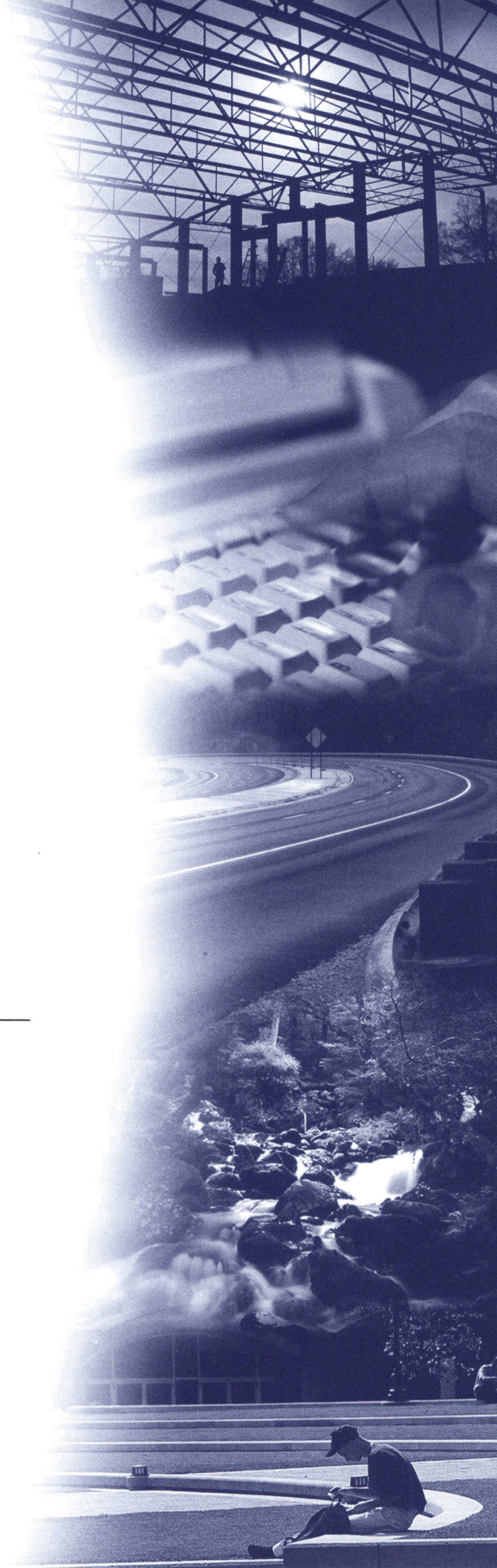


WOOLPERT

DETENTION ANALYSIS

RPS PACKAGE DISTRIBUTION CENTER

Union Township, Butler County, Ohio

January 26, 1999

PROJECT: RPS Pre-Developed East

Runoff Q by the Rational Method

Made By: A.L.B. Date: 03/08/99

Checked By: Date:

Area of Drainage Basin

USGS Map Area (Ac.)=

Project Aerials Area (Ac.)= 7.2

Total Area (Ac.)= 7.2

Land usage: Fallow grassland

Runoff Coefficient C= 0.45

Overland Flow (Chart 1101-1)

Flow Distance (ft) = 620

Upper Elevation = 744

Lower Elevation = 688

Slope (%) = 9.03

Time of Concentration (min) = 16

I2 = 3.21

I5= 3.74

I10 = 4.36

I25 = 5.00

I50 = 5.81

I100= 6.38

Q = CIA (cfs)

Q2 = 10.407273

Q5 = 12.126857

Q10 = 14.123077

Q25 = 16.2

Q50 = 18.837209

Q100 = 20.680851

PROJECT: RPS Pre-Developed West

Runoff Q by the Rational Method

Made By: A.L.B. Date: 03/08/99

Checked By: Date:

Area of Drainage Basin

USGS Map Area (Ac.)=

Project Aerials Area (Ac.)= 4.6

Total Area (Ac.)= 4.6

Land usage: Fallow grassland

Runoff Coefficient C= 0.45

Overland Flow (Chart 1101-1)

Flow Distance (ft) = 360

Upper Elevation = 744

Lower Elevation = 684

Slope (%) = 16.67

Time of Concentration (min) = 12

I2 = 3.66

I5= 4.23

I10 = 4.86

I25 = 5.48

I50 = 6.41

I100= 6.98

Q = CIA (cfs)

Q2 = 7.5662069

Q5 = 8.7474194

Q10 = 10.054286

Q25 = 11.335714

Q50 = 13.269231

Q100 = 14.44186

PROJECT: RPS Post-Developed West

Runoff Q by the Rational Method

Made By: A.L.B. Date: 03/08/99

Checked By: Date:

Area of Drainage Basin

USGS Map Area (Ac.)=

Project Aerials Area (Ac.)= 2.3

Total Area (Ac.)= 2.3

Land usage: Fallow grassland

Runoff Coefficient C= 0.45

Overland Flow (Chart 1101-1)

Flow Distance (ft) = 140

Upper Elevation = 724

Lower Elevation = 684

Slope (%) = 28.57

Time of Concentration (min) = 10

I2 = 3.93

I5= 4.52

I10 = 5.15

I25 = 5.75

I50 = 6.76

I100= 7.32

Q = CIA (cfs)

Q2 = 4.0633333

Q5 = 4.6753448

Q10 = 5.3318182

Q25 = 5.95125

Q50 = 6.9932432

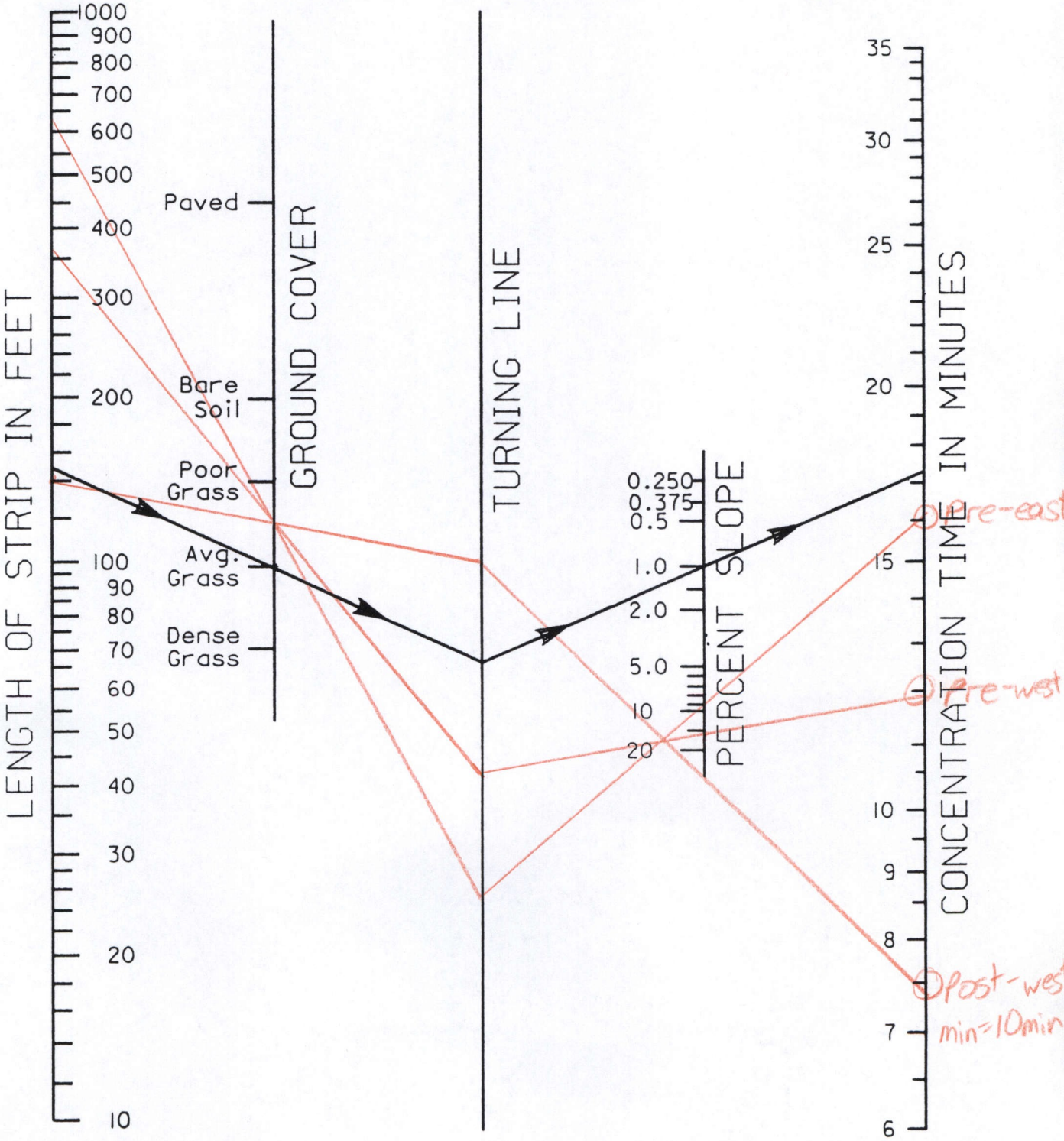
Q100 = 7.5731707

OVERLAND FLOW CHART

1101-1

REFERENCE SECTION
1101.22

Post East = 3,007
dist = 1061
C = 0.78



Woolpert Transmittal

WOOLPERT

If enclosures are not received as noted below,
please call sender or Woolpert at 513.272.8300

Date: February 23, 1999

Re: RPS Package Distribution Center
Union Twp. Butler County, OH

To: Eric Pottenger
Butler County Engineer's Office
1921 Fairgrove Avenue
Hamilton, OH 45011

Order Number: 56249.02.083

Shipped Via: First Class Mail

We are sending you

☐ Shop Drawings ☐ Samples ☐ Specifications ☐ Plans ☐ Change Order
☒ Other

Copies	Date	No.	Description
1	1-26-99		Detention Analysis

Remarks:

For your review/approval. Kiesland has submitted the plans to the Bldg. Dept.
I thought I would submit this report directly to you rather than having it get lost along the way.
Please call if you have any questions or require additional information.

Copy To:

RECEIVED
FEB 26 1999
BUTLER COUNTY
ENGINEER'S OFFICE

Signature: Larry W. Smith, PS

WOOLPERT LLP
4141 Rosslyn Drive • Cincinnati, Ohio 45209-1183
513.272.8300 • Fax 513.272.8301 • www.woolpert.com

DETENTION ANALYSIS

RPS PACKAGE DISTRIBUTION CENTER

Union Township, Butler County, Ohio

January 26, 1999

DETENTION ANALYSIS
for
RPS PACKAGE DISTRIBUTION CENTER
Union Township, Butler County, Ohio

I. Abstract

This 11.8 acre site, located on the west side of Inter-Ocean Drive approximately 1000' south of Mulhauser Road, is being developed as a truck terminal facility. The site will require storm water detention per the Butler Co. Engineer's guidelines. A detention basin will be constructed in the northeast portion of the property and will discharge into the existing storm sewer system in Inter-Ocean Drive.

This report is based upon the Rational method using "Hydraflow" software, version 5.1, developed by Intelisolve.

II. Pre & Post Developed Conditions

PRE The site is situated at the highest point of the industrial park and drains both east (7.2 ac.) and west (4.6 ac.) from the center of the property. The runoff coefficient is 0.45 and the time of concentration is 15.5 minutes east and 11.3 minutes west. 7.2+4.6=11.8

POST Upon completion, the developed portion (9.1 ac.) will drain east into the detention basin and the rear area (2.3 ac.) will drain west undetained. The runoff coefficient is 0.80 for the developed east area with a time of concentration of 13.8 minutes. The runoff coefficient is 0.45 for the rear west area with a time of concentration of 10.1 minutes. 9.1+2.3=11.5

III. Allowable Peak Discharge

The allowable peak discharge for the post-developed 50 year event shall not exceed the pre-developed 10 year event.

Q50 west = (2.3) (0.45) (6.74) = 7.0 cfs
No detention required.

APD west: Q10 = (4.6) (0.45) (4.96) = 10.3 cfs

Q50 east = (9.1) (0.80) (6.13) = 44.6 cfs
Detention required.

APD east: Q10 = (7.2) (0.45) (4.42) = 14.3 cfs

IV. Required Storage

The detention basin shall have the capacity to store a post-developed 50 year event. Using the county's storage volume worksheet the required volume is 34,824 cubic feet.

