

CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director



Mayor Timothy M. Keller

December 3, 2018

David Soule, P.E.
Rio Grande Engineering
P.O. Box 93924
Albuquerque, NM, 87199

**RE: JATC Expansion
4501 Montbel Place NE
Grading & Drainage Plan and Drainage Report
Engineer's Stamp Date: 11/15/18
Hydrology File: F16D011**

Dear Mr. Soule:

PO Box 1293

Based upon the information provided in your submittal received 11/16/2018, the Grading & Drainage Plan and Drainage Report is approved for Building Permit and Grading Permit.

Albuquerque

Prior to approval in support of Permanent Release of Occupancy by Hydrology, Engineer Certification per the DPM checklist will be required and a formal Elevation Certificate needs to be submitted to Hydrology.

NM 87103

Please provide a Drainage Covenant per Chapter 17 of the DPM for all detention ponds prior to Permanent Release of Occupancy. Please submit this on the 4th floor of Plaza de Sol. A \$25 fee will be required.

www.cabq.gov

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Curtis Cherne, PE, ccherne@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov.

Sincerely,

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department



City of Albuquerque

Planning Department
Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: JATC EXPANSION **Building Permit #:** _____ **Hydrology File #:** _____

DRB#: _____ **EPC#:** _____ **Work Order#:** _____

Legal Description: TRACT 1A1A AND 1A1B, SUNDT INDUSTRIAL PARK

City Address: 4501 MONTBEL

Applicant: JATCIEB CORPORATION **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

Other Contact: RIO GRANDE ENGINEERING **Contact:** DAVID SOULE

Address: PO BOX 93924 ALB NM 87199

Phone#: 505.321.9099 **Fax#:** 505.872.0999 **E-mail:** david@riograndeengineering.com

TYPE OF DEVELOPMENT: _____ PLAT _____ RESIDENCE _____ DRB SITE ☒ ADMIN SITE

Check all that Apply:

DEPARTMENT:

☒ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION

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?

IS THIS A RESUBMITTAL?: _____ Yes ☒ No

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) _____

DATE SUBMITTED: _____ **By:** _____

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

DRAINAGE REPORT

For

JATC
Lot 1-A-1-A/1-A-1-B
Sundt's Industrial Center
Albuquerque, New Mexico

Prepared by

Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199



11/15/18

October 2018

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PURPOSE

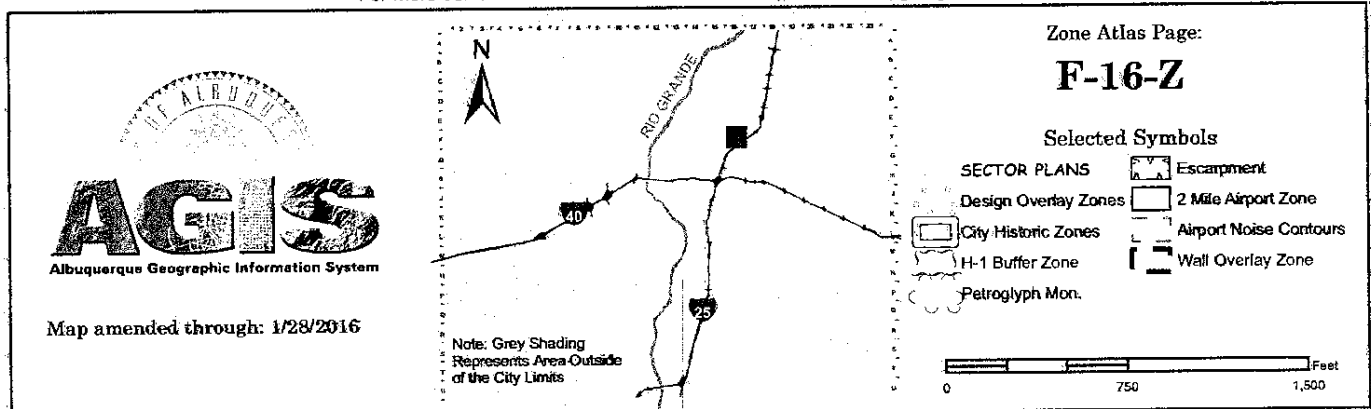
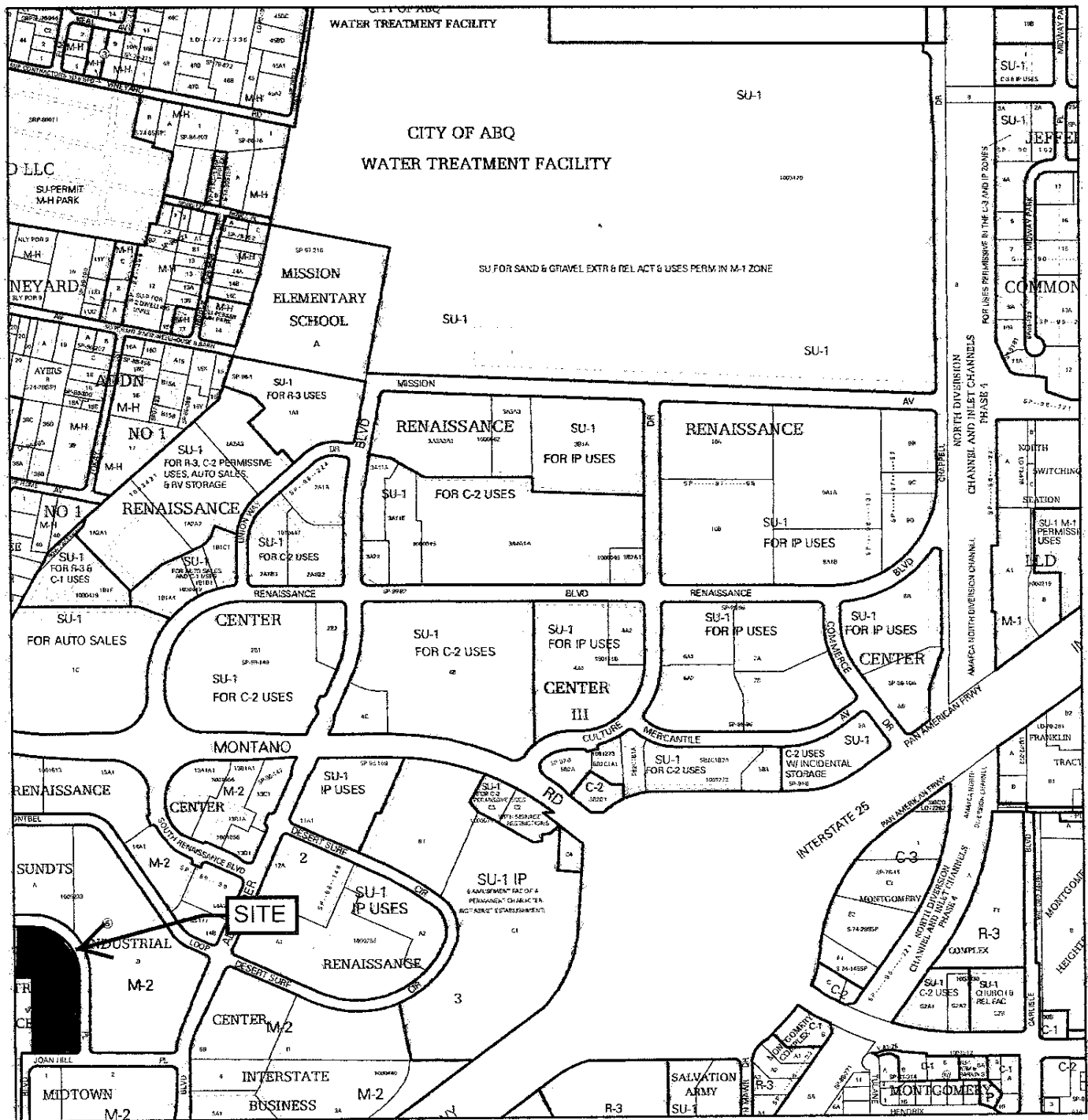
The purpose of this report is to provide the Drainage Management Plan for the upgrade of an existing Electrical training center located on northwest corner of Montbel and Joan Hill. This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that the grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

INTRODUCTION

The subject of this report, as shown on the Exhibit A, is a 3.94-acre parcel of land located on the northwest side of Montbel and Joan Hill in north east Albuquerque. The legal description of this site is tract 1A1A and 1A1B, Sundt industrial center. As shown on FIRM map35001C0138g, the entire property is located within Flood Zone X. This site is surrounded by fully developed parcels. This site is an existing partially developed site within fully developed areas. The site is located within the Renaissance center and was developed utilizing an approved plan within City of Albuquerque drainage file F16D11. Based on the site location and the adjacent drainage infrastructure this development must maintain existing drainage patterns and match existing conditions as closely as possible.

EXISTING CONDITIONS

The site is currently developed. The site is not impacted by any offsite flows, and is surrounded by developed properties. As shown in Appendix A, the existing site discharges at a peak rate of 3.48 cfs in a 100-year, 6-hour event. The discharge leaves the site thru detention ponds and 4" outfalls to Montbel.



PROPOSED CONDITIONS

The proposed improvements consist of a building addition and associated parking lot expansion. The site will be graded to accommodate the new building while maintaining the existing drainage patterns. As shown in appendix A, the site will be graded to contain four basins. Basin A includes the North West portion of the existing building and western parking lot. This basin will discharge 2.14 cfs to a detention/harvesting pond. Basin B contains the west half of the new building and existing slope. This basin discharges 1.34 cfs to a detention pond. Basin B has a routed outlet flow of .105 cfs that drains to basin A. The modeling of the ponds with AHYMO is found in Appendix B. Basin A pond will discharge .62 cfs to the Montbel thru the existing 4" pipe draining thru the curb. The existing pond emergency overflow will remain. Basin A and B ponds will harvest 2329 cubic feet, which exceeds the 451 cfs required. Basin C contains the east portion of the existing and new building as well as the existing east parking field and discharges 6.70 cfs to a detention pond. Basin D contains the remaining portion of the site and parking lot expansion. This basin drains to Basin C pond via a 6" PVC drain to pond in basin C. The discharge of 6.15 is throttled to 0.1 cfs utilizing a 1.5" orifice plat at the inlets outfall and detention ponding within the parking field. As shown in appendix B, the combined routed flow for basin C and D is reduced to 1.765 cfs that will leave pond C via 4 existing 6" pipes at curb. The emergency overflow for this pond is the driveway on the east side draining to Montbel. The combined water quality volume of basin C and D are 3857 CF which exceed the 2746 CF. The entire developed site will discharge at a peak rate of 2.38 cfs which is less than the existing condition discharge rate of 3.48 cfs. The site exceeds the .1 cfs per acre described within the Renaissance master drainage plan, but since this is an existing site and the historical rate is reduced we feel the plan meets the current drainage ordinance.

SUMMARY AND RECOMMENDATIONS

This project is an infill project within a completely developed area of North Albuquerque. The project is a redevelopment of an existing site. The site currently discharges 3.48 cfs to Montbel via detention ponds discharging through 6" pipes at the flow line. The proposed drainage plan will maintain the existing drainage patterns and outfalls. The post development discharge will be 2.38 cfs, which is a reduction of 1.1 cfs from historical rates. The site retains in excess of the required first flush ponds. The development has emergency overflows. Since this site work area encompasses more than 1 acre, a NPDES permit and Erosion and Sediment Control Plan shall be required prior to any construction activity.

