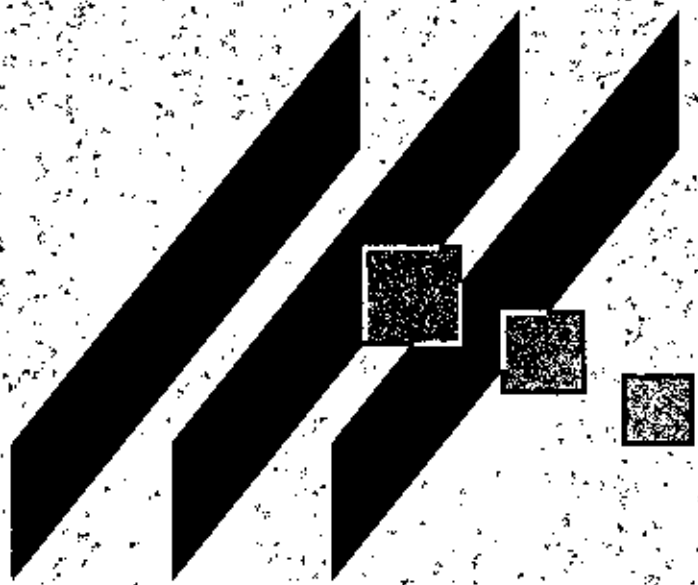
MID-KANSAS ENGINEERING CONSULTANTS, INC.

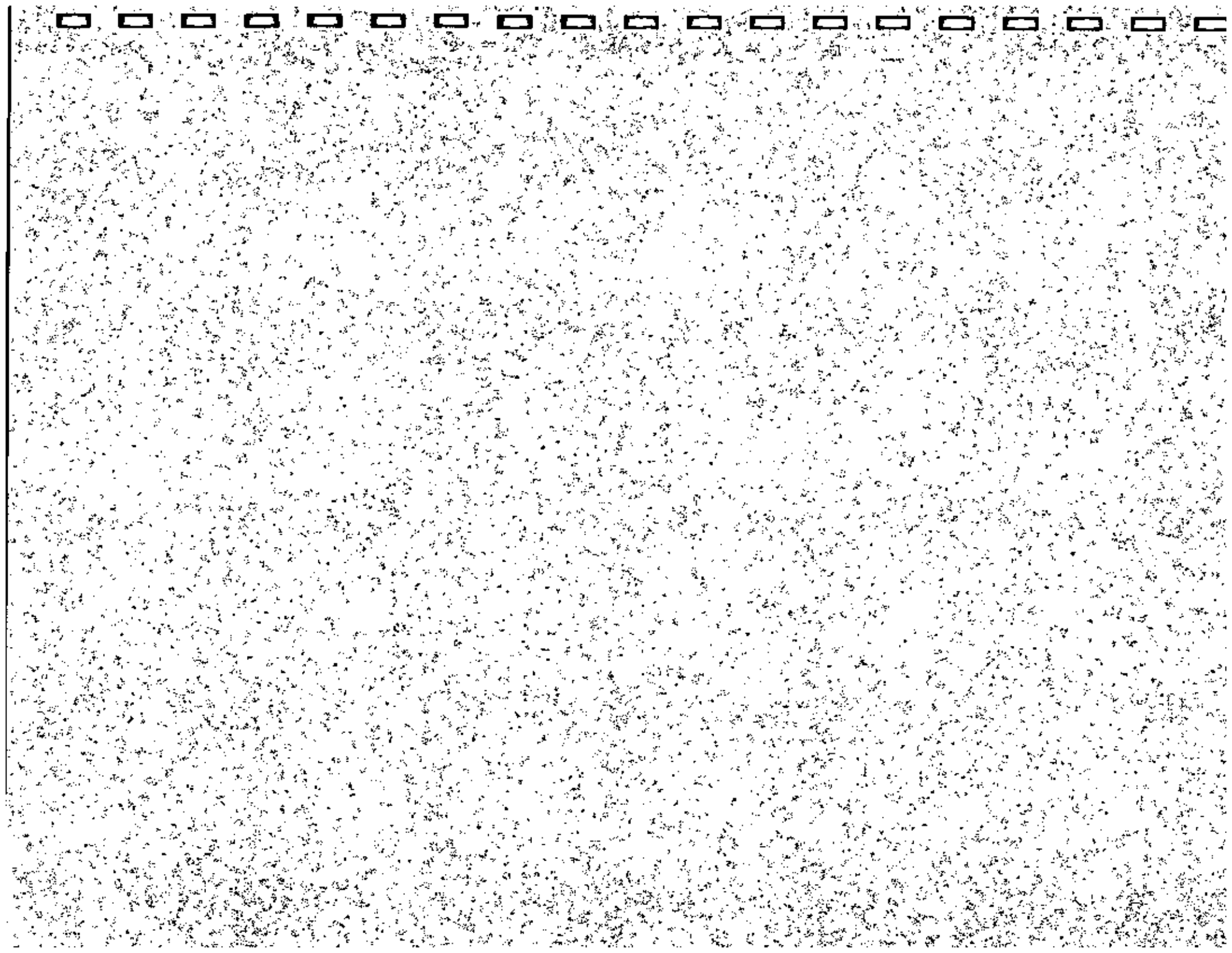


DRAINAGE STUDY FOR

THE GATEWAY CENTER ADDITION
13TH STREET AND GREENWICH ROAD

February, 1999

411 N. WEBB ROAD • WICHITA, KS 67206 • 316-684-9600 • FAX 316-684-5100



MID-KANSAS ENGINEERING CONSULTANTS, INC.

February 5, 1999

Vicky Huang, PE
City of Wichita
7th Floor, City Hall
455 N. Main
Wichita, KS 67202

Reference: Drainage Report for The Gateway Center Addition
MKEC Project 98158

Dear Ms. Huang:

Following is our drainage report for The Gateway Center Addition in the NW ¼ of Section 15, T27S, R2E.

Very truly yours,

MID-KANSAS ENGINEERING CONSULTANTS, INC.

Timothy K. Meyer, P.E.

TKM/wb

c: File
Greg Allison

K:\WP\PROJECT\1998\98158\HUANG2.DOC

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Drainage Report
The Gateway Center Addition
MKEC Project 98158
February 4, 1999

Location

The site lies in the north west quarter of Section 15, T27S, R2E, and is bounded on the east by K-96 Expressway, the north by 13th St., the west by Greenwich Road, and the south by agricultural land. Adjacent lands include Dillon's 12th Addition, Board of Trustees of the Chapel Hill United Methodist Church, Alice Kiser Family Trust, and Kiser, Inc.

The plat shows dimensions of 1,383 ft north-south, and approximately 1800 ft east-west. The total area The site's net area is 58.6 ac. An aerial photograph of the site with contours superimposed is shown in Figure 1. The drainage and utility concept is shown in the drawing inside the back cover.

Existing Site Conditions

Soils

According to the NRCS (SCS) Sedgwick County Soil Survey, the site is approximately ½ in the Irwin Series (silty clay) and ½ in the Renfrow Series (silty clay loam). Both series indicate 1 to 3 percent slopes; well-drained soil on upland divides and uneven side slopes. Both soils are in Hydrologic Soil Group (HSG) "D".

Current Development

The parcel is currently undeveloped, and is in the uppermost part of the watershed.

Landform and Slope

The site is near an upland divide, with slope direction generally toward a swale near the center that flows approximately northwest to southeast. Greenwich Road on the west and 13th St. on the north serve as divides in this area, and the depressed section of K-96 Highway serves as a divide on the east. Consequently, no water enters from off-site areas. The contour map in Figure 1 shows land slopes of 1.3 to 2.0 percent toward a small channel that crosses the south boundary approximately 1,450 ft east of Greenwich Road.

Drainage Conditions

No portion of the site is included in a regulatory floodplain (FIRM Panel 150, Sedgwick County, June 3, 1986). The nearest regulatory floodplain is in the next watershed east, on West Fork Fourmile Creek.

The channel beginning to form near the south boundary discharges to an unnamed tributary of Spring Branch – Fourmile Creek. After leaving the site, the channel flows for approximately 850 ft through undeveloped land to a small dam, which will be modified to provide detention for the site.

The north boundary of Preston Trails Addition lies approximately 650 ft south of the detention dam, and the Preston Trails' lake dam lies approximately 1,200 ft south of the north Preston Trails boundary.

Proposed Site Runoff Characteristics

Proposed site development is 100 percent commercial. General runoff patterns will be modified slightly under proposed conditions to avoid buildings, but grading and on-site facilities will direct all runoff from the commercial site to a channel or culvert just upstream of the detention basin immediately south of Gateway Center.

A TR-20 computer model of the site was prepared to evaluate detention effects on pre- and post-development peak flows. A summary of the analyses is attached, followed by the TR-20 output for the different conditions.

To accommodate the additional runoff from the developed site, additional storage will be provided in the detention area. The TR-20 model for the proposed conditions with detention modifications assumes a preliminary system configuration that would lower a 6.5 acre area approximately one foot and install a stepped weir discharge structure.

The maximum expected excavation volume to achieve adequate detention volume is 10,500 cy.

The existing dam has a 12-inch CMP primary outlet, with the discharge elevation at 177.3 (1364.7 USGS), and an estimated capacity of 5 cfs. The pipe elevation upstream of the dam is unknown, but the approximate normal water surface elevation is 180.6 (1368 USGS). Under most heavy rainfall events, the existing pond fills quickly. Excess flow passes over *de facto* grassed spillways on both sides of the dam. The low section appears to be on the dam's east side at about elevation 182.4 (1369.8 USGS). The top of the dam elevation is approximately 185.1 (1372.5 USGS).

Modifications to the dam area include removing the existing outlet, closing the existing spillway on the east abutment, constructing a stepped discharge outlet structure at elevation 179.6 (1367 USGS) on the west abutment, and raising the top of the dam to elevation 186.6 (1374 USGS). Preliminary analyses indicate that the structure configuration shown on Figure 2 would reduce peak discharges from the pond to less than those calculated for existing conditions during the 10-year and 100-year events.

A summary of the preliminary analyses follows. A separate analysis using the final grading plan, final structure design, and other details not currently available will be completed during site design for both parcels.

Proposed Minimum Pad Elevation

The minimum building pad elevations for this site will be 187.6 (1375 USGS). This represents freeboard of approximately three feet above the anticipated maximum 100-year water surface elevation in the detention basin just south of the site's boundary.

Summary of TR-20 Analyses: Gateway Center

Detention Basin Discharges, cfs						
	Precipitation Return Interval					
Undeveloped Conditions	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
Existing Detention						
6-hr McEnroe-Larson	23	60	86	111	131	159
24-hr SCS Type II	46	87	111	137	163	188
24-hr SCS Zone 5	51	92	116	141	168	193
Proposed Conditions						
Existing Detention						
6-hr McEnroe-Larson	74	120	146	173	198	231
24-hr SCS Type II	100	138	162	190	218	243
24-hr SCS Zone 5	104	140	163	191	219	245
Proposed Conditions						
Modified Detention						
6-hr McEnroe-Larson	65	87	97	108	115	123
24-hr SCS Type II	73	90	99	110	117	124
24-hr SCS Zone 5	75	92	101	111	119	126

N

SCALE: 1"=300'

0 300 600

MID-KANSAS ENGINEERING
CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

THE GATEWAY CENTER
PROJECT NAME

FIGURE 1 - DRAINAGE REPORT
SHEET TITLE

TM	KKL	TM
DESIGN BY:	DRAWN BY:	CHECKED BY:
FEBRUARY 1999	98158-154	1 / 1
DATE	JOB NO.	SHEET/OF

The Gateway Center Addition
Preliminary TR-20 Analyses
Background Calculations

02/04/99

MKEC 98158

Gateway Center Addition MKEC 98158-154

2/3/99

Area No	DA (ac)	Elev. Max	Elev. Min	L (ft)	Slope	Kirpich Tc (min) (min = 10)
Gateway Center Addition						
1		1390.0	1369.0	2012	1.043738	15.80
2		1383.0	1369.0	1073	1.304753	8.94
3						

City of Wichita Method

FAA Tc and Rational Formula Calculations

Watershed	C2	C5	C10	C100	Elev Max	Elev Min	Flow Length	Slope %	Tc2 Calc	Tc5	Tc10	Tc100 Calc	Tc2 min	Tc100 min	I2 in/hr	I100 in/hr
Pre-dev																
1	0.30	0.35	0.45	0.65	1390.00	1369.00	2012.00	0.0104	63.68	59.70	51.74	35.82	64	36	1.63	5.00
2	0.30	0.35	0.45	0.65	1383.00	1369.00	1073.00	0.0130	43.17	40.47	35.07	24.28	43	24	2.14	6.01
Post-dev																
1	0.68	0.69	0.73	0.80	1390.00	1369.00	2012.00	0.0104	33.43	32.53	29.45	23.88	33	24	2.52	6.13
2	0.60	0.64	0.62	0.76	1383.00	1369.00	1073.00	0.0130	32.38	30.22	25.90	18.35	32	18	2.57	6.84

SCS Lag Method for Tc Calculation

Watershed	Y (Wslope)	L (length)	CN	Tc (hr)	Lag (hr)	Tc (min)	Lag (min)
Pre-dev							
1	1.5	2012	83	0.686723	0.412034	41.20338	24.72203
2	1.5	1073	83	0.415297	0.249178	24.91783	14.9507
Post-dev							
1	1.5	2012	95	0.423158	0.253895	25.3895	15.2337
2	1.5	1073	87	0.360901	0.21654	21.65404	12.99242

Soil Classification

	Ia	D	1-3%
	Rd	D	1-3%

Cursory map evaluation => Y= 1.5% avg.

Existing	Storage Elev ft	Area ac	Inc. Vol. ac ft	Cum Vol. ac ft
	1368	0.75		
	1369	1.44	1.095	1.095
	1370	2.49	1.965	3.06
	1371	4.02	3.255	6.315
	1372	5.33	4.675	10.99

Projected	Storage Elev ft	Area ac	Inc. Vol. ac ft	Cum Vol. ac ft
8 ac	1367	0.75		
Max Pool	1368	1.44	1.095	1.095
Normal	1369	2.49	1.965	3.06
Pool	1370	4.02	3.255	6.315
Lowered	1371	5.33	4.675	10.99
	1372	6.5	5.915	16.905
	1373	7.8	7.15	24.055

THE GATEWAY CENTER
MKEC 98158-154
EXISTING DETENTION
LOW FLOWS

CURRENT DATE: 02-02-1999
CURRENT TIME: 16:12:29

FILE DATE: 02-02-1999
FILE NAME: GATEWYEX

FHWA CULVERT ANALYSIS
HY-8, VERSION 4.1

C U L V	SITE DATA: INLET ELEV. (FT)	OUTLET ELEV. (FT)	CULVERT LENGTH (FT)	CULVERT SHAPE, MATERIAL, INLET: BARRELS / SHAPE / MATERIAL	SPAN (FT)	RISE (FT)	MANNING n	INLET TYPE
1	1366.00	1364.70	60.01	1 CSP	1.00	1.00	.024	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (CFS) FILE: GATEWYEX DATE: 02-02-1999

ELEV (FT)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
1366.00	0	0	0	0	0	0	0	0	1
1366.39	1	1	0	0	0	0	0	0	1
1366.58	1	1	0	0	0	0	0	0	1
1366.74	2	2	0	0	0	0	0	0	1
1366.98	2	2	0	0	0	0	0	0	1
1367.11	3	3	0	0	0	0	0	0	1
1367.26	3	3	0	0	0	0	0	0	1
1368.13	4	4	0	0	0	0	0	0	1
1368.87	4	4	0	0	0	0	0	0	1
1369.71	5	5	0	0	0	0	0	0	1
1369.91	5	5	0	0	0	0	0	0	30
1369.80	5	5	0	0	0	0	0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: GATEWYEX DATE: 02-02-1999

HEAD ELEV(FT)	HEAD ERROR(FT)	TOTAL FLOW(CFS)	FLOW ERROR(CFS)	% FLOW ERROR
1366.00	0.00	0	0	0.00
1366.39	0.00	1	0	0.00
1366.58	0.00	1	0	0.00
1366.74	0.00	2	0	0.00
1366.98	0.00	2	0	0.00
1367.11	0.00	3	0	0.00
1367.26	0.00	3	0	0.00
1368.13	0.00	4	0	0.00
1368.87	0.00	4	0	0.00
1369.71	0.00	5	0	0.00
1369.91	-0.00	5	0	2.51

<1> TOLERANCE (FT) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 02-02-1999 FILE DATE: 02-02-1999
CURRENT TIME: 16:12:29 FILE NAME: GATEWYEX

PERFORMANCE CURVE FOR CULVERT # 1 - 1 (1 BY 1) CSP

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRITICAL DEPTH (ft)	OUTLET VEL. (fps)	OUTLET DEPTH (ft)	TAILWATER VEL. (fps)	TAILWATER DEPTH (ft)
0	1366.00	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.30
1	1366.39	0.39	0.39	1-S2n	0.28	0.29	2.75	0.28	0.00	0.30
1	1366.58	0.58	0.58	1-S2n	0.41	0.42	3.31	0.41	0.00	0.30
2	1366.74	0.74	0.74	1-S2n	0.52	0.52	3.67	0.52	0.00	0.30
2	1366.98	0.90	0.98	2-M2c	0.62	0.60	4.04	0.60	0.00	0.30
3	1367.11	1.06	1.11	2-M2c	0.73	0.68	4.43	0.68	0.00	0.30
3	1367.26	1.23	1.26	2-M2c	0.89	0.74	4.80	0.74	0.00	0.30
4	1368.13	1.44	2.13	6-FFn	1.00	0.80	4.46	1.00	0.00	0.30
4	1368.87	1.66	2.87	6-FFn	1.00	0.84	5.09	1.00	0.00	0.30
5	1369.71	1.93	3.71	6-FFn	1.00	0.88	5.73	1.00	0.00	0.30
5	1369.90	1.99	3.90	6-FFn	1.00	0.89	5.87	1.00	0.00	0.30

El. inlet face invert 1366.00 ft El. outlet invert 1364.70 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION (FT)	0.00
INLET ELEVATION (FT)	1366.00
OUTLET STATION (FT)	60.00
OUTLET ELEVATION (FT)	1364.70
NUMBER OF BARRELS	1
SLOPE (V-FT/H-FT)	0.0217
CULVERT LENGTH ALONG SLOPE (FT)	60.01

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	CIRCULAR
BARREL DIAMETER	1.00 FT
BARREL MATERIAL	CORRUGATED STEEL
BARREL MANNING'S N	0.024
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE WITH HEADWALL
INLET DEPRESSION	NONE

CURRENT DATE: 02-02-1999
CURRENT TIME: 16:12:29

FILE DATE: 02-02-1999
FILE NAME: GATEWYEX

TAILWATER

CONSTANT WATER SURFACE ELEVATION
1365.00

ROADWAY OVERTOPPING DATA

WEIR COEFFICIENT 2.70
EMBANKMENT TOP WIDTH (FT) 0.00
***** USER DEFINED ROADWAY PROFILE

CROSS-SECTION COORD. NO.	X (FT)	Y (FT)
1	15.00	1372.00
2	71.00	1370.50
3	90.00	1371.00
4	96.00	1372.00
5	146.00	1372.00
6	167.00	1370.00
7	173.00	1369.80
8	257.00	1372.00

THE GATEWAY CENTER
NIKEC 98158-154
EXISTING DETENTION
HIGH FLOWS

CURRENT DATE: 02-03-1999
CURRENT TIME: 10:20:27

FILE DATE: 02-02-1999
FILE NAME: GATEWYEX

FHWA CULVERT ANALYSIS
HY-8, VERSION 4.1

C	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
U	INLET	OUTLET	CULVERT	BARRELS				
L	ELEV.	ELEV.	LENGTH	SHAPE	SPAN	RISE	MANNING	INLET
V	(FT)	(FT)	(FT)	MATERIAL	(FT)	(FT)	n	TYPE
1	1366.00	1364.70	60.01	1 CSP	1.00	1.00	.024	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (CFS) FILE: GATEWYEX DATE: 02-02-1999

ELEV (FT)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
1366.00	0	0	0	0	0	0	0	0	1
1370.73	50	0	0	0	0	0	0	50	10
1371.00	100	0	0	0	0	0	0	99	6
1371.18	150	0	0	0	0	0	0	149	5
1371.33	200	0	0	0	0	0	0	198	5
1371.46	250	0	0	0	0	0	0	248	5
1371.57	300	0	0	0	0	0	0	298	5
1371.67	350	0	0	0	0	0	0	346	4
1371.76	400	0	0	0	0	0	0	396	4
1371.85	450	0	0	0	0	0	0	446	4
1371.93	500	0	0	0	0	0	0	496	4
1369.80	0	0	0	0	0	0	0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: GATEWYEX DATE: 02-02-1999

HEAD ELEV(FT)	HEAD ERROR(FT)	TOTAL FLOW(CFS)	FLOW ERROR(CFS)	% FLOW ERROR
1366.00	0.00	0	0	0.00
1370.73	-0.00	50	0	0.28
1371.00	-0.00	100	1	0.72
1371.18	-0.01	150	1	0.70
1371.33	-0.01	200	1	0.58
1371.46	-0.00	250	1	0.49
1371.57	-0.00	300	1	0.42
1371.67	-0.01	350	3	0.91
1371.76	-0.01	400	3	0.84
1371.85	-0.01	450	3	0.74
1371.93	-0.01	500	3	0.65

<1> TOLERANCE (FT) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 02-03-1999 FILE DATE: 02-02-1999
CURRENT TIME: 10:20:27 FILE NAME: GATEWYEX

PERFORMANCE CURVE FOR CULVERT # 1 - 1 (1 BY 1) CSP

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRITICAL DEPTH (ft)	OUTLET VEL. (fps)	TAILWATER DEPTH (ft)	TAILWATER VEL. (fps)	TAILWATER DEPTH (ft)
0	1366.00	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
0	1366.33	0.33	0.33	1-S2n	0.23	0.24	2.59	0.23	0.00	0.30
0	1366.34	0.34	0.34	1-S2n	0.24	0.25	2.65	0.24	0.00	0.80
0	1366.34	0.34	0.34	1-S1f	0.24	0.25	0.49	1.00	0.00	1.30
0	1366.43	0.34	0.43	1-S1f	0.24	0.25	0.49	1.00	0.00	1.70
0	1366.53	0.34	0.53	1-S1f	0.24	0.25	0.49	1.00	0.00	1.80
0	1366.63	0.34	0.63	1-S1f	0.24	0.25	0.49	1.00	0.00	1.90
0	1366.63	0.35	0.63	1-S1f	0.25	0.25	0.50	1.00	0.00	1.90
0	1366.63	0.35	0.63	1-S1f	0.25	0.26	0.51	1.00	0.00	1.90
0	1366.93	0.34	0.93	1-S1f	0.24	0.25	0.49	1.00	0.00	2.20
0	1367.03	0.34	1.03	4-FF	0.24	0.25	0.49	1.00	0.00	2.30

El. inlet face invert 1366.00 ft El. outlet invert 1364.70 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION (FT)	0.00
INLET ELEVATION (FT)	1366.00
OUTLET STATION (FT)	60.00
OUTLET ELEVATION (FT)	1364.70
NUMBER OF BARRELS	1
SLOPE (V-FT/H-FT)	0.0217
CULVERT LENGTH ALONG SLOPE (FT)	60.01

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	CIRCULAR
BARREL DIAMETER	1.00 FT
BARREL MATERIAL	CORRUGATED STEEL
BARREL MANNING'S N	0.024
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE WITH HEADWALL
INLET DEPRESSION	NONE

CURRENT DATE: 02-03-1999
CURRENT TIME: 10:20:27

FILE DATE: 02-02-1999
FILE NAME: GATEWYEX

TAILWATER

TAILWATER RATING CURVE

FLOW(CFS)	W.S.E.(FT)	DEPTH (FT)
0	1364.70	0.00
50	1365.00	0.30
100	1365.50	0.80
150	1366.00	1.30
200	1366.40	1.70
250	1366.50	1.80
300	1366.60	1.90
350	1366.60	1.90
400	1366.60	1.90
450	1366.90	2.20
500	1367.00	2.30

