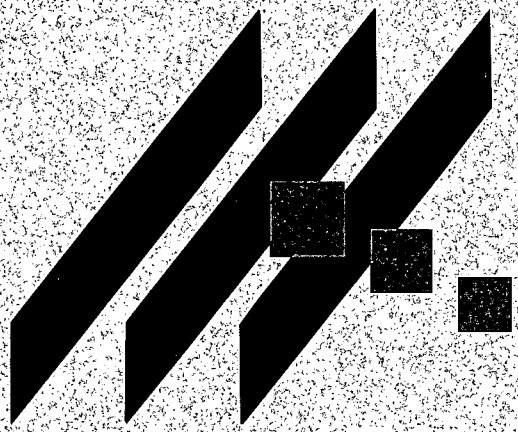
MKEC ENGINEERING CONSULTANTS, INC.



DRAINAGE REPORT

Watershed North of the Balthrop Addition

KISAR WEST ADDITION

July, 2001

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

Drainage Report for the Watershed North of the Balthrop Addition

Location

The majority of the watershed area is located South of 13th Street, North of the Balthrop Addition, West of K-96 Highway, and East of Greenwich Road. A small portion of the watershed lies west of Greenwich Road, as shown on sheet 1 of 1 in Appendix A. The watershed includes most of the Northwest Quarter of Section 15, T27S, R2E, with the small portion mentioned before in the Eastern half of Section 16, T27S, R2E. The total watershed area is approximately 154.5 acres.

Soils

According to the NRCS (SCS) Sedgwick County Soil Survey, the drainage watershed is in the Irwin Series: silty clay loam, 1-3 percent slopes, and the Rosehill Series: silty clay, 1-3 percent slopes. The Hydrological Soil Group (HSG) for both soils is "D".

Pre-developed Conditions

Current Development
Currently, the Warren Theater is being developed and the Killenwood Pointe paving is complete. For purpose of analysis, we studied watershed conditions prior to all development.

Current Landform and Slope
A natural channel passes through an existing pond on the eastern section of the watershed and exits in the southern portion of the watershed though the Balthrop Addition. Based on the Andover, Kansas Quadrangle map, Appendix B, local elevations vary from roughly 1404 feet on the west edge of the watershed, to 1361 feet on the south edge of the watershed. Watershed slopes vary from 0.7% to 2.5%. Runoff leaves the site toward a low swale that discharges south to the drainage reserve in the Balthrop Addition.

Current Drainage Conditions
No portion of the site is included in a regulatory floodplain (FBFM Panels 150 and 255, Sedgwick County, June 3, 1986). Zone A is 3/4-mile southwest of the discharge point.

Upstream of Site
The watershed is at the upstream end of the basin; therefore no runoff enters from offsite.

Current Runoff Characteristics

The pre-developed watershed is divided into five different sub-watersheds: N, NW, W, S, and C (as seen on the drawing in Appendix A). The SCS TR-20 method was used for calculating discharge hydrographs at locations of concern. The curve number used for the watershed is 83.0, which corresponds to undeveloped agricultural uses. The time of concentrations range from 25 minutes to 41 minutes. Discharge hydrographs were calculated for the 2, 5, 10, and 100-year return periods. The pre-developed peak discharge from the sub-watersheds and watershed (entering the Balthrop Addition) for each return period is listed in Table 1. TR-20 program output for the pre-developed watershed basin is included in Appendix C.

Table 1. Pre-developed runoff.

Sub-Watershed	2-Year (cfs)	5-Year (cfs)	10-Year (cfs)	100-Year (cfs)
W	44	67	82	139
NW	9	13	17	28
N	65	98	120	203
C	31	47	58	97
S	68	101	125	210
Watershed Discharge	129	209	274	571

Post-Developed Condition

Proposed Development

The watershed will be developed as residential and commercial subdivisions. The Gateway and Kiser West Additions will be commercial development. The Killenwood Pointe and Pine Meadow Additions will be developed as residential subdivisions with the average lot size approximately ¼ acre.

Proposed Landform and Slope

The commercial areas will have surface slopes ranging from 0.75% to 4.0%. Final slopes in the residential development have not been determined, but the minimum will be 0.5% within street right-of-way, and 1-2% in backyards.

Proposed Runoff Characteristics

Curve numbers for the watershed will range from 83.0 to 95.0, which vary from undeveloped agricultural to commercial and business use. The time of concentration for the sub-areas in the watershed will range from 16 to 32 minutes, as calculated using the City of Wichita Method.

The rational method was used in determining the size of the storm sewers from the sub-watersheds shown in drainage and utility plans, Appendix D. This encompasses the Kiser West Addition, the Killenwood Pointe Addition, and the Pine Meadow Addition. The

spreadsheets in Appendix D display the area, runoff coefficient (c), time of concentration (t_c), and the flow rate (Q) for each sub-watershed, for the 2 and 5 year events. Once the discharge was determined for each of the sub-watersheds, we used the Manning's nomograph to determine a preliminary size for the structures. The structure sizes are listed in the spreadsheet also.

The watershed is divided into six sub-watersheds: N, NW, W, KW, S, and C. (as seen sheet 2 of 2, Appendix A). The sub-watershed hydrographs have been combined using the SCS TR-20 software program. Sub-watersheds N and C were routed through storage in the proposed north pond, as indicated on sheet 2 of 2 in Appendix A. Hydrographs representing runoff from sub-watersheds W, KW, NW, S and the discharge from the north pond were routed through the proposed south pond detention. The SCS output for the post-development watershed model is shown in shown in Appendix E.

Table 2. Post-developed runoff.

Sub-Watershed	2-Year (cfs)	5-Year (cfs)	10-Year (cfs)	100-Year (cfs)
N	133	179	208	314
C	40	58	69	111
$Q_{in\ Prop.\ North\ Pond}$	174	236	277	425
$Q_{out\ Prop.\ North\ Pond}$	100	129	148	222
W	30	46	56	95
NW	19	26	30	46
S	94	136	164	264
$Q_{in\ Prop.\ South\ Pond}$	246	344	405	634
$Q_{out\ Prop.\ South\ Pond}$ (Watershed Discharge)	128	203	254	458

Summary

Development is proposed for all platted areas of this watershed. Development will occur in these four separate plats: the Gateway, Killenwood Pointe, Kiser West, and Pine Meadow Additions. The Gateway and Kiser West developments will be commercial. The Killenwood Pointe and Pine Meadow Additions will be residential. To control excess runoff generated by the residential and commercial development of the watershed, two detention ponds are proposed. The ponds are under design at this time and are scheduled to begin construction this summer. They will be located to the East of the Pine Meadow Addition. To analyze this watershed, it has been divided into sub-watersheds and examined under pre- and post- development conditions using the SCS TR-20 software. This analysis shows that the detention ponds will decrease runoff downstream. The watershed's post-developed peak discharge will be less than the pre-developed peak discharge, as shown in Tables 1 and 2, prior to entering the Balthrop Addition. The detention ponds support the development of this watershed and prevent drainage problems downstream.

Appendix A

Appendix B

Appendix C

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

JOB TR-20                                          SUMMARY
TITLE 003 Existing runoff @ KILLENWOOD POINTE NGG 2,5,10,100-YR EVENTS
TITLE  FAA TC PRELIM. EVALUATIONS K=484 FILENAME KPEX.T20
 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
 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      30                                                     N POND
```

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

 8                      1368.0      0.0         0.0
 8                      1369.0      4.2         1.095
 8                      1370.0      10.3        3.06
 8                      1370.73     50.0        5.436
 8                      1371.0      105.0       6.315
 8                      1371.25     173.0       7.48
 8                      1371.5      268.0       8.65
 8                      1371.75     394.0       9.82
 8                      1372.0      500.0       10.99
 9 ENDTBL
 6 RUNOFF 1 001       1 0.0467      83.0        0.5320              1 W WSHD
 6 RUNOFF 1 005       2 0.0095      83.0        0.5475              1 NW WSHD
 6 RUNOFF 1 010       3 0.0761      83.0        0.5945              1 S WSHD
 6 RUNOFF 1 015       4 0.0806      83.0        0.6870              1 N WSHD
 6 RUNOFF 1 020       5 0.0284      83.0        0.4150              1 C WSHD
 6 ADDHYD 4 025   4 5 6                                           1 Qin NPON
 6 RESVOR 2    30 6   4 1368.0                                    1 Qout NPO
 6 ADDHYD 4 035   1 2 5                                           1 W&NW
 6 ADDHYD 4 040   5 3 6                                           1 W&NW&S
 6 ADDHYD 4 045   4 6 7                                           1 Qo SITE
   ENDATA
 7 INCREM 6             0.0833
 7 COMPUT 7 001   045   0.0         2.52        1.0         7 2  11  01 2-YR 6-H
   ENDCMP 1
 7 COMPUT 7 001   045   0.0         3.42        1.0         7 2  12  02 5-YR 6-H
   ENDCMP 1
 7 COMPUT 7 001   045   0.0         4.02        1.0         7 2  13  03 10-YR 6-
   ENDCMP 1
 7 COMPUT 7 001   045   0.0         5.94        1.0         7 2  16  06 100-YR 6
   ENDCMP 1
 7 COMPUT 7 001   045   0.0         3.48        1.0         2 2  21  01 2-YR TYP
   ENDCMP 1
 7 COMPUT 7 001   045   0.0         4.55        1.0         2 2  22  02 5-YR TYP
   ENDCMP 1
 7 COMPUT 7 001   045   0.0         5.25        1.0         2 2  23  03 10-YR TY
   ENDCMP 1
 7 COMPUT 7 001   045   0.0         7.80        1.0         2 2  26  06 100-YR T
   ENDCMP 1
 7 COMPUT 7 001   045   0.0         3.48        1.0         8 2  41  01 2-YR ZON
   ENDCMP 1
 7 COMPUT 7 001   045   0.0         4.55        1.0         8 2  42  02 5-YR ZON
   ENDCMP 1
 7 COMPUT 7 001   045   0.0         5.25        1.0         8 2  43  03 10-YR ZO
   ENDCMP 1
 7 COMPUT 7 001   045   0.0         7.80        1.0         8 2  46  06 100-YR Z
   ENDCMP 1
```

