HYDROLOGY REPORT FOR TRACT NO. 34896, 35967, 35968, and 35969

April 2008

Prepared for:

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Figure 1-Vicinity Map

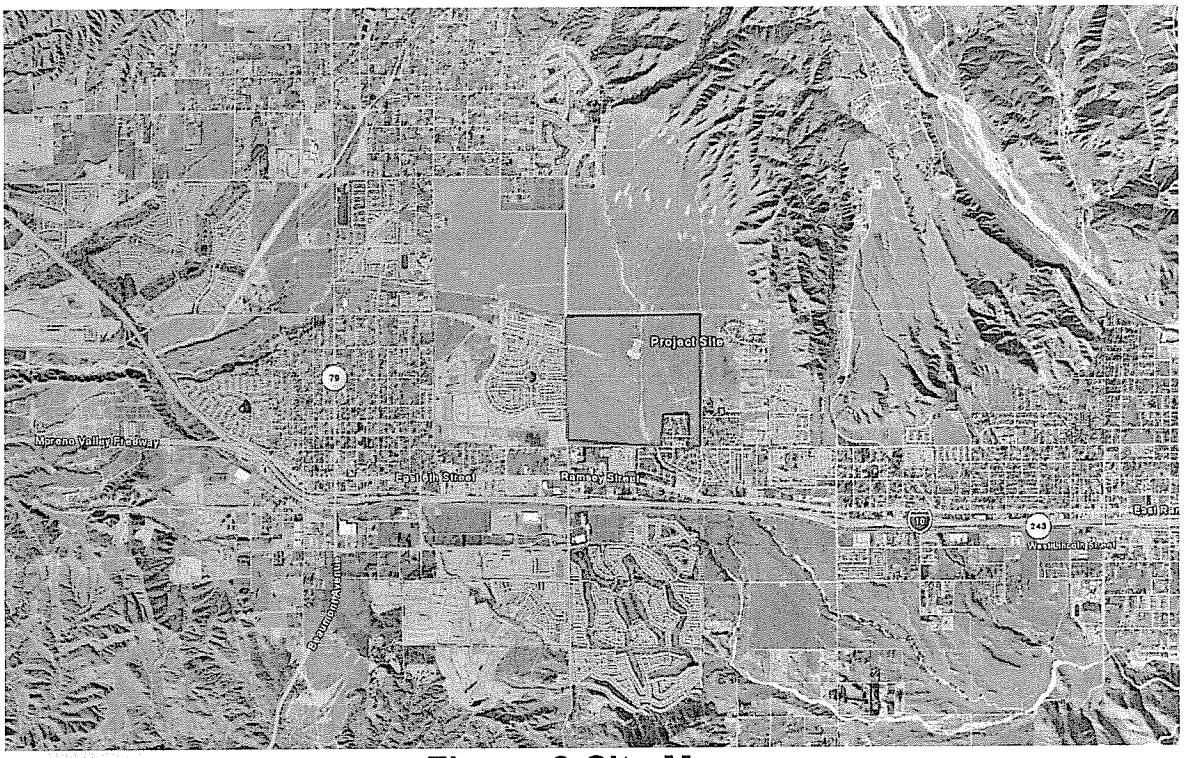
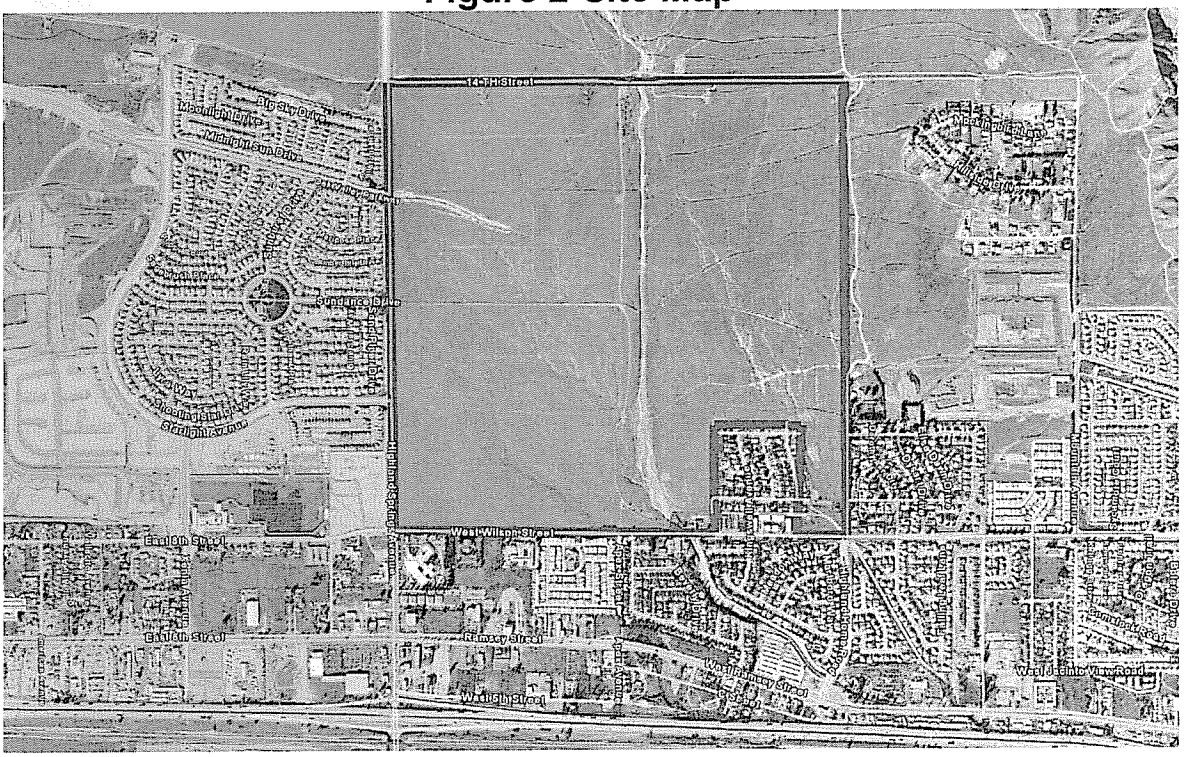


Figure 2-Site Map



Section 1 Introduction

1.1 Location and Setting

This Hydrology study is to provide the hydrologic basis for the preliminary design of on-site storm drains for the Tract No. 34896, 35967, 35968 and 35969 located in the City of Banning, County of Riverside. All four tracts have approximately 407 acres. Tract No. 34896, 35967, and 35968 are single-family housing development. Tract 35969 is condominiums housing development. All tracts are eventually drains to Tract 35966 offsite backbone storm drain systems. The project area is bounded by Highland Spring Ave to the west, Wilson Street to the south, Highland Home Road to the east, 14th Street to the north. The Vicinity and Site Map, Figure 1 and 2 shows the project location.

1.2 Project Objectives

The objectives of this study include the following:

1. Prepare hydrologic analysis of the proposed condition watershed based on land uses, drainage patterns, ground slopes, and soil types to generate the 10-year and 100-year flood storm events. The hydrology computations are based on the Riverside County Flood Control and Water Conservation District Hydrology (RCFC&WCD) Manual Rational Method.

2. Develop post-project condition hydrology map identifying drainage boundaries, drainage patterns, and concentration points for onsite areas as indicated in the Tract No. 34896, 35967, 35968 and 35969.

3. Preparation of the Hydrology Report.

The Riverside County Flood Control and Water Conservation District Hydrology Manual (April 1978) guidelines were used in performing the hydrologic analysis presented in this report. The hydrologic analysis was performed using the Advanced Engineering Software computer program developed for RCFC&WCD Hydrology Manual Rational Method (AES, 2004).

1.3 Existing Facilities

The tributary area consists predominantly of open space with fair vegetation cover, seasonally tilled land, and dirt roads.

Most of the onsite area is tributary to Smith Creek through the off-site storm drain facilities. The rest of the area is tributary to Pershing Channel along Highland Home Road just north of Wilson Street.

1.4 Additional Reports

The Banning/Deutch Property Backbone Drainage Study for the Butterfield Specific Plan prepared by RBF Consulting (Reference 1) analyses the entire watershed in an existing and proposed condition that tributary to Smith Creek and Pershing Channel.

The Tract No. 35966 Preliminary Hydrology Report prepared by RBF Consulting (Reference 2) analyses the offsite storm drain facilities.

Section 2 Hydrology Analysis & Procedure

2.1 Rational Method

The Rational Method is an empirical computational procedure for developing a peak runoff/discharge for storms of a specified recurrence interval in small watersheds and was utilized in generating the hydrologic results of this study. The Rational Method is used to compute peak flow rates for watersheds less than 640 acres. The formula is:

$$Q = CIA$$

Where:

Q = Peak discharge, in cfs.
C = Runoff coefficient representing the ration of runoff depth to rainfall depth
I = The time-averaged rainfall intensity for a storm duration equal to the time of concentration, in/hr.
A = Drainage area, in acres

The basic assumption for the Rational Method is that the precipitation rate is constant and uniform over the entire watershed for the time duration such that runoff could travel from the most remote point in the watershed to the concentration point; after which time the rate of runoff does not increase. This is the time defined as the "time of concentration (T_c)." The method is based on the assumption that the peak flow rate is directly proportional to drainage area, rainfall intensity, and a runoff coefficient "C," which is related to land use and soil type.

2.2 Rational Method Guidelines

The following assumptions/guidelines were applied for use of the Rational Method:

The Rational Method hydrology includes the effects of infiltration caused by soil surface characteristics. The soils map from the RCFC&WCD Hydrology Manual indicates that the study area consists of primarily soil type "A" and "B". Hydrologic soil ratings are based on a scale of A through D, where D is the least pervious, providing the greatest runoff. The Hydrologic Soils Map, is retrieved from existing USGS, and county soils maps and saved in a GIS database, is provided under Exhibit D. For rational method the entire area was deemed to have soil type "B" as it would be the worst case scenario.

The type of vegetation, percent ground cover and the percentage of impervious surfaces also affect the infiltration rate. The post-project condition cover utilized in the calculation for Tract 35969 is condominiums which estimates a 65% impervious, the rest of tracts area is ¼ acre lots which estimates a 40% impervious.

The runoff coefficient was developed utilizing a runoff index potential number or curve number which ranges from 1 to 98, 98 is the most impervious and the

highest runoff potential. The runoff coefficients are dependent upon the percentage of pervious area, which actually allows.

The Kirpich formula as used to determine the times of concentration (Tc) for initial upstream sub-areas. This procedure is applicable for determining the time of concentration for watershed catchments where overland flow hydraulics dominates. Initial sub-areas were drawn to be less than 10 acres in size and less than 1,000 feet in length per the RCFC&WCD Hydrology Manual guidelines using this procedure.

Standard rainfall intensity-duration curve data and the Slope of Intensity Duration Duration Curves were obtained from the RCFC&WCD Hydrology Manual dated April 1978. RCFC&WCD has developed Standard Intensity Duration Curves for the City of Banning and a Slope of Intensity Duration Curve Map for the entire county of Riverside; the data obtained from the manual is included under Exhibits D and E.

Per criteria from the RCFC&WCD Hydrology Manual an Antecedent Moisture Condition (AMC) of 2 was utilized for the 10-year and 100-year analysis that reflects the degree of ground saturation from previous rainfall events. The AMC can range from 1 to 3, with the condition 3 being the most severe allowing for greater runoff and low infiltration.

2.3 Rational Method Calculations Computer Program

The hydrologic calculations for the post-project onsite areas were performed using a computer program developed by Advanced Engineering Software (AES) for the RCFC&WCD Hydrology Manual Rational Method. The 10-year and 100-year storm events design discharge at intermediate points were computed by generating a hydrologic "link-node" model which divides the area into drainage subareas, each tributary to a concentration point or hydrologic "node" point determined by the proposed terrain as shown on the Hydrology Map, Exhibit A.

2.4 Hydrology Summary

A hydrology results summary for the proposed condition hydrology is shown on the Summary Table provided with the Hydrology Map, Exhibit A. The detailed analysis of the AES Rational Method hydrology is included in Appendix A for onsite areas post-project condition.

Section 3 Hydraulics

3.1 Storm Drain Design Criteria

The proposed storm drain system was analyzed to convey the 100-year storm event.

The following parameters were utilized for the design of the storm drain system:

1. Manning's "n" value of 0.013 for reinforced concrete pipe (RCP) was used in the calculations.
2. The minimum pipe size is 18-inches for main line storm drain systems.
3. 100-Year storm event flows will be contained within the Right-of-way.
4. 10-Year storm event flows will be contained within the top of curb.
5. The mainline storm drain system will be designed to convey the 100-year flood event flowrate for the proposed condition.
6. The entire 100-year storm event flows will be intercepted at 'sump' locations.

3.2 Proposed Storm Drain Systems

In-Tract pipe sizes were estimated using normal depth hydraulic analysis by the FlowMaster Computer Program. See Appendix C for the storm drain sizing calculation worksheets.

A facilities map has been provided under Exhibit C outlining the proposed storm drain systems that will be designed in order to mitigate the estimated 100-year storm event flowrates. A storm drain improvement plan set along with a Hydraulics report will be submitted at a future date.

3.3 Typical Street Cross-section Capacity Calculations

The conditions of approval state a) All building pads shall be free from flood hazard for the 100-year frequency storm by elevating finished floor elevations on foot above the 100-year level of flood protection. b)Depths of flow in the streets shall not exceed top of curb elevations for the 10-year frequency. When either of these criteria is iexceeded, additional drainage facilities shall be installed.

The FlowMaster Computer Program, based upon the Federal Highway Administration HEC-22 Design Manual, developed by Haestad Methods Inc was utilized to estimate the street cross-section intersection capacity. Based upon typical cross-section of the street, with a varying slope Rating Tables have been provided under Appendix B.

Section 4 Results

4.1 Hydrology Results

The 10-year and 100-year discharges are presented in Appendix A. The onsite flowrates at key locations are in Table 1, 2, 3 below.

Table 1 – Tract 34896 Post-project Hydrology Results

Node	Q_{10} ft^3/sec	Q_{100} ft^3/sec
104	39.99	53.35
402	19.52	30.54
502	18.93	29.74
505	4.57	7.09
509	5.17	8.03
519	34.61	54.80
608	41.16	64.91
703	30.90	48.04
805	23.31	36.58

Table 2 – Tract 35967 Post-project Hydrology Results

Node	Q_{10} ft^3/sec	Q_{100} ft^3/sec
439	4.64	7.20
445	42.18	66.37

Table 3 – Tract 35968, 35969 Post-project Hydrology Results

Node	Q_{10} ft^3/sec	Q_{100} ft^3/sec
467	5.41	8.35
604	38.65	61.05
710	38.68	60.53
713	46.73	72.01

4.2 Water Quality

In order to comply with NPDES requirements and the Specific Plan, the post construction water quality management plan for the Butterfield project utilizes extended detention basins (water quality basin) to fulfill the Treatment Control BMP Requirements.

The two onsite water quality basins are located at the north end of the Specific Plan area where Smith Creek enters the site and north central park of the golf course.

The calculations supporting the water quality basin volumes are attached in Appendix D. The procedures and worksheets used for these calculations were taken from the Riverside County Stormwater Quality Best Management Practice Design Handbook dated July 2004.

Section 5 References

5.1 Technical References

1. RBF Consulting, *Banning/Deutch Property Backbone Drainage Study, Dated Feb, 2006.*
2. RBF Consulting, Tract 35966 Preliminary Hydrology Report, Dated March, 2008.
3. Riverside County Flood Control and Water Conservation District (RCFC&WCD), *Hydrology Manual,* 1978.
4. Riverside County Stormwater Quality Best Management Practice Design Handbook, dated July 2004.

TECHNICAL APPENDIX

APPENDIX A.1

Tract 34896 10-Yr Storm Event

Post-Project Condition

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**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
       RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                    (RCFC&WCD)  1978 HYDROLOGY MANUAL
        (c) Copyright 1982-2004 Advanced Engineering Software (aes)
                    (Rational Tabling Version 6.0D)
                Release Date: 01/01/2004  License ID 1264

                        Analysis prepared by:

                            RBF Consulting
                          14725 Alton Parkway
                        Irvine, California  92618


 ************************* DESCRIPTION OF STUDY *************************
* Deutsch Banning Project      Project No: 65-100183                     *
* Hydrology for Tract 35966, 10 Years Storm Event                        *
* Date : 2008-04-08      By: AC                                          *
 **************************************************************************

  FILE NAME: PH1_10.DAT
  TIME/DATE OF STUDY: 10:50 04/14/2008
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.570
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.300
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =   10.00   1-HOUR INTENSITY(INCH/HOUR) =   0.879
  SLOPE OF INTENSITY DURATION CURVE = 0.5300
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
        AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE   FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)     (n)
===  =====  =========  ================  ======  =====  ====  =====  =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150
  2   18.0      9.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0160
  3   20.0     12.0    0.015/0.050/0.020   0.50    1.50 0.0313 0.125 0.0160
  4   12.0      6.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth = -0.17 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  8.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
    MINIMUM LOSS RATE PERCENTAGE FOR 24-HOUR STORM =  2.00

**************************************************************************
  FLOW PROCESS FROM NODE     100.00 TO NODE     103.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   990.00
  UPSTREAM ELEVATION(FEET) =   2691.50
  DOWNSTREAM ELEVATION(FEET) =   2674.00
  ELEVATION DIFFERENCE(FEET) =     17.50
  TC = 0.393*[(  990.00**3)/(    17.50)]**.2 =   13.891
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.909
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7405
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      7.63
  TOTAL AREA(ACRES) =      5.40   TOTAL RUNOFF(CFS) =      7.63

**************************************************************************
  FLOW PROCESS FROM NODE     103.00 TO NODE     102.00 IS CODE =  62
--------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
==========================================================================
  UPSTREAM ELEVATION(FEET) = 2674.00  DOWNSTREAM ELEVATION(FEET) = 2661.00
  STREET LENGTH(FEET) =   771.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      10.53
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.38
    HALFSTREET FLOOD WIDTH(FEET) =   12.55
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.11
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.17
  STREET FLOW TRAVEL TIME(MIN.) =   4.13   Tc(MIN.) =  18.02
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.663
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7261
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    4.80      SUBAREA RUNOFF(CFS) =    5.80
  TOTAL AREA(ACRES) =     10.20        PEAK FLOW RATE(CFS) =      13.43

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.40   HALFSTREET FLOOD WIDTH(FEET) =  13.89
  FLOW VELOCITY(FEET/SEC.) =  3.28   DEPTH*VELOCITY(FT*FT/SEC.) =   1.33
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    102.00 =  1761.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE     102.00 TO NODE     104.00 IS CODE =  62
--------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
==========================================================================
  UPSTREAM ELEVATION(FEET) = 2661.00  DOWNSTREAM ELEVATION(FEET) = 2645.00
  STREET LENGTH(FEET) =   528.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      16.60
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.39
    HALFSTREET FLOOD WIDTH(FEET) =   13.39
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.34
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.71
  STREET FLOW TRAVEL TIME(MIN.) =   2.03   Tc(MIN.) =  20.05
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.571
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7200
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 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     5.60      SUBAREA RUNOFF(CFS) =     6.34
 TOTAL AREA(ACRES) =      15.80       PEAK FLOW RATE(CFS) =      19.76

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.41   HALFSTREET FLOOD WIDTH(FEET) =  14.38
 FLOW VELOCITY(FEET/SEC.) =  4.52   DEPTH*VELOCITY(FT*FT/SEC.) =   1.87
 LONGEST FLOWPATH FROM NODE    100.00 TO NODE    104.00 =  2289.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =  10
----------------------------------------------------------------------------
 >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 3 <<<<<
============================================================================

****************************************************************************
 FLOW PROCESS FROM NODE    200.00 TO NODE    201.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   798.00
 UPSTREAM ELEVATION(FEET) =   2685.00
 DOWNSTREAM ELEVATION(FEET) =   2663.50
 ELEVATION DIFFERENCE(FEET) =     21.50
 TC = 0.393*[(  798.00**3)/(    21.50)]**.2 =   11.713
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.089
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7497
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      8.30
 TOTAL AREA(ACRES) =      5.30   TOTAL RUNOFF(CFS) =      8.30

****************************************************************************
 FLOW PROCESS FROM NODE    201.00 TO NODE    202.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2663.50  DOWNSTREAM ELEVATION(FEET) = 2654.00
 STREET LENGTH(FEET) =   460.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      11.12
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.37
   HALFSTREET FLOOD WIDTH(FEET) =   12.34
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.39
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.26
 STREET FLOW TRAVEL TIME(MIN.) =   2.26   Tc(MIN.) =  13.98
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.903
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7402
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     4.00      SUBAREA RUNOFF(CFS) =     5.63
 TOTAL AREA(ACRES) =      9.30       PEAK FLOW RATE(CFS) =      13.94

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.40   HALFSTREET FLOOD WIDTH(FEET) =  13.54
 FLOW VELOCITY(FEET/SEC.) =  3.57   DEPTH*VELOCITY(FT*FT/SEC.) =   1.42
 LONGEST FLOWPATH FROM NODE    200.00 TO NODE    202.00 =  1258.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    202.00 TO NODE    202.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  13.98
 RAINFALL INTENSITY(INCH/HR) =   1.90
 TOTAL STREAM AREA(ACRES) =     9.30
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.94

****************************************************************************
 FLOW PROCESS FROM NODE    102.00 TO NODE    202.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   297.00
 UPSTREAM ELEVATION(FEET) =   2661.00
 DOWNSTREAM ELEVATION(FEET) =   2654.00
 ELEVATION DIFFERENCE(FEET) =      7.00
 TC = 0.393*[(  297.00**3)/(     7.00)]**.2 =    8.102
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.540
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7686
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      2.93
 TOTAL AREA(ACRES) =      1.50   TOTAL RUNOFF(CFS) =      2.93

****************************************************************************
 FLOW PROCESS FROM NODE    202.00 TO NODE    202.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =   8.10
 RAINFALL INTENSITY(INCH/HR) =   2.54
 TOTAL STREAM AREA(ACRES) =     1.50
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.93

 ** CONFLUENCE DATA **
 STREAM      RUNOFF      Tc      INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
     1        13.94     13.98        1.903         9.30
     2         2.93      8.10        2.540         1.50

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF      Tc      INTENSITY
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)
     1        11.01      8.10        2.540
     2        16.13     13.98        1.903

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     16.13   Tc(MIN.) =   13.98
 TOTAL AREA(ACRES) =     10.80
 LONGEST FLOWPATH FROM NODE    200.00 TO NODE    202.00 =  1258.00 FEET.
```

```
****************************************************************************
 FLOW PROCESS FROM NODE    202.00 TO NODE    104.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =  2654.00  DOWNSTREAM(FEET) =  2645.00
 FLOW LENGTH(FEET) =   850.00   MANNING'S N =  0.013
 DEPTH OF FLOW IN  24.0 INCH PIPE IS  15.2 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =   7.67
 ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =     16.13
 PIPE TRAVEL TIME(MIN.) =   1.85    Tc(MIN.) =  15.82
 LONGEST FLOWPATH FROM NODE    200.00 TO NODE    104.00 =  2108.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =  11
----------------------------------------------------------------------------
 >>>>>CONFLUENCE MEMORY BANK # 3 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

 ** MAIN STREAM CONFLUENCE DATA **
 STREAM      RUNOFF      Tc       INTENSITY      AREA
 NUMBER       (CFS)    (MIN.)    (INCH/HOUR)    (ACRE)
    1         16.13     15.82        1.782        10.80
 LONGEST FLOWPATH FROM NODE    200.00 TO NODE    104.00 =  2108.00 FEET.

 ** MEMORY BANK #  3 CONFLUENCE DATA **
 STREAM      RUNOFF      Tc       INTENSITY      AREA
 NUMBER       (CFS)    (MIN.)    (INCH/HOUR)    (ACRE)
    1         19.76     20.05        1.571        15.80
 LONGEST FLOWPATH FROM NODE    100.00 TO NODE    104.00 =  2289.00 FEET.

 ****************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

 ** PEAK FLOW RATE TABLE **
 STREAM     RUNOFF        Tc       INTENSITY
 NUMBER      (CFS)      (MIN.)    (INCH/HOUR)
    1        31.73       15.82        1.782
    2        33.99       20.05        1.571

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     33.99   Tc(MIN.) =   20.05
 TOTAL AREA(ACRES) =     26.60

****************************************************************************
 FLOW PROCESS FROM NODE    300.00 TO NODE    301.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   625.00
 UPSTREAM ELEVATION(FEET) =   2687.00
 DOWNSTREAM ELEVATION(FEET) =   2663.00
 ELEVATION DIFFERENCE(FEET) =     24.00
 TC = 0.393*[(  625.00**3)/(    24.00)]**.2 =    9.895
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.285
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7585
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      3.47
 TOTAL AREA(ACRES) =      2.00   TOTAL RUNOFF(CFS) =      3.47

****************************************************************************
 FLOW PROCESS FROM NODE    301.00 TO NODE    302.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2663.00  DOWNSTREAM ELEVATION(FEET) = 2642.50
 STREET LENGTH(FEET) =   521.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       4.78
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.33
   HALFSTREET FLOOD WIDTH(FEET) =   10.09
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.21
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.38
 STREET FLOW TRAVEL TIME(MIN.) =   2.06   Tc(MIN.) =  11.96
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.067
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7486
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    1.70      SUBAREA RUNOFF(CFS) =    2.63
 TOTAL AREA(ACRES) =      3.70        PEAK FLOW RATE(CFS) =       6.10

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.35   HALFSTREET FLOOD WIDTH(FEET) =  11.21
 FLOW VELOCITY(FEET/SEC.) =  4.43   DEPTH*VELOCITY(FT*FT/SEC.) =   1.55
 LONGEST FLOWPATH FROM NODE    300.00 TO NODE    302.00 =  1146.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   961.00
 UPSTREAM ELEVATION(FEET) =   2687.00
 DOWNSTREAM ELEVATION(FEET) =   2652.50
 ELEVATION DIFFERENCE(FEET) =     34.50
 TC = 0.393*[(  961.00**3)/(    34.50)]**.2 =   11.913
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.071
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7488
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      4.81
 TOTAL AREA(ACRES) =      3.10   TOTAL RUNOFF(CFS) =      4.81

****************************************************************************
 FLOW PROCESS FROM NODE    401.00 TO NODE    402.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2652.50  DOWNSTREAM ELEVATION(FEET) = 2636.00
 STREET LENGTH(FEET) =   658.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
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 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       6.78
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.38
   HALFSTREET FLOOD WIDTH(FEET) =   12.83
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.84
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.47
 STREET FLOW TRAVEL TIME(MIN.) =   2.85   Tc(MIN.) =  14.77
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.848
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7372
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    2.90      SUBAREA RUNOFF(CFS) =    3.95
 TOTAL AREA(ACRES) =      6.00        PEAK FLOW RATE(CFS) =       8.76

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.41   HALFSTREET FLOOD WIDTH(FEET) =  14.24
 FLOW VELOCITY(FEET/SEC.) =  4.08   DEPTH*VELOCITY(FT*FT/SEC.) =   1.68
 LONGEST FLOWPATH FROM NODE    400.00 TO NODE    402.00 =  1619.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    402.00 TO NODE    402.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  14.77
 RAINFALL INTENSITY(INCH/HR) =   1.85
 TOTAL STREAM AREA(ACRES) =     6.00
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.76

****************************************************************************
 FLOW PROCESS FROM NODE    403.00 TO NODE    402.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   945.00
 UPSTREAM ELEVATION(FEET) =   2662.50
 DOWNSTREAM ELEVATION(FEET) =   2636.00
 ELEVATION DIFFERENCE(FEET) =     26.50
 TC = 0.393*[(  945.00**3)/(    26.50)]**.2 =   12.433
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.024
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7465
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      3.17
 TOTAL AREA(ACRES) =      2.10   TOTAL RUNOFF(CFS) =      3.17

****************************************************************************
 FLOW PROCESS FROM NODE    402.00 TO NODE    402.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  12.43
 RAINFALL INTENSITY(INCH/HR) =   2.02
 TOTAL STREAM AREA(ACRES) =     2.10
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.17

****************************************************************************
 FLOW PROCESS FROM NODE    404.00 TO NODE    402.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   942.00
 UPSTREAM ELEVATION(FEET) =   2663.00
 DOWNSTREAM ELEVATION(FEET) =   2636.00
 ELEVATION DIFFERENCE(FEET) =     27.00
 TC = 0.393*[(  942.00**3)/(    27.00)]**.2 =   12.363
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.031
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7468
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      8.64
 TOTAL AREA(ACRES) =      5.70   TOTAL RUNOFF(CFS) =      8.64

****************************************************************************
 FLOW PROCESS FROM NODE    402.00 TO NODE    402.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
 TIME OF CONCENTRATION(MIN.) =  12.36
 RAINFALL INTENSITY(INCH/HR) =   2.03
 TOTAL STREAM AREA(ACRES) =     5.70
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.64

 ** CONFLUENCE DATA **
 STREAM      RUNOFF      Tc      INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
     1         8.76     14.77        1.848         6.00
     2         3.17     12.43        2.024         2.10
     3         8.64     12.36        2.031         5.70

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  3 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF      Tc      INTENSITY
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)
     1        19.13     12.36        2.031
     2        19.17     12.43        2.024
     3        19.52     14.77        1.848

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     19.52   Tc(MIN.) =   14.77
 TOTAL AREA(ACRES) =     13.80
 LONGEST FLOWPATH FROM NODE    400.00 TO NODE    402.00 =  1619.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    500.00 TO NODE    501.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   984.00
 UPSTREAM ELEVATION(FEET) =   2647.50
 DOWNSTREAM ELEVATION(FEET) =   2632.00
 ELEVATION DIFFERENCE(FEET) =     15.50
 TC = 0.393*[(  984.00**3)/(    15.50)]**.2 =   14.180
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.888
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7394
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 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      4.33
 TOTAL AREA(ACRES) =      3.10   TOTAL RUNOFF(CFS) =      4.33

****************************************************************************
 FLOW PROCESS FROM NODE    501.00 TO NODE    502.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2632.00  DOWNSTREAM ELEVATION(FEET) = 2622.00
 STREET LENGTH(FEET) =   846.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       6.55
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.42
   HALFSTREET FLOOD WIDTH(FEET) =   14.73
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.86
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.20
 STREET FLOW TRAVEL TIME(MIN.) =   4.93   Tc(MIN.) =  19.11
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.612
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7227
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    3.80      SUBAREA RUNOFF(CFS) =    4.43
 TOTAL AREA(ACRES) =      6.90        PEAK FLOW RATE(CFS) =       8.76

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.46   HALFSTREET FLOOD WIDTH(FEET) =  16.56
 FLOW VELOCITY(FEET/SEC.) =  3.06   DEPTH*VELOCITY(FT*FT/SEC.) =   1.40
 LONGEST FLOWPATH FROM NODE    500.00 TO NODE    502.00 =  1830.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    502.00 TO NODE    502.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  19.11
 RAINFALL INTENSITY(INCH/HR) =   1.61
 TOTAL STREAM AREA(ACRES) =     6.90
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.76

****************************************************************************
 FLOW PROCESS FROM NODE    503.00 TO NODE    502.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   738.00
 UPSTREAM ELEVATION(FEET) =   2633.50
 DOWNSTREAM ELEVATION(FEET) =   2622.00
 ELEVATION DIFFERENCE(FEET) =     11.50
 TC = 0.393*[(  738.00**3)/(    11.50)]**.2 =   12.666
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.005
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7455
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      6.73
 TOTAL AREA(ACRES) =      4.50   TOTAL RUNOFF(CFS) =      6.73

****************************************************************************
 FLOW PROCESS FROM NODE    502.00 TO NODE    502.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  12.67
 RAINFALL INTENSITY(INCH/HR) =   2.00
 TOTAL STREAM AREA(ACRES) =     4.50
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      6.73

****************************************************************************
 FLOW PROCESS FROM NODE    506.00 TO NODE    507.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   684.00
 UPSTREAM ELEVATION(FEET) =   2639.00
 DOWNSTREAM ELEVATION(FEET) =   2627.00
 ELEVATION DIFFERENCE(FEET) =     12.00
 TC = 0.393*[(  684.00**3)/(    12.00)]**.2 =   11.999
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.063
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7484
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      3.09
 TOTAL AREA(ACRES) =      2.00   TOTAL RUNOFF(CFS) =      3.09

****************************************************************************
 FLOW PROCESS FROM NODE    507.00 TO NODE    502.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2627.00  DOWNSTREAM ELEVATION(FEET) = 2622.00
 STREET LENGTH(FEET) =   345.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       4.35
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.37
   HALFSTREET FLOOD WIDTH(FEET) =   11.99
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.80
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.02
 STREET FLOW TRAVEL TIME(MIN.) =   2.05   Tc(MIN.) =  14.05
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.897
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7399
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    1.80      SUBAREA RUNOFF(CFS) =    2.53
 TOTAL AREA(ACRES) =      3.80        PEAK FLOW RATE(CFS) =       5.61

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.39   HALFSTREET FLOOD WIDTH(FEET) =  13.32
 FLOW VELOCITY(FEET/SEC.) =  2.97   DEPTH*VELOCITY(FT*FT/SEC.) =   1.16
 LONGEST FLOWPATH FROM NODE    506.00 TO NODE    502.00 =  1029.00 FEET.
```

```
****************************************************************************
 FLOW PROCESS FROM NODE     502.00 TO NODE     502.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
 TIME OF CONCENTRATION(MIN.) =  14.05
 RAINFALL INTENSITY(INCH/HR) =   1.90
 TOTAL STREAM AREA(ACRES) =     3.80
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      5.61

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY       AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
     1         8.76     19.11         1.612          6.90
     2         6.73     12.67         2.005          4.50
     3         5.61     14.05         1.897          3.80

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  3 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        17.59     12.67        2.005
     2        18.42     14.05        1.897
     3        18.93     19.11        1.612

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     18.93   Tc(MIN.) =   19.11
 TOTAL AREA(ACRES) =     15.20
 LONGEST FLOWPATH FROM NODE    500.00 TO NODE    502.00 =  1830.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     508.00 TO NODE     509.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   609.00
 UPSTREAM ELEVATION(FEET) =   2647.50
 DOWNSTREAM ELEVATION(FEET) =   2640.00
 ELEVATION DIFFERENCE(FEET) =      7.50
 TC = 0.393*[(  609.00**3)/(     7.50)]**.2 =   12.294
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.036
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7471
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      5.17
 TOTAL AREA(ACRES) =      3.40   TOTAL RUNOFF(CFS) =      5.17

****************************************************************************
 FLOW PROCESS FROM NODE     504.00 TO NODE     505.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   607.00
 UPSTREAM ELEVATION(FEET) =   2646.00
 DOWNSTREAM ELEVATION(FEET) =   2636.00
 ELEVATION DIFFERENCE(FEET) =     10.00
 TC = 0.393*[(  607.00**3)/(    10.00)]**.2 =   11.584
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.102
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7503
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      4.57
 TOTAL AREA(ACRES) =      2.90   TOTAL RUNOFF(CFS) =      4.57

****************************************************************************
 FLOW PROCESS FROM NODE     510.00 TO NODE     511.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   932.00
 UPSTREAM ELEVATION(FEET) =   2640.90
 DOWNSTREAM ELEVATION(FEET) =   2625.00
 ELEVATION DIFFERENCE(FEET) =     15.90
 TC = 0.393*[(  932.00**3)/(    15.90)]**.2 =   13.656
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.926
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7415
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      5.28
 TOTAL AREA(ACRES) =      3.70   TOTAL RUNOFF(CFS) =      5.28

****************************************************************************
 FLOW PROCESS FROM NODE     511.00 TO NODE     512.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2625.00  DOWNSTREAM ELEVATION(FEET) = 2613.00
 STREET LENGTH(FEET) =   909.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       7.06
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.42
   HALFSTREET FLOOD WIDTH(FEET) =   14.87
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.03
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.28
 STREET FLOW TRAVEL TIME(MIN.) =   5.00   Tc(MIN.) =  18.65
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.633
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7241
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    3.00      SUBAREA RUNOFF(CFS) =    3.55
 TOTAL AREA(ACRES) =      6.70        PEAK FLOW RATE(CFS) =       8.83

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.45   HALFSTREET FLOOD WIDTH(FEET) =  16.21
 FLOW VELOCITY(FEET/SEC.) =  3.22   DEPTH*VELOCITY(FT*FT/SEC.) =   1.45
 LONGEST FLOWPATH FROM NODE    510.00 TO NODE    512.00 =  1841.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     512.00 TO NODE     512.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
```

```
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  18.65
 RAINFALL INTENSITY(INCH/HR) =   1.63
 TOTAL STREAM AREA(ACRES) =     6.70
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.83

****************************************************************************
 FLOW PROCESS FROM NODE    513.00 TO NODE    514.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   706.00
 UPSTREAM ELEVATION(FEET) =   2647.00
 DOWNSTREAM ELEVATION(FEET) =   2639.50
 ELEVATION DIFFERENCE(FEET) =      7.50
 TC = 0.393*[(  706.00**3)/(     7.50)]**.2 =   13.434
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.943
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7424
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      1.07
 TOTAL AREA(ACRES) =      0.74   TOTAL RUNOFF(CFS) =      1.07

****************************************************************************
 FLOW PROCESS FROM NODE    514.00 TO NODE    515.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2639.50  DOWNSTREAM ELEVATION(FEET) = 2628.00
 STREET LENGTH(FEET) =   389.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       3.00
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.30
   HALFSTREET FLOOD WIDTH(FEET) =    8.79
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.36
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.02
 STREET FLOW TRAVEL TIME(MIN.) =   1.93   Tc(MIN.) =  15.36
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.810
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7350
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     2.90      SUBAREA RUNOFF(CFS) =     3.86
 TOTAL AREA(ACRES) =      3.64        PEAK FLOW RATE(CFS) =       4.92

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.34   HALFSTREET FLOOD WIDTH(FEET) =  10.86
 FLOW VELOCITY(FEET/SEC.) =  3.79   DEPTH*VELOCITY(FT*FT/SEC.) =   1.30
 LONGEST FLOWPATH FROM NODE    513.00 TO NODE    515.00 =  1095.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    515.00 TO NODE    512.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2628.00  DOWNSTREAM ELEVATION(FEET) = 2613.00
 STREET LENGTH(FEET) =  1248.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       6.24
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.41
   HALFSTREET FLOOD WIDTH(FEET) =   14.38
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.86
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.18
 STREET FLOW TRAVEL TIME(MIN.) =   7.28   Tc(MIN.) =  22.65
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.473
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7130
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     2.50      SUBAREA RUNOFF(CFS) =     2.63
 TOTAL AREA(ACRES) =      6.14        PEAK FLOW RATE(CFS) =       7.55

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.44   HALFSTREET FLOOD WIDTH(FEET) =  15.57
 FLOW VELOCITY(FEET/SEC.) =  2.97   DEPTH*VELOCITY(FT*FT/SEC.) =   1.30
 LONGEST FLOWPATH FROM NODE    513.00 TO NODE    512.00 =  2343.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    512.00 TO NODE    512.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  22.65
 RAINFALL INTENSITY(INCH/HR) =   1.47
 TOTAL STREAM AREA(ACRES) =     6.14
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      7.55

****************************************************************************
 FLOW PROCESS FROM NODE    516.00 TO NODE    517.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   604.00
 UPSTREAM ELEVATION(FEET) =   2641.00
 DOWNSTREAM ELEVATION(FEET) =   2629.60
 ELEVATION DIFFERENCE(FEET) =     11.40
 TC = 0.393*[(  604.00**3)/(    11.40)]**.2 =   11.251
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.134
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7518
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      4.65
 TOTAL AREA(ACRES) =      2.90   TOTAL RUNOFF(CFS) =      4.65

****************************************************************************
 FLOW PROCESS FROM NODE    517.00 TO NODE    512.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2629.60  DOWNSTREAM ELEVATION(FEET) = 2613.00
 STREET LENGTH(FEET) =   857.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00
```

```
 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       8.92
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.35
   HALFSTREET FLOOD WIDTH(FEET) =   11.43
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.13
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.11
 STREET FLOW TRAVEL TIME(MIN.) =   4.56   Tc(MIN.) =  15.81
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.782
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7334
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    6.50      SUBAREA RUNOFF(CFS) =    8.50
 TOTAL AREA(ACRES) =      9.40        PEAK FLOW RATE(CFS) =      13.15

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.39   HALFSTREET FLOOD WIDTH(FEET) =  13.39
 FLOW VELOCITY(FEET/SEC.) =  3.44   DEPTH*VELOCITY(FT*FT/SEC.) =   1.36
 LONGEST FLOWPATH FROM NODE    516.00 TO NODE    512.00 =  1461.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    512.00 TO NODE    512.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
 TIME OF CONCENTRATION(MIN.) =  15.81
 RAINFALL INTENSITY(INCH/HR) =   1.78
 TOTAL STREAM AREA(ACRES) =     9.40
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.15

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
     1         8.83     18.65         1.633         6.70
     2         7.55     22.65         1.473         6.14
     3        13.15     15.81         1.782         9.40

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  3 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        25.91     15.81        1.782
     2        27.10     18.65        1.633
     3        26.39     22.65        1.473

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     25.91   Tc(MIN.) =   15.81
 TOTAL AREA(ACRES) =     22.24
 LONGEST FLOWPATH FROM NODE    513.00 TO NODE    512.00 =  2343.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    512.00 TO NODE    518.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2613.00  DOWNSTREAM ELEVATION(FEET) = 2605.50
 STREET LENGTH(FEET) =   551.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      28.06
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.51
   HALFSTREET FLOOD WIDTH(FEET) =   18.44
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.73
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.90
 STREET FLOW TRAVEL TIME(MIN.) =   2.47   Tc(MIN.) =  18.28
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.651
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7253
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    3.60      SUBAREA RUNOFF(CFS) =    4.31
 TOTAL AREA(ACRES) =     25.84        PEAK FLOW RATE(CFS) =      30.22

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.52   HALFSTREET FLOOD WIDTH(FEET) =  18.87
 FLOW VELOCITY(FEET/SEC.) =  3.85   DEPTH*VELOCITY(FT*FT/SEC.) =   1.99
 LONGEST FLOWPATH FROM NODE    513.00 TO NODE    518.00 =  2894.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    518.00 TO NODE    519.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2605.50  DOWNSTREAM ELEVATION(FEET) = 2602.50
 STREET LENGTH(FEET) =   501.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      32.41
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.59
   HALFSTREET FLOOD WIDTH(FEET) =   22.41
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.01
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.77
 STREET FLOW TRAVEL TIME(MIN.) =   2.78   Tc(MIN.) =  21.05
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.531
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7172
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.00      SUBAREA RUNOFF(CFS) =    4.39
 TOTAL AREA(ACRES) =     29.84        PEAK FLOW RATE(CFS) =      34.61
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  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.60   HALFSTREET FLOOD WIDTH(FEET) =  22.96
  FLOW VELOCITY(FEET/SEC.) =  3.07   DEPTH*VELOCITY(FT*FT/SEC.) =   1.84
  LONGEST FLOWPATH FROM NODE    513.00 TO NODE    519.00 =  3395.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    900.00 TO NODE    901.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   995.00
  UPSTREAM ELEVATION(FEET) =   2626.00
  DOWNSTREAM ELEVATION(FEET) =   2617.00
  ELEVATION DIFFERENCE(FEET) =      9.00
  TC = 0.393*[(  995.00**3)/(    9.00)]**.2 =  15.915
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.776
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7330
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      4.56
  TOTAL AREA(ACRES) =      3.50   TOTAL RUNOFF(CFS) =      4.56

****************************************************************************
  FLOW PROCESS FROM NODE    520.00 TO NODE    521.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   822.00
  UPSTREAM ELEVATION(FEET) =   2667.00
  DOWNSTREAM ELEVATION(FEET) =   2653.00
  ELEVATION DIFFERENCE(FEET) =     14.00
  TC = 0.393*[(  822.00**3)/(   14.00)]**.2 =  12.991
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.978
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7442
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      3.09
  TOTAL AREA(ACRES) =      2.10   TOTAL RUNOFF(CFS) =      3.09

****************************************************************************
  FLOW PROCESS FROM NODE    521.00 TO NODE    522.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2653.00  DOWNSTREAM ELEVATION(FEET) = 2644.00
  STREET LENGTH(FEET) =   424.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       4.48
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.29
    HALFSTREET FLOOD WIDTH(FEET) =    8.27
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.79
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.81
  STREET FLOW TRAVEL TIME(MIN.) =   2.53   Tc(MIN.) =  15.52
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.800
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7344
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    2.10      SUBAREA RUNOFF(CFS) =    2.78
  TOTAL AREA(ACRES) =      4.20        PEAK FLOW RATE(CFS) =       5.87

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.31   HALFSTREET FLOOD WIDTH(FEET) =   9.32
  FLOW VELOCITY(FEET/SEC.) =  2.97   DEPTH*VELOCITY(FT*FT/SEC.) =   0.93
  LONGEST FLOWPATH FROM NODE    520.00 TO NODE    522.00 =  1246.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    600.00 TO NODE    601.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   897.00
  UPSTREAM ELEVATION(FEET) =   2618.50
  DOWNSTREAM ELEVATION(FEET) =   2606.20
  ELEVATION DIFFERENCE(FEET) =     12.30
  TC = 0.393*[(  897.00**3)/(   12.30)]**.2 =  14.049
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.897
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7399
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      8.14
  TOTAL AREA(ACRES) =      5.80   TOTAL RUNOFF(CFS) =      8.14

****************************************************************************
  FLOW PROCESS FROM NODE    601.00 TO NODE    602.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2606.20  DOWNSTREAM ELEVATION(FEET) = 2602.00
  STREET LENGTH(FEET) =   511.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      10.41
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.42
    HALFSTREET FLOOD WIDTH(FEET) =   14.45
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.36
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.98
  STREET FLOW TRAVEL TIME(MIN.) =   3.61   Tc(MIN.) =  17.66
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.681
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7272
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    3.70      SUBAREA RUNOFF(CFS) =    4.52
  TOTAL AREA(ACRES) =      9.50        PEAK FLOW RATE(CFS) =      12.67

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.44   HALFSTREET FLOOD WIDTH(FEET) =  15.64
  FLOW VELOCITY(FEET/SEC.) =  2.47   DEPTH*VELOCITY(FT*FT/SEC.) =   1.08
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    602.00 =  1408.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    602.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
```

```
===============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  17.66
  RAINFALL INTENSITY(INCH/HR) =   1.68
  TOTAL STREAM AREA(ACRES) =     9.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     12.67

*******************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    604.00 IS CODE =  21
-------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
===============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   547.00
  UPSTREAM ELEVATION(FEET) =   2617.00
  DOWNSTREAM ELEVATION(FEET) =   2612.20
  ELEVATION DIFFERENCE(FEET) =      4.80
  TC = 0.393*[(  547.00**3)/(     4.80)]**.2 =   12.604
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.010
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7458
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      6.15
  TOTAL AREA(ACRES) =      4.10   TOTAL RUNOFF(CFS) =      6.15

*******************************************************************************
  FLOW PROCESS FROM NODE    604.00 TO NODE    602.00 IS CODE =  62
-------------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
===============================================================================
  UPSTREAM ELEVATION(FEET) = 2612.20  DOWNSTREAM ELEVATION(FEET) = 2602.00
  STREET LENGTH(FEET) =   617.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       8.67
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.36
    HALFSTREET FLOOD WIDTH(FEET) =   11.64
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.94
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.06
  STREET FLOW TRAVEL TIME(MIN.) =   3.49   Tc(MIN.) =  16.10
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.766
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7324
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    3.90      SUBAREA RUNOFF(CFS) =    5.04
  TOTAL AREA(ACRES) =      8.00        PEAK FLOW RATE(CFS) =      11.19

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.38   HALFSTREET FLOOD WIDTH(FEET) =  12.90
  FLOW VELOCITY(FEET/SEC.) =  3.14   DEPTH*VELOCITY(FT*FT/SEC.) =   1.21
  LONGEST FLOWPATH FROM NODE    603.00 TO NODE    602.00 =  1164.00 FEET.

*******************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    602.00 IS CODE =   1
-------------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
===============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  16.10
  RAINFALL INTENSITY(INCH/HR) =   1.77
  TOTAL STREAM AREA(ACRES) =     8.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     11.19

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY       AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
      1        12.67     17.66         1.681          9.50
      2        11.19     16.10         1.766          8.00

 ********************************WARNING*********************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1        22.73     16.10         1.766
      2        23.32     17.66         1.681

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     23.32   Tc(MIN.) =   17.66
  TOTAL AREA(ACRES) =     17.50
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    602.00 =  1408.00 FEET.

*******************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    605.00 IS CODE =  62
-------------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
===============================================================================
  UPSTREAM ELEVATION(FEET) = 2602.00  DOWNSTREAM ELEVATION(FEET) = 2601.00
  STREET LENGTH(FEET) =   267.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      23.83
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.58
    HALFSTREET FLOOD WIDTH(FEET) =   21.86
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.32
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.34
  STREET FLOW TRAVEL TIME(MIN.) =   1.92   Tc(MIN.) =  19.58
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.591
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7214
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    0.90      SUBAREA RUNOFF(CFS) =    1.03
  TOTAL AREA(ACRES) =     18.40        PEAK FLOW RATE(CFS) =      24.35

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.58   HALFSTREET FLOOD WIDTH(FEET) =  21.98
  FLOW VELOCITY(FEET/SEC.) =  2.34   DEPTH*VELOCITY(FT*FT/SEC.) =   1.36
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    605.00 =  1675.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     605.00 TO NODE     605.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  19.58
  RAINFALL INTENSITY(INCH/HR) =   1.59
  TOTAL STREAM AREA(ACRES) =    18.40
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     24.35

****************************************************************************
  FLOW PROCESS FROM NODE     606.00 TO NODE     605.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   216.00
  UPSTREAM ELEVATION(FEET) =   2607.00
  DOWNSTREAM ELEVATION(FEET) =   2601.00
  ELEVATION DIFFERENCE(FEET) =      6.00
  TC = 0.393*[(  216.00**3)/(     6.00)]**.2 =    6.902
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.765
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7764
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      3.01
  TOTAL AREA(ACRES) =      1.40   TOTAL RUNOFF(CFS) =      3.01

****************************************************************************
  FLOW PROCESS FROM NODE     605.00 TO NODE     605.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   6.90
  RAINFALL INTENSITY(INCH/HR) =   2.77
  TOTAL STREAM AREA(ACRES) =     1.40
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.01

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY       AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
      1        24.35     19.58         1.591         18.40
      2         3.01      6.90         2.765          1.40

 ***********************************WARNING***********************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 *****************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1        11.59      6.90         2.765
      2        26.08     19.58         1.591

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     26.08   Tc(MIN.) =   19.58
  TOTAL AREA(ACRES) =     19.80
  LONGEST FLOWPATH FROM NODE     600.00 TO NODE     605.00 =  1675.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     605.00 TO NODE     607.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2601.00  DOWNSTREAM ELEVATION(FEET) = 2596.00
  STREET LENGTH(FEET) =   288.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      26.97
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.49
    HALFSTREET FLOOD WIDTH(FEET) =   18.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.95
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.93
  STREET FLOW TRAVEL TIME(MIN.) =   1.22   Tc(MIN.) =  20.80
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.541
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7179
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    1.60      SUBAREA RUNOFF(CFS) =    1.77
  TOTAL AREA(ACRES) =     21.40        PEAK FLOW RATE(CFS) =      27.85

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.49   HALFSTREET FLOOD WIDTH(FEET) =  18.00
  FLOW VELOCITY(FEET/SEC.) =  4.00   DEPTH*VELOCITY(FT*FT/SEC.) =   1.97
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    607.00 =  1963.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     607.00 TO NODE     608.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2596.00  DOWNSTREAM ELEVATION(FEET) = 2588.00
  STREET LENGTH(FEET) =   882.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      30.22
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.55
    HALFSTREET FLOOD WIDTH(FEET) =   20.27
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.38
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.84
  STREET FLOW TRAVEL TIME(MIN.) =   4.35   Tc(MIN.) =  25.15
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.394
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7069
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    4.80      SUBAREA RUNOFF(CFS) =    4.73
```

```
 TOTAL AREA(ACRES) =     26.20        PEAK FLOW RATE(CFS) =      32.58

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.56   HALFSTREET FLOOD WIDTH(FEET) =  20.82
 FLOW VELOCITY(FEET/SEC.) =  3.47   DEPTH*VELOCITY(FT*FT/SEC.) =   1.93
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    608.00 =  2845.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    608.00 TO NODE    608.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  25.15
 RAINFALL INTENSITY(INCH/HR) =   1.39
 TOTAL STREAM AREA(ACRES) =    26.20
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     32.58

****************************************************************************
 FLOW PROCESS FROM NODE    609.00 TO NODE    610.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   479.00
 UPSTREAM ELEVATION(FEET) =   2598.00
 DOWNSTREAM ELEVATION(FEET) =   2592.00
 ELEVATION DIFFERENCE(FEET) =      6.00
 TC = 0.393*[(  479.00**3)/(     6.00)]**.2 =   11.131
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.147
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7524
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      5.49
 TOTAL AREA(ACRES) =      3.40   TOTAL RUNOFF(CFS) =      5.49

****************************************************************************
 FLOW PROCESS FROM NODE    610.00 TO NODE    608.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2592.00  DOWNSTREAM ELEVATION(FEET) = 2588.00
 STREET LENGTH(FEET) =   649.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       8.11
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.40
   HALFSTREET FLOOD WIDTH(FEET) =   13.89
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    1.98
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.80
 STREET FLOW TRAVEL TIME(MIN.) =   5.46   Tc(MIN.) =  16.59
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.737
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7307
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     4.10      SUBAREA RUNOFF(CFS) =     5.21
 TOTAL AREA(ACRES) =      7.50        PEAK FLOW RATE(CFS) =      10.70

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.44   HALFSTREET FLOOD WIDTH(FEET) =  15.50
 FLOW VELOCITY(FEET/SEC.) =  2.12   DEPTH*VELOCITY(FT*FT/SEC.) =   0.93
 LONGEST FLOWPATH FROM NODE    609.00 TO NODE    608.00 =  1128.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    608.00 TO NODE    608.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  16.59
 RAINFALL INTENSITY(INCH/HR) =   1.74
 TOTAL STREAM AREA(ACRES) =     7.50
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     10.70

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY       AREA
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)     (ACRE)
     1        32.58     25.15        1.394         26.20
     2        10.70     16.59        1.737          7.50

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)
     1        32.19     16.59        1.737
     2        41.16     25.15        1.394

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     41.16   Tc(MIN.) =   25.15
 TOTAL AREA(ACRES) =     33.70
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    608.00 =  2845.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    700.00 TO NODE    701.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS CONDOMINIUM
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   510.00
 UPSTREAM ELEVATION(FEET) =   2601.00
 DOWNSTREAM ELEVATION(FEET) =   2592.50
 ELEVATION DIFFERENCE(FEET) =      8.50
 TC = 0.359*[(  510.00**3)/(     8.50)]**.2 =    9.863
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.289
 CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8011
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      3.12
 TOTAL AREA(ACRES) =      1.70   TOTAL RUNOFF(CFS) =      3.12

****************************************************************************
 FLOW PROCESS FROM NODE    701.00 TO NODE    702.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2592.50  DOWNSTREAM ELEVATION(FEET) = 2585.50
```

```
 STREET LENGTH(FEET) =   395.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 16.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   8.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       5.06
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.31
   HALFSTREET FLOOD WIDTH(FEET) =    9.09
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.67
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.82
 STREET FLOW TRAVEL TIME(MIN.) =   2.46   Tc(MIN.) =  12.32
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.034
 CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .7929
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    2.40      SUBAREA RUNOFF(CFS) =    3.87
 TOTAL AREA(ACRES) =      4.10        PEAK FLOW RATE(CFS) =       6.99

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.34   HALFSTREET FLOOD WIDTH(FEET) =  10.47
 FLOW VELOCITY(FEET/SEC.) =  2.88   DEPTH*VELOCITY(FT*FT/SEC.) =   0.97
 LONGEST FLOWPATH FROM NODE    700.00 TO NODE    702.00 =   905.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    702.00 TO NODE    707.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2585.50  DOWNSTREAM ELEVATION(FEET) = 2583.40
 STREET LENGTH(FEET) =   300.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 16.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   8.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.55
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.41
   HALFSTREET FLOOD WIDTH(FEET) =   14.41
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.18
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.90
 STREET FLOW TRAVEL TIME(MIN.) =   2.30   Tc(MIN.) =  14.62
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.858
 CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .7864
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    3.50      SUBAREA RUNOFF(CFS) =    5.11
 TOTAL AREA(ACRES) =      7.60        PEAK FLOW RATE(CFS) =      12.10

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.44   HALFSTREET FLOOD WIDTH(FEET) =  15.84
 FLOW VELOCITY(FEET/SEC.) =  2.30   DEPTH*VELOCITY(FT*FT/SEC.) =   1.02
 LONGEST FLOWPATH FROM NODE    700.00 TO NODE    707.00 =  1205.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    707.00 TO NODE    703.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2583.40  DOWNSTREAM ELEVATION(FEET) = 2578.00
 STREET LENGTH(FEET) =   439.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 16.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   8.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      14.04
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.43
   HALFSTREET FLOOD WIDTH(FEET) =   15.03
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.95
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.26
 STREET FLOW TRAVEL TIME(MIN.) =   2.48   Tc(MIN.) =  17.10
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.710
 CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .7803
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    2.90      SUBAREA RUNOFF(CFS) =    3.87
 TOTAL AREA(ACRES) =     10.50        PEAK FLOW RATE(CFS) =      15.97

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.44   HALFSTREET FLOOD WIDTH(FEET) =  15.84
 FLOW VELOCITY(FEET/SEC.) =  3.04   DEPTH*VELOCITY(FT*FT/SEC.) =   1.35
 LONGEST FLOWPATH FROM NODE    700.00 TO NODE    703.00 =  1644.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    703.00 TO NODE    703.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  17.10
 RAINFALL INTENSITY(INCH/HR) =   1.71
 TOTAL STREAM AREA(ACRES) =    10.50
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     15.97

****************************************************************************
 FLOW PROCESS FROM NODE    704.00 TO NODE    705.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS CONDOMINIUM
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   405.00
 UPSTREAM ELEVATION(FEET) =   2596.20
 DOWNSTREAM ELEVATION(FEET) =   2588.00
 ELEVATION DIFFERENCE(FEET) =      8.20
 TC = 0.359*[(  405.00**3)/(     8.20)]**.2 =    8.651
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.454
 CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8057
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      6.13
 TOTAL AREA(ACRES) =      3.10   TOTAL RUNOFF(CFS) =      6.13

****************************************************************************
 FLOW PROCESS FROM NODE    705.00 TO NODE    706.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
```

```
==========================================================================
  UPSTREAM ELEVATION(FEET) = 2588.00  DOWNSTREAM ELEVATION(FEET) = 2582.50
  STREET LENGTH(FEET) =   348.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 32.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.21
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.37
    HALFSTREET FLOOD WIDTH(FEET) =   12.06
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.93
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.08
  STREET FLOW TRAVEL TIME(MIN.) =   1.98   Tc(MIN.) =  10.63
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.199
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .7984
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     3.50      SUBAREA RUNOFF(CFS) =     6.15
  TOTAL AREA(ACRES) =      6.60        PEAK FLOW RATE(CFS) =      12.27

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.40   HALFSTREET FLOOD WIDTH(FEET) =  13.54
  FLOW VELOCITY(FEET/SEC.) =  3.15   DEPTH*VELOCITY(FT*FT/SEC.) =   1.25
  LONGEST FLOWPATH FROM NODE    704.00 TO NODE    706.00 =   753.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    706.00 TO NODE    703.00 IS CODE =  61
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STANDARD CURB SECTION USED)<<<<<
==========================================================================
  UPSTREAM ELEVATION(FEET) = 2582.50  DOWNSTREAM ELEVATION(FEET) = 2578.00
  STREET LENGTH(FEET) =   480.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 32.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      15.25
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.45
    HALFSTREET FLOOD WIDTH(FEET) =   16.41
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.71
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.23
  STREET FLOW TRAVEL TIME(MIN.) =   2.95   Tc(MIN.) =  13.58
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.932
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .7892
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     3.90      SUBAREA RUNOFF(CFS) =     5.95
  TOTAL AREA(ACRES) =     10.50        PEAK FLOW RATE(CFS) =      18.22

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.48   HALFSTREET FLOOD WIDTH(FEET) =  17.59
  FLOW VELOCITY(FEET/SEC.) =  2.83   DEPTH*VELOCITY(FT*FT/SEC.) =   1.36
  LONGEST FLOWPATH FROM NODE    704.00 TO NODE    703.00 =  1233.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    703.00 TO NODE    703.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
==========================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  13.58
  RAINFALL INTENSITY(INCH/HR) =   1.93
  TOTAL STREAM AREA(ACRES) =    10.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     18.22

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY       AREA
  NUMBER       (CFS)     (MIN.)   (INCH/HOUR)     (ACRE)
      1        15.97     17.10        1.710         10.50
      2        18.22     13.58        1.932         10.50

 ********************************WARNING*********************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)   (INCH/HOUR)
      1        30.90     13.58        1.932
      2        32.10     17.10        1.710

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     30.90   Tc(MIN.) =   13.58
  TOTAL AREA(ACRES) =     21.00
  LONGEST FLOWPATH FROM NODE    700.00 TO NODE    703.00 =  1644.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    703.00 TO NODE    708.00 IS CODE =  61
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STANDARD CURB SECTION USED)<<<<<
==========================================================================
  UPSTREAM ELEVATION(FEET) = 2578.00  DOWNSTREAM ELEVATION(FEET) = 2576.00
  STREET LENGTH(FEET) =   269.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 32.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      31.19
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.58
    HALFSTREET FLOOD WIDTH(FEET) =   26.50
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.90
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.68
  STREET FLOW TRAVEL TIME(MIN.) =   1.55   Tc(MIN.) =  15.13
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.825
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .7851
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     0.40      SUBAREA RUNOFF(CFS) =     0.57
  TOTAL AREA(ACRES) =     21.40        PEAK FLOW RATE(CFS) =      31.48
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```
 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.58   HALFSTREET FLOOD WIDTH(FEET) =  26.63
 FLOW VELOCITY(FEET/SEC.) =  2.91   DEPTH*VELOCITY(FT*FT/SEC.) =   1.69
 LONGEST FLOWPATH FROM NODE    700.00 TO NODE    708.00 =  1913.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    800.00 TO NODE    801.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   806.00
 UPSTREAM ELEVATION(FEET) =   2644.00
 DOWNSTREAM ELEVATION(FEET) =   2626.50
 ELEVATION DIFFERENCE(FEET) =     17.50
 TC = 0.393*[(  806.00**3)/(    17.50)]**.2 =   12.278
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.038
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7472
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      6.09
 TOTAL AREA(ACRES) =      4.00   TOTAL RUNOFF(CFS) =      6.09

****************************************************************************
 FLOW PROCESS FROM NODE    801.00 TO NODE    804.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2626.50  DOWNSTREAM ELEVATION(FEET) = 2621.50
 STREET LENGTH(FEET) =   195.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       6.67
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.32
   HALFSTREET FLOOD WIDTH(FEET) =    9.46
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.29
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.04
 STREET FLOW TRAVEL TIME(MIN.) =   0.99   Tc(MIN.) =  13.26
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.956
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7431
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    0.80      SUBAREA RUNOFF(CFS) =    1.16
 TOTAL AREA(ACRES) =      4.80        PEAK FLOW RATE(CFS) =       7.25

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.32   HALFSTREET FLOOD WIDTH(FEET) =   9.81
 FLOW VELOCITY(FEET/SEC.) =  3.36   DEPTH*VELOCITY(FT*FT/SEC.) =   1.08
 LONGEST FLOWPATH FROM NODE    800.00 TO NODE    804.00 =  1001.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    804.00 TO NODE    804.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  13.26
 RAINFALL INTENSITY(INCH/HR) =   1.96
 TOTAL STREAM AREA(ACRES) =     4.80
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      7.25

****************************************************************************
 FLOW PROCESS FROM NODE    802.00 TO NODE    803.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   773.00
 UPSTREAM ELEVATION(FEET) =   2640.50
 DOWNSTREAM ELEVATION(FEET) =   2627.00
 ELEVATION DIFFERENCE(FEET) =     13.50
 TC = 0.393*[(  773.00**3)/(    13.50)]**.2 =   12.612
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.009
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7458
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      7.04
 TOTAL AREA(ACRES) =      4.70   TOTAL RUNOFF(CFS) =      7.04

****************************************************************************
 FLOW PROCESS FROM NODE    803.00 TO NODE    804.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2627.00  DOWNSTREAM ELEVATION(FEET) = 2621.50
 STREET LENGTH(FEET) =   510.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.19
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.39
   HALFSTREET FLOOD WIDTH(FEET) =   13.04
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.53
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.98
 STREET FLOW TRAVEL TIME(MIN.) =   3.37   Tc(MIN.) =  15.98
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.772
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7328
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    3.30      SUBAREA RUNOFF(CFS) =    4.29
 TOTAL AREA(ACRES) =      8.00        PEAK FLOW RATE(CFS) =      11.33

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.41   HALFSTREET FLOOD WIDTH(FEET) =  14.17
 FLOW VELOCITY(FEET/SEC.) =  2.66   DEPTH*VELOCITY(FT*FT/SEC.) =   1.09
 LONGEST FLOWPATH FROM NODE    802.00 TO NODE    804.00 =  1283.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    804.00 TO NODE    804.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  15.98
 RAINFALL INTENSITY(INCH/HR) =   1.77
 TOTAL STREAM AREA(ACRES) =     8.00
```

```
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     11.33

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY       AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
     1         7.25     13.26         1.956          4.80
     2        11.33     15.98         1.772          8.00

 ***********************************WARNING************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ******************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        16.66     13.26        1.956
     2        17.90     15.98        1.772

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     17.90   Tc(MIN.) =   15.98
 TOTAL AREA(ACRES) =     12.80
 LONGEST FLOWPATH FROM NODE    802.00 TO NODE    804.00 =  1283.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    804.00 TO NODE    805.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2621.50  DOWNSTREAM ELEVATION(FEET) = 2609.00
 STREET LENGTH(FEET) =   542.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      20.60
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.43
   HALFSTREET FLOOD WIDTH(FEET) =   15.43
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.12
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.79
 STREET FLOW TRAVEL TIME(MIN.) =   2.19   Tc(MIN.) =  18.17
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.656
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7256
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.50      SUBAREA RUNOFF(CFS) =    5.41
 TOTAL AREA(ACRES) =     17.30        PEAK FLOW RATE(CFS) =      23.31

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.45   HALFSTREET FLOOD WIDTH(FEET) =  16.21
 FLOW VELOCITY(FEET/SEC.) =  4.25   DEPTH*VELOCITY(FT*FT/SEC.) =   1.91
 LONGEST FLOWPATH FROM NODE    802.00 TO NODE    805.00 =  1825.00 FEET.
============================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)      =     17.30  TC(MIN.) =     18.17
 PEAK FLOW RATE(CFS)    =     23.31
============================================================================
============================================================================

 END OF RATIONAL METHOD ANALYSIS
```

TECHNICAL APPENDIX

APPENDIX A.2

Tract 35967 10-Yr Storm Event

Post-Project Condition

```
**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
        RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                    (RCFC&WCD)  1978 HYDROLOGY MANUAL
         (c) Copyright 1982-2004 Advanced Engineering Software (aes)
                    (Rational Tabling Version 6.0D)
                Release Date: 01/01/2004  License ID 1264

                        Analysis prepared by:

                            RBF Consulting
                          14725 Alton Parkway
                        Irvine, California  92618


 ************************* DESCRIPTION OF STUDY *************************
* Deutsch Banning Project    Project No: 65-100183                       *
* Hydrology for Tract 35967, 10 years storm event                        *
* Date : 2008-04-03      By: AC                                          *
 **************************************************************************

  FILE NAME: D_K_10.DAT
  TIME/DATE OF STUDY: 11:16 04/04/2008
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.570
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.300
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =   10.00   1-HOUR INTENSITY(INCH/HOUR) =   0.879
  SLOPE OF INTENSITY DURATION CURVE = 0.5300
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
        AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-   CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH   CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)      (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0      20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150
  2   18.0       9.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0160
  3   20.0      12.0    0.015/0.050/0.020   0.50    1.50 0.0313 0.125 0.0160

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth = -0.17 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  8.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

**************************************************************************
  FLOW PROCESS FROM NODE     410.00 TO NODE     412.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   366.00
  UPSTREAM ELEVATION(FEET) =   2641.00
  DOWNSTREAM ELEVATION(FEET) =   2637.80
  ELEVATION DIFFERENCE(FEET) =      3.20
  TC = 0.393*[(  366.00**3)/(     3.20)]**.2 =   10.740
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.188
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7543
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =     10.53
  TOTAL AREA(ACRES) =      6.38   TOTAL RUNOFF(CFS) =     10.53

**************************************************************************
  FLOW PROCESS FROM NODE     412.00 TO NODE     431.00 IS CODE =  62
--------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
==========================================================================
  UPSTREAM ELEVATION(FEET) = 2637.80  DOWNSTREAM ELEVATION(FEET) = 2633.00
  STREET LENGTH(FEET) =   578.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      13.52
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.45
   HALFSTREET FLOOD WIDTH(FEET) =   16.00
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.53
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.13
  STREET FLOW TRAVEL TIME(MIN.) =   3.81   Tc(MIN.) =  14.55
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.862
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7380
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    4.35      SUBAREA RUNOFF(CFS) =    5.98
  TOTAL AREA(ACRES) =     10.73       PEAK FLOW RATE(CFS) =      16.51

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.47   HALFSTREET FLOOD WIDTH(FEET) =  17.33
  FLOW VELOCITY(FEET/SEC.) =  2.64   DEPTH*VELOCITY(FT*FT/SEC.) =   1.25
  LONGEST FLOWPATH FROM NODE    410.00 TO NODE    431.00 =   944.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE     431.00 TO NODE     431.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
==========================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  14.55
  RAINFALL INTENSITY(INCH/HR) =   1.86
  TOTAL STREAM AREA(ACRES) =    10.73
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     16.51

**************************************************************************
  FLOW PROCESS FROM NODE     427.00 TO NODE     429.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   504.00
  UPSTREAM ELEVATION(FEET) =   2645.00
  DOWNSTREAM ELEVATION(FEET) =   2636.00
  ELEVATION DIFFERENCE(FEET) =      9.00
  TC = 0.303*[(  504.00**3)/(     9.00)]**.2 =    8.170
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.529
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8736
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =     7.89
  TOTAL AREA(ACRES) =     3.57   TOTAL RUNOFF(CFS) =     7.89
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     429.00 TO NODE     431.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2636.00  DOWNSTREAM ELEVATION(FEET) = 2633.00
  STREET LENGTH(FEET) =   294.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.38
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.39
    HALFSTREET FLOOD WIDTH(FEET) =   13.25
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.50
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.98
  STREET FLOW TRAVEL TIME(MIN.) =   1.96   Tc(MIN.) =  10.13
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.257
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7573
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    1.75      SUBAREA RUNOFF(CFS) =    2.99
  TOTAL AREA(ACRES) =      5.32        PEAK FLOW RATE(CFS) =      10.88

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.41   HALFSTREET FLOOD WIDTH(FEET) =  14.10
  FLOW VELOCITY(FEET/SEC.) =  2.58   DEPTH*VELOCITY(FT*FT/SEC.) =   1.05
  LONGEST FLOWPATH FROM NODE    427.00 TO NODE    431.00 =   798.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     431.00 TO NODE     431.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  10.13
  RAINFALL INTENSITY(INCH/HR) =   2.26
  TOTAL STREAM AREA(ACRES) =     5.32
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     10.88

  ** CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       16.51    14.55        1.862         10.73
      2       10.88    10.13        2.257          5.32

 ***********************************WARNING***********************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 *****************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)
      1       22.36    10.13        2.257
      2       25.48    14.55        1.862

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     25.48   Tc(MIN.) =   14.55
  TOTAL AREA(ACRES) =     16.05
  LONGEST FLOWPATH FROM NODE    410.00 TO NODE    431.00 =   944.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     431.00 TO NODE     435.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2633.00  DOWNSTREAM ELEVATION(FEET) = 2627.50
  STREET LENGTH(FEET) =   477.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      26.77
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.51
    HALFSTREET FLOOD WIDTH(FEET) =   18.62
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.49
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.79
  STREET FLOW TRAVEL TIME(MIN.) =   2.28   Tc(MIN.) =  16.83
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.724
  SINGLE-FAMILY(1/2 ACRE LOT) RUNOFF COEFFICIENT = .6959
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    2.15      SUBAREA RUNOFF(CFS) =    2.58
  TOTAL AREA(ACRES) =     18.20        PEAK FLOW RATE(CFS) =      28.06

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.52   HALFSTREET FLOOD WIDTH(FEET) =  18.93
  FLOW VELOCITY(FEET/SEC.) =  3.55   DEPTH*VELOCITY(FT*FT/SEC.) =   1.84
  LONGEST FLOWPATH FROM NODE    410.00 TO NODE    435.00 =  1421.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     435.00 TO NODE     435.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  16.83
  RAINFALL INTENSITY(INCH/HR) =   1.72
  TOTAL STREAM AREA(ACRES) =    18.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     28.06

****************************************************************************
  FLOW PROCESS FROM NODE     433.00 TO NODE     435.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY(1/2 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   534.00
  UPSTREAM ELEVATION(FEET) =   2638.00
  DOWNSTREAM ELEVATION(FEET) =   2627.50
  ELEVATION DIFFERENCE(FEET) =     10.50
  TC = 0.422*[(  534.00**3)/(    10.50)]**.2 =   11.421
```

```
  10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.118
 SINGLE-FAMILY(1/2 ACRE LOT) RUNOFF COEFFICIENT = .7213
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      5.61
 TOTAL AREA(ACRES) =      3.67   TOTAL RUNOFF(CFS) =      5.61

****************************************************************************
 FLOW PROCESS FROM NODE    435.00 TO NODE    435.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  11.42
 RAINFALL INTENSITY(INCH/HR) =   2.12
 TOTAL STREAM AREA(ACRES) =     3.67
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      5.61

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY       AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
     1        28.06     16.83         1.724         18.20
     2         5.61     11.42         2.118          3.67

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        24.65     11.42        2.118
     2        32.63     16.83        1.724

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     32.63   Tc(MIN.) =   16.83
 TOTAL AREA(ACRES) =     21.87
 LONGEST FLOWPATH FROM NODE    410.00 TO NODE    435.00 =  1421.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    435.00 TO NODE    408.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2627.50  DOWNSTREAM ELEVATION(FEET) = 2624.00
 STREET LENGTH(FEET) =   253.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      32.78
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.53
   HALFSTREET FLOOD WIDTH(FEET) =   19.36
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.99
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.10
 STREET FLOW TRAVEL TIME(MIN.) =   1.06   Tc(MIN.) =  17.89
  10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.669
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7265
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    0.25      SUBAREA RUNOFF(CFS) =    0.30
 TOTAL AREA(ACRES) =     22.12        PEAK FLOW RATE(CFS) =      32.93

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.53   HALFSTREET FLOOD WIDTH(FEET) =  19.42
 FLOW VELOCITY(FEET/SEC.) =  3.98   DEPTH*VELOCITY(FT*FT/SEC.) =   2.10
 LONGEST FLOWPATH FROM NODE    410.00 TO NODE    408.00 =  1674.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    408.00 TO NODE    408.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  17.89
 RAINFALL INTENSITY(INCH/HR) =   1.67
 TOTAL STREAM AREA(ACRES) =    22.12
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     32.93

****************************************************************************
 FLOW PROCESS FROM NODE    400.00 TO NODE    402.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   396.00
 UPSTREAM ELEVATION(FEET) =   2695.00
 DOWNSTREAM ELEVATION(FEET) =   2688.60
 ELEVATION DIFFERENCE(FEET) =      6.40
 TC = 0.393*[(  396.00**3)/(     6.40)]**.2 =    9.802
  10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.296
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7590
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      1.81
 TOTAL AREA(ACRES) =      1.04   TOTAL RUNOFF(CFS) =      1.81

****************************************************************************
 FLOW PROCESS FROM NODE    402.00 TO NODE    406.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2688.60  DOWNSTREAM ELEVATION(FEET) = 2650.00
 STREET LENGTH(FEET) =   888.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       3.93
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.26
   HALFSTREET FLOOD WIDTH(FEET) =    6.57
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.57
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.92
 STREET FLOW TRAVEL TIME(MIN.) =   4.14   Tc(MIN.) =  13.94
```

```
  10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.905
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7403
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     2.99      SUBAREA RUNOFF(CFS) =     4.22
 TOTAL AREA(ACRES) =      4.03        PEAK FLOW RATE(CFS) =       6.03

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.29   HALFSTREET FLOOD WIDTH(FEET) =   8.04
 FLOW VELOCITY(FEET/SEC.) =  3.94   DEPTH*VELOCITY(FT*FT/SEC.) =   1.13
 LONGEST FLOWPATH FROM NODE    400.00 TO NODE    406.00 =  1284.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    406.00 TO NODE    407.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2650.00  DOWNSTREAM ELEVATION(FEET) = 2635.00
 STREET LENGTH(FEET) =   697.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       7.12
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.33
   HALFSTREET FLOOD WIDTH(FEET) =   10.14
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.11
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.02
 STREET FLOW TRAVEL TIME(MIN.) =   3.74   Tc(MIN.) =  17.68
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.680
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7272
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     1.79      SUBAREA RUNOFF(CFS) =     2.19
 TOTAL AREA(ACRES) =      5.82        PEAK FLOW RATE(CFS) =       8.22

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.34   HALFSTREET FLOOD WIDTH(FEET) =  10.76
 FLOW VELOCITY(FEET/SEC.) =  3.22   DEPTH*VELOCITY(FT*FT/SEC.) =   1.10
 LONGEST FLOWPATH FROM NODE    400.00 TO NODE    407.00 =  1981.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    407.00 TO NODE    408.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2635.00  DOWNSTREAM ELEVATION(FEET) = 2624.00
 STREET LENGTH(FEET) =   366.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       8.69
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.33
   HALFSTREET FLOOD WIDTH(FEET) =   10.25
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.72
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.23
 STREET FLOW TRAVEL TIME(MIN.) =   1.64   Tc(MIN.) =  19.32
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.603
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7221
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     0.82      SUBAREA RUNOFF(CFS) =     0.95
 TOTAL AREA(ACRES) =      6.64        PEAK FLOW RATE(CFS) =       9.17

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.34   HALFSTREET FLOOD WIDTH(FEET) =  10.53
 FLOW VELOCITY(FEET/SEC.) =  3.73   DEPTH*VELOCITY(FT*FT/SEC.) =   1.26
 LONGEST FLOWPATH FROM NODE    400.00 TO NODE    408.00 =  2347.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    408.00 TO NODE    408.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  19.32
 RAINFALL INTENSITY(INCH/HR) =   1.60
 TOTAL STREAM AREA(ACRES) =     6.64
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      9.17

 ** CONFLUENCE DATA **
 STREAM      RUNOFF      Tc      INTENSITY      AREA
 NUMBER       (CFS)    (MIN.)   (INCH/HOUR)    (ACRE)
     1        32.93    17.89        1.669        22.12
     2         9.17    19.32        1.603         6.64

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF      Tc      INTENSITY
 NUMBER       (CFS)    (MIN.)   (INCH/HOUR)
     1        41.42    17.89        1.669
     2        40.78    19.32        1.603

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     41.42   Tc(MIN.) =   17.89
 TOTAL AREA(ACRES) =     28.76
 LONGEST FLOWPATH FROM NODE    400.00 TO NODE    408.00 =  2347.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    408.00 TO NODE    441.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2624.00  DOWNSTREAM ELEVATION(FEET) = 2613.00
 STREET LENGTH(FEET) =   537.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
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 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      42.37
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.55
   HALFSTREET FLOOD WIDTH(FEET) =   23.25
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.64
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.53
 STREET FLOW TRAVEL TIME(MIN.) =   1.93   Tc(MIN.) =  19.82
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.581
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7207
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    1.68      SUBAREA RUNOFF(CFS) =    1.91
 TOTAL AREA(ACRES) =     30.44        PEAK FLOW RATE(CFS) =      43.33

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.55   HALFSTREET FLOOD WIDTH(FEET) =  23.63
 FLOW VELOCITY(FEET/SEC.) =  4.65   DEPTH*VELOCITY(FT*FT/SEC.) =   2.56
 LONGEST FLOWPATH FROM NODE    400.00 TO NODE    441.00 =  2884.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    441.00 TO NODE    414.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2613.00  DOWNSTREAM ELEVATION(FEET) = 2612.00
 STREET LENGTH(FEET) =   270.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      43.73
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.70
   HALFSTREET FLOOD WIDTH(FEET) =   39.13
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.30
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.62
 STREET FLOW TRAVEL TIME(MIN.) =   1.96   Tc(MIN.) =  21.78
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.504
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7153
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    0.75      SUBAREA RUNOFF(CFS) =    0.81
 TOTAL AREA(ACRES) =     31.19        PEAK FLOW RATE(CFS) =      44.14

