

This site will discharge a total of 38.20 cfs; with 19.15 cfs going into the existing storm sewer along Paseo Del Norte as a interim solution. A total of 16.19 cfs (Basins B, C, OS-2 and OS-3) will be a permanent discharge to this storm sewer system. The remaining 22.01 cfs (Basins A, D, OS-1 and OS-4) being a temporary discharge to the Paseo Del Norte storm sewer system at a rate of 2.96 cfs until the storm sewer in Holly Avenue is constructed. Once the Holly Avenue storm sewer is complete, the temporary detention pond can then be eliminated and the flows allowed to freely discharge into Holly Avenue.

The development of this site is consistent with the DPM, Chapter 22, Hydrology section. Since this site encompasses more than 1 acre an NPDES permit will be required in addition to a Top Soil Disturbance Permit prior to any construction activity.

Weighted E Method

Developed On-Site Basins

											100-Year			10-Year		
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)						
A	173,014	3.97	0%	0	14%	0.56	0%	0.00	86%	3.42	2.158	0.714	18.59	1.340	0.444	12.24
B	6,341	0.15	0%	0	9%	0.01	0%	0.00	91%	0.13	2.230	0.027	0.70	1.397	0.017	0.46
C	138,415	3.18	0%	0	12%	0.38	0%	0.00	88%	2.80	2.187	0.579	15.03	1.363	0.361	9.93
D	2,786	0.06	0%	0	100%	0.06	0%	0.00	0%	0.00	0.920	0.005	0.17	0.360	0.002	0.08

Developed Off-Site Basins

											100-Year			10-Year		
Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
			%	(acres)	%	(acres)	%	(acres)	%	(acres)						
OS-1	30,460	0.70	0%	0	27%	0.19	0%	0.00	73%	0.51	1.971	0.115	3.05	1.192	0.069	1.96
OS-2	5,697	0.13	0%	0	100%	0.13	0%	0.00	0%	0.00	0.920	0.010	0.34	0.360	0.004	0.16
OS-3	1,985	0.05	0%	0	100%	0.05	0%	0.00	0%	0.00	0.920	0.003	0.12	0.360	0.001	0.05
OS-4	3,374	0.08	0%	0	100%	0.08	0%	0.00	0%	0.00	0.920	0.006	0.20	0.360	0.002	0.09

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad

Excess Precipitation, E (inches)		
Zone3	100-Year	10 - Year
E_a	0.66	0.19
E_b	0.92	0.36
E_c	1.29	0.62
E_d	2.36	1.50

Peak Discharge (cfs/acre)		
Zone 3	100-Year	10 - Year
Q_a	1.87	0.58
Q_b	2.60	1.19
Q_c	3.45	2.00
Q_d	5.02	3.39

Weighted E Method

Undeveloped On-Site Basins

Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		100-Year			10-Year		
			%	(acres)	%	(acres)	%	(acres)	%	(acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
A	173,014	3.97	100%	3.97	0%	0.00	0%	0.00	0%	0.00	0.660	0.218	7.43	0.190	0.063	2.30
B	6,341	0.15	100%	0.15	0%	0.00	0%	0.00	0%	0.00	0.660	0.008	0.27	0.190	0.002	0.08
C	138,415	3.18	100%	3.18	0%	0.00	0%	0.00	0%	0.00	0.660	0.175	5.94	0.190	0.050	1.84
D	2,786	0.06	100%	0.06	0%	0.00	0%	0.00	0%	0.00	0.660	0.004	0.12	0.190	0.001	0.04

Undeveloped Off-Site Basins

Basin	Area (sf)	Area (acres)	Treatment A		Treatment B		Treatment C		Treatment D		100-Year			10-Year		
			%	(acres)	%	(acres)	%	(acres)	%	(acres)	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs
OS-1	30,460	0.70	60%	0.42	12%	0.08	0%	0.00	28%	0.20	1.167	0.068	1.99	0.577	0.034	1.01
OS-2	5,697	0.13	0%	0.00	100%	0.13	0%	0.00	0%	0.00	0.920	0.010	0.34	0.360	0.004	0.16
OS-3	1,985	0.05	0%	0.00	100%	0.05	0%	0.00	0%	0.00	0.920	0.003	0.12	0.360	0.001	0.05
OS-4	3,374	0.08	0%	0.00	100%	0.08	0%	0.00	0%	0.00	0.920	0.006	0.20	0.360	0.002	0.09