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

```
   ENDJOB 2
```

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

COMPUTED PEAK RATE FACTOR = 484.00

EXECUTIVE CONTROL INCREM MAIN TIME INCREMENT = .08 HOURS

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 45 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 1 TO XSECTION 45 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 1 TO XSECTION 45 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 1 TO XSECTION 45 100-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 4

```
EXECUTIVE CONTROL COMPUT    FROM XSECTION   1  TO XSECTION  45        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   5


EXECUTIVE CONTROL COMPUT    FROM XSECTION   1  TO XSECTION  45        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   6


EXECUTIVE CONTROL COMPUT    FROM XSECTION   1  TO XSECTION  45        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   7


EXECUTIVE CONTROL COMPUT    FROM XSECTION   1  TO XSECTION  45        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   8
```

```
EXECUTIVE CONTROL COMPUT    FROM XSECTION   1  TO XSECTION  45        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   9


EXECUTIVE CONTROL COMPUT    FROM XSECTION   1  TO XSECTION  45        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  10


EXECUTIVE CONTROL COMPUT    FROM XSECTION   1  TO XSECTION  45        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  11


EXECUTIVE CONTROL COMPUT    FROM XSECTION   1  TO XSECTION  45        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


EXECUTIVE CONTROL ENDCMP    COMPUTATIONS COMPLETED FOR PASS  12
```

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 1	RUNOFF	.05	1.07	---	2.66	31	620.0
XSECTION 5	RUNOFF	.01	1.07	---	2.67	6	600.0
XSECTION 10	RUNOFF	.08	1.07	---	2.70	47	587.5
XSECTION 15	RUNOFF	.08	1.07	---	2.76	45	562.5
XSECTION 20	RUNOFF	.03	1.07	---	2.58	22	733.3
XSECTION 25	ADDHYD	.11	1.07	---	2.69	63	572.7
STRUCTURE 30	RESVOR	.11	1.07	1370.11	3.66	16	145.5
XSECTION 35	ADDHYD	.06	1.07	---	2.66	37	616.7
XSECTION 40	ADDHYD	.13	1.07	---	2.68	84	646.2
XSECTION 45	ADDHYD	.24	1.07	---	2.69	89	370.8
RAINFALL OF 3.42 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 12 STORM 2							
XSECTION 1	RUNOFF	.05	1.79	---	2.64	53	1060.0
XSECTION 5	RUNOFF	.01	1.79	---	2.66	11	1100.0
XSECTION 10	RUNOFF	.08	1.79	---	2.69	81	1012.5
XSECTION 15	RUNOFF	.08	1.79	---	2.74	78	975.0
XSECTION 20	RUNOFF	.03	1.79	---	2.57	38	1266.7
XSECTION 25	ADDHYD	.11	1.79	---	2.67	109	990.9
STRUCTURE 30	RESVOR	.11	1.79	1370.58	3.32	42	381.8
XSECTION 35	ADDHYD	.06	1.79	---	2.65	64	1066.7
XSECTION 40	ADDHYD	.13	1.79	---	2.67	144	1107.7
XSECTION 45	ADDHYD	.24	1.79	---	2.69	153	637.5

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 4.02 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.								
ALTERNATE 13 STORM 3								
XSECTION	1	RUNOFF	.05	2.30	---	2.64	69	1380.0
XSECTION	5	RUNOFF	.01	2.30	---	2.65	14	1400.0
XSECTION	10	RUNOFF	.08	2.30	---	2.68	104	1300.0
XSECTION	15	RUNOFF	.08	2.30	---	2.74	101	1262.5
XSECTION	20	RUNOFF	.03	2.30	---	2.56	48	1600.0
XSECTION	25	ADDHYD	.11	2.30	---	2.66	141	1281.8
STRUCTURE	30	RESVOR	.11	2.30	1370.84	3.14	73	663.6
XSECTION	35	ADDHYD	.06	2.30	---	2.64	83	1383.3
XSECTION	40	ADDHYD	.13	2.30	---	2.66	186	1430.8
XSECTION	45	ADDHYD	.24	2.30	---	2.72	207	862.5
RAINFALL OF 5.94 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.								
ALTERNATE 16 STORM 6								
XSECTION	1	RUNOFF	.05	4.04	---	2.63	122	2440.0
XSECTION	5	RUNOFF	.01	4.03	---	2.64	24	2400.0
XSECTION	10	RUNOFF	.08	4.04	---	2.67	186	2325.0
XSECTION	15	RUNOFF	.08	4.03	---	2.73	179	2237.5
XSECTION	20	RUNOFF	.03	4.03	---	2.55	85	2833.3
XSECTION	25	ADDHYD	.11	4.03	---	2.66	249	2263.6
STRUCTURE	30	RESVOR	.11	4.03	1371.28	2.93	185	1681.8
XSECTION	35	ADDHYD	.06	4.03	---	2.63	146	2433.3
XSECTION	40	ADDHYD	.13	4.04	---	2.65	331	2546.2
XSECTION	45	ADDHYD	.24	4.03	---	2.76	456	1900.0

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 3.48 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 2, AMC 2							
ALTERNATE 21 STORM 1							
XSECTION 1	RUNOFF	.05	1.84	---	12.20	44	880.0
XSECTION 5	RUNOFF	.01	1.84	---	12.22	9	900.0
XSECTION 10	RUNOFF	.08	1.84	---	12.24	68	850.0
XSECTION 15	RUNOFF	.08	1.84	---	12.30	65	812.5
XSECTION 20	RUNOFF	.03	1.84	---	12.14	31	1033.3
XSECTION 25	ADDHYD	.11	1.84	---	12.23	90	818.2
STRUCTURE 30	RESVOR	.11	1.84	1370.40	12.84	32	290.9
XSECTION 35	ADDHYD	.06	1.84	---	12.21	53	883.3
XSECTION 40	ADDHYD	.13	1.84	---	12.23	121	930.8
XSECTION 45	ADDHYD	.24	1.84	---	12.24	129	537.5
RAINFALL OF 4.55 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 22 STORM 2							
XSECTION 1	RUNOFF	.05	2.77	---	12.20	67	1340.0
XSECTION 5	RUNOFF	.01	2.76	---	12.21	13	1300.0
XSECTION 10	RUNOFF	.08	2.77	---	12.24	101	1262.5
XSECTION 15	RUNOFF	.08	2.77	---	12.29	98	1225.0
XSECTION 20	RUNOFF	.03	2.77	---	12.13	47	1566.7
XSECTION 25	ADDHYD	.11	2.77	---	12.22	137	1245.5
STRUCTURE 30	RESVOR	.11	2.76	1370.84	12.63	73	663.6
XSECTION 35	ADDHYD	.06	2.77	---	12.20	81	1350.0

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 22 STORM 2							
XSECTION 40	ADDHYD	.13	2.77	---	12.22	181	1392.3
XSECTION 45	ADDHYD	.24	2.77	---	12.27	209	870.8
RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 23 STORM 3							
XSECTION 1	RUNOFF	.05	3.40	---	12.20	82	1640.0
XSECTION 5	RUNOFF	.01	3.40	---	12.20	17	1700.0
XSECTION 10	RUNOFF	.08	3.39	---	12.23	125	1562.5
XSECTION 15	RUNOFF	.08	3.40	---	12.29	120	1500.0
XSECTION 20	RUNOFF	.03	3.40	---	12.13	58	1933.3
XSECTION 25	ADDHYD	.11	3.40	---	12.22	168	1527.3
STRUCTURE 30	RESVOR	.11	3.39	1371.02	12.54	110	1000.0
XSECTION 35	ADDHYD	.06	3.40	---	12.20	99	1650.0
XSECTION 40	ADDHYD	.13	3.40	---	12.22	222	1707.7
XSECTION 45	ADDHYD	.24	3.39	---	12.34	274	1141.7
RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 26 STORM 6							
XSECTION 1	RUNOFF	.05	5.78	---	12.19	139	2780.0
XSECTION 5	RUNOFF	.01	5.78	---	12.20	28	2800.0
XSECTION 10	RUNOFF	.08	5.78	---	12.23	210	2625.0
XSECTION 15	RUNOFF	.08	5.78	---	12.28	203	2537.5
XSECTION 20	RUNOFF	.03	5.78	---	12.13	97	3233.3
XSECTION 25	ADDHYD	.11	5.78	---	12.21	284	2581.8
STRUCTURE 30	RESVOR	.11	5.77	1371.41	12.41	235	2136.4
XSECTION 35	ADDHYD	.06	5.78	---	12.20	166	2766.7
XSECTION 40	ADDHYD	.13	5.78	---	12.21	375	2884.6
XSECTION 45	ADDHYD	.24	5.78	---	12.29	571	2379.2