APPENDIX A

SITE HYDROLOGY/ORIGINAL GRADING PLAN

Weighted E Method JATC

Existing Developed Basins- not accounting for detention basin

Basin	Area (sf)	Area (acres)	Treatment A %	Treatment B %	Treatment C %	Treatment D %	Weighted E (ac-ft)	Volume (ac-ft)	Flow cfs	10-day Volume (ac-ft)
BASIN A	22968	0.527	0%	12.0%	20.0%	67%	1.740	0.076	2.14	0.124
BASIN B	16896	0.388	0%	20.0%	48.0%	32%	1.377	0.044	1.34	0.061
BASIN C	68560	1.575	0%	12.0%	12.0%	76%	1.840	0.241	6.65	0.491
BASIN D	83065	1.448	0%	0.0%	29.0%	71%	1.833	0.221	6.15	0.358
COMBINED	171848	3.938	0%	8.4%	9.5%	34%	0.884	0.290	16.28	0.468

Equations:

Weighted E = $E_a \cdot A_a + E_b \cdot A_b + E_c \cdot A_c + E_d \cdot A_d$ / (Total Area)

Volume = Weighted D * Total Area

Flow = $Q_a \cdot A_a + Q_b \cdot A_b + Q_c \cdot A_c + Q_d \cdot A_d$

Where for 100-year, 6-hour storm (zone 3)

- $E_a = 0.53$
- $E_b = 0.78$
- $E_c = 1.13$
- $E_d = 2.12$

- $Q_a = 1.57$
- $Q_b = 2.28$
- $Q_c = 3.14$
- $Q_d = 4.7$

First flush requirement (Redevelopment=impx.26/12-- New development=impx.34/12)

first flush= volume retained=

BASIN A+B BASIN C+D

451 2748 CF

2329 3857 CF

EXISTING PROPOSED AFTER ROUTING

DRAINS TO MONTBELL

3.48 16.28

VOLUME CALCULATIONS

PARKING LOT POND A

OUTLET outfall

ACTUAL ELEV.	DEPTH (FT)	AREA SF	VOLUME PER UNIT	VOLUME CUMULATIVE	VOLUME AC-FT	Q (CFS)
	0	0	0	0	0.000	
36.98	0.00	1794.00	1327.56	1327.56	0.030	0.00
37.00	0.02	1524.00	33.18	1360.74	0.031	0.06
38.00	1.02	2187.00	1855.50	3216.24	0.074	0.42

90.45

Orifice Equation

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

C =

0.6

Diameter (in)

4

Area (ft²)=

0.087266463

g =

32.2

H (Ft) =

Depth of water above center of orifice

Q (CFS)=

Flow

VOLUME CALCULATIONS

PARKING LOT POND B

OUTLET Inlet bottom
outfall

ACTUAL ELEV.	DEPTH (FT)	AREA SF	VOLUME PER UNIT	VOLUME CUMULATIVE	VOLUME AC-FT	Q (CFS)
38	0	0	0	0	0.000	
40.25	0.00	1316.00	1480.5	1480.5	0.034	0.00
41.00	0.75	1567.00	1081.13	2561.625	0.059	0.09
42.00	1.75	2085.00	1826.00	4387.625	0.101	0.14

90.45

Orifice Equation

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

C = 0.6

Diameter (in) = 2

Area (ft²) = 0.021816616

g = 32.2

H (Ft) = Depth of water above center of orifice

Q (CFS) = Flow

VOLUME CALCULATIONS

PARKING LOT POND C

OUTLET POND BOTTOM
outfall

ACTUAL ELEV.	DEPTH (FT)	AREA SF	VOLUME PER UNIT	VOLUME CUMULATIVE	VOLUME AC-FT	Q (CFS)
0	0	0	0	0	0.000	0
39.95	0.00	3025.00	680.625	1528	0.035	0.00
40.50	0.38	3640.00	1832.88	3360.875	0.077	1.0361
41.00	0.88	4416.00	2014.00	5374.875	0.123	1.5767
41.25	1.13	5211.00	2406.75	7781.625	0.179	1.7867

90.45

Orifice Equation

$Q = CA \sqrt{2gH}$

C =

0.6

Diameter (in) =

4

Area (ft²) =

0.087266463

g =

32.2

H (Ft) =

Depth of water above center of orifice

Q (CFS) =

Flow

NOTE- 4 PIPES

VOLUME CALCULATIONS

PARKING LOT POND D

INVERT-OUT
GRATE

ACTUAL ELEV.	DEPTH (FT)	AREA SF	VOLUME PER UNIT	VOLUME CUMULATIVE	VOLUME AC-FT	Q (CFS)
42	0	4	0	0	0.000	
44.25	2.25	8.00	13.5	40	0.001	0.09
44.50	2.50	9565.00	1196.63	1236.625	0.028	0.09
45.00	3.00	20950.00	7628.75	8865.375	0.204	0.10

Orifice Equation

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

$$C = 0.6$$

$$\text{Diameter (in)} = 1.5$$

$$\text{Area (ft}^2\text{)} = 0.012271846$$

$$g = 32.2$$

$$H \text{ (Ft)} = \text{Depth of water above center of orifice}$$

$$Q \text{ (CFS)} = \text{Flow}$$

APPENDIX B
AHYMO MODEL

AHYMO.OUT

AHYMO PROGRAM (AHYMO-S4)

- Version: S4.01a - Rel: 01a

RUN DATE (MON/DAY/YR) = 11/15/2018

START TIME (HR:MIN:SEC) = 17:56:40

USER NO. =

RioGrandeSing1eA41963517

INPUT FILE = C:\Documents and Settings\Owner\Desktop\2018

JOBS\18153-jatc\pondrout111518.txt

*S AHYMO - DETENTION-LOMAS
*S POND ROUTING

START TIME=0.0 PUNCH CODE=0

RAINFALL TYPE=2
QUARTER=0.0 ONE= 2.01 IN
SIX=2.35 IN DAY= 2.75 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	0.0023	0.0046	0.0071	0.0099	0.0127	0.0159	
0.0203	0.0272	0.0347	0.0424	0.0509	0.0595	0.0684	
0.0776	0.0870	0.0974	0.1084	0.1204	0.1437	0.1728	
0.2117	0.2559	0.3104	0.3831	0.4649	0.6062	0.8258	
1.2021	1.4666	1.6752	1.7800	1.8719	1.9379	1.9905	
2.0362	2.0697	2.1005	2.1259	2.1418	2.1530	2.1629	
2.1722	2.1803	2.1879	2.1953	2.2025	2.2084	2.2118	
2.2152	2.2186	2.2217	2.2247	2.2278	2.2307	2.2336	
2.2363	2.2391	2.2417	2.2443	2.2469	2.2494	2.2518	
2.2542	2.2565	2.2588	2.2611	2.2633	2.2654	2.2676	
2.2697	2.2717	2.2738	2.2758	2.2778	2.2798	2.2817	
2.2837	2.2856	2.2874	2.2893	2.2911	2.2930	2.2948	
2.2965	2.2983	2.3000	2.3017	2.3034	2.3051	2.3068	
2.3084	2.3100	2.3117	2.3133	2.3148	2.3164	2.3180	
2.3195	2.3210	2.3225	2.3240	2.3255	2.3269	2.3284	
2.3298	2.3313	2.3327	2.3341	2.3355	2.3368	2.3382	
2.3396	2.3409	2.3422	2.3436	2.3449	2.3462	2.3474	
2.3487	2.3500	2.3513	2.3525	2.3538	2.3551	2.3563	
2.3576	2.3589	2.3601	2.3614	2.3627	2.3639	2.3652	
2.3665	2.3677	2.3690	2.3702	2.3715	2.3728	2.3740	
2.3753	2.3765	2.3778	2.3790	2.3803	2.3815	2.3828	
2.3840	2.3853	2.3865	2.3878	2.3890	2.3903	2.3915	
2.3927	2.3940	2.3952	2.3965	2.3977	2.3989	2.4002	
2.4014	2.4027	2.4039	2.4051	2.4064	2.4076	2.4088	
2.4101	2.4113	2.4125	2.4137	2.4150	2.4162	2.4174	
2.4186	2.4199	2.4211	2.4223	2.4235	2.4247	2.4260	
2.4272	2.4284	2.4296	2.4308	2.4320	2.4333	2.4345	
2.4357	2.4369	2.4381	2.4393	2.4405	2.4417	2.4429	
2.4441	2.4453	2.4465	2.4478	2.4490	2.4502	2.4514	
2.4526	2.4538	2.4550	2.4561	2.4573	2.4585	2.4597	
2.4609	2.4621	2.4633	2.4645	2.4657	2.4669	2.4681	
2.4692	2.4704	2.4716	2.4728	2.4740	2.4752	2.4764	
2.4775	2.4787	2.4799	2.4811	2.4822	2.4834	2.4846	
2.4858	2.4869	2.4881	2.4893	2.4905	2.4916	2.4928	
2.4940	2.4951	2.4963	2.4975	2.4986	2.4998	2.5010	
2.5021	2.5033	2.5044	2.5056	2.5068	2.5079	2.5091	
2.5102	2.5114	2.5125	2.5137	2.5148	2.5160	2.5171	
2.5183	2.5194	2.5206	2.5217	2.5229	2.5240	2.5252	
2.5263	2.5274	2.5286	2.5297	2.5309	2.5320	2.5331	
2.5343	2.5354	2.5365	2.5377	2.5388	2.5399	2.5411	
2.5422	2.5433	2.5445	2.5456	2.5467	2.5478	2.5490	

AHYMO.OUT

2.5501	2.5512	2.5523	2.5535	2.5546	2.5557	2.5568
2.5579	2.5590	2.5602	2.5613	2.5624	2.5635	2.5646
2.5657	2.5668	2.5679	2.5691	2.5702	2.5713	2.5724
2.5735	2.5746	2.5757	2.5768	2.5779	2.5790	2.5801
2.5812	2.5823	2.5834	2.5845	2.5856	2.5867	2.5878
2.5889	2.5899	2.5910	2.5921	2.5932	2.5943	2.5954
2.5965	2.5976	2.5986	2.5997	2.6008	2.6019	2.6030
2.6040	2.6051	2.6062	2.6073	2.6084	2.6094	2.6105
2.6116	2.6126	2.6137	2.6148	2.6159	2.6169	2.6180
2.6191	2.6201	2.6212	2.6223	2.6233	2.6244	2.6254
2.6265	2.6276	2.6286	2.6297	2.6307	2.6318	2.6328
2.6339	2.6350	2.6360	2.6371	2.6381	2.6392	2.6402
2.6413	2.6423	2.6433	2.6444	2.6454	2.6465	2.6475
2.6486	2.6496	2.6506	2.6517	2.6527	2.6538	2.6548
2.6558	2.6569	2.6579	2.6589	2.6600	2.6610	2.6620
2.6630	2.6641	2.6651	2.6661	2.6672	2.6682	2.6692
2.6702	2.6712	2.6723	2.6733	2.6743	2.6753	2.6763
2.6774	2.6784	2.6794	2.6804	2.6814	2.6824	2.6834
2.6844	2.6854	2.6865	2.6875	2.6885	2.6895	2.6905
2.6915	2.6925	2.6935	2.6945	2.6955	2.6965	2.6975
2.6985	2.6995	2.7005	2.7015	2.7025	2.7034	2.7044
2.7054	2.7064	2.7074	2.7084	2.7094	2.7104	2.7114
2.7123	2.7133	2.7143	2.7153	2.7163	2.7172	2.7182
2.7192	2.7202	2.7211	2.7221	2.7231	2.7241	2.7250
2.7260	2.7270	2.7280	2.7289	2.7299	2.7309	2.7318
2.7328	2.7338	2.7347	2.7357	2.7366	2.7376	2.7386
2.7395	2.7405	2.7414	2.7424	2.7433	2.7443	2.7452
2.7462	2.7472	2.7481	2.7491	2.7500		

* BASIN D
COMPUTE NM HYD

ID=1 HYD NO=101 DA= .0022625 SQ MI
PER A=0 PER B=0 PER C=29 PER D=71
TP=-.165 MASSRAIN=-1

K = 0.089925HR TP = 0.165000HR K/TP RATIO = 0.545000 SHAPE
CONSTANT, N = 7.106428
UNIT PEAK = 5.1236 CFS UNIT VOLUME = 0.9972 B = 526.28
P60 = 2.0100
AREA = 0.001606 SQ MI IA = 0.10000 INCHES INF = 0.04000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
0.050000

K = 0.132998HR TP = 0.165000HR K/TP RATIO = 0.806046 SHAPE
CONSTANT, N = 4.440407
UNIT PEAK = 1.5251 CFS UNIT VOLUME = 0.9924 B = 383.54
P60 = 2.0100
AREA = 0.000656 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=3

PARTIAL HYDROGRAPH 101.00

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
HRS	FLOW	CFS	HRS	FLOW	CFS	HRS	CFS
14.850	0.000	0.0	19.800	0.0	0.0	9.900	0.0
	0.150	0.0	5.100	0.0	0.0	10.050	0.0

AHYMO.OUT						
15.000	0.0	19.950	0.0			
	0.300	0.0	5.250	0.0	10.200	0.0
15.150	0.0	20.100	0.0			
	0.450	0.0	5.400	0.0	10.350	0.0
15.300	0.0	20.250	0.0			
	0.600	0.0	5.550	0.0	10.500	0.0
15.450	0.0	20.400	0.0			
	0.750	0.0	5.700	0.0	10.650	0.0
15.600	0.0	20.550	0.0			
	0.900	0.0	5.850	0.0	10.800	0.0
15.750	0.0	20.700	0.0			
	1.050	0.3	6.000	0.0	10.950	0.0
15.900	0.0	20.850	0.0			
	1.200	0.7	6.150	0.0	11.100	0.0
16.050	0.0	21.000	0.0			
	1.350	1.7	6.300	0.0	11.250	0.0
16.200	0.0	21.150	0.0			
	1.500	5.5	6.450	0.0	11.400	0.0
16.350	0.0	21.300	0.0			
	1.650	4.5	6.600	0.0	11.550	0.0
16.500	0.0	21.450	0.0			
	1.800	2.2	6.750	0.0	11.700	0.0
16.650	0.0	21.600	0.0			
	1.950	1.2	6.900	0.0	11.850	0.0
16.800	0.0	21.750	0.0			
	2.100	0.7	7.050	0.0	12.000	0.0
16.950	0.0	21.900	0.0			
	2.250	0.4	7.200	0.0	12.150	0.0
17.100	0.0	22.050	0.0			
	2.400	0.3	7.350	0.0	12.300	0.0
17.250	0.0	22.200	0.0			
	2.550	0.2	7.500	0.0	12.450	0.0
17.400	0.0	22.350	0.0			
	2.700	0.1	7.650	0.0	12.600	0.0
17.550	0.0	22.500	0.0			
	2.850	0.1	7.800	0.0	12.750	0.0
17.700	0.0	22.650	0.0			
	3.000	0.0	7.950	0.0	12.900	0.0
17.850	0.0	22.800	0.0			
	3.150	0.0	8.100	0.0	13.050	0.0
18.000	0.0	22.950	0.0			
	3.300	0.0	8.250	0.0	13.200	0.0
18.150	0.0	23.100	0.0			
	3.450	0.0	8.400	0.0	13.350	0.0
18.300	0.0	23.250	0.0			
	3.600	0.0	8.550	0.0	13.500	0.0
18.450	0.0	23.400	0.0			
	3.750	0.0	8.700	0.0	13.650	0.0
18.600	0.0	23.550	0.0			
	3.900	0.0	8.850	0.0	13.800	0.0
18.750	0.0	23.700	0.0			
	4.050	0.0	9.000	0.0	13.950	0.0
18.900	0.0	23.850	0.0			
	4.200	0.0	9.150	0.0	14.100	0.0
19.050	0.0	24.000	0.0			
	4.350	0.0	9.300	0.0	14.250	0.0
19.200	0.0	24.150	0.0			
	4.500	0.0	9.450	0.0	14.400	0.0
19.350	0.0	24.300	0.0			
	4.650	0.0	9.600	0.0	14.550	0.0
19.500	0.0	24.450	0.0			
	4.800	0.0	9.750	0.0	14.700	0.0
19.650	0.0	24.600	0.0			