V. Routing

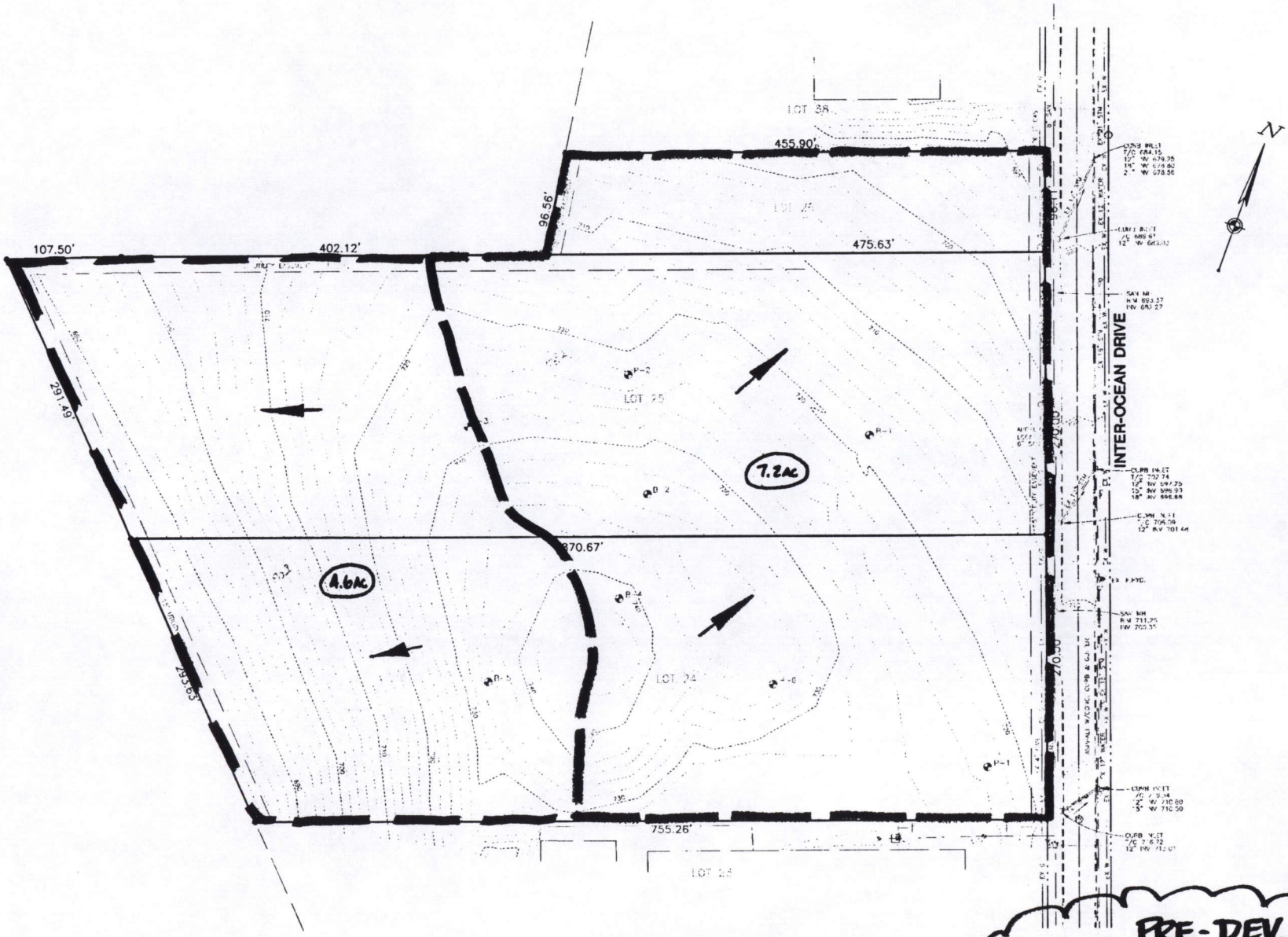
The outlet structure is a 15" pipe at elevation 689.0 connected to an ODOT CB 2-4 with two windows (6"x48") at elevation 694.5. A 21" pipe is then connected to the existing storm sewer inlet on the east side of Inter-Ocean Drive.

The following table shows the pond routing results.

Event	Pre-East (cfs)	Post-East (cfs)	Basin Outflow (cfs)	Peak Elevation
10 year	14.1 (hyd.#1)	33.4 (hyd.#3)	11.2 (hyd.#5)	693.25
25 year	16.2 (hyd.#6)	38.1 (hyd.#8)	11.9 (hyd.#10)	693.67
50 year	18.8 (hyd.#11)	44.4 (hyd.#13)	12.6 (hyd.#15)	694.17
100 year	20.0 (hyd.#16)	46.9 (hyd.#18)	12.8 (hyd.#20)	694.32

V. Conclusion

The results of this analysis shows that adequate detention and storage is provided with the facility modeled in this report.



PRE-DEV. DRAINAGE MAP

NOTES:

1. PROPERTY IS LOCATED IN COMMERCE PARK – TRI-COUNTY, UNION TOWNSHIP, BUTLER COUNTY, OHIO.
2. TOPOGRAPHY SHOWN WAS DEVELOPED FROM FIELD INFORMATION OBTAINED BY WOOLPERT, LLP, 12-18-98.
3. SANITARY AND STORM SEWER INFORMATION TAKEN FROM AS-BUILT INFORMATION PROVIDED BY THE BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES AND ENGINEER'S OFFICE.
4. SOIL BORING LOCATIONS WERE FIELD LOCATED 12-18-98 AND ARE LABELED PER THE REPORT PREPARED BY ALT & WITZIG, DATED NOV. 14, 1998.

2 WORKING DAYS BEFORE YOU DIG
CALL TOLL FREE 800-362-2764
OHIO UTILITIES PROTECTION SERVICE

GRAPHIC SCALE
50 0 25 50 100 200
1 inch = 50 ft.

No.	DATE	REVISION
	12/30/98	ISSUED FOR PRICING

PROJECT No: 56249.02
DATE 12\16\98
SCALE 1"=50'
DES. LWS
DR. TMB
CKD. SJK

WOOLPERT LLP
4141 Rosslyn Drive
Cincinnati, Ohio
45209
513.272.8300
WOOLPERT FAX: 513.272.8301

RPS PACKAGE DISTRIBUTION CENTER
INTEROCEAN DRIVE
UNION TOWNSHIP
BUTLER COUNTY, OHIO

EXISTING CONDITIONS PLAN

SHEET NO.
C1.2
FILE

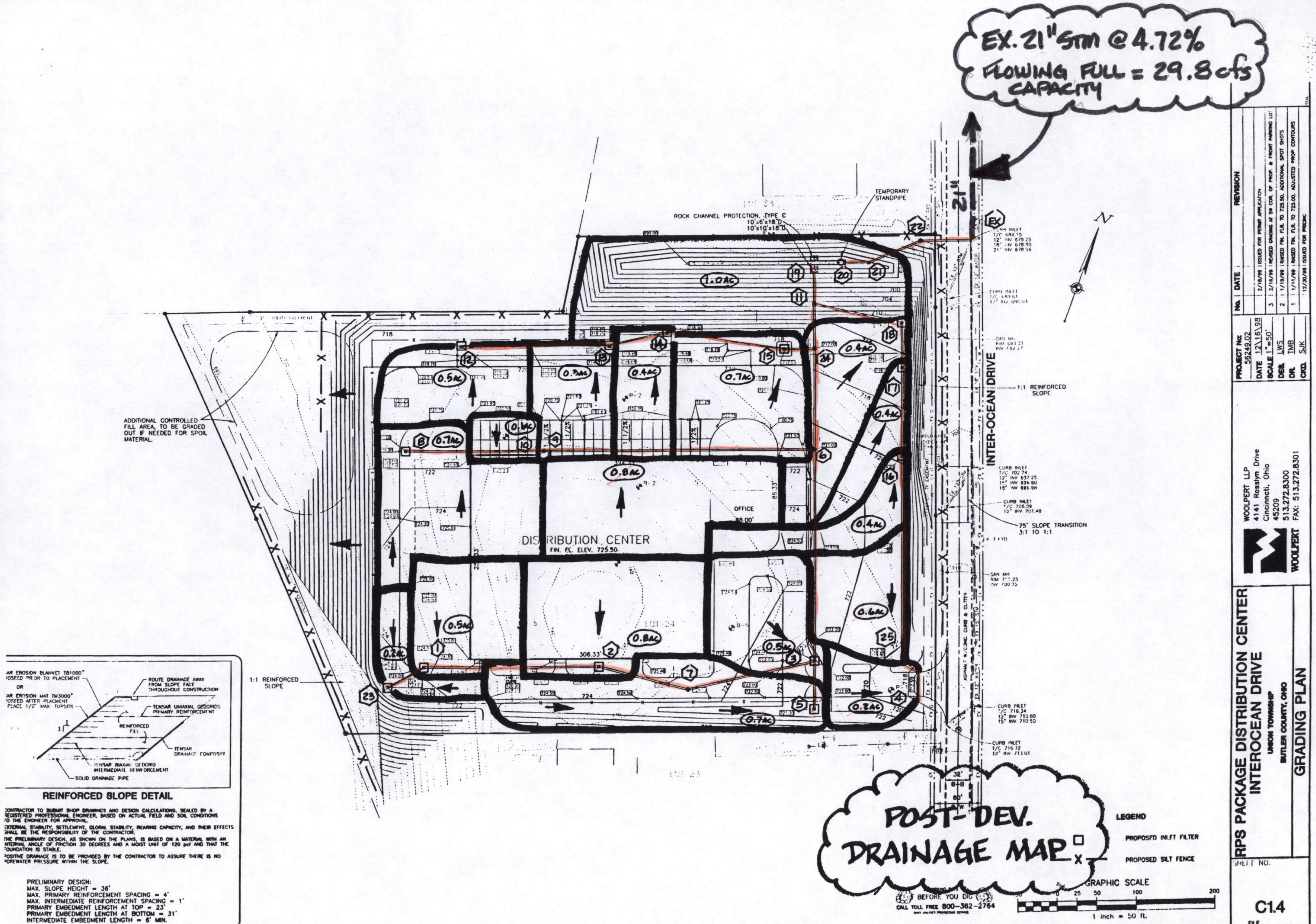
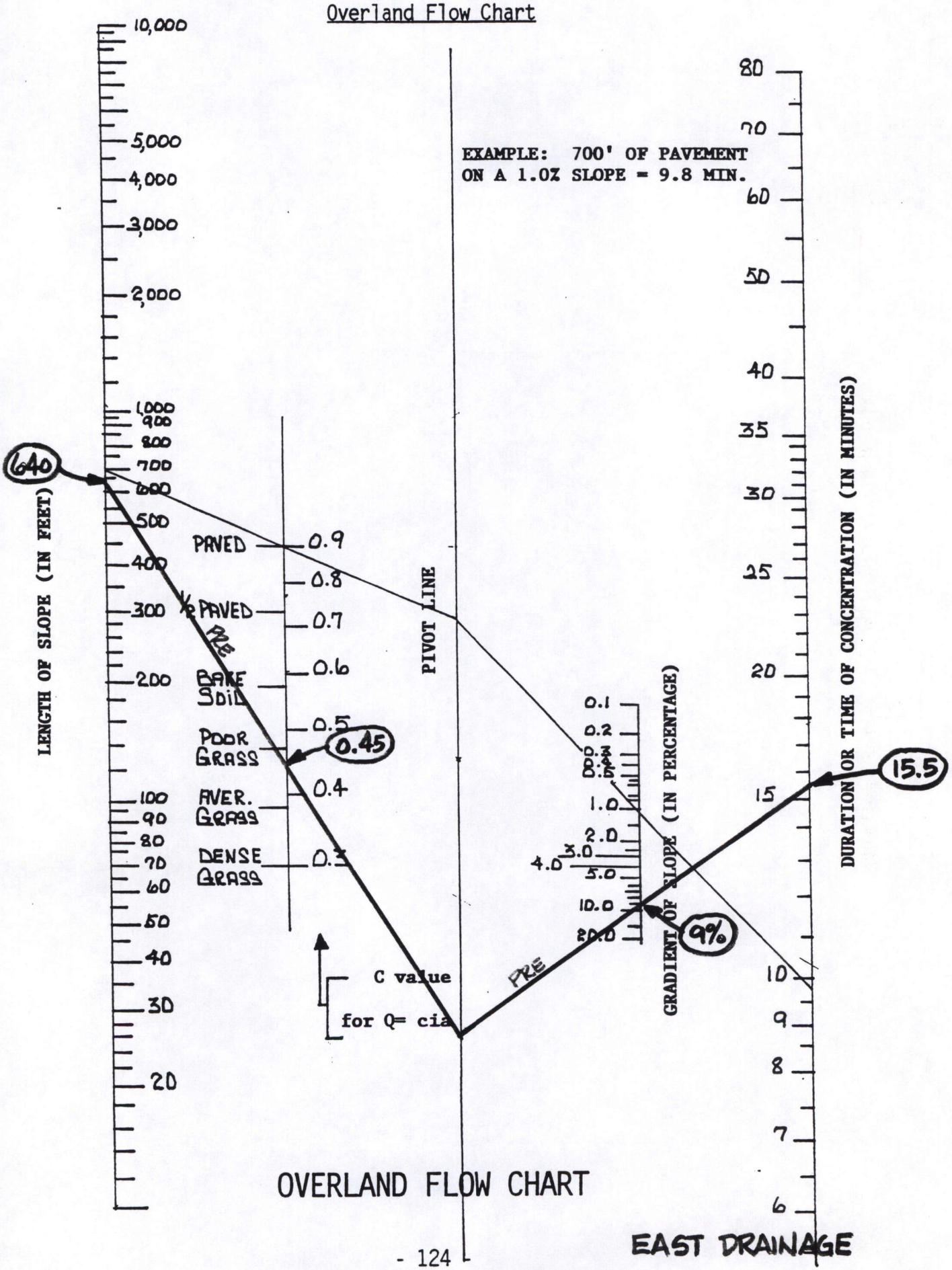

EX. 21" STM @ 4.72%
FLOWING FULL = 29.8 cfs
CAPACITY
21"
POST-DEV.
DRAINAGE MAP
INTER-OCEAN DRIVE
DISTRIBUTION CENTER
FIN. FL. ELEV. 725.50
OFFICE
TEMPORARY STANDPIPE
ROCK CHANNEL PROTECTION, TYPE C
10'x6'x18"D
10'x10'x18"D
1:1 REINFORCED SLOPE
75' SLOPE TRANSITION
3:1 TO 1:1
ADDITIONAL CONTROLLED FILL AREA, TO BE GRADED OUT IF NEEDED FOR SPOIL MATERIAL.
1.0AC
0.5AC
0.3AC
0.4AC
0.7AC
0.1AC
0.8AC
0.2AC
0.6AC
REINFORCED SLOPE DETAIL
ROUTE DRAINAGE AWAY FROM SLOPE FACE THROUGHOUT CONSTRUCTION
TENSAR UNIAXIAL GEOGRIDS PRIMARY REINFORCEMENT
REINFORCED FILL
TENSAR DRAINAGE COMPOSITE
SOLID DRAINAGE PIPE
CONTRACTOR TO SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS, SEALED BY A REGISTERED PROFESSIONAL ENGINEER, BASED ON ACTUAL FIELD AND SOIL CONDITIONS TO THE ENGINEER FOR APPROVAL.
EXTERNAL STABILITY, SETTLEMENT, GLOBAL STABILITY, BEARING CAPACITY, AND THEIR EFFECTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
THE PRELIMINARY DESIGN, AS SHOWN ON THE PLANS, IS BASED ON A MATERIAL WITH AN INTERNAL ANGLE OF FRICTION 30 DEGREES AND A MOIST UNIT OF 120 pcf AND THAT THE FOUNDATION IS STABLE.
POSITIVE DRAINAGE IS TO BE PROVIDED BY THE CONTRACTOR TO ASSURE THERE IS NO POREWATER PRESSURE WITHIN THE SLOPE.
PRELIMINARY DESIGN:
MAX. SLOPE HEIGHT = 36'
MAX. PRIMARY REINFORCEMENT SPACING = 4'
MAX. INTERMEDIATE REINFORCEMENT SPACING = 1'
PRIMARY EMBEDMENT LENGTH AT TOP = 23'
PRIMARY EMBEDMENT LENGTH AT BOTTOM = 31'
INTERMEDIATE EMBEDMENT LENGTH = 6' MIN.
LEGEND
PROPOSED INLET FILTER
PROPOSED SILT FENCE
GRAPHIC SCALE
1 inch = 50 ft.
BEFORE YOU DIG
CALL TOLL FREE 800-362-2764
PROJECT No: 56249.02
DATE 12\16\98
SCALE 1"=50'
DES. LWS
DR. TMB
CKD. SJK
No. DATE REVISION
2/18/99 ISSUED FOR PERMIT APPLICATION
3 2/16/99 REVISED GRADING AT SW COR. OF PROP. & FRONT PARKING LOT
2 1/19/99 RAISED FIN. FLR. TO 725.50, ADDITIONAL SPOT SHOTS
1 1/11/99 RAISED FIN. FLR. TO 725.00, ADJUSTED PROP CONTOURS
12/30/98 ISSUED FOR PRICING
WOOLPERT LLP
4141 Rosslyn Drive
Cincinnati, Ohio
45209
513.272.8300
FAX: 513.272.8301
RPS PACKAGE DISTRIBUTION CENTER
INTEROCEAN DRIVE
UNION TOWNSHIP
BUTLER COUNTY, OHIO
GRADING PLAN
SHEET NO.
C1.4