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 3.48 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 8, AMC 2							
ALTERNATE 41 STORM 1							
XSECTION 1	RUNOFF	.05	1.84	---	12.12	42	840.0
XSECTION 5	RUNOFF	.01	1.84	---	12.13	8	800.0
XSECTION 10	RUNOFF	.08	1.84	---	12.15	65	812.5
XSECTION 15	RUNOFF	.08	1.84	---	12.20	64	800.0
XSECTION 20	RUNOFF	.03	1.84	---	12.06	28	933.3
XSECTION 25	ADDHYD	.11	1.84	---	12.15	89	809.1
STRUCTURE 30	RESVOR	.11	1.84	1370.46	12.69	35	318.2
XSECTION 35	ADDHYD	.06	1.84	---	12.12	50	833.3
XSECTION 40	ADDHYD	.13	1.84	---	12.14	115	884.6
XSECTION 45	ADDHYD	.24	1.84	---	12.20	126	525.0
RAINFALL OF 4.55 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 42 STORM 2							
XSECTION 1	RUNOFF	.05	2.77	---	12.12	63	1260.0
XSECTION 5	RUNOFF	.01	2.77	---	12.12	13	1300.0
XSECTION 10	RUNOFF	.08	2.77	---	12.15	98	1225.0
XSECTION 15	RUNOFF	.08	2.77	---	12.20	96	1200.0
XSECTION 20	RUNOFF	.03	2.77	---	12.06	42	1400.0
XSECTION 25	ADDHYD	.11	2.77	---	12.14	134	1218.2
STRUCTURE 30	RESVOR	.11	2.76	1370.89	12.49	82	745.5
XSECTION 35	ADDHYD	.06	2.77	---	12.12	75	1250.0

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 42 STORM 2							
XSECTION 40	ADDHYD	.13	2.77	---	12.13	173	1330.8
XSECTION 45	ADDHYD	.24	2.77	---	12.19	211	879.2
RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 43 STORM 3							
XSECTION 1	RUNOFF	.05	3.40	---	12.12	77	1540.0
XSECTION 5	RUNOFF	.01	3.40	---	12.12	15	1500.0
XSECTION 10	RUNOFF	.08	3.40	---	12.15	119	1487.5
XSECTION 15	RUNOFF	.08	3.40	---	12.19	118	1475.0
XSECTION 20	RUNOFF	.03	3.40	---	12.06	51	1700.0
XSECTION 25	ADDHYD	.11	3.40	---	12.14	164	1490.9
STRUCTURE 30	RESVOR	.11	3.40	1371.05	12.41	118	1072.7
XSECTION 35	ADDHYD	.06	3.40	---	12.12	92	1533.3
XSECTION 40	ADDHYD	.13	3.40	---	12.13	211	1623.1
XSECTION 45	ADDHYD	.24	3.40	---	12.26	294	1225.0
RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 46 STORM 6							
XSECTION 1	RUNOFF	.05	5.78	---	12.12	128	2560.0
XSECTION 5	RUNOFF	.01	5.78	---	12.12	26	2600.0
XSECTION 10	RUNOFF	.08	5.78	---	12.14	199	2487.5
XSECTION 15	RUNOFF	.08	5.78	---	12.20	197	2462.5
XSECTION 20	RUNOFF	.03	5.78	---	12.06	85	2833.3
XSECTION 25	ADDHYD	.11	5.78	---	12.14	274	2490.9
STRUCTURE 30	RESVOR	.11	5.78	1371.42	12.30	239	2172.7
XSECTION 35	ADDHYD	.06	5.78	---	12.12	154	2566.7
XSECTION 40	ADDHYD	.13	5.78	---	12.13	353	2715.4
XSECTION 45	ADDHYD	.24	5.78	---	12.20	569	2370.8

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	6
STRUCTURE 30		.11				
ALTERNATE	11		16	*********	*********	*********
ALTERNATE	12		*********	42	*********	*********
ALTERNATE	13		*********	*********	73	*********
ALTERNATE	16		*********	*********	*********	185
ALTERNATE	21		32	*********	*********	*********
ALTERNATE	22		*********	73	*********	*********
ALTERNATE	23		*********	*********	110	*********
ALTERNATE	26		*********	*********	*********	235
ALTERNATE	41		35	*********	*********	*********
ALTERNATE	42		*********	82	*********	*********
ALTERNATE	43		*********	*********	118	*********
ALTERNATE	46		*********	*********	*********	239
XSECTION 1		.05				
ALTERNATE	11		31	*********	*********	*********
ALTERNATE	12		*********	53	*********	*********
ALTERNATE	13		*********	*********	69	*********
ALTERNATE	16		*********	*********	*********	122
ALTERNATE	21		44	*********	*********	*********
ALTERNATE	22		*********	67	*********	*********
ALTERNATE	23		*********	*********	82	*********
ALTERNATE	26		*********	*********	*********	139
ALTERNATE	41		42	*********	*********	*********
ALTERNATE	42		*********	63	*********	*********
ALTERNATE	43		*********	*********	77	*********
ALTERNATE	46		*********	*********	*********	128
XSECTION 5		.01				
ALTERNATE	11		6	*********	*********	*********
ALTERNATE	12		*********	11	*********	*********
ALTERNATE	13		*********	*********	14	*********
ALTERNATE	16		*********	*********	*********	24
ALTERNATE	21		9	*********	*********	*********
ALTERNATE	22		*********	13	*********	*********
ALTERNATE	23		*********	*********	17	*********

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	6
XSECTION	5	.01				
ALTERNATE	26		*********	*********	*********	28
ALTERNATE	41		8	*********	*********	*********
ALTERNATE	42		*********	13	*********	*********
ALTERNATE	43		*********	*********	15	*********
ALTERNATE	46		*********	*********	*********	26
XSECTION	10	.08				
ALTERNATE	11		47	*********	*********	*********
ALTERNATE	12		*********	81	*********	*********
ALTERNATE	13		*********	*********	104	*********
ALTERNATE	16		*********	*********	*********	186
ALTERNATE	21		68	*********	*********	*********
ALTERNATE	22		*********	101	*********	*********
ALTERNATE	23		*********	*********	125	*********
ALTERNATE	26		*********	*********	*********	210
ALTERNATE	41		65	*********	*********	*********
ALTERNATE	42		*********	98	*********	*********
ALTERNATE	43		*********	*********	119	*********
ALTERNATE	46		*********	*********	*********	199
XSECTION	15	.08				
ALTERNATE	11		45	*********	*********	*********
ALTERNATE	12		*********	78	*********	*********
ALTERNATE	13		*********	*********	101	*********
ALTERNATE	16		*********	*********	*********	179
ALTERNATE	21		65	*********	*********	*********
ALTERNATE	22		*********	98	*********	*********
ALTERNATE	23		*********	*********	120	*********
ALTERNATE	26		*********	*********	*********	203
ALTERNATE	41		64	*********	*********	*********
ALTERNATE	42		*********	96	*********	*********
ALTERNATE	43		*********	*********	118	*********
ALTERNATE	46		*********	*********	*********	197
XSECTION	20	.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	6
XSECTION 20		.03				
ALTERNATE	13		*********	*********	48	*********
ALTERNATE	16		*********	*********	*********	85
ALTERNATE	21		31	*********	*********	*********
ALTERNATE	22		*********	47	*********	*********
ALTERNATE	23		*********	*********	58	*********
ALTERNATE	26		*********	*********	*********	97
ALTERNATE	41		28	*********	*********	*********
ALTERNATE	42		*********	42	*********	*********
ALTERNATE	43		*********	*********	51	*********
ALTERNATE	46		*********	*********	*********	85
XSECTION 25		.11				
ALTERNATE	11		63	*********	*********	*********
ALTERNATE	12		*********	109	*********	*********
ALTERNATE	13		*********	*********	141	*********
ALTERNATE	16		*********	*********	*********	249
ALTERNATE	21		90	*********	*********	*********
ALTERNATE	22		*********	137	*********	*********
ALTERNATE	23		*********	*********	168	*********
ALTERNATE	26		*********	*********	*********	284
ALTERNATE	41		89	*********	*********	*********
ALTERNATE	42		*********	134	*********	*********
ALTERNATE	43		*********	*********	164	*********
ALTERNATE	46		*********	*********	*********	274
XSECTION 35		.06				
ALTERNATE	11		37	*********	*********	*********
ALTERNATE	12		*********	64	*********	*********
ALTERNATE	13		*********	*********	83	*********
ALTERNATE	16		*********	*********	*********	146
ALTERNATE	21		53	*********	*********	*********
ALTERNATE	22		*********	81	*********	*********
ALTERNATE	23		*********	*********	99	*********
ALTERNATE	26		*********	*********	*********	166
ALTERNATE	41		50	*********	*********	*********
ALTERNATE	42		*********	75	*********	*********