ROADWAY OVERTOPPING DATA

WEIR COEFFICIENT 2.70
EMBANKMENT TOP WIDTH (FT) 0.00
***** USER DEFINED ROADWAY PROFILE

CROSS-SECTION COORD. NO.	X (FT)	Y (FT)
1	15.00	1372.00
2	71.00	1370.50
3	90.00	1371.00
4	96.00	1372.00
5	146.00	1372.00
6	167.00	1370.00
7	173.00	1369.80
8	257.00	1372.00

THE GATEWAY CENTER
IMEC 98158-154

10 FT
WEIR

PROPOSED DETENTION

CURRENT DATE: 02-03-1999
CURRENT TIME: 16:06:07

FILE DATE: 02-03-1999
FILE NAME: GATENEW

FHWA CULVERT ANALYSIS
HY-8, VERSION 4.1

CROSSING	SITE DATA	CULVERT SHAPE, MATERIAL, INLET					
	INLET ELEV. (FT)	OUTLET ELEV. (FT)	CULVERT LENGTH (FT)	BARRELS SHAPE MATERIAL	SPAN (FT)	RISE (FT)	MANNING n	INLET TYPE
1	1367.00	1366.80	10.00	1 RCB	7.00	2.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (CFS) FILE: GATENEW DATE: 02-03-1999

ELEV (FT)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
1367.00	0	0	0	0	0	0	0	0	1
1368.54	35	35	0	0	0	0	0	0	1
1369.53	70	70	0	0	0	0	0	0	1
1370.80	105	105	0	0	0	0	0	0	1
1371.76	125	125	0	0	0	0	0	0	1
1372.93	175	145	0	0	0	0	0	29	4
1373.38	210	152	0	0	0	0	0	57	3
1373.75	245	157	0	0	0	0	0	87	3
1374.07	280	162	0	0	0	0	0	118	3
1374.36	315	165	0	0	0	0	0	149	3
1374.61	350	169	0	0	0	0	0	180	3
1372.00	129	129	0	0	0	0	0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: GATENEW DATE: 02-03-1999

HEAD ELEV(FT)	HEAD ERROR(FT)	TOTAL FLOW(CFS)	FLOW ERROR(CFS)	% FLOW ERROR
1367.00	0.00	0	0	0.00
1368.54	0.00	35	0	0.00
1369.53	0.00	70	0	0.00
1370.80	0.00	105	0	0.00
1371.76	0.00	125	0	0.00
1372.93	-0.01	175	0	0.27
1373.38	-0.01	210	1	0.31
1373.75	-0.01	245	1	0.27
1374.07	-0.00	280	1	0.23
1374.36	-0.00	315	1	0.21
1374.61	-0.01	350	1	0.27

<1> TOLERANCE (FT) = 0.010 <2> TOLERANCE (%) = 1.000

INTERPOLATED Q

67	0
68	22.7
69	51.3
70	83.0
71	109.2
72	129
72.5	153.7
73	180.4

CURRENT DATE: 02-03-1999 FILE DATE: 02-03-1999
CURRENT TIME: 16:06:07 FILE NAME: GATENEW

PERFORMANCE CURVE FOR CULVERT # 1 - 1 (7 BY 2) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRITICAL DEPTH (ft)	OUTLET VEL. (fps)	OUTLET DEPTH (ft)	TAILWATER VEL. (fps)	TAILWATER DEPTH (ft)
0	1367.00	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	-1.80
35	1368.54	1.54	1.54	1-S2n	0.49	0.92	7.38	0.68	2.58	-0.70
70	1369.53	2.53	2.53	5-S2n	0.77	1.46	8.80	1.14	3.13	-0.23
105	1370.80	3.80	3.80	5-S2n	1.01	1.92	9.79	1.53	3.50	0.11
125	1371.76	4.76	4.76	5-S2n	1.13	2.00	10.33	1.73	3.67	0.28
145	1372.93	5.93	5.93	5-S2n	1.25	2.00	11.22	1.85	4.01	0.65
152	1373.38	6.38	6.38	5-S2n	1.29	2.00	11.57	1.88	4.21	0.87
157	1373.75	6.75	6.75	5-S2n	1.32	2.00	11.84	1.90	4.39	1.07
162	1374.07	7.07	7.07	5-S2n	1.34	2.00	12.18	1.90	4.54	1.25
165	1374.35	7.35	7.35	5-S2n	1.36	2.00	12.40	1.90	4.68	1.42
169	1374.61	7.61	7.61	5-S2n	1.38	2.00	12.60	1.91	4.81	1.58

El. inlet face invert 1367.00 ft El. outlet invert 1366.80 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION (FT)	0.00
INLET ELEVATION (FT)	1367.00
OUTLET STATION (FT)	10.00
OUTLET ELEVATION (FT)	1366.80
NUMBER OF BARRELS	1
SLOPE (V-FT/H-FT)	0.0200
CULVERT LENGTH ALONG SLOPE (FT)	10.00

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	BOX
BARREL SPAN	7.00 FT
BARREL RISE	2.00 FT
BARREL MATERIAL	CONCRETE
BARREL MANNING'S N	0.012
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE (90-45 DEG.)
INLET DEPRESSION	NONE

CURRENT DATE: 02-03-1999
CURRENT TIME: 16:06:07

FILE DATE: 02-03-1999
FILE NAME: GATENEW

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH (FT)	8.00
SIDE SLOPE H/V (X:1)	4.0
CHANNEL SLOPE V/H (FT/FT)	0.005
MANNING'S N (.01-0.1)	0.035
CHANNEL INVERT ELEVATION (FT)	1365.00
CULVERT NO.1 OUTLET INVERT ELEVATION	1366.80 FT

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (CFS)	W.S.E. (FT)	FROUDE NUMBER	DEPTH (FT)	VEL. (FPS)	SHEAR (PSF)
0.00	1365.00	0.000	0.00	0.00	0.00
35.00	1366.10	0.434	1.10	2.58	0.34
70.00	1366.57	0.442	1.57	3.13	0.49
105.00	1366.91	0.446	1.91	3.50	0.60
125.00	1367.08	0.448	2.08	3.67	0.65
175.00	1367.45	0.452	2.45	4.01	0.76
210.00	1367.67	0.454	2.67	4.21	0.83
245.00	1367.87	0.456	2.87	4.39	0.89
280.00	1368.05	0.458	3.05	4.54	0.95
315.00	1368.22	0.460	3.22	4.68	1.00
350.00	1368.38	0.461	3.38	4.81	1.05

ROADWAY OVERTOPPING DATA

WEIR COEFFICIENT	2.65
EMBANKMENT TOP WIDTH (FT)	12.00

***** USER DEFINED ROADWAY PROFILE

CROSS-SECTION COORD. NO.	X (FT)	Y (FT)
1	0.00	1377.00
2	5.00	1375.00
3	15.00	1372.00
4	25.00	1372.00
5	35.00	1375.00
6	40.00	1377.00

The Gateway Center Addition
Preliminary TR-20 Analyses
Existing Conditions
Existing Detention

02/04/99

MKEC 98158

```
*****************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****************

JOB TR-20                                          SUMMARY
TITLE 003 GATEWAY CENTER ADDITION GREENWICH & 13 2,5,10,25,50,100-YR 6-HR
TITLE     GATX1L.T20 02FEB99 EXISTING CONDITIONS, EXISTING DETENTION 24-HR
 4 DIMHYD                                                              256
 8          .0          .150        .320        .6          .93
 8          1.0         .96         .88         .78         .69
 8          .59         .52         .48         .43         .39
 8          .35         .32         .29         .26         .23
 8          .21         .2          .19         .18         .17
 8          .16         .15         .14         .13         .12
 8          .11         .1          .09         .08         .07
 8          .06         .05         .045        .04         .035
 8          .03         .025        .02         .015        .01
 8          .0          .0          .0          .0          .0
 9 ENDTBL
 4 DIMHYD               0.02                                           484
 8          .000        .030        .100        .190        .310
 8          .470        .660        .820        .930        .990
 8          1.000       .990        .930        .860        .780
 8          .680        .560        .460        .390        .330
 8          .280        .241        .207        .174        .147
 8          .126        .107        .091        .077        .066
 8          .055        .047        .040        .034        .029
 8          .025        .021        .018        .015        .013
 8          .011        .009        .008        .007        .006
 8          .005        .004        .003        .002        .001
 8          .000        .000        .000        .000        .000
 9 ENDTBL
 5 RAINFL 7             0.08333                                        6-HR M&L
 8          0.0000      0.0033      0.0066      0.0099      0.0132
 8          0.0166      0.0198      0.0248      0.0296      0.0346
 8          0.0404      0.0463      0.0522      0.0590      0.0658
 8          0.0727      0.0796      0.0864      0.0933      0.1136
 8          0.1340      0.1572      0.1832      0.2124      0.2473
 8          0.2850      0.3400      0.4464      0.6034      0.6752
 8          0.7220      0.7409      0.7598      0.7758      0.7919
 8          0.8072      0.8224      0.8310      0.8396      0.8468
 8          0.8540      0.8628      0.8714      0.8773      0.8832
 8          0.8890      0.8939      0.8988      0.9038      0.9086
 8          0.9136      0.9184      0.9233      0.9282      0.9332
 8          0.9380      0.9429      0.9478      0.9527      0.9576
 8          0.9626      0.9664      0.9704      0.9742      0.9782
 8          0.9821      0.9860      0.9884      0.9906      0.9930
 8          0.9954      0.9976      1.0000      1.0000      1.0000
 9 ENDTBL
 5 RAINFL 8             0.5                                            24-HRSCS
```

```
**********80-80 LIST OF INPUT DATA (CONTINUED)**********
 8          .000        .002        .005        .009        .013        ZONE 5
 8          .018        .023        .029        .035        .042
 8          .050        .059        .068        .078        .089
 8          .101        .114        .128        .144        .162
 8          .183        .208        .244        .339        .723
 8          .773        .802        .825        .844        .861
 8          .876        .890        .903        .914        .924
 8          .934        .943        .951        .959        .966
 8          .972        .977        .982        .986        .990
 8          .993        .996        .998       1.000       1.000
 9 ENDTBL
 3 STRUCT    06                                                      POND 03
 8                      1368.0      0.0         0.0
 8                      1369.       4.2         1.095
 8                      1370.       10.3        3.06
 8                      1370.73     50.         5.436
 8                      1371.       105.        6.315
 8                      1371.25     173.        7.48
 8                      1371.5      268.        8.65
 8                      1371.75     394.        9.82
 8                      1372.       500.        10.99
 9 ENDTBL
 3 STRUCT    07                                                      DUMMY
 8                      1365.4      0.0         0.0
 9 ENDTBL
 3 STRUCT    10                                                      DUMMY
 8                      1364.0      0.0         0.0
 9 ENDTBL
 6 RUNOFF 1 002      6 0.0903      83.0        0.687                 1 SITE RO
 6 RUNOFF 1 004      7 0.0289      83.0        0.415                 1 RES RO
 6 ADDHYD 4 006   7 6 5                                              1 QIN 06
 6 RESVOR 2    06 5   6 1368.0                                      1 QOUT 06
   ENDATA
 7 INCREM 6             0.0833
 7 COMPUT 7 002      06 0.0        2.52        1.0         7 2  11  01 2-YR 6-H
   ENDCMP 1
 7 COMPUT 7 002      06 0.0        3.42        1.0         7 2  12  02 5-YR 6-H
   ENDCMP 1
 7 COMPUT 7 002      06 0.0        4.02        1.0         7 2  13  03 10-YR 6-
   ENDCMP 1
 7 COMPUT 7 002      06 0.0        4.63        1.0         7 2  14  04 25-YR 6-
   ENDCMP 1
 7 COMPUT 7 002      06 0.0        5.20        1.0         7 2  15  05 50-YR 6-
   ENDCMP 1
 7 COMPUT 7 002      06 0.0        5.94        1.0         7 2  16  06 100-YR 6
   ENDCMP 1
```

**********80-80 LIST OF INPUT DATA (CONTINUED)**********

```
 7 COMPUT 7 002     06 0.0        3.48        1.0        2 2  21  01 2-YR TYP
   ENDCMP 1
 7 COMPUT 7 002     06 0.0        4.55        1.0        2 2  22  02 5-YR TYP
   ENDCMP 1
 7 COMPUT 7 002     06 0.0        5.25        1.0        2 2  23  03 10-YR TY
   ENDCMP 1
 7 COMPUT 7 002     06 0.0        6.10        1.0        2 2  24  04 25-YR TY
   ENDCMP 1
 7 COMPUT 7 002     06 0.0        6.98        1.0        2 2  25  05 50-YR TY
   ENDCMP 1
 7 COMPUT 7 002     06 0.0        7.80        1.0        2 2  26  06 100-YR T
   ENDCMP 1
 7 COMPUT 7 002     06 0.0        3.48        1.0        8 2  41  01 2-YR ZON
   ENDCMP 1
 7 COMPUT 7 002     06 0.0        4.55        1.0        8 2  42  02 5-YR ZON
   ENDCMP 1
 7 COMPUT 7 002     06 0.0        5.25        1.0        8 2  43  03 10-YR ZO
   ENDCMP 1
 7 COMPUT 7 002     06 0.0        6.10        1.0        8 2  44  04 25-YR ZO
   ENDCMP 1
 7 COMPUT 7 002     06 0.0        6.98        1.0        8 2  45  05 50-YR ZO
   ENDCMP 1
 7 COMPUT 7 002     06 0.0        7.80        1.0        8 2  46  06 100-YR Z
   ENDCMP 1
   ENDJOB 2
```

**********END OF 80-80 LIST**********

```
TR20 ---------------------------------------------------------------------
        GATEWAY CENTER ADDITION GREENWICH & 13 2,5,10,25,50,100-YR 6-H VERSION
02/04/99 GATXIL.T20 02FEB99 EXISTING CONDITIONS, EXISTING DETENTION 24-10/01/90
09:40:30                          PASS   1                          PAGE   1

            COMPUTED PEAK RATE FACTOR =   256.08

            COMPUTED PEAK RATE FACTOR =   484.00


EXECUTIVE CONTROL INCREM    MAIN TIME INCREMENT =   .08 HOURS


EXECUTIVE CONTROL COMPUT    FROM XSECTION   2  TO STRUCTURE  6        2-YR 6-H
   STARTING TIME =   .00         RAIN DEPTH =  2.52       RAIN DURATION=  1.00
   ANT. MOIST. COND. = 2         MAIN TIME INCREMENT =   .08 HOURS
   ALTERNATE NO.=11              STORM NO.= 1             RAIN TABLE NO.= 7


EXECUTIVE CONTROL ENDCMP    COMPUTATIONS COMPLETED FOR PASS   1


EXECUTIVE CONTROL COMPUT    FROM XSECTION   2  TO STRUCTURE  6        5-YR 6-H
   STARTING TIME =   .00         RAIN DEPTH =  3.42       RAIN DURATION=  1.00
   ANT. MOIST. COND. = 2         MAIN TIME INCREMENT =   .08 HOURS
   ALTERNATE NO.=12              STORM NO.= 2             RAIN TABLE NO.= 7


EXECUTIVE CONTROL ENDCMP    COMPUTATIONS COMPLETED FOR PASS   2


EXECUTIVE CONTROL COMPUT    FROM XSECTION   2  TO STRUCTURE  6        10-YR 6-
   STARTING TIME =   .00         RAIN DEPTH =  4.02       RAIN DURATION=  1.00
   ANT. MOIST. COND. = 2         MAIN TIME INCREMENT =   .08 HOURS
   ALTERNATE NO.=13              STORM NO.= 3             RAIN TABLE NO.= 7


EXECUTIVE CONTROL ENDCMP    COMPUTATIONS COMPLETED FOR PASS   3


EXECUTIVE CONTROL COMPUT    FROM XSECTION   2  TO STRUCTURE  6        25-YR 6-
   STARTING TIME =   .00         RAIN DEPTH =  4.63       RAIN DURATION=  1.00
   ANT. MOIST. COND. = 2         MAIN TIME INCREMENT =   .08 HOURS
   ALTERNATE NO.=14              STORM NO.= 4             RAIN TABLE NO.= 7
```

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 4

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 50-YR 6-
STARTING TIME = .00 RAIN DEPTH = 5.20 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=15 STORM NO.= 5 RAIN TABLE NO.= 7

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 5

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 100-YR 6
STARTING TIME = .00 RAIN DEPTH = 5.94 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=16 STORM NO.= 6 RAIN TABLE NO.= 7

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 6

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 2-YR TYP
STARTING TIME = .00 RAIN DEPTH = 3.48 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=21 STORM NO.= 1 RAIN TABLE NO.= 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 7

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 5-YR TYP
STARTING TIME = .00 RAIN DEPTH = 4.55 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=22 STORM NO.= 2 RAIN TABLE NO.= 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 8

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 10-YR TY
STARTING TIME = .00 RAIN DEPTH = 5.25 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=23 STORM NO.= 3 RAIN TABLE NO.= 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 9

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 25-YR TY
STARTING TIME = .00 RAIN DEPTH = 6.10 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=24 STORM NO.= 4 RAIN TABLE NO.= 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 10

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 50-YR TY
STARTING TIME = .00 RAIN DEPTH = 6.98 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=25 STORM NO.= 5 RAIN TABLE NO.= 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 11

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 100-YR T
STARTING TIME = .00 RAIN DEPTH = 7.80 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=26 STORM NO.= 6 RAIN TABLE NO.= 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 12

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 2-YR ZON
STARTING TIME = .00 RAIN DEPTH = 3.48 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=41 STORM NO.= 1 RAIN TABLE NO.= 8

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 13

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 5-YR ZON
STARTING TIME = .00 RAIN DEPTH = 4.55 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=42 STORM NO.= 2 RAIN TABLE NO.= 8

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 14

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 10-YR ZO
STARTING TIME = .00 RAIN DEPTH = 5.25 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=43 STORM NO.= 3 RAIN TABLE NO.= 8

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 15

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 25-YR ZO
STARTING TIME = .00 RAIN DEPTH = 6.10 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=44 STORM NO.= 4 RAIN TABLE NO.= 8

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 16

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 50-YR 20
STARTING TIME = .00 RAIN DEPTH = 6.98 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=45 STORM NO.= 5 RAIN TABLE NO.= 8

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 17

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 100-YR 2
STARTING TIME = .00 RAIN DEPTH = 7.80 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=46 STORM NO.= 6 RAIN TABLE NO.= 8

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 18

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
RAINFALL OF 2.52 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 7, AMC 2							
MAIN TIME INCREMENT .08 HOURS							
ALTERNATE 11 STORM 1							
XSECTION 2	RUNOFF	.09	1.07	---	2.76	51	566.7
XSECTION 4	RUNOFF	.03	1.07	---	2.58	22	733.3
XSECTION 6	ADDHYD	.12	1.07	---	2.69	69	575.0
STRUCTURE 6	RESVOR	.12	1.07	1370.17	3.58	20	166.7
RAINFALL OF 3.42 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 12 STORM 2							
XSECTION 2	RUNOFF	.09	1.79	---	2.74	87	966.7
XSECTION 4	RUNOFF	.03	1.79	---	2.57	38	1266.7
XSECTION 6	ADDHYD	.12	1.79	---	2.67	119	991.7
STRUCTURE 6	RESVOR	.12	1.79	1370.68	3.30	47	391.7
RAINFALL OF 4.02 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 13 STORM 3							
XSECTION 2	RUNOFF	.09	2.30	---	2.74	113	1255.6
XSECTION 4	RUNOFF	.03	2.30	---	2.56	49	1633.3
XSECTION 6	ADDHYD	.12	2.30	---	2.67	154	1283.3
STRUCTURE 6	RESVOR	.12	2.30	1370.91	3.10	87	725.0
RAINFALL OF 4.63 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 14 STORM 4							
XSECTION 2	RUNOFF	.09	2.84	---	2.73	140	1555.6
XSECTION 4	RUNOFF	.03	2.84	---	2.56	61	2033.3
XSECTION 6	ADDHYD	.12	2.84	---	2.66	191	1591.7

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 14 STORM 4							
STRUCTURE 6	RESVOR	.12	2.83	1371.07	3.01	125	1041.7
RAINFALL OF 5.20 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 15 STORM 5							
XSECTION 2	RUNOFF	.09	3.35	---	2.73	166	1844.4
XSECTION 4	RUNOFF	.03	3.35	---	2.56	72	2400.0
XSECTION 6	ADDHYD	.12	3.35	---	2.66	225	1875.0
STRUCTURE 6	RESVOR	.12	3.35	1371.20	2.96	160	1333.3
RAINFALL OF 5.94 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 16 STORM 6							
XSECTION 2	RUNOFF	.09	4.03	---	2.73	200	2222.2
XSECTION 4	RUNOFF	.03	4.03	---	2.55	86	2866.7
XSECTION 6	ADDHYD	.12	4.03	---	2.66	271	2258.3
STRUCTURE 6	RESVOR	.12	4.02	1371.35	2.91	211	1758.3
RAINFALL OF 3.48 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 2, AMC 2							
ALTERNATE 21 STORM 1							
XSECTION 2	RUNOFF	.09	1.84	---	12.30	72	800.0
XSECTION 4	RUNOFF	.03	1.84	---	12.14	32	1066.7
XSECTION 6	ADDHYD	.12	1.84	---	12.23	98	816.7
STRUCTURE 6	RESVOR	.12	1.84	1370.49	12.82	37	308.3

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
RAINFALL OF 4.55 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 22 STORM 2							
XSECTION 2	RUNOFF	.09	2.77	---	12.29	110	1222.2
XSECTION 4	RUNOFF	.03	2.77	---	12.13	48	1600.0
XSECTION 6	ADDHYD	.12	2.77	---	12.23	150	1250.0
STRUCTURE 6	RESVOR	.12	2.76	1370.92	12.59	88	733.3
RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 23 STORM 3							
XSECTION 2	RUNOFF	.09	3.40	---	12.29	134	1488.9
XSECTION 4	RUNOFF	.03	3.40	---	12.13	59	1966.7
XSECTION 6	ADDHYD	.12	3.40	---	12.22	182	1516.7
STRUCTURE 6	RESVOR	.12	3.39	1371.08	12.52	126	1050.0
RAINFALL OF 6.10 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 24 STORM 4							
XSECTION 2	RUNOFF	.09	4.18	---	12.28	166	1844.4
XSECTION 4	RUNOFF	.03	4.18	---	12.13	72	2400.0
XSECTION 6	ADDHYD	.12	4.18	---	12.22	226	1883.3
STRUCTURE 6	RESVOR	.12	4.18	1371.23	12.47	169	1408.3

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
RAINFALL OF 6.98 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 25 STORM 5							
XSECTION 2	RUNOFF	.09	5.00	---	12.29	196	2177.8
XSECTION 4	RUNOFF	.03	5.00	---	12.13	86	2866.7
XSECTION 6	ADDHYD	.12	5.00	---	12.22	267	2225.0
STRUCTURE 6	RESVOR	.12	4.99	1371.37	12.43	218	1816.7
RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 26 STORM 6							
XSECTION 2	RUNOFF	.09	5.78	---	12.28	227	2522.2
XSECTION 4	RUNOFF	.03	5.78	---	12.13	99	3300.0
XSECTION 6	ADDHYD	.12	5.78	---	12.21	309	2575.0
STRUCTURE 6	RESVOR	.12	5.78	1371.48	12.40	261	2175.0
RAINFALL OF 3.48 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs. RAINTABLE NUMBER 8, AMC 2							
ALTERNATE 41 STORM 1							
XSECTION 2	RUNOFF	.09	1.84	---	12.20	71	788.9
XSECTION 4	RUNOFF	.03	1.84	---	12.06	28	933.3
XSECTION 6	ADDHYD	.12	1.84	---	12.15	97	808.3
STRUCTURE 6	RESVOR	.12	1.84	1370.55	12.68	40	333.3

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
RAINFALL OF 4.55 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 42 STORM 2							
XSECTION 2	RUNOFF	.09	2.77	---	12.20	107	1188.9
XSECTION 4	RUNOFF	.03	2.77	---	12.06	43	1433.3
XSECTION 6	ADDHYD	.12	2.77	---	12.15	146	1216.7
STRUCTURE 6	RESVOR	.12	2.76	1370.96	12.45	97	808.3
RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 43 STORM 3							
XSECTION 2	RUNOFF	.09	3.40	---	12.19	132	1466.7
XSECTION 4	RUNOFF	.03	3.40	---	12.06	52	1733.3
XSECTION 6	ADDHYD	.12	3.40	---	12.15	179	1491.7
STRUCTURE 6	RESVOR	.12	3.39	1371.11	12.39	134	1116.7
RAINFALL OF 6.10 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 44 STORM 4							
XSECTION 2	RUNOFF	.09	4.18	---	12.19	161	1788.9
XSECTION 4	RUNOFF	.03	4.18	---	12.06	64	2133.3
XSECTION 6	ADDHYD	.12	4.18	---	12.14	219	1825.0
STRUCTURE 6	RESVOR	.12	4.18	1371.26	12.35	177	1475.0

