27th Avenue Alternative HEC-1 Models

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HDR

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Appendix D.3
27th Avenue Focus Alternative
100-Year Existing Condition Model

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1*****************************************                                                  ****************************************
 *                                       *                                                  *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                                                  *    U.S. ARMY CORPS OF ENGINEERS      *
 *              JUN 09 1992              *                                                  *    HYDROLOGIC ENGINEERING CENTER     *
 *            VERSION 4.0.3E             *                                                  *          609 SECOND STREET           *
 *                                       *                                                  *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE  06/03/97  TIME  13:11:58   *                                                  *           (916) 551-1748             *
 *                                       *                                                  *                                      *
 *****************************************                                                  ****************************************


                                                X     X  XXXXXXX   XXXXX          X
                                                X     X  X        X     X        XX
                                                X     X  X        X               X
                                                XXXXXXX  XXXX     X        XXXXX  X
                                                X     X  X        X               X
                                                X     X  X        X     X         X
                                                X     X  XXXXXXX   XXXXX         XXX


          THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

          THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
          THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
          NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
          DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
          KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM


1                                                  HEC-1 INPUT                                                  PAGE  1

         LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

            1          ID    LAVEEN ADMP INVESTIGATION BY HDR ENGINEERING
            2          ID    MODIFICATIONS IN dECEMBER 1996
            3          ID    LAVEEN ADMS (FINAL HEC-1) 100-YR 24-HR STORM          CBA FILE # 40916-02-30
            4          ID    HIDDEN VALLEY WATERSHED/CHAMPION DRAIN WATERSHED
            5          ID    INPUT FILE NAME  273BASEX.DAT                        DATE: DECEMBER,1996
            6          ID    27th AVE., 3 BASIN ALTERNATIVE, EXISTING DEVELOPMENT
            7          ID    24-HOUR SCS TYPE II RAINFALL
                      *DIAGRAM
            8          IT       5                   2000
            9          IO       5

           10          KK    SM1C
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```
KM   SUB-BASIN SM1C-LAND USE- NATURAL DESERT(MOUNTAIN)
KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
IN      30
BA   1.840
KM   RAINFALL DEPTH OF 4.20 WAS SPACIALLY REDUCED AS SHOWN BY THE PB RECORD
PB   3.780
KM   THE FOLLOWING PC RECORD USED A 24-HOUR SCS TYPE II STORM
PC    .000    .005    .011    .016    .022    .028    .035    .041    .048    .056
PC    .068    .071    .080    .089    .098    .109    .120    .133    .147    .163
PC    .181    .204    .235    .283    .663    .735    .772    .799    .820    .838
PC    .854    .868    .880    .891    .902    .912    .921    .929    .937    .945
PC    .952    .959    .965    .972    .978    .984    .989    .995   1.000
LG    .150    .346   3.800    .623  50.000
UC    .450    .220
UA       0       3       5       8      12      20      43      75      90      96
UA     100

KK   SM1AC
KM   SUB-BASIN SM1AC-LAND USE- NATURAL DESERT(MOUNTAIN)
KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
BA    .280
LG    .150    .343   4.050    .528  10.000
UC    .367    .288
UA       0       3       5       8      12      20      43      75      90      96
UA     100

KK    CSM1
KM   COMBINE FLOW FROM SUB-BASIN SM1C WITH SM1AC AT COMPUTATOIN
KM   POINT CSM1
HC       2
*

KK    RSM1
KM   ROUTE FLOW FROM COMPUTATION POINT CSM1  TO COMPUTATION POINT CSM2
RS       2    ELEV  1375.5
RC   0.035   0.035   0.035    4300   0.017
RX       0      90     160     230     310     380     490     590
RY    1390    1380    1377  1375.5    1377    1380    1383    1390
*
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LINE   ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK    SM2C
KM   SUB-BASIN SM2C-LAND USE- NATURAL DESERT(MOUNTAIN)
KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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```
50          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
            *      1       2
51          BA   2.190
52          LG    .150    .350   3.310    .820  86.000
53          UC    .383    .134
54          UA       0       3       5       8      12      20      43      75      90      96
55          UA     100
            *

56          KK    CSM2
57          KM   COMBINE RUNOFF FROM SUB-BASIN SM2C TO ROUTED FLOW FROM COMPUTATION
58          KM   POINT CSM1
59          HC       2

60          KK   RDENT
61          KM   ROUTE INFLOW HYDROGRAPH THROUGH SOUTH MOUNTAIN DETENTION BASIN
62          RS       1    ELEV    1292
63          SA    2.30    7.80   15.91   19.96   24.08   28.27   30.45   31.91
64          SE    1292    1294    1300    1305    1310    1315    1318    1320
65          SL    1298    7.06    0.58     0.5
66          SS    1318     200     2.7     1.5

67          KK    RSM2
68          KM   ROUTE FLOW FROM COMPUTATOIN POINT CSM2 TO COMPUTATOIN POINT CSM3
69          RS      12    ELEV    1226
70          RC   0.040   0.040   0.040    6600   0.019    1228
71          RX       0      70     100     140     160     190     240     320
72          RY    1228  1227.5    1227    1226    1228  1228.5    1229    1230
            *
            *  REVISIONS DUE TO PROPOSED IMPROVEMENTS.

73          KK   SM3CE
74          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
75          BA     .17
76          LG     .16    .348    3.85    .607     1.5
77          UC   0.227   0.158
78          UA       0       3       5       8      12      20      43      75      90      96
79          UA     100
            *

80          KK    C3CE
81          KM   COMBINE HYDROGRAPHS
82          HC       2
            *

83          KK  RSM3CE
84          KM   ROUTE RUNOFF FROM SM3CE TO 7th AVE & DOBBINS
85          RD    1980  0.0066   0.014            CIRC     4.5
            *
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1                                          HEC-1 INPUT                                          PAGE  3

        LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


          86          KK   SM4CE
          87          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          88          BA     .05
          89          LG    0.26    0.35     4.6    .592    14.4
          90          UC   0.087   0.081
          91          UA       0       5      16      30      65      77      84      90      94      97
          92          UA     100
                      *

          93          KK    SM5C
          94          KM   SUB-BASIN SM5C-LAND USE-URBAN
          95          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          96          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          97          BA    .200
          98          LG    .200    .349   4.300    .555  18.000
          99          UC    .383    .355
         100          UA       0       5      16      30      65      77      84      90      94      97
         101          UA     100
                      *

         102          KK   CSM5C
         103          KM   COMBINE HYDROGRAPHS FROM SM3CE, SM4CE, & SM5C
         104          HC       3
                      *

         105          KK  DIVM5C
         106          KM        Divert flow in excess of 250 cfs - Storm Drain Capacity
         107          KO       3
         108          DT  DCSM5C
         109          DI       0     250     500
         110          DQ       0       0     250
                      *
                      * FLOW FROM SM5C ROUTED THROUGH PIPE NORTH ALONG 7th AVE.

         111          KK  RCSM5C
         112          KM   ROUTE FLOW THROUGH PIPE TO BOTTOM OF SMA15E
         113          RD    1200   .0066    .014            CIRC       6
                      *

         114          KK  SMA15E
         115          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
         116          BA     .07
         117          LG      .4    .045     3.7   0.547       0
         118          UC    .081   0.057
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 119          UA       0       3       9      18      28      42      59      73      87      92
 120          UA     100
              *

 121          KK    C15E
 122          KM   COMBINE HYDROGRAPHS FROM SMA15E & RCSM5C
 123          HC       2
              *
1                                          HEC-1 INPUT                                          PAGE  4

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 124          KK  DIV15E
 125          KM        Divert flow in excess of 270 cfs - Storm Drain Capacity
 126          KO       3
 127          DT   DC15E
 128          DI       0     270     540
 129          DQ       0       0     270
              *

 130          KK   RC15E
 131          KM   ROUTE HYDROGRAPH FROM C15E TO BOTTOM OF CBDE
 132          RD    4710   .0055    .014            CIRC       7
              *

 133          KK    CBDE
 134          KM   BASIN EAST OF CENTRAL 7th AVE FROM BASELINE TO NORTH OF DOBBINS
 135          BA    0.17
 136          LG     .35     .25     4.3     .33       9
 137          UC     .65     .65
 138          UA       0       3       9      18      28      42      59      73      87      92
 139          UA     100
              *

 140          KK   CCBDE
 141          KM   COMBINE HYDROGRAPHS
 142          HC       2
              *

 143          KK  DIVbde
 144          KM        Divert flow in excess of 300 cfs - Storm Drain Capacity
 145          KO       3
 146          DT  DCCBDE
 147          DI       0     300     900
 148          DQ       0       0     600
              *

 149          KK  RCCBDE
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          KM   ROUTE HYDROGRAPH THROUGH PIPE TO BOTTOM OF BR19C
          RD    5750   .0032    .014            CIRC       8
          *

          KK  RETCBD
          KM        Retrieve Diverted Hydrograph DCCBDE
          DR  DCCBDE
          *

          KK   RCDIV
          KM        Route combined diverted hydrographs to BR19C
          RD    5200   0.008   0.030            TRAP    10.0    20.0
          *
1                                   HEC-1 INPUT                                          PAGE  5

LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


          KK   BR19C
          KM   SUB-BASIN BR19C-LAND USE - AGRICULTURE;MINOR DEVELOPMENT
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          BA    .390
          LG    .430    .027   4.050    .619   3.300
          UC    .517    .319
          UA       0       3       9      18      28      42      59      73      87      92
          UA     100
          *

          KK  CBR19C
          KM   COMBINE HYDROGRAPHS FROM BR19C & ROUTED FLOW
          HC       3
          *

          KK  RBR19C
          KM   ROUTE HYDROGRAPH THROUGH PIPE TO DETENTION BASIN @ 27th & BASELINE
          KM   USE DIVERT ROUTINE TO PASS 156 CFS TO CPB27C
          RD    4800   .0032    .014            CIRC      10
          *

          KK  DIV19C
          KM   DIVERT 156 CFS TO CPB27C
          DT   D1927             156
          DI       0     156    5000
          DQ       0     156     156
          *

          KK  RETM5C
          KM        Retrieve Diverted Hydrograph DCSM5C
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181          DR  DCSM5C
             *

182          KK  RET15E
183          KM        Retrieve Diverted Hydrograph DC15E
184          DR   DC15E
             *

185          KK  COMDIV
186          KM        Combine diverted hydrographs north of Dobbins and 7th Ave.
187          HC       2
             *

188          KK   RCDIV
189          KM        Route combined diverted hydrographs to SMA15W
190          RD    3600   0.015   0.030            TRAP    10.0    20.0
             *
1                                          HEC-1 INPUT                                          PAGE  6

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


191          KK  SMA15W
192          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
193          BA    0.29
194          LG      .4    .045     3.7    .547       0
195          UC    .336    .235
196          UA       0       3       9      18      28      42      59      73      87      92
197          UA     100
             *

198          KK  CSMA15W
199          KM        Combine flows at SMA15W
200          HC       2
             *

201          KK  RSM19C
202          KM   ROUTE FLOW FROM SUB-BASIN SA15C TO COMPUTATION POINT CPS19C
203          RS       4    ELEV  1139.2
204          RC   0.070   0.070   0.070    2030    0.01    1140
205          RX       0      50     110     160     210     260     350     430
206          RY    1140  1139.5  1139.2  1139.2  1139.2  1139.2  1139.5    1140
             *

207          KK  SMA19C
208          KM   SUB-BASIN SMA19C-LAND USE - AGRICULTURE;MINOR DEVELOPMENT
209          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
210          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
211          BA    .156
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        212          LG    .500    .000   4.200    .777    .000
        213          UC    .833   1.212
        214          UA       0       3       9      18      28      42      59      73      87      92
        215          UA     100
                     *

        216          KK  CPS19C
        217          KM   COMBINE ROUTED FLOW FROM SUB-BASIN SMA15C TO RUNOFF FROM SUB-BASIN SMA19C
        218          HC       2
                     *

        219          KK  RRB27C
        220          KM   ROUTE FLOW FROM COMPUTATION POINT CPS19C TO COMPUTATION POINT CPB27C
        221          RS      22    ELEV  1107.8
        222          RC   0.070   0.070   0.070    7400  0.0090    1110
        223          RX       0     260     550     770     920    1170    1320    1500
        224          RY    1110    1109    1109    1108    1108  1107.8    1108    1110
                     *
                     * SM3C SPLIT INTO SM3CE & SM3CW DUE TO PROPOSED IMPROVEMENTS

        225          KK   SM3CW
        226          BA     .31
        227          LG     .16   0.348    3.85   0.607     1.5
        228          UC   0.415   0.289
        229          UA       0       3       5       8      12      20      43      75      90      96
        230          UA     100
                     *
1                                                HEC-1 INPUT                                          PAGE  7

       LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


        231          KK    RSM3
        232          KM   ROUTE FLOW FROM COMPUTATION POINT CSM3 TO COMPUTATION POINT CSM4
        233          RS       4    ELEV    1176
        234          RC   0.040   0.040   0.040    3000  0.0095
        235          RX       0     120     190     270     330     400     470     530
        236          RY    1178  1177.5    1177    1176    1176    1177  1177.5    1178
                     *
                     * SM4C SPLIT INTO SM4CE & SM4CW DUE TO PROPOSED IMPROVEMENTS

        237          KK   SM4CW
        238          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
        239          BA     .19
        240          LG     .26     .35    3.85   0.592    14.4
        241          UC     .33    .306
        242          UA       0       5      16      30      65      77      84      90      94      97
        243          UA     100
                     *
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244          KK    RSM4
245          KM   ROUTE FLOW FROM SUB-BASIN SM4C TO COMPUTATION POINT CSM4
246          RS       2    ELEV    1168
247          RC   0.035   0.035   0.035    1200   0.012
248          RX       0      50      80     110     130     160     180     200
249          RY    1170  1169.5    1169  1168.5    1168  1168.5    1169    1170
             *

250          KK   DRW2C
251          KM   SUB-BASIN DRW2C-LAND USE- NATURAL DESERT(HILLSLOPE,MOUNTAIN)
252          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
253          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
254          BA    .530
255          LG    .150    .340   3.250    .859  30.000
256          UC    .517    .377
257          UA       0       3       5       8      12      20      43      75      90      96
258          UA     100
             *

259          KK  DRWC1C
260          KM   SUB-BASIN DRWC1C-LAND USE-AGRICULTURE
261          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
262          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
263          BA   .120
264          LG   .500    .000   4.250    .727    .000
265          UC   .600    .720
266          UA       0       3       9      18      28      42      59      73      87      92
267          UA     100
             *

268          KK    CSM4
269          KM   COMBINE RUNOFF FROM SUB-BASINS DRW2C AND DRWC1C WITH ROUTED FLOW FROM SM4C
270          KM   AND COMPUTATION POINT CSM3
271          HC       4
1                                          HEC-1 INPUT                                          PAGE  8

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

272          KK    RSM5
273          KM   ROUTE FLOW FROM COMPUTATION POINT CSM4 TO COMPUTATION POINT CSM5
274          RS       1    ELEV    1156
275          RC   0.045   0.045   0.045    1800  0.0078
276          RX       0      80     130     160     180     190     220     260
277          RY    1160    1159  1158.5    1158    1156    1156    1158    1160
             *

278          KK    DR1C
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          KM   SUB-BASIN DR1C-LAND USE-NATURAL DESERT(HILLSLOPE)
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          BA    .160
          LG    .150    .265   5.300    .198    .000
          UC    .417    .442
          UA       0       3       5       8      12      20      43      75      90      96
          UA     100
          *

          KK    WC1A
          KM   SUB-BASIN WC1A-LAND USE- NATURAL DESERT(HILLSLOPE)
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          BA    .250
          LG    .150    .264   4.680    .217    40.0
          UC    .400    .404
          UA       0       3       5       8      12      20      43      75      90      96
          UA     100
          *

          KK    RSM6
          KM   ROUTE FLOW FROM SUB-BASIN WC1A TO COMPUTATION POINT CPDR2C
          RS       1    ELEV    1146
          RC   0.045   0.045   0.045    1150   0.012    1150
          RX       0      30      50      70      90     110     130     170
          RY    1152    1151    1150    1148    1146    1146    1148    1150
          *

          KK    DR2C
          KM   SUB-BASIN DR2C-LAND USE- NATURAL DESERT(HILLSLOPE),AGRICULTURAL
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          BA    .050
          LG    .150    .325   4.255   .423    .000
          UC    .350    .318
          UA       0       3       5       8      12      20      43      75      90      96
          UA     100
          *
1                                   HEC-1 INPUT                                    PAGE  9

LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


          KK  CPDR2C
          KM   COMBINE FLOW FROM SUB-BASINS DR2C AND DR1C TO ROUTED FLOW FROM SUB-BASIN WC1A
          KM   AND COMPUTATION POINT CSM4
          HC       4
          *
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 315          KK  RRB27C
 316          KM   ROUTE FLOW FROM COMPUTATION POINT CPDR2C TO COMPUTATION POINT CPB27C
 317          RS      15    ELEV  1107.8
 318          RC   0.070   0.070   0.070    7400   0.009    1110
 319          RX       0     260     550     770     920    1170    1320    1500
 320          RY    1110    1109    1109    1108    1108  1107.8    1108    1110
              *

 321          KK   BR27C
 322          KM   SUB-BASIN BR27C-LAND USE - AGRICULTURE;MINOR DEVELOPMENT
 323          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 324          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 325          BA    .780
 326          LG    .500    .000   4.150    .695    .000
 327          UC    .700    .416
 328          UA       0       3       9      18      28      42      59      73      87      92
 329          UA     100
              *

 330          KK    C27C
 331          KM   COMBINE HYDROGRAPHS FLOWING INTO DETENTION BASIN
 332          HC       4
              *

 333          KK    WC2A
 334          KM   SUB-BASIN WC2A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
 335          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 336          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 337          BA    .080
 338          LG    .150    .251   8.600    .070    .000
 339          UC    .383    .530
 340          UA       0       3       5       8      12      20      43      75      90      96
 341          UA     100
              *

 342          KK  RD27.1
 343          KM   ROUTE FLOW FROM SUB-BASIN WC2A  TO COMPUTATION POINT CD27.1
 344          RS       1    ELEV    1147
 345          RC   0.035   0.035   0.035     960   0.016    1150
 346          RX       0      30      40      55      70      85     105     130
 347          RY    1150    1150    1148    1147    1148    1149    1150    1151
              *
1                                          HEC-1 INPUT                                          PAGE 10

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 348          KK  WC2.1A
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KM   SUB-BASIN WC2.1A-LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
BA    .080
LG    .150    .290   4.000    .520    .000
UC    .350    .310
UA       0       3       5       8      12      20      43      75      90      96
UA     100
*

KK  RD27.2
KM   ROUTE FLOW FROM SUB-BASIN WC2.1A TO COMPUTATION POINT CD27.1
RS       1    ELEV    1148
RC   0.035   0.035   0.035    1000   0.015    1153
RX       0      35      75     100     135     145     165     195
RY    1153    1152    1150    1149    1148    1150    1152    1154
*

KK  CD27.1
KM   COMBINE ROUTED FLOW FROM SUB-BASINS WC2A AND WC2.1A
HC       2
*

KK  RD27.3
KM   ROUTE FLOW FROM COMPUTATION POINT CP27.1 TO COMPUTATION POINT CP27.2
RS       1    ELEV    1141
RC   0.035   0.035   0.035     450   0.011    1144
RX       0      50     115     125     140     150     160     180
RY    1144    1143    1142    1141    1142    1144    1146    1148
*

KK    WC3A
KM   SUB-BASIN WC3A--LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
BA    .014
LG    .150    .250   8.600    .066    .000
UC    .300    .467
UA       0       3       5       8      12      20      43      75      90      96
UA     100
*

KK  RD27.4
KM   ROUTE FLOW FROM SUB-BASIN WC3A TO COMPUTATION POINT CD27.2
RS       1    ELEV  1141.8
RC   0.035   0.040   0.035     640   0.022
RX       0      40      80     100     110     120     150     200
RY    1145    1144    1143    1142  1141.8    1142    1144    1145
*
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1                                    HEC-1 INPUT                                    PAGE 11

        LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


         387          KK  CD27.2
         388          KM   COMBINE ROUTED FLOWS FROM SUB-BASIN WC3A AND COMPUTATION POINT CD27.1
         389          HC       2
                      *

         390          KK  RD27.5
         391          KM   ROUTE FLOW FROM COMPUTATION POINT CD27.2 TO COMPUTATION POINT CD27.3
         392          RS       1    ELEV    1121
         393          RC   0.035   0.035   0.035    1400   0.014
         394          RX       0      40     100     160     175     190     240     260
         395          RY    1126    1124    1123    1122    1121    1122    1124    1126
                      *

         396          KK    WC4A
         397          KM   SUB-BASIN WC4A -LAND USE- DESERT MOUNTAIN, DESERT HILLS;  MINOR DEVELOPMENT
         398          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
         399          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
         400          BA    .360
         401          LG    .150    .297   3.950    .546  25.000
         402          UC    .383    .273
         403          UA       0       3       5       8      12      20      43      75      90      96
         404          UA     100
                      *

         405          KK  RD27.6
         406          KM   ROUTE FLOW FROM SUB-BASIN WC4A TO COMPUTATION POINT CD27.3
         407          RS       3    ELEV    1140
         408          RC   0.035   0.035   0.035    2200   0.016
         409          RX       0      60     100     180     225     300     435     500
         410          RY    1142    1141  1140.5    1140    1140  1140.5    1141    1142
                      *

         411          KK  CD27.3
         412          KM   COMBINE ROUTED FLOWS FROM COMPUTATION POINT CD27.2 AND SUB-BASIN WC4A
         413          HC       2
                      *

         414          KK  RD27.7
         415          KM   ROUTE FLOW FROM COMPUTATION POINT CD27.3 TO COMPUTATION POINT CD27.4
         416          RS       2    ELEV    1115
         417          RC   0.040   0.050   0.035     950   0.006
         418          RX       0      20     135     170     220     280     400     460
         419          RY  1116.5    1116  1115.5    1115  1115.5  1115.8    1116  1116.5
                      *
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```
 420          KK   DR27C
 421          KM   SUB-BASIN DR27C-LAND USE- AGRICULTURE, DESERT HILLS; MINOR DEVELOMENT
 422          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 423          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 424          BA    .230
 425          LG    .210    .345   3.996    .609    .000
 426          UC    .467    .352
 427          UA       0       3       5       8      12      20      43      75      90      96
 428          UA     100
              *
1                                          HEC-1 INPUT                                          PAGE 12

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 429          KK    WC5A
 430          KM   SUB-BASIN WC5A -LAND USE- DESERT HILLS; MINOR DEVELOMENT
 431          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 432          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
              *      1       2
 433          BA    .420
 434          LG    .150    .346   2.880   1.050  28.000
 435          UC    .500    .359
 436          UA       0       3       5       8      12      20      43      75      90      96
 437          UA     100
              *

 438          KK  CD27.4
 439          KM   COMBINE RUNOFF FROM SUB-BASIN DR27C WITH ROUTED FLOW FROM COMPUTATION POINT
 440          KM   CD27.3 & WC5A
 441          HC       3
              *
              * PROPOSED DETENTION BASIN

 442          KK  ST27.4
 443          KM   PROPOSED DETENTION BASIN AT 27th & DOBBINS, 36" RCP OUTLET
 444          KO       3
 445          RS       1    STOR
 446          SV       0    56.6   115.4
 447          SQ       0      38      80
 448          SE       0       3       6
              *

 449          KK  RST274
 450          KM   ROUTE DISCHARGE FROM DETENTION BASIN TO BR35CE
 451          RD    2520   .0051    .012            CIRC       3
              *
              *  BASIN BR35C2 SPLIT DUE TO PROPOSED IMPROVEMENT
```

```
 452          KK  BR35CE
 453          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FO RTHIS BASIN
 454          BA     .23
 455          LG      .5       0    3.55    .439       0
 456          UC    .273    .217
 457          UA       0       3       9      18      28      42      59      73      87      92
 458          UA     100
              *

 459          KK   C35CE
 460          KM   COMBINE HYDROGRAPHS FROM C35CE & ST27C
 461          HC       2
              *

 462          KK   R35CE
 463          KM   ROUTE HYDROGRAPH THROUGH PIPE TO CPB27C (27th & BASELINE)
 464          RD    2450  0.0051    .014            CIRC     4.5
              *
1                                          HEC-1 INPUT                                          PAGE 13

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 465          KK   D35CE
 466          KM   DIVERT 43 CFS TO 27th & BASELINE, REST INTO BASIN
 467          DT   D35CE             156
 468          DI       0      43    5000
 469          DQ       0      43      43
              *

 470          KK  C27BAS
 471          KM   COMBINE HYDROGRAPH FOR ROUTING THROUGH DETENTION BASIN @ 27th & BASELINE
 472          HC       2
              *  PROPOSED DETENTION BASE @ 27th & BASELINE