RUNOFF VOLUME = 2.12976 INCHES = 0.2570 ACRE-FEET
 PEAK DISCHARGE RATE = 5.91 CFS AT 1.550 HOURS BASIN AREA =

0.0023 SQ. MI.

AHYMO.OUT

* ROUTE THE TOTAL FLOW THROUGH THE PROPOSED RESERVOIR

ROUTE RESERVOIR	ID=2	HYD NO=102	INFLOW=1	CODE=3	
	OUTFLOW(CFS)	STORAGE(AC-FT)	ELEV(FT)		
	0.00	0.000	42.00		
	0.09	0.001	44.25		
		0.09	0.028		44.50
	0.10	0.204	45.00		

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	42.00	0.000	0.00
0.15	0.00	42.00	0.000	0.00
0.30	0.00	42.00	0.000	0.00
0.45	0.00	42.00	0.000	0.00
0.60	0.00	42.00	0.000	0.00
0.75	0.00	42.00	0.000	0.00
0.90	0.02	42.09	0.000	0.00
1.05	0.25	44.50	0.028	0.09
1.20	0.66	44.50	0.028	0.09
1.35	1.66	44.50	0.028	0.09
1.50	5.47	44.59	0.059	0.09
1.65	4.46	44.78	0.125	0.10
1.80	2.20	44.89	0.164	0.10
1.95	1.22	44.94	0.183	0.10
2.10	0.68	44.97	0.193	0.10
2.25	0.41	44.98	0.199	0.10
2.40	0.27	44.99	0.202	0.10
2.55	0.16	45.00	0.203	0.10
2.70	0.10	45.00	0.203	0.10
2.85	0.06	45.00	0.203	0.10
3.00	0.03	45.00	0.202	0.10
3.15	0.02	44.99	0.201	0.10
3.30	0.01	44.99	0.200	0.10
3.45	0.01	44.99	0.199	0.10
3.60	0.01	44.98	0.198	0.10
3.75	0.01	44.98	0.197	0.10
3.90	0.01	44.98	0.196	0.10
4.05	0.01	44.97	0.195	0.10
4.20	0.01	44.97	0.194	0.10
4.35	0.01	44.97	0.193	0.10
4.50	0.01	44.96	0.192	0.10
4.65	0.01	44.96	0.191	0.10
4.80	0.02	44.96	0.189	0.10
4.95	0.02	44.96	0.188	0.10
5.10	0.02	44.95	0.187	0.10
5.25	0.02	44.95	0.186	0.10
5.40	0.02	44.95	0.185	0.10
5.55	0.02	44.94	0.184	0.10
5.70	0.02	44.94	0.183	0.10
5.85	0.02	44.94	0.183	0.10
6.00	0.02	44.94	0.182	0.10
6.15	0.03	44.93	0.181	0.10
6.30	0.03	44.93	0.180	0.10
6.45	0.03	44.93	0.179	0.10

			AHYMO.OUT	
6.60	0.03	44.93	0.178	0.10
6.75	0.03	44.92	0.177	0.10
6.90	0.03	44.92	0.176	0.10
7.05	0.03	44.92	0.175	0.10
7.20	0.03	44.92	0.174	0.10
7.35	0.03	44.91	0.174	0.10
7.50	0.03	44.91	0.173	0.10
7.65	0.03	44.91	0.172	0.10
7.80	0.03	44.91	0.171	0.10
7.95	0.03	44.90	0.170	0.10
8.10	0.03	44.90	0.169	0.10
8.25	0.03	44.90	0.168	0.10

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
8.40	0.03	44.90	0.167	0.10
8.55	0.03	44.89	0.166	0.10
8.70	0.03	44.89	0.165	0.10
8.85	0.03	44.89	0.165	0.10
9.00	0.03	44.89	0.164	0.10
9.15	0.03	44.88	0.163	0.10
9.30	0.03	44.88	0.162	0.10
9.45	0.03	44.88	0.161	0.10
9.60	0.03	44.88	0.160	0.10
9.75	0.02	44.87	0.159	0.10
9.90	0.02	44.87	0.158	0.10
10.05	0.03	44.87	0.157	0.10
10.20	0.03	44.87	0.156	0.10
10.35	0.02	44.86	0.156	0.10
10.50	0.02	44.86	0.155	0.10
10.65	0.02	44.86	0.154	0.10
10.80	0.02	44.85	0.153	0.10
10.95	0.02	44.85	0.152	0.10
11.10	0.02	44.85	0.151	0.10
11.25	0.02	44.85	0.150	0.10
11.40	0.02	44.84	0.149	0.10
11.55	0.02	44.84	0.148	0.10
11.70	0.02	44.84	0.148	0.10
11.85	0.02	44.84	0.147	0.10
12.00	0.02	44.83	0.146	0.10
12.15	0.02	44.83	0.145	0.10
12.30	0.02	44.83	0.144	0.10
12.45	0.02	44.83	0.143	0.10
12.60	0.02	44.82	0.142	0.10
12.75	0.02	44.82	0.141	0.10
12.90	0.02	44.82	0.140	0.10
13.05	0.02	44.82	0.139	0.10
13.20	0.02	44.81	0.139	0.10
13.35	0.02	44.81	0.138	0.10
13.50	0.02	44.81	0.137	0.10
13.65	0.02	44.81	0.136	0.10
13.80	0.02	44.80	0.135	0.10
13.95	0.02	44.80	0.134	0.10
14.10	0.02	44.80	0.133	0.10
14.25	0.02	44.80	0.132	0.10
14.40	0.02	44.79	0.131	0.10
14.55	0.02	44.79	0.130	0.10
14.70	0.02	44.79	0.130	0.10
14.85	0.02	44.79	0.129	0.10
15.00	0.02	44.78	0.128	0.10
15.15	0.02	44.78	0.127	0.10
15.30	0.02	44.78	0.126	0.10
15.45	0.02	44.78	0.125	0.10
15.60	0.02	44.77	0.124	0.10
15.75	0.02	44.77	0.123	0.10

15.90	0.02	44.77	AHYMO.OUT 0.122	0.10
16.05	0.02	44.77	0.121	0.10
16.20	0.02	44.76	0.121	0.10
16.35	0.02	44.76	0.120	0.10
16.50	0.02	44.76	0.119	0.10
16.65	0.02	44.76	0.118	0.10

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
16.80	0.02	44.75	0.117	0.10
16.95	0.02	44.75	0.116	0.10
17.10	0.02	44.75	0.115	0.09
17.25	0.02	44.74	0.114	0.09
17.40	0.02	44.74	0.113	0.09
17.55	0.02	44.74	0.112	0.09
17.70	0.02	44.74	0.112	0.09
17.85	0.02	44.73	0.111	0.09
18.00	0.02	44.73	0.110	0.09
18.15	0.02	44.73	0.109	0.09
18.30	0.02	44.73	0.108	0.09
18.45	0.02	44.72	0.107	0.09
18.60	0.02	44.72	0.106	0.09
18.75	0.02	44.72	0.105	0.09
18.90	0.02	44.72	0.104	0.09
19.05	0.02	44.71	0.103	0.09
19.20	0.02	44.71	0.103	0.09
19.35	0.02	44.71	0.102	0.09
19.50	0.02	44.71	0.101	0.09
19.65	0.02	44.70	0.100	0.09
19.80	0.02	44.70	0.099	0.09
19.95	0.02	44.70	0.098	0.09
20.10	0.02	44.70	0.097	0.09
20.25	0.02	44.69	0.096	0.09
20.40	0.02	44.69	0.095	0.09
20.55	0.02	44.69	0.094	0.09
20.70	0.02	44.69	0.094	0.09
20.85	0.02	44.68	0.093	0.09
21.00	0.02	44.68	0.092	0.09
21.15	0.02	44.68	0.091	0.09
21.30	0.02	44.68	0.090	0.09
21.45	0.02	44.67	0.089	0.09
21.60	0.02	44.67	0.088	0.09
21.75	0.02	44.67	0.087	0.09
21.90	0.02	44.67	0.086	0.09
22.05	0.02	44.66	0.085	0.09
22.20	0.02	44.66	0.084	0.09
22.35	0.02	44.66	0.084	0.09
22.50	0.02	44.66	0.083	0.09
22.65	0.02	44.65	0.082	0.09
22.80	0.02	44.65	0.081	0.09
22.95	0.02	44.65	0.080	0.09
23.10	0.02	44.65	0.079	0.09
23.25	0.02	44.64	0.078	0.09
23.40	0.02	44.64	0.077	0.09
23.55	0.02	44.64	0.076	0.09
23.70	0.02	44.63	0.075	0.09
23.85	0.02	44.63	0.075	0.09
24.00	0.02	44.63	0.074	0.09
24.15	0.01	44.63	0.073	0.09
24.30	0.00	44.62	0.072	0.09
24.45	0.00	44.62	0.071	0.09
24.60	0.00	44.62	0.069	0.09
24.75	0.00	44.61	0.068	0.09
24.90	0.00	44.61	0.067	0.09
25.05	0.00	44.61	0.066	0.09

AHYMO.OUT

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
25.20	0.00	44.60	0.065	0.09
25.35	0.00	44.60	0.064	0.09
25.50	0.00	44.60	0.063	0.09
25.65	0.00	44.59	0.061	0.09
25.80	0.00	44.59	0.060	0.09
25.95	0.00	44.59	0.059	0.09
26.10	0.00	44.59	0.058	0.09
26.25	0.00	44.58	0.057	0.09
26.40	0.00	44.58	0.056	0.09
26.55	0.00	44.58	0.055	0.09
26.70	0.00	44.57	0.053	0.09
26.85	0.00	44.57	0.052	0.09
27.00	0.00	44.57	0.051	0.09
27.15	0.00	44.56	0.050	0.09
27.30	0.00	44.56	0.049	0.09
27.45	0.00	44.56	0.048	0.09
27.60	0.00	44.55	0.047	0.09
27.75	0.00	44.55	0.046	0.09
27.90	0.00	44.55	0.044	0.09
28.05	0.00	44.54	0.043	0.09
28.20	0.00	44.54	0.042	0.09
28.35	0.00	44.54	0.041	0.09
28.50	0.00	44.53	0.040	0.09
28.65	0.00	44.53	0.039	0.09
28.80	0.00	44.53	0.038	0.09
28.95	0.00	44.52	0.037	0.09
29.10	0.00	44.52	0.035	0.09
29.25	0.00	44.52	0.034	0.09
29.40	0.00	44.51	0.033	0.09
29.55	0.00	44.51	0.032	0.09
29.70	0.00	44.51	0.031	0.09
29.85	0.00	44.51	0.030	0.09
30.00	0.00	44.50	0.029	0.09
30.15	0.00	44.50	0.028	0.09
30.30	0.00	44.50	0.028	0.09
30.45	0.00	44.50	0.028	0.09
30.60	0.00	44.50	0.028	0.09
30.75	0.00	44.50	0.028	0.09
30.90	0.00	44.50	0.028	0.09
31.05	0.00	44.50	0.028	0.09
31.20	0.00	44.50	0.028	0.09
31.35	0.00	44.50	0.028	0.09
31.50	0.00	44.50	0.028	0.09
31.65	0.00	44.50	0.028	0.09
31.80	0.00	44.50	0.028	0.09
31.95	0.00	44.50	0.028	0.09
32.10	0.00	44.50	0.028	0.09
32.25	0.00	44.50	0.028	0.09
32.40	0.00	44.50	0.028	0.09
32.55	0.00	44.50	0.028	0.09
32.70	0.00	44.50	0.028	0.09
32.85	0.00	44.50	0.028	0.09
33.00	0.00	44.50	0.028	0.09
33.15	0.00	44.50	0.028	0.09
33.30	0.00	44.50	0.028	0.09
33.45	0.00	44.50	0.028	0.09
TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
33.60	0.00	44.50	0.028	0.09
33.75	0.00	43.92	0.001	0.08

AHYMO.OUT

33.90	0.00	42.62	0.000	0.02
34.05	0.00	42.20	0.000	0.01
34.20	0.00	42.06	0.000	0.00

