

CITY OF ALBUQUERQUE

Hydrology Section Planning Department
David S. Campbell, Director



Timothy M. Keller, Mayor

February 27, 2019

Joel Hernandez, P.E.
Tierra West, LLC
5571 Midway Park Place, NE
Albuquerque, NM 87109

**RE: Los Pastores Shopping Center
Montgomery/Wyoming
DMP Addendum
Engineers Stamp Date: 2/11/2019,
Hydrology File: F19D013C**

Dear Mr. Hernandez,

Based on the information provided in your submittal received on 2/11/2019 the DMP Addendum cannot be approved until the following comments are addressed.

1. The review can not be completed without legible summary tables like the ones in Appendix C of the original DMP. Please reformat the summary AHYMO summary output so that the columns don't overlap, and update the tables in the addendum.
2. What are the changes to the pond routing input file in the "Proposed" AHYMO? Please provide an explanation and calculations.
3. Please explain what conditions are represented on the "Pre-development and Existing" basin map and the AHYMO file respectively, and identify and justify any revision to the previously approved analysis.
4. Details of the pond outfall structure and pond grading must be included in the addendum including the new storm drain from the McDonalds.
5. Basin 5 should be separated into two basins, onsite and offsite. Additional analysis points are needed.
6. The new McDonalds layout needs to be shown on the Post-Development Basin Map. The basins on this plan must agree with the separate plans being prepared for the McDonalds building permit.
7. The comments in the proposed conditions AHYMO pond routing need to be changed from EX-4 to PR-4.
8. The opening sentence says that this addendum is in support of the McDonald's which has a different Hydro-Trans number. Please clearly state whom Tierra West is representing with this submittal in the addendum, and add the owner contact information on the DTIS form (see revised form).
9. The addendum should begin with a concise identification of all of the documents that comprise the DMP. Perhaps this should be called addendum # 2 or revision # 2.
10. Page 1 of the previously approved Los Pastores DMP states "the existing McDonalds lease parcel will be platted as a separate tract, however, no changes or improvements

PO Box 1293

Albuquerque

NM 87103

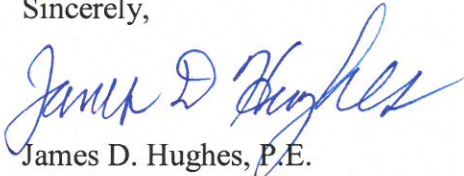
www.cabq.gov

are proposed within that property.” The DMP should be revised to include the changes proposed on the McDonald’s site throughout the narrative. All of the changes to the previous DMP must be identified in the new application so it may be easier to revise the original rather than adding an addendum.

11. Will the allowable peak flow rate from the other lots in the Los Pastores Shopping Center be reduced to compensate for the increased free discharge from the McDonald’s site? If so how does this impact the statement on page 3 of the previous DMP that says each site will be required to provide detention to historic rates. This addendum needs to establish that flow rate for each lot.
12. The DMP needs to be modified to include more than one analysis point. The previous report focused on the total flow to the alley at the northwest corner of the McDonald’s Site, AP#1. The scope of the DMP needs to be expanded to now include the total flow entering Montgomery Blvd. and at more than one place.
13. A new Drainage Covenant and drainage easement for the new storm drain from the McDonalds site will be required from the owner of the Los Pastores Pond prior to approval of the G&D Plan for the McDonald’s Building Permit including all of the new pond details with elevations and flow rates.
14. The Storm water Quality volume calculations need to be on the pond detail in the addendum and in the covenant.
15. An updated Engineer’s Certification of the Los Pastores Pond will be required prior to Certificate of Occupancy for the McDonald’s, and may be included in the addendum if no new pond construction is needed.

If you have any questions, you can contact me at 924-3686 or jhughes@cabq.gov .

Sincerely,

A handwritten signature in blue ink that reads "James D. Hughes". The signature is fluid and cursive, with the first name "James" and last name "Hughes" clearly legible.

James D. Hughes, P.E.
Principal Engineer, Planning Dept.
Development and Review Services



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: Los Pastores Shopping Center **Building Permit #:** _____ **Hydrology File #:** F19D013C
DRB#: _____ **EPC#:** _____ **Work Order#:** 719880
Legal Description: Tract A-1-F Los Pastores Shopping Center
City Address: NWC Montgomery & Wyoming Shopping Center

Applicant: Tierra West, LLC **Contact:** Joel Hernandez
Address: 5571 Midway Park Place NE Albuquerque NM 87109
Phone#: 505-858-3100 **Fax#:** 505-858-1118 **E-mail:** jdhernandez@tierrawestllc.com

Other Contact: _____ **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

TYPE OF DEVELOPMENT: _____ PLAT (# of lots) _____ RESIDENCE _____ DRB SITE _____ ADMIN SITE

IS THIS A RESUBMITTAL? _____ Yes ☒ No

DEPARTMENT _____ TRANSPORTATION ☒ HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

- ☐ ENGINEER/ARCHITECT CERTIFICATION
☐ PAD CERTIFICATION
☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☒ DRAINAGE REPORT
☐ DRAINAGE MASTER PLAN
☐ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
☐ ELEVATION CERTIFICATE
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ STREET LIGHT LAYOUT
☐ OTHER (SPECIFY) _____
☐ PRE-DESIGN MEETING?

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
☐ FLOODPLAIN DEVELOPMENT PERMIT
☒ OTHER (SPECIFY) DMP Addendum

DATE SUBMITTED: 02/11/2019 **By:** Joel Hernandez

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



TIERRA WEST, LLC

February 11, 2019

James D. Hughes, P.E.
Planning Department- Hydrology
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

**RE: LOS PASTORES SHOPPING CENTER DMP ADDENDUM FOR MCDONALD'S
REDEVELOPMENT-GRADING AND DRAINAGE (FILE: F19D013C)**

Dear Mr. Hughes:

This submittal is in support of the Grading and Drainage Plans prepared by Adam's Engineering for the redevelopment of the McDonald's site within the Los Pastores Shopping Center.

Introduction

The purpose of this Drainage Management Plan Addendum is to evaluate the effects of the proposed grading and drainage for the McDonalds redevelopment on the Los Pastores Shopping Center pond and overall net effect of drainage being conveyed onto Montgomery Boulevard.

Hydrologic Analysis Methodology

The hydrologic analysis was updated to compare the historic drainage being conveyed to Montgomery Boulevard to the proposed drainage configuration for the McDonald's redevelopment, to include the offsite tributary flows into the McDonald's from the adjacent Bank site to the east (portion of Area EX-5) in addition to the flows from area EX-3 which is routed to the pond.

The hydrologic areas and flow rates for both the historic/pre-developed flows and proposed/post-development conditions are depicted on the updated Drainage Basin Maps. Calculations were developed using AHYMO, which are also included in this report.

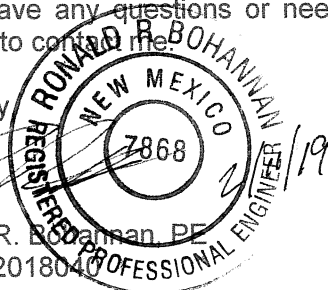
Conclusion

This Drainage Management Plan Addendum demonstrates the proposed McDonald's Redevelopment configuration will result in a net decrease in the peak discharge rate onto Montgomery Boulevard from 30.3 CFS in the pre-development condition (AP#1 + EX-5) to 26.5 CFS in the post-development condition. Additionally, the proposed drainage configuration will result in flow rates to the improved public alley which are within the design capacity of 28 CFS.