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad

Excess Precipitation, E (inches)		
Zone3	100-Year	10 - Year
E_a	0.66	0.19
E_b	0.92	0.36
E_c	1.29	0.62
E_d	2.36	1.50

Peak Discharge (cfs/acre)		
Zone 3	100-Year	10 - Year
Q_a	1.87	0.58
Q_b	2.60	1.19
Q_c	3.45	2.00
Q_d	5.02	3.39

VOLUME CALCULATIONS

POND

Ab - Bottom Of The Pond Surface Area
At - Top Of The Pond Surface Area
D - Water Depth
Dt - Total Pond Depth
C - Change In Surface Area / Water Depth

Volume = Ab * D + 0.5 * C * D^2
C = (At - Ab) / Dt

Ab	=	5,813.00
At	=	11,832.00
Dt	=	4.00
C	=	1504.75

ACTUAL ELEV.	DEPTH (FT)	VOLUME (AC-FT)	Q (CFS)
5280.00	0.00	0.00	0.0000
5281.00	1.00	0.1334	1.3723
5282.00	2.00	0.2842	2.1698
5283.00	3.00	0.4694	2.7446
5284.00	4.00	0.6892	3.2184

<u>Orifice Equation</u>
Q = CA SQRT(2gH)

C =	0.6
Diameter (in)	8
Area (ft^2)=	0.349
g =	32.2
H (Ft) =	Depth of water above center of orifice
Q (CFS)=	Flow

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) - VERSION: 1997.02d RUN DATE (MON/DAY/YR) =10/19/2005