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.71   HALFSTREET FLOOD WIDTH(FEET) =  39.25
 FLOW VELOCITY(FEET/SEC.) =  2.31   DEPTH*VELOCITY(FT*FT/SEC.) =   1.63
 LONGEST FLOWPATH FROM NODE    400.00 TO NODE    414.00 =  3154.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    417.00 TO NODE    419.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   750.00
 UPSTREAM ELEVATION(FEET) =   2692.00
 DOWNSTREAM ELEVATION(FEET) =   2675.00
 ELEVATION DIFFERENCE(FEET) =     17.00
 TC = 0.393*[(  750.00**3)/(    17.00)]**.2 =   11.828
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.079
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7492
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      7.85
 TOTAL AREA(ACRES) =      5.04   TOTAL RUNOFF(CFS) =      7.85

****************************************************************************
 FLOW PROCESS FROM NODE    419.00 TO NODE    421.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2675.00  DOWNSTREAM ELEVATION(FEET) = 2658.00
 STREET LENGTH(FEET) =   303.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      11.17
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.33
   HALFSTREET FLOOD WIDTH(FEET) =   10.02
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.98
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.63
 STREET FLOW TRAVEL TIME(MIN.) =   1.01   Tc(MIN.) =  12.84
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.990
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7448
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.48      SUBAREA RUNOFF(CFS) =    6.64
 TOTAL AREA(ACRES) =      9.52        PEAK FLOW RATE(CFS) =      14.49

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.35   HALFSTREET FLOOD WIDTH(FEET) =  11.14
 FLOW VELOCITY(FEET/SEC.) =  5.33   DEPTH*VELOCITY(FT*FT/SEC.) =   1.86
 LONGEST FLOWPATH FROM NODE    417.00 TO NODE    421.00 =  1053.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    421.00 TO NODE    425.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2658.00  DOWNSTREAM ELEVATION(FEET) = 2636.50
 STREET LENGTH(FEET) =   841.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      18.48
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.42
   HALFSTREET FLOOD WIDTH(FEET) =   14.52
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.15
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.73
 STREET FLOW TRAVEL TIME(MIN.) =   3.38   Tc(MIN.) =  16.22
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  10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.758
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7320
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    6.20      SUBAREA RUNOFF(CFS) =    7.98
 TOTAL AREA(ACRES) =     15.72       PEAK FLOW RATE(CFS) =      22.47

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.44   HALFSTREET FLOOD WIDTH(FEET) =  15.64
 FLOW VELOCITY(FEET/SEC.) =  4.38   DEPTH*VELOCITY(FT*FT/SEC.) =   1.92
 LONGEST FLOWPATH FROM NODE    417.00 TO NODE    425.00 =  1894.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    425.00 TO NODE    425.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  16.22
 RAINFALL INTENSITY(INCH/HR) =   1.76
 TOTAL STREAM AREA(ACRES) =    15.72
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     22.47

****************************************************************************
 FLOW PROCESS FROM NODE    417.00 TO NODE    423.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   490.00
 UPSTREAM ELEVATION(FEET) =   2692.00
 DOWNSTREAM ELEVATION(FEET) =   2664.00
 ELEVATION DIFFERENCE(FEET) =     28.00
 TC = 0.393*[(  490.00**3)/(    28.00)]**.2 =    8.292
  10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.509
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7675
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      6.34
 TOTAL AREA(ACRES) =      3.29   TOTAL RUNOFF(CFS) =      6.34

****************************************************************************
 FLOW PROCESS FROM NODE    423.00 TO NODE    425.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2664.00  DOWNSTREAM ELEVATION(FEET) = 2636.50
 STREET LENGTH(FEET) =   590.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.85
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.32
   HALFSTREET FLOOD WIDTH(FEET) =    9.88
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.50
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.46
 STREET FLOW TRAVEL TIME(MIN.) =   2.18   Tc(MIN.) =  10.48
  10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.217
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7556
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.19      SUBAREA RUNOFF(CFS) =    7.02
 TOTAL AREA(ACRES) =      7.48       PEAK FLOW RATE(CFS) =      13.35

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.35   HALFSTREET FLOOD WIDTH(FEET) =  11.21
 FLOW VELOCITY(FEET/SEC.) =  4.85   DEPTH*VELOCITY(FT*FT/SEC.) =   1.70
 LONGEST FLOWPATH FROM NODE    417.00 TO NODE    425.00 =  1080.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    425.00 TO NODE    425.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  10.48
 RAINFALL INTENSITY(INCH/HR) =   2.22
 TOTAL STREAM AREA(ACRES) =     7.48
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.35

 ** CONFLUENCE DATA **
 STREAM      RUNOFF      Tc      INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
     1        22.47     16.22        1.758        15.72
     2        13.35     10.48        2.217         7.48

 ********************************WARNING*********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF      Tc      INTENSITY
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)
     1        27.87     10.48        2.217
     2        33.06     16.22        1.758

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     33.06   Tc(MIN.) =   16.22
 TOTAL AREA(ACRES) =     23.20
 LONGEST FLOWPATH FROM NODE    417.00 TO NODE    425.00 =  1894.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    425.00 TO NODE    443.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2636.50  DOWNSTREAM ELEVATION(FEET) = 2628.00
 STREET LENGTH(FEET) =   600.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      34.65
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
```

```
    STREET FLOW DEPTH(FEET) =  0.53
    HALFSTREET FLOOD WIDTH(FEET) =   19.66
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.09
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.18
  STREET FLOW TRAVEL TIME(MIN.) =   2.44   Tc(MIN.) =  18.66
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.632
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7241
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    2.68      SUBAREA RUNOFF(CFS) =    3.17
  TOTAL AREA(ACRES) =     25.88       PEAK FLOW RATE(CFS) =      36.23

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.54   HALFSTREET FLOOD WIDTH(FEET) =  19.97
  FLOW VELOCITY(FEET/SEC.) =  4.16   DEPTH*VELOCITY(FT*FT/SEC.) =   2.24
  LONGEST FLOWPATH FROM NODE    417.00 TO NODE    443.00 =  2494.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    443.00 TO NODE    445.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2628.00  DOWNSTREAM ELEVATION(FEET) = 2615.00
  STREET LENGTH(FEET) =   680.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      39.21
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.53
    HALFSTREET FLOOD WIDTH(FEET) =   19.48
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.71
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.50
  STREET FLOW TRAVEL TIME(MIN.) =   2.41   Tc(MIN.) =  21.07
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.531
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7172
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    5.42      SUBAREA RUNOFF(CFS) =    5.95
  TOTAL AREA(ACRES) =     31.30       PEAK FLOW RATE(CFS) =      42.18

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.54   HALFSTREET FLOOD WIDTH(FEET) =  20.03
  FLOW VELOCITY(FEET/SEC.) =  4.82   DEPTH*VELOCITY(FT*FT/SEC.) =   2.60
  LONGEST FLOWPATH FROM NODE    417.00 TO NODE    445.00 =  3174.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    445.00 TO NODE    414.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =  2615.00  DOWNSTREAM(FEET) =  2612.00
  FLOW LENGTH(FEET) =   400.00   MANNING'S N =  0.015
  DEPTH OF FLOW IN  36.0 INCH PIPE IS  26.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.59
  ESTIMATED PIPE DIAMETER(INCH) =  36.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     42.18
  PIPE TRAVEL TIME(MIN.) =   0.88    Tc(MIN.) =  21.94
  LONGEST FLOWPATH FROM NODE    417.00 TO NODE    414.00 =  3574.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    437.00 TO NODE    439.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   416.00
  UPSTREAM ELEVATION(FEET) =   2629.00
  DOWNSTREAM ELEVATION(FEET) =   2626.00
  ELEVATION DIFFERENCE(FEET) =      3.00
  TC = 0.393*[(  416.00**3)/(     3.00)]**.2 =   11.748
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.086
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7496
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      4.64
  TOTAL AREA(ACRES) =      2.97   TOTAL RUNOFF(CFS) =      4.64

****************************************************************************
  FLOW PROCESS FROM NODE    439.00 TO NODE    414.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =  2626.00  DOWNSTREAM(FEET) =  2612.00
  FLOW LENGTH(FEET) =   400.00   MANNING'S N =  0.015
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 18.000
  DEPTH OF FLOW IN  18.0 INCH PIPE IS   6.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.90
  ESTIMATED PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      4.64
  PIPE TRAVEL TIME(MIN.) =   0.84    Tc(MIN.) =  12.59
  LONGEST FLOWPATH FROM NODE    437.00 TO NODE    414.00 =   816.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    242.00 TO NODE    244.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   947.00
  UPSTREAM ELEVATION(FEET) =   2683.30
  DOWNSTREAM ELEVATION(FEET) =   2669.00
  ELEVATION DIFFERENCE(FEET) =     14.30
  TC = 0.393*[(  947.00**3)/(    14.30)]**.2 =   14.083
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.895
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7398
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      4.30
  TOTAL AREA(ACRES) =      3.07   TOTAL RUNOFF(CFS) =      4.30

****************************************************************************
  FLOW PROCESS FROM NODE    244.00 TO NODE    247.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2669.00  DOWNSTREAM ELEVATION(FEET) = 2650.00
  STREET LENGTH(FEET) =   883.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
```

```
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.58
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.36
   HALFSTREET FLOOD WIDTH(FEET) =   11.50
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.33
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.19
 STREET FLOW TRAVEL TIME(MIN.) =   4.42   Tc(MIN.) =  18.51
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.640
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7246
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    8.85      SUBAREA RUNOFF(CFS) =   10.51
 TOTAL AREA(ACRES) =     11.92       PEAK FLOW RATE(CFS) =      14.82

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.40   HALFSTREET FLOOD WIDTH(FEET) =  13.75
 FLOW VELOCITY(FEET/SEC.) =  3.69   DEPTH*VELOCITY(FT*FT/SEC.) =   1.48
 LONGEST FLOWPATH FROM NODE    242.00 TO NODE    247.00 =  1830.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    247.00 TO NODE    247.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  18.51
 RAINFALL INTENSITY(INCH/HR) =   1.64
 TOTAL STREAM AREA(ACRES) =    11.92
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     14.82

****************************************************************************
 FLOW PROCESS FROM NODE    251.00 TO NODE    253.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   604.00
 UPSTREAM ELEVATION(FEET) =   2682.00
 DOWNSTREAM ELEVATION(FEET) =   2655.50
 ELEVATION DIFFERENCE(FEET) =     26.50
 TC = 0.393*[(  604.00**3)/(    26.50)]**.2 =    9.504
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.334
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7606
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      6.92
 TOTAL AREA(ACRES) =      3.90   TOTAL RUNOFF(CFS) =      6.92

****************************************************************************
 FLOW PROCESS FROM NODE    253.00 TO NODE    255.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2655.50  DOWNSTREAM ELEVATION(FEET) = 2653.00
 STREET LENGTH(FEET) =   275.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.86
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.40
   HALFSTREET FLOOD WIDTH(FEET) =   13.89
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.41
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.97
 STREET FLOW TRAVEL TIME(MIN.) =   1.90   Tc(MIN.) =  11.41
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.119
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7511
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    3.68      SUBAREA RUNOFF(CFS) =    5.86
 TOTAL AREA(ACRES) =      7.58       PEAK FLOW RATE(CFS) =      12.78

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.43   HALFSTREET FLOOD WIDTH(FEET) =  15.36
 FLOW VELOCITY(FEET/SEC.) =  2.58   DEPTH*VELOCITY(FT*FT/SEC.) =   1.12
 LONGEST FLOWPATH FROM NODE    251.00 TO NODE    255.00 =   879.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    255.00 TO NODE    247.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2653.00  DOWNSTREAM ELEVATION(FEET) = 2650.00
 STREET LENGTH(FEET) =     4.77   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      16.58
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.26
   HALFSTREET FLOOD WIDTH(FEET) =    6.92
   AVERAGE FLOW VELOCITY(FEET/SEC.) =   13.88
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    3.67
 STREET FLOW TRAVEL TIME(MIN.) =   0.01   Tc(MIN.) =  11.41
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.118
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7511
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.77      SUBAREA RUNOFF(CFS) =    7.59
 TOTAL AREA(ACRES) =     12.35       PEAK FLOW RATE(CFS) =      20.37

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.28   HALFSTREET FLOOD WIDTH(FEET) =   7.62
 FLOW VELOCITY(FEET/SEC.) = 14.57   DEPTH*VELOCITY(FT*FT/SEC.) =   4.06
 LONGEST FLOWPATH FROM NODE    251.00 TO NODE    247.00 =   883.77 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    247.00 TO NODE    247.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  11.41
 RAINFALL INTENSITY(INCH/HR) =   2.12
 TOTAL STREAM AREA(ACRES) =    12.35
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     20.37

 ** CONFLUENCE DATA **
 STREAM      RUNOFF      Tc      INTENSITY      AREA
```

```
 NUMBER      (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
     1       14.82     18.51        1.640          11.92
     2       20.37     11.41        2.118          12.35

 ********************************WARNING*************************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1        29.51     11.41        2.118
      2        30.58     18.51        1.640

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     29.51   Tc(MIN.) =   11.41
  TOTAL AREA(ACRES) =     24.27
  LONGEST FLOWPATH FROM NODE    242.00 TO NODE    247.00 =  1830.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    247.00 TO NODE    249.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2650.00  DOWNSTREAM ELEVATION(FEET) = 2643.00
  STREET LENGTH(FEET) =   280.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      30.41
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.48
    HALFSTREET FLOOD WIDTH(FEET) =   17.75
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.65
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.24
  STREET FLOW TRAVEL TIME(MIN.) =   1.00   Tc(MIN.) =  12.42
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.026
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7466
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    1.19      SUBAREA RUNOFF(CFS) =    1.80
  TOTAL AREA(ACRES) =     25.46        PEAK FLOW RATE(CFS) =      31.31

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.49   HALFSTREET FLOOD WIDTH(FEET) =  17.96
  FLOW VELOCITY(FEET/SEC.) =  4.68   DEPTH*VELOCITY(FT*FT/SEC.) =   2.27
  LONGEST FLOWPATH FROM NODE    242.00 TO NODE    249.00 =  2110.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    249.00 TO NODE    249.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  12.42
  RAINFALL INTENSITY(INCH/HR) =   2.03
  TOTAL STREAM AREA(ACRES) =    25.46
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     31.31

****************************************************************************
  FLOW PROCESS FROM NODE    257.00 TO NODE    249.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   813.00
  UPSTREAM ELEVATION(FEET) =   2652.50
  DOWNSTREAM ELEVATION(FEET) =   2643.00
  ELEVATION DIFFERENCE(FEET) =      9.50
  TC = 0.393*[(  813.00**3)/(     9.50)]**.2 =   13.946
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.905
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7403
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      2.47
  TOTAL AREA(ACRES) =      1.75   TOTAL RUNOFF(CFS) =      2.47

****************************************************************************
  FLOW PROCESS FROM NODE    249.00 TO NODE    249.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  13.95
  RAINFALL INTENSITY(INCH/HR) =   1.90
  TOTAL STREAM AREA(ACRES) =     1.75
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.47

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY      AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
      1        31.31     12.42        2.026         25.46
      2         2.47     13.95        1.905          1.75

 ********************************WARNING*************************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1        33.51     12.42        2.026
      2        31.91     13.95        1.905

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     33.51   Tc(MIN.) =   12.42
  TOTAL AREA(ACRES) =     27.21
  LONGEST FLOWPATH FROM NODE    242.00 TO NODE    249.00 =  2110.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    249.00 TO NODE    246.00 IS CODE =  61
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2643.00  DOWNSTREAM ELEVATION(FEET) = 2642.50
  STREET LENGTH(FEET) =   195.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 32.00
```

```
  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      33.83
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.69
    HALFSTREET FLOOD WIDTH(FEET) =   37.63
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    1.89
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.30
  STREET FLOW TRAVEL TIME(MIN.) =   1.72   Tc(MIN.) =  14.14
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.891
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7396
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    0.46      SUBAREA RUNOFF(CFS) =    0.64
  TOTAL AREA(ACRES) =     27.67        PEAK FLOW RATE(CFS) =      34.15

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.69   HALFSTREET FLOOD WIDTH(FEET) =  37.88
  FLOW VELOCITY(FEET/SEC.) =  1.89   DEPTH*VELOCITY(FT*FT/SEC.) =   1.31
  LONGEST FLOWPATH FROM NODE    242.00 TO NODE    246.00 =  2305.00 FEET.
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)      =     27.67  TC(MIN.) =     14.14
  PEAK FLOW RATE(CFS)    =     34.15
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

TECHNICAL APPENDIX

APPENDIX A.3

Tract 35968, 35969 10-Yr Storm Event

Post-Project Condition

```
**************************************************************************
        RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
      RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                  (RCFC&WCD)  1978 HYDROLOGY MANUAL
       (c) Copyright 1982-2004 Advanced Engineering Software (aes)
                   (Rational Tabling Version 6.0D)
              Release Date: 01/01/2004  License ID 1264

                      Analysis prepared by:

                          RBF Consulting
                        14725 Alton Parkway
                      Irvine, California  92618


 ************************* DESCRIPTION OF STUDY *************************
* Deutsch Banning Project     Project No: 65-100183                      *
* Hydrology for Tract 35968, 35969, 10 Years Storm Event                 *
* Date : 2008-04-07     By:AC                                            *
 **************************************************************************

  FILE NAME: D_F_G_10.DAT
  TIME/DATE OF STUDY: 16:13 04/07/2008
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =   10.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.570
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.300
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =   10.00   1-HOUR INTENSITY(INCH/HOUR) =   0.879
  SLOPE OF INTENSITY DURATION CURVE = 0.5300
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
        AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE   FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)     (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150
  2   18.0      9.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0160
  3   20.0     12.0    0.015/0.050/0.020   0.50    1.50 0.0313 0.125 0.0160
  4   12.0      6.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth = -0.17 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  8.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*
    MINIMUM LOSS RATE PERCENTAGE FOR 24-HOUR STORM =  2.00

**************************************************************************
  FLOW PROCESS FROM NODE     715.00 TO NODE     717.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS CONDOMINIUM
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   858.00
  UPSTREAM ELEVATION(FEET) =   2610.00
  DOWNSTREAM ELEVATION(FEET) =   2592.00
  ELEVATION DIFFERENCE(FEET) =     18.00
  TC = 0.359*[(  858.00**3)/(    18.00)]**.2 =   11.598
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.100
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .7952
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =     14.98
  TOTAL AREA(ACRES) =      8.97   TOTAL RUNOFF(CFS) =     14.98

**************************************************************************
  FLOW PROCESS FROM NODE     717.00 TO NODE     719.00 IS CODE =  62
--------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  4 USED)<<<<<
==========================================================================
  UPSTREAM ELEVATION(FEET) = 2592.00  DOWNSTREAM ELEVATION(FEET) = 2583.00
  STREET LENGTH(FEET) =   352.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 12.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   6.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0150

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      18.90
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.40
    HALFSTREET FLOOD WIDTH(FEET) =   12.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.71
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.90
  STREET FLOW TRAVEL TIME(MIN.) =   1.24   Tc(MIN.) =  12.84
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.990
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .7914
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    4.98      SUBAREA RUNOFF(CFS) =    7.84
  TOTAL AREA(ACRES) =    13.95       PEAK FLOW RATE(CFS) =      22.82

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.42   HALFSTREET FLOOD WIDTH(FEET) =  12.00
  FLOW VELOCITY(FEET/SEC.) =  5.06   DEPTH*VELOCITY(FT*FT/SEC.) =   2.15
  LONGEST FLOWPATH FROM NODE    715.00 TO NODE    719.00 =  1210.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE     719.00 TO NODE     711.00 IS CODE =  62
--------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  4 USED)<<<<<
==========================================================================
  UPSTREAM ELEVATION(FEET) = 2583.00  DOWNSTREAM ELEVATION(FEET) = 2575.00
  STREET LENGTH(FEET) =     5.37   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 12.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   6.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0150

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      27.05
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.26
    HALFSTREET FLOOD WIDTH(FEET) =    6.89
    AVERAGE FLOW VELOCITY(FEET/SEC.) =   22.81
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    6.02
  STREET FLOW TRAVEL TIME(MIN.) =   0.00   Tc(MIN.) =  12.85
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.990
```

```
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .7913
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     5.37      SUBAREA RUNOFF(CFS) =     8.46
  TOTAL AREA(ACRES) =      19.32       PEAK FLOW RATE(CFS) =      31.28

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.27   HALFSTREET FLOOD WIDTH(FEET) =   7.36
  FLOW VELOCITY(FEET/SEC.) = 23.71   DEPTH*VELOCITY(FT*FT/SEC.) =   6.48
  LONGEST FLOWPATH FROM NODE    715.00 TO NODE    711.00 =  1215.37 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    711.00 TO NODE    713.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  4 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2575.00  DOWNSTREAM ELEVATION(FEET) = 2560.00
  STREET LENGTH(FEET) =   782.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 12.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   6.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0150

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      36.71
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.51
    HALFSTREET FLOOD WIDTH(FEET) =   12.48
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    5.59
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.85
  STREET FLOW TRAVEL TIME(MIN.) =   2.33   Tc(MIN.) =  15.18
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.821
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .7850
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     7.59      SUBAREA RUNOFF(CFS) =    10.85
  TOTAL AREA(ACRES) =      26.91       PEAK FLOW RATE(CFS) =      42.13

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.53   HALFSTREET FLOOD WIDTH(FEET) =  13.64
  FLOW VELOCITY(FEET/SEC.) =  5.88   DEPTH*VELOCITY(FT*FT/SEC.) =   3.13
  LONGEST FLOWPATH FROM NODE    715.00 TO NODE    713.00 =  1997.37 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    713.00 TO NODE    713.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  15.18
  RAINFALL INTENSITY(INCH/HR) =   1.82
  TOTAL STREAM AREA(ACRES) =    26.91
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     42.13

****************************************************************************
  FLOW PROCESS FROM NODE    712.00 TO NODE    713.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS CONDOMINIUM
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   352.00
  UPSTREAM ELEVATION(FEET) =   2562.00
  DOWNSTREAM ELEVATION(FEET) =   2560.00
  ELEVATION DIFFERENCE(FEET) =      2.00
  TC = 0.359*[(  352.00**3)/(     2.00)]**.2 =   10.545
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.209
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .7987
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      5.58
  TOTAL AREA(ACRES) =      3.16   TOTAL RUNOFF(CFS) =      5.58

****************************************************************************
  FLOW PROCESS FROM NODE    713.00 TO NODE    713.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  10.55
  RAINFALL INTENSITY(INCH/HR) =   2.21
  TOTAL STREAM AREA(ACRES) =     3.16
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      5.58

  ** CONFLUENCE DATA **
  STREAM      RUNOFF      Tc      INTENSITY      AREA
  NUMBER       (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
       1       42.13     15.18        1.821        26.91
       2        5.58     10.55        2.209         3.16

 ***********************************WARNING***********************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 *****************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF      Tc      INTENSITY
  NUMBER       (CFS)     (MIN.)   (INCH/HOUR)
       1       34.85     10.55        2.209
       2       46.73     15.18        1.821

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     46.73   Tc(MIN.) =   15.18
  TOTAL AREA(ACRES) =     30.07
  LONGEST FLOWPATH FROM NODE    715.00 TO NODE    713.00 =  1997.37 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    461.00 TO NODE    463.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   679.00
  UPSTREAM ELEVATION(FEET) =   2629.00
  DOWNSTREAM ELEVATION(FEET) =   2618.00
  ELEVATION DIFFERENCE(FEET) =     11.00
  TC = 0.393*[(  679.00**3)/(    11.00)]**.2 =   12.156
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.049
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7477
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      8.10
  TOTAL AREA(ACRES) =      5.29   TOTAL RUNOFF(CFS) =      8.10

****************************************************************************
  FLOW PROCESS FROM NODE    463.00 TO NODE    460.00 IS CODE =  62
----------------------------------------------------------------------------
```

```
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
================================================================================
 UPSTREAM ELEVATION(FEET) = 2618.00  DOWNSTREAM ELEVATION(FEET) = 2611.00
 STREET LENGTH(FEET) =   608.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      10.72
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.40
   HALFSTREET FLOOD WIDTH(FEET) =   13.68
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.70
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.08
 STREET FLOW TRAVEL TIME(MIN.) =   3.76   Tc(MIN.) =  15.92
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.776
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7330
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.01      SUBAREA RUNOFF(CFS) =    5.22
 TOTAL AREA(ACRES) =      9.30        PEAK FLOW RATE(CFS) =      13.32

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.43   HALFSTREET FLOOD WIDTH(FEET) =  14.94
 FLOW VELOCITY(FEET/SEC.) =  2.83   DEPTH*VELOCITY(FT*FT/SEC.) =   1.20
 LONGEST FLOWPATH FROM NODE    461.00 TO NODE    460.00 =  1287.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    460.00 TO NODE    460.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  15.92
 RAINFALL INTENSITY(INCH/HR) =   1.78
 TOTAL STREAM AREA(ACRES) =     9.30
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.32

****************************************************************************
 FLOW PROCESS FROM NODE    416.00 TO NODE    460.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   166.00
 UPSTREAM ELEVATION(FEET) =   2612.00
 DOWNSTREAM ELEVATION(FEET) =   2611.00
 ELEVATION DIFFERENCE(FEET) =      1.00
 TC = 0.393*[(  166.00**3)/(     1.00)]**.2 =    8.434
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.487
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7666
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      0.74
 TOTAL AREA(ACRES) =      0.39   TOTAL RUNOFF(CFS) =      0.74

****************************************************************************
 FLOW PROCESS FROM NODE    460.00 TO NODE    460.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =   8.43
 RAINFALL INTENSITY(INCH/HR) =   2.49
 TOTAL STREAM AREA(ACRES) =     0.39
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      0.74

 ** CONFLUENCE DATA **
 STREAM      RUNOFF      Tc      INTENSITY      AREA
 NUMBER       (CFS)    (MIN.)   (INCH/HOUR)    (ACRE)
     1        13.32    15.92        1.776         9.30
     2         0.74     8.43        2.487         0.39

 ********************************WARNING**********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 *************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF      Tc      INTENSITY
 NUMBER       (CFS)    (MIN.)   (INCH/HOUR)
     1         7.80     8.43        2.487
     2        13.86    15.92        1.776

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     13.86   Tc(MIN.) =   15.92
 TOTAL AREA(ACRES) =      9.69
 LONGEST FLOWPATH FROM NODE    461.00 TO NODE    460.00 =  1287.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    460.00 TO NODE    465.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2611.00  DOWNSTREAM ELEVATION(FEET) = 2602.00
 STREET LENGTH(FEET) =  1789.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      15.84
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.50
   HALFSTREET FLOOD WIDTH(FEET) =   18.88
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.17
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.09
 STREET FLOW TRAVEL TIME(MIN.) =  13.73   Tc(MIN.) =  29.64
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.277
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .6972
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.43      SUBAREA RUNOFF(CFS) =    3.95
 TOTAL AREA(ACRES) =     14.12        PEAK FLOW RATE(CFS) =      17.80

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.52   HALFSTREET FLOOD WIDTH(FEET) =  20.63
 FLOW VELOCITY(FEET/SEC.) =  2.23   DEPTH*VELOCITY(FT*FT/SEC.) =   1.16
 LONGEST FLOWPATH FROM NODE    461.00 TO NODE    465.00 =  3076.00 FEET.
```

```
****************************************************************************
 FLOW PROCESS FROM NODE    465.00 TO NODE    465.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  29.64
 RAINFALL INTENSITY(INCH/HR) =   1.28
 TOTAL STREAM AREA(ACRES) =    14.12
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     17.80

****************************************************************************
 FLOW PROCESS FROM NODE    469.00 TO NODE    471.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   542.00
 UPSTREAM ELEVATION(FEET) =   2629.00
 DOWNSTREAM ELEVATION(FEET) =   2614.00
 ELEVATION DIFFERENCE(FEET) =     15.00
 TC = 0.393*[(  542.00**3)/(    15.00)]**.2 =    9.980
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.274
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7581
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      6.43
 TOTAL AREA(ACRES) =      3.73   TOTAL RUNOFF(CFS) =      6.43

****************************************************************************
 FLOW PROCESS FROM NODE    471.00 TO NODE    465.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2614.00  DOWNSTREAM ELEVATION(FEET) = 2602.00
 STREET LENGTH(FEET) =   470.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       8.78
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.34
   HALFSTREET FLOOD WIDTH(FEET) =   10.65
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.51
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.19
 STREET FLOW TRAVEL TIME(MIN.) =   2.23   Tc(MIN.) =  12.21
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.044
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7475
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     3.08      SUBAREA RUNOFF(CFS) =     4.70
 TOTAL AREA(ACRES) =      6.81        PEAK FLOW RATE(CFS) =      11.14

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.36   HALFSTREET FLOOD WIDTH(FEET) =  11.78
 FLOW VELOCITY(FEET/SEC.) =  3.70   DEPTH*VELOCITY(FT*FT/SEC.) =   1.34
 LONGEST FLOWPATH FROM NODE    469.00 TO NODE    465.00 =  1012.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    465.00 TO NODE    465.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  12.21
 RAINFALL INTENSITY(INCH/HR) =   2.04
 TOTAL STREAM AREA(ACRES) =     6.81
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     11.14

****************************************************************************
 FLOW PROCESS FROM NODE    473.00 TO NODE    467.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   336.00
 UPSTREAM ELEVATION(FEET) =   2626.50
 DOWNSTREAM ELEVATION(FEET) =   2619.00
 ELEVATION DIFFERENCE(FEET) =      7.50
 TC = 0.393*[(  336.00**3)/(     7.50)]**.2 =    8.605
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.460
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7656
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      5.41
 TOTAL AREA(ACRES) =      2.87   TOTAL RUNOFF(CFS) =      5.41

****************************************************************************
 FLOW PROCESS FROM NODE    467.00 TO NODE    465.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =  2619.00  DOWNSTREAM(FEET) =  2602.00
 FLOW LENGTH(FEET) =   200.00   MANNING'S N =  0.013
 ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 18.000
 DEPTH OF FLOW IN  18.0 INCH PIPE IS   5.3 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =  12.58
 ESTIMATED PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      5.41
 PIPE TRAVEL TIME(MIN.) =   0.26    Tc(MIN.) =   8.87
 LONGEST FLOWPATH FROM NODE    473.00 TO NODE    465.00 =   536.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    465.00 TO NODE    465.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
 TIME OF CONCENTRATION(MIN.) =   8.87
 RAINFALL INTENSITY(INCH/HR) =   2.42
 TOTAL STREAM AREA(ACRES) =     2.87
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      5.41

 ** CONFLUENCE DATA **
 STREAM      RUNOFF      Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
     1        17.80     29.64        1.277         14.12
     2        11.14     12.21        2.044          6.81
     3         5.41      8.87        2.421          2.87

 ********************************WARNING*********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
```

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

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  3 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF       Tc       INTENSITY
  NUMBER      (CFS)     (MIN.)    (INCH/HOUR)
      1       18.82      8.87        2.421
      2       23.03     12.21        2.044
      3       27.61     29.64        1.277

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     27.61   Tc(MIN.) =   29.64
  TOTAL AREA(ACRES) =     23.80
  LONGEST FLOWPATH FROM NODE    461.00 TO NODE    465.00 =  3076.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    465.00 TO NODE    416.00 IS CODE =  61
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2602.00  DOWNSTREAM ELEVATION(FEET) = 2601.50
  STREET LENGTH(FEET) =   197.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 32.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      27.82
    ***STREET FLOW SPLITS OVER STREET-CROWN***
    FULL DEPTH(FEET) =    0.77   FLOOD WIDTH(FEET) =   45.31
    FULL HALF-STREET VELOCITY(FEET/SEC.) =    2.01
    SPLIT DEPTH(FEET) =    0.44   SPLIT FLOOD WIDTH(FEET) =   15.58
    SPLIT FLOW(CFS) =    3.49   SPLIT VELOCITY(FEET/SEC.) =    1.37
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.77
    HALFSTREET FLOOD WIDTH(FEET) =   45.31
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.01
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.54
  STREET FLOW TRAVEL TIME(MIN.) =   1.64   Tc(MIN.) =  31.28
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.241
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .6941
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    0.47      SUBAREA RUNOFF(CFS) =    0.40
  TOTAL AREA(ACRES) =    24.27        PEAK FLOW RATE(CFS) =      28.02

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.77   HALFSTREET FLOOD WIDTH(FEET) =  45.31
  FLOW VELOCITY(FEET/SEC.) =  2.01   DEPTH*VELOCITY(FT*FT/SEC.) =   1.54
  LONGEST FLOWPATH FROM NODE    461.00 TO NODE    416.00 =  3273.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    700.00 TO NODE    702.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   435.00
  UPSTREAM ELEVATION(FEET) =   2596.00
  DOWNSTREAM ELEVATION(FEET) =   2593.50
  ELEVATION DIFFERENCE(FEET) =      2.50
  TC = 0.303*[(  435.00**3)/(     2.50)]**.2 =    9.663
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.314
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8720
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      8.29
  TOTAL AREA(ACRES) =      4.11   TOTAL RUNOFF(CFS) =      8.29

****************************************************************************
  FLOW PROCESS FROM NODE    702.00 TO NODE    704.00 IS CODE =  53
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   2593.50  DOWNSTREAM(FEET) =   2585.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   554.00   CHANNEL SLOPE =  0.0153
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0153 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  CHANNEL FLOW THRU SUBAREA(CFS) =      8.29
  FLOW VELOCITY(FEET/SEC) =   1.40 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   6.58   Tc(MIN.) =  16.24
  LONGEST FLOWPATH FROM NODE    700.00 TO NODE    704.00 =   989.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    704.00 TO NODE    704.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.757
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7319
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    5.92   SUBAREA RUNOFF(CFS) =    7.61
  TOTAL AREA(ACRES) =    10.03   TOTAL RUNOFF(CFS) =   15.90
  TC(MIN.) =  16.24

****************************************************************************
  FLOW PROCESS FROM NODE    704.00 TO NODE    704.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  16.24
  RAINFALL INTENSITY(INCH/HR) =   1.76
  TOTAL STREAM AREA(ACRES) =   10.03
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     15.90

****************************************************************************
  FLOW PROCESS FROM NODE    711.00 TO NODE    704.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   641.00
  UPSTREAM ELEVATION(FEET) =   2589.00
  DOWNSTREAM ELEVATION(FEET) =   2585.00
  ELEVATION DIFFERENCE(FEET) =      4.00
  TC = 0.393*[(  641.00**3)/(     4.00)]**.2 =   14.376
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.874
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7387
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      0.68
  TOTAL AREA(ACRES) =      0.49   TOTAL RUNOFF(CFS) =      0.68

****************************************************************************
  FLOW PROCESS FROM NODE    704.00 TO NODE    704.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
```

```
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
================================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  14.38
  RAINFALL INTENSITY(INCH/HR) =   1.87
  TOTAL STREAM AREA(ACRES) =     0.49
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      0.68

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY       AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
      1        15.90     16.24         1.757         10.03
      2         0.68     14.38         1.874          0.49

 ***********************************WARNING************************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ******************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1        14.75     14.38         1.874
      2        16.54     16.24         1.757

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     16.54   Tc(MIN.) =   16.24
  TOTAL AREA(ACRES) =     10.52
  LONGEST FLOWPATH FROM NODE    700.00 TO NODE    704.00 =   989.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    704.00 TO NODE    704.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 3 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    706.00 TO NODE    707.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   580.00
  UPSTREAM ELEVATION(FEET) =   2606.20
  DOWNSTREAM ELEVATION(FEET) =   2603.00
  ELEVATION DIFFERENCE(FEET) =      3.20
  TC = 0.393*[(  580.00**3)/(     3.20)]**.2 =   14.157
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.890
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7395
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      5.28
  TOTAL AREA(ACRES) =      3.78   TOTAL RUNOFF(CFS) =      5.28

****************************************************************************
  FLOW PROCESS FROM NODE    707.00 TO NODE    707.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  14.16
  RAINFALL INTENSITY(INCH/HR) =   1.89
  TOTAL STREAM AREA(ACRES) =     3.78
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      5.28

****************************************************************************
  FLOW PROCESS FROM NODE    705.00 TO NODE    707.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   137.00
  UPSTREAM ELEVATION(FEET) =   2606.50
  DOWNSTREAM ELEVATION(FEET) =   2603.00
  ELEVATION DIFFERENCE(FEET) =      3.50
  TC = 0.393*[(  137.00**3)/(     3.50)]**.2 =    5.850
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.019
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7841
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      0.43
  TOTAL AREA(ACRES) =      0.18   TOTAL RUNOFF(CFS) =      0.43

****************************************************************************
  FLOW PROCESS FROM NODE    707.00 TO NODE    707.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   5.85
  RAINFALL INTENSITY(INCH/HR) =   3.02
  TOTAL STREAM AREA(ACRES) =     0.18
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      0.43

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY       AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
      1         5.28     14.16         1.890          3.78
      2         0.43      5.85         3.019          0.18

 ***********************************WARNING************************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ******************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1         2.61      5.85         3.019
      2         5.55     14.16         1.890

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      5.55   Tc(MIN.) =   14.16
  TOTAL AREA(ACRES) =      3.96
  LONGEST FLOWPATH FROM NODE    706.00 TO NODE    707.00 =   580.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    707.00 TO NODE    708.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2603.00  DOWNSTREAM ELEVATION(FEET) = 2593.50
  STREET LENGTH(FEET) =   315.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00
```

```
  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       5.79
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.30
    HALFSTREET FLOOD WIDTH(FEET) =    8.62
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.36
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.00
  STREET FLOW TRAVEL TIME(MIN.) =   1.56   Tc(MIN.) =  15.72
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.788
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7337
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     0.37      SUBAREA RUNOFF(CFS) =     0.49
  TOTAL AREA(ACRES) =      4.33        PEAK FLOW RATE(CFS) =       6.03

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.30   HALFSTREET FLOOD WIDTH(FEET) =   8.74
  FLOW VELOCITY(FEET/SEC.) =  3.42   DEPTH*VELOCITY(FT*FT/SEC.) =   1.03
  LONGEST FLOWPATH FROM NODE    706.00 TO NODE    708.00 =   895.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    708.00 TO NODE    704.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2593.50  DOWNSTREAM ELEVATION(FEET) = 2585.00
  STREET LENGTH(FEET) =   289.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       6.73
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.31
    HALFSTREET FLOOD WIDTH(FEET) =    9.25
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.46
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.08
  STREET FLOW TRAVEL TIME(MIN.) =   1.39   Tc(MIN.) =  17.11
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.709
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7290
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     1.11      SUBAREA RUNOFF(CFS) =     1.38
  TOTAL AREA(ACRES) =      5.44        PEAK FLOW RATE(CFS) =       7.42

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.32   HALFSTREET FLOOD WIDTH(FEET) =   9.67
  FLOW VELOCITY(FEET/SEC.) =  3.52   DEPTH*VELOCITY(FT*FT/SEC.) =   1.13
  LONGEST FLOWPATH FROM NODE    706.00 TO NODE    704.00 =  1184.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    704.00 TO NODE    704.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 3 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
  STREAM      RUNOFF      Tc       INTENSITY      AREA
  NUMBER       (CFS)    (MIN.)    (INCH/HOUR)    (ACRE)
      1         7.42     17.11        1.709         5.44
  LONGEST FLOWPATH FROM NODE    706.00 TO NODE    704.00 =  1184.00 FEET.

  ** MEMORY BANK #  3 CONFLUENCE DATA **
  STREAM      RUNOFF      Tc       INTENSITY      AREA
  NUMBER       (CFS)    (MIN.)    (INCH/HOUR)    (ACRE)
      1        16.54     16.24        1.757        10.52
  LONGEST FLOWPATH FROM NODE    700.00 TO NODE    704.00 =   989.00 FEET.

 ****************************************WARNING*****************************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF        Tc       INTENSITY
  NUMBER      (CFS)      (MIN.)    (INCH/HOUR)
      1       23.58       16.24        1.757
      2       23.51       17.11        1.709

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     23.58   Tc(MIN.) =   16.24
  TOTAL AREA(ACRES) =     15.96

****************************************************************************
  FLOW PROCESS FROM NODE    704.00 TO NODE    710.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2585.00  DOWNSTREAM ELEVATION(FEET) = 2578.00
  STREET LENGTH(FEET) =   811.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      25.99
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.53
    HALFSTREET FLOOD WIDTH(FEET) =   19.42
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.14
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.66
  STREET FLOW TRAVEL TIME(MIN.) =   4.30   Tc(MIN.) =  20.55
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.551
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7186
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     4.31      SUBAREA RUNOFF(CFS) =     4.80
  TOTAL AREA(ACRES) =     20.27        PEAK FLOW RATE(CFS) =      28.39

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.54   HALFSTREET FLOOD WIDTH(FEET) =  20.03
  FLOW VELOCITY(FEET/SEC.) =  3.24   DEPTH*VELOCITY(FT*FT/SEC.) =   1.75
  LONGEST FLOWPATH FROM NODE    706.00 TO NODE    710.00 =  1995.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    710.00 TO NODE    710.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
```

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================================================================================

********************************************************************************
  FLOW PROCESS FROM NODE     750.00 TO NODE     709.00 IS CODE =  21
--------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
================================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   356.00
  UPSTREAM ELEVATION(FEET) =   2606.20
  DOWNSTREAM ELEVATION(FEET) =   2589.00
  ELEVATION DIFFERENCE(FEET) =     17.20
  TC = 0.393*[(  356.00**3)/(    17.20)]**.2 =    7.546
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.638
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7721
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      3.65
  TOTAL AREA(ACRES) =      1.79   TOTAL RUNOFF(CFS) =      3.65

********************************************************************************
  FLOW PROCESS FROM NODE     709.00 TO NODE     709.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
================================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   7.55
  RAINFALL INTENSITY(INCH/HR) =   2.64
  TOTAL STREAM AREA(ACRES) =     1.79
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.65

********************************************************************************
  FLOW PROCESS FROM NODE     708.00 TO NODE     709.00 IS CODE =  21
--------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
================================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   686.00
  UPSTREAM ELEVATION(FEET) =   2593.50
  DOWNSTREAM ELEVATION(FEET) =   2589.00
  ELEVATION DIFFERENCE(FEET) =      4.50
  TC = 0.393*[(  686.00**3)/(     4.50)]**.2 =   14.625
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.857
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7377
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      5.59
  TOTAL AREA(ACRES) =      4.08   TOTAL RUNOFF(CFS) =      5.59

********************************************************************************
  FLOW PROCESS FROM NODE     709.00 TO NODE     709.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
================================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  14.63
  RAINFALL INTENSITY(INCH/HR) =   1.86
  TOTAL STREAM AREA(ACRES) =     4.08
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      5.59

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY       AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
      1         3.65      7.55         2.638          1.79
      2         5.59     14.63         1.857          4.08

 *********************************WARNING*************************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ***********************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1         6.53      7.55         2.638
      2         8.16     14.63         1.857

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      8.16   Tc(MIN.) =   14.63
  TOTAL AREA(ACRES) =      5.87
  LONGEST FLOWPATH FROM NODE     708.00 TO NODE     709.00 =   686.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE     709.00 TO NODE     710.00 IS CODE =  62
--------------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
================================================================================
  UPSTREAM ELEVATION(FEET) = 2589.00  DOWNSTREAM ELEVATION(FEET) = 2578.00
  STREET LENGTH(FEET) =   540.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.70
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.36
    HALFSTREET FLOOD WIDTH(FEET) =   11.71
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.26
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.17
  STREET FLOW TRAVEL TIME(MIN.) =   2.76   Tc(MIN.) =  17.39
    10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.695
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7281
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    2.50      SUBAREA RUNOFF(CFS) =    3.08
  TOTAL AREA(ACRES) =      8.37        PEAK FLOW RATE(CFS) =      11.24

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.37   HALFSTREET FLOOD WIDTH(FEET) =  12.41
  FLOW VELOCITY(FEET/SEC.) =  3.39   DEPTH*VELOCITY(FT*FT/SEC.) =   1.27
  LONGEST FLOWPATH FROM NODE     708.00 TO NODE     710.00 =  1226.00 FEET.

********************************************************************************
  FLOW PROCESS FROM NODE     710.00 TO NODE     710.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
================================================================================

  ** MAIN STREAM CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY      AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
      1        11.24     17.39         1.695         8.37
  LONGEST FLOWPATH FROM NODE     708.00 TO NODE     710.00 =  1226.00 FEET.
```

```
 ** MEMORY BANK #  1 CONFLUENCE DATA **
 STREAM     RUNOFF      Tc       INTENSITY     AREA
 NUMBER      (CFS)    (MIN.)    (INCH/HOUR)    (ACRE)
     1       28.39     20.55        1.551       20.27
 LONGEST FLOWPATH FROM NODE    706.00 TO NODE    710.00 =  1995.00 FEET.

 ****************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

 ** PEAK FLOW RATE TABLE **
 STREAM    RUNOFF       Tc       INTENSITY
 NUMBER     (CFS)     (MIN.)    (INCH/HOUR)
     1      35.26      17.39        1.695
     2      38.68      20.55        1.551

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     38.68   Tc(MIN.) =   20.55
 TOTAL AREA(ACRES) =     28.64

************************************************************************
 FLOW PROCESS FROM NODE    600.00 TO NODE    602.00 IS CODE =  21
------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   958.00
 UPSTREAM ELEVATION(FEET) =   2601.00
 DOWNSTREAM ELEVATION(FEET) =   2587.50
 ELEVATION DIFFERENCE(FEET) =     13.50
 TC = 0.393*[(  958.00**3)/(    13.50)]**.2 =   14.345
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.877
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7388
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      8.01
 TOTAL AREA(ACRES) =      5.78   TOTAL RUNOFF(CFS) =      8.01

************************************************************************
 FLOW PROCESS FROM NODE    602.00 TO NODE    602.00 IS CODE =   1
------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
========================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  14.35
 RAINFALL INTENSITY(INCH/HR) =   1.88
 TOTAL STREAM AREA(ACRES) =     5.78
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.01

************************************************************************
 FLOW PROCESS FROM NODE    603.00 TO NODE    602.00 IS CODE =  21
------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   553.00
 UPSTREAM ELEVATION(FEET) =   2599.50
 DOWNSTREAM ELEVATION(FEET) =   2587.50
 ELEVATION DIFFERENCE(FEET) =     12.00
 TC = 0.393*[(  553.00**3)/(    12.00)]**.2 =   10.562
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.207
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7552
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      5.88
 TOTAL AREA(ACRES) =      3.53   TOTAL RUNOFF(CFS) =      5.88

************************************************************************
 FLOW PROCESS FROM NODE    602.00 TO NODE    602.00 IS CODE =   1
------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
========================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  10.56
 RAINFALL INTENSITY(INCH/HR) =   2.21
 TOTAL STREAM AREA(ACRES) =     3.53
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      5.88

 ** CONFLUENCE DATA **
 STREAM     RUNOFF      Tc       INTENSITY      AREA
 NUMBER      (CFS)    (MIN.)    (INCH/HOUR)    (ACRE)
     1        8.01     14.35        1.877         5.78
     2        5.88     10.56        2.207         3.53

 ****************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM     RUNOFF      Tc       INTENSITY
 NUMBER      (CFS)    (MIN.)    (INCH/HOUR)
     1       11.78     10.56        2.207
     2       13.02     14.35        1.877

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     13.02   Tc(MIN.) =   14.35
 TOTAL AREA(ACRES) =      9.31
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    602.00 =   958.00 FEET.

************************************************************************
 FLOW PROCESS FROM NODE    602.00 TO NODE    607.00 IS CODE =  62
------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
========================================================================
 UPSTREAM ELEVATION(FEET) = 2587.50  DOWNSTREAM ELEVATION(FEET) = 2580.00
 STREET LENGTH(FEET) =   277.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      13.65
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.38
   HALFSTREET FLOOD WIDTH(FEET) =   12.69
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.95
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.50
 STREET FLOW TRAVEL TIME(MIN.) =   1.17   Tc(MIN.) =  15.51
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.800
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7345
 SOIL CLASSIFICATION IS "B"
```

```
 SUBAREA AREA(ACRES) =     0.96      SUBAREA RUNOFF(CFS) =     1.27
 TOTAL AREA(ACRES) =     10.27        PEAK FLOW RATE(CFS) =      14.29

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.38   HALFSTREET FLOOD WIDTH(FEET) =  12.90
 FLOW VELOCITY(FEET/SEC.) =  4.01   DEPTH*VELOCITY(FT*FT/SEC.) =   1.54
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    607.00 =  1235.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    607.00 TO NODE    607.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  15.51
 RAINFALL INTENSITY(INCH/HR) =   1.80
 TOTAL STREAM AREA(ACRES) =    10.27
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     14.29

****************************************************************************
 FLOW PROCESS FROM NODE    605.00 TO NODE    607.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   528.00
 UPSTREAM ELEVATION(FEET) =   2583.30
 DOWNSTREAM ELEVATION(FEET) =   2580.00
 ELEVATION DIFFERENCE(FEET) =      3.30
 TC = 0.393*[(  528.00**3)/(     3.30)]**.2 =   13.299
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.953
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7429
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      5.83
 TOTAL AREA(ACRES) =      4.02   TOTAL RUNOFF(CFS) =      5.83

****************************************************************************
 FLOW PROCESS FROM NODE    607.00 TO NODE    607.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  13.30
 RAINFALL INTENSITY(INCH/HR) =   1.95
 TOTAL STREAM AREA(ACRES) =     4.02
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      5.83

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
     1        14.29     15.51         1.800        10.27
     2         5.83     13.30         1.953         4.02

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        18.08     13.30         1.953
     2        19.66     15.51         1.800

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     19.66   Tc(MIN.) =   15.51
 TOTAL AREA(ACRES) =     14.29
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    607.00 =  1235.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    607.00 TO NODE    609.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2580.00  DOWNSTREAM ELEVATION(FEET) = 2573.50
 STREET LENGTH(FEET) =   305.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      20.45
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.44
   HALFSTREET FLOOD WIDTH(FEET) =   15.64
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.99
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.75
 STREET FLOW TRAVEL TIME(MIN.) =   1.28   Tc(MIN.) =  16.79
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.726
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7301
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     1.25      SUBAREA RUNOFF(CFS) =     1.58
 TOTAL AREA(ACRES) =     15.54        PEAK FLOW RATE(CFS) =      21.24

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.44   HALFSTREET FLOOD WIDTH(FEET) =  15.86
 FLOW VELOCITY(FEET/SEC.) =  4.03   DEPTH*VELOCITY(FT*FT/SEC.) =   1.79
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    609.00 =  1540.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    609.00 TO NODE    609.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  16.79
 RAINFALL INTENSITY(INCH/HR) =   1.73
 TOTAL STREAM AREA(ACRES) =    15.54
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     21.24

****************************************************************************
 FLOW PROCESS FROM NODE    611.00 TO NODE    609.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   184.00
 UPSTREAM ELEVATION(FEET) =   2575.00
 DOWNSTREAM ELEVATION(FEET) =   2573.50
 ELEVATION DIFFERENCE(FEET) =      1.50
 TC = 0.393*[(  184.00**3)/(     1.50)]**.2 =    8.272
```

```
  10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.512
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7676
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      2.10
 TOTAL AREA(ACRES) =      1.09   TOTAL RUNOFF(CFS) =      2.10

****************************************************************************
 FLOW PROCESS FROM NODE    609.00 TO NODE    609.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =   8.27
 RAINFALL INTENSITY(INCH/HR) =   2.51
 TOTAL STREAM AREA(ACRES) =     1.09
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.10

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc      INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
     1        21.24     16.79        1.726         15.54
     2         2.10      8.27        2.512          1.09

 ***********************************WARNING***********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 *****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc      INTENSITY
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)
     1        12.57      8.27        2.512
     2        22.68     16.79        1.726

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     22.68   Tc(MIN.) =   16.79
 TOTAL AREA(ACRES) =     16.63
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    609.00 =  1540.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    609.00 TO NODE    604.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2573.50  DOWNSTREAM ELEVATION(FEET) = 2569.00
 STREET LENGTH(FEET) =   303.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      23.56
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.48
   HALFSTREET FLOOD WIDTH(FEET) =   17.75
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.60
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.73
 STREET FLOW TRAVEL TIME(MIN.) =   1.40   Tc(MIN.) =  18.19
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.655
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7255
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    1.47      SUBAREA RUNOFF(CFS) =    1.76
 TOTAL AREA(ACRES) =     18.10        PEAK FLOW RATE(CFS) =      24.45

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.49   HALFSTREET FLOOD WIDTH(FEET) =  18.00
 FLOW VELOCITY(FEET/SEC.) =  3.63   DEPTH*VELOCITY(FT*FT/SEC.) =   1.77
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    604.00 =  1843.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    604.00 TO NODE    604.00 IS CODE =  10
----------------------------------------------------------------------------
 >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<
============================================================================

****************************************************************************
 FLOW PROCESS FROM NODE    606.00 TO NODE    608.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   837.00
 UPSTREAM ELEVATION(FEET) =   2589.00
 DOWNSTREAM ELEVATION(FEET) =   2577.80
 ELEVATION DIFFERENCE(FEET) =     11.20
 TC = 0.393*[(  837.00**3)/(    11.20)]**.2 =   13.732
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.921
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7412
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      5.25
 TOTAL AREA(ACRES) =      3.69   TOTAL RUNOFF(CFS) =      5.25

****************************************************************************
 FLOW PROCESS FROM NODE    608.00 TO NODE    613.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2577.80  DOWNSTREAM ELEVATION(FEET) = 2573.00
 STREET LENGTH(FEET) =   324.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       6.67
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.34
   HALFSTREET FLOOD WIDTH(FEET) =   10.65
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.66
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    0.90
 STREET FLOW TRAVEL TIME(MIN.) =   2.03   Tc(MIN.) =  15.76
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.785
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7336
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    2.17      SUBAREA RUNOFF(CFS) =    2.84
 TOTAL AREA(ACRES) =      5.86        PEAK FLOW RATE(CFS) =       8.09

 END OF SUBAREA STREET FLOW HYDRAULICS:
```

```
 DEPTH(FEET) = 0.36   HALFSTREET FLOOD WIDTH(FEET) =  11.57
 FLOW VELOCITY(FEET/SEC.) =  2.78   DEPTH*VELOCITY(FT*FT/SEC.) =   0.99
 LONGEST FLOWPATH FROM NODE    606.00 TO NODE    613.00 =  1161.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    608.00 TO NODE    608.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  15.76
 RAINFALL INTENSITY(INCH/HR) =   1.79
 TOTAL STREAM AREA(ACRES) =     5.86
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.09

****************************************************************************
 FLOW PROCESS FROM NODE    650.00 TO NODE    613.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   472.00
 UPSTREAM ELEVATION(FEET) =   2575.00
 DOWNSTREAM ELEVATION(FEET) =   2573.00
 ELEVATION DIFFERENCE(FEET) =      2.00
 TC = 0.393*[(  472.00**3)/(     2.00)]**.2 =   13.744
   10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.920
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7411
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      4.44
 TOTAL AREA(ACRES) =      3.12   TOTAL RUNOFF(CFS) =      4.44

****************************************************************************
 FLOW PROCESS FROM NODE    613.00 TO NODE    613.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  13.74
 RAINFALL INTENSITY(INCH/HR) =   1.92
 TOTAL STREAM AREA(ACRES) =     3.12
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      4.44

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY       AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
     1         8.09     15.76         1.785          5.86
     2         4.44     13.74         1.920          3.12

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        11.50     13.74         1.920
     2        12.22     15.76         1.785

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

 PEAK FLOW RATE(CFS) =     12.22   Tc(MIN.) =   15.76
 TOTAL AREA(ACRES) =      8.98
 LONGEST FLOWPATH FROM NODE    606.00 TO NODE    613.00 =  1161.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    613.00 TO NODE    604.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2573.00  DOWNSTREAM ELEVATION(FEET) = 2569.00
 STREET LENGTH(FEET) =   751.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

  **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      14.52
  STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
  STREET FLOW DEPTH(FEET) =  0.49
  HALFSTREET FLOOD WIDTH(FEET) =   17.96
  AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.17
  PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.05
 STREET FLOW TRAVEL TIME(MIN.) =   5.77   Tc(MIN.) =  21.53
  10 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.513
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7159
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.23      SUBAREA RUNOFF(CFS) =    4.58
 TOTAL AREA(ACRES) =     13.21        PEAK FLOW RATE(CFS) =      16.81

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.50   HALFSTREET FLOOD WIDTH(FEET) =  18.14
 FLOW VELOCITY(FEET/SEC.) =  2.30   DEPTH*VELOCITY(FT*FT/SEC.) =   1.16
 LONGEST FLOWPATH FROM NODE    606.00 TO NODE    604.00 =  1912.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    604.00 TO NODE    604.00 IS CODE =  11
----------------------------------------------------------------------------
 >>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

 ** MAIN STREAM CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY       AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
     1        16.81     21.53         1.513         13.21
 LONGEST FLOWPATH FROM NODE    606.00 TO NODE    604.00 =  1912.00 FEET.

 ** MEMORY BANK #  2 CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY       AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
     1        24.45     18.19         1.655         18.10
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    604.00 =  1843.00 FEET.

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        38.65     18.19         1.655
     2        39.16     21.53         1.513
```

```
  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     38.65   Tc(MIN.) =   18.19
  TOTAL AREA(ACRES) =     31.31
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)      =     31.31  TC(MIN.) =     18.19
  PEAK FLOW RATE(CFS)    =     38.65
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

TECHNICAL APPENDIX

APPENDIX A.4

Tract 34896 100-Yr Storm Event

Post-Project Condition

```
**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
       RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                    (RCFC&WCD)  1978 HYDROLOGY MANUAL
         (c) Copyright 1982-2004 Advanced Engineering Software (aes)
                    (Rational Tabling Version 6.0D)
                Release Date: 01/01/2004  License ID 1264

                        Analysis prepared by:

                            RBF Consulting
                          14725 Alton Parkway
                        Irvine, California  92618


 ************************* DESCRIPTION OF STUDY *************************
* Deutsch Benning Project   Project No: 65-100183                       *
* Hydrology for Tract 35966, 100 Year Storm Event                       *
* Date : 2008-04-08    By: AC                                           *
 **************************************************************************

  FILE NAME: PH1_100.DAT
  TIME/DATE OF STUDY: 10:43 04/14/2008
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.570
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.300
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.300
  SLOPE OF INTENSITY DURATION CURVE = 0.5300
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
        AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150
  2   18.0      9.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0160
  3   20.0     12.0    0.015/0.050/0.020   0.50    1.50 0.0313 0.125 0.0160
  4   12.0      6.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth = -0.17 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  8.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

**************************************************************************
  FLOW PROCESS FROM NODE     100.00 TO NODE     103.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   990.00
  UPSTREAM ELEVATION(FEET) =   2691.50
  DOWNSTREAM ELEVATION(FEET) =   2674.00
  ELEVATION DIFFERENCE(FEET) =     17.50
  TC = 0.393*[(  990.00**3)/(    17.50)]**.2 =   13.891
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.823
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7782
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =     11.86
  TOTAL AREA(ACRES) =      5.40   TOTAL RUNOFF(CFS) =     11.86

**************************************************************************
  FLOW PROCESS FROM NODE     103.00 TO NODE     102.00 IS CODE =  62
--------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
==========================================================================
  UPSTREAM ELEVATION(FEET) = 2674.00  DOWNSTREAM ELEVATION(FEET) = 2661.00
  STREET LENGTH(FEET) =   771.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      16.45
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.43
    HALFSTREET FLOOD WIDTH(FEET) =   15.01
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.47
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.48
  STREET FLOW TRAVEL TIME(MIN.) =   3.71   Tc(MIN.) =  17.60
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.491
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7668
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    4.80      SUBAREA RUNOFF(CFS) =    9.17
  TOTAL AREA(ACRES) =     10.20        PEAK FLOW RATE(CFS) =      21.03

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.46   HALFSTREET FLOOD WIDTH(FEET) =  16.56
  FLOW VELOCITY(FEET/SEC.) =  3.68   DEPTH*VELOCITY(FT*FT/SEC.) =   1.68
  LONGEST FLOWPATH FROM NODE    100.00 TO NODE    102.00 =  1761.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE     102.00 TO NODE     104.00 IS CODE =  62
--------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
==========================================================================
  UPSTREAM ELEVATION(FEET) = 2661.00  DOWNSTREAM ELEVATION(FEET) = 2645.00
  STREET LENGTH(FEET) =   528.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      26.07
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.45
    HALFSTREET FLOOD WIDTH(FEET) =   16.07
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.83
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.16
  STREET FLOW TRAVEL TIME(MIN.) =   1.82   Tc(MIN.) =  19.42
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.364
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7618
  SOIL CLASSIFICATION IS "B"
```

```
 SUBAREA AREA(ACRES) =     5.60      SUBAREA RUNOFF(CFS) =    10.08
 TOTAL AREA(ACRES) =     15.80        PEAK FLOW RATE(CFS) =      31.11

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.47   HALFSTREET FLOOD WIDTH(FEET) =  17.26
 FLOW VELOCITY(FEET/SEC.) =  5.02   DEPTH*VELOCITY(FT*FT/SEC.) =   2.37
 LONGEST FLOWPATH FROM NODE    100.00 TO NODE    104.00 =  2289.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =  10
----------------------------------------------------------------------------
 >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 3 <<<<<
============================================================================

****************************************************************************
 FLOW PROCESS FROM NODE    200.00 TO NODE    201.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   798.00
 UPSTREAM ELEVATION(FEET) =   2685.00
 DOWNSTREAM ELEVATION(FEET) =   2663.50
 ELEVATION DIFFERENCE(FEET) =     21.50
 TC = 0.393*[(  798.00**3)/(    21.50)]**.2 =   11.713
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.090
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7861
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =     12.87
 TOTAL AREA(ACRES) =      5.30   TOTAL RUNOFF(CFS) =     12.87

****************************************************************************
 FLOW PROCESS FROM NODE    201.00 TO NODE    202.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2663.50  DOWNSTREAM ELEVATION(FEET) = 2654.00
 STREET LENGTH(FEET) =   460.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      17.30
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.42
   HALFSTREET FLOOD WIDTH(FEET) =   14.73
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.78
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.59
 STREET FLOW TRAVEL TIME(MIN.) =   2.03   Tc(MIN.) =  13.74
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.839
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7787
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     4.00      SUBAREA RUNOFF(CFS) =    8.84
 TOTAL AREA(ACRES) =      9.30        PEAK FLOW RATE(CFS) =      21.72

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.45   HALFSTREET FLOOD WIDTH(FEET) =  16.14
 FLOW VELOCITY(FEET/SEC.) =  3.99   DEPTH*VELOCITY(FT*FT/SEC.) =   1.79
 LONGEST FLOWPATH FROM NODE    200.00 TO NODE    202.00 =  1258.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    202.00 TO NODE    202.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  13.74
 RAINFALL INTENSITY(INCH/HR) =   2.84
 TOTAL STREAM AREA(ACRES) =     9.30
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     21.72

****************************************************************************
 FLOW PROCESS FROM NODE    102.00 TO NODE    202.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   297.00
 UPSTREAM ELEVATION(FEET) =   2661.00
 DOWNSTREAM ELEVATION(FEET) =   2654.00
 ELEVATION DIFFERENCE(FEET) =      7.00
 TC = 0.393*[(  297.00**3)/(     7.00)]**.2 =    8.102
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.757
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .8019
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      4.52
 TOTAL AREA(ACRES) =      1.50   TOTAL RUNOFF(CFS) =      4.52

****************************************************************************
 FLOW PROCESS FROM NODE    202.00 TO NODE    202.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =   8.10
 RAINFALL INTENSITY(INCH/HR) =   3.76
 TOTAL STREAM AREA(ACRES) =     1.50
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      4.52

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
     1        21.72     13.74         2.839         9.30
     2         4.52      8.10         3.757         1.50

 ********************************WARNING*********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        17.32      8.10         3.757
     2        25.13     13.74         2.839

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     25.13   Tc(MIN.) =   13.74
 TOTAL AREA(ACRES) =     10.80
 LONGEST FLOWPATH FROM NODE    200.00 TO NODE    202.00 =  1258.00 FEET.
```

```
****************************************************************************
 FLOW PROCESS FROM NODE    202.00 TO NODE    104.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =  2654.00  DOWNSTREAM(FEET) =  2645.00
 FLOW LENGTH(FEET) =   850.00   MANNING'S N =  0.013
 DEPTH OF FLOW IN  27.0 INCH PIPE IS  18.8 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =   8.50
 ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =     25.13
 PIPE TRAVEL TIME(MIN.) =   1.67    Tc(MIN.) =  15.41
 LONGEST FLOWPATH FROM NODE    200.00 TO NODE    104.00 =  2108.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    104.00 TO NODE    104.00 IS CODE =  11
----------------------------------------------------------------------------
 >>>>>CONFLUENCE MEMORY BANK # 3 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

 ** MAIN STREAM CONFLUENCE DATA **
 STREAM      RUNOFF      Tc       INTENSITY      AREA
 NUMBER       (CFS)    (MIN.)    (INCH/HOUR)    (ACRE)
    1        25.13     15.41        2.672        10.80
 LONGEST FLOWPATH FROM NODE    200.00 TO NODE    104.00 =  2108.00 FEET.

 ** MEMORY BANK #  3 CONFLUENCE DATA **
 STREAM      RUNOFF      Tc       INTENSITY      AREA
 NUMBER       (CFS)    (MIN.)    (INCH/HOUR)    (ACRE)
    1        31.11     19.42        2.364        15.80
 LONGEST FLOWPATH FROM NODE    100.00 TO NODE    104.00 =  2289.00 FEET.

 ****************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 ** PEAK FLOW RATE TABLE **
 STREAM     RUNOFF        Tc       INTENSITY
 NUMBER      (CFS)      (MIN.)    (INCH/HOUR)
    1       49.82       15.41        2.672
    2       53.35       19.42        2.364

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     53.35   Tc(MIN.) =   19.42
 TOTAL AREA(ACRES) =     26.60

****************************************************************************
 FLOW PROCESS FROM NODE    300.00 TO NODE    301.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   625.00
 UPSTREAM ELEVATION(FEET) =   2687.00
 DOWNSTREAM ELEVATION(FEET) =   2663.00
 ELEVATION DIFFERENCE(FEET) =     24.00
 TC = 0.393*[(  625.00**3)/(    24.00)]**.2 =    9.895
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.379
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7935
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      5.36
 TOTAL AREA(ACRES) =      2.00   TOTAL RUNOFF(CFS) =      5.36

****************************************************************************
 FLOW PROCESS FROM NODE    301.00 TO NODE    302.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2663.00  DOWNSTREAM ELEVATION(FEET) = 2642.50
 STREET LENGTH(FEET) =   521.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       7.42
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.37
   HALFSTREET FLOOD WIDTH(FEET) =   12.13
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.67
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.72
 STREET FLOW TRAVEL TIME(MIN.) =   1.86   Tc(MIN.) =  11.75
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.084
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7859
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    1.70      SUBAREA RUNOFF(CFS) =    4.12
 TOTAL AREA(ACRES) =      3.70        PEAK FLOW RATE(CFS) =       9.48

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.40   HALFSTREET FLOOD WIDTH(FEET) =  13.46
 FLOW VELOCITY(FEET/SEC.) =  4.91   DEPTH*VELOCITY(FT*FT/SEC.) =   1.94
 LONGEST FLOWPATH FROM NODE    300.00 TO NODE    302.00 =  1146.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   961.00
 UPSTREAM ELEVATION(FEET) =   2687.00
 DOWNSTREAM ELEVATION(FEET) =   2652.50
 ELEVATION DIFFERENCE(FEET) =     34.50
 TC = 0.393*[(  961.00**3)/(    34.50)]**.2 =   11.913
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.062
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7853
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      7.46
 TOTAL AREA(ACRES) =      3.10   TOTAL RUNOFF(CFS) =      7.46

****************************************************************************
 FLOW PROCESS FROM NODE    401.00 TO NODE    402.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2652.50  DOWNSTREAM ELEVATION(FEET) = 2636.00
 STREET LENGTH(FEET) =   658.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
```

```
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      10.57
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.43
    HALFSTREET FLOOD WIDTH(FEET) =   15.36
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.26
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.85
  STREET FLOW TRAVEL TIME(MIN.) =   2.57   Tc(MIN.) =  14.49
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.761
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7762
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    2.90      SUBAREA RUNOFF(CFS) =    6.22
  TOTAL AREA(ACRES) =      6.00        PEAK FLOW RATE(CFS) =      13.67

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.47   HALFSTREET FLOOD WIDTH(FEET) =  16.98
  FLOW VELOCITY(FEET/SEC.) =  4.55   DEPTH*VELOCITY(FT*FT/SEC.) =   2.12
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    402.00 =  1619.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    402.00 TO NODE    402.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  3
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  14.49
  RAINFALL INTENSITY(INCH/HR) =   2.76
  TOTAL STREAM AREA(ACRES) =     6.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.67

****************************************************************************
  FLOW PROCESS FROM NODE    403.00 TO NODE    402.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   945.00
  UPSTREAM ELEVATION(FEET) =   2662.50
  DOWNSTREAM ELEVATION(FEET) =   2636.00
  ELEVATION DIFFERENCE(FEET) =     26.50
  TC = 0.393*[(  945.00**3)/(    26.50)]**.2 =   12.433
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.994
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7834
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      4.93
  TOTAL AREA(ACRES) =      2.10   TOTAL RUNOFF(CFS) =      4.93

****************************************************************************
  FLOW PROCESS FROM NODE    402.00 TO NODE    402.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  3
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  12.43
  RAINFALL INTENSITY(INCH/HR) =   2.99
  TOTAL STREAM AREA(ACRES) =     2.10
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      4.93

****************************************************************************
  FLOW PROCESS FROM NODE    404.00 TO NODE    402.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   942.00
  UPSTREAM ELEVATION(FEET) =   2663.00
  DOWNSTREAM ELEVATION(FEET) =   2636.00
  ELEVATION DIFFERENCE(FEET) =     27.00
  TC = 0.393*[(  942.00**3)/(    27.00)]**.2 =   12.363
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.003
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7836
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =     13.41
  TOTAL AREA(ACRES) =      5.70   TOTAL RUNOFF(CFS) =     13.41

****************************************************************************
  FLOW PROCESS FROM NODE    402.00 TO NODE    402.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  3
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
  TIME OF CONCENTRATION(MIN.) =  12.36
  RAINFALL INTENSITY(INCH/HR) =   3.00
  TOTAL STREAM AREA(ACRES) =     5.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.41

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY       AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
      1        13.67     14.49         2.761          6.00
      2         4.93     12.43         2.994          2.10
      3        13.41     12.36         3.003          5.70

 ********************************WARNING**********************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 *************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  3 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1        29.98     12.36         3.003
      2        30.03     12.43         2.994
      3        30.54     14.49         2.761

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     30.54   Tc(MIN.) =   14.49
  TOTAL AREA(ACRES) =     13.80
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    402.00 =  1619.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    500.00 TO NODE    501.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   984.00
  UPSTREAM ELEVATION(FEET) =   2647.50
  DOWNSTREAM ELEVATION(FEET) =   2632.00
  ELEVATION DIFFERENCE(FEET) =     15.50
  TC = 0.393*[(  984.00**3)/(    15.50)]**.2 =   14.180
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.792
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7772
  SOIL CLASSIFICATION IS "B"
```

```
  SUBAREA RUNOFF(CFS) =      6.73
  TOTAL AREA(ACRES) =      3.10   TOTAL RUNOFF(CFS) =      6.73

****************************************************************************
  FLOW PROCESS FROM NODE    501.00 TO NODE    502.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2632.00  DOWNSTREAM ELEVATION(FEET) = 2622.00
  STREET LENGTH(FEET) =   846.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      10.25
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.48
    HALFSTREET FLOOD WIDTH(FEET) =   17.61
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.18
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.52
  STREET FLOW TRAVEL TIME(MIN.) =   4.43   Tc(MIN.) =  18.61
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.418
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7640
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     3.80      SUBAREA RUNOFF(CFS) =     7.02
  TOTAL AREA(ACRES) =      6.90        PEAK FLOW RATE(CFS) =      13.75

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.49   HALFSTREET FLOOD WIDTH(FEET) =  18.00
  FLOW VELOCITY(FEET/SEC.) =  3.23   DEPTH*VELOCITY(FT*FT/SEC.) =   1.57
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    502.00 =  1830.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    502.00 TO NODE    502.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  3
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  18.61
  RAINFALL INTENSITY(INCH/HR) =   2.42
  TOTAL STREAM AREA(ACRES) =     6.90
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.75

****************************************************************************
  FLOW PROCESS FROM NODE    503.00 TO NODE    502.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   738.00
  UPSTREAM ELEVATION(FEET) =   2633.50
  DOWNSTREAM ELEVATION(FEET) =   2622.00
  ELEVATION DIFFERENCE(FEET) =     11.50
  TC = 0.393*[(  738.00**3)/(    11.50)]**.2 =   12.666
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.965
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7825
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =     10.44
  TOTAL AREA(ACRES) =      4.50   TOTAL RUNOFF(CFS) =     10.44

****************************************************************************
  FLOW PROCESS FROM NODE    502.00 TO NODE    502.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  3
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  12.67
  RAINFALL INTENSITY(INCH/HR) =   2.96
  TOTAL STREAM AREA(ACRES) =     4.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     10.44

****************************************************************************
  FLOW PROCESS FROM NODE    506.00 TO NODE    507.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   684.00
  UPSTREAM ELEVATION(FEET) =   2639.00
  DOWNSTREAM ELEVATION(FEET) =   2627.00
  ELEVATION DIFFERENCE(FEET) =     12.00
  TC = 0.393*[(  684.00**3)/(    12.00)]**.2 =   11.999
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.051
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7850
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      4.79
  TOTAL AREA(ACRES) =      2.00   TOTAL RUNOFF(CFS) =      4.79

****************************************************************************
  FLOW PROCESS FROM NODE    507.00 TO NODE    502.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2627.00  DOWNSTREAM ELEVATION(FEET) = 2622.00
  STREET LENGTH(FEET) =   345.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       6.77
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.41
    HALFSTREET FLOOD WIDTH(FEET) =   14.31
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.13
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.29
  STREET FLOW TRAVEL TIME(MIN.) =   1.84   Tc(MIN.) =  13.84
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.829
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7784
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     1.80      SUBAREA RUNOFF(CFS) =     3.96
  TOTAL AREA(ACRES) =      3.80        PEAK FLOW RATE(CFS) =       8.75

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.44   HALFSTREET FLOOD WIDTH(FEET) =  15.86
  FLOW VELOCITY(FEET/SEC.) =  3.33   DEPTH*VELOCITY(FT*FT/SEC.) =   1.47
  LONGEST FLOWPATH FROM NODE    506.00 TO NODE    502.00 =  1029.00 FEET.