EXHIBIT NO. 5

Overland Flow Chart

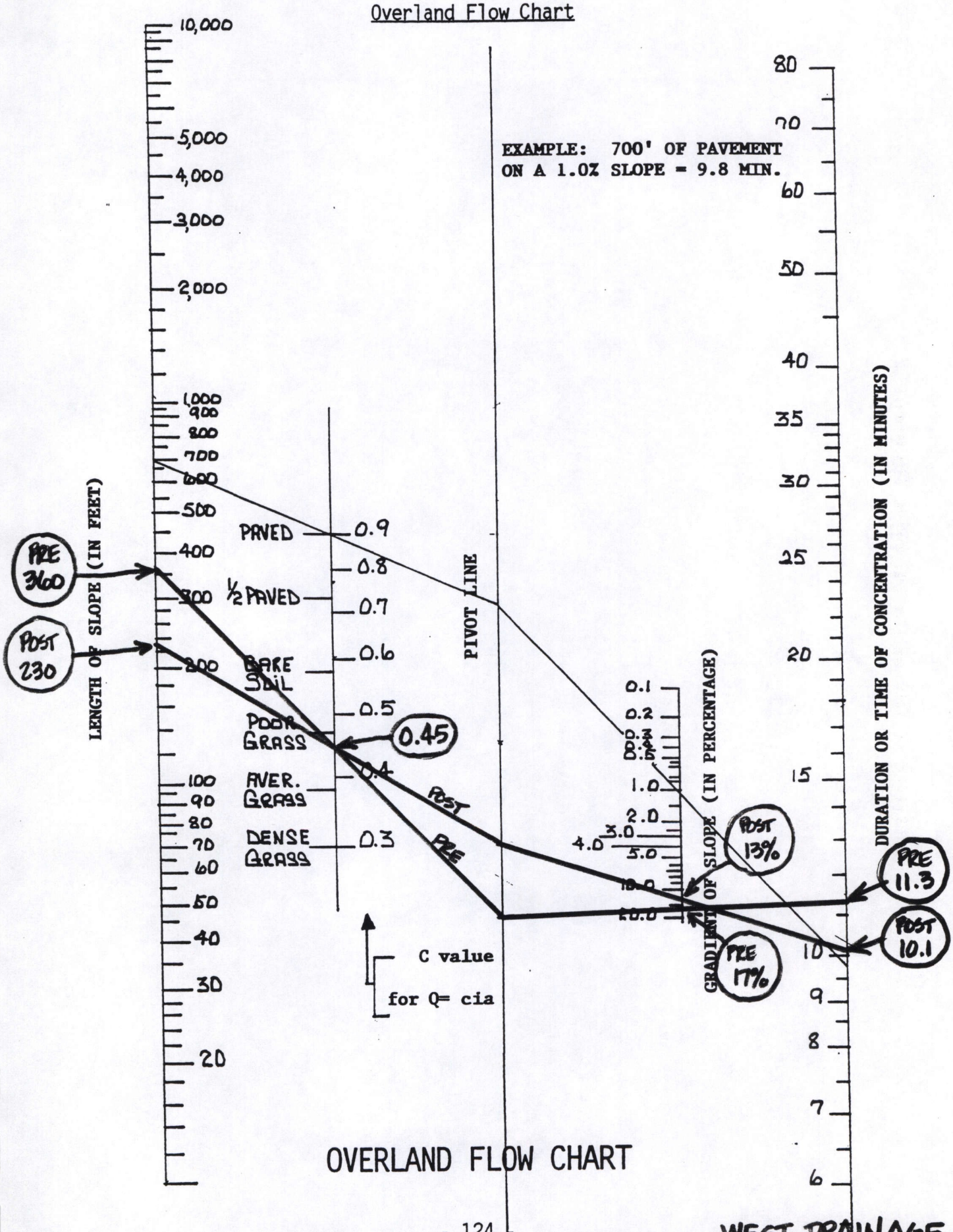


OVERLAND FLOW CHART

EAST DRAINAGE

EXHIBIT NO. 5

Overland Flow Chart



OVERLAND FLOW CHART

WEST DRAINAGE

WOOLPERT LLP

4141 Rosslyn Drive
Cincinnati, Ohio 45209-1183
513.272.8300
Fax 513.272.8301

STORM SEWER ANALYSIS

Project: **RPS PACKAGE DISTRIBUTION CENTER**
Location: UNION TWP. BUTLER CO.
Calc. by: LWS

Job No.: 56249.02.077
Date: 18-Feb-99

file: rpsstm.wb2

Structure Number		Drainage Area		Coeff. Runoff	Area x C		Time Concentration			Intensity		Discharge Required		Pipe Size	Pipe Area	Hyd. Radius	Coeff. Fric.	Pipe Slope	Pipe Cap.	Pipe Vel.	Pipe Length	Fric. Slope	Headloss Q(25)
Hi	Low	A	Sum A	C	AC	Sum AC	Tc	Delta Tc	Sum Tc	I(10)	I(25)	Q(10)	Q(25)		a	r	n	S	Qp	V		Sf	Hf
23	1	0.20	0.20	0.80	0.16	0.16	10.00	0.32	10.00	5.15	5.75	0.82	0.92	12	0.785	0.250	0.015	0.50%	2.18	2.78	54	0.09%	0.05
1	2	0.50	0.70	0.80	0.40	0.56	10.00	1.16	10.32	5.10	5.70	2.86	3.19	15	1.227	0.313	0.015	0.50%	3.96	3.23	224	0.33%	0.73
2	7	0.80	1.50	0.80	0.64	1.20	10.00	0.54	11.48	4.93	5.54	5.92	6.65	18	1.767	0.375	0.015	0.50%	6.44	3.64	118	0.53%	0.63
7	3	0.00	1.50	0.80	0.00	1.20	10.00	0.75	12.02	4.85	5.47	5.83	6.57	18	1.767	0.375	0.015	0.50%	6.44	3.64	165	0.52%	0.86
5	3	0.70	0.70	0.80	0.56	0.56	10.00	0.31	10.00	5.15	5.75	2.88	3.22	15	1.227	0.313	0.015	0.50%	3.96	3.23	60	0.33%	0.20
3	6	0.50	2.70	0.80	0.40	2.16	10.00	0.72	12.78	4.75	5.38	10.26	11.61	24	3.142	0.500	0.015	1.00%	19.61	6.24	269	0.35%	0.94
8	9	0.70	0.70	0.80	0.56	0.56	10.00	0.92	10.00	5.15	5.75	2.88	3.22	15	1.227	0.313	0.015	0.50%	3.96	3.23	178	0.33%	0.59
10	9	0.10	0.10	0.80	0.08	0.08	10.00	0.05	10.00	5.15	5.75	0.41	0.46	6	0.196	0.125	0.015	2.00%	0.69	3.50	10	0.89%	0.09
9	6	0.80	1.60	0.80	0.64	1.28	10.00	1.51	10.92	5.01	5.62	6.42	7.19	18	1.767	0.375	0.015	0.55%	6.75	3.82	346	0.62%	2.16
6	24	0.00	4.30	0.80	0.00	3.44	10.00	0.16	13.49	4.66	5.29	16.02	18.19	24	3.142	0.500	0.015	5.00%	43.84	13.95	132	0.86%	1.14
12	13	0.50	0.50	0.80	0.40	0.40	10.00	1.13	10.00	5.15	5.75	2.06	2.30	12	0.785	0.250	0.015	0.50%	2.18	2.78	189	0.55%	1.05
13	14	0.30	0.80	0.80	0.24	0.64	10.00	0.39	11.13	4.98	5.59	3.19	3.58	15	1.227	0.313	0.015	0.50%	3.96	3.23	76	0.41%	0.31
14	15	0.40	1.20	0.80	0.32	0.96	10.00	0.70	11.53	4.92	5.54	4.73	5.32	18	1.767	0.375	0.015	0.50%	6.44	3.64	152	0.34%	0.52
15	24	0.70	1.90	0.80	0.56	1.52	10.00	0.06	12.22	4.83	5.45	7.34	8.28	18	1.767	0.375	0.015	5.00%	20.36	11.52	39	0.83%	0.32
24	11	0.00	6.20	0.80	0.00	4.96	10.00	0.07	13.65	4.64	5.27	23.01	26.13	24	3.142	0.500	0.015	5.00%	43.84	13.95	58	1.78%	1.03
4	25	0.20	0.20	0.80	0.16	0.16	10.00	0.17	10.00	5.15	5.75	0.82	0.92	8	0.349	0.167	0.015	0.65%	0.84	2.42	24	0.77%	0.19
25	16	0.60	0.80	0.80	0.48	0.64	10.00	1.62	10.17	5.13	5.73	3.28	3.66	15	1.227	0.313	0.015	0.35%	3.31	2.70	262	0.43%	1.12
16	17	0.40	1.20	0.80	0.32	0.96	10.00	0.24	11.78	4.89	5.50	4.69	5.28	15	1.227	0.313	0.015	3.00%	9.70	7.90	115	0.89%	1.02
17	18	0.40	1.60	0.80	0.32	1.28	10.00	0.12	12.03	4.85	5.47	6.21	7.01	15	1.227	0.313	0.015	3.00%	9.70	7.90	59	1.57%	0.92
18	11	0.40	2.00	0.80	0.32	1.60	10.00	0.15	12.15	4.84	5.46	7.74	8.73	15	1.227	0.313	0.015	7.81%	15.65	12.75	114	2.43%	2.77
11	19	0.00	8.20	0.80	0.00	6.56	10.00	0.05	13.72	4.63	5.26	30.37	34.51	24	3.142	0.500	0.015	4.00%	39.21	12.48	41	3.10%	1.27

29, 21, 22, EX?

10,167

RATIONAL METHOD OF

RETENTION BASIN DESIGN OF STORAGE VOLUME

(30 acres or less)

RPS FACILITY UNION TWP.

Calculate 10 yr. existing flow $q_o = ACi$

Drainage area, A= **7.2** acres

x

Runoff coefficient, C= **.45**

x

Calculate intensity, i

$i = a/b + tc$

a = 170

b = 23

tc = **15.5** 16

$i = \frac{170}{23 + 15.5}$ 16

i = **4.42** 4.36

=

The allowable release rate, qo, is **14.32** 14.13 c.f.s.

Calculate the 50 yr. proposed flow $Q_o = ACI\ max$

Drainage area, A= **9.1** 9.2 acres

Runoff coefficient, C= **.8** 0.78

Calculate maximum time of concentration, TC max

a= 250
b= 27

$$Tc_{max} = \sqrt{\frac{A \times C \times a \times b}{\frac{2 \times q_o}{3} - \frac{q_o^2 \times tc}{6 \times C \times A \times a}}} - b$$

$$Tc_{max} = \sqrt{\frac{9.1 \times .8 \times 250 \times 27}{\frac{2 \times 14.32}{3} - \frac{14.32^2 \times 15.5}{.8 \times 9.1 \times 250 \times 6}}} - 27$$

9.2 14.13 14.13 16 14.13 9.2

Tcmax = **45.85** $\sqrt{\frac{49140}{9.55 - .29}} - 27$

46.76

72.85 - 27 = 45.85

Calculate maximum intensity, I max

$$Imax = \frac{a}{b+Tcmax}$$

a= 250
b= 27

Tcmax = 45.85 46.76

$$Imax = \frac{250}{27+45.85} \quad 46.76$$

Imax =

9.2

A = 9.1 acr

x

C = .8

x

Imax = 3.43 3.53

=

24.97 c.f.