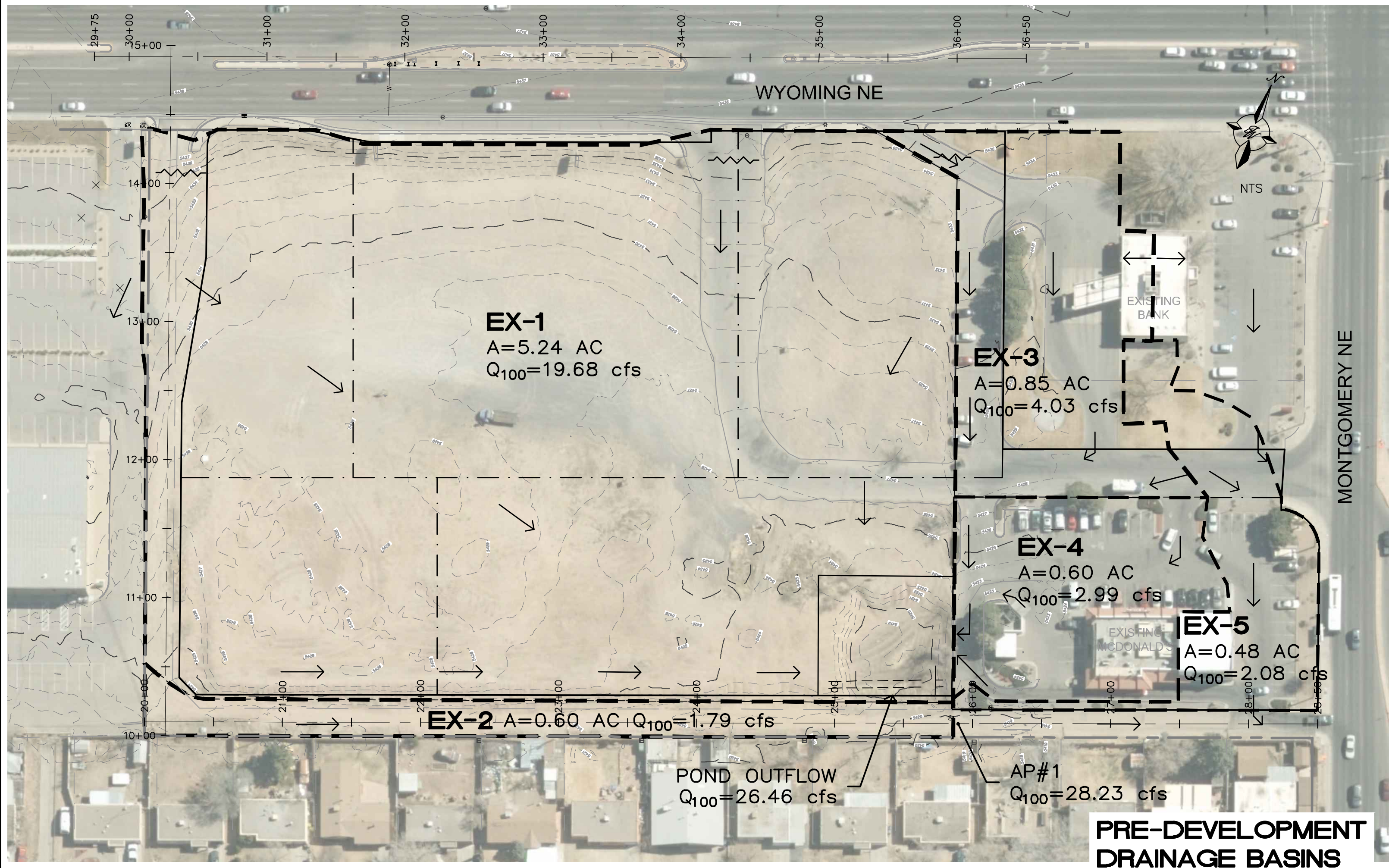
If you have any questions or need additional information regarding this matter, please do not hesitate to contact me.

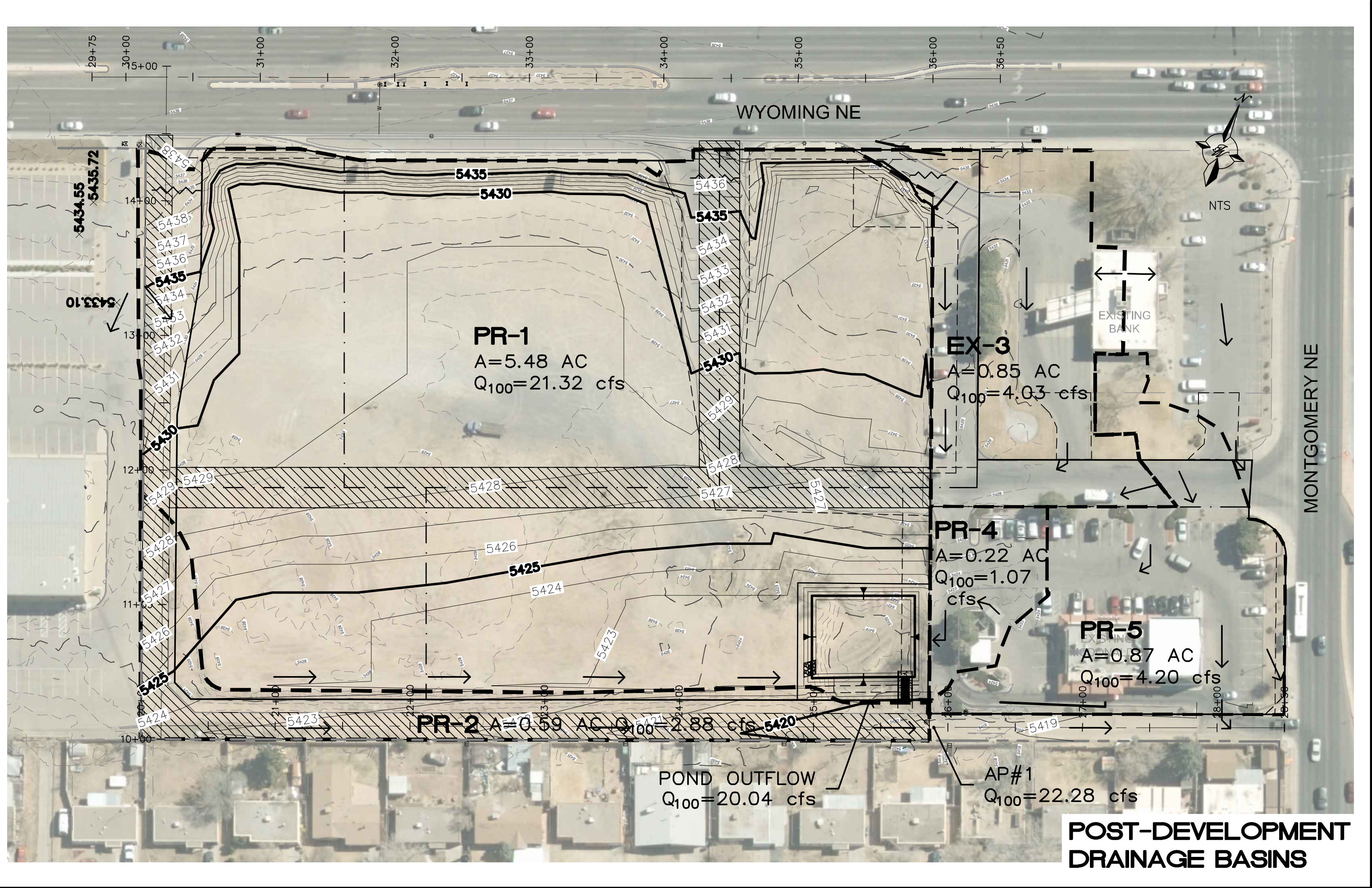
Sincerely,

Ronald R. Bohannon, PE
JN: 2018040
RRB/jh/jg



5571 Midway Park Pl. NE
Albuquerque, NM 87109
(505) 858-3100
fax (505) 858-1118
tierrawestllc.com





**POST-DEVELOPMENT
DRAINAGE BASINS**

AHYMO INPUT

Los Pastores- Pre.txt

```
*****
*                               Los Pastores SC @ Wyoming& Mont, ABQ,NM                               *
*****
* 100-YEAR, 24-HR STORM (UNDER EXIST CONDITIONS) W/ routing *
*****
*
START                                TIME=0.0
*
*
RAINFALL                            TYPE=2 RAIN QUARTER=0.0 IN
                                    RAIN ONE=2.14 IN RAIN SIX=2.60 IN
                                    RAIN DAY=3.10 IN DT=0.05 HR
*DEVELOPED CONDITIONS
*
*BASIN EX-1
*
COMPUTE NM HYD                      ID=1 HYD NO=100.1 AREA=0.00818 SQ MI
                                    PER A=0.00 PER B=0.0 PER C=94.0 PER D=6.00
                                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD                          ID=1 CODE=1
*
*
*BASIN EX-2
*
COMPUTE NM HYD                      ID=2 HYD NO=100.2 AREA=0.00094 SQ MI
                                    PER A=0.00 PER B=100.0 PER C=0.0 PER D=0.00
                                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD                          ID=2 CODE=1
*
*
*BASIN EX-3
*
COMPUTE NM HYD                      ID=3 HYD NO=100.3 AREA=0.00132 SQ MI
                                    PER A=0.00 PER B=00.0 PER C=26.0 PER D=74.00
                                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD                          ID=3 CODE=1
*
*
*BASIN EX-4
*
COMPUTE NM HYD                      ID=4 HYD NO=100.4 AREA=0.00093 SQ MI
                                    PER A=0.00 PER B=6.00 PER C=00.0 PER D=94.0
                                    TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD                          ID=4 CODE=1
*
*BASIN EX-5
*
COMPUTE NM HYD                      ID=5 HYD NO=100.5 AREA=0.00075 SQ MI
```

```

                                Los Pastores- Pre.txt
PER A=0.00 PER B=38.0 PER C=00.0 PER D=62.0
TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD                      ID=5 CODE=1
**
*
*COMBINE EX-1, EX-3, AND EX-4
*
ADD HYD                        ID=50 HYD NO=100.21 ID=1 ID=3
ADD HYD                        ID=50 HYD NO=100.21 ID=50 ID=4
*
PRINT HYD                      ID=50 CODE=1
**
*ROUTE BASINS EX-1, EX-3, AND EX-4 THROUGH EXIST DETENTION POND
ROUTE RESERVOIR                ID=55 HYD NO=200.1 INFLOW ID=50 CODE=24
                                OUTFLOW (CFS) STORAGE(AC-FT) ELEVATION(FT)
                                0.0100          0.0          19.00
                                0.0100          0.0573         20.00
                                0.1000          0.0914         20.50
                                28.570         0.1366         21.00
*
*
PRINT HYD                      ID=55 CODE=1
*
*
*COMBINE POND OUTFLOW WITH EX-2 FOR TOTAL AT AP#1
*
ADD HYD                        ID=58 HYD NO=100.22 ID=2 ID=55
*
PRINT HYD                      ID=58 CODE=1
*
*
FINISH