PEAK DISCHARGE = 0.100 CFS - PEAK OCCURS AT HOUR 2.70
 MAXIMUM WATER SURFACE ELEVATION = 44.998
 MAXIMUM STORAGE = 0.2033 AC-FT INCREMENTAL TIME= 0.050000HRS

* BASIN C
 COMPUTE NM HYD ID=3 HYD NO=103 DA= .002460938 SQ MI
 PER A=0 PER B=12 PER C=12 PER D=76
 TP=-.165 MASSRAIN=-1

K = 0.089925HR TP = 0.165000HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 5.9655 CFS UNIT VOLUME = 0.9976 B = 526.28
 P60 = 2.0100
 AREA = 0.001870 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

K = 0.148248HR TP = 0.165000HR K/TP RATIO = 0.898476 SHAPE
 CONSTANT, N = 3.944812
 UNIT PEAK = 1.2581 CFS UNIT VOLUME = 0.9907 B = 351.48
 P60 = 2.0100
 AREA = 0.000591 SQ MI IA = 0.42500 INCHES INF = 1.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

PRINT HYD ID=3 CODE=3

PARTIAL HYDROGRAPH 103.00

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
HRS	FLOW	CFS	HRS	FLOW	CFS	HRS	CFS
HRS	CFS		HRS	CFS			
	0.000	0.0	4.950	0.0		9.900	0.0
14.850	0.0	0.0	5.100	0.0		10.050	0.0
15.000	0.150	0.0	5.250	0.0		10.200	0.0
15.150	0.300	0.0	5.400	0.0		10.350	0.0
15.300	0.450	0.0	5.550	0.0		10.500	0.0
15.450	0.600	0.0	5.700	0.0		10.650	0.0
15.600	0.750	0.0	5.850	0.0		10.800	0.0
15.750	0.900	0.0	6.000	0.0		10.950	0.0
15.900	1.050	0.3	6.150	0.0		11.100	0.0
16.050	1.200	0.8	6.300	0.0		11.250	0.0
16.200	1.350	1.8	6.450	0.0		11.400	0.0
16.350	1.500	5.9	6.600	0.0		11.550	0.0
16.500	1.650	4.8	6.750	0.0			
	1.800	2.4					

				AHYMO.OUT			
16.650	0.0	21.600	0.0				
16.800	1.950	1.4	6.900	0.0	11.850	0.0	
16.950	0.0	21.750	0.0				
17.100	2.100	0.8	7.050	0.0	12.000	0.0	
17.250	0.0	21.900	0.0				
17.400	2.250	0.5	7.200	0.0	12.150	0.0	
17.550	0.0	22.050	0.0				
17.700	2.400	0.3	7.350	0.0	12.300	0.0	
17.850	0.0	22.200	0.0				
18.000	2.550	0.2	7.500	0.0	12.450	0.0	
18.150	0.0	22.350	0.0				
18.300	2.700	0.1	7.650	0.0	12.600	0.0	
18.450	0.0	22.500	0.0				
18.600	2.850	0.1	7.800	0.0	12.750	0.0	
18.750	0.0	22.650	0.0				
18.900	3.000	0.0	7.950	0.0	12.900	0.0	
19.050	0.0	22.800	0.0				
19.200	3.150	0.0	8.100	0.0	13.050	0.0	
19.350	0.0	22.950	0.0				
19.500	3.300	0.0	8.250	0.0	13.200	0.0	
19.650	0.0	23.100	0.0				
19.800	3.450	0.0	8.400	0.0	13.350	0.0	
19.950	0.0	23.250	0.0				
20.100	3.600	0.0	8.550	0.0	13.500	0.0	
20.250	0.0	23.400	0.0				
20.400	3.750	0.0	8.700	0.0	13.650	0.0	
20.550	0.0	23.550	0.0				
20.700	3.900	0.0	8.850	0.0	13.800	0.0	
20.850	0.0	23.700	0.0				
21.000	4.050	0.0	9.000	0.0	13.950	0.0	
21.150	0.0	23.850	0.0				
21.300	4.200	0.0	9.150	0.0	14.100	0.0	
21.450	0.0	24.000	0.0				
21.600	4.350	0.0	9.300	0.0	14.250	0.0	
21.750	0.0	24.150	0.0				
21.900	4.500	0.0	9.450	0.0	14.400	0.0	
22.050	0.0	24.300	0.0				
22.200	4.650	0.0	9.600	0.0	14.550	0.0	
22.350	0.0	24.450	0.0				
22.500	4.800	0.0	9.750	0.0	14.700	0.0	
22.650	0.0	24.600	0.0				

RUNOFF VOLUME = 2.16120 INCHES = 0.2837 ACRE-Feet
 PEAK DISCHARGE RATE = 6.40 CFS AT 1.550 HOURS BASIN AREA = 0.0025 SQ. MI.

ADD HYD ID=4 HYD NO=104 ID I=2 ID II=3

* ROUTE THE TOTAL FLOW THROUGH THE PROPOSED RESERVOIR
 ROUTE RESERVOIR ID=5 HYD NO=105 INFLOW=4 CODE=3

OUTFLOW(CFS)	STORAGE(AC-FT)	ELEV(FT)	
0.00	0.035	39.95	
1.04	0.077	40.50	
	1.57	0.123	41.00
	1.79	0.179	41.25

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
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AHYMO.OUT

0.00	0.00	39.95	0.035	0.00
0.15	0.00	39.95	0.035	0.00
0.30	0.00	39.95	0.035	0.00
0.45	0.00	39.95	0.035	0.00
0.60	0.00	39.95	0.035	0.00
0.75	0.00	39.95	0.035	0.00
0.90	0.03	39.95	0.035	0.00
1.05	0.38	39.98	0.037	0.05
1.20	0.86	40.06	0.043	0.20
1.35	1.90	40.21	0.055	0.49
1.50	6.02	40.66	0.092	1.21
1.65	4.92	41.11	0.147	1.66
1.80	2.49	41.21	0.170	1.75
1.95	1.45	41.22	0.172	1.76
2.10	0.86	41.18	0.164	1.73
2.25	0.56	41.13	0.152	1.68
2.40	0.41	41.06	0.137	1.63
2.55	0.28	40.98	0.122	1.55
2.70	0.21	40.82	0.106	1.38
2.85	0.17	40.67	0.093	1.22
3.00	0.14	40.54	0.080	1.08
3.15	0.12	40.41	0.070	0.86
3.30	0.12	40.30	0.062	0.66
3.45	0.11	40.22	0.056	0.52
3.60	0.11	40.17	0.052	0.41
3.75	0.11	40.13	0.048	0.33
3.90	0.11	40.09	0.046	0.27
4.05	0.11	40.07	0.044	0.23
4.20	0.11	40.06	0.043	0.20
4.35	0.11	40.04	0.042	0.18
4.50	0.11	40.03	0.041	0.16
4.65	0.12	40.03	0.041	0.15
4.80	0.12	40.02	0.041	0.14
4.95	0.12	40.02	0.040	0.13
5.10	0.12	40.02	0.040	0.13
5.25	0.12	40.02	0.040	0.13
5.40	0.12	40.02	0.040	0.13
5.55	0.12	40.02	0.040	0.12
5.70	0.12	40.02	0.040	0.12
5.85	0.13	40.02	0.040	0.12
6.00	0.13	40.02	0.040	0.13
6.15	0.13	40.02	0.040	0.13
6.30	0.13	40.02	0.040	0.13
6.45	0.13	40.02	0.040	0.13
6.60	0.13	40.02	0.040	0.13
6.75	0.13	40.02	0.040	0.13
6.90	0.13	40.02	0.040	0.13
7.05	0.13	40.02	0.040	0.13
7.20	0.13	40.02	0.040	0.13
7.35	0.13	40.02	0.040	0.13
7.50	0.13	40.02	0.040	0.13
7.65	0.13	40.02	0.040	0.13
7.80	0.13	40.02	0.040	0.13
7.95	0.13	40.02	0.040	0.13
8.10	0.13	40.02	0.040	0.13
8.25	0.13	40.02	0.040	0.13
TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
8.40	0.13	40.02	0.040	0.13
8.55	0.13	40.02	0.040	0.13
8.70	0.13	40.02	0.040	0.13
8.85	0.13	40.02	0.040	0.13
9.00	0.13	40.02	0.040	0.13

			AHYMO.OUT	
9.15	0.13	40.02	0.040	0.13
9.30	0.13	40.02	0.040	0.13
9.45	0.13	40.02	0.040	0.13
9.60	0.13	40.02	0.040	0.13
9.75	0.13	40.02	0.040	0.13
9.90	0.13	40.02	0.040	0.13
10.05	0.13	40.02	0.040	0.13
10.20	0.13	40.02	0.040	0.13
10.35	0.13	40.02	0.040	0.13
10.50	0.13	40.02	0.040	0.13
10.65	0.13	40.02	0.040	0.13
10.80	0.13	40.02	0.040	0.13
10.95	0.13	40.02	0.040	0.13
11.10	0.13	40.02	0.040	0.13
11.25	0.13	40.02	0.040	0.13
11.40	0.13	40.02	0.040	0.13
11.55	0.13	40.02	0.040	0.13
11.70	0.13	40.02	0.040	0.13
11.85	0.13	40.02	0.040	0.13
12.00	0.12	40.02	0.040	0.13
12.15	0.12	40.02	0.040	0.13
12.30	0.12	40.02	0.040	0.13
12.45	0.12	40.02	0.040	0.12
12.60	0.12	40.02	0.040	0.12
12.75	0.12	40.02	0.040	0.12
12.90	0.12	40.02	0.040	0.12
13.05	0.12	40.02	0.040	0.12
13.20	0.12	40.02	0.040	0.12
13.35	0.12	40.02	0.040	0.12
13.50	0.12	40.02	0.040	0.12
13.65	0.12	40.02	0.040	0.12
13.80	0.12	40.02	0.040	0.12
13.95	0.12	40.02	0.040	0.12
14.10	0.12	40.02	0.040	0.12
14.25	0.12	40.02	0.040	0.12
14.40	0.12	40.02	0.040	0.12
14.55	0.12	40.02	0.040	0.12
14.70	0.12	40.02	0.040	0.12
14.85	0.12	40.02	0.040	0.12
15.00	0.12	40.02	0.040	0.12
15.15	0.12	40.01	0.040	0.12
15.30	0.12	40.01	0.040	0.12
15.45	0.12	40.01	0.040	0.12
15.60	0.12	40.01	0.040	0.12
15.75	0.12	40.01	0.040	0.12
15.90	0.12	40.01	0.040	0.12
16.05	0.12	40.01	0.040	0.12
16.20	0.12	40.01	0.040	0.12
16.35	0.12	40.01	0.040	0.12
16.50	0.12	40.01	0.040	0.12
16.65	0.12	40.01	0.040	0.12

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
16.80	0.12	40.01	0.040	0.12
16.95	0.12	40.01	0.040	0.12
17.10	0.12	40.01	0.040	0.12
17.25	0.12	40.01	0.040	0.12
17.40	0.12	40.01	0.040	0.12
17.55	0.12	40.01	0.040	0.12
17.70	0.12	40.01	0.040	0.12
17.85	0.12	40.01	0.040	0.12
18.00	0.12	40.01	0.040	0.12
18.15	0.12	40.01	0.040	0.12
18.30	0.12	40.01	0.040	0.12

			AHYMO.OUT	
18.45	0.12	40.01	0.040	0.12
18.60	0.12	40.01	0.040	0.12
18.75	0.12	40.01	0.040	0.12
18.90	0.12	40.01	0.040	0.12
19.05	0.12	40.01	0.040	0.12
19.20	0.12	40.01	0.040	0.12
19.35	0.12	40.01	0.040	0.12
19.50	0.12	40.01	0.040	0.12
19.65	0.12	40.01	0.040	0.12
19.80	0.12	40.01	0.040	0.12
19.95	0.12	40.01	0.040	0.12
20.10	0.12	40.01	0.040	0.12
20.25	0.12	40.01	0.040	0.12
20.40	0.12	40.01	0.040	0.12
20.55	0.12	40.01	0.040	0.12
20.70	0.12	40.01	0.040	0.12
20.85	0.12	40.01	0.040	0.12
21.00	0.12	40.01	0.040	0.12
21.15	0.12	40.01	0.040	0.12
21.30	0.12	40.01	0.040	0.12
21.45	0.12	40.01	0.040	0.12
21.60	0.12	40.01	0.040	0.12
21.75	0.12	40.01	0.040	0.12
21.90	0.12	40.01	0.040	0.12
22.05	0.12	40.01	0.040	0.12
22.20	0.12	40.01	0.040	0.12
22.35	0.12	40.01	0.040	0.12
22.50	0.12	40.01	0.040	0.12
22.65	0.12	40.01	0.040	0.12
22.80	0.12	40.01	0.040	0.12
22.95	0.12	40.01	0.040	0.12
23.10	0.12	40.01	0.040	0.12
23.25	0.12	40.01	0.040	0.12
23.40	0.12	40.01	0.040	0.12
23.55	0.12	40.01	0.040	0.12
23.70	0.12	40.01	0.040	0.12
23.85	0.12	40.01	0.040	0.12
24.00	0.12	40.01	0.040	0.12
24.15	0.11	40.01	0.040	0.12
24.30	0.10	40.01	0.039	0.11
24.45	0.09	40.01	0.039	0.11
24.60	0.09	40.00	0.039	0.10
24.75	0.09	40.00	0.039	0.10
24.90	0.09	40.00	0.039	0.10
25.05	0.09	40.00	0.039	0.10