25.98

The flow at maximum duration, Qo is

CALCULATE STORAGE VOLUME NEEDED

$$Vol = 60 \times Qo \times Tcmax - \frac{2 \times qo \times (TCmax + tc) \times 60}{3} + \frac{qo^2 \times tc \times 60}{6 \times Qo}$$

25.98 46.76 14.13 46.78 61.35 16 14.13 16

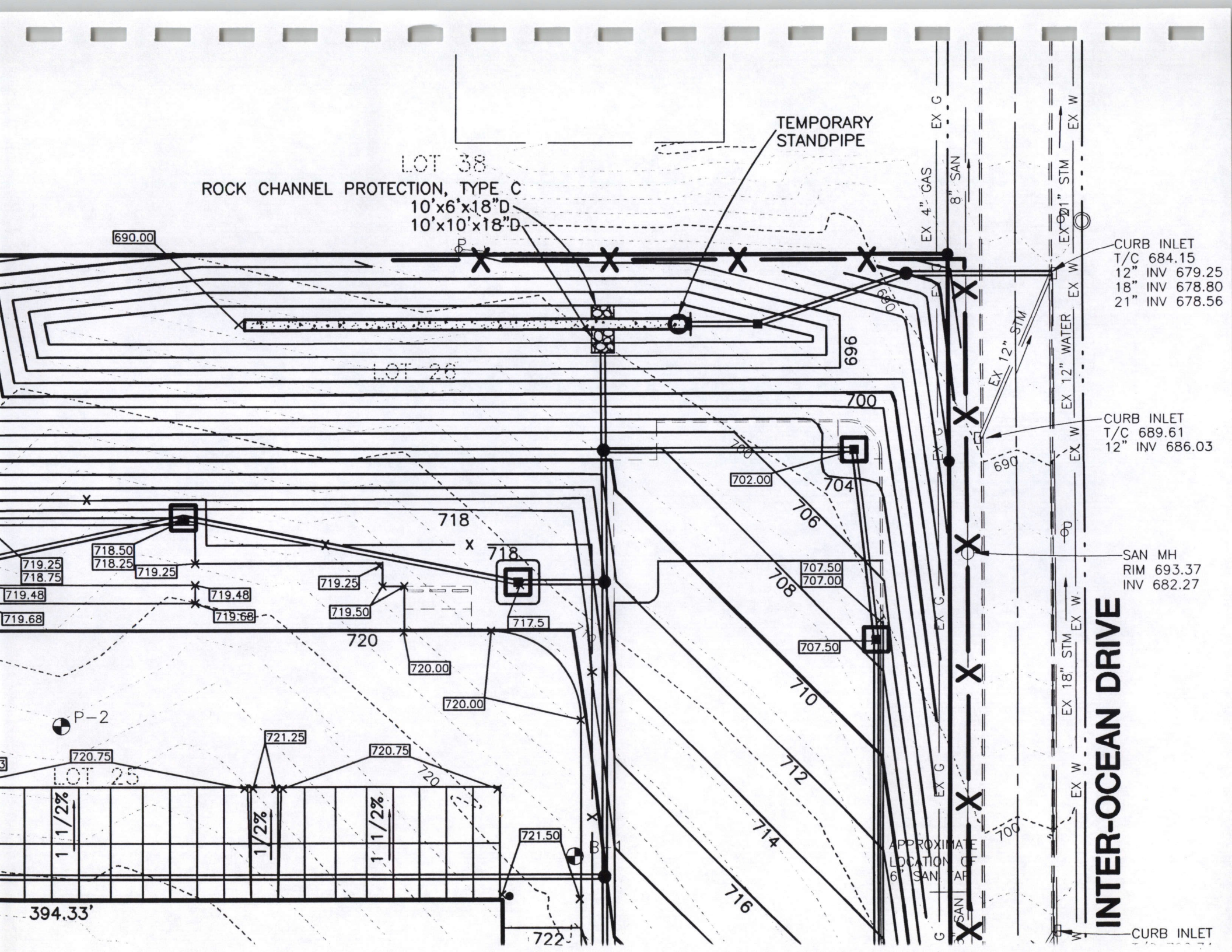
$$Vol = 60 \times 24.97 \times 45.85 - \frac{2 \times 14.32 \times (45.85 + 15.5) \times 60}{3} + \frac{14.32^2 \times 15.5 \times 60}{6 \times 24.97}$$

25.98

Vol = 34824 cubic feet

38647

68692 - 35141 + 1273


TEMPORARY STANDPIPE
LOT 38
ROCK CHANNEL PROTECTION, TYPE C
10'x6'x18"D
10'x10'x18"D
690.00
LOT 26
696
700
702.00
704
706
708
710
712
714
716
718
718
718.50
718.25
719.25
718.75
719.25
719.48
719.48
719.68
719.68
719.25
719.50
717.5
720
720.00
720.00
707.50
707.00
707.50
721.25
720.75
720.75
LOT 25
1 1/2%
1/2%
1 1/2%
721.50
B-1
P-2
394.33'
722
EX G
EX 4" GAS
8" SAN
EX 21" STM
EX W
EX 12" WATER
EX 12" STM
EX 18" STM
CURB INLET
T/C 684.15
12" INV 679.25
18" INV 678.80
21" INV 678.56
CURB INLET
T/C 689.61
12" INV 686.03
SAN MH
RIM 693.37
INV 682.27
APPROXIMATE LOCATION OF 6" SAN TAP
INTER-OCEAN DRIVE
CURB INLET

Elevation ft.	Pond Area ~~ac.~~ sf	Average Pond Area, ~~ac.~~ sf	Increment of Depth, ft.	Increment of Volume, ~~ac.~~ ft.	Total Volume ~~ac.~~ ft.	ELEV.
689	0				0	689
		545	1			
690	1090				545	690
		3120	2	6240		
692	5150				6785	692
		7310	2	14620		
694	9470				21405	694
		11775	2	23550		
696	14080				44955	696
					43903	

Proposed detention pond volumes

PROJECT NAME: RPS FACILITY

PROJECT NUMBER: 56249 DATE: 1-5-99

Reservoir Report

Reservoir No. 1

BASIN

Culvert / Orifice Structures

		[A]	[B]	[C]
Rise (in)	=	15.0	6.0	0.0
Span (in)	=	15.0	48.0	0.0
No. Barrels	=	1	2	0
Invert El. (ft)	=	689.00	694.50	0.00
Length (ft)	=	0.0	0.0	0.0
Slope (%)	=	0.00	0.00	0.00
N-Value	=	.013	.013	.013
Orif. Coeff.	=	0.60	0.60	0.60
Multi-Stage	=	-----	No	No

Weir Structures

		[A]	[B]	[C]
Crest Len (ft)	=	0.0	0.0	0.0
Crest El. (ft)	=	0.00	0.00	0.00
Weir Coeff.	=	3.00	3.00	3.00
Eqn. Exp.	=	1.50	1.50	1.50
Multi-Stage	=	No	No	No

Tailwater Elevation = 0.00 ft

Note: All outflows have been analyzed under inlet and outlet control.

Stage / Storage / Discharge Table

Stage (ft)	Storage (cuft)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Discharge (cfs)
0.0	00	689.00	0.00	0.00	---	---	---	---	0.00
0.1	55	689.10	0.05	0.00	---	---	---	---	0.05
0.2	109	689.20	0.19	0.00	---	---	---	---	0.19
0.3	164	689.30	0.46	0.00	---	---	---	---	0.46
0.4	218	689.40	0.75	0.00	---	---	---	---	0.75
0.5	273	689.50	1.11	0.00	---	---	---	---	1.11
0.6	327	689.60	1.54	0.00	---	---	---	---	1.54
0.7	382	689.70	2.09	0.00	---	---	---	---	2.09
0.8	436	689.80	2.59	0.00	---	---	---	---	2.59
0.9	491	689.90	3.09	0.00	---	---	---	---	3.09
1.0	545	690.00	3.62	0.00	---	---	---	---	3.62
1.2	1,169	690.20	4.52	0.00	---	---	---	---	4.52 full flow
1.4	1,793	690.40	5.20	0.00	---	---	---	---	5.20
1.6	2,417	690.60	5.83	0.00	---	---	---	---	5.83
1.8	3,041	690.80	5.96	0.00	---	---	---	---	5.96
2.0	3,665	691.00	6.93	0.00	---	---	---	---	6.93
2.2	4,289	691.20	7.41	0.00	---	---	---	---	7.41
2.4	4,913	691.40	7.87	0.00	---	---	---	---	7.87
2.6	5,537	691.60	8.30	0.00	---	---	---	---	8.30
2.8	6,161	691.80	8.71	0.00	---	---	---	---	8.71
3.0	6,785	692.00	9.11	0.00	---	---	---	---	9.11
3.2	8,247	692.20	9.48	0.00	---	---	---	---	9.48
3.4	9,709	692.40	9.84	0.00	---	---	---	---	9.84
3.6	11,171	692.60	10.19	0.00	---	---	---	---	10.19

Continues on next page...

Stage / Storage / Discharge Table

Stage (ft)	Storage (cuft)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Discharge (cfs)
3.8	12,633	692.80	10.53	0.00	---	---	---	---	10.53
4.0	14,095	693.00	10.85	0.00	---	---	---	---	10.85
4.2	15,557	693.20	11.17	0.00	---	---	---	---	11.17
4.4	17,019	693.40	11.48	0.00	---	---	---	---	11.48
4.6	18,481	693.60	11.78	0.00	---	---	---	---	11.78
4.8	19,943	693.80	12.07	0.00	---	---	---	---	12.07
5.0	21,405	694.00	12.36	0.00	---	---	---	---	12.36
5.2	23,760	694.20	12.64	0.00	---	---	---	---	12.64
5.4	26,115	694.40	12.91	0.00	---	---	---	---	12.91
5.6	28,470	694.60	13.18	0.86	---	---	---	---	14.04 max all, 50yr.
5.8	30,825	694.80	13.44	4.48	---	---	---	---	17.92
6.0	33,180	695.00	13.70	9.63	---	---	---	---	23.33
6.2	35,535	695.20	13.95	11.72	---	---	---	---	25.67
6.4	37,890	695.40	14.20	15.53	---	---	---	---	29.73
6.6	40,245	695.60	14.44	17.76	---	---	---	---	32.20
6.8	42,600	695.80	14.68	19.74	---	---	---	---	34.42
7.0	44,955	696.00	14.92	21.53	---	---	---	---	36.45

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (acft)	Return period (yrs)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	Rational	14.1	1	16	0.31	10	----	------	------	PRE-10-EAST
2	Rational	10.4	1	11	0.16	10	----	------	------	PRE-10-WEST
3	Rational	33.4	1	14	0.65	10	----	------	------	POST-10-EAST
4	Rational	5.3	1	10	0.07	10	----	------	------	POST-10-WEST
5	Reservoir	11.2	1	23	0.65	10	3	693.25	15928	BASIN OUT-10YR
6	Rational	16.2	1	16	0.36	25	----	------	------	PRE-25-EAST
7	Rational	11.6	1	11	0.18	25	----	------	------	PRE-25-WEST
8	Rational	38.1	1	14	0.73	25	----	------	------	POST-25-EAST
9	Rational	6.0	1	10	0.08	25	----	------	------	POST-25-WEST
10	Reservoir	11.9	1	24	0.73	25	8	693.67	18989	BASIN OUT-25YR
11	Rational	18.8	1	16	0.42	50	----	------	------	PRE-50-EAST
12	Rational	13.6	1	11	0.21	50	----	------	------	PRE-50-WEST
13	Rational	44.4	1	14	0.86	50	----	------	------	POST-50-EAST
14	Rational	7.0	1	10	0.10	50	----	------	------	POST-50-WEST
15	Reservoir	12.6	1	24	0.86	50	13	694.17	23355	BASIN OUT-50YR
16	Rational	20.0	1	16	0.44	100	----	------	------	PRE-100-EAST
17	Rational	14.3	1	11	0.22	100	----	------	------	PRE-100-WEST
18	Rational	46.9	1	14	0.90	100	----	------	------	POST-100-EAST
19	Rational	7.3	1	10	0.10	100	----	------	------	POST-100-WEST
20	Reservoir	12.8	1	24	0.90	100	18	694.32	25133	BASIN OUT-100Y

OK

Proj. file: RPS.GPW | IDF file: CINC.IDF | Run date: 01-26-1999

Hydrograph Report

Hyd. No. 1

PRE-10-EAST

Hydrograph type	= Rational	Peak discharge	= 14.12 cfs
Storm frequency	= 10 yrs	Time interval	= 1 min
Drainage area	= 7.2 ac	Runoff coeff.	= .45
Intensity	= 4.36 in/hr	Time of conc. (Tc)	= 16 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 13,558 cuft, 0.311 acft

Hydrograph Discharge Table

Time (hrs)	Outflow cfs)
0.02	0.88
0.03	1.77
0.05	2.65
0.07	3.53
0.08	4.41
0.10	5.30
0.12	6.18
0.13	7.06
0.15	7.94
0.17	8.83
0.18	9.71
0.20	10.59
0.22	11.47
0.23	12.36
0.25	13.24
0.27	14.12 <<
0.28	13.24
0.30	12.36
0.32	11.47
0.33	10.59
0.35	9.71
0.37	8.83
0.38	7.94
0.40	7.06
0.42	6.18
0.43	5.30
0.45	4.41
0.47	3.53
0.48	2.65
0.50	1.77
0.52	0.88

...End

Hydrograph Report

Hyd. No. 2

PRE-10-WEST

Hydrograph type	= Rational	Peak discharge	= 10.35 cfs
Storm frequency	= 10 yrs	Time interval	= 1 min
Drainage area	= 4.6 ac	Runoff coeff.	= .45
Intensity	= 5.00 in/hr	Time of conc. (Tc)	= 11 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 6,831 cuft, 0.157 acft

Hydrograph Discharge Table

Time (hrs)	Outflow cfs)
0.02	0.94
0.03	1.88
0.05	2.82
0.07	3.76
0.08	4.70
0.10	5.65
0.12	6.59
0.13	7.53
0.15	8.47
0.17	9.41
0.18	10.35 <<
0.20	9.41
0.22	8.47
0.23	7.53
0.25	6.59
0.27	5.65
0.28	4.70
0.30	3.76
0.32	2.82
0.33	1.88
0.35	0.94

...End

Hydrograph Report

Hyd. No. 3

POST-10-EAST

Hydrograph type	= Rational	Peak discharge	= 33.45 cfs
Storm frequency	= 10 yrs	Time interval	= 1 min
Drainage area	= 9.1 ac	Runoff coeff.	= .8
Intensity	= 4.59 in/hr	Time of conc. (Tc)	= 14 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 28,097 cuft, 0.645 acft

Hydrograph Discharge Table

Time (hrs)	Outflow (cfs)
0.02	2.39
0.03	4.78
0.05	7.17
0.07	9.56
0.08	11.95
0.10	14.34
0.12	16.72
0.13	19.11
0.15	21.50
0.17	23.89
0.18	26.28
0.20	28.67
0.22	31.06
0.23	33.45 <<
0.25	31.06
0.27	28.67
0.28	26.28
0.30	23.89
0.32	21.50
0.33	19.11
0.35	16.72
0.37	14.34
0.38	11.95
0.40	9.56
0.42	7.17
0.43	4.78
0.45	2.39

...End

Hydrograph Report

Hyd. No. 4

POST-10-WEST

Hydrograph type	= Rational	Peak discharge	= 5.33 cfs
Storm frequency	= 10 yrs	Time interval	= 1 min
Drainage area	= 2.3 ac	Runoff coeff.	= .45
Intensity	= 5.15 in/hr	Time of conc. (Tc)	= 10 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 3,199 cuft, 0.073 acft

Hydrograph Discharge Table

Time (hrs)	Outflow cfs)
0.02	0.53
0.03	1.07
0.05	1.60
0.07	2.13
0.08	2.67
0.10	3.20
0.12	3.73
0.13	4.27
0.15	4.80
0.17	5.33 <<
0.18	4.80
0.20	4.27
0.22	3.73
0.23	3.20
0.25	2.67
0.27	2.13
0.28	1.60
0.30	1.07
0.32	0.53

...End

Hydrograph Report

Hyd. No. 5

BASIN OUT-10YR

Hydrograph type	= Reservoir	Peak discharge	= 11.25 cfs
Storm frequency	= 10 yrs	Time interval	= 1 min
Inflow hyd. No.	= 3	Reservoir name	= BASIN
Max. Elevation	= 693.25 ft	Max. Storage	= 15,928 cuft

Storage Indication method used.