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	6
XSECTION 35		.06				
ALTERNATE	43		*********	*********	92	*********
ALTERNATE	46		*********	*********	*********	154
XSECTION 40		.13				
ALTERNATE	11		84	*********	*********	*********
ALTERNATE	12		*********	144	*********	*********
ALTERNATE	13		*********	*********	186	*********
ALTERNATE	16		*********	*********	*********	331
ALTERNATE	21		121	*********	*********	*********
ALTERNATE	22		*********	181	*********	*********
ALTERNATE	23		*********	*********	222	*********
ALTERNATE	26		*********	*********	*********	375
ALTERNATE	41		115	*********	*********	*********
ALTERNATE	42		*********	173	*********	*********
ALTERNATE	43		*********	*********	211	*********
ALTERNATE	46		*********	*********	*********	353
XSECTION 45		.24				
ALTERNATE	11		89	*********	*********	*********
ALTERNATE	12		*********	153	*********	*********
ALTERNATE	13		*********	*********	207	*********
ALTERNATE	16		*********	*********	*********	456
ALTERNATE	21		129	*********	*********	*********
ALTERNATE	22		*********	209	*********	*********
ALTERNATE	23		*********	*********	274	*********
ALTERNATE	26		*********	*********	*********	571
ALTERNATE	41		126	*********	*********	*********
ALTERNATE	42		*********	211	*********	*********
ALTERNATE	43		*********	*********	294	*********
ALTERNATE	46		*********	*********	*********	569

END OF 1 JOBS IN THIS RUN

SCS TR-20, VERSION 10/01/90
FILES

INPUT = kpex.t20
OUTPUT = kpex.out , DATED 07/12/**,10:30:33

FILES GENERATED - DATED 07/12/**,10:30:33

NONE!

*** TR-20 RUN COMPLETED ***

7/18/01

DRAINAGE ANALYSIS SUMMARY
KISER WEST ADDITION

Soil Group D

Area ID	Area ac	Accum. Area ac	C2	C5	C10	C100	Elev Max	Elev Min	Flow Length	Tc2 Calc	Avg V2	Tc5 Calc	Avg V5	Tc10 Calc	Avg V10	Tc100 Calc	vg V100	Tc2 min	Tc5 min	Tc10 min	Tc100 min	I2 in/hr	I5 in/hr	I10 in/hr	I100 in/hr	Q2 cfs	Q5 cfs
A	3.34		0.32	0.37	0.47	0.67	1401.00	1392.50	570.00	29.34	0.32	27.46	0.35	23.70	0.40	16.17	0.59	29	27	24	16	2.72	3.43	4.31	7.18	2.91	4.24
B	2.66		0.77	0.79	0.83	0.89	1399.00	1389.50	400.00	8.90	0.75	8.36	0.80	7.29	0.92	5.80	1.15	15	15	15	15	3.83	4.56	5.22	7.37	7.84	9.58
A+B		**6.00**	**0.52**	**0.56**	**0.63**	**0.77**	**1401.00**	**1389.50**	**570.00**	**19.74**	**0.48**	**18.49**	**0.51**	**16.00**	**0.59**	**11.38**	**0.83**	**20**	**18**	**16**	**15**	**3.42**	**4.20**	**5.22**	**7.37**	**10.66**	**14.02**
C	1.23		0.77	0.79	0.83	0.89	1394.50	1390.00	340.00	9.98	0.57	9.37	0.60	8.16	0.69	6.50	0.87	15	15	15	15	3.83	4.56	5.22	7.37	3.63	4.43
A+B+C		**7.23**	**0.56**	**0.60**	**0.66**	**0.79**	**1401.00**	**1389.50**	**950.00**	**28.00**	**0.57**	**26.24**	**0.60**	**22.71**	**0.70**	**16.36**	**0.97**	**28**	**26**	**23**	**16**	**2.78**	**3.50**	**4.40**	**7.18**	**11.30**	**15.08**
E	1.90		0.77	0.79	0.83	0.89	1394.50	1386.00	520.00	11.50	0.75	10.80	0.80	9.41	0.92	7.49	1.16	15	15	15	15	3.83	4.56	5.22	7.37	5.60	6.84
F	4.17		0.77	0.79	0.83	0.89	1396.50	1383.00	870.00	15.13	0.96	14.22	1.02	12.38	1.17	9.86	1.47	15	15	15	15	3.83	4.56	5.22	7.37	12.30	15.02
E+F		**6.07**	**0.77**	**0.79**	**0.83**	**0.89**	**1396.50**	**1383.00**	**870.00**	**15.13**	**0.96**	**14.22**	**1.02**	**12.38**	**1.17**	**9.86**	**1.47**	**15**	**15**	**15**	**15**	**3.83**	**4.56**	**5.22**	**7.37**	**17.90**	**21.87**
G	2.09		0.77	0.79	0.83	0.89	1394.00	1383.00	590.00	11.72	0.84	11.01	0.89	9.59	1.03	7.64	1.29	15	15	15	15	3.83	4.56	5.22	7.37	6.16	7.53
H	1.24		0.77	0.79	0.83	0.89	1393.50	1386.00	350.00	8.62	0.68	8.10	0.72	7.05	0.83	5.62	1.04	15	15	15	15	3.83	4.56	5.22	7.37	3.66	4.47
G+H		**3.33**	**0.77**	**0.79**	**0.83**	**0.89**	**1394.00**	**1383.00**	**590.00**	**11.72**	**0.84**	**11.01**	**0.89**	**9.59**	**1.03**	**7.64**	**1.29**	**15**	**15**	**15**	**15**	**3.83**	**4.56**	**5.22**	**7.37**	**9.82**	**12.00**
I	20.45		0.32	0.37	0.47	0.67	1401.00	1390.50	1050.00	45.49	0.38	42.58	0.41	36.75	0.48	25.08	0.70	45	43	37	25	2.08	2.68	3.41	5.90	13.61	20.28
J	0.74		0.77	0.79	0.83	0.89	1393.50	1390.00	260.00	8.67	0.50	8.15	0.53	7.10	0.61	5.65	0.77	15	15	15	15	3.83	4.56	5.22	7.37	2.18	2.67
E+F+G+H+I		**30.59**	**0.47**	**0.51**	**0.59**	**0.74**	**1401.00**	**1383.00**	**1300.00**	**36.73**	**0.59**	**34.40**	**0.63**	**29.74**	**0.73**	**20.89**	**1.04**	**37**	**34**	**30**	**21**	**2.39**	**3.01**	**3.83**	**6.53**	**34.30**	**46.89**

Irwin Silty Clay Loam - Soil Group D; Rosehill Silty Clay - Soil Group D

7/17/01

DRAINAGE ANALYSIS SUMMARY
PINE MEADOW AND KILLENWOOD POINTE ADDITION
Irwin Silty Clay Loam - Soil Group D; Rosehill Silty Clay - Soil Group D

