

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



April 22, 2015

David Thompson, P.E.
Thompson Engineering Consultants, Inc
PO Box 65760
Albuquerque, NM 87193

Richard J. Berry, Mayor

Re: Update to the Amendment to the DMP Trails Units 1, 2, and 3

Major Changes:

- **Removed Offsite Pond 2,**
- **rerouted Pond B to Pond A5,**
- **rerouted Basin E3 thru Basin E5,**
- **modeled Pond E as a Detention Pond**

**Drainage Report Letter with Updated Calculations,
Revised Drainage Plan, Plates 1 and 2,
Engineer's Stamp Date 2-26-2015 (File: C09D001)**

Dear Mr. Thompson:

Based upon the information provided in your submittal received 2-26-15, the above referenced Submittal is approved for future development.

PO Box 1293

If you have any questions, you can contact me at 924-3695.

Albuquerque

Sincerely,

New Mexico 87103

Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Services

www.cabq.gov

Orig: Drainage file, c.pdf Addressee via Email, Monica Ortiz

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

PROJECT TITLE: THE TRAILS DMP ZONE MAP PAGE: C-9/D001
DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: _____
CITY ADDRESS: Southwest Corner of Paseo del Norte NW and Universe Blvd. NW

ENGINEERING FIRM: Thompson Engineering Consultants, Inc. CONTACT: David Thompson
ADDRESS: P.O. Box 65760 PHONE: 271-2199
CITY, STATE: Albuquerque, NM ZIP CODE: 87193

OWNER: The Trails, LLC CONTACT: Rick Beltramo
ADDRESS: 6330 Riverside Plaza Lane #160 PHONE: (505) 761-9911
CITY, STATE: Albuquerque, NM ZIP CODE: 87120

ARCHITECT: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

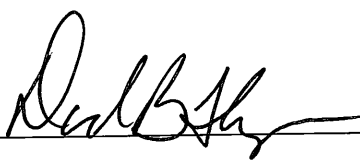
SURVEYOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

TYPE OF SUBMITTAL:
____ DRAINAGE REPORT
____ DRAINAGE PLAN 1st SUBMITTAL
XX 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) RESPONSE LETTER

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

WAS A PRE-DESIGN CONFERENCE ATTENDED:
____ YES
____ NO
____ COPY PROVIDED

SUBMITTED BY: David Thompson  DATE: 2-26-15

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.

THOMPSON Engineering Consultants, Inc.

February 26, 2015

Mr. Curtis Cherne, P.E.
Principal Engineer, Planning Department
Development and Building Services
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

**Re: UPDATE TO THE AMENDMENT TO THE DRAINAGE MASTER PLAN FOR
THE TRAILS UNITS 1, 2, AND 3 (C09-D001)**

Dear Mr. Cherne:

This letter will serve as an Update to the Amendment to the Drainage Master Plan for the Trails Units 1, 2, and 3, dated April, 2014. This update incorporates all modifications to the drainage basins included in Unit 3, Tracts 2, 6, 7, 8, 9, 10, and 11 following the Drainage Reports for Valle Vista, Valle Prado, and Durango subdivisions as prepared by Bohannon-Huston. The drainage basins included in the drainage reports for the subdivisions were combined to more closely match the drainage basins in the April 2014 DMP. The AHYMO model as well as Plates 1 and 2 have been revised to reflect the modifications completed for this update. Also, the Developed Drainage Basin Characteristics Table, the Detention Pond Characteristics Table, and the Analysis Point Peak Flows Table have been revised showing the modifications.

The outfall for Pond B, located in Basin B within Tract 2, has been revised to drain directly to Pond A5 and continue downstream to Pond A6, Pond D1, and Pond D instead of draining to a future storm drain extension in Woodmont Avenue. This eliminates the extension of the Woodmont storm drain past the storm drain connection for Basin E1.1.

The Drainage Report for the Durango subdivision included revisions to Basins E1.1, E1.2, and E2. First, the future Offsite Pond 2 has been eliminated so that runoff from Offsite Basin 2 drains directly to Basin E1.2. Sub-Basins were combined and Land Treatments were calculated for the basins (See the Land Treatment Table for the basins). The AHYMO model (refer to the AHYMO input file and summary file) was revised imputing the new basin characteristics and storm drains.

The Drainage Report for the Valle Prado subdivision included revisions to Basins E3 and E5. Sub-Basins were combined and Land Treatments were calculated for the basins. The AHYMO model was revised imputing the new basin characteristics and storm drains. Basin E7 is a new basin in the DMP that correlates to Basin 4 and Offsite Basin 2 in the Valle Prado Drainage Report. Runoff from Basin E7 drains to a retention pond located within the basin. Therefore, the runoff volume is not included in the total volume of Pond E. Pond E has been modified to be a detention pond instead of a surge pond.

The Drainage Report for the Valle Prado Unit 3 subdivision included revisions to Basin C. Sub-Basins were combined and Land Treatments were calculated for the basins. The AHYMO model

Mr. Curtis Cherne, P.E.

February 26, 2015

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was revised imputing the new basin characteristics and storm drains. Basin C drains directly to a storm drain located in Tree Line Avenue. This storm drain eventually drains to Pond F.

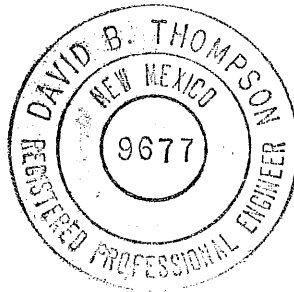
The AHYMO model with the revised basin characteristics and routing shows that there is no negative impact to the downstream ponds. The volume in Pond D remains the same, whereas the volumes in Ponds F, G, H, and K are all reduced. The discharge from Pond K is reduced from 60.72 CFS to 60.66 CFS. In fact, with these modifications the impacts to the downstream ponds is positive.

If you should have any questions about this update, please call me at 271-2199.

Sincerely,



David B. Thompson, P.E.



TRAILS UNIT 3 TRACTS 6, 7, 9, AND 10 BASINS

BASIN	AREA	%A	%B	%C	%D	AVG %A	AVG %B	AVG %C	AVG %D
<u>DURANGO</u>									
E1.1A	0.009772	0	29	29	42				
E1.1B	0.008835	0	27	27	46				
E1.1	0.018607					0	28.1	28.1	43.8
E1.2A	0.009110	0	33	33	34				
E1.2B	0.010826	0	24	24	52				
E1.2	0.019936					0	28.1	28.1	43.8
<u>VALLE PRADO</u>									
BASIN 1	0.005000	0	24	24	52				
BASIN 2	0.004513	0	26	26	48				
BASIN 3	0.006875	0	31	31	38				
BASIN 5	0.001875	0	31.5	31.5	37				
OFFSITE WELL	0.001563	0	40	40	20				
OFFSITE 3	0.001094	76	24	0	0				
OFFSITE 4	0.001406	80	20	0	0				
OFFSITE 5	0.003281	95	5	0	0				
OFFSITE 6	0.001400	0	0	100	0				
BASIN E5	0.027007					18.8	23.8	26.4	31.0
FUTURE 1	0.010781	0	21	21	58				
FUTURE 2	0.007500	0	23	23	54				
FUTURE 3	0.005938	0	22.5	22.5	55				
BASIN E3	0.024219					0	22.0	22.0	56.0
BASIN 4	0.003594	0	26	26	48				
OFFSITE 2	0.000938	80	20	0	0				
BASIN E7	0.004532					16.5	24.8	20.6	38.1
<u>VALLE PRADO UNIT 3</u>									
BASIN 1	0.004571	40	25	25	10				
BASIN 2	0.007088	0	31	31	38				
BASIN 3	0.002524	0	27	27	46				
BASIN C	0.014183					12.8	28.4	28.4	30.4
<u>VALLE VISTA</u>									
BASIN H1	0.017190	0	26.6	26.6	46.8	0	26.6	26.6	46.8

BASIN	AREA	LAND TREATMENT				Q	VOL
		A	B	C	D	CFS	AC-FT
OFFSITE 1	127.87	100	0	0	0	37.00	4.426
A1	15.50	0	12.5	12.5	75	51.68	2.610
A2	8.52	0	33	33	34	23.43	0.960
A3	3.21	0	5	5	90	11.41	0.606
A4	7.59	0	7.5	7.5	85	26.39	1.381
A5	11.71	0	17	17	66	37.55	1.829
A6	16.97	0	19	19	62	53.44	2.558
A7	6.75	0	12.5	12.5	75	22.52	1.137
C	9.08	12.8	28.4	28.4	30.4	23.20	0.935
D1	11.62	0	19	19	62	36.60	1.752
D2	22.12	0	28.5	28.5	43	63.65	2.763
D3	3.71	0	5	5	90	13.18	0.701
D4	12.55	0	28.5	28.5	43	36.12	1.568
D5	8.75	0	23	23	54	26.55	1.224
D6	5.00	0	18	18	64	15.89	0.764
F1	14.13	0	21.7	21.8	56.5	43.39	2.025
F2	3.67	0	5	5	90	13.02	0.692
F3	22.80	0	21.7	21.8	56.5	70.02	3.267
F4	24.91	0	25	25	50	74.16	3.349
F5	11.85	0	12.5	12.5	75	39.52	1.996
F7	7.02	0	7.5	7.5	85	24.42	1.278
F8	5.00	0	18	18	64	15.89	0.764
G1	16.20	0	25	25	50	48.23	2.178
G2	16.19	0	25	25	50	48.22	2.177
OFFSITE 2	51.52	100	0	0	0	13.87	1.783
B	12.79	0	34	34	32	34.80	1.407
E1.1	11.91	0	28.1	28.1	43.8	34.41	1.501
E1.2	12.76	0	28.1	28.1	43.8	36.78	1.608
E2	5.55	0	30.7	30.7	38.6	15.63	0.660
E3	15.50	0	22	22	56	47.48	2.210
E4	3.69	0	5	5	90	13.11	0.697
E5	17.28	18.8	23.8	26.4	31	43.19	1.762
E6	3.12	0	5	5	90	11.09	0.590
E7	2.90	16.5	24.8	20.6	38.1	7.55	0.324
P	4.51	43	25	25	7	8.41	0.273
H1	11.00	0	26.6	26.6	46.8	32.26	1.431
H2	5.35	0	5	5	90	19.16	1.018
H3	7.62	0	20	20	60	23.79	1.128
J1	3.31	0	12.5	12.5	75	11.04	0.557
J2	10.92	0	12.5	12.5	75	36.40	1.839
J3	3.71	0	19	19	62	11.70	0.560
J4	6.44	0	12.5	12.5	75	21.47	1.084
J5	0.86	0	5	5	90	3.05	0.162
J6	2.70	0	5	5	90	9.59	0.510
J7	2.84	0	5	5	90	10.09	0.536
J8	5.78	0	70	30	0	12.31	0.355
J9	3.51	0	7.5	7.5	85	12.20	0.638
J10	4.02	0	5	5	90	14.27	0.759
J11	4.79	0	5	5	90	16.65	0.886
J12	9.08	100	0	0	0	10.65	0.314
K1	17.11	0	19	19	62	50.54	2.579
K2	9.51	0	15	15	70	29.39	1.537
K3	5.85	0	5	5	90	20.76	1.104
K4	8.58	0	70	30	0	18.28	0.527
K5	15.13	0	19	19	62	47.63	2.281
K6	1.41	0	5	5	90	5.01	0.266