```

Los Pastores Post.txt

```
*****
*                               Los Pastores SC @ Wyoming& Mont, ABQ,NM                               *
*****
* 100-YEAR, 24-HR STORM (UNDER PROPOSED CONDITIONS) W/ MCD'S *
*****
*
START                               TIME=0.0
*
*
RAINFALL                           TYPE=2 RAIN QUARTER=0.0 IN
                                   RAIN ONE=2.14 IN RAIN SIX=2.60 IN
                                   RAIN DAY=3.10 IN DT=0.05 HR
*DEVELOPED CONDITIONS
*
*BASIN PR-1
*
COMPUTE NM HYD                     ID=1 HYD NO=100.1 AREA=0.00856 SQ MI
                                   PER A=0.00 PER B=0.0 PER C=85.0 PER D=15.0
                                   TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD                          ID=1 CODE=1
*
*
*BASIN PR-2
*
COMPUTE NM HYD                     ID=2 HYD NO=100.2 AREA=0.00092 SQ MI
                                   PER A=0.00 PER B=0.0 PER C=19.0 PER D=81.00
                                   TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD                          ID=2 CODE=1
*
*
*BASIN EX-3 (MC D'S 0-1,0-2,0-4)
*
COMPUTE NM HYD                     ID=3 HYD NO=100.3 AREA=0.00132 SQ MI
                                   PER A=0.00 PER B=0.00 PER C=26.0 PER D=74.00
                                   TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD                          ID=3 CODE=1
*
*
*BASIN PR-4 (MC D'S A-2)
*
COMPUTE NM HYD                     ID=4 HYD NO=100.4 AREA=0.00034 SQ MI
                                   PER A=0.00 PER B=0.00 PER C=20.0 PER D=80.0
                                   TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD                          ID=4 CODE=1
*
*
*BASIN PR-5 (MC D'S A-1,3,4,5,6,7,R-1,0-3)
*
```

```

                                Los Pastores Post.txt
COMPUTE NM HYD                ID=5 HYD NO=100.5 AREA=0.00136 SQ MI
                                PER A=0.00 PER B=0.00 PER C=22.0 PER D=78.0
                                TP=-0.1333 HR MASS RAINFALL=-1
PRINT HYD                      ID=5 CODE=1
**
*
*COMBINE PR-1, EX-3, AND EX-4
*
ADD HYD                        ID=50 HYD NO=100.21 ID=1 ID=3
ADD HYD                        ID=50 HYD NO=100.21 ID=50 ID=4
*
PRINT HYD                      ID=50 CODE=1
**
*ROUTE BASINS PR-1, EX-3, AND EX-4 THROUGH PROPOSED DETENTION POND
ROUTE RESERVOIR                ID=55 HYD NO=200.1 INFLOW ID=50 CODE=24
                                OUTFLOW (CFS) STORAGE(AC-FT) ELEVATION(FT)
                                0.0100          0.0          19.50
                                0.0100          0.0497        20.00
                                0.4800          0.1041        20.60
                                4.8300          0.1634        21.10
                                8.0200          0.2278        21.60
                                12.210         0.2974        22.10
                                26.930         0.3617        22.60
*
*
PRINT HYD                      ID=55 CODE=1
*
*
*COMBINE POND OUTFLOW WITH PR-2 FOR TOTAL AT AP#1
*
ADD HYD                        ID=58 HYD NO=100.22 ID=2 ID=55
*
PRINT HYD                      ID=58 CODE=1
*
*
FINISH

```

AHYMO OUTPUT SUMMARY

AHYMO PRE SUM.txt

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4)

- Ver. S4.01a,

Rel: 01a RUN DATE (MON/DAY/YR) =02/11/2019

INPUT FILE = C:\Users\Joel\Desktop\AHYMO IN\Los Pastores- Pre.txt

USER NO.= AHYMO_Temp_User:20122010

TIME TO	CFS	FROM	TO	PEAK	RUNOFF
PEAK	HYDROGRAPH	PAGE =	1	DISCHARGE	VOLUME
COMMAND	PER	ID	ID	(CFS)	(AC-FT)
(INCHES)	IDENTIFICATION	NO.	NO.		
	ACRE	NOTATION			
START					
	TIME=	0.00			
RAINFALL	TYPE= 2 NOAA 14				
	RAIN24=	3.100			
COMPUTE NM HYD	100.10	-	1	0.00818	0.626
1.43442 1.500	3.760	PER IMP=	6.00		
COMPUTE NM HYD	100.20	-	2	0.00094	0.054
1.07690 1.500	2.967	PER IMP=	0.00		
COMPUTE NM HYD	100.30	-	3	0.00132	0.173
2.45832 1.500	4.770	PER IMP=	74.00		
COMPUTE NM HYD	100.40	-	4	0.00093	0.136
2.74343 1.500	5.031	PER IMP=	94.00		
COMPUTE NM HYD	100.50	-	5	0.00075	0.087
2.17610 1.500	4.343	PER IMP=	62.00		
ADD HYD	100.21	1& 3	50	0.00950	0.799
1.57664 1.500	3.900				
ADD HYD	100.21	50& 4	50	0.01043	0.935
1.68064 1.500	4.001				
ROUTE RESERVOIR	200.10	50	55	0.01043	1.018
1.83084 1.550	3.963	AC-FT=	0.133		
ADD HYD	100.22	2&55	58	0.01137	1.072
1.76850 1.550	3.879				
FINISH					

AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4)

- Ver. S4.01a,

Rel: 01a RUN DATE (MON/DAY/YR) =02/11/2019

INPUT FILE = C:\Users\Joel\Desktop\AHYMO IN\Los Pastores Post.txt

USER NO.= AHYMO_Temp_User:20122010

TIME TO	CFS	FROM	TO	PEAK	RUNOFF
PEAK	HYDROGRAPH	PAGE =	1	DISCHARGE	VOLUME
COMMAND	PER	ID	ID	(CFS)	(AC-FT)
(INCHES)	IDENTIFICATION	NO.	NO.		
(HOURS)	ACRE	NOTATION			
START					
	TIME=	0.00			
RAINFALL	TYPE= 2 NOAA 14				
	RAIN24=	3.100			
COMPUTE NM HYD	100.10	-	1	0.00856	0.717
1.56994 1.500	3.891 PER IMP=	15.00			
COMPUTE NM HYD	100.20	-	2	0.00092	0.126
2.56372 1.500	4.884 PER IMP=	81.00			
COMPUTE NM HYD	100.30	-	3	0.00132	0.173
2.45832 1.500	4.770 PER IMP=	74.00			
COMPUTE NM HYD	100.40	-	4	0.00034	0.046
2.54866 1.500	4.925 PER IMP=	80.00			
COMPUTE NM HYD	100.50	-	5	0.00136	0.183
2.51855 1.500	4.827 PER IMP=	78.00			
ADD HYD	100.21	1& 3	50	0.00988	0.890
1.68857 1.500	4.009				
ADD HYD	100.21	50& 4	50	0.01022	0.936
1.71716 1.500	4.039				
ROUTE RESERVOIR	200.10	50	55	0.01022	1.031
1.89080 1.600	3.064 AC-FT=	0.332			
ADD HYD	100.22	2&55	58	0.01114	1.156
1.94633 1.600	3.125				
FINISH					

AHYMO OUTPUT DETAIL

Los Pastores PRE-OUT.TXT

AHYMO PROGRAM (AHYMO-S4) - Version: S4.01a - Rel: 01a
 RUN DATE (MON/DAY/YR) = 02/11/2019
 START TIME (HR:MIN:SEC) = 12:19:10 USER NO.=
 AHYMO_Temp_User:20122010
 INPUT FILE = C:\Users\Joel\Desktop\AHYMO IN\Los Pastores- Pre.txt