INPUT FILE = C:\AHYMOW~1\25017D~1.TXT USER NO.=

AHYMO-S-9702d1TierraW-AH

COMMAND NOTATION	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1
START										TIME=
.00										
RAINFALL TYPE= 1										RAIN6=
2.600										
*S BASIN A										
COMPUTE NM HYD	101.00	-	1	.00621	18.61	.714	2.15447	1.500	4.682	PER IMP= 86.00
*S BASIN B										
COMPUTE NM HYD	102.00	-	2	.00023	.72	.027	2.22619	1.500	4.895	PER IMP= 91.00
*S BASIN C										
COMPUTE NM HYD	103.00	-	3	.00497	15.05	.579	2.18316	1.500	4.732	PER IMP= 88.00
*S BASIN D										
COMPUTE NM HYD	104.00	-	4	.00010	.18	.005	.92096	1.500	2.752	PER IMP= .00
*S BASIN OS-1										
COMPUTE NM HYD	105.00	-	5	.00109	3.06	.114	1.96801	1.500	4.391	PER IMP= 73.00
*S BASIN OS-2										
COMPUTE NM HYD	106.00	-	6	.00020	.34	.010	.92096	1.500	2.673	PER IMP= .00
*S BASIN OS-3										
COMPUTE NM HYD	107.00	-	7	.00007	.13	.003	.92096	1.500	2.819	PER IMP= .00
*S BASIN OS-4										
COMPUTE NM HYD	108.00	-	8	.00012	.21	.006	.92096	1.500	2.727	PER IMP= .00
*S ADD BASINS A AND OS-4										
ADD HYD	151.00	1& 8	9	.00633	18.82	.719	2.13104	1.500	4.645	
*S ADD BASINS B AND OS-3										
ADD HYD	152.00	2& 7	10	.00030	.85	.031	1.92051	1.500	4.411	
*S ADD BASINS C AND OS-2										
ADD HYD	153.00	3& 6	11	.00517	15.39	.588	2.13426	1.500	4.652	
*S ADD BASINS D AND OS-1										
ADD HYD	154.00	4& 5	12	.00119	3.24	.119	1.87972	1.500	4.253	
*S ADD BASINS A, D, OS-1 and OS-4										
ADD HYD	155.00	9&12	13	.00752	22.06	.839	2.09127	1.500	4.583	
*S ADD BASINS B, C, OS-2 AND OS-3										
ADD HYD	156.00	10&11	14	.00547	16.24	.619	2.12253	1.500	4.639	
*S POND A										

```
 ROUTE RESERVOIR        201.00    13    15        .00752          2.96         .839       2.09126     2.133      .614 AC-FT=
.568
 FINISH
```

```
**********************************************************************
*                                                                    *
*                  KOHL'S AT PASEO DRAINAGE ANALYSIS                 *
*                LOUISIANA & PASEO DEL NORTE (25017)                 *
*             PROPOSED CONDITIONS (100-YEAR, 6-HR STORM)             *
*                                                                    *
**********************************************************************
*
START                   TIME=0.0 HR
RAINFALL                TYPE=1 RAIN QUARTER=0.0 IN
                        RAIN ONE=2.14 IN RAIN SIX=2.60 IN
                        RAIN DAY=3.10 IN DT=0.03333 HR
*
*S BASIN A
*
COMPUTE NM HYD          ID=1 HYD NO=101 AREA=0.00621 SQ MI
                        PER A=0 PER B=14.00 PER C=0.00 PER D=86.00
                        TP=0 HR MASS RAINFALL=-1
PRINT HYD               ID=1 CODE=1

*
*S BASIN B
*
COMPUTE NM HYD          ID=2 HYD NO=102 AREA=0.00023 SQ MI
                        PER A=0 PER B=9.00 PER C=0.00 PER D=91.00
                        TP=0 HR MASS RAINFALL=-1
PRINT HYD               ID=2 CODE=1

*
*S BASIN C
*
COMPUTE NM HYD          ID=3 HYD NO=103 AREA=0.00497 SQ MI
                        PER A=0 PER B=12.00 PER C=0.00 PER D=88.00
                        TP=0 HR MASS RAINFALL=-1
PRINT HYD               ID=3 CODE=1

*S BASIN D
*
COMPUTE NM HYD          ID=4 HYD NO=104 AREA=0.0001 SQ MI
                        PER A=0 PER B=100.00 PER C=0.00 PER D=0.00
                        TP=0 HR MASS RAINFALL=-1
PRINT HYD               ID=4 CODE=1

*
*S BASIN OS-1
*
COMPUTE NM HYD          ID=5 HYD NO=105 AREA=0.00109 SQ MI
                        PER A=0 PER B=27.00 PER C=0.00 PER D=73.00
                        TP=0 HR MASS RAINFALL=-1
PRINT HYD               ID=5 CODE=1

*
*S BASIN OS-2
*
COMPUTE NM HYD          ID=6 HYD NO=106 AREA=0.00020 SQ MI
                        PER A=0 PER B=100.00 PER C=0.00 PER D=0.00
                        TP=0 HR MASS RAINFALL=-1
PRINT HYD               ID=6 CODE=1

*
*S BASIN OS-3
*
COMPUTE NM HYD          ID=7 HYD NO=107 AREA=0.00007 SQ MI
                        PER A=0 PER B=100.00 PER C=0.00 PER D=0.00
                        TP=0 HR MASS RAINFALL=-1
PRINT HYD               ID=7 CODE=1
```

```
*
*S BASIN OS-4
*
COMPUTE NM HYD       ID=8 HYD NO=108 AREA=0.00012 SQ MI