Detention Pond Characteristics

POND	DRAIN AREA (AC)	Q100 IN (CFS)	Q100 OUT (CFS)	BYPASS Q (CFS)	MAX VOL (ac-ft)	V100 (ac-ft)	TOP ELEV	BOTTOM ELEV	WSEL
OFF 1	127.9	37.00	9.25		2.44	2.302	6	0	5.80
A5	179.6	121.19	16.29		4.61	4.256	5516	5511	5515.76
A6	204.2	84.21	16.19		4.72	3.241	5506	5500	5504.73
B	12.8	34.80	3.36		0.99	0.930	5519	5515	5518.86
D1	222.5	65.02	14.46		6.06	5.360	5475	5471	5474.48
D	274.7	146.48	5.93	13.77	6.24	4.035	5436.9	5429.5	5435.03
E	118.2	194.46	20.22		7.17	6.412	5452	5440	5451.44
F5	18.9	62.89	19.84		1.40	1.386	5426	5421	5425.97
F	373.1	259.49	17.58	6.20	11.76	10.293	5424.3	5415.08	5423.51
G	405.5	111.28	7.00	17.61	7.21	2.948	5422.5	5415.67	5419.83
H	149.8	97.80	4.50	21.60	3.02	2.205	5422	5418.65	5421.42
J	57.9	141.18	6.05	26.34	7.94	3.771	5417	5414	5415.66
K	670.8	239.15	15.75	44.91	14.84	8.346	5409	5404.85	5407.77

Analysis Point Peak Flows

ANALYSIS POINT	PEAK FLOW
AP-A5	16.29 CFS
AP-A6	16.19 CFS
AP-D1	14.46 CFS
AP-D	19.42 CFS
AP-E	20.22 CFS
AP-F5	27.40 CFS
AP-F	23.78 CFS
AP-G	24.61 CFS
AP-H	26.10 CFS
AP-J	32.39 CFS
AP-K	60.66 CFS

AHYMO PROGRAM SUMMARY TABLE (AHYMO 97) -
 INPUT FILE = C:\Projects\GALWAY-1\TRAILS-2.TXT

- VERSION: 1997.02c

RUN DATE (MON/DAY/YR) = 02/24/2015
 USER NO. = AHYMO-I-9702a01000K21-AH

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1	NOTATION
START											
RAINFALL TYPE= 2											
SEDIMENT BULK											
*S*****	COMPUTE NM HYD	OFFSITE1	50	1.9980	37.00	4.426	.41534	2.000	.289 PER IMP=		.00
*S*****	ROUTE RESERVOIR	OFF.POND.1	50	1.9980	9.25	4.426	.41533	3.200	.072 AC-FT=		2.302
*S*****	ROUTE MCUNGE	RTE.OFF.POND	53	1.9980	9.26	4.426	.41537	3.200	.072 CCODE =		.2
*S*****	COMPUTE NM HYD	BASIN.A1	21	.02422	51.68	2.610	2.02069	1.500	3.334 PER IMP=		75.00
*S*****	COMPUTE NM HYD	BASIN.A2	22	.01331	23.43	.960	1.35259	1.500	2.750 PER IMP=		34.00
*S*****	COMPUTE NM HYD	BASIN.A3	23	.00502	11.41	.606	2.26512	1.500	3.550 PER IMP=		90.00
*S*****	COMPUTE NM HYD	BASIN.A4	24	.01186	26.39	1.381	2.18365	1.500	3.477 PER IMP=		85.00
*S*****	COMPUTE NM HYD	BASIN.A5	25	.01830	37.55	1.829	1.87404	1.500	3.206 PER IMP=		66.00
*S*****	COMPUTE NM HYD	BASIN.A6	26	.02652	53.44	2.558	1.80886	1.500	3.149 PER IMP=		62.00
*S*****	COMPUTE NM HYD	BASIN.A7	27	.01055	22.52	1.137	2.02070	1.500	3.335 PER IMP=		75.00
*S*****	ADD HYD	O1.A2	54&22	.21311	25.89	5.386	.47390	1.500	.190		
*S*****	ADD HYD	O1A2.A1	55&21	.23733	77.57	7.996	.63175	1.500	.511		
*S*****	ADD HYD	O1A2A1.A3	56&23	.24235	88.97	8.603	.66558	1.500	.574		
*S*****	ROUTE MCUNGE	RTE.O1A2A1.A	57	.24235	80.93	8.569	.66299	1.500	.522 CCODE =		.1
*S*****	ADD HYD	ALTOA5	58&25	.26065	118.48	10.398	.74801	1.500	.710		
*S*****	COMPUTE NM HYD	BASIN.B	30	.01998	34.80	1.407	1.32000	1.500	2.721 PER IMP=		32.00
*S*****	ROUTE RESERVOIR	POND.B	31	.01998	3.36	1.407	1.31999	2.100	.263 AC-FT=		.930
*S*****	ADD HYD	ALTOA5.B	59&51	.28063	121.19	11.805	.78873	1.500	.675		
*S*****	ROUTE RESERVOIR	POND.A5	58	.28063	16.29	11.805	.78873	2.500	.091 AC-FT=		4.256
*S*****	ROUTE MCUNGE	RTE.A4	24	.01186	24.62	1.372	2.16943	1.500	3.243 CCODE =		.1
*S*****	ADD HYD	RTE.A4.A6	61&26	.03838	78.06	3.931	1.92024	1.500	3.178		
*S*****	ADD HYD	RTEA4A6.POND	62&60	.31901	84.21	15.735	.92485	1.500	.412		
*S*****	ROUTE RESERVOIR	POND.A6	63	.31901	16.19	15.735	.92485	3.800	.079 AC-FT=		3.241
*S*****	ADD HYD	PONDA6.A7	64&27	.32956	28.43	16.872	.95993	1.500	.135		.0
*S*****	ROUTE MCUNGE	RTE.A6.A7	65	.32956	28.43	16.872	.95993	1.500	.135 CCODE =		62.00
*S*****	COMPUTE NM HYD	BASIN.D1	25	.01816	36.60	1.752	1.80886	1.500	3.149 PER IMP=		.292
*S*****	ADD HYD	A6.A7.D1	66&25	.34772	65.02	18.624	1.00426	1.500	.065 AC-FT=		5.360
*S*****	ROUTE RESERVOIR	POND.D1	67	.34772	14.46	18.626	1.00438	8.700	.065 CCODE =		.0
*S*****	ROUTE MCUNGE	RTE.D1	68	.34772	14.46	18.625	1.00434	8.700	.065 CCODE =		.0
*S*****	COMPUTE NM HYD	BASIN.D2	25	.03456	63.65	2.763	1.49925	1.500	2.878 PER IMP=		43.00
*S*****	ADD HYD	PONDD1.D2	69&25	.38228	64.70	21.304	1.04493	1.500	.264		
*S*****	COMPUTE NM HYD	BASIN.D3	26	.00380	13.18	.701	2.26512	1.500	3.550 PER IMP=		90.00
*S*****	ADD HYD	D1.D2.D3	70&26	.38808	77.88	22.005	1.06317	1.500	.314		
*S*****	ROUTE MCUNGE	RTE.D1	71	.38808	74.07	21.985	1.06219	1.600	.298		.1
*S*****	COMPUTE NM HYD	BASIN.D4	27	.01961	36.12	1.568	1.49925	1.500	2.878 PER IMP=		43.00
*S*****	ADD HYD	D1D2D3.D4	72&27	.40769	104.03	23.553	1.08321	1.500	.399		
*S*****	COMPUTE NM HYD	BASIN.D5	28	.01367	26.55	1.224	1.67850	1.500	3.035 PER IMP=		54.00
*S*****	ADD HYD	D1234.D5	73&28	.42136	130.59	24.776	1.10252	1.500	.484		
*S*****	COMPUTE NM HYD	BASIN.D6	25	.00781	15.89	.767	1.84145	1.500	3.178 PER IMP=		64.00
*S*****	ADD HYD	D12345.D6	74&25	.42917	146.48	25.543	1.11597	1.500	.533		
*S*****	POND D INFLOW HYDROGRAPH										
*S*****	DIVIDE HYD	BYPASS.D	75	.34657	13.77	20.627	1.11597	1.300	.062		
*S*****		SURGE.D	and	.08260	132.71	4.916	1.11597	1.500	2.510		

TIME= .00
 RAIN24= 2.660
 PK BF = 1.00

000

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 2	NOTATION
ROUTE RESERVOIR	POND.D	32	50	.08260	5.93	4.916	1.11601	2.100	.112	AC-FT=	4.035
ROUTE MCUNGE	RTE.D	50	51	.08260	5.92	4.913	1.11519	2.400	.112	CCODE =	.1
ADD HYD	BYPASS.RTE.D	51&31	75	.42917	19.42	25.540	1.11581	2.200	.071		
COMPUTE NM HYD	BASIN.C	-	20	.01418	23.20	.935	1.23554	1.500	2.556	PER IMP=	30.40
ROUTE MCUNGE	RTE.C	20	76	.01418	22.64	.931	1.23117	1.600	2.495	CCODE =	.1
COMPUTE NM HYD	BASIN.F1	-	20	.02208	43.39	2.025	1.71939	1.500	3.071	PER IMP=	56.50
ADD HYD	C.F1	76&20	77	.03626	62.26	2.956	1.52839	1.500	2.683		
COMPUTE NM HYD	BASIN.F2	-	21	.00573	13.02	.692	2.26512	1.500	3.550	PER IMP=	90.00
ADD HYD	CF1.F2	77&21	78	.04199	75.28	3.648	1.62891	1.500	2.801		
ROUTE MCUNGE	RTE.CF1F2	78	79	.04199	74.48	3.651	1.63022	1.500	2.771	CCODE =	.2
COMPUTE NM HYD	BASIN.F3	-	22	.03563	70.02	3.267	1.71938	1.500	3.070	PER IMP=	56.50
ADD HYD	CF1F2.F3	79&22	70	.07762	144.50	6.918	1.67112	1.500	2.909		
COMPUTE NM HYD	BASIN.F4	-	23	.03892	74.16	3.349	1.61331	1.500	2.977	PER IMP=	50.00
ADD HYD	CF1F2F3.F4	70&23	71	.11654	218.66	10.267	1.65181	1.500	2.932		
ADD HYD	CF1F2F3F4.D	71&75	70	.54571	232.57	35.807	1.23028	1.500	.666		
COMPUTE NM HYD	BASIN.F5	-	24	.01852	39.52	1.996	2.02070	1.500	3.334	PER IMP=	75.00
COMPUTE NM HYD	BASIN.J10	-	25	.00628	14.27	.759	2.26512	1.500	3.550	PER IMP=	90.00
COMPUTE NM HYD	BASIN.J11	-	26	.00733	16.65	.886	2.26512	1.500	3.549	PER IMP=	90.00
ADD HYD	J10.J11	25&26	23	.01361	30.92	1.644	2.26508	1.500	3.550	CCODE =	.1
ROUTE MCUNGE	RTE.J10J11	23	10	.01361	29.01	1.634	2.25104	1.500	3.478	PER IMP=	85.00
COMPUTE NM HYD	BASIN.F7	-	26	.01097	24.42	1.278	2.18365	1.500	3.328	CCODE =	.1
ROUTE MCUNGE	RTE.F7	26	74	.01097	23.37	1.269	2.16910	1.500	3.332		
ADD HYD	F7.F5	74&24	75	.02949	62.89	3.265	2.07585	1.500	1.051	AC-FT=	1.386
ROUTE RESERVOIR	POND.F5	75	51	.02949	19.84	3.265	2.07584	1.900	3.178	PER IMP=	64.00
COMPUTE NM HYD	BASIN.F8	-	27	.00781	15.89	.767	1.84145	1.500	1.148		
ADD HYD	PONDF5.F8	51&27	78	.03730	27.40	4.032	2.02672	1.500	1.145	CCODE =	.2
ROUTE MCUNGE	RTE.PONDF5	78	77	.03730	27.34	4.033	2.02709	1.600	.695		
ADD HYD	F10F8	77&70	78	.58301	259.49	39.839	1.28125	1.500	1.035		
DIVIDE HYD	BYPASS.F	78	31	.20070	6.20	13.714	1.28125	1.200	.048		
ROUTE RESERVOIR	POND.F	32	52	.38231	17.58	26.125	1.28125	1.500	.072	AC-FT=	10.293
ADD HYD	BYPASSF.POND	31&52	53	.58301	23.78	39.821	1.28065	3.300	.064	CCODE =	.2
ROUTE MCUNGE	RTE.PONDF	53	77	.58301	23.74	39.792	1.27972	3.600	.064	PER IMP=	50.00
COMPUTE NM HYD	BASIN.G1	-	20	.02531	48.23	2.178	1.61331	1.500	2.978	PER IMP=	50.00
ROUTE MCUNGE	RTE.G1	20	78	.02531	48.23	2.177	1.61330	1.500	2.978	CCODE =	.0
COMPUTE NM HYD	BASIN.G2	-	21	.02530	48.22	2.177	1.61331	1.500	2.978	PER IMP=	50.00
ADD HYD	G1.G2	78&21	30	.05061	96.45	4.355	1.61330	1.500	.274		
ADD HYD	G1G2.PONDF	30&77	31	.63362	111.28	44.146	1.30636	1.500	.056		
DIVIDE HYD	BYPASS.G	31	32	.49082	17.61	34.197	1.30636	1.300	1.025	AC-FT=	2.948
ROUTE RESERVOIR	POND.G	33	34	.14281	93.67	9.950	1.30639	3.000	.077	CCODE =	.1
ROUTE MCUNGE	RTE.PONDG	34	78	.14281	7.00	9.946	1.30583	3.300	.061		
ADD HYD	BYPASS.RTE.G	78&32	79	.63362	24.61	44.142	1.30623	3.300	.061	PER IMP=	.00
COMPUTE NM HYD	OFFSITE2	-	55	.08050	13.87	1.783	.41534	2.000	.269	PER IMP=	43.80
COMPUTE NM HYD	BASINEL.1	-	30	.01861	34.41	1.501	1.51229	1.500	2.890	PER IMP=	43.80
COMPUTE NM HYD	BASINEL.2	-	31	.01994	36.87	1.608	1.51228	1.500	2.890	PER IMP=	43.80
ADD HYD	OFF.E12	55&31	73	.10044	40.64	3.391	.63307	1.500	.632		
COMPUTE NM HYD	BASIN.E2	-	32	.00867	15.63	.660	1.42755	1.500	2.817	PER IMP=	38.60
ADD HYD	OFFE2.E12	73&32	72	.10911	56.26	4.051	.69619	1.500	.806	CCODE =	.0
ROUTE MCUNGE	RTE.E12	72	76	.10911	56.26	4.051	.69619	1.500	.806	PER IMP=	90.00
COMPUTE NM HYD	BASIN.E4	-	34	.00577	13.11	.697	2.26513	1.500	3.550	PER IMP=	90.00
ADD HYD	E11.E4	30&34	75	.02438	47.52	2.198	1.69046	1.500	3.046		