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
RAINFALL OF 6.98 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 45 STORM 5							
XSECTION 2	RUNOFF	.09	5.01	---	12.20	192	2133.3
XSECTION 4	RUNOFF	.03	5.00	---	12.06	76	2533.3
XSECTION 6	ADDHYD	.12	5.01	---	12.15	260	2166.7
STRUCTURE 6	RESVOR	.12	5.00	1371.39	12.32	224	1866.7
RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 46 STORM 6							
XSECTION 2	RUNOFF	.09	5.78	---	12.20	221	2455.6
XSECTION 4	RUNOFF	.03	5.78	---	12.06	87	2900.0
XSECTION 6	ADDHYD	.12	5.78	---	12.14	299	2491.7
STRUCTURE 6	RESVOR	.12	5.78	1371.49	12.30	264	2200.0

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	3	4	5
STRUCTURE 6	.12					
ALTERNATE 11		20	*********	*********	*********	*********
ALTERNATE 12		*********	47	*********	*********	*********
ALTERNATE 13		*********	*********	87	*********	*********
ALTERNATE 14		*********	*********	*********	125	*********
ALTERNATE 15		*********	*********	*********	*********	160
ALTERNATE 21		37	*********	*********	*********	*********
ALTERNATE 22		*********	88	*********	*********	*********
ALTERNATE 23		*********	*********	126	*********	*********
ALTERNATE 24		*********	*********	*********	169	*********
ALTERNATE 25		*********	*********	*********	*********	218
ALTERNATE 41		40	*********	*********	*********	*********
ALTERNATE 42		*********	97	*********	*********	*********
ALTERNATE 43		*********	*********	134	*********	*********
ALTERNATE 44		*********	*********	*********	177	*********
ALTERNATE 45		*********	*********	*********	*********	224
XSECTION 2	.09					
ALTERNATE 11		51	*********	*********	*********	*********
ALTERNATE 12		*********	87	*********	*********	*********
ALTERNATE 13		*********	*********	113	*********	*********
ALTERNATE 14		*********	*********	*********	140	*********
ALTERNATE 15		*********	*********	*********	*********	166
ALTERNATE 21		72	*********	*********	*********	*********
ALTERNATE 22		*********	110	*********	*********	*********
ALTERNATE 23		*********	*********	134	*********	*********
ALTERNATE 24		*********	*********	*********	166	*********
ALTERNATE 25		*********	*********	*********	*********	196
ALTERNATE 41		71	*********	*********	*********	*********
ALTERNATE 42		*********	107	*********	*********	*********
ALTERNATE 43		*********	*********	132	*********	*********
ALTERNATE 44		*********	*********	*********	161	*********
ALTERNATE 45		*********	*********	*********	*********	192
XSECTION 4	.03					
ALTERNATE 11		22	*********	*********	*********	*********
ALTERNATE 12		*********	38	*********	*********	*********

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	3	4	5
XSECTION 4	.03					
ALTERNATE 13		**********	*********	49	**********	**********
ALTERNATE 14		**********	**********	**********	61	**********
ALTERNATE 15		**********	**********	**********	**********	72
ALTERNATE 21		32	**********	**********	**********	**********
ALTERNATE 22		**********	48	**********	**********	**********
ALTERNATE 23		**********	**********	59	**********	**********
ALTERNATE 24		**********	**********	**********	72	**********
ALTERNATE 25		**********	**********	**********	**********	86
ALTERNATE 41		28	**********	**********	**********	**********
ALTERNATE 42		**********	43	**********	**********	**********
ALTERNATE 43		**********	**********	52	**********	**********
ALTERNATE 44		**********	**********	**********	64	**********
ALTERNATE 45		**********	**********	**********	**********	76
XSECTION 6	.12					
ALTERNATE 11		69	**********	**********	**********	**********
ALTERNATE 12		**********	119	**********	**********	**********
ALTERNATE 13		**********	**********	154	**********	**********
ALTERNATE 14		**********	**********	**********	191	**********
ALTERNATE 15		**********	**********	**********	**********	225
ALTERNATE 21		98	**********	**********	**********	**********
ALTERNATE 22		**********	150	**********	**********	**********
ALTERNATE 23		**********	**********	182	**********	**********
ALTERNATE 24		**********	**********	**********	226	**********
ALTERNATE 25		**********	**********	**********	**********	267
ALTERNATE 41		97	**********	**********	**********	**********
ALTERNATE 42		**********	146	**********	**********	**********
ALTERNATE 43		**********	**********	179	**********	**********
ALTERNATE 44		**********	**********	**********	219	**********
ALTERNATE 45		**********	**********	**********	**********	260

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE	DRAINAGE AREA	STORM NUMBERS.....

ID		(SQ MI)	6
STRUCTURE	6	.12	
ALTERNATE	16		211
ALTERNATE	26		261
ALTERNATE	46		264
XSECTION	2	.09	

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS 6
XSECTION 2	.09	
ALTERNATE 16		200
ALTERNATE 26		227
ALTERNATE 46		221
XSECTION 4	.03	
ALTERNATE 16		86
ALTERNATE 26		99
ALTERNATE 46		87
XSECTION 6	.12	
ALTERNATE 16		271
ALTERNATE 26		309
ALTERNATE 46		299

END OF 1 JOBS IN THIS RUN

SCS TR-20, VERSION 10/01/90

FILES

INPUT = GATX1L.T20

OUTPUT = GATX1L.OUT , DATED 02/04/99,09:40:30

FILES GENERATED - DATED 02/04/99,09:40:30

NONE!

*** TR-20 RUN COMPLETED ***

The Gateway Center Addition
Preliminary TR-20 Analyses
Proposed Conditions
Existing Detention

02/04/99

MKEC 98158

```
**********80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY**********

JOB TR-20                                          SUMMARY
TITLE 003 GATEWAY CENTER ADDITION GREENWICH & 13 2,5,10,25,50,100-YR 6-HR
TITLE     GATP1L.T20    02FEB99 PROPOSED CONDITIONS, EXIST DET.     24-HR
 4 DIMHYD                                                          256
 8          .0          .150        .320        .6          .93
 8          1.0         .96         .88         .78         .69
 8          .59         .52         .48         .43         .39
 8          .35         .32         .29         .26         .23
 8          .21         .2          .19         .18         .17
 8          .16         .15         .14         .13         .12
 8          .11         .1          .09         .08         .07
 8          .06         .05         .045        .04         .035
 8          .03         .025        .02         .015        .01
 8          .0          .0          .0          .0          .0
 9 ENDTBL
 4 DIMHYD               0.02                                       484
 8          .000        .030        .100        .190        .310
 8          .470        .660        .820        .930        .990
 8          1.000       .990        .930        .860        .780
 8          .680        .560        .460        .390        .330
 8          .280        .241        .207        .174        .147
 8          .126        .107        .091        .077        .066
 8          .055        .047        .040        .034        .029
 8          .025        .021        .018        .015        .013
 8          .011        .009        .008        .007        .006
 8          .005        .004        .003        .002        .001
 8          .000        .000        .000        .000        .000
 9 ENDTBL
 5 RAINFL 7             0.08333                                    6-HR M&L
 8          0.0000      0.0033      0.0066      0.0099      0.0132
 8          0.0166      0.0198      0.0248      0.0296      0.0346
 8          0.0404      0.0463      0.0522      0.0590      0.0658
 8          0.0727      0.0796      0.0864      0.0933      0.1136
 8          0.1340      0.1572      0.1832      0.2124      0.2473
 8          0.2850      0.3400      0.4464      0.6034      0.6752
 8          0.7220      0.7409      0.7598      0.7758      0.7919
 8          0.8072      0.8224      0.8310      0.8396      0.8468
 8          0.8540      0.8628      0.8714      0.8773      0.8832
 8          0.8890      0.8939      0.8988      0.9038      0.9086
 8          0.9136      0.9184      0.9233      0.9282      0.9332
 8          0.9380      0.9429      0.9478      0.9527      0.9576
 8          0.9626      0.9664      0.9704      0.9742      0.9782
 8          0.9821      0.9860      0.9884      0.9906      0.9930
 8          0.9954      0.9976      1.0000      1.0000      1.0000
 9 ENDTBL
 5 RAINFL 8             0.5                                        24-HRSCS
```

```
**********BD-BD LIST OF INPUT DATA (CONTINUED)**********

 8          .000        .002        .005        .009        .013        ZONE 5
 8          .018        .023        .029        .035        .042
 8          .050        .059        .068        .078        .089
 8          .101        .114        .128        .144        .162
 8          .183        .208        .244        .339        .723
 8          .773        .802        .825        .844        .861
 8          .876        .890        .903        .914        .924
 8          .934        .943        .951        .959        .966
 8          .972        .977        .982        .986        .990
 8          .993        .996        .998       1.000       1.000
 9 ENDTBL
 3 STRUCT      06                                                   POND 05
 8                      1368.0      0.0         0.0
 8                      1369.       4.2         1.095
 8                      1370.       10.3        3.06
 8                      1370.73     50.         5.436
 8                      1371.       105.        6.315
 8                      1371.25     173.        7.48
 8                      1371.5      268.        8.65
 8                      1371.75     394.        9.82
 8                      1372.       500.        10.99
 9 ENDTBL
 3 STRUCT      07                                                   DUMMY
 8                      1365.4      0.0         0.0
 9 ENDTBL
 3 STRUCT      10                                                   DUMMY
 8                      1364.0      0.0         0.0
 9 ENDTBL
 6 RUNOFF 1 002       6 0.0903      95.0        0.423              1 SITE RO
 6 RUNOFF 1 004       7 0.0289      87.0        0.361              1 RES RO
 6 ADDHYD 4 006   7 6 5                                            1 QIN 06
 6 RESVOR 2    06 5   6 1368.0                                    1 QOUT 06
   ENDATA
 7 INCREM 6             0.0833
 7 COMPUT 7 002      06 0.0         2.52        1.0         7 2  11  01 2-YR 6-H
   ENDCMP 1
 7 COMPUT 7 002      06 0.0         3.42        1.0         7 2  12  02 5-YR 6-H
   ENDCMP 1
 7 COMPUT 7 002      06 0.0         4.02        1.0         7 2  13  03 10-YR 6-
   ENDCMP 1
 7 COMPUT 7 002      06 0.0         4.63        1.0         7 2  14  04 25-YR 6-
   ENDCMP 1
 7 COMPUT 7 002      06 0.0         5.20        1.0         7 2  15  05 50-YR 6-
   ENDCMP 1
 7 COMPUT 7 002      06 0.0         5.94        1.0         7 2  16  06 100-YR 6
   ENDCMP 1
```

```
**********80-80 LIST OF INPUT DATA (CONTINUED)**********

 7 COMPUT 7 002     06 0.0       3.48       1.0       2 2  21  01 2-YR TYP
   ENDCMP 1
 7 COMPUT 7 002     06 0.0       4.55       1.0       2 2  22  02 5-YR TYP
   ENDCMP 1
 7 COMPUT 7 002     06 0.0       5.25       1.0       2 2  23  03 10-YR TY
   ENDCMP 1
 7 COMPUT 7 002     06 0.0       6.10       1.0       2 2  24  04 25-YR TY
   ENDCMP 1
 7 COMPUT 7 002     06 0.0       6.98       1.0       2 2  25  05 50-YR TY
   ENDCMP 1
 7 COMPUT 7 002     06 0.0       7.80       1.0       2 2  26  06 100-YR T
   ENDCMP 1
 7 COMPUT 7 002     06 0.0       3.48       1.0       8 2  41  01 2-YR ZON
   ENDCMP 1
 7 COMPUT 7 002     06 0.0       4.55       1.0       8 2  42  02 5-YR ZON
   ENDCMP 1
 7 COMPUT 7 002     06 0.0       5.25       1.0       8 2  43  03 10-YR ZO
   ENDCMP 1
 7 COMPUT 7 002     06 0.0       6.10       1.0       8 2  44  04 25-YR ZO
   ENDCMP 1
 7 COMPUT 7 002     06 0.0       6.98       1.0       8 2  45  05 50-YR ZO
   ENDCMP 1
 7 COMPUT 7 002     06 0.0       7.80       1.0       8 2  46  06 100-YR Z
   ENDCMP 1
   ENDJOB 2

**********END OF 80-80 LIST**********
```

COMPUTED PEAK RATE FACTOR = 256.08

COMPUTED PEAK RATE FACTOR = 484.00

EXECUTIVE CONTROL INCREM MAIN TIME INCREMENT = .08 HOURS

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 2-YR 6-H
STARTING TIME = .00 RAIN DEPTH = 2.52 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=11 STORM NO.= 1 RAIN TABLE NO.= 7

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 1

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 5-YR 6-H
STARTING TIME = .00 RAIN DEPTH = 3.42 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=12 STORM NO.= 2 RAIN TABLE NO.= 7

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 2

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 10-YR 6-
STARTING TIME = .00 RAIN DEPTH = 4.02 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=13 STORM NO.= 3 RAIN TABLE NO.= 7

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 3

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 25-YR 6-
STARTING TIME = .00 RAIN DEPTH = 4.63 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=14 STORM NO.= 4 RAIN TABLE NO.= 7

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 4

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 50-YR 6-
STARTING TIME = .00 RAIN DEPTH = 5.20 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=15 STORM NO.= 5 RAIN TABLE NO.= 7

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 5

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 100-YR 6
STARTING TIME = .00 RAIN DEPTH = 5.94 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=16 STORM NO.= 6 RAIN TABLE NO.= 7

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 6

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 2-YR TYP
STARTING TIME = .00 RAIN DEPTH = 3.48 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=21 STORM NO.= 1 RAIN TABLE NO.= 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 7

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 5-YR TYP
STARTING TIME = .00 RAIN DEPTH = 4.55 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=22 STORM NO.= 2 RAIN TABLE NO.= 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 8

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 10-YR TY
STARTING TIME = .00 RAIN DEPTH = 5.25 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=23 STORM NO.= 3 RAIN TABLE NO.= 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 9

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 25-YR TY
STARTING TIME = .00 RAIN DEPTH = 6.10 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=24 STORM NO.= 4 RAIN TABLE NO.= 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 10

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 50-YR TY
STARTING TIME = .00 RAIN DEPTH = 6.98 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=25 STORM NO.= 5 RAIN TABLE NO.= 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 11

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 100-YR T
STARTING TIME = .00 RAIN DEPTH = 7.80 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=26 STORM NO.= 6 RAIN TABLE NO.= 2

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 12

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 2-YR ZON
STARTING TIME = .00 RAIN DEPTH = 3.48 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=41 STORM NO.= 1 RAIN TABLE NO.= 8

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 13

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 5-YR ZON
STARTING TIME = .00 RAIN DEPTH = 4.55 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=42 STORM NO.= 2 RAIN TABLE NO.= 8

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 14

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 10-YR ZO
STARTING TIME = .00 RAIN DEPTH = 5.25 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=43 STORM NO.= 3 RAIN TABLE NO.= 8

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 15

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 25-YR ZO
STARTING TIME = .00 RAIN DEPTH = 6.10 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=44 STORM NO.= 4 RAIN TABLE NO.= 8

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 16

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 50-YR 2O
STARTING TIME = .00 RAIN DEPTH = 6.98 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=45 STORM NO.= 5 RAIN TABLE NO.= 8

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 17

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 100-YR 2
STARTING TIME = .00 RAIN DEPTH = 7.80 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=46 STORM NO.= 6 RAIN TABLE NO.= 8

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 18

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 2.52 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 7, AMC 2							
MAIN TIME INCREMENT .08 HOURS							
ALTERNATE 11 STORM 1							
XSECTION 2	RUNOFF	.09	1.98	---	2.56	130	1444.4
XSECTION 4	RUNOFF	.03	1.33	---	2.53	31	1033.3
XSECTION 6	ADDHYD	.12	1.82	---	2.55	160	1333.3
STRUCTURE 6	RESVOR	.12	1.82	1370.81	2.92	66	550.0
RAINFALL OF 3.42 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 12 STORM 2							
XSECTION 2	RUNOFF	.09	2.86	---	2.55	184	2044.4
XSECTION 4	RUNOFF	.03	2.11	---	2.53	49	1633.3
XSECTION 6	ADDHYD	.12	2.68	---	2.55	232	1933.3
STRUCTURE 6	RESVOR	.12	2.68	1371.14	2.78	144	1200.0
RAINFALL OF 4.02 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 13 STORM 3							
XSECTION 2	RUNOFF	.09	3.45	---	2.54	220	2444.4
XSECTION 4	RUNOFF	.03	2.65	---	2.52	62	2066.7
XSECTION 6	ADDHYD	.12	3.26	---	2.54	283	2358.3
STRUCTURE 6	RESVOR	.12	3.26	1371.31	2.74	195	1625.0
RAINFALL OF 4.63 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 14 STORM 4							
XSECTION 2	RUNOFF	.09	4.05	---	2.55	257	2855.6
XSECTION 4	RUNOFF	.03	3.22	---	2.52	74	2466.7
XSECTION 6	ADDHYD	.12	3.85	---	2.54	330	2750.0

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 14 STORM 4							
STRUCTURE 6	RESVOR	.12	3.84	1371.45	2.71	251	2091.7
RAINFALL OF 5.20 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 15 STORM 5							
XSECTION 2	RUNOFF	.09	4.67	---	2.55	291	3233.3
XSECTION 4	RUNOFF	.03	3.73	---	2.52	86	2866.7
XSECTION 6	ADDHYD	.12	4.40	---	2.54	376	3133.3
STRUCTURE 6	RESVOR	.12	4.40	1371.57	2.69	304	2533.3
RAINFALL OF 5.94 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 16 STORM 6							
XSECTION 2	RUNOFF	.09	5.35	---	2.54	338	3755.6
XSECTION 4	RUNOFF	.03	4.45	---	2.52	102	3400.0
XSECTION 6	ADDHYD	.12	5.13	---	2.53	439	3658.3
STRUCTURE 6	RESVOR	.12	5.13	1371.70	2.67	368	3066.7
RAINFALL OF 3.48 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs. RAINFABLE NUMBER 2, AMC 2							
ALTERNATE 21 STORM 1							
XSECTION 2	RUNOFF	.09	2.92	---	12.12	149	1655.6
XSECTION 4	RUNOFF	.03	2.16	---	12.10	41	1366.7
XSECTION 6	ADDHYD	.12	2.73	---	12.12	190	1583.3
STRUCTURE 6	RESVOR	.12	2.73	1371.02	12.36	109	908.3

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 4.55 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 22 STORM 2							
XSECTION 2	RUNOFF	.09	3.97	---	12.13	200	2222.2
XSECTION 4	RUNOFF	.03	3.14	---	12.09	59	1966.7
XSECTION 6	ADDHYD	.12	3.77	---	12.12	258	2150.0
STRUCTURE 6	RESVOR	.12	3.76	1371.26	12.31	177	1475.0
RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 23 STORM 3							
XSECTION 2	RUNOFF	.09	4.66	---	12.12	233	2588.9
XSECTION 4	RUNOFF	.03	3.80	---	12.10	70	2333.3
XSECTION 6	ADDHYD	.12	4.45	---	12.12	303	2525.0
STRUCTURE 6	RESVOR	.12	4.45	1371.40	12.27	230	1916.7
RAINFALL OF 6.10 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 24 STORM 4							
XSECTION 2	RUNOFF	.09	5.51	---	12.13	274	3044.4
XSECTION 4	RUNOFF	.03	4.61	---	12.09	85	2833.3
XSECTION 6	ADDHYD	.12	5.29	---	12.12	357	2975.0
STRUCTURE 6	RESVOR	.12	5.27	1371.54	12.25	288	2400.0

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 6.98 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 25 STORM 5							
XSECTION 2	RUNOFF	.09	6.38	---	12.12	314	3488.9
XSECTION 4	RUNOFF	.03	5.45	---	12.09	99	3300.0
XSECTION 6	ADDHYD	.12	6.16	---	12.11	413	3441.7
STRUCTURE 6	RESVOR	.12	6.14	1371.66	12.24	346	2883.3
RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 26 STORM 6							
XSECTION 2	RUNOFF	.09	7.20	---	12.12	352	3911.1
XSECTION 4	RUNOFF	.03	6.25	---	12.09	113	3766.7
XSECTION 6	ADDHYD	.12	6.97	---	12.11	465	3875.0
STRUCTURE 6	RESVOR	.12	6.95	1371.76	12.23	397	3308.3
RAINFALL OF 3.48 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs. RAINTABLE NUMBER 8, AMC 2							
ALTERNATE 41 STORM 1							
XSECTION 2	RUNOFF	.09	2.92	---	12.06	131	1455.6
XSECTION 4	RUNOFF	.03	2.16	---	12.04	34	1133.3
XSECTION 6	ADDHYD	.12	2.73	---	12.05	165	1375.0
STRUCTURE 6	RESVOR	.12	2.73	1371.04	12.26	115	958.3

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
RAINFALL OF 4.55 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 42 STORM 2							
XSECTION 2	RUNOFF	.09	3.97	---	12.06	175	1944.4
XSECTION 4	RUNOFF	.03	3.14	---	12.03	49	1633.3
XSECTION 6	ADDHYD	.12	3.77	---	12.05	225	1875.0
STRUCTURE 6	RESVOR	.12	3.77	1371.27	12.22	179	1491.7
RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 43 STORM 3							
XSECTION 2	RUNOFF	.09	4.66	---	12.06	204	2266.7
XSECTION 4	RUNOFF	.03	3.80	---	12.03	59	1966.7
XSECTION 6	ADDHYD	.12	4.45	---	12.05	263	2191.7
STRUCTURE 6	RESVOR	.12	4.45	1371.38	12.19	223	1858.3
RAINFALL OF 6.10 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 44 STORM 4							
XSECTION 2	RUNOFF	.09	5.51	---	12.05	238	2644.4
XSECTION 4	RUNOFF	.03	4.61	---	12.03	71	2366.7
XSECTION 6	ADDHYD	.12	5.29	---	12.05	309	2575.0
STRUCTURE 6	RESVOR	.12	5.28	1371.51	12.17	271	2258.3

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION		DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 6.98 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.								
ALTERNATE 45 STORM 5								
XSECTION	2	RUNOFF	.09	6.38	---	12.05	274	3044.4
XSECTION	4	RUNOFF	.03	5.45	---	12.03	83	2766.7
XSECTION	6	ADDHYD	.12	6.16	---	12.05	357	2975.0
STRUCTURE	6	RESVOR	.12	6.15	1371.61	12.16	325	2708.3
RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.								
ALTERNATE 46 STORM 6								
XSECTION	2	RUNOFF	.09	7.20	---	12.05	307	3411.1
XSECTION	4	RUNOFF	.03	6.25	---	12.03	95	3166.7
XSECTION	6	ADDHYD	.12	6.97	---	12.05	402	3350.0
STRUCTURE	6	RESVOR	.12	6.96	1371.70	12.15	370	3083.3

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	3	4	5
STRUCTURE 6	.12					
ALTERNATE 11		66	*********	*********	*********	*********
ALTERNATE 12		*********	144	*********	*********	*********
ALTERNATE 13		*********	*********	195	*********	*********
ALTERNATE 14		*********	*********	*********	251	*********
ALTERNATE 15		*********	*********	*********	*********	304
ALTERNATE 21		109	*********	*********	*********	*********
ALTERNATE 22		*********	177	*********	*********	*********
ALTERNATE 23		*********	*********	230	*********	*********
ALTERNATE 24		*********	*********	*********	288	*********
ALTERNATE 25		*********	*********	*********	*********	346
ALTERNATE 41		115	*********	*********	*********	*********
ALTERNATE 42		*********	179	*********	*********	*********
ALTERNATE 43		*********	*********	223	*********	*********
ALTERNATE 44		*********	*********	*********	271	*********
ALTERNATE 45		*********	*********	*********	*********	325
XSECTION 2	.09					
ALTERNATE 11		130	*********	*********	*********	*********
ALTERNATE 12		*********	184	*********	*********	*********
ALTERNATE 13		*********	*********	220	*********	*********
ALTERNATE 14		*********	*********	*********	257	*********
ALTERNATE 15		*********	*********	*********	*********	291
ALTERNATE 21		149	*********	*********	*********	*********
ALTERNATE 22		*********	200	*********	*********	*********
ALTERNATE 23		*********	*********	233	*********	*********
ALTERNATE 24		*********	*********	*********	274	*********
ALTERNATE 25		*********	*********	*********	*********	314
ALTERNATE 41		131	*********	*********	*********	*********
ALTERNATE 42		*********	175	*********	*********	*********
ALTERNATE 43		*********	*********	204	*********	*********
ALTERNATE 44		*********	*********	*********	238	*********
ALTERNATE 45		*********	*********	*********	*********	274
XSECTION 4	.03					
ALTERNATE 11		31	*********	*********	*********	*********
ALTERNATE 12		*********	49	*********	*********	*********

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	3	4	5
XSECTION 4	.03					
ALTERNATE 13		*********	*********	62	*********	*********
ALTERNATE 14		*********	*********	*********	74	*********
ALTERNATE 15		*********	*********	*********	*********	86
ALTERNATE 21		41	*********	*********	*********	*********
ALTERNATE 22		*********	59	*********	*********	*********
ALTERNATE 23		*********	*********	70	*********	*********
ALTERNATE 24		*********	*********	*********	85	*********
ALTERNATE 25		*********	*********	*********	*********	99
ALTERNATE 41		34	*********	*********	*********	*********
ALTERNATE 42		*********	49	*********	*********	*********
ALTERNATE 43		*********	*********	59	*********	*********
ALTERNATE 44		*********	*********	*********	71	*********
ALTERNATE 45		*********	*********	*********	*********	83
XSECTION 6	.12					
ALTERNATE 11		160	*********	*********	*********	*********
ALTERNATE 12		*********	232	*********	*********	*********
ALTERNATE 13		*********	*********	283	*********	*********
ALTERNATE 14		*********	*********	*********	330	*********
ALTERNATE 15		*********	*********	*********	*********	376
ALTERNATE 21		190	*********	*********	*********	*********
ALTERNATE 22		*********	258	*********	*********	*********
ALTERNATE 23		*********	*********	303	*********	*********
ALTERNATE 24		*********	*********	*********	357	*********
ALTERNATE 25		*********	*********	*********	*********	413
ALTERNATE 41		165	*********	*********	*********	*********
ALTERNATE 42		*********	225	*********	*********	*********
ALTERNATE 43		*********	*********	263	*********	*********
ALTERNATE 44		*********	*********	*********	309	*********
ALTERNATE 45		*********	*********	*********	*********	357

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE	DRAINAGE AREA	STORM NUMBERS.....

