

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



October 2, 2015

Ron Bohannon, PE
Tierra West, LLC
5571 Midway Park Pl NE
Albuquerque, NM 87109

Richard J. Berry, Mayor

**RE: Multi-Specialty Clinic
Rough Grading Plan
Engineer's Stamp Date 9-30-2015 (File: M15D026B)**

Dear Mr. Bohannon:

Based upon the information provided in your submittal received 9-30-2015, the above referenced plan is approved for Grading Permit for a temporary condition .

Since the disturbed area on this site exceeds 1.0 acre, an Erosion and Sediment Control (ESC) Plan, prepared by a NM PE and approved by the City's Stormwater Engineer, will be required for this site

PO Box 1293

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

Albuquerque

New Mexico 87103

www.cabq.gov

Sincerely,

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

Orig: Drainage file
c.pdf: via Email: Recipient



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: _____ **Building Permit #:** _____ **City Drainage #:** _____
DRB#: _____ **EPC#:** _____ **Work Order#:** _____
Legal Description: _____
City Address: _____

Engineering Firm: _____ **Contact:** _____
Address: _____
Phone#: _____ **Fax#:** _____ **E-mail:** _____

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

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

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

Check all that Apply:

DEPARTMENT:

☐ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

☐ ENGINEER/ ARCHITECT CERTIFICATION

☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR

☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)

☐ OTHER (SPECIFY) _____

CHECK 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

☐ PRE-DESIGN MEETING
☐ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ☐ Yes ☐ No

DATE SUBMITTED: _____ **By:** _____

COA STAFF: _____ ELECTRONIC SUBMITTAL RECEIVED: _____

Worksheet for Temp 24 in for Pond Outlet

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.01500	ft/ft
Diameter	2.00	ft
Discharge	26.47	ft ³ /s

Results

Normal Depth	1.56	ft
Flow Area	2.64	ft ²
Wetted Perimeter	4.34	ft
Hydraulic Radius	0.61	ft
Top Width	1.65	ft
Critical Depth	1.80	ft
Percent Full	78.2	%
Critical Slope	0.01207	ft/ft
Velocity	10.04	ft/s
Velocity Head	1.57	ft
Specific Energy	3.13	ft
Froude Number	1.40	
Maximum Discharge	29.80	ft ³ /s
Discharge Full	27.71	ft ³ /s
Slope Full	0.01369	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	78.22	%
Downstream Velocity	Infinity	ft/s

Worksheet for Broad Crested Weir - Temp Pond

Project Description

Solve For Headwater Elevation

Input Data

Discharge		84.64	ft ³ /s
Crest Elevation		5041.45	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		5.00	ft
Crest Length		80.00	ft

Results

Headwater Elevation	5041.98	ft
Headwater Height Above Crest	0.53	ft
Tailwater Height Above Crest	-5041.45	ft
Weir Coefficient	2.70	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.70	US
Flow Area	42.79	ft ²
Velocity	1.98	ft/s
Wetted Perimeter	81.07	ft
Top Width	80.00	ft

Pond Discharge-Orifice Calculations (TEMPORARY POND)

OFFSITE POND B-1 VOLUME CALCULATIONS

ELEVATION (ft)	AREA (sf)	VOLUME (cf)	CUMULATIVE VOLUME (cf)
5039	7118	0	0
5040	9192	8155	8155
5041	11206	10199	18354
5042	13265	12235.5	30590
5043	15375	14320	44910

OFFSITE POND B-2 VOLUME CALCULATIONS

ELEVATION (ft)	AREA (sf)	VOLUME (cf)	CUMULATIVE VOLUME (cf)
5039	2964	0	0
5040	3498	3231	3231
5041	4057	3777.5	7008.5
5042	4642	4349.5	11358
5042.5	4943	2396.25	13754.25

ONSITE TEMPORARY POND VOLUME CALCULATIONS

ELEVATION (ft)	AREA (sf)	VOLUME (cf)	CUMULATIVE VOLUME (cf)
5039	10510	0	0
5040	12459	11484.5	11485
5041	14455	13457	24942
5042	16955	15705	40647