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COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 3	NOTATION
ROUTE MCUNGE	RTE.E1E4	75	77	.02438	47.52	2.198	1.69046	1.500	3.046	CCODE =	.0
ADD HYD	E1E4.E12	77&76	78	.13348	103.78	6.249	.87777	1.500	1.215	CCODE =	.0
ROUTE MCUNGE	RTE.E1E4E12	78	77	.13348	103.78	6.249	.87777	1.500	1.215	CCODE =	.0
COMPUTE NM HYD	BASIN.E3	-	33	.02422	47.48	2.210	1.71109	1.500	3.063	PER IMP=	56.00
COMPUTE NM HYD	BASIN.E5	-	35	.02701	43.19	1.762	1.22359	1.500	2.499	PER IMP=	31.00
COMPUTE NM HYD	BASIN.E7	-	34	.00453	7.55	.324	1.33990	1.500	2.603	PER IMP=	38.10
ADD HYD	E3.E5	33&35	80	.05123	90.67	3.973	1.45406	1.500	2.766		
ADD HYD	PONDE.INFLOW	80&77	40	.18471	194.46	10.221	1.03760	1.500	1.645		
ROUTE RESERVOIR	POND.E	40	37	.18471	20.22	9.680	.98261	2.400	.171	AC-FT=	6.412
COMPUTE NM HYD	BASIN.E6	-	36	.00488	11.09	.590	2.26512	1.500	3.550	PER IMP=	90.00
ADD HYD	TOTALE	36&37	40	.18959	21.51	10.054	.99432	2.000	.177	CCODE =	.1
ROUTE MCUNGE	RTE.PONDE	40	38	.18959	21.51	10.054	.99432	2.000	.177	CCODE =	.1
COMPUTE NM HYD	BASIN.P	-	32	.00705	8.41	.273	.72623	1.500	1.865	PER IMP=	7.00
COMPUTE NM HYD	BASIN.H1	-	33	.01719	32.26	1.431	1.56117	1.500	2.932	PER IMP=	46.80
ADD HYD	PONDE.H1	38&33	43	.20678	46.44	11.484	1.04129	1.500	.351		
COMPUTE NM HYD	BASIN.H2	-	34	.00836	19.16	1.018	2.28220	1.500	3.582	PER IMP=	90.00
ADD HYD	P.H2	32&34	44	.01541	27.58	1.291	1.57031	1.500	2.796		
ADD HYD	PH2.H1	44&43	45	.22219	74.01	12.774	1.07798	1.500	.520		
COMPUTE NM HYD	BASIN.H3	-	35	.01191	23.79	1.128	1.77627	1.500	3.121	PER IMP=	60.00
ADD HYD	PH1H3	45&35	46	.23410	97.80	13.902	1.11351	1.500	.653		
DIVIDE HYD	BYPASS.H	46	47	.19116	21.60	11.352	1.11351	1.300	.177		
ROUTE RESERVOIR	POND.H	48	30	.04294	76.20	2.550	1.11351	1.500	2.773	AC-FT=	2.205
ROUTE MCUNGE	RTE.PONDH	30	49	.04294	4.50	2.550	1.11351	2.300	.164	CCODE =	.2
ADD HYD	BYPASS.RTE.H	49&47	31	.23410	26.10	13.902	1.11350	2.300	.174		
COMPUTE NM HYD	BASIN.K1	-	20	.02673	50.54	2.579	1.80886	1.500	2.954	PER IMP=	62.00
ADD HYD	PONDH.K1	31&20	32	.26083	72.37	16.481	1.18476	1.500	.434		
ROUTE MCUNGE	RTE.K1	32	33	.26083	72.37	16.481	1.18476	1.500	.434	CCODE =	.0
COMPUTE NM HYD	BASIN.K2	-	21	.01486	29.39	1.537	1.93922	1.500	3.090	PER IMP=	70.00
ADD HYD	K1.K2	33&21	34	.27569	101.76	18.018	1.22543	1.500	.577		
COMPUTE NM HYD	BASIN.K3	-	22	.00914	20.76	1.104	2.26513	1.500	3.549	PER IMP=	90.00
ADD HYD	PONDG.K3	79&22	24	.64276	38.61	45.246	1.31987	1.500	.094		
COMPUTE NM HYD	BASIN.K4	-	23	.01340	18.28	.527	.73726	1.500	2.132	PER IMP=	.00
ADD HYD	K3.K4	24&23	25	.65616	56.89	45.773	1.30797	1.500	.135		
COMPUTE NM HYD	BASIN.J1	-	81	.00517	11.04	.557	2.02069	1.500	3.336	PER IMP=	75.00
COMPUTE NM HYD	BASIN.J2	-	82	.01706	36.40	1.839	2.02069	1.500	3.334	PER IMP=	75.00
COMPUTE NM HYD	BASIN.J3	-	83	.00580	11.70	.560	1.80886	1.500	3.151	PER IMP=	62.00
COMPUTE NM HYD	BASIN.J4	-	84	.01006	21.47	1.084	2.02069	1.500	3.335	PER IMP=	75.00
COMPUTE NM HYD	BASIN.J5	-	85	.00134	3.05	.162	2.26513	1.500	3.561	PER IMP=	90.00
COMPUTE NM HYD	BASIN.J6	-	86	.00422	9.59	.510	2.26512	1.500	3.551	PER IMP=	90.00
COMPUTE NM HYD	BASIN.J7	-	87	.00444	10.09	.536	2.26512	1.500	3.551	PER IMP=	90.00
COMPUTE NM HYD	BASIN.J8	-	88	.00903	12.31	.355	.73726	1.500	2.130	PER IMP=	.00
COMPUTE NM HYD	BASIN.J9	-	89	.00548	12.20	.638	2.18365	1.500	3.479	PER IMP=	85.00
COMPUTE NM HYD	BASIN.J12	-	12	.01419	10.65	.314	.41534	1.500	1.173	PER IMP=	.00
ADD HYD	J10J11.J6	86&10	11	.01783	38.60	2.144	2.25428	1.500	3.383		
ADD HYD	J10J11J6.J9	11&89	95	.02331	50.80	2.782	2.23766	1.500	3.405		
ADD HYD	J10J11J6J9.J	85&95	90	.02465	53.86	2.944	2.23914	1.500	3.414		
ROUTE MCUNGE	RTE.J5J6	90	91	.02465	53.86	2.944	2.23914	1.500	3.414	CCODE =	.0
ADD HYD	J1.J4	81&84	93	.01523	32.51	1.641	2.02065	1.500	3.335		
ADD HYD	J1J4.J5J6J9	91&93	94	.03988	86.37	4.585	2.15570	1.500	3.384		
ROUTE MCUNGE	RTE.J14569	94	92	.03988	86.37	4.585	2.15570	1.500	3.384	CCODE =	.0
ADD HYD	J2.J3	82&83	95	.02286	48.10	2.398	1.96692	1.500	3.288		

[illegible]

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*
*          TRAILS UNIT III DRAINAGE MASTER PLAN
*          HYDROLOGIC MODEL--FULLY DEVELOPED CONDITIONS
*          24 FEBRUARY 2015
*
*****
*
*          HYDROLOGIC MODEL FOR OFFSITE AND ONSITE BASINS
*          100-YEAR, 24-HOUR STORM:
*
*
*          PRECIPITATION:
*          P60 = 1.84"
*          P360 = 2.20"
*          P1440 = 2.66"
*
*****
*
START          TIME=0.0 HR   PUNCH CODE=0
*
*
RAINFALL          TYPE=2   RAIN QUARTER=0.0 IN
                  RAIN ONE=1.84 IN  RAIN SIX=2.20 IN
                  RAIN DAY=2.66 IN  DT=0.10 HRS
SEDIMENT BULK     CODE=1   FACTOR=1.0
*
*
*S*****
*S***** COMPUTE ONSITE BASINS FROM THE TRAILS
*S*****
*
COMPUTE NM HYD     ID=50  HYD NO=OFFSITE1  DA=.1998 SQ MI
                  %A=100  %B=0  %C=0  %D=0
                  TP=-.66 HR  RAIN=-1
PRINT HYD          ID=50 CODE=10
*
ROUTE RESERVOIR   ID=53  HYD=OFF.POND.1  INFLOW ID=50 CODE=5
                  OUTFLOW  STORAGE  DEPTH
                  0         0         0
                  3.85      0.037      1
                  5.44      0.218      2
                  6.66      0.610      3
                  7.69      1.150      4
                  8.60      1.759      5
                  9.42      2.439      6

PRINT HYD          ID=53 CODE=10
*
*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.0176
                  DIA=2.0  N=0.013
ROUTE MCUNGE       ID=54  HYD=RTE.OFF.POND  INFLOW ID=53
                  DT=0.0  L=740  NS=0  SLOPE=0.0176
                  MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0