Soil Group D

Area ID	Area	Accum. Area	C2	C5	C10	C100	Elev	Elev	Flow	Tc2	Avg V2	Tc5	Avg V5	Tc10	Avg V10	Tc100	vg V100	Tc2	Tc5	Tc10	Tc100	I2	I5	I10	I100	Q2	Q5
	ac	ac					Max	Min	Length	Calc		Calc		Calc		Calc		min	min	min	min	in/hr	in/hr	in/hr	in/hr	cfs	cfs
Offsight W	29.9		0.32	0.37	0.47	0.67	1400.00	1384.00	1100.00	41.10	0.45	38.46	0.48	33.19	0.55	22.66	0.81	41	38	33	23	2.21	2.84	3.57	6.26	21.15	31.42
A	2.38		0.44	0.46	0.52	0.61	1391.00	1376.70	1050.00	34.73	0.50	33.68	0.52	30.52	0.57	25.78	0.68	35	34	31	26	2.48	3.05	3.76	5.90	2.60	3.34
B	0.98		0.50	0.54	0.62	0.76	1387.00	1379.00	520.00	21.33	0.41	19.91	0.44	17.07	0.51	12.09	0.72	21	20	17	15	3.25	4.10	4.95	7.37	1.59	2.17
C	1.48		0.50	0.54	0.62	0.76	1383.00	1379.00	540.00	27.74	0.32	25.89	0.35	22.19	0.41	15.72	0.57	28	26	22	16	2.84	3.57	4.40	7.37	2.10	2.85
B+C		**2.5**	**0.50**	**0.54**	**0.62**	**0.76**	**1387.00**	**1379.00**	**540.00**	**22.02**	**0.41**	**20.55**	**0.44**	**17.61**	**0.51**	**12.48**	**0.72**	**22**	**21**	**18**	**15**	**3.17**	**4.00**	**4.95**	**7.37**	**3.90**	**5.31**
D	2.92		0.50	0.54	0.62	0.76	1391.00	1377.00	900.00	27.96	0.54	26.10	0.57	22.37	0.67	15.85	0.95	28	26	22	16	2.84	3.50	4.40	7.37	4.15	5.52
D+I		**4.3**	**0.50**	**0.54**	**0.62**	**0.76**	**1391.00**	**1377.00**	**900.00**	**27.96**	**0.54**	**26.10**	**0.57**	**22.37**	**0.67**	**15.85**	**0.95**	**28**	**26**	**22**	**16**	**2.84**	**3.50**	**4.40**	**7.37**	**6.15**	**8.18**
E	1.08		0.50	0.54	0.62	0.76	1383.00	1379.00	540.00	27.74	0.32	25.89	0.35	22.19	0.41	15.72	0.57	28	26	22	16	2.84	3.57	4.40	7.37	1.53	2.08
F	1.32		0.50	0.54	0.62	0.76	1394.00	1377.00	850.00	24.99	0.57	23.33	0.61	19.99	0.71	14.16	1.00	25	23	20	15	3.03	3.73	4.71	7.37	2.00	2.66
G	1.93		0.48	0.51	0.57	0.68	1381.00	1374.80	500.00	23.23	0.36	22.10	0.38	19.86	0.42	15.74	0.53	23	22	20	16	3.10	3.81	4.71	7.37	2.87	3.75
H	2.06		0.50	0.54	0.62	0.76	1383.50	1368.00	940.00	28.03	0.56	26.16	0.60	22.42	0.70	15.88	0.99	28	26	22	16	2.78	3.50	4.40	7.37	2.86	3.89
I	1.41		0.50	0.54	0.62	0.76	1380.00	1377.00	700.00	37.90	0.31	35.37	0.33	30.32	0.38	21.48	0.54	38	35	30	21	2.35	2.98	3.76	6.39	1.66	2.27
J	4.18		0.50	0.54	0.62	0.76	1389.00	1371.00	1350.00	36.05	0.62	33.65	0.67	28.84	0.78	20.43	1.10	36	34	29	20	2.39	3.05	3.90	6.53	5.00	6.88
K	2.56		0.50	0.54	0.62	0.76	1388.00	1374.00	1270.00	37.26	0.57	34.77	0.61	29.81	0.71	21.11	1.00	37	35	30	21	2.35	3.01	3.83	6.39	3.01	4.16
L	6.56		0.50	0.54	0.62	0.76	1390.00	1367.00	1380.00	33.84	0.68	31.58	0.73	27.07	0.85	19.18	1.20	34	32	27	19	2.52	3.19	3.98	6.68	8.27	11.30
M	2.72		0.50	0.54	0.62	0.76	1385.00	1374.00	600.00	21.62	0.46	20.17	0.50	17.29	0.58	12.25	0.82	22	20	17	15	3.25	4.00	4.95	7.37	4.42	5.88
N	1.44		0.50	0.54	0.62	0.76	1383.00	1374.00	550.00	21.49	0.43	20.06	0.46	17.20	0.53	12.18	0.75	21	20	17	15	3.25	4.00	4.95	7.37	2.34	3.11
O	1.11		0.50	0.54	0.62	0.76	1377.00	1374.00	430.00	25.25	0.28	23.57	0.30	20.20	0.35	14.31	0.50	25	24	20	15	2.96	3.73	4.60	7.37	1.64	2.24
K+M+N+O		**7.8**	**0.50**	**0.54**	**0.62**	**0.76**	**1388.00**	**1374.00**	**1270.00**	**37.26**	**0.57**	**34.77**	**0.61**	**29.81**	**0.71**	**21.11**	**1.00**	**37**	**35**	**30**	**21**	**2.35**	**3.01**	**3.83**	**6.39**	**9.20**	**12.73**
K+M+N		**6.7**	**0.50**	**0.54**	**0.62**	**0.76**	**1388.00**	**1374.00**	**1270.00**	**37.26**	**0.57**	**34.77**	**0.61**	**29.81**	**0.71**	**21.11**	**1.00**	**37**	**35**	**30**	**21**	**2.35**	**3.01**	**3.83**	**6.39**	**7.90**	**10.92**
NLW+Off+A		**37.2**	**0.38**	**0.42**	**0.51**	**0.68**	**1400.00**	**1377.00**	**1750.00**	**49.80**	**0.59**	**46.86**	**0.62**	**40.71**	**0.72**	**28.64**	**1.02**	**50**	**47**	**41**	**29**	**1.97**	**2.54**	**3.22**	**5.59**	**27.54**	**39.56**
NLW+Off+A+B+C		**39.7**	**0.38**	**0.43**	**0.51**	**0.69**	**1400.00**	**1377.00**	**1750.00**	**49.27**	**0.59**	**46.34**	**0.63**	**40.23**	**0.72**	**28.31**	**1.03**	**49**	**46**	**40**	**28**	**1.97**	**2.54**	**3.22**	**5.59**	**29.97**	**42.93**
NLW+Off+A+B+C+E		**40.8**	**0.39**	**0.43**	**0.52**	**0.69**	**1400.00**	**1377.00**	**1800.00**	**50.22**	**0.60**	**47.23**	**0.64**	**40.99**	**0.73**	**28.85**	**1.04**	**50**	**47**	**41**	**29**	**1.95**	**2.50**	**3.22**	**5.59**	**30.71**	**43.71**
NLW+Off+A+B+C+E+G		**42.7**	**0.39**	**0.43**	**0.52**	**0.69**	**1400.00**	**1374.80**	**2040.00**	**53.75**	**0.63**	**50.57**	**0.67**	**43.96**	**0.77**	**31.09**	**1.09**	**54**	**51**	**44**	**31**	**1.86**	**2.41**	**3.09**	**5.32**	**31.02**	**44.51**
NLW+Off+A+B+C+E+G+D+I		**47.0**	**0.40**	**0.44**	**0.53**	**0.70**	**1400.00**	**1374.80**	**2040.00**	**52.99**	**0.64**	**49.82**	**0.68**	**43.26**	**0.79**	**30.60**	**1.11**	**53**	**50**	**43**	**31**	**1.89**	**2.44**	**3.09**	**5.40**	**35.61**	**50.77**
LW+Off+A+B+C+E+G+D+I+F		**48.4**	**0.48**	**0.50**	**0.56**	**0.67**	**1400.00**	**1374.80**	**2080.00**	**47.97**	**0.72**	**46.11**	**0.75**	**41.23**	**0.84**	**33.38**	**1.04**	**48**	**46**	**41**	**33**	**2.02**	**2.54**	**3.17**	**5.14**	**46.59**	**61.56**
North Lot - West Half (NLW)	4.95		0.68	0.69	0.73	0.80	1392.50	1379.00	2400.00	**44.87**	**0.89**	**43.80**	**0.91**	**39.52**	**1.01**	**32.05**	**1.25**	**45**	**44**	**40**	**32**	**2.11**	**2.64**	**3.26**	**5.22**	**7.10**	**9.02**
North Lot - East Half (NLE)	51.74		0.68	0.69	0.73	0.80	1392.50	1371.00	3900.00	**57.58**	**1.13**	**56.21**	**1.16**	**50.72**	**1.28**	**41.13**	**1.58**	**58**	**56**	**51**	**41**	**1.76**	**2.25**	**2.83**	**4.60**	**61.92**	**80.33**
Offsight S	0.38		0.46	0.50	0.59	0.73	1393.50	1389.50	350.00	20.61	0.28	19.33	0.30	16.43	0.36	11.92	0.49	21	19	16	15	3.33	4.10	5.08	7.37	0.58	0.77