ID	(SQ MI)	6

STRUCTURE	6	.12
ALTERNATE	16	368
ALTERNATE	26	397
ALTERNATE	46	370

XSECTION	2	.09

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 6
XSECTION 2	.09	
ALTERNATE 16		338
ALTERNATE 26		352
ALTERNATE 46		307
XSECTION 4	.03	
ALTERNATE 16		102
ALTERNATE 26		113
ALTERNATE 46		95
XSECTION 6	.12	
ALTERNATE 16		439
ALTERNATE 26		465
ALTERNATE 46		402

END OF 1 JOBS IN THIS RUN

SCS TR-20, VERSION 10/01/90

FILES

INPUT = GATP1L.T20
OUTPUT = GATP1L.OUT , DATED 02/04/99,09:40:57

FILES GENERATED - DATED 02/04/99,09:40:57

NONE!

*** TR-20 RUN COMPLETED ***

The Gateway Center Addition
Preliminary TR-20 Analyses
Proposed Conditions
Proposed Detention

02/04/99

MKEC 98158

III.

```
******************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*********************

JOB TR-20                                                SUMMARY
TITLE 003 GATEWAY CENTER ADDITION GREENWICH & 13 2,5,10,25,50,100-YR 6-HR
TITLE     GATP2L.T20    02FEB99 PROPOSED CONDITIONS AND DETENTION   24-HR
 4 DIMHYD                                                                256
 8          .0          .150        .320        .6          .93
 8          1.0         .96         .88         .78         .69
 8          .59         .52         .48         .43         .39
 8          .35         .32         .29         .26         .23
 8          .21         .2          .19         .18         .17
 8          .16         .15         .14         .13         .12
 8          .11         .1          .09         .08         .07
 8          .06         .05         .045        .04         .035
 8          .03         .025        .02         .015        .01
 8          .0          .0          .0          .0          .0
 9 ENDTBL
 4 DIMHYD                0.02                                            484
 8          .000        .030        .100        .190        .310
 8          .470        .660        .820        .930        .990
 8          1.000       .990        .930        .860        .780
 8          .680        .560        .460        .390        .330
 8          .280        .241        .207        .174        .147
 8          .126        .107        .091        .077        .066
 8          .055        .047        .040        .034        .029
 8          .025        .021        .018        .015        .013
 8          .011        .009        .008        .007        .006
 8          .005        .004        .003        .002        .001
 8          .000        .000        .000        .000        .000
 9 ENDTBL
 5 RAINFL 7              0.08333                                         6-HR M&L
 8          0.0000      0.0033      0.0066      0.0099      0.0132
 8          0.0166      0.0198      0.0248      0.0296      0.0346
 8          0.0404      0.0463      0.0522      0.0590      0.0658
 8          0.0727      0.0796      0.0864      0.0933      0.1136
 8          0.1340      0.1572      0.1832      0.2124      0.2473
 8          0.2850      0.3400      0.4464      0.6034      0.6752
 8          0.7220      0.7409      0.7598      0.7758      0.7919
 8          0.8072      0.8224      0.8310      0.8396      0.8468
 8          0.8540      0.8628      0.8714      0.8773      0.8832
 8          0.8890      0.8939      0.8988      0.9038      0.9086
 8          0.9136      0.9184      0.9233      0.9282      0.9332
 8          0.9380      0.9429      0.9478      0.9527      0.9576
 8          0.9626      0.9664      0.9704      0.9742      0.9782
 8          0.9821      0.9860      0.9884      0.9906      0.9930
 8          0.9954      0.9976      1.0000      1.0000      1.0000
 9 ENDTBL
 5 RAINFL 8              0.5                                             24-HRSCS
```

```
**********80-80 LIST OF INPUT DATA (CONTINUED)**********

 8          .000        .002        .005        .009        .013        ZONE 5
 8          .018        .023        .029        .035        .042
 8          .050        .059        .068        .078        .089
 8          .101        .114        .128        .144        .162
 8          .183        .208        .244        .339        .723
 8          .773        .802        .825        .844        .861
 8          .876        .890        .903        .914        .924
 8          .934        .943        .951        .959        .966
 8          .972        .977        .982        .986        .990
 8          .993        .996        .998       1.000       1.000
 9 ENDTBL
 3 STRUCT      06                                                    7X2OPEN
 8                      1367.0      0.0         0.0
 8                      1368.       22.7        1.095
 8                      1369.       51.3        3.06
 8                      1370.       83.0        6.315
 8                      1371.       109.2       10.99
 8                      1372.       129.0       16.905
 8                      1372.5      168.1       19.78
 8                      1373.       220.8       24.055
 8                      1373.5      293.3       28.
 9 ENDTBL
 3 STRUCT      07                                                    DUMMY
 8                      1365.4      0.0         0.0
 9 ENDTBL
 3 STRUCT      10                                                    DUMMY
 8                      1364.0      0.0         0.0
 9 ENDTBL
 6 RUNOFF 1 002       6 0.0903      95.0        0.423          1   1 SITE RO
 6 RUNOFF 1 004       7 0.0289      87.0        0.361          1   1 RES RO
 6 ADDHYD 4 006   7 6 5                                        1   1 DIN 06
 6 RESVOR 2    06 5   6 1367.0                          1 1 1 1   1 QOUT 06
   ENDATA
 7 INCREM 6             0.0833
 7 COMPUT 7 002      06 0.0         2.52        1.0        7 2  11  01 2-YR 6-H
   ENDCMP 1
 7 COMPUT 7 002      06 0.0         3.42        1.0        7 2  12  02 5-YR 6-H
   ENDCMP 1
 7 COMPUT 7 002      06 0.0         4.02        1.0        7 2  13  03 10-YR 6-
   ENDCMP 1
 7 COMPUT 7 002      06 0.0         4.63        1.0        7 2  14  04 25-YR 6-
   ENDCMP 1
 7 COMPUT 7 002      06 0.0         5.20        1.0        7 2  15  05 50-YR 6-
   ENDCMP 1
 7 COMPUT 7 002      06 0.0         5.94        1.0        7 2  16  06 100-YR 6
   ENDCMP 1
```

**********80-80 LIST OF INPUT DATA (CONTINUED)**********

```
7 COMPUT 7 002      06 0.0        3.48        1.0        2 2  21  01 2-YR TYP
  ENDCMP 1
7 COMPUT 7 002      06 0.0        4.55        1.0        2 2  22  02 5-YR TYP
  ENDCMP 1
7 COMPUT 7 002      06 0.0        5.25        1.0        2 2  23  03 10-YR TY
  ENDCMP 1
7 COMPUT 7 002      06 0.0        6.10        1.0        2 2  24  04 25-YR TY
  ENDCMP 1
7 COMPUT 7 002      06 0.0        6.98        1.0        2 2  25  05 50-YR TY
  ENDCMP 1
7 COMPUT 7 002      06 0.0        7.80        1.0        2 2  26  06 100-YR T
  ENDCMP 1
7 COMPUT 7 002      06 0.0        3.48        1.0        8 2  41  01 2-YR ZON
  ENDCMP 1
7 COMPUT 7 002      06 0.0        4.55        1.0        8 2  42  02 5-YR ZON
  ENDCMP 1
7 COMPUT 7 002      06 0.0        5.25        1.0        8 2  43  03 10-YR ZO
  ENDCMP 1
7 COMPUT 7 002      06 0.0        6.10        1.0        8 2  44  04 25-YR ZO
  ENDCMP 1
7 COMPUT 7 002      06 0.0        6.98        1.0        8 2  45  05 50-YR ZO
  ENDCMP 1
7 COMPUT 7 002      06 0.0        7.80        1.0        8 2  46  06 100-YR Z
  ENDCMP 1
  ENDJOB 2
```

**********END OF 80-80 LIST**********

COMPUTED PEAK RATE FACTOR = 256.08

COMPUTED PEAK RATE FACTOR = 484.00

EXECUTIVE CONTROL INCREM MAIN TIME INCREMENT = .08 HOURS

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 2-YR 6-H
STARTING TIME = .00 RAIN DEPTH = 2.52 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=11 STORM NO.= 1 RAIN TABLE NO.= 7

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	5
FLOW(CFS)	12	6	0

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	4
FLOW(CFS)	2	1	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	5
FLOW(CFS)	14	7	0

OPERATION RESVDR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.92	65.0	1369.43

HYDROGRAPH POINTS FOR ALTERNATE =11, STORM = 1
MAIN TIME INCREMENT = .08 hr, DRAINAGE AREA = .12 SQ.MI.

HRS								
1.42	CFS	0	1	1	1	2	3	5	7
1.42	ELEV	1367.02	1367.03	1367.04	1367.06	1367.09	1367.14	1367.21	1367.30
2.08	CFS	9	13	17	24	31	42	52	58
2.08	ELEV	1367.41	1367.56	1367.76	1368.04	1368.31	1368.67	1369.03	1369.22
2.75	CFS	62	65	65	65	63	62	60	58
2.75	ELEV	1369.35	1369.42	1369.43	1369.42	1369.38	1369.34	1369.28	1369.22
3.42	CFS	56	54	51	48	45	43	40	37
3.42	ELEV	1369.15	1369.08	1369.01	1368.90	1368.79	1368.70	1368.60	1368.51
4.08	CFS	35	33	31	29	27	26	24	23
4.08	ELEV	1368.43	1368.35	1368.28	1368.21	1368.15	1368.10	1368.05	1368.00
4.75	CFS	21	20	19	18	17	16	15	14

4.75 ELEV	1367.93	1367.87	1367.82	1367.77	1367.73	1367.69	1367.66	1367.63
5.41 CFS	14	13	12	12	11	11	10	10
5.41 ELEV	1367.60	1367.57	1367.55	1367.52	1367.50	1367.47	1367.45	1367.42
6.08 CFS	9	8	8	7	6	6	5	4
6.08 ELEV	1367.40	1367.37	1367.34	1367.31	1367.28	1367.25	1367.22	1367.19
6.75 CFS	4	3	3	2	2	2	2	1
6.75 ELEV	1367.17	1367.14	1367.12	1367.11	1367.09	1367.08	1367.07	1367.06
7.41 CFS	1	1	1	1	1	1	1	0
7.41 ELEV	1367.05	1367.05	1367.04	1367.03	1367.03	1367.03	1367.02	1367.02

RUNOFF ABOVE BASEFLOW OF .00 CFS
1.82 WATERSHED INCHES; 140 CFS-HRS; 11.6 ACRE-FEET.

DURATION(HRS)	2	4	6	6
FLOW(CFS)	27	9	1	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 1

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 5-YR 6-H
STARTING TIME = .00 RAIN DEPTH = 3.42 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=12 STORM NO.= 2 RAIN TABLE NO.= 7

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6
FLOW(CFS)	16	9	0

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	5
FLOW(CFS)	4	2	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6
FLOW(CFS)	21	10	0

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.94	86.6	1370.14

HYDROGRAPH POINTS FOR ALTERNATE =12, STORM = 2

HRS	MAIN TIME INCREMENT = .08 hr,				DRAINAGE AREA =			.12 SQ.MI.
1.17 CFS	0	1	1	1	2	2	3	5
1.17 ELEV	1367.02	1367.03	1367.04	1367.06	1367.08	1367.11	1367.14	1367.20
1.83 CFS	6	9	13	17	22	27	35	46
1.83 ELEV	1367.28	1367.40	1367.55	1367.74	1367.97	1368.16	1368.42	1368.83
2.50 CFS	58	69	79	84	86	87	86	86
2.50 ELEV	1369.22	1369.57	1369.86	1370.04	1370.11	1370.14	1370.13	1370.10
3.17 CFS	85	83	81	78	75	71	68	66
3.17 ELEV	1370.06	1370.01	1369.92	1369.83	1369.73	1369.64	1369.54	1369.45
3.83 CFS	63	60	57	55	52	49	46	43
3.83 ELEV	1369.36	1369.27	1369.19	1369.11	1369.03	1368.92	1368.81	1368.71
4.50 CFS	40	38	36	34	32	30	29	27
4.50 ELEV	1368.61	1368.53	1368.45	1368.38	1368.32	1368.26	1368.21	1368.17
5.16 CFS	26	25	24	23	22	20	19	18
5.16 ELEV	1368.12	1368.08	1368.04	1368.01	1367.95	1367.89	1367.84	1367.79
5.83 CFS	17	16	15	14	13	12	11	10
5.83 ELEV	1367.74	1367.69	1367.65	1367.61	1367.56	1367.52	1367.47	1367.42
6.50 CFS	9	8	7	6	5	4	4	3
6.50 ELEV	1367.38	1367.33	1367.29	1367.25	1367.22	1367.19	1367.16	1367.14
7.16 CFS	3	2	2	2	2	1	1	1
7.16 ELEV	1367.12	1367.11	1367.09	1367.08	1367.07	1367.06	1367.05	1367.05
7.83 CFS	1	1	1	1	1	0		
7.83 ELEV	1367.04	1367.03	1367.03	1367.03	1367.02	1367.02		

RUNOFF ABOVE BASEFLOW OF .00 CFS
2.68 WATERSHED INCHES; 206 CFS-HRS; 17.0 ACRE-FEET.

DURATION(HRS)	2	4	6	7
FLOW(CFS)	43	14	2	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 2

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 10-YR 6-
STARTING TIME = .00 RAIN DEPTH = 4.02 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=13 STORM NO.= 3 RAIN TABLE NO.= 7

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6
FLOW(CFS)	19	10	0

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	5
FLOW(CFS)	5	2	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6
FLOW(CFS)	25	13	0

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.96	96.9	1370.53

HYDROGRAPH POINTS FOR ALTERNATE =13, STORM = 3

HRS	MAIN TIME INCREMENT = .08 hr,			DRAINAGE AREA = .12 SQ.MI.				
1.08	CFS	0	1	1	2	2	3	4	5
1.08	ELEV	1367.02	1367.03	1367.05	1367.07	1367.10	1367.13	1367.16	1367.21
1.75	CFS	6	9	13	17	22	27	33	43
1.75	ELEV	1367.29	1367.40	1367.55	1367.75	1367.98	1368.15	1368.37	1368.70
2.42	CFS	55	68	81	89	93	96	97	97
2.42	ELEV	1369.12	1369.53	1369.95	1370.22	1370.39	1370.49	1370.53	1370.53
3.08	CFS	96	95	94	92	90	88	86	84
3.08	ELEV	1370.50	1370.46	1370.41	1370.34	1370.27	1370.19	1370.11	1370.03
3.75	CFS	81	77	74	70	67	64	61	58
3.75	ELEV	1369.93	1369.82	1369.71	1369.60	1369.50	1369.40	1369.31	1369.22
4.41	CFS	56	53	51	48	45	42	40	38
4.41	ELEV	1369.14	1369.06	1368.98	1368.87	1368.77	1368.68	1368.60	1368.52
5.08	CFS	36	34	32	31	29	28	27	25
5.08	ELEV	1368.46	1368.39	1368.34	1368.28	1368.23	1368.18	1368.14	1368.09
5.75	CFS	24	23	21	20	18	17	16	14
5.75	ELEV	1368.05	1368.01	1367.94	1367.87	1367.81	1367.75	1367.68	1367.62
6.41	CFS	13	11	10	9	7	6	6	5
6.41	ELEV	1367.55	1367.49	1367.43	1367.38	1367.33	1367.29	1367.25	1367.21
7.08	CFS	4	4	3	3	2	2	2	2
7.08	ELEV	1367.19	1367.16	1367.14	1367.12	1367.10	1367.09	1367.08	1367.07
7.75	CFS	1	1	1	1	1	1	1	0
7.75	ELEV	1367.06	1367.05	1367.04	1367.04	1367.03	1367.03	1367.03	1367.02

RUNOFF ABOVE BASEFLOW OF .00 CFS
3.26 WATERSHED INCHES; 250 CFS-HRS; 20.7 ACRE-FEET.

DURATION(HRS)	2	4	6	7
FLOW(CFS)	55	18	2	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 3

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 25-YR 6-
STARTING TIME = .00 RAIN DEPTH = 4.63 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=14 STORM NO.= 4 RAIN TABLE NO.= 7

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6
FLOW(CFS)	24	12	0

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	5
FLOW(CFS)	6	3	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6
FLOW(CFS)	29	15	0

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.98	107.7	1370.94

HYDROGRAPH POINTS FOR ALTERNATE =14, STORM = 4
MAIN TIME INCREMENT = .08 hr, DRAINAGE AREA = .12 SQ.MI.

HRS								
1.00 CFS	0	1	1	2	3	3	4	5
1.00 ELEV	1367.02	1367.03	1367.06	1367.08	1367.11	1367.15	1367.18	1367.23
1.67 CFS	7	9	12	16	22	27	32	40
1.67 ELEV	1367.29	1367.39	1367.53	1367.72	1367.95	1368.14	1368.34	1368.60
2.33 CFS	51	63	78	89	97	103	106	107
2.33 ELEV	1368.99	1369.36	1369.83	1370.24	1370.54	1370.76	1370.88	1370.93
3.00 CFS	108	107	106	105	103	101	98	96
3.00 ELEV	1370.94	1370.92	1370.88	1370.83	1370.76	1370.68	1370.59	1370.50
3.67 CFS	94	92	89	87	85	82	78	74
3.67 ELEV	1370.42	1370.33	1370.24	1370.15	1370.06	1369.96	1369.84	1369.73
4.33 CFS	71	68	65	62	59	56	54	52
4.33 ELEV	1369.62	1369.51	1369.42	1369.33	1369.24	1369.16	1369.09	1369.02
5.00 CFS	49	46	44	42	39	37	35	34

5.00 ELEV	1368.93	1368.83	1368.74	1368.66	1368.58	1368.51	1368.44	1368.38
5.66 CFS	32	30	29	27	26	24	23	21
5.66 ELEV	1368.32	1368.26	1368.21	1368.15	1368.10	1368.05	1368.00	1367.91
6.33 CFS	19	16	15	13	11	10	8	7
6.33 ELEV	1367.82	1367.73	1367.64	1367.56	1367.49	1367.43	1367.37	1367.32
7.00 CFS	6	6	5	4	4	3	3	2
7.00 ELEV	1367.28	1367.24	1367.21	1367.18	1367.16	1367.14	1367.12	1367.10
7.66 CFS	2	2	2	1	1	1	1	1
7.66 ELEV	1367.09	1367.08	1367.07	1367.06	1367.05	1367.04	1367.04	1367.03
8.33 CFS	1	1	0					
8.33 ELEV	1367.03	1367.02	1367.02					

RUNOFF ABOVE BASEFLOW OF .00 CFS
3.85 WATERSHED INCHES; 296 CFS-HRS; 24.5 ACRE-FEET.

DURATION(HRS)	2	4	6	7
FLOW(CFS)	65	24	3	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 4

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 50-YR 6-
STARTING TIME = .00 RAIN DEPTH = 5.20 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=15 STORM NO.= 5 RAIN TABLE NO.= 7

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6
FLOW(CFS)	28	14	0

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	5
FLOW(CFS)	7	3	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6
FLOW(CFS)	33	17	0

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
3.01	114.7	1371.28

HYDROGRAPH POINTS FOR ALTERNATE =15, STORM = 5

HRS MAIN TIME INCREMENT = .08 hr, DRAINAGE AREA = .12 SQ.MI.

.92 CFS	0	1	1	2	3	3	4	5
.92 ELEV	1367.02	1367.03	1367.05	1367.08	1367.11	1367.15	1367.19	1367.24
1.58 CFS	7	8	11	15	20	25	31	38
1.58 ELEV	1367.30	1367.37	1367.49	1367.65	1367.88	1368.09	1368.28	1368.52
2.25 CFS	46	57	70	85	96	106	111	113
2.25 ELEV	1368.83	1369.17	1369.59	1370.10	1370.51	1370.86	1371.09	1371.20
2.92 CFS	114	115	115	114	113	112	111	109
2.92 ELEV	1371.26	1371.28	1371.27	1371.24	1371.20	1371.14	1371.07	1371.00
3.58 CFS	107	104	102	99	96	94	91	89
3.58 ELEV	1370.90	1370.81	1370.71	1370.61	1370.51	1370.42	1370.32	1370.22
4.25 CFS	86	84	81	77	74	70	67	64
4.25 ELEV	1370.13	1370.04	1369.93	1369.82	1369.70	1369.60	1369.50	1369.41
4.91 CFS	62	59	57	55	52	50	47	44
4.91 ELEV	1369.33	1369.25	1369.18	1369.11	1369.04	1368.96	1368.85	1368.76
5.58 CFS	42	40	38	35	33	31	29	27
5.58 ELEV	1368.68	1368.60	1368.52	1368.44	1368.37	1368.30	1368.23	1368.17
6.25 CFS	25	23	21	19	16	14	12	11
6.25 ELEV	1368.10	1368.03	1367.93	1367.82	1367.71	1367.62	1367.54	1367.47
6.91 CFS	9	8	7	6	5	5	4	3
6.91 ELEV	1367.41	1367.35	1367.31	1367.27	1367.23	1367.20	1367.17	1367.15
7.58 CFS	3	3	2	2	2	1	1	1
7.58 ELEV	1367.13	1367.11	1367.10	1367.08	1367.07	1367.06	1367.06	1367.05
8.25 CFS	1	1	1	1	1	0		
8.25 ELEV	1367.04	1367.04	1367.03	1367.03	1367.02	1367.02		

RUNOFF ABOVE BASEFLOW OF .00 CFS
4.40 WATERSHED INCHES; 338 CFS-HRS; 28.0 ACRE-FEET.

DURATION(HRS)	2	4	6	8
FLOW(CFS)	77	29	4	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 5

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 100-YR 6
STARTING TIME = .00 RAIN DEPTH = 5.94 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=16 STORM NO.= 6 RAIN TABLE NO.= 7

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6
FLOW(CFS)	32	16	0

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	5
FLOW(CFS)	8	4	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6
FLOW(CFS)	41	21	0

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
3.04	123.4	1371.72

HYDROGRAPH POINTS FOR ALTERNATE =16, STORM = 6

MAIN TIME INCREMENT = .08 hr, DRAINAGE AREA = .12 SQ.MI.