PRINT HYD          ID=54 CODE=0
*
COMPUTE NM HYD     ID=21  HYD NO=BASIN.A1  DA=.02422 SQ MI

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```

%A=0 %B=12.5 %C=12.5 %D=75.0
TP=-.133 HR RAIN=-1
ID=21 CODE=10
PRINT HYD
*
COMPUTE NM HYD ID=22 HYD NO=BASIN.A2 DA=.01331 SQ MI
%A=0 %B=33.0 %C=33.0 %D=34.0
TP=-.133 HR RAIN=-1
ID=22 CODE=10
PRINT HYD
*
*
COMPUTE NM HYD ID=23 HYD NO=BASIN.A3 DA=.00502 SQ MI
%A=0 %B=5.0 %C=5.0 %D=90.0
TP=-.133 HR RAIN=-1
ID=23 CODE=10
PRINT HYD
*
*
COMPUTE NM HYD ID=24 HYD NO=BASIN.A4 DA=.01186 SQ MI
%A=0 %B=7.5 %C=7.5 %D=85.0
TP=-.133 HR RAIN=-1
ID=24 CODE=10
PRINT HYD
*
*
COMPUTE NM HYD ID=25 HYD NO=BASIN.A5 DA=.01830 SQ MI
%A=0 %B=17.0 %C=17.0 %D=66.0
TP=-.133 HR RAIN=-1
ID=25 CODE=10
PRINT HYD
*
*
COMPUTE NM HYD ID=26 HYD NO=BASIN.A6 DA=.02652 SQ MI
%A=0 %B=19.0 %C=19.0 %D=62.0
TP=-.133 HR RAIN=-1
ID=26 CODE=10
PRINT HYD
*
*
COMPUTE NM HYD ID=27 HYD NO=BASIN.A7 DA=.01055 SQ MI
%A=0 %B=12.5 %C=12.5 %D=75.0
TP=-.133 HR RAIN=-1
ID=26 CODE=10
PRINT HYD
*
ADD HYD ID=55 HYD=01.A2 ID I=54 II=22
PRINT HYD ID=55 CODE=10
*
ADD HYD ID=56 HYD=01A2.A1 ID I=55 II=21
PRINT HYD ID=56 CODE=10
*
*
ADD HYD ID=57 HYD=01A2A1.A3 ID I=56 II=23
PRINT HYD ID=57 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.007
DIA=4.0 N=0.013
ROUTE MCUNGE ID=58 HYD=RTE.01A2A1.A3 INFLOW ID=57
DT=0.0 L=1000 NS=0 SLOPE=0.007
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD ID=58 CODE=0
*
*
ADD HYD ID=59 HYD=A1TOA5 ID I=58 II=25
PRINT HYD ID=59 CODE=10
*
*
COMPUTE NM HYD ID=30 HYD NO=BASIN.B DA=.01998 SQ MI

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%A=0 %B=34.0 %C=34.0 %D=32.0
TP=-.133 HR RAIN=-1
ID=30 CODE=10
PRINT HYD
*
*
ROUTE RESERVOIR      ID=51 HYD=POND.B  INFLOW ID=30 CODE=5
OUTFLOW  STORAGE    DEPTH
0         0          5515
1.71     0.06       5516
2.42     0.24       5517
2.96     0.55       5518
3.42     0.99       5519
3.82     1.67       5520
*
*
PRINT HYD            ID=51 CODE=10
*
*
ADD HYD              ID=58 HYD=A1TOA5.B ID I=59 II=51
PRINT HYD            ID=58 CODE=10
*
*
*****
*DIVIDE HYD          ID=59 Q=8.26 ID I=61 HYD NO=BYPASS.A5
                      ID II=62 HYD NO=SURGE.A5
*PRINT HYD           ID=61 CODE=10
*PRINT HYD           ID=62 CODE=10
*****
*
*
ROUTE RESERVOIR      ID=60 HYD=POND.A5  INFLOW ID=58 CODE=5
OUTFLOW  STORAGE    DEPTH
0.0      0.0        5511
2.13     0.35       5512
5.13     1.03       5513
8.82     1.94       5514
13.07    3.15       5515
17.32    4.61       5516

PRINT HYD            ID=60 CODE=10
*
*
*ADD HYD              ID=59 HYD=TOTALA5 ID I=61 II=60
*PRINT HYD            ID=59 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.013
                      DIA=2.0 N=0.013
ROUTE MCUNGE          ID=61 HYD=RTE.A4 INFLOW ID=24
                      DT=0.0 L=900 NS=0 SLOPE=0.013
                      MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD            ID=61 CODE=0
*
*
ADD HYD              ID=62 HYD=RTE.A4.A6 ID I=61 II=26
PRINT HYD            ID=62 CODE=10
*
*
ADD HYD              ID=63 HYD=RTEA4A6.PONDA5 ID I=62 II=60
PRINT HYD            ID=63 CODE=10
*
*

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*****
*DIVIDE HYD          ID=63 Q=8.26 ID I=61  HYD NO=BYPASS.A6
                      ID II=62 HYD NO=SURGE.A6
*PRINT HYD          ID=61 CODE=10
*PRINT HYD          ID=62 CODE=10
*****
*
*
ROUTE RESERVOIR      ID=64 HYD=POND.A6  INFLOW ID=63 CODE=5
OUTFLOW  STORAGE    DEPTH
0         0          5500
2.13     0.30       5501
5.13     0.85       5502
8.82     1.57       5503
13.07    2.47       5504
17.32    3.52       5505
21.57    4.72       5506
100.00   6.06       5507
*
*
PRINT HYD           ID=64 CODE=10
*
*
*ADD HYD            ID=66 HYD=TOTALA6 ID I=61 II=64
*PRINT HYD          ID=66 CODE=10
*
*
ADD HYD             ID=65 HYD=PONDA6.A7 ID I=64 II=27
PRINT HYD           ID=65 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.021
DIA=2.0 N=0.013
ROUTE MCUNGE        ID=66 HYD=RTE.A6.A7 INFLOW ID=65
DT=0.0 L=520 NS=0 SLOPE=0.021
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
*
PRINT HYD           ID=66 CODE=0
*
*
COMPUTE NM HYD      ID=25 HYD NO=BASIN.D1 DA=.01816 SQ MI
%A=0 %B=19.0 %C=19.0 %D=62.0
TP=-.133 HR RAIN=-1
PRINT HYD           ID=25 CODE=10
*
*
ADD HYD             ID=67 HYD=A6.A7.D1 ID I=66 II=25
PRINT HYD           ID=67 CODE=10
*
*
*****
*DIVIDE HYD          ID=67 Q=11.07 ID I=61  HYD NO=BYPASS.AD1
                      ID II=62 HYD NO=SURGE.D1
*PRINT HYD          ID=61 CODE=10
*PRINT HYD          ID=62 CODE=10
*****
*
*
ROUTE RESERVOIR      ID=68 HYD=POND.D1  INFLOW ID=67 CODE=6.3
OUTFLOW  STORAGE    DEPTH
0         0          5471
2.83     2.47       5472
6.84     3.52       5473
11.75    4.72       5474
17.42    6.06       5475

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PRINT HYD          ID=68 CODE=10
*
*
*ADD HYD           ID=67 HYD=TOTALD1 ID I=61 II=68
*PRINT HYD        ID=67 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.018
DIA=2.0 N=0.013
ROUTE MCUNGE      ID=69 HYD=RTE.D1 INFLOW ID=68
DT=0.0 L=1470 NS=0 SLOPE=0.018
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD          ID=69 CODE=0
*
*
****HERITAGE UNIT 1****
*
COMPUTE NM HYD     ID=25 HYD NO=BASIN.D2 DA=.03456 SQ MI
%A=0 %B=28.5 %C=28.5 %D=43.0
TP=-.133 HR RAIN=-1
PRINT HYD          ID=25 CODE=10
*
ADD HYD            ID=70 HYD=PONDD1.D2 ID I=69 II=25
PRINT HYD          ID=70 CODE=10
*
*
****UNIVERSE BLVD****
*
COMPUTE NM HYD     ID=26 HYD NO=BASIN.D3 DA=.00580 SQ MI
%A=0 %B=5.0 %C=5.0 %D=90.0
TP=-.133 HR RAIN=-1
PRINT HYD          ID=26 CODE=10
*
ADD HYD            ID=71 HYD=D1.D2.D3 ID I=70 II=26
PRINT HYD          ID=71 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.02
DIA=4.0 N=0.013
ROUTE MCUNGE      ID=72 HYD=RTE.D1 INFLOW ID=71
DT=0.0 L=1150 NS=0 SLOPE=0.02
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD          ID=72 CODE=0
*
*
****HERITAGE UNIT 2****
*
COMPUTE NM HYD     ID=27 HYD NO=BASIN.D4 DA=.01961 SQ MI
%A=0 %B=28.5 %C=28.5 %D=43.0
TP=-.133 HR RAIN=-1
PRINT HYD          ID=27 CODE=10
*
*
ADD HYD            ID=73 HYD=D1D2D3.D4 ID I=72 II=27
PRINT HYD          ID=73 CODE=10
*
*
COMPUTE NM HYD     ID=28 HYD NO=BASIN.D5 DA=.01367 SQ MI
%A=0 %B=23.0 %C=23.0 %D=54.0
TP=-.133 HR RAIN=-1
PRINT HYD          ID=28 CODE=10
*

```



```

ADD HYD ID=74 HYD=D1234.D5 ID I=73 II=28
PRINT HYD ID=74 CODE=10
*
*
COMPUTE NM HYD ID=25 HYD NO=BASIN.D6 DA=.00781 SQ MI
%A=0.0 %B=18.0 %C=18.0 %D=64.0
TP=-.1333 HR RAIN=-1
PRINT HYD ID=25 CODE=10
*
ADD HYD ID=75 HYD=D12345.D6 ID I=74 II=25
PRINT HYD ID=75 CODE=10
*
*S***** POND D INFLOW HYDROGRAPH
*PUNCH HYD ID=75
*
*****
DIVIDE HYD ID=75 Q=13.77 ID I=31 HYD NO=BYPASS.D
ID II=32 HYD NO=SURGE.D
PRINT HYD ID=31 CODE=10
PRINT HYD ID=32 CODE=10
*****
*
*
ROUTE RESERVOIR ID=50 HYD=POND.D INFLOW ID=32 CODE=6.3
OUTFLOW STORAGE DEPTH
0 0 5429.46
1.87 0.30 5431
2.97 1.01 5432
4.00 1.91 5433
4.98 2.91 5434
5.90 4.00 5435
6.79 5.17 5436
7.51 6.24 5436.85
130.0 7.80 5438
*
*
PRINT HYD ID=50 CODE=10
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.0057
DIA=2.0 N=0.013
ROUTE MCUNGE ID=51 HYD=RTE.D INFLOW ID=50
DT=0.0 L=1530 NS=0 SLOPE=0.0057
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD ID=51 CODE=0
*
*
ADD HYD ID=75 HYD=BYPASS.RTE.D ID I=51 II=31
PRINT HYD ID=75 CODE=10
*
*
COMPUTE NM HYD ID=20 HYD NO=BASIN.C DA=.014183 SQ MI
%A=12.8 %B=28.4 %C=28.4 %D=30.4
TP=-.133 HR RAIN=-1
PRINT HYD ID=20 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.027
DIA=3.0 N=0.013
ROUTE MCUNGE ID=76 HYD=RTE.C INFLOW ID=20
DT=0.0 L=1020 NS=0 SLOPE=0.027
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD ID=76 CODE=0

```