****************************************************************************
```

```
 FLOW PROCESS FROM NODE    502.00 TO NODE    502.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
 TIME OF CONCENTRATION(MIN.) =  13.84
 RAINFALL INTENSITY(INCH/HR) =   2.83
 TOTAL STREAM AREA(ACRES) =     3.80
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.75

 ** CONFLUENCE DATA **
 STREAM     RUNOFF       Tc       INTENSITY      AREA
 NUMBER      (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
     1       13.75     18.61        2.418         6.90
     2       10.44     12.67        2.965         4.50
     3        8.75     13.84        2.829         3.80

 ********************************WARNING*********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  3 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM     RUNOFF       Tc       INTENSITY
 NUMBER      (CFS)     (MIN.)    (INCH/HOUR)
     1       27.81     12.67        2.965
     2       28.93     13.84        2.829
     3       29.74     18.61        2.418

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     29.74   Tc(MIN.) =   18.61
 TOTAL AREA(ACRES) =     15.20
 LONGEST FLOWPATH FROM NODE    500.00 TO NODE    502.00 =  1830.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    508.00 TO NODE    509.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   609.00
 UPSTREAM ELEVATION(FEET) =   2647.50
 DOWNSTREAM ELEVATION(FEET) =   2640.00
 ELEVATION DIFFERENCE(FEET) =      7.50
 TC = 0.393*[(  609.00**3)/(     7.50)]**.2 =   12.294
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.012
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7839
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      8.03
 TOTAL AREA(ACRES) =      3.40   TOTAL RUNOFF(CFS) =      8.03

****************************************************************************
 FLOW PROCESS FROM NODE    504.00 TO NODE    505.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   607.00
 UPSTREAM ELEVATION(FEET) =   2646.00
 DOWNSTREAM ELEVATION(FEET) =   2636.00
 ELEVATION DIFFERENCE(FEET) =     10.00
 TC = 0.393*[(  607.00**3)/(    10.00)]**.2 =   11.584
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.108
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7866
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      7.09
 TOTAL AREA(ACRES) =      2.90   TOTAL RUNOFF(CFS) =      7.09

****************************************************************************
 FLOW PROCESS FROM NODE    510.00 TO NODE    511.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   932.00
 UPSTREAM ELEVATION(FEET) =   2640.90
 DOWNSTREAM ELEVATION(FEET) =   2625.00
 ELEVATION DIFFERENCE(FEET) =     15.90
 TC = 0.393*[(  932.00**3)/(    15.90)]**.2 =   13.656
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.849
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7790
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      8.21
 TOTAL AREA(ACRES) =      3.70   TOTAL RUNOFF(CFS) =      8.21

****************************************************************************
 FLOW PROCESS FROM NODE    511.00 TO NODE    512.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2625.00  DOWNSTREAM ELEVATION(FEET) = 2613.00
 STREET LENGTH(FEET) =   909.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      11.03
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.48
   HALFSTREET FLOOD WIDTH(FEET) =   17.75
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.37
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.62
 STREET FLOW TRAVEL TIME(MIN.) =   4.49   Tc(MIN.) =  18.15
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.450
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7652
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    3.00      SUBAREA RUNOFF(CFS) =    5.62
 TOTAL AREA(ACRES) =      6.70        PEAK FLOW RATE(CFS) =      13.84

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.49   HALFSTREET FLOOD WIDTH(FEET) =  18.00
 FLOW VELOCITY(FEET/SEC.) =  3.42   DEPTH*VELOCITY(FT*FT/SEC.) =   1.66
 LONGEST FLOWPATH FROM NODE    510.00 TO NODE    512.00 =  1841.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    512.00 TO NODE    512.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
```

```
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  18.15
  RAINFALL INTENSITY(INCH/HR) =   2.45
  TOTAL STREAM AREA(ACRES) =     6.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.84

****************************************************************************
  FLOW PROCESS FROM NODE    513.00 TO NODE    514.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   706.00
  UPSTREAM ELEVATION(FEET) =   2647.00
  DOWNSTREAM ELEVATION(FEET) =   2639.50
  ELEVATION DIFFERENCE(FEET) =      7.50
  TC = 0.393*[(  706.00**3)/(     7.50)]**.2 =   13.434
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.873
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7798
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      1.66
  TOTAL AREA(ACRES) =      0.74   TOTAL RUNOFF(CFS) =      1.66

****************************************************************************
  FLOW PROCESS FROM NODE    514.00 TO NODE    515.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2639.50  DOWNSTREAM ELEVATION(FEET) = 2628.00
  STREET LENGTH(FEET) =   389.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       4.68
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.34
    HALFSTREET FLOOD WIDTH(FEET) =   10.65
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.74
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.27
  STREET FLOW TRAVEL TIME(MIN.) =   1.73   Tc(MIN.) =  15.17
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.694
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7740
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     2.90      SUBAREA RUNOFF(CFS) =     6.05
  TOTAL AREA(ACRES) =      3.64        PEAK FLOW RATE(CFS) =       7.71

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.39   HALFSTREET FLOOD WIDTH(FEET) =  13.11
  FLOW VELOCITY(FEET/SEC.) =  4.19   DEPTH*VELOCITY(FT*FT/SEC.) =   1.63
  LONGEST FLOWPATH FROM NODE    513.00 TO NODE    515.00 =  1095.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    515.00 TO NODE    512.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2628.00  DOWNSTREAM ELEVATION(FEET) = 2613.00
  STREET LENGTH(FEET) =  1248.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.82
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.47
    HALFSTREET FLOOD WIDTH(FEET) =   17.26
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.17
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.49
  STREET FLOW TRAVEL TIME(MIN.) =   6.56   Tc(MIN.) =  21.73
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.227
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7560
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     2.50      SUBAREA RUNOFF(CFS) =     4.21
  TOTAL AREA(ACRES) =      6.14        PEAK FLOW RATE(CFS) =       11.92

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.49   HALFSTREET FLOOD WIDTH(FEET) =  18.00
  FLOW VELOCITY(FEET/SEC.) =  3.26   DEPTH*VELOCITY(FT*FT/SEC.) =   1.59
  LONGEST FLOWPATH FROM NODE    513.00 TO NODE    512.00 =  2343.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    512.00 TO NODE    512.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  3
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  21.73
  RAINFALL INTENSITY(INCH/HR) =   2.23
  TOTAL STREAM AREA(ACRES) =     6.14
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     11.92

****************************************************************************
  FLOW PROCESS FROM NODE    516.00 TO NODE    517.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   604.00
  UPSTREAM ELEVATION(FEET) =   2641.00
  DOWNSTREAM ELEVATION(FEET) =   2629.60
  ELEVATION DIFFERENCE(FEET) =     11.40
  TC = 0.393*[(  604.00**3)/(    11.40)]**.2 =   11.251
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.157
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7879
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      7.21
  TOTAL AREA(ACRES) =      2.90   TOTAL RUNOFF(CFS) =      7.21

****************************************************************************
  FLOW PROCESS FROM NODE    517.00 TO NODE    512.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2629.60  DOWNSTREAM ELEVATION(FEET) = 2613.00
  STREET LENGTH(FEET) =   857.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00
```

```
  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      13.97
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.40
    HALFSTREET FLOOD WIDTH(FEET) =   13.68
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.51
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.40
  STREET FLOW TRAVEL TIME(MIN.) =   4.07   Tc(MIN.) =  15.32
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.680
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7735
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    6.50      SUBAREA RUNOFF(CFS) =   13.48
  TOTAL AREA(ACRES) =      9.40        PEAK FLOW RATE(CFS) =      20.69

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.45   HALFSTREET FLOOD WIDTH(FEET) =  16.00
  FLOW VELOCITY(FEET/SEC.) =  3.86   DEPTH*VELOCITY(FT*FT/SEC.) =   1.72
  LONGEST FLOWPATH FROM NODE    516.00 TO NODE    512.00 =  1461.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    512.00 TO NODE    512.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  3
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
  TIME OF CONCENTRATION(MIN.) =  15.32
  RAINFALL INTENSITY(INCH/HR) =  2.68
  TOTAL STREAM AREA(ACRES) =    9.40
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     20.69

  ** CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY      AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)    (ACRE)
      1       13.84    18.15       2.450         6.70
      2       11.92    21.73       2.227         6.14
      3       20.69    15.32       2.680         9.40

 **********************************WARNING***********************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  3 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       40.77    15.32       2.680
      2       42.70    18.15       2.450
      3       41.68    21.73       2.227

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     40.77   Tc(MIN.) =   15.32
  TOTAL AREA(ACRES) =     22.24
  LONGEST FLOWPATH FROM NODE    513.00 TO NODE    512.00 =  2343.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    512.00 TO NODE    518.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2613.00  DOWNSTREAM ELEVATION(FEET) = 2605.50
  STREET LENGTH(FEET) =   551.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      44.22
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.57
    HALFSTREET FLOOD WIDTH(FEET) =   21.62
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.39
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.51
  STREET FLOW TRAVEL TIME(MIN.) =   2.09   Tc(MIN.) =  17.41
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.505
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7673
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    3.60      SUBAREA RUNOFF(CFS) =    6.92
  TOTAL AREA(ACRES) =     25.84        PEAK FLOW RATE(CFS) =      47.68

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.58   HALFSTREET FLOOD WIDTH(FEET) =  22.23
  FLOW VELOCITY(FEET/SEC.) =  4.49   DEPTH*VELOCITY(FT*FT/SEC.) =   2.63
  LONGEST FLOWPATH FROM NODE    513.00 TO NODE    518.00 =  2894.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    518.00 TO NODE    519.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2605.50  DOWNSTREAM ELEVATION(FEET) = 2602.50
  STREET LENGTH(FEET) =   501.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      51.24
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.67
    HALFSTREET FLOOD WIDTH(FEET) =   26.56
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.45
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.32
  STREET FLOW TRAVEL TIME(MIN.) =   2.42   Tc(MIN.) =  19.83
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.338
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7607
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    4.00      SUBAREA RUNOFF(CFS) =    7.11
  TOTAL AREA(ACRES) =     29.84        PEAK FLOW RATE(CFS) =      54.80

  END OF SUBAREA STREET FLOW HYDRAULICS:
```

```
 DEPTH(FEET) = 0.68   HALFSTREET FLOOD WIDTH(FEET) =  27.23
 FLOW VELOCITY(FEET/SEC.) =  3.52   DEPTH*VELOCITY(FT*FT/SEC.) =   2.41
 LONGEST FLOWPATH FROM NODE    513.00 TO NODE    519.00 =  3395.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    900.00 TO NODE    901.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   995.00
 UPSTREAM ELEVATION(FEET) =   2626.00
 DOWNSTREAM ELEVATION(FEET) =   2617.00
 ELEVATION DIFFERENCE(FEET) =      9.00
 TC = 0.393*[(  995.00**3)/(    9.00)]**.2 =   15.915
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.627
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7717
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      7.09
 TOTAL AREA(ACRES) =      3.50   TOTAL RUNOFF(CFS) =      7.09

****************************************************************************
 FLOW PROCESS FROM NODE    520.00 TO NODE    521.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   822.00
 UPSTREAM ELEVATION(FEET) =   2667.00
 DOWNSTREAM ELEVATION(FEET) =   2653.00
 ELEVATION DIFFERENCE(FEET) =     14.00
 TC = 0.393*[(  822.00**3)/(   14.00)]**.2 =   12.991
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.925
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7813
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      4.80
 TOTAL AREA(ACRES) =      2.10   TOTAL RUNOFF(CFS) =      4.80

****************************************************************************
 FLOW PROCESS FROM NODE    521.00 TO NODE    522.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2653.00  DOWNSTREAM ELEVATION(FEET) = 2644.00
 STREET LENGTH(FEET) =   424.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      6.98
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.33
   HALFSTREET FLOOD WIDTH(FEET) =  10.09
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.07
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.01
 STREET FLOW TRAVEL TIME(MIN.) =   2.30   Tc(MIN.) =  15.29
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.683
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7736
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    2.10      SUBAREA RUNOFF(CFS) =    4.36
 TOTAL AREA(ACRES) =      4.20        PEAK FLOW RATE(CFS) =       9.16

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.35   HALFSTREET FLOOD WIDTH(FEET) =  11.29
 FLOW VELOCITY(FEET/SEC.) =  3.29   DEPTH*VELOCITY(FT*FT/SEC.) =   1.16
 LONGEST FLOWPATH FROM NODE    520.00 TO NODE    522.00 =  1246.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    600.00 TO NODE    601.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   897.00
 UPSTREAM ELEVATION(FEET) =   2618.50
 DOWNSTREAM ELEVATION(FEET) =   2606.20
 ELEVATION DIFFERENCE(FEET) =     12.30
 TC = 0.393*[(  897.00**3)/(   12.30)]**.2 =   14.049
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.806
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7777
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =     12.66
 TOTAL AREA(ACRES) =      5.80   TOTAL RUNOFF(CFS) =     12.66

****************************************************************************
 FLOW PROCESS FROM NODE    601.00 TO NODE    602.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2606.20  DOWNSTREAM ELEVATION(FEET) = 2602.00
 STREET LENGTH(FEET) =   511.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =     16.23
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.47
   HALFSTREET FLOOD WIDTH(FEET) =  17.26
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.62
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.24
 STREET FLOW TRAVEL TIME(MIN.) =   3.25   Tc(MIN.) =  17.30
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.513
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7676
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    3.70      SUBAREA RUNOFF(CFS) =    7.14
 TOTAL AREA(ACRES) =      9.50        PEAK FLOW RATE(CFS) =      19.79

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.50   HALFSTREET FLOOD WIDTH(FEET) =  18.00
 FLOW VELOCITY(FEET/SEC.) =  2.79   DEPTH*VELOCITY(FT*FT/SEC.) =   1.39
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    602.00 =  1408.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    602.00 TO NODE    602.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
```

```
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  17.30
  RAINFALL INTENSITY(INCH/HR) =   2.51
  TOTAL STREAM AREA(ACRES) =     9.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     19.79

****************************************************************************
  FLOW PROCESS FROM NODE    603.00 TO NODE    604.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   547.00
  UPSTREAM ELEVATION(FEET) =   2617.00
  DOWNSTREAM ELEVATION(FEET) =   2612.20
  ELEVATION DIFFERENCE(FEET) =      4.80
  TC = 0.393*[(  547.00**3)/(     4.80)]**.2 =   12.604
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.972
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7827
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      9.54
  TOTAL AREA(ACRES) =      4.10   TOTAL RUNOFF(CFS) =      9.54

****************************************************************************
  FLOW PROCESS FROM NODE    604.00 TO NODE    602.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2612.20  DOWNSTREAM ELEVATION(FEET) = 2602.00
  STREET LENGTH(FEET) =   617.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      13.52
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.41
    HALFSTREET FLOOD WIDTH(FEET) =   13.96
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.27
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.33
  STREET FLOW TRAVEL TIME(MIN.) =   3.14   Tc(MIN.) =  15.75
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.642
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7722
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     3.90      SUBAREA RUNOFF(CFS) =     7.96
  TOTAL AREA(ACRES) =      8.00        PEAK FLOW RATE(CFS) =      17.49

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.44   HALFSTREET FLOOD WIDTH(FEET) =  15.50
  FLOW VELOCITY(FEET/SEC.) =  3.47   DEPTH*VELOCITY(FT*FT/SEC.) =   1.51
  LONGEST FLOWPATH FROM NODE    603.00 TO NODE    602.00 =  1164.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    602.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  15.75
  RAINFALL INTENSITY(INCH/HR) =   2.64
  TOTAL STREAM AREA(ACRES) =     8.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     17.49

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY       AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
      1        19.79     17.30         2.513          9.50
      2        17.49     15.75         2.642          8.00

 ********************************WARNING*************************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1        35.51     15.75         2.642
      2        36.44     17.30         2.513

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     36.44   Tc(MIN.) =   17.30
  TOTAL AREA(ACRES) =     17.50
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    602.00 =  1408.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    602.00 TO NODE    605.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2602.00  DOWNSTREAM ELEVATION(FEET) = 2601.00
  STREET LENGTH(FEET) =   267.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      37.26
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.66
    HALFSTREET FLOOD WIDTH(FEET) =   25.77
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.66
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.74
  STREET FLOW TRAVEL TIME(MIN.) =   1.67   Tc(MIN.) =  18.97
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.393
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7630
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     0.90      SUBAREA RUNOFF(CFS) =     1.64
  TOTAL AREA(ACRES) =     18.40        PEAK FLOW RATE(CFS) =      38.08

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.66   HALFSTREET FLOOD WIDTH(FEET) =  25.95
  FLOW VELOCITY(FEET/SEC.) =  2.68   DEPTH*VELOCITY(FT*FT/SEC.) =   1.77
  LONGEST FLOWPATH FROM NODE    600.00 TO NODE    605.00 =  1675.00 FEET.
```

```
****************************************************************************
 FLOW PROCESS FROM NODE     605.00 TO NODE     605.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  18.97
 RAINFALL INTENSITY(INCH/HR) =   2.39
 TOTAL STREAM AREA(ACRES) =    18.40
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     38.08

****************************************************************************
 FLOW PROCESS FROM NODE     606.00 TO NODE     605.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   216.00
 UPSTREAM ELEVATION(FEET) =   2607.00
 DOWNSTREAM ELEVATION(FEET) =   2601.00
 ELEVATION DIFFERENCE(FEET) =      6.00
 TC = 0.393*[(  216.00**3)/(     6.00)]**.2 =    6.902
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  4.090
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .8082
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      4.63
 TOTAL AREA(ACRES) =      1.40   TOTAL RUNOFF(CFS) =      4.63

****************************************************************************
 FLOW PROCESS FROM NODE     605.00 TO NODE     605.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =   6.90
 RAINFALL INTENSITY(INCH/HR) =   4.09
 TOTAL STREAM AREA(ACRES) =     1.40
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      4.63

 ** CONFLUENCE DATA **
 STREAM      RUNOFF      Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       38.08     18.97        2.393        18.40
      2        4.63      6.90        4.090         1.40

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF      Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)
      1       18.48      6.90       4.090
      2       40.79     18.97       2.393

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     40.79   Tc(MIN.) =   18.97
 TOTAL AREA(ACRES) =     19.80
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    605.00 =  1675.00 FEET.
```

```
****************************************************************************
 FLOW PROCESS FROM NODE     605.00 TO NODE     607.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2601.00  DOWNSTREAM ELEVATION(FEET) = 2596.00
 STREET LENGTH(FEET) =   288.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      42.20
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.55
   HALFSTREET FLOOD WIDTH(FEET) =   20.33
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.69
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.56
 STREET FLOW TRAVEL TIME(MIN.) =   1.02   Tc(MIN.) =  20.00
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.327
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7603
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    1.60      SUBAREA RUNOFF(CFS) =    2.83
 TOTAL AREA(ACRES) =     21.40        PEAK FLOW RATE(CFS) =      43.62

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.55   HALFSTREET FLOOD WIDTH(FEET) =  20.58
 FLOW VELOCITY(FEET/SEC.) =  4.74   DEPTH*VELOCITY(FT*FT/SEC.) =   2.62
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    607.00 =  1963.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     607.00 TO NODE     608.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2596.00  DOWNSTREAM ELEVATION(FEET) = 2588.00
 STREET LENGTH(FEET) =   882.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      47.45
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.62
   HALFSTREET FLOOD WIDTH(FEET) =   23.87
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.91
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.42
 STREET FLOW TRAVEL TIME(MIN.) =   3.76   Tc(MIN.) =  23.75
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.124
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7514
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.80      SUBAREA RUNOFF(CFS) =    7.66
 TOTAL AREA(ACRES) =     26.20        PEAK FLOW RATE(CFS) =      51.28
```

```
 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.63   HALFSTREET FLOOD WIDTH(FEET) =  24.61
 FLOW VELOCITY(FEET/SEC.) =  3.99   DEPTH*VELOCITY(FT*FT/SEC.) =   2.52
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    608.00 =  2845.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    608.00 TO NODE    608.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  23.75
 RAINFALL INTENSITY(INCH/HR) =   2.12
 TOTAL STREAM AREA(ACRES) =    26.20
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     51.28

****************************************************************************
 FLOW PROCESS FROM NODE    609.00 TO NODE    610.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   479.00
 UPSTREAM ELEVATION(FEET) =   2598.00
 DOWNSTREAM ELEVATION(FEET) =   2592.00
 ELEVATION DIFFERENCE(FEET) =      6.00
 TC = 0.393*[(  479.00**3)/(     6.00)]**.2 =   11.131
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.175
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7883
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      8.51
 TOTAL AREA(ACRES) =      3.40   TOTAL RUNOFF(CFS) =      8.51

****************************************************************************
 FLOW PROCESS FROM NODE    610.00 TO NODE    608.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2592.00  DOWNSTREAM ELEVATION(FEET) = 2588.00
 STREET LENGTH(FEET) =   649.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      12.66
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.46
   HALFSTREET FLOOD WIDTH(FEET) =  16.56
   AVERAGE FLOW VELOCITY(FEET/SEC.) =   2.21
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =   1.01
 STREET FLOW TRAVEL TIME(MIN.) =  4.89   Tc(MIN.) =  16.02
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.618
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7714
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.10      SUBAREA RUNOFF(CFS) =    8.28
 TOTAL AREA(ACRES) =     7.50        PEAK FLOW RATE(CFS) =      16.79

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.49   HALFSTREET FLOOD WIDTH(FEET) =  18.00
 FLOW VELOCITY(FEET/SEC.) =  2.40   DEPTH*VELOCITY(FT*FT/SEC.) =   1.18
 LONGEST FLOWPATH FROM NODE    609.00 TO NODE    608.00 =  1128.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    608.00 TO NODE    608.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  16.02
 RAINFALL INTENSITY(INCH/HR) =   2.62
 TOTAL STREAM AREA(ACRES) =     7.50
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     16.79

 ** CONFLUENCE DATA **
 STREAM     RUNOFF      Tc      INTENSITY      AREA
 NUMBER      (CFS)    (MIN.)   (INCH/HOUR)    (ACRE)
     1       51.28    23.75        2.124         26.20
     2       16.79    16.02        2.618          7.50

 **********************************WARNING**********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ***************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM     RUNOFF      Tc      INTENSITY
 NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
     1       51.37    16.02        2.618
     2       64.91    23.75        2.124

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     64.91   Tc(MIN.) =   23.75
 TOTAL AREA(ACRES) =     33.70
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    608.00 =  2845.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    700.00 TO NODE    701.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS CONDOMINIUM
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   510.00
 UPSTREAM ELEVATION(FEET) =   2601.00
 DOWNSTREAM ELEVATION(FEET) =   2592.50
 ELEVATION DIFFERENCE(FEET) =      8.50
 TC = 0.359*[(  510.00**3)/(     8.50)]**.2 =    9.863
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.385
 CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8256
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      4.75
 TOTAL AREA(ACRES) =      1.70   TOTAL RUNOFF(CFS) =      4.75

****************************************************************************
 FLOW PROCESS FROM NODE    701.00 TO NODE    702.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2592.50  DOWNSTREAM ELEVATION(FEET) = 2585.50
 STREET LENGTH(FEET) =   395.00   CURB HEIGHT(INCHES) =  6.0
```

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  STREET HALFWIDTH(FEET) = 16.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =    8.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =    0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =    0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       7.74
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.35
    HALFSTREET FLOOD WIDTH(FEET) =   10.97
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.93
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.01
  STREET FLOW TRAVEL TIME(MIN.) =   2.25   Tc(MIN.) =  12.11
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.036
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8192
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    2.40      SUBAREA RUNOFF(CFS) =    5.97
  TOTAL AREA(ACRES) =      4.10        PEAK FLOW RATE(CFS) =      10.72

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.38   HALFSTREET FLOOD WIDTH(FEET) =  12.53
  FLOW VELOCITY(FEET/SEC.) =  3.17   DEPTH*VELOCITY(FT*FT/SEC.) =   1.20
  LONGEST FLOWPATH FROM NODE    700.00 TO NODE    702.00 =   905.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    702.00 TO NODE    707.00 IS CODE =  61
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2585.50  DOWNSTREAM ELEVATION(FEET) = 2583.40
  STREET LENGTH(FEET) =   300.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 16.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =    8.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =    0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =    0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      14.71
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.46
    HALFSTREET FLOOD WIDTH(FEET) =   16.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.48
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.15
  STREET FLOW TRAVEL TIME(MIN.) =   2.01   Tc(MIN.) =  14.12
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.798
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8142
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    3.50      SUBAREA RUNOFF(CFS) =    7.97
  TOTAL AREA(ACRES) =      7.60        PEAK FLOW RATE(CFS) =      18.69

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.49   HALFSTREET FLOOD WIDTH(FEET) =  16.00
  FLOW VELOCITY(FEET/SEC.) =  2.72   DEPTH*VELOCITY(FT*FT/SEC.) =   1.34
  LONGEST FLOWPATH FROM NODE    700.00 TO NODE    707.00 =  1205.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    707.00 TO NODE    703.00 IS CODE =  61
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2583.40  DOWNSTREAM ELEVATION(FEET) = 2578.00
  STREET LENGTH(FEET) =   439.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 16.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =    8.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =    0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =    0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      21.74
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.48
    HALFSTREET FLOOD WIDTH(FEET) =   16.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.42
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.63
  STREET FLOW TRAVEL TIME(MIN.) =   2.14   Tc(MIN.) =  16.26
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.597
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8095
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    2.90      SUBAREA RUNOFF(CFS) =    6.10
  TOTAL AREA(ACRES) =     10.50        PEAK FLOW RATE(CFS) =      24.79

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.49   HALFSTREET FLOOD WIDTH(FEET) =  16.00
  FLOW VELOCITY(FEET/SEC.) =  3.61   DEPTH*VELOCITY(FT*FT/SEC.) =   1.78
  LONGEST FLOWPATH FROM NODE    700.00 TO NODE    703.00 =  1644.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    703.00 TO NODE    703.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  16.26
  RAINFALL INTENSITY(INCH/HR) =   2.60
  TOTAL STREAM AREA(ACRES) =    10.50
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     24.79

****************************************************************************
  FLOW PROCESS FROM NODE    704.00 TO NODE    705.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS CONDOMINIUM
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   405.00
  UPSTREAM ELEVATION(FEET) =   2596.20
  DOWNSTREAM ELEVATION(FEET) =   2588.00
  ELEVATION DIFFERENCE(FEET) =      8.20
  TC = 0.359*[(  405.00**3)/(     8.20)]**.2 =    8.651
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.629
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8294
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      9.33
  TOTAL AREA(ACRES) =      3.10   TOTAL RUNOFF(CFS) =      9.33

****************************************************************************
  FLOW PROCESS FROM NODE    705.00 TO NODE    706.00 IS CODE =  61
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
```

```
 >>>>>(STANDARD CURB SECTION USED)<<<<<
==========================================================================
 UPSTREAM ELEVATION(FEET) = 2588.00  DOWNSTREAM ELEVATION(FEET) = 2582.50
 STREET LENGTH(FEET) =   348.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      14.07
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.41
   HALFSTREET FLOOD WIDTH(FEET) =   14.33
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.24
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.34
 STREET FLOW TRAVEL TIME(MIN.) =   1.79   Tc(MIN.) =  10.44
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.284
 CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8238
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    3.50      SUBAREA RUNOFF(CFS) =    9.47
 TOTAL AREA(ACRES) =      6.60        PEAK FLOW RATE(CFS) =      18.80

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.45   HALFSTREET FLOOD WIDTH(FEET) =  16.03
 FLOW VELOCITY(FEET/SEC.) =  3.50   DEPTH*VELOCITY(FT*FT/SEC.) =   1.56
 LONGEST FLOWPATH FROM NODE    704.00 TO NODE    706.00 =   753.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    706.00 TO NODE    703.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
==========================================================================
 UPSTREAM ELEVATION(FEET) = 2582.50  DOWNSTREAM ELEVATION(FEET) = 2578.00
 STREET LENGTH(FEET) =   480.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      23.44
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.51
   HALFSTREET FLOOD WIDTH(FEET) =   20.13
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.01
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.55
 STREET FLOW TRAVEL TIME(MIN.) =   2.65   Tc(MIN.) =  13.10
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.913
 CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8167
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    3.90      SUBAREA RUNOFF(CFS) =    9.28
 TOTAL AREA(ACRES) =     10.50        PEAK FLOW RATE(CFS) =      28.08

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.54   HALFSTREET FLOOD WIDTH(FEET) =  22.88
 FLOW VELOCITY(FEET/SEC.) =  3.13   DEPTH*VELOCITY(FT*FT/SEC.) =   1.70
 LONGEST FLOWPATH FROM NODE    704.00 TO NODE    703.00 =  1233.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    703.00 TO NODE    703.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
==========================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  13.10
 RAINFALL INTENSITY(INCH/HR) =   2.91
 TOTAL STREAM AREA(ACRES) =    10.50
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     28.08

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
    1         24.79     16.26        2.597         10.50
    2         28.08     13.10        2.913         10.50

 ********************************WARNING*********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
    1         48.04     13.10        2.913
    2         49.82     16.26        2.597

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     48.04   Tc(MIN.) =   13.10
 TOTAL AREA(ACRES) =     21.00
 LONGEST FLOWPATH FROM NODE    700.00 TO NODE    703.00 =  1644.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    703.00 TO NODE    708.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
==========================================================================
 UPSTREAM ELEVATION(FEET) = 2578.00  DOWNSTREAM ELEVATION(FEET) = 2576.00
 STREET LENGTH(FEET) =   269.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      48.49
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.66
   HALFSTREET FLOOD WIDTH(FEET) =   34.25
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.14
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.06
 STREET FLOW TRAVEL TIME(MIN.) =   1.43   Tc(MIN.) =  14.52
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.757
 CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8133
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    0.40      SUBAREA RUNOFF(CFS) =    0.90
 TOTAL AREA(ACRES) =     21.40        PEAK FLOW RATE(CFS) =      48.94
```

```
 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.66   HALFSTREET FLOOD WIDTH(FEET) =  34.50
 FLOW VELOCITY(FEET/SEC.) =  3.13   DEPTH*VELOCITY(FT*FT/SEC.) =   2.06
 LONGEST FLOWPATH FROM NODE    700.00 TO NODE    708.00 =  1913.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    800.00 TO NODE    801.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   806.00
 UPSTREAM ELEVATION(FEET) =   2644.00
 DOWNSTREAM ELEVATION(FEET) =   2626.50
 ELEVATION DIFFERENCE(FEET) =     17.50
 TC = 0.393*[(  806.00**3)/(    17.50)]**.2 =   12.278
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.014
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7839
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      9.45
 TOTAL AREA(ACRES) =      4.00   TOTAL RUNOFF(CFS) =      9.45

****************************************************************************
 FLOW PROCESS FROM NODE    801.00 TO NODE    804.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2626.50  DOWNSTREAM ELEVATION(FEET) = 2621.50
 STREET LENGTH(FEET) =   195.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      10.36
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.35
   HALFSTREET FLOOD WIDTH(FEET) =   11.43
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.64
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.29
 STREET FLOW TRAVEL TIME(MIN.) =   0.89   Tc(MIN.) =  13.17
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.904
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7807
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     0.80      SUBAREA RUNOFF(CFS) =     1.81
 TOTAL AREA(ACRES) =      4.80        PEAK FLOW RATE(CFS) =      11.26

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.36   HALFSTREET FLOOD WIDTH(FEET) =  11.85
 FLOW VELOCITY(FEET/SEC.) =  3.70   DEPTH*VELOCITY(FT*FT/SEC.) =   1.34
 LONGEST FLOWPATH FROM NODE    800.00 TO NODE    804.00 =  1001.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    804.00 TO NODE    804.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  13.17
 RAINFALL INTENSITY(INCH/HR) =   2.90
 TOTAL STREAM AREA(ACRES) =     4.80
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     11.26

****************************************************************************
 FLOW PROCESS FROM NODE    802.00 TO NODE    803.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   773.00
 UPSTREAM ELEVATION(FEET) =   2640.50
 DOWNSTREAM ELEVATION(FEET) =   2627.00
 ELEVATION DIFFERENCE(FEET) =     13.50
 TC = 0.393*[(  773.00**3)/(    13.50)]**.2 =   12.612
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.971
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7827
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =     10.93
 TOTAL AREA(ACRES) =      4.70   TOTAL RUNOFF(CFS) =     10.93

****************************************************************************
 FLOW PROCESS FROM NODE    803.00 TO NODE    804.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2627.00  DOWNSTREAM ELEVATION(FEET) = 2621.50
 STREET LENGTH(FEET) =   510.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      14.32
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.44
   HALFSTREET FLOOD WIDTH(FEET) =   15.57
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.81
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.23
 STREET FLOW TRAVEL TIME(MIN.) =   3.02   Tc(MIN.) =  15.63
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.652
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7726
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     3.30      SUBAREA RUNOFF(CFS) =     6.76
 TOTAL AREA(ACRES) =      8.00        PEAK FLOW RATE(CFS) =      17.69

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.46   HALFSTREET FLOOD WIDTH(FEET) =  16.91
 FLOW VELOCITY(FEET/SEC.) =  2.97   DEPTH*VELOCITY(FT*FT/SEC.) =   1.38
 LONGEST FLOWPATH FROM NODE    802.00 TO NODE    804.00 =  1283.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    804.00 TO NODE    804.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  15.63
 RAINFALL INTENSITY(INCH/HR) =   2.65
```

```
 TOTAL STREAM AREA(ACRES) =     8.00
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     17.69

 ** CONFLUENCE DATA **
 STREAM     RUNOFF      Tc      INTENSITY      AREA
 NUMBER      (CFS)    (MIN.)   (INCH/HOUR)    (ACRE)
     1       11.26    13.17       2.904         4.80
     2       17.69    15.63       2.652         8.00

 ********************************WARNING*********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM     RUNOFF      Tc      INTENSITY
 NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
     1       26.17    13.17       2.904
     2       27.98    15.63       2.652

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     27.98   Tc(MIN.) =   15.63
 TOTAL AREA(ACRES) =     12.80
 LONGEST FLOWPATH FROM NODE    802.00 TO NODE    804.00 =  1283.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    804.00 TO NODE    805.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2621.50  DOWNSTREAM ELEVATION(FEET) = 2609.00
 STREET LENGTH(FEET) =   542.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      32.28
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.49
   HALFSTREET FLOOD WIDTH(FEET) =   18.00
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.64
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.29
 STREET FLOW TRAVEL TIME(MIN.) =   1.95   Tc(MIN.) =  17.58
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.492
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7668
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.50      SUBAREA RUNOFF(CFS) =    8.60
 TOTAL AREA(ACRES) =     17.30        PEAK FLOW RATE(CFS) =      36.58

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.51   HALFSTREET FLOOD WIDTH(FEET) =  18.44
 FLOW VELOCITY(FEET/SEC.) =  4.86   DEPTH*VELOCITY(FT*FT/SEC.) =   2.47
 LONGEST FLOWPATH FROM NODE    802.00 TO NODE    805.00 =  1825.00 FEET.
============================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)     =     17.30  TC(MIN.) =     17.58
 PEAK FLOW RATE(CFS)   =     36.58

============================================================================
============================================================================
 END OF RATIONAL METHOD ANALYSIS
```

TECHNICAL APPENDIX

APPENDIX A.5

Tract 35967 100-Yr Storm Event

Post-Project Condition

```
**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
       RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                    (RCFC&WCD)  1978 HYDROLOGY MANUAL
          (c) Copyright 1982-2004 Advanced Engineering Software (aes)
                    (Rational Tabling Version 6.0D)
                Release Date: 01/01/2004  License ID 1264

                        Analysis prepared by:

                            RBF Consulting
                          14725 Alton Parkway
                        Irvine, California  92618


 ************************* DESCRIPTION OF STUDY *************************
* Deutsch Banning Project        Project No : 65-100183                  *
* Hydrology for Tract 35967, 100 years storm event                       *
* Date : 2008-04-03     By:Ac                                            *
 **************************************************************************

  FILE NAME: D_K_100.DAT
  TIME/DATE OF STUDY: 11:20 04/04/2008
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.570
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.300
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.300
  SLOPE OF INTENSITY DURATION CURVE = 0.5300
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
        AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)     SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150
  2   18.0      9.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0160
  3   20.0     12.0    0.015/0.050/0.020   0.50    1.50 0.0313 0.125 0.0160

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth = -0.17 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  8.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

**************************************************************************
  FLOW PROCESS FROM NODE     410.00 TO NODE     412.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   366.00
  UPSTREAM ELEVATION(FEET) =   2641.00
  DOWNSTREAM ELEVATION(FEET) =   2637.80
  ELEVATION DIFFERENCE(FEET) =      3.20
  TC = 0.393*[(  366.00**3)/(     3.20)]**.2 =   10.740
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.235
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7899
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =     16.31
  TOTAL AREA(ACRES) =      6.38   TOTAL RUNOFF(CFS) =     16.31

**************************************************************************
  FLOW PROCESS FROM NODE     412.00 TO NODE     431.00 IS CODE =  62
--------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
==========================================================================
  UPSTREAM ELEVATION(FEET) = 2637.80  DOWNSTREAM ELEVATION(FEET) = 2633.00
  STREET LENGTH(FEET) =   578.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      21.05
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.50
    HALFSTREET FLOOD WIDTH(FEET) =   18.20
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.86
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.44
  STREET FLOW TRAVEL TIME(MIN.) =   3.36   Tc(MIN.) =  14.11
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.800
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7775
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    4.35      SUBAREA RUNOFF(CFS) =    9.47
  TOTAL AREA(ACRES) =     10.73        PEAK FLOW RATE(CFS) =      25.78

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.53   HALFSTREET FLOOD WIDTH(FEET) =  19.48
  FLOW VELOCITY(FEET/SEC.) =  3.10   DEPTH*VELOCITY(FT*FT/SEC.) =   1.64
  LONGEST FLOWPATH FROM NODE    410.00 TO NODE    431.00 =   944.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE     431.00 TO NODE     431.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
==========================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  14.11
  RAINFALL INTENSITY(INCH/HR) =   2.80
  TOTAL STREAM AREA(ACRES) =    10.73
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     25.78

**************************************************************************
  FLOW PROCESS FROM NODE     427.00 TO NODE     429.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   504.00
  UPSTREAM ELEVATION(FEET) =   2645.00
  DOWNSTREAM ELEVATION(FEET) =   2636.00
  ELEVATION DIFFERENCE(FEET) =      9.00
  TC = 0.303*[(  504.00**3)/(     9.00)]**.2 =    8.170
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.740
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8803
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =     11.75
```

```
 TOTAL AREA(ACRES) =      3.57   TOTAL RUNOFF(CFS) =     11.75

****************************************************************************
 FLOW PROCESS FROM NODE    429.00 TO NODE    431.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2636.00  DOWNSTREAM ELEVATION(FEET) = 2633.00
 STREET LENGTH(FEET) =   294.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      14.10
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.44
   HALFSTREET FLOOD WIDTH(FEET) =   15.64
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.75
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.21
 STREET FLOW TRAVEL TIME(MIN.) =   1.78   Tc(MIN.) =   9.95
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.369
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7932
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    1.75      SUBAREA RUNOFF(CFS) =    4.68
 TOTAL AREA(ACRES) =      5.32        PEAK FLOW RATE(CFS) =      16.43

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.46   HALFSTREET FLOOD WIDTH(FEET) =  16.63
 FLOW VELOCITY(FEET/SEC.) =  2.85   DEPTH*VELOCITY(FT*FT/SEC.) =   1.31
 LONGEST FLOWPATH FROM NODE    427.00 TO NODE    431.00 =   798.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    431.00 TO NODE    431.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =   9.95
 RAINFALL INTENSITY(INCH/HR) =   3.37
 TOTAL STREAM AREA(ACRES) =     5.32
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     16.43

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
     1       25.78     14.11        2.800         10.73
     2       16.43      9.95        3.369          5.32

 ********************************WARNING***********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 **************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1       34.62      9.95        3.369
     2       39.43     14.11        2.800

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     39.43   Tc(MIN.) =   14.11
 TOTAL AREA(ACRES) =     16.05
 LONGEST FLOWPATH FROM NODE    410.00 TO NODE    431.00 =   944.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    431.00 TO NODE    435.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2633.00  DOWNSTREAM ELEVATION(FEET) = 2627.50
 STREET LENGTH(FEET) =   477.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      41.53
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.58
   HALFSTREET FLOOD WIDTH(FEET) =   21.80
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.06
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.34
 STREET FLOW TRAVEL TIME(MIN.) =   1.96   Tc(MIN.) =  16.06
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.614
 SINGLE-FAMILY(1/2 ACRE LOT) RUNOFF COEFFICIENT = .7455
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    2.15      SUBAREA RUNOFF(CFS) =    4.19
 TOTAL AREA(ACRES) =     18.20        PEAK FLOW RATE(CFS) =      43.62

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.58   HALFSTREET FLOOD WIDTH(FEET) =  22.16
 FLOW VELOCITY(FEET/SEC.) =  4.13   DEPTH*VELOCITY(FT*FT/SEC.) =   2.41
 LONGEST FLOWPATH FROM NODE    410.00 TO NODE    435.00 =  1421.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    435.00 TO NODE    435.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  16.06
 RAINFALL INTENSITY(INCH/HR) =   2.61
 TOTAL STREAM AREA(ACRES) =    18.20
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     43.62

****************************************************************************
 FLOW PROCESS FROM NODE    433.00 TO NODE    435.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY(1/2 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   534.00
 UPSTREAM ELEVATION(FEET) =   2638.00
 DOWNSTREAM ELEVATION(FEET) =   2627.50
 ELEVATION DIFFERENCE(FEET) =     10.50
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 TC = 0.422*[(  534.00**3)/(    10.50)]**.2 =   11.421
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.132
 SINGLE-FAMILY(1/2 ACRE LOT) RUNOFF COEFFICIENT = .7646
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      8.79
 TOTAL AREA(ACRES) =      3.67   TOTAL RUNOFF(CFS) =      8.79

****************************************************************************
 FLOW PROCESS FROM NODE    435.00 TO NODE    435.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  11.42
 RAINFALL INTENSITY(INCH/HR) =   3.13
 TOTAL STREAM AREA(ACRES) =     3.67
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.79

 ** CONFLUENCE DATA **
 STREAM     RUNOFF      Tc      INTENSITY      AREA
 NUMBER      (CFS)    (MIN.)   (INCH/HOUR)    (ACRE)
     1       43.62    16.06        2.614        18.20
     2        8.79    11.42        3.132         3.67

 ***********************************WARNING***********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 *****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM     RUNOFF      Tc      INTENSITY
 NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
     1       39.80    11.42        3.132
     2       50.96    16.06        2.614

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     50.96   Tc(MIN.) =   16.06
 TOTAL AREA(ACRES) =     21.87
 LONGEST FLOWPATH FROM NODE    410.00 TO NODE    435.00 =  1421.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    435.00 TO NODE    408.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2627.50  DOWNSTREAM ELEVATION(FEET) = 2624.00
 STREET LENGTH(FEET) =   253.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      51.20
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.59
   HALFSTREET FLOOD WIDTH(FEET) =   22.71
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.63
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.75
 STREET FLOW TRAVEL TIME(MIN.) =   0.91   Tc(MIN.) =  16.97
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.538
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7685
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    0.25      SUBAREA RUNOFF(CFS) =    0.49
 TOTAL AREA(ACRES) =     22.12       PEAK FLOW RATE(CFS) =      51.45

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.60   HALFSTREET FLOOD WIDTH(FEET) =  22.78
 FLOW VELOCITY(FEET/SEC.) =  4.63   DEPTH*VELOCITY(FT*FT/SEC.) =   2.76
 LONGEST FLOWPATH FROM NODE    410.00 TO NODE    408.00 =  1674.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    408.00 TO NODE    408.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  16.97
 RAINFALL INTENSITY(INCH/HR) =   2.54
 TOTAL STREAM AREA(ACRES) =    22.12
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     51.45

****************************************************************************
 FLOW PROCESS FROM NODE    400.00 TO NODE    402.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   396.00
 UPSTREAM ELEVATION(FEET) =   2695.00
 DOWNSTREAM ELEVATION(FEET) =   2688.60
 ELEVATION DIFFERENCE(FEET) =      6.40
 TC = 0.393*[(  396.00**3)/(     6.40)]**.2 =    9.802
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.396
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7939
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      2.80
 TOTAL AREA(ACRES) =      1.04   TOTAL RUNOFF(CFS) =      2.80

****************************************************************************
 FLOW PROCESS FROM NODE    402.00 TO NODE    406.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2688.60  DOWNSTREAM ELEVATION(FEET) = 2650.00
 STREET LENGTH(FEET) =   888.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      6.15
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.29
   HALFSTREET FLOOD WIDTH(FEET) =    8.10
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.97
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.14
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 STREET FLOW TRAVEL TIME(MIN.) =   3.73   Tc(MIN.) =  13.53
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.863
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7794
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     2.99      SUBAREA RUNOFF(CFS) =     6.67
 TOTAL AREA(ACRES) =       4.03        PEAK FLOW RATE(CFS) =       9.48

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.32   HALFSTREET FLOOD WIDTH(FEET) =   9.85
 FLOW VELOCITY(FEET/SEC.) =  4.35   DEPTH*VELOCITY(FT*FT/SEC.) =   1.41
 LONGEST FLOWPATH FROM NODE    400.00 TO NODE    406.00 =  1284.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    406.00 TO NODE    407.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2650.00  DOWNSTREAM ELEVATION(FEET) = 2635.00
 STREET LENGTH(FEET) =   697.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      11.23
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.37
   HALFSTREET FLOOD WIDTH(FEET) =   12.29
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.45
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.28
 STREET FLOW TRAVEL TIME(MIN.) =   3.37   Tc(MIN.) =  16.90
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.544
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7688
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     1.79      SUBAREA RUNOFF(CFS) =     3.50
 TOTAL AREA(ACRES) =       5.82        PEAK FLOW RATE(CFS) =      12.98

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.39   HALFSTREET FLOOD WIDTH(FEET) =  13.03
 FLOW VELOCITY(FEET/SEC.) =  3.57   DEPTH*VELOCITY(FT*FT/SEC.) =   1.38
 LONGEST FLOWPATH FROM NODE    400.00 TO NODE    407.00 =  1981.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    407.00 TO NODE    408.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2635.00  DOWNSTREAM ELEVATION(FEET) = 2624.00
 STREET LENGTH(FEET) =   366.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      13.74
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.38
   HALFSTREET FLOOD WIDTH(FEET) =   12.46
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.11
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.54
 STREET FLOW TRAVEL TIME(MIN.) =   1.48   Tc(MIN.) =  18.38
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.433
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7646
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =     0.82      SUBAREA RUNOFF(CFS) =     1.53
 TOTAL AREA(ACRES) =       6.64        PEAK FLOW RATE(CFS) =      14.50

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.38   HALFSTREET FLOOD WIDTH(FEET) =  12.74
 FLOW VELOCITY(FEET/SEC.) =  4.16   DEPTH*VELOCITY(FT*FT/SEC.) =   1.59
 LONGEST FLOWPATH FROM NODE    400.00 TO NODE    408.00 =  2347.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    408.00 TO NODE    408.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  18.38
 RAINFALL INTENSITY(INCH/HR) =   2.43
 TOTAL STREAM AREA(ACRES) =     6.64
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     14.50

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY       AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
     1        51.45     16.97         2.538         22.12
     2        14.50     18.38         2.433          6.64

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        64.84     16.97         2.538
     2        63.82     18.38         2.433

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     64.84   Tc(MIN.) =   16.97
 TOTAL AREA(ACRES) =     28.76
 LONGEST FLOWPATH FROM NODE    400.00 TO NODE    408.00 =  2347.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    408.00 TO NODE    441.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2624.00  DOWNSTREAM ELEVATION(FEET) = 2613.00
 STREET LENGTH(FEET) =   537.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
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  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =    0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =    0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       66.38
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.62
    HALFSTREET FLOOD WIDTH(FEET) =    30.75
    AVERAGE FLOW VELOCITY(FEET/SEC.) =     5.03
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =     3.12
  STREET FLOW TRAVEL TIME(MIN.) =   1.78   Tc(MIN.) =  18.75
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.408
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7636
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     1.68       SUBAREA RUNOFF(CFS) =     3.09
  TOTAL AREA(ACRES) =      30.44         PEAK FLOW RATE(CFS) =       67.93

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.62   HALFSTREET FLOOD WIDTH(FEET) =  31.13
  FLOW VELOCITY(FEET/SEC.) =  5.06   DEPTH*VELOCITY(FT*FT/SEC.) =   3.16
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    441.00 =  2884.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    441.00 TO NODE    414.00 IS CODE =  61
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2613.00  DOWNSTREAM ELEVATION(FEET) = 2612.00
  STREET LENGTH(FEET) =   270.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 32.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =    0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =    0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       68.58
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.79
    HALFSTREET FLOOD WIDTH(FEET) =   46.75
    AVERAGE FLOW VELOCITY(FEET/SEC.) =     2.55
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =     2.03
  STREET FLOW TRAVEL TIME(MIN.) =   1.77   Tc(MIN.) =  20.52
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.296
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7590
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     0.75       SUBAREA RUNOFF(CFS) =     1.31
  TOTAL AREA(ACRES) =      31.19         PEAK FLOW RATE(CFS) =       69.23

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.80   HALFSTREET FLOOD WIDTH(FEET) =  46.87
  FLOW VELOCITY(FEET/SEC.) =  2.55   DEPTH*VELOCITY(FT*FT/SEC.) =   2.03
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    414.00 =  3154.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    417.00 TO NODE    419.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   750.00
  UPSTREAM ELEVATION(FEET) =   2692.00
  DOWNSTREAM ELEVATION(FEET) =   2675.00
  ELEVATION DIFFERENCE(FEET) =     17.00
  TC = 0.393*[(  750.00**3)/(    17.00)]**.2 =   11.828
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.074
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7856
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =     12.17
  TOTAL AREA(ACRES) =      5.04   TOTAL RUNOFF(CFS) =     12.17

****************************************************************************
  FLOW PROCESS FROM NODE    419.00 TO NODE    421.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2675.00  DOWNSTREAM ELEVATION(FEET) = 2658.00
  STREET LENGTH(FEET) =   303.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =    0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =    0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       17.35
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.37
    HALFSTREET FLOOD WIDTH(FEET) =   12.06
    AVERAGE FLOW VELOCITY(FEET/SEC.) =     5.52
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =     2.03
  STREET FLOW TRAVEL TIME(MIN.) =   0.92   Tc(MIN.) =  12.74
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.955
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7822
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     4.48       SUBAREA RUNOFF(CFS) =    10.36
  TOTAL AREA(ACRES) =      9.52         PEAK FLOW RATE(CFS) =       22.53

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.39   HALFSTREET FLOOD WIDTH(FEET) =  13.39
  FLOW VELOCITY(FEET/SEC.) =  5.89   DEPTH*VELOCITY(FT*FT/SEC.) =   2.32
  LONGEST FLOWPATH FROM NODE    417.00 TO NODE    421.00 =  1053.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    421.00 TO NODE    425.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2658.00  DOWNSTREAM ELEVATION(FEET) = 2636.50
  STREET LENGTH(FEET) =   841.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =    0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =    0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       28.85
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.47
    HALFSTREET FLOOD WIDTH(FEET) =   17.33
    AVERAGE FLOW VELOCITY(FEET/SEC.) =     4.62
```

```
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.19
  STREET FLOW TRAVEL TIME(MIN.) =   3.03   Tc(MIN.) =  15.78
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.639
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7721
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     6.20      SUBAREA RUNOFF(CFS) =   12.63
  TOTAL AREA(ACRES) =     15.72        PEAK FLOW RATE(CFS) =      35.16

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.50   HALFSTREET FLOOD WIDTH(FEET) =  18.00
  FLOW VELOCITY(FEET/SEC.) =  4.93   DEPTH*VELOCITY(FT*FT/SEC.) =   2.45
  LONGEST FLOWPATH FROM NODE    417.00 TO NODE    425.00 =  1894.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    425.00 TO NODE    425.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  15.78
  RAINFALL INTENSITY(INCH/HR) =   2.64
  TOTAL STREAM AREA(ACRES) =    15.72
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     35.16

****************************************************************************
  FLOW PROCESS FROM NODE    417.00 TO NODE    423.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   490.00
  UPSTREAM ELEVATION(FEET) =   2692.00
  DOWNSTREAM ELEVATION(FEET) =   2664.00
  ELEVATION DIFFERENCE(FEET) =     28.00
  TC = 0.393*[(  490.00**3)/(    28.00)]**.2 =    8.292
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.711
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .8009
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      9.78
  TOTAL AREA(ACRES) =      3.29   TOTAL RUNOFF(CFS) =      9.78

****************************************************************************
  FLOW PROCESS FROM NODE    423.00 TO NODE    425.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2664.00  DOWNSTREAM ELEVATION(FEET) = 2636.50
  STREET LENGTH(FEET) =   590.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      15.28
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.36
    HALFSTREET FLOOD WIDTH(FEET) =   11.85
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    5.02
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.82
  STREET FLOW TRAVEL TIME(MIN.) =   1.96   Tc(MIN.) =  10.25
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.317
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7920
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     4.19      SUBAREA RUNOFF(CFS) =   11.01
  TOTAL AREA(ACRES) =      7.48        PEAK FLOW RATE(CFS) =      20.78

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.40   HALFSTREET FLOOD WIDTH(FEET) =  13.46
  FLOW VELOCITY(FEET/SEC.) =  5.38   DEPTH*VELOCITY(FT*FT/SEC.) =   2.13
  LONGEST FLOWPATH FROM NODE    417.00 TO NODE    425.00 =  1080.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    425.00 TO NODE    425.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  10.25
  RAINFALL INTENSITY(INCH/HR) =   3.32
  TOTAL STREAM AREA(ACRES) =     7.48
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     20.78

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY      AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
      1        35.16     15.78         2.639        15.72
      2        20.78     10.25         3.317         7.48

 ********************************WARNING*************************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1        43.63     10.25         3.317
      2        51.70     15.78         2.639

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     51.70   Tc(MIN.) =   15.78
  TOTAL AREA(ACRES) =     23.20
  LONGEST FLOWPATH FROM NODE    417.00 TO NODE    425.00 =  1894.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    425.00 TO NODE    443.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2636.50  DOWNSTREAM ELEVATION(FEET) = 2628.00
  STREET LENGTH(FEET) =   600.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      54.23
```

```
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.60
    HALFSTREET FLOOD WIDTH(FEET) =   23.14
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.74
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.86
  STREET FLOW TRAVEL TIME(MIN.) =   2.11   Tc(MIN.) =  17.89
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.469
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7659
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    2.68      SUBAREA RUNOFF(CFS) =    5.07
  TOTAL AREA(ACRES) =     25.88        PEAK FLOW RATE(CFS) =      56.77

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.61   HALFSTREET FLOOD WIDTH(FEET) =  23.51
  FLOW VELOCITY(FEET/SEC.) =  4.82   DEPTH*VELOCITY(FT*FT/SEC.) =   2.94
  LONGEST FLOWPATH FROM NODE    417.00 TO NODE    443.00 =  2494.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    443.00 TO NODE    445.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2628.00  DOWNSTREAM ELEVATION(FEET) = 2615.00
  STREET LENGTH(FEET) =   680.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      61.57
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.60
    HALFSTREET FLOOD WIDTH(FEET) =   22.96
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    5.46
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    3.27
  STREET FLOW TRAVEL TIME(MIN.) =   2.08   Tc(MIN.) =  19.96
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.330
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7604
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    5.42      SUBAREA RUNOFF(CFS) =    9.60
  TOTAL AREA(ACRES) =     31.30        PEAK FLOW RATE(CFS) =      66.37

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.61   HALFSTREET FLOOD WIDTH(FEET) =  23.57
  FLOW VELOCITY(FEET/SEC.) =  5.60   DEPTH*VELOCITY(FT*FT/SEC.) =   3.43
  LONGEST FLOWPATH FROM NODE    417.00 TO NODE    445.00 =  3174.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    445.00 TO NODE    414.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =  2615.00  DOWNSTREAM(FEET) =  2612.00
  FLOW LENGTH(FEET) =   400.00   MANNING'S N =  0.015
  DEPTH OF FLOW IN  42.0 INCH PIPE IS  31.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.45
  ESTIMATED PIPE DIAMETER(INCH) =  42.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     66.37
  PIPE TRAVEL TIME(MIN.) =   0.79    Tc(MIN.) =  20.75
  LONGEST FLOWPATH FROM NODE    417.00 TO NODE    414.00 =  3574.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    437.00 TO NODE    439.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   416.00
  UPSTREAM ELEVATION(FEET) =   2629.00
  DOWNSTREAM ELEVATION(FEET) =   2626.00
  ELEVATION DIFFERENCE(FEET) =      3.00
  TC = 0.393*[(  416.00**3)/(     3.00)]**.2 =   11.748
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.085
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7859
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      7.20
  TOTAL AREA(ACRES) =      2.97   TOTAL RUNOFF(CFS) =      7.20

****************************************************************************
  FLOW PROCESS FROM NODE    439.00 TO NODE    414.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =  2626.00  DOWNSTREAM(FEET) =  2612.00
  FLOW LENGTH(FEET) =   400.00   MANNING'S N =  0.015
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 18.000
  DEPTH OF FLOW IN  18.0 INCH PIPE IS   8.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.88
  ESTIMATED PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      7.20
  PIPE TRAVEL TIME(MIN.) =   0.75    Tc(MIN.) =  12.50
  LONGEST FLOWPATH FROM NODE    437.00 TO NODE    414.00 =   816.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    242.00 TO NODE    244.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   947.00
  UPSTREAM ELEVATION(FEET) =   2683.30
  DOWNSTREAM ELEVATION(FEET) =   2669.00
  ELEVATION DIFFERENCE(FEET) =     14.30
  TC = 0.393*[(  947.00**3)/(    14.30)]**.2 =   14.083
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.803
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7776
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      6.69
  TOTAL AREA(ACRES) =      3.07   TOTAL RUNOFF(CFS) =      6.69

****************************************************************************
  FLOW PROCESS FROM NODE    244.00 TO NODE    247.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2669.00  DOWNSTREAM ELEVATION(FEET) = 2650.00
  STREET LENGTH(FEET) =   883.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
```

```
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      15.03
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.40
   HALFSTREET FLOOD WIDTH(FEET) =   13.82
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.71
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.49
 STREET FLOW TRAVEL TIME(MIN.) =   3.97   Tc(MIN.) =  18.05
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.457
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7655
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    8.85      SUBAREA RUNOFF(CFS) =   16.64
 TOTAL AREA(ACRES) =     11.92        PEAK FLOW RATE(CFS) =      23.33

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.46   HALFSTREET FLOOD WIDTH(FEET) =  16.49
 FLOW VELOCITY(FEET/SEC.) =  4.11   DEPTH*VELOCITY(FT*FT/SEC.) =   1.88
 LONGEST FLOWPATH FROM NODE    242.00 TO NODE    247.00 =  1830.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    247.00 TO NODE    247.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  18.05
 RAINFALL INTENSITY(INCH/HR) =   2.46
 TOTAL STREAM AREA(ACRES) =    11.92
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     23.33

****************************************************************************
 FLOW PROCESS FROM NODE    251.00 TO NODE    253.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   604.00
 UPSTREAM ELEVATION(FEET) =   2682.00
 DOWNSTREAM ELEVATION(FEET) =   2655.50
 ELEVATION DIFFERENCE(FEET) =     26.50
 TC = 0.393*[(  604.00**3)/(    26.50)]**.2 =    9.504
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.452
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7952
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =     10.71
 TOTAL AREA(ACRES) =      3.90   TOTAL RUNOFF(CFS) =     10.71

****************************************************************************
 FLOW PROCESS FROM NODE    253.00 TO NODE    255.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2655.50  DOWNSTREAM ELEVATION(FEET) = 2653.00
 STREET LENGTH(FEET) =   275.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      15.30
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.46
   HALFSTREET FLOOD WIDTH(FEET) =   16.49
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.70
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.23
 STREET FLOW TRAVEL TIME(MIN.) =   1.70   Tc(MIN.) =  11.20
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.164
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7881
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    3.68      SUBAREA RUNOFF(CFS) =    9.17
 TOTAL AREA(ACRES) =      7.58        PEAK FLOW RATE(CFS) =      19.88

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.49   HALFSTREET FLOOD WIDTH(FEET) =  18.00
 FLOW VELOCITY(FEET/SEC.) =  2.88   DEPTH*VELOCITY(FT*FT/SEC.) =   1.41
 LONGEST FLOWPATH FROM NODE    251.00 TO NODE    255.00 =   879.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    255.00 TO NODE    247.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2653.00  DOWNSTREAM ELEVATION(FEET) = 2650.00
 STREET LENGTH(FEET) =     4.77   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      25.82
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.30
   HALFSTREET FLOOD WIDTH(FEET) =    8.50
   AVERAGE FLOW VELOCITY(FEET/SEC.) =   15.35
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    4.55
 STREET FLOW TRAVEL TIME(MIN.) =   0.01   Tc(MIN.) =  11.21
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.163
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7880
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.77      SUBAREA RUNOFF(CFS) =   11.89
 TOTAL AREA(ACRES) =     12.35        PEAK FLOW RATE(CFS) =      31.77

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.31   HALFSTREET FLOOD WIDTH(FEET) =   9.32
 FLOW VELOCITY(FEET/SEC.) = 16.11   DEPTH*VELOCITY(FT*FT/SEC.) =   5.04
 LONGEST FLOWPATH FROM NODE    251.00 TO NODE    247.00 =   883.77 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    247.00 TO NODE    247.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  11.21
 RAINFALL INTENSITY(INCH/HR) =   3.16
 TOTAL STREAM AREA(ACRES) =    12.35
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     31.77
```

```
 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
     1        23.33     18.05         2.457        11.92
     2        31.77     11.21         3.163        12.35

 ***********************************WARNING***********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 *****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        46.26     11.21        3.163
     2        48.01     18.05        2.457

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     46.26   Tc(MIN.) =   11.21
 TOTAL AREA(ACRES) =     24.27
 LONGEST FLOWPATH FROM NODE    242.00 TO NODE    247.00 =  1830.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    247.00 TO NODE    249.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2650.00  DOWNSTREAM ELEVATION(FEET) = 2643.00
 STREET LENGTH(FEET) =   280.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =     47.68
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.54
   HALFSTREET FLOOD WIDTH(FEET) =   19.91
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    5.51
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.96
 STREET FLOW TRAVEL TIME(MIN.) =   0.85   Tc(MIN.) =  12.06
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.043
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7848
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    1.19      SUBAREA RUNOFF(CFS) =    2.84
 TOTAL AREA(ACRES) =     25.46       PEAK FLOW RATE(CFS) =     49.10

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.54   HALFSTREET FLOOD WIDTH(FEET) =  20.15
 FLOW VELOCITY(FEET/SEC.) =  5.55   DEPTH*VELOCITY(FT*FT/SEC.) =   3.01
 LONGEST FLOWPATH FROM NODE    242.00 TO NODE    249.00 =  2110.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    249.00 TO NODE    249.00 IS CODE =  1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  12.06
 RAINFALL INTENSITY(INCH/HR) =   3.04
 TOTAL STREAM AREA(ACRES) =    25.46
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     49.10

****************************************************************************
 FLOW PROCESS FROM NODE    257.00 TO NODE    249.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   813.00
 UPSTREAM ELEVATION(FEET) =   2652.50
 DOWNSTREAM ELEVATION(FEET) =   2643.00
 ELEVATION DIFFERENCE(FEET) =      9.50
 TC = 0.393*[(  813.00**3)/(     9.50)]**.2 =   13.946
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.817
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7780
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =     3.84
 TOTAL AREA(ACRES) =     1.75   TOTAL RUNOFF(CFS) =     3.84

****************************************************************************
 FLOW PROCESS FROM NODE    249.00 TO NODE    249.00 IS CODE =  1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  13.95
 RAINFALL INTENSITY(INCH/HR) =   2.82
 TOTAL STREAM AREA(ACRES) =     1.75
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     3.84

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
     1        49.10     12.06         3.043        25.46
     2         3.84     13.95         2.817         1.75

 ***********************************WARNING***********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 *****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        52.42     12.06        3.043
     2        49.29     13.95        2.817

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     52.42   Tc(MIN.) =   12.06
 TOTAL AREA(ACRES) =     27.21
 LONGEST FLOWPATH FROM NODE    242.00 TO NODE    249.00 =  2110.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    249.00 TO NODE    246.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
```

```
 UPSTREAM ELEVATION(FEET) = 2643.00  DOWNSTREAM ELEVATION(FEET) = 2642.50
 STREET LENGTH(FEET) =   195.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      52.93
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.78
   HALFSTREET FLOOD WIDTH(FEET) =   46.08
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.06
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.61
 STREET FLOW TRAVEL TIME(MIN.) =   1.58   Tc(MIN.) =  13.63
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.851
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7791
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    0.46      SUBAREA RUNOFF(CFS) =    1.02
 TOTAL AREA(ACRES) =     27.67        PEAK FLOW RATE(CFS) =      53.44

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.78   HALFSTREET FLOOD WIDTH(FEET) =  46.14
 FLOW VELOCITY(FEET/SEC.) =  2.07   DEPTH*VELOCITY(FT*FT/SEC.) =   1.62
 LONGEST FLOWPATH FROM NODE    242.00 TO NODE    246.00 =  2305.00 FEET.
****************************************************************************
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)     =     27.67  TC(MIN.) =     13.63
 PEAK FLOW RATE(CFS)   =     53.44
****************************************************************************
****************************************************************************
 END OF RATIONAL METHOD ANALYSIS
```