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
25.20	0.09	40.00	0.039	0.10
25.35	0.09	40.00	0.039	0.09
25.50	0.09	40.00	0.039	0.09
25.65	0.09	40.00	0.039	0.09
25.80	0.09	40.00	0.039	0.09
25.95	0.09	40.00	0.039	0.09
26.10	0.09	40.00	0.039	0.09
26.25	0.09	40.00	0.039	0.09
26.40	0.09	40.00	0.039	0.09
26.55	0.09	40.00	0.039	0.09
26.70	0.09	40.00	0.039	0.09
26.85	0.09	40.00	0.039	0.09
27.00	0.09	40.00	0.039	0.09
27.15	0.09	40.00	0.039	0.09
27.30	0.09	40.00	0.039	0.09
27.45	0.09	40.00	0.039	0.09
27.60	0.09	40.00	0.039	0.09

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
27.75	0.09	40.00	0.039	0.09
27.90	0.09	40.00	0.039	0.09
28.05	0.09	40.00	0.039	0.09
28.20	0.09	40.00	0.039	0.09
28.35	0.09	40.00	0.039	0.09
28.50	0.09	40.00	0.039	0.09
28.65	0.09	40.00	0.039	0.09
28.80	0.09	40.00	0.039	0.09
28.95	0.09	40.00	0.039	0.09
29.10	0.09	40.00	0.039	0.09
29.25	0.09	40.00	0.039	0.09
29.40	0.09	40.00	0.039	0.09
29.55	0.09	40.00	0.039	0.09
29.70	0.09	40.00	0.039	0.09
29.85	0.09	40.00	0.039	0.09
30.00	0.09	40.00	0.039	0.09
30.15	0.09	40.00	0.039	0.09
30.30	0.09	40.00	0.039	0.09
30.45	0.09	40.00	0.039	0.09
30.60	0.09	40.00	0.039	0.09
30.75	0.09	40.00	0.039	0.09
30.90	0.09	40.00	0.039	0.09
31.05	0.09	40.00	0.039	0.09
31.20	0.09	40.00	0.039	0.09
31.35	0.09	40.00	0.039	0.09
31.50	0.09	40.00	0.039	0.09
31.65	0.09	40.00	0.039	0.09
31.80	0.09	40.00	0.039	0.09
31.95	0.09	40.00	0.039	0.09
32.10	0.09	40.00	0.039	0.09
32.25	0.09	40.00	0.039	0.09
32.40	0.09	40.00	0.039	0.09
32.55	0.09	40.00	0.039	0.09
32.70	0.09	40.00	0.039	0.09
32.85	0.09	40.00	0.039	0.09
33.00	0.09	40.00	0.039	0.09
33.15	0.09	40.00	0.039	0.09
33.30	0.09	40.00	0.039	0.09
33.45	0.09	40.00	0.039	0.09

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
33.60	0.09	40.00	0.039	0.09
33.75	0.08	40.00	0.039	0.09
33.90	0.02	39.99	0.038	0.08
34.05	0.01	39.98	0.037	0.06
34.20	0.00	39.97	0.037	0.05
34.35	0.00	39.97	0.036	0.03
34.50	0.00	39.96	0.036	0.03
34.65	0.00	39.96	0.036	0.02
34.80	0.00	39.96	0.036	0.01
34.95	0.00	39.96	0.035	0.01
35.10	0.00	39.95	0.035	0.01
35.25	0.00	39.95	0.035	0.01
35.40	0.00	39.95	0.035	0.00

PEAK DISCHARGE = 1.765 CFS - PEAK OCCURS AT HOUR 1.90
 MAXIMUM WATER SURFACE ELEVATION = 41.222
 MAXIMUM STORAGE = 0.1726 AC-FT INCREMENTAL TIME= 0.050000HRS

* BASIN B
 COMPUTE NM HYD ID=6 HYD NO=106 DA= .00060625 SQ MI
 PER A=0 PER B=20 PER C=48 PER D=32
 TP=-.165 MASSRAIN=-1

AHYMO.OUT

K = 0.089925HR TP = 0.165000HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 0.61877 CFS UNIT VOLUME = 0.9814 B = 526.28
 P60 = 2.0100
 AREA = 0.000194 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

K = 0.141969HR TP = 0.165000HR K/TP RATIO = 0.860416 SHAPE
 CONSTANT, N = 4.132702
 UNIT PEAK = 0.90925 CFS UNIT VOLUME = 0.9871 B = 363.92
 P60 = 2.0100
 AREA = 0.000412 SQ MI IA = 0.39412 INCHES INF = 0.95353
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

PRINT HYD ID=6 CODE=3

PARTIAL HYDROGRAPH 106.00

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
HRS	FLOW	CFS	HRS	FLOW	CFS	HRS	CFS
	HRS			HRS			
14.850	0.000	0.0	19.800	4.950	0.0	9.900	0.0
15.000	0.150	0.0	19.950	5.100	0.0	10.050	0.0
15.150	0.300	0.0	20.100	5.250	0.0	10.200	0.0
15.300	0.450	0.0	20.250	5.400	0.0	10.350	0.0
15.450	0.600	0.0	20.400	5.550	0.0	10.500	0.0
15.600	0.750	0.0	20.550	5.700	0.0	10.650	0.0
15.750	0.900	0.0	20.700	5.850	0.0	10.800	0.0
15.900	1.050	0.0	20.850	6.000	0.0	10.950	0.0
16.050	1.200	0.1	21.000	6.150	0.0	11.100	0.0
16.200	1.350	0.3	21.150	6.300	0.0	11.250	0.0
16.350	1.500	1.2	21.300	6.450	0.0	11.400	0.0
16.500	1.650	1.0	21.450	6.600	0.0	11.550	0.0
16.650	1.800	0.5	21.600	6.750	0.0	11.700	0.0
16.800	1.950	0.2	21.750	6.900	0.0	11.850	0.0
16.950	2.100	0.1	21.900	7.050	0.0	12.000	0.0
17.100	2.250	0.1	22.050	7.200	0.0	12.150	0.0
17.250	2.400	0.1	22.200	7.350	0.0	12.300	0.0
17.400	2.550	0.0	22.350	7.500	0.0	12.450	0.0
17.550	2.700	0.0	22.500	7.650	0.0	12.600	0.0

			AHYMO.OUT			
17.700	2.850 0.0	0.0	22.650	7.800 0.0	0.0	12.750 0.0
17.850	3.000 0.0	0.0	22.800	7.950 0.0	0.0	12.900 0.0
18.000	3.150 0.0	0.0	22.950	8.100 0.0	0.0	13.050 0.0
18.150	3.300 0.0	0.0	23.100	8.250 0.0	0.0	13.200 0.0
18.300	3.450 0.0	0.0	23.250	8.400 0.0	0.0	13.350 0.0
18.450	3.600 0.0	0.0	23.400	8.550 0.0	0.0	13.500 0.0
18.600	3.750 0.0	0.0	23.550	8.700 0.0	0.0	13.650 0.0
18.750	3.900 0.0	0.0	23.700	8.850 0.0	0.0	13.800 0.0
18.900	4.050 0.0	0.0	23.850	9.000 0.0	0.0	13.950 0.0
19.050	4.200 0.0	0.0	24.000	9.150 0.0	0.0	14.100 0.0
19.200	4.350 0.0	0.0	24.150	9.300 0.0	0.0	14.250 0.0
19.350	4.500 0.0	0.0		9.450 0.0	0.0	14.400 0.0
19.500	4.650 0.0	0.0		9.600 0.0	0.0	14.550 0.0
19.650	4.800 0.0	0.0		9.750 0.0	0.0	14.700 0.0

RUNOFF VOLUME = 1.56734 INCHES = 0.0507 ACRE-Feet
 PEAK DISCHARGE RATE = 1.33 CFS AT 1.550 HOURS BASIN AREA = 0.0006 SQ. MI.

* ROUTE THE TOTAL FLOW THROUGH THE PROPOSED RESERVOIR
 ROUTE RESERVOIR ID=7 HYD NO=107 INFLOW=6 CODE=3
 OUTFLOW(CFS) STORAGE(AC-FT) ELEV(FT)
 0.00 0.034 40.25
 0.09 0.059 41.00
 0.14 0.101 42.00

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	40.25	0.034	0.00
0.15	0.00	40.25	0.034	0.00
0.30	0.00	40.25	0.034	0.00
0.45	0.00	40.25	0.034	0.00
0.60	0.00	40.25	0.034	0.00
0.75	0.00	40.25	0.034	0.00
0.90	0.00	40.25	0.034	0.00
1.05	0.03	40.26	0.034	0.00
1.20	0.08	40.28	0.035	0.00
1.35	0.30	40.33	0.037	0.01
1.50	1.22	40.60	0.046	0.04
1.65	1.03	41.02	0.060	0.09
1.80	0.48	41.21	0.068	0.10
1.95	0.24	41.28	0.071	0.10

AHYMO.OUT				
2.10	0.13	41.30	0.072	0.11
2.25	0.08	41.30	0.072	0.11
2.40	0.05	41.29	0.071	0.10
2.55	0.03	41.27	0.071	0.10
2.70	0.02	41.25	0.070	0.10
2.85	0.01	41.23	0.069	0.10
3.00	0.00	41.20	0.067	0.10
3.15	0.00	41.17	0.066	0.10
3.30	0.00	41.14	0.065	0.10
3.45	0.00	41.11	0.064	0.10
3.60	0.00	41.09	0.063	0.09
3.75	0.00	41.06	0.061	0.09
3.90	0.00	41.03	0.060	0.09
4.05	0.00	41.01	0.059	0.09
4.20	0.00	40.97	0.058	0.09
4.35	0.00	40.94	0.057	0.08
4.50	0.00	40.91	0.056	0.08
4.65	0.00	40.89	0.055	0.08
4.80	0.00	40.86	0.054	0.07
4.95	0.00	40.83	0.053	0.07
5.10	0.00	40.81	0.053	0.07
5.25	0.00	40.78	0.052	0.06
5.40	0.00	40.76	0.051	0.06
5.55	0.00	40.74	0.050	0.06
5.70	0.00	40.72	0.050	0.06
5.85	0.00	40.70	0.049	0.05
6.00	0.00	40.68	0.048	0.05
6.15	0.00	40.66	0.048	0.05
6.30	0.00	40.65	0.047	0.05
6.45	0.00	40.63	0.047	0.05
6.60	0.00	40.62	0.046	0.04
6.75	0.00	40.60	0.046	0.04
6.90	0.00	40.59	0.045	0.04
7.05	0.00	40.57	0.045	0.04
7.20	0.00	40.56	0.044	0.04
7.35	0.00	40.55	0.044	0.04
7.50	0.00	40.54	0.044	0.03
7.65	0.00	40.52	0.043	0.03
7.80	0.00	40.51	0.043	0.03
7.95	0.00	40.50	0.042	0.03
8.10	0.00	40.49	0.042	0.03
8.25	0.00	40.48	0.042	0.03

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
8.40	0.00	40.47	0.041	0.03
8.55	0.00	40.47	0.041	0.03
8.70	0.00	40.46	0.041	0.02
8.85	0.00	40.45	0.041	0.02
9.00	0.00	40.44	0.040	0.02
9.15	0.00	40.43	0.040	0.02
9.30	0.00	40.43	0.040	0.02
9.45	0.00	40.42	0.040	0.02
9.60	0.00	40.41	0.039	0.02
9.75	0.00	40.41	0.039	0.02
9.90	0.00	40.40	0.039	0.02
10.05	0.00	40.40	0.039	0.02
10.20	0.00	40.39	0.039	0.02
10.35	0.00	40.39	0.039	0.02
10.50	0.00	40.38	0.038	0.02
10.65	0.00	40.38	0.038	0.02
10.80	0.00	40.37	0.038	0.01
10.95	0.00	40.37	0.038	0.01
11.10	0.00	40.36	0.038	0.01
11.25	0.00	40.36	0.038	0.01

AHYMO.OUT				
11.40	0.00	40.36	0.038	0.01
11.55	0.00	40.35	0.037	0.01
11.70	0.00	40.35	0.037	0.01
11.85	0.00	40.35	0.037	0.01
12.00	0.00	40.34	0.037	0.01
12.15	0.00	40.34	0.037	0.01
12.30	0.00	40.34	0.037	0.01
12.45	0.00	40.33	0.037	0.01
12.60	0.00	40.33	0.037	0.01
12.75	0.00	40.33	0.037	0.01
12.90	0.00	40.33	0.037	0.01
13.05	0.00	40.32	0.036	0.01
13.20	0.00	40.32	0.036	0.01
13.35	0.00	40.32	0.036	0.01
13.50	0.00	40.32	0.036	0.01
13.65	0.00	40.32	0.036	0.01
13.80	0.00	40.31	0.036	0.01
13.95	0.00	40.31	0.036	0.01
14.10	0.00	40.31	0.036	0.01
14.25	0.00	40.31	0.036	0.01
14.40	0.00	40.31	0.036	0.01
14.55	0.00	40.31	0.036	0.01
14.70	0.00	40.30	0.036	0.01
14.85	0.00	40.30	0.036	0.01
15.00	0.00	40.30	0.036	0.01
15.15	0.00	40.30	0.036	0.01
15.30	0.00	40.30	0.036	0.01
15.45	0.00	40.30	0.036	0.01
15.60	0.00	40.30	0.036	0.01
15.75	0.00	40.30	0.036	0.01
15.90	0.00	40.30	0.036	0.01
16.05	0.00	40.29	0.035	0.01
16.20	0.00	40.29	0.035	0.01
16.35	0.00	40.29	0.035	0.01
16.50	0.00	40.29	0.035	0.01
16.65	0.00	40.29	0.035	0.00