```

*
*
*****SANTA FE UNIT 1*****
*
COMPUTE NM HYD      ID=20  HYD NO=BASIN.F1  DA=.02208 SQ MI
                    %A=0  %B=21.7  %C=21.8  %D=56.5
                    TP=-.133 HR  RAIN=-1
PRINT HYD           ID=20  CODE=10
*
ADD HYD             ID=77  HYD=C.F1  ID I=76  II=20
PRINT HYD           ID=77  CODE=10
*
*
*****UNIVERSE BLVD*****
*
COMPUTE NM HYD      ID=21  HYD NO=BASIN.F2  DA=.00573 SQ MI
                    %A=0  %B=5.0  %C=5.0  %D=90.0
                    TP=-.133 HR  RAIN=-1
PRINT HYD           ID=21  CODE=10
*
ADD HYD             ID=78  HYD=CF1.F2  ID I=77  II=21
PRINT HYD           ID=78  CODE=10
*
*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.023
                    DIA=3.0  N=0.013
ROUTE MCUNGE        ID=79  HYD=RTE.CF1F2  INFLOW ID=78
                    DT=0.0  L=1560 NS=0  SLOPE=0.023
                    MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
*
PRINT HYD           ID=79  CODE=0
*
*
*****TAOS AT THE TRAILS*****
*
COMPUTE NM HYD      ID=22  HYD NO=BASIN.F3  DA=.03563 SQ MI
                    %A=0  %B=21.7  %C=21.8  %D=56.5
                    TP=-.133 HR  RAIN=-1
PRINT HYD           ID=22  CODE=10
*
ADD HYD             ID=70  HYD=CF1F2.F3  ID I=79  II=22
PRINT HYD           ID=70  CODE=10
*
*
*****SANTA FE III*****
*
COMPUTE NM HYD      ID=23  HYD NO=BASIN.F4  DA=.03892 SQ MI
                    %A=0  %B=25.0  %C=25.0  %D=50.0
                    TP=-.133 HR  RAIN=-1
PRINT HYD           ID=23  CODE=10
*
*
ADD HYD             ID=71  HYD=CF1F2F3.F4  ID I=70  II=23
PRINT HYD           ID=71  CODE=10
*
ADD HYD             ID=70  HYD=CF1F2F3F4.D  ID I=71  II=75
PRINT HYD           ID=70  CODE=10
*
*
*
COMPUTE NM HYD      ID=24  HYD NO=BASIN.F5  DA=.01852 SQ MI
                    %A=0  %B=12.5  %C=12.5  %D=75.0
                    TP=-.133 HR  RAIN=-1
PRINT HYD           ID=24  CODE=10

```

```

*
*
COMPUTE NM HYD      ID=25  HYD NO=BASIN.J10  DA=.00628 SQ MI
                    %A=0  %B=5.0  %C=5.0 %D=90.0
                    TP=-.133 HR  RAIN=-1
PRINT HYD           ID=25 CODE=10
*
*
COMPUTE NM HYD      ID=26  HYD NO=BASIN.J11  DA=.00733 SQ MI
                    %A=0  %B=5.0  %C=5.0 %D=90.0
                    TP=-.133 HR  RAIN=-1
PRINT HYD           ID=26 CODE=10
*
*
ADD HYD             ID=23  HYD=J10.J11  ID I=25  II=26
PRINT HYD           ID=23 CODE=10
*
*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.004
                    DIA=3.0  N=0.013
ROUTE MCUNGE        ID=10  HYD=RTE.J10J11  INFLOW ID=23
                    DT=0.0  L=1450 NS=0  SLOPE=0.004
                    MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
*
*
PRINT HYD           ID=10 CODE=0
*
*
*
COMPUTE NM HYD      ID=26  HYD NO=BASIN.F7  DA=.01097 SQ MI
                    %A=0.0  %B=7.5  %C=7.5 %D=85.0
                    TP=-.1333 HR  RAIN=-1
PRINT HYD           ID=26 CODE=10
*
*
*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.004
                    DIA=3.5  N=0.013
ROUTE MCUNGE        ID=74  HYD=RTE.F7  INFLOW ID=26
                    DT=0.0  L=500 NS=0  SLOPE=0.004
                    MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
*
*
PRINT HYD           ID=74 CODE=0
*
*
*
ADD HYD             ID=75  HYD=F7.F5  ID I=74  II=24
PRINT HYD           ID=75 CODE=10
*
*
ROUTE RESERVOIR     ID=51  HYD=POND.F5  INFLOW ID=75 CODE=5
                    OUTFLOW  STORAGE  DEPTH
                    0        0        5421
                    3.00     0.1993   5422
                    7.00     0.4325   5423
                    11.00    0.7053   5424
                    15.00    1.0245   5425
                    20.00    1.3979   5426
                    50.00    1.8334   5427
*
*
PRINT HYD           ID=51 CODE=10
*
*
COMPUTE NM HYD      ID=27  HYD NO=BASIN.F8  DA=.00781 SQ MI
                    %A=0.0  %B=18.0  %C=18.0 %D=64.0
                    TP=-.1333 HR  RAIN=-1

```

```

PRINT HYD          ID=27 CODE=10
*
*
*
ADD HYD            ID=78 HYD=PONDF5.F8 ID I=51 II=27
PRINT HYD          ID=78 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.003
DIA=3.5 N=0.013
ROUTE MCUNGE       ID=77 HYD=RTE.PONDF5 INFLOW ID=78
DT=0.0 L=590 NS=0 SLOPE=0.004
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD          ID=77 CODE=0
*
*
ADD HYD            ID=78 HYD=F1TOF8 ID I=77 II=70
PRINT HYD          ID=78 CODE=10
*
*****
DIVIDE HYD         ID=78 Q=6.20 ID I=31 HYD NO=BYPASS.F
ID II=32 HYD NO=SURGE.F
PRINT HYD          ID=31 CODE=10
PRINT HYD          ID=32 CODE=10
*****
*
*
ROUTE RESERVOIR    ID=52 HYD=POND.F INFLOW ID=32 CODE=6.3
OUTFLOW STORAGE DEPTH
0 0 5415.08
3.80 0.25 5416.0
6.52 0.55 5417.0
8.74 1.69 5418.0
10.68 3.08 5419.0
12.41 4.54 5420.0
14.00 6.08 5421.0
15.47 7.70 5422.0
16.85 9.39 5423.0
18.29 11.16 5424.0
18.60 11.76 5424.33
100.00 13.02 5425.0
*
*
PRINT HYD          ID=52 CODE=10
*
*
ADD HYD            ID=53 HYD=BYPASSF.PONDF ID I=31 II=52
PRINT HYD          ID=53 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.004
DIA=2.0 N=0.013
ROUTE MCUNGE       ID=77 HYD=RTE.PONDF INFLOW ID=53
DT=0.0 L=850 NS=0 SLOPE=0.004
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD          ID=77 CODE=0
*
*
*****RESERVE*****
*
COMPUTE NM HYD     ID=20 HYD NO=BASIN.G1 DA=.02531 SQ MI
%A=0 %B=25.0 %C=25.0 %D=50.0

```

```

TP=-.133 HR RAIN=-1
PRINT HYD ID=20 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.007
DIA=3.0 N=0.013
ROUTE MCUNGE ID=78 HYD=RTE.G1 INFLOW ID=20
DT=0.0 L=580 NS=0 SLOPE=0.007
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD ID=78 CODE=0
*
*
*****SANTA FE 2*****
*
COMPUTE NM HYD ID=21 HYD NO=BASIN.G2 DA=.02530 SQ MI
%A=0 %B=25.0 %C=25.0 %D=50.0
TP=-.133 HR RAIN=-1
PRINT HYD ID=21 CODE=10
*
*
ADD HYD ID=30 HYD=G1.G2 ID I=78 II=21
PRINT HYD ID=30 CODE=10
*
*
ADD HYD ID=31 HYD=G1G2.PONDF ID I=30 II=77
PRINT HYD ID=31 CODE=10
*
*
*****
DIVIDE HYD ID=31 Q=17.61 ID I=32 HYD NO=BYPASS.G
ID II=33 HYD NO=SURGE.G
PRINT HYD ID=32 CODE=10
PRINT HYD ID=33 CODE=10
*****
*
*
ROUTE RESERVOIR ID=34 HYD=POND.G INFLOW ID=33 CODE=6.3
OUTFLOW STORAGE DEPTH
0 0 5415.67
2.50 0.23 5417.0
4.20 0.84 5418.0
5.77 1.83 5419.0
7.24 3.17 5420.0
8.63 4.70 5421.0
9.95 6.34 5422.0
10.45 7.21 5422.5
100.00 8.10 5423.0
*
*
PRINT HYD ID=24 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.006
DIA=3.0 N=0.013
ROUTE MCUNGE ID=78 HYD=RTE.PONDG INFLOW ID=34
DT=0.0 L=1440 NS=0 SLOPE=0.006
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD ID=78 CODE=0
*
*
ADD HYD ID=79 HYD=BYPASS.RTE.G ID I=78 II=32
PRINT HYD ID=79 CODE=10

```

```

*
*
*****
*
*****POND G DISCHARGES INTO POND K*****
*
COMPUTE NM HYD      ID=55  HYD NO=OFFSITE2  DA=.0805 SQ MI
                    %A=100  %B=0.0  %C=0.0  %D=0.0
                    TP=-.66 HR  RAIN=-1
                    ID=55  CODE=10

PRINT HYD
*
*
*ROUTE RESERVOIR    ID=50  HYD=OFFPOND2  INFLOW ID=55  CODE=5
                    OUTFLOW  STORAGE  DEPTH
                    0         0         0
                    2.16     0.047     1
                    3.06     0.222     2
                    3.75     0.466     3
                    4.33     0.751     4
                    4.84     1.081     5

*
*
*PRINT HYD          ID=50  CODE=10
*
*
*COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.011
                    DIA=2.0  N=0.013
*ROUTE MCUNGE      ID=70  HYD=RTE.OFFPOND2  INFLOW ID=50
                    DT=0.0  L=900  NS=0  SLOPE=0.011
                    MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0

*
*PRINT HYD          ID=70  CODE=0
*
*
*COMPUTE NM HYD      ID=30  HYD NO=BASIN.B  DA=.01998 SQ MI
                    %A=0  %B=34.0  %C=34.0  %D=32.0
                    TP=-.133 HR  RAIN=-1
                    ID=30  CODE=10

*PRINT HYD
*
*
*ROUTE RESERVOIR    ID=51  HYD=POND.B  INFLOW ID=30  CODE=5
                    OUTFLOW  STORAGE  DEPTH
                    0         0         5515
                    1.71     0.06     5516
                    2.42     0.24     5517
                    2.96     0.55     5518
                    3.42     0.99     5519
                    3.82     1.67     5520

*
*
*PRINT HYD          ID=51  CODE=10
*
*
*COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.03
                    DIA=2.0  N=0.013
*ROUTE MCUNGE      ID=71  HYD=RTE.PONDB  INFLOW ID=51
                    DT=0.0  L=1180  NS=0  SLOPE=0.03
                    MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0

*
*PRINT HYD          ID=71  CODE=0
*
*
*ADD HYD            ID=72  HYD=OFF.B  ID I=71  II=70
*PRINT HYD          ID=72  CODE=10

```

```

*
* BEGIN DURANGO ANALYSIS
*
COMPUTE NM HYD      ID=30  HYD NO=BASINE1.1  DA=.018607 SQ MI
                    %A=0.0  %B=28.1  %C=28.1  %D=43.8
                    TP=-0.133 HR  RAIN=-1
PRINT HYD           ID=30  CODE=10
*
*
COMPUTE NM HYD      ID=31  HYD NO=BASINE1.2  DA=.019936 SQ MI
                    %A=0.0  %B=28.1  %C=28.1  %D=43.8
                    TP=-0.133 HR  RAIN=-1
PRINT HYD           ID=31  CODE=10
*
*
ADD HYD             ID=73  HYD=OFF.E12 ID I=55 II=31
PRINT HYD           ID=73  CODE=10
*
*
COMPUTE NM HYD      ID=32  HYD NO=BASIN.E2  DA=.008669 SQ MI
                    %A=0.0  %B=30.7  %C=30.7  %D=38.6
                    TP=-.133 HR  RAIN=-1
PRINT HYD           ID=32  CODE=10
*
*
ADD HYD             ID=72  HYD=OFFE2.E12 ID I=73 II=32
PRINT HYD           ID=72  CODE=10
*
*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.003
                    DIA=4.0  N=0.013
ROUTE MCUNGE        ID=76  HYD=RTE.E12 INFLOW ID=72
                    DT=0.0  L=400 NS=0  SLOPE=0.003
                    MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD           ID=76  CODE=0
*
* BEGIN WOODMONT ANALYSIS
*
COMPUTE NM HYD      ID=34  HYD NO=BASIN.E4  DA=.00577 SQ MI
                    %A=0.0  %B=5.0  %C=5.0  %D=90.0
                    TP=-0.133 HR  RAIN=-1
PRINT HYD           ID=34  CODE=10
*
*
ADD HYD             ID=75  HYD=E11.E4 ID I=30 II=34
PRINT HYD           ID=75  CODE=10
*
*
*ADD HYD            ID=75  HYD=E3E4.PONDB ID I=74 II=71
*PRINT HYD          ID=75  CODE=10
*
*
*ADD HYD            ID=74  HYD=E3E4.OFFE11 ID I=75 II=73
*PRINT HYD          ID=74  CODE=10
*
*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.05
                    DIA=4.0  N=0.013
ROUTE MCUNGE        ID=77  HYD=RTE.E1E4 INFLOW ID=75
                    DT=0.0  L=450 NS=0  SLOPE=0.05
                    MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD           ID=77  CODE=0

```