HRS								
.83 CFS	0	1	1	2	3	4	5	6
.83 ELEV	1367.01	1367.03	1367.05	1367.08	1367.12	1367.16	1367.21	1367.27
1.50 CFS	7	9	11	14	19	24	30	36
1.50 ELEV	1367.33	1367.39	1367.48	1367.62	1367.83	1368.05	1368.25	1368.48
2.17 CFS	44	54	64	80	93	106	114	118
2.17 ELEV	1368.76	1369.08	1369.40	1369.89	1370.38	1370.87	1371.22	1371.46
2.83 CFS	121	123	123	123	123	122	121	120
2.83 ELEV	1371.61	1371.68	1371.71	1371.71	1371.69	1371.65	1371.59	1371.52
3.50 CFS	118	116	115	113	112	110	107	104
3.50 ELEV	1371.45	1371.37	1371.29	1371.20	1371.12	1371.03	1370.93	1370.82
4.16 CFS	102	99	96	93	91	89	86	84
4.16 ELEV	1370.71	1370.60	1370.50	1370.40	1370.30	1370.21	1370.12	1370.03
4.83 CFS	81	77	74	71	68	65	62	60
4.83 ELEV	1369.93	1369.82	1369.72	1369.62	1369.53	1369.44	1369.35	1369.27
5.50 CFS	57	55	53	50	47	44	41	39
5.50 ELEV	1369.19	1369.12	1369.05	1368.97	1368.86	1368.75	1368.65	1368.56
6.16 CFS	36	34	31	28	26	23	21	18
6.16 ELEV	1368.47	1368.38	1368.29	1368.20	1368.11	1368.03	1367.91	1367.80
6.83 CFS	16	14	12	10	9	8	7	6
6.83 ELEV	1367.69	1367.60	1367.52	1367.45	1367.39	1367.34	1367.29	1367.25
7.50 CFS	5	4	4	3	3	2	2	2
7.50 ELEV	1367.22	1367.19	1367.17	1367.14	1367.12	1367.11	1367.09	1367.08
8.16 CFS	2	1	1	1	1	1	1	1
8.16 ELEV	1367.07	1367.06	1367.05	1367.05	1367.04	1367.03	1367.03	1367.03
8.83 CFS	1	0						
8.83 ELEV	1367.02	1367.02						

RUNOFF ABOVE BASEFLOW OF .00 CFS
5.13 WATERSHED INCHES; 395 CFS-HRS; 32.6 ACRE-FEET.

DURATION(HRS)	2	4	6	8
FLOW(CFS)	91	36	6	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 6

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 2-YR TYP
STARTING TIME = .00 RAIN DEPTH = 3.48 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=21 STORM NO.= 1 RAIN TABLE NO.= 2

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	13	7	5	4	3	3	2	2

DURATION(HRS)	18	20	20
FLOW(CFS)	1	1	0

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	6	8	10	12	14	15
FLOW(CFS)	3	2	1	1	1	1	1	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	15	9	6	5	4	3	3	3

DURATION(HRS)	18	20	20
FLOW(CFS)	2	1	0

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.47	73.0	1369.69

HYDROGRAPH POINTS FOR ALTERNATE =21, STORM = 1
MAIN TIME INCREMENT = .08 hr, DRAINAGE AREA = .12 SQ.MI.

HRS								
4.66 CFS	0	1	1	1	1	1	1	1

4.66 ELEV	1367.02	1367.02	1367.02	1367.03	1367.03	1367.03	1367.03	1367.03
5.33 CFS	1	1	1	1	1	1	1	1
5.33 ELEV	1367.03	1367.04	1367.04	1367.04	1367.04	1367.04	1367.04	1367.05
6.00 CFS	1	1	1	1	1	1	1	1
6.00 ELEV	1367.05	1367.05	1367.05	1367.05	1367.06	1367.06	1367.06	1367.06
6.66 CFS	1	1	2	2	2	2	2	2
6.66 ELEV	1367.06	1367.07	1367.07	1367.07	1367.07	1367.07	1367.08	1367.08
7.33 CFS	2	2	2	2	2	2	2	2
7.33 ELEV	1367.08	1367.08	1367.09	1367.09	1367.09	1367.09	1367.10	1367.10
8.00 CFS	2	2	2	2	3	3	3	3
8.00 ELEV	1367.10	1367.10	1367.11	1367.11	1367.11	1367.11	1367.12	1367.12
8.66 CFS	3	3	3	3	3	3	4	4
8.66 ELEV	1367.13	1367.13	1367.13	1367.14	1367.15	1367.15	1367.16	1367.16
9.33 CFS	4	4	4	4	4	4	5	5
9.33 ELEV	1367.17	1367.18	1367.18	1367.19	1367.19	1367.20	1367.20	1367.21
10.00 CFS	5	5	5	5	6	6	6	6
10.00 ELEV	1367.21	1367.22	1367.23	1367.24	1367.24	1367.25	1367.27	1367.28
10.66 CFS	7	7	7	8	8	9	9	10
10.66 ELEV	1367.29	1367.30	1367.32	1367.34	1367.35	1367.38	1367.40	1367.42
11.33 CFS	10	11	12	13	14	17	21	28
11.33 ELEV	1367.45	1367.48	1367.52	1367.56	1367.63	1367.74	1367.95	1368.18
12.00 CFS	37	50	59	66	71	73	73	72
12.00 ELEV	1368.51	1368.95	1369.25	1369.47	1369.62	1369.68	1369.68	1369.65
12.66 CFS	70	68	66	63	61	58	56	53
12.66 ELEV	1369.60	1369.53	1369.46	1369.38	1369.29	1369.21	1369.13	1369.06
13.33 CFS	50	47	44	41	39	36	34	32
13.33 ELEV	1368.97	1368.85	1368.75	1368.65	1368.55	1368.47	1368.39	1368.31
13.99 CFS	30	28	26	25	23	22	20	19
13.99 ELEV	1368.25	1368.18	1368.13	1368.07	1368.02	1367.96	1367.88	1367.82
14.66 CFS	17	16	15	14	13	13	12	12
14.66 ELEV	1367.76	1367.71	1367.67	1367.63	1367.59	1367.56	1367.53	1367.51
15.33 CFS	11	11	10	10	9	9	9	9
15.33 ELEV	1367.49	1367.47	1367.45	1367.43	1367.41	1367.40	1367.39	1367.37
15.99 CFS	8	8	8	8	7	7	7	7
15.99 ELEV	1367.36	1367.35	1367.34	1367.33	1367.32	1367.31	1367.31	1367.30
16.66 CFS	7	7	6	6	6	6	6	6
16.66 ELEV	1367.29	1367.29	1367.28	1367.28	1367.27	1367.27	1367.26	1367.26
17.33 CFS	6	6	6	6	6	5	5	5
17.33 ELEV	1367.26	1367.25	1367.25	1367.25	1367.24	1367.24	1367.24	1367.23
17.99 CFS	5	5	5	5	5	5	5	5
17.99 ELEV	1367.23	1367.23	1367.23	1367.22	1367.22	1367.22	1367.22	1367.21
18.66 CFS	5	5	5	5	5	5	4	4
18.66 ELEV	1367.21	1367.21	1367.21	1367.20	1367.20	1367.20	1367.20	1367.19
19.33 CFS	4	4	4	4	4	4	4	4
19.33 ELEV	1367.19	1367.19	1367.19	1367.18	1367.18	1367.18	1367.18	1367.17
19.99 CFS	4	4	4	4	4	4	4	4
19.99 ELEV	1367.17	1367.17	1367.17	1367.17	1367.16	1367.16	1367.16	1367.16
20.66 CFS	4	4	3	3	3	3	3	3
20.66 ELEV	1367.16	1367.15	1367.15	1367.15	1367.15	1367.15	1367.15	1367.15

21.32 CFS	3	3	3	3	3	3	3	3
21.32 ELEV	1367.15	1367.15	1367.15	1367.14	1367.14	1367.14	1367.14	1367.14
21.99 CFS	3	3	3	3	3	3	3	3
21.99 ELEV	1367.14	1367.14	1367.14	1367.14	1367.14	1367.14	1367.14	1367.14
22.66 CFS	3	3	3	3	3	3	3	3
22.66 ELEV	1367.14	1367.14	1367.14	1367.14	1367.14	1367.13	1367.13	1367.13
23.32 CFS	3	3	3	3	3	3	3	3
23.32 ELEV	1367.13	1367.13	1367.13	1367.13	1367.13	1367.13	1367.13	1367.13
23.99 CFS	3	3	3	3	3	2	2	2
23.99 ELEV	1367.13	1367.13	1367.13	1367.12	1367.11	1367.11	1367.09	1367.08
24.66 CFS	2	1	1	1	1	1	1	1
24.66 ELEV	1367.07	1367.07	1367.06	1367.05	1367.04	1367.04	1367.03	1367.03
25.32 CFS	1	0						
25.32 ELEV	1367.02	1367.02						

RUNOFF ABOVE BASEFLOW OF .00 CFS
2.73 WATERSHED INCHES; 210 CFS-HRS; 17.4 ACRE-FEET.

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	30	11	7	5	4	3	3	3

DURATION(HRS)	18	20	21
FLOW(CFS)	1	1	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 7

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 5-YR TYP
STARTING TIME = .00 RAIN DEPTH = 4.55 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=22 STORM NO.= 2 RAIN TABLE NO.= 2

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	17	9	7	6	5	4	3	3

DURATION(HRS)	18	20	21
FLOW(CFS)	2	1	0

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	4	3	2	1	1	1	1	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	21	12	9	7	6	5	4	4
DURATION(HRS)	18	20	21					
FLOW(CFS)	3	1	0					

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.50	90.0	1370.27

HYDROGRAPH POINTS FOR ALTERNATE =22, STORM = 2
MAIN TIME INCREMENT = .08 hr, DRAINAGE AREA = .12 SQ.MI.

HRS								
3.67 CFS	0	1	1	1	1	1	1	1
3.67 ELEV	1367.02	1367.02	1367.02	1367.03	1367.03	1367.03	1367.03	1367.04
4.33 CFS	1	1	1	1	1	1	1	1
4.33 ELEV	1367.04	1367.04	1367.04	1367.04	1367.05	1367.05	1367.05	1367.05
5.00 CFS	1	1	1	1	1	2	2	2
5.00 ELEV	1367.06	1367.06	1367.06	1367.06	1367.07	1367.07	1367.07	1367.07
5.66 CFS	2	2	2	2	2	2	2	2
5.66 ELEV	1367.08	1367.08	1367.08	1367.08	1367.09	1367.09	1367.09	1367.10
6.33 CFS	2	2	2	2	3	3	3	3
6.33 ELEV	1367.10	1367.10	1367.11	1367.11	1367.11	1367.12	1367.12	1367.12
7.00 CFS	3	3	3	3	3	3	3	3
7.00 ELEV	1367.13	1367.13	1367.13	1367.14	1367.14	1367.14	1367.15	1367.15
7.66 CFS	3	4	4	4	4	4	4	4
7.66 ELEV	1367.15	1367.16	1367.16	1367.16	1367.17	1367.17	1367.17	1367.18
8.33 CFS	4	4	4	4	5	5	5	5
8.33 ELEV	1367.18	1367.18	1367.19	1367.19	1367.20	1367.21	1367.21	1367.22
9.00 CFS	5	5	6	6	6	6	6	6
9.00 ELEV	1367.23	1367.24	1367.25	1367.25	1367.26	1367.27	1367.28	1367.29
9.66 CFS	7	7	7	7	7	8	8	8
9.66 ELEV	1367.29	1367.30	1367.31	1367.31	1367.32	1367.33	1367.34	1367.35
10.33 CFS	8	9	9	9	10	10	11	11
10.33 ELEV	1367.37	1367.38	1367.40	1367.41	1367.43	1367.45	1367.47	1367.50
11.00 CFS	12	12	13	14	15	16	17	18
11.00 ELEV	1367.52	1367.55	1367.58	1367.61	1367.65	1367.70	1367.75	1367.81
11.66 CFS	20	24	28	37	50	62	74	84
11.66 ELEV	1367.90	1368.03	1368.19	1368.49	1368.95	1369.34	1369.73	1370.03
12.33 CFS	88	90	90	90	88	87	85	83
12.33 ELEV	1370.18	1370.25	1370.27	1370.25	1370.21	1370.15	1370.09	1370.02
12.99 CFS	80	77	74	70	67	64	61	59
12.99 ELEV	1369.92	1369.81	1369.70	1369.60	1369.50	1369.41	1369.32	1369.23
13.66 CFS	56	53	51	48	44	42	39	37
13.66 ELEV	1369.15	1369.07	1368.99	1368.87	1368.76	1368.66	1368.57	1368.48
14.33 CFS	34	32	30	29	27	26	24	23

14.33 ELEV	1368.40	1368.33	1368.27	1368.21	1368.15	1368.10	1368.05	1368.01
14.99 CFS	21	20	19	18	17	16	15	14
14.99 ELEV	1367.94	1367.88	1367.83	1367.78	1367.73	1367.70	1367.66	1367.63
15.66 CFS	14	13	13	12	12	11	11	10
15.66 ELEV	1367.60	1367.58	1367.55	1367.53	1367.51	1367.49	1367.48	1367.46
16.33 CFS	10	10	10	9	9	9	9	8
16.33 ELEV	1367.45	1367.43	1367.42	1367.41	1367.40	1367.39	1367.38	1367.37
16.99 CFS	8	8	8	8	8	8	8	7
16.99 ELEV	1367.37	1367.36	1367.35	1367.35	1367.34	1367.34	1367.33	1367.33
17.66 CFS	7	7	7	7	7	7	7	7
17.66 ELEV	1367.32	1367.32	1367.32	1367.31	1367.31	1367.30	1367.30	1367.30
18.33 CFS	7	7	7	6	6	6	6	6
18.33 ELEV	1367.29	1367.29	1367.29	1367.28	1367.28	1367.28	1367.27	1367.27
18.99 CFS	6	6	6	6	6	6	6	6
18.99 ELEV	1367.27	1367.26	1367.26	1367.26	1367.25	1367.25	1367.25	1367.24
19.66 CFS	5	5	5	5	5	5	5	5
19.66 ELEV	1367.24	1367.24	1367.24	1367.23	1367.23	1367.23	1367.22	1367.22
20.33 CFS	5	5	5	5	5	5	5	5
20.33 ELEV	1367.22	1367.21	1367.21	1367.21	1367.21	1367.21	1367.20	1367.20
20.99 CFS	5	5	4	4	4	4	4	4
20.99 ELEV	1367.20	1367.20	1367.20	1367.20	1367.20	1367.19	1367.19	1367.19
21.66 CFS	4	4	4	4	4	4	4	4
21.66 ELEV	1367.19	1367.19	1367.19	1367.19	1367.19	1367.19	1367.19	1367.19
22.32 CFS	4	4	4	4	4	4	4	4
22.32 ELEV	1367.19	1367.18	1367.18	1367.18	1367.18	1367.18	1367.18	1367.18
22.99 CFS	4	4	4	4	4	4	4	4
22.99 ELEV	1367.18	1367.18	1367.18	1367.18	1367.18	1367.18	1367.18	1367.18
23.66 CFS	4	4	4	4	4	4	4	4
23.66 ELEV	1367.17	1367.17	1367.17	1367.17	1367.17	1367.17	1367.17	1367.16
24.32 CFS	3	3	3	3	2	2	2	1
24.32 ELEV	1367.15	1367.14	1367.13	1367.11	1367.10	1367.09	1367.08	1367.07
24.99 CFS	1	1	1	1	1	1	1	0
24.99 ELEV	1367.06	1367.05	1367.04	1367.04	1367.03	1367.03	1367.02	1367.02

RUNOFF ABOVE BASEFLOW OF .00 CFS
3.77 WATERSHED INCHES; 290 CFS-HRS; 24.0 ACRE-FEET.

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	44	16	9	7	6	5	4	4

DURATION(HRS)	18	20	22
FLOW(CFS)	2	1	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 8

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 10-YR TY
STARTING TIME = .00 RAIN DEPTH = 5.25 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=23 STORM NO.= 3 RAIN TABLE NO.= 2

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	19	11	8	7	5	4	4	4
DURATION(HRS)	18	20	22					
FLOW(CFS)	3	2	0					

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	5	3	2	2	1	1	1	1
DURATION(HRS)	17							
FLOW(CFS)	0							

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	25	14	10	8	7	5	5	5
DURATION(HRS)	18	20	22					
FLOW(CFS)	3	2	0					

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.51	98.9	1370.61

HYDROGRAPH POINTS FOR ALTERNATE =23, STORM = 3
MAIN TIME INCREMENT = .08 hr, DRAINAGE AREA = .12 SQ.MI.

HRS								
3.25 CFS	0	1	1	1	1	1	1	1
3.25 ELEV	1367.02	1367.02	1367.03	1367.03	1367.03	1367.03	1367.04	1367.04
3.92 CFS	1	1	1	1	1	1	1	1
3.92 ELEV	1367.04	1367.04	1367.05	1367.05	1367.05	1367.05	1367.06	1367.06
4.58 CFS	1	1	2	2	2	2	2	2
4.58 ELEV	1367.06	1367.07	1367.07	1367.07	1367.07	1367.08	1367.08	1367.08
5.25 CFS	2	2	2	2	2	2	2	3
5.25 ELEV	1367.09	1367.09	1367.09	1367.10	1367.10	1367.10	1367.11	1367.11
5.91 CFS	3	3	3	3	3	3	3	3

5.91 ELEV	1367.11	1367.12	1367.12	1367.13	1367.13	1367.13	1367.14	1367.14
6.58 CFS	3	3	3	4	4	4	4	4
6.58 ELEV	1367.14	1367.15	1367.15	1367.16	1367.16	1367.16	1367.17	1367.17
7.25 CFS	4	4	4	4	4	4	5	5
7.25 ELEV	1367.17	1367.18	1367.18	1367.19	1367.19	1367.19	1367.20	1367.20
7.91 CFS	5	5	5	5	5	5	5	5
7.91 ELEV	1367.21	1367.21	1367.21	1367.22	1367.22	1367.23	1367.23	1367.24
8.58 CFS	6	6	6	6	6	6	7	7
8.58 ELEV	1367.24	1367.25	1367.26	1367.27	1367.28	1367.29	1367.30	1367.31
9.25 CFS	7	7	8	8	8	8	8	9
9.25 ELEV	1367.32	1367.33	1367.34	1367.35	1367.35	1367.36	1367.37	1367.38
9.91 CFS	9	9	9	10	10	10	11	11
9.91 ELEV	1367.39	1367.40	1367.41	1367.42	1367.43	1367.45	1367.47	1367.48
10.58 CFS	11	12	12	13	14	14	15	16
10.58 ELEV	1367.50	1367.52	1367.55	1367.57	1367.60	1367.63	1367.66	1367.70
11.25 CFS	17	18	19	20	22	24	27	33
11.25 ELEV	1367.74	1367.79	1367.84	1367.90	1367.97	1368.04	1368.15	1368.35
11.91 CFS	43	56	70	84	91	96	98	99
11.91 ELEV	1368.70	1369.15	1369.59	1370.04	1370.31	1370.49	1370.58	1370.61
12.58 CFS	99	98	96	94	92	90	88	86
12.58 ELEV	1370.60	1370.56	1370.50	1370.43	1370.35	1370.27	1370.19	1370.11
13.24 CFS	84	80	77	73	70	67	64	61
13.24 ELEV	1370.02	1369.91	1369.80	1369.69	1369.58	1369.48	1369.39	1369.30
13.91 CFS	58	55	53	50	47	44	41	38
13.91 ELEV	1369.21	1369.13	1369.05	1368.96	1368.84	1368.74	1368.64	1368.55
14.58 CFS	36	34	32	30	29	27	26	24
14.58 ELEV	1368.47	1368.39	1368.33	1368.26	1368.21	1368.15	1368.10	1368.06
15.24 CFS	23	22	21	19	18	17	16	16
15.24 ELEV	1368.02	1367.97	1367.91	1367.85	1367.81	1367.76	1367.72	1367.69
15.91 CFS	15	14	14	13	13	12	12	11
15.91 ELEV	1367.66	1367.63	1367.60	1367.58	1367.56	1367.54	1367.52	1367.50
16.58 CFS	11	11	11	10	10	10	10	9
16.58 ELEV	1367.49	1367.47	1367.46	1367.45	1367.44	1367.43	1367.42	1367.42
17.24 CFS	9	9	9	9	9	9	8	8
17.24 ELEV	1367.41	1367.40	1367.40	1367.39	1367.38	1367.38	1367.37	1367.37
17.91 CFS	8	8	8	8	8	8	8	8
17.91 ELEV	1367.36	1367.36	1367.35	1367.35	1367.35	1367.34	1367.34	1367.33
18.58 CFS	7	7	7	7	7	7	7	7
18.58 ELEV	1367.33	1367.33	1367.32	1367.32	1367.31	1367.31	1367.31	1367.30
19.24 CFS	7	7	7	7	6	6	6	6
19.24 ELEV	1367.30	1367.30	1367.29	1367.29	1367.28	1367.28	1367.28	1367.27
19.91 CFS	6	6	6	6	6	6	6	6
19.91 ELEV	1367.27	1367.27	1367.26	1367.26	1367.26	1367.25	1367.25	1367.25
20.58 CFS	6	5	5	5	5	5	5	5
20.58 ELEV	1367.24	1367.24	1367.24	1367.24	1367.23	1367.23	1367.23	1367.23
21.24 CFS	5	5	5	5	5	5	5	5
21.24 ELEV	1367.23	1367.23	1367.23	1367.22	1367.22	1367.22	1367.22	1367.22
21.91 CFS	5	5	5	5	5	5	5	5
21.91 ELEV	1367.22	1367.22	1367.22	1367.22	1367.22	1367.21	1367.21	1367.21

22.57 CFS	5	5	5	5	5	5	5	5
22.57 ELEV	1367.21	1367.21	1367.21	1367.21	1367.21	1367.21	1367.21	1367.21
23.24 CFS	5	5	5	5	5	5	5	5
23.24 ELEV	1367.21	1367.21	1367.20	1367.20	1367.20	1367.20	1367.20	1367.20
23.91 CFS	5	5	5	4	4	4	4	3
23.91 ELEV	1367.20	1367.20	1367.20	1367.20	1367.19	1367.18	1367.16	1367.15
24.57 CFS	3	3	2	2	2	1	1	1
24.57 ELEV	1367.13	1367.11	1367.10	1367.09	1367.07	1367.06	1367.06	1367.05
25.24 CFS	1	1	1	1	1	0		
25.24 ELEV	1367.04	1367.04	1367.03	1367.03	1367.02	1367.02		

RUNOFF ABOVE BASEFLOW OF .00 CFS
4.45 WATERSHED INCHES; 343 CFS-HRS; 28.3 ACRE-FEET.