PEAK DISCHARGE = 0.105 CFS - PEAK OCCURS AT HOUR 2.20
 MAXIMUM WATER SURFACE ELEVATION = 41.306
 MAXIMUM STORAGE = 0.0719 AC-FT INCREMENTAL TIME= 0.050000HRS

* BASIN A
 COMPUTE NM HYD ID=8 HYD NO=108 DA= .000823438 SQ MI
 PER A=0 PER B=12 PER C=20 PER D=68
 TP=-.165 MASSRAIN=-1

K = 0.089925HR TP = 0.165000HR K/TP RATIO = 0.545000 SHAPE
 CONSTANT, N = 7.106428
 UNIT PEAK = 1.7859 CFS UNIT VOLUME = 0.9936 B = 526.28
 P60 = 2.0100
 AREA = 0.000560 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

K = 0.144436HR TP = 0.165000HR K/TP RATIO = 0.875368 SHAPE
 CONSTANT, N = 4.056482
 UNIT PEAK = 0.57318 CFS UNIT VOLUME = 0.9777 B = 358.92
 P60 = 2.0100
 AREA = 0.000264 SQ MI IA = 0.40625 INCHES INF = 0.98750
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT =
 0.050000

PRINT HYD

ID=8 CODE=3

AHYMO.OUT

PARTIAL HYDROGRAPH 108.00

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
HRS	FLOW	CFS	HRS	FLOW	CFS	HRS	CFS
	HRS			HRS			
	CFS			CFS			
	0.000	0.0		4.950	0.0	9.900	0.0
14.850	0.0	0.0	19.800	0.0	0.0	10.050	0.0
15.000	0.150	0.0	19.950	0.0	0.0	10.200	0.0
15.150	0.300	0.0	20.100	0.0	0.0	10.350	0.0
15.300	0.450	0.0	20.250	0.0	0.0	10.500	0.0
15.450	0.600	0.0	20.400	0.0	0.0	10.650	0.0
15.600	0.750	0.0	20.550	0.0	0.0	10.800	0.0
15.750	0.900	0.0	20.700	0.0	0.0	10.950	0.0
15.900	1.050	0.1	20.850	0.0	0.0	11.100	0.0
16.050	1.200	0.2	21.000	0.0	0.0	11.250	0.0
16.200	1.350	0.6	21.150	0.0	0.0	11.400	0.0
16.350	1.500	1.9	21.300	0.0	0.0	11.550	0.0
16.500	1.650	1.6	21.450	0.0	0.0	11.700	0.0
16.650	1.800	0.8	21.600	0.0	0.0	11.850	0.0
16.800	1.950	0.4	21.750	0.0	0.0	12.000	0.0
16.950	2.100	0.2	21.900	0.0	0.0	12.150	0.0
17.100	2.250	0.1	22.050	0.0	0.0	12.300	0.0
17.250	2.400	0.1	22.200	0.0	0.0	12.450	0.0
17.400	2.550	0.1	22.350	0.0	0.0	12.600	0.0
17.550	2.700	0.0	22.500	0.0	0.0	12.750	0.0
17.700	2.850	0.0	22.650	0.0	0.0	12.900	0.0
17.850	3.000	0.0	22.800	0.0	0.0	13.050	0.0
18.000	3.150	0.0	22.950	0.0	0.0	13.200	0.0
18.150	3.300	0.0	23.100	0.0	0.0	13.350	0.0
18.300	3.450	0.0	23.250	0.0	0.0	13.500	0.0
18.450	3.600	0.0	23.400	0.0	0.0	13.650	0.0
18.600	3.750	0.0	23.550	0.0	0.0	13.800	0.0
18.750	3.900	0.0	23.700	0.0	0.0	13.950	0.0
18.900	4.050	0.0	23.850	0.0	0.0	14.100	0.0
19.050	4.200	0.0	24.000	0.0	0.0		

				AHYMO.OUT		
19.200	4.350	0.0	24.150	9.300	0.0	14.250
	0.0			0.0		0.0
19.350	4.500	0.0	24.300	9.450	0.0	14.400
	0.0			0.0		0.0
19.500	4.650	0.0		9.600	0.0	14.550
	0.0					0.0
19.650	4.800	0.0		9.750	0.0	14.700
	0.0					0.0

RUNOFF VOLUME = 2.05691 INCHES = 0.0903 ACRE-Feet
 PEAK DISCHARGE RATE = 2.10 CFS AT 1.550 HOURS BASIN AREA =
 0.0008 SQ. MI.

ADD HYD ID=9 HYD NO=109 ID I=7 ID II=8

* ROUTE THE TOTAL FLOW THROUGH THE PROPOSED RESERVOIR

ROUTE RESERVOIR	ID=10	HYD NO=110	INFLOW=9	CODE=3
	OUTFLOW(CFS)	STORAGE(AC-FT)	ELEV(FT)	
	0.00	0.030	36.98	
	0.52	0.031	37.00	
		0.64	0.074	38.00

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	36.98	0.030	0.00
0.15	0.00	36.98	0.030	0.00
0.30	0.00	36.98	0.030	0.00
0.45	0.00	36.98	0.030	0.00
0.60	0.00	36.98	0.030	0.00
0.75	0.00	36.98	0.030	0.00
0.90	0.01	36.98	0.030	0.00
1.05	0.09	36.98	0.030	0.07
1.20	0.23	36.99	0.030	0.21
1.35	0.58	37.00	0.031	0.50
1.50	1.98	37.20	0.040	0.54
1.65	1.68	37.61	0.057	0.59
1.80	0.88	37.80	0.065	0.62
1.95	0.53	37.81	0.066	0.62
2.10	0.35	37.76	0.064	0.61
2.25	0.25	37.67	0.060	0.60
2.40	0.20	37.57	0.055	0.59
2.55	0.16	37.45	0.050	0.57
2.70	0.13	37.33	0.045	0.56
2.85	0.11	37.20	0.040	0.54
3.00	0.11	37.08	0.034	0.53
3.15	0.10	36.98	0.030	0.09
3.30	0.10	36.98	0.030	0.10
3.45	0.10	36.98	0.030	0.10
3.60	0.10	36.98	0.030	0.10
3.75	0.10	36.98	0.030	0.10
3.90	0.10	36.98	0.030	0.10
4.05	0.09	36.98	0.030	0.09
4.20	0.09	36.98	0.030	0.09
4.35	0.09	36.98	0.030	0.09
4.50	0.08	36.98	0.030	0.08
4.65	0.08	36.98	0.030	0.08
4.80	0.08	36.98	0.030	0.08
4.95	0.08	36.98	0.030	0.08

			AHYMO.OUT	
5.10	0.07	36.98	0.030	0.07
5.25	0.07	36.98	0.030	0.07
5.40	0.07	36.98	0.030	0.07
5.55	0.07	36.98	0.030	0.07
5.70	0.06	36.98	0.030	0.06
5.85	0.06	36.98	0.030	0.06
6.00	0.06	36.98	0.030	0.06
6.15	0.06	36.98	0.030	0.06
6.30	0.06	36.98	0.030	0.06
6.45	0.05	36.98	0.030	0.06
6.60	0.05	36.98	0.030	0.05
6.75	0.05	36.98	0.030	0.05
6.90	0.05	36.98	0.030	0.05
7.05	0.05	36.98	0.030	0.05
7.20	0.05	36.98	0.030	0.05
7.35	0.04	36.98	0.030	0.04
7.50	0.04	36.98	0.030	0.04
7.65	0.04	36.98	0.030	0.04
7.80	0.04	36.98	0.030	0.04
7.95	0.04	36.98	0.030	0.04
8.10	0.04	36.98	0.030	0.04
8.25	0.04	36.98	0.030	0.04

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
8.40	0.04	36.98	0.030	0.04
8.55	0.03	36.98	0.030	0.03
8.70	0.03	36.98	0.030	0.03
8.85	0.03	36.98	0.030	0.03
9.00	0.03	36.98	0.030	0.03
9.15	0.03	36.98	0.030	0.03
9.30	0.03	36.98	0.030	0.03
9.45	0.03	36.98	0.030	0.03
9.60	0.03	36.98	0.030	0.03
9.75	0.03	36.98	0.030	0.03
9.90	0.03	36.98	0.030	0.03
10.05	0.03	36.98	0.030	0.03
10.20	0.03	36.98	0.030	0.03
10.35	0.03	36.98	0.030	0.03
10.50	0.02	36.98	0.030	0.02
10.65	0.02	36.98	0.030	0.02
10.80	0.02	36.98	0.030	0.02
10.95	0.02	36.98	0.030	0.02
11.10	0.02	36.98	0.030	0.02
11.25	0.02	36.98	0.030	0.02
11.40	0.02	36.98	0.030	0.02
11.55	0.02	36.98	0.030	0.02
11.70	0.02	36.98	0.030	0.02
11.85	0.02	36.98	0.030	0.02
12.00	0.02	36.98	0.030	0.02
12.15	0.02	36.98	0.030	0.02
12.30	0.02	36.98	0.030	0.02
12.45	0.02	36.98	0.030	0.02
12.60	0.02	36.98	0.030	0.02
12.75	0.02	36.98	0.030	0.02
12.90	0.02	36.98	0.030	0.02
13.05	0.02	36.98	0.030	0.02
13.20	0.02	36.98	0.030	0.02
13.35	0.02	36.98	0.030	0.02
13.50	0.02	36.98	0.030	0.02
13.65	0.02	36.98	0.030	0.02
13.80	0.02	36.98	0.030	0.02
13.95	0.02	36.98	0.030	0.02
14.10	0.02	36.98	0.030	0.02
14.25	0.02	36.98	0.030	0.02

			AHYMO.OUT	
14.40	0.02	36.98	0.030	0.02
14.55	0.01	36.98	0.030	0.01
14.70	0.01	36.98	0.030	0.01
14.85	0.01	36.98	0.030	0.01
15.00	0.01	36.98	0.030	0.01
15.15	0.01	36.98	0.030	0.01
15.30	0.01	36.98	0.030	0.01
15.45	0.01	36.98	0.030	0.01
15.60	0.01	36.98	0.030	0.01
15.75	0.01	36.98	0.030	0.01
15.90	0.01	36.98	0.030	0.01
16.05	0.01	36.98	0.030	0.01
16.20	0.01	36.98	0.030	0.01
16.35	0.01	36.98	0.030	0.01
16.50	0.01	36.98	0.030	0.01
16.65	0.01	36.98	0.030	0.01

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
16.80	0.01	36.98	0.030	0.01
16.95	0.01	36.98	0.030	0.01
17.10	0.01	36.98	0.030	0.01
17.25	0.01	36.98	0.030	0.01
17.40	0.01	36.98	0.030	0.01
17.55	0.01	36.98	0.030	0.01
17.70	0.01	36.98	0.030	0.01
17.85	0.01	36.98	0.030	0.01
18.00	0.01	36.98	0.030	0.01
18.15	0.01	36.98	0.030	0.01
18.30	0.01	36.98	0.030	0.01
18.45	0.01	36.98	0.030	0.01
18.60	0.01	36.98	0.030	0.01
18.75	0.01	36.98	0.030	0.01
18.90	0.01	36.98	0.030	0.01
19.05	0.01	36.98	0.030	0.01
19.20	0.01	36.98	0.030	0.01
19.35	0.01	36.98	0.030	0.01
19.50	0.01	36.98	0.030	0.01
19.65	0.01	36.98	0.030	0.01
19.80	0.01	36.98	0.030	0.01
19.95	0.01	36.98	0.030	0.01
20.10	0.01	36.98	0.030	0.01
20.25	0.01	36.98	0.030	0.01
20.40	0.01	36.98	0.030	0.01
20.55	0.01	36.98	0.030	0.01
20.70	0.01	36.98	0.030	0.01
20.85	0.01	36.98	0.030	0.01
21.00	0.01	36.98	0.030	0.01
21.15	0.01	36.98	0.030	0.01
21.30	0.01	36.98	0.030	0.01
21.45	0.01	36.98	0.030	0.01
21.60	0.01	36.98	0.030	0.01
21.75	0.01	36.98	0.030	0.01
21.90	0.01	36.98	0.030	0.01
22.05	0.01	36.98	0.030	0.01
22.20	0.01	36.98	0.030	0.01
22.35	0.01	36.98	0.030	0.01
22.50	0.01	36.98	0.030	0.01
22.65	0.01	36.98	0.030	0.01
22.80	0.01	36.98	0.030	0.01
22.95	0.01	36.98	0.030	0.01
23.10	0.01	36.98	0.030	0.01
23.25	0.01	36.98	0.030	0.01
23.40	0.01	36.98	0.030	0.01
23.55	0.01	36.98	0.030	0.01