```

*
*
ADD HYD          ID=78 HYD=E1E4.E12 ID I=77 II=76
PRINT HYD        ID=78 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.026
DIA=4.0 N=0.013
ROUTE MCUNGE     ID=77 HYD=RTE.E1E4E12 INFLOW ID=78
DT=0.0 L=450 NS=0 SLOPE=0.026
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD        ID=77 CODE=0
*
*
* BEGIN VALLE PRADO ANALYSIS
*
COMPUTE NM HYD   ID=33 HYD NO=BASIN.E3 DA=.024219 SQ MI
%A=0.0 %B=22.0 %C=22.0 %D=56.0
TP=-0.133 HR RAIN=-1
PRINT HYD        ID=33 CODE=10
*
*
COMPUTE NM HYD   ID=35 HYD NO=BASIN.E5 DA=.027007 SQ MI
%A=18.8 %B=23.8 %C=26.4 %D=31.0
TP=-0.133 HR RAIN=-1
PRINT HYD        ID=35 CODE=10
*
*
COMPUTE NM HYD   ID=34 HYD NO=BASIN.E7 DA=.004532 SQ MI
%A=16.5 %B=24.8 %C=20.6 %D=38.1
TP=-0.133 HR RAIN=-1
PRINT HYD        ID=34 CODE=10
*
*
ADD HYD          ID=80 HYD=E3.E5 ID I=33 II=35
PRINT HYD        ID=80 CODE=10
*
*
ADD HYD          ID=40 HYD=PONDE.INFLOW ID I=80 II=77
PRINT HYD        ID=40 CODE=10
*
*
*****
*DIVIDE HYD      ID=40 Q=15.5 ID I=61 HYD NO=BYPASS.E
ID II=62 HYD NO=SURGE.E
*PRINT HYD      ID=61 CODE=10
*PRINT HYD      ID=62 CODE=10
*****
*
*
ROUTE RESERVOIR  ID=37 HYD=POND.E INFLOW ID=40 CODE=6.3
OUTFLOW STORAGE DEPTH
0.0 0.02 5440
0.011 0.05 5440.5
0.012 0.09 5441
0.013 0.13 5441.5
0.014 0.18 5442
0.015 0.24 5442.5
0.016 0.31 5443
0.017 0.39 5443.5
0.018 0.50 5444
0.02 0.65 5444.5
0.03 0.83 5445

```


0.50	1.03	5445.5
1.30	1.28	5446
2.20	1.56	5446.5
3.30	1.89	5447
4.50	2.25	5447.5
5.80	2.64	5448
7.60	3.08	5448.5
9.50	3.56	5449
11.5	4.08	5449.5
13.6	4.63	5450
15.8	5.21	5450.5
18.1	5.83	5451
20.5	6.49	5451.5
23.0	7.17	5452

*

PRINT HYD ID=37 CODE=10

*

*

COMPUTE NM HYD ID=36 HYD NO=BASIN.E6 DA=.00488 SQ MI
 %A=0.0 %B=5.0 %C=5.0 %D=90.0
 TP=-0.133 HR RAIN=-1

PRINT HYD ID=36 CODE=10

*

*

ADD HYD ID=40 HYD=TOTALE ID I=36 II=37
 PRINT HYD ID=40 CODE=10

*

*

COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.022
 DIA=2.5 N=0.013
 ROUTE MCUNGE ID=38 HYD=RTE.PONDE INFLOW ID=40
 DT=0.0 L=1200 NS=0 SLOPE=0.022
 MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0

*

PRINT HYD ID=38 CODE=0

*

*

*

PARK

*

COMPUTE NM HYD ID=32 HYD NO=BASIN.P DA=.00705 SQ MI
 %A=43 %B=25 %C=25 %D=7
 TP=-.133 HR RAIN=-1

PRINT HYD ID=32 CODE=10

*

*

VALLE VISTA

*

COMPUTE NM HYD ID=33 HYD NO=BASIN.H1 DA=.01719 SQ MI
 %A=0.0 %B=26.6 %C=26.6 %D=46.8
 TP=-.133 HR RAIN=-1

PRINT HYD ID=33 CODE=10

*

*

ADD HYD ID=43 HYD=PONDE.H1 ID I=38 II=33
 PRINT HYD ID=43 CODE=10

*

*

RAINBOW BLVD PORTION

*

COMPUTE NM HYD ID=34 HYD NO=BASIN.H2 DA=.00836 SQ MI
 %A=0.0 %B=0.0 %C=10.0 %D=90.0
 TP=-.133 HR RAIN=-1

PRINT HYD ID=34 CODE=10

```

*
*
ADD HYD          ID=44 HYD=P.H2 ID I=32 II=34
PRINT HYD        ID=44 CODE=10
*
*
ADD HYD          ID=45 HYD=PH2.H1 ID I=44 II=43
PRINT HYD        ID=45 CODE=10
*
*
*
COMPUTE NM HYD   ID=35 HYD NO=BASIN.H3 DA=.01191 SQ MI
                  %A=0.0 %B=20.0 %C=20.0 %D=60.0
                  TP=-.133 HR RAIN=-1
PRINT HYD        ID=35 CODE=10
*
*
ADD HYD          ID=46 HYD=PH1H3 ID I=45 II=35
PRINT HYD        ID=46 CODE=10
*
*
*
*****
DIVIDE HYD       ID=46 Q=21.6 ID I=47 HYD NO=BYPASS.H
                  ID II=48 HYD NO=SURGE.H
PRINT HYD        ID=47 CODE=10
PRINT HYD        ID=48 CODE=10
*****
*
*
*****
ROUTE RESERVOIR ID=30 HYD=POND.H INFLOW ID=48 CODE=5
OUTFLOW         STORAGE      DEPTH
0.0             0.0          5418.65
2.31            0.57          5420
3.88            1.62          5421
5.36            3.02          5422
100.0           4.60          5423
*
PRINT HYD        ID=30 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.003
DIA=2.5 N=0.013
ROUTE MCUNGE     ID=49 HYD=RTE.PONDH INFLOW ID=30
DT=0.0 L=1600 NS=0 SLOPE=0.003
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD        ID=49 CODE=0
*
*
ADD HYD          ID=31 HYD=BYPASS.RTE.H ID I=49 II=47
PRINT HYD        ID=31 CODE=10
*
*
*****TIERRA VISTA*****
*
COMPUTE NM HYD   ID=20 HYD NO=BASIN.K1 DA=.02673 SQ MI
                  %A=0.0 %B=19.0 %C=19.0 %D=62.0
                  TP=-.1715 HR RAIN=-1
PRINT HYD        ID=20 CODE=10
*
*
ADD HYD          ID=32 HYD=PONDH.K1 ID I=31 II=20

```

```

PRINT HYD          ID=32 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.0088
DIA=4.5 N=0.013
ROUTE MCUNGE       ID=33 HYD=RTE.K1 INFLOW ID=32
DT=0.0 L=800 NS=0 SLOPE=0.0088
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD          ID=33 CODE=0
*
*
COMPUTE NM HYD     ID=21 HYD NO=BASIN.K2 DA=.01486 SQ MI
%A=0.0 %B=15.0 %C=15.0 %D=70.0
TP=-.1715 HR RAIN=-1
PRINT HYD          ID=21 CODE=10
*
ADD HYD            ID=34 HYD=K1.K2 ID I=33 II=21
PRINT HYD          ID=34 CODE=10
*
*
COMPUTE NM HYD     ID=22 HYD NO=BASIN.K3 DA=.00914 SQ MI
%A=0 %B=5.0 %C=5.0 %D=90.0
TP=-.133 HR RAIN=-1
PRINT HYD          ID=22 CODE=10
*
*
ADD HYD            ID=24 HYD=PONDG.K3 ID I=79 II=22
PRINT HYD          ID=24 CODE=10
*
*
COMPUTE NM HYD     ID=23 HYD NO=BASIN.K4 DA=.0134 SQ MI
%A=0.0 %B=70.0 %C=30.0 %D=0.0
TP=-.133 HR RAIN=-1
PRINT HYD          ID=23 CODE=10
*
*
ADD HYD            ID=25 HYD=K3.K4 ID I=24 II=23
PRINT HYD          ID=25 CODE=10
*
*
*****BASINS 2, B, E, H, L ARE LATER ROUTED THROUGH POND K*****
*
*
COMPUTE NM HYD     ID=81 HYD NO=BASIN.J1 DA=.00517 SQ MI
%A=0.0 %B=12.5 %C=12.5 %D=75.0
TP=-.1333 HR RAIN=-1
PRINT HYD          ID=81 CODE=10
*
*****CANTATA*****
*
COMPUTE NM HYD     ID=82 HYD NO=BASIN.J2 DA=.01706 SQ MI
%A=0.0 %B=12.5 %C=12.5 %D=75.0
TP=-.1333 HR RAIN=-1
PRINT HYD          ID=82 CODE=10
*
COMPUTE NM HYD     ID=83 HYD NO=BASIN.J3 DA=.00580 SQ MI
%A=0.0 %B=19.0 %C=19.0 %D=62.0
TP=-.1333 HR RAIN=-1
PRINT HYD          ID=83 CODE=10
*
*****CANTATA*****
*
COMPUTE NM HYD     ID=84 HYD NO=BASIN.J4 DA=.01006 SQ MI

```

```

%A=0.0 %B=12.5 %C=12.5 %D=75.0
TP=-.1333 HR RAIN=-1
ID=84 CODE=10
PRINT HYD
*
*
COMPUTE NM HYD ID=85 HYD NO=BASIN.J5 DA=.00134 SQ MI
%A=0.0 %B=5.0 %C=5.0 %D=90.0
TP=-.1333 HR RAIN=-1
ID=85 CODE=10
PRINT HYD
*
*
COMPUTE NM HYD ID=86 HYD NO=BASIN.J6 DA=.00422 SQ MI
%A=0.0 %B=5.0 %C=5.0 %D=90.0
TP=-.1333 HR RAIN=-1
ID=86 CODE=10
PRINT HYD
*
*
COMPUTE NM HYD ID=87 HYD NO=BASIN.J7 DA=.00444 SQ MI
%A=0.0 %B=5.0 %C=5.0 %D=90.0
TP=-.1333 HR RAIN=-1
ID=87 CODE=10
PRINT HYD
*
*
COMPUTE NM HYD ID=88 HYD NO=BASIN.J8 DA=.00903 SQ MI
%A=0.0 %B=70.0 %C=30.0 %D=0.0
TP=-.1333 HR RAIN=-1
ID=88 CODE=10
PRINT HYD
*
*
COMPUTE NM HYD ID=89 HYD NO=BASIN.J9 DA=.00548 SQ MI
%A=0.0 %B=7.5 %C=7.5 %D=85.0
TP=-.1333 HR RAIN=-1
ID=89 CODE=10
PRINT HYD
*
*
COMPUTE NM HYD ID=12 HYD NO=BASIN.J12 DA=.01419 SQ MI
%A=100.0 %B=0.0 %C=0.0 %D=0.0
TP=-.1333 HR RAIN=-1
ID=12 CODE=10
PRINT HYD
*
*
ADD HYD ID=11 HYD=J10J11.J6 ID I=86 II=10
PRINT HYD ID=11 CODE=10
*
*
ADD HYD ID=95 HYD=J10J11J6.J9 ID I=11 II=89
PRINT HYD ID=95 CODE=10
*
*
ADD HYD ID=90 HYD=J10J11J6J9.J5 ID I=85 II=95
PRINT HYD ID=90 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.007
DIA=3.0 N=0.013
ROUTE MCUNGE ID=91 HYD=RTE.J5J6 INFLOW ID=90
DT=0.0 L=350 NS=0 SLOPE=0.007
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD ID=91 CODE=0
*
*
ADD HYD ID=93 HYD=J1.J4 ID I=81 II=84
PRINT HYD ID=93 CODE=10