 473          KK   ST27C
 474          KM   DETENTION BASIN 27th & BASELINE W/ 36" RCP OUTLET
 475          KO       3
 476          RS       1    STOR
 477          SV       0   116.3   274.9
 478          SQ       0      38      90
 479          SE       0       3       7
              *

 480          KK   D1927
 481          KM   RETREIVE 156 CFS FROM DIV1927
 482          DR   D1927
              *
```

```
 483          KK   D35CE
 484          KM   RETREIVE 43 CFS FROM D35CE
 485          DR   D35CE
              *

 486          KK  CPB27C
 487          KM   COMBINE HYDROGRAPHS FOR ROUTING TO 27th & SOUTHERN
 488          HC       3
              *

 489          KK  RPB27C
 490          KM   ROUTE HYDROGRAPH FROM 27th & BASELINE THROUGH PIPE TO 27th & SOUTHERN
 491          RD    5400  0.0044   0.012            CIRC     5.5
              *

 492          KK   SA27C
 493          KM   SUB-BASIN SA27C-LAND USE - AGRICULTURE;MINOR DEVELOPMENT
 494          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 495          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 496          BA    .623
 497          LG    .500    .000   3.520    .476    .000
 498          UC    .683    .444
 499          UA       0       3       9      18      28      42      59      73      87      92
 500          UA     100
              *
1                                          HEC-1 INPUT                                          PAGE 14

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 501          KK  CSA27C
 502          KM   COMBINE HYDROGRAPHS @ 27th & SOUTHERN
 503          HC       2
              *

 504          KK  RSA27C
 505          KM   ROUTE COMBINED HYDROGRAPHS TO BOTTOM OF BASIN RR27C
 506          RD    2520  0.0044   0.012            CIRC      10
              *

 507          KK   SA19C
 508          KM    !!!!!!! START CHAMPION DRAIN WATERSHED  !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
 509          KM   SUB-BASIN SA19C-LAND USE- URBAN,AGRICULTURE
 510          BA    .480
 511          LG    .400    .093   3.750    .484   5.800
 512          UC    .700    .599
 513          UA       0       3       9      18      28      42      59      73      87      92
 514          UA     100
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                *

        515     KK  DSA19C
        516     KM   DIVERT CAPACITY OF STORMDRAIN AT CONCENTRARION POINT
        517     DT   SA19C
        518     DI      10      30      70     100     200     300
        519     DQ      10      30      70      70      70      70
                *

        520     KK  RR23C1
        521     KM   ROUTE FLOW FROM SUB-BASIN SA19C TO COMPUTATION POINT CPC23C ( 1ST REACH )
        522     RS       4    ELEV  1075.8
        523     RC   0.035   0.035   0.035    1200  0.0083    1076
        524     RX       0      50     120     220    1020    1080    1180    1250
        525     RY    1076  1075.8  1075.8  1075.8  1075.8  1075.8  1075.8    1076
                *

        526     KK  RR23C2
        527     KM   ROUTE FLOW FROM SUB-BASIN SA19C TO COMPUTATION POINT CPC23C ( 2ND REACH )
        528     RS       8    ELEV  1063.5
        529     RC   0.100   0.100   0.100    1600  0.0088    1066
        530     RX       0     150     560     820    1230    1470    1700    1870
        531     RY    1066    1064    1064  1063.6  1063.5    1064    1064    1066
                *

        532     KK  RR23C3
        533     KM   ROUTE FLOW FROM SUB-BASIN SA19C TO COMPUTATION POINT CPC23C ( 3RD REACH )
        534     RS      10    ELEV  1052.8
        535     RC   0.070   0.070   0.070    1900  0.0053    1056
        536     RX       0      40     110     590    1210    1490    1770    2040
        537     RY    1058    1054    1054  1052.8  1052.8    1054  1054.8    1056
                *
1                                          HEC-1 INPUT                                          PAGE 15

       LINE     ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


        538     KK   CR23C
        539     KM   SUB-BASIN CR23C-LAND USE- URBAN,AGRICULTURE
        540     KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
        541     KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
        542     BA    .580
        543     LG    .320    .114   5.550    .234   3.300
        544     UC    .433    .214
        545     UA       0       3       9      18      28      42      59      73      87      92
        546     UA     100
                *

        547     KK  CPC23C
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548          KM    COMBINE ROUTED FLOW FROM SUB-BASIN SA19C TO RUNOFF FROM SUB-BASIN CR23C
549          HC       2
             *
             *  PROPOSED DETENTION BASIN

550          KK   STR23
551          KM   PROPOSED DETENTION BASIN, ASSUMES 5:1 SS, 24" RCP OUTLET W/ INLET CONTROL
552          KO       3
553          RS       1    STOR
554          SV       0      16      33      51      70
555          SQ       0      14      29      40      47
556          SE       0       2       4       6       8
             *

557          KK  RSTR23
558          KM   ROUTE DISCHARGE FROM BASIN THROUGH PIPE TO 27th
559          RD    2640   0.005    .012            CIRC       5
             *

560          KK   RR27C
561          KM   SUB-BASIN RR27C-LAND USE- URBAN,AGRICULTURE
562          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
563          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
564          BA    .480
565          LG    .460    .036   3.780    .432    .000
566          UC    .633    .314
567          UA       0       3       9      18      28      42      59      73      87      92
568          UA     100
             *

569          KK   CR27C
570          KM   COMBINE HYDROGRAPHS
571          HC       3
             *

572          KK  RCR27C
573          KM   ROUTE COMBINED HYDROGRAPHS THROUGH 8'x6' RCB TO 27th & BROADWAY
574          RD    2520   0.005    .014            DEEP       8
             *
1                                          HEC-1 INPUT                                          PAGE 16

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


575          KK  RCR27C
576          KM   ROUTE HYDROGRAPH THROUGH EX. 108" SD TO SLAT RIVER
577          RD    1560   .0017    .012            CIRC       9
             *
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```
578          KK   RR35C
579          KM   SUB-BASIN RR35C-LAND USE - AGRICULTURE;MINOR DEVELOPMENT
580          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
581          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
582          BA   1.890
583          LG    .500    .000   5.500    .348    .000
584          UC    .983    .310
585          UA       0       3       9      18      28      42      59      73      87      92
586          UA     100
             *

587          KK  RRS37C
588          KM   ROUTE FLOW FROM COMPUTATION POINT CPR35C TO COMPUTATION POINT CPS37C
589          RS       8    ELEV    1025
590          RC    0.10    0.10    0.10    2400  0.0025
591          RX       0     280     470     630     700     840    1390    1860
592          RY    1028    1026    1026    1025    1025    1025    1026    1028
             *

593          KK   SA37C
594          KM   SUB-BASIN SA37C-LAND USE- URBAN, AGRICULTURE
595          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
596          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
597          BA    .590
598          LG    .320    .130   4.900    .323  15.000
599          UC    .750    .337
600          UA       0       5      16      30      65      77      84      90      94      97
601          UA     100
             *

602          KK  CPS37C
603          KM    COMBINE ROUTED FLOW FROM COMPUTATION POINT CPS37C WITH RUNOFF FROM SUB-
604          KM    BASIN SA37C
605          HC       2
             *

606          KK  RAV431
607          KM   ROUTE FLOW FROM COMPUTATION POINT CPS37C TO COMPUTATION POINT CAV43C
608          RS      15    ELEV  1020.6
609          RC    0.10    0.10    0.10    3200  0.0012
610          RX       0     380     620     980    1320    1560    1700    2200
611          RY  1022.8    1021  1020.6  1020.9  1021.4  1021.6  1021.8  1022.8
             *
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

612          KK  AVR43C
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```
613          KM   SUB-BASIN AVR43C -LAND USE- URBAN, AGRICULTURE
614          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
615          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
616          BA   1.030
617          LG    .430    .059   4.000    .396   6.250
618          UC    .717    .321
619          UA       0       5      16      30      65      77      84      90      94      97
620          UA     100
             *

621          KK  CAV43C
622          KM   COMBINE ROUTED FLOW FROM COMPUTATION POINT CPS37C, AVR43C
623          HC       2
             *

624          KK  BR35CW
625          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
626          BA      .5
627          LG      .5       0    3.55    .439       0
628          UC    .594    .472
629          UA       0       3       9      18      28      42      59      73      87      92
630          UA     100
             *

631          KK  BR35C1
632          KM    SUB-BASIN BR35C1-LAND USE- AGRICULTURE; MINOR DEVELOPMENT
633          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
634          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
635          BA    .550
636          LG    .500    .000   5.100    .368    .000
637          UC    .933    .670
638          UA       0       3       9      18      28      42      59      73      87      92
639          UA     100
             *

640          KK  CPB352
641          KM    COMBINE RUNOFF FROM BR35CW, BR35C1, CAV43C
642          HC       2
             *

643          KK  RAV432
644          KM   ROUTE FLOW FROM COMPUTATION POINT CPB352 TO COMPUTATION POINT CAV43C( 1ST.
645          KM   REACH )
646          RS       9    ELEV  1041.2
647          RC    0.07    0.07    0.07    3400  0.0056
648          RX       0      90      91     360     640    1015    1016    1475
649          RY    1044    1042    1042  1041.2  1041.2    1042    1042    1044
             *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 650          KK  RAV433
 651          KM   ROUTE FLOW FROM COMPUTATION POINT CPB352 TO COMPUTATION POINT CAV43C (2ND.
 652          KM   REACH )
 653          RS       8    ELEV    1028
 654          RC    0.07    0.07    0.07    3000  0.0060
 655          RX       0     300     301     570     630    1220    1400    1650
 656          RY    1030    1029    1029    1028    1028    1029    1029    1030
              *

 657          KK    C43C
 658          KM   COMBINE HYDROGRAPHS FROM CAV43C & CPB352
 659          HC       2
              *
              * PROPOSED DETENTION BASIN

 660          KK  STOR43
 661          KM   PROPOSED BASIN AT THE CORNER OF 43RD AVE AND SOUTHERN
 662          KM   DATA IS APPROXIMATE ONLY
 663          KO       3
 664          RS       1    STOR
 665          SV       0      15     300     319
 666          SQ       0     100     100    1500
 667          SE       0      .5      20      21
              *

 668          KK    WC6A
 669          KM   SUB-BASIN WC6A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
 670          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 671          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 672          BA    .014
 673          LG    .150    .270   3.750    .293    .000
 674          UC    .233    .259
 675          UA       0       3       5       8      12      20      43      75      90      96
 676          UA     100
              *

 677          KK  RD35.2
 678          KM   ROUTE RUNOFF FROM SUB-BASIN WC6A TO COMPUTATION POINT CD35.1
 679          RS      13    ELEV  1117.8
 680          RC   0.070   0.070   0.070    3800   0.015
 681          RX       0     130     240     280     340     440     530     655
 682          RY    1122    1120    1118  1117.8    1118    1119    1120    1122
              *

 683          KK  RD35.3
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```
 684          KM   ROUTE FLOW FROM COMPUTATION POINT CD35.1 TO COMPUTATION POINT CD35.2
 685          RS       6    ELEV  1089.6
 686          RC   0.035   0.035   0.035    2480   0.005  1090.5
 687          RX       0     100     200     350     435     480     500     525
 688          RY    1092    1091    1090  1089.8  1089.7  1089.6    1090  1090.5
              *
1                                          HEC-1 INPUT                                          PAGE 19

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 689          KK    WC7A
 690          KM   SUB-BASIN WC7A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
 691          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 692          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 693          BA    .050
 694          LG    .150    .270   7.000    .141    .000
 695          UC    .317    .332
 696          UA       0       3       5       8      12      20      43      75      90      96
 697          UA     100
              *

 698          KK  RD35.4
 699          KM   ROUTE RUNOFF FROM SUB-BASIN WC7A TO COMPUTATION POINT CD35.3
 700          RS       4    ELEV  1125.8
 701          RC   0.035   0.035   0.035    2800   0.018  1128.5
 702          RX       0     100     170     240     250     260     330     360
 703          RY    1129    1128    1127    1126  1125.8    1126    1128  1128.5
              *

 704          KK    WC8A
 705          KM   SUB-BASIN WC8A -LAND USE- DESERT MOUNTAIN, DESERT HILLS; MINOR DEVELOMENT
 706          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 707          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 708          BA    .350
 709          LG    .150    .321   3.700    .651  30.000
 710          UC    .433    .366
 711          UA       0       3       5       8      12      20      43      75      90      96
 712          UA     100
              *

 713          KK  RD35.5
 714          KM   ROUTE FLOW FROM SUB-BASIN WC8A TO COMPUTATION POINT CD35.3
 715          RS       2    ELEV    1137
 716          RC   0.030   0.030   0.030    2200   0.022    1139
 717          RX       0      50     125     190     240     370     400     450
 718          RY    1139    1138  1137.5    1137  1137.5    1138    1140    1141
              *
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```
 719          KK  CD35.3
 720          KM   COMBINE ROUTED FLOW FROM SUB-BASINS WC7A AND WC8A
 721          HC       2

 722          KK  RD35.6
 723          KM   ROUTE FLOW FROM COMPUTATION POINT CD35.3 TO COMPUTATION POINT CD35.4
 724          RS       1    ELEV    1101
 725          RC   0.030   0.035   0.035     700   0.011
 726          RX       0      30      60     110     140     180     240     350
 727          RY    1103  1101.8  1101.6  1101.4    1101  1101.4  1101.7    1103
              *
1                                          HEC-1 INPUT                                          PAGE 20

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 728          KK    WC9A
 729          KM   SUB-BASIN WC9A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
 730          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 731          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 732          BA    .025
 733          LG    .150    .250   8.600    .066    .000
 734          UC    .300    .420
 735          UA       0       3       5       8      12      20      43      75      90      96
 736          UA     100
              *

 737          KK  RD35.7
 738          KM   ROUTE RUNOFF FROM SUB-BASIN WC9A TO COMPUTATION POINT CD35.5
 739          RS       1    ELEV    1128
 740          RC   0.035   0.035   0.035    1000   0.025    1130
 741          RX       0      30      40      60      70      90     120     140
 742          RY    1130    1130    1129    1128  1128.5    1129    1130  1130.5
              *

 743          KK   WC10A
 744          KM   SUB-BASIN WC10A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
 745          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 746          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 747          BA    .020
 748          LG    .150    .260   5.800    .059    .000
 749          UC    .233    .289
 750          UA       0       3       5       8      12      20      43      75      90      96
 751          UA     100
              *

 752          KK  RD35.8
 753          KM   ROUTE RUNOFF FROM SUB-BASIN WC10A TO COMPUTATION POINT CD35.5
 754          RS       1    ELEV    1132
```

```
          RC   0.035   0.035   0.035    1000   0.025
          RX       0      30      50      70     100     140     210     260
          RY    1134    1134    1133    1132    1132    1133  1133.5    1134
          *

          KK  CD35.5
          KM   COMBINE ROUTED FLOW FROM SUB-BASINS WC9A AND WC10A
          HC       2

          KK  RD35.9
          KM   ROUTE FLOW FROM COMPUTATION POINT CD35.5 TO COMPUTATION POINT CD35.6
          RS       2    ELEV  1114.8
          RC   0.030   0.030   0.030    1200   0.015
          RX       0      60     110     170     210     240     330     370
          RY    1116  1115.8  1115.5    1115  1114.8    1115  1115.8    1116
          *
1                                   HEC-1 INPUT                                    PAGE 21

LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


          KK   WC11A
          KM   SUB-BASIN WC11A -LAND USE- DESERT MOUNTAINS, DESERT HILLS; MINOR DEVELOPMENT
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          BA    .290
          LG    .150    .335   3.600    .703  53.000
          UC    .367    .357
          UA       0       3       5       8      12      20      43      75      90      96
          UA     100
          *

          KK  RD3510
          KM   ROUTE RUNOFF FROM SUB-BASIN WC11A TO COMPUTATION POINT CD35.7
          RS       1    ELEV    1131
          RC   0.050   0.050   0.050    1100   0.024
          RX       0      50     170     180     225     260     380     460
          RY    1132  1131.8  1131.6  1131.5    1131  1131.5  1131.8    1132
          *

          KK   WC12A
          KM   SUB-BASIN WC12A -LAND USE- DESERT MOUNTAIN, DESERT HILLS; MINOR DEVELOPMENT
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          BA    .260
          LG    .150    .320   3.800    .632  28.000
          UC    .333    .217
          UA       0       3       5       8      12      20      43      75      90      96
          UA     100
```

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                 *

 791             KK  RD3511
 792             KM   ROUTE RUNOFF FROM SUB-BASIN WC12A TO COMPUTATION POINT CD35.7
 793             RS       1    ELEV    1143
 794             RC   0.040   0.040   0.040    1200   0.022    1144
 795             RX       0      10      25      45      70     120     235     290
 796             RY  1144.5    1144  1143.5    1143  1143.5  1143.7  1143.8    1144
                 *

 797             KK  CD35.7
 798             KM   COMBINE ROUTED FLOWS FROM SUB-BASINS WC11A AND WC12A
 799             HC       2
                 *

 800             KK  RD3512
 801             KM   ROUTE FLOW FROM COMPUTATION POINT CD35.7 TO COMPUTATION POINT CD35.6
 802             RS       2    ELEV  1120.5
 803             RC   0.055   0.055   0.055    1080   0.006
 804             RX       0      20      50      70     130     180     400     460
 805             RY  1122.5    1122    1121  1120.5    1121  1121.5    1122  1122.5
                 *
1                                          HEC-1 INPUT                                          PAGE 22

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 806             KK  CD35.6
 807             KM   COMBINE ROUTED FLOW FROM COMPUTATION POINTS CD35.5 AND CD35.7
 808             HC       2
                 *

 809             KK  RD3513
 810             KM   ROUTE FLOW FROM COMPUTATION POINT CD35.6 TO COMPUTATION POINT CD35.4
 811             RS       1    ELEV    1101
 812             RC   0.040   0.035   0.030    1000   0.012
 813             RX       0      40     130     210     280     340     570     615
 814             RY  1102.5    1102  1101.8  1101.5    1101  1101.5    1102  1102.5
                 *

 815             KK  CD35.4
 816             KM   COMBINE ROUTED FLOW FROM COMPUTATION POINTS CD35.3 AND CD35.6
 817             HC       2
                 *

 818             KK  RD3514
 819             KM   ROUTE FLOW FROM COMPUTATION POINT CD35.4 TO COMPUTATION POINT CD35.2
 820             RS       3    ELEV  1192.5
 821             RC   0.070   0.070   0.070    1400   0.006    1194
```

```
822          RX       0     120     200     300     400     470     560     660
823          RY    1194  1193.0  1192.8  1192.5  1192.5  1192.8    1193    1194
             *

824          KK   WC15A
825          KM   SUB-BASIN WC15A -LAND USE- DESERT MOUNTAIN, DESERT HILLS; MINOR DEVELOMENT
826          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
827          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
             *      1       2
828          BA    .360
829          LG    .150    .320   3.350    .784  50.000
830          UC    .317    .245
831          UA       0       3       5       8      12      20      43      75      90      96
832          UA     100
             *

833          KK  RD3515
834          KM   ROUTE RUNOFF FROM SUB-BASIN WC15A TO COMPUTATION POINT CD35.8
835          RS       1    ELEV    1132
836          RC   0.030   0.035   0.030    1250   0.014    1136
837          RX       0      30      50      70      85     100     140     200
838          RY    1140    1138    1136    1134    1132    1134    1135    1136
             *

839          KK    PM2A
840          KM   SUB-BASIN PM2A -LAND USE- DESERT MOUNTAIN, DESERT HILLS; MINOR DEVELOMENT
841          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
842          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
843          BA    .070
844          LG    .150    .332   4.100    .502  15.000
845          UC    .300    .282
846          UA       0       3       5       8      12      20      43      75      90      96
1                                          HEC-1 INPUT                                          PAGE 23

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

847          UA     100
             *

848          KK  CD35.8
849          KM   COMBINE ROUTED FLOW FROM SUB-BASIN WC15A TO SUB-BASIN PM2A
850          HC       2
             *

851          KK  RD3516
852          KM   ROUTE FLOW FROM COMPUTATION POINT CD35.8 TO COMPUTATION POINT CD35.9
853          RS       1    ELEV    1122
854          RC   0.035   0.040   0.030    1400   0.008    1126
855          RX       0      25      35      50     130     150     200     260
```

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856          RY    1130    1126    1124    1122    1122    1124    1125    1126
             *

857          KK   WC13A
858          KM   SUB-BASIN WC13A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
859          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
860          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
861          BA    .013
862          LG    .150    .250   8.600    .066    .000
863          UC    .250    .341
864          UA       0       3       5       8      12      20      43      75      90      96
865          UA     100
             *

866          KK  RD3517
867          KM   ROUTE RUNOFF FROM SUB-BASIN WC13A TO COMPUTATION POINT CD35.9
868          RS       3    ELEV    1131
869          RC   0.035   0.035   0.035    1280   0.023
870          RX       0     115     180     225     270     350     435     530
871          RY    1132  1131.5  1131.2    1131  1131.2  1131.5  1131.8    1132
             *

872          KK   WC14A
873          KM   SUB-BASIN WC14A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
874          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
875          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
876          BA    .050
877          LG    .150    .290   4.000    .520    .000
878          UC    .367    .427
879          UA       0       3       5       8      12      20      43      75      90      96
880          UA     100
             *

881          KK  RD3518
882          KM   ROUTE RUNOFF FROM SUB-BASIN WC14A TO COMPUTATION POINT CD35.9
883          RS       6    ELEV  1133.4
884          RC   0.040   0.045   0.040    2000   0.013
885          RX       0      60     150     220     250     280     310     360
886          RY    1134  1133.9  1133.7  1133.4  1133.7  1133.8  1133.9    1134
             *
1                                        HEC-1 INPUT                                        PAGE 24

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


887          KK    PM1A
888          KM   SUB-BASIN PM1A -LAND USE- AGRICULTURE, DESERT HILLS; MINOR DEVELOPMENT
889          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
890          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
```

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891          BA    .070
892          LG    .380    .097   4.210    .697    2.00
893          UC    .383    .279
894          UA       0       3       5       8      12      20      43      75      90      96
895          UA     100
             *

896          KK  CD35.9
897          KM   COMBINE ROUTED FLOWS FROM SUB-BASINS WC13A AND WC14A, COMPUTATION POINT
898          KM   CD35.8 WITH RUNOFF FROM SUB-BASIN PM1A
899          HC       4
             *

900          KK  RD3519
901          KM   ROUTE FLOW FROM COMPUTATION POINT CD35.9 TO COMPUTATION POINT CD35.2
902          RS       1    ELEV    1101
903          RC   0.040   0.045   0.040    3360   0.012
904          RX       0      80     190     270     310     335     440     480
905          RY  1102.5    1102  1101.7  1101.5    1101  1101.5    1102  1102.5
             *

906          KK   DR35C
907          KM   SUB-BASIN DR35C -LAND USE- AGRICULTURE; MINOR DEVELOPMENT
908          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
909          KM   THIS BASIN USED RAINFALL REDUCTION FATOR OF .90
910          BA    .600
911          LG    .360    .221   4.200    .454    .000
912          UC    .717    .443
913          UA       0       3       5       8      12      20      43      75      90      96
914          UA     100
             *

915          KK  CD35.2
916          KM   COMBINE ROUTED FLOWS FROM COMPUTATION POINTS CD35.1, CD35.4 AND CD35.9 WITH
917          KM   RUNOFF FROM SUB-BASIN DR35C
918          HC       4
             *
             *  DUMMY BASIN TO SIMULATE FUTURE GOLF COURSE STORAGE

919          KK     STG
920          KM   DUMMY BASIN SIMULATING FUTURE GOLF COURSE
921          RS       1    STOR
922          SV       0     100    5000
923          SQ       0      50      50
             *
1                                    HEC-1 INPUT                                    PAGE 25

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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```
KK  RSTG39
KM   ROUTE DISCHARGE FROM STG TO 39TH & BASELINE
RD    7920   0.004    .014            CIRC       5

KK  RSTG43
KM   ROUTE DISCHARGE FROM STG TO 43RD & BASELINE
RD    2640   0.005    .012            CIRC       5
*

KK  SMA43C
KM   SUB-BASIN SMA43C-LAND USE - AGRICULTURE;MINOR DEVELOPMENT
KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
BA    .130
LG    .500    .000   6.960    .244    .000
UC    .400    .261
UA       0       3       9      18      28      42      59      73      87      92
UA     100
*

KK  RB43C2
KM   ROUTE RUNOFF FROM SUB-BASIN SMA43C TO CBR43C
RS       3    ELEV  1043.3
RC    0.02    0.07    0.07    2600   0.003  1044.2
RX       0       1      55      56      65      70      90     120
RY  1044.2  1043.2  1043.2  1044.1  1043.5  1043.7  1043.8  1044.2
*

KK   BR43C
KM   SUB-BASIN BR43C-LAND USE - AGRICULTURE;MINOR DEVELOPMENT-LAND USE
KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
BA     .35
LG    .500    .000   6.350    .259    .000
UC    .883    .538
UA       0       3       9      18      28      42      59      73      87      92
UA     100
*

KK  CBR43C
KM   COMBINE ROUTED FLOWS FROM COMPUTATION POINT CD35.2, SUB-BASIN SMA43C, STG
HC       3
*

KK  RBR43C
KM   ROUTE HYDROGRAPH FROM CBR43C TO 43RD & SOUTHERN
RD    5280   .0028    .012            CIRC       6
*
```