 * Los Pastores SC @ Wyoming& Mont, ABQ,NM *

 * 100-YEAR, 24-HR STORM (UNDER EXIST CONDITIONS) W/ routing *

*
 START TIME=0.0
 *

*
 RAINFALL TYPE=2 RAIN QUARTER=0.0 IN
 RAIN ONE=2.14 IN RAIN SIX=2.60 IN
 RAIN DAY=3.10 IN DT=0.05 HR

24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE
 AREAS (NM & AZ) - D1

DT =	0.050000	HOURS	END TIME =	24.000002	HOURS
0.0000	0.0031	0.0062	0.0096	0.0133	0.0171
0.0274	0.0368	0.0470	0.0575	0.0690	0.0807
0.1052	0.1178	0.1320	0.1467	0.1627	0.1887
0.2611	0.3081	0.3661	0.4435	0.5307	0.6811
1.3155	1.5971	1.8192	1.9308	2.0287	2.0989
2.2036	2.2393	2.2720	2.2991	2.3181	2.3331
2.3590	2.3700	2.3804	2.3905	2.4002	2.4083
2.4175	2.4219	2.4261	2.4303	2.4343	2.4383
2.4459	2.4495	2.4531	2.4566	2.4601	2.4634
2.4699	2.4731	2.4762	2.4792	2.4822	2.4851
2.4909	2.4937	2.4965	2.4992	2.5019	2.5046
2.5098	2.5124	2.5149	2.5175	2.5200	2.5224
2.5273	2.5296	2.5320	2.5343	2.5366	2.5389
2.5434	2.5456	2.5478	2.5500	2.5521	2.5542
2.5584	2.5605	2.5626	2.5646	2.5666	2.5686
2.5725	2.5745	2.5764	2.5783	2.5802	2.5821
2.5858	2.5876	2.5894	2.5912	2.5930	2.5948
2.5983	2.6000	2.6017	2.6035	2.6052	2.6069
2.6104	2.6121	2.6138	2.6155	2.6172	2.6190
2.6224	2.6241	2.6258	2.6275	2.6292	2.6309
2.6343	2.6360	2.6377	2.6394	2.6411	2.6428
2.6461	2.6478	2.6495	2.6512	2.6529	2.6545
2.6579	2.6595	2.6612	2.6629	2.6645	2.6662
2.6695	2.6712	2.6728	2.6745	2.6761	2.6778
					2.6794

Los Pastores PRE-OUT.TXT

2.6811	2.6827	2.6844	2.6860	2.6876	2.6893	2.6909
2.6925	2.6942	2.6958	2.6974	2.6990	2.7007	2.7023
2.7039	2.7055	2.7071	2.7087	2.7104	2.7120	2.7136
2.7152	2.7168	2.7184	2.7200	2.7216	2.7232	2.7248
2.7264	2.7279	2.7295	2.7311	2.7327	2.7343	2.7359
2.7374	2.7390	2.7406	2.7422	2.7437	2.7453	2.7469
2.7484	2.7500	2.7516	2.7531	2.7547	2.7562	2.7578
2.7593	2.7609	2.7624	2.7640	2.7655	2.7671	2.7686
2.7701	2.7717	2.7732	2.7747	2.7763	2.7778	2.7793
2.7808	2.7824	2.7839	2.7854	2.7869	2.7884	2.7899
2.7915	2.7930	2.7945	2.7960	2.7975	2.7990	2.8005
2.8020	2.8035	2.8050	2.8065	2.8079	2.8094	2.8109
2.8124	2.8139	2.8154	2.8168	2.8183	2.8198	2.8213
2.8227	2.8242	2.8257	2.8271	2.8286	2.8301	2.8315
2.8330	2.8344	2.8359	2.8373	2.8388	2.8402	2.8417
2.8431	2.8446	2.8460	2.8474	2.8489	2.8503	2.8517
2.8532	2.8546	2.8560	2.8574	2.8589	2.8603	2.8617
2.8631	2.8645	2.8659	2.8674	2.8688	2.8702	2.8716
2.8730	2.8744	2.8758	2.8772	2.8786	2.8800	2.8813
2.8827	2.8841	2.8855	2.8869	2.8883	2.8897	2.8910
2.8924	2.8938	2.8952	2.8965	2.8979	2.8993	2.9006
2.9020	2.9033	2.9047	2.9061	2.9074	2.9088	2.9101
2.9115	2.9128	2.9141	2.9155	2.9168	2.9182	2.9195
2.9208	2.9222	2.9235	2.9248	2.9262	2.9275	2.9288
2.9301	2.9314	2.9328	2.9341	2.9354	2.9367	2.9380
2.9393	2.9406	2.9419	2.9432	2.9445	2.9458	2.9471
2.9484	2.9497	2.9510	2.9523	2.9536	2.9549	2.9561
2.9574	2.9587	2.9600	2.9612	2.9625	2.9638	2.9651
2.9663	2.9676	2.9689	2.9701	2.9714	2.9726	2.9739
2.9751	2.9764	2.9776	2.9789	2.9801	2.9814	2.9826
2.9839	2.9851	2.9863	2.9876	2.9888	2.9900	2.9912
2.9925	2.9937	2.9949	2.9961	2.9974	2.9986	2.9998
3.0010	3.0022	3.0034	3.0046	3.0058	3.0070	3.0082
3.0094	3.0106	3.0118	3.0130	3.0142	3.0154	3.0166
3.0178	3.0189	3.0201	3.0213	3.0225	3.0237	3.0248
3.0260	3.0272	3.0283	3.0295	3.0307	3.0318	3.0330
3.0341	3.0353	3.0364	3.0376	3.0387	3.0399	3.0410
3.0422	3.0433	3.0445	3.0456	3.0467	3.0479	3.0490
3.0501	3.0513	3.0524	3.0535	3.0546	3.0558	3.0569
3.0580	3.0591	3.0602	3.0613	3.0624	3.0635	3.0646
3.0658	3.0669	3.0680	3.0690	3.0701	3.0712	3.0723
3.0734	3.0745	3.0756	3.0767	3.0777	3.0788	3.0799
3.0810	3.0821	3.0831	3.0842	3.0853	3.0863	3.0874
3.0885	3.0895	3.0906	3.0916	3.0927	3.0937	3.0948
3.0958	3.0969	3.0979	3.0990	3.1000		

*DEVELOPED CONDITIONS

*

Los Pastores PRE-OUT.TXT

*BASIN EX-1

*

COMPUTE NM HYD ID=1 HYD NO=100.1 AREA=0.00818 SQ MI
PER A=0.00 PER B=0.0 PER C=94.0 PER D=6.00
TP=-0.1333 HR MASS RAINFALL=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE
CONSTANT, N = 7.106428
UNIT PEAK = 1.9377 CFS UNIT VOLUME = 0.9941 B = 526.28
P60 = 2.1400
AREA = 0.000491 SQ MI IA = 0.10000 INCHES INF = 0.04000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

K = 0.108912HR TP = 0.133300HR K/TP RATIO = 0.817047 SHAPE
CONSTANT, N = 4.373953
UNIT PEAK = 21.884 CFS UNIT VOLUME = 1.001 B = 379.38
P60 = 2.1400
AREA = 0.007689 SQ MI IA = 0.35000 INCHES INF = 0.83000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 100.10

RUNOFF VOLUME = 1.43442 INCHES = 0.6258 ACRE-FEET
PEAK DISCHARGE RATE = 19.68 CFS AT 1.500 HOURS BASIN AREA =
0.0082 SQ. MI.

*

*

*BASIN EX-2

*

COMPUTE NM HYD ID=2 HYD NO=100.2 AREA=0.00094 SQ MI
PER A=0.00 PER B=100.0 PER C=0.0 PER D=0.00
TP=-0.1333 HR MASS RAINFALL=-1

K = 0.133656HR TP = 0.133300HR K/TP RATIO = 1.002670 SHAPE
CONSTANT, N = 3.520654
UNIT PEAK = 2.2695 CFS UNIT VOLUME = 0.9952 B = 321.84
P60 = 2.1400

Los Pastores PRE-OUT.TXT

AREA = 0.000940 SQ MI IA = 0.50000 INCHES INF = 1.25000
INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 100.20

RUNOFF VOLUME = 1.07690 INCHES = 0.0540 ACRE-Feet
PEAK DISCHARGE RATE = 1.79 CFS AT 1.500 HOURS BASIN AREA =
0.0009 SQ. MI.

*

*

*BASIN EX-3

*

COMPUTE NM HYD ID=3 HYD NO=100.3 AREA=0.00132 SQ MI
PER A=0.00 PER B=00.0 PER C=26.0 PER D=74.00
TP=-0.1333 HR MASS RAINFALL=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE
CONSTANT, N = 7.106428

UNIT PEAK = 3.8565 CFS UNIT VOLUME = 0.9966 B = 526.28

P60 = 2.1400

AREA = 0.000977 SQ MI IA = 0.10000 INCHES INF = 0.04000
INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

K = 0.108912HR TP = 0.133300HR K/TP RATIO = 0.817047 SHAPE
CONSTANT, N = 4.373953

UNIT PEAK = 0.97676 CFS UNIT VOLUME = 0.9884 B = 379.38

P60 = 2.1400

AREA = 0.000343 SQ MI IA = 0.35000 INCHES INF = 0.83000
INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 100.30

Los Pastores PRE-OUT.TXT

RUNOFF VOLUME = 2.45832 INCHES = 0.1731 ACRE-FEET
 PEAK DISCHARGE RATE = 4.03 CFS AT 1.500 HOURS BASIN AREA =
 0.0013 SQ. MI.

*

*

*BASIN EX-4

*

COMPUTE NM HYD ID=4 HYD NO=100.4 AREA=0.00093 SQ MI
 PER A=0.00 PER B=6.00 PER C=00.0 PER D=94.0
 TP=-0.1333 HR MASS RAINFALL=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428

UNIT PEAK = 3.4514 CFS UNIT VOLUME = 0.9959 B = 526.28
 P60 = 2.1400

AREA = 0.000874 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

K = 0.133656HR TP = 0.133300HR K/TP RATIO = 1.002670 SHAPE
 CONSTANT, N = 3.520654

UNIT PEAK = 0.13472 CFS UNIT VOLUME = 0.9008 B = 321.84
 P60 = 2.1400

AREA = 0.000056 SQ MI IA = 0.50000 INCHES INF = 1.25000
 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 100.40

RUNOFF VOLUME = 2.74343 INCHES = 0.1361 ACRE-FEET
 PEAK DISCHARGE RATE = 2.99 CFS AT 1.500 HOURS BASIN AREA =
 0.0009 SQ. MI.