                     PER A=0 PER B=100.00 PER C=0.00 PER D=0.00
                     TP=0 HR MASS RAINFALL=-1
PRINT HYD            ID=8 CODE=1

*
*S ADD BASINS A AND OS-4
*
ADD HYD              ID=9 HYD NO=151.00 ID=1  ID=8
PRINT HYD            ID=9 CODE=1

*
*S ADD BASINS B AND OS-3
*
ADD HYD              ID=10 HYD NO=152.00 ID=2 ID=7
PRINT HYD            ID=10 CODE=1

*
*S ADD BASINS C AND OS-2
*
ADD HYD              ID=11 HYD NO=153.00 ID=3 ID=6
PRINT HYD            ID=11 CODE=1

*
*S ADD BASINS D AND OS-1
*
ADD HYD              ID=12 HYD NO=154.00 ID=4 ID=5
PRINT HYD            ID=12 CODE=1

*
*S ADD BASINS A, D, OS-1 and OS-4
*
ADD HYD              ID=13 HYD NO=155.00 ID=9 ID=12
PRINT HYD            ID=13 CODE=1

*
*S ADD BASINS B, C, OS-2 AND OS-3
*
ADD HYD              ID=14 HYD NO=156.00 ID=10 ID=11
PRINT HYD            ID=14 CODE=1

*
*S POND A
*
ROUTE RESERVOIR      ID=15 HYD NO=201.00 INFLOW ID=13 CODE=24
                     OUTFLOW(CFS)      STORAGE(AC-FT)  ELEVATION(FT)
                         0.0000            0.0000          5280.00
                         1.3723            0.1334          5281.00
                         2.1698            0.2842          5282.00
                         2.7446            0.4694          5283.00
                         3.2184            0.6892          5284.00

PRINT HYD            ID=15 CODE=1
*

*
FINISH
```

```
          AHYMO PROGRAM (AHYMO_97) -                                - Version:
1997.02d
               RUN DATE (MON/DAY/YR) = 10/19/2005
               START TIME (HR:MIN:SEC) = 14:04:29     USER NO.= AHYMO-S-
9702d1TierraW-AH
               INPUT FILE = C:\AHYMOW~1\25017D~1.TXT

     **********************************************************************
     *                                                                    *
     *                    KOHL'S AT PASEO DRAINAGE ANALYSIS               *
     *                  LOUISIANA & PASEO DEL NORTE (25017)               *
     *              PROPOSED CONDITIONS (100-YEAR, 6-HR STORM)            *
     *                                                                    *
     **********************************************************************
     *
     START                    TIME=0.0 HR
     RAINFALL                 TYPE=1 RAIN QUARTER=0.0 IN
                              RAIN ONE=2.14 IN RAIN SIX=2.60 IN
                              RAIN DAY=3.10 IN DT=0.03333 HR

                         COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA
ATLAS 2 - PEAK AT 1.40 HR.
                         DT =     .033330 HOURS        END TIME =     5.999400
HOURS
                            .0000    .0027    .0055    .0084    .0113    .0143
.0173
                            .0204    .0236    .0269    .0302    .0337    .0372
.0408
                            .0445    .0484    .0523    .0564    .0606    .0649
.0694
                            .0741    .0789    .0839    .0892    .0946    .1003
.1063
                            .1126    .1192    .1262    .1322    .1385    .1452
.1597
                            .1922    .2422    .3139    .4119    .5407    .7049
.9093
                           1.1588   1.3904   1.4871   1.5687   1.6414   1.7074
1.7683
                           1.8247   1.8775   1.9270   1.9735   2.0174   2.0589
2.0982
                           2.1354   2.1707   2.2041   2.2359   2.2661   2.2737
2.2807
                           2.2875   2.2939   2.3001   2.3060   2.3117   2.3172
2.3226
                           2.3277   2.3328   2.3376   2.3423   2.3470   2.3514
2.3558
                           2.3601   2.3643   2.3683   2.3723   2.3762   2.3801
2.3838
                           2.3875   2.3911   2.3947   2.3982   2.4016   2.4050
2.4083
                           2.4115   2.4147   2.4179   2.4210   2.4241   2.4271
2.4301
                           2.4330   2.4359   2.4388   2.4416   2.4444   2.4472
2.4499
                           2.4526   2.4553   2.4579   2.4605   2.4631   2.4656
2.4681
                           2.4706   2.4731   2.4755   2.4779   2.4803   2.4827
2.4850
                           2.4873   2.4896   2.4919   2.4942   2.4964   2.4986
2.5008
```