vin Silty Clay Loam - Soil Group D; Rosehill Silty Clay - Soil Group D

Appendix D

Appendix E

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

JOB TR-20                                          SUMMARY
TITLE 003 Proposed runoff @ KILLENWOOD POINTE NGG 2,5,10,100-YR EVENTS
TITLE  FAA TC PRELIM. EVALUATIONS K=484 FILENAME KPPR3.t20
 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
 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      30                                                    N POND
```

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

 8                        1366.0      0.0         0.0
 8                        1366.5      17.2        0.99
 8                        1367.0      38.7        2.03
 8                        1367.5      75.9        3.12
 8                        1368.0      106.3       4.26
 8                        1368.5      128.8       5.45
 8                        1369.0      151.8       6.70
 8                        1369.5      181.9       8.00
 8                        1370.0      208.2       9.36
 9 ENDTBL
 3 STRUCT      50                                                  S POND
 8                        1362.0      0.0         0.0
 8                        1362.5      20.0        1.73
 8                        1363.0      40.0        3.50
 8                        1363.5      60.0        5.32
 8                        1364.0      93.0        7.18
 8                        1364.5      139.1       9.09
 8                        1365.0      200.2       11.05
 8                        1365.5      272.6       13.06
 8                        1366.0      359.7       15.11
 8                        1366.5      462.9       17.21
 8                        1367.0      588.6       19.36
 9 ENDTBL
 6 RUNOFF 1 001        3 0.0320      83.0        0.5320              1 W WSHD
 6 RUNOFF 1 003        2 0.0150      95.0        0.3284              1 KW WSHD
 6 ADDHYD 4 005   3 2 1                                            1 Qi GREEN
 6 RUNOFF 1 007        2 0.0095      95.0        0.2694              1 NW WSHD
 6 RUNOFF 1 010        3 0.0761      87.0        0.4573              1 S WSHD
 6 RUNOFF 1 015        4 0.0806      95.0        0.4230              1 N WSHD
 6 RUNOFF 1 020        5 0.0284      87.0        0.3610              1 C WSHD
 6 ADDHYD 4 025   4 5 6                                            1 Qin NPON
 6 RESVOR 2    30 6    4 1366.0                                    1 Qo NPOND
 6 ADDHYD 4 035   1 2 5                                            1 W&NW
 6 ADDHYD 4 040   5 3 6                                            1 W&NW&S
 6 ADDHYD 4 045   4 6 7                                            1 Qin SPON
 6 RESVOR 2    50 7    1 1362.0                                    1 Qo SPOND
   ENDATA
 7 INCREM 6             0.0833
 7 COMPUT 7 001       50 0.0         2.52        1.0         7 2  11  01 2-YR 6-H
   ENDCMP 1
 7 COMPUT 7 001       50 0.0         3.42        1.0         7 2  12  02 5-YR 6-H
   ENDCMP 1
 7 COMPUT 7 001       50 0.0         4.02        1.0         7 2  13  03 10-YR 6-
   ENDCMP 1
 7 COMPUT 7 001       50 0.0         5.94        1.0         7 2  16  06 100-YR 6
   ENDCMP 1
```

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

 7 COMPUT 7 001      50 0.0         3.48        1.0         2 2  21  01 2-YR TYP
   ENDCMP 1
 7 COMPUT 7 001      50 0.0         4.55        1.0         2 2  22  02 5-YR TYP
   ENDCMP 1
 7 COMPUT 7 001      50 0.0         5.25        1.0         2 2  23  03 10-YR TY
   ENDCMP 1
 7 COMPUT 7 001      50 0.0         7.80        1.0         2 2  26  06 100-YR T
   ENDCMP 1
 7 COMPUT 7 001      50 0.0         3.48        1.0         8 2  41  01 2-YR ZON
   ENDCMP 1
 7 COMPUT 7 001      50 0.0         4.55        1.0         8 2  42  02 5-YR ZON
   ENDCMP 1
 7 COMPUT 7 001      50 0.0         5.25        1.0         8 2  43  03 10-YR ZO
   ENDCMP 1
 7 COMPUT 7 001      50 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 = 484.00

EXECUTIVE CONTROL INCREM MAIN TIME INCREMENT = .08 HOURS

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO STRUCTURE 50 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 1 TO STRUCTURE 50 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 1 TO STRUCTURE 50 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 1 TO STRUCTURE 50 100-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

*** WARNING - DISCHARGE EXCEEDS HIGHEST RATING POINT FOR STRUCTURE 30,
VALUE EXTRAPOLATED. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 4

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO STRUCTURE 50 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 5

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO STRUCTURE 50 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 6

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO STRUCTURE 50 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 7

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO STRUCTURE 50 100-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

*** WARNING - DISCHARGE EXCEEDS HIGHEST RATING POINT FOR STRUCTURE 30,
VALUE EXTRAPOLATED. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 8

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO STRUCTURE 50 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 9

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO STRUCTURE 50 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 10

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO STRUCTURE 50 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 11

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO STRUCTURE 50 100-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

*** WARNING - DISCHARGE EXCEEDS HIGHEST RATING POINT FOR STRUCTURE 30,
VALUE EXTRAPOLATED. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 12

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 1	RUNOFF	.03	1.07	---	2.66	21	700.0
XSECTION 3	RUNOFF	.01	1.98	---	2.50	24	2400.0
XSECTION 5	ADDHYD	.05	1.36	---	2.56	42	840.0
XSECTION 7	RUNOFF	.01	1.97	---	2.46	17	1700.0
XSECTION 10	RUNOFF	.08	1.33	---	2.60	70	875.0
XSECTION 15	RUNOFF	.08	1.98	---	2.56	116	1450.0
XSECTION 20	RUNOFF	.03	1.33	---	2.53	30	1000.0
XSECTION 25	ADDHYD	.11	1.81	---	2.55	145	1318.2
STRUCTURE 30	RESVOR	.11	1.81	1367.64	2.79	85	772.7
XSECTION 35	ADDHYD	.06	1.46	---	2.52	57	950.0
XSECTION 40	ADDHYD	.13	1.38	---	2.56	125	961.5
XSECTION 45	ADDHYD	.24	1.58	---	2.64	193	804.2
STRUCTURE 50	RESVOR	.24	1.57	1364.01	3.21	94	391.7
RAINFALL OF 3.42 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 12 STORM 2							
XSECTION 1	RUNOFF	.03	1.79	---	2.64	37	1233.3
XSECTION 3	RUNOFF	.01	2.86	---	2.49	35	3500.0
XSECTION 5	ADDHYD	.05	2.13	---	2.56	66	1320.0
XSECTION 7	RUNOFF	.01	2.85	---	2.46	24	2400.0
XSECTION 10	RUNOFF	.08	2.11	---	2.59	113	1412.5
XSECTION 15	RUNOFF	.08	2.86	---	2.55	165	2062.5
XSECTION 20	RUNOFF	.03	2.11	---	2.53	48	1600.0
XSECTION 25	ADDHYD	.11	2.66	---	2.55	212	1927.3
STRUCTURE 30	RESVOR	.11	2.66	1368.31	2.80	120	1090.9
XSECTION 35	ADDHYD	.06	2.25	---	2.52	88	1466.7

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)
ALTERNATE 12 STORM 2							
XSECTION 40	ADDHYD	.13	2.17	---	2.56	198	1523.1
XSECTION 45	ADDHYD	.24	2.39	---	2.60	300	1250.0
STRUCTURE 50	RESVOR	.24	2.39	1364.75	3.09	170	708.3
RAINFALL OF 4.02 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 13 STORM 3							
XSECTION 1	RUNOFF	.03	2.30	---	2.64	47	1566.7
XSECTION 3	RUNOFF	.01	3.45	---	2.49	41	4100.0
XSECTION 5	ADDHYD	.05	2.67	---	2.55	83	1660.0
XSECTION 7	RUNOFF	.01	3.45	---	2.45	29	2900.0
XSECTION 10	RUNOFF	.08	2.65	---	2.58	143	1787.5
XSECTION 15	RUNOFF	.08	3.45	---	2.54	197	2462.5
XSECTION 20	RUNOFF	.03	2.65	---	2.52	60	2000.0
XSECTION 25	ADDHYD	.11	3.24	---	2.54	258	2345.5
STRUCTURE 30	RESVOR	.11	3.24	1368.78	2.80	142	1290.9
XSECTION 35	ADDHYD	.06	2.80	---	2.52	109	1816.7
XSECTION 40	ADDHYD	.13	2.71	---	2.56	247	1900.0
XSECTION 45	ADDHYD	.24	2.95	---	2.60	367	1529.2
STRUCTURE 50	RESVOR	.24	2.95	1365.16	3.02	224	933.3
RAINFALL OF 5.94 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 16 STORM 6							
XSECTION 1	RUNOFF	.03	4.04	---	2.63	83	2766.7
XSECTION 3	RUNOFF	.01	5.34	---	2.49	63	6300.0
XSECTION 5	ADDHYD	.05	4.45	---	2.56	138	2760.0
XSECTION 7	RUNOFF	.01	5.35	---	2.45	43	4300.0
XSECTION 10	RUNOFF	.08	4.45	---	2.58	236	2950.0

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 16 STORM 6							
XSECTION 15	RUNOFF	.08	5.35	---	2.54	301	3762.5
XSECTION 20	RUNOFF	.03	4.45	---	2.52	100	3333.3
XSECTION 25	ADDHYD	.11	5.11	---	2.53	401	3645.5
STRUCTURE 30	RESVOR	.11	5.11	1370.16	2.80	217	1972.7
XSECTION 35	ADDHYD	.06	4.60	---	2.52	176	2933.3
XSECTION 40	ADDHYD	.13	4.52	---	2.55	408	3138.5
XSECTION 45	ADDHYD	.24	4.79	---	2.60	589	2454.2
STRUCTURE 50	RESVOR	.24	4.78	1366.28	2.89	418	1741.7

RAINFALL OF 3.48 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.
RAINTABLE NUMBER 2, AMC 2