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1                                                  HEC-1 INPUT                                                  PAGE 26

          LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


           960          KK   CST43
           961          KM   COMBINE OUTFLOW OF DETENTION BASIN (STOR43) & PIPE FLOW (RBR43C
           962          HC       2
                        *

           963          KK  RAV43B
           964          KM   ROUTE COMBINED DISCHARGE TO SALT RIVER
           965          RD    5400  0.0028    .012            CIRC       7
                        *
           966          ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    10        SM1C
                .
                .
    28          .       SM1AC
                .           .
                .           .
    37        CSM1............
                V
                V
    41        RSM1
                .
                .
    47          .        SM2C
                .           .
                .           .
    56        CSM2............
                V
                V
    60       RDENT
                V
                V
    67        RSM2
                .
                .
    73          .       SM3CE
                .           .
                .           .
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```
 80        C3CE............
              V
              V
 83      RSM3CE
              .
              .
 86           .       SM4CE
              .           .
              .           .
 93           .           .        SM5C
              .           .           .
              .           .           .
102       CSM5C........................
              .
              .
108           .-------> DCSM5C
105      DIVM5C
              V
              V
111      RCSM5C
              .
              .
114           .      SMA15E
              .           .
              .           .
121        C15E............
              .
              .
127           .------->  DC15E
124      DIV15E
              V
              V
130       RC15E
              .
              .
133           .        CBDE
              .           .
              .           .
140       CCBDE............
              .
              .
146           .-------> DCCBDE
143      DIVbde
              V
              V
149      RCCBDE
              .
              .
154           .           .<-------  DCCBDE
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152          .      RETCBD
             .          V
             .          V
155          .       RCDIV
             .           .
             .           .
158          .           .      BR19C
             .           .          .
             .           .          .
167     CBR19C.......................
             V
             V
170     RBR19C
             .
             .
176          .-------->   D1927
174     DIV19C
             .
             .
181          .           .<-------  DCSM5C
179          .      RETM5C
             .           .
             .           .
184          .           .          .<-------   DC15E
182          .           .      RET15E
             .           .          .
             .           .          .
185          .      COMDIV............
             .          V
             .          V
188          .       RCDIV
             .           .
             .           .
191          .           .      SMA15W
             .           .          .
             .           .          .
198          .      CSMA15............
             .          V
             .          V
201          .      RSM19C
             .           .
             .           .
207          .           .      SMA19C
             .           .          .
             .           .          .
216          .      CPS19C............
             .          V
             .          V
219          .      RRB27C
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                .         .
                .         .
225             .         .      SM3CW
                .         .          V
                .         .          V
231             .         .       RSM3
                .         .          .
                .         .          .
237             .         .          .      SM4CW
                .         .          .          V
                .         .          .          V
244             .         .          .       RSM4
                .         .          .          .
                .         .          .          .
250             .         .          .          .      DRW2C
                .         .          .          .          .
                .         .          .          .          .
259             .         .          .          .          .     DRWC1C
                .         .          .          .          .          .
                .         .          .          .          .          .
268             .         .       CSM4.......................................
                .         .          V
                .         .          V
272             .         .       RSM5
                .         .          .
                .         .          .
278             .         .          .       DR1C
                .         .          .          .
                .         .          .          .
287             .         .          .          .       WC1A
                .         .          .          .          V
                .         .          .          .          V
296             .         .          .          .       RSM6
                .         .          .          .          .
                .         .          .          .          .
302             .         .          .          .          .       DR2C
                .         .          .          .          .          .
                .         .          .          .          .          .
311             .         .     CPDR2C.......................................
                .         .          V
                .         .          V
315             .         .     RRB27C
                .         .          .
                .         .          .
321             .         .          .      BR27C
                .         .          .          .
                .         .          .          .
330         C27C.......................................
                .
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                .
333             .       WC2A
                .          V
                .          V
342             .     RD27.1
                .          .
                .          .
348             .          .     WC2.1A
                .          .          V
                .          .          V
357             .          .     RD27.2
                .          .          .
                .          .          .
363             .     CD27.1............
                .          V
                .          V
366             .     RD27.3
                .          .
                .          .
372             .          .       WC3A
                .          .          V
                .          .          V
381             .          .     RD27.4
                .          .          .
                .          .          .
387             .     CD27.2............
                .          V
                .          V
390             .     RD27.5
                .          .
                .          .
396             .          .       WC4A
                .          .          V
                .          .          V
405             .          .     RD27.6
                .          .          .
                .          .          .
411             .     CD27.3............
                .          V
                .          V
414             .     RD27.7
                .          .
                .          .
420             .          .      DR27C
                .          .          .
                .          .          .
429             .          .          .       WC5A
                .          .          .          .
                .          .          .          .
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438          .      CD27.4.......................
             .           V
             .           V
442          .      ST27.4
             .           V
             .           V
449          .      RST274
             .           .
             .           .
452          .           .      BR35CE
             .           .           .
             .           .           .
459          .       C35CE............
             .           V
             .           V
462          .       R35CE
             .           .
             .           .
467          .           .------->   D35CE
465          .       D35CE
             .           .
             .           .
470      C27BAS............
             V
             V
473       ST27C
             .
             .
482          .           .<-------   D1927
480          .       D1927
             .           .
             .           .
485          .           .           .<-------   D35CE
483          .           .      D35CE
             .           .           .
             .           .           .
486      CPB27C........................
             V
             V
489      RPB27C
             .
             .
492          .       SA27C
             .           .
             .           .
501      CSA27C............
             V
             V
504      RSA27C
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                .
                .
507             .       SA19C
                .           .
                .           .
517             .           .-------->   SA19C
515             .      DSA19C
                .           V
                .           V
520             .      RR23C1
                .           V
                .           V
526             .      RR23C2
                .           V
                .           V
532             .      RR23C3
                .           .
                .           .
538             .           .       CR23C
                .           .           .
                .           .           .
547             .      CPC23C............
                .           V
                .           V
550             .       STR23
                .           V
                .           V
557             .      RSTR23
                .           .
                .           .
560             .           .       RR27C
                .           .           .
                .           .           .
569        CR27C........................
                V
                V
572       RCR27C
                V
                V
575       RCR27C
                .
                .
578             .       RR35C
                .           V
                .           V
587             .      RRS37C
                .           .
                .           .
593             .           .       SA37C
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                .         .         .
                .         .         .
602             .     CPS37C............
                .         V
                .         V
606             .     RAV431
                .         .
                .         .
612             .         .     AVR43C
                .         .         .
                .         .         .
621             .     CAV43C............
                .         .
                .         .
624             .         .     BR35CW
                .         .         .
                .         .         .
631             .         .         .     BR35C1
                .         .         .         .
                .         .         .         .
640             .         .     CPB352............
                .         .         V
                .         .         V
643             .         .     RAV432
                .         .         V
                .         .         V
650             .         .     RAV433
                .         .         .
                .         .         .
657             .       C43C............
                .         V
                .         V
660             .     STOR43
                .         .
                .         .
668             .         .       WC6A
                .         .         V
                .         .         V
677             .         .     RD35.2
                .         .         V
                .         .         V
683             .         .     RD35.3
                .         .         .
                .         .         .
689             .         .         .       WC7A
                .         .         .         V
                .         .         .         V
698             .         .         .     RD35.4
                .         .         .         .
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                .         .         .         .
704             .         .         .         .       WC8A
                .         .         .         .          V
                .         .         .         .          V
713             .         .         .         .     RD35.5
                .         .         .         .          .
                .         .         .         .          .
719             .         .         .     CD35.3...........
                .         .         .          V
                .         .         .          V
722             .         .         .     RD35.6
                .         .         .         .
                .         .         .         .
728             .         .         .         .       WC9A
                .         .         .         .          V
                .         .         .         .          V
737             .         .         .         .     RD35.7
                .         .         .         .          .
                .         .         .         .          .
743             .         .         .         .          .      WC10A
                .         .         .         .          .          V
                .         .         .         .          .          V
752             .         .         .         .          .     RD35.8
                .         .         .         .          .          .
                .         .         .         .          .          .
758             .         .         .         .     CD35.5...........
                .         .         .         .          V
                .         .         .         .          V
761             .         .         .         .     RD35.9
                .         .         .         .          .
                .         .         .         .          .
767             .         .         .         .          .      WC11A
                .         .         .         .          .          V
                .         .         .         .          .          V
776             .         .         .         .          .     RD3510
                .         .         .         .          .          .
                .         .         .         .          .          .
782             .         .         .         .          .          .      WC12A
                .         .         .         .          .          .          V
                .         .         .         .          .          .          V
791             .         .         .         .          .          .     RD3511
                .         .         .         .          .          .          .
                .         .         .         .          .          .          .
797             .         .         .         .          .     CD35.7...........
                .         .         .         .          .          V
                .         .         .         .          .          V
800             .         .         .         .          .     RD3512
                .         .         .         .          .          .
                .         .         .         .          .          .
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806          .          .          .          .     CD35.6............
             .          .          .          .          V
             .          .          .          .          V
809          .          .          .          .     RD3513
             .          .          .          .          .
             .          .          .          .          .
815          .          .          .     CD35.4............
             .          .          .          V
             .          .          .          V
818          .          .          .     RD3514
             .          .          .          .
             .          .          .          .
824          .          .          .          .      WC15A
             .          .          .          .          V
             .          .          .          .          V
833          .          .          .          .     RD3515
             .          .          .          .          .
             .          .          .          .          .
839          .          .          .          .          .       PM2A
             .          .          .          .          .          .
             .          .          .          .          .          .
848          .          .          .          .     CD35.8............
             .          .          .          .          V
             .          .          .          .          V
851          .          .          .          .     RD3516
             .          .          .          .          .
             .          .          .          .          .
857          .          .          .          .          .      WC13A
             .          .          .          .          .          V
             .          .          .          .          .          V
866          .          .          .          .          .     RD3517
             .          .          .          .          .          .
             .          .          .          .          .          .
872          .          .          .          .          .          .      WC14A
             .          .          .          .          .          .          V
             .          .          .          .          .          .          V
881          .          .          .          .          .          .     RD3518
             .          .          .          .          .          .          .
             .          .          .          .          .          .          .
887          .          .          .          .          .          .          .       PM1A
             .          .          .          .          .          .          .          .
             .          .          .          .          .          .          .          .
896          .          .          .          .     CD35.9.....................................
             .          .          .          .          V
             .          .          .          .          V
900          .          .          .          .     RD3519
             .          .          .          .          .
             .          .          .          .          .
906          .          .          .          .          .      DR35C
```

```
                .         .         .         .         .         .
                .         .         .         .         .         .
  915           .         .     CD35.2.................................
                .         .         V
                .         .         V
  919           .         .       STG
                .         .         V
                .         .         V
  924           .         .     RSTG39
                .         .         V
                .         .         V
  927           .         .     RSTG43
                .         .         .
                .         .         .
  930           .         .         .     SMA43C
                .         .         .         V
                .         .         .         V
  939           .         .         .     RB43C2
                .         .         .         .
                .         .         .         .
  945           .         .         .         .      BR43C
                .         .         .         .          .
                .         .         .         .          .
  954           .         .     CBR43C......................
                .         .         V
                .         .         V
  957           .         .     RBR43C
                .         .         .
                .         .         .
  960           .      CST43............
                .         V
                .         V
  963           .     RAV43B
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*             JUN 09 1992              *
*           VERSION 4.0.3E             *
*                                      *
*  RUN DATE  06/03/97  TIME  13:11:58  *
*                                      *
****************************************
```

```
****************************************
*                                      *
*   U.S. ARMY CORPS OF ENGINEERS       *
*   HYDROLOGIC ENGINEERING CENTER      *
*         609 SECOND STREET            *
*      DAVIS, CALIFORNIA 95616         *
*          (916) 551-1748              *
*                                      *
****************************************
```

```
                         LAVEEN ADMP INVESTIGATION BY HDR ENGINEERING
                         MODIFICATIONS IN dECEMBER 1996
                         LAVEEN ADMS (FINAL HEC-1) 100-YR 24-HR STORM          CBA FILE # 40916-02-30
                         HIDDEN VALLEY WATERSHED/CHAMPION DRAIN WATERSHED
                         INPUT FILE NAME  273BASEX.DAT                        DATE: DECEMBER,1996
                         27th AVE., 3 BASIN ALTERNATIVE, EXISTING DEVELOPMENT
                         24-HOUR SCS TYPE II RAINFALL

   9 IO          OUTPUT CONTROL VARIABLES
                       IPRNT          5  PRINT CONTROL
                       IPLOT          0  PLOT CONTROL
                       QSCAL         0.  HYDROGRAPH PLOT SCALE

     IT          HYDROGRAPH TIME DATA
                        NMIN          5  MINUTES IN COMPUTATION INTERVAL
                       IDATE      1   0  STARTING DATE
                       ITIME       0000  STARTING TIME
                          NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                      NDDATE      7   0  ENDING DATE
                      NDTIME       2235  ENDING TIME
                      ICENT          19  CENTURY MARK

                  COMPUTATION INTERVAL    0.08 HOURS
                       TOTAL TIME BASE  166.58 HOURS

          ENGLISH UNITS
               DRAINAGE AREA          SQUARE MILES
               PRECIPITATION DEPTH    INCHES
               LENGTH, ELEVATION      FEET
               FLOW                   CUBIC FEET PER SECOND
               STORAGE VOLUME         ACRE-FEET
               SURFACE AREA           ACRES
               TEMPERATURE            DEGREES FAHRENHEIT
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0


 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


            **************
            *            *
 105 KK     *    DIVM5C  *
            *            *
            **************
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```
 107 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           3  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE

     DT          DIVERSION
                       ISTAD      DCSM5C  DIVERSION HYDROGRAPH IDENTIFICATION

     DI             INFLOW        0.00    250.00    500.00

     DQ      DIVERTED FLOW        0.00      0.00    250.00

                                                                  ***

      ***            ***            ***            ***            ***

                        DIVERSION HYDROGRAPH   DCSM5C

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR    166.58-HR
+   (CFS)       (HR)
                          (CFS)
+     190.     12.08                  12.          3.          1.           0.
                       (INCHES)     0.023       0.023       0.023        0.023
                        (AC-FT)       6.          6.          6.           6.

                        CUMULATIVE AREA =    4.73 SQ MI


      ***            ***            ***            ***            ***

                        HYDROGRAPH AT STATION   DIVM5C

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR    166.58-HR
+   (CFS)       (HR)
                          (CFS)
+     250.     11.83                 164.        145.         99.          43.
                       (INCHES)     0.323       1.142       2.335        2.373
                        (AC-FT)      81.        288.        589.         599.

                        CUMULATIVE AREA =    4.73 SQ MI

MANE2 NPLAN,NSTM       1      0


 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***
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            **************
            *            *
  124 KK    *    DIV15E  *
            *            *
            **************

  126 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           3  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

      DT          DIVERSION
                        ISTAD       DC15E  DIVERSION HYDROGRAPH IDENTIFICATION

      DI             INFLOW        0.00    270.00    540.00

      DQ      DIVERTED FLOW        0.00      0.00    270.00

                                                                  ***

       ***            ***            ***            ***            ***

                          DIVERSION HYDROGRAPH    DC15E

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR       24-HR       72-HR    166.58-HR
+   (CFS)       (HR)
                            (CFS)
+      80.     12.00                    4.          1.          0.           0.
                         (INCHES)    0.008       0.008       0.008        0.008
                          (AC-FT)       2.          2.          2.           2.

                          CUMULATIVE AREA =    4.80 SQ MI


       ***            ***            ***            ***            ***

                          HYDROGRAPH AT STATION   DIV15E

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR       24-HR       72-HR    166.58-HR
+   (CFS)       (HR)
                            (CFS)
+     270.     11.75                  167.        146.         99.          44.
                         (INCHES)    0.324       1.132       2.308        2.346
                          (AC-FT)      83.        290.        591.         601.
```

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                    CUMULATIVE AREA =    4.80 SQ MI

MANE2 NPLAN,NSTM       1      0


 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


            **************
            *            *
  143 KK    *    DIVbde  *
            *            *
            **************

  145 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           3  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

      DT          DIVERSION
                        ISTAD      DCCBDE  DIVERSION HYDROGRAPH IDENTIFICATION

      DI             INFLOW        0.00    300.00    900.00

      DQ      DIVERTED FLOW        0.00      0.00    600.00

                                                                  ***

       ***            ***            ***            ***            ***

                         DIVERSION HYDROGRAPH   DCCBDE

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR       24-HR       72-HR    166.58-HR
+   (CFS)       (HR)
                           (CFS)
+      61.     12.25                    5.          1.          0.           0.
                        (INCHES)     0.009       0.009       0.009        0.009
                         (AC-FT)        2.          2.          2.           2.

                        CUMULATIVE AREA =    4.97 SQ MI


       ***            ***            ***            ***            ***

                         HYDROGRAPH AT STATION   DIVbde

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
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```
                                        6-HR       24-HR       72-HR    166.58-HR
+   (CFS)       (HR)
                              (CFS)
+     300.     11.92                    184.        150.        101.         44.
                          (INCHES)    0.344       1.126       2.264        2.301
                           (AC-FT)     91.        298.        600.         610.

                           CUMULATIVE AREA =    4.97 SQ MI

MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0

 WARNING --- ROUTED OUTFLOW (    444.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    534.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    532.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    447.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    451.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    515.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    495.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    413.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    451.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    493.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    463.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    443.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    470.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

 WARNING --- ROUTED OUTFLOW (    434.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
```

```
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0


 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


            **************
            *            *
  442 KK    *    ST27.4  *
            *            *
            **************

  444 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           3  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

                HYDROGRAPH ROUTING DATA

  445 RS          STORAGE ROUTING
                        NSTPS           1  NUMBER OF SUBREACHES
                         ITYP        STOR  TYPE OF INITIAL CONDITION
                       RSVRIC        0.00  INITIAL CONDITION
                            X        0.00 WORKING R AND D COEFFICIENT

  446 SV            STORAGE         0.0      56.6     115.4

  447 SQ          DISCHARGE          0.       38.       80.

  448 SE          ELEVATION        0.00      3.00      6.00

                                                                  ***

       ***            ***            ***            ***            ***

                          HYDROGRAPH AT STATION   ST27.4

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR       24-HR       72-HR    166.58-HR
+   (CFS)       (HR)
                            (CFS)
+      45.     14.08                  42.         30.         14.           6.
```

```
                    (INCHES)     0.330       0.935       1.292       1.332
                     (AC-FT)      21.         59.         82.         84.

 PEAK STORAGE   TIME                        MAXIMUM AVERAGE STORAGE
                                     6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)      (HR)
      66.     14.08                   62.         44.         20.          9.

  PEAK STAGE    TIME                        MAXIMUM AVERAGE STAGE
                                     6-HR       24-HR       72-HR    166.58-HR
+   (FEET)      (HR)
     3.50     14.08                  3.29        2.34        1.08         0.48

                     CUMULATIVE AREA =    1.18 SQ MI

MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0


 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


           **************
           *            *
  473 KK   *     ST27C  *
           *            *
           **************

  475 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           3  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE

               HYDROGRAPH ROUTING DATA

  476 RS          STORAGE ROUTING
                       NSTPS           1  NUMBER OF SUBREACHES
                        ITYP        STOR  TYPE OF INITIAL CONDITION
                      RSVRIC        0.00  INITIAL CONDITION
                           X        0.00 WORKING R AND D COEFFICIENT

  477 SV            STORAGE         0.0     116.3     274.9

  478 SQ          DISCHARGE          0.       38.       90.

  479 SE          ELEVATION        0.00      3.00      7.00

                                                          ***
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      ***            ***            ***            ***            ***

                        HYDROGRAPH AT STATION    ST27C

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR    166.58-HR
+   (CFS)       (HR)
                          (CFS)
+      68.     17.00                 67.         58.         36.         18.
                        (INCHES)    0.065       0.224       0.418       0.485
                         (AC-FT)     33.        115.        214.        249.

 PEAK STORAGE   TIME                         MAXIMUM AVERAGE STORAGE
                                     6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)      (HR)
      209.     17.00                205.        177.        110.         55.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                     6-HR       24-HR       72-HR    166.58-HR
+   (FEET)      (HR)
      5.33     17.00                 5.25        4.53        2.83        1.42

                         CUMULATIVE AREA =    9.61 SQ MI

MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0


 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


            **************
            *            *
  550 KK    *     STR23  *
            *            *
            **************

  552 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           3  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

                HYDROGRAPH ROUTING DATA

  553 RS          STORAGE ROUTING
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```
                    NSTPS          1  NUMBER OF SUBREACHES
                     ITYP       STOR  TYPE OF INITIAL CONDITION
                   RSVRIC       0.00  INITIAL CONDITION
                        X       0.00 WORKING R AND D COEFFICIENT

 554 SV          STORAGE        0.0      16.0      33.0      51.0      70.0

 555 SQ        DISCHARGE         0.       14.       29.       40.       47.

 556 SE        ELEVATION       0.00      2.00      4.00      6.00      8.00

                                                                ***

     ***           ***           ***           ***           ***

                      HYDROGRAPH AT STATION    STR23

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                    6-HR       24-HR       72-HR    166.58-HR
+   (CFS)      (HR)
                          (CFS)
+      37.     15.50                 35.         24.         10.          4.
                       (INCHES)    0.307       0.837       1.036       1.046
                        (AC-FT)      17.         47.         59.         59.

 PEAK STORAGE   TIME                         MAXIMUM AVERAGE STORAGE
                                    6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)      (HR)
       46.     15.50                 43.         28.         12.          5.

 PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                    6-HR       24-HR       72-HR    166.58-HR
+   (FEET)      (HR)
      5.46     15.50                5.10        3.39        1.40        0.61

                      CUMULATIVE AREA =    1.06 SQ MI

MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0


 *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***
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            **************
            *            *
  660 KK    *    STOR43  *
            *            *
            **************

  663 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           3  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

                HYDROGRAPH ROUTING DATA

  664 RS          STORAGE ROUTING
                        NSTPS           1  NUMBER OF SUBREACHES
                         ITYP        STOR  TYPE OF INITIAL CONDITION
                       RSVRIC        0.00  INITIAL CONDITION
                            X        0.00 WORKING R AND D COEFFICIENT

  665 SV            STORAGE         0.0      15.0     300.0     319.0

  666 SQ          DISCHARGE          0.      100.      100.     1500.

  667 SE          ELEVATION        0.00      0.50     20.00     21.00

                                                                ***

       ***            ***            ***            ***            ***

                          HYDROGRAPH AT STATION   STOR43

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR       24-HR       72-HR    166.58-HR
+   (CFS)       (HR)
                           (CFS)
+     100.     12.08                  100.        100.         56.          24.
                        (INCHES)     0.204       0.816       1.373        1.373
                         (AC-FT)       50.        198.        334.         334.

 PEAK STORAGE   TIME                          MAXIMUM AVERAGE STORAGE
                                      6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)      (HR)
      264.     17.83                  257.        201.         80.          35.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                      6-HR       24-HR       72-HR    166.58-HR
+   (FEET)      (HR)
     17.54     17.83                 17.05       13.21        5.17         2.24
```

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                    CUMULATIVE AREA =    4.56 SQ MI

MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
MANE2 NPLAN,NSTM       1      0
1
                                          RUNOFF SUMMARY
                                     FLOW IN CUBIC FEET PER SECOND
                                   TIME IN HOURS,  AREA IN SQUARE MILES

                                 PEAK   TIME OF    AVERAGE FLOW FOR MAXIMUM PERIOD      BASIN     MAXIMUM     TIME OF
        OPERATION       STATION  FLOW    PEAK                                           AREA      STAGE     MAX STAGE
+                                                   6-HOUR     24-HOUR     72-HOUR

        HYDROGRAPH AT
+                         SM1C   2160.   12.25        341.        113.         38.      1.84

        HYDROGRAPH AT
+                        SM1AC    253.   12.17         31.          9.          3.      0.28

        2 COMBINED AT
+                         CSM1   2401.   12.17        373.        121.         40.      2.12

        ROUTED TO
+                         RSM1   2321.   12.33        372.        121.         40.      2.12
+                                                                                       1378.07       12.33