***NOTE: THREE PONDS INTERCONNECTED THEREFORE SUM USED**

ACTUAL ELEV.	DEPTH (FT)	VOLUME (CF)	Q (CFS)	VOLUME (AC-FT)
39.00	0	0	0.00	
40.00	1.00	22871	15.89	0.52503444
41.00	2.00	50304	23.56	1.15482094
42.00	3.00	82594	30.19	1.89609734

Orifice Equation

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

$$C = 0.6$$

$$\text{Diameter} = 2$$

$$\text{Area (ft}^2\text{)} = 0.022$$

$$g = 32.2$$

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

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

AHYMO

01a AHYMO PROGRAM (AHYMO-S4) - Version: S4.01a - Rel:
 RUN DATE (MON/DAY/YR) = 09/28/2015
 START TIME (HR:MIN:SEC) = 13:24:59 USER NO.=
 TierraWest-SiteA99368577
 INPUT FILE = C:\Users\Joel\Desktop\Clinic Basins RGRADE.txt

* Multi Specialty Clinic, ALBUQUERQUE, NM *

* 100-YEAR, 24-HR STORM (ROUGH GRADE CONDITIONS) w/ routing *

*

START TIME=0.0

*

*

RAINFALL TYPE=2 RAIN QUARTER=0.0 IN

RAIN ONE=2.01 IN RAIN SIX=2.35 IN

RAIN 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	0.0182	0.0205	0.0228	0.0251	0.0274
0.0297	0.0320	0.0343	0.0366	0.0389	0.0412
0.0450	0.0473	0.0496	0.0519	0.0542	0.0565
0.0603	0.0626	0.0649	0.0672	0.0695	0.0718
0.0871	0.0894	0.0917	0.0940	0.0963	0.0986
0.1261	0.1284	0.1307	0.1330	0.1353	0.1376
0.1791	0.1814	0.1837	0.1860	0.1883	0.1906
0.2371	0.2394	0.2417	0.2440	0.2463	0.2486
0.3121	0.3144	0.3167	0.3190	0.3213	0.3236
0.4061	0.4084	0.4107	0.4130	0.4153	0.4176
0.5201	0.5224	0.5247	0.5270	0.5293	0.5316
0.6541	0.6564	0.6587	0.6610	0.6633	0.6656
0.8081	0.8104	0.8127	0.8150	0.8173	0.8196
0.9821	0.9844	0.9867	0.9890	0.9913	0.9936
1.1761	1.1784	1.1807	1.1830	1.1853	1.1876
1.3901	1.3924	1.3947	1.3970	1.3993	1.4016
1.6241	1.6264	1.6287	1.6310	1.6333	1.6356
1.8781	1.8804	1.8827	1.8850	1.8873	1.8896
2.1521	2.1544	2.1567	2.1590	2.1613	2.1636
2.4461	2.4484	2.4507	2.4530	2.4553	2.4576
2.7601	2.7624	2.7647	2.7670	2.7693	2.7716
3.0941	3.0964	3.0987	3.1010	3.1033	3.1056
3.4481	3.4504	3.4527	3.4550	3.4573	3.4596
3.8221	3.8244	3.8267	3.8290	3.8313	3.8336
4.2161	4.2184	4.2207	4.2230	4.2253	4.2276
4.6301	4.6324	4.6347	4.6370	4.6393	4.6416
5.0641	5.0664	5.0687	5.0710	5.0733	5.0756
5.5181	5.5204	5.5227	5.5250	5.5273	5.5296
5.9921	5.9944	5.9967	5.9990	6.0013	6.0036
6.4861	6.4884	6.4907	6.4930	6.4953	6.4976
6.9901	6.9924	6.9947	6.9970	6.9993	7.0016
7.5041	7.5064	7.5087	7.5110	7.5133	7.5156
8.0281	8.0304	8.0327	8.0350	8.0373	8.0396
8.5621	8.5644	8.5667	8.5690	8.5713	8.5736
9.1061	9.1084	9.1107	9.1130	9.1153	9.1176
9.6601	9.6624	9.6647	9.6670	9.6693	9.6716
10.2241	10.2264	10.2287	10.2310	10.2333	10.2356
10.7981	10.8004	10.8027	10.8050	10.8073	10.8096
11.3821	11.3844	11.3867	11.3890	11.3913	11.3936
11.9761	11.9784	11.9807	11.9830	11.9853	11.9876
12.5801	12.5824	12.5847	12.5870	12.5893	12.5916
13.1941	13.1964	13.1987	13.2010	13.2033	13.2056
13.8181	13.8204	13.8227	13.8250	13.8273	13.8296
14.4521	14.4544	14.4567	14.4590	14.4613	14.4636
15.0961	15.0984	15.1007	15.1030	15.1053	15.1076
15.7501	15.7524	15.7547	15.7570	15.7593	15.7616
16.4141	16.4164	16.4187	16.4210	16.4233	16.4256
17.0881	17.0904	17.0927	17.0950	17.0973	17.0996
17.7721	17.7744	17.7767	17.7790	17.7813	17.7836
18.4661	18.4684	18.4707	18.4730	18.4753	18.4776
19.1701	19.1724	19.1747	19.1770	19.1793	19.1816
19.8841	19.8864	19.8887	19.8910	19.8933	19.8956
20.6081	20.6104	20.6127	20.6150	20.6173	20.6196
21.3421	21.3444	21.3467	21.3490	21.3513	21.3536
22.0861	22.0884	22.0907	22.0930	22.0953	22.0976