ALTERNATE 21 STORM 1							
XSECTION 1	RUNOFF	.03	1.84	---	12.20	30	1000.0
XSECTION 3	RUNOFF	.01	2.91	---	12.07	28	2800.0
XSECTION 5	ADDHYD	.05	2.18	---	12.12	55	1100.0
XSECTION 7	RUNOFF	.01	2.92	---	12.04	19	1900.0
XSECTION 10	RUNOFF	.08	2.16	---	12.16	94	1175.0
XSECTION 15	RUNOFF	.08	2.92	---	12.12	133	1662.5
XSECTION 20	RUNOFF	.03	2.16	---	12.10	40	1333.3
XSECTION 25	ADDHYD	.11	2.72	---	12.11	174	1581.8
STRUCTURE 30	RESVOR	.11	2.72	1367.89	12.35	100	909.1
XSECTION 35	ADDHYD	.06	2.31	---	12.09	73	1216.7
XSECTION 40	ADDHYD	.13	2.22	---	12.13	164	1261.5
XSECTION 45	ADDHYD	.24	2.45	---	12.18	246	1025.0
STRUCTURE 50	RESVOR	.24	2.45	1364.38	12.64	128	533.3

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 1	RUNOFF	.03	2.77	---	12.20	46	1533.3
XSECTION 3	RUNOFF	.01	3.97	---	12.07	38	3800.0
XSECTION 5	ADDHYD	.05	3.15	---	12.13	79	1580.0
XSECTION 7	RUNOFF	.01	3.97	---	12.04	26	2600.0
XSECTION 10	RUNOFF	.08	3.14	---	12.15	136	1700.0
XSECTION 15	RUNOFF	.08	3.97	---	12.13	179	2237.5
XSECTION 20	RUNOFF	.03	3.14	---	12.09	58	1933.3
XSECTION 25	ADDHYD	.11	3.76	---	12.12	236	2145.5
STRUCTURE 30	RESVOR	.11	3.75	1368.51	12.36	129	1172.7
XSECTION 35	ADDHYD	.06	3.29	---	12.10	103	1716.7
XSECTION 40	ADDHYD	.13	3.20	---	12.13	235	1807.7
XSECTION 45	ADDHYD	.24	3.45	---	12.17	344	1433.3
STRUCTURE 50	RESVOR	.24	3.45	1365.02	12.56	203	845.8
RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 23 STORM 3							
XSECTION 1	RUNOFF	.03	3.40	---	12.20	56	1866.7
XSECTION 3	RUNOFF	.01	4.66	---	12.07	44	4400.0
XSECTION 5	ADDHYD	.05	3.80	---	12.13	95	1900.0
XSECTION 7	RUNOFF	.01	4.66	---	12.04	30	3000.0
XSECTION 10	RUNOFF	.08	3.80	---	12.15	164	2050.0
XSECTION 15	RUNOFF	.08	4.66	---	12.12	208	2600.0

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)
ALTERNATE 23 STORM 3							
XSECTION 20	RUNOFF	.03	3.80	---	12.10	69	2300.0
XSECTION 25	ADDHYD	.11	4.44	---	12.11	277	2518.2
STRUCTURE 30	RESVOR	.11	4.44	1368.92	12.37	148	1345.5
XSECTION 35	ADDHYD	.06	3.94	---	12.10	123	2050.0
XSECTION 40	ADDHYD	.13	3.86	---	12.13	282	2169.2
XSECTION 45	ADDHYD	.24	4.12	---	12.16	405	1687.5
STRUCTURE 50	RESVOR	.24	4.12	1365.37	12.51	254	1058.3
RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 26 STORM 6							
XSECTION 1	RUNOFF	.03	5.78	---	12.19	95	3166.7
XSECTION 3	RUNOFF	.01	7.19	---	12.07	66	6600.0
XSECTION 5	ADDHYD	.05	6.23	---	12.13	153	3060.0
XSECTION 7	RUNOFF	.01	7.20	---	12.04	46	4600.0
XSECTION 10	RUNOFF	.08	6.25	---	12.15	264	3300.0
XSECTION 15	RUNOFF	.08	7.20	---	12.12	314	3925.0
XSECTION 20	RUNOFF	.03	6.25	---	12.09	111	3700.0
XSECTION 25	ADDHYD	.11	6.95	---	12.11	425	3863.6
STRUCTURE 30	RESVOR	.11	6.95	1370.26	12.37	222	2018.2
XSECTION 35	ADDHYD	.06	6.40	---	12.10	195	3250.0
XSECTION 40	ADDHYD	.13	6.31	---	12.13	453	3484.6
XSECTION 45	ADDHYD	.24	6.60	---	12.17	634	2641.7
STRUCTURE 50	RESVOR	.24	6.60	1366.47	12.42	458	1908.3
RAINFALL OF 3.48 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs. RAINTABLE NUMBER 8, AMC 2							
ALTERNATE 41 STORM 1							

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 41 STORM 1							
XSECTION 1	RUNOFF	.03	1.84	---	12.12	29	966.7
XSECTION 3	RUNOFF	.01	2.92	---	12.01	23	2300.0
XSECTION 5	ADDHYD	.05	2.18	---	12.06	51	1020.0
XSECTION 7	RUNOFF	.01	2.92	---	11.98	15	1500.0
XSECTION 10	RUNOFF	.08	2.16	---	12.07	85	1062.5
XSECTION 15	RUNOFF	.08	2.92	---	12.06	117	1462.5
XSECTION 20	RUNOFF	.03	2.16	---	12.04	34	1133.3
XSECTION 25	ADDHYD	.11	2.72	---	12.05	151	1372.7
STRUCTURE 30	RESVOR	.11	2.72	1367.91	12.27	101	918.2
XSECTION 35	ADDHYD	.06	2.31	---	12.05	66	1100.0
XSECTION 40	ADDHYD	.13	2.22	---	12.06	150	1153.8
XSECTION 45	ADDHYD	.24	2.45	---	12.11	238	991.7
STRUCTURE 50	RESVOR	.24	2.45	1364.47	12.51	136	566.7

RAINFALL OF 4.55 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 42 STORM 2							
XSECTION 1	RUNOFF	.03	2.77	---	12.12	43	1433.3
XSECTION 3	RUNOFF	.01	3.97	---	12.01	31	3100.0
XSECTION 5	ADDHYD	.05	3.15	---	12.06	73	1460.0
XSECTION 7	RUNOFF	.01	3.97	---	11.98	20	2000.0
XSECTION 10	RUNOFF	.08	3.14	---	12.07	122	1525.0
XSECTION 15	RUNOFF	.08	3.97	---	12.06	156	1950.0
XSECTION 20	RUNOFF	.03	3.14	---	12.03	48	1600.0

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 42 STORM 2							
XSECTION 25	ADDHYD	.11	3.76	---	12.05	205	1863.6
STRUCTURE 30	RESVOR	.11	3.75	1368.53	12.28	130	1181.8
XSECTION 35	ADDHYD	.06	3.29	---	12.05	92	1533.3
XSECTION 40	ADDHYD	.13	3.21	---	12.06	213	1638.5
XSECTION 45	ADDHYD	.24	3.45	---	12.10	328	1366.7
STRUCTURE 50	RESVOR	.24	3.45	1365.11	12.43	216	900.0
RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 43 STORM 3							
XSECTION 1	RUNOFF	.03	3.40	---	12.12	52	1733.3
XSECTION 3	RUNOFF	.01	4.66	---	12.01	36	3600.0
XSECTION 5	ADDHYD	.05	3.80	---	12.06	87	1740.0
XSECTION 7	RUNOFF	.01	4.66	---	11.98	23	2300.0
XSECTION 10	RUNOFF	.08	3.80	---	12.07	146	1825.0
XSECTION 15	RUNOFF	.08	4.66	---	12.06	182	2275.0
XSECTION 20	RUNOFF	.03	3.80	---	12.03	58	1933.3
XSECTION 25	ADDHYD	.11	4.44	---	12.05	240	2181.8
STRUCTURE 30	RESVOR	.11	4.44	1368.93	12.29	148	1345.5
XSECTION 35	ADDHYD	.06	3.95	---	12.05	110	1833.3
XSECTION 40	ADDHYD	.13	3.86	---	12.06	256	1969.2
XSECTION 45	ADDHYD	.24	4.12	---	12.10	386	1608.3
STRUCTURE 50	RESVOR	.24	4.12	1365.47	12.40	268	1116.7
RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 46 STORM 6							
XSECTION 1	RUNOFF	.03	5.78	---	12.12	88	2933.3
XSECTION 3	RUNOFF	.01	7.19	---	12.01	54	5400.0

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)
ALTERNATE 46 STORM 6								
XSECTION	5	ADDHYD	.05	6.23	---	12.07	140	2800.0
XSECTION	7	RUNOFF	.01	7.19	---	11.98	35	3500.0
XSECTION	10	RUNOFF	.08	6.25	---	12.07	234	2925.0
XSECTION	15	RUNOFF	.08	7.20	---	12.05	274	3425.0
XSECTION	20	RUNOFF	.03	6.25	---	12.03	93	3100.0
XSECTION	25	ADDHYD	.11	6.95	---	12.05	368	3345.5
STRUCTURE	30	RESVOR	.11	6.95	1370.29	12.29	223	2027.3
XSECTION	35	ADDHYD	.06	6.39	---	12.05	174	2900.0
XSECTION	40	ADDHYD	.13	6.31	---	12.06	408	3138.5
XSECTION	45	ADDHYD	.24	6.60	---	12.10	600	2500.0
STRUCTURE	50	RESVOR	.24	6.60	1366.55	12.32	475	1979.2