AHYMO.OUT

23.70	0.01	36.98	0.030	0.01
23.85	0.01	36.98	0.030	0.01
24.00	0.01	36.98	0.030	0.01
24.15	0.01	36.98	0.030	0.01
24.30	0.00	36.98	0.030	0.00

PEAK DISCHARGE = 0.618 CFS - PEAK OCCURS AT HOUR 1.90
 MAXIMUM WATER SURFACE ELEVATION = 37.819
 MAXIMUM STORAGE = 0.0662 AC-FT INCREMENTAL TIME= 0.050000HRS

ADD HYD ID=11 HYD NO=111 ID I=5 ID II=10
 PRINT HYD ID=11 CODE=3

PARTIAL HYDROGRAPH 111.00

TIME	TIME	FLOW	TIME	TIME	FLOW	TIME	FLOW
HRS	FLOW	CFS	HRS	FLOW	CFS	HRS	CFS
	HRS			HRS			
	0.000	0.0		7.350	0.2	14.700	0.1
22.050	0.1	0.0	29.400	0.1	0.2	14.850	0.1
	0.150	0.0		7.500	0.2		
22.200	0.1	0.0	29.550	0.1	0.2	15.000	0.1
	0.300	0.0		7.650	0.2		
22.350	0.1	0.0	29.700	0.1	0.2	15.150	0.1
	0.450	0.0		7.800	0.2		
22.500	0.1	0.0	29.850	0.1	0.2	15.300	0.1
	0.600	0.0		7.950	0.2		
22.650	0.1	0.0	30.000	0.1	0.2	15.450	0.1
	0.750	0.0		8.100	0.2		
22.800	0.1	0.0	30.150	0.1	0.2	15.600	0.1
	0.900	0.0		8.250	0.2		
22.950	0.1	0.1	30.300	0.1	0.2	15.750	0.1
	1.050	0.1		8.400	0.2		
23.100	0.1	0.4	30.450	0.1	0.2	15.900	0.1
	1.200	0.4		8.550	0.2		
23.250	0.1	1.0	30.600	0.1	0.2	16.050	0.1
	1.350	1.0		8.700	0.2		
23.400	0.1	1.8	30.750	0.1	0.2	16.200	0.1
	1.500	1.8		8.850	0.2		
23.550	0.1	2.3	30.900	0.1	0.2	16.350	0.1
	1.650	2.3		9.000	0.2		
23.700	0.1	2.4	31.050	0.1	0.2	16.500	0.1
	1.800	2.4		9.150	0.2		
23.850	0.1	2.4	31.200	0.1	0.2	16.650	0.1
	1.950	2.4		9.300	0.2		
24.000	0.1	2.3	31.350	0.1	0.2	16.800	0.1
	2.100	2.3		9.450	0.2		
24.150	0.1	2.3	31.500	0.1	0.2	16.950	0.1
	2.250	2.3		9.600	0.2		
24.300	0.1	2.2	31.650	0.1	0.2	17.100	0.1
	2.400	2.2		9.750	0.2		
24.450	0.1	2.1	31.800	0.1	0.2	17.250	0.1
	2.550	2.1		9.900	0.2		
24.600	0.1	1.9	31.950	0.1	0.2	17.400	0.1
	2.700	1.9		10.050	0.2		
24.750	0.1	1.8	32.100	0.1	0.2	17.550	0.1
	2.850	1.8		10.200	0.2		
24.900	0.1	1.6	32.250	0.1	0.2	17.700	0.1
	3.000	1.6		10.350	0.2		
25.050	0.1	1.0	32.400	0.1	0.2	17.850	0.1
	3.150	1.0		10.500	0.2		
25.200	0.1	0.8	32.550	0.1	0.2	18.000	0.1
	3.300	0.8		10.650	0.2		
25.350	0.1	0.6	32.700	0.1	0.1	18.150	0.1
	3.450	0.6		10.800	0.1		
25.500	0.1		32.850	0.1			

			AHYMO.OUT			
25.650	3.600 0.1	0.5	10.950 0.1	0.1	18.300	0.1
25.800	3.750 0.1	0.4	11.100 0.1	0.1	18.450	0.1
25.950	3.900 0.1	0.4	11.250 0.1	0.1	18.600	0.1
26.100	4.050 0.1	0.3	11.400 0.1	0.1	18.750	0.1
26.250	4.200 0.1	0.3	11.550 0.1	0.1	18.900	0.1
26.400	4.350 0.1	0.3	11.700 0.1	0.1	19.050	0.1
26.550	4.500 0.1	0.2	11.850 0.1	0.1	19.200	0.1
26.700	4.650 0.1	0.2	12.000 0.1	0.1	19.350	0.1
26.850	4.800 0.1	0.2	12.150 0.0	0.1	19.500	0.1
27.000	4.950 0.1	0.2	12.300 0.0	0.1	19.650	0.1
27.150	5.100 0.1	0.2	12.450 0.0	0.1	19.800	0.1
27.300	5.250 0.1	0.2	12.600 0.0	0.1	19.950	0.1
27.450	5.400 0.1	0.2	12.750 0.0	0.1	20.100	0.1
27.600	5.550 0.1	0.2	12.900 0.0	0.1	20.250	0.1
27.750	5.700 0.1	0.2	13.050 0.0	0.1	20.400	0.1
27.900	5.850 0.1	0.2	13.200 0.0	0.1	20.550	0.1
28.050	6.000 0.1	0.2	13.350 0.0	0.1	20.700	0.1
28.200	6.150 0.1	0.2	13.500 0.0	0.1	20.850	0.1
28.350	6.300 0.1	0.2	13.650 0.0	0.1	21.000	0.1
28.500	6.450 0.1	0.2	13.800 0.0	0.1	21.150	0.1
28.650	6.600 0.1	0.2	13.950 0.0	0.1	21.300	0.1
28.800	6.750 0.1	0.2	14.100 0.0	0.1	21.450	0.1
28.950	6.900 0.1	0.2	14.250 0.0	0.1	21.600	0.1
29.100	7.050 0.1	0.2	14.400 0.0	0.1	21.750	0.1
29.250	7.200 0.1	0.2	14.550 0.0	0.1	21.900	0.1

RUNOFF VOLUME = 2.07595 INCHES = 0.6813 ACRE-FEET
 PEAK DISCHARGE RATE = 2.38 CFS AT 1.900 HOURS BASIN AREA =
 0.0062 SQ. MI.

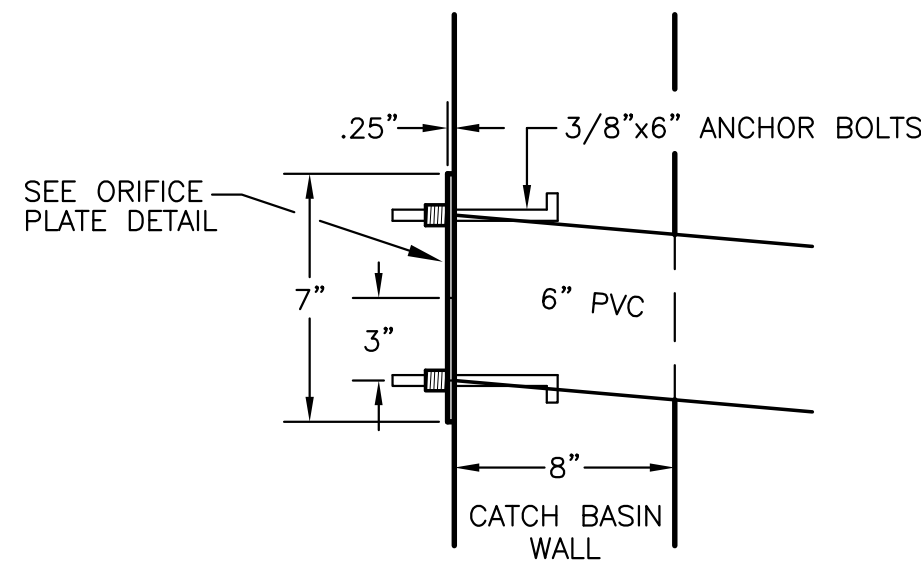
FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 17:56:40

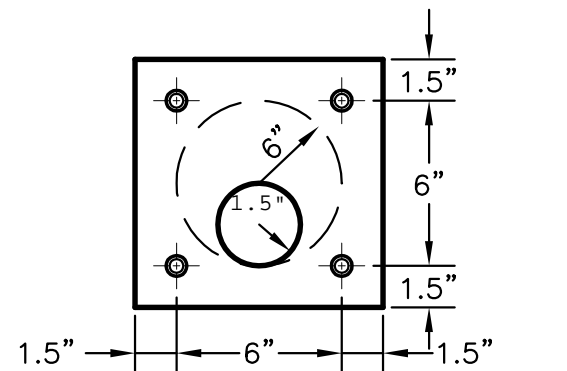
EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.

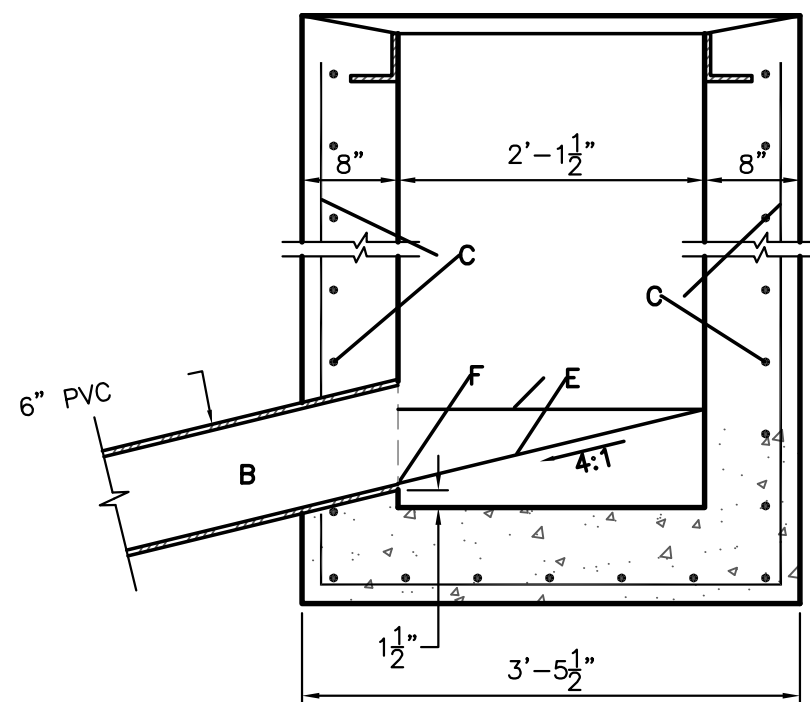
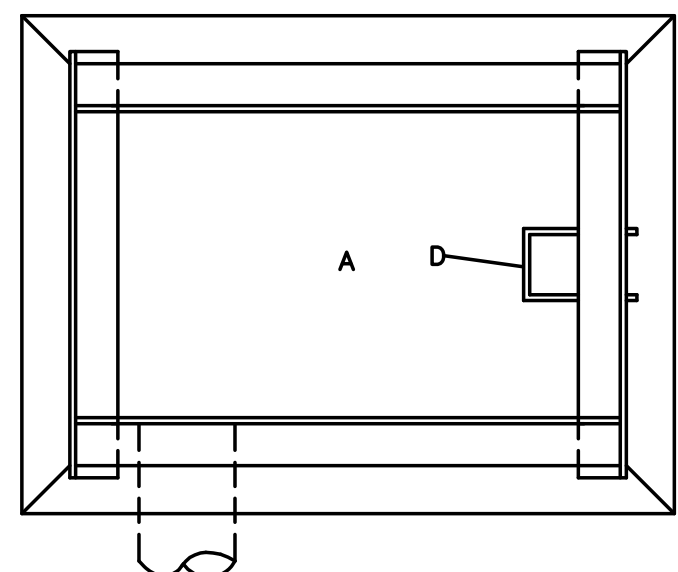


DETAIL A

TO BE INSTALLED @ THE OUTFLOW OF THE CATCH BASINS (SEE THIS PLAN FOR ORIFICE PLATE SIZES)



TYP. ORIFICE PLATE DETAIL
N.T.S.