TECHNICAL APPENDIX

APPENDIX A.6

Tract 35968, 35969 100-Yr Storm Event

Post-Project Condition

```
************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
        RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                      (RCFC&WCD)  1978 HYDROLOGY MANUAL
          (c) Copyright 1982-2004 Advanced Engineering Software (aes)
                      (Rational Tabling Version 6.0D)
                  Release Date: 01/01/2004  License ID 1264

                          Analysis prepared by:

                              RBF Consulting
                            14725 Alton Parkway
                          Irvine, California  92618


 ************************* DESCRIPTION OF STUDY *************************
* Deutsch Banning Project        Project No: 65-100183                  *
* Hydrology for Tract 35968, 35969   100 Years Storm Event               *
* Date: 2008-04-07             By: AC                                   *
 ************************************************************************

  FILE NAME: DFG_100.DAT
  TIME/DATE OF STUDY: 16:14 04/07/2008
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  18.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.570
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.300
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.300
  SLOPE OF INTENSITY DURATION CURVE = 0.5300
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: COMPUTE CONFLUENCE VALUES ACCORDING TO RCFC&WCD HYDROLOGY MANUAL
        AND IGNORE OTHER CONFLUENCE COMBINATIONS FOR DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)   (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150
  2   18.0      9.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0160
  3   20.0     12.0    0.015/0.050/0.020   0.50    1.50 0.0313 0.125 0.0160
  4   12.0      6.0    0.020/0.020/0.020   0.50    1.50 0.0313 0.125 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth = -0.17 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  8.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

************************************************************************
  FLOW PROCESS FROM NODE     715.00 TO NODE     717.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS CONDOMINIUM
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   858.00
  UPSTREAM ELEVATION(FEET) =   2610.00
  DOWNSTREAM ELEVATION(FEET) =   2592.00
  ELEVATION DIFFERENCE(FEET) =     18.00
  TC = 0.359*[(  858.00**3)/(    18.00)]**.2 =   11.598
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.106
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8206
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =     22.86
  TOTAL AREA(ACRES) =      8.97   TOTAL RUNOFF(CFS) =     22.86

************************************************************************
  FLOW PROCESS FROM NODE     717.00 TO NODE     719.00 IS CODE =  62
------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  4 USED)<<<<<
========================================================================
  UPSTREAM ELEVATION(FEET) = 2592.00  DOWNSTREAM ELEVATION(FEET) = 2583.00
  STREET LENGTH(FEET) =   352.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 12.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   6.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0150

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      28.90
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.45
    HALFSTREET FLOOD WIDTH(FEET) =   12.00
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    5.55
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.52
  STREET FLOW TRAVEL TIME(MIN.) =   1.06   Tc(MIN.) =  12.66
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.966
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8178
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    4.98      SUBAREA RUNOFF(CFS) =   12.08
  TOTAL AREA(ACRES) =     13.95       PEAK FLOW RATE(CFS) =      34.94

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.48   HALFSTREET FLOOD WIDTH(FEET) =  12.00
  FLOW VELOCITY(FEET/SEC.) =  6.00   DEPTH*VELOCITY(FT*FT/SEC.) =   2.87
  LONGEST FLOWPATH FROM NODE    715.00 TO NODE    719.00 =  1210.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE     719.00 TO NODE     711.00 IS CODE =  62
------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  4 USED)<<<<<
========================================================================
  UPSTREAM ELEVATION(FEET) = 2583.00  DOWNSTREAM ELEVATION(FEET) = 2575.00
  STREET LENGTH(FEET) =     5.37   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 12.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   6.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0150

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      41.45
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.29
    HALFSTREET FLOOD WIDTH(FEET) =    8.39
    AVERAGE FLOW VELOCITY(FEET/SEC.) =   25.21
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    7.41
  STREET FLOW TRAVEL TIME(MIN.) =   0.00   Tc(MIN.) =  12.66
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.965
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8178
```

```
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     5.37      SUBAREA RUNOFF(CFS) =    13.02
  TOTAL AREA(ACRES) =      19.32        PEAK FLOW RATE(CFS) =       47.97

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.31   HALFSTREET FLOOD WIDTH(FEET) =    8.95
  FLOW VELOCITY(FEET/SEC.) = 26.08   DEPTH*VELOCITY(FT*FT/SEC.) =    7.96
  LONGEST FLOWPATH FROM NODE     715.00 TO NODE     711.00 =  1215.37 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     711.00 TO NODE     713.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  4 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2575.00  DOWNSTREAM ELEVATION(FEET) = 2560.00
  STREET LENGTH(FEET) =   782.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 12.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =    6.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =    0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =    0.0150

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       56.42
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.59
    HALFSTREET FLOOD WIDTH(FEET) =   16.33
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    6.43
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    3.77
  STREET FLOW TRAVEL TIME(MIN.) =   2.03   Tc(MIN.) =  14.69
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.741
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8129
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =     7.59      SUBAREA RUNOFF(CFS) =    16.91
  TOTAL AREA(ACRES) =      26.91        PEAK FLOW RATE(CFS) =       64.88

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.62   HALFSTREET FLOOD WIDTH(FEET) =  17.79
  FLOW VELOCITY(FEET/SEC.) =  6.63   DEPTH*VELOCITY(FT*FT/SEC.) =    4.09
  LONGEST FLOWPATH FROM NODE     715.00 TO NODE     713.00 =  1997.37 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     713.00 TO NODE     713.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  14.69
  RAINFALL INTENSITY(INCH/HR) =   2.74
  TOTAL STREAM AREA(ACRES) =    26.91
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     64.88

****************************************************************************
  FLOW PROCESS FROM NODE     712.00 TO NODE     713.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS CONDOMINIUM
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   352.00
  UPSTREAM ELEVATION(FEET) =   2562.00
  DOWNSTREAM ELEVATION(FEET) =   2560.00
  ELEVATION DIFFERENCE(FEET) =      2.00
  TC = 0.359*[(  352.00**3)/(     2.00)]**.2 =   10.545
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.267
  CONDOMINIUM DEVELOPMENT RUNOFF COEFFICIENT = .8235
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      8.50
  TOTAL AREA(ACRES) =      3.16   TOTAL RUNOFF(CFS) =      8.50

****************************************************************************
  FLOW PROCESS FROM NODE     713.00 TO NODE     713.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  10.55
  RAINFALL INTENSITY(INCH/HR) =   3.27
  TOTAL STREAM AREA(ACRES) =     3.16
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.50

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY      AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
      1        64.88     14.69         2.741        26.91
      2         8.50     10.55         3.267         3.16

 ********************************WARNING*********************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1        55.08     10.55         3.267
      2        72.01     14.69         2.741

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     72.01   Tc(MIN.) =   14.69
  TOTAL AREA(ACRES) =     30.07
  LONGEST FLOWPATH FROM NODE     715.00 TO NODE     713.00 =  1997.37 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     461.00 TO NODE     463.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   679.00
  UPSTREAM ELEVATION(FEET) =   2629.00
  DOWNSTREAM ELEVATION(FEET) =   2618.00
  ELEVATION DIFFERENCE(FEET) =     11.00
  TC = 0.393*[(  679.00**3)/(    11.00)]**.2 =   12.156
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.030
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7844
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =     12.57
  TOTAL AREA(ACRES) =      5.29   TOTAL RUNOFF(CFS) =     12.57

****************************************************************************
  FLOW PROCESS FROM NODE     463.00 TO NODE     460.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
```

```
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
================================================================================
 UPSTREAM ELEVATION(FEET) = 2618.00  DOWNSTREAM ELEVATION(FEET) = 2611.00
 STREET LENGTH(FEET) =   608.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      16.70
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.45
   HALFSTREET FLOOD WIDTH(FEET) =   16.35
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.99
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.36
 STREET FLOW TRAVEL TIME(MIN.) =   3.39   Tc(MIN.) =  15.54
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.660
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7728
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.01      SUBAREA RUNOFF(CFS) =    8.24
 TOTAL AREA(ACRES) =      9.30        PEAK FLOW RATE(CFS) =      20.82

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.48   HALFSTREET FLOOD WIDTH(FEET) =  17.82
 FLOW VELOCITY(FEET/SEC.) =  3.16   DEPTH*VELOCITY(FT*FT/SEC.) =   1.52
 LONGEST FLOWPATH FROM NODE    461.00 TO NODE    460.00 =  1287.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    460.00 TO NODE    460.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  15.54
 RAINFALL INTENSITY(INCH/HR) =   2.66
 TOTAL STREAM AREA(ACRES) =     9.30
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     20.82

****************************************************************************
 FLOW PROCESS FROM NODE    416.00 TO NODE    460.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   166.00
 UPSTREAM ELEVATION(FEET) =   2612.00
 DOWNSTREAM ELEVATION(FEET) =   2611.00
 ELEVATION DIFFERENCE(FEET) =      1.00
 TC = 0.393*[(  166.00**3)/(     1.00)]**.2 =    8.434
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.678
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .8002
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      1.15
 TOTAL AREA(ACRES) =      0.39   TOTAL RUNOFF(CFS) =      1.15

****************************************************************************
 FLOW PROCESS FROM NODE    460.00 TO NODE    460.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =   8.43
 RAINFALL INTENSITY(INCH/HR) =   3.68
 TOTAL STREAM AREA(ACRES) =     0.39
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      1.15

 ** CONFLUENCE DATA **
 STREAM      RUNOFF      Tc      INTENSITY      AREA
 NUMBER       (CFS)    (MIN.)   (INCH/HOUR)    (ACRE)
     1        20.82    15.54        2.660         9.30
     2         1.15     8.43        3.678         0.39

 ********************************WARNING**********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 *************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF      Tc      INTENSITY
 NUMBER       (CFS)    (MIN.)   (INCH/HOUR)
     1        12.44     8.43        3.678
     2        21.65    15.54        2.660

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     21.65   Tc(MIN.) =   15.54
 TOTAL AREA(ACRES) =      9.69
 LONGEST FLOWPATH FROM NODE    461.00 TO NODE    460.00 =  1287.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    460.00 TO NODE    465.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2611.00  DOWNSTREAM ELEVATION(FEET) = 2602.00
 STREET LENGTH(FEET) =  1789.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      24.85
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.57
   HALFSTREET FLOOD WIDTH(FEET) =   26.00
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.37
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.36
 STREET FLOW TRAVEL TIME(MIN.) =  12.59   Tc(MIN.) =  28.13
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.942
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7423
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.43      SUBAREA RUNOFF(CFS) =    6.39
 TOTAL AREA(ACRES) =     14.12        PEAK FLOW RATE(CFS) =      28.03

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.59   HALFSTREET FLOOD WIDTH(FEET) =  28.00
 FLOW VELOCITY(FEET/SEC.) =  2.42   DEPTH*VELOCITY(FT*FT/SEC.) =   1.44
 LONGEST FLOWPATH FROM NODE    461.00 TO NODE    465.00 =  3076.00 FEET.
```

```
**************************************************************************
 FLOW PROCESS FROM NODE    465.00 TO NODE    465.00 IS CODE =   1
--------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
==========================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  28.13
 RAINFALL INTENSITY(INCH/HR) =   1.94
 TOTAL STREAM AREA(ACRES) =    14.12
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     28.03

**************************************************************************
 FLOW PROCESS FROM NODE    469.00 TO NODE    471.00 IS CODE =  21
--------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   542.00
 UPSTREAM ELEVATION(FEET) =   2629.00
 DOWNSTREAM ELEVATION(FEET) =   2614.00
 ELEVATION DIFFERENCE(FEET) =     15.00
 TC = 0.393*[(  542.00**3)/(    15.00)]**.2 =    9.980
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.364
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7931
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      9.95
 TOTAL AREA(ACRES) =      3.73   TOTAL RUNOFF(CFS) =      9.95

**************************************************************************
 FLOW PROCESS FROM NODE    471.00 TO NODE    465.00 IS CODE =  62
--------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
==========================================================================
 UPSTREAM ELEVATION(FEET) = 2614.00  DOWNSTREAM ELEVATION(FEET) = 2602.00
 STREET LENGTH(FEET) =   470.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      13.64
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.38
   HALFSTREET FLOOD WIDTH(FEET) =   12.83
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.86
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.48
 STREET FLOW TRAVEL TIME(MIN.) =   2.03   Tc(MIN.) =  12.01
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.050
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7849
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    3.08      SUBAREA RUNOFF(CFS) =    7.37
 TOTAL AREA(ACRES) =      6.81        PEAK FLOW RATE(CFS) =      17.32

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.41   HALFSTREET FLOOD WIDTH(FEET) =  14.10
 FLOW VELOCITY(FEET/SEC.) =  4.11   DEPTH*VELOCITY(FT*FT/SEC.) =   1.68
 LONGEST FLOWPATH FROM NODE    469.00 TO NODE    465.00 =  1012.00 FEET.

**************************************************************************
 FLOW PROCESS FROM NODE    465.00 TO NODE    465.00 IS CODE =   1
--------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
==========================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  12.01
 RAINFALL INTENSITY(INCH/HR) =   3.05
 TOTAL STREAM AREA(ACRES) =     6.81
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     17.32

**************************************************************************
 FLOW PROCESS FROM NODE    473.00 TO NODE    467.00 IS CODE =  21
--------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   336.00
 UPSTREAM ELEVATION(FEET) =   2626.50
 DOWNSTREAM ELEVATION(FEET) =   2619.00
 ELEVATION DIFFERENCE(FEET) =      7.50
 TC = 0.393*[(  336.00**3)/(     7.50)]**.2 =    8.605
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.639
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7994
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      8.35
 TOTAL AREA(ACRES) =      2.87   TOTAL RUNOFF(CFS) =      8.35

**************************************************************************
 FLOW PROCESS FROM NODE    467.00 TO NODE    465.00 IS CODE =  31
--------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
==========================================================================
 ELEVATION DATA: UPSTREAM(FEET) =  2619.00  DOWNSTREAM(FEET) =  2602.00
 FLOW LENGTH(FEET) =   200.00   MANNING'S N =  0.013
 ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 18.000
 DEPTH OF FLOW IN  18.0 INCH PIPE IS   6.6 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =  14.21
 ESTIMATED PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      8.35
 PIPE TRAVEL TIME(MIN.) =   0.23    Tc(MIN.) =   8.84
 LONGEST FLOWPATH FROM NODE    473.00 TO NODE    465.00 =   536.00 FEET.

**************************************************************************
 FLOW PROCESS FROM NODE    465.00 TO NODE    465.00 IS CODE =   1
--------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
==========================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
 TIME OF CONCENTRATION(MIN.) =   8.84
 RAINFALL INTENSITY(INCH/HR) =   3.59
 TOTAL STREAM AREA(ACRES) =     2.87
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.35

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY       AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
     1        28.03     28.13         1.942         14.12
     2        17.32     12.01         3.050          6.81
     3         8.35      8.84         3.587          2.87

 ********************************WARNING*********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************
```

```
 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  3 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM     RUNOFF      Tc       INTENSITY
 NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
     1       29.91     8.84       3.587
     2       36.39    12.01       3.050
     3       43.59    28.13       1.942

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     43.59   Tc(MIN.) =   28.13
 TOTAL AREA(ACRES) =     23.80
 LONGEST FLOWPATH FROM NODE    461.00 TO NODE    465.00 =  3076.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    465.00 TO NODE    416.00 IS CODE =  61
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2602.00  DOWNSTREAM ELEVATION(FEET) = 2601.50
 STREET LENGTH(FEET) =   197.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 32.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  16.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      43.91
   ***STREET FLOW SPLITS OVER STREET-CROWN***
   FULL DEPTH(FEET) =    0.77   FLOOD WIDTH(FEET) =   45.31
   FULL HALF-STREET VELOCITY(FEET/SEC.) =    2.01
   SPLIT DEPTH(FEET) =    0.72   SPLIT FLOOD WIDTH(FEET) =   40.75
   SPLIT FLOW(CFS) =   19.59   SPLIT VELOCITY(FEET/SEC.) =    1.93
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.77
   HALFSTREET FLOOD WIDTH(FEET) =   45.31
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.01
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.54
 STREET FLOW TRAVEL TIME(MIN.) =   1.64   Tc(MIN.) =  29.77
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.885
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7392
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    0.47      SUBAREA RUNOFF(CFS) =    0.65
 TOTAL AREA(ACRES) =     24.27        PEAK FLOW RATE(CFS) =      44.24

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.77   HALFSTREET FLOOD WIDTH(FEET) =  45.31
 FLOW VELOCITY(FEET/SEC.) =  2.01   DEPTH*VELOCITY(FT*FT/SEC.) =   1.54
 LONGEST FLOWPATH FROM NODE    461.00 TO NODE    416.00 =  3273.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    700.00 TO NODE    702.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS COMMERCIAL
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   435.00
 UPSTREAM ELEVATION(FEET) =   2596.00
 DOWNSTREAM ELEVATION(FEET) =   2593.50
 ELEVATION DIFFERENCE(FEET) =      2.50
 TC = 0.303*[(  435.00**3)/(     2.50)]**.2 =    9.663
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.422
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8789
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =     12.36
 TOTAL AREA(ACRES) =      4.11   TOTAL RUNOFF(CFS) =     12.36

****************************************************************************
 FLOW PROCESS FROM NODE    702.00 TO NODE    704.00 IS CODE =  53
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   2593.50  DOWNSTREAM(FEET) =   2585.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   554.00   CHANNEL SLOPE =  0.0153
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0153 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 CHANNEL FLOW THRU SUBAREA(CFS) =     12.36
 FLOW VELOCITY(FEET/SEC) =   1.60 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   5.76   Tc(MIN.) =  15.42
 LONGEST FLOWPATH FROM NODE    700.00 TO NODE    704.00 =   989.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    704.00 TO NODE    704.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.671
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7732
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    5.92   SUBAREA RUNOFF(CFS) =   12.22
 TOTAL AREA(ACRES) =    10.03   TOTAL RUNOFF(CFS) =   24.59
 TC(MIN.) =  15.42

****************************************************************************
 FLOW PROCESS FROM NODE    704.00 TO NODE    704.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  15.42
 RAINFALL INTENSITY(INCH/HR) =   2.67
 TOTAL STREAM AREA(ACRES) =    10.03
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     24.59

****************************************************************************
 FLOW PROCESS FROM NODE    711.00 TO NODE    704.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   641.00
 UPSTREAM ELEVATION(FEET) =   2589.00
 DOWNSTREAM ELEVATION(FEET) =   2585.00
 ELEVATION DIFFERENCE(FEET) =      4.00
 TC = 0.393*[(  641.00**3)/(     4.00)]**.2 =   14.376
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.772
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7766
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      1.05
 TOTAL AREA(ACRES) =      0.49   TOTAL RUNOFF(CFS) =      1.05

****************************************************************************
 FLOW PROCESS FROM NODE    704.00 TO NODE    704.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
```

```
==========================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  14.38
  RAINFALL INTENSITY(INCH/HR) =   2.77
  TOTAL STREAM AREA(ACRES) =     0.49
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      1.05

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY       AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
      1        24.59     15.42         2.671          10.03
      2         1.05     14.38         2.772           0.49

 ********************************WARNING*********************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1        23.97     14.38        2.772
      2        25.60     15.42        2.671

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     25.60   Tc(MIN.) =   15.42
  TOTAL AREA(ACRES) =     10.52
  LONGEST FLOWPATH FROM NODE    700.00 TO NODE    704.00 =   989.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    704.00 TO NODE    704.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 3 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    706.00 TO NODE    707.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   580.00
  UPSTREAM ELEVATION(FEET) =   2606.20
  DOWNSTREAM ELEVATION(FEET) =   2603.00
  ELEVATION DIFFERENCE(FEET) =      3.20
  TC = 0.393*[(  580.00**3)/(     3.20)]**.2 =   14.157
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.795
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7773
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      8.21
  TOTAL AREA(ACRES) =      3.78   TOTAL RUNOFF(CFS) =      8.21

****************************************************************************
  FLOW PROCESS FROM NODE    707.00 TO NODE    707.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =  14.16
  RAINFALL INTENSITY(INCH/HR) =   2.79
  TOTAL STREAM AREA(ACRES) =     3.78
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.21

****************************************************************************
  FLOW PROCESS FROM NODE    705.00 TO NODE    707.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   137.00
  UPSTREAM ELEVATION(FEET) =   2606.50
  DOWNSTREAM ELEVATION(FEET) =   2603.00
  ELEVATION DIFFERENCE(FEET) =      3.50
  TC = 0.393*[(  137.00**3)/(     3.50)]**.2 =    5.850
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  4.464
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .8145
  SOIL CLASSIFICATION IS "B"
  SUBAREA RUNOFF(CFS) =      0.65
  TOTAL AREA(ACRES) =      0.18   TOTAL RUNOFF(CFS) =      0.65

****************************************************************************
  FLOW PROCESS FROM NODE    707.00 TO NODE    707.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   5.85
  RAINFALL INTENSITY(INCH/HR) =   4.46
  TOTAL STREAM AREA(ACRES) =     0.18
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      0.65

  ** CONFLUENCE DATA **
  STREAM      RUNOFF       Tc       INTENSITY       AREA
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
      1         8.21     14.16         2.795          3.78
      2         0.65      5.85         4.464          0.18

 ********************************WARNING*********************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM      RUNOFF       Tc       INTENSITY
  NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
      1         4.05      5.85         4.464
      2         8.62     14.16         2.795

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      8.62   Tc(MIN.) =   14.16
  TOTAL AREA(ACRES) =      3.96
  LONGEST FLOWPATH FROM NODE    706.00 TO NODE    707.00 =   580.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    707.00 TO NODE    708.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2603.00  DOWNSTREAM ELEVATION(FEET) = 2593.50
  STREET LENGTH(FEET) =   315.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
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  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =       9.00
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.34
    HALFSTREET FLOOD WIDTH(FEET) =   10.44
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.72
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.25
  STREET FLOW TRAVEL TIME(MIN.) =   1.41   Tc(MIN.) =  15.57
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.658
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7728
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    0.37      SUBAREA RUNOFF(CFS) =    0.76
  TOTAL AREA(ACRES) =      4.33        PEAK FLOW RATE(CFS) =       9.38

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.34   HALFSTREET FLOOD WIDTH(FEET) =  10.58
  FLOW VELOCITY(FEET/SEC.) =  3.79   DEPTH*VELOCITY(FT*FT/SEC.) =   1.28
  LONGEST FLOWPATH FROM NODE    706.00 TO NODE    708.00 =   895.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    708.00 TO NODE    704.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2593.50  DOWNSTREAM ELEVATION(FEET) = 2585.00
  STREET LENGTH(FEET) =   289.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      10.47
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.35
    HALFSTREET FLOOD WIDTH(FEET) =   11.14
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.85
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.34
  STREET FLOW TRAVEL TIME(MIN.) =   1.25   Tc(MIN.) =  16.82
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.551
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7690
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    1.11      SUBAREA RUNOFF(CFS) =    2.18
  TOTAL AREA(ACRES) =      5.44        PEAK FLOW RATE(CFS) =      11.56

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.36   HALFSTREET FLOOD WIDTH(FEET) =  11.64
  FLOW VELOCITY(FEET/SEC.) =  3.93   DEPTH*VELOCITY(FT*FT/SEC.) =   1.41
  LONGEST FLOWPATH FROM NODE    706.00 TO NODE    704.00 =  1184.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    704.00 TO NODE    704.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 3 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
     1        11.56    16.82       2.551        5.44
  LONGEST FLOWPATH FROM NODE    706.00 TO NODE    704.00 =  1184.00 FEET.

  ** MEMORY BANK #  3 CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
     1        25.60    15.42       2.671       10.52
  LONGEST FLOWPATH FROM NODE    700.00 TO NODE    704.00 =   989.00 FEET.

 ****************************WARNING*************************************
  IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
  ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
  WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF       Tc      INTENSITY
  NUMBER      (CFS)      (MIN.)   (INCH/HOUR)
     1        36.20      15.42       2.671
     2        36.01      16.82       2.551

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     36.20   Tc(MIN.) =   15.42
  TOTAL AREA(ACRES) =      15.96

****************************************************************************
  FLOW PROCESS FROM NODE    704.00 TO NODE    710.00 IS CODE =  62
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) = 2585.00  DOWNSTREAM ELEVATION(FEET) = 2578.00
  STREET LENGTH(FEET) =   811.00   CURB HEIGHT(INCHES) =  6.0
  STREET HALFWIDTH(FEET) = 18.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.020
  OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
  STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      40.12
    ***STREET FLOWING FULL***
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.59
    HALFSTREET FLOOD WIDTH(FEET) =   22.65
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.65
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.16
  STREET FLOW TRAVEL TIME(MIN.) =   3.70   Tc(MIN.) =  19.13
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.383
  SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7626
  SOIL CLASSIFICATION IS "B"
  SUBAREA AREA(ACRES) =    4.31      SUBAREA RUNOFF(CFS) =    7.83
  TOTAL AREA(ACRES) =     20.27        PEAK FLOW RATE(CFS) =      44.03

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.61   HALFSTREET FLOOD WIDTH(FEET) =  23.45
  FLOW VELOCITY(FEET/SEC.) =  3.76   DEPTH*VELOCITY(FT*FT/SEC.) =   2.29
  LONGEST FLOWPATH FROM NODE    706.00 TO NODE    710.00 =  1995.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    710.00 TO NODE    710.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================
```

```
****************************************************************************
 FLOW PROCESS FROM NODE    750.00 TO NODE    709.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   356.00
 UPSTREAM ELEVATION(FEET) =   2606.20
 DOWNSTREAM ELEVATION(FEET) =   2589.00
 ELEVATION DIFFERENCE(FEET) =     17.20
 TC = 0.393*[(  356.00**3)/(    17.20)]**.2 =    7.546
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.901
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .8047
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      5.62
 TOTAL AREA(ACRES) =      1.79   TOTAL RUNOFF(CFS) =      5.62

****************************************************************************
 FLOW PROCESS FROM NODE    709.00 TO NODE    709.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =   7.55
 RAINFALL INTENSITY(INCH/HR) =   3.90
 TOTAL STREAM AREA(ACRES) =     1.79
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      5.62

****************************************************************************
 FLOW PROCESS FROM NODE    708.00 TO NODE    709.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   686.00
 UPSTREAM ELEVATION(FEET) =   2593.50
 DOWNSTREAM ELEVATION(FEET) =   2589.00
 ELEVATION DIFFERENCE(FEET) =      4.50
 TC = 0.393*[(  686.00**3)/(     4.50)]**.2 =   14.625
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.747
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7758
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      8.69
 TOTAL AREA(ACRES) =      4.08   TOTAL RUNOFF(CFS) =      8.69

****************************************************************************
 FLOW PROCESS FROM NODE    709.00 TO NODE    709.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  14.63
 RAINFALL INTENSITY(INCH/HR) =   2.75
 TOTAL STREAM AREA(ACRES) =     4.08
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.69

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
     1         5.62      7.55         3.901         1.79
     2         8.69     14.63         2.747         4.08

 ********************************WARNING*************************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1         10.11      7.55         3.901
     2         12.65     14.63         2.747

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     12.65   Tc(MIN.) =   14.63
 TOTAL AREA(ACRES) =      5.87
 LONGEST FLOWPATH FROM NODE    708.00 TO NODE    709.00 =   686.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    709.00 TO NODE    710.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2589.00  DOWNSTREAM ELEVATION(FEET) = 2578.00
 STREET LENGTH(FEET) =   540.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL)  =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      15.08
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.41
   HALFSTREET FLOOD WIDTH(FEET) =   13.96
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    3.65
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.48
 STREET FLOW TRAVEL TIME(MIN.) =   2.47   Tc(MIN.) =  17.09
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.529
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7682
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    2.50      SUBAREA RUNOFF(CFS) =    4.86
 TOTAL AREA(ACRES) =      8.37        PEAK FLOW RATE(CFS) =      17.51

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.42   HALFSTREET FLOOD WIDTH(FEET) =  14.87
 FLOW VELOCITY(FEET/SEC.) =  3.76   DEPTH*VELOCITY(FT*FT/SEC.) =   1.59
 LONGEST FLOWPATH FROM NODE    708.00 TO NODE    710.00 =  1226.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    710.00 TO NODE    710.00 IS CODE =  11
----------------------------------------------------------------------------
 >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

 ** MAIN STREAM CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
     1         17.51     17.09        2.529         8.37
 LONGEST FLOWPATH FROM NODE    708.00 TO NODE    710.00 =  1226.00 FEET.

 ** MEMORY BANK #  1 CONFLUENCE DATA **
```

```
 STREAM      RUNOFF      Tc       INTENSITY      AREA
 NUMBER       (CFS)    (MIN.)    (INCH/HOUR)    (ACRE)
    1         44.03     19.13        2.383        20.27
 LONGEST FLOWPATH FROM NODE    706.00 TO NODE    710.00 =  1995.00 FEET.

 ****************************************WARNING****************************************
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 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 ** PEAK FLOW RATE TABLE **
 STREAM    RUNOFF       Tc       INTENSITY
 NUMBER     (CFS)      (MIN.)    (INCH/HOUR)
    1       56.85       17.09        2.529
    2       60.53       19.13        2.383

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     60.53   Tc(MIN.) =   19.13
 TOTAL AREA(ACRES) =     28.64

****************************************************************************
 FLOW PROCESS FROM NODE    600.00 TO NODE    602.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   958.00
 UPSTREAM ELEVATION(FEET) =   2601.00
 DOWNSTREAM ELEVATION(FEET) =   2587.50
 ELEVATION DIFFERENCE(FEET) =     13.50
 TC = 0.393*[(  958.00**3)/(    13.50)]**.2 =   14.345
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.775
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7767
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =     12.46
 TOTAL AREA(ACRES) =      5.78   TOTAL RUNOFF(CFS) =     12.46

****************************************************************************
 FLOW PROCESS FROM NODE    602.00 TO NODE    602.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  14.35
 RAINFALL INTENSITY(INCH/HR) =   2.78
 TOTAL STREAM AREA(ACRES) =     5.78
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     12.46

****************************************************************************
 FLOW PROCESS FROM NODE    603.00 TO NODE    602.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   553.00
 UPSTREAM ELEVATION(FEET) =   2599.50
 DOWNSTREAM ELEVATION(FEET) =   2587.50
 ELEVATION DIFFERENCE(FEET) =     12.00
 TC = 0.393*[(  553.00**3)/(    12.00)]**.2 =   10.562
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.264
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7907
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      9.11
 TOTAL AREA(ACRES) =      3.53   TOTAL RUNOFF(CFS) =      9.11

****************************************************************************
 FLOW PROCESS FROM NODE    602.00 TO NODE    602.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  10.56
 RAINFALL INTENSITY(INCH/HR) =   3.26
 TOTAL STREAM AREA(ACRES) =     3.53
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      9.11

 ** CONFLUENCE DATA **
 STREAM      RUNOFF      Tc       INTENSITY      AREA
 NUMBER       (CFS)    (MIN.)    (INCH/HOUR)    (ACRE)
    1         12.46     14.35        2.775         5.78
    2          9.11     10.56        3.264         3.53

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 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF      Tc       INTENSITY
 NUMBER       (CFS)    (MIN.)    (INCH/HOUR)
    1         18.28     10.56        3.264
    2         20.21     14.35        2.775

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     20.21   Tc(MIN.) =   14.35
 TOTAL AREA(ACRES) =      9.31
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    602.00 =   958.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    602.00 TO NODE    607.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2587.50  DOWNSTREAM ELEVATION(FEET) = 2580.00
 STREET LENGTH(FEET) =   277.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      21.20
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.43
   HALFSTREET FLOOD WIDTH(FEET) =   15.15
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.39
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.88
 STREET FLOW TRAVEL TIME(MIN.) =   1.05   Tc(MIN.) =  15.40
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.673
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7733
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    0.96      SUBAREA RUNOFF(CFS) =    1.98
```

```
 TOTAL AREA(ACRES) =     10.27        PEAK FLOW RATE(CFS) =      22.19

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.43   HALFSTREET FLOOD WIDTH(FEET) =  15.43
 FLOW VELOCITY(FEET/SEC.) =  4.44   DEPTH*VELOCITY(FT*FT/SEC.) =   1.93
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    607.00 =  1235.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    607.00 TO NODE    607.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  15.40
 RAINFALL INTENSITY(INCH/HR) =   2.67
 TOTAL STREAM AREA(ACRES) =    10.27
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     22.19

****************************************************************************
 FLOW PROCESS FROM NODE    605.00 TO NODE    607.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   528.00
 UPSTREAM ELEVATION(FEET) =   2583.30
 DOWNSTREAM ELEVATION(FEET) =   2580.00
 ELEVATION DIFFERENCE(FEET) =      3.30
 TC = 0.393*[(  528.00**3)/(     3.30)]**.2 =   13.299
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.889
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7802
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      9.06
 TOTAL AREA(ACRES) =      4.02   TOTAL RUNOFF(CFS) =      9.06

****************************************************************************
 FLOW PROCESS FROM NODE    607.00 TO NODE    607.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  13.30
 RAINFALL INTENSITY(INCH/HR) =   2.89
 TOTAL STREAM AREA(ACRES) =     4.02
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      9.06

 ** CONFLUENCE DATA **
 STREAM     RUNOFF      Tc      INTENSITY      AREA
 NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
     1       22.19    15.40        2.673         10.27
     2        9.06    13.30        2.889          4.02

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

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM     RUNOFF      Tc      INTENSITY
 NUMBER      (CFS)     (MIN.)   (INCH/HOUR)
     1       28.23    13.30        2.889
     2       30.57    15.40        2.673

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     30.57   Tc(MIN.) =   15.40
 TOTAL AREA(ACRES) =     14.29
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    607.00 =  1235.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    607.00 TO NODE    609.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2580.00  DOWNSTREAM ELEVATION(FEET) = 2573.50
 STREET LENGTH(FEET) =   305.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      31.81
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.50
   HALFSTREET FLOOD WIDTH(FEET) =   18.00
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.49
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.23
 STREET FLOW TRAVEL TIME(MIN.) =   1.13   Tc(MIN.) =  16.53
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.574
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7698
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    1.25      SUBAREA RUNOFF(CFS) =    2.48
 TOTAL AREA(ACRES) =     15.54        PEAK FLOW RATE(CFS) =      33.05

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.50   HALFSTREET FLOOD WIDTH(FEET) =  18.08
 FLOW VELOCITY(FEET/SEC.) =  4.55   DEPTH*VELOCITY(FT*FT/SEC.) =   2.28
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    609.00 =  1540.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    609.00 TO NODE    609.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  16.53
 RAINFALL INTENSITY(INCH/HR) =   2.57
 TOTAL STREAM AREA(ACRES) =    15.54
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     33.05

****************************************************************************
 FLOW PROCESS FROM NODE    611.00 TO NODE    609.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   184.00
 UPSTREAM ELEVATION(FEET) =   2575.00
 DOWNSTREAM ELEVATION(FEET) =   2573.50
 ELEVATION DIFFERENCE(FEET) =      1.50
 TC = 0.393*[(  184.00**3)/(     1.50)]**.2 =    8.272
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 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.716
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .8010
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      3.24
 TOTAL AREA(ACRES) =      1.09   TOTAL RUNOFF(CFS) =      3.24

****************************************************************************
 FLOW PROCESS FROM NODE    609.00 TO NODE    609.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =   8.27
 RAINFALL INTENSITY(INCH/HR) =   3.72
 TOTAL STREAM AREA(ACRES) =     1.09
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.24

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY       AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)     (ACRE)
     1        33.05     16.53        2.574          15.54
     2         3.24      8.27        3.716           1.09

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 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 *****************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        19.78      8.27        3.716
     2        35.30     16.53        2.574

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     35.30   Tc(MIN.) =   16.53
 TOTAL AREA(ACRES) =     16.63
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    609.00 =  1540.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    609.00 TO NODE    604.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2573.50  DOWNSTREAM ELEVATION(FEET) = 2569.00
 STREET LENGTH(FEET) =   303.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      36.70
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.54
   HALFSTREET FLOOD WIDTH(FEET) =   19.91
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    4.24
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.28
 STREET FLOW TRAVEL TIME(MIN.) =   1.19   Tc(MIN.) =  17.72
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.481
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7664
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    1.47      SUBAREA RUNOFF(CFS) =    2.80
 TOTAL AREA(ACRES) =     18.10        PEAK FLOW RATE(CFS) =      38.09

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.54   HALFSTREET FLOOD WIDTH(FEET) =  20.15
 FLOW VELOCITY(FEET/SEC.) =  4.30   DEPTH*VELOCITY(FT*FT/SEC.) =   2.34
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    604.00 =  1843.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    604.00 TO NODE    604.00 IS CODE =  10
----------------------------------------------------------------------------
 >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 2 <<<<<
============================================================================

****************************************************************************
 FLOW PROCESS FROM NODE    606.00 TO NODE    608.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   837.00
 UPSTREAM ELEVATION(FEET) =   2589.00
 DOWNSTREAM ELEVATION(FEET) =   2577.80
 ELEVATION DIFFERENCE(FEET) =     11.20
 TC = 0.393*[(  837.00**3)/(    11.20)]**.2 =   13.732
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.840
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7787
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      8.16
 TOTAL AREA(ACRES) =      3.69   TOTAL RUNOFF(CFS) =      8.16

****************************************************************************
 FLOW PROCESS FROM NODE    608.00 TO NODE    613.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2577.80  DOWNSTREAM ELEVATION(FEET) = 2573.00
 STREET LENGTH(FEET) =   324.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      10.39
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.38
   HALFSTREET FLOOD WIDTH(FEET) =   12.83
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.94
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.13
 STREET FLOW TRAVEL TIME(MIN.) =   1.83   Tc(MIN.) =  15.57
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.658
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7728
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    2.17      SUBAREA RUNOFF(CFS) =    4.46
 TOTAL AREA(ACRES) =      5.86        PEAK FLOW RATE(CFS) =      12.62
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 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.40   HALFSTREET FLOOD WIDTH(FEET) =  13.89
 FLOW VELOCITY(FEET/SEC.) =  3.08   DEPTH*VELOCITY(FT*FT/SEC.) =   1.25
 LONGEST FLOWPATH FROM NODE    606.00 TO NODE    613.00 =  1161.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    608.00 TO NODE    608.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  15.57
 RAINFALL INTENSITY(INCH/HR) =   2.66
 TOTAL STREAM AREA(ACRES) =     5.86
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     12.62

****************************************************************************
 FLOW PROCESS FROM NODE    650.00 TO NODE    613.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS SINGLE FAMILY (1/4 ACRE)
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   472.00
 UPSTREAM ELEVATION(FEET) =   2575.00
 DOWNSTREAM ELEVATION(FEET) =   2573.00
 ELEVATION DIFFERENCE(FEET) =      2.00
 TC = 0.393*[(  472.00**3)/(     2.00)]**.2 =   13.744
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.839
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7787
 SOIL CLASSIFICATION IS "B"
 SUBAREA RUNOFF(CFS) =      6.90
 TOTAL AREA(ACRES) =      3.12   TOTAL RUNOFF(CFS) =      6.90

****************************************************************************
 FLOW PROCESS FROM NODE    613.00 TO NODE    613.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  13.74
 RAINFALL INTENSITY(INCH/HR) =   2.84
 TOTAL STREAM AREA(ACRES) =     3.12
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      6.90

 ** CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY       AREA
 NUMBER       (CFS)     (MIN.)   (INCH/HOUR)     (ACRE)
     1        12.62     15.57        2.658          5.86
     2         6.90     13.74        2.839          3.12

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 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM      RUNOFF       Tc       INTENSITY
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)
     1        18.04     13.74        2.839
     2        19.08     15.57        2.658

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     19.08   Tc(MIN.) =   15.57
 TOTAL AREA(ACRES) =      8.98
 LONGEST FLOWPATH FROM NODE    606.00 TO NODE    613.00 =  1161.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    613.00 TO NODE    604.00 IS CODE =  62
----------------------------------------------------------------------------
 >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>(STREET TABLE SECTION #  2 USED)<<<<<
============================================================================
 UPSTREAM ELEVATION(FEET) = 2573.00  DOWNSTREAM ELEVATION(FEET) = 2569.00
 STREET LENGTH(FEET) =   751.00   CURB HEIGHT(INCHES) =  6.0
 STREET HALFWIDTH(FEET) = 18.00

 DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =   9.00
 INSIDE STREET CROSSFALL(DECIMAL) =  0.020
 OUTSIDE STREET CROSSFALL(DECIMAL) =  0.020

 SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  2
 STREET PARKWAY CROSSFALL(DECIMAL) =  0.020
 Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0160
 Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0130

   **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      22.78
   ***STREET FLOWING FULL***
   STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
   STREET FLOW DEPTH(FEET) =  0.54
   HALFSTREET FLOOD WIDTH(FEET) =   20.15
   AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.57
   PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    1.40
 STREET FLOW TRAVEL TIME(MIN.) =   4.86   Tc(MIN.) =  20.43
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.301
 SINGLE-FAMILY(1/4 ACRE LOT) RUNOFF COEFFICIENT = .7592
 SOIL CLASSIFICATION IS "B"
 SUBAREA AREA(ACRES) =    4.23      SUBAREA RUNOFF(CFS) =    7.39
 TOTAL AREA(ACRES) =     13.21        PEAK FLOW RATE(CFS) =      26.46

 END OF SUBAREA STREET FLOW HYDRAULICS:
 DEPTH(FEET) = 0.56   HALFSTREET FLOOD WIDTH(FEET) =  21.25
 FLOW VELOCITY(FEET/SEC.) =  2.71   DEPTH*VELOCITY(FT*FT/SEC.) =   1.53
 LONGEST FLOWPATH FROM NODE    606.00 TO NODE    604.00 =  1912.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    604.00 TO NODE    604.00 IS CODE =  11
----------------------------------------------------------------------------
 >>>>>CONFLUENCE MEMORY BANK # 2 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

 ** MAIN STREAM CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
     1        26.46     20.43        2.301         13.21
 LONGEST FLOWPATH FROM NODE    606.00 TO NODE    604.00 =  1912.00 FEET.

 ** MEMORY BANK #  2 CONFLUENCE DATA **
 STREAM      RUNOFF       Tc       INTENSITY      AREA
 NUMBER       (CFS)     (MIN.)    (INCH/HOUR)    (ACRE)
     1        38.09     17.72        2.481         18.10
 LONGEST FLOWPATH FROM NODE    600.00 TO NODE    604.00 =  1843.00 FEET.

 ********************************WARNING*********************************
 IN THIS COMPUTER PROGRAM, THE CONFLUENCE VALUE USED IS BASED
 ON THE RCFC&WCD FORMULA OF PLATE D-1 AS DEFAULT VALUE. THIS FORMULA
 WILL NOT NECESSARILY RESULT IN THE MAXIMUM VALUE OF PEAK FLOW.
 ************************************************************************

 ** PEAK FLOW RATE TABLE **
 STREAM     RUNOFF       Tc       INTENSITY
 NUMBER      (CFS)     (MIN.)    (INCH/HOUR)
```

```
      1       61.05       17.72         2.481
      2       61.79       20.43         2.301

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      61.05   Tc(MIN.) =   17.72
  TOTAL AREA(ACRES) =      31.31
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)      =      31.31  TC(MIN.) =      17.72
  PEAK FLOW RATE(CFS)    =      61.05
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

TECHNICAL APPENDIX

APPENDIX B.1

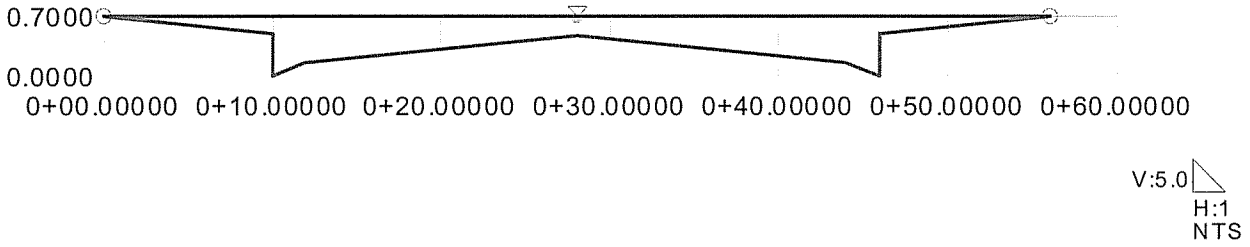
56' R/W – R/W to R/W – Rating Table

by FlowMaster

6" CURB - 56 R/W - R/W TO R/W
Cross Section for Irregular Channel

Project Description	
Worksheet	6" CURB - 56' R/W - RV
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Section Data		
Mannings Coefficie	0.015	
Slope	0.004000	ft/ft
Water Surface Elev	0.70	ft
Elevation Range	.00 to 0.70	
Discharge	45.87	cfs



6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Project Description	
Worksheet	6" CURB - 56' R/W - RV
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Input Data	
Water Surface Elev	0.70 ft

Options	
Current Roughness Meth	ved Lotter's Method
Open Channel Weighting	ved Lotter's Method
Closed Channel Weightin	Horton's Method

Attribute	Minimum	Maximum	Increment
Slope (ft/ft)	0.000300	0.090000	0.000100

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.000300	12.56	0.75	16.6	57.0232	56.0000
0.000400	14.50	0.87	16.6	57.0232	56.0000
0.000500	16.22	0.97	16.6	57.0232	56.0000
0.000600	17.76	1.07	16.6	57.0232	56.0000
0.000700	19.19	1.15	16.6	57.0232	56.0000
0.000800	20.51	1.23	16.6	57.0232	56.0000
0.000900	21.76	1.31	16.6	57.0232	56.0000
0.001000	22.93	1.38	16.6	57.0232	56.0000
0.001100	24.05	1.45	16.6	57.0232	56.0000
0.001200	25.12	1.51	16.6	57.0232	56.0000
0.001300	26.15	1.57	16.6	57.0232	56.0000
0.001400	27.13	1.63	16.6	57.0232	56.0000
0.001500	28.09	1.69	16.6	57.0232	56.0000
0.001600	29.01	1.74	16.6	57.0232	56.0000
0.001700	29.90	1.80	16.6	57.0232	56.0000
0.001800	30.77	1.85	16.6	57.0232	56.0000
0.001900	31.61	1.90	16.6	57.0232	56.0000
0.002000	32.43	1.95	16.6	57.0232	56.0000
0.002100	33.23	2.00	16.6	57.0232	56.0000
0.002200	34.01	2.04	16.6	57.0232	56.0000
0.002300	34.78	2.09	16.6	57.0232	56.0000
0.002400	35.53	2.14	16.6	57.0232	56.0000
0.002500	36.26	2.18	16.6	57.0232	56.0000
0.002600	36.98	2.22	16.6	57.0232	56.0000
0.002700	37.68	2.26	16.6	57.0232	56.0000
0.002800	38.37	2.31	16.6	57.0232	56.0000
0.002900	39.05	2.35	16.6	57.0232	56.0000
0.003000	39.72	2.39	16.6	57.0232	56.0000
0.003100	40.38	2.43	16.6	57.0232	56.0000
0.003200	41.02	2.47	16.6	57.0232	56.0000