Total Volume = 28,097 cuft, 0.645 acft

Hydrograph Discharge Table

Time (hrs)	Inflow (cfs)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Outflow (cfs)
0.02	2.39	689.13	0.09	-----	-----	-----	-----	-----	0.09
0.03	4.78	689.46	0.98	-----	-----	-----	-----	-----	0.98
0.05	7.17	689.90	3.07	-----	-----	-----	-----	-----	3.07
0.07	9.56	690.08	3.96	-----	-----	-----	-----	-----	3.96
0.08	11.95	690.20	4.52	-----	-----	-----	-----	-----	4.52
0.10	14.34	690.36	5.07	-----	-----	-----	-----	-----	5.07
0.12	16.72	690.56	5.69	-----	-----	-----	-----	-----	5.69
0.13	19.11	690.79	5.96	-----	-----	-----	-----	-----	5.96
0.15	21.50	691.05	7.06	-----	-----	-----	-----	-----	7.06
0.17	23.89	691.35	7.75	-----	-----	-----	-----	-----	7.75
0.18	26.28	691.67	8.46	-----	-----	-----	-----	-----	8.46
0.20	28.67	692.01	9.13	-----	-----	-----	-----	-----	9.13
0.22	31.06	692.18	9.45	-----	-----	-----	-----	-----	9.45
0.23	33.45 <<	692.37	9.79	-----	-----	-----	-----	-----	9.79
0.25	31.06	692.55	10.11	-----	-----	-----	-----	-----	10.11
0.27	28.67	692.71	10.38	-----	-----	-----	-----	-----	10.38
0.28	26.28	692.85	10.61	-----	-----	-----	-----	-----	10.61
0.30	23.89	692.97	10.81	-----	-----	-----	-----	-----	10.81
0.32	21.50	693.07	10.96	-----	-----	-----	-----	-----	10.96
0.33	19.11	693.14	11.08	-----	-----	-----	-----	-----	11.08
0.35	16.72	693.20	11.17	-----	-----	-----	-----	-----	11.17
0.37	14.34	693.24	11.23	-----	-----	-----	-----	-----	11.23
0.38	11.95	693.25 <<	11.25	-----	-----	-----	-----	-----	11.25 <<
0.40	9.56	693.25	11.24	-----	-----	-----	-----	-----	11.24
0.42	7.17	693.22	11.21	-----	-----	-----	-----	-----	11.21
0.43	4.78	693.18	11.14	-----	-----	-----	-----	-----	11.14
0.45	2.39	693.12	11.04	-----	-----	-----	-----	-----	11.04
0.47	0.00	693.04	10.92	-----	-----	-----	-----	-----	10.92
0.48	0.00	692.95	10.77	-----	-----	-----	-----	-----	10.77
0.50	0.00	692.86	10.63	-----	-----	-----	-----	-----	10.63
0.52	0.00	692.78	10.49	-----	-----	-----	-----	-----	10.49
0.53	0.00	692.69	10.34	-----	-----	-----	-----	-----	10.34
0.55	0.00	692.61	10.20	-----	-----	-----	-----	-----	10.20
0.57	0.00	692.52	10.05	-----	-----	-----	-----	-----	10.05
0.58	0.00	692.44	9.91	-----	-----	-----	-----	-----	9.91
0.60	0.00	692.36	9.77	-----	-----	-----	-----	-----	9.77

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Hydrograph Discharge Table

Time (hrs)	Inflow (cfs)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Outflow (cfs)
0.62	0.00	692.28	9.63	-----	-----	-----	-----	-----	9.63
0.63	0.00	692.20	9.48	-----	-----	-----	-----	-----	9.48
0.65	0.00	692.12	9.34	-----	-----	-----	-----	-----	9.34
0.67	0.00	692.05	9.20	-----	-----	-----	-----	-----	9.20
0.68	0.00	691.94	8.98	-----	-----	-----	-----	-----	8.98
0.70	0.00	691.77	8.65	-----	-----	-----	-----	-----	8.65
0.72	0.00	691.61	8.31	-----	-----	-----	-----	-----	8.31
0.73	0.00	691.45	7.98	-----	-----	-----	-----	-----	7.98
0.75	0.00	691.30	7.64	-----	-----	-----	-----	-----	7.64
0.77	0.00	691.16	7.31	-----	-----	-----	-----	-----	7.31
0.78	0.00	691.02	6.97	-----	-----	-----	-----	-----	6.97
0.80	0.00	690.89	6.39	-----	-----	-----	-----	-----	6.39
0.82	0.00	690.77	5.94	-----	-----	-----	-----	-----	5.94
0.83	0.00	690.66	5.87	-----	-----	-----	-----	-----	5.87
0.85	0.00	690.55	5.66	-----	-----	-----	-----	-----	5.66
0.87	0.00	690.44	5.33	-----	-----	-----	-----	-----	5.33
0.88	0.00	690.34	5.00	-----	-----	-----	-----	-----	5.00
0.90	0.00	690.25	4.68	-----	-----	-----	-----	-----	4.68
0.92	0.00	690.16	4.35	-----	-----	-----	-----	-----	4.35
0.93	0.00	690.08	3.99	-----	-----	-----	-----	-----	3.99
0.95	0.00	690.01	3.66	-----	-----	-----	-----	-----	3.66
0.97	0.00	689.72	2.20	-----	-----	-----	-----	-----	2.20
0.98	0.00	689.53	1.24	-----	-----	-----	-----	-----	1.24
1.00	0.00	689.42	0.82	-----	-----	-----	-----	-----	0.82
1.02	0.00	689.34	0.58	-----	-----	-----	-----	-----	0.58
1.03	0.00	689.29	0.42	-----	-----	-----	-----	-----	0.42
1.05	0.00	689.25	0.31	-----	-----	-----	-----	-----	0.31
1.07	0.00	689.21	0.23	-----	-----	-----	-----	-----	0.23
1.08	0.00	689.19	0.18	-----	-----	-----	-----	-----	0.18
1.10	0.00	689.17	0.16	-----	-----	-----	-----	-----	0.16
1.12	0.00	689.16	0.13	-----	-----	-----	-----	-----	0.13
1.13	0.00	689.14	0.11	-----	-----	-----	-----	-----	0.11
1.15	0.00	689.13	0.10	-----	-----	-----	-----	-----	0.10
1.17	0.00	689.12	0.08	-----	-----	-----	-----	-----	0.08
1.18	0.00	689.11	0.07	-----	-----	-----	-----	-----	0.07
1.20	0.00	689.11	0.06	-----	-----	-----	-----	-----	0.06
1.22	0.00	689.10	0.05	-----	-----	-----	-----	-----	0.05
1.23	0.00	689.09	0.05	-----	-----	-----	-----	-----	0.05
1.25	0.00	689.09	0.05	-----	-----	-----	-----	-----	0.05
1.27	0.00	689.08	0.04	-----	-----	-----	-----	-----	0.04
1.28	0.00	689.08	0.04	-----	-----	-----	-----	-----	0.04
1.30	0.00	689.07	0.04	-----	-----	-----	-----	-----	0.04
1.32	0.00	689.07	0.04	-----	-----	-----	-----	-----	0.04
1.33	0.00	689.07	0.04	-----	-----	-----	-----	-----	0.04
1.35	0.00	689.06	0.03	-----	-----	-----	-----	-----	0.03
1.37	0.00	689.06	0.03	-----	-----	-----	-----	-----	0.03
1.38	0.00	689.06	0.03	-----	-----	-----	-----	-----	0.03
1.40	0.00	689.05	0.03	-----	-----	-----	-----	-----	0.03
1.42	0.00	689.05	0.03	-----	-----	-----	-----	-----	0.03

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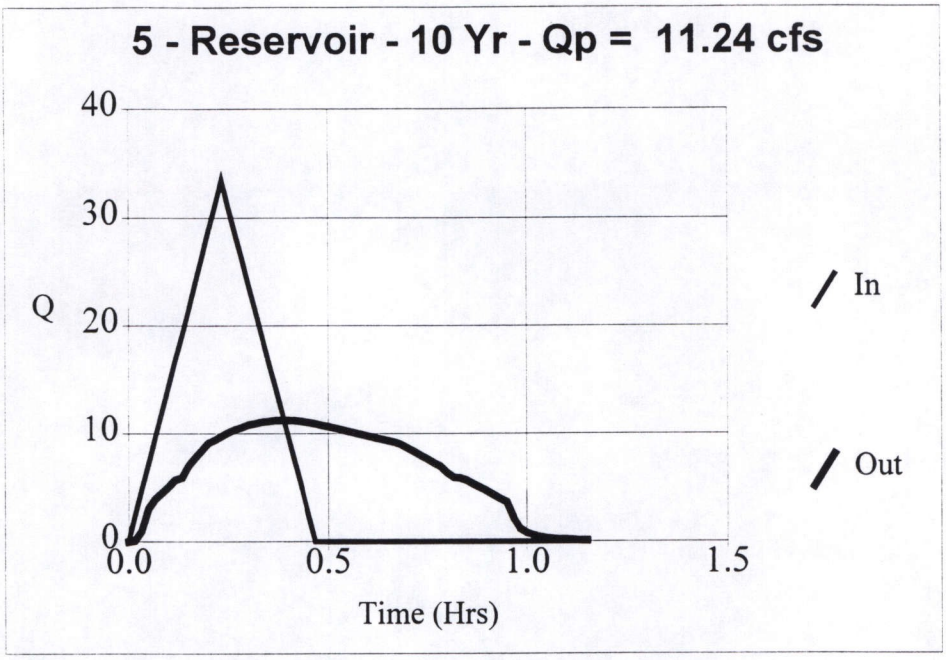
Hydrograph Discharge Table

Time (hrs)	Inflow (cfs)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Outflow (cfs)
1.43	0.00	689.05	0.02	-----	-----	-----	-----	-----	0.02
1.45	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.47	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.48	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.50	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.52	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.53	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.55	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.57	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.58	0.00	689.03	0.01	-----	-----	-----	-----	-----	0.01
1.60	0.00	689.03	0.01	-----	-----	-----	-----	-----	0.01
1.62	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.63	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.65	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.67	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.68	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01

...End


5 - Reservoir - 10 Yr - Qp = 11.24 cfs
40
30
20
10
0
Q
0.0
0.5
1.0
1.5
Time (Hrs)
In
Out

Hydrograph Report

Hyd. No. 6

PRE-25-EAST

Hydrograph type	= Rational	Peak discharge	= 16.20 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 7.2 ac	Runoff coeff.	= .45
Intensity	= 5.00 in/hr	Time of conc. (Tc)	= 16 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 15,552 cuft, 0.357 acft

Hydrograph Discharge Table

Time (hrs)	Outflow cfs)	
0.02	1.01	
0.03	2.02	
0.05	3.04	
0.07	4.05	
0.08	5.06	
0.10	6.07	
0.12	7.09	
0.13	8.10	
0.15	9.11	
0.17	10.12	
0.18	11.14	
0.20	12.15	
0.22	13.16	
0.23	14.17	
0.25	15.19	
0.27	16.20	<<
0.28	15.19	
0.30	14.17	
0.32	13.16	
0.33	12.15	
0.35	11.14	
0.37	10.13	
0.38	9.11	
0.40	8.10	
0.42	7.09	
0.43	6.08	
0.45	5.06	
0.47	4.05	
0.48	3.04	
0.50	2.03	
0.52	1.01	

...End

Hydrograph Report

Hyd. No. 7

PRE-25-WEST

Hydrograph type	= Rational	Peak discharge	= 11.61 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 4.6 ac	Runoff coeff.	= .45
Intensity	= 5.61 in/hr	Time of conc. (Tc)	= 11 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 7,664 cuft, 0.176 acft

Hydrograph Discharge Table

Time -- (hrs	Outflow cfs)
0.02	1.06
0.03	2.11
0.05	3.17
0.07	4.22
0.08	5.28
0.10	6.33
0.12	7.39
0.13	8.45
0.15	9.50
0.17	10.56
0.18	11.61 <<
0.20	10.56
0.22	9.50
0.23	8.45
0.25	7.39
0.27	6.33
0.28	5.28
0.30	4.22
0.32	3.17
0.33	2.11
0.35	1.06

...End

Hydrograph Report

Hyd. No. 8

POST-25-EAST

Hydrograph type	= Rational	Peak discharge	= 38.05 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 9.1 ac	Runoff coeff.	= .8
Intensity	= 5.23 in/hr	Time of conc. (Tc)	= 14 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 31,966 cuft, 0.734 acft

Hydrograph Discharge Table

Time (hrs)	Outflow cfs)
0.02	2.72
0.03	5.44
0.05	8.15
0.07	10.87
0.08	13.59
0.10	16.31
0.12	19.03
0.13	21.75
0.15	24.46
0.17	27.18
0.18	29.90
0.20	32.62
0.22	35.34
0.23	38.05 <<
0.25	35.34
0.27	32.62
0.28	29.90
0.30	27.18
0.32	24.46
0.33	21.75
0.35	19.03
0.37	16.31
0.38	13.59
0.40	10.87
0.42	8.15
0.43	5.44
0.45	2.72

...End

Hydrograph Report

Hyd. No. 9

POST-25-WEST

Hydrograph type	= Rational	Peak discharge	= 5.95 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 2.3 ac	Runoff coeff.	= .45
Intensity	= 5.75 in/hr	Time of conc. (Tc)	= 10 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 3,571 cuft, 0.082 acft

Hydrograph Discharge Table

Time (hrs)	Outflow cfs)
0.02	0.60
0.03	1.19
0.05	1.79
0.07	2.38
0.08	2.98
0.10	3.57
0.12	4.17
0.13	4.76
0.15	5.36
0.17	5.95 <<
0.18	5.36
0.20	4.76
0.22	4.17
0.23	3.57
0.25	2.98
0.27	2.38
0.28	1.79
0.30	1.19
0.32	0.60

...End

Hydrograph Report

Hyd. No. 10

BASIN OUT-25YR

Hydrograph type	= Reservoir	Peak discharge	= 11.88 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Inflow hyd. No.	= 8	Reservoir name	= BASIN
Max. Elevation	= 693.67 ft	Max. Storage	= 18,989 cuft

Storage Indication method used.