        HYDROGRAPH AT
+                         SM2C   3451.   12.17        561.        196.         65.      2.19

        2 COMBINED AT
+                         CSM2   5481.   12.17        933.        317.        106.      4.31

        ROUTED TO
+                        RDENT    146.   17.33        146.        139.         96.      4.31
+                                                                                       1317.80       17.42
```

	ROUTED TO								
+	RSM2	146.	17.67	146.	139.	96.	4.31		
+								1227.21	17.25
	HYDROGRAPH AT								
+	SM3CE	168.	12.08	15.	4.	1.	0.17		
	2 COMBINED AT								
+	C3CE	242.	12.08	148.	141.	97.	4.48		
	ROUTED TO								
+	RSM3CE	237.	12.08	148.	141.	97.	4.48		
	HYDROGRAPH AT								
+	SM4CE	57.	12.00	5.	2.	1.	0.05		
	HYDROGRAPH AT								
+	SM5C	164.	12.08	24.	7.	2.	0.20		
	3 COMBINED AT								
+	CSM5C	440.	12.08	176.	148.	100.	4.73		
	DIVERSION TO								
+	DCSM5C	190.	11.83	12.	3.	1.	4.73		
	HYDROGRAPH AT								
+	DIVM5C	250.	11.83	164.	145.	99.	4.73		
	ROUTED TO								
+	RCSM5C	250.	12.00	164.	145.	99.	4.73		
	HYDROGRAPH AT								
+	SMA15E	100.	12.00	8.	2.	1.	0.07		
	2 COMBINED AT								
+	C15E	350.	12.00	172.	147.	100.	4.80		
	DIVERSION TO								
+	DC15E	80.	11.75	4.	1.	0.	4.80		
	HYDROGRAPH AT								
+	DIV15E	270.	11.75	167.	146.	99.	4.80		
	ROUTED TO								
+	RC15E	273.	11.83	167.	146.	99.	4.80		
	HYDROGRAPH AT								
+	CBDE	108.	12.42	22.	6.	2.	0.17		

```
        2 COMBINED AT
+                       CCBDE     361.   12.25      189.      152.      101.      4.97
        DIVERSION TO
+                      DCCBDE      61.   11.92        5.        1.        0.      4.97
        HYDROGRAPH AT
+                      DIVbde     300.   11.92      184.      150.      101.      4.97
        ROUTED TO
+                      RCCBDE     302.   12.00      184.      150.      101.      4.97
        HYDROGRAPH AT
+                      RETCBD      61.   12.25        5.        1.        0.      0.00
        ROUTED TO
+                       RCDIV      59.   12.67        5.        1.        0.      0.00
        HYDROGRAPH AT
+                       BR19C     364.   12.25       47.       12.        4.      0.39
        3 COMBINED AT
+                      CBR19C     664.   12.25      235.      163.      105.      5.36
        ROUTED TO
+                      RBR19C     660.   12.33      234.      163.      105.      5.36
        DIVERSION TO
+                       D1927     156.   12.33      154.      143.       99.      5.36
        HYDROGRAPH AT
+                      DIV19C     504.   12.33       81.       20.        7.      5.36
        HYDROGRAPH AT
+                      RETM5C     190.   12.08       12.        3.        1.      0.00
        HYDROGRAPH AT
+                      RET15E      80.   12.00        4.        1.        0.      0.00
        2 COMBINED AT
+                      COMDIV     258.   12.00       16.        4.        1.      0.00
        ROUTED TO
+                       RCDIV     253.   12.17       16.        4.        1.      0.00
        HYDROGRAPH AT
+                      SMA15W     327.   12.08       34.        9.        3.      0.29
        2 COMBINED AT
```

```
+                    CSMA15      573.   12.17        51.        13.        4.      0.29

        ROUTED TO
+                    RSM19C      470.   12.42        51.        13.        4.      0.29
+                                                                                  1140.09      12.42

        HYDROGRAPH AT
+                    SMA19C       59.   12.58        17.         4.        1.      0.16

        2 COMBINED AT
+                    CPS19C      526.   12.42        68.        17.        6.      0.45

        ROUTED TO
+                    RRB27C      266.   13.92        65.        17.        6.      0.45
+                                                                                  1108.35      13.92

        HYDROGRAPH AT
+                     SM3CW      240.   12.25        27.         7.        2.      0.31

        ROUTED TO
+                      RSM3      209.   12.50        27.         7.        2.      0.31
+                                                                                  1176.76      12.50

        HYDROGRAPH AT
+                     SM4CW      162.   12.08        21.         6.        2.      0.19

        ROUTED TO
+                      RSM4      158.   12.17        21.         6.        2.      0.19
+                                                                                  1169.01      12.17

        HYDROGRAPH AT
+                     DRW2C      401.   12.33        71.        22.        7.      0.53

        HYDROGRAPH AT
+                    DRWC1C       70.   12.33        14.         3.        1.      0.12

        4 COMBINED AT
+                      CSM4      771.   12.33       133.        39.       13.      1.15

        ROUTED TO
+                      RSM5      719.   12.42       133.        39.       13.      1.15
+                                                                                  1159.12      12.42

        HYDROGRAPH AT
+                      DR1C      152.   12.25        22.         5.        2.      0.16

        HYDROGRAPH AT
+                      WC1A      274.   12.25        49.        15.        5.      0.25
```

```
        ROUTED TO
+                       RSM6      268.   12.25        49.        15.         5.      0.25
+                                                                                   1147.73      12.25

        HYDROGRAPH AT
+                       DR2C       46.   12.17         5.         1.         0.      0.05

        4 COMBINED AT
+                     CPDR2C     1116.   12.33       209.        61.        20.      1.61

        ROUTED TO
+                     RRB27C      891.   13.33       207.        61.        20.      1.61
+                                                                                   1108.77      13.33

        HYDROGRAPH AT
+                      BR27C      594.   12.33        91.        23.         8.      0.78

        4 COMBINED AT
+                       C27C     1113.   12.33       436.       121.        40.      8.20

        HYDROGRAPH AT
+                       WC2A       78.   12.25        14.         3.         1.      0.08

        ROUTED TO
+                     RD27.1       76.   12.25        14.         3.         1.      0.08
+                                                                                   1148.15      12.25

        HYDROGRAPH AT
+                     WC2.1A       70.   12.17         8.         2.         1.      0.08

        ROUTED TO
+                     RD27.2       67.   12.25         8.         2.         1.      0.08
+                                                                                   1149.00      12.25

        2 COMBINED AT
+                     CD27.1      143.   12.25        21.         5.         2.      0.16

        ROUTED TO
+                     RD27.3      141.   12.25        21.         5.         2.      0.16
+                                                                                   1142.56      12.25

        HYDROGRAPH AT
+                       WC3A       15.   12.17         2.         1.         0.      0.01

        ROUTED TO
+                     RD27.4       15.   12.25         2.         1.         0.      0.01
+                                                                                   1142.19      12.25

        2 COMBINED AT
```

```
+                    CD27.2     155.   12.25        24.        6.        2.      0.17
        ROUTED TO
+                    RD27.5     146.   12.33        24.        6.        2.      0.17
+                                                                                 1122.49      12.33
        HYDROGRAPH AT
+                      WC4A     369.   12.17        52.       16.        5.      0.36
        ROUTED TO
+                    RD27.6     351.   12.33        52.       16.        5.      0.36
+                                                                                 1140.69      12.33
        2 COMBINED AT
+                    CD27.3     498.   12.33        75.       21.        7.      0.53
        ROUTED TO
+                    RD27.7     484.   12.42        75.       21.        7.      0.53
+                                                                                 1116.30      12.42
        HYDROGRAPH AT
+                     DR27C     157.   12.25        19.        5.        2.      0.23
        HYDROGRAPH AT
+                      WC5A     290.   12.25        51.       16.        5.      0.42
        3 COMBINED AT
+                    CD27.4     891.   12.33       145.       42.       14.      1.18
        ROUTED TO
+                    ST27.4      45.   14.08        42.       30.       14.      1.18
+                                                                                    3.50      14.08
        ROUTED TO
+                    RST274      45.   14.17        42.       30.       14.      1.18
        HYDROGRAPH AT
+                    BR35CE     300.   12.08        31.        8.        3.      0.23
        2 COMBINED AT
+                     C35CE     308.   12.08        68.       37.       16.      1.41
        ROUTED TO
+                     R35CE     298.   12.08        68.       37.       16.      1.41
        DIVERSION TO
+                     D35CE      43.   12.08        43.       31.       14.      1.41
        HYDROGRAPH AT
```

```
+                    D35CE      255.   12.08        26.         6.         2.      1.41
        2 COMBINED AT
+                    C27BAS    1286.   12.25       462.       127.        42.      9.61
        ROUTED TO
+                    ST27C       68.   17.00        67.        58.        36.      9.61
+                                                                                        5.33      17.00
        HYDROGRAPH AT
+                    D1927      156.   11.92       154.       143.        99.      0.00
        HYDROGRAPH AT
+                    D35CE       43.   11.75        43.        31.        14.      0.00
        3 COMBINED AT
+                    CPB27C     262.   15.50       258.       230.       148.      9.61
        ROUTED TO
+                    RPB27C     262.   15.58       258.       230.       148.      9.61
        HYDROGRAPH AT
+                    SA27C      513.   12.33        82.        21.         7.      0.62
        2 COMBINED AT
+                    CSA27C     723.   12.33       326.       250.       155.     10.23
        ROUTED TO
+                    RSA27C     723.   12.42       326.       250.       155.     10.23
        HYDROGRAPH AT
+                    SA19C      316.   12.42        61.        16.         5.      0.48
        DIVERSION TO
+                    SA19C       70.   12.42        28.         8.         3.      0.48
        HYDROGRAPH AT
+                    DSA19C     246.   12.42        32.         8.         3.      0.48
        ROUTED TO
+                    RR23C1     235.   12.58        32.         8.         3.      0.48
+                                                                                     1075.97      12.58
        ROUTED TO
+                    RR23C2     189.   13.25        32.         8.         3.      0.48
+                                                                                     1063.98      13.25
        ROUTED TO
+                    RR23C3     156.   13.92        32.         8.         3.      0.48
```

```
+                                                                                  1053.12      13.92

        HYDROGRAPH AT
+                       CR23C      734.   12.17        85.        22.         7.      0.58

        2 COMBINED AT
+                      CPC23C      734.   12.17       116.        30.        10.      1.06

        ROUTED TO
+                       STR23       37.   15.50        35.        24.        10.      1.06
+                                                                                     5.46      15.50

        ROUTED TO
+                      RSTR23       37.   15.58        35.        24.        10.      1.06

        HYDROGRAPH AT
+                       RR27C      460.   12.33        62.        16.         5.      0.48

        3 COMBINED AT
+                       CR27C     1190.   12.33       419.       289.       170.     11.77

        ROUTED TO
+                      RCR27C     1179.   12.42       418.       289.       170.     11.77

        ROUTED TO
+                      RCR27C     1164.   12.42       417.       289.       170.     11.77

        HYDROGRAPH AT
+                       RR35C     1694.   12.50       277.        69.        23.      1.89

        ROUTED TO
+                      RRS37C     1476.   13.08       276.        69.        23.      1.89
+                                                                                  1026.89      13.08

        HYDROGRAPH AT
+                       SA37C      571.   12.25        89.        25.         8.      0.59

        2 COMBINED AT
+                      CPS37C     1578.   13.08       363.        94.        31.      2.48

        ROUTED TO
+                      RAV431     1248.   14.25       357.        94.        31.      2.48
+                                                                                  1022.46      14.25

        HYDROGRAPH AT
+                      AVR43C     1009.   12.25       143.        38.        13.      1.03

        2 COMBINED AT
+                      CAV43C     1255.   14.25       485.       131.        44.      3.51
```

```
        HYDROGRAPH AT
+                    BR35CW     422.   12.33       68.       17.        6.     0.50

        HYDROGRAPH AT
+                    BR35C1     361.   12.58       79.       20.        7.     0.55

        2 COMBINED AT
+                    CPB352     731.   12.42      147.       37.       12.     1.05

        ROUTED TO
+                    RAV432     642.   13.08      147.       37.       12.     1.05
+                                                                                1042.09     13.08

        ROUTED TO
+                    RAV433     546.   13.75      144.       37.       12.     1.05
+                                                                                1029.00     13.75

        2 COMBINED AT
+                      C43C    1668.   14.25      625.      168.       56.     4.56

        ROUTED TO
+                    STOR43     100.   12.08      100.      100.       56.     4.56
+                                                                                  17.54     17.83

        HYDROGRAPH AT
+                      WC6A      17.   12.08        2.        0.        0.     0.01

        ROUTED TO
+                    RD35.2       7.   13.42        2.        0.        0.     0.01
+                                                                                1118.01     13.42

        ROUTED TO
+                    RD35.3       6.   14.58        2.        0.        0.     0.01
+                                                                                1089.79     14.58

        HYDROGRAPH AT
+                      WC7A      57.   12.17        7.        2.        1.     0.05

        ROUTED TO
+                    RD35.4      51.   12.42        7.        2.        1.     0.05
+                                                                                1126.41     12.42

        HYDROGRAPH AT
+                      WC8A     307.   12.25       51.       16.        5.     0.35

        ROUTED TO
+                    RD35.5     287.   12.33       51.       16.        5.     0.35
+                                                                                1137.78     12.33
```

```
        2 COMBINED AT
+                    CD35.3      338.   12.33        58.        18.        6.      0.40
        ROUTED TO
+                    RD35.6      336.   12.42        58.        18.        6.      0.40
+                                                                                  1101.97      12.42
        HYDROGRAPH AT
+                      WC9A       28.   12.17         4.         1.        0.      0.03
        ROUTED TO
+                    RD35.7       27.   12.25         4.         1.        0.      0.03
+                                                                                  1128.65      12.25
        HYDROGRAPH AT
+                     WC10A       28.   12.08         4.         1.        0.      0.02
        ROUTED TO
+                    RD35.8       26.   12.17         4.         1.        0.      0.02
+                                                                                  1132.27      12.17
        2 COMBINED AT
+                    CD35.5       52.   12.17         8.         2.        1.      0.05
        ROUTED TO
+                    RD35.9       50.   12.33         8.         2.        1.      0.05
+                                                                                  1115.17      12.33
        HYDROGRAPH AT
+                     WC11A      295.   12.17        55.        18.        6.      0.29
        ROUTED TO
+                    RD3510      274.   12.25        55.        18.        6.      0.29
+                                                                                  1131.90      12.25
        HYDROGRAPH AT
+                     WC12A      280.   12.17        37.        11.        4.      0.26
        ROUTED TO
+                    RD3511      262.   12.25        37.        11.        4.      0.26
+                                                                                  1143.99      12.25
        2 COMBINED AT
+                    CD35.7      536.   12.25        92.        30.       10.      0.55
        ROUTED TO
+                    RD3512      499.   12.33        92.        30.       10.      0.55
+                                                                                  1122.15      12.33
```

```
        2 COMBINED AT
+                       CD35.6      549.   12.33       100.        32.        11.      0.59
        ROUTED TO
+                       RD3513      530.   12.42       100.        32.        11.      0.59
+                                                                                   1101.99      12.42
        2 COMBINED AT
+                       CD35.4      867.   12.42       158.        49.        16.      1.00
        ROUTED TO
+                       RD3514      808.   12.67       158.        49.        16.      1.00
+                                                                                   1193.75      12.67
        HYDROGRAPH AT
+                        WC15A      411.   12.17        65.        22.         7.      0.36
        ROUTED TO
+                       RD3515      403.   12.17        65.        22.         7.      0.36
+                                                                                   1134.77      12.17
        HYDROGRAPH AT
+                         PM2A       68.   12.17         9.         2.         1.      0.07
        2 COMBINED AT
+                       CD35.8      471.   12.17        74.        24.         8.      0.43
        ROUTED TO
+                       RD3516      455.   12.25        74.        24.         8.      0.43
+                                                                                   1123.33      12.25
        HYDROGRAPH AT
+                        WC13A       16.   12.08         2.         1.         0.      0.01
        ROUTED TO
+                       RD3517       15.   12.33         2.         1.         0.      0.01
+                                                                                   1131.21      12.33
        HYDROGRAPH AT
+                        WC14A       37.   12.17         5.         1.         0.      0.05
        ROUTED TO
+                       RD3518       32.   12.58         5.         1.         0.      0.05
+                                                                                   1133.78      12.58
        HYDROGRAPH AT
+                         PM1A       64.   12.17         7.         2.         1.      0.07
```

```
        4 COMBINED AT
+                       CD35.9      542.   12.25        88.        28.         9.      0.56

        ROUTED TO
+                       RD3519      387.   12.50        88.        28.         9.      0.56
+                                                                                        1102.11      12.50

        HYDROGRAPH AT
+                        DR35C      435.   12.42        63.        16.         5.      0.60

        4 COMBINED AT
+                       CD35.2     1551.   12.58       310.        93.        31.      2.17

        ROUTED TO
+                          STG       50.   12.92        50.        49.        29.      2.17

        ROUTED TO
+                       RSTG39       50.   13.25        50.        49.        29.      2.17

        ROUTED TO
+                       RSTG43       50.   13.33        50.        49.        29.      2.17

        HYDROGRAPH AT
+                       SMA43C      168.   12.17        21.         5.         2.      0.13

        ROUTED TO
+                       RB43C2      152.   12.33        21.         6.         2.      0.13
+                                                                                        1043.99      12.33

        HYDROGRAPH AT
+                        BR43C      280.   12.50        57.        14.         5.      0.35

        3 COMBINED AT
+                       CBR43C      430.   12.50       120.        67.        35.      2.65

        ROUTED TO
+                       RBR43C      424.   12.58       120.        67.        35.      2.65

        2 COMBINED AT
+                        CST43      524.   12.58       220.       167.        91.      7.21

        ROUTED TO
+                       RAV43B      521.   12.67       219.       167.        91.      7.21
1
                                  SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
                                     (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
                                                                          INTERPOLATED TO
                                                                       COMPUTATION INTERVAL
          ISTAQ    ELEMENT      DT       PEAK    TIME TO     VOLUME      DT       PEAK    TIME TO     VOLUME
```

```
                                        PEAK                                  PEAK
                          (MIN)    (CFS)    (MIN)    (IN)    (MIN)    (CFS)    (MIN)     (IN)
          RSM3CE  MANE     2.41   238.76   726.66    2.46     5.00   237.13   725.00     2.46

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5869E+03 EXCESS=0.0000E+00 OUTFLOW=0.5869E+03 BASIN STORAGE=0.2739E-03 PERCENT ERROR=   0.0

          RCSM5C  MANE     1.40   250.10   713.57    2.37     5.00   250.00   720.00     2.37

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5985E+03 EXCESS=0.0000E+00 OUTFLOW=0.5985E+03 BASIN STORAGE=0.1593E-03 PERCENT ERROR=   0.0

           RC15E  MANE     5.00   272.87   710.00    2.35     5.00   272.87   710.00     2.35

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6005E+03 EXCESS=0.0000E+00 OUTFLOW=0.6005E+03 BASIN STORAGE=0.6653E-03 PERCENT ERROR=   0.0

          RCCBDE  MANE     5.00   301.73   720.00    2.30     5.00   301.73   720.00     2.30

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6100E+03 EXCESS=0.0000E+00 OUTFLOW=0.6099E+03 BASIN STORAGE=0.9898E-03 PERCENT ERROR=   0.0

           RCDIV  MANE     1.25    60.13   753.75   -1.00     5.00    59.36   760.00    -1.00

          RBR19C  MANE     5.00   659.86   740.00    2.23     5.00   659.86   740.00     2.23

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6367E+03 EXCESS=0.0000E+00 OUTFLOW=0.6366E+03 BASIN STORAGE=0.7955E-03 PERCENT ERROR=   0.0

           RCDIV  MANE     1.00   252.59   730.00   -1.00     5.00   252.59   730.00    -1.00

          RST274  MANE     4.45    44.96   850.19    1.33     5.00    44.96   850.00     1.33

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8413E+02 EXCESS=0.0000E+00 OUTFLOW=0.8413E+02 BASIN STORAGE=0.3951E-03 PERCENT ERROR=   0.0

           R35CE  MANE     3.16   301.08   726.11    1.32     5.00   297.51   725.00     1.32
```

```
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.9964E+02 EXCESS=0.0000E+00 OUTFLOW=0.9961E+02 BASIN STORAGE=0.4149E-03 PERCENT ERROR=   0.0

           RPB27C  MANE         5.00    262.05    935.00      1.82      5.00    262.05    935.00        1.82

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.9320E+03 EXCESS=0.0000E+00 OUTFLOW=0.9319E+03 BASIN STORAGE=0.3841E-01 PERCENT ERROR=   0.0

           RSA27C  MANE         2.31    722.64    745.33      1.78      5.00    722.53    745.00        1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.9727E+03 EXCESS=0.0000E+00 OUTFLOW=0.9727E+03 BASIN STORAGE=0.1660E-01 PERCENT ERROR=   0.0

           RSTR23  MANE         4.56     37.05    935.62      1.05      5.00     37.05    935.00        1.05

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5914E+02 EXCESS=0.0000E+00 OUTFLOW=0.5914E+02 BASIN STORAGE=0.3553E-03 PERCENT ERROR=   0.0

           RCR27C  MANE         2.42   1183.64    743.50      1.69      5.00   1178.83    745.00        1.69

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1063E+04 EXCESS=0.0000E+00 OUTFLOW=0.1062E+04 BASIN STORAGE=0.2787E-01 PERCENT ERROR=   0.0

           RCR27C  MANE         1.92   1165.85    745.66      1.69      5.00   1164.40    745.00        1.69

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1062E+04 EXCESS=0.0000E+00 OUTFLOW=0.1062E+04 BASIN STORAGE=0.1529E-01 PERCENT ERROR=   0.0

           RSTG39  MANE         5.00     50.39    795.00      1.59      5.00     50.39    795.00        1.59

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1847E+03 EXCESS=0.0000E+00 OUTFLOW=0.1847E+03 BASIN STORAGE=0.1427E-01 PERCENT ERROR=   0.0

           RSTG43  MANE         4.29     50.36    798.27      1.59      5.00     50.25    800.00        1.59

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1847E+03 EXCESS=0.0000E+00 OUTFLOW=0.1847E+03 BASIN STORAGE=0.3897E-02 PERCENT ERROR=   0.0

           RBR43C  MANE         4.00    424.00    756.00      1.58      5.00    423.96    755.00        1.58
```

```
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2239E+03 EXCESS=0.0000E+00 OUTFLOW=0.2238E+03 BASIN STORAGE=0.9655E-02 PERCENT ERROR=   0.0

            RAV43B  MANE         5.00    520.61    760.00      1.45      5.00    520.61    760.00        1.45

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5578E+03 EXCESS=0.0000E+00 OUTFLOW=0.5577E+03 BASIN STORAGE=0.9737E-02 PERCENT ERROR=   0.0


*** NORMAL END OF HEC-1 ***
```

DRAFT

Appendix D.6
27th Avenue Focus Alternative
100-Year Future Condition Model

```
1*****************************************                                                  ****************************************
 *                                       *                                                  *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                                                  *    U.S. ARMY CORPS OF ENGINEERS      *
 *              MAY   1991               *                                                  *    HYDROLOGIC ENGINEERING CENTER     *
 *           VERSION 4.0.1E              *                                                  *          609 SECOND STREET           *
 *                                       *                                                  *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   6/02/1997  TIME   9:01    *                                                  *           (916) 551-1748             *
 *                                       *                                                  *                                      *
 *****************************************                                                  ****************************************


                                                X     X  XXXXXXX   XXXXX          X
                                                X     X  X        X     X        XX
                                                X     X  X        X               X
                                                XXXXXXX  XXXX     X       XXXXX   X
                                                X     X  X        X               X
                                                X     X  X        X     X         X
                                                X     X  XXXXXXX   XXXXX         XXX


          THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

          THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
          THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
          NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
          DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
          KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM


1                                                  HEC-1 INPUT                                                  PAGE  1

         LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

            1          ID    MODIFICATIONS IN DECEMBER 1996
            2          ID    LAVEEN ADMS 100-YR 24-HR STORM
            3          ID    HIDDEN VALLEY WATERSHED/CHAMPION DRAIN WATERSHED
            4          ID    INPUT FILE NAME  273BASFU.DAT                        DATE: DECEMBER,1996
            5          ID    27th AVE., 3 BASIN ALTERNATIVE, FUTURE DEVELOPMENT w/ RETENTION
            6          ID    24-HOUR SCS TYPE II RAINFALL
                       *DIAGRAM
            7          IT       5                   2000
            8          IO       5

            9          KK    SM1C
           10          KM   SUB-BASIN SM1C-LAND USE- NATURAL DESERT(MOUNTAIN)
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KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
IN      30
BA   1.840
KM   RAINFALL DEPTH OF 4.20 WAS SPACIALLY REDUCED AS SHOWN BY THE PB RECORD
PB   3.780
KM   THE FOLLOWING PC RECORD USED A 24-HOUR SCS TYPE II STORM
PC    .000    .005    .011    .016    .022    .028    .035    .041    .048    .056
PC    .068    .071    .080    .089    .098    .109    .120    .133    .147    .163
PC    .181    .204    .235    .283    .663    .735    .772    .799    .820    .838
PC    .854    .868    .880    .891    .902    .912    .921    .929    .937    .945
PC    .952    .959    .965    .972    .978    .984    .989    .995   1.000
LG    .150    .346   3.800    .623  50.000
UC    .450    .220
UA       0       3       5       8      12      20      43      75      90      96
UA     100

KK   SM1AC
KM   SUB-BASIN SM1AC-LAND USE- NATURAL DESERT(MOUNTAIN)
KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
BA    .280
LG    .150    .343   4.050    .528  10.000
UC    .367    .288
UA       0       3       5       8      12      20      43      75      90      96
UA     100

KK    CSM1
KM   COMBINE FLOW FROM SUB-BASIN SM1C WITH SM1AC AT COMPUTATOIN
KM   POINT CSM1
HC       2
*

KK    RSM1
KM   ROUTE FLOW FROM COMPUTATION POINT CSM1  TO COMPUTATION POINT CSM2
RS       2    ELEV  1375.5
RC   0.035   0.035   0.035    4300   0.017
RX       0      90     160     230     310     380     490     590
RY    1390    1380    1377  1375.5    1377    1380    1383    1390
*
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1 HEC-1 INPUT PAGE 2

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LINE    ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK    SM2C
KM   SUB-BASIN SM2C-LAND USE- NATURAL DESERT(MOUNTAIN)
KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
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```
                 *      1       2
50               BA   2.190
51               LG    .150    .350   3.310    .820  86.000
52               UC    .383    .134
53               UA       0       3       5       8      12      20      43      75      90      96
54               UA     100
                 *

55               KK    CSM2
56               KM   COMBINE RUNOFF FROM SUB-BASIN SM2C TO ROUTED FLOW FROM COMPUTATION
57               KM   POINT CSM1
58               HC       2

59               KK   RDENT
60               KM   ROUTE INFLOW HYDROGRAPH THROUGH SOUTH MOUNTAIN DETENTION BASIN
61               RS       1    ELEV    1292
62               SA    2.30    7.80   15.91   19.96   24.08   28.27   30.45   31.91
63               SE    1292    1294    1300    1305    1310    1315    1318    1320
64               SL    1298    7.06    0.58     0.5
65               SS    1318     200     2.7     1.5

66               KK    RSM2
67               KM   ROUTE FLOW FROM COMPUTATOIN POINT CSM2 TO COMPUTATOIN POINT CSM3
68               RS      12    ELEV    1226
69               RC   0.040   0.040   0.040    6600   0.019    1228
70               RX       0      70     100     140     160     190     240     320
71               RY    1228  1227.5    1227    1226    1228  1228.5    1229    1230
                 *
                 *  REVISIONS DUE TO PROPOSED IMPROVEMENTS.