*

*BASIN EX-5

*

COMPUTE NM HYD ID=5 HYD NO=100.5 AREA=0.00075 SQ MI

Los Pastores PRE-OUT.TXT
PER A=0.00 PER B=38.0 PER C=00.0 PER D=62.0
TP=-0.1333 HR MASS RAINFALL=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE
CONSTANT, N = 7.106428
UNIT PEAK = 1.8358 CFS UNIT VOLUME = 0.9928 B = 526.28
P60 = 2.1400
AREA = 0.000465 SQ MI IA = 0.10000 INCHES INF = 0.04000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

K = 0.133656HR TP = 0.133300HR K/TP RATIO = 1.002670 SHAPE
CONSTANT, N = 3.520654
UNIT PEAK = 0.68810 CFS UNIT VOLUME = 0.9811 B = 321.84
P60 = 2.1400
AREA = 0.000285 SQ MI IA = 0.50000 INCHES INF = 1.25000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

PRINT HYD ID=5 CODE=1

PARTIAL HYDROGRAPH 100.50

RUNOFF VOLUME = 2.17610 INCHES = 0.0870 ACRE-FEET
PEAK DISCHARGE RATE = 2.08 CFS AT 1.500 HOURS BASIN AREA =
0.0008 SQ. MI.

**
*
*COMBINE EX-1, EX-3, AND EX-4
*

ADD HYD ID=50 HYD NO=100.21 ID=1 ID=3

ADD HYD ID=50 HYD NO=100.21 ID=50 ID=4

*
PRINT HYD ID=50 CODE=1

PARTIAL HYDROGRAPH 100.21

RUNOFF VOLUME = 1.68064 INCHES = 0.9349 ACRE-FEET

Los Pastores PRE-OUT.TXT

PEAK DISCHARGE RATE = 26.71 CFS AT 1.500 HOURS BASIN AREA = 0.0104 SQ. MI.

**

*ROUTE BASINS EX-1, EX-3, AND EX-4 THROUGH EXIST DETENTION POND

ROUTE RESERVOIR ID=55 HYD NO=200.1 INFLOW ID=50 CODE=24

OUTFLOW (CFS) STORAGE(AC-FT) ELEVATION(FT)

0.0100 0.0 19.00

0.0100 0.0573 20.00

0.1000 0.0914 20.50

28.570 0.1366 21.00

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	-Infinity	-Infinity	0.00
1.20	1.58	20.00	0.057	0.01
2.40	0.79	20.51	0.093	0.84
3.60	0.04	20.48	0.090	0.10
4.80	0.04	20.41	0.085	0.08
6.00	0.05	20.36	0.082	0.07
7.20	0.05	20.33	0.080	0.07
8.40	0.05	20.31	0.078	0.06
9.60	0.05	20.29	0.077	0.06
10.80	0.05	20.27	0.076	0.06
12.00	0.05	20.25	0.075	0.06
13.20	0.04	20.24	0.074	0.05
14.40	0.04	20.23	0.073	0.05
15.60	0.04	20.22	0.072	0.05
16.80	0.04	20.21	0.071	0.05
18.00	0.04	20.20	0.071	0.05
19.20	0.04	20.19	0.070	0.04
20.40	0.04	20.18	0.069	0.04
21.60	0.03	20.17	0.069	0.04
22.80	0.03	20.16	0.068	0.04
24.00	0.03	20.15	0.068	0.04
25.20	0.00	20.11	0.065	0.03
26.40	0.00	20.07	0.062	0.02
27.60	0.00	20.04	0.060	0.02
28.80	0.00	20.02	0.059	0.01

Los Pastores PRE-OUT.TXT

30.00	0.00	20.00	0.057	0.01
31.20	0.00	20.00	0.057	0.01
32.40	0.00	20.00	0.057	0.01
33.60	0.00	20.00	0.057	0.01
34.80	0.00	20.00	0.057	0.01
36.00	0.00	20.00	0.057	0.01
37.20	0.00	20.00	0.057	0.01
38.40	0.00	20.00	0.057	0.01
39.60	0.00	20.00	0.057	0.01
40.80	0.00	20.00	0.057	0.01
42.00	0.00	20.00	0.057	0.01
43.20	0.00	20.00	0.057	0.01
44.40	0.00	20.00	0.057	0.01
45.60	0.00	20.00	0.057	0.01
46.80	0.00	20.00	0.057	0.01
48.00	0.00	20.00	0.057	0.01
49.20	0.00	20.00	0.057	0.01
50.40	0.00	20.00	0.057	0.01
51.60	0.00	20.00	0.057	0.01
52.80	0.00	20.00	0.057	0.01
54.00	0.00	20.00	0.057	0.01
55.20	0.00	20.00	0.057	0.01
56.40	0.00	20.00	0.057	0.01
57.60	0.00	20.00	0.057	0.01
58.80	0.00	20.00	0.057	0.01
60.00	0.00	20.00	0.057	0.01
61.20	0.00	20.00	0.057	0.01
62.40	0.00	20.00	0.057	0.01
63.60	0.00	20.00	0.057	0.01
64.80	0.00	20.00	0.057	0.01
66.00	0.00	20.00	0.057	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
67.20	0.00	20.00	0.057	0.01
68.40	0.00	20.00	0.057	0.01
69.60	0.00	20.00	0.057	0.01
70.80	0.00	20.00	0.057	0.01
72.00	0.00	20.00	0.057	0.01
73.20	0.00	20.00	0.057	0.01
74.40	0.00	20.00	0.057	0.01
75.60	0.00	20.00	0.057	0.01
76.80	0.00	20.00	0.057	0.01
78.00	0.00	20.00	0.057	0.01
79.20	0.00	20.00	0.057	0.01
80.40	0.00	20.00	0.057	0.01
81.60	0.00	20.00	0.057	0.01

Los Pastores PRE-OUT.TXT

82.80	0.00	20.00	0.057	0.01
84.00	0.00	20.00	0.057	0.01
85.20	0.00	20.00	0.057	0.01
86.40	0.00	20.00	0.057	0.01
87.60	0.00	20.00	0.057	0.01
88.80	0.00	20.00	0.057	0.01
90.00	0.00	20.00	0.057	0.01
91.20	0.00	20.00	0.057	0.01
92.40	0.00	20.00	0.057	0.01
93.60	0.00	20.00	0.057	0.01
94.80	0.00	20.00	0.057	0.01
96.00	0.00	20.00	0.057	0.01
97.20	0.00	20.00	0.057	0.01
98.40	0.00	20.00	0.057	0.01
99.60	0.00	20.00	0.057	0.01
100.80	0.00	20.00	0.057	0.01
102.00	0.00	20.00	0.057	0.01
103.20	0.00	20.00	0.057	0.01
104.40	0.00	20.00	0.057	0.01
105.60	0.00	20.00	0.057	0.01
106.80	0.00	20.00	0.057	0.01
108.00	0.00	20.00	0.057	0.01
109.20	0.00	20.00	0.057	0.01
110.40	0.00	20.00	0.057	0.01
111.60	0.00	20.00	0.057	0.01
112.80	0.00	20.00	0.057	0.01
114.00	0.00	20.00	0.057	0.01
115.20	0.00	20.00	0.057	0.01
116.40	0.00	20.00	0.057	0.01
117.60	0.00	20.00	0.057	0.01
118.80	0.00	20.00	0.057	0.01
120.00	0.00	20.00	0.057	0.01
121.20	0.00	20.00	0.057	0.01
122.40	0.00	20.00	0.057	0.01
123.60	0.00	20.00	0.057	0.01
124.80	0.00	20.00	0.057	0.01
126.00	0.00	20.00	0.057	0.01
127.20	0.00	20.00	0.057	0.01
128.40	0.00	20.00	0.057	0.01
129.60	0.00	20.00	0.057	0.01
130.80	0.00	20.00	0.057	0.01
132.00	0.00	20.00	0.057	0.01
133.20	0.00	20.00	0.057	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
134.40	0.00	20.00	0.057	0.01