Total Volume = 31,966 cuft, 0.734 acft

Hydrograph Discharge Table

Time (hrs)	Inflow (cfs)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Outflow (cfs)
0.02	2.72	689.14	0.11	-----	-----	-----	-----	-----	0.11
0.03	5.44	689.52	1.20	-----	-----	-----	-----	-----	1.20
0.05	8.15	690.00	3.63	-----	-----	-----	-----	-----	3.63
0.07	10.87	690.11	4.11	-----	-----	-----	-----	-----	4.11
0.08	13.59	690.26	4.72	-----	-----	-----	-----	-----	4.72
0.10	16.31	690.45	5.36	-----	-----	-----	-----	-----	5.36
0.12	19.03	690.68	5.89	-----	-----	-----	-----	-----	5.89
0.13	21.75	690.95	6.70	-----	-----	-----	-----	-----	6.70
0.15	24.46	691.26	7.55	-----	-----	-----	-----	-----	7.55
0.17	27.18	691.60	8.31	-----	-----	-----	-----	-----	8.31
0.18	29.90	691.99	9.08	-----	-----	-----	-----	-----	9.08
0.20	32.62	692.17	9.43	-----	-----	-----	-----	-----	9.43
0.22	35.34	692.37	9.80	-----	-----	-----	-----	-----	9.80
0.23	38.05 <<	692.59	10.18	-----	-----	-----	-----	-----	10.18
0.25	35.34	692.81	10.54	-----	-----	-----	-----	-----	10.54
0.27	32.62	693.00	10.86	-----	-----	-----	-----	-----	10.86
0.28	29.90	693.17	11.12	-----	-----	-----	-----	-----	11.12
0.30	27.18	693.31	11.34	-----	-----	-----	-----	-----	11.34
0.32	24.46	693.43	11.52	-----	-----	-----	-----	-----	11.52
0.33	21.75	693.52	11.66	-----	-----	-----	-----	-----	11.66
0.35	19.03	693.59	11.77	-----	-----	-----	-----	-----	11.77
0.37	16.31	693.64	11.84	-----	-----	-----	-----	-----	11.84
0.38	13.59	693.67	11.88	-----	-----	-----	-----	-----	11.88
0.40	10.87	693.67 <<	11.88	-----	-----	-----	-----	-----	11.88 <<
0.42	8.15	693.65	11.85	-----	-----	-----	-----	-----	11.85
0.43	5.44	693.61	11.79	-----	-----	-----	-----	-----	11.79
0.45	2.72	693.55	11.70	-----	-----	-----	-----	-----	11.70
0.47	0.00	693.46	11.57	-----	-----	-----	-----	-----	11.57
0.48	0.00	693.37	11.43	-----	-----	-----	-----	-----	11.43
0.50	0.00	693.27	11.29	-----	-----	-----	-----	-----	11.29
0.52	0.00	693.18	11.14	-----	-----	-----	-----	-----	11.14
0.53	0.00	693.09	11.00	-----	-----	-----	-----	-----	11.00
0.55	0.00	693.00	10.86	-----	-----	-----	-----	-----	10.86
0.57	0.00	692.91	10.71	-----	-----	-----	-----	-----	10.71
0.58	0.00	692.83	10.57	-----	-----	-----	-----	-----	10.57
0.60	0.00	692.74	10.43	-----	-----	-----	-----	-----	10.43

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Hydrograph Discharge Table

Time (hrs)	Inflow (cfs)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Outflow (cfs)
0.62	0.00	692.65	10.28	-----	-----	-----	-----	-----	10.28
0.63	0.00	692.57	10.14	-----	-----	-----	-----	-----	10.14
0.65	0.00	692.49	10.00	-----	-----	-----	-----	-----	10.00
0.67	0.00	692.41	9.85	-----	-----	-----	-----	-----	9.85
0.68	0.00	692.33	9.71	-----	-----	-----	-----	-----	9.71
0.70	0.00	692.25	9.57	-----	-----	-----	-----	-----	9.57
0.72	0.00	692.17	9.42	-----	-----	-----	-----	-----	9.42
0.73	0.00	692.09	9.28	-----	-----	-----	-----	-----	9.28
0.75	0.00	692.02	9.14	-----	-----	-----	-----	-----	9.14
0.77	0.00	691.87	8.84	-----	-----	-----	-----	-----	8.84
0.78	0.00	691.70	8.51	-----	-----	-----	-----	-----	8.51
0.80	0.00	691.54	8.17	-----	-----	-----	-----	-----	8.17
0.82	0.00	691.39	7.84	-----	-----	-----	-----	-----	7.84
0.83	0.00	691.24	7.50	-----	-----	-----	-----	-----	7.50
0.85	0.00	691.10	7.16	-----	-----	-----	-----	-----	7.16
0.87	0.00	690.96	6.75	-----	-----	-----	-----	-----	6.75
0.88	0.00	690.84	6.15	-----	-----	-----	-----	-----	6.15
0.90	0.00	690.72	5.91	-----	-----	-----	-----	-----	5.91
0.92	0.00	690.61	5.84	-----	-----	-----	-----	-----	5.84
0.93	0.00	690.50	5.52	-----	-----	-----	-----	-----	5.52
0.95	0.00	690.40	5.19	-----	-----	-----	-----	-----	5.19
0.97	0.00	690.30	4.86	-----	-----	-----	-----	-----	4.86
0.98	0.00	690.21	4.56	-----	-----	-----	-----	-----	4.56
1.00	0.00	690.13	4.19	-----	-----	-----	-----	-----	4.19
1.02	0.00	690.05	3.84	-----	-----	-----	-----	-----	3.84
1.03	0.00	689.90	3.09	-----	-----	-----	-----	-----	3.09
1.05	0.00	689.63	1.73	-----	-----	-----	-----	-----	1.73
1.07	0.00	689.48	1.05	-----	-----	-----	-----	-----	1.05
1.08	0.00	689.39	0.71	-----	-----	-----	-----	-----	0.71
1.10	0.00	689.32	0.51	-----	-----	-----	-----	-----	0.51
1.12	0.00	689.27	0.38	-----	-----	-----	-----	-----	0.38
1.13	0.00	689.23	0.28	-----	-----	-----	-----	-----	0.28
1.15	0.00	689.21	0.21	-----	-----	-----	-----	-----	0.21
1.17	0.00	689.18	0.17	-----	-----	-----	-----	-----	0.17
1.18	0.00	689.17	0.15	-----	-----	-----	-----	-----	0.15
1.20	0.00	689.15	0.13	-----	-----	-----	-----	-----	0.13
1.22	0.00	689.14	0.11	-----	-----	-----	-----	-----	0.11
1.23	0.00	689.13	0.09	-----	-----	-----	-----	-----	0.09
1.25	0.00	689.12	0.08	-----	-----	-----	-----	-----	0.08
1.27	0.00	689.11	0.07	-----	-----	-----	-----	-----	0.07
1.28	0.00	689.10	0.06	-----	-----	-----	-----	-----	0.06
1.30	0.00	689.10	0.05	-----	-----	-----	-----	-----	0.05
1.32	0.00	689.09	0.05	-----	-----	-----	-----	-----	0.05
1.33	0.00	689.09	0.05	-----	-----	-----	-----	-----	0.05
1.35	0.00	689.08	0.04	-----	-----	-----	-----	-----	0.04
1.37	0.00	689.08	0.04	-----	-----	-----	-----	-----	0.04
1.38	0.00	689.07	0.04	-----	-----	-----	-----	-----	0.04
1.40	0.00	689.07	0.04	-----	-----	-----	-----	-----	0.04
1.42	0.00	689.06	0.03	-----	-----	-----	-----	-----	0.03

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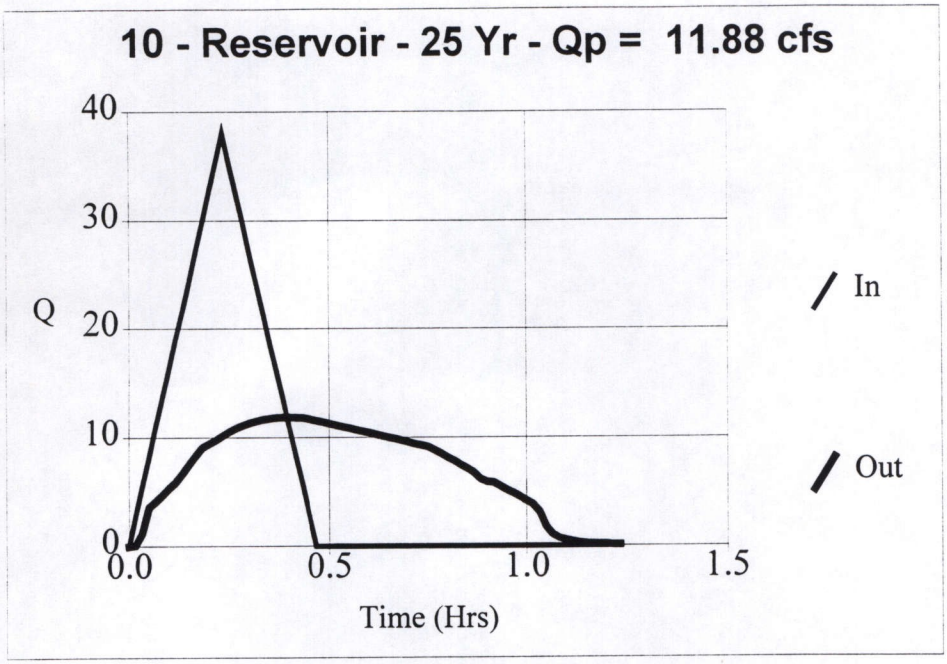
Hydrograph Discharge Table

Time (hrs)	Inflow (cfs)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Outflow (cfs)
1.43	0.00	689.06	0.03	-----	-----	-----	-----	-----	0.03
1.45	0.00	689.06	0.03	-----	-----	-----	-----	-----	0.03
1.47	0.00	689.05	0.03	-----	-----	-----	-----	-----	0.03
1.48	0.00	689.05	0.03	-----	-----	-----	-----	-----	0.03
1.50	0.00	689.05	0.03	-----	-----	-----	-----	-----	0.03
1.52	0.00	689.05	0.02	-----	-----	-----	-----	-----	0.02
1.53	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.55	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.57	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.58	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.60	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.62	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.63	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.65	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.67	0.00	689.03	0.01	-----	-----	-----	-----	-----	0.01
1.68	0.00	689.03	0.01	-----	-----	-----	-----	-----	0.01
1.70	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.72	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.73	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.75	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.77	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01

...End


10 - Reservoir - 25 Yr - Qp = 11.88 cfs
40
30
20
10
0
Q
0.0
0.5
1.0
1.5
Time (Hrs)
In
Out

Hydrograph Report

Hyd. No. 11

PRE-50-EAST

Hydrograph type	= Rational	Peak discharge	= 18.84 cfs
Storm frequency	= 50 yrs	Time interval	= 1 min
Drainage area	= 7.2 ac	Runoff coeff.	= .45
Intensity	= 5.81 in/hr	Time of conc. (Tc)	= 16 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 18,084 cuft, 0.415 acft

Hydrograph Discharge Table

Time (hrs)	Outflow cfs)
0.02	1.18
0.03	2.35
0.05	3.53
0.07	4.71
0.08	5.89
0.10	7.06
0.12	8.24
0.13	9.42
0.15	10.60
0.17	11.77
0.18	12.95
0.20	14.13
0.22	15.31
0.23	16.48
0.25	17.66
0.27	18.84 <<
0.28	17.66
0.30	16.48
0.32	15.31
0.33	14.13
0.35	12.95
0.37	11.77
0.38	10.60
0.40	9.42
0.42	8.24
0.43	7.06
0.45	5.89
0.47	4.71
0.48	3.53
0.50	2.35
0.52	1.18

...End

Hydrograph Report

Hyd. No. 12

PRE-50-WEST

Hydrograph type	= Rational	Peak discharge	= 13.62 cfs
Storm frequency	= 50 yrs	Time interval	= 1 min
Drainage area	= 4.6 ac	Runoff coeff.	= .45
Intensity	= 6.58 in/hr	Time of conc. (Tc)	= 11 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 8,988 cuft, 0.206 acft

Hydrograph Discharge Table

Time (hrs)	Outflow cfs)
0.02	1.24
0.03	2.48
0.05	3.71
0.07	4.95
0.08	6.19
0.10	7.43
0.12	8.67
0.13	9.90
0.15	11.14
0.17	12.38
0.18	13.62 <<
0.20	12.38
0.22	11.14
0.23	9.90
0.25	8.67
0.27	7.43
0.28	6.19
0.30	4.95
0.32	3.71
0.33	2.48
0.35	1.24

...End

Hydrograph Report

Hyd. No. 13

POST-50-EAST

Hydrograph type	= Rational	Peak discharge	= 44.39 cfs
Storm frequency	= 50 yrs	Time interval	= 1 min
Drainage area	= 9.1 ac	Runoff coeff.	= .8
Intensity	= 6.10 in/hr	Time of conc. (Tc)	= 14 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 37,288 cuft, 0.856 acft

Hydrograph Discharge Table

Time (hrs)	Outflow cfs)	
0.02	3.17	
0.03	6.34	
0.05	9.51	
0.07	12.68	
0.08	15.85	
0.10	19.02	
0.12	22.20	
0.13	25.37	
0.15	28.54	
0.17	31.71	
0.18	34.88	
0.20	38.05	
0.22	41.22	
0.23	44.39	<<
0.25	41.22	
0.27	38.05	
0.28	34.88	
0.30	31.71	
0.32	28.54	
0.33	25.37	
0.35	22.20	
0.37	19.02	
0.38	15.85	
0.40	12.68	
0.42	9.51	
0.43	6.34	
0.45	3.17	

...End

Hydrograph Report

Hyd. No. 14

POST-50-WEST

Hydrograph type	= Rational	Peak discharge	= 6.99 cfs
Storm frequency	= 50 yrs	Time interval	= 1 min
Drainage area	= 2.3 ac	Runoff coeff.	= .45
Intensity	= 6.76 in/hr	Time of conc. (Tc)	= 10 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 4,196 cuft, 0.096 acft

Hydrograph Discharge Table

Time -- (hrs	Outflow cfs)	
0.02	0.70	
0.03	1.40	
0.05	2.10	
0.07	2.80	
0.08	3.50	
0.10	4.20	
0.12	4.90	
0.13	5.59	
0.15	6.29	
0.17	6.99	<<
0.18	6.29	
0.20	5.59	
0.22	4.90	
0.23	4.20	
0.25	3.50	
0.27	2.80	
0.28	2.10	
0.30	1.40	
0.32	0.70	

...End

Hydrograph Report

Hyd. No. 15

BASIN OUT-50YR

Hydrograph type	= Reservoir	Peak discharge	= 12.59 cfs
Storm frequency	= 50 yrs	Time interval	= 1 min
Inflow hyd. No.	= 13	Reservoir name	= BASIN
Max. Elevation	= 694.17 ft	Max. Storage	= 23,355 cuft

Storage Indication method used.