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	55	19	11	8	7	6	5	5

DURATION(HRS)	18	20	22	22
FLOW(CFS)	3	2	1	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 9

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 25-YR TY
STARTING TIME = .00 RAIN DEPTH = 6.10 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=24 STORM NO.= 4 RAIN TABLE NO.= 2

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	23	13	10	8	6	5	5	4

DURATION(HRS)	18	20	22	22
FLOW(CFS)	4	2	1	0

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	6	4	3	2	2	1	1	1

DURATION(HRS)	18
FLOW(CFS)	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	29	17	12	10	8	7	6	5
DURATION(HRS)	18	20	22	22				
FLOW(CFS)	4	2	1	0				

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.53	109.7	1371.03

HYDROGRAPH POINTS FOR ALTERNATE =24, STORM = 4

HRS	MAIN TIME INCREMENT = .08 hr,				DRAINAGE AREA =			.12 SQ.MI.
2.83 CFS	0	1	1	1	1	1	1	1
2.83 ELEV	1367.02	1367.02	1367.03	1367.03	1367.03	1367.04	1367.04	1367.04
3.50 CFS	1	1	1	1	1	1	1	2
3.50 ELEV	1367.05	1367.05	1367.05	1367.06	1367.06	1367.06	1367.07	1367.07
4.16 CFS	2	2	2	2	2	2	2	2
4.16 ELEV	1367.07	1367.07	1367.08	1367.08	1367.08	1367.09	1367.09	1367.10
4.83 CFS	2	2	2	3	3	3	3	3
4.83 ELEV	1367.10	1367.10	1367.11	1367.11	1367.11	1367.12	1367.12	1367.13
5.50 CFS	3	3	3	3	3	3	4	4
5.50 ELEV	1367.13	1367.14	1367.14	1367.14	1367.15	1367.15	1367.16	1367.16
6.16 CFS	4	4	4	4	4	4	4	4
6.16 ELEV	1367.17	1367.17	1367.18	1367.18	1367.18	1367.19	1367.19	1367.20
6.83 CFS	5	5	5	5	5	5	5	5
6.83 ELEV	1367.20	1367.21	1367.21	1367.22	1367.22	1367.23	1367.23	1367.23
7.50 CFS	5	6	6	6	6	6	6	6
7.50 ELEV	1367.24	1367.24	1367.25	1367.25	1367.26	1367.26	1367.27	1367.27
8.16 CFS	6	6	6	7	7	7	7	7
8.16 ELEV	1367.28	1367.28	1367.29	1367.29	1367.30	1367.31	1367.31	1367.32
8.83 CFS	8	8	8	8	9	9	9	9
8.83 ELEV	1367.33	1367.34	1367.36	1367.37	1367.38	1367.39	1367.40	1367.42
9.50 CFS	10	10	10	10	11	11	11	11
9.50 ELEV	1367.43	1367.44	1367.45	1367.46	1367.47	1367.48	1367.49	1367.50
10.16 CFS	12	12	12	13	13	14	15	15
10.16 ELEV	1367.52	1367.53	1367.55	1367.57	1367.59	1367.61	1367.64	1367.67
10.83 CFS	16	17	17	18	19	20	22	23
10.83 ELEV	1367.70	1367.73	1367.77	1367.81	1367.85	1367.90	1367.95	1368.01
11.50 CFS	24	26	28	31	38	50	63	80
11.50 ELEV	1368.05	1368.10	1368.17	1368.30	1368.54	1368.96	1369.38	1369.90
12.16 CFS	91	100	106	109	110	110	109	107
12.16 ELEV	1370.32	1370.65	1370.87	1370.98	1371.02	1371.02	1370.99	1370.93
12.83 CFS	105	103	101	99	96	94	91	89
12.83 ELEV	1370.86	1370.77	1370.69	1370.59	1370.50	1370.41	1370.32	1370.23
13.49 CFS	87	84	81	78	74	71	67	64

13.49 ELEV	1370.14	1370.05	1369.95	1369.83	1369.71	1369.61	1369.50	1369.41
14.16 CFS	61	58	56	53	51	48	45	42
14.16 ELEV	1369.31	1369.23	1369.14	1369.06	1368.98	1368.87	1368.76	1368.67
14.83 CFS	39	37	35	33	31	30	28	27
14.83 ELEV	1368.58	1368.50	1368.43	1368.36	1368.30	1368.24	1368.19	1368.14
15.49 CFS	25	24	23	22	21	20	18	18
15.49 ELEV	1368.10	1368.05	1368.02	1367.97	1367.91	1367.86	1367.81	1367.77
16.16 CFS	17	16	15	15	14	14	13	13
16.16 ELEV	1367.74	1367.70	1367.67	1367.65	1367.62	1367.60	1367.58	1367.56
16.83 CFS	12	12	12	12	11	11	11	11
16.83 ELEV	1367.55	1367.53	1367.52	1367.51	1367.50	1367.49	1367.48	1367.47
17.49 CFS	10	10	10	10	10	10	10	9
17.49 ELEV	1367.46	1367.45	1367.45	1367.44	1367.43	1367.43	1367.42	1367.42
18.16 CFS	9	9	9	9	9	9	9	9
18.16 ELEV	1367.41	1367.41	1367.40	1367.40	1367.39	1367.39	1367.38	1367.38
18.83 CFS	8	8	8	8	8	8	8	8
18.83 ELEV	1367.37	1367.37	1367.36	1367.36	1367.35	1367.35	1367.35	1367.34
19.49 CFS	8	8	7	7	7	7	7	7
19.49 ELEV	1367.34	1367.33	1367.33	1367.32	1367.32	1367.32	1367.31	1367.31
20.16 CFS	7	7	7	7	7	6	6	6
20.16 ELEV	1367.30	1367.30	1367.29	1367.29	1367.29	1367.28	1367.28	1367.28
20.83 CFS	6	6	6	6	6	6	6	6
20.83 ELEV	1367.28	1367.27	1367.27	1367.27	1367.27	1367.27	1367.26	1367.26
21.49 CFS	6	6	6	6	6	6	6	6
21.49 ELEV	1367.26	1367.26	1367.26	1367.26	1367.26	1367.26	1367.25	1367.25
22.16 CFS	6	6	6	6	6	6	6	6
22.16 ELEV	1367.25	1367.25	1367.25	1367.25	1367.25	1367.25	1367.25	1367.25
22.82 CFS	6	6	6	6	5	5	5	5
22.82 ELEV	1367.25	1367.24	1367.24	1367.24	1367.24	1367.24	1367.24	1367.24
23.49 CFS	5	5	5	5	5	5	5	5
23.49 ELEV	1367.24	1367.24	1367.24	1367.24	1367.23	1367.23	1367.23	1367.23
24.16 CFS	5	5	5	4	4	3	3	3
24.16 ELEV	1367.23	1367.22	1367.21	1367.19	1367.17	1367.15	1367.13	1367.12
24.82 CFS	2	2	2	2	1	1	1	1
24.82 ELEV	1367.10	1367.09	1367.08	1367.07	1367.06	1367.05	1367.04	1367.04
25.49 CFS	1	1	1	0				
25.49 ELEV	1367.03	1367.03	1367.02	1367.02				

RUNOFF ABOVE BASEFLOW OF .00 CFS
5.29 WATERSHED INCHES; 407 CFS-HRS; 33.6 ACRE-FEET.

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	64	24	14	10	8	7	6	5

DURATION(HRS)	18	20	22	23
FLOW(CFS)	4	2	1	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 10

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 50-YR TY
STARTING TIME = .00 RAIN DEPTH = 6.98 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=25 STORM NO.= 5 RAIN TABLE NO.= 2

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	27	15	11	9	7	6	5	5
DURATION(HRS)	18	20	22	22				
FLOW(CFS)	5	3	1	0				

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	7	4	3	2	2	2	1	1
DURATION(HRS)	18	18						
FLOW(CFS)	1	0						

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	33	19	14	11	9	8	7	6
DURATION(HRS)	18	20	22	22				
FLOW(CFS)	5	3	1	0				

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.56	116.9	1371.39

HYDROGRAPH POINTS FOR ALTERNATE =25, STORM = 5

HRS	MAIN TIME INCREMENT = .08 hr,				DRAINAGE AREA =			.12 SQ.MI.
2.50 CFS	0	1	1	1	1	1	1	1
2.50 ELEV	1367.02	1367.02	1367.03	1367.03	1367.03	1367.04	1367.04	1367.05
3.17 CFS	1	1	1	1	1	2	2	2
3.17 ELEV	1367.05	1367.05	1367.06	1367.06	1367.07	1367.07	1367.07	1367.08
3.83 CFS	2	2	2	2	2	2	2	2
3.83 ELEV	1367.08	1367.08	1367.09	1367.09	1367.10	1367.10	1367.10	1367.11
4.50 CFS	3	3	3	3	3	3	3	3

4.50	ELEV	1367.11	1367.12	1367.12	1367.13	1367.13	1367.14	1367.14	1367.15
5.16	CFS	3	4	4	4	4	4	4	4
5.16	ELEV	1367.15	1367.16	1367.16	1367.17	1367.17	1367.18	1367.18	1367.19
5.83	CFS	4	4	5	5	5	5	5	5
5.83	ELEV	1367.19	1367.20	1367.20	1367.21	1367.21	1367.22	1367.22	1367.23
6.50	CFS	5	5	5	6	6	6	6	6
6.50	ELEV	1367.23	1367.24	1367.24	1367.25	1367.25	1367.26	1367.26	1367.27
7.16	CFS	6	6	6	7	7	7	7	7
7.16	ELEV	1367.27	1367.28	1367.28	1367.29	1367.29	1367.30	1367.31	1367.31
7.83	CFS	7	7	7	8	8	8	8	8
7.83	ELEV	1367.32	1367.32	1367.33	1367.33	1367.34	1367.34	1367.35	1367.36
8.50	CFS	8	8	9	9	9	9	10	10
8.50	ELEV	1367.36	1367.37	1367.38	1367.39	1367.40	1367.42	1367.43	1367.44
9.16	CFS	10	11	11	11	12	12	12	12
9.16	ELEV	1367.46	1367.47	1367.49	1367.50	1367.51	1367.53	1367.54	1367.55
9.83	CFS	13	13	13	14	14	14	15	15
9.83	ELEV	1367.56	1367.57	1367.58	1367.60	1367.62	1367.63	1367.65	1367.68
10.50	CFS	16	17	17	18	19	20	21	22
10.50	ELEV	1367.70	1367.73	1367.76	1367.79	1367.83	1367.86	1367.91	1367.95
11.16	CFS	23	24	25	26	27	29	32	36
11.16	ELEV	1368.00	1368.03	1368.07	1368.11	1368.17	1368.23	1368.32	1368.47
11.83	CFS	44	56	71	87	99	109	113	116
11.83	ELEV	1368.75	1369.15	1369.62	1370.16	1370.62	1371.01	1371.21	1371.33
12.49	CFS	117	117	116	116	114	113	112	110
12.49	ELEV	1371.38	1371.39	1371.37	1371.32	1371.26	1371.20	1371.12	1371.04
13.16	CFS	108	105	103	100	97	95	92	90
13.16	ELEV	1370.96	1370.85	1370.75	1370.65	1370.55	1370.45	1370.35	1370.26
13.83	CFS	87	85	82	79	75	71	68	65
13.83	ELEV	1370.17	1370.08	1369.98	1369.86	1369.74	1369.63	1369.53	1369.43
14.49	CFS	62	59	57	54	52	49	46	43
14.49	ELEV	1369.34	1369.25	1369.16	1369.09	1369.01	1368.91	1368.80	1368.71
15.16	CFS	40	38	36	34	32	31	29	28
15.16	ELEV	1368.62	1368.54	1368.46	1368.40	1368.33	1368.28	1368.22	1368.17
15.83	CFS	26	25	24	23	22	21	20	19
15.83	ELEV	1368.13	1368.09	1368.05	1368.01	1367.96	1367.91	1367.86	1367.82
16.49	CFS	18	17	16	16	15	15	14	14
16.49	ELEV	1367.78	1367.75	1367.72	1367.69	1367.66	1367.64	1367.62	1367.61
17.16	CFS	13	13	13	13	12	12	12	12
17.16	ELEV	1367.59	1367.58	1367.56	1367.55	1367.54	1367.53	1367.52	1367.51
17.83	CFS	11	11	11	11	11	11	11	10
17.83	ELEV	1367.50	1367.50	1367.49	1367.48	1367.48	1367.47	1367.46	1367.46
18.49	CFS	10	10	10	10	10	10	9	9
18.49	ELEV	1367.45	1367.44	1367.44	1367.43	1367.43	1367.42	1367.42	1367.41
19.16	CFS	9	9	9	9	9	9	9	8
19.16	ELEV	1367.41	1367.40	1367.40	1367.39	1367.39	1367.38	1367.38	1367.37
19.83	CFS	8	8	8	8	8	8	8	8
19.83	ELEV	1367.37	1367.36	1367.36	1367.35	1367.35	1367.34	1367.34	1367.33
20.49	CFS	7	7	7	7	7	7	7	7
20.49	ELEV	1367.33	1367.33	1367.32	1367.32	1367.32	1367.31	1367.31	1367.31

21.16 CFS	7	7	7	7	7	7	7	7
21.16 ELEV	1367.31	1367.31	1367.30	1367.30	1367.30	1367.30	1367.30	1367.30
21.82 CFS	7	7	7	7	7	7	7	7
21.82 ELEV	1367.29	1367.29	1367.29	1367.29	1367.29	1367.29	1367.29	1367.29
22.49 CFS	6	6	6	6	6	6	6	6
22.49 ELEV	1367.29	1367.28	1367.28	1367.28	1367.28	1367.28	1367.28	1367.28
23.16 CFS	6	6	6	6	6	6	6	6
23.16 ELEV	1367.28	1367.28	1367.28	1367.27	1367.27	1367.27	1367.27	1367.27
23.82 CFS	6	6	6	6	6	6	5	5
23.82 ELEV	1367.27	1367.27	1367.27	1367.27	1367.26	1367.25	1367.24	1367.22
24.49 CFS	4	4	3	3	3	2	2	2
24.49 ELEV	1367.20	1367.17	1367.15	1367.13	1367.12	1367.10	1367.09	1367.08
25.16 CFS	2	1	1	1	1	1	1	1
25.16 ELEV	1367.07	1367.06	1367.05	1367.04	1367.04	1367.03	1367.03	1367.02
25.82 CFS	0							
25.82 ELEV	1367.02							

RUNOFF ABOVE BASEFLOW OF .00 CFS
6.16 WATERSHED INCHES; 474 CFS-HRS; 39.1 ACRE-FEET.

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	78	29	17	12	9	8	7	6
DURATION(HRS)	18	20	22	23				
FLOW(CFS)	5	3	1	0				

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 11

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 100-YR Y
STARTING TIME = .00 RAIN DEPTH = 7.80 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=26 STORM NO.= 6 RAIN TABLE NO.= 2

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	30	17	13	10	8	7	6	6
DURATION(HRS)	18	20	22	23				
FLOW(CFS)	5	3	1	0				

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	9	5	3	3	2	2	2	2

DURATION(HRS)	18	19
FLOW(CFS)	1	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	38	22	16	13	11	9	8	7

DURATION(HRS)	18	20	22	23
FLOW(CFS)	6	4	1	0

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.58	123.9	1371.74

HYDROGRAPH POINTS FOR ALTERNATE =26, STORM = 6

HRS	MAIN TIME INCREMENT = .08 hr,				DRAINAGE AREA = .12 SQ.MI.			
2.25 CFS	0	1	1	1	1	1	1	1
2.25 ELEV	1367.02	1367.02	1367.03	1367.03	1367.04	1367.04	1367.04	1367.05
2.92 CFS	1	1	1	2	2	2	2	2
2.92 ELEV	1367.05	1367.06	1367.06	1367.07	1367.07	1367.08	1367.08	1367.09
3.58 CFS	2	2	2	2	2	3	3	3
3.58 ELEV	1367.09	1367.09	1367.10	1367.10	1367.11	1367.11	1367.12	1367.12
4.25 CFS	3	3	3	3	3	3	4	4
4.25 ELEV	1367.13	1367.13	1367.14	1367.14	1367.15	1367.15	1367.16	1367.16
4.91 CFS	4	4	4	4	4	4	5	5
4.91 ELEV	1367.17	1367.17	1367.18	1367.19	1367.19	1367.20	1367.20	1367.21
5.58 CFS	5	5	5	5	5	6	6	6
5.58 ELEV	1367.21	1367.22	1367.23	1367.23	1367.24	1367.24	1367.25	1367.25
6.25 CFS	6	6	6	6	6	7	7	7
6.25 ELEV	1367.26	1367.27	1367.27	1367.28	1367.28	1367.29	1367.30	1367.30
6.91 CFS	7	7	7	7	7	8	8	8
6.91 ELEV	1367.31	1367.31	1367.32	1367.32	1367.33	1367.34	1367.34	1367.35
7.58 CFS	8	8	8	8	9	9	9	9
7.58 ELEV	1367.35	1367.36	1367.37	1367.37	1367.38	1367.38	1367.39	1367.39
8.25 CFS	9	9	9	10	10	10	10	11
8.25 ELEV	1367.40	1367.41	1367.42	1367.42	1367.43	1367.45	1367.46	1367.47
8.91 CFS	11	11	12	12	12	13	13	13
8.91 ELEV	1367.48	1367.50	1367.52	1367.53	1367.55	1367.56	1367.58	1367.59
9.58 CFS	14	14	14	15	15	15	16	16
9.58 ELEV	1367.61	1367.62	1367.63	1367.64	1367.66	1367.67	1367.69	1367.71
10.25 CFS	17	17	18	18	19	20	21	21
10.25 ELEV	1367.73	1367.75	1367.78	1367.81	1367.84	1367.87	1367.91	1367.95
10.91 CFS	22	23	24	25	26	28	29	31

10.91	ELEV	1367.99	1368.02	1368.05	1368.09	1368.12	1368.17	1368.22	1368.28
11.58	CFS	33	36	41	50	61	78	93	106
11.58	ELEV	1368.35	1368.46	1368.63	1368.95	1369.31	1369.83	1370.37	1370.90
12.25	CFS	115	119	122	124	124	124	123	122
12.25	ELEV	1371.27	1371.51	1371.66	1371.72	1371.74	1371.72	1371.68	1371.63
12.91	CFS	120	119	117	116	114	112	110	108
12.91	ELEV	1371.56	1371.48	1371.40	1371.32	1371.23	1371.15	1371.06	1370.97
13.58	CFS	105	103	100	97	95	92	89	87
13.58	ELEV	1370.86	1370.75	1370.64	1370.54	1370.44	1370.34	1370.25	1370.15
14.24	CFS	85	82	78	74	71	68	64	62
14.24	ELEV	1370.06	1369.96	1369.84	1369.72	1369.61	1369.51	1369.42	1369.32
14.91	CFS	59	56	54	52	49	46	43	40
14.91	ELEV	1369.24	1369.16	1369.08	1369.01	1368.90	1368.80	1368.71	1368.62
15.58	CFS	38	36	34	32	31	29	28	27
15.58	ELEV	1368.54	1368.47	1368.40	1368.34	1368.29	1368.23	1368.18	1368.14
16.24	CFS	26	24	23	22	21	20	19	18
16.24	ELEV	1368.10	1368.06	1368.02	1367.98	1367.93	1367.88	1367.84	1367.81
16.91	CFS	18	17	16	16	15	15	15	14
16.91	ELEV	1367.78	1367.75	1367.72	1367.70	1367.68	1367.66	1367.64	1367.63
17.58	CFS	14	14	13	13	13	13	12	12
17.58	ELEV	1367.61	1367.60	1367.59	1367.58	1367.57	1367.56	1367.55	1367.54
18.24	CFS	12	12	12	12	11	11	11	11
18.24	ELEV	1367.53	1367.52	1367.52	1367.51	1367.50	1367.49	1367.49	1367.48
18.91	CFS	11	11	11	10	10	10	10	10
18.91	ELEV	1367.48	1367.47	1367.46	1367.46	1367.45	1367.45	1367.44	1367.43
19.58	CFS	10	10	9	9	9	9	9	9
19.58	ELEV	1367.43	1367.42	1367.42	1367.41	1367.41	1367.40	1367.39	1367.39
20.24	CFS	9	9	8	8	8	8	8	8
20.24	ELEV	1367.38	1367.38	1367.37	1367.37	1367.37	1367.36	1367.36	1367.35
20.91	CFS	8	8	8	8	8	8	8	8
20.91	ELEV	1367.35	1367.35	1367.35	1367.34	1367.34	1367.34	1367.34	1367.34
21.57	CFS	8	8	8	7	7	7	7	7
21.57	ELEV	1367.33	1367.33	1367.33	1367.33	1367.33	1367.33	1367.33	1367.32
22.24	CFS	7	7	7	7	7	7	7	7
22.24	ELEV	1367.32	1367.32	1367.32	1367.32	1367.32	1367.32	1367.32	1367.32
22.91	CFS	7	7	7	7	7	7	7	7
22.91	ELEV	1367.31	1367.31	1367.31	1367.31	1367.31	1367.31	1367.31	1367.31
23.57	CFS	7	7	7	7	7	7	7	7
23.57	ELEV	1367.31	1367.30	1367.30	1367.30	1367.30	1367.30	1367.30	1367.29
24.24	CFS	6	6	6	5	4	4	3	3
24.24	ELEV	1367.28	1367.27	1367.24	1367.22	1367.19	1367.17	1367.15	1367.13
24.91	CFS	3	2	2	2	1	1	1	1
24.91	ELEV	1367.11	1367.10	1367.09	1367.08	1367.07	1367.06	1367.05	1367.04
25.57	CFS	1	1	1	1	0			
25.57	ELEV	1367.04	1367.03	1367.03	1367.02	1367.02			

RUNOFF ABOVE BASEFLOW OF .00 CFS
6.96 WATERSHED INCHES; 536 CFS-HRS; 44.3 ACRE-FEET.

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	89	36	20	14	11	9	8	7
DURATION(HRS)	18	20	22	24				
FLOW(CFS)	6	3	2	0				

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 12

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 2-YR ZDN
STARTING TIME = .00 RAIN DEPTH = 3.48 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=41 STORM NO.= 1 RAIN TABLE NO.= 8

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	12	7	5	4	3	3	2	1
DURATION(HRS)	18	19						
FLOW(CFS)	1	0						

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	6	8	10	12	12
FLOW(CFS)	3	2	1	1	1	1	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	15	9	7	5	4	3	2	2
DURATION(HRS)	18	19						
FLOW(CFS)	1	0						

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.37	74.8	1369.74

HYDROGRAPH POINTS FOR ALTERNATE =41, STORM = 1

HRS	MAIN TIME INCREMENT = .08 hr,					DRAINAGE AREA = .12 SQ.MI.		
5.41 CFS	0	1	1	1	1	1	1	1

5.41	ELEV	1367.02	1367.02	1367.03	1367.03	1367.03	1367.03	1367.03	1367.04
6.08	CFS	1	1	1	1	1	1	1	1
6.08	ELEV	1367.04	1367.04	1367.04	1367.04	1367.05	1367.05	1367.05	1367.05
6.75	CFS	1	1	1	1	2	2	2	2
6.75	ELEV	1367.06	1367.06	1367.06	1367.07	1367.07	1367.07	1367.07	1367.08
7.41	CFS	2	2	2	2	2	2	2	2
7.41	ELEV	1367.08	1367.08	1367.09	1367.09	1367.09	1367.10	1367.10	1367.11
8.08	CFS	3	3	3	3	3	3	3	3
8.08	ELEV	1367.11	1367.11	1367.12	1367.12	1367.13	1367.13	1367.13	1367.14
8.75	CFS	3	3	4	4	4	4	4	4
8.75	ELEV	1367.14	1367.15	1367.15	1367.16	1367.17	1367.17	1367.18	1367.18
9.41	CFS	4	4	5	5	5	5	5	6
9.41	ELEV	1367.19	1367.20	1367.20	1367.21	1367.22	1367.22	1367.23	1367.24
10.08	CFS	6	6	6	6	7	7	7	7
10.08	ELEV	1367.25	1367.26	1367.27	1367.28	1367.29	1367.30	1367.31	1367.33
10.75	CFS	8	8	9	9	10	11	12	14
10.75	ELEV	1367.34	1367.36	1367.39	1367.41	1367.44	1367.47	1367.53	1367.61
11.41	CFS	16	19	21	25	30	37	47	55
11.41	ELEV	1367.71	1367.82	1367.94	1368.07	1368.25	1368.51	1368.84	1369.12
12.08	CFS	62	68	73	75	75	73	72	69
12.08	ELEV	1369.34	1369.54	1369.67	1369.73	1369.74	1369.70	1369.64	1369.56
12.74	CFS	67	64	61	58	56	53	50	47
12.74	ELEV	1369.48	1369.40	1369.31	1369.22	1369.13	1369.05	1368.96	1368.84
13.41	CFS	43	40	38	35	33	31	29	27
13.41	ELEV	1368.72	1368.62	1368.53	1368.44	1368.36	1368.28	1368.22	1368.15
14.08	CFS	25	24	23	21	19	18	17	16
14.08	ELEV	1368.10	1368.04	1367.99	1367.91	1367.84	1367.78	1367.73	1367.68
14.74	CFS	15	14	13	12	12	11	11	10
14.74	ELEV	1367.64	1367.60	1367.57	1367.54	1367.51	1367.49	1367.47	1367.45
15.41	CFS	10	10	9	9	9	8	8	8
15.41	ELEV	1367.43	1367.42	1367.41	1367.39	1367.38	1367.37	1367.36	1367.35
16.08	CFS	8	8	8	7	7	7	7	7
16.08	ELEV	1367.35	1367.34	1367.33	1367.32	1367.31	1367.31	1367.30	1367.29
16.74	CFS	7	6	6	6	6	6	6	6
16.74	ELEV	1367.29	1367.28	1367.27	1367.27	1367.26	1367.26	1367.25	1367.25
17.41	CFS	6	6	5	5	5	5	5	5
17.41	ELEV	1367.25	1367.24	1367.24	1367.24	1367.24	1367.23	1367.23	1367.23
18.08	CFS	5	5	5	5	5	5	5	5
18.08	ELEV	1367.22	1367.22	1367.22	1367.22	1367.21	1367.21	1367.20	1367.20
18.74	CFS	5	4	4	4	4	4	4	4
18.74	ELEV	1367.20	1367.20	1367.19	1367.19	1367.19	1367.19	1367.19	1367.19
19.41	CFS	4	4	4	4	4	4	4	4
19.41	ELEV	1367.18	1367.18	1367.18	1367.17	1367.17	1367.17	1367.17	1367.16
20.08	CFS	4	4	3	3	3	3	3	3
20.08	ELEV	1367.16	1367.16	1367.15	1367.15	1367.15	1367.14	1367.14	1367.14
20.74	CFS	3	3	3	3	3	3	3	3
20.74	ELEV	1367.13	1367.13	1367.13	1367.13	1367.12	1367.12	1367.12	1367.12
21.41	CFS	3	3	2	2	2	2	2	2
21.41	ELEV	1367.12	1367.11	1367.11	1367.11	1367.11	1367.10	1367.10	1367.10

22.07 CFS	2	2	2	2	2	2	2	2
22.07 ELEV	1367.10	1367.10	1367.10	1367.09	1367.09	1367.09	1367.09	1367.08
22.74 CFS	2	2	2	2	2	2	2	2
22.74 ELEV	1367.08	1367.08	1367.08	1367.08	1367.08	1367.07	1367.07	1367.07
23.41 CFS	2	1	1	1	1	1	1	1
23.41 ELEV	1367.07	1367.07	1367.06	1367.06	1367.06	1367.06	1367.06	1367.05
24.07 CFS	1	1	1	1	1	1	1	1
24.07 ELEV	1367.05	1367.05	1367.05	1367.05	1367.04	1367.04	1367.03	1367.03
24.74 CFS	1	1	0					
24.74 ELEV	1367.03	1367.02	1367.02					

RUNOFF ABOVE BASEFLOW OF .00 CFS
2.73 WATERSHED INCHES; 210 CFS-HRS; 17.4 ACRE-FEET.