Los Pastores PRE-OUT.TXT

135.60	0.00	20.00	0.057	0.01
136.80	0.00	20.00	0.057	0.01
138.00	0.00	20.00	0.057	0.01
139.20	0.00	20.00	0.057	0.01
140.40	0.00	20.00	0.057	0.01
141.60	0.00	20.00	0.057	0.01
142.80	0.00	20.00	0.057	0.01
144.00	0.00	20.00	0.057	0.01
145.20	0.00	20.00	0.057	0.01
146.40	0.00	20.00	0.057	0.01
147.60	0.00	20.00	0.057	0.01
148.80	0.00	20.00	0.057	0.01
150.00	0.00	20.00	0.057	0.01
151.20	0.00	20.00	0.057	0.01
152.40	0.00	20.00	0.057	0.01
153.60	0.00	20.00	0.057	0.01
154.80	0.00	20.00	0.057	0.01
156.00	0.00	20.00	0.057	0.01
157.20	0.00	20.00	0.057	0.01
158.40	0.00	20.00	0.057	0.01
159.60	0.00	20.00	0.057	0.01
160.80	0.00	20.00	0.057	0.01
162.00	0.00	20.00	0.057	0.01
163.20	0.00	20.00	0.057	0.01
164.40	0.00	20.00	0.057	0.01
165.60	0.00	20.00	0.057	0.01
166.80	0.00	20.00	0.057	0.01
168.00	0.00	20.00	0.057	0.01
169.20	0.00	20.00	0.057	0.01
170.40	0.00	20.00	0.057	0.01
171.60	0.00	20.00	0.057	0.01
172.80	0.00	20.00	0.057	0.01
174.00	0.00	20.00	0.057	0.01
175.20	0.00	20.00	0.057	0.01
176.40	0.00	20.00	0.057	0.01
177.60	0.00	20.00	0.057	0.01
178.80	0.00	20.00	0.057	0.01
180.00	0.00	20.00	0.057	0.01
181.20	0.00	20.00	0.057	0.01
182.40	0.00	20.00	0.057	0.01
183.60	0.00	20.00	0.057	0.01
184.80	0.00	20.00	0.057	0.01
186.00	0.00	20.00	0.057	0.01
187.20	0.00	20.00	0.057	0.01
188.40	0.00	20.00	0.057	0.01
189.60	0.00	20.00	0.057	0.01
190.80	0.00	20.00	0.057	0.01
192.00	0.00	20.00	0.057	0.01

Los Pastores PRE-OUT.TXT

193.20	0.00	20.00	0.057	0.01
194.40	0.00	20.00	0.057	0.01
195.60	0.00	20.00	0.057	0.01
196.80	0.00	20.00	0.057	0.01
198.00	0.00	20.00	0.057	0.01
199.20	0.00	20.00	0.057	0.01

PEAK DISCHARGE = 26.456 CFS - PEAK OCCURS AT HOUR 1.55
 MAXIMUM WATER SURFACE ELEVATION = 20.963
 MAXIMUM STORAGE = 0.1332 AC-FT INCREMENTAL TIME= 0.050000HRS

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*

PRINT HYD ID=55 CODE=1

PARTIAL HYDROGRAPH 200.10

RUNOFF VOLUME = 1.83084 INCHES = 1.0184 ACRE-FEET
 PEAK DISCHARGE RATE = 26.46 CFS AT 1.550 HOURS BASIN AREA =
 0.0104 SQ. MI.

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*COMBINE POND OUTFLOW WITH EX-2 FOR TOTAL AT AP#1

*

ADD HYD ID=58 HYD NO=100.22 ID=2 ID=55

*

PRINT HYD ID=58 CODE=1

PARTIAL HYDROGRAPH 100.22

RUNOFF VOLUME = 1.76850 INCHES = 1.0724 ACRE-FEET
 PEAK DISCHARGE RATE = 28.23 CFS AT 1.550 HOURS BASIN AREA =
 0.0114 SQ. MI.

*

*

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 12:19:10

Los Pastores POST-OUT.TXT

AHYMO PROGRAM (AHYMO-S4) - Version: S4.01a - Rel: 01a
 RUN DATE (MON/DAY/YR) = 02/11/2019
 START TIME (HR:MIN:SEC) = 12:21:44 USER NO.=
 AHYMO_Temp_User:20122010
 INPUT FILE = C:\Users\Joel\Desktop\AHYMO IN\Los Pastores Post.txt

 * Los Pastores SC @ Wyoming& Mont, ABQ,NM *

 * 100-YEAR, 24-HR STORM (UNDER PROPOSED CONDITIONS) W/ MCD'S *

*
 START TIME=0.0
 *

*
 RAINFALL TYPE=2 RAIN QUARTER=0.0 IN
 RAIN ONE=2.14 IN RAIN SIX=2.60 IN
 RAIN DAY=3.10 IN DT=0.05 HR

24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR CONVECTIVE
 AREAS (NM & AZ) - D1

DT =	0.050000 HOURS	END TIME =	24.000002 HOURS
0.0000	0.0031	0.0062	0.0096
0.0096	0.0133	0.0171	0.0214
0.0214	0.0274	0.0368	0.0470
0.0470	0.0575	0.0690	0.0807
0.0807	0.0927	0.1052	0.1178
0.1178	0.1320	0.1467	0.1627
0.1627	0.1887	0.2196	0.2611
0.2611	0.3081	0.3661	0.4435
0.4435	0.5307	0.6811	0.9149
0.9149	1.3155	1.5971	1.8192
1.8192	1.9308	2.0287	2.0989
2.0989	2.1549	2.2036	2.2393
2.2393	2.2720	2.2991	2.3181
2.3181	2.3331	2.3464	2.3590
2.3590	2.3700	2.3804	2.3905
2.3905	2.4002	2.4083	2.4129
2.4129	2.4175	2.4219	2.4261
2.4261	2.4303	2.4343	2.4383
2.4383	2.4422	2.4459	2.4495
2.4495	2.4531	2.4566	2.4601
2.4601	2.4634	2.4667	2.4699
2.4699	2.4731	2.4762	2.4792
2.4792	2.4822	2.4851	2.4880
2.4880	2.4909	2.4937	2.4965
2.4965	2.4992	2.5019	2.5046
2.5046	2.5072	2.5098	2.5124
2.5124	2.5149	2.5175	2.5200
2.5200	2.5224	2.5249	2.5273
2.5273	2.5296	2.5320	2.5343
2.5343	2.5366	2.5389	2.5412
2.5412	2.5434	2.5456	2.5478
2.5478	2.5500	2.5521	2.5542
2.5542	2.5564	2.5584	2.5605
2.5605	2.5626	2.5646	2.5666
2.5666	2.5686	2.5706	2.5725
2.5725	2.5745	2.5764	2.5783
2.5783	2.5802	2.5821	2.5839
2.5839	2.5858	2.5876	2.5894
2.5894	2.5912	2.5930	2.5948
2.5948	2.5965	2.5983	2.6000
2.6000	2.6017	2.6035	2.6052
2.6052	2.6069	2.6086	2.6104
2.6104	2.6121	2.6138	2.6155
2.6155	2.6172	2.6190	2.6207
2.6207	2.6224	2.6241	2.6258
2.6258	2.6275	2.6292	2.6309
2.6309	2.6326	2.6343	2.6360
2.6360	2.6377	2.6394	2.6411
2.6411	2.6428	2.6445	2.6461
2.6461	2.6478	2.6495	2.6512
2.6512	2.6529	2.6545	2.6562
2.6562	2.6579	2.6595	2.6612
2.6612	2.6629	2.6645	2.6662
2.6662	2.6679	2.6695	2.6712
2.6712	2.6728	2.6745	2.6761
2.6761	2.6778	2.6794	

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2.6811	2.6827	2.6844	2.6860	2.6876	2.6893	2.6909
2.6925	2.6942	2.6958	2.6974	2.6990	2.7007	2.7023
2.7039	2.7055	2.7071	2.7087	2.7104	2.7120	2.7136
2.7152	2.7168	2.7184	2.7200	2.7216	2.7232	2.7248
2.7264	2.7279	2.7295	2.7311	2.7327	2.7343	2.7359
2.7374	2.7390	2.7406	2.7422	2.7437	2.7453	2.7469
2.7484	2.7500	2.7516	2.7531	2.7547	2.7562	2.7578
2.7593	2.7609	2.7624	2.7640	2.7655	2.7671	2.7686
2.7701	2.7717	2.7732	2.7747	2.7763	2.7778	2.7793
2.7808	2.7824	2.7839	2.7854	2.7869	2.7884	2.7899
2.7915	2.7930	2.7945	2.7960	2.7975	2.7990	2.8005
2.8020	2.8035	2.8050	2.8065	2.8079	2.8094	2.8109
2.8124	2.8139	2.8154	2.8168	2.8183	2.8198	2.8213
2.8227	2.8242	2.8257	2.8271	2.8286	2.8301	2.8315
2.8330	2.8344	2.8359	2.8373	2.8388	2.8402	2.8417
2.8431	2.8446	2.8460	2.8474	2.8489	2.8503	2.8517
2.8532	2.8546	2.8560	2.8574	2.8589	2.8603	2.8617
2.8631	2.8645	2.8659	2.8674	2.8688	2.8702	2.8716
2.8730	2.8744	2.8758	2.8772	2.8786	2.8800	2.8813
2.8827	2.8841	2.8855	2.8869	2.8883	2.8897	2.8910
2.8924	2.8938	2.8952	2.8965	2.8979	2.8993	2.9006
2.9020	2.9033	2.9047	2.9061	2.9074	2.9088	2.9101
2.9115	2.9128	2.9141	2.9155	2.9168	2.9182	2.9195
2.9208	2.9222	2.9235	2.9248	2.9262	2.9275	2.9288
2.9301	2.9314	2.9328	2.9341	2.9354	2.9367	2.9380
2.9393	2.9406	2.9419	2.9432	2.9445	2.9458	2.9471
2.9484	2.9497	2.9510	2.9523	2.9536	2.9549	2.9561
2.9574	2.9587	2.9600	2.9612	2.9625	2.9638	2.9651
2.9663	2.9676	2.9689	2.9701	2.9714	2.9726	2.9739
2.9751	2.9764	2.9776	2.9789	2.9801	2.9814	2.9826
2.9839	2.9851	2.9863	2.9876	2.9888	2.9900	2.9912
2.9925	2.9937	2.9949	2.9961	2.9974	2.9986	2.9998
3.0010	3.0022	3.0034	3.0046	3.0058	3.0070	3.0082
3.0094	3.0106	3.0118	3.0130	3.0142	3.0154	3.0166
3.0178	3.0189	3.0201	3.0213	3.0225	3.0237	3.0248
3.0260	3.0272	3.0283	3.0295	3.0307	3.0318	3.0330
3.0341	3.0353	3.0364	3.0376	3.0387	3.0399	3.0410
3.0422	3.0433	3.0445	3.0456	3.0467	3.0479	3.0490
3.0501	3.0513	3.0524	3.0535	3.0546	3.0558	3.0569
3.0580	3.0591	3.0602	3.0613	3.0624	3.0635	3.0646
3.0658	3.0669	3.0680	3.0690	3.0701	3.0712	3.0723
3.0734	3.0745	3.0756	3.0767	3.0777	3.0788	3.0799
3.0810	3.0821	3.0831	3.0842	3.0853	3.0863	3.0874
3.0885	3.0895	3.0906	3.0916	3.0927	3.0937	3.0948
3.0958	3.0969	3.0979	3.0990	3.1000		