Total Volume = 37,288 cuft, 0.856 acft

Hydrograph Discharge Table

Time (hrs)	Inflow (cfs)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Outflow (cfs)
0.02	3.17	689.17	0.15	-----	-----	-----	-----	-----	0.15
0.03	6.34	689.60	1.53	-----	-----	-----	-----	-----	1.53
0.05	9.51	690.03	3.76	-----	-----	-----	-----	-----	3.76
0.07	12.68	690.17	4.37	-----	-----	-----	-----	-----	4.37
0.08	15.85	690.35	5.03	-----	-----	-----	-----	-----	5.03
0.10	19.02	690.58	5.78	-----	-----	-----	-----	-----	5.78
0.12	22.20	690.86	6.26	-----	-----	-----	-----	-----	6.26
0.13	25.37	691.19	7.39	-----	-----	-----	-----	-----	7.39
0.15	28.54	691.56	8.21	-----	-----	-----	-----	-----	8.21
0.17	31.71	691.97	9.05	-----	-----	-----	-----	-----	9.05
0.18	34.88	692.18	9.45	-----	-----	-----	-----	-----	9.45
0.20	38.05	692.40	9.85	-----	-----	-----	-----	-----	9.85
0.22	41.22	692.65	10.27	-----	-----	-----	-----	-----	10.27
0.23	44.39 <<	692.91	10.71	-----	-----	-----	-----	-----	10.71
0.25	41.22	693.17	11.13	-----	-----	-----	-----	-----	11.13
0.27	38.05	693.41	11.49	-----	-----	-----	-----	-----	11.49
0.28	34.88	693.61	11.79	-----	-----	-----	-----	-----	11.79
0.30	31.71	693.79	12.05	-----	-----	-----	-----	-----	12.05
0.32	28.54	693.93	12.26	-----	-----	-----	-----	-----	12.26
0.33	25.37	694.03	12.40	-----	-----	-----	-----	-----	12.40
0.35	22.20	694.09	12.48	-----	-----	-----	-----	-----	12.48
0.37	19.02	694.13	12.54	-----	-----	-----	-----	-----	12.54
0.38	15.85	694.16	12.58	-----	-----	-----	-----	-----	12.58
0.40	12.68	694.17 <<	12.59	-----	-----	-----	-----	-----	12.59 <<
0.42	9.51	694.16	12.58	-----	-----	-----	-----	-----	12.58
0.43	6.34	694.13	12.55	-----	-----	-----	-----	-----	12.55
0.45	3.17	694.09	12.49	-----	-----	-----	-----	-----	12.49
0.47	0.00	694.04	12.41	-----	-----	-----	-----	-----	12.41
0.48	0.00	693.96	12.30	-----	-----	-----	-----	-----	12.30
0.50	0.00	693.86	12.16	-----	-----	-----	-----	-----	12.16
0.52	0.00	693.76	12.02	-----	-----	-----	-----	-----	12.02
0.53	0.00	693.66	11.87	-----	-----	-----	-----	-----	11.87
0.55	0.00	693.57	11.73	-----	-----	-----	-----	-----	11.73
0.57	0.00	693.47	11.59	-----	-----	-----	-----	-----	11.59
0.58	0.00	693.38	11.44	-----	-----	-----	-----	-----	11.44
0.60	0.00	693.28	11.30	-----	-----	-----	-----	-----	11.30

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Hydrograph Discharge Table

Time (hrs)	Inflow (cfs)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Outflow (cfs)
0.62	0.00	693.19	11.16	-----	-----	-----	-----	-----	11.16
0.63	0.00	693.10	11.01	-----	-----	-----	-----	-----	11.01
0.65	0.00	693.01	10.87	-----	-----	-----	-----	-----	10.87
0.67	0.00	692.92	10.73	-----	-----	-----	-----	-----	10.73
0.68	0.00	692.84	10.58	-----	-----	-----	-----	-----	10.58
0.70	0.00	692.75	10.44	-----	-----	-----	-----	-----	10.44
0.72	0.00	692.66	10.30	-----	-----	-----	-----	-----	10.30
0.73	0.00	692.58	10.16	-----	-----	-----	-----	-----	10.16
0.75	0.00	692.50	10.01	-----	-----	-----	-----	-----	10.01
0.77	0.00	692.42	9.87	-----	-----	-----	-----	-----	9.87
0.78	0.00	692.33	9.72	-----	-----	-----	-----	-----	9.72
0.80	0.00	692.26	9.58	-----	-----	-----	-----	-----	9.58
0.82	0.00	692.18	9.44	-----	-----	-----	-----	-----	9.44
0.83	0.00	692.10	9.29	-----	-----	-----	-----	-----	9.29
0.85	0.00	692.03	9.15	-----	-----	-----	-----	-----	9.15
0.87	0.00	691.89	8.88	-----	-----	-----	-----	-----	8.88
0.88	0.00	691.72	8.54	-----	-----	-----	-----	-----	8.54
0.90	0.00	691.56	8.21	-----	-----	-----	-----	-----	8.21
0.92	0.00	691.40	7.88	-----	-----	-----	-----	-----	7.88
0.93	0.00	691.25	7.54	-----	-----	-----	-----	-----	7.54
0.95	0.00	691.11	7.20	-----	-----	-----	-----	-----	7.20
0.97	0.00	690.98	6.82	-----	-----	-----	-----	-----	6.82
0.98	0.00	690.85	6.21	-----	-----	-----	-----	-----	6.21
1.00	0.00	690.74	5.92	-----	-----	-----	-----	-----	5.92
1.02	0.00	690.62	5.85	-----	-----	-----	-----	-----	5.85
1.03	0.00	690.51	5.56	-----	-----	-----	-----	-----	5.56
1.05	0.00	690.41	5.23	-----	-----	-----	-----	-----	5.23
1.07	0.00	690.31	4.90	-----	-----	-----	-----	-----	4.90
1.08	0.00	690.22	4.59	-----	-----	-----	-----	-----	4.59
1.10	0.00	690.14	4.23	-----	-----	-----	-----	-----	4.23
1.12	0.00	690.06	3.88	-----	-----	-----	-----	-----	3.88
1.13	0.00	689.93	3.27	-----	-----	-----	-----	-----	3.27
1.15	0.00	689.65	1.83	-----	-----	-----	-----	-----	1.83
1.17	0.00	689.49	1.09	-----	-----	-----	-----	-----	1.09
1.18	0.00	689.39	0.73	-----	-----	-----	-----	-----	0.73
1.20	0.00	689.32	0.53	-----	-----	-----	-----	-----	0.53
1.22	0.00	689.27	0.39	-----	-----	-----	-----	-----	0.39
1.23	0.00	689.24	0.29	-----	-----	-----	-----	-----	0.29
1.25	0.00	689.21	0.21	-----	-----	-----	-----	-----	0.21
1.27	0.00	689.19	0.17	-----	-----	-----	-----	-----	0.17
1.28	0.00	689.17	0.15	-----	-----	-----	-----	-----	0.15
1.30	0.00	689.15	0.13	-----	-----	-----	-----	-----	0.13
1.32	0.00	689.14	0.11	-----	-----	-----	-----	-----	0.11
1.33	0.00	689.13	0.09	-----	-----	-----	-----	-----	0.09
1.35	0.00	689.12	0.08	-----	-----	-----	-----	-----	0.08
1.37	0.00	689.11	0.07	-----	-----	-----	-----	-----	0.07
1.38	0.00	689.10	0.06	-----	-----	-----	-----	-----	0.06
1.40	0.00	689.10	0.05	-----	-----	-----	-----	-----	0.05
1.42	0.00	689.09	0.05	-----	-----	-----	-----	-----	0.05

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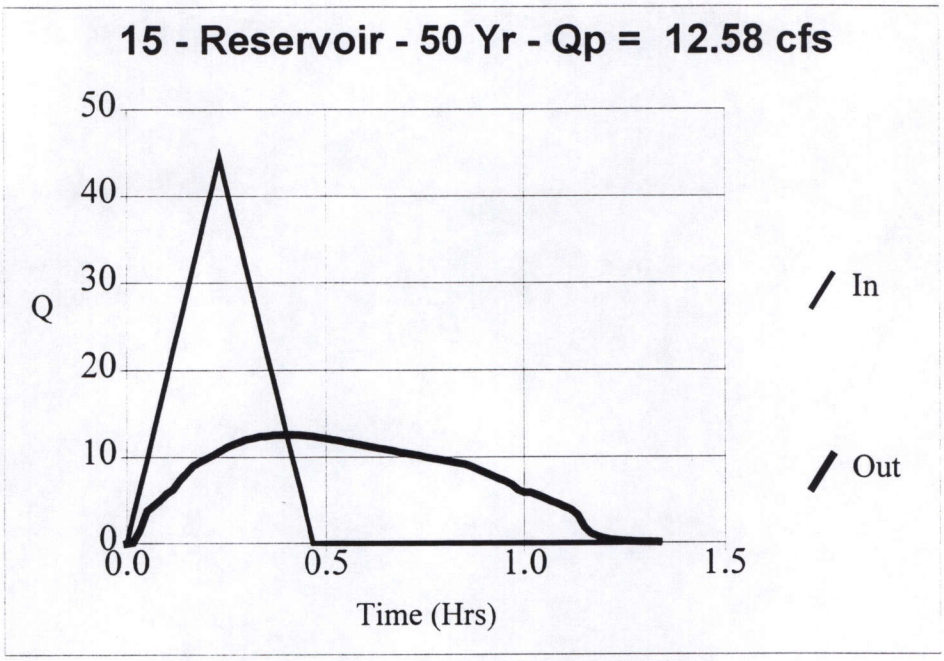
Hydrograph Discharge Table

Time (hrs)	Inflow (cfs)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Outflow (cfs)
1.43	0.00	689.09	0.05	-----	-----	-----	-----	-----	0.05
1.45	0.00	689.08	0.04	-----	-----	-----	-----	-----	0.04
1.47	0.00	689.08	0.04	-----	-----	-----	-----	-----	0.04
1.48	0.00	689.07	0.04	-----	-----	-----	-----	-----	0.04
1.50	0.00	689.07	0.04	-----	-----	-----	-----	-----	0.04
1.52	0.00	689.06	0.03	-----	-----	-----	-----	-----	0.03
1.53	0.00	689.06	0.03	-----	-----	-----	-----	-----	0.03
1.55	0.00	689.06	0.03	-----	-----	-----	-----	-----	0.03
1.57	0.00	689.05	0.03	-----	-----	-----	-----	-----	0.03
1.58	0.00	689.05	0.03	-----	-----	-----	-----	-----	0.03
1.60	0.00	689.05	0.03	-----	-----	-----	-----	-----	0.03
1.62	0.00	689.05	0.02	-----	-----	-----	-----	-----	0.02
1.63	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.65	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.67	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.68	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.70	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.72	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.73	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.75	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.77	0.00	689.03	0.01	-----	-----	-----	-----	-----	0.01
1.78	0.00	689.03	0.01	-----	-----	-----	-----	-----	0.01
1.80	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.82	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.83	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.85	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.87	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01

...End


15 - Reservoir - 50 Yr - Qp = 12.58 cfs
50
40
30
20
10
0
Q
0.0
0.5
1.0
1.5
Time (Hrs)
In
Out

Hydrograph Report

Hyd. No. 16

PRE-100-EAST

Hydrograph type	= Rational	Peak discharge	= 19.99 cfs
Storm frequency	= 100 yrs	Time interval	= 1 min
Drainage area	= 7.2 ac	Runoff coeff.	= .45
Intensity	= 6.17 in/hr	Time of conc. (Tc)	= 16 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 19,192 cuft, 0.441 acft

Hydrograph Discharge Table

Time -- Outflow (hrs cfs)	
0.02	1.25
0.03	2.50
0.05	3.75
0.07	5.00
0.08	6.25
0.10	7.50
0.12	8.75
0.13	10.00
0.15	11.25
0.17	12.49
0.18	13.74
0.20	14.99
0.22	16.24
0.23	17.49
0.25	18.74
0.27	19.99 <<
0.28	18.74
0.30	17.49
0.32	16.24
0.33	14.99
0.35	13.74
0.37	12.49
0.38	11.25
0.40	10.00
0.42	8.75
0.43	7.50
0.45	6.25
0.47	5.00
0.48	3.75
0.50	2.50
0.52	1.25

...End

Hydrograph Report

Hyd. No. 17

PRE-100-WEST

Hydrograph type	= Rational	Peak discharge	= 14.29 cfs
Storm frequency	= 100 yrs	Time interval	= 1 min
Drainage area	= 4.6 ac	Runoff coeff.	= .45
Intensity	= 6.90 in/hr	Time of conc. (Tc)	= 11 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 9,433 cuft, 0.217 acft

Hydrograph Discharge Table

Time (hrs)	Outflow (cfs)
0.02	1.30
0.03	2.60
0.05	3.90
0.07	5.20
0.08	6.50
0.10	7.80
0.12	9.10
0.13	10.39
0.15	11.69
0.17	12.99
0.18	14.29 <<
0.20	12.99
0.22	11.69
0.23	10.39
0.25	9.10
0.27	7.80
0.28	6.50
0.30	5.20
0.32	3.90
0.33	2.60
0.35	1.30