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*
ADD HYD ID=94 HYD=J1J4.J5J6J9 ID I=91 II=93
PRINT HYD ID=94 CODE=10
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.007
DIA=3.5 N=0.013
ROUTE MCUNGE ID=92 HYD=RTE.J14569 INFLOW ID=94
DT=0.0 L=650 NS=0 SLOPE=0.007
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD ID=92 CODE=0
*
*
ADD HYD ID=95 HYD=J2.J3 ID I=82 II=83
PRINT HYD ID=95 CODE=10
*
*
ADD HYD ID=94 HYD=J2J3.J7 ID I=95 II=87
PRINT HYD ID=94 CODE=10
*
*
ADD HYD ID=96 HYD=J145679.J237 ID I=94 II=92
PRINT HYD ID=96 CODE=10
*
*
ADD HYD ID=97 HYD=J1J7.J8 ID I=96 II=88
PRINT HYD ID=97 CODE=10
*
*
ADD HYD ID=98 HYD=J1J8.J12 ID I=97 II=12
PRINT HYD ID=98 CODE=10
*
*
*****
DIVIDE HYD ID=98 Q=26.34 ID I=83 HYD NO=BYPASSJ
ID II=84 HYD NO=SURGEJ
PRINT HYD ID=83 CODE=10
PRINT HYD ID=84 CODE=10
*****
*
*
ROUTE RESERVOIR ID=90 HYD=POND.J INFLOW ID=84 CODE=10
OUTFLOW STORAGE DEPTH
0 0 5414
3.82 1.96 5415
7.20 4.70 5416
10.28 7.94 5417
100.0 11.56 5418
*
PRINT HYD ID=90 CODE=0
*
*
ADD HYD ID=97 HYD=BYPASS.SURGEPONDJ ID I=90 II=83
PRINT HYD ID=97 CODE=10
*
*
COMPUTE RATING CURVE CID=1 VS NO=1 CODE=-1 SLP=0.007
DIA=4.0 N=0.013
ROUTE MCUNGE ID=91 HYD=RTE.J5J6 INFLOW ID=97
DT=0.0 L=1100 NS=0 SLOPE=0.007
MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD ID=91 CODE=0
*
*****TAOS*****

```

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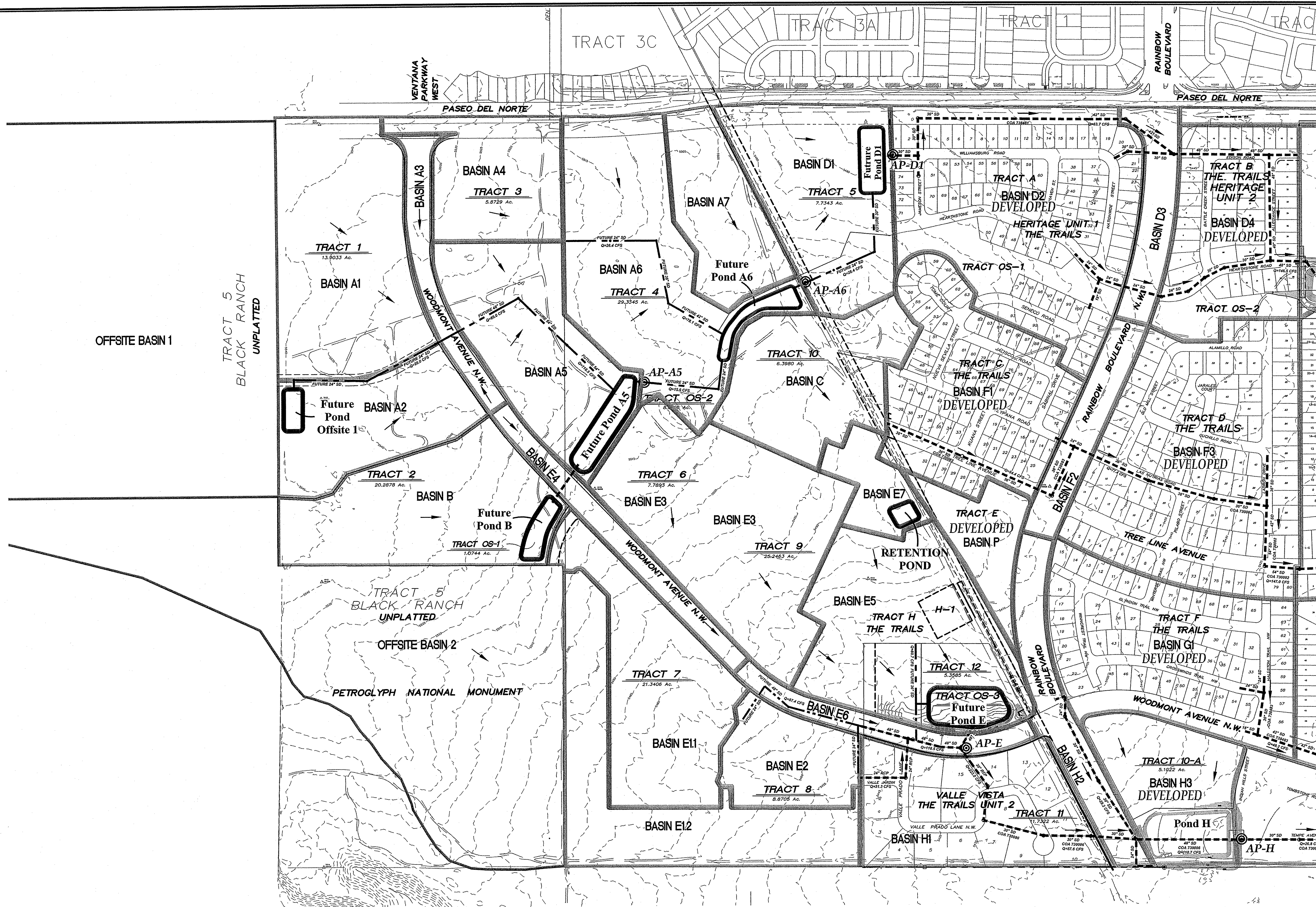
*
COMPUTE NM HYD      ID=30  HYD NO=BASIN.K5  DA=.02364 SQ MI
                    %A=0.0  %B=19.0  %C=19.0  %D=62.0
                    TP=-.1333 HR  RAIN=-1
PRINT HYD          ID=30  CODE=10
*
*
COMPUTE NM HYD      ID=31  HYD NO=BASIN.K6  DA=.00220 SQ MI
                    %A=0.0  %B=5.0  %C=5.0  %D=90.0
                    TP=-.1333 HR  RAIN=-1
PRINT HYD          ID=31  CODE=10
*
*
ADD HYD             ID=41  HYD=K5.K6  ID I=30  II=31
PRINT HYD          ID=41  CODE=10
*
*
*ADD HYD            ID=83  HYD=1ADCFG.JK6  ID I=27  II=91
*PRINT HYD          ID=83  CODE=10
*
*
ADD HYD             ID=43  HYD=K5K6.PONDJ  I=41  II=91
PRINT HYD          ID=43  CODE=10
*
*
ADD HYD             ID=44  HYD=K5K6PONDJ.K3K4  I=43  II=25
PRINT HYD          ID=44  CODE=10
*
*
ADD HYD             ID=96  HYD=PONDJK13.K1K4  ID I=34  II=44
PRINT HYD          ID=96  CODE=10
*
*****
DIVIDE HYD          ID=96  Q=44.91  ID I=97  HYD NO=BYPASS.K
                    ID II=98  HYD NO=SURGE.K
PRINT HYD          ID=97  CODE=10
PRINT HYD          ID=98  CODE=10
*****
*
*
*
ROUTE RESERVOIR     ID=70  HYD=POND.K  INFLOW ID=98  CODE=5
                    OUTFLOW  STORAGE  DEPTH
                    0.00      0        5404.85
                    6.79      2.60     5406
                    12.04     5.29     5407
                    16.84     9.24     5408
                    21.30     14.84    5409
                    25.48     21.67    5410
*
PRINT HYD          ID=70  CODE=10
*
*
ADD HYD             ID=99  HYD=BYPASS.ROUTE.K  ID I=70  II=97
PRINT HYD          ID=99  CODE=5
*
PUNCH HYD           ID=99
*
*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.005
                    DIA=2.5  N=0.013
ROUTE MCUNGE        ID=1  HYD=RTE.PONDK  INFLOW ID=99
                    DT=0.0  L=2000  NS=0  SLOPE=0.005
                    MATCODE=0  REGCODE=0  CCODE=0  MM CODE=0
*

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```

PRINT HYD          ID=1 CODE=0
*
*
COMPUTE NM HYD      ID=2  HYD NO=UNIVROWNORTH  DA=.007266 SQ MI
                    %A=0.0  %B=5.0  %C=5.0  %D=90.0
                    TP=-.1333 HR  RAIN=-1
PRINT HYD          ID=2 CODE=5
*
ADD HYD             ID=3  HYD=UNIVN.PONDK ID I=1 II=2
PRINT HYD          ID=3 CODE=5
*
*
COMPUTE RATING CURVE CID=1  VS NO=1  CODE=-1  SLP=0.005
                    DIA=2.5  N=0.013
ROUTE MCUNGE        ID=4  HYD=RTE.UNIVN INFLOW ID=3
                    DT=0.0  L=2000 NS=0  SLOPE=0.005
                    MATCODE=0 REGCODE=0 CCODE=0 MM CODE=0
*
PRINT HYD          ID=4 CODE=0
*
*
COMPUTE NM HYD      ID=5  HYD NO=UNIVROWSOUTH  DA=.007266 SQ MI
                    %A=0.0  %B=5.0  %C=5.0  %D=90.0
                    TP=-.1333 HR  RAIN=-1
PRINT HYD          ID=5 CODE=5
*
ADD HYD             ID=6  HYD=UNIVNS.PONDK ID I=4 II=5
PRINT HYD          ID=6 CODE=5
*
*PUNCH HYD          ID=6
*
*S*****
*
/*S*****END OF TRAILS DRAINAGE ANALYSIS
*
FINISH

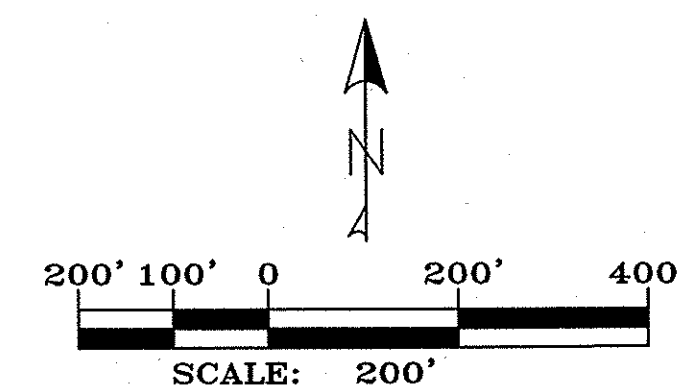