0.003300	41.66	2.50	16.6	57.0232	56.0000
0.003400	42.29	2.54	16.6	57.0232	56.0000
0.003500	42.90	2.58	16.6	57.0232	56.0000
0.003600	43.51	2.61	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.003700	44.11	2.65	16.6	57.0232	56.0000
0.003800	44.70	2.69	16.6	57.0232	56.0000
0.003900	45.29	2.72	16.6	57.0232	56.0000
0.004000	45.87	2.76	16.6	57.0232	56.0000
0.004100	46.44	2.79	16.6	57.0232	56.0000
0.004200	47.00	2.82	16.6	57.0232	56.0000
0.004300	47.55	2.86	16.6	57.0232	56.0000
0.004400	48.10	2.89	16.6	57.0232	56.0000
0.004500	48.65	2.92	16.6	57.0232	56.0000
0.004600	49.19	2.96	16.6	57.0232	56.0000
0.004700	49.72	2.99	16.6	57.0232	56.0000
0.004800	50.24	3.02	16.6	57.0232	56.0000
0.004900	50.76	3.05	16.6	57.0232	56.0000
0.005000	51.28	3.08	16.6	57.0232	56.0000
0.005100	51.79	3.11	16.6	57.0232	56.0000
0.005200	52.29	3.14	16.6	57.0232	56.0000
0.005300	52.80	3.17	16.6	57.0232	56.0000
0.005400	53.29	3.20	16.6	57.0232	56.0000
0.005500	53.78	3.23	16.6	57.0232	56.0000
0.005600	54.27	3.26	16.6	57.0232	56.0000
0.005700	54.75	3.29	16.6	57.0232	56.0000
0.005800	55.23	3.32	16.6	57.0232	56.0000
0.005900	55.70	3.35	16.6	57.0232	56.0000
0.006000	56.17	3.38	16.6	57.0232	56.0000
0.006100	56.64	3.40	16.6	57.0232	56.0000
0.006200	57.10	3.43	16.6	57.0232	56.0000
0.006300	57.56	3.46	16.6	57.0232	56.0000
0.006400	58.02	3.49	16.6	57.0232	56.0000
0.006500	58.47	3.51	16.6	57.0232	56.0000
0.006600	58.92	3.54	16.6	57.0232	56.0000
0.006700	59.36	3.57	16.6	57.0232	56.0000
0.006800	59.80	3.59	16.6	57.0232	56.0000
0.006900	60.24	3.62	16.6	57.0232	56.0000
0.007000	60.67	3.65	16.6	57.0232	56.0000
0.007100	61.11	3.67	16.6	57.0232	56.0000
0.007200	61.54	3.70	16.6	57.0232	56.0000
0.007300	61.96	3.72	16.6	57.0232	56.0000
0.007400	62.38	3.75	16.6	57.0232	56.0000
0.007500	62.80	3.77	16.6	57.0232	56.0000
0.007600	63.22	3.80	16.6	57.0232	56.0000
0.007700	63.64	3.82	16.6	57.0232	56.0000
0.007800	64.05	3.85	16.6	57.0232	56.0000
0.007900	64.46	3.87	16.6	57.0232	56.0000
0.008000	64.86	3.90	16.6	57.0232	56.0000
0.008100	65.27	3.92	16.6	57.0232	56.0000
0.008200	65.67	3.95	16.6	57.0232	56.0000
0.008300	66.07	3.97	16.6	57.0232	56.0000
0.008400	66.47	3.99	16.6	57.0232	56.0000
0.008500	66.86	4.02	16.6	57.0232	56.0000
0.008600	67.25	4.04	16.6	57.0232	56.0000
0.008700	67.64	4.07	16.6	57.0232	56.0000
0.008800	68.03	4.09	16.6	57.0232	56.0000
0.008900	68.42	4.11	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.009000	68.80	4.13	16.6	57.0232	56.0000
0.009100	69.18	4.16	16.6	57.0232	56.0000
0.009200	69.56	4.18	16.6	57.0232	56.0000
0.009300	69.94	4.20	16.6	57.0232	56.0000
0.009400	70.31	4.23	16.6	57.0232	56.0000
0.009500	70.68	4.25	16.6	57.0232	56.0000
0.009600	71.05	4.27	16.6	57.0232	56.0000
0.009700	71.42	4.29	16.6	57.0232	56.0000
0.009800	71.79	4.31	16.6	57.0232	56.0000
0.009900	72.16	4.34	16.6	57.0232	56.0000
0.010000	72.52	4.36	16.6	57.0232	56.0000
0.010100	72.88	4.38	16.6	57.0232	56.0000
0.010200	73.24	4.40	16.6	57.0232	56.0000
0.010300	73.60	4.42	16.6	57.0232	56.0000
0.010400	73.96	4.44	16.6	57.0232	56.0000
0.010500	74.31	4.47	16.6	57.0232	56.0000
0.010600	74.66	4.49	16.6	57.0232	56.0000
0.010700	75.02	4.51	16.6	57.0232	56.0000
0.010800	75.37	4.53	16.6	57.0232	56.0000
0.010900	75.71	4.55	16.6	57.0232	56.0000
0.011000	76.06	4.57	16.6	57.0232	56.0000
0.011100	76.40	4.59	16.6	57.0232	56.0000
0.011200	76.75	4.61	16.6	57.0232	56.0000
0.011300	77.09	4.63	16.6	57.0232	56.0000
0.011400	77.43	4.65	16.6	57.0232	56.0000
0.011500	77.77	4.67	16.6	57.0232	56.0000
0.011600	78.11	4.69	16.6	57.0232	56.0000
0.011700	78.44	4.71	16.6	57.0232	56.0000
0.011800	78.78	4.73	16.6	57.0232	56.0000
0.011900	79.11	4.75	16.6	57.0232	56.0000
0.012000	79.44	4.77	16.6	57.0232	56.0000
0.012100	79.77	4.79	16.6	57.0232	56.0000
0.012200	80.10	4.81	16.6	57.0232	56.0000
0.012300	80.43	4.83	16.6	57.0232	56.0000
0.012400	80.75	4.85	16.6	57.0232	56.0000
0.012500	81.08	4.87	16.6	57.0232	56.0000
0.012600	81.40	4.89	16.6	57.0232	56.0000
0.012700	81.73	4.91	16.6	57.0232	56.0000
0.012800	82.05	4.93	16.6	57.0232	56.0000
0.012900	82.37	4.95	16.6	57.0232	56.0000
0.013000	82.69	4.97	16.6	57.0232	56.0000
0.013100	83.00	4.99	16.6	57.0232	56.0000
0.013200	83.32	5.01	16.6	57.0232	56.0000
0.013300	83.63	5.03	16.6	57.0232	56.0000
0.013400	83.95	5.04	16.6	57.0232	56.0000
0.013500	84.26	5.06	16.6	57.0232	56.0000
0.013600	84.57	5.08	16.6	57.0232	56.0000
0.013700	84.88	5.10	16.6	57.0232	56.0000
0.013800	85.19	5.12	16.6	57.0232	56.0000
0.013900	85.50	5.14	16.6	57.0232	56.0000
0.014000	85.81	5.16	16.6	57.0232	56.0000
0.014100	86.11	5.18	16.6	57.0232	56.0000
0.014200	86.42	5.19	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.014300	86.72	5.21	16.6	57.0232	56.0000
0.014400	87.02	5.23	16.6	57.0232	56.0000
0.014500	87.33	5.25	16.6	57.0232	56.0000
0.014600	87.63	5.27	16.6	57.0232	56.0000
0.014700	87.93	5.28	16.6	57.0232	56.0000
0.014800	88.22	5.30	16.6	57.0232	56.0000
0.014900	88.52	5.32	16.6	57.0232	56.0000
0.015000	88.82	5.34	16.6	57.0232	56.0000
0.015100	89.11	5.36	16.6	57.0232	56.0000
0.015200	89.41	5.37	16.6	57.0232	56.0000
0.015300	89.70	5.39	16.6	57.0232	56.0000
0.015400	90.00	5.41	16.6	57.0232	56.0000
0.015500	90.29	5.43	16.6	57.0232	56.0000
0.015600	90.58	5.44	16.6	57.0232	56.0000
0.015700	90.87	5.46	16.6	57.0232	56.0000
0.015800	91.16	5.48	16.6	57.0232	56.0000
0.015900	91.44	5.50	16.6	57.0232	56.0000
0.016000	91.73	5.51	16.6	57.0232	56.0000
0.016100	92.02	5.53	16.6	57.0232	56.0000
0.016200	92.30	5.55	16.6	57.0232	56.0000
0.016300	92.59	5.56	16.6	57.0232	56.0000
0.016400	92.87	5.58	16.6	57.0232	56.0000
0.016500	93.15	5.60	16.6	57.0232	56.0000
0.016600	93.44	5.62	16.6	57.0232	56.0000
0.016700	93.72	5.63	16.6	57.0232	56.0000
0.016800	94.00	5.65	16.6	57.0232	56.0000
0.016900	94.28	5.67	16.6	57.0232	56.0000
0.017000	94.55	5.68	16.6	57.0232	56.0000
0.017100	94.83	5.70	16.6	57.0232	56.0000
0.017200	95.11	5.72	16.6	57.0232	56.0000
0.017300	95.39	5.73	16.6	57.0232	56.0000
0.017400	95.66	5.75	16.6	57.0232	56.0000
0.017500	95.94	5.77	16.6	57.0232	56.0000
0.017600	96.21	5.78	16.6	57.0232	56.0000
0.017700	96.48	5.80	16.6	57.0232	56.0000
0.017800	96.75	5.81	16.6	57.0232	56.0000
0.017900	97.03	5.83	16.6	57.0232	56.0000
0.018000	97.30	5.85	16.6	57.0232	56.0000
0.018100	97.57	5.86	16.6	57.0232	56.0000
0.018200	97.83	5.88	16.6	57.0232	56.0000
0.018300	98.10	5.90	16.6	57.0232	56.0000
0.018400	98.37	5.91	16.6	57.0232	56.0000
0.018500	98.64	5.93	16.6	57.0232	56.0000
0.018600	98.90	5.94	16.6	57.0232	56.0000
0.018700	99.17	5.96	16.6	57.0232	56.0000
0.018800	99.43	5.98	16.6	57.0232	56.0000
0.018900	99.70	5.99	16.6	57.0232	56.0000
0.019000	99.96	6.01	16.6	57.0232	56.0000
0.019100	100.22	6.02	16.6	57.0232	56.0000
0.019200	100.49	6.04	16.6	57.0232	56.0000
0.019300	100.75	6.05	16.6	57.0232	56.0000
0.019400	101.01	6.07	16.6	57.0232	56.0000
0.019500	101.27	6.09	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.019600	101.53	6.10	16.6	57.0232	56.0000
0.019700	101.79	6.12	16.6	57.0232	56.0000
0.019800	102.04	6.13	16.6	57.0232	56.0000
0.019900	102.30	6.15	16.6	57.0232	56.0000
0.020000	102.56	6.16	16.6	57.0232	56.0000
0.020100	102.82	6.18	16.6	57.0232	56.0000
0.020200	103.07	6.19	16.6	57.0232	56.0000
0.020300	103.33	6.21	16.6	57.0232	56.0000
0.020400	103.58	6.22	16.6	57.0232	56.0000
0.020500	103.83	6.24	16.6	57.0232	56.0000
0.020600	104.09	6.26	16.6	57.0232	56.0000
0.020700	104.34	6.27	16.6	57.0232	56.0000
0.020800	104.59	6.29	16.6	57.0232	56.0000
0.020900	104.84	6.30	16.6	57.0232	56.0000
0.021000	105.09	6.32	16.6	57.0232	56.0000
0.021100	105.34	6.33	16.6	57.0232	56.0000
0.021200	105.59	6.35	16.6	57.0232	56.0000
0.021300	105.84	6.36	16.6	57.0232	56.0000
0.021400	106.09	6.38	16.6	57.0232	56.0000
0.021500	106.34	6.39	16.6	57.0232	56.0000
0.021600	106.58	6.41	16.6	57.0232	56.0000
0.021700	106.83	6.42	16.6	57.0232	56.0000
0.021800	107.07	6.43	16.6	57.0232	56.0000
0.021900	107.32	6.45	16.6	57.0232	56.0000
0.022000	107.56	6.46	16.6	57.0232	56.0000
0.022100	107.81	6.48	16.6	57.0232	56.0000
0.022200	108.05	6.49	16.6	57.0232	56.0000
0.022300	108.30	6.51	16.6	57.0232	56.0000
0.022400	108.54	6.52	16.6	57.0232	56.0000
0.022500	108.78	6.54	16.6	57.0232	56.0000
0.022600	109.02	6.55	16.6	57.0232	56.0000
0.022700	109.26	6.57	16.6	57.0232	56.0000
0.022800	109.50	6.58	16.6	57.0232	56.0000
0.022900	109.74	6.60	16.6	57.0232	56.0000
0.023000	109.98	6.61	16.6	57.0232	56.0000
0.023100	110.22	6.62	16.6	57.0232	56.0000
0.023200	110.46	6.64	16.6	57.0232	56.0000
0.023300	110.70	6.65	16.6	57.0232	56.0000
0.023400	110.93	6.67	16.6	57.0232	56.0000
0.023500	111.17	6.68	16.6	57.0232	56.0000
0.023600	111.41	6.70	16.6	57.0232	56.0000
0.023700	111.64	6.71	16.6	57.0232	56.0000
0.023800	111.88	6.72	16.6	57.0232	56.0000
0.023900	112.11	6.74	16.6	57.0232	56.0000
0.024000	112.35	6.75	16.6	57.0232	56.0000
0.024100	112.58	6.77	16.6	57.0232	56.0000
0.024200	112.81	6.78	16.6	57.0232	56.0000
0.024300	113.05	6.79	16.6	57.0232	56.0000
0.024400	113.28	6.81	16.6	57.0232	56.0000
0.024500	113.51	6.82	16.6	57.0232	56.0000
0.024600	113.74	6.84	16.6	57.0232	56.0000
0.024700	113.97	6.85	16.6	57.0232	56.0000
0.024800	114.20	6.86	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.024900	114.43	6.88	16.6	57.0232	56.0000
0.025000	114.66	6.89	16.6	57.0232	56.0000
0.025100	114.89	6.90	16.6	57.0232	56.0000
0.025200	115.12	6.92	16.6	57.0232	56.0000
0.025300	115.35	6.93	16.6	57.0232	56.0000
0.025400	115.58	6.95	16.6	57.0232	56.0000
0.025500	115.81	6.96	16.6	57.0232	56.0000
0.025600	116.03	6.97	16.6	57.0232	56.0000
0.025700	116.26	6.99	16.6	57.0232	56.0000
0.025800	116.48	7.00	16.6	57.0232	56.0000
0.025900	116.71	7.01	16.6	57.0232	56.0000
0.026000	116.94	7.03	16.6	57.0232	56.0000
0.026100	117.16	7.04	16.6	57.0232	56.0000
0.026200	117.38	7.05	16.6	57.0232	56.0000
0.026300	117.61	7.07	16.6	57.0232	56.0000
0.026400	117.83	7.08	16.6	57.0232	56.0000
0.026500	118.05	7.09	16.6	57.0232	56.0000
0.026600	118.28	7.11	16.6	57.0232	56.0000
0.026700	118.50	7.12	16.6	57.0232	56.0000
0.026800	118.72	7.13	16.6	57.0232	56.0000
0.026900	118.94	7.15	16.6	57.0232	56.0000
0.027000	119.16	7.16	16.6	57.0232	56.0000
0.027100	119.38	7.17	16.6	57.0232	56.0000
0.027200	119.60	7.19	16.6	57.0232	56.0000
0.027300	119.82	7.20	16.6	57.0232	56.0000
0.027400	120.04	7.21	16.6	57.0232	56.0000
0.027500	120.26	7.23	16.6	57.0232	56.0000
0.027600	120.48	7.24	16.6	57.0232	56.0000
0.027700	120.70	7.25	16.6	57.0232	56.0000
0.027800	120.92	7.27	16.6	57.0232	56.0000
0.027900	121.13	7.28	16.6	57.0232	56.0000
0.028000	121.35	7.29	16.6	57.0232	56.0000
0.028100	121.57	7.31	16.6	57.0232	56.0000
0.028200	121.78	7.32	16.6	57.0232	56.0000
0.028300	122.00	7.33	16.6	57.0232	56.0000
0.028400	122.21	7.34	16.6	57.0232	56.0000
0.028500	122.43	7.36	16.6	57.0232	56.0000
0.028600	122.64	7.37	16.6	57.0232	56.0000
0.028700	122.86	7.38	16.6	57.0232	56.0000
0.028800	123.07	7.40	16.6	57.0232	56.0000
0.028900	123.28	7.41	16.6	57.0232	56.0000
0.029000	123.50	7.42	16.6	57.0232	56.0000
0.029100	123.71	7.43	16.6	57.0232	56.0000
0.029200	123.92	7.45	16.6	57.0232	56.0000
0.029300	124.13	7.46	16.6	57.0232	56.0000
0.029400	124.35	7.47	16.6	57.0232	56.0000
0.029500	124.56	7.49	16.6	57.0232	56.0000
0.029600	124.77	7.50	16.6	57.0232	56.0000
0.029700	124.98	7.51	16.6	57.0232	56.0000
0.029800	125.19	7.52	16.6	57.0232	56.0000
0.029900	125.40	7.54	16.6	57.0232	56.0000
0.030000	125.61	7.55	16.6	57.0232	56.0000
0.030100	125.82	7.56	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.030200	126.03	7.57	16.6	57.0232	56.0000
0.030300	126.23	7.59	16.6	57.0232	56.0000
0.030400	126.44	7.60	16.6	57.0232	56.0000
0.030500	126.65	7.61	16.6	57.0232	56.0000
0.030600	126.86	7.62	16.6	57.0232	56.0000
0.030700	127.07	7.64	16.6	57.0232	56.0000
0.030800	127.27	7.65	16.6	57.0232	56.0000
0.030900	127.48	7.66	16.6	57.0232	56.0000
0.031000	127.68	7.67	16.6	57.0232	56.0000
0.031100	127.89	7.69	16.6	57.0232	56.0000
0.031200	128.10	7.70	16.6	57.0232	56.0000
0.031300	128.30	7.71	16.6	57.0232	56.0000
0.031400	128.51	7.72	16.6	57.0232	56.0000
0.031500	128.71	7.74	16.6	57.0232	56.0000
0.031600	128.91	7.75	16.6	57.0232	56.0000
0.031700	129.12	7.76	16.6	57.0232	56.0000
0.031800	129.32	7.77	16.6	57.0232	56.0000
0.031900	129.53	7.78	16.6	57.0232	56.0000
0.032000	129.73	7.80	16.6	57.0232	56.0000
0.032100	129.93	7.81	16.6	57.0232	56.0000
0.032200	130.13	7.82	16.6	57.0232	56.0000
0.032300	130.33	7.83	16.6	57.0232	56.0000
0.032400	130.54	7.84	16.6	57.0232	56.0000
0.032500	130.74	7.86	16.6	57.0232	56.0000
0.032600	130.94	7.87	16.6	57.0232	56.0000
0.032700	131.14	7.88	16.6	57.0232	56.0000
0.032800	131.34	7.89	16.6	57.0232	56.0000
0.032900	131.54	7.91	16.6	57.0232	56.0000
0.033000	131.74	7.92	16.6	57.0232	56.0000
0.033100	131.94	7.93	16.6	57.0232	56.0000
0.033200	132.14	7.94	16.6	57.0232	56.0000
0.033300	132.34	7.95	16.6	57.0232	56.0000
0.033400	132.54	7.96	16.6	57.0232	56.0000
0.033500	132.73	7.98	16.6	57.0232	56.0000
0.033600	132.93	7.99	16.6	57.0232	56.0000
0.033700	133.13	8.00	16.6	57.0232	56.0000
0.033800	133.33	8.01	16.6	57.0232	56.0000
0.033900	133.52	8.02	16.6	57.0232	56.0000
0.034000	133.72	8.04	16.6	57.0232	56.0000
0.034100	133.92	8.05	16.6	57.0232	56.0000
0.034200	134.11	8.06	16.6	57.0232	56.0000
0.034300	134.31	8.07	16.6	57.0232	56.0000
0.034400	134.50	8.08	16.6	57.0232	56.0000
0.034500	134.70	8.09	16.6	57.0232	56.0000
0.034600	134.90	8.11	16.6	57.0232	56.0000
0.034700	135.09	8.12	16.6	57.0232	56.0000
0.034800	135.28	8.13	16.6	57.0232	56.0000
0.034900	135.48	8.14	16.6	57.0232	56.0000
0.035000	135.67	8.15	16.6	57.0232	56.0000
0.035100	135.87	8.17	16.6	57.0232	56.0000
0.035200	136.06	8.18	16.6	57.0232	56.0000
0.035300	136.25	8.19	16.6	57.0232	56.0000
0.035400	136.45	8.20	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.035500	136.64	8.21	16.6	57.0232	56.0000
0.035600	136.83	8.22	16.6	57.0232	56.0000
0.035700	137.02	8.23	16.6	57.0232	56.0000
0.035800	137.21	8.25	16.6	57.0232	56.0000
0.035900	137.41	8.26	16.6	57.0232	56.0000
0.036000	137.60	8.27	16.6	57.0232	56.0000
0.036100	137.79	8.28	16.6	57.0232	56.0000
0.036200	137.98	8.29	16.6	57.0232	56.0000
0.036300	138.17	8.30	16.6	57.0232	56.0000
0.036400	138.36	8.31	16.6	57.0232	56.0000
0.036500	138.55	8.33	16.6	57.0232	56.0000
0.036600	138.74	8.34	16.6	57.0232	56.0000
0.036700	138.93	8.35	16.6	57.0232	56.0000
0.036800	139.12	8.36	16.6	57.0232	56.0000
0.036900	139.31	8.37	16.6	57.0232	56.0000
0.037000	139.50	8.38	16.6	57.0232	56.0000
0.037100	139.68	8.39	16.6	57.0232	56.0000
0.037200	139.87	8.41	16.6	57.0232	56.0000
0.037300	140.06	8.42	16.6	57.0232	56.0000
0.037400	140.25	8.43	16.6	57.0232	56.0000
0.037500	140.43	8.44	16.6	57.0232	56.0000
0.037600	140.62	8.45	16.6	57.0232	56.0000
0.037700	140.81	8.46	16.6	57.0232	56.0000
0.037800	141.00	8.47	16.6	57.0232	56.0000
0.037900	141.18	8.48	16.6	57.0232	56.0000
0.038000	141.37	8.50	16.6	57.0232	56.0000
0.038100	141.55	8.51	16.6	57.0232	56.0000
0.038200	141.74	8.52	16.6	57.0232	56.0000
0.038300	141.92	8.53	16.6	57.0232	56.0000
0.038400	142.11	8.54	16.6	57.0232	56.0000
0.038500	142.29	8.55	16.6	57.0232	56.0000
0.038600	142.48	8.56	16.6	57.0232	56.0000
0.038700	142.66	8.57	16.6	57.0232	56.0000
0.038800	142.85	8.58	16.6	57.0232	56.0000
0.038900	143.03	8.60	16.6	57.0232	56.0000
0.039000	143.22	8.61	16.6	57.0232	56.0000
0.039100	143.40	8.62	16.6	57.0232	56.0000
0.039200	143.58	8.63	16.6	57.0232	56.0000
0.039300	143.77	8.64	16.6	57.0232	56.0000
0.039400	143.95	8.65	16.6	57.0232	56.0000
0.039500	144.13	8.66	16.6	57.0232	56.0000
0.039600	144.31	8.67	16.6	57.0232	56.0000
0.039700	144.50	8.68	16.6	57.0232	56.0000
0.039800	144.68	8.69	16.6	57.0232	56.0000
0.039900	144.86	8.71	16.6	57.0232	56.0000
0.040000	145.04	8.72	16.6	57.0232	56.0000
0.040100	145.22	8.73	16.6	57.0232	56.0000
0.040200	145.40	8.74	16.6	57.0232	56.0000
0.040300	145.58	8.75	16.6	57.0232	56.0000
0.040400	145.76	8.76	16.6	57.0232	56.0000
0.040500	145.94	8.77	16.6	57.0232	56.0000
0.040600	146.12	8.78	16.6	57.0232	56.0000
0.040700	146.30	8.79	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.040800	146.48	8.80	16.6	57.0232	56.0000
0.040900	146.66	8.81	16.6	57.0232	56.0000
0.041000	146.84	8.82	16.6	57.0232	56.0000
0.041100	147.02	8.84	16.6	57.0232	56.0000
0.041200	147.20	8.85	16.6	57.0232	56.0000
0.041300	147.38	8.86	16.6	57.0232	56.0000
0.041400	147.56	8.87	16.6	57.0232	56.0000
0.041500	147.73	8.88	16.6	57.0232	56.0000
0.041600	147.91	8.89	16.6	57.0232	56.0000
0.041700	148.09	8.90	16.6	57.0232	56.0000
0.041800	148.27	8.91	16.6	57.0232	56.0000
0.041900	148.44	8.92	16.6	57.0232	56.0000
0.042000	148.62	8.93	16.6	57.0232	56.0000
0.042100	148.80	8.94	16.6	57.0232	56.0000
0.042200	148.98	8.95	16.6	57.0232	56.0000
0.042300	149.15	8.96	16.6	57.0232	56.0000
0.042400	149.33	8.97	16.6	57.0232	56.0000
0.042500	149.50	8.98	16.6	57.0232	56.0000
0.042600	149.68	9.00	16.6	57.0232	56.0000
0.042700	149.86	9.01	16.6	57.0232	56.0000
0.042800	150.03	9.02	16.6	57.0232	56.0000
0.042900	150.21	9.03	16.6	57.0232	56.0000
0.043000	150.38	9.04	16.6	57.0232	56.0000
0.043100	150.56	9.05	16.6	57.0232	56.0000
0.043200	150.73	9.06	16.6	57.0232	56.0000
0.043300	150.90	9.07	16.6	57.0232	56.0000
0.043400	151.08	9.08	16.6	57.0232	56.0000
0.043500	151.25	9.09	16.6	57.0232	56.0000
0.043600	151.43	9.10	16.6	57.0232	56.0000
0.043700	151.60	9.11	16.6	57.0232	56.0000
0.043800	151.77	9.12	16.6	57.0232	56.0000
0.043900	151.95	9.13	16.6	57.0232	56.0000
0.044000	152.12	9.14	16.6	57.0232	56.0000
0.044100	152.29	9.15	16.6	57.0232	56.0000
0.044200	152.46	9.16	16.6	57.0232	56.0000
0.044300	152.64	9.17	16.6	57.0232	56.0000
0.044400	152.81	9.18	16.6	57.0232	56.0000
0.044500	152.98	9.19	16.6	57.0232	56.0000
0.044600	153.15	9.20	16.6	57.0232	56.0000
0.044700	153.32	9.21	16.6	57.0232	56.0000
0.044800	153.50	9.22	16.6	57.0232	56.0000
0.044900	153.67	9.23	16.6	57.0232	56.0000
0.045000	153.84	9.25	16.6	57.0232	56.0000
0.045100	154.01	9.26	16.6	57.0232	56.0000
0.045200	154.18	9.27	16.6	57.0232	56.0000
0.045300	154.35	9.28	16.6	57.0232	56.0000
0.045400	154.52	9.29	16.6	57.0232	56.0000
0.045500	154.69	9.30	16.6	57.0232	56.0000
0.045600	154.86	9.31	16.6	57.0232	56.0000
0.045700	155.03	9.32	16.6	57.0232	56.0000
0.045800	155.20	9.33	16.6	57.0232	56.0000
0.045900	155.37	9.34	16.6	57.0232	56.0000
0.046000	155.54	9.35	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.046100	155.71	9.36	16.6	57.0232	56.0000
0.046200	155.88	9.37	16.6	57.0232	56.0000
0.046300	156.04	9.38	16.6	57.0232	56.0000
0.046400	156.21	9.39	16.6	57.0232	56.0000
0.046500	156.38	9.40	16.6	57.0232	56.0000
0.046600	156.55	9.41	16.6	57.0232	56.0000
0.046700	156.72	9.42	16.6	57.0232	56.0000
0.046800	156.88	9.43	16.6	57.0232	56.0000
0.046900	157.05	9.44	16.6	57.0232	56.0000
0.047000	157.22	9.45	16.6	57.0232	56.0000
0.047100	157.39	9.46	16.6	57.0232	56.0000
0.047200	157.55	9.47	16.6	57.0232	56.0000
0.047300	157.72	9.48	16.6	57.0232	56.0000
0.047400	157.89	9.49	16.6	57.0232	56.0000
0.047500	158.05	9.50	16.6	57.0232	56.0000
0.047600	158.22	9.51	16.6	57.0232	56.0000
0.047700	158.39	9.52	16.6	57.0232	56.0000
0.047800	158.55	9.53	16.6	57.0232	56.0000
0.047900	158.72	9.54	16.6	57.0232	56.0000
0.048000	158.88	9.55	16.6	57.0232	56.0000
0.048100	159.05	9.56	16.6	57.0232	56.0000
0.048200	159.21	9.57	16.6	57.0232	56.0000
0.048300	159.38	9.58	16.6	57.0232	56.0000
0.048400	159.54	9.59	16.6	57.0232	56.0000
0.048500	159.71	9.60	16.6	57.0232	56.0000
0.048600	159.87	9.61	16.6	57.0232	56.0000
0.048700	160.04	9.62	16.6	57.0232	56.0000
0.048800	160.20	9.63	16.6	57.0232	56.0000
0.048900	160.37	9.64	16.6	57.0232	56.0000
0.049000	160.53	9.65	16.6	57.0232	56.0000
0.049100	160.69	9.66	16.6	57.0232	56.0000
0.049200	160.86	9.67	16.6	57.0232	56.0000
0.049300	161.02	9.68	16.6	57.0232	56.0000
0.049400	161.18	9.69	16.6	57.0232	56.0000
0.049500	161.35	9.70	16.6	57.0232	56.0000
0.049600	161.51	9.71	16.6	57.0232	56.0000
0.049700	161.67	9.72	16.6	57.0232	56.0000
0.049800	161.84	9.73	16.6	57.0232	56.0000
0.049900	162.00	9.74	16.6	57.0232	56.0000
0.050000	162.16	9.75	16.6	57.0232	56.0000
0.050100	162.32	9.75	16.6	57.0232	56.0000
0.050200	162.48	9.76	16.6	57.0232	56.0000
0.050300	162.65	9.77	16.6	57.0232	56.0000
0.050400	162.81	9.78	16.6	57.0232	56.0000
0.050500	162.97	9.79	16.6	57.0232	56.0000
0.050600	163.13	9.80	16.6	57.0232	56.0000
0.050700	163.29	9.81	16.6	57.0232	56.0000
0.050800	163.45	9.82	16.6	57.0232	56.0000
0.050900	163.61	9.83	16.6	57.0232	56.0000
0.051000	163.77	9.84	16.6	57.0232	56.0000
0.051100	163.93	9.85	16.6	57.0232	56.0000
0.051200	164.09	9.86	16.6	57.0232	56.0000
0.051300	164.25	9.87	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.051400	164.41	9.88	16.6	57.0232	56.0000
0.051500	164.57	9.89	16.6	57.0232	56.0000
0.051600	164.73	9.90	16.6	57.0232	56.0000
0.051700	164.89	9.91	16.6	57.0232	56.0000
0.051800	165.05	9.92	16.6	57.0232	56.0000
0.051900	165.21	9.93	16.6	57.0232	56.0000
0.052000	165.37	9.94	16.6	57.0232	56.0000
0.052100	165.53	9.95	16.6	57.0232	56.0000
0.052200	165.69	9.96	16.6	57.0232	56.0000
0.052300	165.85	9.97	16.6	57.0232	56.0000
0.052400	166.01	9.98	16.6	57.0232	56.0000
0.052500	166.16	9.99	16.6	57.0232	56.0000
0.052600	166.32	10.00	16.6	57.0232	56.0000
0.052700	166.48	10.00	16.6	57.0232	56.0000
0.052800	166.64	10.01	16.6	57.0232	56.0000
0.052900	166.80	10.02	16.6	57.0232	56.0000
0.053000	166.95	10.03	16.6	57.0232	56.0000
0.053100	167.11	10.04	16.6	57.0232	56.0000
0.053200	167.27	10.05	16.6	57.0232	56.0000
0.053300	167.43	10.06	16.6	57.0232	56.0000
0.053400	167.58	10.07	16.6	57.0232	56.0000
0.053500	167.74	10.08	16.6	57.0232	56.0000
0.053600	167.90	10.09	16.6	57.0232	56.0000
0.053700	168.05	10.10	16.6	57.0232	56.0000
0.053800	168.21	10.11	16.6	57.0232	56.0000
0.053900	168.37	10.12	16.6	57.0232	56.0000
0.054000	168.52	10.13	16.6	57.0232	56.0000
0.054100	168.68	10.14	16.6	57.0232	56.0000
0.054200	168.83	10.15	16.6	57.0232	56.0000
0.054300	168.99	10.16	16.6	57.0232	56.0000
0.054400	169.14	10.16	16.6	57.0232	56.0000
0.054500	169.30	10.17	16.6	57.0232	56.0000
0.054600	169.46	10.18	16.6	57.0232	56.0000
0.054700	169.61	10.19	16.6	57.0232	56.0000
0.054800	169.77	10.20	16.6	57.0232	56.0000
0.054900	169.92	10.21	16.6	57.0232	56.0000
0.055000	170.07	10.22	16.6	57.0232	56.0000
0.055100	170.23	10.23	16.6	57.0232	56.0000
0.055200	170.38	10.24	16.6	57.0232	56.0000
0.055300	170.54	10.25	16.6	57.0232	56.0000
0.055400	170.69	10.26	16.6	57.0232	56.0000
0.055500	170.85	10.27	16.6	57.0232	56.0000
0.055600	171.00	10.28	16.6	57.0232	56.0000
0.055700	171.15	10.29	16.6	57.0232	56.0000
0.055800	171.31	10.29	16.6	57.0232	56.0000
0.055900	171.46	10.30	16.6	57.0232	56.0000
0.056000	171.61	10.31	16.6	57.0232	56.0000
0.056100	171.77	10.32	16.6	57.0232	56.0000
0.056200	171.92	10.33	16.6	57.0232	56.0000
0.056300	172.07	10.34	16.6	57.0232	56.0000
0.056400	172.23	10.35	16.6	57.0232	56.0000
0.056500	172.38	10.36	16.6	57.0232	56.0000
0.056600	172.53	10.37	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.056700	172.68	10.38	16.6	57.0232	56.0000
0.056800	172.84	10.39	16.6	57.0232	56.0000
0.056900	172.99	10.40	16.6	57.0232	56.0000
0.057000	173.14	10.41	16.6	57.0232	56.0000
0.057100	173.29	10.41	16.6	57.0232	56.0000
0.057200	173.44	10.42	16.6	57.0232	56.0000
0.057300	173.59	10.43	16.6	57.0232	56.0000
0.057400	173.75	10.44	16.6	57.0232	56.0000
0.057500	173.90	10.45	16.6	57.0232	56.0000
0.057600	174.05	10.46	16.6	57.0232	56.0000
0.057700	174.20	10.47	16.6	57.0232	56.0000
0.057800	174.35	10.48	16.6	57.0232	56.0000
0.057900	174.50	10.49	16.6	57.0232	56.0000
0.058000	174.65	10.50	16.6	57.0232	56.0000
0.058100	174.80	10.50	16.6	57.0232	56.0000
0.058200	174.95	10.51	16.6	57.0232	56.0000
0.058300	175.10	10.52	16.6	57.0232	56.0000
0.058400	175.25	10.53	16.6	57.0232	56.0000
0.058500	175.40	10.54	16.6	57.0232	56.0000
0.058600	175.55	10.55	16.6	57.0232	56.0000
0.058700	175.70	10.56	16.6	57.0232	56.0000
0.058800	175.85	10.57	16.6	57.0232	56.0000
0.058900	176.00	10.58	16.6	57.0232	56.0000
0.059000	176.15	10.59	16.6	57.0232	56.0000
0.059100	176.30	10.59	16.6	57.0232	56.0000
0.059200	176.45	10.60	16.6	57.0232	56.0000
0.059300	176.60	10.61	16.6	57.0232	56.0000
0.059400	176.75	10.62	16.6	57.0232	56.0000
0.059500	176.90	10.63	16.6	57.0232	56.0000
0.059600	177.04	10.64	16.6	57.0232	56.0000
0.059700	177.19	10.65	16.6	57.0232	56.0000
0.059800	177.34	10.66	16.6	57.0232	56.0000
0.059900	177.49	10.67	16.6	57.0232	56.0000
0.060000	177.64	10.68	16.6	57.0232	56.0000
0.060100	177.79	10.68	16.6	57.0232	56.0000
0.060200	177.93	10.69	16.6	57.0232	56.0000
0.060300	178.08	10.70	16.6	57.0232	56.0000
0.060400	178.23	10.71	16.6	57.0232	56.0000
0.060500	178.38	10.72	16.6	57.0232	56.0000
0.060600	178.52	10.73	16.6	57.0232	56.0000
0.060700	178.67	10.74	16.6	57.0232	56.0000
0.060800	178.82	10.75	16.6	57.0232	56.0000
0.060900	178.96	10.76	16.6	57.0232	56.0000
0.061000	179.11	10.76	16.6	57.0232	56.0000
0.061100	179.26	10.77	16.6	57.0232	56.0000
0.061200	179.40	10.78	16.6	57.0232	56.0000
0.061300	179.55	10.79	16.6	57.0232	56.0000
0.061400	179.70	10.80	16.6	57.0232	56.0000
0.061500	179.84	10.81	16.6	57.0232	56.0000
0.061600	179.99	10.82	16.6	57.0232	56.0000
0.061700	180.14	10.83	16.6	57.0232	56.0000
0.061800	180.28	10.83	16.6	57.0232	56.0000
0.061900	180.43	10.84	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.062000	180.57	10.85	16.6	57.0232	56.0000
0.062100	180.72	10.86	16.6	57.0232	56.0000
0.062200	180.86	10.87	16.6	57.0232	56.0000
0.062300	181.01	10.88	16.6	57.0232	56.0000
0.062400	181.16	10.89	16.6	57.0232	56.0000
0.062500	181.30	10.90	16.6	57.0232	56.0000
0.062600	181.45	10.90	16.6	57.0232	56.0000
0.062700	181.59	10.91	16.6	57.0232	56.0000
0.062800	181.73	10.92	16.6	57.0232	56.0000
0.062900	181.88	10.93	16.6	57.0232	56.0000
0.063000	182.02	10.94	16.6	57.0232	56.0000
0.063100	182.17	10.95	16.6	57.0232	56.0000
0.063200	182.31	10.96	16.6	57.0232	56.0000
0.063300	182.46	10.96	16.6	57.0232	56.0000
0.063400	182.60	10.97	16.6	57.0232	56.0000
0.063500	182.74	10.98	16.6	57.0232	56.0000
0.063600	182.89	10.99	16.6	57.0232	56.0000
0.063700	183.03	11.00	16.6	57.0232	56.0000
0.063800	183.18	11.01	16.6	57.0232	56.0000
0.063900	183.32	11.02	16.6	57.0232	56.0000
0.064000	183.46	11.03	16.6	57.0232	56.0000
0.064100	183.61	11.03	16.6	57.0232	56.0000
0.064200	183.75	11.04	16.6	57.0232	56.0000
0.064300	183.89	11.05	16.6	57.0232	56.0000
0.064400	184.04	11.06	16.6	57.0232	56.0000
0.064500	184.18	11.07	16.6	57.0232	56.0000
0.064600	184.32	11.08	16.6	57.0232	56.0000
0.064700	184.46	11.09	16.6	57.0232	56.0000
0.064800	184.61	11.09	16.6	57.0232	56.0000
0.064900	184.75	11.10	16.6	57.0232	56.0000
0.065000	184.89	11.11	16.6	57.0232	56.0000
0.065100	185.03	11.12	16.6	57.0232	56.0000
0.065200	185.17	11.13	16.6	57.0232	56.0000
0.065300	185.32	11.14	16.6	57.0232	56.0000
0.065400	185.46	11.15	16.6	57.0232	56.0000
0.065500	185.60	11.15	16.6	57.0232	56.0000
0.065600	185.74	11.16	16.6	57.0232	56.0000
0.065700	185.88	11.17	16.6	57.0232	56.0000
0.065800	186.03	11.18	16.6	57.0232	56.0000
0.065900	186.17	11.19	16.6	57.0232	56.0000
0.066000	186.31	11.20	16.6	57.0232	56.0000
0.066100	186.45	11.20	16.6	57.0232	56.0000
0.066200	186.59	11.21	16.6	57.0232	56.0000
0.066300	186.73	11.22	16.6	57.0232	56.0000
0.066400	186.87	11.23	16.6	57.0232	56.0000
0.066500	187.01	11.24	16.6	57.0232	56.0000
0.066600	187.15	11.25	16.6	57.0232	56.0000
0.066700	187.29	11.26	16.6	57.0232	56.0000
0.066800	187.43	11.26	16.6	57.0232	56.0000
0.066900	187.57	11.27	16.6	57.0232	56.0000
0.067000	187.71	11.28	16.6	57.0232	56.0000
0.067100	187.85	11.29	16.6	57.0232	56.0000
0.067200	187.99	11.30	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.067300	188.13	11.31	16.6	57.0232	56.0000
0.067400	188.27	11.31	16.6	57.0232	56.0000
0.067500	188.41	11.32	16.6	57.0232	56.0000
0.067600	188.55	11.33	16.6	57.0232	56.0000
0.067700	188.69	11.34	16.6	57.0232	56.0000
0.067800	188.83	11.35	16.6	57.0232	56.0000
0.067900	188.97	11.36	16.6	57.0232	56.0000
0.068000	189.11	11.36	16.6	57.0232	56.0000
0.068100	189.25	11.37	16.6	57.0232	56.0000
0.068200	189.39	11.38	16.6	57.0232	56.0000
0.068300	189.53	11.39	16.6	57.0232	56.0000
0.068400	189.66	11.40	16.6	57.0232	56.0000
0.068500	189.80	11.41	16.6	57.0232	56.0000
0.068600	189.94	11.41	16.6	57.0232	56.0000
0.068700	190.08	11.42	16.6	57.0232	56.0000
0.068800	190.22	11.43	16.6	57.0232	56.0000
0.068900	190.36	11.44	16.6	57.0232	56.0000
0.069000	190.49	11.45	16.6	57.0232	56.0000
0.069100	190.63	11.46	16.6	57.0232	56.0000
0.069200	190.77	11.46	16.6	57.0232	56.0000
0.069300	190.91	11.47	16.6	57.0232	56.0000
0.069400	191.05	11.48	16.6	57.0232	56.0000
0.069500	191.18	11.49	16.6	57.0232	56.0000
0.069600	191.32	11.50	16.6	57.0232	56.0000
0.069700	191.46	11.51	16.6	57.0232	56.0000
0.069800	191.60	11.51	16.6	57.0232	56.0000
0.069900	191.73	11.52	16.6	57.0232	56.0000
0.070000	191.87	11.53	16.6	57.0232	56.0000
0.070100	192.01	11.54	16.6	57.0232	56.0000
0.070200	192.14	11.55	16.6	57.0232	56.0000
0.070300	192.28	11.56	16.6	57.0232	56.0000
0.070400	192.42	11.56	16.6	57.0232	56.0000
0.070500	192.55	11.57	16.6	57.0232	56.0000
0.070600	192.69	11.58	16.6	57.0232	56.0000
0.070700	192.83	11.59	16.6	57.0232	56.0000
0.070800	192.96	11.60	16.6	57.0232	56.0000
0.070900	193.10	11.60	16.6	57.0232	56.0000
0.071000	193.24	11.61	16.6	57.0232	56.0000
0.071100	193.37	11.62	16.6	57.0232	56.0000
0.071200	193.51	11.63	16.6	57.0232	56.0000
0.071300	193.64	11.64	16.6	57.0232	56.0000
0.071400	193.78	11.65	16.6	57.0232	56.0000
0.071500	193.92	11.65	16.6	57.0232	56.0000
0.071600	194.05	11.66	16.6	57.0232	56.0000
0.071700	194.19	11.67	16.6	57.0232	56.0000
0.071800	194.32	11.68	16.6	57.0232	56.0000
0.071900	194.46	11.69	16.6	57.0232	56.0000
0.072000	194.59	11.69	16.6	57.0232	56.0000
0.072100	194.73	11.70	16.6	57.0232	56.0000
0.072200	194.86	11.71	16.6	57.0232	56.0000
0.072300	195.00	11.72	16.6	57.0232	56.0000
0.072400	195.13	11.73	16.6	57.0232	56.0000
0.072500	195.27	11.73	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.072600	195.40	11.74	16.6	57.0232	56.0000
0.072700	195.54	11.75	16.6	57.0232	56.0000
0.072800	195.67	11.76	16.6	57.0232	56.0000
0.072900	195.80	11.77	16.6	57.0232	56.0000
0.073000	195.94	11.78	16.6	57.0232	56.0000
0.073100	196.07	11.78	16.6	57.0232	56.0000
0.073200	196.21	11.79	16.6	57.0232	56.0000
0.073300	196.34	11.80	16.6	57.0232	56.0000
0.073400	196.47	11.81	16.6	57.0232	56.0000
0.073500	196.61	11.82	16.6	57.0232	56.0000
0.073600	196.74	11.82	16.6	57.0232	56.0000
0.073700	196.88	11.83	16.6	57.0232	56.0000
0.073800	197.01	11.84	16.6	57.0232	56.0000
0.073900	197.14	11.85	16.6	57.0232	56.0000
0.074000	197.28	11.86	16.6	57.0232	56.0000
0.074100	197.41	11.86	16.6	57.0232	56.0000
0.074200	197.54	11.87	16.6	57.0232	56.0000
0.074300	197.68	11.88	16.6	57.0232	56.0000
0.074400	197.81	11.89	16.6	57.0232	56.0000
0.074500	197.94	11.90	16.6	57.0232	56.0000
0.074600	198.07	11.90	16.6	57.0232	56.0000
0.074700	198.21	11.91	16.6	57.0232	56.0000
0.074800	198.34	11.92	16.6	57.0232	56.0000
0.074900	198.47	11.93	16.6	57.0232	56.0000
0.075000	198.60	11.94	16.6	57.0232	56.0000
0.075100	198.74	11.94	16.6	57.0232	56.0000
0.075200	198.87	11.95	16.6	57.0232	56.0000
0.075300	199.00	11.96	16.6	57.0232	56.0000
0.075400	199.13	11.97	16.6	57.0232	56.0000
0.075500	199.27	11.98	16.6	57.0232	56.0000
0.075600	199.40	11.98	16.6	57.0232	56.0000
0.075700	199.53	11.99	16.6	57.0232	56.0000
0.075800	199.66	12.00	16.6	57.0232	56.0000
0.075900	199.79	12.01	16.6	57.0232	56.0000
0.076000	199.92	12.01	16.6	57.0232	56.0000
0.076100	200.06	12.02	16.6	57.0232	56.0000
0.076200	200.19	12.03	16.6	57.0232	56.0000
0.076300	200.32	12.04	16.6	57.0232	56.0000
0.076400	200.45	12.05	16.6	57.0232	56.0000
0.076500	200.58	12.05	16.6	57.0232	56.0000
0.076600	200.71	12.06	16.6	57.0232	56.0000
0.076700	200.84	12.07	16.6	57.0232	56.0000
0.076800	200.97	12.08	16.6	57.0232	56.0000
0.076900	201.10	12.09	16.6	57.0232	56.0000
0.077000	201.24	12.09	16.6	57.0232	56.0000
0.077100	201.37	12.10	16.6	57.0232	56.0000
0.077200	201.50	12.11	16.6	57.0232	56.0000
0.077300	201.63	12.12	16.6	57.0232	56.0000
0.077400	201.76	12.12	16.6	57.0232	56.0000
0.077500	201.89	12.13	16.6	57.0232	56.0000
0.077600	202.02	12.14	16.6	57.0232	56.0000
0.077700	202.15	12.15	16.6	57.0232	56.0000
0.077800	202.28	12.16	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.077900	202.41	12.16	16.6	57.0232	56.0000
0.078000	202.54	12.17	16.6	57.0232	56.0000
0.078100	202.67	12.18	16.6	57.0232	56.0000
0.078200	202.80	12.19	16.6	57.0232	56.0000
0.078300	202.93	12.20	16.6	57.0232	56.0000
0.078400	203.06	12.20	16.6	57.0232	56.0000
0.078500	203.19	12.21	16.6	57.0232	56.0000
0.078600	203.32	12.22	16.6	57.0232	56.0000
0.078700	203.44	12.23	16.6	57.0232	56.0000
0.078800	203.57	12.23	16.6	57.0232	56.0000
0.078900	203.70	12.24	16.6	57.0232	56.0000
0.079000	203.83	12.25	16.6	57.0232	56.0000
0.079100	203.96	12.26	16.6	57.0232	56.0000
0.079200	204.09	12.27	16.6	57.0232	56.0000
0.079300	204.22	12.27	16.6	57.0232	56.0000
0.079400	204.35	12.28	16.6	57.0232	56.0000
0.079500	204.48	12.29	16.6	57.0232	56.0000
0.079600	204.60	12.30	16.6	57.0232	56.0000
0.079700	204.73	12.30	16.6	57.0232	56.0000
0.079800	204.86	12.31	16.6	57.0232	56.0000
0.079900	204.99	12.32	16.6	57.0232	56.0000
0.080000	205.12	12.33	16.6	57.0232	56.0000
0.080100	205.25	12.33	16.6	57.0232	56.0000
0.080200	205.37	12.34	16.6	57.0232	56.0000
0.080300	205.50	12.35	16.6	57.0232	56.0000
0.080400	205.63	12.36	16.6	57.0232	56.0000
0.080500	205.76	12.37	16.6	57.0232	56.0000
0.080600	205.89	12.37	16.6	57.0232	56.0000
0.080700	206.01	12.38	16.6	57.0232	56.0000
0.080800	206.14	12.39	16.6	57.0232	56.0000
0.080900	206.27	12.40	16.6	57.0232	56.0000
0.081000	206.40	12.40	16.6	57.0232	56.0000
0.081100	206.52	12.41	16.6	57.0232	56.0000
0.081200	206.65	12.42	16.6	57.0232	56.0000
0.081300	206.78	12.43	16.6	57.0232	56.0000
0.081400	206.90	12.43	16.6	57.0232	56.0000
0.081500	207.03	12.44	16.6	57.0232	56.0000
0.081600	207.16	12.45	16.6	57.0232	56.0000
0.081700	207.29	12.46	16.6	57.0232	56.0000
0.081800	207.41	12.46	16.6	57.0232	56.0000
0.081900	207.54	12.47	16.6	57.0232	56.0000
0.082000	207.67	12.48	16.6	57.0232	56.0000
0.082100	207.79	12.49	16.6	57.0232	56.0000
0.082200	207.92	12.50	16.6	57.0232	56.0000
0.082300	208.05	12.50	16.6	57.0232	56.0000
0.082400	208.17	12.51	16.6	57.0232	56.0000
0.082500	208.30	12.52	16.6	57.0232	56.0000
0.082600	208.42	12.53	16.6	57.0232	56.0000
0.082700	208.55	12.53	16.6	57.0232	56.0000
0.082800	208.68	12.54	16.6	57.0232	56.0000
0.082900	208.80	12.55	16.6	57.0232	56.0000
0.083000	208.93	12.56	16.6	57.0232	56.0000
0.083100	209.05	12.56	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.083200	209.18	12.57	16.6	57.0232	56.0000
0.083300	209.31	12.58	16.6	57.0232	56.0000
0.083400	209.43	12.59	16.6	57.0232	56.0000
0.083500	209.56	12.59	16.6	57.0232	56.0000
0.083600	209.68	12.60	16.6	57.0232	56.0000
0.083700	209.81	12.61	16.6	57.0232	56.0000
0.083800	209.93	12.62	16.6	57.0232	56.0000
0.083900	210.06	12.62	16.6	57.0232	56.0000
0.084000	210.18	12.63	16.6	57.0232	56.0000
0.084100	210.31	12.64	16.6	57.0232	56.0000
0.084200	210.43	12.65	16.6	57.0232	56.0000
0.084300	210.56	12.65	16.6	57.0232	56.0000
0.084400	210.68	12.66	16.6	57.0232	56.0000
0.084500	210.81	12.67	16.6	57.0232	56.0000
0.084600	210.93	12.68	16.6	57.0232	56.0000
0.084700	211.06	12.68	16.6	57.0232	56.0000
0.084800	211.18	12.69	16.6	57.0232	56.0000
0.084900	211.31	12.70	16.6	57.0232	56.0000
0.085000	211.43	12.71	16.6	57.0232	56.0000
0.085100	211.55	12.71	16.6	57.0232	56.0000
0.085200	211.68	12.72	16.6	57.0232	56.0000
0.085300	211.80	12.73	16.6	57.0232	56.0000
0.085400	211.93	12.74	16.6	57.0232	56.0000
0.085500	212.05	12.74	16.6	57.0232	56.0000
0.085600	212.18	12.75	16.6	57.0232	56.0000
0.085700	212.30	12.76	16.6	57.0232	56.0000
0.085800	212.42	12.77	16.6	57.0232	56.0000
0.085900	212.55	12.77	16.6	57.0232	56.0000
0.086000	212.67	12.78	16.6	57.0232	56.0000
0.086100	212.79	12.79	16.6	57.0232	56.0000
0.086200	212.92	12.80	16.6	57.0232	56.0000
0.086300	213.04	12.80	16.6	57.0232	56.0000
0.086400	213.16	12.81	16.6	57.0232	56.0000
0.086500	213.29	12.82	16.6	57.0232	56.0000
0.086600	213.41	12.83	16.6	57.0232	56.0000
0.086700	213.53	12.83	16.6	57.0232	56.0000
0.086800	213.66	12.84	16.6	57.0232	56.0000
0.086900	213.78	12.85	16.6	57.0232	56.0000
0.087000	213.90	12.85	16.6	57.0232	56.0000
0.087100	214.03	12.86	16.6	57.0232	56.0000
0.087200	214.15	12.87	16.6	57.0232	56.0000
0.087300	214.27	12.88	16.6	57.0232	56.0000
0.087400	214.39	12.88	16.6	57.0232	56.0000
0.087500	214.52	12.89	16.6	57.0232	56.0000
0.087600	214.64	12.90	16.6	57.0232	56.0000
0.087700	214.76	12.91	16.6	57.0232	56.0000
0.087800	214.88	12.91	16.6	57.0232	56.0000
0.087900	215.01	12.92	16.6	57.0232	56.0000
0.088000	215.13	12.93	16.6	57.0232	56.0000
0.088100	215.25	12.94	16.6	57.0232	56.0000
0.088200	215.37	12.94	16.6	57.0232	56.0000
0.088300	215.50	12.95	16.6	57.0232	56.0000
0.088400	215.62	12.96	16.6	57.0232	56.0000

6" CURB - 56' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.088500	215.74	12.97	16.6	57.0232	56.0000
0.088600	215.86	12.97	16.6	57.0232	56.0000
0.088700	215.98	12.98	16.6	57.0232	56.0000
0.088800	216.11	12.99	16.6	57.0232	56.0000
0.088900	216.23	12.99	16.6	57.0232	56.0000
0.089000	216.35	13.00	16.6	57.0232	56.0000
0.089100	216.47	13.01	16.6	57.0232	56.0000
0.089200	216.59	13.02	16.6	57.0232	56.0000
0.089300	216.71	13.02	16.6	57.0232	56.0000
0.089400	216.83	13.03	16.6	57.0232	56.0000
0.089500	216.96	13.04	16.6	57.0232	56.0000
0.089600	217.08	13.05	16.6	57.0232	56.0000
0.089700	217.20	13.05	16.6	57.0232	56.0000
0.089800	217.32	13.06	16.6	57.0232	56.0000
0.089900	217.44	13.07	16.6	57.0232	56.0000
0.090000	217.56	13.07	16.6	57.0232	56.0000

TECHNICAL APPENDIX

APPENDIX B.2

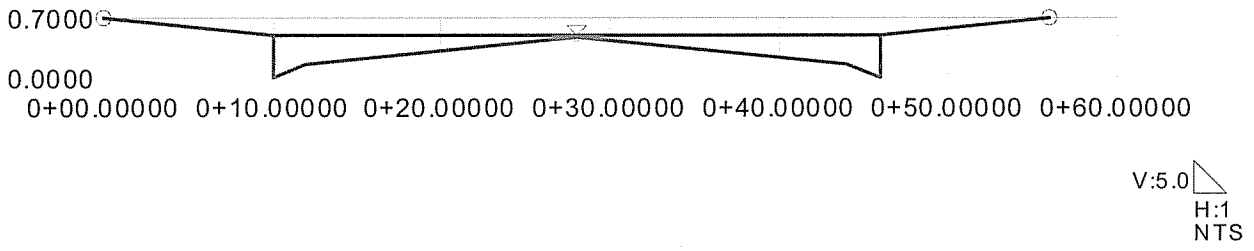
56' R/W – TC to TC – Rating Table

by FlowMaster

6" CURB - 56' R/W - TC TO TC
Cross Section for Irregular Channel

Project Description	
Worksheet	6" CURB - 56' R/W - TC
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Section Data		
Mannings Coefficie	0.015	
Slope	0.004000	ft/ft
Water Surface Elev	0.50	ft
Elevation Range	.00 to 0.70	
Discharge	15.99	cfs



6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Project Description	
Worksheet	6" CURB - 56' R/W - TC
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Input Data	
Water Surface Elev	0.50 ft

Options	
Current Roughness Meth	ved Lotter's Method
Open Channel Weighting	ved Lotter's Method
Closed Channel Weightin	Horton's Method

Attribute	Minimum	Maximum	Increment
Slope (ft/ft)	0.000300	0.090000	0.000100

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft²)	Wetted Perimeter (ft)	Top Width (ft)
0.000300	4.38	0.59	7.4	37.0192	36.0000
0.000400	5.06	0.68	7.4	37.0192	36.0000
0.000500	5.65	0.76	7.4	37.0192	36.0000
0.000600	6.19	0.83	7.4	37.0192	36.0000
0.000700	6.69	0.90	7.4	37.0192	36.0000
0.000800	7.15	0.96	7.4	37.0192	36.0000
0.000900	7.59	1.02	7.4	37.0192	36.0000
0.001000	8.00	1.07	7.4	37.0192	36.0000
0.001100	8.39	1.13	7.4	37.0192	36.0000
0.001200	8.76	1.18	7.4	37.0192	36.0000
0.001300	9.12	1.23	7.4	37.0192	36.0000
0.001400	9.46	1.27	7.4	37.0192	36.0000
0.001500	9.79	1.32	7.4	37.0192	36.0000
0.001600	10.12	1.36	7.4	37.0192	36.0000
0.001700	10.43	1.40	7.4	37.0192	36.0000
0.001800	10.73	1.44	7.4	37.0192	36.0000
0.001900	11.02	1.48	7.4	37.0192	36.0000
0.002000	11.31	1.52	7.4	37.0192	36.0000
0.002100	11.59	1.56	7.4	37.0192	36.0000
0.002200	11.86	1.59	7.4	37.0192	36.0000
0.002300	12.13	1.63	7.4	37.0192	36.0000
0.002400	12.39	1.67	7.4	37.0192	36.0000
0.002500	12.64	1.70	7.4	37.0192	36.0000
0.002600	12.89	1.73	7.4	37.0192	36.0000
0.002700	13.14	1.77	7.4	37.0192	36.0000
0.002800	13.38	1.80	7.4	37.0192	36.0000
0.002900	13.62	1.83	7.4	37.0192	36.0000
0.003000	13.85	1.86	7.4	37.0192	36.0000
0.003100	14.08	1.89	7.4	37.0192	36.0000
0.003200	14.30	1.92	7.4	37.0192	36.0000
0.003300	14.53	1.95	7.4	37.0192	36.0000
0.003400	14.75	1.98	7.4	37.0192	36.0000
0.003500	14.96	2.01	7.4	37.0192	36.0000
0.003600	15.17	2.04	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.003700	15.38	2.07	7.4	37.0192	36.0000
0.003800	15.59	2.10	7.4	37.0192	36.0000
0.003900	15.79	2.12	7.4	37.0192	36.0000
0.004000	15.99	2.15	7.4	37.0192	36.0000
0.004100	16.19	2.18	7.4	37.0192	36.0000
0.004200	16.39	2.20	7.4	37.0192	36.0000
0.004300	16.58	2.23	7.4	37.0192	36.0000
0.004400	16.77	2.25	7.4	37.0192	36.0000
0.004500	16.96	2.28	7.4	37.0192	36.0000
0.004600	17.15	2.31	7.4	37.0192	36.0000
0.004700	17.34	2.33	7.4	37.0192	36.0000
0.004800	17.52	2.35	7.4	37.0192	36.0000
0.004900	17.70	2.38	7.4	37.0192	36.0000
0.005000	17.88	2.40	7.4	37.0192	36.0000
0.005100	18.06	2.43	7.4	37.0192	36.0000
0.005200	18.24	2.45	7.4	37.0192	36.0000
0.005300	18.41	2.47	7.4	37.0192	36.0000
0.005400	18.58	2.50	7.4	37.0192	36.0000
0.005500	18.75	2.52	7.4	37.0192	36.0000
0.005600	18.92	2.54	7.4	37.0192	36.0000
0.005700	19.09	2.57	7.4	37.0192	36.0000
0.005800	19.26	2.59	7.4	37.0192	36.0000
0.005900	19.42	2.61	7.4	37.0192	36.0000
0.006000	19.59	2.63	7.4	37.0192	36.0000
0.006100	19.75	2.65	7.4	37.0192	36.0000
0.006200	19.91	2.68	7.4	37.0192	36.0000
0.006300	20.07	2.70	7.4	37.0192	36.0000
0.006400	20.23	2.72	7.4	37.0192	36.0000
0.006500	20.39	2.74	7.4	37.0192	36.0000
0.006600	20.54	2.76	7.4	37.0192	36.0000
0.006700	20.70	2.78	7.4	37.0192	36.0000
0.006800	20.85	2.80	7.4	37.0192	36.0000
0.006900	21.01	2.82	7.4	37.0192	36.0000
0.007000	21.16	2.84	7.4	37.0192	36.0000
0.007100	21.31	2.86	7.4	37.0192	36.0000
0.007200	21.46	2.88	7.4	37.0192	36.0000
0.007300	21.61	2.90	7.4	37.0192	36.0000
0.007400	21.75	2.92	7.4	37.0192	36.0000
0.007500	21.90	2.94	7.4	37.0192	36.0000
0.007600	22.05	2.96	7.4	37.0192	36.0000
0.007700	22.19	2.98	7.4	37.0192	36.0000
0.007800	22.33	3.00	7.4	37.0192	36.0000
0.007900	22.48	3.02	7.4	37.0192	36.0000
0.008000	22.62	3.04	7.4	37.0192	36.0000
0.008100	22.76	3.06	7.4	37.0192	36.0000
0.008200	22.90	3.08	7.4	37.0192	36.0000
0.008300	23.04	3.10	7.4	37.0192	36.0000
0.008400	23.18	3.12	7.4	37.0192	36.0000
0.008500	23.31	3.13	7.4	37.0192	36.0000
0.008600	23.45	3.15	7.4	37.0192	36.0000
0.008700	23.59	3.17	7.4	37.0192	36.0000
0.008800	23.72	3.19	7.4	37.0192	36.0000
0.008900	23.86	3.21	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.009000	23.99	3.22	7.4	37.0192	36.0000
0.009100	24.12	3.24	7.4	37.0192	36.0000
0.009200	24.26	3.26	7.4	37.0192	36.0000
0.009300	24.39	3.28	7.4	37.0192	36.0000
0.009400	24.52	3.30	7.4	37.0192	36.0000
0.009500	24.65	3.31	7.4	37.0192	36.0000
0.009600	24.78	3.33	7.4	37.0192	36.0000
0.009700	24.91	3.35	7.4	37.0192	36.0000
0.009800	25.03	3.36	7.4	37.0192	36.0000
0.009900	25.16	3.38	7.4	37.0192	36.0000
0.010000	25.29	3.40	7.4	37.0192	36.0000
0.010100	25.41	3.42	7.4	37.0192	36.0000
0.010200	25.54	3.43	7.4	37.0192	36.0000
0.010300	25.66	3.45	7.4	37.0192	36.0000
0.010400	25.79	3.47	7.4	37.0192	36.0000
0.010500	25.91	3.48	7.4	37.0192	36.0000
0.010600	26.04	3.50	7.4	37.0192	36.0000
0.010700	26.16	3.52	7.4	37.0192	36.0000
0.010800	26.28	3.53	7.4	37.0192	36.0000
0.010900	26.40	3.55	7.4	37.0192	36.0000
0.011000	26.52	3.56	7.4	37.0192	36.0000
0.011100	26.64	3.58	7.4	37.0192	36.0000
0.011200	26.76	3.60	7.4	37.0192	36.0000
0.011300	26.88	3.61	7.4	37.0192	36.0000
0.011400	27.00	3.63	7.4	37.0192	36.0000
0.011500	27.12	3.64	7.4	37.0192	36.0000
0.011600	27.24	3.66	7.4	37.0192	36.0000
0.011700	27.35	3.68	7.4	37.0192	36.0000
0.011800	27.47	3.69	7.4	37.0192	36.0000
0.011900	27.59	3.71	7.4	37.0192	36.0000
0.012000	27.70	3.72	7.4	37.0192	36.0000
0.012100	27.82	3.74	7.4	37.0192	36.0000
0.012200	27.93	3.75	7.4	37.0192	36.0000
0.012300	28.05	3.77	7.4	37.0192	36.0000
0.012400	28.16	3.78	7.4	37.0192	36.0000
0.012500	28.27	3.80	7.4	37.0192	36.0000
0.012600	28.39	3.82	7.4	37.0192	36.0000
0.012700	28.50	3.83	7.4	37.0192	36.0000
0.012800	28.61	3.85	7.4	37.0192	36.0000
0.012900	28.72	3.86	7.4	37.0192	36.0000
0.013000	28.83	3.88	7.4	37.0192	36.0000
0.013100	28.94	3.89	7.4	37.0192	36.0000
0.013200	29.05	3.91	7.4	37.0192	36.0000
0.013300	29.16	3.92	7.4	37.0192	36.0000
0.013400	29.27	3.93	7.4	37.0192	36.0000
0.013500	29.38	3.95	7.4	37.0192	36.0000
0.013600	29.49	3.96	7.4	37.0192	36.0000
0.013700	29.60	3.98	7.4	37.0192	36.0000
0.013800	29.71	3.99	7.4	37.0192	36.0000
0.013900	29.81	4.01	7.4	37.0192	36.0000
0.014000	29.92	4.02	7.4	37.0192	36.0000
0.014100	30.03	4.04	7.4	37.0192	36.0000
0.014200	30.13	4.05	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.014300	30.24	4.06	7.4	37.0192	36.0000
0.014400	30.35	4.08	7.4	37.0192	36.0000
0.014500	30.45	4.09	7.4	37.0192	36.0000
0.014600	30.56	4.11	7.4	37.0192	36.0000
0.014700	30.66	4.12	7.4	37.0192	36.0000
0.014800	30.76	4.13	7.4	37.0192	36.0000
0.014900	30.87	4.15	7.4	37.0192	36.0000
0.015000	30.97	4.16	7.4	37.0192	36.0000
0.015100	31.07	4.18	7.4	37.0192	36.0000
0.015200	31.18	4.19	7.4	37.0192	36.0000
0.015300	31.28	4.20	7.4	37.0192	36.0000
0.015400	31.38	4.22	7.4	37.0192	36.0000
0.015500	31.48	4.23	7.4	37.0192	36.0000
0.015600	31.58	4.25	7.4	37.0192	36.0000
0.015700	31.69	4.26	7.4	37.0192	36.0000
0.015800	31.79	4.27	7.4	37.0192	36.0000
0.015900	31.89	4.29	7.4	37.0192	36.0000
0.016000	31.99	4.30	7.4	37.0192	36.0000
0.016100	32.09	4.31	7.4	37.0192	36.0000
0.016200	32.19	4.33	7.4	37.0192	36.0000
0.016300	32.29	4.34	7.4	37.0192	36.0000
0.016400	32.38	4.35	7.4	37.0192	36.0000
0.016500	32.48	4.37	7.4	37.0192	36.0000
0.016600	32.58	4.38	7.4	37.0192	36.0000
0.016700	32.68	4.39	7.4	37.0192	36.0000
0.016800	32.78	4.41	7.4	37.0192	36.0000
0.016900	32.87	4.42	7.4	37.0192	36.0000
0.017000	32.97	4.43	7.4	37.0192	36.0000
0.017100	33.07	4.44	7.4	37.0192	36.0000
0.017200	33.16	4.46	7.4	37.0192	36.0000
0.017300	33.26	4.47	7.4	37.0192	36.0000
0.017400	33.36	4.48	7.4	37.0192	36.0000
0.017500	33.45	4.50	7.4	37.0192	36.0000
0.017600	33.55	4.51	7.4	37.0192	36.0000
0.017700	33.64	4.52	7.4	37.0192	36.0000
0.017800	33.74	4.53	7.4	37.0192	36.0000
0.017900	33.83	4.55	7.4	37.0192	36.0000
0.018000	33.93	4.56	7.4	37.0192	36.0000
0.018100	34.02	4.57	7.4	37.0192	36.0000
0.018200	34.11	4.59	7.4	37.0192	36.0000
0.018300	34.21	4.60	7.4	37.0192	36.0000
0.018400	34.30	4.61	7.4	37.0192	36.0000
0.018500	34.39	4.62	7.4	37.0192	36.0000
0.018600	34.49	4.64	7.4	37.0192	36.0000
0.018700	34.58	4.65	7.4	37.0192	36.0000
0.018800	34.67	4.66	7.4	37.0192	36.0000
0.018900	34.76	4.67	7.4	37.0192	36.0000
0.019000	34.86	4.69	7.4	37.0192	36.0000
0.019100	34.95	4.70	7.4	37.0192	36.0000
0.019200	35.04	4.71	7.4	37.0192	36.0000
0.019300	35.13	4.72	7.4	37.0192	36.0000
0.019400	35.22	4.73	7.4	37.0192	36.0000
0.019500	35.31	4.75	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.019600	35.40	4.76	7.4	37.0192	36.0000
0.019700	35.49	4.77	7.4	37.0192	36.0000
0.019800	35.58	4.78	7.4	37.0192	36.0000
0.019900	35.67	4.79	7.4	37.0192	36.0000
0.020000	35.76	4.81	7.4	37.0192	36.0000
0.020100	35.85	4.82	7.4	37.0192	36.0000
0.020200	35.94	4.83	7.4	37.0192	36.0000
0.020300	36.03	4.84	7.4	37.0192	36.0000
0.020400	36.12	4.85	7.4	37.0192	36.0000
0.020500	36.21	4.87	7.4	37.0192	36.0000
0.020600	36.29	4.88	7.4	37.0192	36.0000
0.020700	36.38	4.89	7.4	37.0192	36.0000
0.020800	36.47	4.90	7.4	37.0192	36.0000
0.020900	36.56	4.91	7.4	37.0192	36.0000
0.021000	36.65	4.93	7.4	37.0192	36.0000
0.021100	36.73	4.94	7.4	37.0192	36.0000
0.021200	36.82	4.95	7.4	37.0192	36.0000
0.021300	36.91	4.96	7.4	37.0192	36.0000
0.021400	36.99	4.97	7.4	37.0192	36.0000
0.021500	37.08	4.98	7.4	37.0192	36.0000
0.021600	37.17	5.00	7.4	37.0192	36.0000
0.021700	37.25	5.01	7.4	37.0192	36.0000
0.021800	37.34	5.02	7.4	37.0192	36.0000
0.021900	37.42	5.03	7.4	37.0192	36.0000
0.022000	37.51	5.04	7.4	37.0192	36.0000
0.022100	37.59	5.05	7.4	37.0192	36.0000
0.022200	37.68	5.06	7.4	37.0192	36.0000
0.022300	37.76	5.08	7.4	37.0192	36.0000
0.022400	37.85	5.09	7.4	37.0192	36.0000
0.022500	37.93	5.10	7.4	37.0192	36.0000
0.022600	38.02	5.11	7.4	37.0192	36.0000
0.022700	38.10	5.12	7.4	37.0192	36.0000
0.022800	38.18	5.13	7.4	37.0192	36.0000
0.022900	38.27	5.14	7.4	37.0192	36.0000
0.023000	38.35	5.15	7.4	37.0192	36.0000
0.023100	38.43	5.17	7.4	37.0192	36.0000
0.023200	38.52	5.18	7.4	37.0192	36.0000
0.023300	38.60	5.19	7.4	37.0192	36.0000
0.023400	38.68	5.20	7.4	37.0192	36.0000
0.023500	38.77	5.21	7.4	37.0192	36.0000
0.023600	38.85	5.22	7.4	37.0192	36.0000
0.023700	38.93	5.23	7.4	37.0192	36.0000
0.023800	39.01	5.24	7.4	37.0192	36.0000
0.023900	39.09	5.25	7.4	37.0192	36.0000
0.024000	39.18	5.27	7.4	37.0192	36.0000
0.024100	39.26	5.28	7.4	37.0192	36.0000
0.024200	39.34	5.29	7.4	37.0192	36.0000
0.024300	39.42	5.30	7.4	37.0192	36.0000
0.024400	39.50	5.31	7.4	37.0192	36.0000
0.024500	39.58	5.32	7.4	37.0192	36.0000
0.024600	39.66	5.33	7.4	37.0192	36.0000
0.024700	39.74	5.34	7.4	37.0192	36.0000
0.024800	39.82	5.35	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.024900	39.90	5.36	7.4	37.0192	36.0000
0.025000	39.98	5.37	7.4	37.0192	36.0000
0.025100	40.06	5.38	7.4	37.0192	36.0000
0.025200	40.14	5.40	7.4	37.0192	36.0000
0.025300	40.22	5.41	7.4	37.0192	36.0000
0.025400	40.30	5.42	7.4	37.0192	36.0000
0.025500	40.38	5.43	7.4	37.0192	36.0000
0.025600	40.46	5.44	7.4	37.0192	36.0000
0.025700	40.54	5.45	7.4	37.0192	36.0000
0.025800	40.62	5.46	7.4	37.0192	36.0000
0.025900	40.70	5.47	7.4	37.0192	36.0000
0.026000	40.78	5.48	7.4	37.0192	36.0000
0.026100	40.85	5.49	7.4	37.0192	36.0000
0.026200	40.93	5.50	7.4	37.0192	36.0000
0.026300	41.01	5.51	7.4	37.0192	36.0000
0.026400	41.09	5.52	7.4	37.0192	36.0000
0.026500	41.17	5.53	7.4	37.0192	36.0000
0.026600	41.24	5.54	7.4	37.0192	36.0000
0.026700	41.32	5.55	7.4	37.0192	36.0000
0.026800	41.40	5.56	7.4	37.0192	36.0000
0.026900	41.47	5.57	7.4	37.0192	36.0000
0.027000	41.55	5.58	7.4	37.0192	36.0000
0.027100	41.63	5.60	7.4	37.0192	36.0000
0.027200	41.71	5.61	7.4	37.0192	36.0000
0.027300	41.78	5.62	7.4	37.0192	36.0000
0.027400	41.86	5.63	7.4	37.0192	36.0000
0.027500	41.93	5.64	7.4	37.0192	36.0000
0.027600	42.01	5.65	7.4	37.0192	36.0000
0.027700	42.09	5.66	7.4	37.0192	36.0000
0.027800	42.16	5.67	7.4	37.0192	36.0000
0.027900	42.24	5.68	7.4	37.0192	36.0000
0.028000	42.31	5.69	7.4	37.0192	36.0000
0.028100	42.39	5.70	7.4	37.0192	36.0000
0.028200	42.47	5.71	7.4	37.0192	36.0000
0.028300	42.54	5.72	7.4	37.0192	36.0000
0.028400	42.62	5.73	7.4	37.0192	36.0000
0.028500	42.69	5.74	7.4	37.0192	36.0000
0.028600	42.77	5.75	7.4	37.0192	36.0000
0.028700	42.84	5.76	7.4	37.0192	36.0000
0.028800	42.91	5.77	7.4	37.0192	36.0000
0.028900	42.99	5.78	7.4	37.0192	36.0000
0.029000	43.06	5.79	7.4	37.0192	36.0000
0.029100	43.14	5.80	7.4	37.0192	36.0000
0.029200	43.21	5.81	7.4	37.0192	36.0000
0.029300	43.29	5.82	7.4	37.0192	36.0000
0.029400	43.36	5.83	7.4	37.0192	36.0000
0.029500	43.43	5.84	7.4	37.0192	36.0000
0.029600	43.51	5.85	7.4	37.0192	36.0000
0.029700	43.58	5.86	7.4	37.0192	36.0000
0.029800	43.65	5.87	7.4	37.0192	36.0000
0.029900	43.73	5.88	7.4	37.0192	36.0000
0.030000	43.80	5.89	7.4	37.0192	36.0000
0.030100	43.87	5.90	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.030200	43.95	5.91	7.4	37.0192	36.0000
0.030300	44.02	5.92	7.4	37.0192	36.0000
0.030400	44.09	5.93	7.4	37.0192	36.0000
0.030500	44.16	5.94	7.4	37.0192	36.0000
0.030600	44.24	5.95	7.4	37.0192	36.0000
0.030700	44.31	5.96	7.4	37.0192	36.0000
0.030800	44.38	5.96	7.4	37.0192	36.0000
0.030900	44.45	5.97	7.4	37.0192	36.0000
0.031000	44.52	5.98	7.4	37.0192	36.0000
0.031100	44.60	5.99	7.4	37.0192	36.0000
0.031200	44.67	6.00	7.4	37.0192	36.0000
0.031300	44.74	6.01	7.4	37.0192	36.0000
0.031400	44.81	6.02	7.4	37.0192	36.0000
0.031500	44.88	6.03	7.4	37.0192	36.0000
0.031600	44.95	6.04	7.4	37.0192	36.0000
0.031700	45.02	6.05	7.4	37.0192	36.0000
0.031800	45.09	6.06	7.4	37.0192	36.0000
0.031900	45.17	6.07	7.4	37.0192	36.0000
0.032000	45.24	6.08	7.4	37.0192	36.0000
0.032100	45.31	6.09	7.4	37.0192	36.0000
0.032200	45.38	6.10	7.4	37.0192	36.0000
0.032300	45.45	6.11	7.4	37.0192	36.0000
0.032400	45.52	6.12	7.4	37.0192	36.0000
0.032500	45.59	6.13	7.4	37.0192	36.0000
0.032600	45.66	6.14	7.4	37.0192	36.0000
0.032700	45.73	6.15	7.4	37.0192	36.0000
0.032800	45.80	6.16	7.4	37.0192	36.0000
0.032900	45.87	6.16	7.4	37.0192	36.0000
0.033000	45.94	6.17	7.4	37.0192	36.0000
0.033100	46.01	6.18	7.4	37.0192	36.0000
0.033200	46.08	6.19	7.4	37.0192	36.0000
0.033300	46.15	6.20	7.4	37.0192	36.0000
0.033400	46.21	6.21	7.4	37.0192	36.0000
0.033500	46.28	6.22	7.4	37.0192	36.0000
0.033600	46.35	6.23	7.4	37.0192	36.0000
0.033700	46.42	6.24	7.4	37.0192	36.0000
0.033800	46.49	6.25	7.4	37.0192	36.0000
0.033900	46.56	6.26	7.4	37.0192	36.0000
0.034000	46.63	6.27	7.4	37.0192	36.0000
0.034100	46.70	6.28	7.4	37.0192	36.0000
0.034200	46.76	6.29	7.4	37.0192	36.0000
0.034300	46.83	6.29	7.4	37.0192	36.0000
0.034400	46.90	6.30	7.4	37.0192	36.0000
0.034500	46.97	6.31	7.4	37.0192	36.0000
0.034600	47.04	6.32	7.4	37.0192	36.0000
0.034700	47.11	6.33	7.4	37.0192	36.0000
0.034800	47.17	6.34	7.4	37.0192	36.0000
0.034900	47.24	6.35	7.4	37.0192	36.0000
0.035000	47.31	6.36	7.4	37.0192	36.0000
0.035100	47.38	6.37	7.4	37.0192	36.0000
0.035200	47.44	6.38	7.4	37.0192	36.0000
0.035300	47.51	6.39	7.4	37.0192	36.0000
0.035400	47.58	6.39	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.035500	47.65	6.40	7.4	37.0192	36.0000
0.035600	47.71	6.41	7.4	37.0192	36.0000
0.035700	47.78	6.42	7.4	37.0192	36.0000
0.035800	47.85	6.43	7.4	37.0192	36.0000
0.035900	47.91	6.44	7.4	37.0192	36.0000
0.036000	47.98	6.45	7.4	37.0192	36.0000
0.036100	48.05	6.46	7.4	37.0192	36.0000
0.036200	48.11	6.47	7.4	37.0192	36.0000
0.036300	48.18	6.48	7.4	37.0192	36.0000
0.036400	48.25	6.48	7.4	37.0192	36.0000
0.036500	48.31	6.49	7.4	37.0192	36.0000
0.036600	48.38	6.50	7.4	37.0192	36.0000
0.036700	48.44	6.51	7.4	37.0192	36.0000
0.036800	48.51	6.52	7.4	37.0192	36.0000
0.036900	48.58	6.53	7.4	37.0192	36.0000
0.037000	48.64	6.54	7.4	37.0192	36.0000
0.037100	48.71	6.55	7.4	37.0192	36.0000
0.037200	48.77	6.56	7.4	37.0192	36.0000
0.037300	48.84	6.56	7.4	37.0192	36.0000
0.037400	48.90	6.57	7.4	37.0192	36.0000
0.037500	48.97	6.58	7.4	37.0192	36.0000
0.037600	49.03	6.59	7.4	37.0192	36.0000
0.037700	49.10	6.60	7.4	37.0192	36.0000
0.037800	49.16	6.61	7.4	37.0192	36.0000
0.037900	49.23	6.62	7.4	37.0192	36.0000
0.038000	49.29	6.63	7.4	37.0192	36.0000
0.038100	49.36	6.63	7.4	37.0192	36.0000
0.038200	49.42	6.64	7.4	37.0192	36.0000
0.038300	49.49	6.65	7.4	37.0192	36.0000
0.038400	49.55	6.66	7.4	37.0192	36.0000
0.038500	49.62	6.67	7.4	37.0192	36.0000
0.038600	49.68	6.68	7.4	37.0192	36.0000
0.038700	49.75	6.69	7.4	37.0192	36.0000
0.038800	49.81	6.69	7.4	37.0192	36.0000
0.038900	49.87	6.70	7.4	37.0192	36.0000
0.039000	49.94	6.71	7.4	37.0192	36.0000
0.039100	50.00	6.72	7.4	37.0192	36.0000
0.039200	50.07	6.73	7.4	37.0192	36.0000
0.039300	50.13	6.74	7.4	37.0192	36.0000
0.039400	50.19	6.75	7.4	37.0192	36.0000
0.039500	50.26	6.76	7.4	37.0192	36.0000
0.039600	50.32	6.76	7.4	37.0192	36.0000
0.039700	50.39	6.77	7.4	37.0192	36.0000
0.039800	50.45	6.78	7.4	37.0192	36.0000
0.039900	50.51	6.79	7.4	37.0192	36.0000
0.040000	50.58	6.80	7.4	37.0192	36.0000
0.040100	50.64	6.81	7.4	37.0192	36.0000
0.040200	50.70	6.81	7.4	37.0192	36.0000
0.040300	50.76	6.82	7.4	37.0192	36.0000
0.040400	50.83	6.83	7.4	37.0192	36.0000
0.040500	50.89	6.84	7.4	37.0192	36.0000
0.040600	50.95	6.85	7.4	37.0192	36.0000
0.040700	51.02	6.86	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.040800	51.08	6.87	7.4	37.0192	36.0000
0.040900	51.14	6.87	7.4	37.0192	36.0000
0.041000	51.20	6.88	7.4	37.0192	36.0000
0.041100	51.27	6.89	7.4	37.0192	36.0000
0.041200	51.33	6.90	7.4	37.0192	36.0000
0.041300	51.39	6.91	7.4	37.0192	36.0000
0.041400	51.45	6.92	7.4	37.0192	36.0000
0.041500	51.51	6.92	7.4	37.0192	36.0000
0.041600	51.58	6.93	7.4	37.0192	36.0000
0.041700	51.64	6.94	7.4	37.0192	36.0000
0.041800	51.70	6.95	7.4	37.0192	36.0000
0.041900	51.76	6.96	7.4	37.0192	36.0000
0.042000	51.82	6.97	7.4	37.0192	36.0000
0.042100	51.89	6.97	7.4	37.0192	36.0000
0.042200	51.95	6.98	7.4	37.0192	36.0000
0.042300	52.01	6.99	7.4	37.0192	36.0000
0.042400	52.07	7.00	7.4	37.0192	36.0000
0.042500	52.13	7.01	7.4	37.0192	36.0000
0.042600	52.19	7.02	7.4	37.0192	36.0000
0.042700	52.25	7.02	7.4	37.0192	36.0000
0.042800	52.32	7.03	7.4	37.0192	36.0000
0.042900	52.38	7.04	7.4	37.0192	36.0000
0.043000	52.44	7.05	7.4	37.0192	36.0000
0.043100	52.50	7.06	7.4	37.0192	36.0000
0.043200	52.56	7.06	7.4	37.0192	36.0000
0.043300	52.62	7.07	7.4	37.0192	36.0000
0.043400	52.68	7.08	7.4	37.0192	36.0000
0.043500	52.74	7.09	7.4	37.0192	36.0000
0.043600	52.80	7.10	7.4	37.0192	36.0000
0.043700	52.86	7.11	7.4	37.0192	36.0000
0.043800	52.92	7.11	7.4	37.0192	36.0000
0.043900	52.98	7.12	7.4	37.0192	36.0000
0.044000	53.04	7.13	7.4	37.0192	36.0000
0.044100	53.10	7.14	7.4	37.0192	36.0000