2.5157 2.5030 2.5052 2.5073 2.5094 2.5115 2.5136

2.5297 2.5177 2.5198 2.5218 2.5238 2.5258 2.5277

2.5430 2.5317 2.5336 2.5355 2.5374 2.5393 2.5412

2.5557 2.5449 2.5467 2.5486 2.5504 2.5522 2.5540

2.5679 2.5575 2.5593 2.5610 2.5627 2.5645 2.5662

2.5795 2.5696 2.5713 2.5729 2.5746 2.5762 2.5779

2.5907 2.5811 2.5828 2.5844 2.5860 2.5876 2.5891

2.5923 2.5938 2.5954 2.5969 2.5984 2.6000

```
     *
     *S BASIN A
     *
     COMPUTE NM HYD       ID=1 HYD NO=101 AREA=0.00621 SQ MI
                          PER A=0 PER B=14.00 PER C=0.00 PER D=86.00
                          TP=0 HR MASS RAINFALL=-1
          *****Warning*****A value for the Time to Peak was not
previously computed; use Tp=0.133333 hrs.

          TIME TO PEAK (hrs)=    .1333

          K =    .072666HR     TP =    .133333HR     K/TP RATIO =    .545000
SHAPE CONSTANT, N =  7.106420
          UNIT PEAK =    21.080     CFS    UNIT VOLUME =     .9988        B =
526.28       P60 = 2.1400
          AREA =       .005341 SQ MI     IA =     .10000 INCHES     INF =
.04000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =    .033330


          K =    .133689HR     TP =    .133333HR     K/TP RATIO =  1.002670
SHAPE CONSTANT, N =  3.520804
          UNIT PEAK =    2.0986     CFS    UNIT VOLUME =     .9937        B =
321.84       P60 = 2.1400
          AREA =       .000869 SQ MI     IA =     .50000 INCHES     INF =
1.25000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =    .033330

     PRINT HYD            ID=1 CODE=1

                                        PARTIAL HYDROGRAPH    101.00


          RUNOFF VOLUME =      2.15447 INCHES      =          .7136 ACRE-FEET
          PEAK DISCHARGE RATE =       18.61 CFS  AT    1.500 HOURS    BASIN
AREA =    .0062 SQ. MI.



     *
     *S BASIN B
     *
```

```
     COMPUTE NM HYD       ID=2 HYD NO=102 AREA=0.00023 SQ MI
                          PER A=0 PER B=9.00 PER C=0.00 PER D=91.00
                          TP=0 HR MASS RAINFALL=-1
          TIME TO PEAK (hrs)=    .1333
          *****Warning*****This Tp value was used for a previously
computed hydrograph.
                               A new Tp value should be computed.


          K =    .072666HR     TP =    .133333HR     K/TP RATIO =    .545000
SHAPE CONSTANT, N =  7.106420
          UNIT PEAK =    .82612     CFS   UNIT VOLUME =     .9862        B =
526.28       P60 = 2.1400
          AREA =       .000209 SQ MI     IA =     .10000 INCHES     INF =
.04000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =    .033330

          K =    .133689HR     TP =    .133333HR     K/TP RATIO =  1.002670
SHAPE CONSTANT, N =  3.520804
          UNIT PEAK =    .49967E-01CFS   UNIT VOLUME =     .8691        B =
321.84       P60 = 2.1400
          AREA =       .000021 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   102.00


          RUNOFF VOLUME =      2.22619 INCHES      =          .0273 ACRE-FEET
          PEAK DISCHARGE RATE =          .72 CFS  AT    1.500 HOURS   BASIN
AREA =    .0002 SQ. MI.



     *
     *S BASIN C
     *
     COMPUTE NM HYD       ID=3 HYD NO=103 AREA=0.00497 SQ MI
                          PER A=0 PER B=12.00 PER C=0.00 PER D=88.00
                          TP=0 HR MASS RAINFALL=-1
          TIME TO PEAK (hrs)=    .1333
          *****Warning*****This Tp value was used for a previously
computed hydrograph.
                               A new Tp value should be computed.


          K =    .072666HR     TP =    .133333HR     K/TP RATIO =    .545000
SHAPE CONSTANT, N =  7.106420
          UNIT PEAK =    17.263     CFS   UNIT VOLUME =     .9988        B =
526.28       P60 = 2.1400
          AREA =       .004374 SQ MI     IA =     .10000 INCHES     INF =
.04000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =    .033330
```

```
          K =    .133689HR     TP =    .133333HR     K/TP RATIO =  1.002670
SHAPE CONSTANT, N =  3.520804
          UNIT PEAK =    1.4396     CFS    UNIT VOLUME =     .9903        B =
321.84       P60 = 2.1400
          AREA =       .000596 SQ MI     IA =     .50000 INCHES     INF =
1.25000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =    .033330

     PRINT HYD             ID=3 CODE=1

                                          PARTIAL HYDROGRAPH   103.00