72               KK   SM3CE
73               KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
74               BA     .17
75               LG     .16    .348    3.85    .607     1.5
76               UC   0.227   0.158
77               UA       0       3       5       8      12      20      43      75      90      96
78               UA     100
                 *

79               KK    C3CE
80               KM   COMBINE HYDROGRAPHS
81               HC       2
                 *

82               KK  RSM3CE
83               KM   ROUTE RUNOFF FROM SM3CE TO 7th AVE & DOBBINS
84               RD    1980  0.0066   0.014            CIRC     4.5
                 *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 85           KK   SM4CE
 86           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 87           BA     .05
 88           LG    0.26    0.35     4.6    .592    14.4
 89           UC   0.087   0.081
 90           UA       0       5      16      30      65      77      84      90      94      97
 91           UA     100
              *

 92           KK    SM5C
 93           KM   SUB-BASIN SM5C-LAND USE-URBAN
 94           KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 95           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 96           BA    .200
 97           LG    .200    .349   4.300    .555  18.000
 98           UC    .383    .355
 99           UA       0       5      16      30      65      77      84      90      94      97
100           UA     100
              *

101           KK   CSM5C
102           KM   COMBINE HYDROGRAPHS FROM SM3CE, SM4CE, & SM5C
103           HC       3
              *

104           KK  DIVM5C
105           KM        Divert flow in excess of 250 cfs - Storm Drain Capacity
106           DT  DCSM5C
107           DI       0     250     500
108           DQ       0       0     250
              *
              * FLOW FROM SM5C ROUTED THROUGH PIPE NORTH ALONG 7th AVE.

109           KK  RCSM5C
110           KM   ROUTE FLOW THROUGH PIPE TO BOTTOM OF SMA15E
111           RD    1200   .0066    .014            CIRC       6
              *

112           KK  SMA15E
113           KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
114           BA     .07
115           LG      .3     .25    4.35      .4       5
116           UC     .25     0.2
117           UA       0       5      16      30      65      77      84      90      94      97
118           UA     100
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                    *

          119       KK    C15E
          120       KM   COMBINE HYDROGRAPHS FROM SMA15E & RCSM5C
          121       HC       2
                    *
1                                          HEC-1 INPUT                                          PAGE  4

         LINE       ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


          122       KK  DIV15E
          123       KM        Divert flow in excess of 270 cfs - Storm Drain Capacity
          124       DT   DC15E
          125       DI       0     270     540
          126       DQ       0       0     270
                    *

          127       KK   RC15E
          128       KM   ROUTE HYDROGRAPH FROM C15E TO BOTTOM OF CBDE
          129       RD    4710   .0055    .014            CIRC       7
                    *

          130       KK    CBDE
          131       KM   BASIN EAST OF CENTRAL 7th AVE FROM BASELINE TO NORTH OF DOBBINS
          132       BA    0.17
          133       LG     .35     .25     4.3     .33       9
          134       UC     .65     .65
          135       UA       0       3       9      18      28      42      59      73      87      92
          136       UA     100
                    *

          137       KK   CCBDE
          138       KM   COMBINE HYDROGRAPHS
          139       HC       2
                    *

          140       KK  DIVbde
          141       KM        Divert flow in excess of 300 cfs - Storm Drain Capacity
          142       DT  DCCBDE
          143       DI       0     300     900
          144       DQ       0       0     600
                    *

          145       KK  RCCBDE
          146       KM   ROUTE HYDROGRAPH THROUGH PIPE TO BOTTOM OF BR19C
          147       RD    5750   .0032    .014            CIRC       8
                    *
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 148          KK  RETCBD
 149          KM        Retrieve Diverted Hydrograph DCCBDE
 150          DR  DCCBDE
              *

 151          KK   RCDIV
 152          KM        Route combined diverted hydrographs to BR19C
 153          RD    5200   0.008   0.030            TRAP    10.0    20.0
              *

 154          KK   BR19C
 155          KM   SUB-BASIN BR19C-LAND USE - 180 ACRES OF FUTURE DEVELOPMENT
 156          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 157          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 158          BA    .390
 159          LG      .3     .25     4.4     .39       5
1                                          HEC-1 INPUT                                          PAGE  5

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 160          UC    .504    .298
 161          UA       0       5      16      30      65      77      84      90      94      97
 162          UA     100
              *

 163          KK  RETAIN
 164          KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM BR19C
 165          DT  RETAIN      20
 166          DI       0     500    2000
 167          DQ       0     500    2000
              *

 168          KK  CBR19C
 169          KM   COMBINE HYDROGRAPHS FROM BR19C & ROUTED FLOW
 170          HC       3
              *

 171          KK  RBR19C
 172          KM   ROUTE HYDROGRAPH THROUGH PIPE TO DETENTION BASIN @ 27th & BASELINE
 173          KM   USE DIVERT ROUTINE TO PASS 156 CFS TO CPB27C
 174          RD    4800   .0032    .014            CIRC      10
              *

 175          KK  DIV19C
 176          KM   DIVERT 156 CFS TO CPB27C
 177          DT   D1927             156
 178          DI       0     156    5000
 179          DQ       0     156     156
              *
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 180          KK  RETM5C
 181          KM        Retrieve Diverted Hydrograph DCSM5C
 182          DR  DCSM5C
              *

 183          KK  RET15E
 184          KM        Retrieve Diverted Hydrograph DC15E
 185          DR   DC15E
              *

 186          KK  COMDIV
 187          KM        Combine diverted hydrographs north of Dobbins and 7th Ave.
 188          HC       2
              *

 189          KK   RCDIV
 190          KM        Route combined diverted hydrographs to SMA15W
 191          RD    3600   0.015   0.030            TRAP    10.0    20.0
              *
1                                        HEC-1 INPUT                                          PAGE  6

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 192          KK  SMA15W
 193          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 194          BA    0.29
 195          LG      .3     .25    4.65     .33       5
 196          UC     .31    0.15
 197          UA       0       5      16      30      65      77      84      90      94      97
 198          UA     100
              *

 199          KK  RETAIN
 200          KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM SMA15W
 201          DT  RETAIN       6
 202          DI       0     500    2000
 203          DQ       0     500    2000
              *

 204          KK  CSMA15W
 205          KM        Combine flows at SMA15W
 206          HC       2
              *

 207          KK  RSM19C
 208          KM   ROUTE FLOW FROM SUB-BASIN SA15C TO COMPUTATION POINT CPS19C
 209          RS       4    ELEV  1139.2
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210          RC   0.070   0.070   0.070    2030    0.01    1140
211          RX       0      50     110     160     210     260     350     430
212          RY    1140  1139.5  1139.2  1139.2  1139.2  1139.2  1139.5    1140
             *

213          KK  SMA19C
214          KM   SUB-BASIN SMA19C-FULLY DEVELOPED
215          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
216          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
217          BA    .156
218          LG      .3     .25    4.15     .45       5
219          UC    .829   1.205
220          UA       0       5      16      30      65      77      84      90      94      97
221          UA     100
             *

222          KK  RETAIN
223          KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM SMA19C
224          DT  RETAIN       7
225          DI       0     500    2000
226          DQ       0     500    2000
             *

227          KK  CPS19C
228          KM   COMBINE ROUTED FLOW FROM SUB-BASIN SMA15C TO RUNOFF FROM SUB-BASIN SMA19C
229          HC       2
             *
1                                        HEC-1 INPUT                                        PAGE  7

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


230          KK  RRB27C
231          KM   ROUTE FLOW FROM COMPUTATION POINT CPS19C TO COMPUTATION POINT CPB27C
232          RS      22    ELEV  1107.8
233          RC   0.070   0.070   0.070    7400  0.0090    1110
234          RX       0     260     550     770     920    1170    1320    1500
235          RY    1110    1109    1109    1108    1108  1107.8    1108    1110
             *
             * SM3C SPLIT INTO SM3CE & SM3CW DUE TO PROPOSED IMPROVEMENTS

236          KK   SM3CW
237          BA     .31
238          LG     .16   0.348    3.85   0.607     1.5
239          UC   0.415   0.289
240          UA       0       3       5       8      12      20      43      75      90      96
241          UA     100
             *
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242          KK    RSM3
243          KM   ROUTE FLOW FROM COMPUTATION POINT CSM3 TO COMPUTATION POINT CSM4
244          RS       4    ELEV    1176
245          RC   0.040   0.040   0.040    3000  0.0095
246          RX       0     120     190     270     330     400     470     530
247          RY    1178  1177.5    1177    1176    1176    1177  1177.5    1178
             *
             * SM4C SPLIT INTO SM4CE & SM4CW DUE TO PROPOSED IMPROVEMENTS

248          KK   SM4CW
249          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
250          BA     .19
251          LG     .26     .35    3.85   0.592    14.4
252          UC     .33    .306
253          UA       0       5      16      30      65      77      84      90      94      97
254          UA     100
             *

255          KK    RSM4
256          KM   ROUTE FLOW FROM SUB-BASIN SM4C TO COMPUTATION POINT CSM4
257          RS       2    ELEV    1168
258          RC   0.035   0.035   0.035    1200   0.012
259          RX       0      50      80     110     130     160     180     200
260          RY    1170  1169.5    1169  1168.5    1168  1168.5    1169    1170
             *

261          KK   DRW2C
262          KM   SUB-BASIN DRW2C-LAND USE- NATURAL DESERT(HILLSLOPE,MOUNTAIN)
263          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
264          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
265          BA    .530
266          LG    .150    .340   3.250    .859  30.000
267          UC    .517    .377
268          UA       0       3       5       8      12      20      43      75      90      96
269          UA     100
             *
1                                        HEC-1 INPUT                                        PAGE  8

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


270          KK  DRWC1C
271          KM   FULLY DEVELOPED
272          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
273          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
274          BA   .120
275          LG     .43     .25       4     .48       0
276          UC    .604    .725
277          UA       0       5      16      30      65      77      84      90      94      97
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          UA     100
          *

          KK  RETAIN
          KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM DRWC1C
          DT  RETAIN     4.5
          DI       0     500    2000
          DQ       0     500    2000
          *

          KK    CSM4
          KM   COMBINE RUNOFF FROM SUB-BASINS DRW2C AND DRWC1C WITH ROUTED FLOW FROM SM4C
          KM   AND COMPUTATION POINT CSM3
          HC       4

          KK    RSM5
          KM   ROUTE FLOW FROM COMPUTATION POINT CSM4 TO COMPUTATION POINT CSM5
          RS       1    ELEV    1156
          RC   0.045   0.045   0.045    1800  0.0078
          RX       0      80     130     160     180     190     220     260
          RY    1160    1159  1158.5    1158    1156    1156    1158    1160
          *

          KK    DR1C
          KM   SUB-BASIN DR1C-LAND USE-NATURAL DESERT(HILLSLOPE)
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          BA    .160
          LG    .150    .265   5.300    .198    .000
          UC    .417    .442
          UA       0       3       5       8      12      20      43      75      90      96
          UA     100
          *

          KK    WC1A
          KM   SUB-BASIN WC1A-LAND USE- NATURAL DESERT(HILLSLOPE)
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          BA    .250
          LG    .150    .264   4.680    .217    40.0
          UC    .400    .404
          UA       0       3       5       8      12      20      43      75      90      96
          UA     100
          *
1                                   HEC-1 INPUT                                    PAGE  9

LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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KK    RSM6
KM   ROUTE FLOW FROM SUB-BASIN WC1A TO COMPUTATION POINT CPDR2C
RS       1    ELEV    1146
RC   0.045   0.045   0.045    1150   0.012    1150
RX       0      30      50      70      90     110     130     170
RY    1152    1151    1150    1148    1146    1146    1148    1150
*

KK    DR2C
KM   SUB-BASIN DR2C-LAND USE- NATURAL DESERT(HILLSLOPE),AGRICULTURAL
KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
BA    .050
LG    .150    .325   4.255    .423    .000
UC    .350    .318
UA       0       3       5       8      12      20      43      75      90      96
UA     100
*

KK  CPDR2C
KM   COMBINE FLOW FROM SUB-BASINS DR2C AND DR1C TO ROUTED FLOW FROM SUB-BASIN WC1A
KM   AND COMPUTATION POINT CSM4
HC       4
*

KK  RRB27C
KM   ROUTE FLOW FROM COMPUTATION POINT CPDR2C TO COMPUTATION POINT CPB27C
RS      15    ELEV  1107.8
RC   0.070   0.070   0.070    7400   0.009    1110
RX       0     260     550     770     920    1170    1320    1500
RY    1110    1109    1109    1108    1108  1107.8    1108    1110
*

KK   BR27C
KM   SUB-BASIN BR27C-LAND USE - FULLY DEVELOPED
KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
BA    .780
LG      .3     .25     4.1     .46       5
UC     .75    .592
UA       0       5      16      30      65      77      84      90      94      97
UA     100
*

KK  RETAIN
KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM BR27C
DT  RETAIN      34
DI       0     500    2000
DQ       0     500    2000
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                    *
1                                          HEC-1 INPUT                                                  PAGE 10

          LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


           351      KK    C27C
           352      KM   COMBINE HYDROGRAPHS FLOWING INTO DETENTION BASIN
           353      HC       4
                    *

           354      KK    WC2A
           355      KM   SUB-BASIN WC2A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
           356      KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
           357      KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
           358      BA    .080
           359      LG    .150    .251   8.600    .070    .000
           360      UC    .383    .530
           361      UA       0       3       5       8      12      20      43      75      90      96
           362      UA     100
                    *

           363      KK  RD27.1
           364      KM   ROUTE FLOW FROM SUB-BASIN WC2A  TO COMPUTATION POINT CD27.1
           365      RS       1    ELEV    1147
           366      RC   0.035   0.035   0.035     960   0.016    1150
           367      RX       0      30      40      55      70      85     105     130
           368      RY    1150    1150    1148    1147    1148    1149    1150    1151
                    *

           369      KK  WC2.1A
           370      KM   SUB-BASIN WC2.1A-LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
           371      KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
           372      KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
           373      BA    .080
           374      LG    .150    .290   4.000    .520    .000
           375      UC    .350    .310
           376      UA       0       3       5       8      12      20      43      75      90      96
           377      UA     100
                    *

           378      KK  RD27.2
           379      KM   ROUTE FLOW FROM SUB-BASIN WC2.1A TO COMPUTATION POINT CD27.1
           380      RS       1    ELEV    1148
           381      RC   0.035   0.035   0.035    1000   0.015    1153
           382      RX       0      35      75     100     135     145     165     195
           383      RY    1153    1152    1150    1149    1148    1150    1152    1154
                    *
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          KK  CD27.1
          KM   COMBINE ROUTED FLOW FROM SUB-BASINS WC2A AND WC2.1A
          HC       2
          *

          KK  RD27.3
          KM   ROUTE FLOW FROM COMPUTATION POINT CP27.1 TO COMPUTATION POINT CP27.2
          RS       1    ELEV    1141
          RC   0.035   0.035   0.035     450   0.011    1144
          RX       0      50     115     125     140     150     160     180
          RY    1144    1143    1142    1141    1142    1144    1146    1148
          *
1                                   HEC-1 INPUT                                    PAGE 11

LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

          KK    WC3A
          KM   SUB-BASIN WC3A--LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          BA    .014
          LG    .150    .250   8.600    .066    .000
          UC    .300    .467
          UA       0       3       5       8      12      20      43      75      90      96
          UA     100
          *

          KK  RD27.4
          KM   ROUTE FLOW FROM SUB-BASIN WC3A TO COMPUTATION POINT CD27.2
          RS       1    ELEV  1141.8
          RC   0.035   0.040   0.035     640   0.022
          RX       0      40      80     100     110     120     150     200
          RY    1145    1144    1143    1142  1141.8    1142    1144    1145
          *

          KK  CD27.2
          KM   COMBINE ROUTED FLOWS FROM SUB-BASIN WC3A AND COMPUTATION POINT CD27.1
          HC       2
          *

          KK  RD27.5
          KM   ROUTE FLOW FROM COMPUTATION POINT CD27.2 TO COMPUTATION POINT CD27.3
          RS       1    ELEV    1121
          RC   0.035   0.035   0.035    1400   0.014
          RX       0      40     100     160     175     190     240     260
          RY    1126    1124    1123    1122    1121    1122    1124    1126
          *
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```
 417          KK    WC4A
 418          KM   SUB-BASIN WC4A -LAND USE- DESERT MOUNTAIN, DESERT HILLS;  MINOR DEVELOPMENT
 419          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 420          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 421          BA    .360
 422          LG    .150    .297   3.950    .546  25.000
 423          UC    .383    .273
 424          UA       0       3       5       8      12      20      43      75      90      96
 425          UA     100
              *

 426          KK  RD27.6
 427          KM   ROUTE FLOW FROM SUB-BASIN WC4A TO COMPUTATION POINT CD27.3
 428          RS       3    ELEV    1140
 429          RC   0.035   0.035   0.035    2200   0.016
 430          RX       0      60     100     180     225     300     435     500
 431          RY    1142    1141  1140.5    1140    1140  1140.5    1141    1142
              *
1                                          HEC-1 INPUT                                          PAGE 12

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 432          KK  CD27.3
 433          KM   COMBINE ROUTED FLOWS FROM COMPUTATION POINT CD27.2 AND SUB-BASIN WC4A
 434          HC       2
              *

 435          KK  RD27.7
 436          KM   ROUTE FLOW FROM COMPUTATION POINT CD27.3 TO COMPUTATION POINT CD27.4
 437          RS       2    ELEV    1115
 438          RC   0.040   0.050   0.035     950   0.006
 439          RX       0      20     135     170     220     280     400     460
 440          RY  1116.5    1116  1115.5    1115  1115.5  1115.8    1116  1116.5
              *

 441          KK   DR27C
 442          KM   SUB-BASIN DR27C-LAND USE- AGRICULTURE, DESERT HILLS; MINOR DEVELOMENT
 443          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 444          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 445          BA    .230
 446          LG    .210    .345   3.996    .609    .000
 447          UC    .467    .352
 448          UA       0       3       5       8      12      20      43      75      90      96
 449          UA     100
              *

 450          KK    WC5A
 451          KM   SUB-BASIN WC5A -LAND USE- DESERT HILLS; MINOR DEVELOMENT
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452          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
453          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
             *      1       2
454          BA    .420
455          LG    .150    .346   2.880   1.050  28.000
456          UC    .500    .359
457          UA       0       3       5       8      12      20      43      75      90      96
458          UA     100
             *

459          KK  CD27.4
460          KM   COMBINE RUNOFF FROM SUB-BASIN DR27C WITH ROUTED FLOW FROM COMPUTATION POINT
461          KM   CD27.3 & WC5A
462          HC       3
             *
             * PROPOSED DETENTION BASIN

463          KK  ST27.4
464          KM   PROPOSED DETENTION BASIN AT 27th & DOBBINS, 36" RCP OUTLET
465          KO       3
466          RS       1    STOR
467          SV       0    56.6   115.4
468          SQ       0      38      80
469          SE       0       3       6
             *
1                                          HEC-1 INPUT                                          PAGE 13

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


470          KK  RST274
471          KM   ROUTE DISCHARGE FROM DETENTION BASIN TO BR35CE
472          RD    2520   .0051    .012            CIRC       3
             *
             *  BASIN BR35C2 SPLIT DUE TO PROPOSED IMPROVEMENT

473          KK  BR35CE
474          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FO RTHIS BASIN
475          BA     .23
476          LG      .3     .25    4.15     .45       5
477          UC      .5     .36
478          UA       0       5      16      30      65      77      84      90      94      97
479          UA     100
             *

480          KK  RETAIN
481          KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM BR35CE
482          DT  RETAIN      11
483          DI       0     500    2000
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        484         DQ       0     500    2000
                    *

        485         KK   C35CE
        486         KM   COMBINE HYDROGRAPHS FROM C35CE & ST27C
        487         HC       2
                    *

        488         KK   R35CE
        489         KM   ROUTE HYDROGRAPH THROUGH PIPE TO CPB27C (27th & BASELINE)
        490         RD    2450  0.0051    .014            CIRC     4.5
                    *

        491         KK   D35CE
        492         KM   DIVERT 43 CFS TO 27th & BASELINE, REST INTO BASIN
        493         DT   D35CE             156
        494         DI       0      43    5000
        495         DQ       0      43      43
                    *

        496         KK  C27BAS
        497         KM   COMBINE HYDROGRAPH FOR ROUTING THROUGH DETENTION BASIN @ 27th & BASELINE
        498         HC       2
                    *  PROPOSED DETENTION BASE @ 27th & BASELINE

        499         KK   ST27C
        500         KM   DETENTION BASIN 27th & BASELINE W/ 36" RCP OUTLET
        501         KO       3
        502         RS       1    STOR
        503         SV       0   116.3   274.9
        504         SQ       0      38      90
        505         SE       0       3       7
                    *
1                                          HEC-1 INPUT                                          PAGE 14

       LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


        506         KK   D1927
        507         KM   RETREIVE 156 CFS FROM DIV1927
        508         DR   D1927
                    *

        509         KK   D35CE
        510         KM   RETREIVE 43 CFS FROM D35CE
        511         DR   D35CE
                    *

        512         KK  CPB27C
```

```
          513          KM   COMBINE HYDROGRAPHS FOR ROUTING TO 27th & SOUTHERN
          514          HC       3
                       *

          515          KK  RPB27C
          516          KM   ROUTE HYDROGRAPH FROM 27th & BASELINE THROUGH PIPE TO 27th & SOUTHERN
          517          RD    5400  0.0044   0.012            CIRC     5.5
                       *

          518          KK   SA27C
          519          KM   SUB-BASIN SA27C-LAND USE - 361 ACRES OF FUTURE DEVELOPMENT
          520          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          521          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          522          BA    .623
          523          LG      .3     .25     4.5     .42      13
          524          UC    .729    .477
          525          UA       0       5      16      30      65      77      84      90      94      97
          526          UA     100
                       *