0.044200	53.16	7.15	7.4	37.0192	36.0000
0.044300	53.22	7.15	7.4	37.0192	36.0000
0.044400	53.28	7.16	7.4	37.0192	36.0000
0.044500	53.34	7.17	7.4	37.0192	36.0000
0.044600	53.40	7.18	7.4	37.0192	36.0000
0.044700	53.46	7.19	7.4	37.0192	36.0000
0.044800	53.52	7.19	7.4	37.0192	36.0000
0.044900	53.58	7.20	7.4	37.0192	36.0000
0.045000	53.64	7.21	7.4	37.0192	36.0000
0.045100	53.70	7.22	7.4	37.0192	36.0000
0.045200	53.76	7.23	7.4	37.0192	36.0000
0.045300	53.82	7.23	7.4	37.0192	36.0000
0.045400	53.88	7.24	7.4	37.0192	36.0000
0.045500	53.94	7.25	7.4	37.0192	36.0000
0.045600	54.00	7.26	7.4	37.0192	36.0000
0.045700	54.06	7.27	7.4	37.0192	36.0000
0.045800	54.12	7.27	7.4	37.0192	36.0000
0.045900	54.18	7.28	7.4	37.0192	36.0000
0.046000	54.24	7.29	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.046100	54.29	7.30	7.4	37.0192	36.0000
0.046200	54.35	7.31	7.4	37.0192	36.0000
0.046300	54.41	7.31	7.4	37.0192	36.0000
0.046400	54.47	7.32	7.4	37.0192	36.0000
0.046500	54.53	7.33	7.4	37.0192	36.0000
0.046600	54.59	7.34	7.4	37.0192	36.0000
0.046700	54.65	7.35	7.4	37.0192	36.0000
0.046800	54.71	7.35	7.4	37.0192	36.0000
0.046900	54.76	7.36	7.4	37.0192	36.0000
0.047000	54.82	7.37	7.4	37.0192	36.0000
0.047100	54.88	7.38	7.4	37.0192	36.0000
0.047200	54.94	7.38	7.4	37.0192	36.0000
0.047300	55.00	7.39	7.4	37.0192	36.0000
0.047400	55.05	7.40	7.4	37.0192	36.0000
0.047500	55.11	7.41	7.4	37.0192	36.0000
0.047600	55.17	7.42	7.4	37.0192	36.0000
0.047700	55.23	7.42	7.4	37.0192	36.0000
0.047800	55.29	7.43	7.4	37.0192	36.0000
0.047900	55.34	7.44	7.4	37.0192	36.0000
0.048000	55.40	7.45	7.4	37.0192	36.0000
0.048100	55.46	7.45	7.4	37.0192	36.0000
0.048200	55.52	7.46	7.4	37.0192	36.0000
0.048300	55.58	7.47	7.4	37.0192	36.0000
0.048400	55.63	7.48	7.4	37.0192	36.0000
0.048500	55.69	7.49	7.4	37.0192	36.0000
0.048600	55.75	7.49	7.4	37.0192	36.0000
0.048700	55.80	7.50	7.4	37.0192	36.0000
0.048800	55.86	7.51	7.4	37.0192	36.0000
0.048900	55.92	7.52	7.4	37.0192	36.0000
0.049000	55.98	7.52	7.4	37.0192	36.0000
0.049100	56.03	7.53	7.4	37.0192	36.0000
0.049200	56.09	7.54	7.4	37.0192	36.0000
0.049300	56.15	7.55	7.4	37.0192	36.0000
0.049400	56.20	7.55	7.4	37.0192	36.0000
0.049500	56.26	7.56	7.4	37.0192	36.0000
0.049600	56.32	7.57	7.4	37.0192	36.0000
0.049700	56.37	7.58	7.4	37.0192	36.0000
0.049800	56.43	7.58	7.4	37.0192	36.0000
0.049900	56.49	7.59	7.4	37.0192	36.0000
0.050000	56.54	7.60	7.4	37.0192	36.0000
0.050100	56.60	7.61	7.4	37.0192	36.0000
0.050200	56.66	7.62	7.4	37.0192	36.0000
0.050300	56.71	7.62	7.4	37.0192	36.0000
0.050400	56.77	7.63	7.4	37.0192	36.0000
0.050500	56.83	7.64	7.4	37.0192	36.0000
0.050600	56.88	7.65	7.4	37.0192	36.0000
0.050700	56.94	7.65	7.4	37.0192	36.0000
0.050800	57.00	7.66	7.4	37.0192	36.0000
0.050900	57.05	7.67	7.4	37.0192	36.0000
0.051000	57.11	7.68	7.4	37.0192	36.0000
0.051100	57.16	7.68	7.4	37.0192	36.0000
0.051200	57.22	7.69	7.4	37.0192	36.0000
0.051300	57.28	7.70	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.051400	57.33	7.71	7.4	37.0192	36.0000
0.051500	57.39	7.71	7.4	37.0192	36.0000
0.051600	57.44	7.72	7.4	37.0192	36.0000
0.051700	57.50	7.73	7.4	37.0192	36.0000
0.051800	57.55	7.74	7.4	37.0192	36.0000
0.051900	57.61	7.74	7.4	37.0192	36.0000
0.052000	57.66	7.75	7.4	37.0192	36.0000
0.052100	57.72	7.76	7.4	37.0192	36.0000
0.052200	57.78	7.77	7.4	37.0192	36.0000
0.052300	57.83	7.77	7.4	37.0192	36.0000
0.052400	57.89	7.78	7.4	37.0192	36.0000
0.052500	57.94	7.79	7.4	37.0192	36.0000
0.052600	58.00	7.80	7.4	37.0192	36.0000
0.052700	58.05	7.80	7.4	37.0192	36.0000
0.052800	58.11	7.81	7.4	37.0192	36.0000
0.052900	58.16	7.82	7.4	37.0192	36.0000
0.053000	58.22	7.82	7.4	37.0192	36.0000
0.053100	58.27	7.83	7.4	37.0192	36.0000
0.053200	58.33	7.84	7.4	37.0192	36.0000
0.053300	58.38	7.85	7.4	37.0192	36.0000
0.053400	58.44	7.85	7.4	37.0192	36.0000
0.053500	58.49	7.86	7.4	37.0192	36.0000
0.053600	58.55	7.87	7.4	37.0192	36.0000
0.053700	58.60	7.88	7.4	37.0192	36.0000
0.053800	58.65	7.88	7.4	37.0192	36.0000
0.053900	58.71	7.89	7.4	37.0192	36.0000
0.054000	58.76	7.90	7.4	37.0192	36.0000
0.054100	58.82	7.91	7.4	37.0192	36.0000
0.054200	58.87	7.91	7.4	37.0192	36.0000
0.054300	58.93	7.92	7.4	37.0192	36.0000
0.054400	58.98	7.93	7.4	37.0192	36.0000
0.054500	59.03	7.93	7.4	37.0192	36.0000
0.054600	59.09	7.94	7.4	37.0192	36.0000
0.054700	59.14	7.95	7.4	37.0192	36.0000
0.054800	59.20	7.96	7.4	37.0192	36.0000
0.054900	59.25	7.96	7.4	37.0192	36.0000
0.055000	59.30	7.97	7.4	37.0192	36.0000
0.055100	59.36	7.98	7.4	37.0192	36.0000
0.055200	59.41	7.99	7.4	37.0192	36.0000
0.055300	59.47	7.99	7.4	37.0192	36.0000
0.055400	59.52	8.00	7.4	37.0192	36.0000
0.055500	59.57	8.01	7.4	37.0192	36.0000
0.055600	59.63	8.01	7.4	37.0192	36.0000
0.055700	59.68	8.02	7.4	37.0192	36.0000
0.055800	59.73	8.03	7.4	37.0192	36.0000
0.055900	59.79	8.04	7.4	37.0192	36.0000
0.056000	59.84	8.04	7.4	37.0192	36.0000
0.056100	59.89	8.05	7.4	37.0192	36.0000
0.056200	59.95	8.06	7.4	37.0192	36.0000
0.056300	60.00	8.06	7.4	37.0192	36.0000
0.056400	60.05	8.07	7.4	37.0192	36.0000
0.056500	60.11	8.08	7.4	37.0192	36.0000
0.056600	60.16	8.09	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.056700	60.21	8.09	7.4	37.0192	36.0000
0.056800	60.27	8.10	7.4	37.0192	36.0000
0.056900	60.32	8.11	7.4	37.0192	36.0000
0.057000	60.37	8.11	7.4	37.0192	36.0000
0.057100	60.43	8.12	7.4	37.0192	36.0000
0.057200	60.48	8.13	7.4	37.0192	36.0000
0.057300	60.53	8.14	7.4	37.0192	36.0000
0.057400	60.58	8.14	7.4	37.0192	36.0000
0.057500	60.64	8.15	7.4	37.0192	36.0000
0.057600	60.69	8.16	7.4	37.0192	36.0000
0.057700	60.74	8.16	7.4	37.0192	36.0000
0.057800	60.80	8.17	7.4	37.0192	36.0000
0.057900	60.85	8.18	7.4	37.0192	36.0000
0.058000	60.90	8.19	7.4	37.0192	36.0000
0.058100	60.95	8.19	7.4	37.0192	36.0000
0.058200	61.01	8.20	7.4	37.0192	36.0000
0.058300	61.06	8.21	7.4	37.0192	36.0000
0.058400	61.11	8.21	7.4	37.0192	36.0000
0.058500	61.16	8.22	7.4	37.0192	36.0000
0.058600	61.21	8.23	7.4	37.0192	36.0000
0.058700	61.27	8.23	7.4	37.0192	36.0000
0.058800	61.32	8.24	7.4	37.0192	36.0000
0.058900	61.37	8.25	7.4	37.0192	36.0000
0.059000	61.42	8.26	7.4	37.0192	36.0000
0.059100	61.48	8.26	7.4	37.0192	36.0000
0.059200	61.53	8.27	7.4	37.0192	36.0000
0.059300	61.58	8.28	7.4	37.0192	36.0000
0.059400	61.63	8.28	7.4	37.0192	36.0000
0.059500	61.68	8.29	7.4	37.0192	36.0000
0.059600	61.73	8.30	7.4	37.0192	36.0000
0.059700	61.79	8.30	7.4	37.0192	36.0000
0.059800	61.84	8.31	7.4	37.0192	36.0000
0.059900	61.89	8.32	7.4	37.0192	36.0000
0.060000	61.94	8.33	7.4	37.0192	36.0000
0.060100	61.99	8.33	7.4	37.0192	36.0000
0.060200	62.04	8.34	7.4	37.0192	36.0000
0.060300	62.10	8.35	7.4	37.0192	36.0000
0.060400	62.15	8.35	7.4	37.0192	36.0000
0.060500	62.20	8.36	7.4	37.0192	36.0000
0.060600	62.25	8.37	7.4	37.0192	36.0000
0.060700	62.30	8.37	7.4	37.0192	36.0000
0.060800	62.35	8.38	7.4	37.0192	36.0000
0.060900	62.40	8.39	7.4	37.0192	36.0000
0.061000	62.46	8.39	7.4	37.0192	36.0000
0.061100	62.51	8.40	7.4	37.0192	36.0000
0.061200	62.56	8.41	7.4	37.0192	36.0000
0.061300	62.61	8.42	7.4	37.0192	36.0000
0.061400	62.66	8.42	7.4	37.0192	36.0000
0.061500	62.71	8.43	7.4	37.0192	36.0000
0.061600	62.76	8.44	7.4	37.0192	36.0000
0.061700	62.81	8.44	7.4	37.0192	36.0000
0.061800	62.86	8.45	7.4	37.0192	36.0000
0.061900	62.91	8.46	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.062000	62.97	8.46	7.4	37.0192	36.0000
0.062100	63.02	8.47	7.4	37.0192	36.0000
0.062200	63.07	8.48	7.4	37.0192	36.0000
0.062300	63.12	8.48	7.4	37.0192	36.0000
0.062400	63.17	8.49	7.4	37.0192	36.0000
0.062500	63.22	8.50	7.4	37.0192	36.0000
0.062600	63.27	8.50	7.4	37.0192	36.0000
0.062700	63.32	8.51	7.4	37.0192	36.0000
0.062800	63.37	8.52	7.4	37.0192	36.0000
0.062900	63.42	8.52	7.4	37.0192	36.0000
0.063000	63.47	8.53	7.4	37.0192	36.0000
0.063100	63.52	8.54	7.4	37.0192	36.0000
0.063200	63.57	8.54	7.4	37.0192	36.0000
0.063300	63.62	8.55	7.4	37.0192	36.0000
0.063400	63.67	8.56	7.4	37.0192	36.0000
0.063500	63.72	8.56	7.4	37.0192	36.0000
0.063600	63.77	8.57	7.4	37.0192	36.0000
0.063700	63.82	8.58	7.4	37.0192	36.0000
0.063800	63.87	8.59	7.4	37.0192	36.0000
0.063900	63.92	8.59	7.4	37.0192	36.0000
0.064000	63.97	8.60	7.4	37.0192	36.0000
0.064100	64.02	8.61	7.4	37.0192	36.0000
0.064200	64.07	8.61	7.4	37.0192	36.0000
0.064300	64.12	8.62	7.4	37.0192	36.0000
0.064400	64.17	8.63	7.4	37.0192	36.0000
0.064500	64.22	8.63	7.4	37.0192	36.0000
0.064600	64.27	8.64	7.4	37.0192	36.0000
0.064700	64.32	8.65	7.4	37.0192	36.0000
0.064800	64.37	8.65	7.4	37.0192	36.0000
0.064900	64.42	8.66	7.4	37.0192	36.0000
0.065000	64.47	8.67	7.4	37.0192	36.0000
0.065100	64.52	8.67	7.4	37.0192	36.0000
0.065200	64.57	8.68	7.4	37.0192	36.0000
0.065300	64.62	8.69	7.4	37.0192	36.0000
0.065400	64.67	8.69	7.4	37.0192	36.0000
0.065500	64.72	8.70	7.4	37.0192	36.0000
0.065600	64.77	8.71	7.4	37.0192	36.0000
0.065700	64.82	8.71	7.4	37.0192	36.0000
0.065800	64.87	8.72	7.4	37.0192	36.0000
0.065900	64.92	8.73	7.4	37.0192	36.0000
0.066000	64.97	8.73	7.4	37.0192	36.0000
0.066100	65.01	8.74	7.4	37.0192	36.0000
0.066200	65.06	8.75	7.4	37.0192	36.0000
0.066300	65.11	8.75	7.4	37.0192	36.0000
0.066400	65.16	8.76	7.4	37.0192	36.0000
0.066500	65.21	8.76	7.4	37.0192	36.0000
0.066600	65.26	8.77	7.4	37.0192	36.0000
0.066700	65.31	8.78	7.4	37.0192	36.0000
0.066800	65.36	8.78	7.4	37.0192	36.0000
0.066900	65.41	8.79	7.4	37.0192	36.0000
0.067000	65.46	8.80	7.4	37.0192	36.0000
0.067100	65.50	8.80	7.4	37.0192	36.0000
0.067200	65.55	8.81	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.067300	65.60	8.82	7.4	37.0192	36.0000
0.067400	65.65	8.82	7.4	37.0192	36.0000
0.067500	65.70	8.83	7.4	37.0192	36.0000
0.067600	65.75	8.84	7.4	37.0192	36.0000
0.067700	65.80	8.84	7.4	37.0192	36.0000
0.067800	65.84	8.85	7.4	37.0192	36.0000
0.067900	65.89	8.86	7.4	37.0192	36.0000
0.068000	65.94	8.86	7.4	37.0192	36.0000
0.068100	65.99	8.87	7.4	37.0192	36.0000
0.068200	66.04	8.88	7.4	37.0192	36.0000
0.068300	66.09	8.88	7.4	37.0192	36.0000
0.068400	66.14	8.89	7.4	37.0192	36.0000
0.068500	66.18	8.90	7.4	37.0192	36.0000
0.068600	66.23	8.90	7.4	37.0192	36.0000
0.068700	66.28	8.91	7.4	37.0192	36.0000
0.068800	66.33	8.92	7.4	37.0192	36.0000
0.068900	66.38	8.92	7.4	37.0192	36.0000
0.069000	66.43	8.93	7.4	37.0192	36.0000
0.069100	66.47	8.93	7.4	37.0192	36.0000
0.069200	66.52	8.94	7.4	37.0192	36.0000
0.069300	66.57	8.95	7.4	37.0192	36.0000
0.069400	66.62	8.95	7.4	37.0192	36.0000
0.069500	66.67	8.96	7.4	37.0192	36.0000
0.069600	66.71	8.97	7.4	37.0192	36.0000
0.069700	66.76	8.97	7.4	37.0192	36.0000
0.069800	66.81	8.98	7.4	37.0192	36.0000
0.069900	66.86	8.99	7.4	37.0192	36.0000
0.070000	66.90	8.99	7.4	37.0192	36.0000
0.070100	66.95	9.00	7.4	37.0192	36.0000
0.070200	67.00	9.01	7.4	37.0192	36.0000
0.070300	67.05	9.01	7.4	37.0192	36.0000
0.070400	67.10	9.02	7.4	37.0192	36.0000
0.070500	67.14	9.02	7.4	37.0192	36.0000
0.070600	67.19	9.03	7.4	37.0192	36.0000
0.070700	67.24	9.04	7.4	37.0192	36.0000
0.070800	67.29	9.04	7.4	37.0192	36.0000
0.070900	67.33	9.05	7.4	37.0192	36.0000
0.071000	67.38	9.06	7.4	37.0192	36.0000
0.071100	67.43	9.06	7.4	37.0192	36.0000
0.071200	67.48	9.07	7.4	37.0192	36.0000
0.071300	67.52	9.08	7.4	37.0192	36.0000
0.071400	67.57	9.08	7.4	37.0192	36.0000
0.071500	67.62	9.09	7.4	37.0192	36.0000
0.071600	67.67	9.09	7.4	37.0192	36.0000
0.071700	67.71	9.10	7.4	37.0192	36.0000
0.071800	67.76	9.11	7.4	37.0192	36.0000
0.071900	67.81	9.11	7.4	37.0192	36.0000
0.072000	67.85	9.12	7.4	37.0192	36.0000
0.072100	67.90	9.13	7.4	37.0192	36.0000
0.072200	67.95	9.13	7.4	37.0192	36.0000
0.072300	67.99	9.14	7.4	37.0192	36.0000
0.072400	68.04	9.15	7.4	37.0192	36.0000
0.072500	68.09	9.15	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.072600	68.14	9.16	7.4	37.0192	36.0000
0.072700	68.18	9.16	7.4	37.0192	36.0000
0.072800	68.23	9.17	7.4	37.0192	36.0000
0.072900	68.28	9.18	7.4	37.0192	36.0000
0.073000	68.32	9.18	7.4	37.0192	36.0000
0.073100	68.37	9.19	7.4	37.0192	36.0000
0.073200	68.42	9.20	7.4	37.0192	36.0000
0.073300	68.46	9.20	7.4	37.0192	36.0000
0.073400	68.51	9.21	7.4	37.0192	36.0000
0.073500	68.56	9.21	7.4	37.0192	36.0000
0.073600	68.60	9.22	7.4	37.0192	36.0000
0.073700	68.65	9.23	7.4	37.0192	36.0000
0.073800	68.70	9.23	7.4	37.0192	36.0000
0.073900	68.74	9.24	7.4	37.0192	36.0000
0.074000	68.79	9.25	7.4	37.0192	36.0000
0.074100	68.84	9.25	7.4	37.0192	36.0000
0.074200	68.88	9.26	7.4	37.0192	36.0000
0.074300	68.93	9.26	7.4	37.0192	36.0000
0.074400	68.98	9.27	7.4	37.0192	36.0000
0.074500	69.02	9.28	7.4	37.0192	36.0000
0.074600	69.07	9.28	7.4	37.0192	36.0000
0.074700	69.11	9.29	7.4	37.0192	36.0000
0.074800	69.16	9.30	7.4	37.0192	36.0000
0.074900	69.21	9.30	7.4	37.0192	36.0000
0.075000	69.25	9.31	7.4	37.0192	36.0000
0.075100	69.30	9.31	7.4	37.0192	36.0000
0.075200	69.35	9.32	7.4	37.0192	36.0000
0.075300	69.39	9.33	7.4	37.0192	36.0000
0.075400	69.44	9.33	7.4	37.0192	36.0000
0.075500	69.48	9.34	7.4	37.0192	36.0000
0.075600	69.53	9.35	7.4	37.0192	36.0000
0.075700	69.58	9.35	7.4	37.0192	36.0000
0.075800	69.62	9.36	7.4	37.0192	36.0000
0.075900	69.67	9.36	7.4	37.0192	36.0000
0.076000	69.71	9.37	7.4	37.0192	36.0000
0.076100	69.76	9.38	7.4	37.0192	36.0000
0.076200	69.80	9.38	7.4	37.0192	36.0000
0.076300	69.85	9.39	7.4	37.0192	36.0000
0.076400	69.90	9.39	7.4	37.0192	36.0000
0.076500	69.94	9.40	7.4	37.0192	36.0000
0.076600	69.99	9.41	7.4	37.0192	36.0000
0.076700	70.03	9.41	7.4	37.0192	36.0000
0.076800	70.08	9.42	7.4	37.0192	36.0000
0.076900	70.12	9.43	7.4	37.0192	36.0000
0.077000	70.17	9.43	7.4	37.0192	36.0000
0.077100	70.22	9.44	7.4	37.0192	36.0000
0.077200	70.26	9.44	7.4	37.0192	36.0000
0.077300	70.31	9.45	7.4	37.0192	36.0000
0.077400	70.35	9.46	7.4	37.0192	36.0000
0.077500	70.40	9.46	7.4	37.0192	36.0000
0.077600	70.44	9.47	7.4	37.0192	36.0000
0.077700	70.49	9.47	7.4	37.0192	36.0000
0.077800	70.53	9.48	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.077900	70.58	9.49	7.4	37.0192	36.0000
0.078000	70.62	9.49	7.4	37.0192	36.0000
0.078100	70.67	9.50	7.4	37.0192	36.0000
0.078200	70.71	9.50	7.4	37.0192	36.0000
0.078300	70.76	9.51	7.4	37.0192	36.0000
0.078400	70.81	9.52	7.4	37.0192	36.0000
0.078500	70.85	9.52	7.4	37.0192	36.0000
0.078600	70.90	9.53	7.4	37.0192	36.0000
0.078700	70.94	9.54	7.4	37.0192	36.0000
0.078800	70.99	9.54	7.4	37.0192	36.0000
0.078900	71.03	9.55	7.4	37.0192	36.0000
0.079000	71.08	9.55	7.4	37.0192	36.0000
0.079100	71.12	9.56	7.4	37.0192	36.0000
0.079200	71.17	9.57	7.4	37.0192	36.0000
0.079300	71.21	9.57	7.4	37.0192	36.0000
0.079400	71.26	9.58	7.4	37.0192	36.0000
0.079500	71.30	9.58	7.4	37.0192	36.0000
0.079600	71.35	9.59	7.4	37.0192	36.0000
0.079700	71.39	9.60	7.4	37.0192	36.0000
0.079800	71.43	9.60	7.4	37.0192	36.0000
0.079900	71.48	9.61	7.4	37.0192	36.0000
0.080000	71.52	9.61	7.4	37.0192	36.0000
0.080100	71.57	9.62	7.4	37.0192	36.0000
0.080200	71.61	9.63	7.4	37.0192	36.0000
0.080300	71.66	9.63	7.4	37.0192	36.0000
0.080400	71.70	9.64	7.4	37.0192	36.0000
0.080500	71.75	9.64	7.4	37.0192	36.0000
0.080600	71.79	9.65	7.4	37.0192	36.0000
0.080700	71.84	9.66	7.4	37.0192	36.0000
0.080800	71.88	9.66	7.4	37.0192	36.0000
0.080900	71.93	9.67	7.4	37.0192	36.0000
0.081000	71.97	9.67	7.4	37.0192	36.0000
0.081100	72.01	9.68	7.4	37.0192	36.0000
0.081200	72.06	9.69	7.4	37.0192	36.0000
0.081300	72.10	9.69	7.4	37.0192	36.0000
0.081400	72.15	9.70	7.4	37.0192	36.0000
0.081500	72.19	9.70	7.4	37.0192	36.0000
0.081600	72.24	9.71	7.4	37.0192	36.0000
0.081700	72.28	9.72	7.4	37.0192	36.0000
0.081800	72.32	9.72	7.4	37.0192	36.0000
0.081900	72.37	9.73	7.4	37.0192	36.0000
0.082000	72.41	9.73	7.4	37.0192	36.0000
0.082100	72.46	9.74	7.4	37.0192	36.0000
0.082200	72.50	9.74	7.4	37.0192	36.0000
0.082300	72.55	9.75	7.4	37.0192	36.0000
0.082400	72.59	9.76	7.4	37.0192	36.0000
0.082500	72.63	9.76	7.4	37.0192	36.0000
0.082600	72.68	9.77	7.4	37.0192	36.0000
0.082700	72.72	9.77	7.4	37.0192	36.0000
0.082800	72.77	9.78	7.4	37.0192	36.0000
0.082900	72.81	9.79	7.4	37.0192	36.0000
0.083000	72.85	9.79	7.4	37.0192	36.0000
0.083100	72.90	9.80	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.083200	72.94	9.80	7.4	37.0192	36.0000
0.083300	72.98	9.81	7.4	37.0192	36.0000
0.083400	73.03	9.82	7.4	37.0192	36.0000
0.083500	73.07	9.82	7.4	37.0192	36.0000
0.083600	73.12	9.83	7.4	37.0192	36.0000
0.083700	73.16	9.83	7.4	37.0192	36.0000
0.083800	73.20	9.84	7.4	37.0192	36.0000
0.083900	73.25	9.84	7.4	37.0192	36.0000
0.084000	73.29	9.85	7.4	37.0192	36.0000
0.084100	73.33	9.86	7.4	37.0192	36.0000
0.084200	73.38	9.86	7.4	37.0192	36.0000
0.084300	73.42	9.87	7.4	37.0192	36.0000
0.084400	73.46	9.87	7.4	37.0192	36.0000
0.084500	73.51	9.88	7.4	37.0192	36.0000
0.084600	73.55	9.89	7.4	37.0192	36.0000
0.084700	73.60	9.89	7.4	37.0192	36.0000
0.084800	73.64	9.90	7.4	37.0192	36.0000
0.084900	73.68	9.90	7.4	37.0192	36.0000
0.085000	73.73	9.91	7.4	37.0192	36.0000
0.085100	73.77	9.92	7.4	37.0192	36.0000
0.085200	73.81	9.92	7.4	37.0192	36.0000
0.085300	73.86	9.93	7.4	37.0192	36.0000
0.085400	73.90	9.93	7.4	37.0192	36.0000
0.085500	73.94	9.94	7.4	37.0192	36.0000
0.085600	73.99	9.94	7.4	37.0192	36.0000
0.085700	74.03	9.95	7.4	37.0192	36.0000
0.085800	74.07	9.96	7.4	37.0192	36.0000
0.085900	74.11	9.96	7.4	37.0192	36.0000
0.086000	74.16	9.97	7.4	37.0192	36.0000
0.086100	74.20	9.97	7.4	37.0192	36.0000
0.086200	74.24	9.98	7.4	37.0192	36.0000
0.086300	74.29	9.98	7.4	37.0192	36.0000
0.086400	74.33	9.99	7.4	37.0192	36.0000
0.086500	74.37	10.00	7.4	37.0192	36.0000
0.086600	74.42	10.00	7.4	37.0192	36.0000
0.086700	74.46	10.01	7.4	37.0192	36.0000
0.086800	74.50	10.01	7.4	37.0192	36.0000
0.086900	74.54	10.02	7.4	37.0192	36.0000
0.087000	74.59	10.03	7.4	37.0192	36.0000
0.087100	74.63	10.03	7.4	37.0192	36.0000
0.087200	74.67	10.04	7.4	37.0192	36.0000
0.087300	74.72	10.04	7.4	37.0192	36.0000
0.087400	74.76	10.05	7.4	37.0192	36.0000
0.087500	74.80	10.05	7.4	37.0192	36.0000
0.087600	74.84	10.06	7.4	37.0192	36.0000
0.087700	74.89	10.07	7.4	37.0192	36.0000
0.087800	74.93	10.07	7.4	37.0192	36.0000
0.087900	74.97	10.08	7.4	37.0192	36.0000
0.088000	75.02	10.08	7.4	37.0192	36.0000
0.088100	75.06	10.09	7.4	37.0192	36.0000
0.088200	75.10	10.09	7.4	37.0192	36.0000
0.088300	75.14	10.10	7.4	37.0192	36.0000
0.088400	75.19	10.11	7.4	37.0192	36.0000

6" CURB - 56' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.088500	75.23	10.11	7.4	37.0192	36.0000
0.088600	75.27	10.12	7.4	37.0192	36.0000
0.088700	75.31	10.12	7.4	37.0192	36.0000
0.088800	75.36	10.13	7.4	37.0192	36.0000
0.088900	75.40	10.13	7.4	37.0192	36.0000
0.089000	75.44	10.14	7.4	37.0192	36.0000
0.089100	75.48	10.15	7.4	37.0192	36.0000
0.089200	75.52	10.15	7.4	37.0192	36.0000
0.089300	75.57	10.16	7.4	37.0192	36.0000
0.089400	75.61	10.16	7.4	37.0192	36.0000
0.089500	75.65	10.17	7.4	37.0192	36.0000
0.089600	75.69	10.17	7.4	37.0192	36.0000
0.089700	75.74	10.18	7.4	37.0192	36.0000
0.089800	75.78	10.19	7.4	37.0192	36.0000
0.089900	75.82	10.19	7.4	37.0192	36.0000
0.090000	75.86	10.20	7.4	37.0192	36.0000

TECHNICAL APPENDIX

APPENDIX B.3

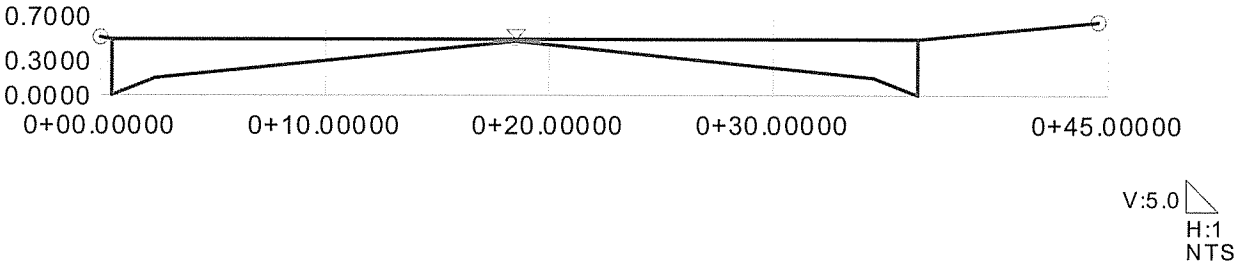
36' TC – TC to TC – Rating Table

by FlowMaster

PRIVATE STREET 36' TC - TC TO TC
Cross Section for Irregular Channel

Project Description	
Worksheet	PRIVATE STREET 36' TC
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Section Data		
Mannings Coefficie	0.015	
Slope	0.029850	ft/ft
Water Surface Elev	0.50	ft
Elevation Range	.00 to 0.66	
Discharge	43.69	cfs



PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Project Description	
Worksheet	PRIVATE STREET 36' TC
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Input Data	
Water Surface Elev	0.50 ft

Options	
Current Roughness Meth	ved Lotter's Method
Open Channel Weighting	ved Lotter's Method
Closed Channel Weightin	Horton's Method

Attribute	Minimum	Maximum	Increment
Slope (ft/ft)	0.000300	0.090000	0.000100

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.000300	4.38	0.59	7.4	37.0192	36.0000
0.000400	5.06	0.68	7.4	37.0192	36.0000
0.000500	5.65	0.76	7.4	37.0192	36.0000
0.000600	6.19	0.83	7.4	37.0192	36.0000
0.000700	6.69	0.90	7.4	37.0192	36.0000
0.000800	7.15	0.96	7.4	37.0192	36.0000
0.000900	7.59	1.02	7.4	37.0192	36.0000
0.001000	8.00	1.07	7.4	37.0192	36.0000
0.001100	8.39	1.13	7.4	37.0192	36.0000
0.001200	8.76	1.18	7.4	37.0192	36.0000
0.001300	9.12	1.23	7.4	37.0192	36.0000
0.001400	9.46	1.27	7.4	37.0192	36.0000
0.001500	9.79	1.32	7.4	37.0192	36.0000
0.001600	10.12	1.36	7.4	37.0192	36.0000
0.001700	10.43	1.40	7.4	37.0192	36.0000
0.001800	10.73	1.44	7.4	37.0192	36.0000
0.001900	11.02	1.48	7.4	37.0192	36.0000
0.002000	11.31	1.52	7.4	37.0192	36.0000
0.002100	11.59	1.56	7.4	37.0192	36.0000
0.002200	11.86	1.59	7.4	37.0192	36.0000
0.002300	12.13	1.63	7.4	37.0192	36.0000
0.002400	12.39	1.67	7.4	37.0192	36.0000
0.002500	12.64	1.70	7.4	37.0192	36.0000
0.002600	12.89	1.73	7.4	37.0192	36.0000
0.002700	13.14	1.77	7.4	37.0192	36.0000
0.002800	13.38	1.80	7.4	37.0192	36.0000
0.002900	13.62	1.83	7.4	37.0192	36.0000
0.003000	13.85	1.86	7.4	37.0192	36.0000
0.003100	14.08	1.89	7.4	37.0192	36.0000
0.003200	14.30	1.92	7.4	37.0192	36.0000
0.003300	14.53	1.95	7.4	37.0192	36.0000
0.003400	14.75	1.98	7.4	37.0192	36.0000
0.003500	14.96	2.01	7.4	37.0192	36.0000
0.003600	15.17	2.04	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.003700	15.38	2.07	7.4	37.0192	36.0000
0.003800	15.59	2.10	7.4	37.0192	36.0000
0.003900	15.79	2.12	7.4	37.0192	36.0000
0.004000	15.99	2.15	7.4	37.0192	36.0000
0.004100	16.19	2.18	7.4	37.0192	36.0000
0.004200	16.39	2.20	7.4	37.0192	36.0000
0.004300	16.58	2.23	7.4	37.0192	36.0000
0.004400	16.77	2.25	7.4	37.0192	36.0000
0.004500	16.96	2.28	7.4	37.0192	36.0000
0.004600	17.15	2.31	7.4	37.0192	36.0000
0.004700	17.34	2.33	7.4	37.0192	36.0000
0.004800	17.52	2.35	7.4	37.0192	36.0000
0.004900	17.70	2.38	7.4	37.0192	36.0000
0.005000	17.88	2.40	7.4	37.0192	36.0000
0.005100	18.06	2.43	7.4	37.0192	36.0000
0.005200	18.24	2.45	7.4	37.0192	36.0000
0.005300	18.41	2.47	7.4	37.0192	36.0000
0.005400	18.58	2.50	7.4	37.0192	36.0000
0.005500	18.75	2.52	7.4	37.0192	36.0000
0.005600	18.92	2.54	7.4	37.0192	36.0000
0.005700	19.09	2.57	7.4	37.0192	36.0000
0.005800	19.26	2.59	7.4	37.0192	36.0000
0.005900	19.42	2.61	7.4	37.0192	36.0000
0.006000	19.59	2.63	7.4	37.0192	36.0000
0.006100	19.75	2.65	7.4	37.0192	36.0000
0.006200	19.91	2.68	7.4	37.0192	36.0000
0.006300	20.07	2.70	7.4	37.0192	36.0000
0.006400	20.23	2.72	7.4	37.0192	36.0000
0.006500	20.39	2.74	7.4	37.0192	36.0000
0.006600	20.54	2.76	7.4	37.0192	36.0000
0.006700	20.70	2.78	7.4	37.0192	36.0000
0.006800	20.85	2.80	7.4	37.0192	36.0000
0.006900	21.01	2.82	7.4	37.0192	36.0000
0.007000	21.16	2.84	7.4	37.0192	36.0000
0.007100	21.31	2.86	7.4	37.0192	36.0000
0.007200	21.46	2.88	7.4	37.0192	36.0000
0.007300	21.61	2.90	7.4	37.0192	36.0000
0.007400	21.75	2.92	7.4	37.0192	36.0000
0.007500	21.90	2.94	7.4	37.0192	36.0000
0.007600	22.05	2.96	7.4	37.0192	36.0000
0.007700	22.19	2.98	7.4	37.0192	36.0000
0.007800	22.33	3.00	7.4	37.0192	36.0000
0.007900	22.48	3.02	7.4	37.0192	36.0000
0.008000	22.62	3.04	7.4	37.0192	36.0000
0.008100	22.76	3.06	7.4	37.0192	36.0000
0.008200	22.90	3.08	7.4	37.0192	36.0000
0.008300	23.04	3.10	7.4	37.0192	36.0000
0.008400	23.18	3.12	7.4	37.0192	36.0000
0.008500	23.31	3.13	7.4	37.0192	36.0000
0.008600	23.45	3.15	7.4	37.0192	36.0000
0.008700	23.59	3.17	7.4	37.0192	36.0000
0.008800	23.72	3.19	7.4	37.0192	36.0000
0.008900	23.86	3.21	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.009000	23.99	3.22	7.4	37.0192	36.0000
0.009100	24.12	3.24	7.4	37.0192	36.0000
0.009200	24.26	3.26	7.4	37.0192	36.0000
0.009300	24.39	3.28	7.4	37.0192	36.0000
0.009400	24.52	3.30	7.4	37.0192	36.0000
0.009500	24.65	3.31	7.4	37.0192	36.0000
0.009600	24.78	3.33	7.4	37.0192	36.0000
0.009700	24.91	3.35	7.4	37.0192	36.0000
0.009800	25.03	3.36	7.4	37.0192	36.0000
0.009900	25.16	3.38	7.4	37.0192	36.0000
0.010000	25.29	3.40	7.4	37.0192	36.0000
0.010100	25.41	3.42	7.4	37.0192	36.0000
0.010200	25.54	3.43	7.4	37.0192	36.0000
0.010300	25.66	3.45	7.4	37.0192	36.0000
0.010400	25.79	3.47	7.4	37.0192	36.0000
0.010500	25.91	3.48	7.4	37.0192	36.0000
0.010600	26.04	3.50	7.4	37.0192	36.0000
0.010700	26.16	3.52	7.4	37.0192	36.0000
0.010800	26.28	3.53	7.4	37.0192	36.0000
0.010900	26.40	3.55	7.4	37.0192	36.0000
0.011000	26.52	3.56	7.4	37.0192	36.0000
0.011100	26.64	3.58	7.4	37.0192	36.0000
0.011200	26.76	3.60	7.4	37.0192	36.0000
0.011300	26.88	3.61	7.4	37.0192	36.0000
0.011400	27.00	3.63	7.4	37.0192	36.0000
0.011500	27.12	3.64	7.4	37.0192	36.0000
0.011600	27.24	3.66	7.4	37.0192	36.0000
0.011700	27.35	3.68	7.4	37.0192	36.0000
0.011800	27.47	3.69	7.4	37.0192	36.0000
0.011900	27.59	3.71	7.4	37.0192	36.0000
0.012000	27.70	3.72	7.4	37.0192	36.0000
0.012100	27.82	3.74	7.4	37.0192	36.0000
0.012200	27.93	3.75	7.4	37.0192	36.0000
0.012300	28.05	3.77	7.4	37.0192	36.0000
0.012400	28.16	3.78	7.4	37.0192	36.0000
0.012500	28.27	3.80	7.4	37.0192	36.0000
0.012600	28.39	3.82	7.4	37.0192	36.0000
0.012700	28.50	3.83	7.4	37.0192	36.0000
0.012800	28.61	3.85	7.4	37.0192	36.0000
0.012900	28.72	3.86	7.4	37.0192	36.0000
0.013000	28.83	3.88	7.4	37.0192	36.0000
0.013100	28.94	3.89	7.4	37.0192	36.0000
0.013200	29.05	3.91	7.4	37.0192	36.0000
0.013300	29.16	3.92	7.4	37.0192	36.0000
0.013400	29.27	3.93	7.4	37.0192	36.0000
0.013500	29.38	3.95	7.4	37.0192	36.0000
0.013600	29.49	3.96	7.4	37.0192	36.0000
0.013700	29.60	3.98	7.4	37.0192	36.0000
0.013800	29.71	3.99	7.4	37.0192	36.0000
0.013900	29.81	4.01	7.4	37.0192	36.0000
0.014000	29.92	4.02	7.4	37.0192	36.0000
0.014100	30.03	4.04	7.4	37.0192	36.0000
0.014200	30.13	4.05	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.014300	30.24	4.06	7.4	37.0192	36.0000
0.014400	30.35	4.08	7.4	37.0192	36.0000
0.014500	30.45	4.09	7.4	37.0192	36.0000
0.014600	30.56	4.11	7.4	37.0192	36.0000
0.014700	30.66	4.12	7.4	37.0192	36.0000
0.014800	30.76	4.13	7.4	37.0192	36.0000
0.014900	30.87	4.15	7.4	37.0192	36.0000
0.015000	30.97	4.16	7.4	37.0192	36.0000
0.015100	31.07	4.18	7.4	37.0192	36.0000
0.015200	31.18	4.19	7.4	37.0192	36.0000
0.015300	31.28	4.20	7.4	37.0192	36.0000
0.015400	31.38	4.22	7.4	37.0192	36.0000
0.015500	31.48	4.23	7.4	37.0192	36.0000
0.015600	31.58	4.25	7.4	37.0192	36.0000
0.015700	31.69	4.26	7.4	37.0192	36.0000
0.015800	31.79	4.27	7.4	37.0192	36.0000
0.015900	31.89	4.29	7.4	37.0192	36.0000
0.016000	31.99	4.30	7.4	37.0192	36.0000
0.016100	32.09	4.31	7.4	37.0192	36.0000
0.016200	32.19	4.33	7.4	37.0192	36.0000
0.016300	32.29	4.34	7.4	37.0192	36.0000
0.016400	32.38	4.35	7.4	37.0192	36.0000
0.016500	32.48	4.37	7.4	37.0192	36.0000
0.016600	32.58	4.38	7.4	37.0192	36.0000
0.016700	32.68	4.39	7.4	37.0192	36.0000
0.016800	32.78	4.41	7.4	37.0192	36.0000
0.016900	32.87	4.42	7.4	37.0192	36.0000
0.017000	32.97	4.43	7.4	37.0192	36.0000
0.017100	33.07	4.44	7.4	37.0192	36.0000
0.017200	33.16	4.46	7.4	37.0192	36.0000
0.017300	33.26	4.47	7.4	37.0192	36.0000
0.017400	33.36	4.48	7.4	37.0192	36.0000
0.017500	33.45	4.50	7.4	37.0192	36.0000
0.017600	33.55	4.51	7.4	37.0192	36.0000
0.017700	33.64	4.52	7.4	37.0192	36.0000
0.017800	33.74	4.53	7.4	37.0192	36.0000
0.017900	33.83	4.55	7.4	37.0192	36.0000
0.018000	33.93	4.56	7.4	37.0192	36.0000
0.018100	34.02	4.57	7.4	37.0192	36.0000
0.018200	34.11	4.59	7.4	37.0192	36.0000
0.018300	34.21	4.60	7.4	37.0192	36.0000
0.018400	34.30	4.61	7.4	37.0192	36.0000
0.018500	34.39	4.62	7.4	37.0192	36.0000
0.018600	34.49	4.64	7.4	37.0192	36.0000
0.018700	34.58	4.65	7.4	37.0192	36.0000
0.018800	34.67	4.66	7.4	37.0192	36.0000
0.018900	34.76	4.67	7.4	37.0192	36.0000
0.019000	34.86	4.69	7.4	37.0192	36.0000
0.019100	34.95	4.70	7.4	37.0192	36.0000
0.019200	35.04	4.71	7.4	37.0192	36.0000
0.019300	35.13	4.72	7.4	37.0192	36.0000
0.019400	35.22	4.73	7.4	37.0192	36.0000
0.019500	35.31	4.75	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.019600	35.40	4.76	7.4	37.0192	36.0000
0.019700	35.49	4.77	7.4	37.0192	36.0000
0.019800	35.58	4.78	7.4	37.0192	36.0000
0.019900	35.67	4.79	7.4	37.0192	36.0000
0.020000	35.76	4.81	7.4	37.0192	36.0000
0.020100	35.85	4.82	7.4	37.0192	36.0000
0.020200	35.94	4.83	7.4	37.0192	36.0000
0.020300	36.03	4.84	7.4	37.0192	36.0000
0.020400	36.12	4.85	7.4	37.0192	36.0000
0.020500	36.21	4.87	7.4	37.0192	36.0000
0.020600	36.29	4.88	7.4	37.0192	36.0000
0.020700	36.38	4.89	7.4	37.0192	36.0000
0.020800	36.47	4.90	7.4	37.0192	36.0000
0.020900	36.56	4.91	7.4	37.0192	36.0000
0.021000	36.65	4.93	7.4	37.0192	36.0000
0.021100	36.73	4.94	7.4	37.0192	36.0000
0.021200	36.82	4.95	7.4	37.0192	36.0000
0.021300	36.91	4.96	7.4	37.0192	36.0000
0.021400	36.99	4.97	7.4	37.0192	36.0000
0.021500	37.08	4.98	7.4	37.0192	36.0000
0.021600	37.17	5.00	7.4	37.0192	36.0000
0.021700	37.25	5.01	7.4	37.0192	36.0000
0.021800	37.34	5.02	7.4	37.0192	36.0000
0.021900	37.42	5.03	7.4	37.0192	36.0000
0.022000	37.51	5.04	7.4	37.0192	36.0000
0.022100	37.59	5.05	7.4	37.0192	36.0000
0.022200	37.68	5.06	7.4	37.0192	36.0000
0.022300	37.76	5.08	7.4	37.0192	36.0000
0.022400	37.85	5.09	7.4	37.0192	36.0000
0.022500	37.93	5.10	7.4	37.0192	36.0000
0.022600	38.02	5.11	7.4	37.0192	36.0000
0.022700	38.10	5.12	7.4	37.0192	36.0000
0.022800	38.18	5.13	7.4	37.0192	36.0000
0.022900	38.27	5.14	7.4	37.0192	36.0000
0.023000	38.35	5.15	7.4	37.0192	36.0000
0.023100	38.43	5.17	7.4	37.0192	36.0000
0.023200	38.52	5.18	7.4	37.0192	36.0000
0.023300	38.60	5.19	7.4	37.0192	36.0000
0.023400	38.68	5.20	7.4	37.0192	36.0000
0.023500	38.77	5.21	7.4	37.0192	36.0000
0.023600	38.85	5.22	7.4	37.0192	36.0000
0.023700	38.93	5.23	7.4	37.0192	36.0000
0.023800	39.01	5.24	7.4	37.0192	36.0000
0.023900	39.09	5.25	7.4	37.0192	36.0000
0.024000	39.18	5.27	7.4	37.0192	36.0000
0.024100	39.26	5.28	7.4	37.0192	36.0000
0.024200	39.34	5.29	7.4	37.0192	36.0000
0.024300	39.42	5.30	7.4	37.0192	36.0000
0.024400	39.50	5.31	7.4	37.0192	36.0000
0.024500	39.58	5.32	7.4	37.0192	36.0000
0.024600	39.66	5.33	7.4	37.0192	36.0000
0.024700	39.74	5.34	7.4	37.0192	36.0000
0.024800	39.82	5.35	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.024900	39.90	5.36	7.4	37.0192	36.0000
0.025000	39.98	5.37	7.4	37.0192	36.0000
0.025100	40.06	5.38	7.4	37.0192	36.0000
0.025200	40.14	5.40	7.4	37.0192	36.0000
0.025300	40.22	5.41	7.4	37.0192	36.0000
0.025400	40.30	5.42	7.4	37.0192	36.0000
0.025500	40.38	5.43	7.4	37.0192	36.0000
0.025600	40.46	5.44	7.4	37.0192	36.0000
0.025700	40.54	5.45	7.4	37.0192	36.0000
0.025800	40.62	5.46	7.4	37.0192	36.0000
0.025900	40.70	5.47	7.4	37.0192	36.0000
0.026000	40.78	5.48	7.4	37.0192	36.0000
0.026100	40.85	5.49	7.4	37.0192	36.0000
0.026200	40.93	5.50	7.4	37.0192	36.0000
0.026300	41.01	5.51	7.4	37.0192	36.0000
0.026400	41.09	5.52	7.4	37.0192	36.0000
0.026500	41.17	5.53	7.4	37.0192	36.0000
0.026600	41.24	5.54	7.4	37.0192	36.0000
0.026700	41.32	5.55	7.4	37.0192	36.0000
0.026800	41.40	5.56	7.4	37.0192	36.0000
0.026900	41.47	5.57	7.4	37.0192	36.0000
0.027000	41.55	5.58	7.4	37.0192	36.0000
0.027100	41.63	5.60	7.4	37.0192	36.0000
0.027200	41.71	5.61	7.4	37.0192	36.0000
0.027300	41.78	5.62	7.4	37.0192	36.0000
0.027400	41.86	5.63	7.4	37.0192	36.0000
0.027500	41.93	5.64	7.4	37.0192	36.0000
0.027600	42.01	5.65	7.4	37.0192	36.0000
0.027700	42.09	5.66	7.4	37.0192	36.0000
0.027800	42.16	5.67	7.4	37.0192	36.0000
0.027900	42.24	5.68	7.4	37.0192	36.0000
0.028000	42.31	5.69	7.4	37.0192	36.0000
0.028100	42.39	5.70	7.4	37.0192	36.0000
0.028200	42.47	5.71	7.4	37.0192	36.0000
0.028300	42.54	5.72	7.4	37.0192	36.0000
0.028400	42.62	5.73	7.4	37.0192	36.0000
0.028500	42.69	5.74	7.4	37.0192	36.0000
0.028600	42.77	5.75	7.4	37.0192	36.0000
0.028700	42.84	5.76	7.4	37.0192	36.0000
0.028800	42.91	5.77	7.4	37.0192	36.0000
0.028900	42.99	5.78	7.4	37.0192	36.0000
0.029000	43.06	5.79	7.4	37.0192	36.0000
0.029100	43.14	5.80	7.4	37.0192	36.0000
0.029200	43.21	5.81	7.4	37.0192	36.0000
0.029300	43.29	5.82	7.4	37.0192	36.0000
0.029400	43.36	5.83	7.4	37.0192	36.0000
0.029500	43.43	5.84	7.4	37.0192	36.0000
0.029600	43.51	5.85	7.4	37.0192	36.0000
0.029700	43.58	5.86	7.4	37.0192	36.0000
0.029800	43.65	5.87	7.4	37.0192	36.0000
0.029900	43.73	5.88	7.4	37.0192	36.0000
0.030000	43.80	5.89	7.4	37.0192	36.0000
0.030100	43.87	5.90	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.030200	43.95	5.91	7.4	37.0192	36.0000
0.030300	44.02	5.92	7.4	37.0192	36.0000
0.030400	44.09	5.93	7.4	37.0192	36.0000
0.030500	44.16	5.94	7.4	37.0192	36.0000
0.030600	44.24	5.95	7.4	37.0192	36.0000
0.030700	44.31	5.96	7.4	37.0192	36.0000
0.030800	44.38	5.96	7.4	37.0192	36.0000
0.030900	44.45	5.97	7.4	37.0192	36.0000
0.031000	44.52	5.98	7.4	37.0192	36.0000
0.031100	44.60	5.99	7.4	37.0192	36.0000
0.031200	44.67	6.00	7.4	37.0192	36.0000
0.031300	44.74	6.01	7.4	37.0192	36.0000
0.031400	44.81	6.02	7.4	37.0192	36.0000
0.031500	44.88	6.03	7.4	37.0192	36.0000
0.031600	44.95	6.04	7.4	37.0192	36.0000
0.031700	45.02	6.05	7.4	37.0192	36.0000
0.031800	45.09	6.06	7.4	37.0192	36.0000
0.031900	45.17	6.07	7.4	37.0192	36.0000
0.032000	45.24	6.08	7.4	37.0192	36.0000
0.032100	45.31	6.09	7.4	37.0192	36.0000
0.032200	45.38	6.10	7.4	37.0192	36.0000
0.032300	45.45	6.11	7.4	37.0192	36.0000
0.032400	45.52	6.12	7.4	37.0192	36.0000
0.032500	45.59	6.13	7.4	37.0192	36.0000
0.032600	45.66	6.14	7.4	37.0192	36.0000
0.032700	45.73	6.15	7.4	37.0192	36.0000
0.032800	45.80	6.16	7.4	37.0192	36.0000
0.032900	45.87	6.16	7.4	37.0192	36.0000
0.033000	45.94	6.17	7.4	37.0192	36.0000
0.033100	46.01	6.18	7.4	37.0192	36.0000
0.033200	46.08	6.19	7.4	37.0192	36.0000
0.033300	46.15	6.20	7.4	37.0192	36.0000
0.033400	46.21	6.21	7.4	37.0192	36.0000
0.033500	46.28	6.22	7.4	37.0192	36.0000
0.033600	46.35	6.23	7.4	37.0192	36.0000
0.033700	46.42	6.24	7.4	37.0192	36.0000
0.033800	46.49	6.25	7.4	37.0192	36.0000
0.033900	46.56	6.26	7.4	37.0192	36.0000
0.034000	46.63	6.27	7.4	37.0192	36.0000
0.034100	46.70	6.28	7.4	37.0192	36.0000
0.034200	46.76	6.29	7.4	37.0192	36.0000
0.034300	46.83	6.29	7.4	37.0192	36.0000
0.034400	46.90	6.30	7.4	37.0192	36.0000
0.034500	46.97	6.31	7.4	37.0192	36.0000
0.034600	47.04	6.32	7.4	37.0192	36.0000
0.034700	47.11	6.33	7.4	37.0192	36.0000
0.034800	47.17	6.34	7.4	37.0192	36.0000
0.034900	47.24	6.35	7.4	37.0192	36.0000
0.035000	47.31	6.36	7.4	37.0192	36.0000
0.035100	47.38	6.37	7.4	37.0192	36.0000
0.035200	47.44	6.38	7.4	37.0192	36.0000
0.035300	47.51	6.39	7.4	37.0192	36.0000
0.035400	47.58	6.39	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.035500	47.65	6.40	7.4	37.0192	36.0000
0.035600	47.71	6.41	7.4	37.0192	36.0000
0.035700	47.78	6.42	7.4	37.0192	36.0000
0.035800	47.85	6.43	7.4	37.0192	36.0000
0.035900	47.91	6.44	7.4	37.0192	36.0000
0.036000	47.98	6.45	7.4	37.0192	36.0000
0.036100	48.05	6.46	7.4	37.0192	36.0000
0.036200	48.11	6.47	7.4	37.0192	36.0000
0.036300	48.18	6.48	7.4	37.0192	36.0000
0.036400	48.25	6.48	7.4	37.0192	36.0000
0.036500	48.31	6.49	7.4	37.0192	36.0000
0.036600	48.38	6.50	7.4	37.0192	36.0000
0.036700	48.44	6.51	7.4	37.0192	36.0000
0.036800	48.51	6.52	7.4	37.0192	36.0000
0.036900	48.58	6.53	7.4	37.0192	36.0000
0.037000	48.64	6.54	7.4	37.0192	36.0000
0.037100	48.71	6.55	7.4	37.0192	36.0000
0.037200	48.77	6.56	7.4	37.0192	36.0000
0.037300	48.84	6.56	7.4	37.0192	36.0000
0.037400	48.90	6.57	7.4	37.0192	36.0000
0.037500	48.97	6.58	7.4	37.0192	36.0000
0.037600	49.03	6.59	7.4	37.0192	36.0000
0.037700	49.10	6.60	7.4	37.0192	36.0000
0.037800	49.16	6.61	7.4	37.0192	36.0000
0.037900	49.23	6.62	7.4	37.0192	36.0000
0.038000	49.29	6.63	7.4	37.0192	36.0000
0.038100	49.36	6.63	7.4	37.0192	36.0000
0.038200	49.42	6.64	7.4	37.0192	36.0000
0.038300	49.49	6.65	7.4	37.0192	36.0000
0.038400	49.55	6.66	7.4	37.0192	36.0000
0.038500	49.62	6.67	7.4	37.0192	36.0000
0.038600	49.68	6.68	7.4	37.0192	36.0000
0.038700	49.75	6.69	7.4	37.0192	36.0000
0.038800	49.81	6.69	7.4	37.0192	36.0000
0.038900	49.87	6.70	7.4	37.0192	36.0000
0.039000	49.94	6.71	7.4	37.0192	36.0000
0.039100	50.00	6.72	7.4	37.0192	36.0000
0.039200	50.07	6.73	7.4	37.0192	36.0000
0.039300	50.13	6.74	7.4	37.0192	36.0000
0.039400	50.19	6.75	7.4	37.0192	36.0000
0.039500	50.26	6.76	7.4	37.0192	36.0000
0.039600	50.32	6.76	7.4	37.0192	36.0000
0.039700	50.39	6.77	7.4	37.0192	36.0000
0.039800	50.45	6.78	7.4	37.0192	36.0000
0.039900	50.51	6.79	7.4	37.0192	36.0000
0.040000	50.58	6.80	7.4	37.0192	36.0000
0.040100	50.64	6.81	7.4	37.0192	36.0000
0.040200	50.70	6.81	7.4	37.0192	36.0000
0.040300	50.76	6.82	7.4	37.0192	36.0000
0.040400	50.83	6.83	7.4	37.0192	36.0000
0.040500	50.89	6.84	7.4	37.0192	36.0000
0.040600	50.95	6.85	7.4	37.0192	36.0000
0.040700	51.02	6.86	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.040800	51.08	6.87	7.4	37.0192	36.0000
0.040900	51.14	6.87	7.4	37.0192	36.0000
0.041000	51.20	6.88	7.4	37.0192	36.0000
0.041100	51.27	6.89	7.4	37.0192	36.0000
0.041200	51.33	6.90	7.4	37.0192	36.0000
0.041300	51.39	6.91	7.4	37.0192	36.0000
0.041400	51.45	6.92	7.4	37.0192	36.0000
0.041500	51.51	6.92	7.4	37.0192	36.0000
0.041600	51.58	6.93	7.4	37.0192	36.0000
0.041700	51.64	6.94	7.4	37.0192	36.0000
0.041800	51.70	6.95	7.4	37.0192	36.0000
0.041900	51.76	6.96	7.4	37.0192	36.0000
0.042000	51.82	6.97	7.4	37.0192	36.0000
0.042100	51.89	6.97	7.4	37.0192	36.0000
0.042200	51.95	6.98	7.4	37.0192	36.0000
0.042300	52.01	6.99	7.4	37.0192	36.0000
0.042400	52.07	7.00	7.4	37.0192	36.0000
0.042500	52.13	7.01	7.4	37.0192	36.0000
0.042600	52.19	7.02	7.4	37.0192	36.0000
0.042700	52.25	7.02	7.4	37.0192	36.0000
0.042800	52.32	7.03	7.4	37.0192	36.0000
0.042900	52.38	7.04	7.4	37.0192	36.0000
0.043000	52.44	7.05	7.4	37.0192	36.0000
0.043100	52.50	7.06	7.4	37.0192	36.0000
0.043200	52.56	7.06	7.4	37.0192	36.0000
0.043300	52.62	7.07	7.4	37.0192	36.0000
0.043400	52.68	7.08	7.4	37.0192	36.0000
0.043500	52.74	7.09	7.4	37.0192	36.0000
0.043600	52.80	7.10	7.4	37.0192	36.0000
0.043700	52.86	7.11	7.4	37.0192	36.0000
0.043800	52.92	7.11	7.4	37.0192	36.0000
0.043900	52.98	7.12	7.4	37.0192	36.0000
0.044000	53.04	7.13	7.4	37.0192	36.0000
0.044100	53.10	7.14	7.4	37.0192	36.0000
0.044200	53.16	7.15	7.4	37.0192	36.0000
0.044300	53.22	7.15	7.4	37.0192	36.0000
0.044400	53.28	7.16	7.4	37.0192	36.0000
0.044500	53.34	7.17	7.4	37.0192	36.0000
0.044600	53.40	7.18	7.4	37.0192	36.0000
0.044700	53.46	7.19	7.4	37.0192	36.0000
0.044800	53.52	7.19	7.4	37.0192	36.0000
0.044900	53.58	7.20	7.4	37.0192	36.0000
0.045000	53.64	7.21	7.4	37.0192	36.0000
0.045100	53.70	7.22	7.4	37.0192	36.0000
0.045200	53.76	7.23	7.4	37.0192	36.0000
0.045300	53.82	7.23	7.4	37.0192	36.0000
0.045400	53.88	7.24	7.4	37.0192	36.0000
0.045500	53.94	7.25	7.4	37.0192	36.0000
0.045600	54.00	7.26	7.4	37.0192	36.0000
0.045700	54.06	7.27	7.4	37.0192	36.0000
0.045800	54.12	7.27	7.4	37.0192	36.0000
0.045900	54.18	7.28	7.4	37.0192	36.0000
0.046000	54.24	7.29	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.046100	54.29	7.30	7.4	37.0192	36.0000
0.046200	54.35	7.31	7.4	37.0192	36.0000
0.046300	54.41	7.31	7.4	37.0192	36.0000
0.046400	54.47	7.32	7.4	37.0192	36.0000
0.046500	54.53	7.33	7.4	37.0192	36.0000
0.046600	54.59	7.34	7.4	37.0192	36.0000
0.046700	54.65	7.35	7.4	37.0192	36.0000
0.046800	54.71	7.35	7.4	37.0192	36.0000
0.046900	54.76	7.36	7.4	37.0192	36.0000
0.047000	54.82	7.37	7.4	37.0192	36.0000
0.047100	54.88	7.38	7.4	37.0192	36.0000
0.047200	54.94	7.38	7.4	37.0192	36.0000
0.047300	55.00	7.39	7.4	37.0192	36.0000
0.047400	55.05	7.40	7.4	37.0192	36.0000
0.047500	55.11	7.41	7.4	37.0192	36.0000
0.047600	55.17	7.42	7.4	37.0192	36.0000
0.047700	55.23	7.42	7.4	37.0192	36.0000
0.047800	55.29	7.43	7.4	37.0192	36.0000
0.047900	55.34	7.44	7.4	37.0192	36.0000
0.048000	55.40	7.45	7.4	37.0192	36.0000
0.048100	55.46	7.45	7.4	37.0192	36.0000
0.048200	55.52	7.46	7.4	37.0192	36.0000
0.048300	55.58	7.47	7.4	37.0192	36.0000
0.048400	55.63	7.48	7.4	37.0192	36.0000
0.048500	55.69	7.49	7.4	37.0192	36.0000
0.048600	55.75	7.49	7.4	37.0192	36.0000
0.048700	55.80	7.50	7.4	37.0192	36.0000
0.048800	55.86	7.51	7.4	37.0192	36.0000
0.048900	55.92	7.52	7.4	37.0192	36.0000
0.049000	55.98	7.52	7.4	37.0192	36.0000
0.049100	56.03	7.53	7.4	37.0192	36.0000
0.049200	56.09	7.54	7.4	37.0192	36.0000
0.049300	56.15	7.55	7.4	37.0192	36.0000
0.049400	56.20	7.55	7.4	37.0192	36.0000
0.049500	56.26	7.56	7.4	37.0192	36.0000
0.049600	56.32	7.57	7.4	37.0192	36.0000
0.049700	56.37	7.58	7.4	37.0192	36.0000
0.049800	56.43	7.58	7.4	37.0192	36.0000
0.049900	56.49	7.59	7.4	37.0192	36.0000
0.050000	56.54	7.60	7.4	37.0192	36.0000
0.050100	56.60	7.61	7.4	37.0192	36.0000
0.050200	56.66	7.62	7.4	37.0192	36.0000
0.050300	56.71	7.62	7.4	37.0192	36.0000
0.050400	56.77	7.63	7.4	37.0192	36.0000
0.050500	56.83	7.64	7.4	37.0192	36.0000
0.050600	56.88	7.65	7.4	37.0192	36.0000
0.050700	56.94	7.65	7.4	37.0192	36.0000
0.050800	57.00	7.66	7.4	37.0192	36.0000
0.050900	57.05	7.67	7.4	37.0192	36.0000
0.051000	57.11	7.68	7.4	37.0192	36.0000
0.051100	57.16	7.68	7.4	37.0192	36.0000
0.051200	57.22	7.69	7.4	37.0192	36.0000
0.051300	57.28	7.70	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.051400	57.33	7.71	7.4	37.0192	36.0000
0.051500	57.39	7.71	7.4	37.0192	36.0000
0.051600	57.44	7.72	7.4	37.0192	36.0000
0.051700	57.50	7.73	7.4	37.0192	36.0000
0.051800	57.55	7.74	7.4	37.0192	36.0000
0.051900	57.61	7.74	7.4	37.0192	36.0000
0.052000	57.66	7.75	7.4	37.0192	36.0000
0.052100	57.72	7.76	7.4	37.0192	36.0000
0.052200	57.78	7.77	7.4	37.0192	36.0000
0.052300	57.83	7.77	7.4	37.0192	36.0000
0.052400	57.89	7.78	7.4	37.0192	36.0000
0.052500	57.94	7.79	7.4	37.0192	36.0000
0.052600	58.00	7.80	7.4	37.0192	36.0000
0.052700	58.05	7.80	7.4	37.0192	36.0000
0.052800	58.11	7.81	7.4	37.0192	36.0000
0.052900	58.16	7.82	7.4	37.0192	36.0000
0.053000	58.22	7.82	7.4	37.0192	36.0000
0.053100	58.27	7.83	7.4	37.0192	36.0000
0.053200	58.33	7.84	7.4	37.0192	36.0000
0.053300	58.38	7.85	7.4	37.0192	36.0000
0.053400	58.44	7.85	7.4	37.0192	36.0000
0.053500	58.49	7.86	7.4	37.0192	36.0000
0.053600	58.55	7.87	7.4	37.0192	36.0000
0.053700	58.60	7.88	7.4	37.0192	36.0000
0.053800	58.65	7.88	7.4	37.0192	36.0000
0.053900	58.71	7.89	7.4	37.0192	36.0000
0.054000	58.76	7.90	7.4	37.0192	36.0000
0.054100	58.82	7.91	7.4	37.0192	36.0000
0.054200	58.87	7.91	7.4	37.0192	36.0000
0.054300	58.93	7.92	7.4	37.0192	36.0000
0.054400	58.98	7.93	7.4	37.0192	36.0000
0.054500	59.03	7.93	7.4	37.0192	36.0000
0.054600	59.09	7.94	7.4	37.0192	36.0000
0.054700	59.14	7.95	7.4	37.0192	36.0000
0.054800	59.20	7.96	7.4	37.0192	36.0000
0.054900	59.25	7.96	7.4	37.0192	36.0000
0.055000	59.30	7.97	7.4	37.0192	36.0000
0.055100	59.36	7.98	7.4	37.0192	36.0000
0.055200	59.41	7.99	7.4	37.0192	36.0000
0.055300	59.47	7.99	7.4	37.0192	36.0000
0.055400	59.52	8.00	7.4	37.0192	36.0000
0.055500	59.57	8.01	7.4	37.0192	36.0000
0.055600	59.63	8.01	7.4	37.0192	36.0000
0.055700	59.68	8.02	7.4	37.0192	36.0000
0.055800	59.73	8.03	7.4	37.0192	36.0000
0.055900	59.79	8.04	7.4	37.0192	36.0000
0.056000	59.84	8.04	7.4	37.0192	36.0000
0.056100	59.89	8.05	7.4	37.0192	36.0000
0.056200	59.95	8.06	7.4	37.0192	36.0000
0.056300	60.00	8.06	7.4	37.0192	36.0000
0.056400	60.05	8.07	7.4	37.0192	36.0000
0.056500	60.11	8.08	7.4	37.0192	36.0000
0.056600	60.16	8.09	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.056700	60.21	8.09	7.4	37.0192	36.0000
0.056800	60.27	8.10	7.4	37.0192	36.0000
0.056900	60.32	8.11	7.4	37.0192	36.0000
0.057000	60.37	8.11	7.4	37.0192	36.0000
0.057100	60.43	8.12	7.4	37.0192	36.0000
0.057200	60.48	8.13	7.4	37.0192	36.0000
0.057300	60.53	8.14	7.4	37.0192	36.0000
0.057400	60.58	8.14	7.4	37.0192	36.0000
0.057500	60.64	8.15	7.4	37.0192	36.0000
0.057600	60.69	8.16	7.4	37.0192	36.0000
0.057700	60.74	8.16	7.4	37.0192	36.0000
0.057800	60.80	8.17	7.4	37.0192	36.0000
0.057900	60.85	8.18	7.4	37.0192	36.0000
0.058000	60.90	8.19	7.4	37.0192	36.0000
0.058100	60.95	8.19	7.4	37.0192	36.0000
0.058200	61.01	8.20	7.4	37.0192	36.0000
0.058300	61.06	8.21	7.4	37.0192	36.0000
0.058400	61.11	8.21	7.4	37.0192	36.0000
0.058500	61.16	8.22	7.4	37.0192	36.0000
0.058600	61.21	8.23	7.4	37.0192	36.0000
0.058700	61.27	8.23	7.4	37.0192	36.0000
0.058800	61.32	8.24	7.4	37.0192	36.0000
0.058900	61.37	8.25	7.4	37.0192	36.0000
0.059000	61.42	8.26	7.4	37.0192	36.0000
0.059100	61.48	8.26	7.4	37.0192	36.0000
0.059200	61.53	8.27	7.4	37.0192	36.0000
0.059300	61.58	8.28	7.4	37.0192	36.0000
0.059400	61.63	8.28	7.4	37.0192	36.0000
0.059500	61.68	8.29	7.4	37.0192	36.0000
0.059600	61.73	8.30	7.4	37.0192	36.0000
0.059700	61.79	8.30	7.4	37.0192	36.0000
0.059800	61.84	8.31	7.4	37.0192	36.0000
0.059900	61.89	8.32	7.4	37.0192	36.0000
0.060000	61.94	8.33	7.4	37.0192	36.0000
0.060100	61.99	8.33	7.4	37.0192	36.0000
0.060200	62.04	8.34	7.4	37.0192	36.0000
0.060300	62.10	8.35	7.4	37.0192	36.0000
0.060400	62.15	8.35	7.4	37.0192	36.0000
0.060500	62.20	8.36	7.4	37.0192	36.0000
0.060600	62.25	8.37	7.4	37.0192	36.0000
0.060700	62.30	8.37	7.4	37.0192	36.0000
0.060800	62.35	8.38	7.4	37.0192	36.0000
0.060900	62.40	8.39	7.4	37.0192	36.0000
0.061000	62.46	8.39	7.4	37.0192	36.0000
0.061100	62.51	8.40	7.4	37.0192	36.0000
0.061200	62.56	8.41	7.4	37.0192	36.0000
0.061300	62.61	8.42	7.4	37.0192	36.0000
0.061400	62.66	8.42	7.4	37.0192	36.0000
0.061500	62.71	8.43	7.4	37.0192	36.0000
0.061600	62.76	8.44	7.4	37.0192	36.0000
0.061700	62.81	8.44	7.4	37.0192	36.0000
0.061800	62.86	8.45	7.4	37.0192	36.0000
0.061900	62.91	8.46	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.062000	62.97	8.46	7.4	37.0192	36.0000
0.062100	63.02	8.47	7.4	37.0192	36.0000
0.062200	63.07	8.48	7.4	37.0192	36.0000
0.062300	63.12	8.48	7.4	37.0192	36.0000
0.062400	63.17	8.49	7.4	37.0192	36.0000
0.062500	63.22	8.50	7.4	37.0192	36.0000
0.062600	63.27	8.50	7.4	37.0192	36.0000
0.062700	63.32	8.51	7.4	37.0192	36.0000
0.062800	63.37	8.52	7.4	37.0192	36.0000
0.062900	63.42	8.52	7.4	37.0192	36.0000
0.063000	63.47	8.53	7.4	37.0192	36.0000
0.063100	63.52	8.54	7.4	37.0192	36.0000
0.063200	63.57	8.54	7.4	37.0192	36.0000
0.063300	63.62	8.55	7.4	37.0192	36.0000
0.063400	63.67	8.56	7.4	37.0192	36.0000
0.063500	63.72	8.56	7.4	37.0192	36.0000
0.063600	63.77	8.57	7.4	37.0192	36.0000
0.063700	63.82	8.58	7.4	37.0192	36.0000
0.063800	63.87	8.59	7.4	37.0192	36.0000
0.063900	63.92	8.59	7.4	37.0192	36.0000
0.064000	63.97	8.60	7.4	37.0192	36.0000
0.064100	64.02	8.61	7.4	37.0192	36.0000
0.064200	64.07	8.61	7.4	37.0192	36.0000
0.064300	64.12	8.62	7.4	37.0192	36.0000
0.064400	64.17	8.63	7.4	37.0192	36.0000
0.064500	64.22	8.63	7.4	37.0192	36.0000
0.064600	64.27	8.64	7.4	37.0192	36.0000
0.064700	64.32	8.65	7.4	37.0192	36.0000
0.064800	64.37	8.65	7.4	37.0192	36.0000
0.064900	64.42	8.66	7.4	37.0192	36.0000
0.065000	64.47	8.67	7.4	37.0192	36.0000
0.065100	64.52	8.67	7.4	37.0192	36.0000
0.065200	64.57	8.68	7.4	37.0192	36.0000
0.065300	64.62	8.69	7.4	37.0192	36.0000
0.065400	64.67	8.69	7.4	37.0192	36.0000
0.065500	64.72	8.70	7.4	37.0192	36.0000
0.065600	64.77	8.71	7.4	37.0192	36.0000
0.065700	64.82	8.71	7.4	37.0192	36.0000
0.065800	64.87	8.72	7.4	37.0192	36.0000
0.065900	64.92	8.73	7.4	37.0192	36.0000
0.066000	64.97	8.73	7.4	37.0192	36.0000
0.066100	65.01	8.74	7.4	37.0192	36.0000
0.066200	65.06	8.75	7.4	37.0192	36.0000
0.066300	65.11	8.75	7.4	37.0192	36.0000
0.066400	65.16	8.76	7.4	37.0192	36.0000
0.066500	65.21	8.76	7.4	37.0192	36.0000
0.066600	65.26	8.77	7.4	37.0192	36.0000
0.066700	65.31	8.78	7.4	37.0192	36.0000
0.066800	65.36	8.78	7.4	37.0192	36.0000
0.066900	65.41	8.79	7.4	37.0192	36.0000
0.067000	65.46	8.80	7.4	37.0192	36.0000
0.067100	65.50	8.80	7.4	37.0192	36.0000
0.067200	65.55	8.81	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.067300	65.60	8.82	7.4	37.0192	36.0000
0.067400	65.65	8.82	7.4	37.0192	36.0000
0.067500	65.70	8.83	7.4	37.0192	36.0000
0.067600	65.75	8.84	7.4	37.0192	36.0000
0.067700	65.80	8.84	7.4	37.0192	36.0000
0.067800	65.84	8.85	7.4	37.0192	36.0000
0.067900	65.89	8.86	7.4	37.0192	36.0000
0.068000	65.94	8.86	7.4	37.0192	36.0000
0.068100	65.99	8.87	7.4	37.0192	36.0000
0.068200	66.04	8.88	7.4	37.0192	36.0000
0.068300	66.09	8.88	7.4	37.0192	36.0000
0.068400	66.14	8.89	7.4	37.0192	36.0000
0.068500	66.18	8.90	7.4	37.0192	36.0000
0.068600	66.23	8.90	7.4	37.0192	36.0000
0.068700	66.28	8.91	7.4	37.0192	36.0000
0.068800	66.33	8.92	7.4	37.0192	36.0000
0.068900	66.38	8.92	7.4	37.0192	36.0000
0.069000	66.43	8.93	7.4	37.0192	36.0000
0.069100	66.47	8.93	7.4	37.0192	36.0000
0.069200	66.52	8.94	7.4	37.0192	36.0000
0.069300	66.57	8.95	7.4	37.0192	36.0000
0.069400	66.62	8.95	7.4	37.0192	36.0000
0.069500	66.67	8.96	7.4	37.0192	36.0000
0.069600	66.71	8.97	7.4	37.0192	36.0000
0.069700	66.76	8.97	7.4	37.0192	36.0000
0.069800	66.81	8.98	7.4	37.0192	36.0000
0.069900	66.86	8.99	7.4	37.0192	36.0000
0.070000	66.90	8.99	7.4	37.0192	36.0000
0.070100	66.95	9.00	7.4	37.0192	36.0000
0.070200	67.00	9.01	7.4	37.0192	36.0000
0.070300	67.05	9.01	7.4	37.0192	36.0000
0.070400	67.10	9.02	7.4	37.0192	36.0000
0.070500	67.14	9.02	7.4	37.0192	36.0000
0.070600	67.19	9.03	7.4	37.0192	36.0000
0.070700	67.24	9.04	7.4	37.0192	36.0000
0.070800	67.29	9.04	7.4	37.0192	36.0000
0.070900	67.33	9.05	7.4	37.0192	36.0000
0.071000	67.38	9.06	7.4	37.0192	36.0000
0.071100	67.43	9.06	7.4	37.0192	36.0000
0.071200	67.48	9.07	7.4	37.0192	36.0000
0.071300	67.52	9.08	7.4	37.0192	36.0000
0.071400	67.57	9.08	7.4	37.0192	36.0000
0.071500	67.62	9.09	7.4	37.0192	36.0000
0.071600	67.67	9.09	7.4	37.0192	36.0000
0.071700	67.71	9.10	7.4	37.0192	36.0000
0.071800	67.76	9.11	7.4	37.0192	36.0000
0.071900	67.81	9.11	7.4	37.0192	36.0000
0.072000	67.85	9.12	7.4	37.0192	36.0000
0.072100	67.90	9.13	7.4	37.0192	36.0000
0.072200	67.95	9.13	7.4	37.0192	36.0000
0.072300	67.99	9.14	7.4	37.0192	36.0000
0.072400	68.04	9.15	7.4	37.0192	36.0000
0.072500	68.09	9.15	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.072600	68.14	9.16	7.4	37.0192	36.0000
0.072700	68.18	9.16	7.4	37.0192	36.0000
0.072800	68.23	9.17	7.4	37.0192	36.0000
0.072900	68.28	9.18	7.4	37.0192	36.0000
0.073000	68.32	9.18	7.4	37.0192	36.0000
0.073100	68.37	9.19	7.4	37.0192	36.0000
0.073200	68.42	9.20	7.4	37.0192	36.0000
0.073300	68.46	9.20	7.4	37.0192	36.0000
0.073400	68.51	9.21	7.4	37.0192	36.0000
0.073500	68.56	9.21	7.4	37.0192	36.0000
0.073600	68.60	9.22	7.4	37.0192	36.0000
0.073700	68.65	9.23	7.4	37.0192	36.0000
0.073800	68.70	9.23	7.4	37.0192	36.0000
0.073900	68.74	9.24	7.4	37.0192	36.0000
0.074000	68.79	9.25	7.4	37.0192	36.0000
0.074100	68.84	9.25	7.4	37.0192	36.0000
0.074200	68.88	9.26	7.4	37.0192	36.0000
0.074300	68.93	9.26	7.4	37.0192	36.0000
0.074400	68.98	9.27	7.4	37.0192	36.0000
0.074500	69.02	9.28	7.4	37.0192	36.0000
0.074600	69.07	9.28	7.4	37.0192	36.0000
0.074700	69.11	9.29	7.4	37.0192	36.0000
0.074800	69.16	9.30	7.4	37.0192	36.0000
0.074900	69.21	9.30	7.4	37.0192	36.0000
0.075000	69.25	9.31	7.4	37.0192	36.0000
0.075100	69.30	9.31	7.4	37.0192	36.0000
0.075200	69.35	9.32	7.4	37.0192	36.0000
0.075300	69.39	9.33	7.4	37.0192	36.0000
0.075400	69.44	9.33	7.4	37.0192	36.0000
0.075500	69.48	9.34	7.4	37.0192	36.0000
0.075600	69.53	9.35	7.4	37.0192	36.0000
0.075700	69.58	9.35	7.4	37.0192	36.0000
0.075800	69.62	9.36	7.4	37.0192	36.0000
0.075900	69.67	9.36	7.4	37.0192	36.0000
0.076000	69.71	9.37	7.4	37.0192	36.0000
0.076100	69.76	9.38	7.4	37.0192	36.0000
0.076200	69.80	9.38	7.4	37.0192	36.0000
0.076300	69.85	9.39	7.4	37.0192	36.0000
0.076400	69.90	9.39	7.4	37.0192	36.0000
0.076500	69.94	9.40	7.4	37.0192	36.0000
0.076600	69.99	9.41	7.4	37.0192	36.0000
0.076700	70.03	9.41	7.4	37.0192	36.0000
0.076800	70.08	9.42	7.4	37.0192	36.0000
0.076900	70.12	9.43	7.4	37.0192	36.0000
0.077000	70.17	9.43	7.4	37.0192	36.0000
0.077100	70.22	9.44	7.4	37.0192	36.0000
0.077200	70.26	9.44	7.4	37.0192	36.0000
0.077300	70.31	9.45	7.4	37.0192	36.0000
0.077400	70.35	9.46	7.4	37.0192	36.0000
0.077500	70.40	9.46	7.4	37.0192	36.0000
0.077600	70.44	9.47	7.4	37.0192	36.0000
0.077700	70.49	9.47	7.4	37.0192	36.0000
0.077800	70.53	9.48	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.077900	70.58	9.49	7.4	37.0192	36.0000
0.078000	70.62	9.49	7.4	37.0192	36.0000
0.078100	70.67	9.50	7.4	37.0192	36.0000
0.078200	70.71	9.50	7.4	37.0192	36.0000
0.078300	70.76	9.51	7.4	37.0192	36.0000
0.078400	70.81	9.52	7.4	37.0192	36.0000
0.078500	70.85	9.52	7.4	37.0192	36.0000
0.078600	70.90	9.53	7.4	37.0192	36.0000
0.078700	70.94	9.54	7.4	37.0192	36.0000
0.078800	70.99	9.54	7.4	37.0192	36.0000
0.078900	71.03	9.55	7.4	37.0192	36.0000
0.079000	71.08	9.55	7.4	37.0192	36.0000
0.079100	71.12	9.56	7.4	37.0192	36.0000
0.079200	71.17	9.57	7.4	37.0192	36.0000
0.079300	71.21	9.57	7.4	37.0192	36.0000
0.079400	71.26	9.58	7.4	37.0192	36.0000
0.079500	71.30	9.58	7.4	37.0192	36.0000
0.079600	71.35	9.59	7.4	37.0192	36.0000
0.079700	71.39	9.60	7.4	37.0192	36.0000
0.079800	71.43	9.60	7.4	37.0192	36.0000
0.079900	71.48	9.61	7.4	37.0192	36.0000
0.080000	71.52	9.61	7.4	37.0192	36.0000
0.080100	71.57	9.62	7.4	37.0192	36.0000
0.080200	71.61	9.63	7.4	37.0192	36.0000
0.080300	71.66	9.63	7.4	37.0192	36.0000
0.080400	71.70	9.64	7.4	37.0192	36.0000
0.080500	71.75	9.64	7.4	37.0192	36.0000
0.080600	71.79	9.65	7.4	37.0192	36.0000
0.080700	71.84	9.66	7.4	37.0192	36.0000
0.080800	71.88	9.66	7.4	37.0192	36.0000
0.080900	71.93	9.67	7.4	37.0192	36.0000
0.081000	71.97	9.67	7.4	37.0192	36.0000
0.081100	72.01	9.68	7.4	37.0192	36.0000
0.081200	72.06	9.69	7.4	37.0192	36.0000
0.081300	72.10	9.69	7.4	37.0192	36.0000
0.081400	72.15	9.70	7.4	37.0192	36.0000
0.081500	72.19	9.70	7.4	37.0192	36.0000
0.081600	72.24	9.71	7.4	37.0192	36.0000
0.081700	72.28	9.72	7.4	37.0192	36.0000
0.081800	72.32	9.72	7.4	37.0192	36.0000
0.081900	72.37	9.73	7.4	37.0192	36.0000
0.082000	72.41	9.73	7.4	37.0192	36.0000
0.082100	72.46	9.74	7.4	37.0192	36.0000
0.082200	72.50	9.74	7.4	37.0192	36.0000
0.082300	72.55	9.75	7.4	37.0192	36.0000
0.082400	72.59	9.76	7.4	37.0192	36.0000
0.082500	72.63	9.76	7.4	37.0192	36.0000
0.082600	72.68	9.77	7.4	37.0192	36.0000
0.082700	72.72	9.77	7.4	37.0192	36.0000
0.082800	72.77	9.78	7.4	37.0192	36.0000
0.082900	72.81	9.79	7.4	37.0192	36.0000
0.083000	72.85	9.79	7.4	37.0192	36.0000
0.083100	72.90	9.80	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.083200	72.94	9.80	7.4	37.0192	36.0000
0.083300	72.98	9.81	7.4	37.0192	36.0000
0.083400	73.03	9.82	7.4	37.0192	36.0000
0.083500	73.07	9.82	7.4	37.0192	36.0000
0.083600	73.12	9.83	7.4	37.0192	36.0000
0.083700	73.16	9.83	7.4	37.0192	36.0000
0.083800	73.20	9.84	7.4	37.0192	36.0000
0.083900	73.25	9.84	7.4	37.0192	36.0000
0.084000	73.29	9.85	7.4	37.0192	36.0000
0.084100	73.33	9.86	7.4	37.0192	36.0000
0.084200	73.38	9.86	7.4	37.0192	36.0000
0.084300	73.42	9.87	7.4	37.0192	36.0000
0.084400	73.46	9.87	7.4	37.0192	36.0000
0.084500	73.51	9.88	7.4	37.0192	36.0000
0.084600	73.55	9.89	7.4	37.0192	36.0000
0.084700	73.60	9.89	7.4	37.0192	36.0000
0.084800	73.64	9.90	7.4	37.0192	36.0000
0.084900	73.68	9.90	7.4	37.0192	36.0000
0.085000	73.73	9.91	7.4	37.0192	36.0000
0.085100	73.77	9.92	7.4	37.0192	36.0000
0.085200	73.81	9.92	7.4	37.0192	36.0000
0.085300	73.86	9.93	7.4	37.0192	36.0000
0.085400	73.90	9.93	7.4	37.0192	36.0000
0.085500	73.94	9.94	7.4	37.0192	36.0000
0.085600	73.99	9.94	7.4	37.0192	36.0000
0.085700	74.03	9.95	7.4	37.0192	36.0000
0.085800	74.07	9.96	7.4	37.0192	36.0000
0.085900	74.11	9.96	7.4	37.0192	36.0000
0.086000	74.16	9.97	7.4	37.0192	36.0000
0.086100	74.20	9.97	7.4	37.0192	36.0000
0.086200	74.24	9.98	7.4	37.0192	36.0000
0.086300	74.29	9.98	7.4	37.0192	36.0000
0.086400	74.33	9.99	7.4	37.0192	36.0000
0.086500	74.37	10.00	7.4	37.0192	36.0000
0.086600	74.42	10.00	7.4	37.0192	36.0000
0.086700	74.46	10.01	7.4	37.0192	36.0000
0.086800	74.50	10.01	7.4	37.0192	36.0000
0.086900	74.54	10.02	7.4	37.0192	36.0000
0.087000	74.59	10.03	7.4	37.0192	36.0000
0.087100	74.63	10.03	7.4	37.0192	36.0000
0.087200	74.67	10.04	7.4	37.0192	36.0000
0.087300	74.72	10.04	7.4	37.0192	36.0000
0.087400	74.76	10.05	7.4	37.0192	36.0000
0.087500	74.80	10.05	7.4	37.0192	36.0000
0.087600	74.84	10.06	7.4	37.0192	36.0000
0.087700	74.89	10.07	7.4	37.0192	36.0000
0.087800	74.93	10.07	7.4	37.0192	36.0000
0.087900	74.97	10.08	7.4	37.0192	36.0000
0.088000	75.02	10.08	7.4	37.0192	36.0000
0.088100	75.06	10.09	7.4	37.0192	36.0000
0.088200	75.10	10.09	7.4	37.0192	36.0000
0.088300	75.14	10.10	7.4	37.0192	36.0000
0.088400	75.19	10.11	7.4	37.0192	36.0000

PRIVATE STREET 36' TC - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.088500	75.23	10.11	7.4	37.0192	36.0000
0.088600	75.27	10.12	7.4	37.0192	36.0000
0.088700	75.31	10.12	7.4	37.0192	36.0000
0.088800	75.36	10.13	7.4	37.0192	36.0000
0.088900	75.40	10.13	7.4	37.0192	36.0000
0.089000	75.44	10.14	7.4	37.0192	36.0000
0.089100	75.48	10.15	7.4	37.0192	36.0000
0.089200	75.52	10.15	7.4	37.0192	36.0000
0.089300	75.57	10.16	7.4	37.0192	36.0000
0.089400	75.61	10.16	7.4	37.0192	36.0000
0.089500	75.65	10.17	7.4	37.0192	36.0000
0.089600	75.69	10.17	7.4	37.0192	36.0000