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	6
STRUCTURE 50		.24				
ALTERNATE	11		94	*********	*********	*********
ALTERNATE	12		*********	170	*********	*********
ALTERNATE	13		*********	*********	224	*********
ALTERNATE	16		*********	*********	*********	418
ALTERNATE	21		128	*********	*********	*********
ALTERNATE	22		*********	203	*********	*********
ALTERNATE	23		*********	*********	254	*********
ALTERNATE	26		*********	*********	*********	458
ALTERNATE	41		136	*********	*********	*********
ALTERNATE	42		*********	216	*********	*********
ALTERNATE	43		*********	*********	268	*********
ALTERNATE	46		*********	*********	*********	475
STRUCTURE 30		.11				
ALTERNATE	11		85	*********	*********	*********
ALTERNATE	12		*********	120	*********	*********
ALTERNATE	13		*********	*********	142	*********
ALTERNATE	16		*********	*********	*********	217
ALTERNATE	21		100	*********	*********	*********
ALTERNATE	22		*********	129	*********	*********
ALTERNATE	23		*********	*********	148	*********
ALTERNATE	26		*********	*********	*********	222
ALTERNATE	41		101	*********	*********	*********
ALTERNATE	42		*********	130	*********	*********
ALTERNATE	43		*********	*********	148	*********
ALTERNATE	46		*********	*********	*********	223
XSECTION 1		.03				
ALTERNATE	11		21	*********	*********	*********
ALTERNATE	12		*********	37	*********	*********
ALTERNATE	13		*********	*********	47	*********
ALTERNATE	16		*********	*********	*********	83
ALTERNATE	21		30	*********	*********	*********
ALTERNATE	22		*********	46	*********	*********
ALTERNATE	23		*********	*********	56	*********

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	6
XSECTION	1	.03				
ALTERNATE	26		*********	*********	*********	95
ALTERNATE	41		29	*********	*********	*********
ALTERNATE	42		*********	43	*********	*********
ALTERNATE	43		*********	*********	52	*********
ALTERNATE	46		*********	*********	*********	88
XSECTION	3	.01				
ALTERNATE	11		24	*********	*********	*********
ALTERNATE	12		*********	35	*********	*********
ALTERNATE	13		*********	*********	41	*********
ALTERNATE	16		*********	*********	*********	63
ALTERNATE	21		28	*********	*********	*********
ALTERNATE	22		*********	38	*********	*********
ALTERNATE	23		*********	*********	44	*********
ALTERNATE	26		*********	*********	*********	66
ALTERNATE	41		23	*********	*********	*********
ALTERNATE	42		*********	31	*********	*********
ALTERNATE	43		*********	*********	36	*********
ALTERNATE	46		*********	*********	*********	54
XSECTION	5	.05				
ALTERNATE	11		42	*********	*********	*********
ALTERNATE	12		*********	66	*********	*********
ALTERNATE	13		*********	*********	83	*********
ALTERNATE	16		*********	*********	*********	138
ALTERNATE	21		55	*********	*********	*********
ALTERNATE	22		*********	79	*********	*********
ALTERNATE	23		*********	*********	95	*********
ALTERNATE	26		*********	*********	*********	153
ALTERNATE	41		51	*********	*********	*********
ALTERNATE	42		*********	73	*********	*********
ALTERNATE	43		*********	*********	87	*********
ALTERNATE	46		*********	*********	*********	140
XSECTION	7	.01				
ALTERNATE	11		17	*********	*********	*********
ALTERNATE	12		*********	24	*********	*********

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	6
XSECTION	7	.01				
ALTERNATE	13		*********	*********	29	*********
ALTERNATE	16		*********	*********	*********	43
ALTERNATE	21		19	*********	*********	*********
ALTERNATE	22		*********	26	*********	*********
ALTERNATE	23		*********	*********	30	*********
ALTERNATE	26		*********	*********	*********	46
ALTERNATE	41		15	*********	*********	*********
ALTERNATE	42		*********	20	*********	*********
ALTERNATE	43		*********	*********	23	*********
ALTERNATE	46		*********	*********	*********	35
XSECTION	10	.08				
ALTERNATE	11		70	*********	*********	*********
ALTERNATE	12		*********	113	*********	*********
ALTERNATE	13		*********	*********	143	*********
ALTERNATE	16		*********	*********	*********	236
ALTERNATE	21		94	*********	*********	*********
ALTERNATE	22		*********	136	*********	*********
ALTERNATE	23		*********	*********	164	*********
ALTERNATE	26		*********	*********	*********	264
ALTERNATE	41		85	*********	*********	*********
ALTERNATE	42		*********	122	*********	*********
ALTERNATE	43		*********	*********	146	*********
ALTERNATE	46		*********	*********	*********	234
XSECTION	15	.08				
ALTERNATE	11		116	*********	*********	*********
ALTERNATE	12		*********	165	*********	*********
ALTERNATE	13		*********	*********	197	*********
ALTERNATE	16		*********	*********	*********	301
ALTERNATE	21		133	*********	*********	*********
ALTERNATE	22		*********	179	*********	*********
ALTERNATE	23		*********	*********	208	*********
ALTERNATE	26		*********	*********	*********	314
ALTERNATE	41		117	*********	*********	*********
ALTERNATE	42		*********	156	*********	*********

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	6
XSECTION 15		.08				
ALTERNATE	43		*********	*********	182	*********
ALTERNATE	46		*********	*********	*********	274
XSECTION 20		.03				
ALTERNATE	11		30	*********	*********	*********
ALTERNATE	12		*********	48	*********	*********
ALTERNATE	13		*********	*********	60	*********
ALTERNATE	16		*********	*********	*********	100
ALTERNATE	21		40	*********	*********	*********
ALTERNATE	22		*********	58	*********	*********
ALTERNATE	23		*********	*********	69	*********
ALTERNATE	26		*********	*********	*********	111
ALTERNATE	41		34	*********	*********	*********
ALTERNATE	42		*********	48	*********	*********
ALTERNATE	43		*********	*********	58	*********
ALTERNATE	46		*********	*********	*********	93
XSECTION 25		.11				
ALTERNATE	11		145	*********	*********	*********
ALTERNATE	12		*********	212	*********	*********
ALTERNATE	13		*********	*********	258	*********
ALTERNATE	16		*********	*********	*********	401
ALTERNATE	21		174	*********	*********	*********
ALTERNATE	22		*********	236	*********	*********
ALTERNATE	23		*********	*********	277	*********
ALTERNATE	26		*********	*********	*********	425
ALTERNATE	41		151	*********	*********	*********
ALTERNATE	42		*********	205	*********	*********
ALTERNATE	43		*********	*********	240	*********
ALTERNATE	46		*********	*********	*********	368
XSECTION 35		.06				
ALTERNATE	11		57	*********	*********	*********
ALTERNATE	12		*********	88	*********	*********
ALTERNATE	13		*********	*********	109	*********
ALTERNATE	16		*********	*********	*********	176
ALTERNATE	21		73	*********	*********	*********

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	6
XSECTION	35	.06				
ALTERNATE	22		*********	103	*********	*********
ALTERNATE	23		*********	*********	123	*********
ALTERNATE	26		*********	*********	*********	195
ALTERNATE	41		66	*********	*********	*********
ALTERNATE	42		*********	92	*********	*********
ALTERNATE	43		*********	*********	110	*********
ALTERNATE	46		*********	*********	*********	174
XSECTION	40	.13				
ALTERNATE	11		125	*********	*********	*********
ALTERNATE	12		*********	198	*********	*********
ALTERNATE	13		*********	*********	247	*********
ALTERNATE	16		*********	*********	*********	408
ALTERNATE	21		164	*********	*********	*********
ALTERNATE	22		*********	235	*********	*********
ALTERNATE	23		*********	*********	282	*********
ALTERNATE	26		*********	*********	*********	453
ALTERNATE	41		150	*********	*********	*********
ALTERNATE	42		*********	213	*********	*********
ALTERNATE	43		*********	*********	256	*********
ALTERNATE	46		*********	*********	*********	408
XSECTION	45	.24				
ALTERNATE	11		193	*********	*********	*********
ALTERNATE	12		*********	300	*********	*********
ALTERNATE	13		*********	*********	367	*********
ALTERNATE	16		*********	*********	*********	589
ALTERNATE	21		246	*********	*********	*********
ALTERNATE	22		*********	344	*********	*********
ALTERNATE	23		*********	*********	405	*********
ALTERNATE	26		*********	*********	*********	634
ALTERNATE	41		238	*********	*********	*********
ALTERNATE	42		*********	328	*********	*********
ALTERNATE	43		*********	*********	386	*********
ALTERNATE	46		*********	*********	*********	600

END OF 1 JOBS IN THIS RUN

SCS TR-20, VERSION 10/01/90
FILES

INPUT = kppr3.t20
OUTPUT = kppr3.out , DATED 07/12/**,10:38:01

FILES GENERATED - DATED 07/12/**,10:38:01

NONE!

*** TR-20 RUN COMPLETED ***