          527          KK  RETAIN
          528          KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM SA27C
          529          DT  RETAIN      34
          530          DI       0     500    2000
          531          DQ       0     500    2000
                       *

          532          KK  CSA27C
          533          KM   COMBINE HYDROGRAPHS @ 27th & SOUTHERN
          534          HC       2
                       *

          535          KK  RSA27C
          536          KM   ROUTE COMBINED HYDROGRAPHS TO BOTTOM OF BASIN RR27C
          537          RD    2520  0.0044   0.012            CIRC      10
                       *

          538          KK   SA19C
          539          KM    !!!!!!! START CHAMPION DRAIN WATERSHED  !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
          540          KM   SUB-BASIN SA19C-LAND USE- 50 ACRES OF FUTURE DEVELOPMENT
          541          BA    .480
          542          LG      .3     .25     4.5     .42       0
          543          UC    .771    .623
1                                                  HEC-1 INPUT                                                  PAGE 15

         LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

          544          UA       0       5      16      30      65      77      84      90      94      97
          545          UA     100
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*

KK  RETAIN
KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM SA19C
DT  RETAIN       5
DI       0     500    2000
DQ       0     500    2000
*

KK  DSA19C
KM   DIVERT CAPACITY OF STORMDRAIN AT CONCENTRARION POINT
DT   SA19C
DI      10      30      70     100     200     300
DQ      10      30      70      70      70      70
*

KK  RR23C1
KM   ROUTE FLOW FROM SUB-BASIN SA19C TO COMPUTATION POINT CPC23C ( 1ST REACH )
RS       4    ELEV  1075.8
RC   0.035   0.035   0.035    1200  0.0083    1076
RX       0      50     120     220    1020    1080    1180    1250
RY    1076  1075.8  1075.8  1075.8  1075.8  1075.8  1075.8    1076
*

KK  RR23C2
KM   ROUTE FLOW FROM SUB-BASIN SA19C TO COMPUTATION POINT CPC23C ( 2ND REACH )
RS       8    ELEV  1063.5
RC   0.100   0.100   0.100    1600  0.0088    1066
RX       0     150     560     820    1230    1470    1700    1870
RY    1066    1064    1064  1063.6  1063.5    1064    1064    1066
*

KK  RR23C3
KM   ROUTE FLOW FROM SUB-BASIN SA19C TO COMPUTATION POINT CPC23C ( 3RD REACH )
RS      10    ELEV  1052.8
RC   0.070   0.070   0.070    1900  0.0053    1056
RX       0      40     110     590    1210    1490    1770    2040
RY    1058    1054    1054  1052.8  1052.8    1054  1054.8    1056
*

KK   CR23C
KM   SUB-BASIN CR23C-LAND USE- 110 ACRES OF FUTURE DEVELOPMENT
KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
BA    .580
LG     .25     .23     6.2     .21      27
UC    .479    .239
UA       0       5      16      30      65      77      84      90      94      97
UA     100
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                    *
1                                                HEC-1 INPUT                                                PAGE 16

        LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

         583        KK  RETAIN
         584        KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM CR23C
         585        DT  RETAIN      17
         586        DI       0     500    2000
         587        DQ       0     500    2000
                    *

         588        KK  CPC23C
         589        KM    COMBINE ROUTED FLOW FROM SUB-BASIN SA19C TO RUNOFF FROM SUB-BASIN CR23C
         590        HC       2
                    *
                    *  PROPOSED DETENTION BASIN

         591        KK   STR23
         592        KM   PROPOSED DETENTION BASIN, ASSUMES 5:1 SS, 24" RCP OUTLET W/ INLET CONTROL
         593        KO       3
         594        RS       1    STOR
         595        SV       0      16      33      51      70
         596        SQ       0      14      29      40      47
         597        SE       0       2       4       6       8
                    *

         598        KK  RSTR23
         599        KM   ROUTE DISCHARGE FROM BASIN THROUGH PIPE TO 27th
         600        RD    2640   0.005    .012            CIRC       3
                    *

         601        KK   RR27C
         602        KM   SUB-BASIN RR27C-LAND USE- FULLY DEVELOPED
         603        KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
         604        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
         605        BA    .480
         606        LG     .23     .15       7     .15      35
         607        UC    .375    .189
         608        UA       0       5      16      30      65      77      84      90      94      97
         609        UA     100
                    *

         610        KK  RETAIN
         611        KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM RR27C
         612        DT  RETAIN      26
         613        DI       0     500    2000
         614        DQ       0     500    2000
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                    *

     615            KK   CR27C
     616            KM   COMBINE HYDROGRAPHS
     617            HC       3
                    *
1                                          HEC-1 INPUT                                          PAGE 17

    LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


     618            KK  RCR27C
     619            KM   ROUTE COMBINED HYDROGRAPHS THROUGH 8'x6' RCB TO 27th & BROADWAY
     620            RD    2520   0.005    .014            DEEP       8
                    *

     621            KK  RCR27C
     622            KM   ROUTE HYDROGRAPH THROUGH EX. 108" SD TO SLAT RIVER
     623            RD    1560   .0017    .012            CIRC       9
                    *

     624            KK   RR35C
     625            KM   SUB-BASIN RR35C-LAND USE - 770 ACRES OF FUTURE DEVELOPMENT
     626            KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
     627            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
     628            BA   1.890
     629            LG     .27     .25     5.4     .27      24
     630            UC    .746    .228
     631            UA       0       5      16      30      65      77      84      90      94      97
     632            UA     100
                    *

     633            KK  RETAIN
     634            KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM RR35C
     635            DT  RETAIN     110
     636            DI       0     500    3000
     637            DQ       0     500    3000
                    *

     638            KK  RRS37C
     639            KM   ROUTE FLOW FROM COMPUTATION POINT CPR35C TO COMPUTATION POINT CPS37C
     640            RS       8    ELEV    1025
     641            RC    0.10    0.10    0.10    2400  0.0025
     642            RX       0     280     470     630     700     840    1390    1860
     643            RY    1028    1026    1026    1025    1025    1025    1026    1028
                    *

     644            KK   SA37C
     645            KM   SUB-BASIN SA37C-LAND USE- 156 ACRES OF FUTURE DEVELOPMENT
```

```
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          BA    .590
          LG     .29     .19     6.6     .17      17
          UC    .708    .316
          UA       0       5      16      30      65      77      84      90      94      97
          UA     100
          *

          KK  RETAIN
          KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM SA37C
          DT  RETAIN      23
          DI       0     500    2000
          DQ       0     500    2000
          *
1                                   HEC-1 INPUT                                          PAGE 18

LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


          KK  CPS37C
          KM    COMBINE ROUTED FLOW FROM COMPUTATION POINT CPS37C WITH RUNOFF FROM SUB-
          KM    BASIN SA37C
          HC       2
          *

          KK  RAV431
          KM   ROUTE FLOW FROM COMPUTATION POINT CPS37C TO COMPUTATION POINT CAV43C
          RS      15    ELEV  1020.6
          RC    0.10    0.10    0.10    3200  0.0012
          RX       0     380     620     980    1320    1560    1700    2200
          RY  1022.8    1021  1020.6  1020.9  1021.4  1021.6  1021.8  1022.8
          *

          KK  AVR43C
          KM   SUB-BASIN AVR43C -LAND USE- 240 ACRES OF FUTURE DEVELOPMENT
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          BA   1.030
          LG     .29     .25     5.4     .27      17
          UC    .667    .297
          UA       0       5      16      30      65      77      84      90      94      97
          UA     100
          *

          KK  RETAIN
          KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM AVR43C
          DT  RETAIN      32
          DI       0     500    2000
```

```
          DQ       0     500    2000
          *

          KK  CAV43C
          KM   COMBINE ROUTED FLOW FROM COMPUTATION POINT CPS37C, AVR43C
          HC       2
          *

          KK  BR35CW
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          BA      .5
          LG     .28     .25    4.55     .42      22
          UC     .67     .47
          UA       0       5      16      30      65      77      84      90      94      97
          UA     100
          *

          KK  RETAIN
          KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM BR35CW
          DT  RETAIN      10
          DI       0     500    2000
          DQ       0     500    2000
          *
1                                   HEC-1 INPUT                                          PAGE 19

LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

          KK  BR35C1
          KM    SUB-BASIN BR35C1-LAND USE- 200 ACRES OF FUTURE DEVELOPMENT
          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
          BA    .550
          LG     .23     .25     4.5     .44       0
          UC    .808    .571
          UA       0       5      16      30      65      77      84      90      94      97
          UA     100
          *

          KK  RETAIN
          KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM BR35C1
          DT  RETAIN      21
          DI       0     500    2000
          DQ       0     500    2000
          *

          KK  CPB352
          KM    COMBINE RUNOFF FROM BR35CW, BR35C1, CAV43C
          HC       2
```

```
                 *

714              KK  RAV432
715              KM   ROUTE FLOW FROM COMPUTATION POINT CPB352 TO COMPUTATION POINT CAV43C( 1ST.
716              KM   REACH
717              RS       9    ELEV  1041.2
718              RC    0.07    0.07    0.07    3400  0.0056
719              RX       0      90      91     360     640    1015    1016    1475
720              RY    1044    1042    1042  1041.2  1041.2    1042    1042    1044
                 *

721              KK  RAV433
722              KM   ROUTE FLOW FROM COMPUTATION POINT CPB352 TO COMPUTATION POINT CAV43C (2ND.
723              KM   REACH )
724              RS       8    ELEV    1028
725              RC    0.07    0.07    0.07    3000  0.0060
726              RX       0     300     301     570     630    1220    1400    1650
727              RY    1030    1029    1029    1028    1028    1029    1029    1030
                 *

728              KK    C43C
729              KM   COMBINE HYDROGRAPHS FROM CAV43C & CPB352
730              HC       2
                 *
                 * PROPOSED DETENTION BASIN

731              KK  STOR43
732              KM   PROPOSED BASIN AT THE CORNER OF 43RD AVE AND SOUTHERN
733              KM   DATA IS APPROXIMATE ONLY
734              KO       3
735              RS       1    STOR
736              SV       0      15     300     319
737              SQ       0     100     100    1500
1                                            HEC-1 INPUT                                          PAGE 20

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

738              SE       0      .5      20      21
                 *

739              KK    WC6A
740              KM   SUB-BASIN WC6A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
741              KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
742              KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
743              BA    .014
744              LG    .150    .270   3.750    .293    .000
745              UC    .233    .259
746              UA       0       3       5       8      12      20      43      75      90      96
747              UA     100
```

```
                 *

 748             KK  RD35.2
 749             KM   ROUTE RUNOFF FROM SUB-BASIN WC6A TO COMPUTATION POINT CD35.1
 750             RS      13    ELEV  1117.8
 751             RC   0.070   0.070   0.070    3800   0.015
 752             RX       0     130     240     280     340     440     530     655
 753             RY    1122    1120    1118  1117.8    1118    1119    1120    1122
                 *

 754             KK  RD35.3
 755             KM   ROUTE FLOW FROM COMPUTATION POINT CD35.1 TO COMPUTATION POINT CD35.2
 756             RS       6    ELEV  1089.6
 757             RC   0.035   0.035   0.035    2480   0.005  1090.5
 758             RX       0     100     200     350     435     480     500     525
 759             RY    1092    1091    1090  1089.8  1089.7  1089.6    1090  1090.5
                 *

 760             KK    WC7A
 761             KM   SUB-BASIN WC7A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
 762             KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 763             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 764             BA    .050
 765             LG    .150    .270   7.000    .141    .000
 766             UC    .317    .332
 767             UA       0       3       5       8      12      20      43      75      90      96
 768             UA     100
                 *

 769             KK  RD35.4
 770             KM   ROUTE RUNOFF FROM SUB-BASIN WC7A TO COMPUTATION POINT CD35.3
 771             RS       4    ELEV  1125.8
 772             RC   0.035   0.035   0.035    2800   0.018  1128.5
 773             RX       0     100     170     240     250     260     330     360
 774             RY    1129    1128    1127    1126  1125.8    1126    1128  1128.5
                 *

 775             KK    WC8A
 776             KM   SUB-BASIN WC8A -LAND USE- DESERT MOUNTAIN, DESERT HILLS; MINOR DEVELOMENT
 777             KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 778             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 779             BA    .350
 780             LG    .150    .321   3.700    .651  30.000
1                                             HEC-1 INPUT                                          PAGE 21

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 781             UC    .433    .366
 782             UA       0       3       5       8      12      20      43      75      90      96
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783          UA     100
             *

784          KK  RD35.5
785          KM   ROUTE FLOW FROM SUB-BASIN WC8A TO COMPUTATION POINT CD35.3
786          RS       2    ELEV    1137
787          RC   0.030   0.030   0.030    2200   0.022    1139
788          RX       0      50     125     190     240     370     400     450
789          RY    1139    1138  1137.5    1137  1137.5    1138    1140    1141
             *

790          KK  CD35.3
791          KM   COMBINE ROUTED FLOW FROM SUB-BASINS WC7A AND WC8A
792          HC       2

793          KK  RD35.6
794          KM   ROUTE FLOW FROM COMPUTATION POINT CD35.3 TO COMPUTATION POINT CD35.4
795          RS       1    ELEV    1101
796          RC   0.030   0.035   0.035     700   0.011
797          RX       0      30      60     110     140     180     240     350
798          RY    1103  1101.8  1101.6  1101.4    1101  1101.4  1101.7    1103
             *

799          KK    WC9A
800          KM   SUB-BASIN WC9A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
801          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
802          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
803          BA    .025
804          LG    .150    .250   8.600    .066    .000
805          UC    .300    .420
806          UA       0       3       5       8      12      20      43      75      90      96
807          UA     100
             *

808          KK  RD35.7
809          KM   ROUTE RUNOFF FROM SUB-BASIN WC9A TO COMPUTATION POINT CD35.5
810          RS       1    ELEV    1128
811          RC   0.035   0.035   0.035    1000   0.025    1130
812          RX       0      30      40      60      70      90     120     140
813          RY    1130    1130    1129    1128  1128.5    1129    1130  1130.5
             *

814          KK   WC10A
815          KM   SUB-BASIN WC10A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
816          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
817          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
818          BA    .020
819          LG    .150    .260   5.800    .059    .000
820          UC    .233    .289
```

```
821          UA       0       3       5       8      12      20      43      75      90      96
822          UA     100
             *
1                                          HEC-1 INPUT                                          PAGE 22

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


823          KK  RD35.8
824          KM   ROUTE RUNOFF FROM SUB-BASIN WC10A TO COMPUTATION POINT CD35.5
825          RS       1    ELEV    1132
826          RC   0.035   0.035   0.035    1000   0.025
827          RX       0      30      50      70     100     140     210     260
828          RY    1134    1134    1133    1132    1132    1133  1133.5    1134
             *

829          KK  CD35.5
830          KM   COMBINE ROUTED FLOW FROM SUB-BASINS WC9A AND WC10A
831          HC       2

832          KK  RD35.9
833          KM   ROUTE FLOW FROM COMPUTATION POINT CD35.5 TO COMPUTATION POINT CD35.6
834          RS       2    ELEV  1114.8
835          RC   0.030   0.030   0.030    1200   0.015
836          RX       0      60     110     170     210     240     330     370
837          RY    1116  1115.8  1115.5    1115  1114.8    1115  1115.8    1116
             *

838          KK   WC11A
839          KM   SUB-BASIN WC11A -LAND USE- DESERT MOUNTAINS, DESERT HILLS; MINOR DEVELOPMENT
840          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
841          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
842          BA    .290
843          LG    .150    .335   3.600    .703  53.000
844          UC    .367    .357
845          UA       0       3       5       8      12      20      43      75      90      96
846          UA     100
             *

847          KK  RD3510
848          KM   ROUTE RUNOFF FROM SUB-BASIN WC11A TO COMPUTATION POINT CD35.7
849          RS       1    ELEV    1131
850          RC   0.050   0.050   0.050    1100   0.024
851          RX       0      50     170     180     225     260     380     460
852          RY    1132  1131.8  1131.6  1131.5    1131  1131.5  1131.8    1132
             *

853          KK   WC12A
854          KM   SUB-BASIN WC12A -LAND USE- DESERT MOUNTAIN, DESERT HILLS; MINOR DEVELOPMENT
```

```
855          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
856          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
857          BA    .260
858          LG    .150    .320   3.800    .632  28.000
859          UC    .333    .217
860          UA       0       3       5       8      12      20      43      75      90      96
861          UA     100
             *
1                                          HEC-1 INPUT                                          PAGE 23

        LINE     ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


862          KK  RD3511
863          KM   ROUTE RUNOFF FROM SUB-BASIN WC12A TO COMPUTATION POINT CD35.7
864          RS       1    ELEV    1143
865          RC   0.040   0.040   0.040    1200   0.022    1144
866          RX       0      10      25      45      70     120     235     290
867          RY  1144.5    1144  1143.5    1143  1143.5  1143.7  1143.8    1144
             *

868          KK  CD35.7
869          KM   COMBINE ROUTED FLOWS FROM SUB-BASINS WC11A AND WC12A
870          HC       2
             *

871          KK  RD3512
872          KM   ROUTE FLOW FROM COMPUTATION POINT CD35.7 TO COMPUTATION POINT CD35.6
873          RS       2    ELEV  1120.5
874          RC   0.055   0.055   0.055    1080   0.006
875          RX       0      20      50      70     130     180     400     460
876          RY  1122.5    1122    1121  1120.5    1121  1121.5    1122  1122.5
             *

877          KK  CD35.6
878          KM   COMBINE ROUTED FLOW FROM COMPUTATION POINTS CD35.5 AND CD35.7
879          HC       2
             *

880          KK  RD3513
881          KM   ROUTE FLOW FROM COMPUTATION POINT CD35.6 TO COMPUTATION POINT CD35.4
882          RS       1    ELEV    1101
883          RC   0.040   0.035   0.030    1000   0.012
884          RX       0      40     130     210     280     340     570     615
885          RY  1102.5    1102  1101.8  1101.5    1101  1101.5    1102  1102.5
             *

886          KK  CD35.4
887          KM   COMBINE ROUTED FLOW FROM COMPUTATION POINTS CD35.3 AND CD35.6
```

```
888          HC       2
             *

889          KK  RD3514
890          KM   ROUTE FLOW FROM COMPUTATION POINT CD35.4 TO COMPUTATION POINT CD35.2
891          RS       3    ELEV  1192.5
892          RC   0.070   0.070   0.070    1400   0.006    1194
893          RX       0     120     200     300     400     470     560     660
894          RY    1194  1193.0  1192.8  1192.5  1192.5  1192.8    1193    1194
             *

895          KK   WC15A
896          KM   SUB-BASIN WC15A -LAND USE- DESERT MOUNTAIN, DESERT HILLS; MINOR DEVELOMENT
897          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
898          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
             *      1       2
899          BA    .360
900          LG    .150    .320   3.350    .784  50.000
1                                          HEC-1 INPUT                                          PAGE 24

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

901          UC    .317    .245
902          UA       0       3       5       8      12      20      43      75      90      96
903          UA     100
             *

904          KK  RD3515
905          KM   ROUTE RUNOFF FROM SUB-BASIN WC15A TO COMPUTATION POINT CD35.8
906          RS       1    ELEV    1132
907          RC   0.030   0.035   0.030    1250   0.014    1136
908          RX       0      30      50      70      85     100     140     200
909          RY    1140    1138    1136    1134    1132    1134    1135    1136
             *

910          KK    PM2A
911          KM   SUB-BASIN PM2A -LAND USE- DESERT MOUNTAIN, DESERT HILLS; MINOR DEVELOMENT
912          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
913          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
914          BA    .070
915          LG    .150    .332   4.100    .502  15.000
916          UC    .300    .282
917          UA       0       3       5       8      12      20      43      75      90      96
918          UA     100
             *

919          KK  CD35.8
920          KM   COMBINE ROUTED FLOW FROM SUB-BASIN WC15A TO SUB-BASIN PM2A
921          HC       2
```

```
                *

922             KK  RD3516
923             KM   ROUTE FLOW FROM COMPUTATION POINT CD35.8 TO COMPUTATION POINT CD35.9
924             RS       1    ELEV    1122
925             RC   0.035   0.040   0.030    1400   0.008    1126
926             RX       0      25      35      50     130     150     200     260
927             RY    1130    1126    1124    1122    1122    1124    1125    1126
                *

928             KK   WC13A
929             KM   SUB-BASIN WC13A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
930             KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
931             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
932             BA    .013
933             LG    .150    .250   8.600    .066    .000
934             UC    .250    .341
935             UA       0       3       5       8      12      20      43      75      90      96
936             UA     100
                *

937             KK  RD3517
938             KM   ROUTE RUNOFF FROM SUB-BASIN WC13A TO COMPUTATION POINT CD35.9
939             RS       3    ELEV    1131
940             RC   0.035   0.035   0.035    1280   0.023
941             RX       0     115     180     225     270     350     435     530
942             RY    1132  1131.5  1131.2    1131  1131.2  1131.5  1131.8    1132
                *
1                                          HEC-1 INPUT                                          PAGE 25

        LINE    ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


943             KK   WC14A
944             KM   SUB-BASIN WC14A -LAND USE- NATURAL DESERT HILLSLOPES; MINOR DEVELOPMENT
945             KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
946             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
947             BA    .050
948             LG    .150    .290   4.000    .520    .000
949             UC    .367    .427
950             UA       0       3       5       8      12      20      43      75      90      96
951             UA     100
                *

952             KK  RD3518
953             KM   ROUTE RUNOFF FROM SUB-BASIN WC14A TO COMPUTATION POINT CD35.9
954             RS       6    ELEV  1133.4
955             RC   0.040   0.045   0.040    2000   0.013
956             RX       0      60     150     220     250     280     310     360
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 957          RY    1134  1133.9  1133.7  1133.4  1133.7  1133.8  1133.9    1134
              *

 958          KK    PM1A
 959          KM   SUB-BASIN PM1A -LAND USE- AGRICULTURE, DESERT HILLS; MINOR DEVELOPMENT
 960          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 961          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
 962          BA    .070
 963          LG    .380    .097   4.210    .697    2.00
 964          UC    .383    .279
 965          UA       0       3       5       8      12      20      43      75      90      96
 966          UA     100
              *

 967          KK  CD35.9
 968          KM   COMBINE ROUTED FLOWS FROM SUB-BASINS WC13A AND WC14A, COMPUTATION POINT
 969          KM   CD35.8 WITH RUNOFF FROM SUB-BASIN PM1A
 970          HC       4
              *

 971          KK  RD3519
 972          KM   ROUTE FLOW FROM COMPUTATION POINT CD35.9 TO COMPUTATION POINT CD35.2
 973          RS       1    ELEV    1101
 974          RC   0.040   0.045   0.040    3360   0.012
 975          RX       0      80     190     270     310     335     440     480
 976          RY  1102.5    1102  1101.7  1101.5    1101  1101.5    1102  1102.5
              *

 977          KK   DR35C
 978          KM   SUB-BASIN DR35C -LAND USE- AGRICULTURE; MINOR DEVELOPMENT
 979          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 980          KM   THIS BASIN USED RAINFALL REDUCTION FATOR OF .90
 981          BA    .600
 982          LG    .360    .221   4.200    .454    .000
 983          UC    .717    .443
 984          UA       0       3       5       8      12      20      43      75      90      96
 985          UA     100
              *
1                                          HEC-1 INPUT                                          PAGE 26

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 986          KK  CD35.2
 987          KM   COMBINE ROUTED FLOWS FROM COMPUTATION POINTS CD35.1, CD35.4 AND CD35.9 WITH
 988          KM   RUNOFF FROM SUB-BASIN DR35C
 989          HC       4
              *
              *  DUMMY BASIN TO SIMULATE FUTURE GOLF COURSE STORAGE
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```
 990          KK     STG
 991          KM   DUMMY BASIN SIMULATING FUTURE GOLF COURSE
 992          RS       1    STOR
 993          SV       0     100    5000
 994          SQ       0      50      50
              *

 995          KK  RSTG39
 996          KM   ROUTE DISCHARGE FROM STG TO 39TH & BASELINE
 997          RD    7920   0.004    .014            CIRC       5

 998          KK  RSTG43
 999          KM   ROUTE DISCHARGE FROM STG TO 43RD & BASELINE
1000          RD    2640   0.005    .012            CIRC       5
              *

1001          KK  SMA43C
1002          KM   SUB-BASIN SMA43C-LAND USE - FULLY DEVELOPED
1003          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1004          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
1005          BA    .130
1006          LG      .3     .25     4.2     .52      15
1007          UC    .417    .274
1008          UA       0       5      16      30      65      77      84      90      94      97
1009          UA     100
              *

1010          KK  RETAIN
1011          KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM SMA43C
1012          DT  RETAIN       7
1013          DI       0     500    2000
1014          DQ       0     500    2000
              *