0.089700	75.74	10.18	7.4	37.0192	36.0000
0.089800	75.78	10.19	7.4	37.0192	36.0000
0.089900	75.82	10.19	7.4	37.0192	36.0000
0.090000	75.86	10.20	7.4	37.0192	36.0000

TECHNICAL APPENDIX

APPENDIX B.4

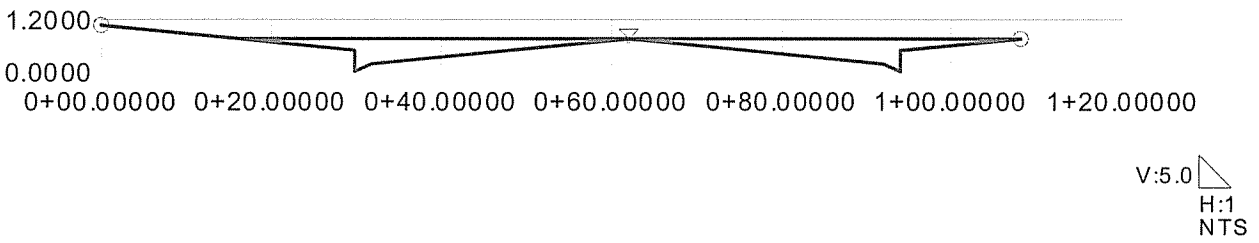
108' R/W – R/W to R/W – Rating Table

by FlowMaster

108' R/W - R/W TO R/W
Cross Section for Irregular Channel

Project Description	
Worksheet	6" CURB - 108' R/W - R\
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Section Data		
Mannings Coefficie	0.015	
Slope	0.010000	ft/ft
Water Surface Elev	0.78	ft
Elevation Range	.00 to 1.10	
Discharge	109.53	cfs



6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Project Description	
Worksheet	6" CURB - 108' R/W - R\
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Input Data	
Water Surface Elev	0.78 ft

Options	
Current Roughness Metho	ved Lotter's Method
Open Channel Weighting	ved Lotter's Method
Closed Channel Weightin	Horton's Method

Attribute	Minimum	Maximum	Increment
Slope (ft/ft)	0.000300	0.090000	0.000100

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft²)	Wetted Perimeter (ft)	Top Width (ft)
0.000300	18.97	0.73	25.9	93.0304	92.0000
0.000400	21.91	0.85	25.9	93.0304	92.0000
0.000500	24.49	0.94	25.9	93.0304	92.0000
0.000600	26.83	1.04	25.9	93.0304	92.0000
0.000700	28.98	1.12	25.9	93.0304	92.0000
0.000800	30.98	1.20	25.9	93.0304	92.0000
0.000900	32.86	1.27	25.9	93.0304	92.0000
0.001000	34.64	1.34	25.9	93.0304	92.0000
0.001100	36.33	1.40	25.9	93.0304	92.0000
0.001200	37.94	1.46	25.9	93.0304	92.0000
0.001300	39.49	1.52	25.9	93.0304	92.0000
0.001400	40.98	1.58	25.9	93.0304	92.0000
0.001500	42.42	1.64	25.9	93.0304	92.0000
0.001600	43.81	1.69	25.9	93.0304	92.0000
0.001700	45.16	1.74	25.9	93.0304	92.0000
0.001800	46.47	1.79	25.9	93.0304	92.0000
0.001900	47.74	1.84	25.9	93.0304	92.0000
0.002000	48.98	1.89	25.9	93.0304	92.0000
0.002100	50.19	1.94	25.9	93.0304	92.0000
0.002200	51.38	1.98	25.9	93.0304	92.0000
0.002300	52.53	2.03	25.9	93.0304	92.0000
0.002400	53.66	2.07	25.9	93.0304	92.0000
0.002500	54.77	2.11	25.9	93.0304	92.0000
0.002600	55.85	2.15	25.9	93.0304	92.0000
0.002700	56.92	2.20	25.9	93.0304	92.0000
0.002800	57.96	2.24	25.9	93.0304	92.0000
0.002900	58.99	2.28	25.9	93.0304	92.0000
0.003000	59.99	2.31	25.9	93.0304	92.0000
0.003100	60.99	2.35	25.9	93.0304	92.0000
0.003200	61.96	2.39	25.9	93.0304	92.0000
0.003300	62.92	2.43	25.9	93.0304	92.0000
0.003400	63.87	2.46	25.9	93.0304	92.0000
0.003500	64.80	2.50	25.9	93.0304	92.0000
0.003600	65.72	2.54	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.003700	66.63	2.57	25.9	93.0304	92.0000
0.003800	67.52	2.60	25.9	93.0304	92.0000
0.003900	68.40	2.64	25.9	93.0304	92.0000
0.004000	69.27	2.67	25.9	93.0304	92.0000
0.004100	70.14	2.71	25.9	93.0304	92.0000
0.004200	70.99	2.74	25.9	93.0304	92.0000
0.004300	71.83	2.77	25.9	93.0304	92.0000
0.004400	72.66	2.80	25.9	93.0304	92.0000
0.004500	73.48	2.83	25.9	93.0304	92.0000
0.004600	74.29	2.87	25.9	93.0304	92.0000
0.004700	75.09	2.90	25.9	93.0304	92.0000
0.004800	75.89	2.93	25.9	93.0304	92.0000
0.004900	76.67	2.96	25.9	93.0304	92.0000
0.005000	77.45	2.99	25.9	93.0304	92.0000
0.005100	78.22	3.02	25.9	93.0304	92.0000
0.005200	78.99	3.05	25.9	93.0304	92.0000
0.005300	79.74	3.08	25.9	93.0304	92.0000
0.005400	80.49	3.11	25.9	93.0304	92.0000
0.005500	81.23	3.13	25.9	93.0304	92.0000
0.005600	81.97	3.16	25.9	93.0304	92.0000
0.005700	82.70	3.19	25.9	93.0304	92.0000
0.005800	83.42	3.22	25.9	93.0304	92.0000
0.005900	84.13	3.25	25.9	93.0304	92.0000
0.006000	84.84	3.27	25.9	93.0304	92.0000
0.006100	85.55	3.30	25.9	93.0304	92.0000
0.006200	86.25	3.33	25.9	93.0304	92.0000
0.006300	86.94	3.35	25.9	93.0304	92.0000
0.006400	87.63	3.38	25.9	93.0304	92.0000
0.006500	88.31	3.41	25.9	93.0304	92.0000
0.006600	88.99	3.43	25.9	93.0304	92.0000
0.006700	89.66	3.46	25.9	93.0304	92.0000
0.006800	90.32	3.48	25.9	93.0304	92.0000
0.006900	90.99	3.51	25.9	93.0304	92.0000
0.007000	91.64	3.54	25.9	93.0304	92.0000
0.007100	92.29	3.56	25.9	93.0304	92.0000
0.007200	92.94	3.59	25.9	93.0304	92.0000
0.007300	93.59	3.61	25.9	93.0304	92.0000
0.007400	94.22	3.64	25.9	93.0304	92.0000
0.007500	94.86	3.66	25.9	93.0304	92.0000
0.007600	95.49	3.68	25.9	93.0304	92.0000
0.007700	96.11	3.71	25.9	93.0304	92.0000
0.007800	96.74	3.73	25.9	93.0304	92.0000
0.007900	97.36	3.76	25.9	93.0304	92.0000
0.008000	97.97	3.78	25.9	93.0304	92.0000
0.008100	98.58	3.80	25.9	93.0304	92.0000
0.008200	99.19	3.83	25.9	93.0304	92.0000
0.008300	99.79	3.85	25.9	93.0304	92.0000
0.008400	100.39	3.87	25.9	93.0304	92.0000
0.008500	100.98	3.90	25.9	93.0304	92.0000
0.008600	101.58	3.92	25.9	93.0304	92.0000
0.008700	102.17	3.94	25.9	93.0304	92.0000
0.008800	102.75	3.96	25.9	93.0304	92.0000
0.008900	103.33	3.99	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.009000	103.91	4.01	25.9	93.0304	92.0000
0.009100	104.49	4.03	25.9	93.0304	92.0000
0.009200	105.06	4.05	25.9	93.0304	92.0000
0.009300	105.63	4.08	25.9	93.0304	92.0000
0.009400	106.20	4.10	25.9	93.0304	92.0000
0.009500	106.76	4.12	25.9	93.0304	92.0000
0.009600	107.32	4.14	25.9	93.0304	92.0000
0.009700	107.88	4.16	25.9	93.0304	92.0000
0.009800	108.43	4.18	25.9	93.0304	92.0000
0.009900	108.98	4.20	25.9	93.0304	92.0000
0.010000	109.53	4.23	25.9	93.0304	92.0000
0.010100	110.08	4.25	25.9	93.0304	92.0000
0.010200	110.62	4.27	25.9	93.0304	92.0000
0.010300	111.16	4.29	25.9	93.0304	92.0000
0.010400	111.70	4.31	25.9	93.0304	92.0000
0.010500	112.24	4.33	25.9	93.0304	92.0000
0.010600	112.77	4.35	25.9	93.0304	92.0000
0.010700	113.30	4.37	25.9	93.0304	92.0000
0.010800	113.83	4.39	25.9	93.0304	92.0000
0.010900	114.36	4.41	25.9	93.0304	92.0000
0.011000	114.88	4.43	25.9	93.0304	92.0000
0.011100	115.40	4.45	25.9	93.0304	92.0000
0.011200	115.92	4.47	25.9	93.0304	92.0000
0.011300	116.44	4.49	25.9	93.0304	92.0000
0.011400	116.95	4.51	25.9	93.0304	92.0000
0.011500	117.46	4.53	25.9	93.0304	92.0000
0.011600	117.97	4.55	25.9	93.0304	92.0000
0.011700	118.48	4.57	25.9	93.0304	92.0000
0.011800	118.98	4.59	25.9	93.0304	92.0000
0.011900	119.49	4.61	25.9	93.0304	92.0000
0.012000	119.99	4.63	25.9	93.0304	92.0000
0.012100	120.49	4.65	25.9	93.0304	92.0000
0.012200	120.98	4.67	25.9	93.0304	92.0000
0.012300	121.48	4.69	25.9	93.0304	92.0000
0.012400	121.97	4.71	25.9	93.0304	92.0000
0.012500	122.46	4.72	25.9	93.0304	92.0000
0.012600	122.95	4.74	25.9	93.0304	92.0000
0.012700	123.44	4.76	25.9	93.0304	92.0000
0.012800	123.92	4.78	25.9	93.0304	92.0000
0.012900	124.41	4.80	25.9	93.0304	92.0000
0.013000	124.89	4.82	25.9	93.0304	92.0000
0.013100	125.37	4.84	25.9	93.0304	92.0000
0.013200	125.84	4.86	25.9	93.0304	92.0000
0.013300	126.32	4.87	25.9	93.0304	92.0000
0.013400	126.79	4.89	25.9	93.0304	92.0000
0.013500	127.27	4.91	25.9	93.0304	92.0000
0.013600	127.74	4.93	25.9	93.0304	92.0000
0.013700	128.21	4.95	25.9	93.0304	92.0000
0.013800	128.67	4.96	25.9	93.0304	92.0000
0.013900	129.14	4.98	25.9	93.0304	92.0000
0.014000	129.60	5.00	25.9	93.0304	92.0000
0.014100	130.06	5.02	25.9	93.0304	92.0000
0.014200	130.52	5.04	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.014300	130.98	5.05	25.9	93.0304	92.0000
0.014400	131.44	5.07	25.9	93.0304	92.0000
0.014500	131.90	5.09	25.9	93.0304	92.0000
0.014600	132.35	5.11	25.9	93.0304	92.0000
0.014700	132.80	5.12	25.9	93.0304	92.0000
0.014800	133.25	5.14	25.9	93.0304	92.0000
0.014900	133.70	5.16	25.9	93.0304	92.0000
0.015000	134.15	5.18	25.9	93.0304	92.0000
0.015100	134.60	5.19	25.9	93.0304	92.0000
0.015200	135.04	5.21	25.9	93.0304	92.0000
0.015300	135.49	5.23	25.9	93.0304	92.0000
0.015400	135.93	5.24	25.9	93.0304	92.0000
0.015500	136.37	5.26	25.9	93.0304	92.0000
0.015600	136.81	5.28	25.9	93.0304	92.0000
0.015700	137.24	5.29	25.9	93.0304	92.0000
0.015800	137.68	5.31	25.9	93.0304	92.0000
0.015900	138.12	5.33	25.9	93.0304	92.0000
0.016000	138.55	5.35	25.9	93.0304	92.0000
0.016100	138.98	5.36	25.9	93.0304	92.0000
0.016200	139.41	5.38	25.9	93.0304	92.0000
0.016300	139.84	5.40	25.9	93.0304	92.0000
0.016400	140.27	5.41	25.9	93.0304	92.0000
0.016500	140.70	5.43	25.9	93.0304	92.0000
0.016600	141.12	5.44	25.9	93.0304	92.0000
0.016700	141.55	5.46	25.9	93.0304	92.0000
0.016800	141.97	5.48	25.9	93.0304	92.0000
0.016900	142.39	5.49	25.9	93.0304	92.0000
0.017000	142.81	5.51	25.9	93.0304	92.0000
0.017100	143.23	5.53	25.9	93.0304	92.0000
0.017200	143.65	5.54	25.9	93.0304	92.0000
0.017300	144.07	5.56	25.9	93.0304	92.0000
0.017400	144.48	5.57	25.9	93.0304	92.0000
0.017500	144.90	5.59	25.9	93.0304	92.0000
0.017600	145.31	5.61	25.9	93.0304	92.0000
0.017700	145.72	5.62	25.9	93.0304	92.0000
0.017800	146.14	5.64	25.9	93.0304	92.0000
0.017900	146.55	5.65	25.9	93.0304	92.0000
0.018000	146.95	5.67	25.9	93.0304	92.0000
0.018100	147.36	5.69	25.9	93.0304	92.0000
0.018200	147.77	5.70	25.9	93.0304	92.0000
0.018300	148.17	5.72	25.9	93.0304	92.0000
0.018400	148.58	5.73	25.9	93.0304	92.0000
0.018500	148.98	5.75	25.9	93.0304	92.0000
0.018600	149.38	5.76	25.9	93.0304	92.0000
0.018700	149.78	5.78	25.9	93.0304	92.0000
0.018800	150.18	5.79	25.9	93.0304	92.0000
0.018900	150.58	5.81	25.9	93.0304	92.0000
0.019000	150.98	5.82	25.9	93.0304	92.0000
0.019100	151.38	5.84	25.9	93.0304	92.0000
0.019200	151.77	5.86	25.9	93.0304	92.0000
0.019300	152.17	5.87	25.9	93.0304	92.0000
0.019400	152.56	5.89	25.9	93.0304	92.0000
0.019500	152.95	5.90	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.019600	153.35	5.92	25.9	93.0304	92.0000
0.019700	153.74	5.93	25.9	93.0304	92.0000
0.019800	154.13	5.95	25.9	93.0304	92.0000
0.019900	154.52	5.96	25.9	93.0304	92.0000
0.020000	154.90	5.98	25.9	93.0304	92.0000
0.020100	155.29	5.99	25.9	93.0304	92.0000
0.020200	155.68	6.01	25.9	93.0304	92.0000
0.020300	156.06	6.02	25.9	93.0304	92.0000
0.020400	156.44	6.04	25.9	93.0304	92.0000
0.020500	156.83	6.05	25.9	93.0304	92.0000
0.020600	157.21	6.07	25.9	93.0304	92.0000
0.020700	157.59	6.08	25.9	93.0304	92.0000
0.020800	157.97	6.09	25.9	93.0304	92.0000
0.020900	158.35	6.11	25.9	93.0304	92.0000
0.021000	158.73	6.12	25.9	93.0304	92.0000
0.021100	159.11	6.14	25.9	93.0304	92.0000
0.021200	159.48	6.15	25.9	93.0304	92.0000
0.021300	159.86	6.17	25.9	93.0304	92.0000
0.021400	160.23	6.18	25.9	93.0304	92.0000
0.021500	160.61	6.20	25.9	93.0304	92.0000
0.021600	160.98	6.21	25.9	93.0304	92.0000
0.021700	161.35	6.23	25.9	93.0304	92.0000
0.021800	161.72	6.24	25.9	93.0304	92.0000
0.021900	162.09	6.25	25.9	93.0304	92.0000
0.022000	162.46	6.27	25.9	93.0304	92.0000
0.022100	162.83	6.28	25.9	93.0304	92.0000
0.022200	163.20	6.30	25.9	93.0304	92.0000
0.022300	163.57	6.31	25.9	93.0304	92.0000
0.022400	163.93	6.32	25.9	93.0304	92.0000
0.022500	164.30	6.34	25.9	93.0304	92.0000
0.022600	164.66	6.35	25.9	93.0304	92.0000
0.022700	165.03	6.37	25.9	93.0304	92.0000
0.022800	165.39	6.38	25.9	93.0304	92.0000
0.022900	165.75	6.39	25.9	93.0304	92.0000
0.023000	166.12	6.41	25.9	93.0304	92.0000
0.023100	166.48	6.42	25.9	93.0304	92.0000
0.023200	166.84	6.44	25.9	93.0304	92.0000
0.023300	167.20	6.45	25.9	93.0304	92.0000
0.023400	167.55	6.46	25.9	93.0304	92.0000
0.023500	167.91	6.48	25.9	93.0304	92.0000
0.023600	168.27	6.49	25.9	93.0304	92.0000
0.023700	168.62	6.51	25.9	93.0304	92.0000
0.023800	168.98	6.52	25.9	93.0304	92.0000
0.023900	169.33	6.53	25.9	93.0304	92.0000
0.024000	169.69	6.55	25.9	93.0304	92.0000
0.024100	170.04	6.56	25.9	93.0304	92.0000
0.024200	170.39	6.57	25.9	93.0304	92.0000
0.024300	170.75	6.59	25.9	93.0304	92.0000
0.024400	171.10	6.60	25.9	93.0304	92.0000
0.024500	171.45	6.61	25.9	93.0304	92.0000
0.024600	171.80	6.63	25.9	93.0304	92.0000
0.024700	172.14	6.64	25.9	93.0304	92.0000
0.024800	172.49	6.65	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.024900	172.84	6.67	25.9	93.0304	92.0000
0.025000	173.19	6.68	25.9	93.0304	92.0000
0.025100	173.53	6.69	25.9	93.0304	92.0000
0.025200	173.88	6.71	25.9	93.0304	92.0000
0.025300	174.22	6.72	25.9	93.0304	92.0000
0.025400	174.57	6.73	25.9	93.0304	92.0000
0.025500	174.91	6.75	25.9	93.0304	92.0000
0.025600	175.25	6.76	25.9	93.0304	92.0000
0.025700	175.60	6.77	25.9	93.0304	92.0000
0.025800	175.94	6.79	25.9	93.0304	92.0000
0.025900	176.28	6.80	25.9	93.0304	92.0000
0.026000	176.62	6.81	25.9	93.0304	92.0000
0.026100	176.96	6.83	25.9	93.0304	92.0000
0.026200	177.29	6.84	25.9	93.0304	92.0000
0.026300	177.63	6.85	25.9	93.0304	92.0000
0.026400	177.97	6.87	25.9	93.0304	92.0000
0.026500	178.31	6.88	25.9	93.0304	92.0000
0.026600	178.64	6.89	25.9	93.0304	92.0000
0.026700	178.98	6.91	25.9	93.0304	92.0000
0.026800	179.31	6.92	25.9	93.0304	92.0000
0.026900	179.65	6.93	25.9	93.0304	92.0000
0.027000	179.98	6.94	25.9	93.0304	92.0000
0.027100	180.31	6.96	25.9	93.0304	92.0000
0.027200	180.65	6.97	25.9	93.0304	92.0000
0.027300	180.98	6.98	25.9	93.0304	92.0000
0.027400	181.31	6.99	25.9	93.0304	92.0000
0.027500	181.64	7.01	25.9	93.0304	92.0000
0.027600	181.97	7.02	25.9	93.0304	92.0000
0.027700	182.30	7.03	25.9	93.0304	92.0000
0.027800	182.63	7.05	25.9	93.0304	92.0000
0.027900	182.96	7.06	25.9	93.0304	92.0000
0.028000	183.28	7.07	25.9	93.0304	92.0000
0.028100	183.61	7.08	25.9	93.0304	92.0000
0.028200	183.94	7.10	25.9	93.0304	92.0000
0.028300	184.26	7.11	25.9	93.0304	92.0000
0.028400	184.59	7.12	25.9	93.0304	92.0000
0.028500	184.91	7.13	25.9	93.0304	92.0000
0.028600	185.24	7.15	25.9	93.0304	92.0000
0.028700	185.56	7.16	25.9	93.0304	92.0000
0.028800	185.88	7.17	25.9	93.0304	92.0000
0.028900	186.21	7.18	25.9	93.0304	92.0000
0.029000	186.53	7.20	25.9	93.0304	92.0000
0.029100	186.85	7.21	25.9	93.0304	92.0000
0.029200	187.17	7.22	25.9	93.0304	92.0000
0.029300	187.49	7.23	25.9	93.0304	92.0000
0.029400	187.81	7.25	25.9	93.0304	92.0000
0.029500	188.13	7.26	25.9	93.0304	92.0000
0.029600	188.45	7.27	25.9	93.0304	92.0000
0.029700	188.77	7.28	25.9	93.0304	92.0000
0.029800	189.08	7.29	25.9	93.0304	92.0000
0.029900	189.40	7.31	25.9	93.0304	92.0000
0.030000	189.72	7.32	25.9	93.0304	92.0000
0.030100	190.03	7.33	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.030200	190.35	7.34	25.9	93.0304	92.0000
0.030300	190.66	7.36	25.9	93.0304	92.0000
0.030400	190.98	7.37	25.9	93.0304	92.0000
0.030500	191.29	7.38	25.9	93.0304	92.0000
0.030600	191.60	7.39	25.9	93.0304	92.0000
0.030700	191.92	7.40	25.9	93.0304	92.0000
0.030800	192.23	7.42	25.9	93.0304	92.0000
0.030900	192.54	7.43	25.9	93.0304	92.0000
0.031000	192.85	7.44	25.9	93.0304	92.0000
0.031100	193.16	7.45	25.9	93.0304	92.0000
0.031200	193.47	7.46	25.9	93.0304	92.0000
0.031300	193.78	7.48	25.9	93.0304	92.0000
0.031400	194.09	7.49	25.9	93.0304	92.0000
0.031500	194.40	7.50	25.9	93.0304	92.0000
0.031600	194.71	7.51	25.9	93.0304	92.0000
0.031700	195.02	7.52	25.9	93.0304	92.0000
0.031800	195.33	7.54	25.9	93.0304	92.0000
0.031900	195.63	7.55	25.9	93.0304	92.0000
0.032000	195.94	7.56	25.9	93.0304	92.0000
0.032100	196.24	7.57	25.9	93.0304	92.0000
0.032200	196.55	7.58	25.9	93.0304	92.0000
0.032300	196.86	7.59	25.9	93.0304	92.0000
0.032400	197.16	7.61	25.9	93.0304	92.0000
0.032500	197.46	7.62	25.9	93.0304	92.0000
0.032600	197.77	7.63	25.9	93.0304	92.0000
0.032700	198.07	7.64	25.9	93.0304	92.0000
0.032800	198.37	7.65	25.9	93.0304	92.0000
0.032900	198.68	7.66	25.9	93.0304	92.0000
0.033000	198.98	7.68	25.9	93.0304	92.0000
0.033100	199.28	7.69	25.9	93.0304	92.0000
0.033200	199.58	7.70	25.9	93.0304	92.0000
0.033300	199.88	7.71	25.9	93.0304	92.0000
0.033400	200.18	7.72	25.9	93.0304	92.0000
0.033500	200.48	7.73	25.9	93.0304	92.0000
0.033600	200.78	7.75	25.9	93.0304	92.0000
0.033700	201.08	7.76	25.9	93.0304	92.0000
0.033800	201.37	7.77	25.9	93.0304	92.0000
0.033900	201.67	7.78	25.9	93.0304	92.0000
0.034000	201.97	7.79	25.9	93.0304	92.0000
0.034100	202.27	7.80	25.9	93.0304	92.0000
0.034200	202.56	7.81	25.9	93.0304	92.0000
0.034300	202.86	7.83	25.9	93.0304	92.0000
0.034400	203.15	7.84	25.9	93.0304	92.0000
0.034500	203.45	7.85	25.9	93.0304	92.0000
0.034600	203.74	7.86	25.9	93.0304	92.0000
0.034700	204.04	7.87	25.9	93.0304	92.0000
0.034800	204.33	7.88	25.9	93.0304	92.0000
0.034900	204.62	7.89	25.9	93.0304	92.0000
0.035000	204.92	7.91	25.9	93.0304	92.0000
0.035100	205.21	7.92	25.9	93.0304	92.0000
0.035200	205.50	7.93	25.9	93.0304	92.0000
0.035300	205.79	7.94	25.9	93.0304	92.0000
0.035400	206.09	7.95	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.035500	206.38	7.96	25.9	93.0304	92.0000
0.035600	206.67	7.97	25.9	93.0304	92.0000
0.035700	206.96	7.98	25.9	93.0304	92.0000
0.035800	207.25	8.00	25.9	93.0304	92.0000
0.035900	207.54	8.01	25.9	93.0304	92.0000
0.036000	207.82	8.02	25.9	93.0304	92.0000
0.036100	208.11	8.03	25.9	93.0304	92.0000
0.036200	208.40	8.04	25.9	93.0304	92.0000
0.036300	208.69	8.05	25.9	93.0304	92.0000
0.036400	208.98	8.06	25.9	93.0304	92.0000
0.036500	209.26	8.07	25.9	93.0304	92.0000
0.036600	209.55	8.08	25.9	93.0304	92.0000
0.036700	209.84	8.10	25.9	93.0304	92.0000
0.036800	210.12	8.11	25.9	93.0304	92.0000
0.036900	210.41	8.12	25.9	93.0304	92.0000
0.037000	210.69	8.13	25.9	93.0304	92.0000
0.037100	210.98	8.14	25.9	93.0304	92.0000
0.037200	211.26	8.15	25.9	93.0304	92.0000
0.037300	211.54	8.16	25.9	93.0304	92.0000
0.037400	211.83	8.17	25.9	93.0304	92.0000
0.037500	212.11	8.18	25.9	93.0304	92.0000
0.037600	212.39	8.19	25.9	93.0304	92.0000
0.037700	212.67	8.21	25.9	93.0304	92.0000
0.037800	212.96	8.22	25.9	93.0304	92.0000
0.037900	213.24	8.23	25.9	93.0304	92.0000
0.038000	213.52	8.24	25.9	93.0304	92.0000
0.038100	213.80	8.25	25.9	93.0304	92.0000
0.038200	214.08	8.26	25.9	93.0304	92.0000
0.038300	214.36	8.27	25.9	93.0304	92.0000
0.038400	214.64	8.28	25.9	93.0304	92.0000
0.038500	214.92	8.29	25.9	93.0304	92.0000
0.038600	215.20	8.30	25.9	93.0304	92.0000
0.038700	215.48	8.31	25.9	93.0304	92.0000
0.038800	215.76	8.32	25.9	93.0304	92.0000
0.038900	216.03	8.33	25.9	93.0304	92.0000
0.039000	216.31	8.35	25.9	93.0304	92.0000
0.039100	216.59	8.36	25.9	93.0304	92.0000
0.039200	216.86	8.37	25.9	93.0304	92.0000
0.039300	217.14	8.38	25.9	93.0304	92.0000
0.039400	217.42	8.39	25.9	93.0304	92.0000
0.039500	217.69	8.40	25.9	93.0304	92.0000
0.039600	217.97	8.41	25.9	93.0304	92.0000
0.039700	218.24	8.42	25.9	93.0304	92.0000
0.039800	218.52	8.43	25.9	93.0304	92.0000
0.039900	218.79	8.44	25.9	93.0304	92.0000
0.040000	219.07	8.45	25.9	93.0304	92.0000
0.040100	219.34	8.46	25.9	93.0304	92.0000
0.040200	219.61	8.47	25.9	93.0304	92.0000
0.040300	219.89	8.48	25.9	93.0304	92.0000
0.040400	220.16	8.49	25.9	93.0304	92.0000
0.040500	220.43	8.50	25.9	93.0304	92.0000
0.040600	220.70	8.51	25.9	93.0304	92.0000
0.040700	220.97	8.53	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.040800	221.25	8.54	25.9	93.0304	92.0000
0.040900	221.52	8.55	25.9	93.0304	92.0000
0.041000	221.79	8.56	25.9	93.0304	92.0000
0.041100	222.06	8.57	25.9	93.0304	92.0000
0.041200	222.33	8.58	25.9	93.0304	92.0000
0.041300	222.60	8.59	25.9	93.0304	92.0000
0.041400	222.87	8.60	25.9	93.0304	92.0000
0.041500	223.14	8.61	25.9	93.0304	92.0000
0.041600	223.40	8.62	25.9	93.0304	92.0000
0.041700	223.67	8.63	25.9	93.0304	92.0000
0.041800	223.94	8.64	25.9	93.0304	92.0000
0.041900	224.21	8.65	25.9	93.0304	92.0000
0.042000	224.48	8.66	25.9	93.0304	92.0000
0.042100	224.74	8.67	25.9	93.0304	92.0000
0.042200	225.01	8.68	25.9	93.0304	92.0000
0.042300	225.28	8.69	25.9	93.0304	92.0000
0.042400	225.54	8.70	25.9	93.0304	92.0000
0.042500	225.81	8.71	25.9	93.0304	92.0000
0.042600	226.07	8.72	25.9	93.0304	92.0000
0.042700	226.34	8.73	25.9	93.0304	92.0000
0.042800	226.60	8.74	25.9	93.0304	92.0000
0.042900	226.87	8.75	25.9	93.0304	92.0000
0.043000	227.13	8.76	25.9	93.0304	92.0000
0.043100	227.40	8.77	25.9	93.0304	92.0000
0.043200	227.66	8.78	25.9	93.0304	92.0000
0.043300	227.92	8.79	25.9	93.0304	92.0000
0.043400	228.19	8.80	25.9	93.0304	92.0000
0.043500	228.45	8.81	25.9	93.0304	92.0000
0.043600	228.71	8.82	25.9	93.0304	92.0000
0.043700	228.97	8.83	25.9	93.0304	92.0000
0.043800	229.24	8.84	25.9	93.0304	92.0000
0.043900	229.50	8.85	25.9	93.0304	92.0000
0.044000	229.76	8.86	25.9	93.0304	92.0000
0.044100	230.02	8.87	25.9	93.0304	92.0000
0.044200	230.28	8.88	25.9	93.0304	92.0000
0.044300	230.54	8.89	25.9	93.0304	92.0000
0.044400	230.80	8.90	25.9	93.0304	92.0000
0.044500	231.06	8.91	25.9	93.0304	92.0000
0.044600	231.32	8.92	25.9	93.0304	92.0000
0.044700	231.58	8.93	25.9	93.0304	92.0000
0.044800	231.84	8.94	25.9	93.0304	92.0000
0.044900	232.10	8.95	25.9	93.0304	92.0000
0.045000	232.35	8.96	25.9	93.0304	92.0000
0.045100	232.61	8.97	25.9	93.0304	92.0000
0.045200	232.87	8.98	25.9	93.0304	92.0000
0.045300	233.13	8.99	25.9	93.0304	92.0000
0.045400	233.39	9.00	25.9	93.0304	92.0000
0.045500	233.64	9.01	25.9	93.0304	92.0000
0.045600	233.90	9.02	25.9	93.0304	92.0000
0.045700	234.16	9.03	25.9	93.0304	92.0000
0.045800	234.41	9.04	25.9	93.0304	92.0000
0.045900	234.67	9.05	25.9	93.0304	92.0000
0.046000	234.92	9.06	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.046100	235.18	9.07	25.9	93.0304	92.0000
0.046200	235.43	9.08	25.9	93.0304	92.0000
0.046300	235.69	9.09	25.9	93.0304	92.0000
0.046400	235.94	9.10	25.9	93.0304	92.0000
0.046500	236.20	9.11	25.9	93.0304	92.0000
0.046600	236.45	9.12	25.9	93.0304	92.0000
0.046700	236.70	9.13	25.9	93.0304	92.0000
0.046800	236.96	9.14	25.9	93.0304	92.0000
0.046900	237.21	9.15	25.9	93.0304	92.0000
0.047000	237.46	9.16	25.9	93.0304	92.0000
0.047100	237.71	9.17	25.9	93.0304	92.0000
0.047200	237.97	9.18	25.9	93.0304	92.0000
0.047300	238.22	9.19	25.9	93.0304	92.0000
0.047400	238.47	9.20	25.9	93.0304	92.0000
0.047500	238.72	9.21	25.9	93.0304	92.0000
0.047600	238.97	9.22	25.9	93.0304	92.0000
0.047700	239.22	9.23	25.9	93.0304	92.0000
0.047800	239.47	9.24	25.9	93.0304	92.0000
0.047900	239.73	9.25	25.9	93.0304	92.0000
0.048000	239.98	9.26	25.9	93.0304	92.0000
0.048100	240.23	9.27	25.9	93.0304	92.0000
0.048200	240.47	9.28	25.9	93.0304	92.0000
0.048300	240.72	9.29	25.9	93.0304	92.0000
0.048400	240.97	9.30	25.9	93.0304	92.0000
0.048500	241.22	9.31	25.9	93.0304	92.0000
0.048600	241.47	9.32	25.9	93.0304	92.0000
0.048700	241.72	9.33	25.9	93.0304	92.0000
0.048800	241.97	9.34	25.9	93.0304	92.0000
0.048900	242.21	9.34	25.9	93.0304	92.0000
0.049000	242.46	9.35	25.9	93.0304	92.0000
0.049100	242.71	9.36	25.9	93.0304	92.0000
0.049200	242.96	9.37	25.9	93.0304	92.0000
0.049300	243.20	9.38	25.9	93.0304	92.0000
0.049400	243.45	9.39	25.9	93.0304	92.0000
0.049500	243.70	9.40	25.9	93.0304	92.0000
0.049600	243.94	9.41	25.9	93.0304	92.0000
0.049700	244.19	9.42	25.9	93.0304	92.0000
0.049800	244.43	9.43	25.9	93.0304	92.0000
0.049900	244.68	9.44	25.9	93.0304	92.0000
0.050000	244.92	9.45	25.9	93.0304	92.0000
0.050100	245.17	9.46	25.9	93.0304	92.0000
0.050200	245.41	9.47	25.9	93.0304	92.0000
0.050300	245.66	9.48	25.9	93.0304	92.0000
0.050400	245.90	9.49	25.9	93.0304	92.0000
0.050500	246.15	9.50	25.9	93.0304	92.0000
0.050600	246.39	9.51	25.9	93.0304	92.0000
0.050700	246.63	9.52	25.9	93.0304	92.0000
0.050800	246.88	9.52	25.9	93.0304	92.0000
0.050900	247.12	9.53	25.9	93.0304	92.0000
0.051000	247.36	9.54	25.9	93.0304	92.0000
0.051100	247.60	9.55	25.9	93.0304	92.0000
0.051200	247.85	9.56	25.9	93.0304	92.0000
0.051300	248.09	9.57	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.051400	248.33	9.58	25.9	93.0304	92.0000
0.051500	248.57	9.59	25.9	93.0304	92.0000
0.051600	248.81	9.60	25.9	93.0304	92.0000
0.051700	249.05	9.61	25.9	93.0304	92.0000
0.051800	249.29	9.62	25.9	93.0304	92.0000
0.051900	249.53	9.63	25.9	93.0304	92.0000
0.052000	249.77	9.64	25.9	93.0304	92.0000
0.052100	250.01	9.65	25.9	93.0304	92.0000
0.052200	250.25	9.65	25.9	93.0304	92.0000
0.052300	250.49	9.66	25.9	93.0304	92.0000
0.052400	250.73	9.67	25.9	93.0304	92.0000
0.052500	250.97	9.68	25.9	93.0304	92.0000
0.052600	251.21	9.69	25.9	93.0304	92.0000
0.052700	251.45	9.70	25.9	93.0304	92.0000
0.052800	251.69	9.71	25.9	93.0304	92.0000
0.052900	251.93	9.72	25.9	93.0304	92.0000
0.053000	252.16	9.73	25.9	93.0304	92.0000
0.053100	252.40	9.74	25.9	93.0304	92.0000
0.053200	252.64	9.75	25.9	93.0304	92.0000
0.053300	252.88	9.76	25.9	93.0304	92.0000
0.053400	253.11	9.77	25.9	93.0304	92.0000
0.053500	253.35	9.77	25.9	93.0304	92.0000
0.053600	253.59	9.78	25.9	93.0304	92.0000
0.053700	253.82	9.79	25.9	93.0304	92.0000
0.053800	254.06	9.80	25.9	93.0304	92.0000
0.053900	254.30	9.81	25.9	93.0304	92.0000
0.054000	254.53	9.82	25.9	93.0304	92.0000
0.054100	254.77	9.83	25.9	93.0304	92.0000
0.054200	255.00	9.84	25.9	93.0304	92.0000
0.054300	255.24	9.85	25.9	93.0304	92.0000
0.054400	255.47	9.86	25.9	93.0304	92.0000
0.054500	255.71	9.87	25.9	93.0304	92.0000
0.054600	255.94	9.87	25.9	93.0304	92.0000
0.054700	256.18	9.88	25.9	93.0304	92.0000
0.054800	256.41	9.89	25.9	93.0304	92.0000
0.054900	256.64	9.90	25.9	93.0304	92.0000
0.055000	256.88	9.91	25.9	93.0304	92.0000
0.055100	257.11	9.92	25.9	93.0304	92.0000
0.055200	257.34	9.93	25.9	93.0304	92.0000
0.055300	257.58	9.94	25.9	93.0304	92.0000
0.055400	257.81	9.95	25.9	93.0304	92.0000
0.055500	258.04	9.96	25.9	93.0304	92.0000
0.055600	258.28	9.96	25.9	93.0304	92.0000
0.055700	258.51	9.97	25.9	93.0304	92.0000
0.055800	258.74	9.98	25.9	93.0304	92.0000
0.055900	258.97	9.99	25.9	93.0304	92.0000
0.056000	259.20	10.00	25.9	93.0304	92.0000
0.056100	259.43	10.01	25.9	93.0304	92.0000
0.056200	259.67	10.02	25.9	93.0304	92.0000
0.056300	259.90	10.03	25.9	93.0304	92.0000
0.056400	260.13	10.04	25.9	93.0304	92.0000
0.056500	260.36	10.04	25.9	93.0304	92.0000
0.056600	260.59	10.05	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.056700	260.82	10.06	25.9	93.0304	92.0000
0.056800	261.05	10.07	25.9	93.0304	92.0000
0.056900	261.28	10.08	25.9	93.0304	92.0000
0.057000	261.51	10.09	25.9	93.0304	92.0000
0.057100	261.74	10.10	25.9	93.0304	92.0000
0.057200	261.97	10.11	25.9	93.0304	92.0000
0.057300	262.19	10.12	25.9	93.0304	92.0000
0.057400	262.42	10.12	25.9	93.0304	92.0000
0.057500	262.65	10.13	25.9	93.0304	92.0000
0.057600	262.88	10.14	25.9	93.0304	92.0000
0.057700	263.11	10.15	25.9	93.0304	92.0000
0.057800	263.34	10.16	25.9	93.0304	92.0000
0.057900	263.56	10.17	25.9	93.0304	92.0000
0.058000	263.79	10.18	25.9	93.0304	92.0000
0.058100	264.02	10.19	25.9	93.0304	92.0000
0.058200	264.25	10.19	25.9	93.0304	92.0000
0.058300	264.47	10.20	25.9	93.0304	92.0000
0.058400	264.70	10.21	25.9	93.0304	92.0000
0.058500	264.93	10.22	25.9	93.0304	92.0000
0.058600	265.15	10.23	25.9	93.0304	92.0000
0.058700	265.38	10.24	25.9	93.0304	92.0000
0.058800	265.60	10.25	25.9	93.0304	92.0000
0.058900	265.83	10.26	25.9	93.0304	92.0000
0.059000	266.06	10.26	25.9	93.0304	92.0000
0.059100	266.28	10.27	25.9	93.0304	92.0000
0.059200	266.51	10.28	25.9	93.0304	92.0000
0.059300	266.73	10.29	25.9	93.0304	92.0000
0.059400	266.96	10.30	25.9	93.0304	92.0000
0.059500	267.18	10.31	25.9	93.0304	92.0000
0.059600	267.40	10.32	25.9	93.0304	92.0000
0.059700	267.63	10.33	25.9	93.0304	92.0000
0.059800	267.85	10.33	25.9	93.0304	92.0000
0.059900	268.08	10.34	25.9	93.0304	92.0000
0.060000	268.30	10.35	25.9	93.0304	92.0000
0.060100	268.52	10.36	25.9	93.0304	92.0000
0.060200	268.75	10.37	25.9	93.0304	92.0000
0.060300	268.97	10.38	25.9	93.0304	92.0000
0.060400	269.19	10.39	25.9	93.0304	92.0000
0.060500	269.42	10.39	25.9	93.0304	92.0000
0.060600	269.64	10.40	25.9	93.0304	92.0000
0.060700	269.86	10.41	25.9	93.0304	92.0000
0.060800	270.08	10.42	25.9	93.0304	92.0000
0.060900	270.31	10.43	25.9	93.0304	92.0000
0.061000	270.53	10.44	25.9	93.0304	92.0000
0.061100	270.75	10.45	25.9	93.0304	92.0000
0.061200	270.97	10.45	25.9	93.0304	92.0000
0.061300	271.19	10.46	25.9	93.0304	92.0000
0.061400	271.41	10.47	25.9	93.0304	92.0000
0.061500	271.63	10.48	25.9	93.0304	92.0000
0.061600	271.85	10.49	25.9	93.0304	92.0000
0.061700	272.07	10.50	25.9	93.0304	92.0000
0.061800	272.30	10.51	25.9	93.0304	92.0000
0.061900	272.52	10.51	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.062000	272.74	10.52	25.9	93.0304	92.0000
0.062100	272.96	10.53	25.9	93.0304	92.0000
0.062200	273.17	10.54	25.9	93.0304	92.0000
0.062300	273.39	10.55	25.9	93.0304	92.0000
0.062400	273.61	10.56	25.9	93.0304	92.0000
0.062500	273.83	10.56	25.9	93.0304	92.0000
0.062600	274.05	10.57	25.9	93.0304	92.0000
0.062700	274.27	10.58	25.9	93.0304	92.0000
0.062800	274.49	10.59	25.9	93.0304	92.0000
0.062900	274.71	10.60	25.9	93.0304	92.0000
0.063000	274.93	10.61	25.9	93.0304	92.0000
0.063100	275.14	10.62	25.9	93.0304	92.0000
0.063200	275.36	10.62	25.9	93.0304	92.0000
0.063300	275.58	10.63	25.9	93.0304	92.0000
0.063400	275.80	10.64	25.9	93.0304	92.0000
0.063500	276.01	10.65	25.9	93.0304	92.0000
0.063600	276.23	10.66	25.9	93.0304	92.0000
0.063700	276.45	10.67	25.9	93.0304	92.0000
0.063800	276.67	10.67	25.9	93.0304	92.0000
0.063900	276.88	10.68	25.9	93.0304	92.0000
0.064000	277.10	10.69	25.9	93.0304	92.0000
0.064100	277.32	10.70	25.9	93.0304	92.0000
0.064200	277.53	10.71	25.9	93.0304	92.0000
0.064300	277.75	10.72	25.9	93.0304	92.0000
0.064400	277.96	10.72	25.9	93.0304	92.0000
0.064500	278.18	10.73	25.9	93.0304	92.0000
0.064600	278.40	10.74	25.9	93.0304	92.0000
0.064700	278.61	10.75	25.9	93.0304	92.0000
0.064800	278.83	10.76	25.9	93.0304	92.0000
0.064900	279.04	10.77	25.9	93.0304	92.0000
0.065000	279.26	10.77	25.9	93.0304	92.0000
0.065100	279.47	10.78	25.9	93.0304	92.0000
0.065200	279.69	10.79	25.9	93.0304	92.0000
0.065300	279.90	10.80	25.9	93.0304	92.0000
0.065400	280.11	10.81	25.9	93.0304	92.0000
0.065500	280.33	10.82	25.9	93.0304	92.0000
0.065600	280.54	10.82	25.9	93.0304	92.0000
0.065700	280.76	10.83	25.9	93.0304	92.0000
0.065800	280.97	10.84	25.9	93.0304	92.0000
0.065900	281.18	10.85	25.9	93.0304	92.0000
0.066000	281.40	10.86	25.9	93.0304	92.0000
0.066100	281.61	10.86	25.9	93.0304	92.0000
0.066200	281.82	10.87	25.9	93.0304	92.0000
0.066300	282.03	10.88	25.9	93.0304	92.0000
0.066400	282.25	10.89	25.9	93.0304	92.0000
0.066500	282.46	10.90	25.9	93.0304	92.0000
0.066600	282.67	10.91	25.9	93.0304	92.0000
0.066700	282.88	10.91	25.9	93.0304	92.0000
0.066800	283.10	10.92	25.9	93.0304	92.0000
0.066900	283.31	10.93	25.9	93.0304	92.0000
0.067000	283.52	10.94	25.9	93.0304	92.0000
0.067100	283.73	10.95	25.9	93.0304	92.0000
0.067200	283.94	10.95	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.067300	284.15	10.96	25.9	93.0304	92.0000
0.067400	284.36	10.97	25.9	93.0304	92.0000
0.067500	284.58	10.98	25.9	93.0304	92.0000
0.067600	284.79	10.99	25.9	93.0304	92.0000
0.067700	285.00	11.00	25.9	93.0304	92.0000
0.067800	285.21	11.00	25.9	93.0304	92.0000
0.067900	285.42	11.01	25.9	93.0304	92.0000
0.068000	285.63	11.02	25.9	93.0304	92.0000
0.068100	285.84	11.03	25.9	93.0304	92.0000
0.068200	286.05	11.04	25.9	93.0304	92.0000
0.068300	286.26	11.04	25.9	93.0304	92.0000
0.068400	286.47	11.05	25.9	93.0304	92.0000
0.068500	286.68	11.06	25.9	93.0304	92.0000
0.068600	286.88	11.07	25.9	93.0304	92.0000
0.068700	287.09	11.08	25.9	93.0304	92.0000
0.068800	287.30	11.08	25.9	93.0304	92.0000
0.068900	287.51	11.09	25.9	93.0304	92.0000
0.069000	287.72	11.10	25.9	93.0304	92.0000
0.069100	287.93	11.11	25.9	93.0304	92.0000
0.069200	288.14	11.12	25.9	93.0304	92.0000
0.069300	288.34	11.12	25.9	93.0304	92.0000
0.069400	288.55	11.13	25.9	93.0304	92.0000
0.069500	288.76	11.14	25.9	93.0304	92.0000
0.069600	288.97	11.15	25.9	93.0304	92.0000
0.069700	289.18	11.16	25.9	93.0304	92.0000
0.069800	289.38	11.16	25.9	93.0304	92.0000
0.069900	289.59	11.17	25.9	93.0304	92.0000
0.070000	289.80	11.18	25.9	93.0304	92.0000
0.070100	290.00	11.19	25.9	93.0304	92.0000
0.070200	290.21	11.20	25.9	93.0304	92.0000
0.070300	290.42	11.20	25.9	93.0304	92.0000
0.070400	290.62	11.21	25.9	93.0304	92.0000
0.070500	290.83	11.22	25.9	93.0304	92.0000
0.070600	291.04	11.23	25.9	93.0304	92.0000
0.070700	291.24	11.24	25.9	93.0304	92.0000
0.070800	291.45	11.24	25.9	93.0304	92.0000
0.070900	291.65	11.25	25.9	93.0304	92.0000
0.071000	291.86	11.26	25.9	93.0304	92.0000
0.071100	292.07	11.27	25.9	93.0304	92.0000
0.071200	292.27	11.28	25.9	93.0304	92.0000
0.071300	292.48	11.28	25.9	93.0304	92.0000
0.071400	292.68	11.29	25.9	93.0304	92.0000
0.071500	292.89	11.30	25.9	93.0304	92.0000
0.071600	293.09	11.31	25.9	93.0304	92.0000
0.071700	293.30	11.32	25.9	93.0304	92.0000
0.071800	293.50	11.32	25.9	93.0304	92.0000
0.071900	293.70	11.33	25.9	93.0304	92.0000
0.072000	293.91	11.34	25.9	93.0304	92.0000
0.072100	294.11	11.35	25.9	93.0304	92.0000
0.072200	294.32	11.35	25.9	93.0304	92.0000
0.072300	294.52	11.36	25.9	93.0304	92.0000
0.072400	294.72	11.37	25.9	93.0304	92.0000
0.072500	294.93	11.38	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.072600	295.13	11.39	25.9	93.0304	92.0000
0.072700	295.33	11.39	25.9	93.0304	92.0000
0.072800	295.54	11.40	25.9	93.0304	92.0000
0.072900	295.74	11.41	25.9	93.0304	92.0000
0.073000	295.94	11.42	25.9	93.0304	92.0000
0.073100	296.14	11.43	25.9	93.0304	92.0000
0.073200	296.35	11.43	25.9	93.0304	92.0000
0.073300	296.55	11.44	25.9	93.0304	92.0000
0.073400	296.75	11.45	25.9	93.0304	92.0000
0.073500	296.95	11.46	25.9	93.0304	92.0000
0.073600	297.16	11.46	25.9	93.0304	92.0000
0.073700	297.36	11.47	25.9	93.0304	92.0000
0.073800	297.56	11.48	25.9	93.0304	92.0000
0.073900	297.76	11.49	25.9	93.0304	92.0000
0.074000	297.96	11.50	25.9	93.0304	92.0000
0.074100	298.16	11.50	25.9	93.0304	92.0000
0.074200	298.36	11.51	25.9	93.0304	92.0000
0.074300	298.57	11.52	25.9	93.0304	92.0000
0.074400	298.77	11.53	25.9	93.0304	92.0000
0.074500	298.97	11.53	25.9	93.0304	92.0000
0.074600	299.17	11.54	25.9	93.0304	92.0000
0.074700	299.37	11.55	25.9	93.0304	92.0000
0.074800	299.57	11.56	25.9	93.0304	92.0000
0.074900	299.77	11.57	25.9	93.0304	92.0000
0.075000	299.97	11.57	25.9	93.0304	92.0000
0.075100	300.17	11.58	25.9	93.0304	92.0000
0.075200	300.37	11.59	25.9	93.0304	92.0000
0.075300	300.57	11.60	25.9	93.0304	92.0000
0.075400	300.77	11.60	25.9	93.0304	92.0000
0.075500	300.97	11.61	25.9	93.0304	92.0000
0.075600	301.17	11.62	25.9	93.0304	92.0000
0.075700	301.37	11.63	25.9	93.0304	92.0000
0.075800	301.56	11.63	25.9	93.0304	92.0000
0.075900	301.76	11.64	25.9	93.0304	92.0000
0.076000	301.96	11.65	25.9	93.0304	92.0000
0.076100	302.16	11.66	25.9	93.0304	92.0000
0.076200	302.36	11.67	25.9	93.0304	92.0000
0.076300	302.56	11.67	25.9	93.0304	92.0000
0.076400	302.76	11.68	25.9	93.0304	92.0000
0.076500	302.95	11.69	25.9	93.0304	92.0000
0.076600	303.15	11.70	25.9	93.0304	92.0000
0.076700	303.35	11.70	25.9	93.0304	92.0000
0.076800	303.55	11.71	25.9	93.0304	92.0000
0.076900	303.74	11.72	25.9	93.0304	92.0000
0.077000	303.94	11.73	25.9	93.0304	92.0000
0.077100	304.14	11.73	25.9	93.0304	92.0000
0.077200	304.34	11.74	25.9	93.0304	92.0000
0.077300	304.53	11.75	25.9	93.0304	92.0000
0.077400	304.73	11.76	25.9	93.0304	92.0000
0.077500	304.93	11.76	25.9	93.0304	92.0000
0.077600	305.12	11.77	25.9	93.0304	92.0000
0.077700	305.32	11.78	25.9	93.0304	92.0000
0.077800	305.52	11.79	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.077900	305.71	11.79	25.9	93.0304	92.0000
0.078000	305.91	11.80	25.9	93.0304	92.0000
0.078100	306.11	11.81	25.9	93.0304	92.0000
0.078200	306.30	11.82	25.9	93.0304	92.0000
0.078300	306.50	11.82	25.9	93.0304	92.0000
0.078400	306.69	11.83	25.9	93.0304	92.0000
0.078500	306.89	11.84	25.9	93.0304	92.0000
0.078600	307.08	11.85	25.9	93.0304	92.0000
0.078700	307.28	11.85	25.9	93.0304	92.0000
0.078800	307.47	11.86	25.9	93.0304	92.0000
0.078900	307.67	11.87	25.9	93.0304	92.0000
0.079000	307.86	11.88	25.9	93.0304	92.0000
0.079100	308.06	11.88	25.9	93.0304	92.0000
0.079200	308.25	11.89	25.9	93.0304	92.0000
0.079300	308.45	11.90	25.9	93.0304	92.0000
0.079400	308.64	11.91	25.9	93.0304	92.0000
0.079500	308.84	11.92	25.9	93.0304	92.0000
0.079600	309.03	11.92	25.9	93.0304	92.0000
0.079700	309.23	11.93	25.9	93.0304	92.0000
0.079800	309.42	11.94	25.9	93.0304	92.0000
0.079900	309.61	11.94	25.9	93.0304	92.0000
0.080000	309.81	11.95	25.9	93.0304	92.0000
0.080100	310.00	11.96	25.9	93.0304	92.0000
0.080200	310.19	11.97	25.9	93.0304	92.0000
0.080300	310.39	11.97	25.9	93.0304	92.0000
0.080400	310.58	11.98	25.9	93.0304	92.0000
0.080500	310.77	11.99	25.9	93.0304	92.0000
0.080600	310.97	12.00	25.9	93.0304	92.0000
0.080700	311.16	12.00	25.9	93.0304	92.0000
0.080800	311.35	12.01	25.9	93.0304	92.0000
0.080900	311.54	12.02	25.9	93.0304	92.0000
0.081000	311.74	12.03	25.9	93.0304	92.0000
0.081100	311.93	12.03	25.9	93.0304	92.0000
0.081200	312.12	12.04	25.9	93.0304	92.0000
0.081300	312.31	12.05	25.9	93.0304	92.0000
0.081400	312.51	12.06	25.9	93.0304	92.0000
0.081500	312.70	12.06	25.9	93.0304	92.0000
0.081600	312.89	12.07	25.9	93.0304	92.0000
0.081700	313.08	12.08	25.9	93.0304	92.0000
0.081800	313.27	12.09	25.9	93.0304	92.0000
0.081900	313.46	12.09	25.9	93.0304	92.0000
0.082000	313.66	12.10	25.9	93.0304	92.0000
0.082100	313.85	12.11	25.9	93.0304	92.0000
0.082200	314.04	12.12	25.9	93.0304	92.0000
0.082300	314.23	12.12	25.9	93.0304	92.0000
0.082400	314.42	12.13	25.9	93.0304	92.0000
0.082500	314.61	12.14	25.9	93.0304	92.0000
0.082600	314.80	12.15	25.9	93.0304	92.0000
0.082700	314.99	12.15	25.9	93.0304	92.0000
0.082800	315.18	12.16	25.9	93.0304	92.0000
0.082900	315.37	12.17	25.9	93.0304	92.0000
0.083000	315.56	12.17	25.9	93.0304	92.0000
0.083100	315.75	12.18	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.083200	315.94	12.19	25.9	93.0304	92.0000
0.083300	316.13	12.20	25.9	93.0304	92.0000
0.083400	316.32	12.20	25.9	93.0304	92.0000
0.083500	316.51	12.21	25.9	93.0304	92.0000
0.083600	316.70	12.22	25.9	93.0304	92.0000
0.083700	316.89	12.23	25.9	93.0304	92.0000
0.083800	317.08	12.23	25.9	93.0304	92.0000
0.083900	317.27	12.24	25.9	93.0304	92.0000
0.084000	317.46	12.25	25.9	93.0304	92.0000
0.084100	317.65	12.25	25.9	93.0304	92.0000
0.084200	317.84	12.26	25.9	93.0304	92.0000
0.084300	318.02	12.27	25.9	93.0304	92.0000
0.084400	318.21	12.28	25.9	93.0304	92.0000
0.084500	318.40	12.28	25.9	93.0304	92.0000
0.084600	318.59	12.29	25.9	93.0304	92.0000
0.084700	318.78	12.30	25.9	93.0304	92.0000
0.084800	318.97	12.31	25.9	93.0304	92.0000
0.084900	319.15	12.31	25.9	93.0304	92.0000
0.085000	319.34	12.32	25.9	93.0304	92.0000
0.085100	319.53	12.33	25.9	93.0304	92.0000
0.085200	319.72	12.33	25.9	93.0304	92.0000
0.085300	319.90	12.34	25.9	93.0304	92.0000
0.085400	320.09	12.35	25.9	93.0304	92.0000
0.085500	320.28	12.36	25.9	93.0304	92.0000
0.085600	320.47	12.36	25.9	93.0304	92.0000
0.085700	320.65	12.37	25.9	93.0304	92.0000
0.085800	320.84	12.38	25.9	93.0304	92.0000
0.085900	321.03	12.39	25.9	93.0304	92.0000
0.086000	321.21	12.39	25.9	93.0304	92.0000
0.086100	321.40	12.40	25.9	93.0304	92.0000
0.086200	321.59	12.41	25.9	93.0304	92.0000
0.086300	321.77	12.41	25.9	93.0304	92.0000
0.086400	321.96	12.42	25.9	93.0304	92.0000
0.086500	322.15	12.43	25.9	93.0304	92.0000
0.086600	322.33	12.44	25.9	93.0304	92.0000
0.086700	322.52	12.44	25.9	93.0304	92.0000
0.086800	322.70	12.45	25.9	93.0304	92.0000
0.086900	322.89	12.46	25.9	93.0304	92.0000
0.087000	323.08	12.46	25.9	93.0304	92.0000
0.087100	323.26	12.47	25.9	93.0304	92.0000
0.087200	323.45	12.48	25.9	93.0304	92.0000
0.087300	323.63	12.49	25.9	93.0304	92.0000
0.087400	323.82	12.49	25.9	93.0304	92.0000
0.087500	324.00	12.50	25.9	93.0304	92.0000
0.087600	324.19	12.51	25.9	93.0304	92.0000
0.087700	324.37	12.51	25.9	93.0304	92.0000
0.087800	324.56	12.52	25.9	93.0304	92.0000
0.087900	324.74	12.53	25.9	93.0304	92.0000
0.088000	324.93	12.54	25.9	93.0304	92.0000
0.088100	325.11	12.54	25.9	93.0304	92.0000
0.088200	325.30	12.55	25.9	93.0304	92.0000
0.088300	325.48	12.56	25.9	93.0304	92.0000
0.088400	325.67	12.56	25.9	93.0304	92.0000

6" CURB - 108' R/W - R/W TO R/W
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.088500	325.85	12.57	25.9	93.0304	92.0000
0.088600	326.03	12.58	25.9	93.0304	92.0000
0.088700	326.22	12.59	25.9	93.0304	92.0000
0.088800	326.40	12.59	25.9	93.0304	92.0000
0.088900	326.59	12.60	25.9	93.0304	92.0000
0.089000	326.77	12.61	25.9	93.0304	92.0000
0.089100	326.95	12.61	25.9	93.0304	92.0000
0.089200	327.14	12.62	25.9	93.0304	92.0000
0.089300	327.32	12.63	25.9	93.0304	92.0000
0.089400	327.50	12.64	25.9	93.0304	92.0000
0.089500	327.69	12.64	25.9	93.0304	92.0000
0.089600	327.87	12.65	25.9	93.0304	92.0000
0.089700	328.05	12.66	25.9	93.0304	92.0000
0.089800	328.23	12.66	25.9	93.0304	92.0000
0.089900	328.42	12.67	25.9	93.0304	92.0000
0.090000	328.60	12.68	25.9	93.0304	92.0000

TECHNICAL APPENDIX

APPENDIX B.5

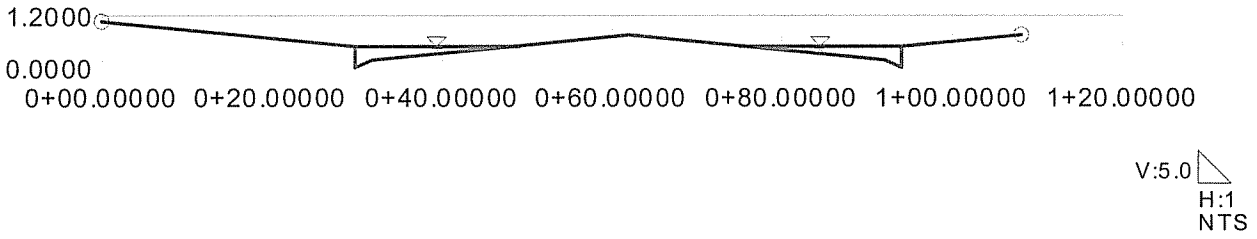
108' R/W – TC to TC – Rating Table

by FlowMaster

108' R/W - TC TO TC
Cross Section for Irregular Channel

Project Description	
Worksheet	6" CURB - 108' R/W - TC
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Section Data		
Mannings Coefficie	0.015	
Slope	0.010000	ft/ft
Water Surface Elev	0.50	ft
Elevation Range	.00 to 1.10	
Discharge	24.53	cfs



6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Project Description	
Worksheet	6" CURB - 108' R/W - TC
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Discharge

Input Data	
Water Surface Elev	0.50 ft

Options	
Current Roughness Meth	ved Lotter's Method
Open Channel Weighting	ved Lotter's Method
Closed Channel Weightin	Horton's Method

Attribute	Minimum	Maximum	Increment
Slope (ft/ft)	0.000300	0.090000	0.000100

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.000300	4.25	0.57	7.5	39.0196	38.0000
0.000400	4.91	0.66	7.5	39.0196	38.0000
0.000500	5.48	0.74	7.5	39.0196	38.0000
0.000600	6.01	0.81	7.5	39.0196	38.0000
0.000700	6.49	0.87	7.5	39.0196	38.0000
0.000800	6.94	0.93	7.5	39.0196	38.0000
0.000900	7.36	0.99	7.5	39.0196	38.0000
0.001000	7.76	1.04	7.5	39.0196	38.0000
0.001100	8.13	1.09	7.5	39.0196	38.0000
0.001200	8.50	1.14	7.5	39.0196	38.0000
0.001300	8.84	1.19	7.5	39.0196	38.0000
0.001400	9.18	1.23	7.5	39.0196	38.0000
0.001500	9.50	1.27	7.5	39.0196	38.0000
0.001600	9.81	1.32	7.5	39.0196	38.0000
0.001700	10.11	1.36	7.5	39.0196	38.0000
0.001800	10.41	1.39	7.5	39.0196	38.0000
0.001900	10.69	1.43	7.5	39.0196	38.0000
0.002000	10.97	1.47	7.5	39.0196	38.0000
0.002100	11.24	1.51	7.5	39.0196	38.0000
0.002200	11.50	1.54	7.5	39.0196	38.0000
0.002300	11.76	1.58	7.5	39.0196	38.0000
0.002400	12.01	1.61	7.5	39.0196	38.0000
0.002500	12.26	1.64	7.5	39.0196	38.0000
0.002600	12.51	1.68	7.5	39.0196	38.0000
0.002700	12.74	1.71	7.5	39.0196	38.0000
0.002800	12.98	1.74	7.5	39.0196	38.0000
0.002900	13.21	1.77	7.5	39.0196	38.0000
0.003000	13.43	1.80	7.5	39.0196	38.0000
0.003100	13.66	1.83	7.5	39.0196	38.0000
0.003200	13.87	1.86	7.5	39.0196	38.0000
0.003300	14.09	1.89	7.5	39.0196	38.0000
0.003400	14.30	1.92	7.5	39.0196	38.0000
0.003500	14.51	1.94	7.5	39.0196	38.0000
0.003600	14.72	1.97	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.003700	14.92	2.00	7.5	39.0196	38.0000
0.003800	15.12	2.03	7.5	39.0196	38.0000
0.003900	15.32	2.05	7.5	39.0196	38.0000
0.004000	15.51	2.08	7.5	39.0196	38.0000
0.004100	15.70	2.11	7.5	39.0196	38.0000
0.004200	15.89	2.13	7.5	39.0196	38.0000
0.004300	16.08	2.16	7.5	39.0196	38.0000
0.004400	16.27	2.18	7.5	39.0196	38.0000
0.004500	16.45	2.21	7.5	39.0196	38.0000
0.004600	16.63	2.23	7.5	39.0196	38.0000
0.004700	16.81	2.25	7.5	39.0196	38.0000
0.004800	16.99	2.28	7.5	39.0196	38.0000
0.004900	17.17	2.30	7.5	39.0196	38.0000
0.005000	17.34	2.32	7.5	39.0196	38.0000
0.005100	17.51	2.35	7.5	39.0196	38.0000
0.005200	17.69	2.37	7.5	39.0196	38.0000
0.005300	17.85	2.39	7.5	39.0196	38.0000
0.005400	18.02	2.42	7.5	39.0196	38.0000
0.005500	18.19	2.44	7.5	39.0196	38.0000
0.005600	18.35	2.46	7.5	39.0196	38.0000
0.005700	18.52	2.48	7.5	39.0196	38.0000
0.005800	18.68	2.50	7.5	39.0196	38.0000
0.005900	18.84	2.53	7.5	39.0196	38.0000
0.006000	19.00	2.55	7.5	39.0196	38.0000
0.006100	19.15	2.57	7.5	39.0196	38.0000
0.006200	19.31	2.59	7.5	39.0196	38.0000
0.006300	19.47	2.61	7.5	39.0196	38.0000
0.006400	19.62	2.63	7.5	39.0196	38.0000
0.006500	19.77	2.65	7.5	39.0196	38.0000
0.006600	19.92	2.67	7.5	39.0196	38.0000
0.006700	20.07	2.69	7.5	39.0196	38.0000
0.006800	20.22	2.71	7.5	39.0196	38.0000
0.006900	20.37	2.73	7.5	39.0196	38.0000
0.007000	20.52	2.75	7.5	39.0196	38.0000
0.007100	20.67	2.77	7.5	39.0196	38.0000
0.007200	20.81	2.79	7.5	39.0196	38.0000
0.007300	20.95	2.81	7.5	39.0196	38.0000
0.007400	21.10	2.83	7.5	39.0196	38.0000
0.007500	21.24	2.85	7.5	39.0196	38.0000
0.007600	21.38	2.87	7.5	39.0196	38.0000
0.007700	21.52	2.88	7.5	39.0196	38.0000
0.007800	21.66	2.90	7.5	39.0196	38.0000
0.007900	21.80	2.92	7.5	39.0196	38.0000
0.008000	21.94	2.94	7.5	39.0196	38.0000
0.008100	22.07	2.96	7.5	39.0196	38.0000
0.008200	22.21	2.98	7.5	39.0196	38.0000
0.008300	22.34	3.00	7.5	39.0196	38.0000
0.008400	22.48	3.01	7.5	39.0196	38.0000
0.008500	22.61	3.03	7.5	39.0196	38.0000
0.008600	22.74	3.05	7.5	39.0196	38.0000
0.008700	22.88	3.07	7.5	39.0196	38.0000
0.008800	23.01	3.08	7.5	39.0196	38.0000
0.008900	23.14	3.10	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.009000	23.27	3.12	7.5	39.0196	38.0000
0.009100	23.40	3.14	7.5	39.0196	38.0000
0.009200	23.52	3.15	7.5	39.0196	38.0000
0.009300	23.65	3.17	7.5	39.0196	38.0000
0.009400	23.78	3.19	7.5	39.0196	38.0000
0.009500	23.90	3.20	7.5	39.0196	38.0000
0.009600	24.03	3.22	7.5	39.0196	38.0000
0.009700	24.15	3.24	7.5	39.0196	38.0000
0.009800	24.28	3.25	7.5	39.0196	38.0000
0.009900	24.40	3.27	7.5	39.0196	38.0000
0.010000	24.53	3.29	7.5	39.0196	38.0000
0.010100	24.65	3.30	7.5	39.0196	38.0000
0.010200	24.77	3.32	7.5	39.0196	38.0000
0.010300	24.89	3.34	7.5	39.0196	38.0000
0.010400	25.01	3.35	7.5	39.0196	38.0000
0.010500	25.13	3.37	7.5	39.0196	38.0000
0.010600	25.25	3.38	7.5	39.0196	38.0000
0.010700	25.37	3.40	7.5	39.0196	38.0000
0.010800	25.49	3.42	7.5	39.0196	38.0000
0.010900	25.61	3.43	7.5	39.0196	38.0000
0.011000	25.72	3.45	7.5	39.0196	38.0000
0.011100	25.84	3.46	7.5	39.0196	38.0000
0.011200	25.96	3.48	7.5	39.0196	38.0000
0.011300	26.07	3.49	7.5	39.0196	38.0000
0.011400	26.19	3.51	7.5	39.0196	38.0000
0.011500	26.30	3.53	7.5	39.0196	38.0000
0.011600	26.41	3.54	7.5	39.0196	38.0000
0.011700	26.53	3.56	7.5	39.0196	38.0000
0.011800	26.64	3.57	7.5	39.0196	38.0000
0.011900	26.75	3.59	7.5	39.0196	38.0000
0.012000	26.87	3.60	7.5	39.0196	38.0000
0.012100	26.98	3.62	7.5	39.0196	38.0000
0.012200	27.09	3.63	7.5	39.0196	38.0000
0.012300	27.20	3.65	7.5	39.0196	38.0000
0.012400	27.31	3.66	7.5	39.0196	38.0000
0.012500	27.42	3.68	7.5	39.0196	38.0000
0.012600	27.53	3.69	7.5	39.0196	38.0000
0.012700	27.64	3.70	7.5	39.0196	38.0000
0.012800	27.75	3.72	7.5	39.0196	38.0000
0.012900	27.86	3.73	7.5	39.0196	38.0000
0.013000	27.96	3.75	7.5	39.0196	38.0000
0.013100	28.07	3.76	7.5	39.0196	38.0000
0.013200	28.18	3.78	7.5	39.0196	38.0000
0.013300	28.28	3.79	7.5	39.0196	38.0000
0.013400	28.39	3.81	7.5	39.0196	38.0000
0.013500	28.50	3.82	7.5	39.0196	38.0000
0.013600	28.60	3.83	7.5	39.0196	38.0000
0.013700	28.71	3.85	7.5	39.0196	38.0000
0.013800	28.81	3.86	7.5	39.0196	38.0000
0.013900	28.91	3.88	7.5	39.0196	38.0000
0.014000	29.02	3.89	7.5	39.0196	38.0000
0.014100	29.12	3.90	7.5	39.0196	38.0000
0.014200	29.23	3.92	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.014300	29.33	3.93	7.5	39.0196	38.0000
0.014400	29.43	3.95	7.5	39.0196	38.0000
0.014500	29.53	3.96	7.5	39.0196	38.0000
0.014600	29.63	3.97	7.5	39.0196	38.0000
0.014700	29.74	3.99	7.5	39.0196	38.0000
0.014800	29.84	4.00	7.5	39.0196	38.0000
0.014900	29.94	4.01	7.5	39.0196	38.0000
0.015000	30.04	4.03	7.5	39.0196	38.0000
0.015100	30.14	4.04	7.5	39.0196	38.0000
0.015200	30.24	4.05	7.5	39.0196	38.0000
0.015300	30.34	4.07	7.5	39.0196	38.0000
0.015400	30.44	4.08	7.5	39.0196	38.0000
0.015500	30.53	4.09	7.5	39.0196	38.0000
0.015600	30.63	4.11	7.5	39.0196	38.0000
0.015700	30.73	4.12	7.5	39.0196	38.0000
0.015800	30.83	4.13	7.5	39.0196	38.0000
0.015900	30.93	4.15	7.5	39.0196	38.0000
0.016000	31.02	4.16	7.5	39.0196	38.0000
0.016100	31.12	4.17	7.5	39.0196	38.0000
0.016200	31.22	4.18	7.5	39.0196	38.0000
0.016300	31.31	4.20	7.5	39.0196	38.0000
0.016400	31.41	4.21	7.5	39.0196	38.0000
0.016500	31.50	4.22	7.5	39.0196	38.0000
0.016600	31.60	4.24	7.5	39.0196	38.0000
0.016700	31.69	4.25	7.5	39.0196	38.0000
0.016800	31.79	4.26	7.5	39.0196	38.0000
0.016900	31.88	4.27	7.5	39.0196	38.0000
0.017000	31.98	4.29	7.5	39.0196	38.0000
0.017100	32.07	4.30	7.5	39.0196	38.0000
0.017200	32.16	4.31	7.5	39.0196	38.0000
0.017300	32.26	4.32	7.5	39.0196	38.0000
0.017400	32.35	4.34	7.5	39.0196	38.0000
0.017500	32.44	4.35	7.5	39.0196	38.0000
0.017600	32.54	4.36	7.5	39.0196	38.0000
0.017700	32.63	4.37	7.5	39.0196	38.0000
0.017800	32.72	4.39	7.5	39.0196	38.0000
0.017900	32.81	4.40	7.5	39.0196	38.0000
0.018000	32.90	4.41	7.5	39.0196	38.0000
0.018100	33.00	4.42	7.5	39.0196	38.0000
0.018200	33.09	4.44	7.5	39.0196	38.0000
0.018300	33.18	4.45	7.5	39.0196	38.0000
0.018400	33.27	4.46	7.5	39.0196	38.0000
0.018500	33.36	4.47	7.5	39.0196	38.0000
0.018600	33.45	4.48	7.5	39.0196	38.0000
0.018700	33.54	4.50	7.5	39.0196	38.0000
0.018800	33.63	4.51	7.5	39.0196	38.0000
0.018900	33.72	4.52	7.5	39.0196	38.0000
0.019000	33.81	4.53	7.5	39.0196	38.0000
0.019100	33.89	4.54	7.5	39.0196	38.0000
0.019200	33.98	4.56	7.5	39.0196	38.0000
0.019300	34.07	4.57	7.5	39.0196	38.0000
0.019400	34.16	4.58	7.5	39.0196	38.0000
0.019500	34.25	4.59	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.019600	34.34	4.60	7.5	39.0196	38.0000
0.019700	34.42	4.61	7.5	39.0196	38.0000
0.019800	34.51	4.63	7.5	39.0196	38.0000
0.019900	34.60	4.64	7.5	39.0196	38.0000
0.020000	34.68	4.65	7.5	39.0196	38.0000
0.020100	34.77	4.66	7.5	39.0196	38.0000
0.020200	34.86	4.67	7.5	39.0196	38.0000
0.020300	34.94	4.68	7.5	39.0196	38.0000
0.020400	35.03	4.70	7.5	39.0196	38.0000
0.020500	35.11	4.71	7.5	39.0196	38.0000
0.020600	35.20	4.72	7.5	39.0196	38.0000
0.020700	35.29	4.73	7.5	39.0196	38.0000
0.020800	35.37	4.74	7.5	39.0196	38.0000
0.020900	35.46	4.75	7.5	39.0196	38.0000
0.021000	35.54	4.76	7.5	39.0196	38.0000
0.021100	35.62	4.78	7.5	39.0196	38.0000
0.021200	35.71	4.79	7.5	39.0196	38.0000
0.021300	35.79	4.80	7.5	39.0196	38.0000
0.021400	35.88	4.81	7.5	39.0196	38.0000
0.021500	35.96	4.82	7.5	39.0196	38.0000
0.021600	36.04	4.83	7.5	39.0196	38.0000
0.021700	36.13	4.84	7.5	39.0196	38.0000
0.021800	36.21	4.85	7.5	39.0196	38.0000
0.021900	36.29	4.87	7.5	39.0196	38.0000
0.022000	36.38	4.88	7.5	39.0196	38.0000
0.022100	36.46	4.89	7.5	39.0196	38.0000
0.022200	36.54	4.90	7.5	39.0196	38.0000
0.022300	36.62	4.91	7.5	39.0196	38.0000
0.022400	36.71	4.92	7.5	39.0196	38.0000
0.022500	36.79	4.93	7.5	39.0196	38.0000
0.022600	36.87	4.94	7.5	39.0196	38.0000
0.022700	36.95	4.95	7.5	39.0196	38.0000
0.022800	37.03	4.96	7.5	39.0196	38.0000
0.022900	37.11	4.97	7.5	39.0196	38.0000
0.023000	37.19	4.99	7.5	39.0196	38.0000
0.023100	37.28	5.00	7.5	39.0196	38.0000
0.023200	37.36	5.01	7.5	39.0196	38.0000
0.023300	37.44	5.02	7.5	39.0196	38.0000
0.023400	37.52	5.03	7.5	39.0196	38.0000
0.023500	37.60	5.04	7.5	39.0196	38.0000
0.023600	37.68	5.05	7.5	39.0196	38.0000
0.023700	37.76	5.06	7.5	39.0196	38.0000
0.023800	37.84	5.07	7.5	39.0196	38.0000
0.023900	37.92	5.08	7.5	39.0196	38.0000
0.024000	37.99	5.09	7.5	39.0196	38.0000
0.024100	38.07	5.10	7.5	39.0196	38.0000
0.024200	38.15	5.11	7.5	39.0196	38.0000
0.024300	38.23	5.12	7.5	39.0196	38.0000
0.024400	38.31	5.14	7.5	39.0196	38.0000
0.024500	38.39	5.15	7.5	39.0196	38.0000
0.024600	38.47	5.16	7.5	39.0196	38.0000
0.024700	38.54	5.17	7.5	39.0196	38.0000
0.024800	38.62	5.18	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.024900	38.70	5.19	7.5	39.0196	38.0000
0.025000	38.78	5.20	7.5	39.0196	38.0000
0.025100	38.86	5.21	7.5	39.0196	38.0000
0.025200	38.93	5.22	7.5	39.0196	38.0000
0.025300	39.01	5.23	7.5	39.0196	38.0000
0.025400	39.09	5.24	7.5	39.0196	38.0000
0.025500	39.16	5.25	7.5	39.0196	38.0000
0.025600	39.24	5.26	7.5	39.0196	38.0000
0.025700	39.32	5.27	7.5	39.0196	38.0000
0.025800	39.39	5.28	7.5	39.0196	38.0000
0.025900	39.47	5.29	7.5	39.0196	38.0000
0.026000	39.55	5.30	7.5	39.0196	38.0000
0.026100	39.62	5.31	7.5	39.0196	38.0000
0.026200	39.70	5.32	7.5	39.0196	38.0000
0.026300	39.77	5.33	7.5	39.0196	38.0000
0.026400	39.85	5.34	7.5	39.0196	38.0000
0.026500	39.92	5.35	7.5	39.0196	38.0000
0.026600	40.00	5.36	7.5	39.0196	38.0000
0.026700	40.07	5.37	7.5	39.0196	38.0000
0.026800	40.15	5.38	7.5	39.0196	38.0000
0.026900	40.22	5.39	7.5	39.0196	38.0000
0.027000	40.30	5.40	7.5	39.0196	38.0000
0.027100	40.37	5.41	7.5	39.0196	38.0000
0.027200	40.45	5.42	7.5	39.0196	38.0000
0.027300	40.52	5.43	7.5	39.0196	38.0000
0.027400	40.60	5.44	7.5	39.0196	38.0000
0.027500	40.67	5.45	7.5	39.0196	38.0000
0.027600	40.74	5.46	7.5	39.0196	38.0000
0.027700	40.82	5.47	7.5	39.0196	38.0000
0.027800	40.89	5.48	7.5	39.0196	38.0000
0.027900	40.97	5.49	7.5	39.0196	38.0000
0.028000	41.04	5.50	7.5	39.0196	38.0000
0.028100	41.11	5.51	7.5	39.0196	38.0000
0.028200	41.18	5.52	7.5	39.0196	38.0000
0.028300	41.26	5.53	7.5	39.0196	38.0000
0.028400	41.33	5.54	7.5	39.0196	38.0000
0.028500	41.40	5.55	7.5	39.0196	38.0000
0.028600	41.48	5.56	7.5	39.0196	38.0000
0.028700	41.55	5.57	7.5	39.0196	38.0000
0.028800	41.62	5.58	7.5	39.0196	38.0000
0.028900	41.69	5.59	7.5	39.0196	38.0000
0.029000	41.77	5.60	7.5	39.0196	38.0000
0.029100	41.84	5.61	7.5	39.0196	38.0000
0.029200	41.91	5.62	7.5	39.0196	38.0000
0.029300	41.98	5.63	7.5	39.0196	38.0000
0.029400	42.05	5.64	7.5	39.0196	38.0000
0.029500	42.12	5.65	7.5	39.0196	38.0000
0.029600	42.19	5.66	7.5	39.0196	38.0000
0.029700	42.27	5.67	7.5	39.0196	38.0000
0.029800	42.34	5.68	7.5	39.0196	38.0000
0.029900	42.41	5.68	7.5	39.0196	38.0000
0.030000	42.48	5.69	7.5	39.0196	38.0000
0.030100	42.55	5.70	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.030200	42.62	5.71	7.5	39.0196	38.0000
0.030300	42.69	5.72	7.5	39.0196	38.0000
0.030400	42.76	5.73	7.5	39.0196	38.0000
0.030500	42.83	5.74	7.5	39.0196	38.0000
0.030600	42.90	5.75	7.5	39.0196	38.0000
0.030700	42.97	5.76	7.5	39.0196	38.0000
0.030800	43.04	5.77	7.5	39.0196	38.0000
0.030900	43.11	5.78	7.5	39.0196	38.0000
0.031000	43.18	5.79	7.5	39.0196	38.0000
0.031100	43.25	5.80	7.5	39.0196	38.0000
0.031200	43.32	5.81	7.5	39.0196	38.0000
0.031300	43.39	5.82	7.5	39.0196	38.0000
0.031400	43.46	5.83	7.5	39.0196	38.0000
0.031500	43.53	5.83	7.5	39.0196	38.0000
0.031600	43.60	5.84	7.5	39.0196	38.0000
0.031700	43.67	5.85	7.5	39.0196	38.0000
0.031800	43.73	5.86	7.5	39.0196	38.0000
0.031900	43.80	5.87	7.5	39.0196	38.0000
0.032000	43.87	5.88	7.5	39.0196	38.0000
0.032100	43.94	5.89	7.5	39.0196	38.0000
0.032200	44.01	5.90	7.5	39.0196	38.0000
0.032300	44.08	5.91	7.5	39.0196	38.0000
0.032400	44.15	5.92	7.5	39.0196	38.0000
0.032500	44.21	5.93	7.5	39.0196	38.0000
0.032600	44.28	5.94	7.5	39.0196	38.0000
0.032700	44.35	5.94	7.5	39.0196	38.0000
0.032800	44.42	5.95	7.5	39.0196	38.0000
0.032900	44.48	5.96	7.5	39.0196	38.0000
0.033000	44.55	5.97	7.5	39.0196	38.0000
0.033100	44.62	5.98	7.5	39.0196	38.0000
0.033200	44.69	5.99	7.5	39.0196	38.0000
0.033300	44.75	6.00	7.5	39.0196	38.0000
0.033400	44.82	6.01	7.5	39.0196	38.0000
0.033500	44.89	6.02	7.5	39.0196	38.0000
0.033600	44.96	6.03	7.5	39.0196	38.0000
0.033700	45.02	6.04	7.5	39.0196	38.0000
0.033800	45.09	6.04	7.5	39.0196	38.0000
0.033900	45.16	6.05	7.5	39.0196	38.0000
0.034000	45.22	6.06	7.5	39.0196	38.0000
0.034100	45.29	6.07	7.5	39.0196	38.0000
0.034200	45.36	6.08	7.5	39.0196	38.0000
0.034300	45.42	6.09	7.5	39.0196	38.0000
0.034400	45.49	6.10	7.5	39.0196	38.0000
0.034500	45.55	6.11	7.5	39.0196	38.0000
0.034600	45.62	6.12	7.5	39.0196	38.0000
0.034700	45.69	6.12	7.5	39.0196	38.0000
0.034800	45.75	6.13	7.5	39.0196	38.0000
0.034900	45.82	6.14	7.5	39.0196	38.0000
0.035000	45.88	6.15	7.5	39.0196	38.0000
0.035100	45.95	6.16	7.5	39.0196	38.0000
0.035200	46.01	6.17	7.5	39.0196	38.0000
0.035300	46.08	6.18	7.5	39.0196	38.0000
0.035400	46.14	6.19	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.035500	46.21	6.19	7.5	39.0196	38.0000
0.035600	46.27	6.20	7.5	39.0196	38.0000
0.035700	46.34	6.21	7.5	39.0196	38.0000
0.035800	46.40	6.22	7.5	39.0196	38.0000
0.035900	46.47	6.23	7.5	39.0196	38.0000
0.036000	46.53	6.24	7.5	39.0196	38.0000
0.036100	46.60	6.25	7.5	39.0196	38.0000
0.036200	46.66	6.26	7.5	39.0196	38.0000
0.036300	46.73	6.26	7.5	39.0196	38.0000
0.036400	46.79	6.27	7.5	39.0196	38.0000
0.036500	46.86	6.28	7.5	39.0196	38.0000
0.036600	46.92	6.29	7.5	39.0196	38.0000
0.036700	46.98	6.30	7.5	39.0196	38.0000
0.036800	47.05	6.31	7.5	39.0196	38.0000
0.036900	47.11	6.32	7.5	39.0196	38.0000
0.037000	47.18	6.32	7.5	39.0196	38.0000
0.037100	47.24	6.33	7.5	39.0196	38.0000
0.037200	47.30	6.34	7.5	39.0196	38.0000
0.037300	47.37	6.35	7.5	39.0196	38.0000
0.037400	47.43	6.36	7.5	39.0196	38.0000
0.037500	47.49	6.37	7.5	39.0196	38.0000
0.037600	47.56	6.37	7.5	39.0196	38.0000
0.037700	47.62	6.38	7.5	39.0196	38.0000
0.037800	47.68	6.39	7.5	39.0196	38.0000
0.037900	47.75	6.40	7.5	39.0196	38.0000
0.038000	47.81	6.41	7.5	39.0196	38.0000
0.038100	47.87	6.42	7.5	39.0196	38.0000