22.8401	22.8424	22.8447	22.8470	22.8493	22.8516
23.6041	23.6064	23.6087	23.6110	23.6133	23.6156
24.3781	24.3804	24.3827	24.3850	24.3873	24.3896
25.1621	25.1644	25.1667	25.1690	25.1713	25.1736
25.9561	25.9584	25.9607	25.9630	25.9653	25.9676
26.7601	26.7624	26.7647	26.7670	26.7693	26.7716
27.5741	27.5764	27.5787	27.5810	27.5833	27.5856
28.3981	28.4004	28.4027	28.4050	28.4073	28.4096
29.2321	29.2344	29.2367	29.2390	29.2413	29.2436
30.0761	30.0784	30.0807	30.0830	30.0853	30.0876
30.9301	30.9324	30.9347	30.9370	30.9393	30.9416
31.7941	31.7964	31.7987	31.8010	31.8033	31.8056
32.6681	32.6704	32.6727	32.6750	32.6773	32.6796
33.5521	33.5544	33.5567	33.5590	33.5613	33.5636
34.4461	34.4484	34.4507	34.4530	34.4553	34.4576
35.3501	35.3524	35.3547	35.3570	35.3593	35.3616
36.2641	36.2664	36.2687	36.2710	36.2733	36.2756
37.1881	37.1904	37.1927	37.1950	37.1973	37.1996
38.1221	38.1244	38.1267	38.1290	38.1313	38.1336
39.0661	39.0684	39.0707	39.0730	39.0753	39.0776
40.0201	40.0224	40.0247	40.0270	40.0293	40.0316
40.9841	40.9864	40.9887	40.9910	40.9933	40.9956
41.9581	41.9604	41.9627	41.9650	41.9673	41.9696
42.9421	42.9444	42.9467	42.9490	42.9513	42.9536
43.9361	43.9384	43.9407	43.9430	43.9453	43.9476
44.9401	44.9424	44.9447	44.9470	44.9493	44.9516
45.9541	45.9564	45.9587	45.9610	45.9633	45.9656
46.9781	46.9804	46.9827	46.9850	46.9873	46.9896
48.0121	48.0144	48.0167	48.0190	48.0213	48.0236
49.0561	49.0584	49.0607	49.0630	49.0653	49.0676
50.1101	50.1124	50.1147	50.1170	50.1193	50.1216
51.1741	51.1764	51.1787	51.1810	51.1833	51.1856
52.2481	52.2504	52.2527	52.2550	52.2573	52.2596
53.3321	53.3344	53.3367	53.3390	53.3413	53.3436
54.4261	54.4284	54.4307	54.4330	54.4353	54.4376
55.5301	55.5324	55.5347	55.5370	55.5393	55.5416
56.6441	56.6464	56.6487	56.6510	56.6533	56.6556
57.7681	57.7704	57.7727	57.7750	57.7773	57.7796
58.9021	58.9044	58.9067	58.9090	58.9113	58.9136
60.0461	60.0484	60.0507	60.0530	60.0553	60.0576
61.2001	61.2024	61.2047	61.2070	61.2093	61.2116
62.3641	62.3664	62.3687	62.3710	62.3733	62.3756
63.5381	63.5404	63.5427	63.5450	63.5473	63.5496
64.7221	64.7244	64.7267	64.7290	64.7313	64.7336
65.9161	65.9184	65.9207	65.9230	65.9253	65.9276
67.1201	67.1224	67.1247	67.1270	67.1293	67.1316
68.3341	68.3364	68.3387	68.3410	68.3433	68.3456
69.5581	69.5604	69.5627	69.5650	69.5673	69.5696
70.7921	70.7944	70.7967	70.7990	70.8013	70.8036
72.0361	72.0384	72.0407	72.0430	72.0453	72.0476
73.2901	73.2924	73.2947	73.2970	73.2993	73.3016
74.5541	74.5564	74.5587	74.5610	74.5633	74.5656
75.8281	75.8304	75.8327	75.8350	75.8373	75.8396
77.1121	77.1144	77.1167	77.1190	77.1213	77.1236
78.4061	78.4084	78.4107	78.4130	78.4153	78.4176
79.7101	79.7124	79.7147	79.7170	79.7193	79.7216
81.0241	81.0264	81.0287	81.0310	81.0333	81.0356
82.3481	82.3504	82.3527	82.3550	82.3573	82.3596
83.6821	83.6844	83.6867	83.6890	83.6913	83.6936
85.0261	85.0284	85.0307	85.0330	85.0353	85.0376
86.3801	86.3824	86.3847	86.3870	86.3893	86.3916
87.7441	87.7464	87.7487	87.7510	87.7533	87.7556
89.1181	89.1204	89.1227	89.1250	89.1273	89.1296
90.5021	90.5044	90.5067	90.5090	90.5113	90.5136
91.8961	91.8984	91.9007	91.9030	91.9053	91.9076
93.3001	93.3024	93.3047	93.3070	93.3093	93.3116
94.7141	94.7164	94.7187	94.7210	94.7233	94.7256
96.1381	96.1404	96.1427	96.1450	96.1473	96.1496
97.5721	97.5744	97.5767	97.5790	97.5813	97.5836
99.0161	99.0184	99.0207	99.0230	99.0253	99.0276
100.4701	100.4724	100.4747	100.4770	100.4793	100.4816