1015          KK  RB43C2
1016          KM   ROUTE RUNOFF FROM SUB-BASIN SMA43C TO CBR43C
1017          RS       3    ELEV  1043.3
1018          RC    0.02    0.07    0.07    2600   0.003  1044.2
1019          RX       0       1      55      56      65      70      90     120
1020          RY  1044.2  1043.2  1043.2  1044.1  1043.5  1043.7  1043.8  1044.2
              *
1                                          HEC-1 INPUT                                          PAGE 27

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1021          KK   BR43C
1022          KM   SUB-BASIN BR43C-LAND USE - FULLY DEVELOPED
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```
1023          KM   24-HOUR TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1024          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF .90
1025          BA     .35
1026          LG     .22     .25    4.55     .51      12
1027          UC   1.329    .847
1028          UA       0       5      16      30      65      77      84      90      94      97
1029          UA     100
              *

1030          KK  RETAIN
1031          KM   RETAIN 100-YR 2-HR RUNOFF VOLUME FROM BR43C
1032          DT  RETAIN      17
1033          DI       0     500    2000
1034          DQ       0     500    2000
              *

1035          KK  CBR43C
1036          KM   COMBINE ROUTED FLOWS FROM COMPUTATION POINT CD35.2, SUB-BASIN SMA43C, STG
1037          HC       3
              *

1038          KK  RBR43C
1039          KM   ROUTE HYDROGRAPH FROM CBR43C TO 43RD & SOUTHERN
1040          RD    5280   .0028    .012            CIRC       6
              *

1041          KK   CST43
1042          KM   COMBINE OUTFLOW OF DETENTION BASIN (STOR43) & PIPE FLOW (RBR43C
1043          HC       2
              *

1044          KK  RAV43B
1045          KM   ROUTE COMBINED DISCHARGE TO SALT RIVER
1046          RD    5400  0.0028    .012            CIRC       7
              *
1047          ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

     9        SM1C
                .
                .
    27          .       SM1AC
                .           .
                .           .
```

```
 36        CSM1............
              V
              V
 40        RSM1
              .
              .
 46           .        SM2C
              .           .
              .           .
 55        CSM2............
              V
              V
 59       RDENT
              V
              V
 66        RSM2
              .
              .
 72           .       SM3CE
              .           .
              .           .
 79        C3CE............
              V
              V
 82      RSM3CE
              .
              .
 85           .       SM4CE
              .           .
              .           .
 92           .           .        SM5C
              .           .           .
              .           .           .
101       CSM5C........................
              .
              .
106           .-------> DCSM5C
104      DIVM5C
              V
              V
109      RCSM5C
              .
              .
112           .      SMA15E
              .           .
              .           .
119        C15E............
              .
              .
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```
124          .------->   DC15E
122      DIV15E
             V
             V
127       RC15E
             .
             .
130          .        CBDE
             .           .
             .           .
137       CCBDE............
             .
             .
142          .------->  DCCBDE
140      DIVbde
             V
             V
145      RCCBDE
             .
             .
150          .           .<-------  DCCBDE
148          .      RETCBD
             .           V
             .           V
151          .       RCDIV
             .           .
             .           .
154          .           .       BR19C
             .           .           .
             .           .           .
165          .           .           .------->  RETAIN
163          .           .      RETAIN
             .           .           .
             .           .           .
168      CBR19C........................
             V
             V
171      RBR19C
             .
             .
177          .------->   D1927
175      DIV19C
             .
             .
182          .           .<-------  DCSM5C
180          .      RETM5C
             .           .
             .           .
185          .           .           .<-------   DC15E
```

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183          .          .      RET15E
             .          .          .
             .          .          .
186          .     COMDIV............
             .          V
             .          V
189          .      RCDIV
             .          .
             .          .
192          .          .      SMA15W
             .          .          .
             .          .          .
201          .          .          .-------> RETAIN
199          .          .      RETAIN
             .          .          .
             .          .          .
204          .     CSMA15............
             .          V
             .          V
207          .     RSM19C
             .          .
             .          .
213          .          .      SMA19C
             .          .          .
             .          .          .
224          .          .          .-------> RETAIN
222          .          .      RETAIN
             .          .          .
             .          .          .
227          .     CPS19C............
             .          V
             .          V
230          .     RRB27C
             .          .
             .          .
236          .          .       SM3CW
             .          .          V
             .          .          V
242          .          .        RSM3
             .          .          .
             .          .          .
248          .          .          .      SM4CW
             .          .          .          V
             .          .          .          V
255          .          .          .       RSM4
             .          .          .          .
             .          .          .          .
261          .          .          .          .      DRW2C
             .          .          .          .          .
```

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                .         .         .         .         .
270             .         .         .         .         .     DRWC1C
                .         .         .         .         .         .
                .         .         .         .         .         .
281             .         .         .         .         .         .-------> RETAIN
279             .         .         .         .         .     RETAIN
                .         .         .         .         .         .
                .         .         .         .         .         .
284             .         .      CSM4.....................................
                .         .         V
                .         .         V
288             .         .      RSM5
                .         .         .
                .         .         .
294             .         .         .       DR1C
                .         .         .         .
                .         .         .         .
303             .         .         .         .       WC1A
                .         .         .         .          V
                .         .         .         .          V
312             .         .         .         .       RSM6
                .         .         .         .         .
                .         .         .         .         .
318             .         .         .         .         .       DR2C
                .         .         .         .         .         .
                .         .         .         .         .         .
327             .         .    CPDR2C.....................................
                .         .         V
                .         .         V
331             .         .    RRB27C
                .         .         .
                .         .         .
337             .         .         .      BR27C
                .         .         .         .
                .         .         .         .
348             .         .         .         .-------> RETAIN
346             .         .         .     RETAIN
                .         .         .         .
                .         .         .         .
351          C27C.....................................
                .
                .
354             .      WC2A
                .         V
                .         V
363             .    RD27.1
                .         .
                .         .
369             .         .    WC2.1A
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                .         .         V
                .         .         V
 378            .         .     RD27.2
                .         .         .
                .         .         .
 384            .     CD27.1............
                .         V
                .         V
 387            .     RD27.3
                .         .
                .         .
 393            .         .       WC3A
                .         .         V
                .         .         V
 402            .         .     RD27.4
                .         .         .
                .         .         .
 408            .     CD27.2............
                .         V
                .         V
 411            .     RD27.5
                .         .
                .         .
 417            .         .       WC4A
                .         .         V
                .         .         V
 426            .         .     RD27.6
                .         .         .
                .         .         .
 432            .     CD27.3............
                .         V
                .         V
 435            .     RD27.7
                .         .
                .         .
 441            .         .      DR27C
                .         .         .
                .         .         .
 450            .         .         .       WC5A
                .         .         .          .
                .         .         .          .
 459            .     CD27.4........................
                .         V
                .         V
 463            .     ST27.4
                .         V
                .         V
 470            .     RST274
                .         .
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                .           .
473             .           .      BR35CE
                .           .           .
                .           .           .
482             .           .           .-------> RETAIN
480             .           .      RETAIN
                .           .           .
                .           .           .
485             .       C35CE............
                .           V
                .           V
488             .       R35CE
                .           .
                .           .
493             .           .------->   D35CE
491             .       D35CE
                .           .
                .           .
496         C27BAS............
                V
                V
499          ST27C
                .
                .
508             .           .<-------   D1927
506             .       D1927
                .           .
                .           .
511             .           .           .<-------   D35CE
509             .           .       D35CE
                .           .           .
                .           .           .
512         CPB27C........................
                V
                V
515         RPB27C
                .
                .
518             .       SA27C
                .           .
                .           .
529             .           .-------> RETAIN
527             .      RETAIN
                .           .
                .           .
532         CSA27C............
                V
                V
535         RSA27C
```

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                .
                .
538             .       SA19C
                .           .
                .           .
548             .           .-------> RETAIN
546             .      RETAIN
                .           .
                .           .
553             .           .------->  SA19C
551             .      DSA19C
                .           V
                .           V
556             .      RR23C1
                .           V
                .           V
562             .      RR23C2
                .           V
                .           V
568             .      RR23C3
                .           .
                .           .
574             .           .       CR23C
                .           .           .
                .           .           .
585             .           .           .-------> RETAIN
583             .           .      RETAIN
                .           .           .
                .           .           .
588             .      CPC23C............
                .           V
                .           V
591             .       STR23
                .           V
                .           V
598             .      RSTR23
                .           .
                .           .
601             .           .       RR27C
                .           .           .
                .           .           .
612             .           .           .-------> RETAIN
610             .           .      RETAIN
                .           .           .
                .           .           .
615          CR27C........................
                V
                V
618         RCR27C
```

```
                V
                V
621       RCR27C
                .
                .
624             .       RR35C
                .           .
                .           .
635             .           .-------> RETAIN
633             .     RETAIN
                .           V
                .           V
638             .     RRS37C
                .           .
                .           .
644             .           .       SA37C
                .           .           .
                .           .           .
655             .           .           .-------> RETAIN
653             .           .     RETAIN
                .           .           .
                .           .           .
658             .     CPS37C............
                .           V
                .           V
662             .     RAV431
                .           .
                .           .
668             .           .     AVR43C
                .           .           .
                .           .           .
679             .           .           .-------> RETAIN
677             .           .     RETAIN
                .           .           .
                .           .           .
682             .     CAV43C............
                .           .
                .           .
685             .           .     BR35CW
                .           .           .
                .           .           .
694             .           .           .-------> RETAIN
692             .           .     RETAIN
                .           .           .
                .           .           .
697             .           .           .     BR35C1
                .           .           .           .
                .           .           .           .
708             .           .           .           .-------> RETAIN
```

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706          .          .          .     RETAIN
             .          .          .          .
             .          .          .          .
711          .          .     CPB352............
             .          .          V
             .          .          V
714          .          .     RAV432
             .          .          V
             .          .          V
721          .          .     RAV433
             .          .          .
             .          .          .
728          .       C43C............
             .          V
             .          V
731          .     STOR43
             .          .
             .          .
739          .          .       WC6A
             .          .          V
             .          .          V
748          .          .     RD35.2
             .          .          V
             .          .          V
754          .          .     RD35.3
             .          .          .
             .          .          .
760          .          .          .       WC7A
             .          .          .          V
             .          .          .          V
769          .          .          .     RD35.4
             .          .          .          .
             .          .          .          .
775          .          .          .          .       WC8A
             .          .          .          .          V
             .          .          .          .          V
784          .          .          .          .     RD35.5
             .          .          .          .          .
             .          .          .          .          .
790          .          .          .     CD35.3............
             .          .          .          V
             .          .          .          V
793          .          .          .     RD35.6
             .          .          .          .
             .          .          .          .
799          .          .          .          .       WC9A
             .          .          .          .          V
             .          .          .          .          V
808          .          .          .          .     RD35.7
```

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                .         .         .         .         .
                .         .         .         .         .
814             .         .         .         .         .      WC10A
                .         .         .         .         .          V
                .         .         .         .         .          V
823             .         .         .         .         .     RD35.8
                .         .         .         .         .          .
                .         .         .         .         .          .
829             .         .         .         .    CD35.5............
                .         .         .         .         V
                .         .         .         .         V
832             .         .         .         .    RD35.9
                .         .         .         .         .
                .         .         .         .         .
838             .         .         .         .         .      WC11A
                .         .         .         .         .          V
                .         .         .         .         .          V
847             .         .         .         .         .     RD3510
                .         .         .         .         .          .
                .         .         .         .         .          .
853             .         .         .         .         .          .      WC12A
                .         .         .         .         .          .          V
                .         .         .         .         .          .          V
862             .         .         .         .         .          .     RD3511
                .         .         .         .         .          .          .
                .         .         .         .         .          .          .
868             .         .         .         .         .     CD35.7............
                .         .         .         .         .          V
                .         .         .         .         .          V
871             .         .         .         .         .     RD3512
                .         .         .         .         .          .
                .         .         .         .         .          .
877             .         .         .         .    CD35.6............
                .         .         .         .         V
                .         .         .         .         V
880             .         .         .         .    RD3513
                .         .         .         .         .
                .         .         .         .         .
886             .         .         .    CD35.4............
                .         .         .         V
                .         .         .         V
889             .         .         .    RD3514
                .         .         .         .
                .         .         .         .
895             .         .         .         .     WC15A
                .         .         .         .         V
                .         .         .         .         V
904             .         .         .         .    RD3515
                .         .         .         .         .
```

```
                .         .         .         .         .
 910            .         .         .         .         .      PM2A
                .         .         .         .         .         .
                .         .         .         .         .         .
 919            .         .         .         .    CD35.8............
                .         .         .         .         V
                .         .         .         .         V
 922            .         .         .         .    RD3516
                .         .         .         .         .
                .         .         .         .         .
 928            .         .         .         .         .     WC13A
                .         .         .         .         .         V
                .         .         .         .         .         V
 937            .         .         .         .         .    RD3517
                .         .         .         .         .         .
                .         .         .         .         .         .
 943            .         .         .         .         .         .     WC14A
                .         .         .         .         .         .         V
                .         .         .         .         .         .         V
 952            .         .         .         .         .         .    RD3518
                .         .         .         .         .         .         .
                .         .         .         .         .         .         .
 958            .         .         .         .         .         .         .      PM1A
                .         .         .         .         .         .         .         .
                .         .         .         .         .         .         .         .
 967            .         .         .         .    CD35.9.....................................
                .         .         .         .         V
                .         .         .         .         V
 971            .         .         .         .    RD3519
                .         .         .         .         .
                .         .         .         .         .
 977            .         .         .         .         .     DR35C
                .         .         .         .         .         .
                .         .         .         .         .         .
 986            .         .    CD35.2.....................................
                .         .         V
                .         .         V
 990            .         .       STG
                .         .         V
                .         .         V
 995            .         .    RSTG39
                .         .         V
                .         .         V
 998            .         .    RSTG43
                .         .         .
                .         .         .
1001            .         .         .    SMA43C
                .         .         .         .
                .         .         .         .
```

```
 1012          .          .          .          .-------> RETAIN
 1010          .          .          .     RETAIN
               .          .          .          V
               .          .          .          V
 1015          .          .          .     RB43C2
               .          .          .          .
               .          .          .          .
 1021          .          .          .          .      BR43C
               .          .          .          .          .
               .          .          .          .          .
 1032          .          .          .          .          .-------> RETAIN
 1030          .          .          .          .     RETAIN
               .          .          .          .          .
               .          .          .          .          .
 1035          .          .     CBR43C.......................
               .          .          V
               .          .          V
 1038          .          .     RBR43C
               .          .          .
               .          .          .
 1041          .      CST43............
               .          V
               .          V
 1044          .     RAV43B

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*****************************************                                                  ****************************************
 *                                       *                                                  *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                                                  *    U.S. ARMY CORPS OF ENGINEERS      *
 *              MAY   1991               *                                                  *    HYDROLOGIC ENGINEERING CENTER     *
 *           VERSION 4.0.1E              *                                                  *          609 SECOND STREET           *
 *                                       *                                                  *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   6/02/1997  TIME   9:01    *                                                  *           (916) 551-1748             *
 *                                       *                                                  *                                      *
 *****************************************                                                  ****************************************


                         MODIFICATIONS IN DECEMBER 1996
                         LAVEEN ADMS 100-YR 24-HR STORM
                         HIDDEN VALLEY WATERSHED/CHAMPION DRAIN WATERSHED
                         INPUT FILE NAME  273BASFU.DAT                        DATE: DECEMBER,1996
                         27th AVE., 3 BASIN ALTERNATIVE, FUTURE DEVELOPMENT w/ RETENTION
                         24-HOUR SCS TYPE II RAINFALL

   8 IO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
```

```
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

     IT          HYDROGRAPH TIME DATA
                     NMIN          5  MINUTES IN COMPUTATION INTERVAL
                    IDATE      1    0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE      7    0  ENDING DATE
                   NDTIME       2235  ENDING TIME
                    ICENT         19  CENTURY MARK

                 COMPUTATION INTERVAL    0.08 HOURS
                      TOTAL TIME BASE  166.58 HOURS

          ENGLISH UNITS
               DRAINAGE AREA          SQUARE MILES
               PRECIPITATION DEPTH    INCHES
               LENGTH, ELEVATION      FEET
               FLOW                   CUBIC FEET PER SECOND
               STORAGE VOLUME         ACRE-FEET
               SURFACE AREA           ACRES
               TEMPERATURE            DEGREES FAHRENHEIT

WARNING --- ROUTED OUTFLOW (    394.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (    511.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (    489.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (    394.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (    391.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (    477.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (    449.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (    445.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (    414.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (    415.) IS GREATER THAN MAXIMUM OUTFLOW (    386.) IN STORAGE-OUTFLOW TABLE


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***
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            **************
            *            *
  463 KK    *    ST27.4  *
            *            *
            **************

  465 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           3  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

                HYDROGRAPH ROUTING DATA

  466 RS          STORAGE ROUTING
                        NSTPS           1  NUMBER OF SUBREACHES
                         ITYP        STOR  TYPE OF INITIAL CONDITION
                       RSVRIC        0.00  INITIAL CONDITION
                            X        0.00 WORKING R AND D COEFFICIENT

  467 SV            STORAGE         0.0      56.6     115.4

  468 SQ          DISCHARGE          0.       38.       80.

  469 SE          ELEVATION        0.00      3.00      6.00

                                                                ***

       ***            ***            ***            ***            ***

                          HYDROGRAPH AT STATION   ST27.4

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                        6-HR       24-HR       72-HR    166.58-HR
+   (CFS)       (HR)
                            (CFS)
+      45.     14.08                     42.         30.         14.           6.
                         (INCHES)      0.330       0.935       1.292        1.332
                          (AC-FT)       21.         59.         82.          84.

 PEAK STORAGE   TIME                          MAXIMUM AVERAGE STORAGE
                                        6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)      (HR)
       66.     14.08                     62.         44.         20.           9.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                        6-HR       24-HR       72-HR    166.58-HR
+   (FEET)      (HR)
      3.50     14.08                    3.29        2.34        1.08         0.48
```

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                    CUMULATIVE AREA =    1.18 SQ MI



*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


          **************
          *            *
 499 KK   *    ST27C   *
          *            *
          **************

 501 KO         OUTPUT CONTROL VARIABLES
                     IPRNT           3  PRINT CONTROL
                     IPLOT           0  PLOT CONTROL
                     QSCAL          0.  HYDROGRAPH PLOT SCALE

             HYDROGRAPH ROUTING DATA

 502 RS         STORAGE ROUTING
                     NSTPS           1  NUMBER OF SUBREACHES
                      ITYP        STOR  TYPE OF INITIAL CONDITION
                    RSVRIC        0.00  INITIAL CONDITION
                         X        0.00 WORKING R AND D COEFFICIENT

 503 SV           STORAGE         0.0     116.3     274.9

 504 SQ         DISCHARGE          0.       38.       90.

 505 SE         ELEVATION        0.00      3.00      7.00

                                                          ***

     ***            ***            ***            ***            ***

                       HYDROGRAPH AT STATION    ST27C

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                    6-HR       24-HR       72-HR    166.58-HR
+   (CFS)      (HR)
                         (CFS)
+      45.     18.25                45.         39.         25.          12.
                      (INCHES)     0.043       0.152       0.286        0.332
                       (AC-FT)      22.         78.        146.         170.

 PEAK STORAGE   TIME                         MAXIMUM AVERAGE STORAGE
                                    6-HR       24-HR       72-HR    166.58-HR
```

```
+  (AC-FT)      (HR)
      138.     18.33                  137.        120.         75.          38.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                        6-HR       24-HR       72-HR    166.58-HR
+   (FEET)      (HR)
      3.55     18.33                  3.51        3.09        1.94         0.98

                        CUMULATIVE AREA =    9.61 SQ MI



*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


            **************
            *            *
  591 KK    *     STR23  *
            *            *
            **************

  593 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           3  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

                HYDROGRAPH ROUTING DATA

  594 RS          STORAGE ROUTING
                        NSTPS           1  NUMBER OF SUBREACHES
                         ITYP        STOR  TYPE OF INITIAL CONDITION
                       RSVRIC        0.00  INITIAL CONDITION
                            X        0.00 WORKING R AND D COEFFICIENT

  595 SV            STORAGE         0.0      16.0      33.0      51.0      70.0

  596 SQ          DISCHARGE          0.       14.       29.       40.       47.

  597 SE          ELEVATION        0.00      2.00      4.00      6.00      8.00

                                                                  ***

      ***            ***            ***            ***            ***

                          HYDROGRAPH AT STATION    STR23

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                        6-HR       24-HR       72-HR    166.58-HR
```

```
+   (CFS)       (HR)
                          (CFS)
+      32.     15.75                  30.         21.          9.          4.
                        (INCHES)    0.264       0.729       0.906       0.912
                         (AC-FT)      15.         41.         51.         52.

 PEAK STORAGE   TIME                          MAXIMUM AVERAGE STORAGE
                                     6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)      (HR)
       37.     15.75                  35.         24.         10.          4.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                     6-HR       24-HR       72-HR    166.58-HR
+   (FEET)      (HR)
      4.46     15.75                 4.21        2.91        1.21        0.53

                         CUMULATIVE AREA =    1.06 SQ MI



*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


            **************
            *            *
  731 KK    *    STOR43  *
            *            *
            **************

  734 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           3  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

                HYDROGRAPH ROUTING DATA

  735 RS          STORAGE ROUTING
                        NSTPS           1  NUMBER OF SUBREACHES
                         ITYP        STOR  TYPE OF INITIAL CONDITION
                       RSVRIC        0.00  INITIAL CONDITION
                            X        0.00 WORKING R AND D COEFFICIENT

  736 SV            STORAGE         0.0      15.0     300.0     319.0

  737 SQ          DISCHARGE          0.      100.      100.     1500.

  738 SE          ELEVATION        0.00      0.50     20.00     21.00
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                                                                    ***

      ***            ***            ***            ***            ***

                        HYDROGRAPH AT STATION   STOR43

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR       24-HR       72-HR    166.58-HR
+   (CFS)       (HR)
                          (CFS)
+     100.     12.33                  100.         94.         32.          14.
                        (INCHES)     0.204       0.768       0.785        0.785
                         (AC-FT)      50.        187.        191.         191.