...End

Hydrograph Report

Hyd. No. 18

POST-100-EAST

Hydrograph type	= Rational	Peak discharge	= 46.92 cfs
Storm frequency	= 100 yrs	Time interval	= 1 min
Drainage area	= 9.1 ac	Runoff coeff.	= .8
Intensity	= 6.44 in/hr	Time of conc. (Tc)	= 14 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 39,409 cuft, 0.905 acft

Hydrograph Discharge Table

Time (hrs)	Outflow cfs)
0.02	3.35
0.03	6.70
0.05	10.05
0.07	13.40
0.08	16.76
0.10	20.11
0.12	23.46
0.13	26.81
0.15	30.16
0.17	33.51
0.18	36.86
0.20	40.21
0.22	43.56
0.23	46.92 <<
0.25	43.56
0.27	40.21
0.28	36.86
0.30	33.51
0.32	30.16
0.33	26.81
0.35	23.46
0.37	20.11
0.38	16.76
0.40	13.40
0.42	10.05
0.43	6.70
0.45	3.35

...End

Hydrograph Report

Hyd. No. 19

POST-100-WEST

Hydrograph type	= Rational	Peak discharge	= 7.32 cfs
Storm frequency	= 100 yrs	Time interval	= 1 min
Drainage area	= 2.3 ac	Runoff coeff.	= .45
Intensity	= 7.07 in/hr	Time of conc. (Tc)	= 10 min
I-D-F Curve	= CINC.IDF	Reced. limb factor	= 1

Total Volume = 4,392 cuft, 0.101 acft

Hydrograph Discharge Table

Time (hrs)	Outflow (cfs)
0.02	0.73
0.03	1.46
0.05	2.20
0.07	2.93
0.08	3.66
0.10	4.39
0.12	5.12
0.13	5.86
0.15	6.59
0.17	7.32 <<
0.18	6.59
0.20	5.86
0.22	5.12
0.23	4.39
0.25	3.66
0.27	2.93
0.28	2.20
0.30	1.46
0.32	0.73

...End

Hydrograph Report

Hyd. No. 20

BASIN OUT-100YR

Hydrograph type	= Reservoir	Peak discharge	= 12.80 cfs
Storm frequency	= 100 yrs	Time interval	= 1 min
Inflow hyd. No.	= 18	Reservoir name	= BASIN
Max. Elevation	= 694.32 ft	Max. Storage	= 25,133 cuft

Storage Indication method used.

Total Volume = 39,409 cuft, 0.905 acft

Hydrograph Discharge Table

Time (hrs)	Inflow (cfs)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Outflow (cfs)
0.02	3.35	689.18	0.16	-----	-----	-----	-----	-----	0.16
0.03	6.70	689.63	1.69	-----	-----	-----	-----	-----	1.69
0.05	10.05	690.04	3.82	-----	-----	-----	-----	-----	3.82
0.07	13.40	690.19	4.47	-----	-----	-----	-----	-----	4.47
0.08	16.76	690.39	5.15	-----	-----	-----	-----	-----	5.15
0.10	20.11	690.63	5.86	-----	-----	-----	-----	-----	5.86
0.12	23.46	690.93	6.61	-----	-----	-----	-----	-----	6.61
0.13	26.81	691.28	7.60	-----	-----	-----	-----	-----	7.60
0.15	30.16	691.67	8.46	-----	-----	-----	-----	-----	8.46
0.17	33.51	692.05	9.20	-----	-----	-----	-----	-----	9.20
0.18	36.86	692.26	9.59	-----	-----	-----	-----	-----	9.59
0.20	40.21	692.50	10.01	-----	-----	-----	-----	-----	10.01
0.22	43.56	692.76	10.46	-----	-----	-----	-----	-----	10.46
0.23	46.92 <<	693.04	10.92	-----	-----	-----	-----	-----	10.92
0.25	43.56	693.32	11.36	-----	-----	-----	-----	-----	11.36
0.27	40.21	693.57	11.73	-----	-----	-----	-----	-----	11.73
0.28	36.86	693.79	12.06	-----	-----	-----	-----	-----	12.06
0.30	33.51	693.98	12.33	-----	-----	-----	-----	-----	12.33
0.32	30.16	694.08	12.48	-----	-----	-----	-----	-----	12.48
0.33	26.81	694.17	12.59	-----	-----	-----	-----	-----	12.59
0.35	23.46	694.23	12.68	-----	-----	-----	-----	-----	12.68
0.37	20.11	694.28	12.74	-----	-----	-----	-----	-----	12.74
0.38	16.76	694.30	12.78	-----	-----	-----	-----	-----	12.78
0.40	13.40	694.32 <<	12.80	-----	-----	-----	-----	-----	12.80 <<
0.42	10.05	694.31	12.79	-----	-----	-----	-----	-----	12.79
0.43	6.70	694.29	12.76	-----	-----	-----	-----	-----	12.76
0.45	3.35	694.25	12.70	-----	-----	-----	-----	-----	12.70
0.47	0.00	694.19	12.63	-----	-----	-----	-----	-----	12.63
0.48	0.00	694.13	12.54	-----	-----	-----	-----	-----	12.54
0.50	0.00	694.07	12.45	-----	-----	-----	-----	-----	12.45
0.52	0.00	694.00	12.36	-----	-----	-----	-----	-----	12.36
0.53	0.00	693.90	12.22	-----	-----	-----	-----	-----	12.22
0.55	0.00	693.80	12.08	-----	-----	-----	-----	-----	12.08
0.57	0.00	693.71	11.93	-----	-----	-----	-----	-----	11.93
0.58	0.00	693.61	11.79	-----	-----	-----	-----	-----	11.79
0.60	0.00	693.51	11.65	-----	-----	-----	-----	-----	11.65

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Hydrograph Discharge Table

Time (hrs)	Inflow (cfs)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Outflow (cfs)
0.62	0.00	693.42	11.50	-----	-----	-----	-----	-----	11.50
0.63	0.00	693.32	11.36	-----	-----	-----	-----	-----	11.36
0.65	0.00	693.23	11.22	-----	-----	-----	-----	-----	11.22
0.67	0.00	693.14	11.07	-----	-----	-----	-----	-----	11.07
0.68	0.00	693.05	10.93	-----	-----	-----	-----	-----	10.93
0.70	0.00	692.96	10.79	-----	-----	-----	-----	-----	10.79
0.72	0.00	692.87	10.64	-----	-----	-----	-----	-----	10.64
0.73	0.00	692.78	10.50	-----	-----	-----	-----	-----	10.50
0.75	0.00	692.70	10.36	-----	-----	-----	-----	-----	10.36
0.77	0.00	692.61	10.21	-----	-----	-----	-----	-----	10.21
0.78	0.00	692.53	10.07	-----	-----	-----	-----	-----	10.07
0.80	0.00	692.45	9.93	-----	-----	-----	-----	-----	9.93
0.82	0.00	692.37	9.78	-----	-----	-----	-----	-----	9.78
0.83	0.00	692.29	9.64	-----	-----	-----	-----	-----	9.64
0.85	0.00	692.21	9.50	-----	-----	-----	-----	-----	9.50
0.87	0.00	692.13	9.35	-----	-----	-----	-----	-----	9.35
0.88	0.00	692.06	9.21	-----	-----	-----	-----	-----	9.21
0.90	0.00	691.96	9.02	-----	-----	-----	-----	-----	9.02
0.92	0.00	691.79	8.69	-----	-----	-----	-----	-----	8.69
0.93	0.00	691.62	8.35	-----	-----	-----	-----	-----	8.35
0.95	0.00	691.47	8.01	-----	-----	-----	-----	-----	8.01
0.97	0.00	691.31	7.68	-----	-----	-----	-----	-----	7.68
0.98	0.00	691.17	7.34	-----	-----	-----	-----	-----	7.34
1.00	0.00	691.03	7.01	-----	-----	-----	-----	-----	7.01
1.02	0.00	690.90	6.46	-----	-----	-----	-----	-----	6.46
1.03	0.00	690.78	5.95	-----	-----	-----	-----	-----	5.95
1.05	0.00	690.67	5.88	-----	-----	-----	-----	-----	5.88
1.07	0.00	690.56	5.70	-----	-----	-----	-----	-----	5.70
1.08	0.00	690.45	5.36	-----	-----	-----	-----	-----	5.36
1.10	0.00	690.35	5.04	-----	-----	-----	-----	-----	5.04
1.12	0.00	690.26	4.72	-----	-----	-----	-----	-----	4.72
1.13	0.00	690.17	4.39	-----	-----	-----	-----	-----	4.39
1.15	0.00	690.09	4.02	-----	-----	-----	-----	-----	4.02
1.17	0.00	690.02	3.69	-----	-----	-----	-----	-----	3.69
1.18	0.00	689.75	2.36	-----	-----	-----	-----	-----	2.36
1.20	0.00	689.55	1.33	-----	-----	-----	-----	-----	1.33
1.22	0.00	689.43	0.86	-----	-----	-----	-----	-----	0.86
1.23	0.00	689.35	0.61	-----	-----	-----	-----	-----	0.61
1.25	0.00	689.29	0.44	-----	-----	-----	-----	-----	0.44
1.27	0.00	689.25	0.33	-----	-----	-----	-----	-----	0.33
1.28	0.00	689.22	0.24	-----	-----	-----	-----	-----	0.24
1.30	0.00	689.19	0.19	-----	-----	-----	-----	-----	0.19
1.32	0.00	689.18	0.16	-----	-----	-----	-----	-----	0.16
1.33	0.00	689.16	0.14	-----	-----	-----	-----	-----	0.14
1.35	0.00	689.15	0.12	-----	-----	-----	-----	-----	0.12
1.37	0.00	689.13	0.10	-----	-----	-----	-----	-----	0.10
1.38	0.00	689.12	0.09	-----	-----	-----	-----	-----	0.09
1.40	0.00	689.11	0.07	-----	-----	-----	-----	-----	0.07
1.42	0.00	689.11	0.06	-----	-----	-----	-----	-----	0.06

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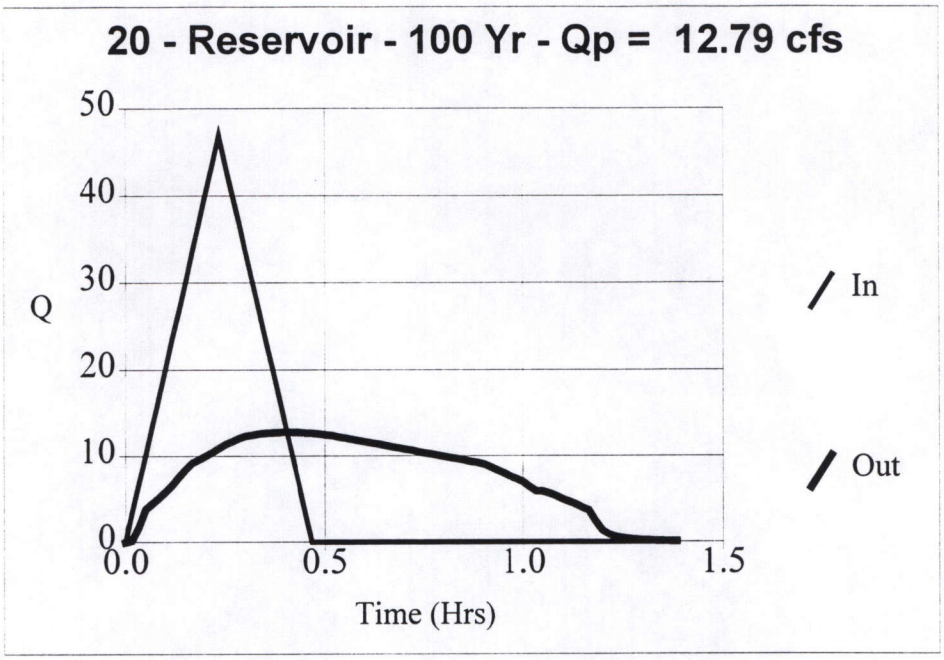
Hydrograph Discharge Table

Time (hrs)	Inflow (cfs)	Elevation (ft)	Culv. A (cfs)	Culv. B (cfs)	Culv. C (cfs)	Weir A (cfs)	Weir B (cfs)	Weir C (cfs)	Outflow (cfs)
1.43	0.00	689.10	0.05	-----	-----	-----	-----	-----	0.05
1.45	0.00	689.09	0.05	-----	-----	-----	-----	-----	0.05
1.47	0.00	689.09	0.05	-----	-----	-----	-----	-----	0.05
1.48	0.00	689.08	0.04	-----	-----	-----	-----	-----	0.04
1.50	0.00	689.08	0.04	-----	-----	-----	-----	-----	0.04
1.52	0.00	689.07	0.04	-----	-----	-----	-----	-----	0.04
1.53	0.00	689.07	0.04	-----	-----	-----	-----	-----	0.04
1.55	0.00	689.07	0.04	-----	-----	-----	-----	-----	0.04
1.57	0.00	689.06	0.03	-----	-----	-----	-----	-----	0.03
1.58	0.00	689.06	0.03	-----	-----	-----	-----	-----	0.03
1.60	0.00	689.06	0.03	-----	-----	-----	-----	-----	0.03
1.62	0.00	689.05	0.03	-----	-----	-----	-----	-----	0.03
1.63	0.00	689.05	0.03	-----	-----	-----	-----	-----	0.03
1.65	0.00	689.05	0.02	-----	-----	-----	-----	-----	0.02
1.67	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.68	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.70	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.72	0.00	689.04	0.02	-----	-----	-----	-----	-----	0.02
1.73	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.75	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.77	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.78	0.00	689.03	0.02	-----	-----	-----	-----	-----	0.02
1.80	0.00	689.03	0.01	-----	-----	-----	-----	-----	0.01
1.82	0.00	689.03	0.01	-----	-----	-----	-----	-----	0.01
1.83	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.85	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.87	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.88	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01
1.90	0.00	689.02	0.01	-----	-----	-----	-----	-----	0.01

...End


20 - Reservoir - 100 Yr - Qp = 12.79 cfs
50
40
30
20
10
0
Q
0.0
0.5
1.0
1.5
Time (Hrs)
In
Out