AHYMO							
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	
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			

*DEVELOPED CONDITIONS

*

*BASIN B-1

*

COMPUTE NM HYD ID=1 HYD NO=100.1 AREA=0.01705 SQ MI

PER A=0.00 PER B=0.00 PER C=15.0 PER D=85.00

TP=-0.1333 HR MASS RAINFALL=-1

K = 0.072649HR TP = 0.133300HR K/TP RATIO = 0.545000
 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 57.217 CFS UNIT VOLUME = 0.9989 B =
 526.28 P60 = 2.0100
 AREA = 0.014493 SQ MI IA = 0.10000 INCHES INF = 0.04000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD -
 DT = 0.050000

AHYMO

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046
 SHAPE CONSTANT, N = 4.440407
 UNIT PEAK = 7.3586 CFS UNIT VOLUME = 1.000 B =
 383.54 P60 = 2.0100
 AREA = 0.002558 SQ MI IA = 0.35000 INCHES INF = 0.83000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD -
 DT = 0.050000

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 100.10

RUNOFF VOLUME = 2.31096 INCHES = 2.1014 ACRE-Feet
 PEAK DISCHARGE RATE = 50.21 CFS AT 1.500 HOURS BASIN AREA =
 0.0171 SQ. MI.

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*BASIN EX-B3

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COMPUTE NM HYD ID=2 HYD NO=100.2 AREA=0.01104 SQ MI
 PER A=0.00 PER B=0.00 PER C=100.0 PER D=0.0
 TP=-0.1333 HR MASS RAINFALL=-1

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046
 SHAPE CONSTANT, N = 4.440407
 UNIT PEAK = 31.765 CFS UNIT VOLUME = 1.001 B =
 383.54 P60 = 2.0100
 AREA = 0.011040 SQ MI IA = 0.35000 INCHES INF = 0.83000
 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD -
 DT = 0.050000

PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 100.20

RUNOFF VOLUME = 1.21081 INCHES = 0.7129 ACRE-Feet
 PEAK DISCHARGE RATE = 24.09 CFS AT 1.500 HOURS BASIN AREA =
 0.0110 SQ. MI.