0.038200	47.93	6.43	7.5	39.0196	38.0000
0.038300	48.00	6.43	7.5	39.0196	38.0000
0.038400	48.06	6.44	7.5	39.0196	38.0000
0.038500	48.12	6.45	7.5	39.0196	38.0000
0.038600	48.18	6.46	7.5	39.0196	38.0000
0.038700	48.25	6.47	7.5	39.0196	38.0000
0.038800	48.31	6.48	7.5	39.0196	38.0000
0.038900	48.37	6.48	7.5	39.0196	38.0000
0.039000	48.43	6.49	7.5	39.0196	38.0000
0.039100	48.50	6.50	7.5	39.0196	38.0000
0.039200	48.56	6.51	7.5	39.0196	38.0000
0.039300	48.62	6.52	7.5	39.0196	38.0000
0.039400	48.68	6.53	7.5	39.0196	38.0000
0.039500	48.74	6.53	7.5	39.0196	38.0000
0.039600	48.80	6.54	7.5	39.0196	38.0000
0.039700	48.87	6.55	7.5	39.0196	38.0000
0.039800	48.93	6.56	7.5	39.0196	38.0000
0.039900	48.99	6.57	7.5	39.0196	38.0000
0.040000	49.05	6.58	7.5	39.0196	38.0000
0.040100	49.11	6.58	7.5	39.0196	38.0000
0.040200	49.17	6.59	7.5	39.0196	38.0000
0.040300	49.23	6.60	7.5	39.0196	38.0000
0.040400	49.30	6.61	7.5	39.0196	38.0000
0.040500	49.36	6.62	7.5	39.0196	38.0000
0.040600	49.42	6.62	7.5	39.0196	38.0000
0.040700	49.48	6.63	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.040800	49.54	6.64	7.5	39.0196	38.0000
0.040900	49.60	6.65	7.5	39.0196	38.0000
0.041000	49.66	6.66	7.5	39.0196	38.0000
0.041100	49.72	6.66	7.5	39.0196	38.0000
0.041200	49.78	6.67	7.5	39.0196	38.0000
0.041300	49.84	6.68	7.5	39.0196	38.0000
0.041400	49.90	6.69	7.5	39.0196	38.0000
0.041500	49.96	6.70	7.5	39.0196	38.0000
0.041600	50.02	6.71	7.5	39.0196	38.0000
0.041700	50.08	6.71	7.5	39.0196	38.0000
0.041800	50.14	6.72	7.5	39.0196	38.0000
0.041900	50.20	6.73	7.5	39.0196	38.0000
0.042000	50.26	6.74	7.5	39.0196	38.0000
0.042100	50.32	6.75	7.5	39.0196	38.0000
0.042200	50.38	6.75	7.5	39.0196	38.0000
0.042300	50.44	6.76	7.5	39.0196	38.0000
0.042400	50.50	6.77	7.5	39.0196	38.0000
0.042500	50.56	6.78	7.5	39.0196	38.0000
0.042600	50.62	6.79	7.5	39.0196	38.0000
0.042700	50.68	6.79	7.5	39.0196	38.0000
0.042800	50.74	6.80	7.5	39.0196	38.0000
0.042900	50.80	6.81	7.5	39.0196	38.0000
0.043000	50.86	6.82	7.5	39.0196	38.0000
0.043100	50.92	6.83	7.5	39.0196	38.0000
0.043200	50.97	6.83	7.5	39.0196	38.0000
0.043300	51.03	6.84	7.5	39.0196	38.0000
0.043400	51.09	6.85	7.5	39.0196	38.0000
0.043500	51.15	6.86	7.5	39.0196	38.0000
0.043600	51.21	6.86	7.5	39.0196	38.0000
0.043700	51.27	6.87	7.5	39.0196	38.0000
0.043800	51.33	6.88	7.5	39.0196	38.0000
0.043900	51.39	6.89	7.5	39.0196	38.0000
0.044000	51.44	6.90	7.5	39.0196	38.0000
0.044100	51.50	6.90	7.5	39.0196	38.0000
0.044200	51.56	6.91	7.5	39.0196	38.0000
0.044300	51.62	6.92	7.5	39.0196	38.0000
0.044400	51.68	6.93	7.5	39.0196	38.0000
0.044500	51.74	6.94	7.5	39.0196	38.0000
0.044600	51.79	6.94	7.5	39.0196	38.0000
0.044700	51.85	6.95	7.5	39.0196	38.0000
0.044800	51.91	6.96	7.5	39.0196	38.0000
0.044900	51.97	6.97	7.5	39.0196	38.0000
0.045000	52.03	6.97	7.5	39.0196	38.0000
0.045100	52.08	6.98	7.5	39.0196	38.0000
0.045200	52.14	6.99	7.5	39.0196	38.0000
0.045300	52.20	7.00	7.5	39.0196	38.0000
0.045400	52.26	7.00	7.5	39.0196	38.0000
0.045500	52.31	7.01	7.5	39.0196	38.0000
0.045600	52.37	7.02	7.5	39.0196	38.0000
0.045700	52.43	7.03	7.5	39.0196	38.0000
0.045800	52.49	7.04	7.5	39.0196	38.0000
0.045900	52.54	7.04	7.5	39.0196	38.0000
0.046000	52.60	7.05	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.046100	52.66	7.06	7.5	39.0196	38.0000
0.046200	52.72	7.07	7.5	39.0196	38.0000
0.046300	52.77	7.07	7.5	39.0196	38.0000
0.046400	52.83	7.08	7.5	39.0196	38.0000
0.046500	52.89	7.09	7.5	39.0196	38.0000
0.046600	52.94	7.10	7.5	39.0196	38.0000
0.046700	53.00	7.10	7.5	39.0196	38.0000
0.046800	53.06	7.11	7.5	39.0196	38.0000
0.046900	53.11	7.12	7.5	39.0196	38.0000
0.047000	53.17	7.13	7.5	39.0196	38.0000
0.047100	53.23	7.13	7.5	39.0196	38.0000
0.047200	53.28	7.14	7.5	39.0196	38.0000
0.047300	53.34	7.15	7.5	39.0196	38.0000
0.047400	53.40	7.16	7.5	39.0196	38.0000
0.047500	53.45	7.17	7.5	39.0196	38.0000
0.047600	53.51	7.17	7.5	39.0196	38.0000
0.047700	53.56	7.18	7.5	39.0196	38.0000
0.047800	53.62	7.19	7.5	39.0196	38.0000
0.047900	53.68	7.20	7.5	39.0196	38.0000
0.048000	53.73	7.20	7.5	39.0196	38.0000
0.048100	53.79	7.21	7.5	39.0196	38.0000
0.048200	53.84	7.22	7.5	39.0196	38.0000
0.048300	53.90	7.23	7.5	39.0196	38.0000
0.048400	53.96	7.23	7.5	39.0196	38.0000
0.048500	54.01	7.24	7.5	39.0196	38.0000
0.048600	54.07	7.25	7.5	39.0196	38.0000
0.048700	54.12	7.26	7.5	39.0196	38.0000
0.048800	54.18	7.26	7.5	39.0196	38.0000
0.048900	54.23	7.27	7.5	39.0196	38.0000
0.049000	54.29	7.28	7.5	39.0196	38.0000
0.049100	54.34	7.28	7.5	39.0196	38.0000
0.049200	54.40	7.29	7.5	39.0196	38.0000
0.049300	54.45	7.30	7.5	39.0196	38.0000
0.049400	54.51	7.31	7.5	39.0196	38.0000
0.049500	54.57	7.31	7.5	39.0196	38.0000
0.049600	54.62	7.32	7.5	39.0196	38.0000
0.049700	54.68	7.33	7.5	39.0196	38.0000
0.049800	54.73	7.34	7.5	39.0196	38.0000
0.049900	54.79	7.34	7.5	39.0196	38.0000
0.050000	54.84	7.35	7.5	39.0196	38.0000
0.050100	54.89	7.36	7.5	39.0196	38.0000
0.050200	54.95	7.37	7.5	39.0196	38.0000
0.050300	55.00	7.37	7.5	39.0196	38.0000
0.050400	55.06	7.38	7.5	39.0196	38.0000
0.050500	55.11	7.39	7.5	39.0196	38.0000
0.050600	55.17	7.40	7.5	39.0196	38.0000
0.050700	55.22	7.40	7.5	39.0196	38.0000
0.050800	55.28	7.41	7.5	39.0196	38.0000
0.050900	55.33	7.42	7.5	39.0196	38.0000
0.051000	55.39	7.42	7.5	39.0196	38.0000
0.051100	55.44	7.43	7.5	39.0196	38.0000
0.051200	55.49	7.44	7.5	39.0196	38.0000
0.051300	55.55	7.45	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.051400	55.60	7.45	7.5	39.0196	38.0000
0.051500	55.66	7.46	7.5	39.0196	38.0000
0.051600	55.71	7.47	7.5	39.0196	38.0000
0.051700	55.76	7.48	7.5	39.0196	38.0000
0.051800	55.82	7.48	7.5	39.0196	38.0000
0.051900	55.87	7.49	7.5	39.0196	38.0000
0.052000	55.93	7.50	7.5	39.0196	38.0000
0.052100	55.98	7.50	7.5	39.0196	38.0000
0.052200	56.03	7.51	7.5	39.0196	38.0000
0.052300	56.09	7.52	7.5	39.0196	38.0000
0.052400	56.14	7.53	7.5	39.0196	38.0000
0.052500	56.19	7.53	7.5	39.0196	38.0000
0.052600	56.25	7.54	7.5	39.0196	38.0000
0.052700	56.30	7.55	7.5	39.0196	38.0000
0.052800	56.35	7.55	7.5	39.0196	38.0000
0.052900	56.41	7.56	7.5	39.0196	38.0000
0.053000	56.46	7.57	7.5	39.0196	38.0000
0.053100	56.51	7.58	7.5	39.0196	38.0000
0.053200	56.57	7.58	7.5	39.0196	38.0000
0.053300	56.62	7.59	7.5	39.0196	38.0000
0.053400	56.67	7.60	7.5	39.0196	38.0000
0.053500	56.73	7.60	7.5	39.0196	38.0000
0.053600	56.78	7.61	7.5	39.0196	38.0000
0.053700	56.83	7.62	7.5	39.0196	38.0000
0.053800	56.89	7.63	7.5	39.0196	38.0000
0.053900	56.94	7.63	7.5	39.0196	38.0000
0.054000	56.99	7.64	7.5	39.0196	38.0000
0.054100	57.04	7.65	7.5	39.0196	38.0000
0.054200	57.10	7.65	7.5	39.0196	38.0000
0.054300	57.15	7.66	7.5	39.0196	38.0000
0.054400	57.20	7.67	7.5	39.0196	38.0000
0.054500	57.25	7.67	7.5	39.0196	38.0000
0.054600	57.31	7.68	7.5	39.0196	38.0000
0.054700	57.36	7.69	7.5	39.0196	38.0000
0.054800	57.41	7.70	7.5	39.0196	38.0000
0.054900	57.46	7.70	7.5	39.0196	38.0000
0.055000	57.52	7.71	7.5	39.0196	38.0000
0.055100	57.57	7.72	7.5	39.0196	38.0000
0.055200	57.62	7.72	7.5	39.0196	38.0000
0.055300	57.67	7.73	7.5	39.0196	38.0000
0.055400	57.73	7.74	7.5	39.0196	38.0000
0.055500	57.78	7.74	7.5	39.0196	38.0000
0.055600	57.83	7.75	7.5	39.0196	38.0000
0.055700	57.88	7.76	7.5	39.0196	38.0000
0.055800	57.93	7.77	7.5	39.0196	38.0000
0.055900	57.99	7.77	7.5	39.0196	38.0000
0.056000	58.04	7.78	7.5	39.0196	38.0000
0.056100	58.09	7.79	7.5	39.0196	38.0000
0.056200	58.14	7.79	7.5	39.0196	38.0000
0.056300	58.19	7.80	7.5	39.0196	38.0000
0.056400	58.24	7.81	7.5	39.0196	38.0000
0.056500	58.30	7.81	7.5	39.0196	38.0000
0.056600	58.35	7.82	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.056700	58.40	7.83	7.5	39.0196	38.0000
0.056800	58.45	7.84	7.5	39.0196	38.0000
0.056900	58.50	7.84	7.5	39.0196	38.0000
0.057000	58.55	7.85	7.5	39.0196	38.0000
0.057100	58.60	7.86	7.5	39.0196	38.0000
0.057200	58.66	7.86	7.5	39.0196	38.0000
0.057300	58.71	7.87	7.5	39.0196	38.0000
0.057400	58.76	7.88	7.5	39.0196	38.0000
0.057500	58.81	7.88	7.5	39.0196	38.0000
0.057600	58.86	7.89	7.5	39.0196	38.0000
0.057700	58.91	7.90	7.5	39.0196	38.0000
0.057800	58.96	7.90	7.5	39.0196	38.0000
0.057900	59.01	7.91	7.5	39.0196	38.0000
0.058000	59.06	7.92	7.5	39.0196	38.0000
0.058100	59.12	7.92	7.5	39.0196	38.0000
0.058200	59.17	7.93	7.5	39.0196	38.0000
0.058300	59.22	7.94	7.5	39.0196	38.0000
0.058400	59.27	7.94	7.5	39.0196	38.0000
0.058500	59.32	7.95	7.5	39.0196	38.0000
0.058600	59.37	7.96	7.5	39.0196	38.0000
0.058700	59.42	7.97	7.5	39.0196	38.0000
0.058800	59.47	7.97	7.5	39.0196	38.0000
0.058900	59.52	7.98	7.5	39.0196	38.0000
0.059000	59.57	7.99	7.5	39.0196	38.0000
0.059100	59.62	7.99	7.5	39.0196	38.0000
0.059200	59.67	8.00	7.5	39.0196	38.0000
0.059300	59.72	8.01	7.5	39.0196	38.0000
0.059400	59.77	8.01	7.5	39.0196	38.0000
0.059500	59.82	8.02	7.5	39.0196	38.0000
0.059600	59.87	8.03	7.5	39.0196	38.0000
0.059700	59.92	8.03	7.5	39.0196	38.0000
0.059800	59.97	8.04	7.5	39.0196	38.0000
0.059900	60.02	8.05	7.5	39.0196	38.0000
0.060000	60.07	8.05	7.5	39.0196	38.0000
0.060100	60.12	8.06	7.5	39.0196	38.0000
0.060200	60.17	8.07	7.5	39.0196	38.0000
0.060300	60.22	8.07	7.5	39.0196	38.0000
0.060400	60.27	8.08	7.5	39.0196	38.0000
0.060500	60.32	8.09	7.5	39.0196	38.0000
0.060600	60.37	8.09	7.5	39.0196	38.0000
0.060700	60.42	8.10	7.5	39.0196	38.0000
0.060800	60.47	8.11	7.5	39.0196	38.0000
0.060900	60.52	8.11	7.5	39.0196	38.0000
0.061000	60.57	8.12	7.5	39.0196	38.0000
0.061100	60.62	8.13	7.5	39.0196	38.0000
0.061200	60.67	8.13	7.5	39.0196	38.0000
0.061300	60.72	8.14	7.5	39.0196	38.0000
0.061400	60.77	8.15	7.5	39.0196	38.0000
0.061500	60.82	8.15	7.5	39.0196	38.0000
0.061600	60.87	8.16	7.5	39.0196	38.0000
0.061700	60.92	8.17	7.5	39.0196	38.0000
0.061800	60.97	8.17	7.5	39.0196	38.0000
0.061900	61.02	8.18	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.062000	61.07	8.19	7.5	39.0196	38.0000
0.062100	61.12	8.19	7.5	39.0196	38.0000
0.062200	61.17	8.20	7.5	39.0196	38.0000
0.062300	61.21	8.21	7.5	39.0196	38.0000
0.062400	61.26	8.21	7.5	39.0196	38.0000
0.062500	61.31	8.22	7.5	39.0196	38.0000
0.062600	61.36	8.23	7.5	39.0196	38.0000
0.062700	61.41	8.23	7.5	39.0196	38.0000
0.062800	61.46	8.24	7.5	39.0196	38.0000
0.062900	61.51	8.25	7.5	39.0196	38.0000
0.063000	61.56	8.25	7.5	39.0196	38.0000
0.063100	61.61	8.26	7.5	39.0196	38.0000
0.063200	61.66	8.26	7.5	39.0196	38.0000
0.063300	61.70	8.27	7.5	39.0196	38.0000
0.063400	61.75	8.28	7.5	39.0196	38.0000
0.063500	61.80	8.28	7.5	39.0196	38.0000
0.063600	61.85	8.29	7.5	39.0196	38.0000
0.063700	61.90	8.30	7.5	39.0196	38.0000
0.063800	61.95	8.30	7.5	39.0196	38.0000
0.063900	62.00	8.31	7.5	39.0196	38.0000
0.064000	62.04	8.32	7.5	39.0196	38.0000
0.064100	62.09	8.32	7.5	39.0196	38.0000
0.064200	62.14	8.33	7.5	39.0196	38.0000
0.064300	62.19	8.34	7.5	39.0196	38.0000
0.064400	62.24	8.34	7.5	39.0196	38.0000
0.064500	62.29	8.35	7.5	39.0196	38.0000
0.064600	62.33	8.36	7.5	39.0196	38.0000
0.064700	62.38	8.36	7.5	39.0196	38.0000
0.064800	62.43	8.37	7.5	39.0196	38.0000
0.064900	62.48	8.38	7.5	39.0196	38.0000
0.065000	62.53	8.38	7.5	39.0196	38.0000
0.065100	62.58	8.39	7.5	39.0196	38.0000
0.065200	62.62	8.39	7.5	39.0196	38.0000
0.065300	62.67	8.40	7.5	39.0196	38.0000
0.065400	62.72	8.41	7.5	39.0196	38.0000
0.065500	62.77	8.41	7.5	39.0196	38.0000
0.065600	62.82	8.42	7.5	39.0196	38.0000
0.065700	62.86	8.43	7.5	39.0196	38.0000
0.065800	62.91	8.43	7.5	39.0196	38.0000
0.065900	62.96	8.44	7.5	39.0196	38.0000
0.066000	63.01	8.45	7.5	39.0196	38.0000
0.066100	63.05	8.45	7.5	39.0196	38.0000
0.066200	63.10	8.46	7.5	39.0196	38.0000
0.066300	63.15	8.47	7.5	39.0196	38.0000
0.066400	63.20	8.47	7.5	39.0196	38.0000
0.066500	63.24	8.48	7.5	39.0196	38.0000
0.066600	63.29	8.48	7.5	39.0196	38.0000
0.066700	63.34	8.49	7.5	39.0196	38.0000
0.066800	63.39	8.50	7.5	39.0196	38.0000
0.066900	63.43	8.50	7.5	39.0196	38.0000
0.067000	63.48	8.51	7.5	39.0196	38.0000
0.067100	63.53	8.52	7.5	39.0196	38.0000
0.067200	63.58	8.52	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.067300	63.62	8.53	7.5	39.0196	38.0000
0.067400	63.67	8.54	7.5	39.0196	38.0000
0.067500	63.72	8.54	7.5	39.0196	38.0000
0.067600	63.77	8.55	7.5	39.0196	38.0000
0.067700	63.81	8.55	7.5	39.0196	38.0000
0.067800	63.86	8.56	7.5	39.0196	38.0000
0.067900	63.91	8.57	7.5	39.0196	38.0000
0.068000	63.95	8.57	7.5	39.0196	38.0000
0.068100	64.00	8.58	7.5	39.0196	38.0000
0.068200	64.05	8.59	7.5	39.0196	38.0000
0.068300	64.09	8.59	7.5	39.0196	38.0000
0.068400	64.14	8.60	7.5	39.0196	38.0000
0.068500	64.19	8.60	7.5	39.0196	38.0000
0.068600	64.24	8.61	7.5	39.0196	38.0000
0.068700	64.28	8.62	7.5	39.0196	38.0000
0.068800	64.33	8.62	7.5	39.0196	38.0000
0.068900	64.38	8.63	7.5	39.0196	38.0000
0.069000	64.42	8.64	7.5	39.0196	38.0000
0.069100	64.47	8.64	7.5	39.0196	38.0000
0.069200	64.52	8.65	7.5	39.0196	38.0000
0.069300	64.56	8.65	7.5	39.0196	38.0000
0.069400	64.61	8.66	7.5	39.0196	38.0000
0.069500	64.66	8.67	7.5	39.0196	38.0000
0.069600	64.70	8.67	7.5	39.0196	38.0000
0.069700	64.75	8.68	7.5	39.0196	38.0000
0.069800	64.79	8.69	7.5	39.0196	38.0000
0.069900	64.84	8.69	7.5	39.0196	38.0000
0.070000	64.89	8.70	7.5	39.0196	38.0000
0.070100	64.93	8.70	7.5	39.0196	38.0000
0.070200	64.98	8.71	7.5	39.0196	38.0000
0.070300	65.03	8.72	7.5	39.0196	38.0000
0.070400	65.07	8.72	7.5	39.0196	38.0000
0.070500	65.12	8.73	7.5	39.0196	38.0000
0.070600	65.17	8.74	7.5	39.0196	38.0000
0.070700	65.21	8.74	7.5	39.0196	38.0000
0.070800	65.26	8.75	7.5	39.0196	38.0000
0.070900	65.30	8.75	7.5	39.0196	38.0000
0.071000	65.35	8.76	7.5	39.0196	38.0000
0.071100	65.40	8.77	7.5	39.0196	38.0000
0.071200	65.44	8.77	7.5	39.0196	38.0000
0.071300	65.49	8.78	7.5	39.0196	38.0000
0.071400	65.53	8.78	7.5	39.0196	38.0000
0.071500	65.58	8.79	7.5	39.0196	38.0000
0.071600	65.63	8.80	7.5	39.0196	38.0000
0.071700	65.67	8.80	7.5	39.0196	38.0000
0.071800	65.72	8.81	7.5	39.0196	38.0000
0.071900	65.76	8.82	7.5	39.0196	38.0000
0.072000	65.81	8.82	7.5	39.0196	38.0000
0.072100	65.85	8.83	7.5	39.0196	38.0000
0.072200	65.90	8.83	7.5	39.0196	38.0000
0.072300	65.95	8.84	7.5	39.0196	38.0000
0.072400	65.99	8.85	7.5	39.0196	38.0000
0.072500	66.04	8.85	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.072600	66.08	8.86	7.5	39.0196	38.0000
0.072700	66.13	8.86	7.5	39.0196	38.0000
0.072800	66.17	8.87	7.5	39.0196	38.0000
0.072900	66.22	8.88	7.5	39.0196	38.0000
0.073000	66.26	8.88	7.5	39.0196	38.0000
0.073100	66.31	8.89	7.5	39.0196	38.0000
0.073200	66.35	8.89	7.5	39.0196	38.0000
0.073300	66.40	8.90	7.5	39.0196	38.0000
0.073400	66.44	8.91	7.5	39.0196	38.0000
0.073500	66.49	8.91	7.5	39.0196	38.0000
0.073600	66.54	8.92	7.5	39.0196	38.0000
0.073700	66.58	8.93	7.5	39.0196	38.0000
0.073800	66.63	8.93	7.5	39.0196	38.0000
0.073900	66.67	8.94	7.5	39.0196	38.0000
0.074000	66.72	8.94	7.5	39.0196	38.0000
0.074100	66.76	8.95	7.5	39.0196	38.0000
0.074200	66.81	8.96	7.5	39.0196	38.0000
0.074300	66.85	8.96	7.5	39.0196	38.0000
0.074400	66.90	8.97	7.5	39.0196	38.0000
0.074500	66.94	8.97	7.5	39.0196	38.0000
0.074600	66.99	8.98	7.5	39.0196	38.0000
0.074700	67.03	8.99	7.5	39.0196	38.0000
0.074800	67.08	8.99	7.5	39.0196	38.0000
0.074900	67.12	9.00	7.5	39.0196	38.0000
0.075000	67.17	9.00	7.5	39.0196	38.0000
0.075100	67.21	9.01	7.5	39.0196	38.0000
0.075200	67.25	9.02	7.5	39.0196	38.0000
0.075300	67.30	9.02	7.5	39.0196	38.0000
0.075400	67.34	9.03	7.5	39.0196	38.0000
0.075500	67.39	9.03	7.5	39.0196	38.0000
0.075600	67.43	9.04	7.5	39.0196	38.0000
0.075700	67.48	9.05	7.5	39.0196	38.0000
0.075800	67.52	9.05	7.5	39.0196	38.0000
0.075900	67.57	9.06	7.5	39.0196	38.0000
0.076000	67.61	9.06	7.5	39.0196	38.0000
0.076100	67.66	9.07	7.5	39.0196	38.0000
0.076200	67.70	9.08	7.5	39.0196	38.0000
0.076300	67.74	9.08	7.5	39.0196	38.0000
0.076400	67.79	9.09	7.5	39.0196	38.0000
0.076500	67.83	9.09	7.5	39.0196	38.0000
0.076600	67.88	9.10	7.5	39.0196	38.0000
0.076700	67.92	9.10	7.5	39.0196	38.0000
0.076800	67.97	9.11	7.5	39.0196	38.0000
0.076900	68.01	9.12	7.5	39.0196	38.0000
0.077000	68.05	9.12	7.5	39.0196	38.0000
0.077100	68.10	9.13	7.5	39.0196	38.0000
0.077200	68.14	9.13	7.5	39.0196	38.0000
0.077300	68.19	9.14	7.5	39.0196	38.0000
0.077400	68.23	9.15	7.5	39.0196	38.0000
0.077500	68.28	9.15	7.5	39.0196	38.0000
0.077600	68.32	9.16	7.5	39.0196	38.0000
0.077700	68.36	9.16	7.5	39.0196	38.0000
0.077800	68.41	9.17	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.077900	68.45	9.18	7.5	39.0196	38.0000
0.078000	68.50	9.18	7.5	39.0196	38.0000
0.078100	68.54	9.19	7.5	39.0196	38.0000
0.078200	68.58	9.19	7.5	39.0196	38.0000
0.078300	68.63	9.20	7.5	39.0196	38.0000
0.078400	68.67	9.21	7.5	39.0196	38.0000
0.078500	68.71	9.21	7.5	39.0196	38.0000
0.078600	68.76	9.22	7.5	39.0196	38.0000
0.078700	68.80	9.22	7.5	39.0196	38.0000
0.078800	68.85	9.23	7.5	39.0196	38.0000
0.078900	68.89	9.23	7.5	39.0196	38.0000
0.079000	68.93	9.24	7.5	39.0196	38.0000
0.079100	68.98	9.25	7.5	39.0196	38.0000
0.079200	69.02	9.25	7.5	39.0196	38.0000
0.079300	69.06	9.26	7.5	39.0196	38.0000
0.079400	69.11	9.26	7.5	39.0196	38.0000
0.079500	69.15	9.27	7.5	39.0196	38.0000
0.079600	69.19	9.28	7.5	39.0196	38.0000
0.079700	69.24	9.28	7.5	39.0196	38.0000
0.079800	69.28	9.29	7.5	39.0196	38.0000
0.079900	69.32	9.29	7.5	39.0196	38.0000
0.080000	69.37	9.30	7.5	39.0196	38.0000
0.080100	69.41	9.30	7.5	39.0196	38.0000
0.080200	69.45	9.31	7.5	39.0196	38.0000
0.080300	69.50	9.32	7.5	39.0196	38.0000
0.080400	69.54	9.32	7.5	39.0196	38.0000
0.080500	69.58	9.33	7.5	39.0196	38.0000
0.080600	69.63	9.33	7.5	39.0196	38.0000
0.080700	69.67	9.34	7.5	39.0196	38.0000
0.080800	69.71	9.35	7.5	39.0196	38.0000
0.080900	69.76	9.35	7.5	39.0196	38.0000
0.081000	69.80	9.36	7.5	39.0196	38.0000
0.081100	69.84	9.36	7.5	39.0196	38.0000
0.081200	69.89	9.37	7.5	39.0196	38.0000
0.081300	69.93	9.37	7.5	39.0196	38.0000
0.081400	69.97	9.38	7.5	39.0196	38.0000
0.081500	70.02	9.39	7.5	39.0196	38.0000
0.081600	70.06	9.39	7.5	39.0196	38.0000
0.081700	70.10	9.40	7.5	39.0196	38.0000
0.081800	70.14	9.40	7.5	39.0196	38.0000
0.081900	70.19	9.41	7.5	39.0196	38.0000
0.082000	70.23	9.41	7.5	39.0196	38.0000
0.082100	70.27	9.42	7.5	39.0196	38.0000
0.082200	70.32	9.43	7.5	39.0196	38.0000
0.082300	70.36	9.43	7.5	39.0196	38.0000
0.082400	70.40	9.44	7.5	39.0196	38.0000
0.082500	70.44	9.44	7.5	39.0196	38.0000
0.082600	70.49	9.45	7.5	39.0196	38.0000
0.082700	70.53	9.45	7.5	39.0196	38.0000
0.082800	70.57	9.46	7.5	39.0196	38.0000
0.082900	70.61	9.47	7.5	39.0196	38.0000
0.083000	70.66	9.47	7.5	39.0196	38.0000
0.083100	70.70	9.48	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.083200	70.74	9.48	7.5	39.0196	38.0000
0.083300	70.78	9.49	7.5	39.0196	38.0000
0.083400	70.83	9.49	7.5	39.0196	38.0000
0.083500	70.87	9.50	7.5	39.0196	38.0000
0.083600	70.91	9.51	7.5	39.0196	38.0000
0.083700	70.95	9.51	7.5	39.0196	38.0000
0.083800	71.00	9.52	7.5	39.0196	38.0000
0.083900	71.04	9.52	7.5	39.0196	38.0000
0.084000	71.08	9.53	7.5	39.0196	38.0000
0.084100	71.12	9.53	7.5	39.0196	38.0000
0.084200	71.17	9.54	7.5	39.0196	38.0000
0.084300	71.21	9.55	7.5	39.0196	38.0000
0.084400	71.25	9.55	7.5	39.0196	38.0000
0.084500	71.29	9.56	7.5	39.0196	38.0000
0.084600	71.33	9.56	7.5	39.0196	38.0000
0.084700	71.38	9.57	7.5	39.0196	38.0000
0.084800	71.42	9.57	7.5	39.0196	38.0000
0.084900	71.46	9.58	7.5	39.0196	38.0000
0.085000	71.50	9.58	7.5	39.0196	38.0000
0.085100	71.54	9.59	7.5	39.0196	38.0000
0.085200	71.59	9.60	7.5	39.0196	38.0000
0.085300	71.63	9.60	7.5	39.0196	38.0000
0.085400	71.67	9.61	7.5	39.0196	38.0000
0.085500	71.71	9.61	7.5	39.0196	38.0000
0.085600	71.75	9.62	7.5	39.0196	38.0000
0.085700	71.80	9.62	7.5	39.0196	38.0000
0.085800	71.84	9.63	7.5	39.0196	38.0000
0.085900	71.88	9.64	7.5	39.0196	38.0000
0.086000	71.92	9.64	7.5	39.0196	38.0000
0.086100	71.96	9.65	7.5	39.0196	38.0000
0.086200	72.01	9.65	7.5	39.0196	38.0000
0.086300	72.05	9.66	7.5	39.0196	38.0000
0.086400	72.09	9.66	7.5	39.0196	38.0000
0.086500	72.13	9.67	7.5	39.0196	38.0000
0.086600	72.17	9.67	7.5	39.0196	38.0000
0.086700	72.21	9.68	7.5	39.0196	38.0000
0.086800	72.26	9.69	7.5	39.0196	38.0000
0.086900	72.30	9.69	7.5	39.0196	38.0000
0.087000	72.34	9.70	7.5	39.0196	38.0000
0.087100	72.38	9.70	7.5	39.0196	38.0000
0.087200	72.42	9.71	7.5	39.0196	38.0000
0.087300	72.46	9.71	7.5	39.0196	38.0000
0.087400	72.51	9.72	7.5	39.0196	38.0000
0.087500	72.55	9.72	7.5	39.0196	38.0000
0.087600	72.59	9.73	7.5	39.0196	38.0000
0.087700	72.63	9.74	7.5	39.0196	38.0000
0.087800	72.67	9.74	7.5	39.0196	38.0000
0.087900	72.71	9.75	7.5	39.0196	38.0000
0.088000	72.75	9.75	7.5	39.0196	38.0000
0.088100	72.79	9.76	7.5	39.0196	38.0000
0.088200	72.84	9.76	7.5	39.0196	38.0000
0.088300	72.88	9.77	7.5	39.0196	38.0000
0.088400	72.92	9.77	7.5	39.0196	38.0000

6" CURB - 108' R/W - TC TO TC
Rating Table for Irregular Channel

Slope (ft/ft)	Discharge (cfs)	Velocity (ft/s)	Flow Area (ft^2)	Wetted Perimeter (ft)	Top Width (ft)
0.088500	72.96	9.78	7.5	39.0196	38.0000
0.088600	73.00	9.79	7.5	39.0196	38.0000
0.088700	73.04	9.79	7.5	39.0196	38.0000
0.088800	73.08	9.80	7.5	39.0196	38.0000
0.088900	73.12	9.80	7.5	39.0196	38.0000
0.089000	73.17	9.81	7.5	39.0196	38.0000
0.089100	73.21	9.81	7.5	39.0196	38.0000
0.089200	73.25	9.82	7.5	39.0196	38.0000
0.089300	73.29	9.82	7.5	39.0196	38.0000
0.089400	73.33	9.83	7.5	39.0196	38.0000
0.089500	73.37	9.84	7.5	39.0196	38.0000
0.089600	73.41	9.84	7.5	39.0196	38.0000
0.089700	73.45	9.85	7.5	39.0196	38.0000
0.089800	73.49	9.85	7.5	39.0196	38.0000
0.089900	73.53	9.86	7.5	39.0196	38.0000
0.090000	73.58	9.86	7.5	39.0196	38.0000

TECHNICAL APPENDIX

APPENDIX C

Storm Drain Sizing Calculations Worksheet

by FlowMaster

Pipe A
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe A
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	018200	ft/ft
Depth	1.50	ft
Diameter	18	in

Results		
Discharge	14.17	cfs
Flow Area	1.8	ft²
Wetted Perime	4.71	ft
Top Width	3.65e-8	ft
Critical Depth	1.39	ft
Percent Full	100.0	%
Critical Slope	0.015773	ft/ft
Velocity	8.02	ft/s
Velocity Head	1.00	ft
Specific Energ	2.50	ft
Froude Numbe	2.03e-4	
Maximum Disc	15.24	cfs
Discharge Full	14.17	cfs
Slope Full	0.018200	ft/ft
Flow Type	Subcritical	

Pipe B
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe B
Flow Element	Circular Chann
Method	Manning's Forr
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	009000	ft/ft
Depth	1.50	ft
Diameter	18	in

Results		
Discharge	9.96	cfs
Flow Area	1.8	ft²
Wetted Perime	4.71	ft
Top Width	3.65e-8	ft
Critical Depth	1.22	ft
Percent Full	100.0	%
Critical Slope	0.009168	ft/ft
Velocity	5.64	ft/s
Velocity Head	0.49	ft
Specific Energ	1.99	ft
Froude Numbe	1.43e-4	
Maximum Disc	10.72	cfs
Discharge Full	9.96	cfs
Slope Full	0.009000	ft/ft
Flow Type	Subcritical	

Pipe C
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe C
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Depth	2.50	ft
Diameter	30	in

Results		
Discharge	41.01	cfs
Flow Area	4.9	ft²
Wetted Perime	7.85	ft
Top Width	6.66e-8	ft
Critical Depth	2.15	ft
Percent Full	100.0	%
Critical Slope	0.009257	ft/ft
Velocity	8.36	ft/s
Velocity Head	1.08	ft
Specific Energ	3.58	ft
Froude Numbe	1.72e-4	
Maximum Disc	44.12	cfs
Discharge Full	41.01	cfs
Slope Full	0.010000	ft/ft
Flow Type	Subcritical	

Pipe D
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe D
Flow Element	Circular Chann
Method	Manning's Forr
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	060000	ft/ft
Depth	2.00	ft
Diameter	24	in

Results		
Discharge	55.41	cfs
Flow Area	3.1	ft²
Wetted Perime	6.28	ft
Top Width	5.96e-8	ft
Critical Depth	1.99	ft
Percent Full	100.0	%
Critical Slope	0.056037	ft/ft
Velocity	17.64	ft/s
Velocity Head	4.83	ft
Specific Energ	6.83	ft
Froude Numbe	4.28e-4	
Maximum Disc	59.61	cfs
Discharge Full	55.41	cfs
Slope Full	0.060000	ft/ft
Flow Type	Subcritical	

Pipe E
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe E
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	013400	ft/ft
Depth	3.00	ft
Diameter	36	in

Results		
Discharge	77.20	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	7.3e-8	ft
Critical Depth	2.74	ft
Percent Full	100.0	%
Critical Slope	0.011669	ft/ft
Velocity	10.92	ft/s
Velocity Head	1.85	ft
Specific Energ	4.85	ft
Froude Numbe	1.96e-4	
Maximum Disc	83.05	cfs
Discharge Full	77.20	cfs
Slope Full	0.013400	ft/ft
Flow Type	Subcritical	

Pipe F
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe F
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Depth	3.00	ft
Diameter	36	in

Results		
Discharge	66.69	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	7.3e-8	ft
Critical Depth	2.61	ft
Percent Full	100.0	%
Critical Slope	0.009115	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energ	4.38	ft
Froude Numbe	1.69e-4	
Maximum Disc	71.74	cfs
Discharge Full	66.69	cfs
Slope Full	0.010000	ft/ft
Flow Type	Subcritical	

Pipe G
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe G
Flow Element	Circular Chann
Method	Manning's Forr
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	007000	ft/ft
Depth	3.00	ft
Diameter	36	in

Results		
Discharge	55.80	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	7.3e-8	ft
Critical Depth	2.42	ft
Percent Full	100.0	%
Critical Slope	0.007194	ft/ft
Velocity	7.89	ft/s
Velocity Head	0.97	ft
Specific Energ	3.97	ft
Froude Numbe	1.41e-4	
Maximum Disc	60.03	cfs
Discharge Full	55.80	cfs
Slope Full	0.007000	ft/ft
Flow Type	Subcritical	

Pipe H
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe H
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	010000	ft/ft
Depth	3.00	ft
Diameter	36	in

Results		
Discharge	66.69	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	7.3e-8	ft
Critical Depth	2.61	ft
Percent Full	100.0	%
Critical Slope	0.009115	ft/ft
Velocity	9.44	ft/s
Velocity Head	1.38	ft
Specific Energ	4.38	ft
Froude Numbe	1.69e-4	
Maximum Disc	71.74	cfs
Discharge Full	66.69	cfs
Slope Full	0.010000	ft/ft
Flow Type	Subcritical	

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Pipe I
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe I
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	125000	ft/ft
Depth	1.50	ft
Diameter	18	in

Results		
Discharge	37.14	cfs
Flow Area	1.8	ft²
Wetted Perime	4.71	ft
Top Width	3.65e-8	ft
Critical Depth	1.50	ft
Percent Full	100.0	%
Critical Slope	0.120518	ft/ft
Velocity	21.01	ft/s
Velocity Head	6.86	ft
Specific Energ	8.36	ft
Froude Numbe	5.32e-4	
Maximum Disc	39.95	cfs
Discharge Full	37.14	cfs
Slope Full	0.125000	ft/ft
Flow Type	Subcritical	

Pipe J
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe J
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	080000	ft/ft
Depth	1.50	ft
Diameter	18	in

Results		
Discharge	29.71	cfs
Flow Area	1.8	ft²
Wetted Perime	4.71	ft
Top Width	3.65e-8	ft
Critical Depth	1.49	ft
Percent Full	100.0	%
Critical Slope	0.075596	ft/ft
Velocity	16.81	ft/s
Velocity Head	4.39	ft
Specific Energ	5.89	ft
Froude Numbe	4.26e-4	
Maximum Disc	31.96	cfs
Discharge Full	29.71	cfs
Slope Full	0.080000	ft/ft
Flow Type	Subcritical	

Pipe K
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe K
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	009400	ft/ft
Depth	3.50	ft
Diameter	42	in

Results		
Discharge	97.54	cfs
Flow Area	9.6	ft²
Wetted Perime	11.00	ft
Top Width	1.12e-7	ft
Critical Depth	3.04	ft
Percent Full	100.0	%
Critical Slope	0.008591	ft/ft
Velocity	10.14	ft/s
Velocity Head	1.60	ft
Specific Energ	5.10	ft
Froude Numbe	1.92e-4	
Maximum Disc	104.92	cfs
Discharge Full	97.54	cfs
Slope Full	0.009400	ft/ft
Flow Type	Subcritical	

Pipe L
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe L
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	005000	ft/ft
Depth	3.50	ft
Diameter	42	in

Results		
Discharge	71.14	cfs
Flow Area	9.6	ft²
Wetted Perime	11.00	ft
Top Width	1.12e-7	ft
Critical Depth	2.64	ft
Percent Full	100.0	%
Critical Slope	0.005920	ft/ft
Velocity	7.39	ft/s
Velocity Head	0.85	ft
Specific Energ	4.35	ft
Froude Numbe	1.4e-4	
Maximum Disc	76.52	cfs
Discharge Full	71.14	cfs
Slope Full	0.005000	ft/ft
Flow Type	Subcritical	

Pipe M
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe M
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	033000	ft/ft
Depth	2.50	ft
Diameter	30	in

Results		
Discharge	74.51	cfs
Flow Area	4.9	ft²
Wetted Perime	7.85	ft
Top Width	6.66e-8	ft
Critical Depth	2.45	ft
Percent Full	100.0	%
Critical Slope	0.029641	ft/ft
Velocity	15.18	ft/s
Velocity Head	3.58	ft
Specific Energ	6.08	ft
Froude Numbe	3.12e-4	
Maximum Disc	80.15	cfs
Discharge Full	74.51	cfs
Slope Full	0.033000	ft/ft
Flow Type	Subcritical	

Pipe N
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe N
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	015000	ft/ft
Depth	2.50	ft
Diameter	30	in

Results		
Discharge	50.23	cfs
Flow Area	4.9	ft²
Wetted Perime	7.85	ft
Top Width	6.66e-8	ft
Critical Depth	2.30	ft
Percent Full	100.0	%
Critical Slope	0.013015	ft/ft
Velocity	10.23	ft/s
Velocity Head	1.63	ft
Specific Energ	4.13	ft
Froude Numbe	2.1e-4	
Maximum Disc	54.04	cfs
Discharge Full	50.23	cfs
Slope Full	0.015000	ft/ft
Flow Type	Subcritical	

Pipe O
Worksheet for Circular Channel

Project Description	
Worksheet	Pipe O
Flow Element	Circular Chann
Method	Manning's For
Solve For	Discharge

Input Data		
Mannings Coeffic	0.013	
Slope	011000	ft/ft
Depth	3.00	ft
Diameter	36	in

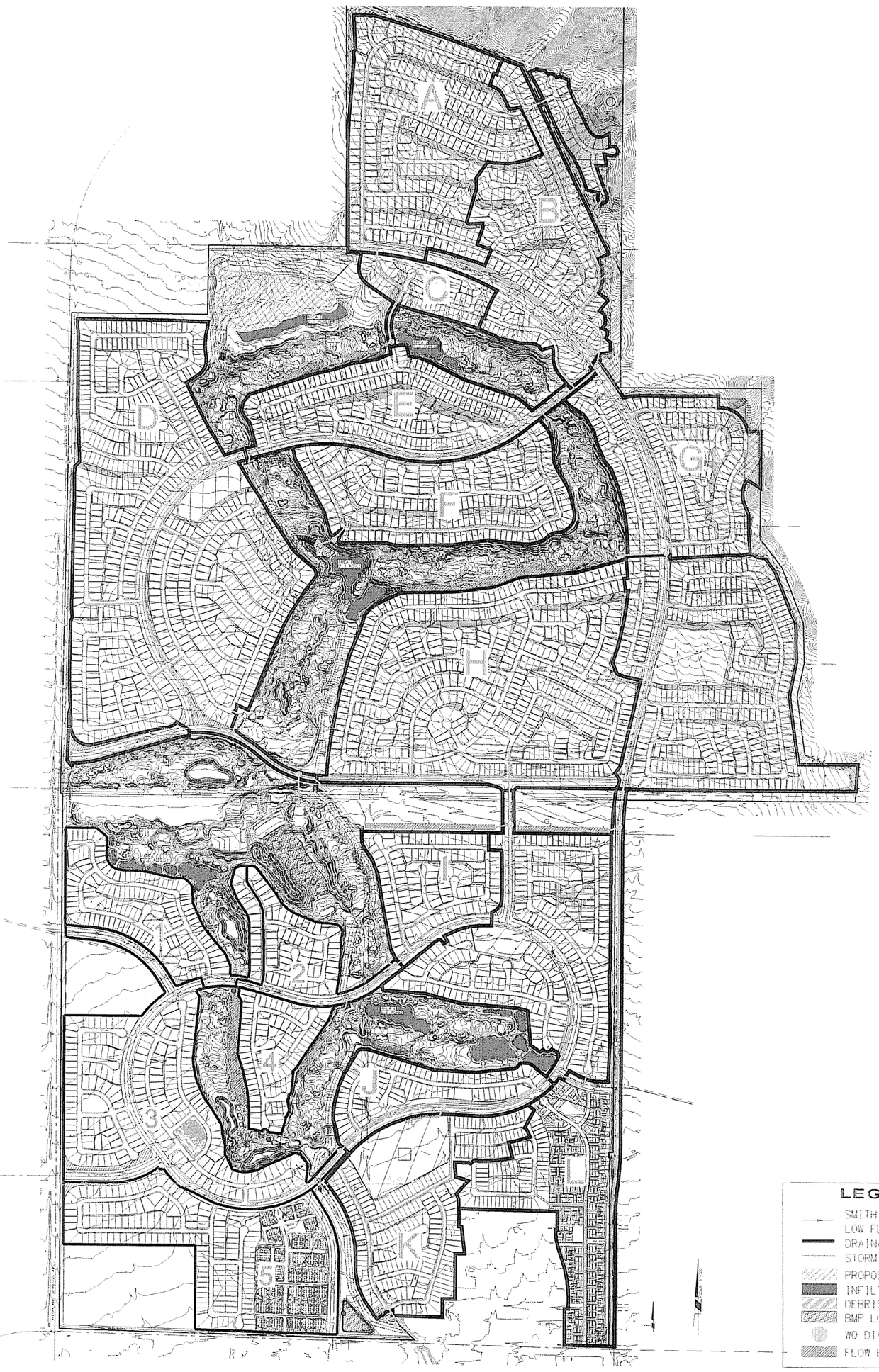
Results		
Discharge	69.95	cfs
Flow Area	7.1	ft²
Wetted Perime	9.42	ft
Top Width	7.3e-8	ft
Critical Depth	2.66	ft
Percent Full	100.0	%
Critical Slope	0.009828	ft/ft
Velocity	9.90	ft/s
Velocity Head	1.52	ft
Specific Energ	4.52	ft
Froude Numbe	1.77e-4	
Maximum Disc	75.25	cfs
Discharge Full	69.95	cfs
Slope Full	0.011000	ft/ft
Flow Type	Subcritical	

TECHNICAL APPENDIX

APPENDIX D.1

Proposed Water Quality/ Infiltration Areas Map

– Phase I, II, III



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SCALE: 1"=300'

DEUTSCH BANNING PROJECT
PROPOSED WATER QUALITY/INFILTRATION AREAS MAP - PHASE I,II & III

TECHNICAL APPENDIX

APPENDIX D.2

Water Quality Basins Volume Calculations

Region 1

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	31.3	0.50	15.65
Multi Family	0	0.65	0
Swale	2.2	0.00	0
Basin	0	0.90	0
Total	33.5		15.65

IA % = 0.47

IA%	C
0.47	0.32

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	27.4	0.37	0.84	36,375
B	31.3	0.37	0.97	42,039

Region 1

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.46	0.0	0.00	0.00
B	0.50	31.3	1.00	0.50
C	0.54	0.0	0.00	0.00
D	0.57	0.0	0.00	0.00
Total		31.3		0.50

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.47	0.50

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	27.4	0.50	0.2	2.74
B	31.3	0.5	0.2	3.13

Region 2

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	17.8	0.50	8.9
Multi Family	0	0.65	0
Swale	2.6	0.00	0
Basin	0	0.90	0
Total	20.4		8.9

IA % = 0.44

IA%	C
0.44	0.30

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	21.7	0.35	0.63	27,570
B	17.8	0.35	0.52	22,615

Region 2

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.46	0.0	0.00	0.00
B	0.50	31.3	1.00	0.50
C	0.54	0.0	0.00	0.00
D	0.57	0.0	0.00	0.00
Total		31.3		0.50

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.44	0.50

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	21.7	0.50	0.2	2.17
B	17.8	0.50	0.2	1.78

Region 3

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	64.9	0.50	32.45
Multi Family	0	0.65	0
Swale	4.6	0.00	0
Basin	0	0.90	0
Total	69.5		32.45

IA % = 0.47

IA%	C
0.47	0.32

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	64.9	0.37	2.00	87,167
B	64.9	0.37	2.00	87,167

Region 3

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.46	0.0	0.00	0.00
B	0.50	31.3	1.00	0.50
C	0.54	0.0	0.00	0.00
D	0.57	0.0	0.00	0.00
Total		31.3		0.50

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.47	0.50

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	64.9	0.50	0.2	6.49
B	64.9	0.5	0.2	6.49

Region 4

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	17	0.50	8.5
Multi Family	0	0.65	0
Swale	0	0.00	0
Basin	1.1	0.90	0.99
Total	18.1		9.49

IA % = 0.52

IA%	C
0.52	0.35

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	17.0	0.41	0.58	25,301
B	17.0	0.41	0.58	25,301

Region 4

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.46	0.0	0.00	0.00
B	0.50	31.3	1.00	0.50
C	0.54	0.0	0.00	0.00
D	0.57	0.0	0.00	0.00
Total		31.3		0.50

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.52	0.50

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	17.0	0.50	0.2	1.70
B	17.0	0.5	0.2	1.70

Region 5

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	35.2	0.50	17.6
Multi Family	22.1	0.65	14.365
Swale	0	0.00	0
Basin	3.5	0.90	3.15
Total	60.8		35.115

IA % = 0.58

IA%	C
0.58	0.39

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	57.3	0.46	2.20	95,680
B	57.3	0.46	2.20	95,680

Region 5

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.46	0.0	0.00	0.00
B	0.50	31.3	1.00	0.50
C	0.54	0.0	0.00	0.00
D	0.57	0.0	0.00	0.00
Total		31.3		0.50

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.58	0.50

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	57.3	0.50	0.2	5.73
B	57.3	0.5	0.2	5.73

Phase 1 Summary

Region	WQV (ac-ft)	WQF (cfs)
1	0.97	3.1
2	0.52	1.8
3	2.00	6.5
4	0.58	1.7
5	2.20	5.7

Region A

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	69.6	0.50	34.8
Multi Family	0	0.65	0
School	0	0.40	0
Park	0	0.20	0
Total	69.6		34.8

IA % = 0.50

IA%	C
0.50	0.34

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	69.6	0.39	2.26	98,277

Region A

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.48	33.4	0.48	0.23
B	0.52	36.2	0.52	0.27
C	0.56	0.0	0.00	0.00
D	0.59	0.0	0.00	0.00
Total		69.6		0.50

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.50	0.50

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	69.6	0.50	0.2	6.97

Region C

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	12.8	0.50	6.4
Multi Family	0	0.65	0
School	0	0.40	0
Park	0	0.20	0
Total	12.8		6.4

IA % = 0.50

IA%	C
0.50	0.34

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	12.8	0.39	0.41	18,074

Region C

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.48	0.0	0.00	0.00
B	0.52	12.8	1.00	0.52
C	0.56	0.0	0.00	0.00
D	0.59	0.0	0.00	0.00
Total		12.8		0.52

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.50	0.52

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	12.8	0.52	0.2	1.33

Region D

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	149	0.50	74.5
Multi Family	0	0.65	0
School	0	0.40	0
Park	5.9	0.20	1.18
Total	154.9		75.68

IA % = 0.49

IA%	C
0.49	0.33

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	154.9	0.38	4.92	214,098

Region D

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.47	86.4	0.56	0.26
B	0.51	68.5	0.44	0.23
C	0.55	0.0	0.00	0.00
D	0.58	0.0	0.00	0.00
Total		154.9		0.49

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.49	0.49

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	154.9	0.49	0.2	15.11

Region E

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	45.7	0.50	22.85
Multi Family	0	0.65	0
School	0	0.40	0
Park	1.4	0.20	0.28
Total	47.1		23.13

IA % = 0.49

IA%	C
0.49	0.33

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	47.1	0.38	1.50	65,407

Region E

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.47	0.0	0.00	0.00
B	0.51	31.3	1.00	0.51
C	0.55	0.0	0.00	0.00
D	0.58	0.0	0.00	0.00
Total		31.3		0.51

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.49	0.51

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	47.1	0.51	0.2	4.80

Region F

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	49.3	0.50	24.65
Multi Family	0	0.65	0
School	0	0.40	0
Park	0	0.20	0
Total	49.3		24.65

IA % = 0.50

IA%	C
0.50	0.34

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	49.3	0.39	1.60	69,613

Region F

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.48	0.0	0.00	0.00
B	0.52	31.3	1.00	0.52
C	0.56	0.0	0.00	0.00
D	0.59	0.0	0.00	0.00
Total		31.3		0.52

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.50	0.52

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	49.3	0.52	0.2	5.13

Region B

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	59.5	0.50	29.75
Multi Family	0	0.65	0
School	0	0.40	0
Park	2	0.20	0.4
Total	61.5		30.15

IA % = 0.49

IA%	C
0.49	0.33

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	61.5	0.38	1.96	85,270

Region B

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.47	7.2	0.12	0.06
B	0.51	41.8	0.68	0.35
C	0.55	0.0	0.00	0.00
D	0.58	12.5	0.20	0.12
Total		61.5		0.52

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.49	0.52

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	61.5	0.52	0.2	6.39

Region G

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	120.2	0.50	60.1
Multi Family	0	0.65	0
School	13.5	0.40	5.4
Park	0.8	0.20	0.16
Total	134.5		65.66

IA % = 0.49

IA%	C
0.49	0.33

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	134.5	0.38	4.26	185,764

Region G

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.47	12.9	0.10	0.05
B	0.51	119.9	0.89	0.45
C	0.55	0.0	0.00	0.00
D	0.58	1.7	0.01	0.01
Total		134.5		0.51

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.49	0.51

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	134.5	0.51	0.2	13.64

Region G1

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	48.5	0.50	24.25
Multi Family	0	0.65	0
School	0	0.40	0
Park	0.8	0.20	0.16
Total	49.3		24.41

IA % = 0.50

IA%	C
0.50	0.34

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	49.3	0.39	1.58	68,983

Region G1

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.48	9.1	0.18	0.09
B	0.52	40.2	0.82	0.42
C	0.56	0.0	0.00	0.00
D	0.59	0.0	0.00	0.00
Total		49.3		0.51

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.50	0.51

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	49.3	0.51	0.2	5.05

Region G2

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	71.7	0.50	35.85
Multi Family	0	0.65	0
School	13.5	0.40	5.4
Park	0	0.20	0
Total	85.2		41.25

IA % = 0.48

IA%	C
0.48	0.33

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	85.2	0.38	2.68	116,789

Region G2

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.46	3.8	0.04	0.02
B	0.50	79.7	0.94	0.47
C	0.55	0.0	0.00	0.00
D	0.58	1.7	0.02	0.01
Total		85.2		0.50

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.48	0.50

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	85.2	0.50	0.2	8.52

Region H

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	179.6	0.50	89.8
Multi Family	0	0.65	0
School	0	0.40	0
Park	5.6	0.20	1.12
Total	185.2		90.92

IA % = 0.49

IA%	C
0.49	0.33

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	185.2	0.38	5.90	257,109

Region H

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.47	1.9	0.01	0.00
B	0.51	183.3	0.99	0.50
C	0.55	0.0	0.00	0.00
D	0.58	0.0	0.00	0.00
Total		185.2		0.51

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.49	0.51

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	185.2	0.51	0.2	18.88

Region H1

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	117.8	0.50	58.9
Multi Family	0	0.65	0
School	0	0.40	0
Park	1.8	0.20	0.36
Total	119.6		59.26

IA % = 0.50

IA%	C
0.50	0.34

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	119.6	0.39	3.84	167,460

Region H1

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.48	1.9	0.02	0.01
B	0.52	117.7	0.98	0.51
C	0.56	0.0	0.00	0.00
D	0.59	0.0	0.00	0.00
Total		119.6		0.52

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.50	0.52

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	119.6	0.52	0.2	12.42

Region H2

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	61.8	0.50	30.9
Multi Family	0	0.65	0
School	0	0.40	0
Park	3.8	0.20	0.76
Total	65.6		31.66

IA % = 0.48

IA%	C
0.48	0.33

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	65.6	0.38	2.06	89,663

Region H2

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.46	0.0	0.00	0.00
B	0.50	65.6	1.00	0.50
C	0.55	0.0	0.00	0.00
D	0.58	0.0	0.00	0.00
Total		65.6		0.50

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.48	0.50

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	65.6	0.50	0.2	6.56

Region I

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	27.5	0.50	13.75
Multi Family	0	0.65	0
School	0	0.40	0
Park	0	0.20	0
Total	27.5		13.75

IA % = 0.50

IA%	C
0.50	0.34

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	27.5	0.39	0.89	38,831

Region I

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.48	0.0	0.00	0.00
B	0.52	27.5	1.00	0.52
C	0.56	0.0	0.00	0.00
D	0.59	0.0	0.00	0.00
Total		27.5		0.52

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.50	0.52

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	27.5	0.52	0.2	2.86

Region J

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	23.9	0.50	11.95
Multi Family	0	0.65	0
School	0	0.40	0
Park	0.4	0.20	0.08
Total	24.3		12.03

IA % = 0.50

IA%	C
0.50	0.34

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	24.3	0.39	0.78	33,997

Region J

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.48	3.2	0.13	0.06
B	0.52	21.1	0.87	0.45
C	0.56	0.0	0.00	0.00
D	0.59	0.0	0.00	0.00
Total		24.3		0.51

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.50	0.51

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	24.3	0.51	0.2	2.50

Region K

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	37.4	0.50	18.7
Multi Family	0	0.65	0
School	11.7	0.40	4.68
Park	0.6	0.20	0.12
Total	49.7		23.5

IA % = 0.47

IA%	C
0.47	0.32

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	49.7	0.37	1.53	66,691

Region K
Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.46	5.8	0.12	0.05
B	0.50	43.9	0.88	0.44
C	0.54	0.0	0.00	0.00
D	0.57	0.0	0.00	0.00
Total		49.7		0.50

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

IA%	Runoff Coeff
0.47	0.50

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	49.7	0.50	0.2	4.92

Region L

Impervious Percent

Land Use	Area (ac)	Impervious Fraction	Impervious Area
Single Family	25.6	0.50	12.8
Multi Family	26.7	0.65	17.355
School	0	0.40	0
Park	1.8	0.20	0.36
Total	54.1		30.515

IA % = 0.56

IA%	C
0.56	0.38

Water Quality Volume

Plan	Area (ac)	85th Percentile (in-ac/ac)	WQV (ac-ft)	WQV (cf)
A	54.1	0.44	1.98	86,034

Region L

Runoff Coefficient

Soil Type	Coefficient	Area (ac)	Total Area Fraction	Coefficient Fraction
A	0.53	0.0	0.00	0.00
B	0.57	54.1	1.00	0.57
C	0.61	0.0	0.00	0.00
D	0.63	0.0	0.00	0.00
Total		54.1		0.57

Runoff Coefficient values from Table 4 of Riverside County SWQ BMP Design HB

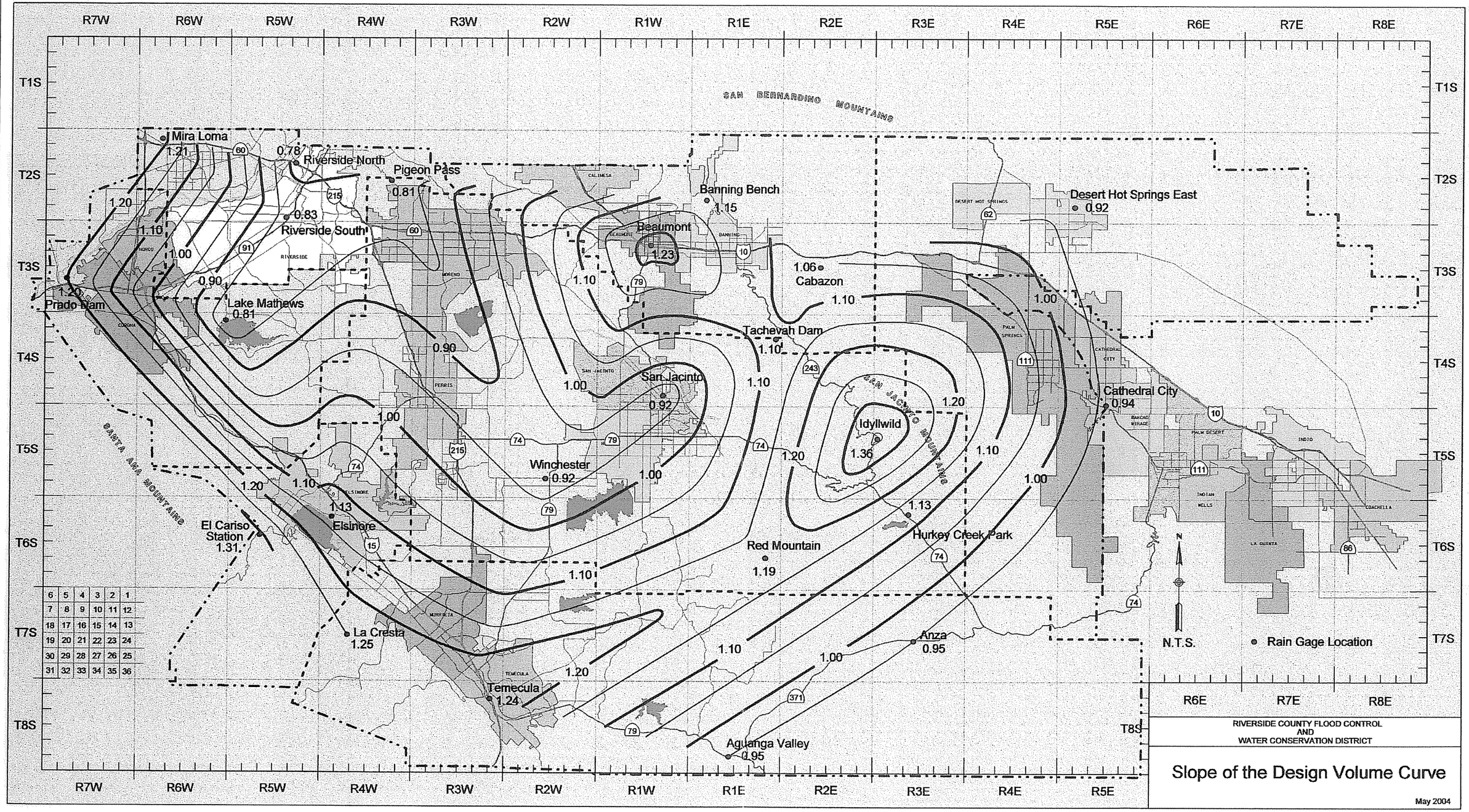
IA%	Runoff Coeff
0.56	0.57

Water Quality Flow

Plan	Area (ac)	Runoff Coeff, C	Intensity, I (in/hr)	WQF (cfs)
A	54.1	0.57	0.2	6.17

Phase 2-3 Summary

Region	WQV (ac-ft)	WQF (cfs)
A	2.26	7.0
B	1.96	6.4
C	0.41	1.3
D	4.92	15.1
E	1.50	4.8
F	1.60	5.1
G	4.26	13.6
G1	1.58	5.1
G2	2.68	8.5
H	5.90	18.9
H1	3.84	12.4
H2	2.06	6.6
I	0.89	2.9
J	0.78	2.5
K	1.53	4.9
L	1.98	6.2



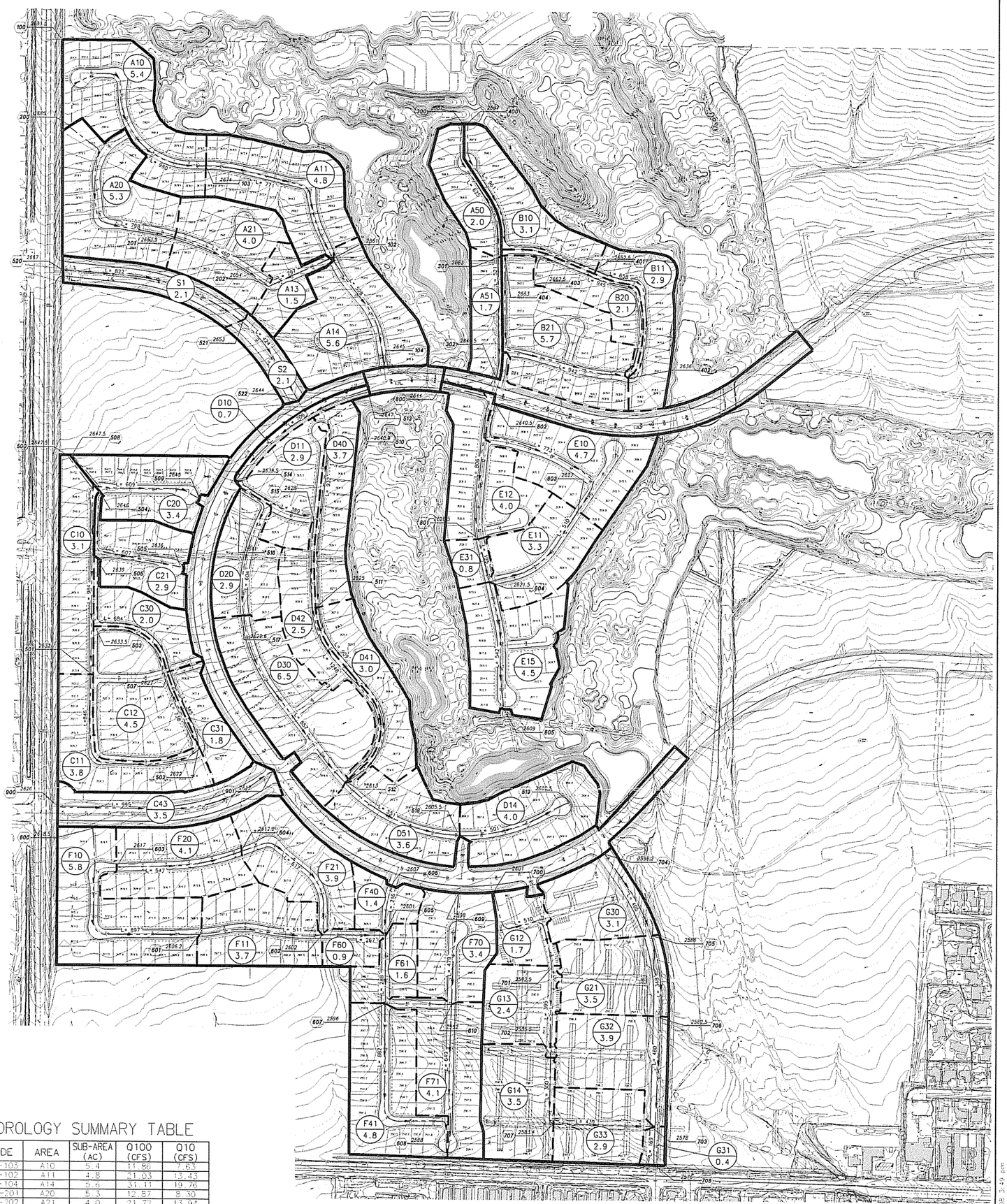
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

Slope of the Design Volume Curve

May 2004

EXHIBIT A.1

Tract 34896 Hydrology Map – Post Project Condition



HYDROLOGY SUMMARY TABLE

NODE	AREA	SUB-AREA (AC)	Q100 (CFS)	Q10 (CFS)
100-103	A10	5.4	11.96	7.63
103-102	A11	4.8	21.03	13.43
102-104	A14	5.6	31.11	19.76
200-201	A20	5.3	12.97	8.30
201-202	A21	4.0	21.72	13.94
102-202	A13	1.5	4.52	2.93
*202	--	--	25.13	16.13
*104	--	--	53.35	39.99
300-301	A50	2.0	5.36	3.47
301-302	A51	1.7	9.48	6.10
400-401	B10	3.1	7.46	4.81
401-402	B11	2.9	13.67	8.76
403-402	B20	2.1	4.93	3.17
404-402	B21	5.7	13.41	8.64
*402	--	--	30.54	19.52
500-501	C10	3.1	6.73	4.33
501-502	C11	3.8	13.75	8.76
503-502	C12	4.5	10.44	6.73
506-507	C30	2.0	4.79	3.09
507-502	C31	1.8	8.75	5.61
*502	--	--	29.74	18.93
508-509	C20	3.4	8.05	5.17
504-505	C21	2.9	7.09	4.57
510-511	D40	3.7	8.21	5.28
511-512	D41	3.0	13.84	8.83
513-514	D10	0.7	1.66	1.07
514-515	D11	2.9	7.71	4.92
515-512	D40	3.5	11.92	7.55
516-517	D20	2.9	7.21	4.65
517-512	D30	6.5	20.69	13.15
*512	--	--	30.77	25.91
512-518	D51	3.6	47.68	30.22
518-519	D14	4.0	54.80	34.61
900-901	D43	3.5	7.09	4.56
520-521	S1	2.1	4.50	3.09
521-522	S2	2.1	9.16	5.87

NODE	AREA	SUB-AREA (AC)	Q100 (CFS)	Q10 (CFS)
600-601	F10	5.8	12.66	8.14
601-602	F11	3.7	19.79	12.67
603-604	F20	4.1	9.54	6.15
604-602	F21	3.9	17.49	11.19
*602	--	--	36.44	23.32
602-605	F60	0.9	38.08	24.35
606-605	F40	1.4	4.63	3.01
*605	--	--	40.79	26.08
605-607	F61	1.6	43.62	27.85
607-608	F41	4.8	51.28	32.58
609-610	F70	3.4	8.51	5.49
610-608	F71	4.1	16.79	10.70
*608	--	--	64.91	41.16
700-701	G12	1.7	4.75	3.12
701-702	G13	2.4	10.72	6.99
702-707	G14	3.5	18.69	12.10
707-703	G33	2.9	24.79	15.97
704-705	G30	3.1	9.33	6.13
705-706	G21	3.5	18.80	12.27
706-703	G32	3.9	28.08	18.22
*703	--	--	48.04	30.90
703-708	G31	0.4	48.94	31.48
800-801	E12	4.0	9.45	6.09
801-804	E31	4.8	11.36	7.25
802-803	E10	4.7	10.93	7.04
803-804	E11	3.3	17.69	11.33
*804	--	--	27.98	17.90
804-805	E15	4.5	36.58	23.31

LEGEND

- DRAINAGE BOUNDARY
- SUBAREA BOUNDARY
- FLOW PATH
- A-1 / 1.0 — SUBAREA DESIGNATION / SUBAREA (ACRES)
- 441 / 2613 — UPSTREAM/DOWNSTREAM ELEVATION
- HYDROLOGY NODE
- * DENOTES NODE WHERE CONFLUENCE OCCURS

SCALE 1"=200'

200 0 200 400 600

GRAPHIC SCALE

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PLANNING ■ DESIGN ■ CONSTRUCTION
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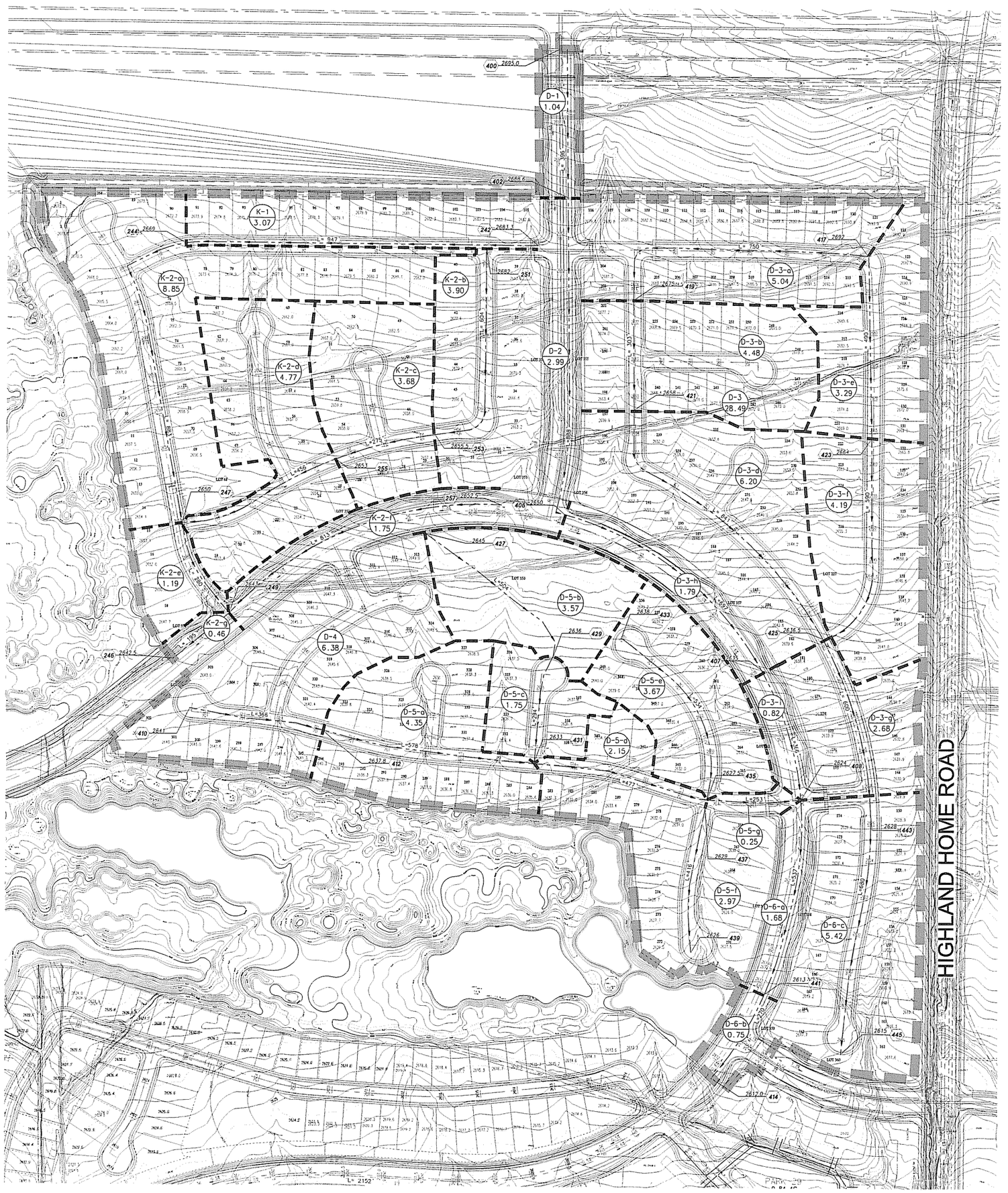
ONTARIO, CALIFORNIA 91761
909.974.4900 ▪ FAX 909.390.9817 ▪ www.RBF.com

TRACT 34896
Pardee-Banning Onsite Hydrology MAP
Post-Project Condition

H:\PDATA\65100\B83\CAD\LAND\DLV\HYDRO_B-MAP_0183-HYD-004 (TRACT 34896).DWG ACHENG 4/17/08 3:49 pm

EXHIBIT A.2

Tract 35967 Hydrology Map – Post Project Condition



LEGEND

- DRAINAGE BOUNDARY
- SUBAREA BOUNDARY
- TRACT BOUNDARY
- FLOW PATH
- A-1 / 1.0 — SUBAREA DESIGNATION / SUBAREA (ACRES)
- 441 / 2613 — HYDROLOGY NODE / UPSTREAM/DOWNSTREAM ELEVATION
- * DENOTES NODE WHERE CONFLUENCE OCCURS

HYDROLOGY SUMMARY TABLE

NODE	AREA	SUB-AREA (AC)	Q100 (CFS)	Q10 (CFS)
400-402	D-1	1.04	2.80	1.81
402-406	D-2	2.99	9.48	6.03
406-407	D-3-h	1.79	12.98	8.22
407-408	D-3-i	0.82	14.50	9.17
410-412	D-4	6.38	16.31	10.53
412-431	D-5-a	4.35	25.78	16.51
427-429	D-5-b	3.57	11.75	7.89
429-431	D-5-c	1.75	16.43	10.88
*431	--	--	39.43	25.48
431-435	D-5-d	2.15	43.62	28.06
433-435	D-5-e	3.67	8.79	5.61
*435	--	--	50.96	32.63
435-408	D-5-g	0.25	51.45	32.93
*405	--	--	64.84	41.42
408-441	D-6-a	1.68	67.93	43.33
441-414	D-6-b	0.75	69.23	44.14
417-419	D-3-a	5.04	12.17	7.85
419-421	D-3-b	4.48	22.53	14.49
421-423	D-3-d	6.20	35.16	22.47
417-423	D-3-e	3.29	9.78	6.34
423-425	D-3-f	4.19	20.78	13.38
*425	--	--	51.70	33.06
425-443	D-3-g	2.68	56.77	36.23
443-445	D-6-c	5.42	66.37	42.18
437-439	D-5-f	2.97	7.20	4.64

NODE	AREA	SUB-AREA (AC)	Q100 (CFS)	Q10 (CFS)
242-244	K-1	3.07	6.69	4.30
244-247	K-2-a	8.85	23.33	14.82
251-253	K-2-b	3.90	10.71	6.92
253-255	K-2-c	3.68	19.88	12.78
255-247	K-2-d	4.77	31.77	20.32
*247	--	--	46.76	29.51
247-249	K-2-e	1.19	49.10	31.31
257-249	K-2-f	1.75	3.84	2.47
*249	--	--	52.42	33.51
249-246	K-2-g	0.46	53.44	34.15

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SCALE: 1"=120'

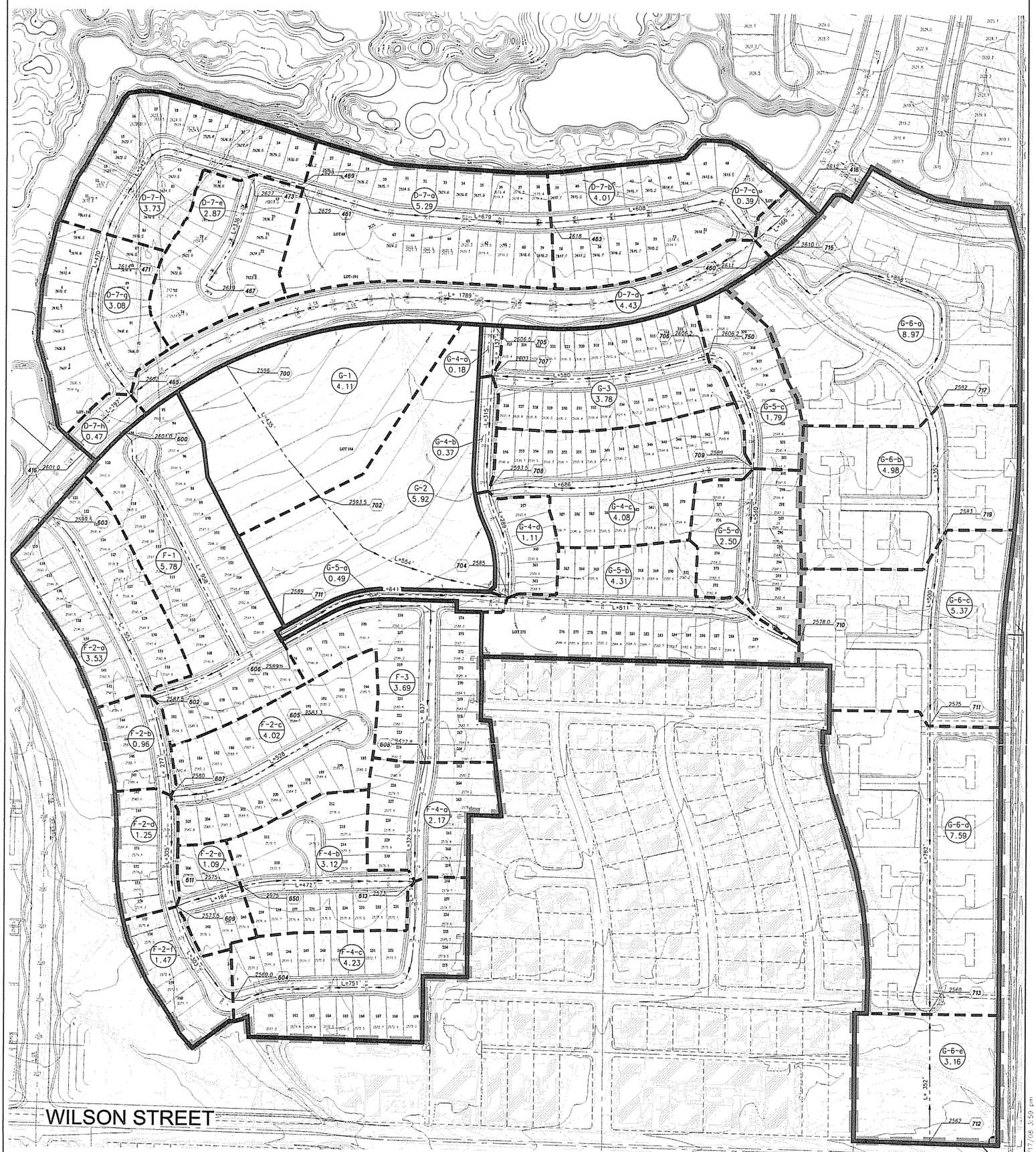
TRACT 35967
Pardee-Banning Onsite Hydrology
Post-Project Condition

H:\PROJECTS\6510\0183\CADD\LAND DEV\HYDRO\B-MAP\0183-HYD-002 (TRACT 35967).DWG ACHEDIS 4/17/08 3:54 pm

EXHIBIT A.3

Tract 35968, 35969 Hydrology Map

– Post Project Condition



HYDROLOGY SUMMARY TABLE

NODE	AREA	SUB-AREA (AC)	Q100 (CFS)	Q10 (CFS)
715-717	G-6-a	8.97	22.86	14.98
717-719	G-6-b	4.98	34.94	22.82
719-711	G-6-c	5.37	47.97	31.25
711-713	G-6-d	7.59	64.88	42.13
712-713	G-6-e	3.16	8.5	5.58
*713	--	--	72.01	46.73
461-463	D-7-a	5.29	12.57	8.10
463-460	D-7-b	4.01	20.82	13.32
416-460	D-7-c	0.39	1.15	0.74
*460	--	--	21.65	13.56
460-465	D-7-d	4.43	28.03	17.80
469-471	D-7-i	3.73	9.95	6.43
471-465	D-7-g	3.08	17.32	11.14
473-467	D-7-e	2.87	8.35	5.41
*465	--	--	43.59	27.61
465-416	D-7-h	0.47	44.24	28.02
700-702	G-1	4.11	12.36	8.29
702-704	G-2	5.92	24.59	15.90
711-704	G-5-a	0.49	1.05	0.68
706-707	G-3	3.78	5.21	5.28
705-707	G-4-a	0.18	0.65	0.43
*707	--	--	8.62	5.55
707-708	G-4-b	0.37	9.38	6.03
708-704	G-4-d	1.11	11.56	7.42
*704	--	--	36.20	23.58

NODE	AREA	SUB-AREA (AC)	Q100 (CFS)	Q10 (CFS)
704-710	G-5-b	4.31	44.03	28.39
750-709	G-5-c	1.79	5.62	3.65
708-709	G-4-c	4.08	8.69	5.59
*709	--	--	12.65	8.16
709-710	G-5-a	2.50	17.51	11.24
*710	--	--	60.53	38.68
600-602	F-1	5.78	12.46	8.01
603-602	F-2-a	3.53	9.11	5.88
*602	--	--	20.21	13.02
602-607	F-2-b	0.96	22.19	14.29
605-607	F-2-c	4.02	9.06	5.83
*607	--	--	30.57	19.66
607-609	F-2-d	1.25	33.05	21.24
611-609	F-2-e	1.09	3.24	2.10
*609	--	--	35.30	22.68
609-604	F-2-f	1.47	38.09	24.45
606-608	F-3	3.69	8.16	5.25
608-613	F-4-a	2.17	12.62	8.09
650-613	F-4-b	3.12	6.90	4.44
*613	--	--	19.08	12.25
613-604	F-4-c	4.23	26.46	16.81
*604	--	--	61.05	38.65

LEGEND

- DRAINAGE BOUNDARY
- SUBAREA BOUNDARY
- TRACT BOUNDARY
- FLOW PATH
- A-1 / 1.0 — SUBAREA DESIGNATION / SUBAREA (ACRES)
- 2613 / 441 — UPSTREAM/DOWNSTREAM ELEVATION
- HYDROLOGY NODE
- * DENOTES NODE WHERE CONFLUENCE OCCURS

SCALE: 1"=120'

120 0 120 240 360

SCALE: 1"=120'

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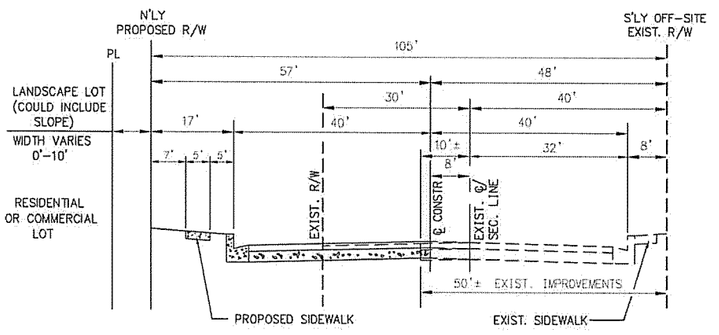
TRACT 35968, 35969
Pardee-Banning Onsite Hydrology
Post-Project Condition

H:\PDATA\65100183\CADD\LAND DEVHYDRO\E-MAP\0183-HY-003 (TRACT 35968-91)DWG AEHEND 4/17/08 3:59 pm

EXHIBIT B

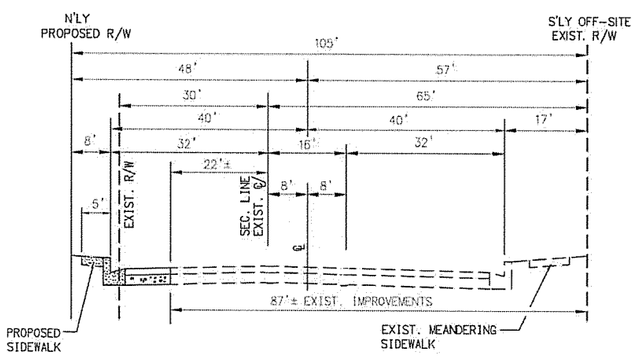
Typical Street Cross-Section Exhibit



WILSON STREET

(HIGHLAND SPRINGS AVENUE TO C STREET)

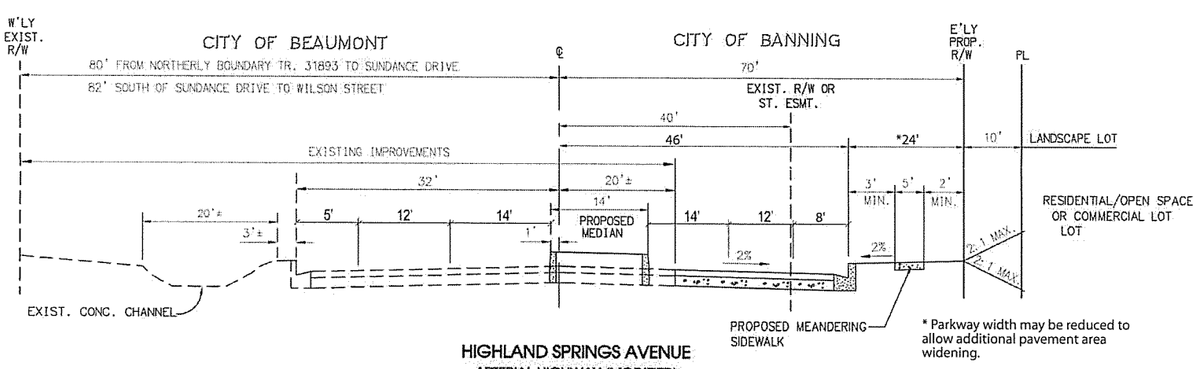
MAJOR HIGHWAY (MODIFIED)



WILSON STREET

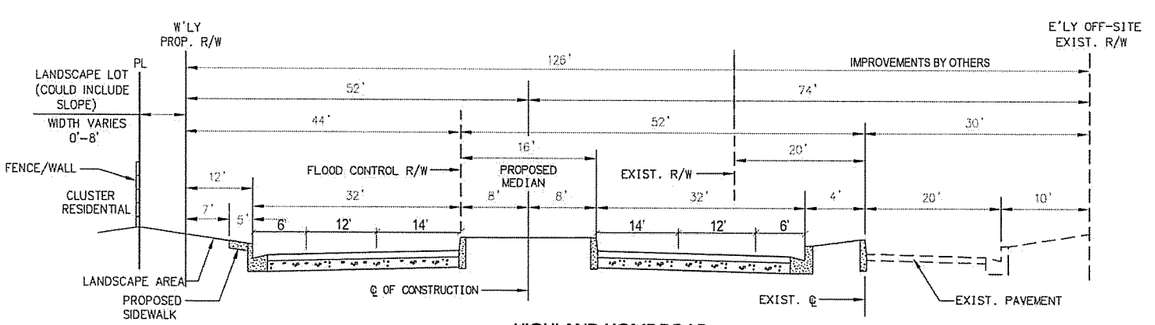
FROM 475'± WEST OF HIGHLAND HOME ROAD TO HIGHLAND HOME ROAD)

MAJOR HIGHWAY (MODIFIED)



HIGHLAND SPRINGS AVENUE

ARTERIAL HIGHWAY (MODIFIED)

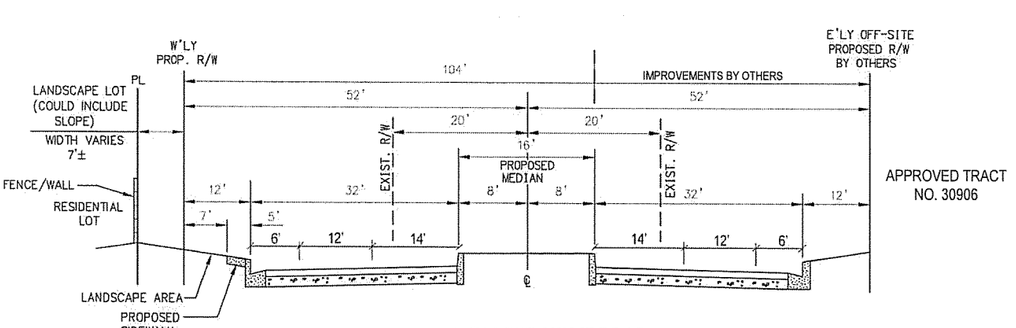


HIGHLAND HOME ROAD

(ADJACENT TO EXISTING ROAD)

FROM WILSON STREET TO 1229'± SOUTH OF "D" STREET

MAJOR/ARTERIAL HIGHWAY (MODIFIED)

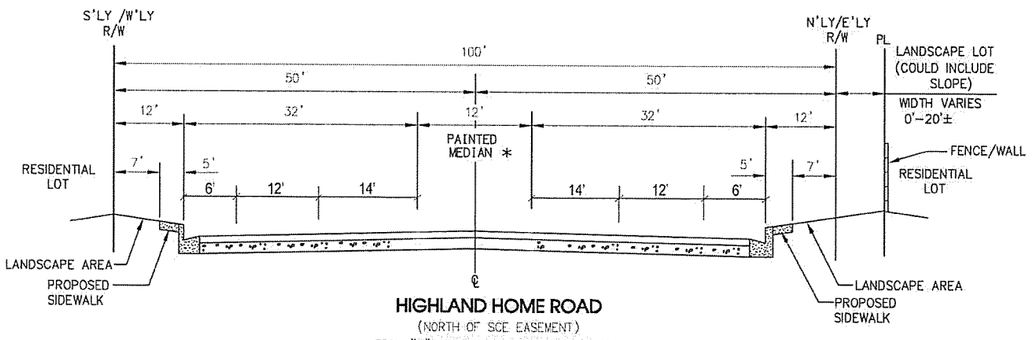


HIGHLAND HOME ROAD

(ALONG FRONTAGE OF TRACT 30906)

FROM 594'± SOUTH OF "D" STREET TO 57'± SOUTH OF 330' SCE R/W

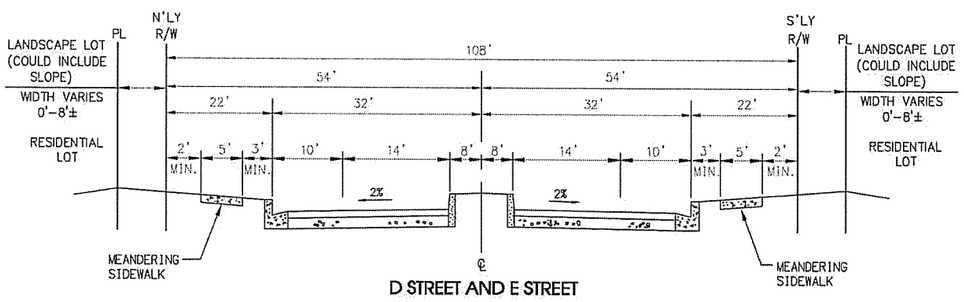
MAJOR/ARTERIAL HIGHWAY (MODIFIED)



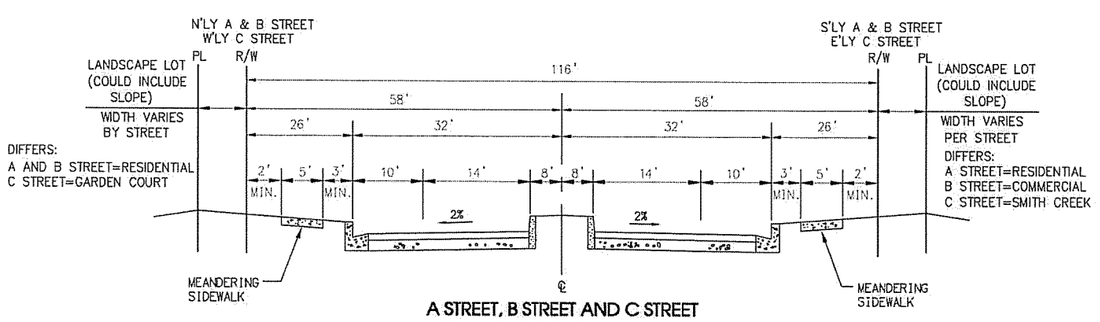
HIGHLAND HOME ROAD
(NORTH OF SCE EASEMENT)
FROM "F" STREET TO BROOKSIDE AVENUE
MAJOR HIGHWAY (MODIFIED)

*A RAISED MEDIAN MAY BE USED IN AREAS

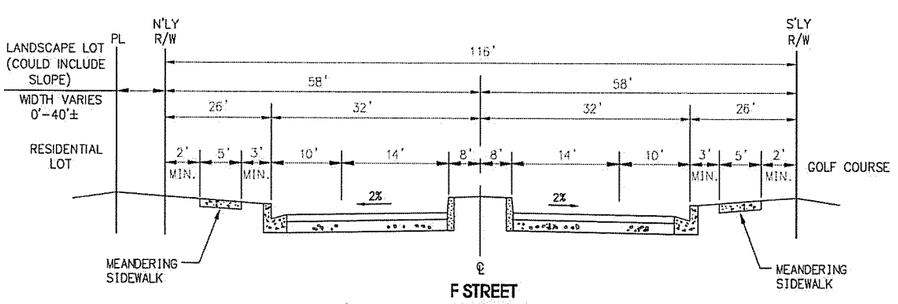
INTERIM HALF STREET ONLY WEST OF PA 61



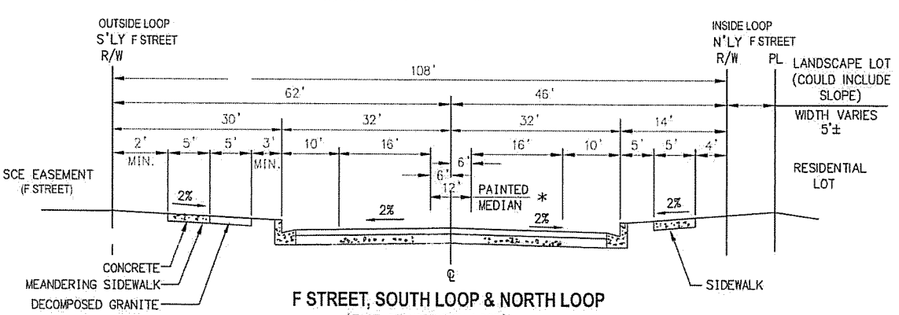
D STREET AND E STREET
MODIFIED DIVIDED COLLECTOR STREET



A STREET, B STREET AND C STREET
MODIFIED DIVIDED COLLECTOR STREET

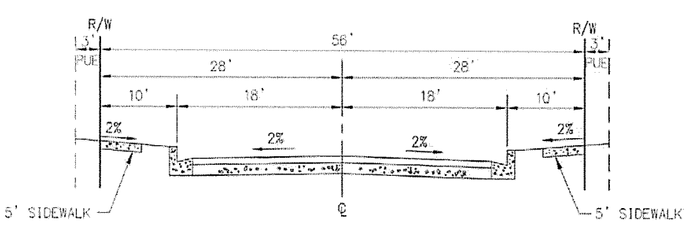


F STREET
(HIGHLAND SPRINGS AVENUE TO NORTHERN LOOP)
MODIFIED DIVIDED COLLECTOR STREET



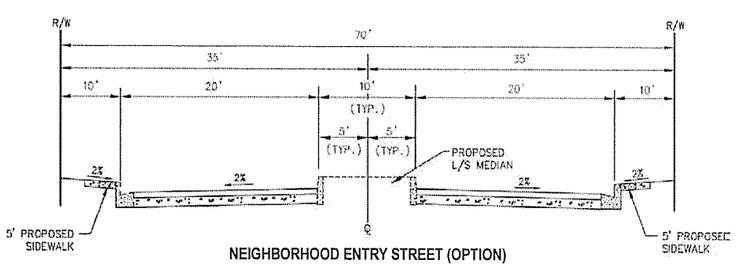
F STREET, SOUTH LOOP & NORTH LOOP
(EAST OF NORTHERN LOOP)
MODIFIED DIVIDED COLLECTOR STREET

*A RAISED MEDIAN MAY BE USED IN AREAS



MODIFIED LOCAL RESIDENTIAL STREET

Sidewalks on Local Streets may be located adjacent to the curb or set off from the curb, separated by a landscape strip.



NEIGHBORHOOD ENTRY STREET (OPTION)

This option may be used only where the median will not interfeare with access to residential driveways.

EXHIBIT C

Proposed Storm Drain Sizing Exhibit

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ONTARIO, CALIFORNIA 91761
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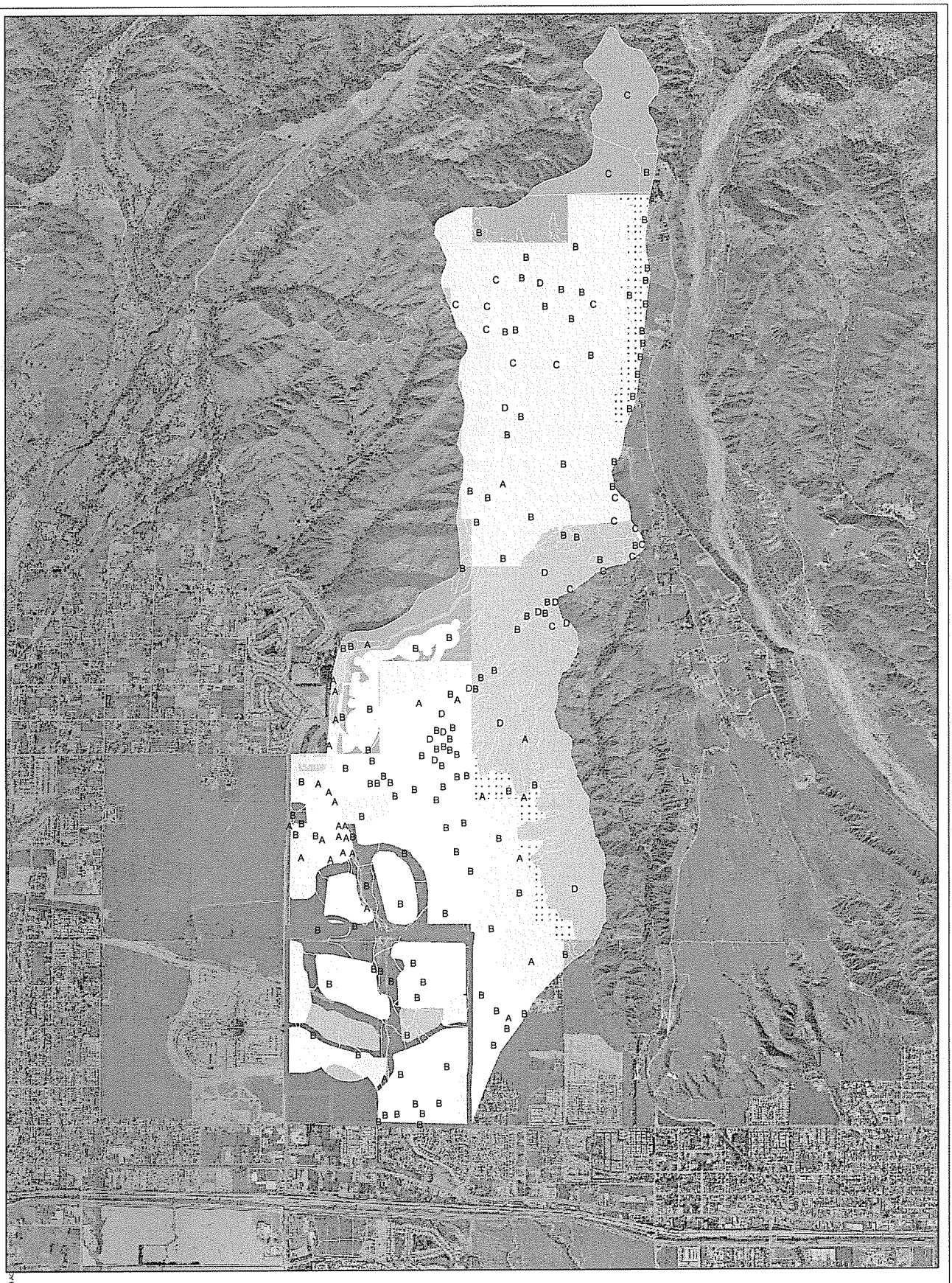
Exhibit C
PROPOSED ON-SITE STORM DRAIN SIZING

H:\PDATA\651001B3\CADD\LAND\DLV\HYDRO\B-MAP\ON-SITE PIPE SIZING EXHIBIT.DWG ACHEN: 4/17/08 4:17 pm

EXHIBIT D

Hydrologic Soils Map



Land Use and Soil Overlay

RBF CONSULTING GIS

N

0 2,500 5,000

Feet

Sources: Riverside County General Plan - 2003
USDA - The Natural Resources Conservation Service
Eagle Aerial

VLDR-RC
Medium Density Residential
Medium High Density Residential
Rural Mountainous
Conservation
Open Space Recreation
Water
Indian Lands
City
B Soil - Hydrological Classification

Map Document (M:\Masa\1810\24550\SI\StormwaterMap.mxd) - 3/27/2008 4:

EXHIBIT E

Standard Intensity – Duration Curves Data

RCFC & WCD

HYDROLOGY MANUAL

RAINFALL INTENSITY - INCHES PER HOUR

ANZA			BANNING			BEAUMONT			CALIMESA			CANYON LAKE		
DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	100 YEAR
5	4.23	6.85	5	3.32	4.93	5	3.32	4.93	5	3.57	5.30	5	3.07	4.61
6	3.80	6.16	6	3.02	4.47	6	3.02	4.47	6	3.23	4.79	6	2.81	4.23
7	3.48	5.63	7	2.78	4.12	7	2.78	4.12	7	2.97	4.40	7	2.61	3.93
8	3.22	5.21	8	2.59	3.84	8	2.59	3.84	8	2.76	4.09	8	2.45	3.68
9	3.01	4.87	9	2.43	3.61	9	2.43	3.61	9	2.58	3.83	9	2.31	3.48
10	2.83	4.58	10	2.30	3.41	10	2.30	3.41	10	2.44	3.62	10	2.20	3.31
11	2.67	4.33	11	2.19	3.24	11	2.19	3.24	11	2.31	3.43	11	2.10	3.16
12	2.54	4.12	12	2.09	3.10	12	2.09	3.10	12	2.21	3.27	12	2.01	3.03
13	2.43	3.93	13	2.00	2.97	13	2.00	2.97	13	2.11	3.13	13	1.94	2.92
14	2.33	3.77	14	1.92	2.85	14	1.92	2.85	14	2.03	3.01	14	1.87	2.82
15	2.23	3.62	15	1.86	2.75	15	1.86	2.75	15	1.95	2.89	15	1.81	2.72
16	2.15	3.49	16	1.79	2.66	16	1.79	2.66	16	1.88	2.79	16	1.75	2.64
17	2.08	3.37	17	1.74	2.58	17	1.74	2.58	17	1.82	2.70	17	1.70	2.56
18	2.01	3.26	18	1.68	2.50	18	1.68	2.50	18	1.76	2.62	18	1.66	2.50
19	1.95	3.16	19	1.64	2.43	19	1.64	2.43	19	1.71	2.54	19	1.62	2.43
20	1.89	3.06	20	1.59	2.36	20	1.59	2.36	20	1.67	2.47	20	1.58	2.37
22	1.79	2.90	22	1.51	2.25	22	1.51	2.25	22	1.58	2.34	22	1.51	2.27
24	1.70	2.76	24	1.45	2.15	24	1.45	2.15	24	1.51	2.23	24	1.44	2.17
26	1.62	2.63	26	1.39	2.06	26	1.39	2.06	26	1.44	2.14	26	1.39	2.09
28	1.56	2.52	28	1.33	1.98	28	1.33	1.98	28	1.38	2.05	28	1.34	2.02
30	1.49	2.42	30	1.29	1.91	30	1.29	1.91	30	1.33	1.98	30	1.30	1.95
32	1.44	2.33	32	1.24	1.84	32	1.24	1.84	32	1.29	1.91	32	1.26	1.89
34	1.39	2.25	34	1.20	1.78	34	1.20	1.78	34	1.24	1.85	34	1.22	1.84
36	1.34	2.18	36	1.17	1.73	36	1.17	1.73	36	1.21	1.79	36	1.19	1.79
38	1.30	2.11	38	1.13	1.68	38	1.13	1.68	38	1.17	1.74	38	1.16	1.74
40	1.27	2.05	40	1.10	1.64	40	1.10	1.64	40	1.14	1.69	40	1.13	1.70
45	1.18	1.91	45	1.04	1.54	45	1.04	1.54	45	1.07	1.58	45	1.07	1.61
50	1.11	1.80	50	.98	1.45	50	.98	1.45	50	1.01	1.49	50	1.02	1.53
55	1.05	1.70	55	.93	1.38	55	.93	1.38	55	.95	1.42	55	.97	1.46
60	1.00	1.62	60	.89	1.32	60	.89	1.32	60	.91	1.35	60	.93	1.40
65	.95	1.55	65	.85	1.27	65	.85	1.27	65	.87	1.29	65	.89	1.35
70	.91	1.48	70	.82	1.22	70	.82	1.22	70	.84	1.24	70	.86	1.30
75	.88	1.42	75	.79	1.17	75	.79	1.17	75	.80	1.19	75	.84	1.26
80	.85	1.37	80	.76	1.13	80	.76	1.13	80	.78	1.15	80	.81	1.22
85	.82	1.32	85	.74	1.10	85	.74	1.10	85	.75	1.11	85	.79	1.18
SLOPE = .580			SLOPE = .530			SLOPE = .530			SLOPE = .550			SLOPE = .480		

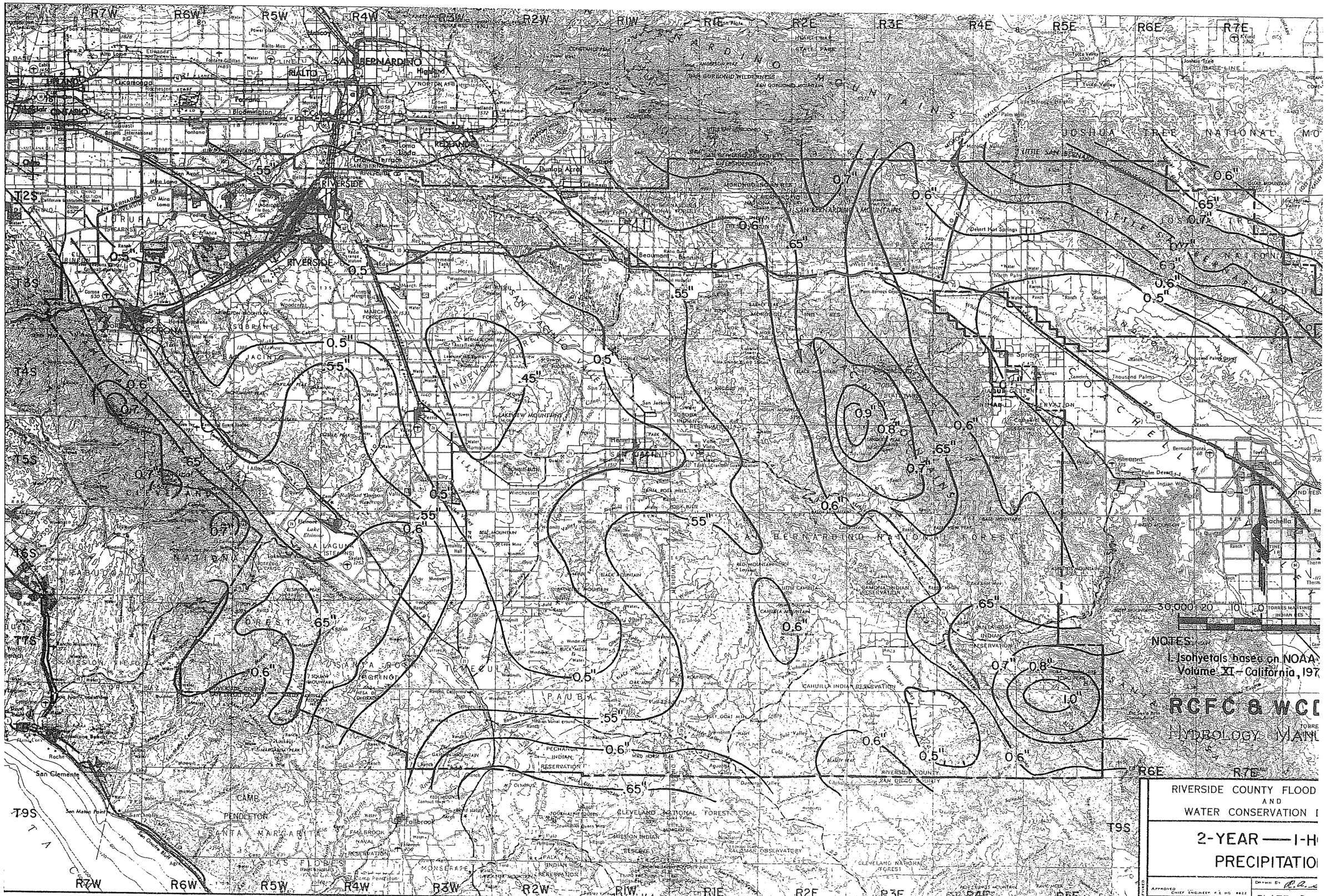
STANDARD INTENSITY-DURATION CURVES DATA

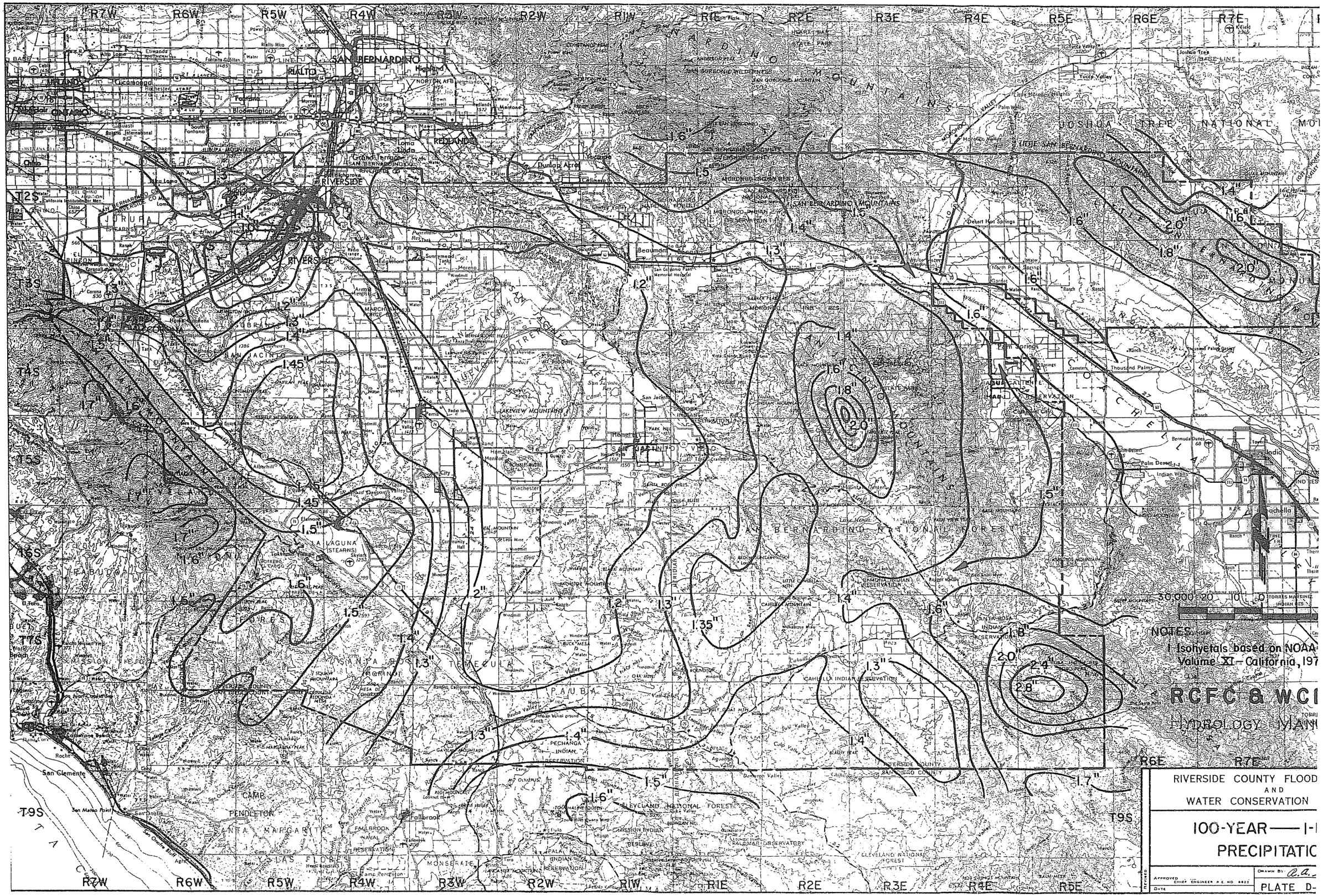
PLATE D-4.1 (1 of 6)

EXHIBIT F

2-Yr – 1-Hr Precipitation Map

100-Yr – 1-Hr Precipitation Map


R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E
R3E
R4E
R5E
R6E
R7E
T2S
T3S
T4S
T5S
T6S
T7S
T8S
T9S
SAN BERNARDINO
RIALTO
RIVERSIDE
COLTON
LOMA LINDA
REDLANDS
HIGHLAND
NORTON AFB
JURUPA
CORONA
NORCO
MIRA LOMA
ONTARIO
UPLAND
CUCAMONGA
FONTANA
BLOOMINGTON
MORENO
SUNNYMEAD
EDGEMONT
MARCH FIELD
BEAUMONT
BANNING
SAN JACINTO
HEMET
WINCHESTER
MURRIETA
TEMECULA
ELSINORE
LAKE ELSINORE
LAGUNA
WILDOMAR
MENIFEE
SUN CITY
PERRIS
ROMOLAND
HOMELAND
SAN JACINTO MOUNTAINS
SAN BERNARDINO MOUNTAINS
SAN GABRIEL MOUNTAINS
SAN JACINTO FAULT
SAN ANDREAS FAULT
SAN JACINTO WILDERNESS
SAN GORGONIO WILDERNESS
SAN GORGONIO MOUNTAIN
MORONGO VALLEY
YUCCA VALLEY
PALM SPRINGS
DESERT HOT SPRINGS
PALM DESERT
INDIAN WELLS
LA QUINTA
INDIO
COACHELLA
THOUSAND PALMS
BERMUDA DUNES
JOSHUA TREE NATIONAL MO
LITTLE SAN BERNARDINO
MOUNTAINS
SANTA ROSA MOUNTAINS
SANTA ROSA AND SAN JACINTO MOUNTAINS NATIONAL MONUMENT
SAN BERNARDINO NATIONAL FOREST
CLEVELAND NATIONAL FOREST
CAHUILLA INDIAN RESERVATION
SANTA ROSA INDIAN RESERVATION
AGUA CALIENTE INDIAN RESERVATION
MORONGO INDIAN RESERVATION
SOBOBA INDIAN RESERVATION
PECHANGA INDIAN RESERVATION
MISSION INDIAN RESERVATION
PALA INDIAN RESERVATION
PAUBA
TEMECULA
SANTA MARGARITA
CAMP PENDLETON
FALLBROOK NAVAL RESERVATION
SAN CLEMENTE
SAN MATEO POINT
SAN ONOFRE BLUFF
RIVERSIDE COUNTY
SAN DIEGO COUNTY
.55"
.65"
.45"
.5"
.6"
.7"
.8"
.9"
1.0"
NOTES
1. Isohyetals based on NOAA
Volume XI - California, 197
RCFC & WCD
HYDROLOGY MANU
RIVERSIDE COUNTY FLOOD
AND
WATER CONSERVATION
2-YEAR — 1-H
PRECIPITATIO
PLATE D-
APPROVED CHIEF ENGINEER R.E. NO. 8822
DATE
DRAWN BY
REVISED



NOTES

1 Isohyetals based on NOAA
Volume XI – California, 197

RCFC & WCI

HYDROLOGY MAN

RIVERSIDE COUNTY FLOOD
AND
WATER CONSERVATION

100-YEAR — 1-
PRECIPITATIC

Drawn By: A.A.

Approved
Chief Engineer R.E. No. 48822

Date

PLATE D-