*DEVELOPED CONDITIONS

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Los Pastores POST-OUT.TXT

*BASIN PR-1

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COMPUTE NM HYD ID=1 HYD NO=100.1 AREA=0.00856 SQ MI
PER A=0.00 PER B=0.0 PER C=85.0 PER D=15.0
TP=-0.1333 HR MASS RAINFALL=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE
CONSTANT, N = 7.106428
UNIT PEAK = 5.0693 CFS UNIT VOLUME = 0.9971 B = 526.28
P60 = 2.1400
AREA = 0.001284 SQ MI IA = 0.10000 INCHES INF = 0.04000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

K = 0.108912HR TP = 0.133300HR K/TP RATIO = 0.817047 SHAPE
CONSTANT, N = 4.373953
UNIT PEAK = 20.708 CFS UNIT VOLUME = 1.001 B = 379.38
P60 = 2.1400
AREA = 0.007276 SQ MI IA = 0.35000 INCHES INF = 0.83000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 100.10

RUNOFF VOLUME = 1.56994 INCHES = 0.7167 ACRE-FEET
PEAK DISCHARGE RATE = 21.32 CFS AT 1.500 HOURS BASIN AREA =
0.0086 SQ. MI.

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*BASIN PR-2

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COMPUTE NM HYD ID=2 HYD NO=100.2 AREA=0.00092 SQ MI
PER A=0.00 PER B=0.0 PER C=19.0 PER D=81.00
TP=-0.1333 HR MASS RAINFALL=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE
CONSTANT, N = 7.106428
UNIT PEAK = 2.9421 CFS UNIT VOLUME = 0.9951 B = 526.28
P60 = 2.1400

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AREA = 0.000745 SQ MI IA = 0.10000 INCHES INF = 0.04000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

K = 0.108912HR TP = 0.133300HR K/TP RATIO = 0.817047 SHAPE
CONSTANT, N = 4.373953
UNIT PEAK = 0.49749 CFS UNIT VOLUME = 0.9770 B = 379.38
P60 = 2.1400
AREA = 0.000175 SQ MI IA = 0.35000 INCHES INF = 0.83000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 100.20

RUNOFF VOLUME = 2.56372 INCHES = 0.1258 ACRE-FEET
PEAK DISCHARGE RATE = 2.88 CFS AT 1.500 HOURS BASIN AREA =
0.0009 SQ. MI.

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*BASIN EX-3 (MC D'S 0-1,0-2,0-4)

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COMPUTE NM HYD ID=3 HYD NO=100.3 AREA=0.00132 SQ MI
PER A=0.00 PER B=0.00 PER C=26.0 PER D=74.00
TP=-0.1333 HR MASS RAINFALL=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE
CONSTANT, N = 7.106428
UNIT PEAK = 3.8565 CFS UNIT VOLUME = 0.9966 B = 526.28
P60 = 2.1400
AREA = 0.000977 SQ MI IA = 0.10000 INCHES INF = 0.04000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

K = 0.108912HR TP = 0.133300HR K/TP RATIO = 0.817047 SHAPE
CONSTANT, N = 4.373953
UNIT PEAK = 0.97676 CFS UNIT VOLUME = 0.9884 B = 379.38
P60 = 2.1400

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AREA = 0.000343 SQ MI IA = 0.35000 INCHES INF = 0.83000
INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 100.30

RUNOFF VOLUME = 2.45832 INCHES = 0.1731 ACRE-FEET
PEAK DISCHARGE RATE = 4.03 CFS AT 1.500 HOURS BASIN AREA = 0.0013 SQ. MI.

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*BASIN PR-4 (MC D'S A-2)

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COMPUTE NM HYD ID=4 HYD NO=100.4 AREA=0.00034 SQ MI
PER A=0.00 PER B=0.00 PER C=20.0 PER D=80.0
TP=-0.1333 HR MASS RAINFALL=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE
CONSTANT, N = 7.106428
UNIT PEAK = 1.0739 CFS UNIT VOLUME = 0.9891 B = 526.28
P60 = 2.1400

AREA = 0.000272 SQ MI IA = 0.10000 INCHES INF = 0.04000
INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.108912HR TP = 0.133300HR K/TP RATIO = 0.817047 SHAPE
CONSTANT, N = 4.373953
UNIT PEAK = 0.19353 CFS UNIT VOLUME = 0.9395 B = 379.38
P60 = 2.1400

AREA = 0.000068 SQ MI IA = 0.35000 INCHES INF = 0.83000
INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 100.40

Los Pastores POST-OUT.TXT

RUNOFF VOLUME = 2.54866 INCHES = 0.0462 ACRE-FEET
 PEAK DISCHARGE RATE = 1.07 CFS AT 1.500 HOURS BASIN AREA =
 0.0003 SQ. MI.

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*BASIN PR-5 (MC D'S A-1,3,4,5,6,7,R-1,0-3)

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COMPUTE NM HYD ID=5 HYD NO=100.5 AREA=0.00136 SQ MI
 PER A=0.00 PER B=0.00 PER C=22.0 PER D=78.0
 TP=-0.1333 HR MASS RAINFALL=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428

UNIT PEAK = 4.1881 CFS UNIT VOLUME = 0.9966 B = 526.28
 P60 = 2.1400

AREA = 0.001061 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

K = 0.108912HR TP = 0.133300HR K/TP RATIO = 0.817047 SHAPE
 CONSTANT, N = 4.373953

UNIT PEAK = 0.85154 CFS UNIT VOLUME = 0.9884 B = 379.38
 P60 = 2.1400

AREA = 0.000299 SQ MI IA = 0.35000 INCHES INF = 0.83000
 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

PRINT HYD ID=5 CODE=1

PARTIAL HYDROGRAPH 100.50

RUNOFF VOLUME = 2.51855 INCHES = 0.1827 ACRE-FEET
 PEAK DISCHARGE RATE = 4.20 CFS AT 1.500 HOURS BASIN AREA =
 0.0014 SQ. MI.

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*COMBINE PR-1, EX-3, AND EX-4

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ADD HYD ID=50 HYD NO=100.21 ID=1 ID=3

ADD HYD ID=50 HYD NO=100.21 ID=50 ID=4

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PRINT HYD ID=50 CODE=1

PARTIAL HYDROGRAPH 100.21

RUNOFF VOLUME = 1.71716 INCHES = 0.9360 ACRE-FEET
 PEAK DISCHARGE RATE = 26.42 CFS AT 1.500 HOURS BASIN AREA =
 0.0102 SQ. MI.