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*BASIN EX-C

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COMPUTE NM HYD ID=3 HYD NO=100.3 AREA=0.00473 SQ MI

AHYMO

PER A=0.00 PER B=0.00 PER C=100.0 PER D=0.0

TP=-0.1333 HR MASS RAINFALL=-1

K = 0.107446HR TP = 0.133300HR K/TP RATIO = 0.806046
SHAPE CONSTANT, N = 4.440407
UNIT PEAK = 13.609 CFS UNIT VOLUME = 1.001 B =
383.54 P60 = 2.0100
AREA = 0.004730 SQ MI IA = 0.35000 INCHES INF = 0.83000
INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD -
DT = 0.050000

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 100.30

RUNOFF VOLUME = 1.21081 INCHES = 0.3054 ACRE-FEET
PEAK DISCHARGE RATE = 10.33 CFS AT 1.500 HOURS BASIN AREA =
0.0047 SQ. MI.

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ADD HYD ID=50 HYD NO=100.21 ID=1 ID=2

*

ADD HYD ID=51 HYD NO=100.22 ID=3 ID=50

*

*

PRINT HYD ID=51 CODE=1

PARTIAL HYDROGRAPH 100.22

RUNOFF VOLUME = 1.78232 INCHES = 3.1198 ACRE-FEET
PEAK DISCHARGE RATE = 84.64 CFS AT 1.500 HOURS BASIN AREA =
0.0328 SQ. MI.

BASIS FOR TEMP POND EMERGENCY WEIR
OVERFLOW CALC

*

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*ROUTE BASIN B-1, EX-B3 and EX-C THROUGH DETENTION PONDS (TEMP+EXIST)

ROUTE RESERVOIR ID=55 HYD NO=200.1 INFLOW ID=51 CODE=24

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

AHYMO

0.0	0.0	39.00
15.89	0.5250	40.00
23.560	1.1548	41.00
30.190	1.8961	42.00

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	39.00	0.000	0.00
1.20	7.27	39.12	0.065	1.98
2.40	2.47	40.35	0.748	18.61
3.60	0.10	39.09	0.047	1.43
4.80	0.14	39.01	0.006	0.19
6.00	0.23	39.01	0.007	0.20
7.20	0.23	39.01	0.008	0.23
8.40	0.23	39.01	0.008	0.23
9.60	0.23	39.01	0.008	0.23
10.80	0.22	39.01	0.007	0.22
12.00	0.22	39.01	0.007	0.22
13.20	0.22	39.01	0.007	0.22
14.40	0.21	39.01	0.007	0.21
15.60	0.21	39.01	0.007	0.21
16.80	0.20	39.01	0.007	0.20
18.00	0.20	39.01	0.007	0.20
19.20	0.20	39.01	0.006	0.20
20.40	0.19	39.01	0.006	0.19
21.60	0.19	39.01	0.006	0.19
22.80	0.18	39.01	0.006	0.18
24.00	0.18	39.01	0.006	0.18
25.20	0.00	39.00	0.001	0.02

PEAK DISCHARGE = 26.469 CFS - PEAK OCCURS AT HOUR 1.75
MAXIMUM WATER SURFACE ELEVATION = 41.439 <TOP OF POND EL=42.0, OK
MAXIMUM STORAGE = 1.4800 AC-FT INCREMENTAL TIME=
0.050000HRS

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*

PRINT HYD ID=55 CODE=1

PARTIAL HYDROGRAPH 200.10

RUNOFF VOLUME = 1.78232 INCHES = 3.1198 ACRE-FEET
PEAK DISCHARGE RATE = 26.47 CFS AT 1.750 HOURS BASIN AREA =
0.0328 SQ. MI.

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FINISH

AHYMO

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 13:24:59

ENGINEER'S SEAL	MULTI-SPECIALTY CLINIC 2901 TRANSPORT ST, S.E.	DRAWN BY DY
		DATE 9/28/15
	ROUGH GRADING PLAN	2015044--ROUGH GRADING PLAN
		SHEET # GR-1
RONALD R. BOHANNAN P.E. #7868	 <i>TIERRA WEST, LLC</i> 5571 MIDWAY PARK PLACE NE ALBUQUERQUE, NM 87109 (505) 858-3100 www.tierrawestllc.com	JOB # 2015044