GENERAL NOTES:

1. STORM INLET CUTTER TRANSITION WILL BE SHOWN ON THE CONSTRUCTION PLANS.
2. OUTLET PIPE, PER DESIGN REQUIREMENT.
3. FOR FRAME & GRATING, SEE DWG. 2216, 2220 & 2221

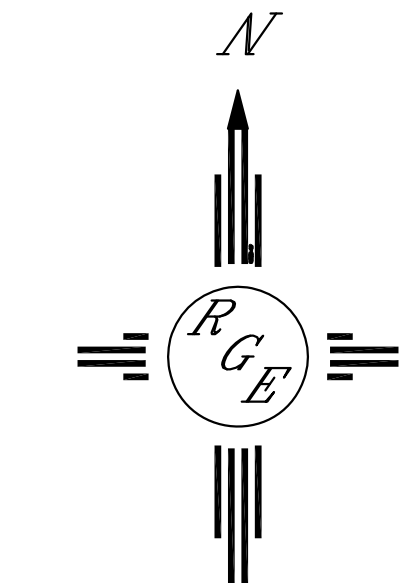
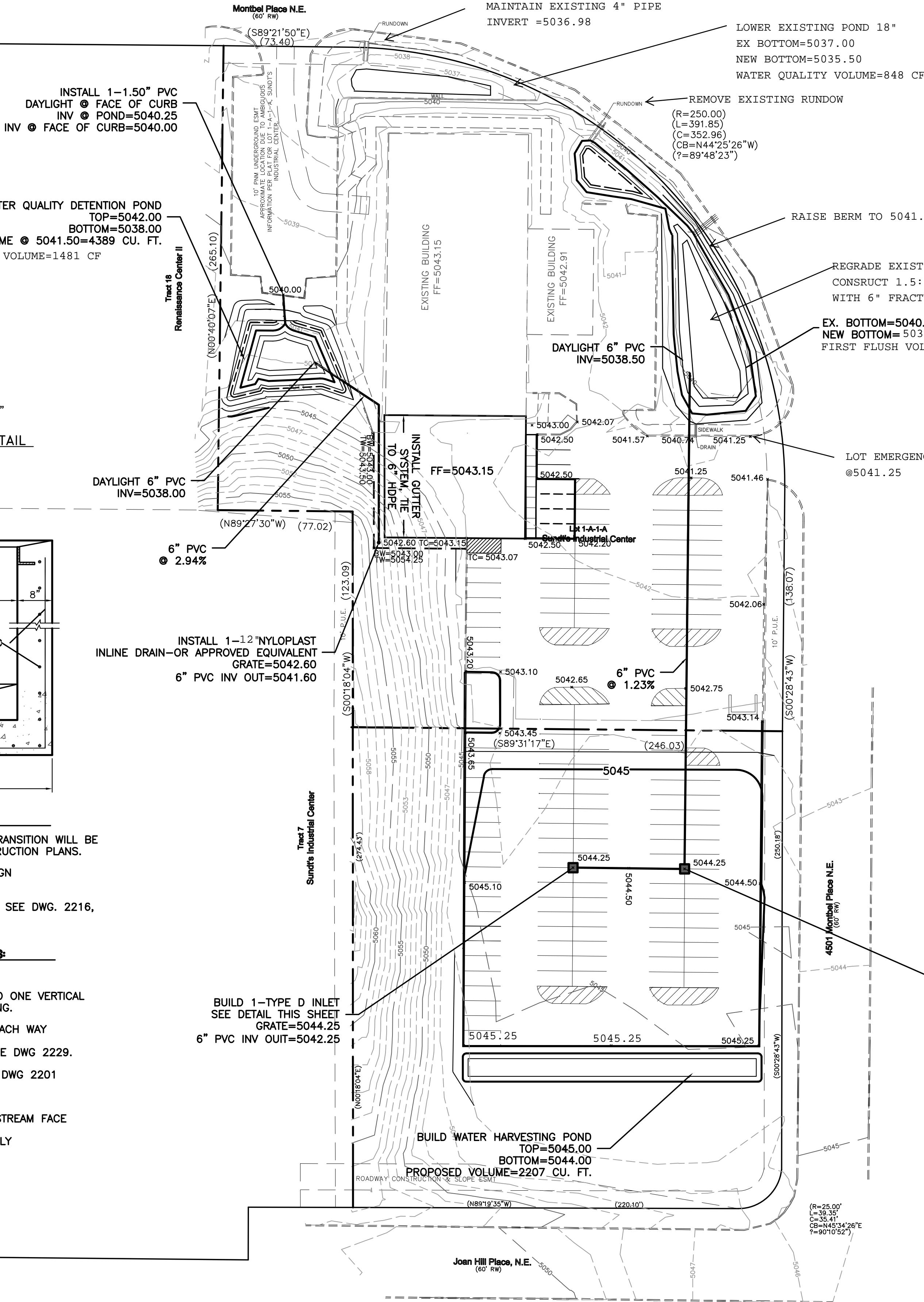
CONSTRUCTION NOTES:

- A. FRAME & GRATE
- B. CUT ONE HORIZONTAL AND ONE VERTICAL BAR MAX. AT PIPE OPENING.
- C. NO. 4 BARS @ 6" O.C. EACH WAY
- D. USE STANDARD STEPS, SEE DWG. 2229.
- E. CONC. FILL, SEE NOTE C DWG. 2201
- F. INVERT PER DESIGN
- G. INSTALL STEPS ON DOWNSTREAM FACE
- H. CENTER SUPPORT ASSEMBLY

TYPE D INLET DETAIL

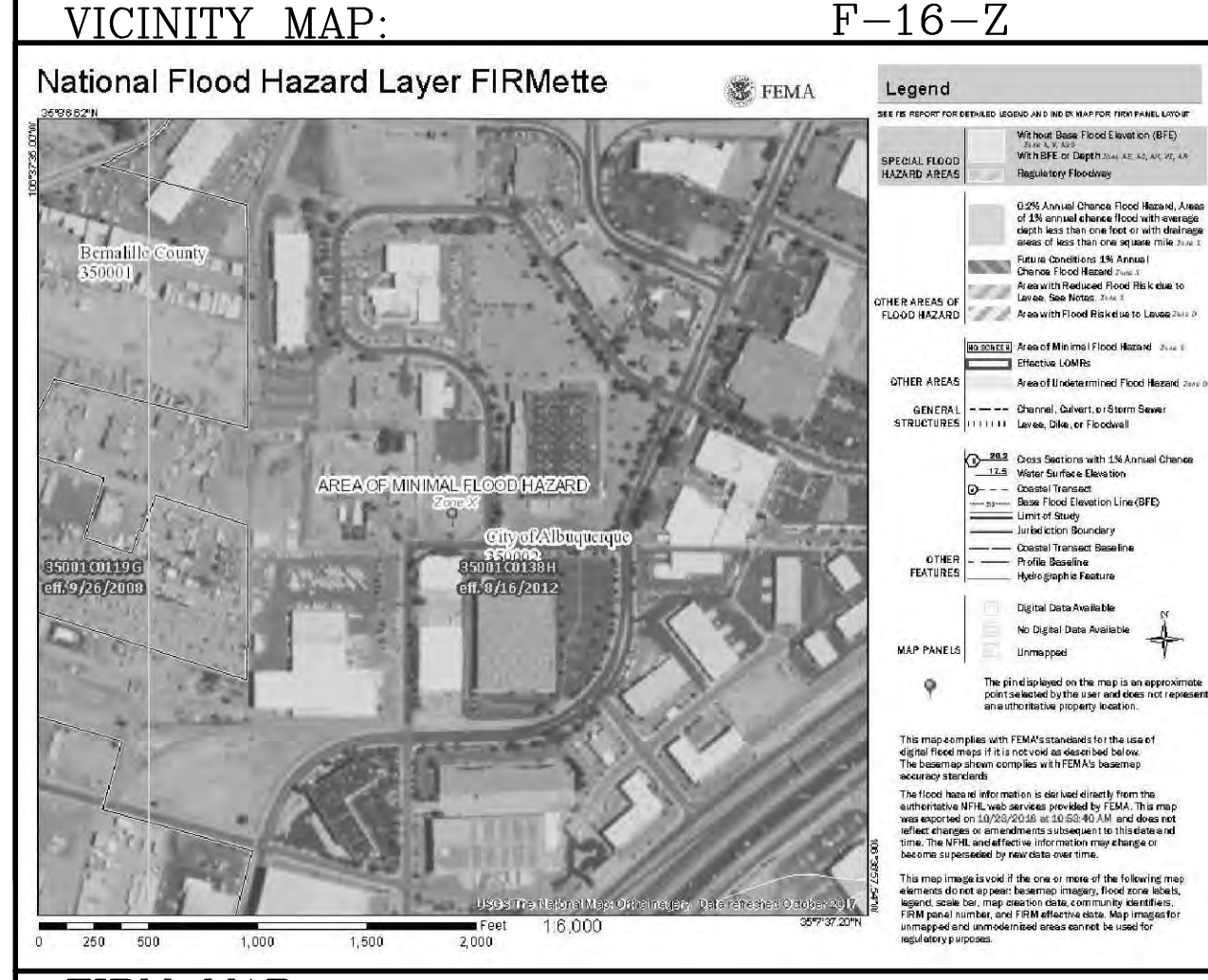
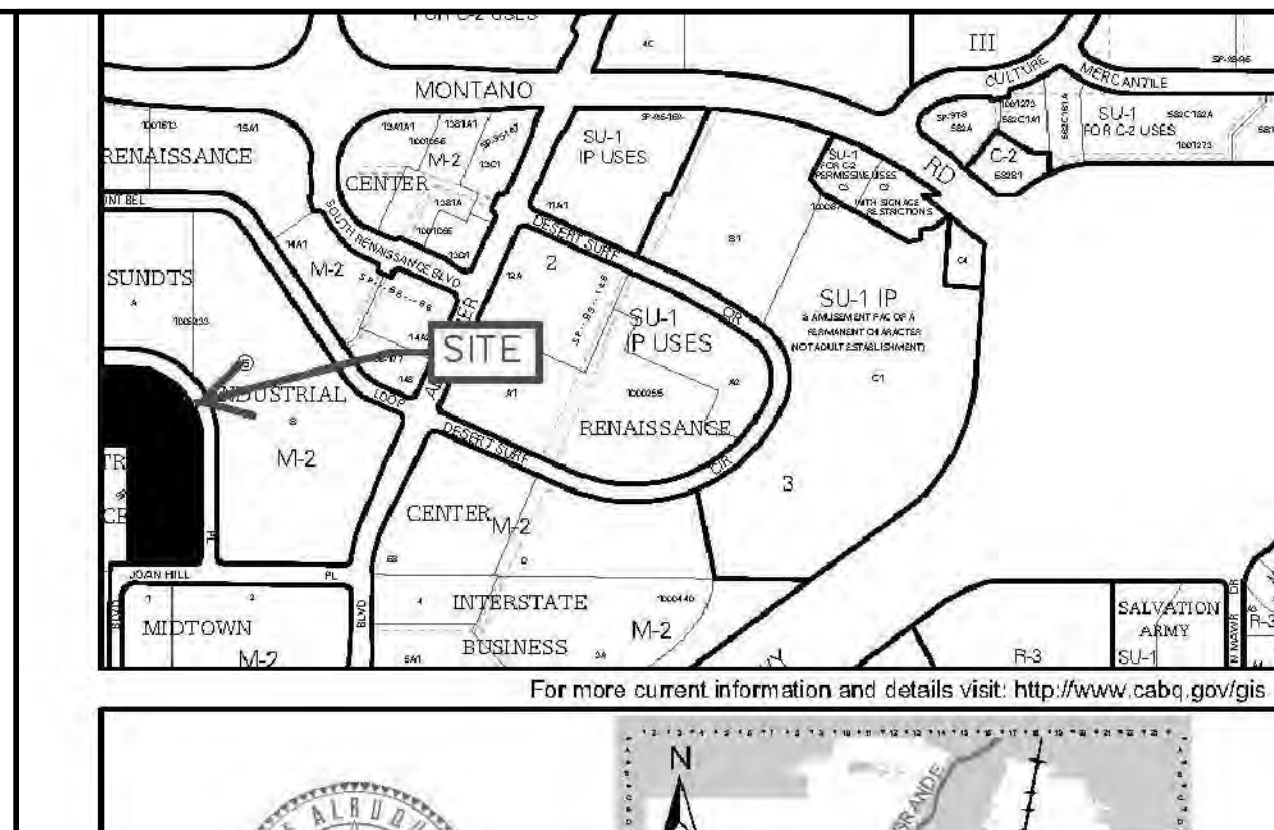
CAUTION:

EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.



GRAPHIC SCALE

SCALE: 1"=40'



FIRM MAP:

LEGAL DESCRIPTION:

LOTS 1-A-1-A, 1-A-1-B, SUNDT'S INDUSTRIAL CENTER

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. ALL CURB AND GUTTER TO 6" HEADER UNLESS OTHERWISE NOTED.
3. ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.
4. ANY CURBS OR PAVEMENT NEGATIVELY IMPACTED BY CONSTRUCTION ACTIVITY SHALL BE REPLACED TO MATCH EXISTING CONDITIONS.
5. ALL SITE WORK SHALL CONFORM TO CITY OF ALBUQUERQUE STANDARDS FOR PUBLIC WORKS CONSTRUCTION EDITION 9

LEGEND

---	-5414-	EXISTING CONTOUR
---	-5415-	EXISTING INDEX CONTOUR
---	-5414-	PROPOSED CONTOUR
---	-5415-	PROPOSED INDEX CONTOUR
---	1	SLOPE TIE
---	x 4048.25	EXISTING SPOT ELEVATION
---	x 4048.25	PROPOSED SPOT ELEVATION
---	---	BOUNDARY
---	---	CENTERLINE
---	---	RIGHT-OF-WAY
---	---	PROPOSED CURB
---	---	EXISTING CURB AND GUTTER
---	---	EXISTING SIDEWALK
---	---	PROPOSED RETAINING WALL (SEE STRUCTURAL DRAWINGS)

ENGINEER'S SEAL DAVID SOULE NEW MEXICO REGISTERED PROFESSIONAL ENGINEER 11/15/18	JATC 4501 MONTBEL GRADING AND DRAINAGE PLAN Rio Grande Engineering 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999	DRAWN BY WCWJ DATE 9-26-18 218143-LAYOUT-9-25-18 SHEET # JOB # 218143
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