          RUNOFF VOLUME =      2.18316 INCHES      =          .5787 ACRE-FEET
          PEAK DISCHARGE RATE =       15.05 CFS  AT    1.500 HOURS   BASIN
AREA =    .0050 SQ. MI.

     *S BASIN D
     *
     COMPUTE NM HYD        ID=4 HYD NO=104 AREA=0.0001 SQ MI
                           PER A=0 PER B=100.00 PER C=0.00 PER D=0.00
                           TP=0 HR MASS RAINFALL=-1
          TIME TO PEAK (hrs)=    .1333
          *****Warning*****This Tp value was used for a previously
computed hydrograph.
                             A new Tp value should be computed.


          K =    .133689HR     TP =    .133333HR     K/TP RATIO =  1.002670
SHAPE CONSTANT, N =  3.520804
          UNIT PEAK =    .24138     CFS    UNIT VOLUME =     .9432        B =
321.84       P60 = 2.1400
          AREA =       .000100 SQ MI     IA =     .50000 INCHES     INF =
1.25000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =    .033330

     PRINT HYD             ID=4 CODE=1

                                          PARTIAL HYDROGRAPH   104.00


          RUNOFF VOLUME =       .92096 INCHES      =          .0049 ACRE-FEET
          PEAK DISCHARGE RATE =         .18 CFS  AT    1.500 HOURS   BASIN
AREA =    .0001 SQ. MI.


     *
     *S BASIN OS-1
     *
     COMPUTE NM HYD        ID=5 HYD NO=105 AREA=0.00109 SQ MI
                           PER A=0 PER B=27.00 PER C=0.00 PER D=73.00
                           TP=0 HR MASS RAINFALL=-1
          TIME TO PEAK (hrs)=    .1333
```

```
          *****Warning*****This Tp value was used for a previously
computed hydrograph.
                              A new Tp value should be computed.


          K =    .072666HR    TP =    .133333HR    K/TP RATIO =    .545000
SHAPE CONSTANT, N =  7.106420
          UNIT PEAK =   3.1407    CFS   UNIT VOLUME =    .9955       B =
526.28      P60 = 2.1400
          AREA =       .000796 SQ MI    IA =    .10000 INCHES    INF =
.04000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =    .033330


          K =    .133689HR    TP =    .133333HR    K/TP RATIO =  1.002670
SHAPE CONSTANT, N =  3.520804
          UNIT PEAK =    .71039    CFS   UNIT VOLUME =    .9809       B =
321.84      P60 = 2.1400
          AREA =       .000294 SQ MI    IA =    .50000 INCHES    INF =
1.25000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =    .033330

     PRINT HYD            ID=5 CODE=1

                                        PARTIAL HYDROGRAPH   105.00


          RUNOFF VOLUME =     1.96801 INCHES     =         .1144 ACRE-FEET
          PEAK DISCHARGE RATE =       3.06 CFS  AT   1.500 HOURS   BASIN
AREA =    .0011 SQ. MI.



     *
     *S BASIN OS-2
     *
     COMPUTE NM HYD       ID=6 HYD NO=106 AREA=0.00020 SQ MI
                          PER A=0 PER B=100.00 PER C=0.00 PER D=0.00
                          TP=0 HR MASS RAINFALL=-1
          TIME TO PEAK (hrs)=    .1333
          *****Warning*****This Tp value was used for a previously
computed hydrograph.
                              A new Tp value should be computed.


          K =    .133689HR    TP =    .133333HR    K/TP RATIO =  1.002670
SHAPE CONSTANT, N =  3.520804
          UNIT PEAK =    .48277    CFS   UNIT VOLUME =    .9709       B =
321.84      P60 = 2.1400
          AREA =       .000200 SQ MI    IA =    .50000 INCHES    INF =
1.25000 INCHES PER HOUR
          RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =    .033330

     PRINT HYD            ID=6 CODE=1

                                        PARTIAL HYDROGRAPH   106.00
```

```
          RUNOFF VOLUME =       .92096 INCHES     =         .0098 ACRE-FEET
          PEAK DISCHARGE RATE =         .34 CFS  AT    1.500 HOURS   BASIN
AREA =    .0002 SQ. MI.


      *
      *S BASIN OS-3
      *
      COMPUTE NM HYD       ID=7 HYD NO=107 AREA=0.00007 SQ MI
                           PER A=0 PER B=100.00 PER C=0.00 PER D=0.00
                           TP=0 HR MASS RAINFALL=-1
           TIME TO PEAK (hrs)=    .1333
           *****Warning*****This Tp value was used for a previously
computed hydrograph.
                              A new Tp value should be computed.

           K =    .133689HR    TP =    .133333HR    K/TP RATIO =  1.002670
SHAPE CONSTANT, N =  3.520804