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	31	11	7	5	4	3	2	2

DURATION(HRS)	18	19
FLOW(CFS)	1	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 13

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 5-YR ZON
STARTING TIME = .00 RAIN DEPTH = 4.55 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=42 STORM NO.= 2 RAIN TABLE NO.= 8

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	17	10	7	6	5	4	3	2

DURATION(HRS)	18	20	20
FLOW(CFS)	1	1	0

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	6	8	10	12	14	14
FLOW(CFS)	4	2	2	1	1	1	1	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	21	12	9	7	6	5	3	2

DURATION(HRS)	18	20	20
FLOW(CFS)	2	1	0

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.40	91.6	1370.33

HYDROGRAPH POINTS FOR ALTERNATE =42, STORM = 2

HRS	MAIN TIME INCREMENT = .08 hr,				DRAINAGE AREA = .12 SQ.MI.			
4.58 CFS	0	1	1	1	1	1	1	1
4.58 ELEV	1367.02	1367.02	1367.02	1367.03	1367.03	1367.03	1367.04	1367.04
5.25 CFS	1	1	1	1	1	1	1	1
5.25 ELEV	1367.04	1367.05	1367.05	1367.05	1367.06	1367.06	1367.06	1367.07
5.91 CFS	2	2	2	2	2	2	2	2
5.91 ELEV	1367.07	1367.07	1367.07	1367.08	1367.08	1367.08	1367.09	1367.09
6.58 CFS	2	2	2	2	3	3	3	3
6.58 ELEV	1367.10	1367.10	1367.10	1367.11	1367.11	1367.12	1367.12	1367.13
7.25 CFS	3	3	3	3	3	4	4	4
7.25 ELEV	1367.13	1367.14	1367.14	1367.15	1367.15	1367.16	1367.16	1367.17
7.91 CFS	4	4	4	4	4	5	5	5
7.91 ELEV	1367.17	1367.18	1367.18	1367.19	1367.19	1367.20	1367.21	1367.21
8.58 CFS	5	5	5	5	6	6	6	6
8.58 ELEV	1367.22	1367.22	1367.23	1367.24	1367.25	1367.25	1367.26	1367.27
9.25 CFS	6	6	7	7	7	7	8	8
9.25 ELEV	1367.28	1367.29	1367.30	1367.30	1367.31	1367.32	1367.33	1367.34
9.91 CFS	8	8	9	9	9	10	10	10
9.91 ELEV	1367.36	1367.37	1367.38	1367.39	1367.40	1367.42	1367.44	1367.45
10.58 CFS	11	11	12	12	13	14	14	16
10.58 ELEV	1367.47	1367.49	1367.51	1367.54	1367.57	1367.60	1367.64	1367.69
11.25 CFS	17	20	23	26	28	33	40	50
11.25 ELEV	1367.77	1367.88	1368.01	1368.10	1368.20	1368.35	1368.60	1368.96
11.91 CFS	59	69	79	86	89	91	92	91
11.91 ELEV	1369.25	1369.56	1369.87	1370.10	1370.24	1370.31	1370.33	1370.31
12.58 CFS	90	88	86	84	82	78	74	71
12.58 ELEV	1370.26	1370.20	1370.13	1370.05	1369.95	1369.84	1369.72	1369.61
13.24 CFS	67	64	61	58	56	53	50	47
13.24 ELEV	1369.51	1369.41	1369.31	1369.22	1369.13	1369.05	1368.96	1368.84
13.91 CFS	44	41	38	36	33	31	30	28
13.91 ELEV	1368.73	1368.63	1368.54	1368.45	1368.38	1368.31	1368.24	1368.18
14.58 CFS	26	25	24	22	21	19	18	17
14.58 ELEV	1368.13	1368.08	1368.03	1367.98	1367.91	1367.85	1367.80	1367.75
15.24 CFS	16	15	15	14	13	13	12	12
15.24 ELEV	1367.71	1367.67	1367.64	1367.61	1367.59	1367.56	1367.54	1367.53
15.91 CFS	12	11	11	11	10	10	10	9
15.91 ELEV	1367.51	1367.49	1367.48	1367.47	1367.45	1367.44	1367.43	1367.42

16.58	CFS	9	9	9	9	8	8	8	8
16.58	ELEV	1367.41	1367.40	1367.39	1367.38	1367.37	1367.36	1367.35	1367.35
17.24	CFS	8	8	7	7	7	7	7	7
17.24	ELEV	1367.34	1367.33	1367.33	1367.33	1367.32	1367.32	1367.32	1367.31
17.91	CFS	7	7	7	7	7	6	6	6
17.91	ELEV	1367.31	1367.30	1367.30	1367.29	1367.29	1367.29	1367.28	1367.28
18.58	CFS	6	6	6	6	6	6	6	6
18.58	ELEV	1367.27	1367.27	1367.26	1367.26	1367.26	1367.26	1367.25	1367.25
19.24	CFS	6	6	6	5	5	5	5	5
19.24	ELEV	1367.25	1367.25	1367.24	1367.24	1367.24	1367.23	1367.23	1367.22
19.91	CFS	5	5	5	5	5	4	4	4
19.91	ELEV	1367.22	1367.22	1367.21	1367.21	1367.20	1367.20	1367.19	1367.19
20.58	CFS	4	4	4	4	4	4	4	4
20.58	ELEV	1367.18	1367.18	1367.18	1367.17	1367.17	1367.17	1367.16	1367.16
21.24	CFS	4	4	3	3	3	3	3	3
21.24	ELEV	1367.16	1367.16	1367.15	1367.15	1367.15	1367.14	1367.14	1367.14
21.91	CFS	3	3	3	3	3	3	3	3
21.91	ELEV	1367.14	1367.13	1367.13	1367.13	1367.13	1367.12	1367.12	1367.12
22.57	CFS	3	3	2	2	2	2	2	2
22.57	ELEV	1367.11	1367.11	1367.11	1367.11	1367.10	1367.10	1367.10	1367.10
23.24	CFS	2	2	2	2	2	2	2	2
23.24	ELEV	1367.10	1367.09	1367.09	1367.09	1367.08	1367.08	1367.08	1367.08
23.91	CFS	2	2	2	2	1	1	1	1
23.91	ELEV	1367.07	1367.07	1367.07	1367.07	1367.07	1367.06	1367.06	1367.05
24.57	CFS	1	1	1	1	1	1	0	
24.57	ELEV	1367.04	1367.04	1367.03	1367.03	1367.03	1367.02	1367.02	

RUNOFF ABOVE BASEFLOW OF .00 CFS
3.77 WATERSHED INCHES; 290 CFS-HRS; 24.0 ACRE-FEET.

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	47	16	10	7	6	4	3	2

DURATION(HRS)	18	20	20
FLOW(CFS)	2	1	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 14

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 10-YR 20
STARTING TIME = .00 RAIN DEPTH = 5.25 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=43 STORM NO.= 3 RAIN TABLE NO.= 8

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	20	11	9	7	6	5	3	2
DURATION(HRS)	18	20	21					
FLOW(CFS)	2	1	0					

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	5	3	2	2	1	1	1	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	25	14	11	8	7	5	4	3
DURATION(HRS)	18	20	21					
FLOW(CFS)	2	1	0					

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.42	101.0	1370.69

HYDROGRAPH POINTS FOR ALTERNATE =43, STORM = 3

MAIN TIME INCREMENT = .08 hr, DRAINAGE AREA = .12 SQ.MI.

HRS								
4.16	CFS	0	1	1	1	1	1	1	1
4.16	ELEV	1367.02	1367.02	1367.02	1367.03	1367.03	1367.03	1367.04	1367.04
4.83	CFS	1	1	1	1	1	1	1	2
4.83	ELEV	1367.04	1367.05	1367.05	1367.05	1367.06	1367.06	1367.06	1367.07
5.50	CFS	2	2	2	2	2	2	2	2
5.50	ELEV	1367.07	1367.08	1367.08	1367.09	1367.09	1367.09	1367.10	1367.10
6.16	CFS	2	2	3	3	3	3	3	3
6.16	ELEV	1367.11	1367.11	1367.11	1367.12	1367.12	1367.13	1367.13	1367.14
6.83	CFS	3	3	4	4	4	4	4	4
6.83	ELEV	1367.14	1367.15	1367.16	1367.16	1367.17	1367.17	1367.18	1367.18
7.50	CFS	4	4	5	5	5	5	5	5
7.50	ELEV	1367.19	1367.20	1367.20	1367.21	1367.22	1367.22	1367.23	1367.24
8.16	CFS	5	6	6	6	6	6	6	7
8.16	ELEV	1367.24	1367.25	1367.26	1367.26	1367.27	1367.28	1367.28	1367.29
8.83	CFS	7	7	7	7	8	8	8	8
8.83	ELEV	1367.30	1367.31	1367.32	1367.33	1367.34	1367.35	1367.36	1367.37
9.50	CFS	9	9	9	9	10	10	10	11
9.50	ELEV	1367.38	1367.39	1367.40	1367.41	1367.42	1367.44	1367.45	1367.47
10.16	CFS	11	11	12	12	13	13	13	14
10.16	ELEV	1367.48	1367.50	1367.51	1367.53	1367.55	1367.57	1367.59	1367.62
10.83	CFS	15	16	17	17	19	21	24	26

10.83 ELEV	1367.65	1367.69	1367.73	1367.77	1367.83	1367.93	1368.04	1368.13
11.50 CFS	29	33	38	46	56	67	78	87
11.50 ELEV	1368.24	1368.36	1368.54	1368.83	1369.16	1369.49	1369.85	1370.16
12.16 CFS	93	98	100	101	100	99	98	96
12.16 ELEV	1370.39	1370.56	1370.66	1370.69	1370.67	1370.62	1370.56	1370.48
12.83 CFS	93	91	89	86	84	81	77	73
12.83 ELEV	1370.40	1370.31	1370.22	1370.13	1370.04	1369.93	1369.81	1369.69
13.49 CFS	70	66	63	60	57	55	52	49
13.49 ELEV	1369.58	1369.48	1369.38	1369.28	1369.19	1369.11	1369.03	1368.93
14.16 CFS	46	43	40	38	35	33	31	30
14.16 ELEV	1368.81	1368.71	1368.61	1368.52	1368.44	1368.37	1368.30	1368.24
14.83 CFS	28	27	25	24	23	21	20	19
14.83 ELEV	1368.19	1368.13	1368.09	1368.04	1368.00	1367.94	1367.88	1367.83
15.49 CFS	18	17	16	15	15	14	14	13
15.49 ELEV	1367.78	1367.75	1367.71	1367.68	1367.65	1367.63	1367.60	1367.58
16.16 CFS	13	12	12	12	11	11	11	10
16.16 ELEV	1367.57	1367.55	1367.53	1367.51	1367.50	1367.48	1367.47	1367.46
16.83 CFS	10	10	10	9	9	9	9	9
16.83 ELEV	1367.45	1367.43	1367.42	1367.41	1367.41	1367.40	1367.39	1367.39
17.49 CFS	9	9	8	8	8	8	8	8
17.49 ELEV	1367.38	1367.38	1367.37	1367.37	1367.36	1367.36	1367.35	1367.35
18.16 CFS	8	8	8	7	7	7	7	7
18.16 ELEV	1367.34	1367.34	1367.33	1367.33	1367.32	1367.32	1367.31	1367.31
18.83 CFS	7	7	7	7	7	7	6	6
18.83 ELEV	1367.30	1367.30	1367.30	1367.29	1367.29	1367.29	1367.29	1367.28
19.49 CFS	6	6	6	6	6	6	6	6
19.49 ELEV	1367.28	1367.27	1367.27	1367.26	1367.26	1367.25	1367.25	1367.24
20.16 CFS	5	5	5	5	5	5	5	5
20.16 ELEV	1367.24	1367.23	1367.23	1367.22	1367.22	1367.21	1367.21	1367.20
20.83 CFS	5	4	4	4	4	4	4	4
20.83 ELEV	1367.20	1367.20	1367.19	1367.19	1367.19	1367.19	1367.18	1367.18
21.49 CFS	4	4	4	4	4	4	4	3
21.49 ELEV	1367.17	1367.17	1367.17	1367.16	1367.16	1367.16	1367.15	1367.15
22.16 CFS	3	3	3	3	3	3	3	3
22.16 ELEV	1367.15	1367.15	1367.14	1367.14	1367.14	1367.13	1367.13	1367.13
22.82 CFS	3	3	3	3	3	3	2	2
22.82 ELEV	1367.12	1367.12	1367.12	1367.12	1367.11	1367.11	1367.11	1367.11
23.49 CFS	2	2	2	2	2	2	2	2
23.49 ELEV	1367.10	1367.10	1367.09	1367.09	1367.09	1367.09	1367.08	1367.08
24.16 CFS	2	2	2	1	1	1	1	1
24.16 ELEV	1367.08	1367.08	1367.07	1367.06	1367.06	1367.05	1367.05	1367.04
24.82 CFS	1	1	1	1	0			
24.82 ELEV	1367.03	1367.03	1367.03	1367.02	1367.02			

RUNOFF ABOVE BASEFLOW OF .00 CFS
4.45 WATERSHED INCHES; 343 CFS-HRS; 28.3 ACRE-FEET.

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	56	21	12	9	7	5	4	3

DURATION(HRS)	18	20	21
FLOW(CFS)	2	1	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 15

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 25-YR ZO
STARTING TIME = .00 RAIN DEPTH = 6.10 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=44 STORM NO.= 4 RAIN TABLE NO.= 8

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	23	13	10	8	7	5	4	3

DURATION(HRS)	18	20	21
FLOW(CFS)	2	1	0

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	6	4	3	2	2	1	1	1

DURATION(HRS)	17
FLOW(CFS)	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	29	17	13	10	8	7	5	4

DURATION(HRS)	18	20	21
FLOW(CFS)	3	1	0

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.44	111.3	1371.11

HYDROGRAPH POINTS FOR ALTERNATE =44, STORM = 4

HRS	MAIN TIME INCREMENT = .08 hr,				DRAINAGE AREA =			.12 SQ.MI.
3.75 CFS	0	1	1	1	1	1	1	1
3.75 ELEV	1367.02	1367.02	1367.03	1367.03	1367.03	1367.03	1367.04	1367.04
4.41 CFS	1	1	1	1	1	1	2	2
4.41 ELEV	1367.04	1367.05	1367.05	1367.06	1367.06	1367.06	1367.07	1367.07
5.08 CFS	2	2	2	2	2	2	2	3
5.08 ELEV	1367.08	1367.08	1367.09	1367.09	1367.10	1367.10	1367.11	1367.11
5.75 CFS	3	3	3	3	3	3	3	4
5.75 ELEV	1367.12	1367.12	1367.13	1367.13	1367.14	1367.14	1367.15	1367.15
6.41 CFS	4	4	4	4	4	4	4	5
6.41 ELEV	1367.16	1367.17	1367.17	1367.18	1367.18	1367.19	1367.20	1367.21
7.08 CFS	5	5	5	5	5	6	6	6
7.08 ELEV	1367.21	1367.22	1367.23	1367.23	1367.24	1367.25	1367.25	1367.26
7.75 CFS	6	6	6	7	7	7	7	7
7.75 ELEV	1367.27	1367.28	1367.29	1367.29	1367.30	1367.31	1367.32	1367.32
8.41 CFS	8	8	8	8	8	9	9	9
8.41 ELEV	1367.33	1367.34	1367.35	1367.36	1367.37	1367.38	1367.39	1367.40
9.08 CFS	9	10	10	10	10	11	11	11
9.08 ELEV	1367.41	1367.42	1367.43	1367.44	1367.46	1367.47	1367.48	1367.49
9.75 CFS	12	12	12	13	13	13	14	14
9.75 ELEV	1367.51	1367.52	1367.54	1367.56	1367.57	1367.59	1367.61	1367.63
10.41 CFS	15	15	16	16	17	18	19	20
10.41 ELEV	1367.65	1367.67	1367.70	1367.72	1367.75	1367.79	1367.84	1367.88
11.08 CFS	21	23	25	27	31	34	39	45
11.08 ELEV	1367.93	1368.00	1368.07	1368.16	1368.28	1368.41	1368.56	1368.77
11.75 CFS	54	64	76	87	95	103	108	111
11.75 ELEV	1369.07	1369.39	1369.78	1370.15	1370.47	1370.75	1370.97	1371.07
12.41 CFS	111	111	110	109	107	105	102	100
12.41 ELEV	1371.10	1371.09	1371.06	1371.01	1370.93	1370.84	1370.74	1370.64
13.08 CFS	97	95	92	89	87	84	81	78
13.08 ELEV	1370.54	1370.44	1370.34	1370.24	1370.15	1370.06	1369.95	1369.83
13.74 CFS	74	70	67	64	61	58	55	53
13.74 ELEV	1369.71	1369.60	1369.49	1369.39	1369.30	1369.21	1369.13	1369.05
14.41 CFS	50	47	44	41	39	36	34	32
14.41 ELEV	1368.96	1368.84	1368.74	1368.65	1368.56	1368.48	1368.41	1368.34
15.08 CFS	31	29	28	26	25	24	23	22
15.08 ELEV	1368.28	1368.22	1368.17	1368.12	1368.08	1368.04	1368.00	1367.95
15.74 CFS	20	19	18	18	17	16	16	15
15.74 ELEV	1367.90	1367.85	1367.81	1367.77	1367.74	1367.71	1367.68	1367.66
16.41 CFS	14	14	13	13	13	12	12	12
16.41 ELEV	1367.63	1367.61	1367.59	1367.57	1367.55	1367.54	1367.52	1367.51
17.08 CFS	11	11	11	11	10	10	10	10
17.08 ELEV	1367.49	1367.48	1367.47	1367.46	1367.46	1367.45	1367.44	1367.44
17.74 CFS	10	10	10	9	9	9	9	9
17.74 ELEV	1367.43	1367.43	1367.42	1367.41	1367.41	1367.40	1367.40	1367.39
18.41 CFS	9	9	8	8	8	8	8	8

18.41 ELEV	1367.38	1367.38	1367.37	1367.36	1367.36	1367.36	1367.35	1367.35
19.08 CFS	8	8	8	8	7	7	7	7
19.08 ELEV	1367.34	1367.34	1367.34	1367.33	1367.33	1367.32	1367.32	1367.31
19.74 CFS	7	7	7	7	6	6	6	6
19.74 ELEV	1367.31	1367.30	1367.30	1367.29	1367.29	1367.28	1367.27	1367.27
20.41 CFS	6	6	6	6	5	5	5	5
20.41 ELEV	1367.26	1367.25	1367.25	1367.24	1367.24	1367.23	1367.23	1367.23
21.07 CFS	5	5	5	5	5	5	4	4
21.07 ELEV	1367.22	1367.22	1367.22	1367.21	1367.21	1367.20	1367.20	1367.19
21.74 CFS	4	4	4	4	4	4	4	4
21.74 ELEV	1367.19	1367.19	1367.18	1367.18	1367.18	1367.18	1367.17	1367.17
22.41 CFS	4	4	4	3	3	3	3	3
22.41 ELEV	1367.16	1367.16	1367.16	1367.15	1367.15	1367.14	1367.14	1367.14
23.07 CFS	3	3	3	3	3	3	3	3
23.07 ELEV	1367.14	1367.13	1367.13	1367.13	1367.12	1367.12	1367.11	1367.11
23.74 CFS	2	2	2	2	2	2	2	2
23.74 ELEV	1367.11	1367.10	1367.10	1367.10	1367.10	1367.09	1367.09	1367.08
24.41 CFS	2	2	1	1	1	1	1	1
24.41 ELEV	1367.08	1367.07	1367.06	1367.05	1367.05	1367.04	1367.04	1367.03
25.07 CFS	1	1	0					
25.07 ELEV	1367.03	1367.02	1367.02					

RUNOFF ABOVE BASEFLOW OF .00 CFS
5.29 WATERSHED INCHES; 407 CFS-HRS; 33.6 ACRE-FEET.

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	67	26	14	10	8	7	5	4

DURATION(HRS)	18	20	21
FLOW(CFS)	3	1	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 16

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 50-YR ZO
STARTING TIME = .00 RAIN DEPTH = 6.98 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=45 STORM NO.= 5 RAIN TABLE NO.= 6

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	26	15	12	9	8	6	5	4
DURATION(HRS)	18	20	21					
FLOW(CFS)	2	2	0					

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	7	4	3	3	2	1	1	1
DURATION(HRS)	18							
FLOW(CFS)	0							

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	34	19	15	11	10	8	6	4
DURATION(HRS)	18	20	21					
FLOW(CFS)	3	2	0					

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.45	118.9	1371.49

HYDROGRAPH POINTS FOR ALTERNATE =45, STORM = 5
MAIN TIME INCREMENT = .08 hr, DRAINAGE AREA = .12 SQ.MI.