 PEAK STORAGE   TIME                         MAXIMUM AVERAGE STORAGE
                                      6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)      (HR)
      104.     17.92                   99.         60.         20.           9.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                      6-HR       24-HR       72-HR    166.58-HR
+   (FEET)      (HR)
      6.60     17.92                  6.27        3.58        1.20         0.52

                        CUMULATIVE AREA =    4.56 SQ MI

1
                                                    RUNOFF SUMMARY
                                              FLOW IN CUBIC FEET PER SECOND
                                           TIME IN HOURS,  AREA IN SQUARE MILES

                                   PEAK   TIME OF     AVERAGE FLOW FOR MAXIMUM PERIOD      BASIN     MAXIMUM     TIME OF
          OPERATION       STATION   FLOW    PEAK                                          AREA      STAGE     MAX STAGE
+                                                      6-HOUR     24-HOUR     72-HOUR

          HYDROGRAPH AT
+                           SM1C    2160.   12.25        341.        113.         38.      1.84

          HYDROGRAPH AT
+                          SM1AC     253.   12.17         31.          9.          3.      0.28

          2 COMBINED AT
+                           CSM1    2401.   12.17        373.        121.         40.      2.12

          ROUTED TO
+                           RSM1    2321.   12.33        372.        121.         40.      2.12
+                                                                                          1378.07       12.33

          HYDROGRAPH AT
```

```
+                    SM2C    3451.   12.17     561.     196.      65.     2.19

     2 COMBINED AT
+                    CSM2    5481.   12.17     933.     317.     106.     4.31

     ROUTED TO
+                    RDENT     146.   17.33     146.     139.      96.     4.31
+                                                                        1317.80     17.42

     ROUTED TO
+                    RSM2      146.   17.67     146.     139.      96.     4.31
+                                                                        1227.21     17.25

     HYDROGRAPH AT
+                    SM3CE     168.   12.08      15.       4.       1.     0.17

     2 COMBINED AT
+                    C3CE      242.   12.08     148.     141.      97.     4.48

     ROUTED TO
+                    RSM3CE    237.   12.08     148.     141.      97.     4.48

     HYDROGRAPH AT
+                    SM4CE      57.   12.00       5.       2.       1.     0.05

     HYDROGRAPH AT
+                    SM5C      164.   12.08      24.       7.       2.     0.20

     3 COMBINED AT
+                    CSM5C     440.   12.08     176.     148.     100.     4.73

     DIVERSION TO
+                    DCSM5C    190.   11.83      12.       3.       1.     4.73

     HYDROGRAPH AT
+                    DIVM5C    250.   11.83     164.     145.      99.     4.73

     ROUTED TO
+                    RCSM5C    250.   12.00     164.     145.      99.     4.73

     HYDROGRAPH AT
+                    SMA15E     81.   12.00       8.       2.       1.     0.07

     2 COMBINED AT
+                    C15E      331.   12.00     172.     147.     100.     4.80

     DIVERSION TO
+                    DC15E      61.   11.83       4.       1.       0.     4.80
```

	HYDROGRAPH AT							
+		DIV15E	270.	11.83	168.	146.	99.	4.80
	ROUTED TO							
+		RC15E	281.	11.92	168.	146.	99.	4.80
	HYDROGRAPH AT							
+		CBDE	108.	12.42	22.	6.	2.	0.17
	2 COMBINED AT							
+		CCBDE	377.	12.33	190.	152.	101.	4.97
	DIVERSION TO							
+		DCCBDE	77.	11.92	6.	2.	1.	4.97
	HYDROGRAPH AT							
+		DIVbde	300.	11.92	184.	150.	101.	4.97
	ROUTED TO							
+		RCCBDE	305.	12.08	183.	150.	101.	4.97
	HYDROGRAPH AT							
+		RETCBD	77.	12.33	6.	2.	1.	0.00
	ROUTED TO							
+		RCDIV	76.	12.75	6.	2.	1.	0.00
	HYDROGRAPH AT							
+		BR19C	371.	12.17	46.	12.	4.	0.39
	DIVERSION TO							
+		RETAIN	371.	12.67	40.	10.	3.	0.39
	HYDROGRAPH AT							
+		RETAIN	102.	12.67	7.	2.	1.	0.39
	3 COMBINED AT							
+		CBR19C	475.	12.67	196.	154.	102.	5.36
	ROUTED TO							
+		RBR19C	458.	12.83	196.	154.	102.	5.36
	DIVERSION TO							
+		D1927	156.	12.83	154.	143.	98.	5.36
	HYDROGRAPH AT							
+		DIV19C	302.	12.83	43.	11.	4.	5.36
	HYDROGRAPH AT							

```
+                    RETM5C     190.   12.08        12.        3.        1.      0.00
        HYDROGRAPH AT
+                    RET15E      61.   12.00         4.        1.        0.      0.00
        2 COMBINED AT
+                    COMDIV     249.   12.08        16.        4.        1.      0.00
        ROUTED TO
+                     RCDIV     241.   12.17        15.        4.        1.      0.00
        HYDROGRAPH AT
+                    SMA15W     372.   12.00        36.        9.        3.      0.29
        DIVERSION TO
+                    RETAIN     289.   12.00        12.        3.        1.      0.29
        HYDROGRAPH AT
+                    RETAIN     372.   12.00        25.        6.        2.      0.29
        2 COMBINED AT
+                    CSMA15     550.   12.08        40.       10.        3.      0.29
        ROUTED TO
+                    RSM19C     415.   12.42        40.       10.        3.      0.29
+                                                                                 1140.03      12.42
        HYDROGRAPH AT
+                    SMA19C      58.   12.42        18.        5.        2.      0.16
        DIVERSION TO
+                    RETAIN      58.   14.00        14.        4.        1.      0.16
        HYDROGRAPH AT
+                    RETAIN      18.   14.00         4.        1.        0.      0.16
        2 COMBINED AT
+                    CPS19C     415.   12.42        44.       11.        4.      0.45
        ROUTED TO
+                    RRB27C     149.   14.25        40.       11.        4.      0.45
+                                                                                 1108.22      14.25
        HYDROGRAPH AT
+                     SM3CW     240.   12.25        27.        7.        2.      0.31
        ROUTED TO
+                      RSM3     209.   12.50        27.        7.        2.      0.31
+                                                                                 1176.76      12.50
```

```
        HYDROGRAPH AT
+                    SM4CW     162.   12.08       21.        6.        2.      0.19
        ROUTED TO
+                     RSM4     158.   12.17       21.        6.        2.      0.19
+                                                                                 1169.01     12.17
        HYDROGRAPH AT
+                    DRW2C     401.   12.33       71.       22.        7.      0.53
        HYDROGRAPH AT
+                   DRWC1C      61.   12.25       12.        3.        1.      0.12
        DIVERSION TO
+                   RETAIN      61.   13.17        9.        2.        1.      0.12
        HYDROGRAPH AT
+                   RETAIN      20.   13.17        3.        1.        0.      0.12
        4 COMBINED AT
+                     CSM4     702.   12.33      123.       36.       12.      1.15
        ROUTED TO
+                     RSM5     653.   12.42      122.       36.       12.      1.15
+                                                                                 1159.03     12.42
        HYDROGRAPH AT
+                     DR1C     152.   12.25       22.        5.        2.      0.16
        HYDROGRAPH AT
+                     WC1A     274.   12.25       49.       15.        5.      0.25
        ROUTED TO
+                     RSM6     268.   12.25       49.       15.        5.      0.25
+                                                                                 1147.73     12.25
        HYDROGRAPH AT
+                     DR2C      46.   12.17        5.        1.        0.      0.05
        4 COMBINED AT
+                   CPDR2C    1054.   12.33      198.       58.       19.      1.61
        ROUTED TO
+                   RRB27C     825.   13.33      196.       58.       19.      1.61
+                                                                                 1108.74     13.33
        HYDROGRAPH AT
+                    BR27C     465.   12.25       88.       23.        8.      0.78
```

```
        DIVERSION TO
+                    RETAIN     465.   13.00       67.       17.        6.     0.78
        HYDROGRAPH AT
+                    RETAIN     190.   13.00       23.        6.        2.     0.78
        4 COMBINED AT
+                      C27C    1017.   13.33      296.       86.       29.     8.20
        HYDROGRAPH AT
+                      WC2A      78.   12.25       14.        3.        1.     0.08
        ROUTED TO
+                    RD27.1      76.   12.25       14.        3.        1.     0.08
+                                                                                1148.15     12.25
        HYDROGRAPH AT
+                    WC2.1A      70.   12.17        8.        2.        1.     0.08
        ROUTED TO
+                    RD27.2      67.   12.25        8.        2.        1.     0.08
+                                                                                1149.00     12.25
        2 COMBINED AT
+                    CD27.1     143.   12.25       21.        5.        2.     0.16
        ROUTED TO
+                    RD27.3     141.   12.25       21.        5.        2.     0.16
+                                                                                1142.56     12.25
        HYDROGRAPH AT
+                      WC3A      15.   12.17        2.        1.        0.     0.01
        ROUTED TO
+                    RD27.4      15.   12.25        2.        1.        0.     0.01
+                                                                                1142.19     12.25
        2 COMBINED AT
+                    CD27.2     155.   12.25       24.        6.        2.     0.17
        ROUTED TO
+                    RD27.5     146.   12.33       24.        6.        2.     0.17
+                                                                                1122.49     12.33
        HYDROGRAPH AT
+                      WC4A     369.   12.17       52.       16.        5.     0.36
        ROUTED TO
```

```
+                    RD27.6      351.   12.33        52.        16.         5.      0.36
+                                                                                  1140.69      12.33
        2 COMBINED AT
+                    CD27.3      498.   12.33        75.        21.         7.      0.53
        ROUTED TO
+                    RD27.7      484.   12.42        75.        21.         7.      0.53
+                                                                                  1116.30      12.42
        HYDROGRAPH AT
+                     DR27C      157.   12.25        19.         5.         2.      0.23
        HYDROGRAPH AT
+                      WC5A      290.   12.25        51.        16.         5.      0.42
        3 COMBINED AT
+                    CD27.4      891.   12.33       145.        42.        14.      1.18
        ROUTED TO
+                    ST27.4       45.   14.08        42.        30.        14.      1.18
+                                                                                     3.50      14.08
        ROUTED TO
+                    RST274       45.   14.17        42.        30.        14.      1.18
        HYDROGRAPH AT
+                    BR35CE      194.   12.17        26.         7.         2.      0.23
        DIVERSION TO
+                    RETAIN      194.   12.75        22.         6.         2.      0.23
        HYDROGRAPH AT
+                    RETAIN       54.   12.75         5.         1.         0.      0.23
        2 COMBINED AT
+                     C35CE       87.   12.75        47.        31.        14.      1.41
        ROUTED TO
+                     R35CE       85.   12.83        47.        31.        14.      1.41
        DIVERSION TO
+                     D35CE       43.   12.83        42.        30.        14.      1.41
        HYDROGRAPH AT
+                     D35CE       42.   12.83         4.         1.         0.      1.41
        2 COMBINED AT
+                    C27BAS     1031.   13.33       301.        87.        29.      9.61
```

```
        ROUTED TO
+                    ST27C      45.   18.25      45.      39.      25.     9.61
+                                                                                  3.55     18.33
        HYDROGRAPH AT
+                    D1927     156.   12.00     154.     143.      98.     0.00
        HYDROGRAPH AT
+                    D35CE      43.   12.75      42.      30.      14.     0.00
        3 COMBINED AT
+                    CPB27C    239.   15.50     236.     211.     136.     9.61
        ROUTED TO
+                    RPB27C    239.   15.58     236.     211.     136.     9.61
        HYDROGRAPH AT
+                    SA27C     451.   12.25      80.      22.       8.     0.62
        DIVERSION TO
+                    RETAIN    451.   13.00      66.      17.       6.     0.62
        HYDROGRAPH AT
+                    RETAIN    149.   13.00      19.       5.       2.     0.62
        2 COMBINED AT
+                    CSA27C    354.   13.00     251.     216.     138.    10.23
        ROUTED TO
+                    RSA27C    348.   13.08     251.     216.     138.    10.23
        HYDROGRAPH AT
+                    SA19C     272.   12.33      51.      13.       4.     0.48
        DIVERSION TO
+                    RETAIN    209.   12.33      10.       3.       1.     0.48
        HYDROGRAPH AT
+                    RETAIN    272.   12.33      41.      10.       3.     0.48
        DIVERSION TO
+                    SA19C      70.   12.33      21.       5.       2.     0.48
        HYDROGRAPH AT
+                    DSA19C    202.   12.33      20.       5.       2.     0.48
        ROUTED TO
+                    RR23C1    170.   12.67      20.       5.       2.     0.48
```

```
+                                                                                  1075.94      12.67

        ROUTED TO
+                       RR23C2      115.   13.42        20.         5.         2.      0.48
+                                                                                  1063.89      13.42

        ROUTED TO
+                       RR23C3       87.   14.17        20.         5.         2.      0.48
+                                                                                  1053.02      14.17

        HYDROGRAPH AT
+                        CR23C      725.   12.08       100.        30.        10.      0.58

        DIVERSION TO
+                       RETAIN      475.   12.08        30.         9.         3.      0.58

        HYDROGRAPH AT
+                       RETAIN      725.   12.08        79.        21.         7.      0.58

        2 COMBINED AT
+                       CPC23C      725.   12.08        98.        26.         9.      1.06

        ROUTED TO
+                        STR23       32.   15.75        30.        21.         9.      1.06
+                                                                                     4.46      15.75

        ROUTED TO
+                       RSTR23       32.   15.83        30.        21.         9.      1.06

        HYDROGRAPH AT
+                        RR27C      715.   12.08        95.        29.        10.      0.48

        DIVERSION TO
+                       RETAIN      691.   12.17        47.        13.         4.      0.48

        HYDROGRAPH AT
+                       RETAIN      639.   12.17        57.        16.         5.      0.48

        3 COMBINED AT
+                        CR27C      797.   12.17       325.       252.       152.     11.77

        ROUTED TO
+                       RCR27C      756.   12.17       324.       251.       152.     11.77

        ROUTED TO
+                       RCR27C      710.   12.25       322.       251.       152.     11.77

        HYDROGRAPH AT
+                        RR35C     2074.   12.17       301.        89.        30.      1.89
```

```
        DIVERSION TO
+                       RETAIN     2074.   12.50       207.        55.        18.       1.89
        HYDROGRAPH AT
+                       RETAIN     1238.   12.50       118.        33.        11.       1.89
        ROUTED TO
+                       RRS37C      507.   13.42       111.        33.        11.       1.89
+                                                                                   1026.21      13.42
        HYDROGRAPH AT
+                        SA37C      627.   12.25        98.        27.         9.       0.59
        DIVERSION TO
+                       RETAIN      619.   12.33        43.        12.         4.       0.59
        HYDROGRAPH AT
+                       RETAIN      581.   12.33        60.        16.         5.       0.59
        2 COMBINED AT
+                       CPS37C      581.   12.33       167.        49.        16.       2.48
        ROUTED TO
+                       RAV431      396.   14.92       152.        49.        16.       2.48
+                                                                                   1021.78      14.92
        HYDROGRAPH AT
+                       AVR43C     1044.   12.17       152.        43.        14.       1.03
        DIVERSION TO
+                       RETAIN      960.   12.25        59.        16.         5.       1.03
        HYDROGRAPH AT
+                       RETAIN     1025.   12.25       102.        27.         9.       1.03
        2 COMBINED AT
+                       CAV43C     1025.   12.25       238.        76.        25.       3.51
        HYDROGRAPH AT
+                       BR35CW      391.   12.25        73.        21.         7.       0.50
        DIVERSION TO
+                       RETAIN      222.   12.25        17.         5.         2.       0.50
        HYDROGRAPH AT
+                       RETAIN      391.   12.25        61.        16.         5.       0.50
        HYDROGRAPH AT
```

```
+                    BR35C1      324.   12.33        58.        14.         5.      0.55
        DIVERSION TO
+                    RETAIN      324.   12.92        42.        11.         4.      0.55
        HYDROGRAPH AT
+                    RETAIN      151.   12.92        16.         4.         1.      0.55
        2 COMBINED AT
+                    CPB352      391.   12.25        77.        20.         7.      1.05
        ROUTED TO
+                    RAV432      258.   13.33        75.        20.         7.      1.05
+                                                                                  1041.78      13.33
        ROUTED TO
+                    RAV433      229.   14.25        73.        20.         7.      1.05
+                                                                                  1028.71      14.25
        2 COMBINED AT
+                      C43C     1025.   12.25       307.        96.        32.      4.56
        ROUTED TO
+                    STOR43      100.   12.33       100.        94.        32.      4.56
+                                                                                     6.60      17.92
        HYDROGRAPH AT
+                      WC6A       17.   12.08         2.         0.         0.      0.01
        ROUTED TO
+                    RD35.2        7.   13.42         2.         0.         0.      0.01
+                                                                                  1118.01      13.42
        ROUTED TO
+                    RD35.3        6.   14.58         2.         0.         0.      0.01
+                                                                                  1089.79      14.58
        HYDROGRAPH AT
+                      WC7A       57.   12.17         7.         2.         1.      0.05
        ROUTED TO
+                    RD35.4       51.   12.42         7.         2.         1.      0.05
+                                                                                  1126.41      12.42
        HYDROGRAPH AT
+                      WC8A      307.   12.25        51.        16.         5.      0.35
        ROUTED TO
+                    RD35.5      287.   12.33        51.        16.         5.      0.35
```

```
+                                                                                  1137.78     12.33

        2 COMBINED AT
+                       CD35.3      338.   12.33        58.        18.        6.      0.40

        ROUTED TO
+                       RD35.6      336.   12.42        58.        18.        6.      0.40
+                                                                                  1101.97     12.42

        HYDROGRAPH AT
+                        WC9A        28.   12.17         4.         1.        0.      0.03

        ROUTED TO
+                       RD35.7       27.   12.25         4.         1.        0.      0.03
+                                                                                  1128.65     12.25

        HYDROGRAPH AT
+                        WC10A       28.   12.08         4.         1.        0.      0.02

        ROUTED TO
+                       RD35.8       26.   12.17         4.         1.        0.      0.02
+                                                                                  1132.27     12.17

        2 COMBINED AT
+                       CD35.5       52.   12.17         8.         2.        1.      0.05

        ROUTED TO
+                       RD35.9       50.   12.33         8.         2.        1.      0.05
+                                                                                  1115.17     12.33

        HYDROGRAPH AT
+                        WC11A      295.   12.17        55.        18.        6.      0.29

        ROUTED TO
+                       RD3510      274.   12.25        55.        18.        6.      0.29
+                                                                                  1131.90     12.25

        HYDROGRAPH AT
+                        WC12A      280.   12.17        37.        11.        4.      0.26

        ROUTED TO
+                       RD3511      262.   12.25        37.        11.        4.      0.26
+                                                                                  1143.99     12.25

        2 COMBINED AT
+                       CD35.7      536.   12.25        92.        30.       10.      0.55

        ROUTED TO
+                       RD3512      499.   12.33        92.        30.       10.      0.55
```

```
+                                                                                  1122.15      12.33

        2 COMBINED AT
+                       CD35.6      549.   12.33       100.        32.        11.      0.59

        ROUTED TO
+                       RD3513      530.   12.42       100.        32.        11.      0.59
+                                                                                  1101.99      12.42

        2 COMBINED AT
+                       CD35.4      867.   12.42       158.        49.        16.      1.00

        ROUTED TO
+                       RD3514      808.   12.67       158.        49.        16.      1.00
+                                                                                  1193.75      12.67

        HYDROGRAPH AT
+                        WC15A      411.   12.17        65.        22.         7.      0.36

        ROUTED TO
+                       RD3515      403.   12.17        65.        22.         7.      0.36
+                                                                                  1134.77      12.17

        HYDROGRAPH AT
+                         PM2A       68.   12.17         9.         2.         1.      0.07

        2 COMBINED AT
+                       CD35.8      471.   12.17        74.        24.         8.      0.43

        ROUTED TO
+                       RD3516      455.   12.25        74.        24.         8.      0.43
+                                                                                  1123.33      12.25

        HYDROGRAPH AT
+                        WC13A       16.   12.08         2.         1.         0.      0.01

        ROUTED TO
+                       RD3517       15.   12.33         2.         1.         0.      0.01
+                                                                                  1131.21      12.33

        HYDROGRAPH AT
+                        WC14A       37.   12.17         5.         1.         0.      0.05

        ROUTED TO
+                       RD3518       32.   12.58         5.         1.         0.      0.05
+                                                                                  1133.78      12.58

        HYDROGRAPH AT
+                         PM1A       64.   12.17         7.         2.         1.      0.07
```

```
        4 COMBINED AT
+                    CD35.9      542.   12.25        88.        28.         9.      0.56
        ROUTED TO
+                    RD3519      387.   12.50        88.        28.         9.      0.56
+                                                                                  1102.11      12.50
        HYDROGRAPH AT
+                     DR35C      435.   12.42        63.        16.         5.      0.60
        4 COMBINED AT
+                    CD35.2     1551.   12.58       310.        93.        31.      2.17
        ROUTED TO
+                       STG       50.   12.92        50.        49.        29.      2.17
        ROUTED TO
+                    RSTG39       50.   13.25        50.        49.        29.      2.17
        ROUTED TO
+                    RSTG43       50.   13.33        50.        49.        29.      2.17
        HYDROGRAPH AT
+                    SMA43C      127.   12.08        16.         5.         2.      0.13
        DIVERSION TO
+                    RETAIN      127.   12.58        13.         4.         1.      0.13
        HYDROGRAPH AT
+                    RETAIN       37.   12.58         4.         1.         0.      0.13
        ROUTED TO
+                    RB43C2       20.   13.00         4.         1.         0.      0.13
+                                                                                  1043.43      13.00
        HYDROGRAPH AT
+                     BR43C      147.   12.50        42.        12.         4.      0.35
        DIVERSION TO
+                    RETAIN      147.   13.67        33.         9.         3.      0.35
        HYDROGRAPH AT
+                    RETAIN       62.   13.67        12.         3.         1.      0.35
        3 COMBINED AT
+                    CBR43C      119.   13.67        64.        53.        30.      2.65
        ROUTED TO
```

```
+                        RBR43C       115.   13.92         64.         53.         30.       2.65

         2 COMBINED AT
+                         CST43       215.   13.92        164.        147.         62.       7.21

         ROUTED TO
+                        RAV43B       215.   14.00        164.        147.         62.       7.21
1
                                        SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
                                            (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
                                                                                  INTERPOLATED TO
                                                                                COMPUTATION INTERVAL
           ISTAQ    ELEMENT      DT       PEAK    TIME TO     VOLUME      DT       PEAK    TIME TO     VOLUME
                                                     PEAK                                     PEAK

                                (MIN)     (CFS)     (MIN)      (IN)     (MIN)     (CFS)     (MIN)       (IN)

            RSM3CE  MANE         2.41    238.76    726.66      2.46      5.00    237.13    725.00        2.46

 CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5869E+03 EXCESS=0.0000E+00 OUTFLOW=0.5869E+03 BASIN STORAGE=0.2739E-03 PERCENT ERROR=   0.0

            RCSM5C  MANE         1.40    250.10    713.57      2.37      5.00    250.00    720.00        2.37

 CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5985E+03 EXCESS=0.0000E+00 OUTFLOW=0.5985E+03 BASIN STORAGE=0.1593E-03 PERCENT ERROR=   0.0

             RC15E  MANE         5.00    281.08    715.00      2.35      5.00    281.08    715.00        2.35

 CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6008E+03 EXCESS=0.0000E+00 OUTFLOW=0.6008E+03 BASIN STORAGE=0.6653E-03 PERCENT ERROR=   0.0

            RCCBDE  MANE         5.00    304.65    725.00      2.30      5.00    304.65    725.00        2.30

 CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6097E+03 EXCESS=0.0000E+00 OUTFLOW=0.6096E+03 BASIN STORAGE=0.9898E-03 PERCENT ERROR=   0.0

             RCDIV  MANE         1.50     76.15    763.50     -1.00      5.00     75.98    765.00       -1.00


            RBR19C  MANE         5.00    457.52    770.00      2.16      5.00    457.52    770.00        2.16

 CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6166E+03 EXCESS=0.0000E+00 OUTFLOW=0.6166E+03 BASIN STORAGE=0.7955E-03 PERCENT ERROR=   0.0
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          RCDIV  MANE        1.00    245.19    733.00     -1.00      5.00    241.14    730.00       -1.00

          RST274 MANE        4.45     44.96    850.19      1.33      5.00     44.96    850.00        1.33
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8413E+02 EXCESS=0.0000E+00 OUTFLOW=0.8413E+02 BASIN STORAGE=0.3951E-03 PERCENT ERROR=   0.0
          R35CE  MANE        4.07     88.08    768.43      1.15      5.00     84.85    770.00        1.15
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8678E+02 EXCESS=0.0000E+00 OUTFLOW=0.8677E+02 BASIN STORAGE=0.4149E-03 PERCENT ERROR=   0.0
          RPB27C MANE        5.00    238.61    935.00      1.66      5.00    238.61    935.00        1.66
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8503E+03 EXCESS=0.0000E+00 OUTFLOW=0.8503E+03 BASIN STORAGE=0.2898E-01 PERCENT ERROR=   0.0
          RSA27C MANE        2.66    347.70    785.23      1.58      5.00    347.66    785.00        1.58
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8610E+03 EXCESS=0.0000E+00 OUTFLOW=0.8609E+03 BASIN STORAGE=0.1253E-01 PERCENT ERROR=   0.0
          RSTR23 MANE        5.00     31.54    950.00      0.91      5.00     31.54    950.00        0.91
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5157E+02 EXCESS=0.0000E+00 OUTFLOW=0.5157E+02 BASIN STORAGE=0.3790E-03 PERCENT ERROR=   0.0
          RCR27C MANE        2.68    776.50    730.93      1.50      5.00    755.72    730.00        1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.9434E+03 EXCESS=0.0000E+00 OUTFLOW=0.9433E+03 BASIN STORAGE=0.2142E-01 PERCENT ERROR=   0.0
          RCR27C MANE        2.10    711.37    735.18      1.50      5.00    709.79    735.00        1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.9433E+03 EXCESS=0.0000E+00 OUTFLOW=0.9430E+03 BASIN STORAGE=0.1155E-01 PERCENT ERROR=   0.0
          RSTG39 MANE        5.00     50.39    795.00      1.59      5.00     50.39    795.00        1.59
```

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CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1847E+03 EXCESS=0.0000E+00 OUTFLOW=0.1847E+03 BASIN STORAGE=0.1427E-01 PERCENT ERROR=   0.0

           RSTG43  MANE         4.29     50.36    798.27      1.59      5.00     50.25    800.00        1.59

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1847E+03 EXCESS=0.0000E+00 OUTFLOW=0.1847E+03 BASIN STORAGE=0.3897E-02 PERCENT ERROR=   0.0

           RBR43C  MANE         5.00    115.46    835.00      1.37      5.00    115.46    835.00        1.37

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1938E+03 EXCESS=0.0000E+00 OUTFLOW=0.1938E+03 BASIN STORAGE=0.9650E-02 PERCENT ERROR=   0.0

           RAV43B  MANE         5.00    214.66    840.00      1.00      5.00    214.66    840.00        1.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3848E+03 EXCESS=0.0000E+00 OUTFLOW=0.3847E+03 BASIN STORAGE=0.9761E-02 PERCENT ERROR=   0.0


*** NORMAL END OF HEC-1 ***
```