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*ROUTE BASINS PR-1, EX-3, AND EX-4 THROUGH PROPOSED DETENTION POND
 ROUTE RESERVOIR ID=55 HYD NO=200.1 INFLOW ID=50 CODE=24

OUTFLOW (CFS)	STORAGE(AC-FT)	ELEVATION(FT)
0.0100	0.0	19.50
0.0100	0.0497	20.00
0.4800	0.1041	20.60
4.8300	0.1634	21.10
8.0200	0.2278	21.60
12.210	0.2974	22.10
26.930	0.3617	22.60

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	-Infinity	-Infinity	0.00
1.20	1.66	20.00	0.050	0.01
2.40	0.79	20.76	0.123	1.87
3.60	0.05	20.38	0.084	0.31
4.80	0.04	20.19	0.066	0.16
6.00	0.06	20.11	0.059	0.09
7.20	0.06	20.08	0.057	0.07
8.40	0.05	20.07	0.056	0.06

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9.60	0.05	20.06	0.055	0.06
10.80	0.05	20.06	0.055	0.05
12.00	0.05	20.05	0.055	0.05
13.20	0.05	20.05	0.054	0.05
14.40	0.05	20.05	0.054	0.05
15.60	0.04	20.05	0.054	0.05
16.80	0.04	20.04	0.054	0.05
18.00	0.04	20.04	0.054	0.04
19.20	0.04	20.04	0.053	0.04
20.40	0.04	20.04	0.053	0.04
21.60	0.04	20.04	0.053	0.04
22.80	0.04	20.04	0.053	0.04
24.00	0.03	20.03	0.053	0.04
25.20	0.00	20.01	0.051	0.02
26.40	0.00	20.00	0.050	0.01
27.60	0.00	20.00	0.050	0.01
28.80	0.00	20.00	0.050	0.01
30.00	0.00	20.00	0.050	0.01
31.20	0.00	20.00	0.050	0.01
32.40	0.00	20.00	0.050	0.01
33.60	0.00	20.00	0.050	0.01
34.80	0.00	20.00	0.050	0.01
36.00	0.00	20.00	0.050	0.01
37.20	0.00	20.00	0.050	0.01
38.40	0.00	20.00	0.050	0.01
39.60	0.00	20.00	0.050	0.01
40.80	0.00	20.00	0.050	0.01
42.00	0.00	20.00	0.050	0.01
43.20	0.00	20.00	0.050	0.01
44.40	0.00	20.00	0.050	0.01
45.60	0.00	20.00	0.050	0.01
46.80	0.00	20.00	0.050	0.01
48.00	0.00	20.00	0.050	0.01
49.20	0.00	20.00	0.050	0.01
50.40	0.00	20.00	0.050	0.01
51.60	0.00	20.00	0.050	0.01
52.80	0.00	20.00	0.050	0.01
54.00	0.00	20.00	0.050	0.01
55.20	0.00	20.00	0.050	0.01
56.40	0.00	20.00	0.050	0.01
57.60	0.00	20.00	0.050	0.01
58.80	0.00	20.00	0.050	0.01
60.00	0.00	20.00	0.050	0.01
61.20	0.00	20.00	0.050	0.01
62.40	0.00	20.00	0.050	0.01
63.60	0.00	20.00	0.050	0.01
64.80	0.00	20.00	0.050	0.01
66.00	0.00	20.00	0.050	0.01

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
67.20	0.00	20.00	0.050	0.01
68.40	0.00	20.00	0.050	0.01
69.60	0.00	20.00	0.050	0.01
70.80	0.00	20.00	0.050	0.01
72.00	0.00	20.00	0.050	0.01
73.20	0.00	20.00	0.050	0.01
74.40	0.00	20.00	0.050	0.01
75.60	0.00	20.00	0.050	0.01
76.80	0.00	20.00	0.050	0.01
78.00	0.00	20.00	0.050	0.01
79.20	0.00	20.00	0.050	0.01
80.40	0.00	20.00	0.050	0.01
81.60	0.00	20.00	0.050	0.01
82.80	0.00	20.00	0.050	0.01
84.00	0.00	20.00	0.050	0.01
85.20	0.00	20.00	0.050	0.01
86.40	0.00	20.00	0.050	0.01
87.60	0.00	20.00	0.050	0.01
88.80	0.00	20.00	0.050	0.01
90.00	0.00	20.00	0.050	0.01
91.20	0.00	20.00	0.050	0.01
92.40	0.00	20.00	0.050	0.01
93.60	0.00	20.00	0.050	0.01
94.80	0.00	20.00	0.050	0.01
96.00	0.00	20.00	0.050	0.01
97.20	0.00	20.00	0.050	0.01
98.40	0.00	20.00	0.050	0.01
99.60	0.00	20.00	0.050	0.01
100.80	0.00	20.00	0.050	0.01
102.00	0.00	20.00	0.050	0.01
103.20	0.00	20.00	0.050	0.01
104.40	0.00	20.00	0.050	0.01
105.60	0.00	20.00	0.050	0.01
106.80	0.00	20.00	0.050	0.01
108.00	0.00	20.00	0.050	0.01
109.20	0.00	20.00	0.050	0.01
110.40	0.00	20.00	0.050	0.01
111.60	0.00	20.00	0.050	0.01
112.80	0.00	20.00	0.050	0.01
114.00	0.00	20.00	0.050	0.01
115.20	0.00	20.00	0.050	0.01
116.40	0.00	20.00	0.050	0.01
117.60	0.00	20.00	0.050	0.01
118.80	0.00	20.00	0.050	0.01

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120.00	0.00	20.00	0.050	0.01
121.20	0.00	20.00	0.050	0.01
122.40	0.00	20.00	0.050	0.01
123.60	0.00	20.00	0.050	0.01
124.80	0.00	20.00	0.050	0.01
126.00	0.00	20.00	0.050	0.01
127.20	0.00	20.00	0.050	0.01
128.40	0.00	20.00	0.050	0.01
129.60	0.00	20.00	0.050	0.01
130.80	0.00	20.00	0.050	0.01
132.00	0.00	20.00	0.050	0.01
133.20	0.00	20.00	0.050	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
134.40	0.00	20.00	0.050	0.01
135.60	0.00	20.00	0.050	0.01
136.80	0.00	20.00	0.050	0.01
138.00	0.00	20.00	0.050	0.01
139.20	0.00	20.00	0.050	0.01
140.40	0.00	20.00	0.050	0.01
141.60	0.00	20.00	0.050	0.01
142.80	0.00	20.00	0.050	0.01
144.00	0.00	20.00	0.050	0.01
145.20	0.00	20.00	0.050	0.01
146.40	0.00	20.00	0.050	0.01
147.60	0.00	20.00	0.050	0.01
148.80	0.00	20.00	0.050	0.01
150.00	0.00	20.00	0.050	0.01
151.20	0.00	20.00	0.050	0.01
152.40	0.00	20.00	0.050	0.01
153.60	0.00	20.00	0.050	0.01
154.80	0.00	20.00	0.050	0.01
156.00	0.00	20.00	0.050	0.01
157.20	0.00	20.00	0.050	0.01
158.40	0.00	20.00	0.050	0.01
159.60	0.00	20.00	0.050	0.01
160.80	0.00	20.00	0.050	0.01
162.00	0.00	20.00	0.050	0.01
163.20	0.00	20.00	0.050	0.01
164.40	0.00	20.00	0.050	0.01
165.60	0.00	20.00	0.050	0.01
166.80	0.00	20.00	0.050	0.01
168.00	0.00	20.00	0.050	0.01
169.20	0.00	20.00	0.050	0.01
170.40	0.00	20.00	0.050	0.01
171.60	0.00	20.00	0.050	0.01

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172.80	0.00	20.00	0.050	0.01
174.00	0.00	20.00	0.050	0.01
175.20	0.00	20.00	0.050	0.01
176.40	0.00	20.00	0.050	0.01
177.60	0.00	20.00	0.050	0.01
178.80	0.00	20.00	0.050	0.01
180.00	0.00	20.00	0.050	0.01
181.20	0.00	20.00	0.050	0.01
182.40	0.00	20.00	0.050	0.01
183.60	0.00	20.00	0.050	0.01
184.80	0.00	20.00	0.050	0.01
186.00	0.00	20.00	0.050	0.01
187.20	0.00	20.00	0.050	0.01
188.40	0.00	20.00	0.050	0.01
189.60	0.00	20.00	0.050	0.01
190.80	0.00	20.00	0.050	0.01
192.00	0.00	20.00	0.050	0.01
193.20	0.00	20.00	0.050	0.01
194.40	0.00	20.00	0.050	0.01
195.60	0.00	20.00	0.050	0.01
196.80	0.00	20.00	0.050	0.01
198.00	0.00	20.00	0.050	0.01
199.20	0.00	20.00	0.050	0.01

PEAK DISCHARGE = 20.039 CFS - PEAK OCCURS AT HOUR 1.60

MAXIMUM WATER SURFACE ELEVATION = 22.366

MAXIMUM STORAGE = 0.3316 AC-FT INCREMENTAL TIME= 0.050000HRS

*

*

PRINT HYD ID=55 CODE=1

PARTIAL HYDROGRAPH 200.10

RUNOFF VOLUME = 1.89080 INCHES = 1.0306 ACRE-FEET

PEAK DISCHARGE RATE = 20.04 CFS AT 1.600 HOURS BASIN AREA =
0.0102 SQ. MI.

*

*

*COMBINE POND OUTFLOW WITH PR-2 FOR TOTAL AT AP#1

*

ADD HYD ID=58 HYD NO=100.22 ID=2 ID=55

*

PRINT HYD ID=58 CODE=1

Los Pastores POST-OUT.TXT

PARTIAL HYDROGRAPH 100.22

RUNOFF VOLUME = 1.94633 INCHES = 1.1564 ACRE-FEET
PEAK DISCHARGE RATE = 22.28 CFS AT 1.600 HOURS BASIN AREA =
0.0111 SQ. MI.

*

*

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 12:21:44