           UNIT PEAK =    .16897    CFS   UNIT VOLUME =     .9206       B =
321.84       P60 = 2.1400
           AREA =       .000070 SQ MI    IA =     .50000 INCHES    INF =
1.25000 INCHES PER HOUR
           RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =    .033330

      PRINT HYD            ID=7 CODE=1

                                          PARTIAL HYDROGRAPH   107.00


          RUNOFF VOLUME =       .92096 INCHES     =         .0034 ACRE-FEET
          PEAK DISCHARGE RATE =         .13 CFS  AT    1.500 HOURS   BASIN
AREA =    .0001 SQ. MI.


      *
      *S BASIN OS-4
      *
      COMPUTE NM HYD       ID=8 HYD NO=108 AREA=0.00012 SQ MI
                           PER A=0 PER B=100.00 PER C=0.00 PER D=0.00
                           TP=0 HR MASS RAINFALL=-1
           TIME TO PEAK (hrs)=    .1333
           *****Warning*****This Tp value was used for a previously
computed hydrograph.
                              A new Tp value should be computed.


           K =    .133689HR    TP =    .133333HR    K/TP RATIO =  1.002670
SHAPE CONSTANT, N =  3.520804
           UNIT PEAK =    .28966    CFS   UNIT VOLUME =     .9519       B =
321.84       P60 = 2.1400
           AREA =       .000120 SQ MI    IA =     .50000 INCHES    INF =
1.25000 INCHES PER HOUR
           RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER
METHOD - DT =    .033330
```

```
      PRINT HYD             ID=8 CODE=1

                                          PARTIAL HYDROGRAPH   108.00

          RUNOFF VOLUME =       .92096 INCHES     =         .0059 ACRE-FEET
          PEAK DISCHARGE RATE =         .21 CFS  AT    1.500 HOURS   BASIN
AREA =    .0001 SQ. MI.



      *
      *S ADD BASINS A AND OS-4
      *
      ADD HYD                       ID=9 HYD NO=151.00 ID=1  ID=8
      PRINT HYD               ID=9 CODE=1

                                          PARTIAL HYDROGRAPH   151.00

          RUNOFF VOLUME =      2.13104 INCHES     =         .7194 ACRE-FEET
          PEAK DISCHARGE RATE =       18.82 CFS  AT    1.500 HOURS   BASIN
AREA =    .0063 SQ. MI.


      *
      *S ADD BASINS B AND OS-3
      *
      ADD HYD                       ID=10 HYD NO=152.00 ID=2 ID=7
      PRINT HYD               ID=10 CODE=1

                                          PARTIAL HYDROGRAPH   152.00

          RUNOFF VOLUME =      1.92051 INCHES     =         .0307 ACRE-FEET
          PEAK DISCHARGE RATE =         .85 CFS  AT    1.500 HOURS   BASIN
AREA =    .0003 SQ. MI.


      *
      *S ADD BASINS C AND OS-2
      *
      ADD HYD                       ID=11 HYD NO=153.00 ID=3 ID=6
      PRINT HYD               ID=11 CODE=1

                                          PARTIAL HYDROGRAPH   153.00

          RUNOFF VOLUME =      2.13426 INCHES     =         .5885 ACRE-FEET
          PEAK DISCHARGE RATE =       15.39 CFS  AT    1.500 HOURS   BASIN
AREA =    .0052 SQ. MI.
```

```
*
*S ADD BASINS D AND OS-1
*
ADD HYD                        ID=12 HYD NO=154.00 ID=4 ID=5
PRINT HYD                 ID=12 CODE=1


                                        PARTIAL HYDROGRAPH   154.00

     RUNOFF VOLUME =     1.87972 INCHES     =         .1193 ACRE-FEET
     PEAK DISCHARGE RATE =       3.24 CFS  AT    1.500 HOURS   BASIN
AREA =    .0012 SQ. MI.

*
*S ADD BASINS A, D, OS-1 and OS-4
*
ADD HYD                        ID=13 HYD NO=155.00 ID=9 ID=12
PRINT HYD                 ID=13 CODE=1


                                        PARTIAL HYDROGRAPH   155.00

     RUNOFF VOLUME =     2.09127 INCHES     =         .8387 ACRE-FEET
     PEAK DISCHARGE RATE =      22.06 CFS  AT    1.500 HOURS   BASIN
AREA =    .0075 SQ. MI.


*
*S ADD BASINS B, C, OS-2 AND OS-3
*
ADD HYD                        ID=14 HYD NO=156.00 ID=10 ID=11
PRINT HYD                 ID=14 CODE=1

                                        PARTIAL HYDROGRAPH   156.00

     RUNOFF VOLUME =     2.12253 INCHES     =         .6192 ACRE-FEET
     PEAK DISCHARGE RATE =      16.24 CFS  AT    1.500 HOURS   BASIN
AREA =    .0055 SQ. MI.


*
*S POND A
*
ROUTE RESERVOIR      ID=15 HYD NO=201.00 INFLOW ID=13 CODE=24
                     OUTFLOW(CFS)      STORAGE(AC-FT)  ELEVATION(FT)
                         0.0000            0.0000         5280.00
                         1.3723            0.1334         5281.00
```