HRS								
3.42	CFS	0	1	1	1	1	1	1	1
3.42	ELEV	1367.02	1367.02	1367.03	1367.03	1367.03	1367.04	1367.04	1367.04
4.08	CFS	1	1	1	1	1	2	2	2
4.08	ELEV	1367.05	1367.05	1367.05	1367.06	1367.06	1367.07	1367.07	1367.08
4.75	CFS	2	2	2	2	2	2	3	3
4.75	ELEV	1367.08	1367.09	1367.09	1367.10	1367.10	1367.11	1367.12	1367.12
5.41	CFS	3	3	3	3	4	4	4	4
5.41	ELEV	1367.13	1367.14	1367.14	1367.15	1367.16	1367.16	1367.17	1367.18
6.08	CFS	4	4	4	5	5	5	5	5
6.08	ELEV	1367.18	1367.19	1367.19	1367.20	1367.21	1367.21	1367.22	1367.23
6.75	CFS	5	6	6	6	6	6	6	7
6.75	ELEV	1367.23	1367.24	1367.25	1367.26	1367.27	1367.27	1367.28	1367.29
7.41	CFS	7	7	7	7	8	8	8	8
7.41	ELEV	1367.30	1367.31	1367.32	1367.33	1367.33	1367.34	1367.35	1367.36
8.08	CFS	8	9	9	9	9	9	10	10
8.08	ELEV	1367.37	1367.38	1367.39	1367.40	1367.41	1367.42	1367.43	1367.43
8.75	CFS	10	10	11	11	11	11	12	12
8.75	ELEV	1367.44	1367.46	1367.47	1367.48	1367.49	1367.51	1367.52	1367.53

9.41	CFS	12	13	13	13	14	14	15	15
9.41	ELEV	1367.55	1367.56	1367.58	1367.59	1367.61	1367.63	1367.65	1367.67
10.08	CFS	16	16	16	17	18	18	19	19
10.08	ELEV	1367.68	1367.70	1367.72	1367.75	1367.78	1367.80	1367.83	1367.86
10.75	CFS	20	21	22	23	24	26	28	31
10.75	ELEV	1367.89	1367.94	1367.99	1368.02	1368.06	1368.11	1368.19	1368.30
11.41	CFS	35	40	45	52	60	71	85	94
11.41	ELEV	1368.44	1368.59	1368.77	1369.01	1369.26	1369.63	1370.06	1370.42
12.08	CFS	104	111	115	118	119	119	118	117
12.08	ELEV	1370.79	1371.11	1371.31	1371.43	1371.48	1371.48	1371.45	1371.40
12.74	CFS	116	114	113	111	109	107	104	101
12.74	ELEV	1371.34	1371.27	1371.18	1371.10	1371.01	1370.90	1370.79	1370.68
13.41	CFS	98	95	93	90	88	85	82	78
13.41	ELEV	1370.57	1370.47	1370.37	1370.27	1370.17	1370.08	1369.98	1369.86
14.08	CFS	75	71	68	65	62	59	56	54
14.08	ELEV	1369.74	1369.63	1369.52	1369.42	1369.33	1369.24	1369.16	1369.08
14.74	CFS	51	48	45	42	40	38	36	34
14.74	ELEV	1369.00	1368.89	1368.78	1368.69	1368.60	1368.52	1368.45	1368.38
15.41	CFS	32	30	29	27	26	25	24	23
15.41	ELEV	1368.32	1368.26	1368.21	1368.17	1368.12	1368.08	1368.05	1368.01
16.08	CFS	22	21	20	19	18	17	17	16
16.08	ELEV	1367.97	1367.92	1367.87	1367.83	1367.79	1367.76	1367.73	1367.70
16.74	CFS	15	15	14	14	13	13	13	12
16.74	ELEV	1367.67	1367.65	1367.63	1367.61	1367.59	1367.57	1367.56	1367.55
17.41	CFS	12	12	12	12	11	11	11	11
17.41	ELEV	1367.54	1367.53	1367.52	1367.51	1367.50	1367.50	1367.49	1367.48
18.08	CFS	11	11	10	10	10	10	10	10
18.08	ELEV	1367.47	1367.47	1367.46	1367.45	1367.44	1367.43	1367.43	1367.42
18.74	CFS	9	9	9	9	9	9	9	9
18.74	ELEV	1367.41	1367.41	1367.40	1367.40	1367.40	1367.39	1367.39	1367.38
19.41	CFS	9	8	8	8	8	8	8	8
19.41	ELEV	1367.38	1367.37	1367.37	1367.36	1367.36	1367.35	1367.34	1367.33
20.08	CFS	7	7	7	7	7	7	6	6
20.08	ELEV	1367.33	1367.32	1367.31	1367.31	1367.30	1367.29	1367.29	1367.28
20.74	CFS	6	6	6	6	6	6	6	6
20.74	ELEV	1367.27	1367.27	1367.26	1367.26	1367.26	1367.25	1367.25	1367.24
21.41	CFS	5	5	5	5	5	5	5	5
21.41	ELEV	1367.24	1367.23	1367.23	1367.22	1367.22	1367.21	1367.21	1367.21
22.07	CFS	5	5	4	4	4	4	4	4
22.07	ELEV	1367.20	1367.20	1367.20	1367.19	1367.19	1367.18	1367.18	1367.17
22.74	CFS	4	4	4	4	4	3	3	3
22.74	ELEV	1367.17	1367.17	1367.16	1367.16	1367.16	1367.15	1367.15	1367.15
23.41	CFS	3	3	3	3	3	3	3	3
23.41	ELEV	1367.14	1367.14	1367.13	1367.13	1367.12	1367.12	1367.12	1367.11
24.07	CFS	2	2	2	2	2	2	2	1
24.07	ELEV	1367.11	1367.11	1367.10	1367.09	1367.09	1367.08	1367.07	1367.06
24.74	CFS	1	1	1	1	1	1	1	0
24.74	ELEV	1367.05	1367.05	1367.04	1367.03	1367.03	1367.03	1367.02	1367.02

RUNOFF ABOVE BASEFLOW OF .00 CFS
6.16 WATERSHED INCHES; 474 CFS-HRS; 39.1 ACRE-FEET.

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	82	32	18	12	10	8	6	4

DURATION(HRS)	18	20	22
FLOW(CFS)	3	2	0

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 17

EXECUTIVE CONTROL COMPUT FROM XSECTION 2 TO STRUCTURE 6 100-YR Z
STARTING TIME = .00 RAIN DEPTH = 7.80 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=46 STORM NO.= 6 RAIN TABLE NO.= 8

OPERATION RUNOFF XSECTION 2

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	29	17	13	10	9	7	5	4

DURATION(HRS)	18	20	22
FLOW(CFS)	3	2	0

OPERATION RUNOFF XSECTION 4

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	8	5	4	3	2	2	1	1

DURATION(HRS)	18	18
FLOW(CFS)	1	0

OPERATION ADDHYD XSECTION 6

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	38	22	17	13	11	9	7	5

DURATION(HRS)	18	20	22
FLOW(CFS)	4	2	0

OPERATION RESVOR STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
12.47	126.2	1371.86

HYDROGRAPH POINTS FOR ALTERNATE =46, STORM = 6

MAIN TIME INCREMENT = .08 hr, DRAINAGE AREA = .12 SQ.MI.

HRS								
3.17 CFS	0	1	1	1	1	1	1	1
3.17 ELEV	1367.02	1367.02	1367.03	1367.03	1367.03	1367.04	1367.04	1367.05
3.83 CFS	1	1	1	1	2	2	2	2
3.83 ELEV	1367.05	1367.06	1367.06	1367.06	1367.07	1367.07	1367.08	1367.08
4.50 CFS	2	2	2	2	3	3	3	3
4.50 ELEV	1367.09	1367.09	1367.10	1367.10	1367.11	1367.12	1367.13	1367.13
5.16 CFS	3	3	4	4	4	4	4	4
5.16 ELEV	1367.14	1367.15	1367.15	1367.16	1367.17	1367.18	1367.19	1367.19
5.83 CFS	5	5	5	5	5	5	6	6
5.83 ELEV	1367.20	1367.21	1367.22	1367.22	1367.23	1367.24	1367.24	1367.25
6.50 CFS	6	6	6	6	7	7	7	7
6.50 ELEV	1367.26	1367.27	1367.27	1367.28	1367.29	1367.30	1367.31	1367.32
7.16 CFS	7	8	8	8	8	9	9	9
7.16 ELEV	1367.33	1367.34	1367.35	1367.36	1367.37	1367.38	1367.39	1367.40
7.83 CFS	9	9	10	10	10	10	11	11
7.83 ELEV	1367.41	1367.42	1367.43	1367.44	1367.45	1367.46	1367.47	1367.48
8.50 CFS	11	11	12	12	12	12	13	13
8.50 ELEV	1367.49	1367.50	1367.51	1367.52	1367.53	1367.55	1367.56	1367.57
9.16 CFS	13	14	14	14	15	15	16	16
9.16 ELEV	1367.59	1367.60	1367.62	1367.64	1367.65	1367.67	1367.69	1367.70
9.83 CFS	16	17	17	18	18	19	20	20
9.83 ELEV	1367.72	1367.75	1367.77	1367.79	1367.81	1367.83	1367.86	1367.89
10.50 CFS	21	22	22	23	24	25	26	27
10.50 ELEV	1367.92	1367.95	1367.98	1368.01	1368.04	1368.08	1368.11	1368.16
11.16 CFS	29	31	35	40	45	50	56	65
11.16 ELEV	1368.21	1368.31	1368.44	1368.60	1368.77	1368.97	1369.16	1369.44
11.83 CFS	78	90	101	111	117	122	125	126
11.83 ELEV	1369.86	1370.27	1370.68	1371.08	1371.40	1371.63	1371.78	1371.85
12.49 CFS	126	126	125	123	122	120	118	117
12.49 ELEV	1371.86	1371.83	1371.78	1371.72	1371.64	1371.56	1371.47	1371.38
13.16 CFS	115	113	111	109	106	103	100	98
13.16 ELEV	1371.28	1371.19	1371.10	1371.00	1370.89	1370.78	1370.67	1370.56
13.83 CFS	95	92	90	87	85	82	78	74
13.83 ELEV	1370.45	1370.35	1370.25	1370.16	1370.06	1369.96	1369.84	1369.72
14.49 CFS	71	67	64	61	59	56	54	51
14.49 ELEV	1369.61	1369.51	1369.41	1369.32	1369.23	1369.15	1369.07	1369.00
15.16 CFS	48	45	43	40	38	36	34	32
15.16 ELEV	1368.89	1368.79	1368.70	1368.61	1368.53	1368.46	1368.40	1368.34
15.83 CFS	31	29	28	27	26	25	24	23
15.83 ELEV	1368.28	1368.23	1368.19	1368.15	1368.11	1368.07	1368.04	1368.00
16.49 CFS	22	20	19	19	18	17	16	16
16.49 ELEV	1367.95	1367.90	1367.86	1367.82	1367.78	1367.75	1367.72	1367.70

17.16 CFS	15	15	14	14	14	14	13	13
17.16 ELEV	1367.67	1367.65	1367.64	1367.62	1367.61	1367.60	1367.59	1367.58
17.83 CFS	13	13	12	12	12	12	12	11
17.83 ELEV	1367.57	1367.56	1367.55	1367.54	1367.53	1367.52	1367.51	1367.50
18.49 CFS	11	11	11	11	10	10	10	10
18.49 ELEV	1367.49	1367.48	1367.47	1367.47	1367.46	1367.45	1367.45	1367.45
19.16 CFS	10	10	10	10	9	9	9	9
19.16 ELEV	1367.44	1367.44	1367.43	1367.42	1367.42	1367.41	1367.41	1367.40
19.83 CFS	9	9	9	8	8	8	8	8
19.83 ELEV	1367.39	1367.38	1367.38	1367.37	1367.36	1367.35	1367.34	1367.34
20.49 CFS	7	7	7	7	7	7	7	7
20.49 ELEV	1367.33	1367.32	1367.31	1367.31	1367.30	1367.30	1367.29	1367.29
21.16 CFS	6	6	6	6	6	6	6	6
21.16 ELEV	1367.28	1367.28	1367.27	1367.27	1367.26	1367.25	1367.25	1367.24
21.82 CFS	5	5	5	5	5	5	5	5
21.82 ELEV	1367.24	1367.24	1367.23	1367.23	1367.23	1367.22	1367.22	1367.21
22.49 CFS	5	5	4	4	4	4	4	4
22.49 ELEV	1367.21	1367.20	1367.19	1367.19	1367.19	1367.18	1367.18	1367.18
23.16 CFS	4	4	4	4	3	3	3	3
23.16 ELEV	1367.17	1367.17	1367.16	1367.16	1367.15	1367.15	1367.14	1367.14
23.82 CFS	3	3	3	3	3	3	2	2
23.82 ELEV	1367.13	1367.13	1367.13	1367.12	1367.12	1367.11	1367.11	1367.10
24.49 CFS	2	2	2	1	1	1	1	1
24.49 ELEV	1367.09	1367.08	1367.07	1367.06	1367.05	1367.05	1367.04	1367.03
25.16 CFS	1	1	1	0				
25.16 ELEV	1367.03	1367.03	1367.02	1367.02				

RUNOFF ABOVE BASEFLOW OF .00 CFS
6.97 WATERSHED INCHES; 536 CFS-HRS; 44.3 ACRE-FEET.

DURATION(HRS)	2	4	6	8	10	12	14	16
FLOW(CFS)	90	40	21	14	11	9	7	5
DURATION(HRS)	18	20	22	22				
FLOW(CFS)	4	2	1	0				

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 18

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
RAINFALL OF 2.52 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 7, AMC 2							
MAIN TIME INCREMENT .08 HOURS							
ALTERNATE 11 STORM 1							
XSECTION 2	RUNOFF	.09	1.98	---	2.56	130	1444.4
XSECTION 4	RUNOFF	.03	1.33	---	2.53	31	1033.3
XSECTION 6	ADDHYD	.12	1.82	---	2.55	160	1333.3
STRUCTURE 6	RESVOR	.12	1.82	1369.43	2.92	65	541.7
RAINFALL OF 3.42 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 12 STORM 2							
XSECTION 2	RUNOFF	.09	2.86	---	2.55	184	2044.4
XSECTION 4	RUNOFF	.03	2.11	---	2.53	49	1633.3
XSECTION 6	ADDHYD	.12	2.68	---	2.55	232	1933.3
STRUCTURE 6	RESVOR	.12	2.68	1370.14	2.94	87	725.0
RAINFALL OF 4.02 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 13 STORM 3							
XSECTION 2	RUNOFF	.09	3.45	---	2.54	220	2444.4
XSECTION 4	RUNOFF	.03	2.65	---	2.52	62	2066.7
XSECTION 6	ADDHYD	.12	3.26	---	2.54	283	2358.3
STRUCTURE 6	RESVOR	.12	3.26	1370.53	2.96	97	808.3
RAINFALL OF 4.63 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 14 STORM 4							
XSECTION 2	RUNOFF	.09	4.05	---	2.55	257	2855.6
XSECTION 4	RUNOFF	.03	3.22	---	2.52	74	2466.7
XSECTION 6	ADDHYD	.12	3.85	---	2.54	330	2750.0

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 14 STORM 4							
STRUCTURE 6	RESVOR	.12	3.85	1370.94	2.98	108	900.0
RAINFALL OF 5.20 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 15 STORM 5							
XSECTION 2	RUNOFF	.09	4.61	---	2.55	291	3233.3
XSECTION 4	RUNOFF	.03	3.73	---	2.52	86	2866.7
XSECTION 6	ADDHYD	.12	4.40	---	2.54	376	3133.3
STRUCTURE 6	RESVOR	.12	4.40	1371.28	3.01	115	958.3
RAINFALL OF 5.94 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 16 STORM 6							
XSECTION 2	RUNOFF	.09	5.35	---	2.54	338	3755.6
XSECTION 4	RUNOFF	.03	4.45	---	2.52	102	3400.0
XSECTION 6	ADDHYD	.12	5.13	---	2.53	439	3658.3
STRUCTURE 6	RESVOR	.12	5.13	1371.72	3.04	123	1025.0
RAINFALL OF 3.48 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 2, AMC 2							
ALTERNATE 21 STORM 1							
XSECTION 2	RUNOFF	.09	2.92	---	12.12	149	1655.6
XSECTION 4	RUNOFF	.03	2.16	---	12.10	41	1366.7
XSECTION 6	ADDHYD	.12	2.73	---	12.12	190	1583.3
STRUCTURE 6	RESVOR	.12	2.73	1369.69	12.47	73	608.3

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
RAINFALL OF 4.55 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 22 STORM 2							
XSECTION 2	RUNOFF	.09	3.97	---	12.13	200	2222.2
XSECTION 4	RUNOFF	.03	3.14	---	12.09	59	1966.7
XSECTION 6	ADDHYD	.12	3.77	---	12.12	258	2150.0
STRUCTURE 6	RESVOR	.12	3.77	1370.27	12.50	90	750.0
RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 23 STORM 3							
XSECTION 2	RUNOFF	.09	4.66	---	12.12	233	2588.9
XSECTION 4	RUNOFF	.03	3.80	---	12.10	70	2333.3
XSECTION 6	ADDHYD	.12	4.45	---	12.12	303	2525.0
STRUCTURE 6	RESVOR	.12	4.45	1370.61	12.51	99	825.0
RAINFALL OF 6.10 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 24 STORM 4							
XSECTION 2	RUNOFF	.09	5.51	---	12.13	274	3044.4
XSECTION 4	RUNOFF	.03	4.61	---	12.09	85	2833.3
XSECTION 6	ADDHYD	.12	5.29	---	12.12	357	2975.0
STRUCTURE 6	RESVOR	.12	5.29	1371.03	12.53	110	916.7

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 6.98 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 25 STORM 5							
XSECTION 2	RUNOFF	.09	6.38	---	12.12	314	3488.9
XSECTION 4	RUNOFF	.03	5.45	---	12.09	99	3300.0
XSECTION 6	ADDHYD	.12	6.16	---	12.11	413	3441.7
STRUCTURE 6	RESVOR	.12	6.16	1371.39	12.56	117	975.0
RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 26 STORM 6							
XSECTION 2	RUNOFF	.09	7.20	---	12.12	352	3911.1
XSECTION 4	RUNOFF	.03	6.25	---	12.09	113	3766.7
XSECTION 6	ADDHYD	.12	6.97	---	12.11	465	3875.0
STRUCTURE 6	RESVOR	.12	6.96	1371.74	12.58	124	1033.3
RAINFALL OF 3.48 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs. RAINTABLE NUMBER 8, AMC 2							
ALTERNATE 41 STORM 1							
XSECTION 2	RUNOFF	.09	2.92	---	12.06	131	1455.6
XSECTION 4	RUNOFF	.03	2.16	---	12.04	34	1133.3
XSECTION 6	ADDHYD	.12	2.73	---	12.05	165	1375.0
STRUCTURE 6	RESVOR	.12	2.73	1369.74	12.37	75	625.0

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
RAINFALL OF 4.55 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 42 STORM 2							
XSECTION 2	RUNOFF	.09	3.97	---	12.06	175	1944.4
XSECTION 4	RUNOFF	.03	3.14	---	12.03	49	1633.3
XSECTION 6	ADDHYD	.12	3.77	---	12.05	225	1875.0
STRUCTURE 6	RESVOR	.12	3.77	1370.33	12.40	92	766.7
RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 43 STORM 3							
XSECTION 2	RUNOFF	.09	4.66	---	12.06	204	2266.7
XSECTION 4	RUNOFF	.03	3.80	---	12.03	59	1966.7
XSECTION 6	ADDHYD	.12	4.45	---	12.05	263	2191.7
STRUCTURE 6	RESVOR	.12	4.45	1370.69	12.42	101	841.7
RAINFALL OF 6.10 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 44 STORM 4							
XSECTION 2	RUNOFF	.09	5.51	---	12.05	238	2644.4
XSECTION 4	RUNOFF	.03	4.61	---	12.03	71	2366.7
XSECTION 6	ADDHYD	.12	5.29	---	12.05	309	2575.0
STRUCTURE 6	RESVOR	.12	5.29	1371.11	12.44	111	925.0

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
RAINFALL OF 6.98 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 45 STORM 5							
XSECTION 2	RUNOFF	.09	6.38	---	12.05	274	3044.4
XSECTION 4	RUNOFF	.03	5.45	---	12.03	83	2766.7
XSECTION 6	ADDHYD	.12	6.16	---	12.05	357	2975.0
STRUCTURE 6	RESVOR	.12	6.16	1371.49	12.45	119	991.7
RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 46 STORM 6							
XSECTION 2	RUNOFF	.09	7.20	---	12.05	307	3411.1
XSECTION 4	RUNOFF	.03	6.25	---	12.03	95	3166.7
XSECTION 6	ADDHYD	.12	6.97	---	12.05	402	3350.0
STRUCTURE 6	RESVOR	.12	6.97	1371.86	12.47	126	1050.0

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	3	4	5
STRUCTURE 6	.12					
ALTERNATE 11		65	*********	*********	*********	*********
ALTERNATE 12		*********	87	*********	*********	*********
ALTERNATE 13		*********	*********	97	*********	*********
ALTERNATE 14		*********	*********	*********	108	*********
ALTERNATE 15		*********	*********	*********	*********	115
ALTERNATE 21		73	*********	*********	*********	*********
ALTERNATE 22		*********	90	*********	*********	*********
ALTERNATE 23		*********	*********	99	*********	*********
ALTERNATE 24		*********	*********	*********	110	*********
ALTERNATE 25		*********	*********	*********	*********	117
ALTERNATE 41		75	*********	*********	*********	*********
ALTERNATE 42		*********	92	*********	*********	*********
ALTERNATE 43		*********	*********	101	*********	*********
ALTERNATE 44		*********	*********	*********	111	*********
ALTERNATE 45		*********	*********	*********	*********	119
XSECTION 2	.09					
ALTERNATE 11		130	*********	*********	*********	*********
ALTERNATE 12		*********	184	*********	*********	*********
ALTERNATE 13		*********	*********	220	*********	*********
ALTERNATE 14		*********	*********	*********	257	*********
ALTERNATE 15		*********	*********	*********	*********	291
ALTERNATE 21		149	*********	*********	*********	*********
ALTERNATE 22		*********	200	*********	*********	*********
ALTERNATE 23		*********	*********	233	*********	*********
ALTERNATE 24		*********	*********	*********	274	*********
ALTERNATE 25		*********	*********	*********	*********	314
ALTERNATE 41		131	*********	*********	*********	*********
ALTERNATE 42		*********	175	*********	*********	*********
ALTERNATE 43		*********	*********	204	*********	*********
ALTERNATE 44		*********	*********	*********	238	*********
ALTERNATE 45		*********	*********	*********	*********	274
XSECTION 4	.03					
ALTERNATE 11		31	*********	*********	*********	*********
ALTERNATE 12		*********	49	*********	*********	*********

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2	3	4	5
XSECTION 4	.03					
ALTERNATE 13		*********	*********	62	*********	*********
ALTERNATE 14		*********	*********	*********	74	*********
ALTERNATE 15		*********	*********	*********	*********	86
ALTERNATE 21		41	*********	*********	*********	*********
ALTERNATE 22		*********	59	*********	*********	*********
ALTERNATE 23		*********	*********	70	*********	*********
ALTERNATE 24		*********	*********	*********	85	*********
ALTERNATE 25		*********	*********	*********	*********	99
ALTERNATE 41		34	*********	*********	*********	*********
ALTERNATE 42		*********	49	*********	*********	*********
ALTERNATE 43		*********	*********	59	*********	*********
ALTERNATE 44		*********	*********	*********	71	*********
ALTERNATE 45		*********	*********	*********	*********	83
XSECTION 6	.12					
ALTERNATE 11		160	*********	*********	*********	*********
ALTERNATE 12		*********	232	*********	*********	*********
ALTERNATE 13		*********	*********	283	*********	*********
ALTERNATE 14		*********	*********	*********	330	*********
ALTERNATE 15		*********	*********	*********	*********	376
ALTERNATE 21		190	*********	*********	*********	*********
ALTERNATE 22		*********	258	*********	*********	*********
ALTERNATE 23		*********	*********	303	*********	*********
ALTERNATE 24		*********	*********	*********	357	*********
ALTERNATE 25		*********	*********	*********	*********	413
ALTERNATE 41		165	*********	*********	*********	*********
ALTERNATE 42		*********	225	*********	*********	*********
ALTERNATE 43		*********	*********	263	*********	*********
ALTERNATE 44		*********	*********	*********	309	*********
ALTERNATE 45		*********	*********	*********	*********	357

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE	DRAINAGE AREA	STORM NUMBERS.....

ID (SQ MI) 6

STRUCTURE 6 .12

ALTERNATE	16	123
ALTERNATE	26	124
ALTERNATE	46	126

XSECTION 2 .09

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 6
XSECTION 2	.09	
ALTERNATE 16		338
ALTERNATE 26		352
ALTERNATE 46		307
XSECTION 4	.03	
ALTERNATE 16		102
ALTERNATE 26		113
ALTERNATE 46		95
XSECTION 6	.12	
ALTERNATE 16		439
ALTERNATE 26		465
ALTERNATE 46		402

END OF 1 JOBS IN THIS RUN

SCS TR-20, VERSION 10/01/90

FILES

INPUT = GATP2L.T20

OUTPUT = GATP2L.OUT , DATED 02/04/99,09:41:18

FILES GENERATED - DATED 02/04/99,09:41:18

NONE!

*** TR-20 RUN COMPLETED ***