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- NOTES:
1. STORM DRAIN SIZES BASED ON 100-YR. 24-HR. STORM FLOWS. FUTURE PROJECTS MAY BE REQUIRED TO INCREASE STORM DRAIN SIZE BASED ON 100-YR. 6-HR. STORM FLOWS.
 2. THE INTENDED FUTURE CONTRIBUTION FROM THE TRAILS UNIT 4 IS 20 CFS TO THE MAXIMUM DOWNSTREAM DISCHARGE OF 62 CFS IN UNIVERSE BLVD.

LEGEND

- ⊙ ANALYSIS POINT
- EXISTING STORM DRAIN
- FLOW DIRECTION
- - - FUTURE DEVELOPED STORM DRAIN

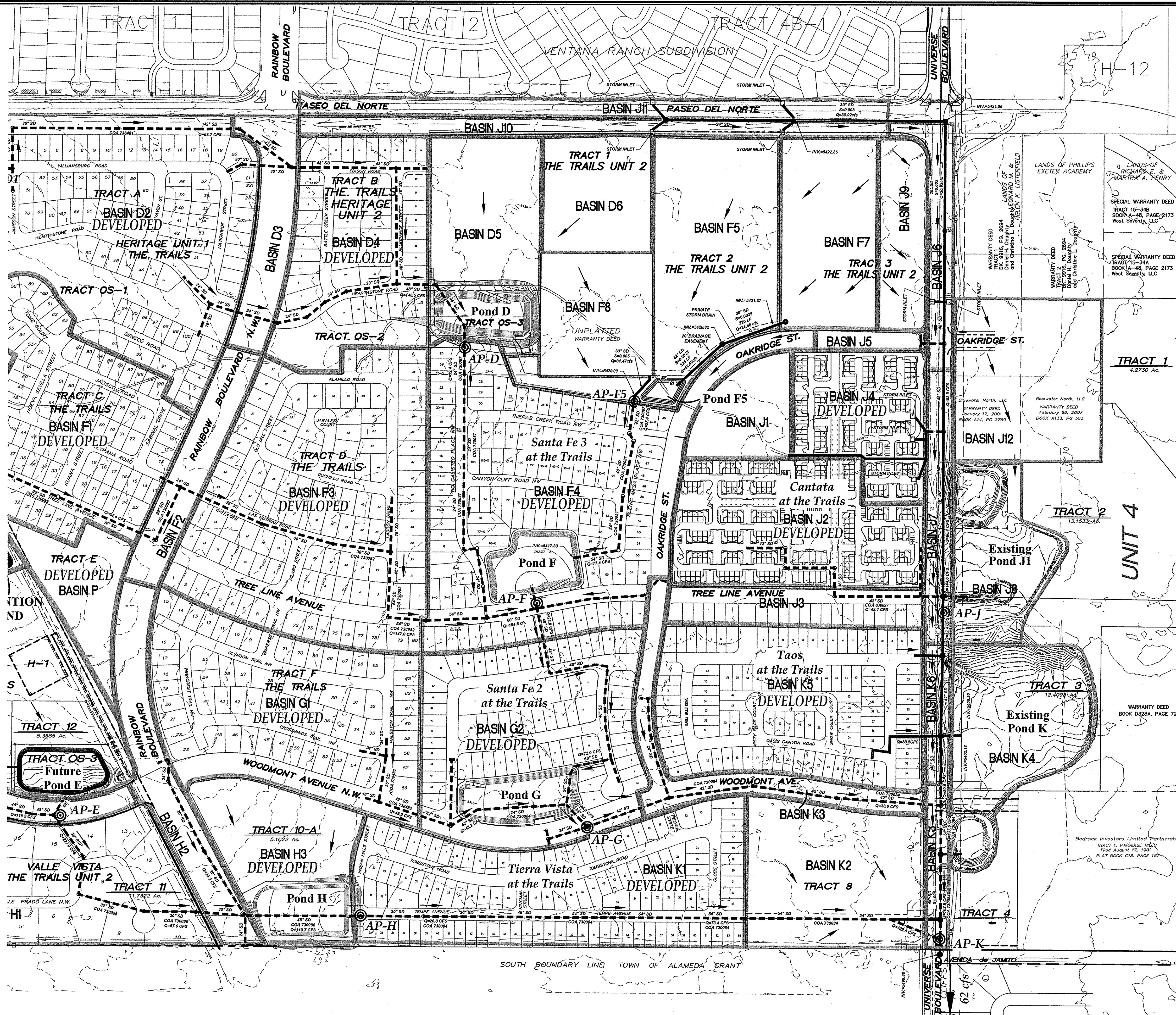


DATUM NAVD 1929

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**UPDATE TO THE
AMENDMENT TO DMP FOR
THE TRAILS UNITS, 1, 2 AND 3
PLATE 1**

David H. Thompson
9677
REGISTERED PROFESSIONAL ENGINEER



DETENTION POND CHARACTERISTICS

POND	DRAIN AREA (AC)	Q100 IN (CFS)	Q100 OUT (CFS)	BYPASS Q (CFS)	MAX VOL (ac-ft)	V100 (ac-ft)	TOP ELEV	BOTTOM ELEV	WSEL
OFF 1	127.9	37.00	9.25		2.44	2.302	6	0	5.80
A5	179.6	121.19	16.29		4.61	4.256	5516	5511	5515.76
A6	204.2	84.21	16.19		4.72	3.241	5506	5500	5504.73
B	12.8	34.80	3.36		0.99	0.930	5519	5515	5518.86
D1	222.5	65.02	14.46		6.06	5.360	5475	5471	5474.48
D	274.7	146.48	5.93	13.77	6.24	4.035	5436.9	5429.5	5435.03
E	118.2	194.46	20.22		7.17	6.412	5452	5440	5451.44
F	18.9	62.89	19.84		1.40	1.386	5426	5421	5425.97
F	373.1	259.49	17.58	6.20	11.76	10.293	5424.3	5415.08	5423.31
G	403.5	111.28	7.00	17.61	7.21	2.948	5422.5	5415.67	5419.83
H	149.8	97.80	4.30	21.60	3.02	2.205	5422	5418.65	5421.42
J	57.9	141.18	6.05	26.34	7.94	3.771	5417	5414	5415.66
K	670.8	239.15	15.75	44.91	14.84	8.346	5409	5404.85	5407.77

ANALYSIS POINT PEAK FLOWS

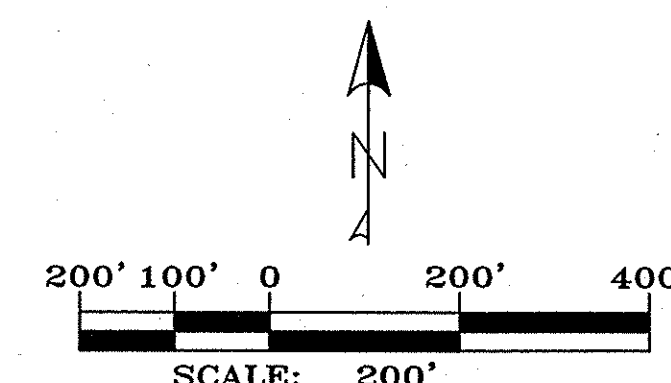
ANALYSIS POINT	PEAK FLOW
AP-A5	16.29 CFS
AP-A6	16.19 CFS
AP-D1	14.46 CFS
AP-D	19.42 CFS
AP-E	20.22 CFS
AP-F5	27.40 CFS
AP-F	23.78 CFS
AP-G	24.61 CFS
AP-H	26.10 CFS
AP-J	32.39 CFS
AP-K	60.66 CFS

DEVELOPED DRAINAGE BASIN CHARACTERISTICS

BASIN	AREA ACRES	A	B	C	D	Q CFS	VOL AC-FT
OFFSITE 1	127.87	100	0	0	0	37.00	4.426
A1	15.30	0	12.5	12.5	75	51.68	2.610
A2	8.52	0	33	33	34	23.43	0.960
A3	3.21	0	5	5	90	11.41	0.606
A4	7.59	0	7.5	7.5	85	26.39	1.381
A5	11.71	0	17	17	66	37.55	1.829
A6	16.97	0	19	19	62	53.44	2.558
A7	6.75	0	12.5	12.5	75	22.52	1.137
C	9.08	12.8	28.4	28.4	30.4	23.20	0.935
D1	11.62	0	19	19	62	36.60	1.752
D2	22.12	0	28.5	28.5	43	63.65	2.763
D3	3.71	0	5	5	90	13.18	0.701
D4	12.55	0	28.5	28.5	43	36.12	1.568
D5	8.75	0	23	23	54	26.55	1.229
D6	5.00	0	18	18	64	15.89	0.764
F1	14.13	0	21.7	21.8	56.5	43.39	2.023
F2	3.67	0	5	5	90	13.02	0.692
F3	22.80	0	21.7	21.8	56.5	70.02	3.267
F4	24.91	0	25	25	50	74.16	3.349
F5	11.85	0	12.5	12.5	75	39.52	1.996
F7	7.02	0	7.5	7.5	85	24.42	1.278
F8	5.00	0	18	18	64	15.89	0.764
G1	16.20	0	25	25	50	48.23	2.178
G2	16.19	0	25	25	50	48.22	2.177
OFFSITE 2	51.52	100	0	0	0	13.87	1.783
B	12.79	0	34	34	32	34.80	1.407
E1.1	11.91	0	28.1	28.1	43.8	34.41	1.501
E1.2	12.76	0	28.1	28.1	43.8	36.78	1.608
E2	5.55	0	30.7	30.7	38.6	15.63	0.660
E3	15.50	0	22	22	56	47.48	2.210
E4	3.69	0	5	5	90	13.11	0.697
E5	17.28	18.8	23.8	26.4	31	43.19	1.762
E6	3.12	0	5	5	90	11.09	0.590
E7	2.90	16.5	24.8	20.6	38.1	7.55	0.324
P	4.51	43	25	25	7	8.41	0.273
H1	11.00	0	26.6	26.6	46.8	32.26	1.431
H2	5.35	0	5	5	90	19.16	1.018
H3	7.62	0	20	20	60	23.39	1.128
J1	3.31	0	12.5	12.5	75	11.04	0.557
J2	10.92	0	12.5	12.5	75	36.40	1.839
J3	3.71	0	19	19	62	11.70	0.560
J4	6.44	0	12.5	12.5	75	21.47	1.084
J5	0.86	0	5	5	90	3.05	0.162
J6	2.70	0	5	5	90	9.59	0.510
J7	2.84	0	5	5	90	10.09	0.536
J8	5.78	0	70	30	0	12.31	0.355
J9	3.51	0	7.5	7.5	85	12.20	0.638
J10	4.02	0	5	5	90	14.27	0.759
J11	4.79	0	5	5	90	16.65	0.886
J12	9.08	100	0	0	0	10.65	0.314
K1	17.11	0	19	19	62	59.54	2.579
K2	9.51	0	15	15	70	29.39	1.357
K3	5.85	0	5	5	90	20.76	1.104
K4	8.58	0	70	30	0	18.28	0.527
K5	15.13	0	19	19	62	47.63	2.281
K6	1.41	0	5	5	90	5.01	0.266

LEGEND

- ANALYSIS POINT
- EXISTING STORM DRAIN
- FLOW DIRECTION
- FUTURE DEVELOPED STORM DRAIN



DATUM NAVD 1929

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UPDATE TO THE AMENDMENT TO DMP FOR THE TRAILS UNITS, 1, 2 AND 3 PLATE 2

NOTES:

- STORM DRAIN SIZES BASED ON 100-YR, 24-HR STORM FLOWS. FUTURE PROJECTS MAY BE REQUIRED TO INCREASE STORM DRAIN SIZE BASED ON 100-YR, 6-HR STORM FLOWS.
- THE INTENDED FUTURE CONTRIBUTION FROM THE TRAILS UNIT 4 IS 20 CFS TO THE MAXIMUM DOWNSTREAM DISCHARGE OF 61 CFS IN UNIVERSE BLVD.

Signature
 9677
 2-26-15
 LICENSED PROFESSIONAL ENGINEER