2.1698	0.2842	5282.00
2.7446	0.4694	5283.00
3.2184	0.6892	5284.00

* * * * * * * * * * * * * * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5280.00	.000	.00
.80	.00	5280.00	.000	.00
1.60	15.37	5282.44	.366	2.42
2.40	.98	5283.32	.539	2.90
3.20	.24	5282.58	.391	2.50
4.00	.17	5281.80	.254	2.01
4.80	.16	5281.12	.151	1.46
5.60	.17	5280.63	.085	.87
6.40	.01	5280.36	.048	.50
7.20	.00	5280.18	.025	.25
8.00	.00	5280.09	.012	.13
8.80	.00	5280.05	.006	.06
9.60	.00	5280.02	.003	.03
10.40	.00	5280.01	.002	.02
11.20	.00	5280.01	.001	.01
12.00	.00	5280.00	.000	.00

PEAK DISCHARGE = 2.957 CFS - PEAK OCCURS AT HOUR 2.13
MAXIMUM WATER SURFACE ELEVATION = 5283.449
MAXIMUM STORAGE = .5681 AC-FT INCREMENTAL TIME= .033330HRS

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 201.00

RUNOFF VOLUME = 2.09126 INCHES = .8387 ACRE-FEET
PEAK DISCHARGE RATE = 2.96 CFS AT 2.133 HOURS BASIN AREA = .0075 SQ. MI.

*
*
FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 14:04:29

SIDEWALK CULVERTS

Orifice Equation:

$$Q = CA\sqrt{2gH}$$

Where:
C = 0.6
A = 0.5833*2 = 1.167 ft^2
g = 32.2
H = Height of water measured from center of orifice

$$Q = 0.6 * 1.1678\sqrt{2 * 32.2 * 0.2917}$$

Q=3.035 cfs

Basin D
3.04 cfs > 0.17 cfs
Use one 24" sidewalk culvert

Basin OS-1
6.07 cfs > 3.22 cfs
Use two 24" sidewalk culverts